CITY OF OREGON CITY
PLANNING COMMISSION
AGENDA

Hanlon Commission Chambers, Libke Public Safety Facility, 1234 Linn Ave, Oregon City
Monday, January 26, 2026 at 7:00 PM

Ways to participate in this public meeting:

- *Attend in person, location listed above. Please see the public comment guidelines below.*
- *Attend the livestream of the meeting on the City's YouTube Channel: https://www.youtube.com/user/CityofOregonCity*
- *Register to provide electronic testimony (email ocplanning@orcity.org or call 503-722-3789 by 3:00 PM on the day of the meeting to register)*
- *Email ocplanning@orcity.org (deadline to submit written testimony via email is 3:00 PM on the day of the meeting)*
- *Mail to City of Oregon City, Attn: City Recorder, P.O. Box 3040, Oregon City, OR 97045*

1. **CONVENE MEETING AND ROLL CALL**
   a. Oath of Office for New Planning Commissioner
2. **ELECTIONS**
3. **PUBLIC COMMENTS**
   Please see the public comment guidelines below.
4. **PUBLIC HEARINGS**
   a. GLUA-25-00047 / MAS-25-00006: Clackamas Community College Athletic Fields Complex Phase 2 Detailed Development Plan
5. **DISCUSSION ITEMS**
6. **COMMUNICATIONS**
7. **ADJOURNMENT**

PUBLIC COMMENT GUIDELINES

Complete a Comment Card prior to the meeting and submit it to the clerk. When the Chair calls your name, proceed to the speaker table, and state your name and city of residence. Each speaker is given 3 minutes to speak. As a general practice, the committee does not engage in discussion with those making comments. Complaints shall be addressed at the department level prior to addressing the committee.

ADA NOTICE

The location is ADA accessible. Hearing devices may be requested from the City Recorder prior to the meeting. Individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-657-0891.

Agenda Posted at City Hall, Pioneer Community Center, Library, City Website.

Video Streaming & Broadcasts: The meeting is streamed live on the Oregon City's website and available on demand following the meeting. The meeting can be viewed on Willamette Falls Television channel 28 for Oregon City area residents as a rebroadcast. Please contact WFMC at 503-650-0275 for a programming schedule.

625 Center Street
Oregon City, OR 97045
503-657-0891

CITY OF OREGON CITY

Staff Report

To: Planning Commission **Agenda Date:** January 26, 2026
From:

SUBJECT:
Oath of Office for New Planning Commissioner

STAFF RECOMMENDATION:

EXECUTIVE SUMMARY:

BACKGROUND:

NEXT STEPS:

OPTIONS:

625 Center Street
Oregon City, OR 97045
503-657-0891

CITY OF OREGON CITY

Staff Report

To:	Planning Commission	**Agenda Date:**	January 26, 2026
From:	Jude Thaddaeus, Assistant Planner		

SUBJECT:
GLUA-25-00047 / MAS-25-00006: Clackamas Community College Athletic Fields Complex Phase 2 Detailed Development Plan

STAFF RECOMMENDATION:
Based on the findings in this report, staff recommends the Planning Commission approve, with the recommended conditions, the applicant's Detailed Development Plan and requested Adjustments.

EXECUTIVE SUMMARY:
Clackamas Community College is requesting a Detailed Development Plan (DDP) review for Phase 2 of the redevelopment of the campus Athletic Fields Complex. The development includes a track replacement and widening, installation of a turf soccer field in the track median, the addition of grandstands, storage facilities, a public restroom, plaza spaces, baseball viewing area, batting cages, and vehicular circulation improvements. The applicant requests Adjustments to OCMC 17.54 for retaining wall height and OCMC 17.62 for building materials and building design elements. Under the existing General Development Plan (file # GLUA-24-00020 / MAS-24-00001), these adjustments require review by the Planning Commission.

BACKGROUND:
The site currently has an 8-lane track with areas for field events in the track interior. The interior of the track and exterior areas are mostly surfaced with lawn. A throws facility is on the eastern side of the track, with space for shot put, discus, and hammer throw sectors. There is a baseball field and softball field, which are being improved in Phase 1 of this project and were submitted for Land Use review in September 2025.

The Athletic Sports Complex is located near the center of the 156-acre site, more than 600 feet from the nearest public rights-of-way on Beavercreek Rd and Marjorie Lane, and bounded to the north and east by private Douglas Loop, to the south by private Killdeer Rd, and to the southeast by private Grove Circle, which provide internal vehicular circulation to the site.

Phase 2 links together the softball and baseball fields with new pedestrian circulation and a viewing plaza space and restroom at the baseball field, replacing the old bleachers and restroom. In addition, Phase 2 proposes to widen and replace the existing 8-lane track to add a synthetic turf soccer field in the center of the track. Field event sectors will be

consolidated on the track to the east and south. A large hitting barn building is proposed at the south end of the track, with a multi-use plaza space. A 3,000-person grandstand is proposed west of the track. To serve the grandstands, a new vehicle drop-off and plaza space is proposed between the track and softball field. Small grading improvements and an additional javelin runway are proposed at the existing throws facility.

The applicant seeks adjustments that involve 1) Building a retaining wall in excess of 8.5 feet to support the trackside grandstand structure, which is beyond what OCMC 17.54.100 ordinarily permits, and 2) Using split-face concrete block as the prominent building facade material for the public restroom, which is beyond what OCMC 17.62.050.H.2 ordinarily permits.

NEXT STEPS:

Discuss and provide direction to staff on the findings and recommended Conditions of Approval in the Staff Report.

OPTIONS:

1. Approve GLUA-25-00047 / MAS-25-00001 with the recommended conditions.
2. Approve GLUA-25-00047 / MAS-25-00001 with revised findings and conditions.
3. Deny GLUA-25-00047 / MAS-25-00001 and provide further direction to Staff and the applicant.
4. Continue GLUA-25-00047 / MAS-25-00001 to a date certain and keep the public record open through that date.

OREGON CITY

Community Development – Planning

695 Warner Parrott Road | Oregon City OR 97045
Ph (503) 722-3789

TYPE III STAFF REPORT AND RECOMMENDATION
January 15, 2026

FILE NUMBER: GLUA-25-00047 / MAS-25-00006

Submitted: 10/22/2025
Complete: 11/21/2025
120 Day Deadline: 3/21/2026
Hearing Date: 1/26/2026

APPLICANT: Collin McArthur & Jason Gillies
Cameron McCarthy Landscape Architecture & Planning
160 E Broadway
Eugene, OR 97401

OWNER: Ron Prince
Clackamas Community College
19600 Molalla Ave
Oregon City, OR 97045

REQUEST: Detailed Development Plan (DDP) for Phase 2 of the redevelopment of the campus Athletic Fields Complex. Includes a track replacement and widening, installation of a turf soccer field in the track median, addition of grandstands, storage facilities, plaza spaces, baseball viewing area, and vehicular circulation improvements. The applicant requests Adjustments to OCMC 17.54 for retaining wall height and OCMC 17.62 for building materials and building design elements. Under the existing General Development Plan (file # GLUA-24-00020 / MAS-24-00001), these adjustments require review by the Planning Commission.

LOCATION: 19600 Molalla Ave
Map and Taxlot Number 3-2E-09C -00800

REVIEWER: Jude Thaddaeus | Planner
Sang Pau | Development Services

ZONING: Institutional (I) District

RECOMMENDATION: Approval with Conditions

PROCESS: Type III decisions involve the greatest amount of discretion and evaluation of subjective approval standards, yet are not required to be heard by the city commission, except upon appeal. Applications evaluated through this process include conditional use permits. The process for these land use decisions is controlled by ORS 197.763. Notice of the application and the planning commission hearing is published and mailed to the applicant, recognized neighborhood association and property owners within three hundred feet of the subject property. Notice must be issued at least twenty days pre-hearing, and the staff report must be available at least seven days pre-hearing. At the evidentiary hearing held before the planning commission, all issues are

addressed. The decision is final unless appealed and description of the requirements for perfecting an appeal. The decision of the planning commission is appealable to the city commission within fourteen days of the issuance of the final decision. The city commission hearing on appeal is on the record and no new evidence shall be allowed. Only those persons or a city-recognized neighborhood association who have participated either orally or in writing have standing to appeal the decision of the planning commission. Grounds for appeal are limited to those issues raised either orally or in writing before the close of the public record. A city-recognized neighborhood association requesting an appeal fee waiver pursuant to OCMC 17.50.290.C must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal. The city commission decision on appeal from the planning commission is the city's final decision and is appealable to the Land Use Board of Appeals (LUBA) within twenty-one days of when it becomes final.

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RECOMMENDATION: 90

EXHIBITS: 91

CONDITIONS OF APPROVAL

Planning File GLUA-25-00047 / MAS-25-00006

(P) = Verify that condition of approval has been met with the Planning Division.
(DS) = Verify that condition of approval has been met with the Development Services Division.
(B) = Verify that condition of approval has been met with the Building Division.
(F) = Verify that condition of approval has been met with Clackamas Fire Department.

The applicant shall fulfill the following conditions prior to issuance of a public improvement and/or Building permit associated with the proposed application.

1. The development plans shall comply with all current Oregon City Public Works design standards, specifications, codes, and policies prior to receiving a permit and beginning construction. (DS)

2. The developer shall submit or address all items in section 16.12.014 of the Oregon City Municipal Code based on the timing requirements contained therein and as deemed applicable by the City. (DS)

3. The developer shall provide finalized engineered drainage plan(s), drainage report(s), and design flow calculation report(s) stamped and signed by a licensed engineer addressing all items from Section 9.3 & 9.4 of the Public Works Stormwater and Grading Design Standards prior to receiving a permit and beginning construction. (DS)

4. The developer shall obtain a 1200-C (NPDES) permit from Oregon Department of Environmental Quality (DEQ) for construction activities one acre or greater prior to receiving a permit and beginning construction. (DS)

5. The developer shall obtain a city-issued grading permit before the commencement of any grading activities. (DS)

6. The developer shall provide an engineered grading plan prepared by a professional engineer in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards. (DS)

7. The engineering plans shall provide a local benchmark, onsite, using the NAVD88 datum prior to receiving a permit and beginning construction. (DS)

8. A city issued erosion and sediment control permit shall be obtained prior to commencement of any earth disturbing activities. (DS)

9. Erosion and sediment control plans shall be submitted for review and approval by the City prior to issuance of an erosion and sediment control permit. (DS)

10. Prior to the issuance of a Building Permit, the Building Official shall determine whether the final design of the retaining wall and grandstand structure meets this requirement. (P)

11. Prior to the issuance of a Building Permit, the applicant shall supplement their exterior lighting plan with information that demonstrates the lighting plan complies with this section. (P)

12. To further mitigate the effect of the full concrete block façade on the restroom building, the applicant shall add landscaping planters planted with native plants and shrubs from the Oregon City Native Plant List, and seating areas to be located within 4 feet of the building façade on all sides where they would not obstruct entryways into the building. Similar alternative landscaping treatments may be proposed by the applicant for consideration by the Planning Commission at the public hearing, or approved by the Community Development Director, and shown on the site plan and building elevations prior to issuance of a building permit for the structure. (P)

The following conditions of approval shall be met to the satisfaction of the City during construction.

13. The workmanship and materials for any work performed under permits issued by Oregon City Public Works shall be in accordance with the edition of the "Oregon Standard Specifications for Construction" as prepared by the Oregon Department of Transportation (ODOT) and the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the city. (DS)

14. The developer's project engineer shall inspect construction of stormwater management facilities at the cost of the applicant. The City will perform inspections in accordance with city policies and standards. (DS)

The following conditions of approval shall be met to the satisfaction of the City prior to final occupancy or as noted.

15. The property owner(s) shall execute an agreement providing maintenance of, and giving Oregon City access to, privately-owned stormwater management facilities and pay associated recording fees. The agreement shall include a site plan identifying all privately-owned stormwater management facilities and an operation and maintenance plan for each type of stormwater facility in accordance with the Public Works Stormwater and Grading Design Standards. The agreement shall run with the land and be applicable to subsequent property owners. (DS)

16. As-built construction plans and digital copies of as-built drawings shall be filed with the City Engineer within 90 days of completing improvements. (DS)

17. Prior to building final, the applicant shall complete and submit a restrictive tree protection covenant or easement to the City for review, record it on the property deed with Clackamas County, and submit to the City a recorded copy of the document. (P)

18. Prior to building final, the applicant shall submit a bicycle parking plan that demonstrates compliance with OCMC 17.52.040, the Bicycle Parking standards of the Oregon City Municipal Code. This plan can consist of an inventory of existing bicycle parking facilities onsite if they already meet the standards, or include a combination of existing and

proposed new facilities if more parking needs to be added or revised to meet the standards of OCMC 17.52. (P)

19. New signs that are visible from the public right of way shall be subject to OCMC 15.28 and the sign permit review process based on the zone and their type. (P)

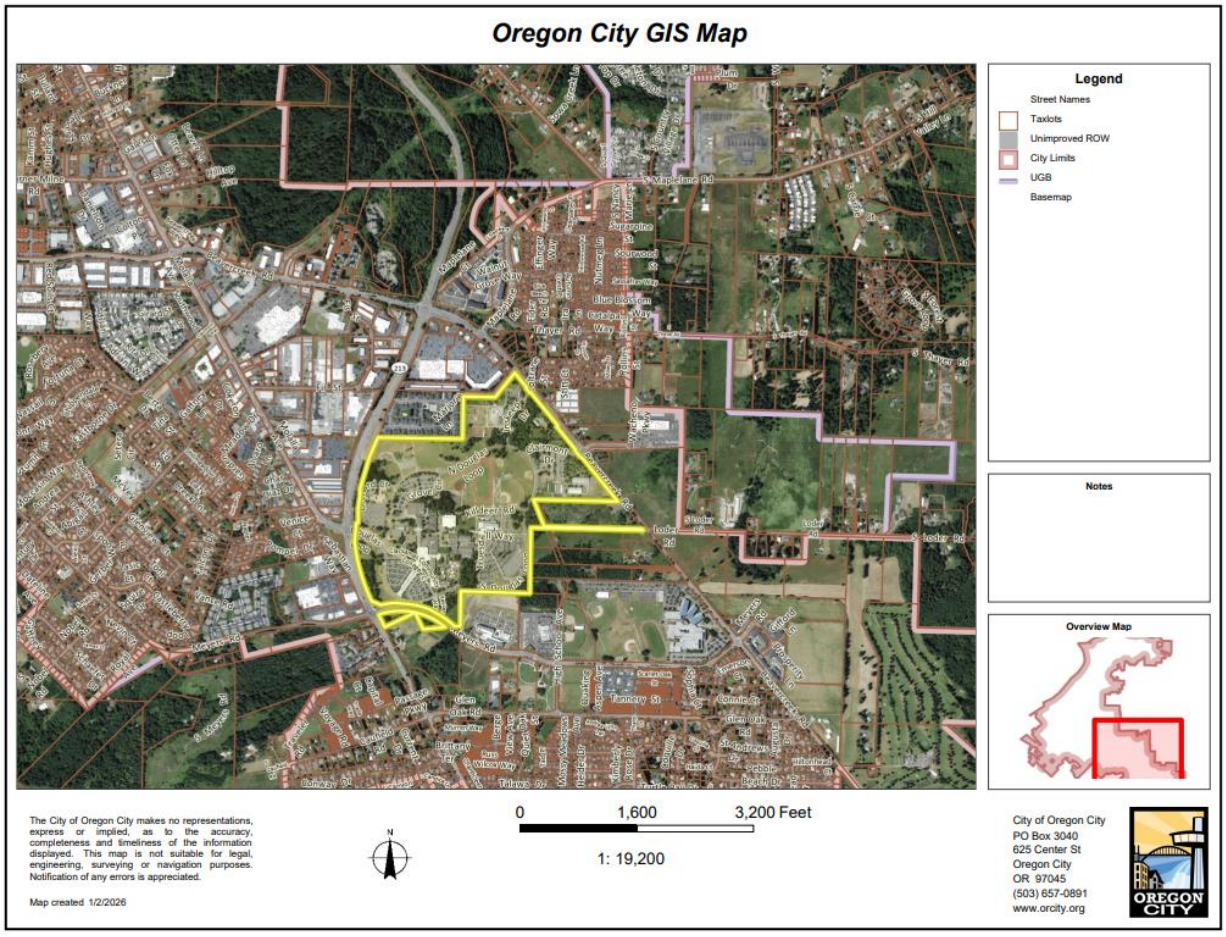
20. Visible corner moldings on the metal-sided hitting barns shall be added prior to building final. (P)

21. The applicant shall submit a statement to Planning staff that discusses how the refuse and recycling needs of the site are served within the campus's existing infrastructure. (P)

22. Installation of the required landscaping features around the restroom building (as required in Condition 12 above) is to be reviewed for compliance through a Planning inspection that shall be scheduled prior to building final. (P)

BACKGROUND:

Figure 1. Vicinity Map

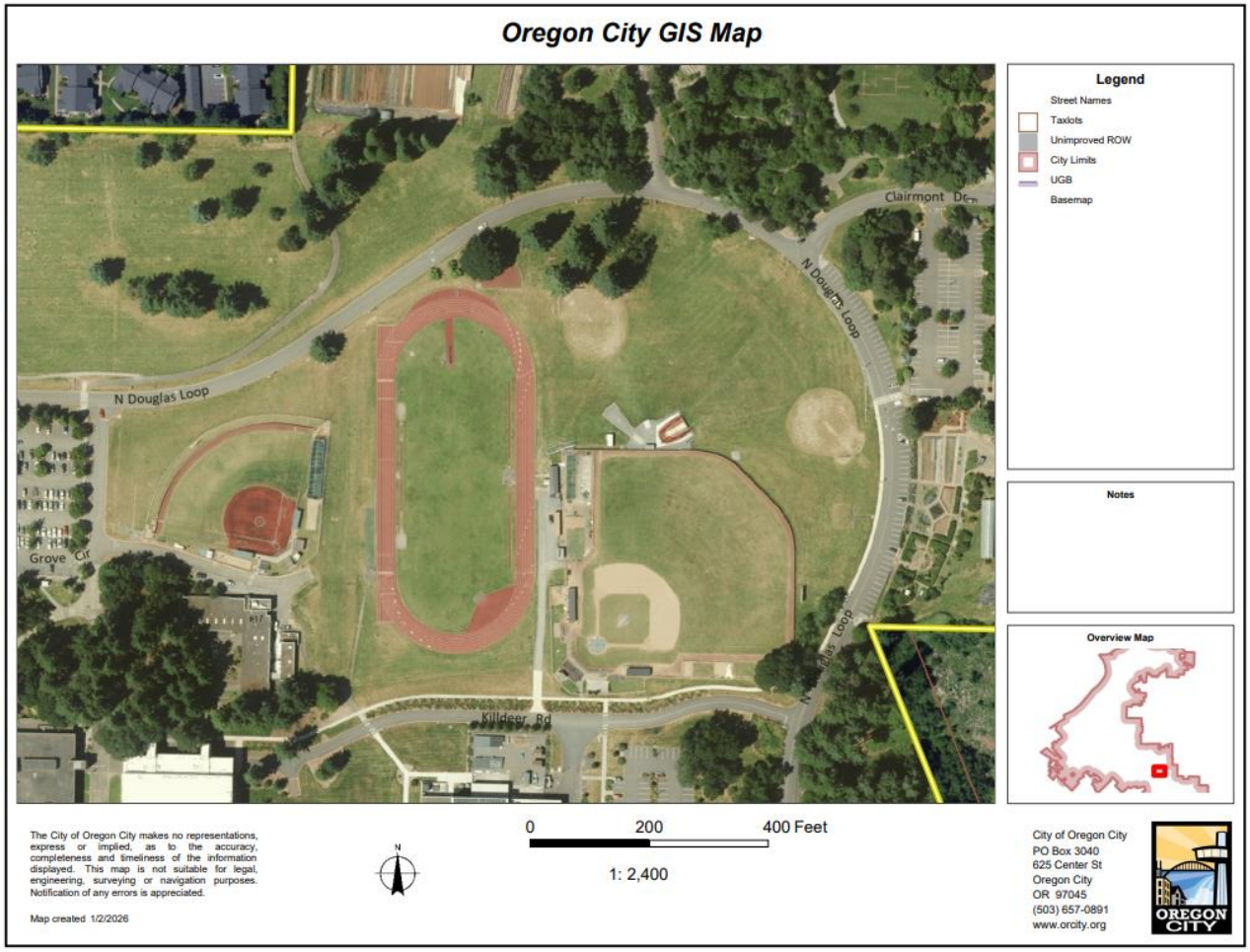


Existing Conditions (description from the applicant's submittal)

The site currently has an 8-lane track with areas for field events in the track interior. The interior of the track and exterior areas are mostly surfaced with lawn. A throws facility is on the eastern side of the track, with space for shot put, discus, and hammer throw sectors. There is a baseball field and softball field, which are being improved in Phase 1 of this project and were submitted for Land Use review in September 2025.

The Athletic Sports Complex is located near the center of the 156-acre site, more than 600 feet from the nearest public rights-of-way on Beavercreek Rd and Marjorie Lane, and bounded to the north and east by private Douglas Loop, to the south by private Killdeer Rd, and to the southeast by private Grove Circle, which provide internal vehicular circulation to the site.

Figure 2: Existing Conditions – Aerial Image



Project Description (description from the applicant's submittal)

Phase 2 links together the softball and baseball fields with new pedestrian circulation and a viewing plaza space and restroom at the baseball field, replacing the old bleachers and restroom. In addition, Phase 2 proposes to widen and replace the existing 8-lane track to add a synthetic turf soccer field in the center of the track. Field event sectors will be consolidated on the track to the east and south. A large hitting barn building is proposed at the south end of the track, with a multi-use plaza space. A 3,000-person grandstand is proposed west of the track. To serve the grandstands, a new vehicle drop-off and plaza space is proposed between the track and softball

field. Small grading improvements and an additional javelin runway are proposed at the existing throws facility.

Figure 3: Proposed Site Plan

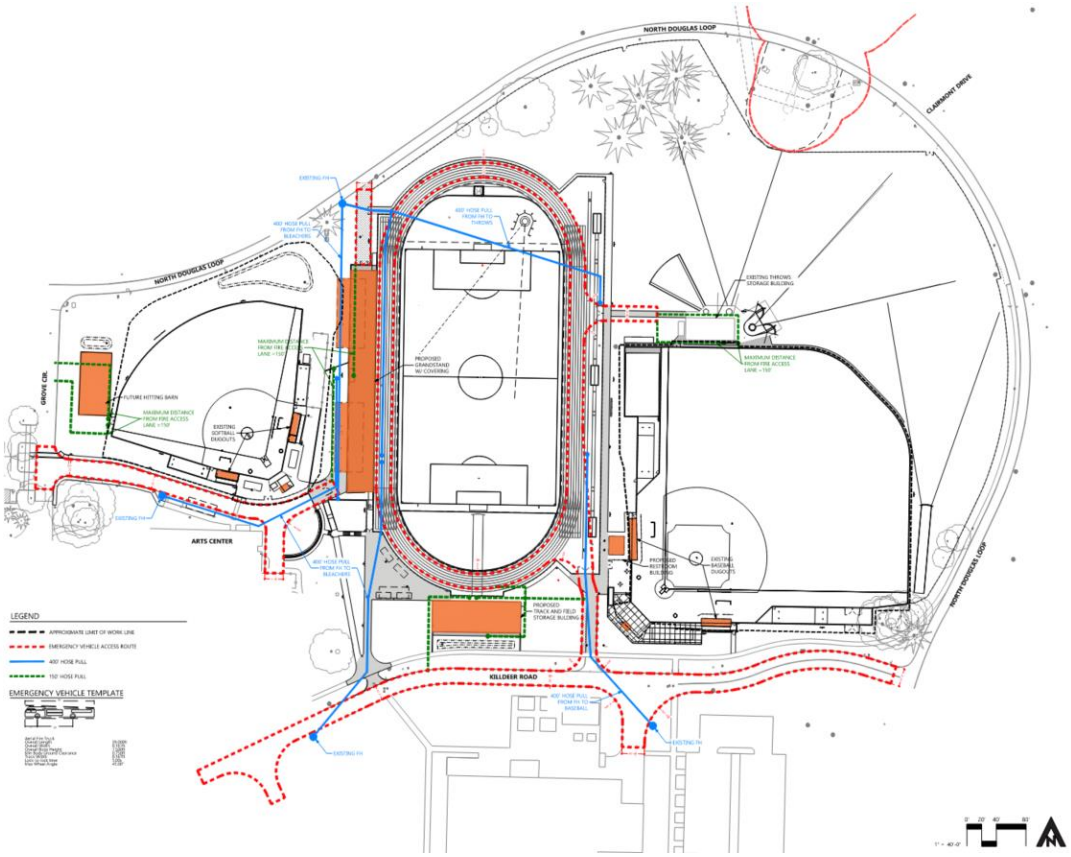


Figure 4: Proposed Building Elevations for Large Hitting Barn

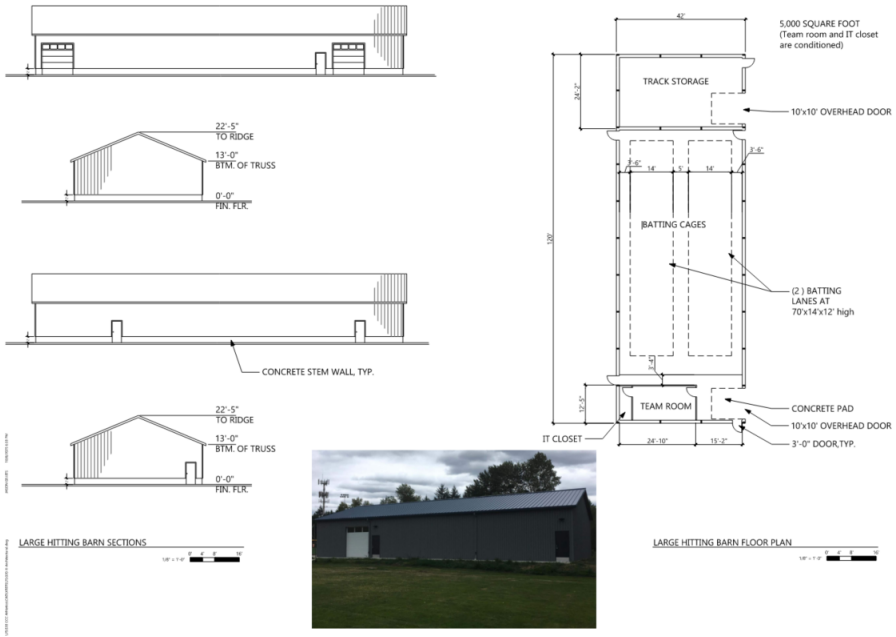


Figure 5: Proposed Building Elevations for Small Hitting Barn

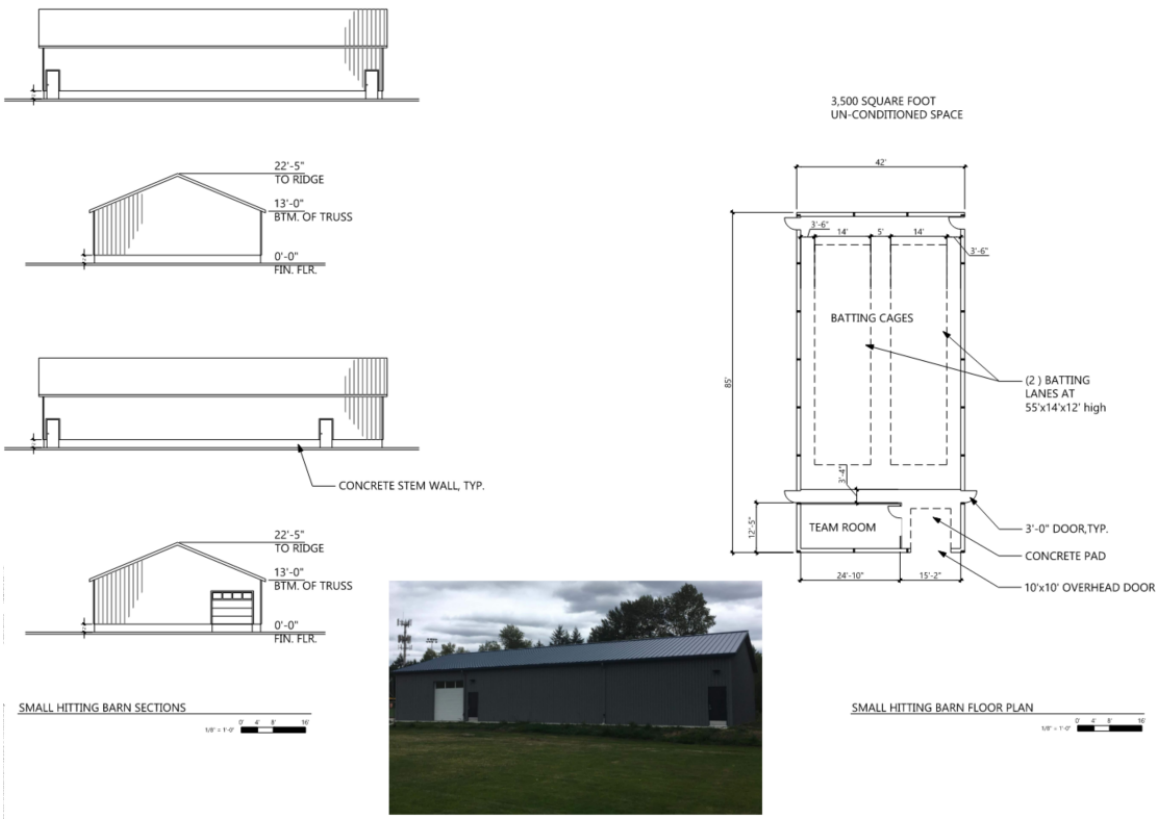


Figure 6: Proposed Building Elevations for Restroom Building

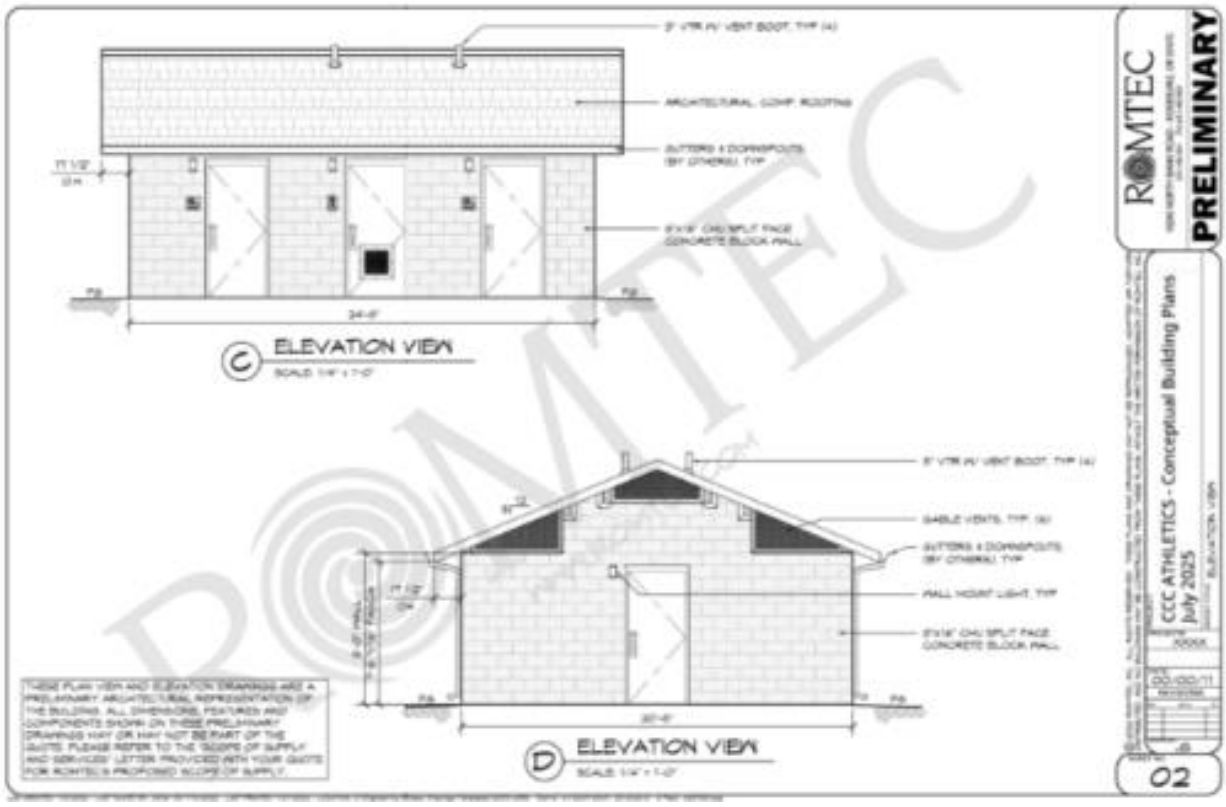
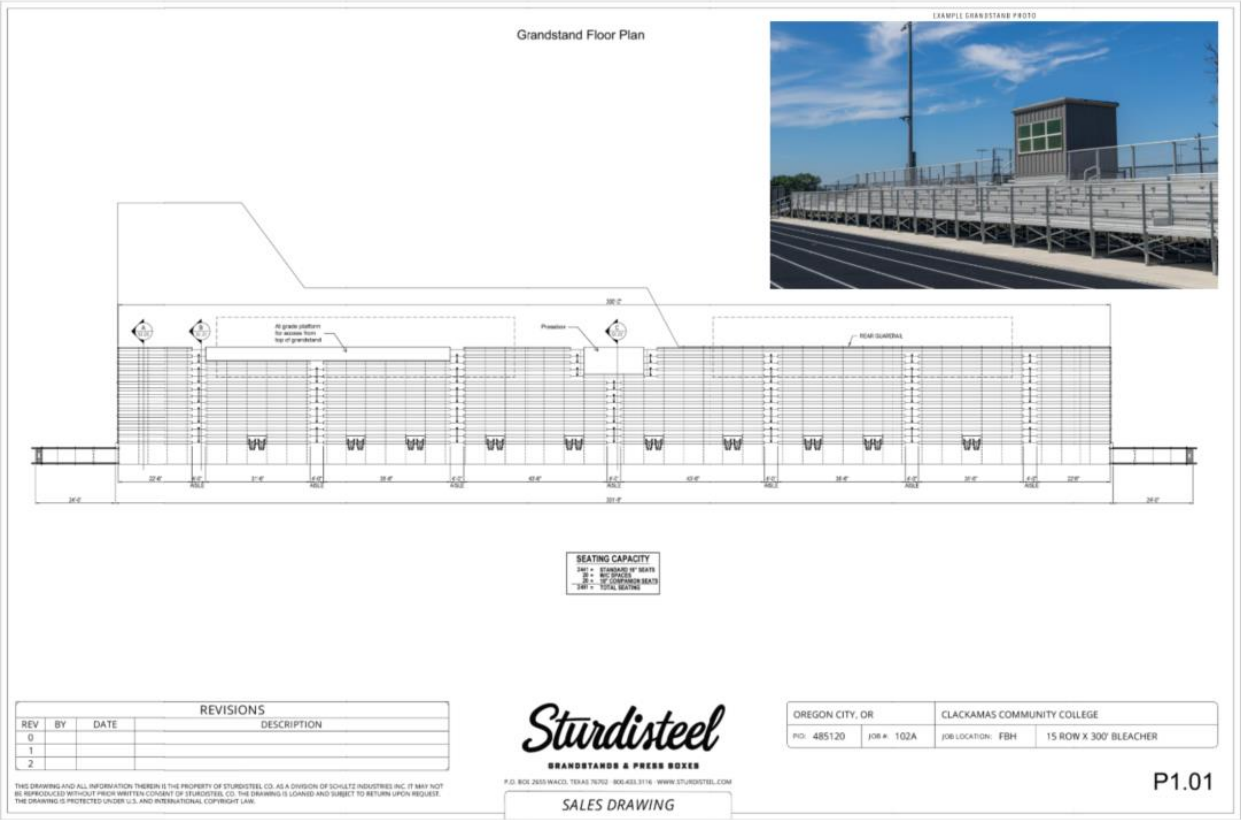


Figure 7: Proposed Building Elevations for Grandstands



1. **Permits and Approvals:** The applicant is responsible for obtaining approval and permits from each applicable governmental agency and department at Oregon City including but not limited to the Engineering and Building Divisions.

2. **Public Comment**
   As of the date of this Staff Report, no public comments pertaining the project have been received by Planning Staff. Public Comments received between the date of this Staff Report and the Planning Commission Hearing will be provided to the Planning Commission and discussed in the public hearing on that date.

ANALYSIS AND FINDINGS:

Municipal Code Standards and Requirements: The following sections of the Oregon City Municipal Code are applicable to this land use approval:

CHAPTER 12.04 – STREETS SIDEWALKS AND PUBLIC SPACES

12.04.005 - Jurisdiction and management of the public rights-of-way.
A. The City has jurisdiction and exercises regulatory management over all public rights-of-way within the City under authority of the City Charter and state law by issuing separate public works right-of-way permits or permits as part of issued public infrastructure construction plans. No work in the public right-of-way shall be done without the proper permit. Some public rights-of-way within the City are regulated by the State of Oregon Department of Transportation (ODOT) or Clackamas

County and as such, any work in these streets shall conform to their respective permitting requirements.
B. Public rights-of-way include, but are not limited to, streets, roads, highways, bridges, alleys, sidewalks, trails, paths, public easements and all other public ways or areas, including the subsurface under and air space over these areas.
C. The City has jurisdiction and exercises regulatory management over each public right-of-way whether the City has a fee, easement, or other legal interest in the right-of-way. The City has jurisdiction and regulatory management of each right-of-way whether the legal interest in the right-of-way was obtained by grant, dedication, prescription, reservation, condemnation, annexation, foreclosure or other means.
D. No person may occupy or encroach on a public right-of-way without the permission of the City. The City grants permission to use rights-of-way by franchises, licenses and permits.
E. The exercise of jurisdiction and regulatory management of a public right-of-way by the City is not official acceptance of the right-of-way, and does not obligate the City to maintain or repair any part of the right-of-way.

Finding: applicable. The City of Oregon City has jurisdiction over roads adjacent to the development property.

12.04.025 - Driveways.
Driveways shall be reviewed in accordance with OCMC 16.12.035. Driveway requirements may be modified through the procedures in OCMC 16.12.013.

Finding: applicable. See 16.12.035 for more information.

12.04.030 - Maintenance and repair.
The owner of land abutting the street where a sidewalk has been constructed shall be responsible for maintaining said sidewalk and abutting curb, if any, in good repair.

Finding: not applicable. Existing sidewalk of the street abutting the development property will be repaired as needed with other phases of an approved master plan (GLUA-24-00020 / MAS-24-00001).

12.04.031 - Liability for sidewalk injuries.
A. The owner or occupant of real property responsible for maintaining the adjacent sidewalk shall be liable to any person injured because of negligence of such owner or occupant in failing to maintain the sidewalk in good condition.
B. If the City is required to pay damages for an injury to persons or property caused by the failure of an owner or occupant to perform the duty that this chapter imposes, the owner or occupant shall compensate the City for the amount of the damages paid. The City may maintain an action in a court of competent jurisdiction to enforce this section.

Finding: not applicable. Existing sidewalk of the street abutting the development property will be repaired as needed with other phases of an approved master plan (GLUA-24-00020 / MAS-24-00001).

12.04.032 - Required sidewalk repair.

A. When the public works director determines that repair of a sidewalk is necessary, written notice shall be provided to the owner of property adjacent to the defective sidewalk.
B. The notice shall require the owner of the property adjacent to the defective sidewalk to complete the repair of the sidewalk within ninety days after the service of notice. The notice shall also state that if the repair is not made by the owner, the City may do the work and the cost of the work shall be assessed against the property adjacent to the sidewalk.
1. All sidewalks hereafter constructed in the City on improved streets shall be constructed to city standards and widths required in the Oregon City Transportation System Plan and OCMC 16.12. Sidewalks and curbs are to be constructed according to plans and specifications approved by the City Engineer.
2. Sidewalks constructed on unimproved streets shall be constructed of concrete according to lines and grades approved by the City Engineer. On unimproved streets, curbs do not have to be constructed.
C. The public works director shall cause a copy of the notice to be served personally upon the owner of the property adjacent to the defective sidewalk, or the notice may be served by registered or certified mail, return receipt requested. If after diligent search the owner is not discovered, the public works director shall cause a copy of the notice to be posted in a conspicuous place on the property, and such posting shall have the same effect as service of notice by mail or by personal service upon the owner of the property.
D. The person serving the notice shall file with the City Recorder a statement stating the time, place and manner of service or notice.

Finding: not applicable. Existing sidewalk of the street abutting the development property will be repaired as needed with other phases of an approved master plan (GLUA-24-00020 / MAS-24-00001).

12.04.050 - Retaining walls—Required.
Every owner of a lot within the City, abutting upon an improved street, where the surface of the lot or tract of land is above the surface of the improved street and where the soil or earth from the lot, or tract of land is liable to, or does slide or fall into the street or upon the sidewalk, or both, shall build a retaining wall, the outer side of which shall be on the line separating the lot, or tract of land from the improved street, and the wall shall be so constructed as to prevent the soil or earth from the lot or tract of land from falling or sliding into the street or upon the sidewalk, or both, and the owner of any such property shall keep the wall in good repair.

Finding: not applicable. No retaining walls exist or are proposed on this project adjacent to the public sidewalk.

12.04.100 - Excavations—Restoration of pavement.
Whenever any excavation shall have been made in any pavement or other street improvement on any street or alley in the City for any purpose whatsoever under the permit granted by the City Engineer, it shall be the duty of the person making the excavation to restore the pavement in accordance with the City of Oregon City Public Works Pavement Cut Standard in effect at the time a right-of-way permit is granted. The City Commission may adopt and modify the City of Oregon City Public Works Pavement Cut Standards by resolution as necessary to implement the requirements of this chapter.

Finding: not applicable. Pavement cuts are not proposed within a public streets

12.04.120 - Obstructions—Permit required.

A. Permanent Obstructions. It is unlawful for any person to place, put or maintain any obstruction, other than a temporary obstruction, as defined in subsection B of this section, in any public street or alley in the City, without obtaining approval for a right-of-way permit from the City Commission by passage of a resolution.

1. The City Engineer shall provide applicants with an application form outlining the minimum submittal requirements.

2. The applicant shall submit at least the following information in the permitting process in order to allow the City Commission to adequately consider whether to allow the placement of an obstruction and whether any conditions may be attached:

a. Site plan showing right-of-way, utilities, driveways as directed by staff;

b. Sight distance per OCMC 10.32, Traffic Sight Obstructions;

c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);

d. Alternative routes if necessary;

e. Minimizing obstruction area; and

f. Hold harmless/maintenance agreement.

3. If the City Commission adopts a resolution allowing the placement of a permanent obstruction in the right-of-way, the City Engineer shall issue a right-of-way permit with any conditions deemed necessary by the City Commission.

4. Signage that acts as an obstruction is approved through OCMC 15.28.

B. Temporary Obstructions.

1. A "temporary obstruction" is defined as an object placed in a public street, sidewalk, road, or alley which is not permanently anchored to another surface such as the pavement, sidewalk, or a building. A "temporary obstruction" includes, but is not limited to, moving containers, debris dumpsters, and seating.

a. Planters and benches are exempt from permitting unless the City Engineer finds by inspection that the planter or bench is impeding use of the right-of-way. If deemed an impeding use, a planter or bench will comply with the requirements for temporary obstructions.

2. The City Engineer, or designee, is authorized to grant a permit for a temporary obstruction.

3. The City Engineer shall provide applicants with an application form outlining the minimum submittal requirements.

4. The applicant shall submit, and the City Engineer, or designee, shall consider, at least the following items in the permitting process. Additional information may be required in the discretion of the City Engineer:

a. Site plan showing right-of-way, utilities, driveways as directed by staff;

b. Sight distance per OCMC 10.32, Traffic Sight Obstructions;

c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);

d. Handicap accessible route complying with Americans with Disability Act (ADA) standards;

e. Alternative routes if necessary;

f. Minimizing obstruction area; and

g. Hold harmless/maintenance agreement.

5. In determining whether to issue a right-of-way permit to allow a temporary obstruction, the City Engineer may issue such a permit only after finding that the following criteria have been satisfied:

a. The obstruction will not unreasonably impair the safety of people using the right-of-way and nearby residents;

b. The obstruction will not unreasonably hinder the efficiency of traffic affected by the obstruction;

c. No alternative locations are available that would not require use of the public right-of-way; and

d. Any other factor that the City Engineer deems relevant.
6. The permittee shall post a weatherproof copy of the temporary obstruction permit in plain view from the right-of-way.
7. Types
a. A short-term temporary obstruction is allowed for a period of not more than sixty consecutive calendar days. It is permitted with a temporary obstruction in the right-of-way permit.
b. A long-term temporary obstruction is allowed for a period of not more than one year, and it is permitted with a renewable right-of-way permit.
8. Signage that acts as an obstruction is approved through OCMC 15.28
C. Fees. The fee for obtaining a right-of-way permit for either a permanent obstruction or a temporary obstruction shall be set by resolution of the City Commission.

Finding: not applicable. No obstructions are proposed within the right of way.

12.04.150 - Street and alley vacations—Cost.
At the time of filing a petition for vacation of a street, alley, or any part thereof, a fee as established by City Commission resolution shall be paid to the City. The City Commission, upon hearing such petition, may grant the same in whole or in part, or may deny the same in whole or in part, or may grant the same with such reservations as would appear to be for the public interest, including reservations pertaining to the maintenance and use of underground public utilities in the portion vacated.

Finding: not applicable. No vacations are proposed as part of this application.

12.04.170 - Street design—Purpose and general provisions.
All development shall be in conformance with the City's public facility master plans, public works policies, standard drawings, and engineering specifications. All streets shall be reviewed and approved by the City Engineer prior to construction. All streets and driveway connections to another jurisdiction's facility or right-of-way must be reviewed by the appropriate jurisdiction as a condition of the preliminary plat or site planning and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Finding: complies with condition. See findings from chapter 16.12 of this report.

12.04.270 - Standard construction specifications.
The workmanship and materials for any work performed under permits issued per this chapter shall be in accordance with the current edition of the "Oregon Standard Specifications for Construction" as prepared by the Oregon Department of Transportation (ODOT) and the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the City in accordance with this ordinance, in effect at the time of application. The exception to this requirement is where this chapter and the public works street standard drawings provide other design details, in which case the requirements of this chapter and the public works street standard drawings shall control. In the case of work within ODOT or Clackamas County rights-of-way, work shall be in conformance with their respective construction standards.

Finding: not applicable. No public street improvements are required or proposed.

CHAPTER 13.12 – STORMWATER MANAGEMENT

13.12.050 - Applicability and exemptions.

This chapter establishes performance standards for stormwater conveyance, quantity and quality. Additional performance standards for erosion prevention and sediment control are established in OCMC 17.47.

A. Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all stormwater systems constructed with any development activity, except as follows:

1. The conveyance facilities are located entirely on one privately owned parcel;

2. The conveyance facilities are privately maintained; and

3. The conveyance facilities receive no stormwater runoff from outside the parcel's property limits. Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.

Finding: applicable. Connection to a public stormwater conveyance system is required to serve this development.

B. Water Quality and Flow Control. The water quality and flow control requirements of this chapter shall apply to the following proposed uses or developments, unless exempted under subsection C:

1. Activities located wholly or partially within water quality resource areas pursuant to OCMC 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the NROD or will disturb more than one thousand square feet of existing impervious surface within the NROD as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given five-year period; or

2. Activities that create or replace more than five thousand square feet of impervious surface, cumulated over any given five-year period.

Finding: Applicable. The proposed development will create or replace more than 5000 square feet of impervious area.

C. Exemptions. The following exemptions to subsection B of this section apply:

1. An exemption to the flow control requirements of this chapter will be granted when the development site discharges to the Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred-year floodplain or is up to ten feet above the design flood elevation as defined in OCMC 17.42, provided that the following conditions are met:

a. The project site is drained by a conveyance system that is comprised entirely of man-made elements (e.g. pipes, ditches, culverts outfalls, outfall protection, etc.) and extends to the ordinary high water line of the exempt receiving water; and

b. The conveyance system between the project site and the exempt receiving water has sufficient hydraulic capacity and erosion stabilization measures to convey discharges from the proposed conditions of the project site and the existing conditions from non-project areas from which runoff is collected.

2. Projects in the following categories are generally exempt from the water quality and flow control requirements:

a. Stream enhancement or restoration projects approved by the city.

b. Farming practices as defined by ORS 30.960 and farm use as defined in ORS 214.000; except that buildings associated with farm practices and farm use are subject to the requirements of this chapter.

c. Actions by a public utility or any other governmental agency to remove or alleviate an emergency condition.

d. Road and parking area preservation/maintenance projects such as pothole and square cut patching, surface sealing, replacing or overlaying of existing asphalt or concrete pavement, provided the preservation/maintenance activity does not expand the existing area of impervious coverage above the thresholds in subsection B of this section.

e. Pedestrian and bicycle improvements (sidewalks, trails, pathways, and bicycle paths/lands) where no other impervious surfaces are created or replaced, built to direct stormwater runoff to adjacent vegetated areas.

f. Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics.

g. Maintenance or repair of existing utilities.

Finding: not applicable. The proposed development does not meet the criteria for exemption to the flow control requirements of this chapter.

D. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices, as defined in the public works stormwater and grading design standards:

1. Bulk petroleum storage facilities;

2. Above ground storage of liquid materials;

3. Solid waste storage areas, containers, and trash compactors for commercial, industrial, or multi-family uses;

4. Exterior storage of bulk construction materials;

5. Material transfer areas and loading docks;

6. Equipment and/or vehicle washing facilities;

7. Development on land with suspected or known contamination;

8. Covered vehicle parking for commercial or industrial uses;

9. Industrial or commercial uses locating in high traffic areas, defined as average daily count trip of two thousand five hundred or more trips per day; and

10. Land uses subject to DEQ 1200-Z Industrial Stormwater Permit Requirements.

Finding: not applicable. The development has not proposed use of the land that requires additional management practices as defined in the Public Works Stormwater and Grading Design Standards.

13.12.080 - Submittal requirements.

A. Applications subject to stormwater conveyance, water quality, and/or flow control requirements of this chapter shall prepare engineered drainage plans, drainage reports, and design flow calculation reports in compliance with the submittal requirements of the public works stormwater and grading design standards.

B. Each project site, which may be composed of one or more contiguous parcels of land, shall have a separate valid City approved plan and report before proceeding with construction.

Finding: complies with condition. See findings from section 13.12.090 of this report.

13.12.090 - Approval criteria for engineered drainage plans and drainage report.

An engineered drainage plan and/or drainage report shall be approved only upon making the following findings:

A. The plan and report demonstrate how the proposed development and stormwater facilities will accomplish the purpose statements of this chapter.

B. The plan and report meet the requirements of the public works stormwater and grading design standards adopted by resolution under OCMC 13.12.020.

C. The storm drainage design within the proposed development includes provisions to adequately control runoff from all public and private streets and roof, footing, and area drains and ensures future extension of the current drainage system.

D. Streambank erosion protection is provided where stormwater, directly or indirectly, discharges to open channels or streams.

E. Specific operation and maintenance measures are proposed that ensure that the proposed stormwater quantity control facilities will be properly operated and maintained.

Finding: complies with condition. The applicant's submittal did not include downstream analysis or conveyance calculations. The developer shall provide finalized engineered drainage plan(s), drainage report(s), and design flow calculation report(s) stamped and signed by a licensed engineer addressing all items from Section 9.3 & 9.4 of the Public Works Stormwater and Grading Design Standards prior to receiving a permit and beginning construction. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

13.12.100 - Alternative materials, alternative design and methods of construction.

The provisions of this chapter are not intended to prevent the use of any material, alternate design or method of construction not specifically prescribed by this chapter or the public works stormwater and grading design standards, provided any alternate has been approved and its use authorized by the City Engineer. The City Engineer may approve any such alternate, provided that

the City Engineer finds that the proposed design is satisfactory and complies with the intent of this chapter and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed by this chapter in effectiveness, suitability, strength, durability and safety. The City Engineer shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternate shall be recorded and entered in the City files.

Finding: Not Applicable. The applicant has not proposed alternative design methods requiring special approval by the City Engineer. However, should the applicant propose such methods with the public facilities construction plan submittal, the proposal will be reviewed and approved by the City Engineer as required.

13.12.110 - Transfer of engineering responsibility.

Project drainage plans shall always have a project engineer. If the project engineer is changed during the course of the work, the City shall be notified in writing and the work shall be stopped until the replacement engineer has agreed to accept the responsibilities of the project engineer. The new project engineer shall provide written notice of accepting project responsibility to the City within seventy-two hours of accepting the position as project engineer.

Finding: See section 16.12.014 regarding requirement to execute a "Developer/Engineer Agreement for Public Works Improvements"

13.12.120 - Standard construction specifications.

The workmanship and materials shall be in accordance with the current edition of the "Standard Specifications for Public Works Construction," as prepared by the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the City, in effect at the time of application. The exception to this requirement is where this chapter and the Public Works Stormwater and Grading Design Standards provide other design details, in which case the requirements of this chapter and the Public Works Stormwater and Grading Design Standards shall be complied with.

Finding: complies with condition. The workmanship and materials for any work performed under permits issued by Oregon City Public Works shall be in accordance with the edition of the "Oregon Standard Specifications for Construction" as prepared by the Oregon Department of Transportation (ODOT) and the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the city. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

13.12.140 - Maintenance of public stormwater facilities.

A. A stormwater facility that receives stormwater runoff from a public right-of-way shall be a public facility. Upon expiration of the warranty period and acceptance by the City as described below, the City shall be responsible for maintenance of those public stormwater facilities. Access for maintenance of the stormwater facilities shall be provided to the City through the granting of a stormwater easement or other means acceptable to the City.

Finding: not applicable. All stormwater facilities proposed are private.

B. Responsibility for maintenance of stormwater facilities including all landscaping, irrigation systems, structures and appurtenances shall remain with the property owner/developer for two years (known as the warranty period). The owner/developer shall provide the City a separate two-year landscaping maintenance surety bond for one hundred ten percent of the landscaping cost. Transfer of maintenance of stormwater conveyance systems shall occur when the City accepts the stormwater conveyance system.

Finding: not applicable. All stormwater facilities proposed are private.

13.12.145 - Maintenance of private stormwater facilities.

A. An applicant shall submit an operation and maintenance plan for each proposed stormwater facilities, unless exempted in the Public Works Stormwater and Grading Design Standards. The information in the operation and maintenance plan shall satisfy the requirements of the Public Works Stormwater and Grading Design Standards.

B. Private owners are required to inspect and maintain stormwater facilities on their property in accordance with an approved operation and maintenance plan. A maintenance log is required to document facility inspections and specific maintenance activities. The log shall be available to City inspection staff upon request.

C. Failure to operate or maintain a stormwater facility according to the operation and maintenance plan may result in an enforcement action under Section 13.12.150.

Finding: complies with condition. Private stormwater management facilities are required and proposed by the development. The property owner(s) shall execute an agreement providing maintenance of, and giving Oregon City access to, privately-owned stormwater management facilities and pay associated recording fees. The agreement shall include a site plan identifying all privately-owned stormwater management facilities and an operation and maintenance plan for each type of stormwater facility in accordance with the Public Works Stormwater and Grading Design Standards. The agreement shall run with the land and be applicable to subsequent property owners. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

13.12.170 - Permits from other jurisdictions.

A. The Oregon State Department of Environmental Quality (DEQ) currently issues NPDES 1200-C permits for projects that cover areas of one acre or greater. No permit shall be issued for projects of this size (or any other size as modified by DEQ) without a copy of said DEQ permit being on file with Oregon City. DEQ is responsible for policing its own permits; however, if City personnel observe conditions that are believed to be in violation of any such permit, and cannot get corrections made, the City will bring such conditions to the attention of the appropriate DEQ representatives.

Finding: complies with condition. The development proposes to disturb more than 1.0 acre. The developer shall obtain a 1200-C (NPDES) permit from Oregon Department of Environmental Quality (DEQ) for construction activities one acre or greater prior to receiving a permit and beginning construction. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

B. Projects may require Oregon State Division of State Lands (DSL) and/or United States Army Corps of Engineers (USACE) permits. If such permits are required, no permission to construct will be granted until such a time as a copy of such permit is on file with the City or notice is received from those agencies that a permit is not required. DSL/USACE is responsible for enforcing its own permits; however, if City personnel observe conditions that are believed to be in violation of any such permit, and cannot get corrections made, the City will bring such conditions to the attention of the appropriate DSL/USACE representatives.

Finding: not applicable. A permit from DSL or USACOE is not required of this project.

C. Projects may require Oregon State Department of Fish and Wildlife (ODFW) permits. When ODFW permits are required, no work will be authorized until the receipt of a copy of the ODFW permit. ODFW is responsible for policing its own permits; however, if City personnel observe conditions that are believed to be in violation of any such permit, and cannot get corrections made, the City will bring such conditions to the attention of the appropriate ODFW representatives.

Finding: not applicable. A permit from ODFW is not required of this project.

CHAPTER 15.48 – GRADING, FILLING AND EXCAVATING

15.48.030 Applicability—Grading permit required.

A. A city-issued grading permit shall be required before the commencement of any of the following filling or grading activities:

1. Grading activities in excess of ten cubic yards of earth;

2. Grading activities which may result in the diversion of existing drainage courses, both natural and man-made, from their natural point of entry or exit from the grading site;

3. Grading and paving activities resulting in the creation of impervious surfaces greater than two thousand square feet or more in area;

4. Any excavation beyond the limits of a basement or footing excavation, having an unsupported soil height greater than five feet after the completion of such a structure; or

5. Grading activities involving the clearing or disturbance of one-half acres (twenty-one thousand seven hundred eighty square feet) or more of land.

B. Those fill and grading activities proposed to be undertaken in conjunction with a land use application, including but not limited to subdivisions, planned unit developments, partitions and site plan reviews, are subject to the standards of this chapter. However, a separate grading permit is not required. Approval of the construction plans submitted through the land use application process shall constitute the grading permit required under this chapter.

Finding: complies with condition. Grading and paving activities resulting in the creation of impervious surfaces greater than two thousand square feet or more in area. The developer shall obtain a city-issued grading permit before the commencement of any grading activities. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

15.48.040 - Grading permit exemptions.

The following filling and grading activities shall not require the issuance of a grading permit:

A. Excavation for utilities, or for wells or tunnels allowed under separate permit by other governmental agencies;

B. An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. The placement of any fill material removed from such an excavation requires a grading permit if:

1. It exceeds fifty cubic yards,

2. More than ten cubic yards are removed from the site, or

3. The fill is placed on the site to a depth greater than one foot;

C. Farming practices as defined in ORS 30.930 and farm uses as defined in ORS 215.203, except that buildings associated with farm practices and farm uses are subject to the requirements of this chapter;

D. Excavation for cemetery graves;

E. Sandbagging, diking, ditching, filling or similar work when done to protect life or property during an emergency;

F. Repaving of existing paved surfaces that does not alter existing drainage patterns;

G. Maintenance work on public roads performed under the direction of the city, Clackamas County or Oregon State Department of Transportation personnel.

Finding: not applicable. The application does not qualify for an exemption.

15.48.090 Submittal requirements.

An engineered grading plan or an abbreviated grading plan shall be prepared in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards whenever a city approved grading permit is required. In addition, a geotechnical engineering report and/or residential lot grading plan may be required pursuant to the criteria listed below.

A. Abbreviated Grading Plan. The city shall allow the applicant to submit an abbreviated grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards if the following criteria are met:

*1. No portion of the proposed site is within the flood management area overlay district pursuant to **Chapter 17.42**, the unstable soils and hillside constraints overlay district pursuant to **Chapter 17.44**, or a water quality resource area pursuant to **Chapter 17.49**; and*

2. The proposed filling or grading activity does not involve more than fifty cubic yards of earth.

B. Engineered Grading Plan. The city shall require an engineered grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards to be

prepared by a professional engineer if the proposed activities do not qualify for abbreviated grading plan.

C. Geotechnical Engineering Report. The city shall require a geotechnical engineering report in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer who specializes in geotechnical work when any of the following site conditions may exist in the development area:

1. When any publicly maintained facility (structure, street, pond, utility, park, etc.) will be supported by any engineered fill;

2. When an embankment for a stormwater pond is created by the placement of fill;

3. When, by excavation, the soils remaining in place are greater than three feet high and less than twenty feet wide.

D. Residential Lot Grading Plan. The city shall require a residential lot grading plan in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer for all land divisions creating new residential building lots or where a public improvement project is required to provide access to an existing residential lot.

Finding: complies with conditions. The developer shall provide an engineered grading plan prepared by a professional engineer in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

CHAPTER 16.12 – MINIMUM PUBLIC IMPROVEMENTS AND DESIGN STANDARDS FOR DEVELOPMENT

16.12.010 - Purpose and general provisions.

The purpose of this chapter is to identify the standards for development in and adjacent to spaces which benefit the public including right-of-way, access to the right-of-way, public off-street pedestrian and bicycle accessways, and easements. All development shall be in conformance with the policies and design standards established by this chapter and with applicable standards in the City's public facility master plans and city design standards and specifications. In reviewing applications for development, the City Engineer shall take into consideration any approved development and the remaining development potential of adjacent properties. All street, water, sanitary sewer, storm drainage and utility plans associated with any development shall be reviewed and approved by the City Engineer prior to construction. All streets, driveways or storm drainage connections to another jurisdiction's facility or right-of-way shall be reviewed by the appropriate jurisdiction as a condition of the preliminary plat and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Finding: complies with condition. Compliance with the "purpose and general provisions" of chapter 16.12 can be met by adhering to the following: The development plans shall comply with all current Oregon City Public Works design standards, specifications, codes, and policies prior to receiving a permit and beginning construction. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

16.12.011 - Applicability.

A. Compliance with this chapter is required for all development including land divisions, site plan and design review, master plan, detailed development plan and conditional use applications and all public improvements that are required in conjunction with a land use decision.

B. Compliance with this chapter is also required for new construction or additions which exceed fifty percent of the existing square footage of all single-family detached residential and middle housing units' living space. Garages, carports, sheds, and porches may not be included in the calculation if these spaces are not living spaces. Accessory dwelling units are not subject to compliance with this chapter. All single-family detached residential and middle housing units shall provide any necessary dedications, easements or agreements as identified in the transportation system plan and this chapter, subject to constitutional limitations. In addition, the street frontage shall be improved to include the following priorities for improvements:

1. Improve street pavement, construct curbs, gutters, sidewalks and planter strips; and

2. Plant street trees.

The cost of compliance with the standards identified in subsections 16.12.011.B.1 and 16.12.011.B.2 is calculated based on the square footage valuation from the state of Oregon Building Codes Division and limited to ten percent of the total construction costs. The value of the alterations and improvements is based on the total construction costs for a complete project rather than costs of various project component parts subject to individual building permits. The entire proposed construction project cost includes engineering and consulting fees and construction costs. It does not include permit fees, recording fees, or any work associated with drafting or recording dedications or easements.

C. Exemptions. The following are exempt from review by this chapter unless public improvements, driveways, PUEs, or other items regulated by this chapter are proposed:

1. Minor Site Plan and Design Review applications.

2. Work within the right-of-way.

3. Lot Line Adjustments and Abandonments.

4. Public capital improvement projects.

Finding: applicable. The application is a Detailed Development Plan; therefore, the development shall follow the standards set forth in OCMC 16.12.

16.12.012 - Jurisdiction and management of the public rights-of-way.

The City has jurisdiction and exercises regulatory management over all public rights-of-way as defined and outlined within 12.04 of the Oregon City Municipal Code.

Finding: applicable. The City has exercised its regulatory management authority by providing findings within this staff report with conditions to be met by the applicant prior to working within all public rights-of-way.

16.12.013 - Modifications.

The applicant may request and the review body may consider modification of the standards in this chapter resulting from constitutional limitations restricting the City's ability to require the dedication of property or for any other reason, based upon the criteria listed below and other criteria identified in the standard to be modified. All modifications, except for adjustments approved by the City Engineer for tree preservation purposes pursuant to Section 16.12.013.A, shall be processed through a Type II land use application and may require additional evidence from a transportation engineer or others to verify compliance. Compliance with the following criteria is required:

A. Compliance with the following criteria is required:

The modification meets the intent of the standard;

The modification provides safe and efficient movement of pedestrians, motor vehicles, bicyclists and freight;

The modification is consistent with an adopted transportation or utility plan;

The modification is complementary with a surrounding street design; or, in the alternative;

If a modification is requested for constitutional reasons, the applicant shall demonstrate the constitutional provision or provisions to be avoided by the modification and propose a modification that complies with the state or federal constitution. The City shall be under no obligation to grant a modification in excess of that which is necessary to meet its constitutional obligations.

Finding: not applicable. No modification has been requested.

B. The following modifications shall be processed as a Type I modification by the City Engineer using the criteria in 16.12.13.A.

1. Modifications to driveway location, size, and sharing standards in 16.12.035;

2. Modifications to sidewalk and planter strips widths and location in 16.12.016 that preserve existing street trees or trees on private property to ensure compliance with ADA standards.

Finding: not applicable. No Type I modification has been requested.

16.12.014 - Administrative provisions.

An applicant shall submit the following items to the City and complete the following tasks prior to proceeding with construction of proposed development plans. These items include the following:

Pre-Design Meeting;

Final Engineering Plans, Stamped and Signed by an Oregon Licensed Professional Engineer;

Stormwater Report, Stamped and Signed by an Oregon Licensed Professional Engineer;

D. Geotechnical Report, Stamped and Signed by an Oregon Licensed Professional Engineer (if applicable);

E. Engineer's Preliminary and Final Cost Estimates (also may be known as engineer's opinion of probable construction cost);

F. Plan Check and Inspection Fees (as set by City resolution);

G. Certificate of Liability Insurance for City funded public projects contracted by the City (not less than one million dollars single incident and two million dollars aggregate);

H. Preconstruction Meeting;

I. Financial Guarantee(s) per OCMC 17.50.140;

J. Applicable Approvals/Permits from other agencies or entities;

K. Developer/Engineer Agreement for public works improvements.

An applicant shall submit the following additional items to the City and complete the following tasks prior to completing construction of proposed development plans. These items include the following:

L. Project Engineer's Certificate of Completion;

M. Stormwater Operation and Maintenance Easement (if applicable);

N. Deed of Dedication (Bargain and Sale Deed);

O. Recorded Plat and/or Easements (if applicable);

P. Recorded Non-Remonstrance Covenant Agreement;

Q. Land Division Compliance Agreement (if applicable);

R. Permanent Stabilization and/or Restoration of the impact from the development;

S. Fulfillment of all Conditions of Approval;

T. Payment of all Outstanding Fees;

U. Maintenance Guarantee(s). per OCMC 17.50.141;

V. Indemnity Agreement (if applicable);

W. Completed Punchlist;

X. As-Built Drawings;

Details on individual items required by this subsection can be obtained by contacting public works. Many items, such as the engineer's cost estimate and plan check and inspection fee, maybe be submitted in conjunction with documentation for other infrastructure improvements that are done with the development (such as street, sanitary sewer, and water).

Finding: complies with condition. The developer shall submit or address all items in section 16.12.014 of the Oregon City Municipal Code based on the timing requirements contained therein

and as deemed applicable by the City. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

16.12.015 - Street design—Generally.

Development shall be required to provide existing or future connections to adjacent sites through the use of vehicular and pedestrian access easements where applicable. Development shall provide any necessary dedications, easements or agreements as identified in the transportation system plan, trails master plan, and/or parks and recreation master plan and this chapter, subject to constitutional limitations. The location, width and grade of street shall be considered in relation to: Existing and planned streets, topographical conditions, public convenience and safety for all modes of travel, existing and identified future transit routes and pedestrian/bicycle accessways, overlay districts, and the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. To the extent possible, proposed streets shall connect to all existing or approved stub streets that abut the development site. The arrangement of streets shall either:

A. Provide for the continuation or appropriate projection of existing principal streets in the surrounding area and on adjacent parcels or conform to a plan for the area approved or adopted by the City to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical;

B. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the City Engineer. Notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future. Access control in accordance with OCMC 16.12.017 shall be required to preserve the objectives of street extensions.

C. Adequate right-of-way and improvements to streets, pedestrian ways, bike routes and bikeways, and transit facilities shall be provided and be consistent with the City's transportation system plan. Consideration shall be given to the need for street widening and other improvements in the area of the proposed development impacted by traffic generated by the proposed development. This shall include, but not be limited to, improvements to the right-of-way, such as installation of lighting, signalization, turn lanes, median and parking strips, traffic islands, paving, curbs and gutters, sidewalks, bikeways, street drainage facilities and other facilities needed because of anticipated vehicular and pedestrian traffic generation.

Finding: Compiles as proposed. All streets along the development property frontage are fully improved and meet the requirements of the Oregon City Transportation System Plan. Incremental required frontage improvements are contained in master plan (GLUA-24-00020 / MAS-24-00001).

16.12.016 - Street design.

All development regulated by this chapter shall provide street improvements in compliance with the standards in Table 16.12.016 depending on the street classification set forth in the transportation system plan and the comprehensive plan designation of the adjacent property, unless an alternative plan has been adopted. The table implements the adopted transportation

system plan and illustrates the maximum design standards. These standards may be reduced with an alternative street design which may be approved based on the modification criteria in OCMC 16.12.013. The steps for reducing the street design are found in the transportation system plan.

Table 16.12.016 Street Design

To read the table select the road classification as identified in the Transportation System Plan and the Comprehensive Plan designation of the adjacent properties to find the maximum design standards for the road cross section. If the Comprehensive Plan designation for lands on either side of the street differs, the wider right-of-way standard shall apply.

Road Classification	***Comprehensive Plan Designation***	***Right-of-Way Width***	***Pavement Width***	***Public Access***	***Sidewalk***	***Landscape Strip***	***Bike Lane***	***Street Parking***	***Travel Lanes***	***Median***
Major Arterial	*Mixed Use, Commercial or Public/ Quasi Public*	*116 ft.*	*94 ft.*	*0.5 ft.*	*10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells*		*6 ft.*	*8 ft.*	*(5) 12 ft. Lanes*	*6 ft.*
	Industrial	*120 ft.*	*88 ft.*	*0.5 ft.*	*5 ft.*	*10.5 ft.*	*6 ft.*	*N/A*	*(5) 14 ft. Lanes*	*6 ft.*
	Residential	*126 ft.*	*94 ft.*	*0.5 ft.*	*5 ft.*	*10.5 ft.*	*6 ft.*	*8 ft.*	*(5) 12 ft. Lanes*	*6 ft.*
Minor Arterial	*Mixed Use, Commercial or Public/Quasi Public*	*116 ft.*	*94 ft.*	*0.5 ft.*	*10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells*		*6 ft.*	*8 ft.*	*(5) 12 ft. Lanes*	*6 ft.*

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
	Industrial	118 ft.	86 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(5) 12 ft. Lanes	N/A
	Residential	100 ft.	68 ft.	0.5 ft.	5 ft.	10.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	6 ft.
Collector	Mixed Use, Commercial or Public/Quasi Public	86 ft.	64 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells		6 ft.	8 ft.	(3) 12 ft. Lanes	N/A
	Industrial	88 ft.	62 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 12 ft. Lanes	N/A
	Residential	85 ft.	59 ft.	0.5 ft.	5 ft.	7.5 ft.	6 ft.	7 ft.	(3) 11 ft. Lanes	N/A
Local	Mixed Use, Commercial or Public/ Quasi Public	62 ft.	40 ft.	0.5 ft.	10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells		N/A	8 ft.	(2) 12 ft. Lanes	N/A

Road Classification	Comprehensive Plan Designation	Right-of-Way Width	Pavement Width	Public Access	Sidewalk	Landscape Strip	Bike Lane	Street Parking	Travel Lanes	Median
	Industrial	60 ft.	38 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 19 ft. Shared Space			N/A
	Residential	54 ft.	32 ft.	0.5 ft.	5 ft.	5.5 ft.	(2) 16 ft. Shared Space			N/A

1. Pavement width includes bike lane, street parking, travel lanes and median.

2. Public access, sidewalks, landscape strips, bike lanes and on-street parking are required on both sides of the street in all designations. The right-of-way width and pavement widths identified above include the total street section.

3. A 0.5 foot curb is included in landscape strip or sidewalk width.

4. Travel lanes may be through lanes or turn lanes.

5. The 0.5 foot public access provides access to adjacent public improvements.

6. Alleys shall have a minimum right-of-way width of twenty feet and a minimum pavement width of sixteen feet. If alleys are provided, garage access shall be provided from the alley.

7. A raised concrete median or landscape median shall be utilized for roads identified to have access restrictions.

8. A public utility easement (PUE) shall be provided on both sides of the right-of-way or public access easement on private property as identified in 16.12.085.

A. Sidewalks. The applicant shall provide for sidewalks on both sides of all public streets, on any private street if so required by the decision-maker, and in any special pedestrian way within the development. Both sidewalks and curbs are to be constructed to city standards and at widths set forth above, and according to plans and specifications provided by the City Engineer. Exceptions to this requirement may be allowed in order to accommodate topography, trees or some similar site constraint. In the case of major or minor arterials, the decision-maker may approve a development without sidewalks where sidewalks are found to be dangerous or otherwise impractical to construct or are not reasonably related to the applicant's development. The decision-maker may require the applicant to provide sidewalks concurrent with the issuance of the initial building permit within the area that is the subject of the development application. Applicants for partitions may be allowed to meet this requirement by providing the City with a financial guarantee per OCMC 16.12.110.

B. Pedestrian and Bicycle Accessways Routes. If deemed appropriate to extend pedestrian and bicycle routes, existing or planned, the decision-maker may require the installation of separate pedestrian and bicycle facilities.

C. Street Name Signs and Traffic Control Devices. The applicant shall install street signs and traffic control devices as directed by the City Engineer. Street name signs and traffic control devices shall be in conformance with all applicable city regulations and standards.

D. Street Lights. The applicant shall install street lights which shall be served from an underground source of supply. Street lights shall be in conformance with all City regulations.

E. Any new street proposed with a pavement width of less than thirty-two feet shall be processed through OCMC 16.12.013 and meet minimum life safety requirements, which may include fire suppression devices as determined by the Fire Marshall to assure an adequate level of fire and life safety. The modified street shall have no less than a twenty-foot wide unobstructed travel lane.

F. All development shall include vegetated planter strips that are five feet in width or larger and located between the sidewalk and curb unless otherwise approved pursuant to this chapter. All development shall utilize the vegetated planter strip for the placement of street trees or place street trees in other acceptable locations, as prescribed by OCMC 12.08. Development proposed along a collector, minor arterial, or major arterial roads may place street trees within tree wells within a wider sidewalk in lieu of a planter strip. In addition to street trees per OCMC 12.08, vegetated planter strips shall include ground cover and/or shrubs spaced four feet apart and appropriate for the location. No invasive or nuisance plant species shall be permitted.

G. Vehicle and pedestrian access easements may serve in lieu of streets when approved by the decision maker and only where dedication of a street is deemed impracticable.

H. Vehicular and pedestrian easements shall allow for public access and shall comply with all applicable pedestrian access requirements.

Finding: Not appliable. All streets along the development property frontage are fully improved and meet the requirements of the Oregon City Transportation System Plan. Only ADA improvements to existing pedestrian paths along the frontage streets is required through conditions of approval already written in previous sections of this document. Requirements for pedestrian easements has been conditioned with a separate land use decision.

16.12.033 - Mobility standards.

Development shall demonstrate compliance with intersection mobility standards. When evaluating the performance of the transportation system, the City of Oregon City requires all intersections, except for the facilities identified in subsection E below, to be maintained at or below the following mobility standards during the two-hour peak operating conditions. The first hour has the highest weekday traffic volumes and the second hour is the next highest hour before or after the first hour. Except as provided otherwise below, this may require the installation of mobility improvements as set forth in the transportation system plan (TSP) or as otherwise identified by the City Engineer.

A. For intersections within the regional center, the following mobility standards apply:

1. During the first hour, a maximum v/c ratio of 1.10 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections,

this standard applies to movements on the major street. There is no performance standard for the minor street approaches.

2. During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.

3. Intersections located on the regional center boundary shall be considered within the regional center.

B. For intersections outside of the regional center but designated on the arterial and throughway network, as defined in the regional transportation plan, the following mobility standards apply:

1. During the first hour, a maximum v/c ratio of 0.99 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.

2. During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.

C. For intersections outside the boundaries of the regional center and not designated on the arterial and throughway network, as defined in the regional transportation plan, the following mobility standards apply:

1. For signalized intersections:

a. During the first hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.

b. During the second hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.

2. For unsignalized intersections outside of the boundaries of the regional center:

a. For unsignalized intersections, during the peak hour, all movements serving more than twenty vehicles shall be maintained at LOS "E" or better. LOS "F" will be tolerated at movements serving no more than twenty vehicles during the peak hour.

D. For the intersection of OR 213 and Beavercreek Road, the following mobility standards apply:

1. During the first, second and third hours, a maximum v/c ratio of 1.00 shall be maintained. Calculation of the maximum v/c ratio will be based on an average annual weekday peak hour.

E. Until the City adopts new performance measures that identify alternative mobility targets, the City shall exempt proposed development that is permitted, either conditionally, outright, or through

detailed development master plan approval, from compliance with the above-referenced mobility standards for the following state-owned facilities:

I-205/OR 99E Interchange.

State intersections located within or on the regional center boundaries.

1. In the case of conceptual development approval for a master plan that impacts the above references intersections:

a. The form of mitigation will be determined at the time of the detailed development plan review for subsequent phases utilizing the code in place at the time the detailed development plan is submitted; and

b. Only those trips approved by a detailed development plan review are vested.

2. Development which does not comply with the mobility standards for the intersections identified in OCMC 16.12.033 shall provide for the improvements identified in the transportation system plan (TSP) in an effort to improve intersection mobility as necessary to offset the impact caused by development. Where required by other provisions of the code, the applicant shall provide a traffic impact study that includes an assessment of the development's impact on the intersections identified in this exemption and shall construct the intersection improvements listed in the TSP or required by the code.

Finding: Not appliable. All streets along the development property frontage are fully improved and meet the requirements of the Oregon City Transportation System Plan. Only ADA improvements to existing pedestrian paths along the frontage streets is required through conditions of approval already written in previous sections of this document.

16.12.035 - Driveways.

A. All new development, redevelopment, and capital improvement projects shall meet the minimum driveway spacing standards identified in Table 16.12.035.A. Minor Site Plan and Design Review do not follow these standards unless a request is made to modify the driveway.

Table 16.12.035.A Minimum Driveway Spacing Standards		
Street Functional Classification	*Minimum Driveway Spacing Standards*	*Distance*
Major Arterial Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*175 ft.*

Minor Arterial Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*175 ft.*
Collector Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*100 ft.*
Local Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*25 ft.*

1. When driveways are shared (combined), the minimum driveway spacing shall be 20 feet.

2. All driveways, except for shared driveways, shall be placed a minimum of 5 feet from the property line.

3. The distance from a street corner to a driveway is measured along the right-of-way from the edge of the intersection (on the same side of the road) right-of-way to the nearest portion of the driveway and the distance between driveways is measured at the nearest portions of the driveway at the right-of-way.

B. All detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses shall have driveways which meet the minimum distance from a street corner standards except when the lot size is smaller than the minimum distance required. When minimum distance cannot be met due to lot size or due to the location of an overlay district, the driveway shall be located as far away from the intersection as possible, but no more than 5 feet to the neighboring property line, as approved by the City Engineer.

C. Nonresidential or multi-family residential use driveways that generate high traffic volumes as determined by a traffic analysis shall be treated as intersections and shall adhere to requirements of OCMC 16.12.020.

D. For any detached single-family dwellings, duplexes, triplexes, quadplexes, and townhouses or property developed with an ADU with multiple frontages, only one driveway is allowed per street frontage classified as a local street and in no case shall more than two driveways (one per frontage), unless otherwise approved by the City Engineer.

Two driveways shall never be granted for any property with only one frontage on a local road for any single-family detached residential property or property that contains an ADU unless required by Clackamas Fire District No. 1.

E. Cluster housing properties may be granted more than one driveway per property and per frontage meeting the spacing standards. Driveways should be combined whenever possible to limit the number of driveways per property.

Middle housing properties with only one building may be allowed one driveway for every two units, provided that spacing standards and/or driveway width requirements are met.

Middle housing properties with more than one structure shall meet the cluster housing standards.

F. Townhouses shall have one driveway approach for every two dwelling units (round up for townhouse structures with an odd number of dwellings).

G. Driveways on collectors or arterials shall be provided in such a way that no backing of a vehicle will occur from the driveway to the collector or arterial.

H. When a property fronts multiple roads, access shall be provided from and limited to the road with the lowest classification in the transportation system plan to minimize points of access to arterials and collectors. Access shall not be provided on arterial or collector roads unless there is no other alternative. At the discretion of the City Engineer, properties fronting a collector or arterial road may be allowed a second driveway, for the creation of a circulation pattern that eliminates reverse maneuvers for vehicles exiting a property if applied for and granted through procedures in OCMC 16.12.013. All lots proposed with a driveway and lot orientation on a collector or minor arterial shall combine driveways into one joint access per two or more lots unless the City Engineer determines that:

1. No driveway access may be allowed since the driveway(s) would cause a significant traffic safety hazard; or

2. Allowing a single driveway access per lot will not cause a significant traffic safety hazard.

I. All driveway approaches shall be limited to the dimensions identified in Table 16.12.035.D.

Table 16.12.035.D Driveway Approach Size Standards

Property Use	*Minimum Driveway Approach Width*		*Maximum Driveway Approach Width*
Single-Family Detached and Duplexes	*10 feet*		*24 feet*
Townhouses	*10 feet*		*24 feet*
Triplexes, Quadplex and Cottage Clusters	*10 feet*		*36 feet*
Multi-Family	*18 feet*		*30 feet*
Commercial, Industrial, Office, Institutional, Mixed Use, and/or Nonresidential	*One-Way* *12 feet*	*Two-Way* *20 feet*	*40 feet*

1. Shared driveways for middle housing structures shall be minimum 18 feet and maximum 36 feet except when section J.4.a applies.

2. Driveway widths shall match the width of the driveway approach where the driveway meets sidewalk or property line but may be widened onsite (for example between the property line and the entrance to a garage). Groups of more than four parking spaces shall be so located and served by driveways so that their use will not require backing movements or other maneuvering within a street right-of-way other than an alley.

J. The City Engineer reserves the right to require a reduction in the number and size of driveway approaches as far as practicable for any of the following purposes:

1. To provide adequate space for on-street parking;

2. To facilitate street tree planting requirements;

3. To assure pedestrian and vehicular safety by limiting vehicular access points; and

4. To assure that adequate sight distance requirements are met.

a. Where the decision maker determines any of these situations exist or may occur due to the approval of a proposed development for non-residential uses or attached or multi-family housing, a shared driveway shall be required and limited to twenty-four feet in width adjacent to the sidewalk or property line.

K. For all driveways, the following standards apply.

1. Each new or redeveloped curb cut shall have an approved concrete approach or asphalted street connection where there is no concrete curb and a minimum hard surface for at least ten feet back into the property as measured from the current edge of sidewalk or street pavement to provide for controlling gravel tracking onto the public street. The hard surface may be concrete, asphalt, or other surface approved by the City Engineer.

2. Any driveway approach built within public right-of-way shall be built and permitted per city requirements as approved by the City Engineer.

3. No driveway with a slope of greater than fifteen percent shall be permitted without approval of the City Engineer.

L. Exceptions. The City Engineer reserves the right to waive these standards or not allow driveway access, if the driveway(s) would cause a significant traffic safety hazard. Narrower or wider driveway widths may be considered where field conditions preclude use of recommended widths. When larger vehicles and trucks will be the predominant users of a particular driveway, turning templates may be utilized to develop a driveway width that can safely and expeditiously accommodate the prevalent type of ingress and egress traffic.

Finding: not applicable. No new driveway is proposed or required.

16.12.065 - Building site—Grading.

Grading of building sites shall conform to the state of Oregon Structural Specialty Code, Title 18, any approved grading plan and any approved residential lot grading plan in accordance with the

requirements of OCMC 13.12, 15.48, 16.12 and the public works stormwater and grading design standards, and the erosion control requirements of OCMC 17.47.

Finding: applicable. Please refer to the findings within sections 13.12,15.48, 16.12 & 17.47 of this report.

16.12.085 - Easements.

The following shall govern the location, improvement and layout of easements:

A. Utilities. Utility easements shall be required where necessary as determined by the City Engineer.

Insofar as practicable, easements shall be continuous and aligned from block-to-block within the

development and with adjoining subdivisions or partitions.

1. Specific public utility easements for water, sanitary or storm drainage shall be provided based on approved final engineering plans conforming to the requirements found within the applicable design standards.

2. Conveyance of public utility easements for gas, electric, telecommunication, and fiberoptic shall be required where necessary as determined by the City Engineer. The City Engineer will require the easement unless it is found that the utility can be placed in a different location or can be placed in a smaller easement than what is required. The easement shall be located adjacent to all public rights-of-way or public access easements within private property. In the event that the provision of a public utility easement would create a conflict with achieving compliance with another part of the code, the location and width may be adjusted by the City Engineer.

a. The easement shall be 10 feet in the R-10, R-8, R-6, R-5, R-3.5, R-2, GI, and CI zones

b. The easement shall be a minimum of 5 feet in the NC, HC, I, C, MUC-1, MUC-2, MUE, MUD, and WFDD zones.

i. The applicant shall obtain a written determination from all utilities that the minimum 5 foot PUE coupled with use of a minimum of a five-foot area under the public sidewalk or parkway area is sufficient to serve the development. Where the minimum width is deemed inadequate, a modification shall be required.

c. An applicant may seek a modification to the public utility easement dedication requirement using 16.12.013.

Finding: not applicable. New public utility easements are required or proposed.

B. Unusual Facilities. Easements for unusual facilities such as high voltage electric transmission lines, drainage channels and stormwater detention facilities shall be adequately sized for their intended purpose, including any necessary maintenance roads. These easements shall be shown to scale on the preliminary and final plats or maps. If the easement is for drainage channels, stormwater detention facilities or related purposes, the easement shall comply with the requirements of the public works stormwater and grading design standards.

Finding: not applicable. No easements for unusual facilities are required for this development.

C. Watercourses. Where a development is traversed or bounded by a watercourse, drainageway, channel or stream, a stormwater easement or drainage right-of-way shall be provided which conforms substantially to the line of such watercourse, drainageway, channel or stream and is of a sufficient width to allow construction, maintenance and control for the purpose as required by the responsible agency. For those subdivisions or partitions which are bounded by a stream of established recreational value, setbacks or easements may be required to prevent impacts to the water resource or to accommodate pedestrian or bicycle paths.

Finding: not applicable. The application does not affect any watercourses.

D. Access. When easements are used to provide vehicular access to lots within a development, the construction standards, but not necessarily width standards, for the easement shall meet City specifications. The minimum width of the easement shall be 20 feet. The easements shall be improved and recorded by the applicant and inspected by the City Engineer. Access easements may also provide for utility placement.

Finding: not applicable. The application has not proposed any joint access use; therefore, no access easements are required.

E. Resource Protection. Easements or other protective measures may also be required as the Community Development Director deems necessary to ensure compliance with applicable review criteria protecting any unusual significant natural feature or features of historic significance.

Finding: not applicable. The application does not impact any natural resources; therefore, no access easements are required.

16.12.090 - Minimum improvements—Procedures.

In addition to other requirements, improvements installed by the applicant either as a requirement of these or other regulations, or at the applicant's option, shall conform to the requirements of this title and be designed to City specifications and standards as set out in the City's facility master plan and Public Works Stormwater and Grading Design Standards. The improvements shall be installed in accordance with the following procedure:

A. Improvement work shall not commence until construction plans have been reviewed and approved by the City Engineer and to the extent that improvements are located in county or state right-of-way, they shall be approved by the responsible authority. To the extent necessary for evaluation of the proposal, the plans may be required before approval of the preliminary plat of a subdivision or partition. Expenses incurred thereby shall be borne by the applicant and paid for prior to final plan review.

Finding: complies with condition. The development plans shall comply with all current Oregon City Public Works design standards, specifications, codes, and policies prior to receiving a permit and beginning construction. (Also written in 16.12.010). **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

B. Improvements shall be constructed under the inspection and approval of the City Engineer. Expenses incurred thereby shall be borne by the applicant and paid prior to final approval. Where

required by the City Engineer or other City decision-maker, the applicant's project engineer also shall inspect construction.

Finding: complies with condition. The developer's project engineer shall inspect construction of stormwater management facilities at the cost of the applicant. The City will perform inspections in accordance with city policies and standards. See section 16.12.014 of this report regarding inspection fees. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

C. Erosion control or resource protection facilities or measures are required to be installed in accordance with the requirements of OCMC 17.47, 17.49 and the Public Works Erosion and Sediment Control Standards.

Finding: See findings from section 17.47, 17.49 of this report.

D. Underground utilities, waterlines, sanitary sewers and storm drains installed in streets shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities, such as, storm, water and sanitary sewer shall be placed beyond the ten-foot-wide public utility easement within private property as defined in OCMC 16.12.85.A.2.

Finding: not applicable. There are no new utility services proposed with the development.

E. As-built construction plans and digital copies of as-built drawings shall be filed with the City Engineer upon completion of the improvements.

Finding: complies with condition. As-built construction plans and digital copies of as-built drawings shall be filed with the City Engineer within 90 days of completing improvements. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

F. The City Engineer may regulate the hours of construction and access routes for construction equipment to minimize impacts on adjoining residences or neighborhoods.

Finding: not applicable. The City Engineer has not required regulated hours of construction. All construction activities are proposed on private property and more than 300 feet away from any residential properties.

16.12.095 - Minimum improvements—Public facilities and services.

The following minimum improvements shall be required of all applicants for a development, unless the decision-maker determines that any such improvement is not proportional to the impact imposed on the City's public systems and facilities:

A. Transportation System. Applicants and all subsequent lot owners shall be responsible for improving the City's planned level of service on all public streets, including alleys within the development and those portions of public streets adjacent to but only partially within development. Applicants are responsible for designing and providing adequate vehicular, bicycle and pedestrian access to their developments and for accommodating future access to neighboring undeveloped properties that are suitably zoned for future development. Storm drainage facilities shall be installed and connected to off-site natural or man-made drainageways. Upon completion of the street improvement survey, the applicant shall reestablish and protect monuments of the type

required by ORS 92.060 in monument boxes with covers at every public street intersection and all points or curvature and points of tangency of their center line, and at such other points as directed by the City Engineer.

Finding: Not appliable. All streets along the development property frontage are fully improved and meet the requirements of the Oregon City Transportation System Plan. Only ADA improvements to existing pedestrian paths along the frontage streets is required through conditions of approval already written in previous sections of this document.

B. Stormwater Drainage System. Applicants shall design and install drainage facilities within a development and shall connect the development's drainage system to the appropriate downstream storm drainage system as a minimum requirement for providing services to the applicant's development. The applicant shall obtain county or state approval when appropriate. Applicants are responsible for extending the appropriate storm drainage system to the development site and for providing for the connection of upgradient properties to that system. The applicant shall design the drainage facilities in accordance with city drainage master plan requirements, OCMC 13.12 and the public works stormwater and grading design standards.

Finding: complies with condition. See findings from section 13.12 for the design of stormwater management facilities to serve the development.

C. Sanitary Sewer System. The applicant shall design and install a sanitary sewer system to serve all lots or parcels within a development in accordance with the City's sanitary sewer design standards, and shall connect those lots or parcels to the City's sanitary sewer system, except where connection is required to the county sanitary sewer system as approved by the county. Applicants are responsible for extending the City's sanitary sewer system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development. The applicant shall obtain all required permits and approvals from all affected jurisdictions prior to final approval and prior to commencement of construction. Design shall be approved by the City Engineer before construction begins.

Finding: not applicable. There are no new utility services proposed with the development.

D. Water System. The applicant shall design and install a water system to serve all lots or parcels within a development in accordance with the City public works water system design standards, and shall connect those lots or parcels to the City's water system. Applicants are responsible for extending the City's water system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development.

Finding: not applicable. There are no new utility services proposed with the development.

E. Street Trees. Refer to OCMC 12.08, Street Trees.

Finding: See findings from section 12.08.

F. Bench Marks. At least one bench mark shall be located within the subdivision boundaries using datum plane specified by the City Engineer.

Finding: complies with condition. The engineering plans shall provide a local benchmark, onsite, using the NAVD88 datum prior to receiving a permit and beginning construction. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

G. Other Utilities. The applicant shall make all necessary arrangements with utility companies or other affected parties for the installation of underground lines and facilities. All new utilities shall be placed underground unless the respective franchise agreements allow otherwise or unless it is physically or technically impossible to comply with applicable standards. Existing electrical lines and other wires, including but not limited to telecommunication, street lighting and fiberoptic, shall be relocated underground.

1. Exemptions to relocation of existing overhead utilities to underground for property development as follows (Only one exemption criteria is required to be exempt from this requirement):

a. No transmission or feeder lines shall be relocated underground unless approved by the City Engineer.

b. Properties with less than one acre of land area shall not be required to relocate existing overhead utilities unless required by the franchise utility.

c. Properties with less than two hundred feet of frontage on any individual roadway shall not be required to relocate existing overhead utilities unless required by the franchise utility.

d. Land divisions with five or fewer subdivided lots shall not be required to relocate existing overhead utilities unless required by the franchise utility.

2. The exemptions in G.1. do not apply if properties within the same block were required to relocate the overhead utilities within the past ten years. In those cases, the existing overhead utilities shall be relocated underground.

3. When any franchise utility (electric, gas, telecommunication, fiberoptic, street lighting or similar utility) is installed along an existing or new roadway, the utility shall be installed within the existing or proposed public utility easement unless it is physically or technically impossible.

4. These requirements do not apply to work by a franchise utility for improvement, repair, alteration or addition to their existing systems.

Finding: not applicable. There are no overhead lines along the streets fronting the development property.

H. Oversizing of Facilities. All facilities and improvements shall be designed to city standards as set out in the City's facility master plan, public works design standards, or other city ordinances or regulations. Compliance with facility design standards shall be addressed during final engineering. A development may be required to modify or replace existing offsite systems if necessary to provide adequate public facilities. The City may require oversizing of facilities to meet standards in the City's facility master plan or to allow for orderly and efficient development. Where oversizing is required, the applicant may request reimbursement from the City for oversizing based on the City's reimbursement policy and funds available or provide for recovery of costs from intervening properties as they develop.

Finding: not applicable. No facilities are required to be oversized as part of this application.

I. Erosion Control Plan—Mitigation. The applicant shall be responsible for complying with all applicable provisions of OCMC 17.47 with regard to erosion control.

Finding: See findings from section 17.47 of this report

16.12.100 - Same—Road standards and requirements.

A. The creation of a public street and the resultant separate land parcels shall be in conformance with requirements for subdivisions or partitions and the applicable street design standards of this Chapter. However, the decision-maker may approve the creation of a public street to be established by deed without full compliance with the regulations applicable to subdivisions or partitions where any of the following conditions exist:

1. The establishment of the public street is initiated by the City Commission and is declared essential for the purpose of general traffic circulation and the partitioning of land is an incidental effect rather than the primary objective of the street;

2. The tract in which the street is to be dedicated is within an isolated ownership either not over one acre or of such size and characteristics as to make it impossible to develop building sites for more than three dwelling units.

Finding: not applicable. The creation of a new public street is not proposed or required.

B. For any public street created pursuant to subsection A of this section, a copy of a preliminary plan and the proposed deed shall be submitted to the Community Development Director and City Engineer at least ten days prior to any public hearing scheduled for the matter. The plan, deed and any additional information the applicant may submit shall be reviewed by the decision-maker and, if not in conflict with the standards of Title 16 and Title 17, may be approved with appropriate conditions.

Finding: not applicable. The applicant has not proposed the creation of a public street to be established by deed without full compliance with the regulations applicable to subdivisions or partitions.

C. The design and construction of public streets shall be per the standards found in this chapter and the most recent version of any City Design and Construction Standards.

Finding: complies with condition. The development plans shall comply with all current Oregon City Public Works design standards, specifications, codes, and policies prior to receiving a permit and beginning construction. (Also written in 16.12.010). **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

16.12.105 - Same—Timing requirements.

A. Prior to applying for final plat approval, the applicant shall either complete construction of all public improvements required as part of the preliminary plat approval or guarantee the construction of those improvements. Whichever option the applicant elects shall be in accordance with OCMC 17.50.140.

Finding: See findings from OCMC 17.50.140 regarding timing of construction of improvements and guarantee for construction of improvements.

B. Construction. The applicant shall construct the public improvements according to approved final engineering plans and all applicable requirements of this Code, and under the supervision of the City Engineer. Under this option, the improvement shall be complete and accepted by the City Engineer prior to final plat approval.

Finding: not applicable. No public improvements are required.

16.12.110 -Public improvements—Financial guarantees.

A. To ensure construction of required public improvements, the applicant shall provide the City with a performance guarantee in accordance with OCMC 17.50.140.

Finding: Please see findings from Section17.50.140 of this report.

B. After satisfactory completion of required public improvements and facilities, all public improvements not constructed by the City, shall be maintained and under warranty provided by the property owner or developer constructing the facilities until the City accepts the improvements at the end of the warranty period as prescribed in OCMC 17.50.141.

Finding: Please see findings from Section17.50.141 of this report.

16.12.120 Waiver of Remonstrance

The review authority may require a property owner to sign a waiver of remonstrance against the formation of and participation in a local improvement district where it deems such a waiver necessary to provide needed improvements reasonably related to the impacts created by the proposed development. To ensure compliance with this chapter, the review authority may require an applicant to sign or accept a legal and enforceable covenant, contract, dedication, easement, performance guarantee, or other document, which shall be approved in form by the City Attorney.

Finding: not applicable. The property owner(s) shall sign a Restrictive Covenant Non-Remonstrance Agreement for the purpose of making storm sewer, sanitary sewer, water or street improvements in the future that benefit the property and all fees associated with processing and recording the Non-Remonstrance Agreement shall be paid prior to occupancy. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

CHAPTER 17.39 – INSTITUTIONAL (I) DISTRICT

17.39.010 - Designated.
The purpose of this district is designed to facilitate the development of major public institutions, government facilities and parks and ensure the compatibility of these developments with surrounding areas. The I—Institutional zone is consistent with the public/quasi-public and park designations on the comprehensive plan map.

17.39.020 - Permitted uses.
Permitted uses in the institutional district are:

A. Private and/or public educational or training facilities;
B. Parks, playgrounds, playfields and community or neighborhood community centers;
C. Public facilities and services including courts, libraries and general government offices and maintenance facilities;
D. Stadiums and arenas;
E. Banquet, conference facilities and meeting rooms;
F. Government offices;
G. Transportation facilities;
H. Mobile food units.

Finding: Permitted. The applicant is proposing improvements to an existing stadium/arena that also serves the academic programs of a public educational facility.

17.39.030 - Accessory uses.
The following uses are permitted outright if they are accessory to and related to the primary institutional use:
A. Offices;
B. Retail (not to exceed twenty percent of total gross floor area of all building);
C. Child care centers or nursery schools;
D. Scientific, educational, or medical research facilities and laboratories;
E. Religious institutions.

Finding: not applicable. No accessory uses are proposed with this application.

17.39.040 - Conditional uses.
Uses requiring conditional use permit are:
A. Any uses listed under OCMC 17.39.030 that are not accessory to the primary institutional use;
B. Boarding and lodging houses, bed and breakfast inns;
C. Cemeteries, crematories, mausoleums, and columbariums;
D. Correctional facilities;
E. Helipad in conjunction with a permitted use;
F. Parking lots not in conjunction with a primary use;
G. Public utilities, including sub-stations (such as buildings, plants and other structures);
H. Fire stations;
I. Police Station.

Finding: not applicable. No conditional uses are proposed with this application.

17.39.045 - Prohibited uses.
Prohibited uses in the I district are:
A. Any use not expressly listed in OCMC 17.39.020, 17.39.030 or 17.39.040;
B. Marijuana businesses;

Finding: not applicable. No prohibited uses are proposed with this application.

17.39.050 - Dimensional standards.
Dimensional standards in the I district are:

A. Maximum building height: Within one hundred feet of any district boundary, not to exceed thirty-five feet; elsewhere, not to exceed seventy feet.

Finding: complies as proposed. Tallest structure proposed: 22.5 feet. Number of stories proposed: One

B. Minimum required setbacks: Twenty-five feet from property line except when the development is adjacent to a public right-of-way. When adjacent to a public right-of-way, the minimum setback is zero feet and the maximum setback is five feet.
Public utility easements may supersede the minimum setback. Maximum setback may be increased per OCMC 17.62.055.D.

Finding: complies as proposed. Smallest setback proposed: 600 feet

C. Minimum required landscaping (including landscaping within a parking lot): Fifteen percent.

Finding: complies as proposed.
Lot size: 168 acres
Square Feet of Landscaping: 98 acres
Percentage: 58.3%

17.39.060 - Relationship to master plan.
A. A master plan is required for any development within the I District on a site over ten acres in size that:
1. Is for a new development on a vacant property;
2. Is for the redevelopment of a property previously used as a non-institutional use; or
3. Increases the floor area of the existing development by ten thousand square feet over existing conditions

B. Master plan dimensional standards that are less restrictive than those of the Institutional District require adjustments. Adjustments will address the criteria of OCMC 17.65.70 and will be processed concurrently with the master plan application.
C. Modifications to other development standards in the code may be made as part of the phased master plan adjustment process. All modifications shall be in accordance with the requirements of the master plan adjustment process identified in OCMC 17.65.070.

Finding: complies as proposed. This Detailed Development Plan (DDP) is part of a General Development Plan (GDP) under file # MAS-24-00001 that was approved in 2024. This DDP is being reviewed under the conditions approval associated with that GDP. Adjustments are being requested with this DDP which impact building materials, retaining wall height, and building design elements, but no aspects of this chapter.

CHAPTER 17.41 – TREE PROTECTION, PRESERVATION, REMOVAL AND REPLANTING STANDARDS

17.41.010 - Protection of trees—Intent.
The intent of this chapter is to ensure that new development is designed in a manner that preserves trees to the maximum extent practicable. As a requirement of any Type II land use application, the

siting of structures, roadways and utility easements, shall provide for the protection of tree resources to the maximum extent practicable. This chapter applies to all land division and site plan and design review applications.

17.41.020 - Tree protection—Applicability.
A. Applications for development subject to OCMC 16.08 (Land Divisions) or OCMC 17.62 (Site Plan and Design Review) shall demonstrate compliance with these standards as part of the review proceedings for those developments. Compliance with this chapter is required from the date a land use application is filed until a land division is recorded or other development approval is final.
B. For public capital improvement projects, the City engineer shall demonstrate compliance with these standards pursuant to a Type I process.
C. Tree canopy removal greater than twenty-five percent on areas with greater than twenty-five percent slope, unless exempted under OCMC 17.41.040, shall be subject to these standards.
D. A heritage tree or grove which has been designated pursuant to the procedures of OCMC 12.32 shall be subject to the standards of this section.
E. A tree that has been planted pursuant to this section shall remain or shall be replaced with a new tree if removed.

Finding: applicable.

17.41.030 - Tree protection—Conflicting code provisions.
Except as otherwise specified in this section, where these standards conflict with adopted city development codes or policies, the provision which provides the greater protection for regulated trees or groves, as defined in OCMC 17.04, shall govern.

Finding: applicable.

17.41.040 - Exemptions.
These regulations are not intended to regulate normal cutting, pruning and maintenance of trees on private property except where trees are located on lots that are undergoing development review or are otherwise protected within the natural resource overlay district (NROD) of OCMC 17.49. These standards are not intended to regulate farm and forest practices as those practices are defined under ORS 30.930, for farm or forestlands. These regulations to not apply to the removal of trees that are considered invasive species. An applicant for development may claim exemption from compliance with these standards if the development site containing the regulated grove or trees was a designated farm or forest use, tree farm, Christmas tree plantation, or other approved timber use within one year prior to development application. "Forest practices" and "forestlands" as used in this subsection shall have the meaning as set out in ORS 30.930. The Community Development Director has the authority to modify or waive compliance in this case.

Finding: not applicable. No exemptions are requested and no activities that are eligible for exemptions are proposed by this application.

17.41.050 - Compliance options.
Applicants for review shall comply with these requirements through one or a combination of the following procedures:
A. Option 1—Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to OCMC 17.41.060.

B. Option 2—Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to OCMC 17.41.080; or
C. Option 3—Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to OCMC 17.41.110; or
D. Option 4—Cash-in-lieu of planting pursuant to OCMC 17.41.120.

Finding: complies as proposed. The applicant proposes compliance with this chapter according to Options 1 and 3 above, as outlined in the Certified Arborist Report submitted by Cameron McCarthy with this application.

17.41.060 - Tree removal and replanting—Mitigation (Option 1).
A. Applicants for development who select this option shall ensure that all healthy trees shall be preserved outside the construction area as defined in OCMC 17.04 to the extent practicable. Preserved trees are subject to Option 3 of this chapter. Compliance with these standards shall be demonstrated in a tree mitigation plan report prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arboriculture. Tree inventories for the purposes of mitigation calculations may be prepared by a licensed surveyor. At the applicant's expense, the City may require the report to be reviewed by a consulting arborist. The number of replacement trees required on a development site shall be calculated separately from, and in addition to, any public or street trees in the public right-of-way required under OCMC 12.08, Public and Street Trees, any required tree planting in parking lots, and any trees planted in pedestrian and bicycle accessways.

Finding: complies as proposed. The applicant proposes compliance with this chapter as outlined in the Certified Arborist Report submitted by Cameron McCarthy with this application.

B. The applicant shall determine the number of trees to be mitigated on the site by counting all of the trees six-inch DBH (minimum four and one-half feet from the ground) or larger on the entire site and either:
1. Trees that are removed outside of the construction area shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2; or
2. Dying, diseased or hazardous trees, when the condition is verified by a certified arborist to be consistent with the definitions in OCMC 17.04, may be removed from the tree replacement calculation. Dead trees may also be removed from the calculation, with the condition of the tree verified either by the Community Development Director or by a certified arborist at the applicant's expense, when the Community Development Director cannot make a determination. To the extent that the Community Development Director determines that the dead, dying, hazardous or diseased condition of the tree is the result of intentional action, the removal of that tree shall require mitigation pursuant to Column 2 of Table 17.41.060-1.

Finding: complies as proposed. The applicant proposes to remove 1 dying red maple of 12” DBH without replacement (Tree #8). A second red maple (Tree #14), located in the construction area, is also to be removed and replaced according to the mitigation schedule with 2 vine maples.

Table 17.41.060-1
Tree Replacement Requirements

Size of tree removed (DBH)	*Number of trees to be planted. (If removed Outside of construction area)*	*Number of trees to be planted. (If removed Within the construction area)*
6 to 12"	*3*	*1*
13 to 18"	*6*	*2*
19 to 24"	*9*	*3*
25 to 30"	*12*	*4*
31 and over"	*15*	*5*

Steps for calculating the number of replacement trees:
1. Count all trees measuring six inches DBH (minimum four and one-half feet from the ground) or larger on the entire development site.
2. Designate the size (DBH) of all trees pursuant to accepted industry standards.
3. Document in a certified arborist report any trees that are currently dead, dying, diseased or hazardous.
4. Subtract the number of dead, dying, diseased or hazardous trees in step 3 from the total number of trees on the development site in step 1. The remaining number is the number of healthy trees on the site. Use this number to determine the number of replacement trees in steps 5 through 8.
5. Identify the construction area (as defined in OCMC 17.04.230).
6. Determine the number and diameter of trees to be removed within the construction area. Based on the size of each tree, use Column 2 to determine the number of replacement trees required.
7. Determine the number and diameter of trees to be removed outside of the construction area. Based on the size of each tree, use Column 1 to determine the number of replacement trees required.
8. Determine the total number of replacement trees from steps 6 and 7.

Finding: complies as proposed. The applicant proposes to remove 1 dying red maple of 12" DBH without replacement (Tree #8). A second red maple (Tree #14), located in the construction area, is also to be removed and replaced according to the mitigation schedule with 2 vine maples.

Size of tree removed (DBH)	Number of Trees Removed Outside of Construction Area	Number of Trees Removed Within the Construction area	Number of Mitigation Trees Required (See Table 17.41.060-1)
13 to 18"		1	2

C. Planting Area Priority for Mitigation. Development applications which opt for removal of trees with subsequent replanting pursuant to OCMC 17.41.050.A shall be required to mitigate for tree cutting by complying with the following priority for replanting standards below:
1. First Priority. Replanting on the development site.
2. Second Priority. Off-site replacement tree planting locations. If the Community Development Director determines that it is not practicable to plant the total number of replacement trees on-site, a suitable off-site planting location for the remainder of the trees may be approved that will

reasonably satisfy the objectives of this section. Such locations may include either publicly owned or private land and shall be approved by the Community Development Director.

Finding: complies as proposed. The applicant proposes to plant 2 vine maple mitigation trees on the development site. According to Sheet L6.00, those trees are to be planted north of Killdeer Road in a pedestrian plaza to the south of the track.

D. Replacement tree planting standards.
1. All replacement trees shall be either two-inch caliper deciduous or six-foot high conifer.

Finding: complies as proposed.

2. Replacement tree species shall be approved by a landscape architect or certified arborist or shall be found on the City's Native Plant or Street Tree lists.

Finding: complies as proposed.

3. Due to their diminishing range in the region, Oregon white oak (Quercus garryana) trees, if removed, shall be replaced by the same species.

Finding: not applicable.

E. All existing tree(s) in the tract shall be protected by a permanent restrictive covenant or easement approved in form by the City.

Finding: complies with condition. Prior to building final, the applicant shall complete and submit a restrictive covenant or easement to the City for review, record it on the property deed with Clackamas County, and submit to the City a recorded copy of the document. **Staff has determined that it is possible and reasonable that the applicant can meet this standard through the Conditions of Approval.**

F. Alternative Mitigation Plan. The Community Development Director may, subject to a Type II procedure, approve an alternative mitigation plan that adequately protects habitat pursuant to the standards for the natural resource overlay district alternative mitigation plan in OCMC 17.49.190.

Finding: not applicable. The applicant has proposed to follow existing mitigation options.

17.41.080 - Tree preservation within subdivisions and partitions—Dedicated tract (Option 2).
A. An applicant for a new subdivision and partition may delineate and show the regulated trees or groves as either a separate tract or part of a larger tract that meets the requirements of subsection D. of this section. All existing tree(s) in the tract shall be protected by a permanent restrictive covenant or easement approved in form by the City

Finding: not applicable. The applicant has not proposed any land divisions.

17.41.110 - Tree protection by restrictive covenant (Option 3).
Any regulated tree or grove which cannot be protected in a tract pursuant to Section 17.41.080 above shall be protected with a restrictive covenant in a format to be approved by the Community

Development Director. Such covenant shall be recorded against the property deed and shall contain provisions to permanently protect the regulated tree or grove unless such tree or grove, as determined by a certified arborist and approved by the Community Development Director, are determined to be diseased or hazardous.
A. Permitted adjustments.
1. The Community Development Director, pursuant to a Type II procedure, may grant an adjustment to the side, front and rear yard setback standards by up to fifty percent if necessary to retain a Regulated Tree or Grove through a restrictive covenant pursuant to this section. In no case may the side yard setback be reduced to less than three feet. The adjustment shall be the minimum necessary to accomplish preservation of trees on the lot and shall not conflict with other conditions imposed on the property.
2. The City Engineer may grant an adjustment to street standards, pursuant to adopted public works standards, in order to preserve a tree. This may include flexibility to redesign sidewalk and planter strip sizes and locations and allow placement of sidewalks and planter strips in an easement within private lots.
3. The Community Development Director, pursuant to a Type II procedure, may allow other adjustments in order to preserve any healthy tree that cannot be moved due to its size, but will contribute to the landscape character of the area and will not present a foreseeable hazard if retained.

Finding: complies with condition. Prior to building final, the applicant shall complete and submit a restrictive covenant or easement to the City for review, record it on the property deed with Clackamas County, and submit to the City a recorded copy of the document. **Staff has determined that it is possible and reasonable that the applicant can meet this standard through the Conditions of Approval.**

17.41.120 - Cash-in-lieu of planting (Option 4).
The applicant may choose this option in-lieu-of or in addition to Compliance Options 1 through 3. In this case, the Community Development Director may approve the payment of cash-in-lieu into a dedicated fund for the remainder of trees that cannot be replanted in the manner described above.

The cash-in-lieu payment per required mitigation tree shall be as listed on the adopted fee schedule and shall be adjusted annually based on the Consumer Price Index. The price shall include 150% of the cost of materials, transportation and planting.

Finding: not applicable. The applicant has not proposed Option 4 in their mitigation plan.

17.41.130 - Regulated tree protection procedures during construction.
A. No permit for any grading or construction of public or private improvements may be released prior to verification by the Community Development Director that regulated trees designated for protection or conservation have been protected according to the following standards. No trees designated for removal shall be removed without prior written approval from the Community Development Director.
B. Tree protection shall be as recommended by a qualified arborist or, as a minimum, to include the following protective measures:
1. Except as otherwise determined by the Community Development Director, all required tree protection measures set forth in this section shall be instituted prior to any development activities, including, but not limited to clearing, grading, excavation or demolition work, and such measures

shall be removed only after completion of all construction activity, including necessary landscaping and irrigation installation, and any required plat, tract, conservation easement or restrictive covenant has been recorded.
2. Approved construction fencing, a minimum of four feet tall with steel posts placed no farther than ten feet apart, shall be installed at the edge of the tree protection zone or dripline, whichever is greater. An alternative may be used with the approval of the Community Development Director.
3. Approved signs shall be attached to the fencing stating that inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the Community Development Director.
4. No construction activity shall occur within the tree protection zone, including, but not limited to; dumping or storage of materials such as building supplies, soil, waste items; nor passage or parking of vehicles or equipment.
5. The tree protection zone shall remain free of chemically injurious materials and liquids such as paints, thinners, cleaning solutions, petroleum products, and concrete or dry wall excess, construction debris, or run-off.
6. No excavation, trenching, grading, root pruning or other activity shall occur within the tree protection zone unless directed by an arborist present on site and approved by the Community Development Director.
7. No machinery repair or cleaning shall be performed within ten feet of the dripline of any trees identified for protection.
8. Digging a trench for placement of public or private utilities or other structure within the critical root zone of a tree to be protected is prohibited. Boring under or through the tree protection zone may be permitted if approved by the Community Development Director and pursuant to the approved written recommendations and on-site guidance and supervision of a certified arborist.
9. The Community Development Director may require that a certified arborist be present during any construction or grading activities that may affect the dripline of trees to be protected.
10. The Community Development Director may impose conditions to avoid disturbance to tree roots from grading activities and to protect trees and other significant vegetation identified for retention from harm. Such conditions may include, if necessary, the advisory expertise of a qualified consulting arborist or horticulturist both during and after site preparation, and a special maintenance/management program to provide protection to the resource as recommended by the arborist or horticulturist.
C. Changes in soil hydrology due to soil compaction and site drainage within tree protection areas shall be avoided. Drainage and grading plans shall include provision to ensure that drainage of the site does not conflict with the standards of this section. Excessive site run-off shall be directed to appropriate storm drainage facilities and away from trees designated for conservation or protection.

Finding: complies as proposed. The applicant's Certified Arborist Report (Exhibit C) and Landscaping Plan from Cameron McCarthy outline tree protection procedures that comply with this section.

CHAPTER 17.47 – CONSTRUCTION SITE RUNOFF CONTROLS

17.47.030- Applicability.
A. This chapter, which may also be referred to as "construction site runoff controls" in this Code, applies to development that may cause discharge of construction site waste materials or the visible or measurable erosion on any property within the city limits of Oregon City.

B. All development that results in 1,000 square feet of new or replaced impervious surface or 1,000 square feet of earth disturbance shall be subject to the construction site runoff controls requirements and the standards found within the Stormwater and Grading Design Standards as referenced in OCMC 13.12.
C. This chapter does not apply to work necessary to protect, repair, maintain or replace existing structures, utility facilities, roadways, driveways, accessory uses and exterior improvements in response to emergencies, provided that after the emergency has passed, adverse impacts are mitigated in accordance with applicable standards.

Finding: applicable. The application disturbs more than 1,000 square feet of earth; therefore, Construction Site Runoff Controls standards shall be followed.

17.47.060 - Permit required.
The applicant must obtain an Construction Site Runoff Controls permit prior to, or contemporaneous with, the approval of an application for any building, land use or other City-issued permit that may cause visible or measurable erosion.

Finding: complies with condition. A city issued erosion and sediment control permit shall be obtained prior to commencement of any earth disturbing activities. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

17.47.070 - Construction Site Runoff Controls plans.
A. An application for an Construction Site Runoff Controls permit shall include an Construction Site Runoff Controls plan, which contains methods and interim measures to be used during and following construction to prevent or control construction site wastes and erosion prepared in compliance with City of Oregon City public works standards for Construction Site Runoff Controls. These standards are incorporated herein and made a part of this title and are on file in the office of the city recorder.
B. Approval Standards. An Construction Site Runoff Controls plan shall be approved only upon making the following findings:
1. The Construction Site Runoff Controls plan meets the requirements of the City of Oregon City public works standards for construction site wastes and Construction Site Runoff Controls incorporated by reference as part of this chapter;
2. The Construction Site Runoff Controls plan indicates that construction site wastes and Construction Site Runoff Controls measures will be managed and maintained during and following development. The Construction Site Runoff Controls plan indicates that construction site wastes and Construction Site Runoff Controls measures will remain in place until disturbed soil areas are permanently stabilized by landscaping, grass, approved mulch or other permanent soil stabilizing measures.
C. The erosion and sediment control plan shall be reviewed in conjunction with the requested development approval. If the development does not require additional review, the manager may approve or deny the permit with notice of the decision to the applicant.
D. The city may inspect the development site to determine compliance with the erosion and sediment control plan and permit.
E. Erosion that occurs on a development site that does not have an erosion and sediment control permit, or that results from a failure to comply with the terms of such a permit, constitutes a violation of this chapter.

F. If the manager finds that the facilities and techniques approved in an erosion and sediment control plan and permit are not sufficient to prevent erosion and the discharge of construction site wastes, the manager shall notify the owner or his/her designated representative. Upon receiving notice, the owner or his/her designated representative shall immediately install interim construction site wastes and erosion and sediment control measures as specified in the City of Oregon City public works standards for erosion and sediment control. Within three days from the date of notice, the owner or his/her designated representative shall submit a revised erosion and sediment control plan to the city. Upon approval of the revised plan and issuance of an amended permit, the owner or his/her designated representative shall immediately implement the revised plan.
G. Approval of an erosion and sediment control plan does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).

Finding: complies with condition. Erosion and sediment control plans shall be submitted for review and approval by the City prior to issuance of an erosion and sediment control permit. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

17.47.080 - Plan implementation.
An approved erosion control and sediment control plan shall be implemented and maintained as follows:
A. Plan approval, where required, shall be obtained prior to clearing or grading. No grading, clearing or excavation of land requiring a plan shall be undertaken prior to approval of the plan.
B. The erosion and sediment control facilities shall be constructed prior to any clearing and grading activities, and maintained in such a manner as to ensure that sediment laden water does not enter the drainage system or violate applicable water standards.
C. The implementation of an erosion and sediment control plan and the construction, maintenance, replacement, and upgrading of erosion and sediment control facilities is the responsibility of the owner or his/her designated representative until all construction is completed and approved, and vegetation, landscaping or approved finished surfaces is established.
D. The erosion and sediment control facilities herein are the minimum requirements for anticipated site conditions. During the construction period, these construction site waste management controls and erosion and sediment control facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment or pollutant-laden water does not leave the site.
E. Any observation of visible or measurable discharges of construction site wastes or erosion, or an observation of more than a ten-percent increase in downstream channel turbidities, will result in an enforcement action by the city.
F. The owner or his/her designated representative shall implement the measures and construct facilities as provided for and according to the implementation schedule in the approved plan. The manager shall be allowed reasonable access to the development site for inspection purposes.

Finding: applicable. Plan approval is required be obtained per chapter 16.12. The Oregon City Erosion Control Officer ensures that the development will comply with the City's Erosion and Sediment Control Standards. The Oregon City Erosion Control Officer will access the development site and perform inspections to ensure compliance prior to any clearing and grading activities are permitted. The Oregon City Erosion Control Officer ensures implementation of an erosion and sediment control plan and the construction, maintenance, replacement, and upgrading of erosion

and sediment control facilities. The Oregon City Erosion Control Officer may issue a Stop Work Order if the owner or his/her designated representative fails to implement and maintain the approved erosion control and sediment control plan until all construction is completed and approved, and vegetation, landscaping or approved finished surfaces is established.

17.47.090 - Plan performance guarantee and security.
After the plan is approved by the manager and prior to construction or grading, the owner shall provide a financial guarantee. Management of construction site waste as well as erosion and sediment control shall be included in the cost estimate for the primary project, such as land division or site plan, and included in that project's performance guarantee.

Finding: See findings in Section 17.50.140.

CHAPTER 17.49 – NATURAL RESOURCES OVERLAY DISTRICT

17.49.040 - NROD permit and review process.
An NROD permit is required for those uses regulated under OCMC 17.49.090, Uses Allowed under Prescribed Conditions. An NROD permit shall be processed under the Type II development permit procedure unless an adjustment of standards pursuant to OCMC 17.49.200 is requested or the application is being processed in conjunction with a concurrent application or action requiring a Type III or Type IV development permit.

Finding: not applicable. The applicant has provided a wetland delineation of the site and confirmed that no proposed development activity will occur within or near it. No NROD review is required, except for OCMC 17.49.100.H (see below).

17.49.100 – General standards for development.
*The following standards apply to all uses allowed under prescribed conditions within the NROD with the exception of rights-of-way (subject to OCMC **17.49.150**), trails (subject to OCMC **17.49.170**), utility lines (subject to OCMC **17.49.140**), land divisions (subject to OCMC **17.49.160**), and mitigation projects (subject to OCMC **17.49.180** or **17.49.190**):*

H. Exterior lighting shall be placed or shielded so that they do not shine directly into resource areas;

Finding: complies with condition. The subject site is minimally impacted by a small wetland area in the northeast corner near the throwing event fields. A larger wetland area is located beyond Douglas Loop further to the northeast. The applicant shall supplement their exterior lighting plan with information that demonstrates the lighting plan complies with this section. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

CHAPTER 17.50 – ADMINISTRATION AND PROCEDURES

17.50.030 Summary of the City's decision-making processes.
The following decision-making processes chart shall control the City's review of the indicated permits:

Table 17.50.030 – Permit Approval Process

Permit Type	*I*	*II*	*III*	*IV*	*Expedited Land Division*
*Detailed development plan**	*X*	*X*	*X*		

**If any provision or element of the master plan/planned unit development requires a deferred Type III procedure, the detailed development plan shall be processed through a Type III procedure.*

C. Type III decisions involve the greatest amount of discretion and evaluation of subjective approval standards, yet are not required to be heard by the City Commission, except upon appeal. In the event that any decision is not classified, it shall be treated as a Type III decision. The process for these land use decisions is controlled by ORS 197.763. Notice of the application and the Planning Commission or the Historic Review Board hearing is published and mailed to the applicant, recognized neighborhood association(s) and property owners within three hundred feet. Notice shall be issued at least twenty days pre-hearing, and the staff report shall be available at least seven days pre-hearing. At the evidentiary hearing held before the Planning Commission or the Historic Review Board, all issues are addressed. The decision of the Planning Commission or Historic Review Board is appealable to the City Commission, on the record pursuant to OCMC 17.50.190. The City Commission decision on appeal from is the City's final decision and is subject to review by LUBA within twenty-one days of when it becomes final, unless otherwise provided by state law.
F. Decisions, completeness reviews, appeals, and notices in this chapter shall be calculated according to OCMC 1.04.070 and shall be based on calendar days, not business days.

Finding: applicable. The applicant is undergoing a Type III land use application for a Detailed Development Plan with adjustments.

17.50.040 Development review in overlay districts and for erosion control.
For any development subject to regulation of geologic hazards overlay district under OCMC 17.44; natural resource overlay district under OCMC 17.49; Willamette River Greenway Overlay District under OCMC 17.48; historic overlay district under OCMC 17.40, and erosion and sediment control under OCMC 17.47, compliance with the requirements of these chapters shall be reviewed as part of the review process required for the underlying development for the site.

Finding: applicable. See findings in those chapters.

17.50.050 – Pre-application conference.
A. Pre-application Conference. Prior to a Type II – IV or Legislative application, excluding Historic Review, being deemed complete, the applicant shall schedule and attend a pre-application conference with City staff to discuss the proposal, unless waived by the Community Development Director. The purpose of the pre-application conference is to provide an opportunity for staff to provide the applicant with information on the likely impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal.
1. To schedule a pre-application conference, the applicant shall contact the Planning Division, submit the required materials, and pay the appropriate conference fee.
2. At a minimum, an applicant should submit a short narrative describing the proposal and a proposed site plan, drawn to a scale acceptable to the City, which identifies the proposed land uses, traffic circulation, and public rights-of-way and all other required plans.

3. The Planning Division shall provide the applicant(s) with the identity and contact persons for all affected neighborhood associations as well as a written summary of the pre-application conference.
B. A pre-application conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant shall schedule and attend another conference before the City will accept a permit application. The Community Development Director may waive the pre-application requirement if, in the Director's opinion, the development has not changed significantly and the applicable municipal code or standards have not been significantly amended. In no case shall a pre-application conference be valid for more than one year.
C. Notwithstanding any representations by City staff at a pre-application conference, staff is not authorized to waive any requirements of this code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.

Finding: complies as proposed. The applicant attended a Pre-Application Conference for this proposal in compliance with these requirements.

17.50.055 - Neighborhood association meeting.
Neighborhood Association Meeting. The purpose of the meeting with the recognized neighborhood association is to inform the affected neighborhood association about the proposed development and to receive the preliminary responses and suggestions from the neighborhood association and the member residents.
A. Applicants applying for annexations, zone change, comprehensive plan amendments, conditional use, Planning Commission variances, subdivision, or site plan and design review (excluding minor site plan and design review), general development master plans or detailed development plans applications shall schedule and attend a meeting with the City-recognized neighborhood association in whose territory the application is proposed no earlier than one year prior to the date of application. Although not required for other projects than those identified above, a meeting with the neighborhood association is highly recommended.
B. The applicant shall request via email or regular mail a request to meet with the neighborhood association chair where the proposed development is located. The notice shall describe the proposed project. A copy of this notice shall also be provided to the chair of the citizen involvement committee.
C. A meeting shall be scheduled within thirty days of the date that the notice is sent. A meeting may be scheduled later than thirty days if by mutual agreement of the applicant and the neighborhood association. If the neighborhood association does not want to, or cannot meet within thirty days, the applicant shall host a meeting inviting the neighborhood association, citizen involvement committee, and all property owners within three hundred feet to attend. This meeting shall not begin before six p.m. on a weekday or may be held on a weekend and shall occur within the neighborhood association boundaries or at a city facility.
D. If the neighborhood association is not currently recognized by the City, is inactive, or does not exist, the applicant shall request a meeting with the citizen involvement committee.
E. To show compliance with this section, the applicant shall submit a copy of the email or mail notice to the neighborhood association and CIC chair, a sign-in sheet of meeting attendees, and a summary of issues discussed at the meeting. If the applicant held a separately noticed meeting, the applicant shall submit a copy of the meeting flyer, postcard or other correspondence used, and

a summary of issues discussed at the meeting and submittal of these materials shall be required for a complete application.

Finding: complies as proposed. The applicant attended a Caufield Neighborhood Association Meeting on March 19, 2025 as part of the General Development Plan application.

17.50.060 Application requirements.
A permit application may only be initiated by the record property owner or contract purchaser, the City Commission or Planning Commission. If there is more than one record owner, then the City will not complete a Type II—IV application without signed authorization from all record owners. All permit applications shall be submitted on the form provided by the City, along with the appropriate fee and all necessary supporting documentation and information, sufficient to demonstrate compliance with all applicable approval criteria. The applicant has the burden of demonstrating, with evidence, that all applicable approval criteria are, or can be, met.

Finding: complies as proposed. All property owners are signatory to this application.

17.50.070 Completeness review and one hundred twenty-day rule.
A. Upon submission, the Community Development Director shall date stamp the application form and verify that all of the appropriate application review fee(s) have been submitted. Upon receipt of all review fees and an application form, the Community Development Director will then review the application and all information submitted with it and evaluate whether the application is complete enough to process. Within thirty days of receipt of the application and all applicable review fees, the Community Development Director shall complete this initial review and issue to the applicant a written statement indicating whether the application is complete enough to process, and if not, what information shall be submitted to make the application complete.
B. The applicant has one hundred eighty days from the date the application was made to submit the missing information or the application shall be rejected and the unused portion of the application fee returned to the applicant. If the applicant submits the requested information within the one hundred eighty-day period, the Community Development Director shall again verify whether the application, as augmented, is complete. Each such review and verification shall follow the procedure in subsection A of this section.
The application will be deemed complete for the purpose of this section upon receipt by the Community Development Director of:
1. All the missing information;
2. Some of the missing information and written notice from the applicant that no other information will be provided; or
3. Written notice from the applicant that none of the missing information will be provided.
C. Once the Community Development Director determines the application is complete enough to process, or the applicant refuses to submit any more information, the City shall declare the application complete. Pursuant to ORS 227.178, the City will reach a final decision on an application within one hundred twenty calendar days from the date that the application is determined to be or deemed complete unless the applicant agrees to suspend the one hundred twenty-calendar-day timeline or unless state law provides otherwise. The one hundred twenty-day period, however, does not apply in the following situations:
1. Any hearing continuance or other process delay requested by the applicant shall be deemed an extension or waiver, as appropriate, of the one hundred twenty-day period.

2. Any delay in the decision-making process necessitated because the applicant provided an incomplete set of mailing labels for the record property owners within three hundred feet of the subject property shall extend the one hundred twenty-day period for the amount of time required to correct the notice defect.
3. The one hundred twenty-day period does not apply to any application for a permit that is not wholly within the City's authority and control.
4. The one hundred twenty-day period does not apply to any application for an amendment to the City's comprehensive plan or land use regulations nor to any application for a permit, the approval of which depends upon a plan amendment.
D. A one hundred day-period applies in place of the one hundred twenty-day period for affordable housing projects where:
1. The project includes five or more residential units, including assisted living facilities or group homes;
2. At least fifty percent of the residential units will be sold or rented to households with incomes equal to or less than sixty percent of the median family income for Clackamas County or for the state, whichever is greater; and
3. Development is subject to a covenant restricting the owner and successive owner from selling or renting any of the affordable units as housing that is not affordable for a period of sixty years from the date of the certificate of occupancy.
E. The one hundred twenty-day period specified in OCMC 17.50.070.C or D may be extended for a specified period of time at the written request of the applicant. The total of all extensions may not exceed two hundred forty-five calendar days.
F. The approval standards that control the City's review and decision on a complete application are those which were in effect on the date the application was first submitted.

Finding: complies as proposed. This application was deemed complete within the required timeframe and has been assigned a 120-day decision timeline in compliance with this section.

17.50.080 Complete application—Required information.
Unless stated elsewhere in OCMC 16 or 17, a complete application includes all the materials listed in this subsection. The Community Development Director may waive the submission of any of these materials if not deemed to be applicable to the specific review sought. Likewise, within thirty days of when the application is first submitted, the Community Development Director may require additional information, beyond that listed in this subsection or elsewhere in Titles 12, 14, 15, 16, or 17, such as a traffic study or other report prepared by an appropriate expert. In any event, the applicant is responsible for the completeness and accuracy of the application and all of the supporting documentation, and the City will not deem the application complete until all information required by the Community Development Director is submitted. At a minimum, the applicant shall submit the following:
A. One copy of a completed application form that includes the following information:
1. An accurate address and tax map and location of all properties that are the subject of the application;
2. Name, address, telephone number and authorization signature of all record property owners or contract owners, and the name, address and telephone number of the applicant, if different from the property owner(s);
B. A complete list of the permit approvals sought by the applicant;
C. A complete and detailed narrative description of the proposed development;

D. A discussion of the approval criteria for all permits required for approval of the development proposal that explains how the criteria are or can be met or are not applicable, and any other information indicated by staff at the pre-application conference as being required;
E. One copy of all architectural drawings and site plans shall be submitted for Type II—IV applications.
One paper copy of all application materials shall be submitted for Type I applications;
F. For all Type II—IV applications, the following is required:
1. An electronic copy of all materials.
2. Mailing labels or associated fee for notice to all parties entitled under OCMC 17.50.090 to receive mailed notice of the application. The applicant shall use the names and addresses of property owners within the notice area indicated on the most recent property tax rolls.
3. Documentation indicating there are no liens favoring the City on the subject site.
4. A receipt from the county assessor's office indicating that all taxes for the lot or parcels involved are paid in full for the preceding tax year.
5. A current preliminary title report or trio for the subject property(ies);
G. All required application fees;
H. Annexation agreements, traffic or technical studies (if applicable);
I. Additional documentation, as needed and identified by the Community Development Director.

Finding: complies as proposed. This application was deemed complete within the required timeframe and in compliance with this section.

17.50.090 - Public notices.
All public notices issued by the City announcing applications or public hearings of quasi-judicial or legislative actions, shall comply with the requirements of this section.
A. Notice of Type II Applications. Once the Community Development Director has deemed a Type II application complete, the City shall prepare and send notice of the application, by first class mail, to all record owners of property within three hundred feet of the subject property and to any city-recognized neighborhood association whose territory includes the subject property. The applicant shall provide or the City shall prepare for a fee an accurate and complete set of mailing labels for these property owners and for posting the subject property with the City-prepared notice in accordance with OCMC 17.50.100. The City's Type II notice shall include the following information:
1. Street address or other easily understood location of the subject property and city-assigned planning file number;
2. A description of the applicant's proposal, along with citations of the approval criteria that the City will use to evaluate the proposal;
3. A statement that any interested party may submit to the City written comments on the application during a fourteen-day comment period prior to the City's deciding the application, along with instructions on where to send the comments and the deadline of the fourteen-day comment period;
4. A statement that any issue which is intended to provide a basis for an appeal shall be raised in writing during the fourteen-day comment period with sufficient specificity to enable the City to respond to the issue;
5. A statement that the application and all supporting materials may be inspected, and copied at cost, at City Hall during normal business hours;
6. The name and telephone number of the planning staff person assigned to the application or is otherwise available to answer questions about the application;

7. The notice shall state that a city-recognized neighborhood association requesting an appeal fee waiver pursuant to OCMC 17.50.290.C must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal.
B. Notice of Public Hearing on a Type III or IV Quasi-Judicial Application. Notice for all public hearings concerning a quasi-judicial application shall conform to the requirements of this subsection. At least twenty days prior to the hearing, the City shall prepare and send, by first class mail, notice of the hearing to all record owners of property within three hundred feet of the subject property and to any city-recognized neighborhood association whose territory includes the subject property. The City shall also publish the notice on the City website within the City at least twenty days prior to the hearing. Pursuant to OCMC 17.50.080.H, the applicant is responsible for providing an accurate and complete set of mailing labels for these property owners and for posting the subject property with the City-prepared notice in accordance with OCMC 17.50.100. Notice of the application hearing shall include the following information:
1. The time, date and location of the public hearing;
2. Street address or other easily understood location of the subject property and city-assigned planning file number;
3. A description of the applicant's proposal, along with a list of citations of the approval criteria that the City will use to evaluate the proposal;
4. A statement that any interested party may testify at the hearing or submit written comments on the proposal at or prior to the hearing and that a staff report will be prepared and made available to the public at least seven days prior to the hearing;
5. A statement that any issue which is intended to provide a basis for an appeal to the City Commission shall be raised before the close of the public record. Issues must be raised and accompanied by statements or evidence sufficient to afford the City and all parties to respond to the issue;
6. The notice shall state that a city-recognized neighborhood association requesting an appeal fee waiver pursuant to OCMC 17.50.290.C must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal;
7. A statement that the application and all supporting materials and evidence submitted in support of the application may be inspected at no charge and that copies may be obtained at reasonable cost at the planning division offices during normal business hours; and
8. The name and telephone number of the planning staff person responsible for the application or is otherwise available to answer questions about the application.
C. Notice of Public Hearing on a Legislative Proposal. At least twenty days prior to a public hearing at which a legislative proposal to amend or adopt the City's land use regulations or comprehensive plan is to be considered, the Community Development Director shall issue a public notice that conforms to the requirements of this subsection. Notice shall be sent to affected governmental entities, special districts, providers of urban services, including Tri-Met, Oregon Department of Transportation and Metro, any affected recognized neighborhood associations and any party who has requested in writing such notice. Notice shall also be published on the City website. Notice issued under this subsection shall include the following information:
1. The time, date and location of the public hearing;
2. The City-assigned planning file number and title of the proposal;
3. A description of the proposal in sufficient detail for people to determine the nature of the change being proposed;
4. A statement that any interested party may testify at the hearing or submit written comments on the proposal at or prior to the hearing; and

5. The name and telephone number of the planning staff person responsible for the proposal and who interested people may contact for further information.

Finding: complies as proposed. Public Notices were created, mailed, and posted to the subject site in compliance with this section.

17.50.100 - Notice posting requirements.
Where this chapter requires notice of a pending or proposed permit application or hearing to be posted on the subject property, the requirements of this section shall apply.
A. City Guidance and the Applicant's Responsibility. The City shall supply all of the notices which the applicant is required to post on the subject property and shall specify the dates the notices are to be posted and the earliest date on which they may be removed. The City shall also provide a statement to be signed and returned by the applicant certifying that the notice(s) were posted at the correct time and that if there is any delay in the City's land use process caused by the applicant's failure to correctly post the subject property for the required period of time and in the correct location, the applicant agrees to extend the applicable decision-making time limit in a timely manner.
B. Number and Location. The applicant shall place the notices on each frontage of the subject property. If the property's frontage exceeds six hundred feet, the applicant shall post one copy of the notice for each six hundred feet or fraction thereof. Notices do not have to be posted adjacent to alleys or unconstructed right-of-way. Notices shall be posted within ten feet of the street and shall be visible to pedestrians and motorists. Notices shall not be posted within the public right-of-way or on trees. The applicant shall remove all signs within ten days following the event announced in the notice.

Finding: complies as proposed. Public Notices were created, mailed, and posted to the subject site in compliance with this section.

17.50.110 Assignment of decision-makers.
The following City entity or official shall decide the following types of applications:
A. Type I Decisions. The Community Development Director shall render all Type I decisions. The Community Development Director's decision is the City's final decision on a Type I application.
B. Type II Decisions. The Community Development Director shall render the City's decision on all Type II permit applications, which are then appealable to the City Commission with notice to the Planning Commission. The City's final decision is subject to review by LUBA.
C. Type III Decisions. The Planning Commission or Historic Review Board, as applicable, shall render all Type III decisions. Such decision is appealable to the City Commission, on the record. The City Commission 's decision is the city's final decision and is subject to review by LUBA within twenty-one days of when it becomes final.
D. Type IV Decisions. The Planning Commission shall render the initial decision on all Type IV permit applications. If the Planning Commission denies the Type IV application, that decision is final unless appealed in accordance with OCMC 17.50.190. If the Planning Commission recommends approval of the application, that recommendation is forwarded to the City Commission. The City Commission decision is the City's final decision on a Type IV application and is subject to review LUBA.
E. Expedited Land Division (ELD). The Community Development Director shall render the initial decision on all ELD applications. The Community Development Director's decision is the City's final decision unless appealed in accordance to ORS 197.375 to a City-appointed hearings referee. The

hearings referee decision is the City's final decision which is appealable to the Oregon Court of Appeals.

Finding: complies as proposed. This proposal qualifies as a Type III Decision and is scheduled for a public hearing before the Planning Commission.

17.50.120 Quasi-judicial hearing process.
All public hearings pertaining to quasi-judicial permits, whether before the Planning Commission, Historic Review Board, or City Commission, shall comply with the procedures of this section. In addition, all public hearings held pursuant to this chapter shall comply with the Oregon Public Meetings Law, the applicable provisions of ORS 197.763 and any other applicable law.
A. Once the Community Development Director determines that an application for a Type III or IV decision is complete, the planning division shall schedule a hearing before the Planning Commission or Historic Review Board, as applicable. Once the Community Development Director determines that an appeal of a Type II, Type III or Type IV decision has been properly filed under OCMC 17.50.190, the planning division shall schedule a hearing pursuant to OCMC 17.50.190.
B. Notice of the Type III or IV hearing shall be issued at least twenty days prior to the hearing in accordance with OCMC 17.50.090.B.
C. Written notice of an appeal hearing shall be sent by regular mail no later than fourteen days prior to the date of the hearing to the appellant, the applicant if different from the appellant, the property owner(s) of the subject site, all persons who testified either orally or in writing before the hearing body and all persons that requested in writing to be notified.
D. The Community Development Director shall prepare a staff report on the application which lists the applicable approval criteria, describes the application and the applicant's development proposal, summarizes all relevant city department, agency and public comments, describes all other pertinent facts as they relate to the application and the approval criteria and makes a recommendation as to whether each of the approval criteria are met.
E. At the beginning of the initial public hearing at which any quasi-judicial application or appeal is reviewed, a statement describing the following shall be announced to those in attendance:
1. That the hearing will proceed in the following general order: Staff report, applicant's presentation, testimony in favor of the application, testimony in opposition to the application, rebuttal, record closes, commission deliberation and decision;
2. That all testimony and evidence submitted, orally or in writing, shall be directed toward the applicable approval criteria. If any person believes that other criteria apply in addition to those addressed in the staff report, those criteria shall be listed and discussed on the record. The meeting chairperson may reasonably limit oral presentations in length or content depending upon time constraints. Any party may submit written materials of any length while the public record is open;
3. Failure to raise an issue on the record with sufficient specificity and accompanied by statements or evidence sufficient to afford the City and all parties to respond to the issue, will preclude appeal on that issue to the land use board of appeals;
4. Any party wishing a continuance or to keep open the record shall make that request while the record is still open;
5. That the commission chair shall call for any ex-parte contacts, conflicts of interest or bias before the beginning of each hearing item; and
6. For appeal hearings, only those persons who participated either orally or in writing in the decision or review will be allowed to participate either orally or in writing on the appeal.

F. Requests for continuance and to keep open the record: The hearing may be continued to allow the submission of additional information or for deliberation without additional information. New notice of a continued hearing need not be given so long as a time-certain and location is established for the continued hearing. Similarly, hearing may be closed but the record kept open for the submission of additional written material or other documents and exhibits. The chairperson may limit the factual and legal issues that may be addressed in any continued hearing or open record period.

Finding: applicable.

17.50.130 Conditions of approval and notice of decision.

A. All City decision-makers have the authority to impose reasonable conditions of approval designed to ensure that all applicable approval standards, including standards set out in city overlay districts, the City's master plans, and City public works design standards, are, or can be met.

B. Failure to comply with any condition of approval shall be grounds for revocation of the permit(s) and grounds for instituting code enforcement proceedings pursuant to OCMC 1.20 of this code and ORS 30.315.

C. Notice of Decision. The City shall send, by first class mail, a notice of all decisions rendered under this chapter to all persons with standing, i.e., the applicant, all others who participated either orally or in writing before the close of the public record and those who specifically requested notice of the decision. The notice of decision shall include the following information:

1. The file number and date of decision;

2. The name of the applicant, owner and appellant (if different);

3. The street address or other easily understood location of the subject property;

4. A brief summary of the decision, and if an approval, a description of the permit approved;

5. A statement that the decision is final unless appealed and description of the requirements for perfecting an appeal;

6. The contact person, address and a telephone number whereby a copy of the final decision may be inspected or copies obtained.

D. Modification of Conditions. Any request to modify a condition of permit approval is to be considered either minor modification or a major modification, unless otherwise authorized. A minor modification shall be processed as a Type I. A major modification shall be processed in the same manner and shall be subject to the same standards as was the original application. However, the decision-maker may at their sole discretion, consider a modification request and limit its review of the approval criteria to those issues or aspects of the application that are proposed to be changed from what was originally approved.

Finding: applicable.

17.50.140 – Financial guarantees.

When conditions of permit approval require a permitee to construct certain public improvements, the City shall require the permitee to provide financial guarantee for construction of the certain public improvements. Financial guarantees shall be governed by this section.

A. Form of Guarantee. Guarantees shall be in a form approved by the City attorney. Approvable forms of guarantee include irrevocable standby letters of credit to the benefit of the City issued by a recognized lending institution, certified checks, dedicated bank accounts or allocations of construction loans held in reserve by the lending institution for the benefit of the City. The form of

guarantee shall be specified by the City engineer and, prior to execution and acceptance by the City shall be reviewed and approved by the City attorney. The guarantee shall be filed with the City engineer.
B. Performance Guarantees. A permittee shall be required to provide a performance guarantee as follows.
1. After Final Approved Design by the City. The City may request the permittee to submit a performance guarantee for construction of certain public improvements. A permitee may request the option of submitting a performance guarantee when prepared for temporary/final occupancy. The guarantee shall be one hundred twenty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the City engineer.
2. Before Complete Design Approval and Established Engineered Cost Estimate. The City may request a permittee to submit a performance guarantee for construction of certain public improvements. A permitee may request the option of submitting a performance guarantee before public improvements are designed and completed. The guarantee shall be one hundred fifty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer and approved by the City engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the City engineer.
C. Release of Guarantee. The guarantee shall remain in effect until the improvement is actually constructed and accepted by the City. Once the City has inspected and accepted the improvement, the City shall release the guarantee to the permittee. If the improvement is not completed to the City's satisfaction within the time limits specified in the permit approval, the City engineer may, at their discretion, draw upon the guarantee and use the proceeds to construct or complete construction of the improvement and for any related administrative and legal costs incurred by the City in completing the construction, including any costs incurred in attempting to have the permittee complete the improvement. Once constructed and approved by the City, any remaining funds shall be refunded to the permittee. The City shall not allow a permittee to defer construction of improvements by using a performance guarantee, unless the permittee agrees to construct those improvements upon written notification by the City, or at some other mutually agreed-to time. If the permittee fails to commence construction of the required improvements within six months of being instructed to do so, the City may, without further notice, undertake the construction of the improvements and draw upon the permittee's performance guarantee to pay those costs.
D. Fee-in-lieu. When conditions of approval or the City engineer allows a permittee to provide a fee-in-lieu of actual construction of public improvements, the fee shall be one hundred fifty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer and approved by the City engineer. The percentage required is to ensure adequate funds for the future work involved in design, bid, contracting, and construction management and contract closeout. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the City engineer. The fee-in-lieu shall be submitted as cash, certified check, or other negotiable instrument acceptable by the City attorney.

Finding: not applicable. There are no public improvements required.

17.50.141 – Public improvements – Warranty
All public improvements not constructed by the City, shall be maintained and under warranty provided by the property owner or developer constructing the facilities until the City accepts the improvements at the end of the warranty period. The warranty is to be used at the discretion of the

City engineer or designee to correct deficiencies in materials or maintenance of constructed public infrastructure, or to address any failure of engineering design.
A. Duration of Warranty. Responsibility for maintenance of public improvements shall remain with the property owner or developer for a warranty period of two years.
B. Financial Guarantee. Approvable forms of guarantee include irrevocable standby letters of credit to the benefit of the City issued by a recognized lending institution, bond, certified checks, dedicated bank accounts or allocations of construction loans held in reserve by the lending institution for the benefit of the City. The form of guarantee shall be specified by the City engineer and, prior to execution and acceptance by the City shall be reviewed and approved by the City attorney. The guarantee shall be filed with the City engineer.
C. Amount of Warranty. The amount of the warranty shall be equal to fifteen percent of the estimated cost of construction of all public improvements (including those improvements that will become owned and maintained by the City at the end of the two-year maintenance period), and shall be supported by a verified engineering estimate and approved by the City engineer. Upon expiration of the warranty period and acceptance by the City as described below, the City shall be responsible for maintenance of those improvements.
D. Transfer of Maintenance. The City will perform an inspection of all public improvements approximately forty-five days before the two-year warranty period expires. The public improvements shall be found to be in a clean, functional condition by the City engineer before acceptance of maintenance responsibility by the City. Transfer of maintenance of public improvements shall occur when the City accepts the improvements at the end of the two-year warranty period.

Finding: not applicable. There are no public improvements required.

CHAPTER 17.52 – OFF-STREET PARKING AND LOADING

17.52.010 - Applicability.

The construction of a new structure or parking lot, or alterations to the size or use of an existing structure, parking lot or property use shall require site plan review approval and compliance with this chapter. This chapter does not apply to single-family detached residential dwellings, duplexes, townhouses, and cottage clusters.

Finding: applicable. The proposal is nonresidential and includes new structures and revisions to onsite vehicle circulation.

17.52.015 - Planning commission adjustment of parking standards.
A. Purpose. The purpose of permitting a planning commission adjustment to parking standards is to provide for flexibility in modifying parking standards in all zoning districts, without permitting an adjustment that would adversely impact the surrounding or planned neighborhood. Adjustments provide flexibility to those uses which may be extraordinary, unique, or provide greater flexibility for areas that can accommodate a denser development pattern based on existing infrastructure and ability to access the site by means of walking, biking or transit. An adjustment to a minimum parking standard may be approved based on a determination by the planning commission that the adjustment is consistent with the purpose of this code, and the approval criteria can be met.
B. Procedure. A request for a planning commission parking adjustment shall be initiated by a property owner or authorized agent by filing a land use application. The application shall be

accompanied by a site plan, drawn to scale, showing the dimensions and arrangement of the proposed development and parking plan, the extent of the adjustment requested along with findings for each applicable approval criteria. A request for a parking adjustment shall be processed as a Type III application as set forth in Chapter 17.50.

Finding: not applicable. The applicant is not requesting a Planning Commission Adjustment of Parking Standards with this proposal.

17.52.020 - Number of automobile spaces required.
A. The number of parking spaces shall comply with the minimum and maximum standards listed in Table 17.52.020. The parking requirements are based on spaces per one thousand square feet net leasable area unless otherwise stated.
Table 17.52.020

LAND USE	***PARKING REQUIREMENTS***	
	MINIMUM	***MAXIMUM***
High School, College, Commercial School for Adults	*0.20 per # staff and students*	*0.30 per # staff and students*
Auditorium, Meeting Room, Stadium, Religious Assembly Building, movie theater,	*.25 per seat*	*0.5 per seat*
Sports Club, Recreation Facilities	*Case Specific*	*5.40*

1. Multiple Uses. In the event several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of the several uses computed separately.
2. Requirements for types of buildings and uses not specifically listed herein shall be determined by the Community Development Director, based upon the requirements of comparable uses listed.
3. Where calculation in accordance with the above list results in a fractional space, any fraction less than one-half shall be disregarded and any fraction of one-half or more shall require one space.
4. Fleet vehicle parking shall be accommodated within the maximum parking ratio, except that in GI, CI, and MUE zones, fleet vehicle parking may be included in a parking lot in addition to the maximum number of permitted parking spaces.
5. A change in use within an existing habitable building located in the MUD Design District or the Willamette Falls Downtown District is exempt from additional parking requirements. Additions to an existing building and new construction are required to meet the minimum parking requirements for the areas as specified in Table 17.52.020 for the increased square footage.

Finding: complies as proposed. Under Climate Friendly Equitable Communities rules (**OAR 660-012-440),** developments are not required to create additional off-street parking if the development is located within a ½ Mile Frequent Transit Corridor. This development site is located in the corridor and is therefore not required to add more parking to the site. No additions to parking or changes to parking lots are proposed with this application.

B. Parking requirements can be met either onsite, or offsite by meeting one or multiple of the following conditions:

1. Parking may be located on the same site as the associated use which it is supporting.
2. Mixed Uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for the off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (e.g. the uses operate on different days or at different times of the day). In that case, the total requirements shall be reduced accordingly, up to a maximum reduction of fifty percent, as determined by the Community Development Director.
3. Shared Parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlay (e.g., uses primarily of a daytime versus nighttime nature), that the shared parking facility is within one thousand feet of the potential uses, and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument authorizing the joint use.
4. On-Street Parking. On-street parking may be counted toward the minimum standards when it is on the street face abutting the subject land use. An on-street parking space shall not obstruct a required clear vision area and it shall not violate any law or street standard. On-street parking for commercial uses shall conform to the following standards:
a. Dimensions. The following constitutes one on-street parking space:
i. Parallel parking: twenty-two feet of uninterrupted and available curb;
ii. Forty-five and/or sixty-degree diagonal parking: Fifteen feet of curb;
iii. Ninety-degree (perpendicular) parking: Twelve feet of curb.
iv. Public Use Required for Credit. On-street parking spaces counted toward meeting the parking requirements of a specific use may not be used exclusively by that use but shall be available for general public use at all times. Signs or other actions that limit general public use of on-street spaces are prohibited.

Finding: complies as proposed. Under Climate Friendly Equitable Communities rules (**OAR 660-012-440),** developments are not required to create additional off-street parking if the development is located within a ½ Mile Frequent Transit Corridor. This development site is located in the corridor and is therefore not required to add more parking to the site. No additions to parking or changes to parking lots are proposed with this application.

C. Reduction of the Number of the Minimum Automobile Spaces Required. Any combination of the reductions below is permitted unless otherwise noted.
1. Downtown Parking Overlay. The minimum required number of parking stalls is reduced within the downtown parking overlay by fifty percent.
2. Transit Oriented Development. For projects not located within the downtown parking overlay district, the minimum required number of parking stalls is reduced up to twenty-five percent when:
a. In a commercial center (sixty thousand square feet or greater of retail or office use measured cumulatively within a five hundred foot radius);
b. When adjacent to multi-family development with over eighty units; or
c. Within one thousand three hundred twenty feet of an existing or planned public transit street and within one thousand three hundred twenty feet of the opposite use (commercial center or multi-family development with over eighty units).
3. Tree Preservation. The Community Development Director may grant an adjustment to any standard of this requirement provided that the adjustment preserves a designated heritage tree or grove so that the reduction in the amount of required pavement can help preserve existing healthy trees in an undisturbed, natural condition.

4. Transportation Demand Management. The Community Development Director shall reduce the required number of parking stalls up to twenty-five percent when a parking-traffic study prepared by a traffic engineer demonstrates alternative modes of transportation, including transit, bicycles, and walking, and/or special characteristics of the customer, client, employee or resident population will reduce expected vehicle use and parking space demand for this development, as compared to standard Institute of Transportation Engineers vehicle trip generation rates and further that the transportation demand management program promotes or achieves parking utilization lower than minimum city parking requirements.
A transportation demand management (TDM) program shall be developed to include strategies for reducing vehicle use and parking demand generated by the development and will be measured annually. If, at the annual assessment, the City determines the plan is not successful, the plan may be revised. If the City determines that no good-faith effort has been made to implement the plan, the City may take enforcement actions.
5. The minimum required number of stalls may be reduced by up to ten percent when the subject property is adjacent to an existing or planned fixed public transit route or within one thousand feet of an existing or planned transit stop.

Finding: not applicable. The applicant is not requesting a reduction in parking spaces or the minimum requirement for this application.

17.52.040 - Bicycle parking standards.
A. Purpose-Applicability. To encourage bicycle transportation to help reduce principal reliance on the automobile, and to ensure bicycle safety and security, bicycle parking shall be provided in conjunction with all uses other than exclusively residential use with less than five dwellings on-site (excluding cottage clusters).
B. Number of Bicycle Spaces Required. For any use not specifically mentioned in Table A, the bicycle parking requirements shall be the same as the use which, as determined by the Community Development Director, is most similar to the use not specifically mentioned. Calculation of the number of bicycle parking spaces required shall be determined in the manner established in OCMC 17.52.020 for determining automobile parking space requirements. Modifications to bicycle parking requirements may be made through the site plan and design, conditional use, or master plan review process.

*TABLE A Required Bicycle Parking Spaces**
Where two options for a requirement are provided, the option resulting in more bicycle parking applies. Where a calculation results in a fraction, the result is rounded up to the nearest whole number.

USE	***MINIMUM BICYCLE PARKING***	***MINIMUM BICYCLE PARKING - COVERED - The following percentage of bicycle parking is required to be covered***
Swimming pools, gymnasiums, ball courts	*1 per 10 auto spaces (min of 2)*	*30% (min of 1)*

* *Covered bicycle parking is not required for developments with two or fewer parking stalls.*

C. Design Standards.
1. Bicycle parking facilities shall be in the form of a lockable enclosure onsite, secure room in a building onsite, a covered or uncovered rack onsite, or within the adjacent right-of-way.
2. Bicycle parking areas shall be clearly marked or visible from on-site buildings or the street. If a bicycle parking area is not plainly visible from the street or main building entrance, a sign shall be posted indicating the location of the bicycle parking area. Indoor bicycle parking areas shall not require stairs to access the space. If sites have more than one building, bicycle parking shall be distributed as appropriate to serve all buildings.
3. All bicycle racks shall be designed so that:
a. The bicycle frame is supported horizontally at two or more places.
b. The frame and at least one wheel of the bicycle can be locked to the rack with a standard U-type lock.
c. The user is not required to lift the bicycle onto the bicycle rack.
d. Each bicycle parking space is accessible without moving another bicycle.
e. It is a minimum of thirty inches tall and eighteen inches wide between the two points of contact.
f. Provides an area of six feet by two feet per bicycle.
g. All bicycle racks and lockers shall be securely anchored to the ground or to a structure.

Finding: complies with condition. Prior to building final, the applicant shall submit a bicycle parking plan that demonstrates compliance with this section. **Staff has determined that it is possible and reasonable that the applicant can meet this standard through the Conditions of Approval.**

17.52.060 - Parking lot landscaping.
Purpose. The purpose of this code section includes the following:
1. To enhance and soften the appearance of parking lots;
2. To limit the visual impact of parking lots from sidewalks, streets and particularly from residential areas;
3. To shade and cool parking areas;
4. To reduce air and water pollution;
5. To reduce stormwater impacts and improve water quality; and
6. To establish parking lots that are more inviting to pedestrians and bicyclists.
A. Applicability. Unless otherwise specified, construction of new parking lots and alterations of existing parking lots shall comply with parking lot landscaping standards. Parking lot landscaping requirements within this section do not apply to parking structures or parking garages, except landscaping as required in OCMC 17.62.

Finding: not applicable. No changes to parking areas or parking lot landscaping are proposed with this application.

17.52.080 - Maintenance.
The owner, tenant and their agent, if any, shall be jointly and severally responsible for the maintenance of the site including but not limited to the off-street parking and loading spaces, bicycle parking and all landscaping which shall be maintained in good condition so as to present a healthy, neat and orderly appearance and shall be kept free from refuse and debris.
All plant growth in interior landscaped areas shall be controlled by pruning, trimming, or otherwise so that:
A. It will not interfere with the maintenance or repair of any public utility;

B. It will not restrict pedestrian or vehicular access; and
C. It will not constitute a traffic hazard due to reduced visibility.

Finding: complies as proposed. The applicant's narrative identified that the landscaped areas will be maintained by the owner in accordance with this section.

17.52.090 - Loading areas.
A. Purpose. The purpose of this section is to provide adequate loading areas for commercial, office, retail and industrial uses that do not interfere with the operation of adjacent streets.
B. Applicability. OCMC 17.52.090 applies to uses that are expected to have service or delivery truck visits with a forty-foot or longer wheelbase, at a frequency of one or more vehicles per week. The City Engineer and decision maker shall determine through site plan and design review the number, size and location of required loading areas, if any.
C. Standards.
1. The off-street loading space shall be large enough to accommodate the largest vehicle that is expected to serve the use without obstructing vehicles or pedestrian traffic on adjacent streets and driveways. Applicants are advised to provide complete and accurate information about the potential need for loading spaces because the City Engineer or decision maker may restrict the use of other public right-of-way to ensure efficient loading areas and reduce interference with other uses.
2. Where parking areas are prohibited between a building and the street, loading areas or drive isles are also prohibited.
3. The City Engineer and decision maker, through site plan and design review, may approve a loading area adjacent to or within a street right-of-way when all of the following loading and unloading operations conditions are met:
a. Short in duration (i.e., less than one hour);
b. Infrequent (less than three operations daily between 5:00 a.m. and 12:00 a.m. or all operations between 12:00 a.m. and 5:00 a.m. at a location that is not adjacent to a residential zone);
c. Does not obstruct traffic during peak traffic hours;
d. Does not interfere with emergency response services; and
e. Is acceptable to the applicable roadway authority.

Finding: not applicable. No new loading areas or changes to existing loading areas are proposed with this application.

CHAPTER 17.54 – SUPPLEMENTAL ZONING REGULATIONS AND EXCEPTIONS

17.54.010 - Accessory structures and uses.
Accessory structures and uses shall comply with all requirements for the principal use except where specifically modified by this title and shall comply with the following standards:
A. Signs. Signs shall be permitted as provided in Chapter 15.28.

Finding: complies with condition. New signs, although indicated on the plans, are not shown in detail. New signs shall be subject to OCMC 15.28 and the sign permit review process based on the zone and their type. **Staff has determined that it is possible and reasonable that the applicant can meet this standard through the Conditions of Approval.**

B. Residential Accessory Structures, Not Including Accessory Dwellings Units. The section applies to all accessory structures within the R-10, R-8, R-6, R-5 and R-3.5 zoning districts and accessory structures on properties with a residential use with less than five units within a zoning designation not listed above.

Finding: not applicable. The applicant is proposing Institutional use buildings, rather than residential.

17.54.020 - Projections from buildings.
Residential building projections that are cantilevered so that they do not touch the ground (such as cornices, eaves, bay windows, fireplaces, overhangs, canopies, sunshades, gutters, chimneys, flues, sills or similar architectural features) may project into the required setbacks up to twenty-four inches. The projection may be limited by easement restrictions, etc.

Finding: not applicable. The applicant is proposing Institutional use buildings, rather than residential.

17.54.030 - Setback exceptions.
A. Through lots having a frontage on two streets shall provide the required front yard on each street. The required rear yard setback shall not apply.
B. Structures within the right-of-way are exempt from setback standards.
C. Uncovered decks or porches with a height of less than thirty inches from grade are exempt from setback standards.

Finding: not applicable. The new structures proposed by this application are located well outside the setbacks of the zone.

17.54.100 Fences, Hedges, Walls, and Retaining Walls.
A. A fence, hedge, wall, retaining wall, or combination thereof may be located on real property, not within the right-of-way, subject to all of the following:
1. A fence, hedge, wall, retaining wall, or combination thereof located in front of a building may be up to 3.5-feet in total height as measured from the finished grade at any point on the fence.

Finding: not applicable. All proposed fences and retaining walls are located more than 40 feet from the right of way.

2. A fence, hedge, wall, located next to, or behind the forward most building, or within more than forty feet of the right-of-way, whichever is less may be up to:
a. Six feet in total height for residential properties with less than five units as measured from the finished grade at any point on the fence; or
b. Eight feet in total height for all other uses as measured from the finished grade at any point on the fence.

Finding: complies as proposed. As a nonresidential property and development, all proposed fences meet the maximum 8-foot height requirement. The applicant also proposes the addition of a 12-foot high retaining wall to be obscured from view below grade by the addition of grandstands in front of it and a press box on top. The retaining wall's height is subject to an Adjustment under OCMC 17.65.070. Please see the findings contained in that section for further analysis.

3. A retaining wall or combination of a fence, hedge, wall located next to and behind the forward most building, or within more than forty feet of the right-of-way, whichever is less, may be up to (as measured from the finished grade) 8.5 feet in height from the finished grade.

Finding: See findings in OCMC 17.65.070 for analysis of the proposed 12-foot high retaining wall.

4. Fences, hedges, and/or walls located within two feet above a retaining wall, as measured on a horizontal plane, shall be measured together for the purposes of determining height.
5. Property owners shall ensure compliance with the Traffic Sight Obstruction requirements in Chapter 10.32 of the Oregon City Municipal Code.
6. Retaining walls completely below the elevation of the right-of-way may be up to six feet in height.

Finding: not applicable.

7. Minimum fall protection required by the Building Official, such as railings, is not included in the height of a retaining wall but must comply with the fence height requirements.

Finding: complies with condition. Prior to the issuance of a Building Permit, the Building Official shall determine whether the final design of the retaining wall and grandstand structure meets this requirement. **Staff has determined that it is possible and reasonable that the applicant can meet this standard through the Conditions of Approval.**

B. When no other practicable alternative exists, the City Engineer may permit a fence, hedge, wall, retaining wall, or combination thereof to be located within the right-of-way subject to all of the following:
1. A Revocable Permanent Obstruction in the Right of Way permit is granted per OCMC 12.04.120;
2. Retaining walls, fences, or hedges comply with OCMC 17.54.100.A, unless determined to be impracticable by the City Engineer.
3. The abutting property owner shall ensure compliance with the Traffic Sight Obstruction requirements in Chapter 10.32 of the Oregon City Municipal Code.

Finding: not applicable. No such structures are proposed in the right of way.

C. It is unlawful for any person to erect any electric fence or any fence constructed in whole or in part of barbed wire or to use barbed wire, except as erected in connection with security installations at a minimum height of six feet, providing further that prior written approval has been granted by the City Manager.

Finding: not applicable. No such building materials are proposed.

CHAPTER 17.62 – SITE PLAN AND DESIGN REVIEW

17.62.010 Purpose.
The purposes of site plan and design review are to: Encourage site planning in advance of construction; protect lives and property from potential adverse impacts of development; consider natural or man-made hazards which may impose limitations on development; conserve the City's natural beauty and visual character and minimize adverse impacts of development on the natural

environment as much as is reasonably practicable; assure that development is supported with necessary public facilities and services; ensure that structures and other improvements are properly related to their sites and to surrounding sites and structure; and implement the City's comprehensive plan and land use regulations with respect to development standards and policies.

17.62.015 - Modifications that will better meet design review requirements.

The review body shall consider modification of certain site related development standards of this chapter specified below. These modifications may be approved as part of a Type II design review process.

A. Applicability.

This process shall apply to modifications to:

a. Landscaping in OCMC 17.62.050.A;

b. Vehicular connections to adjoining properties in OCMC 17.62.050.B.2;

c. On-site pedestrian circulation in OCMC 17.62.050.C;

d. Onsite utility location OCMC 17.62.050.G;

e. Building location in OCMC 17.62.055.D;

f. Building details in OCMC 17.62.055.I;

g. Windows in OCMC 17.62.055.J;

h. Parking lot landscaping in OCMC 17.52.060.

2. Modifications that are denied through Type II design review may be requested as a variance through the variance process pursuant to OCMC 17.60.020 or master plan adjustment pursuant to OCMC 17.65.070 as applicable.

3. Rather than a modification, applicants may choose to apply for a variance through the variance process pursuant to OCMC 17.60.020 or master plan adjustment pursuant to OCMC 17.65.070 as applicable.

Finding: not applicable. The applicant is requesting adjustments to Site Plan & Design Review standards through OCMC 17.65.070, some of which are eligible as modifications under this chapter, and some which aren't. See the findings in OCMC 17.65.070 for more information.

17.62.030 - When required.

Site plan and design review shall be required for all development of real property in all zones except the low and medium density residential districts, unless otherwise provided for by this title or as a condition of approval of a permit. Site plan and design review shall also apply to all conditional uses, cluster housing developments, multi-family uses, manufactured home parks, and non-residential uses in all zones. Site Plan and Design Review does not apply to activities occurring within the right-of-way except for communication facilities pursuant to OCMC 17.80.

Site plan and design review is required for a change in use between the uses in Table 17.62.030:

Table 17.62.030

Existing Use	***Proposed Use***
Residential	*Nonresidential use, including but not limited to: commercial, office, industrial, retail, or institutional*
Single-family or duplex	*3 or more dwellings*

Site plan and design review shall not alter the type and category of uses permitted in the underlying zoning districts.

Only the standards of OCMC 17.62.035 apply to duplex, triplex, quadplex, cottage cluster, townhouse, single-family detached residential unit, live/work dwelling and accessory dwelling unit Type I applications

Finding: applicable. The applicant has proposed new development in the "I" Institutional District.

17.62.035 - Minor site plan and design review.
This section provides for a minor site plan and design review process. Minor site plan review is a Type I or Type II decision, as described in OCMC 17.62.035.A, subject to administrative proceedings described in OCMC 17.50 and may be utilized as the appropriate review process only when authorized by the Community Development Director. The purpose of this type of review is to expedite design review standards for uses and activities that require only a minimal amount of review, typical of minor modifications and/or changes to existing uses or buildings.

Finding: not applicable. The scope of development proposed with this application includes the addition of structures well in excess of the 1,000 square foot threshold in this section.

17.62.040 – Items required.
A complete application for site plan and design review shall be submitted. Except as otherwise in subsection I of this section, the application shall include the following:
A. A site plan or plans, to scale, containing the following:
1. Vicinity information showing streets and access points, pedestrian and bicycle pathways, transit stops and utility locations;
2. The site size, dimensions, and zoning, including dimensions and gross area of each lot or parcel and tax lot and assessor map designations for the proposed site and immediately adjoining properties;
3. Contour lines at two-foot contour intervals for grades zero to ten percent, and five-foot intervals for grades over ten percent;
4. The location of natural hazard areas on and within one hundred feet of the boundaries of the site, including:
a. Areas indicated on floodplain maps as being within the one hundred-year floodplain,
b. Unstable slopes, as defined in OCMC 17.44.020,
c. Areas identified on the seismic conditions map in the comprehensive plan as subject to earthquake and seismic conditions;
5. The location of natural resource areas on and within one hundred feet of the boundaries of the site, including fish and wildlife habitat, existing trees (six inches or greater in caliper measured four feet above ground level), wetlands, streams, natural areas, wooded areas, areas of significant trees or vegetation, and areas designated as being within the natural resources overlay district;
6. The location of inventoried historic or cultural resources on and within one hundred feet of the boundaries of the site;
7. The location, dimensions, and setback distances of all existing permanent structures, improvements and utilities on or within twenty five feet of the site, and the current or proposed uses of the structures;
8. The location, dimensions, square footage, building orientation and setback distances of proposed structures, improvements and utilities, and the proposed uses of the structures by square footage;
9. The location, dimension and names, as appropriate, of all existing and platted streets, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle accessways and other

pedestrian and bicycle ways, transit street and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site;
10. The location, dimension and names, as appropriate, of all proposed streets, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle accessways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred feet of the boundaries of the site;
11. All parking, circulation, loading and servicing areas, including the locations of all carpool, vanpool and bicycle parking spaces as required in OCMC 17.52;
12. Site access points for automobiles, pedestrians, bicycles and transit;
13. On-site pedestrian and bicycle circulation;
14. Outdoor common areas proposed as open space;
15. Total impervious surface created (including buildings and hard ground surfaces);
16. The proposed location, dimensions and materials of fences and walls.
B. A landscaping plan, drawn to scale, showing the location and types of existing trees (six inches or greater in caliper measured four feet above ground level) and vegetation proposed to be removed and to be retained on the site, the location and design of landscaped areas, the varieties, sizes and spacings of trees and plant materials to be planted on the site, other pertinent landscape features, and irrigation systems required to maintain plant materials.
C. Architectural drawings or sketches, drawn to scale and showing floor plans, elevations accurately reflected to grade, and exterior materials of all proposed structures and other improvements as they will appear on completion of construction. The name of the adjacent street shall be identified on each applicable building elevation.
D. An electronic materials board clearly depicting all building materials with specifications as to type, color and texture of exterior materials of proposed structures.
E. An erosion/sedimentation control plan, in accordance with the requirements of OCMC 17.47 and the public works erosion and sediment control standards, and a drainage plan developed in accordance with city drainage master plan requirements, OCMC 13.12 and the public works stormwater and grading design standards. The drainage plan shall identify the location of drainage patterns and drainage courses on and within one hundred feet of the boundaries of the site. Where development is proposed within an identified hazard area, these plans shall reflect concerns identified in the hydrological/geological/geotechnical development impact statement.
F. An exterior lighting plan, drawn to scale, showing type, height, and area of illumination.

Finding: Complies as proposed. This application was deemed Complete for processing on November 21, 2025.

G. Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide:
1. A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and
2. A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable

tribal cultural resource representative had not commented within forty-five days of notification by the applicant.
If, after forty-five days' notice from the applicant, the Oregon State Historic Preservation Office or the applicable tribal cultural resource representative fails to provide comment, the City will not require the letter or email as part of the completeness review. For the purpose of this section, ground disturbance is defined as the movement of native soils.

Finding: complies as proposed.

H. Such special studies or reports as the Community Development Director may require to obtain information to ensure that the proposed development does not adversely affect the surrounding community or identified natural resource areas or create hazardous conditions for persons or improvements on the site. The Community Development Director shall require an applicant to submit one or more development impact evaluations as may be necessary to establish that the City's traffic safety or capacity standards, natural resource, including geologic hazard and flood plain overlay districts, will be satisfied.

Finding: complies as proposed.

I. The Community Development Director may waive the submission of information for specific requirements of this section or may require information in addition to that required by a specific provision of this section, as follows:
1. The Community Development Director may waive the submission of information for a specific requirement upon determination either that specific information is not necessary to evaluate the application properly, or that a specific approval standard is not applicable to the application. If submission of information is waived, the Community Development Director shall, in the decision, identify the waived requirements, explain the reasons for the waiver, and state that the waiver may be challenged on appeal and may be denied by a subsequent review authority. If the matter is forwarded to the planning commission for initial review, the information required by this paragraph shall be included in the staff report;
2. The Community Development Director may require information in addition to that required by a specific provision of this section upon determination that the information is needed to evaluate the application properly and that the need can be justified on the basis of a special or unforeseen circumstance as necessary to comply with the applicable standards. If additional information is required, the Community Development Director shall, in the decision, explain the reasons for requiring the additional information.

Finding: complies as proposed.

J. All new utilities shall be placed underground.
1. Service poles may be allowed on private property when undergrounding service is technically or physically infeasible.

Finding: complies as proposed.

K. One full-sized copy of all architectural and site plans.

Finding: complies as proposed.

17.62.050 - General Standards

All development shall comply with the following standards:

A. Landscaping.

1. Existing native vegetation is encouraged to be retained to the maximum extent practicable. All plants listed on the Oregon City Nuisance Plant List shall be removed from the site prior to issuance of a final occupancy permit for the building.

Finding: complies as proposed. Existing trees are to remain to the extent practicable and no nuisance plants have been identified onsite. See findings in OCMC 17.41 for more information.

2. The amount of landscaping required is found in the standards for each underlying zone. Where the underlying zone does not contain and minimum landscaping standard, the minimum site landscaping shall be fifteen percent of the total site area. Except as allowed elsewhere in Title 16 or 17 of this code, all areas to be credited towards landscaping shall be installed with growing plant materials.

Finding: complies as proposed. The underlying zone requires at least 15% landscaping. The applicant has shown that the site is 58% landscaped.

3. Pursuant to OCMC 17.49, landscaping requirements within the Natural Resource Overlay District, other than landscaping required for parking lots, may be met by preserving, restoring and permanently protecting native vegetation and habitat on development sites.

Finding: not applicable. No landscaping changes are proposed within the Natural Resource Overlay District areas onsite.

4. A landscaping plan shall be prepared by a registered landscape architect for new or revised landscaped areas and parking lots. Landscape architect approval is not required for tree removal and/or installation if the species are chosen from an approved street tree list. A certified landscape designer, arborist, or nurseryman shall be acceptable in lieu of a landscape architect for projects with less than five hundred square feet of landscaping. All landscape plans shall include a mix of vertical (trees and shrubs) and horizontal elements (grass, groundcover, etc.) that within three years will cover one hundred percent of the landscape area. Plant species listed on the Oregon City Nuisance Plant list are prohibited and native species are encouraged. No mulch, bark chips, or similar materials shall be allowed at the time of landscape installation except under the canopy of shrubs and within two feet of the base of trees.

Finding: complies as proposed. Landscaping plans were prepared by a registered Landscaping Architect, Cameron McCarthy Landscaping Architecture & Planning.

5. Landscaping shall be visible from public thoroughfares to the extent practicable.

Finding: complies as proposed. Landscaping for the project area is located more than 600 feet from the nearest public rights of way, but is visible from pedestrian circulation paths and private roads internal to the site.

6. The landscaping in parking areas shall not obstruct lines of sight for safe traffic operation and shall comply with all requirements of OCMC 10.32, Traffic Sight Obstructions.

Finding: not applicable. No new parking lot landscaping is proposed.

B. Vehicular Access and Connectivity.
1. Parking areas shall be located behind the building façade that is closest to the street, below buildings, or on one or both sides of buildings.

Finding: not applicable. No new parking areas are proposed.

2. Existing or future connections to adjacent sites through the use of vehicular and pedestrian access easements which provide connection from the right-of-way to the adjoining property shall be provided.

Finding: not applicable. Connections to and through the site are not impacted by this proposal.

3. Parcels larger than three acres shall provide streets as required in OCMC 16.12.

Finding: complies as proposed. The subject site includes several interconnected internal private streets that provide direct access to adjacent public rights of way.

4. Parking garage entries shall not be more than half of the streetscape.

Finding: not applicable. No parking garage entries are proposed by this application.

C. A well-marked, continuous and protected on-site pedestrian circulation system meeting the following standards shall be provided:
1. Pathways between all building entrances and the street are required. Pathways between the street and buildings fronting on the street shall be direct and not cross a drive aisle. Exceptions may be allowed by the director where steep slopes, a physically constrained site, or protected natural resources prevent a direct connection or where an indirect route would enhance the design and/or use of a common open space.

Finding: complies as proposed. All pedestrian paths connect buildings to the street through a continuous circulation system.

2. The pedestrian circulation system shall connect all main entrances, parking areas, bicycle parking, recreational areas, common outdoor areas, and any pedestrian amenities on the site. For buildings fronting on the street, the sidewalk may be used to meet this standard.

Finding: complies as proposed. The proposal includes a pedestrian circulation system that connects main entrances, parking areas, bicycle parking, recreational areas, common outdoor areas, and pedestrian amenities.

3. The pedestrian circulation system shall connect the principal building entrance to those of buildings on adjacent sites, except within industrial zoning designations.

Finding: complies as proposed. All pedestrian paths connect buildings entrances to buildings on adjacent sites through a continuous circulation system.

4. Elevated external stairways or walkways shall not extend beyond the building façade except for external stairways or walkways located in, or facing interior courtyard areas that are not visible from the street or a public access easement. This standard does not apply to sky-bridges or sky-ways.

Finding: not applicable. No elevated walkways are proposed except for stair areas within the bleachers proposed alongside the track.

5. On-site pedestrian walkways shall be hard surfaced, well drained and at least five feet wide. Surface material shall contrast visually to adjoining surfaces. When bordering parking spaces other than spaces for parallel parking, pedestrian walkways shall be a minimum of seven feet in width unless curb stops are provided. When the pedestrian circulation system is parallel and adjacent to an auto travel lane, the walkway shall be raised or separated from the auto travel lane by a raised curb, bollards, landscaping or other physical barrier.

Finding: complies as proposed. All proposed pedestrian paths are concrete or compacted gravel, contrast with adjoining surfaces, are a minimum of five feet wide, and border no parking spaces. Walkways next to travel lanes are elevated in similar fashion to sidewalks along public streets. The vehicle drop-off location includes a curb cut and surface pavers to assist with accessibility standards.

D. All development shall maintain continuous compliance with applicable federal, state, and City standards.

Finding: complies as proposed. Building permit review processes will determine compliance with applicable Americans with Disabilities Act standards.

E. Adequate public water and sanitary sewer facilities sufficient to serve the proposed or permitted level of development shall be provided pursuant to OCMC 16.12. The applicant shall demonstrate that adequate facilities and services are presently available or can be made available concurrent with development. Service providers shall be presumed correct in the evidence, which they submit. All facilities shall be designated to City standards as set out in the City's facility master plans and public works design standards. A development may be required to modify or replace existing off-site systems if necessary to provide adequate public facilities. The City may require over sizing of facilities where necessary to meet standards in the City's facility master plan or to allow for the orderly and efficient provision of public facilities and services. Where over sizing is required, the developer may request reimbursement from the City for over sizing based on the City's reimbursement policy and fund availability, or provide for recovery of costs from intervening properties as they develop.

Finding: complies as proposed. The proposed development connects to existing water and sanitary services on-site.

F. If a transit agency, upon review of an application for an industrial, institutional, retail or office development, recommends that a bus stop, bus turnout lane, bus shelter, accessible bus landing pad, lighting, or transit stop connection be constructed, or that an easement or dedication be

provided for one of these uses, consistent with an agency adopted or approved plan at the time of development, the review authority shall require such improvement, using designs supportive of transit use. Improvements at a major transit stop may include intersection or mid-block traffic management improvements to allow for crossings at major transit stops, as identified in the City's transportation system plan.

Finding: complies as proposed. No transit agency has provided recommendations for any changes to the existing transit-serving infrastructure onsite.

G. Screening of Mechanical Equipment. Commercial, mixed-use, institutional, and multi-family buildings shall include the following measures to screen or block views of mechanical equipment from adjacent streets according to the following requirements:
1. Rooftop mechanical equipment, including HVAC equipment and utility equipment that serves the structure, shall be screened from view from the adjacent street on all new buildings or building additions. Screening shall be accomplished through the use of parapet walls or a sight-obscuring enclosure around the equipment constructed of one of the primary materials used on the primary facades of the structure, and that is an integral part of the building's architectural design. The parapet or screen shall completely surround the rooftop mechanical equipment to an elevation equal to or greater than the highest portion of the rooftop mechanical equipment being screened from adjacent streets, as viewed from the sidewalk or future sidewalk location on the adjacent street at pedestrian level. In the event such parapet wall does not fully screen all rooftop equipment, then the rooftop equipment shall be enclosed by a screen constructed of one of the primary materials used on the primary facade of the building so as to achieve complete screening. Screening requirements do not apply to new or replacement equipment on existing buildings. New or replacement rooftop mechanical equipment on existing buildings shall be painted or powder-coated.

Finding: not applicable. No rooftop mechanical equipment is proposed.

2. Wall-mounted mechanical HVAC and air conditioning equipment, and groups of multiple utility meters shall not be placed on the front facade of a building or on a facade that faces a right-of-way. Wall-mounted mechanical equipment, including-air conditioning and groups of multiple utility meters, that extend six inches or more from the outer building wall shall be screened from view from adjacent streets; from residential, public, and institutional properties; and from public areas of the site or adjacent sites through the use of (a) sight-obscuring enclosures constructed of one of the primary materials used on the primary facade of the structure, (b) sight-obscuring fences, or (c) trees or shrubs that block at least eighty percent of the equipment from view or (d) painting the units to match the building. Wall-mounted mechanical equipment that extends six inches or less from the outer building wall shall be designed to blend in with the color and architectural design of the subject building. Vents which extend six inches or less from the outer building wall shall [be] exempt from this standard if painted.

Finding: complies as proposed. No wall-mounted mechanical equipment will be visible from the right of way. No mechanical equipment will protrude from buildings more than 6 inches.

3. Ground-mounted above-grade mechanical equipment shall be screened by ornamental fences, screening enclosures, trees, or shrubs that block at least eighty percent of the view from the public right of way.

Finding: complies as proposed. No ground-mounted mechanical equipment will be visible from the right of way.

4. This section shall not apply to the installation of solar energy panels, photovoltaic equipment, wind power generating equipment, dishes/antennas, pipes, vents, and chimneys.

Finding: not applicable.

H. Building Materials.
1. Prohibited Materials. The following materials shall be prohibited in visible locations from the right-of-way or a public access easement unless an exception is granted by the Community Development Director based on the integration of the material into the overall design of the structure:
a. Vinyl or plywood siding (including T-111 or similar plywood).
b. Glass block or highly tinted, reflected, translucent or mirrored glass (except stained glass) as more than ten percent of the building facade.
c. Corrugated fiberglass.
d. Chain link fencing (except for temporary purposes such as a construction site, gates for a refuse enclosure, stormwater facilities, when excepted by 17.62.050.H.2.g, or when located on properties within the general industrial district).
e. Crushed colored rock/crushed tumbled glass.
f. Non-corrugated and highly reflective sheet metal.
g. Tarps, except for the protection of outside storage.

Finding: complies as proposed. Of this list, only chain link fencing as excepted by 17.62.050.H.2.g is proposed. See findings below.

2. Special Material Standards. The following materials are allowed if they comply with the requirements found below:
a. Concrete Block. When used for the front façade of any building, concrete blocks shall be split, rock- or ground-faced and shall not be the prominent material of the elevation. Plain concrete block or plain concrete may be used as foundation material if the foundation material is not revealed more than three feet above the finished grade level adjacent to the foundation wall.

Finding: complies with condition. The applicant is proposing a public restroom building to be added to the site that uses split face concrete block as the prominent material of all of its elevations. The applicant has requested an adjustment from this standard. See the findings in section 17.65.

b. Metal Siding. Metal siding shall have visible corner moldings and trim and incorporate masonry or other similar durable/permanent material near the ground level (first two feet above ground level) except when used for a temporary structure.

Finding: complies with condition. Metal-sided structures appear to have a durable permanent material for the first two feet above ground level. Corner moldings are not immediately visible on the building elevation drawings. These elements must be added to the building design prior to

building final. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

c. Exterior insulation and finish system (EIFS) and similar troweled finishes shall be trimmed in wood, masonry, or other approved materials and shall be sheltered from extreme weather by roof overhangs or other methods.
d. Building surfaces shall be maintained in a clean condition and painted surfaces shall be maintained to prevent or repair peeling, blistered or cracking paint.
e. Membrane or fabric covered storage areas are permitted as temporary structures, excluding the use of tarps.
f. Vinyl or powder coated chain link fencing is permitted for City-owned stormwater management facilities, reservoirs, and other public works facilities such as pump stations, maintenance yards, and storage yards not located within the general industrial district.
g. Chain link fencing is permitted in the following circumstances:
1. Within City-owned parks and recreational facilities.
2. On any property when used for a baseball or softball backstop or dugout, track and field facility, or sports court.

Finding: complies as proposed. The applicant is proposing the addition of black vinyl chain link fencing for baseball and softball backstops, dugouts, track facility and field events facility.

I. Temporary Structures. Temporary structures are permitted pursuant to the following standards:

Finding: not applicable. No temporary structures are proposed.

J. All new utilities shall be placed underground.
1. Service poles may be allowed on private property when undergrounding service is technically or physically infeasible.

Finding: complies as proposed. No new utilities are proposed to be placed above ground.

K. Development shall comply with requirements of the following Oregon City Municipal Code chapters, as applicable, including but not limited to:
1. Chapter 12.04, Streets, Sidewalks and Public Places.
2. Chapter 12.08, Public and Street Trees.
3. Chapter 13.04, Water Service System.
4. Chapter 13.08, Sewer Regulations.
5. Chapter 13.12, Stormwater Management.
6. Chapter 16.12, Minimum Improvements and Design Standards for Development.
7. Chapter 17.20, Residential Design Standards for ADU's, Cluster Housing, Internal Conversions, Live/Work Units, and Manufactured Home Parks.
8. Chapter 17.40, Historic Overlay District.
9. Chapter 17.41, Tree Protection Standards.
10. Chapter 17.42, Flood Management Overlay District.
11. Chapter 17.44, Geologic Hazards.
12. Chapter 17.47, Erosion and Sediment Control.
13. Chapter 17.48, Willamette River Greenway.
14. Chapter 17.49, Natural Resource Overlay District.

15. Chapter 17.50, Administration and Procedures.
16. Chapter 17.52, Off-Street Parking and Loading.
17. Chapter 17.54, Supplemental Zoning Regulations and Exceptions.
18. Chapter 17.58, Lawful Nonconforming Uses, Structures, and Lots.
19. Chapter 17.65, Master Plans and Planned Unit Development.

Finding: applicable. The applicable chapters are included within this report.

17.62.055 – Institutional, office, multi-family, retail, and commercial building standards.
A. Purpose. The primary objective of the regulations contained in this section is to provide a range of design choices that promote creative, functional, and cohesive development that is compatible with surrounding areas. Buildings approved in compliance with these standards are intended to serve multiple tenants over the life of the building, and are not intended for a one-time occupant. The standards encourage people to spend time in the area, which also provides safety though informal surveillance. Finally, this section is intended to promote the design of an urban environment that is built to human scale by creating buildings and streets that are attractive to pedestrians, create a sense of enclosure, provide activity and interest at the intersection of the public and private spaces, while also accommodating vehicular movement.
B. Applicability. This section applies to institutional, office, multi-family, retail and commercial buildings except accessory structures less than one thousand square feet and temporary structures.

Finding: not applicable. The proposed development is part of an institutional use, the proposed site configuration includes pedestrian areas and amenities that are intended to encourage people to spend time in the area, provide activity/interest, and accommodate vehicular movement. The grandstand structure and large and small hitting barns each exceed 1,000 square feet in floor area. However, the pre-existing athletic fields complex is located more than 600 feet from the nearest right of way and locating the proposed structures according to the right-of-way centric building siting, building orientation, entryway, and window standards is neither feasible nor reasonable for this project. The open-air nature of the athletic fields site and the non-traditional institutional uses (i.e., batting cages and stadium grandstands) to be contained therein are not appropriate for the kinds of design elements that non-residential buildings that front on streets require.

17.62.065 Outdoor lighting.
A. Purpose. The general purpose of this section is to require outdoor lighting that is adequate for safety and convenience; in scale with the activity to be illuminated and its surroundings; directed to the surface or activity to be illuminated; and designed to clearly render people and objects and contribute to a pleasant nighttime environment. Additional specific purposes are to:
1. Provide safety and personal security as well as convenience and utility in areas of public use or traverse, for uses where there is outdoor public activity during hours of darkness;
2. Control glare and excessive brightness to improve visual performance, allow better visibility with relatively less light, and protect residents from nuisance and discomfort;
3. Control trespass light onto neighboring properties to protect inhabitants from the consequences of stray light shining in inhabitants' eyes or onto neighboring properties;
4. Result in cost and energy savings to establishments by carefully directing light at the surface area or activity to be illuminated, using only the amount of light necessary; and
5. Control light pollution to minimize the negative effects of misdirected light and recapture views to the night sky.

6. Encourage energy efficient lighting with new technologies such as light emitting diodes (LED) or similar to reduce ongoing electrical demand and operating costs.
B. Applicability.
1. General.
a. All exterior lighting for any type of commercial, mixed-use, industrial, institutional, or multifamily development shall comply with the standards of this section, unless excepted in subsection B.3.
b. The City engineer or public works director shall have the authority to enforce these regulations on private property if any outdoor illumination is determined to present an immediate threat to the public health, safety and welfare.
2. Lighting Plan Requirement. All commercial, industrial, mixed-use, cottage housing and multi-family developments shall submit a proposed exterior lighting plan. The plan shall be submitted concurrently with the site plan. The exterior lighting plan shall include plans and specifications for streetlights, parking lot lights, and exterior building lights. The specifications shall include details of the pole, fixture height and design, lamp type, wattage, and spacing of lights.
3. Excepted Lighting. The following types of lighting are excepted from the requirements of this section:
a. Residential lighting for single-family attached and detached homes, and duplexes.
b. Public street and right-of-way lighting.
c. Temporary decorative seasonal lighting provided that individual lamps have a light output of sixty watts or less.
d. Temporary lighting for emergency or nighttime work and construction.
e. Temporary lighting for theatrical, television, and performance areas, or for special public events.
f. Lighting for a special district, street, or building that, according to an adopted municipal plan or ordinance, is determined to require special lighting aesthetics as part of its physical character.
g. Lighting required and regulated by the Federal Aviation Administration.

Finding: applicable. The proposed development includes institutional uses as part of an athletic event center related to an educational facility's athletic programming.

C. Design and Illumination Standards.
1. Outdoor lighting, if provided, shall be provided in a manner that enhances security, is appropriate for the use, avoids adverse impacts on surrounding properties, and the night sky through appropriate shielding as defined in this section. Glare shall not cause illumination on other properties in excess of a measurement of 0.5 footcandles of light as measured at the property line.
2. Lighting shall be provided in parking lots and vehicular circulation areas.
3. Lighting shall be provided in pedestrian walkways, pedestrian plazas, and pedestrian circulation areas.
4. Lighting shall be provided at all building entrances.
5. With the exception of pedestrian scale lighting, all light sources shall be concealed or shielded with a full cut-off style fixture in order to minimize the potential for glare and unnecessary diffusion on adjacent property.
6. The maximum height of any lighting pole serving a multi-family residential use shall be twenty feet. The maximum height serving any other type of use shall be twenty-five feet, except in parking lots larger than five acres, the maximum height shall be thirty-five feet if the pole is located at least one hundred feet from any residential use.
7. Floodlights shall not be utilized to light all or any portion of a building facade between ten p.m. and six a.m.

8. Lighting on outdoor canopies shall be fully recessed into the canopy and shall not protrude downward beyond the ceiling of the canopy.
9. All outdoor light not necessary for security purposes shall be reduced, activated by motion sensor detectors, or turned off during non-operating hours.
10. Light fixtures used to illuminate flags, statues, or any other objects mounted on a pole, pedestal, or platform shall use a narrow cone beam of light that will not extend beyond the illuminated object.
11. For upward-directed architectural, landscape, and decorative lighting, direct light emissions shall not be visible above the building roofline.
12. No flickering or flashing lights shall be permitted, except for temporary decorative seasonal lighting.
13. Lighting for outdoor recreational uses such as ball fields, playing fields, tennis courts, and similar uses, are allowed a light post height up to eighty feet in height.
14. Main building entrances shall be well lighted and visible from any transit street. The minimum lighting level for building entries fronting on a transit street shall be three foot-candles.

Finding: complies as proposed. The applicant's submitted Exterior Lighting Plan (Exhibit D) includes sufficient information to determine compliance with all relevant criteria. Lights cast no more than 0.5 footcandles of glare at the property lines, it is shown in pedestrian circulation areas, walkways, building entrances, appears to be cut-off style fixtures, and field lighting poles are no taller than 80 feet. See findings in OCMC 17.49.100 for impacts on NROD areas on the subject site.

17.62.085 Refuse and recycling standards for commercial, industrial, office, institutional, and multi-family developments.
The purpose and intent of these provisions is to provide an efficient, safe and convenient refuse and recycling enclosure for the public as well as the local collection firm. All new development, change in property use, expansions, or exterior alterations to uses, other than single-family detached residential units, duplexes, triplexes, quadplexes, townhouses, cottage clusters or accessory dwelling units (ADUs), shall include a refuse and recycling enclosure. The area(s) shall be:
A. Fully enclosed and visually screened;
B. Located in a manner easily and safely accessible by collection vehicles;
C. Located in a manner so as not to hinder travel lanes, walkways, streets or adjacent properties;
D. On a level, hard surface designed to discharge surface water runoff and avoid ponding;
E. Maintained by the property owner;
F. Used only for purposes of storing solid waste and recyclable materials;
G. Designed in accordance with applicable sections of the Oregon City Municipal Code (including OCMC 8.20, Solid Waste Collection and Disposal) and City adopted policies.

Enclosures are encouraged to be sized appropriately to meet the needs of current and future tenants and designed with sturdy materials which are compatible to the primary structure(s).

Finding: complies with conditions. The applicant's submittal did not discuss how refuse generated and collected onsite will be managed with the current refuse enclosure facilities onsite. Therefore, prior to building final, the applicant shall submit a statement to Planning staff that discusses how the refuse and recycling needs of the site are served within the campus's existing infrastructure. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

17.62.090 Implementation.

A. Applications for site plan and design review shall be reviewed in the manner provided in OCMC 16.12 and 17.50. The building official may issue a certificate of occupancy only after the improvements required by site plan and design review approval have been completed, or a schedule for completion and a bond or other financial guarantee have been accepted by the City.

B. In performing site plan and design review, the review authority shall consider the effect of additional financial burdens imposed by such review on the cost and availability of needed housing types. Consideration of such factors shall not prevent the imposition of conditions of approval found necessary to meet the requirements of this section. The cost of such conditions of approval shall not unduly increase the cost of housing beyond the minimum necessary to achieve the provisions of this title, nor shall such cost prevent the construction of needed housing types.

C. The site plan and design review provisions of this chapter shall not be applied to reduce the density or height of an application for a development project that reserves at least seventy-five percent of the gross floor area for housing where the proposed density or height is at or below what is allowed in the base zone, except in the following situations:

1. Where the reduction in density is required for development subject to historic overlay provision in OCMC 17.40; or

2. Where the reduction in density is necessary to resolve a health, safety or habitability issue, or to comply with the natural resource overlay district regulations of OCMC 17.49, the geologic hazard overlay district regulations of OCMC 17.44, or the floodplain management overlay district regulations of OCMC 17.42 or steep slope regulations.

Finding: applicable.

CHAPTER 17.65 – MASTER PLANS AND PLANNED UNIT DEVELOPMENT

17.65.030 - Applicability of the Master Plan or Planned Unit Development Regulations.

A. Required for Large Institutional Uses. If the boundaries of an institutional development exceed ten acres in size, the proposed development shall be master planned using the regulations of this chapter. No land use review other than a Type I or II Minor Site Plan and Design Review shall be issued for any institutional development in excess of ten acres in total acreage unless it is accompanied by or preceded by a master plan approval under this chapter. This requirement does not apply to modifications to existing institutional developments unless the modification results in a cumulative square footage increase of over ten thousand total building square feet in an existing institutional development over ten acres.

B. When Required as Part of Previous Land Use Review. The master plan or planned unit development regulations may be used to fulfill a condition of approval from a previous land use decision-requiring master planning for a development.

C. When identified in the Oregon City Comprehensive Plan. The master plan regulations are required for all properties identified for master planning in the land use section of the Oregon City Comprehensive Plan.

D. Voluntarily. An applicant may voluntarily submit a master plan or planned unit development as part of a land use review, including for residential projects.

Finding: applicable. The applicant was approved for a General Development Plan under GLUA-24-00020 / MAS-24-00001 in 2025. This application is for a Detailed Development Plan that implements the General Development Plan as it pertains to the Athletic Fields Complex area.

17.65.040 - Procedure.
A. Preapplication Review. Prior to filing for either general development plan or detailed development plan approval, the applicant shall file a pre-application conference pursuant to OCMC 17.50.030.

Finding: complies as proposed. The applicant attended a Pre-Application Conference (PA-25-00039) that was held on August 21, 2025 to discuss this Detailed Development Plan proposal.

B. General Development Plan. An application for a general development plan describing the long-term buildout of the site shall be reviewed through a Type III procedure. An applicant shall have an approved general development plan before any detailed development plan may be approved unless both are approved or amended concurrently. Amendments to an approved general development plan shall be reviewed under a Type III procedure pursuant to OCMC 17.65.080.

Finding: complies as proposed. The applicant was approved for a General Development Plan under GLUA-24-00020 / MAS-24-00001 in 2025. This application is for a Detailed Development Plan that implements the General Development Plan as it pertains to the Athletic Fields Complex area.

C. Detailed Development Plan. An application for a detailed development plan, is processed through a Type II procedure, as long as it is in conformance with the approved general development plan. Amendments to an approved detailed development plan shall be processed pursuant to OCMC 17.65.080. Once a development has an approved detailed development plan, OCMC 17.62 Site Plan and Design Review is not required.

Finding: complies as proposed. The applicant is requesting a Detailed Development Plan review with this application.

D. Concurrent Review. An applicant may concurrently apply for a general development plan and a detailed development plan. Such a concurrent application is reviewed through the highest procedure that applies to any element of the combined application.

Finding: not applicable. The applicant elected to submit their General Development Plan prior to and separate from all associated Detailed Development Plans, including this one.

E. Relationship to Other Reviews. It is the express policy of the City that development review not be segmented into discrete parts in a manner that precludes a comprehensive review of the entire development and its cumulative impacts.

Finding: complies as proposed. This Detailed Development Plan is being reviewed as an entire development with its cumulative impacts under consideration.

F. Duration of General Development Plan. A general development plan shall involve a planning period of up to twenty years. An approved general development plan shall remain in effect until development allowed by the plan has been completed through the detailed development plan process, the plan is amended or superseded, or the plan expires under its stated expiration date either as stated in the approved master plan or planned unit development application or decision of approval.

Finding: applicable. Under GLUA-24-00020 / MAS-24-00001, the applicant requested that the General Development Plan involve a duration of twenty years. This Detailed Development Plan has been submitted for review less than one year after the approval of the General Development Plan approval, much less within the 20-year horizon that applies to the General Development Plan.

17.65.060 - Detailed development plan.
A. Submittal Requirements.
1. A transportation impact study documenting the on- and off-site transportation impacts, as specified in OCMC 17.65.050.B.1.h.i. If such an analysis was submitted as part of the general development plan process, the scope of the report may be limited to any changes which have occurred during the interim and any information listed below which was not a part of the initial study. The on-site portion of the analysis shall include the location, dimensions and names of all proposed streets, alleys, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle access ways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site. The map shall identify existing subdivisions and development and un-subdivided or unpartitioned land ownerships adjacent to the proposed development site and show how existing streets, alleys, sidewalks, bike routes, pedestrian/bicycle access ways and utilities within two hundred fifty feet may be extended to and/or through the proposed development.

Finding: not applicable. Reah Flisakowski of DKS, the City's transportation planning consultant, determined that no traffic analysis was required for this application, as the proposed development merely seeks to improve the facilities for activities that already exist onsite.

2. The location within the development and in the adjoining streets of existing and proposed sewers, water mains, culverts, drain pipes, underground electric, cable television and telephone distribution lines, gas lines, and the location of existing aerial electric, telephone and television cable lines, if any, to be relocated within the development.
3. For portions of the project that would otherwise be subject to site plan and design review, a site plan or plans, to scale, containing the required information identified in OCMC 17.62.040.
4. For residential portions of the project not otherwise subject to site plan and design review, a site plan or plans, to scale, showing the proposed land uses and densities, building locations, lot patterns, circulation patterns, and open space locations and uses.
5. Any other information the Community Development Director deems necessary to show that the proposed development will comply with all of the applicable Chapter 17 requirements.

Finding: complies as proposed. The applicant submitted all the required information to for staff to deem the application Complete.

B. Approval Criteria. The Community Development Director shall approve an application for detailed development plan approval only upon findings that:
1. All development standards and impact mitigation meet the requirements of the approved general development plan, including conditions of approval.
2. Any other applicable zoning regulations that are not addressed in the general development plan are met, unless an adjustment to those regulations has been applied for and is approved. The approval standards applicable to adjustments required as part of a master plan or planned unit development are contained in OCMC 17.65.070.

3. The detailed development plan conforms with the base zone standards, applicable residential design standards, and applicable standards contained in Chapters 17.62, 17.52, 16.12, and 16.08 unless adjusted as provided in OCMC 17.65.070

Finding: complies as proposed. All aspects of the application either comply as proposed with impact mitigation standards, applicable zoning regulations, and the parameters of the General Development Plan, or they comply with under the recommended conditions of approval.

17.65.070 - Adjustments to development standards.
A. Purpose. In order to implement the purpose of the City's master plan or planned unit development process, which is to foster the growth of major institutions, major residential, commercial or mixed-use development, and other large-scale development, while identifying and mitigating their impacts on surrounding properties and public infrastructure, an applicant may request one or more adjustments to the applicable development regulations as part of the master planning or planned unit development process, and are not required to go through the variance process pursuant to OCMC Chapter 17.60.
B. Procedure. Requests for adjustments shall be processed concurrently with a general development plan. An adjustment request at the detailed development plan review shall cause the detailed development plan to be reviewed as a Type III application.

Finding: complies as proposed. The applicant has requested adjustments to OCMC 17.54.100 for the proposed height of the retaining wall support structure for the track and field grandstands, as well as OCMC 17.62.050.H for the use of split-face concrete block as the primary elevation building material for the public restroom onsite. These adjustment requests are being considered by the Planning Commission through a Type III application process.

C. Regulations That May be Adjusted. Adjustments may be allowed for the following items:
1. Dimensional standards of the underlying zone of up to twenty percent, except the perimeter of the development shall meet the underlying zone's setbacks when adjacent to residentially zoned property.
2. Site plan and design standards.
3. Residential design standards.
4. Increase in allowed maximum residential density of up to ten percent.
5. Standards for land division approval.
6. Additional uses allowed with residential projects, or residential component of projects:
a. Notwithstanding the use provisions of the underlying zones, neighborhood commercial uses as defined in Chapter 17.24.020, including restaurants and eating and drinking establishments without a drive-through, retail trade, and services, are permitted on up to ten percent of the net developable area. The neighborhood commercial uses shall be planned and constructed so as to support and be compatible with the entire development and shall not alter the character of the surrounding area so as to substantially preclude, impair or limit the use of surrounding properties for the primary uses listed in the underlying district.
b. Public or private parks and playgrounds, community buildings and/or outdoor recreational facilities, such as swimming pools and tennis courts.
c. Indoor recreational facilities, such as racquetball or tennis courts, fitness centers or swimming pools.
d. Common public and private open space including trails.

e. Primary or accessory uses that are not identified as a permitted or conditional use in the underlying zone but which are defined in the code.

Finding: complies as proposed. The applicant is requesting adjustments to Site Plan & Design Review standards and accessory uses (i.e., retaining wall height) as defined in the code.

D. Regulations That May Not be Adjusted. Adjustments are prohibited for the following items:
1. To allow a primary or accessory use that is not identified as a permitted, or conditional use in the underlying zone, with the exception of the additional uses permitted under OCMC 17.65.070.C.6 above;
2. To any regulation that contains the word "prohibited";
3. As an exception to a threshold review, such as a Type III review process; and
4. Minimum density for residential sites may not be reduced.

Finding: not applicable. Neither requested adjustment allows a non-permitted or non-conditional use to be added to the site. Neither OCMC 17.54.100.A.3 nor 17.62.050.H.2.a contain the word "prohibited." No threshold review is being requested. No residential site is part of this proposal.

E. Approval Criteria. A request for an adjustment to one or more applicable development regulations under this section shall be approved if the review body finds that the applicant has shown the following criteria to be met.
1. Granting the adjustment will equally or better meet the purpose of the regulation to be modified;

Findings:
Adjustment to OCMC 17.54.100.A.3: The purpose of the fence, hedge, wall and retaining wall height regulations is to promote public health, safety, and welfare through the maintenance of adequate light and air access to public sites and ensure that sightlines for traffic safety and for building connections to public and private streets are maintained. Retaining wall heights are also regulated to prevent imposing development beyond pedestrian scale in areas that pedestrians are likely to gather and circulate. The applicant believes that the retaining wall in this case, being largely obscured from view by bleachers that will use the wall as a support structure, will better permit pedestrians to use and spend time in the area due to the increased stadium capacity that can be accommodated by the additional retaining wall height, and allowed access from both above and below. The applicant notes that fall risk will be mitigated at the back of the bleachers and the edge of retaining wall.

Adjustment to OCMC 17.62.050.H.2.a: The purpose of the Building Material Standards for Site Plan & Design Review is to promote development that is pedestrian-scale and encourages attractive building forms and materials. The applicant is proposing that the restroom building be made primarily of concrete block material along the facades. The concrete block is the only material proposed and will appear as a blank wall. Public restrooms invite public access and use by providing a service that all humans require, so the use of the building in and of itself encourages human interaction. Concrete block, when used for a restroom building, might also better block unpleasant sounds and odors, and might appear to users as more protective of their privacy than other materials would. Given the small (under 1,000 SF) size of the proposed restroom building and its relationship to much larger scale surrounding developments with a wide array of exterior building materials, the use of concrete block as the primary façade material for this building does not adversely impact the site or discourage its use.

- **Recommended condition of approval:** To further mitigate the effect of the full concrete block façade, the applicant shall add landscaping planters planted with native plants and shrubs, and seating areas to be located within 4 feet of the building façade on all sides where they would not obstruct entryways into the building, in order to soften the concrete block façade and provide pleasing design features that attract users to the building.

  Similar alternative landscaping treatments may be proposed by the applicant for consideration by the Planning Commission at the public hearing, or approved by the Community Development Director prior to issuance of a building permit. The applicant shall show these items on submitted plans for the building permit associated with this structure. The applicant shall install these facilities to be reviewed by a Planning inspection that shall be scheduled prior to building final. **Staff has determined that it is possible, likely and reasonable that the applicant can meet this standard through the conditions of approval.**

Adjustment to OCMC 17.62.055.I.1: No such adjustment is necessary. See findings under OCMC 17.62.055.

2. If more than one adjustment is being requested, the cumulative effect of the adjustments results in a project that is still consistent with the overall purpose of the zone;

Finding: complies as proposed. The cumulative effect of a taller than otherwise approvable retaining wall and a building façade primarily of concrete block could read as discouraging use of the site at a pedestrian scale. However, the retaining wall is largely obscured by the grandstands it will support and the impact of the concrete block restroom is, given the scale of existing and proposed development onsite, extremely small in and of itself. Permitting these building details does not make the site inconsistent with the overall purpose of the zone.

3. City-designated Goal 5 resources are protected to the extent otherwise required by Title 17;

Finding: complies as proposed. No Goal 5 resources are located near the vicinity of the retaining wall or restroom under consideration for adjustments.

4. Any impacts resulting from the adjustment are mitigated such that the development does not create significant adverse impacts on adjacent properties;

Finding: complies as proposed. The retaining wall is being covered by a large grandstand structure and both it and the small concrete block restroom are located more than 600 feet from any adjacent properties, thus creating no adverse impacts on adjacent properties.

5. If an environmental zone, the proposal has as few significant detrimental environmental impacts on the resource and resource values as is practicable; and

Finding: not applicable. Neither of the proposed structures under consideration for adjustments are near environmental zones.

6. The proposed adjustment is consistent with the Oregon City Comprehensive Plan and a concept plan if applicable.

Finding: complies as proposed. The requested adjustments enable the site to include a large grandstand area accessible from above and below due to the 12 foot-high retaining wall height, and a small public restroom area that is made of concrete block materials that protect users and the public through privacy and separation from the unpleasant effects of human biological activity. Athletic and cultural activities will be taking place in view of the grandstands and will be related to the educational facility's athletic department. Therefore, these elements help the site "Provide activities and programs for residents and visitors that weave together historic, artistic, and cultural resources, education, and recreation," according to Goal 2, Policy 2.5.

17.65.80 - Amendments to approved plans.
A. When Required. An amendment to an approved general development plan or detailed development plan is required for any use or development that is not in conformance with the applicable plan, as provided below. The approval criteria contained in OCMC 17.65.050 will apply to general development plan amendments, the approval criteria contained in OCMC 17.65.060 will apply to detailed development plan amendments. The thresholds and procedures for amendments are stated below.

Finding: not applicable. No amendments are proposed.

17.65.090 - Regulations that apply.
An applicant is entitled to rely on land use regulations in effect on the date its general development plan application was initially submitted, pursuant to ORS 227.178(3), as that statute may be amended from time to time. After a general development plan is approved, and so long as that general development plan is in effect, an applicant is entitled to rely on the land use regulations in effect on the date its general development plan application was initially submitted, as provided above, when seeking approval of detailed development plans that implement an approved general development plan. At its option, an applicant may request that a detailed development plan be subject to the land use regulations in effect on the date its detailed development plan is initially submitted.

Finding: applicable. The General Development Plan (GLUA-24-00020 / MAS-24-00001) related to this Detailed Development Plan proposal secured the regulations that were in effect as of August 1, 2024 to apply to this project. The code criteria listed above and the findings in this review are based on the code in effect as of that date.

RECOMMENDATION:

Based on the analysis and findings as described above, Staff concludes that the proposed development located at 19600 Molalla Ave, Oregon City, Oregon 97045, identified as Clackamas County Map 3-2E-09C Tax lot 800, can meet the requirements as described in the Oregon City Municipal Code by complying with the Conditions of Approval provided in this report. Therefore, the Community Development Director recommends that the Planning Commission approve GLUA-25-00047 / MAS-25-00006 with conditions, based upon the findings and exhibits contained in this staff report.

EXHIBITS: (ON FILE)

1. Vicinity Map

2. Applicant's Narrative and Plans

3. Additional Plan Exhibits

4. General Development Plan (GLUA-24-00020 / MAS-24-00001) Notice of Decision

OREGON CITY
Community Development – Planning
695 Warner Parrott Road | Oregon City OR 97045
Ph (503) 722-3789

LAND USE APPLICATION FORM

Type I (OCMC 17.50.030.A)
- ☐ Compatibility Review
  - ☐ Willamette River Greenway
  - ☐ Communication Facility / Eligible Modification
- ☐ Lot Line Adjustment
- ☐ Non-Conforming Use Review
- ☐ Natural Resource (NROD) Verification
- ☐ Minor Site Plan & Design Review
- ☐ Extension of Approval
- ☐ Historic Review – Remodel
- ☐ Detailed Dev. Plan (DDP)
- ☐ LUCS

Expedited Type II (OCMC 17.50.030.B & 16.24)
- ☐ Middle Housing Land Division

Type II (OCMC 17.50.030.B)
- ☐ Master Plan / PUD / GDP or Amendment
- ☐ Detailed Development Plan (DDP)
- ☐ Floodplain Review
- ☐ Geologic Hazard Overlay
- ☐ Minor Partition (<4 lots)
- ☐ Minor Site Plan & Design Review
- ☐ Non-Conforming Use Review
  - ☐ Proportional Upgrades
- ☑ Site Plan and Design Review / DDP
- ☐ Manufactured Home Park
- ☐ Compatibility Review

Modifications / Adjustments
- ☐ Residential Design
- ☐ Site Plan & Design Review
- ☐ Public Improvement
- ☐ Tree Mitigation
- ☐ Subdivision (4+ lots)
- ☐ Administrative (Minor) Variance
- ☐ Natural Resource (NROD) Review
- ☐ Willamette River Greenway
- ☐ Phased Subdivision / Site Plan and Design Review Occupancy Plan
- ☐ Expedited Land Division

Type III / IV (OCMC 17.50.030.C & D.)
- ☐ Annexation
- ☐ Code Interpretation / Similar Use
- ☐ Master Plan / PUD / GDP Amendment
- ☐ Conditional Use
- ☐ Comprehensive Plan/Legislative Amendment
  - ☐ Code ☐ Map
- ☑ Detailed Development Plan DDP
- ☐ Historic Review Board
  - ☐ Demolition
  - ☐ New Construction
  - ☐ Remodel
- ☐ Municipal Code Amendment
- ☐ Parking Adjustment
- ☐ Variance
  - ☐ Sign Variance
- ☐ Natural Resource (NROD) Review
- ☐ Zone Change (Text/Map)
- ☐ Willamette River Greenway

Legislative Action (OCMC 17.50.170)
- ☐ Legislative

File Number(s):	**Application Date:**
Project Name: Clackamas Community College Athletics Facility Improvements	
Proposed Land Use or Activity: Higher Education/Community College/Athletic Facilities	**# of Lots Proposed (If Applicable):** 1
Physical Address(es) of Site: 19600 Molalla Ave, Oregon City, OR 97045	
Clackamas County Map and Tax Lot Number(s): 3-2E-09C-00800	

Applicant(s)

Applicant(s) Signature: Colin McArthur, AICP — Digitally signed by Colin McArthur, AICP Date: 2025.10.13 16:25:10 -07'00'	
Applicant(s) Name Printed: Colin McArthur	Date:
Mailing Address: 160 E Broadway, Eugene, OR 97401	
Phone: 541-485-7385	Email: cmcarthur@cameronmccarthy.com

Property Owner(s) – If more than 2 owners, add all information to back of page including signatures.

Property Owner #1	
Property Owner#1 Signature: Ron Prince — Digitally signed by Ron Prince Date: 2025.10.10 14:43:49 -07'00'	
Property Owner#1 Name Printed: Ron Prince	Date: 10/10/25
Mailing Address: 19600 Molalla Ave, Oregon City, OR 97045	
Ownership Address: 19600 Molalla Ave, Oregon City, OR 97045	
Phone: (503) 594-6787	Email: ron.prince@clackamas.edu

Property Owner #2	
Property Owner#2 Signature:	
Property Owner#2 Name Printed:	Date:
Mailing Address:	
Ownership Address:	
Phone:	Email:

Representative(s)

Representative(s) Signature:	
Representative(s) Name Printed:	Date:
Mailing Address:	
Phone:	Email:

All signatures represented must have the full legal capacity and hereby authorize the filing of this application and certify that the information and exhibits herewith are correct and indicate the party's willingness to comply with all code requirements.

TYPE III – DETAILED DEVELOPMENT PLAN REVIEW
Applicant's Submittal
October 13, 2025

APPLICANT: Colin McArthur
160 E. Broadway, Eugene, OR 97401
(458) 234-6354
cmcarthur@cameronmccarthy.com

OWNER: Ron Prince
19600 Molalla Ave, Oregon City, OR 97045
(503) 594-6787
ron.prince@clackamas.edu

REQUEST: Track replacement and widening to allow for a synthetic turf soccer field inside the track, with the addition of grandstands, storage facilities, plaza spaces, baseball viewing plaza, and circulation improvements.

LOCATION: 19600 Molalla Ave, Oregon City, OR 97045
3-2E-09C-00800

I. BACKGROUND:

1. Existing Conditions

The site currently has an 8-lane track with areas for field events in the track interior. The interior of the track and exterior areas are mostly surfaced with lawn. A throws facility is on the eastern side of the track, with space for shot put, discus, and hammer throw sectors. There is a baseball field and softball field, which are being improved in Phase 1 of this project and were submitted for Land Use review in September 2025.

2. Project Description

Under Phase 1, softball and baseball improvements are proposed. Phase 2 links together the softball and baseball fields with new pedestrian circulation and a viewing plaza space and restroom at the baseball field, replacing the old bleachers and restroom. In addition, Phase 2 proposes to widen and replace the existing 8-lane track to add a synthetic turf soccer field in the center of the track. Field event sectors will be consolidated on the track to the east and south. A large hitting barn building is proposed at the south end of the track, with a multi-use plaza space. A 3,000-person grandstand is proposed west of the track. To serve the grandstands, a

new vehicle drop-off and plaza space is proposed between the track and softball field. Small grading improvements and an additional javelin runway are proposed at the existing throws facility.

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CODE RESPONSE

Municipal Code Standards and Requirements: The following sections of the Oregon City Municipal Code are applicable to this land use approval:

Chapter 12.04 – Streets, Sidewalks, and Public Places
Chapter 12.08 – Public And Street Trees
Chapter 13.12 – Stormwater Management
Chapter 15.48 – Grading, Filling And Excavating
Chapter 16.12 – Minimum Public Improvements and Design Standards for Development
Chapter 17.39 – Institutional District
Chapter 17.41 – Tree Protection, Preservation, Removal And Replanting Standards
Chapter 17.47 – Construction Site Runoff Controls
Chapter 17.50 – Administration And Procedures
Chapter 17.52 – Off-Street Parking And Loading
Chapter 17.54 – Supplemental Zoning Regulations And Exceptions
Chapter 17.62 – Site Plan And Design Review
Chapter 17.65 – Master Plans

Standards and requirements titles are shown in highlighted text, standards and requirements are shown in *italic* text, with responses in plain text.

CHAPTER 12.04 – STREETS SIDEWALKS AND PUBLIC SPACES

Applicant Response: Not applicable. No public right-of-way work is included in the proposal, and development is not anticipated to trigger public improvements on the surrounding street system; therefore, this chapter in its entirety is not applicable.

Applicant Response: Not applicable. No public right-of-ways are included in the project boundary. All streets, roads, sidewalks, trails, paths, and easements are on private property, therefore this section in its entirety is not applicable.

12.04.025 - Driveways.
Driveways shall be reviewed *in accordance with OCMC 16.12.035. Driveway requirements may be modified through the procedures in OCMC 16.12.013.*

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.030 - Maintenance and repair.
The owner of land abutting the street where a sidewalk has been constructed shall be responsible for maintaining said sidewalk and abutting curb, if any, in good repair.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.031 - Liability for sidewalk injuries.

A. The owner or occupant of real property responsible for maintaining the adjacent sidewalk shall be liable to any person injured because of negligence of such owner or occupant in failing to maintain the sidewalk in good condition.

B. If the City is required to pay damages for an injury to persons or property caused by the failure of an owner or occupant to perform the duty that this chapter imposes, the owner or occupant shall compensate the City for the amount of the damages paid. The City may maintain an action in a court of competent jurisdiction to enforce this section.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.032 - Required sidewalk repair.

A. When the public works director determines that repair of a sidewalk is necessary, written notice shall be provided to the owner of property adjacent to the defective sidewalk.

B. The notice shall require the owner of the property adjacent to the defective sidewalk to complete the repair of the sidewalk within ninety days after the service of notice. The notice shall also state that if the repair is not made by the owner, the City may do the work and the cost of the work shall be assessed against the property adjacent to the sidewalk.
1. All sidewalks hereafter constructed in the City on improved streets shall be constructed to city standards and widths required in the Oregon City Transportation System Plan and OCMC 16.12. Sidewalks and curbs are to be constructed according to plans and specifications approved by the City Engineer.
2. Sidewalks constructed on unimproved streets shall be constructed of concrete according to lines and grades approved by the City Engineer. On unimproved streets, curbs do not have to be constructed.

C. The public works director shall cause a copy of the notice to be served personally upon the owner of the property adjacent to the defective sidewalk, or the notice may be served by registered or certified mail, return receipt requested. If after diligent search the owner is not discovered, the public works director shall cause a copy of the notice to be posted in a conspicuous place on the property, and such posting shall have the same effect as service of notice by mail or by personal service upon the owner of the property.

D. The person serving the notice shall file with the City Recorder a statement stating the time, place and manner of service or notice.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.050 - Retaining walls—Required.

Every owner of a lot within the City, abutting upon an improved street, where the surface of the lot or tract of land is above the surface of the improved street and where the soil or earth from the lot, or tract of land is liable to, or does slide or fall into the street or upon the sidewalk, or both, shall build a retaining wall, the outer side of which shall be on the line separating the lot, or tract of land from the improved street, and the wall shall be so constructed as to prevent the soil or earth from the lot or tract of land from falling or sliding into the street or upon the sidewalk, or both, and the owner of any such property shall keep the wall in good repair.

Applicant Response: Not applicable. No proposed retaining walls abut an improved street. Any changes in grade abutting improved streets will be kept to a ratio of 4:1 and are not liable to sliding. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.100 - Excavations—Restoration of pavement.

Whenever any excavation shall have been made in any pavement or other street improvement on any street or alley in the City for any purpose whatsoever under the permit granted by the City Engineer, it shall be the duty of the person making the excavation to restore the pavement in accordance with the City of Oregon City Public Works Pavement Cut Standard in effect at the time a right-of-way permit is granted. The City Commission may adopt and modify the City of Oregon City Public Works Pavement Cut Standards by resolution as necessary to implement the requirements of this chapter.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.120 - Obstructions—Permit required.

A. Permanent Obstructions. It is unlawful for any person to place, put or maintain any obstruction, other than a temporary obstruction, as defined in subsection B of this section, in any public street or alley in the City, without obtaining approval for a right-of-way permit from the City Commission by passage of a resolution.
1. The City Engineer shall provide applicants with an application form outlining the minimum submittal requirements.
2. The applicant shall submit at least the following information in the permitting process in order to allow the City Commission to adequately consider whether to allow the placement of an obstruction and whether any conditions may be attached:
a. Site plan showing right-of-way, utilities, driveways as directed by staff;
b. Sight distance per OCMC 10.32, Traffic Sight Obstructions;

c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);
d. Alternative routes if necessary;
e. Minimizing obstruction area; and
f. Hold harmless/maintenance agreement.
3. If the City Commission adopts a resolution allowing the placement of a permanent obstruction in the right-of-way, the City Engineer shall issue a right-of-way permit with any conditions deemed necessary by the City Commission.
4. Signage that acts as an obstruction is approved through OCMC 15.28.

B. Temporary Obstructions.
1. A "temporary obstruction" is defined as an object placed in a public street, sidewalk, road, or alley which is not permanently anchored to another surface such as the pavement, sidewalk, or a building. A "temporary obstruction" includes, but is not limited to, moving containers, debris dumpsters, and seating.
a. Planters and benches are exempt from permitting unless the City Engineer finds by inspection that the planter or bench is impeding use of the right-of-way. If deemed an impeding use, a planter or bench will comply with the requirements for temporary obstructions.

2. The City Engineer, or designee, is authorized to grant a permit for a temporary obstruction.

3. The City Engineer shall provide applicants with an application form outlining the minimum submittal requirements.

4. The applicant shall submit, and the City Engineer, or designee, shall consider, at least the following items in the permitting process. Additional information may be required in the discretion of the City Engineer:
a. Site plan showing right-of-way, utilities, driveways as directed by staff;
b. Sight distance per OCMC 10.32, Traffic Sight Obstructions;
c. Traffic control plan including parking per Manual on Uniform Traffic Control Devices (MUTCD);
d. Handicap accessible route complying with Americans with Disability Act (ADA) standards;
e. Alternative routes if necessary;
f. Minimizing obstruction area; and
g. Hold harmless/maintenance agreement.

5. In determining whether to issue a right-of-way permit to allow a temporary obstruction, the City Engineer may issue such a permit only after finding that the following criteria have been satisfied:
a. The obstruction will not unreasonably impair the safety of people using the right-of-way and nearby residents;

b. The obstruction will not unreasonably hinder the efficiency of traffic affected by the obstruction;
c. No alternative locations are available that would not require use of the public right-of-way; and
d. Any other factor that the City Engineer deems relevant.

6. The permittee shall post a weatherproof copy of the temporary obstruction permit in plain view from the right-of-way.

7. Types
a. A short-term temporary obstruction is allowed for a period of not more than sixty consecutive calendar days. It is permitted with a temporary obstruction in the right-of-way permit.
b. A long-term temporary obstruction is allowed for a period of not more than one year, and it is permitted with a renewable right-of-way permit.

8. Signage that acts as an obstruction is approved through OCMC 15.28

C. Fees. The fee for obtaining a right-of-way permit for either a permanent obstruction or a temporary obstruction shall be set by resolution of the City Commission.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.150 - Street and alley vacations—Cost.
At the time of filing a petition for vacation of a street, alley, or any part thereof, a fee as established by City Commission resolution shall be paid to the City. The City Commission, upon hearing such petition, may grant the same in whole or in part, or may deny the same in whole or in part, or may grant the same with such reservations as would appear to be for the public interest, including reservations pertaining to the maintenance and use of underground public utilities in the portion vacated.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.170 - Street design—Purpose and general provisions.
All development shall be in conformance with the City's public facility master plans, public works policies, standard drawings, and engineering specifications. All streets shall be reviewed and approved by the City Engineer prior to construction. All streets and driveway connections to another jurisdiction's facility or right-of-way must be reviewed by the appropriate jurisdiction as a condition of the preliminary plat or site planning and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

12.04.270 - Standard construction specifications.

The workmanship and materials for any work performed under permits issued per this chapter shall be in accordance with the current edition of the "Oregon Standard Specifications for Construction" as prepared by the Oregon Department of Transportation (ODOT) and the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the City in accordance with this ordinance, in effect at the time of application. The exception to this requirement is where this chapter and the public works street standard drawings provide other design details, in which case the requirements of this chapter and the public works street standard drawings shall control. In the case of work within ODOT or Clackamas County rights-of-way, work shall be in conformance with their respective construction standards.

Applicant Response: Not applicable. No public right-of-way work is included in the project boundaries; therefore, this section in its entirety is not applicable.

CHAPTER 12.08 – PUBLIC AND STREET TREES

Applicant's Response: Not applicable. The proposed development does not abut property frontage or public right-of-ways, therefore, no street trees are required, and this chapter in its entirety is not applicable.

CHAPTER 13.12 – STORMWATER MANAGEMENT

13.12.050 - Applicability and exemptions.

This chapter establishes performance standards for stormwater conveyance, quantity and quality. Additional performance standards for erosion prevention and sediment control are established in OCMC 17.47.

A. Stormwater Conveyance. The stormwater conveyance requirements of this chapter shall apply to all stormwater systems constructed with any development activity, except as follows:
1. The conveyance facilities are located entirely on one privately owned parcel;
2. The conveyance facilities are privately maintained; and
3. The conveyance facilities receive no stormwater runoff from outside the parcel's property limits.
Those facilities exempted from the stormwater conveyance requirements by the above subsection will remain subject to the requirements of the Oregon Uniform Plumbing Code. Those exempted facilities shall be reviewed by the building official.

Applicant Response: Not applicable. The stormwater facilities are located entirely on one privately owned parcel, are privately maintained, and receive no stormwater runoff

from outside the property limits. The proposed development meets the above exceptions. Conveyance system to be reviewed by the building official.

B. Water Quality and Flow Control. The water quality and flow control requirements of this chapter shall apply to the following proposed uses or developments, unless exempted under subsection C:
1. Activities located wholly or partially within water quality resource areas pursuant to OCMC 17.49 that will result in the creation of more than five hundred square feet of impervious surface within the NROD or will disturb more than one thousand square feet of existing impervious surface within the NROD as part of a commercial or industrial redevelopment project. These square footage measurements will be considered cumulative for any given five-year period; or
2. Activities that create or replace more than five thousand square feet of impervious surface, cumulated over any given five-year period.

Applicant Response: Applicable. The project will satisfy the water quality and flow control requirements. No work is proposed within the NROD boundary. Refer to the Stormwater Management Report in Exhibit E.

C. Exemptions. The following exemptions to subsection B of this section apply:
1. An exemption to the flow control requirements of this chapter will be granted when the development site discharges to the Willamette River, Clackamas River or Abernethy Creek; and either lies within the one hundred-year floodplain or is up to ten feet above the design flood elevation as defined in OCMC 17.42, provided that the following conditions are met:
a. The project site is drained by a conveyance system that is comprised entirely of man-made elements (e.g. pipes, ditches, culverts outfalls, outfall protection, etc.) and extends to the ordinary high water line of the exempt receiving water; and
b. The conveyance system between the project site and the exempt receiving water has sufficient hydraulic capacity and erosion stabilization measures to convey discharges from the proposed conditions of the project site and the existing conditions from non-project areas from which runoff is collected.
2. Projects in the following categories are generally exempt from the water quality and flow control requirements:
a. Stream enhancement or restoration projects approved by the city.
b. Farming practices as defined by ORS 30.960 and farm use as defined in ORS 214.000; except that buildings associated with farm practices and farm use are subject to the requirements of this chapter.
c. Actions by a public utility or any other governmental agency to remove or alleviate an emergency condition.
d. Road and parking area preservation/maintenance projects such as pothole and square cut patching, surface sealing, replacing or overlaying of existing asphalt or concrete pavement,

provided the preservation/maintenance activity does not expand the existing area of impervious coverage above the thresholds in subsection B of this section.
e. Pedestrian and bicycle improvements (sidewalks, trails, pathways, and bicycle paths/lands) where no other impervious surfaces are created or replaced, built to direct stormwater runoff to adjacent vegetated areas.
f. Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics.
g. Maintenance or repair of existing utilities.

Applicant Response: Not applicable. The project does not meet any of the exemptions. The project will satisfy the water quality and flow control requirements. Refer to the Stormwater Management Report in Exhibit E.

D. Uses Requiring Additional Management Practices. In addition to any other applicable requirements of this chapter, the following uses are subject to additional management practices, as defined in the public works stormwater and grading design standards:
1. Bulk petroleum storage facilities;
2. Above ground storage of liquid materials;
3. Solid waste storage areas, containers, and trash compactors for commercial, industrial, or multi-family uses;
4. Exterior storage of bulk construction materials;
5. Material transfer areas and loading docks;
6. Equipment and/or vehicle washing facilities;
7. Development on land with suspected or known contamination;
8. Covered vehicle parking for commercial or industrial uses;
9. Industrial or commercial uses locating in high traffic areas, defined as average daily count trip of two thousand five hundred or more trips per day; and
10. Land uses subject to DEQ 1200-Z Industrial Stormwater Permit Requirements.

Applicant Response: Not applicable. The above uses are not proposed on the project site; therefore, this section is not applicable. Refer to the Stormwater Management Report in Exhibit E for additional information.

13.12.080 - Submittal requirements.
A. Applications subject to stormwater conveyance, water quality, and/or flow control requirements of this chapter shall prepare engineered drainage plans, drainage reports, and design flow calculation reports in compliance with the submittal requirements of the public works stormwater and grading design standards.

B. Each project site, which may be composed of one or more contiguous parcels of land, shall have a separate valid City approved plan and report before proceeding with construction.

Applicant Response: Complies as proposed. A grading plan, geotechnical report, and stormwater report in compliance with the submittal requirements are provided in the Land Use Application packet. Refer to Exhibit B, sheet series L3.00, Exhibit E, and Exhibit I. The project site is contained within one parcel of land and will be approved under this land use application.

13.12.090 - Approval criteria for engineered drainage plans and drainage report.
An engineered drainage plan and/or drainage report shall be approved only upon making the following findings:
A. The plan and report demonstrate how the proposed development and stormwater facilities will accomplish the purpose statements of this chapter.

B. The plan and report meet the requirements of the public works stormwater and grading design standards adopted by resolution under OCMC 13.12.020.

C. The storm drainage design within the proposed development includes provisions to adequately control runoff from all public and private streets and roof, footing, and area drains and ensures future extension of the current drainage system.

D. Streambank erosion protection is provided where stormwater, directly or indirectly, discharges to open channels or streams.

E. Specific operation and maintenance measures are proposed that ensure that the proposed stormwater quantity control facilities will be properly operated and maintained.

Applicant Response: Complies as proposed. The Stormwater Management Report addresses the approval criteria of this section. Refer to Exhibit E and Exhibit B, sheet series L3.00 and L4.00.

13.12.100 - Alternative materials, alternative design and methods of construction.
The provisions of this chapter are not intended to prevent the use of any material, alternate design or method of construction not specifically prescribed by this chapter or the public works stormwater and grading design standards, provided any alternate has been approved and its use authorized by the City Engineer. The City Engineer may approve any such alternate, provided that the City Engineer finds that the proposed design is satisfactory and complies with the intent of this chapter and that the material, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed by this chapter in effectiveness, suitability, strength, durability and safety. The City Engineer shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternate shall be recorded and entered in the City files.

Applicant Response: Complies with condition. Section 13.12.120 implies materials and workmanship for stormwater systems must comply with the Oregon City Standard Specifications and Standard Drawings. The project intends to comply with the intent and performance standards identified in the City's Specifications and Standard Drawings. However, the City's Standard Drawings and Specifications are geared toward municipal construction and are not appropriate for all materials and conditions encountered with private development. All athletic facilities will address stormwater management requirements with a subgrade drainage system. Refer to Exhibit B, sheet series L4.00, and Exhibit E.

13.12.110 - Transfer of engineering responsibility.

Project drainage plans shall always have a project engineer. If the project engineer is changed during the course of the work, the City shall be notified in writing and the work shall be stopped until the replacement engineer has agreed to accept the responsibilities of the project engineer. The new project engineer shall provide written notice of accepting project responsibility to the City within seventy-two hours of accepting the position as project engineer.

Applicant Response: Complies as proposed. If the project engineer changes, the applicant will notify the City within 72 hours of accepting the position.

13.12.120 - Standard construction specifications.

The workmanship and materials shall be in accordance with the current edition of the "Standard Specifications for Public Works Construction," as prepared by the Oregon Chapter of American Public Works Association (APWA) and as modified and adopted by the City, in effect at the time of application. The exception to this requirement is where this chapter and the Public Works Stormwater and Grading Design Standards provide other design details, in which case the requirements of this chapter and the Public Works Stormwater and Grading Design Standards shall be complied with.

Applicant Response: Complies with condition. The project intends to comply with the intent and performance standards identified in the City's Specifications and Standard Drawings. However, the City's Standard Drawings and Specifications are geared toward municipal construction and are not appropriate for all materials and conditions encountered with private development.

13.12.140 - Maintenance of public stormwater facilities.

A. A stormwater facility that receives stormwater runoff from a public right-of-way shall be a public facility. Upon expiration of the warranty period and acceptance by the City as described below, the City shall be responsible for maintenance of those public stormwater facilities. Access for maintenance of the stormwater facilities shall be provided to the City through the granting of a stormwater easement or other means acceptable to the City.

Applicant Response: Not applicable. The stormwater facilities proposed on site will not receive runoff from a public right-of-way; therefore, this section in its entirety is not applicable.

B. Responsibility for maintenance of stormwater facilities including all landscaping, irrigation systems, structures and appurtenances shall remain with the property owner/developer for two years (known as the warranty period). The owner/developer shall provide the City a separate two-year landscaping maintenance surety bond for one hundred ten percent of the landscaping cost. Transfer of maintenance of stormwater conveyance systems shall occur when the City accepts the stormwater conveyance system.

Applicant Response: Not applicable. The stormwater facilities proposed on site are not on public property; therefore, this section in its entirety is not applicable.

13.12.145 - Maintenance of private stormwater facilities.

A. An applicant shall submit an operation and maintenance plan for each proposed stormwater facilities, unless exempted in the Public Works Stormwater and Grading Design Standards. The information in the operation and maintenance plan shall satisfy the requirements of the Public Works Stormwater and Grading Design Standards.

B. Private owners are required to inspect and maintain stormwater facilities on their property in accordance with an approved operation and maintenance plan. A maintenance log is required to document facility inspections and specific maintenance activities. The log shall be available to City inspection staff upon request.

C. Failure to operate or maintain a stormwater facility according to the operation and maintenance plan may result in an enforcement action under Section 13.12.150.

Applicant Response: Complies as proposed. For Rain Garden – Filtration Figure C-4 facilities on site, the applicant will use the template for Rain Gardens Operation & Maintenance Plan in Appendix C of Oregon City's Stormwater and Grading Design Standards. Owner will track maintenance and comply with maintenance log requests from the City.

13.12.170 - Permits from other jurisdictions.

A. The Oregon State Department of Environmental Quality (DEQ) currently issues NPDES 1200-C permits for projects that cover areas of one acre or greater. No permit shall be issued for projects of this size (or any other size as modified by DEQ) without a copy of said DEQ permit being on file with Oregon City. DEQ is responsible for policing its own permits; however, if City personnel observe conditions that are believed to be in violation of any such permit, and cannot get corrections made, the City will bring such conditions to the attention of the appropriate DEQ representatives.

Applicant Response: Complies as proposed. A DEQ 1200-C Permit application is under review at the time of this land use application (RID # 90225). It is noted that permit issuance will be contingent on approval of the 1200-C permit.

B. Projects may require Oregon State Division of State Lands (DSL) and/or United States Army Corps of Engineers (USACE) permits. If such permits are required, no permission to construct will be granted until such a time as a copy of such permit is on file with the City or notice is received from those agencies that a permit is not required. DSL/USACE is responsible for enforcing its own permits; however, if City personnel observe conditions that are believed to be in violation of any such permit, and cannot get corrections made, the City will bring such conditions to the attention of the appropriate DSL/USACE representatives.

Applicant Response: Not applicable. No additional permits from DSL and/or USACE are required; therefore, this section is not applicable.

C. Projects may require Oregon State Department of Fish and Wildlife (ODFW) permits. When ODFW permits are required, no work will be authorized until the receipt of a copy of the ODFW permit. ODFW is responsible for policing its own permits; however, if City personnel observe conditions that are believed to be in violation of any such permit, and cannot get corrections made, the City will bring such conditions to the attention of the appropriate ODFW representatives.

Applicant Response: Not applicable. No additional permits from ODFW are required; therefore, this section is not applicable.

CHAPTER 15.48 – GRADING, FILLING AND EXCAVATING

15.48.030 Applicability—Grading permit required.

A. A city-issued grading permit shall be required before the commencement of any of the following filling or grading activities:
1. Grading activities in excess of ten cubic yards of earth;
2. Grading activities which may result in the diversion of existing drainage courses, both natural and man-made, from their natural point of entry or exit from the grading site;
3. Grading and paving activities resulting in the creation of impervious surfaces greater than two thousand square feet or more in area;
4. Any excavation beyond the limits of a basement or footing excavation, having an unsupported soil height greater than five feet after the completion of such a structure; or
5. Grading activities involving the clearing or disturbance of one-half acres (twenty-one thousand seven hundred eighty square feet) or more of land.

B. Those fill and grading activities proposed to be undertaken in conjunction with a land use application, including but not limited to subdivisions, planned unit developments, partitions and site plan reviews, are subject to the standards of this chapter. However, a separate grading permit is not required. Approval of the construction plans submitted through the land use application process shall constitute the grading permit required under this chapter.

Applicant Response: Applicable. A city-issued grading permit is required for grading activities in excess of ten cubic yards of earth and grading activities involving the disturbance of one-half acres or more. A grading permit will be obtained prior to construction.

15.48.040 - Grading permit exemptions.

The following filling and grading activities shall not require the issuance of a grading permit:
A. Excavation for utilities, or for wells or tunnels allowed under separate permit by other governmental agencies;

B. An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. The placement of any fill material removed from such an excavation requires a grading permit if:
1. It exceeds fifty cubic yards,
2. More than ten cubic yards are removed from the site, or
3. The fill is placed on the site to a depth greater than one foot;

C. Farming practices as defined in ORS 30.930 and farm uses as defined in ORS 215.203, except that buildings associated with farm practices and farm uses are subject to the requirements of this chapter;

D. Excavation for cemetery graves;

E. Sandbagging, diking, ditching, filling or similar work when done to protect life or property during an emergency;

F. Repaving of existing paved surfaces that does not alter existing drainage patterns;

G. Maintenance work on public roads performed under the direction of the city, Clackamas County or Oregon State Department of Transportation personnel.

Applicant Response: Not applicable. None of the listed activities is proposed; therefore, this section is not applicable.

15.48.090 Submittal requirements.

An engineered grading plan or an abbreviated grading plan shall be prepared in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards whenever a city approved grading permit is required. In addition, a geotechnical engineering report and/or residential lot grading plan may be required pursuant to the criteria listed below.
A. Abbreviated Grading Plan. The city shall allow the applicant to submit an abbreviated grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards if the following criteria are met:
1. No portion of the proposed site is within the flood management area overlay district pursuant to Chapter 17.42, the unstable soils and hillside constraints overlay district pursuant to Chapter 17.44, or a water quality resource area pursuant to Chapter 17.49; and
2. The proposed filling or grading activity does not involve more than fifty cubic yards of earth.

B. Engineered Grading Plan. The city shall require an engineered grading plan in compliance with the submittal requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer if the proposed activities do not qualify for abbreviated grading plan.

C. Geotechnical Engineering Report. The city shall require a geotechnical engineering report in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer who specializes in geotechnical work when any of the following site conditions may exist in the development area:
1. When any publicly maintained facility (structure, street, pond, utility, park, etc.) will be supported by any engineered fill;
2. When an embankment for a stormwater pond is created by the placement of fill;
3. When, by excavation, the soils remaining in place are greater than three feet high and less than twenty feet wide.

D. Residential Lot Grading Plan. The city shall require a residential lot grading plan in compliance with the minimum report requirements of the Public Works Stormwater and Grading Design Standards to be prepared by a professional engineer for all land divisions creating new residential building lots or where a public improvement project is required to provide access to an existing residential lot.

Applicant Response: Complies as proposed. An Engineered Grading Plan is included in the land use application packet, along with a Geotechnical Engineering Report. See Exhibit B, sheet series L3.00, and Exhibit I. A Residential Lot Grading Plan is not applicable, as no new residential building lots or access to existing residential lots are proposed.

CHAPTER 16.12 – MINIMUM PUBLIC IMPROVEMENTS AND DESIGN STANDARDS FOR DEVELOPMENT

16.12.008 Definitions.

Whenever the words or terms and their derivatives are used in this chapter, they shall have the meaning
herein ascribed to them as described in OCMC 17.04 unless the context dictates application of a different meaning.

16.12.010 - Purpose and general provisions.
The purpose of this chapter is to identify the standards for development in and adjacent to spaces which benefit the public including right-of-way, access to the right-of-way, public off-street pedestrian and bicycle accessways, and easements. All development shall be in conformance with the policies and design standards established by this chapter and with applicable standards in the City's public facility master plans and city design standards and specifications. In reviewing applications for development, the City Engineer shall take into consideration any approved development and the remaining development potential of adjacent properties. All street, water, sanitary sewer, storm drainage and utility plans associated with any development shall be reviewed and approved by the City Engineer prior to construction. All streets, driveways or storm drainage connections to another jurisdiction's facility or right-of-way shall be reviewed by the appropriate jurisdiction as a condition of the preliminary plat and when required by law or intergovernmental agreement shall be approved by the appropriate jurisdiction.

Applicant Response: Not applicable. No improvements to right-of-ways, public off-street pedestrian and bike accessways or easements are proposed therefore this chapter in its entirety is not applicable. Utility plans are included in the land use application material.

16.12.011 - Applicability.
A. Compliance with this chapter is required for all development including land divisions, site plan and design review, master plan, detailed development plan and conditional use applications and all public improvements that are required in conjunction with a land use decision.

B. Compliance with this chapter is also required for new construction or additions which exceed fifty percent of the existing square footage of all single-family detached residential and middle housing units' living space. Garages, carports, sheds, and porches may not be included in the calculation if these spaces are not living spaces. Accessory dwelling units are not subject to compliance with this chapter. All single-family detached residential and middle housing units shall provide any necessary dedications, easements or agreements as identified in the transportation system plan and this chapter, subject to constitutional limitations. In addition, the street frontage shall be improved to include the following priorities for improvements:
1. Improve street pavement, construct curbs, gutters, sidewalks and planter strips; and
2. Plant street trees.
The cost of compliance with the standards identified in subsections 16.12.011.B.1 and 16.12.011.B.2 is calculated based on the square footage valuation from the state of Oregon

Building Codes Division and limited to ten percent of the total construction costs. The value of the alterations and improvements is based on the total construction costs for a complete project rather than costs of various project component parts subject to individual building permits. The entire proposed construction project cost includes engineering and consulting fees and construction costs. It does not include permit fees, recording fees, or any work associated with drafting or recording dedications or easements.

C. Exemptions. The following are exempt from review by this chapter unless public improvements, driveways, PUEs, or other items regulated by this chapter are proposed:
1. Minor Site Plan and Design Review applications.
2. Work within the right-of-way.
3. Lot Line Adjustments and Abandonments.
4. Public capital improvement projects.

Applicant Response: Applicable. Compliance is required as we are submitting for land use review under a Detailed Development Plan. Refer to Exhibit A for Construction Cost Form.

16.12.012 - Jurisdiction and management of the public rights-of-way.
The City has jurisdiction and exercises regulatory management over all public rights-of-way as defined and outlined within 12.04 of the Oregon City Municipal Code.

Applicant Response: Not Applicable. No work within the public right-of-way is proposed in this project's scope; therefore, this section is not applicable.

16.12.013 - Modifications.
The applicant may request and the review body may consider modification of the standards in this chapter resulting from constitutional limitations restricting the City's ability to require the dedication of property or for any other reason, based upon the criteria listed below and other criteria identified in the standard to be modified. All modifications, except for adjustments approved by the City Engineer for tree preservation purposes pursuant to Section 16.12.013.A, shall be processed through a Type II land use application and may require additional evidence from a transportation engineer or others to verify compliance. Compliance with the following criteria is required:
A. Compliance with the following criteria is required:
1. The modification meets the intent of the standard;

Applicant Response: Not applicable. No modifications of the standards within this chapter are requested; therefore, this section in its entirety is not applicable.

16.12.014 - Administrative provisions.

An applicant shall submit the following items to the City and complete the following tasks prior to proceeding with construction of proposed development plans. These items include the following:
A. Pre-Design Meeting;
B. Final Engineering Plans, Stamped and Signed by an Oregon Licensed Professional Engineer;
C. Stormwater Report, Stamped and Signed by an Oregon Licensed Professional Engineer;
D. Geotechnical Report, Stamped and Signed by an Oregon Licensed Professional Engineer (if applicable);
E. Engineer's Preliminary and Final Cost Estimates (also may be known as engineer's opinion of probable construction cost);
F. Plan Check and Inspection Fees (as set by City resolution);
G. Certificate of Liability Insurance for City funded public projects contracted by the City (not less than one million dollars single incident and two million dollars aggregate);
H. Preconstruction Meeting;
I. Financial Guarantee(s) per OCMC 17.50.140;
J. Applicable Approvals/Permits from other agencies or entities;
K. Developer/Engineer Agreement for public works improvements.

An applicant shall submit the following additional items to the City and complete the following tasks prior to completing construction of proposed development plans. These items include the following:
L. Project Engineer's Certificate of Completion;
M. Stormwater Operation and Maintenance Easement (if applicable);
N. Deed of Dedication (Bargain and Sale Deed);
O. Recorded Plat and/or Easements (if applicable);
P. Recorded Non-Remonstrance Covenant Agreement;
Q. Land Division Compliance Agreement (if applicable);
R. Permanent Stabilization and/or Restoration of the impact from the development;
S. Fulfillment of all Conditions of Approval;
T. Payment of all Outstanding Fees;
U. Maintenance Guarantee(s). per OCMC 17.50.141;
V. Indemnity Agreement (if applicable);
W. Completed Punchlist;
X. As-Built Drawings;
Details on individual items required by this subsection can be obtained by contacting public works. Many items, such as the engineer's cost estimate and plan check and inspection fee, maybe be submitted in conjunction with documentation for other infrastructure improvements that are done with the development (such as street, sanitary sewer, and water).

Applicant Response: Applicable. A Pre-design meeting will be held before construction of the project. A Stormwater report (C) and Geotechnical report (D) are provided in this land use application. All other items (B, E, F, G, H, I, J, and K) will be submitted prior to start

of construction. Items N, and O are provided in this land use application. Items L, M, P, R, S, T, U, V, W, and X will be provided prior to construction completion.

16.12.015 - Street design—Generally.

Development shall be required to provide existing or future connections to adjacent sites through the use of vehicular and pedestrian access easements where applicable. Development shall provide any necessary dedications, easements or agreements as identified in the transportation system plan, trails master plan, and/or parks and recreation master plan and this chapter, subject to constitutional limitations. The location, width and grade of street shall be considered in relation to: Existing and planned streets, topographical conditions, public convenience and safety for all modes of travel, existing and identified future transit routes and pedestrian/bicycle accessways, overlay districts, and the proposed use of land to be served by the streets. The street system shall assure an adequate traffic circulation system with intersection angles, grades, tangents and curves appropriate for the traffic to be carried considering the terrain. To the extent possible, proposed streets shall connect to all existing or approved stub streets that abut the development site. The arrangement of streets shall either:

A. Provide for the continuation or appropriate projection of existing principal streets in the surrounding area and on adjacent parcels or conform to a plan for the area approved or adopted by the City to meet a particular situation where topographical or other conditions make continuance or conformance to existing streets impractical;

B. Where necessary to give access to or permit a satisfactory future development of adjoining land, streets shall be extended to the boundary of the development and the resulting dead-end street (stub) may be approved with a temporary turnaround as approved by the City Engineer. Notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future. Access control in accordance with OCMC 16.12.017 shall be required to preserve the objectives of street extensions.

C. Adequate right-of-way and improvements to streets, pedestrian ways, bike routes and bikeways, and transit facilities shall be provided and be consistent with the City's transportation system plan. Consideration shall be given to the need for street widening and other improvements in the area of the proposed development impacted by traffic generated by the proposed development. This shall include, but not be limited to, improvements to the right-of-way, such as installation of lighting, signalization, turn lanes, median and parking strips, traffic islands, paving, curbs and gutters, sidewalks, bikeways, street drainage facilities and other facilities needed because of anticipated vehicular and pedestrian traffic generation.

Applicant Response: Not applicable. No development is proposed in or near public right-of-ways. The Oregon City Trails Mater Plan has identified that the Oregon City Loop Trail passes through the campus. Improvements to Douglas Loop to serve the Loop Trail

are proposed under a separate project (File # PA-25-00027). No other improvements are identified per the Transportation System Plan, Trails Master Plan, and Parks and Recreation Master Plan on site; therefore, this section is not applicable.

16.12.016 - Street design.

All development regulated by this chapter shall provide street improvements in compliance with the standards in Table 16.12.016 depending on the street classification set forth in the transportation system plan and the comprehensive plan designation of the adjacent property unless an alternative plan has been adopted. The table implements the adopted transportation system plan and illustrates the maximum design standards. These standards may be reduced with an alternative street design which may be approved based on the modification criteria in OCMC 16.12.013. The steps for reducing the street design are found in the transportation system plan.

Table 16.12.016 Street Design

To read the table select the road classification as identified in the Transportation System Plan and the Comprehensive Plan designation of the adjacent properties to find the maximum design standards for the road cross section. If the Comprehensive Plan designation for lands on either side of the street differs, the wider right-of-way standard shall apply.

Road Classi-fication	***Compre-hensive Plan Designation***	***Right-of-Way Width***	***Pave-ment Width***	***Public Access***	***Sidewalk***	***Landscape Strip***	***Bike Lane***	***Street Parking***	***Travel Lanes***	***Median***
Major Arterial	*Mixed Use, Commercial or Public/ Quasi Public*	*116 ft.*	*94 ft.*	*0.5 ft.*	*10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells*		*6 ft.*	*8 ft.*	*(5) 12 ft. Lanes*	*6 ft.*
	Industrial	*120 ft.*	*88 ft.*	*0.5 ft.*	*5 ft.*	*10.5 ft.*	*6 ft.*	*N/A*	*(5) 14 ft. Lanes*	*6 ft.*
	Residential	*126 ft.*	*94 ft.*	*0.5 ft.*	*5 ft.*	*10.5 ft.*	*6 ft.*	*8 ft.*	*(5) 12 ft. Lanes*	*6 ft.*
Minor Arterial	*Mixed Use, Commercial or*	*116 ft.*	*94 ft.*	*0.5 ft.*	*10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells*		*6 ft.*	*8 ft.*	*(5) 12 ft. Lanes*	*6 ft.*

Road Classi-fication	***Compre-hensive Plan Designation***	***Right-of-Way Width***	***Pave-ment Width***	***Public Access***	***Sidewalk***	***Landscape Strip***	***Bike Lane***	***Street Parking***	***Travel Lanes***	***Median***
	Public/Quasi Public									
	Industrial	*118 ft.*	*86 ft.*	*0.5 ft.*	*5 ft.*	*10.5 ft.*	*6 ft.*	*7 ft.*	*(5) 12 ft. Lanes*	*N/A*
	Residential	*100 ft.*	*68 ft.*	*0.5 ft.*	*5 ft.*	*10.5 ft.*	*6 ft.*	*7 ft.*	*(3) 12 ft. Lanes*	*6 ft.*
Collector	*Mixed Use, Commercial or Public/Quasi Public*	*86 ft.*	*64 ft.*	*0.5 ft.*	*10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells*		*6 ft.*	*8 ft.*	*(3) 12 ft. Lanes*	*N/A*
	Industrial	*88 ft.*	*62 ft.*	*0.5 ft.*	*5 ft.*	*7.5 ft.*	*6 ft.*	*7 ft.*	*(3) 12 ft. Lanes*	*N/A*
	Residential	*85 ft.*	*59 ft.*	*0.5 ft.*	*5 ft.*	*7.5 ft.*	*6 ft.*	*7 ft.*	*(3) 11 ft. Lanes*	*N/A*
Local	*Mixed Use, Commercial or Public/ Quasi Public*	*62 ft.*	*40 ft.*	*0.5 ft.*	*10.5 ft. sidewalk including 5 ft. x 5 ft. tree wells*		*N/A*	*8 ft.*	*(2) 12 ft. Lanes*	*N/A*
	Industrial	*60 ft.*	*38 ft.*	*0.5 ft.*	*5 ft.*	*5.5 ft.*	*(2) 19 ft. Shared Space*			*N/A*
	Residential	*54 ft.*	*32 ft.*	*0.5 ft.*	*5 ft.*	*5.5 ft.*	*(2) 16 ft. Shared Space*			*N/A*

1. Pavement width includes, bike lane, street parking, travel lanes and median.

2. Public access, sidewalks, landscape strips, bike lanes and on-street parking are required on both sides of the street in all designations. The right-of-way width and pavement widths identified above include the total street section.
3. A 0.5 foot curb is included in landscape strip or sidewalk width.
4. Travel lanes may be through lanes or turn lanes.
5. The 0.5 foot public access provides access to adjacent public improvements.
6. Alleys shall have a minimum right-of-way width of twenty feet and a minimum pavement width of sixteen feet. If alleys are provided, garage access shall be provided from the alley.
7. A raised concrete median or landscape median shall be utilized for roads identified to have access restrictions.
8. A public utility easement (PUE) shall be provided on both sides of the right-of-way or public access easement on private property as identified in 16.12.085.

Applicant Response: Not applicable. No development of streets or impacts on streets are proposed; therefore, this section in its entirety is not applicable.

16.12.017 - Street design—Access control.
A. A street which is dedicated to end at the boundary of the development or in the case of half-streets dedicated along a boundary shall have an access control granted to the City as a City controlled plat restriction for the purposes of controlling ingress and egress to the property adjacent to the end of the dedicated street. The access control restriction shall exist until such time as a public street is created, by dedication and accepted, extending the street to the adjacent property.

Applicant Response: Not applicable. No new street is proposed, and no access control is needed; therefore, this section in its entirety is not applicable.

16.12.018 - Street design—Alignment.
The centerline of streets shall be:
A. Aligned with existing streets by continuation of the centerlines; or
B. Offset from the centerline by no more than five feet, provided appropriate mitigation, in the judgment of the City Engineer, is provided to ensure that the offset intersection will not pose a safety hazard.
C. Driveways that are at least twenty-four feet wide shall align with existing or planned streets on adjacent sites.

Applicant Response: Not applicable. No new street is proposed therefore this section is not applicable.

16.12.019 - Traffic sight obstructions.
All new streets shall comply with the Traffic Sight Obstructions in Chapter 10.32.

Applicant Response: Not applicable. No new street is proposed; therefore, this section is not applicable.

16.12.020 - Street design—Intersection angles.
Except where topography requires a lesser angle, streets shall be laid out to intersect at angles as near as possible to right angles. In no case shall the acute angles be less than eighty degrees unless there is a special intersection design. An arterial or collector street intersecting with another street shall have at least one hundred feet of tangent adjacent to the intersection unless topography requires a lesser distance. Other streets, except alleys, shall have at least fifty feet of tangent adjacent to the intersection unless topography requires a lesser distance. All street intersections shall be provided with a minimum curb return radius of twenty-five feet for local streets. Larger radii shall be required for higher street classifications as determined by the City Engineer. Additional right-of-way shall be required to accommodate curb returns and sidewalks at intersections. Ordinarily, intersections should not have more than two streets at any one point.

Applicant Response: No new street is proposed; therefore, this section is not applicable.

16.12.021 - Street design—Grades and curves.
Grades and center line radii shall conform to standards approved by the City Engineer.

Applicant Response: Not applicable. No new street is proposed; therefore, this section is not applicable.

16.12.022 - Street design—Development abutting arterial or collector street.
Where development abuts or contains an existing or proposed arterial or collector street, the decision maker may require: Access control; screen planting or wall contained in an easement or otherwise protected by a restrictive covenant in a form acceptable to the decision maker along the rear or side property line; or such other treatment it deems necessary to adequately protect residential properties or afford separation of through and local traffic. Reverse frontage lots with suitable depth may also be considered an option for residential property that has arterial frontage. Where access for development abuts and connects for vehicular access to another jurisdiction's facility then authorization by that jurisdiction may be required.

Applicant Response: Not applicable. No new street is proposed; therefore, this section is not applicable.

16.12.023 - Street design—Pedestrian and bicycle safety.
Where deemed necessary to ensure public safety, reduce traffic hazards and promote the welfare of pedestrians, bicyclists and residents of the subject area, the decision maker may require that local streets be so designed as to discourage their use by nonlocal automobile traffic.

The City Engineer may require that crosswalks include a large vegetated or sidewalk area which extends into the street pavement as far as practicable to provide safer pedestrian crossing opportunities. These curb extensions can increase the visibility of pedestrians and provide a shorter crosswalk distance as well as encourage motorists to drive slower. The City Engineer may approve an alternative design that achieves the same standard for constrained sites.

Applicant Response: Not applicable. No new street is proposed; therefore, this section is not applicable.

16.12.024 - Street design—Half street.

Half streets, while generally not acceptable, may be approved where essential to the development, when in conformance with all other applicable requirements, and where it will not create a safety hazard. When approving half streets, the decision maker shall first determine that it will be practical to require the dedication of the other half of the street when the adjoining property is divided or developed. Where the decision maker approves a half street, the applicant shall construct a half street with at least twenty feet of pavement width and provide signage prohibiting street parking so as to make the half street safe until such time as the other half is constructed. Whenever a half street is adjacent to property capable of being divided or developed, the other half of the street shall be provided and improved when that adjacent property divides or develops. Access control may be required to preserve the objectives of half streets.

When the remainder of an existing half-street improvement is completed it shall include the following items: Dedication of required right-of-way, construction of the remaining portion of the street including pavement, curb and gutter, landscape strip, sidewalk, street trees, lighting and other improvements as required for that particular street. It shall also include at a minimum the pavement replacement to the centerline of the street. Any damage to the existing street shall be repaired in accordance with the City's "Pavement Cut Standards" or as approved by the City Engineer.

Applicant Response: Not applicable. No new street is proposed; therefore, this section is not applicable.

16.12.025 - Street design—Cul-de-sacs and dead-end streets.

The City discourages the use of cul-de-sacs and permanent dead-end streets except where construction of a through street is found by the decision maker to be impracticable due to topography or some significant physical constraint such as geologic hazards, wetland, natural or historic resource areas, pre-existing dedicated open space, pre-existing development patterns, arterial access restrictions or similar situation as determined by the decision maker. This section is not intended to preclude the use of curvilinear eyebrow widening of a street where needed.

A. When permitted, access from new cul-de-sacs and permanent dead-end streets shall be limited to a maximum of twenty-five dwelling units.

Applicant Response: Not applicable. No new street is proposed; therefore, this section in its entirety is not applicable.

16.12.026 - Street design—Alleys.

Alleys with public access easements on private property shall be provided in the Park Place and South End concept plan areas for the following districts R-5, R-3.5, R-2, MUC-1, MUC-2 and NC zones unless other permanent provisions for private access to off-street parking and loading facilities are approved by the decision maker. All alleys intended to provide access for emergency vehicles shall be a minimum width of twenty feet. The corners of alley intersections shall have a radius of not less than ten feet and shall conform to standards approved by the City Engineer. Access easements and maintenance agreements shall be recorded on affected properties.

Applicant Response: Not applicable. No alleys are proposed; therefore, this section is not applicable.

16.12.027 - Street design—Off-site street improvements.

During consideration of the preliminary plan for a development, the decision maker shall determine whether existing streets impacted by, adjacent to, or abutting the development meet the applicable design or dimensional requirements. Where such streets fail to meet these requirements, the decision-maker shall require the applicant to make proportional improvements sufficient to achieve conformance with minimum applicable design standards required to serve the proposed development.

Applicant Response: The proposed development use is not changing the site's current use. Nearby streets have the following dimensions. Killdeer Road, 20' wide, with a 6" curb, 19.5' planting strip, and 6' wide concrete sidewalk. North Douglas Loop is 25' wide with a 6' curbed sidewalk on north/west side of the street. The sidewalk only extends for a portion of the street, but additional improvements are being proposed under the Douglas Loop improvement project (File # PA-25-00027). Grove Circle is 24' wide with a 9' planting strip and a 6' wide sidewalk on the west side of the street. Along the unnamed access road south of the softball field, a 5' sidewalk is proposed on either side of the access road to improve pedestrian access and safety. Refer to Exhibit B, sheet series L1.00.

16.12.028 - Street design—Transit.

Streets shall be designed and laid out in a manner that promotes pedestrian and bicycle circulation. The applicant shall coordinate with transit agencies where the application impacts transit streets as identified in OCMC 17.04.1310. Pedestrian/bicycle access ways shall be provided as necessary to minimize the travel distance to transit streets and stops and neighborhood activity centers. The decision maker may require provisions, including easements,

for transit facilities along transit streets where a need for bus stops, bus pullouts or other transit facilities within or adjacent to the development has been identified.

Applicant Response: Not applicable. No impacts to transit streets are proposed. Transit routes and stops at the intersection of Clairmont Dr. and S Beavercreek Road, as well as the Clackamas Community College Transit Center, are accessed via existing internal campus pedestrian/bike circulation. The project is not proposing any circulation changes that would impact existing movement to transit stops.

16.12.029 - Excavations—Restoration of pavement.

Whenever any excavation shall have been made in any pavement or other street improvement on any street or alley in the City for any purpose whatsoever under the permit granted by the engineer, it shall be the duty of the person making the excavation to restore the pavement in accordance with the City of Oregon City Public Works Pavement Cut Standards in effect at the time the permit is granted. The City Commission may adopt and modify the City of Oregon City Public Works Pavement Cut Standards by resolution as necessary to implement the requirements of this chapter.

Applicant Response: Complies as proposed. The City of Oregon City Public Works Pavement Cut Standards will be referenced in project specifications so that any excavations and restoration of pavement in streets adheres to applicable standards.

16.12.030 - Blocks—Width.

The width of blocks shall ordinarily be sufficient to allow for two tiers of lots with depths consistent with the type of land use proposed. The length, width and shape of blocks shall take into account the need for adequate building site size, convenient motor vehicle, pedestrian, bicycle and transit access, control of traffic circulation, and limitations imposed by topography and other natural features. All new streets shall be designed as local streets unless otherwise designated as arterials and collectors in the current adopted transportation system plan. The maximum block spacing between streets is five hundred thirty feet and the minimum block spacing between streets is one hundred fifty feet as measured between the right-of-way centerlines except in zones GI, CI, MUE, I, and WFDD where determining the appropriate street spacing will be determined by the City Engineer. If the maximum block size is exceeded, pedestrian accessways shall be provided every three hundred thirty feet. The spacing standards within this section do not apply to alleys.

Applicant Response: Not applicable. No new blocks or streets are proposed; therefore, this section is not applicable. The site is in Zone I, where block spacing is determined but the City Engineer.

16.12.031 - Street design—Street names.

Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street. Street names shall conform to the established standards in the City and shall be subject to the approval of the City.

Applicant Response: Not applicable. No new streets are proposed; therefore, this section is not applicable.

16.12.032 – Public off-street pedestrian and bicycle accessways.

Pedestrian/bicycle accessways are intended to provide direct, safe and convenient connections between residential areas, retail and office areas, institutional facilities, industrial parks, transit streets, neighborhood activity centers, rights-of-way, and pedestrian/bicycle accessways which minimize out-of-direction travel, and transit orientated developments where public street connections for automobiles, bicycles and pedestrians are unavailable. Pedestrian/bicycle accessways are appropriate in areas where public street options are unavailable, impractical or inappropriate. Pedestrian and bicycle accessways are required through private property or as right-of-way connecting development to the right-of-way at intervals not exceeding three hundred thirty feet of frontage; or where the lack of street continuity creates inconvenient or out of direction travel patterns for local pedestrian or bicycle trips.

Applicant Response: Complies with condition. No pedestrian/bike accessways are proposed under this DDP; therefore, this section in its entirety is not applicable. However, under the GDP, the development of the Oregon City Loop Trail is required. This is being proposed under the improvements to Douglas Loop Path project no. (PA-25-00027).

16.12.033 - Mobility standards.

Development shall demonstrate compliance with intersection mobility standards. When evaluating the performance of the transportation system, the City of Oregon City requires all intersections, except for the facilities identified in subsection E below, to be maintained at or below the following mobility standards during the two-hour peak operating conditions. The first hour has the highest weekday traffic volumes and the second hour is the next highest hour before or after the first hour. Except as provided otherwise below, this may require the installation of mobility improvements as set forth in the transportation system plan (TSP) or as otherwise identified by the City Engineer.

A. For intersections within the regional center, the following mobility standards apply:
1. During the first hour, a maximum v/c ratio of 1.10 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.
2. During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole.

For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.
3. Intersections located on the regional center boundary shall be considered within the regional center.

B. For intersections outside of the regional center but designated on the arterial and throughway network, as defined in the regional transportation plan, the following mobility standards apply:
1. During the first hour, a maximum v/c ratio of 0.99 shall be maintained. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.
2. During the second hour, a maximum v/c ratio of 0.99 shall be maintained at signalized intersections. For signalized intersections, this standard applies to the intersection as a whole. For unsignalized intersections, this standard applies to movements on the major street. There is no performance standard for the minor street approaches.

C. For intersections outside the boundaries of the regional center and not designated on the arterial and throughway network, as defined in the regional transportation plan, the following mobility standards apply:
1. For signalized intersections:
a. During the first hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.
b. During the second hour, LOS "D" or better will be required for the intersection as a whole and no approach operating at worse than LOS "E" and a v/c ratio not higher than 1.0 for the sum of the critical movements.
2. For unsignalized intersections outside of the boundaries of the regional center:
a. For unsignalized intersections, during the peak hour, all movements serving more than twenty vehicles shall be maintained at LOS "E" or better. LOS "F" will be tolerated at movements serving no more than twenty vehicles during the peak hour.

D. For the intersection of OR 213 and Beavercreek Road, the following mobility standards apply:
1. During the first, second and third hours, a maximum v/c ratio of 1.00 shall be maintained. Calculation of the maximum v/c ratio will be based on an average annual weekday peak hour.

E. Until the City adopts new performance measures that identify alternative mobility targets, the City shall exempt proposed development that is permitted, either conditionally, outright, or through detailed development master plan approval, from compliance with the above-referenced mobility standards for the following state-owned facilities:
I-205/OR 99E Interchange.
State intersections located within or on the regional center boundaries.

1. In the case of conceptual development approval for a master plan that impacts the above references intersections:
a. The form of mitigation will be determined at the time of the detailed development plan review for subsequent phases utilizing the code in place at the time the detailed development plan is submitted; and
b. Only those trips approved by a detailed development plan review are vested.
2. Development which does not comply with the mobility standards for the intersections identified in OCMC 16.12.033 shall provide for the improvements identified in the transportation system plan (TSP) in an effort to improve intersection mobility as necessary to offset the impact caused by development. Where required by other provisions of the code, the applicant shall provide a traffic impact study that includes an assessment of the development's impact on the intersections identified in this exemption and shall construct the intersection improvements listed in the TSP or required by the code.

Applicant Response: Not applicable. No new intersections are proposed as part of the development plan. This section is not applicable.

16.12.035 - Driveways.
A. All new development, redevelopment, and capital improvement projects shall meet the minimum driveway spacing standards identified in Table 16.12.035.A. Minor Site Plan and Design Review do not follow these standards unless a request is made to modify the driveway.

Table 16.12.035.A Minimum Driveway Spacing Standards

Street Functional Classification	***Minimum Driveway Spacing Standards***	***Distance***
Major Arterial Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*175 ft.*
Minor Arterial Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*175 ft.*
Collector Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*100 ft.*
Local Streets	*Minimum distance from a street corner to a driveway and between driveways for all uses other than detached single-family dwellings, duplexes, triplexes, quadplexes and townhouses*	*25 ft.*

When driveways are shared (combined), the minimum driveway spacing shall be 20 feet.

All driveways, except for shared driveways, shall be placed a minimum of 5 feet from the property line.

The distance from a street corner to a driveway is measured along the right-of-way from the edge of the intersection (on the same side of the road) right-of-way to the nearest portion of the driveway and the distance between driveways is measured at the nearest portions of the driveway at the right-of-way.

Applicant Response: Not applicable. No new driveways are proposed; therefore, this section in its entirety is not applicable.

16.12.065 - Building site—Grading.

Grading of building sites shall conform to the state of Oregon Structural Specialty Code, Title 18, any approved grading plan and any approved residential lot grading plan in accordance with the requirements of OCMC 13.12, 15.48, 16.12 and the public works stormwater and grading design standards, and the erosion control requirements of OCMC 17.47.

Applicant Response: Complies as proposed. Refer to Exhibit B, sheet series L3.00 for grading plan, and to sections listed above in this code response document.

16.12.085 - Easements.

The following shall govern the location, improvement and layout of easements:
A. Utilities. Utility easements shall be required where necessary as determined by the City Engineer.
Insofar as practicable, easements shall be continuous and aligned from block-to-block within the
development and with adjoining subdivisions or partitions.
1. Specific public utility easements for water, sanitary or storm drainage shall be provided based on approved final engineering plans conforming to the requirements found within the applicable design standards.
2. Conveyance of public utility easements for gas, electric, telecommunication, and fiberoptic shall be required where necessary as determined by the City Engineer. The City Engineer will require the easement unless it is found that the utility can be placed in a different location or can be placed in a smaller easement than what is required. The easement shall be located adjacent to all public rights-of-way or public access easements within private property. In the event that the provision of a public utility easement would create a conflict with achieving compliance with another part of the code, the location and width may be adjusted by the City Engineer.
a. The easement shall be 10 feet in the R-10, R-8, R-6, R-5, R-3.5, R-2, GI, and CI zones

b. The easement shall be a minimum of 5 feet in the NC, HC, I, C, MUC-1, MUC-2, MUE, MUD, and WFDD zones.
i. The applicant shall obtain a written determination from all utilities that the minimum 5 foot PUE coupled with use of a minimum of a five-foot area under the public sidewalk or parkway area is sufficient to serve the development. Where the minimum width is deemed inadequate, a modification shall be required.
c. An applicant may seek a modification to the public utility easement dedication requirement using 16.12.013.

Applicant Response: Not applicable. Utilities on site are privately owned; no public utility access easements are needed unless required by City Engineer.

B. Unusual Facilities. Easements for unusual facilities such as high voltage electric transmission lines, drainage channels and stormwater detention facilities shall be adequately sized for their intended purpose, including any necessary maintenance roads. These easements shall be shown to scale on the preliminary and final plats or maps. If the easement is for drainage channels, stormwater detention facilities or related purposes, the easement shall comply with the requirements of the public works stormwater and grading design standards.

Applicant Response: Complies as proposed. The city will dictate if any unusual facility easements are required.

C. Watercourses. Where a development is traversed or bounded by a watercourse, drainageway, channel or stream, a stormwater easement or drainage right-of-way shall be provided which conforms substantially to the line of such watercourse, drainageway, channel or stream and is of a sufficient width to allow construction, maintenance and control for the purpose as required by the responsible agency. For those subdivisions or partitions which are bounded by a stream of established recreational value, setbacks or easements may be required to prevent impacts to the water resource or to accommodate pedestrian or bicycle paths.

Applicant Response: Not applicable. Development is not bounded or traversed by a watercourse.

D. Access. When easements are used to provide vehicular access to lots within a development, the construction standards, but not necessarily width standards, for the easement shall meet City specifications. The minimum width of the easement shall be 20 feet. The easements shall be improved and recorded by the applicant and inspected by the City Engineer. Access easements may also provide for utility placement.

Applicant Response: Not applicable. No access easements are proposed, unless requested by the city.

E. Resource Protection. Easements or other protective measures may also be required as the Community Development Director deems necessary to ensure compliance with applicable review criteria protecting any unusual significant natural feature or features of historic significance.

Applicant Response: Not applicable. Natural resources on site are already protected by the NROD. Reference Exhibit H for resources within the NROD boundary.

16.12.090 - Minimum improvements—Procedures.

In addition to other requirements, improvements installed by the applicant either as a requirement of these or other regulations, or at the applicant's option, shall conform to the requirements of this title and be designed to City specifications and standards as set out in the City's facility master plan and Public Works Stormwater and Grading Design Standards. The improvements shall be installed in accordance with the following procedure:
A. Improvement work shall not commence until construction plans have been reviewed and approved by the City Engineer and to the extent that improvements are located in county or state right-of-way, they shall be approved by the responsible authority. To the extent necessary for evaluation of the proposal, the plans may be required before approval of the preliminary plat of a subdivision or partition. Expenses incurred thereby shall be borne by the applicant and paid for prior to final plan review.

Applicant Response: Applicable. Work will not commence until construction plans have been reviewed and approved by the responsible authority.

B. Improvements shall be constructed under the inspection and approval of the City Engineer. Expenses incurred thereby shall be borne by the applicant and paid prior to final approval. Where required by the City Engineer or other City decision-maker, the applicant's project engineer also shall inspect construction.

Applicant Response: Applicable. Improvements to be inspected by the City Engineer.

C. Erosion control or resource protection facilities or measures are required to be installed in accordance with the requirements of OCMC 17.47, 17.49 and the Public Works Erosion and Sediment Control Standards.

Applicant Response: Applicable. Refer to the Erosion Control Plans in Exhibit B.

D. Underground utilities, waterlines, sanitary sewers and storm drains installed in streets shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities, such as, storm, water and sanitary sewer shall be placed beyond the ten-foot-wide public utility easement within private property as defined in OCMC 16.12.85.A.2.

Applicant Response: Complies as proposed. No utilities are proposed in streets. Stubs for service connections will be placed beyond any existing utility easements.

E. As-built construction plans and digital copies of as-built drawings shall be filed with the City Engineer upon completion of the improvements.

Applicant Response: Complies as proposed. As-built plans will be provided as required.

F. The City Engineer may regulate the hours of construction and access routes for construction equipment to minimize impacts on adjoining residences or neighborhoods.

Applicant Response: Complies as proposed. City Engineer to provide regulations as applicable.

16.12.095 - Minimum improvements—Public facilities and services.

The following minimum improvements shall be required of all applicants for a development, unless the decision-maker determines that any such improvement is not proportional to the impact imposed on the City's public systems and facilities:

A. Transportation System. Applicants and all subsequent lot owners shall be responsible for improving the City's planned level of service on all public streets, including alleys within the development and those portions of public streets adjacent to but only partially within development. Applicants are responsible for designing and providing adequate vehicular, bicycle and pedestrian access to their developments and for accommodating future access to neighboring undeveloped properties that are suitably zoned for future development. Storm drainage facilities shall be installed and connected to off-site natural or man-made drainageways. Upon completion of the street improvement survey, the applicant shall reestablish and protect monuments of the type required by ORS 92.060 in monument boxes with covers at every public street intersection and all points or curvature and points of tangency of their center line, and at such other points as directed by the City Engineer.

Applicant Response: Not applicable. There are no public streets adjacent to the project site. Site access is existing and will remain unchanged. This section is not applicable.

B. Stormwater Drainage System. Applicants shall design and install drainage facilities within a development and shall connect the development's drainage system to the appropriate downstream storm drainage system as a minimum requirement for providing services to the applicant's development. The applicant shall obtain county or state approval when appropriate. Applicants are responsible for extending the appropriate storm drainage system to the development site and for providing for the connection of upgradient properties to that system. The applicant shall design the drainage facilities in accordance with city drainage master plan requirements, OCMC 13.12 and the public works stormwater and grading design standards.

Applicant Response: Complies as proposed. Refer to Exhibit B, sheet series C2.00.

C. Sanitary Sewer System. The applicant shall design and install a sanitary sewer system to serve all lots or parcels within a development in accordance with the City's sanitary sewer design standards and shall connect those lots or parcels to the City's sanitary sewer system, except where connection is required to the county sanitary sewer system as approved by the county. Applicants are responsible for extending the City's sanitary sewer system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development. The applicant shall obtain all required permits and approvals from all affected jurisdictions prior to final approval and prior to commencement of construction. Design shall be approved by the City Engineer before construction begins.

Applicant Response: Not applicable. The lot is already connected to the City's sanitary sewer system, and there are no neighboring undeveloped properties that would need connection. This section is not applicable.

D. Water System. The applicant shall design and install a water system to serve all lots or parcels within a development in accordance with the City public works water system design standards and shall connect those lots or parcels to the City's water system. Applicants are responsible for extending the City's water system to the development site and through the applicant's property to allow for the future connection of neighboring undeveloped properties that are suitably zoned for future development.

Applicant Response: Not applicable. The lot is already connected to the City's water system and provides service to the development site. There are no neighboring undeveloped properties that would need connection. This section is not applicable.

E. Street Trees. Refer to OCMC 12.08, Street Trees.

Applicant Response: Not applicable. No street trees are proposed or required; therefore, this section is not applicable.

F. Bench Marks. At least one benchmark shall be located within the subdivision boundaries using datum plane specified by the City Engineer.

Applicant Response: Not applicable. No new subdivision is proposed; therefore, this section is not applicable.

G. Other Utilities. The applicant shall make all necessary arrangements with utility companies or other affected parties for the installation of underground lines and facilities. All new utilities shall be placed underground unless the respective franchise agreements allow otherwise or

unless it is physically or technically impossible to comply with applicable standards. Existing electrical lines and other wires, including but not limited to telecommunication, street lighting and fiberoptic, shall be relocated underground.
1. Exemptions to relocation of existing overhead utilities to underground for property development as follows (Only one exemption criteria is required to be exempt from this requirement):
a. No transmission or feeder lines shall be relocated underground unless approved by the City Engineer.
b. Properties with less than one acre of land area shall not be required to relocate existing overhead utilities unless required by the franchise utility.
c. Properties with less than two hundred feet of frontage on any individual roadway shall not be required to relocate existing overhead utilities unless required by the franchise utility.
d. Land divisions with five or fewer subdivided lots shall not be required to relocate existing overhead utilities unless required by the franchise utility.
2. The exemptions in G.1. do not apply if properties within the same block were required to relocate the overhead utilities within the past ten years. In those cases, the existing overhead utilities shall be relocated underground.
3. When any franchise utility (electric, gas, telecommunication, fiberoptic, street lighting or similar utility) is installed along an existing or new roadway, the utility shall be installed within the existing or proposed public utility easement unless it is physically or technically impossible.
4. These requirements do not apply to work by a franchise utility for improvement, repair, alteration or addition to their existing systems.

Applicant Response: Not applicable. No overhead utilities exist on site. All utilities relocations are to be buried. No exemptions are needed; therefore, the section does not apply.

H. Oversizing of Facilities. All facilities and improvements shall be designed to city standards as set out in the City's facility master plan, public works design standards, or other city ordinances or regulations. Compliance with facility design standards shall be addressed during final engineering. A development may be required to modify or replace existing offsite systems if necessary to provide adequate public facilities. The City may require oversizing of facilities to meet standards in the City's facility master plan or to allow for orderly and efficient development. Where oversizing is required, the applicant may request reimbursement from the City for oversizing based on the City's reimbursement policy and funds available or provide for recovery of costs from intervening properties as they develop.

Applicant Response: Complies as proposed. Compliance with design standards will be addressed during final engineering. City to indicate if oversizing of utilities is needed, but the applicant assumes it is not required at this time.

I. Erosion Control Plan—Mitigation. The applicant shall be responsible for complying with all applicable provisions of OCMC 17.47 with regard to erosion control.

Applicant Response: Complies as proposed. An Erosion Control Plan prepared in accordance with OCMC 17.47 and is included in this land use application, see Exhibit B.

16.12.100 - Same—Road standards and requirements.

A. The creation of a public street and the resultant separate land parcels shall be in conformance with requirements for subdivisions or partitions and the applicable street design standards of this Chapter. However, the decision-maker may approve the creation of a public street to be established by deed without full compliance with the regulations applicable to subdivisions or partitions where any of the following conditions exist:
1. The establishment of the public street is initiated by the City Commission and is declared essential for the purpose of general traffic circulation and the partitioning of land is an incidental effect rather than the primary objective of the street;
2. The tract in which the street is to be dedicated is within an isolated ownership either not over one acre or of such size and characteristics as to make it impossible to develop building sites for more than three dwelling units.

Applicant Response: Not applicable. No street creation is proposed as part of the project; therefore, this section in its entirety does not apply.

16.12.105 - Same—Timing requirements.

A. Prior to applying for final plat approval, the applicant shall either complete construction of all public improvements required as part of the preliminary plat approval or guarantee the construction of those improvements. Whichever option the applicant elects shall be in accordance with OCMC 17.50.140.

Applicant Response: Not applicable. Plat is already approved for this project; therefore, this section is not applicable in its entirety.

16.12.110 -Public improvements—Financial guarantees.

A. To ensure construction of required public improvements, the applicant shall provide the City with a performance guarantee in accordance with OCMC 17.50.140.

Applicant Response: Not applicable. No public improvements are proposed in this project; therefore, this section in its entirety is not applicable.

16.12.120 Waiver of Remonstrance

The review authority may require a property owner to sign a waiver of remonstrance against the formation of and participation in a local improvement district where it deems such a waiver necessary to provide needed improvements reasonably related to the impacts created by the

proposed development. To ensure compliance with this chapter, the review authority may require an applicant to sign or accept a legal and enforceable covenant, contract, dedication, easement, performance guarantee, or other document, which shall be approved in form by the City Attorney.

Applicant Response: Not applicable. No public improvements are proposed in this project therefore this section in its entirety is not applicable.

16.12.125 Violation—Penalty.
Any act or omission in violation of this chapter shall be deemed a nuisance. Violation of any provision of this chapter is subject to the code enforcement procedures of OCMC 1.16, 1.20 and 1.24.

CHAPTER 17.39 I INSTITUTIONAL DISTRICT

17.39.010 - Designated.
The purpose of this district is designed to facilitate the development of major public institutions, government facilities and parks and ensure the compatibility of these developments with surrounding areas. The I—Institutional zone is consistent with the public/quasi-public and park designations on the comprehensive plan map.

17.39.020 - Permitted uses.
Permitted uses in the institutional district are:
A. Private and/or public educational or training facilities;
B. Parks, playgrounds, playfields and community or neighborhood community centers;
C. Public facilities and services including courts, libraries and general government offices and maintenance facilities;
D. Stadiums and arenas;
E. Banquet, conference facilities and meeting rooms;
F. Government offices;
G. Transportation facilities;
H. Mobile food units.

Applicant's Response: Complies as proposed. The project site uses are consistent with subsections A. private and/or public educational or training facilities and B. playfields. The site is part of Clackamas Community College and will serve its athletics department by improving the track, adding a soccer field, and improving spectator experiences.

17.39.030 - Accessory uses.
The following uses are permitted outright if they are accessory to and related to the primary institutional use:
A. Offices;

B. Retail (not to exceed twenty percent of total gross floor area of all building);
C. Child care centers or nursery schools;
D. Scientific, educational, or medical research facilities and laboratories;
E. Religious institutions.

Applicant's Response: Not applicable. None of the above uses are proposed; therefore, this section is not applicable.

17.39.040 - Conditional uses.
Uses requiring conditional use permit are:
A. Any uses listed under OCMC 17.39.030 that are not accessory to the primary institutional use;
B. Boarding and lodging houses, bed and breakfast inns;
C. Cemeteries, crematories, mausoleums, and columbariums;
D. Correctional facilities;
E. Helipad in conjunction with a permitted use;
F. Parking lots not in conjunction with a primary use;
G. Public utilities, including sub-stations (such as buildings, plants and other structures);
H. Fire stations;
I. Police Station.

Applicant's Response: Not applicable. None of the above uses are proposed; therefore, this section is not applicable.

17.39.045 - Prohibited uses.
Prohibited uses in the I district are:
A. Any use not expressly listed in OCMC 17.39.020, 17.39.030 or 17.39.040;
B. Marijuana businesses;

Applicant's Response: Not applicable. All proposed uses are approved under OCMC 17.39.020.

17.39.050 - Dimensional standards.
Dimensional standards in the I district are:
A. Maximum building height: Within one hundred feet of any district boundary, not to exceed thirty-five feet; elsewhere, not to exceed seventy feet.

Applicant's Response: Complies as proposed. The project site is set back more than 100 feet from the Institutional district boundary. The maximum proposed building height is 22.5 feet.

B. Minimum required setbacks: Twenty-five feet from property line except when the development is adjacent to a public right-of-way. When adjacent to a public right-of-way, the minimum setback is zero feet and the maximum setback is five feet.

Public utility easements may supersede the minimum setback. Maximum setback may be increased per OCMC 17.62.055.D.

Applicant's Response: Complies as proposed. The project site is set back roughly 575 feet from the property line and is not adjacent to any public right-of-ways. All proposed buildings comply with the minimum required setbacks.

C. Minimum required landscaping (including landscaping within a parking lot): Fifteen percent.

Applicant's Response: Complies as proposed. Approximately 58% of the 168-acre campus is landscaped. The project site is 43% landscaping. The campus character is defined by large open areas, sports facilities and mature trees. The proposed development aligns with the existing character.

Campus Land Use	Acres	Share (%)
Landscaping, Open Areas, Play Fields	98	58%
Parking	22	13%
Pedestrian Paths	18	11%
Buildings	12.5	7%
Streets and Driveways	10	6%
Synthetic Turf and Track Surfacing	8	5%
Total	**168**	**100%**

Site Land Use	Square Feet	Share (%)
Landscaping, Open Areas, Play Fields	321626	42.9%
Parking	0	0.0%
Pedestrian Paths	50550	6.7%
Buildings	26685	3.6%
Streets and Driveways	8457	1.1%
Synthetic Turf and Track Surfacing	342545	45.7%
Total	**749864**	**100%**

17.39.060 - Relationship to master plan.

A. A master plan is required for any development within the I District on a site over ten acres in size that:

1. Is for a new development on a vacant property;

2. Is for the redevelopment of a property previously used an a non-institutional use; or
3. Increases the floor area of the existing development by ten thousand square feet over existing conditions

Applicant's Response: Complies as proposed. A master plan for Clackamas Community College was approved by the city in 2025 (Clackamas Community College 2024-44 Master Plan, file #GLUA-24-00020 / MAS-24-00001). The proposed development was proposed and approved under that process. The proposal involves redevelopment of an existing site with the same use and zoning designation. The proposed development is adding roughly 22,000 sf of floor area, above the threshold stated above.

B. Master plan dimensional standards that are less restrictive than those of the Institutional District require adjustments. Adjustments will address the criteria of OCMC 17.65.70 and will be processed concurrently with the master plan application.

Applicant's Response: Not applicable. The master plan does not specify less restrictive development standards, and no adjustments were requested.

C. Modifications to other development standards in the code may be made as part of the phased master plan adjustment process. All modifications shall be in accordance with the requirements of the master plan adjustment process identified in OCMC 17.65.070.

Applicant's Response: Complies with condition. Any adjustments requested will address criteria of OCMC 17.65.70 but will not be processed with a master plan, as a master plan is already in place for the project.

CHAPTER 17.41 – TREE PROTECTION, PRESERVATION, REMOVAL AND REPLANTING STANDARDS

17.41.010 - Protection of trees—Intent.
The intent of this chapter is to ensure that new development is designed in a manner that preserves trees to the maximum extent practicable. As a requirement of any Type II land use application, the siting of structures, roadways and utility easements, shall provide for the protection of tree resources to the maximum extent practicable. This chapter applies to all land division and site plan and design review applications.

17.41.020 - Tree protection—Applicability.
A. Applications for development subject to OCMC 16.08 (Land Divisions) or OCMC 17.62 (Site Plan and Design Review) shall demonstrate compliance with these standards as part of the review proceedings for those developments. Compliance with this chapter is required from the date a land use application is filed until a land division is recorded or other development approval is final.

B. For public capital improvement projects, the City engineer shall demonstrate compliance with these standards pursuant to a Type I process.
C. Tree canopy removal greater than twenty-five percent on areas with greater than twenty-five percent slope, unless exempted under OCMC 17.41.040, shall be subject to these standards.
D. A heritage tree or grove which has been designated pursuant to the procedures of OCMC 12.32 shall be subject to the standards of this section.
E. A tree that has been planted pursuant to this section shall remain or shall be replaced with a new tree if removed.

Applicant's Response: Applicable. Compliance is required as the proposed development is being reviewed under OCMC 17.62 as a Detailed Development Plan.

17.41.030 - Tree protection—Conflicting code provisions.
Except as otherwise specified in this section, where these standards conflict with adopted city development codes or policies, the provision which provides the greater protection for regulated trees or groves, as defined in OCMC 17.04, shall govern.

Applicant's Response: Applicable. Some trees in the proposed development boundary are within the natural overlay district and are subject to protection and mitigation under OCMC 17.4.

17.41.040 - Exemptions.
These regulations are not intended to regulate normal cutting, pruning and maintenance of trees on private property except where trees are located on lots that are undergoing development review or are otherwise protected within the natural resource overlay district (NROD) of OCMC 17.49. These standards are not intended to regulate farm and forest practices as those practices are defined under ORS 30.930, for farm or forestlands. These regulations do not apply to the removal of trees that are considered invasive species. An applicant for development may claim exemption from compliance with these standards if the development site containing the regulated grove or trees was a designated farm or forest use, tree farm, Christmas tree plantation, or other approved timber use within one year prior to development application. "Forest practices" and "forestlands" as used in this subsection shall have the meaning as set out in ORS 30.930. The Community Development Director has the authority to modify or waive compliance in this case.

Applicant's Response: Not applicable. No exemption is needed currently. The proposed development is not on farm or forest land, and the trees on-site are not invasive species.

17.41.050 - Compliance options.
Applicants for review shall comply with these requirements through one or a combination of the following procedures:

A. Option 1—Mitigation. Retention and removal of trees, with subsequent mitigation by replanting pursuant to OCMC 17.41.060.
B. Option 2—Dedicated Tract. Protection of trees or groves by placement in a tract within a new subdivision or partition plat pursuant to OCMC 17.41.080; or
C. Option 3—Restrictive Covenant. Protection of trees or groves by recordation of a permanent restrictive covenant pursuant to OCMC 17.41.110; or
D. Option 4—Cash-in-lieu of planting pursuant to OCMC 17.41.120.

Applicant's Response: Complies as proposed. Compliance will be met through option 1, mitigation by re-planting pursuant to OCMC 17.41.060 and option 3 pursuant to OCMC 17.41.100.

17.41.060 - Tree removal and replanting—Mitigation (Option 1).
A. Applicants for development who select this option shall ensure that all healthy trees shall be preserved outside the construction area as defined in OCMC 17.04 to the extent practicable. Preserved trees are subject to Option 3 of this chapter. Compliance with these standards shall be demonstrated in a tree mitigation plan report prepared by a certified arborist, horticulturalist or forester or other environmental professional with experience and academic credentials in forestry or arboriculture. Tree inventories for the purposes of mitigation calculations may be prepared by a licensed surveyor. At the applicant's expense, the City may require the report to be reviewed by a consulting arborist. The number of replacement trees required on a development site shall be calculated separately from, and in addition to, any public or street trees in the public right-of-way required under OCMC 12.08, Public and Street Trees, any required tree planting in parking lots, and any trees planted in pedestrian and bicycle accessways.

Applicant's Response: Complies as proposed. Refer to Exhibit C for the arborist's report and Exhibit B, L0.00 series sheets for the tree mitigation plan. Tree inventories were provided by a licensed surveyor.

B. The applicant shall determine the number of trees to be mitigated on the site by counting all of the trees six-inch DBH (minimum four and one-half feet from the ground) or larger on the entire site and either:
1. Trees that are removed outside of the construction area shall be replanted with the number of trees specified in Column 1 of Table 17.41.060-1. Trees that are removed within the construction area shall be replanted with the number of replacement trees required in Column 2; or
2. Dying, diseased or hazardous trees, when the condition is verified by a certified arborist to be consistent with the definitions in OCMC 17.04, may be removed from the tree replacement calculation. Dead trees may also be removed from the calculation, with the condition of the tree verified either by the Community Development Director or by a certified arborist at the applicant's expense, when the Community Development Director cannot make a determination.

To the extent that the Community Development Director determines that the dead, dying, hazardous or diseased condition of the tree is the result of intentional action, the removal of that tree shall require mitigation pursuant to Column 2 of Table 17.41.060-1.

Applicant's Response: Complies as proposed. There are 32 six-inch or greater DBH trees within the proposed development. One 16-inch DBH tree is proposed to be removed within the construction area. One 12-inch DBH dying and hazardous tree is to be removed within the construction area, but is excluded from replacement calculations per OCMC 17.41.060.B2.

Table 17.41.060-1
Tree Replacement Requirements

Size of tree removed (DBH)	***Number of trees to be planted. (If removed Outside of construction area)***	***Number of trees to be planted. (If removed Within the construction area)***
6 to 12"	*3*	*1*
13 to 18"	*6*	*2*
19 to 24"	*9*	*3*
25 to 30"	*12*	*4*
31 and over"	*15*	*5*

Steps for calculating the number of replacement trees:
1. Count all trees measuring six inches DBH (minimum four and one-half feet from the ground) or larger on the entire development site.
2. Designate the size (DBH) of all trees pursuant to accepted industry standards.
3. Document in a certified arborist report any trees that are currently dead, dying, diseased or hazardous.
4. Subtract the number of dead, dying, diseased or hazardous trees in step 3 from the total number of trees on the development site in step 1. The remaining number is the number of healthy trees on the site. Use this number to determine the number of replacement trees in steps 5 through 8.
5. Identify the construction area (as defined in OCMC 17.04.230).
6. Determine the number and diameter of trees to be removed within the construction area. Based on the size of each tree, use Column 2 to determine the number of replacement trees required.
7. Determine the number and diameter of trees to be removed outside of the construction area. Based on the size of each tree, use Column 1 to determine the number of replacement trees required.

8. Determine the total number of replacement trees from steps 6 and 7.

Applicant's Response: Complies as proposed. Refer to Exhibit C for the arborist report. There are 32 trees with a DBH over 6 inches. There is one dead, dying, or hazardous tree to be removed. There is one tree to be removed and replaced.

Please complete the Table below for trees being removed based on the Tree Replacement Requirements in Table 17.41.060-1

Size of tree removed (DBH)	***Number of Trees Removed Outside of Construction Area***	***Number of Trees Removed Within the Construction area***	***Number of Mitigation Trees Required (See Table 17.41.060-1)***
6 to 12"			
13 to 18"		*1*	*2*
19 to 24"			
25 to 30"			
31 and over"			

C. Planting Area Priority for Mitigation. Development applications which opt for removal of trees with subsequent replanting pursuant to OCMC 17.41.050.A shall be required to mitigate for tree cutting by complying with the following priority for replanting standards below:
1. First Priority. Replanting on the development site.
2. Second Priority. Off-site replacement tree planting locations. If the Community Development Director determines that it is not practicable to plant the total number of replacement trees on-site, a suitable off-site planting location for the remainder of the trees may be approved that will reasonably satisfy the objectives of this section. Such locations may include either publicly owned or private land and shall be approved by the Community Development Director.

Applicant's Response: Complies as proposed. Tree replanting will be done within the development plan, per Landscape Plans and Arborist Report. Reference Exhibit B, sheet series L6.00, and Exhibit C for the arborist report.

D. Replacement tree planting standards.
1. All replacement trees shall be either two-inch caliper deciduous or six-foot high conifer.

Applicant's Response: Complies as proposed. Per exhibit B, sheet series L6.00, and exhibit C - arborist report, all replacement trees will be two-inch caliper deciduous trees.

2. Replacement tree species shall be approved by a landscape architect or certified arborist or shall be found on the City's Native Plant or Street Tree lists.

Applicant's Response: Complies as proposed. Replacement trees were selected by a landscape architect and are included in the City's Native Plant list.

3. Due to their diminishing range in the region, Oregon white oak (Quercus garryana) trees, if removed, shall be replaced by the same species.

Applicant's Response: Not applicable. No Quercus garryana are proposed to be removed.

E. All existing tree(s) in the tract shall be protected by a permanent restrictive covenant or easement approved in form by the City.

Applicant's Response: Complies as proposed. The proposal does not involve a new tract. This requirement does not apply.

F. Alternative Mitigation Plan. The Community Development Director may, subject to a Type II procedure, approve an alternative mitigation plan that adequately protects habitat pursuant to the standards for the natural resource overlay district alternative mitigation plan in OCMC 17.49.190.

Applicant's Response: Not applicable. No alternative mitigation plan is requested at this time.

17.41.080 - Tree preservation within subdivisions and partitions—Dedicated tract (Option 2).

A. An applicant for a new subdivision and partition may delineate and show the regulated trees or groves as either a separate tract or part of a larger tract that meets the requirements of subsection D. of this section. All existing tree(s) in the tract shall be protected by a permanent restrictive covenant or easement approved in form by the City

B. The standards for land divisions subject to this section shall apply in addition to the requirements of the City land division ordinance and zoning ordinance, provided that the minimum lot area, minimum average lot width, and minimum average lot depth standards of the base zone may be superseded in order to allow for a reduction of dimensional standards pursuant to OCMC 17.41.080.F below.

C. Prior to preliminary plat approval, the regulated tree or grove area shall be shown either as a separate tract or part of a larger tract that meets the requirements of subsection D. of this section, which shall not be a part of any parcel used for construction of a dwelling. The size of the tract shall be the minimum necessary as recommended by a consulting arborist to

adequately encompass the dripline of the tree, protect the critical root zone and ensure long term survival of the tree or grove.

D. Prior to final plat approval, ownership of the regulated tree or grove tract shall be identified to distinguish it from lots intended for sale. The tract may be identified as any one of the following:
1. Private open space held by the owner or a homeowner's association; or
2. For residential land divisions, private open space subject to an easement conveying stormwater and surface water management rights to the City and preventing the owner of the tract from activities and uses inconsistent with the purpose of this document; or
3. Public open space where the tract has been dedicated to the City or other governmental unit; or
4. Any other ownership proposed by the owner and approved by the Community Development Director.

E. Density transfers incentive for tree protection tracts.
1. The purpose of this section is to allow dimensional adjustments within a regulated tree protection tract to be transferred outside said tract to the remainder of the site. Density shall not be transferred beyond the boundaries of the development site.
2. Development applications for subdivisions and minor partitions that request a density transfer shall:
a. Provide a map showing the net buildable area of the tree protection tract;
b. Provide calculations justifying the requested dimensional adjustments;
c. Demonstrate that the minimum lot size requirements can be met based on an average of all lots created, including the tree protection tract created pursuant to this section;
d. Demonstrate that, with the exception of the tree protection tract, no parcels have been created which would be unbuildable in terms of minimum yard setbacks;
e. Meet all other standards of the base zone except as modified in this section.
3. The area of land contained in a tree protection tract may be excluded from the calculations for determining compliance with minimum density requirements of the zoning code.

F. Permitted modifications to dimensional standards.
1. An applicant proposing to protect trees in a dedicated tract may request, and the Community Development Director, pursuant to a Type II procedure, may grant a reduction to, the lot size, width, depth, and setbacks of the underlying zone district in approving a subdivision or partition if necessary to retain a regulated tree or grove in a tract, as long as the calculation of average lot size, including tree protection tracts, meet the minimum lot size for the zone. The applicant may choose to make the adjustments over as many lots as required. For example, the lot reduction could be spread across all the remaining lots in the proposed subdivision or partition or could be applied to only those needed to incorporate the area of the tree tract.

Table 17.41.080.A
Lot Size Reduction

ZONE	***Min. Lot Size [sq. feet]***	***Min. Lot Width***	***Min. Lot Depth***
R-10	*5,000 sq. feet*	*50'*	*65'*
R-8	*4,000 sq. feet*	*45'*	*60'*
R-6	*3,500 sq. feet*	*35'*	*55'*
R-5	*3,000 sq. feet*	*30'*	*50'*
R-3.5	*1,800 sq. feet*	*20'*	*45'*

Table 17.41.080.B
Reduced Dimensional Standards for Detached Single-Family Residential Units

Size of Reduced Lot	***Front Yard Setback***	***Rear Yard Setback***	***Side yard Setback***	***Corner Side***	***Lot Coverage***
8,000—9,999 square feet	*15 feet*	*20 feet*	*7/9 feet*	*15 feet*	*40%*
6,000—7,999 square feet	*10 feet*	*15 feet*	*5/7 feet*	*15 feet*	*40%*
4,000—5,999 square feet	*10 feet*	*15 feet*	*5/5 feet*	*10 feet*	*40%*
1,800—3,999 square feet	*5 feet*	*15 feet*	*5/5 feet*	*10 feet*	*55%*

Table 17.41.080.C
Reduced Dimensional Standards for Single-Family Attached or Two-Family Residential Units

Size of Reduced Lot	***Front Yard Setback***	***Rear Yard Setback***	***Side yard Setback***	***Corner Side***	***Lot Coverage***
3,500—7,000 square feet	*10 feet*	*15 feet*	*5/0* feet*	*10 feet*	*40%*
1,800—3,499 square feet	*5 feet*	*15 feet*	*5/0* feet*	*10 feet*	*55%*

**0 foot setback is only allowed on single-family attached units*

Applicant's Response: Not applicable. The applicant is not pursuing mitigation under option 2. The proposed development site is not part of a new subdivision or partition. Tree

mitigation and replacement are dealt with under Option 1 for the proposed development; therefore, this section is not applicable.

17.41.110 - Tree protection by restrictive covenant (Option 3).

Any regulated tree or grove which cannot be protected in a tract pursuant to Section 17.41.080 above shall be protected with a restrictive covenant in a format to be approved by the Community Development Director. Such covenant shall be recorded against the property deed and shall contain provisions to permanently protect the regulated tree or grove unless such tree or grove, as determined by a certified arborist and approved by the Community Development Director, are determined to be diseased or hazardous.

Applicant's Response: Complies as proposed. The applicant consents to tree protection by restrictive covenant as necessary. Refer to the arborist's report for the location of any diseases or hazardous trees to be excluded from the covenant. See Exhibit C.

A. Permitted adjustments.
1. The Community Development Director, pursuant to a Type II procedure, may grant an adjustment to the side, front and rear yard setback standards by up to fifty percent if necessary to retain a Regulated Tree or Grove through a restrictive covenant pursuant to this section. In no case may the side yard setback be reduced to less than three feet. The adjustment shall be the minimum necessary to accomplish preservation of trees on the lot and shall not conflict with other conditions imposed on the property.
2. The City Engineer may grant an adjustment to street standards, pursuant to adopted public works standards, in order to preserve a tree. This may include flexibility to redesign sidewalk and planter strip sizes and locations and allow placement of sidewalks and planter strips in an easement within private lots.
3. The Community Development Director, pursuant to a Type II procedure, may allow other adjustments in order to preserve any healthy tree that cannot be moved due to its size, but will contribute to the landscape character of the area and will not present a foreseeable hazard if retained.

Applicant's Response: Not applicable. No adjustments are necessary, and trees that are not near lot lines/setback lines are not considered street trees.

17.41.120 - Cash-in-lieu of planting (Option 4).

The applicant may choose this option in-lieu-of or in addition to Compliance Options 1 through 3. In this case, the Community Development Director may approve the payment of cash-in-lieu into a dedicated fund for the remainder of trees that cannot be replanted in the manner described above.

The cash-in-lieu payment per required mitigation tree shall be as listed on the adopted fee schedule and shall be adjusted annually based on the Consumer Price Index. The price shall include 150% of the cost of materials, transportation and planting.

Applicant's Response: Not applicable. The applicant will not pursue cash-in-lieu and instead will comply with Options 1 and 3 above.

17.41.130 - Regulated tree protection procedures during construction.

A. No permit for any grading or construction of public or private improvements may be released prior to verification by the Community Development Director that regulated trees designated for protection or conservation have been protected according to the following standards. No trees designated for removal shall be removed without prior written approval from the Community Development Director.

B. Tree protection shall be as recommended by a qualified arborist or, as a minimum, to include the following protective measures:
1. Except as otherwise determined by the Community Development Director, all required tree protection measures set forth in this section shall be instituted prior to any development activities, including, but not limited to clearing, grading, excavation or demolition work, and such measures shall be removed only after completion of all construction activity, including necessary landscaping and irrigation installation, and any required plat, tract, conservation easement or restrictive covenant has been recorded.
2. Approved construction fencing, a minimum of four feet tall with steel posts placed no farther than ten feet apart, shall be installed at the edge of the tree protection zone or dripline, whichever is greater. An alternative may be used with the approval of the Community Development Director.
3. Approved signs shall be attached to the fencing stating that inside the fencing is a tree protection zone, not to be disturbed unless prior approval has been obtained from the Community Development Director.
4. No construction activity shall occur within the tree protection zone, including, but not limited to; dumping or storage of materials such as building supplies, soil, waste items; nor passage or parking of vehicles or equipment.
5. The tree protection zone shall remain free of chemically injurious materials and liquids such as paints, thinners, cleaning solutions, petroleum products, and concrete or dry wall excess, construction debris, or run-off.
6. No excavation, trenching, grading, root pruning or other activity shall occur within the tree protection zone unless directed by an arborist present on site and approved by the Community Development Director.
7. No machinery repair or cleaning shall be performed within ten feet of the dripline of any trees identified for protection.
8. Digging a trench for placement of public or private utilities or other structure within the critical root zone of a tree to be protected is prohibited. Boring under or through the tree

protection zone may be permitted if approved by the Community Development Director and pursuant to the approved written recommendations and on-site guidance and supervision of a certified arborist.
9. The Community Development Director may require that a certified arborist be present during any construction or grading activities that may affect the dripline of trees to be protected.
10. The Community Development Director may impose conditions to avoid disturbance to tree roots from grading activities and to protect trees and other significant vegetation identified for retention from harm. Such conditions may include, if necessary, the advisory expertise of a qualified consulting arborist or horticulturist both during and after site preparation, and a special maintenance/management program to provide protection to the resource as recommended by the arborist or horticulturist.

C. Changes in soil hydrology due to soil compaction and site drainage within tree protection areas shall be avoided. Drainage and grading plans shall include provision to ensure that drainage of the site does not conflict with the standards of this section. Excessive site run-off shall be directed to appropriate storm drainage facilities and away from trees designated for conservation or protection.

Applicant's Response: Complies as proposed. Refer to the arborist report (Exhibit C) and L0.00 series sheets (Exhibit B) for tree protection measures to be used on the development site. Tree protection measures will be installed prior to construction and remain in place until all construction activities are completed. Tree protection fencing to be installed along the tree's protection zone with approved signage. No work shall be done in the tree protection zone, unless under the recommendation and supervision of a certified arborist and in accordance with the requirements laid out in the section above.

CHAPTER 17.47 – EROSION AND SEDIMENT CONTROL

17.47.030 - Applicability.
A. This chapter, which may also be referred to as "construction site runoff controls" in this Code, applies to development that may cause discharge of construction site waste materials or the visible or measurable erosion on any property within the city limits of Oregon City.
B. All development that results in 1,000 square feet of new or replaced impervious surface or 1,000 square feet of earth disturbance shall be subject to the construction site runoff controls requirements and the standards found within the Stormwater and Grading Design Standards as referenced in OCMC 13.12.
C. This chapter does not apply to work necessary to protect, repair, maintain or replace existing structures, utility facilities, roadways, driveways, accessory uses and exterior improvements in response to emergencies, provided that after the emergency has passed, adverse impacts are mitigated in accordance with applicable standards.

Applicant Response: Applicable. Erosion and construction site runoff controls are applicable and will be implemented in accordance with the listed standards.

17.47.060 - Permit required.

The applicant must obtain an erosion and sediment control permit prior to, or contemporaneous with, the approval of an application for any building, land use or other city-issued permit that may cause visible or measurable erosion.

Applicant Response: Applicable. A permit will be obtained prior to construction.

17.47.070 - Erosion and sediment control plans.

A. An application for an erosion and sediment control permit shall include an erosion and sediment control plan, which contains methods and interim measures to be used during and following construction to prevent or control construction site wastes and erosion prepared in compliance with City of Oregon City public works standards for erosion and sediment control. These standards are incorporated herein and made a part of this title and are on file in the office of the city recorder.

B. Approval Standards. An erosion and sediment control plan shall be approved only upon making the following findings:

1. The erosion and sediment control plan meets the requirements of the City of Oregon City public works standards for construction site wastes and erosion and sediment control incorporated by reference as part of this chapter;

2. The erosion and sediment control plan indicates that construction site wastes and erosion and sediment control measures will be managed and maintained during and following development. The erosion and sediment control plan indicates that construction site wastes and erosion and sediment control measures will remain in place until disturbed soil areas are permanently stabilized by landscaping, grass, approved mulch or other permanent soil stabilizing measures.

C. The erosion and sediment control plan shall be reviewed in conjunction with the requested development approval. If the development does not require additional review, the manager may approve or deny the permit with notice of the decision to the applicant.

D. The city may inspect the development site to determine compliance with the erosion and sediment control plan and permit.

E. Erosion that occurs on a development site that does not have an erosion and sediment control permit, or that results from a failure to comply with the terms of such a permit, constitutes a violation of this chapter.

F. If the manager finds that the facilities and techniques approved in an erosion and sediment control plan and permit are not sufficient to prevent erosion and the discharge of construction site wastes, the manager shall notify the owner or his/her designated representative. Upon receiving notice, the owner or his/her designated representative shall immediately install interim construction site wastes and erosion and sediment control measures as specified in the City of Oregon City public works standards for erosion and sediment control. Within three days

from the date of notice, the owner or his/her designated representative shall submit a revised erosion and sediment control plan to the city. Upon approval of the revised plan and issuance of an amended permit, the owner or his/her designated representative shall immediately implement the revised plan.
G. Approval of an erosion and sediment control plan does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).

Applicant Response: Applicable. Erosion and construction site runoff controls are applicable and will be implemented in accordance with the listed standards. Refer to the Erosion and Sedimentation Control Plans included with this submittal in Exhibit B, CE1.00 series.

17.47.080 - Plan implementation.
An approved erosion control and sediment control plan shall be implemented and maintained as follows:
A. Plan approval, where required, shall be obtained prior to clearing or grading. No grading, clearing or excavation of land requiring a plan shall be undertaken prior to approval of the plan.
B. The erosion and sediment control facilities shall be constructed prior to any clearing and grading activities and maintained in such a manner as to ensure that sediment laden water does not enter the drainage system or violate applicable water standards.
C. The implementation of an erosion and sediment control plan and the construction, maintenance, replacement, and upgrading of erosion and sediment control facilities is the responsibility of the owner or his/her designated representative until all construction is completed and approved, and vegetation, landscaping or approved finished surfaces is established.
D. The erosion and sediment control facilities herein are the minimum requirements for anticipated site conditions. During the construction period, these construction site waste management controls and erosion and sediment control facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment or pollutant-laden water does not leave the site.
E. Any observation of visible or measurable discharges of construction site wastes or erosion, or an observation of more than a ten-percent increase in downstream channel turbidities, will result in an enforcement action by the city.
F. The owner or his/her designated representative shall implement the measures and construct facilities as provided for and according to the implementation schedule in the approved plan. The manager shall be allowed reasonable access to the development site for inspection purposes.

Applicant Response: Applicable. Erosion and construction site runoff controls are applicable and will be implemented in accordance with the listed standards. Refer to the

Erosion and Sedimentation Control Plans included with this submittal in Exhibit B, CE1.00 series.

17.47.090 - Plan performance guarantee and security.

After the plan is approved by the manager and prior to construction or grading, the owner shall provide a financial guarantee. Management of construction site waste as well as erosion and sediment control shall be included in the cost estimate for the primary project, such as land division or site plan, and included in that project's performance guarantee.

Applicant Response: Applicable. The applicant consents to providing a financial guarantee for site management and erosion control. Refer to Exhibit A for cost estimate form, Section I.

CHAPTER 17.49 – NATURAL RESOURCE OVERLAY DISTRICT

Applicant Response: Complies with condition. NROD is present on the property but is excluded from the proposed development area. All proposed development will be completed outside the NROD boundary therefore this chapter in its entirety is not applicable. See sheet L1.00 for NROD extents and location of proposed development (Exhibit B).

CHAPTER 17.50 – ADMINISTRATION AND PROCEDURES

17.50.050 – Pre-application conference.

A. Pre-application Conference. Prior to a Type II – IV or Legislative application, excluding Historic Review, being deemed complete, the applicant shall schedule and attend a pre-application conference with City staff to discuss the proposal, unless waived by the Community Development Director. The purpose of the pre-application conference is to provide an opportunity for staff to provide the applicant with information on the likely impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal.
1. To schedule a pre-application conference, the applicant shall contact the Planning Division, submit the required materials, and pay the appropriate conference fee.
2. At a minimum, an applicant should submit a short narrative describing the proposal and a proposed site plan, drawn to a scale acceptable to the City, which identifies the proposed land uses, traffic circulation, and public rights-of-way and all other required plans.
3. The Planning Division shall provide the applicant(s) with the identity and contact persons for all affected neighborhood associations as well as a written summary of the pre-application conference.

Applicant's Response: Applicable. The pre-application conference was scheduled and held on August 21, 2025.

B. A pre-application conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant shall schedule and attend another conference before the City will accept a permit application. The Community Development Director may waive the pre-application requirement if, in the Director's opinion, the development has not changed significantly and the applicable municipal code or standards have not been significantly amended. In no case shall a pre-application conference be valid for more than one year.

Applicant's Response: Applicable. The pre-application conference was held on August 21, 2025, and is valid until February 2026.

C. Notwithstanding any representations by City staff at a pre-application conference, staff is not authorized to waive any requirements of this code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.

Applicant's Response: Applicable. City staff were represented at the pre-application conference, as indicated in the Pre-Application Conference Notes (Exhibit F).

17.50.055 - Neighborhood association meeting.

Neighborhood Association Meeting. The purpose of the meeting with the recognized neighborhood association is to inform the affected neighborhood association about the proposed development and to receive the preliminary responses and suggestions from the neighborhood association and the member residents.

A. Applicants applying for annexations, zone change, comprehensive plan amendments, conditional use, Planning Commission variances, subdivision, or site plan and design review (excluding minor site plan and design review), general development master plans or detailed development plans applications shall schedule and attend a meeting with the City-recognized neighborhood association in whose territory the application is proposed no earlier than one year prior to the date of application. Although not required for other projects than those identified above, a meeting with the neighborhood association is highly recommended.

B. The applicant shall request via email or regular mail a request to meet with the neighborhood association chair where the proposed development is located. The notice shall describe the proposed project. A copy of this notice shall also be provided to the chair of the citizen involvement committee.

C. A meeting shall be scheduled within thirty days of the date that the notice is sent. A meeting may be scheduled later than thirty days if by mutual agreement of the applicant and the neighborhood association. If the neighborhood association does not want to, or cannot meet within thirty days, the applicant shall host a meeting inviting the neighborhood association, citizen involvement committee, and all property owners within three hundred feet to attend. This meeting shall not begin before six p.m. on a weekday or may be held on a weekend and shall occur within the neighborhood association boundaries or at a city facility.

D. If the neighborhood association is not currently recognized by the City, is inactive, or does not exist, the applicant shall request a meeting with the citizen involvement committee.
E. To show compliance with this section, the applicant shall submit a copy of the email or mail notice to the neighborhood association and CIC chair, a sign-in sheet of meeting attendees, and a summary of issues discussed at the meeting. If the applicant held a separately noticed meeting, the applicant shall submit a copy of the meeting flyer, postcard or other correspondence used, and a summary of issues discussed at the meeting and submittal of these materials shall be required for a complete application.

Applicant's Response: Not applicable. The proposed development was approved by the City with the Clackamas Community College 2024-44 Master Plan (file # GLUA-24-00020 / MAS-24-00001). A neighborhood association meeting was held on March 19, 2025, with the Caufield Neighborhood Association, and authorizes subsequent applications until March 19, 2026. Refer to the pre-application meeting notes in Exhibit F.

17.50.060 Application requirements.
A permit application may only be initiated by the record property owner or contract purchaser, the City Commission or Planning Commission. If there is more than one record owner, then the City will not complete a Type II—IV application without signed authorization from all record owners. All permit applications shall be submitted on the form provided by the City, along with the appropriate fee and all necessary supporting documentation and information, sufficient to demonstrate compliance with all applicable approval criteria. The applicant has the burden of demonstrating, with evidence, that all applicable approval criteria are, or can be, met.

Applicant's Response: Complies as proposed. All record owners have provided signed authorization for permit applications.

17.50.070 Completeness review and one hundred twenty-day rule.
A. Upon submission, the Community Development Director shall date stamp the application form and verify that all of the appropriate application review fee(s) have been submitted. Upon receipt of all review fees and an application form, the Community Development Director will then review the application and all information submitted with it and evaluate whether the application is complete enough to process. Within thirty days of receipt of the application and all applicable review fees, the Community Development Director shall complete this initial review and issue to the applicant a written statement indicating whether the application is complete enough to process, and if not, what information shall be submitted to make the application complete.

B. The applicant has one hundred eighty days from the date the application was made to submit the missing information or the application shall be rejected and the unused portion of the application fee returned to the applicant. If the applicant submits the requested information within the one hundred eighty-day period, the Community Development Director shall again

verify whether the application, as augmented, is complete. Each such review and verification shall follow the procedure in subsection A of this section.

The application will be deemed complete for the purpose of this section upon receipt by the Community Development Director of:
1. All the missing information;
2. Some of the missing information and written notice from the applicant that no other information will be provided; or
3. Written notice from the applicant that none of the missing information will be provided.

C. Once the Community Development Director determines the application is complete enough to process, or the applicant refuses to submit any more information, the City shall declare the application complete. Pursuant to ORS 227.178, the City will reach a final decision on an application within one hundred twenty calendar days from the date that the application is determined to be or deemed complete unless the applicant agrees to suspend the one hundred twenty-calendar-day timeline or unless state law provides otherwise. The one hundred twenty-day period, however, does not apply in the following situations:
1. Any hearing continuance or other process delay requested by the applicant shall be deemed an extension or waiver, as appropriate, of the one hundred twenty-day period.
2. Any delay in the decision-making process necessitated because the applicant provided an incomplete set of mailing labels for the record property owners within three hundred feet of the subject property shall extend the one hundred twenty-day period for the amount of time required to correct the notice defect.
3. The one hundred twenty-day period does not apply to any application for a permit that is not wholly within the City's authority and control.
4. The one hundred twenty-day period does not apply to any application for an amendment to the City's comprehensive plan or land use regulations nor to any application for a permit, the approval of which depends upon a plan amendment.

D. A one hundred day-period applies in place of the one hundred twenty-day period for affordable housing projects where:
1. The project includes five or more residential units, including assisted living facilities or group homes;
2. At least fifty percent of the residential units will be sold or rented to households with incomes equal to or less than sixty percent of the median family income for Clackamas County or for the state, whichever is greater; and
3. Development is subject to a covenant restricting the owner and successive owner from selling or renting any of the affordable units as housing that is not affordable for a period of sixty years from the date of the certificate of occupancy.
E. The one hundred twenty-day period specified in OCMC 17.50.070.C or D may be extended for a specified period of time at the written request of the applicant. The total of all extensions may not exceed two hundred forty-five calendar days.

F. The approval standards that control the City's review and decision on a complete application are those which were in effect on the date the application was first submitted.

Applicant's Response: Applicable/Complies as proposed.

17.50.080 Complete application—Required information.

Unless stated elsewhere in OCMC 16 or 17, a complete application includes all the materials listed in this
subsection. The Community Development Director may waive the submission of any of these materials if not deemed to be applicable to the specific review sought. Likewise, within thirty days of when the application is first submitted, the Community Development Director may require additional information, beyond that listed in this subsection or elsewhere in Titles 12, 14, 15, 16, or 17, such as a traffic study or other report prepared by an appropriate expert. In any event, the applicant is responsible for the completeness and accuracy of the application and all of the supporting documentation, and the City will not deem the application complete until all information required by the Community Development Director is submitted. At a minimum, the applicant shall submit the following:

A. One copy of a completed application form that includes the following information:
1. An accurate address and tax map and location of all properties that are the subject of the application;
2. Name, address, telephone number and authorization signature of all record property owners or contract owners, and the name, address and telephone number of the applicant, if different from the property owner(s);
B. A complete list of the permit approvals sought by the applicant;
C. A complete and detailed narrative description of the proposed development;
D. A discussion of the approval criteria for all permits required for approval of the development proposal that explains how the criteria are or can be met or are not applicable, and any other information indicated by staff at the pre-application conference as being required;
E. One copy of all architectural drawings and site plans shall be submitted for Type II—IV applications.
One paper copy of all application materials shall be submitted for Type I applications;
F. For all Type II—IV applications, the following is required:
1. An electronic copy of all materials.
2. Mailing labels or associated fee for notice to all parties entitled under OCMC 17.50.090 to receive mailed notice of the application. The applicant shall use the names and addresses of property owners within the notice area indicated on the most recent property tax rolls.
3. Documentation indicating there are no liens favoring the City on the subject site.
4. A receipt from the county assessor's office indicating that all taxes for the lot or parcels involved are paid in full for the preceding tax year.
5. A current preliminary title report or trio for the subject property(ies);
G. All required application fees;

H. Annexation agreements, traffic or technical studies (if applicable);
I. Additional documentation, as needed and identified by the Community Development Director.

Applicant's Response: Complies as proposed. The applicant has provided all the documentation required for a complete application. Refer to the attached exhibits.

17.50.090 - Public notices.

All public notices issued by the City announcing applications or public hearings of quasi-judicial or legislative actions, shall comply with the requirements of this section.
A. Notice of Type II Applications. Once the Community Development Director has deemed a Type II application complete, the City shall prepare and send notice of the application, by first class mail, to all record owners of property within three hundred feet of the subject property and to any city-recognized neighborhood association whose territory includes the subject property. The applicant shall provide or the City shall prepare for a fee an accurate and complete set of mailing labels for these property owners and for posting the subject property with the City-prepared notice in accordance with OCMC 17.50.100. The City's Type II notice shall include the following information:
1. Street address or other easily understood location of the subject property and city-assigned planning file number;
2. A description of the applicant's proposal, along with citations of the approval criteria that the City will use to evaluate the proposal;
3. A statement that any interested party may submit to the City written comments on the application during a fourteen-day comment period prior to the City's deciding the application, along with instructions on where to send the comments and the deadline of the fourteen-day comment period;
4. A statement that any issue which is intended to provide a basis for an appeal shall be raised in writing during the fourteen-day comment period with sufficient specificity to enable the City to respond to the issue;
5. A statement that the application and all supporting materials may be inspected, and copied at cost, at City Hall during normal business hours;
6. The name and telephone number of the planning staff person assigned to the application or is otherwise available to answer questions about the application;
7. The notice shall state that a city-recognized neighborhood association requesting an appeal fee waiver pursuant to OCMC 17.50.290.C must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal.

Applicant's Response: Not applicable. The project is being processed under a Type III Detailed Development Plan review.

B. Notice of Public Hearing on a Type III or IV Quasi-Judicial Application. Notice for all public hearings concerning a quasi-judicial application shall conform to the requirements of this subsection. At least twenty days prior to the hearing, the City shall prepare and send, by first

class mail, notice of the hearing to all record owners of property within three hundred feet of the subject property and to any city-recognized neighborhood association whose territory includes the subject property. The City shall also publish the notice on the City website within the City at least twenty days prior to the hearing. Pursuant to OCMC 17.50.080.H, the applicant is responsible for providing an accurate and complete set of mailing labels for these property owners and for posting the subject property with the City-prepared notice in accordance with OCMC 17.50.100. Notice of the application hearing shall include the following information:
1. The time, date and location of the public hearing;
2. Street address or other easily understood location of the subject property and city-assigned planning file number;
3. A description of the applicant's proposal, along with a list of citations of the approval criteria that the City will use to evaluate the proposal;
4. A statement that any interested party may testify at the hearing or submit written comments on the proposal at or prior to the hearing and that a staff report will be prepared and made available to the public at least seven days prior to the hearing;
5. A statement that any issue which is intended to provide a basis for an appeal to the City Commission shall be raised before the close of the public record. Issues must be raised and accompanied by statements or evidence sufficient to afford the City and all parties to respond to the issue;
6. The notice shall state that a city-recognized neighborhood association requesting an appeal fee waiver pursuant to OCMC 17.50.290.C must officially approve the request through a vote of its general membership or board at a duly announced meeting prior to the filing of an appeal;
7. A statement that the application and all supporting materials and evidence submitted in support of the application may be inspected at no charge and that copies may be obtained at reasonable cost at the planning division offices during normal business hours; and
8. The name and telephone number of the planning staff person responsible for the application or is otherwise available to answer questions about the application.

Applicant's Response: Not applicable. Proposed development is being processed as a Type III Detailed Development Plan; however, a public hearing is not required pursuant to OCMC 17.65.070.

C. Notice of Public Hearing on a Legislative Proposal. At least twenty days prior to a public hearing at which a legislative proposal to amend or adopt the City's land use regulations or comprehensive plan is to be considered, the Community Development Director shall issue a public notice that conforms to the requirements of this subsection. Notice shall be sent to affected governmental entities, special districts, providers of urban services, including Tri-Met, Oregon Department of Transportation and Metro, any affected recognized neighborhood associations and any party who has requested in writing such notice. Notice shall also be published on the City website. Notice issued under this subsection shall include the following information:
1. The time, date and location of the public hearing;

2. The City-assigned planning file number and title of the proposal;
3. A description of the proposal in sufficient detail for people to determine the nature of the change being proposed;
4. A statement that any interested party may testify at the hearing or submit written comments on the proposal at or prior to the hearing; and
5. The name and telephone number of the planning staff person responsible for the proposal and who interested people may contact for further information.

Applicant's Response: Not applicable. Detailed Development Plan applications are not Legislative proposals and are not subject to the Legislative process. No changes to the city's land use regulation or comprehensive plan are proposed.

17.50.100 - Notice posting requirements.
Where this chapter requires notice of a pending or proposed permit application or hearing to be posted on the subject property, the requirements of this section shall apply.
A. City Guidance and the Applicant's Responsibility. The City shall supply all of the notices which the applicant is required to post on the subject property and shall specify the dates the notices are to be posted and the earliest date on which they may be removed. The City shall also provide a statement to be signed and returned by the applicant certifying that the notice(s) were posted at the correct time and that if there is any delay in the City's land use process caused by the applicant's failure to correctly post the subject property for the required period of time and in the correct location, the applicant agrees to extend the applicable decision-making time limit in a timely manner.
B. Number and Location. The applicant shall place the notices on each frontage of the subject property. If the property's frontage exceeds six hundred feet, the applicant shall post one copy of the notice for each six hundred feet or fraction thereof. Notices do not have to be posted adjacent to alleys or unconstructed right-of-way. Notices shall be posted within ten feet of the street and shall be visible to pedestrians and motorists. Notices shall not be posted within the public right-of-way or on trees. The applicant shall remove all signs within ten days following the event announced in the notice.

Applicant's Response: Applicable. The City shall supply and the applicant will post notices of the application.

17.50.110 Assignment of decision-makers.
The following City entity or official shall decide the following types of applications:
A. Type I Decisions. The Community Development Director shall render all Type I decisions. The Community Development Director's decision is the City's final decision on a Type I application.
B. Type II Decisions. The Community Development Director shall render the City's decision on all Type II permit applications, which are then appealable to the City Commission with notice to the Planning Commission. The City's final decision is subject to review by LUBA.

C. Type III Decisions. The Planning Commission or Historic Review Board, as applicable, shall render all Type III decisions. Such decision is appealable to the City Commission, on the record. The City Commission 's decision is the city's final decision and is subject to review by LUBA within twenty-one days of when it becomes final.
D. Type IV Decisions. The Planning Commission shall render the initial decision on all Type IV permit applications. If the Planning Commission denies the Type IV application, that decision is final unless appealed in accordance with OCMC 17.50.190. If the Planning Commission recommends approval of the application, that recommendation is forwarded to the City Commission. The City Commission decision is the City's final decision on a Type IV application and is subject to review LUBA.
E. Expedited Land Division (ELD). The Community Development Director shall render the initial decision on all ELD applications. The Community Development Director's decision is the City's final decision unless appealed in accordance to ORS 197.375 to a City-appointed hearings referee. The hearings referee decision is the City's final decision which is appealable to the Oregon Court of Appeals.

Applicant's Response: Complies are proposed. The application is subject to the appropriate level of review and assignment of decision-makers by City staff.

17.50.120 Quasi-judicial hearing process.
All public hearings pertaining to quasi-judicial permits, whether before the Planning Commission, Historic Review Board, or City Commission, shall comply with the procedures of this section. In addition, all public hearings held pursuant to this chapter shall comply with the Oregon Public Meetings Law, the applicable provisions of ORS 197.763 and any other applicable law.
A. Once the Community Development Director determines that an application for a Type III or IV decision is complete, the planning division shall schedule a hearing before the Planning Commission or Historic Review Board, as applicable. Once the Community Development Director determines that an appeal of a Type II, Type III or Type IV decision has been properly filed under OCMC 17.50.190, the planning division shall schedule a hearing pursuant to OCMC 17.50.190.
B. Notice of the Type III or IV hearing shall be issued at least twenty days prior to the hearing in accordance with OCMC 17.50.090.B.
C. Written notice of an appeal hearing shall be sent by regular mail no later than fourteen days prior to the date of the hearing to the appellant, the applicant if different from the appellant, the property owner(s) of the subject site, all persons who testified either orally or in writing before the hearing body and all persons that requested in writing to be notified.
D. The Community Development Director shall prepare a staff report on the application which lists the applicable approval criteria, describes the application and the applicant's development proposal, summarizes all relevant city department, agency and public comments, describes all other pertinent facts as they relate to the application and the approval criteria and makes a recommendation as to whether each of the approval criteria are met.

E. At the beginning of the initial public hearing at which any quasi-judicial application or appeal is reviewed, a statement describing the following shall be announced to those in attendance:
1. That the hearing will proceed in the following general order: Staff report, applicant's presentation, testimony in favor of the application, testimony in opposition to the application, rebuttal, record closes, commission deliberation and decision;
2. That all testimony and evidence submitted, orally or in writing, shall be directed toward the applicable approval criteria. If any person believes that other criteria apply in addition to those addressed in the staff report, those criteria shall be listed and discussed on the record. The meeting chairperson may reasonably limit oral presentations in length or content depending upon time constraints. Any party may submit written materials of any length while the public record is open;
3. Failure to raise an issue on the record with sufficient specificity and accompanied by statements or evidence sufficient to afford the City and all parties to respond to the issue, will preclude appeal on that issue to the land use board of appeals;
4. Any party wishing a continuance or to keep open the record shall make that request while the record is still open;
5. That the commission chair shall call for any ex-parte contacts, conflicts of interest or bias before the beginning of each hearing item; and
6. For appeal hearings, only those persons who participated either orally or in writing in the decision or review will be allowed to participate either orally or in writing on the appeal.

F. Requests for continuance and to keep open the record: The hearing may be continued to allow the submission of additional information or for deliberation without additional information. New notice of a continued hearing need not be given so long as a time-certain and location is established for the continued hearing. Similarly, hearing may be closed but the record kept open for the submission of additional written material or other documents and exhibits. The chairperson may limit the factual and legal issues that may be addressed in any continued hearing or open record period.

Applicant's Response: Not applicable. Proposed development is being processed as a Type III Detailed Development Plan; however, a public hearing is not required pursuant to OCMC 17.65.070.

17.50.130 Conditions of approval and notice of decision.
A. All City decision-makers have the authority to impose reasonable conditions of approval designed to ensure that all applicable approval standards, including standards set out in city overlay districts, the City's master plans, and City public works design standards, are, or can be met.
B. Failure to comply with any condition of approval shall be grounds for revocation of the permit(s) and grounds for instituting code enforcement proceedings pursuant to OCMC 1.20 of this code and ORS 30.315.

C. Notice of Decision. The City shall send, by first class mail, a notice of all decisions rendered under this chapter to all persons with standing, i.e., the applicant, all others who participated either orally or in writing before the close of the public record and those who specifically requested notice of the decision. The notice of decision shall include the following information:
1. The file number and date of decision;
2. The name of the applicant, owner and appellant (if different);
3. The street address or other easily understood location of the subject property;
4. A brief summary of the decision, and if an approval, a description of the permit approved;
5. A statement that the decision is final unless appealed and description of the requirements for perfecting an appeal;
6. The contact person, address and a telephone number whereby a copy of the final decision may be inspected or copies obtained.

D. Modification of Conditions. Any request to modify a condition of permit approval is to be considered either minor modification or a major modification, unless otherwise authorized. A minor modification shall be processed as a Type I. A major modification shall be processed in the same manner and shall be subject to the same standards as was the original application. However, the decision-maker may at their sole discretion, consider a modification request and limit its review of the approval criteria to those issues or aspects of the application that are proposed to be changed from what was originally approved.

Applicant's Response: Applicable.

17.50.140 – Financial guarantees.
When conditions of permit approval require a permitee to construct certain public improvements, the City shall require the permitee to provide financial guarantee for construction of the certain public improvements. Financial guarantees shall be governed by this section.
A. Form of Guarantee. Guarantees shall be in a form approved by the City attorney. Approvable forms of guarantee include irrevocable standby letters of credit to the benefit of the City issued by a recognized lending institution, certified checks, dedicated bank accounts or allocations of construction loans held in reserve by the lending institution for the benefit of the City. The form of guarantee shall be specified by the City engineer and, prior to execution and acceptance by the City shall be reviewed and approved by the City attorney. The guarantee shall be filed with the City engineer.
B. Performance Guarantees. A permittee shall be required to provide a performance guarantee as follows.
1. After Final Approved Design by the City. The City may request the permittee to submit a performance guarantee for construction of certain public improvements. A permitee may request the option of submitting a performance guarantee when prepared for temporary/final occupancy. The guarantee shall be one hundred twenty percent of the estimated cost of

constructing the public improvements as submitted by the permittee's engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the City engineer.
2. Before Complete Design Approval and Established Engineered Cost Estimate. The City may request a permittee to submit a performance guarantee for construction of certain public improvements. A permitee may request the option of submitting a performance guarantee before public improvements are designed and completed. The guarantee shall be one hundred fifty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer and approved by the City engineer. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the City engineer.

C. Release of Guarantee. The guarantee shall remain in effect until the improvement is actually constructed and accepted by the City. Once the City has inspected and accepted the improvement, the City shall release the guarantee to the permittee. If the improvement is not completed to the City's satisfaction within the time limits specified in the permit approval, the City engineer may, at their discretion, draw upon the guarantee and use the proceeds to construct or complete construction of the improvement and for any related administrative and legal costs incurred by the City in completing the construction, including any costs incurred in attempting to have the permittee complete the improvement. Once constructed and approved by the City, any remaining funds shall be refunded to the permittee. The City shall not allow a permittee to defer construction of improvements by using a performance guarantee, unless the permittee agrees to construct those improvements upon written notification by the City, or at some other mutually agreed-to time. If the permittee fails to commence construction of the required improvements within six months of being instructed to do so, the City may, without further notice, undertake the construction of the improvements and draw upon the permittee's performance guarantee to pay those costs.

D. Fee-in-lieu. When conditions of approval or the City engineer allows a permittee to provide a fee-in-lieu of actual construction of public improvements, the fee shall be one hundred fifty percent of the estimated cost of constructing the public improvements as submitted by the permittee's engineer and approved by the City engineer. The percentage required is to ensure adequate funds for the future work involved in design, bid, contracting, and construction management and contract closeout. The engineer's estimated costs shall be supported by a verified engineering estimate and approved by the City engineer. The fee-in-lieu shall be submitted as cash, certified check, or other negotiable instrument acceptable by the City attorney.

Applicant's Response: Not applicable. Public improvements are not proposed or required by this application.

17.50.141 – Public improvements – Warranty

All public improvements not constructed by the City, shall be maintained and under warranty provided by the property owner or developer constructing the facilities until the City accepts the improvements at the end of the warranty period. The warranty is to be used at the discretion of the City engineer or designee to correct deficiencies in materials or maintenance of constructed public infrastructure, or to address any failure of engineering design.
A. Duration of Warranty. Responsibility for maintenance of public improvements shall remain with the property owner or developer for a warranty period of two years.
B. Financial Guarantee. Approvable forms of guarantee include irrevocable standby letters of credit to the benefit of the City issued by a recognized lending institution, bond, certified checks, dedicated bank accounts or allocations of construction loans held in reserve by the lending institution for the benefit of the City. The form of guarantee shall be specified by the City engineer and, prior to execution and acceptance by the City shall be reviewed and approved by the City attorney. The guarantee shall be filed with the City engineer.
C. Amount of Warranty. The amount of the warranty shall be equal to fifteen percent of the estimated cost of construction of all public improvements (including those improvements that will become owned and maintained by the City at the end of the two-year maintenance period), and shall be supported by a verified engineering estimate and approved by the City engineer. Upon expiration of the warranty period and acceptance by the City as described below, the City shall be responsible for maintenance of those improvements.
D. Transfer of Maintenance. The City will perform an inspection of all public improvements approximately forty-five days before the two-year warranty period expires. The public improvements shall be found to be in a clean, functional condition by the City engineer before acceptance of maintenance responsibility by the City. Transfer of maintenance of public improvements shall occur when the City accepts the improvements at the end of the two-year warranty period.

Applicant's Response: Not applicable. Public improvements are not proposed or required by this application.

CHAPTER 17.52 OFF-STREET PARKING AND LOADING

17.52.010 - Applicability.
The construction of a new structure or parking lot, or alterations to the size or use of an existing structure, parking lot or property use shall require site plan review approval and compliance with this chapter. This chapter does not apply to single-family attached, detached residential dwellings, duplexes, townhouses and cottage clusters.

Applicant's Response: Not applicable. No new parking structures or lots or alterations to parking lots are proposed; therefore this chapter in its entirety is not applicable. The applicant assumes that parking demands will be met within the existing parking areas on the parcel without the need for additional parking.

17.52.015 - Planning commission adjustment of parking standards.

A. Purpose. The purpose of permitting a planning commission adjustment to parking standards is to provide for flexibility in modifying parking standards in all zoning districts, without permitting an adjustment that would adversely impact the surrounding or planned neighborhood. Adjustments provide flexibility to those uses which may be extraordinary, unique, or provide greater flexibility for areas that can accommodate a denser development pattern based on existing infrastructure and ability to access the site by means of walking, biking or transit. An adjustment to a minimum parking standard may be approved based on a determination by the planning commission that the adjustment is consistent with the purpose of this code, and the approval criteria can be met.

B. Procedure. A request for a planning commission parking adjustment shall be initiated by a property owner or authorized agent by filing a land use application. The application shall be accompanied by a site plan, drawn to scale, showing the dimensions and arrangement of the proposed development and parking plan, the extent of the adjustment requested along with findings for each applicable approval criteria. A request for a parking adjustment shall be processed as a Type III application as set forth in Chapter 17.50.

C. Approval criteria for the adjustment are as follows:

1. Documentation: The applicant shall document that the individual project will require an amount of parking that is different from that required after all applicable reductions have been taken.

Applicant's Response: Not applicable. Applicant is not requesting an adjustment of parking standards. This section in its entirety is not applicable.

17.52.020 - Number of automobile spaces required.

A. The number of parking spaces shall comply with the minimum and maximum standards listed in Table 17.52.020. The parking requirements are based on spaces per one thousand square feet net leasable area unless otherwise stated.

Table 17.52.020

LAND USE	***PARKING REQUIREMENTS***	
	MINIMUM	*MAXIMUM*
Multi-family Residential	*1 per unit*	*2.5 per unit*
Triplex and quadplex	*2*	*4*
Hotel, Motel	*1 per guest room*	*1.25 per guest room*
Correctional Institution	*1 per 7 beds*	*1 per 5 beds*
Senior housing, including congregate care, residential care and assisted living facilities; nursing homes and other types of group homes	*1 per 7 beds*	*1 per 5 beds*

Hospital	*2*	*4*
Preschool Nursery/Kindergarten	*2*	*3*
Elementary/Middle School	*1 per classroom*	*1 per classroom + 1 per administrative employee + 0.25 per seat in auditorium/assembly room/stadium*
High School, College, Commercial School for Adults	*0.20 per # staff and students*	*0.30 per # staff and students*
Auditorium, Meeting Room, Stadium, Religious Assembly Building, movie theater,	*.25 per seat*	*0.5 per seat*
Retail Store, Shopping Center, Restaurants	*4.10*	*5*
Office	*2.70*	*3.33*
Medical or Dental Clinic	*2.70*	*3.33*
Sports Club, Recreation Facilities	*Case Specific*	*5.40*
Storage Warehouse, Freight Terminal	*0.30*	*0.40*
Manufacturing, Wholesale Establishment	*1.60*	*1.67*
Light Industrial, Industrial Park	*1.3*	*1.60*

Multiple Uses. In the event several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of the several uses computed separately.

Applicant's Response: Complies with condition. Peak use will be once a year during graduation, where an anticipated maximum of 3,500 people will be on site. A minimum of 875 off-street parking stalls are required to serve the stadium. 995 stalls are onsite near the development site and will serve the facility. Several uses occupy the subject property; however, the applicant does not anticipate the peak use of the facility will coincide with other athletic uses. There is additional off-street parking at the southwest of campus, near the transit center, that can serve multiple uses if needed.

2. Requirements for types of buildings and uses not specifically listed herein shall be determined by the Community Development Director, based upon the requirements of comparable uses listed.

Applicant's Response: Complies as proposed. Community Development Director to determine additional requirements as needed to comply with the section.

3. Where calculation in accordance with the above list results in a fractional space, any fraction less than one-half shall be disregarded and any fraction of one-half or more shall require one space.

Applicant's Response: Complies as proposed. Numbers have been rounded down or up in accordance with this section.

4. Fleet vehicle parking shall be accommodated within the maximum parking ratio, except that in GI, CI, and MUE zones, fleet vehicle parking may be included in a parking lot in addition to the maximum number of permitted parking spaces.

Applicant's Response: Not applicable. No fleet vehicle parking is proposed or needed on site.

5. A change in use within an existing habitable building located in the MUD Design District or the Willamette Falls Downtown District is exempt from additional parking requirements. Additions to an existing building and new construction are required to meet the minimum parking requirements for the areas as specified in Table 17.52.020 for the increased square footage.

Applicant's Response: Not applicable. The subject site is not in the MUD Design District or Willamette Falls Downtown District.

B. Parking requirements can be met either onsite, or offsite by meeting one or multiple of the following conditions:
1. Parking may be located on the same site as the associated use which it is supporting.

Applicant's Response: Not applicable. Parking requirements are mixed use.

2. Mixed Uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for the off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (e.g. the uses operate on different days or at different times of the day). In that case, the total requirements shall be reduced accordingly, up to a maximum reduction of fifty percent, as determined by the Community Development Director.

Applicant's Response: Complies with condition. Peak demand of the athletic facility is less than peak demand of the college and stadium use is unlikely to coincide with other uses as graduation and sporting events are typically held outside of school operating

hours. There is additional off-street parking at the southwest of campus at the transit center, allowing for access to the site by other modes of transportation.

3. Shared Parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlay (e.g., uses primarily of a daytime versus nighttime nature), that the shared parking facility is within one thousand feet of the potential uses, and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument authorizing the joint use.

Applicant's Response: Not applicable. All site parking and uses are contained in one parcel.

4. On-Street Parking. On-street parking may be counted toward the minimum standards when it is on the street face abutting the subject land use. An on-street parking space shall not obstruct a required clear vision area and it shall not violate any law or street standard. On-street parking for commercial uses shall conform to the following standards:
a. Dimensions. The following constitutes one on-street parking space:
i. Parallel parking: twenty-two feet of uninterrupted and available curb;
ii. Forty-five and/or sixty-degree diagonal parking: Fifteen feet of curb;
iii. Ninety-degree (perpendicular) parking: Twelve feet of curb.
iv. Public Use Required for Credit. On-street parking spaces counted toward meeting the parking requirements of a specific use may not be used exclusively by that use but shall be available for general public use at all times. Signs or other actions that limit general public use of on-street spaces are prohibited.

Applicant's Response: Not applicable. While there is on-street parking adjacent to the site, it is on private streets and is not needed to meet parking requirements.

C. Reduction of the Number of the Minimum Automobile Spaces Required. Any combination of the reductions below is permitted unless otherwise noted.
1. Downtown Parking Overlay. The minimum required number of parking stalls is reduced within the downtown parking overlay by fifty percent.
2. Transit Oriented Development. For projects not located within the downtown parking overlay district, the minimum required number of parking stalls is reduced up to twenty-five percent when:
a. In a commercial center (sixty thousand square feet or greater of retail or office use measured cumulatively within a five hundred foot radius);

b. When adjacent to multi-family development with over eighty units; or

c. Within one thousand three hundred twenty feet of an existing or planned public transit street and within one thousand three hundred twenty feet of the opposite use (commercial center or multi-family development with over eighty units).
3. Tree Preservation. The Community Development Director may grant an adjustment to any standard of this requirement provided that the adjustment preserves a designated heritage tree or grove so that the reduction in the amount of required pavement can help preserve existing healthy trees in an undisturbed, natural condition.
4. Transportation Demand Management. The Community Development Director shall reduce the required number of parking stalls up to twenty-five percent when a parking-traffic study prepared by a traffic engineer demonstrates alternative modes of transportation, including transit, bicycles, and walking, and/or special characteristics of the customer, client, employee or resident population will reduce expected vehicle use and parking space demand for this development, as compared to standard Institute of Transportation Engineers vehicle trip generation rates and further that the transportation demand management program promotes or achieves parking utilization lower than minimum city parking requirements.
A transportation demand management (TDM) program shall be developed to include strategies for reducing vehicle use and parking demand generated by the development and will be measured annually. If, at the annual assessment, the City determines the plan is not successful, the plan may be revised. If the City determines that no good-faith effort has been made to implement the plan, the City may take enforcement actions.

Applicant's Response: Not applicable.

5. The minimum required number of stalls may be reduced by up to ten percent when the subject property is adjacent to an existing or planned fixed public transit route or within one thousand feet of an existing or planned transit stop.

Applicant's Response: Not applicable. Proposed development is within 1,000 feet of the Clackamas Community College shuttle, but is not on a public transit route, and no parking reduction is requested.

17.52.030 - Standards for automobile parking.
A. Access. Ingress and egress locations on public thoroughfares shall be located in the interests of public traffic safety and meet requirements of OCMC 16.12.035. Groups of more than four parking spaces shall be so located and served by driveways so that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.

Applicant's Response: Not applicable. No parking is proposed as part of this proposal. This section in its entirety is not applicable.

B. Surfacing. Required off-street parking spaces and access aisles shall have paved surfaces adequately maintained. The use of pervious asphalt/concrete and alternative designs that

reduce storm water runoff and improve water quality pursuant to the City's stormwater and low impact development design standards are encouraged.

Applicant's Response: Not applicable. No parking is proposed as part of this proposal. This section in its entirety is not applicable.

C. Drainage. Drainage shall be designed in accordance with the requirements of OCMC 13.12 and the City public works stormwater and grading design standards.

Applicant's Response: Complies as proposed. The proposed systems are designed to meet the requirements of the referenced standard. Refer to the Storm Drainage Plans (Exhibit B, sheet series C2.00) and Stormwater Management Report in Exhibit E.

17.52.040 - Bicycle parking standards.

A. Purpose-Applicability. To encourage bicycle transportation to help reduce principal reliance on the automobile, and to ensure bicycle safety and security, bicycle parking shall be provided in conjunction with all uses other than exclusively residential use with less than five dwellings on-site (excluding cottage clusters).
B. Number of Bicycle Spaces Required. For any use not specifically mentioned in Table A, the bicycle parking requirements shall be the same as the use which, as determined by the Community Development Director, is most similar to the use not specifically mentioned. Calculation of the number of bicycle parking spaces required shall be determined in the manner established in OCMC 17.52.020 for determining automobile parking space requirements. Modifications to bicycle parking requirements may be made through the site plan and design, conditional use, or master plan review process.

*TABLE A Required Bicycle Parking Spaces**
Where two options for a requirement are provided, the option resulting in more bicycle parking applies. Where a calculation results in a fraction, the result is rounded up to the nearest whole number.

USE	***MINIMUM BICYCLE PARKING***	***MINIMUM BICYCLE PARKING - COVERED - The following percentage of bicycle parking is required to be covered***
Multi-family (five or more units)	*1 per 10 units (min of 2)*	*50% (min of 1)*
Correctional institution	*1 per 15 auto spaces (min of 2)*	*30% (min of 1)*
Nursing home or care facility	*1 per 30 auto spaces (min of 2)*	*30% (min of 1)*

Hospital	*1 per 20 auto spaces (min of 2)*	*30% (min of 1)*
Park-and-ride lot	*1 per 5 auto spaces (min of 2)*	*50% (min of 1)*
Transit center	*1 per 5 auto spaces (min of 2)*	*50% (min of 1)*
Parks and open space	*1 per 10 auto spaces (min of 2)*	*0%*
Public parking lots	*1 per 10 auto spaces (min of 2)*	*50% (min of 1)*
Automobile parking structures	*1 per 10 auto spaces (min of 4)*	*80% (min of 2)*
Religious institutions, movie theater, auditorium or meeting room	*1 per 10 auto spaces (min of 2)*	*30% (min of 1)*
Libraries, museums	*1 per 5 auto spaces (min of 2)*	*30% (min of 1)*
Preschool, nursery, kindergarten	*2 per classroom (min of 2)*	*50% (min of 1)*
Elementary	*4 per classroom (min of 2)*	*50% (min of 1)*
Junior high and High school	*2 per classroom (min of 2)*	*50% (min of 2)*
College, business/commercial schools	*2 per classroom (min of 2)*	*50% (min of 1)*
Swimming pools, gymnasiums, ball courts	*1 per 10 auto spaces (min of 2)*	*30% (min of 1)*
Retail stores and shopping centers	*1 per 20 auto spaces (min of 2)*	*50% (min of 2)*
Retail stores handling exclusively bulky merchandise such as automobile, boat or trailer sales or rental	*1 per 40 auto spaces (min of 2)*	*0%*
Bank, office	*1 per 20 auto spaces (min of 2)*	*50% (min of 1)*
Medical and dental clinic	*1 per 20 auto spaces (min of 2)*	*50% (min of 1)*
Eating and drinking establishment	*1 per 20 auto spaces (min of 2)*	*0%*
Gasoline service station	*1 per 10 auto spaces (min of 2)*	*0%*

** Covered bicycle parking is not required for developments with two or fewer parking stalls.*

Applicant's Response: Complies with condition. Adequate bike parking is provided for the site throughout campus. Peak use of the athletic facility is less than campus peak use should not coincide with other site uses. There are at least 113 know bike parking stalls on campus. Therefore, this section in its entirety is not applicable.

17.52.060 - Parking lot landscaping.

Purpose. The purpose of this code section includes the following:
1. To enhance and soften the appearance of parking lots;
2. To limit the visual impact of parking lots from sidewalks, streets and particularly from residential areas;
3. To shade and cool parking areas;
4. To reduce air and water pollution;
5. To reduce stormwater impacts and improve water quality; and
6. To establish parking lots that are more inviting to pedestrians and bicyclists.
A. Applicability. Unless otherwise specified, construction of new parking lots and alterations of existing parking lots shall comply with parking lot landscaping standards. Parking lot landscaping requirements within this section do not apply to parking structures or parking garages, except landscaping as required in OCMC 17.62.

Applicant's Response: Not applicable. No new parking areas or parking lots are proposed. All parking that serves the subject site already exists on campus and is outside of the proposed scope of work. Therefore, this section in its entirety is not applicable.
The owner, tenant and their agent, if any, shall be jointly and severally responsible for the maintenance of the site including but not limited to the off-street parking and loading spaces, bicycle parking and all landscaping which shall be maintained in good condition so as to present a healthy, neat and orderly appearance and shall be kept free from refuse and debris. All plant growth in interior landscaped areas shall be controlled by pruning, trimming, or otherwise so that:
A. It will not interfere with the maintenance or repair of any public utility;
B. It will not restrict pedestrian or vehicular access; and
C. It will not constitute a traffic hazard due to reduced visibility.

Applicant's Response: Complies as proposed. The owner is responsible for maintaining the site. Interior landscape areas shall be maintained as to not interfere with public utilities, pedestrian and vehicular access, and visibility.

17.52.090 - Loading areas.

A. Purpose. The purpose of this section is to provide adequate loading areas for commercial, office, retail and industrial uses that do not interfere with the operation of adjacent streets.

Applicant's Response: Not applicable. A loading area for the track and filed facility is proposed, but will not be used by vehicles with a 40' or longer wheelbase at a frequency of one or more vehicles per week.

B. Applicability. OCMC 17.52.090 applies to uses that are expected to have service or delivery truck visits with a forty-foot or longer wheelbase, at a frequency of one or more vehicles per week. The City Engineer and decision maker shall determine through site plan and design review the number, size and location of required loading areas, if any.

Applicant's Response: Not applicable. A loading area for the track and field facility is proposed, but will not be used by vehicles with a 40' or longer wheelbase at a frequency of one or more vehicles per week. See site plan sheets L1.00 series in Exhibit B.

C. Standards.
1. The off-street loading space shall be large enough to accommodate the largest vehicle that is expected to serve the use without obstructing vehicles or pedestrian traffic on adjacent streets and driveways. Applicants are advised to provide complete and accurate information about the potential need for loading spaces because the City Engineer or decision maker may restrict the use of other public right-of-way to ensure efficient loading areas and reduce interference with other uses.

Applicant's Response: Applicable. The largest expected vehicle is a 40' box truck with a wheelbase of 25' in length.

2. Where parking areas are prohibited between a building and the street, loading areas or drive isles are also prohibited.

Applicant's Response: Applicable.

3. The City Engineer and decision maker, through site plan and design review, may approve a loading area adjacent to or within a street right-of-way when all of the following loading and unloading operations conditions are met:
a. Short in duration (i.e., less than one hour);
b. Infrequent (less than three operations daily between 5:00 a.m. and 12:00 a.m. or all operations between 12:00 a.m. and 5:00 a.m. at a location that is not adjacent to a residential zone);
c. Does not obstruct traffic during peak traffic hours;
d. Does not interfere with emergency response services; and
e. Is acceptable to the applicable roadway authority.

Applicant's Response: Complies as proposed. The loading area is to be used infrequently, does not obstruct traffic, and does not interfere with emergency response.

CHAPTER 17.54 SUPPLEMENTAL ZONING REGULATIONS AND EXCEPTIONS

17.54.010 - Accessory structures and uses.

Accessory structures and uses shall comply with all requirements for the principal use except where specifically modified by this title and shall comply with the following standards:
A. Signs. Signs shall be permitted as provided in Chapter 15.28.
B. Residential Accessory Structures, Not Including Accessory Dwellings Units. The section applies to all accessory structures within the R-10, R-8, R-6, R-5 and R-3.5 zoning districts and accessory structures on properties with a residential use with less than five units within a zoning designation not listed above.
1. Accessory Structures with a Footprint Less than Two Hundred Square Feet:
a. Shall be located behind the front line of the primary structure;
b. Shall comply with the dimensional standards of the zoning designation including height, lot coverage and setbacks unless modified pursuant to subsection c herein; and
c. Side and rear setbacks may be reduced to not less than three feet for the accessory structure and its projections if the height does not exceed seventeen feet as defined in OCMC 17.04.550.

Applicant's Response: Not applicable. Proposed accessory structures are not regulated under this code. Signs compatible with the site use are proposed but are not regulated under Chapter 15.28 because they are not visible from adjacent properties or right-of-ways, and no regulations are provided for signs in the Institutional zone. Proposed accessory structures are not residential and are in the Institutional zone. This section in its entirety is not applicable.

17.54.020 - Projections from buildings.

Residential building projections that are cantilevered so that they do not touch the ground (such as cornices, eaves, bay windows, fireplaces, overhangs, canopies, sunshades, gutters, chimneys, flues, sills or similar architectural features) may project into the required setbacks up to twenty-four inches. The projection may be limited by easement restrictions, etc.

Applicant's Response: Not applicable. Proposed buildings are not residential structures.

17.54.030 - Setback exceptions.

A. Through lots having a frontage on two streets shall provide the required front yard on each street. The required rear yard setback shall not apply.
B. Structures within the right-of-way are exempt from setback standards.
C. Uncovered decks or porches with a height of less than thirty inches from grade are exempt from setback standards.

Applicant's Response: Not applicable.

17.54.100 Fences, Hedges, Walls, and Retaining Walls.

A. A fence, hedge, wall, retaining wall, or combination thereof may be located on real property, not within the right-of-way, subject to all of the following:
1. A fence, hedge, wall, retaining wall, or combination thereof located in front of a building may be up to 3.5-feet in total height as measured from the finished grade at any point on the fence.
2. A fence, hedge, wall, located next to, or behind the forward most building, or within more than forty feet of the right-of-way, whichever is less may be up to:
a. Six feet in total height for residential properties with less than five units as measured from the finished grade at any point on the fence; or
b. Eight feet in total height for all other uses as measured from the finished grade at any point on the fence.
3. A retaining wall or combination of a fence, hedge, wall located next to and behind the forward most building, or within more than forty feet of the right-of-way, whichever is less, may be up to (as measured from the finished grade) 8.5 feet in height from the finished grade.
4. Fences, hedges, and/or walls located within two feet above a retaining wall, as measured on a horizontal plane, shall be measured together for the purposes of determining height.
5. Property owners shall ensure compliance with the Traffic Sight Obstruction requirements in Chapter 10.32 of the Oregon City Municipal Code.
6. Retaining walls completely below the elevation of the right-of-way may be up to six feet in height.
7. Minimum fall protection required by the Building Official, such as railings, is not included in the height of a retaining wall but must comply with the fence height requirements.

Applicant's Response: Complies with condition. Proposed chain link fences are between 4' and 8' tall, maximum, and comply with the standards. Fences are compatible with the athletic facility use and are located behind frontage buildings and more than 850' away from the right-of-way. A modification to the allowable retaining wall height is requested, as a 12' retaining wall is proposed. The retaining wall will be obstructed from sight by a bleacher structure. See section 17.65.070, and Exhibit G.

B. When no other practicable alternative exists, the City Engineer may permit a fence, hedge, wall, retaining wall, or combination thereof to be located within the right-of-way subject to all of the following:
1. A Revocable Permanent Obstruction in the Right of Way permit is granted per OCMC 12.04.120;
2. Retaining walls, fences, or hedges comply with OCMC 17.54.100.A, unless determined to be impracticable by the City Engineer.
3. The abutting property owner shall ensure compliance with the Traffic Sight Obstruction requirements in Chapter 10.32 of the Oregon City Municipal Code.

Applicant's Response: Not applicable. No fence, hedge, wall, retaining wall, or combination is proposed to be in the right-of-way.

C. It is unlawful for any person to erect any electric fence or any fence constructed in whole or in part of barbed wire or to use barbed wire, except as erected in connection with security installations at a minimum height of six feet, providing further that prior written approval has been granted by the City Manager.

Applicant's Response: Not appliable. Barbed wire or electrical fencing will not be used on site.

17.54.110 - Marijuana businesses.

For the purpose of zoning regulation pursuant to this section, recreational and medical marijuana facilities are considered the same by Oregon City.
A. Applicability. These standards apply to all marijuana businesses in Oregon City.
B. Restrictions on Location—Zoning.
1. Please refer to individual zone districts elsewhere in this title to determine whether marijuana businesses including production, laboratories, processing, wholesale, and retail use are permitted, prohibited or otherwise regulated;
2. Marijuana businesses are prohibited abutting any "R" residentially zoned area, except that this provision shall not apply where the subject property abuts a road that has a freeway, expressway, major arterial, minor arterial, or collector functional classification as shown on Figure 8, Multi-Modal Street System, of the Oregon City Transportation System Plan and;
3. Home Occupation. A marijuana business may not be operated as a home occupation; and
4. The sale or distribution of marijuana is prohibited for mobile vendors and at all special events and outdoor markets.

Applicant's Response: Not applicable. This application proposes no such use. This section in its entirety is not applicable.

17.54.115 - Mobile Food Units

A. Applicability. The following provisions apply to mobile food units not located within a building. The provisions do not apply to indoor mobile food units or mobile food units allowed pursuant to a special event permit issued by the City.

Applicant's Response: Not applicable. The proposal does not involve mobile food units. Any future mobile food units will obtain a special event permit to operate on site. Therefore, this section in its entirety is not applicable.

CHAPTER 17.62 – SITE PLAN AND DESIGN REVIEW

17.62.015 - Modifications that will better meet design review requirements.

The review body shall consider modification of certain site related development standards of this chapter specified below. These modifications may be approved as part of a Type II design review process.
A. Applicability.
This process shall apply to modifications to:
a. Landscaping in OCMC 17.62.050.A;
b. Vehicular connections to adjoining properties in OCMC 17.62.050.B.2;
c. On-site pedestrian circulation in OCMC 17.62.050.C;
d. Onsite utility location OCMC 17.62.050.G;
e. Building location in OCMC 17.62.055.D;
f. Building details in OCMC 17.62.055.I;
g. Windows in OCMC 17.62.055.J;
h. Parking lot landscaping in OCMC 17.52.060.
2. Modifications that are denied through Type II design review may be requested as a variance through the variance process pursuant to OCMC 17.60.020 or master plan adjustment pursuant to OCMC 17.65.070 as applicable.
3. Rather than a modification, applicants may choose to apply for a variance through the variance process pursuant to OCMC 17.60.020 or master plan adjustment pursuant to OCMC 17.65.070 as applicable.

Applicant's Response: Complies as proposed. Variances are requested through OCMC 17.65.070.

B. The review body may approve requested modifications if it finds that the applicant has shown that the following approval criteria are met:
1. The modification will result in a development that better meets the applicable design guidelines; and

Applicant's Response: Refer to OCMC 17.65.070 code response.

2. The modification meets the intent of the standard. On balance, the proposal will be consistent with the purpose of the standard for which a modification is requested.

Applicant's Response: Refer to OCMC 17.65.070 code response.

17.62.030 - When required.
Site plan and design review shall be required for all development of real property in all zones except the low and medium density residential districts, unless otherwise provided for by this title or as a condition of approval of a permit. Site plan and design review shall also apply to all conditional uses, cluster housing developments, multi-family uses, manufactured home parks, and non-residential uses in all zones. Site Plan and Design Review does not apply to activities occurring within the right-of-way except for communication facilities pursuant to OCMC 17.80.

Site plan and design review is required for a change in use between the uses in Table 17.62.030:

Table 17.62.030

Existing Use	***Proposed Use***
Residential	*Nonresidential use, including but not limited to: commercial, office, industrial, retail, or institutional*
Single-family or duplex	*3 or more dwellings*

Site plan and design review shall not alter the type and category of uses permitted in the underlying zoning districts.

Only the standards of OCMC 17.62.035 apply to duplex, triplex, quadplex, cottage cluster, townhouse, single family detached residential unit, live/work dwelling and accessory dwelling unit Type I applications

Applicant's Response: Applicable. Required for development in Institutional zones.

17.62.035 - Minor site plan and design review.

This section provides for a minor site plan and design review process. Minor site plan review is a Type I or Type II decision, as described in OCMC 17.62.035.A, subject to administrative proceedings described in OCMC 17.50 and may be utilized as the appropriate review process only when authorized by the Community Development Director. The purpose of this type of review is to expedite design review standards for uses and activities that require only a minimal amount of review, typical of minor modifications and/or changes to existing uses or buildings.
A. Type I Minor Site Plan and Design Review.
1. Applicability. Type I applications involve no discretion and are typically processed concurrently with a building permit application. The Type I process is not applicable for:
a. Any activity which is included with or initiates actions that require Type II—IV review.
b. Any increase in square footage of a conditional or nonconforming use (excluding nonconforming structures).
c. Any proposal in which nonconforming upgrades are required under OCMC 17.58.
d. Any proposal in which modifications are proposed under OCMC 17.62.015.

Applicant's Response: Not applicable. The proposed development is subject to Type II and III Detailed Development Plan review and modifications as proposed. This section is not applicable.

2. The following projects may be processed as a Type I application:
a. Addition of up to two hundred square feet to a commercial, institutional, or multi-family structure in which no increases are required to off-street parking. This includes a new ancillary structure, addition to an existing structure, or new interior space (excluding new drive thru).

Increases of more than two hundred square feet in a twelve-month period shall be processed as Type II.
b. Addition of up to one thousand square feet to an industrial use in which no increases are required to off-street parking. This includes a new ancillary structure, addition to an existing structure, or new interior space (excluding ancillary retail and office). Increases of more than one thousand square feet in a twelve-month period shall be processed as Type II.
c. Temporary structures, excluding mobile vendors.
d. Removal, replacement or addition of awnings, or architectural projections to existing structures.
e. Addition, modification, or relocation of refuse enclosure.
f. Changes to amount, location, or design of bicycle parking.
g. Installation of mechanical equipment.
h. Repaving of previously approved parking lots with no change to striping.
i. Replacement of exterior building materials.
j. Addition of windows and doors, relocation of windows and doors in which transparency levels remain unchanged, or removal of windows and doors provided minimum transparency requirements are still met.
k. Addition or alteration of parapets or rooflines.
l. Modification of building entrances.
m. Addition to or alteration of a legal nonconforming single- or two-family dwelling.
n. Change to parking lot circulation or layout, excluding driveway modifications.
o. Removal or relocation of vehicle parking stalls provided total parking remains between approved minimum and maximum with no new reductions other than through the downtown parking district.
p. Adoption of shared parking agreements.
q. Changes to landscaping that do not require stormwater quality and quantity treatment under OCMC 13.12.
r. New or changes to existing pedestrian accessways, walkways or plazas.
s. Installation of or alterations to ADA accessibility site elements.
t. Modification or installation of a fence, hedge, or wall, or addition of a fence, hedge or wall.
u. Addition of or alterations to outdoor lighting.
v. Demolition of any structure or portion of a structure.
w. Tree removal.
x. Type I master plan amendments under OCMC 17.65.080.
y. Mobile food units in one location for five hours or less as identified in OCMC 17.54.115.
z. Duplex, triplex, quadplex, cottage cluster, townhouse, single-family detached residential unit, live/work dwelling, and accessory dwelling unit.
aa. Placement of a single manufactured home within an existing space or lot in a manufactured home park.

3. Submittal Requirements. A Type I application shall include:
a. A narrative describing the project.

b. Site plan drawings showing existing conditions/uses and proposed conditions/uses.
c. Architectural drawings, including building elevations and envelopes, if architectural work is proposed.
d. A completed application form.
e. Any other information determined necessary by the Community Development Director.

Applicant's Response: Not applicable. Proposed development is subject to Type II and III Detailed Development Plan review and modifications as proposed. This section is not applicable.

B. Type II Minor Site Plan and Design Review.
1. Type II minor site plan and design review applies to the following uses and activities unless those uses and activities qualify for Type I review per OCMC 17.62.035.A:
a. Modification of an office, commercial, industrial, institutional, public or multi-family structure that does not increase the interior usable space (for example covered walkways or entryways, addition of unoccupied features such as clock tower, etc.).
b. Modification to parking lot layout and landscaping, or the addition of up to five parking spaces.
c. A maximum addition of up to one thousand square feet to a commercial, office, institutional, public, multi-family, or industrial building provided that the addition is not more than thirty-five percent of the original building square footage.
d. Mobile food units in OCMC 17.54.115.
e. Other land uses and activities may be added if the Community Development Director makes written findings that the activity/use will not increase off-site impacts and is consistent with the type and/or scale of activities/uses listed above.

2. Application. The application for the Type II minor site plan and design review shall contain the following elements:
a. The submittal requirements of OCMC 17.50.
b. A narrative explaining all aspects of the proposal in detail and addressing each of the applicable criteria listed in OCMC 17.62.
c. Site plan drawings showing existing conditions/uses and proposed conditions/uses.
d. Architectural drawings, including building elevations and envelopes, if architectural work is proposed.
e. Additional submittal material may be required by the Community Development Director on a case-by-case basis.

Applicant's Response: Not applicable. Proposed development is subject to Type II and III Detailed Development Plan review and modifications as proposed. This section is not applicable.

17.62.040 – Items required.

A complete application for site plan and design review shall be submitted. Except as otherwise in subsection I of this section, the application shall include the following:
A. A site plan or plans, to scale, containing the following:
1. Vicinity information showing streets and access points, pedestrian and bicycle pathways, transit stops and utility locations;
2. The site size, dimensions, and zoning, including dimensions and gross area of each lot or parcel and tax lot and assessor map designations for the proposed site and immediately adjoining properties;
3. Contour lines at two-foot contour intervals for grades zero to ten percent, and five-foot intervals for grades over ten percent;
4. The location of natural hazard areas on and within one hundred feet of the boundaries of the site, including:
a. Areas indicated on floodplain maps as being within the one hundred-year floodplain,
b. Unstable slopes, as defined in OCMC 17.44.020,
c. Areas identified on the seismic conditions map in the comprehensive plan as subject to earthquake and seismic conditions;

5. The location of natural resource areas on and within one hundred feet of the boundaries of the site, including fish and wildlife habitat, existing trees (six inches or greater in caliper measured four feet above ground level), wetlands, streams, natural areas, wooded areas, areas of significant trees or vegetation, and areas designated as being within the natural resources overlay district;
6. The location of inventoried historic or cultural resources on and within one hundred feet of the boundaries of the site;
7. The location, dimensions, and setback distances of all existing permanent structures, improvements and utilities on or within twenty five feet of the site, and the current or proposed uses of the structures;
8. The location, dimensions, square footage, building orientation and setback distances of proposed structures, improvements and utilities, and the proposed uses of the structures by square footage;
9. The location, dimension and names, as appropriate, of all existing and platted streets, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle accessways and other pedestrian and bicycle ways, transit street and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site;
10. The location, dimension and names, as appropriate, of all proposed streets, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle accessways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred feet of the boundaries of the site;
11. All parking, circulation, loading and servicing areas, including the locations of all carpool, vanpool and bicycle parking spaces as required in OCMC 17.52;
12. Site access points for automobiles, pedestrians, bicycles and transit;
13. On-site pedestrian and bicycle circulation;

14. Outdoor common areas proposed as open space;
15. Total impervious surface created (including buildings and hard ground surfaces);
16. The proposed location, dimensions and materials of fences and walls.

B. A landscaping plan, drawn to scale, showing the location and types of existing trees (six inches or greater in caliper measured four feet above ground level) and vegetation proposed to be removed and to be retained on the site, the location and design of landscaped areas, the varieties, sizes and spacings of trees and plant materials to be planted on the site, other pertinent landscape features, and irrigation systems required to maintain plant materials.
C. Architectural drawings or sketches, drawn to scale and showing floor plans, elevations accurately reflected to grade, and exterior materials of all proposed structures and other improvements as they will appear on completion of construction. The name of the adjacent street shall be identified on each applicable building elevation.
D. An electronic materials board clearly depicting all building materials with specifications as to type, color and texture of exterior materials of proposed structures.
E. An erosion/sedimentation control plan, in accordance with the requirements of OCMC 17.47 and the public works erosion and sediment control standards, and a drainage plan developed in accordance with city drainage master plan requirements, OCMC 13.12 and the public works stormwater and grading design standards. The drainage plan shall identify the location of drainage patterns and drainage courses on and within one hundred feet of the boundaries of the site. Where development is proposed within an identified hazard area, these plans shall reflect concerns identified in the hydrological/geological/geotechnical development impact statement.
F. An exterior lighting plan, drawn to scale, showing type, height, and area of illumination.

Applicant's Response: Complies as proposed. Refer to Exhibits for required items.

G. Archeological Monitoring Recommendation. For all projects that will involve ground disturbance, the applicant shall provide:
1. A letter or email from the Oregon State Historic Preservation Office Archaeological Division indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the Oregon State Historic Preservation Office and that the Oregon State Historic Preservation Office had not commented within forty-five days of notification by the applicant; and
2. A letter or email from the applicable tribal cultural resource representative of the Confederated Tribes of the Grand Ronde, Confederated Tribes of the Siletz, Confederated Tribes of the Umatilla, Confederated Tribes of the Warm Springs and the Confederated Tribes of the Yakama Nation indicating the level of recommended archeological monitoring on-site, or demonstrate that the applicant had notified the applicable tribal cultural resource representative and that the applicable tribal cultural resource representative had not commented within forty-five days of notification by the applicant.

If, after forty-five days' notice from the applicant, the Oregon State Historic Preservation Office or the applicable tribal cultural resource representative fails to provide comment, the City will not require the letter or email as part of the completeness review. For the purpose of this section, ground disturbance is defined as the movement of native soils.

Applicant's Response: Complies with condition. At the time of application submission, the Oregon State Historical Preservation Office Archaeological Division and applicable tribal representatives have been solicited for comment on archaeological monitoring recommendations. Refer to Exhibit J.

H. Such special studies or reports as the Community Development Director may require to obtain information to ensure that the proposed development does not adversely affect the surrounding community or identified natural resource areas or create hazardous conditions for persons or improvements on the site. The Community Development Director shall require an applicant to submit one or more development impact evaluations as may be necessary to establish that the City's traffic safety or capacity standards, natural resource, including geologic hazard and flood plain overlay districts, will be satisfied.

Applicant's Response: Not applicable. The applicant is not aware of any additional studies or reports to that are required and none were identified at the pre-application conference.

I. The Community Development Director may waive the submission of information for specific requirements of this section or may require information in addition to that required by a specific provision of this section, as follows:
1. The Community Development Director may waive the submission of information for a specific requirement upon determination either that specific information is not necessary to evaluate the application properly, or that a specific approval standard is not applicable to the application. If submission of information is waived, the Community Development Director shall, in the decision, identify the waived requirements, explain the reasons for the waiver, and state that the waiver may be challenged on appeal and may be denied by a subsequent review authority. If the matter is forwarded to the planning commission for initial review, the information required by this paragraph shall be included in the staff report;
2. The Community Development Director may require information in addition to that required by a specific provision of this section upon determination that the information is needed to evaluate the application properly and that the need can be justified on the basis of a special or unforeseen circumstance as necessary to comply with the applicable standards. If additional information is required, the Community Development Director shall, in the decision, explain the reasons for requiring the additional information.

Applicant's Response: This standards is at the discretion of the Community Development Director.

J. All new utilities shall be placed underground.
1. Service poles may be allowed on private property when undergrounding service is technically or physically infeasible.

Applicant's Response: Complies as proposed. All new utilities are to be placed underground. Refer to sheet series C2.00 and C3.00 in Exhibit B.

K. One full-sized copy of all architectural and site plans.

Applicant's Response: Complies with condition. Plans are provided electronically.

17.62.050 - General Standards
All development shall comply with the following standards:
A. Landscaping.
1. Existing native vegetation is encouraged to be retained to the maximum extent practicable. All plants listed on the Oregon City Nuisance Plant List shall be removed from the site prior to issuance of a final occupancy permit for the building.

Applicant's Response: Complies as proposed. Existing trees are to remain to the extent possible; no nuisance plants have been found on site.

2. The amount of landscaping required is found in the standards for each underlying zone. Where the underlying zone does not contain and minimum landscaping standard, the minimum site landscaping shall be fifteen percent of the total site area. Except as allowed elsewhere in Title 16 or 17 of this code, all areas to be credited towards landscaping shall be installed with growing plant materials.

Applicant's Response: Complies as proposed. The underlying zone (Institutional) required site landscaping minimum is 15% of the total site area. The proposal increases total site area landscaping to 58%.

3. Pursuant to OCMC 17.49, landscaping requirements within the Natural Resource Overlay District, other than landscaping required for parking lots, may be met by preserving, restoring and permanently protecting native vegetation and habitat on development sites.

Applicant's Response: Complies as proposed. Landscaping requirements within the NROD are met by preserving existing conditions.

4. A landscaping plan shall be prepared by a registered landscape architect for new or revised landscaped areas and parking lots. Landscape architect approval is not required for tree removal and/or installation if the species are chosen from an approved street tree list. A

certified landscape designer, arborist, or nurseryman shall be acceptable in lieu of a landscape architect for projects with less than five hundred square feet of landscaping. All landscape plans shall include a mix of vertical (trees and shrubs) and horizontal elements (grass, groundcover, etc.) that within three years will cover one hundred percent of the landscape area. Plant species listed on the Oregon City Nuisance Plant list are prohibited and native species are encouraged. No mulch, bark chips, or similar materials shall be allowed at the time of landscape installation except under the canopy of shrubs and within two feet of the base of trees.

Applicant's Response: Complies as proposed. Landscaping plans were prepared by a Registered Landscape Architect.

5. Landscaping shall be visible from public thoroughfares to the extent practicable.

Applicant's Response: Complies as proposed. All landscaping is on private property, but is primarily visible from pedestrian circulation paths.

6. The landscaping in parking areas shall not obstruct lines of sight for safe traffic operation and shall comply with all requirements of OCMC 10.32, Traffic Sight Obstructions.

Applicant's Response: Not applicable. No parking area landscaping is proposed.

B. Vehicular Access and Connectivity.
1. Parking areas shall be located behind the building façade that is closest to the street, below buildings, or on one or both sides of buildings.

Applicant's Response: Not applicable. No parking is proposed.

2. Existing or future connections to adjacent sites through the use of vehicular and pedestrian access easements which provide connection from the right-of-way to the adjoining property shall be provided.

Applicant's Response: Not applicable. No easements are proposed. Existing connections to sites on the parcel and to the adjoining property are not impacted by the proposal.

3. Parcels larger than three acres shall provide streets as required in OCMC 16.12.

Applicant's Response: Complies as proposed. Required streets are in existence on the subject property. Reference site plans L.100 in Exhibit B. Douglas Loop, Clairmont Drive, and Keyser Way are adjacent to the development site.

4. Parking garage entries shall not be more than half of the streetscape.

Applicant's Response: Not applicable. No parking garages are proposed.

C. A well-marked, continuous and protected on-site pedestrian circulation system meeting the following standards shall be provided:
1. Pathways between all building entrances and the street are required. Pathways between the street and buildings fronting on the street shall be direct and not cross a drive aisle. Exceptions may be allowed by the director where steep slopes, a physically constrained site, or protected natural resources prevent a direct connection or where an indirect route would enhance the design and/or use of a common open space.

Applicant's Response: Complies as proposed. Continuous and protected on-site pedestrian paths are provided that provide connections between all building and streets. Some proposed paths are not direct due to slope constraints, existing elements to remain, and connections to other common open space. Refer to grading plans on sheets L3.00 in Exhibit B.

2. The pedestrian circulation system shall connect all main entrances, parking areas, bicycle parking, recreational areas, common outdoor areas, and any pedestrian amenities on the site. For buildings fronting on the street, the sidewalk may be used to meet this standard.

Applicant's Response: Complies as proposed. The pedestrian circulation system connects all main building entrances, parking areas, recreational areas and other site amenities. The pedestrian circulation system connects to the existing campus circulation system as well. Refer to site plans on sheets L1.00 in Exhibit B.

3. The pedestrian circulation system shall connect the principal building entrance to those of buildings on adjacent sites, except within industrial zoning designations.

Applicant's Response: Complies as proposed. The proposed site circulation connects to the existing campus circulation system and links to principal building entrances. Refer to the site plans on sheet L1.00 in Exhibit B.

4. Elevated external stairways or walkways shall not extend beyond the building façade except for external stairways or walkways located in, or facing interior courtyard areas that are not visible from the street or a public access easement. This standard does not apply to sky-bridges or sky-ways.

Applicant's Response: Not applicable. Bleacher and press box access is contained within the bleachers themselves. Refer to architectural plans A5.00 series, and A6.01 in Exhibit B.

5. On-site pedestrian walkways shall be hard surfaced, well drained and at least five feet wide. Surface material shall contrast visually to adjoining surfaces. When bordering parking spaces

other than spaces for parallel parking, pedestrian walkways shall be a minimum of seven feet in width unless curb stops are provided. When the pedestrian circulation system is parallel and adjacent to an auto travel lane, the walkway shall be raised or separated from the auto travel lane by a raised curb, bollards, landscaping or other physical barrier.

Applicant's Response: Complies as proposed. All pedestrian walkways are proposed to be concrete or compacted gravel and will contrast with adjoining surfaces. All proposed paths are a minimum of 5' wide—no proposed paths border parking spaces. Walkways next to traffic lanes are elevated. At the vehicular drop-off location, the walkway is separated by detectable pavers, but is at grade for accessible drop off.

D. All development shall maintain continuous compliance with applicable federal, state, and City standards.

Applicant's Response: Complies as proposed. Proposed development complies with American with Disabilities (ADA) code and other applicable standards.

E. Adequate public water and sanitary sewer facilities sufficient to serve the proposed or permitted level of development shall be provided pursuant to OCMC 16.12. The applicant shall demonstrate that adequate facilities and services are presently available or can be made available concurrent with development. Service providers shall be presumed correct in the evidence which they submit. All facilities shall be designated to City standards as set out in the City's facility master plans and public works design standards. A development may be required to modify or replace existing off-site systems if necessary to provide adequate public facilities. The City may require over sizing of facilities where necessary to meet standards in the City's facility master plan or to allow for the orderly and efficient provision of public facilities and services. Where oversizing is required, the developer may request reimbursement from the City for over sizing based on the City's reimbursement policy and fund availability or provide for recovery of costs from intervening properties as they develop.

Applicant's Response: Complies as proposed. The proposed development connects to existing water and sanitary services on-site. Refer to Exhibit B, sheet series C2.00 and C3.00 for sizing of services and detailing. The use demand is equal to current use demands, as the proposal involves a renovation of existing uses.

F. If a transit agency, upon review of an application for an industrial, institutional, retail or office development, recommends that a bus stop, bus turnout lane, bus shelter, accessible bus landing pad, lighting, or transit stop connection be constructed, or that an easement or dedication be provided for one of these uses, consistent with an agency adopted or approved plan at the time of development, the review authority shall require such improvement, using designs supportive of transit use. Improvements at a major transit stop may include

intersection or mid-block traffic management improvements to allow for crossings at major transit stops, as identified in the City's transportation system plan.

Applicant's Response: Not applicable. The site is served by the Clackamas Community College Transit Center southwest of the site. Existing transit access is sufficient to serve the proposed development.

G. Screening of Mechanical Equipment. Commercial, mixed-use, institutional, and multi-family buildings shall include the following measures to screen or block views of mechanical equipment from adjacent streets according to the following requirements:
1. Rooftop mechanical equipment, including HVAC equipment and utility equipment that serves the structure, shall be screened from view from the adjacent street on all new buildings or building additions. Screening shall be accomplished through the use of parapet walls or a sight-obscuring enclosure around the equipment constructed of one of the primary materials used on the primary facades of the structure, and that is an integral part of the building's architectural design. The parapet or screen shall completely surround the rooftop mechanical equipment to an elevation equal to or greater than the highest portion of the rooftop mechanical equipment being screened from adjacent streets, as viewed from the sidewalk or future sidewalk location on the adjacent street at pedestrian level. In the event such parapet wall does not fully screen all rooftop equipment, then the rooftop equipment shall be enclosed by a screen constructed of one of the primary materials used on the primary facade of the building so as to achieve complete screening. Screening requirements do not apply to new or replacement equipment on existing buildings. New or replacement rooftop mechanical equipment on existing buildings shall be painted or powder-coated.

Applicant's Response: Not applicable. No mechanical equipment is proposed on structure rooftops. Refer to Exhibit B, A series sheets for architectural elevations of proposed structures and buildings.

2. Wall-mounted mechanical HVAC and air conditioning equipment, and groups of multiple utility meters shall not be placed on the front facade of a building or on a facade that faces a right-of-way. Wall-mounted mechanical equipment, including-air conditioning and groups of multiple utility meters, that extend six inches or more from the outer building wall shall be screened from view from adjacent streets; from residential, public, and institutional properties; and from public areas of the site or adjacent sites through the use of (a) sight-obscuring enclosures constructed of one of the primary materials used on the primary facade of the structure, (b) sight-obscuring fences, or (c) trees or shrubs that block at least eighty percent of the equipment from view or (d) painting the units to match the building. Wall-mounted mechanical equipment that extends six inches or less from the outer building wall shall be designed to blend in with the color and architectural design of the subject building. Vents which extend six inches or less from the outer building wall shall [be] exempt from this standard if painted.

Applicant's Response: Complies as proposed. Utility meters do not face the right-of-way and are not placed on the front facade. No meters or HVAC units extend 6" beyond the building envelope. Refer to Exhibit B, A series sheets.

3. Ground-mounted above-grade mechanical equipment shall be screened by ornamental fences, screening enclosures, trees, or shrubs that block at least eighty percent of the view from the public right of way.

Applicant's Response: Not applicable. The subject site is not visible from public right-of-ways.

4. This section shall not apply to the installation of solar energy panels, photovoltaic equipment, wind power generating equipment, dishes/antennas, pipes, vents, and chimneys.

Applicant's Response: Complies as proposed.

H. Building Materials.
1. Prohibited Materials. The following materials shall be prohibited in visible locations from the right-of-way or a public access easement unless an exception is granted by the Community Development Director based on the integration of the material into the overall design of the structure:
a. Vinyl or plywood siding (including T-111 or similar plywood).
b. Glass block or highly tinted, reflected, translucent or mirrored glass (except stained glass) as more than ten percent of the building facade.
c. Corrugated fiberglass.
d. Chain link fencing (except for temporary purposes such as a construction site, gates for a refuse enclosure, stormwater facilities, when excepted by 17.62.050.H.2.g, or when located on properties within the general industrial district).
e. Crushed colored rock/crushed tumbled glass.
f. Non-corrugated and highly reflective sheet metal.
g. Tarps, except for the protection of outside storage.

Applicant's Response: Complies as proposed. The above materials are not proposed for use, except for chain link fencing, which is allowed under site circumstances per OCMC 17.62.050.H.2.g.2.

2. Special Material Standards. The following materials are allowed if they comply with the requirements found below:
a. Concrete Block. When used for the front façade of any building, concrete blocks shall be split, rock- or ground-faced and shall not be the prominent material of the elevation. Plain concrete

block or plain concrete may be used as foundation material if the foundation material is not revealed more than three feet above the finished grade level adjacent to the foundation wall.
b. Metal Siding. Metal siding shall have visible corner moldings and trim and incorporate masonry or other similar durable/permanent material near the ground level (first two feet above ground level) except when used for a temporary structure.
c. Exterior insulation and finish system (EIFS) and similar troweled finishes shall be trimmed in wood, masonry, or other approved materials and shall be sheltered from extreme weather by roof overhangs or other methods.
d. Building surfaces shall be maintained in a clean condition and painted surfaces shall be maintained to prevent or repair peeling, blistered or cracking paint.
e. Membrane or fabric covered storage areas are permitted as temporary structures, excluding the use of tarps.
f. Vinyl or powder coated chain link fencing is permitted for City-owned stormwater management facilities, reservoirs, and other public works facilities such as pump stations, maintenance yards, and storage yards not located within the general industrial district.
g. Chain link fencing is permitted in the following circumstances:
1. Within City-owned parks and recreational facilities.
2. On any property when used for a baseball or softball backstop or dugout, track and field facility, or sports court.

Applicant's Response: Complies with condition. Black vinyl chain link fencing is proposed; however, it is permitted under certain circumstances for use at baseball, softball, and track and field facilities. Split face concrete block is proposed for use on the restroom facility and is used for most of the building façade. An adjustment is requested to allow for split face block to be used for the majority of façade on the restroom building. Refer to Exhibit B sheet A4.01 and code response to OCMC 17.65.070.

I. Temporary Structures. Temporary structures are permitted pursuant to the following standards:
1. Structures up to two hundred square feet:
a. Shall not be on a property for more than three consecutive days;
b. Shall not be on a property more than six times per year;
c. Shall comply with the minimum dimensional standards of the zoning designation;
d. Shall be sited so as to leave the minimum number of parking spaces for the primary uses as required by OCMC 17.52 or as otherwise specified in a land use approval;
e. Shall not disturb ingress or egress to the site; and
f. Shall be exempt from all sections of OCMC 12.08, 16.12, 17.52 and 17.62 except subsections 17.62.050.I and J.
2. Temporary structures larger than two hundred square feet may be permitted up to two times per year; and:
a. Structures larger than two hundred square feet up to eight hundred square feet:
i. Shall not be on a property for more than thirty consecutive days;

ii. Shall comply with the minimum dimensional standards of the zoning designation;
iii. Shall be sited so as to leave the minimum number of parking spaces for the primary uses as required by OCMC 17.52 or as otherwise specified in a land use approval;
iv. Shall not disturb ingress or egress to the site; and
v. Shall be exempt from all sections of OCMC 12.08, 16.12, 17.52 and 17.62 except subsections 17.62.050.I and J.
b. Structures larger than eight hundred square feet:
i. Shall not be on a property for more than seven consecutive days;
ii. Shall comply with the minimum dimensional standards of the zoning designation;
iii. Shall be sited so as to leave the minimum number of parking spaces for the primary uses as required by OCMC 17.52 or as otherwise specified in a land use approval;
iv. Shall not disturb ingress or egress to the site; and
v. Shall be exempt from all sections of OCMC 12.08, 16.12, 17.52 and 17.62 except subsections 17.62.050.I and J.
3. Government owned properties are exempt from all sections of OCMC 12.08, 16.12, 17.52 and 17.62 except subsections 17.62.050.H and I and the dimensional standards of the zoning designation.

Applicant's Response: Not applicable. No temporary structures are proposed.

J. All new utilities shall be placed underground.
1. Service poles may be allowed on private property when undergrounding service is technically or physically infeasible.

Applicant's Response: Complies as proposed. No new utilities are proposed to be placed above ground.

K. Development shall comply with requirements of the following Oregon City Municipal Code chapters, as applicable, including but not limited to:
1. Chapter 12.04, Streets, Sidewalks and Public Places.
2. Chapter 12.08, Public and Street Trees.
3. Chapter 13.04, Water Service System.
4. Chapter 13.08, Sewer Regulations.
5. Chapter 13.12, Stormwater Management.
6. Chapter 16.12, Minimum Improvements and Design Standards for Development.
7. Chapter 17.20, Residential Design Standards for ADU's, Cluster Housing, Internal Conversions, Live/Work Units, and Manufactured Home Parks.
8. Chapter 17.40, Historic Overlay District.
9. Chapter 17.41, Tree Protection Standards.
10. Chapter 17.42, Flood Management Overlay District.
11. Chapter 17.44, Geologic Hazards.
12. Chapter 17.47, Erosion and Sediment Control.

13. Chapter 17.48, Willamette River Greenway.
14. Chapter 17.49, Natural Resource Overlay District.
15. Chapter 17.50, Administration and Procedures.
16. Chapter 17.52, Off-Street Parking and Loading.
17. Chapter 17.54, Supplemental Zoning Regulations and Exceptions.
18. Chapter 17.58, Lawful Nonconforming Uses, Structures, and Lots.
19. Chapter 17.65, Master Plans and Planned Unit Development.

Applicant's Response: Complies as proposed. Applicable sections and responses are included in the narrative herein.

17.62.055 –Institutional, office, multi-family, retail, and commercial building standards.
A. Purpose. The primary objective of the regulations contained in this section is to provide a range of design choices that promote creative, functional, and cohesive development that is compatible with surrounding areas. Buildings approved in compliance with these standards are intended to serve multiple tenants over the life of the building and are not intended for a one-time occupant. The standards encourage people to spend time in the area, which also provides safety though informal surveillance. Finally, this section is intended to promote the design of an urban environment that is built to human scale by creating buildings and streets that are attractive to pedestrians, create a sense of enclosure, provide activity and interest at the intersection of the public and private spaces, while also accommodating vehicular movement.
B. Applicability. This section applies to institutional, office, multi-family, retail and commercial buildings except accessory structures less than one thousand square feet and temporary structures.

Applicant's Response: Not applicable. All proposed structures are accessory structures, most of which are under 1,000 square feet. Buildings and structures are meant to support athletic programs on site and are not intended for occupancy. This section is not applicable as the institutional building standards do not address open space or athletic developments. The site use and amenities are will facilitate use, and site landscape areas create an experience that is attractive to pedestrians. However, accessory structures are not meant to serve the public, they are meant to support use of the proposed athletic facilities.

C. Conflicts. With the exception of standards for building orientation and building front setbacks, in the event of a conflict between a design standard in this section and a standard or requirement contained in the underlying zoning district, the standard in the zoning district shall prevail.

Applicant's Response: Not applicable.

D. Siting of Structures. On sites with one hundred feet or more of frontage at least sixty percent of the site frontage width shall be occupied by buildings placed within five feet of the property line. For sites with less than one hundred feet of street frontage, at least fifty percent of the site frontage width shall be occupied by buildings placed within five feet of the property. Multi-family developments shall be placed no farther than twenty feet from the front property line. This section does not apply to properties with less than forty feet of frontage.

Applicant's Response: Not applicable. The subject property area has more than 100' of private street frontage but proposed development adjacent to the property line. This requirement does not account for open space development within Institutional districts. The siting structures along street frontage conflicts with existing and proposed site uses. The structures on the subject site have been placed around the athletic fields they are intended to serve, and are not necessary along street frontage. Refer to Exhibit B, sheet A0.00.

A larger front yard setback may be approved through site plan and design review if the setback area incorporates at least one element from the following list for every five feet of increased setback requested:
1. Tables, benches or other approved seating area.
2. Cobbled, patterned or paved stone or enhanced concrete.
3. Pedestrian scale lighting.
4. Sculpture/public art.
5. Fountains/Water feature.
6. At least twenty square feet of landscaping or planter boxes for each tenant facade fronting on the activity area.
7. Outdoor café.
8. Enhanced landscaping or additional landscaping.
9. Other elements, as approved by the Community Development Director, that can meet the intent of this section.

Applicant's Response: Not applicable. See response to previous item. The large hitting barn building is set back 50' from Killdeer Rd. to accommodate the existing stormwater planter and sidewalk (26'), in addition to a new stormwater planter of 24' in width. The large hitting barn building is an unoccupied accessory structure meant to facilitate athletic events, practices, and storage. The small hitting barn is set back 25' from Grove Cir. The space between the building and street will be lawn. This building is intended to serve the softball and baseball programs, and as such, the building faces the softball field. This requirement does not apply to athletic or open space developments.

E. Building Orientation. All buildings along the street frontage shall face the front most architecturally significant façade toward the street and have a functional primary entrance facing the street. Primary building entrances shall be clearly defined and recessed or framed by

a sheltering element such as an awning, arcade or portico in order to provide shelter from the summer sun and winter weather.

Applicant's Response: Not applicable. The most architecturally significant facades will face towards the main pedestrian circulation routes and the athletic facility they are intended to support. Entrances do not have sheltering elements as they are not facing the street.

F. Entryways. Entrances shall include a doorway and a minimum of four of the following elements:
1. Display windows; recesses or projections; peaked roof or raised parapet over the door; canopy of at least five feet in depth; porch; distinct materials; architectural details such as tile work and moldings; pedestrian amenities such as benches, planters or planter boxes; landscape treatments integrating arbors, low walls, trellis work; or similar elements. Trellises, canopies and fabric awnings may project up to five feet into front setbacks and public rights-of-way, provided that the base is not less than eight feet at the lowest point and no higher than ten feet above the sidewalk.

Applicant's Response: Not applicable. Entryways include a doorway but no additional elements as they are accessory structures for storage and athletic program use and are not meant to facilitate loitering in front of the structures. Pedestrian amenities are proposed elsewhere. Refer to Exhibit B, sheet series L1.00.

G. Corner Lots. For buildings located at the corner of intersections, the primary entrance of the building shall be located at the corner of the building or within twenty-five feet of the corner of the building. Additionally, one of the following treatments shall be required:
1. Incorporate prominent architectural elements, such as increased building height or massing, cupola, turrets, or pitched roof, at the corner of the building or within twenty-five feet of the corner of the building.
2. Chamfer the corner of the building (i.e. cut the corner at a forty-five degree angle and a minimum of ten feet from the corner) and incorporate extended weather protection (arcade or awning), special paving materials, street furnishings, or plantings in the chamfered area.
3. Standards 1 and 2 above do not apply to vertically attached 3—4 plexes, multi-family buildings or multi-family portions of residential mixed-use buildings.

Applicant's Response: Not applicable. Proposed development is not on a corner lot.

H. Variation in Massing. For street facing facades greater than one hundred twenty feet in length a modulation is required which extends through all floors. Decks and roof overhangs may encroach up to three feet per side into the modulation. The modulation shall meet one of the following dimensional requirements:

1. A minimum depth of two percent of the length of the façade and a minimum width of thirty percent of the length of the façade; or
2. A minimum depth of four percent of the length of the façade and a minimum width of twenty percent of the length of the façade.

Applicant's Response: Not applicable. The large hitting barn building is just over 120' in length. No modulation is proposed, however the street facing façade is proposed to be screened with planting. Refer to Exhibit B, sheets L6.03 and A2.01.

I. Building Design Elements.
All front and side facades shall provide a design element or architectural feature that add interest and detail such that there are no blank walls of thirty feet in length or more, measured horizontally. Features that can meet this requirement include:
a. Change in building material or texture;
b. Window or door;
c. Balcony; or
d. Pillar or post

Applicant's Response: Adjustment requested. The applicant requests an adjustment to building design elements to allow for blank walls over 30' in length. Reference code response for section OCMC 17.65.070.

2. Street facing facades shall include additional design features. For every thirty feet of façade length, three of the following elements are required:
a. Decorative materials on more than ten percent of the total wall area (e.g., brick or stonework, shingles, wainscoting, ornamentation, and similar features);
b. Decorative cornice and/or roof line (e.g., for flat roofs);
c. Roof gable;
d. Recessed entry;
e. Covered canopy entry;
f. Cupola or tower;
g. Dormer;
h. Balcony;
i. Pillars or posts;
j. Repeating pattern of building materials;
k. A change in plane of at least two feet in width and six inches in depth;
l. Bay or oriel window; or
m. An alternative feature providing visual relief and detail as approved by the Community Development Director

Applicant's Response: Not applicable. No facades are considered street-facing; see responses to previous items. Therefore, this section is not applicable.

3. Building Detail Variation. Architectural features shall be varied on different buildings within the same development. At least two of the required features on each street-facing elevation shall be distinct from the street-facing elevations of other buildings within the same development.

Applicant's Response: Not applicable. All buildings over 1,000 sf have similar details and materials to identify them as part of the sports facility.

J. Windows.
1. The minimum windows requirements are set forth in Table 17.62.055.J. Windows are measured in lineal fashion between 3.5 feet and six feet from the ground. For example, a one hundred foot long building elevation would be required to have at least sixty feet (sixty percent of one hundred feet) of windows in length between the height of 3.5 feet and six feet from the ground.
Table 17.62.055.J Minimum Windows

Use	***Ground Floor: Front and Street Facing Facades***	***Upper floor(s): Front and Street Facing Facades***	***Ground Floor: Side(s) Facades***	***Upper Floor(s): Side(s) Facades***
Non-Multi-Family (or Portions of Buildings Thereof)	*60%*	*10%*	*30%*	*10%*
Multi-Family (or Portions of Buildings Thereof)	*15%*	*15%*	*10%*	*10%*
Proposed:	0%	N/A	0%	N/A

Applicant's Response: Not applicable. Accessory structures over 1,000 sf are intended to be used for storage and athletic purposes. The inclusion of windows would conflict with the intended use.

2. Reflective, glazed, mirrored or tinted glass is limited to ten percent of the lineal footage of windows on the street facing facade. Highly reflective or glare-producing glass with a reflective factor of one quarter or greater is prohibited on all building facades. Any glazing materials shall have a maximum fifteen percent outside visual light reflectivity value. No exception shall be made for reflective glass styles that appear transparent when internally illuminated.

Applicant's Response: Not applicable. No windows are proposed.

3. Side walls that face walkways may include false windows and door openings only when actual doors and windows are not feasible because of the nature of the use of the interior use of the building. False windows located within twenty feet of a right-of-way shall be utilized as display windows with a minimum display depth of thirty-six inches.

Applicant's Response: Not applicable. No building side walls face walkways.

4. Multi-family windows shall incorporate window trim at least four inches in width when surrounded by horizontal or vertical lap siding

Applicant's Response: Not applicable. The proposal does not involve any multi-family buildings.

K. Roof Treatments. The maximum length of any continuous roofline on a street-facing façade shall be seventy five feet without a cross gable or change in height of at least two feet.

Applicant's Response: Not applicable. No facades are considered street facing, see responses to previous items. Therefore, this section is not applicable.

L. Drive-through facilities shall:
1. Be located at the side or rear of the building.
2. Be designed to maximize queue storage on site.

Applicant's Response: Not applicable. No drive-through facilities are proposed.

M. Special development standards along transit streets.
1. Purpose. This section is intended to provide direct and convenient pedestrian access to retail, office and institutional buildings from public sidewalks and transit facilities and to promote pedestrian and transit travel to commercial and institutional facilities.
2. Applicability. Except as otherwise provide in this section, the requirements of this section shall apply to the construction of new retail, office and institutional buildings which front on a transit street.
3. Development Standards.
a. All buildings shall have at least one main building entrance oriented towards the transit street. A main building entrance is oriented toward a transit street if it is directly located on the transit street, or if it is linked to the transit street by an on-site pedestrian walkway that does not cross off-street parking or maneuvering areas.
i. If the site has frontage on more than one transit street, or on a transit street and a street intersecting a transit street, the building shall provide one main building entrance oriented to the transit street or to the corner where the two streets intersect.
ii. For building facades over three hundred feet in length on a transit street, two or more main building entrances shall be provided as appropriate and oriented towards the transit street.

b. In the event a requirement of this section conflicts with other requirements in Title 17, the requirements of this section shall control.
4. Exemptions. The following permitted uses are exempted from meeting the requirements of subsection 3. of this section:
a. Heavy equipment sales;
b. Motor vehicle service stations, including convenience stores associated therewith; or
c. Solid waste transfer stations.

Applicant's Response: Not applicable. Proposed development is not located along a transit street.

17.62.056 - Additional standards for large retail establishments.
Retail building(s) occupying more than ten thousand gross square feet of floor area shall contribute to the establishment or enhancement of community and public spaces by providing at least two of the following:
A. Patio/seating area;
B. Pedestrian plaza with benches;
C. Transportation center;
D. Window shopping walkway;
E. Outdoor playground area;
F. Kiosk area, water feature;
G. Clock tower; or
H. Other such deliberately shaped area and/or a focal feature or amenity that, in the judgment of the appropriate decision maker, adequately enhances such community and public spaces. Any such areas shall have direct access to the public sidewalk network and such features shall not be constructed of materials that are inferior to the principle materials of the building and landscape.

Applicant's Response: Not applicable. Proposed development does not include retail buildings.

17.62.057 - Multifamily Usable Open Space Requirements
A. Intent. Creating areas of usable open space that are easily accessed by residents provides focal points for community recreation and interaction and adds to the overall quality of life for residents. Given the environmental and recreational benefits of common open space, it should be integrated purposefully into the overall design of a development and not merely be residual areas left over after buildings and parking lots are sited.
B. Open Space Required. All new multi-family developments in all zones shall provide usable open space.
1. In residential zones, each development shall provide a minimum of one hundred square feet of open space per dwelling unit.

Applicant's Response: Not applicable. The proposed development does not include multifamily development, and the underlaying parcel is not zoned for said use. Therefore, this section in its entirety is not applicable.

17.62.058 - Additional public park and open space requirements in Thimble Creek Concept Plan Area—Nonresidential development.

A. New non-residential development creating new commercial or industrial space will contribute to the creation of the parks and open space within the Thimble Creek Concept Plan by contributing a fee in lieu to the City to support the acquisition and interim use of needed park and open space land within the concept plan boundary as follows:
1. The fee in lieu will be set by the City Commission and adopted yearly in the City's fee schedule. The fee shall only be used by the City for park, trail and open space acquisition and interim site development.
2. The fee-in-lieu or other equivalent monetary contribution, approved by the Community Development Director, must be paid prior to approval of the certificate of occupancy.

Applicant's Response: Not applicable. The development site is not located within the Thimble Creek Concept Plan Area.

17.62.059 Additional public park and open space requirements in Thimble Creek Concept Plan Area—Residential development.

A. Each development within the Thimble Creek Concept Plan area that includes residential development must dedicate land for neighborhood parks and open space subject to the location requirement set forth in subsection D as follows:
1. The minimum acreage of land dedicated for the South-Central Open Space-Neighborhood Park as provided in the following calculation: (2.6 persons per dwelling units) × (total number of dwelling units proposed) × (four acres)/(one thousand persons);
2. The minimum amount of land in acres dedicated for the East Ridge-Thimble Creek Conservation Area shall be 7.5 acres; and
3. The entire acreage must be dedicated as part of the final plat or site plan development approval for the first phase of development.

Applicant's Response: Not applicable. The development site is not located within the Thimble Creek Concept Plan Area. This section in its entirety is not applicable.

17.62.065 Outdoor lighting.

A. Purpose. The general purpose of this section is to require outdoor lighting that is adequate for safety and convenience; in scale with the activity to be illuminated and its surroundings; directed to the surface or activity to be illuminated; and designed to clearly render people and objects and contribute to a pleasant nighttime environment. Additional specific purposes are to:
1. Provide safety and personal security as well as convenience and utility in areas of public use or traverse, for uses where there is outdoor public activity during hours of darkness;

2. Control glare and excessive brightness to improve visual performance, allow better visibility with relatively less light, and protect residents from nuisance and discomfort;
3. Control trespass light onto neighboring properties to protect inhabitants from the consequences of stray light shining in inhabitants' eyes or onto neighboring properties;
4. Result in cost and energy savings to establishments by carefully directing light at the surface area or activity to be illuminated, using only the amount of light necessary; and
5. Control light pollution to minimize the negative effects of misdirected light and recapture views to the night sky.
6. Encourage energy efficient lighting with new technologies such as light emitting diodes (LED) or similar to reduce ongoing electrical demand and operating costs.

Applicant's Response: Complies as proposed. The sports-specific lighting is intended to provide safe playing areas for proposed sports activities and adheres to the items noted above. Pedestrian lighting is provided to illuminate pedestrian circulation paths in accordance with the purposes detailed above. Lighting on buildings at entrances is proposed, in accordance with the purposes detailed above. Refer to Exhibit D for photometric plans and Exhibit B, E series sheets.

B. Applicability.
1. General.
a. All exterior lighting for any type of commercial, mixed-use, industrial, institutional, or multifamily development shall comply with the standards of this section, unless excepted in subsection B.3.
b. The City engineer or public works director shall have the authority to enforce these regulations on private property if any outdoor illumination is determined to present an immediate threat to the public health, safety and welfare.
2. Lighting Plan Requirement. All commercial, industrial, mixed-use, cottage housing and multi-family developments shall submit a proposed exterior lighting plan. The plan shall be submitted concurrently with the site plan. The exterior lighting plan shall include plans and specifications for streetlights, parking lot lights, and exterior building lights. The specifications shall include details of the pole, fixture height and design, lamp type, wattage, and spacing of lights.
3. Excepted Lighting. The following types of lighting are excepted from the requirements of this section:
a. Residential lighting for single-family attached and detached homes, and duplexes.
b. Public street and right-of-way lighting.
c. Temporary decorative seasonal lighting provided that individual lamps have a light output of sixty watts or less.
d. Temporary lighting for emergency or nighttime work and construction.
e. Temporary lighting for theatrical, television, and performance areas, or for special public events.

f. Lighting for a special district, street, or building that, according to an adopted municipal plan or ordinance, is determined to require special lighting aesthetics as part of its physical character.
g. Lighting required and regulated by the Federal Aviation Administration.

Applicant's Response: Complies as proposed. Refer to the site plans (Exhibit B, sheet series L1.00) and photometric plans (Exhibit D). Lighting for sports field use, pedestrian circulation, and building entrances is proposed.

C. Design and Illumination Standards.
1. Outdoor lighting, if provided, shall be provided in a manner that enhances security, is appropriate for the use, avoids adverse impacts on surrounding properties, and the night sky through appropriate shielding as defined in this section. Glare shall not cause illumination on other properties in excess of a measurement of 0.5 footcandles of light as measured at the property line.
2. Lighting shall be provided in parking lots and vehicular circulation areas.
3. Lighting shall be provided in pedestrian walkways, pedestrian plazas, and pedestrian circulation areas.
4. Lighting shall be provided at all building entrances.
5. With the exception of pedestrian scale lighting, all light sources shall be concealed or shielded with a full cut-off style fixture in order to minimize the potential for glare and unnecessary diffusion on adjacent property.
6. The maximum height of any lighting pole serving a multi-family residential use shall be twenty feet. The maximum height serving any other type of use shall be twenty-five feet, except in parking lots larger than five acres, the maximum height shall be thirty-five feet if the pole is located at least one hundred feet from any residential use.
7. Floodlights shall not be utilized to light all or any portion of a building facade between ten p.m. and six a.m.
8. Lighting on outdoor canopies shall be fully recessed into the canopy and shall not protrude downward beyond the ceiling of the canopy.
9. All outdoor light not necessary for security purposes shall be reduced, activated by motion sensor detectors, or turned off during non-operating hours.
10. Light fixtures used to illuminate flags, statues, or any other objects mounted on a pole, pedestal, or platform shall use a narrow cone beam of light that will not extend beyond the illuminated object.
11. For upward-directed architectural, landscape, and decorative lighting, direct light emissions shall not be visible above the building roofline.
12. No flickering or flashing lights shall be permitted, except for temporary decorative seasonal lighting.
13. Lighting for outdoor recreational uses such as ball fields, playing fields, tennis courts, and similar uses, are allowed a light post height up to eighty feet in height.

14. Main building entrances shall be well lighted and visible from any transit street. The minimum lighting level for building entries fronting on a transit street shall be three foot-candles.

Applicant's Response: Complies as proposed. Sports lighting complies with applicable standards (#1 and #13 above). The tallest light pole is 80'. Pedestrian and building lighting complies with applicable standards (#1-10, and #12). Refer to Exhibit D.

17.62.085 Refuse and recycling standards for commercial, industrial, office, institutional, and multi-family developments.

The purpose and intent of these provisions is to provide an efficient, safe and convenient refuse and recycling enclosure for the public as well as the local collection firm. All new development, change in property use, expansions, or exterior alterations to uses, other than single-family detached residential units, duplexes, triplexes, quadplexes, townhouses, cottage clusters or accessory dwelling units (ADUs), shall include a refuse and recycling enclosure. The area(s) shall be:

A. Fully enclosed and visually screened;

B. Located in a manner easily and safely accessible by collection vehicles;

C. Located in a manner so as not to hinder travel lanes, walkways, streets or adjacent properties;

D. On a level, hard surface designed to discharge surface water runoff and avoid ponding;

E. Maintained by the property owner;

F. Used only for purposes of storing solid waste and recyclable materials;

G. Designed in accordance with applicable sections of the Oregon City Municipal Code (including OCMC 8.20, Solid Waste Collection and Disposal) and City adopted policies.

Enclosures are encouraged to be sized appropriately to meet the needs of current and future tenants and designed with sturdy materials which are compatible to the primary structure(s).

Applicant's Response: Not applicable. Refuse and recycling collection will rely on existing enclosures/areas on the campus property. The applicant is not required to provide enclosures as the proposal involves redevelopment.

17.62.090 Implementation.

A. Applications for site plan and design review shall be reviewed in the manner provided in OCMC 16.12 and 17.50. The building official may issue a certificate of occupancy only after the improvements required by site plan and design review approval have been completed, or a schedule for completion and a bond or other financial guarantee have been accepted by the City.

B. In performing site plan and design review, the review authority shall consider the effect of additional financial burdens imposed by such review on the cost and availability of needed housing types. Consideration of such factors shall not prevent the imposition of conditions of

approval found necessary to meet the requirements of this section. The cost of such conditions of approval shall not unduly increase the cost of housing beyond the minimum necessary to achieve the provisions of this title, nor shall such cost prevent the construction of needed housing types.
C. The site plan and design review provisions of this chapter shall not be applied to reduce the density or height of an application for a development project that reserves at least seventy-five percent of the gross floor area for housing where the proposed density or height is at or below what is allowed in the base zone, except in the following situations:
1. Where the reduction in density is required for development subject to historic overlay provision in OCMC 17.40; or
2. Where the reduction in density is necessary to resolve a health, safety or habitability issue, or to comply with the natural resource overlay district regulations of OCMC 17.49, the geologic hazard overlay district regulations of OCMC 17.44, or the floodplain management overlay district regulations of OCMC 17.42 or steep slope regulations.

Applicant's Response: Applicable.

CHAPTER 17.65 MASTER PLANS AND PLANNED UNIT DEVELOPMENT

17.65.030 - Applicability of the Master Plan or Planned Unit Development Regulations.
A. Required for Large Institutional Uses. If the boundaries of an institutional development exceed ten acres in size, the proposed development shall be master planned using the regulations of this chapter. No land use review other than a Type I or II Minor Site Plan and Design Review shall be issued for any institutional development in excess of ten acres in total acreage unless it is accompanied by or preceded by a master plan approval under this chapter. This requirement does not apply to modifications to existing institutional developments unless the modification results in a cumulative square footage increase of over ten thousand total building square feet in an existing institutional development over ten acres.
B. When Required as Part of Previous Land Use Review. The master plan or planned unit development regulations may be used to fulfill a condition of approval from a previous land use decision-requiring master planning for a development.
C. When identified in the Oregon City Comprehensive Plan. The master plan regulations are required for all properties identified for master planning in the land use section of the Oregon City Comprehensive Plan.
D. Voluntarily. An applicant may voluntarily submit a master plan or planned unit development as part of a land use review, including for residential projects.

Applicant's Response: Applicable. An approved Master Plan for the subject site precedes this application. A plan is on file with the City (GLUA-24-00020 / MAS-24-00001).

17.65.040 - Procedure.

A. Preapplication Review. Prior to filing for either general development plan or detailed development plan approval, the applicant shall file a pre-application conference pursuant to OCMC 17.50.030.

Applicant's Response: Complies as proposed. A pre-application conference was scheduled for and held on August 21, 2025. See Exhibit F.

B. General Development Plan. An application for a general development plan describing the long-term buildout of the site shall be reviewed through a Type III procedure. An applicant shall have an approved general development plan before any detailed development plan may be approved unless both are approved or amended concurrently. Amendments to an approved general development plan shall be reviewed under a Type III procedure pursuant to OCMC 17.65.080.

Applicant's Response: Complies as proposed. A general development plan is approved (GLUA-24-00020 / MAS-24-00001) for the subject site.

C. Detailed Development Plan. An application for a detailed development plan, is processed through a Type II procedure, as long as it is in conformance with the approved general development plan. Amendments to an approved detailed development plan shall be processed pursuant to OCMC 17.65.080. Once a development has an approved detailed development plan, OCMC 17.62 Site Plan and Design Review is not required.

Applicant's Response: Complies with condition. This application is processed through a Type III procedure, due to adjustment requests. The proposal is in substantial conformance with the approved general development plan.

D. Concurrent Review. An applicant may concurrently apply for a general development plan and a detailed development plan. Such a concurrent application is reviewed through the highest procedure that applies to any element of the combined application.

Applicant's Response: Not applicable. A general development plan for the campus has been approved.

E. Relationship to Other Reviews. It is the express policy of the City that development review not be segmented into discrete parts in a manner that precludes a comprehensive review of the entire development and its cumulative impacts.

Applicant's Response: Complies with condition. Development of the site is phased to maximize approved bond funds. Refer to Exhibit B, sheet PH.00.

F. Duration of General Development Plan. A general development plan shall involve a planning period of up to twenty years. An approved general development plan shall remain in effect until development allowed by the plan has been completed through the detailed development plan process, the plan is amended or superseded, or the plan expires under its stated expiration date either as stated in the approved master plan or planned unit development application or decision of approval.

Applicant's Response: Complies as proposed. The general development plan is valid until August 1, 2044.

17.65.050 - General Development Plan.

A. Existing Conditions Submittal Requirements.
1. Narrative Statement. An applicant shall submit a narrative statement that describes the following:
a. Current uses of and development on the site;
b. For institutions, history or background information about the mission and operational characteristics of the institution that may be helpful in the evaluation of the general development plan, and information about current programs or services;
c. A vicinity map showing the location of the general development plan boundary relative to the larger community, along with affected major transportation routes, transit, and parking facilities. At least one copy of the vicinity map shall be eight and one-half inches by eleven inches in size, and black and white reproducible;
d. Land uses that surround the development site. This may also reference submitted maps, diagrams or photographs;
e. Previous land use approvals within the general development plan boundary and related conditions of approval, if applicable;
f. Existing utilization of the site;
g. Site description, including the following items. May also reference submitted maps, diagrams or photographs:
i. Physical characteristics;
ii. Ownership patterns;
iii. Building inventory;
iv. Vehicle/bicycle parking;
v. Landscaping/usable open space;
vi. FAR/lot coverage;
vii. Natural resources that appear on the City's adopted Goal 5 inventory;
viii. Cultural/historic resources that appear on the City's adopted Goal 5 inventory;
ix. Location of existing trees six inches in diameter or greater when measured four feet above the ground. The location of single trees shall be shown. Trees within groves may be clustered together rather than shown individually; and
x. Geologic hazards pursuant to OCMC 17.44.

h. Existing transportation analysis, including the following items. May also reference submitted maps, diagrams or photographs.
i. Existing transportation facilities, including highways, local streets and street classifications, and pedestrian and bicycle access points and ways;
ii. Transit routes, facilities and availability;
iii. Alternative modes utilization, including shuttle buses and carpool programs; and
iv. Baseline parking demand and supply study (may be appended to application or waived if not applicable).
i. Infrastructure facilities and capacity, including the following items:
i. Water;
ii. Sanitary sewer;
iii. Stormwater management; and
iv. Easements.

Applicant's Response: Not applicable. A GDP was already approved for the proposed development and is on file with the city (GLUA-24-00020 / MAS-24-00001). Therefore, this section in its entirety is not applicable.

17.65.060 - Detailed development plan.

A. Submittal Requirements.
1. A transportation impact study documenting the on- and off-site transportation impacts, as specified in OCMC 17.65.050.B.1.h.i. If such an analysis was submitted as part of the general development plan process, the scope of the report may be limited to any changes which have occurred during the interim and any information listed below which was not a part of the initial study. The on-site portion of the analysis shall include the location, dimensions and names of all proposed streets, alleys, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle access ways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site. The map shall identify existing subdivisions and development and un-subdivided or unpartitioned land ownerships adjacent to the proposed development site and show how existing streets, alleys, sidewalks, bike routes, pedestrian/bicycle access ways and utilities within two hundred fifty feet may be extended to and/or through the proposed development.
2. The location within the development and in the adjoining streets of existing and proposed sewers, water mains, culverts, drain pipes, underground electric, cable television and telephone distribution lines, gas lines, and the location of existing aerial electric, telephone and television cable lines, if any, to be relocated within the development.
3. For portions of the project that would otherwise be subject to site plan and design review, a site plan or plans, to scale, containing the required information identified in OCMC 17.62.040.
4. For residential portions of the project not otherwise subject to site plan and design review, a site plan or plans, to scale, showing the proposed land uses and densities, building locations, lot patterns, circulation patterns, and open space locations and uses.

5. Any other information the Community Development Director deems necessary to show that the proposed development will comply with all of the applicable Chapter 17 requirements.

B. Approval Criteria. The Community Development Director shall approve an application for detailed development plan approval only upon findings that:
1. All development standards and impact mitigation meet the requirements of the approved general development plan, including conditions of approval.
2. Any other applicable zoning regulations that are not addressed in the general development plan are met, unless an adjustment to those regulations has been applied for and is approved. The approval standards applicable to adjustments required as part of a master plan or planned unit development are contained in OCMC 17.65.070.
3. The detailed development plan conforms with the base zone standards, applicable residential design standards, and applicable standards contained in Chapters 17.62, 17.52, 16.12, and 16.08 unless adjusted as provided in OCMC 17.65.070

Applicant's Response: Complies with condition. The traffic impact study conducted in 2018 for the Clackamas Community College Master Plan encompasses proposed development. Since the athletic uses were existing on site at the time of the TIS, the planned site improvements will not result in any more trips than the existing use. Utility plans included in Exhibit B, along with a site plan and additional plans required under OCMC 17.62.040. In addition, Development Services has indicated that a traffic analysis will not be triggered by proposed development. Reference Exhibit F.

17.65.070 - Adjustments to development standards.
A. Purpose. In order to implement the purpose of the City's master plan or planned unit development process, which is to foster the growth of major institutions, major residential, commercial or mixed-use development, and other large-scale development, while identifying and mitigating their impacts on surrounding properties and public infrastructure, an applicant may request one or more adjustments to the applicable development regulations as part of the master planning or planned unit development process, and are not required to go through the variance process pursuant to OCMC Chapter 17.60.
B. Procedure. Requests for adjustments shall be processed concurrently with a general development plan. An adjustment request at the detailed development plan review shall cause the detailed development plan to be reviewed as a Type III application.

Applicant's Response: Applicable. This application will be processed as a Type III application as the applicant is requesting the adjustments listed below.

C. Regulations That May be Adjusted. Adjustments may be allowed for the following items:
1. Dimensional standards of the underlying zone of up to twenty percent, except the perimeter of the development shall meet the underlying zone's setbacks when adjacent to residentially zoned property.

2. Site plan and design standards.
3. Residential design standards.
4. Increase in allowed maximum residential density of up to ten percent.
5. Standards for land division approval.
6. Additional uses allowed with residential projects, or residential component of projects:
a. Notwithstanding the use provisions of the underlying zones, neighborhood commercial uses as defined in Chapter 17.24.020, including restaurants and eating and drinking establishments without a drive-through, retail trade, and services, are permitted on up to ten percent of the net developable area. The neighborhood commercial uses shall be planned and constructed so as to support and be compatible with the entire development and shall not alter the character of the surrounding area so as to substantially preclude, impair or limit the use of surrounding properties for the primary uses listed in the underlying district.
b. Public or private parks and playgrounds, community buildings and/or outdoor recreational facilities, such as swimming pools and tennis courts.
c. Indoor recreational facilities, such as racquetball or tennis courts, fitness centers or swimming pools.
d. Common public and private open space including trails.
e. Primary or accessory uses that are not identified as a permitted or conditional use in the underlying zone but which are defined in the code.

Applicant's Response: Complies as proposed. Applicant is requesting adjustments to dimensional standards of the underlying zone, and site plan and design standards.

1. Adjustment to OCMC 17.54.100.A.3 Fences, Hedges, Walls, and Retaining Walls. Applicant requests an adjustment to maximum height allowed, from 8.5' to 12'.
2. Adjustment to OCMC 17.62.050.H.2 Building Materials. Applicant request an adjustment to allow split face concrete blocks to be the prominent material of the elevation for accessory structures on site. Specifically, the restroom building.
3. Adjustment to OCMC 17.62.055.I.1 Building Design Elements. Applicant requests an adjustment to allow for blank walls up to 76' in length.

D. Regulations That May Not be Adjusted. Adjustments are prohibited for the following items:
1. To allow a primary or accessory use that is not identified as a permitted, or conditional use in the underlying zone, with the exception of the additional uses permitted under OCMC 17.65.070.C.6 above;
2. To any regulation that contains the word "prohibited";
3. As an exception to a threshold review, such as a Type III review process; and
4. Minimum density for residential sites may not be reduced.

Applicant's Response: Not applicable. The applicant is not requesting adjustments to the above regulations.

E. Approval Criteria. A request for an adjustment to one or more applicable development regulations under this section shall be approved if the review body finds that the applicant has shown the following criteria to be met.
1. Granting the adjustment will equally or better meet the purpose of the regulation to be modified;

Applicant's Response: Complies as proposed.

1. Adjustment to OCMC 17.54.100.A.3 Fences, Hedges, Walls, and Retaining Walls. Applicable purpose of regulations are to promote public health, safety, general welfare through standards and regulations designed to provide adequate light and air; to secure safety from fire and other dangers; to prevent the overcrowding of land; to assure opportunities for effective utilization of land; and to facilitate adequate provision for transportation, public utilities, parks and other provisions set forth in the Oregon City Comprehensive Plan and the Oregon Land Conservation and Development Commission Statewide Planning Goals. The applicant believes that a height adjustment to allowable retaining wall height will create a safer condition for site users, since fall risk will be mitigated at the back of the bleacher and edge of retaining wall. The 12' retaining wall will be screened by the track bleachers and the retaining wall will help facilitate site use and circulation, allowing bleachers to be accessed from the top and bottom of the structure, instead of just the bottom. The retaining wall also helps to screen the bleacher from the west of the site, allowing for light and perceived openness across the site. Refer to exhibit G for renderings of bleachers and retaining wall.
2. Adjustment to OCMC 17.62.050.H.2 Building Materials. Applicable purpose of regulations are to conserve the city's natural beauty and visual character and minimize adverse impacts of development on the natural environment as much as is reasonably practicable; ensure that structures and other improvements are properly related to their sites and to surrounding sites and structure. The applicant believes that an adjustment to building materials should be granted because proposed split face buildings are under 1,000 square feet and fit better aesthetically with the existing to remain split face structures on site. The purpose of the code appears to control street facing facades for commercial spaces but does not consider buildings to be used in open space developments.
3. Adjustment to OCMC 17.62.055.I.1 Building Design Elements. Applicable purpose of regulations are to conserve the city's natural beauty and visual character and minimize adverse impacts of development on the natural environment as much as is reasonably practicable; ensure that structures and other improvements are properly related to their sites and to surrounding sites and structure. The applicant believes that allowing for longer blank walls will facilitate site and structure uses. Primary uses are for storage and athletic purposes, and excessive ornamentation does not fit with the surrounding structures. The project is also bond funded, and

applicant wants to ensure funds are spent on facilities that will serve more people as opposed to accessory structures.

2. If more than one adjustment is being requested, the cumulative effect of the adjustments results in a project that is still consistent with the overall purpose of the zone;

Applicant's Response: Complies as proposed. The requested adjustments do not alter the use of the site, therefore the proposal complies with Institutional uses (Playfield, and stadiums). Adjustments are requested to accommodate efficient use of land and to maximize funds available for development.

3. City-designated Goal 5 resources are protected to the extent otherwise required by Title 17;

Applicant's Response: Complies as proposed.

1. Adjustment to OCMC 17.54.100.A.3 Fences, Hedges, Walls, and Retaining Walls. Complies as proposed. Retaining wall is outside Goal 5/NROD boundary and is meant to create a flat landing pad for bleachers to facilitate runoff collection, mitigating potential surface flow into the NROD.
2. Adjustment to OCMC 17.62.050.H.2 Building Materials. Not applicable. Adjustment has no impact on Goal 5 resources.
3. Adjustment to OCMC 17.62.055.I.1 Building Design Elements. Not applicable. Adjustment has no impact on Goal 5 resources.

4. Any impacts resulting from the adjustment are mitigated such that the development does not create significant adverse impacts on adjacent properties;

Applicant's Response: Complies as proposed.

1. Adjustment to OCMC 17.54.100.A.3 Fences, Hedges, Walls, and Retaining Walls. No impacts to adjacent properties. Retaining wall is not visible from adjacent properties and will ensure better stormwater collection onsite.
2. Adjustment to OCMC 17.62.050.H.2 Building Materials. No impacts on adjacent properties, buildings are not visible from adjacent properties.
3. Adjustment to OCMC 17.62.055.I.1 Building Design Elements. No impacts on adjacent properties, buildings are not visible from adjacent properties.

5. If an environmental zone, the proposal has as few significant detrimental environmental impacts on the resource and resource values as is practicable; and

Applicant's Response: Not applicable. Th subject site is not in an environmental zone.

6. The proposed adjustment is consistent with the Oregon City Comprehensive Plan and a concept plan if applicable.

Applicant's Response: Complies as proposed. The requested adjustments support the goals listed in the Oregon City Comprehensive Plan by supporting activities that contribute to health and welcoming activities and a diverse economy, through sports activities held on site:

1. Adjustment to OCMC 17.54.100.A.3 Fences, Hedges, Walls, and Retaining Walls. Will allow for placement of bleachers for track and soccer spectating, and other college events.
2. Adjustment to OCMC 17.62.050.H.2 Building Materials. Will allow for cost effective amenities on site to support sports activities.
3. Adjustment to OCMC 17.62.055.I.1 Building Design Elements. Will allow for cost effective amenities and storage capacity on site to support sports activities.

17.65.80 - Amendments to approved plans.

A. When Required. An amendment to an approved general development plan or detailed development plan is required for any use or development that is not in conformance with the applicable plan, as provided below. The approval criteria contained in OCMC 17.65.050 will apply to general development plan amendments, the approval criteria contained in OCMC 17.65.060 will apply to detailed development plan amendments. The thresholds and procedures for amendments are stated below.

Applicant's Response: Not applicable. The applicant is not amending the approved GDP. This section does not apply.

B. Type III Procedure. Unless the approved general development plan or detailed development plan specifically provides differently, amendments to either plan that require a Type III procedure are:
1. A proposed expansion of the approved boundary;
2. A proposed reduction in the approved boundary that affects a condition of approval, or takes the site out of conformance, or further out of conformance, with a development standard;
3. Proposals that increase the amount, frequency, or scale of a use over ten percent of what was approved (examples include the number of students, patients or members; the number of helicopter flights; the number or size of special events; transportation impacts);
4. New uses not covered in the plan that will increase vehicle trips to the site greater than ten percent of the original amount approved;
5. Increases or decreases in overall floor area of development on the site or number of residential units of over ten percent;
6. A increase/decrease greater than ten percent in the amount of approved or required parking; and
7. Proposed uses or development which were reviewed, but were denied because they were found not to be in conformance with an approved plan.

C. Type II Procedure. Unless an approved plan specifically provides otherwise, amendments to a general development plan or detailed development plan not specifically stated in subsection B or D are processed through a Type II procedure.
D. Type I Procedure. Unless an approved plan specifically provides otherwise, the following amendments to a general development plan or detailed development plan shall be processed through a Type I procedure:
1. Accessory uses and structures that meet applicable development regulations;
2. Reconfiguration of approved parking or landscape designs that do not alter the points of ingress or egress, and do not change the number of parking spaces required, so long as the reconfiguration meets applicable development regulations; and
3. Structures for approved uses that do not exceed one thousand five hundred square feet in size and that meet applicable development regulations

Applicant's Response: Complies as proposed. As dictated in the GPD, all development plans must be processed as a Type III DDP.

17.65.090 - Regulations that apply.
An applicant is entitled to rely on land use regulations in effect on the date its general development plan
application was initially submitted, pursuant to ORS 227.178(3), as that statute may be amended from time to time. After a general development plan is approved, and so long as that general development plan is in effect, an applicant is entitled to rely on the land use regulations in effect on the date its general development plan application was initially submitted, as provided above, when seeking approval of detailed development plans that implement an approved general development plan. At its option, an applicant may request that a detailed development plan be subject to the land use regulations in effect on the date its detailed development plan is initially submitted.

Applicant's Response: Applicable. The applicant requests that the DDP be subject to land use regulations in effect on the date of initial submittal.

EXHIBIT B
Project Drawings

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITY IMPROVEMENTS
PHASE 2 LAND USE

PROJECT TEAM

OWNER
Clackamas Community College
19600 Molalla Ave, Oregon City, OR 97045
Oregon City, Oregon 97045
Contact: Ron Prince
Phone: (503) 594-6787

OWNER'S REPRESENTATIVE
WENEHA GROUP
9450 SW Commerce Circle, Ste 101
Wilsonville, OR 97070
Contact: Dale Kuykendall
Phone: 253.433.3995

LANDSCAPE ARCHITECT
CAMERON MCCARTHY
Landscape Architecture & Planning LLP
160 East Broadway
Eugene, OR 97401
Contact: Jason Gillies, RLA, ASLA
Colin McCarthur, Planner, AICP
Phone: 541.485.7385

GEOTECHNICAL ENGINEER
GRI
16520 SW Upper Boones Ferry Road,
Suite 100
Tigard, OR 97224
Contact: Thomas O'Dell, PE
Phone: 503.641.3478

CIVIL ENGINEER
MAZZETTI
940 Willamette St., #310
Eugene, OR 97401
Contact: Geoff Larsen
Phone: 503.601.5968

STRUCTURAL ENGINEER
Catena Consulting Engineers
1500 NE Irving, Suite 412
Portland, OR 97232
Contact: Jason Thompson
Phone: 503.467.4980

SURVEYOR
COMPASS SURVEYING
4101 SE International Way, Suite 406
Milwaukie, OR 97222
Phone: 53.588.8800

ELECTRICAL ENGINEER
PECi
21187 Highway 99E NE
Aurora, OR 97002
Contact: Corey Donohue, P.E.
Phone: 503.961.0160

GENERAL CONTRACTOR
FIELD TURF, USA
19600 SW 129th Ave.
Tualatin, OR 07062
Contact: Jason Silvis
Phone: 503.691.2484

PROJECT INFORMATION

ADDRESS: 19600 Molalla Ave,
Oregon City, OR 97045

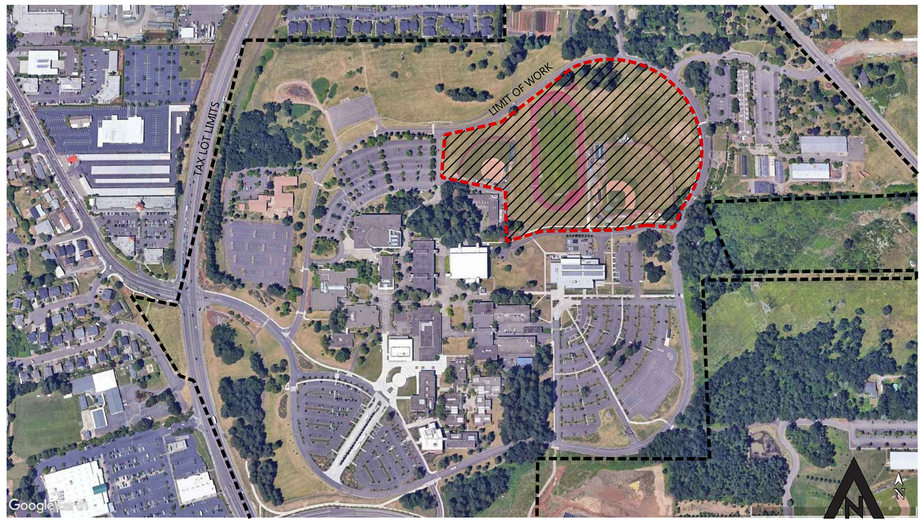
TAX MAP: 3-2E-09C
TAX LOT: #800

PROJECT DESCRIPTION

Improvement to existing Clackamas Community College athletic facilities to include Baseball, Softball, Track and Field, as well as the installation of grandstand seating and circulation pathways.

The project is divided into two (2) phases as identified in the project phasing plan with baseball and softball proposed to be constructed winter 2025/2026. Phase 1 work is generally limited to within the perimeter fence of baseball and softball.

VICINITY MAP



SHEET LIST

Phase 1 sheets are included here for reference however this phase is under separate review by Oregon City (MAS-25-00005).

GENERAL
CS.00 Cover Sheet
CS.01 Vacinity Map
PH.00 Phasing Plan

CIVIL ENGINEERING
CE1.00 Erosion & Sediment Control Notes
CE1.01 Erosion & Sediment Control Notes
CE1.02 ESCP - Existing Conditions
CE1.03 ESCP - Demolition and Mass Grading
CE1.04 ESCP - Utilities and Vertical Construction
CE1.05 ESCP - Final Stabilization
CE1.06 Erosion & Sediment Control Details
CE1.07 Erosion & Sediment Control Details

CD1.01 Site Utility Demolition Plan
C1.01 Civil General Notes and Details
C1.02 Civil Details
C1.03 Civil Details
C1.04 Civil Details
C1.05 Civil Details
C1.06 Civil Details
C1.07 Civil Details
C2.01 Storm Drain Plan - Overall
C2.02 Storm Drain Plan - Track and Field - North
C2.03 Storm Drain Plan - Track and Field - South
C2.04 Storm Drain Plan - Baseball Field (Phase 1)
C2.05 Storm Drain Plan - Softball Field (Phase 1)
C2.06 Storm Drain Plan - Northeast
C2.11 Storm Drain - Cross-Sections
C2.12 Storm Drain Cross-Sections
C2.13 Storm Drain Cross-Sections
C3.01 Sanitary Sewer and Water Plan - Overall
C3.02 Sanitary Sewer and Water Plan - North
C3.03 Sanitary Sewer and Water Plan - South

LANDSCAPE ARCHITECTURE
L0.00 Demolition and Tree Preservation Plan - Overall
L0.01 Demolition and Tree Preservation Plan - Baseball
L0.02 Demolition and Tree Preservation Plan - Softball
L0.03 Demolition and Tree Preservation Plan - Track & Field
L0.04 Demolition and Tree Preservation Plan - Throws Area
L1.00 Site Plan - Overall
L1.01 Site Plan - Baseball (Phase 1)
L1.11 Illustrative Site Plan - Baseball (Phase 1)
L1.02 Site Plan - Softball (Phase 1)
L1.12 Illustrative Site Plan - Softball (Phase 1)
L1.03 Site Plan - Track & Field
L1.13 Illustrative Site Pan - Track & Field
L1.04 Site Plan - Throws Area
L2.11 Field Marking Plan - Baseball (Phase 1)
L2.12 Field Marking Plan - Softball (Phase 1)
L2.13 Field Marking Plan - Track & Field
L3.00 Grading Plan - Overall
L3.01 Grading Plan - Baseball (Phase 1)
L3.02 Grading Plan - Softball (Phase 1)
L3.03 Grading Plan - Track and Soccer
L3.04 Grading Plan - Throws Area
L4.00 Subgrade Drainage Plan - Overall
L4.01 Subgrade Drainage Plan - Baseball (Phase 1)
L4.02 Subgrade Drainage Plan - Softball (Phase 1)
L4.03 Subgrade Drainage Plan - Track & Field
L6.00 Tree Landscape Plan
L6.01 Landscape Plan - Baseball (Phase 1)
L6.02 Landscape Plan - Softball (Phase 1)
L6.03 Landscape Plan - Track & Field
L6.04 Landscape Plan - Throws Area
L7.01 Site Details
L7.02 Site Details
L7.04 Field Details
L7.08 Segmental Wall Details
L8.01 Fire Access Plan

STRUCTURAL ENGINEERING
S001 General Structural Notes
S002 Symbols & Abbreviations
S003 Special Inspection Requirements
S201 Bleacher & Canopy Plans
S202 Hitting Barn Foundation Plans
S210 Dugout Plans (Phase 1)
S301 Sections
S501 Concrete Details
S510 Concrete Details
S511 Details
S610 Steel Details

ELECTRICAL ENGINEERING
E0.01 Legends, Notes and Abbreviations
E0.02 Division 26 Specifications
E0.03 Luminaire and Controls Schedule
ED1.01 Electrical and LV Site Demolition
E1.00 Electrical - Overall Site
E1.01 Baseball Site Plan
E1.02 Softball Site Plan
E1.03 Track Site Plan
E2.01 Enlarged Plan Views - Hitting Barns
E2.02 Enlarged Plan Views - Press Boxes
E2.03 Enlarged Plan Views - Dugouts
E5.00 Electrical Details and Panel Elevations
E6.01 Electrical One-Line Diagram
E6.02 Panel Schedules
E6.03 Panel Schdules

ARCHITECTURAL
A0.00 Architectural Site Plan
A2.01 Large Hitting Barn Plans
A3.01 Small Hitting Barn Plans
A4.01 Restroom Building Plans
A5.01 Grandstand Plans
A5.02 Grandstand Plans
A5.03 Grandstand Plans
A5.04 Grandstand Plans
A5.05 Grandstand Plans
A5.06 Grandstand Plans
A5.07 Grandstand Plans
A5.08 Grandstand Plans
A6.01 Baseball/Softball Bleachers w/ Pressbox

CALL BEFORE YOU DIG
1-800-322-2344

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS
CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

Drawn By: CD/OP
Checked: JG
Project #: 25.020
Date: Oct. 9, 2025

Rev. #: Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
COVER SHEET

CS.00

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VICINITY MAP



0' 100' 200' 400'

1" = 200'-0"

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CLACKAMAS COMMUNITY COLLEGE ATHLETICS FACILITIES IMPROVEMENTS

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100% DESIGN DEVELOPMENT

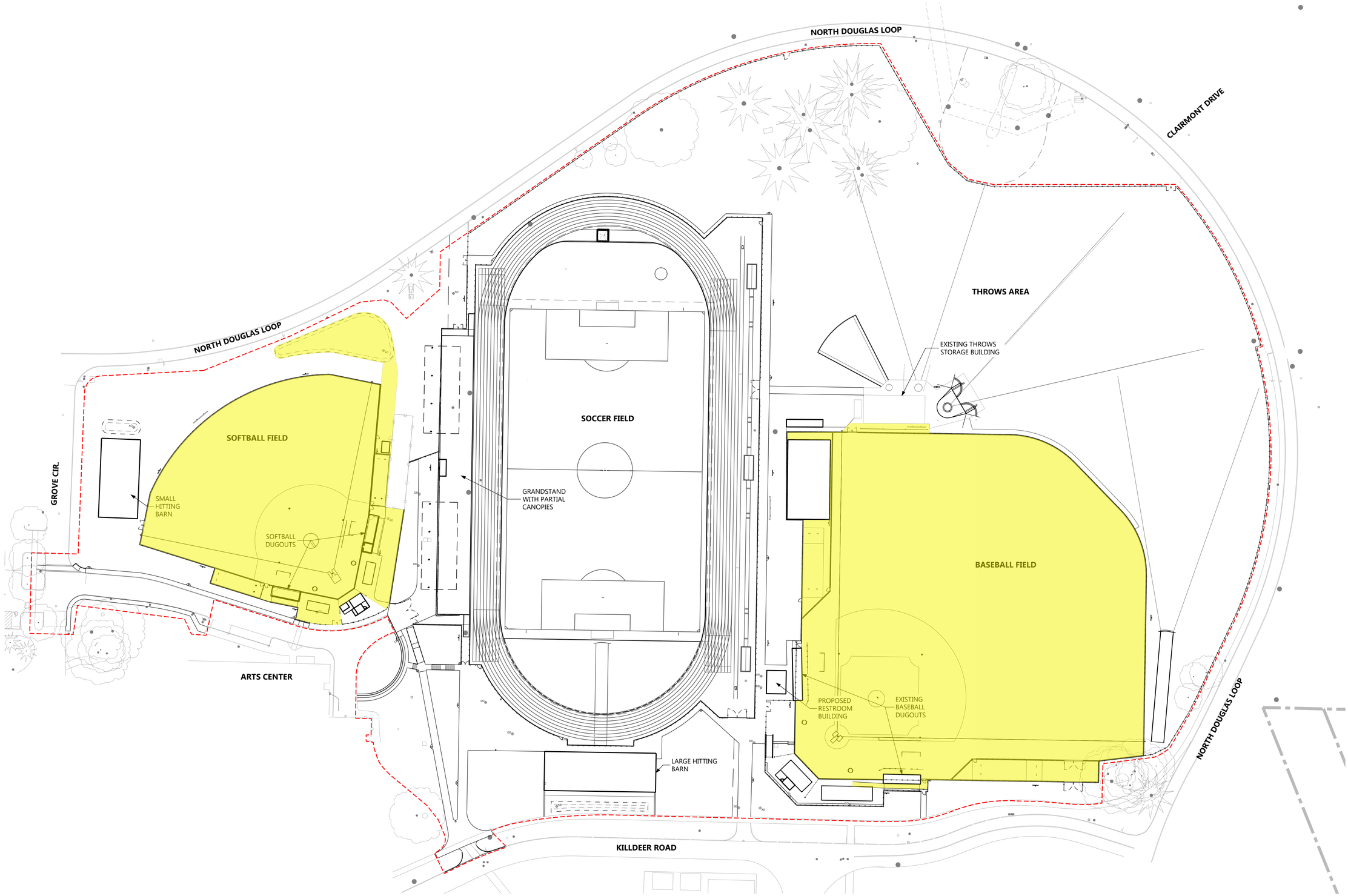
SHEET TITLE

VACINITY MAP

CS.01

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LEGEND

- LIMIT OF WORK LINE
- PHASE 1 EXTENTS

PHASING NOTES

1. All survey information provided by:
   COMPASS Land Surveyors
   4101 SE International Way, Suite 406
   Milwaukie, Oregon 97222
   T: 503-653-9093
   Survey was conducted in May 2025. Improvements to the Throws Area were completed after survey was conducted. Conditions shown on plans may vary from on-site conditions.

2. Limits Shown are for general limits of proposed work in phase 1 (baseball & softball field construction). Supporting utility or under-ground infrastructure may extend beyond this limits, refer to specific plan information for details.

0' 20' 40' 80'

1" = 40'-0"

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CLACKAMAS COMMUNITY COLLEGE ATHLETICS FACILITIES IMPROVEMENTS

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Checked:	JG
Project #:	25.020
Date:	Oct. 9, 2025

Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE

PHASING PLAN

PH.00

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DEVELOPER/OWNER

NAME: TARKETT SPORTS
CONTACT: JASON SILVIS
ADDRESS: 1800 BLANKENSHIP RD, SUITE 315, WEST LINN, OR 97068
PHONE: 503-752-8853

ESCP PREPARER

MAZZETTI
CONTACT: GEOFF LARSEN, PE
940 WILLAMETTE STREET, SUITE 310
EUGENE, OR 97401
PHONE: 503-601-5968

ENGINEERING FIRM

MAZZETTI
CONTACT: GEOFF LARSEN, PE
940 WILLAMETTE STREET, SUITE 310
EUGENE, OR 97401
PHONE: 503-601-5968

GENERAL CONTRACTOR

CLACKAMAS COMMUNITY COLLEGE
CONTACT: RON PRINCE
ADDRESS: 19600 MOLALLA AVE, OREGON CITY, OR 97045
PHONE: 503-594-6787

SITE CONTRACTOR/ BMP INSTALLER AND MAINTAINER

NAME: TARKETT SPORTS
CONTACT: KELLY FITZPATRICK
ADDRESS: 1800 BLANKENSHIP RD, SUITE 315, WEST LINN, OR 97068
PHONE: 503-780-9760

SURVEYOR

COMPASS LAND SURVEYORS
CONTACT: JOSEPH MCALLISTER
ADDRESS: 4101 SE INTERNATIONAL WAY, SUITE 406, MILWAUKIE, OREGON, 97222
PHONE: 503-653-9093

GEOTECHNICAL ENGINEER

GRI
CONTACT: THOMAS O'DELL
ADDRESS: 16520 SW UPPER BOONES FERRY ROAD, SUITE 100
TIGARD, OR 97224
PHONE: 503-641-3478

PERMITTEE'S SITE INSPECTOR: KELLY FITZPATRICK
COMPANY/AGENCY: TARKETT SPORTS
PHONE: 503-780-9760
FAX:
E-MAIL: KELLY.FITZPATRICK@TARKETTSPORTS.COM
DESCRIPTION OF EXPERIENCE: CESCL #ECO-3-11072212, EXPIRES 11/07/2025

INSPECTORS MUST HAVE AND MAINTAIN CERTIFICATION BY PROGRAM APPROVED BY DEQ

SHEET INDEX

CE1.00	EROSION AND SEDIMENT CONTROL NOTES
CE1.01	EROSION AND SEDIMENT CONTROL NOTES
CE1.02	EROSION AND SEDIMENT CONTROL PLAN – EXISTING CONDITIONS
CE1.03	EROSION AND SEDIMENT CONTROL PLAN – DEMO & MASS GRADING
CE1.04	EROSION AND SEDIMENT CONTROL PLAN – UTILITIES & VERTICAL CONSTRUCTION
CE1.05	EROSION AND SEDIMENT CONTROL PLAN – FINAL STABILIZATION
CE1.06	EROSION AND SEDIMENT CONTROL DETAILS
CE1.07	EROSION AND SEDIMENT CONTROL DETAILS

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN O.A.R. 952-001-0010 THROUGH O.A.R. 652-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO (2) BUSINESS DAYS BEFORE COMMENCING AND EXCAVATION. CALL 503-246-6699.

GENERAL CONSTRUCTION SITE MANAGEMENT PLAN (CSMP) NOTES

STOCK PILES

1. MANAGE STOCKPILES IN ACCORDANCE WITH 1200-C PERMIT SECTION 2.2.B. MANAGE STOCKPILES AND LOCATE THEM AWAY FROM CONSTRUCTION ACTIVITIES, AND LAND CLEARING DEBRIS PILES THAT CONTAIN SEDIMENT OR SOIL AS FOLLOWS:
   - A. LOCATE THE PILES OUTSIDE OF ANY NATURAL BUFFERS ESTABLISHED UNDER SECTION 2.2.1 AND AWAY FROM ANY STORMWATER CONVEYANCES, DRAIN INLETS, AND AREAS WHERE STORMWATER FLOW IS CONCENTRATED;
   - B. INSTALL A SEDIMENT BARRIER (E.G. BERMS, DIKES, FIBER ROLLS, SILT FENCES, SANDBAGS, GRAVEL BAGS, OR STRAW BALE) ALONG ALL DOWNGRADIENT PERIMETER AREAS;
   - C. SOIL STOCKPILES MUST BE STABILIZED OR COVERED AT THE END OF EACH WORKDAY, AND BEFORE WEEKENDS, HOLIDAYS, OR EXTENDED BREAKS IN CONSTRUCTION ACTIVITIES IF NEEDED BASED ON WEATHER FORECASTS;
   - D. PROVIDE COVER (E.G. TARPS, BLOWN STRAW OR HYDROSEED) OR APPROPRIATE TEMPORARY STABILIZATION CONSISTENT WITH SECTION 2.2.2D) FOR ANY PILES NOT IN USE; AND
   - E. HOSING DOWN OR SWEEPING SOIL OR SEDIMENT ACCUMULATED ON PAVEMENT OR OTHER IMPERVIOUS SURFACES INTO ANY STORMWATER CONVEYANCE, STORM DRAIN INLET, OR WATER OF THE STATE IS PROHIBITED.

CONCRETE TRUCK WASH AREA

1. PROVIDE MINIMUM OF ONE CONCRETE TRUCK WASH AREA FOR USE ON CLEANING OF DEPARTING CONCRETE TRUCKS.
2. CONCRETE TRUCK WASH AREAS SHALL BE LOCATED ADJACENT TO ANY CONSTRUCTION ENTRANCE USED BY DEPARTING CONCRETE TRUCKS.
3. CONCRETE TRUCK WASH AREAS SHALL BE CONSTRUCTED OF ONE OF THE FOLLOWING:
   - A. STRAW BALE BARRIER WITH PLASTIC LINER.
   - B. STACKED SAND BAGS OR BIO-BAGS AS A BARRIER WITH PLASTIC LINER.
   - C. PORTABLE CONTAINMENT POND.
4. SUGGESTED LOCATIONS OF CONCRETE TRUCK WASH AREA(S) ARE SHOWN ON THE EROSION SEDIMENTATION CONTROL PLANS.
5. FINAL LOCATION OF CONCRETE TRUCK WASH AREA(S) SHALL BE PROVIDED BY THE CONTRACTOR TO THE CITY AT THE TIME OF THE INITIAL ESC INSPECTION.

STABILIZED CONSTRUCTION ENTRANCE

1. STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE ESTABLISHED AS SOON AS POSSIBLE AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO PUBLIC RIGHT-OF-WAY. THERE ARE NO EXISTING PAVED ACCESS POINTS SHOWN.
2. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY, IF NECESSARY, TO MAINTAIN PROPER FUNCTION OF THE PAD.
3. INSTALL VEHICLE BARRIERS AT ANY SITE ENTRANCE NOT USED AS STABILIZED CONSTRUCTION ENTRANCE TO RESTRICT SITE ACCESS.
4. IF ESTABLISHED ENTRANCES DO NOT ADEQUATELY REMOVE DIRT AND MUD FROM VEHICLE WHEELS SUCH THAT MUD AND DIRT TRACKING IS EVIDENT OFF SITE, ADDITIONAL MEASURES MUST BE TAKEN. SUCH MEASURES MAY INCLUDE WHEEL WASHING BEFORE VEHICLES LEAVE THE SITE OR OTHER CONSTRUCTION TECHNIQUES/WORK OPERATION MODIFICATIONS.
5. WHEEL WASHING SHOULD BE DONE ON THE GRAVEL PAD AND WASH WATER SHOULD DRAIN THROUGH A SILT-TRAPPING STRUCTURE PRIOR TO LEAVING THE CONSTRUCTION SITE. REFER TO CITY STD DWG RD1060, SHEET C1.06.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN UP ANY SEDIMENT/MUD TRACKED INTO ADJACENT RIGHT-OF-WAY.

EXISTING TREE PROTECTION

1. CONTRACTOR SHALL IDENTIFY AND MARK ALL EXISTING TREES TO BE PROTECTED PRIOR TO CONSTRUCTION ACTIVITY.
2. PROVIDE TREE PROTECTION MEASURES PER LANDSCAPE DRAWINGS.
3. SAFETY FENCING SHALL BE MAINTAINED AND REPAIRED, AS NECESSARY, UNTIL FINAL LANDSCAPING IS INSTALLED.

EROSION CONTROL SLOPE MITIGATION

PRIOR TO A SITE'S APPROVAL, ALL DISTURBED, STEEP SLOPES (EXCEEDING 2 HORIZONTAL TO 1 VERTICAL - 2:1), MUST BE TREATED FOR LONG-TERM EROSION CONTROL. DISTURBED GROUND OF LESSER SLOPES SHALL BE TREATED FOR EROSION CONTROL IF EROSION WOULD TRANSPORT SEDIMENTS INTO EITHER THE RIGHT OF WAY OR A NEIGHBORING PROPERTY. SEE DISTURBED GROUND, ESPECIALLY STEEP SLOPES. SEEDING REQUIREMENTS SHALL BE AS PER CITY OF NEWPORT ENGINEERING DESIGN AND CONSTRUCTION STANDARDS MANUAL.

SCHEDULE FOR CONSTRUCTION AND IMPLEMENTATION OF ESC CONTROLS

1. HOLD THE PRE-CONSTRUCTION MEETING.
2. FLAG OR FENCE CLEARING LIMITS (AS STATED ON THE APPROVED PLANS).
3. INSTALL ALL EROSION CONTROL BEFORE MOBILIZATION, GRUBBING AND/OR GRADING BEGINS. WATER TRUCKS OR OTHER MEANS OF CONTROLLING DUST MUST BE PRESENT ON SITE AND/OR HAVE A TACIFIER APPLIED TO DISTURBED SOILS.
4. CALL TO SCHEDULE AN ON-SITE INSPECTION OF ALL EROSION MEASURES AFTER INSTALLATION AND PRIOR TO COMMENCING SOIL DISTURBANCE OPERATIONS.
5. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF NEWPORT STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
6. INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY; DAILY DURING/AFTER A RUNOFF PRODUCING STORM EVENT). FIX, REPLACE, OR ADD ANY EROSION AND SEDIMENT CONTROL BMPS IMMEDIATELY UPON FINDING THEY ARE OUT OF CONFORMANCE OR NOT FUNCTIONING.
7. MAINTENANCE AND REPAIR:
   - a. REMOVE SEDIMENT FROM BEHIND A SEDIMENT FENCE WHEN IT HAS REACHED A HEIGHT OF ONE-THIRD (1/3) OF THE FENCE HEIGHT AND BEFORE FENCE REMOVAL.
   - b. SEDIMENT MUST BE REMOVED FROM BEHIND BIO BAGS, STRAW WATTLES, AND OTHER BARRIERS WHEN IT HAS REACHED A HEIGHT OF TWO (2) INCHES AND ALSO BEFORE BMP REMOVAL.
   - c. SEDIMENT MUST BE REMOVED FROM A SEDIMENT BASIN OR CATCH BASIN WHEN IT HAS FILLED FIFTY (50) PERCENT OF THE FACILITY STORAGE CAPACITY (SUMP AREA) AND AT THE COMPLETION OF THE PROJECT.
   - d. WHEN NO LONGER NEEDED, REMOVE TEMPORARY ESC BMPS WITHIN THIRTY (30) DAYS.
   - e. PERMANENTLY STABILIZE AREAS THAT ARE DISTURBED WITHIN TEN (10) DAYS OF THE PROJECT COMPLETION OR WHEN NO LONGER CONDUCTING WORK.
   - f. WHEN SOILS ARE TRACKED ONTO PAVEMENTS, SAID PAVEMENTS SHALL BE IMMEDIATELY SWEPT AND KEPT CLEAN.
   - g. CITY EXPECTS CONTRACTORS TO TRACK WEATHER CONDITIONS AND FORECASTS AND STABILIZE SITES AS NEEDED TO PREVENT EROSION.
8. PERFORM INSPECTIONS BASED ON THE INSPECTION FREQUENCY TABLE.
9. SWEEP STREETS ADJACENT TO CONSTRUCTION ENTRANCES A MINIMUM OF ONCE PER WEEK
10. UPON COMPLETION OF THE PROJECT, STABILIZE ALL DISTURBED AREAS AND REMOVE BMP'S IF APPROPRIATE.

WASTE MANAGEMENT

1. STORE WASTE IN COVERED SECURED DUMPSTER AT LOCATION SHOWN ON DRAWINGS.
2. AVOID WASHING OF APPLICATORS AND CONTAINERS ONSITE TO THE EXTENT POSSIBLE.
3. WHERE WASHING OF APPLICATORS OR CONTAINERS IS PERFORMED ONSITE, THE ACTIVITY MUST BE RESTRICTED TO THE WASTE COLLECTION AND CONTAINMENT AREA SHOWN ON THE DRAWINGS. PROVIDE CONTAINMENT AND ADDITIONAL PROTECTIONS TO COMPLY WITH THE SCHEDULE A.2.3.9 NOTES SHOWN HEREON.

GENERAL EROSION AND SEDIMENTATION CONTROL NOTES

1. WHEN RAINFALL AND RUNOFF OCCURS, A KNOWLEDGEABLE AND EXPERIENCED PERSON IN THE PRINCIPLES, PRACTICES, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS WHO WORKS FOR THE PERMITTEE MUST PROVIDE DAILY INSPECTIONS OF THE EROSION AND SEDIMENT CONTROLS AND DISCHARGE OUTFALLS.
2. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND FROM OCTOBER 1 THROUGH MAY 31ST EACH YEAR.
3. DURING WET WEATHER PERIOD, TEMPORARY STABILIZATION OF THE SITE MUST OCCUR AT THE END OF EACH WORK DAY.
4. SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE AT ALL TIMES DURING CONSTRUCTION. THEY MUST REMAIN IN PLACE UNTIL PERMANENT VEGETATION OR OTHER PERMANENT COVERING OF EXPOSED SOIL IS ESTABLISHED.
5. ALL ACTIVE INLETS MUST HAVE SEDIMENT CONTROLS INSTALLED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
6. SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED. THE CAUSE OF THE SEDIMENT RELEASE MUST BE FOUND AND PREVENTED FROMCAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PREFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIMEFRAME.
7. SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATER BODIES.
8. SEDIMENT MUST BE REMOVED FROM BEHIND ALL SEDIMENT CONTROL MEASURES WHEN IT HAS REACHED A HEIGHT OF 1/3-RD THE BARRIER HEIGHT AND PRIOR TO THE CONTROL MEASURES REMOVAL.
9. CLEANING OF ALL STRUCTURES WITH SUMPS MUST OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 50% AND AT COMPLETION OF PROJECT.
10. ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.
11. THE PERMITTEE MUST PROPERLY MANAGE HAZARDOUS WASTES, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR UTILIZED DURING CONSTRUCTION.
12. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS. NUTRIENT RELEASES FROM FERTILIZERS TO SURFACE WATERS MUST BE MINIMIZED. TIME RELEASE FERTILIZERS SHOULD BE USED AND CARE SHOULD BE MADE IN APPLICATION OF FERTILIZERS WITHIN ANY WATER WAY RIPARIAN ZONE.
13. OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH CURRENT CLEAN WATER SERVICES STANDARDS AND STATE, AND FEDERALREGULATIONS.
14. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BOUNDARIES OF THE CLEARING LIMITS, VEGETATED BUFFERS, AND ANY SENSITIVE AREAS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED IN THE FIELD. UNLESS OTHERWISE APPROVED, NO DISTURBANCE IS PERMITTED BEYOND THE CLEARING LIMITS. THE OWNER/PERMITTEE MUST MAINTAIN THE DELINEATION FOR THE DURATION OF THE PROJECT. NOTE: TREE PROTECTION FENCE OR TAPE TO BE DELINEATED WITH ORANGE CONSTRUCTION FENCE OR APPROVED EQUAL.
15. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BMPS THAT MUST BE INSTALLED ARE GRAVEL CONSTRUCTION ENTRANCE, PERIMETER SEDIMENT CONTROL, AND INLET PROTECTION. THESE BMPS MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT.
16. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1ST; THE TYPE AND PERCENTAGES OF SEED IN THE MIX ARE AS IDENTIFIED ON THE PLANS OR AS SPECIFIED BY THE DESIGN ENGINEER.
17. WATERTIGHT TRUCKS MUST BE USED TO TRANSPORT SATURATED SOILS FROM THE CONSTRUCTION SITE. AN APPROVED EQUIVALENT IS TO DRAIN THE SOIL ON SITE AT A DESIGNATED LOCATION USING APPROPRIATE BMPS; SOIL MUST BE DRAINED SUFFICIENTLY FORMINIMAL SPILLAGE.
18. ALL PUMPING OF SEDIMENT LADEN WATER MUST BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (I.E. FILTER BAG).
19. THE ESC PLAN MUST BE KEPT ONSITE. ALL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED PROPERLY TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER A SURFACE WATER SYSTEM, ROADWAY, OR OTHER PROPERTIES.
20. THE ESC MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE MEASURES SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
21. WRITTEN ESC LOGS ARE SUGGESTED TO BE MAINTAINED ONSITE AND AVAILABLE TO DISTRICT INSPECTORS UPON REQUEST.
22. IN AREAS SUBJECT TO WIND EROSION, APPROPRIATE BMPS MUST BE USED, WHICH MAY INCLUDE THE APPLICATION OF FINE WATER SPRAYING, PLASTIC SHEETING, MULCHING, OR OTHER APPROVED MEASURES.
23. ALL EXPOSED SOILS MUST BE COVERED, AT END OF BUSINESS DAY, DURING WET WEATHER PERIOD, FROM OCTOBER 1 – MAY 31.

DEQ STANDARD EROSION AND SEDIMENT CONTROL PLAN (ESCP) NOTES

1. INCLUDE A LIST OF ALL PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (e.g. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4.c.ii)
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ's 1200-C PERMIT REQUIREMENTS. (SECTION 6.5.q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.4)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (e.g., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FEET OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SECTION 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SECTION 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (e.g., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (e.g., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPs SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPs MUST BE IN PLACE PRIOR TO LAND DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.f)
22. CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, i.e., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPs TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES, AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17.a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPs WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPs MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5.b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5.c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5.d)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN-UP OF SEDIMENT SHALL BE PREFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIMEFRAME. (SECTION 2.2.19.g)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT ANY PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.f)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

1200-C PERMIT SCHEDULE A NOTES - PROJECT SPECIFIC

LIST OF POLLUTANT-GENERATING ACTIVITIES AND INVENTORY OF POLLUTANTS ASSOCIATED WITH ACTIVITY:

A. CLEARING, GRADING, EXCAVATION: SEDIMENT, WITH POTENTIAL EROSION OF SEDIMENT THROUGHOUT THE SITE.
B. TEMPORARY SEEDING: FERTILIZERS, WITH POTENTIAL SPILLS AND LEAKS THROUGHOUT LANDSCAPE PORTION OF THE SITE.
C. LANDSCAPE SOIL PREPARATION: FERTILIZERS (NONE ALLOWED IN STORMWATER TREATMENT FACILITIES), WITH POTENTIAL SPILLS AND LEAKS THROUGHOUT LANDSCAPE PORTION OF THE SITE.
D. PAINTING: PAINT, WITH POTENTIAL SPILLS AND LEAKS AROUND THE PROPOSED BUILDINGS.
E. CLEANING: SOLVENTS, WITH POTENTIAL SPILLS AND LEAKS AROUND THE PROPOSED BUILDINGS.
F. WATERPROOFING: CAULK, WITH POTENTIAL SPILLS AND LEAKS AROUND THE PROPOSED BUILDINGS.

RAIN GAUGE LOCATION:
RAIN GAUGE STATION: LOCATED AT 555 LIBERTY RD SE, SALEM, OREGON, 97302
LATITUDE: 45.246587° N
LONGITUDE: -122.77095° W

1200-C PERMIT SCHEDULE A NOTES - GENERAL

1.4 AUTHORIZED NON-STORMWATER DISCHARGES

THE FOLLOWING NON-STORM

CEMENT-AMENDMENT NOTES

1. RUNOFF FROM CEMENT-AMENDED SUBGRADE MUST COMPLY WITH THE REQUIREMENTS OF THE 1200-C PERMIT SECTIONS 2.2.17, 2.2.18, AND 6.6.1 (SEE BELOW).

2. CONTRACTOR IS RESPONSIBLE FOR DESIGN OF COLLECTION, CONVEYANCE, STORAGE, PH MONITORING, AND PH NEUTRALIZATION SYSTEMS. THE STORAGE AND NEUTRALIZATION SYSTEM MUST BE DESIGNED BY AN OREGON REGISTERED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR PER SECTION 2.2.17 OF THE 1200-C PERMIT.

3. CEMENT AMENDMENT RUNOFF ALTERNATIVES (TO BE SELECTED BY CONTRACTOR):

- OPTION 1: RUNOFF FROM CEMENT-AMENDED SUBGRADE MUST BE DIVERTED TO SEDIMENTATION TANKS IN ACCORDANCE WITH THE 1200-C PERMIT SECTION 2.2.17 AND 2.2.18. PROVIDE PH MONITORING AND NEUTRALIZATION IN BATCHES PRIOR TO DISCHARGE TO THE RECEIVING STORM DRAIN SYSYTEM. CONTINUOUS DISCHARGE NOT PERMITTED. CONTRACTOR RESPOSIBLE FOR DESIGN OF COLLECTION, STORAGE, CONVEYANCE, AND NEUTRALIZATION SYSTEM
- OPTION 2: COVER THE CEMENT-AMENDED SUBGRADE WITH PLASTIC SHEETING UNTIL CURING PERIOD IS OVER SO RAINFALL CANNOT CONTACT CEMENT-AMENDED SUBGRADE. PRIOR TO REMOVING SHEETING, TEST PH POTENTIAL OF SUBGRADE BY APPLYING WATER TO SURFACE AND TESTING PH.

CEMENT-AMENDMENT PERMIT REQUIREMENTS - 1200-C

2.2.17 ENGINEERED SEDIMENT BASIN OR SIMILAR IMPOUNDMENT INSTALLED

IF AN ENGINEERED SEDIMENT BASIN OR SIMILAR IMPOUNDMENT IS INSTALLED THE FOLLOWING MUST TAKE PLACE:

a. THE DESIGN MUST BE PREPARED AND STAMPED BY AN OREGON REGISTERED PROFESSIONAL ENGINEER.
b. THE BASIN OR IMPOUNDMENT MUST BE SITUATED OUTSIDE OF ANY WATER OF THE STATE, ANY NATURAL WATER QUALITY BUFFERS, AND ANY POST-CONSTRUCTION STORMWATER FACILITY DESIGNED AND ENGINEERED TO INFILTRATE (UNLESS THE STORMWATER FACILITY IS CONVERTED TO POST-CONSTRUCTION DESIGN STANDARDS PRIOR TO PERMIT COVERAGE TERMINATION).
c. THE BASIN OR IMPOUNDMENT MUST BE DESIGNED TO AVOID COLLECTING WATER FROM WETLANDS;
d. THE BASIN OR IMPOUNDMENT MUST BE DESIGNED TO PROVIDE STORAGE FOR EITHER OF THE FOLLOWING:
   I. FIND THE SITE'S ESTIMATED 2-YEAR, 24-HOUR PRECIPITATION. THE 2-YEAR, 24-HOUR PRECIPITATION CAN BE FOUND USING THE PRECIPITATION FREQUENCY DATA SERVER (PFDS) DEVELOPED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION'S (NOAA) NATIONAL WEATHER SERVICE (NWS) OR THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT) PRECIPITATION DATA VIEWER; OR
   II. 3,600 CUBIC FEET PER ACRE DRAINED.
e. THE DESIGN MUST UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE OF THE SEDIMENT BASIN OR SIMILAR IMPOUNDMENT UNLESS INFEASIBLE.
f. THE DESIGN MUST USE EROSION CONTROLS AND VELOCITY DISSIPATION DEVICES TO PREVENT EROSION AT INLETS AND OUTLETS; AND
g. FOLLOW MAINTENANCE REQUIREMENTS PER SECTIONS 2.1.4 AND 2.1.5.

2.2.18 ENGINEERED SEDIMENT BASIN OR SIMILAR IMPOUNDMENT MUST BE INSTALLED WITH ENGINEERED SOILS

AN ENGINEERED SEDIMENT BASIN, SIMILAR IMPOUNDEMENT, OR ENGINEERED STORAGE SYSTEM (E.G. BAKER TANK) MUST BE INSTALLED ON SITES WITH ENGINEERED SOILS AS FOLLOWS:

a. FOR CONSTRUCTION ACTIVITY INVOLVING THE USE OF ENGINEERED SOILS (SOIL AMENDMENTS INCLUDING, BUT NOT LIMITED TO PORTLAND CEMENT-TREATED BASE (CTB), CEMENT KILN DUST (CKD), OR FLYASH), THE OPERATOR MUST INSTALL AN ENGINEERED SEDIMENT BASIN OR SIMILAR IMPOUNDMENT IN ACCORDANCE WITH SECTION 4.4 (E.G. TRAP, POND) TO TREAT HIGH PH RUNOFF (I.E. ABOVE 8.5 STANDARD UNITS) BEFORE DISCHARGE. THE OPERATOR IS REQUIRED TO DETERMINE THE ACCEPTABLE PH WATER QUALITY CRITERIA RANGE OF SITE DISCHARGE BASED ON CRITERIA OF THE RECEIVING WATERBODY ACCORDING TO OAR 340-041-021. IF NECESSARY THE OPERATOR MUST ADJUST OR NEUTRALIZE THE HIGH PH WATER UNTIL IT IS IN THE RANGE OF PH STANDARD UNITS (SU) USING AN APPROPRIATE TREATMENT BMP SUCH AS CARBON DIOXIDE (CO2) SPARGING OR DRY ICE.
b. THE OWNER/OPERATOR MUST OBTAIN WRITTEN APPROVAL FROM DEQ BEFORE USING ANY FORM OF CHEMICAL TREATMENT OTHER THAN CO2 SPARGING OR DRY ICE (SEE SECTION 3). SEE SECTION 8.6.1 FOR PH SAMPLING REQUIREMENTS.

6.6.1. MONITORING THE PH OF STORMWATER CAPTURED IN SEDIMENT BASINS/IMPOUNDMENTS WHEN ENGINEERED SOILS ARE USED.

IF CONSTRUCTION ACTIVITY INVOLVES THE USE OF ENGINEERED SOILS (SOIL AMENDMENTS INCLUDING, BUT NOT LIMITED TO PORTLAND CEMENT-TREATED BASE, CEMENT KILN DUST, OR FLY ASH), THE REGISTRANT MUST CONDUCT AND DOCUMENT PH MONITORING OF STORMWATER CAPTURED IN THE SEDIMENT IMPOUNDMENT AS DESCRIBED BELOW:

a. THE REGISTRANT MUST BEGIN THE PH MONITORING PERIOD WHEN THE ENGINEERED SOILS ARE FIRST EXPOSED TO PRECIPITATION AND MUST CONTINUE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE OCCURRENCE OF DISCHARGE FROM THE SITE, OR THE OCCURRENCE OF A STORM EVENT OF 0.10 INCHES OR GREATER UNTIL FINAL STABILIZATION OF THE AREA OF ENGINEERED SOILS IS ESTABLISHED.
b. DOCUMENT THE DATE WHEN SOIL AMENDMENTS WERE ADDED AND FINAL STABILIZATION ACHIEVED IN THE INSPECTION REPORT PER SECTION 8.5.
c. THE REGISTRANT MUST MONITOR THE PH OF STORMWATER IN THE SEDIMENT BASINS/IMPOUNDMENTS AND AT DISCHARGE LOCATIONS THAT RECEIVE STORMWATER RUNOFF FROM THE AREA WHERE ENGINEERED SOILS WERE USED BEFORE THE STORMWATER DISCHARGES TO SURFACE WATERS.
d. THE BENCHMARK VALUE FOR PH IS DEFINED IN STANDARD UNITS (SU), AND DETERMINED BY THE RIVER BASIN CONTAINING THE RECEIVING WATERBODY ACCORDING TO OAR 340-041-0021. ANYTIME MONITORING INDICATES THAT THE PH OF THE SITE'S STORMWATER IS THE MAXIMUM ALLOWED SU OR GREATER, THE REGISTRANT MUST EITHER:
   i. PREVENT THE HIGH PH WATER FROM ENTERING STORM SEWER SYSTEMS OR SURFACE WATERS; OR
   ii. ADJUST OR NEUTRALIZE THE HIGH PH WATER UNTIL IT IS IN THE RANGE OF PH SU ACCEPTABLE FOR DISCHARGE TO THE RIVER BASIN CONTAINING THE RECEIVING WATERBODY BY USING AN APPROPRIATE TREATMENT BMP SUCH AS CARBON DIOXIDE (CO2) SPARGING OR DRY ICE. THE REGISTRANT MUST OBTAIN WRITTEN PERMISSION FROM DEQ OR AGENT BEFORE USING ANY FORM OF CHEMICAL TREATMENT OTHER THAN CO2 SPARGING OR DRY ICE PER SECTION 2.
e. THE REGISTRANT MUST PERFORM PH MONITORING ON SITE WITHIN 15 MINUTES OF SAMPLE COLLECTION WITH AN ACCURATELY CALIBRATED PH METER. THE REGISTRANT MUST RECORD THE PH MONITORING RESULTS AND ANY PH ADJUSTMENT TREATMENTS IN THE INSPECTION REPORT.

1200-C PERMIT CEMENT TREATMENT SITE-SPECIFIC NOTES

ENGINEERED SEDIMENT BASIN FOR CEMENT TREATMENT BASES (CTB)-BASEBALL FIELD

CTB/SEDIMENT BASINS HAVE BEEN DESIGNED IN ACCORDANCE WITH 1200-C PERMIT SECTIONS 2.2.17 AND 2.2.18. SIZING CALCULATIONS ARE SUMMARIZED BELOW:

pH ADJUSTMENT IMPOUNDMENT SIZING SUMMARY TABLE

NAME	DESCRIPTION	DEPTH	AVAILABLE VOLUME	CONTRIBUTING AREA (CEMENT TREATED SOIL)	REQUIRED VOLUME (2.2.17.4.4.d.2)
BASIN B.1 (pH) BASEBALL FIELD	EXCAVATION WITHIN FIELD AREA, DEPRESSED BELOW SURROUNDING GRADES.	VARIABLE'	30000 CU-FT	2.75 ACRES (119849 SF)	9900 CU-FT
BASIN S.1 (pH) SOFTBALL FIELD	EXCAVATION WITHIN FIELD AREA, DEPRESSED BELOW SURROUNDING GRADES.	VARIABLE'	47076 CU-FT	1.00 ACRES (43677 SF)	3610.8 CU-FT

SIZING NOTES
BASIS OF DESIGN: 3,600 CUBIC FEET PER ACRE OF AREA DRAINING TO IMPOUNDMENT.

IMPOUNDMENT DESIGN INFORMATION AND CONSTRUCTION REQUIREMENTS:

- DESCRIPTION:
  IMPOUNDMENT WILL CONSIST OF THE EXCAVATION WITHIN THE SOFTBALL AND BASEBALL FIELDS, WHICH IS DEPRESSED BELOW THE SURROUNDING GRADES, CREATING AN IMPOUNDMENT WITHIN THE AREA TO BE CEMENT-AMENDED. THE FIELD WILL SERVE AS A PRIMARY SEDIMENTATION BASIN AND pH NEUTRALIZATION BASIN.
- INLET STRUCTURE DESIGN: THE TEMPORARY DRAINAGE SYSTEM WILL UTILIZE EROSION CONTROL MEASURES AND VELOCITY DISSIPATION MEASURES PER 1200-C SECTION 2.2.17.f, AS FOLLOWS: RUNOFF FROM CEMENT-TREATED SUBGRADE WILL SHEET DRAIN TO LOW POINT IN THE FIELD EXCAVATION.
- OUTLET STRUCTURE DESIGN: THE OUTLET STRUCTURE FROM THE IMPOUNDMENT WILL CONSIST OF A PUMPING SYSTEM WITH THE PUMP LOCATED AT THE TOP OF THE WATER COLUMN TO DRAW WATER FROM THE SURFACE (PER 1200-C SECTION 2.2.17.e). PUMPED WATER WILL BE DISCHARGED THROUGH A FILTRATION BAG TO EVENLY DISPERSE WATER TO SURROUNDING ESTABLISHED GRASS AREAS.
- PRIOR TO CONSTRUCTION OF THE CTB, EFFLUENT PIPING, IF PRESENT, MUST BE PLUGGED TO PREVENT OFFSITE DISCHARGE.
- PRIOR TO OFFSITE DISCHARGE, STORMWATER RUNOFF FROM CTB AREAS DURING THE CURING PERIOD THAT ACCUMULATES IN THE CTB BASINS SHALL BE MONITORED FOR PH IN ACCORDANCE WITH 1200-C PERMIT SECTION 6.6.1.
- CTB BASIN BMPS AND PH MONITORING MUST BE MAINTAINED FOR AT LEAST 7 CALENDAR DAYS OR UNTIL THE CTB IS CURED, WHICHEVER IS LONGER. CTB CURING AND STABILIZATION SHALL BE DOCUMENTED IN THE REGULAR BIWEEKLY SITE INSPECTION.

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025-010267

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

REGISTERED PROFESSIONAL ENGINEER
74512PE
DIGITAL SIGNATURE
OREGON
JUNE 11, 2008
GEOFF T. LARSEN
EXPIRES 12/31/26

Drawn By:	GTL/MDS
Checked:	GTL
Project #:	025-010267
Date:	Sep. 19, 2025

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1200-C PERMIT APPLICATION

SHEET TITLE
EROSION AND SEDIMENT CONTROL NOTES

CE1.01

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SHEET NOTES

A. REFER TO SHEET XXX FOR GENERAL NOTES AND LEGENDS.
B. REFER TO SHEET CE1.00 AND CE1.01 FOR EROSION AND SEDIMENTATION CONTROL NOTES.
C. REFER TO SHEET CE1.06 AND CE1.07 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
D. REFER TO SHEETS XXX AND XXX FOR SITE GRADING PLAN AND DETAILS.
E. REFER TO STORM DRAIN PLAN FOR STORMWATER SYSTEM IMPROVEMENTS.
F. REFER TO UTILITIES PLANS FOR UNDERGROUND UTILITY IMPROVEMENTS.
G. REFER TO CD1.01 FOR SITE UTILITY AND DEMOLITION PLAN.
H. REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION REQUIREMENTS.



EROSION SEDIMENTATION CONTROL LEGEND

- EXISTING CONTOUR ELEVATION – MAJOR / EXISTING CONTOUR ELEVATION – MINOR
- PROPERTY LINE
- LOD — APPROXIMATE LIMITS OF CONSTRUCTION / MAJOR SOIL DISTURBANCE
- EXISTING DRAINAGE FLOW PATTERN
- STORMWATER FACILITY – EXISTING
- WETLANDS

1 EROSION AND SEDIMENT CONTROL PLAN - EXISTING CONDITIONS

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025-010267

CLACKAMAS COMMUNITY COLLEGE ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

REGISTERED PROFESSIONAL ENGINEER
74512PE
DIGITAL SIGNATURE
OREGON
JUNE 11, 2008
GEOFF T. LARSEN
EXPIRES 12/31/26

Drawn By:	GTL/MDS
Checked:	GTL
Project #:	025-010267
Date:	Sep. 19, 2025

Rev. #:	Date:

1200-C PERMIT APPLICATION

SHEET TITLE
ESCP- EXISTING CONDITIONS

CE1.02

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CONSTRUCTION NOTES

(#)

1A. CONSTRUCTION ENTRANCE/ PHASE 1: REFER TO CONSTRUCTION ENTRANCE NOTES.

1B. CONSTRUCTION ENTRANCE/ PHASE 2: REFER TO CONSTRUCTION ENTRANCE NOTES.

2. FUELING AND MAINTENANCE: EQUIPMENT FUELING AND MAINTENANCE ACTIVITIES TO OCCUR OVER AN ECO-PAN OR SIMILAR APPROVED WATERTIGHT CONTAINMENT SYSTEM TO PREVENT SPILLS AND SOIL CONTAMINATION. NO FUELING OR MAINTENANCE ACTIVITIES SHALL OCCUR WITHOUT CONTAINMENT IN PLACE. REFUELING AREA MAY VARY FROM LOCATION SHOWN ON THIS PLAN. MAINTAIN SPILL PREVENTION KIT ONSITE AND NOTIFY ENVIRONMENTAL ENGINEER IF LEAKS OR SPILLS OCCUR. FOLLOW STATE AND LOCAL SPILL REPORTING REQUIREMENTS

3. PERIMETER CONTROL: CONSTRUCT PERIMETER CONTROL/SEDIMENT BARRIER. REFER TO DETAILS 5/CE1.06 AND 1,2/CE1.07 FOR EROSION CONTROL DETAILS

4. CONCRETE TRUCK WASH: INSTALL CONCRETE TRUCK WASH PER OREGON CITY STD. DWG 1/CE1.06 . LOCATION SHALL BE OFF OF HARD SURFACE AND AT LEAST 20' AWAY FROM NEAREST STORM DRAIN INLET STRUCTURE.

5A. INLET PROTECTION: INSTALL INLET PROTECTION PER OREGON CITY STD DETAILS 3,4/CE1.06. MAINTAIN FOR THE DURATION OF THE PROJECT OR UNTIL STRUCTURE IS REMOVED.

5B. TRENCH DRAIN PROTECTION: PROTECT TRENCH DRAIN BY INSERTING PLUGS IN OUTLETS OF DOWNSTREAM RECEIVING CATCH BASIN. PLUGS TO REMAIN IN PLACE UNTIL FINAL STABILIZATION.

5C. EXISTING STORMWATER FACILITY INLET PROTECTION: INSTALL INLET PROTECTION AT CURB OPENINGS SIMILAR TO TYPE 7 ODOT STD DETAIL RD1010/CE1.07 FOR THE EXISTING STORMWATER FACILITY MAINTAIN FOR THE DURATION OF PROJECT.

6. TEMPORARY CONSTRUCTION STAGING / LAYDOWN / CONTRACTOR PARKING AREA: APPROXIMATE LOCATION. SEE SHEET NOTE L.

7. SANITARY FACILITIES: PORTABLE SANITARY FACILITY LOCATION. APPROXIMATE LOCATION. SEE SHEET NOTE L.

8. CONSTRUCTION WASTE COLLECTION AREA/ CONTAINMENT/ WASHING AREA: REFER TO WASTE MANAGEMENT NOTES AND POLLUTION PREVENTION PROCEDURE NOTES (A.2.3.9) ON SHEET CE1.00 FOR ADDITIONAL REQUIREMENTS. LOCATION IS APPROXIMATE. SEE SHEET NOTE L.

9. TEMPORARY CONSTRUCTION TRAILER LOCATION: APPROXIMATE LOCATION. SEE SHEET NOTE L.

10. STOCKPILE AREA: APPROXIMATE LOCATION. SEE SHEET NOTE L.

11A. EXISTING STORMWATER FACILITY TO BE PROTECTED: REFER TO STORMWATER FACILITY PROTECTION NOTES.

11B. EXISTING STORMWATER FACILITY TO BE REMOVED: REFER TO STORMWATER FACILITY PROTECTION NOTES.

11C. PROPOSED STORMWATER FACILITY TO BE PROTECTED: REFER TO STORMWATER FACILITY PROTECTION NOTES.

12. NOT USED

13A. NOT USED

13B. NOT USED.

14A. EXISTING WETLANDS: EXISTING WETLANDS TO BE PROTECTED IN PLACE (APPROXIMATE LOCATION). INSTALL PROTECTIVE FENCING AT PERIMETER FLAGGED IN FIELD.

14B. WETLANDS BUFFER / PROTECTIVE MEASURES: MAINTAIN 50' MINIMUM NATURAL BUFFER BETWEEN LIMITS OF WORK AND EXISTING WETLANDS. WHERE 50' MINIMUM NATURAL BUFFER CANNOT BE MAINTAINED, CONSTRUCT ADDITIONAL PERIMETER CONTROLS IN ACCORDANCE WITH APPENDIX B OF THE 1200-C PERMIT. ADDITIONAL PERIMETER CONTROLS TO CONSIST OF A MINIMUM OF (2) LAYERS OF SEDIMENT FENCE, SPACED 5' APART.

15. EXISTING TREE TO REMAIN: PROVIDE PROTECTIVE FENCING PER LANDSCAPE DRAWINGS.

16. SLOPE / EXCAVATION PROTECTION: DIVERT RUNOFF AWAY FROM OR AROUND STEEP SLOPE, EMBANKMENT, OR EXCAVATION. INSTALL PLASTIC SHEETING OVER EXPOSED SLOPES, EMBANKMENTS, OR EXCAVATIONS.

STORMWATER MANAGEMENT FACILITY PROTECTION NOTES

1. STORMWATER FACILITY: INSTALL SEDIMENT FENCE AROUND PERIMETER OF FACILITY TO ENSURE SHEET DRAINAGE FROM ADJACENT CONSTRUCTION ACTIVITY DOES NOT ENTER THE STORMWATER FACILITY. PROVIDE TEMPORARY DRAINAGE FACILITIES TO BYPASS VEGETATED FACILITIES UNTIL AREAS ARE STABILIZED. TEMPORARY BYPASS FACILITIES MAY INCLUDE DIVERSIONS INTO THE RECEIVING PIPED STORM SYSTEM THROUGH PROTECTED INLETS. INLETS AND/OR PIPES DRAINING TO THE ONSITE STORMWATER MANAGEMENT FACILITIES MUST BE PLUGGED UNTIL FINAL STABILIZATION. MAINTAIN FOR THE DURATION OF THE PROJECT.
2. STORMWATER FACILITY GRADING, SOIL PREPARATION, AND PLANTING TO BE PERFORMED DURING OPTIMAL WEATHER CONDITIONS AT LOW PRECIPITATION / LOW FLOW PERIODS TO MINIMIZE SEDIMENTATION IMPACTS.
3. PROPOSED STORMWATER FACILITY EXCAVATIONS MAY BE USED TO CONVEY / COLLECT STORMWATER RUNOFF PROVIDED THEY ARE LINED WITH AN IMPERMEABLE LINER OR FILTER FABRIC (TO COLLECT SEDIMENT) AND THE OUTLETS ARE FITTED WITH INLET PROTECTION MEASURES. FOR UNLINED FACILITIES, IMPERMEABLE LINER OR FILTER FABRIC MUST BE REMOVED PRIOR TO EXCAVATION TO FINAL SUBGRADE. FOR LINED FACILITIES, LINER MAY REMAIN IN PLACE FOLLOWING SEDIMENT REMOVAL, CLEANING, AND REPAIR. STORMWATER FACILITIES MAY NOT RECEIVE CONSTRUCTION PERIOD RUNOFF AFTER DRAIN ROCK, FILTER AGGREGATE, OR PLANING SOIL IS IN PLACE.

CONSTRUCTION ENTRANCE NOTES

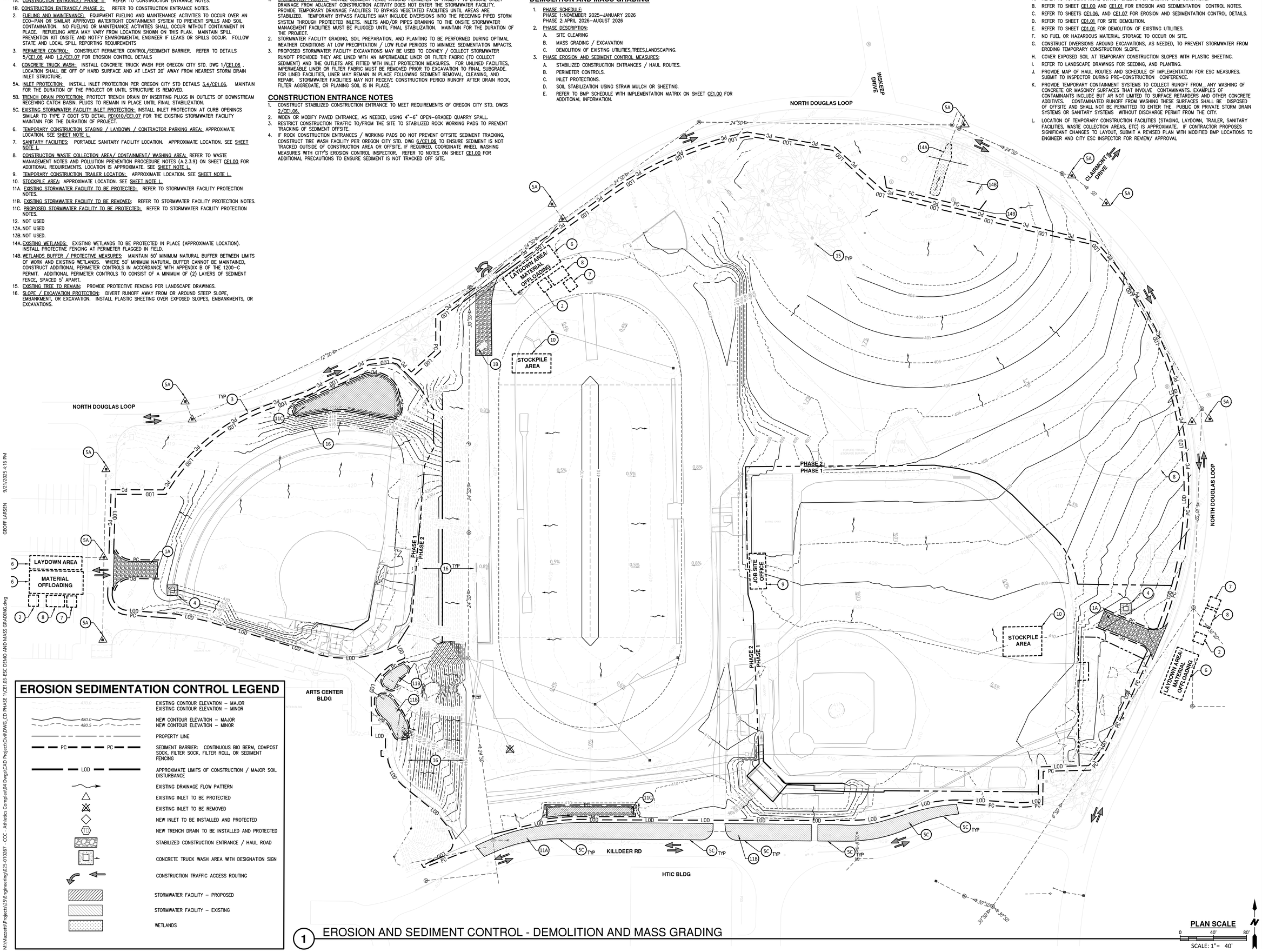
1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE TO MEET REQUIREMENTS OF OREGON CITY STD. DWGS 2/CE1.06.
2. WIDEN OR MODIFY PAVED ENTRANCE, AS NEEDED, USING 4"-6" OPEN-GRADED QUARRY SPALL.
3. RESTRICT CONSTRUCTION TRAFFIC TO/FROM THE SITE TO STABILIZED ROCK WORKING PADS TO PREVENT TRACKING OF SEDIMENT OFFSITE.
4. IF ROCK CONSTRUCTION ENTRANCES / WORKING PADS DO NOT PREVENT OFFSITE SEDIMENT TRACKING, CONSTRUCT TIRE WASH FACILITY PER OREGON CITY STD. DWG 6/CE1.06 TO ENSURE SEDIMENT IS NOT TRACKED OUTSIDE OF CONSTRUCTION AREA OR OFFSITE. IF REQUIRED, COORDINATE WHEEL WASHING MEASURES WITH CITY'S EROSION CONTROL INSPECTOR. REFER TO NOTES ON SHEET CE1.00 FOR ADDITIONAL PRECAUTIONS TO ENSURE SEDIMENT IS NOT TRACKED OFF SITE.

CONSTRUCTION ACTIVITY PHASING NOTES - DEMOLITION AND MASS GRADING

1. PHASE SCHEDULE:
   PHASE 1:NOVEMBER 2025–JANUARY 2026
   PHASE 2: APRIL 2026–AUGUST 2026
2. PHASE DESCRIPTION:
   A. SITE CLEARING
   B. MASS GRADING / EXCAVATION
   C. DEMOLITION OF EXISTING UTILITIES,TREES,LANDSCAPING.
3. PHASE EROSION AND SEDIMENT CONTROL MEASURES:
   A. STABILIZED CONSTRUCTION ENTRANCES / HAUL ROUTES.
   B. PERIMETER CONTROLS.
   C. INLET PROTECTIONS.
   D. SOIL STABILIZATION USING STRAW MULCH OR SHEETING.
   E. REFER TO BMP SCHEDULE WITH IMPLEMENTATION MATRIX ON SHEET CE1.00 FOR ADDITIONAL INFORMATION.

SHEET NOTES

A. REFER TO TOPOGRAPHICAL SURVEY SHEETS FOR EXISTING SITE CONDITIONS.
B. REFER TO SHEET CE1.00 AND CE1.01 FOR EROSION AND SEDIMENTATION CONTROL NOTES.
C. REFER TO SHEETS CE1.06, AND CE1.07 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
D. REFER TO SHEET CD1.01 FOR SITE DEMOLITION.
E. REFER TO SHEET CD1.01 FOR DEMOLITION OF EXISTING UTILITIES.
F. NO FUEL OR HAZARDOUS MATERIAL STORAGE TO OCCUR ON SITE.
G. CONSTRUCT DIVERSIONS AROUND EXCAVATIONS, AS NEEDED, TO PREVENT STORMWATER FROM ERODING TEMPORARY CONSTRUCTION SLOPE.
H. COVER EXPOSED SOIL AT TEMPORARY CONSTRUCTION SLOPES WITH PLASTIC SHEETING.
I. REFER TO LANDSCAPE DRAWINGS FOR SEEDING, AND PLANTING.
J. PROVIDE MAP OF HAUL ROUTES AND SCHEDULE OF IMPLEMENTATION FOR ESC MEASURES. SUBMIT TO INSPECTOR DURING PRE-CONSTRUCTION CONFERENCE.
K. PROVIDE TEMPORARY CONTAINMENT SYSTEMS TO COLLECT RUNOFF FROM ANY WASHING OF CONCRETE OR MASONRY SURFACES THAT INVOLVE CONTAMINANTS. EXAMPLES OF CONTAMINANTS INCLUDE BUT AR NOT LIMITED TO SURFACE RETARDERS AND OTHER CONCRETE ADDITIVES. CONTAMINATED RUNOFF FROM WASHING THESE SURFACES SHALL BE DISPOSED OF OFFSITE AND SHALL NOT BE PERMITTED TO ENTER THE PUBLIC OR PRIVATE STORM DRAIN SYSTEMS OR SANITARY SYSTEMS WITHOUT DISCHARGE PERMIT FROM THE CITY.
L. LOCATION OF TEMPORARY CONSTRUCTION FACILITIES (STAGING, LAYDOWN, TRAILER, SANITARY FACILITIES, WASTE COLLECTION AREAS, ETC) IS APPROXIMATE. IF CONTRACTOR PROPOSES SIGNIFICANT CHANGES TO LAYOUT, SUBMIT A REVISED PLAN WITH MODIFIED BMP LOCATIONS TO ENGINEER AND CITY ESC INSPECTOR FOR REVIEW/ APPROVAL



EROSION SEDIMENTATION CONTROL LEGEND

- EXISTING CONTOUR ELEVATION – MAJOR / EXISTING CONTOUR ELEVATION – MINOR
- NEW CONTOUR ELEVATION – MAJOR / NEW CONTOUR ELEVATION – MINOR
- PROPERTY LINE
- SEDIMENT BARRIER: CONTINUOUS BIO BERM, COMPOST SOCK, FILTER SOCK, FILTER ROLL, OR SEDIMENT FENCING
- APPROXIMATE LIMITS OF CONSTRUCTION / MAJOR SOIL DISTURBANCE
- EXISTING DRAINAGE FLOW PATTERN
- EXISTING INLET TO BE PROTECTED
- EXISTING INLET TO BE REMOVED
- NEW INLET TO BE INSTALLED AND PROTECTED
- NEW TRENCH DRAIN TO BE INSTALLED AND PROTECTED
- STABILIZED CONSTRUCTION ENTRANCE / HAUL ROAD
- CONCRETE TRUCK WASH AREA WITH DESIGNATION SIGN
- CONSTRUCTION TRAFFIC ACCESS ROUTING
- STORMWATER FACILITY – PROPOSED
- STORMWATER FACILITY – EXISTING
- WETLANDS

1 EROSION AND SEDIMENT CONTROL - DEMOLITION AND MASS GRADING

PLAN SCALE 0 40' 80'
SCALE: 1"= 40'

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025-010267

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

REGISTERED PROFESSIONAL ENGINEER 74512PE
DIGITAL SIGNATURE
OREGON
JUNE 11, 2008
GEOFF T. LARSEN
EXPIRES 12/31/26

Drawn By:	GTL/MDS
Checked:	GTL
Project #:	025-010267
Date:	Sep. 19, 2025

Rev. #:	Date:

1200-C PERMIT APPLICATION

SHEET TITLE
ESCP - DEMOLITION AND MASS GRADING

CE1.03

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CONSTRUCTION NOTES

1A. CONSTRUCTION ENTRANCE / PHASE 1: REFER TO CONSTRUCTION ENTRANCE NOTES.

1B. CONSTRUCTION ENTRANCE / PHASE 2: REFER TO CONSTRUCTION ENTRANCE NOTES.

2. FUELING AND MAINTENANCE: EQUIPMENT FUELING AND MAINTENANCE ACTIVITIES TO OCCUR OVER AN ECO-PAN OR SIMILAR APPROVED WATERTIGHT CONTAINMENT SYSTEM TO PREVENT SPILLS AND SOIL CONTAMINATION. NO FUELING OR MAINTENANCE ACTIVITIES SHALL OCCUR WITHOUT CONTAINMENT IN PLACE. REFUELING AREA MAY VARY FROM LOCATION SHOWN ON THIS PLAN. MAINTAIN SPILL PREVENTION KIT ONSITE AND NOTIFY ENVIRONMENTAL ENGINEER IF LEAKS OR SPILLS OCCUR. FOLLOW STATE AND LOCAL SPILL REPORTING REQUIREMENTS

3. PERIMETER CONTROL: CONSTRUCT PERIMETER CONTROL/SEDIMENT BARRIER. REFER TO DETAILS 5/CE1.06 AND 1,2/CE1.07 FOR EROSION CONTROL DETAILS

4. CONCRETE TRUCK WASH: INSTALL CONCRETE TRUCK WASH PER OREGON CITY STD. DWG 1/CE1.06 . LOCATION SHALL BE OFF OF HARD SURFACE AND AT LEAST 20' AWAY FROM NEAREST STORM DRAIN INLET STRUCTURE.

5A. INLET PROTECTION: INSTALL INLET PROTECTION PER OREGON CITY STD DETAILS 3,4/CE1.06. MAINTAIN FOR THE DURATION OF THE PROJECT OR UNTIL STRUCTURE IS REMOVED.

5B. TRENCH DRAIN PROTECTION: PROTECT TRENCH DRAIN BY INSERTING PLUGS IN OUTLETS OF DOWNSTREAM RECEIVING CATCH BASIN. PLUGS TO REMAIN IN PLACE UNTIL FINAL STABILIZATION.

5C. EXISTING STORMWATER FACILITY INLET PROTECTION: INSTALL INLET PROTECTION AT CURB OPENINGS SIMILAR TO TYPE 7 ODOT STD DETAIL RD1010/CE1.07 FOR THE EXISTING STORMWATER FACILITY MAINTAIN FOR THE DURATION OF PROJECT.

6. TEMPORARY CONSTRUCTION STAGING / LAYDOWN / CONTRACTOR PARKING AREA: APPROXIMATE LOCATION. SEE SHEET NOTE L.

7. SANITARY FACILITIES: PORTABLE SANITARY FACILITY LOCATION. APPROXIMATE LOCATION. SEE SHEET NOTE L.

8. CONSTRUCTION WASTE COLLECTION AREA/ CONTAINMENT/ WASHING AREA: REFER TO WASTE MANAGEMENT NOTES AND POLLUTION PREVENTION PROCEDURE NOTES (A.2.3.9) ON SHEET CE1.00 FOR ADDITIONAL REQUIREMENTS. LOCATION IS APPROXIMATE. SEE SHEET NOTE L.

9. TEMPORARY CONSTRUCTION TRAILER LOCATION: APPROXIMATE LOCATION. SEE SHEET NOTE L.

10. STOCKPILE AREA: APPROXIMATE LOCATION. SEE SHEET NOTE L.

11A. EXISTING STORMWATER FACILITY TO BE PROTECTED: REFER TO STORMWATER FACILITY PROTECTION NOTES.

11B. EXISTING STORMWATER FACILITY TO BE REMOVED: REFER TO STORMWATER FACILITY PROTECTION NOTES.

11C. PROPOSED STORMWATER FACILITY TO BE PROTECTED: REFER TO STORMWATER FACILITY PROTECTION NOTES.

12. RUNOFF FROM CEMENT-AMENDED SUBGRADE:

- OPTION 1: RUNOFF FROM CEMENT-AMENDED SUBGRADE MUST BE DIVERTED TO SEDIMENTATION TANKS IN ACCORDANCE WITH THE 1200-C PERMIT SECTION 2.2.17 AND 2.2.18. PROVIDE PH MONITORING AND NEUTRALIZATION IN BATCHES PRIOR TO DISCHARGE TO THE RECEIVNG STORM DRAIN SYSTEM. CONTINUOUS DISCHARGE NOT PERMITTED. CONTRACTOR RESPONSIBLE FOR DESIGN OF COLLECTION, STORAGE, CONVEYANCE, AND NEUTRALIZATION SYSTEM.
- OPTION 2: COVER THE CEMENT-AMENDED SUBGRADE WITH PLASTIC SHEETING UNTIL CURING PERIOD IS OVER SO RAINFALL CANNOT CONTACT CEMENT-AMENDED SUBGRADE. PRIOR TO REMOVING SHEETING, TEST PH POTENTIAL OF SUBGRADE BY APPLYING WATER TO SURFACE AND TESTING PH.

13A. FIELD SUBDRAINAGE SYSTEM: PROTECT NEW FIELD AND SUBDRAINAGE SYSTEM FROM SEDIMENTATION OR OTHER DAMAGE. INSTALL PERIMETER CONTROLS AS NEEDED, TO PROTECT FIELD. REDIRECT UPSTREAM STORMWATER RUNOFF AND/ OR CONSTRUCT DIVERSIONS TO PREVENT UPSTREAM RUNOFF FROM CONTRIBUTING TO EROSION OR SEDIMENTATION.

13B. DETENTION SYSTEM: PROTECT NEW POST-CONSTRUCTION STORMWATER DETENTION SYSTEM FROM SEDIMENTATION. DIVERT STORMWATER FROM CONTRIBUTING AREA UNTIL STABILIZATION.

14A. EXISTING WETLANDS: EXISTING WETLANDS TO BE PROTECTED IN PLACE (APPROXIMATE LOCATION). INSTALL PROTECTIVE FENCING AT PERIMETER FLAGGED IN FIELD.

14B. WETLANDS BUFFER / PROTECTIVE MEASURES: MAINTAIN 50' MINIMUM NATURAL BUFFER BETWEEN LIMITS OF WORK AND EXISTING WETLANDS. WHERE 50' MINIMUM NATURAL BUFFER CANNOT BE MAINTAINED, CONSTRUCT ADDITIONAL PERIMETER CONTROLS IN ACCORDANCE WITH APPENDIX B OF THE 1200-C PERMIT. ADDITIONAL PERIMETER CONTROLS TO CONSIST OF A MINIMUM OF (2) LAYERS OF SEDIMENT FENCE, SPACED 5' APART.

15. EXISTING TREE TO REMAIN: PROVIDE PROTECTIVE FENCING PER LANDSCAPE DRAWINGS.

16. SLOPE / EXCAVATION PROTECTION: DIVERT RUNOFF AWAY FROM OR AROUND STEEP SLOPE, EMBANKMENT, OR EXCAVATION. INSTALL PLASTIC SHEETING OVER EXPOSED SLOPES, EMBANKMENTS, OR EXCAVATIONS.

CONSTRUCTION NOTES CONTINUED

17A. CONSTRUCTION DEWATERING: IF WATER IS ENCOUNTERED WITHIN EXCAVATIONS, DEWATERING ACTIVITIES MUST COMPLY WITH THE REQUIREMENTS OF THE 1200-C PERMIT, SECTION 2.4. CONSTRUCTION DEWATERING TO CONSIST OF PUMPED DISCHARGE FROM EXCAVATIONS AND UPLAND LAND APPLICATION AND INFILTRATION. DEWATERING VOLUME MUST NOT EXCEED INFILTRATION CAPACITY OF UPLAND DISPERSION AREA. DISPERSION TO TO UTILIZE FILTRATION BLADDER BAGS TO DISTRIBUTE AND FILTER DEWATERING DISCHARGE. ADDITIONAL PASSIVE TREATMENT WILL OCCUR THROUGH FILTRATION THROUGH SHEET FLOW THROUGH EXISTING LAWN. INCLUDE PERIMETER CONTROLS AT PERIMETER OF DISPERSION AREA AS NEEDED TO CONTROL VELOCITY AND EVENLY DISTRIBUTE FLOW. CONTRACTOR TO MONITOR PERFORMANCE OF DEWATERING DISPERSION SYSTEM TO ENSURE DISCHARGE DOES NOT EXCEED INFILTRATION RATE. SEE ALSO CONSTRUCTION NOTE 17B.

17B. DEWATERING TREATMENT SYSTEMS: THE DEWATERING EFFLUENT LAND -APPLICATION AND INFILTRATION IS EXPECTED TO MEET THE PERFORMANCE REQUIREMENTS AND PREVENT DEWATERING DISCHARGE FROM LEAVING THE IMMEDIATE PROJECT AREA. IF THE LAND-APPLICATION DOES NOT MEET MINIMUM PERFORMANCE REQUIREMENTS, THE CONTRACTOR WILL BE RESPONSIBLE FOR DESIGNING AN ACTIVE STORAGE AND TREATMENT SYSTEM. THE ACTIVE STORAGE AND TREATMENT SYSTEM MUST BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET THE REQUIREMENTS OF THE 1200-C PERMIT. CONTRACTOR TO COORDINATE SUBMITTAL OF TREATMENT DOCUMENTATION TO DEQ WITH THE PROJECT ENGINEER.

STORMWATER MANAGEMENT FACILITY PROTECTION NOTES

1. STORMWATER FACILITY: INSTALL SEDIMENT FENCE AROUND PERIMETER OF FACILITY TO ENSURE SHEET DRAINAGE FROM ADJACENT CONSTRUCTION ACTIVITY DOES NOT ENTER THE STORMWATER FACILITY. PROVIDE TEMPORARY DRAINAGE FACILITIES TO BYPASS VEGETATED FACILITIES UNTIL AREAS ARE STABILIZED. TEMPORARY BYPASS FACILITIES MAY INCLUDE DIVERSIONS INTO THE RECEIVING PIPED STORM SYSTEM THROUGH PROTECTED INLETS. INLETS AND/OR PIPES DRAINING TO THE ONSITE STORMWATER MANAGEMENT FACILITIES MUST BE PLUGGED UNTIL FINAL STABILIZATION. MAINTAIN FOR THE DURATION OF THE PROJECT.
2. STORMWATER FACILITY GRADING, SOIL PREPARATION, AND PLANTING TO BE PERFORMED DURING OPTIMAL WEATHER CONDITIONS AT LOW PRECIPITATION / LOW FLOW PERIODS TO MINIMIZE SEDIMENTATION IMPACTS.
3. PROPOSED STORMWATER FACILITY EXCAVATIONS MAY BE USED TO CONVEY / COLLECT STORMWATER RUNOFF PROVIDED THEY ARE LINED WITH AN IMPERMEABLE LINER OR FILTER FABRIC (TO COLLECT SEDIMENT) AND THE OUTLETS ARE FITTED WITH INLET PROTECTION MEASURES. FOR UNLINED FACILITIES, IMPERMEABLE LINER OR FILTER FABRIC MUST BE REMOVED PRIOR TO EXCAVATION TO FINAL SUBGRADE. FOR LINED FACILITIES, LINER MAY REMAIN IN PLACE FOLLOWING SEDIMENT REMOVAL, CLEANING, AND REPAIR. STORMWATER FACILITIES MAY NOT RECEIVE CONSTRUCTION PERIOD RUNOFF AFTER DRAIN ROCK, FILTER AGGREGATE, OR PLANING SOIL IS IN PLACE.

CONSTRUCTION ENTRANCE NOTES

1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE TO MEET REQUIREMENTS OF OREGON CITY STD. DWGS 2/CE1.06.
2. WIDEN OR MODIFY PAVED ENTRANCE, AS NEEDED, USING 4"-6" OPEN-GRADED QUARRY SPALL.
3. RESTRICT CONSTRUCTION TRAFFIC TO/FROM THE SITE TO STABILIZED ROCK WORKING PADS TO PREVENT TRACKING OF SEDIMENT OFFSITE.
4. IF ROCK CONSTRUCTION ENTRANCES / WORKING PADS DO NOT PREVENT OFFSITE SEDIMENT TRACKING, CONSTRUCT TIRE WASH FACILITY PER OREGON CITY STD. DWG 6/CE1.06 TO ENSURE SEDIMENT IS NOT TRACKED OUTSIDE OF CONSTRUCTION AREA OR OFFSITE. IF REQUIRED, COORDINATE WHEEL WASHING MEASURES WITH CITY'S EROSION CONTROL INSPECTOR. REFER TO NOTES ON SHEET CE1.00 FOR ADDITIONAL PRECAUTIONS TO ENSURE SEDIMENT IS NOT TRACKED OFF SITE.

CONSTRUCTION ACTIVITY PHASING NOTES - UTILITIES AND VERTICAL CONSTRUCTION

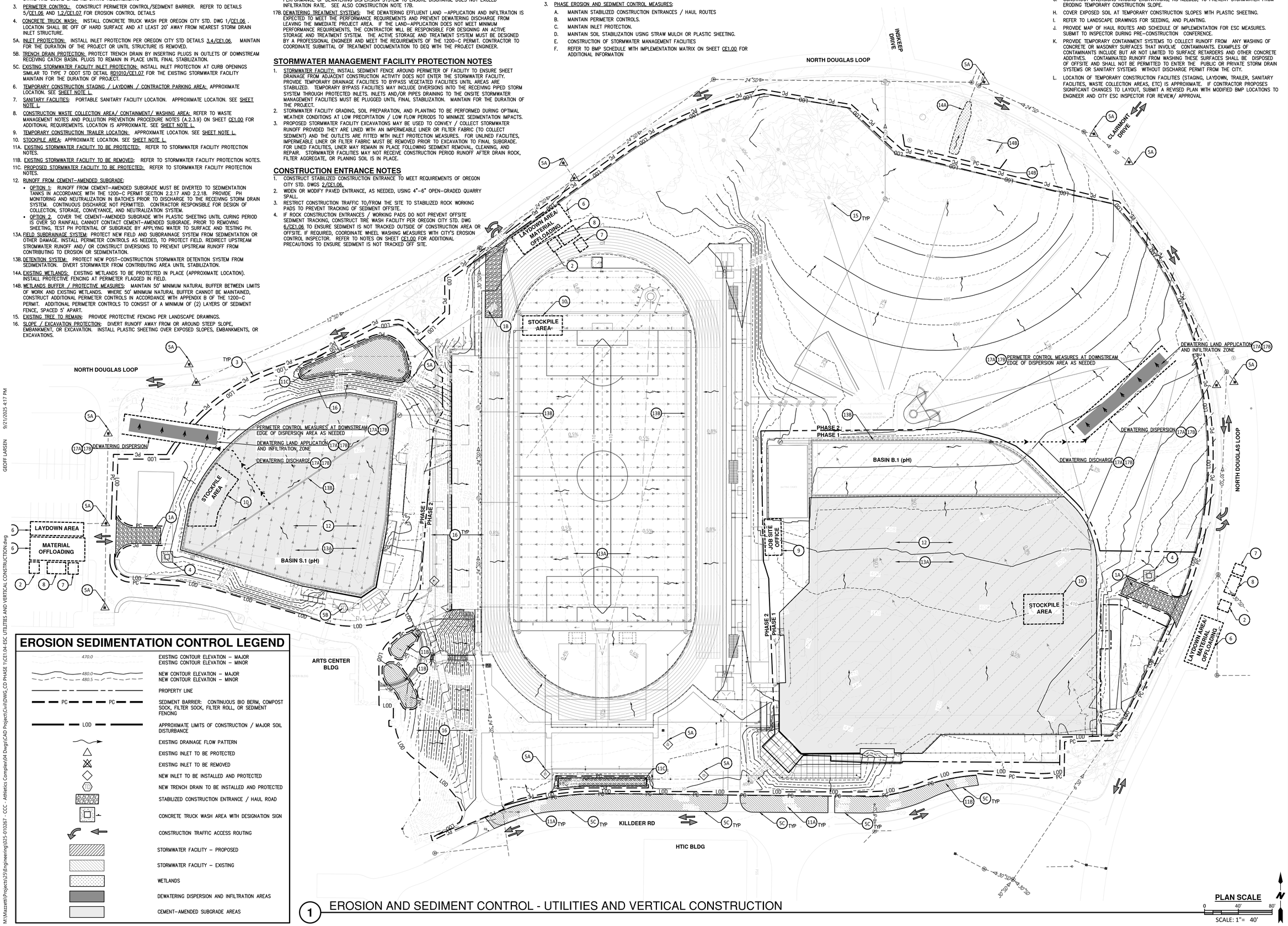
1. PHASE SCHEDULE:
   PHASE 1: NOVEMBER 2025–JANUARY 2026
   PHASE 2: APRIL 2026–SEPTEMBER 2026
2. PHASE DESCRIPTION:
   A. UNDERGROUND STORM DRAIN INSTALLATION.
   B. CEMENT-AMENDED SUBGRADE AREA CONSTRUCTION
3. PHASE EROSION AND SEDIMENT CONTROL MEASURES:
   A. MAINTAIN STABILIZED CONSTRUCTION ENTRANCES / HAUL ROUTES
   B. MAINTAIN PERIMETER CONTROLS.
   C. MAINTAIN INLET PROTECTION.
   D. MAINTAIN SOIL STABILIZATION USING STRAW MULCH OR PLASTIC SHEETING.
   E. CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES
   F. REFER TO BMP SCHEDULE WITH IMPLEMENTATION MATRIX ON SHEET CE1.00 FOR ADDITIONAL INFORMATION

CEMENT-AMENDED SUBGRADE NOTES

1. RUNOFF FROM CEMENT-AMENDED SUBGRADE MUST COMPLY WITH THE REQUIREMENTS OF THE 1200-C PERMIT SECTIONS 2.2.17, 2.2.18, AND 6.6.1.
2. CONTRACTOR RESPONSIBLE FOR DESIGN OF COLLECTION, CONVEYANCE, STORAGE, PH MONITORING, AND PH NEUTRALIZATION SYSTEMS. THE STORAGE AND NEUTRALIZATION SYSTEM MUST BE DESIGNED BY AN OREGON REGISTERED PROFESSIONAL ENGINEER RETAINED BY THE CONTRACTOR PER SECTION 4.1.B OF THE 1200-C PERMIT.

SHEET NOTES

A. REFER TO TOPOGRAPHICAL SURVEY SHEETS FOR EXISTING SITE CONDITIONS.
B. REFER TO SHEET CE1.00 AND CE1.01 FOR EROSION AND SEDIMENTATION CONTROL NOTES.
C. REFER TO SHEETS CE1.06, AND CE1.07 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
D. REFER TO SHEET CD1.01 FOR SITE DEMOLITION.
E. REFER TO SHEET CD1.01 FOR DEMOLITION OF EXISTING UTILITIES.
F. NO FUEL OR HAZARDOUS MATERIAL STORAGE TO OCCUR ON SITE.
G. CONSTRUCT DIVERSIONS AROUND EXCAVATIONS, AS NEEDED, TO PREVENT STORMWATER FROM ERODING TEMPORARY CONSTRUCTION SLOPE.
H. COVER EXPOSED SOIL AT TEMPORARY CONSTRUCTION SLOPES WITH PLASTIC SHEETING.
I. REFER TO LANDSCAPE DRAWINGS FOR SEEDING, AND PLANTING.
J. PROVIDE MAP OF HAUL ROUTES AND SCHEDULE OF IMPLEMENTATION FOR ESC MEASURES. SUBMIT TO INSPECTOR DURING PRE-CONSTRUCTION CONFERENCE.
K. PROVIDE TEMPORARY CONTAINMENT SYSTEMS TO COLLECT RUNOFF FROM ANY WASHING OF CONCRETE OR MASONRY SURFACES THAT INVOLVE CONTAMINANTS. EXAMPLES OF CONTAMINANTS INCLUDE BUT AR NOT LIMITED TO SURFACE RETARDERS AND OTHER CONCRETE ADDITIVES. CONTAMINATED RUNOFF FROM WASHING THESE SURFACES SHALL BE DISPOSED OF OFFSITE AND SHALL NOT BE PERMITTED TO ENTER THE PUBLIC OR PRIVATE STORM DRAIN SYSTEMS OR SANITARY SYSTEMS WITHOUT DISCHARGE PERMIT FROM THE CITY.
L. LOCATION OF TEMPORARY CONSTRUCTION FACILITIES (STAGING, LAYDOWN, TRAILER, SANITARY FACILITIES, WASTE COLLECTION AREAS, ETC) IS APPROXIMATE. IF CONTRACTOR PROPOSES SIGNIFICANT CHANGES TO LAYOUT, SUBMIT A REVISED PLAN WITH MODIFIED BMP LOCATIONS TO ENGINEER AND CITY ESC INSPECTOR FOR REVIEW/ APPROVAL



EROSION SEDIMENTATION CONTROL LEGEND

- EXISTING CONTOUR ELEVATION – MAJOR / EXISTING CONTOUR ELEVATION – MINOR
- NEW CONTOUR ELEVATION – MAJOR / NEW CONTOUR ELEVATION – MINOR
- PROPERTY LINE
- PC — PC: SEDIMENT BARRIER: CONTINUOUS BIO BERM, COMPOST SOCK, FILTER SOCK, FILTER ROLL, OR SEDIMENT FENCING
- LOD: APPROXIMATE LIMITS OF CONSTRUCTION / MAJOR SOIL DISTURBANCE
- EXISTING DRAINAGE FLOW PATTERN
- EXISTING INLET TO BE PROTECTED
- EXISTING INLET TO BE REMOVED
- NEW INLET TO BE INSTALLED AND PROTECTED
- NEW TRENCH DRAIN TO BE INSTALLED AND PROTECTED
- STABILIZED CONSTRUCTION ENTRANCE / HAUL ROAD
- CONCRETE TRUCK WASH AREA WITH DESIGNATION SIGN
- CONSTRUCTION TRAFFIC ACCESS ROUTING
- STORMWATER FACILITY – PROPOSED
- STORMWATER FACILITY – EXISTING
- WETLANDS
- DEWATERING DISPERSION AND INFILTRATION AREAS
- CEMENT-AMENDED SUBGRADE AREAS

1 EROSION AND SEDIMENT CONTROL - UTILITIES AND VERTICAL CONSTRUCTION

PLAN SCALE 0 40' 80'
SCALE: 1"= 40'

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160 E Broadway Eugene, OR 97401
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ATHLETICS FACILITIES IMPROVEMENTS

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19600 Molalla Ave, Oregon City, OR 97045

REGISTERED PROFESSIONAL ENGINEER 74512PE
DIGITAL SIGNATURE
OREGON
JUNE 11, 2008
GEOFF T. LARSEN
EXPIRES 12/31/26

Drawn By:	GTL/MDS
Checked:	GTL
Project #:	025-010267
Date:	Sep. 19, 2025

Rev. #:	Date:

1200-C PERMIT APPLICATION

SHEET TITLE
ESCP - UTILITIES AND VERTICAL CONSTRUCTION

CE1.04

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CONSTRUCTION NOTES

1A. CONSTRUCTION ENTRANCE/ PHASE 1: NOT USED.
1B. CONSTRUCTION ENTRANCE/ PHASE 2: NOT USED.
2. FUELING AND MAINTENANCE: NOT USED
3. PERIMETER CONTROL: CONSTRUCT PERIMETER CONTROL/SEDIMENT BARRIER. REFER TO DETAILS 5/CE1.06 AND 1,2/CE1.07 FOR EROSION CONTROL DETAILS
4. CONCRETE TRUCK WASH: NOT USED.
5A. INLET PROTECTION: INSTALL INLET PROTECTION PER OREGON CITY STD DETAILS 3,4/CE1.06. MAINTAIN FOR THE DURATION OF THE PROJECT OR UNTIL STRUCTURE IS REMOVED.
5B. TRENCH DRAIN PROTECTION: PROTECT TRENCH DRAIN BY INSERTING PLUGS IN OUTLETS OF DOWNSTREAM RECEIVING CATCH BASIN. PLUGS TO REMAIN IN PLACE UNTIL FINAL STABILIZATION.
5C. EXISTING STORMWATER FACILITY INLET PROTECTION: INSTALL INLET PROTECTION AT CURB OPENINGS SIMILAR TO TYPE 7 ODOT STD DETAIL RD1010/CE1.07 FOR THE EXISTING STORMWATER FACILITY MAINTAIN FOR THE DURATION OF PROJECT.
6. TEMPORARY CONSTRUCTION STAGING / LAYDOWN / CONTRACTOR PARKING AREA: NOT USED.
7. SANITARY FACILITIES: NOT USED.
8. CONSTRUCTION WASTE COLLECTION AREA/ CONTAINMENT/ WASHING AREA: NOT USED.
9. TEMPORARY CONSTRUCTION TRAILER LOCATION: NOT USED.
10. STOCKPILE AREA: NOT USED.
11A. EXISTING STORMWATER FACILITY TO BE PROTECTED: REFER TO STORMWATER FACILITY PROTECTION NOTES.
11B. EXISTING STORMWATER FACILITY TO BE REMOVED: NOT USED.
11C. PROPOSED STORMWATER FACILITY TO BE PROTECTED: REFER TO STORMWATER FACILITY PROTECTION NOTES.
12. NOT USED
13A. NOT USED
13B. NOT USED.
14A. EXISTING WETLANDS: EXISTING WETLANDS TO BE PROTECTED IN PLACE (APPROXIMATE LOCATION). INSTALL PROTECTIVE FENCING AT PERIMETER FLAGGED IN FIELD.
14B. WETLANDS BUFFER / PROTECTIVE MEASURES: MAINTAIN 50' MINIMUM NATURAL BUFFER BETWEEN LIMITS OF WORK AND EXISTING WETLANDS. WHERE 50' MINIMUM NATURAL BUFFER CANNOT BE MAINTAINED, CONSTRUCT ADDITIONAL PERIMETER CONTROLS IN ACCORDANCE WITH APPENDIX B OF THE 1200-C PERMIT. ADDITIONAL PERIMETER CONTROLS TO CONSIST OF A MINIMUM OF (2) LAYERS OF SEDIMENT FENCE, SPACED 5' APART.
15. EXISTING TREE TO REMAIN: PROVIDE PROTECTIVE FENCING PER LANDSCAPE DRAWINGS.
16. SLOPE / EXCAVATION PROTECTION: NOT USED.
17A. NOT USED
17B. NOT USED.

STORMWATER MANAGEMENT FACILITY PROTECTION NOTES

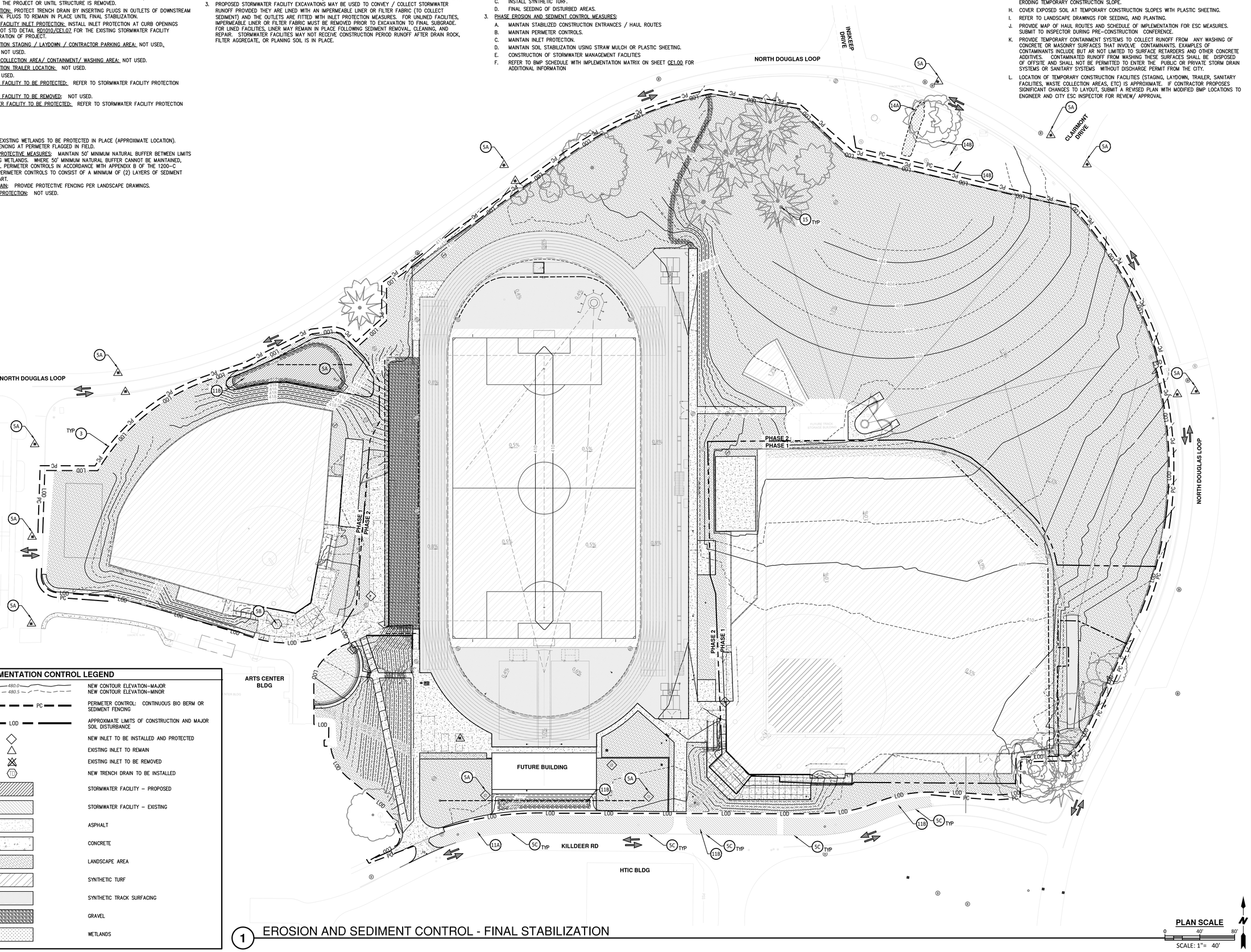
1. STORMWATER FACILITY: INSTALL SEDIMENT FENCE AROUND PERIMETER OF FACILITY TO ENSURE SHEET DRAINAGE FROM ADJACENT CONSTRUCTION ACTIVITY DOES NOT ENTER THE STORMWATER FACILITY. PROVIDE TEMPORARY DRAINAGE FACILITIES TO BYPASS VEGETATED FACILITIES UNTIL AREAS ARE STABILIZED. TEMPORARY BYPASS FACILITIES MAY INCLUDE DIVERSIONS INTO THE RECEIVING PIPED STORM SYSTEM THROUGH PROTECTED INLETS. INLETS AND/OR PIPES DRAINING TO THE ONSITE STORMWATER MANAGEMENT FACILITIES MUST BE PLUGGED UNTIL FINAL STABILIZATION. MAINTAIN FOR THE DURATION OF THE PROJECT.
2. STORMWATER FACILITY GRADING, SOIL PREPARATION, AND PLANTING TO BE PERFORMED DURING OPTIMAL WEATHER CONDITIONS AT LOW PRECIPITATION / LOW FLOW PERIODS TO MINIMIZE SEDIMENTATION IMPACTS.
3. PROPOSED STORMWATER FACILITY EXCAVATIONS MAY BE USED TO CONVEY / COLLECT STORMWATER RUNOFF PROVIDED THEY ARE LINED WITH AN IMPERMEABLE LINER OR FILTER FABRIC (TO COLLECT SEDIMENT) AND THE OUTLETS ARE FITTED WITH INLET PROTECTION MEASURES. FOR UNLINED FACILITIES, IMPERMEABLE LINER OR FILTER FABRIC MUST BE REMOVED PRIOR TO EXCAVATION TO FINAL SUBGRADE. FOR LINED FACILITIES, LINER MAY REMAIN IN PLACE FOLLOWING SEDIMENT REMOVAL, CLEANING, AND REPAIR. STORMWATER FACILITIES MAY NOT RECEIVE CONSTRUCTION PERIOD RUNOFF AFTER DRAIN ROCK, FILTER AGGREGATE, OR PLANING SOIL IS IN PLACE.

CONSTRUCTION ACTIVITY PHASING NOTES - FINAL STABILIZATION

1. PHASE SCHEDULE:
PHASE 1: FEBRUARY 2026–MARCH 2026
PHASE 2: SEPTEMBER 2026–OCTOBER 2026
2. PHASE DESCRIPTION:
A. BASE ROCK FOR SYNTHETIC TURF.
B. CONSTRUCTION OF PLANT BEDS AND LANDSCAPE AREAS.
C. INSTALL SYNTHETIC TURF.
D. FINAL SEEDING OF DISTURBED AREAS.
3. PHASE EROSION AND SEDIMENT CONTROL MEASURES:
A. MAINTAIN STABILIZED CONSTRUCTION ENTRANCES / HAUL ROUTES
B. MAINTAIN PERIMETER CONTROLS.
C. MAINTAIN INLET PROTECTION.
D. MAINTAIN SOIL STABILIZATION USING STRAW MULCH OR PLASTIC SHEETING.
E. CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES
F. REFER TO BMP SCHEDULE WITH IMPLEMENTATION MATRIX ON SHEET CE1.00 FOR ADDITIONAL INFORMATION

SHEET NOTES

A. REFER TO TOPOGRAPHICAL SURVEY SHEETS FOR EXISTING SITE CONDITIONS.
B. REFER TO SHEET CE1.00 AND CE1.01 FOR EROSION AND SEDIMENTATION CONTROL NOTES.
C. REFER TO SHEETS CE1.06, AND CE1.07 FOR EROSION AND SEDIMENTATION CONTROL DETAILS.
D. REFER TO SHEET CD1.01 FOR SITE DEMOLITION.
E. REFER TO SHEET CD1.01 FOR DEMOLITION OF EXISTING UTILITIES.
F. NO FUEL OR HAZARDOUS MATERIAL STORAGE TO OCCUR ON SITE.
G. CONSTRUCT DIVERSIONS AROUND EXCAVATIONS, AS NEEDED, TO PREVENT STORMWATER FROM ERODING TEMPORARY CONSTRUCTION SLOPE.
H. COVER EXPOSED SOIL AT TEMPORARY CONSTRUCTION SLOPES WITH PLASTIC SHEETING.
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EROSION SEDIMENTATION CONTROL LEGEND

- 480.0 / 480.5 — NEW CONTOUR ELEVATION–MAJOR / NEW CONTOUR ELEVATION–MINOR
- PC — PC — PERIMETER CONTROL: CONTINUOUS BIO BERM OR SEDIMENT FENCING
- LOD — APPROXIMATE LIMITS OF CONSTRUCTION AND MAJOR SOIL DISTURBANCE
- NEW INLET TO BE INSTALLED AND PROTECTED
- EXISTING INLET TO REMAIN
- EXISTING INLET TO BE REMOVED
- NEW TRENCH DRAIN TO BE INSTALLED
- STORMWATER FACILITY – PROPOSED
- STORMWATER FACILITY – EXISTING
- ASPHALT
- CONCRETE
- LANDSCAPE AREA
- SYNTHETIC TURF
- SYNTHETIC TRACK SURFACING
- GRAVEL
- WETLANDS

1 EROSION AND SEDIMENT CONTROL - FINAL STABILIZATION

PLAN SCALE 0 40' 80'
SCALE: 1"= 40'

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CLACKAMAS COMMUNITY COLLEGE ATHLETICS FACILITIES IMPROVEMENTS

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REGISTERED PROFESSIONAL ENGINEER 74512PE
DIGITAL SIGNATURE
OREGON
JUNE 11, 2008
GEOFF T. LARSEN
EXPIRES 12/31/26

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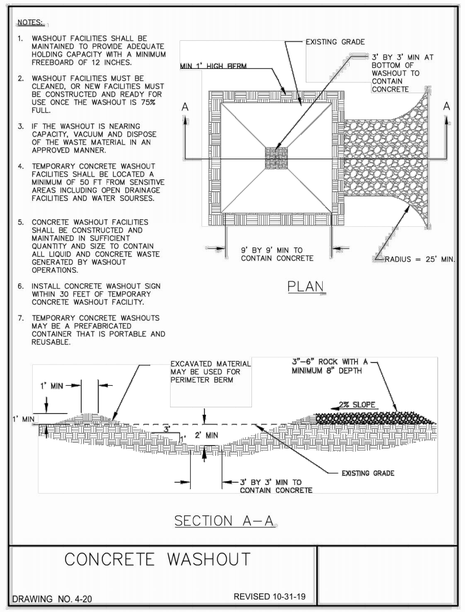
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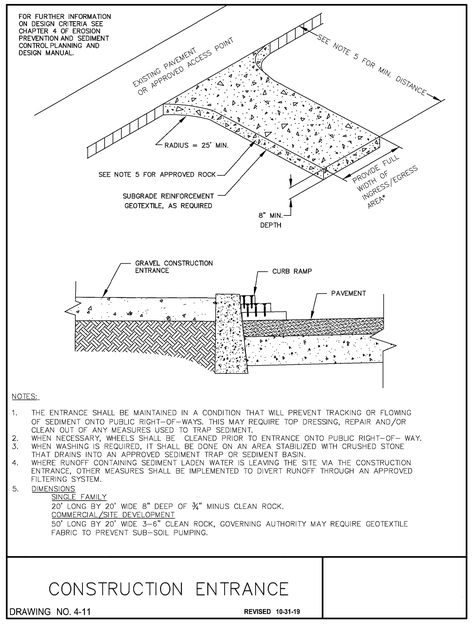
SHEET TITLE
ESCP - FINAL STABILIZATION

CE1.05

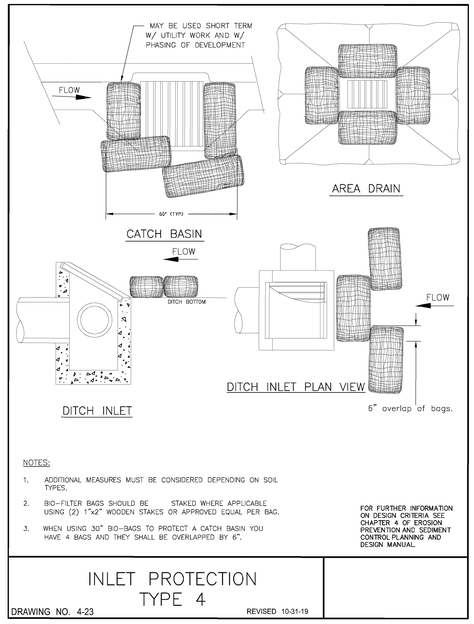
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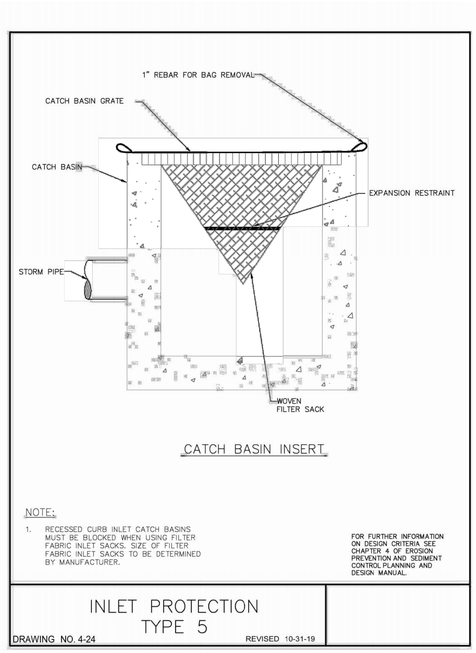
1 CONCRETE WASHOUT



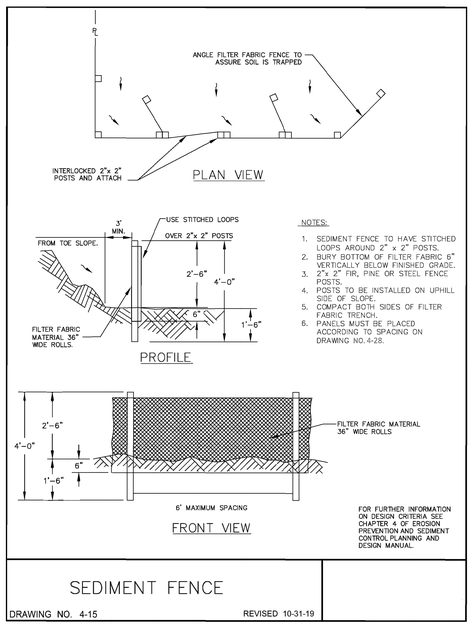
2 CONSTRUCTION ENTRANCE



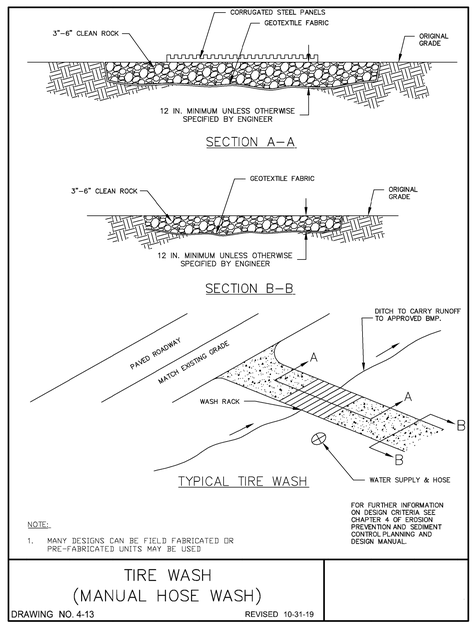
3 INLET PROTECTION TYPE 4



4 INLET PROTECTION TYPE 5



5 SEDIMENT FENCE



6 TIRE WASH

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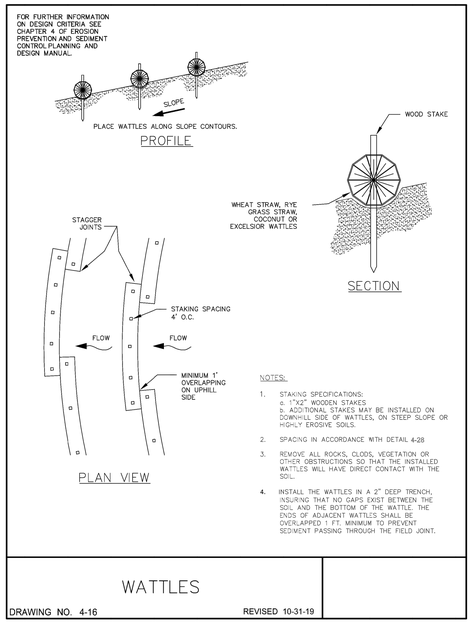
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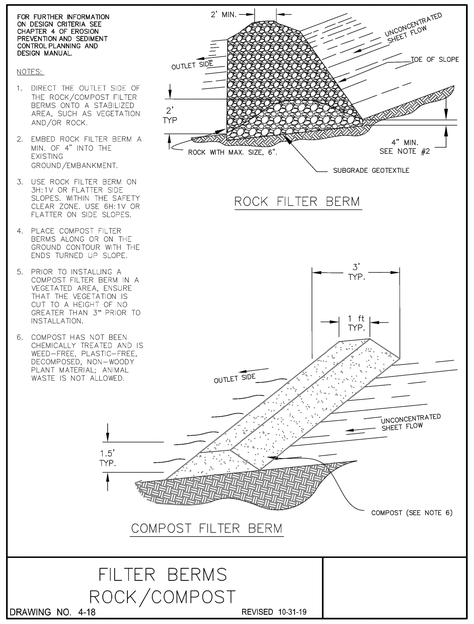
SHEET TITLE
EROSION AND SEDIMENT CONTROL DETAILS

CE1.06

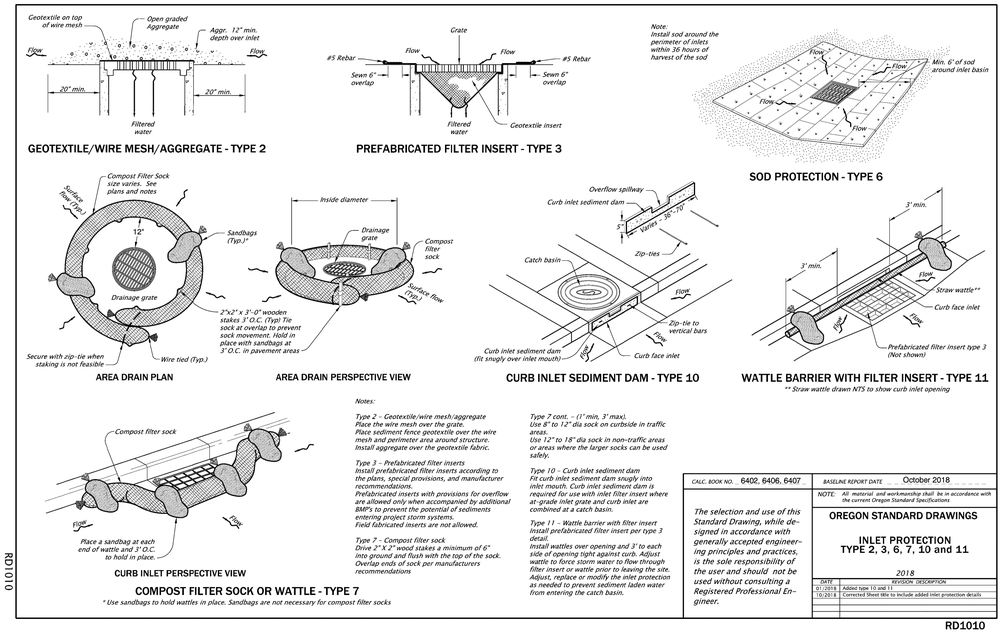
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1 WATTLES



2 FILTER BERMS ROCK/COMPOST



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SHEET TITLE
EROSION AND SEDIMENT CONTROL DETAILS

CE1.07

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DEMOLITION AND EXISTING CONDITIONS KEYNOTES

A1. EXISTING UTILITY TO BE ABANDONED IN PLACE BY FILLING WITH CDF (CAP BOTH ENDS OF PIPE).
A2. EXISTING UTILITY TO BE ABANDONED IN PLACE WITHOUT FILLING WITH CDF (CAP BOTH ENDS OF PIPE).

B. EXISTING BUILDING STRUCTURES TO BE DEMOLISHED: REFER TO LANDSCAPE ARCHITECURAL DRAWINGS FOR DEMOLITION OF EXISTING BUILDING STRUCTURES AND ADJOINING ARCHITECTURAL ELEMENTS.

D1. STORM DRAIN PIPE.
D2. STORM DRAIN MANHOLE.
D3. STORM DRAIN CATCH BASIN.
D4. STORM DRAIN CLEANOUT.
D5. STORMWATER MANAGEMENT FACILITY.
D6. FIELD SUBDRAINAGE SYSTEM. LAYOUT IS CONCEPTUAL, BASED ON PARTIAL RECORD DRAWINGS. MATERIAL AND CONFIGURATION VARY (4" CONCRETE DRAIN TILE, 4" PERFORATED PVC, 3" DRAIN TUBING).
DC. POINT OF CONNECTION TO EXISTING STORM DRAIN SYSTEM. REFER TO C2.1-SERIES DRAWINGS FOR CONTINUATION OF NEW SYSTEMS.

G1. EXISTING GAS LINE.

S1. PRESSURE SANITARY SEWER.
S2. GRAVITY SANITARY SEWER.
S3. SANITARY SEWER MANHOLE.
S4. SANITARY SEWER CLEANOUT.
SC. POINT OF CONNECTION TO EXISTING SANITARY SEWER SYSTEM. REFER TO C3.1-SERIES DRAWINGS FOR CONTINUATION OF NEW SYSTEMS.

W1. DOMESTIC WATER PIPE.
W2. DOMESTIC WATER METER.
W3. DOMESTIC WATER VALVE.
W4. DOMESTIC WATER HOSE BIBB.
WC. POINT OF CONNECTION TO EXISTING DOMSTIC WATER SYSTEM. REFER TO C3.1-SERIES DRAWINGS FOR CONTINUATION OF NEW SYSTEMS.

P1. ELECTRICAL LINE (PER ELECTRICAL DRAWINGS).
P2. ELECTRICAL VAULT (PER ELECTRICAL DRAWINGS).
P3. ELECTRICAL ---(PER ELECTRICAL DRAWINGS).
PC. POINT OF CONNECTION TO EXISTING ELECTRIC LINES (APPROXIMATE). REFER TO E-SERIES DRAWINGS FOR CONTINUATION.

T1. COMMUNICATIONS LINE (PER ELECTRICAL DRAWINGS).
T2. COMMUNICATIONS VAULT (PER ELECTRICAL DRAWINGS).
TC. POINT OF CONNECTION TO EXISTING COMMUNICATION LINES (APPROXIMATE). REFER TO T-SERIES DRAWINGS FOR CONTINUATION.

SHEET NOTES

1. REFER TO SHEET C1.01 FOR LEGENDS AND GENERAL NOTES.
2. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DEMOLITION.
3. INCLUDE DEMOLITION OF UNDERGROUND UTILITIES WITHIN BUILDINGS TO BE DEMOLISHED.
4. REFER TO LANDSCAPE DRAWINGS FOR IRRIGATION DEMOLITION AND MODIFICATION.
5. REFER TO LANDSCAPE DRAWINGS FOR SURFACE FEATURE DEMOLITION AND SALVAGE.
6. REFER TO ELECTRICAL / LOW VOLTAGE DRAWINGS FOR DEMOLITION OF EXISTING ELECTRICAL / LOW VOLTAGE SYSTEMS.

GENERAL UTILITY DEMOLITION NOTES

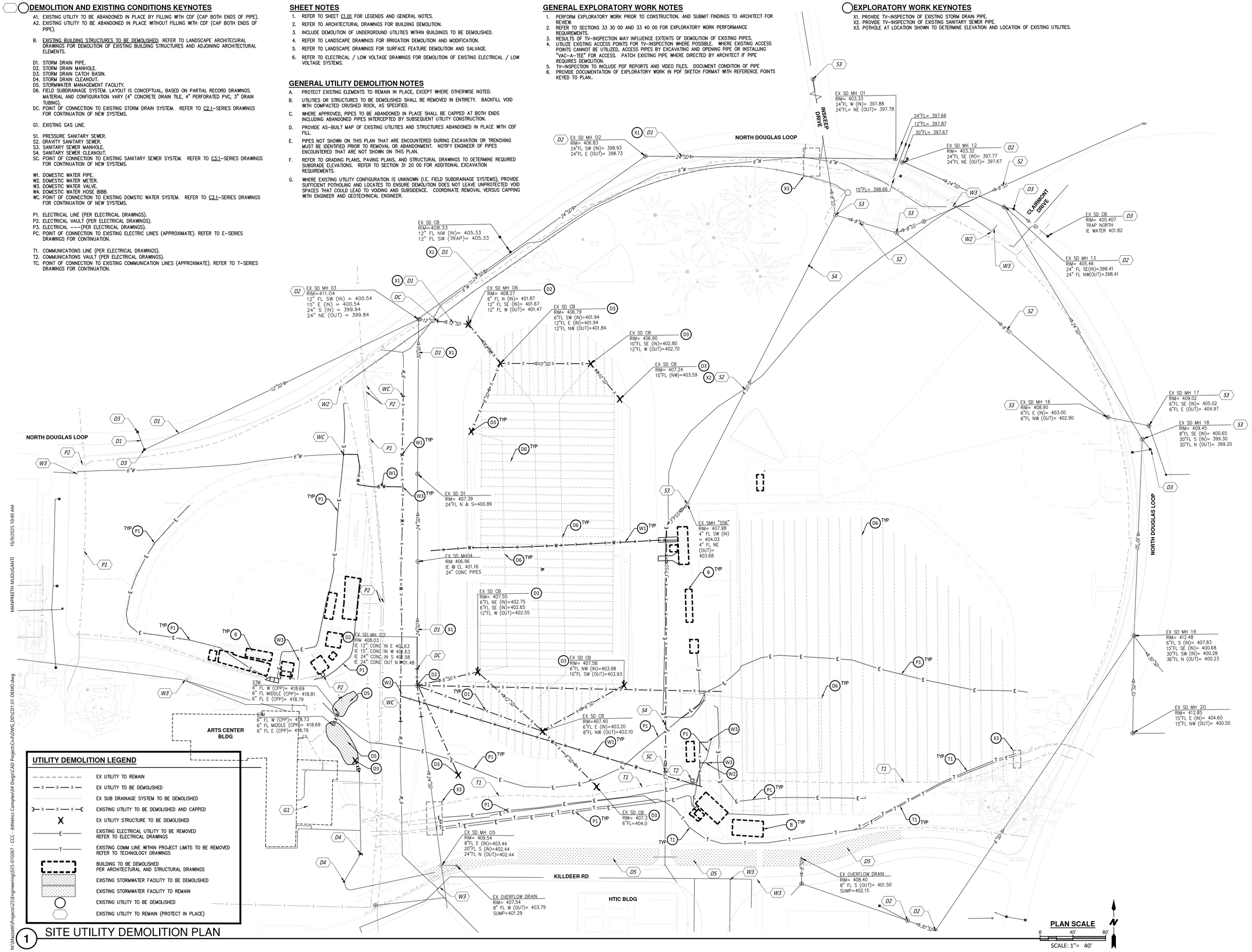
A. PROTECT EXISTING ELEMENTS TO REMAIN IN PLACE, EXCEPT WHERE OTHERWISE NOTED.
B. UTILITIES OR STRUCTURES TO BE DEMOLISHED SHALL BE REMOVED IN ENTIRETY. BACKFILL VOID WITH COMPACTED CRUSHED ROCK, AS SPECIFIED.
C. WHERE APPROVED, PIPES TO BE ABANDONED IN PLACE SHALL BE CAPPED AT BOTH ENDS INCLUDING ABANDONED PIPES INTERCEPTED BY SUBSEQUENT UTILITY CONSTRUCTION.
D. PROVIDE AS-BUILT MAP OF EXISTING UTILITIES AND STRUCTURES ABANDONED IN PLACE WITH CDF FILL.
E. PIPES NOT SHOWN ON THIS PLAN THAT ARE ENCOUNTERED DURING EXCAVATION OR TRENCHING MUST BE IDENTIFIED PRIOR TO REMOVAL OR ABANDONMENT. NOTIFY ENGINEER OF PIPES ENCOUNTERED THAT ARE NOT SHOWN ON THIS PLAN.
F. REFER TO GRADING PLANS, PAVING PLANS, AND STRUCTURAL DRAWINGS TO DETERMINE REQUIRED SUBGRADE ELEVATIONS. REFER TO SECTION 31 20 00 FOR ADDITIONAL EXCAVATION REQUIREMENTS.
G. WHERE EXISTING UTILITY CONFIGURATION IS UNKNOWN (I.E. FIELD SUBDRAINAGE SYSTEMS), PROVIDE SUFFICIENT POTHOLING AND LOCATES TO ENSURE DEMOLITION DOES NOT LEAVE UNPROTECTED VOID SPACES THAT COULD LEAD TO YODING AND SUBSIDENCE. COORDINATE REMOVAL VERSUS CAPPING WITH ENGINEER AND GEOTECHNICAL ENGINEER.

GENERAL EXPLORATORY WORK NOTES

1. PERFORM EXPLORATORY WORK PRIOR TO CONSTRUCTION. AND SUBMIT FINDINGS TO ARCHITECT FOR REVIEW.
2. REFER TO SECTIONS 33 30 00 AND 33 40 00 FOR EXPLORATORY WORK PERFORMANCE REQUIREMENTS.
3. RESULTS OF TV-INSPECTION MAY INFLUENCE EXTENTS OF DEMOLITION OF EXISTING PIPES.
4. UTILIZE EXISTING ACCESS POINTS FOR TV-INSPECTION WHERE POSSIBLE. WHERE EXISTING ACCESS POINTS CANNOT BE UTILIZED, ACCESS PIPES BY EXCAVATING AND OPENING PIPE OR INSTALLING "VAC-A-TEE" FOR ACCESS. PATCH EXISTING PIPE WHERE DIRECTED BY ARCHITECT IF PIPE REQUIRES DEMOLITION.
5. TV-INSPECTION TO INCLUDE PDF REPORTS AND VIDEO FILES. DOCUMENT CONDITION OF PIPE
6. PROVIDE DOCUMENTATION OF EXPLORATORY WORK IN PDF SKETCH FORMAT WITH REFERENCE POINTS KEYED TO PLAN..

EXPLORATORY WORK KEYNOTES

X1. PROVIDE TV-INSPECTION OF EXISTING STORM DRAIN PIPE.
X2. PROVIDE TV-INSPECTION OF EXISTING SANITARY SEWER PIPE.
X3. POTHOLE AT LOCATION SHOWN TO DETERMINE ELEVATION AND LOCATION OF EXISTING UTILITIES.



UTILITY DEMOLITION LEGEND

- EX UTILITY TO REMAIN
- EX UTILITY TO BE DEMOLISHED
- EX SUB DRAINAGE SYSTEM TO BE DEMOLISHED
- EXISTING UTILITY TO BE DEMOLISHED AND CAPPED
- EX UTILITY STRUCTURE TO BE DEMOLISHED
- EXISTING ELECTRICAL UTILITY TO BE REMOVED REFER TO ELECTRICAL DRAWINGS
- EXISTING COMM LINE WITHIN PROJECT LIMITS TO BE REMOVED REFER TO TECHNOLOGY DRAWINGS
- BUILDING TO BE DEMOLISHED PER ARCHITECTURAL AND STRUCTURAL DRAWINGS
- EXISTING STORMWATER FACILITY TO BE DEMOLISHED
- EXISTING STORMWATER FACILITY TO REMAIN
- EXISTING UTILITY TO BE DEMOLISHED
- EXISTING UTILITY TO REMAIN (PROTECT IN PLACE)

1 SITE UTILITY DEMOLITION PLAN

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
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CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

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19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

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SHEET TITLE
SITE UTILITY DEMOLITION PLAN

CD1.01

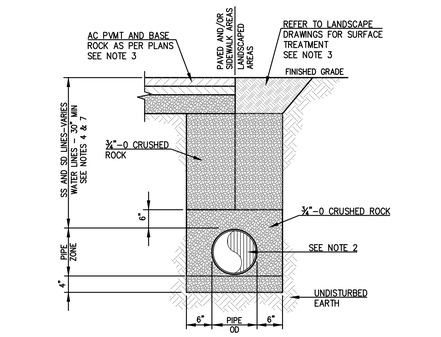
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GENERAL NOTES:

1. THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING PROPERTY AND STREET MONUMENTS PRIOR TO CONSTRUCTION. ANY MONUMENTS DISTURBED DURING CONSTRUCTION OF THE PROJECT SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE. THE MONUMENTS SHALL BE REPLACED WITHIN A MAXIMUM OF 90 DAYS, AND THE COUNTY SURVEYOR SHALL BE NOTIFIED IN WRITING AS REQUIRED BY ORS 209.150.
2. LOCATIONS OF EXISTING UTILITIES ARE ASSUMED FROM INFORMATION AVAILABLE AND ARE NOT GUARANTEED TO BE COMPLETE AND ACCURATE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES.
3. PRIOR TO CONSTRUCTION, POTHOLE AND VERIFY LOCATION AND ELEVATION OF EXISTING STORM, SANITARY, AND WATER UTILITIES AT CONNECTION POINT(S) SHOWN ON PLANS, AND OF OTHER UTILITIES AT CROSSINGS WITH NEW UTILITIES. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS.
4. CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY PRIOR TO EXCAVATING, BORING, OR POTHOLING. ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN O.A.R. 952-001-0010 – 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 1-800-332-2344)
5. CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS AND COMPLY WITH REQUIREMENTS AND SPECIFICATIONS OF ANY RESPECTIVE UTILITY COMPANY FOR UTILITIES TO BE CUT, MOVED, RELOCATED, OR RE-CONNECTED TO AN EXISTING FACILITY.
6. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ANY SERVING UTILITY COMPANY INSTALLING UTILITIES ON SITE. CONSTRUCTION OF OTHER UTILITIES MAY OCCUR AT SAME TIME ON SITE.
7. QUANTITIES SHOWN ARE FOR THE PURPOSE OF IDENTIFYING LENGTHS. ACTUAL QUANTITIES MAY VARY. CONTRACTOR TO PROVIDE QUANTITIES NEEDED FOR LAYOUT OF SYSTEM.
8. CONTRACTOR SHALL PROVIDE AND INSTALL FITTINGS AS REQUIRED TO COMPLETE PIPE CONNECTIONS AND TRANSITIONS PER PLAN, AND TO CONFORM TO TRENCHING REQUIREMENTS AND SITE GRADES.
9. MANHOLE AND CLEANOUT RIM ELEVATIONS ARE APPROXIMATE. FINAL ELEVATIONS MAY VARY AND SHALL MATCH FINISHED ELEVATIONS OF ADJACENT SURFACES.
10. TRACER WIRE SHALL ENTER ALL MANHOLE, CATCH BASIN, INLET, CLEANOUT, AND VALVE BOX STRUCTURES. EXTEND TRACER WIRE INTO STRUCTURE FAR ENOUGH TO PROVIDE ADEQUATE FREE WIRE TO EXTEND END OF WIRE 24" ABOVE/OUTSIDE OF STRUCTURE TO FACILITATE TESTING. COIL AND SECURE TRACER WIRE WITHIN EASY REACH OF STRUCTURE OPENING. VERIFY WIRE IS CLEAR OF ALL FILL MATERIAL IN CLEANOUT AND VALVE BOX STRUCTURES.
11. ALL STORM DRAIN AND SANITARY SEWER LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES. HORIZONTAL BENDS SHALL BE MADE USING FITTINGS WITH MAXIMUM 45° BEND.
12. CAP AND MARK ALL STORM PIPE ENDS WITH A 2"x4" BOARD STUCK IN GROUND. END OF BOARD SHALL BE PAINTED WHITE AND EXTEND MINIMUM 18" ABOVE GROUND SURFACE.
13. REFER TO SHEET CE-SERIES DRAWINGS, FOR EROSION SEDIMENT CONTROL MEASURES AND ADDITIONAL CONSTRUCTION REQUIREMENTS.

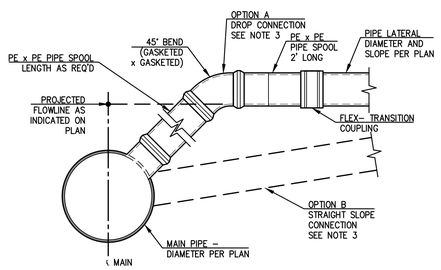
CIVIL SYMBOLS AND ABBREVIATIONS LIST

SYMBOL	ABBR.	DESCRIPTION	ABBR.	DESCRIPTION
12"SD	SD	STORM DRAIN	AC	ASPHALT CONCRETE
12"PD	PD	PERFORATED STORM DRAIN	BLDG	BUILDING
	–	FLOW DIRECTION	BMP	BEST MANAGEMENT PRACTICE
			CONC	CONCRETE
	FC MH	FLOW CONTROL MANHOLE STRUCTURE	CONST	CONSTRUCT
			DI	DUCTILE IRON PIPE MATERIAL
	MH	MANHOLE STRUCTURE	DIA	DIAMETER
			ELEV	ELEVATION
			ESC	EROSION SEDIMENTATION CONTROL
CO	CO	STANDARD CLEANOUT	EX	EXISTING
	–	PIPE TERMINATION (PLUG & MARK)	FFE	FINISHED FLOOR ELEVATION
10 / C-500	DET	DETAIL REFERENCE – DETAIL # OVER SHEET #	FL	FLOWLINE
			FS	FINISHED SURFACE ELEVATION (LANDSCAPE AREAS)
22A	–	CONSTRUCTION NOTE WITH REFERENCE NUMBER	LF	LINEAR FEET
			MAX	MAXIMUM
A / C-500	–	SECTION REFERENCE – SECTION # OVER SHEET #	ME	MATCH EXISTING
			MIN	MINIMUM
			PCC	PORTLAND CEMENT CONCRETE
			PL	PROPERTY LINE
			PUE	PUBLIC UTILITY EASEMENT
			S=	SLOPE=
			TYP	TYPICAL
			STD	STANDARD



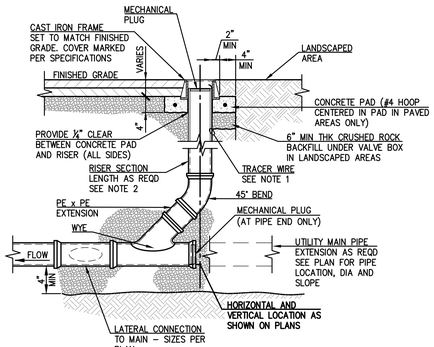
NOTES
1. WATER LINES THAT PARALLEL SANITARY SEWER LINES SHALL BE LOCATED A MINIMUM OF 12" ABOVE SEWER LINES, WHERE SERVICES ARE NOT HORIZONTALLY SEPARATED BY 10'.
2. WITHIN 5' OF A BUILDING STRUCTURE, BUILDING CODE APPROVED PIPE MATERIAL AND ¾"-0 CRUSHED ROCK BACKFILL SHALL BE USED.
3. IN AREAS OUTSIDE OF PROPOSED IMPROVEMENTS, SAWCUT, REMOVE AND REPAIR EXISTING SURFACES TO MATCH EXISTING ASPHALT, CONCRETE, OR LANDSCAPING IN AREAS WHICH DO NOT RECEIVE NEW IMPROVEMENTS. PROVIDE 4" MIN DEPTH ASPHALT PAVEMENT, 4" MIN DEPTH CONCRETE PAVEMENT, OR MATCH EXISTING PAVEMENT DEPTH, WHICHEVER IS GREATER.
4. 36" MINIMUM FOR FIRE SERVICE PIPES UNDER AREAS TRAFFICKED BY VEHICLES. (NFPA 24, 10-4)
5. INSTALL TRACER WIRE ON ANY PIPELINE(S) CONSTRUCTED OF NON-METALLIC PIPE MATERIAL.
6. BACKFILL WITH CDF WHERE COMPACTION WITH CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.

A TYPICAL TRENCHING & BACKFILL SECTION
NO SCALE



NOTES
1. DIAMETER OF ALL PIPE AND FITTINGS TO MATCH LATERAL DIAMETER UNLESS NOTED OTHERWISE.
2. MANUFACTURED WYE FITTING REQ'D FOR ALL CONNECTIONS UNLESS OTHERWISE NOTED. ROTATE WYE FITTING ABOUT MAIN PIPE AXIS, AND 45° BEND FITTING ABOUT LATERAL PIPE AXIS TO OBTAIN PROPER CONNECTION ALIGNMENT.
3. FOR LATERAL CONNECTIONS TO EXISTING STORM DRAIN MAINS:
   FOR MAINLINES 15" AND SMALLER, INSTALL WYE FITTING.
   FOR MAINLINES 18" AND LARGER, CONNECT USING WYE FITTING OR INSERTA-TEE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR'S OPTION TO CONNECT LATERAL TO MAIN USING OPTION A – DROP CONNECTION OR OPTION B – STRAIGHT SLOPE CONNECTION. STRAIGHT SLOPE CONNECTION REQUIRES SLOPE= 0.0100 FT/FT MINIMUM.
5. SLOPES FOR LATERALS SHOWN IN STORM DRAIN PLANS ARE BASED ON OPTION A.

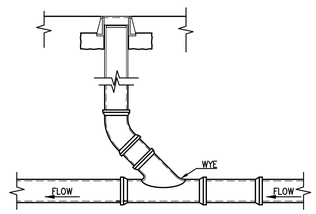
1 LATERAL CONNECTION
NO SCALE



GENERAL CONSTRUCTION

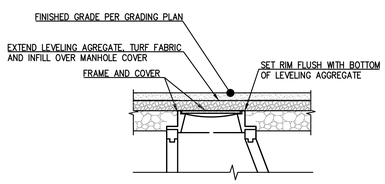
NOTES
1. TRACER WIRE SHALL ENTER STRUCTURE WITH RISER PIPE. PROVIDE ENOUGH FREE WIRE TO EXTEND 24" ABOVE FINISHED GRADE TO FACILITATE TESTING. VERIFY FREE END OF WIRE IS WITHIN EASY REACH OF OPENING IN TOP SECTION.
2. RISER PIPE SIZE:
   4", 6", AND 8" DIA MAIN – DIA TO MATCH MAIN
   10" DIA AND LARGER MAIN – 8" DIA RISER PIPE
3. ADJUST END OF RISER PIPE TO MAINTAIN 2" MIN AND 4" MAX CLEARANCE BETWEEN END PIPE AND BOTTOM OF VALVE BOX LID.

2A STANDARD CLEANOUT (CO)
NO SCALE

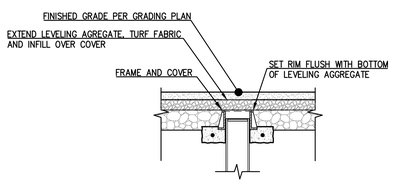


NOTES
1. REFER TO DETAL 2B/C301 FOR CLEANOUT CONSTRUCTION.

2B REVERSE CLEANOUT
NO SCALE

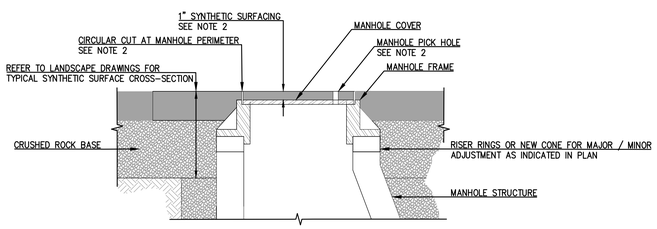


MANHOLE



CLEANOUT / BACKWATER VALVE

3 MANHOLE / CLEANOUT COVERS IN SYNTHETIC TURF AREAS
NO SCALE



NOTES
1. SANDBLAST AND PROVIDE SURFACE PREPARATION FOR MANHOLE FRAME AND COVER PRIOR TO APPLYING SYNTHETIC SURFACING. PROVIDE BONDING AGENT PER MANUFACTURER RECOMMENDATIONS.
2. APPLY SYNTHETIC SURFACING UNIFORMLY AT FINISHED GRADE PER MANUFAFACTURER RECOMMENDATIONS AND PER SECTION 32 18 16. FORM AND POUR, OR CUT OUT CIRCULAR OPENING AROUND PERIMETER OF MANHOLE COVER, FOLLOWING SURFACING MANUFACTURER RECOMMENATIONS. CUT OR DRILL HOLE AT PICK HOLE PER MANUFACTURER RECOMMENDATIONS. MAXIMUM THICKNESS OF SURFACING OVER MANHOLE TO BE 1" TO ENSURE ACCESS FOR MAINTENANCE. PREPARE MOCKUP FOR ARCHITECT'S APPROVAL.

4 MANHOLE COVER AT SYNTHETIC SURFACING
NO SCALE

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
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www.cameronmccarthy.com

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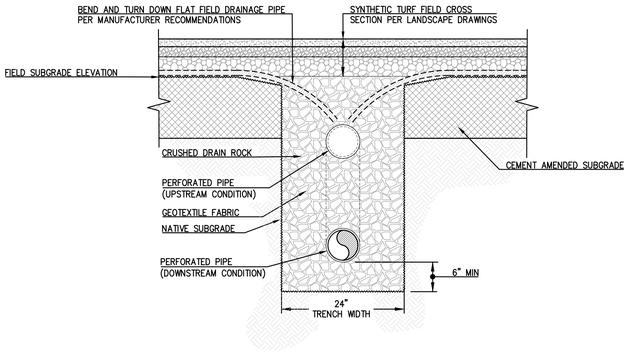
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SHEET TITLE
CIVIL GENERAL NOTES AND DETAILS

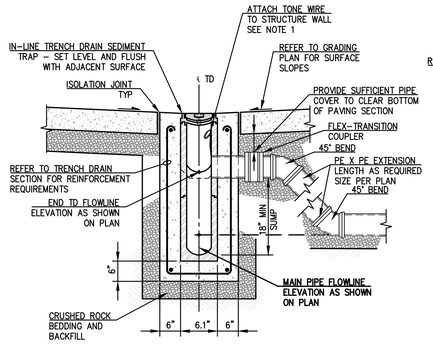
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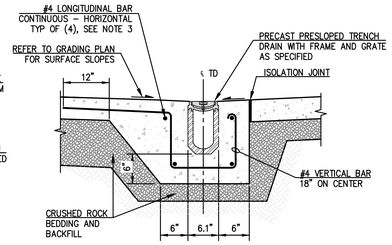


1 PERFORATED FIELD COLLECTOR PIPE TRENCH

NO SCALE



IN-LINE SEDIMENT TRAP SECTION

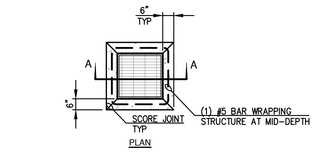


TRENCH DRAIN SECTION

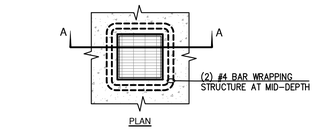
NOTES
1. TRACER WIRE SHALL ENTER STRUCTURE THROUGH WALL AT PIPE ENTRANCE (NOT THROUGH PIPE). PROVIDE ADEQUATE FREE WIRE TO EXTEND 24" ABOVE TOP OF GRATE TO FACILITATE TESTING. COIL WIRE AND SECURE WITH NON-CORROSIVE FASTENER 2" UNDER FRAME.
2. CONSTRUCT CONCRETE ENCASEMENT PER MANUFACTURER RECOMMENDATIONS.
3. EXTEND CONCRETE COLLAR AND LONGITUDINAL BARS AROUND ENDS OF TRENCH DRAIN STRUCTURE AND OVERLAP BARS 6" MINIMUM.
4. TRENCH DRAIN CONCRETE COLLAR TYPE SHALL CONSIST OF EITHER OF THE FOLLOWING, SELECTED TO MATCH JOINT LAYOUT SHOWN ON LANDSCAPE DRAWINGS.
   A. 6" WIDE CONCRETE COLLAR BOTH SIDES OF THE TRENCH DRAIN STRUCTURE WITH ISOLATION JOINT BETWEEN COLLAR AND ADJACENT CONCRETE SLAB, SIMILAR TO IN-LINE SEDIMENT TRAP SECTION.
   B. 6" WIDE CONCRETE COLLAR ON ONE SIDE OF TRENCH DRAIN STRUCTURE WITH CONCRETE SLAB (5' WIDE OR LESS) ON OTHER SIDE SIMILAR TO TRENCH DRAIN SECTION.

2 TRENCH DRAIN (TD)

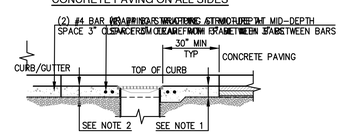
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ASPHALT PAVING OR LANDSCAPE ON ALL SIDES



CONCRETE PAVING ON ALL SIDES



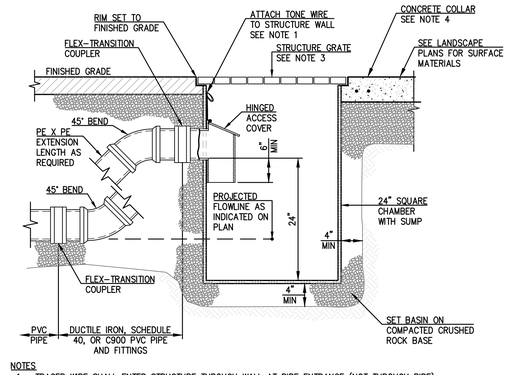
NOTES
1. 7" MINIMUM THICKNESS
2. MATCH GUTTER BAR THICKNESS OR 7" MIN, WHICHEVER IS GREATER

SECTION A-A

NOTES
1. INCLUDE CONCRETE COLLAR IN SEEDED AREAS UNLESS DIRECTED OTHERWISE BY LANDSCAPE ARCHTICT.
2. EXCLUDE CONCRETE COLLAR IN PLANT BED AREAS.

6 CATCH BASIN (CB) COLLAR

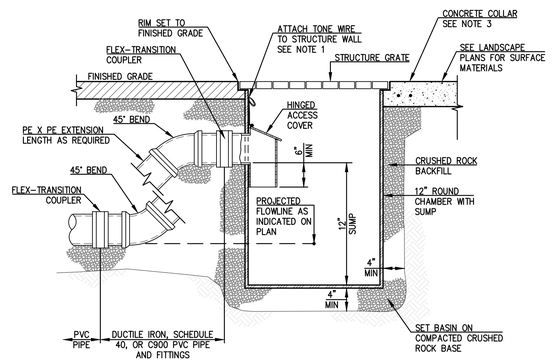
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NOTES
1. TRACER WIRE SHALL ENTER STRUCTURE THROUGH WALL AT PIPE ENTRANCE (NOT THROUGH PIPE). SEAL PIPE PENETRATION WITH MASTIC. PROVIDE ADEQUATE FREE WIRE TO EXTEND 24" ABOVE TOP OF GRATE TO FACILITATE TESTING. COIL WIRE AND SECURE WITH NON-CORROSIVE FASTENER 2" UNDER FRAME.
2. LOCATION SPECIFIED ON PLAN INDICATES CENTER OF GRATED SECTION OF BASIN, FACE OF CURB AT CENTER OF GRATED SECTION, OR INTERSECTION BETWEEN FACE OF CURBS.
3. ALL STRUCTURES SHALL BE PROVIDED WITH HEAVY DUTY GRATE WITH BICYCLE BARS.
4. CONSTRUCT CONCRETE COLLAR AND/OR ADDITIONAL REINFORCING PER DETAIL 4/C-202.

3 STANDARD CATCH BASIN (CB)

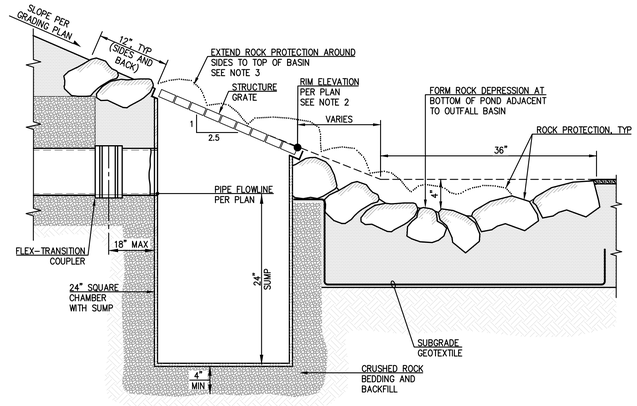
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2. LOCATION SPECIFIED ON PLAN INDICATES CENTER OF GRATED SECTION OF BASIN.
3. CONSTRUCT CONCRETE COLLAR AND/OR ADDITIONAL REINFORCING PER DETAIL 4/C-202.

4 STANDARD AREA DRAIN (AD)

NO SCALE



NOTES
1. TRACER WIRE SHALL ENTER STRUCTURE AT PIPE INLET OR OUTLET. PROVIDE ENOUGH FREE WIRE TO EXTEND 24" ABOVE TOP OF GRATE TO FACILITATE TESTING. COIL WIRE AND SECURE WITH NON-CORROSIVE FASTENER UNDER FRAME.
2. COORDINATES SHOWN ON PLAN REPRESENT MIDPOINT OF LOWER EDGE OF GRATED SECTION.
3. TRANSITION SLOPE WITHIN ROCK PROTECTION FROM 2.5H:1V AT STRUCTURE FRAME TO 4H:1V MAXIMUM SLOPE WHERE ROCK PROTECTION MEETS LANDSCAPE MATERIALS.
4. EXTEND ROCK PROTECTION 3' MIN INTO BOTTOM OF PLANTER AND DEPRESS ROCK SURFACE 4" BELOW BOTTOM ELEVATION. EXTEND ROCK PROTECTION COLLAR 1' MIN AROUND ALL SIDES OF STRUCTURE.
5. ROCK PROTECTION MATERIAL PER SECTION 32 20 00 (COBBLES).

5 OUTFALL BASIN

NO SCALE

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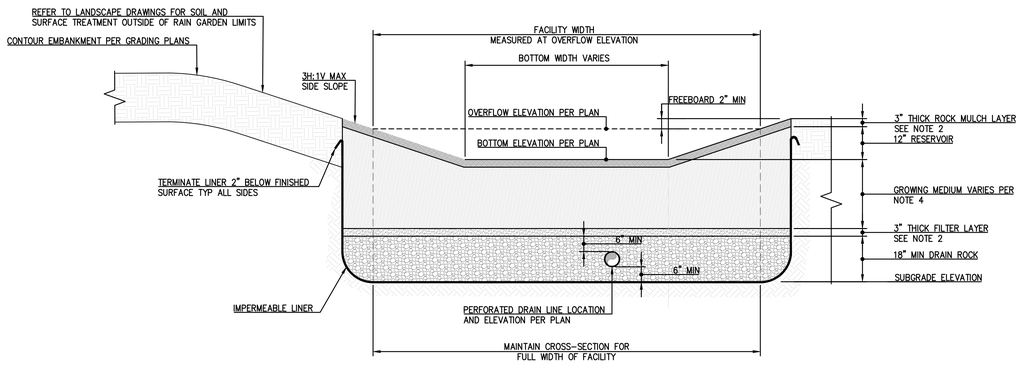
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100% DESIGN DEVELOPMENT

SHEET TITLE
CIVIL DETAILS

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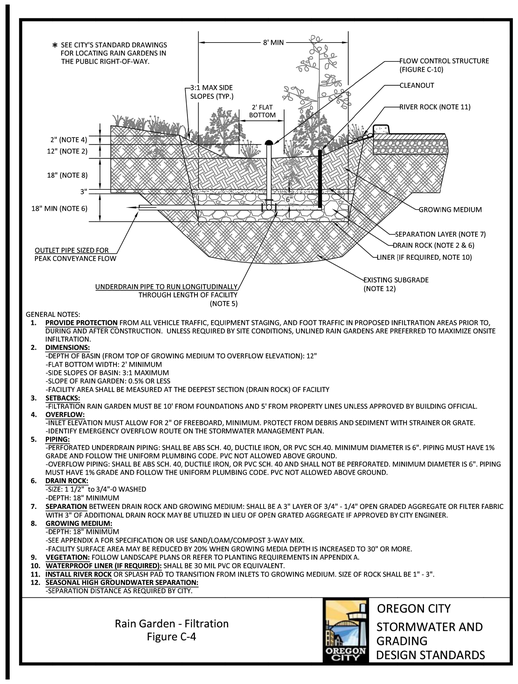
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NOTES
1. FACILITY BOTTOM ELEVATION REPRESENTS TOP OF ROCK MULCH LAYER.
2. REFER TO SECTION 31 20 00 FOR: STORMWATER MULCH (ROCK), STORMWATER PLANTING SOIL, STORMWATER FILTER AGGREGATE, DRAIN ROCK, AND ROCK PROTECTION.
3. INSTALL IMPERMEABLE LINER FOR FULL WIDTH OF RAIN GARDEN.
4. GROWING MEDIUM DEPTH:
   RG-S1: 30" MIN DEPTH
   RG-S2: 18" MIN DEPTH
   RG-T1: 18" MIN DEPTH

1A STORMWATER FILTRATION RAIN GARDEN

NO SCALE



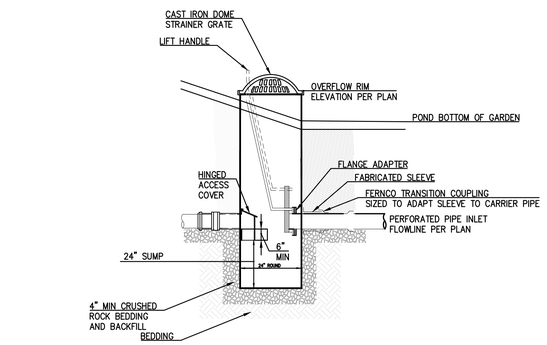
GENERAL NOTES:
1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION. UNLESS REQUIRED BY SITE CONDITIONS, UNLINED RAIN GARDENS ARE PREFERRED TO MAXIMIZE ONSITE INFILTRATION.
2. **DIMENSIONS:**
   -DEPTH OF BASIN (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 12"
   -FLAT BOTTOM WIDTH: 2' MINIMUM
   -SIDE SLOPES OF BASIN: 3:1 MAXIMUM
   -SLOPE OF RAIN GARDEN: 0.5% OR LESS
   -FACILITY AREA SHALL BE MEASURED AT THE DEEPEST SECTION (DRAIN ROCK) OF FACILITY
3. **SETBACKS:**
   -FILTRATION RAIN GARDEN MUST BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES UNLESS APPROVED BY BUILDING OFFICIAL.
4. **OVERFLOW:**
   -INLET ELEVATION MUST ALLOW FOR 2" OF FREEBOARD, MINIMUM. PROTECT FROM DEBRIS AND SEDIMENT WITH STRAINER OR GRATE.
   -IDENTIFY EMERGENCY OVERFLOW ROUTE ON THE STORMWATER MANAGEMENT PLAN.
5. **PIPING:**
   -PERFORATED UNDERDRAIN PIPING: SHALL BE ABS SCH. 40, DUCTILE IRON, OR PVC SCH 40. MINIMUM DIAMETER IS 6". PIPING MUST HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
   -OVERFLOW PIPING: SHALL BE ABS SCH. 40, DUCTILE IRON, OR PVC SCH. 40 AND SHALL NOT BE PERFORATED. MINIMUM DIAMETER IS 6". PIPING MUST HAVE 1% GRADE AND FOLLOW THE UNIFORM PLUMBING CODE. PVC NOT ALLOWED ABOVE GROUND.
6. **DRAIN ROCK:**
   -SIZE: 1 1/2" to 3/4"-0 WASHED
   -DEPTH: 18" MINIMUM
7. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE OR FILTER FABRIC WITH 3" OF ADDITIONAL DRAIN ROCK MAY BE UTILIZED IN LIEU OF OPEN GRATED AGGREGATE IF APPROVED BY CITY ENGINEER.
8. **GROWING MEDIUM:**
   -DEPTH: 18" MINIMUM
   -SEE APPENDIX A FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
   -FACILITY SURFACE AREA MAY BE REDUCED BY 20% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
9. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
10. **WATERPROOF LINER (IF REQUIRED):** SHALL BE 30 MIL PVC OR EQUIVALENT.
11. **INSTALL RIVER ROCK** OR SPLASH PAD TO TRANSITION FROM INLETS TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" - 3".
12. **SEASONAL HIGH GROUNDWATER SEPARATION:**
   -SEPARATION DISTANCE AS REQUIRED BY CITY.

Rain Garden - Filtration
Figure C-4

OREGON CITY
STORMWATER AND GRADING DESIGN STANDARDS

1B OREGON CITY STANDARD DETAIL FILTRATION RAIN GARDEN

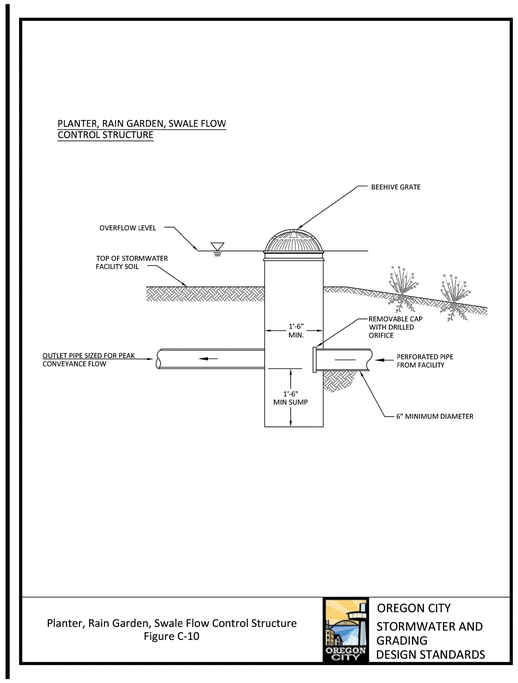
NO SCALE



NOTES
1. TRACER WIRE TO ENTER STRUCTURE AT PIPE INLET OR OUTLET. PROVIDE ADEQUATE FREE WIRE TO EXTEND 24" ABOVE TOP OF GRATE TO FACILITATE TESTING. COIL WIRE AND SECURE WITH NON-CORROSIVE FASTENER 2" UNDER FRAME.
2. SHEAR GATE WITH ORIFICE DRILLED IN CAP. ORIFICE SIZE AS FOLLOWS
   RG-T1: 1.11"
   RG-S1: 1.2"
   RG-S2: 0.35"

2A OVERFLOW BASIN

NO SCALE



Planter, Rain Garden, Swale Flow Control Structure
Figure C-10

OREGON CITY
STORMWATER AND GRADING DESIGN STANDARDS

2B OREGON CITY STANDARD DRAWING RAIN GARDEN OVERFLOW / FLOW CONTROL STRUCTURE

NO SCALE

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
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ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

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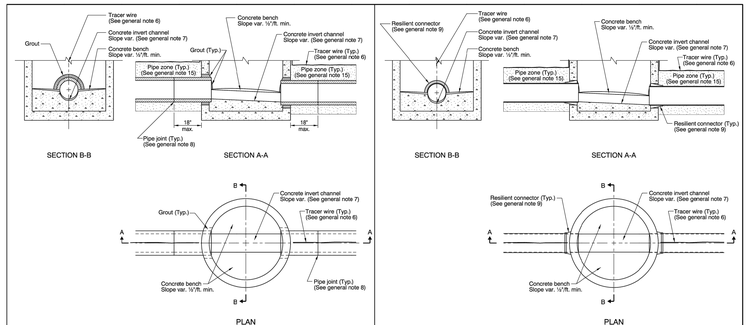
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SHEET TITLE
CIVIL DETAILS

C1.03

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GENERAL NOTES FOR ALL DETAILS:

1. All precast sections shall conform to requirements of ASTM C478.
2. Manhole base sections may be precast or cast-in-place.
3. All concrete shall be commercial grade concrete.
4. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
5. Max. pipe diameter varies with pipe material.
6. All connecting pipes shall have a tracer wire, or approved alternate. See Std. Drg. RD336 for tracer wire details.
7. Invert channels shall be constructed to provide smooth slopes and radii to outlet pipe.
8. When rigid pipe is used, the connecting pipe shall have a flexible, gasketted and unrestrained joint within 18" of manhole wall. Joint type varies with manufacturer.
9. When flexible pipe is used, install resilient connectors conforming to requirements of ASTM C923.
10. See Std. Drgs. RD335, RD336, and RD338 for details not shown.
11. See Std. Drg. RD336 for manhole steps details.
12. See Std. Drg. RD342 for shallow manholes.
13. See Std. Drg. RD344 for manhole base section.
14. See Std. Drg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
15. Pipe zone varies, see Std. Drg. RD300.

CALC BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

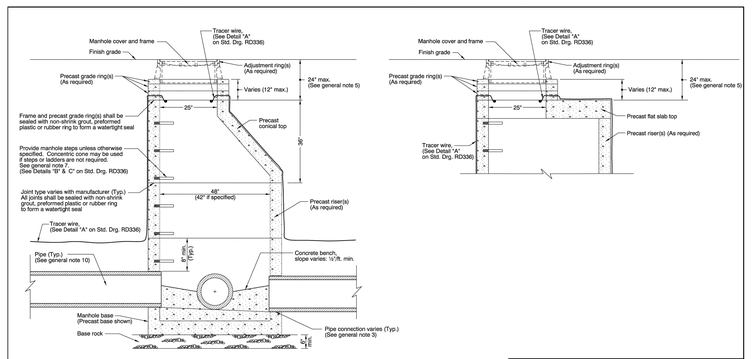
OREGON STANDARD DRAWINGS

PIPE TO MANHOLE CONNECTIONS

2015

DATE	REVISION DESCRIPTION

RD345



GENERAL NOTES FOR ALL DETAILS:

1. All precast products shall conform to requirements of ASTM C478.
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
3. See Std. Drg. RD345 for pipe to manhole connections.
4. See Std. Drg. RD344 for manhole base section.
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate.
7. See Std. Drg. RD337 for manhole safety ladder.
8. See Std. Drg. RD336 for details not shown.
9. See Std. Drg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Drg. RD342 for shallow manholes.
12. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

CALC BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

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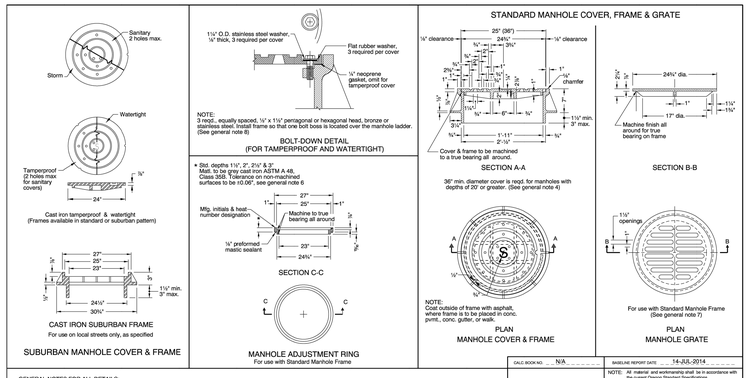
OREGON STANDARD DRAWINGS

STANDARD STORM SEWER MANHOLE

2015

DATE	REVISION DESCRIPTION

RD335



GENERAL NOTES FOR ALL DETAILS:

1. Tamperproof covers reqd. on sanitary or storm drain manhole where located in pedestrian ways or easement areas. Covers for sanitary manholes shall have 2 holes maximum.
2. Watertight covers required if located where cover may be submerged (no holes).
3. Covers and frames shall be stamped with manufacturer's initials, heat number and point of origin.
4. See Std. Drg. RD337 for manhole safety ladder.
5. See Std. Drg. RD360 for manhole frame adjustment.
6. See ODOT's QPL for alternate manhole adjustment rings.
7. Manhole grate allowed only in locations not subject to bicycle or pedestrian use.
8. See ODOT's QPL for alternate bolt-down products.

CALC BOOK NO. N/A — BASELINE REPORT DATE 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

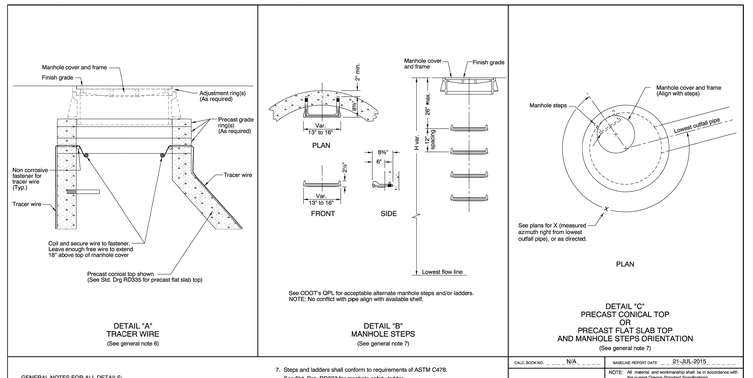
OREGON STANDARD DRAWINGS

MANHOLE COVERS AND FRAMES

2015

DATE	REVISION DESCRIPTION

RD356



GENERAL NOTES FOR ALL DETAILS:

1. All precast products shall conform to requirements of ASTM C478.
2. Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
3. See Std. Drg. RD345 for pipe to manhole connections.
4. See Std. Drg. RD344 for manhole base section.
5. Adjust 24" maximum.
6. All connecting pipes shall have a tracer wire, or approved alternate. Place tracer wire directly over pipe centerline and on top of the pipe zone material.
7. Steps and ladders shall conform to requirements of ASTM C478. See Std. Drg. RD337 for manhole safety ladder. When H=42" or less cont steps. See Detail "C" for alignment of steps, and manhole cover and frame.
8. See Std. Drg. RD335 for details not shown.
9. See Std. Drg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
10. Max. pipe diameter varies with pipe material.
11. See Std. Drg. RD342 for shallow manholes.
12. See project plans for details not shown.

CALC BOOK NO. N/A — BASELINE REPORT DATE 21-JUL-2015

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

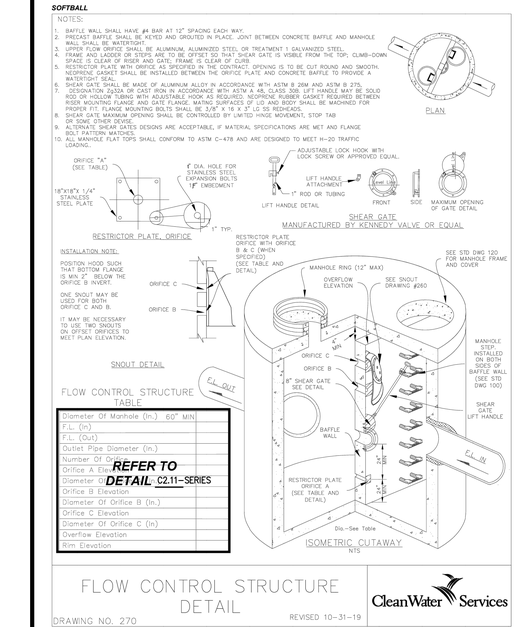
OREGON STANDARD DRAWINGS

STANDARD MANHOLE DETAILS

2015

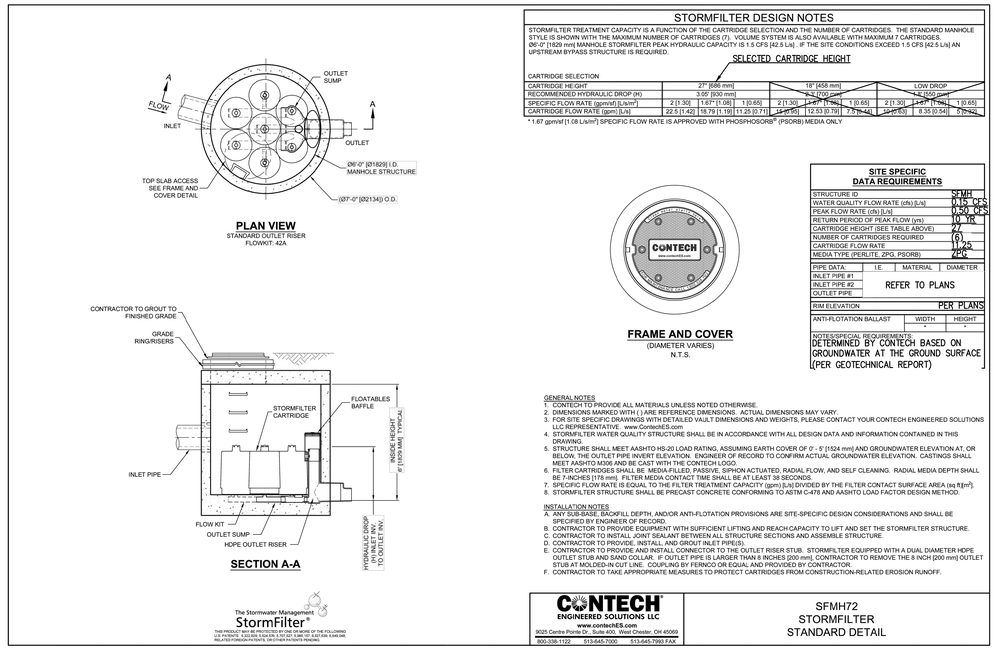
DATE	REVISION DESCRIPTION
21-JUL-15	REVISED DETAILS & NOTES

RD336



1 CWS STANDARD DRAWING NO. 270 - FLOW CONTROL STRUCTURE

NO SCALE



2 STORMFILTER MANHOLE

NO SCALE

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

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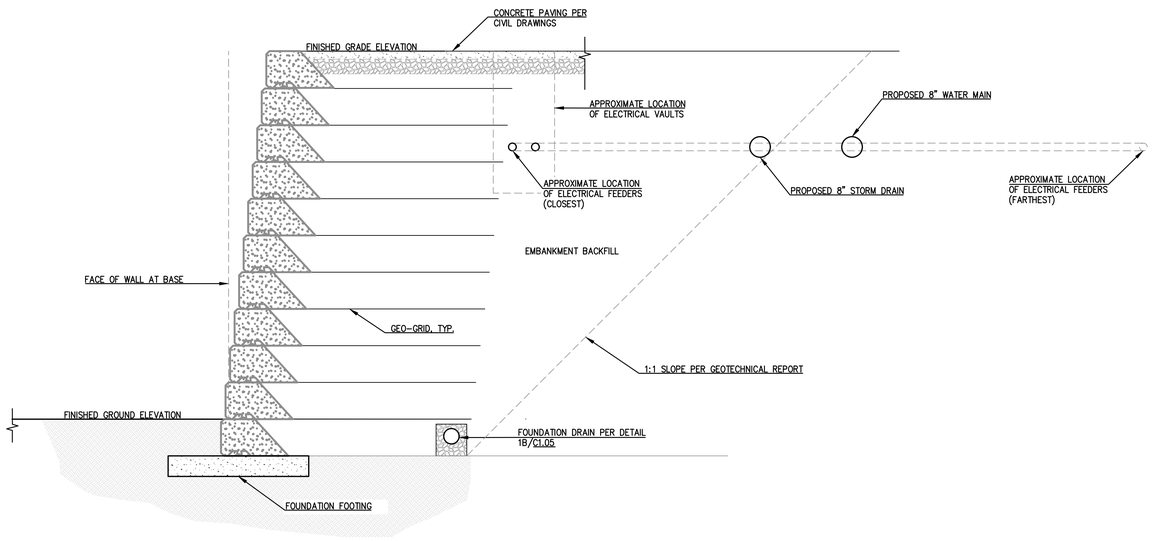
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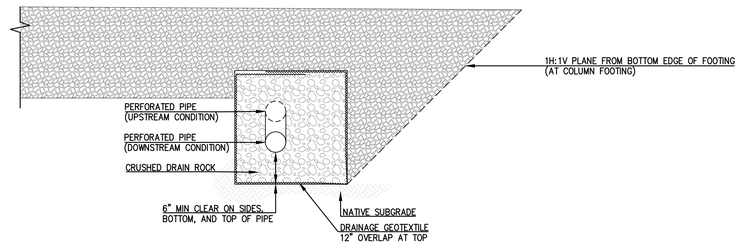
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1A FOUNDATION DRAIN AND EARTHWORK SECTION FOR RETAINING WALL

NO SCALE



TYPICAL CONDITION / RETAINING WALL

1B PERIMETER FOUNDATION DRAIN SECTION

NO SCALE

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
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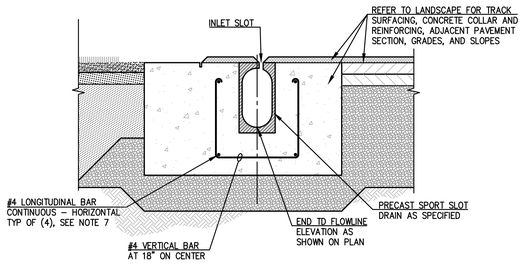
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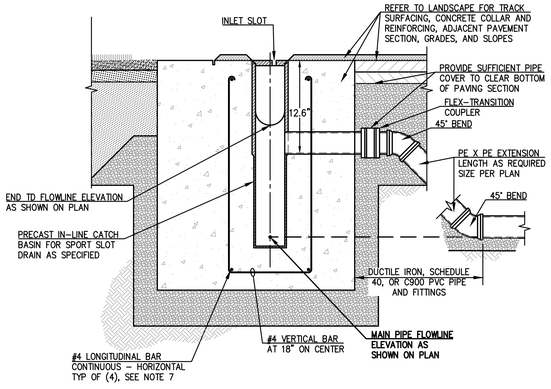
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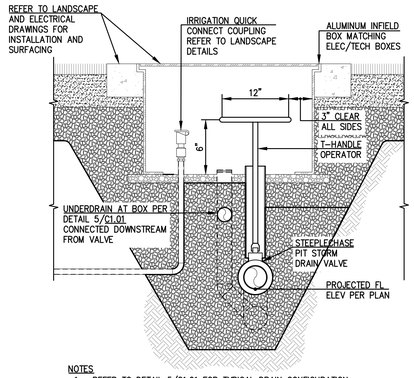
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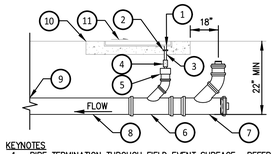
NOTES
1. TRACER WIRE SHALL ENTER STRUCTURE AT PIPE INLET OR OUTLET. PROVIDE ENOUGH FREE WIRE TO EXTEND 24" ABOVE TOP OF GRATE TO FACILITATE TESTING. COIL WIRE AND SECURE WITH NON-CORROSIVE FASTENER 2" UNDER FRAME.
2. CONSTRUCT CONCRETE ENCASEMENT PER MANUFACTURER RECOMMENDATIONS. MINIMUM CONCRETE STRENGTH SHALL BE 4,000 PSI.
3. BEDDING AND BACKFILL SHALL BE COMPACTED 4" MIN THICKNESS 1"-0 CRUSHED ROCK.
4. EXTEND CONCRETE COLLAR AND LONGITUDINAL BARS AROUND ENDS OF TRENCH DRAIN STRUCTURE AS SHOWN. OVERLAP BARS 6" MINIMUM.
5. INSTALL IN-LINE CATCH BASIN WHERE SHOWN IN PLAN.

1 COMPETITION SLOT DRAIN (CSLD)
NO SCALE



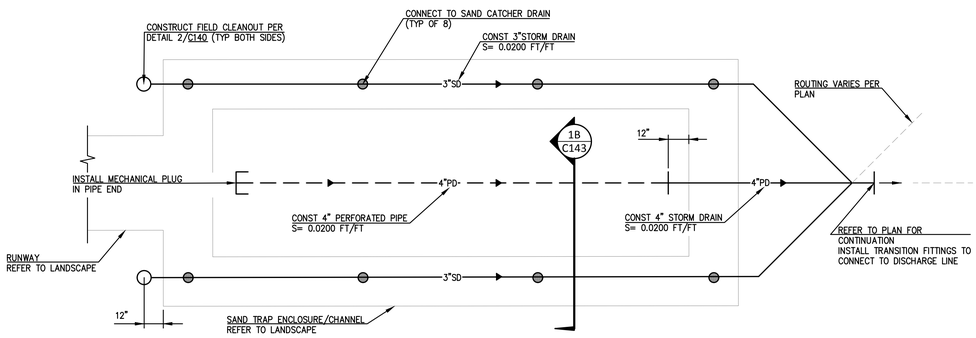
NOTES
1. REFER TO DETAIL 5/C1.01 FOR TYPICAL DRAIN CONFIGURATION.
2. STORM DRAIN FROM STEEPLE CHASE PIT TO CONNECTION WITH STORM MAINLINE TO BE 3" SCHEDULE 40 PVC OR C900, WITH TRANSITION FITTINGS, AS NEEDED TO COMPLETE CONNECTIONS WITH THE GATE VALVE.
3. REFER TO LANDSCAPE DRAWINGS FOR TERMINATION OF DRAIN AT STEEPLE CHASE.
4. SLOPE PIPE FROM STEEPLECHASE DRAIN TO MAINLINE AT 0.025 FT/FT MIN SLOPE.

2 STEEPLECHASE DRAIN AND WATER SUPPLY BOX
NO SCALE

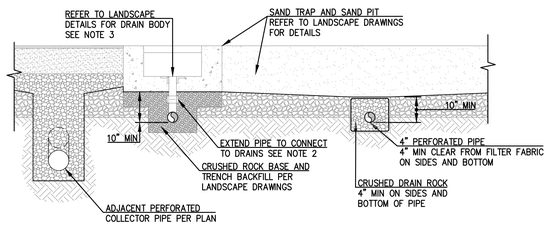


KEYNOTES
1. PIPE TERMINATION THROUGH FIELD EVENT SURFACE. REFER TO LANDSCAPE FOR LOCATION OF PIPE AND END TREATMENT.
2. THREADED COUPLING CAST IN CONCRETE TO RETAIN PIPE.
3. ¾" COPPER PIPE
4. ¾" FERNCO COUPLING.
5. ¾" X 2" SCH 40 PVC BUSHING WITH PLAIN END CONNECTORS.
6. 2" X 3" SCH 40 PVC WYE.
7. EXTEND 3"SD (SCH 40 PVC) TO OPPOSITE SIDE OF EVENT PAVING FROM DISCHARGE POINT AND INSTALL FIELD CLEANOUT PER DETAIL X/CX.0X
8. 3"SCH 40 PVC SLOPED AT 0.0200 FT/FT MIN, ROUTING PER PLAN.
9. FIELD EVENT SURFACE. REFER TO LANDSCAPE DRAWINGS.
10. RUNWAY CROSS-SLOPE. LOCATE DRAIN AT DOWNHILL SIDE, TYP

3 TAKEOFF BOARD DRAINAGE
NO SCALE

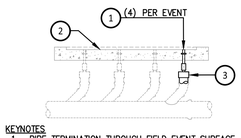


4A JUMP PIT DRAINAGE - TYPICAL LAYOUT
NO SCALE



NOTES
1. PIPE UNDER SAND CATCHER DRAIN TO BE 3" SCHEDULE 40 PVC. WITH SOLVENT-CEMENT JOINTS, EXCEPT AS NOTED.
2. INSTALL FLEXIBLE TRANSITION COUPLING UNDER CONCRETE ENCASEMENT FOR SAND TRAP.
3. INSERT ROOF DRAIN FOAM FILTER IN DRAIN BODY.

4B JUMP PIT DRAINAGE - TYPICAL SECTION
NO SCALE



KEYNOTES
1. PIPE TERMINATION THROUGH FIELD EVENT SURFACE. REFER TO LANDSCAPE FOR LOCATION OF PIPE AND END TREATMENT.
2. FIELD EVENT SURFACE. REFER TO LANDSCAPE DRAWINGS.
3. REFER TO DETAIL 2/C1.01 FOR TYPICAL DRAIN CONFIGURATION

5 HAMMER THROW AND DISCUS DRAINAGE
NO SCALE

CAMERON McCARTHY
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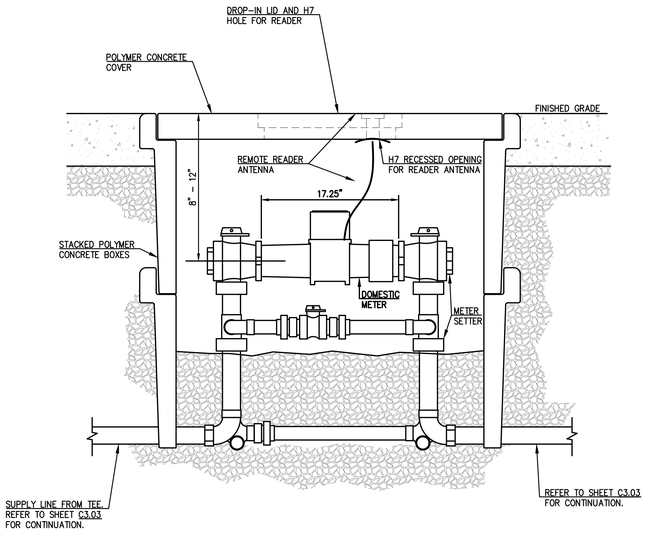
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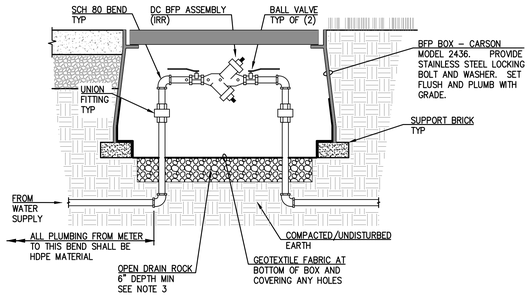
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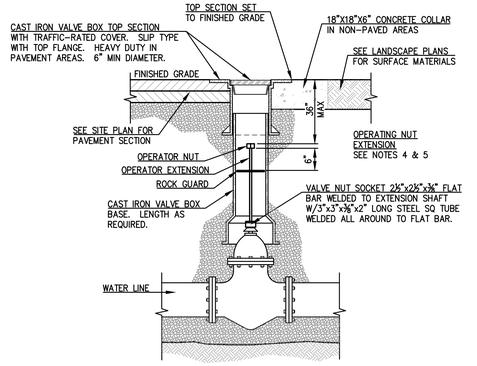
NOTES
1. METER SETTER SHALL BE OFFSET HIGH-BY-PASS. BY-PASS SHALL REMAIN ACCESSIBLE AT ALL TIMES. DO NOT BACKFILL.
2. METER SETTER SHALL BE CENTERED IN BOX.
3. METER SETTER SHALL BE PLACED IN A MANNER THAT THE HIGH BY-PASS IS SET PARALLEL TO THE BOX.

1 DOMESTIC WATER METER INSTALLATION
NO SCALE



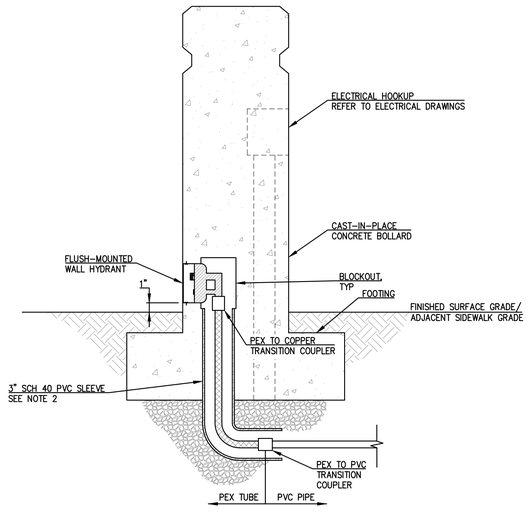
NOTES
1. BACKFILL AROUND BOX USING CRUSHED ROCK IN PAVED OR SIDEWALK AREAS, OR NATIVE MATERIALS IN LANDSCAPE AREAS.
2. TRACER WIRE SHALL EXTEND INTO VAULT AND TERMINATE. PROVIDE ADEQUATE FREE WIRE TO EXTEND 24" INSIDE OF VAULT WALL PENETRATION. COIL WIRE AND SECURE WITH NON-CORROSIVE FASTENER ABOVE PIPE PENETRATION.

2 DC BACKFLOW PREVENTER & BOX
NO SCALE



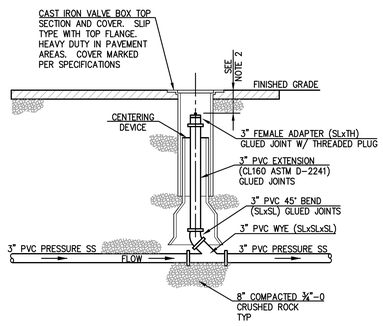
NOTES
1. VALVE BOX SHALL NOT REST ON OPERATING ASSEMBLY.
2. CENTER VALVE BOX ON AXIS OF OPERATOR NUT.
3. TRACER WIRE SHALL ENTER VALVE BOX BASE CLEAR OF OPERATOR NUT AND/OR EXTENSION. PROVIDE ENOUGH FREE WIRE TO EXTEND 24" ABOVE FINISHED GRADE TO FACILITATE TESTING. VERIFY FREE END OF WIRE IS WITHIN EASY REACH OF VALVE BOX OPENING.
4. OPERATOR EXTENSION REQUIRED WHEN VALVE NUT IS DEEPER THAN 4' FROM FINISHED GRADE.
5. OPERATOR NUT EXTENSION: OPERATOR NUT: 2" SQUARE, WELDED TO PIPE SHAFT END. OPERATOR EXTENSION: 1¼" SCH 80 PIPE SHAFT, LENGTH AS REQ'D. ROCK GUARD: ¼" STEEL PLATE, WELDED TO EXTENSION, DIAMETER= VALVE BOX EXTENSION INSIDE DIAMETER MINUS ½". HOT DIP GALVANIZE UNIT AFTER FABRICATION.

3 VALVE BOX WITH OPERATOR EXTENSION ASSEMBLY
NO SCALE



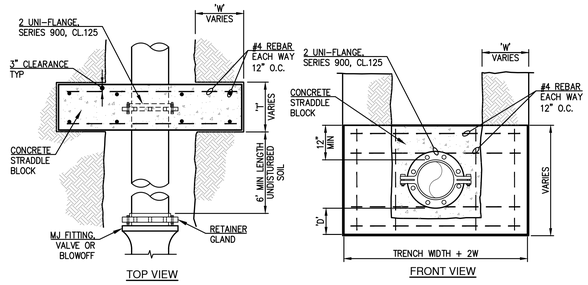
NOTES
1. REFER TO LANDSCAPE DRAWINGS FOR BOLLARD LOCATION AND ORIENTATION OF WALL HYDRANT.
2. COORDINATE LOCATION OF SLEEVE WITH OTHER TRADES. SELECT SLEEVE AND BEND SIZE TO COMPLY WITH PEX TUBE MANUFACTURER'S RECOMMENDATIONS FOR BENDING RADIUS.

4 BOLLARD-MOUNTED WALL HYDRANT
NO SCALE



NOTES
1. TRACER WIRE SHALL ENTER STRUCTURE WITH RISER PIPE. PROVIDE ENOUGH FREE WIRE TO EXTEND 24" ABOVE FINISHED GRADE TO FACILITATE TESTING. VERIFY FREE END OF WIRE IS WITHIN EASY REACH OF OPENING IN TOP SECTION.
2. ADJUST END OF RISER PIPE TO MAINTAIN 3" MIN AND 6" MAX CLEARANCE BETWEEN END PIPE AND BOTTOM OF VALVE BOX LID.

5 INLINE PRESSURE CLEANOUT
NO SCALE



NOTES
1. STRADDLE BLOCKS FOR >10" PIPE SHALL BE DESIGNED INDIVIDUALLY BY THE ENGINEER AND SHALL BE BASED ON THE FOLLOWING:
   a.) 200 PSI WATER PRESSURE.
   b.) SOIL BRG. CAPACITY, STEEL SIZE & SPACING BY THE ENGINEER.
2. BEARING AREA OF BLOCK SHALL BE AGAINST UNDISTURBED SOIL.
3. STRADDLE BLOCK SHALL HAVE A MINIMUM OF 18" COVER.
4. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3300 PSI.

PIPE SIZE	'W'	'D'	'T'
6"	12"	8"	12"
8"	16"	10"	12"

6 STRADDLE BLOCK
NO SCALE

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
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120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025-010267

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

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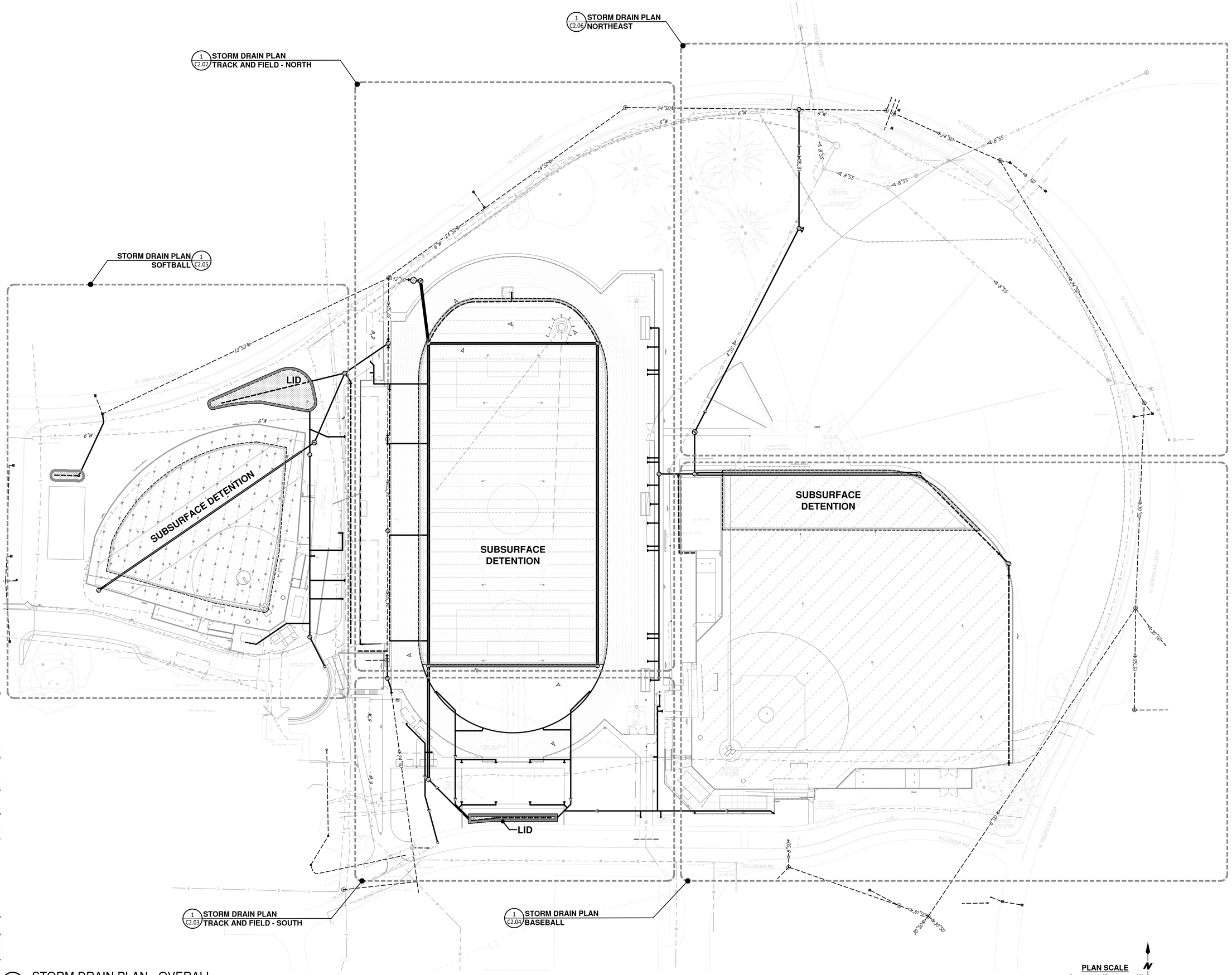
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SHEET TITLE
CIVIL DETAILS

C1.07

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1 STORM DRAIN PLAN - OVERALL

GEOFF LARSEN 10/13/2025 9:14 AM

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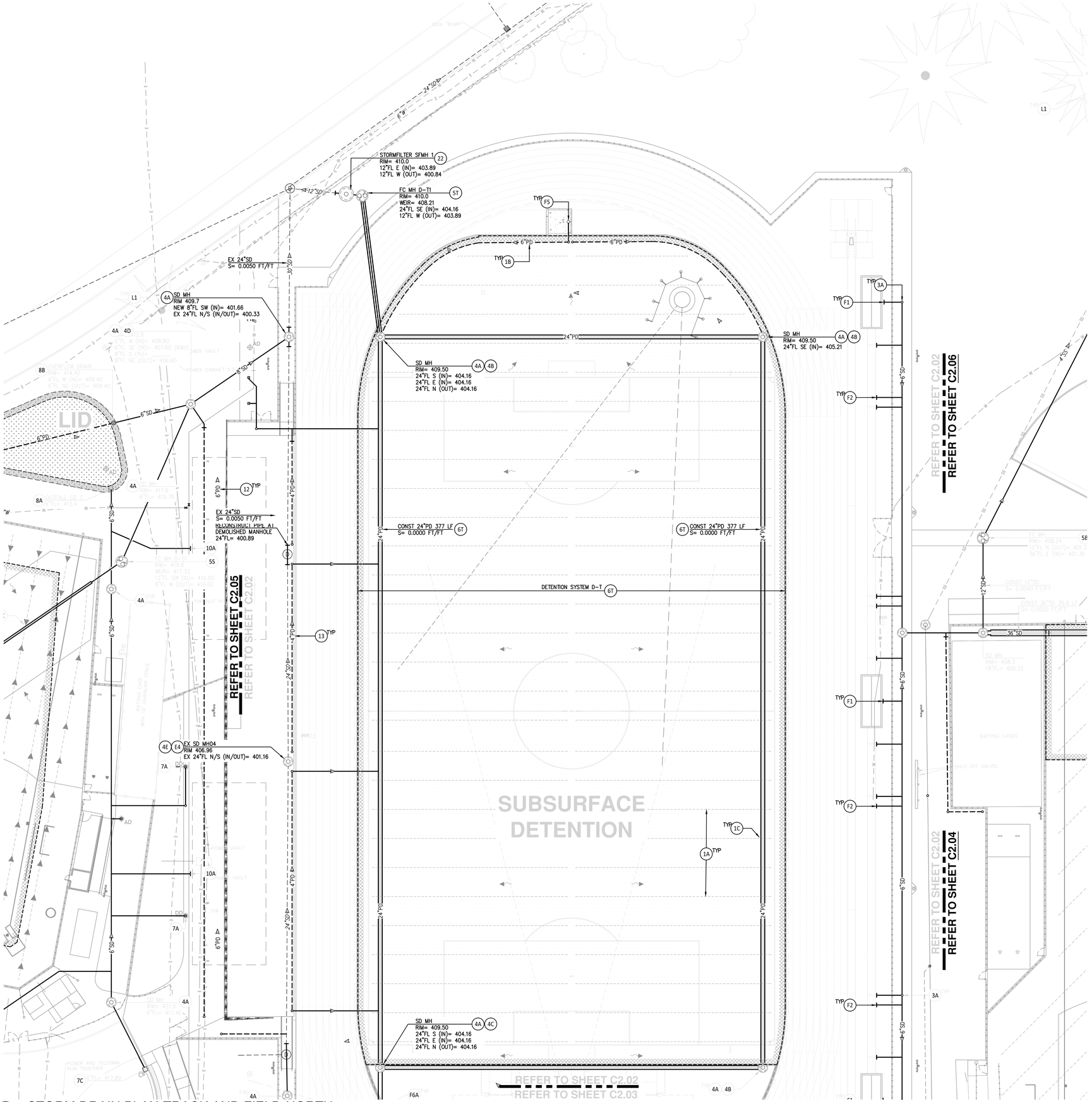
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SHEET TITLE
OVERALL STORM DRAIN PLAN

C2.01



1 STORM DRAIN PLAN-TRACK AND FIELD-NORTH

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C104 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C104 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C104 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ____.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.06 AND 4B/C1.06.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

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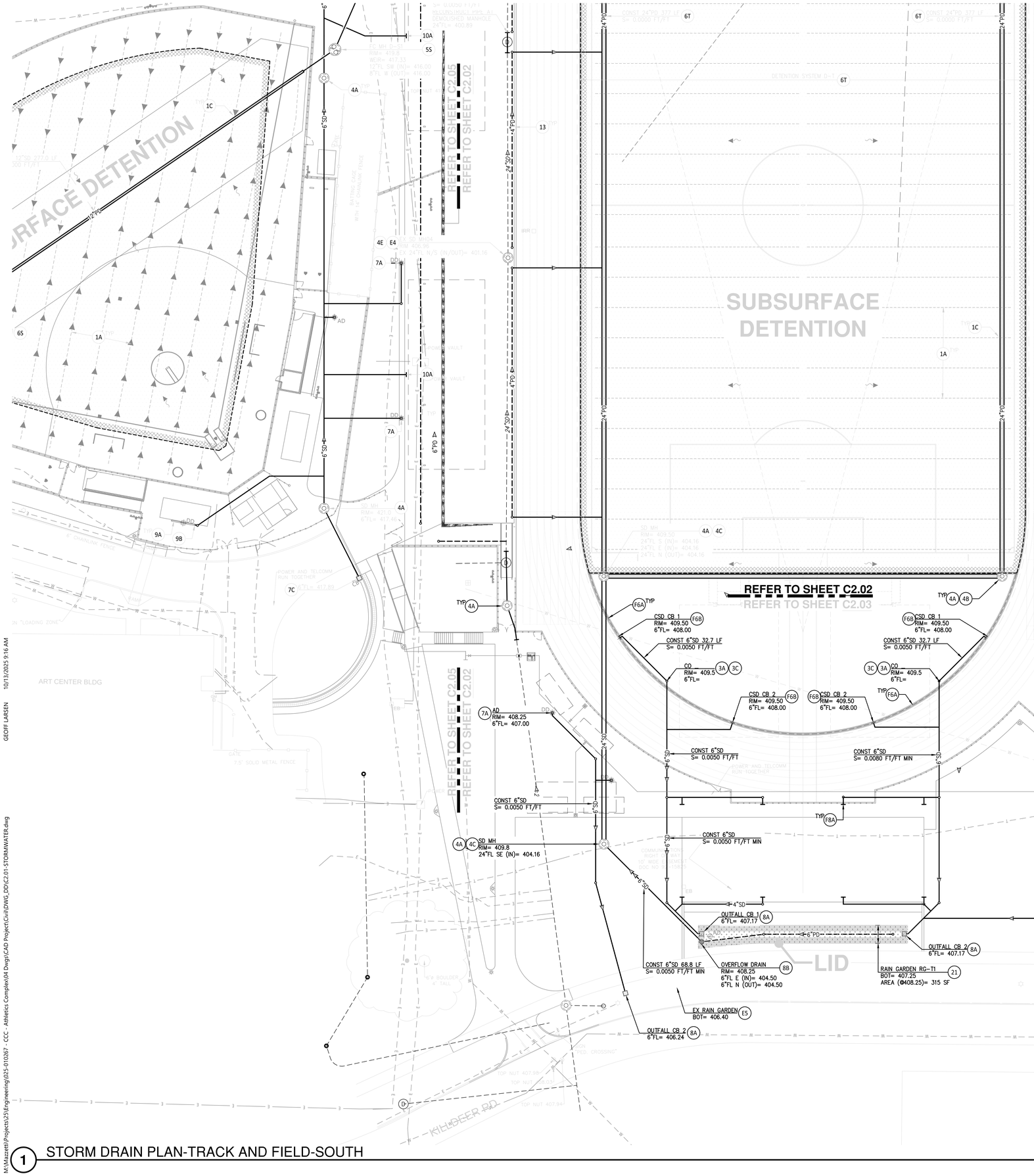
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SHEET TITLE
STORM DRAIN PLAN-TRACK AND FIELD-NORTH

C2.02

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SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

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2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C104 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C104 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C104 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

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7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____.

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ____.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.08 AND 4B/C1.08.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/C1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/C1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/C1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/C1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/C1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

1 STORM DRAIN PLAN-TRACK AND FIELD-SOUTH

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

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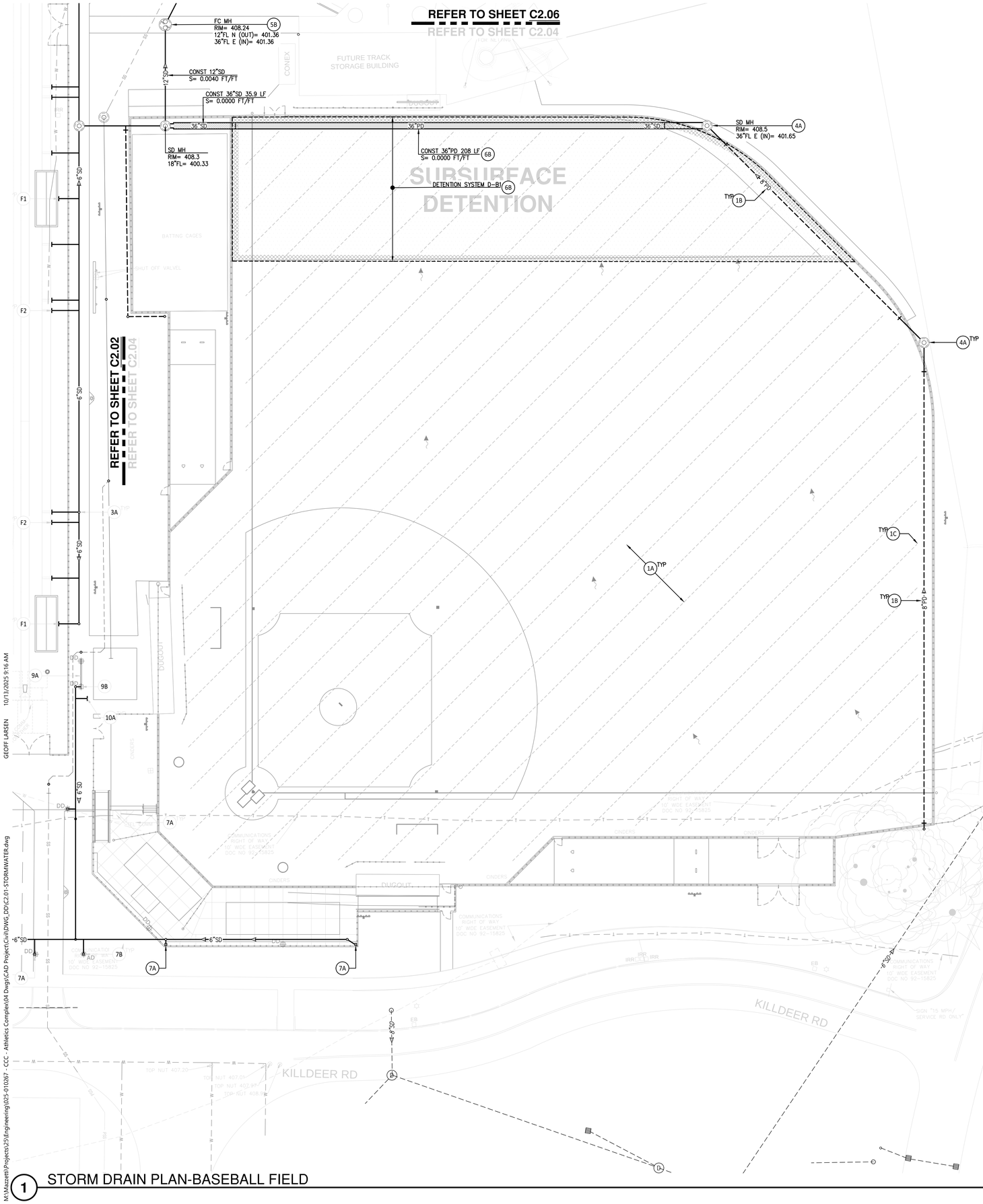
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SHEET TITLE
STORMD DRAIN PLAN-TRACK AND FIELD-SOUTH

C2.03

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1 STORM DRAIN PLAN-BASEBALL FIELD

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C104 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C104 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C104 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____.

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ___.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.06 AND 4B/1.06.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

CAMERON McCARTHY
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CLACKAMAS COMMUNITY COLLEGE
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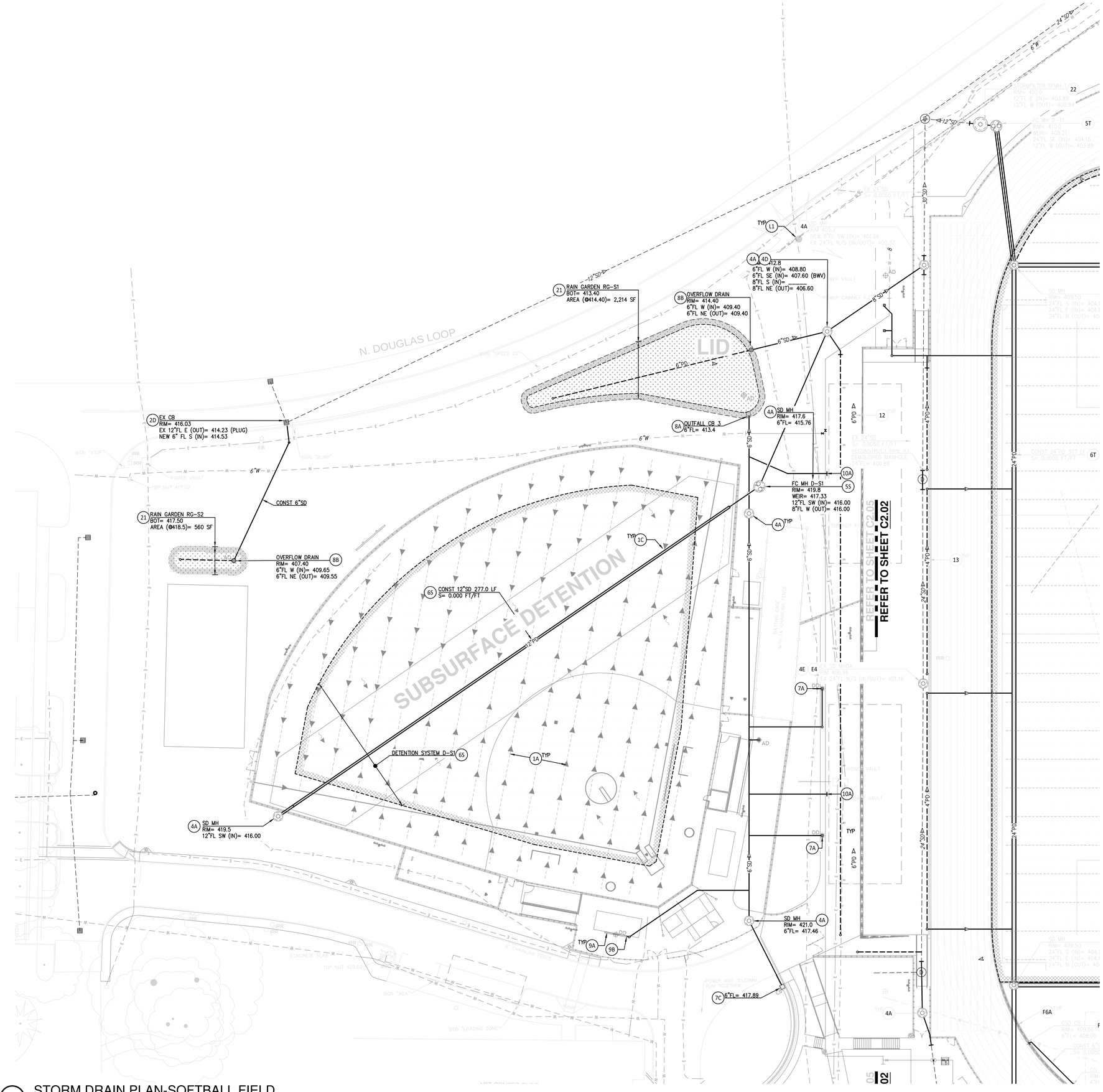
Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
STORM DRAIN PLAN-BASEBALL FIELD

C2.04

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1 STORM DRAIN PLAN-SOFTBALL FIELD

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C1.04 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C1.04 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C1.04 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ____.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.06 AND 4B/C1.06.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

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F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

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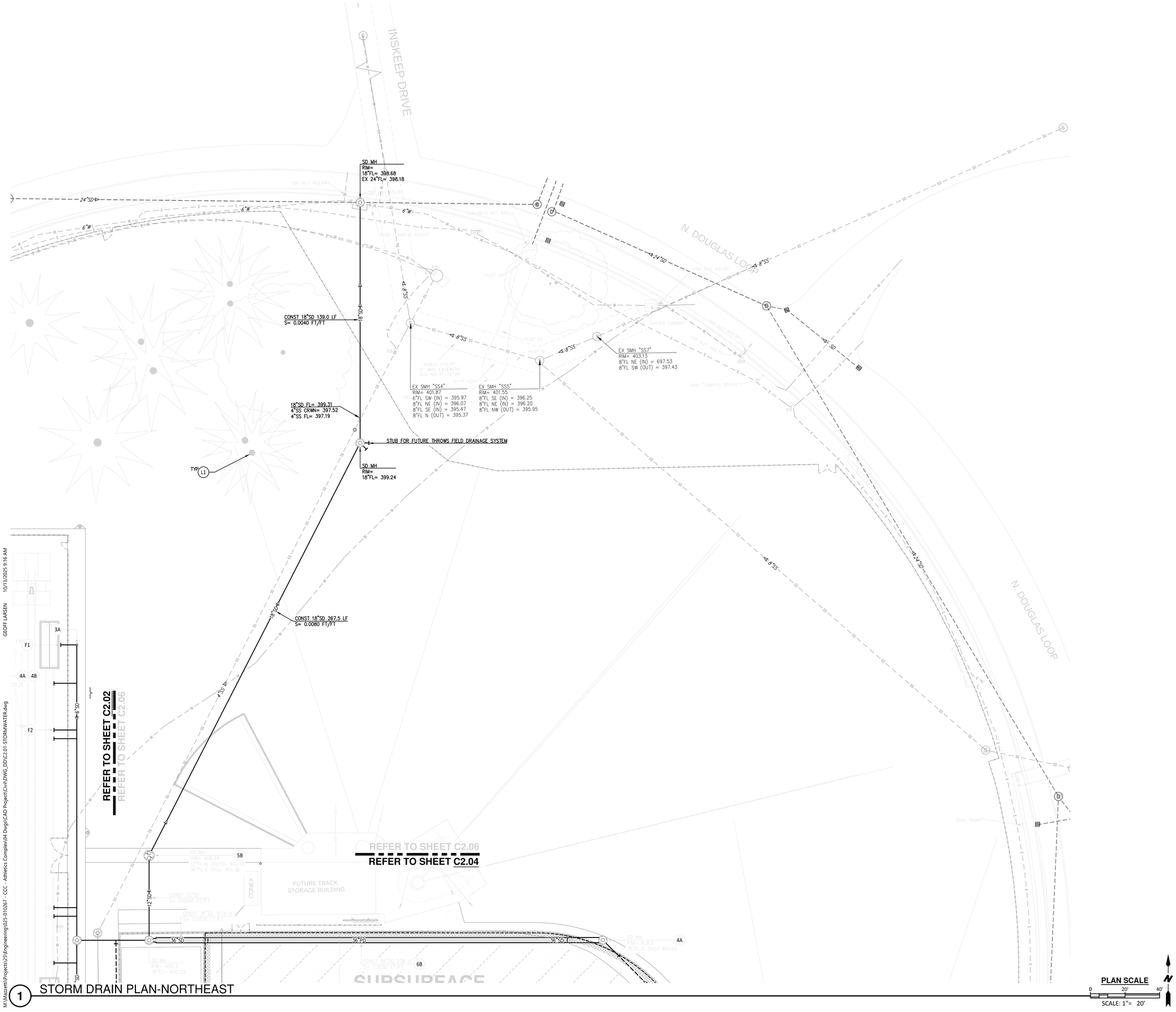
Rev. #:	Date:

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SHEET TITLE
STORM DRAIN PLAN-SOFTBALL FIELD

C2.05

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1 STORM DRAIN PLAN-NORTHEAST

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

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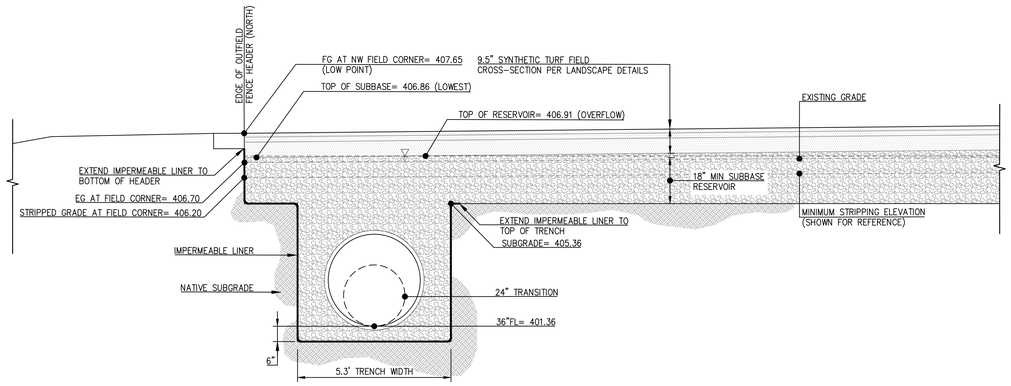
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STORM DRAIN PLAN-NORTHEAST

C2.06



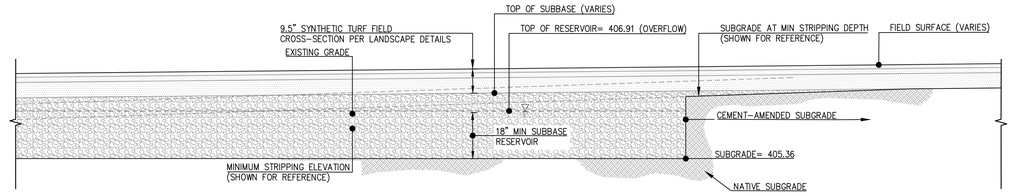
1 DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH

PLAN SCALE
0 10' 20'
SCALE: 1"= 10'



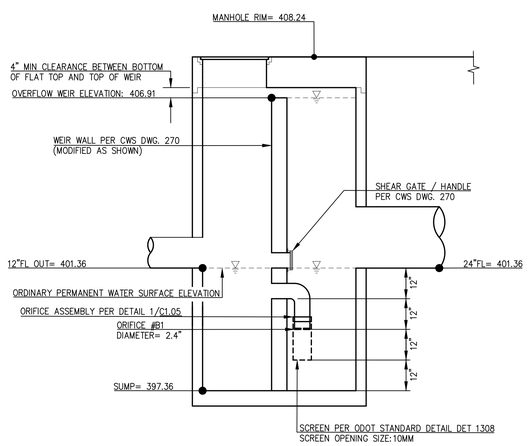
2A DETENTION SYSTEM CROSS-SECTION BASEBALL - LOOKING EAST / NORTH SIDE

PLAN SCALE
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SCALE: 1"= 2'

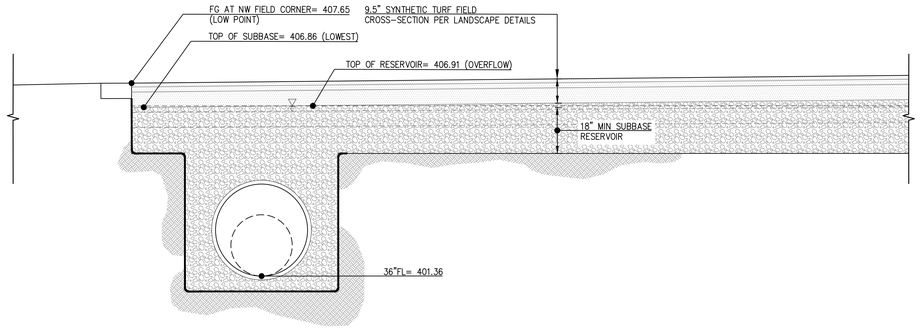


2B DETENTION SYSTEM CROSS-SECTION BASEBALL - LOOKING EAST / SOUTH SIDE

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'



FLOW CONTROL MANHOLE



3 DETENTION SYSTEM CROSS-SECTION BASEBALL - FLOW CONTROL

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

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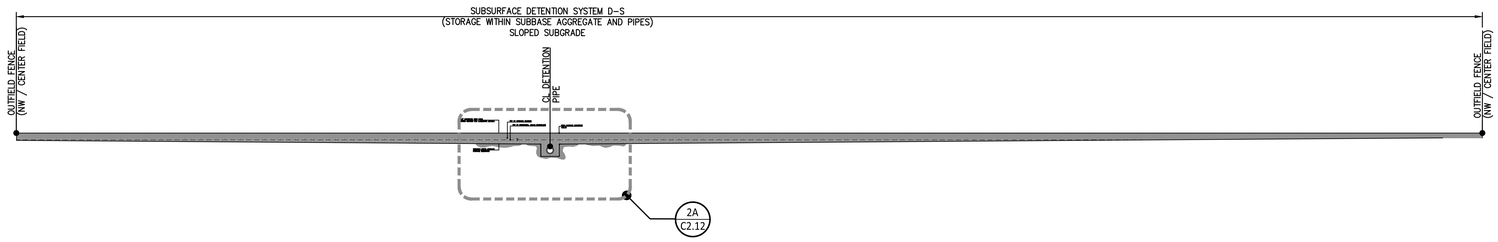
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SHEET TITLE
STORM DRAIN CROSS-SECTIONS

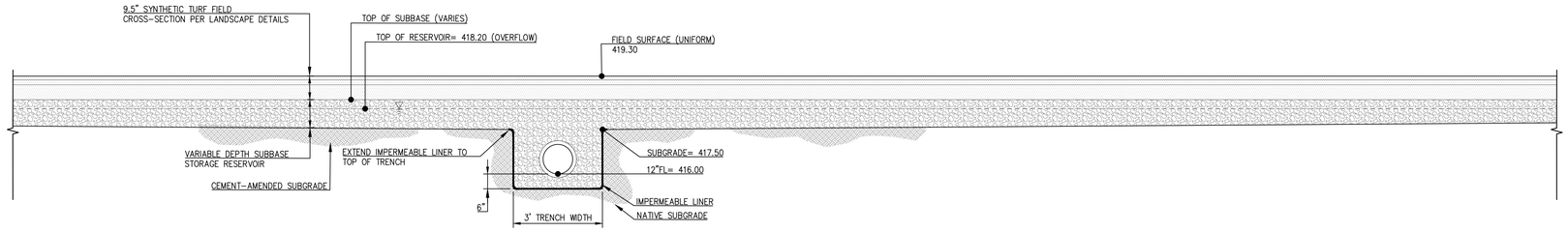
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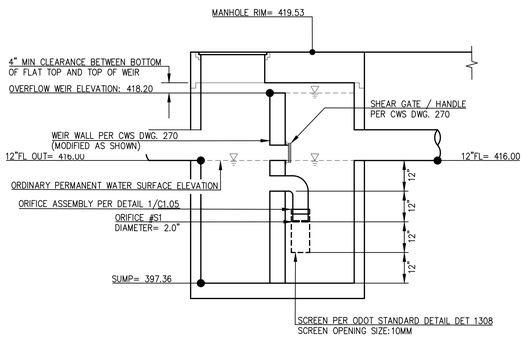
1 DETENTION SYSTEM CROSS-SECTION SOFTBALL - LOOKING NORTH

PLAN SCALE
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SCALE: 1"= 10'

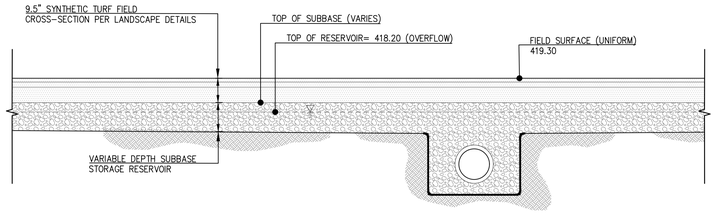


2A DETENTION SYSTEM CROSS-SECTION SOFTBALL - LOOKING NORTHEAST

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'



FLOW CONTROL MANHOLE



3 DETENTION SYSTEM CROSS-SECTION BASEBALL - FLOW CONTROL

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

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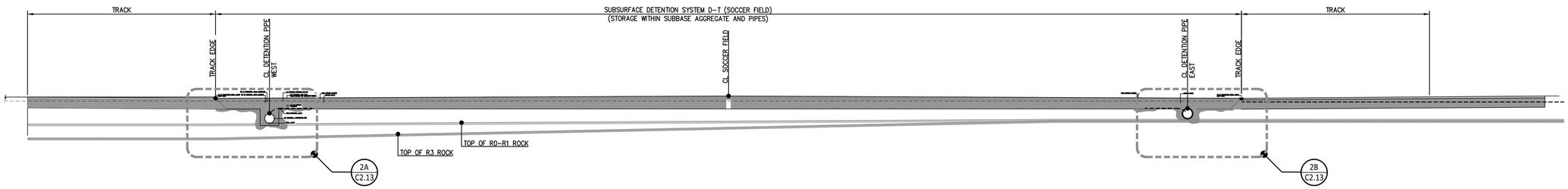
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SHEET TITLE
STORM DRAIN CROSS-SECTIONS

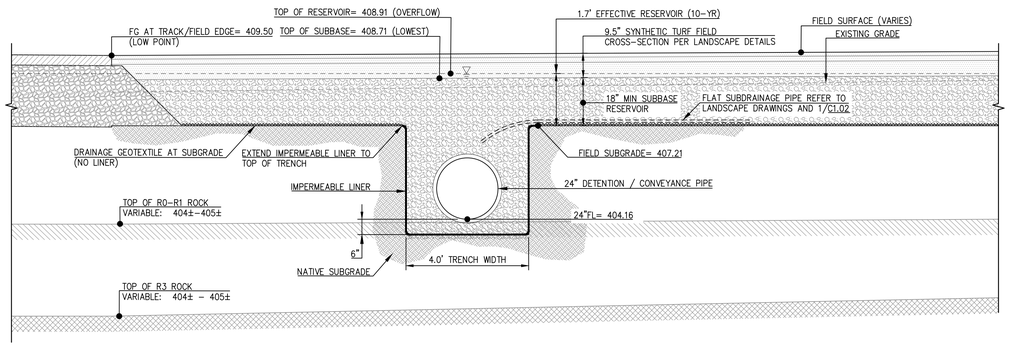
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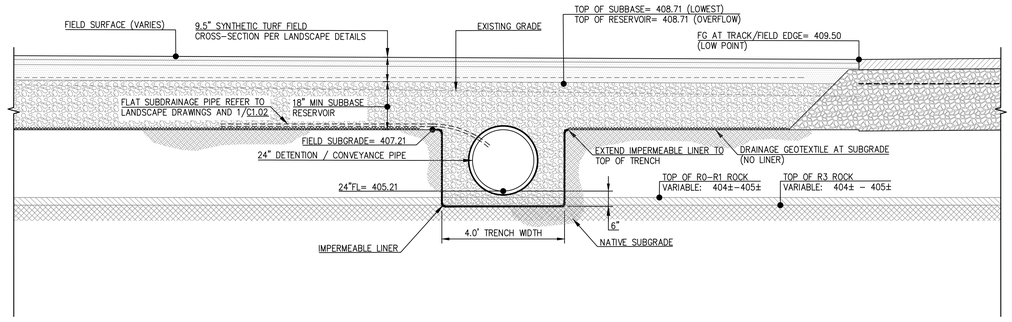
1 DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH

PLAN SCALE
0 10' 20'
SCALE: 1"= 10'



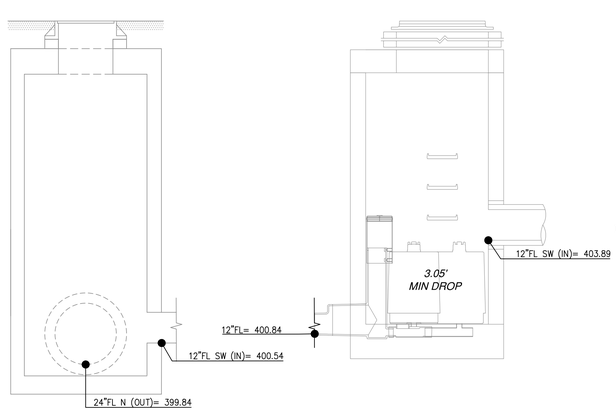
2A DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH / WEST SIDE

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

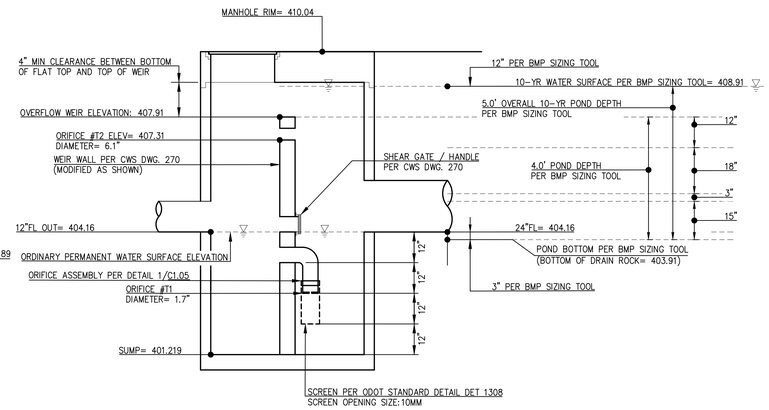


2B DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH / EAST SIDE

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

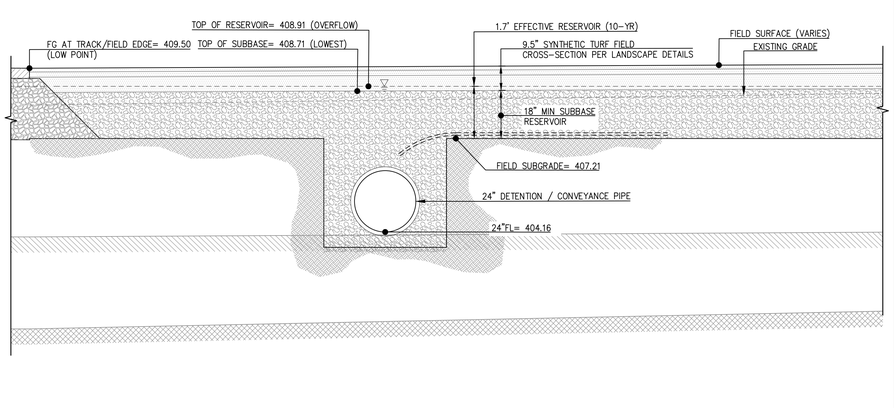


CONNECTION TO EXISTING MAIN



STORMFILTER MANHOLE

FLOW CONTROL MANHOLE



3 DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - FLOW CONTROL

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

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160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
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www.cameronmccarthy.com

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940 Willamette Street, Suite 310
Eugene, OR 97401
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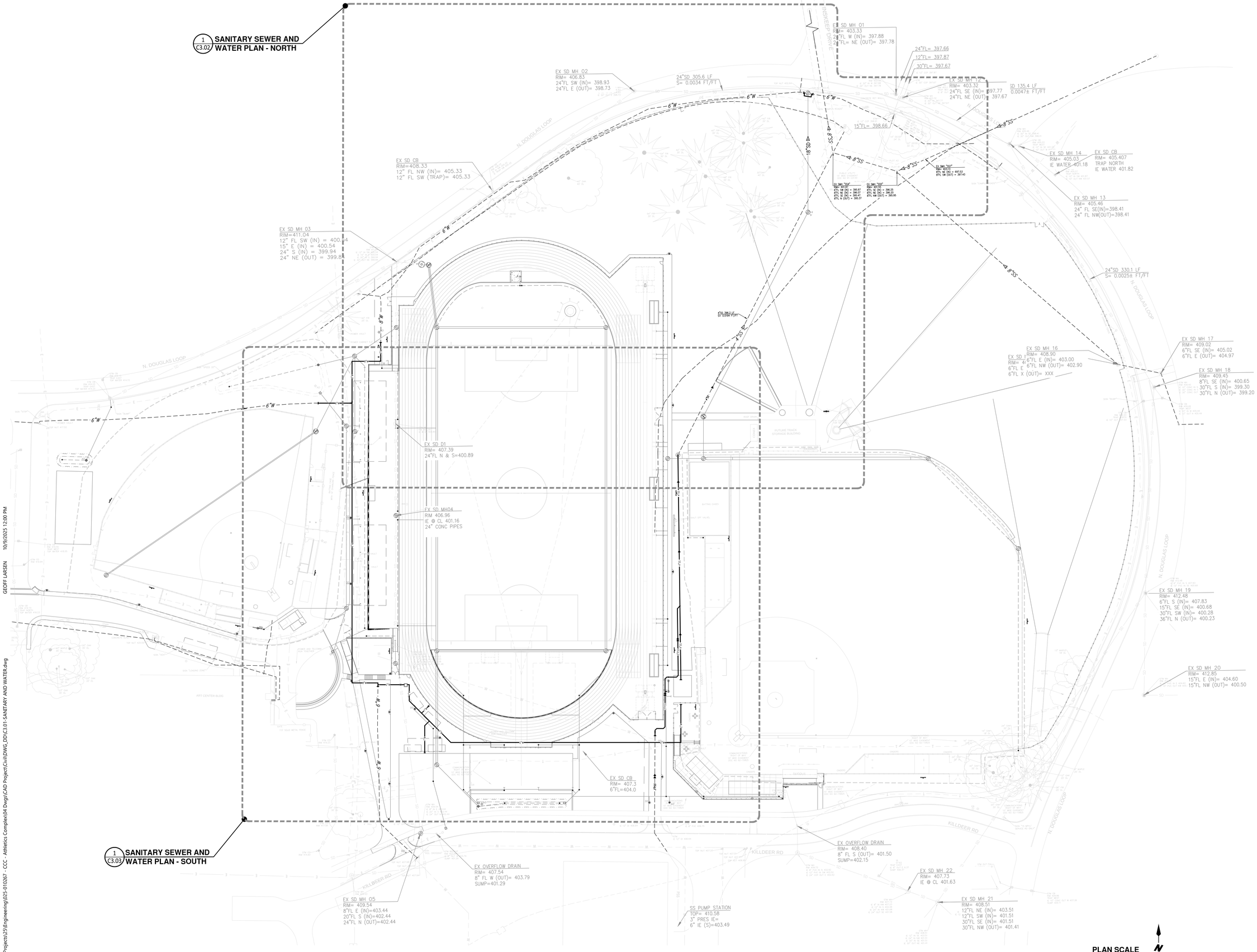
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SHEET TITLE
STORM DRAIN CROSS-SECTIONS

C2.13

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1 SANITARY SEWER AND WATER PLAN - OVERALL

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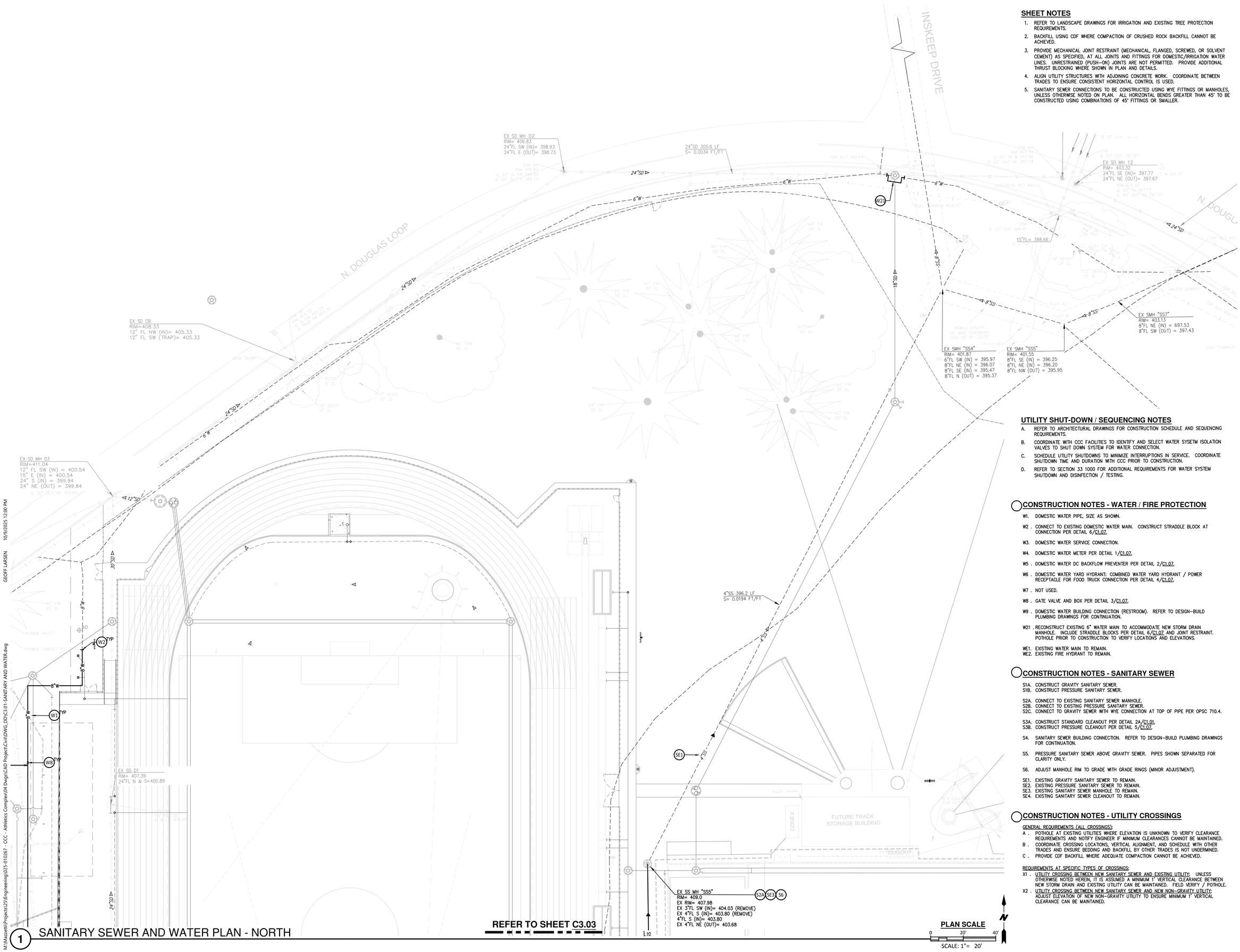
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SHEET TITLE
SANITARY SEWER AND WATER PLAN - OVERALL

C3.01



1 SANITARY SEWER AND WATER PLAN - NORTH

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO LANDSCAPE DRAWINGS FOR IRRIGATION AND EXISTING TREE PROTECTION REQUIREMENTS.
2. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
3. PROVIDE MECHANICAL JOINT RESTRAINT (MECHANICAL, FLANGED, SCREWED, OR SOLVENT CEMENT) AS SPECIFIED, AT ALL JOINTS AND FITTINGS FOR DOMESTIC/IRRIGATION WATER LINES. UNRESTRAINED (PUSH-ON) JOINTS ARE NOT PERMITTED. PROVIDE ADDITIONAL THRUST BLOCKING WHERE SHOWN IN PLAN AND DETAILS.
4. ALIGN UTILITY STRUCTURES WITH ADJOINING CONCRETE WORK. COORDINATE BETWEEN TRADES TO ENSURE CONSISTENT HORIZONTAL CONTROL IS USED.
5. SANITARY SEWER CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.

UTILITY SHUT-DOWN / SEQUENCING NOTES

A. REFER TO ARCHITECTURAL DRAWINGS FOR CONSTRUCTION SCHEDULE AND SEQUENCING REQUIREMENTS.
B. COORDINATE WITH CCC FACILITIES TO IDENTIFY AND SELECT WATER SYSETM ISOLATION VALVES TO SHUT DOWN SYSTEM FOR WATER CONNECTION.
C. SCHEDULE UTILITY SHUTDOWNS TO MINIMIZE INTERRUPTIONS IN SERVICE. COORDINATE SHUTDOWN TIME AND DURATION WITH CCC PRIOR TO CONSTRUCTION.
D. REFER TO SECTION 33 1000 FOR ADDITIONAL REQUIREMENTS FOR WATER SYSTEM SHUTDOWN AND DISINFECTION / TESTING.

CONSTRUCTION NOTES - WATER / FIRE PROTECTION

W1. DOMESTIC WATER PIPE, SIZE AS SHOWN.
W2. CONNECT TO EXISTING DOMESTIC WATER MAIN. CONSTRUCT STRADDLE BLOCK AT CONNECTION PER DETAIL 6/C1.07.
W3. DOMESTIC WATER SERVICE CONNECTION.
W4. DOMESTIC WATER METER PER DETAIL 1/C1.07.
W5. DOMESTIC WATER DC BACKFLOW PREVENTER PER DETAIL 2/C1.07.
W6. DOMESTIC WATER YARD HYDRANT: COMBINED WATER YARD HYDRANT / POWER RECEPTACLE FOR FOOD TRUCK CONNECTION PER DETAIL 4/C1.07.
W7. NOT USED.
W8. GATE VALVE AND BOX PER DETAIL 3/C1.07.
W9. DOMESTIC WATER BUILDING CONNECTION (RESTROOM). REFER TO DESIGN-BUILD PLUMBING DRAWINGS FOR CONTINUATION.
W21. RECONSTRUCT EXISTING 6" WATER MAIN TO ACCOMMODATE NEW STORM DRAIN MANHOLE. INCLUDE STRADDLE BLOCKS PER DETAIL 6/C1.07 AND JOINT RESTRAINT. POTHOLE PRIOR TO CONSTRUCTION TO VERIFY LOCATIONS AND ELEVATIONS.
WE1. EXISTING WATER MAIN TO REMAIN.
WE2. EXISTING FIRE HYDRANT TO REMAIN.

CONSTRUCTION NOTES - SANITARY SEWER

S1A. CONSTRUCT GRAVITY SANITARY SEWER.
S1B. CONSTRUCT PRESSURE SANITARY SEWER.
S2A. CONNECT TO EXISTING SANITARY SEWER MANHOLE.
S2B. CONNECT TO EXISTING PRESSURE SANITARY SEWER.
S2C. CONNECT TO GRAVITY SEWER WITH WYE CONNECTION AT TOP OF PIPE PER OPSC 710.4.
S3A. CONSTRUCT STANDARD CLEANOUT PER DETAIL 2A/C1.01.
S3B. CONSTRUCT PRESSURE CLEANOUT PER DETAIL 5/C1.07.
S4. SANITARY SEWER BUILDING CONNECTION. REFER TO DESIGN-BUILD PLUMBING DRAWINGS FOR CONTINUATION.
S5. PRESSURE SANITARY SEWER ABOVE GRAVITY SEWER. PIPES SHOWN SEPARATED FOR CLARITY ONLY.
S6. ADJUST MANHOLE RIM TO GRADE WITH GRADE RINGS (MINOR ADJUSTMENT).
SE1. EXISTING GRAVITY SANITARY SEWER TO REMAIN.
SE2. EXISTING PRESSURE SANITARY SEWER TO REMAIN.
SE3. EXISTING SANITARY SEWER MANHOLE TO REMAIN.
SE4. EXISTING SANITARY SEWER CLEANOUT TO REMAIN.

CONSTRUCTION NOTES - UTILITY CROSSINGS

GENERAL REQUIREMENTS (ALL CROSSINGS):
A. POTHOLE AT EXISTING UTILITIES WHERE ELEVATION IS UNKNOWN TO VERIFY CLEARANCE REQUIREMENTS AND NOTIFY ENGINEER IF MINIMUM CLEARANCES CANNOT BE MAINTAINED.
B. COORDINATE CROSSING LOCATIONS, VERTICAL ALIGNMENT, AND SCHEDULE WITH OTHER TRADES AND ENSURE BEDDING AND BACKFILL BY OTHER TRADES IS NOT UNDERMINED.
C. PROVIDE CDF BACKFILL WHERE ADEQUATE COMPACTION CANNOT BE ACHIEVED.

REQUIREMENTS AT SPECIFIC TYPES OF CROSSINGS:
X1. UTILITY CROSSING BETWEEN NEW SANITARY SEWER AND EXISTING UTILITY: UNLESS OTHERWISE NOTED HEREIN, IT IS ASSUMED A MINIMUM 1' VERTICAL CLEARANCE BETWEEN NEW STORM DRAIN AND EXISTING UTILITY CAN BE MAINTAINED. FIELD VERIFY / POTHOLE.
X2. UTILITY CROSSING BETWEEN NEW SANITARY SEWER AND NEW NON-GRAVITY UTILITY: ADJUST ELEVATION OF NEW NON-GRAVITY UTILITY TO ENSURE MINIMUM 1' VERTICAL CLEARANCE CAN BE MAINTAINED.

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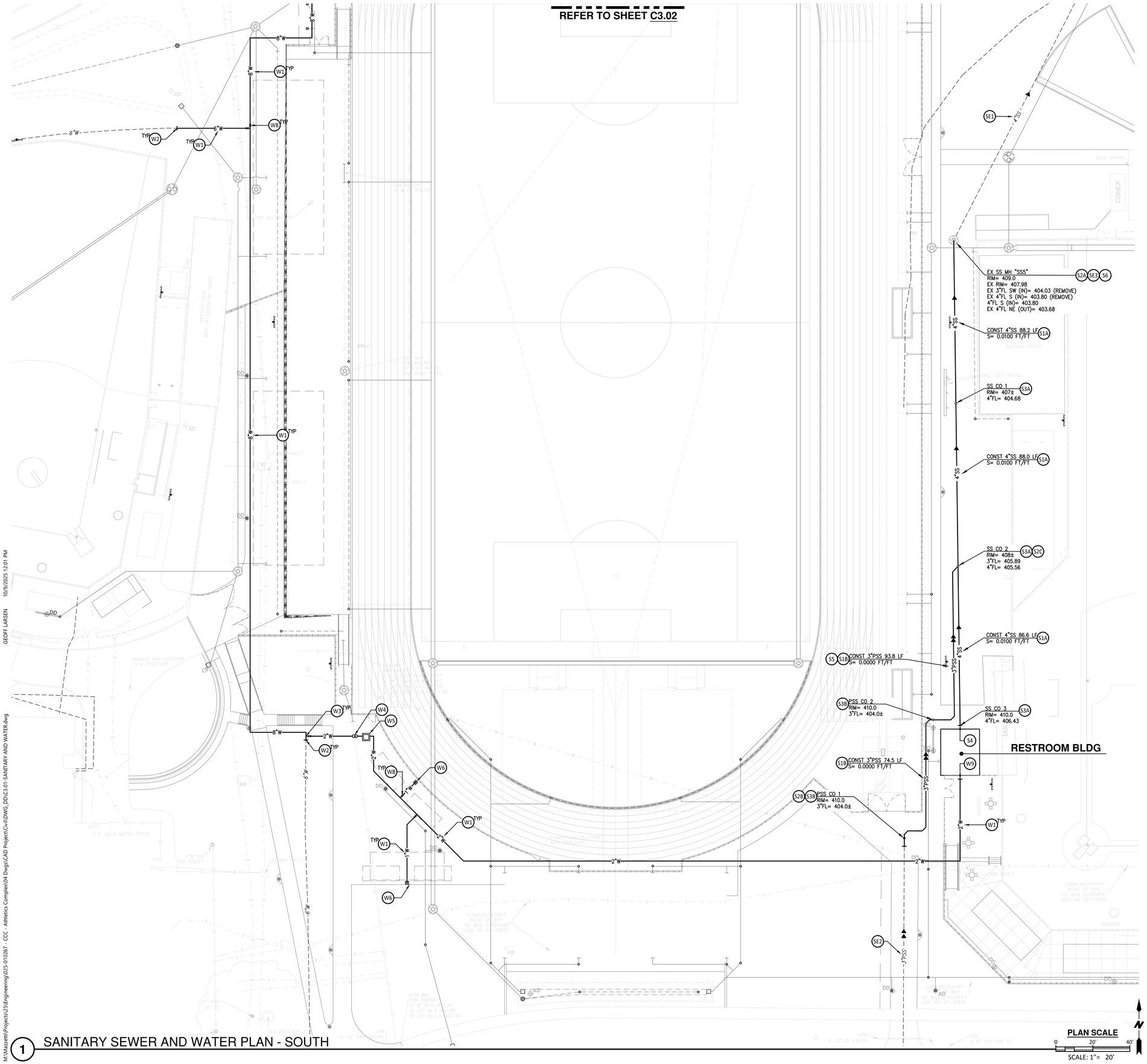
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SHEET TITLE
SANITARY SEWER AND WATER PLAN - NORTH

C3.02

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1 SANITARY SEWER AND WATER PLAN - SOUTH

SHEET NOTES

1. REFER TO LANDSCAPE DRAWINGS FOR IRRIGATION AND EXISTING TREE PROTECTION REQUIREMENTS.
2. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
3. PROVIDE MECHANICAL JOINT RESTRAINT (MECHANICAL, FLANGED, SCREWED, OR SOLVENT CEMENT) AS SPECIFIED, AT ALL JOINTS AND FITTINGS FOR DOMESTIC/IRRIGATION WATER LINES. UNRESTRAINED (PUSH-ON) JOINTS ARE NOT PERMITTED. PROVIDE ADDITIONAL THRUST BLOCKING WHERE SHOWN IN PLAN AND DETAILS.
4. ALIGN UTILITY STRUCTURES WITH ADJOINING CONCRETE WORK. COORDINATE BETWEEN TRADES TO ENSURE CONSISTENT HORIZONTAL CONTROL IS USED.
5. SANITARY SEWER CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.

UTILITY SHUT-DOWN / SEQUENCING NOTES

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D. REFER TO SECTION 33 1000 FOR ADDITIONAL REQUIREMENTS FOR WATER SYSTEM SHUTDOWN AND DISINFECTION / TESTING.

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W3. DOMESTIC WATER SERVICE CONNECTION.
W4. DOMESTIC WATER METER PER DETAIL 1/C1.07.
W5 . DOMESTIC WATER DC BACKFLOW PREVENTER PER DETAIL 2/C1.07.
W6 . DOMESTIC WATER YARD HYDRANT: COMBINED WATER YARD HYDRANT / POWER RECEPTACLE FOR FOOD TRUCK CONNECTION PER DETAIL 4/C1.07.
W7 . NOT USED.
W8 . GATE VALVE AND BOX PER DETAIL 3/C1.07.
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WE1. EXISTING WATER MAIN TO REMAIN.
WE2. EXISTING FIRE HYDRANT TO REMAIN.

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S1B. CONSTRUCT PRESSURE SANITARY SEWER.

S2A. CONNECT TO EXISTING SANITARY SEWER MANHOLE.
S2B. CONNECT TO EXISTING PRESSURE SANITARY SEWER.
S2C. CONNECT TO GRAVITY SEWER WITH WYE CONNECTION AT TOP OF PIPE PER OPSC 710.4.

S3A. CONSTRUCT STANDARD CLEANOUT PER DETAIL 2A/C1.01.
S3B. CONSTRUCT PRESSURE CLEANOUT PER DETAIL 5/C1.07.

S4. SANITARY SEWER BUILDING CONNECTION. REFER TO DESIGN-BUILD PLUMBING DRAWINGS FOR CONTINUATION.

S5. PRESSURE SANITARY SEWER ABOVE GRAVITY SEWER. PIPES SHOWN SEPARATED FOR CLARITY ONLY.

S6. ADJUST MANHOLE RIM TO GRADE WITH GRADE RINGS (MINOR ADJUSTMENT).

SE1. EXISTING GRAVITY SANITARY SEWER TO REMAIN.
SE2. EXISTING PRESSURE SANITARY SEWER TO REMAIN.
SE3. EXISTING SANITARY SEWER MANHOLE TO REMAIN.
SE4. EXISTING SANITARY SEWER CLEANOUT TO REMAIN.

CONSTRUCTION NOTES - UTILITY CROSSINGS

GENERAL REQUIREMENTS (ALL CROSSINGS):
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LANDSCAPE ARCHITECTURE & PLANNING
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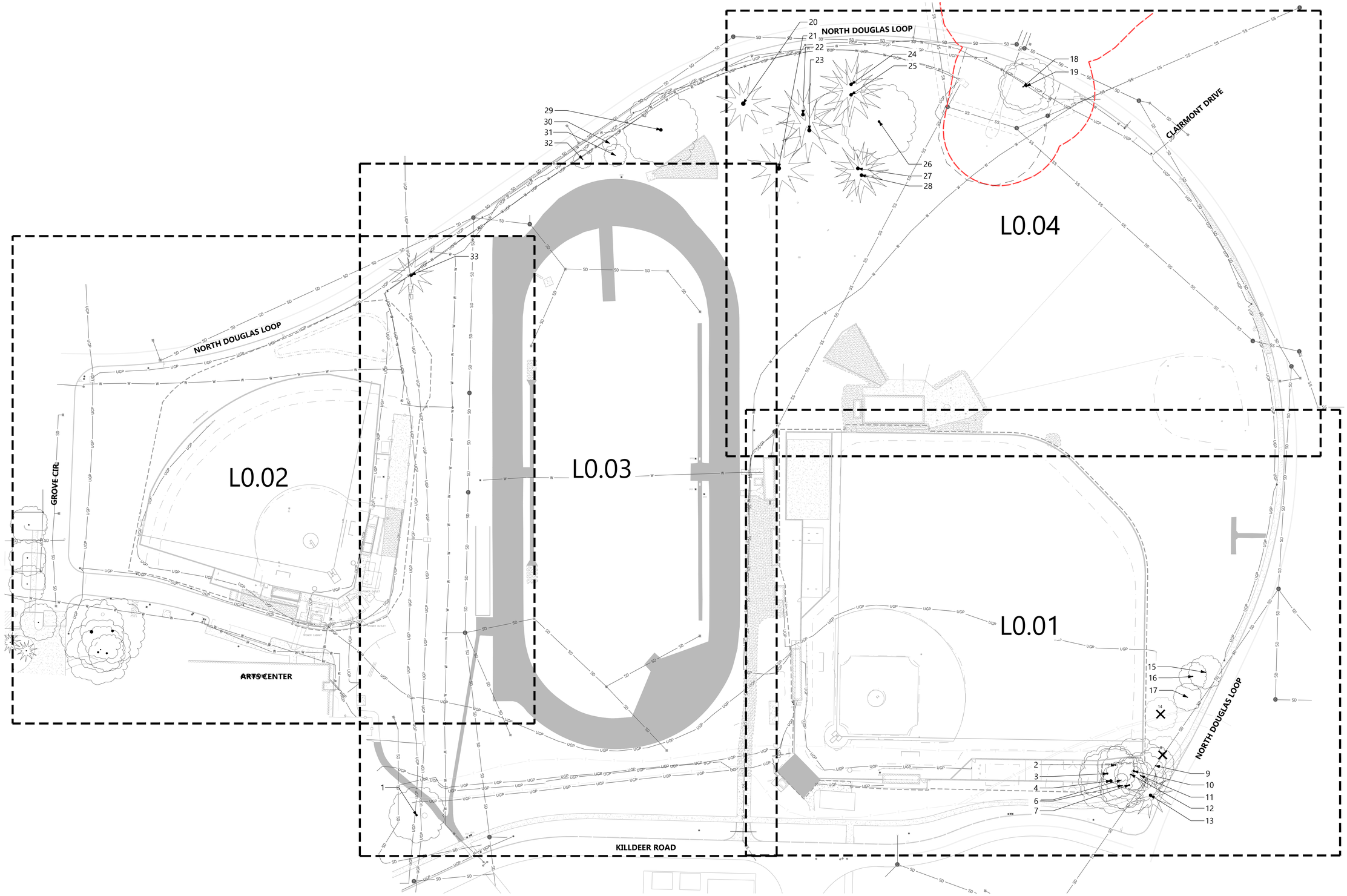
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SHEET TITLE
SANITARY SEWER AND WATER PLAN - SOUTH

C3.03

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TREE REMOVAL REQUIREMENTS

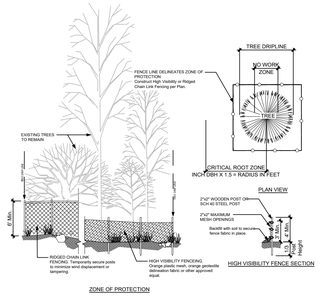
In accordance with OCMC Chapter 17.41.

17.41.060 Option 1 - Replace trees to be removed in accordance with table 17.41.060-1.

Option 1:
Existing Trees over 6" tall DBH to be removed: 2 (1 hazardous)
Replacement Trees Required (in accordance with 17.41.060.D): 2
See Landscape Plans for tree replacement species.

TREE PRESERVATION NOTES

1. All survey information provided by:
   COMPASS Land Surveyors
   4101 SE International Way, Suite 406
   Milwaukie, Oregon 97222
   T: 503-653-9093
2. Verify exact locations and routing of existing underground utilities prior to starting work. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
3. Watering - Water trees if required by the Owner's Representative. Watering will be required if it is judged that root removal is necessary for construction and threatens the survival of the tree. Use a slow drip or soaker hose to provide one inch water per week until completion of construction.
4. Refer to OCMC Chapter 17.41.130 for regulated tree protection procedures during construction.
4. Zone of Protection - Fence boundaries as indicated on plan and directed by the Owner's Representative. Install fence during initial mobilization at the site and maintain until substantial completion. Obtain advance written authorization from the Owner's Representative for removal or modification of fencing.
5. No Work Zone - Without prior authorization by Owner's Representative, there shall be no disturbance within a radius equal to 1/2 the radius of tree dripline as measured from trunk. No storage, no traffic nor other activity not previously authorized.
6. Tree Dripline - Extents of existing tree canopy prior to construction. No operation of heavy equipment, no storage, stockpiling, nor other activity not previously approved. Do not cut roots larger than 2 inches without approval. Within this zone only trench-less boring at pre-authorized depths, "air spade" trenching or hand digging.
7. All root pruning of roots larger than 2 inches shall be performed by an ISA Certified Arborist approved by Owner's Representative.
8. Critical Root Zone - Do not cut roots larger than 2 inches diameter without approval. Contractor shall employ industry standard methods and measures to minimize compaction beyond new hardscape paving and footing extents.
9. Prune, trim and protect exposed roots and limbs as required. Clean area, deposing of pruned or trimmed material off site.



TREE PROTECTION FENCING — NTS — 1

0' 20' 40' 80'

1" = 40'-0"

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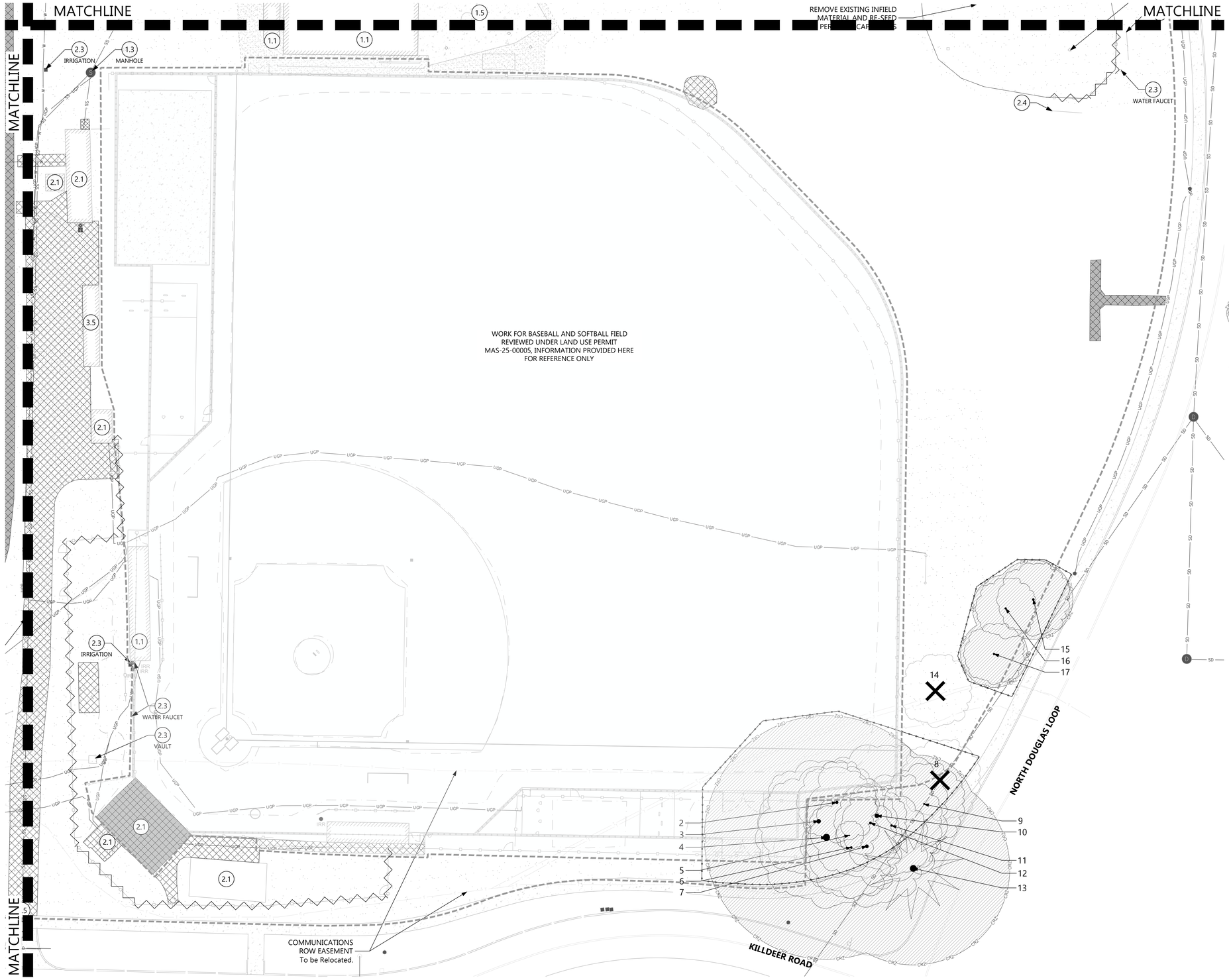
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SHEET TITLE
DEMOLITION AND TREE PRESERVATION & REMOVAL PLAN - OVERALL

L0.00

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- HARDSCAPE AREA TO BE REMOVED
- SOFTSCAPE AREA TO BE REMOVED
- TREE PROTECTION FENCING (1 / L0.00)
- EXISTING TREE TO REMAIN
  Protect as Required. See Notes.
- CRITICAL ROOT ZONE
  See Notes.
- ZONE OF SOIL PROTECTION
  See Notes.
- EXISTING TREE AND TREE #'S
  To be removed. See Tree Table on Sheet L0.01.

TREE PRESERVATION AND REMOVAL TABLE

Tree #	Type	DBH	Action
1	Quercus garryana	24 in.	Preserve
2	Quercus garryana	16 in.	Preserve
3	Quercus garryana	24 in.	Preserve
4	Quercus garryana	40 in.	Preserve
5	Quercus garryana	5 in.	Preserve
6	Quercus garryana	12 in.	Preserve
7	Quercus garryana	20 in.	Preserve
8	Acer rubrum	11 in.	Remove
9	Acer rubrum	9 in.	Preserve
10	Quercus garryana	24 in.	Preserve
11	Quercus garryana	12 in.	Preserve
12	Quercus garryana	14 in.	Preserve
13	Pseudotsuga menziesii	38 in.	Preserve
14	Acer rubrum	16 in.	Remove
15	Acer rubrum	13 in.	Preserve
16	Acer rubrum	11 in.	Preserve
17	Acer rubrum	11 in.	Preserve
18	Fraxinus latifolia	14 in.	Preserve
19	Fraxinus latifolia	22 in.	Preserve
20	Pseudotsuga menziesii	54 in.	Preserve
21	Pseudotsuga menziesii	54 in.	Preserve
22	Pseudotsuga menziesii	42 in.	Preserve
23	Pseudotsuga menziesii	48 in.	Preserve
24	Pseudotsuga menziesii	40 in.	Preserve
25	Pseudotsuga menziesii	40 in.	Preserve
26	Quercus garryana	30 in.	Preserve
27	Pseudotsuga menziesii	44 in.	Preserve
28	Pseudotsuga menziesii	42 in.	Preserve
29	Quercus garryana	40 in.	Preserve
30	Deciduous	6 in.	Preserve
31	Deciduous	7 in.	Preserve
32	Deciduous	10 in.	Preserve
33	Pseudotsuga menziesii	40 in.	Preserve
TREE PRESERVATION AND REMOVAL SUMMARY			
Total # of Existing Trees to Remain		**31**	
	# of Trees Removed	**2**	

DEMOLITION PLAN NOTES

1. All survey information provided by:
   COMPASS Land Surveyors
   4101 SE International Way, Suite 406
   Milwaukie, Oregon 97222
   T: 503-653-9093
2. Verify exact location and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by the Owner's Representative.
3. Prior to performing work, Contractor to field mark, verify and review all extents and elements of removal and salvage with Owner's Representative. Confirm with or make adjustments to the work as directed by Owner's Representative.
4. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to know existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Property Representative.
5. In addition to improvements shown, repair all areas disturbed or damaged by construction impacts to the condition that existed prior to construction activities.
6. See Sheet L0.00 for tree fencing and CRZ (Critical Root Zone) requirements.
7. Boundaries show are approximate. Adjust limits as required to implement improvements shown on other Drawings and Specifications.
8. Salvage site signage. Coordinate salvage with Property Representative.
9. Refer to Civil utility plan for underground utility removal, relocation and preservation plans.

KEY NOTES
EXISTING ELEMENT TO RELOCATE

- (3.1) SIGN TO BE RELOCATED
  See Note 8.
- (3.2) ELECTRICAL TO BE RELOCATED
  Refer to Electrical Plans.
- (3.3) LIGHT POLE TO BE RELCOATED
  Refer to Electrical Plans.
- (3.4) UTILITY TO BE RELOCATED
  Refer to Site Plan and move valve box out of proposed sidewalk.
- (3.5) BUILDING/STRUCTURE TO BE RELOCATED
  Refer to Site Plans.

KEY NOTES
EXISTING ELEMENT TO REMOVE

- (2.1) BUILDING/STRUCTURE TO REMOVE
- (2.2) LIGHT POLE TO REMOVE
- (2.3) UTILITY TO REMOVE
- (2.4) SITE FURNISHING TO REMOVE
- (2.5) ALTHETIC EQUIPMENT TO REMOVE

KEY NOTES
EXISTING ELEMENT TO REMAIN

- (1.1) BUILDING/STRUCTURE TO REMAIN
- (1.2) LIGHT POLE TO REMAIN
- (1.3) UTILITY TO REMAIN
- (1.4) SITE FURNISHING TO REMAIN
- (1.5) PAVING TO REMAIN
- (1.6) CURB TO REMAIN

1" = 20'-0"

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ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
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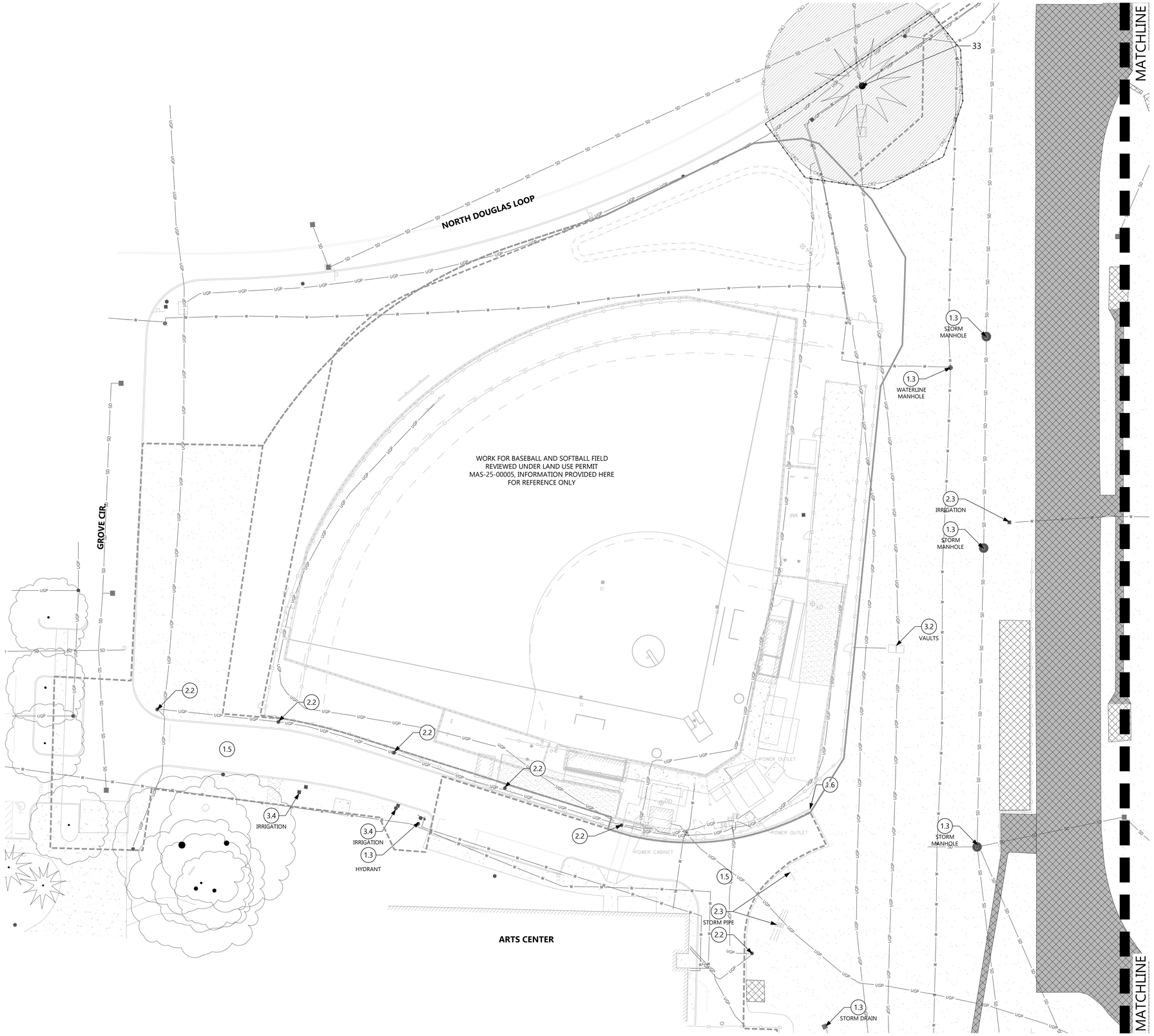
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Checked:	JG
Project #:	25.020
Date:	Oct. 9, 2025
Rev. #:	Date:

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SHEET TITLE
DEMOLITION AND TREE PRESERVATION & REMOVAL PLAN - BASEBALL

L0.01

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- HARDSCAPE AREA TO BE REMOVED
- SOFTSCAPE AREA TO BE REMOVED
- TREE PROTECTION FENCING (1 / L0.00)
- EXISTING TREE TO REMAIN
  Protect as Required. See Notes.
- CRITICAL ROOT ZONE
  See Notes.
- ZONE OF SOIL PROTECTION
  See Notes.
- EXISTING TREE AND TREE #'S
  To be removed. See Tree Table on Sheet L0.01.

KEY NOTES
EXISTING ELEMENT TO REMAIN

- 1.1 BUILDING/STRUCTURE TO REMAIN
- 1.2 LIGHT POLE TO REMAIN
- 1.3 UTILITY TO REMAIN
- 1.4 SITE FURNISHING TO REMAIN
- 1.5 PAVING TO REMAIN
- 1.6 CURB TO REMAIN

KEY NOTES
EXISTING ELEMENT TO REMOVE

- 2.1 BUILDING/STRUCTURE TO REMOVE
- 2.2 LIGHT POLE TO REMOVE
- 2.3 UTILITY TO REMOVE
- 2.4 SITE FURNISHING TO REMOVE
- 2.5 ALTHETIC EQUIPMENT TO REMOVE

KEY NOTES
EXISTING ELEMENT TO RELOCATE

- 3.1 SIGN TO BE RELOCATED
  See Note 8.
- 3.2 ELECTRICAL TO BE RELOCATED
  Refer to Electrical Plans.
- 3.3 LIGHT POLE TO BE RELCOATED
  Refer to Electrical Plans.
- 3.4 UTILITY TO BE RELOCATED
  Refer to Site Plan and move valve box out of proposed sidewalk.
- 3.5 BUILDING/STRUCTURE TO BE RELOCATED
  Refer to Site Plans.

DEMOLITION PLAN NOTES

1. See Sheet L0.01 for Demolition Plan Notes.
2. Refer to Civil utility plan for underground utility removal, relocation and preservation plans.

0' 10' 20' 40'
1" = 20'-0"

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160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
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SHEET TITLE
DEMOLITION AND TREE PRESERVATION & REMOVAL PLAN - SOFTBALL

L0.02

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MATCHLINE

MATCHLINE

2.3 IRRIGATION

2.1

2.1

2.3 CLEANOUT

3.2

2.3 STORM DRAIN

2.3 IRRIGATION

2.3 IRRIGATION

2.3 STORM DRAIN

2.3 STORM DRAIN

2.3 IRRIGATION

2.3 STORM DRAIN

COMMUNICATIONS EASEMENT To be Relocated.

2.3 STORM DRAIN

2.3 STORM MANHOLE

2.4 2.3 STORM DRAIN

2.3 ELECTRIC BOX

2.3 IRRIGATION

1.3 STORM MANHOLE

2.3 IRRIGATION

1.3 STORM MANHOLE

1.3 STORM MANHOLE

1.4

1.5

33

1

1.3 WATERLINE MANHOLE

3.2 VAULTS

1.3 VAULT

1.3

1.5

1.3 STORM DRAIN

MATCHLINE

MATCHLINE

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- HARDSCAPE AREA TO BE REMOVED
- SOFTSCAPE AREA TO BE REMOVED
- TREE PROTECTION FENCING (1 / L0.00)
- EXISTING TREE TO REMAIN Protect as Required. See Notes.
- CRITICAL ROOT ZONE See Notes.
- ZONE OF SOIL PROTECTION See Notes.
- EXISTING TREE AND TREE #'S To be removed. See Tree Table on Sheet L0.01.

KEY NOTES
EXISTING ELEMENT TO REMAIN

1.1	BUILDING/STRUCTURE TO REMAIN
1.2	LIGHT POLE TO REMAIN
1.3	UTILITY TO REMAIN
1.4	SITE FURNISHING TO REMAIN
1.5	PAVING TO REMAIN
1.6	CURB TO REMAIN

KEY NOTES
EXISTING ELEMENT TO REMOVE

2.1	BUILDING/STRUCTURE TO REMOVE
2.2	LIGHT POLE TO REMOVE
2.3	UTILITY TO REMOVE
2.4	SITE FURNISHING TO REMOVE
2.5	ALTHETIC EQUIPMENT TO REMOVE

KEY NOTES
EXISTING ELEMENT TO RELOCATE

3.1	SIGN TO BE RELOCATED See Note 8.
3.2	ELECTRICAL TO BE RELOCATED Refer to Electrical Plans.
3.3	LIGHT POLE TO BE RELCOATED Refer to Electrical Plans.
3.4	UTILITY TO BE RELOCATED Refer to Site Plan and move valve box out of proposed sidewalk.
3.5	BUILDING/STRUCTURE TO BE RELOCATED Refer to Site Plans.

DEMOLITION PLAN NOTES

1. See Sheet L0.01 for Demolition Plan Notes.
2. Refer to Civil utility plan for underground utility removal, relocation and preservation plans.

0' 10' 20' 40'

1" = 20'-0"

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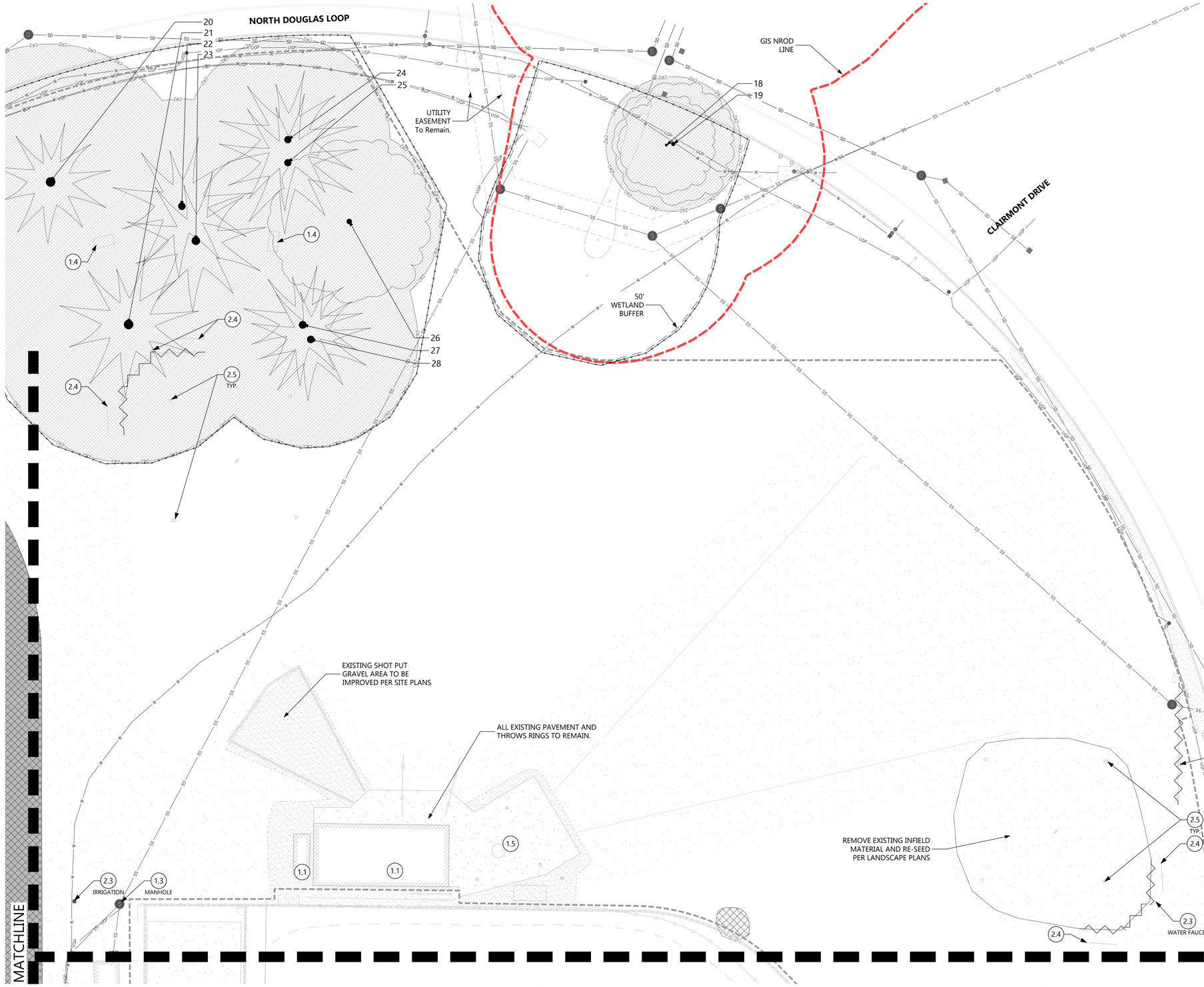
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SHEET TITLE
DEMOLITION AND TREE PRESERVATION & REMOVAL PLAN - TRACK & FIELD

L0.03



LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- HARDSCAPE AREA TO BE REMOVED
- SOFTSCAPE AREA TO BE REMOVED
- TREE PROTECTION FENCING (1 / L0.00)
- EXISTING TREE TO REMAIN Protect as Required. See Notes.
- CRITICAL ROOT ZONE See Notes.
- ZONE OF SOIL PROTECTION See Notes.
- XX XX EXISTING TREE AND TREE #'S To be removed. See Tree Table on Sheet L0.01.

DEMOLITION PLAN NOTES

1. See Sheet L0.01 for Demolition Plan Notes.
2. Refer to Civil utility plan for underground utility removal, relocation and preservation plans.

KEY NOTES
EXISTING ELEMENT TO RELOCATE

3.1	SIGN TO BE RELOCATED See Note 8.
3.2	ELECTRICAL TO BE RELOCATED Refer to Electrical Plans.
3.3	LIGHT POLE TO BE RELCOATED Refer to Electrical Plans.
3.4	UTILITY TO BE RELOCATED Refer to Site Plan and move valve box out of proposed sidewalk.
3.5	BUILDING/STRUCTURE TO BE RELOCATED Refer to Site Plans.

KEY NOTES
EXISTING ELEMENT TO REMOVE

2.1	BUILDING/STRUCTURE TO REMOVE
2.2	LIGHT POLE TO REMOVE
2.3	UTILITY TO REMOVE
2.4	SITE FURNISHING TO REMOVE
2.5	ALTHETIC EQUIPMENT TO REMOVE

KEY NOTES
EXISTING ELEMENT TO REMAIN

1.1	BUILDING/STRUCTURE TO REMAIN
1.2	LIGHT POLE TO REMAIN
1.3	UTILITY TO REMAIN
1.4	SITE FURNISHING TO REMAIN
1.5	PAVING TO REMAIN
1.6	CURB TO REMAIN

1" = 20'-0"

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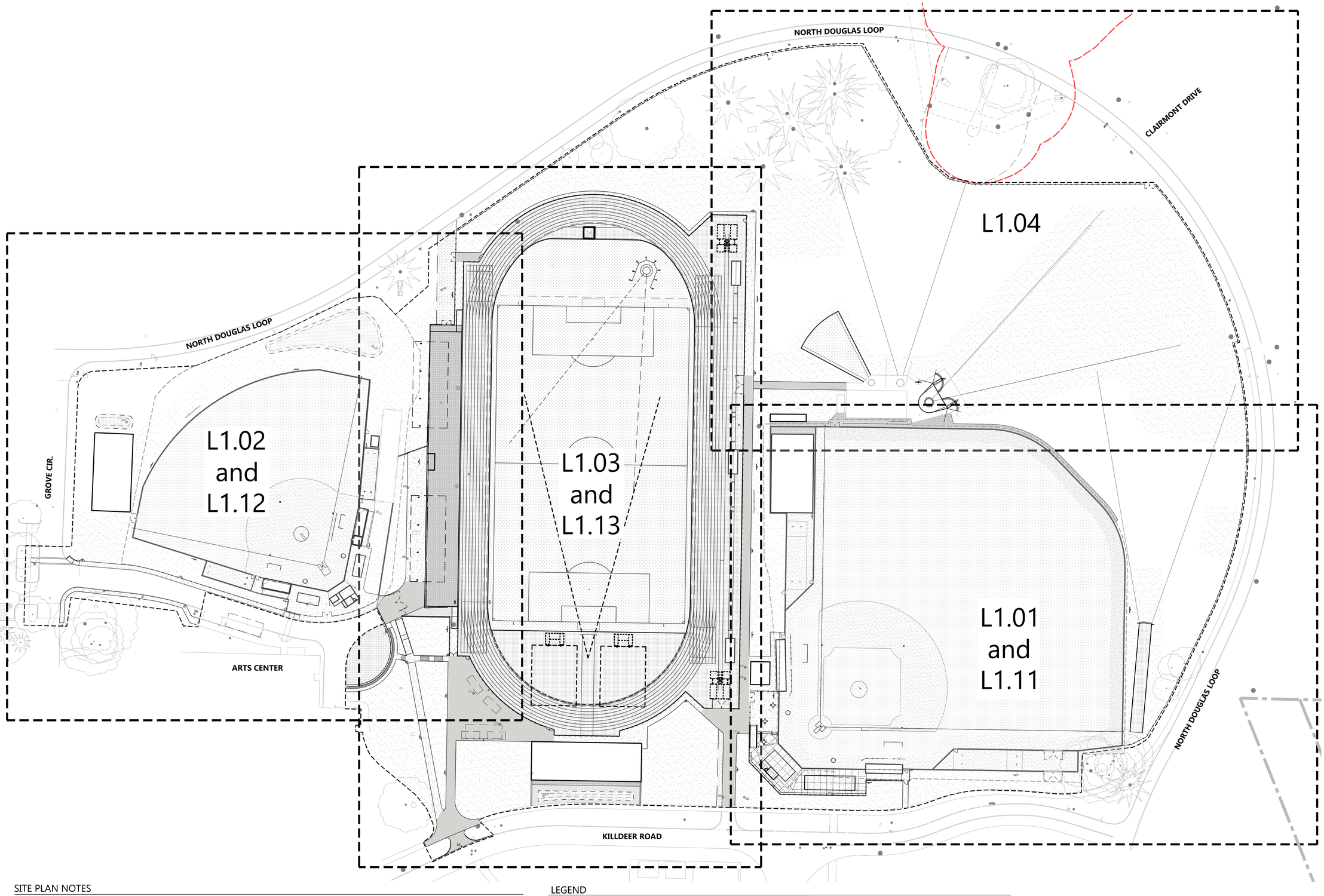
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SHEET TITLE
DEMOLITION AND TREE PRESERVATION & REMOVAL PLAN - THROWS AREA

L0.04

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SITE PLAN NOTES

1. All survey information provided by:
   COMPASS Land Surveyors
   4101 SE International Way, Suite 406
   Milwaukie, Oregon 97222
   T: 503-653-9093
   Survey was conducted in May 2025. Improvements to the Throws Area were completed after survey was conducted. Conditions shown on plans may vary from on-site conditions.
2. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities or related facilities at Contractor's expense in a manner approved by Owner's Representative.
3. Barricade and protect trunks, limbs, roots and root zones beyond dripline of existing trees and plant materials to remain as directed by Owner's Representative. Cut no limbs or roots larger than 2" in diameter without approval of Landscape Architect. Notify Owner's Representative prior to performing any excavation within protection areas. See Preservation and Demolition Plans.
4. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled, and the City of Clackamas Development Code. Obtain Owner's Representative approval prior to installing any related work.
5. Verify existing elevations where new work abuts existing to remain. Notify Owner's Representative of any discrepancies.
6. See Irrigation Mainline Plan for irrigation sleeve locations.
7. Match existing paving pattern to new concrete paving pattern at limit of work.

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES
- FENCE - CHAINLINK
- FENCE - EXISTING
- DRAINAGE BASINS
- STANDARD CONCRETE
- VEHICULAR CONCRETE
- CRUSHED STONE
- ASPHALT PAVING - VEHICULAR
- SYNTHETIC TURF - 1
- SYNTHETIC TURF - 2
- TRACK SURFACING
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

1" = 40'-0"

0' 20' 40' 80'

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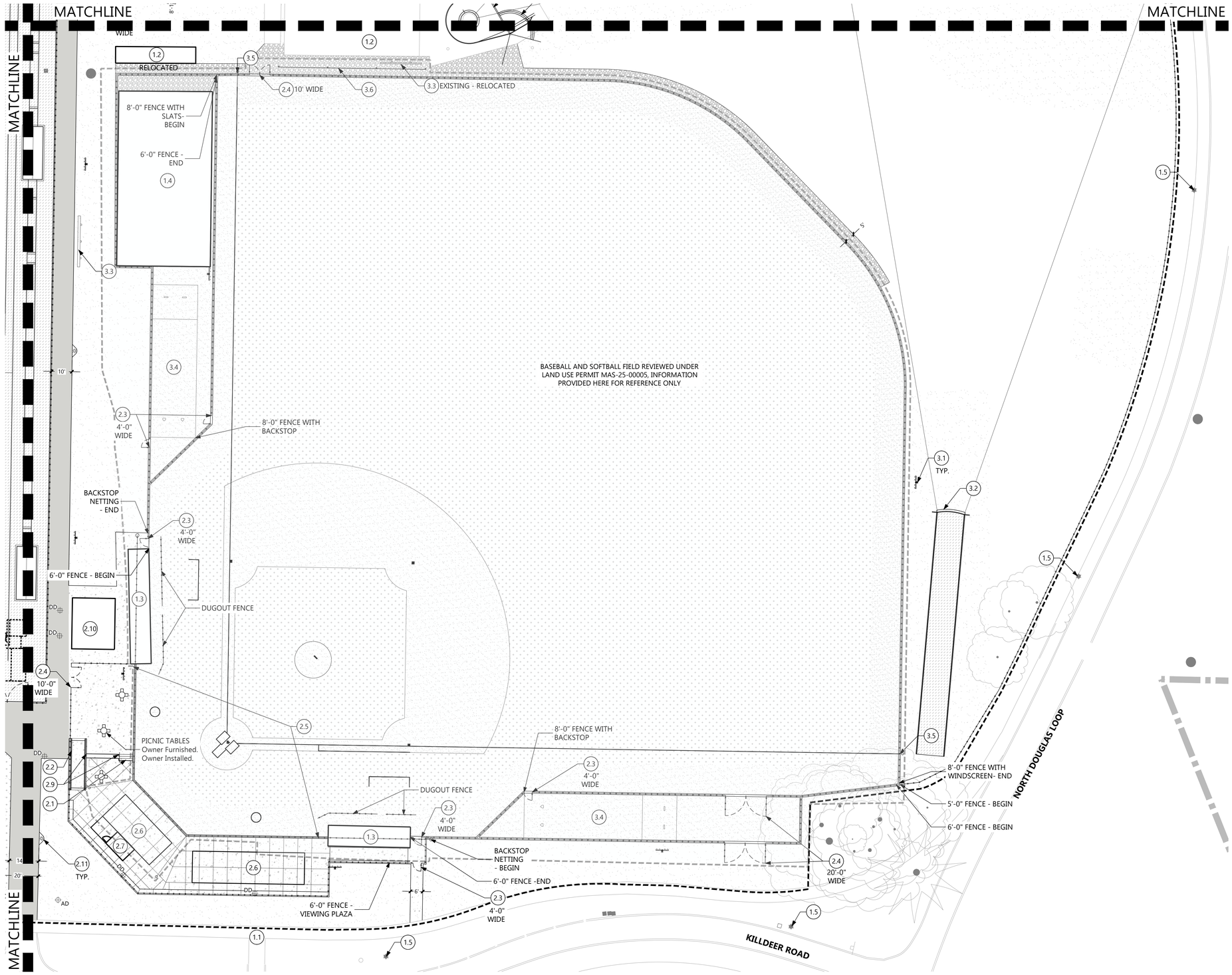
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SITE PLAN - OVERALL

L1.00

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KEYNOTES

EXISTING ELEMENTS TO REMAIN

- 1.1 EXISTING CONCRETE
- 1.2 EXISTING BUILDING STRUCTURE
- 1.3 EXISTING DUGOUT
- 1.4 EXISTING HITTING TUNNELS
- 1.5 EXISTING LIGHT POLE

PROPOSED ELEMENTS - SITE

- 2.1 CONCRETE STAIRS WITH HANDRAIL
- 2.2 CONCRETE RAMP WITH HANDRAILS
- 2.3 SINGLE SWING GATE
- 2.4 DOUBLE SWING GATE
- 2.5 BACKSTOP WALL WITH PADDING
- 2.6 BLEACHER — See Architecture, Structural
- 2.7 ANNOUNCERS BOX — See Architecture, Structural
- 2.8 MOWSTRIP
- 2.9 SEAT WALL
- 2.10 RESTROOM BUILDING (6-USERS) — See Architecture, Structural
- 2.11 FUTURE PEDESTRIAN LIGHT POLE — See Electrical, Structural

PROPOSED ELEMENTS - ATHLETICS

- 3.1 FUTURE FIELD LIGHTS WITH ELECTRICAL BOXES — See Electrical
- 3.2 JAVELIN RUNWAY
- 3.3 SCOREBOARD
- 3.4 BULL PEN
- 3.5 FOUL BALL POST
- 3.6 PROTECTING NETTING

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- FENCE - EXISTING
- FENCE - CHAINLINK
- BACKSTOP NETTING 30' height.
- CB AD DRAINAGE BASINS
- FIELD LIGHTING See Electrical.
- PEDESTRIAN LIGHTING See Electrical.
- LIGHT POLES - EXISTING
- STANDARD CONCRETE
- VEHICULAR CONCRETE
- ASPHALT PAVING - VEHICULAR
- CRUSHED STONE
- SYNTHETIC TURF - 1
- SYNTHETIC TURF - 2
- TRACK SURFACING
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

SITE PLAN NOTES

1. See Sheet L1.00 for Site Plan Notes.

1" = 20'-0"

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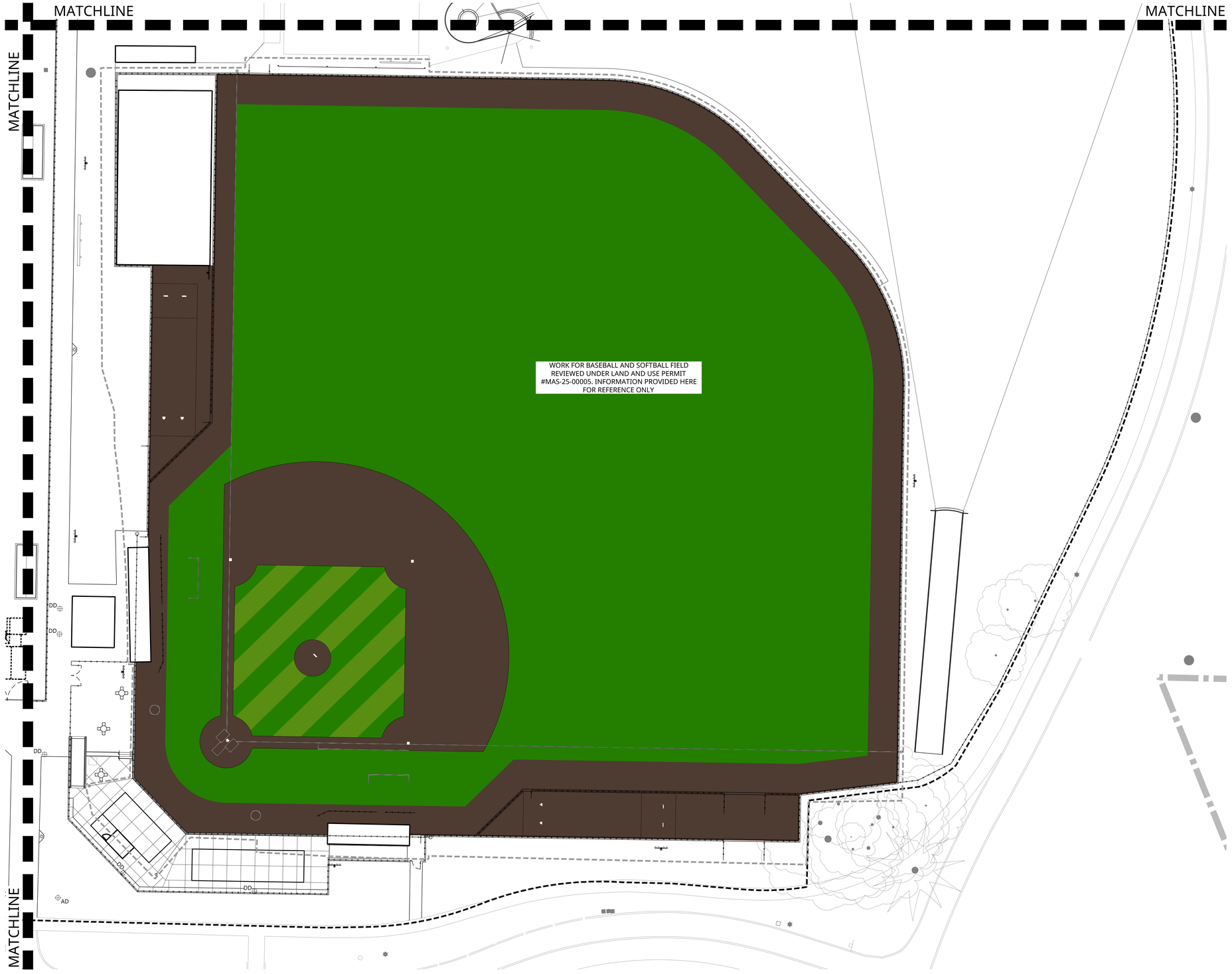
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SITE PLAN - BASEBALL

L1.01

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LEGEND

- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- OUTFIELD TURF - 6,493 SF Color Code: XX
- DARK BROWN - 30,520 SF Color Code: XX
- OUTFIELD TURF - 85,044 SF Color Code: XX

FIELD MARKING NOTES

1. Notify Owner's Representative of any discrepancies with dimensions and obtain approval of any required adjustments prior to installation
   approval of any required adjustments prior to installation.
2. Install baseball field markings to conform to current NCAA Court and Field Diagram Guide.

TURF MARKING LINE SCHEDULE

BASEBALL MARKINGS
Color: White
Width: 3"

1" = 30'-0"

0' 15' 30 60'

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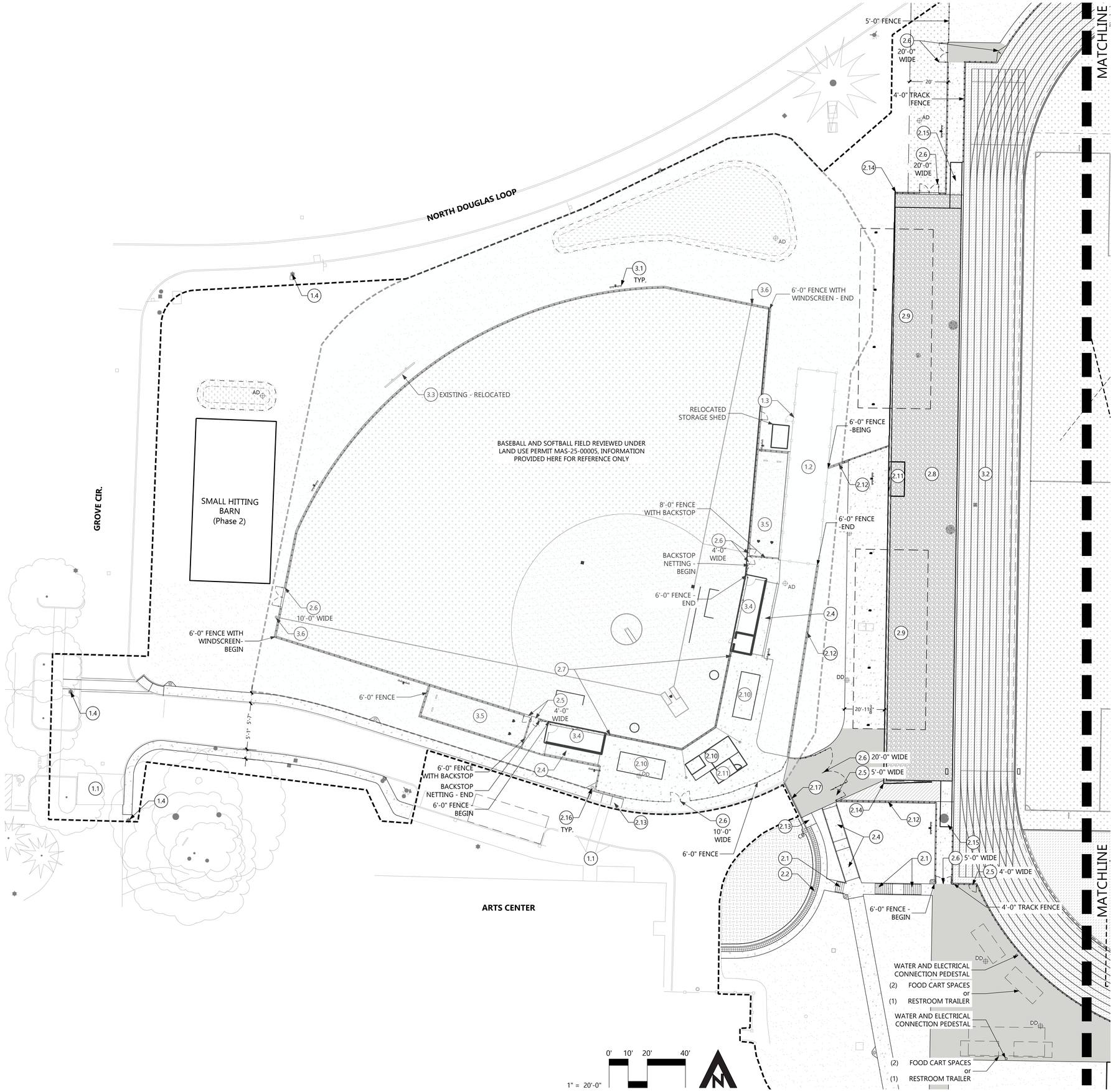
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SHEET TITLE

ILLUSTRATIVE PLAN - BASEBALL

L1.11

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- FENCE - EXISTING
- FENCE - CHAINLINK
- BACKSTOP NETTING 30' height.
- DRAINAGE BASINS (CB, AD)
- FIELD LIGHTING See Electrical.
- PEDESTRIAN LIGHTING See Electrical.
- LIGHT POLES - EXISTING
- STANDARD CONCRETE
- VEHICULAR CONCRETE
- ASPHALT PAVING - VEHICULAR
- CRUSHED STONE
- SYNTHETIC TURF - 1
- SYNTHETIC TURF - 2
- TRACK SURFACING
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

KEY NOTES

EXISTING ELEMENTS TO REMAIN

1.1	EXISTING CONCRETE
1.2	EXISTING HITTING TUNNEL
1.3	EXISTING GATE
1.4	EXISTING LIGHT POLE

KEY NOTES

PROPOSED ELEMENTS - SITE

2.1	CONCRETE STAIRS WITH HANDRAIL	
2.2	DETECTABLE WARNING PANEL	
2.3	CONCRETE RETAINING WALL	
2.4	CONCRETE RAMP AND HANDRAILS	
2.5	SINGLE SWING GATE	
2.6	DOUBLE SWING GATE	
2.7	BACKSTOP WALL WITH PADDING	
2.8	GRANDSTAND	See Architecture, Structural
2.9	GRANDSTAND AWNING	See Architecture, Structural
2.10	BLEACHER	See Architecture, Structural
2.11	ANNOUNCERS BOX	See Architecture, Structural
2.12	MOW STRIP	
2.13	CURB RAMP	
2.14	BLOCK RETAINING WALL	
2.15	GRANDSTAND ACCESS RAMP	
2.16	FUTURE PEDESTRIAN LIGHT POLE	See Electrical, Structural
2.17	MOUNTABLE CURB	

PROPOSED ELEMENTS - ATHLETICS

3.1	FUTURE FIELD LIGHTS WITH ELECTRICAL BOXES	See Electrical
3.2	EIGHT LANE 1AAF METER TRACK	
3.3	SCOREBOARD	
3.4	SOFTBALL DUGOUT	
3.5	BULL PEN	
3.6	FOUL BALL POST	

SITE PLAN NOTES

1. See Sheet L1.00 for Site Plan Notes.

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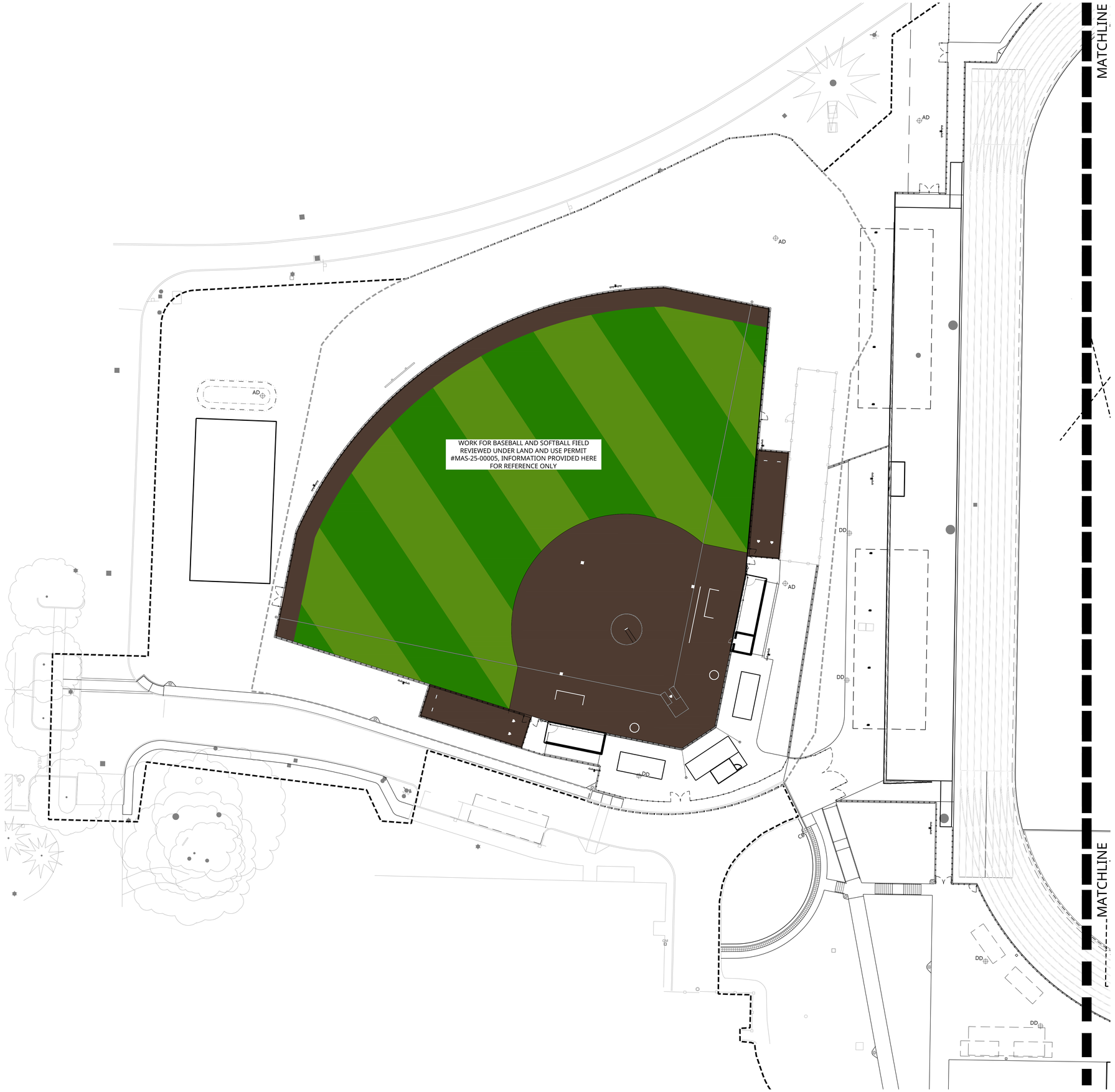
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SHEET TITLE

SITE PLAN - SOFTBALL

L1.02

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LEGEND

- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- OUTFIELD TURF - 31,620 SF
  Color Code: XX
- DARK BROWN - 13,574 SF
  Color Code: XX
- OUTFIELD TURF - 8093 SF
  Color Codes: XX

FIELD MARKING NOTES

1. Notify Owner's Representative of any discrepancies with dimensions
   approval of any required adjustments prior to installation.
2. Install baseball field markings to conform to current NCAA Court and Field Diagram Guide.

TURF MARKING LINE SCHEDULE

BASEBALL MARKINGS
Color: White
Width: 3"

0' 15' 30' 60'
1" = 30'-0"

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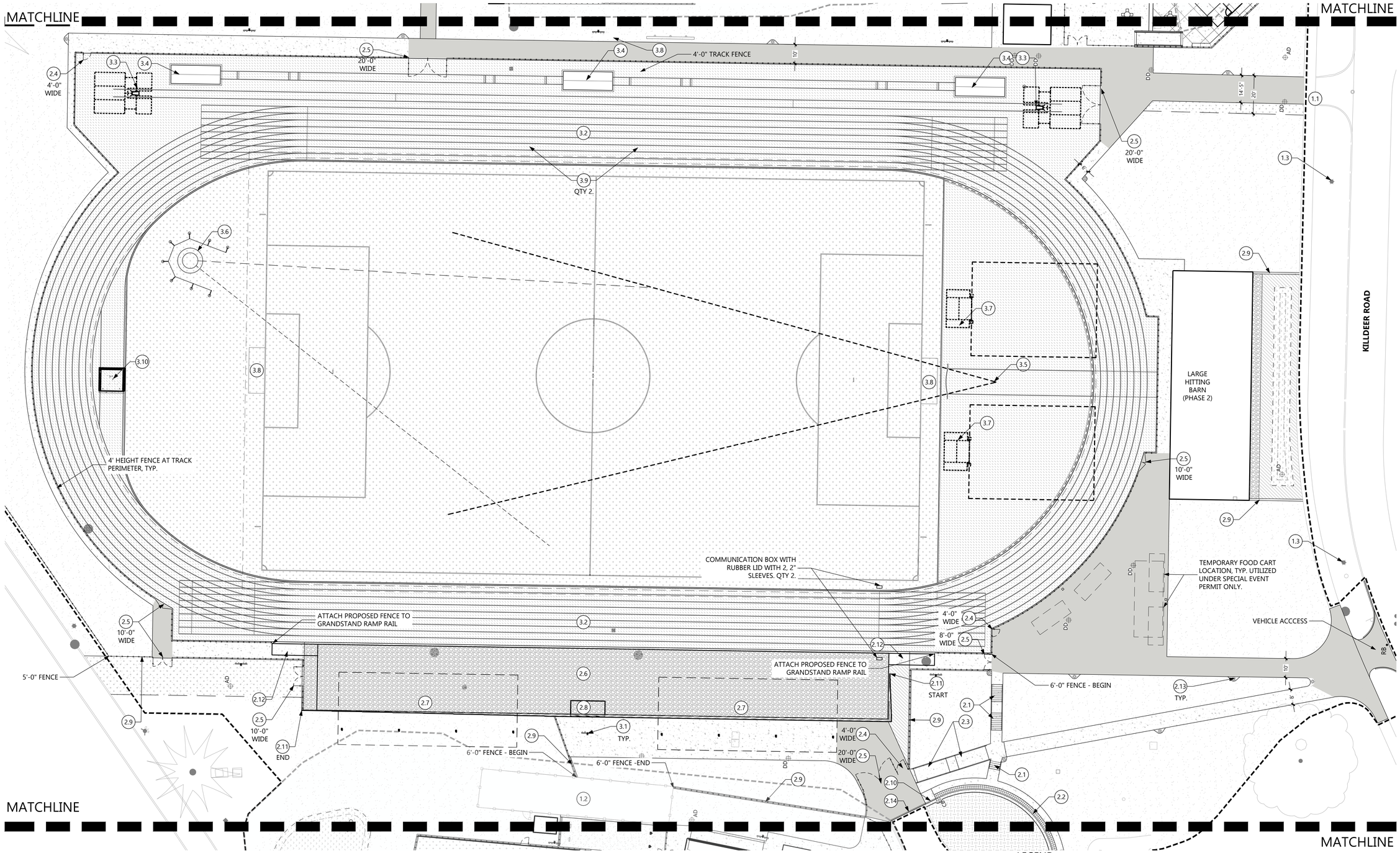
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ILLUSTRATIVE PLAN- SOFTBALL

L1.12

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KEY NOTES

EXISTING ELEMENTS TO REMAIN

1.1	EXISTING CONCRETE
1.2	EXISTING HITTING TUNNEL
1.3	EXISTING LIGHT POLE

PROPOSED ELEMENTS - SITE

2.1	CONCRETE STAIRS WITH HANDRAIL	
2.2	DETECTABLE WARNING PANEL	
2.3	CONCRETE RAMP AND HANDRAILS	
2.4	SINGLE SWING GATE	
2.5	DOUBLE SWING GATE	
2.6	GRANDSTAND	See Architecture, Structural
2.7	GRANDSTAND AWNING	See Architecture, Structural
2.8	ANNOUNCERS BOX	See Architecture, Structural
2.9	MOW STRIP	
2.10	CURB RAMP	
2.11	BLOCK RETAINING WALL	
2.12	GRANDSTAND ACCESS RAMP	
2.13	FUTURE PEDESTRIAN LIGHT POLE	See Electrical, Structural
2.14	MOUNTABLE CURB	

PROPOSED ELEMENTS - ATHLETICS

3.1	FUTURE FIELD LIGHTS WITH ELECTRICAL BOXES	See Electrical
3.2	EIGHT LANE 1AAF METER TRACK Refer to section.	
3.3	POLE VAULT BOX. PAD BY OWNER Shown for reference only.	
3.4	LONG JUMP PIT	
3.5	JAVELIN RUNWAY Striping only.	
3.6	DISCUSS RING ONLY (Netting cage provided by owner)	
3.7	HIGH JUMP PIT AREA, HIGH JUMP PAD BY OWNER Shown for reference only.	
3.8	SOCCER GOAL (Movable)	
3.9	SOCCER PLAYER BENCH (Moveable)	
3.10	STEEPLE CHASE WATER JUMP	

SITE PLAN NOTES

1. See Sheet L1.00 for Site Plan Notes.

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- FENCE - EXISTING
- FENCE - CHAINLINK
- BACKSTOP NETTING 30' height.
- DRAINAGE BASINS (CB, AD)
- REMOVABLE BOLLARD (RB *)
- STANDARD CONCRETE
- VEHICULAR CONCRETE
- ASPHALT PAVING - VEHICULAR
- SYNTHETIC TURF - 1
- TRACK SURFACING
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

0' 10' 20' 40'

1" = 20'-0"

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SHEET TITLE

SITE PLAN - TRACK & FIELD

L1.03

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MATCHLINE

MATCHLINE

MATCHLINE

MATCHLINE

LEGEND

APPROXIMATE LIMIT OF WORK LINE

TRACK SURFACING - 70,353 SF
Color Code:

INFIELD TURF - 90,664 SF
Color Code:

FIELD MARKING NOTES

1. Notify Owner's Representative of any discrepancies with dimensions and obtain approval of any required adjustments prior to installation.
   approval of any required adjustments prior to installation.
2. Install baseball field markings to conform to current NCAA Court and Field Diagram Guide.

TURF MARKING LINE SCHEDULE

SOCCER FIELD MARKINGS
Color: White
Width: 3"

0' 10' 20' 40'

1" = 20'-0"

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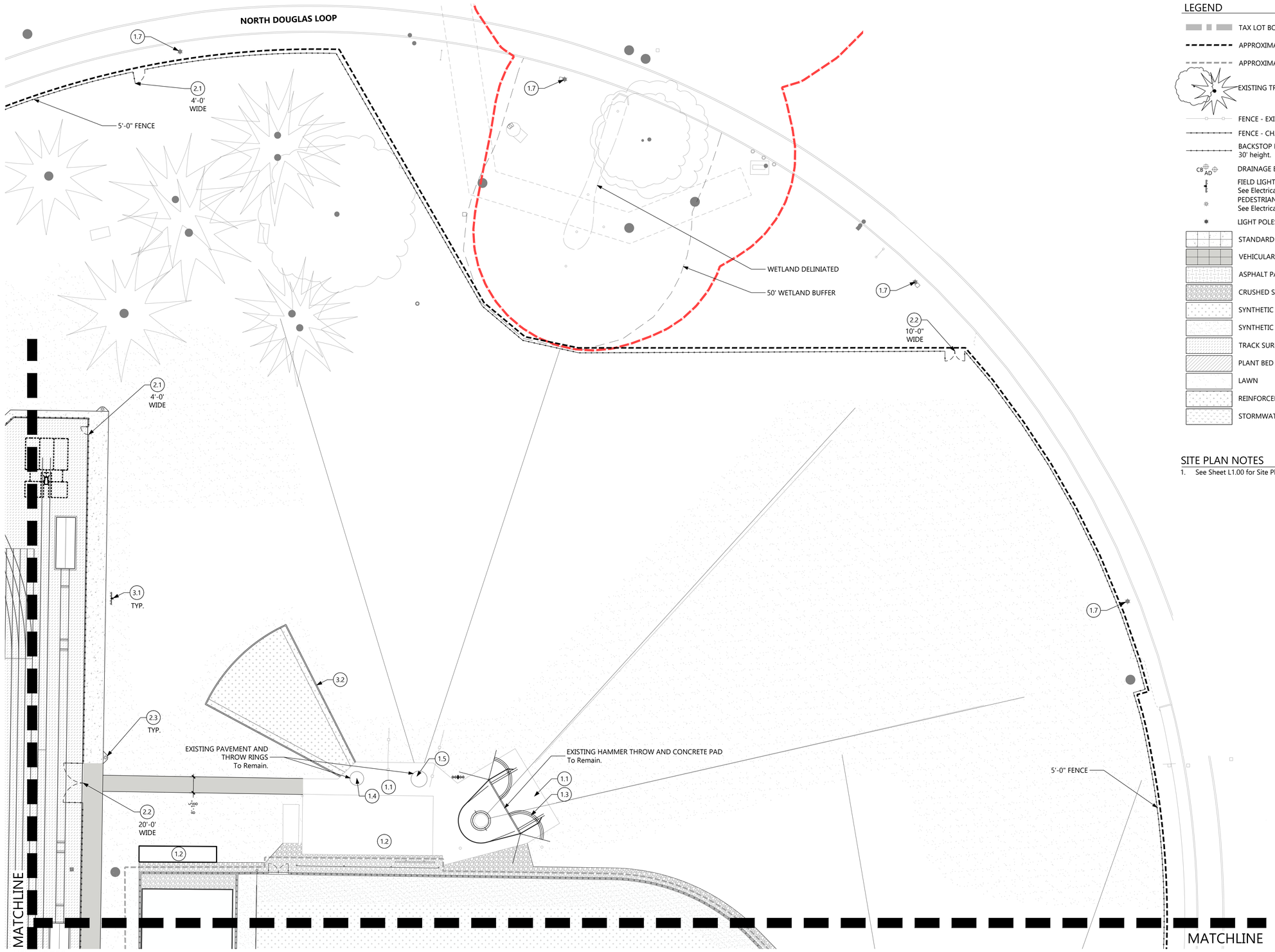
100% DESIGN DEVELOPMENT

SHEET TITLE
ILLUSTRATIVE PLAN - TRACK & FIELD

L1.13

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- FENCE - EXISTING
- FENCE - CHAINLINK
- BACKSTOP NETTING 30' height.
- DRAINAGE BASINS (CB, AD)
- FIELD LIGHTING See Electrical.
- PEDESTRIAN LIGHTING See Electrical.
- LIGHT POLES - EXISTING
- STANDARD CONCRETE
- VEHICULAR CONCRETE
- ASPHALT PAVING - VEHICULAR
- CRUSHED STONE
- SYNTHETIC TURF - 1
- SYNTHETIC TURF - 2
- TRACK SURFACING
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

SITE PLAN NOTES

1. See Sheet L1.00 for Site Plan Notes.

KEY NOTES

EXISTING ELEMENTS TO REMAIN

- 1.1 EXISTING CONCRETE
- 1.2 EXISTING BUILDING STRUCTURE
- 1.3 EXISTING HAMMER THROW
- 1.4 EXISTING SHOTPUT
- 1.5 EXISTING DISCUS
- 1.6 EXISTING HITTING TUNNELS
- 1.7 EXISTING LIGHT POLE

PROPOSED ELEMENTS - SITE

- 2.1 SINGLE SWING GATE
- 2.2 DOUBLE SWING GATE
- 2.3 FUTURE PEDESTRIAN LIGHT POLE See Electrical, Structural

PROPOSED ELEMENTS - ATHLETICS

- 3.1 FUTURE FIELD LIGHTS WITH ELECTRICAL BOXES See Electrical
- 3.2 SHOTPUT LANDING AREA EDGE Use existing wood timber edging as nailer board for synthetic turf. Synthetic turn is re-used from softball infield.

1" = 20'-0" (0' 10' 20' 40')

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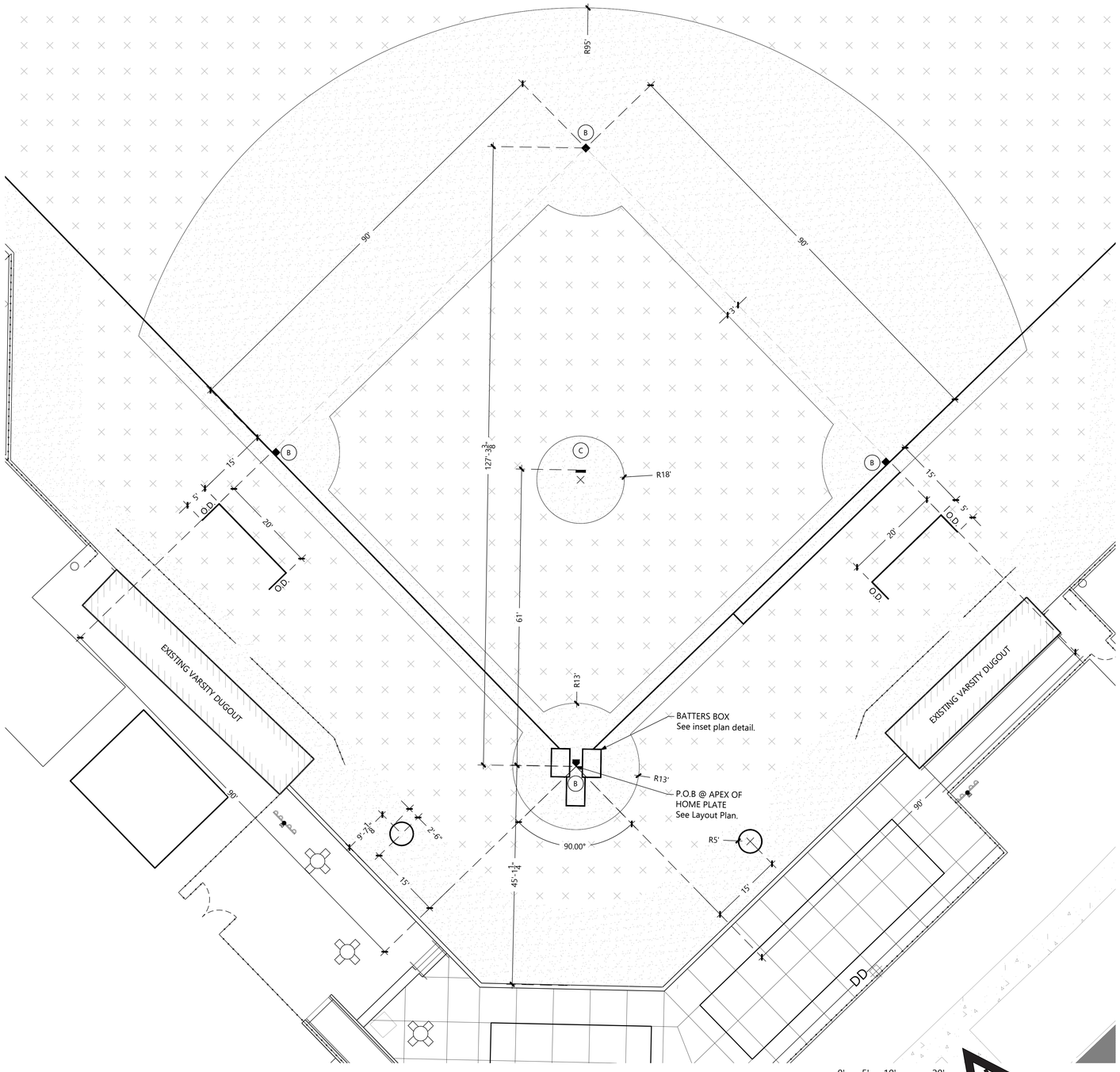
SHEET TITLE

SITE PLAN - THROWS AREA

L1.04

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WORK FOR BASEBALL AND SOFTBALL FIELD
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3 BASEBALL FIELD MARKINGS PLAN
1" = 10'-0"
0' 5' 10' 20'

NOTES

1. Notify Owner's Representative of any discrepancies with dimensions and obtain approval of any required adjustments prior to installation.
2. Install Baseball field markings to conform to current National Federation of State High School Association's Court and Field Diagram Guide.
3. Dashed base path and outfield line shown for reference only, not an actual inlaid line.

TURF MARKING LINE SCHEDULE

BASEBALL MARKINGS
Color: White
Width: 4"

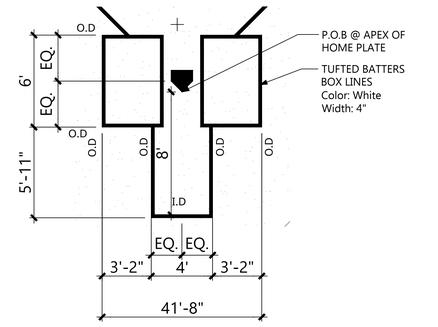
(A) SEWN IN HOME PLATE AT BULLPEN
Color: White
Size: per NFHS at locations noted.

(B) PERMANENT BASE EQUIPMENT
No marking, for reference

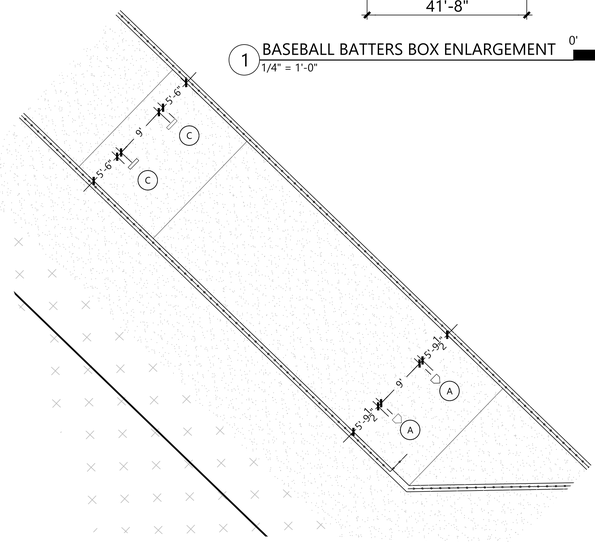
(C) PERMANENT PITCHING RUBBER
No marking, for reference
Refer to pitching mound and bullpen mound details

LEGEND

	APPROXIMATE LIMIT OF WORK LINE
ALIGN	ALIGN WITH ELEMENT
15'	DIMENSION
15'	DIMENSION From Baseline
EQ.	EQUAL
F.O.R.	FRONT/FACE OF PITCHING RUBBER
O.D.	OUTER DIMENSION
TYP.	TYPICAL
P.O.B.	POINT OF BEGINNING



1 BASEBALL BATTERS BOX ENLARGEMENT
1/4" = 1'-0"
0' 2' 4' 8'



2 EAST BULLPEN ENLARGEMENT
1" = 10'-0"
0' 5' 10' 20'

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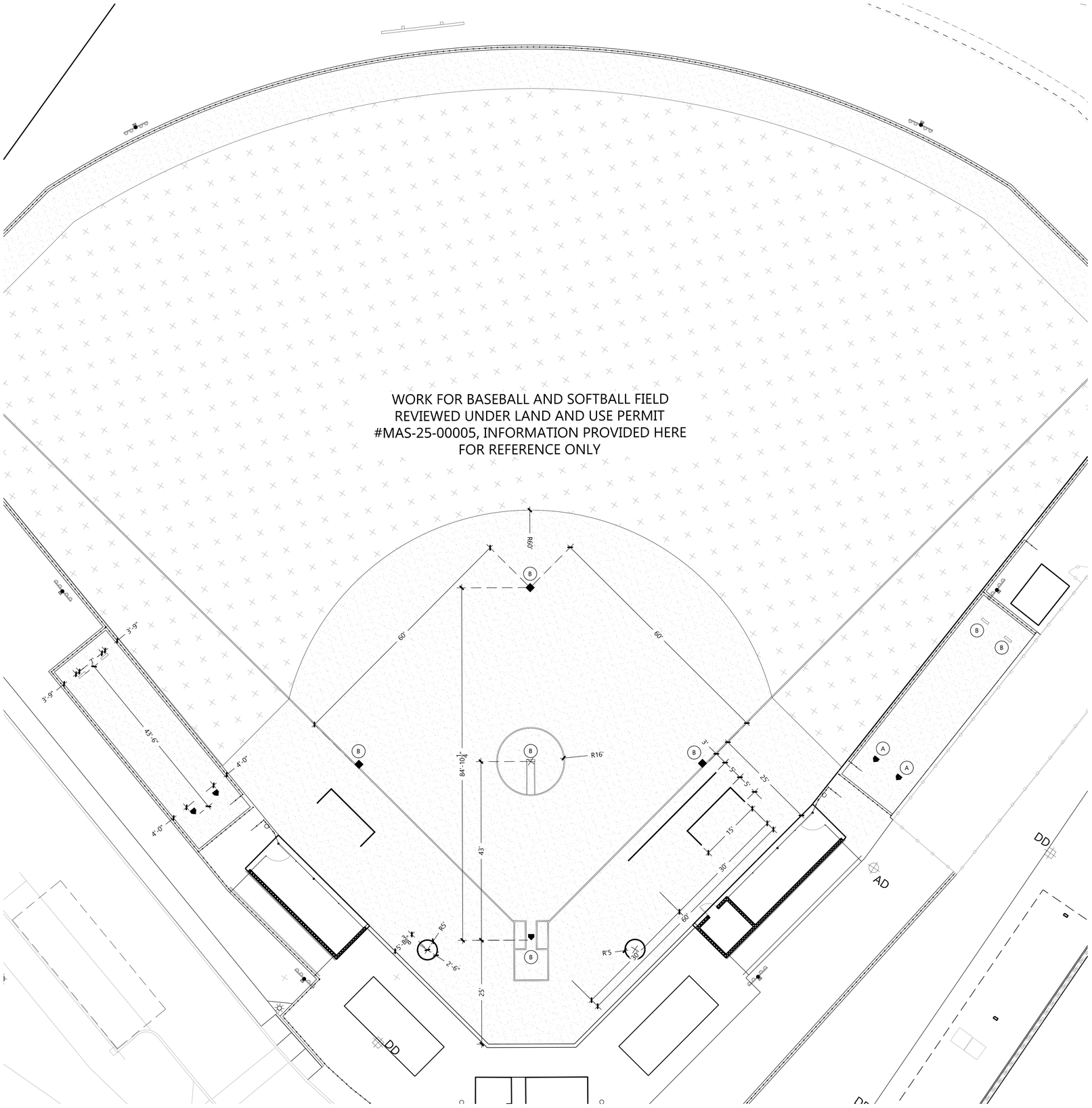
SHEET TITLE
FIELD MARKING PLAN - BASEBALL

L2.11

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WORK FOR BASEBALL AND SOFTBALL FIELD
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2 SOFTBALL FIELD MARKINGS PLAN
1" = 10'-0"

0' 5' 10' 20'

NOTES

1. Notify Owner's Representative of any discrepancies with dimensions and obtain approval of any required adjustments prior to installation.
2. Install Softball field markings to conform to current National Federation of State High School Association's Court and Field Diagram Guide.
3. Dashed base path and outfield line shown for reference only, not an actual inlaid line.

TURF MARKING LINE SCHEDULE

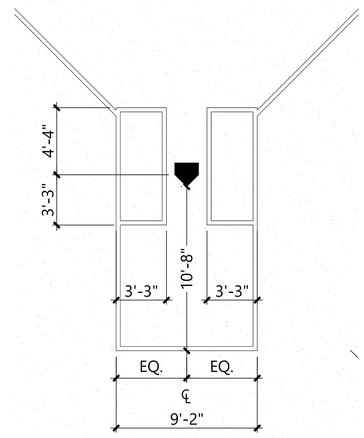
SOFTBALL MARKINGS
Color: White
Width: 4"

(A) SEWN IN HOME PLATE AT BULLPEN
Color: White
Size: per NFHS at locations noted.

(B) PERMANENT BASE EQUIPMENT
No marking, for reference

LEGEND

	APPROXIMATE LIMIT OF WORK LINE
ALIGN	ALIGN WITH ELEMENT
15'	DIMENSION
15'	DIMENSION From Baseline
EQ.	EQUAL
F.O.R.	FRONT/FACE OF PITCHING RUBBER
O.D.	OUTER DIMENSION
TYP.	TYPICAL
P.O.B.	POINT OF BEGINNING



1 SOFTBALL BATTERS BOX ENLARGEMENT

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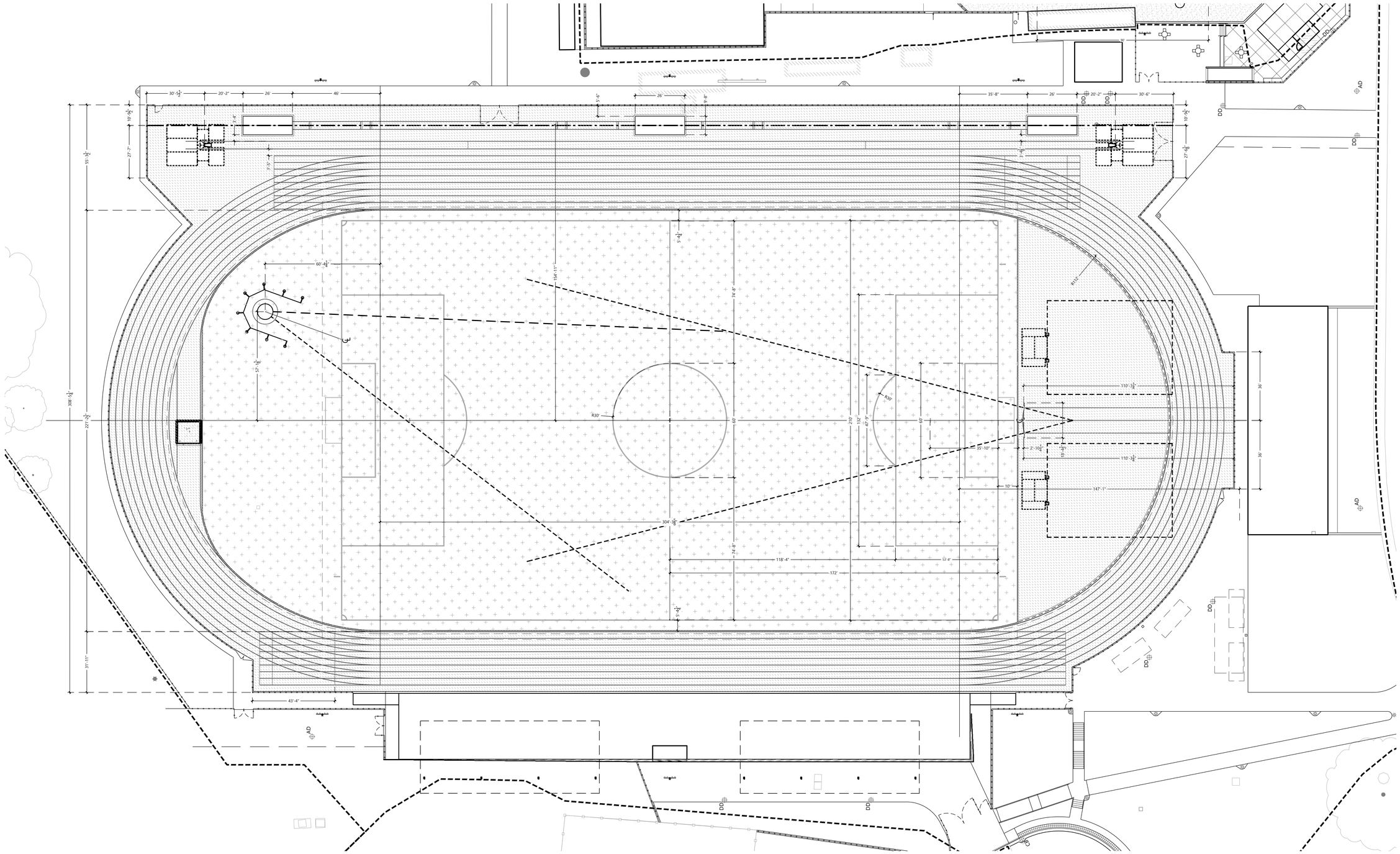
SHEET TITLE

FIELD MARKING PLAN - SOFTBALL

L2.12

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LEGEND

APPROXIMATE LIMIT OF WORK LINE	
ALIGN	ALIGN WITH ELEMENT
15'	DIMENSION
15'	DIMENSION From Baseline
EQ.	EQUAL
F.O.R.	FRONT/FACE OF PITCHING RUBBER
O.D.	OUTER DIMENSION
TYP.	TYPICAL
P.O.B.	POINT OF BEGINNING

NOTES

1. Notify Owner's Representative of any discrepancies with dimensions and obtain approval of any required adjustments prior to installation.
2. Install Baseball field markings to conform to current National Federation of State High School Association's Court and Field Diagram Guide.
3. Dashed base path and outfield line shown for reference only, not an actual inlaid line.

0' 10' 20' 40'

1" = 20'-0"

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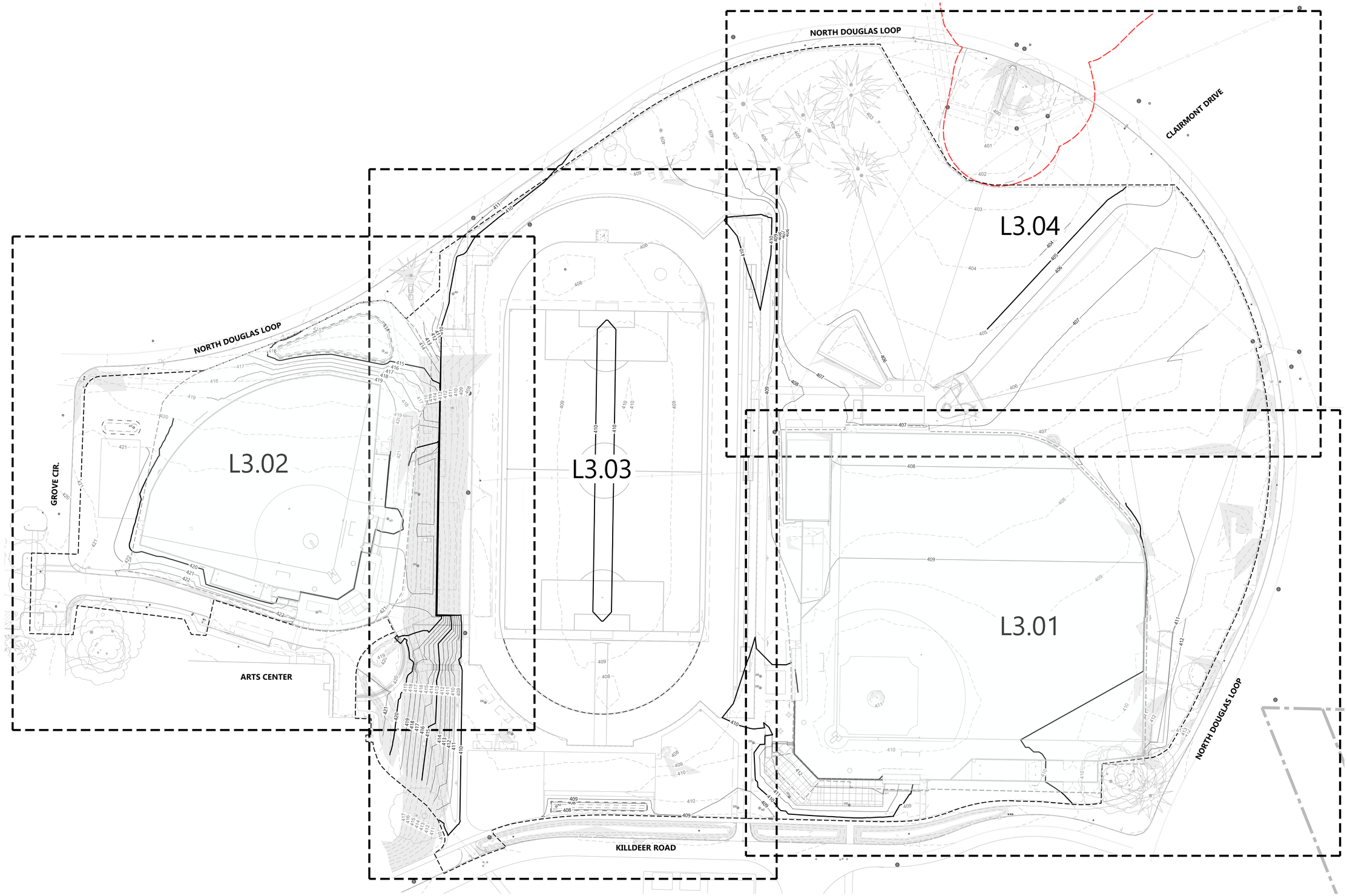
SHEET TITLE

FIELD MARKING PLAN - TRACK & FIELD

L2.13

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GRADING PLAN NOTES

1. All accessible components including, but not limited to signs, ramps, tactile warning, markings, etc. shall conform to all Oregon State Standards for parking and access for the disabled. Obtain Owner's Representative approval prior to installing any related work.
2. Install new utilities so that rim elevations are flush with finish grades at pavement, lawn and plant beds. Adjust rim elevations of existing utilities accordingly.
3. Adjust rim elevations of existing utilities so that rims are flush with finish grade at new paving and lawns.
4. Blend all new elevations back to existing grade to create a uniform slope. Maximum slope, 4:1.
5. Construct smooth transitions between new paving improvements and existing paving to remain.

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING GRADES OVER 10%

0' 20' 40' 80'

1" = 40'-0"

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SHEET TITLE

GRADING PLAN - OVERALL

L3.00

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MATCHLINE

MATCHLINE

MATCHLINE

WORK FOR BASEBALL AND SOFTBALL FIELD REVIEWED UNDER LAND USE PERMIT MAS-25-00005. INFORMATION PROVIDED HERE FOR REFERENCE ONLY.

NORTH DOUGLAS LOOP

KILLDEER ROAD

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES To Remain
- EXISTING CONTOUR 1' interval
- PROPOSED CONTOUR 1' interval
- PROPOSED CONTOUR 5' interval
- BREAK IN GRADE Arrows indicate slope direction
- BOTTOM OF SWALE
- TOP/OVERFLOW OF SWALE
- TOP OF SWALE FREEBOARD
- 400.00 FINISHED GRADE ELEVATION
- V.I.F. 400.00 VERIFY ELEVATION IN FIELD
- VM 400.00 VERIFY AND MATCH EXISTING ELEVATION
- TW 402.50 / BW 400.00 TOP OF WALL ELEVATION / BOTTOM OF WALL ELEVATION
- TC 400.50 / BC 400.00 TOP OF CURB ELEVATION / BOTTOM OF CURB ELEVATION
- TS 402.50 / BS 400.00 TOP OF STEP ELEVATION / BOTTOM OF STEP ELEVATION
- RIM 400.00 DRAIN RIM ELEVATION

GRADING PLAN NOTES

1. See Sheet L3.00 for Grading Plan Notes.

1" = 20'-0"

0' 10' 20' 40'

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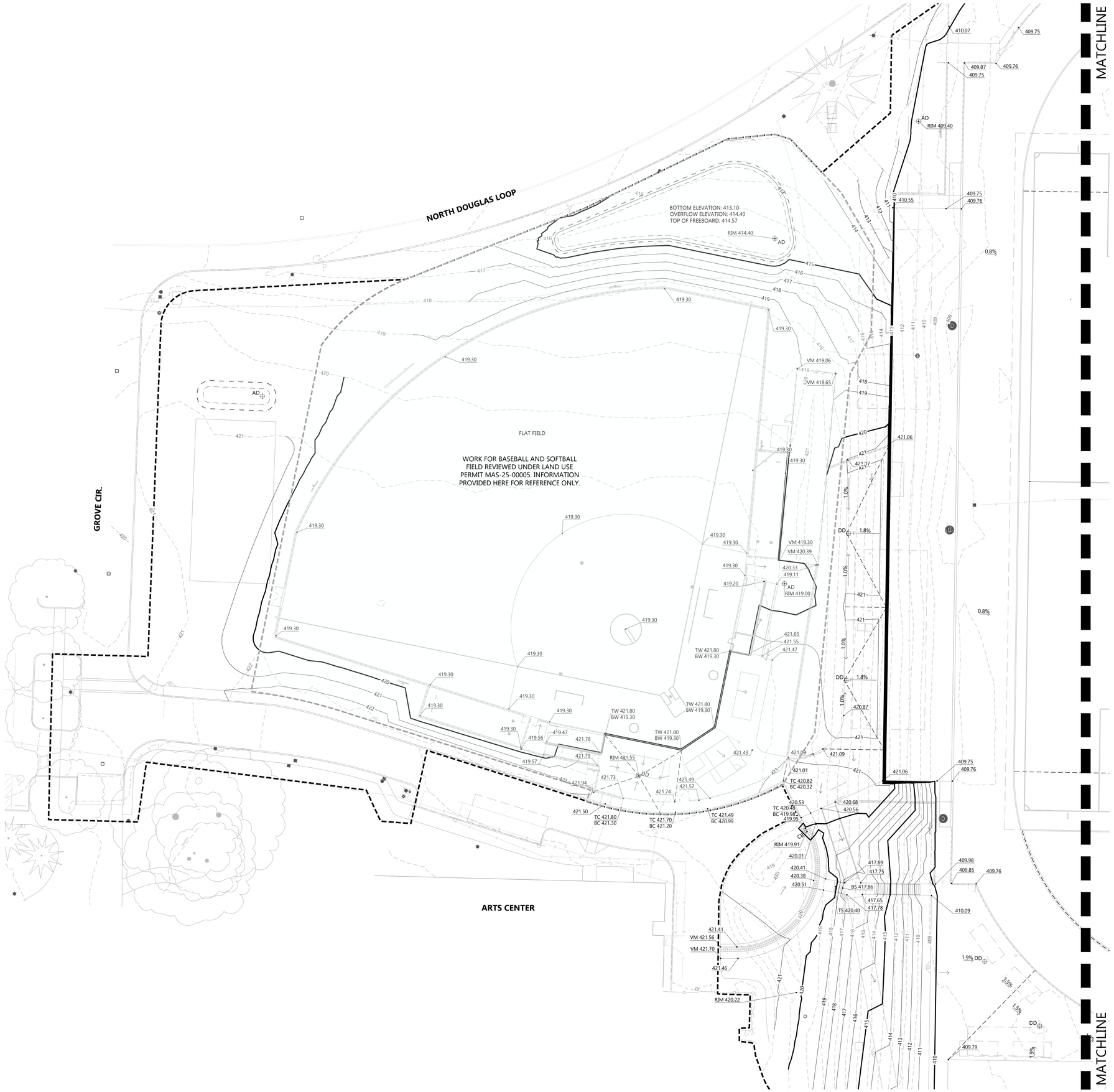
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GRADING PLAN - BASEBALL

L3.01

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES To Remain
- EXISTING CONTOUR 1' interval
- PROPOSED CONTOUR 1' interval
- PROPOSED CONTOUR 5' interval
- BREAK IN GRADE Arrows indicate slope direction
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GRADING PLAN NOTES

1. See Sheet L3.00 for Grading Plan Notes.

1" = 20'-0"

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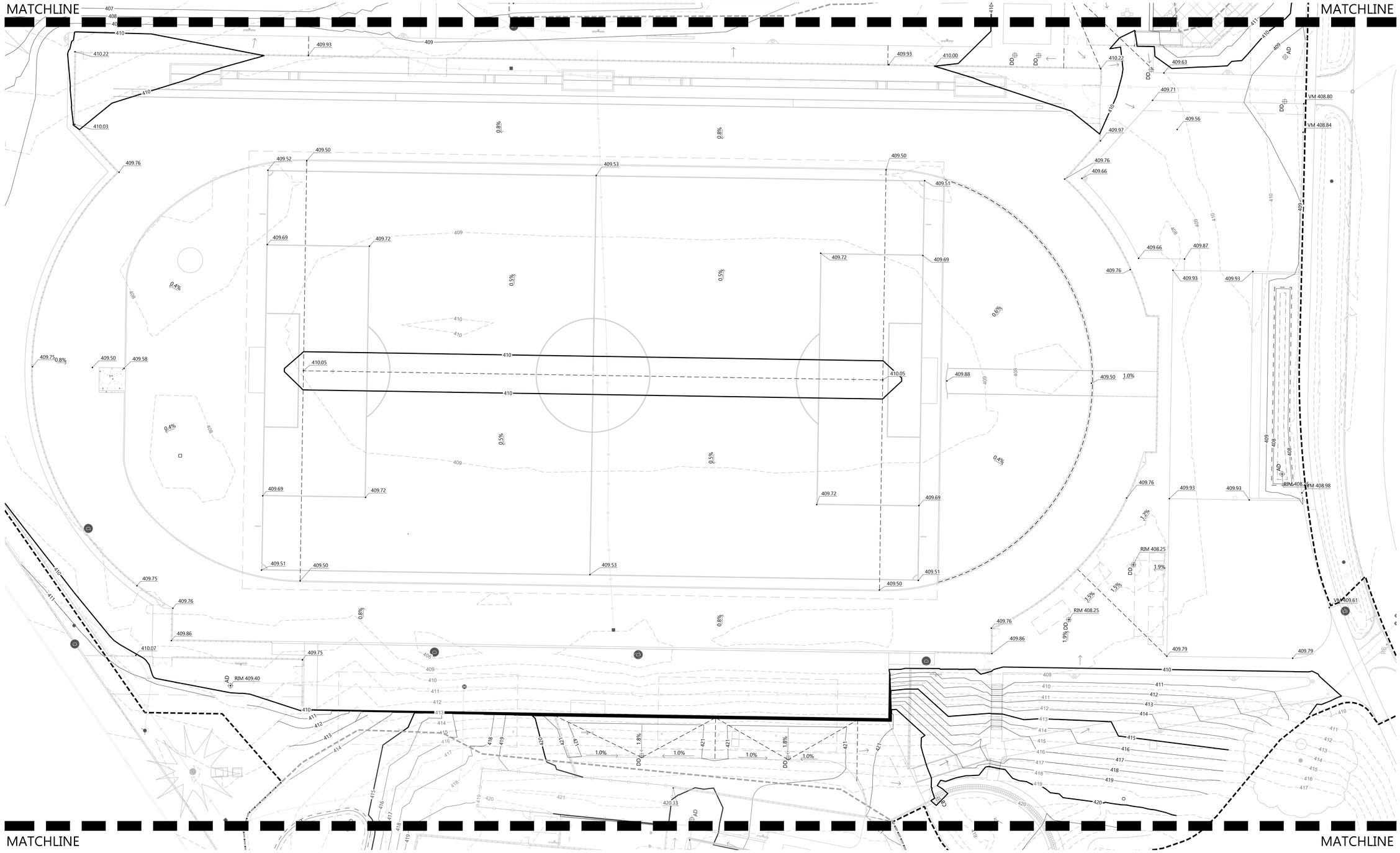
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GRADING PLAN - SOFTBALL

L3.02

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES To Remain
- EXISTING CONTOUR 1' interval
- PROPOSED CONTOUR 1' interval
- PROPOSED CONTOUR 5' interval
- BREAK IN GRADE Arrows indicate slope direction
- BOTTOM OF SWALE
- TOP/OVERFLOW OF SWALE
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- TS 402.50 / BS 400.00 TOP OF STEP ELEVATION / BOTTOM OF STEP ELEVATION
- RIM 400.00 DRAIN RIM ELEVATION

GRADING PLAN NOTES

1. See Sheet L3.00 for Grading Plan Notes.

1" = 20'-0"

0' 10' 20' 40'

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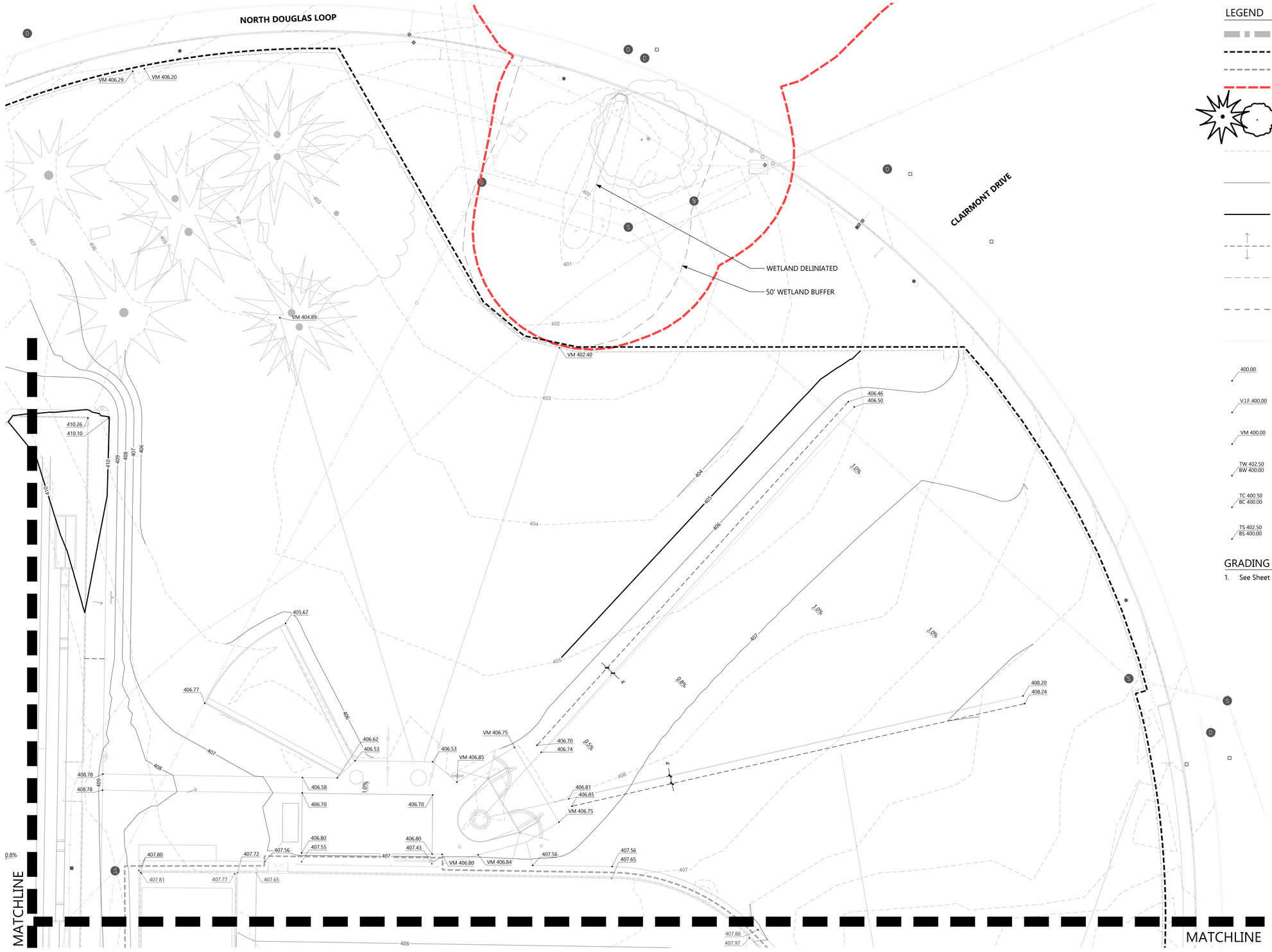
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GRADING PLAN - TRACK & FIELD

L3.03

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES To Remain
- EXISTING CONTOUR 1' interval
- PROPOSED CONTOUR 1' interval
- PROPOSED CONTOUR 5' interval
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- TS 402.50 / BS 400.00 TOP OF STEP ELEVATION / BOTTOM OF STEP ELEVATION

GRADING PLAN NOTES

1. See Sheet L3.00 for Grading Plan Notes.

1" = 20'-0"

0' 10' 20' 40'

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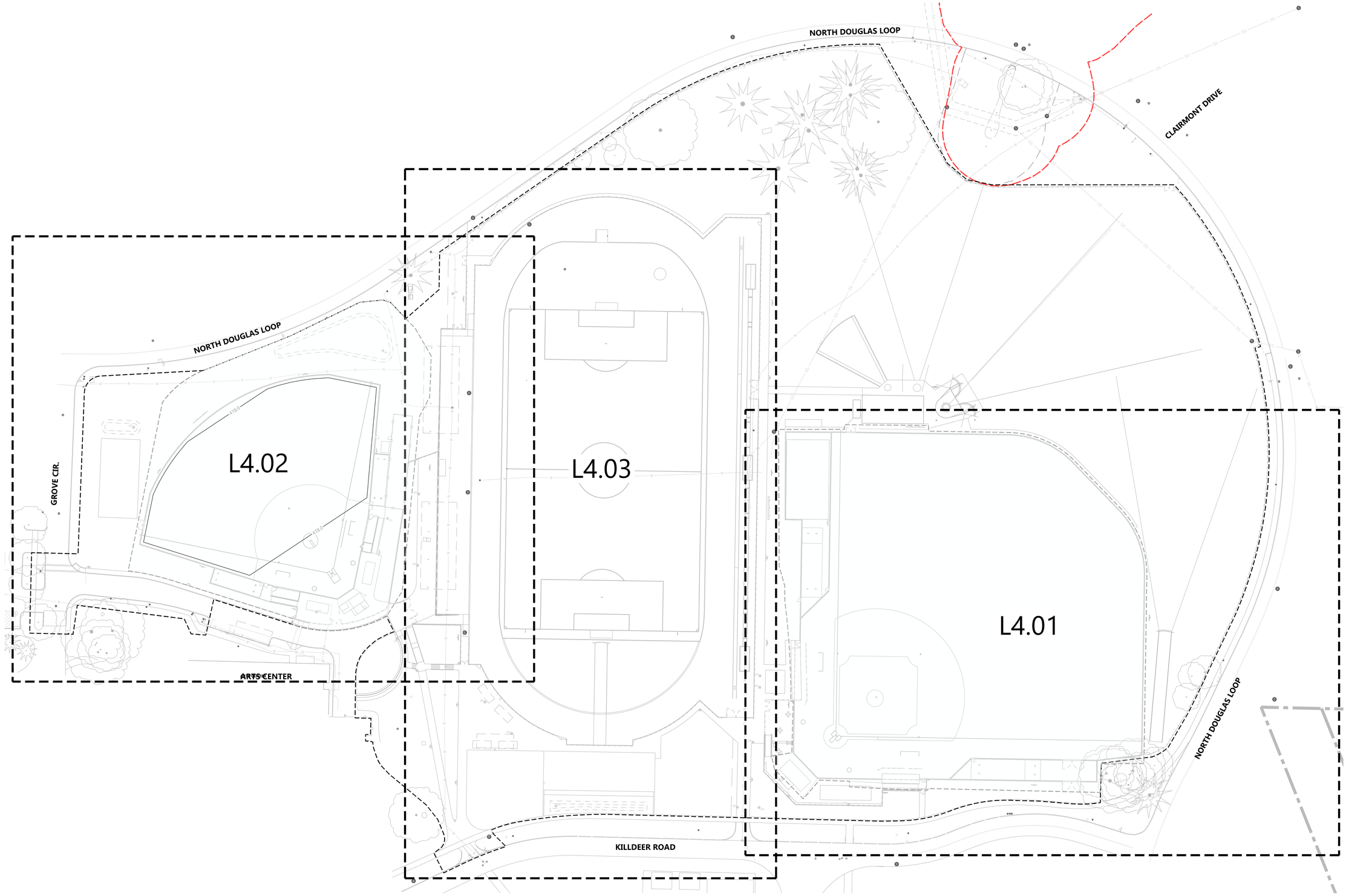
SHEET TITLE

GRADING PLAN - THROWS AREA

L3.04

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT

1" = 40'-0"

0' 20' 40' 80'

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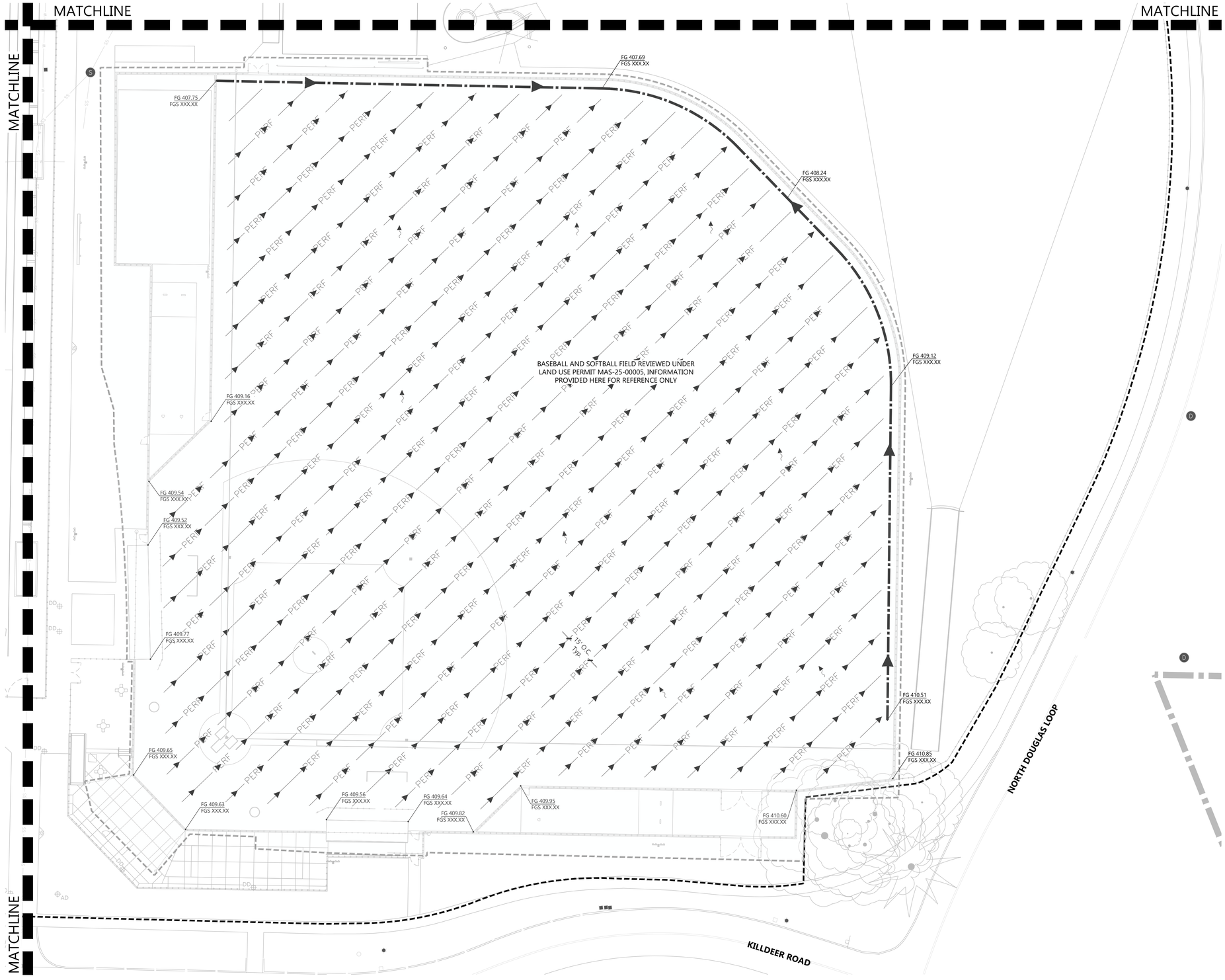
SHEET TITLE

SUBGRADE DRAINAGE PLAN - OVERALL

L4.00

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- HARD PIPE CONNECTION TO STORM SYSTEM See Civil
- PERFORATED COLLECTOR PIPE Arrow indicates direciton of flow; See Civil
- FLAT FIELD SUBGRADE DRAINAGE PIPE Arrow indicates direction of flow
- STORMWATER MANAGEMENT DETENTION TRENCH AREA, See Civil
- FG XXX.XX — FINISHED GRADE
- FSG XXX.XX — FINISHED GRADE OF SUBGRADE
- DIRECTION OF SUBGRADE FLOW / BREAK LINES

SUBGRADE DRAINAGE PLAN NOTES

1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities, or related facilities at contractor's expense in a manner approved by Owner's Representative.
2. Refer to Civil Drawings for utility locations and elevations.
3. Install new utilities so that exposed elements such as manhole lids and drain covers are beneath synthetic turf. Coordinate w/applicable trades.
4. Coordinate collector pipe installation w/Field Subgrade Drainage pipe. Verify collector pipe routing and elevations w/Civil drawings.

1" = 20'-0"

0' 10' 20' 40'

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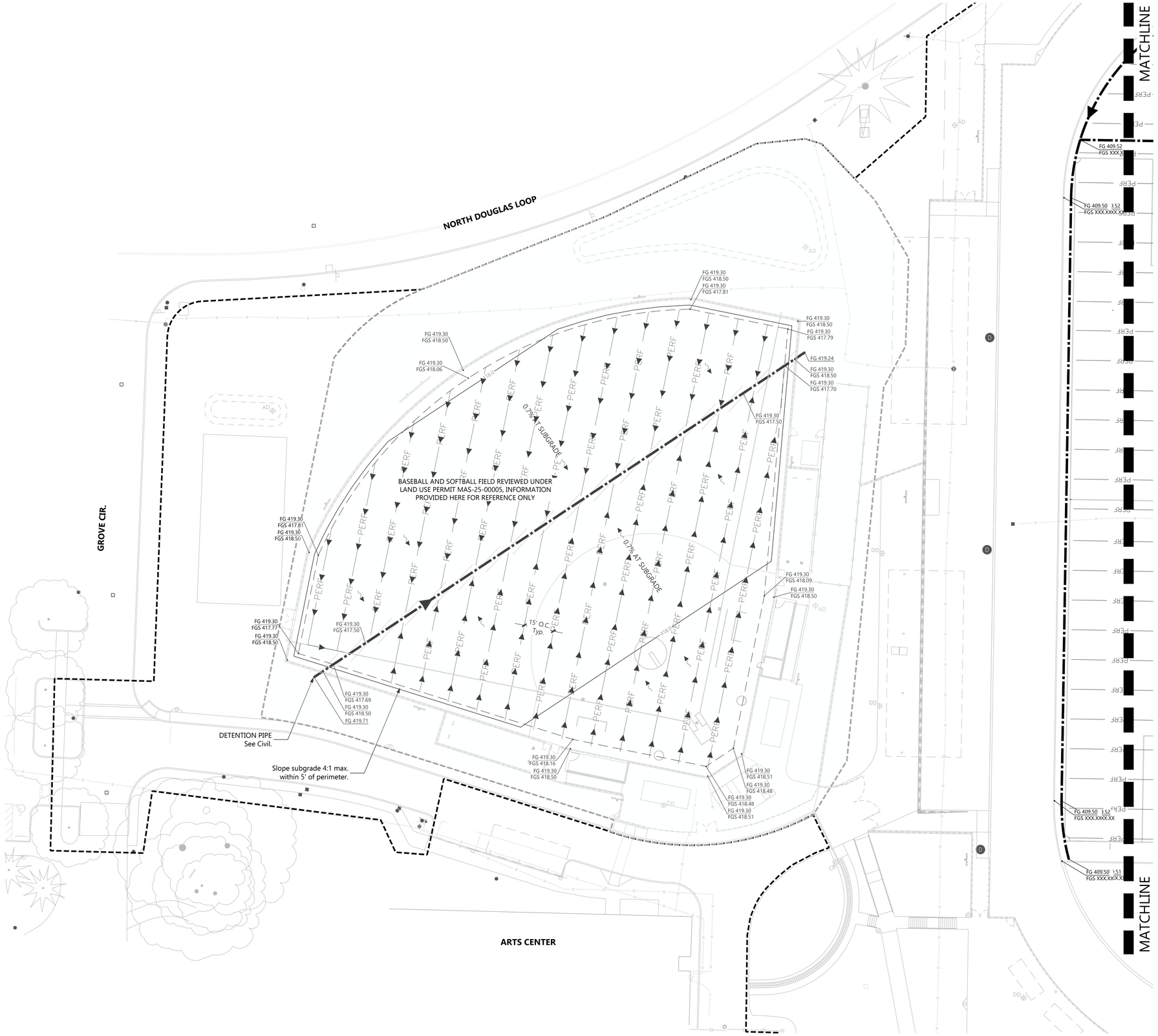
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SUBGRADE DRAINAGE PLAN - BASEBALL

L4.01

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- HARD PIPE CONNECTION TO STORM SYSTEM See Civil
- PERFORATED COLLECTOR PIPE Arrow indicates direciton of flow; See Civil
- FLAT FIELD SUBGRADE DRAINAGE PIPE Arrow indicates direction of flow
- STORMWATER MANAGEMENT DETENTION TRENCH AREA, See Civil
- FG XXX.XX — FINISHED GRADE
- FSG XXX.XX — FINISHED GRADE OF SUBGRADE
- DIRECTION OF SUBGRADE FLOW / BREAK LINES

SUBGRADE DRAINAGE PLAN NOTES

1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities, or related facilities at contractor's expense in a manner approved by Owner's Representative.
2. Refer to Civil Drawings for utility locations and elevations.
3. Install new utilities so that exposed elements such as manhole lids and drain covers are beneath synthetic turf. Coordinate w/applicable trades.
4. Coordinate collector pipe installation w/Field Subgrade Drainage pipe. Verify collector pipe routing and elevations w/Civil drawings.

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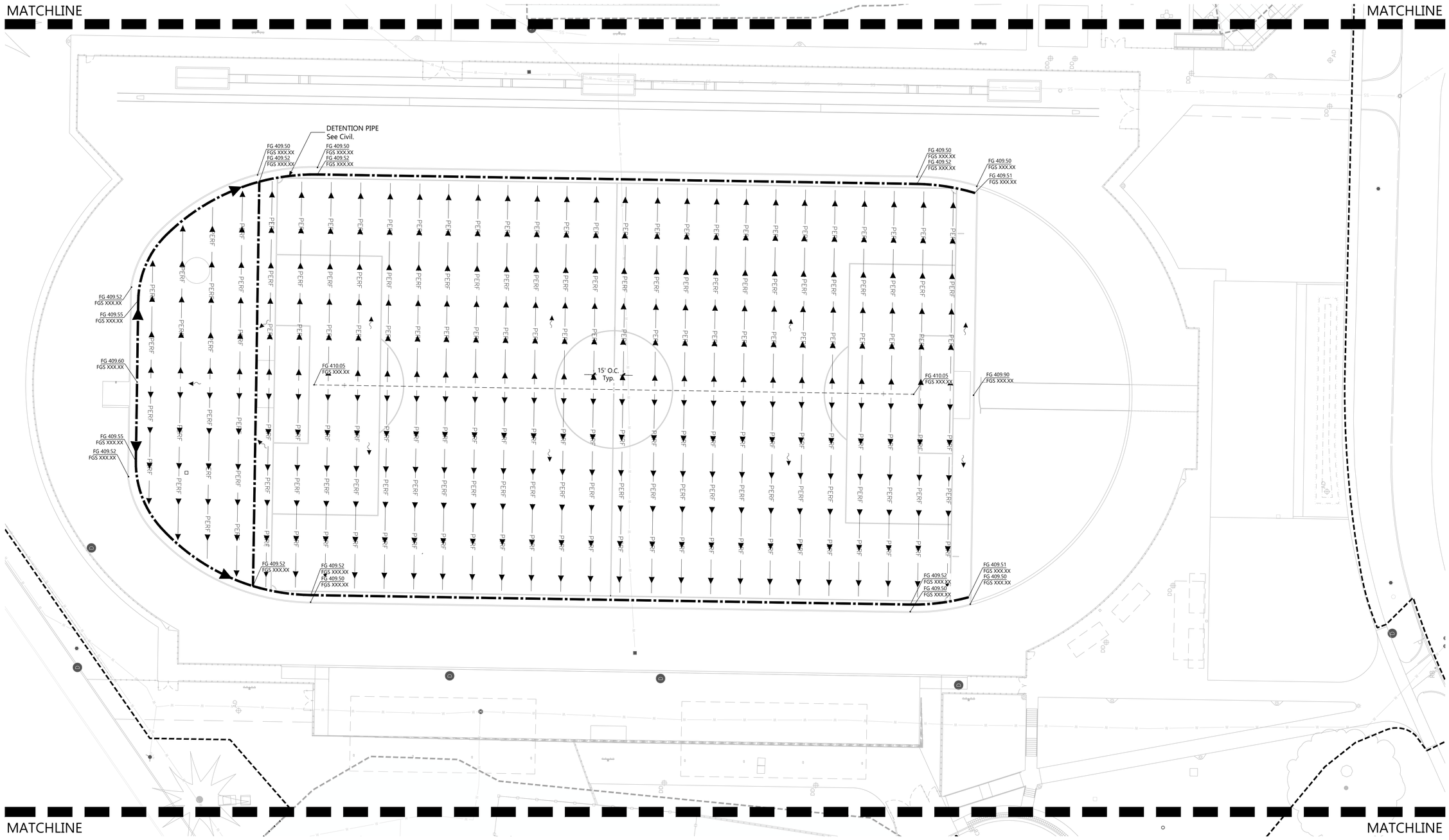
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SHEET TITLE

SUBGRADE DRAINAGE PLAN - SOFTBALL

L4.02

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SUBGRADE DRAINAGE PLAN NOTES

1. Verify exact locations and routing of existing underground utilities prior to starting excavation. Repair any damage to existing pipes, utilities, or related facilities at contractor's expense in a manner approved by Owner's Representative.
2. Refer to Civil Drawings for utility locations and elevations.
3. Install new utilities so that exposed elements such as manhole lids and drain covers are beneath synthetic turf. Coordinate w/applicable trades.
4. Coordinate collector pipe installation w/Field Subgrade Drainage pipe. Verify collector pipe routing and elevations w/Civil drawings.

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- HARD PIPE CONNECTION TO STORM SYSTEM See Civil
- PERFORATED COLLECTOR PIPE Arrow indicates direciton of flow; See Civil
- FLAT FIELD SUBGRADE DRAINAGE PIPE Arrow indicates direciton of flow
- STORMWATER MANAGEMENT DETENTION TRENCH AREA, See Civil
- FG XXX.XX FINISHED GRADE
- FSG XXX.XX FINISHED GRADE OF SUBGRADE
- DIRECTION OF SUBGRADE FLOW / BREAK LINES

0' 10' 20' 40'

1" = 20'-0"

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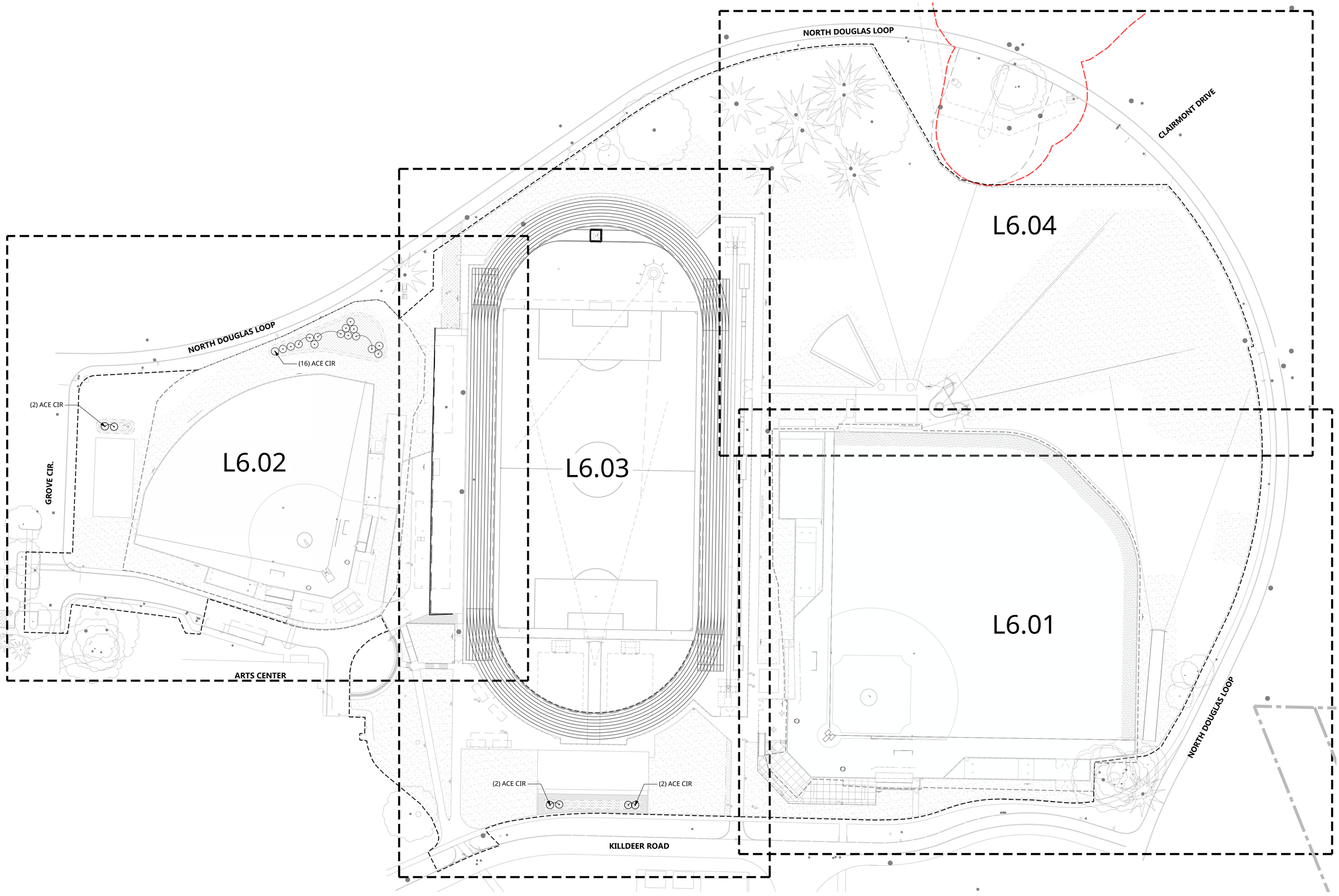
SHEET TITLE

SUBGRADE DRAINAGE PLAN - TRACK & FIELD

L4.03

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LANDSCAPE PLAN NOTES

1. All new plant material to be irrigated with automatic irrigation system.
2. Do not install any plant materials until Owner's Representative has reviewed and approved irrigation system installation, area coverage balancing, soil preparation and finish grading. Refine the shape and finish grade of plant beds as directed by Owner's Representative.
3. Protect all existing trees and plant materials to remain including limbs, trunks, roots and root zones.
4. Make minor adjustments in tree spacing as necessary to accommodate the irrigation system as installed.
5. Where new lawn abuts existing, provide a smooth transition and make repairs as necessary to existing lawn.
6. Plant quantities shown are for Contractor's convenience only. Contractor is responsible to provide 100% coverage of entire area at spacing shown.
7. Triangle space all shrubs and groundcovers, unless otherwise noted.

LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES
- PROPOSED TREES See Plant Schedules.
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

PHASE 1 TREE SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
TREES							
✦	ACE CIR	Acer circinatum	Vine Maple	1.25" cal.	B&B or Cont	As Shown	16

PHASE 2 TREE SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
TREES							
✦	ACE CIR	Acer circinatum	Vine Maple	1.25" cal.	B&B or Cont	As Shown	3
✦	ACE CIR	Acer circinatum	Vine Maple	2" cal	B&B or Cont	As Shown	4

1" = 40'-0" 0' 20' 40' 80'

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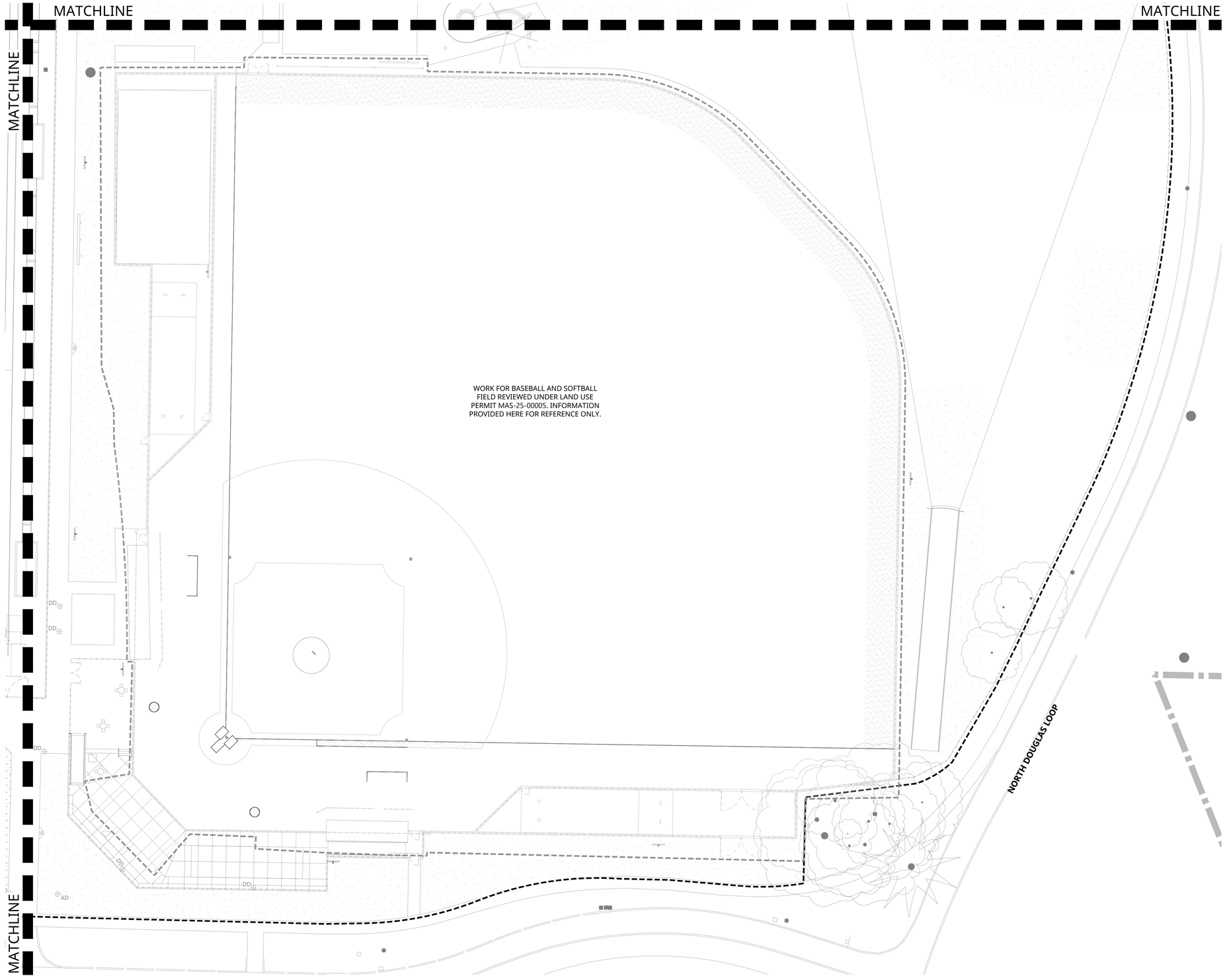
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TREE LANDSCAPE PLAN

L6.00

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- LAWN
- REINFORCED LAWN

LANDSCAPE PLAN NOTES

1. See Sheet L6.00 for Landscape Plan Notes.

1" = 20'-0"

0' 10' 20' 40'

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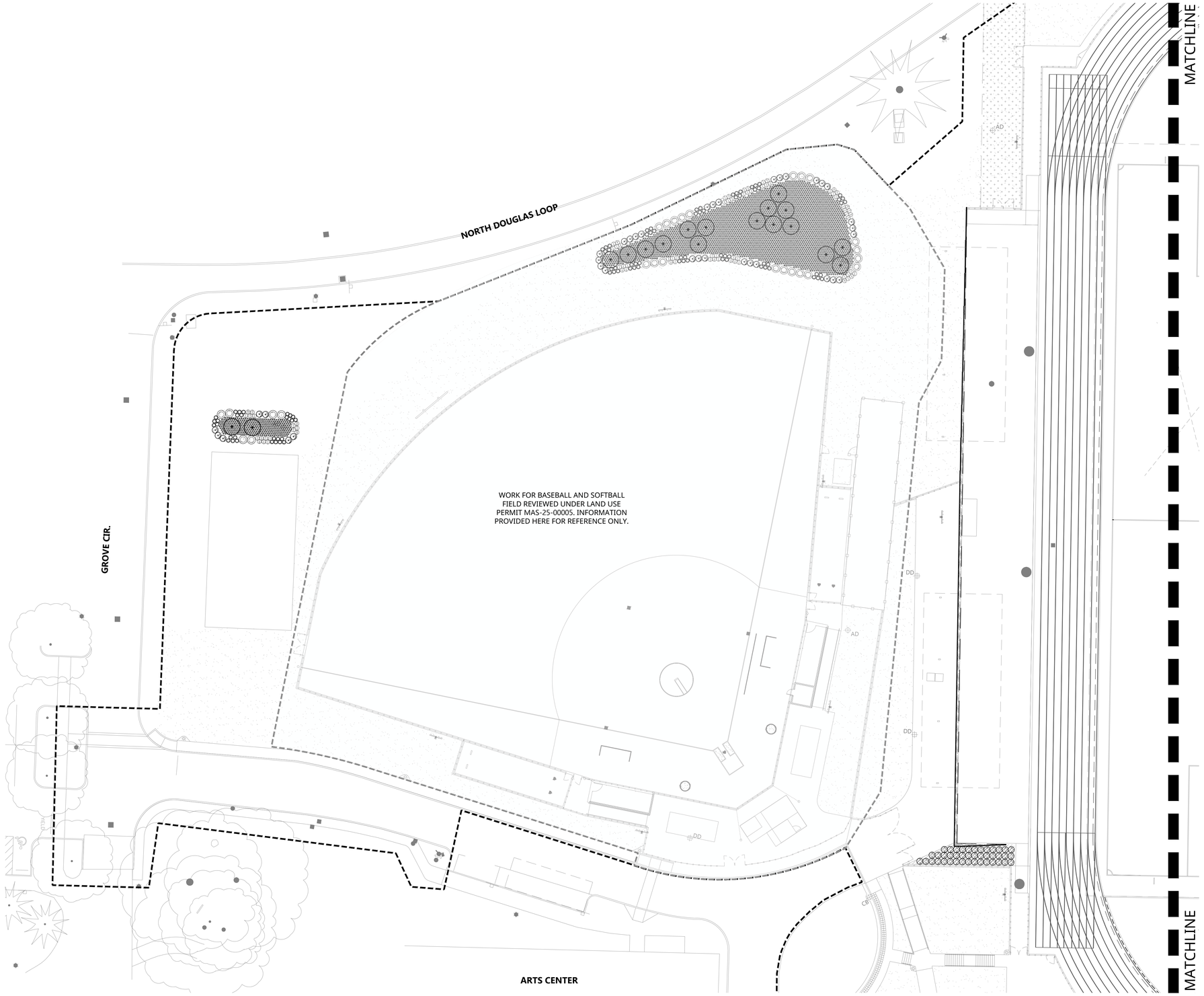
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LANDSCAPE PLAN - BASEBALL

L6.01

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- PLANT BED
- LAWN
- STORMWATER FACILITY

LANDSCAPE PLAN NOTES

1. See Sheet L6.00 for Landscape Plan Notes.

PHASE 1 PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY
TREES						
	ACE CIR	Acer circinatum	Vine Maple	1.25" cal.	As Shown	16
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY
SHRUBS						
	JUN PAT	Juncus patens	California Gray Rush	4" pot	12" o.c.	3,455
	MAH REP	Mahonia repens	Creeping Mahonia	#2	36" o.c.	29
	POL MUN	Polystichum munitum	Western Sword Fern	#2	24" o.c.	62
	SPI BET	Spiraea betulifolia	Birchleaf Spirea	#2	24" o.c.	59
	SPI DOU	Spiraea douglasii	Western Spirea	#3	48" o.c.	20

PHASE 2 PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY
TREES						
	ACE CIR	Acer circinatum	Vine Maple	2" cal	As Shown	2
SHRUBS						
	COT AUT	Cotoneaster salicifolius 'Autumn Fire'	Autumn Fire Willowleaf Cotoneaster	#3	36" o.c.	42
	JUN PAT	Juncus patens	California Gray Rush	4" pot	12" o.c.	338
	MAH REP	Mahonia repens	Creeping Mahonia	#2	36" o.c.	7
	POL MUN	Polystichum munitum	Western Sword Fern	#2	24" o.c.	29
	SPI BET	Spiraea betulifolia	Birchleaf Spirea	#2	24" o.c.	17
	SPI DOU	Spiraea douglasii	Western Spirea	#3	48" o.c.	6

1" = 20'-0"

0' 10' 20' 40'

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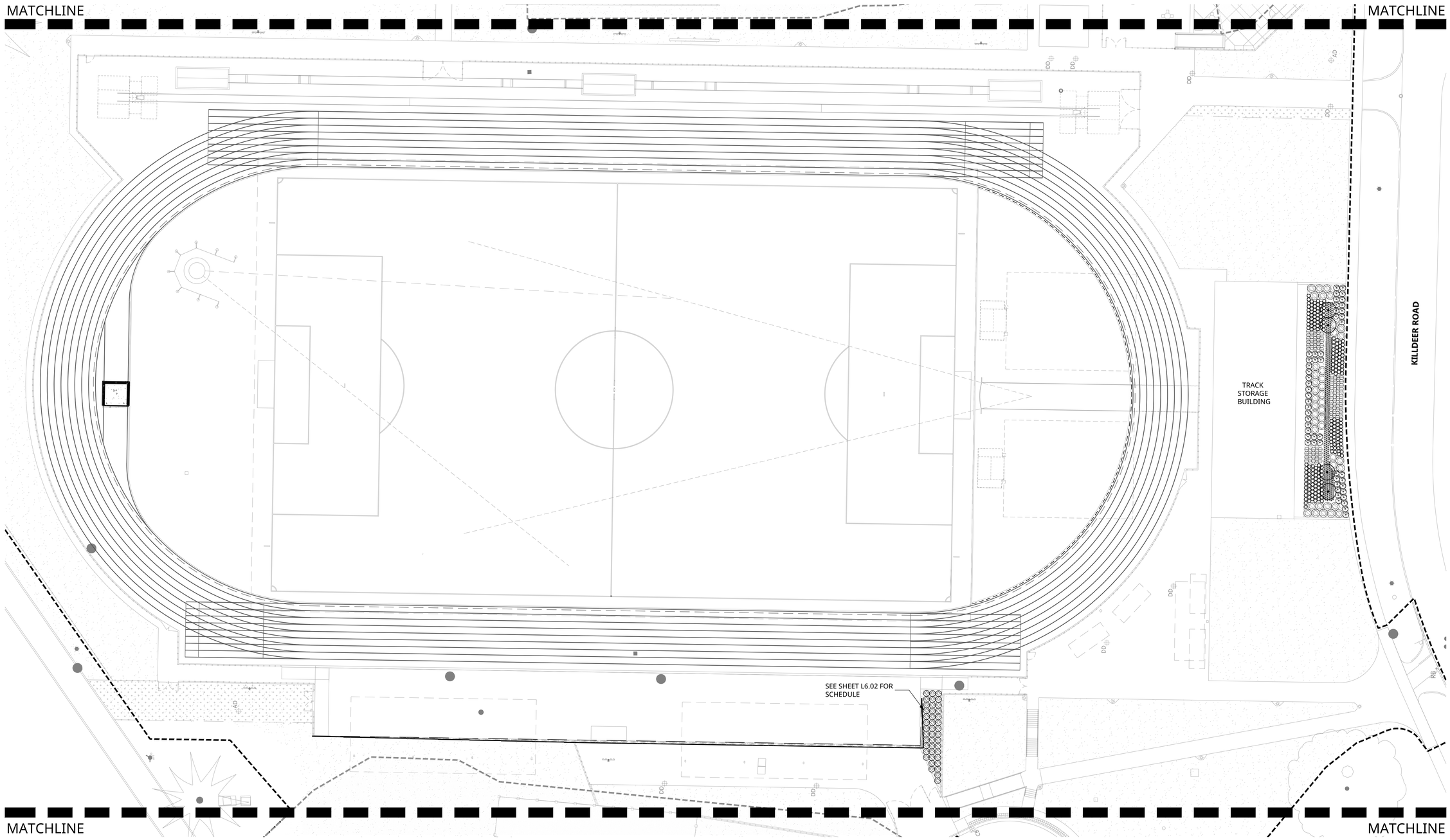
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SHEET TITLE

LANDSCAPE PLAN - SOFTBALL

L6.02

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- EXISTING TREES
- PLANT BED
- LAWN
- REINFORCED LAWN
- STORMWATER FACILITY

LANDSCAPE PLAN NOTES

1. See Sheet L6.00 for Landscape Plan Notes.

PHASE 2 PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	QTY
TREES							
	ACE CIR	Acer circinatum	Vine Maple	1.25" cal.	B&B or Cont	As Shown	2
	ACE CIR	Acer circinatum	Vine Maple	2" cal	B&B or Cont	As Shown	2
SHRUBS							
	JUN PAT	Juncus patens	California Gray Rush	4" pot		12" o.c.	384
	MAH REP	Mahonia repens	Creeping Mahonia	#2		36" o.c.	51
	POL MUN	Polystichum munitum	Western Sword Fern	#2		24" o.c.	196
	SPI BET	Spiraea betulifolia	Birchleaf Spirea	#2		24" o.c.	95
	SPI DOU	Spiraea douglasii	Western Spirea	#3		48" o.c.	40

0' 10' 20' 40'

1" = 20'-0"

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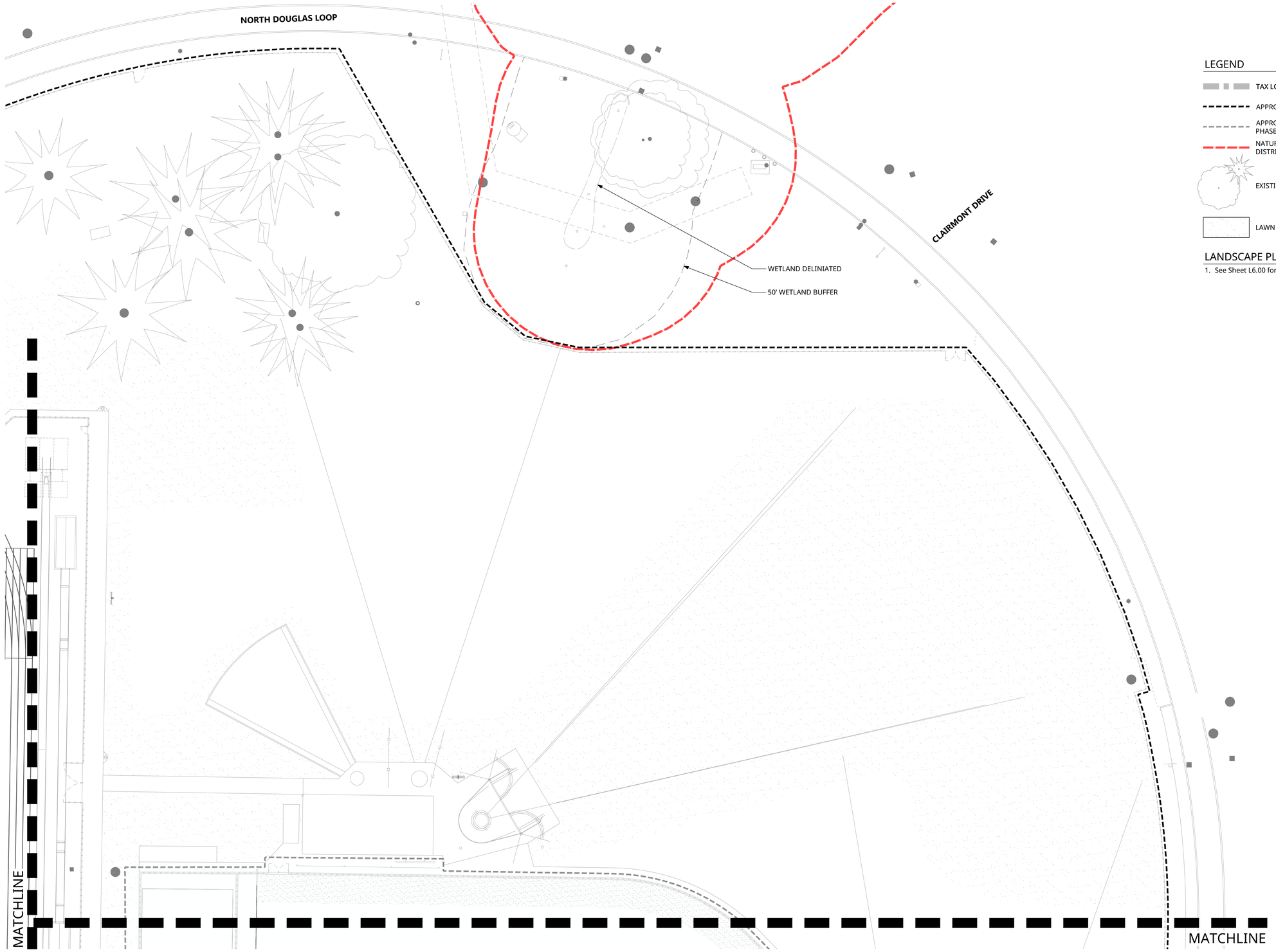
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SHEET TITLE

LANDSCAPE PLAN - TRACK & FIELD

L6.03

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LEGEND

- TAX LOT BOUNDARY
- APPROXIMATE LIMIT OF WORK LINE
- APPROXIMATE LIMIT OF WORK LINE - PHASE 1
- NATURAL RESOURCE OVERLAY DISTRICT
- EXISTING TREES
- LAWN

LANDSCAPE PLAN NOTES

1. See Sheet L6.00 for Landscape Plan Notes.

0' 10' 20' 40'

1" = 20'-0"

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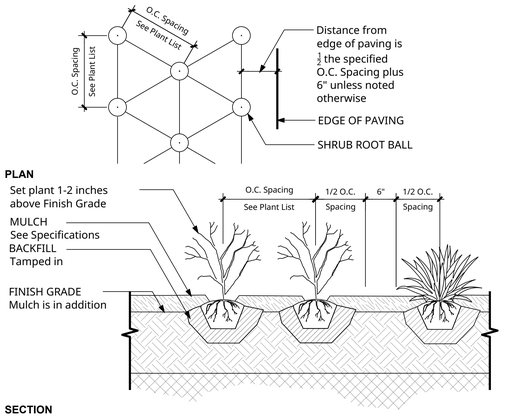
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LANDSCAPE PLAN - THROWS AREA

L6.04

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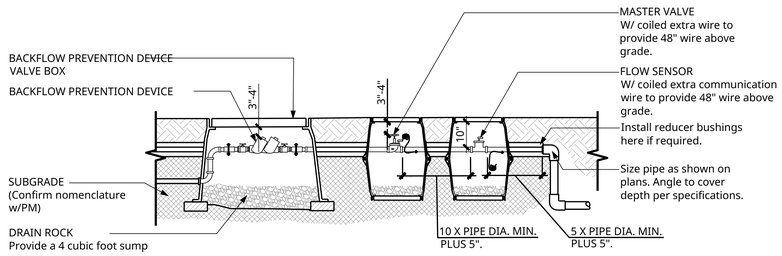


NOTES

1. Allow additional spacing, minimum 6" + O.C. spacing, between plants of a different species. Cluster plants of same species while allowing extra space between plants of a different species. Coordinate with Owner's Representative prior to installation. See Specifications for mock-up requirements.

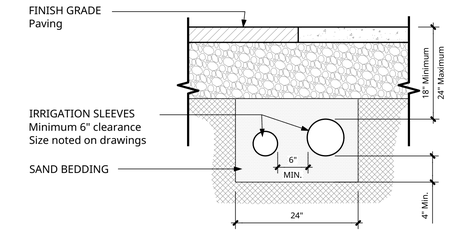
TRIANGULAR SHRUB SPACING

NTS 7



BACK FLOW PREVENTER, MASTER VALVE, FLOW SENSOR

NTS 4

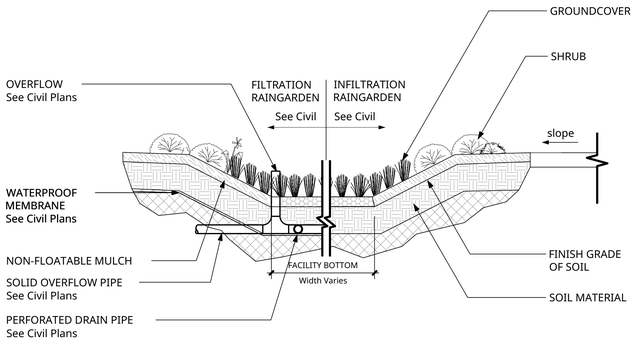


NOTES

1. Extend sleeves beyond pavement edge or back of curb as noted in specification. Cover open ends with duct tape
2. Install 2 x 4 red-top, wood location stakes @ both ends of sleeves and leave 2" above top of curb or pavement.

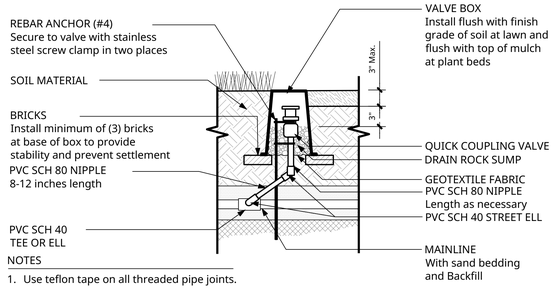
IRRIGATION SLEEVES

NTS 1



STORMWATER FACILITY

NTS 8

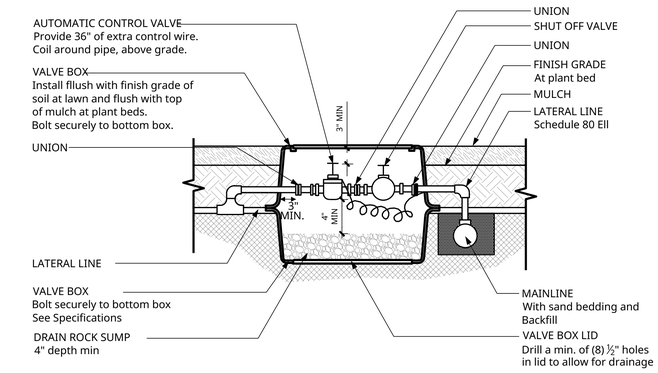


NOTES

1. Use teflon tape on all threaded pipe joints.

QUICK COUPLER ASSEMBLY

NTS 5

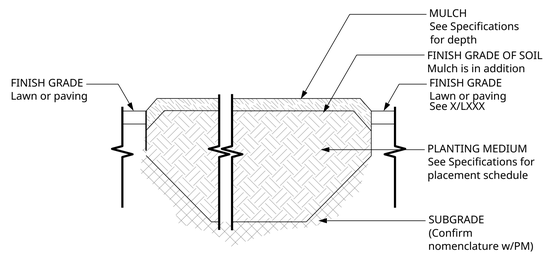


NOTES

1. Use teflon tape on all threaded joints.

ZONE VALVE ASSEMBLY

NTS 2

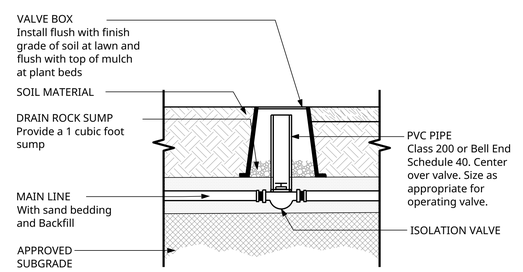


NOTES

1. Finish Grade of soil material to be flush with adjacent paving. Mulch is in addition.

PLANT BED PROFILE - AT GRADE

NTS 6



ISOLATION VALVE

NTS 3

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CLACKAMAS COMMUNITY COLLEGE ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

Drawn By:	CD/OP
Checked:	JG
Project #:	25.020
Date:	Oct. 9, 2025

Rev. #:	Date:

100% DESIGN DEVELOPMENT

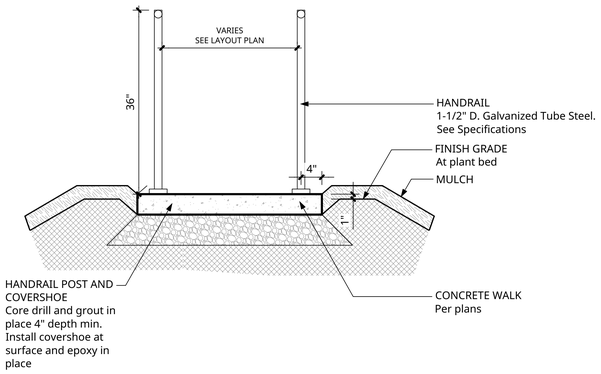
SHEET TITLE

LANDSCAPE AND IRRIGATION DETAILS

L7.00

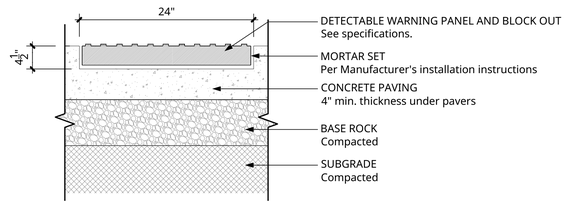
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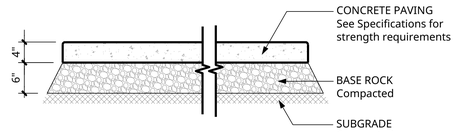
CONCRETE RAMP AND HANDRAIL

NTS 7



DETECTABLE WARNING PANEL

NTS 4

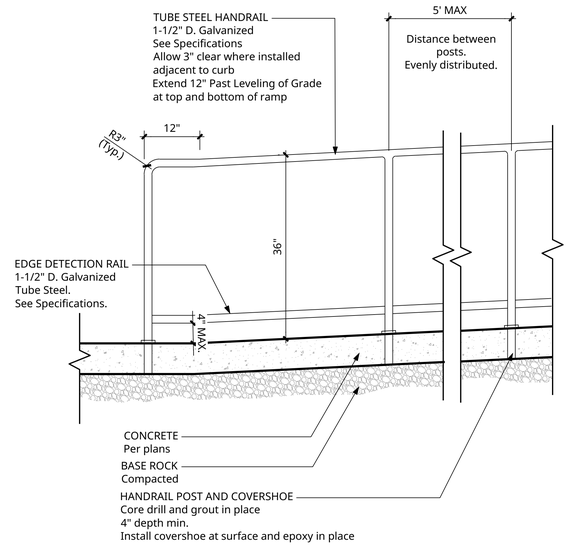


NOTES

1. See specifications for concrete finish.
2. Construct $\frac{1}{2}$ inch radius at edge of paving.

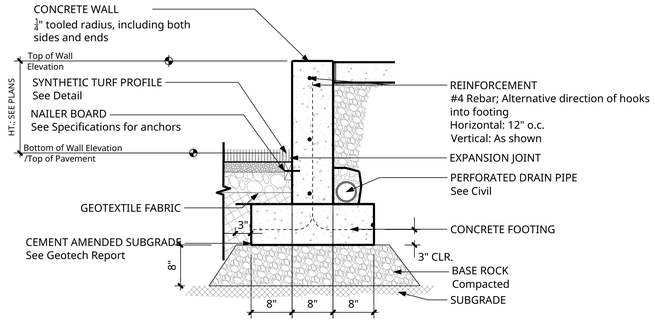
CONCRETE PAVING - STANDARD PROFILE

NTS 1



CONCRETE RAMP AND HANDRAIL

NTS 8

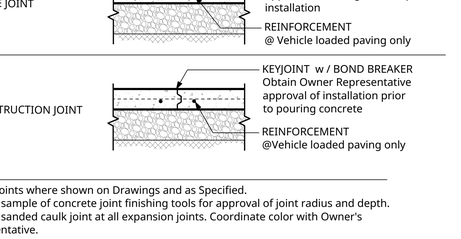


NOTES

1. See Grading Plan for Top of Wall elevation.

CONCRETE RETAINING WALL - 30" TALL

NTS 5

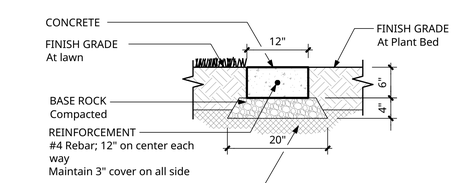


NOTES

1. Locate joints where shown on Drawings and as Specified.
2. Provide sample of concrete joint finishing tools for approval of joint radius and depth.
3. Provide sanded caulk joint at all expansion joints. Coordinate color with Owner's Representative.

CONCRETE JOINTS

NTS 2

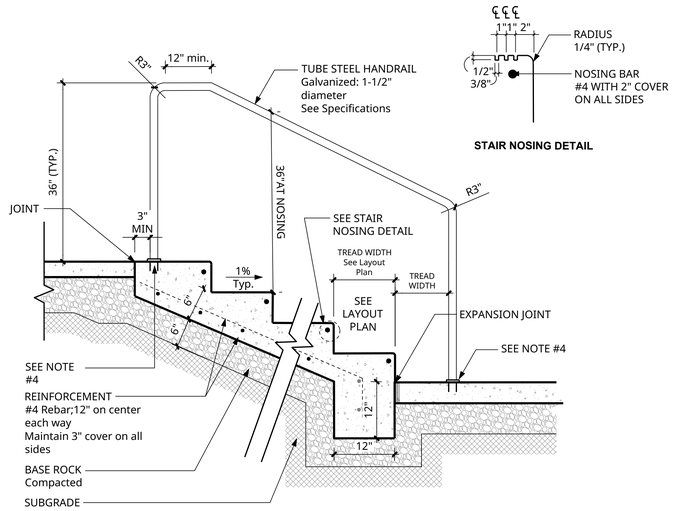


NOTES

1. Provide expansion joints @ 100' O.C. Max and @ all points of tangency.
2. Sawcut green control joints @ 20' O.C.

CONCRETE MOWSTRIP

NTS 9

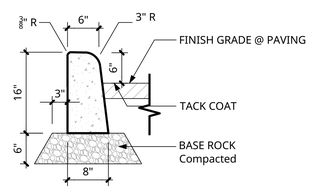


NOTES

1. See layout plan for stair riser/tread relationship.
2. Construct stair nosing to conform with ADA standard '4.93' nosing.
3. Provide positive drainage at each stair tread. 1% typical, 1.5% maximum slope.
4. Core drill holes into concrete sidewalk to recieve handrail posts a minimum of 4 inches deep. Grout in place. install covershoe at surface and epoxy in place. Typical at all posts.

CONCRETE STAIRS WITH METAL HANDRAIL

NTS 6



NOTES

1. Slope top of curb toward AC at 1.5% .
2. Provide expansion joints @ 200' o.c. max. and @ all points of tangency.
3. Sawcut green concrete control joints @ 15' max.
4. Drop top of curb @ ramp and aprons.

CONCRETE CURB - MOUNTABLE

NTS 3

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
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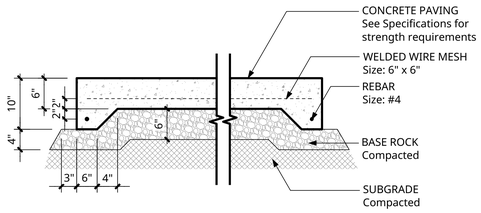
SHEET TITLE

SITE DETAILS

L7.01

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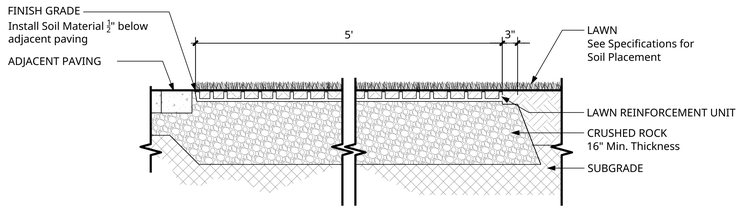
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NOTES
1. See specifications for concrete finish.
2. Construct ¾ inch radius at edge of paving.

CONCRETE PAVING - VEHICLE RATED

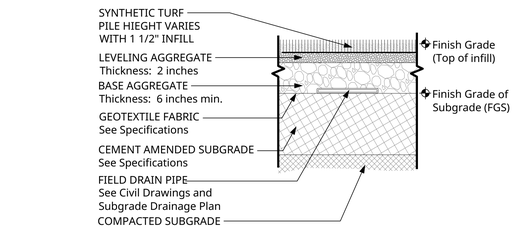
NTS 7



NOTES
1. Install Lawn Reinforcement Units per manufacturers instructions.

REINFORCED LAWN

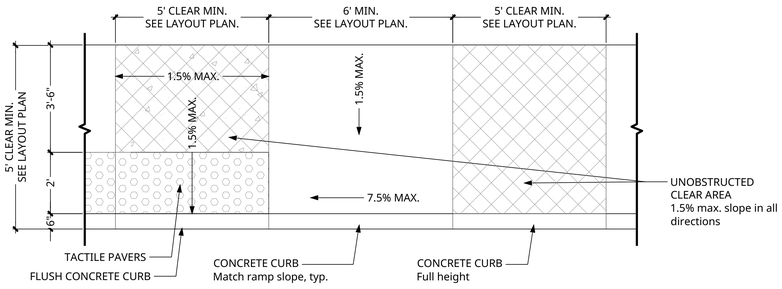
NTS 4



NOTES
1. See Grading Plan for Finish Grade elevations.
2. Overlap edges of geotextile fabric a minimum of 18 inches. Secure fabric to subgrade with nails or spikes.
3. Base aggregate and cement amended subgrade depth are pending and to be confirmed per geotechnical report.

SYNTHETIC TURF PROFILE

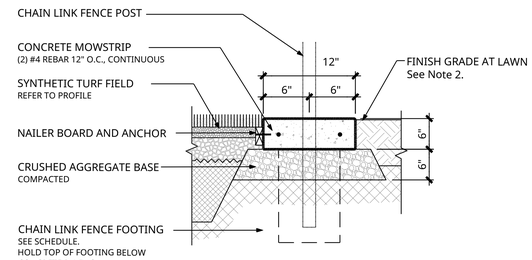
NTS 1



NOTES
1. Ramp sequence may be mirrored. Refer to Layout and Grading Plans for sequence orientation.

CURB RAMP

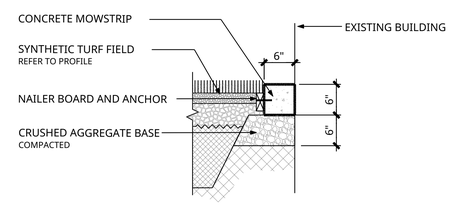
NTS 5



NOTES
1. Install Nailer Board to allow synthetic turf infill to be flush with top of concrete.
2. Hold lawn soil ½" below top of concrete.
3. Construct ¾ inch radius at edge of paving.

TYPE 1 CONCRETE FIELD HEADER WITH PROPOSED FENCE

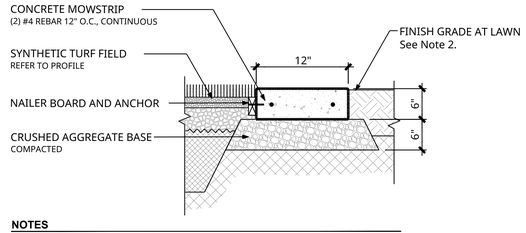
NTS 2



NOTES
1. Install Nailer Board to allow synthetic turf infill to be flush with top of concrete.
2. Construct ¾ inch radius at edge of paving.

TYPE 5 CONCRETE FIELD HEADER 6" WIDE NO FENCE

NTS 6



NOTES
1. Install Nailer Board to allow synthetic turf infill to be flush with top of concrete.
2. Hold lawn soil 1/2" below top of concrete.
3. Construct ¾ inch radius at edge of paving.

TYPE 2 CONCRETE FIELD HEADER WITH NO FENCE

NTS 3

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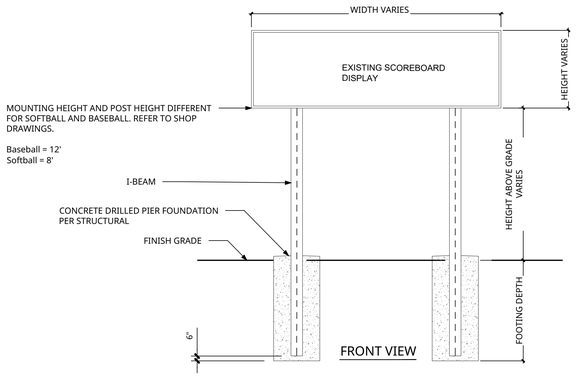
100% DESIGN DEVELOPMENT

SHEET TITLE
SITE DETAILS

L7.02

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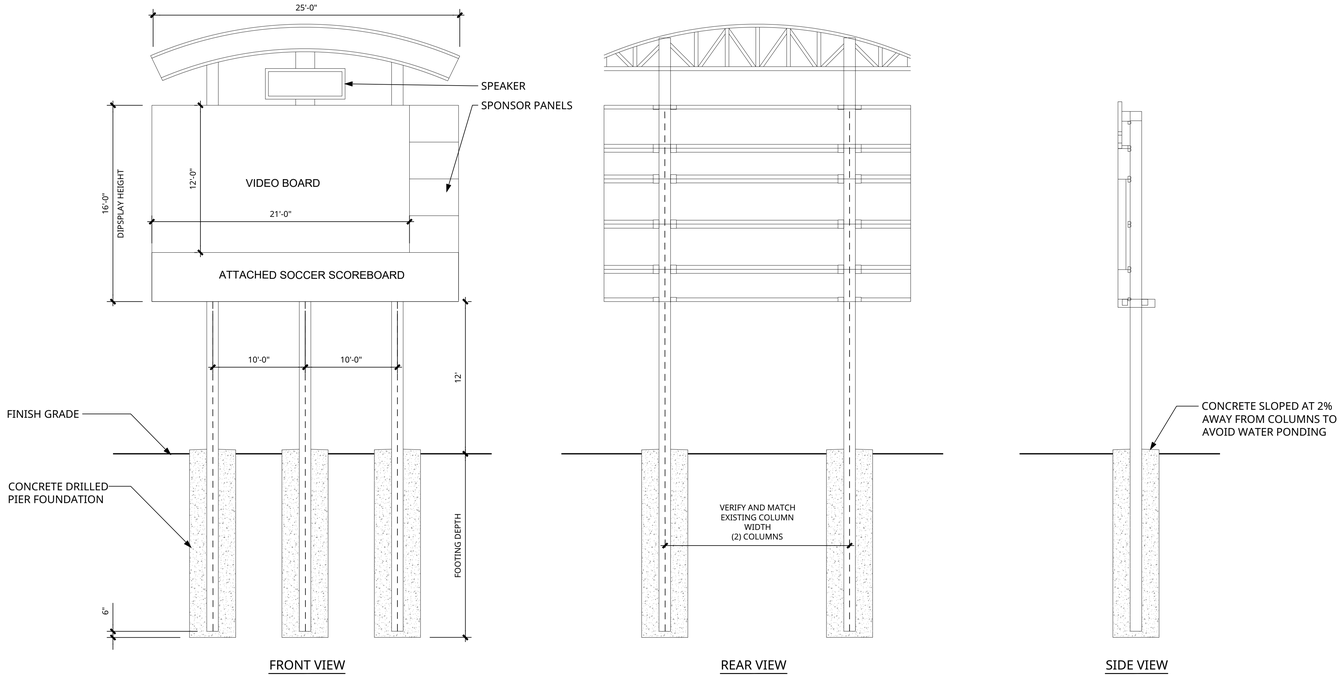


NOTES

1. Refer to structural plans for footing and I-Beam size.
2. Existing Softball Score Board size: 6'x14' plus custom panels.
3. Existing Baseball scoreboard size 7'x25' plus custom panels.

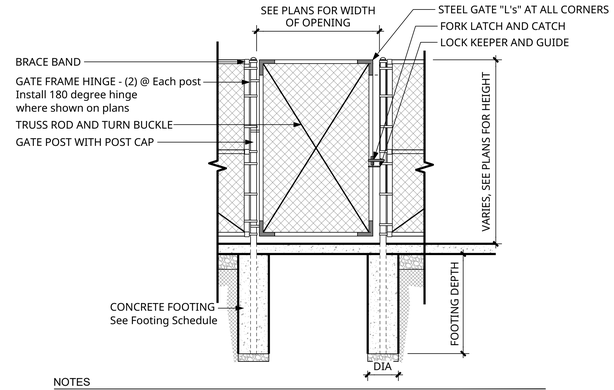
BASEBALL / SOFTBALL BOARD (PHASE 1)

NTS 4



STADIUM FIELD VIDEO BOARD

NTS 4

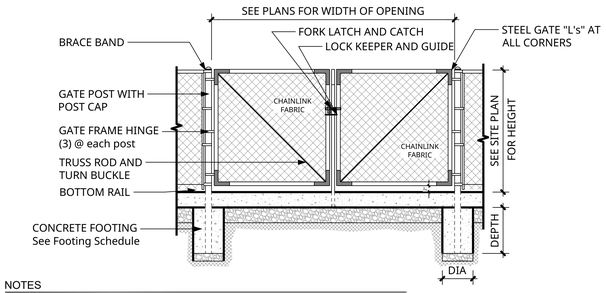


NOTES

1. Coordinate layout and installation with concrete work. Locate fence posts at concrete score joints as shown on plans where applicable.
2. Submit shop drawings for fence, gate, and assemblies as specified.
3. See specifications for finishes and materials.
4. Confirm gate swing is not impeded by surrounding grades or site elements prior to fabrication.

CHAINLINK FENCE - SINGLE SWING GATE

NTS 1

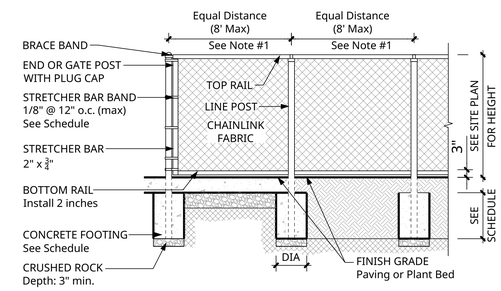


NOTES

1. Coordinate layout and installation with concrete work. Locate fence posts at concrete score joints as shown on plans where applicable.
2. Submit Shop Drawings for fence, gate, and assemblies as specified.
3. See Specifications for finishes and materials.
4. Confirm gate swing is not impeded by surrounding grades or site elements prior to fabrication. Notify Owner's Representative of conflicts.
5. Install Bottom Rail 2 inches above finish grade. Install Chain Link Fabric 1 inch above finish grade.

CHAINLINK FENCE - DOUBLE SWING GATE

NTS 2



FENCE POST FOOTING SCHEDULE

FENCE HEIGHT	FENCE POST	FOOTING DEPTH	FOOTING DIAMETER
4'-0"	pipe4std	24"	12"
6'-0"	pipe4std	30"	12"
8'-0"	pipe4std	50"	12"

NOTES

1. Coordinate layout and installation with concrete work. Locate fence posts at concrete score joints as shown on plans where applicable.
2. Submit Shop Drawings for fence as specified.
3. See Specifications for finishes and materials.
4. All fencing at or under 8' in height at field edge to have fence topper installed. White for softball yellow for baseball.
5. Fence fabric to be installed on the outfield fencing, refer to plans for where this stops and ends. Fence fabric uses a 98% wind and privacy factor, color TBD.

CHAINLINK FENCE

NTS 3

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
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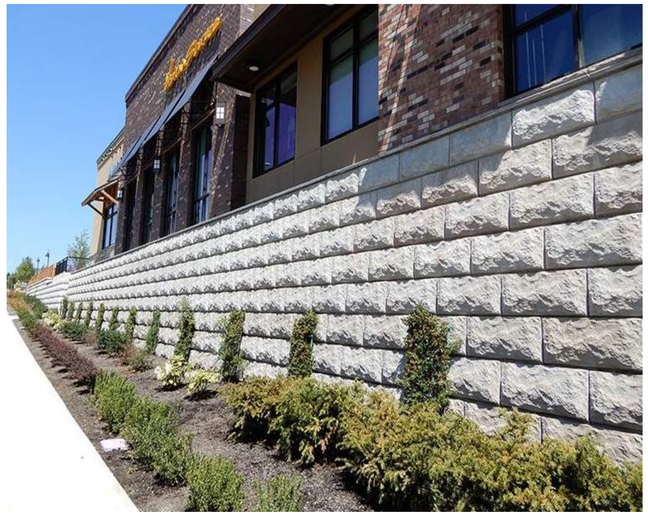
100% DESIGN DEVELOPMENT

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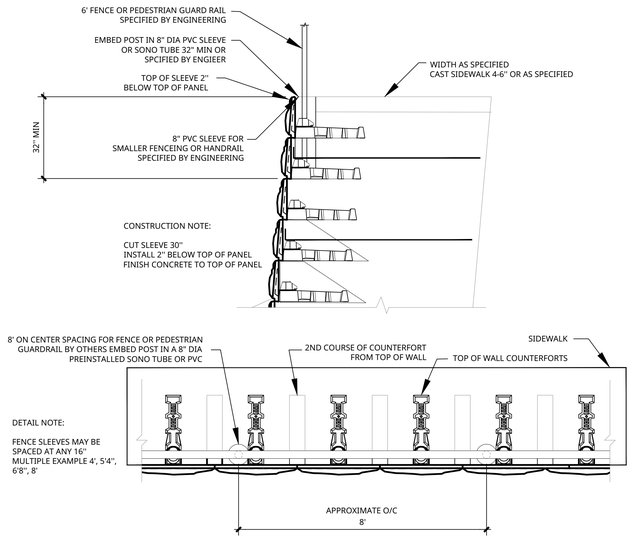
FIELD DETAILS

L7.04

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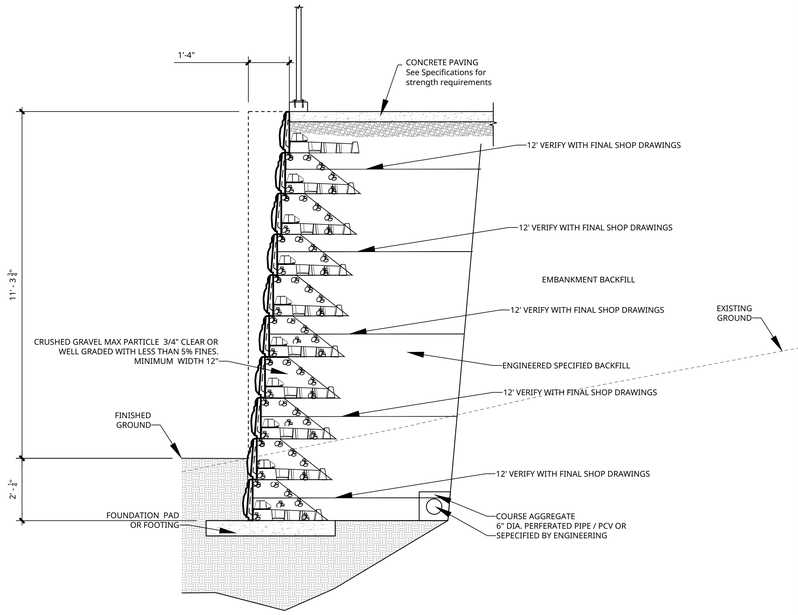


EXAMPLE MATERIAL PHOTO



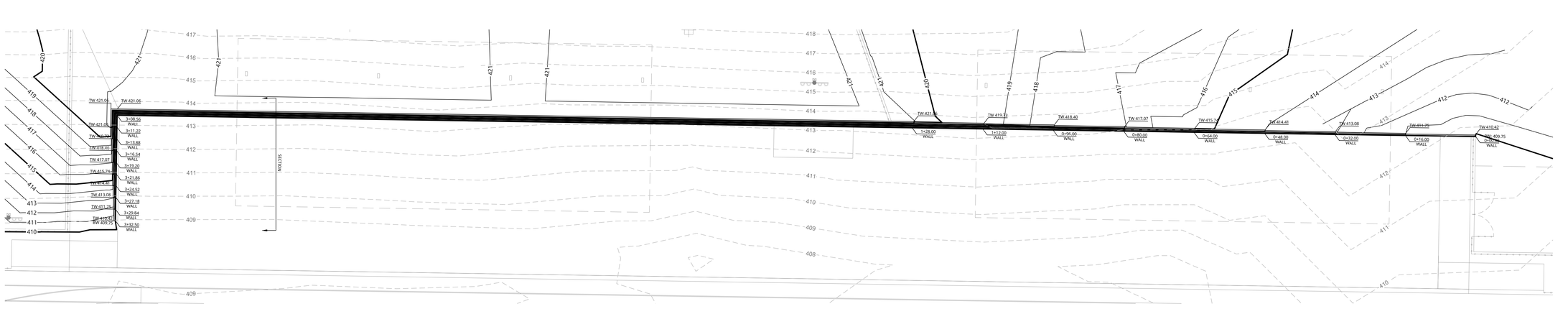
SEGMENTAL RETAINING WALL WITH FENCE SECTION

NTS 3



SEGMENTAL RETAINING WALL SECTION

NTS 1



SEGMENTAL RETAINING WALL PLAN

NTS 2

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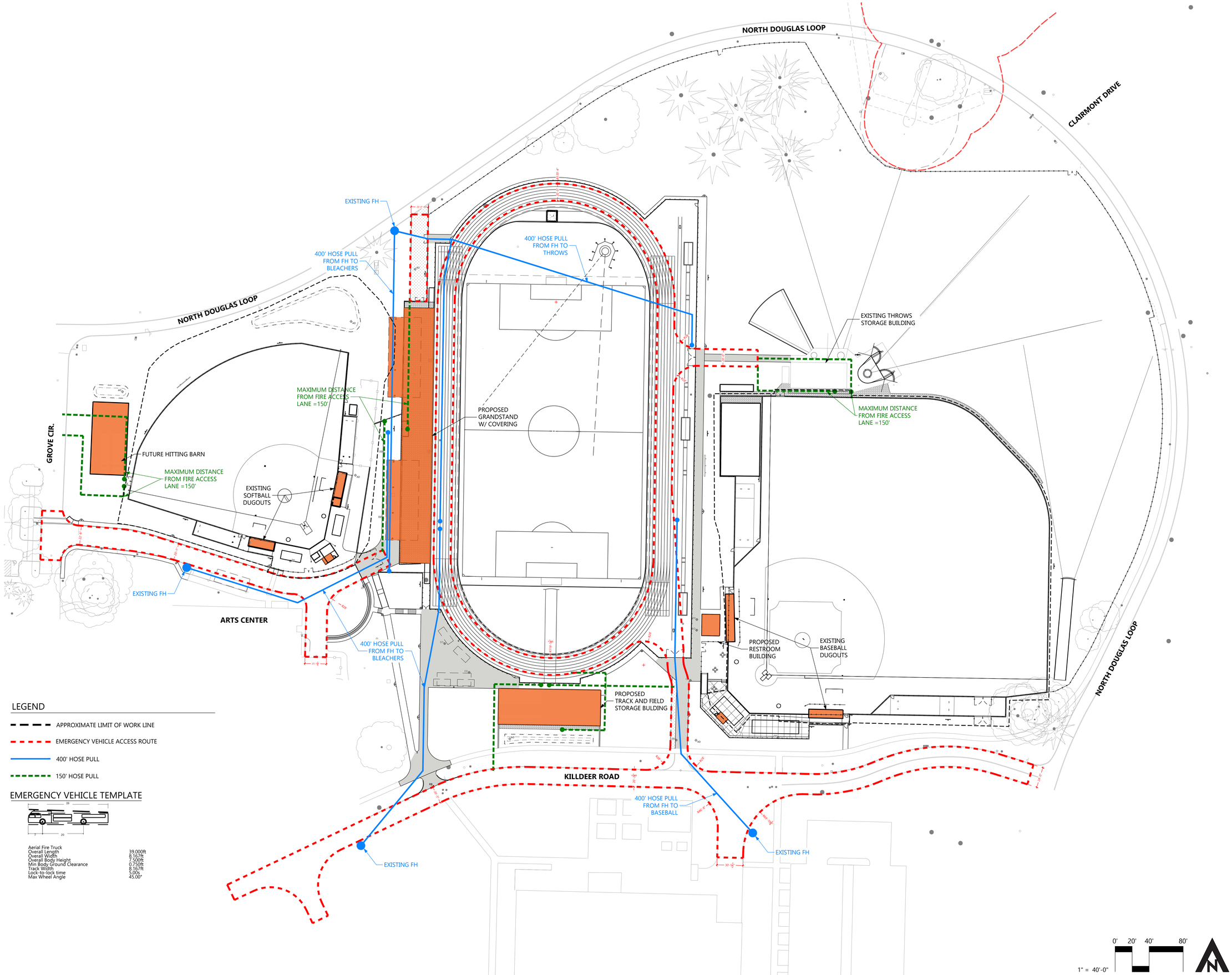
SHEET TITLE

SEGMENTAL WALL DETAILS

L7.08

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LEGEND

- APPROXIMATE LIMIT OF WORK LINE
- EMERGENCY VEHICLE ACCESS ROUTE
- 400' HOSE PULL
- 150' HOSE PULL

EMERGENCY VEHICLE TEMPLATE

Aerial Fire Truck	
Overall Length	39.000ft
Overall Width	8.167ft
Overall Body Height	7.500ft
Min Body Ground Clearance	0.750ft
Track Width	8.167ft
Lock-to-lock time	5.006
Max Wheel Angle	45.00°

1" = 40'-0"

0' 20' 40' 80'

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SHEET TITLE

FIRE ACCESS - OVERALL

L8.01

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GENERAL STRUCTURAL NOTES

I. GENERAL

1. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2022 EDITION OF THE OREGON STRUCTURAL SPECIALTY CODE (OSSC) AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. THE GENERAL STRUCTURAL NOTES SUPPLEMENT THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN CASE OF APPARENT CONFLICT IN OR BETWEEN THE CONTRACT DRAWINGS AND SPECIFICATIONS, CONTACT THE OWNER'S REPRESENTATIVE FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE RELATED WORK. FOR BIDDING PURPOSES, THE MORE COSTLY PROVISION SHALL PREVAIL. OBTAIN CLARIFICATION FROM THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE RELATED WORK.
3. REFERENCES IN THE CONTRACT DOCUMENTS TO CODES, RULES, REGULATIONS, STANDARDS, MANUFACTURER'S INSTRUCTIONS, AND REQUIREMENTS OF REGULATORY AGENCIES ARE TO THE LATEST PRINTED EDITION OF EACH IN EFFECT AT THE DATE OF SUBMISSION OF BID UNLESS THE DOCUMENT DATE IS INDICATED.
4. DO NOT SCALE THE DRAWINGS.
5. THE DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
6. THE DRAWINGS INDICATE THE STRUCTURAL ASPECTS OF THE WORK AND REFER TO INTEGRAL ASPECTS OF THE WORK DESIGNED BY OTHERS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL SYSTEMS & COMPONENTS, AND MECHANICAL, ELECTRICAL, & PLUMBING SYSTEMS & EQUIPMENT. COORDINATE ALL ASPECTS OF THE WORK AND VERIFY DIMENSIONS.
7. REFER TO DRAWINGS BY OTHERS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DISCIPLINES, FOR SIZE, QUANTITY, AND LOCATION OF FLOOR, ROOF, AND WALL OPENINGS AND PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. SUBMIT FINAL SIZING AND LOCATION REQUIREMENTS OF OPENINGS TO THE OWNER'S REPRESENTATIVE FOR REVIEW.
8. INFORMATION RELATING TO EXISTING CONDITIONS INDICATED IN THE DRAWINGS IS BASED ON INFORMATION PROVIDED BY OTHERS; NO GUARANTEE IS GIVEN AS TO THE ACCURACY THEREOF. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION PRIOR TO PROCEEDING WITH RELATED WORK. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.
9. THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC.. RETAIN A REGISTERED, PROPERLY QUALIFIED CIVIL ENGINEER TO DESIGN NECESSARY TEMPORARY MEASURES, TECHNIQUES, SEQUENCES FOR PROCEDURE(S) OF CONSTRUCTION AND/OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING. SITE OBSERVATIONS BY THE OWNER'S REPRESENTATIVE WILL NOT INCLUDE OBSERVATIONS OF THE ABOVE IDENTIFIED MEASURES.

II. DESIGN CRITERIA

1. APPLICABLE CODE: 2022 OSSC
2. FOUNDATIONS HAVE BEEN DESIGNED WITH THE FOLLOWING CRITERIA:

   ALLOWABLE NET SOIL PRESSURE FOR DL + LL = 3,500 PSF
   ALLOWABLE NET SOIL PRESSURE FOR DL + LL + (W OR EQ) = 4,600 PSF
   COEFFICIENT OF FRICTION = 0.35
   PASSIVE RESISTANCE = 300 PCF

3. NEW SOIL RETAINING STRUCTURES SHALL BE DESIGNED WITH THE FOLLOWING CRITERIA:

   ACTIVE EQUIVALENT FLUID PRESSURES (YIELDING AND NON-YIELDING WALLS) = 35 AND 55 PCF
   EARTHQUAKE LATERAL PRESSURE (YIELDING AND NON-YIELDING WALLS) = 8 AND 16 PCF
   PASSIVE EQUIVALENT FLUID PRESSURE = 300 PCF
   UNRESTRAINED/RESTRAINED WALL SURCHARGE COEFFICENT (K) = 0.5
   COEFFICIENT OF FRICTION = 0.35

4. GRAVITY LOADS:

   DEAD LOADS:
   VARY BASED ON ACTUAL BUILDING, STRUCTURE AND EQUIPMENT OPERATING WEIGHTS
   LIVE LOADS:
   20 PSF ROOF (NON-REDUCIBLE)
   SNOW LOADS:
   Pg = 10 PSF GROUND SNOW LOAD
   Pf = 9 PSF CALCULATED FLAT-ROOF SNOW LOAD
   Pm = 25 PSF MINIMUM RAIN-ON-SNOW (Pm = 27 PSF AT BLEACHER CANOPY)
   Ce = 1.0 SNOW EXPOSURE FACTOR
   I = 1.0 SNOW LOAD IMPORTANCE FACTOR (I = 1.25 AT BLEACHER CANOPY)
   Ct = 1.2 THERMAL FACTOR

5. SEISMIC DESIGN:

   IMPORTANCE FACTOR I = 1.0, RISK CATEGORY II (I = 1.25, RISK CATEGORY III AT BLEACHER CANOPY)
   SEISMIC DESIGN CATEGORY: D, SITE CLASS: D
   SPECTRAL RESPONSE ACCELERATIONS: SS = 0.80g: S1 = 0.36g
   SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.70g; SD1 = 0.52g
   SEISMIC FORCE-RESISTING SYSTEM:
   SOFTBALL DUGOUTS
   ALL OTHER REINFORCED MASONRY STRUCTURES NOT SIMILAR TO BUILDINGS DETAILED AS INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
   RESPONSE MODIFICATION FACTOR R = 5
   SEISMIC RESPONSE COEFFICIENT Cs = 0.14
   DESIGN BASE SHEAR V = Cs*W = 0.14W
   EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE
   BLEACHER CANOPY
   STEEL SPECIAL CANTILEVERED COLUMN SYSTEM
   RESPONSE MODIFICATION FACTOR R = 2 1/2
   SEISMIC RESPONSE COEFFICIENT Cs = 0.28
   DESIGN BASE SHEAR V = Cs*W
   EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE

6. WIND DESIGN:

   WIND EXPOSURE C
   V = 98 MPH ULTIMATE DESIGN WIND SPEED (3-SECOND GUST) FOR
   RISK CATEGORY II (V = 105 FOR RISK CATEGORY III AT BLEACHER CANOPY)
   GCpi = ±0.18 INTERNAL PRESSURE COEFFICIENT FOR ENCLOSED BUILDINGS (HITTING BARNS, PRESS BOXES)
   GCpi = ±0.55 INTERNAL PRESSURE COEFFICIENT FOR PARTIALLY ENCLOSED BUILDINGS (DUGOUTS)
   GCpi = 0.00 INTERNAL PRESSURE COEFFICIENT FOR OPEN STRUCTURES (BLEACHER CANOPY)

   MAIN WIND FORCE RESISTING SYSTEM SHALL BE DESIGNED FOR THE FOLLOWING LOAD AND RESISTANCE FACTOR DESIGN (LRFD) WIND PRESSURES:
   ROOF OUTWARD PRESSURE = [DEFINE]

   EXTERIOR COMPONENT AND CLADDING MATERIALS SHALL BE DESIGNED FOR THE FOLLOWING WIND PRESSURES:

COMPONENT	OUTWARD PRESSURE	OUTWARD PRESSURE
WALLS	28 PSF	-35 PSF
ROOFS	16 PSF	-56 PSF

   POSITIVE VALUES INDICATE PRESSURE ACTING TOWARD THE BUILDING FACE, NEGATIVE VALUES INDICATE PRESSURE ACTING AWAY FROM THE BUILDING FACE (SUCTION). PRESSURES ARE BASED ON AN EFFECTIVE AREA OF 10 SF AND SHOULD BE ADJUSTED FOR DIFFERENT EFFECTIVE AREAS IN ACCORDANCE WITH ASCE 7-16. IN ACCORDANCE WITH AAMA TECHNICAL BULLETIN TB-11-1, MULTIPLY VALUES ABOVE BY 0.6 TO DETERMINE ASD DESIGN PRESSURES BEFORE EVALUATING FENESTRATION PRODUCTS FOR PERFORMANCE GRADE.

III. SPECIAL INSPECTIONS AND TESTS

1. SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE 2022 OSSC. REFER TO TABLES 1 THROUGH [DEFINE] ON SHEET [DEFINE] FOR SPECIAL INSPECTION AND TESTING REQUIREMENTS.
2. SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A880 (STEEL), AND ASTM E543 (NON-DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE STRUCTURAL ENGINEER A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED IN ACCORDANCE WITH SECTION 6.1.4.1.1 OF AWS D1.1. THE OWNER SHALL SECURE AND PAY FOR THE SERVICES OF THE INSPECTION AND TESTING AGENCY TO PERFORM ALL SPECIAL INSPECTIONS AND TESTS.
3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, NOTED IN THE INSPECTION REPORTS, AND IF NOT CORRECTED, SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER AND THE BUILDING OFFICIAL.
4. THE SPECIAL INSPECTOR SHALL FURNISH REPORTS FOR EACH INSPECTION AND A FINAL REPORT TO THE BUILDING OFFICIAL, STRUCTURAL ENGINEER, CONTRACTOR, AND OWNER. THE FINAL REPORT SHALL STATE THAT THE WORK IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.
5. CONTINUOUS INSPECTION: THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED.

   PERIODIC INSPECTION: THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
6. WHERE PERIODIC INSPECTION IS ALLOWED IN ACCORDANCE WITH AN EXPANSION ANCHOR'S ICC EVALUATION REPORT, INSPECTIONS SHALL BE AS FOLLOWS:
   A. FOR ALL ANCHORS, PRIOR TO CONCEALMENT, VERIFY: ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR SPACING, AND EDGE DISTANCE.
   B. FOR EACH ANCHOR TYPE AND SIZE, THE SPECIAL INSPECTOR SHALL PERFORM CONTINUOUS INSPECTION ON A MINIMUM OF THE FIRST TEN (10) ANCHORS INSTALLED BY EACH INSTALLER FOR CONFORMANCE WITH THE ICC EVALUATION REPORT. PROVIDED THAT ALL OF THE FIRST TEN (10) ANCHORS ARE INSTALLED CORRECTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE ICC EVALUATION REPORT, THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC INSPECTION A MINIMUM OF TEN PERCENT (10%) OF THE NEXT ONE-THOUSAND (1000) ANCHORS BY EACH INSTALLER AND A MINIMUM OF FIVE PERCENT (5%) OF THE REMAINING ANCHORS BY EACH INSTALLER. INSPECTIONS SHALL OCCUR A MINIMUM OF ONCE PER WEEK AT A RANDOM TIME WHILE ANCHOR INSTALLATION IS ONGOING. ANY NON-COMPLIANCE ISSUES SHALL RESET THE INSPECTION REQUIREMENTS TO TEN (10) CONTINUOUS INSPECTIONS. NON-COMPLIANT ANCHORS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND SHALL BE BROUGHT INTO COMPLIANCE BY EITHER TESTING OR RE-INSTALLATION.
   C. INSPECTION REPORTS SHALL IDENTIFY THE NAMES OF INSTALLERS.
   D. THE SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATION STATING THAT THE MINIMUM NUMBER OF ANCHORS WERE INSPECTED.

IV. STRUCTURAL OBSERVATIONS

1. THE STRUCTURAL ENGINEER OF RECORD WILL PERFORM STRUCTURAL OBSERVATIONS THAT CONFORM TO CHAPTER 17 OF THE 2022 OSSC.
2. THE STRUCTURAL ENGINEER WILL OBSERVE THE INDICATED WORK FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES WILL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE OBSERVATION REPORTS.
3. THE STRUCTURAL ENGINEER WILL FURNISH OBSERVATION REPORTS TO THE BUILDING OFFICIAL, CONTRACTOR, AND OWNER, AND WILL FURNISH A FINAL OBSERVATION REPORT INDICATING THE REQUIRED SITE OBSERVATIONS WERE MADE AND, TO THE BEST OF THE STRUCTURAL ENGINEER'S KNOWLEDGE, THE WORK IS IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS.
4. NOTIFY THE ENGINEER AT SIGNIFICANT CONSTRUCTION STAGES 72 HOURS IN ADVANCE AND PROVIDE ACCESS FOR THE FOLLOWING STRUCTURAL OBSERVATIONS:
   A. FOUNDATIONS
      - PILE INSTALLATION
      - REINFORCEMENT
   B. STEEL FRAMING
      - GENERAL
      - METAL DECKING
   C. CONCRETE
      - SLABS-ON-GRADE
   D. MASONRY
      - WALL REINFORCEMENT

V. SUBMITTALS

1. REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS.
2. THE CONTRACTOR SHALL SUBMIT A SUBMITTAL SCHEDULE FOR REVIEW FOUR WEEKS BEFORE THE FIRST SUBMITTAL IS ISSUED.
3. THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO THE ARCHITECT AND STRUCTURAL ENGINEER. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:
   A. THE SUBMITTAL IS REQUESTED BY THE CONTRACT DOCUMENTS.
   B. THE SUBMITTAL IS BASED ON THE MOST CURRENT EDITION OF THE CONTRACT DOCUMENTS INCLUDING ALL ADDENDA, SUPPLEMENTS, BULLETINS, RFI'S, ETC.
   C. THE ARCHITECT'S AND STRUCTURAL ENGINEER'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
   D. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
   E. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
   F. SUBMITTAL IS COMPLETE.
   G. SUBMITTAL DOES NOT INCLUDE A SUBSTITUTION REQUEST. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.
4. THE STRUCTURAL ENGINEER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE STRUCTURAL ENGINEER'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. ANY WORK STARTED WITHOUT REVIEW IS AT CONTRACTOR'S SOLE RISK AND THEY BEAR RESPONSIBILITY TO INCORPORATE ANY AND ALL COMMENTS, REVISIONS, ADDITIONS MADE IN ENGINEER'S REVIEW AT NO ADDITIONAL EXPENSE TO OWNER.
5. THE STRUCTURAL ENGINEER WILL ONLY STAMP SUBMITTALS FOR ITEMS WITHIN THE SCOPE OF WORK THAT APPEARS IN THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THE STRUCTURAL ENGINEER MAY REVIEW AND PROVIDE COMMENTS ON SUBMITTALS FOR ITEMS THAT APPEAR ON OTHER DRAWINGS OR ARE DELEGATED DESIGN ELEMENTS BUT WILL NOT STAMP THESE SUBMITTALS.
6. CONCRETE MIX DESIGNS AND WELD PROCEDURE SPECIFICATIONS WILL BE REVIEWED BY THE STRUCTURAL ENGINEER, BUT NOT STAMPED, SINCE THESE SUBMITTALS ARE DESIGNED BY ANOTHER ENGINEER.
7. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING::
   A. CONCRETE MIX DESIGNS
   B. CONCRETE REINFORCEMENT (INCLUDING MILL TEST REPORTS
   C. EMBEDDED STEEL ITEMS
   D. STRUCTURAL STEEL (INCLUDING MILL TEST REPORTS
   E. STEEL DECK

   IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF OREGON. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER.

VI. DELEGATED DESIGN ELEMENTS

DELEGATED DESIGN ELEMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. DELEGATED DESIGN ELEMENTS TO BE DESIGNED BY THE CONTRACTOR INCLUDE:

- DRILLED MICROPILES
- SUSPENDED CEILING ASSEMBLIES - GRAVITY SUPPORT, SEISMIC BRACING, AND ANCHORAGE
- MEPT LATERAL BRACING AND ANCHORAGE FOR EQUIPMENT AND DISTRIBUTION SYSTEMS
- LADDERS
- STRUCTURAL ATTACHMENTS FOR BUILDING MAINTENANCE OR FALL PROTECTION
- PV PANELS, SUPPORT FRAMING AND ATTACHMENT TO PRIMARY STRUCTURE
- SEGMENTED SITE RETAINING WALLS
- POST FRAME STRUCTURES
- BLEACHERS

1. DESIGN OF ALL DELEGATED DESIGN ELEMENTS SHALL BE BY A STRUCTURAL OR CIVIL ENGINEER LICENSED IN THE STATE OF OREGON.
   a. DELEGATED DESIGN SUBMITTALS SHALL INCLUDE DESIGN DRAWINGS AND CALCULATIONS FOR ITEMS DESIGNED BY OTHERS.
   b. DELEGATED DESIGN CALCULATIONS SHALL HAVE A SUMMARY PAGE STATING THE DESIGN ASSUMPTIONS INCLUDING CODES AND DESIGN LOADS.
   c. DELEGATED DESIGN DRAWINGS SHALL SHOW THE MAGNITUDES, DIRECTIONS, LOCATIONS, AND CONNECTION CONDITIONS OF ALL LOADS IMPOSED ON THE BUILDING STRUCTURE BY THE ELEMENT.
   d. DELEGATED DESIGN DRAWINGS AND CALCULATIONS SHALL INCLUDE ALL CONNECTIONS TO THE BUILDING STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS.
   e. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OREGON STRUCTURAL SPECIALTY CODE AND AS NOTED UNDER "DESIGN CRITERIA".
   f. DELEGATED DESIGN SUBMITTALS SHALL BEAR THE SEAL AND SIGNATURE OF THE CONTRACTOR'S DESIGN ENGINEER ON EVERY DRAWING SHEET AND ON THE CALCULATION COVER SHEET AND SHALL BE SUBMITTED TO THE OWNER SUFFICIENTLY IN ADVANCE OF SCHEDULED DATES FOR INSTALLATION TO PROVIDE ALL REQUIRED TIME FOR REVIEW, FOR SECURING NECESSARY APPROVALS, FOR POSSIBLE REVISION AND RESUBMITTALS AND FOR PLACING ORDERS AND SECURING DELIVERY.
2. AFTER OWNER & ARCHITECT REVIEW IS COMPLETE, AND WHEN REQUIRED BY THE PERMITTING JURISDICTION, DELEGATED DESIGN ELEMENTS SHALL BE SUBMITTED TO THE PERMITTING AUTHORITY FOR REVIEW AND APPROVAL.
3. THE CONTRACTOR SHALL COORDINATE AT ANCHORAGE SUBMITTALS INCLUDING SEISMIC RESTRAINTS OF MEPT EQUIPMENT, MACHINERY, AND DISTRIBUTION WITH THE STRUCTURE. FOR RISK CATEGORY III AND IV BUILDINGS, THE CONTRACTOR'S DESIGN ENGINEER SHALL SPECIFY THE REQUIREMENTS FOR EQUIPMENT SEISMIC CERTIFICATION IN THE DELEGATED SUBMITTAL IN ACCORDANCE WITH OSSC SECTION 1705.12.6 AND ASCE 7 SECTION 13.2.
4. FIELD ENGINEERED DETAILS DEVELOPED BY THE CONTRACTOR THAT DIFFER FROM OR ADD TO THE STRUCTURAL DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF THE CONTRACTOR'S DESIGN ENGINEER AND SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
5. THE USE OF REPRODUCTIONS OR PHOTOCOPIES OF THE CONTRACT DRAWINGS SHALL NOT BE PERMITTED IN THE CREATION OF DELEGATED DESIGN DRAWINGS. WHEN CAD OR REVIT FILES ARE PROVIDED TO THE CONTRACTOR OR SUBCONTRACTOR, IT IS THE RESPONSIBILITY OF THE CONTRACTOR/SUBCONTRACTOR TO REMOVE ALL INFORMATION NOT DIRECTLY RELEVANT TO THE SCOPE OF THE SUBMITTAL AS WELL AS ALL REFERENCES TO OUTSIDE SOURCE FILES.
6. SUBMIT IAPMO or ICC-ESR REPORT FOR FASTENERS TO BE USED IN THE CONNECTION OF DELEGATED DESIGN ELEMENTS TO THE BUILDING STRUCTURE. WHEN SUBMITTING AN "OR EQUAL" PRODUCT, REPORT SHALL DEMONSTRATE ALL EQUIVALENT OR GREATER PROPERTIES TO SPECIFIED PRODUCT.
7. CONTRACTOR SHALL ENGAGE A PROFESSIONAL ENGINEER TO PREPARE AN ASSESSMENT OF ANY EXCAVATIONS THAT MAY REDUCE THE VERTICAL OR LATERAL SUPPORT OF AN EXISTING FOUNDATION AS REQUIRED BY OSSC SECTION 1803.5.7. THE ASSESSMENT SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND SHALL INCLUDE DETAILS AND SEQUENCING FOR CONSTRUCTION OF ANY UNDERPINNING OR BRACING THAT IS REQUIRED.

VII. DRILLED MICROPILES

1. DRILLED MICROPILES SHALL BE CAPABLE OF DEVELOPING THE WORKING STRESS LOADS SHOWN ON THE DRAWINGS. DRILLED MICROPILE CAPACITY SHALL BE VERIFIED BY TESTING AS REQUIRED BY THE SPECIFICATIONS.
2. PLACE REINFORCING STEEL IN ONE CONTINUOUS UNIT AND ACCURATELY HOLD SECURELY IN FINAL POSITION USING CENTRALIZERS DURING GROUT PLACEMENT.
3. SHOP DRAWINGS SHALL INCLUDE PILE NUMBER AND LOCATION, DESIGN LOAD, TYPE AND SIZE OF CENTRAL BAR, CENTRALIZERS AND THEIR LOCATIONS, CORROSION PROTECTION (IF ANY), COMPONENTS OF PILE CONNECTION TO FOUNDATION, MINIMUM TOTAL BOND LENGTH, MINIMUM OVERALL LENGTH, INCLINATION ANGLE, AND CUTOFF ELEVATION.

VIII. FOUNDATIONS AND SITE WORK

1. THE DESIGN OF THE FOUNDATION SYSTEM IS BASED UPON THE CRITERIA AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT ENTITLED "GEOTECHNICAL INVESTIGATION, ATHLETIC MASTER PLAN, CLACKAMAS COMMUNITY COLLEGE; OREGON CITY CAMPUS" BY GRI, DATED JULY 8, 2025. REPORTS ARE AVAILABLE FOR REVIEW.
2. LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER CONSTRUCTION.
3. REMOVE ABANDONED FOOTINGS, UTILITIES, AND OTHER UNDERGROUND ELEMENTS THAT INTERFERE WITH THE WORK, UNLESS OTHERWISE INDICATED.
4. NOTIFY THE OWNER'S REPRESENTATIVE IF BURIED STRUCTURES NOT INDICATED ARE FOUND, INCLUDING BUT NOT LIMITED TO CESSPOOLS, CISTERNS, AND FOUNDATIONS.
5. PROVIDE NECESSARY EXCAVATION PROCEDURES INCLUDING BUT NOT LIMITED TO LAGGING, SHORING, AND UNDERPINNING OF EXISTING STRUCTURES. PROTECT EXISTING STRUCTURES DURING CONSTRUCTION.
6. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.
7. EXCAVATIONS FOR FOUNDATIONS MUST BE ACCEPTED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCING AND CONCRETE. NOTIFY THE GEOTECHNICAL ENGINEER WHEN EXCAVATIONS ARE READY FOR INSPECTION.
8. MECHANICALLY COMPACT EXCAVATION BACKFILLS IN LAYERS AS REQUIRED IN THE GEOTECHNICAL REPORT.

IX. REINFORCING STEEL

1. REINFORCING SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

LOCATION	TYPE
REINFORCING STEEL IN CONCRETE SHEAR WALLS	A706, GRADE 60
REINFORCING STEEL #7 AND SMALLER	ASTM A615, GRADE 60
REINFORCING STEEL #8 AND LARGER AND REINFORCING STEEL TO BE WELDED	ASTM A706, GRADE 60
WELDED STEEL WIRE FABRIC	ASTM A1064, GRADE 70
SMOOTH DOWELS IN SLAB-ON-GRADE	ASTM A36, GRADE 36

2. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACEMENT DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING WITH METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT 3 FEET ON CENTER MAXIMUM SPACING.
3. ACCEPTABLE MECHANICAL COUPLERS:
   - LENTON THREADED OR INTERLOCK COUPLERS BY ERICO, IAPMO UES ER 0129
   - XTENDER BY HEADED REINFORCEMENT CORPORATION, ICC ESR 2764

   LENTON FORM SAVERS BY ERICO ARE ACCEPTABLE COUPLERS FOR BEAM AND SLAB BARS AT FORMED CONSTRUCTION JOINTS.
4. WELD REINFORCING STEEL IN ACCORDANCE WITH AWS D1.4 USING QUALIFIED WELDERS.
5. TERMINATE REINFORCING STEEL IN STANDARD HOOKS, UNLESS OTHERWISE INDICATED.
6. PROVIDE REINFORCING INDICATED AS CONTINUOUS IN LENGTHS AS LONG AS PRACTICABLE.

X. FORMWORK

1. PROVIDE POUR POCKETS IN FORMS AND UNDER EXISTING STRUCTURAL MEMBERS AS NECESSARY TO PREVENT AIR POCKETS AND/OR "HONEYCOMB" UNDER AND/OR AROUND THE EXISTING MEMBERS. CONCRETE CAST WITH AIR POCKETS AND/OR "HONEYCOMB" UNDER AND/OR AROUND THE MEMBERS IS NOT ACCEPTABLE.
2. REMOVE FORMS IN ACCORDANCE WITH THE FOLLOWING:

LOCATION	REMOVE FORMS NO SOONER THAN:
FOOTINGS, PILE CAPS, AND GRADE BEAMS	48 HOURS

3. PROVIDE CONCRETE FORMS, ACCESSORIES, AND BRACING AS NECESSARY TO ACCOMPLISH CAST-IN-PLACE CONCRETE WORK.
4. PROVIDE CURING WHERE FORMS ARE REMOVED LESS THAN 7 DAYS AFTER CONCRETE PLACEMENT, INCLUDING BUT NOT LIMITED TO GRADE BEAMS, WALLS, AND COLUMNS.

XI. CAST-IN-PLACE CONCRETE

1. CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED. WHERE REINFORCING IS NOT SPECIFICALLY INDICATED, OR WHERE DETAILS ARE NOT GIVEN, PROVIDE REINFORCING SIMILAR TO THAT INDICATED FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
2. ROUGHEN SURFACES OF CONSTRUCTION JOINTS TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE RELATED WORK.
3. WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.
4. WHERE CONCRETE IS CAST AGAINST EXISTING MASONRY, THOROUGHLY ROUGHEN CONTACT SURFACES BY LIGHT SANDBLASTING OR OTHER SUITABLE MEANS AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.
5. REFER TO DRAWINGS BY OTHERS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL AND MECHANICAL DISCIPLINES, FOR LOCATIONS OF CONCRETE CURBS AND HOUSEKEEPING PADS NOT SHOWN IN THE STRUCTURAL DRAWINGS.
6. CONCRETE CLEAR COVER TO REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION	CLEAR COVER
CONCRETE PLACED AGAINST EARTH	3 INCHES
FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH:	
• #6 BARS AND LARGER	2 INCHES
• #5 BARS AND SMALLER	1 1/2 INCHES
SLABS-ON-GRADE (TOP CLEARANCE)	1 1/2 INCHES
BEAMS, GIRDERS, AND COLUMNS NOT EXPOSED TO WEATHER OR EARTH	1 1/2 INCHES
WALL OR SLAB SURFACES NOT EXPOSED TO WEATHER OR EARTH:	
• #5 AND SMALLER	3/4 INCH
• #6 AND #7	1 INCH
• #8, #9, #10 AND #11	1 1/2 INCHES
• #14 AND #18	2 1/2 INCHES

7. CONCRETE TYPES:

28-DAY STRENGTH	TYPE	LOCATION
4000 PSI	NORMAL WEIGHT	ALL USES

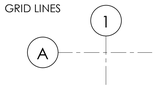
MAXIMUM WATER-CEMENT RATIO		
COMPRESSIVE STRENGTH AT 28-DAYS, PSI	WATER-CEMENT RATIO, BY WEIGHT	
	NON-AIR ENTRAINED CONCRETE	AIR ENTRAINED CONCRETE
4000	0.57	0.48

8. NON-SHRINK GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7000 PSI.
   A. ACCEPTABLE PRODUCTS FOR GENERAL USE:
      - EUCLID CHEMICAL COMPANY "EUCO NS"
      - L&M "CRYSTEX"
      - MASTER BUILDERS "MASTERFLOW 713"
      - FIVE STAR GROUT
   B. ACCEPTABLE PRODUCTS FOR HIGH FLUIDITY OR INCREASED PLACING TIME:
      - EUCLID CHEMICAL COMPANY "EU

SYMBOLS & ABBREVIATIONS

ANNOTATION SYMBOLS

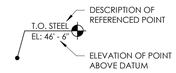
GRID LINES



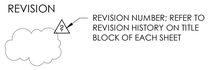
LEVEL LINE



REFERENCED ELEVATION



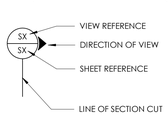
REVISION



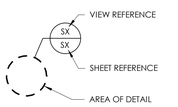
KEYED NOTE



DETAIL (PERPENDICULAR TO VIEW)



DETAIL (PARALLEL TO VIEW)



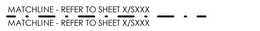
ELEVATION



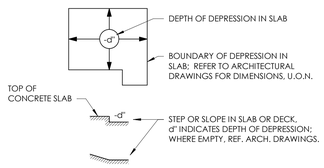
WORK POINT



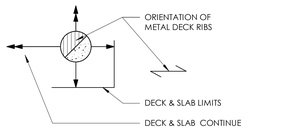
MATCHLINE



SLAB DEPRESSIONS (PLAN)



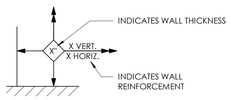
METAL DECK ORIENTATION (PLAN)



OPENING (PLAN OR ELEVATION)



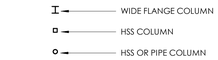
SHEAR WALL (ELEVATION)



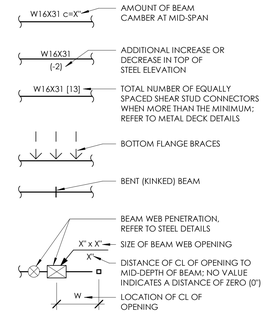
SHORING



COLUMNS (PLAN)



BEAM DESIGNATIONS (PLAN)



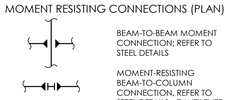
COLLECTOR CONNECTIONS (PLAN)



SHEAR CONNECTIONS (PLAN)



MOMENT RESISTING CONNECTIONS (PLAN)

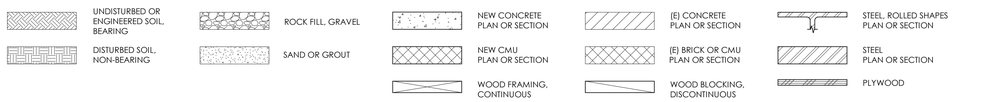


BRACED FRAME (PLAN)



MATERIAL SYMBOLS

SHOWN IN SECTION UNLESS OTHERWISE NOTED



ABBREVIATIONS

#	NUMBER OR POUNDS
&	AND
@	AT
A.B.	ANCHOR BOLT
ADD'L	ADDITIONAL
ADJ.	ADJACENT
ALT.	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AOR	ARCHITECT OF RECORD
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL DOCUMENTS
ASC	AREA OF STEEL CORE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
B.O.	BOTTOM OF
BOTT.	BOTTOM
BRB	BUCKLING RESTRAINED BRACE
BRBF	BUCKLING RESTRAINED BRACED FRAME
C	CHANNEL (AMERICAN STANDARD)
CDF	CONTROLLED DENSITY FILL
CG	CENTER OF GRAVITY
CIP	CAST-IN-PLACE
C.J.	CONSTRUCTION JOINT OR CONTROL JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONT.	CONTINUOUS
CP	COMPLETE PENETRATION
d	PENNY (NAIL SIZE) or REINFORCING BAR DIAMETER
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DEMO	DEMOLITION or DEMOLISH
DIA. or Ø	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DIST.	DISTANCE
DN	DOWN
do	DITTO OR REPEAT
(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMBED	EMBEDMENT
EOR	ENGINEER OF RECORD
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.S.	EACH SIDE
E.W.	EACH WAY
EXP.	EXPANSION
EXT.	EXTERIOR
F.F.	FAR FACE
FIN.	FINISH(ED)
FL. or FLR	FLOOR
F.O.	FACE OF
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUDS
FRP	FIBER REINFORCED POLYMER
F.S.	FAR SIDE
FT	FOOT or FEET
GA.	GAUGE
GALV.	GALVANIZED
GB	GRADE BEAM
GL	GLUED-LAMINATED MEMBER
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
HP	BEARING PILE
H.S.	HEADED STUD
H.S.B.	HIGH STRENGTH BOLTS
HSS	HOLLOW STRUCTURAL SECTION
HT	HEAVY TIMBER
I.D.	INSIDE DIAMETER
INFO	INFORMATION
K	KIP, KIPS
K.O.	KNOCK-OUT
KSI	KIPS PER SQUARE INCH

(CONTINUED ==>)

L OR 2L	ANGLE OR DOUBLE ANGLE
LB	CELLULAR BEAM
LD	DEVELOPMENT LENGTH
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG.	LONGITUDINAL
L.P.	LOW POINT
LS	LAP SPLICE
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LSL	LAMINATED STRAND LUMBER (TIMBER STRAND)
LT	LIGHT
LVF	LOW-VELOCITY FASTENER
LVL	LAMINATED VENEER LUMBER (MICROLAM)
M	MISCELLANEOUS SHAPE
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MC	CHANNEL (OTHER THAN AMERICAN STANDARD)
MECH.	MECHANICAL
MEPT	MECHANICAL, ELECTRICAL, PLUMBING, & TECHNOLOGY
MF	MOMENT FRAME
MFR	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTL	METAL
N	NORTH
(N)	NEW
N.F.	NEAR FACE
N.I.C.	NOT IN CONTRACT
No.	NUMBER
NOM.	NOMINAL DIAMETER
N.S.	NEAR SIDE
N.T.S	NOT TO SCALE
o.c.	ON CENTER
O.D.	OUTSIDE DIAMETER (DIM.)
OPP.	OPPOSITE HAND
OWJ	OPEN WEB JOIST
P.A.F.	POWDER ACTUATED FASTENER
PC, PCS	PIECE, PIECES
PDF	POWDER DRIVEN FASTENER
PERP.	PERPENDICULAR
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
P.P.	PARTIAL PENETRATION
PR	PAIR
PSI	POUNDS PER SQUARE FOOT
PSF	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER (PARALLAM)
PT	POINT
P.T.	PRESSURE-TREATED or POST TENSIONED
R or RAD.	RADIUS
R.A.D.	REF. ARCH. DOCUMENTS
REBAR	REINFORCING BAR
REF.	REFER TO, REFERENCE
REINF.	REINFORCEMENT
REQ'D	REQUIRED
RET.	RETURN
REV.	REVISE or REVISION
R.O.	ROUGH OPENING
S.C.	SLIP CRITICAL
SIM.	SIMILAR
S.M.S.	SHEET METAL SCREW
S.O.G.	SLAB-ON-GRADE
SPEC.	SPECIFICATION
SQ.	SQUARE
SS or SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT.	STRUCTURAL
T	TON, TONS
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THRU	THROUGH
T.O.	TOP OF
T.O.C.	TOP OF CONCRETE
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF STEEL
T.O. SLAB	TOP OF STRUCTURAL SLAB
TRANS.	TRANSVERSE
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
URM	UNREINFORCED MASONRY
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
W or WF	WIDE FLANGE
W/	WITH
W/O	WITHOUT
WD	WOOD
W.H.S.	WELDED HEADED STUDS
W.P.	WORK POINT
WT	STRUCTURAL TEE (CUT FROM WIDE FLANGE)
WWF	WELDED WIRE FABRIC
XS	EXTRA STRONG (STRUCTURAL PIPE)
XXS	DOUBLE-EXTRA STRONG (STRUCTURAL PIPE)

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

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1500 ne irving street
suite 412
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Checked:	JMT
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100% DESIGN DEVELOPMENT

SHEET TITLE
SYMBOLS & ABBREVIATIONS

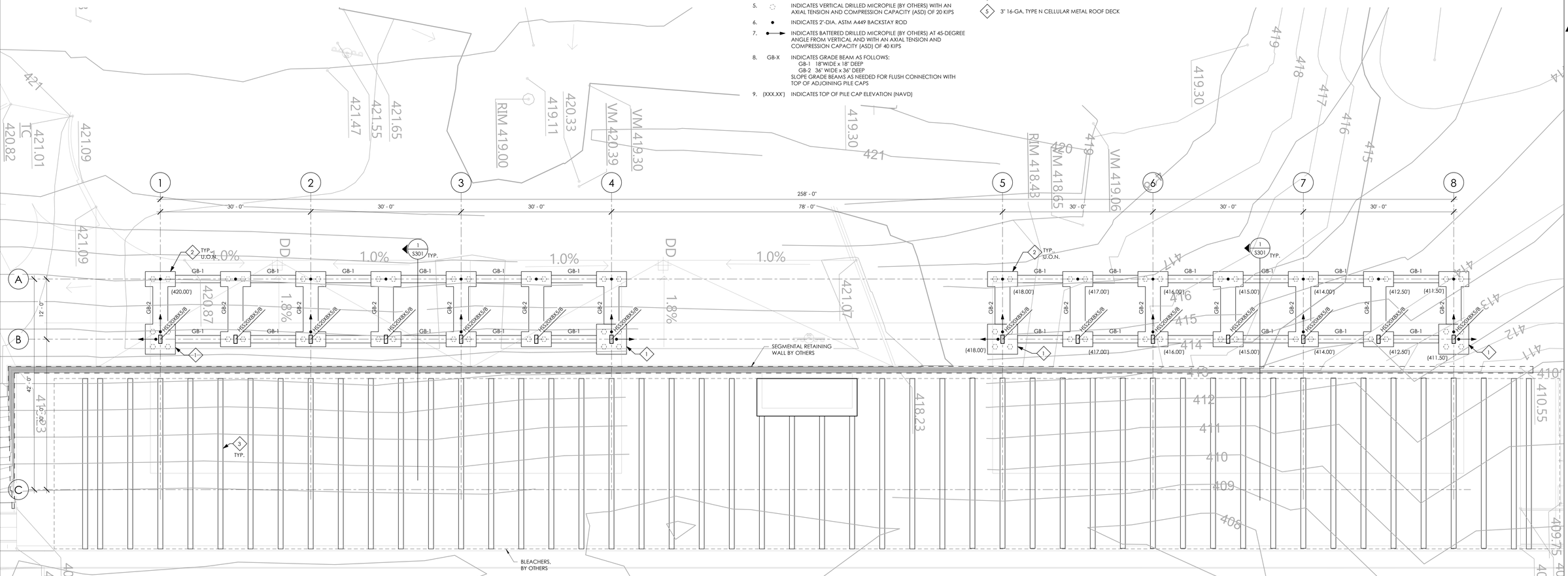
SHEET #
S002

PLAN NOTES:

1. REFER TO SHEET S001 FOR GENERAL STRUCTURAL NOTES AND SHEET S002 FOR SYMBOLS & ABBREVIATIONS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT GIVEN.
3. VERIFY ALL ASPECTS OF WORK INCLUDING BUT NOT LIMITED TO DIMENSIONS, ELEVATIONS, SLOPES, AND DRAINS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION.
4. ALL STRUCTURAL STEEL, CONNECTORS, AND HARDWARE SHALL BE HOT-DIPPED GALVANIZED, U.O.N.
5. ○ INDICATES VERTICAL DRILLED MICROPILE (BY OTHERS) WITH AN AXIAL TENSION AND COMPRESSION CAPACITY (ASD) OF 20 KIPS
6. ● INDICATES 2"-DIA. ASTM A449 BACKSTAY ROD
7. ●→ INDICATES BATTERED DRILLED MICROPILE (BY OTHERS) AT 45-DEGREE ANGLE FROM VERTICAL AND WITH AN AXIAL TENSION AND COMPRESSION CAPACITY (ASD) OF 40 KIPS
8. GB-X INDICATES GRADE BEAM AS FOLLOWS:
   GB-1 18"WIDE x 18" DEEP
   GB-2 36" WIDE x 36" DEEP
   SLOPE GRADE BEAMS AS NEEDED FOR FLUSH CONNECTION WITH TOP OF ADJOINING PILE CAPS
9. (XXX.XX') INDICATES TOP OF PILE CAP ELEVATION (NAVD)

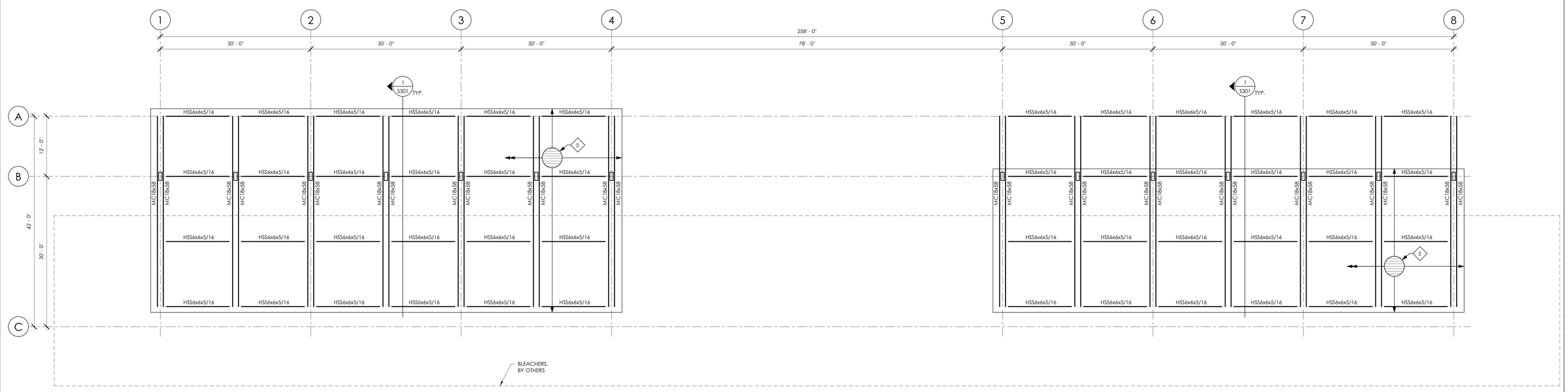
KEYED NOTES:

1. 6'-0" SQUARE x 3'-0" DEEP PILE CAP
2. 3'-0" WIDE x 6'-0" LONG x 3'-0" DEEP PILE CAP
3. 12" WIDE x 12" DEEP STRIP FOOTING CENTERED BENEATH EA. BLEACHER FRAME
4. 12" DEEP MAT FOOTING ALIGNED BENEATH PRESS BOX
5. 3" 16-GA. TYPE N CELLULAR METAL ROOF DECK



1 BLEACHERS/CANOPIES - FOUNDATION PLAN

1/8" = 1'-0"



2 BLEACHER CANOPIES - ROOF FRAMING PLAN

1/8" = 1'-0"

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160 E Broadway Eugene, OR 97401
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120 SW Crowell Way, Suite 300, Bend, OR 97702
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suite 412
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SHEET TITLE

BLEACHER AND CANOPY PLANS

SHEET #

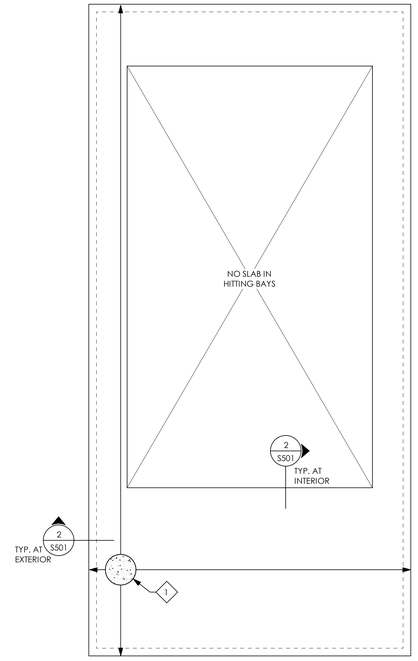
S201

PLAN NOTES:

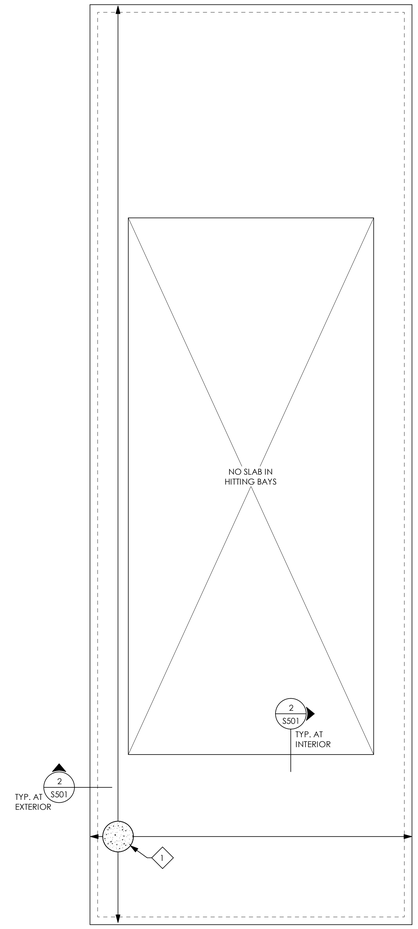
1. REFER TO SHEET S001 FOR GENERAL STRUCTURAL NOTES AND SHEET S002 FOR SYMBOLS & ABBREVIATIONS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT GIVEN.
3. VERIFY ALL ASPECTS OF WORK INCLUDING BUT NOT LIMITED TO DIMENSIONS, ELEVATIONS, SLOPES, AND DRAINS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION.
4. VERIFY MECHANICAL EQUIPMENT LOCATIONS AND MOUNTING DETAILS WITH MECHANICAL DRAWINGS PRIOR TO START OF CONSTRUCTION.
5. REFER TO SHEET S501 FOR CONCRETE DETAILS NOT SPECIFICALLY NOTED.
6. WHERE STEP IN ELEVATION OR DEPRESSION OCCURS, REFER TO 7 / S501
7. T.O. CONC. XXX.XX — INDICATES TOP OF SLAB ON GRADE ELEVATION
8. C.J. — INDICATES CONTROL/CONSTRUCTION JOINT IN SLAB ON GRADE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT AND DETAIL 3 / S501

KEYED NOTES:

1. 4" CONCRETE SLAB ON GRADE W/ #4 @ 16"o.c. EACH WAY AT MID-DEPTH



2 SMALL HITTING BARN - SLAB ON GRADE PLAN
1/8" = 1'-0"



1 LARGE HITTING BARN - SLAB ON GRADE PLAN
1/8" = 1'-0"

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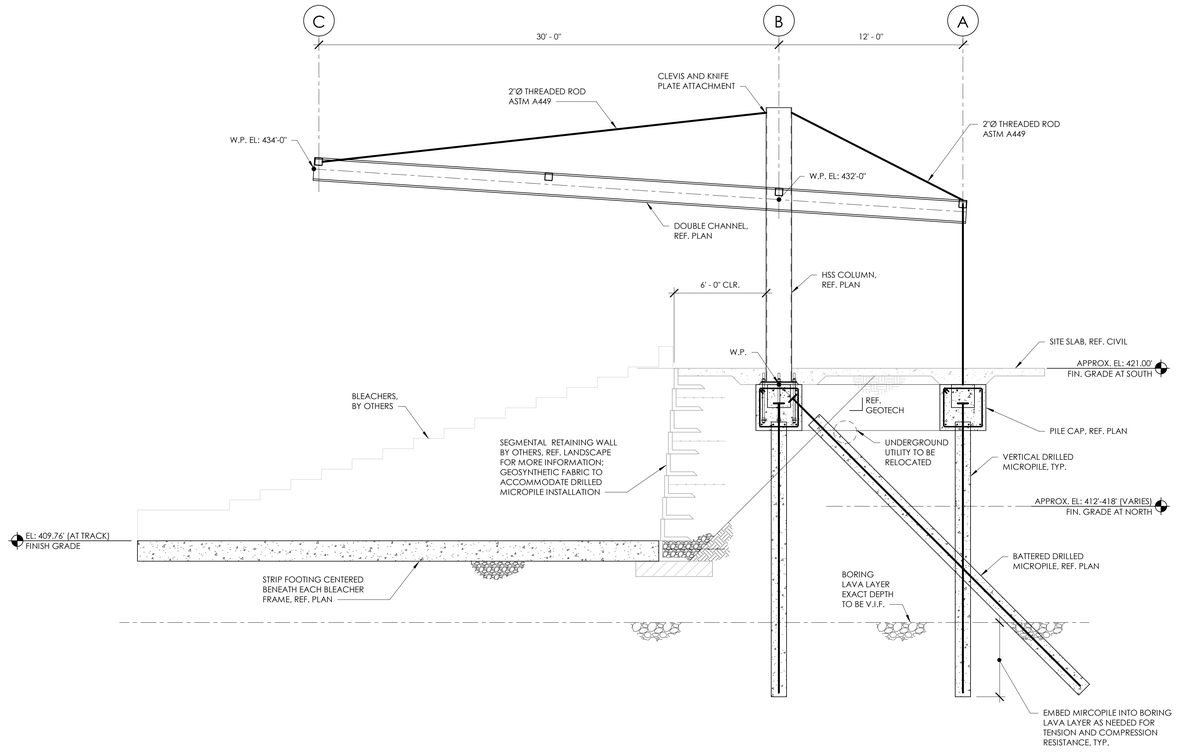
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SHEET TITLE
HITTING BARN FOUNDATION PLANS

SHEET #
S202



1 BLEACHER CANOPY SECTION
1/4" = 1'-0"

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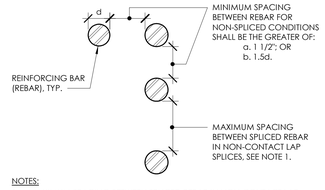
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SHEET TITLE
SECTIONS

SHEET #
S301



NOTES:
1. MAXIMUM SPACING BETWEEN SPLICED REBAR IN NON-CONTACT LAP SPLICES SHALL BE THE LESSER OF:
   a. 1/5 THE REQUIRED LAP SPLICE LENGTH; OR
   b. 6".
2. MINIMUM SPACING BETWEEN REBAR ALSO APPLIES TO THE CLEAR DISTANCE BETWEEN CONTACT LAP SPLICES AND ADJACENT SPLICES OF REBAR.
3. SPLICES MAY BE WIRED TOGETHER INSTEAD OF SPACING AS SHOWN ABOVE.

5 BAR SPACING IN CAST-IN-PLACE CONCRETE

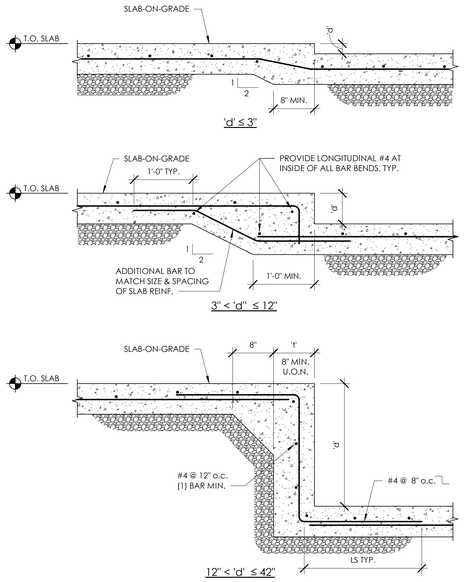
N.T.S.

TYP. SLAB LAP SPLICE LENGTH (INCHES)						
BAR SIZE	4000 PSI		5000 PSI		≥ 6000 PSI	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	16	16	16	16	16	16
#4	20	18	18	18	18	16
#5	28	24	26	22	24	20
#6	37	28	33	25	30	24
#7	60	40	53	36	50	30
#8	74	46	66	41	60	38
#9	90	57	80	51	73	48
#10	108	70	96	63	88	60
#11	127	83	113	75	103	70

NOTES:
1. CASE 1 APPLIES TO BAR WITH CLEAR COVER , < 1 1/2".
   CASE 2 APPLIES TO BAR WITH CLEAR COVER, ≥ 1 1/2".
2. FOR CENTER-TO-CENTER SPACING LESS THAN 4db MULTIPLY LAP LENGTHS ABOVE BY 1.3.
3. FOR HORIZONTAL BARS, CAST ABOVE 12" OF CONCRETE, MULTIPLY LAP LENGTHS ABOVE BY 1.3.
4. FOR WALL BOUNDARY ZONE REINFORCING, MULTIPLY LAP LENGTHS ABOVE BY 1.25.
5. BAR DEVELOPMENT LENGTHS ARE EQUAL TO THE LAP LENGTHS SHOWN IN THE ABOVE TABLE DIVIDED BY 1.3
6. WHEN CALCULATING SPLICE AND DEVELOPMENT LENGTHS, ALL APPLICABLE MULTIPLIERS AND DIVISORS IN THESE NOTES SHALL BE TAKEN INTO ACCOUNT.

6 REINFORCING DEVELOPMENT AND SPLICE TABLE

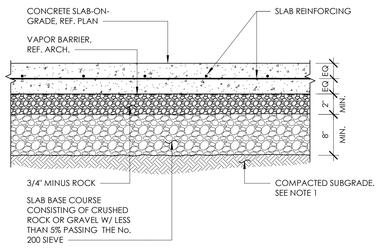
N.T.S.



NOTE:
COORDINATE LOCATION, DEPTH, EXTENT, AND EDGE CONDITIONS OF DEPRESSIONS W/ ARCHITECTURAL DRAWINGS.

7 SLAB-ON-GRADE DEPRESSION

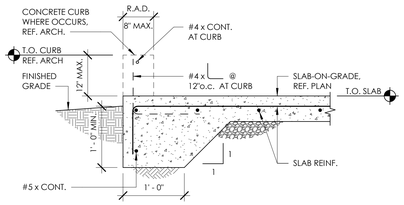
N.T.S.



NOTES:
1. IN AREAS OF SOFT OR DISTURBED SOILS AT SLAB SUBGRADE ELEVATION, OVEREXCAVATE TO PROVIDE A 6-INCH-THICK LAYER OF GRANULAR STRUCTURAL FILL OVER A WOVEN GEOTEXTILE FABRIC BENEATH THE SLAB BASE COURSE.
2. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

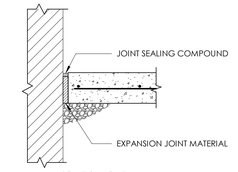
1 SLAB-ON-GRADE SUBGRADE PREPARATION

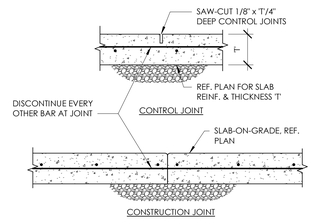
N.T.S.



2 SLAB-ON-GRADE EDGE

N.T.S.

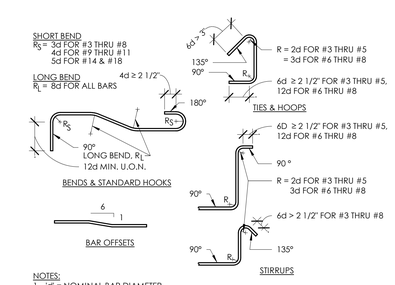




NOTE:
1. FOR SUBGRADE PREPARATION, REFER TO GEOTECHNICAL REPORT AND 1 / S501 .
2. MAXIMUM CONTROL JOINT SPACING IS 15'-0"o.c.
3. MAXIMUM AREA BETWEEN CONTROL JOINTS IS 225 SQ. FT.
4. MAXIMUM LENGTH TO WIDTH RATIO OF CONTROL JOINTS IS 2:1.

3 SLAB-ON-GRADE JOINTS

N.T.S.



NOTES:
1. 'd' = NOMINAL BAR DIAMETER.
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

4 REINFORCING HOOKS AND BENDS

N.T.S.

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CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

STAMP

Drawn By: MBW
Checked: JMT
Project #: 25.020
Date: Oct. 09, 2025

Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
CONCRETE DETAILS

SHEET #
S501

REINFORCING DEVELOPMENT AND LAP SPLICE LENGTHS (INCHES) GRADE 60 REINFORCING BARS, NORMAL WEIGHT CONCRETE																			
CONCRETE STRENGTH	BAR LOCATION	#3		#4		#5		#6		#7		#8		#9		#10		#11	
		LD	LS	LD	LS	LD	LS	LD	LS	LD	LS	LD	LS	LD	LS	LD	LS	LD	LS
f'c = 3000 PSI	HORIZONTAL [2]	22	28	29	37	37	46	44	56	62	81	71	93	80	104	90	118	100	131
	VERTICAL	16	21	22	28	27	36	33	43	48	62	55	71	62	80	70	90	77	100
f'c = 4000 PSI	HORIZONTAL [2]	21	24	26	32	32	40	38	48	54	70	62	80	70	90	78	102	87	113
	VERTICAL	15	18	19	25	24	31	28	37	42	54	47	62	54	70	60	78	67	87
f'c = 5000 PSI	HORIZONTAL [2]	21	22	23	29	29	36	34	43	48	63	55	72	62	81	70	91	78	101
	VERTICAL	15	17	17	21	21	28	25	33	37	43	42	55	48	62	54	70	60	78
f'c = 6000 PSI	HORIZONTAL [2]	21	20	21	26	26	33	31	39	44	57	50	65	57	74	64	83	71	92
	VERTICAL	15	16	15	20	19	25	23	30	34	44	39	50	44	57	49	64	55	71

NOTES:
1. LS = LAP SPLICE; LD = DEVELOPMENT LENGTH.
2. 'LS' LENGTHS, WHERE PERMITTED, SHALL CONFORM TO THIS TABLE UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
3. USE OF 'VERTICAL' BAR VALUES IS ACCEPTABLE WHERE 12" MAXIMUM OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE 'LD' OR 'LS' LENGTH.
4. INCREASE 'LS' LENGTH BY 25% FOR WALL REINFORCING.

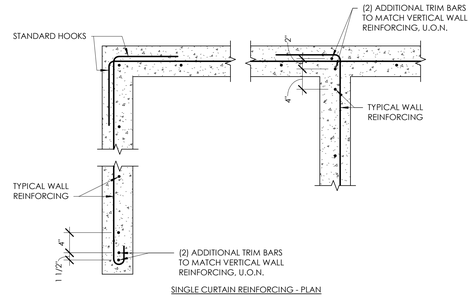
9 REINFORCING DEVELOPMENT AND SPLICE TABLE
N.T.S.

NOTES:
1. "d" = NOMINAL BAR DIAMETER.
2. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

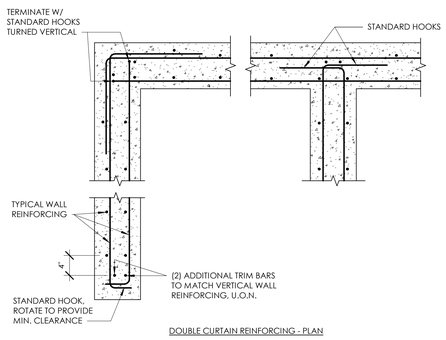
10 REINFORCING HOOKS AND BENDS
N.T.S.

NOTES:
1. MAXIMUM SPACING BETWEEN SPLICED REBAR IN NON-CONTACT LAP SPLICES SHALL BE THE LESSER OF:
   a. 1/5 THE REQUIRED LAP SPLICE LENGTH; OR
   b. 6".
2. MINIMUM SPACING BETWEEN REBAR ALSO APPLIES TO THE CLEAR DISTANCE BETWEEN CONTACT LAP SPLICES AND ADJACENT SPLICES OF REBAR.
3. SPLICES MAY BE WIRED TOGETHER INSTEAD OF SPACING AS SHOWN ABOVE.

11 BAR SPACING IN CAST-IN-PLACE CONCRETE
N.T.S.

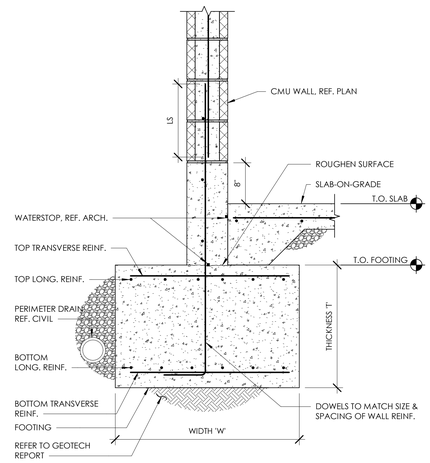


SINGLE CURTAIN REINFORCING - PLAN



DOUBLE CURTAIN REINFORCING - PLAN

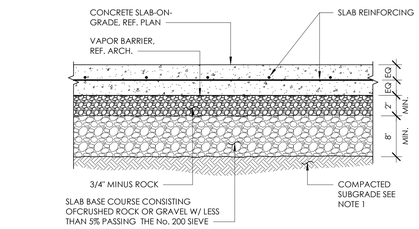
6 WALL REINFORCING AT CORNERS AND INTERSECTIONS
N.T.S.



NOTE:
FOR WIDTH 'W', THICKNESS 'T', AND TOP & BOTTOM FOOTING REINFORCING, REFER TO STRIP FOOTING SCHEDULE.

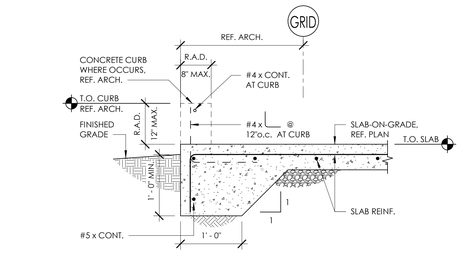
STRIP FOOTING SCHEDULE				
TYPE	DIMENSIONS		REINFORCING	
	WIDTH 'W'	THICKNESS 'T'	TOP	BOTTOM
1	3' - 0"	1' - 6"		(5) #5 LONG. & #5@9"o.c. TRANS

4 STRIP FOOTING
N.T.S.

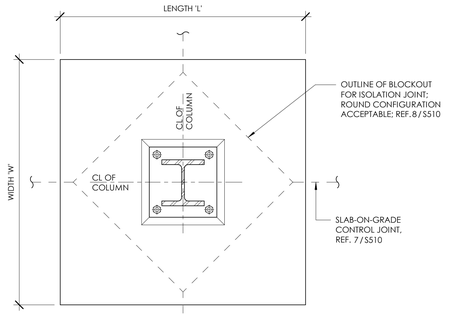


NOTES:
1. IN AREAS OF SOFT OR DISTURBED SOILS AT SLAB SUBGRADE ELEVATION, OVEREXCAVATE TO PROVIDE A 6-INCH-THICK LAYER OF GRANULAR STRUCTURAL FILL OVER A WOVEN GEOTEXTILE FABRIC BENEATH THE SLAB BASE COURSE.
2. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.

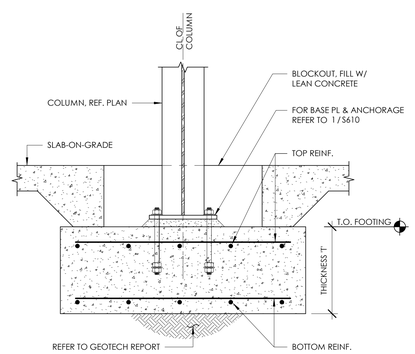
1 SLAB-ON-GRADE SUBGRADE PREPARATION
N.T.S.



2 SLAB-ON-GRADE EDGE
N.T.S.



PLAN VIEW

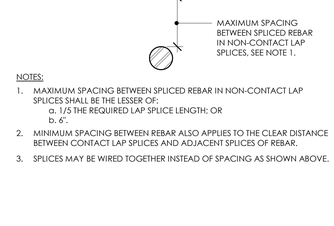


SECTION VIEW

NOTE:
FOR LENGTH 'L', WIDTH 'W', THICKNESS 'T', AND TOP & BOTTOM FOOTING REINFORCING, REFER TO SPREAD FOOTING SCHEDULE.

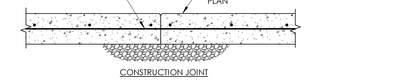
SPREAD FOOTING SCHEDULE					
TYPE	DIMENSIONS			REINFORCING	
	LENGTH 'L'	WIDTH 'W'	THICKNESS 'T'	TOP	BOTTOM
A	2' - 0"	2' - 0"	1' - 0"	----	(4) #4

3 SPREAD FOOTING
N.T.S.



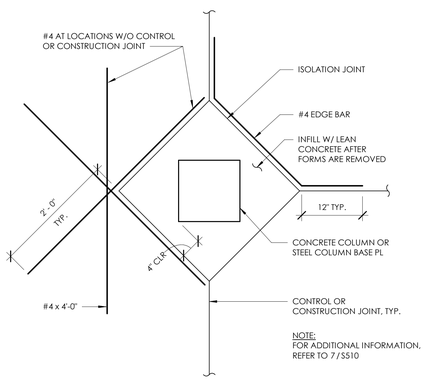
NOTES:
1. MAXIMUM SPACING BETWEEN SPLICED REBAR IN NON-CONTACT LAP SPLICES SHALL BE THE LESSER OF:
   a. 1/5 THE REQUIRED LAP SPLICE LENGTH; OR
   b. 6".
2. MINIMUM SPACING BETWEEN REBAR ALSO APPLIES TO THE CLEAR DISTANCE BETWEEN CONTACT LAP SPLICES AND ADJACENT SPLICES OF REBAR.
3. SPLICES MAY BE WIRED TOGETHER INSTEAD OF SPACING AS SHOWN ABOVE.

11 BAR SPACING IN CAST-IN-PLACE CONCRETE
N.T.S.



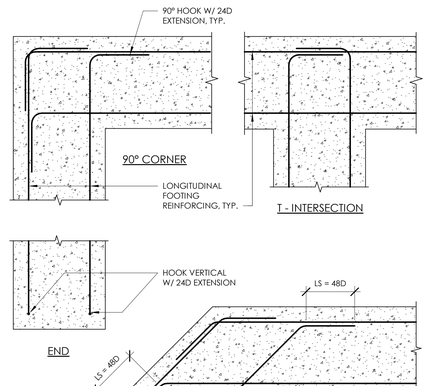
NOTE:
1. FOR SUBGRADE PREPARATION, REFER TO GEOTECHNICAL REPORT AND 1/S510.
2. MAXIMUM CONTROL JOINT SPACING IS 15'-0"o.c.
3. MAXIMUM AREA BETWEEN CONTROL JOINTS IS 225 SQ. FT.
4. MAXIMUM LENGTH TO WIDTH RATIO OF CONTROL JOINTS IS 2:1.

7 SLAB-ON-GRADE JOINTS
N.T.S.



NOTE:
FOR ADDITIONAL INFORMATION, REFER TO 7/S510

8 ISOLATION JOINT AT COLUMN
N.T.S.



NOTE:
1. "D" = NOMINAL BAR DIAMETER.
2. TRANSVERSE BARS NOT SHOWN FOR CLARITY.
3. CONFIGURATIONS AND VALUES ARE APPLICABLE TO BOTH TOP AND BOTTOM REINFORCING.

5 FOOTING REINFORCING AT CORNERS AND INTERSECTIONS
N.T.S.

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

catena consulting engineers
1500 ne irving street
suite 412
portland, or 97232
503. 467. 4980

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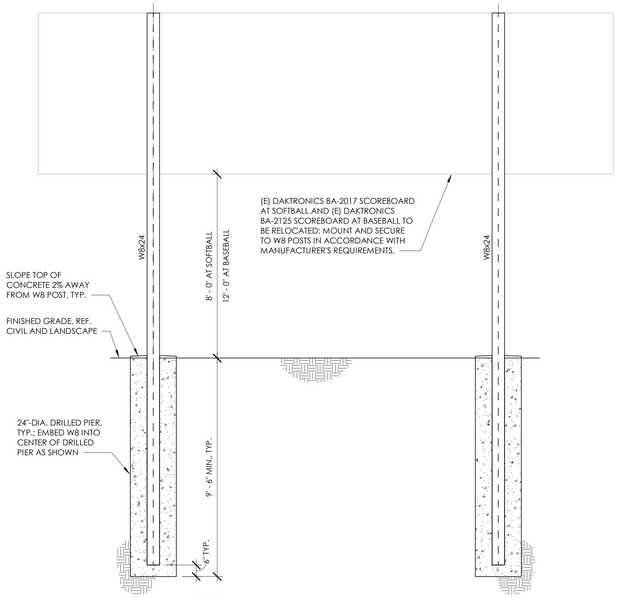
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100% DESIGN DEVELOPMENT

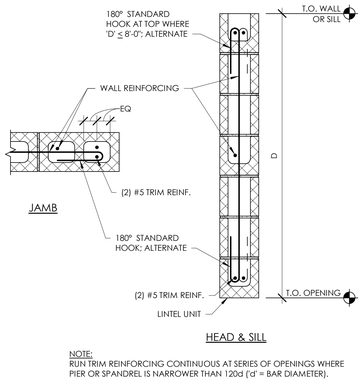
SHEET TITLE
CONCRETE DETAILS

SHEET #
S510



NOTES:
1. ORIENT STRONG AXIS OF W8 POSTS IN DIRECTION NORMAL TO FACE OF SCOREBOARD.
2. THE W8 POSTS AND FOOTINGS SHOWN ARE SPECIFICALLY APPLICABLE ONLY TO THE DAKTRONICS BA-2017 AND BA-2125 SCOREBOARDS INDICATED. CONTACT THE SER IMMEDIATELY IF DIFFERENT SCOREBOARDS THAN THOSE INDICATED ARE TO BE INSTALLED.

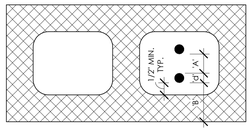
8 SCOREBOARD POSTS AND FOOTINGS
3/8" = 1'-0"



HEAD & SILL

NOTE:
RUN TRIM REINFORCING CONTINUOUS AT SERIES OF OPENINGS WHERE PIER OR SPANDREL IS NARROWER THAN 120d ('d' = BAR DIAMETER).

4 WALL REINFORCING AT OPENINGS
N.T.S.



NOTES:

d = DIAMETER OF LARGER REINFORCING BAR.

A = MIN. CLEAR SPACING AS FOLLOWS:
AT VERTICAL REINFORCING: 1 1/2" OR 1.5d, WHICHEVER IS LARGER;
AT HORIZONTAL REINFORCING: 1" OR d, WHICHEVER IS LARGER.

B = MIN. CLEAR COVER AS FOLLOWS:
ABOVE GRADE: 1 1/2" OR 2.5d, WHICHEVER IS LARGER;
BELOW GRADE: 2" MIN.

5 BAR SPLICING IN CMU
N.T.S.

MASONRY REINFORCING LAP SPLICE LENGTH (INCHES)
YIELD STRENGTH OF REINFORCING BARS, fy = 60,000 PSI
COMPRESSIVE STRENGTH OF MASONRY, f'm = 2,000 PSI

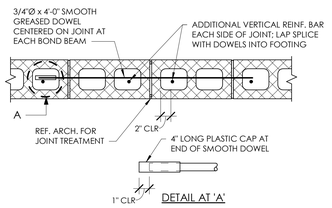
BAR SIZE	(1) BAR IN CENTER OF: 6" CMU	8" CMU	10" CMU	12" CMU	(2) BARS IN SINGLE VERTICAL CELL:	(2) BARS IN SINGLE HORIZONTAL BOND BEAM:
#3	12 [A]	12 [A]	12 [A]	12 [A]	17	25
#4	17	13	12 [A]	12 [A]	30	36 [C]
#5	27	20	15	13	45 [C]	45 [C]
#6	54 [C,D]	37	29	24	54 [C]	54 [C]
#7	NP [B]	52	40	33	63 [C]	63 [C]
#8	NP [B]	72 [C]	61	50	72 [C]	72 [C]
#9	NP [B]	NP [B]	73 [C]	64	82 [C]	82 [C]

NOTES:
LAP SPLICE LENGTH (LS, AS NOTED IN THE DRAWINGS), WHERE PERMITTED, SHALL CONFORM TO THIS TABLE UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.

[A] 12 IN. MINIMUM SPLICE LENGTH
[B] BAR IS TOO LARGE FOR THIS WALL; DIAMETER OF BAR EXCEEDS 1/4 OF THE LEAST CLEAR DIMENSION OF THE CELL TO BE GROUTED, 1/8 OF THE NOMINAL UNIT THICKNESS, OR 4% OF THE CELL AREA TO BE GROUTED.
[C] MAXIMUM SPLICE LENGTH OF 72 TIMES THE DIAMETER OF THE BAR.
[D] PERMITTED ONLY IF ALL MORTAR FINS ARE REMOVED FROM THE CELL TO BE GROUTED, NOT PERMITTED IF ALL MORTAR FINS ARE NOTE REMOVED.

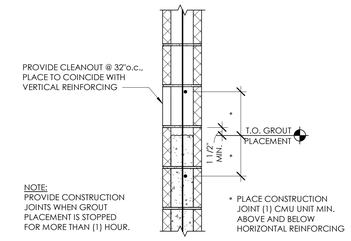
ENGINEER'S NOTES:
-REFER TO NCMA TEK 12-06A AND TMS 402-16 SECTION 6.1.6 FOR CALCULATING LAP SPLICE FOR DIFFERENCE STRENGTHS
-SPLICE LENGTHS CAN BE REDUCED IF CONFINEMENT REINFORCEMENT IS PRESENT, REFER TO TMS 402-16 SECTION 6.1.6.1.1.2.

6 MASONRY REINFORCING SPLICE TABLE
N.T.S.



NOTE:
1. REINFORCING AT FLOORS, ROOF, AND TOP OF PARAPET SHALL BE CONTINUOUS THROUGH CONTROL JOINTS; INTERRUPT OTHER HORIZONTAL REINFORCING AT CONTROL JOINTS U.O.N.
2. WALL REINFORCING NOT SHOWN FOR CLARITY; REFER TO PLAN.
3. CONTROL JOINTS SHALL BE SPACED AT 40'-0" MAX.

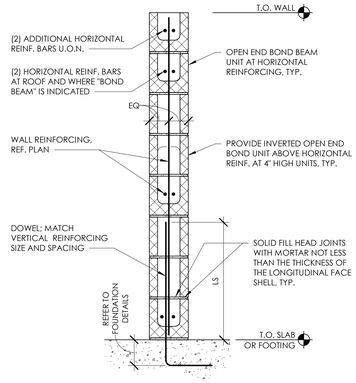
7 WALL CONTROL JOINT
N.T.S.



NOTE:
PROVIDE CONSTRUCTION JOINTS WHEN GROUT PLACEMENT IS STOPPED FOR MORE THAN (1) HOUR.

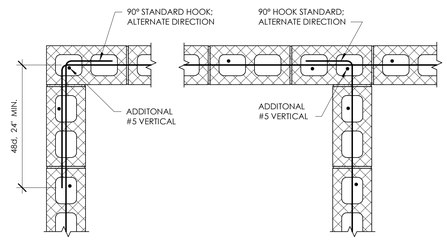
* PLACE CONSTRUCTION JOINT (1) CMU UNIT MIN. ABOVE AND BELOW HORIZONTAL REINFORCING

1 HORIZONTAL CONSTRUCTION JOINT
N.T.S.

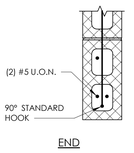


NOTES:
1. FULLY GROUT ALL CELLS CONTAINING VERTICAL REINFORCING.
2. PROVIDE CLEANOUT AT EACH REINFORCED CELL FOR HIGH LIFT GROUT PLACEMENT.
3. PROVIDE CONCAVE MORTAR JOINTS, U.O.N.

2 WALL REINFORCING
N.T.S.



CORNER INTERSECTION



END

NOTE:
'd' = REINFORCING BAR DIAMETER.

3 WALL REINFORCING AT CORNERS INTERSECTIONS & ENDS (1 LAYER)
N.T.S.

CAMERON McCARTHY
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160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

catena consulting engineers
1500 ne irving street
suite 412
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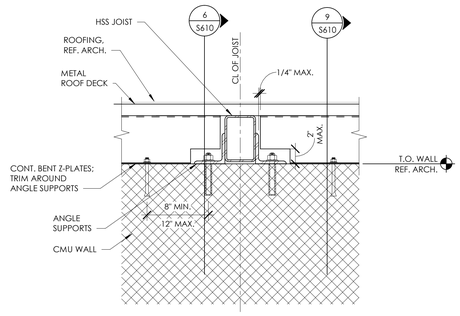
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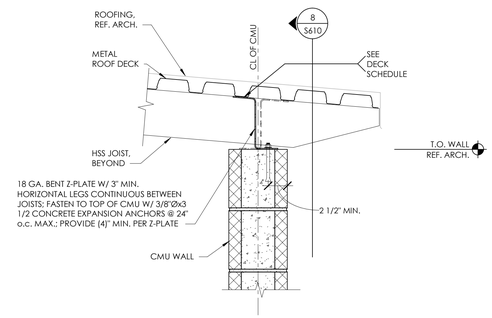
SHEET TITLE
DETAILS

SHEET #
S511



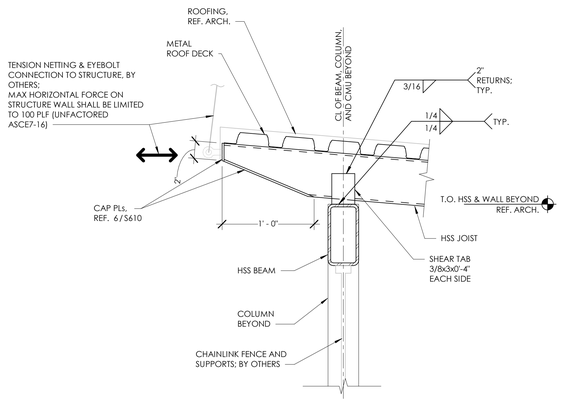
8 HSS JOIST TO CMU WALL (ELEVATION)

1 1/2" = 1'-0"



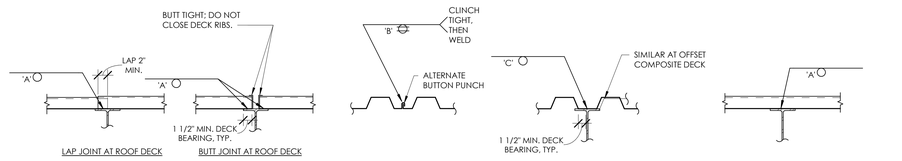
9 DECK TO CMU WALL (PARALLEL)

1 1/2" = 1'-0"



10 HSS JOIST TO HSS BEAM

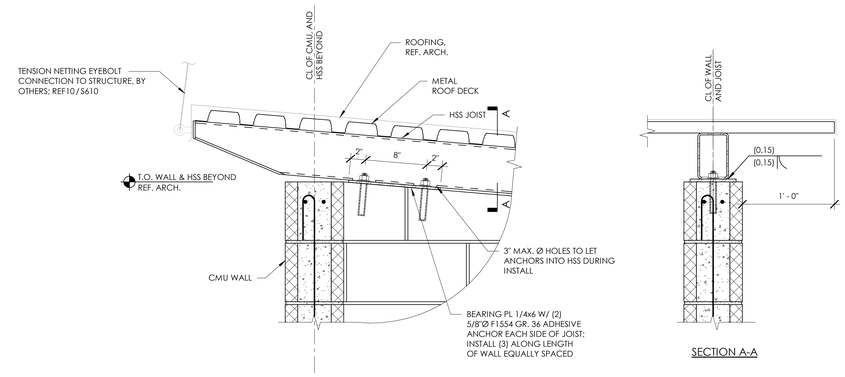
1 1/2" = 1'-0"



WELD SCHEDULE							
DECK TYPE	LOCATIONS	'A'	'B'		'C'	ALTERNATE BUTTON PUNCH	REMARKS
			SIDE SEAM WELD	TOP SEAM WELD			
NON-COMPOSITE METAL DECK	DUGOUTS	5/8"Ø ARC SPOT WELDS 36/4 PATTERN			5/8"Ø ARC SPOT WELDS @ 24" o.c.	BUTTON PUNCH @ 8"o.c.	
NON-COMPOSITE METAL DECK	ROOF						

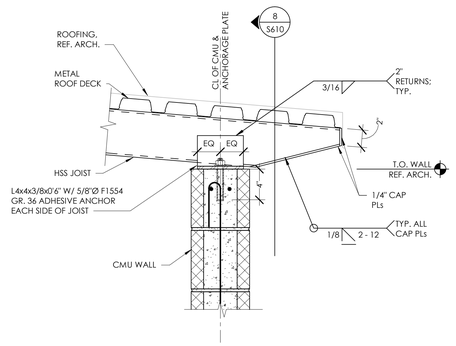
4 METAL DECK CONNECTIONS

N.T.S.



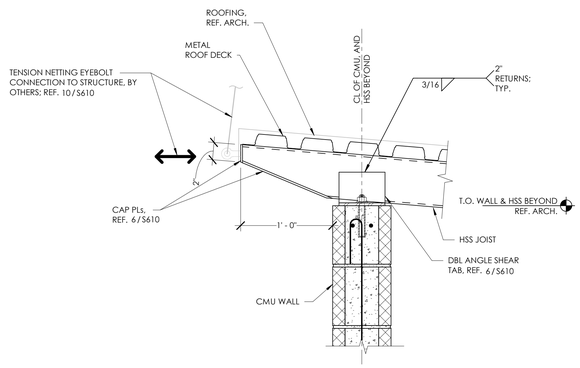
5 HSS JOIST TO CMU WALL (RIDGE SECTION)

1 1/2" = 1'-0"



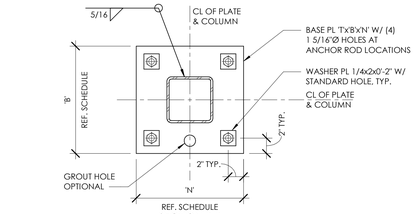
6 HSS JOIST TO CMU WALL (EAVE SECTION)

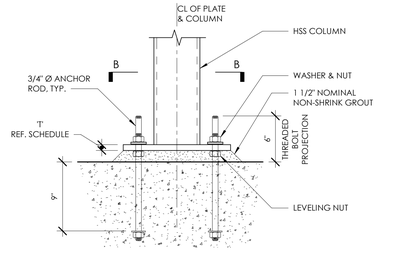
1 1/2" = 1'-0"



7 HSS JOIST TO CMU WALL (RIDGE SECTION)

1 1/2" = 1'-0"





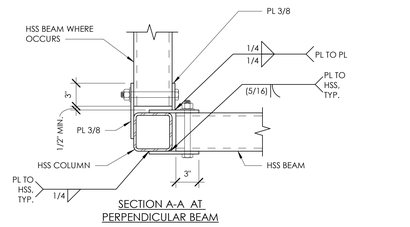
NOTES:

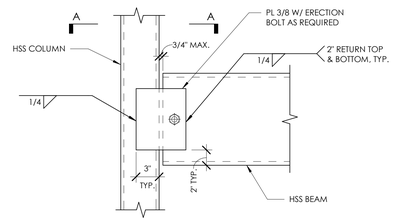
1. ANCHOR RODS SHALL BE HEADED ASTM F1554 GRADE 36 U.O.N.; GALVANIZE BASE PLATE, ANCHOR RODS, WASHERS AND NUTS WHERE LOCATED OUTSIDE THE BUILDING ENVELOPE.
2. PROVIDE MILL FINISH AT BOTTOM OF COLUMN AND TOP OF BASE PLATE.
3. 3/4" Ø x 9" EXPANSION ANCHORS ARE ACCEPTABLE IN LIEU OF ANCHOR RODS.

BASE PLATE SCHEDULE			
COLUMN SIZE	'N'	'B'	THICKNESS 'T'
SQUARE HSS	'N'HSS + 8"	'N'HSS + 8"	3/4"

1 COLUMN BASE PLATE

N.T.S.





2 HSS BEAM TO HSS COLUMN

N.T.S.

NON-COMPOSITE METAL DECK PROPERTIES						
TYPE	PROFILE	THK. (gage)	I $(in^4)/ft$	+S $(in^3)/ft$	-S $(in^3)/ft$
B	1 1/2" 3' - 0"	20	0.216	0.235	0.248
		18	0.302	0.322	0.335
		16	0.377	0.411	0.417
N	3" 2' - 0"	20	0.780	0.466	0.548
		18	1.146	0.664	0.737
		16	1.542	0.851	0.914

NOTE:

1. METAL DECK SHALL BE AS SHOWN WITH PROPERTIES CALCULATED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISI PUBLICATION "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".

3 METAL DECK PROPERTIES

N.T.S.

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

catena consulting engineers
1500 ne irving street
suite 412
portland, or 97232
503. 467. 4980

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS
CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

STAMP

Drawn By: MBW
Checked: JMT
Project #: 25.020
Date: Oct. 09, 2025

Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
STEEL DETAILS

SHEET #
S610

ABBREVIATIONS

A, AMP	AMMETER, AMPERE
AB	ABSOLUTE
AC	ALTERNATING CURRENT
ACB	AIR CIRCUIT BREAKER
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CURRENT
ANN	ANNUNCIATOR
ARF	ABOVE RAISED FLOOR
AS	AMMETER SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
ATX	AUTO TRANSFORMER
AWG	AMERICAN WIRE GAUGE
B	BELL
BAT	BATTERY
BC	BARE COPPER
BFF	BELOW FINISHED FLOOR
BG	BULK GAS
BKR	BREAKER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BOC	BOTTOM OF CONDUIT
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOT	BOTTOM OF TRAY
BRN	BUS REFERENCE NO. (ENGINEERING STUDY USE)
BT	BASIC TRANSPONDER
C	CONDUIT, COIL
CAP.	CAPACITOR
CAT.#	CATALOG NUMBER
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CCTV	CLOSED CIRCUIT TELEVISION
CCT.CKT	CIRCUIT
CLK	CLOCK
CMS	COMBINATION MOTOR STARTER
CO	CONDUIT ONLY
CONT	CONTINUED
CPS	CONTINUOUS POWER SUPPLY
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CRE	CORROSION RESISTANT
CRS	COATED RIGID STEEL CONDUIT
CRWP	CLEANROOM WALL PANEL
CSFD	COMBINATION SMOKE, FIRE DAMPER
CT	CURRENT TRANSFORMER
D	DUCT
DB	DUCT BANK
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DIA	DIAMETER
DIV	DIVISION
DWG	DRAWING
Δ	DELTA CONNECTED
E	EMPTY
(E)	EXISTING
ECS	EMERGENCY COMMAND STATION
EDF	ELECTRIC DRINKING FOUNTAIN
EEW	ELECTRICAL ENERGIZED WORK
EG	ENGINE GENERATOR
EL	ELEVATION
ELEC	ELECTRICAL
EM,EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
EMO	EMERGENCY MANUAL OFF
EMT	ELEC METALLIC TUBING
ENT	ELEC NON-METALLIC TUBING
EOL	END-OF-LINE DEVICE
EPS	EMERGENCY POWER SOURCE
EPSP	EMERGENCY POWER SOURCE PRIMARY
EPSS	EMERGENCY POWER SOURCE SECONDARY
ERT	EMERGENCY RESPONSE TEAM
ESES	EMER SERVICE ENTRANCE SUBSTATION
ET	EXPANDED TRANSPONDER
ETM	ELAPSED TIME METER
EWC	ELECTRIC WATER COOLER
F	FLUSH, FUSE CONTACTOR
(F)	FUTURE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FCS	FACILITY CONTROL SYSTEM
FDR	FEEDER
FLR	FLOOR
FMR	FUSES PER MANUFACTURE RECOMMENDATIONS
FOL	FAST ACTING OL RELAY
FU	FUSE FIRE
FWS	FIRE WATER STORAGE
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GND	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT RELAY
GSM	GAS SAFETY MONITOR
H	HORN
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HB	HORIZONTAL BEND
HP	HORSEPOWER
HTP	HEAT TRACE CONTROL PANEL
ICCB	INSULATED CASE CIRCUIT BREAKER I.D. (IDENTIFICATION)
IER	INTEGRATED EQUIPMENT RATING
I&C	INSTRUMENTATION AND CONTROL
IMC	INTERMEDIATE METALLIC CONDUIT
INV	INVERT
I/O	INPUT/OUTPUT IS CURRENT SWITCH
J, JB	JUNCTION BOX
K	KEY INTERLOCK
KCM	1000 CIRCULAR MIL
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVAR	KILOVAR
KW	KILOWATT
KWD	KILOWATT DEMAND
KWH	KILOWATT HOUR
L	LEFT
LAN	LOCAL AREA NETWORK
LC	LIGHTING CONTACTOR
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
LUPW	LITHIO ULTRA PURE WATER
LV	LOW VOLTAGE
LVR	LOW VOLTAGE RELAY
M	MAG CONTACTOR, COIL OR CONTACT, MAIN CONTACTOR
MAX	MAXIMUM
MBS	MAINTENANCE BYPASS SWITCH
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MDC	MOTORIZED DAMPER CONTROL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MMP	MECHANICAL MOUNTING PANEL
MO	MOTOR OPERATOR
MS	MOTOR STARTER
MSP	MOTOR STATER PANEL
MT,MTD	MOUNT, MOUNTED
MTR	MOTOR
MV	MEDIUM VOLTAGE
N	NEUTRAL
(N)	NEW
NA	NON-AUTOMATIC
NC	NORMALLY CLOSED
NE	NORTHEAST
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NP	NAMEPLATE
NPS	NORMAL POWER SOURCE
NTS	NOT TO SCALE
NW	NORTHWEST
OC	OVERCURRENT
OCB	115KV OIL CIRCUIT BREAKER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OL	OVERLOAD RELAY
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
OPD	OPEN POLE DETECTOR
P	POWER
PB	PUSHBUTTON SWITCH
PC	PHOTOCELL
PCP	PLANT CONTROL PANEL
PDP	POWER DISTRIBUTION PANEL
PF	POWER FACTOR
PL	PILOT LIGHT
PIN	PERSONAL ID NUMBER
PIV	POST INDICATOR VALVE
PM	POWER MONITOR
PNL	PANEL
PP	PUSH PAD
PQ	POWER QUALITY
PROJ	PROJECT
Ø	PHASE
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
R	RATE OF RISE, RIGHT
(R)	RELOCATE
RCPT	RECEPTACLE
RCY	RACEWAY
(RD)	REDUNDANT
RF	RADIO FREQUENCY
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMS	ROOT MEAN SQUARE
RQD	REQUIRED
RTM	RUNNING TIME METER
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
S	SPEAKER
S.C.	SHORT CIRCUIT
SCCR	SHORT CIRCUIT CURRENT RATING
SCD	SUPPLIER CODE
SCP	SECURITY CONTROL PANEL
SE	SOUTH EAST
SEC	SECONDS
SES	SERVICE ENTRANCE SUBSTATION
SFEP	SMOKE/FUME EXHAUST PANEL
SO	SWITCH OPERATOR
SOL	SLOW SPEED OL RELAY
SP	SPARE
SS	STAINLESS STEEL
ST	SHUNT TRIP
STC	SOURCE TRANSFER CONTROL
STD	STANDARD
SUPP	SUPPRESSOR
SUR	SURFACE
SW	SWITCH, SOUTHWEST
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRICAL
SYNC	SYNCHRONIZER
2S1W	TWO SPEED, ONE WINDING
2S2W	TWO SPEED, TWO WINDING
TB	TERMINAL BLOCK
TBD	TO BE DETERMINED
TC	TIME CLOCK
TDR	TIME DELAY RELAY
TJB	TERMINAL JUNCTION BOX
TM	TEMPERATURE MONITOR
TOC	TOP OF CONDUIT
TS	TAMPER SWITCH
TSP	TWISTED SHIELDED PAIR
TSTAT	THERMOSTAT
(TYP)	TYPICAL
U	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTMETER, VOLT
VA	VOLT-AMPERE
VESDA	VERY EARLY SMOKE DETECTION APPARATUS
VFVI	VENDOR FURNISHED VENDOR INSTALLED
VFD	VARIABLE FREQUENCY DRIVE
VIB	VERTICAL INSIDE BEND
VLF	VERTICAL LAMINAR FLOW UNIT
VOB	VERTICAL OUTSIDE BEND
VP	VAPORPROOF
VS	VOLTMETER SWITCH
VT	VOLTAGE TRANSFORMER
W	WATT, WIR
WHD	WATTHOUR DEMAND METER
WP	WEATHERPROOF
WSPW	WAFER STARTS PER WEEK
X	EXPLOSION PROOF - TYPE, CLASS AND GROUP AS NOTED
(X)	REMOVE
XFMR	TRANSFORMER
Y	WYE-CONNECTED
Z	IMPEDANCE
ZSD	ZERO SEQUENCE DETECTOR

PROJECT GENERAL NOTES

A. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS MAY APPEAR ON THIS SHEET AND NOT ON THE PROJECT DRAWINGS.

B. TAG NUMBER DENOTES DEVICE ADDRESS.

C. MOUNTING PER SPECIFICATION UNLESS NOTED OTHERWISE. REFER TO PLAN DRAWINGS AND SECTIONS FOR MOUNTING HEIGHTS.

D. NEMA 1 UNLESS INDICATED OTHERWISE:
- 3R NEMA 3R
- X EXPLOSION PROOF
- 4X NEMA 4X
- WP WEATHER PROOF

E. SEE CONTROL DIAGRAM FOR OPERATIONAL SCHEMATIC.

F. LUMINAIRE SYMBOLS SHOWN ARE GENERIC GRAPHIC REPRESENTATIONS. REFER TO LUMINAIRE SCHEDULE FOR SPECIFIC SOURCE, TYPE AND MOUNTING.

G. CONDUIT ZONE ELEVATIONS ARE ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE.

H. REFER TO ARCHITECTURAL DRAWINGS FOR ELECTRICAL AREA CLASSIFICATIONS AND LOCATIONS OF STRUCTURAL ISOLATIONS BREAKS.

I. EQUIPMENT, CONDUIT, RACEWAYS AND TRAYS ARE SHOWN DIAGRAMMATICALLY. LOCATIONS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. FIELD COORDINATE WORK WITH ARCHITECTURAL, TELECOM, MECHANICAL AND OTHERS.

J. COMPLY WITH THE OREGON ELECTRICAL SPECIALTY CODE LATEST ADOPTED EDITION.

K. THE DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY.

L. CONDUCTORS AND CONDUIT ARE SIZED ON BASIS OF, THHN/THWN. ALUMINUM OR COPPER AS NOTED ON DRAWINGS.

M. SEE CONTROL DIAGRAMS FOR OPERATIONAL SCHEMATIC.

N. LUMINAIRE SYMBOLS SHOWN ARE GENERIC GRAPHIC REPRESENTATIONS. REFER TO LUMINAIRE SCHEDULE FOR SPECIFIC SOURCE, TYPE AND MOUNTING.

O. WIREWAY ROUTING IS SCHEMATIC. FIELD ROUTE.

P. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL COMPONENTS, SUPPORT AND TERMINATIONS UNLESS NOTED OTHERWISE.

Q. COORDINATE EQUIPMENT/ DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS.

R. CONTRACTOR SUPPLIED LOCKABLE SWITCHES OR BREAKERS SHALL BE SIZED PER EQUIPMENT MFG NAMEPLATE IF AVAILABLE OR N.E.C.

S. ROUTE GEC TO NEAREST GROUND ELECTRODE.

T. CONDUIT SHALL BE EMT, UNLESS NOTED OTHERWISE.

U. REFERENCE FACILITY DATA MATRIX FOR POWER SOURCE DETAILS.

V. CIRCUIT RACEWAYS MAY BE COMBINED. ADJUST CONDUCTOR SIZE AS NEEDED FOR DERATING.

W. TRANSITION TO FLEXIBLE CONDUIT AT TERMINATION TO MECHANICAL EQUIPMENT TO MINIMIZE VIBRATION TRANSMISSION.

X. ALL WIRE IS COPPER THHN/THWN-2 U.N.O.

POWER LEGEND

??, 10a, SWITCH, CIRCUIT, GFCI	WP WEATHERPROOF; US USB; AF ARC FAULT; IG ISOLATED GROUND; AC ABOVE COUNTER; TR TAMPER RESISTANT; FS FULLY SWITCHED; HS HALF SWITCHED
	SIMPLEX RECEPTACLE, WALL / CEILING / FLOOR
	DUPLEX RECEPTACLE, WALL / CEILING / FLOOR
	QUADRUPLEX RECEPTACLE, WALL / CEILING / FLOOR
	SPECIAL PURPOSE RECEPTACLE, WALL / CEILING / FLOOR
	JUNCTION BOX, WALL / CEILING / FLOOR
	FLEXIBLE CONNECTION
	PUSH PAD / DOOR ACTUATOR
	CONTROL STATION
?	POWER POLE, D = DATA ONLY
	CONDUIT, DOWN / UP / STUB
	EQUIPMENT CONNECTION POINT
	MOTOR CONNECTION POINT
	SWITCHBOARDS AND MAJOR EQUIPMENT
	PANELBOARDS AND MINOR EQUIPMENT
?	DISCONNECT SWITCH (NONFUSED) F FUSED CB ENCLOSED CIRCUIT BREAKER
	ENCLOSED STARTER
	ENCLOSED COMBINATION STARTER/DISCONNECT
	GROUND BAR
#10 IG	BRANCH CIRCUIT(S) HOMERUN TO PANELBOARD WIRE TICK MARKS CIRCLE GROUND CONDUCTOR, IG=ISOLATED GROUND LONG NEUTRAL CONDUCTOR SHORT HOT CONDUCTOR # INDICATES WIRE GAUGE, BLANK INDICATES #12 GAUGE

LOW VOLTAGE LEGEND

	VOICE - WALL / CEILING / FLOOR
	DATA - WALL / CEILING / FLOOR
	VOICE/DATA - WALL / CEILING / FLOOR
	AUDIO/VIDEO - WALL / CEILING / FLOOR
S, X	SPEAKER - WALL, CEILING P1 ROUND FLUSH - HARD LID CEILING P2 2X2 LAY IN - T-BAR CEILING P3 FLUSH MOUNT HORN - WALL MOUNT AV AUDIO / VIDEO
	WIRED WALL CLOCK
	WIRELESS WALL CLOCK
	CABLE TRAY (MESH)
	CABLE TRAY (LADDER)
V	SPEAKER VOLUME CONTROL SWITCH

LIGHTING LEGEND

A1, A, 1, b, EM	LUMINAIRE TYPE PANEL - CIRCUIT SWITCH LEG EMERGENCY
	LINEAR LUMINAIRE, RECESSED
	LINEAR LUMINAIRE, SURFACE
	LINEAR LUMINAIRE, SUSPENDED
	STRIP LUMINAIRE, RECESSED
	STRIP LUMINAIRE, SURFACE
	STRIP LUMINAIRE, SUSPENDED
	STRIP LUMINAIRE, WALL
	CIRCULAR LUMINAIRE, RECESSED (DOWNLIGHT)
	CIRCULAR LUMINAIRE, SURFACE
OR	CIRCULAR LUMINAIRE, SUSPENDED (PENDANT)
OR	WALL MOUNTED LUMINAIRE
OR	POLE MOUNTED LUMINAIRE
OR	EXIT LIGHT, CEILING OR WALL
	EXTERIOR BOLLARD LUMINAIRE
	EXTERIOR IN GRADE LUMINAIRE
?	WALL SWITCH 2 DOUBLE POLE; 3 THREE WAY; 4 FOUR WAY; D DIMMER; M MASTER OVERRIDE; P PILOT LIGHT; K KEY OPERATED; WP WEATHER PROOF; L LOCKABLE; OC OCCUPANCY SENSOR
?, XX	LOW VOLTAGE SWITCH GROUP (BLANK)=PUSH BUTTON D DIMMER STYLE S SCENE STYLE x,x SWITCH LEGS CONTROLLED
XX, XX	DEVICE LC LIGHTING CONTROLLER; PP POWER PACK; SP SLAVE PACK; R RELAY UL924
PC, PC	PHOTOCELL/DAYLIGHT SENSOR LIGHTING CONTROL UNIT O OPEN LOOP C CLOSED LOOP
MD, MD	LINE VOLTAGE MOTION DETECTOR U ULTRASONIC; P PASSIVE INFRARED; DT DUAL TECHNOLOGY; "n" NETWORKED; "c" CORNER MOUNTED

DOOR INTERCOM LEGEND

ICM	INTERCOM MASTER STATION
ICD	INTERCOM DOOR STATION
ICCP	INTERCOM ADAPTOR
ICPS	24VDC DOOR LOCK POWER SUPPLY

FIRE ALARM LEGEND

FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
NAC	NOTIFICATION PANEL
EVAC	VOICE EVAC PANEL
COMM	COMMUNICATOR / DIALER
F	PULL STATION
TS	TAMPER SWITCH
FS	FLOW SWITCH
M	MONITOR MODULE
C	CONTROL RELAY
	HORN AND STROBE, WALL / CEILING
	STROBE, WALL / CEILING
	HORN, WALL / CEILING
EOL	END OF LINE RESISTOR
	FLOW BELL
	SMOKE DETECTOR
H	HEAT DETECTOR

SECURITY LEGEND

XX	SECURITY DEVICE AO AUTO OPERATOR; DL DOOR LOOP; EL ELEC. HARDWARE; ES ELEC. STRIKE; R RELAY; AP ACCESS PANEL; GB GLASS BREAK; CR CARD READER; DC DOOR CONTACT; EH ELEC. HINGE; PP PUSH PLATE; RE REQUEST TO EXIT; MS MOTION SENSOR; KP KEY PAD
	SECURITY HORN / SOUNDER
XX	CAMERA
ACP	ACCESS CONTROL PANEL
SPS	SECURITY POWER SUPPLY
ICP	INTRUSION CONTROL PANEL

GENERAL SYMBOLS

?	KEYED NOTE
?, ?	DETAIL CALLOUT WITH DETAIL AND SHEET NUMBERS
?, ?	SECTION CALLOUT WITH DETAIL AND SHEET NUMBERS
?	REVISION CLOUD AND TAG
???	DOOR TAG

ONE-LINE LEGEND

K	KIRK KEYED INTERLOCK SWITCH
100 A, 100 A, M	CIRCUIT BREAKER 3 POLE UNLESS INDICATED OTHERWISE. M = MAGNETIC TRIP ONLY TRIP/ FRAME SIZE
	GROUND
480V, 208Y/120V	TRANSFORMER
400:5, (?)	CURRENT TRANSFORMER. RATIO & QUANTITY INDICATED.
800:5, (?)	GROUND SENSOR CURRENT TRANSFORMER. RATIO & QUANTITY INDICATED.
DM	DISPLAY METER (DM)
CS	CONTROL SWITCH
SPD	SURGE PROTECTION DEVICE
208/120V 3PH, 4W AIC; 65 kA RATED, NAME, 100A	BRANCH CIRCUIT PANELBOARD
?, ? A	AUTOMATIC TRANSFER SWITCH ? NAME ? A CURRENT ? kA WIR WITHSTAND RATING
	GENERATOR

CONDUCTOR COLOR CODES

CONDUCTOR	208/120V	240/120V	415Y/240V & 480/277V	ABOVE 600V
PHASE A	BLACK	BLACK	BROWN	RED
PHASE B	RED	ORANGE	ORANGE	BLUE
PHASE C	BLUE	BLUE	YELLOW	BLACK
NEUTRAL	WHITE	WHITE	GRAY	-
GROUND	GREEN	GREEN	GREEN	-
ISO GROUND	GN/YL	GN/YL	GN/YL	-

RACEWAY DESIGNATION

EXAMPLE: [2"C, 2#4/0, 1#4G] AL

[2" C, 2 #4/0, 1 #4 G] AL
- CONDUIT SIZE
- RACEWAY TYPE: C CONDUIT; R RACEWAY (NON-SPECIFIC); W WIREWAY
- NUMBER OF CONDUCTORS
- AWG SIZE OF CONDUCTORS (600V UNLESS INDICATED OTHERWISE)
- NUMBER OF GROUND CONDUCTORS
- AWG SIZE OF GROUND CONDUCTORS
- GROUND
- BLANK = COPPER, AL = ALUMINUM

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

PECi
PORTLAND ELECTRICAL CONSTRUCTION INC.

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

Drawn By: K. SCOTT
Checked: C. DONOHUE
Project #: 597
Date: 10/09/25

Rev. #:	Date:
1	10/09/25

ISSUE FOR 100% DD

SHEET TITLE
LEGENDS, NOTES AND ABBREVIATIONS

E0.01

DIVISION 26

26 05 00 – COMMON WORK RESULTS FOR ELECTRICAL SYSTEMS

A. SCOPE – THIS SPECIFICATION COVERS BASIC MATERIALS AND WIRING METHODS FOR ELECTRICAL SYSTEMS AND INCLUDES THE FOLLOWING PRIMARY COMPONENTS
   1. LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
   2. RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
   3. WIRING DEVICES FOR ELECTRICAL SYSTEMS
   4. EQUIPMENT DISCONNECTS
   5. IDENTIFICATION FOR ELECTRICAL SYSTEMS

B. SUBMITTALS – PROVIDE THE FOLLOWING SUBMITTALS FOR VERIFICATION WITH THE ARCHITECT:
   1. PROVIDE SUBMITTALS FOR FLOOR BOXES TO BE USED INCLUDING TRIM FINISH COLORS FOR FINAL SELECTION BY THE ARCHITECT
   2. PROVIDE SUBMITTALS FOR ELECTRICAL DEVICE AND FACE PLATES TO BE USED INCLUDING TRIM FINISH COLORS FOR FINAL SELECTION AND CONFIRMATION BY THE ARCHITECT.

C. PERFORMANCE SPECIFICATION:
   1. POWER CONDUCTORS AND CABLES
      a. POWER CONDUCTORS SHALL BE THHN/THWN-2 OR XHHW-2. COPPER CONDUCTORS SHALL BE USED FOR CIRCUITS AND FEEDERS 100A AND SMALLER. FOR CIRCUITS AND FEEDERS 100A AND LARGER ALUMINUM OR COPPER ARE ACCEPTABLE
      b. MC CABLE SHALL BE STRANDED OR SOLID WITH ALUMINUM OR STEEL ARMOR. INTERNAL CONDUCTORS SHALL BE THHN OR THWN.
      c. MC CABLE SHALL BE ALLOWED FOR ALL NORMAL POWER LIGHTING AND BRANCH CIRCUIT WIRING WHERE IT CAN BE CONCEALED IN FINISHED CEILING OR WALL SPACES.
      d. MC CABLE IS NOT ALLOWED FOR [CRITICAL, LIFE SAFETY PANELBOARD CIRCUITS,] INSTALLATION IN EXPOSED CEILINGS OPEN TO STRUCTURE CEILINGS OR SURFACE MOUNTED ON WALLS.
   2. RACEWAY
      a. ELECTRICAL RACEWAY FOR BELOW GRADE APPLICATIONS SHALL BE SCHEDULE 40 OR 80 PVC CONDUIT. FOR INDOOR APPLICATIONS RACEWAY SHALL BE EMT WITH SET SCREW FITTINGS AND SHALL UTILIZE FMC FOR TERMINATIONS TO ALL EQUIPMENT REQUIRING A FLEXIBLE CONNECTION. ALL EXTERIOR ABOVE GROUND RACEWAY SHALL BE EMT, IMC OR RMC WITH WEATHER TIGHT COMPRESSION OR THREADED FITTINGS. LFMC SHALL BE USED FOR TERMINATIONS TO ALL OUTDOOR EQUIPMENT REQUIRING A FLEXIBLE CONNECTION.
      b. LOW VOLTAGE DEVICES INSTALLED IN INACCESSIBLE WALLS AND CEILINGS SHALL BE PROVIDED WITH A MINIMUM ¾"C FROM DEVICE BOX TO ACCESSIBLE CEILING SPACE.
   3. ELECTRICAL BOXES
      a. ELECTRICAL BOXES FOR INDOOR APPLICATIONS SHALL BE STAMPED STEEL AND INSTALLED FLUSH IN WALLS UNLESS NOTED OTHERWISE.
      b. EXTERIOR BOXES WHEN SURFACE MOUNTED SHALL BE WEATHERPROOF CAST ALUMINUM WITH THREADED CONDUIT HUBS. WEATHERPROOF COVERS SHALL BE HEAVY DUTY CAST ALUMINUM LISTED FOR WHILE IN USE APPLICATIONS. RACO BELL OR SIMILAR.
      c. FLOOR BOXES REQUIRED SOLELY FOR POWER OR FOR POWER AND VOICE DATA APPLICATIONS SHALL BE STAMPED STEEL OR CAST-IRON STYLE DOUBLE GANG OR SINGLE GANG AS INDICATED ON THE DRAWINGS. TRIMS SHALL BE SELECTED FOR THE FLOOR FINISH STYLE. FLOOR BOXES SHALL BE SUBMITTED TO THE ARCHITECT FOR FINAL REVIEW AND TRIM FINISH COLOR SELECTION. PROVIDE WIREMOLD OMNI BOX OR SIMILAR.
      d. FLOOR BOXES USED IN CONFERENCE ROOMS OR SIMILAR SPACES THAT REQUIRE AUDIO VIDEO SHALL UTILIZE LARGE CAPACITY SIX GANG FLOOR BOXES. TRIMS SHALL BE SELECTED FOR THE FLOOR FINISH STYLE. FLOOR BOXES SHALL BE SUBMITTED TO THE ARCHITECT FOR FINAL REVIEW AND TRIM FINISH COLOR SELECTION. PROVIDE WIREMOLD RFB6-OG OR SIMILAR.
   4. WIRING DEVICES
      a. GENERAL PURPOSE RECEPTACLES - SHALL BE HARD USE SPECIFICATION GRADE 20A DUPLEX RECEPTACLES. TYPE P&S 5362A OR SIMILAR
      b. TAMPER RESISTANT RECEPTACLES - SHALL BE HARD USE SPECIFICATION GRADE 20A DUPLEX RECEPTACLES. INSTALL TAMPER RESISTANT OUTLETS AS REQUIRED PER NEC 406.12. TYPE P&S TR5362
      c. USB CHARGING RECEPTACLES - SHALL BE TAMPER RESISTANT HARD USE SPECIFICATION GRADE 20A RATED. TYPE P&S TR5362USB.
      d. GFCI OUTLETS SHALL BE TAMPER RESISTANT AND WEATHER RESISTANT 20A STYLE. A SINGLE GFCI SHALL BE USED FOR ALL GFCI PROTECTED OUTLETS. NO LOAD SIDE WIRING OF GFCI OUTLETS IS PERMITTED. TYPE P&S 2095TRWR OR SIMILAR
      e. SPECIALTY RECEPTACLES SHALL HAVE NEMA CONFIGURATION AS INDICATED ON THE DRAWINGS. REFER TO DRAWINGS FOR NEMA CONFIGURATIONS REQUIRED.
      f. LINE VOLTAGE TOGGLE AND LOCKING KEYED SWITCHES SHALL BE 20A RATED HEAVY DUTY SPECIFICATION GRADE. TYPE P&S PS20AC OR SIMILAR.
      g. FACEPLATES SHALL BE THERMOPLASTIC NYLON. TYPE PASS AND SEYMOUR TP SERIES OR SIMILAR.
      h. FINISH COLOR SHALL BE WHITE FACEPLATES WITH WHITE DEVICE COLORS FOR ALL NORMAL POWER DEVICES. RED FACEPLATES WITH RED DEVICE COLORS SHALL BE USED FOR ALL EMERGENCY, OPTIONAL STANDBY OR CRITICAL SYSTEM DEVICES. SUBMIT DEVICE AND FACEPLATES TO THE ARCHITECT FOR FINAL APPROVAL OF FINISH COLOR PRIOR TO ORDERING.
   5. EQUIPMENT DISCONNECTING MEANS
      a. WHERE REQUIRED BY CODE AND NOT INTEGRAL TO THE SUPPLIED EQUIPMENT, CONTRACTOR SHALL SUPPLY DISCONNECTS FOR ALL MOTORS AND EQUIPMENT REQUIRED PER NEC.
      b. SINGLE POLE TOGGLE SWITCHES - FOR USE ON SINGLE PHASE LINE TO NEUTRAL EQUIPMENT NOT EXCEEDING 30A OR HP RATINGS AS LISTED ON THE SWITCHES.
      c. MANUAL CONTROLLERS - FOR 3 PHASE AND SINGLE-PHASE LINE TO LINE EQUIPMENT NOT EXCEEDING 30A OR HP RATING AS INDICATED ON THE SWITCH. MANUAL CONTROLLERS SHALL INCLUDE ENCLOSURE RATED FOR THE ENVIRONMENT. TYPE P&S 7800 SERIES MANUAL CONTROLLERS OR SIMILAR.
      d. HEAVY DUTY SAFETY SWITCH – FOR ALL OTHER APPLICATIONS PROVIDE HEAVY DUTY SAFETY DISCONNECT SWITCHES. FOR OUTDOOR APPLICATIONS PROVIDE NEMA 3R STYLE SWITCHES FOR INDOOR APPLICATIONS PROVIDE NEMA 1 STYLE SWITCHES. VOLTAGE AND FUSE RATINGS SHALL BE CONFIRMED WITH EQUIPMENT PRIOR TO INSTALLATION. FUSED DISCONNECTS SHOULD ONLY BE USED WHEN UPSTREAM BREAKERS DO NOT PROVIDE REQUIRED PROTECTION FOR THE EQUIPMENT BEING SERVED OR IF MANUFACTURE INSTALLATION INSTRUCTIONS REQUIRE FUSING AHEAD OF EQUIPMENT.
   6. IDENTIFICATION OF ELECTRICAL SYSTEMS
      a. SERVICES: SERVICES SHALL BE PROVIDED WITH A PHENOLIC PLAQUE INDICATING SERVICE PANEL NAME, AMPERAGE, SYSTEM VOLTAGE/PHASE SERVICE ADDRESS, INSTALLATION DATE AND CALCULATED AVAILABLE FAULT CURRENT.
      b. PANELBOARDS: SHALL BE PROVIDED WITH A PHENOLIC NAMEPLATE INDICATING PANEL NAME. BELOW THE PHENOLIC LABEL UTILIZING CLEAR TAPE THE PANEL SOURCE SHALL BE INDICATED.
      c. DISTRIBUTION FEEDER BREAKERS AND SUB FEED BREAKERS: PROVIDED A PHENOLIC NAMEPLATE INDICATING LOAD FOR EACH FEEDER BREAKER IN A DISTRIBUTION BOARD, SWITCHBOARD, OR SUB-FEED BREAKER IN A STANDARD PANELBOARD.
      d. BRANCH PANEL CIRCUIT DIRECTORY: PROVIDE A TYPED CIRCUIT DIRECTORY FOR ALL BRANCH PANELS.
      e. BRANCH CIRCUITS SERVING FIRE ALARM DEVICES SHALL HAVE A RED LOCKING DEVICE TO LOCK THE BREAKER IN THE CLOSED POSITION. THE OUTSIDE OF THE PANELBOARD SHALL BE LABELED TO INDICATE THAT A FIRE ALARM CIRCUIT IS LOCATED INSIDE THE PANEL. UTILIZE SPACE AGE ELOCK-FA CIRCUIT BREAKER LOCKOUT KIT OR SIMILAR.
      f. EMERGENCY TRANSFER SWITCHES SHALL INCLUDE A PHENOLIC LABEL INDICATING TRANSFER SWITCH NAME, NUMBER OF POLES, RATED AMPERAGE, AND APPLICABLE NEC ARTICLE (NEC 514, 700, 701 OR 702). BELOW THE PHENOLIC LABEL UTILIZING CLEAR TAPE BOTH NORMAL POWER AND EMERGENCY SOURCE SHALL BE INDICATED AS WELL AS THE WITHSTAND CURRENT RATING / BREAKER SERIES RATING AND WORST-CASE AVAILABLE FAULT CURRENT.
      g. ALL DEVICE BOXES SHALL BE LABELED WITH A PERMANENT MARKER IN THE BACK OF THE BOX INDICATING THE DEVICE PANEL AND CIRCUIT NUMBER. RECEPTACLE COVER PLATES IN PATIENT CARE SPACES AND OPERATING ROOMS SHALL BE LABELED WITH A CLEAR STICK ON TAPE INDICATING PANEL AND CIRCUIT NUMBER.
      h. MECHANICAL AND PLUMBING DISCONNECTS: PROVIDE A CLEAR STICK ON LABEL WITH BLACK LETTERS INDICATING EQUIPMENT SERVED AND PANEL / CIRCUIT NUMBER.
      i. PHENOLIC LABELS FOR NORMAL POWER EQUIPMENT SHALL HAVE A BLACK LABEL WITH WHITE LETTERS. PHENOLIC LABELS FOR EMERGENCY EQUIPMENT AND EQUIPMENT SERVED BY A GENERATOR SHALL HAVE A RED LABEL WITH WHITE LETTERS.

D. PROJECT CLOSEOUT: PROVIDE AS-BUILT ELECTRICAL DRAWINGS AND PANEL SCHEDULES IN PDF FORMAT. PROVIDE A COPY OF THE FINAL ELECTRICAL PERMIT. PROVIDE (1) HARD COPY OF THE AS-BUILTS IN THE MAIN ELECTRICAL ROOM.

E. WARRANTY: PROVIDE A 1-YEAR WORKMANSHIP WARRANTY COVERING ALL INSTALLATION AND WIRING OF THE BUILDING.

END OF SPECIFICATION SECTION

26 09 00 – LIGHTING CONTROL DEVICES AND SYSTEMS

A. SCOPE: THIS SPECIFICATION COVERS THE BASIC PRODUCT REQUIREMENTS OF THE LIGHTING CONTROL SYSTEM AND LIGHTING CONTROL DEVICES. REFER TO SEQUENCE OF OPERATIONS AND DRAWINGS FOR INTENDED DEVICES TO CONTROL SPACE:
   1. LIGHTING CONTROL RELAY PANELS / CONTACTORS AND TIME CLOCKS
   2. NETWORKING COMPONENTS (NOT USED)
   3. DIGITAL ROOM CONTROLLERS AND DEVICES (WIRED OR WIRELESS)
   4. DAYLIGHTING SENSORS
   5. OCCUPANCY SENSORS AND SWITCHES (DIGITAL AND LINE VOLTAGE)
   6. LINE VOLTAGE DIMMING SWITCHES
   7. UL 924 EMERGENCY RELAYS.

B. SUBMITTALS: PROVIDE DEVICE SPECIFICATION SHEETS AND SHOP DRAWINGS INDICATING ALL DEVICES TO BE USED IN EACH ROOM/SPACE. INCLUDE ANY WIRING DIAGRAMS NECESSARY FOR INSTALLATION OF SYSTEM.

C. PERFORMANCE SPECIFICATION:
   1. EXTERIOR LIGHTING CONTROLS: OUTSIDE LIGHTING SHALL BE CONTROLLED BY A COMBINATION ASTROLOGICAL TIMECLOCK AND CONTACTOR PANEL OR STANDALONE LIGHTING CONTROL PANEL WITH RELAYS AS INDICATED ON THE DRAWINGS AND LIGHTING CONTROL PANEL SCHEDULE. LIGHTING SHALL BE CONTROLLED TO TIME SETTINGS AS INDICATED IN THE SEQUENCE OF OPERATIONS OR RELAY PANEL SCHEDULE. ONE MANUAL OVERRIDE SWITCH SHALL BE PROVIDED AS INDICATED ON THE DRAWINGS TO TURN ON EXTERIOR LIGHTING. PROVIDE TYPE WATTSTOPPER PEANUT PANEL OR SIMILAR.
   2. DIGITAL LIGHTING CONTROLS SHALL BE UTILIZED WHERE INDICATED ON THE DRAWINGS AND SEQUENCE OF OPERATIONS. PROVIDE STANDALONE ROOM CONTROLLERS, DIGITAL SWITCHES, OCCUPANCY SENSORS AND DAYLIGHT SENSORS FOR A FULLY FUNCTIONAL SYSTEM IN THE ROOM CONTROLLED. TYPE WATTSTOPPER DLM LMRC-210 AND LMRC-110 SERIES ROOM CONTROLLERS OR SIMILAR.
   3. DAYLIGHT SENSORS WHEN REQUIRED SHALL BE DIGITAL STYLE FOR CONTINUOUS DIMMING AND BE WIRED TO STANDALONE ROOM CONTROLLERS WITHIN THE SPACE.
   4. LINE VOLTAGE OCCUPANCY/VACANCY SENSOR SWITCHES FOR ON/OFF OPERATION ONLY. PROVIDE PIR OR DUAL TECH SENSOR SWITCHES AS INDICATED ON THE PLAN VIEW DRAWINGS. TYPE WATTSTOPPER PW-301, DT-301 OR SIMILAR.
   5. 0-10V DIMMING LINE VOLTAGE OCCUPANCY/VACANCY SENSOR SWITCHES FOR ON/OFF CONTROL WITH DIMMING. PROVIDE PIR OR DUAL TECH SENSORS AS INDICATED ON THE PLAN VIEW DRAWINGS. TYPE WATTSTOPPER PW-311, DW-311 OR SIMILAR.
   6. LINE VOLTAGE CEILING OCCUPANCY SENSORS FOR AUTO ON/OFF OPERATION ONLY. PROVIDE LINE VOLTAGE RATED PIR OR DUAL TECH SENSORS AS INDICATED ON THE PLAN VIEW DRAWINGS. TYPE WATTSTOPPER CI-355, DT-355 OR SIMILAR.
   7. LOW VOLTAGE CEILING VACANCY/OCCUPANCY SENSORS FOR AUTO OR MANUAL ON/OFF OPERATION. PROVIDE LOW VOLTAGE CLASS 2 POWERED PIR OR DUAL TECH OCCUPANCY/VACANCY SENSORS. USED IN COMBINATION WITH POWER PACKS AND LOW VOLTAGE MOMENTARY SWITCHES FOR MANUAL ON CONTROL OF ROOMS. WATTSTOPPER CI-300, DT-300 OR SIMILAR.
   8. LIGHTING CONTROL POWER PACKS FOR RELAY CONTROL OF LIGHTING UTILIZING LOW VOLTAGE OCCUPANCY SENSORS. TYPE WATTSTOPPER BZ-150 OR SIMILAR.
   9. LINE VOLTAGE 0-10V DIMMING TOGGLE SWITCHES SHALL BE USED IN ROOMS WHERE MANUAL DIMMING IS NEEDED BUT AUTOMATIC CONTROLS IS NOT DESIRED. PROVIDE WATTSTOPPER TSD4FBL3P OR SIMILAR.
   10. LOW VOLTAGE MOMENTARY SWITCHES TO PROVIDE ON/OFF MANUAL ON SWITCHING CAPABILITY OR EXTERIOR LIGHTING CONTROL OVERRIDE – TYPE WATTSTOPPER LVSW-100 SERIES OR SIMILAR.
   11. UL 924 RELAYS SHALL BE PROVIDED TO SWITCH ALL EMERGENCY LIGHTS ON AUTOMATICALLY DURING A POWER FAILURE. UNDER NORMAL OPERATION THE EMERGENCY RELAY SHALL ALLOW EMERGENCY LIGHTING IN THE SPACE TO TURN ON AND OFF WITH NORMAL POWER LIGHTING. TYPE WATTSTOPPER ELCU-200 OR SIMILAR.
   12. FINISH COLORS FOR SWITCHES SHALL BE AS INDICATED IN 26 50 00 C. 4.

D. ACCESSORIES:
   1. FOR ALL DIGITAL CONTROL DEVICES SUPPLY (1) REMOTE CONTROL/PROGRAMMER TO ADJUST SENSOR SETTINGS.

E. STARTUP & TESTING SERVICES: PROVIDE FACTORY PERSONAL AT CONTRACTOR'S DISCRETION.

F. TRAINING SERVICES: TRAIN OWNER ON BASIC OPERATION OF LIGHTING CONTROLS IN EACH SPACE AND INCLUDE TRAINING ON SETTING AND ADJUSTING OF TIME CLOCK PANEL.

G. PROJECT CLOSEOUT: PROVIDE FINAL AS-BUILT SHOP DRAWINGS OF LIGHTING CONTROL SYSTEM. IF ANY SETTINGS OR ADJUSTMENTS WERE MADE TO THE SEQUENCE OF OPERATIONS PROVIDE AS-BUILT MARKUPS INDICATING MODIFICATIONS. PROVIDE O&M MANUALS INCLUDING INSTRUCTIONS ON HOW TO ADJUST SENSOR SETTINGS. COMBINE IN ONE ELECTRONIC DOCUMENT AND PROVIDE 1 HARD COPY BINDER LOCATED IN THE MAIN ELECTRICAL ROOM.

H. WARRANTY: PROVIDE STANDARD MANUFACTURE WARRANTY DOCUMENTS WITH PROJECT CLOSEOUT

END OF SPECIFICATION SECTION

26 20 00 – LOW VOLTAGE ELECTRICAL DISTRIBUTION

A. SCOPE: THIS SPECIFICATION COVERS THE BASIC PRODUCT REQUIREMENTS FOR THE ELECTRICAL POWER DISTRIBUTION SYSTEM AND MAY INCLUDE THE FOLLOWING COMPONENTS:
   1. UTILITY METERING EQUIPMENT (NOT USED)
   2. LOW VOLTAGE TRANSFORMERS
   3. SWITCHBOARDS (NOT USED)
   4. PANELBOARDS

B. SUBMITTALS – SUBMIT PRODUCT DATA AND SHOP DRAWINGS FOR ALL ITEMS NOTED ABOVE

C. PERFORMANCE SPECIFICATIONS
   1. UTILITY METERING EQUIPMENT – NOT USED
   2. LOW VOLTAGE TRANSFORMERS
      a. REFER TO DRAWINGS FOR SYSTEM VOLTAGE AND PHASE.
      b. REFER TO DRAWINGS FOR MOUNTING REQUIREMENTS - FLOOR, CEILING OR WALL.
      c. TRANSFORMER SHALL BE NEMA 1 RATED FOR INDOORS AND NEMA 3R RATED FOR OUTDOOR APPLICATIONS.
      d. TRANSFORMER SHALL COME EQUIPPED WITH ALL LUGS REQUIRED FOR TERMINATION OF CONDUCTORS. LUGS SHALL BE COMPRESSION OR MECHANICAL DUAL RATED FOR COPPER AND ALUMINUM CONDUCTORS.
      e. INSULATION AND TEMPERATURE RISE SHALL BE CLASS 220 (H) AND 150°C MINIMUM RATING.
      f. TRANSFORMER WINDING SHALL BE ALUMINUM OR COPPER.
   3. SWITCHBOARDS – NOT USED
   4. PANELBOARDS – PANELBOARDS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NEMA PB 1 DESIGN
      a. REFER TO DRAWINGS FOR SYSTEM VOLTAGE AND PHASE.
      b. REFER TO DRAWINGS FOR MOUNTING REQUIREMENTS – SURFACE OR FLUSH.
      c. PANELBOARDS SHALL BE NEMA [1]/[2] RATED FOR INDOOR APPLICATIONS OR NEMA 3R FOR OUTDOOR APPLICATIONS UNLESS NOTED OTHERWISE ON DRAWINGS.
      d. PANELBOARD LUGS SHALL BE MECHANICAL STYLE DUAL RATED FOR COPPER AND ALUMINUM UNLESS NOTED OTHERWISE ON DRAWINGS.
      e. REFER TO DRAWINGS FOR QUANTITY OF BRANCH BREAKER SPACES REQUIRED.
      f. SHORT CIRCUIT CURRENT RATING SHALL BE SERIES OR FULLY RATED AS INDICATED ON PANEL SCHEDULES AND ONE-LINE DIAGRAMS
      g. PANELBOARD BUSSING SHALL BE RATED AS INDICATED ON DRAWINGS. IF THE BUSSING SIZE INDICATED ON THE DRAWINGS IS NOT AVAILABLE, THE NEXT LARGEST SIZE SHALL BE UTILIZED.
      h. PANELBOARD BUSSING SHALL BE [TIN PLATED ALUMINUM] [TIN-PLATED COPPER]
      i. NEUTRAL BUSSING SHALL BE FULLY RATED TO MATCH PHASE BUSSING.
      j. MANUFACTURES STANDARD GROUND BAR BUSSING SHALL BE PROVIDED.
      k. PANELBOARDS SHALL BE LISTED AS SERVICE ENTRANCE WHEN USED AS SERVICE PANELBOARDS.
      l. ALL PANELBOARD TRIMS SHALL HAVE A [STANDARD LOCKABLE HINGED COVER] [DOOR IN DOOR LOCKABLE COVER]
      m. BRANCH PANELBOARDS SHALL BE TYPE SQD NQ/NF, SIEMENS P1/P2 OR SIMILAR
      n. DISTRIBUTION PANELBOARDS SHALL BE TYPE SQD I-LINE, SIEMENS P3-P5 OR SIMILAR
      o. SURGE PROTECTIVE DEVICES SHALL BE FACTORY INSTALLED. REFER TO DRAWINGS FOR PANELS REQUIRING SURGE PROTECTIVE DEVICES
      p. BRANCH BREAKERS SHALL BE PROVIDED WITH ALL ACCESSORIES NOTED IN PANEL SCHEDULES.
      q. REFER TO DRAWINGS FOR ANY ADDITIONAL PANEL ACCESSORIES SUCH AS SUB FEED LUGS, FEED THROUGH LUGS, SUB FEED BREAKERS.

D. PROJECT CLOSEOUT: PROVIDE FINAL AS-BUILT SHOP DRAWINGS AND PRODUCT DATA SHEETS FOR ALL EQUIPMENT SUPPLIED. PROVIDE O&M MANUALS FOR ALL EQUIPMENT SUPPLIED. COMBINED IN ONE ELECTRONIC DOCUMENT AND PROVIDE ONE HARD COPY BINDER LOCATED IN THE MAIN ELECTRICAL ROOM

E. WARRANTY: PROVIDE STANDARD MANUFACTURE WARRANTY DOCUMENTS WITH PROJECT CLOSEOUT

END OF SPECIFICATION SECTION

26 50 00 – LIGHTING

A. SCOPE – THIS SPECIFICATION COVERS GENERAL REQUIREMENTS FOR LIGHTING FIXTURES

B. SUBMITTALS – SUBMIT LIGHTING FIXTURE PRODUCT DATA AND SHOP DRAWINGS PER LIGHTING LUMINAIRE SCHEDULES. IF THE LUMINAIRE SCHEDULE DOES NOT CLEARLY INDICATE FINISH COLOR OPTIONS CLEARLY MARK PRODUCT DATA ASKING FOR FINAL CLARIFICATION ON FINISHES.

C. PERFORMANCE SPECIFICATIONS:
   1. LIGHTING FIXTURES SHOWN ON LUMINAIRE SCHEDULE ARE A BASIS OF DESIGN ONLY. CONTRACTOR CAN SELECT AND SUBMIT ALTERNATE OPTIONS, HOWEVER THE SPECIFICATIONS FOR LIGHT OUTPUT, TEMPERATURE COLOR, MOUNTING METHOD AND STYLE MUST MEET OR EXCEED THE SPECIFIED FIXTURE. ALL SUBSTITUTED FIXTURES ARE SUBJECT TO APPROVAL BY BOTH THE ARCHITECT AND ELECTRICAL ENGINEER.
   2. LIGHTING SHALL BE LED STYLE UNLESS SPECIFICALLY NOTED ON THE LUMINAIRE SCHEDULE
   3. LIGHTING FIXTURES SHALL BE SUPPLIED WITH INTEGRAL DRIVERS UNLESS THE SELECTED FIXTURE DOES NOT COME WITH THAT OPTION. IF DRIVERS ARE REMOTE THIS SHALL BE CLEARLY INDICATED ON SUBMITTALS.
   4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SPECIFY ALL REQUIRED MOUNTING AND WIRING ACCESSORIES FOR FIXTURES DEPENDING ON CEILINGS AND APPLICATIONS.
   5. SUBMITTAL REVIEW DOES NOT INCLUDE VERIFICATION OF CORRECT MOUNTING METHODS TO STRUCTURES AND CEILINGS. IT IS ONLY INTENDED TO CONFIRM PERFORMANCE AND APPEARANCE OF LIGHTING MEETS THE DESIGN INTENT. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO CONFIRM CORRECT MOUNTING REQUIREMENTS, CABLE LENGTHS AND WIRING ACCESSORIES.
   6. CONTRACTOR SHALL UTILIZE ARCHITECTURAL ELEVATIONS TO CONFIRM FINAL MOUNTING HEIGHTS OF ALL WALL MOUNTED FIXTURES. IF THIS IS NOT PROVIDED AND NO FINISHED FLOOR ELEVATIONS ARE GIVEN CONTRACTOR SHALL SUBMIT AN RFI CONFIRMING FINAL HEIGHTS PRIOR TO BOX ROUGH-IN.

D. PROJECT CLOSEOUT: PROVIDE FINAL AS-BUILT SHOP DRAWINGS AND/OR PRODUCT DATA CUTSHEETS FOR LIGHTING PURCHASED. COMBINE IN ONE ELECTRONIC DOCUMENT AND PROVIDE 1 HARD COPY BINDER LOCATED IN THE MAIN ELECTRICAL ROOM.

E. WARRANTY: PROVIDE STANDARD MANUFACTURE WARRANTY DOCUMENTS FOR ALL FIXTURES WITH PROJECT CLOSEOUT

END OF SPECIFICATION SECTION

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

PECi
PORTLAND ELECTRICAL CONSTRUCTION INC.

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

Drawn By:	K. SCOTT
Checked:	C. DONOHUE
Project #:	597
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SHEET TITLE

DIVISION 26 SPECIFICATIONS

E0.02

LUMINAIRE SCHEDULE V2

TYPE	DESCRIPTION	MANF	SERIES	LAMP	WATTAGE	LUMENS	COLOR TEMP	COMMENTS	COUNT	LOCATION
HB1	HIGH BAY ROUND WET RATED STADIUM LIGHTING			LED	0 W	0 lm	3500 K		16	EXTERIOR
SA1	PEDESTRIAN PATHWAY POLE LIGHT			LED	0 W	0 lm	3200 K		18	EXTERIOR
ST1	4' HIGH IMPACT IK10 RATED INDUSTRIAL STRIP FIXTURE			LED	0 W	0 lm	3200 K		16	INTERIOR
ST2	4' INDUSTRIAL STRIP FIXTURE			LED	0 W	0 lm	3200 K		16	INTERIOR
ST3	4' WET RATED VAPOR TIGHT STRIP FIXTURE - HIGH IMPACT IK10 RATED			LED	0 W	0 lm	3200 K		11	INTERIOR
WP1	EXTERIOR DOOR WALL PACK W/ BATTERY BACKUP AND PHOTOCELL			LED	0 W	0 lm	3500 K		9	EXTERIOR
WP2	EXTERIOR WALL PACK - HIGH OUTPUT W/ INTEGRAL OCCUPANCY SENSOR AND PHOTOCELL			LED	0 W	0 lm	3500 K		6	EXTERIOR

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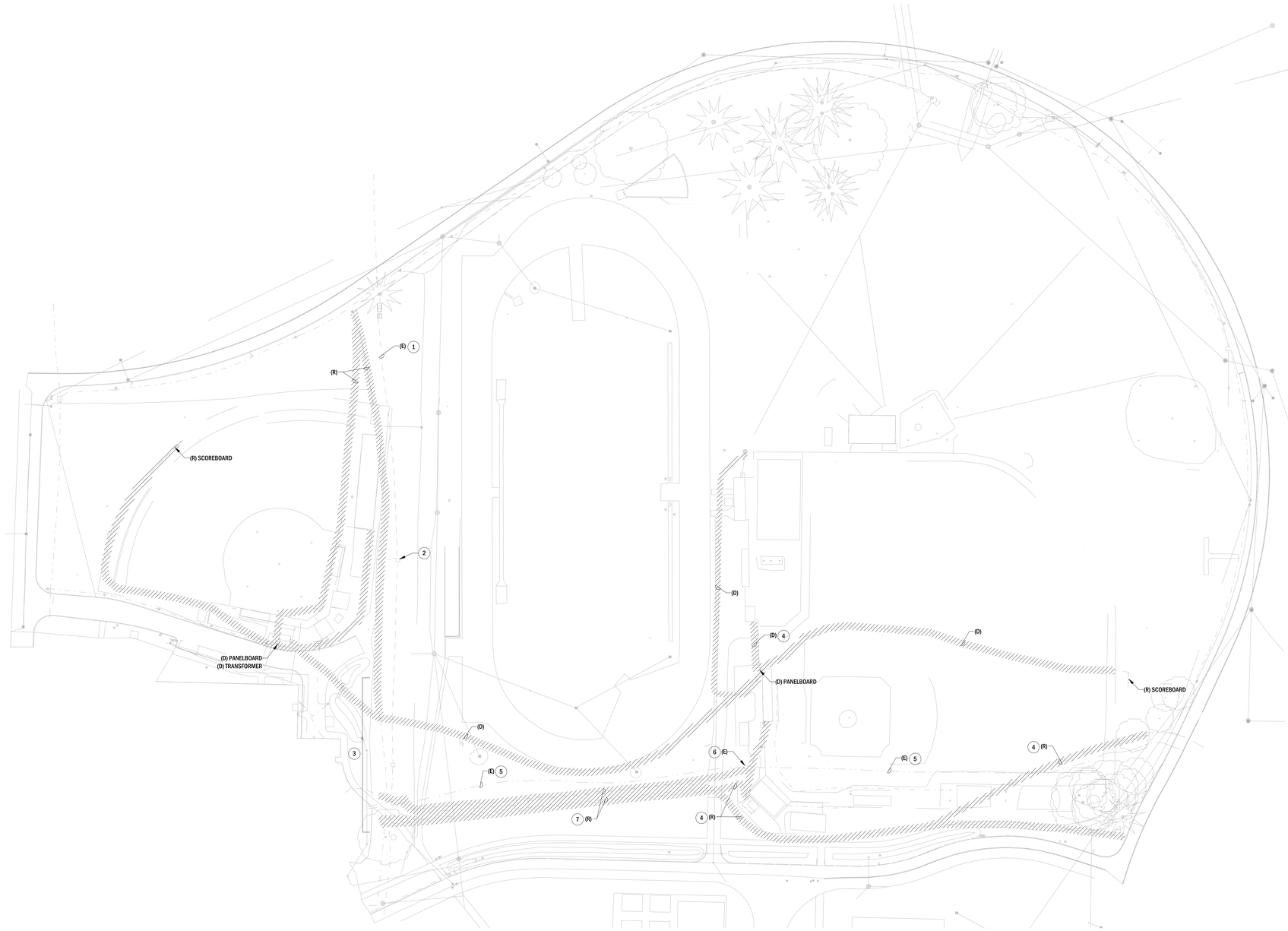
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SHEET TITLE
LUMINAIRE AND CONTROLS SCHEDULE

E0.03



1 ED1.01 **OVERALL ELECTRICAL SITE DEMOLITION PLAN**
1" = 50'-0"

GENERAL NOTES

A. REFER TO SHEETS E0.00 and E0.01 FOR GENERAL NOTES, AND SPECIFICATIONS.

B. REFER TO ONE-LINE DIAGRAM ON SHEET E6.01 FOR STADIUM LIGHTING FEEDER SIZES.

C. ALL DATA AND LOW VOLTAGE CABLING, DEVICES AND EQUIPMENT IS SUPPLIED BY OWNER. ALL CONDUIT RACEWAY AND VAULTS ARE TO BE SUPPLIED BY CONTRACTOR.

D. CONDUIT FOR POWER AND LOW VOLTAGE SYSTEMS IS TO BE SEPARATED BY A MINIMUM OF 12" OR AS FAR AS POSSIBLE BASED ON 18" WIDE TRENCHES WHEN RUNNING PARALLEL.

KEYED NOTES

1. EXISTING 15KV PRIMARY TO REMAIN. COORDINATE WITH CIVIL FOR PROTECTION DURING CONSTRUCTION.
2. PROVIDE VAULT EXTENSION LID TO RAISE VAULT TO NEW FINISHED GRADE.
3. CONFIRM DEPTH OF RACEWAY VS. NEW GRADING, COORDINATE WITH CIVIL.
4. DEMOLISH POWER CONNECTION BACK TO SOURCE.
5. EXISTING CCC FIBER BETWEEN RANDALL HALL AND CLAIRMONT DRIVE TO REMAIN. IDENTIFY AND PROTECT RACEWAY DURING CONSTRUCTION.
6. EXISTING TELECOM VAULT TO REMAIN. COORDINATE WITH CIVIL TO PROVIDE VAULT EXTENSIONS AS REQUIRED WITH EXISTING GRADE.
7. TELECOM SERVICE PROVIDER RACEWAY TO BE RELOCATED, SEE INSTALL PLANS.

PHASING PLAN

DURING PHASE 1 SCOPE, PROVIDE THE FOLLOWING:

a. MAINTAIN POWER TO ALL DUGOUTS AND PITCHING POWER OUTLETS FOR SOFTBALL AND BASEBALL.

b. TEMPORARILY POWER RELOCATED SCOREBOARDS FOR BOTH SOFTBALL AND BASEBALL.

c. TEMPORARILY POWER SEWER LIFT STATION FROM EXISTING PANELS.

d. RELOCATE SOFTBALL POWER DISTRIBUTION OUT OF THE WAY OF NEW CONSTRUCTION.

e. RELOCATE RACEWAY AND CIRCUITS OUT OF SOFTBALL FIELD. POWER TO BE TEMPORARILY FED FROM EXISTING SOFTBALL FIELD PANELS.

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SHEET TITLE
ELECTRICAL AND LV SITE DEMOLITION

ED1.01

GENERAL NOTES

A. REFER TO SHEETS E0.00 and E0.01 FOR GENERAL NOTES, AND SPECIFICATIONS.

B. REFER TO ONE-LINE DIAGRAM ON SHEET E6.01 FOR STADIUM FEEDER SIZES.

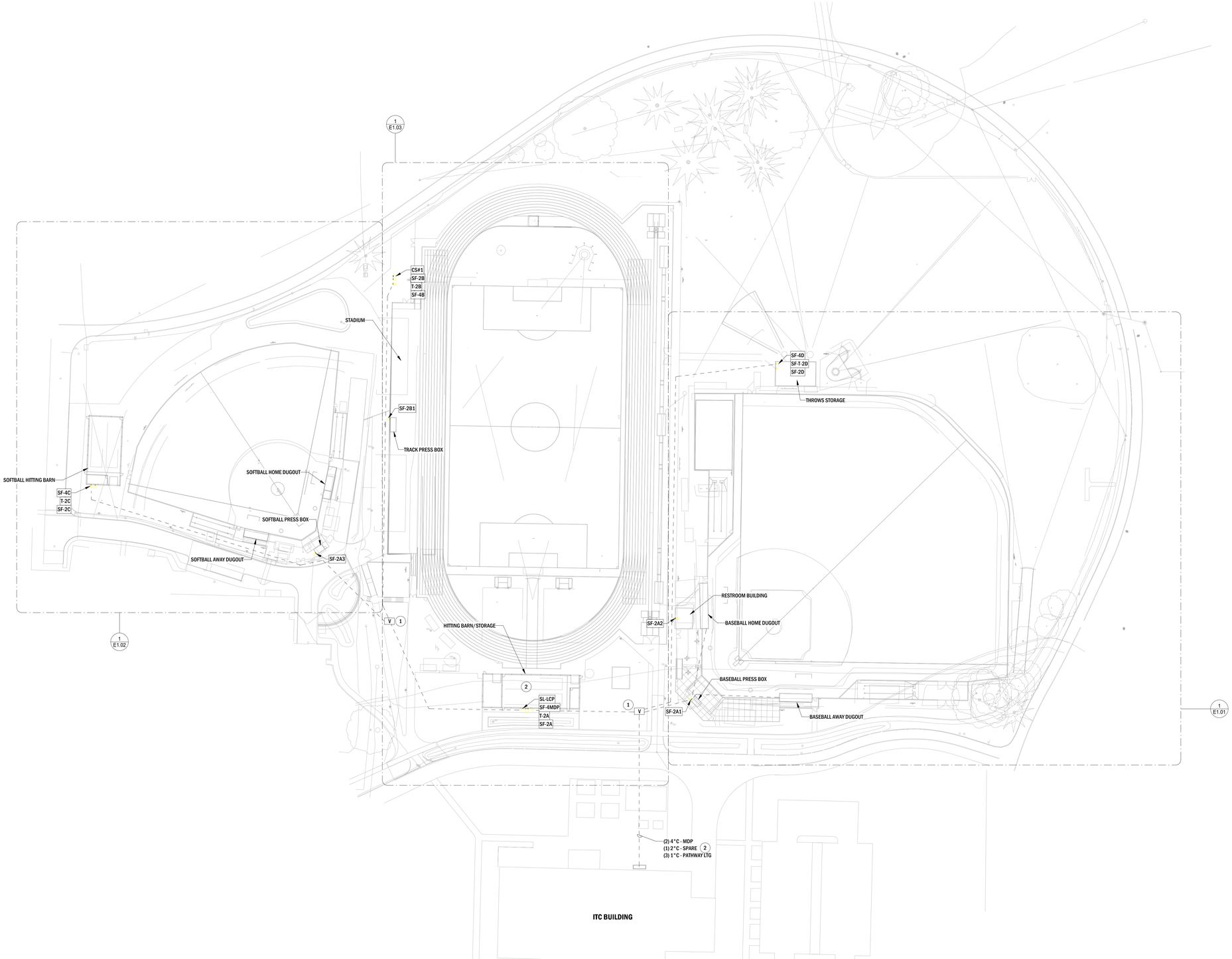
C. ALL CONDUIT ROUTING, UNLESS SPECIFICALLY SHOWN ON PLANS, SHALL NOT BE INSTALLED IN TURF. CONDUIT AND CIRCUITING SHALL RUN ALONG PERIMETER OF TURF FIELDS.

D. CONDUIT FOR POWER AND LOW VOLTAGE SYSTEMS IS TO BE SEPARATED BY A MINIMUM OF 12" OR AS FAR AS POSSIBLE BASED ON 18" WIDE TRENCHES WHEN RUNNING PARALLEL.

KEYED NOTES

1. OLDCASTLE 444-LA OR SIMILAR VAULT. LABEL RACEWAY INSIDE VAULT WITH DESTINATION.

2. ROUTE NEW POWER FROM ITC MAIN ELECTRICAL ROOM. PROVIDE DIRECTIONAL BORE FROM ITC BUILDING TO SITE.



1 E1.00 **OVERALL ELECTRICAL SITE PLAN**
1" = 50'-0"

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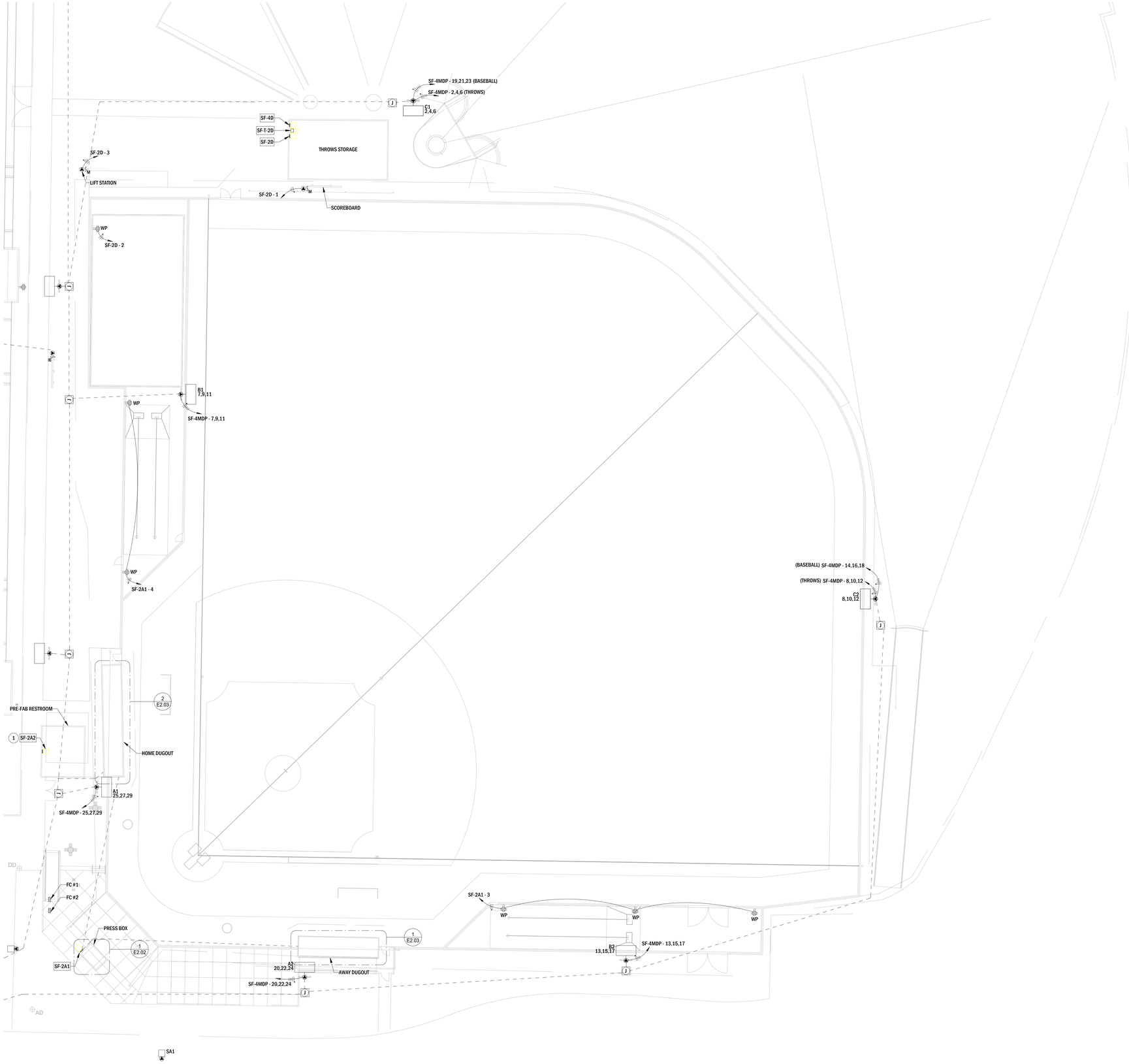
Rev. #:	Date:
1	10/09/25

ISSUE FOR 100% DD

SHEET TITLE

ELECTRICAL - OVERALL SITE

E1.00



1 E1.01 **ELECTRICAL SITE PLAN - BASEBALL FIELD**
1" = 20'-0"

GENERAL NOTES

A. REFER TO SHEETS E0.00 and E0.01 FOR GENERAL NOTES, AND SPECIFICATIONS.

B. REFER TO ONE-LINE DIAGRAM ON SHEET E6.01 FOR STADIUM LIGHTING FEEDER SIZES.

C. ALL CONDUIT ROUTING, UNLESS SPECIFICALLY SHOWN ON PLANS, SHALL NOT BE INSTALLED IN TURF. CONDUIT AND CIRCUITING SHALL RUN ALONG PERIMETER OF TURF FIELDS.

D. CONDUIT FOR POWER AND LOW VOLTAGE SYSTEMS IS TO BE SEPARATED BY A MINIMUM OF 12" OR AS FAR AS POSSIBLE BASED ON 18" WIDE TRENCHES WHEN RUNNING PARALLEL.

KEYED NOTES

1. PANEL FURNISHED WITH BUILDING, PROVIDE SINGLE POINT CONNECTION AND INSTALL GROUNDING ELECTRODE.

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160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

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ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

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Checked:	C. DONOHUE
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SHEET TITLE

BASEBALL SITE PLAN

E1.01

GENERAL NOTES

A. REFER TO SHEETS E0.00 and E0.01 FOR GENERAL NOTES, AND SPECIFICATIONS.

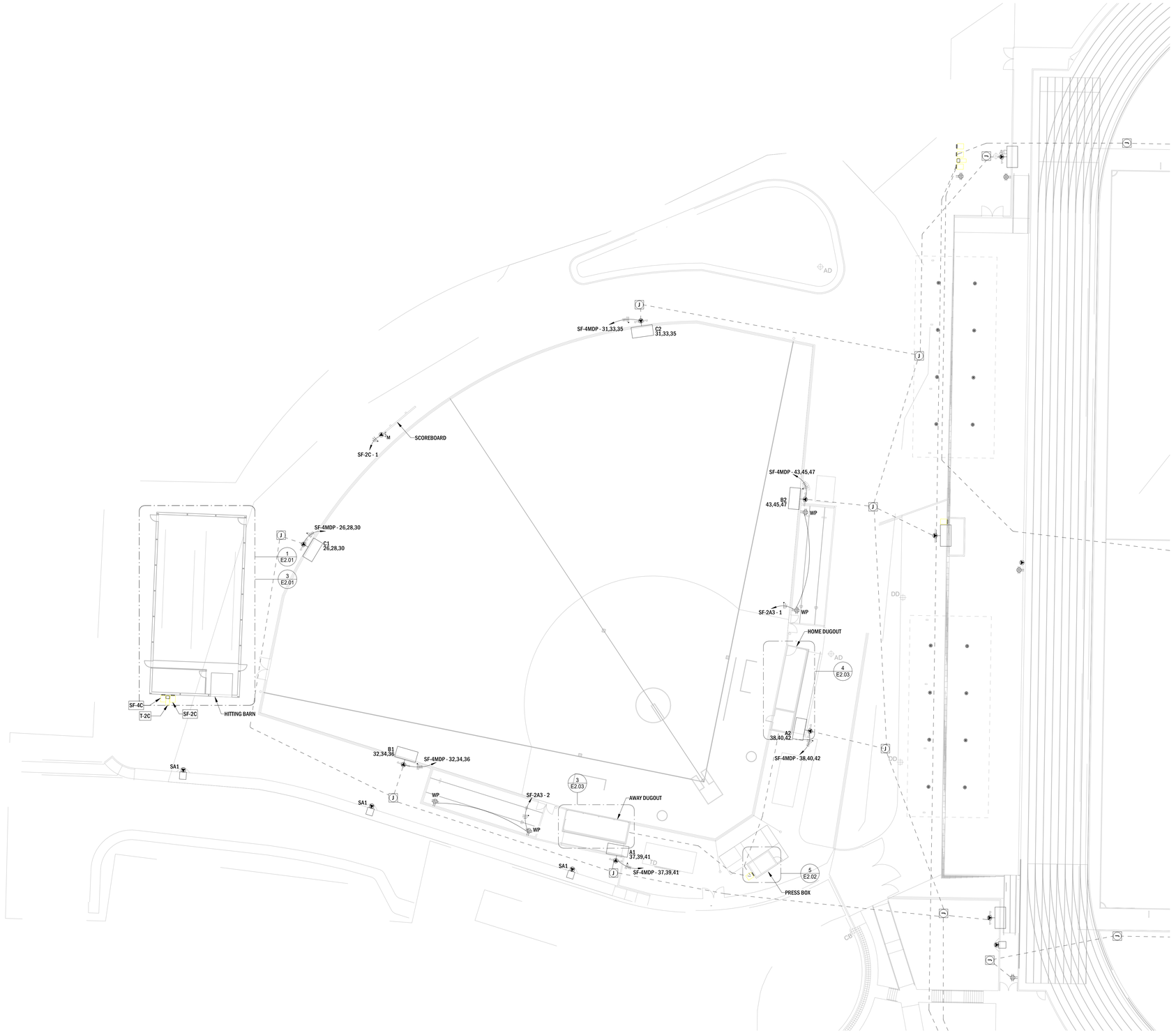
B. REFER TO ONE-LINE DIAGRAM ON SHEET E6.01 FOR STADIUM LIGHTING FEEDER SIZES.

C. ALL CONDUIT ROUTING, UNLESS SPECIFICALLY SHOWN ON PLANS, SHALL NOT BE INSTALLED IN TURF. CONDUIT AND CIRCUITING SHALL RUN ALONG PERIMETER OF TURF FIELDS.

D. CONDUIT FOR POWER AND LOW VOLTAGE SYSTEMS IS TO BE SEPARATED BY A MINIMUM OF 12" OR AS FAR AS POSSIBLE BASED ON 18" WIDE TRENCHES WHEN RUNNING PARALLEL.

KEYED NOTES

1. XXX



1 E1.02 **ELECTRICAL SITE PLAN - SOFTBALL FIELD**
1" = 20'-0"

N

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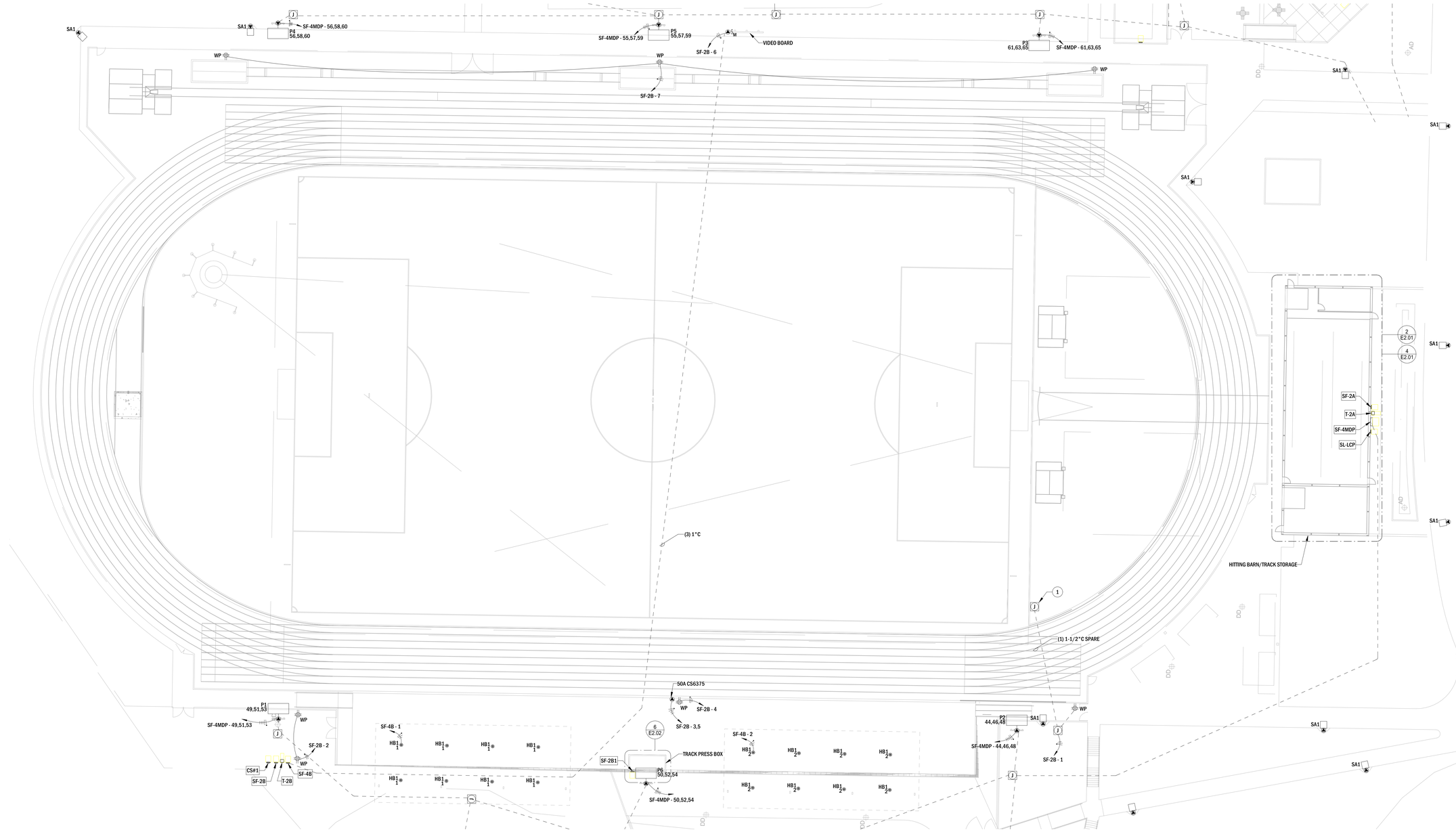
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SHEET TITLE

SOFTBALL SITE PLAN

E1.02



1 E1.03 ELECTRICAL SITE PLAN - TRACK

1" = 20'-0"

KEYED NOTES

1. COORDINATE WITH FIELD TURF INSTALLERS FOR ROUGH-IN OF J-BOXES AT TURF LOCATIONS.

GENERAL NOTES

A. REFER TO SHEETS E0.00 and E0.01 FOR GENERAL NOTES, AND SPECIFICATIONS.

B. REFER TO ONE-LINE DIAGRAM ON SHEET E6.01 FOR STADIUM LIGHTING FEEDER SIZES.

C. ALL CONDUIT ROUTING, UNLESS SPECIFICALLY SHOWN ON PLANS, SHALL NOT BE INSTALLED IN TURF. CONDUIT AND CIRCUITING SHALL RUN ALONG PERIMETER OF TURF FIELDS.

D. CONDUIT FOR POWER AND LOW VOLTAGE SYSTEMS IS TO BE SEPARATED BY A MINIMUM OF 12" OR AS FAR AS POSSIBLE BASED ON 18" WIDE TRENCHES WHEN RUNNING PARALLEL.

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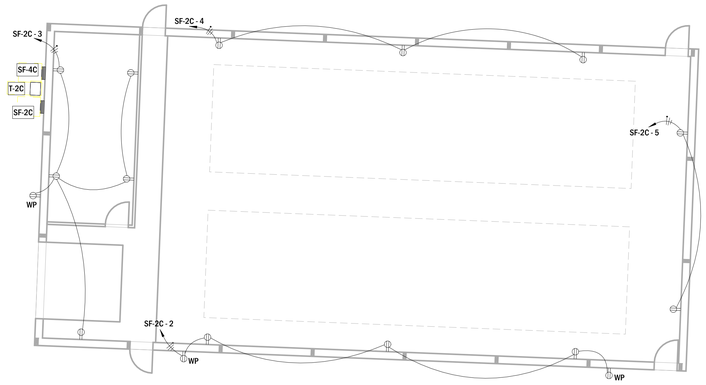
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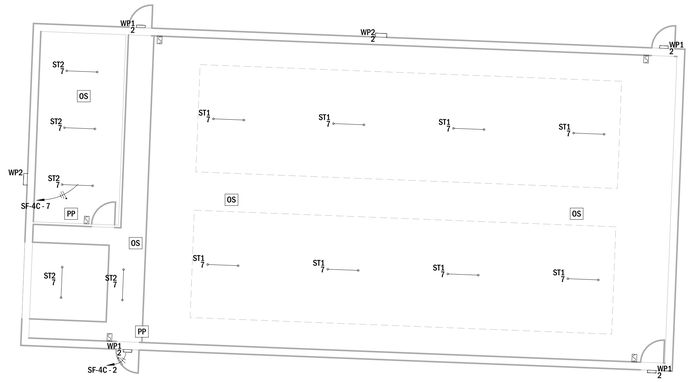
SHEET TITLE

TRACK SITE PLAN

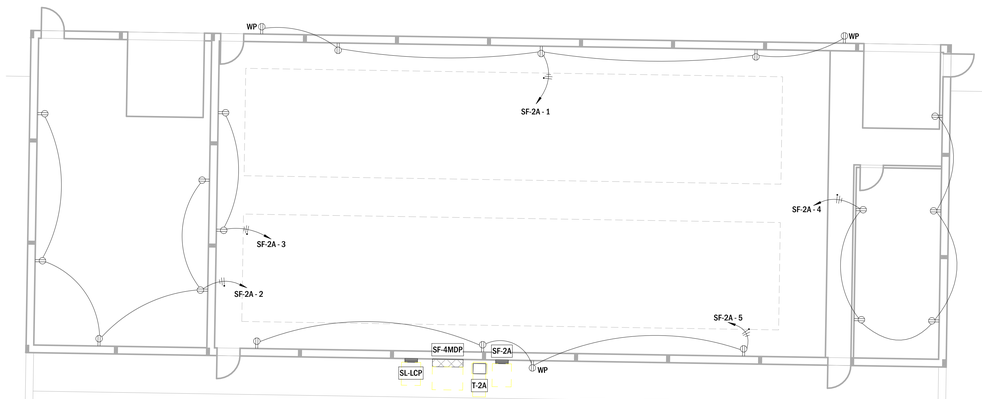
E1.03



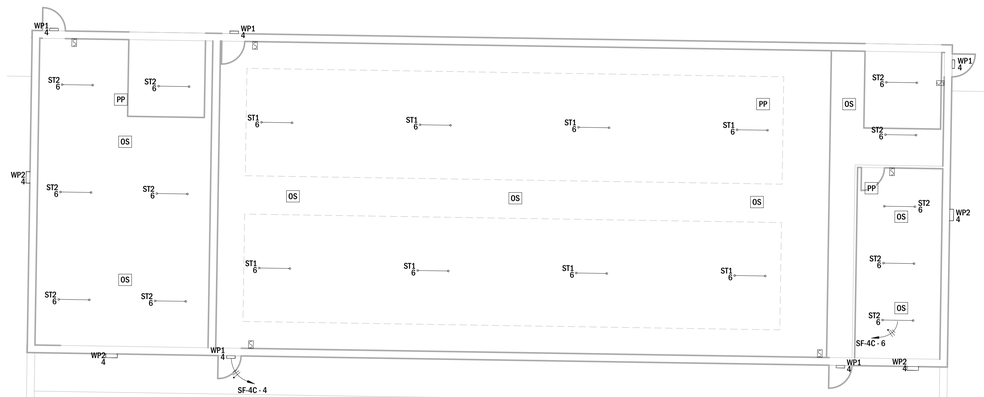
1 E2.01 **HITTING BARN - POWER**
1/8" = 1'-0"



3 E2.01 **HITTING BARN - LIGHTING**
1/8" = 1'-0"



2 E2.01 **HITTING BARN/TRACK STORAGE - POWER**
1/8" = 1'-0"



4 E2.01 **HITTING BARN/TRACK STORAGE - LIGHTING**
1/8" = 1'-0"

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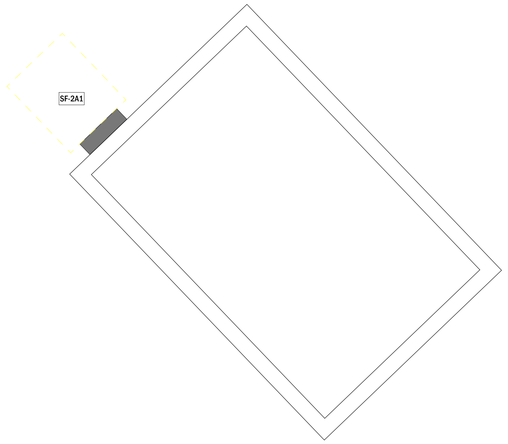
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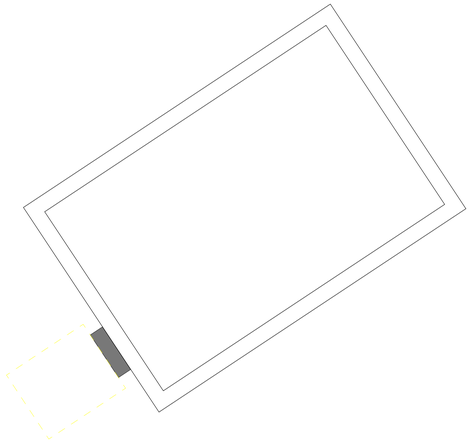
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SHEET TITLE
ENLARGED PLANVIEWS - HITTING BARNS

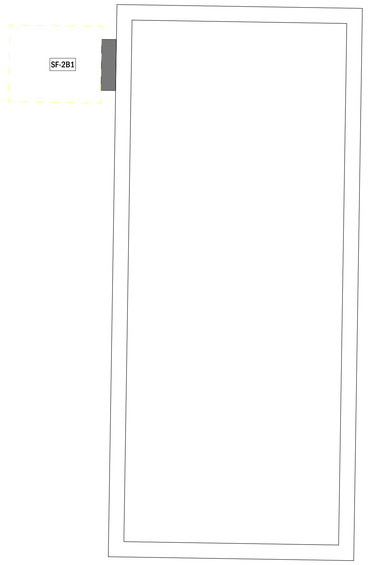
E2.01



1 E2.02 **BASEBALL PRESS BOX - POWER & LIGHTING**
1/2" = 1'-0"



5 E2.02 **SOFTBALL PRESS BOX - POWER & LIGHTING**
1/2" = 1'-0"



6 E2.02 **TRACK PRESS BOX - POWER & LIGHTING**
1/2" = 1'-0"

N

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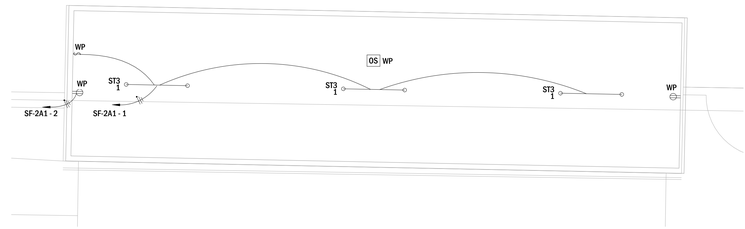
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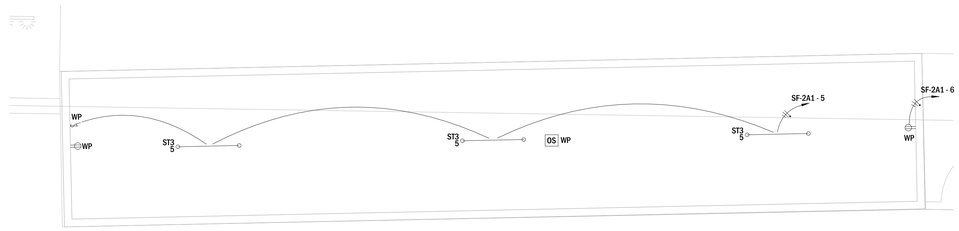
SHEET TITLE
ENLARGED PLANVIEWS - PRESS BOXES

E2.02



1 E2.03 BASEBALL AWAY DUGOUT - POWER & LIGHTING

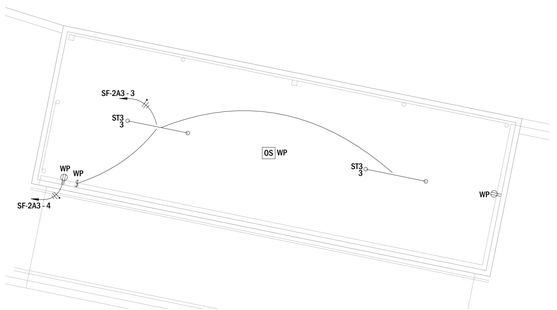
1/4" = 1'-0"



2 E2.03 BASEBALL HOME DUGOUT - POWER & LIGHTING

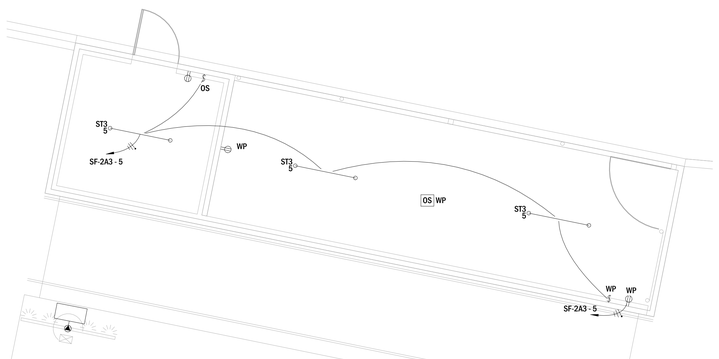
1/4" = 1'-0"

N



3 E2.03 SOFTBALL AWAY DUGOUT - POWER & LIGHTING

1/4" = 1'-0"



4 E2.03 SOFTBALL HOME DUGOUT - POWER & LIGHTING

1/4" = 1'-0"

N

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SHEET TITLE
ENLARGED PLANVIEWS - DUGOUTS

E2.03

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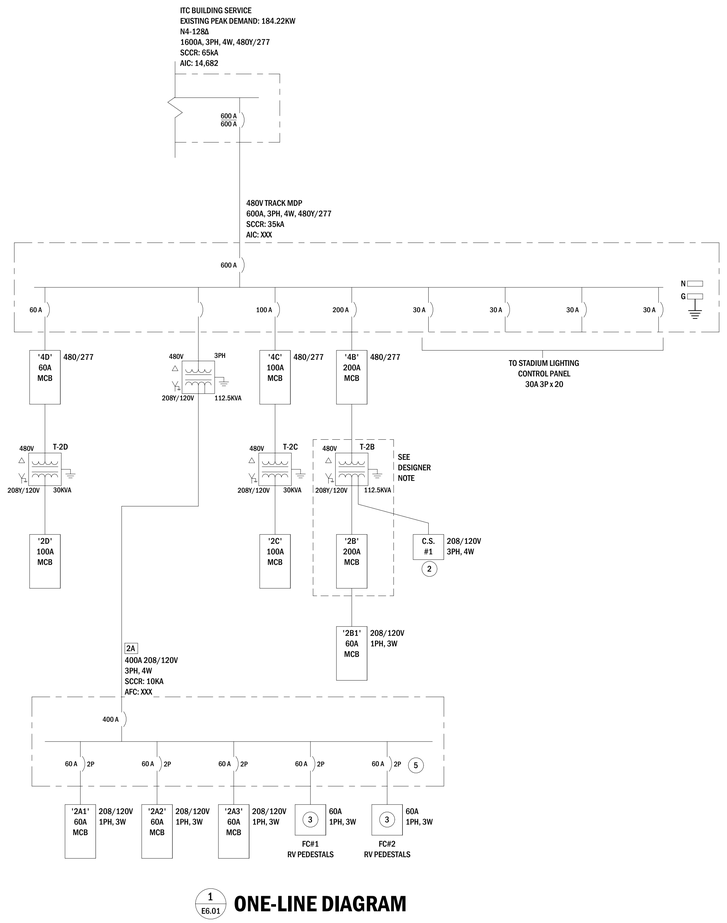
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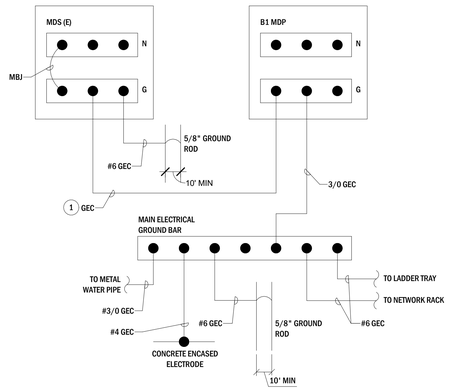
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SHEET TITLE
ELECTRICAL DETAILS AND PANEL ELEVATIONS

E5.00



1 E6.01 **ONE-LINE DIAGRAM**



ABBREVIATIONS:

GEC	GROUNDING ELECTRODE CONDUCTOR
MBJ	MAIN BONDING JUMPER
SSBJ	SUPPLY SIDE BONDING JUMPER
EGC	EQUIPMENT GROUNDING CONDUCTOR
BCT	BONDING CONDUCTOR FOR TELECOM
TMGB	TELECOM MAIN GROUNDING BUS BAR

2 E6.01 **GROUNDING DIAGRAM**
12" = 1'-0"

GENERAL NOTES

1. REFER TO SHEETS E001 & E002 FOR GENERAL NOTES.

KEYED NOTES

1. REFER TO ONE-LINE FOR NEUTRAL AND GROUND CONDUCTOR SIZES.
2. 200A COMPANY SWITCH WITH 200A MAIN BREAKER FOR TEMPORARY VENUE POWER. 208/120V, 3PH, 4W. MODEL XXX.
3. 60A RV PEDESTAL WITH INTEGRAL BREAKERS. PROVIDE 50A 240V PLUG, 30A 120V PLUG AND 20A 120V GFCI. PROVIDE PEDESTAL MOUNT KIT.
4. SEE PANEL SCHEDULE FOR BRANCH BREAKERS AT PANEL.

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SHEET TITLE
ELECTRICAL
ONE-LINE
DIAGRAM

E6.01

BRANCH PANEL: SF-4MDP

LOCATION: TRACK STORAGE
SUPPLY FROM: NW-128A
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 480Y/277
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	SOFTBALL HITTING	3	20 A	4 A	954 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	2
3	--	--	--	--			1717 VA	1607 VA			--	--	--	--	4
5	--	--	--	--					360 VA	1607 VA	--	--	--	--	6
7	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	8
9	--	--	--	--			1607 VA	1607 VA			--	--	--	--	10
11	--	--	--	--					1607 VA	1607 VA	--	--	--	--	12
13	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	14
15	--	--	--	--			1607 VA	1607 VA			--	--	--	--	16
17	--	--	--	--					1607 VA	1607 VA	--	--	--	--	18
19	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	20
21	--	--	--	--			1607 VA	1607 VA			--	--	--	--	22
23	--	--	--	--					1607 VA	1607 VA	--	--	--	--	24
25	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	26
27	--	--	--	--			1607 VA	1607 VA			--	--	--	--	28
29	--	--	--	--					1607 VA	1607 VA	--	--	--	--	30
31	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	32
33	--	--	--	--			1607 VA	1607 VA			--	--	--	--	34
35	--	--	--	--					1607 VA	1607 VA	--	--	--	--	36
37	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	38
39	--	--	--	--			1607 VA	1607 VA			--	--	--	--	40
41	--	--	--	--					1607 VA	1607 VA	--	--	--	--	42
43	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	44
45	--	--	--	--			1607 VA	1607 VA			--	--	--	--	46
47	--	--	--	--					1607 VA	1607 VA	--	--	--	--	48
49	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	50
51	--	--	--	--			1607 VA	1607 VA			--	--	--	--	52
53	--	--	--	--					1607 VA	1607 VA	--	--	--	--	54
55	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	1607 VA					6 A	20 A	3	LIGHTING - STADIUM	56
57	--	--	--	--			1607 VA	1607 VA			--	--	--	--	58
59	--	--	--	--					1607 VA	1607 VA	--	--	--	--	60
61	LIGHTING - STADIUM	3	20 A	6 A	1607 VA	180 VA					0 A	20 A	3	SF-4D	62
63	--	--	--	--			1607 VA	0 VA			--	--	--	--	64
65	--	--	--	--					1607 VA	0 VA	--	--	--	--	66
67	SF-4B	3	20 A	21 A	11200...										68
69	--	--	--	--			540 VA								70
71	--	--	--	--					5380 VA						72
73															74
75															76
77															78
79															80
81															82
83															84
				Total Load:	44481 VA		34404 VA		37887 VA						
				Total Amps:	163 A		124 A		139 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Equipment	0 VA	0.00%	0 VA		
Lighting - Exterior	151 VA	125.00%	189 VA	TOTAL CONNECTED LOAD:	116772 VA
Other	0 VA	0.00%	0 VA	TOTAL ESTIMATED DEMAND:	135830 VA
Receptacle	20180 VA	74.78%	15090 VA	TOTAL CONNECTED CURRENT:	140 A
LIGHTING	0 VA	0.00%	0 VA	TOTAL ESTIMATED DEMAND...	163 A
LIGHTING - STADIUM	96441 VA	125.00%	120551 VA		

NOTES:

BRANCH PANEL: SF-2A

LOCATION: TRACK STORAGE
SUPPLY FROM: T-2A
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208Y/120
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	REC - HITTING BARN/STORAGE NORTH	1	20 A	8 A	900 VA	900 VA					8 A	20 A	1	REC - HITTING BARN/STORAGE NORTH	2
3	REC - HITTING BARN/STORAGE NORTH	1	20 A	3 A			360 VA	900 VA			8 A	20 A	1	REC - HITTING BARN/STORAGE EAST	4
5	REC - HITTING BARN/STORAGE SOUTH	1	20 A	6 A					720 VA	0 VA	0 A	20 A	2	SF-2A2	6
7	SF-2A1	2	20 A	8 A	720 VA	0 VA					--	--	--	--	8
9	--	--	--	--			900 VA								10
11	Panelboard 208 1PH, 120 V/208 V, Single Phase, 3...	2	20 A	8 A					1260 VA						12
13	--	--	--	--	360 VA										14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
				Total Load:	2880 VA		2160 VA		1980 VA						
				Total Amps:	24 A		18 A		17 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Other	0 VA	0.00%	0 VA		
Receptacle	7020 VA	100.00%	7020 VA	TOTAL CONNECTED LOAD:	7020 VA
LIGHTING	0 VA	0.00%	0 VA	TOTAL ESTIMATED DEMAND:	7020 VA
				TOTAL CONNECTED CURRENT:	19 A
				TOTAL ESTIMATED DEMAND...	19 A

NOTES:

BRANCH PANEL: SF-2A1

LOCATION: BASEBALL PRESS BOX
SUPPLY FROM: SF-2A
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208/120V
PHASES: 1
WIRES: 3

MAINS TYPE: MCB
MAINS RATING: 60 A
MCB RATING: 60 A

CKT	CIRCUIT DESCRIPTION	POLES	TRIP	LOAD	A		B		LOAD	TRIP	POLES	CIRCUIT DESCRIPTION	CKT
1	LTG - BASEBALL AWAY DUGOUT	1	20 A	0 A	0 VA	360 VA			3 A	20 A	1	REC - BASEBALL AWAY DUGOUT	2
3	REC - BASEBALL AWAY BULLPEN	1	20 A	5 A			540 VA	360 VA	3 A	20 A	1	REC - BASEBALL HOME BULLPEN	4
5	LTG - BASEBALL HOME DUGOUT	1	20 A	0 A	0 VA	360 VA			3 A	20 A	1	REC - BASEBALL HOME DUGOUT	6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
				Total Load:	720 VA		900 VA						
				Total Amps:	7 A		8 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Receptacle	1620 VA	100.00%	1620 VA		
LIGHTING	0 VA	0.00%	0 VA	TOTAL CONNECTED LOAD:	1620 VA
				TOTAL ESTIMATED DEMAND:	1620 VA
				TOTAL CONNECTED CURRENT:	8 A
				TOTAL ESTIMATED DEMAND...	8 A

NOTES:

BRANCH PANEL: SF-2A2

LOCATION: RESTROOM BUILDING
SUPPLY FROM: SF-2A
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208/120V
PHASES: 1
WIRES: 3

MAINS TYPE: MCB
MAINS RATING: 60 A
MCB RATING: 60 A

CKT	CIRCUIT DESCRIPTION	POLES	TRIP	LOAD	A		C		LOAD	TRIP	POLES	CIRCUIT DESCRIPTION	CKT
1													2
3													4
5													6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
				Total Load:	0 VA		0 VA						
				Total Amps:	0 A		0 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
				TOTAL CONNECTED LOAD:	0 VA
				TOTAL ESTIMATED DEMAND:	0 VA
				TOTAL CONNECTED CURRENT:	0 A
				TOTAL ESTIMATED DEMAND...	0 A

NOTES:

BRANCH PANEL: SF-2A3

LOCATION: SOFTBALL PRESS BOX
SUPPLY FROM: SF-2A
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208/120V
PHASES: 1
WIRES: 3

MAINS TYPE: MCB
MAINS RATING: 60 A
MCB RATING: 60 A

CKT	CIRCUIT DESCRIPTION	POLES	TRIP	LOAD	A		C		LOAD	TRIP	POLES	CIRCUIT DESCRIPTION	CKT
1	REC - SOFTBALL HOME BULLPEN	1	20 A	3 A	360 VA	360 VA			3 A	20 A	1	REC - SOFTBALL AWAY BULLPEN	2
3	LTG - SOFTBALL AWAY DUGOUT	1	20 A	0 A			0 VA	360 VA	3 A	20 A	1	REC - SOFTBALL AWAY DUGOUT	4
5	LIGHTING	1	20 A	5 A	540 VA								6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
				Total Load:	1260 VA		360 VA						
				Total Amps:	11 A		3 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Receptacle	1620 VA	100.00%	1620 VA		
LIGHTING	0 VA	0.00%	0 VA	TOTAL CONNECTED LOAD:	1620 VA
				TOTAL ESTIMATED DEMAND:	1620 VA
				TOTAL CONNECTED CURRENT:	8 A
				TOTAL ESTIMATED DEMAND...	8 A

NOTES:

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LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
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Checked: C. DONOHUE
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Date: 10/09/25

Rev. #:	Date:
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PANEL SCHEDULES

E6.02

BRANCH PANEL: SF-4B

LOCATION: STADIUM
SUPPLY FROM: SF-4MDP
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 480Y/277
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 200 A
MCB RATING: 200 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	LTG - STADIUM NORTH	1	20 A	0 A	0 VA	0 VA					0 A	20 A	1	LIGHTING	2
3	T-2B	3	20 A	21 A			540 VA	0 VA			0 A	20 A	3	CSP1	4
5	--	--	--	--					5380 VA	0 VA	--	--	--	--	6
7	--	--	--	--	11200...	0 VA					--	--	--	--	8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		11200 VA		540 VA		5380 VA						
			Total Amps:		43 A		2 A		22 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Equipment	0 VA	0.00%	0 VA		
Other	0 VA	0.00%	0 VA	TOTAL CONNECTED LOAD:	17120 VA
Receptacle	17120 VA	79.21%	13560 VA	TOTAL ESTIMATED DEMAND:	13560 VA
LIGHTING	0 VA	0.00%	0 VA	TOTAL CONNECTED CURRENT:	21 A
				TOTAL ESTIMATED DEMAND...	16 A

NOTES:

BRANCH PANEL: SF-4C

LOCATION: SOFTBALL HITTING BARN
SUPPLY FROM: SF-4MDP
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 480Y/277
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	XX, 277 V/480 V, Three Phase, 4 Wires, Wye	3	20 A	3 A	900 VA	54 VA					0 A	20 A	1	LTG - HITTING BARN EXTERIOR	2
3	--	--	--	--			1620 VA	97 VA			0 A	20 A	1	LTG - HITTING BARN/STORAGE EXTERIOR	4
5	--	--	--	--					360 VA	0 VA	0 A	20 A	1	LTG - HITTING BARN/STORAGE INTERIOR	6
7	LTG - HITTING BARN INTERIOR	1	20 A	0 A	0 VA										8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		954 VA		1717 VA		360 VA						
			Total Amps:		4 A		7 A		1 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Lighting - Exterior	151 VA	125.00%	189 VA		
Other	0 VA	0.00%	0 VA	TOTAL CONNECTED LOAD:	3031 VA
Receptacle	2880 VA	100.00%	2880 VA	TOTAL ESTIMATED DEMAND:	3069 VA
LIGHTING	0 VA	0.00%	0 VA	TOTAL CONNECTED CURRENT:	4 A
				TOTAL ESTIMATED DEMAND...	4 A

NOTES:

BRANCH PANEL: SF-4D

LOCATION: THROWS STORAGE
SUPPLY FROM: SF-4MDP
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 480Y/277
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 60 A
MCB RATING: 60 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	SF-T-2D	3	20 A	0 A	180 VA										2
3	--	--	--	--			0 VA								4
5	--	--	--	--					0 VA						6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		180 VA		0 VA		0 VA						
			Total Amps:		1 A		0 A		0 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Receptacle	180 VA	100.00%	180 VA		
				TOTAL CONNECTED LOAD:	180 VA
				TOTAL ESTIMATED DEMAND:	180 VA
				TOTAL CONNECTED CURRENT:	0 A
				TOTAL ESTIMATED DEMAND...	0 A

NOTES:

BRANCH PANEL: SF-2B

LOCATION: STADIUM
SUPPLY FROM: T-2B
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208Y/120
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 200 A
MCB RATING: 200 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	Receptacle	1	20 A	2 A	180 VA	180 VA					2 A	20 A	1	Receptacle	2
3	Receptacle	2	20 A	50 A			5200 VA	180 VA			2 A	20 A	1	Receptacle	4
5	--	--	--	--					5200 VA	6000 VA	50 A	20 A	1	Receptacle	6
7	Receptacle	1	20 A	2 A	180 VA	0 VA					0 A	20 A	3	SF-2B1	8
9							0 VA				--	--	--	--	10
11									0 VA		--	--	--	--	12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		540 VA		5380 VA		11200 VA						
			Total Amps:		5 A		51 A		100 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Other	0 VA	0.00%	0 VA		
Receptacle	17120 VA	79.21%	13560 VA	TOTAL CONNECTED LOAD:	17120 VA
				TOTAL ESTIMATED DEMAND:	13560 VA
				TOTAL CONNECTED CURRENT:	48 A
				TOTAL ESTIMATED DEMAND...	38 A

NOTES:

BRANCH PANEL: SF-2C

LOCATION: SOFTBALL HITTING BARN
SUPPLY FROM: T-2C
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208Y/120
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	Receptacle	1	20 A	0 A	0 VA	900 VA					8 A	20 A	1	REC - HITTING BARN WEST	2
3	REC - HITTING BARN NORTH	1	20 A	9 A			1080 VA	540 VA			5 A	20 A	1	REC - HITTING BARN EAST	4
5	REC - HITTING BARN SOUTH	1	20 A	3 A					360 VA						6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		900 VA		1620 VA		360 VA						
			Total Amps:		8 A		14 A		3 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Receptacle	2880 VA	100.00%	2880 VA		
				TOTAL CONNECTED LOAD:	2880 VA
				TOTAL ESTIMATED DEMAND:	2880 VA
				TOTAL CONNECTED CURRENT:	8 A
				TOTAL ESTIMATED DEMAND...	8 A

NOTES:

BRANCH PANEL: SF-2D

LOCATION: THROWS STORAGE
SUPPLY FROM: SF-T-2D
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208Y/120
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1	REC - BASEBALL SCOREBOARD	1	20 A	0 A	0 VA	180 VA					2 A	20 A	1	Receptacle	2
3	Receptacle	1	20 A	0 A			0 VA								4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
			Total Load:		180 VA		0 VA		0 VA						
			Total Amps:		2 A		0 A		0 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
Receptacle	180 VA	100.00%	180 VA		
				TOTAL CONNECTED LOAD:	180 VA
				TOTAL ESTIMATED DEMAND:	180 VA
				TOTAL CONNECTED CURRENT:	0 A
				TOTAL ESTIMATED DEMAND...	0 A

NOTES:

BRANCH PANEL: SF-2B1

LOCATION: STADIUM PRESS BOX
SUPPLY FROM: SF-2B
MOUNTING: SURFACE
ENCLOSURE: N3R

VOLTAGE: 208Y/120
PHASES: 3
WIRES: 4

MAINS TYPE: MCB
MAINS RATING: 60 A
MCB RATING: 60 A

CKT	CIRCUIT DESCRIPTION	POL...	TRIP	LOAD	A		B		C		LOAD	TRIP	POL...	CIRCUIT DESCRIPTION	CKT
1															2
3															4
5															6
7															8
9															10
11															12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
			Total Load:		0 VA		0 VA		0 VA						
			Total Amps:		0 A		0 A		0 A						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
				TOTAL CONNECTED LOAD:	0 VA
				TOTAL ESTIMATED DEMAND:	0 VA
				TOTAL CONNECTED CURRENT:	0 A
				TOTAL ESTIMATED DEMAND...	0 A

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LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
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Drawn By: K. SCOTT
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Project #: 597
Date: 10/09/25

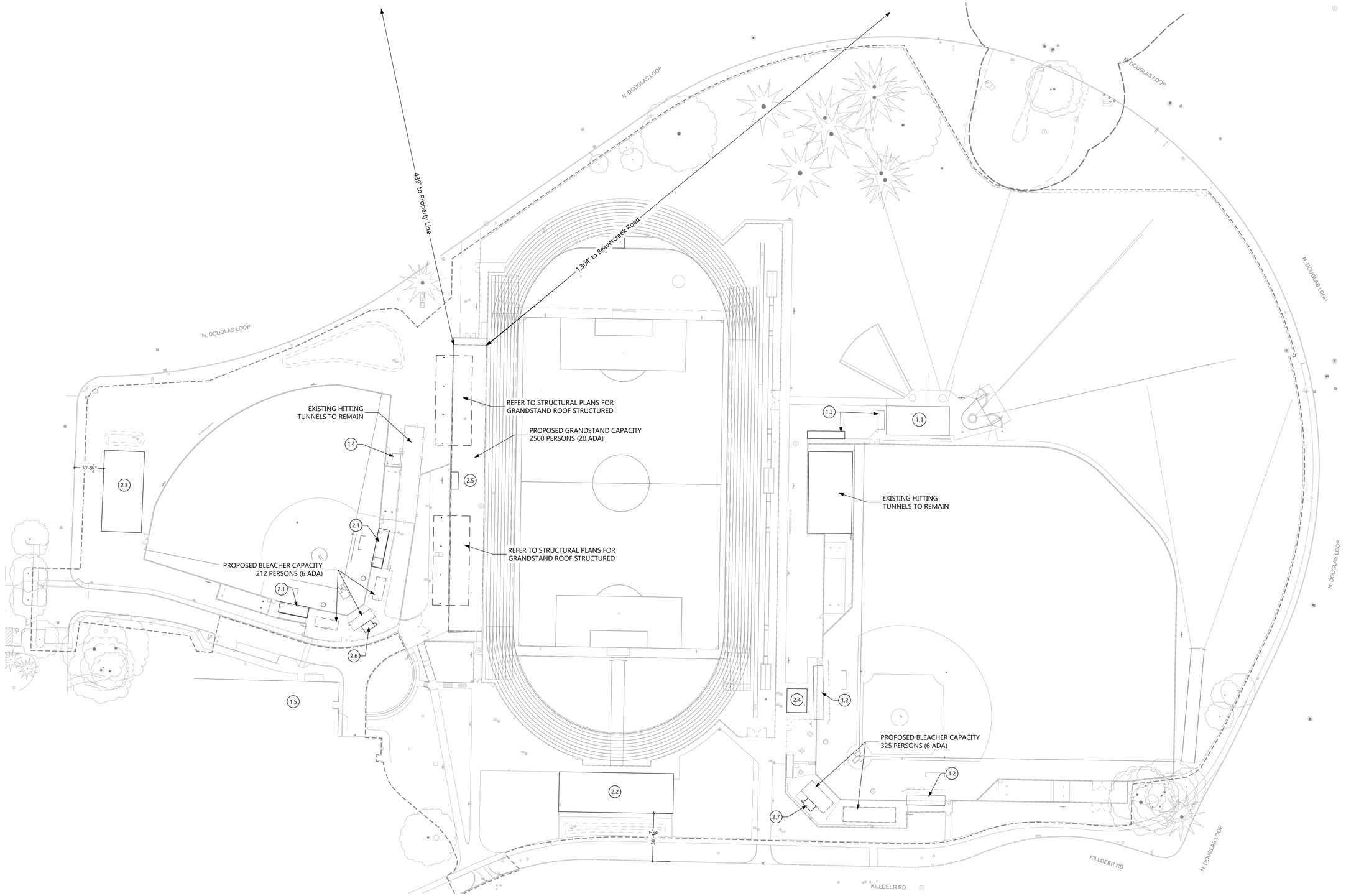
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PANEL SCHEDULES

E6.03



KEY NOTES

EXISTING BUILDINGS TO REMAIN

1.1	THROWS PRACTICE BARN
1.2	BASEBALL DUGOUTS
1.3	STORAGE CONEX
1.4	SOFTBALL STORAGE SHED
1.5	ARTS BUILDING

KEY NOTES

PROPOSED ACCESSORY BUILDINGS		REFERENCE PLAN(S)
2.1	SOFTBALL DUGOUT (PHASE 1)	A1.01 / A1.02
2.2	LARGE HITTING BARN; **5,040 SF**	A2.01
2.3	SMALL HITTING BARN; **3,570 SF**	A3.01
2.4	RESTROOM BUILDING; **509 SF**	A4.01
2.5	GRANDSTAND WITH PRESSBOX	A5.00 SHEETS (8 TOTAL)
2.6	SOFTBALL BLEACHER WITH PRESSBOX	A6.01
2.7	BASEBALL BLEACHER WITH PRESSBOX	A6.01

1" = 40'-0"

0' 20' 40' 80'

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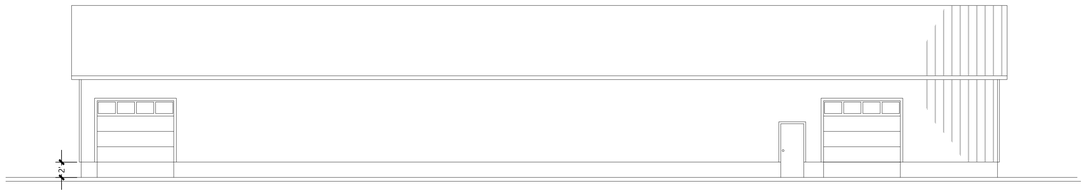
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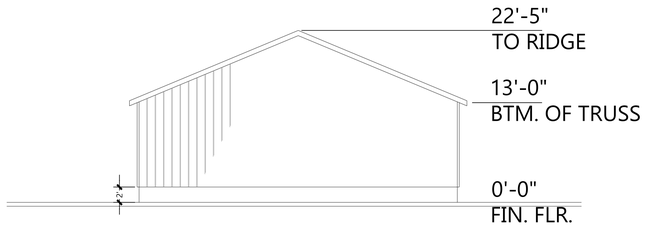
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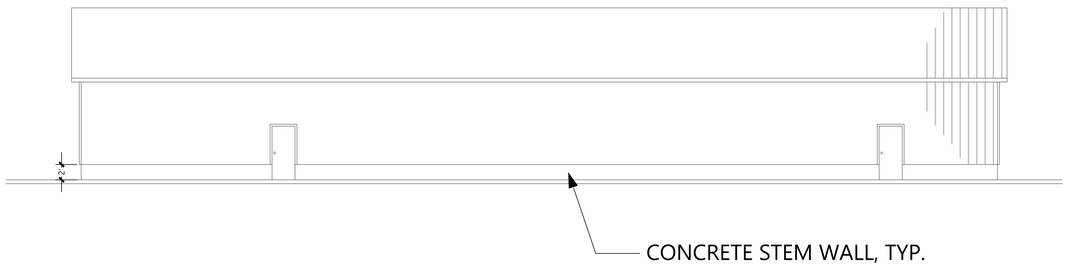
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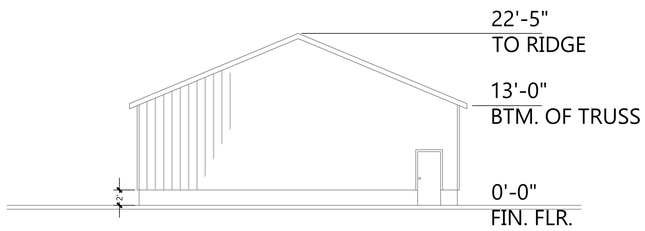
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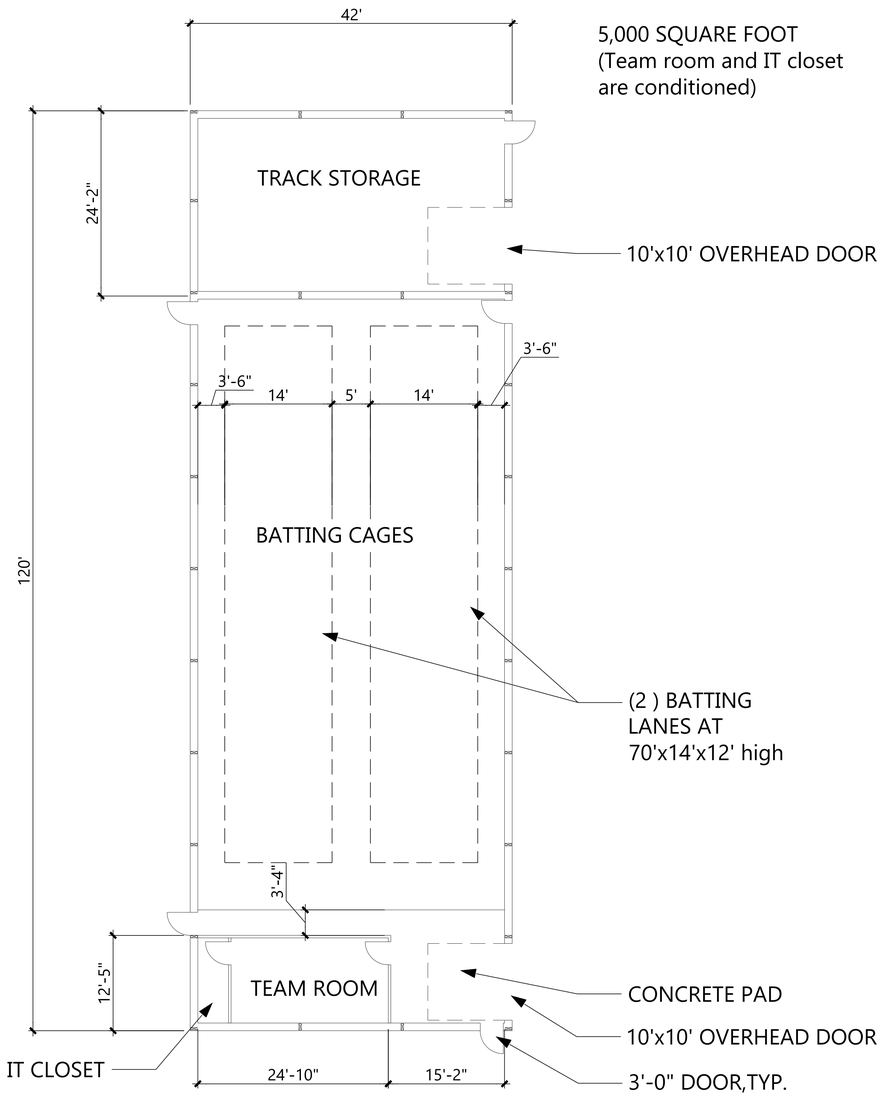




LARGE HITTING BARN SECTIONS

1/8" = 1'-0" 0' 4' 8' 16'





LARGE HITTING BARN FLOOR PLAN

1/8" = 1'-0" 0' 4' 8' 16'

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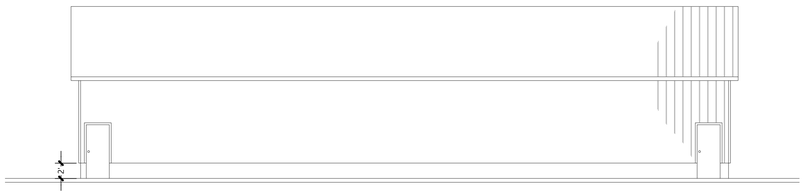
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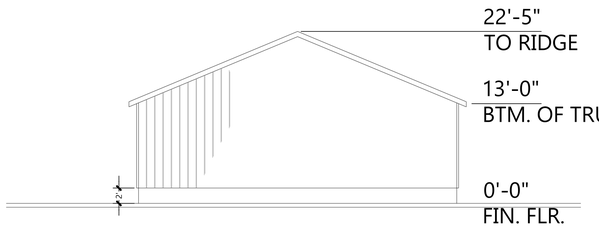
SMALL HITTING BARN PLANS

A2.01

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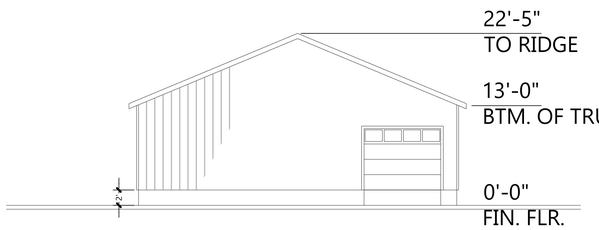
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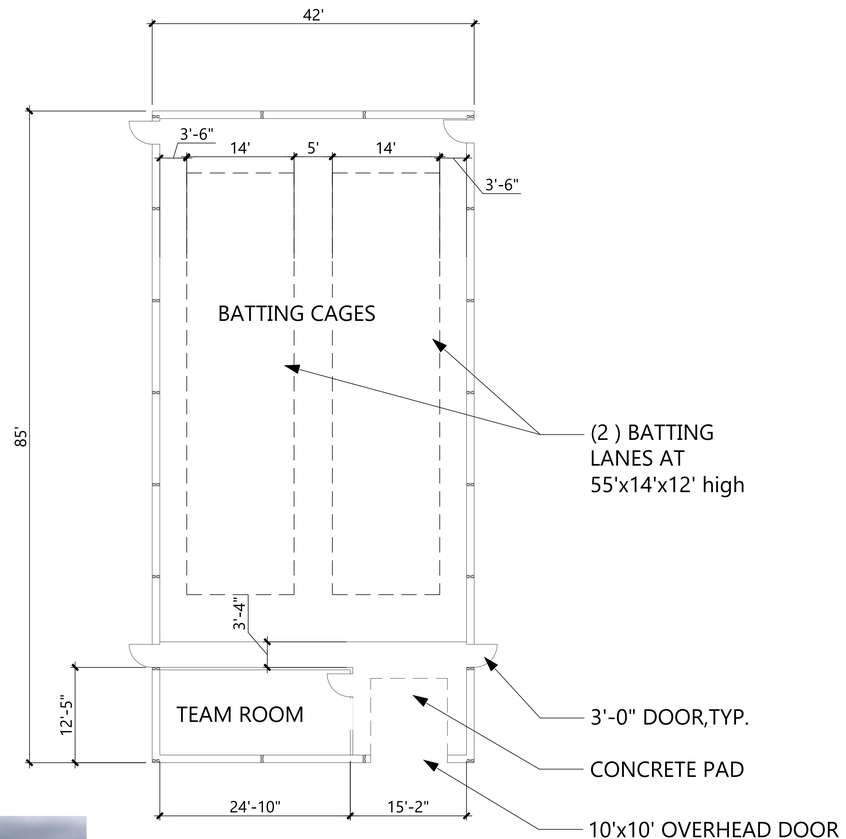


SMALL HITTING BARN SECTIONS

1/8" = 1'-0" 0' 4' 8' 16'



3,500 SQUARE FOOT
UN-CONDITIONED SPACE



SMALL HITTING BARN FLOOR PLAN

1/8" = 1'-0" 0' 4' 8' 16'

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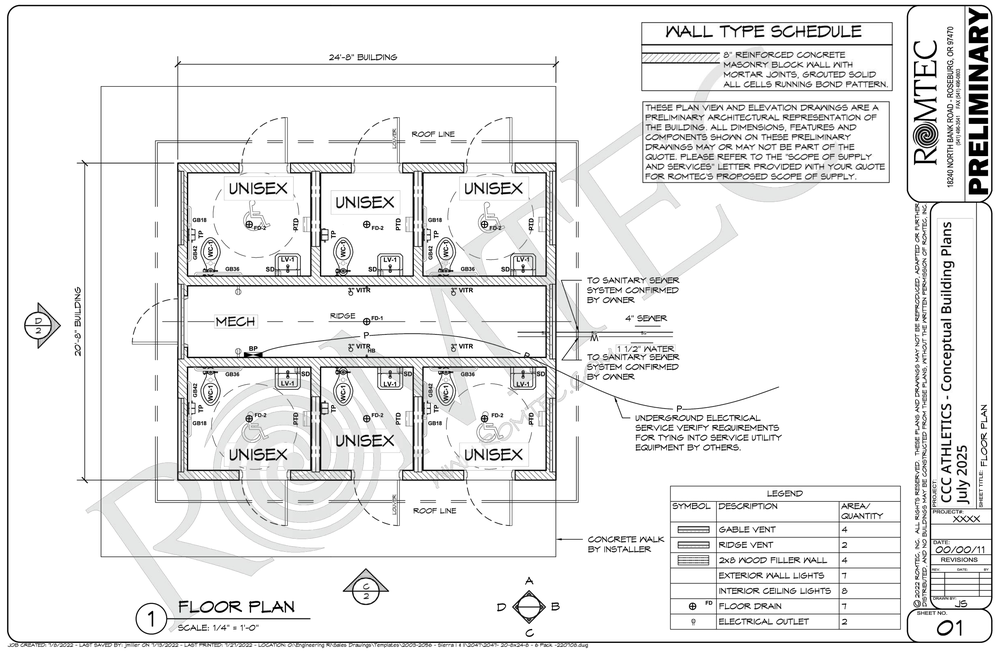
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SMALL HITTING BARN PLANS

A3.01

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WALL TYPE SCHEDULE

8" REINFORCED CONCRETE MASONRY BLOCK WALL WITH MORTAR JOINTS, GROUTED SOLID ALL CELLS RUNNING BOND PATTERN.

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LEGEND		
SYMBOL	DESCRIPTION	AREA/ QUANTITY
	GABLE VENT	4
	RIDGE VENT	2
	2x8 WOOD FILLER WALL	4
	EXTERIOR WALL LIGHTS	7
	INTERIOR CEILING LIGHTS	8
FD	FLOOR DRAIN	7
	ELECTRICAL OUTLET	2

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PROJECT: CCC ATHLETICS - Conceptual Building Plans
July 2025

SHEET TITLE: FLOOR PLAN

PROJECT#: XXXX

DATE: 00/00/11

REVISIONS

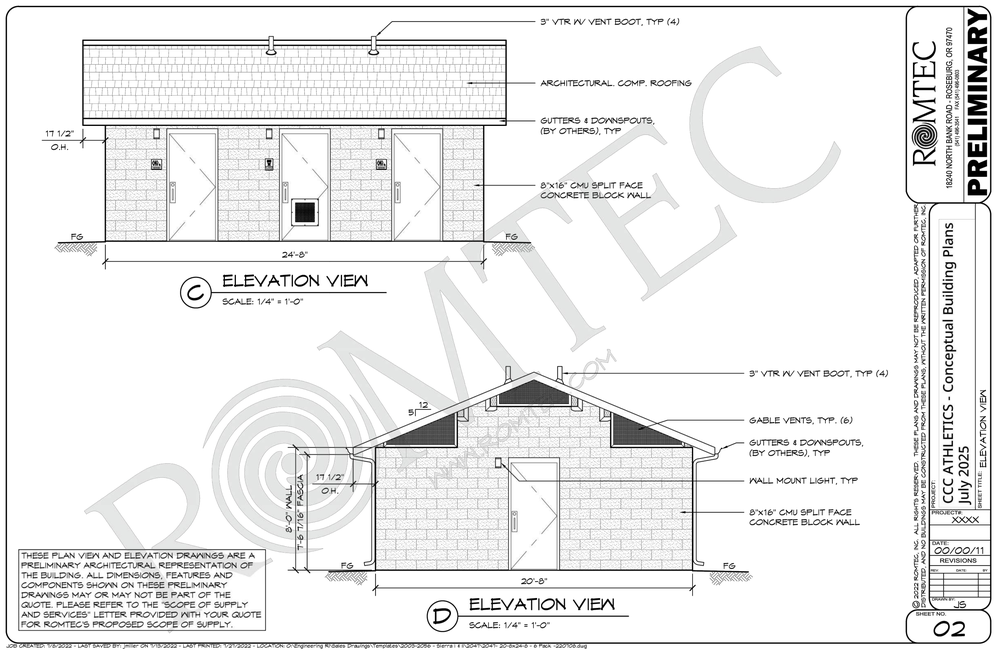
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July 2025

SHEET TITLE: ELEVATION VIEW

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RESTROOM BUILDING PLANS

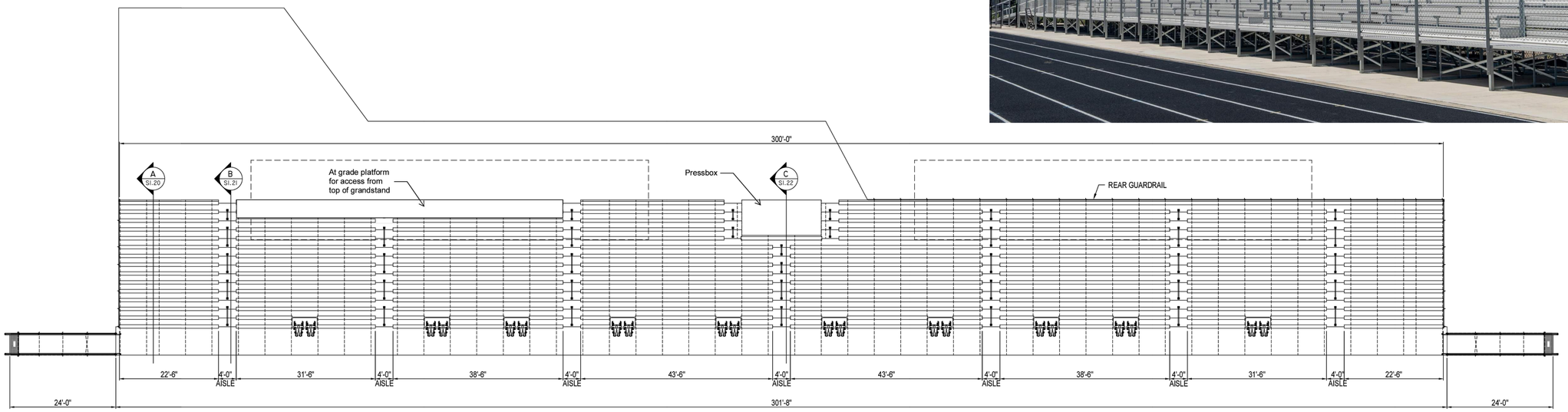
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Grandstand Floor Plan

EXAMPLE GRANDSTAND PHOTO





SEATING CAPACITY	
2441 =	STANDARD 18" SEATS
20 =	W/C SPACES
20 =	18" COMPANION SEATS
2481 =	TOTAL SEATING

REVISIONS			
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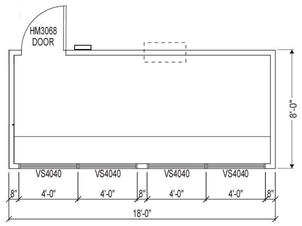
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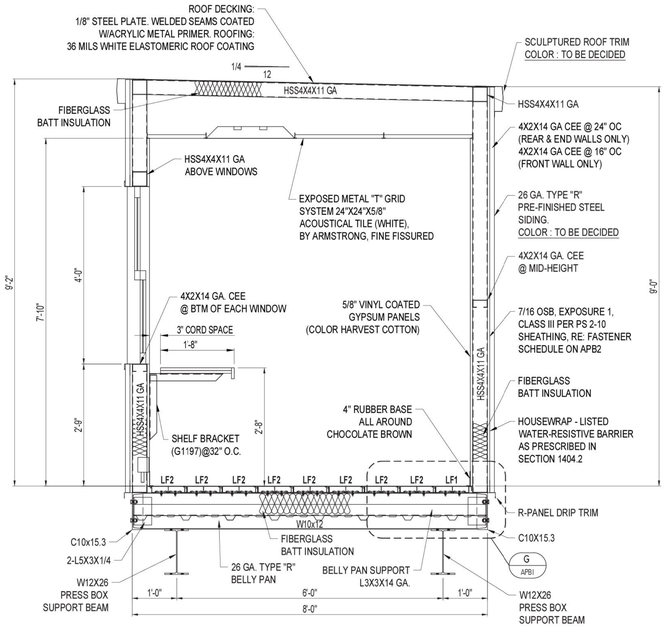
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Grandstand Press Box Floor Plan and Section



4 PRESS BOX FLOOR PLAN



5 CROSS SECTION

ARCHITECTURAL NOTES:

WB = 20" WIDE PRE-FORMED PLASTIC LAMINATE WORK BENCH CONSTRUCTED OF DOUBLE 3/4" AC GRADE PLYWOOD. COUNTER TOP 32" A.F.F., SUPPORTED W/ 2"x2"x3/16" ANGLE BRACKETS @ 32" OC. COLOR : NATURAL ALMOND

HM0068= 3'-0"x6'-8" EXTERIOR STEEL INSULATED HOLLOW METAL DOOR

PRESS BOX COLORS BY :
EXTERIOR SIDING - SLATE GRAY
ALL TRIM TO BE - SLATE GRAY

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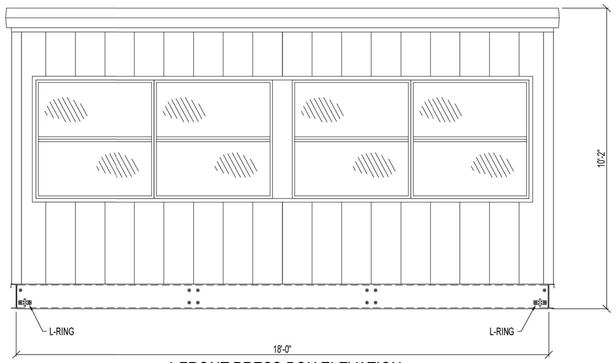
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GRANDSTAND PLANS

A5.02

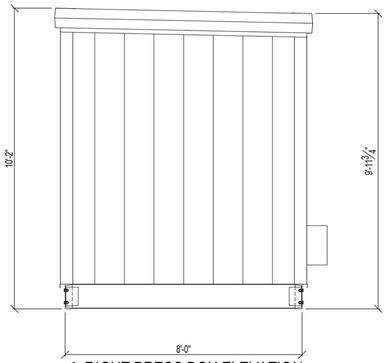
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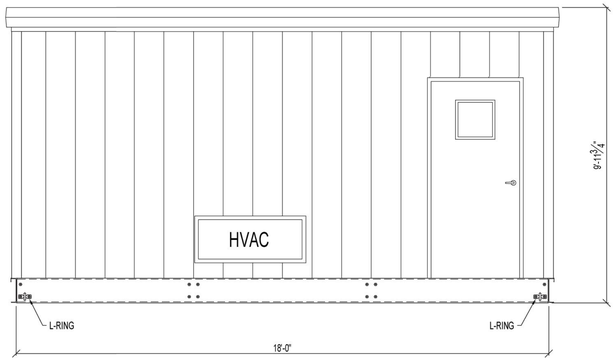
Grandstand Press Box Elevations



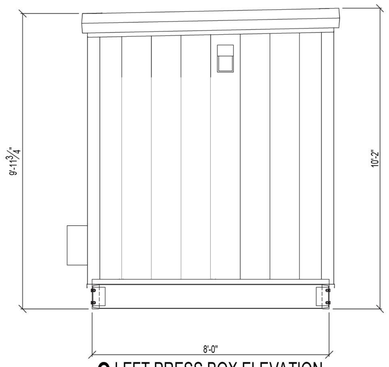
1 FRONT PRESS BOX ELEVATION



4 RIGHT PRESS BOX ELEVATION



2 REAR PRESS BOX ELEVATION



3 LEFT PRESS BOX ELEVATION

FASTENER SCHEDULE			
	BUILDING ELEMENT	FASTENER	NUMBER & LOCATION
1.	4X2X14 GA. CEE TO 4X2X14 GA TRACK (BTM)	1/8" WELD	3 SIDES
2.	4X2X14 GA CEE TO TUBE	1/8" WELD	4 SIDES
3.	ROOF JOISTS TO TUBE	1/8" WELD	4 SIDES
4.	7/16 OSB, EXPOSURE 1, CLASS III PER PS 2-10 SHEATHING (FRONT & REAR WALLS)	#10X1-1/2" ZINC PLATED FLAT HEAD SELF DRILLING SCREWS	6" MAX AT ALL PANEL EDGES, 12" O.C. ALL OTHER SUPPORT STUDS
5.	7/16 OSB, EXPOSURE 1, CLASS III PER PS 2-10 SHEATHING (END WALLS)	#10X1-1/2" ZINC PLATED FLAT HEAD SELF DRILLING SCREWS	6" O.C. MAX AT ALL PANEL EDGES, 12" O.C. ALL OTHER SUPPORT STUDS
6.	LISTED WATER-RESISTIVE BARRIER MEMBRANE AS PRESCRIBED IN SECTION 1404.2	20 GA. HAMMER TACKER STAPLES 3/8"X3/8"	(1) @ 18" MAX O.C. HORIZONTALLY & VERTICALLY
7.	ALUMINUM FLOORING TO W10X12	HOLD DOWN CLIP W/ CBGS/16X1-1/4" & FN-5/16-G	(2) PER BOARD @ EACH CROSS BEAM
8.	3-RAKE TO W10X12	SDS#12X1-1/4" ZINC PLATED	(1) EVERY 12" O.C.
9.	26 GA. BELLY PAN TO 3-RAKE	SDS#12X3/4" ZINC PLATED	(1) EVERY 12" O.C.
10.	R-PANEL TO 7/16 OSB, EXPOSURE 1, CLASS III PER PS 2-10 SHEATHING	SDS#12X1-1/2" ZINC PLATED (HEX HEAD PAINTED TO MATCH R-PANEL)	(1) EVERY 12" O.C. @ PANEL EDGES (1) EVERY 12" O.C. @ PANEL VERT. MIDPOINT
11.	R-PANEL TO R-PANEL OVERLAP	SDS#14X7/8" LAP TEK ZINC PLATED (HEX HEAD PAINTED TO MATCH R-PANEL)	(1) EVERY 24"VERTICALLY @ PANEL OVERLAPS
12.	VINYL COATED GYP. BOARD TO STUD	#6X1-1/4" FLAT HEAD ZINC PLATED SELF DRILLING SCREW	(1) @ 7" MAX O.C. (TOP & BOTTOM) W/ CONSTRUCTION ADHESIVE @ ALL STUD BEARING POINTS
13.	W10X12 TO C10X15.3	HSBS/8X1-3/4" W/ HN-5/8-G GALVANIZED	(4) PER EACH W10X12 @ ENDS (8) PER EACH INTERM. W10X12
14.	1/8" SMOOTH PLATE TO STEEL FRAMING	1/8" WELD, 2" LONG	12" O.C. @ 4X2X14 GA CEE SPACED 16" O.C. MAX, 12" O.C. @ HSS4X4X11 GA SPACED 72" O.C. MAX
15.	FIN FRAMED VINYL WINDOWS TO 4X2X14 GA. CEE OR HSS4X4X11 GA	#10X1-1/2" PHILLIPS WAFER HEAD SELF DRILLING SCREW ZINC PLATED	2" FROM EACH CORNER & 12" O.C. MAX ALONG PERIMETER. (1) AT EACH CORNER TOP/BTM @ MULL BAR LOCATION ON EACH SIDE OF MULL BAR.
16.	FIN FRAMED VINYL WINDOWS @ MULL BAR LOCATIONS WHERE 2 OR MORE WINDOWS ARE JOINED	#10X3/4 PHILLIPS WAFER HEAD SELF DRILLING SCREW ZINC PLATED	STARTING AT 2" FROM END OF MULL BAR 12" O.C. MAX EACH SIDE OF MULLBAR WHERE WINDOW FRAME ATTACHES TO MULL BAR.
17.	DOOR FRAME TO HSS4X4X11 GA & 4X2X14 GA. CEE	#10X1-1/2" ZINC PLATED FLAT HEAD SELF DRILLING SCREW	ATTACH ON SIDES OF FRAME 12" FROM EDGE & @ MID-HEIGHT OF FRAME
18.	DOOR FRAME ANCHORS TO 4X2X14 GA. CEE	#10X1-1/2" ZINC PLATED FLAT HEAD SELF DRILLING SCREW	ATTACH ON EACH SIDE OF DOOR FRAME ANCHOR (TOP, BTM, & MIDDLE)
19.	TRIM & ACCESSORIES	#8X1-5/8" FLAT HEAD W/ STRONG SHIELD COATING SELF DRILLING SCREW	EVERY 24" O.C.

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P1.03

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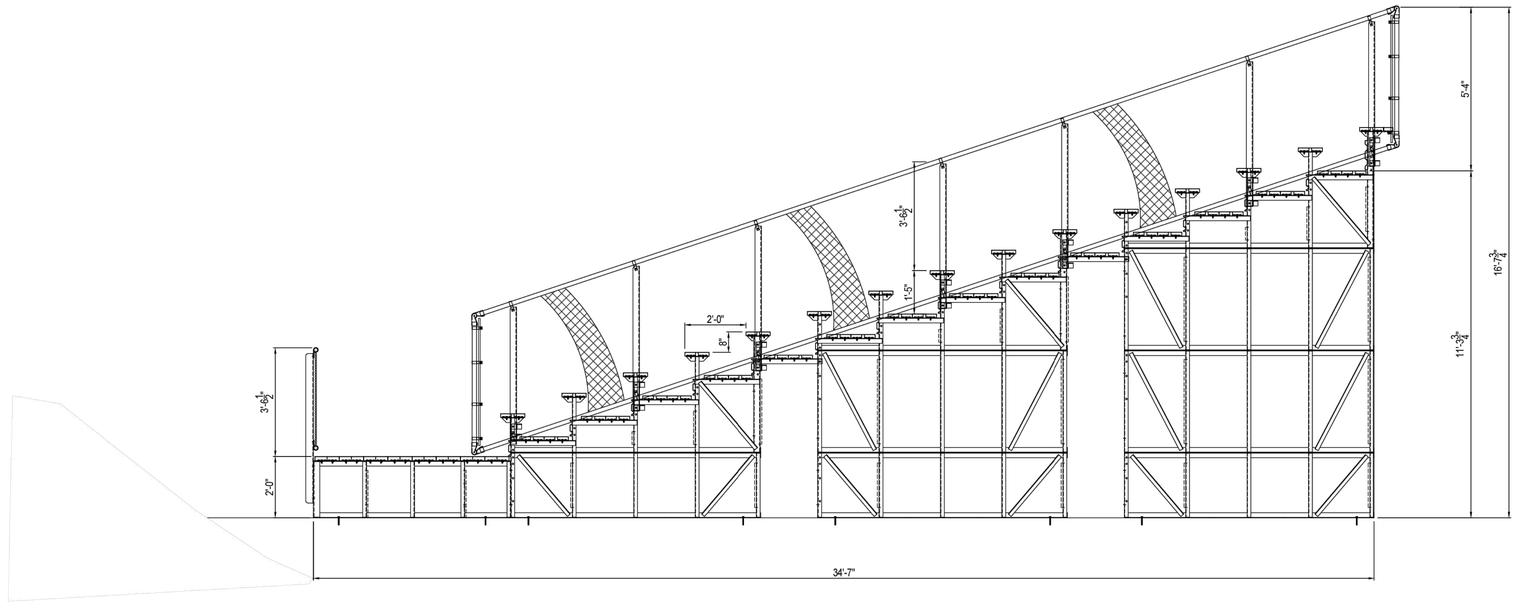
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GRANDSTAND PLANS

A5.03

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Typical Grandstand Section with guardrail



SECTION A A1.10

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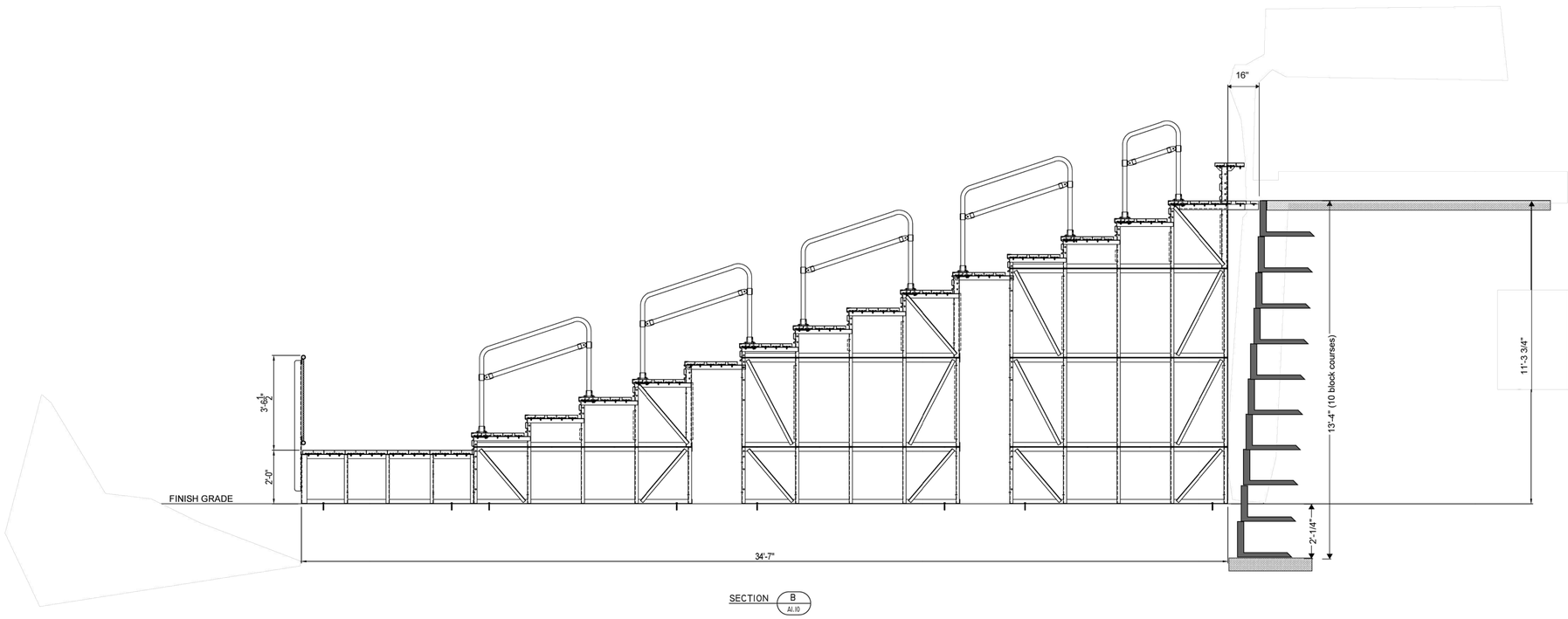
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Typical Grandstand Section @ upper plaza



SECTION B A4.10

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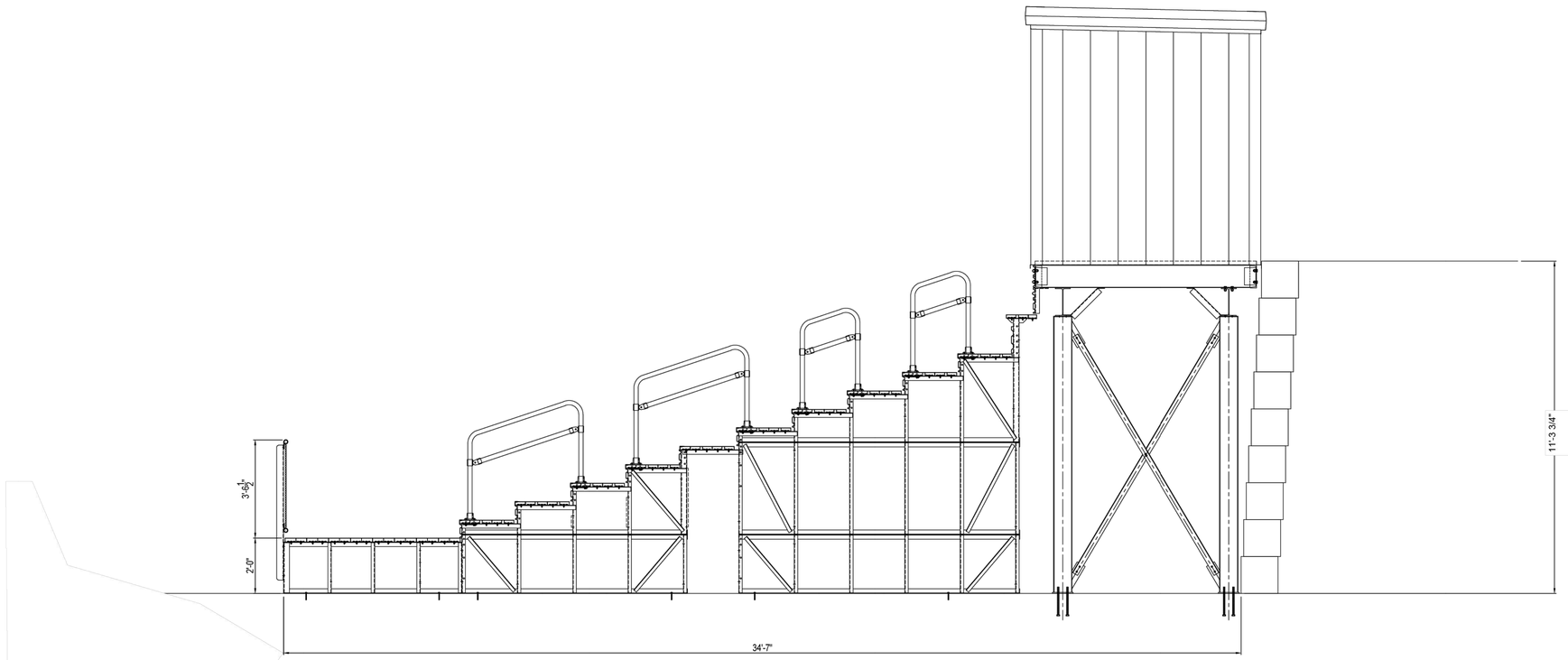
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SECTION C A1.10

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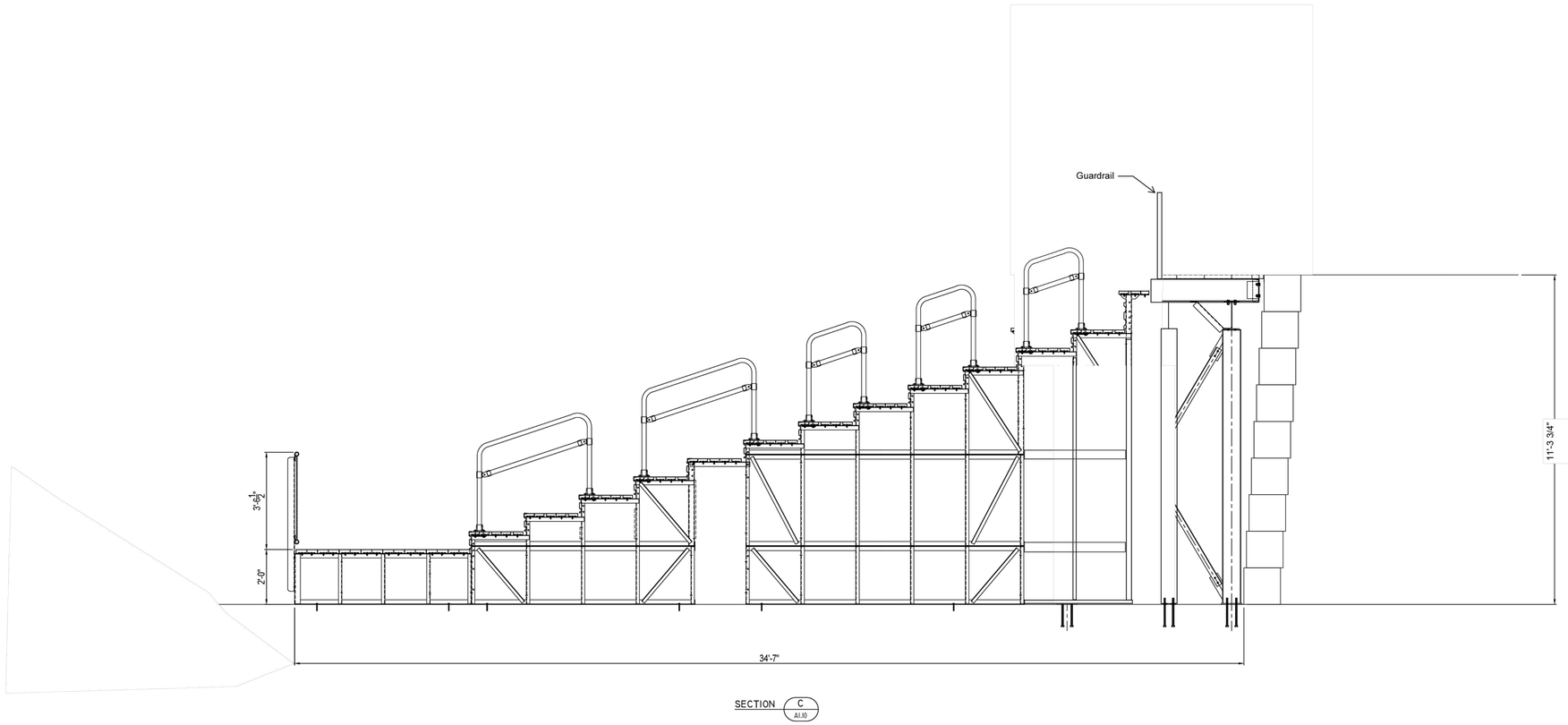
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SECTION C / A1.10

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SALES DRAWING

OREGON CITY, OR		CLACKAMAS COMMUNITY COLLEGE	
PID: 485120	JOB #: 102A	JOB LOCATION: FBH	15 ROW X 300' BLEACHER

S1.23

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
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CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

Drawn By:	CD/OP
Checked:	JG
Project #:	25.020
Date:	Oct. 9, 2025

Rev. #:	Date:

100% DESIGN DEVELOPMENT

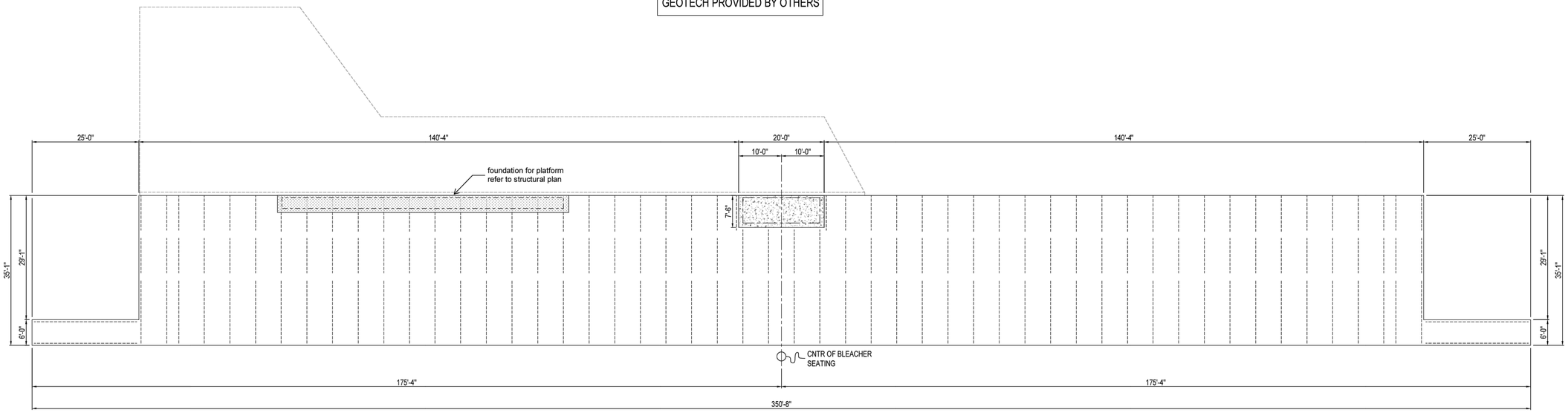
SHEET TITLE
GRANDSTAND PLANS

A5.07

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Framing Plan

FOUNDATION DESIGN PENDING
GEOTECH PROVIDED BY OTHERS



FOUNDATION PLAN

FIELD SIDE

REVISIONS			
REV	BY	DATE	DESCRIPTION
0			
1			
2			

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SALES DRAWING

OREGON CITY, OR		CLACKAMAS COMMUNITY COLLEGE	
PID: 485120	JOB #: 102A	JOB LOCATION: FBH	15 ROW X 300' BLEACHER

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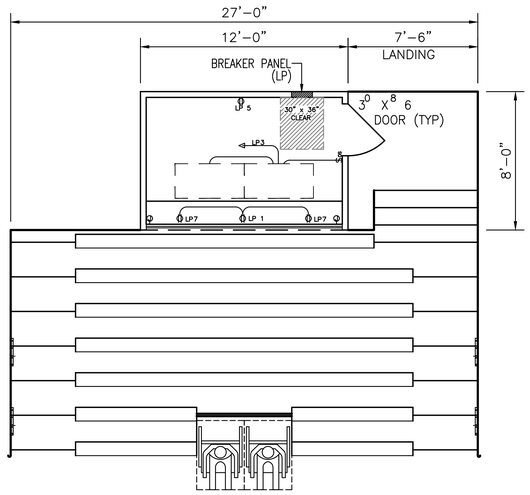
100% DESIGN DEVELOPMENT

SHEET TITLE
GRANDSTAND PLANS

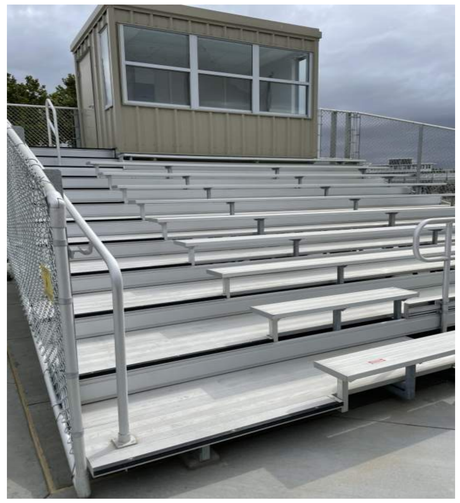
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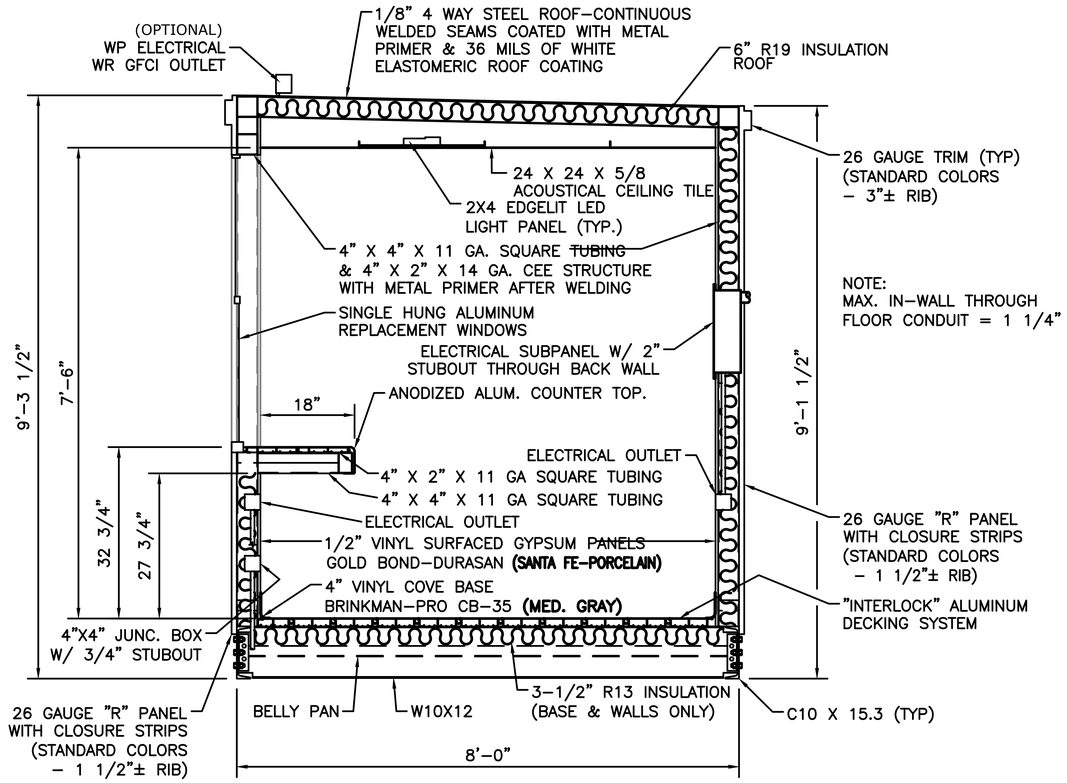
79 TOTAL NET 18" SEATS
2 TOTAL NET 33" WHEELCHAIR SPACES
81 TOTAL SEATING CAPACITY



SOFTBALL BLEACHER PLAN VIEW

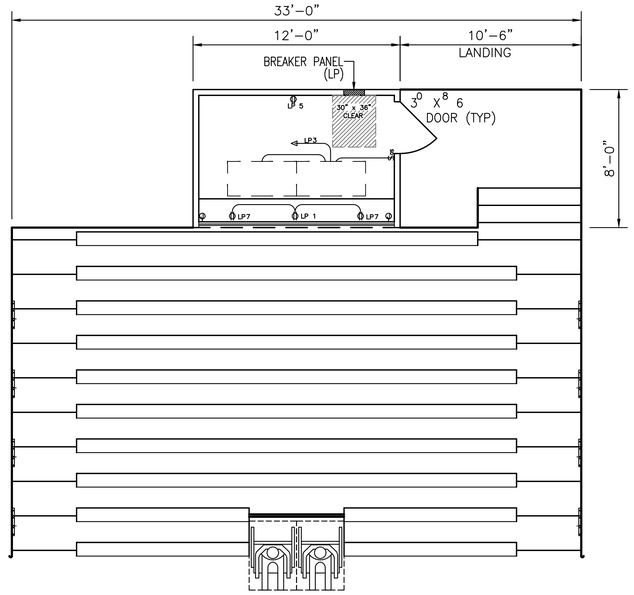


EXAMPLE IMAGE

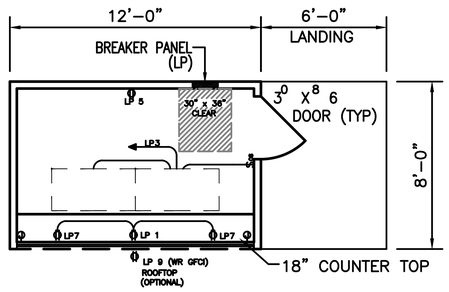


SECTION VIEW
SCALE: 3/4"=1'-0"

158 TOTAL NET 18" SEATS
2 TOTAL NET 33" WHEELCHAIR SPACES
160 TOTAL SEATING CAPACITY



BASEBALL BLEACHER PLAN VIEW



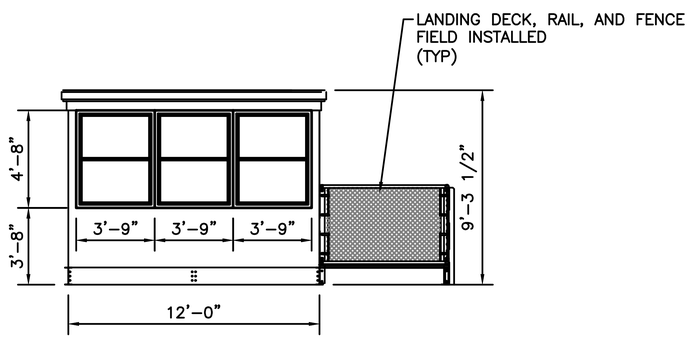
PLAN VIEW
SCALE:1/4"=1'-0"

NOTES:

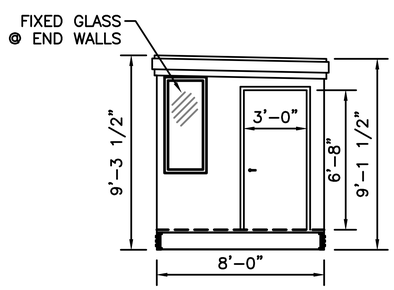
ROOF PLATE STEEL IS WELDED ON BOTH SIDES OF RAFTERS WITH 1-1/2" LONG 1/8" FILLET WELDS ON 12" CENTERS.

WALL PANELS ARE ATTACHED WITH #12 TEK SCREWS - 6" O.C. AT THE TOP AND BOTTOM OF THE PANELS AND 12" O.C. AT ANY INTERMEDIATE BRACE. LAP SCREWS ARE PLACED AT EACH END OF THE PANELS, AT THE INTERMEDIATE SUPPORTS, AND AT THE MID POINT BETWEEN SUPPORTS. (TEK #14)

FLOOR PLANK ATTACHED WITH (2)-MILL ALUMINUM HOLD DOWN CLIP w/ 5/16"X1" CARRIAGE SCREW AND 5/16" FLANGE NUT AT EACH W10X12. FRONT (END) FLOOR PLANK ATTACHED TO W10X12 WITH (2)-COUNTERSUNK 2" TEK SCREWS PER END OF PLANK AND AT INTERMEDIATE SUPPORTS.



FRONT ELEVATION VIEW
SCALE:1/4"=1'-0"



SIDE VIEW
SCALE:1/4"=1'-0"

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100% DESIGN DEVELOPMENT

SHEET TITLE

BBAL / SBALL BLEACHER WITH PRESSBOX

A6.01

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EXHIBIT A
Construction Cost Form

OREGON CITY
Community Development – Planning
695 Warner Parrott Road | Oregon City OR 97045
Ph (503) 722-3789

Construction Costs for Site Plan & Design Review and Detailed Development Plans

The cost of the Planning Division review for Site Plan and Design Review and Detailed Development Plans is based on the construction cost of the project. Construction costs are defined as all costs to complete the project, including soft costs; however, it does exclude interior furniture and moving expenses.

Address: 19600 SW Molalla Ave, Oregon City, OR 97045

Project Description: New Track and Field with 2,500 seat grandstand, storage facility, 6 user restroom and related support facilities

Section I - Construction Costs

	Amount
Design Work - CONSTRUCTION MANAGEMENT, DEMOLITION AND GENERAL CONDITIONS	$ 800,000
Site Prep	$ 900,000
Consultants	$ 35,000
Excavation	$ 1,000,000
Utilities	$ 1,150,000
Foundation AND LOCK AND LOAD WALL	$ 250,000
Framing material/wall construction	$ 225,000
Interior finish (walls, doors, floor, cabinety, light fixtures, etc.)	$ 225,000
Supplemental information (~~fire suppression~~, hvac, electrical, plumbing, SITE LIGHTING, etc.)	$ 1,150,000
Roofing	$ 650,000
Landscaping	$ 150,000
Paving ASPHALT AND CONCRETE	$ 650,000
~~Sign~~ SPORTS FIELD LIGHTING	$ 750,000
~~Trash Enclosures~~ GRANDSTANDS AND PRESSBOX	$ 850,000
Other: TURF, TRACK SURFACING, FENCING, SCOREBOARD AND SPORTS EQUIPMENT	$ 1,655,000
Total Section 1	**$10,440,000**

Section II - Permits

Building	$
Electrical	$
Plumbing	$
Mechanical	$
Land Use	$
Total Section II	**$**

Section III - Totals

Section I Total	$
Section II Total	$
Grand Total	$

Staff Only: Building Official Verification: _____ Date: _____

EXHIBIT B
Project Drawings

Submitted as a separate attachment.

EXHIBIT C
Arborist Report

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING

ARBORIST REPORT

Clackamas Community College Athletics Facilities Improvements Oregon City, Oregon

From: Matt Jorgensen, ISA Certified Arborist, PN-8810A

Date: October 9, 2025

Subject: **Athletics Facilities Improvements Arborist and Tree Mitigation Plan Report**

Introduction

A site visit for tree assessment was performed on October 7, 2025. The Athletics Facilities Improvements project site is on properties owned by Clackamas Community College in Oregon City, Oregon. The site is bordered by Killdeer Road on the south, North Douglas Loop on the east and north, and internal drives on the west. This report focuses on all trees within the project boundaries with a Diameter at Breast Height (DBH) of greater than or equal to 6 inches.

Tree Felling Criteria for this project are presented below. Tree diameters in the reports are the diameter at 4.5 feet above grade (DBH) and for trees larger than 6 inches in DBH. Tree diameters for multi-stemmed trees are the square root of the sum of all squared stem DBHs. Limbs counted are identified before the DBH measurement in parentheses. For example, a double stemmed tree that has a final DBH of 10-inches would be noted as (2) 10". A triple stemmed 10" DBH tree would be noted as (3) 10". Please see the Demolition and Tree Preservation and Removal Plans (L0.00-L0.04) for the tree's corresponding ID number and location, and the table at the end of this document for additional notes pertaining to each tree: tree Species, diameter size, and health/condition. A compilation of field investigation and survey data were used to generate the locations of the trees reported upon in this report.

The study for this report evaluated the health of trees on site and their respective status as a tree proposed for protection or removal.

Observations:

A variety of trees are present on the site. Tree species reviewed in this report include the following: Red Maple (Acer rubrum), Flowering Dogwood (Cornus florida), Oregon Ash (Fraxinus latifolia), Douglas-fir (Pseudotsuga menziesii), Pin Oak (*Quercus palustris*), and Oregon White Oak (*Quercus garryana*).

Trees Located Within the Project Area:

Oregon City Code Section 17.41 indicates documentation needed for any trees in the project area that are "…dead, dying, diseased or hazardous", in addition to any trees deemed necessary for removal. As such, the following describes trees that are recommended to be monitored due current health conditions, as well as any recommendations for removal.

Healthy trees designated for removal will be mitigated per Section 17.41.060 (Option 1). Please see recommendations at the end of this report. Per Section 17.41.060, any trees deemed to be "…dead, dying, diseased or hazardous" will be subtracted from the project area tree count, and per Section 17.41.110 will not be included in the restrictive covenant. All remaining existing trees not mentioned in this report are subject to the tree protection factors outlined in Section 17.41.110 (Option 3).

The first tree in this report is contained in a grove of Oregon White Oaks, found on the south side of the project area between a sidewalk and fencing of the baseball field. This is a dense grouping for oaks, causing severe competition for light in particular, but also competition for soil, nutrients and water. All trees have unbalanced canopies, as branching favors the side with the most light. Due to the age and density of these trees, any potential removal in the future needs to consider the danger of windthrow of the remaining specimens should they lose the protection of a neighbor.

The tree in question in this grove is tree #3: an Oregon White Oak with a DBH of 19 inches. A common condition within the grove, this tree has an unbalanced crown due to competition for light. In this case, it has caused the majority of the crown to extend out to the northwest.

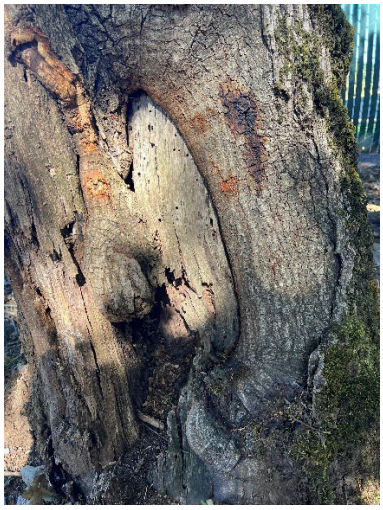


Tree #3 showing location and lean.



Tree #3: injuries at base.

Particularly now that we are in the Fall season, leaf damage from insects and galls are apparent, commonly caused by the Oak Lace Bug and leaf/twig gall wasps (these are common and do not compromise the health of the tree). The base of the tree has old bark injuries, old pruning cuts, a small current injury that is weeping, and suckering from the roots nearby. The old injuries and pruned areas have left exposed sapwood that exhibits decay and the presence of boring insects. However, the canopy does not appear to be dying back or showing any additional stress due to the lower injuries at this time. The location of the decay low on the trunk and the leaning nature due to overcrowding prompts the recommendation that this tree is monitored for decline over time, as progression of decay and/or insect activity will weaken the tree's ability to remain upright. It should be considered for removal and replacement if its health deteriorates.



Tree #3: closeup of bark, insect damage, decay.



Tree #3: closeup of decay.



Tree #3: closeup of decay.

Tree #8 is a Red Maple located just east of the oak grove, with a DBH of 12 inches. The central leader of this tree has been broken off, and the approximately 15 foot long segment is hanging in the branches of the tree. The break appears to have happened some time ago, perhaps due to storm damage, and has resulted in a "topped" condition. Many adventitious shoots have emerged at the top of the tree in an attempt to correct for the missing central leader. The overall foliage of the tree is sparse, and the tree is shaded by larger trees nearby except in the morning hours, which does not help this sun loving species. Exposed surface roots with mower damage are present. This tree is recommended to be removed, as its form cannot recover and can result in future problems, and it is under stress from injury and lack of light.



Tree #8: Broken and hanging central leader; sparse foliage; adventitious shoots.



Tree #8: Sparse foliage; broken central leader.

Tree #14 is a Red Maple that is to be removed due to construction/design related issues, and is not addressed in this report.
On the north/northeast side of the project area are two Oregon Ash trees in close proximity to one another. Tree #18 has a DBH of 15 inches, and leans heavily to the west, with an unbalanced crown. There is a small cavity in the trunk at approximately 6 feet high, with signs of decay and insect activity in the exposed sapwood. Some leaves show puckering/shriveling at branch tips, indicating insect and/or fungal presence, but it is not a concern. There are some watersprouts on the lower trunk. Due to the strong lean and cavity with decay, it is recommended that this tree is monitored over time.

Lastly, tree #27 is a Douglas-fir exhibiting codominance, with an overall DBH of 54 inches. The main trunk has a codominant split at approximately 12 feet with a tight limb angle. However, this segment is not the concern. Another separate codominant leader with a tight limb angle arises very low on the tree and extends out to the west from the base, and due to proximity to the main trunk(s) has an unbalanced canopy. This separate trunk measures at 29 inches DBH on its own. Although there is some shading and reduced branching due to proximity to the neighboring tree and some surface roots are present with mower damage, the tree as a whole is in good condition. However, the strong lean of the one codominant trunk to the west and the proximity of the adjacent baseball diamond earns this tree a “monitor” designation for the future.



Tree #18: Strong lean to the west.



Tree #27: Codominant leader with strong lean to the west.

Design Implications:

The design impacts (1) tree in the southeast quadrant of the project area near the corner of Killdeer Road and North Douglas Loop due to new construction. As construction will be occurring in close proximity to a number of the trees, extra care should be taken near and within Critical Root Zones (CRZ). Other considerations include the proposed removal of (1) tree nearby due to poor condition, as well as monitoring of (3) trees on the south and north sides of the project area due to risk potential from pests, decay or form, as detailed in this report.

Erosion Considerations:

The site is relatively flat; however, erosion control measures will still be required to prevent sediment from entering any storm drains near the site. The design team, the Contractor, and Oregon City will need to work together to ensure proper erosion control measures are put into place prior to demolition and construction.

Recommendations:

Care shall be taken during construction around existing trees to remain. The location of significant roots can be determined during the planning phase and creative designs can be implemented to accommodate the expansion of these major roots. The goal of reducing the impact on the soil and root system can be achieved through various methods. Fencing will reduce impacts to the soil and root systems during construction. Excavation options to reduce root damage to the trees being preserved include hydraulic or air spading, horizontal boring, and hand digging for soil removal without cutting or damaging roots of 1-1/2" or larger. Horizontal boring at a depth of at least 24" is optimal. A thick layer of mulch should be applied to the zone of protection to feed the tree and keep moisture levels intact during the construction period.

Cut and fill in and around existing tree roots can affect the overall health of the tree. While cut is most intrusive, as it directly eliminates an energy (food and water) source, fill can also impact feeder roots in trees. Trees are better equipped to adapt to fill than cut. If fill is required, it is recommended to keep fill materials at least 10-ft from the base of the tree wherever possible and to infill either by hand or with use of heavy equipment where only the bucket enters the protected area, and the weight of the machinery stays outside the tree protection area to avoid soil compaction. No more than 30% of the tree's root zone should be impacted with cut or fill for optimal health of the tree. Concrete walks constructed within a tree's root zone should minimize impact to the root systems.

Tree protection measures and construction access accommodations shall be fine-tuned after the site design has been refined. Coordination between the arborist, planners/designers, and the contractor is critical to protecting the trees to remain to the greatest extent practicable. Respect for the designated protection zone is critical to ensure the long-term health of the tree. All too often the designated protection zone is impacted for 'just a day' or 'just one time'. Impact using heavy equipment can severely impact the soils and can be all it takes to kill the tree 5 to 10 years down the road when construction impacts are no longer remembered.

Living limbs shall be pruned for construction late in the dormant season or very early in spring before leaves form. Growth is maximized and wounds close faster, limiting exposure to pathogens. Flowering trees should be pruned after blooming. Routine maintenance pruning of dead or dying branches can be done at any time.

Typically, tree removal occurs to accommodate new construction if more than 30% of their CRZ will be impacted. The design team has identified trees to be removed.

To mitigate tree removal, the landscape plan should replace trees as appropriate per Oregon City Code.

Assumptions and Limiting Conditions:

- The data given in this report reflects an opinion of the conditions present on site at the time of inspection. The inspection was limited to visual examination only without excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees on the property may not arise in the future.
- Care has been taken to obtain all information from reliable sources. The consultant can neither guarantee nor be responsible for the accuracy and completeness of the information provided by others.
- Consultant shall not be required to give testimony or to attend court by reason of any report unless subsequent contractual arrangements are made, including payment of additional fees.
- Missing pages or alteration of any report invalidates entire report.
- Possession of a report does not imply a right of publication without written consent of the consultant.
- Neither all nor any part of the contents of this report, nor a copy thereof, shall be conveyed to the public through advertising, public relations, news, sales or other media, or for a larger database without the expressed written consent of the consultant.

Tree Mitigation-Replanting Plan:

Tree #8 is designated for removal due to critical flaws/damage/condition. As such, it is not subject to Section 17.41.060.

Tree #14 is designated to be removed due to construction/project design, and has a DBH of 16 inches. Per Table 17.41.060-1, tree replacement requirements indicate the number of trees to be planted is two. These required trees will be replanted on the development site. The following is a species recommendation that is contained on the Oregon City Native Plant List, the Oregon City Street Tree List, and the Stormwater and Grading Design Standards-Facility Planting Guidance: Appendix A, Table A-1 Plant list:

Quantity	Genus & Species	Common Name	Caliper	Preferred Planting Dates	Description
2	Acer circinatum	Vine Maple	2"+	September-November. Alternatively, November-April while trees are dormant is acceptable other than when soil is subject to freezing. Avoid planting during hot, dry weather. If unavoidable, only plant in hot weather if irrigation is readily available.	10'-25' tall and wide

General Planting Guidelines

Soak container grown, B&B, and bare root trees before planting. Remove extra soil on top of root ball to expose flare of first buttress root. Root flare must be visible at top of root ball. Dig individual planting holes circular with vertical sides 3x the diameter of the root ball, or 36" minimum (whichever is greater), at a depth allowing the root crown to remain 1-3 inches above surrounding finish grade. Save and thoroughly loosen soil removed from planting hole and use as backfill around tree; gently tamp in backfill. Lift trees by wire basket only. Do not lift trees by trunk or use trunk as a lever to position or move tree. If present: cut and completely remove twine and other fasteners from root ball; remove burlap from top half of root ball; remove all burlap if not biodegradable; remove top half of wire basket after planting. Neatly cut off broken or frayed roots. Trees with 2" caliper or greater should be staked with (2) stakes on the North and South sides, parallel and plumb, and not piercing the root ball. Each stake should have a separate looped tree tie. Apply organic mulch such as wood chips to a depth of 3 inches to conserve soil moisture and protect from temperature fluctuations. If tree is located in lawn, provide a minimum 2 ½ foot radius mulch ring. No mulch should be placed against the trunk, as it can lead to various issues; pull mulch several inches away from root flare. Provide supplemental irrigation at least for the establishment period: 2-3 years.

Regards,



Matt Jorgensen
ISA Certified Arborist, PN-8810A

CCC 10/9/2025

Existing Trees - Inventory & Assessment-performed 10/6/25

Plan ID	Genus & Species	Common Name	DBH (in)	CANOPY (ft)	Health/ Condition*	Arborist Notes	within 10' of Structure	Co-dominant Leader	Surface Roots	% Deadwood	History of Being Topped	Suckers
1	Quercus palustris	Pin Oak	24	53	4	lower trunk limbed up; some exposed roots, red marking paint going over them in several locations; past suckering from base removed, but some decay on exposed wood; slight lean ESE			x	5%		
2	Quercus garryana	Oregon White Oak	(2) 18, 7. Final DBH 19	22	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage and browning (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); low watersprouts; little branching on S; <1' from fence, but not encroaching/leaning; decay on dead wood/branches				5%		
3	Quercus garryana	Oregon White Oak	19	31	2.5	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); old injury with decay at base with boring insect presence in exposed sapwood; potential white rot on outer surface; weeping injury low on trunk; top leaning NW; a couple old broken limbs need proper pruning; canopy not currently showing additional stress from insects/lower injuries, but needs monitoring				5-10%		x
4	Quercus garryana	Oregon White Oak	35	42	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); split to 3 trunks @ 6' height, with 2 of the trunks exhibiting inosculation farther up; low, large crossing limbs rubbing on trunk; tight limb angles at trunk splits; some broken limb stubs not pruned; some decay on deadwood; some decay on low, old removed limb at 3' on trunk; top lean to WSW		x (3)		5-10%		
5	Quercus garryana	Oregon White Oak	5	11	3.5	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); watersprouts; in central part of grove						x
6	Quercus garryana	Oregon White Oak	12	22	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); old limb/trunk on side of base removed shows some decay				5%		
7	Quercus garryana	Oregon White Oak	22	40	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); slight lean; some upper branching extends into adjacent Douglas-fir			x mi nor	5-10%		

CCC 10/9/2025

Existing Trees - Inventory & Assessment-performed 10/6/25

Plan ID	Genus & Species	Common Name	DBH (in)	CANOPY (ft)	Health/ Condition*	Arborist Notes	within 10' of Structure	Co-dominant Leader	Surface Roots	% Deadwood	History of Being Topped	Suckers
8	Acer rubrum	Red Maple	12	33	2	central leader broken off and hanging (about top 15' of tree); foliage sparse; shaded by larger trees nearby except in morning; watersprouts; roots raising soil around base; surface roots with mower damage; remove			x			
9	Acer rubrum	Red Maple	9	27	3	foliage sparse; shaded by larger trees nearby except in morning; watersprouts; roots raising soil around base; half beneath adjacent oak, trunk wound; surface roots with mower damage			x			
10	Quercus garryana	Oregon White Oak	25	50	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); slight lean N; roots raising soil at base				5-10%		
11	Quercus garryana	Oregon White Oak	(2) 13, 7. Final DBH 15	24	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); split trunk at 2.5'; top leans E				5		
12	Quercus garryana	Oregon White Oak	16	20	3	1 sided; crowded and shaded by others in grove; galls and insect leaf damage (appears to be oak lace bug for foliage, in addition to leaf and twig gall wasps); very tall and skinny; most branches at top only; more central to grove to more shaded; sways the most with wind-danger of wind throw if others removed						
13	Pseudotsuga menziesii	Douglas-fir	38	47	3	some yellowing branch tips; codominant leader at about 50-60'; watersprouts lower on trunk; some galls; rubbing limbs in canopy		x				
14	Acer rubrum	Red Maple	16			remove; construction/design related						
15	Acer rubrum	Red Maple	15	39	3	surface roots with mower damage			x			

CCC 10/9/2025

Existing Trees - Inventory & Assessment-performed 10/6/25

Plan ID	Genus & Species	Common Name	DBH (in)	CANOPY (ft)	Health/ Condition*	Arborist Notes	within 10' of Structure	Co-dominant Leader	Surface Roots	% Deadwood	History of Being Topped	Suckers
16	Acer rubrum	Red Maple	12	34	3	one branch showed strong coloring of leaves before others, possible injury; surface roots with mower damage			x			
17	Acer rubrum	Red Maple	13	40	3	not ideal branching/symmetry; surface roots with mower damage		x	x			
18	Fraxinus latifolia	Oregon Ash	15	29	3	lean W; unbalanced and shaded by neighbor; small cavity in trunk at 6' with visible internal sapwood decay/boring insects; broken limb stub needs pruning; some leaves at branch ends are shriveled/puckered, indicating insect presence and/or fungal presence; watersprouts on lower trunk			x	5		
19	Fraxinus latifolia	Oregon Ash	25	53	3	trunk split/codominant leader at 5' with inosculation extending to 11'; cavity with decay of old wound where inosculation ends; several previously broken off limb stubs need pruning; tag indicating #227			x	5-10%		
20	Pseudotsuga menziesii	Douglas-fir	52	52	3	large codominant leaders with inosculation about 2/3 up the trunk (~40-50'); evidence of insects and birds on lower 10' of trunk		x (4): 2L 2S		<5		
21	Pseudotsuga menziesii	Douglas-fir	59	559	3	codominant leader split is toward top; some broken limbs deadwood is hanging loose in branches; evidence of insects and birds on lower 10' of trunk		x		5%		
22	Pseudotsuga menziesii	Douglas-fir	44	49	3.5-4	sap dripping at multiple pruned limbs; close proximity/shading/reduced branching with immediate neighbor						
23	Pseudotsuga menziesii	Douglas-fir	51	59	3.5-4	decay on a couple limbs; some broken small limbs; close proximity/shading/reduced branching with immediate neighbor						

CCC 10/9/2025

Existing Trees - Inventory & Assessment-performed 10/6/25

Plan ID	Genus & Species	Common Name	DBH (in)	CANOPY (ft)	Health/ Condition*	Arborist Notes	within 10' of Structure	Co-dominant Leader	Surface Roots	% Deadwood	History of Being Topped	Suckers
24	Pseudotsuga menziesii	Douglas-fir	41	59	3.5-4	close proximity/shading/reduced branching with immediate neighbor; mower damage to surface roots			x			
25	Pseudotsuga menziesii	Douglas-fir	47	46	3.5-4	close proximity/shading/reduced branching with immediate neighbor; mower damage to surface roots			x			
26	Quercus garryana	Oregon White Oak	30	55	3	good form but very sparse canopy, partly due to relatively recent pruning of several larger limbs; some broken and dead limbs with decay; shaded in the afternoon from large neighbors				5		
27	Pseudotsuga menziesii	Douglas-fir	(2) 45, 29. Final DBH 54	43	3	close proximity/shading/reduced branching with immediate neighbor; mower damage to surface roots; main trunk is codominant @ 12' with tight limb angle and inosculation; additional side trunk at base with tight limb angle and lean to W (monitor)		x	x			
28	Pseudotsuga menziesii	Douglas-fir	41	61	3	close proximity/shading/reduced branching with immediate neighbor						
29	Quercus garryana	Oregon White Oak	45	83	4	great form; great space to grow; minimal broken small limbs				<5		
30	Cornus florida var.	Flowering Dogwood var.	6	17	3.5	no comment						
31	Cornus florida var.	Flowering Dogwood var.	8	20	3.5	no comment						

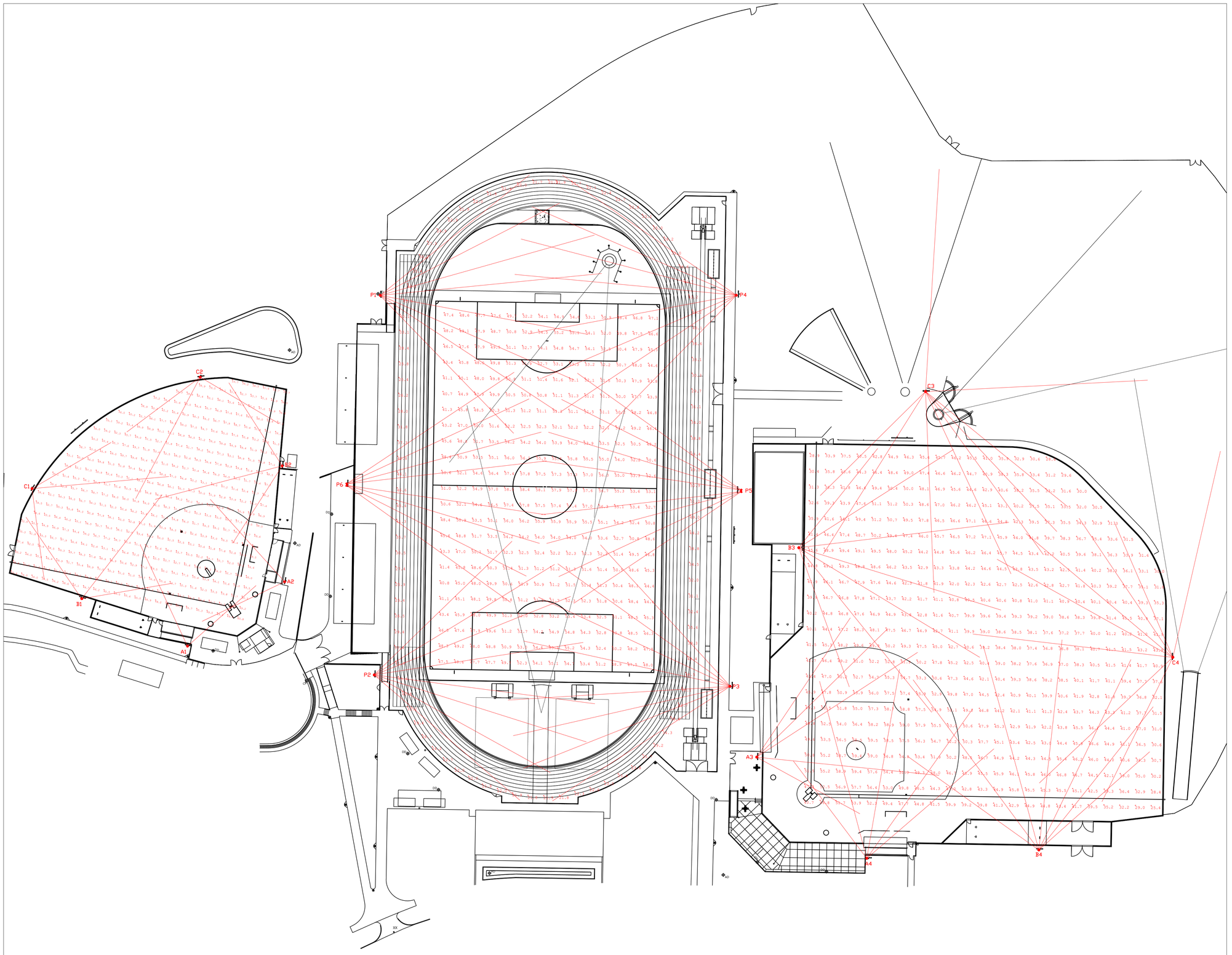
CCC 10/9/2025

Existing Trees - Inventory & Assessment-performed 10/6/25

Plan ID	Genus & Species	Common Name	DBH (in)	CANOPY (ft)	Health/ Condition*	Arborist Notes	within 10' of Structure	Co-dominant Leader	Surface Roots	% Deadwood	History of Being Topped	Suckers
32	Cornus florida var.	Flowering Dogwood var.	11	28	3	watersprounts at interior cut limbs; crowded and rubbing internal branching						
33	Pseudotsuga menziesii	Douglas-fir	35	55	3	raising soil around base; within 10' of curb/road on one side and concrete pads with utilities on the other			x			

*Condition		
5 =	excellent	perfect form, little to no deadwood, all limbs have good attachments, no sign of decay
4 =	very good	good form, multi-leader, but with good attachment, 10% or less large deadwood
3 =	good	unbalanced or incomplete crown, tight limb angles, 15-20% larger deadwood
2 =	poor	Evidence of some decay, 20-30% larger deadwood, history of being topped.
1 =	very poor	Structurally unsound, extensive decay, dieback, poor form, unbalanced or greatly reduced crown.

EXHIBIT D
Exterior Photometric Plans



Calculation Summary									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts	PtSpcLr
Baseball Infield	Illuminance	Fc	52.43	59.5	39.9	1.31	1.49	100	15'
Baseball Outfield	Illuminance	Fc	41.87	51.2	25.4	1.65	2.02	401	15'
Soccer Field	Illuminance	Fc	51.21	58.4	40.7	1.26	1.43	322	15'
Softball Infield	Illuminance	Fc	55.15	64.3	45.3	1.22	1.42	100	10'
Softball Outfield	Illuminance	Fc	45.51	59.2	32.9	1.38	1.80	327	10'
Track	Illuminance	Fc	31.86	51.0	21.7	1.47	2.35	100	15'

Luminaire Schedule		
Qty	Label	Total Watts
105	FL11 3 Blade Full Shield	161700

Equipment:
Softball Field
6 x 60ft Poles (A1-A2, B1-B2, C1-C2)
Each Carrying:-
A1-A2.....2 x SiFlood Maxi Pro PL33T + S3K Visors
B1-B2.....3 x SiFlood Maxi Pro PL33T + S3K Visors
C1-C2.....3 x SiFlood Maxi Pro PL33T + S3K Visors

Track & Field
5 x 80ft Poles (P1-P5)
1 x 70ft Pole (P6 - approx. 11ft above field grade)
Each Carrying:-
P1-P6.....8 x SiFlood Maxi Pro PL33T + S3K Visors

Baseball Field
6 x 80ft Poles (A3-A4, B3-B4, C3-C4)
Each Carrying:-
A3-A4.....5 x SiFlood Maxi Pro PL33T + S3K Visors
B3-B4.....7 x SiFlood Maxi Pro PL33T + S3K Visors
C3.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....2 x SiFlood Maxi Pro PL33T + S3K Visors - Throws
C4.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....1 x SiFlood Maxi Pro PL33T + S3K Visors - Throws

LED Performance
Colour Temperature - 5700K
CRI - Ra70
Lumen Output - 211090 Lm
Total Watts - 1540W

Upward Light Ratio=0%

Maintenance Factor=0.9(Applied)







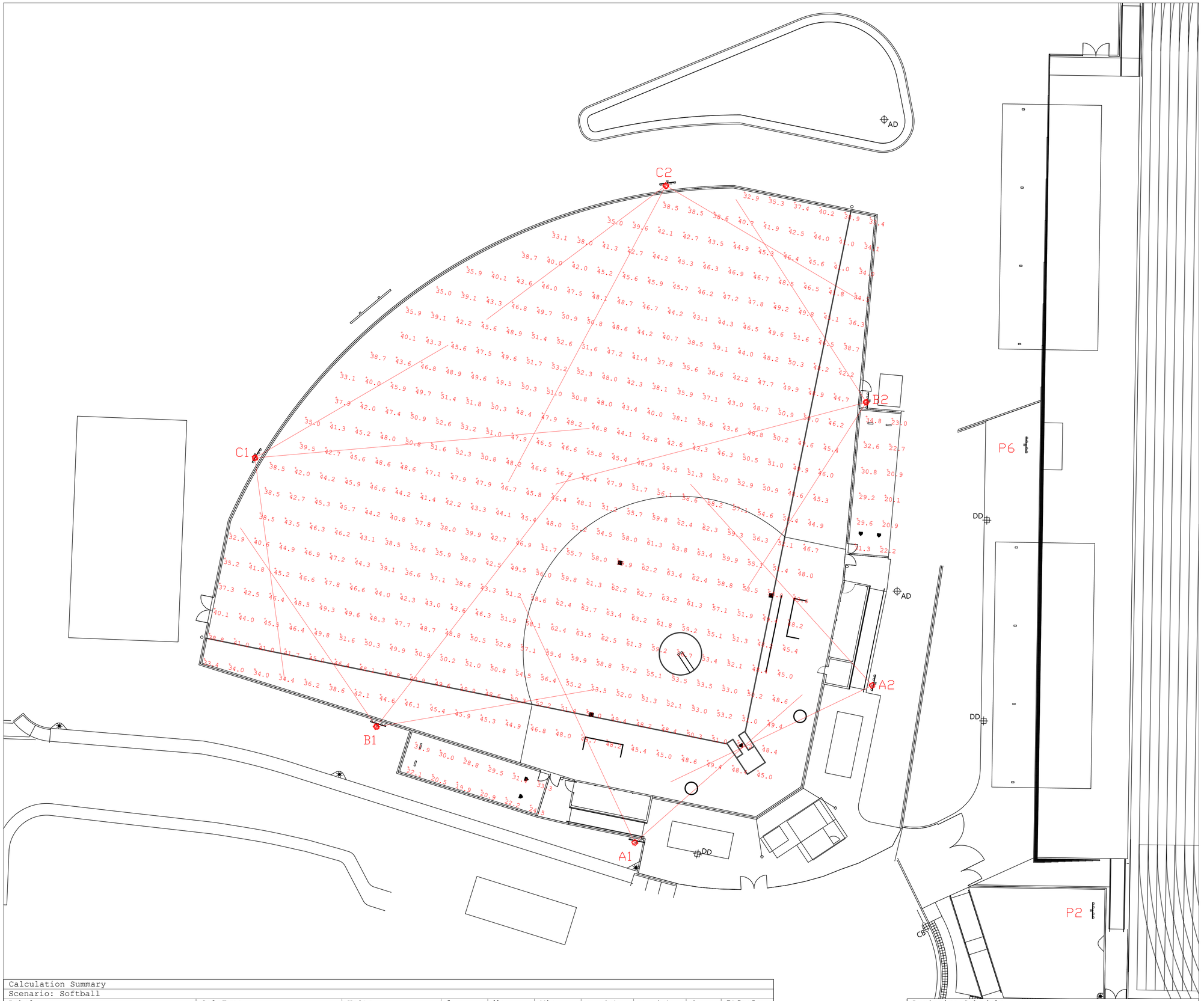
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Project
Clackamas Community College

www.siteco.com

Drawing Title
Sports Lighting

Drawn By (print)	Date
Dan Shah	08/Oct/2025
Project No	Scale
SiUSA1140	A1 1:500
Drawing No E01	Status Proposal



Calculation Summary									
Scenario: Softball									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts	PtSpcLr
SB 1st Base Bullpen	Illuminance	Fc	26.51	34.8	20.1	1.32	1.73	12	10'
SB 3rd Base Bullpen	Illuminance	Fc	26.25	33.3	19.9	1.32	1.67	12	10'
Softball Infield	Illuminance	Fc	54.61	63.8	45.0	1.21	1.42	100	10'
Softball Outfield	Illuminance	Fc	45.06	58.6	32.9	1.37	1.78	327	10'

Luminaire Schedule		
Scenario: Softball		
Qty	Label	Total Watts
16	FL11 3 Blade Full Shield	24640

Equipment:
Softball Field
6 x 60ft Poles (A1-A2, B1-B2, C1-C2)
Each Carrying:-
A1-A2.....2 x SiFlood Maxi Pro PL33T + S3K Visors
B1-B2.....3 x SiFlood Maxi Pro PL33T + S3K Visors
C1-C2.....3 x SiFlood Maxi Pro PL33T + S3K Visors

Track & Field
5 x 80ft Poles (P1-P5)
1 x 70ft Pole (P6 - approx. 11ft above field grade)
Each Carrying:-
P1-P6.....8 x SiFlood Maxi Pro PL33T + S3K Visors

Baseball Field
6 x 80ft Poles (A3-A4, B3-B4, C3-C4)
Each Carrying:-
A3-A4.....5 x SiFlood Maxi Pro PL33T + S3K Visors
B3-B4.....7 x SiFlood Maxi Pro PL33T + S3K Visors
C3.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....2 x SiFlood Maxi Pro PL33T + S3K Visors - Throws
C4.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....1 x SiFlood Maxi Pro PL33T + S3K Visors - Throws

LED Performance
Colour Temperature - 5700K
CRI - Ra70
Lumen Output - 211090 Lm
Total Watts - 1540W

Upward Light Ratio=0%

Maintenance Factor=0.9(Applied)







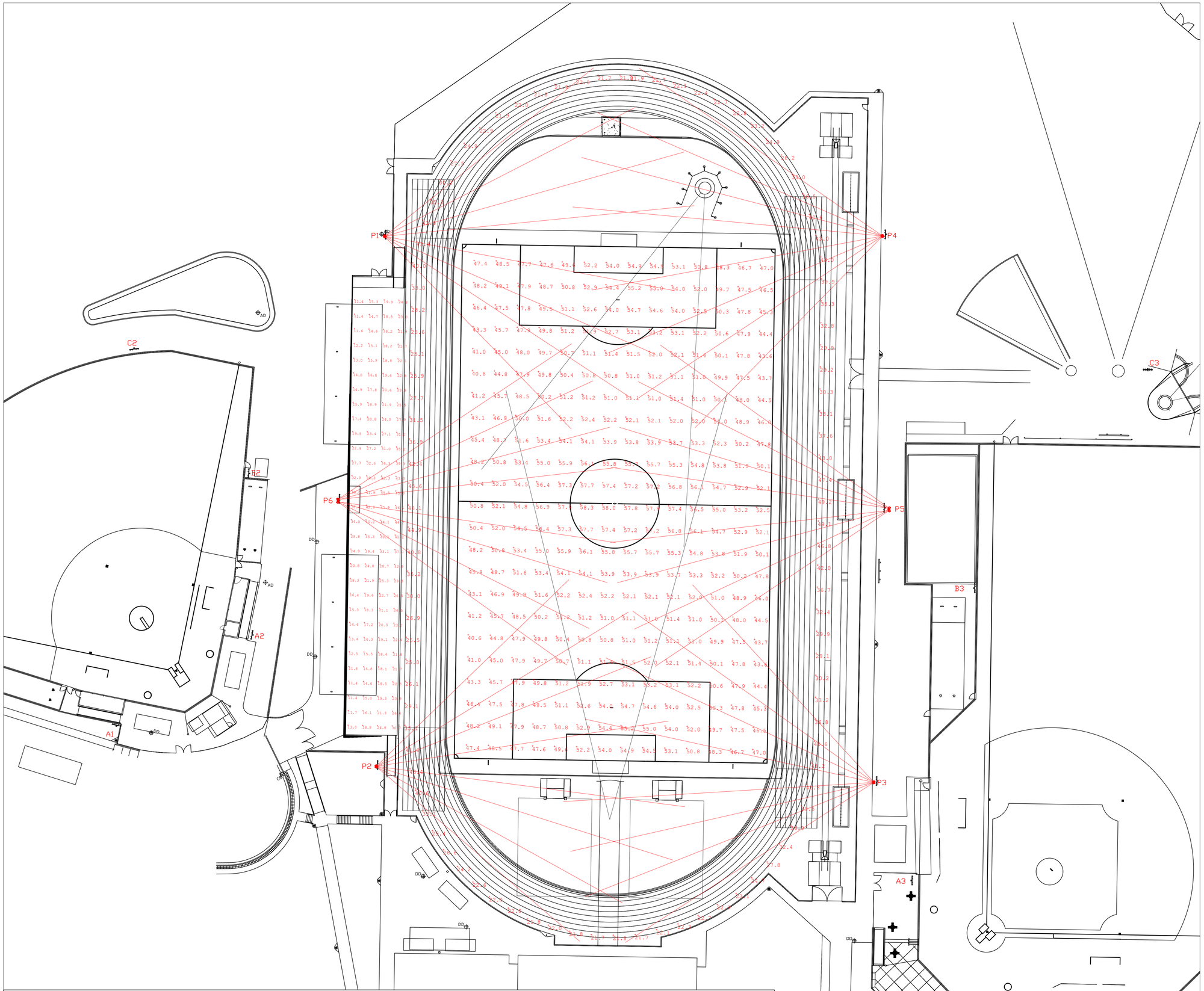
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Project
Clackamas Community College

www.siteco.com

Drawing Title
Softball Field Lighting

Drawn By (print)	Date
Dan Shah	08/Oct/2025
Project No	Scale
SiUSA1140	A1 1:200
Drawing No E01	Status Proposal



Calculation Summary									
Scenario: Track & Field									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts	PtSpcLr
Grandstand	Illuminance	Fc	24.13	46.1	11.4	2.12	4.04	120	10'
Soccer Field	Illuminance	Fc	51.02	58.3	40.6	1.26	1.44	322	15'
Track	Illuminance	Fc	31.23	49.2	21.7	1.44	2.27	100	15'

Luminaire Schedule		
Scenario: Track & Field		
Qty	Label	Total Watts
48	FL11 3 Blade Full Shield	73920

Equipment:
Softball Field
6 x 60ft Poles (A1-A2, B1-B2, C1-C2)
Each Carrying:-
A1-A2.....2 x SiFlood Maxi Pro PL33T + S3K Visors
B1-B2.....3 x SiFlood Maxi Pro PL33T + S3K Visors
C1-C2.....3 x SiFlood Maxi Pro PL33T + S3K Visors

Track & Field
5 x 80ft Poles (P1-P5)
1 x 70ft Pole (P6 - approx. 11ft above field grade)
Each Carrying:-
P1-P6.....8 x SiFlood Maxi Pro PL33T + S3K Visors

Baseball Field
6 x 80ft Poles (A3-A4, B3-B4, C3-C4)
Each Carrying:-
A3-A4.....5 x SiFlood Maxi Pro PL33T + S3K Visors
B3-B4.....7 x SiFlood Maxi Pro PL33T + S3K Visors
C3.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....2 x SiFlood Maxi Pro PL33T + S3K Visors - Throws
C4.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....1 x SiFlood Maxi Pro PL33T + S3K Visors - Throws

LED Performance
Colour Temperature - 5700K
CRI - Ra70
Lumen Output - 211090 Lm
Total Watts - 1540W

Upward Light Ratio=0%

Maintenance Factor=0.9(Applied)







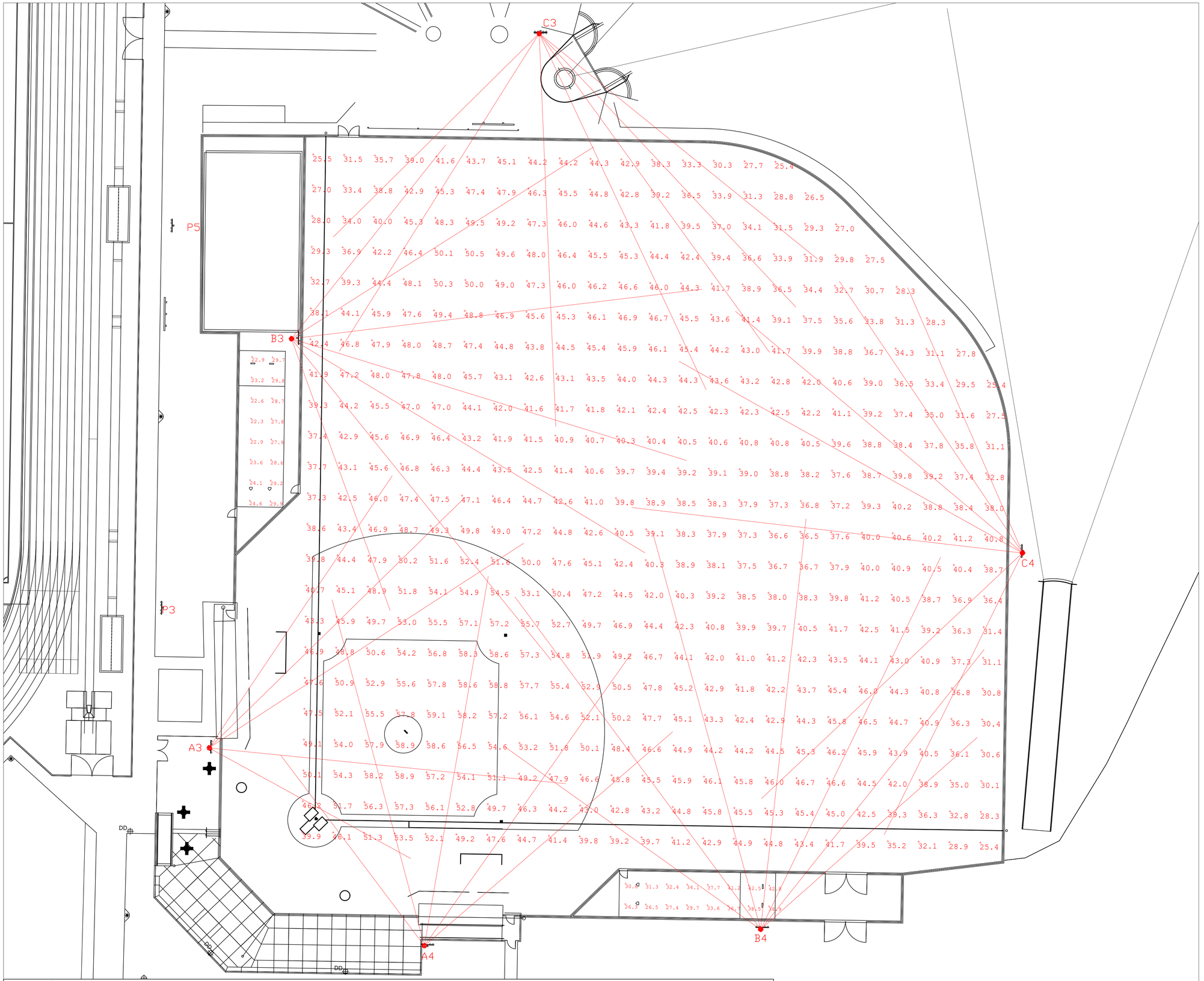
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Project
Clackamas Community College

www.siteco.com

Drawing Title
Track & Field Lighting

Drawn By (print)	Date
Dan Shah	08/Oct/2025
Project No	Scale
SiUSA1140	A1 1:350
Drawing No E01	Status Proposal



Calculation Summary									
Scenario: Baseball									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts	PtSpcLr
Baseball Infield	Illuminance	Fc	51.79	59.1	39.8	1.30	1.48	100	15'
Baseball Outfield	Illuminance	Fc	41.01	50.5	25.4	1.61	1.99	401	15'
BB 1st Base Bullpen	Illuminance	Fc	34.39	42.8	26.3	1.31	1.63	16	10'
BB 3rd Base Bullpen	Illuminance	Fc	26.11	29.9	22.3	1.17	1.34	16	10'

Luminaire Schedule		
Scenario: Baseball		
Qty	Label	Total Watts
38	FL11 3 Blade Full Shield	58520

Equipment:
Softball Field
6 x 60ft Poles (A1-A2, B1-B2, C1-C2)
Each Carrying:-
A1-A2.....2 x SiFlood Maxi Pro PL33T + S3K Visors
B1-B2.....3 x SiFlood Maxi Pro PL33T + S3K Visors
C1-C2.....3 x SiFlood Maxi Pro PL33T + S3K Visors

Track & Field
5 x 80ft Poles (P1-P5)
1 x 70ft Pole (P6 - approx. 11ft above field grade)
Each Carrying:-
P1-P6.....8 x SiFlood Maxi Pro PL33T + S3K Visors

Baseball Field
6 x 80ft Poles (A3-A4, B3-B4, C3-C4)
Each Carrying:-
A3-A4.....5 x SiFlood Maxi Pro PL33T + S3K Visors
B3-B4.....7 x SiFlood Maxi Pro PL33T + S3K Visors
C3.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....2 x SiFlood Maxi Pro PL33T + S3K Visors - Throws
C4.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....1 x SiFlood Maxi Pro PL33T + S3K Visors - Throws

LED Performance
Colour Temperature - 5700K
CRI - Ra70
Lumen Output - 211090 Lm
Total Watts - 1540W

Upward Light Ratio=0%

Maintenance Factor=0.9(Applied)







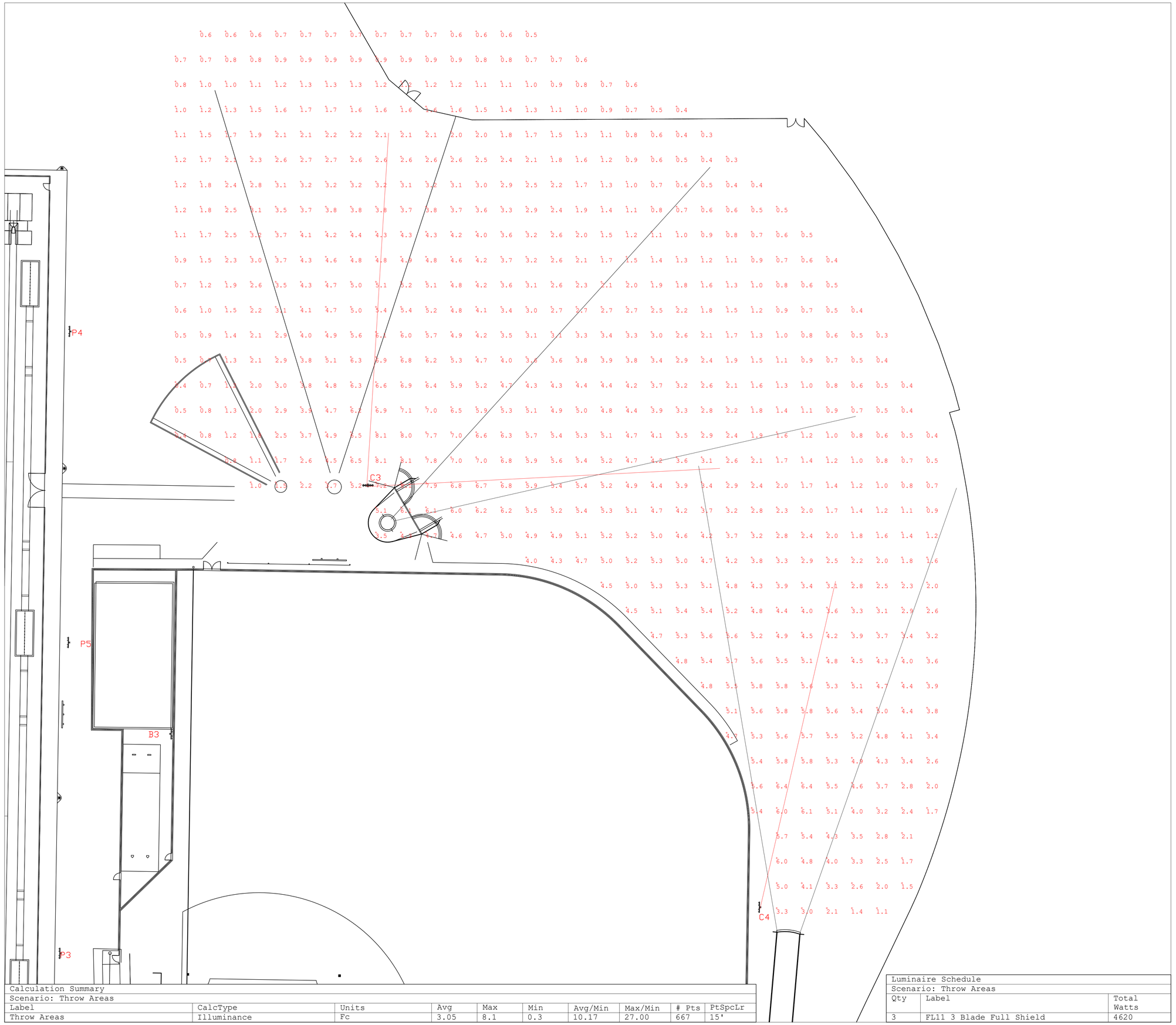
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Project
Clackamas Community College

www.siteco.com

Drawing Title
Baseball Field Lighting

Drawn By (print)	Date
Dan Shah	08/Oct/2025
Project No: SiUSA1140	Scale: A1 1:250
Drawing No: E01	Status: Proposal



Calculation Summary									
Scenario: Throw Areas									
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts	PtSpcLr
Throw Areas	Illuminance	Fc	3.05	8.1	0.3	10.17	27.00	667	15'

Luminaire Schedule		
Scenario: Throw Areas		
Qty	Label	Total Watts
3	FL11 3 Blade Full Shield	4620

Equipment:
Softball Field
6 x 60ft Poles (A1-A2, B1-B2, C1-C2)
Each Carrying:-
A1-A2.....2 x SiFlood Maxi Pro PL33T + S3K Visors
B1-B2.....3 x SiFlood Maxi Pro PL33T + S3K Visors
C1-C2.....3 x SiFlood Maxi Pro PL33T + S3K Visors

Track & Field
5 x 80ft Poles (P1-P5)
1 x 70ft Pole (P6 - approx. 11ft above field grade)
Each Carrying:-
P1-P6.....8 x SiFlood Maxi Pro PL33T + S3K Visors

Baseball Field
6 x 80ft Poles (A3-A4, B3-B4, C3-C4)
Each Carrying:-
A3-A4.....5 x SiFlood Maxi Pro PL33T + S3K Visors
B3-B4.....7 x SiFlood Maxi Pro PL33T + S3K Visors
C3.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....2 x SiFlood Maxi Pro PL33T + S3K Visors - Throws
C4.....7 x SiFlood Maxi Pro PL33T + S3K Visors - Baseball
.....1 x SiFlood Maxi Pro PL33T + S3K Visors - Throws

LED Performance
Colour Temperature - 5700K
CRI - Ra70
Lumen Output - 211090 Lm
Total Watts - 1540W

Upward Light Ratio=0%

Maintenance Factor=0.9(Applied)







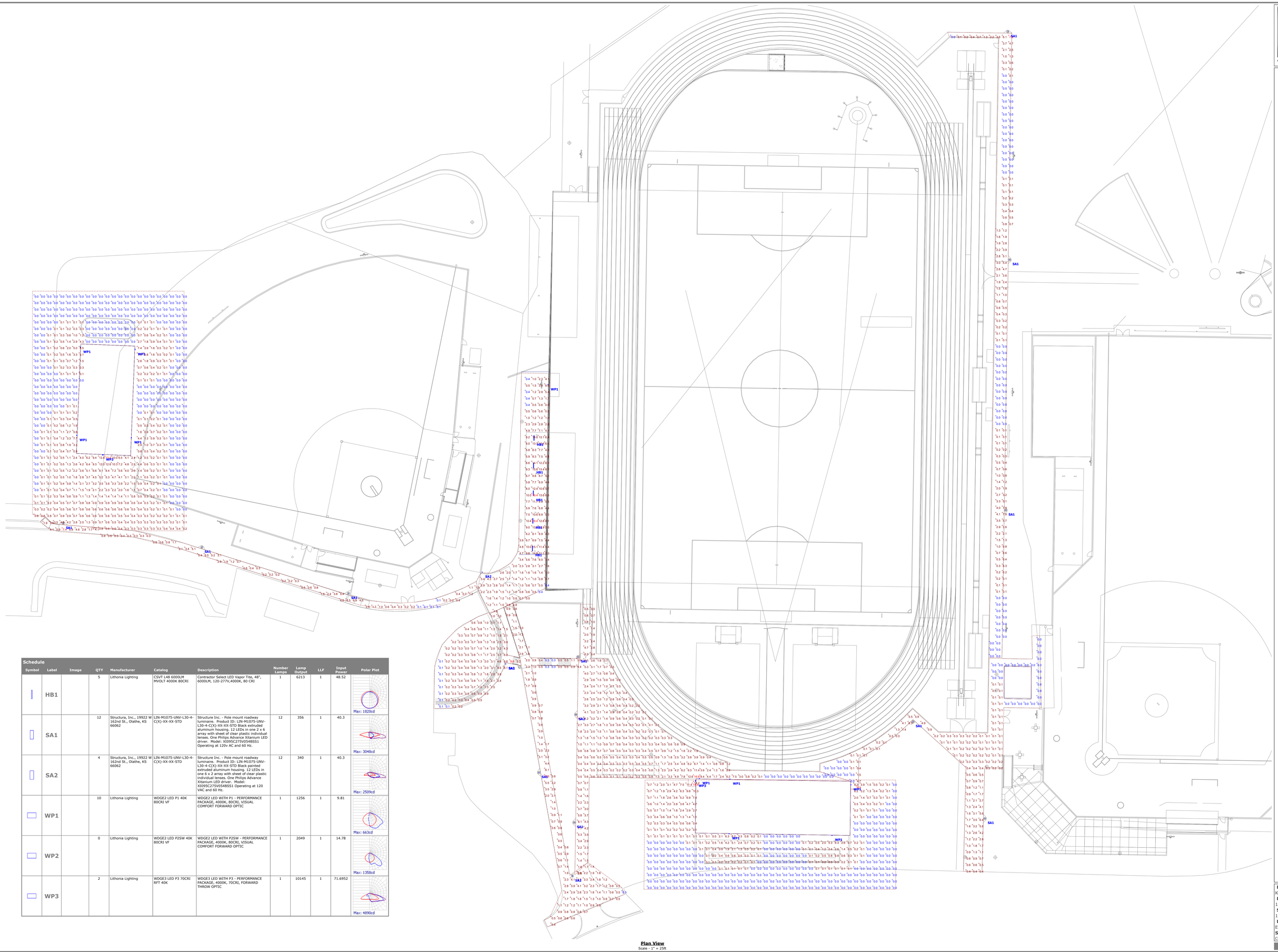
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Project
Clackamas Community College

www.siteco.com

Drawing Title
Throw Areas Lighting

Drawn By (print)	Date
Dan Shah	08/Oct/2025
Project No: SiUSA1140	Scale: A1 1:300
Drawing No: E01	Status: Proposal



Plan View
Scale - 1" = 25ft

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	HB1		5	Lithonia Lighting	CSVT L48 6000LM MVOLT 4000K 80CRI	Contractor Select LED Vapor Tite, 48", 6000LM, 120-277V,4000K, 80 CRI	1	6213	1	48.52	Max: 1820cd
	SA1		12	Structura, Inc., 19922 W 162nd St., Olathe, KS 66062	LIN-M1075-UNV-L30-4-C(X)-XX-XX-STD	Structure Inc. - Pole mount roadway luminaire. Product ID: LIN-M1075-UNV-L30-4-C(X)-XX-XX-STD Black extruded aluminum housing. 12 LEDs in one 2 x 6 array with sheet of clear plastic individual lenses. One Philips Advance Xitanium LED driver. Model: XI095C275V054BSS1 Operating at 120V AC and 60 Hz.	12	356	1	40.3	Max: 3048cd
	SA2		4	Structura, Inc., 19922 W 162nd St., Olathe, KS 66062	LIN-M1075-UNV-L30-4-C(X)-XX-XX-STD	Structure Inc. - Pole mount roadway luminaire. Product ID: LIN-M1075-UNV-L30-4-C(X)-XX-XX-STD Black painted extruded aluminum housing. 12 LEDs in one 6 x 2 array with sheet of clear plastic individual lenses. One Philips Advance Xitanium LED driver. Model: XI095C275V054BSS1 Operating at 120 VAC and 60 Hz.	12	340	1	40.3	Max: 2509cd
	WP1		10	Lithonia Lighting	WDGE2 LED P1 40K 80CRI VF	WDGE2 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT FORWARD OPTIC	1	1256	1	9.81	Max: 663cd
	WP2		0	Lithonia Lighting	WDGE2 LED P2SW 40K 80CRI VF	WDGE2 LED WITH P2SW - PERFORMANCE PACKAGE, 4000K, 80CRI, VISUAL COMFORT FORWARD OPTIC	1	2049	1	14.78	Max: 1358cd
	WP3		2	Lithonia Lighting	WDGE3 LED P3 70CRI RFT 40K	WDGE3 LED WITH P3 - PERFORMANCE PACKAGE, 4000K, 70CRI, FORWARD THROW OPTIC	1	10145	1	71.6952	Max: 4890cd

VISUAL

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS
LAND USE REVIEW

Designer
K. SCOTT
Date
10/08/2025
Scale
1" = 25'-0"
Drawing No.
E8.01
Summary
CCC Pedestrian Lights

LITHONIA LIGHTING®

Catalog Number	
Notes	CCC - Sports Field - Land Use
Type	HB1

Vapor Tight LED Strip Light

CSVT



FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for damp/wet locations such as outdoor venues, canopies and locker rooms. Not for use or installation in direct outdoor sunlight. Must be installed under canopy or covered ceiling. For direct sunlight installations, please refer to the FEX product family. **Certain airborne contaminants can diminish integrity of acrylic and/or polycarbonate.** **Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.**

Certain airborne contaminants may adversely affect the functioning of LEDs and other electronic components, depending on various factors such as concentrations of the contaminants, ventilation, and temperature at the end-user location. **Click here for a list of substances that may not be suitable for interaction with LEDs and other electronic components**.

CONSTRUCTION

- Light Gray Polycarbonate housing
- Frosted Polycarbonate lens
- Poured in place polyurethane gasket
- Polycarbonate Latches, optional stainless steel latches available.
- Standard 1/2" wet location fitting

ELECTRICAL

- High Efficiency LEDs meet DLC Standard
- MVOLT (120-277V) & 347V
- 0-10V Dimming standard

Luminaire Surge Protection Level: Designed to withstand up to 2.5kV/0.75kA per ANSI C82.77-5-2015. For applications requiring higher level of protection additional surge protection must be provided.

INSTALLATION

- Surface (wall, ceiling) using standard brackets (301 stainless steel) includes bail for chain hanging
- Suspended (chain, cable) using standard brackets (301 stainless steel)

LISTINGS

- CSA Certified to UL & C-UL Standards for wet location
- IP65, IP66 rated per IEC60529
- NSF Splash zone rated
- FCC Title 47, Part 15 Subpart B compliant
- 2.5kV/0.75kA Surge Rated per ANSI C82-77-5-2015
- IK10 rated
- CSA Ambient Listings on Page 3
- Lumen Maintenance Listed on Page 3

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

CSVT Vapor Tight LED Strip Light

Looking for Contractor Select readily available configurations? Click here to visit Contractor Select™ spec sheet or go to www.contractorselect.com

A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: CSVT L48 AL03 MVOLT SWW3 80CRI

Series	Length	Lumen Output	Voltage	Color temperature	Color rendering index
CSVT Linear LED Vapor Tight	L48 48"	3000LM 3,000 lumens ‡ 4000LM 4,000 lumens ‡ 5000LM 5,000 lumens ‡ 6000LM 6,000 lumens ‡ AL03 Switchable lumens, 3000LM / 4000LM / 5000LM	MVOLT 120-277V 347 347V	35K 3500K ‡ 40K 4000K ‡ 50K 5000K ‡ SWW3 Switchable white, 35K / 40K / 50K	80CRI 80 CRI
	L96 96"	6000LM 6,000 lumens ‡ 8000LM 8,000 lumens ‡ 10000LM 10,000 lumens ‡ 12000LM 12,000 lumens ‡ AL04 Switchable lumens, 6000LM, 8000LM, and 10000LM			

Options

STSL	Stainless steel latches
IE7WCP	Emergency battery pack, 7W, CA Title 20 Noncompliant ‡
IE7WCPHE	Emergency battery pack, 7W, Certified in CA Title 20 MAEDBS ‡
WLFEND2	Wet location fitting (fittings out both ends) ‡

Individual Controls ‡

SBOR10	360° integral low mount motion sensor (standard on/off operation)
SBOR10 D 3V	360° integral low mount motion sensor with dimming (low trim set at 30%)
SBOR10 P	360° integral low mount motion sensor with photocell

nLight Wireless Controls ‡

NLTAIR2 RSBOR10	nLight (wireless) gen 2 low mount occupancy & daylight sensor

NOTE: ‡ indicates option chosen has ordering restrictions. Please reference ordering restrictions chart.

‡ Option Value Ordering Restrictions

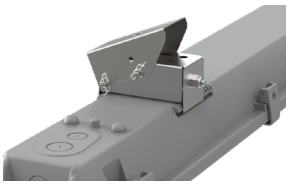
Option value	Restriction
35K, 40K, 50K	Not available with ALO lumen packages.
3000LM, 4000LM, 5000LM, 6000LM, 8000LM, 10000LM, 12000LM	Not available with SWW3.
CSVT STSL LATCH	Requires two for L96
IE7WCP, IE7WCPHE	Not available with 347V.
Individual Controls	Not available with WLFEND2 option.
nLight Wireless Controls	Not available with WLFEND2 option.
WLFEND2	Not available with cord set or sensor options.

Accessories: *Order as separate catalog number.*

CSVT STSL LATCH	Stainless steel latch kit (Set of 10) ‡
CSVTRMBA	Angle mount bracket (QTY of 2) (316 stainless steel)
CSVTRMBU	Rigid mount U-bolt bracket (QTY of 2) (316 stainless steel)
CSVTRMBK	Rigid mount bracket (QTY of 2) (316 stainless steel)
CSVTSMB	Replacement standard mounting brackets (QTY of 2) (301 stainless steel)
MHCH36SS	36" stainless steel chain (QTY of 2)

How to Estimate Delivered Lumens in Emergency Mode
Use the formula below to estimate the delivered lumens in emergency mode
Delivered Lumens = 1.25 x P x LPW
P = Output power of emergency driver. P = 10W for IE10WCPHE
LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet. The LPW rating is also available at Designlight Consortium.

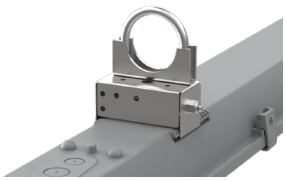
INDUSTRIAL: One Lithonia Way, Conyers, GA 30012 Phone: 800-705-SERV (7378) techsupport-Industrial@acuitybrands.com www.lithonia.com
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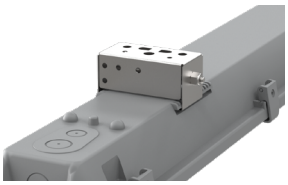
Shown with CSVTRMBA
Bracket can be set to 22.5°, 45° or 90° angles.



Shown with CSVTSMB
(ships standard with fixture)



Shown with CSVTRMBU



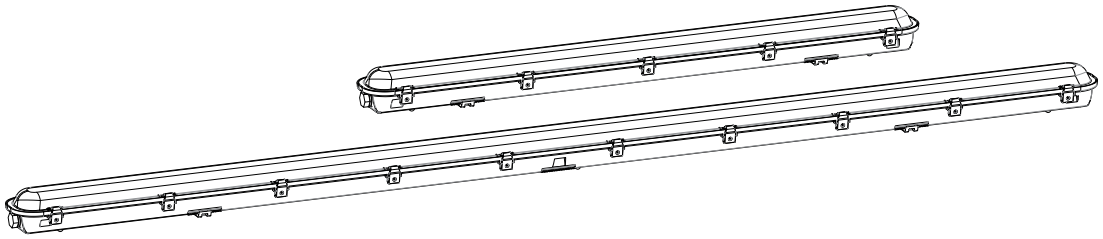
Shown with CSVTRMBK

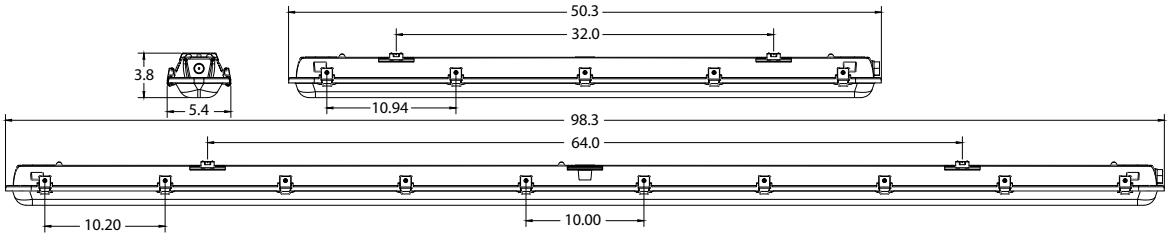
DIMENSIONS

All dimensions are shown in inches unless otherwise noted.

Length	Width	Height	Length	Approximate weight	Fixtures per pallet
L48	5.4	3.8	50.3	5 lbs	70
L96	5.4	3.8	98.3	10 lbs	70

*Weights will vary slightly with added options.





INDUSTRIAL: One Lithonia Way, Conyers, GA 30012 Phone: 800-705-SERV (7378) techsupport-Industrial@acuitybrands.com www.lithonia.com

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OPERATIONAL DATA

Length	Package	Voltage	Watts	3500 K		4000 K		5000 K		Comparable Lightsource
				Lumens	LPW	Lumens	LPW	Lumens	LPW	
L48	3000LM	MVOLT	24	3033	125	3106	128	3134	129	1-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
		347	28		108		110		11	
	4000LM	MVOLT	34	4065	119	4163	122	4200	123	2-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
		347	40		102		105		106	
	5000LM	MVOLT	42	4829	115	4946	118	4989	119	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
		347	49		99		101		102	
	6000LM	MVOLT	49	6066	125	6213	128	6268	129	2-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
		347	56		42		110		111	
	AL03 (3000LM)	MVOLT	24	3019	124	3106	128	3141	129	1-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
		347	28		107		110		111	
	AL03 (4000LM)	MVOLT	34	4046	118	4163	122	4210	123	2-lamp 32W T8, 1-lamp 54W T5HO, 50W HID
		347	40		102		105		106	
	AL03 (5000LM)	MVOLT	42	4806	114	4946	118	5001	119	2-lamp 32W T8, 1-lamp 54W T5HO, 70W HID
		347	49		98		101		102	
L96	6000LM	MVOLT	49	6066	125	6213	128	6268	129	2-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
		347	56		108		110		111	
	8000LM	MVOLT	68	8130	119	8326	122	8400	123	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
		347	80		102		105		106	
	10000LM	MVOLT	84	9658	115	9891	118	9979	119	4-lamp 32W T8, 2-lamp 54W T5HO, 150W HID
		347	98		99		101		102	
	12000LM	MVOLT	103	12133	118	12425	121	12535	122	4-lamp 32W T8, 3-lamp 54W T5HO, 150W HID
		347	120		101		104		105	
	AL04 (6000LM)	MVOLT	49	6038	124	6213	128	6283	129	2-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
		347	56		107		110		111	
	AL04 (8000LM)	MVOLT	68	8092	118	8326	122	8420	123	3-lamp 32W T8, 2-lamp 54W T5HO, 100W HID
		347	80		102		105		106	
	AL04 (10000LM)	MVOLT	84	9613	114	9891	118	10003	119	4-lamp 32W T8, 2-lamp 54W T5HO, 150W HID
		347	98		98		101		102	

*All values are typical and are at 25C. Actual performance may vary and is dependent on operating environment.

PROJECTED LUMEN MAINTENANCE			
Lumen Maintenance Factor	0.91	0.81	0.75
Operating Hours	40,000	90,000	120,000

*Actual performance may vary based on ambient temperature of installed location.

Ambient Temperature Ratings

Fixture Length	Lumen Package	Temperature rating	Temperature rating with IE7WC
L48	3000LM	-40° C - 45° C	0° C to 30° C
	4000LM	-40° C - 45° C	0° C to 30° C
	5000LM	-40° C - 45° C	0° C to 30° C
	6000LM	-40° C - 35° C	0° C to 30° C
L96	6000LM	-40° C - 30° C	0° C to 30° C
	8000LM	-40° C - 30° C	0° C to 30° C
	10000LM	-40° C - 30° C	0° C to 30° C
	12000LM	-40° C - 30° C	0° C to 30° C

Number of Boards and Drivers

Fixture length	Lumen package	Driver QTY	Board QTY
L48	3000LM	1	1
	4000LM	1	1
	5000LM	1	1
	6000LM	1	1
	AL03	1	1
L96	6000LM	1	2
	8000LM	1	2
	10000LM	1	2
	12000LM	2	2
	AL04	1	2

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FIXTURE TYPE: Type SA1 & SA2 - 12' Pedestrian Pole Light

PROJECT NAME: CCC Sports Field Lighting - Land Use





Lineal mounted on Structura Tilt pole.

SPECIFICATIONS:

CONSTRUCTION: Seamless aluminum housing comprised of 6005A-T61 extrusion and 6061-T6 end plates. Gasketed aluminum electrical access cover attached with captive stainless steel hardware and safety cable.

ELECTRICAL: Integral Class P, 120-277V or 347-480V, dimmable constant current driver. Luminaire is pre-wired with watertight 5 conductor 18 gauge SJEOOW whip. 10kA surge suppression is standard with optional external 20kA surge suppression. Operating temperature of -40°C to 50°C.

OPTICAL SYSTEM: LED boards have solderless connections for field upgradability. Available in CCT of 2700, 3000, 3500, and 4000K, >80 CRI. Optics are UV resistant molded PMMA in Type II and IV distributions. Consult factory for additional lumen output, CCT, and optical distribution options.

CONTROLS: Dimming through 0-10V input is standard. Available with integral motion sensor with photocell providing on/off and full light to dim control. Also available with wireless smart city control. See SmartCity control documentation for more information.

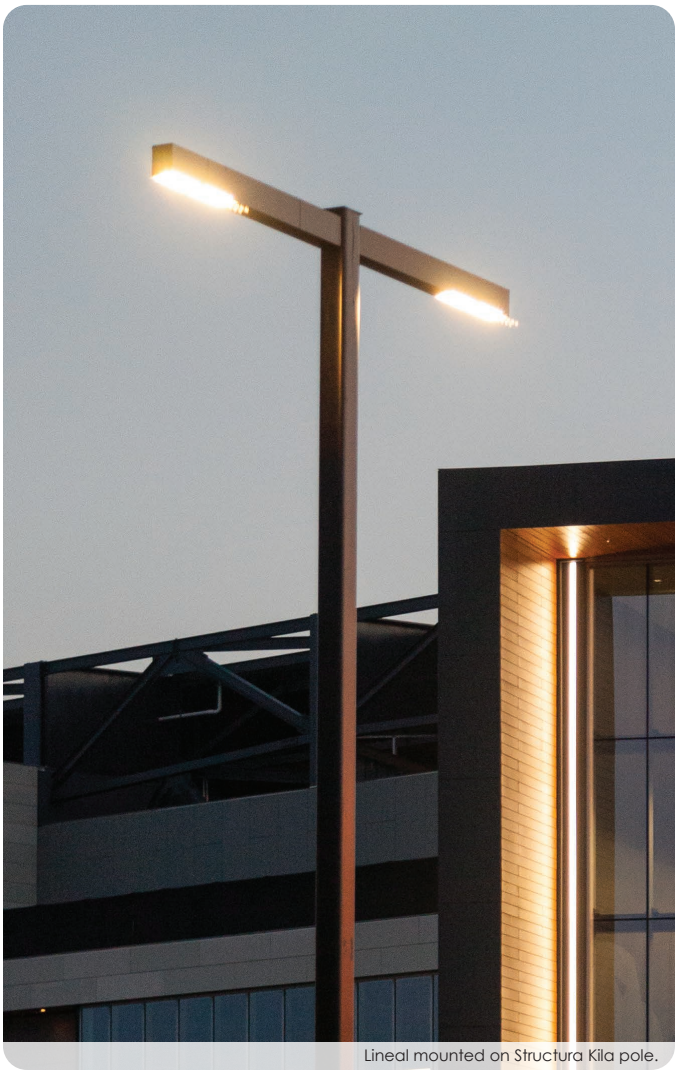
FINISHES: All exterior aluminum parts are polyester powder coat painted to meet AAMA 2604 standards. See Structura's finish options for available colors. Care and Maintenance

LISTINGS & RATINGS: Luminaire CSA listed according to CSA C22.2 No. 250.0-18/UL Standard 1598. Suitable for wet locations. LM-80 test reported L70 > 90,000 hours and calculated L70 > 110,000 hours. Bug rating: B1-U0-G1. IP65 rated.

WARRANTY: 5-year warranty on LED and drivers.

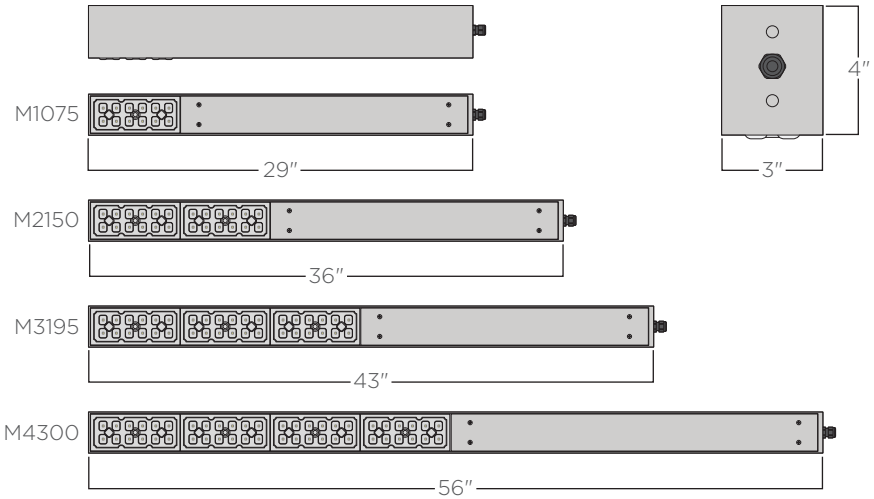
C US

DARKSKY APPROVED Reduces light pollution



Lineal mounted on Structura Kila pole.

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			2700K		3000K		3500K		4000K			
mA	Wattage	CRI	Lumen(1)	Efficacy	Lumen(1)	Efficacy	Lumen(1)	Efficacy	Lumen(1)	Efficacy	EPA	Weight
750	40	>80	4164	103.3	4266	105.9	4437	110.1	4620	114.6	0.81ft²	12.3lbs.
1500	76	>80	8327	109.6	8532	112.3	8837	116.8	9240	121.6	1.00ft²	14.2lbs.
1950	104	>80	10825	104.0	11091	106.6	11535	110.9	12012	115.5	1.19ft²	16.2lbs.
3000	152	>80	16653	109.6	17063	112.3	17745	116.7	18479	121.6	1.55ft²	20.7lbs.

ORDERING GUIDE: EXAMPLE: LIN-M2150-UNV-L30-4-C4-SP-WC-MS/L3-STD

LIN								
1	2	3	4	5	6	7	8	9

1

LIN

2

M1075
M2150
M3195
M4300

3

UNV
HIGH

Series
Lineal

Output(2)
750mA
1500mA
1950mA
3000mA

Voltage
120-277V
347-480V

4

L27
L30
L35
L40
AMB

Color Temperature(2)
2700K(3)
3000K(3)
3500K
4000K
Amber

5

2
4

Distribution(2)
Type II
Type IV

6

C*

CSM

Metal Finish
See color options on finishes technical sheet
Custom Color

7

SP
ST
NA

Mounting
Structura Pole(4)
Square steel pole by Structura(5)
Pole by Others

8

HSS
5P
MS/L*
NX
WC

Options
House-Side Shield
5-Pin Receptacle
Motion Sensor/Photocell(6)
Hubbell NX controls
Wireless Control(7)

9

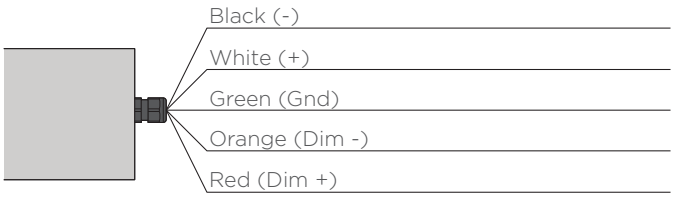
STD

Special
Standard

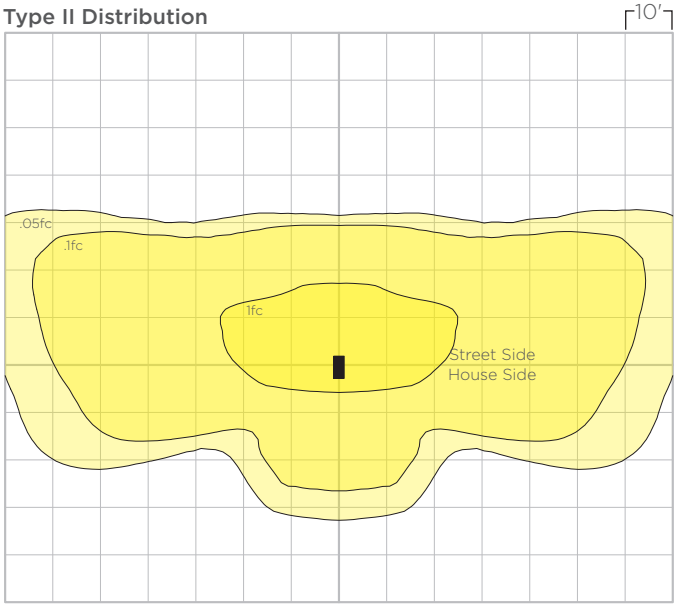
1. Lumen output based upon Type II distribution.
2. Contact factory for alternative output, CCT, and distribution options.
3. CCT of 2700K or 3000K color temperature required for DarkSky Approved.
4. Structura pole specification sheet must be completed showing mounting locations and quantities as a separate item.
5. Specify steel pole on page 108 as a separate item.
6. Specify coverage pattern (see page 107 for detail). Requires wireless handheld configuration tool.
7. Synapse Wireless site gateway controller must be ordered seperately. Please contact factory for design assistance.

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Lineal standard wiring[1]

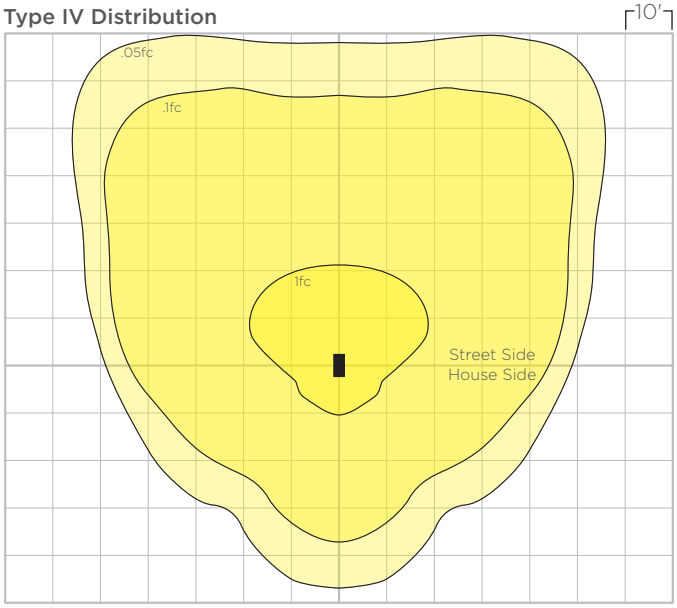


Type II Distribution



LIN-M1075-UNV-L30-2-C(X)-XX-STD mounted at 16'

Type IV Distribution



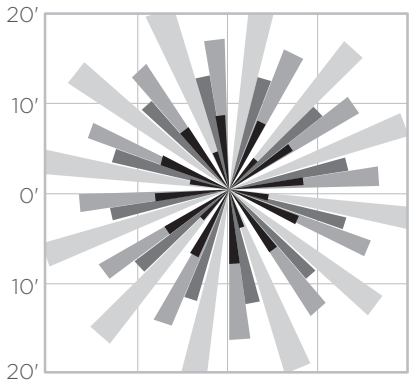
LIN-M175-UNV-L30-4-C(X)-XX-STD mounted at 16'

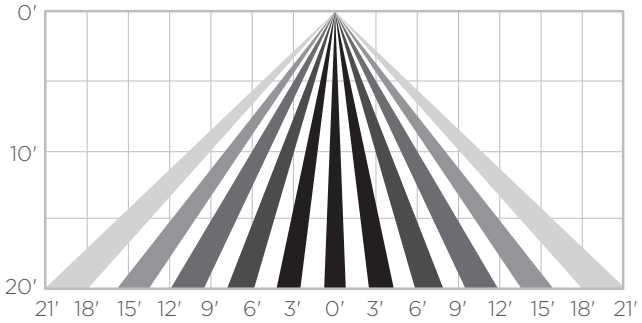
IES file download

1. All fixtures are provided with a 12" 18/5 SJEOOW whip. Cap dimming wires if dimming is not required.

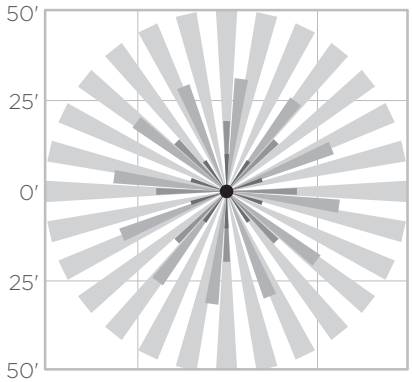
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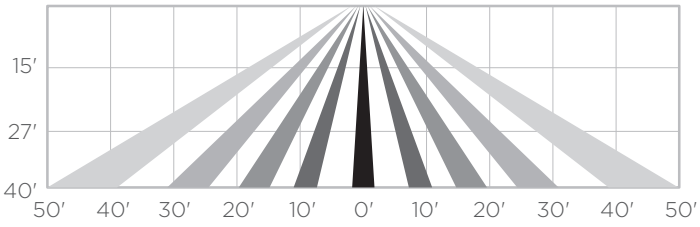
Motion Sensor Type L3 (ordering code MS/L3)





Motion Sensor Type L7 (ordering code MS/L7)





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ST Straight Square Steel Pole

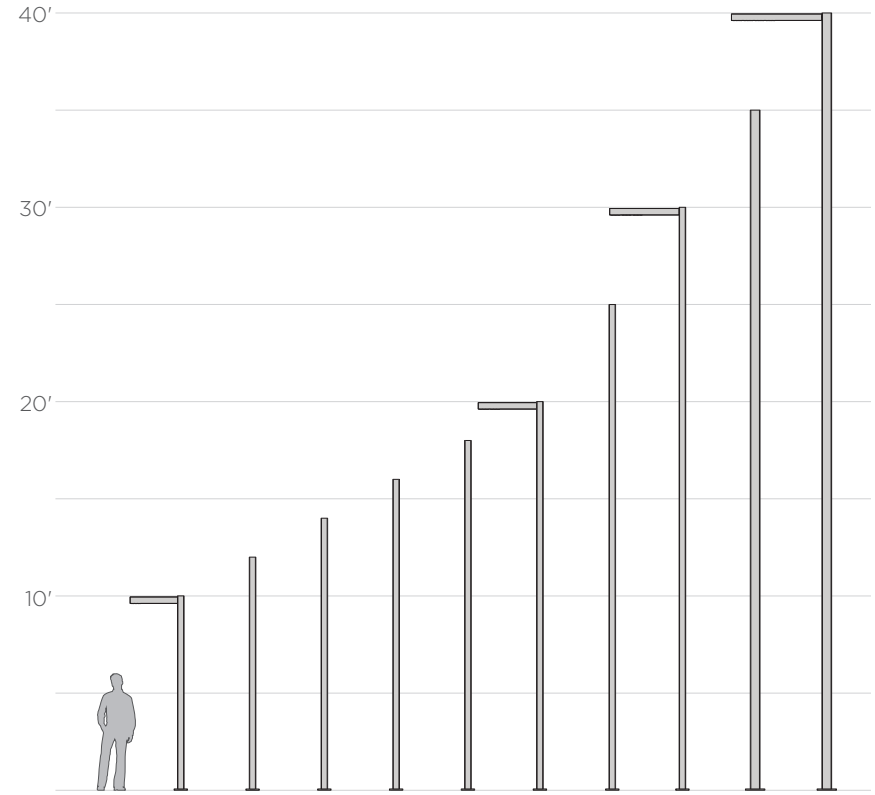
structura

FIXTURE TYPE: _____

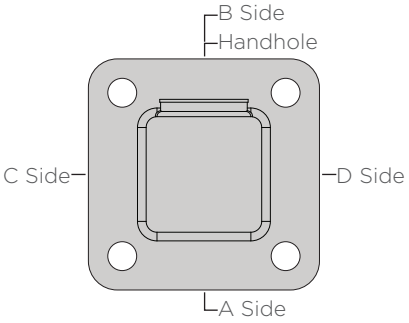
PROJECT NAME: _____

FEATURES:

- Heights available from 10 to 40′
- Polyster powder coat painted (AAMA 2604 standard)
- Supplied with a two piece casted aluminum base cover
- Multiple mounting options



Fixture Orientation



ORDERING GUIDE: EXAMPLE: ST-20-4-S-C7-A20-B12-STD

ST										STD
1	2	3	4	5	6	7	8	9	10	11

1 — Series

ST	Square Steel Pole

2 — Pole Height

10	10′
40	40′
**	Specify

3 — Pole Size

4	4″
5	5″
6	6″

4 — Wall Thickness

S	Standard
T	Thick

5 — Pole Finish

***	See color options on finishes technical sheet
CSM	Custom Color

A Side — 6 — Fixture Mounting Height

Blank	No fixture on this side
A10	10′ A Side
A12	12′ A Side
A**	Specify

B Side — 7 — Fixture Mounting Height

Blank	No fixture on this side
B**	Specify

C Side — 8 — Fixture Mounting Height

Blank	No fixture on this side
C**	Specify

D Side — 9 — Fixture Mounting Height

Blank	No fixture on this side
D**	Specify

10 — Options

BNR	Banner[1]
GALV	Galvanization[2]
GFCI	GFCI Box
VD	Vibration Dampener

11 — Special

STD	Standard

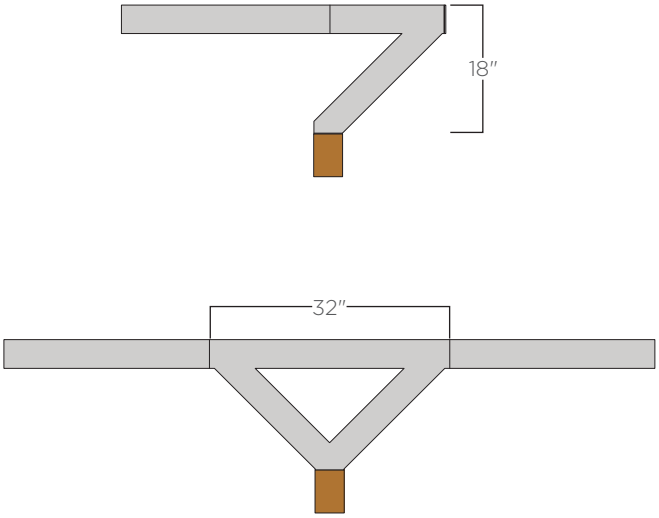
1. Consult factory for allowable EPA for banners.
2. Due to the nature of galvanization, some surface smoothness imperfections can be present.

©2024 STRUCTURA, INC.
Product specification sheets subject to change

FIXTURE TYPE: _____

PROJECT NAME: _____





Aluminum mounting arm designed to mount the Lineal luminaire to Structura wood poles.

FEATURES:

- Easy bolt plate mounting attachment
- Pole top connection with two different connection appearances and styles
- Smooth transition from luminaire[1] to mounting arm

SPECIFICATIONS:

CONSTRUCTION: Welded aluminum 6061-T6 extrusion and plates.

FINISHES AND MATERIALS: All metal parts are polyester powder coat painted.

HARDWARE: All fasteners are stainless steel.

ELECTRICAL: Electrical raceway through center of arm connecting to pole.

ORDERING GUIDE: EXAMPLE: LIN PT-SNGL

1	2

1	Series	2	Arm
LIN PT	Lineal Post Top	SNGL DBL	Single Double

1. For use with Lineal M1075, M2150, and M3195



WDGE1 LED
Architectural Wall Sconce

Catalog Number

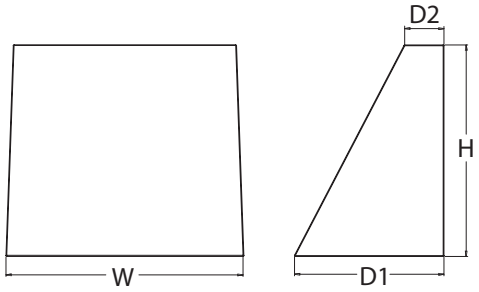
Notes CCC - Sports Field - Land Use

Type WP1 - Door Light

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: (without options) 9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

design select Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P0 P1 P2	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K[1] 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[2]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[3] **Shipped separately** AWS 3/8inch Architectural wall spacer[4] PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.[4]

Options

E4WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)[5]
PE	Photocell, Button Type[6]
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[7]
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
DSLE	Dual Switching (1 Driver, 2 Light Engines)
CCE	Coastal Construction[4]

Finish

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE1PBBW DDBXD U	WDGE1 surface-mounted back box (specify finish)

NOTES

1 50K not available in 90CRI.
2 347V not available with E4WH, DS, DSLE or PE.
3 Not qualified for DLC. Not available with E4WH.
4 For PBBW and AWS with CCE option, require an RFA.
5 E4WH not available with PE or DS.
6 PE not available with DS.
7 DS is not available with P0.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P0	7W	VF	693	99	0	0	0	718	103	0	0	0	739	106	0	0	0	759	108	0	0	0	764	109	0	0	0
		VW	694	99	0	0	0	720	103	0	0	0	740	106	0	0	0	760	109	0	0	0	766	109	0	0	0
P1	10W	VF	1,120	112	0	0	0	1,161	116	0	0	0	1,194	119	0	0	0	1,227	123	0	0	0	1,235	123	0	0	0
		VW	1,122	112	0	0	0	1,163	116	0	0	0	1,196	120	0	0	0	1,229	123	0	0	0	1,237	124	0	0	0
P2	15W	VF	1,806	120	1	0	0	1,872	125	1	0	0	1,925	128	1	0	0	1,978	132	1	0	0	1,992	133	1	0	0
		VW	1,809	120	1	0	0	1,876	125	1	0	0	1,929	128	1	0	0	1,982	132	1	0	0	1,996	133	1	0	0

Electrical Load

Performance Package	System Watts	Current (A)				
		120V	208V	240V	277V	347V
P0	7W	0.060	0.035	0.030	0.026	--
	9W	--	--	--	--	0.026
P1	10W	0.082	0.049	0.043	0.038	--
	13W	--	--	--	--	0.046
P2	15W	0.132	0.081	0.072	0.064	--
	18W	--	--	--	--	0.056

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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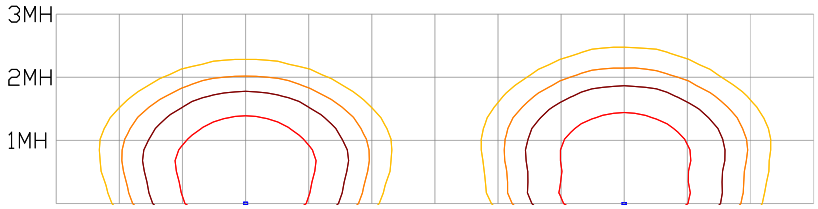
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND

- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 8ft
Grid = 8ft x 8ft



WDGE1 LED P2 40K 80CRI VW

WDGE1 LED P2 40K 80CRI VF

Emergency Egress Options

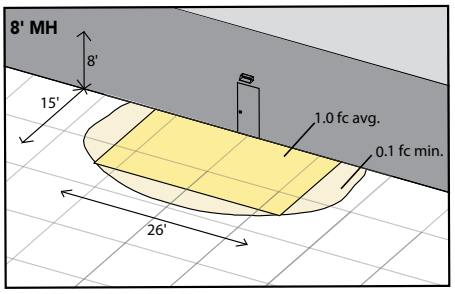
Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The example below shows illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E4WH and VF distribution.

Grid = 10ft x 10ft

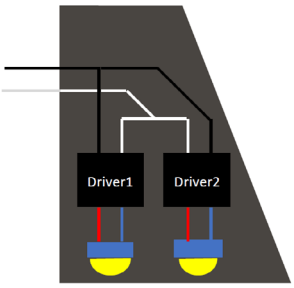


WDGE1 LED xx 40K 80CRI VF MVOLT E4WH

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark.

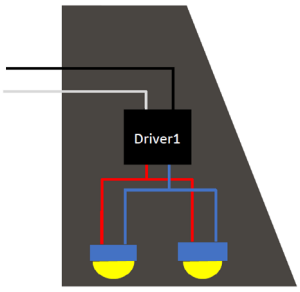
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



Dual Switching Light Engine (DSLE) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with one driver and two light engines. These work completely independent to each other so that a failure of either light engine does not cause the whole luminaire to go dark.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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E4WH – 4W Emergency Battery Backup

D = 5.5"

H = 8"

W = 9"



PBBW – Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"

H = 8"

W = 9"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"

H = 4.4"

W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

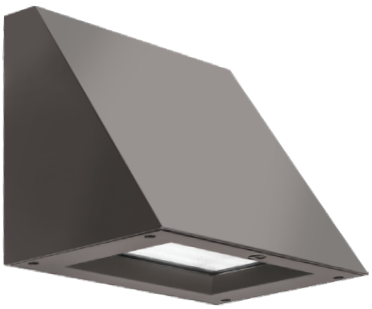
LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

GOVERNMENT PROCUREMENT
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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WDGE2 LED

Architectural Wall Sconce
Visual Comfort Optic

Catalog Number

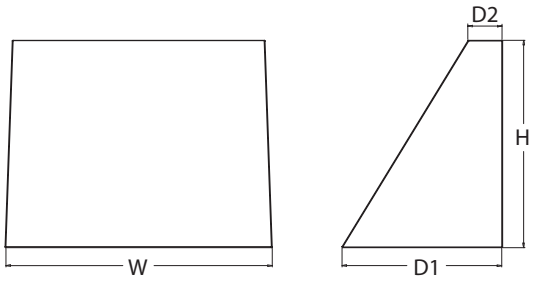
Notes CCC - Sports Field - Land Use

Type WP2 - Wall Pack

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1):	7"
Depth (D2):	1.5"
Height:	9"
Width:	11.5"
Weight: (without options)	13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

design select — Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P1[1] P1SW P2[1] P2SW P3[1] P3SW P4[1] P5[1] Door with small window (SW) is required to accommodate sensors. See page 2 for more details.	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K[2] 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[3] 480[3]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[4] **Shipped separately** AWS 3/8inch Architectural wall spacer[5] PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.[5]

Options

E4WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)
E10WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min)
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)
PE	Photocell, Button Type[6]
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[7]
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[8]
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
DSLE	Dual Switching (1 Driver, 2 Light Engines)
CCE	Coastal Construction[5]

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

NLTAIR2 PIR	Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.
NLTAIR2 PIRH	Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.
NLTAIREM2 PIR	Embedded wireless controls by nLight with UL924 listed emegency operation, Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights[9]
NLTAIREM2 PIRH	Embedded wireless controls by nLight with UL924 listed emegency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights[9]

See page 4 for out of box functionality

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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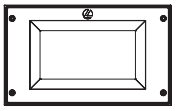
Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE2PBBW DDBXD U	WDGE2 surface-mounted back box (specify finish)

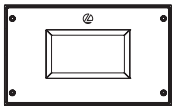
NOTES

1 P1-P5 not available with sensors/controls. Sensors/controls only available with P1SW, P2SW and P3SW.
2 50K not available in 90CRI.
3 347V and 480V not available with E4WH, E10WH, E20WC, DS or DSLE.
4 Not qualified for DLC. Not available with emergency battery backup or sensors/controls.
5 For PBBW and AWS with CCE option,require an RFA.
6 PE not available in 480V or with sensors/controls.
7 DS option not available with E4WH, E10WH, E20WC or sensors/controls.
8 DMG option not available with sensors/controls.
9 Available with MVOLT only and only rated to 25C ambient.



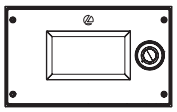
Default configuration with no sensors/controls.

Power Packages: P1, P2, P3, P4, P5



Small Window (SW) configuration

Power Packages: P1SW, P2SW, P3SW



Configuration with sensors/controls

Power Packages: P1SW, P2SW, P3SW

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P1 / P1SW	10W	VF	1,166	119	0	0	0	1,209	123	0	0	0	1,251	128	0	0	0	1,256	128	0	0	0	1,254	128	0	0	0
		VW	1,197	122	0	0	0	1,241	126	0	0	0	1,284	131	0	0	0	1,289	131	0	0	0	1,286	131	0	0	0
P2 / P2SW	15W	VF	1,878	129	1	0	0	1,947	134	1	0	0	2,015	139	1	0	0	2,023	139	1	0	0	2,019	139	1	0	0
		VW	1,927	133	1	0	0	1,997	137	1	0	0	2,067	142	1	0	0	2,075	143	1	0	0	2,071	143	1	0	0
P3 / P3SW	23W	VF	2,908	129	1	0	0	3,015	134	1	0	0	3,119	138	1	0	0	3,132	139	1	0	0	3,126	139	1	0	0
		VW	2,983	132	1	0	0	3,093	137	1	0	0	3,200	142	1	0	0	3,213	143	1	0	0	3,206	142	1	0	0
P4	35W	VF	4,096	117	1	0	1	4,247	121	1	0	1	4,394	126	1	0	1	4,412	126	1	0	1	4,403	126	1	0	1
		VW	4,202	120	1	0	0	4,357	125	1	0	1	4,508	129	1	0	1	4,526	129	1	0	1	4,517	129	1	0	1
P5	48W	VF	5,567	115	1	0	1	5,772	119	1	0	1	5,972	123	1	0	1	5,996	124	1	0	1	5,984	124	1	0	1
		VW	5,711	118	1	0	1	5,921	122	1	0	1	6,127	126	1	0	1	6,151	127	1	0	1	6,139	127	1	0	1

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1 / P1SW	10W	0.082	0.049	0.043	0.038	--	--
	13W	--	--	--	--	0.046	0.033
P2 / P2SW	15W	0.132	0.081	0.072	0.064	--	--
	18W	--	--	--	--	0.056	0.041
P3 / P3SW	23W	0.195	0.114	0.100	0.088	--	--
	26W	--	--	--	--	0.079	0.058
P4	35W	0.302	0.175	0.152	0.134	--	--
	38W	--	--	--	--	0.115	0.086
P5	48W	0.434	0.241	0.211	0.184	--	--
	52W	--	--	--	--	0.157	0.119

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647
E10WH	VF	1,658
	VW	1,701
E20WC	VF	2,840
	VW	2,913

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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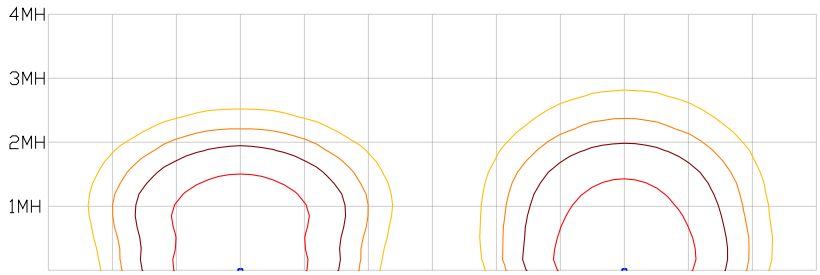
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND

- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 10ft
Grid = 10ft x 10ft



WDGE2 LED P3 40K 80CRI VW

WDGE2 LED P3 40K 80CRI VF

Emergency Egress Options

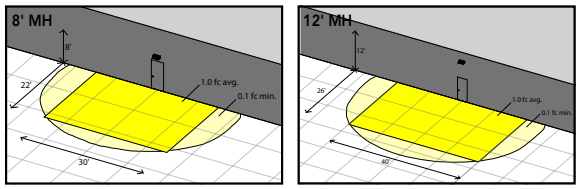
Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

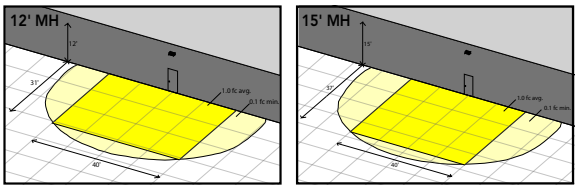
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The examples below show illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E10WH or E20WC and VF distribution.

Grid = 10ft x 10ft



WDGE2 LED xx 40K 80CRI VF MVOLT E10WH

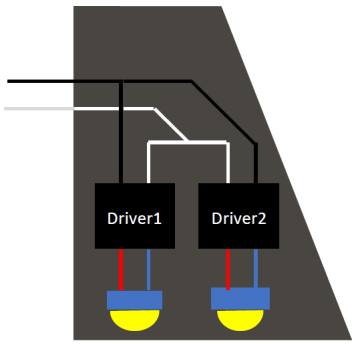


WDGE2 LED xx 40K 80CRI VF MVOLT E20WC

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark.

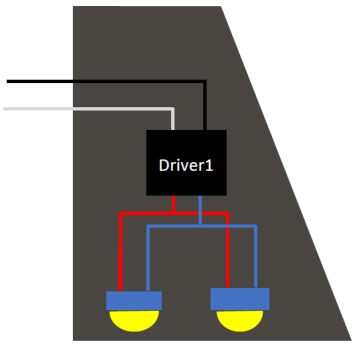
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



Dual Switching Light Engine (DSLE) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with one driver and two light engines. These work completely independent to each other so that a failure of either light engine does not cause the whole luminaire to go dark.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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Control / Sensor Options

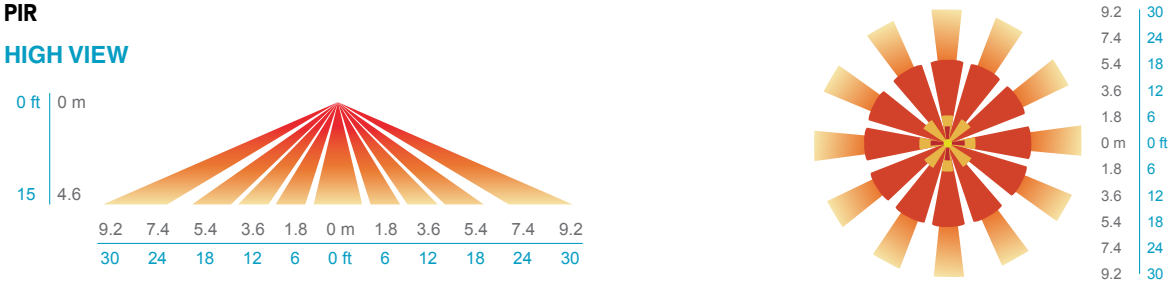
Motion/Ambient Sensor (PIR_, PIRH_)

Motion/Ambeint sensor (Sensor Switch MSOD) is integrated into the the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

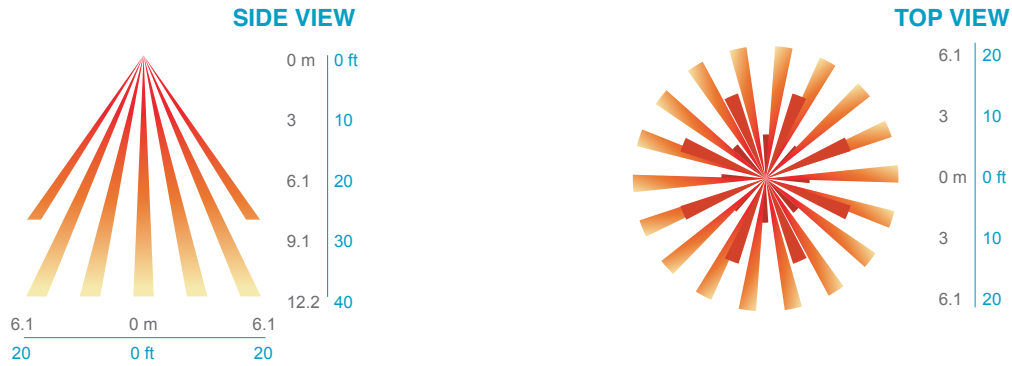
Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

PIR



PIRH



Option	Dim Level	High Level (when triggered	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR1FC3V, PIRH1FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 1fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
NLTAIR2 PIR, NLTAIR2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec

UL 924 Response – nLight AIR Devices with EM Option

- NLTAIREM2 devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+ mobile app, NLTAIREM2 devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- The non-emergency devices, NLTAIR2 PIR and NLTAIR2 PIRH, with version 3.4 or later firmware can be used for normal power sensing.

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Mounting, Options & Accessories



NLTAIR2 PIR – nLight AIR Motion/Ambient Sensor

D = 7"

H = 11"

W = 11.5"



PBBW – Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"

H = 9"

W = 11.5"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"

H = 4.4"

W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

GOVERNMENT PROCUREMENT
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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WDGE3 LED

Architectural Wall Sconce

Catalog Number

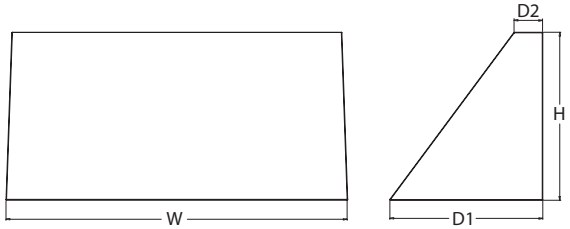
Notes CCC - Sports Field - Land Use

Type WP3

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 8"
Depth (D2): 1.5"
Height: 9"
Width: 18"
Weight: (without options) 19.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE3 LED P3 40K 70CRI R3 MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE3 LED	P0 P1 P2 P3 P4	30K 3000K 40K 4000K 50K 5000K	70CRI 80CRI	R2 Type 2 R3 Type 3 R4 Type 4 RFT Forward Throw	MVOLT 347[1] 480[1]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[2] **Shipped separately** AWS 3/8 inch Architectural wall spacer[3] PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.[3]

Options

E15WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (15W, 5°C min)
E20WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)
PE	Photocell, Button Type[4]
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[5]
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
SPD10KV	10kV Surge pack[6]
CCE	Coastal Construction[3]

Standalone Sensors/Controls

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15'mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30'mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls

NLTAIR2 PIR	Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.
NLTAIR2 PIRH	Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15'-30' mounting heights.
NLTAIREM2 PIR	Embedded wireless controls by nLight with UL924 listed emegency operation, Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights[7]
NLTAIREM2 PIRH	Embedded wireless controls by nLight with UL924 listed emegency operation, Passive Infrared Occ sensor and on/off photocell for 15'-30' mounting heights

See page 4 for out of box functionality

Finish

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE3PBBW DDBXD U	WDGE3 surface-mounted back box (specify finish)

NOTES

1. 347V and 480V not available with E15WH and E20WC.
2. Not qualified for DLC. Not available with emergency battery backup or sensors/controls.
3. For PBBW and AWS with CCE option, require an RFA.
4. PE not available in 480V and with sensors/controls.
5. DMG option not available with sensors/controls.
6. Not available with E20WC option.
7. Available with MVOLT only and only rated to 25C ambient.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P0	41W	R2	6,172	151	1	0	1	6,104	149	2	0	1	6,394	156	2	0	1
		R3	6,071	148	1	0	2	6,004	146	1	0	2	6,290	153	1	0	2
		R4	6,256	153	1	0	2	6,187	151	1	0	2	6,481	158	1	0	2
		RFT	6,126	149	1	0	2	6,058	148	1	0	2	6,347	155	1	0	2
P1	52W	R2	7,037	136	1	0	1	7,649	148	2	0	1	7,649	148	2	0	1
		R3	6,922	134	1	0	2	7,524	145	1	0	2	7,524	145	1	0	2
		R4	7,133	138	1	0	2	7,753	150	1	0	2	7,753	150	1	0	2
		RFT	6,985	135	1	0	2	7,592	147	1	0	2	7,592	147	1	0	2
P2	59W	R2	7,968	135	2	0	1	8,661	147	2	0	1	8,661	147	2	0	1
		R3	7,838	133	1	0	2	8,519	144	1	0	2	8,519	144	1	0	2
		R4	8,077	137	1	0	2	8,779	149	1	0	2	8,779	149	1	0	2
		RFT	7,909	134	1	0	2	8,597	146	2	0	2	8,597	146	2	0	2
P3	71W	R2	9,404	132	2	0	1	10,221	143	2	0	1	10,221	143	2	0	1
		R3	9,250	130	2	0	2	10,054	141	2	0	2	10,054	141	2	0	2
		R4	9,532	134	2	0	2	10,361	145	2	0	2	10,361	145	2	0	2
		RFT	9,334	131	2	0	2	10,146	142	2	0	2	10,146	142	2	0	2
P4	88W	R2	11,380	129	2	0	1	12,369	140	2	0	1	12,369	140	2	0	1
		R3	11,194	127	2	0	2	12,167	138	2	0	2	12,167	138	2	0	2
		R4	11,535	131	2	0	2	12,538	142	2	0	2	12,538	142	2	0	2
		RFT	11,295	128	2	0	2	12,277	139	2	0	2	12,277	139	2	0	2

Lumen Output in Emergency Mode (4000K, 70 CRI)

Option	Dist. Type	Lumens
E15WH	R2	3,185
	R3	3,133
	R4	3,229
	RFT	3,162
E20WC	R2	3,669
	R3	3,609
	R4	3,719
	RFT	3,642

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	52W	0.437	0.246	0.213	0.186	0.150	0.110
P2	59W	0.498	0.287	0.251	0.220	0.175	0.126
P3	71W	0.598	0.344	0.300	0.262	0.210	0.152
P4	88W	0.727	0.424	0.373	0.333	0.260	0.190

Lumen Multiplier for 80CRI

CCT	Multiplier
30K	0.891
40K	0.906
50K	0.906

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.98	>0.97	>0.92

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Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

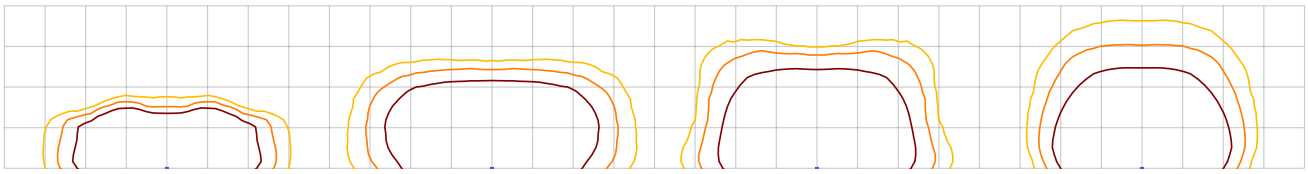
LEGEND

0.25 fc

0.5 fc

1.0 fc

MH = 15ft
Grid = 15ft x 15ft



WDGE3 LED P3 40K 70CRI R2 | WDGE3 LED P3 40K 70CRI R3 | WDGE3 LED P3 40K 70CRI R4 | WDGE3 LED P3 40K 70CRI RFT

Emergency Egress Options

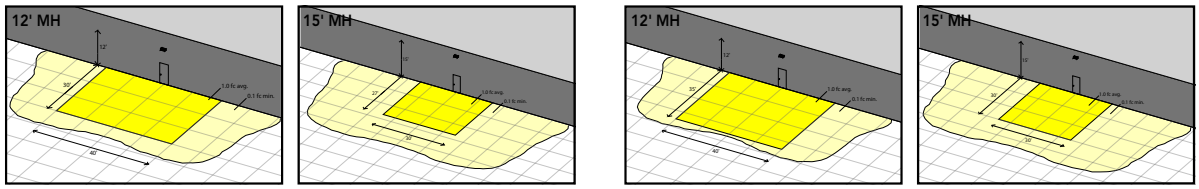
Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain, minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The examples below show illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E15WH or E20WC and R4 distribution.

Grid = 10ft x 10ft



WDGE3 LED xx 40K 70CRI R4 MVOLT E15WH | WDGE3 LED xx 40K 70CRI R4 MVOLT E20WC

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Control / Sensor Options

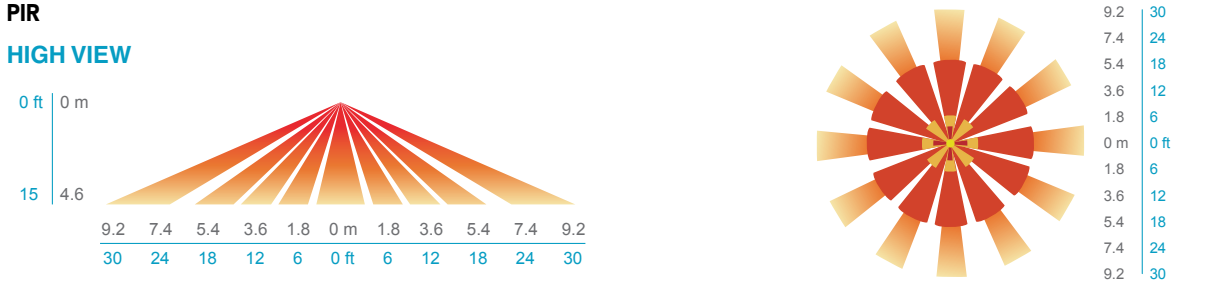
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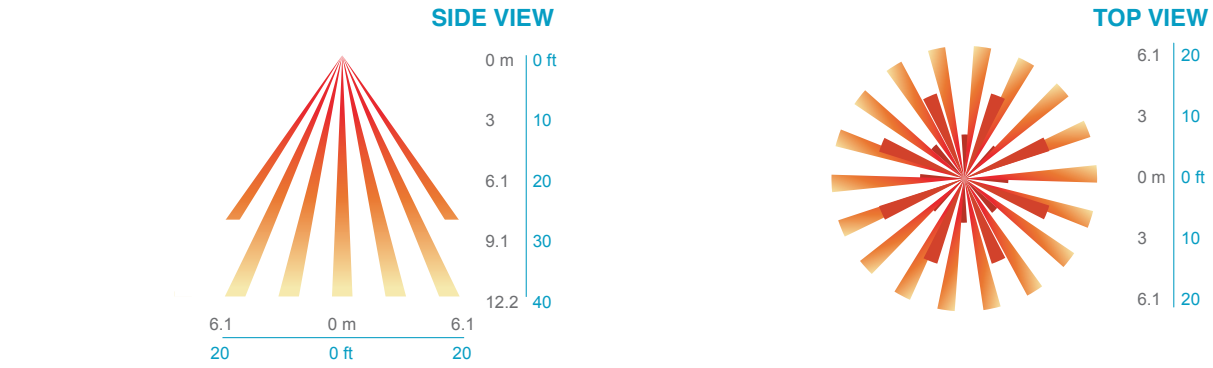
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PIR



PIRH



Motion/Ambient Sensor Default Settings

Option	Dim Level	High Level (when triggered	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
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NLTAIR2 PIR, NLTAIR2 PIRH, NLTAIREM2 PIR, NLTAIREM2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec

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OPTICS
Individually formed acrylic lenses are engineered for superior application efficiency which maximizes the light in the areas where it is most needed. Light engines are available in 3000 K, 4000 K or 5000 K configurations. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

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A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature and SRM mounting only.

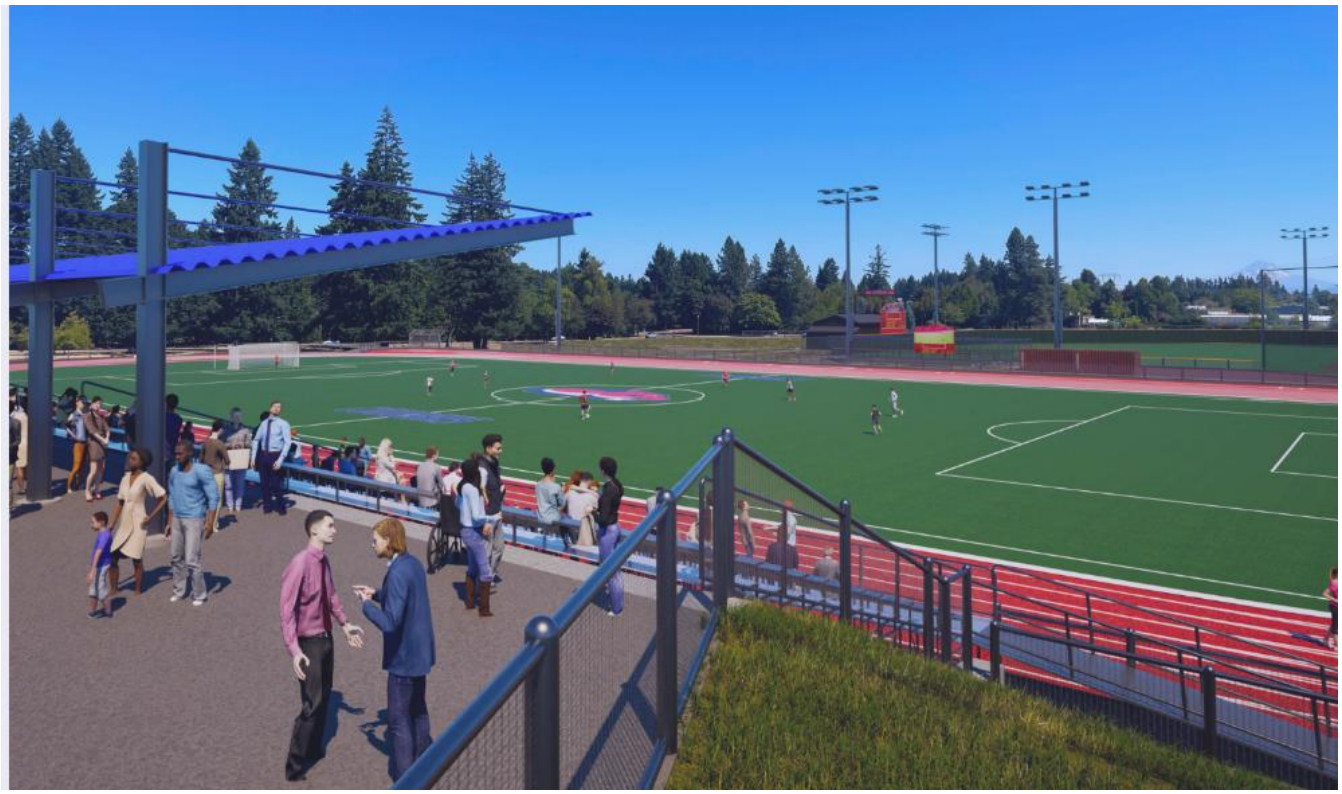
GOVERNMENT PROCUREMENT
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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EXHIBIT E
Stormwater Management Report and Preliminary Storm Calculations



PRELIMINARY STORMWATER MANAGEMENT REPORT

Clackamas Community College Athletics Facilities Improvements

Land Use Application
Application No._____
October 9, 2025

Prepared for:
Cameron McCarthy Landscape Architecture & Planning
133 SW 2nd Ave, Suite 410
Portland, OR 97204

MAZZETTI

T 503.620.3232
121 SW Salmon Street, Suite 1000
Portland, OR 97204

T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

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1.0. INTRODUCTION

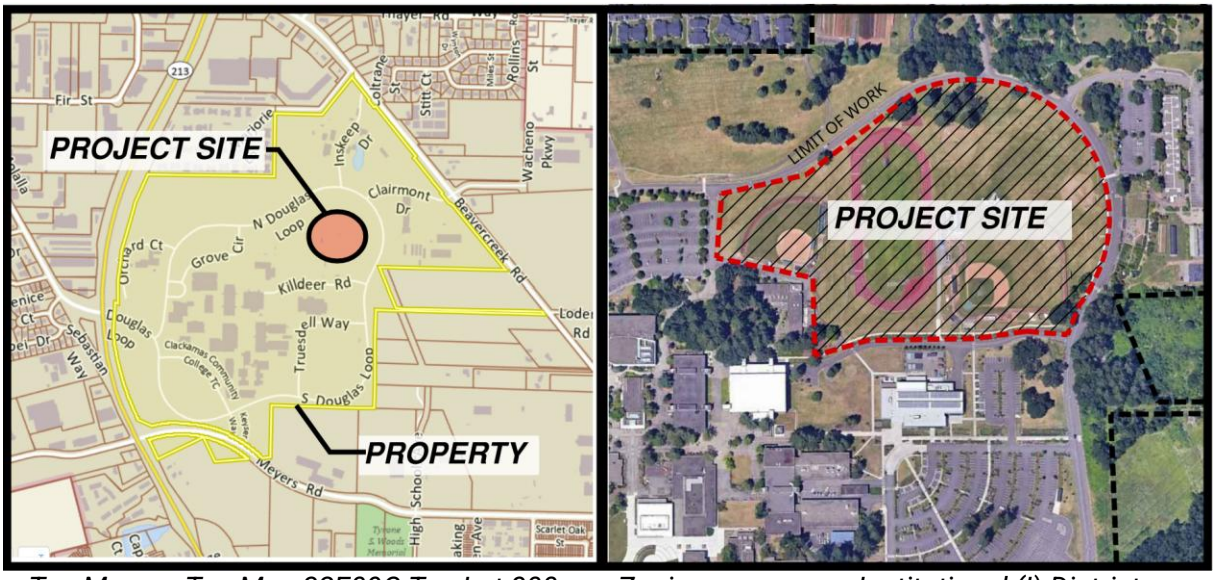
This report is a summary of the stormwater management approach and design for the proposed 18-acre Clackamas Community College Athletics Complex development, located in the northeastern quadrant of the CCC campus in Oregon City, Oregon. This report outlines the applicable requirements of the Oregon City Stormwater and Grading Design Standards (SGDS) and summarizes the design methodology to meet the requirements of the standards.

2.0. PROJECT DESCRIPTION

Overview

The CCC Athletics complex will be redeveloped to meet the current needs of the College. The redevelopment will include the following:

- Replacement of natural turf baseball, softball, and soccer fields with synthetic turf fields.
- Reconstruction of the track facility surrounding the soccer field.
- Construction of a new grandstands structure located west of the track.
- New pedestrian circulation and plaza spaces connecting the athletic facilities.
- New support buildings for baseball, softball, and track uses.
- Reconstruction of the natural turf throws facilities at the northeast corner of the complex.
- Stormwater management facilities to address redeveloped conditions.



Tax Map:	*Tax Map:32E09C Tax Lot 800*	*Zoning:*	*Institutional (I) District*
Site Size:	*156.6 Acres*	*Zoning Overlay:*	*NROD*

Figure 2.1 – Vicinity Map

Existing Conditions

- **Existing Development**
  The existing project site is currently developed with campus athletic facilities, including a running track and natural turf athletic fields (baseball, softball, soccer, hammer throw, shotput, discus, and javelin). The surface condition throughout the site is predominantly pervious lawn surface with several clusters of trees at the northerly and southeasterly edges. Impervious surface areas include the running track, paved hitting cage areas, a hammer throw area, several small ancillary structures, and pedestrian pathways. The site is bound by Douglas Loop Road on the east, north, and northwest sides and borders more densely developed campus space and buildings on the west, southwest, and south sides.

- **Existing Topography and Drainage Patterns:**
  Existing site topography consists of large areas of mild slopes, predominantly sloping from southwest to northeast. A mild embankment (approximately 20% slope), located just west of the track, separates the upper level of the site (softball field) from the lower level of the site (track and baseball field). Refer to Appendix F, Figure 2 and for topographic mapping of the site. Refer to the permit drawings for the topographic survey.

- **Existing Drainage Basin and Stormwater System:**
  The site is located within the Newell Creek Major Basin and within the NE_2900 Sub-Basin (Refer to Appendix B, Figure 2 of the Oregon City Stormwater Master Plan).

  Runoff from the project site is collected in an existing privately owned piped stormwater conveyance system. Stormwater enters the piped conveyance system through catch basins and field subdrainage systems. The existing piped system consists of a 24" mainline extending from south to north through the track and field site and 24" and 30" mainlines located in Douglas Loop Road. The storm mainlines in Douglas Loop drain in a northeasterly direction and discharge at outfall to an open channel and wetlands at the Environmental Learning Center (ELC) wetlands located to the northeast of Douglas Loop and northeast of the project site. Refer to Exhibit 1A for a map of the existing system.

  The open channel and wetlands at the ELC are the headwaters of Newell Creek. The ELC wetlands / channel system was improved in 2017 to enhance the riparian function of the wetlands and provide passive / tertiary stormwater treatment. The ELC wetlands are not classified as a regional stormwater treatment facility for the contributing basins. The ELC wetlands system consists of a forebay and diversion weir systems to divert low flows into the ELC wetlands area and direct high flows through the open channel conveyance path and into the downstream receiving system.

  The ELC wetlands area discharges to the public storm drain system at a ditch inlet located on the south side of Beaver Creek Road (Node 41441). The public piped conveyance system consists of a 42" main extending along the south side of Beaver Creek Road and a 60" elliptical storm drain crossing Beaver Creek Road. The piped public conveyance system outfalls to Newell Creek at the north side of Beaver Creek Road at Node 41405). Refer to Section 5.o0 for additional discussion.

- **Existing Wetlands / Natural Features**
  Several wetland areas are located near but not within the project limits. In addition to the ELC wetlands noted above, an existing wetlands is located on the south side of Douglas Loop at the northeast corner of the Throws Fields (Refer to Exhibit 1A). The area surrounding this wetland is within the mapped Natural Resources Overlay District (NROD) boundary (Refer to Appendix F, Figure 2). The wetlands area was delineated as part of the project. The proposed development will maintain a minimum setback of 50' from the delineated wetlands, maintaining the Water Environment Services (WES) buffer standards.

- **Offsite Drainage**
  There is no offsite drainage entering the project area or the existing private storm drain system in the immediate vicinity of the project. The private stormwater conveyance pipe located east of the site in Douglas Loop conveys drainage from the adjacent Oregon City High School site. Runoff from the High School site combines with drainage from the CCC site and is discharged at the outfall to the ELC wetlands.

- **Water Wells**
  There are no known or recorded water wells within the 250' of the project site.

- **Environmental Conditions**
  There are no known or recorded environmental conditions (i.e. fuel tanks, environmental cleanup, etc.) at the project site.

- **Soil and Groundwater Conditions**
  Natural Resources Conservation Service (NRCS) mapping classifies the soil at the site as Bornstedt Silt Loam with a Hydrologic Soil Group of "C" (HSG C). Refer to Appendix D2 for NRCS soil Mapping and HSG classification.

  Soil conditions at the site consist of an upper layer of silty clay soil underlain by hard basalt bedrock (Boring Lava). The depth of the rock layer varies across the site but is approximately 3' below ground surface at the shallowest point in the vicinity of the track and field. The geotechnical investigation encountered groundwater at shallow depths and indicates perched groundwater will approach the ground surface during the wet season. Refer to Appendix D1 for the geotechnical investigation.

  Infiltration testing was performed as part of the geotechnical investigation. Testing was performed in accordance with Appendix D of the Oregon City Stormwater and Grading Design Standards. Infiltration tests indicated a measured infiltration rate of 0.02 inch/hour and recommend a factor of safety of 2.

  Based on the measured infiltration rates, shallow groundwater, and recommendations from the Geotechnical Engineer, infiltration is not feasible at the site.

Proposed Conditions

- **Proposed Development**
  The project will redevelop the existing site with new athletic facilities as described above and shown in the permit Drawings. The proposed impervious and pervious surface characteristics are shown in Exhibit 2B. and summarized below.
  - Impervious Surfaces: Track surfaces, building roofs, pedestrian pathways and plazas.
  - Pervious Surfaces – Lawn / Landscaping: Open space lawn areas, landscaped areas, natural turf athletic fields.
  - Synthetic Turf – Cement Amended Subgrade: Baseball field and softball field (Winter construction). Refer Section 4.0 for additional discussion.
  - Synthetic Turf – Native Subgrade: Soccer field (dry weather construction).

- **Proposed Stormwater Collection and Conveyance Systems:**
  Stormwater runoff from redeveloped impervious surfaces will generally be conveyed to the storm drain system by sheet drainage to storm drain inlets (i.e. area drains, trench drains, catch basins). Runoff from roof surfaces will be conveyed to the storm drain system by gutter and downspout.

  Due to athletic facility design standards, runoff from the track surface will sheet-drain to the inside edge of the track and will enter the surface of the adjoining synthetic turf soccer field.

  Stormwater from the synthetic turf fields will generally be collected and stored beneath the field surface as discussed below.

  The existing mainline stormwater conveyance systems will remain intact with the project. Post development runoff will maintain existing drainage basin boundaries and will continue to discharge to the existing storm main north of the site in Douglas Loop Road. New stormwater mainlines will be constructed to address routing and detention requirements to meet the stormwater management standards. Refer to Exhibit 1B for a map of the proposed stormwater system and Appendix B for the Permit drawings.

- **Proposed Stormwater Management Systems:**
  Stormwater management facilities will be utilized to meet the requirements of the Oregon City Stormwater and Grading Design Standards (SGDS). Facilities will include:
  - **Impervious Area Reduction Techniques**
  - **Low Impact Development (LID) for Water Quality (Rain Garden)**
  - **Low Impact Development (LID) for Water Quality and Flow Control (Rain Garden)**
  - **Manufactured Treatment Technology**
  - **Underground Detention**

  Stormwater management facility details and sizing methodology is discussed in greater detail under Section 4.0 below.

3.0. STORMWATER REGULATORY REQUIREMENTS

Stormwater Management Hierarchy

The Oregon City SGDS (Section 2.2.4 & 4.2.A) requires stormwater facilities to be selected to prioritize onsite infiltration using Low Impact Development (LID) facilities. The project proposes stormwater facilities to comply with Hierarchy Level 2 requirements to the maximum extent possible. The following provides a summary of the hierarchy requirements and applicability to the project.

- **Level 1: Onsite Retention Using LID:**
  The hierarchy Level 1 criteria require onsite infiltration of the 10-year design storm using LID facilities where possible. Site conditions preclude implementation of Level 1 requirements. The following is a summary of the applicable limiting conditions.
  - Infiltration Rate:
    The measured infiltration rate is less than 2.0 in/hr. The measured infiltration rate is 0.02 in/hr.
  - Groundwater:
    The groundwater depth would be less than 12 inches below the bottom of an LID infiltration facility. As noted under Section 1.0, the groundwater is anticipated to approach the ground surface during winter months.

- **Level 2: Onsite Stormwater Management Using LID**
  The hierarchy Level 2 requires onsite stormwater management using infiltration LID facilities where possible and filtration LID facilities where infiltration rates are less than 0.5 in/hr. The project will utilize filtration LID facilities to the maximum extent possible. Athletic facility design / program requirements, grading constraints, space constraints, and shallow bedrock preclude the use of filtration LID facilities to manage 100% of the new or redeveloped impervious surface. The project will utilize LID facilities for water quality and flow control as a first priority, LID for water quality only as a second priority, and Manufactured treatment as a third priority where LID facilities are not feasible.

Table 3.1 – Stormwater Management Approach Summary

Stormwater Management Approach	Site Impervious Area Managed	
	SF	% of Total
LID for Water Quality and Flow Control	36019	27%
LID for Water Quality and Underground Detention for Flow Control	43930	33%
Manufactured Treatment for Water Quality and Underground Detention for Flow Control	58508	44%
Unmanaged (Refer to Section 4.0 and Table 4.6)	4401	3%
Total	134214	100%

Water Quality

The Oregon City SGDS (Section 4.2.B) requires water quality facilities to capture and treat runoff from the Water Quality Design Storm (See Table 4.8).

Flow Control

The Oregon City SGDS (Section 4.2.C) requires flow control facilities designed to match peak flow duration for all flows between 42% of the 2-year peak up to the 10-year peak flow rate.

General Conveyance / Downstream Analysis

Under the Oregon City SGDS (Section 4.2.D), developments must not cause or increase flooding of adjacent or downstream property. Refer to Section 5.0 for downstream analysis requirements.

Source Control

The Oregon City SGDS (Chapter 6), identify point source pollution control requirements. The project does not include the uses or site conditions triggering source control requirements.

Erosion Control

The project will disturb more than 1-acre and will therefore require coverage under the DEQ 1200-C Erosion Control permit. At the time of this report, a 1200-C erosion control permit application (RID #90225) is under review. An Oregon City Erosion Control permit will also be required.

4.0. STORMWATER MANAGEMENT APPROACH

Stormwater Facility Contributing Areas and Basin Characteristics

The contributing area for each stormwater management facility is shown on Exhibit 2C, and individual contributing subareas and surface types are shown on Figure 2B. Contributing areas and basin characteristics are summarized in Table 4.1 and described below.

Table 4.1– Stormwater Facility Contributing Areas / Basin Characteristics

Basin / Sub-Area	*Description*	*Basin Characteristics*									
		Sub-Basin Area		Methodology		Internal Area Characteristics					Time of Concentration
				Hydrograph	BMP Tool	Curve Number	Impervious		Pervious		T_C
		ft^2	acre			CN	ft^2	% of Total	ft^2	% of Total	min
Basin RG-S1											
S21	Pavement / Roof	20,593	0.47		x	N/A	20,593	100	0	0	N/A
S22	Exist Pavement	9,753	0.22		x	N/A	9,753	100	0	0	N/A
S23	Exist Pavement	2,103	0.05		x	N/A	2,103	100	0	0	N/A
S31	Lawn	4,650	0.11		x	N/A	0	0	4,650	100	N/A
S32	Lawn	4,358	0.10		x	N/A	0	0	4,358	100	N/A
RG-S1 Total		41,457	0.95								
Basin RG-S2											
S24	Roof	3,570	0.08		x	N/A	3,570	100	0	0	N/A
RG-S2 Total		3,570	0.08								
Basin D-S1											
S11[1]	Synthetic Turf[1]	46,869	1.08	x		98.00	46,869	100	0	0	5
S33	Lawn	8,944	0.21	x		74.00	0	0	8,944	100	5
D-S1 Total		55,813	1.28	x							
Basin D-B1											
B11[1]	Synthetic Turf[1]	128,184	2.94	x		98.00	128,184	100	0	0	5
B21	Pavement	3,212	0.07	x		98.00	3,212	100	0	0	5
B22	Exist Pavement	4,070	0.09	x		98.00	4,070	100	0	0	5
B31	Lawn	7,422	0.17	x		74.00	0	0	7,422	100	5
D-B1 Total		142,888	3.28								
Basin RG-T1											
T21	Pavement	43,930	1.01		x	N/A	43,930	100	0	0	N/A
RG-T1 Total		43,930	1.01								
Basin D-T1											
T11[2]	Synthetic Turf[2]	91,356	2.10		x	N/A	91,356	100	0	0	N/A
T21	Pavement	43,930	1.01		x	N/A	43,930	100	0	0	N/A
T22	Pavement	58,508	1.34		x	N/A	58,508	100	0	0	N/A
T31	Lawn	16,046	0.37		x	N/A	16,046	100	0	0	N/A
D-T1 Total		209,840	4.82								
Mitigation (for B22)											
F1	Pavement	9,056	0.21		x	N/A	9,056	100	0	0	N/A
C1	Pavement	1,056	0.02		x	N/A	1,056	100	0	0	N/A
Unmanaged Areas											
S25	Pavement	1,134	0.03		x	N/A	1,134	100	0	0	N/A
T23	Pavement	3,267	0.08		x	N/A	3,267	100	0	0	N/A
Total New / Replaced		**134,214**	**3.08**								
Total New / Unmanaged		**4,401**	**0.10**								
Total Existing Managed with WQFCT		**2,103**	**0.05**								
Total Existing Managed with FCT		**4,070**	**0.09**								

[1]Subbasins S11 (Softball Field) and B11 (Baseball Field) are synthetic turf and are modeled using the single-event hydrograph method. Subgrade soils will undergo cement-amendment and are modeled with a Curve Number (CN) of 98 to reflect Impervious conditions.

[2]Subbasin T11 (Soccer Field) will be constructed on native subgrade soils and is modeled as pervious pavement (HSG C Soil) in the BMP Sizing Tool.

Stormwater Facility Design and Sizing

- **Basin RG-S1: Softball Field Rain Garden – Water Quality and Flow Control:**
  Stormwater facility RG-S1 is a rain garden located north of the softball field and manages runoff from Basin RG-S1. The RG-S1 basin includes the pedestrian plaza space surrounding the softball field and the grandstands roof structure (Subbasin S21), the existing fire lane located south of the softball field (S22), an existing paved hitting cage area (S23), and adjacent landscape areas (S31 & 32).

  The existing fire lane area (Subbasin S22) will be intercepted and managed with RG-S1. Under pre-development conditions, Subbasin S22 is directed to the existing rain garden "F", located immediately north of Killdeer Road (north of the HTIC Building). Rain garden F was constructed with the 2017 HTIC project and is designed in conformance with the current Oregon City SGDS. In exchange for managing Subbasin S22 with RG-S1, Subbasins F1 and C1 (an equivalent area) will be directed to the existing rain gardens "F" and "C" located along the south edge of the project.

  Rain Gardens will be designed to meet the minimum cross-sections shown in the Oregon City SGDS. As noted under Sections 1 & 2, shallow groundwater and poor infiltration rates preclude infiltration facilities and RG-S1 is designed as a filtration rain garden with a liner and a subdrainage system as shown in Figure 4.1 and the permit Drawings. RG-S1 incorporates a 30" growing medium layer and associated sizing reduction. Refer to Table 4.2 for rain garden facility sizing data.

  RG-S1 is sized to meet water quality and flow control (WQFCT) requirements using the BMP Sizing Tool. Refer to Table 4.2 for rain garden facility sizing data and Appendix C1 for BMP Sizing Tool calculations.

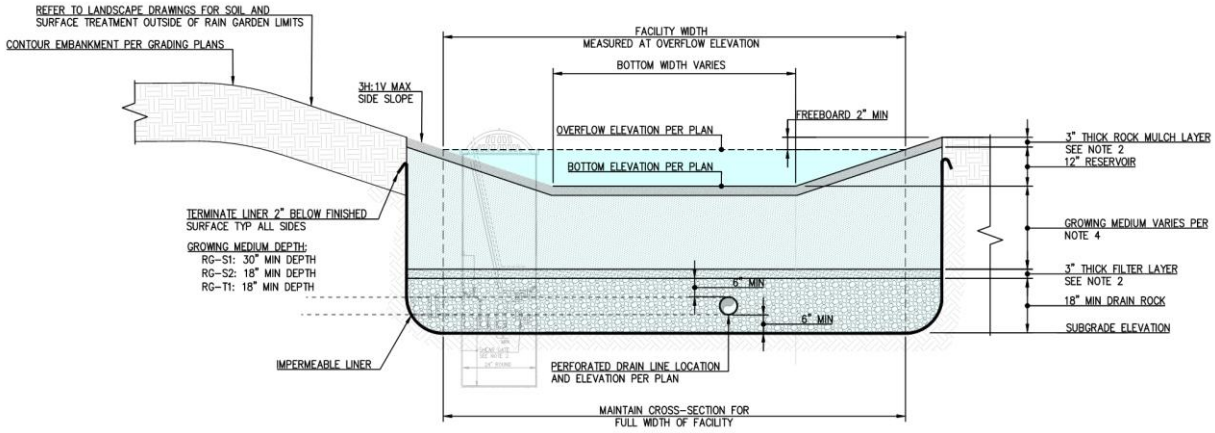


Figure 4.1 – Rain Garden RG-S1

- **Basin RG-S2: Softball Hitting Shed Rain Garden – Water Quality and Flow Control:**
  Stormwater facility RG-S2 is a rain garden located west of the softball field and manages runoff from Basin RG-S2, which includes a hitting structure located immediately south of the rain garden.

  RG-S1 is sized to meet water quality and flow control (WQFCT) requirements using the BMP Sizing Tool and the configuration is similar to RG-S1 noted above.

Table 4.2– Rain Garden (LID) Facility Sizing Data

Stormwater Facility	Description	Contributing Area		Design [1]	Facility Area			Sizing Factor		
		Basin	Area [4]		Min [2]	Min Adj [3]	Proposed	Min Std [2]	Min Adj [3]	Proposed
			SF		SF		SF			
RG-S1	Rain Garden	RG-S1	41,457	FCWQT	5,259	4,207	4,207	0.13	0.10	0.10
RG-S2	Rain Garden	RG-S2	3,570	FCWQT	536	--	80	0.15	0.12	0.02
RG-T1	Rain Garden	RG-T1	43,930	WQT	659	--	965	0.02	--	0.02

Notes

[1] Design column indicates basis of facility design as follows:

WQT	Water Quality Only
FC	Flow Control Only
FCWQT	Flow Control and Water Qaulity

[2] Minimum area and minimum sizing factors based on BMP Sizing Tool. For impervious areas, sizing factors are as follows:

WQT	0.015
FCWQT	0.15

For basins with pervious and impervious areas, the sizing factor is calculated in the BMP sizing tool.

[3] Minimum Adjusted Sizing Factor indicates minimum FCWQT size with 20% reduction with 30" growing medium.

[4] Contributing area is the sum of pervious and impervious area shown in Table 4.1.

[5] Facility area is measured at the overflow elevation of the facility.

- **Basin D-S1: Softball Field Detention:**

Stormwater facility D-S1 is an underground detention system integrated with the synthetic turf field profile for the softball field. Contributing drainage for the softball field detention system (Basin D-S1) will consist of the softball field (Basin S11) and a peripheral landscape area (Basin S33).

The D-S1 detention system consists of an open-graded aggregate subbase storage layer beneath the field and a 12" detention / conveyance pipe extending diagonally across the field (from southwest to northeast). The softball field surface will be graded level, and the subgrade surface will be graded with a gradual slope toward the detention / conveyance pipe at the midpoint of the field. The aggregate storage reservoir will be variable thickness as illustrated in Figure 4.1 and the permit Drawings. A flow control manhole will be located to the northeast of the field and will regulate release rates. Refer to Table 4.3 for underground detention facility sizing data.

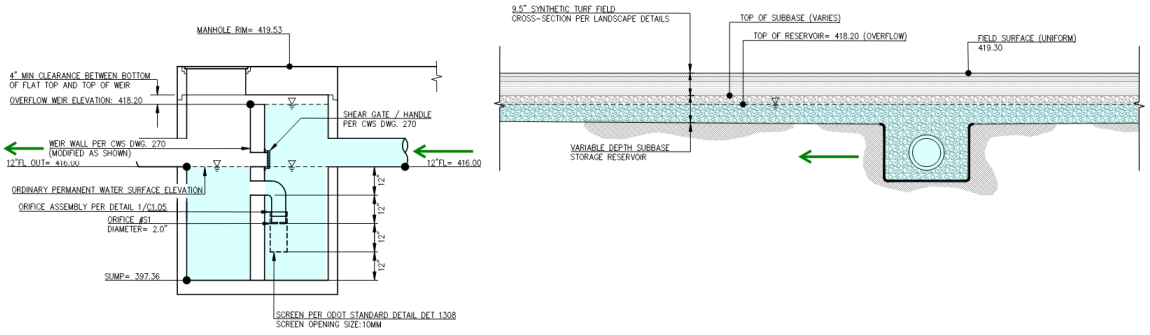


Figure 4.2 - Detention System D-S1

Table 4.3 – Underground Detention Facility Data

Stormwater Facility	Bottom of Storage			Top of Storage			Primary Orifice			Secondary Orifice			Overflow			10-yr Storage Volume	10-yr Water Surface	
	Area	Elev.	Stage	Area	Elev.	Stage	D	EL.	Stage	D	EL.	Stage	L	Elev	Stage		Elev	Stage
	SF	Ft	Ft	SF	Ft	Ft	In	Ft	Ft		Ft	Ft		Ft	Ft	CF	Ft	Ft
D-S1	816	416.00	0.00	46869	418.20	2.20	2.00	416.00	0.00	--	--	--	3.14	418.20	2.20	4153.00	418.01	2.01
D-B1	1401	401.36	0.00	18345	406.91	5.55	2.40	401.36	0.00	--	--	--	6.00	406.91	5.55	14632.00	406.90	5.54
D-T1	3760	404.16	0.00	91356	408.70	4.54	1.90	404.16	0.00	6.10	407.31	3.15	6.30	407.91	3.75	65962.00	408.91	4.75

As coordinated with City engineering staff prior to and during the 08/21/25 pre-application meeting, the synthetic turf field areas will not require water quality treatment but must meet flow control requirements. An alternative modeling approach has been coordinated with City staff for the synthetic turf fields, similar to the approach taken for pervious pavements. The alternative approach utilizes a single-event hydrograph method (in lieu of the continuous simulation method) to match pre-development flow rates for the 10-year design storm.

The softball field and baseball field will be constructed during winter months and existing moisture-sensitive subgrade soils will be subject to disturbance and, in accordance with the recommendations of the geotechnical report, the subgrade soil will be cement-amended to support construction equipment. Although the existing soils have a very low effective infiltration rate (i.e. <0.02 in/hr), the cement-amendment process further reduces the infiltration rate of the native soil. To address this condition, the field surfaces will be modeled as impervious surfaces with a Curve Number (CN) of 98. This condition has been coordinated with City staff, and the pervious pavement methodology (i.e. single-event hydrograph methodology) is still appropriate.

Refer to Appendix C2 for runoff calculations and Table 4.7 for pre-development and post-development runoff rates.

- **Basin D-B1: Baseball Field Underground Detention:**
  Stormwater facility D-B1 is an underground detention system integrated with the synthetic turf field profile for the baseball field. The contributing area for this facility (Basin D-B1) includes the baseball field itself (Subbasin B11) and several small peripheral areas pedestrian pavement areas (B21 and B22) and landscape areas (B21). These peripheral areas will sheet-drain into the west edge of the field.

  The detention system consists of an open-graded aggregate subbase storage layer beneath the field and a 36" detention pipe. The field will be sloped gradually from south to north to match existing topography and the detention pipe will be located at the low point of the field along the northernmost edge. The aggregate subbase reservoir will include an 18" thick level section located within the northern 70' of the field. The level reservoir section provides the necessary storage volume without relying on the sloped sections of the field. A flow control manhole will be located to the northwest of the field and will regulate release rates from the reservoir.

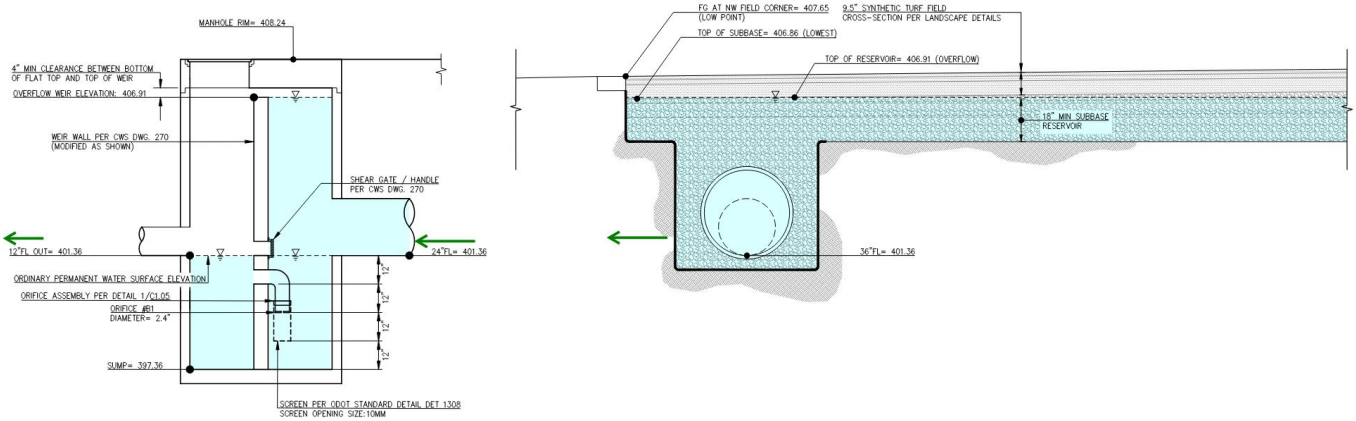


Figure 4.3 - Detention System D-B1

- **Basin RG-T1: Track and Field Rain Garden – Water Quality Treatment**
  Stormwater facility RG-T1 is a rain garden located south of the running track and north of Killdeer Road. The contributing area (Subbasin S21) includes the track pavement surface at the southern section of the track, surrounding pedestrian pavement areas, and the adjacent hitting structure roof. The site grading and stormwater collection system were designed to direct the maximum amount of impervious surface area to RG-T1. It is not feasible to direct additional impervious surface to RG-T1 due to grade limitations and the depth constraints of the receiving storm drain system.

  RG-T1 is sized to meet water quality requirements using the BMP Sizing Tool. Treated runoff from RG-T1 is collected in a subdrainage system beneath the rain garden. Treated runoff and overflow from RG-T1 is directed to the underground detention system D-T1 described below.

- **Basin D-T1: Track and Field Underground Detention**
  Stormwater facility D-T1 is an underground detention system integrated with the synthetic turf field profile of the soccer field. The contributing area for the facility (Basin D-T1) includes the soccer field itself (Subbasin T11), the surrounding track and grandstands (T22), a lawn area north of the grandstands (T31), and Subbasin T21. Drainage from Subbasin T21 consists of treated stormwater and overflow from RG-T1.

  The detention system consists of an open graded aggregate subbase storage layer beneath the field and 24” detention pipes around the outside perimeter of the field. The field will have a mild crown along the midpoint with a gradual surface slope to the edges at the interface with the track. The aggregate subbase reservoir will include an 18” thick level section extending across the full width of the field. A flow control manhole will be located to the northwest of the field and will regulate release rates from the reservoir.

  Per the Oregon City SGDS (Section 4.3.1), the D-T1 underground detention system is modeled as a detention pond using the BMP Sizing Tool. Refer to Appendix C1 for calculations showing the minimum required storage volume is satisfied. For simplicity, RG-T1 is not accounted for in the sizing of the D-T1 detention system.

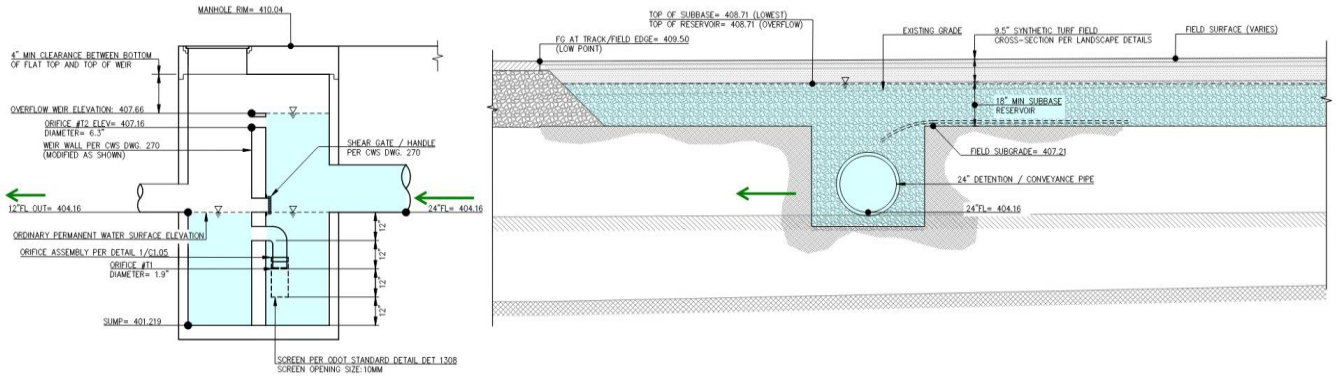


Figure 4.4 - Detention System D-T1

- **Basin D-T1: Track and Field Manufactured Treatment System**
  As noted under Section 2.0 the impervious track surface surrounding the soccer field sheet drains into the perimeter of the field. As such, it is not possible to segregate runoff from the track surface to provide treatment upstream of the D-T1 detention system. To address this, a manufactured treatment system will be utilized downstream from the D-T1 flow control manhole. This will result in redundant treatment of Basin T21, as that area passes through the upstream RG-T1 rain garden.

  It should also be noted that the track surface will generate a very low volume of pollutants, as it will receive only pedestrian traffic. In addition, runoff from the track will be filtered as it passes through the synthetic turf infill, fabric, and aggregate layers and additional settling and filtration will occur within the storage rock reservoir. In light of this, it is requested that the City consider waiving the water quality treatment requirement be waived for Basin T22 (the track and grandstands area surrounding the soccer field). Additional supporting information can be provided if needed.

  Manufactured treatment facility sizing data is shown under Table 4.4 and additional supporting information is included in Appendix C4.

Table 4.4 – Manufactured Treatment Facility Data

Stormwater Facility Identification	**MT-1**	
Description	Stormfilter Manhole	
Number of Cartridges	7	
Water Quality Cartridge Flow Rate	11.25 gpm/cartridge	0.025 CFS/cartridge
Water Quality Capacity	0.175 CFS	
Water Quality Design Flow	0.17 CFS	
Overflow Capacity (10-yr)	1.5 CFS	
Overflow Design Flow (10-yr)	0.65 CFS	

- **Basin F1 and C1: Contributing Area Trading:**
  Basins F1 and C1 are new impervious surfaces areas directed to existing rain gardens RG-F and RG-C, respectively. The existing rain gardens are located along the south edge of the project site and were constructed in 2017 with the HTIC Building project located just south of the site. Rain Gardens F and C were designed to meet the current performance standards of the Oregon City SGDS. Under current (pre-project) conditions, Sub-basin S22 currently drains to RG-F. Under proposed conditions, Sub-basin S22 will be intercepted and redirected to RG-S1. In exchange Sub-basin RG-F will be directed to RG-F. Similarly, a small area of dugout roof and sidewalk (Subbasin RG-C) will be directed to RG-C. Table 4 provides a summary of the pre-development and post-development areas draining to RG-F and RG-C. The project will result in a net decrease of area draining to these existing rain gardens.

Table 4.5 – Contributing Area Trading (Basins RG-F and RG-C)

Facility	Facility Area	Contributing Sub-Basin within Project Area		Total Contributing Area	Sizing Factor
		Sub-Basin	Area		
	SF		SF	SF	
Pre-Project Conditions					
RG-F	6,874	S22	9,753	68,736	0.090
RG-C	2,753	--	--	8,335	0.20
Proposed Conditions (Post-Project					
RG-F	6874	F1	9,056	69,433	0.101
RG-C	2,753	1,056	8,335	9391	0.29

- **Basins S25 and T23: Unmanaged Areas:**
  There are several small areas of the site, where it is not feasible to provide flow control. These areas remain unmanaged but existing impervious areas are managed in exchange. Refer to Table 4.6 for a summary of unmanaged and exchange areas.

Table 4.6 – Unmanaged Areas / Mitigation Trading

Subbasin	Description	Area (SF)
Proposed Areas Not Receiving Flow Control		
S25	Proposed Sidewalk (Southwest of Softball)	1,134
T23	Proposed Sidewalk (East of Track)	3,267
	Total	4,401
Existing Areas Receiving Flow Control		
S23	Existing Pavement (Hitting Cage at Softball)	2,103
B22	Existing Pavement (Hitting Cage at Baseball)	4,070
	Total	6,173

Stormwater Facility Details and Design Considerations

The following provides a summary of notable details and design considerations for the proposed stormwater facilities.

- **Flow Control Manholes**
  Due to limited facility depth and required overflow weir length, flow control manholes will utilize the Clean Water Services weir-wall type flow control manhole as shown on the permit Drawings.

- **Facility Liners**
  The decision to line stormwater facilities is a balance between promoting passive infiltration and groundwater recharge where possible, protecting underlying groundwater, and avoiding unnecessary drain-down of shallow groundwater. The project proposes a solution to balance these considerations. The shallow detention facilities integrated with the synthetic turf fields will remain unlined to promote infiltration where possible. The deeper sections of the subsurface detention facilities (pipe trenches) and the rain gardens will be lined to prevent unnecessary drain-down of the water table.

Stormwater Facility Modeling Methodology

- **Continuous Simulation / BMP Sizing Tool (Basins RG-S1, RG-S2, RG-T1 & D-T1)**
  With the exception of the baseball and softball field synthetic turf fields, stormwater facility sizing is based on the City's continuous simulation methodology, using the BMP Sizing Tool. Refer to Appendix C1 for BMP Sizing Tool calculations.

- **Single Event Hydrograph Methodology (Basin D-S1 and D-S2)**
  As noted above, the baseball and softball synthetic turf field areas are modeled using a single event hydrograph method. The design approach matches the peak runoff rate for post-development conditions to the pre-development conditions for the 10-year design storm. Pre-development and post-development runoff rates are summarized in Table 4.7 below. Input parameters are summarized in Table 4.1 and time of concentration calculations are provided in Appendix C3.

  Hydrologic, hydraulic, and routing calculations are performed using Hydraflow Hydrographs software. Calculations are included in Appendix C2

Table 4.7 – Pre-Development and Post-Development Runoff (Basin D-S1 and D-B1)

Basin	10-yr Design Flow Rate	
	Pre-Development	Post-Development
	CFS	CFS
D-S1	0.35	0.35
D-B1	0.15	0.16

Table 4.8– Rainfall Data / Design Storms

Recurrence Interval	24-hr Rainfall Depth
	inches
Water Quality Storm	2.8
10-Year	3.5
25-Year	4.0
50-Year	4.4
100-Year	4.5
[1] *The 24-hour rainfall depth is taken from the Oregon City SGDS, Appendix H*	

5.0. STORMWATER CONVEYANCE AND DOWNSTREAM ANALYSIS

Downstream Analysis

The project results in a reduction in peak runoff rates and will result in a net improvement to downstream hydraulic performance. There are no known performance issues with the existing private stormwater conveyance system downstream from the project site.

As noted in Section 2.0, the site discharges to Newell Creek through the Environmental Learning Center (ELC) wetlands located northeast of the project site. Drainage from the ELC discharges to a 42" public storm drain system along the south side of Beaver Creek Road, which discharges to Newell Creek through a 60" elliptical storm drain crossing under Beaver Creek Road.

The 2017 ELC project performed a hydraulic analysis of the system downstream from the site and no deficiencies were identified. The ELC stormwater report is referenced below. In addition, the 2007 CCC Infrastructure Report (Referenced Below) determined the receiving section of Newell Creek has adequate capacity to manage flows from the CCC campus and the Oregon City High School site that also drains to the

Referenced Reports

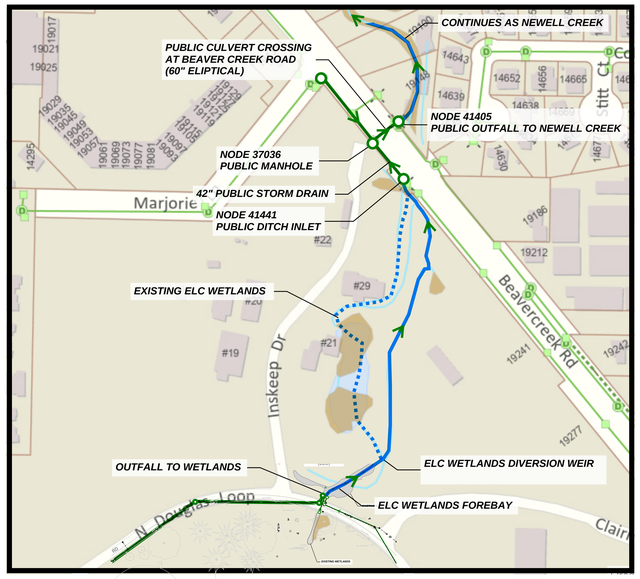
- **HTIC Project - 2017**
  Stormwater Drainage Report, Clackamas Community College Information Technical Center, May 2017, Prepared by KPFF
- **Environmental Learning Center - 2017**
  Stormwater Management Report, Clackamas Community College Environmental Learning Center Site Restoration, July 2017, Prepared by KPFF
- **Clackamas Community College Infrastructure Report - 2007**
  Clackamas Community College Water, Sanitary Sewer, and Stormwater Infrastructure Technical Report, Dated January 26, 2007.

6.0 OPERATIONS AND MAINTENANCE

Operation and maintenance of the proposed stormwater management facilities will comply with Chapter 8 of the Oregon City SGDS. Draft stormwater O&M data is included in Appendix E. At the time of building permit review, the City will require the Owner to submit the O&M documents presented in Appendix E and will require a Notice of Operation and Maintenance to be recorded on the property title.

Appendix A:
Stormwater Management Figures

Figure 1A System Diagram – Existing Conditions
Figure 1B System Diagram – Proposed Conditions
Figure 2A Basin Characteristics – Pre-Development
Figure 2B Basin Characteristics – Post-Development
Figure 2C Basin Map – Contributing Areas



ENVIRONMENTAL LEARNING CENTER WETLANDS
AND RECEIVING PUBLIC STORM DRAIN SYSTEM

CONTINUES THROUGH ELC WETLANDS

CONTINUES AS NEWELL CREEK TO PUBLIC NODE 41441 (SEE INSET DETAILTO LEFT)

ELC WETLANDS BYPASS WEIRS

ENVIRONMENTAL LEARNING CENTER (ELC)

OUTFALL TO WETLANDS

EXISTING ELC WETLANDS FOREBAY

MANHOLE

EXISTING WETLANDS

DOUGLAS LOOP RD

DOUGLAS LOOP ROAD

THROWS FIELDS

HAMMER THROW

SOCCER FIELD AND TRACK

SOFTBALL FIELD

EXISTING GRASSY SWALES TO BE REMOVED (CONSTRUCTED UNDER 2003 STUDIO ARTS PROJECT)

ART CENTER BLDG

BASEBALL FIELD

EXISTING RAIN GARDENS TO REMAIN (CONSTRUCTED UNDER 2015 HTIC PROJECT)

KILLDEER RD

HTIC BLDG

DRAINAGE FROM ADJACENT ONSITE AREA

DRAINAGE FROM ADJACENT ONSITE AREA AND OREGON CITY HIGH SCHOOL

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

1 SYSTEM DIAGRAM - EXISTING CONDITIONS

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LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
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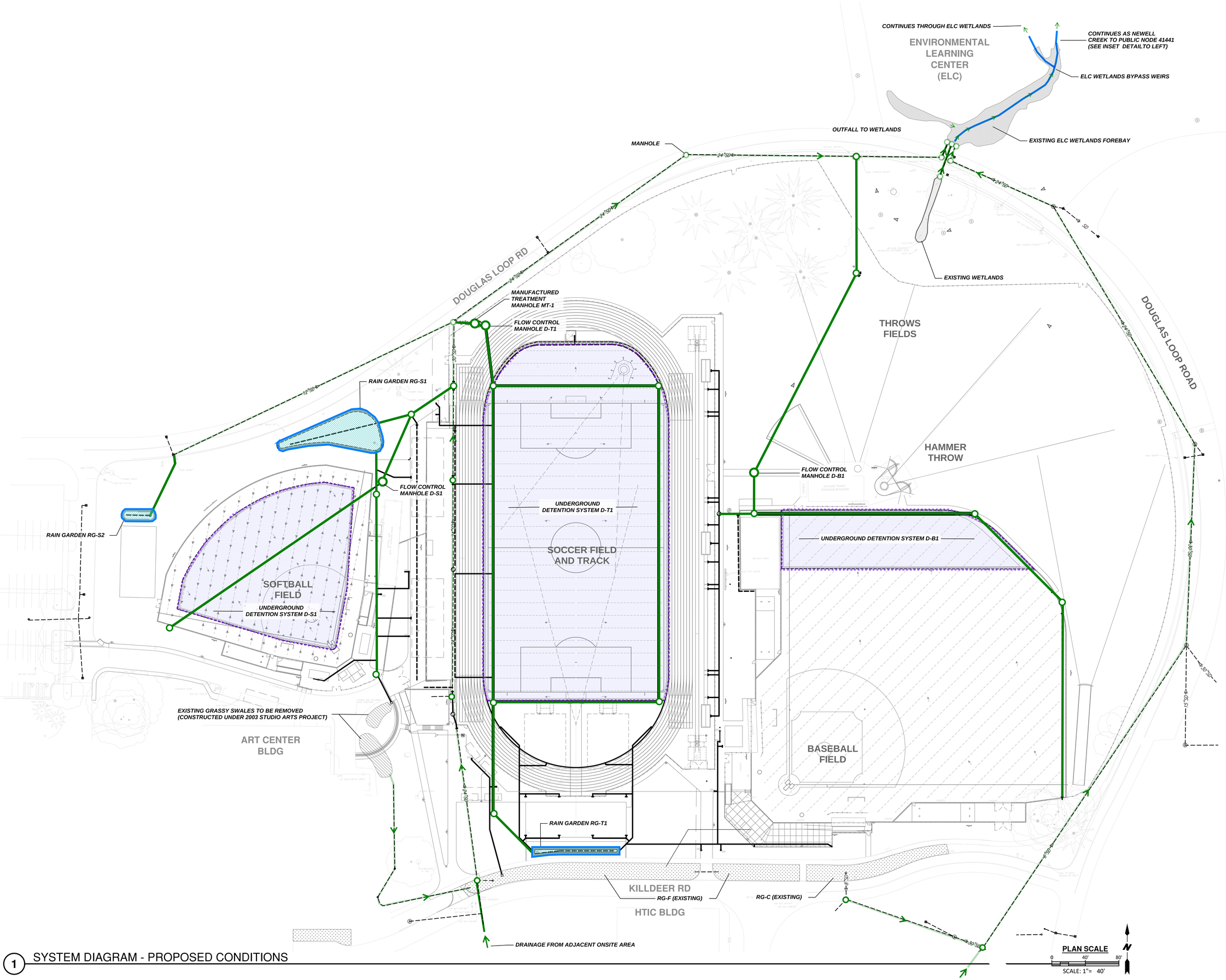
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Rev. #:	Date:

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SYSTEM DIAGRAM EXISTING CONDITIONS

EXHIBIT NO.
1A



1 SYSTEM DIAGRAM - PROPOSED CONDITIONS

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133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

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940 Willamette Street, Suite 310
Eugene, OR 97401
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SYSTEM DIAGRAM
PROPOSED
CONDITIONS

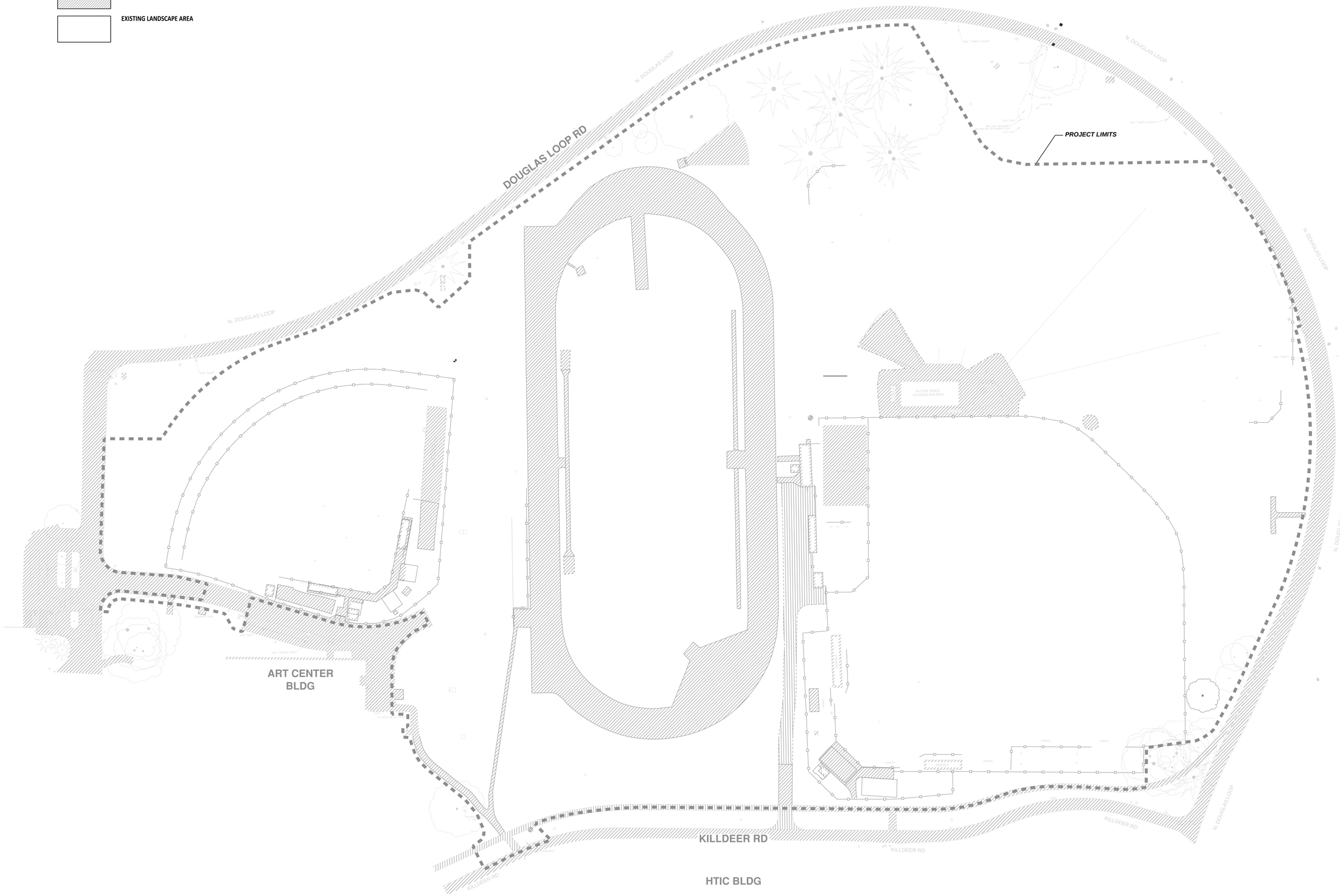
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BASIN LEGEND

EXISTING PAVEMENT OR ROOF

EXISTING LANDSCAPE AREA



1 BASIN MAP - SURFACE CHARACTERISTICS - PRE-DEVELOPMENT

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

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133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
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Eugene, OR 97401
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BASIN MAP - SURFACE CHARACTERISTICS - PRE-DEVELOPMENT

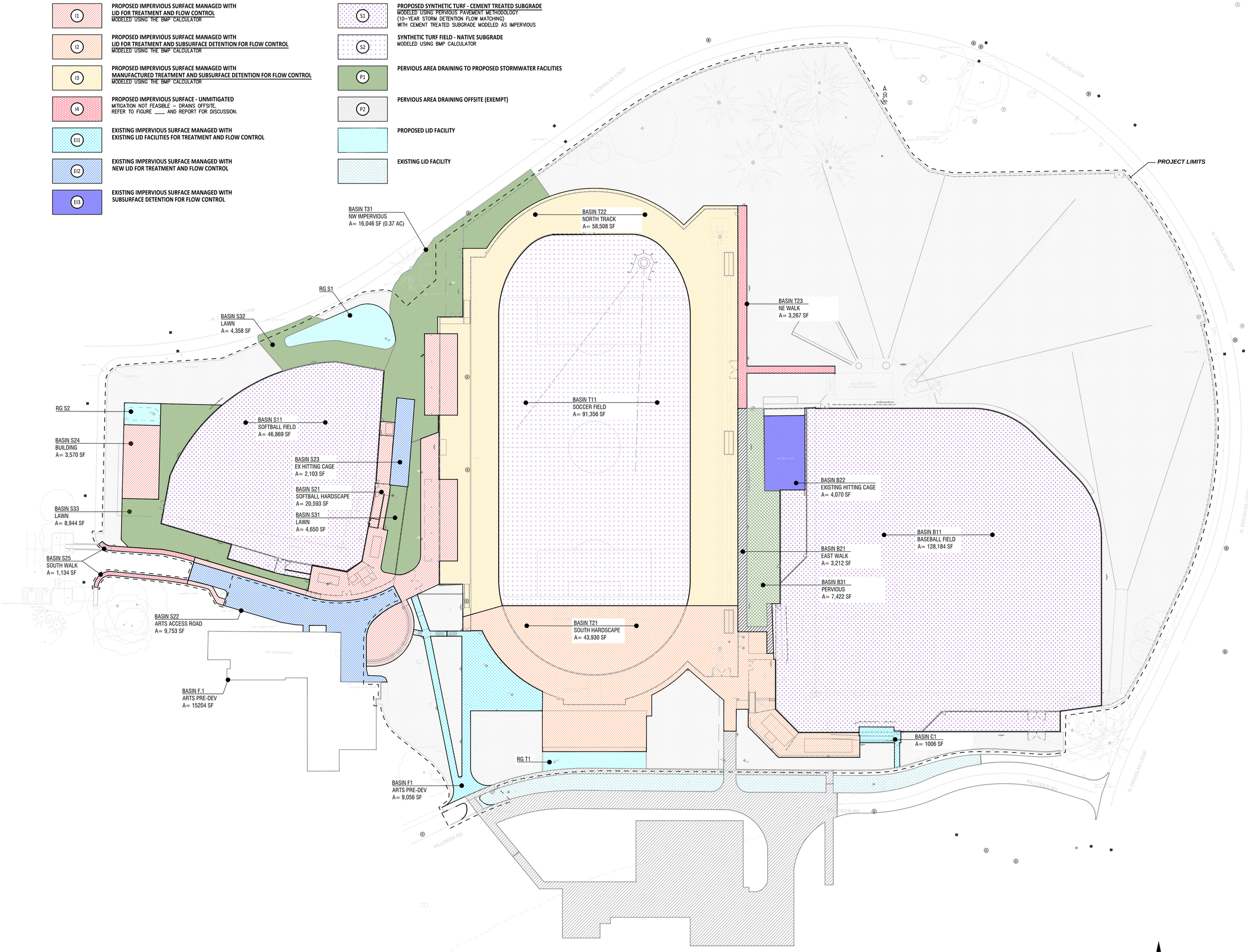
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BASIN LEGEND

- I1 — PROPOSED IMPERVIOUS SURFACE MANAGED WITH LID FOR TREATMENT AND FLOW CONTROL. MODELED USING THE BMP CALCULATOR
- I2 — PROPOSED IMPERVIOUS SURFACE MANAGED WITH LID FOR TREATMENT AND SUBSURFACE DETENTION FOR FLOW CONTROL. MODELED USING THE BMP CALCULATOR
- I3 — PROPOSED IMPERVIOUS SURFACE MANAGED WITH MANUFACTURED TREATMENT AND SUBSURFACE DETENTION FOR FLOW CONTROL. MODELED USING THE BMP CALCULATOR
- I4 — PROPOSED IMPERVIOUS SURFACE - UNMITIGATED. MITIGATION NOT FEASIBLE – DRAINS OFFSITE. REFER TO FIGURE ___ AND REPORT FOR DISCUSSION.
- EI1 — EXISTING IMPERVIOUS SURFACE MANAGED WITH EXISTING LID FACILITIES FOR TREATMENT AND FLOW CONTROL
- EI2 — EXISTING IMPERVIOUS SURFACE MANAGED WITH NEW LID FOR TREATMENT AND FLOW CONTROL
- EI3 — EXISTING IMPERVIOUS SURFACE MANAGED WITH SUBSURFACE DETENTION FOR FLOW CONTROL
- S1 — PROPOSED SYNTHETIC TURF - CEMENT TREATED SUBGRADE. MODELED USING PERVIOUS PAVEMENT METHODOLOGY (10-YEAR STORM DETENTION FLOW MATCHING) WITH CEMENT TREATED SUBGRADE MODELED AS IMPERVIOUS
- S2 — SYNTHETIC TURF FIELD - NATIVE SUBGRADE. MODELED USING BMP CALCULATOR
- P1 — PERVIOUS AREA DRAINING TO PROPOSED STORMWATER FACILITIES
- P2 — PERVIOUS AREA DRAINING OFFSITE (EXEMPT)
- PROPOSED LID FACILITY
- EXISTING LID FACILITY



1 BASIN MAP - POST-DEVELOPMENT

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

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120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

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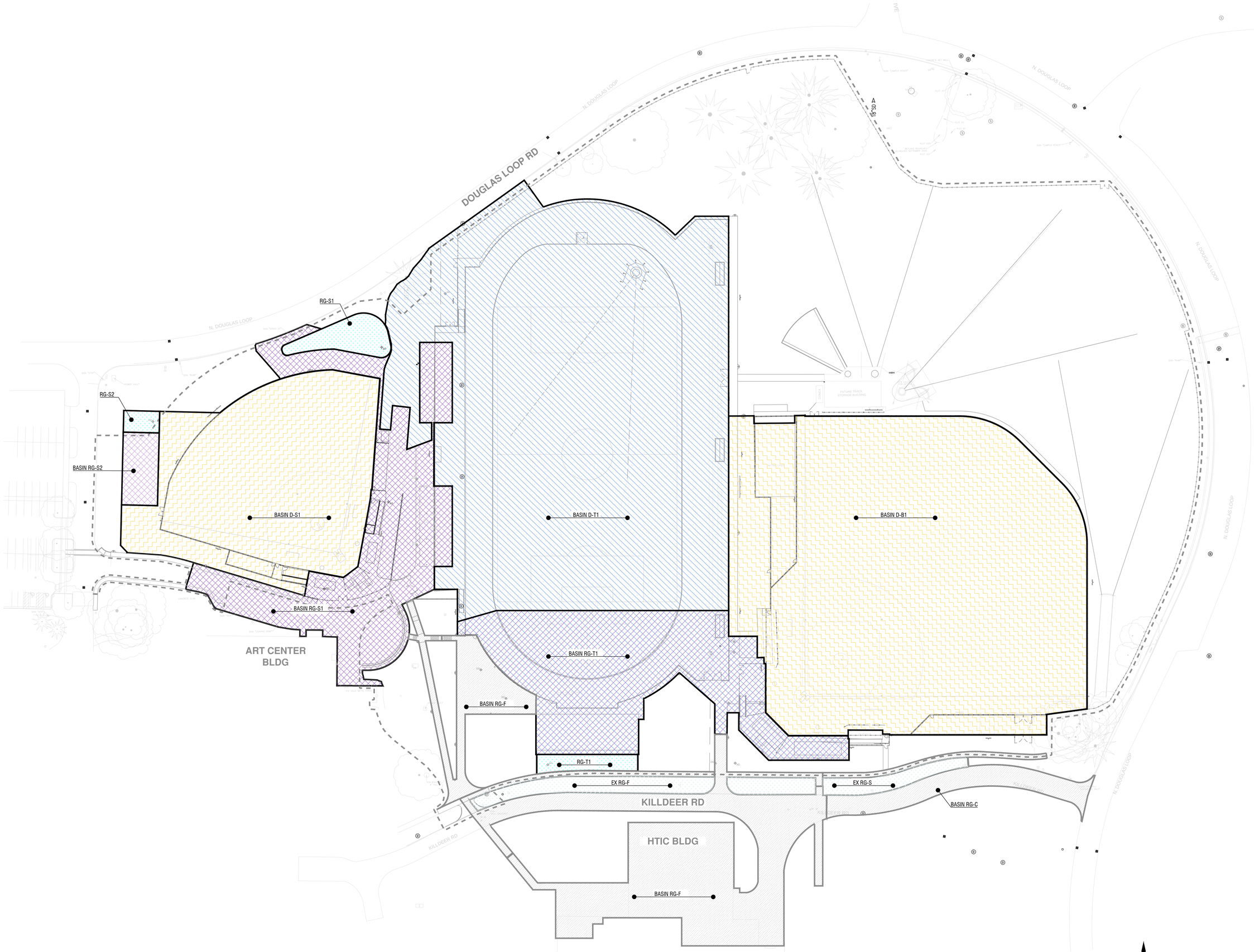
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1 BASIN MAP - CONTRIBUTING AREAS - POST-DEVELOPMENT

PLAN SCALE
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SCALE: 1"= 40'

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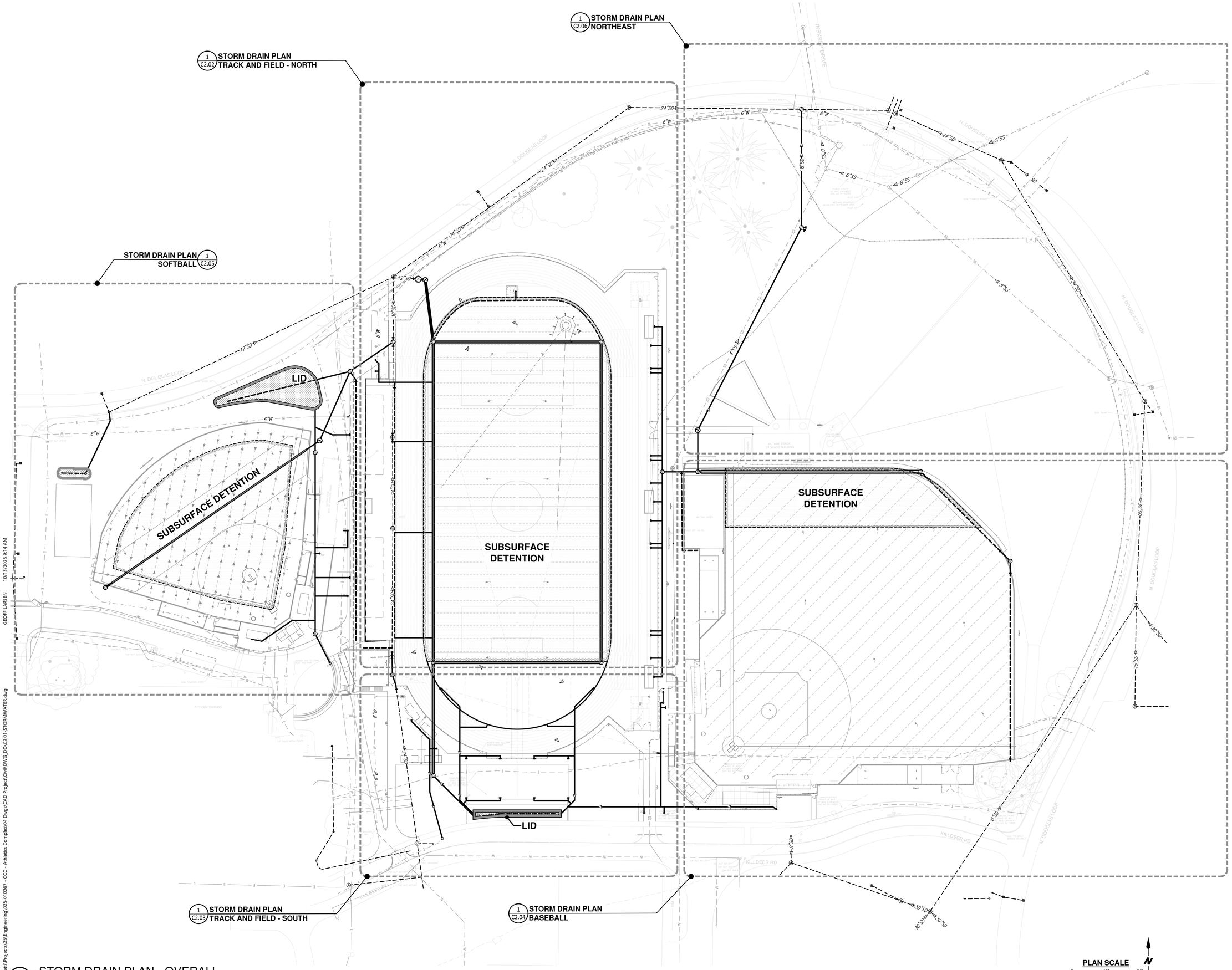
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Appendix B:
Permit Drawings



1 STORM DRAIN PLAN - OVERALL

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

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541-485-7385
www.cameronmccarthy.com

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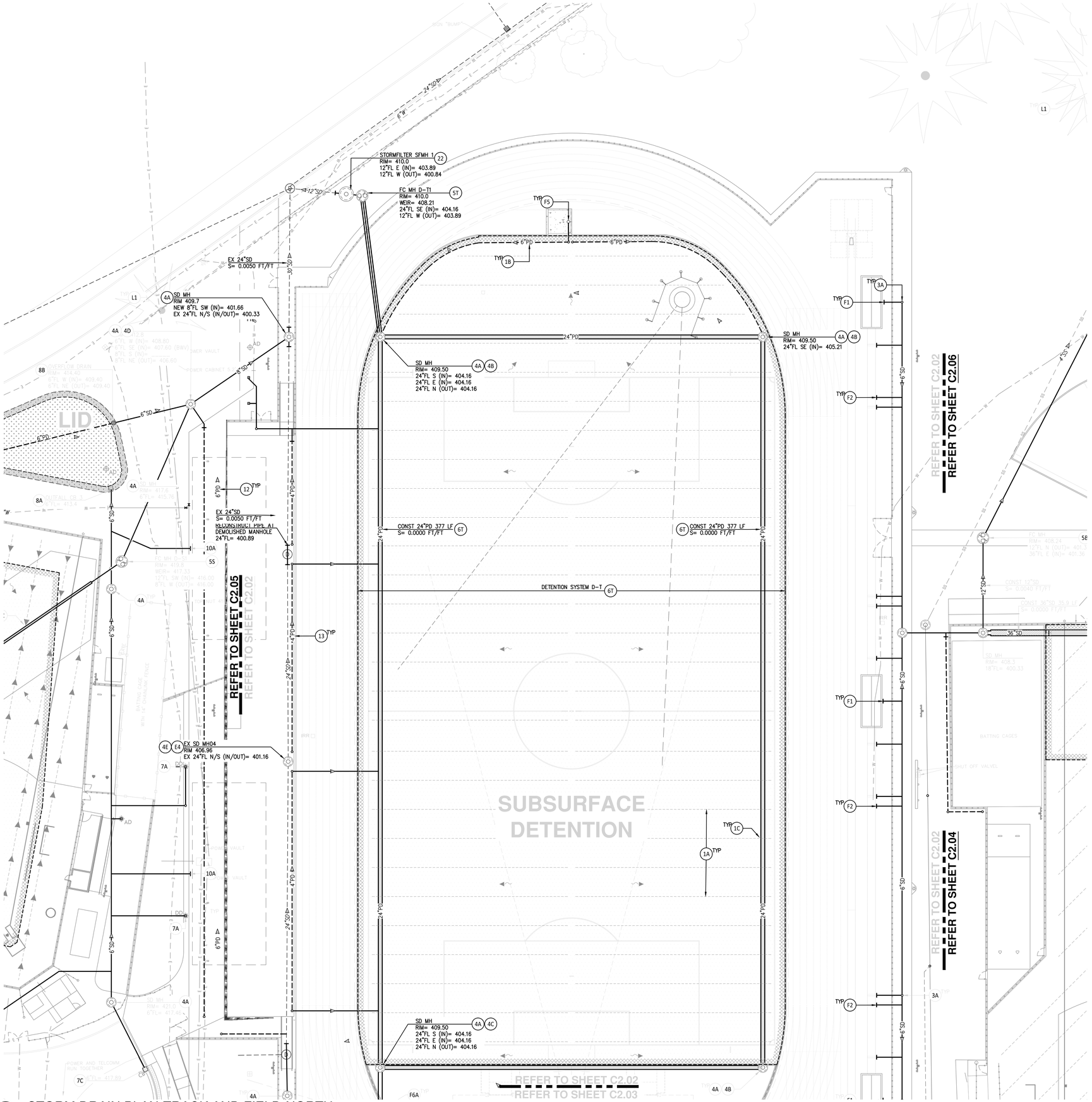
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100% DESIGN DEVELOPMENT

SHEET TITLE
OVERALL STORM DRAIN PLAN

C2.01



1 STORM DRAIN PLAN-TRACK AND FIELD-NORTH

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C104 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C104 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C104 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ____.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.06 AND 4B/C1.06.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025-010267

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

Drawn By:	GTL/MDS
Checked:	GTL
Project #:	025-010267
Date:	Oct. 9, 2025

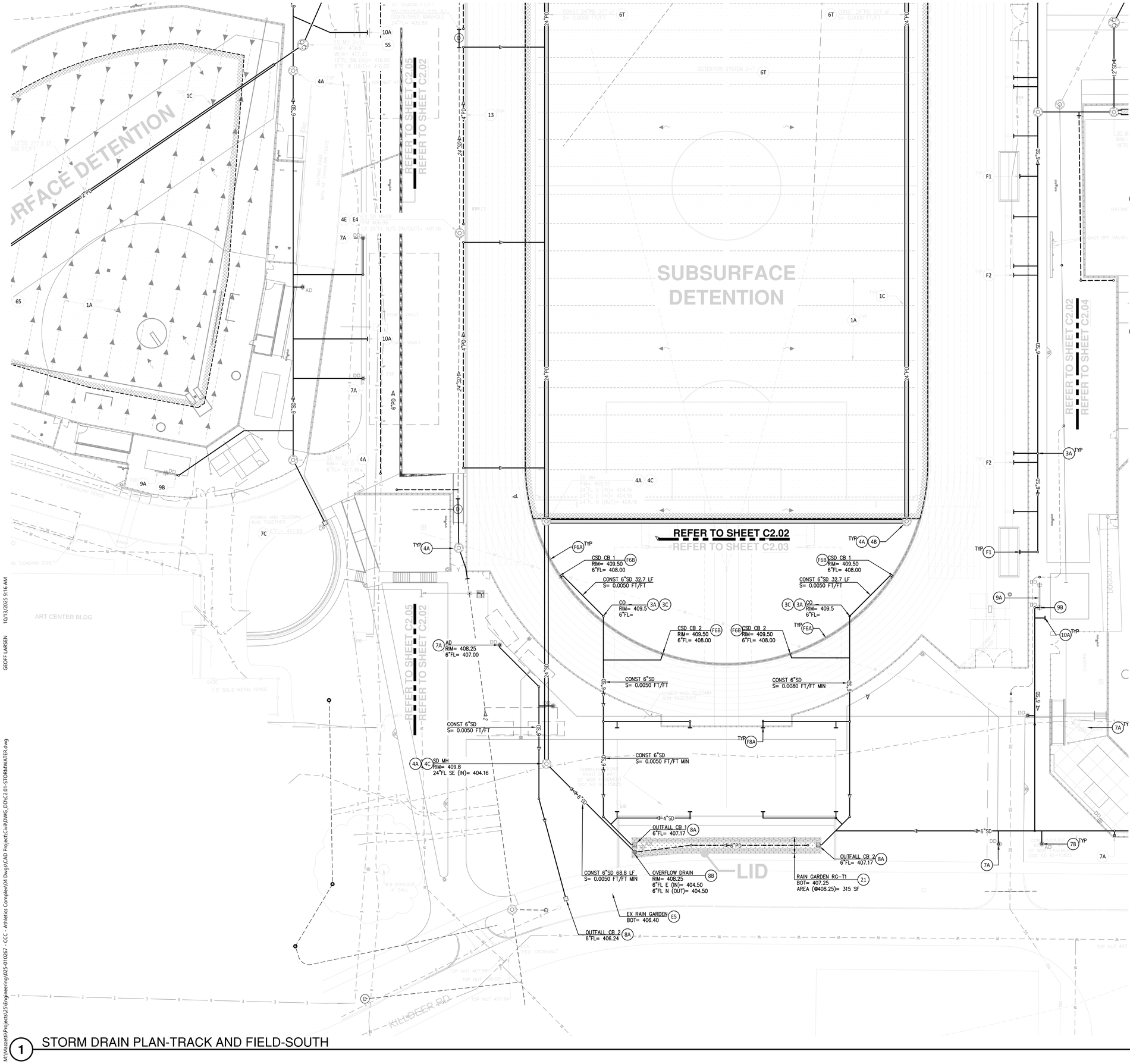
Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
STORM DRAIN PLAN-TRACK AND FIELD-NORTH

C2.02

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1 STORM DRAIN PLAN-TRACK AND FIELD-SOUTH

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C104 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C104 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C104 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____.

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ____.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.08 AND 4B/C1.08.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

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160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
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ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

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Checked:	GTL
Project #:	025-010267
Date:	Oct. 9, 2025

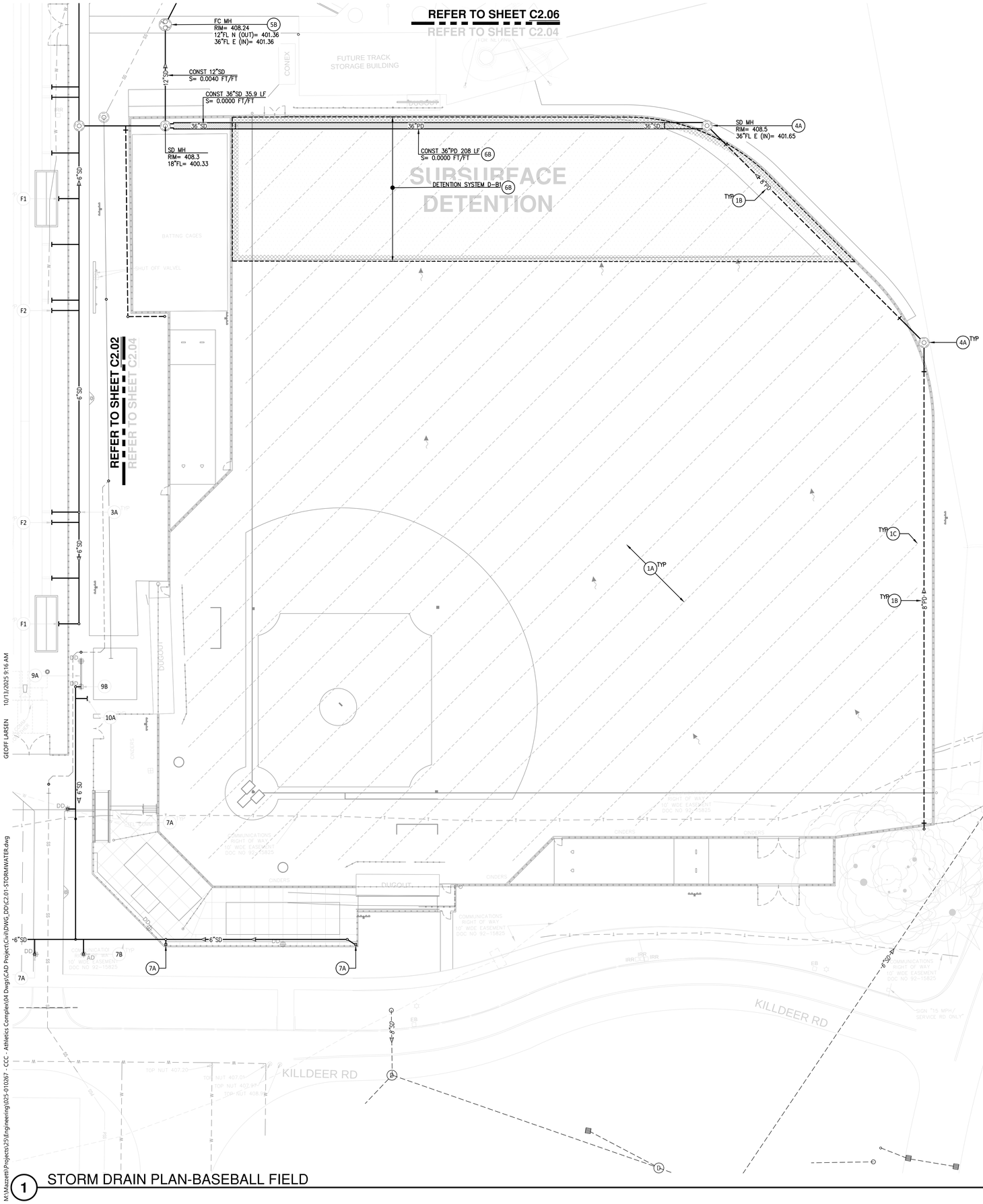
Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
STORMD DRAIN PLAN-TRACK AND FIELD-SOUTH

C2.03

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1 STORM DRAIN PLAN-BASEBALL FIELD

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET C0-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C104 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C104 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C104 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____.

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ___.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.06 AND 4B/1.06.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

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CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

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Checked:	GTL
Project #:	025-010267
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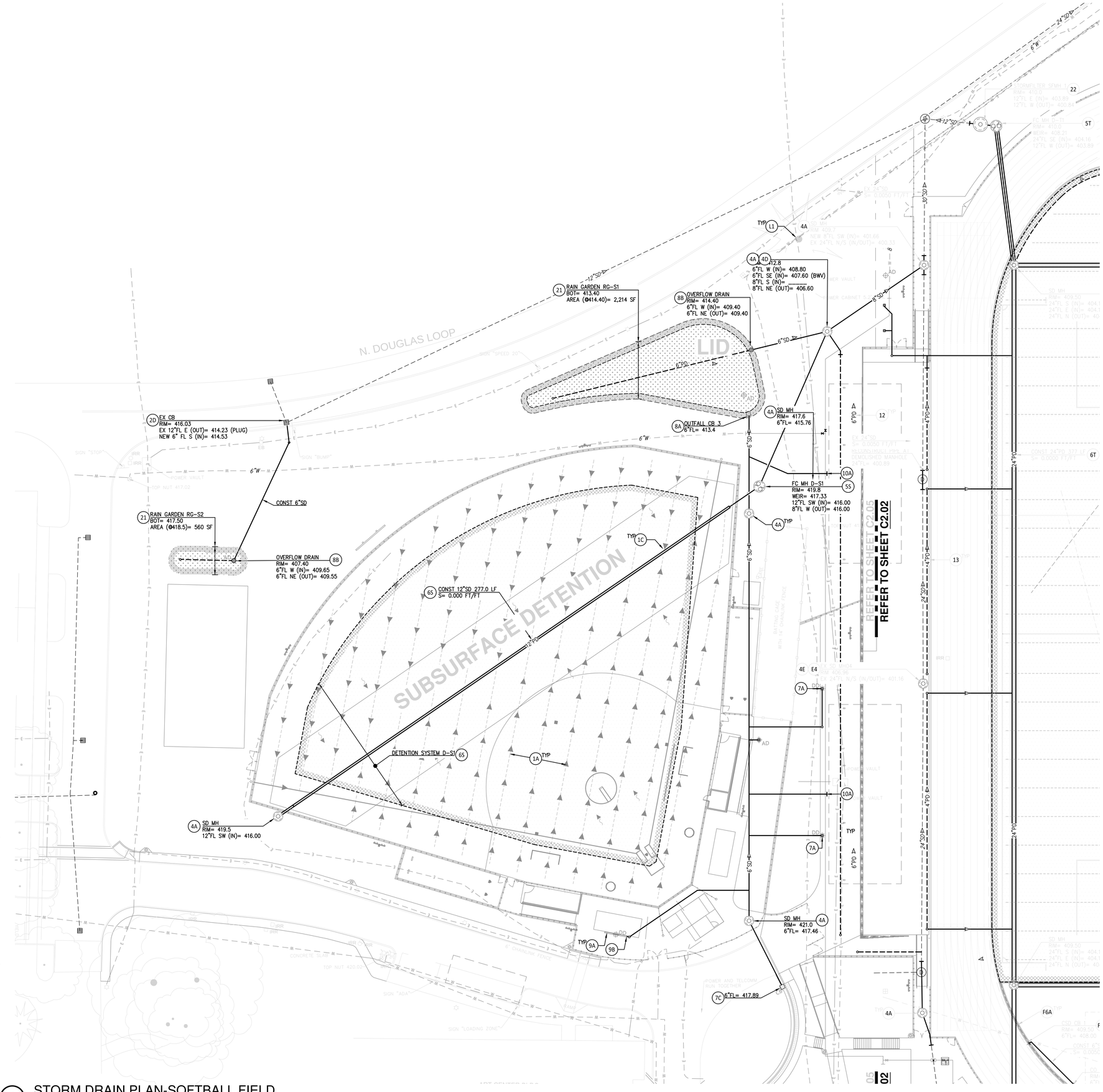
Rev. #:	Date:

100% DESIGN DEVELOPMENT

SHEET TITLE
STORM DRAIN PLAN-BASEBALL FIELD

C2.04

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10/13/2025 9:16 AM
GEOFF LARSEN



1 STORM DRAIN PLAN-SOFTBALL FIELD

PLAN SCALE
0 20' 40'
SCALE: 1"= 20'

SHEET NOTES

1. REFER TO SHEET C____ FOR CIVIL AND SURVEY LEGENDS AND CIVIL GENERAL NOTES & DETAILS.
2. REFER TO ELECTRICAL DWGS FOR SITE LIGHTING, ELECTRICAL, AND LOW VOLTAGE/COMM. COORDINATE WORK BETWEEN TRADES.
3. REFER TO LANDSCAPE DWGS FOR EXISTING TREE PROTECTION REQUIREMENTS.
4. CONST LATERAL CONNECTIONS PER DETAIL 2/____ STORM DRAIN LATERAL CONNECTIONS TO BE CONSTRUCTED USING WYE FITTINGS OR MANHOLES, UNLESS OTHERWISE NOTED ON PLAN. ALL HORIZONTAL BENDS GREATER THAN 45° TO BE CONSTRUCTED USING COMBINATIONS OF 45° FITTINGS OR SMALLER.
5. BACKFILL USING CDF WHERE COMPACTION OF CRUSHED ROCK BACKFILL CANNOT BE ACHIEVED.
6. REFER TO SHEET CD-SERIES DRAWINGS FOR EXISTING UTILITIES DEMOLITION AND TEMPORARY SERVICE, SHUTDOWN AND SEQUENCING NOTES.
7. PROVIDE VIDEO INSPECTION OF NEW AND EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND FOLLOWING CONSTRUCTION. EXTEND VIDEO INSPECTION TO NEXT UPSTREAM OR DOWNSTREAM MANHOLE BEYOND PROJECT LIMITS.

KEYNOTES - EXISTING CONDITIONS

E1A. EXISTING STORM DRAIN TO REMAIN.
E1B. EXISTING SUBDRAINAGE PIPE TO TO REMAIN.
E2 . EXISTING AREA DRAIN TO REMAIN.
E3 . EXISTING CATCH BASIN TO REMAIN
E4 . EXISTING MANHOLE TO REMAIN.
E5 . EXISTING RAIN GARDEN TO REMAIN.

CONSTRUCTION NOTES

1A . FLAT SUBDRAINAGE PIPE PER LANDSCAPE DRAWINGS.
1B . CONSTRUCT FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS AND DETAIL 1/C2.1.
1C . DISCHARGE FLAT FIELD SUBDRAINAGE PIPE TO FIELD DRAINAGE HEADER PIPE PER LANDSCAPE DETAILS.

2A . CONNECT SOLID WALL PIPE TO PERFORATED PIPE
2B . CONNECT TO EXISTING PIPE.
2C . CONNECT TO EXISTING PIPE. POTHOLE PRIOR TO CONSTRUCTION TO DETERMINE ELEVATION.
2D . CONNECT TO EXISTING CONCRETE CATCH BASIN.

3A . CONSTRUCT STANDARD CLEANOUT OUTSIDE OF PER DETAIL 2A/C1.01.
3B . CONSTRUCT CLEANOUT WITHIN SYNTHETIC TURF PER DETAILS 3/C1.01 AND 2A/C1.01.
3C . CONSTRUCT CLEANOUT WITHIN TRACK SURFACING PER DETAILS 4/C1.01 AND 2A/C1.01.

4A . CONSTRUCT MANHOLE PER ODOT STANDARD DRAWINGS RD335, RD336, RD345, & RD356 (C1.04). SELECT MANHOLE SIZE TO SATISFY MINIMUM CLEARANCE REQUIREMENTS.
4B . CONSTRUCT MANHOLE FRAME AND COVER IN SYNTHETIC TURF PER DETAIL 3/C1.01.
4C . CONSTRUCT MANHOLE FRAME AND COVER WITH TRACK SURFACING PER DETAIL 4/C1.01
4D . INSTALL TERMINAL BACKWATER VALVE IN MANHOLE FOR PIPE INDICATED WITH (BWV).
4E . ADJUST MANHOLE TO FINISHED GRADE. REPLACE FRAME AND COVER WITH ALUMINUM LID.

5B . CONSTRUCT FLOW CONTROL MANHOLE (BASEBALL) PER DETAILS 1/C1.04 AND 3/C2.11.
5S . CONSTRUCT FLOW CONTROL MANHOLE (SOFTBALL) PER DETAIL 1/C1.04 AND 3/C2.12.
5T . CONSTRUCT FLOW CONTROL MANHOLE (TRACK/SOCCER) PER DETAIL 1/C1.04 AND 3/C2.13.

6B. CONSTRUCT DETENTION SYSTEM (BASEBALL) PER DETAILS 1/C2.11, 2A/C2.11, AND 2B/C2.11, (CEMENT-AMENDED SUBGRADE)
6S. CONSTRUCT DETENTION SYSTEM (SOFTBALL) PER DETAILS 1/C2.12, 2A/C2.12, AND 2B/C2.12, (CEMENT-AMENDED SUBGRADE)
6T. CONSTRUCT DETENTION SYSTEM (TRACK/SOCCER) PER DETAILS 1/C2.13, 2A/C2.13, AND 2B/C2.13, (NATIVE SUBGRADE).

7A . INSTALL AREA DRAIN DRAIN IN HARDSCAPE PER DETAIL 4/C1.02.
7B. INSTALL AREA DRAIN IN LANDSCAPE PER DETAIL 4/C1.02.
7C . INSTALL CATCH BASIN PER DETAIL 3/C1.02.

8A. INSTALL OUTFALL BASIN PER DETAIL 5/C1.02.
8B. INSTALL OVERFLOW DRAIN PER DETAILS 2A/C1.03 AND 2B/C1.03.

9A . INSTALL TRENCH DRAIN WITH PRE-SLOPED CHANNEL SECTION. CONSTRUCT CONCRETE ENCASEMENT PER DETAIL 2/C2.02. USE MINIMUM 10" DEPTH CHANNEL SECTION AT UPSTREAM END AND SLOPE TO OUTLET. TRENCH DRAIN LENGTH, LOCATION, ALIGNMENT, AND JOINTING PER LANDSCAPE DRAWINGS. COORDINATE INSTALLATION WITH CONCRETE WORK.
9B . INSTALL IN-LINE SEDIMENT TRAP AT OUTLET END OF TRENCH DRAIN PER DETAIL 2/C2.02. SLOPE OUTLET PIPE AT 0.0200 FT/FT MIN.

10A . CONSTRUCT DOWNSPOUT CONNECTION PER DETAIL 2/____.

12 . CONSTRUCT BEHIND WALL SUBDRAINAGE PER DETAIL 1A/C1.05 & 1B/C1.05.

13 . CONSTRUCT SUBDRAINAGE AT GRANDSTANDS PER DETAIL ___.

14 . INSTALL BEND FITTINGS (11.25° MAX) AND DEFLECT PIPE PER MANUFACTURER RECOMMENDATIONS TO FOLLOW CURVED ALIGNMENT SHOWN.

21 . CONSTRUCT FILTRATION RAIN GARDEN PER DETAILS 1A/C1.03 AND 1B/C1.03. INCLUDE 6" PERFORATED SUBDRAINAGE PIPE AS SHOWN IN PLAN (ZERO SLOPE).
22 . CONSTRUCT STORMFILTER MANHOLE PER DETAIL 2/C1.04.

L1 . REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION.

CONSTRUCTION NOTES - COMPETITION FIELDS

F1. SAND PIT/TRAP DRAIN ASSEMBLY PER DETAIL DETAIL 4A/C1.06 AND 4B/C1.06.

F2. TAKE-OFF BOARD DRAIN PER DETAIL 3/1.06.

F3. HAMMER THROW / SHOT PUT / DISCUS PAD DRAIN PER DETAIL 3/1.06.

F4. FUTURE SHOT PUT DRAIN STUB.

F5. STEEPLECHASE DRAIN PER DETAIL 2/1.06.

F6A. INSTALL CONTINUOUS CURVED COMPETITION SLOT DRAIN (CSLD) AT INSIDE EDGE OF CURVED TRACK SECTIONS WITH IN-LINE CATCH BASIN AT OUTLET LOCATIONS. REFER TO DETAIL 1/1.06. REFER TO LANDSCAPE DRAWINGS FOR LAYOUT.

F6B. INSTALL IN-LINE CATCH BASIN WITH 6" OUTLET PIPE PER DETAIL 1/1.06.

F7. ELECTRICAL / TECHNOLOGY BOX DRAINAGE AT INFIELD: PROVIDE 3" DRAIN AND DRAIN ROCK BASE FOR NEW BOX PER DETAIL _/____.

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160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
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541-485-7385
www.cameronmccarthy.com

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940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025-010267

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

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19600 Molalla Ave, Oregon City, OR 97045

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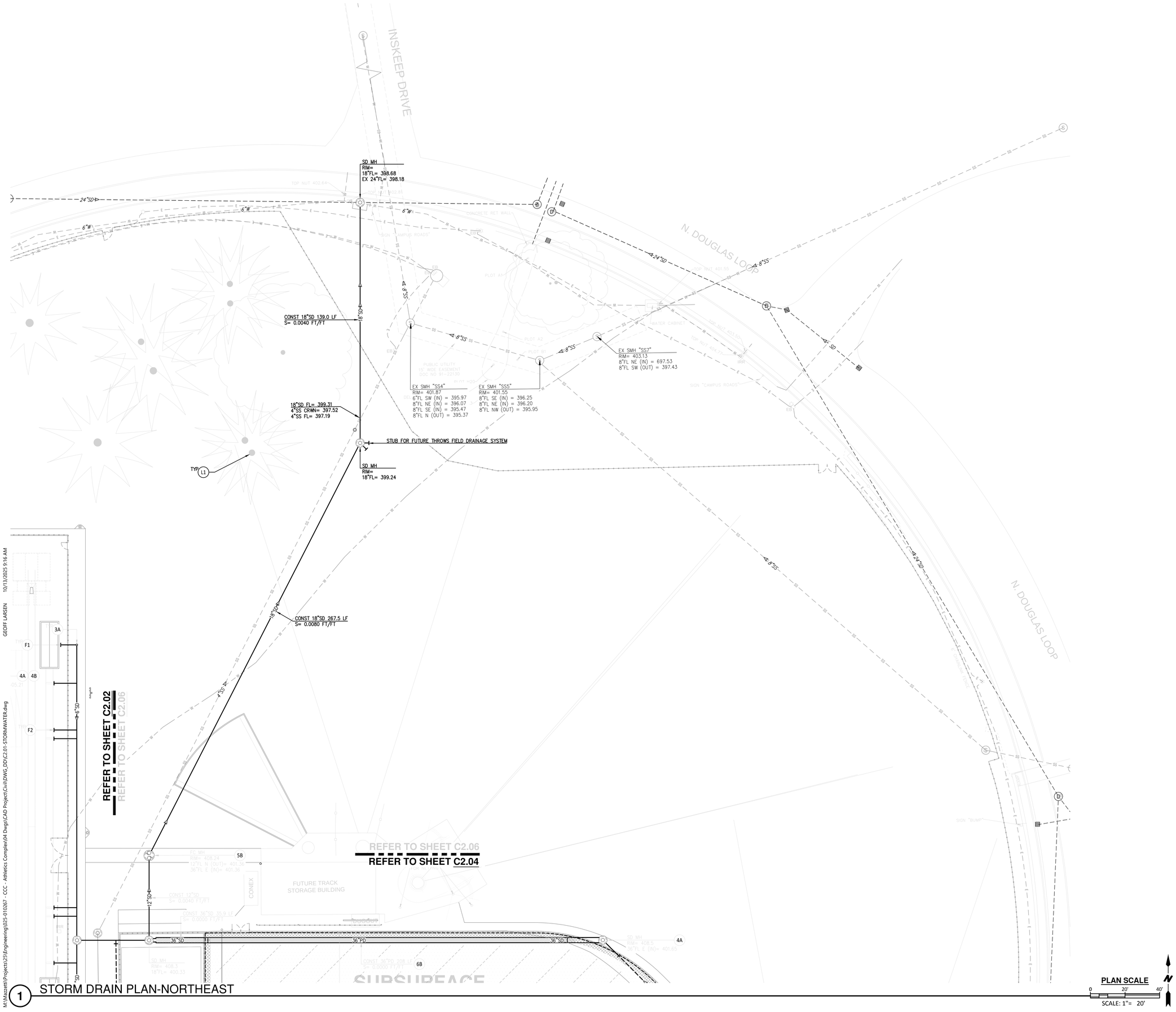
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SHEET TITLE
STORM DRAIN PLAN-SOFTBALL FIELD

C2.05

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1 STORM DRAIN PLAN-NORTHEAST

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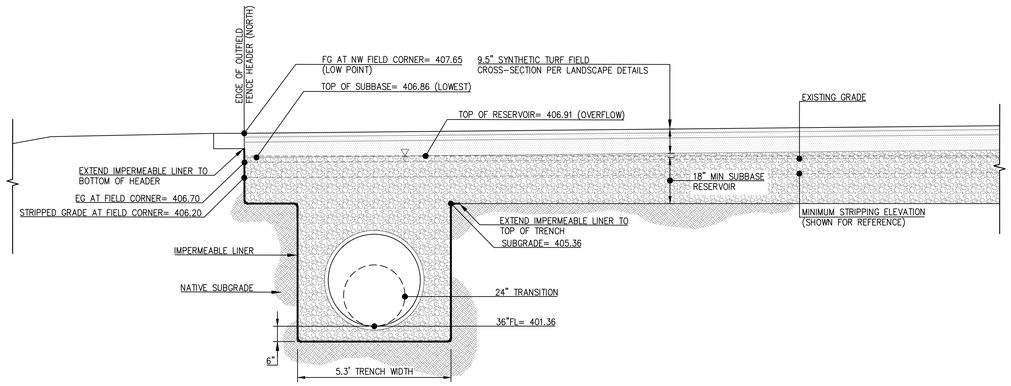
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STORM DRAIN PLAN-NORTHEAST

C2.06



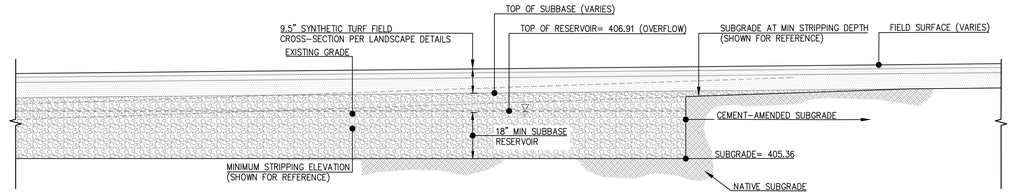
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PLAN SCALE
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SCALE: 1"= 10'



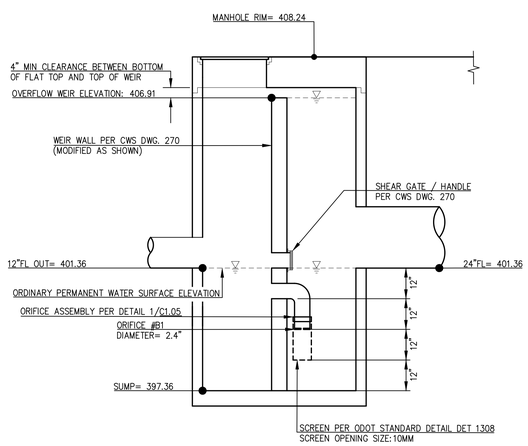
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PLAN SCALE
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SCALE: 1"= 2'

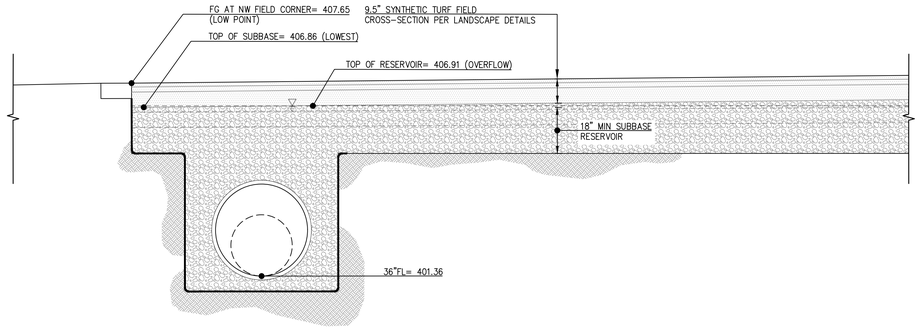


2B DETENTION SYSTEM CROSS-SECTION BASEBALL - LOOKING EAST / SOUTH SIDE

PLAN SCALE
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SCALE: 1"= 2'



FLOW CONTROL MANHOLE



3 DETENTION SYSTEM CROSS-SECTION BASEBALL - FLOW CONTROL

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

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120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

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940 Willamette Street, Suite 310
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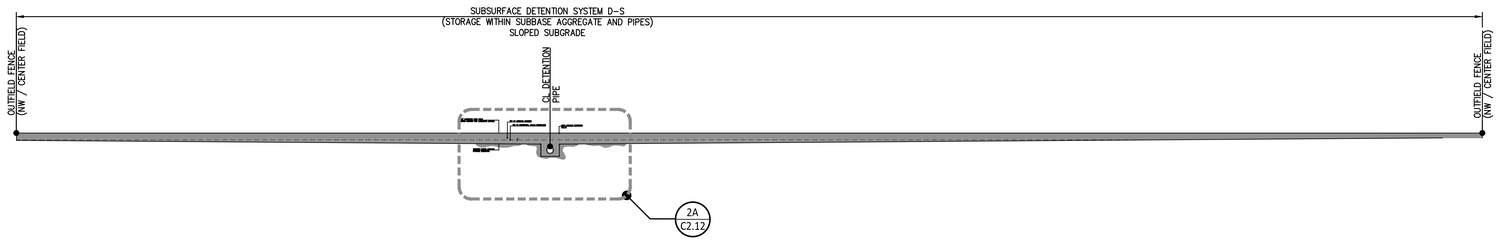
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STORM DRAIN CROSS-SECTIONS

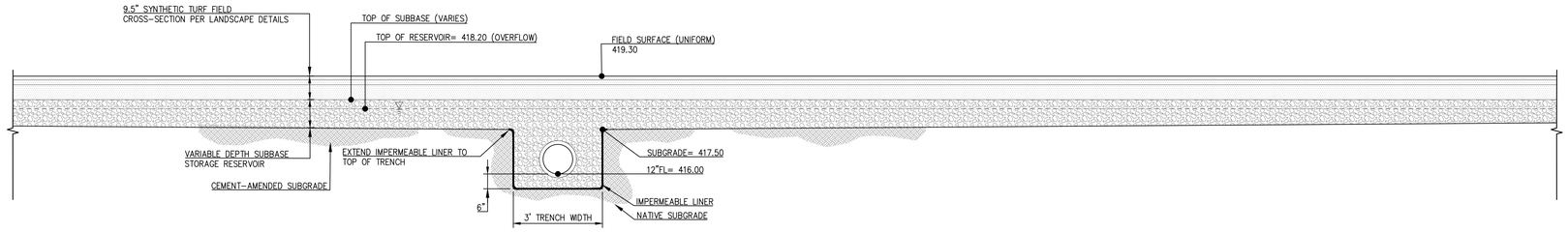
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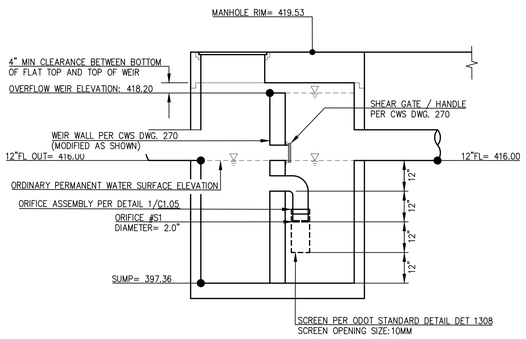
1 DETENTION SYSTEM CROSS-SECTION SOFTBALL - LOOKING NORTH

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SCALE: 1"= 10'

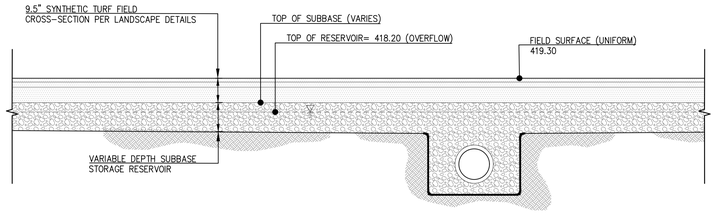


2A DETENTION SYSTEM CROSS-SECTION SOFTBALL - LOOKING NORTHEAST

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'



FLOW CONTROL MANHOLE



3 DETENTION SYSTEM CROSS-SECTION BASEBALL - FLOW CONTROL

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

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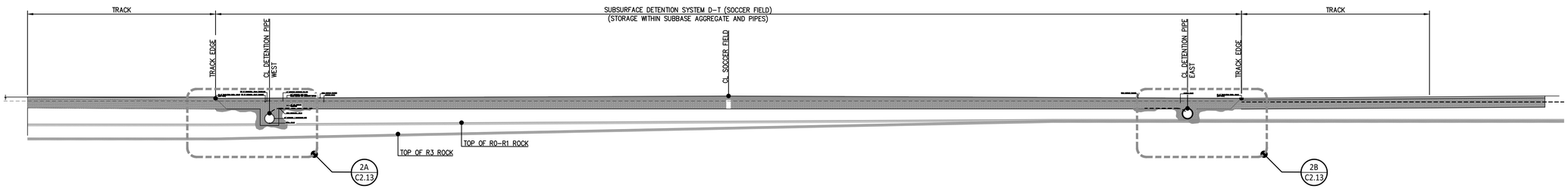
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SHEET TITLE
STORM DRAIN CROSS-SECTIONS

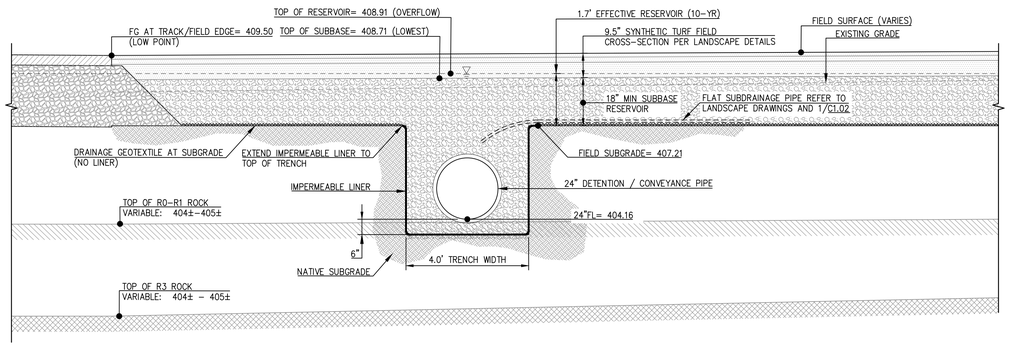
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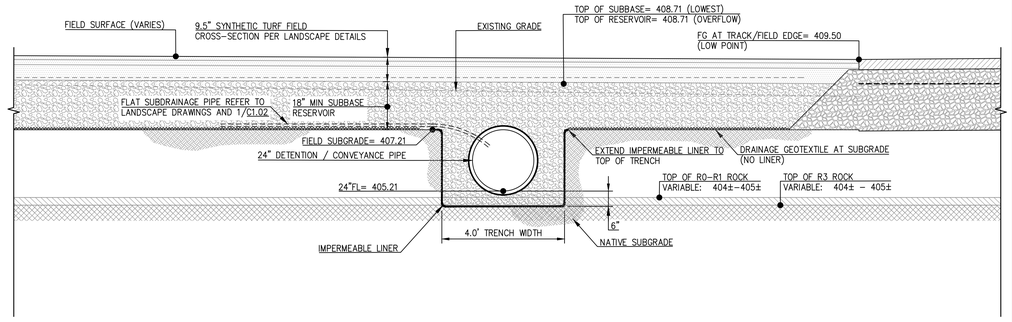
1 DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH

PLAN SCALE
0 10' 20'
SCALE: 1"= 10'



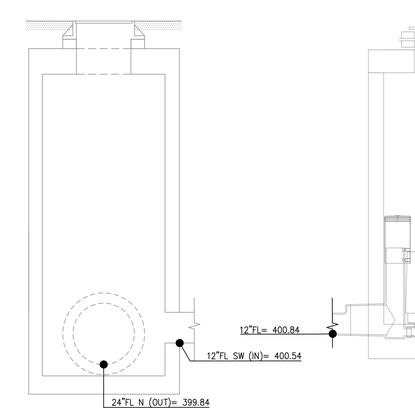
2A DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH / WEST SIDE

PLAN SCALE
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SCALE: 1"= 2'

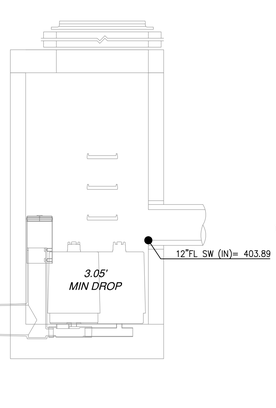


2B DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - LOOKING NORTH / EAST SIDE

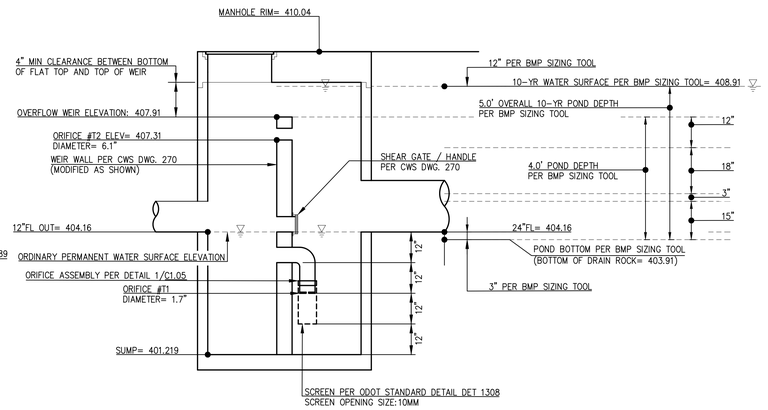
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SCALE: 1"= 2'



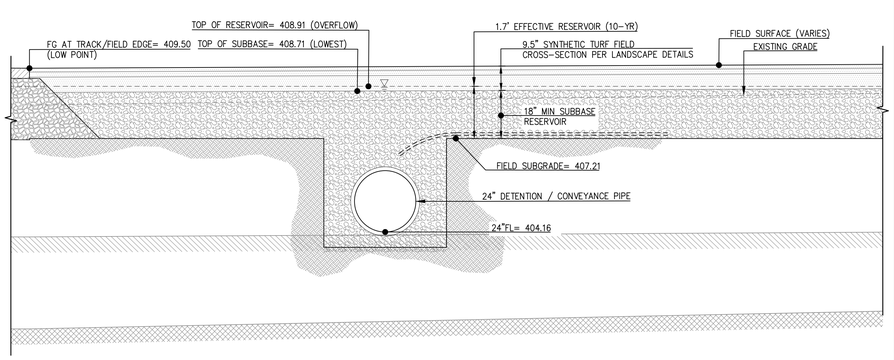
CONNECTION TO EXISTING MAIN



STORMFILTER MANHOLE



FLOW CONTROL MANHOLE



3 DETENTION SYSTEM CROSS-SECTION TRACK AND SOCCER FIELD - FLOW CONTROL

PLAN SCALE
0 2' 4'
SCALE: 1"= 2'

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LANDSCAPE ARCHITECTURE & PLANNING
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SHEET TITLE
STORM DRAIN CROSS-SECTIONS

C2.13

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Appendix C1: Calculations

BMP Sizing Tool Reports

MAZZETTI
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121 SW Salmon Street, Suite 1000
Portland, OR 97204
T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	CCC Athletics: RG-S1
Project Type	Commercial
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
S21	20,593	Forested	ConventionalConcrete	C	RG-S1
S22	9,753	Forested	ConventionalConcrete	C	RG-S1
S23	2,103	Forested	ConventionalConcrete	C	RG-S1
S31	4,650	Forested	Grass	C	RG-S1
S32	4,358	Forested	Grass	C	RG-S1

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
RG-S1	FlowControlAndTreatment	Rain Garden - Filtration	Lined	5,259.2	5,259.0	1.2

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	CCC Athletics: RG-S2
Project Type	Commercial
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
S24	3,570	Forested	ConventionalConcrete	C	RG-S2

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
RG-S2	FlowControlAndTreatment	Rain Garden - Filtration	Lined	535.5	5,259.0	0.4

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	CCC Athletics: RG-T1
Project Type	Commercial
Location	
Stormwater Management Area	956
Project Applicant	
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
T21	43,930	Forested	ConventionalConcrete	C	RG-T21

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
RG-T21	WaterQuality	Rain Garden - Filtration	Lined	659.0	956.0	1.1

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

D-T1
UNDERGROUND DETENTION
FLOW CONTROL

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	CCC Athletics: D-T1
Project Type	Commercial
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	OutofDistrict

VOLUME CHECK:
DRAIN ROCK AND SOIL:
V= 9,700 SF x 3.0 FT x 0.40 = 11,640 CF

OPEN POND STORAGE
V= 9,750 SF x 2.0 FT = 19500 CF

TOTAL VOLUME
V= 31,140

TRANSLATION OF STORAGE VOLUME TO UNDERGROUND STORAGE VOLUME

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
T11	91,356	Forested	PorousAsphalt	C	D-T1
T21	43,930	Forested	ConventionalConcrete	C	D-T1
T22	58,508	Forested	ConventionalConcrete	C	D-T1
T31	16,046	Forested	Grass	C	D-T1

LID Facility Sizing Details

Pond Sizing Details

Pond ID	Design Criteria(1)	Facility Soil Type	Max Depth (ft)(2)	Top Area (sq-ft)	Side Slope (1:H)	Facility Vol. (cu-ft)(3)	Water Storage Vol. (cu-ft)(4)	Adequate Size?
D-T1	FCWQT	Lined	5.00	9,800.0	0.1	48,506.7	31,115.2	Yes

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Simple Pond Geometry Configuration

Pond ID: D-T1
Design: FlowControlAndTreatment

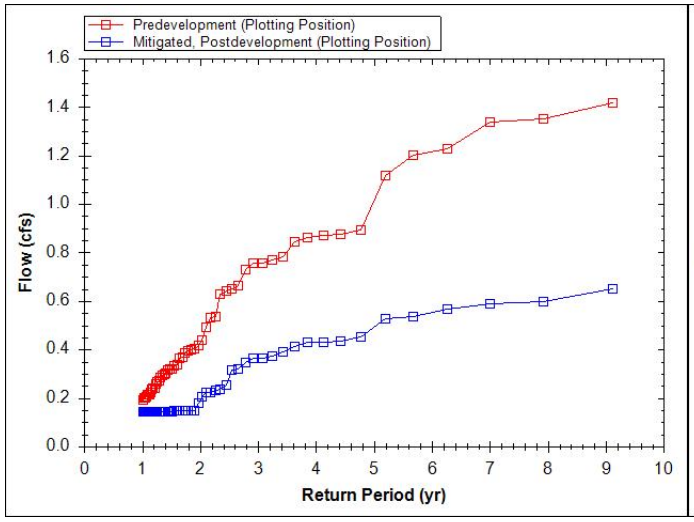
Shape Curve

Depth (ft)	Area (sq ft)
5.0	9,800.0

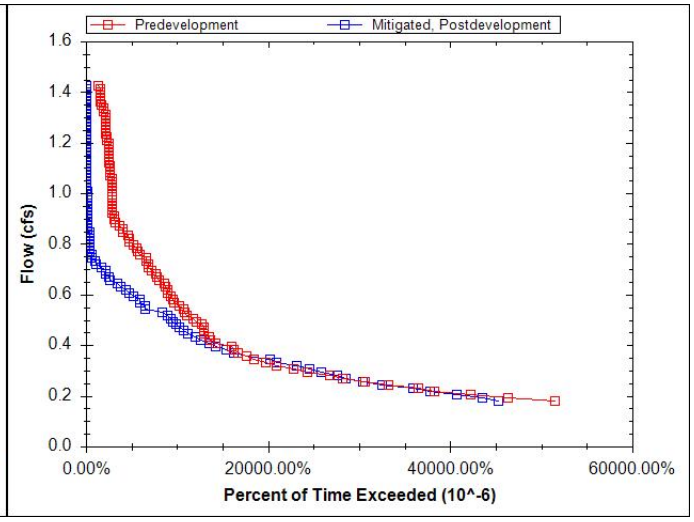
Outlet Structure Details

Lower Orifice Invert (ft)	0.0
Lower Orifice Dia (in)	1.7
Upper Orifice Invert(ft)	3.4
Upper Orifice Dia (in)	6.1
Overflow Weir Invert(ft)	4.0
Overflow Weir Length (ft)	6.3

Flow Frequency Chart



Flow Duration Chart



10-YR WATER SURFACE AT 5.0'

WEIR ELEVATION SET AT 1.0' BELOW THE 10-YEAR WATER SURFACE

Facility Schematic: For ponds sized using **Simple Geometry,** the schematic is a generic representation of the detention pond facility sized by the tool. The figure depicts the main features of the outlet structure with the locations of their inverts. The overflow weir is at 1 foot below the 10-year pond water surface elevation. It is assumed that the pond will need to include additional freeboard (typically 1 foot) above the 10-year water surface elevation.

Appendix C2: Calculations

Hydrograph Calculations:

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Portland, OR 97204
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Eugene, OR 97401

Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SBUH Runoff	------	-------	-------	-------	-------	0.352	-------	-------	-------	D-B1
2	SBUH Runoff	------	-------	-------	-------	-------	0.156	-------	-------	-------	D-S1
5	SBUH Runoff	------	-------	-------	-------	-------	2.405	-------	-------	-------	B11-Post
6	SBUH Runoff	------	-------	-------	-------	-------	0.057	-------	-------	-------	B21-Post
7	SBUH Runoff	------	-------	-------	-------	-------	0.074	-------	-------	-------	B22-Post
8	SBUH Runoff	------	-------	-------	-------	-------	0.041	-------	-------	-------	B31-Post
9	Combine	5, 6, 7, 8	-------	-------	-------	-------	2.574	-------	-------	-------	Basin D-B1 (B11, B21, B22, B31)
10	Reservoir	9	-------	-------	-------	-------	0.351	-------	-------	-------	D-B1 Detention
12	SBUH Runoff	------	-------	-------	-------	-------	0.884	-------	-------	-------	S11
13	SBUH Runoff	------	-------	-------	-------	-------	0.051	-------	-------	-------	S11
14	Combine	12, 13	-------	-------	-------	-------	0.931	-------	-------	-------	Basin D-S1 (S11, S33)
15	Reservoir	14	-------	-------	-------	-------	0.149	-------	-------	-------	D-S1 Detention

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

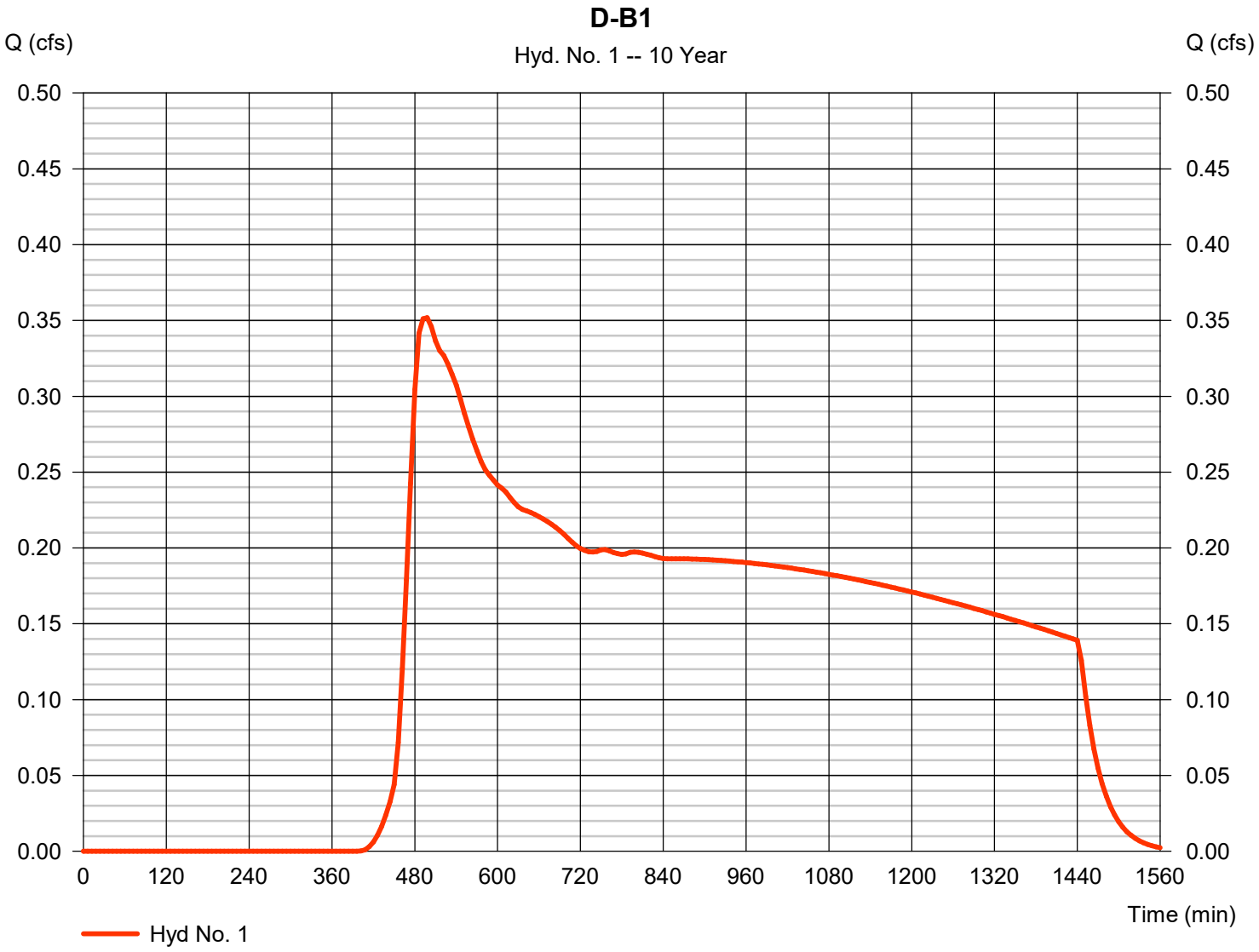
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SBUH Runoff	0.352	6	498	12,003	------	------	------	D-B1
2	SBUH Runoff	0.156	6	486	4,684	------	------	------	D-S1
5	SBUH Runoff	2.405	6	474	34,860	------	------	------	B11-Post
6	SBUH Runoff	0.057	6	474	830	------	------	------	B21-Post
7	SBUH Runoff	0.074	6	474	1,067	------	------	------	B22-Post
8	SBUH Runoff	0.041	6	480	765	------	------	------	B31-Post
9	Combine	2.574	6	474	37,523	5, 6, 7, 8	------	------	Basin D-B1 (B11, B21, B22, B31)
10	Reservoir	0.351	6	960	37,512	9	406.90	14,632	D-B1 Detention
12	SBUH Runoff	0.884	6	474	12,806	------	------	------	S11
13	SBUH Runoff	0.051	6	480	945	------	------	------	S11
14	Combine	0.931	6	474	13,751	12, 13	------	------	Basin D-S1 (S11, S33)
15	Reservoir	0.149	6	810	13,751	14	418.01	4,153	D-S1 Detention

Hydrograph Report

Hyd. No. 1

D-B1

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.352 cfs
Storm frequency	= 10 yrs	Time to peak	= 498 min
Time interval	= 6 min	Hyd. volume	= 12,003 cuft
Drainage area	= 3.280 ac	Curve number	= 70
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 29.00 min
Total precip.	= 3.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

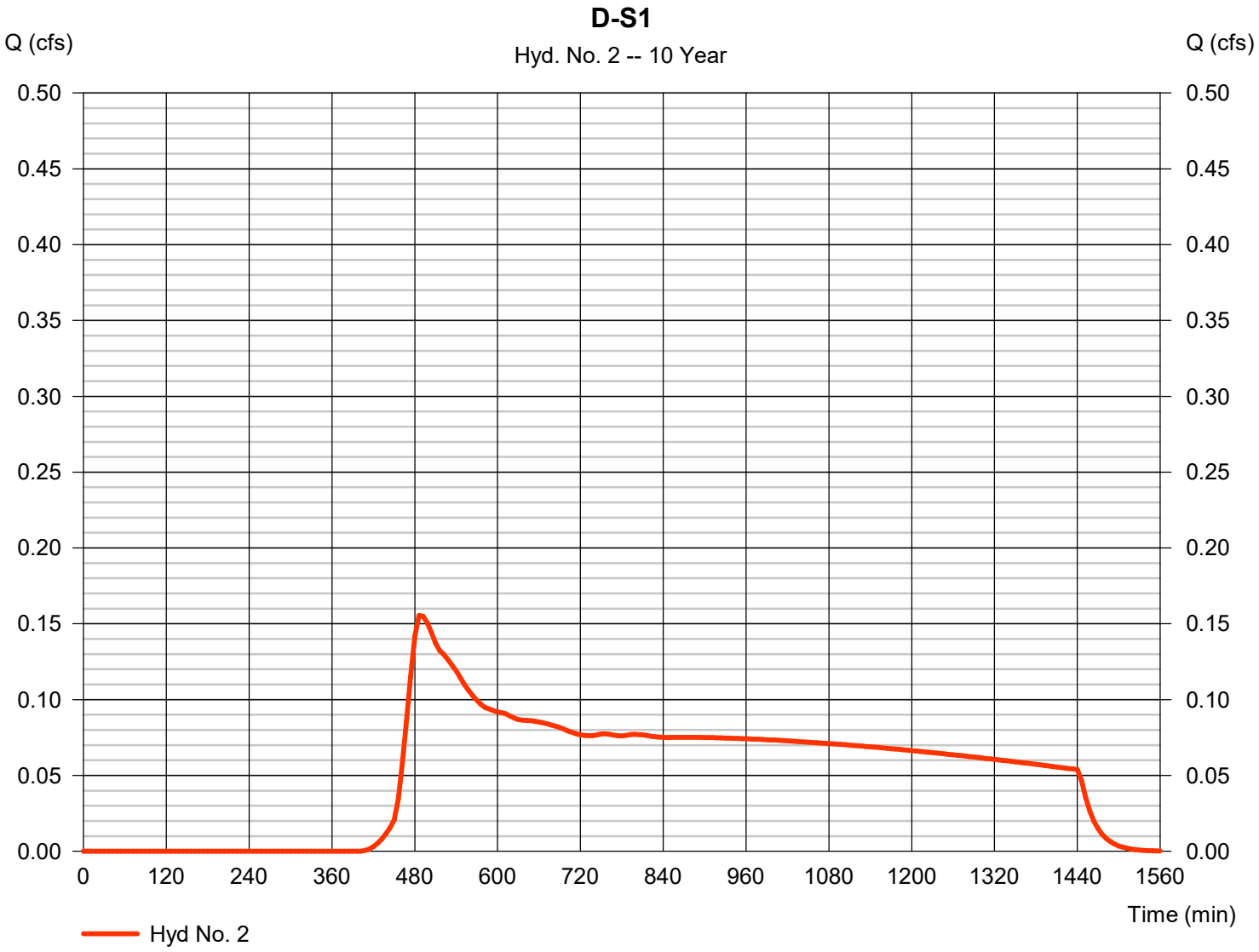


Hydrograph Report

Hyd. No. 2

D-S1

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.156 cfs
Storm frequency	= 10 yrs	Time to peak	= 486 min
Time interval	= 6 min	Hyd. volume	= 4,684 cuft
Drainage area	= 1.280 ac	Curve number	= 70
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 21.00 min
Total precip.	= 3.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

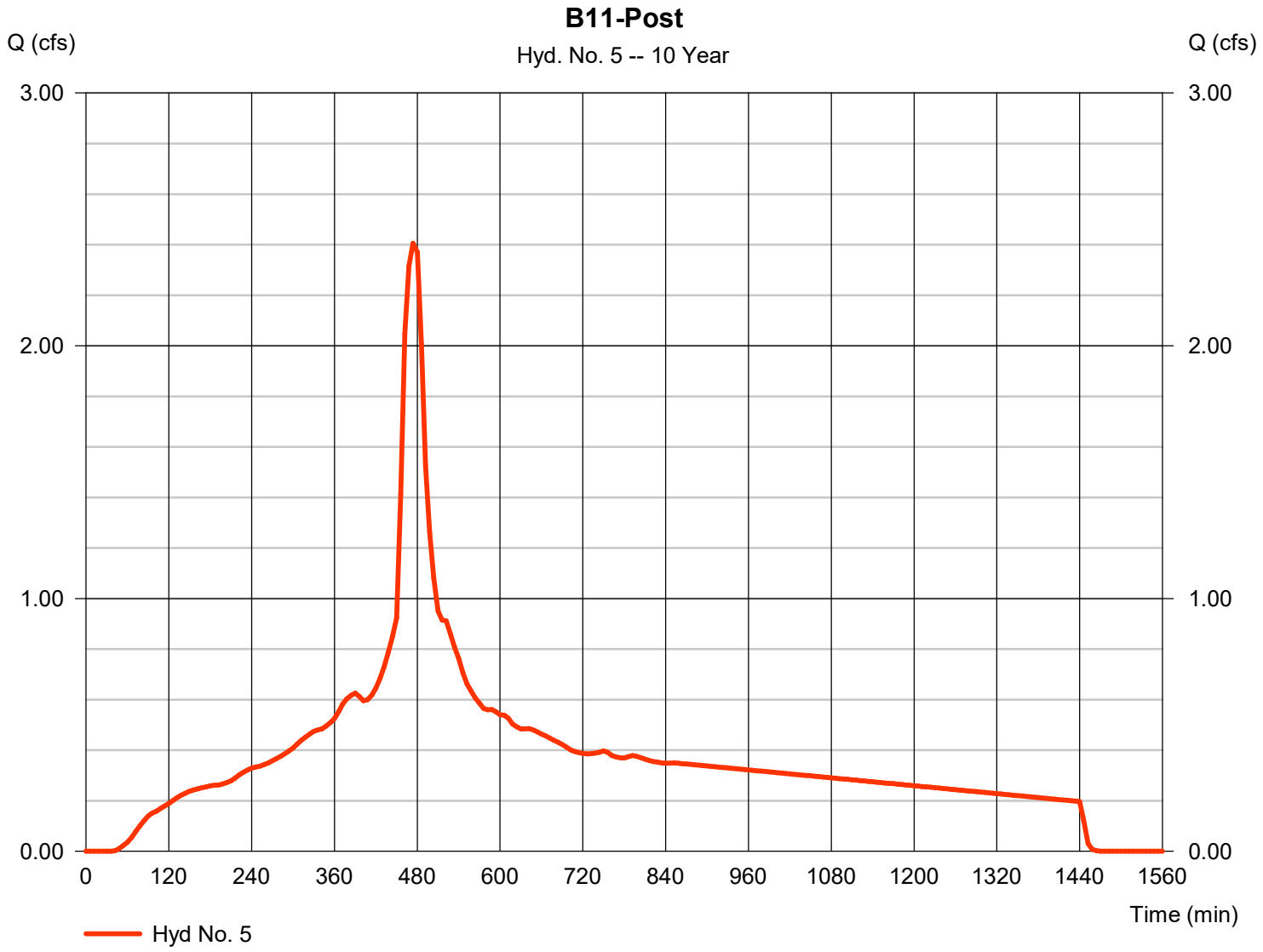


Hydrograph Report

Hyd. No. 5

B11-Post

Hydrograph type	= SBUH Runoff	Peak discharge	= 2.405 cfs
Storm frequency	= 10 yrs	Time to peak	= 474 min
Time interval	= 6 min	Hyd. volume	= 34,860 cuft
Drainage area	= 2.940 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

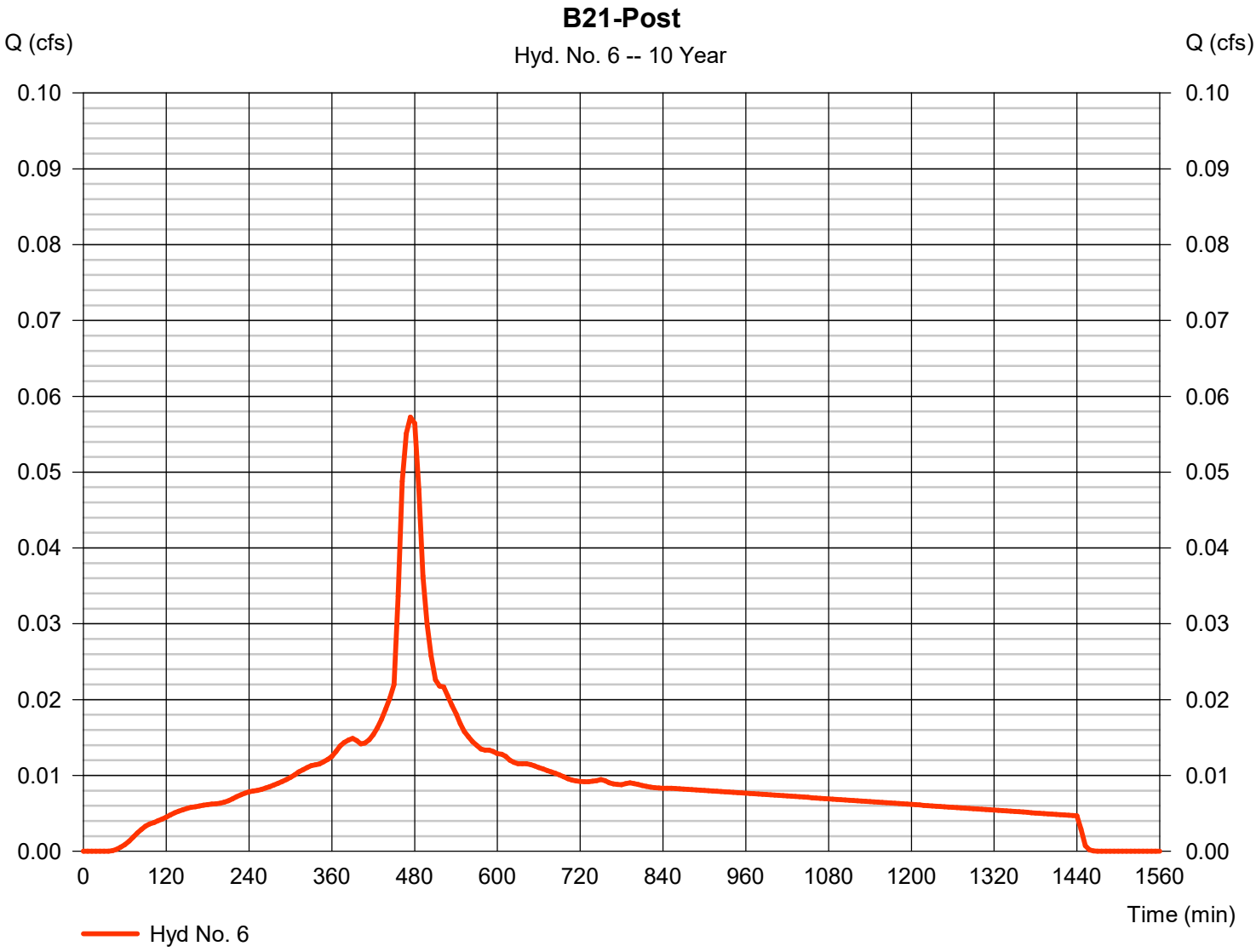


Hydrograph Report

Hyd. No. 6

B21-Post

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.057 cfs
Storm frequency	= 10 yrs	Time to peak	= 474 min
Time interval	= 6 min	Hyd. volume	= 830 cuft
Drainage area	= 0.070 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

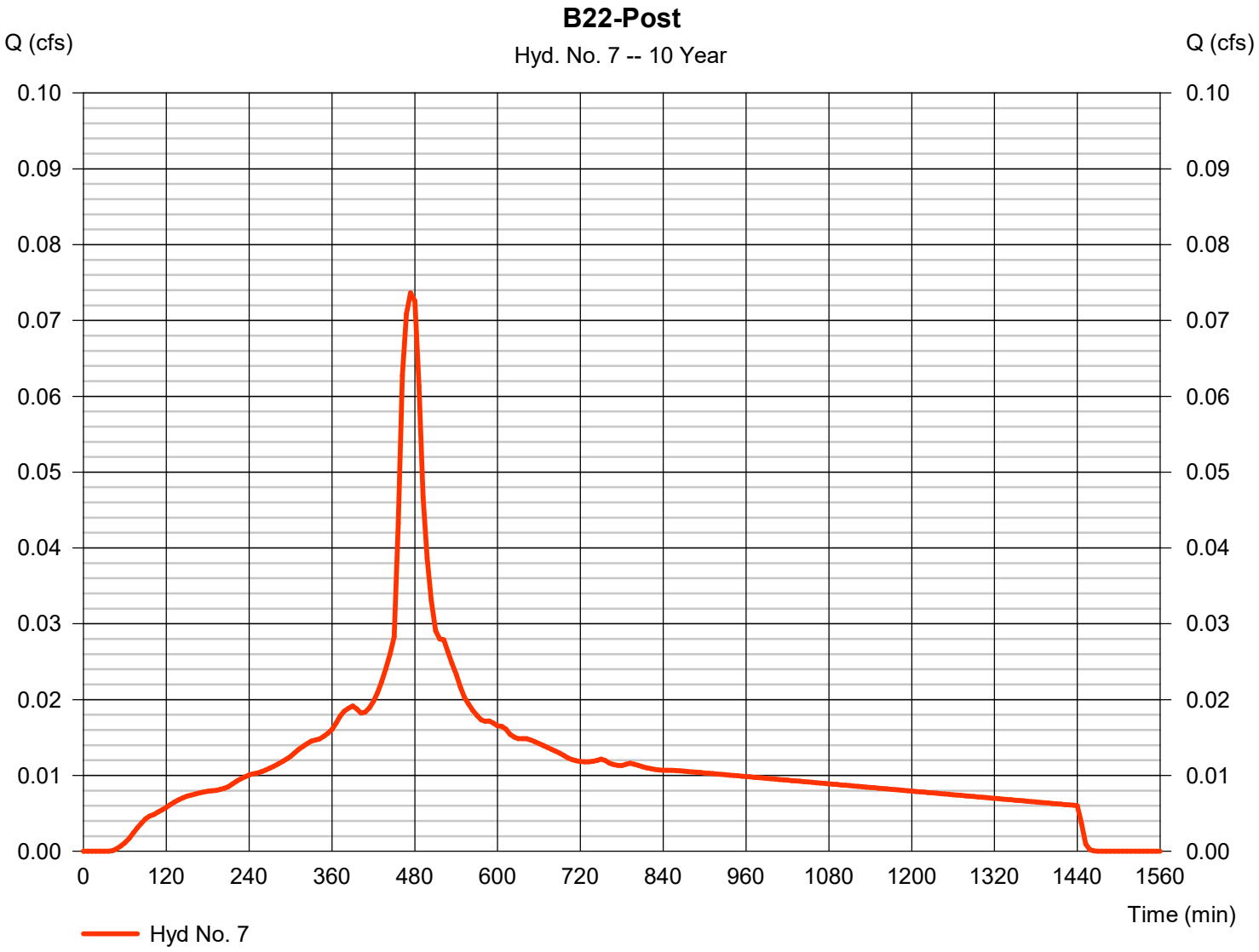


Hydrograph Report

Hyd. No. 7

B22-Post

Hydrograph type	=	SBUH Runoff	Peak discharge	=	0.074 cfs
Storm frequency	=	10 yrs	Time to peak	=	474 min
Time interval	=	6 min	Hyd. volume	=	1,067 cuft
Drainage area	=	0.090 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.50 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	n/a

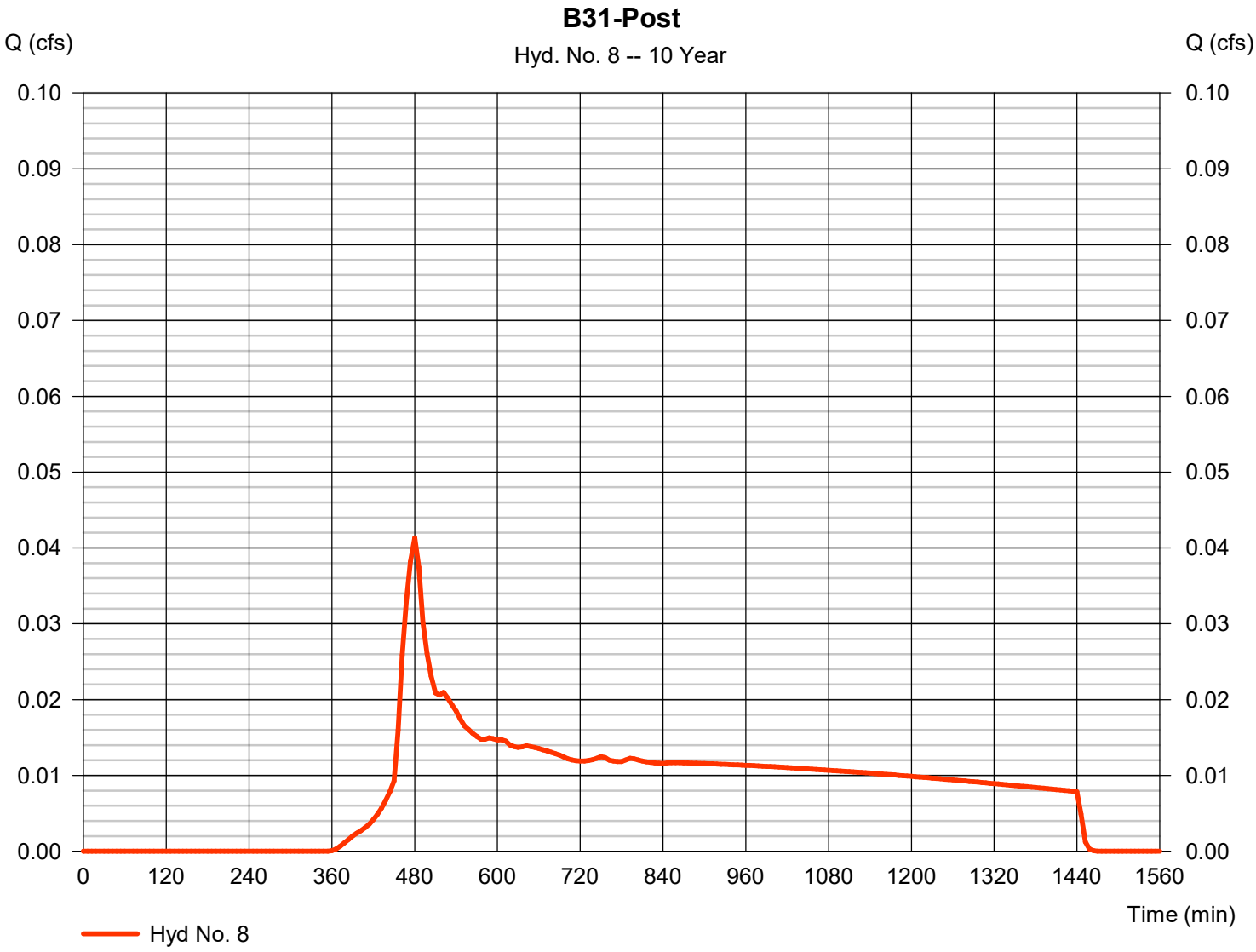


Hydrograph Report

Hyd. No. 8

B31-Post

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.041 cfs
Storm frequency	= 10 yrs	Time to peak	= 480 min
Time interval	= 6 min	Hyd. volume	= 765 cuft
Drainage area	= 0.170 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

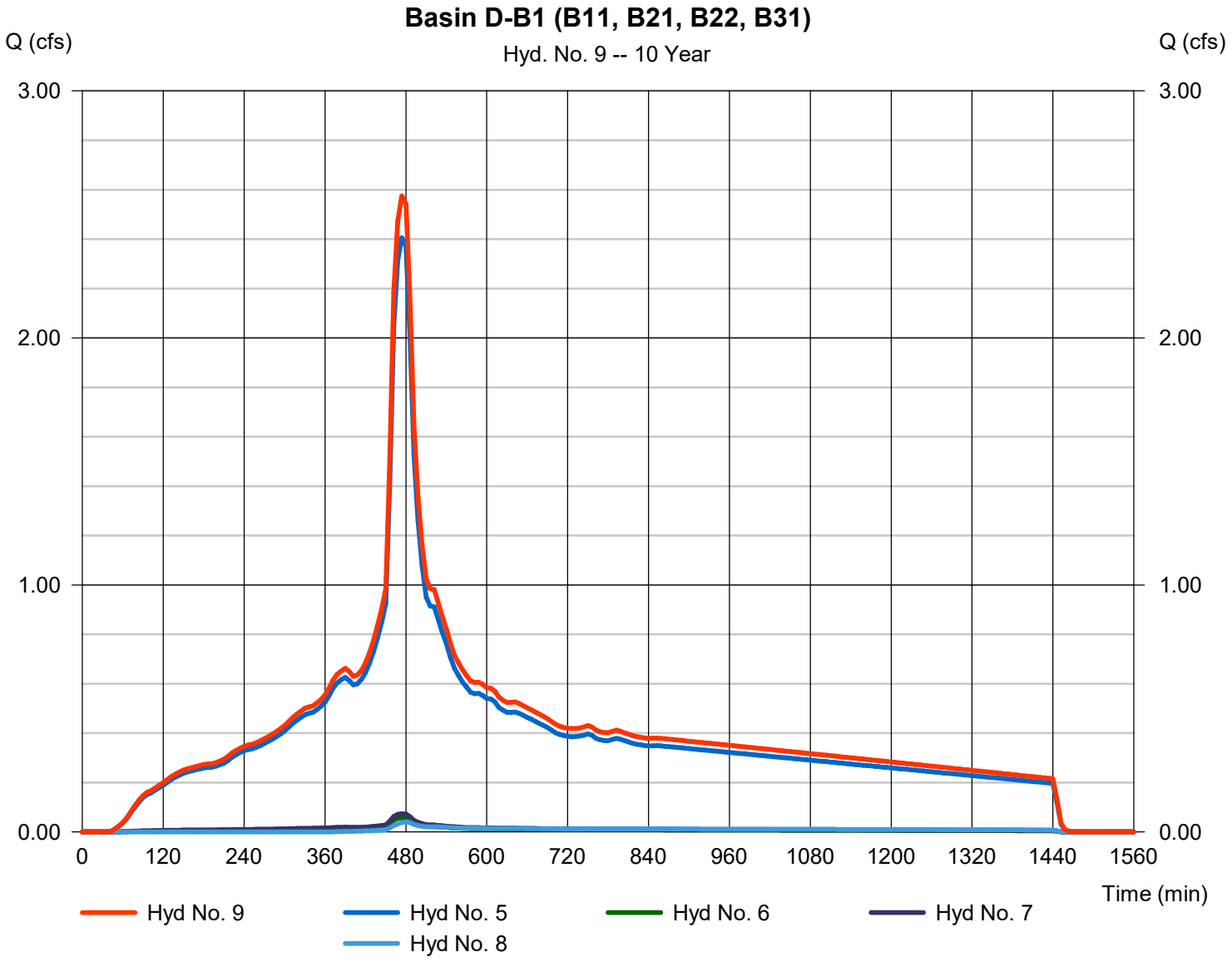


Hydrograph Report

Hyd. No. 9

Basin D-B1 (B11, B21, B22, B31)

Hydrograph type	= Combine	Peak discharge	= 2.574 cfs
Storm frequency	= 10 yrs	Time to peak	= 474 min
Time interval	= 6 min	Hyd. volume	= 37,523 cuft
Inflow hyds.	= 5, 6, 7, 8	Contrib. drain. area	= 3.270 ac



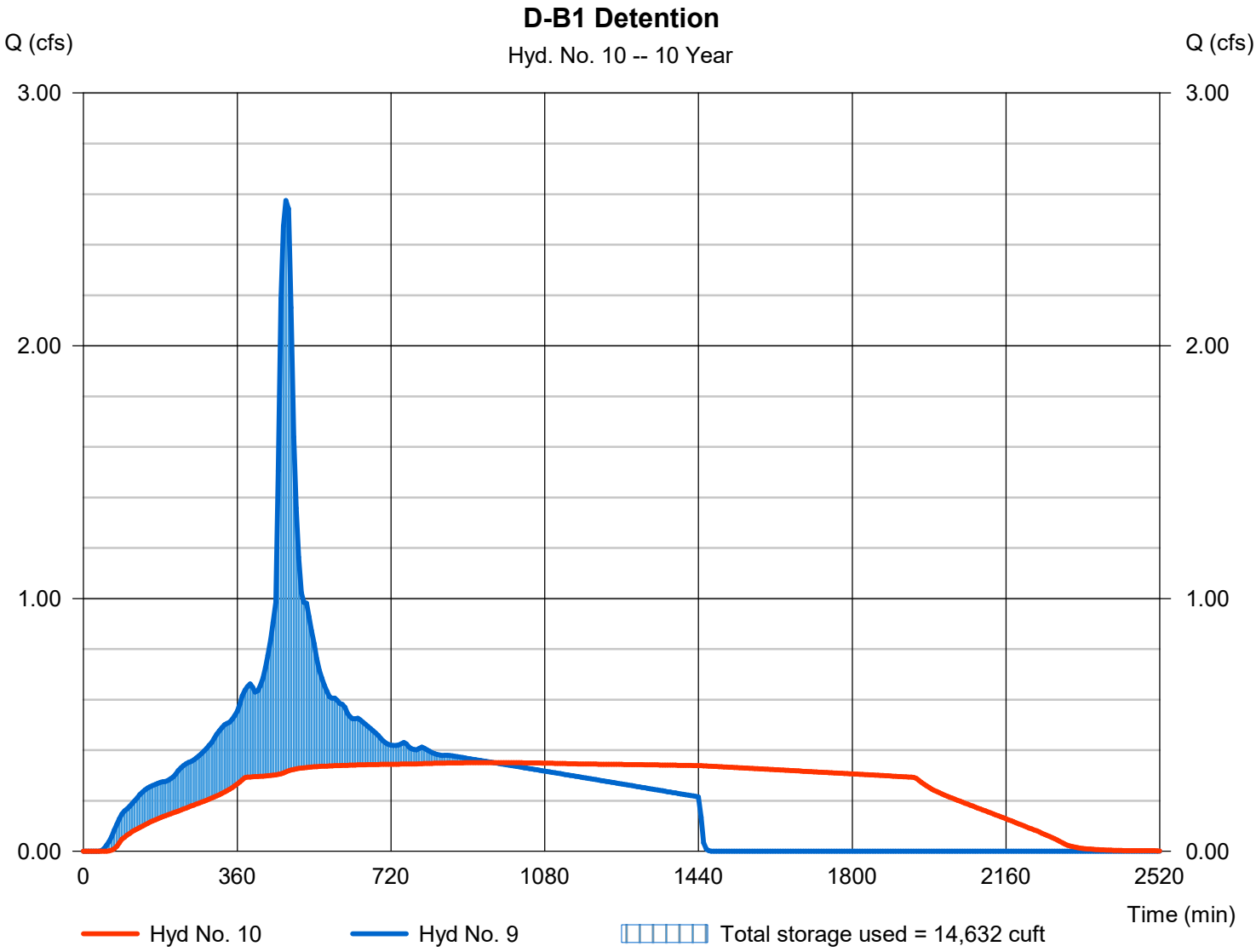
Hydrograph Report

Hyd. No. 10

D-B1 Detention

Hydrograph type	=	Reservoir	Peak discharge	=	0.351 cfs
Storm frequency	=	10 yrs	Time to peak	=	960 min
Time interval	=	6 min	Hyd. volume	=	37,512 cuft
Inflow hyd. No.	=	9 - Basin D-B1 (B11, B21, B22, B31)	Max. Elevation	=	406.90 ft
Reservoir name	=	D-B1	Max. Storage	=	14,632 cuft

Storage Indication method used.



Pond Report

Pond No. 6 - D-B1

Pond Data

UG Chambers - Invert elev. = 401.36 ft, Rise x Span = 3.00 x 3.00 ft, Barrel Len = 263.00 ft, No. Barrels = 1, Slope = 0.00%, Headers = No

Encasement - Invert elev. = 401.36 ft, Width = 5.33 ft, Height = 4.00 ft, Voids = 40.00% Beginning Elevation = 405.37 ft. Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	401.36	n/a	0	0
0.40	401.76	n/a	313	313
0.80	402.16	n/a	375	688
1.20	402.56	n/a	402	1,090
1.60	402.96	n/a	413	1,503
2.00	403.36	n/a	409	1,912
2.40	403.76	n/a	391	2,303
2.80	404.16	n/a	351	2,654
3.20	404.56	n/a	256	2,910
3.60	404.96	n/a	224	3,135
4.00	405.36	n/a	224	3,359
4.01	405.37	18,345	24	3,383
4.04	405.40	18,345	220	3,603
4.24	405.60	18,345	1,467	5,071
4.44	405.80	18,345	1,467	6,538
4.64	406.00	18,345	1,467	8,006
5.14	406.50	18,345	3,669	11,674
5.44	406.80	18,345	2,201	13,876
5.50	406.86	18,345	440	14,316
6.04	407.40	18,345	3,962	18,278
6.54	407.90	18,346	3,669	21,947

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	2.40	0.00	0.00
Span (in)	= 12.00	2.40	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 401.36	401.36	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

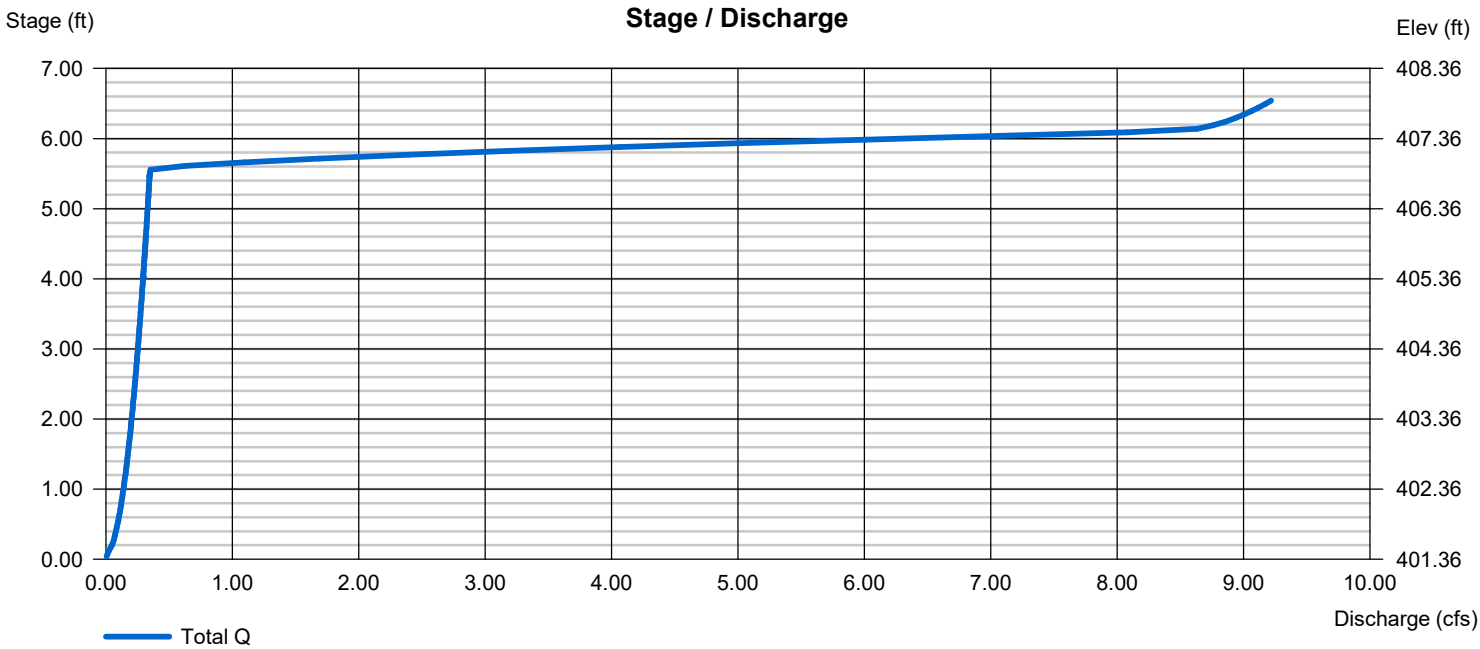
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.00	0.00	0.00	0.00
Crest El. (ft)	= 406.91	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

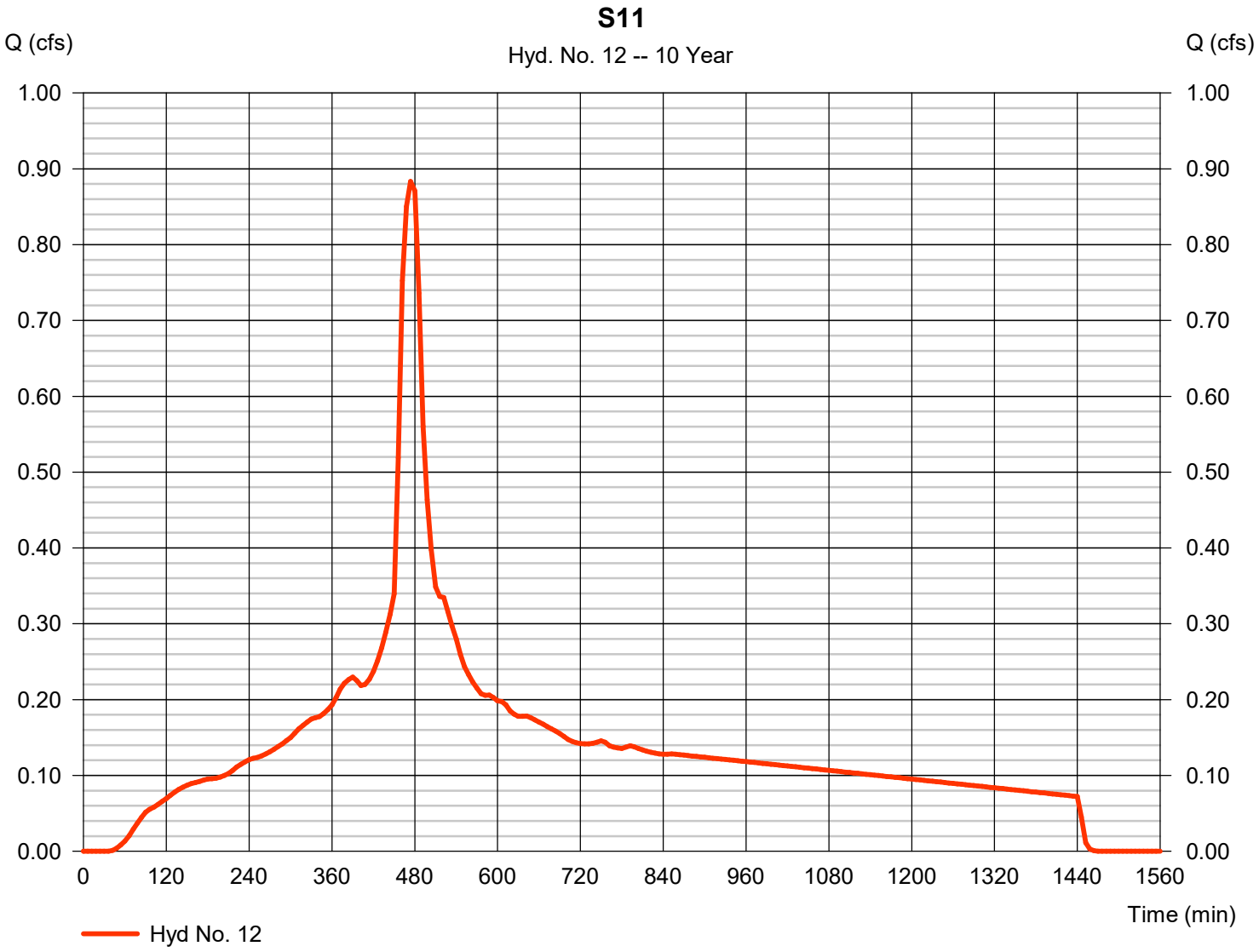


Hydrograph Report

Hyd. No. 12

S11

Hydrograph type	=	SBUH Runoff	Peak discharge	=	0.884 cfs
Storm frequency	=	10 yrs	Time to peak	=	474 min
Time interval	=	6 min	Hyd. volume	=	12,806 cuft
Drainage area	=	1.080 ac	Curve number	=	98
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.50 in	Distribution	=	Type IA
Storm duration	=	24 hrs	Shape factor	=	n/a

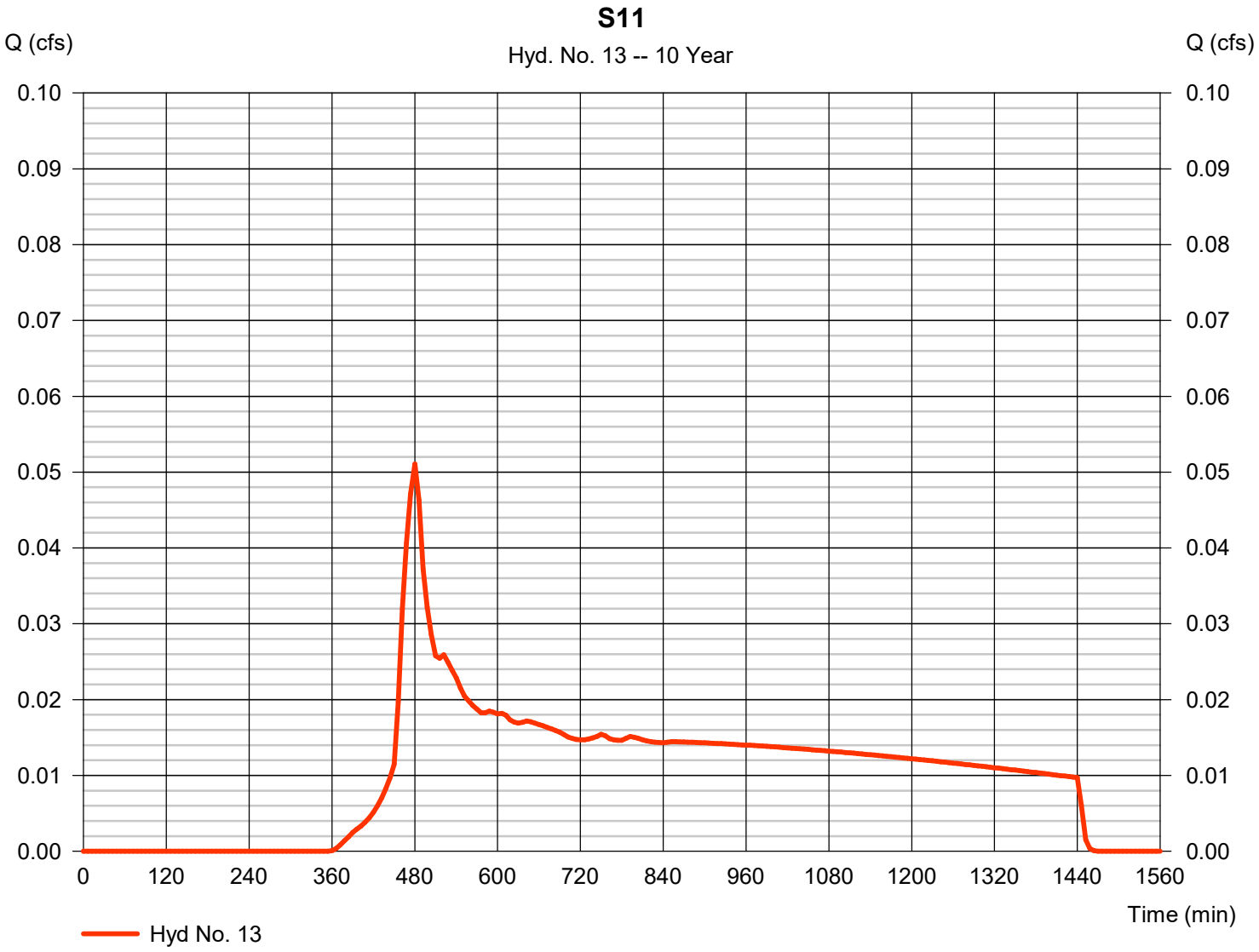


Hydrograph Report

Hyd. No. 13

S11

Hydrograph type	= SBUH Runoff	Peak discharge	= 0.051 cfs
Storm frequency	= 10 yrs	Time to peak	= 480 min
Time interval	= 6 min	Hyd. volume	= 945 cuft
Drainage area	= 0.210 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.50 in	Distribution	= Type IA
Storm duration	= 24 hrs	Shape factor	= n/a

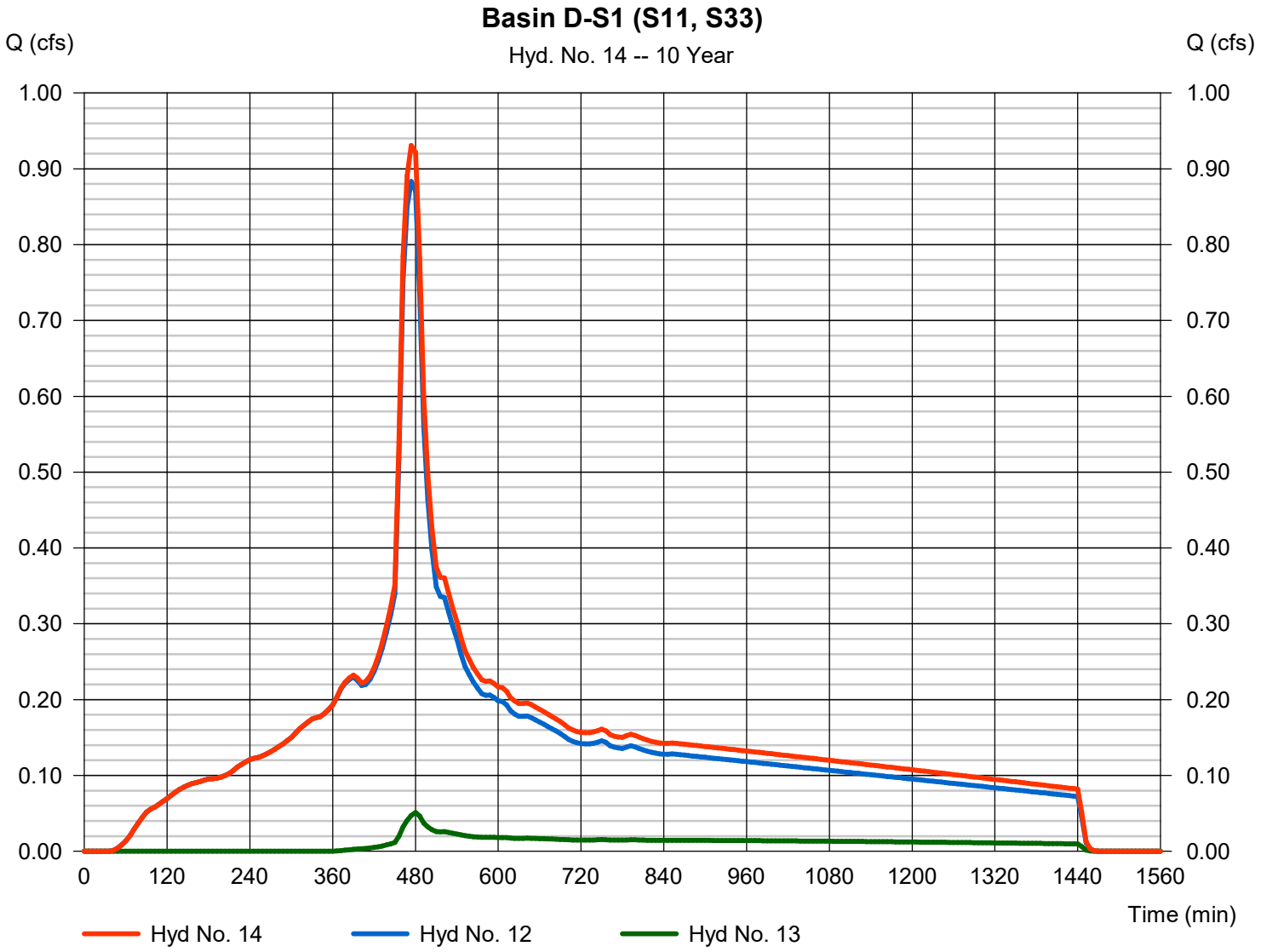


Hydrograph Report

Hyd. No. 14

Basin D-S1 (S11, S33)

Hydrograph type	= Combine	Peak discharge	= 0.931 cfs
Storm frequency	= 10 yrs	Time to peak	= 474 min
Time interval	= 6 min	Hyd. volume	= 13,751 cuft
Inflow hyds.	= 12, 13	Contrib. drain. area	= 1.290 ac



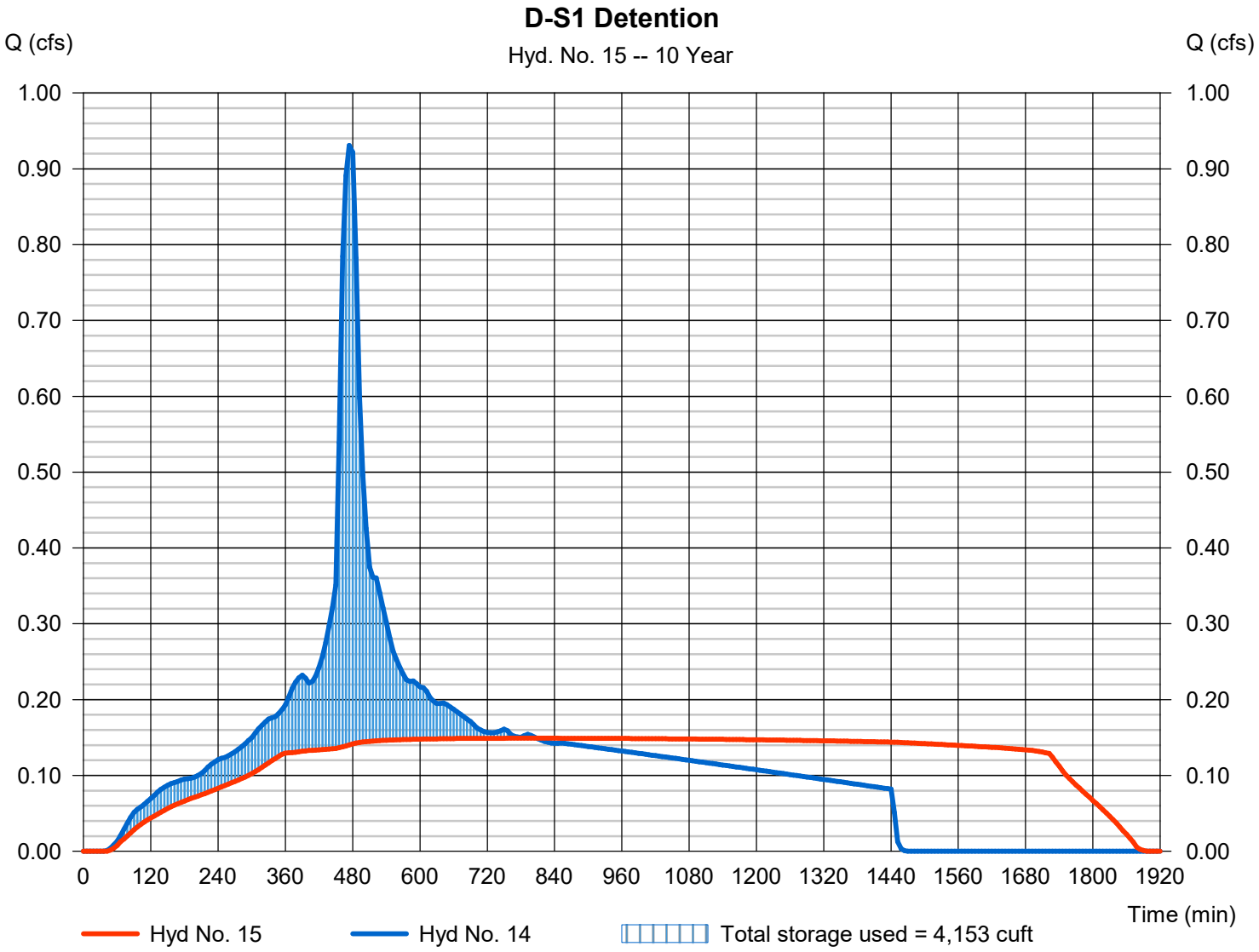
Hydrograph Report

Hyd. No. 15

D-S1 Detention

Hydrograph type	=	Reservoir	Peak discharge	=	0.149 cfs
Storm frequency	=	10 yrs	Time to peak	=	810 min
Time interval	=	6 min	Hyd. volume	=	13,751 cuft
Inflow hyd. No.	=	14 - Basin D-S1 (S11, S33)	Max. Elevation	=	418.01 ft
Reservoir name	=	D-S1	Max. Storage	=	4,153 cuft

Storage Indication method used.



Pond Report

Pond No. 10 - D-S1

Pond Data

UG Chambers - Invert elev. = 416.00 ft, Rise x Span = 1.00 x 1.00 ft, Barrel Len = 272.00 ft, No. Barrels = 1, Slope = 0.00%, Headers = No
Encasement - Invert elev. = 416.00 ft, Width = 3.00 ft, Height = 1.50 ft, Voids = 40.00% Beginning Elevation = 417.51 ft. Voids = 40.00%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	416.00	n/a	0	0
0.15	416.15	n/a	61	61
0.30	416.30	n/a	69	130
0.45	416.45	n/a	73	203
0.60	416.60	n/a	73	276
0.75	416.75	n/a	72	348
0.90	416.90	n/a	67	415
1.05	417.05	n/a	56	471
1.20	417.20	n/a	49	520
1.35	417.35	n/a	49	569
1.50	417.50	n/a	49	618
1.51	417.51	3,185	4	622
1.60	417.60	10,332	231	853
1.70	417.70	18,030	560	1,413
1.80	417.80	22,523	809	2,223
2.00	418.00	22,523	1,802	4,024
2.20	418.20	22,523	1,802	5,826
2.40	418.40	22,523	1,802	7,628
2.80	418.80	22,523	3,603	11,231
3.20	419.20	22,523	3,603	14,834
3.30	419.30	22,523	901	15,735

Culvert / Orifice Structures

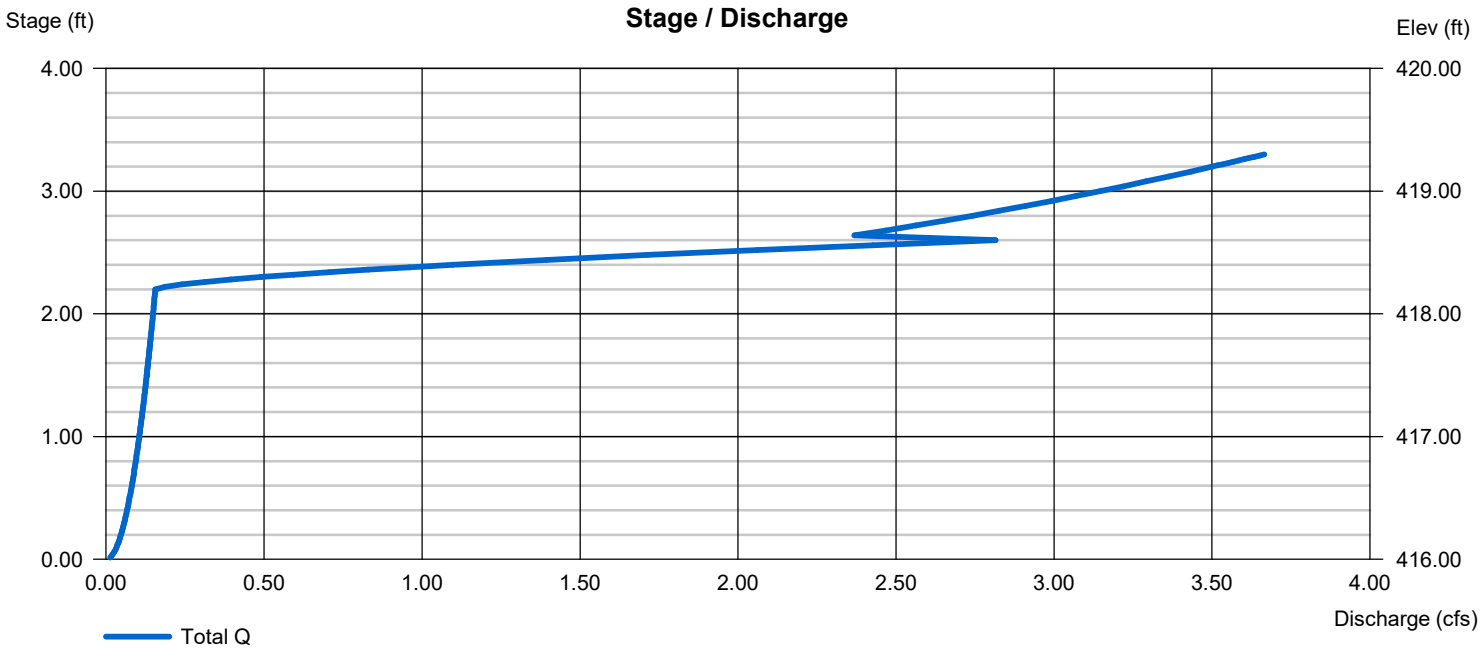
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	2.00	0.00	0.00
Span (in)	= 12.00	2.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 412.62	412.62	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 3.14	0.00	0.00	0.00
Crest El. (ft)	= 418.20	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Appendix C3: Calculations

Time of Concentration Calculations

MAZZETTI
T 503.620.3232
121 SW Salmon Street, Suite 1000
Portland, OR 97204
T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

PRE-DEVELOPMENT T_c CALCULATIONS

VELOCITY METHOD (NEH 630.1502(b))

SHEET FLOW (T_1):

$$T_t = \frac{0.007(nl)^{0.8}}{(P_2)^{0.5}\,S^{0.4}}$$

T_t = travel time, h
n = Manning's roughness coefficient (table 15–1)
l = sheet flow length, ft
P_2 = 2-year, 24-hour rainfall, in
S = slope of land surface, ft/ft

BASEBALL - SEGMENT B.T1:
n= 0.5 (FORESTWOODS, SEE NRCS NEH TABLE 15-1)
L= 30 FT (SEE NRCS NEH EQ 15-9 / TABLE 15-2)
P2= 2.8 INCH
S= 0.008 FT/FT

$T_t = \frac{0.007(0.50\times30)^{0.8}}{2.8^{0.5}\times0.008^{0.4}}$

T_t = 0.25 HR= 15 MIN

SOFTBALL - SEGMENT S.T1:
n= 0.5 (FORESTWOODS, SEE NRCS NEH TABLE 15-1)
L= 30 FT (SEE NRCS NEH EQ 15-9 / TABLE 15-2)
P2= 2.8 INCH
S= 0.012 FT/FT

$T_t = \frac{0.007(0.50\times30)^{0.8}}{2.8^{0.5}\times0.012^{0.4}}$

T_t = 0.22 HR= 13 MIN

SHALLOW OVERLAND FLOW (T_2):

$$T_t = \frac{L}{3600V}$$

T_t = travel time (hr)
L = flow length (ft)
V = average velocity (ft/s)
3600 = conversion factor from seconds to hours.

BASEBALL - SEGMENT B.T2
L= 345 FT
Vr 0.4 FT/S (NEH FIG 15-4, FORESTWOODLAND)

T2= 345/(3600 x 0.40)

T_2= 0.24 HR= 14 MIN

SOFTBALL - SEGMENT S.T2:
L= 194 FT
Vr 0.4 FT/S (NEH FIG 15-4, FORESTWOODLAND)

T2= 194/(3600 x 0.40)

T_2= 0.3 HR= 8 MIN

TOTAL TIME OF CONCENTRATION
TC= T1 + T2 +T3....

BASEBALL
TC= 15 MIN + 14 MIN
TC= 29 MIN

SOFTBALL
TC= 13 MIN + 8 MIN
TC= 21 MIN

NOTES:
1. PRE-DEVELOPMENT CONDITIONS MODELED AS FOREST CONDITIONS.
2. PRE-DEVELOPMENT LAND SLOPE BASED ON PREVAILING LAND SLOPE (EXCLUDES LEVELED INFIELD AREAS)

Table 15–1 Manning's roughness coefficients for sheet flow (flow depth generally ≤ 0.1 ft)

Surface description	n [1]
Smooth surface (concrete, asphalt, gravel, or bare soil)	0.011
Fallow (no residue)	0.05
Cultivated soils:	
Residue cover ≤ 20%	0.06
Residue cover > 20%	0.17
Grass:	
Short-grass prairie	0.15
Dense grasses [2]	0.24
Bermudagrass	0.41
Range (natural)	0.13
Woods: [3]	
Light underbrush	0.40
Dense underbrush	0.80

1 The Manning's n values are a composite of information compiled by Engman (1986).
2 Includes species such as weeping lovegrass, bluegrass, buffalo grass, blue grama grass, and native grass mixtures.
3 When selecting n, consider cover to a height of about 0.1 ft. This is the only part of the plant cover that will obstruct sheet flow.

Table 15–2 Maximum sheet flow lengths using the McCuen-Spiess limitation criterion

Cover type	n values	Slope (ft/ft)	Length (ft)
Range	0.13	0.01	77
Grass	0.41	0.01	24
Woods	0.80	0.01	12.5
Range	0.13	0.05	172
Grass	0.41	0.05	55
Woods	0.80	0.05	28

Table H-1. 24-hour Rainfall Depths in Oregon City

Recurrence Interval, Years	24-Hour Depth, Inches
2	2.8
10	3.5
25	4.0
50	4.4
100	4.5

Source: NOAA Atlas 2, Volume X

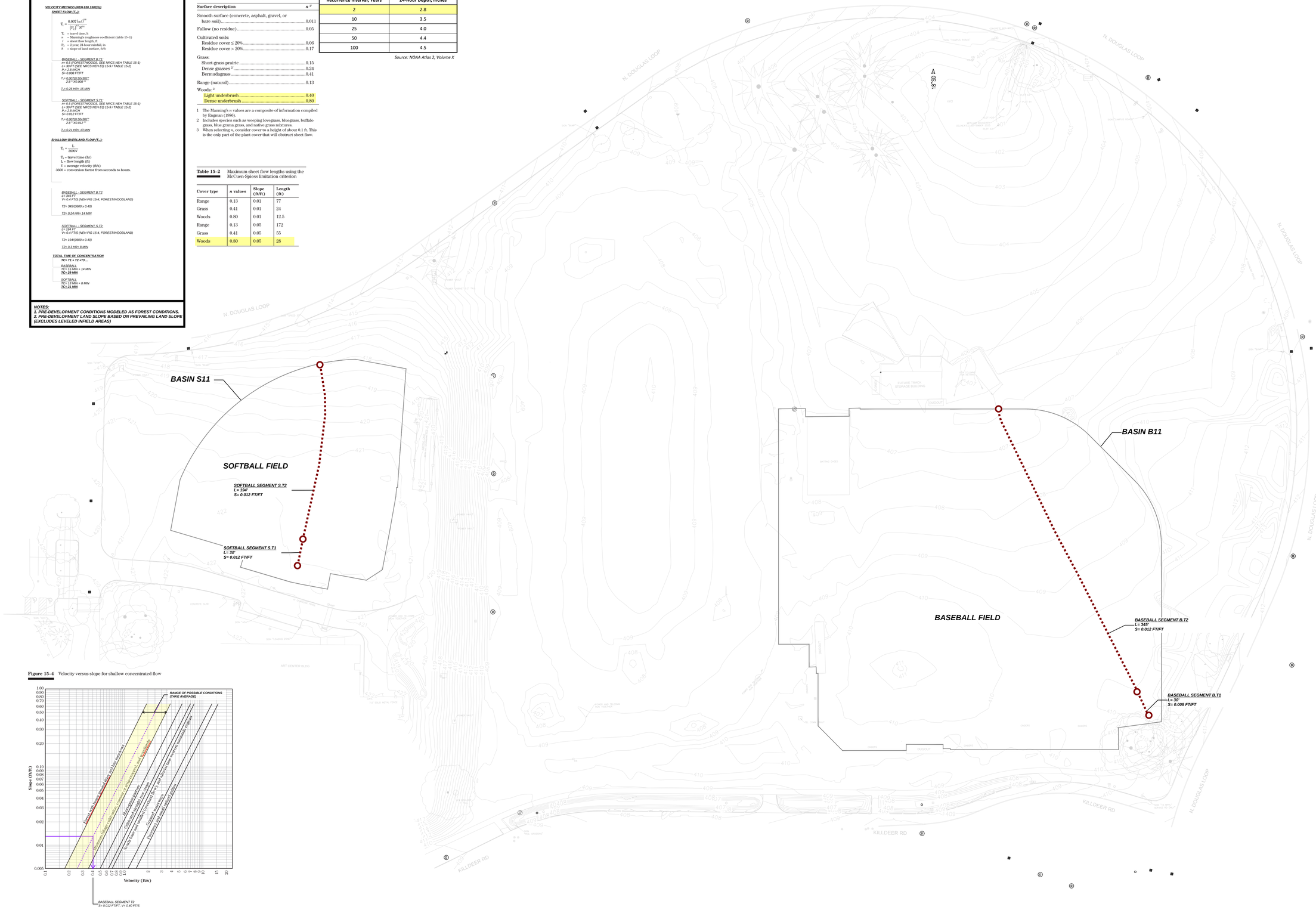


Figure 15–4 Velocity versus slope for shallow concentrated flow

CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

MAZZETTI
940 Willamette Street, Suite 310
Eugene, OR 97401
TEL: 541.686.8478
www.mazzetti.com
Project Number: 025–010267

CLACKAMAS COMMUNITY COLLEGE
ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

Drawn By:	GTL
Checked:	GTL
Project #:	025-010267
Date:	Oct. 9, 2025

Rev. #:	Date:

LAND USE

EXHIBIT TITLE
TIME OF CONCENTRATION MAP / CALCULATION PRE-DEVELOPMENT

EXHIBIT NO.
T1

1 TIME OF CONCENTRATION MAP / CALCULATION - PRE-DEVELOPMENT

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

M:\Mazzetti\Projects\25\Engineering\025-010267 - CCC - Athletics Complex\04 Dwgs\CAD Project\Civil\REFERENCES\Stormwater\251006_Stormwater Report Figures\Figure T-Pre.dwg 10/13/2025 8:47 AM GEOFF LARSEN

Appendix C4: Calculations

Manufactured Treatment Calculations / Sizing Data

MAZZETTI
T 503.620.3232
121 SW Salmon Street, Suite 1000
Portland, OR 97204
T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	CCC Athletics: D-T1
Project Type	Commercial
Location	
Stormwater Management Area	0
Project Applicant	
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
T11	91,356	Forested	PorousAsphalt	C	D-T1
T21	43,930	Forested	ConventionalConcrete	C	D-T1
T22	58,508	Forested	ConventionalConcrete	C	D-T1
T31	16,046	Forested	Grass	C	D-T1

LID Facility Sizing Details

Pond Sizing Details

Pond ID	Design Criteria(1)	Facility Soil Type	Max Depth (ft)(2)	Top Area (sq-ft)	Side Slope (1:H)	Facility Vol. (cu-ft)(3)	Water Storage Vol. (cu-ft)(4)	Adequate Size?
D-T1	FCWQT	Lined	5.00	9,800.0	0.1	48,506.7	31,115.2	Yes

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Simple Pond Geometry Configuration

Pond ID: D-T1
Design: FlowControlAndTreatment

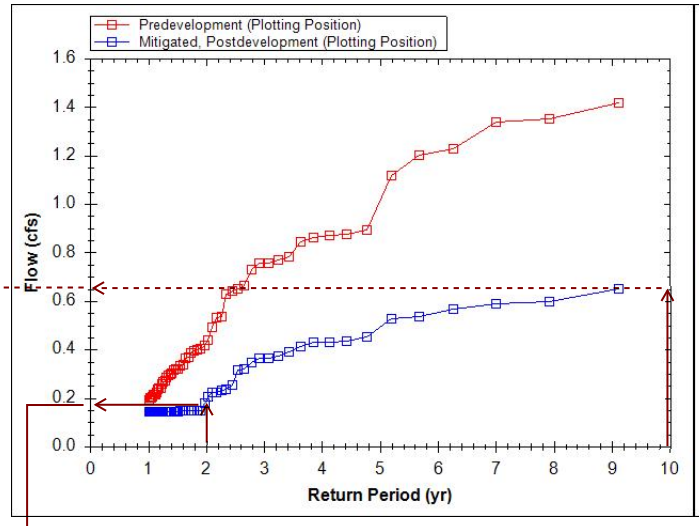
Shape Curve

Depth (ft)	Area (sq ft)
5.0	9,800.0

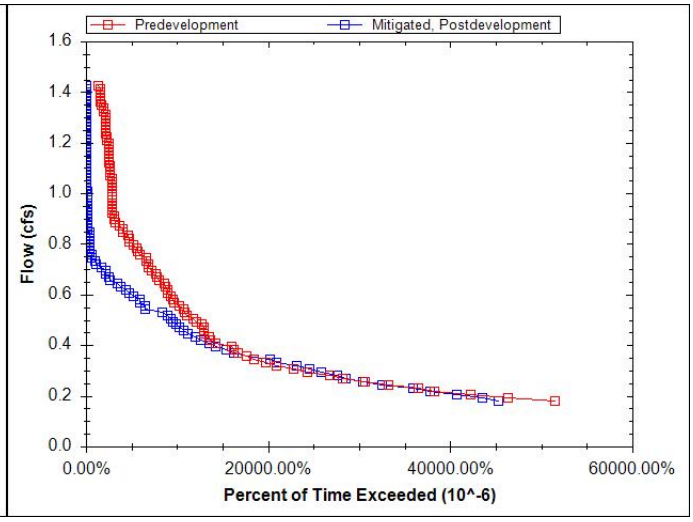
Outlet Structure Details

Lower Orifice Invert (ft)	0.0
Lower Orifice Dia (in)	1.7
Upper Orifice Invert(ft)	3.4
Upper Orifice Dia (in)	6.1
Overflow Weir Invert(ft)	4.0
Overflow Weir Length (ft)	6.3

Flow Frequency Chart



Flow Duration Chart



WATER QUALITY DESIGN FLOW:
BASIS FOR SIZING OF THE DOWNSTREAM MANUFACTURED TREATMENT SYSTEM (STORMFILTER MANHOLE):

Q_{WQ} = 0.17 CFS

SINCE THE BMP SIZING TOOL DOES NOT PROVIDE MITIGATED WATER QUALITY STORM OUTPUT, THE MITIGATED OUTPUT FOR THE 2-YEAR DESIGN STORM IS USED.

OVERFLOW CAPACITY (10-YR):
BASIS FOR SIZING OF THE DOWNSTREAM MANUFACTURED TREATMENT SYSTEM (STORMFILTER MANHOLE):

Q_{FC} = 0.65 CFS

WES BMP Sizing Software Version 1.6.0.2, May 2018

WES BMP Sizing Report

Project Information

Project Name	CCC Athletics: D-T1
Project Type	Commercial
Location	
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Project Applicant	
Jurisdiction	OutofDistrict

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1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only

2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).

3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.

4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Simple Pond Geometry Configuration

Pond ID: D-T1
Design: FlowControlAndTreatment

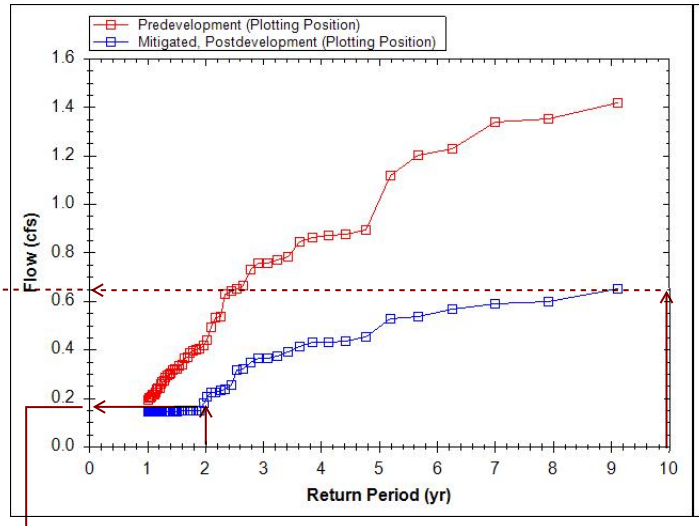
Shape Curve

Depth (ft)	Area (sq ft)
5.0	9,800.0

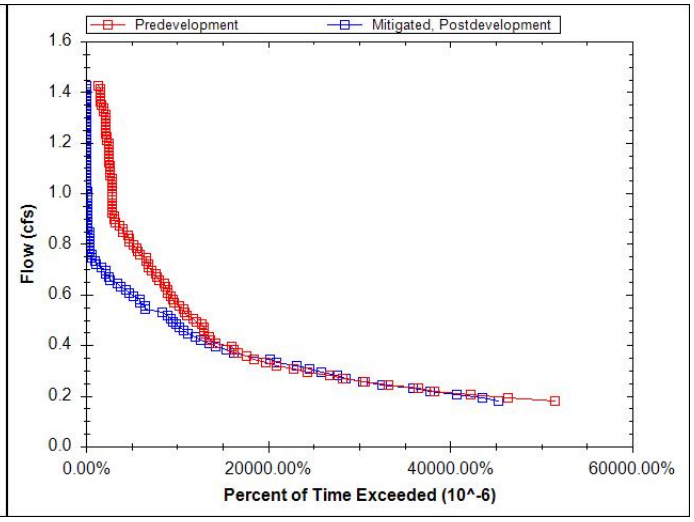
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Lower Orifice Dia (in)	1.7
Upper Orifice Invert(ft)	3.4
Upper Orifice Dia (in)	6.1
Overflow Weir Invert(ft)	4.0
Overflow Weir Length (ft)	6.3

Flow Frequency Chart



Flow Duration Chart



WATER QUALITY DESIGN FLOW:
BASIS FOR SIZING OF THE DOWNSTREAM MANUFACTURED TREATMENT SYSTEM (STORMFILTER MANHOLE):

Q_{WQ} = 0.17 CFS

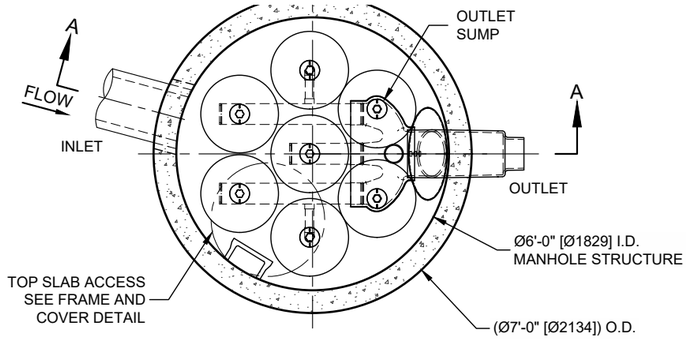
SINCE THE BMP SIZING TOOL DOES NOT PROVIDE MITIGATED WATER QUALITY STORM OUTPUT, THE MITIGATED OUTPUT FOR THE 2-YEAR DESIGN STORM IS USED.

OVERFLOW CAPACITY (10-YR):
BASIS FOR SIZING OF THE DOWNSTREAM MANUFACTURED TREATMENT SYSTEM (STORMFILTER MANHOLE):

Q_{FC} = 0.65 CFS

CONVERSIONS:

1CF= 7.48 GAL
1 MIN= 60 SEC
1CFS= 449 GPM



PLAN VIEW

STANDARD OUTLET RISER
FLOWKIT: 42A

STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (7). VOLUME SYSTEM IS ALSO AVAILABLE WITH MAXIMUM 7 CARTRIDGES.
Ø6'-0" [1829 mm] MANHOLE STORMFILTER PEAK HYDRAULIC CAPACITY IS 1.5 CFS [42.5 L/s] . IF THE SITE CONDITIONS EXCEED 1.5 CFS [42.5 L/s] AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27" [686 mm]			18" [458 mm]			LOW DROP		
RECOMMENDED HYDRAULIC DROP (H)	3.05' [930 mm]			2.3' [700 mm]			1.8' [550 mm]		
SPECIFIC FLOW RATE (gpm/sf) [L/s/m^2]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]	2 [1.30]	1.67* [1.08]	1 [0.65]
CARTRIDGE FLOW RATE (gpm) [L/s]	22.5 [1.42]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.44]	10 [0.63]	8.35 [0.54]	5 [0.32]

* 1.67 gpm/sf [1.08 L/s/m^2] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs) [L/s]	*
PEAK FLOW RATE (cfs) [L/s]	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
CARTRIDGE HEIGHT (SEE TABLE ABOVE)	*
NUMBER OF CARTRIDGES REQUIRED	*
CARTRIDGE FLOW RATE	*
MEDIA TYPE (PERLITE, ZPG, PSORB)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE #1	*	*	*
INLET PIPE #2	*	*	*
OUTLET PIPE	*	*	*

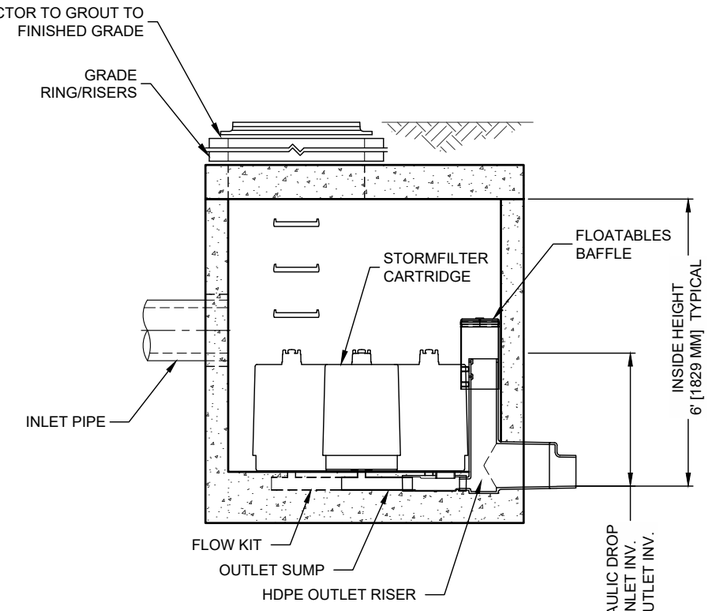
RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

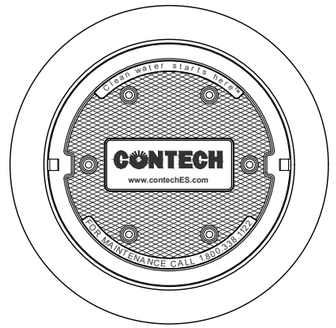
NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

CAPACITY @ (7) CARTRIDGES
27" CART (11.25 GPM/CART): 7 CART x 11.25 GPM/CART x (1 CFS/449 GPM)= 0.18CFS



SECTION A-A



FRAME AND COVER

(DIAMETER VARIES)
N.T.S.

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' [1524 mm] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178 mm]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) [L/s] DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft)[m^2].
8. STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET PIPE(S).
E. CONTRACTOR TO PROVIDE AND INSTALL CONNECTOR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HDPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES [200 mm], CONTRACTOR TO REMOVE THE 8 INCH [200 mm] OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERNCO OR EQUAL AND PROVIDED BY CONTRACTOR.
F. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

The Stormwater Management StormFilter®

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,629; 5,524,576; 5,707,527; 5,985,157; 6,027,639; 6,649,048; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

SFMH72
STORMFILTER
STANDARD DETAIL

APPENDIX E. MANUFACTURED TREATMENT TECHNOLOGIES

Manufactured treatment technologies are proprietary systems, developed to serve specific stormwater management needs. New technologies are always under development to meet the standards of urban stormwater pollutant control. Some manufactured treatment technologies are stand-alone systems and others must be used in conjunction with additional facilities (a "treatment train") in order to accomplish pollutant removal goals.

Oregon City relies on the City of Portland's submission and review protocols to establish a list of approved manufactured stormwater treatment technologies. Engineers wishing to use a manufactured treatment technology for proprietary treatment device for stormwater management should refer to the current version of the City of Portland's Stormwater Management Manual for a list of approved technologies. New technologies must gain approval from the City of Portland before being proposed for use in Oregon City.

February 2019

Stormwater Management Manual
Approved Manufactured Stormwater Treatment Technology

Contech Stormwater Management StormFilter™ with ZPG Filter Media

City of Portland Decision:

The Contech Stormwater Management StormFilter with ZPG Filter Media meets Portland's pollution reduction requirements, per the requirements of the 2016 Stormwater Management Manual, and is approved for use in the City of Portland with the following conditions.

Background:

As part of the application process, Contech Engineered Solutions submitted the Washington State Department of Ecology (DOE) Technology Assessment Protocol (TAPE) Technology Evaluation Report, including all appendices and performance monitoring data, to demonstrate that the StormFilter with ZPG meets the City of Portland's pollution reduction requirements.

Contech gave a technical presentation to City staff, Portland State University students and faculty, and the public on March 13, 2017. The presentation was followed by a technical interview with the City of Portland review committee to discuss water quality performance, maintenance, and overall use in the public right-of-way.

The City of Portland contracted with Portland State University's Department of Civil and Environmental Engineering (PSU) to provide a third-party review of the submitted water quality performance data. PSU analyzed the provided data and found that the Contech StormFilter with ZPG meets the pollution reduction requirements of the 2016 Portland SWMM.

Additional information is available online for this system, including:

- Contech StormFilter product website
- WA DOE General Use Level Designation (GULD) for Basic Treatment (TSS removal) for the StormFilter with ZPG media at 1 gpm/sq ft of surface area.

The City of Portland complies with all non-discrimination laws including Title VI (Civil Rights) and Title II (ADA).
To request a translation, accommodation or additional information, please call 503-823-7740, or use City TTY 503-823-6868, or Oregon Relay Service: 711.

Conditions of Use:

1. All configuration options for the Contech StormFilter with ZPG are approved for TSS removal. Selection of a specific configuration is the responsibility of the project designer.

2. Use of a Contech StormFilter with ZPG does not exempt a project or site from required flow control requirements, operations and maintenance requirements, or other applicable requirements of the SWMM.

3. For use in the public right-of-way, the following conditions must be met:
   - Units must meet City of Portland street design requirements, including but not limited to H-20 vehicle load rating, non-slip surface, and American with Disabilities Act tolerances specific to surface grates or vault lids.

   - The O&M Plan must call for an assessment during the two-year warranty period of project-specific maintenance requirements and frequencies.

4. Contech-certified providers should be utilized for activation, inspection and maintenance of the system, unless otherwise trained and certified by the manufacturer.

Project Designer Responsibilities:

1. Ensuring that the Conditions of Use are met.

2. Ensuring that the project meets all applicable requirements of the Portland SWMM, including the Stormwater Infiltration and Discharge Hierarchy.

3. Ensuring that the design and installation of the units are appropriate for the project goals, site conditions, long-term maintenance requirements, and any other site-specific design requirements on private property or for use in the public right-of-way.

4. Sizing units to meet the current Portland SWMM presumptive design approach and pollution reduction requirements. The pollution reduction capacity is flow-based and assumes a treatment flow intensity of 0.19 inches per hour, 5 minute time of concentration, and a 0.90 runoff coefficient using the Rational Method with treatment rates based upon WA GULD approved flow rates, in lieu of the manufacturer's standard flow rate. The treatment capacities for Contech StormFilter units with ZPG, based on those assumptions, are provided in Table 1. For sites with different times of concentration, different rainfall intensities may be appropriate. See SWMM Chapter 1.3.4, page 1-40 for additional information.

Table 1. Contech StormFilter with ZPG Sizing to Meet City of Portland Pollution Reduction Requirements

Cartridge Size/Stack Configuration	Cartridge Design Flow Rate (gpm/ cartridge stack)	Maximum Drainage Area (acres/ cartridge stack)	Maximum Drainage Area (square feet/ cartridge stack
12	5	0.065	2838
18	7.5	0.098	4257
27	11.3	0.147	6413

5. Each site plan must undergo Contech review before the City of Portland can approve the unit(s) for site installation. A letter certifying the project has been designed to the manufacturer's specification must be submitted to BES prior to the appropriate design milestone. For public improvements, including public works permits, the letter must be submitted to BES prior to 60% plan review. For installation on private property, the letter must be submitted prior to building permit plan approval. The project designer is highly encouraged to work with Contech prior to the appropriate review milestone to maximize placement and performance of the unit(s).

6. If the project designer wishes to vary from these conditions of approval, the project designer must use the Performance Design Approach.

General Conditions:

1. BES may at any time suspend or revoke approval if the performance of the technology does not meet performance criteria, if there are changes to the TAPE certification, or the performance criteria change due to local, state, or federal pollution reduction standards.

2. If any changes, updates, or revisions have occurred to the StormFilter with ZPG, the applicant must obtain WA DOE TAPE GULD certification and re-apply following submission guidelines in effect at the time of application.

Document Updates:

Date	Action
August 2017	The device was approved for use in the City of Portland.
July 2018	Removed the 3-yr expiration date on BES' approval, per a change in BES policy.
February 2019	Removed "Cartridges per Impervious Acre" from Table 1 due to the potential for associated rounding errors.

Appendix D1:
Geotechnical Information

Geotechnical Report

MAZZETTI
T 503.620.3232
121 SW Salmon Street, Suite 1000
Portland, OR 97204
T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

Geotechnical Investigation
Athletic Master Plan
Clackamas Community College: Oregon City Campus

Oregon City, Oregon

July 8, 2025
(REVISED)

Prepared for

Tarkett Sports
19600 SW 129th Avenue, Suite A
Tualatin, OR 97062

Prepared by

16520 SW Upper Boones Ferry Road, Suite 100
Tigard, OR 97224-7661
(503) 641-3478 | www.gri.com

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FIGURES

Figure 1: Vicinity Map
Figure 2: Conceptual Plan
Figure 3: Site Map
Figure 4: Surcharge-Induced Lateral Pressure

FIGURES (Continued)

Figure 5: Overexcavation Detail
Figure 6: Typical Subdrainage Details

APPENDICES

Appendix A: Field Explorations and Laboratory Testing
Appendix B: Site-Specific Seismic Hazard Evaluation
Appendix C: Geoprofessional Business Association Guidance Document

1 INTRODUCTION

As requested, GRI completed a geotechnical investigation for the proposed Athletic Master Plan project located at the Clackamas Community College (CCC) Oregon City Campus in Oregon City, Oregon. The general location of the project is shown on the Vicinity Map, Figure 1. The purpose of the investigation was to provide an evaluation of the subsurface conditions at the site and develop recommendations regarding the planned improvements to the athletic facilities. The investigation consisted of subsurface explorations, laboratory testing, and engineering analyses.

2 PROJECT DESCRIPTION

We understand the project is still in the conceptual phase, and key aspects such as drainage plans and structure loading are still being finalized. However, the conceptual plan set indicates the proposed improvements at the site will include reconstruction of the softball and baseball stadiums, softball/lacrosse field, and the track, as well as supporting structures for the athletic facilities, where indicated on the Conceptual Plan, Figure 2. We anticipate the project will be designed in accordance with the 2022 *Oregon Structural Specialty Code* (OSSC).

3 SITE DESCRIPTION

3.1 General

The site is on the order of 18 acres in size and is bordered to the north and east by N Douglas Loop and to the south and west by existing CCC buildings and associated parking lots. The site is currently developed with baseball, softball, and soccer/lacrosse fields; a rubber-surfaced track; and lightly loaded supporting structures, as shown on the Site Map, Figure 3. Access to the fields is provided by small, paved paths from the south. The northeast portion of the site contains two baseball/softball dirt infields. The undeveloped portions of the site are surfaced with grass. Several trees are present northeast of the track.

3.2 Topography

The softball field is positioned on a flat area approximately 10 feet higher in elevation than the track, soccer field, and baseball field. East of the softball field, the ground surface slopes down at approximately 5H:1V (Horizontal to Vertical) to the existing track. In the northeast portion of the site, the surface slopes downward gently to the northeast to a drainage ditch and culvert that run under N Douglas Loop.

3.3 Geology

Based on our review of the available geologic literature, our experience with other nearby projects, and the explorations made for this investigation, the site is mantled by residual soils produced by weathering of the upper surface of the lithologic unit known as Boring Lava (Wells et al., 2020). Boring Lava generally consists of light gray, open-textured olivine

basalt and breccias. The residual soils derived from weathering of the basalt typically consist of red-brown, clayey silt to silty clay with interspersed cobble-, boulder-, and larger-sized rock fragments. The degree of weathering in the rock typically decreases with depth. The weathered top of the Boring Lava in this area can be overlain by a thin (up to 10 feet thick) layer of undifferentiated sediments consisting of clay with varying amounts of silt and sand. Lava tubes have been documented in this unit on the slopes above the Canemah neighborhood of Oregon City (Madin, 2009).

4 SUBSURFACE CONDITIONS

4.1 General

Subsurface materials and characteristics at the site were investigated during two separate mobilizations. On May 12 and 13, 2025, GRI drilled six borings designated B-1 through B-6. On June 9 and 10, 2025, GRI excavated nine test pits designated TP-1 through TP-9. The explorations were completed within the current athletic fields in grassy areas in or around the proposed developments. The approximate locations of the explorations are shown on Figure 2. The six borings were advanced to depths ranging between approximately 10.1 feet and 40.1 feet, and the nine test pits were advanced to depths ranging between approximately 3.3 feet and 8.3 feet.

Logs of the explorations are shown on Figures 1A through 11A in Appendix A. The soil and rock samples obtained from the explorations were returned to our laboratory for further examination and physical testing. The terms and symbols used to describe the soil and rock encountered in the explorations are summarized in Tables 1A and 2A and shown on the attached legend. Laboratory index test results are shown on the graph portion of each exploration log and summarized in Table 3A.

4.2 Soils

For the purpose of discussion, the materials disclosed by our investigation have been grouped into the following categories based on their physical characteristics and engineering properties. They are listed as they were encountered below the ground surface:

a. Possible FILL
b. Undifferentiated Sediment
c. CLAY, SILT, and SAND (Residual Soil)
d. BORING LAVA

The following paragraphs provide a description of the materials encountered and a discussion of the groundwater conditions at the site.

a. Possible FILL

A 3- to 6-inch-thick heavily rooted zone consisting of sod was observed at the ground surface in all borings and test pits. Test pits TP-2, TP-3, and TP-8 encountered fill from the ground surface to depths of 1.5 feet, 1.0 feet, and 0.8 feet, respectively. The fill encountered in test pit TP-2 is potentially on-site residual soil fill consisting of silty clay to clayey silt with trace to some fine- to coarse-grained sand and trace angular to subangular gravel. The residual soil fill is red-brown and iron-stained with medium to high plasticity.

The fill encountered in test pits TP-3 and TP-8 is fine- to medium-grained sand with variable silt content, ranging from some silt to silty. The sand fill is light gray and micaceous.

b. Undifferentiated Sediment

Undifferentiated sediment consisting of silt to silty clay was encountered below the fill in test pits TP-2 and TP-3 and at the ground surface in test pit TP-7. The undifferentiated sediment is typically gray with occasional orange mottling and low to medium plasticity.

c. CLAY, SILT, and SAND (Residual Soil)

Residual soil consisting of varying proportions of clay, silt, and sand was encountered in all borings and test pits TP-1 and TP-3 through TP-9, ranging from silty clay to clayey silt, with sand content ranging from trace sand to sandy and containing up to some gravel. Boring B-1 was terminated in residual soil at a depth of 21.5 feet. In boring B-5, a 1-foot-thick layer of silty, clayey sand was encountered from 5 feet to 6 feet. The residual soil is typically red-brown to yellow-brown with streaks of red, yellow, orange, gray, and black.

Observation of drilling action during advancement of the borings and rock fragments retrieved in samples indicate the presence of abundant cobbles and boulders within the residual soil unit. Generally, the consistency of the residual soils encountered at the site ranges from medium stiff to stiff.

d. BORING LAVA

Decomposed Boring Lava was encountered below the residual soil in borings B-3 through B-6 and in test pits TP-1, TP-5, and TP-9. The Boring Lava encountered displays varying degrees of weathering, ranging from completely decomposed to fresh, and was recovered as rock fragments or predominantly fine-grained soils with relict rock texture. Observation of drilling action during advancement of the borings and rock fragments retrieved in samples indicate the presence of abundant cobble- and boulder-sized rock fragments within the decomposed Boring Lava.

The decomposed Boring Lava recovered as sandy silt with a trace of gravel in borings B-3 and B-6 contains fine sand and angular, gravel-sized rock fragments and is typically gray

or brown streaked with orange, yellow, and red. The relative consistency of the decomposed Boring Lava in borings B-3 and B-6 is typically very hard and transitions to less-weathered rock at depths of about 4 feet and 11.5 feet, respectively.

The decomposed Boring Lava encountered in borings B-4 and B-5 was retrieved as silty, sandy rock fragments composed of fine to coarse sand and angular, gravel-sized rock fragments. It is generally light brown to light gray streaked with brown, yellow, and orange. The relative density of the decomposed Boring Lava in borings B-4 and B-5 is typically very dense and transitions to less-weathered rock at depths of about 9 feet and 23 feet, respectively.

The decomposed Boring Lava encountered in test pits TP-1, TP-5, and TP-9 consists of clayey SILT with trace to some fine- to coarse-grained sand and up to 3-inch-diameter rock fragments. It is generally red-brown to gray with iron staining and orange and black streaking and mottling. The decomposed Boring Lava generally has medium to high plasticity. The decomposed Boring Lava transitions to less-weathered rock at depths of 4.8 feet, 8.0 feet, and 4.5 feet in test pits TP-1, TP-5, and TP-9, respectively.

Less-weathered rock of the Boring Lava formation was encountered below the residual soil in boring B-2 and test pits TP-3, TP-4, TP-6, TP-7, and TP-8; below the undifferentiated sediment in test pit TP-2; and below the decomposed Boring Lava in borings B-3, B-4, B-5, and B-6 and test pits TP-1, TP-5, and TP-9. It extended to the maximum depths to which those borings and test pits were advanced. Rock encountered in the borings is generally gray to dark gray and blue-gray. Rock encountered in the test pits is generally gray with orange-, black-, iron-, and/or manganese-stained rock surfaces, non-vesicular, completely decomposed to moderately weathered, and extremely weak (R0) to medium strong (R3). Characteristics of Boring Lava, such as vesicularity, degree of weathering, hardness designation, and fracture presence or spacing, could not be characterized in the borings due to the drilling techniques utilized in this project. However, based on our experience at the campus, we anticipate the Boring Lava in this area is generally non-vesicular, decomposed to fresh, and extremely weak (R0) to strong (R4) and has a Rock Quality Designation (RQD) ranging from 0% to 94%, indicating a rock quality ranging from poor to excellent. Typically, the rock hardness and RQD tend to increase with depth, and the degree of weathering tends to decrease with depth. Borings B-2 through B-6 were terminated in rock that yielded Standard Penetration Test (SPT) blow counts of 50 blow counts per 1 inch (practical refusal). All test pits were terminated in weak (R1) to medium strong (R3) Boring Lava.

4.3 Groundwater

The borings advanced for this investigation were completed using mud rotary techniques, which do not allow direct measurement of groundwater levels at the time of drilling. Test pits TP-2, TP-4, TP-5, TP-7, and TP-8 encountered light to moderate groundwater seepage at depths ranging from 5 feet to 8 feet. Groundwater seepage was not encountered in the remaining test pits. Our review of U.S. Geological Survey (USGS) groundwater data (Snyder, 2008) suggests groundwater at the sites typically occurs at depths of 20 feet to 25 feet. Previous subsurface explorations completed by GRI at the campus disclosed groundwater levels of about 12.5 feet to 16 feet below the ground surface. Explorations completed by GRI across N Douglas Loop northeast of the campus encountered groundwater as shallow as 2.7 feet below the ground surface. We anticipate the groundwater level at the site will fluctuate seasonally. Due to the relatively low permeability of the soils that mantle the site, we anticipate shallow perched groundwater conditions will also develop in the near-surface soils, particularly during the wet winter months and following periods of prolonged precipitation.

4.4 Infiltration Testing

Two infiltration tests were conducted in general conformance with the open pit falling head procedure described in Appendix D of the March 2020 *Oregon City Stormwater and Grading Design Standards*. The test results are summarized in the "Stormwater Infiltration" section of this report.

5 FINDINGS AND RECOMMENDATIONS

5.1 General

Subsurface explorations for this investigation encountered residual soils consisting of silty clay to clayey silt. Based on our experience in the area, the relative consistency of the residual soil is generally medium stiff to stiff. The residual soil transitions into decomposed Boring Lava, underlain by intact Boring Lava, as shallow as four feet below the existing ground surface.

In our opinion, foundation support for new structures can be provided by conventional spread and wall foundations established in firm, undisturbed native soil or compacted structural fill. The primary geotechnical considerations associated with the construction of the proposed improvements include the presence of fine-grained soils at the ground surface that are moisture sensitive, the presence of cobbles and boulders within the anticipated depth of excavation, and the potential for shallow, perched groundwater conditions. The following sections of this report provide our conclusions and recommendations for use in the design and construction of the proposed additions.

5.2 Seismic Considerations

5.2.1 Design Acceleration Parameters

We understand seismic design for the project is being completed in accordance with the 2022 OSSC and American Society of Civil Engineers (ASCE) 7-16. A site-specific seismic-hazard study was completed for the project to fulfill the requirements of amended Section 1803 of the 2022 OSSC for special occupancy structures. Details of the site-specific seismic-hazard study and development of the recommended response spectrum are provided in Appendix B.

A ground-motion hazard analysis was completed in accordance with Section 21.2 of ASCE 7-16 to develop the site-specific ground motion values. Based on our review of available geologic and subsurface information for the project area and the results of subsurface explorations and the seismic cone penetration testing completed for this project, it is our opinion the site can generally be classified as Site Class D in accordance with Chapter 20 of ASCE 7-16. The recommended response spectra for structural design were developed by comparing the site-specific spectra based on ground motion hazard analysis with the code-based spectra based on Site Class D conditions. For dynamic analysis using the equivalent lateral force design procedure, the 0.2- and 1.0-second Risk-Targeted Maximum Considered Earthquake (MCE_R) and design acceleration parameters are developed in accordance with Section 21.4 of ASCE 7-16. Table 5-1 summarizes the recommended MCE_R- and design-level spectral response parameters for the Site Class D condition developed at the site in accordance with Section 21.4 of ASCE 7-16.

Table 5-1: RECOMMENDED SEISMIC DESIGN PARAMETERS (2022 OSSC / ASCE 7-16)

Seismic Parameter	Recommended Value
Site Class	D
MCE_R Spectral Response Acceleration Parameter at Short Periods, S_{MS}	1.05 g
MCE_R Spectral Response Acceleration Parameter at 1.0-Second Period, S_{M1}	0.78 g
Design Spectral Response Acceleration Parameter at Short Periods, S_{DS}	0.70 g
Design Spectral Response Acceleration Parameter at 1.0-Second Period, S_{D1}	0.52 g

Abbreviations: OSSC = *Oregon Structural Specialty Code*; ASCE = American Society of Civil Engineers; MCE_R = Risk-Targeted Maximum Considered Earthquake

5.2.2 Other Seismic Hazards

Based on subsurface conditions and site topography, the risk of liquefaction, earthquake-induced slope instability, and/or lateral spreading is low. The risk of damage by a tsunami and/or seiche at the site is absent. Based on USGS maps, the Bolton Fault is the closest crustal fault identified as a hazard to the site, located approximately 4.5 kilometers (km) from the site. The CSZ is mapped approximately 90 km west of the site (Petersen et al.,

2014). Unless occurring on a previously unmapped or unknown fault, the risk of fault rupture at the site is low.

5.3 Earthwork

5.3.1 General

The fine-grained soils that mantle the site are moisture sensitive, and perched groundwater is likely to approach the ground surface during the wet winter months and following periods of sustained precipitation. Therefore, it is our opinion that earthwork can be completed most economically during the dry summer months, which typically extend from June to mid-October. It has been our experience that the moisture content of the upper few feet of fine-grained soils will decrease during extended warm, dry weather. However, below this depth, the moisture content of the soil tends to remain relatively unchanged and well above the optimum moisture content for compaction. As a result, the contractor must use construction equipment and procedures that prevent disturbance and softening of the subgrade soils. To minimize disturbance of the moisture-sensitive fine-grained soils, site grading can be completed using track-mounted hydraulic excavators. Excavations should be finished using a smooth-edged bucket to produce a firm, undisturbed surface.

Cobbles, boulders, and large rock fragments are present within the near-surface soils. Removal of these large particles may result in subgrade disturbance. If the subgrade is disturbed during construction, soft, disturbed soils should be overexcavated to firm soil and backfilled with structural fill.

To reduce the risk of subgrade disturbance resulting from wet ground conditions, constructing granular work pads and haul roads will be required to protect the fine-grained subgrade and provide a firm working surface for construction activities.

5.3.2 Site Preparation

The existing structures located within the extent of the proposed improvements and associated foundations, if any, should be demolished as a part of site preparation activities. Any soils disturbed during the removal of the foundations and any soft or otherwise unsuitable soils in the footprint of the new facilities should be excavated and removed. The excavations should be backfilled in accordance with the “Structural Fill” section of this report.

The ground surface within all building areas, paved areas, walkways, and areas to receive structural fill should be stripped of existing vegetation, surface organics, and loose surface soils or fill. All trees, brush, and surficial organic material should be removed from within the limits of the proposed improvements. Excavations required to remove unsuitable soils,

brush, and trees should be backfilled with structural fill. Organic strippings should be disposed of off site or stockpiled on site for use in landscaped areas.

Following stripping or excavation to design elevation, the exposed subgrade should be evaluated by a qualified member of GRI's geotechnical engineering staff or an engineering geologist. Cobbles or boulders encountered at subgrade elevation may need to be overexcavated and replaced with compacted structural fill. Proof rolling with a loaded dump truck may be part of this evaluation. Any soft areas or areas of unsuitable material disclosed by the evaluation should be overexcavated to firm material and backfilled with compacted structural fill.

5.3.3 Site Grading

Final site grades are not available at this preliminary stage. However, we anticipate areal cuts and fills for the project will generally be less than about 2 feet, and cuts and fills to support retaining wall construction may be on the order of 5 feet to 10 feet. If planned cuts or fills exceed this thickness, GRI should be contacted to review site grading. In general, grading across the project site should also provide for positive drainage of surface water away from buildings, retaining walls, adjacent properties, and slopes to reduce the potential for erosion and ponding. Permanent cut and fill slopes should be no steeper than 2H:1V.

5.3.4 Granular Work Pads and Haul Roads

As noted above, if construction occurs during wet ground conditions, granular work pads will be required to protect the underlying subgrade and provide a firm working surface for construction activities. In our opinion, an 18-inch-thick granular work pad should be sufficient to prevent disturbance of the subgrade by lighter construction equipment and limited traffic by dump trucks. Haul roads and other high-density traffic areas, including the use of Gradalls and forklifts, will require a minimum of 18 inches to 24 inches of fragmental rock, up to 6-inch nominal size, to reduce the risk of subgrade deterioration. The use of a woven geotextile fabric or geogrid over the subgrade may reduce the need for maintenance during construction. Granular haul roads and work pads can also be constructed by placing a thickened section of the pavement section crushed rock base (CRB) and subsequently spreading and grading the excess CRB after earthwork is complete.

As an alternative to the use of a thickened section of crushed rock to support construction activities and protect the subgrade, the subgrade soils can be treated with cement. On a preliminary basis, it has been our experience in this area that treating the subgrade soils to a depth of 12 inches to 18 inches with about a 6% to 10% admixture of cement overlain by 6 inches to 12 inches of crushed rock will support construction equipment and provide a good all-weather working surface. If cement treatment is being considered, GRI should

be contacted prior to construction to assist with refining the preliminary cement admixture estimates noted above.

5.3.5 Prior Site Development

Site improvements within previously developed areas include the risk of encountering undocumented or poorly documented improvements and infrastructure. Although not encountered within the subsurface explorations completed at the site, the possibility does exist to encounter existing underground improvements. Any remnants of previous improvements should be removed within the footprints of the new structures and other improvements. All debris should be removed from the site, and excavations should be backfilled with structural fill.

5.4 Excavation

5.4.1 General

Based on our preliminary understanding of the project, we anticipate the depth of cuts to establish final site grades will generally be less than 2 feet, and the depths of excavations for retaining walls and utility trenches may be on the order of 5 feet to 10 feet. The method of excavation and design of excavation support are the responsibility of the contractor and are subject to applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) excavation and trench safety standards. The means, methods, and sequencing of construction operations and site safety are also the contractor's responsibility. The information provided below is for the use of our client and should not be interpreted to imply we are assuming responsibility for the contractor's actions or site safety.

5.4.2 Groundwater Management

We anticipate that perched groundwater is likely to be encountered in excavations. Groundwater seepage, running-soil conditions, and unstable excavation sidewalls or excavation subgrades, if encountered during construction, will require dewatering of the excavation and sidewall support. The impact of these conditions can be reduced by completing excavations during the summer months, when perched groundwater levels are lowest, and by limiting the depths of the excavations.

We anticipate perched groundwater inflow can generally be controlled by pumping from sumps. To facilitate dewatering, it will be necessary to overexcavate the base of the excavation to permit the installation of a granular working blanket. We estimate the required thickness of the granular working blanket will be on the order of 1 foot or as required to maintain a stable excavation base. The actual required depth of overexcavation will depend on the conditions exposed in the excavations and the effectiveness of the contractor's dewatering efforts. The thickness of the granular blanket must be evaluated

based on field observations during construction. We recommend the use of relatively clean material such as 2- to 4-inch-minus crushed rock with less than about 5% passing the No. 200 sieve (washed analysis) for this purpose. The use of geotextile fabric over the excavation base will assist in subgrade stability and dewatering.

5.4.3 Temporary Excavations

The inclination of temporary excavation slopes will depend, in part, on the perched-groundwater conditions encountered at the time of construction and the contractor's ability to control these conditions. In this regard, we anticipate that temporary excavation slopes can be cut at 1H:1V to a maximum depth of 10 feet if groundwater levels are maintained at least 2 feet below the bottom of the excavation. Flatter slopes will be necessary if significant seepage conditions are encountered. Some minor amounts of sloughing, slumping, or running of temporary slopes should be anticipated shortly after groundwater seepage occurs. A blanket of relatively clean, well-graded, crushed rock placed on the slopes may be required to reduce the risk of raveling soil conditions if temporary excavation slopes encounter perched groundwater. We recommend the use of relatively clean, free-draining material, such as 2- to 4-inch-minus crushed rock, for this purpose. The thickness of the granular blanket should be evaluated based on actual conditions but would likely be in the range of 12 inches to 24 inches.

In our opinion, the short-term stability of temporary slopes will be adequate if surcharge loads due to construction traffic, vehicle parking, material laydown, etc., are maintained at an equal distance to the height of the slope away from the top of the open cut. Additional lateral loading due to surcharge loads can be evaluated using the criteria shown on Figure 3. Other measures that should be implemented to reduce the risk of localized failures of temporary slopes include the following: 1) using geotextile fabric to protect the exposed cut slopes from surface erosion; 2) providing positive drainage away from the tops and bottoms of the cut slopes; 3) constructing and backfilling walls as soon as practical after completing the excavation; 4) backfilling overexcavated areas as soon as practical after completing the excavation; and 5) periodically monitoring the area around the top of the excavation for evidence of ground cracking. It must be emphasized that following these recommendations will not guarantee that sloughing or movement of the temporary cut slopes will not occur; however, the measures should serve to reduce the risk of a major slope failure. It should also be realized that blocks of ground and/or localized slumps may tend to move into the excavation during construction.

The explorations encountered intact Boring Lava as shallow as four feet below the existing ground surface. The surface of the rock may vary between relatively short distances. Additionally, in our experience, the residual soil and decomposed rock layers may contain cobbles, boulders, or larger rock fragments. The degree of weathering typically decreases

with depth. Based on our experience with similar projects and materials, we anticipate it will be difficult to excavate into the Boring Lava using a large hydraulic excavator equipped with a rock bucket with carbide teeth. Therefore, it should be anticipated that rock excavation techniques, such as percussion and chipping methods, may be required if the excavations must be advanced into the Boring Lava. The rate of excavation can be slow and highly variable even when using a percussion hammer, especially for deeper excavations.

5.4.4 Utility Excavations

In our opinion, there are three major considerations associated with the design and construction of new utilities:

1. Provide stable excavation side slopes or support for trench sidewalls to minimize loss of ground.
2. Provide a safe working environment during construction.
3. Minimize post-construction settlement of the utility and ground surface.

According to current OSHA regulations, the fine-grained soils encountered in the explorations may be classified as Type B. In our opinion, trench excavations should be laterally supported or alternatively provided with sideslopes of 1H:1V or flatter, provided static groundwater or seepage is not encountered. If groundwater is encountered, the sideslopes should be sloped at 1.5H:1V or flatter. In our opinion, adequate lateral support may be provided by common methods, such as the use of a trench shield or hydraulic shoring systems.

5.5 Structural Fill

5.5.1 General

We anticipate structural fill required to achieve subgrade elevation for the planned improvements will generally be less than 2 feet. Structural fills on the order of 10 feet are anticipated for retaining wall construction. In general, structural fills should consist of imported or on-site, organic-free soils and should extend a minimum horizontal distance of 5 feet beyond the edge of new foundations and 1 foot beyond the limits of ancillary improvements, such as the edges of new sidewalks, hardscapes, or pavements.

5.5.2 On-Site Fine-Grained Fill

In general, approved, organic-free, fine-grained soils used to construct structural fills should have a maximum size of 2 inches and be placed in 8-inch-thick lifts (loose) and compacted using segmented-pad or sheepsfoot rollers to a density not less than 95% of the maximum dry density, as determined by ASTM D690. Cobbles and boulders are

abundant within the soils encountered at the project site and will need to be removed prior to using on-site soil as fill.

In our opinion, the moisture content of fine-grained soil at the time of compaction should be controlled to within 3% of optimum moisture content for compaction. It has been our experience that the moisture contents of near-surface, fine-grained soils such as those encountered at the project site are typically above optimum throughout the majority of the year. Aeration and drying will be required to meet the requirements for proper compaction. The required drying can best be accomplished by spreading the material in thin lifts and tilling. Drying rates are dependent on weather factors such as wind, temperature, and relative humidity. Typically, higher plasticity fine-grained soils take longer to dry than lower plasticity soils. Therefore, spatial variation in percentages of sand, silt, and clay can result in inconsistent drying. In this regard, aeration and moisture control of on-site fill soils will likely require a significant amount of time and area over extended periods of warm, dry weather or cement amendment. If fine-grained soils are compacted at a moisture content that is above recommended, the specified density cannot be achieved, and the fill material will be relatively weak and possibly compressible. Cement amendment of on-site, fine-grained soils may be an option to stabilize structural fill soils if the soil cannot be suitably moisture conditioned.

On-site, fine-grained soils and site strippings free of debris may be used as fill in non-structural landscaped areas where overlying hardscapes such as sidewalks or pavements will not be constructed. These materials should be placed at about 90% of the maximum dry density, as determined by ASTM D698. The moisture contents of soils placed in landscaped areas are not as critical as the moisture contents of soils placed in structural areas, provided construction equipment can effectively handle the materials. However, fine-grained soils compacted to less than 95% of the maximum dry density, as determined by ASTM D698, or at a moisture content outside 3% of optimum may result in excessive settlement of fill soils.

5.5.3 Imported Granular Fill

Imported granular material would be most suitable for the construction of the structural fills. Granular material, such as sand, sandy gravel, or crushed rock, with a maximum size of 2 inches and less than 5% passing the No. 200 sieve (washed analysis) would be suitable structural fill material. Granular fill should be placed in lifts and compacted with vibratory equipment to at least 95% of the maximum dry density, as determined in accordance with ASTM D698. Compaction of granular fill material greater than about 1.5 inches should be evaluated based on visual observation of compaction equipment and proof rolls. Appropriate lift thicknesses will depend on the type of compaction equipment used. For example, if hand-operated, vibratory-plate equipment is used, lift thicknesses should be

limited to about 6 inches to 8 inches. Based on field-density testing, if smooth-drum vibratory rollers are used, lift thicknesses up to about 12 inches may be appropriate, and if backhoe- or excavator-mounted vibratory plates are used, lift thicknesses of up to about 2 feet may be acceptable.

5.5.4 Utility Trench Backfill

All utility trench excavations within building, hardscape, and pavement areas should be backfilled with relatively clean, granular material, such as sand, sandy gravel, or crushed rock, of up to 1½-inch maximum size and having less than about 5% passing the No. 200 sieve (washed analysis). The bottom of the excavation should be thoroughly cleaned to remove loose materials, and the utilities should be underlain by a minimum-6-inch thickness of bedding material conforming to the utility manufacturer's installation specifications. The granular backfill material should be compacted to at least 95% of the maximum dry density, as determined by ASTM D698. The use of hoe-mounted vibratory-plate compactors is usually the most efficient for this purpose. Flooding or jetting as a means of compacting the trench backfill should not be permitted.

5.5.5 Field and Track Subgrade

For subgrade preparation of the track and turf field subgrade, we recommend considering either cement treatment or placement of CRB course to support field construction and future field maintenance. At a minimum, we recommend that cement treatment extend to approximately 12 inches to 18 inches below subgrade elevation and be completed in accordance with the recommendations outlined in the "Granular Work Pads and Haul Roads" section of this report. Alternatively, cement treatment may be replaced with a 2-foot-thick section of CRB course meeting the requirements outlined in the Structural Fill section of this report. Construction of firm subgrade beneath the field will be critical for field performance and facilitate future maintenance, repair, and replacement of the turf at the end of its design life.

5.6 Stormwater Infiltration

Infiltration tests were completed at depths of about 5.2 feet and 3.5 feet within the test pits excavated for the project. The tests were completed in general accordance with the open pit falling head procedure as described in Appendix D of the March 2020 *Oregon City Stormwater and Grading Design Standards*. The infiltration testing resulted in a measured infiltration rate of 0.5 inches per hour. We recommend applying a factor of safety of 2.0 for design of on-site infiltration facilities. We understand cement amendment is being considered for subgrade stabilization at the track and field. We recommend considering an infiltration rate of 0 inches per hour in cement-amended soils.

5.7 Foundation Support

5.7.1 General

Structural loads are currently unknown; however, we anticipate the maximum column loads will generally be less than about 100 kips. In our opinion, the proposed structural loads can be supported on conventional spread footings in accordance with the following design criteria.

5.7.2 Footing Subgrade Preparation

The base of all new footings should be established in the firm native soil that mantles the site or crushed rock structural fill. Overexcavations to native soil should extend horizontally beyond the edge of footings and settlement-sensitive structures, as indicated on the Surcharge-Induced Lateral Pressure, Figure 4. The base of all new footings should be established at a minimum embedment depth of 18 inches below the lowest adjacent finished grade. The footing width should not be less than 24 inches for isolated column footings and 18 inches for wall footings. Final excavations for all foundations should be made with a smooth-edged bucket and all footing subgrades should be observed by a member of GRI's geotechnical engineering staff. Soft or otherwise unsuitable material encountered at the foundation subgrade level should be overexcavated and backfilled with crushed rock structural fill. Local areas of softer subgrade may require deeper overexcavation and should be evaluated by a member of GRI's geotechnical engineering staff. We recommend the contract documents provide unit costs for subgrade overexcavation and structural backfill. Our experience indicates that the subgrade soils are easily disturbed by excavation and construction activities. Due to these considerations, we recommend installing a minimum-3-inch-thick working pad layer of compacted crushed rock in the bottom of all footing excavations. Relatively clean, ¾-inch-minus crushed rock having less than about 5% fines passing the No. 200 sieve (washed analysis) is suitable for this purpose.

5.7.3 Allowable Bearing Pressure

Our allowable bearing pressures are based on the estimated column and wall loads and the results of our subsurface explorations. Footings established in accordance with the above criteria in the native soil or compacted crushed rock structural fill can be designed based on an allowable soil bearing pressure of 3,500 pounds per square foot. This value applies to the total of dead load and/or frequently applied live loads and can be increased by one-third for the total of all loads: dead, live, and wind or seismic.

5.7.4 Static and Dynamic Settlement

We estimate the total static settlement of spread and wall footings designed in accordance with the recommendations presented above will be less than 1 inch for footings supporting columns up to 100 kips. Differential static settlements between adjacent,

comparably loaded and similarly supported footings should be less than half the total settlement. Differential static settlements between footings supported on differing subsurface conditions may approach total settlements.

5.7.5 Horizontal Forces

Horizontal shear forces can be resisted partially or completely by frictional forces developed between the base of the footings and the underlying soil and by soil passive resistance. The total frictional resistance between the footing and the soil is the normal force times the coefficient of friction between the soil and the base of the footing. We recommend ultimate values of 0.35 and 0.55 for the coefficient of friction for footings cast on firm native soil or granular crushed rock structural fill material, respectively. The normal force is the sum of the vertical forces (dead load plus real live load). If additional lateral resistance is required, passive earth pressures against embedded footings can be computed based on an equivalent fluid. Footing pressures for horizontal backfill conditions can be computed having a unit weight of 300 pounds per cubic foot (pcf) against native soil or compacted structural fill. The design passive earth pressure would be applicable only if the footing is cast neat against undisturbed native soil or if backfill for the footings is placed as granular structural fill and assumes up to 0.01H inches of lateral movement of the structure will occur to develop this resistance, where H is the depth of embedment to the bottom of the footing. This value also assumes the permanent ground surface in front of the foundation is horizontal (i.e., it does not slope downward away from the toe of the footing).

5.8 Retaining Walls

5.8.1 General

Based on the conceptual drawings, we understand a retaining wall is planned behind the new grandstand structure west of the track. Additionally, we anticipate portions of the improvements, such as Americans with Disabilities Act access ramps, may be partially embedded and may require retaining walls. For this report, we assumed site retaining walls would consist of conventional cast-in-place or gravity walls supported on shallow foundations. Foundation design and subgrade preparation should conform to the recommendations provided above for foundation support.

5.8.2 Lateral Earth Pressures

Lateral earth pressures for designing retaining walls depend on the type of construction (i.e., the ability of the wall to yield). Possible conditions are 1) a wall laterally supported at its base and top and, therefore, unable to yield to the active state and 2) a retaining wall, such as a typical cantilever or gravity wall, which yields to the active state by tilting about its base. A conventional basement wall and cantilever retaining wall are examples of non-yielding and yielding walls, respectively. For completely drained, horizontal backfill,

yielding and non-yielding walls may be designed based on equivalent fluid unit weights of 35 pcf and 55 pcf, respectively. For walls retaining a fully drained, sloping backfill of 2H:1V, the equivalent fluid weights should be modified to 55 pcf and 80 pcf for yielding and non-yielding walls, respectively. To account for seismic loading, the Agusti and Sitar (2013) method was used to develop lateral earth pressures on permanent embedded structures. For horizontal backslope conditions, the earth pressures should be increased by 8 pcf and 16 pcf for yielding and non-yielding walls, respectively. For 2H:1V backslope conditions, the earth pressures should be increased by 24 pcf and 52 pcf for yielding and non-yielding walls, respectively. This results in a triangular distribution, with the resultant acting at ⅓H up from the base of the wall, where H is the height of the exposed wall in feet. These pressures are unfactored, real loads and should be adjusted based on the design methodology and referenced code.

5.8.3 Wall Drainage

The lateral earth pressure design criteria presented above are appropriate if the retaining walls are fully drained. Perched groundwater may occur within the shallow, fine-grained soils and existing utility trenches during periods of prolonged or intense precipitation. Based on these considerations, we recommend the installation of a permanent drainage system behind all of the retaining walls. The drainage system can either consist of a drainage blanket of crushed rock or continuous drainage panels between the retained soil/backfill and the face of the wall. The drainage blanket should have a minimum width of 12 inches and consist of crushed drain rock that contains less than 2% fines content (washed analysis). A nonwoven geotextile fabric should separate the drain rock and wall backfill. A typical drainage system for retaining walls constructed with a drainage blanket is shown on the Overexcavation Detail, Figure 5. The drainage blanket or drainage panels should extend to the base of the wall, where water should be collected in a perforated pipe and discharged to a suitable outlet, such as a sump or approved storm drain. In addition, the wall design should include positive drainage measures to prevent ponding of surface water behind the top of the wall.

5.8.4 Backfill Compaction

Overcompaction of backfill behind walls should be avoided. Heavy compactors and large pieces of construction equipment should not operate within 5 feet of any embedded wall to avoid the buildup of excessive lateral earth pressures. Compaction close to the walls should be accomplished with hand-operated, vibratory-plate compactors. Overcompaction of backfill could significantly increase lateral earth pressures behind walls. Additional lateral loading to walls due to surcharge loads can be evaluated using the criteria shown on Figure 3.

5.9 Subdrainage/Floor Support

In general, we recommend floor slabs be established in the native residual soil that underlies the site. In areas where soft or disturbed soils are encountered at slab subgrade elevation, we recommend overexcavating to native subgrade or constructing a minimum 6-inch-thick section of granular structural fill over a woven geotextile fabric beneath the slab base course. To provide a capillary break and reduce the risk of damp floors, slab-on-grade floors should be underlain by a minimum of 8 inches of free-draining, clean rock. This material should consist of angular rock such as 1½- to ¾-inch, open-graded crushed rock with less than 2% passing the No. 200 sieve (washed analysis) and should be capped with a 2-inch-thick layer of compacted, ¾-inch-minus crushed rock to improve workability, as indicated on Figure 5. The slab base course section should be placed in one lift and compacted to at least 95% of the maximum dry density, as determined by ASTM D698, or until well keyed. In areas where floor coverings will be provided or moisture-sensitive materials stored, it would be appropriate to also install a vapor-retarding membrane. The membrane should be installed as recommended by the manufacturer. In addition, a foundation drain should be installed around the building perimeter to collect water that could potentially infiltrate beneath the foundations. All groundwater collected should be drained by gravity or pumped from sumps into an approved stormwater disposal facility. If the water is pumped, an emergency power supply or battery backup should be included to prevent flooding due to power loss during a storm or high groundwater events. The perimeter foundation drain should be placed at the base of the footing and embedded within free-draining, clean, angular rock, such as 1½- to ¾-inch crushed rock with less than 2% passing the No. 200 sieve (washed analysis).

For structures established below final site grades, slabs should be underlain by a subdrainage system in addition to the slab base course and vapor-retarding membrane, as indicated on Figure 5. A subdrainage system will reduce the buildup of hydrostatic pressures on the floor slab and the risk of groundwater entering through embedded walls and floor slabs. Beneath embedded floor slabs, the center-to-center spacing of the underslab drainpipes should not exceed 20 feet. All groundwater collected should be drained by gravity or pumped from sumps into an approved stormwater disposal facility. If the water is pumped, an emergency power supply or battery backup should be included to prevent flooding due to power loss during a storm or high-groundwater events.

6 DESIGN REVIEW AND CONSTRUCTION SERVICES

We welcome the opportunity to review and discuss construction plans and specifications for this project as they are being developed. In addition, GRI should be retained to review all geotechnical-related portions of the plans and specifications to evaluate whether they are in conformance with the recommendations provided in our report. To observe compliance with the intent of our recommendations, the design concepts, and the plans

and specifications, it is our opinion that all construction operations dealing with earthwork, retaining walls, foundations, and pile installations should be observed by a GRI representative. Our construction-phase services will allow for timely design changes if site conditions are encountered that are different from those described in our report. If we do not have the opportunity to confirm our interpretations, assumptions, and analyses during construction, we cannot be responsible for the application of our recommendations to subsurface conditions different from those described in this report.

7 LIMITATIONS

This report has been prepared to aid the project team in the design of this project. The scope is limited to the specific project and location described herein, and our description of the project represents our understanding of the significant aspects of the project relevant to earthwork and design and construction of the improvements outlined on the Master Athletic Plan conceptual drawing. In the event any changes in the design and location of the project elements as outlined in this report are planned, we should be given the opportunity to review the changes and modify or reaffirm the conclusions and recommendations of this report in writing.

The conclusions and recommendations in this report are based on the data obtained from the subsurface explorations at the locations shown on Figure 2 and other sources of information discussed in this report. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is acknowledged variations in subsurface conditions may exist between exploration locations. This report does not reflect variations that may occur between these explorations. The nature and extent of variation may not become evident until construction. If subsurface conditions during construction differ from those encountered in the explorations, we should be advised at once so we can observe and review these conditions and reconsider our recommendations where necessary.

We have included as Appendix C the Geoprofessional Business Association guidance document "Important Information about This Geotechnical-Engineering Report" to assist you and others in understanding the use and limitations of this report. We recommend you read this document.

Submitted for GRI,

Thomas J. O'Dell, PE	Tovey M. Brown, PE	Melissa Preciado
Associate	Project Engineer	Staff Engineer

This document has been submitted electronically.

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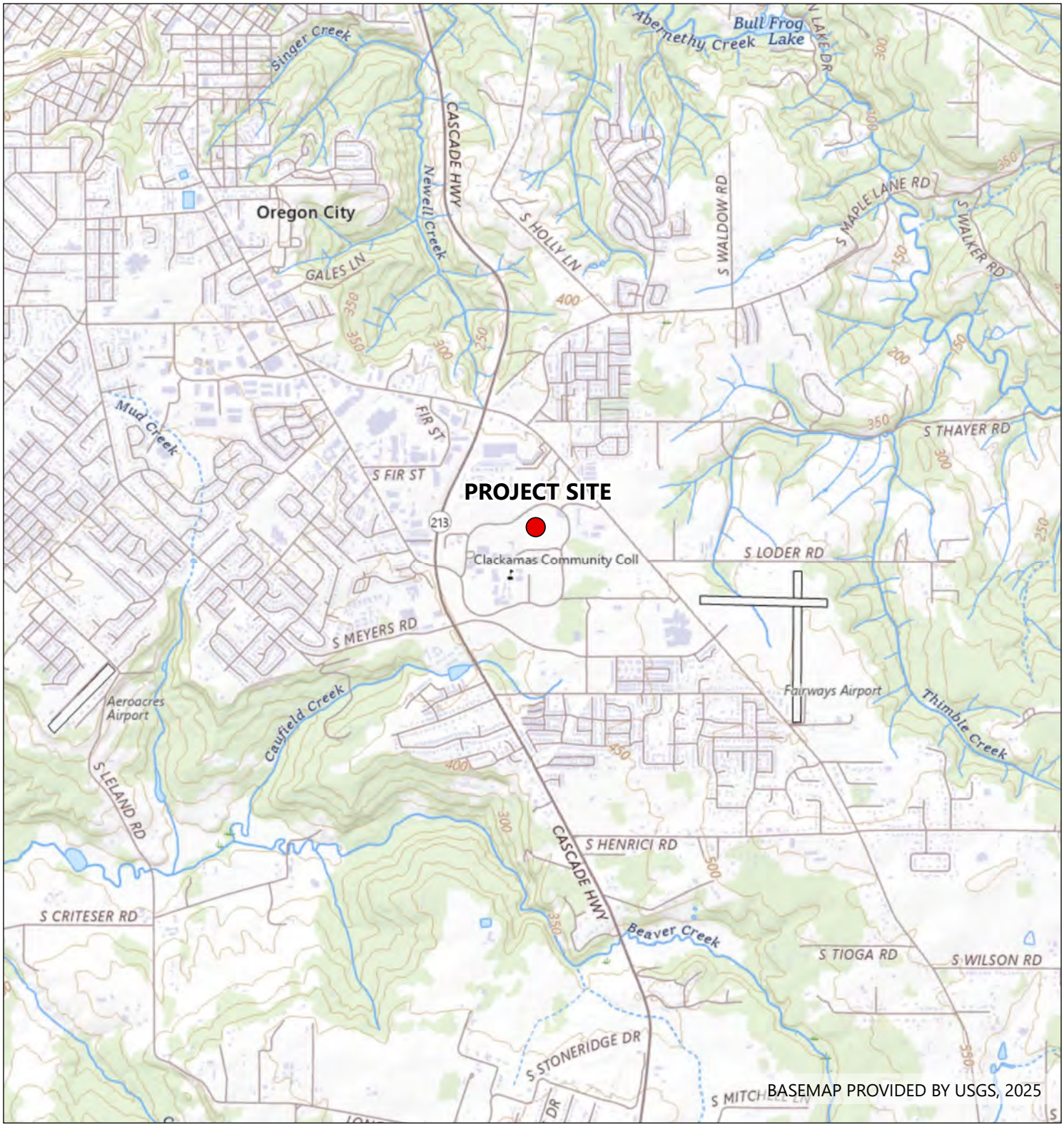
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0 0.5 1

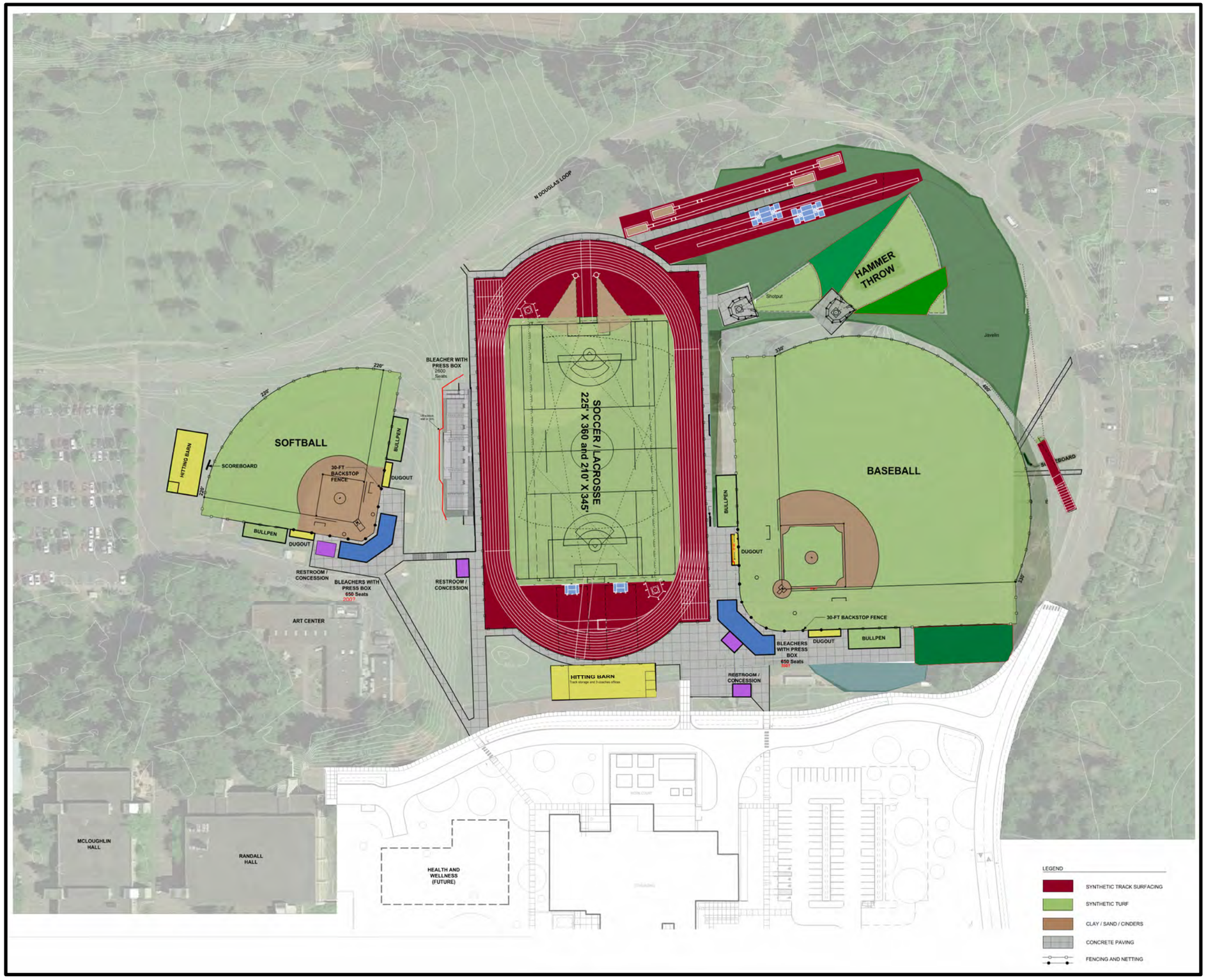
1 INCH = 0.5 MILES

GRI

TARKETT SPORTS
CLACKAMAS COMMUNITY COLLEGE
ATHLETIC MASTER PLAN

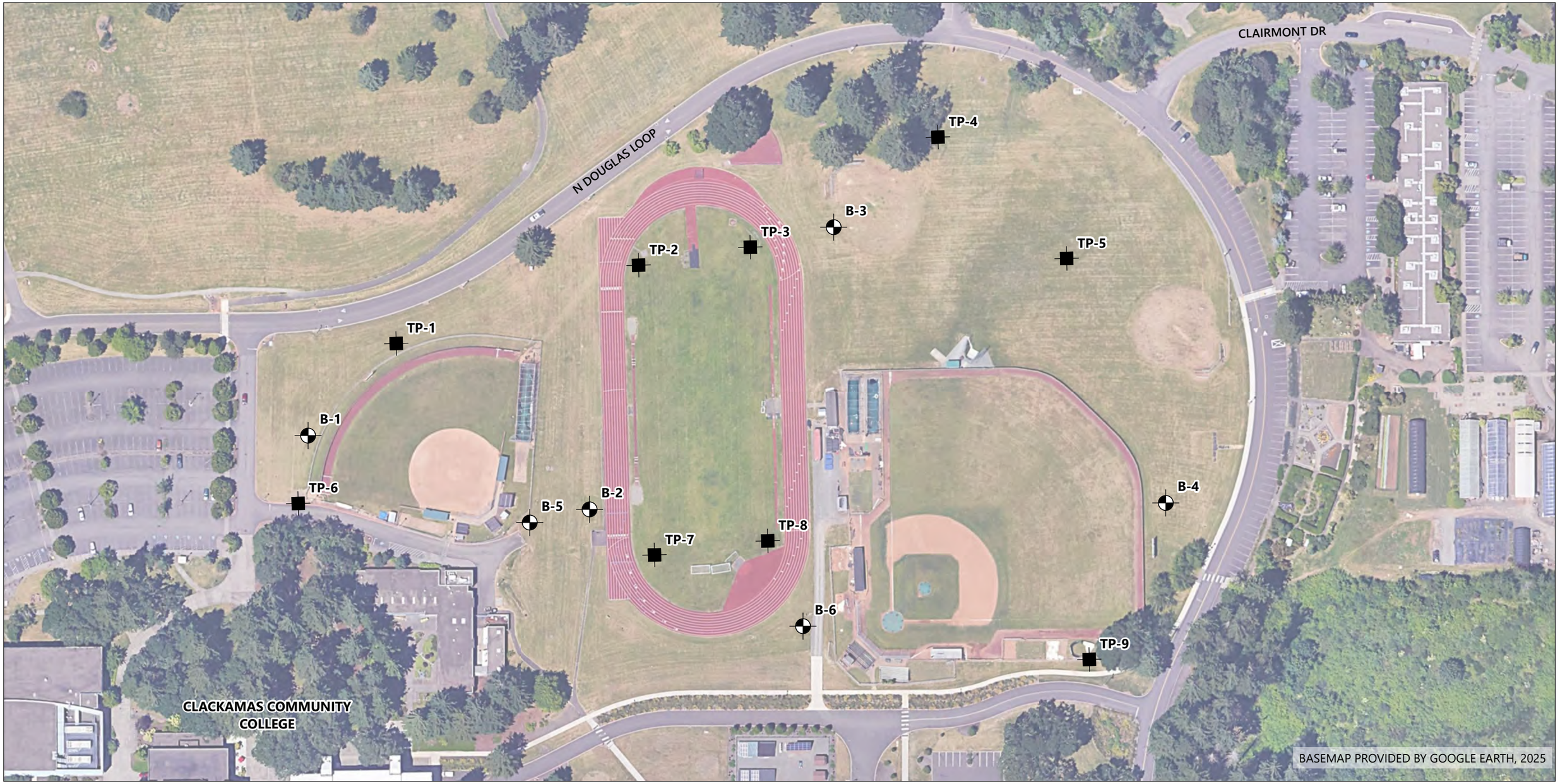
VICINITY MAP

JUL. 2025 JOB NO. 7090-A FIG. 1



TARKETT SPORTS
CLACKAMAS COMMUNITY COLLEGE
ATHLETIC MASTER PLAN

CONCEPTUAL PLAN



LEGEND:

- APPROXIMATE LOCATION OF BORING COMPLETED BY GRI (MAY 12 AND 13, 2025)
- APPROXIMATE LOCATION OF TEST PIT COMPLETED BY GRI (JUNE 9 AND 10, 2025)

N

0 125 250

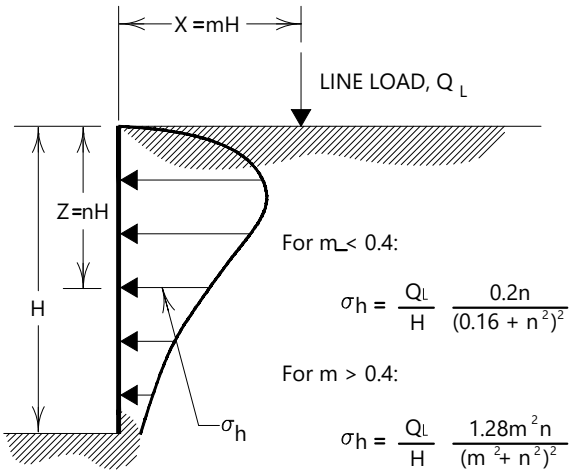
1 INCH = 125 FEET

GRI

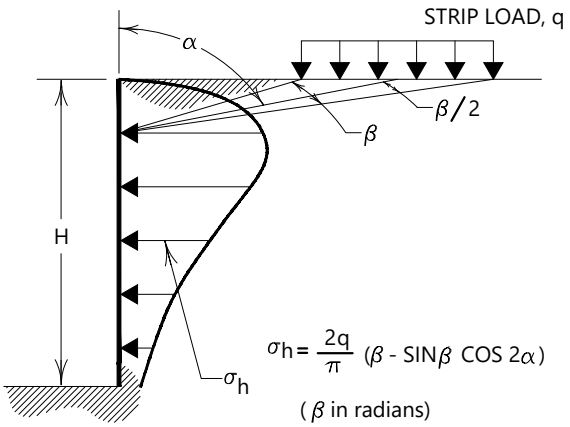
TARKETT SPORTS
CLACKAMAS COMMUNITY COLLEGE
ATHLETIC MASTER PLAN

SITE MAP

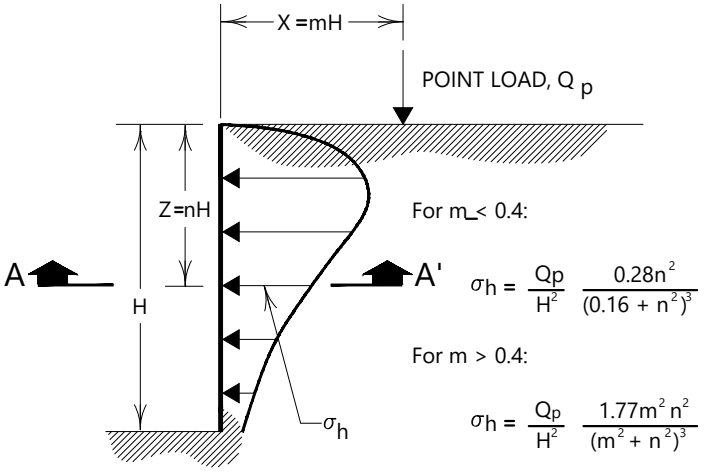
JUL. 2025 JOB NO. 7090-A FIG. 3

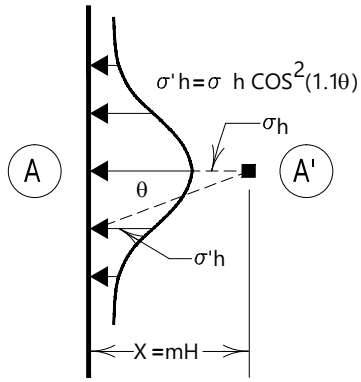


LINE LOAD PARALLEL TO WALL



STRIP LOAD PARALLEL TO WALL





DISTRIBUTION OF HORIZONTAL PRESSURES

VERTICAL POINT LOAD

NOTES:

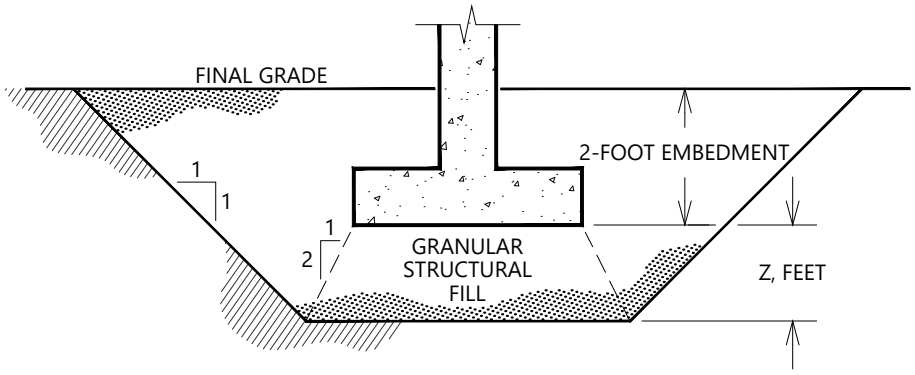
1. THESE GUIDELINES APPLY TO RIGID WALLS WITH POISSON'S RATIO ASSUMED TO BE 0.5 FOR BACKFILL MATERIALS.
2. LATERAL PRESSURES FROM ANY COMBINATION OF THE ABOVE LOADS MAY BE DETERMINED BY THE PRINCIPLE OF SUPERPOSITION.

GRI

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ATHLETIC MASTER PLAN

SURCHARGE-INDUCED LATERAL PRESSURE

JUL. 2025 JOB NO. 7090-A FIG. 4



LIMITS OF OVEREXCAVATION

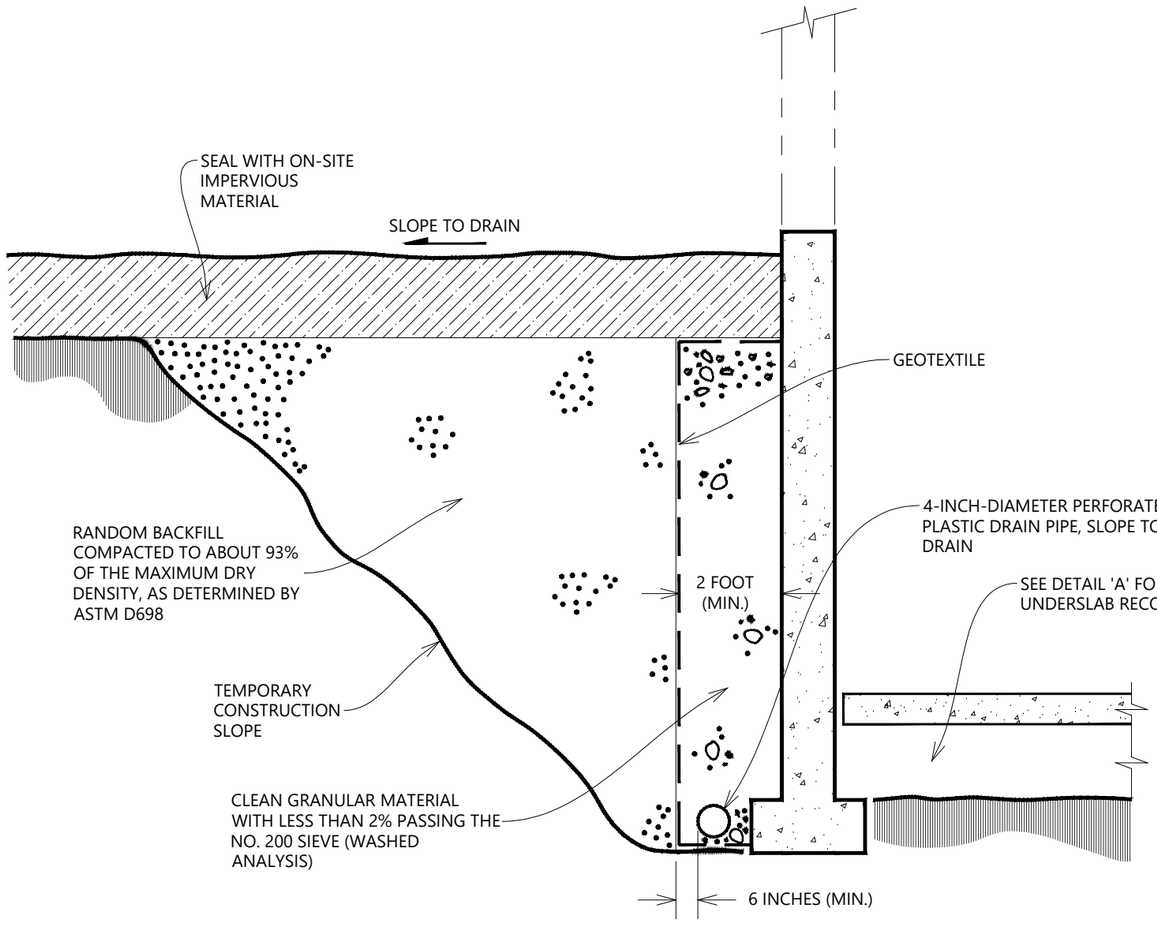
NOT TO SCALE

GRI

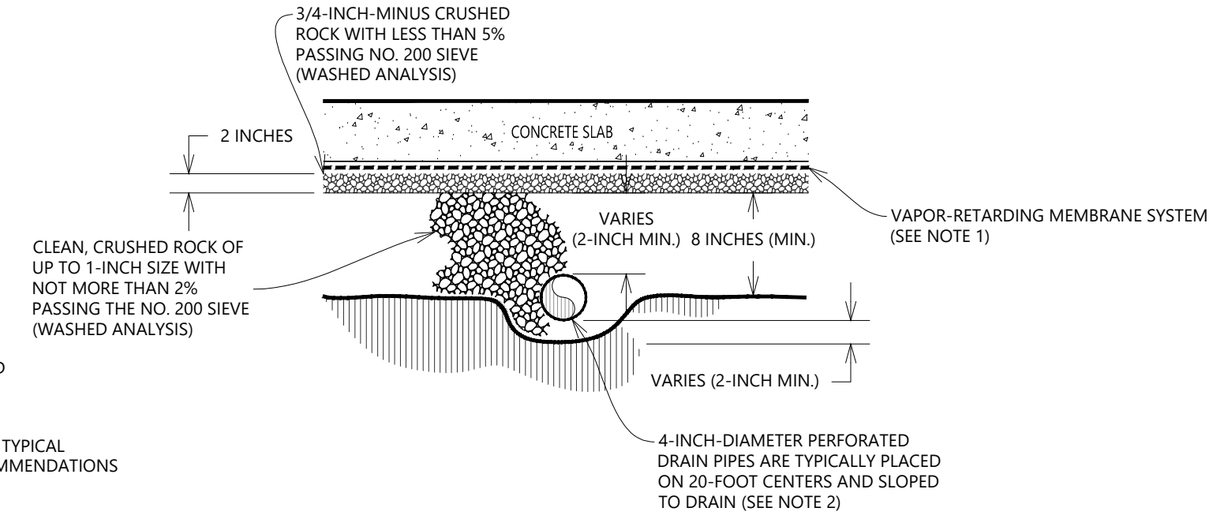
TARKETT SPORTS
CLACKAMAS COMMUNITY COLLEGE
ATHLETIC MASTER PLAN

OVEREXCAVATION DETAIL

JUL. 2025 JOB NO. 7090-A FIG. 5



PERIMETER DRAIN



DETAIL 'A'
NOT TO SCALE

UNDERSLAB DRAIN

NOTES:

1. A VAPOR-RETARDING MEMBRANE SYSTEM IS RECOMMENDED FOR MOISTURE-SENSITIVE AREAS.
2. DETAILS REGARDING INSTALLATION OF THE SYSTEM SHOULD BE REVIEWED BY THE DESIGN TEAM.

GRI

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TYPICAL SUBDRAINAGE DETAILS

JUL. 2025 JOB NO. 7090-A FIG. 6

APPENDIX A

Field Explorations and Laboratory Testing

APPENDIX A

FIELD EXPLORATIONS AND LABORATORY TESTING

A.1 FIELD EXPLORATIONS

A.1.1 General

Subsurface materials and conditions at the site were evaluated on May 12 and 13, 2025, with six borings designated B-1 through B-6, and on June 9 and 10, 2025, with nine test pits designated TP-1 through TP-9. The borings were advanced to depths of about 10.1 feet to 40.1 feet below existing site grades at the approximate locations shown on the Site Map, Figure 2. The subsurface exploration work was coordinated and documented by a GRI representative, who maintained a log of the materials and conditions disclosed during the course of the work. A description of the subsurface explorations completed for this project is provided below.

A.1.2 Machine-Drilled Borings

The borings were completed using a track-mounted drill rig provided and operated by Western States Soil Conservation, Inc., of Hubbard, Oregon. Disturbed and undisturbed soil samples were obtained using a standard split-spoon sampler, and the Standard Penetration Test (SPT) was conducted by driving the sampler into the soil at a distance of 18 inches using a 140-pound hammer dropped 30 inches. The number of blows required to drive the standard split-spoon sampler the last 12 inches is known as the Standard Penetration Resistance (SPT N-value). SPT N-values provide a measure of the relative density of cohesionless soils and the relative consistency of cohesive soils. Samples obtained from the borings were placed in airtight containers and returned to our laboratory for further classification and testing. In addition, relatively undisturbed soil samples were obtained from the borings by pushing a 3-inch outside-diameter Shelby tube into the undisturbed soil at a distance of up to 24 inches using the hydraulic ram of the drill rig. The soil exposed at the ends of the Shelby tube was examined and classified in the field. After classification, the tubes were sealed with rubber caps and returned to our laboratory for further examination and testing.

Logs of the borings are provided on Figures 1A through 6A. The logs present a descriptive summary of the various types of materials encountered in the borings and note the depth at which the materials and/or characteristics of the materials change. To the right of the descriptive summary, the numbers and types of samples are indicated. To the right of the material description, SPT N-values are shown graphically, along with other laboratory test data, where applicable. The terms and symbols used to describe the materials encountered in the borings are defined in Tables 1A and 2A and the attached legend.

A.1.3 Test Pits

Nine test pit excavations, designated TP-1 through TP-9, were advanced to depths of about 3.3 feet to 8.3 feet using a track-mounted excavator provided and operated by Western States Soil Conservation, Inc., of Hubbard, Oregon. Disturbed samples were collected in the test pits at selected depths, typically using a hand trowel on the sidewall of the test pit or by collecting material from the excavator bucket after digging. Samples obtained from the test pits were placed in airtight sample bags and returned to our laboratory for further examination and testing.

Logs of the test pits are provided on Figures 7A through 15A. Each log presents a summary of the various types of materials encountered in the test pits and notes the depths at which the materials and/or characteristics of the materials change. To the right of the descriptive summary, the numbers and types of samples are indicated. Farther to the right, the natural moisture contents, where applicable, are shown graphically. The terms and symbols used to describe the materials encountered in the test pits are defined in Tables 1A and 2A and the attached legend.

A.2 LABORATORY TESTING

A.2.1 General

The samples obtained from the borings were examined in our laboratory, where the physical characteristics of the samples were noted and the field classifications modified where necessary. At the time of classification, the natural moisture content of each sample was determined. Additional testing included grain-size analyses, Torvane shear-strength measurements, dry unit weight determinations, and one-dimensional consolidation testing. A summary of the laboratory test results is provided in Table 3A. The following sections describe the testing program in more detail.

A.2.2 Natural Moisture Content

Natural moisture content determinations were performed in conformance with ASTM International (ASTM) D22216. The results are shown on Figures 1A through 15A and summarized in Table 3A.

A.2.3 Grain Size Analysis (Washed-Sieve Method)

To assist in classification of the soils, samples of known dry weight were washed over a No. 200 sieve. The material retained on the sieve is oven-dried and weighed. The percentage of material passing the No. 200 sieve is then calculated. The results are shown on Figures 1A through 6A, where applicable, and summarized in Table 3A.

A.2.4 Atterberg Limits

Atterberg limits tests were performed for selected samples in conformance with ASTM D4318. The test results are shown on the Plasticity Chart, Figure 16A, and summarized in Table 3A.

A.2.5 Torvane Shear Strength

The approximate undrained shear strength of undisturbed soil samples was measured using the Torvane shear device. The Torvane is a handheld apparatus with vanes, which are inserted into the soil. The torque required to fail the soil in shear around the vanes is measured using a calibrated spring. The results of the Torvane shear-strength measurements are shown on Figures 1A through 6A.

A.2.6 Undisturbed Unit Weight

The unit weight (or density) of an undisturbed soil sample was determined in the laboratory in conformance with ASTM D2937. The results are shown on Figures 1A through 6A and summarized in Table 3A.

A.2.7 One-Dimensional Consolidation

A one-dimensional consolidation test was performed in conformance with ASTM D2435 on a relatively undisturbed soil sample extruded from a Shelby tube to obtain data on the compressibility characteristics and stress history of the soil. The test results are summarized on Figure 13A in the form of a curve showing percent strain versus applied effective stress. The initial dry unit weight and moisture content of the sample are also shown on the figure.

Table 1A

GUIDELINES FOR DESCRIPTION OF SOIL[1]

Description of Relative Density for Cohesionless (Coarse-Grained) Soils

Relative Density	Standard Penetration Resistance (N-values) blows/foot (ft)	3-inch Sampler, 140-lb hammer approx. N-Value (blows/ft)[2]	3-inch Sampler, 300-lb hammer approx. N-Value (blows/ft)[1]
Very Loose	0 - 4	0 – 10	0 – 5
Loose	4 - 10	10 – 24	5 – 11
Medium Dense	10 - 30	24 – 73	11 – 34
Dense	30 - 50	73 – 122	34 – 57
Very Dense	over 50	over 122	over 57

Description of Relative Consistency for Cohesive (Fine-Grained) Soils

Relative Consistency	Standard Penetration Resistance (N-values) blows/ft	3-inch Sampler, 140 lb hammer approx. N-Value (blows/ft)[1]	3-inch Sampler, 300 lb hammer approx. N-Value (blows/ft)[2]	Torvane or Undrained Shear Strength, tsf
Very Soft	0 - 2	0 – 3	0 – 1	less than 0.125
Soft	2 - 4	3 – 6	1 – 3	0.125 - 0.25
Medium Stiff	4 - 8	6 – 12	3 – 6	0.25 - 0.50
Stiff	8 - 15	12 – 23	6 – 11	0.50 - 1.0
Very Stiff	15 - 30	23 – 46	11 – 22	1.0 - 2.0
Hard	30 – 60	46 – 92	22 – 43	over 2.0
Very Hard	over 60	over 92	over 43	

Grain-Size Classification	Modifier for Subclassification		
		Primary Constituent SAND or GRAVEL	Primary Constituent SILT or CLAY
Boulders: >12 inches *Cobbles:* 3 inches - 12 inches *Gravel:* ¼ inch - ¾ inch (fine) ¾ inch - 3 inches (coarse) *Sand:* No. 200 - No. 40 sieve (fine) No. 40 - No. 10 sieve (medium) No. 10 - No. 4 sieve (coarse) *Silt/Clay:* Pass No. 200 sieve	Adjective	Percentage of Other Material (By Weight)	
	trace:	<15 (sand, gravel)	<15 (sand, gravel)
	some:	15 - 30 (sand, gravel)	15 - 30 (sand, gravel)
	sandy, gravelly:	30 - 50 (sand, gravel)	30 - 50 (sand, gravel)
	trace:	<5 (silt, clay)	*Relationship of clay and silt determined by plasticity index test*
	some:	5 - 12 (silt, clay)	
	silty, clayey:	12 - 50 (silt, clay)	

1. Soil descriptions are developed using visual-manual procedures (ASTM D2488) and generally follow ODOT Geotechnical Design Manual (Chapter 5) guidelines.
2. Oversized sampler (OD = 3 inches, ID = 2.4 inches) blow counts converted to SPT N-Value using equations provided by Burmister, D.M., 1948, The importance and practical use of relative density in soil mechanics: Proceedings of ASTM, v. 48:1249.

Table 2A

GUIDELINES FOR CLASSIFICATION OF ROCK

Relative Rock Weathering Scale

Term	Field Identification
Fresh	Crystals are bright. Discontinuities may show some minor surface staining. No discoloration in rock fabric.
Slightly Weathered	Rock mass is generally fresh. Discontinuities are stained and may contain clay. Some discoloration in rock fabric. Decomposition extends up to 1 in. into rock.
Moderately Weathered	Rock mass is decomposed 50% or less. Significant portions of rock show discoloration and weathering effects. Crystals are dull and show visible chemical alteration. Discontinuities are stained and may contain secondary mineral deposits.
Predominantly Decomposed	Rock mass is more than 50% decomposed. Rock can be excavated with geologist's pick. All discontinuities exhibit secondary mineralization. Complete discoloration of rock fabric. Surface of core is friable and usually pitted due to washing out of highly altered minerals by drilling water.
Decomposed	Rock mass is completely decomposed. Original rock "fabric" may be evident. May be reduced to soil with hand pressure.

Relative Rock Strength Scale

Term	Hardness Designation	Field Identification	Approximate Unconfined Compressive Strength
Extremely Weak	R0	Can be indented with difficulty by thumbnail. May be moldable or friable with finger pressure.	35 - 150 psi
Very Weak	R1	Crumbles under firm blows with point of a geology pick. Can be peeled by a pocketknife and scratched with fingernail.	150 - 725 psi
Weak	R2	Can be peeled by a pocketknife with difficulty. Cannot be scratched with fingernail. Shallow indentation made by firm blow of geology pick.	725 – 3,500 psi
Medium Strong	R3	Can be scratched by knife or pick. Specimen can be fractured with a single firm blow of hammer/geology pick.	3,500 – 7,250 psi
Strong	R4	Can be scratched with knife or pick only with difficulty. Several hard hammer blows required to fracture specimen.	7,250 – 14,500 psi
Very Strong	R5	Cannot be scratched by knife or sharp pick. Specimen requires many blows of hammer to fracture or chip. Hammer rebounds after impact.	14,500 – 36,250 psi
Extremely Strong	R6	Can only be chipped with a rock hammer	>36,250 psi

RQD and Rock Quality

Relation of RQD and Rock Quality	
RQD (Rock Quality Designation), %	Description of Rock Quality
0 - 25	Very Poor
25 - 50	Poor
50 - 75	Fair
75 - 90	Good
90 - 100	Excellent

Terminology for Planar Surface		
Bedding	Joints and Fractures	Spacing
Laminated	Very Close	< 2 in.
Thin	Close	2 in. – 12 in.
Medium	Moderately Close	12 in. – 36 in.
Thick	Wide	36 in. – 10 ft
Massive	Very Wide	> 10 ft

Table 3A

SUMMARY OF LABORATORY RESULTS

Sample Information						Atterberg Limits			
Location	Sample	Depth, ft	Elevation, ft	Moisture Content, %	Dry Unit Weight, pcf	Liquid Limit, %	Plasticity Index, %	Fines Content, %	Soil Type
B-1	S-1	2.5	--	29	--	--	--	81	Silty CLAY
	S-2	5.0	--	51	--	--	--	--	Silty CLAY
	S-3	7.5	--	58	--	--	--	--	Clayey SILT
	S-4	10.0	--	57	--	--	--	--	Clayey SILT
	S-5	12.5	--	56	--	--	--	--	Clayey SILT
	S-6	15.0	--	65	--	--	--	--	Clayey SILT
	S-7	20.0	--	74	--	--	--	60	Clayey SILT
B-2	S-1	2.5	--	61	--	69	31	--	Clayey SILT
B-3	S-1A	2.5	--	38	--	--	--	--	Silty CLAY
	S-1B	3.0	--	19	--	--	--	--	Sandy SILT
	S-2	5.0	--	15	--	--	--	25	BASALT
B-4	S-1	2.5	--	39	--	55	20	--	Clayey SILT
	S-2	5.0	--	44	--	--	--	--	Clayey SILT
B-5	S-2A	5.5	--	41	--	--	--	36	Silty SAND
	S-2B	6.0	--	31	--	--	--	68	Sandy SILT
	S-2C	6.3	--	28	101	49	15	--	Sandy SILT
	S-3	7.0	--	44	--	--	--	--	Sandy SILT
	S-4	10.0	--	54	--	--	--	--	Clayey SILT
	S-5	12.5	--	17	--	--	--	28	Silty GRAVEL
	S-6	15.0	--	29	--	--	--	--	Silty GRAVEL
B-6	S-1	2.5	--	30	--	--	--	--	Silty CLAY
	S-2	5.0	--	31	--	--	--	63	Silty CLAY
TP-1	X-1	1.0	--	17	--	--	--	--	Clayey SILT
	X-2	2.0	--	28	--	--	--	--	Clayey SILT
	X-3	4.8	--	40	--	--	--	--	BASALT
TP-2	X-1	0.8	--	28	--	--	--	--	FILL
	X-2	1.5	--	28	--	--	--	--	SILT
	X-3	2.0	--	27	--	--	--	--	SILT
TP-3	X-1	1.0	--	28	--	--	--	--	Silty CLAY
	X-2	2.0	--	27	--	--	--	--	Clayey SILT
TP-4	X-1	0.8	--	14	--	--	--	--	Clayey SILT
	X-2	1.5	--	22	--	--	--	--	Clayey SILT
	X-3	2.5	--	27	--	--	--	--	Clayey SILT
	X-4	3.8	--	28	--	--	--	--	Clayey SILT
	X-5	4.8	--	45	--	--	--	--	BASALT
TP-5	X-1	1.0	--	11	--	--	--	--	Clayey SILT
	X-2	2.5	--	22	--	--	--	--	Clayey SILT
	X-3	3.5	--	23	--	--	--	--	Clayey SILT
	X-4	5.0	--	29	--	--	--	--	Clayey SILT
	X-5	5.5	--	28	--	--	--	--	Clayey SILT

GRI

Table 3A

SUMMARY OF LABORATORY RESULTS

Sample Information						Atterberg Limits			
Location	Sample	Depth, ft	Elevation, ft	Moisture Content, %	Dry Unit Weight, pcf	Liquid Limit, %	Plasticity Index, %	Fines Content, %	Soil Type
TP-5	X-6	8.0	--	45	--	--	--	--	BASALT
TP-6	X-1	0.5	--	28	--	--	--	--	Clayey SILT
	X-2	1.3	--	21	--	--	--	--	Clayey SILT
	X-3	2.3	--	30	--	--	--	--	Clayey SILT
TP-7	X-1	0.5	--	33	--	--	--	--	Silty CLAY
	X-2	1.0	--	34	--	--	--	--	Silty CLAY
	X-3	2.0	--	25	--	--	--	--	Clayey SILT
	X-4	3.0	--	33	--	--	--	--	BASALT
TP-8	X-1	1.0	--	26	--	--	--	--	Clayey SILT
	X-2	3.0	--	30	--	--	--	--	Clayey SILT
	X-3	4.0	--	29	--	--	--	--	BASALT
	X-4	5.0	--	35	--	--	--	--	BASALT
TP-9	X-1	1.0	--	18	--	--	--	--	Silty CLAY
	X-2	2.0	--	21	--	--	--	--	Silty CLAY
	X-3	4.0	--	24	--	--	--	--	Clayey SILT
	X-4	4.5	--	34	--	--	--	--	BASALT

BORING AND TEST PIT LOG LEGEND

SOIL SYMBOLS

Symbol	Typical Description
	LANDSCAPE MATERIALS
	FILL
	GRAVEL; clean to some silt, clay, and sand
	Sandy GRAVEL; clean to some silt and clay
	Silty GRAVEL; up to some clay and sand
	Clayey GRAVEL; up to some silt and sand
	SAND; clean to some silt, clay, and gravel
	Gravelly SAND; clean to some silt and clay
	Silty SAND; up to some clay and gravel
	Clayey SAND; up to some silt and gravel
	SILT; up to some clay, sand, and gravel
	Gravelly SILT; up to some clay and sand
	Sandy SILT; up to some clay and gravel
	Clayey SILT; up to some sand and gravel
	CLAY; up to some silt, sand, and gravel
	Gravelly CLAY; up to some silt and sand
	Sandy CLAY; up to some silt and gravel
	Silty CLAY; up to some sand and gravel
	PEAT

BEDROCK SYMBOLS

Symbol	Typical Description
	BORING LAVA
	MUDSTONE
	SILTSTONE
	SANDSTONE

SURFACE MATERIAL SYMBOLS

Symbol	Typical Description
	Asphalt concrete PAVEMENT
	Portland cement concrete PAVEMENT
	Crushed rock BASE COURSE

SAMPLER SYMBOLS

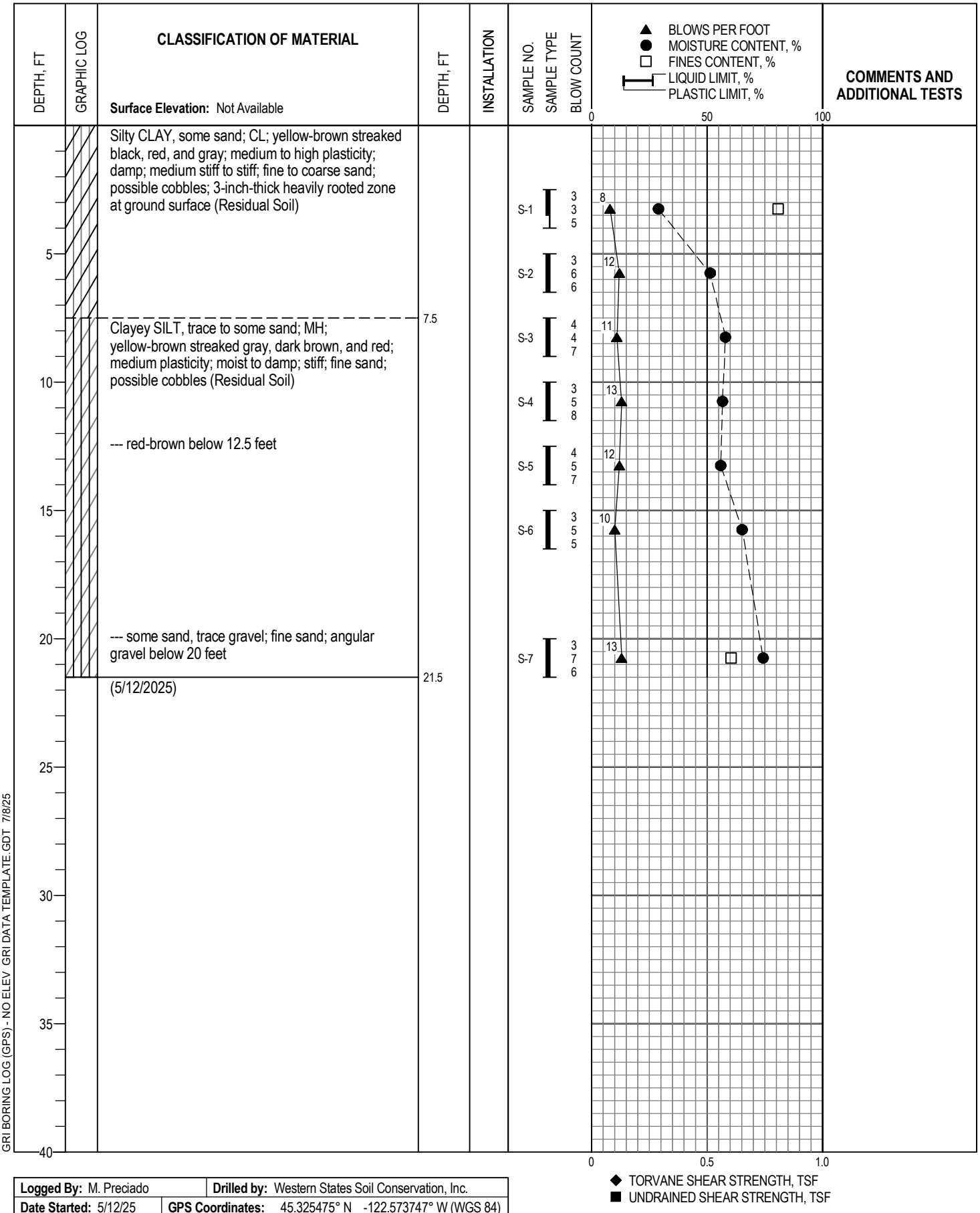
Symbol	Sampler Description
	2.0 in. O.D. split-spoon sampler and Standard Penetration Test with recovery (ASTM D1586)
	Shelby tube sampler with recovery (ASTM D1587)
	3.0 in. O.D. split-spoon sampler with recovery (ASTM D3550)
	Grab Sample
	Rock core sample interval
	Sonic core sample interval
	Push probe sample interval

INSTALLATION SYMBOLS

Symbol	Symbol Description
	Flush-mount monument set in concrete
	Concrete, well casing shown where applicable
	Bentonite seal, well casing shown if applicable
	Filter pack, machine-slotted well casing shown where applicable
	Grout, vibrating-wire transducer cable shown where applicable
	Vibrating-wire pressure transducer
	1-in.-diameter solid PVC
	1-in.-diameter hand-slotted PVC
	Grout, inclinometer casing shown where applicable

FIELD MEASUREMENTS

Symbol	Typical Description
	Groundwater level during drilling and date measured
	Groundwater level after drilling and date measured
	Rock/sonic core or push probe recovery (%)
	Rock quality designation (RQD, %)

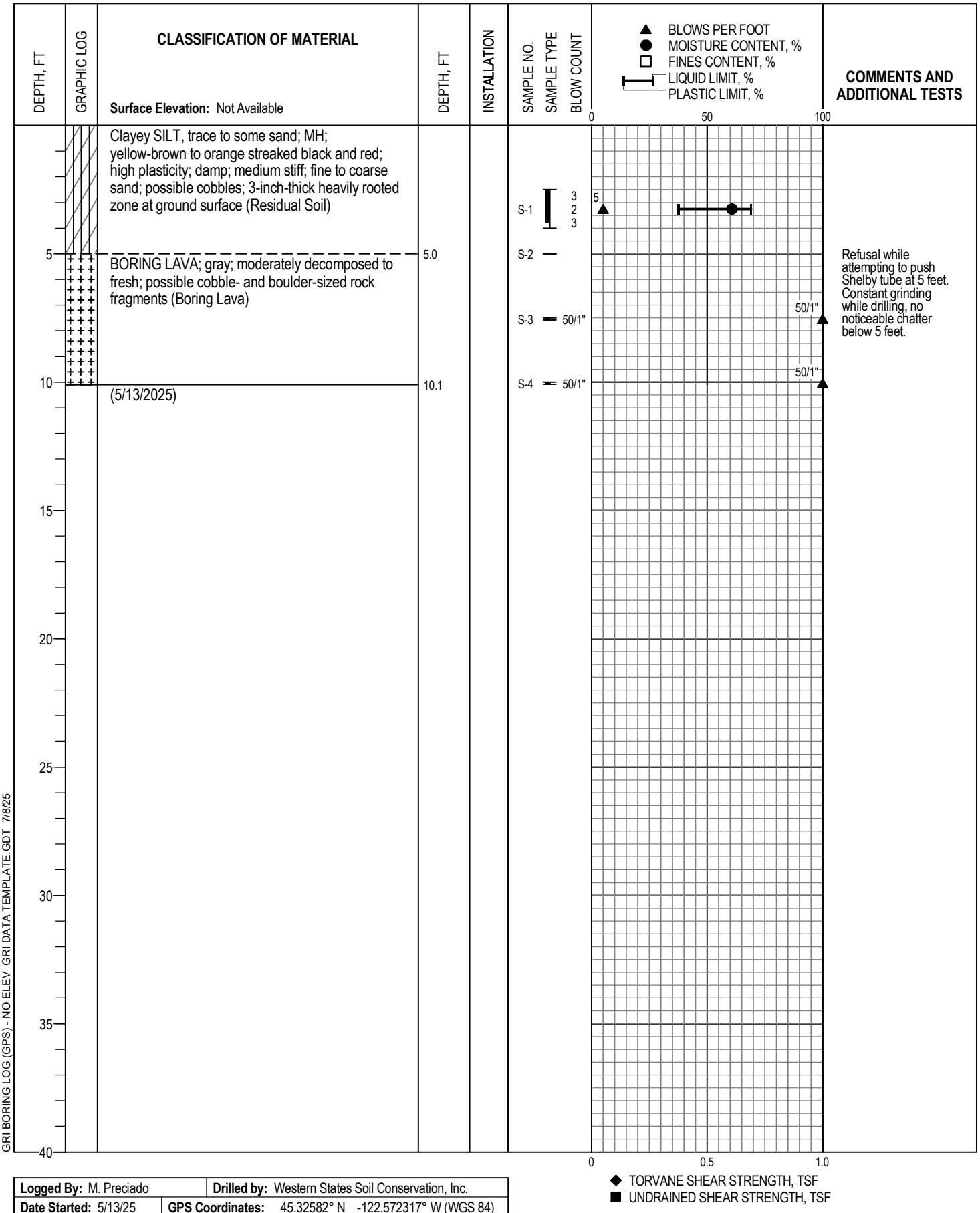


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/12/25	**GPS Coordinates:** 45.325475° N -122.573747° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-1

JUL. 2025 JOB NO. 7090-A FIG. 1A

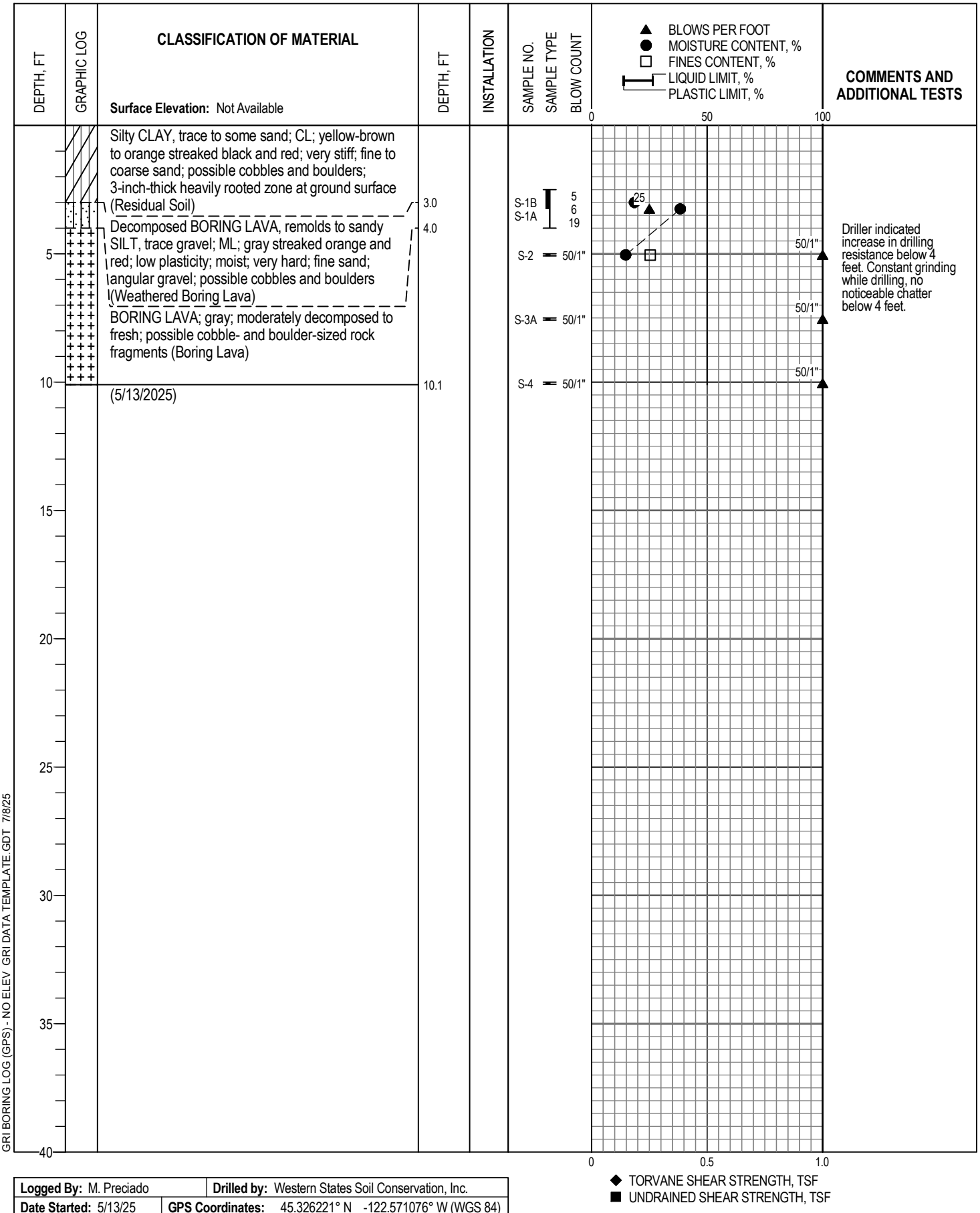


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.32582° N -122.572317° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-2

JUL. 2025 JOB NO. 7090-A FIG. 2A

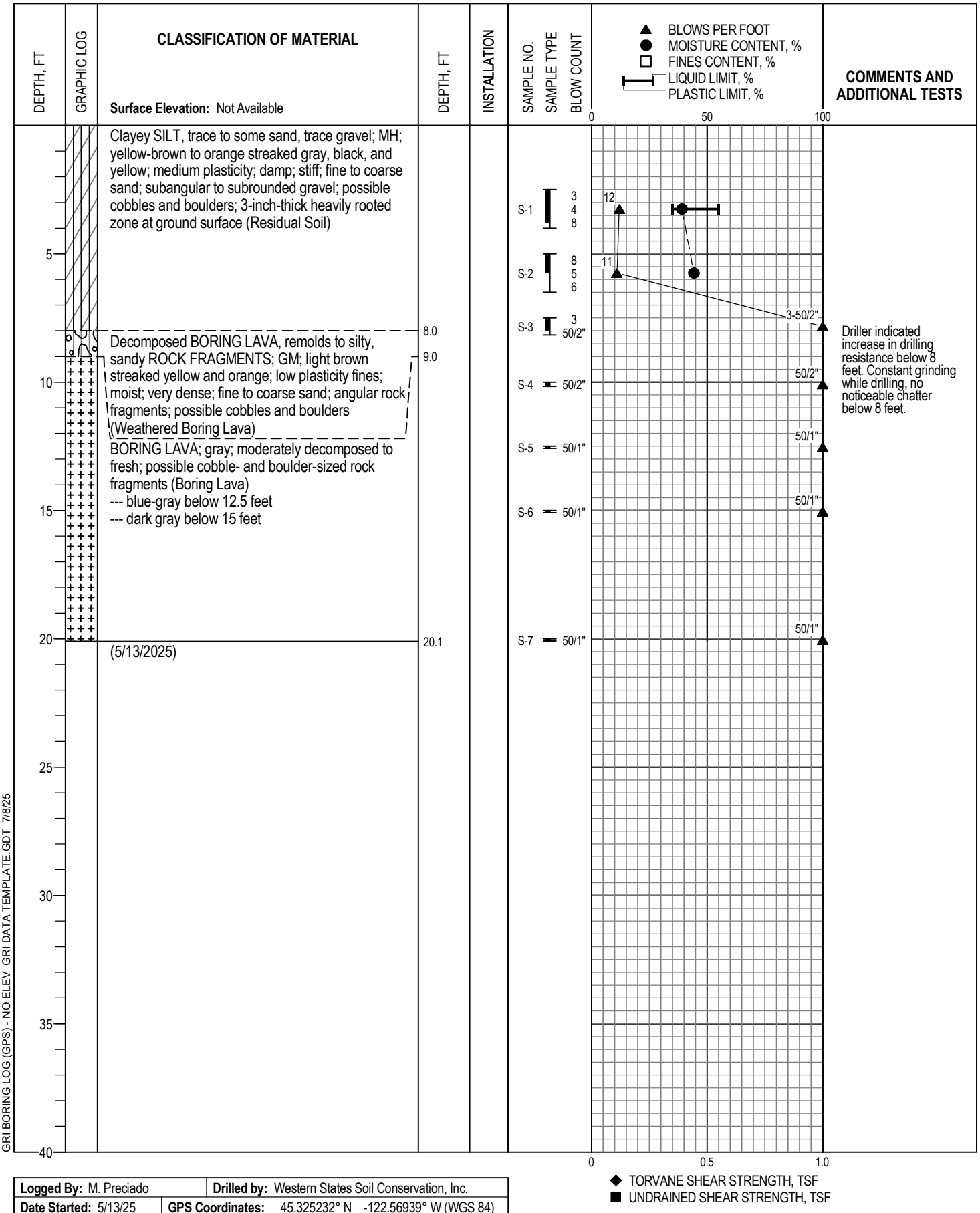


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.326221° N -122.571076° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-3

JUL. 2025 JOB NO. 7090-A FIG. 3A

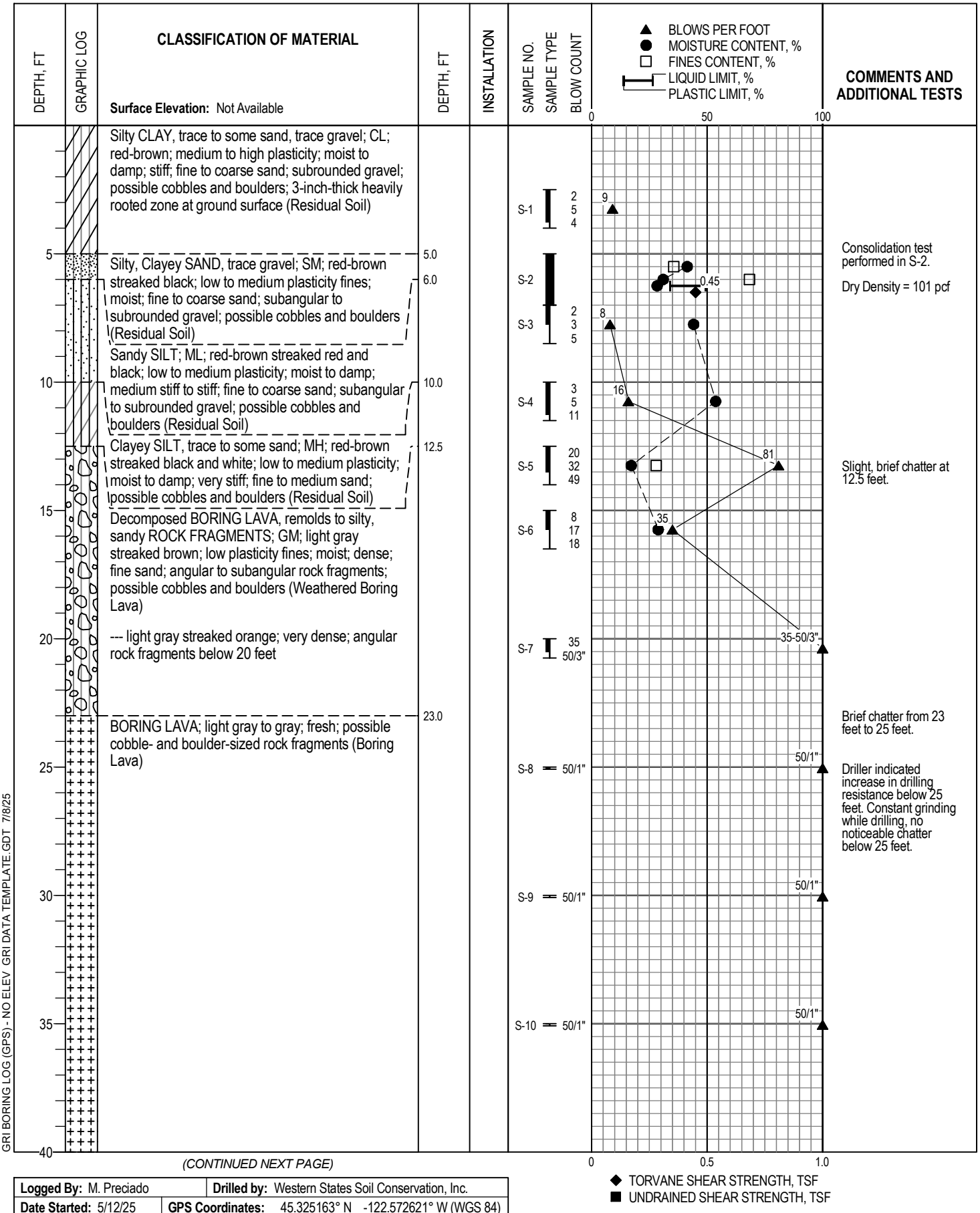


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.325232° N -122.56939° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-4

JUL. 2025 JOB NO. 7090-A FIG. 4A



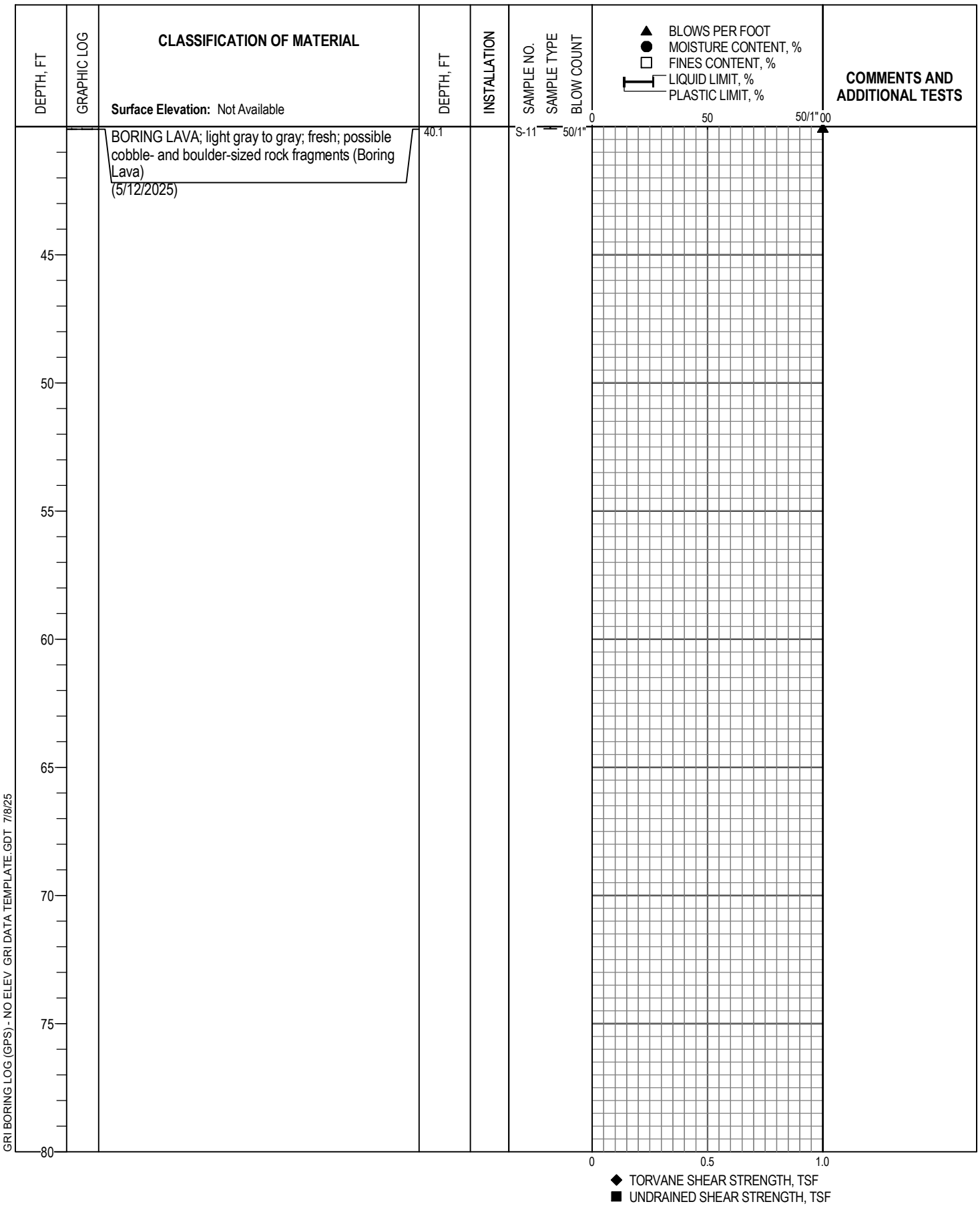
(CONTINUED NEXT PAGE)

GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/12/25	**GPS Coordinates:** 45.325163° N -122.572621° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-5

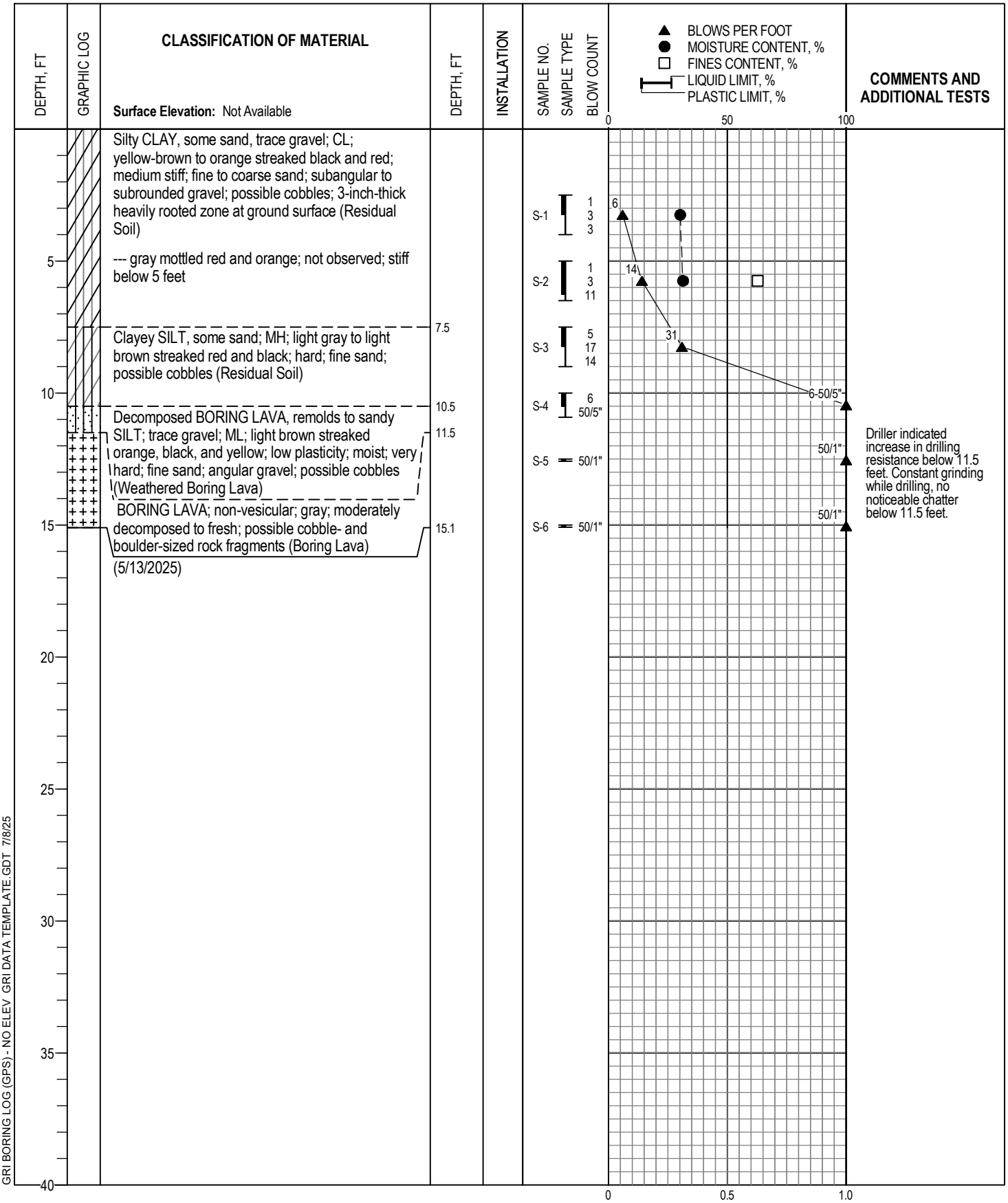
JUL. 2025 JOB NO. 7090-A FIG. 5A



GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

BORING B-5

JUL. 2025 JOB NO. 7090-A FIG. 5A



GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.324791° N -122.571233° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-6

JUL. 2025 JOB NO. 7090-A FIG. 6A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-1 **Surface Elevation:** Not Available

Clayey SILT, trace to some sand, trace gravel, contains organics; MH; brown to red-brown; medium to high plasticity; dry; fine to coarse sand; subangular to subrounded gravel; organics consist of fine scattered roots; 3-inch-thick heavily rooted zone at ground surface (Residual Soil) — 3.0

---moist below 1.5 feet

Decomposed BORING LAVA, remolds to clayey SILT, trace to some sand; MH; red-brown; medium to high plasticity; moist; fine sand (Weathered Boring Lava) — 4.8

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces; moderately weathered; extremely weak to very weak (R0-R1); excavates to subangular rock fragments in a clayey silt to silty clay matrix (Boring Lava) — 6.5

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 6.5 feet

X-1, X-2, X-3, X-4

10-inch maximum observed rock fragment diameter during excavation of Boring Lava.
No seepage observed at the bottom of excavation.

0 – 0.5 – 1.0 ◆ TORVANE SHEAR STRENGTH, TSF

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.325805° N -122.573299° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-2 **Surface Elevation:** Not Available

Silty CLAY to Clayey SILT; trace to some sand; trace gravel; MH; red-brown and iron-stained; medium to high plasticity; dry; fine to coarse sand; angular to subangular gravel (Fill) — 1.5

SILT, trace sand; ML; gray; low to medium plasticity; moist; fine sand (Undifferentiated Sediment) — 2.5

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces; predominantly decomposed; very weak (R1); excavates to subangular rock fragments in a clayey silt to silty clay matrix (Boring Lava)

---moderately weathered to predominantly decomposed; very weak to weak (R1-R2) below 6.8 feet — 7.0

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 7 feet

X-1, X-2, X-3, X-4, X-5

12-inch maximum observed rock fragment diameter during excavation of Boring Lava.
Light seepage observed at the bottom of excavation.

0 – 0.5 – 1.0 ◆ TORVANE SHEAR STRENGTH, TSF

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.326085° N -122.572067° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 7A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-3 **Surface Elevation:** Not Available

SAND, some silt to silty; SP-SM; light gray; nonplastic silt; dry; fine to medium; micaceous; 6-inch-thick heavily rooted zone at ground surface (Fill) — 1.0

Silty Clay to Clayey SILT; trace to some sand; CL; gray mottled brown; low to medium plasticity; moist; medium stiff; fine to coarse sand; micaceous (Undifferentiated Sediment) — 2.0

Clayey SILT, trace sand; MH; red-brown; medium to high plasticity; moist; very stiff; fine to coarse sand (Residual Soil) — 3.0

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces; predominantly to moderately decomposed; extremely weak to weak (R0-R2); excavates to subangular to rounded rock fragments (Boring Lava) — 3.3

(6/9/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 3.25 feet

5

10

X-1 X-2 X-3

Pea gravel drainaige material observed at 1.0 feet.

10-inch maximum observed rock fragment diameter during excavation of Boring Lava.
No seepage observed at the bottom of excavation.

0 0.5 1.0
◆ TORVANE SHEAR STRENGTH, TSF

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator
Date Started: 6/9/25 | **GPS Coordinates:** 45.326149° N -122.5715° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-4 **Surface Elevation:** Not Available

Clayey SILT, trace sand, contains organics; MH; red-brown and iron-stained; medium to high plasticity; dry; very stiff; fine sand; organics consist of fine scattered roots; 6-inch-thick heavily rooted zone at ground surface (Residual Soil)
---moist below 1.5 feet
---red-brown mottled gray below 2.5 feet — 4.8

BORING LAVA; non-vesicular; gray with iron- and manganese-stained rock surfaces; predominantly decomposed to moderately weathered; very weak to weak (R1-R2); excavates to subangular to rounded rock fragments (Boring Lava)
---moderately weathered below 5 feet — 5.3

(6/9/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 5.3 feet

5

10

X-1 X-2 X-3 X-4 X-5 X-6

6-inch maximum observed rock fragment diameter during excavation of Boring Lava.
Light seepage observed at the bottom of excavation.

0 0.5 1.0
◆ TORVANE SHEAR STRENGTH, TSF

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator
Date Started: 6/9/25 | **GPS Coordinates:** 45.326543° N -122.570546° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 8A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-5 **Surface Elevation:** Not Available

Clayey SILT, trace sand, contains organics; MH; brown; medium plasticity; dry; fine to coarse sand; organics consist of fine scattered roots; 6-inch-thick heavily rooted zone at ground surface (Residual Soil)
---moist to damp below 2 feet
---red-brown and iron-stained; medium stiff below 2.5 feet
---medium stiff to stiff below 3.5 feet

5.0

Decomposed BORING LAVA, remolds to clayey SILT, contains rock fragments; MH; gray mottled orange and brown; medium to high plasticity; damp; rock fragments consist of up to 3-inch-diameter Boring Lava (Weathered Boring Lava)

8.0
8.3

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces and fractures; predominantly decomposed to moderately weathered; weak to medium strong (R2-R3); excavates to subangular to subrounded rock fragments (Boring Lava)

(6/9/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 8.3 feet

5
10
15

X-1 X-2 X-3 X-4 X-5 X-6

0 – 50 – 100

0 – 0.5 – 1.0 TORVANE SHEAR STRENGTH, TSF

4-inch maximum observed rock fragment diameter during excavation of Boring Lava.
Moderate seepage observed at the bottom of excavation.

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator
Date Started: 6/9/25 | **GPS Coordinates:** 45.326109° N -122.569893° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-6 **Surface Elevation:** Not Available

Clayey SILT, trace sand and gravel; MH; brown; medium to high plasticity; dry; fine to coarse sand; rounded gravel; 6-inch-thick heavily rooted zone at ground surface (Residual Soil)
---2.5-foot-diameter boulder observed at 1 foot
---red-brown below 1.5 feet

3.0
3.3

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces and fractures; moderately weathered; weak to medium strong (R2-R3); excavates to angular to subrounded rock fragments (Boring Lava)

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 3.3 feet

5
10

X-1 X-2 X-3 X-4

0 – 50 – 100

0 – 0.5 – 1.0 TORVANE SHEAR STRENGTH, TSF

8-inch maximum observed rock fragment diameter during excavation of Boring Lava.
No seepage observed at the bottom of excavation.

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator
Date Started: 6/10/25 | **GPS Coordinates:** 45.325307° N -122.573852° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 9A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-7 **Surface Elevation:** Not Available

Silty CLAY to Clayey SILT, trace to some sand; MH/CL; gray mottled orange; medium plasticity; moist; medium stiff; fine to medium sand; micaceous; 3-inch-thick heavily rooted zone at ground surface (Undifferentiated Sediment) — 1.3

---stiff below 1 foot — 2.5

Clayey SILT, trace sand; MH; yellow-brown; medium plasticity; moist; medium stiff; fine sand (Residual Soil)

BORING LAVA; non-vesicular; brown and orange; decomposed to predominantly decomposed; yellow-brown mottled gray with iron-stained rock surfaces; extremely weak to very weak (R0-R1); excavates to silty clayey subangular rock fragments (Boring Lava)

---brown and orange below 4 feet

---gray with orange- and black-stained rock surfaces; moderately to slightly weathered; weak to medium strong (R2-R3) below 7.25 feet — 7.5

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 7.5 feet

X-1, X-2, X-3, X-4, X-5, X-6

6-inch maximum observed rock fragment diameter during excavation of Boring Lava.

Moderate seepage observed at the bottom of excavation.

TORVANE SHEAR STRENGTH, TSF (0 – 0.5 – 1.0)

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.325047° N -122.571987° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-8 **Surface Elevation:** Not Available

Silty SAND, contains organics; SM; light gray; dry; fine to medium sand; organics consist of scattered fine roots; micaceous; 4-inch-thick heavily rooted zone at ground surface (Fill) — 0.8

Clayey SILT, trace sand, contains organics; MH; brown mottled red and dark gray; medium to high plasticity; moist; stiff; fine to coarse sand (Residual Soil) — 3.5

---iron-stained; medium stiff; organics not observed below 2 feet

---some gravel below 3 feet

BORING LAVA; non-vesicular; light brown with iron- and manganese-stained rock surfaces; decomposed to predominantly decomposed; extremely weak to very weak (R0-R1); excavates to subangular to rounded rock fragments (Boring Lava) — 7.0

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 7 feet

X-1, X-2, X-3, X-4, X-5

6-inch maximum observed rock fragment diameter during excavation of Boring Lava.

Moderate seepage observed at the bottom of excavation.

TORVANE SHEAR STRENGTH, TSF (0 – 0.5 – 1.0)

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.325108° N -122.57147° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 10A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS
TP-9		**Surface Elevation:** Not Available			0 – 50 – 100	
		Silty CLAY to Clayey SILT, trace sand, contains organics; CL; red-brown to red; medium to high plasticity; moist to damp; very stiff; fine sand; organics consist of fine scattered roots; 5-inch-thick heavily rooted zone at ground surface (Residual Soil)		X-1, X-2		
		Decomposed BORING LAVA; remolds to clayey SILT, trace to some sand; MH; red-brown and iron-stained, streaked black; medium to high plasticity; moist; fine to coarse sand (Weathered Boring Lava)	3.0	X-3, X-4, X-5		6-inch maximum observed rock fragment diameter during excavation of Boring Lava. No seepage observed at the bottom of excavation.
5		BORING LAVA; non-vesicular; brown with orange- and black-stained rock surfaces; predominantly decomposed; extremely weak to very weak; (R0-R1); excavates to subangular to rounded rock fragments (Boring Lava) ---predominantly decomposed to moderately weathered; very weak to weak (R1-R2) (6/9/2025)	4.5 – 5.3			
10		Practical refusal encountered on weak to medium strong Boring Lava at a depth of 5.3 feet				
					0 – 0.5 – 1.0 ◆ TORVANE SHEAR STRENGTH, TSF	

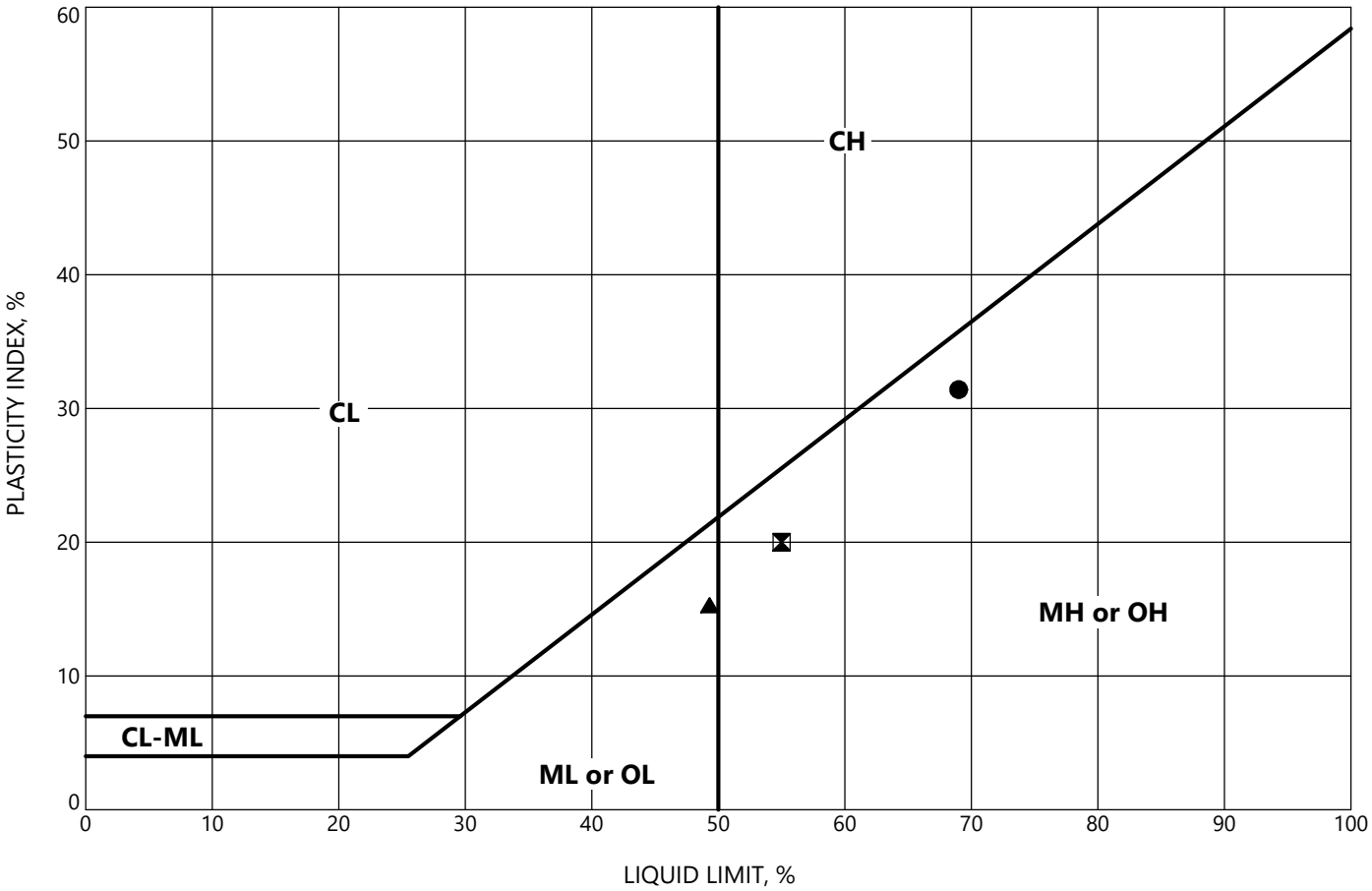
Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/9/25 | **GPS Coordinates:** 45.324671° N -122.569779° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE-GRAINED SOIL GROUPS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
ML	INORGANIC CLAYEY SILTS TO VERY FINE SANDS OF SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY

GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE-GRAINED SOIL GROUPS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
MH	INORGANIC SILTS AND CLAYEY SILT
CH	INORGANIC CLAYS OF HIGH PLASTICITY



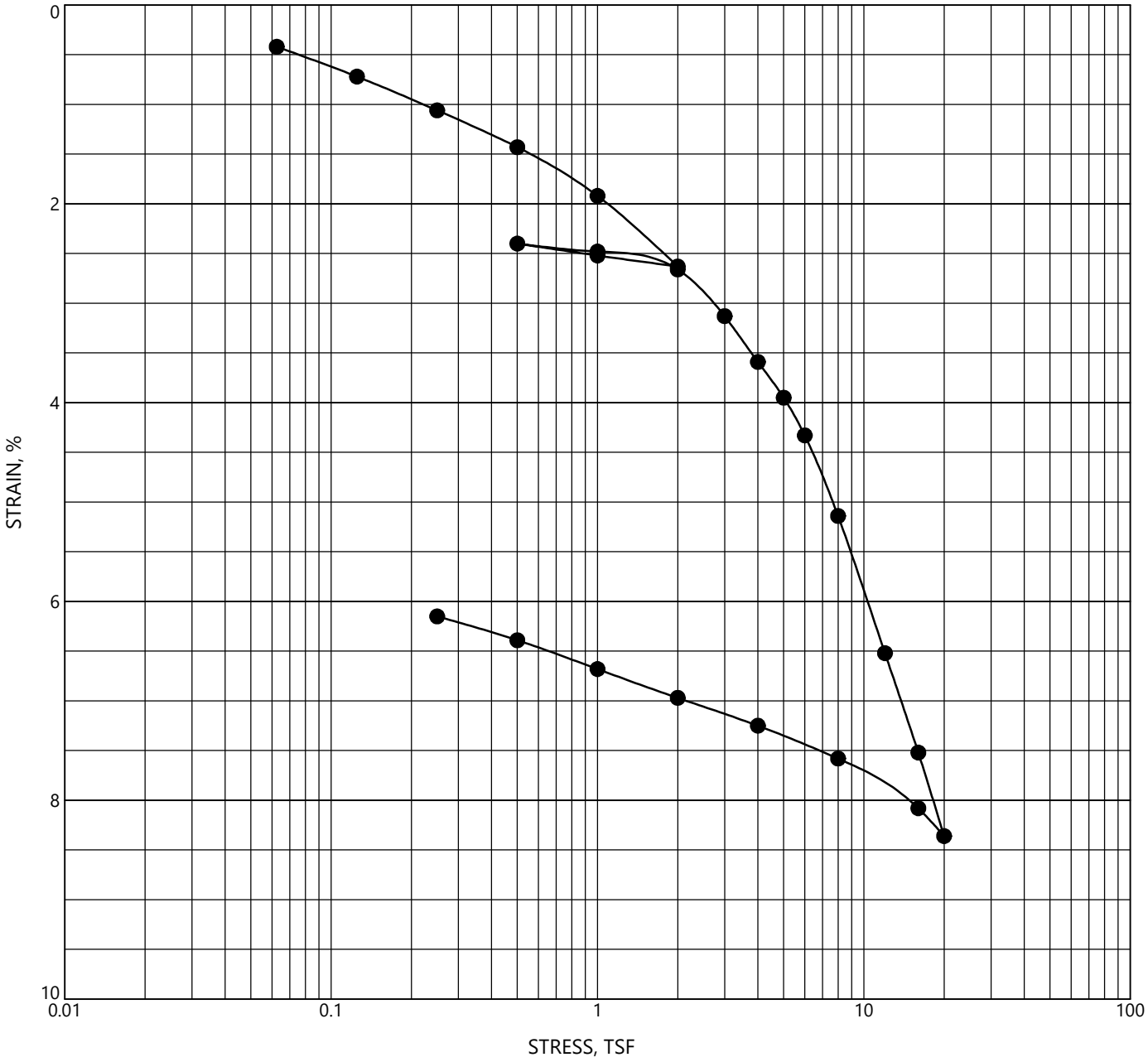
	Location	Sample	Depth, ft	Classification	LL	PL	PI	MC, %
●	B-2	S-1	2.5	Clayey SILT, trace to some sand; MH	69	38	31	61
⊠	B-4	S-1	2.5	Clayey SILT, trace to some sand, trace gravel; MH	55	35	20	39
▲	B-5	S-2C	6.3	Sandy SILT; ML	49	34	15	28

ATTERBERG-PLASTICITY 3 PER PAGE GRI DATA TEMPLATE.GDT 7/3/25

GRI

PLASTICITY CHART

JUL. 2025 JOB NO. 7090-A FIG. 12A



	Location	Sample	Depth, ft	Classification	Initial γ_d, pcf	Initial MC, %
●	B-5	S-2B	6.0	Sandy SILT; ML	99	31

CONSOL STRAIN GRI-0 TO 25-1 PER PAGE GRI DATA TEMPLATE.GDT 7/3/25

GRI

CONSOLIDATION TEST

JUL. 2025 JOB NO. 7090-A FIG. 13A

APPENDIX B

Site-Specific Seismic Hazard Evaluation

APPENDIX B

SITE-SPECIFIC SEISMIC HAZARD EVALUATION

B.1 GENERAL

GRI completed a site-specific seismic hazard evaluation for the proposed Athletic Master Plan project at the Clackamas Community College Oregon City Campus in Oregon City, Oregon. The proposed improvements for the project will include reconstruction of the softball and baseball stadiums, softball/lacrosse field, and the track, as well as supporting structures for the athletic facilities. The primary purpose of this work was to review the potential seismic hazards associated with regional and local seismicity. We understand the project will be designed in accordance with the current 2022 *Oregon Structural Specialty Code* (OSSC) and the American Society of Civil Engineers (ASCE) 7-16 Document, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE 7-16). ASCE 7-16 requires evaluation of seismic hazards based on the Risk-Targeted Maximum Considered Earthquake (MCE_R), which is defined in Chapter 21 of ASCE 7-16 as the response spectrum expected to achieve a 1% probability of building collapse within a 50-year period. We understand that the proposed improvements are considered a risk category of III in accordance with Section 1604.5 of the 2022 OSSC. As large public assembly structures, the proposed improvements meet the criteria for special occupancy and therefore require a site-specific seismic hazard evaluation under the 2022 OSSC.

Our site-specific seismic hazard evaluation was based on the potential for regional and local seismic activity, as described in the existing scientific literature, and the subsurface conditions at the site, as disclosed by the subsurface explorations completed for this project and review of available subsurface information for the project area. Specifically, our work included the following tasks:

1. A review of available literature, including published papers, maps, open-file reports, seismic histories and catalogs, and other sources of information regarding the tectonic setting, regional and local geology, and historical seismic activity that might have a significant effect on the site.

2. Compilation, examination, and evaluation of available subsurface information at the site and surrounding areas, including classification and laboratory analyses of soil samples and shear-wave velocity (V_S) measurements. This information was used to prepare a generalized subsurface profile for the site.

3. Identification of potential seismic sources appropriate for the site and characterization of those sources in terms of magnitude, distance, and acceleration response spectra.

4. Engineering analyses based on the generalized subsurface profile and generalized design earthquakes resulting in conclusions and recommendations concerning the following:

    a. Specific seismic events and characteristic earthquakes that might have a significant effect on the project site

    b. The potential for ground motion amplification at the site

    c. Site-specific acceleration-response spectra for design of structures at the site

This appendix describes the work accomplished and summarizes our conclusions and recommendations regarding seismic design for the project.

B.2 TECTONIC AND GEOLOGIC SETTING

On a regional scale, the site is in the northern limits of the Willamette-Puget Sound lowland trough of the Cascadia convergent tectonic system. The lowland areas consist of broad north-south trending basins in the underlying geologic structure between the Coast Range to the west and the Cascade Mountains to the east. The lowland trough is characterized by alluvial plains with areas of buttes and terraces. The site is approximately 100 kilometers (km) inland from the down-dip edge of the seismogenic extent of the Cascadia Subduction Zone (CSZ), an active convergent-plate boundary along which remnants of the Farallon Plate (the Gorda, Juan de Fuca, and Explorer plates) are being subducted beneath the western edge of the North American continent. The subduction zone is a broad, eastward-dipping zone of contact between the upper portion of the subducting slabs of the Gorda, Juan de Fuca, and Explorer plates and the overriding North American Plate, as shown on the Tectonic Setting Summary, Figure 1B.

On a local scale, the site is in the southeast portion of the Portland Basin, a well-defined structural basin bounded by high-angle, northwest-trending, right-lateral, strike-slip faults. Where applicable, the distribution of these faults relative to the site is shown on the Regional Geologic Map, Figure 2B. Additional faults identified by the U.S. Geological Survey (USGS) are shown on the Local Fault Map, Figure 3B. Information regarding the continuity and potential activity of these faults is lacking due largely to the scale at which geologic mapping in the area has been conducted and the presence of thick, relatively young, basin-filling sediments that obscure underlying structural features. Active faults may be present within the basin, but clear stratigraphic and/or geophysical evidence

regarding their location and extent is not presently available. Additional discussion regarding crustal faults is provided in the Local Crustal Event section below.

B.3 SEISMIC SETTING

B.3.1 General

Because of the proximity of the site to the CSZ and its location within the Portland Basin, three seismic sources contribute to the potential for damaging earthquake motions at the site. Two of these sources are associated with tectonic activity related to the CSZ: subduction-zone events related to sudden slip between the upper surface of the Juan de Fuca plate and the lower surface of the North American plate and subcrustal (intraslab) events related to deformation and volume changes within the deeper portion of the subducted Juan de Fuca plate). The third source is associated with movement on relatively shallow faults within and adjacent to the Portland Basin. Each source is considered capable of producing damaging earthquakes in the Pacific Northwest; however, there are no historical records of significant subcrustal (intraslab) earthquakes (M_W >6.0) in northwest Oregon and southwest Washington. Wong (2005) hypothesizes that, due to subduction-zone geometry, geophysical conditions, and local geology, southwest Washington and northwest Oregon may not be subject to intraslab earthquakes.

Based on our review of historical records and evaluation of U.S. Geological Survey (USGS) national seismic hazard maps, the two primary types of seismic sources at the site are the CSZ interface and local crustal faults.

B.3.2 Cascadia Subduction Zone

Coastal paleoseismic evidence, offshore geological studies, and historical tsunami accounts indicate the CSZ is capable of producing large-magnitude, megathrust earthquakes (M_W 8 to M_W 9) at the interface between the Juan de Fuca and North American plates (Atwater et al., 1995; Goldfinger et al., 2012). Geological studies indicate these megathrust earthquakes have occurred repeatedly in the past 10,000 years (Walton et al., 2021). A combination of paleoseismic and geologic studies (Kelsey et al., 2005) and geodetic studies (Savage et al., 2000) indicate a rate of strain accumulation consistent with the assumption that the CSZ is locked beneath offshore northern California, Oregon, Washington, and southern British Columbia (Fluck et al., 1997; Wang et al., 2001). Numerous geological and geophysical studies suggest the CSZ may be segmented (Hughes and Carr, 1980; Weaver and Michaelson, 1985; Guffanti and Weaver, 1988; Goldfinger, 1994; Kelsey and Bockheim, 1994; Mitchell et al., 1994; Personius, 1995; Nelson and Personius, 1996; Witter, 1999), but the most recent studies suggest that, for the last great earthquake in 1700, most of the subduction zone ruptured in a single M_W 9.0 earthquake (Satake et al., 1996; Atwater and Hemphill-Haley, 1997; Clague et al., 2000). There is consensus within the scientific community that the most recent great earthquake

occurred along the CSZ in January 1700 (Atwater et al., 2015) based on paleoseismic evidence and historical records of an orphan tsunami in Japan. Tsunami modeling completed for the 1700 orphan tsunami indicated that the 1700 earthquake ruptured the whole length of the CSZ and had a moment magnitude of about M_W 9.0 (Satake et al., 2003).

The average recurrence interval for a CSZ megathrust event is estimated to be around 350 years to 600 years based on prehistoric geologic evidence (Atwater & Hemphill-Haley, 1997; Kelsey et al., 2002; and Witter et al., 2003). Tsunami inundation in buried marshes along the Washington and Oregon coasts and stratigraphic evidence from the Cascadia margin support these recurrence intervals (Kelsey et al., 2005; Goldfinger et al., 2003). Goldfinger et al. (2003, 2012, 2017) evaluated turbidite evidence at the heads of Cascadia submarine canyons, the results of which indicated the occurrence of more than 40 great earthquakes over the past 10,000 years with partial or entire length rupture of the CSZ. About 20 of the earthquake events are associated with partial ruptures concentrated in the southern part of the margin and have estimated recurrence intervals of about 220 years to 320 years. About 19 of the events are associated with a rupture of the full CSZ, characterized by an earthquake with a moment magnitude (M_W) of about 8.5 to 9.1 or greater. Considering a combination of recent paleoseismic, geodetic, and geologic research, the average recurrence interval for a full-rupture CSZ earthquake is estimated to be about 500 years to 540 years (Walton et al., 2021).

The 2014 USGS Probabilistic Seismic Hazard Analysis (PSHA) assumes four potential locations (three alternative down-dip edge options and one up-dip edge option) for the eastern edge of the earthquake rupture zone for the CSZ, as shown on the Location of Surface Traces for Up-Dip Edge & Three Down-Dip Edge Options Used in 2014 NSHMs, Figure 4B. As discussed in Petersen et al. (2014), the 2014 USGS mapping effort represents the 2014 CSZ source model with full-CSZ ruptures with moment magnitudes from M_W 8.6 to M_W 9.3, supplemented by partial ruptures with smaller magnitudes (M_W 8.0 to M_W 9.1). There is also a possibility of several M_W 8 earthquakes that rupture the entire CSZ over a period of a few decades or less; however, this is not implemented in the current National Seismic Hazard Models (NSHMs). The partial ruptures were accounted for using a segmented model and an unsegmented model. The magnitude-frequency distribution showing the contributions to the earthquake rates from each model and how the estimated rates vary along the fault is presented on the Variation of Earthquake Rates Cascadia Subduction Zone, Figure 5B.

B.3.3 Local Crustal Event

Sudden crustal movements along relatively shallow, local faults in the project area, although rare, have been responsible for local crustal earthquakes. The precise relationship

between specific earthquakes and individual faults is not well understood because few of the faults in the area are expressed at the ground surface and there is a limited history of crustal events in the region. The history of local seismic activity is commonly used as a basis for determining the size and frequency to be expected of local crustal events. Although the historical record of local earthquakes is relatively short (the earliest reported seismic event in the area occurred in 1920), it can serve as a guide for estimating the potential for seismic activity in the area.

The locations of and general information regarding quaternary faults (i.e., those that have experienced movement during the last 2.6 million years and are considered potentially active) are available through the USGS Earthquake Hazards Program. The USGS Quaternary Fault and Fold Database shows the Bolton Fault is considered the closest mapped crustal fault identified as a hazard to the site. The USGS considers the Bolton Fault to have a characteristic earthquake magnitude of Mw 6.2 and to be located approximately 4.5 km from the site. The Portland Hills Fault, with a characteristic earthquake magnitude of M_W 7.0 and located about 7.2 km from the site, is also a significant contributor to the site's seismicity.

B.4 SITE-SPECIFIC SPECTRAL ACCELERATION VALUES

B.4.1 General

As previously stated, the seismic evaluation for the project is being completed in accordance with ASCE 7-16 and the 2022 OSSC. The proposed improvements are considered a risk category of III in accordance with Section 1604.5 of the 2022 OSSC. A ground motion hazard analysis was completed in accordance with Section 21.2 of ASCE 7-16 to evaluate the seismic response of the soils at the site and develop a recommended MCE_R response spectrum for the project. The recommended MCE_R response spectra at the ground surface are generally developed by comparing site-specific and code-based spectral values at the ground surface. The site-specific MCE_R spectral values are defined as the lesser of probabilistic and deterministic ground motions as described in Section 21.2 of ASCE 7-16. The ground motion associated with the probabilistic MCE_R represents a targeted risk level of 1% in the 50-year probability of collapse in the direction of maximum horizontal response with 5% damping. The deterministic MCE_R is calculated as an 84th-percentile, 5%-damped spectral response in the direction of maximum horizontal response obtained from a characteristic earthquake on a known active fault within the region. The code-based spectral values are developed using the procedures outlined in Chapter 11 of ASCE 7-16. The code-based response spectrum is developed using the mapped bedrock spectral acceleration parameters S_S and S_1 at the site and corresponding site amplification coefficients F_a and F_v to account for underlying soil conditions in accordance with Section 21.3 of ASCE 7-16.

B.4.2 Site-Specific MCE_R Response Spectrum

As previously mentioned, the site-specific MCE_R spectral response acceleration is defined by lesser spectral response accelerations from probabilistic ground motions and deterministic ground motions. The site-specific probabilistic seismic-hazard analysis (PSHA) was conducted using the USGS NSHM Hazard Tool. In accordance with the guidelines of ASCE 7-16, the site-specific PSHA represents the probabilistic ground motions as spectral response acceleration values with a 2,475-year recurrence interval (i.e., a 2% probability of exceedance in 50 years) in the geomean direction. The probabilistic MCE_R spectral values are then derived by applying directivity factors and risk coefficients to the site-specific PSHA values. The directivity factors adjust the spectral values from geometric mean to the direction of maximum horizontal response, and the risk coefficients incorporate the uniform collapse risk objective of 1% over a 50-year period.

Based on the results of the explorations completed for this project and our experience in the project area, the site class was assumed to be generally representative of Site Class D conditions. The resulting site-specific probabilistic spectral values are summarized in Table 1B.

Table 1B: SITE-SPECIFIC PROBABILISTIC MCE_R VALUES

Period, second	Probabilistic MCE_R, g
PGA	0.48
0.05	0.53
0.1	0.81
0.2	1.09
0.3	1.17
0.4	1.16
0.5	1.08
0.75	0.87
1	0.70
1.5	0.50
2	0.39
3	0.26
4	0.19
5	0.15

Abbreviations: MCE_R = Risk-Targeted Maximum Considered Earthquake; PGA = peak ground acceleration

The deterministic ground motions at the site can also be developed concurrently with the site-specific PSHA in accordance with Section 21.2.2 of ASCE 7-16. However, an exception is included in Section 21.2.2 of ASCE 7-16, allowing the deterministic analysis to be disregarded when the largest spectral response acceleration from the probabilistic ground motion is less than 1.2 Fa (i.e., Fa of 1.18 for Site Class D conditions). Therefore, the deterministic analysis was not completed for the site since the largest spectral response acceleration from the probabilistic ground motion, Sa = 1.17 g, is less than 1.2 Fa=1.42 g. Therefore, the probabilistic MCE_R spectral acceleration at any period defines the site-specific MCE_R spectrum at the site. The design response spectrum is typically defined as two-thirds of the MCE_R response spectrum.

B.4.3 Recommended Design Acceleration Parameters

The recommended response spectrum for structural design can be developed by comparing the site-specific MCE_R developed for the site with the code-based spectra based on site class and generic site-amplification factors. As previously discussed, the site is designated Site Class D based on the subsurface explorations completed at the site.

The code-based Site Class D spectrum was derived based on the 0.2- and 1.0-second spectral-acceleration values (S_S and S_1) at the bedrock and corresponding site coefficients, Fa and Fv, in accordance with Chapter 21 of ASCE 7-16 with proposed amendment in Subsection 1613.4.13 of 2022 OSSC. The modification typically applies to the value of Fv, suggested to be determined using straight-line interpolation between the value determined from ASCE 7-16 Section 21.3 (i.e., associated with 0% CSZ interface contribution) and the value from 2022 OSSC Table 1613.3.3(2) (i.e., associated with 100% CSZ interface contribution) based on the relative hazard contribution from the CSZ interface sources at a period of 1.0 second. The relative CSZ interface hazard contribution was obtained using the USGS Hazard Tool and the 2018 NSHM data for the 2,475-year hazard at a spectral period of 1.0 seconds. The USGS hazard tool shows about 77% contribution from the CSZ interface source at the site. The 0.2- and 1.0-second spectral values (S_S and S_1) for the site at bedrock are 0.80 and 0.36, respectively. The short-period site coefficient, Fa, which equals 1.18, was determined using Table 11.4-1 of ASCE 7-16. The long-period site coefficient, Fv, which equals 2.12, was determined using straight-line interpolation between the ASCE 7-16-recommended value of 2.5 and the 2022 OSSC value of 1.95 based on the relative CSZ interface hazard contribution. These site coefficients were applied in developing the Site Class D spectrum. ASCE 7-16 requires the site-specific spectral accelerations at the ground surface not be less than 80% of the spectral values determined for Site Class D.

Comparisons of the site-specific and the code-based MCE_R response spectra are shown on the MCE_R Response Spectra Comparison, Figure 6B. The code-based Site Class D

spectrum was derived based on the 0.2- and 1.0-second spectral-acceleration values (S_S and S_1) at the bedrock and corresponding site coefficients, F_a and F_v, in accordance with Chapter 21 of ASCE 7-16. The recommended MCE_R spectrum can be obtained by enveloping the site-specific response spectra obtained from the ground-motion hazard analysis and the code-based 80% of Site Class D spectral values (i.e., code minimum) in accordance with Section 21.3 of ASCE 7-16 and amendment provided in Section 1613.4.14 of the 2022 OSSC. The figure indicates that the site-specific MCE_R spectrum was generally observed to be higher than the code-based 80% Site Class D spectral values. Therefore, the site-specific MCE_R spectrum represents the recommended MCE_R spectrum. Our recommended MCE_R and design response spectral values for design of the project are summarized in Table 2B. The table presents the traditional two-period spectral values that can be used in seismic design of the project with the equivalent lateral-force procedure. The design response spectrum is developed by taking two-thirds of the MCE_R response spectral values. The spectral values are derived in accordance with the guidelines provided in Section 21.4 of ASCE 7 16. In accordance with Section 21.4, the 0.2-second MCE_R spectral value can be taken as 90% of the maximum spectral acceleration obtained from the site-specific response spectrum at any period within the range of 0.2 seconds to 5.0 seconds. The 1.0-second MCE_R spectral value can be derived based on the maximum value of the product of spectral acceleration and corresponding periods for periods ranging from 1.0 seconds to 5.0 seconds for sites with a V_{s30} value less than 1,450 feet per second but not less than 100% of the spectral value at 1.0 second.

Table 2B: RECOMMENDED SEISMIC DESIGN PARAMETERS OBTAINED FROM GROUND MOTION HAZARD ANALYSIS

Seismic Parameter	Recommended Value
Site Class	D
MCE_R Spectral Response Acceleration Parameter at Short Periods, S_{MS}	1.05 g
MCE_R Spectral Response Acceleration Parameter at 1.0-Second Period, S_{M1}	0.78 g
Design Spectral Response Acceleration Parameter at Short Periods, S_{DS}	0.70 g
Design Spectral Response Acceleration Parameter at 1.0-Second Period, S_{D1}	0.52 g

Abbreviation: MCE_R = Risk-Targeted Maximum Considered Earthquake

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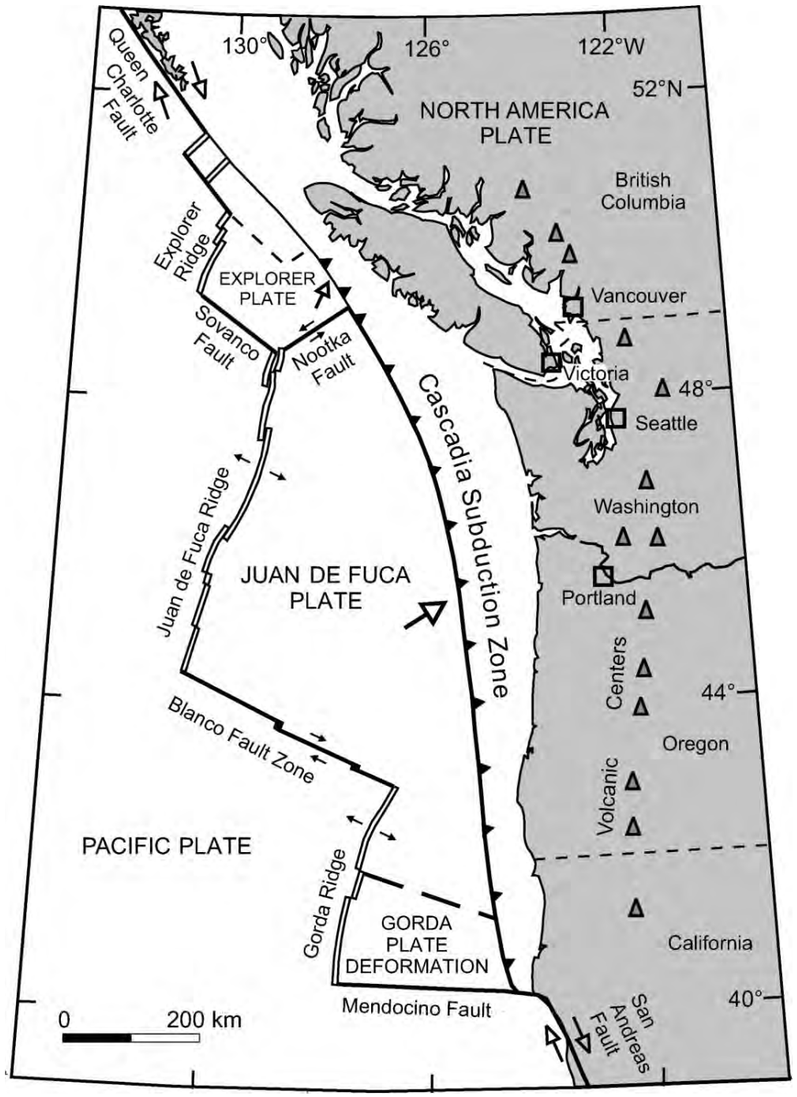
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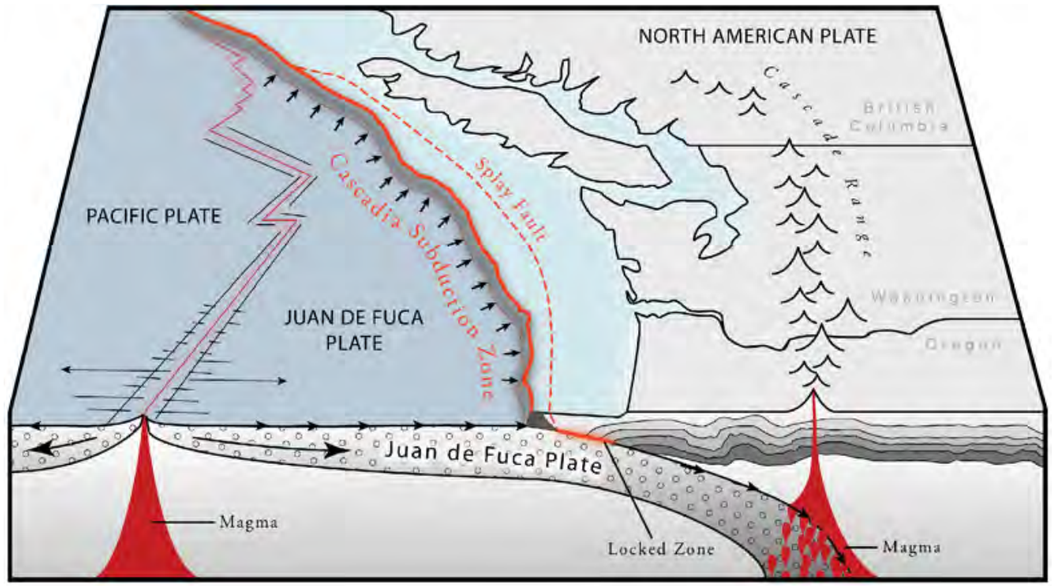
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A) TECTONIC MAP OF PACIFIC NORTHWEST, SHOWING ORIENTATION AND EXTENT OF CASCADIA SUBDUCTION ZONE (MODIFIED FROM DRAGERT ET AL., 1994)

Cascadia Subduction Zone Setting

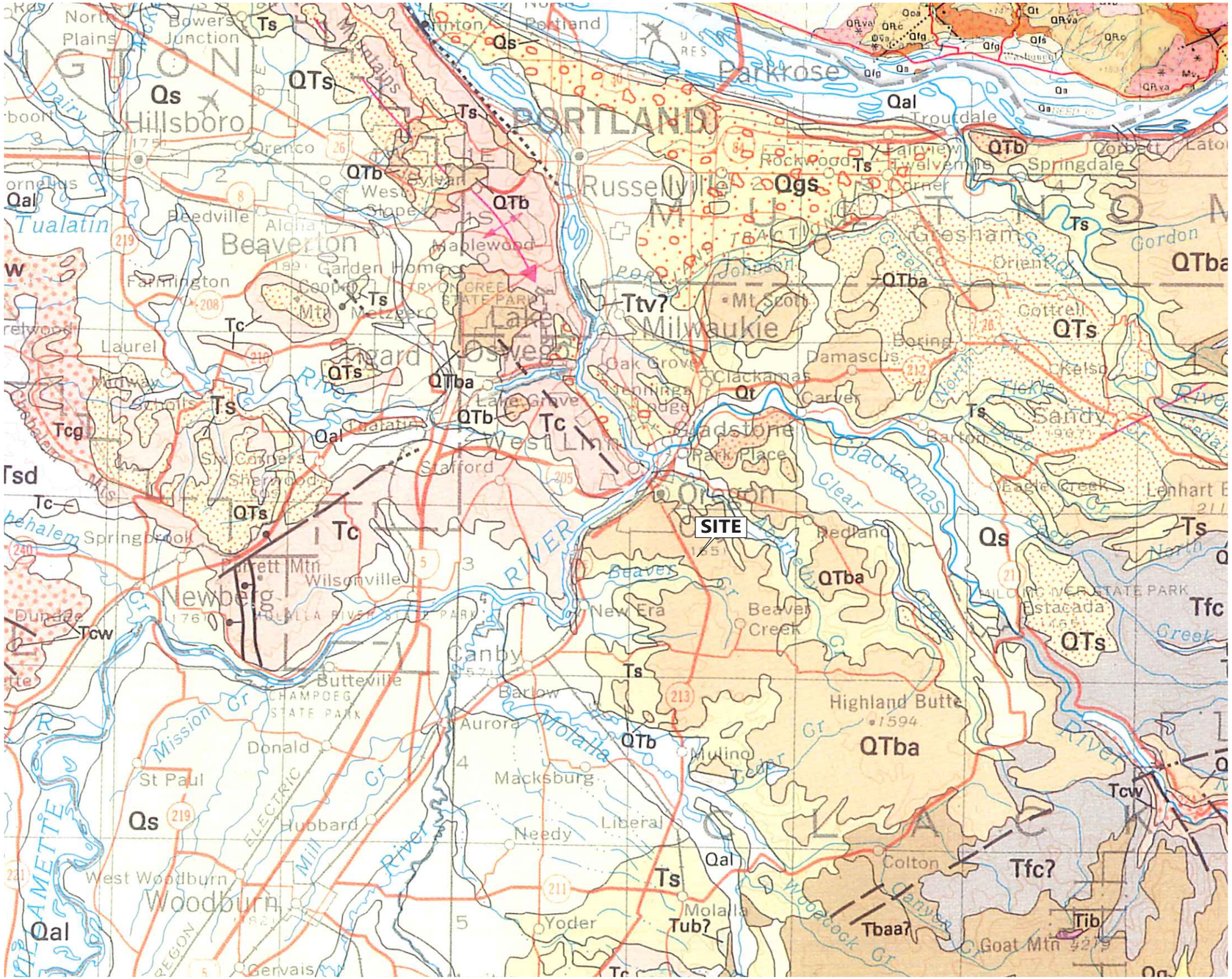


CASCADIA SUBDUCTION ZONE SETTING, TSUNAMI INUNDATION MAPS (OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRY, 2013)

GRI

TECTONIC SETTING SUMMARY

JUL. 2025 JOB NO. 7090-A FIG. 1B



Contact — Approximately located

Fault — Dashed where inferred; dotted where concealed; queried where doubtful; ball and bar on downthrown side

Thrust fault — Dashed where inferred; dotted where concealed; queried where doubtful; sawteeth on upper plate

Strike and dip of bed

FROM:

WALSH, T. J., KOROSEC, M. A., PHILLIPS, W. M., LOGAN, R. L., AND SCHASSE, H. W., 1987, GEOLOGIC MAP OF WASHINGTON-SOUTHWEST QUADRANT; 1:250,000: WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 6M-34

WALKER, G. W., AND MACLEOD, N. S., 1991, GEOLOGIC MAP OF OREGON: U.S. GEOLOGICAL SURVEY

N

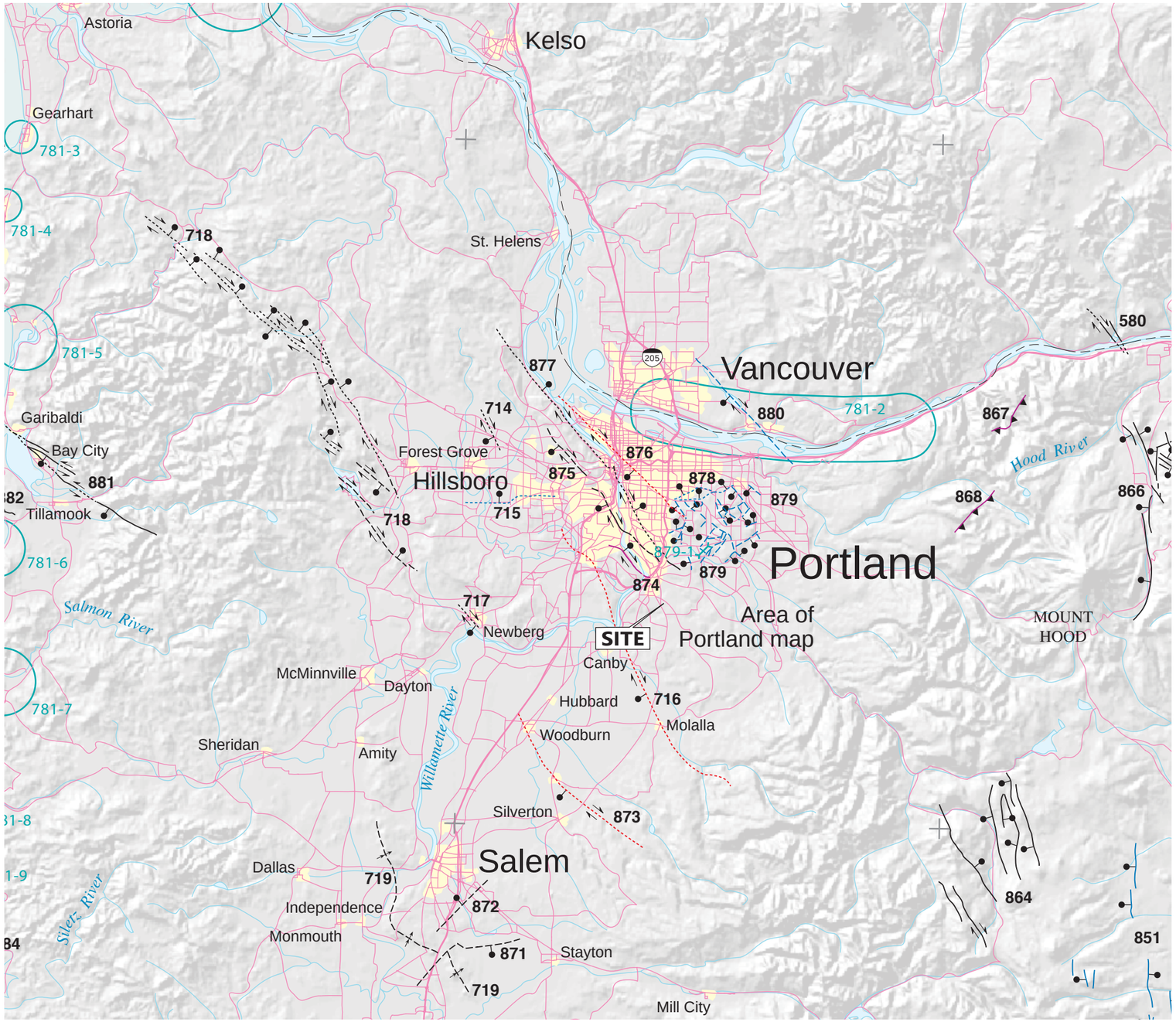
0 5 10 MILES

0 5 10 KILOMETERS

GRI

REGIONAL GEOLOGIC MAP

JUL. 2025 JOB NO. 7090-A FIG. 2B



TIME OF MOST RECENT SURFACE RUPTURE

- Holocene (<10,000 years) or post last glaciation (<15,000 years; 15 ka); no historic ruptures in Oregon to date
- Late Quaternary (<130,000; post penultimate glaciation)
- Late and middle Quaternary (<750,000 years; 750 ka)
- Quaternary, undifferentiated (<1,600,000 years; <1.6 Ma)
- Class B structure (age or origin uncertain)

SLIP RATE

- >5 mm/year
- 1.0-5.0 mm/year
- 0.2-1.0 mm/year
- <0.2 mm/year

TRACE

- Mostly continuous at map scale
- Mostly discontinuous at map scale
- Inferred or concealed

STRUCTURE TYPE AND RELATED FEATUR

- Normal or high-angle reverse fault
- Strike-slip fault
- Thrust fault
- Anticlinal fold
- Synclinal fold
- Monoclinal fold
- Plunge direction of fold
- Fault section marker

DETAILED STUDY SITES

- 731-2 Trench site
- 781-2 Subduction zone study site

CULTURAL AND GEOGRAPHIC FEATURES

- Divided highway
- Primary or secondary road
- Permanent river or stream
- Intermittent river or stream
- Permanent or intermittent lake

FAULT NUMBER	NAME OF STRUCTURE
714	HELVETIA FAULT
715	BEAVERTON FAULT
716	CANBY-MOLALLA FAULT
717	NEWBERG FAULT
718	GALES CREEK FAULT ZONE
719	SALEM-EOLA HILLS HOMOCLINE
864	CLACKAMAS RIVER FAULT ZONE
867	EAGLE CREEK THRUST FAULT
868	BULL RUN THRUST FAULT
872	WALDO HILLS FAULT
873	MOUNT ANGEL FAULT
874	BOLTON FAULT
875	OATFIELD FAULT
876	EAST BANK FAULT
877	PORTLAND HILLS FAULT
878	GRANT BUTTE FAULT
879	DAMASCUS-TICKLE CREEK FAULT ZONE
880	LACAMAS LAKE FAULT
881	TILLAMOOK BAY FAULT ZONE

NOTE: NOT ALL QUATERNARY FAULTS ARE SHOWN.

FROM: PERSONIUS, S. F., ET AL., 2003, MAP OF QUATERNARY FAULTS AND FOLDS IN OREGON, USGS OPEN FILE REPORT OFR-03-095.

N

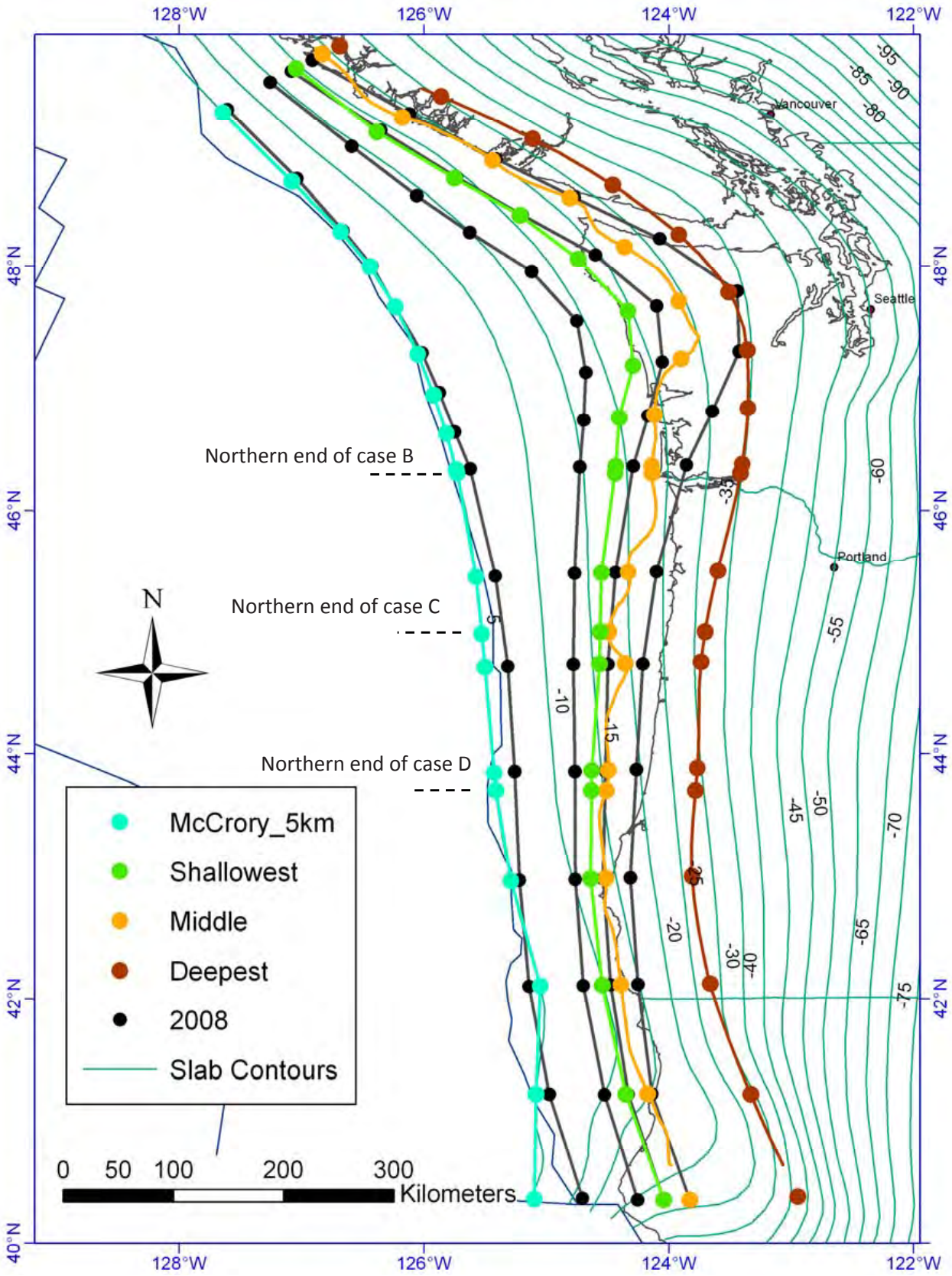
0 10 20 MILES

0 20 40 KILOMETERS

GRI

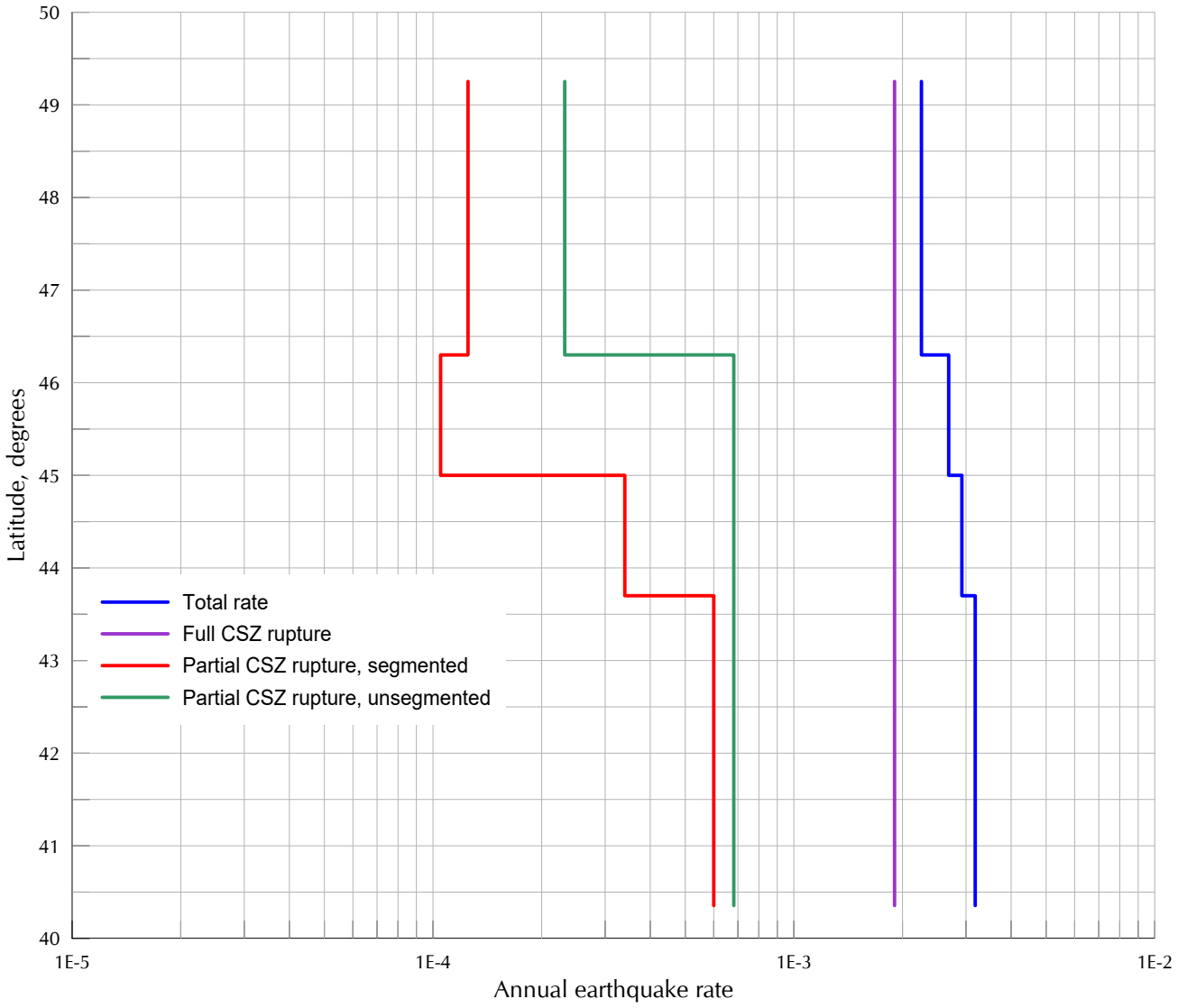
LOCAL FAULT MAP

JUL. 2025 JOB NO. 7090-A FIG. 3B



LOCATION OF SURFACE TRACES FOR UP-DIP EDGE & THREE DOWN-DIP EDGE OPTIONS USED IN 2014 NSHMS (CHEN ET AL., 2014)

JUL. 2025 JOB NO. 7090-A FIG. 4B

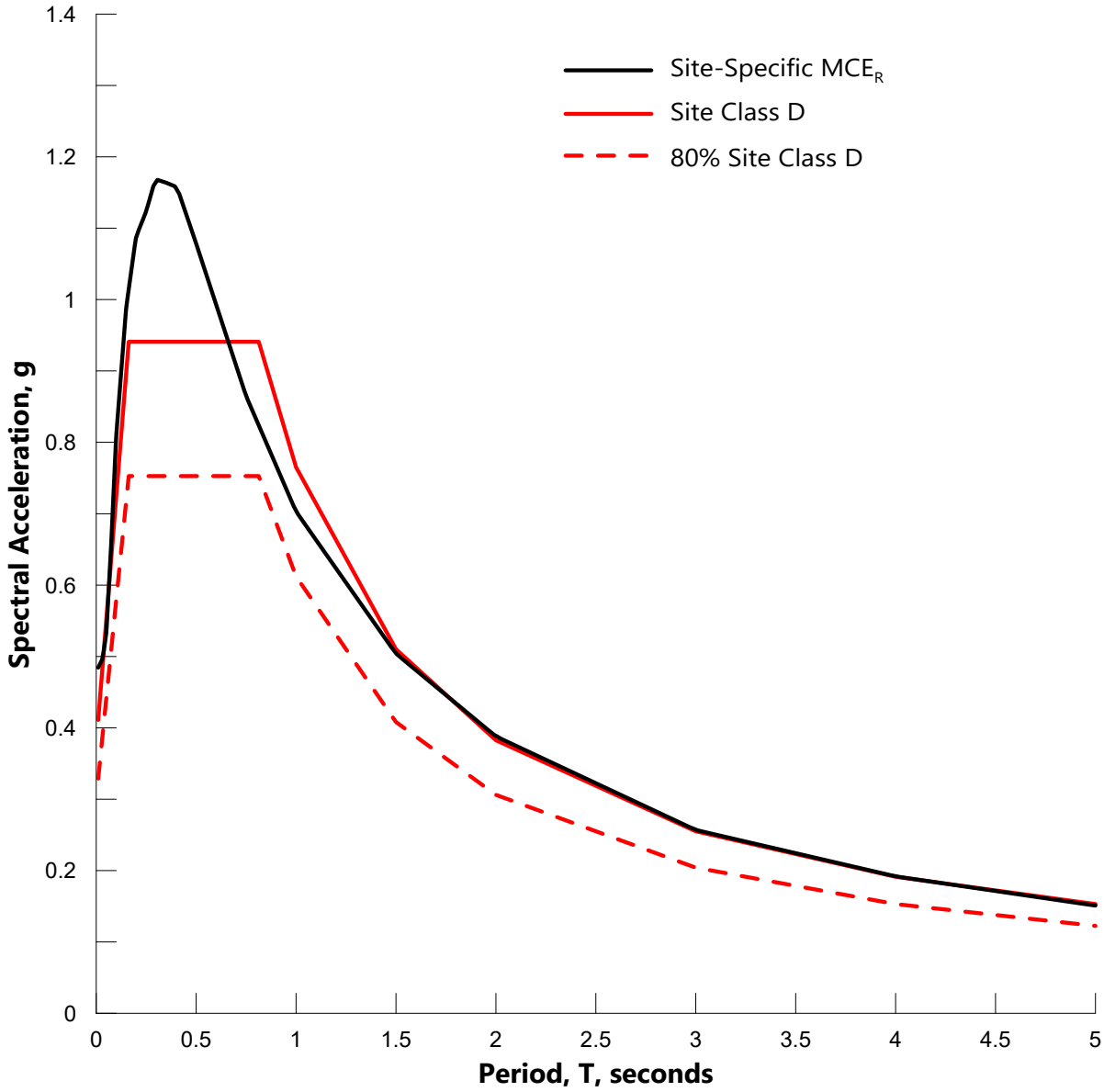


REFERENCE:
PETERSEN, M. D., MOSCHETTI, M. P., POWERS, P. M., MUELLER, C. S., HALLER, K. M., FRANKEL, A. D., ZENG, Y., REZAEIAN, S., HARMSEN, S. C., BOYD, O. S., FIELD, N., CHEN, R., RUKSTALES, K. S., NICO, L., WHEELER, R. L., WILLIAMS, R. A., AND OLSEN, A. H., 2014, DOCUMENTATION FOR THE 2014 UPDATE OF THE UNITED STATES NATIONAL SEISMIC HAZARD MAPS: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 2014–1091, 243 PP.

GRI

VARIATION OF EARTHQUAKE RATES
CASCADIA SUBDUCTION ZONE

JUL. 2025 JOB NO. 7090-A FIG. 5B



GRI

MCE$_R$ RESPONSE SPECTRA COMPARISON
(5% DAMPING)

JUL. 2025 JOB NO. 7090-A FIG. 6B

APPENDIX C

Geoprofessional Business Association Guidance Document

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

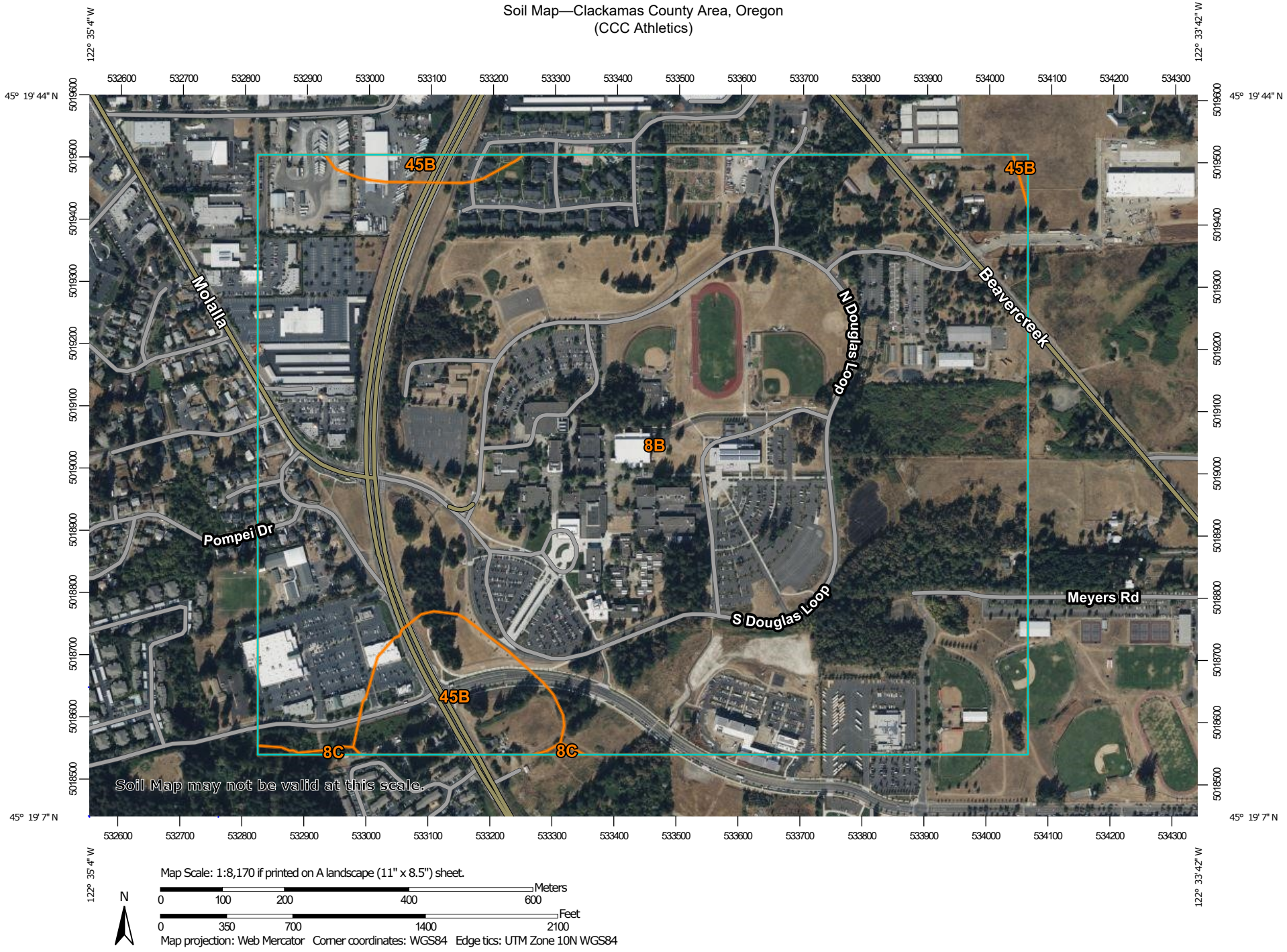
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Appendix D2:
NRCS Soil Data

Soil Map
Hydrologic Soil Group
Water Features

MAZZETTI
T 503.620.3232
121 SW Salmon Street, Suite 1000
Portland, OR 97204
T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

Soil Map—Clackamas County Area, Oregon
(CCC Athletics)



Map Scale: 1:8,170 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 100 200 400 600

Feet
0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 21, Aug 30, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8B	Bornstedt silt loam, 0 to 8 percent slopes	279.5	94.0%
8C	Bornstedt silt loam, 8 to 15 percent slopes	0.5	0.2%
45B	Jory silty clay loam, 2 to 8 percent slopes	17.2	5.8%
Totals for Area of Interest		**297.3**	**100.0%**

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. The kind of water table, apparent or perched, is given if a seasonal high water table exists in the soil. A water table is perched if free water is restricted from moving downward in the soil by a restrictive feature, in most cases a hardpan; there is a dry layer of soil underneath a wet layer. A water table is apparent if free water is present in all horizons from its upper boundary to below 2 meters or to the depth of observation. The water table kind listed is for the first major component in the map unit.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features

Map unit symbol and soil name	Hydrologic group	Surface runoff	Most likely months	Water table			Ponding			Flooding	
				Upper limit	Lower limit	Kind	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*		*Ft*				
8B—Bornstedt silt loam, 0 to 8 percent slopes											
Bornstedt	C		Jan-Apr	2.0-3.0	2.5-3.3	Apparent	—	—	None	—	None
			May-Nov	—	—	—	—	—	None	—	None
			Dec	2.0-3.0	2.5-3.3	Apparent	—	—	None	—	None
8C—Bornstedt silt loam, 8 to 15 percent slopes											
Bornstedt	C		Jan-Apr	2.0-3.0	2.5-3.3	Apparent	—	—	None	—	None
			May-Nov	—	—	—	—	—	None	—	None
			Dec	2.0-3.0	2.5-3.3	Apparent	—	—	None	—	None
45B—Jory silty clay loam, 2 to 8 percent slopes											
Jory	C		Jan-Dec	—	—	—	—	—	None	—	None

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 21, Aug 30, 2024

Hydrologic Soil Group and Surface Runoff

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

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Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

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If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

Report—Hydrologic Soil Group and Surface Runoff

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Hydrologic Soil Group and Surface Runoff–Clackamas County Area, Oregon			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
8B—Bornstedt silt loam, 0 to 8 percent slopes			
Bornstedt	85	—	C

Hydrologic Soil Group and Surface Runoff–Clackamas County Area, Oregon			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
8C—Bornstedt silt loam, 8 to 15 percent slopes			
Bornstedt	80	—	C
45B—Jory silty clay loam, 2 to 8 percent slopes			
Jory	90	—	C

Data Source Information

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 21, Aug 30, 2024

Appendix E:
Operations and Maintenance Information

Stormwater Maintenance Easement Form (Draft)
Stormwater O&M Maintenance Checklist
Stormwater O&M Plan – Rain Gardens (Draft)
Stormwater O&M Plan – Underground Detention Systems (Draft)
Stormwater O&M Plan – Manufactured Treatment Systems (Draft)

AFTER RECORDING RETURN TO:

City of Oregon City, City Recorder
P.O. Box 3040
Oregon City, Oregon 97045-0304

Planning File: _____

Tax Map & Lot: _____

Impervious Area Served (square feet): _____

GRANTOR: _____

MAINTENANCE AND ACCESS EASEMENT AGREEMENT FOR PRIVATELY-OWNED STORMWATER MANAGEMENT FACILITIES

This MAINTENANCE AND ACCESS EASEMENT AGREEMENT ("**Agreement**") is made between the CITY OF OREGON CITY, a municipal corporation of the State of Oregon formed pursuant to ORS Chapter 457 (the "**City**"), and _____ ("**Grantor**").

This Agreement runs with the land and is binding on Grantor and its successors and assigns, including subsequent purchasers of property within the Development (defined below).

RECITALS

A. Grantor is the owner of certain real property located in the City of Oregon City, Clackamas County, Oregon, legally described on **Exhibit A** attached hereto and commonly known as_____, the "**Development**".
Name of development, property address or tax lot

B. The following stormwater management facilities ("**Stormwater Facilities**") were constructed or will be constructed at the Development as further described below and depicted in **Exhibit B** (Site Plan, showing and identifying storm facilities):

Grantor's written description of each facility

C. The City has approved construction plans submitted by Grantor for the Development, including Stormwater Facilities as described above. The Stormwater Facilities are designed by a registered professional engineer to accommodate anticipated volume of runoff and to detain and treat runoff in accordance with City's Stormwater and Grading Design Standards and its amendments. The Stormwater Facilities enable development of property while mitigating the impacts of additional surface water and pollutants associated with stormwater runoff prior to discharge from the property to the public stormwater system.

D. Failure to inspect, maintain, repair, and replace the Stormwater Facilities after they are constructed can result in an unacceptable impact to the public stormwater system. To protect the owners of property within the Development, as well as owners of neighboring property, the City requires Grantor to enter into this Agreement as a condition to the City's approval of construction plans and building permit(s) for the Development. This Agreement confirms Grantor's, and Grantor's successors and assigns', obligation to inspect, maintain, repair, and replace the Stormwater Facilities. The term "**Owner(s)**" is used herein to refer to the owner or owners of any part of the Development on which Stormwater Facilities are located. "Owner(s)" include Grantor while Grantor owns any part of the Development on which Stormwater Facilities are located and includes any homeowner's association owning common areas in the Development on which Stormwater Facilities are located.

E. In connection with its development of the Development, Grantor may divide the property within the Development into individual lots (each a "**Lot**" and collectively the "**Lots**"). The Stormwater Facilities for the Development will be maintained by the Owner(s). Therefore, although Grantor will be the sole owner responsible for constructing, inspecting, maintaining, repairing, and replacing the Stormwater Facilities while Grantor owns the entirety of the Development, upon Grantor's sale or transfer of ownership of any Lot, or part of the Development, those responsibilities will be transferred to the subsequent Owner(s).

F. The consideration for this Agreement is connection to the City's public stormwater system.

AGREEMENT

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the City and Grantor agree as follows:

1. **Incorporation of Recitals**. The Recitals to this Agreement are incorporated into and made a part of this Agreement.

2. **Run with the Land**. The parties' rights and obligations contained herein shall run with the land and shall be binding upon the Grantor and its successors and assigns (including, without limitation, the Owner(s) of the Lot(s) and any homeowner's association owning common areas in the Development). Those rights and obligations shall inure to the benefit of the City, as well as its successors and assigns.

3. **Agreement to Maintain and Repair**. The Owner(s) shall, at their sole expense, themselves or through qualified independent contractors, at all times during their ownership of the property within the Development maintain the Stormwater Facilities in good working order, condition and repair, clear of all debris, and in compliance with all applicable state and local rules, regulations, and guidelines (including those adopted from time to time by the City and including the City's Stormwater and Grading Design Standards) and the Operation and Maintenance Plan attached as **Exhibit C** of this Agreement.

4. **Agreement to Inspect.** The Owner(s) shall perform, at a minimum, annual inspections of all Stormwater Facilities covered by this agreement, per guidelines in **Exhibit C**, attached. The annual inspection required by this Agreement shall identify work necessary to repair or maintain facilities in good working order. The Owner(s) shall provide Oregon City Public Works Department with annual maintenance inspection reports, including identification of the corrective actions taken in response to the annual inspection. If needed, inspection forms can be obtained from the Oregon City Public Works Department.

5. **Easement.** Grantor hereby grants the City, its employees, independent contractors and designees, a nonexclusive easement for ingress and egress over, across and under the Development from time to time at the City's sole discretion to inspect, sample, and monitor components of the Stormwater Facilities and discharges therefrom. Grantor hereby grants to the City permission to undertake the actions described in Sections 6 and 7 of this Agreement. Grantor understands and agrees that this easement limits the ability of Grantor, its successors and assigns, including any Owner(s), from constructing any permanent buildings, structures, landscaping or other improvements that would interfere with the functioning of the Stormwater Facilities or the City's access to perform the inspection and maintenance required under this Agreement.

6. **Failure to Perform Agreement.** If the City, in its sole discretion, determines that the Owner(s) are not in compliance with the Agreement described in Sections 3 and 4, the City or its designee shall provide the non-complying Owner(s) written notice to perform the maintenance and/or repair work specified in the notice. Provided, however, no prior written notice shall be required in the case of an emergency, which shall be governed by Section 7. If such work is not performed to the City's satisfaction within seven (7) days after the date of such notice, or such other time as the City may, in its sole discretion, determine, the City, its employees, independent contractors and designees may exercise their rights under the Easement described in Section 5 of this Agreement to enter the Development to perform any and all work required bringing the Stormwater Facilities into compliance with this Agreement.

7. **Emergency**. If the City, in its sole discretion, determines that there exists or will likely exist an emergency on or about the Development with respect to the Stormwater Facilities, the City, its employees, independent contractors and designees may immediately exercise their rights under the Easement described in Section 5 of this Agreement to immediately enter the Development to perform any and all work required to bring the Stormwater Facilities into compliance with this Agreement, and in such case the City shall use reasonable efforts to notify the affected Owner(s) prior to entering the Development. Notwithstanding the above, the work performed may consist only of avoiding or mitigating the emergency and/or cleaning and/or repairing the Stormwater Facilities to their original condition and standards.

8. **City Under No Obligation.** The City, as well as its departments, employees, independent contractors and/or designees shall have no obligation to exercise its rights under this Agreement, including the right under Sections 6 and 7 of this Agreement, to perform the work required of the Owner(s), or to perform any other maintenance or repair of the stormwater facilities. In addition, neither the City, nor any of its departments, employees, independent contractors and/or designees shall have any liability to any Owner(s) in connection with the exercise or non-exercise of such rights, the maintenance or repair of the stormwater facilities, or the failure to perform the same.

9. **Grantor Obligations.** In addition to the agreements and easement described above, Grantor agrees to the following additional obligations:
   a. Prior to sale of any portion of the Development, Grantor shall provide to the City's Public Works Department, a copy of the Operations and Maintenance Manual for the Stormwater Facilities, which shall include detailed diagrams and descriptions identifying the components and operations of the Stormwater Facilities.
   b. Prior to final approval of the Development, this document shall be recorded in the deed records of Clackamas County.
   c. Grantor shall notify the City's Public Works Director in writing of any change in ownership, and the new Owner(s) shall become the "**Grantor Designee**". The Grantor Designee, its successors and assigns shall be bound with respect to the matters described in this Agreement including Grantor's obligations.
   d. Upon sale or transfer of the Development, or any portion thereof, Grantor shall inform the purchaser of the obligations required under this Agreement.

10. **Reimbursement**. If the City exercises its rights as described in Section 6 and Section 7 to perform compliance work and enters the Development pursuant to the Easement described in Section 5 of this Agreement, the Owner(s) shall reimburse the City for all its costs and expenses incurred in connection therewith within thirty (30) days after receipt of an invoice. If the Development is owned by more than one owner (i.e., multiple lot owners), for each property or Lot where the City exercises its rights as described in Section 6 and Section 7, the Owner(s) shall be severally liable for reimbursing the City for all its costs and expenses incurred in connection therewith within. If any of the Owner(s) fail to pay the invoiced amount within such period, such amount shall thereafter accrue interest at the statutory rate. Such amount, together with interest, shall be a lien on the Development (and each of the Lots within the Development) that may be foreclosed in accordance with ORS Chapter 88.

11. **Indemnification**. Owner(s) agrees to indemnify, defend (with legal counsel reasonably acceptable to the City), and hold harmless the City, its employees, independent contractors and designees harmless from and against any liability, losses, costs, expenses (including reasonable attorney fees), claims or suits arising from failure of the Owner(s) to perform its obligations under this Agreements or the exercise of the City's rights under this Agreement.

12. **Attorney Fees.** If legal action is commenced in connection with this Agreement, the prevailing party in such action shall be entitled to recover its reasonable attorney fees and costs incurred in the trial court and in the appeal therefrom. The term "action" shall be deemed to include action commenced in the bankruptcy courts of the United States and any other court of general or limited jurisdiction.

13. **Assignment**. The obligations of Grantor under this Agreement shall run with the land and therefore shall bind the purchasers of property within the Development without the necessity of any separate agreement evidencing or confirming the assignment and the purchaser's assumption of the obligations. The obligations may not be otherwise assigned except that the obligations may be assigned, with the prior written consent of the City, to a homeowner's association that owns and maintains the common areas of the Development.

14. **Authority.** If Grantor is an entity, the individual executing this Agreement on behalf of Grantor represents and warrants to the City that he or she has the full power and authority to do so and that Grantor has full right and authority to enter into this Agreement and perform its obligations under this Agreement.

IN WITNESS WHEREOF, the GRANTOR has executed this instrument this _____ day of _____, 20_____. The person(s) whose name(s) is/are subscribed to the within instrument acknowledge that he/she/they executed the instrument in his/her/their legally authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

[Signature Page(s) Follow]

GRANTOR: _____

As shown on Page 1 (name of organization or individual property owner(s))

_____

Signature No. 1

_____, _____

Signer's printed name *Title (if applicable)*

_____

Signature No. 2

_____, _____

Signer's printed name *Title (if applicable)*

STATE OF OREGON)
)
County of _____)

This record was acknowledged before me on (month & day) _____, 20____

by _____, as _____

Signer's printed name *Title (write "N/A" if not applicable)*

of _____.

Name of Corporation on whose behalf record is executed (write "N/A" if not applicable)

Stamp notary seal:

WITNESS my hand and official seal.

_____

Signature of Notary Public

My commission expires:_____

Accepted on behalf of the City of Oregon City:

_____ _____

By: Anthony J. Konkol III, City Manager By: John M. Lewis, Public Works Director

_____

Attest: Kattie Riggs, City Recorder

Insert exhibits on separate subsequent sheets.

Exhibit A is a legal description of the subject property provided by a professional land surveyor, stamped with their seal, and having a 1/8th-inch or larger font size (8.5-inch by 11-inch page).

Exhibit B is a site plan having a 1/8th-inch or larger font size (8.5-inch by 11-inch page is preferred).

Exhibit C is an operation and maintenance plan having a 1/8th-inch or larger font size (8.5-inch by 11-inch page).

NOTE:

Please remit the required processing and recording fee with this document submittal.

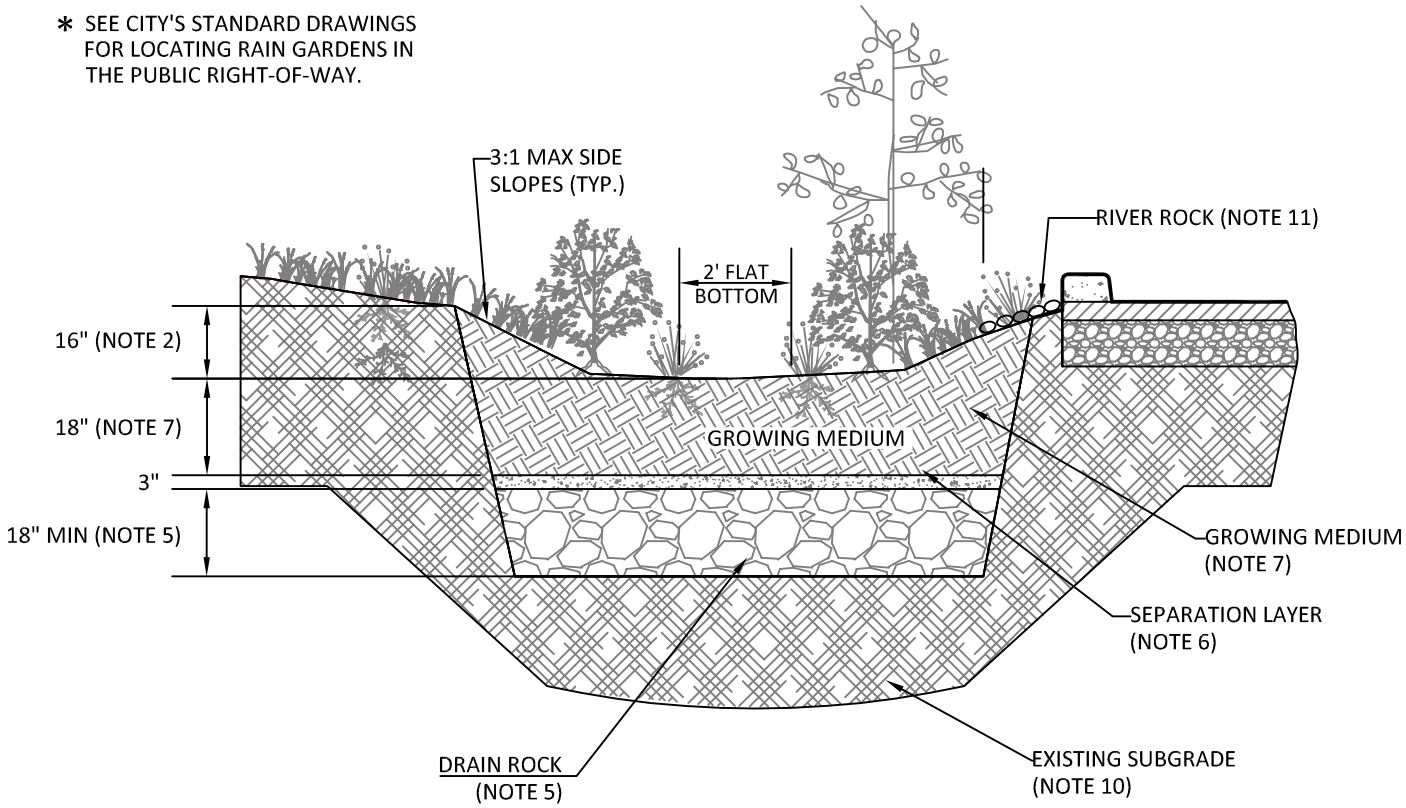
Photostatic copies of reduced tax maps may not meet the above described map requirements – verify with the Clackamas County Recorder.

All pertinent documents must be approved and processed by the City of Oregon City prior to the recording of partition & subdivision plats by the Clackamas County Surveyors Office – allow ample time for the City to process this document.

STORMWATER FACILITIES
OPERATIONS AND MAINTENANCE CHECKLIST

Problem	Recommended / Required	Trigger	Preferred Condition
Sediment Accumulation in Treatment Area	Monthly from November through April / Annually Required	Sediment depth exceeds 3 inches	Sediment removed from vegetated treatment area: level side to side and drains freely toward outlet; no standing water within 24 hours of any major storm (1" in 24 hours)
Erosion Scouring	Monthly from November through April / Annually Required	Exposed earth or rutted soil	Repair ruts or bare areas by filling with topsoil during dry season; regrade and replant large bare areas
Standing Water	Monthly from November through April and after any major storm event (1 inch in 24 hours)	Standing water in the planter between storms that does not drain freely	Remove sediment or trash blockages; improve end to end grade so there is no standing water 24 hours after any major storm (1 inch in 24 hours)
Flow not Distributed Evenly	Monthly from November through April / Annually Required	Flows unevenly distributed through planter width due to uneven or clogged flow spreader	Level the spreader and clean so that flows spread evenly over entire planter width
Settlement/ Misalignment	Annually Required	Failure of planters has created safety, function, or design problem	Planter replaced or repaired to design standards
Constant Baseflow	Monthly from November through April / Annually Required	Small, continual flow of water through the planter even after weeks without rain; planter bottom has an eroded, muddy channel	Add a low-flow pea gravel drain the length of the planter or bypass the baseflow around the planter
Vegetation	Monthly from November through April / Annually Required	Vegetation blocking more than 10% of the inlet pipe opening	No vegetation blocking the inlet pipe opening
Poor Vegetation Coverage	Monthly / Annually Required	Grass or other vegetation is sparse, or bare in more than 10% of the planter area	Determine cause of poor growth and correct the condition; replant with plants (per Appendix A) as needed to meet facility standards
Invasive Vegetation	Monthly / Annually Required	No invasive vegetation is planted or permitted to remain	No invasive vegetation present; remove excessive weeds. Control if complete eradication is not feasible
Rodents	Monthly / Annually Required	Evidence of rodents or rodent damage	No rodents; functioning facility
Insects	Annually Required	Insects such as wasps and hornets that interfere with maintenance activities	Harmful Insects removed
Trash and Debris	Monthly and after any major storm event (1 inch in 24 hours) / Annually Required	Visual evidence of trash, debris or dumping	Trash and Debris removed from facility
Contamination and Pollution	Monthly from November through April / Annually Required	Any evidence of oil, gasoline, contamination or other pollutants	No contaminants or pollutants present; coordinate removal/cleanup with local water quality response agency
Obstructed Inlet/Outlet	Monthly and after any major storm event (1 inch in 24 hours) / Annually Required	Inlet/outlet areas clogged with sediment, vegetation or debris	Clear inlet and outlet; obstructions removed
Excessive Shading	Monthly from November through April / Annually Required	Vegetation growth is poor because sunlight does not reach planter	Trim over-hanging limbs and/or remove brushy vegetation as needed
Vegetation	Monthly from November through April / Annually Required	Specified or approved grass grows so tall that it competes with shrubs and/or becomes a fire danger	String trim non-wetland grasses to 4 to 6 inches and remove clippings; protect woody vegetation

* SEE CITY'S STANDARD DRAWINGS FOR LOCATING RAIN GARDENS IN THE PUBLIC RIGHT-OF-WAY.



GENERAL NOTES:

1. **PROVIDE PROTECTION** FROM ALL VEHICLE TRAFFIC, EQUIPMENT STAGING, AND FOOT TRAFFIC IN PROPOSED INFILTRATION AREAS PRIOR TO, DURING AND AFTER CONSTRUCTION.
2. **DIMENSIONS:**
   -DEPTH OF BASIN (FROM TOP OF GROWING MEDIUM TO OVERFLOW ELEVATION): 16"
   -FLAT BOTTOM WIDTH: 2' MINIMUM
   -SIDE SLOPES OF BASIN: 3:1 MAXIMUM
   -SLOPE OF RAIN GARDEN: 0.5% OR LESS
3. **SETBACKS:**
   -INFILTRATION RAIN GARDEN MUST BE 10' FROM FOUNDATIONS AND 5' FROM PROPERTY LINES.
4. **OVERFLOW:**
   -INLET ELEVATION MUST ALLOW FOR 4" OF FREEBOARD, MINIMUM. PROTECT FROM DEBRIS AND SEDIMENT WITH STRAINER OR GRATE.
   -EMERGENCY OVERFLOW PATH FOR THE 100 YEAR DESIGN STORM SHALL BE IDENTIFIED IN THE STORMWATER MANAGEMENT PLAN.
5. **DRAIN ROCK:**
   -SIZE: 1 1/2" TO 3/4"- WASHED
   -DEPTH: 18"
6. **SEPARATION** BETWEEN DRAIN ROCK AND GROWING MEDIUM: SHALL BE A 3" LAYER OF 3/4" - 1/4" OPEN GRADED AGGREGATE.
7. **GROWING MEDIUM:**
   -DEPTH: 18" MINIMUM
   -SEE APPENDIX A FOR SPECIFICATION OR USE SAND/LOAM/COMPOST 3-WAY MIX.
   -FACILITY SURFACE AREA MAY BE REDUCED BY 20% WHEN GROWING MEDIA DEPTH IS INCREASED TO 30" OR MORE.
8. **VEGETATION:** FOLLOW LANDSCAPE PLANS OR REFER TO PLANTING REQUIREMENTS IN APPENDIX A.
9. **INSTALL RIVER ROCK** SPLASH PAD TO TRANSITION FROM INLET TO GROWING MEDIUM. SIZE OF ROCK SHALL BE 1" TO 3".
10. **SEASONAL HIGH GROUNDWATER SEPARATION:**
    -SEPARATION DISTANCE AS REQUIRED BY THE CITY.

Rain Garden - Infiltration
Figure C-5

Rain Gardens
Operations & Maintenance Plan

What to Look For	What to Do
Structural Components, including inlets and outlets/overflows, shall freely convey stormwater.	
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains and curb inlets and pipes to maintain at least 50% conveyance capacity at all times.
Cracked Drain Pipes	-Repair/seal cracks. Replace when repair is insufficient.
Check Dams	-Maintain 4 to 10 inch deep rock check dams at design intervals.
Vegetation	
Dead or strained vegetation	-Replant per original planting plan, or substitute from Appendix A. -Irrigate as needed. Mulch banks annually. DO NOT apply fertilizers, herbicides, or pesticides.
Tall Grass and Vegetation	-Cut back grass and prune overgrowth 1-2 times per year. Remove cuttings.
Weeds	-Manually remove weeds. Remove all plant debris.
Growing/Filter Medium, including soil and gravels, shall sustain healthy plant cover and infiltrate within 72 hours.	
Gullies	-Fill, lightly compact, and plant vegetation to disperse flow.
Erosion	-Replace splash blocks or inlet gravel/rock.
Slope Slippage	-Stabilize 3:1 slopes/banks with plantings from Appendix A.
Ponding	-Rake, till, or amend to restore infiltration rate.

Annual Maintenance Schedule:

Summer. Make any structural repairs. Improve filter medium as needed. Clear drain. Irrigate as needed.
Fall. Replant exposed soil and replace dead plants. Remove sediment and plant debris.
Winter. Monitor infiltration/flow-through rates. Clear inlets and outlets/overflows to maintain conveyance.
Spring. Remove sediment and plant debris. Replant exposed soil and replace dead plants. Mulch.
All seasons. Weed as necessary. Clean scuppers or curb cuts as needed.
*Maintenance Record*s: Record date, description, and contractor (if applicable) for all structural repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the inspector.
Access: Maintain ingress/egress to design standards.
Infiltration/Flow Control: All facilities shall drain within 72 hours. Record time/date, weather, and site conditions when ponding occurs.
Pollution Prevention: All sites shall implement best management practices to prevent hazardous or solid wastes or excessive oil and sediment from contaminating stormwater. Contact emergency response agencies for immediate assistance responding to spills. Record time/date, weather, and site conditions if site activities contaminate stormwater.
Vectors (Mosquitoes & Rodents): Stormwater facilities shall not harbor mosquito larvae or rats that pose a threat to public health or that undermine the facility structure. Monitor standing water for small wiggling sticks perpendicular to the water's surface. Note holes/burrows in and around facilities. Call Clackamas County Vector Control for immediate assistance to eradicate vectors. Record time/date, weather, and site conditions when vector activity observed.

Detention Pond
Operations & Maintenance Plan

Detention Ponds remove pollutants through several processes: sedimentation, filtration, and biological processes. The facility owner must keep a log, recording all inspection dates, observations, and maintenance activities. The following items shall be inspected and maintained as stated:

What to Look For	What to Do
Structural Components, including inlets and outlets/overflows, shall freely convey stormwater.	
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains, curb inlets and pipes to maintain at least 50% conveyance capacity at all times.
Cracked Drain Pipes	-Repair/seal cracks. Replace when repair is insufficient.
Clogged Control Structures	-Remove accumulated sediment and debris.
Vegetation shall cover 90% of the facility.	
Dead or strained vegetation	-Replant per original planting plan, or substitute from Appendix A. -Irrigate as needed. Mulch banks annually. DO NOT apply fertilizers, herbicides, or pesticides.
Tall Grass and Vegetation	-Cut back grass and prune overgrowth 1-2 times per year. Remove cuttings.
Weeds	-Manually remove weeds. Remove all plant debris.
Growing/Filter Medium, including soil and gravels, shall sustain healthy plant cover and infiltrate within 72 hours.	
Gullies	-Fill, lightly compact, and plant vegetation to disperse flow.
Erosion	-Replace splash blocks or inlet gravel/rock.
Slope Slippage	-Stabilize 3:1 Slopes/banks with plantings from Appendix A.
Ponding	-Rake, till, or amend to restore infiltration rate.

Annual Maintenance Schedule:

All facility components, vegetation, and source controls shall be inspected for proper operations and structural stability. These inspections shall occur, at a minimum, quarterly for the first 2 years from the date of installation, and 2 times per year thereafter, and within 48 hours after each major storm event.

Access: Maintain ingress/egress to design standards.

Infiltration/Flow Control: All facilities shall drain within 72 hours. Record time/date, weather, and site conditions when ponding occurs.

Pollution Prevention: All sites shall implement best management practices to prevent hazardous or solid wastes or excessive oil and sediment from contaminating stormwater. Contact emergency response agencies for immediate assistance responding to spills. Record time/date, weather, and site conditions if site activities contaminate stormwater.

Vectors (Mosquitoes & Rodents): Stormwater facilities shall not harbor mosquito larvae or rats that pose a threat to public health or that undermine the facility structure. Monitor standing water for small wiggling sticks perpendicular to the water's surface. Note holes/burrows in and around facilities. Call Clackamas County Vector Control for immediate assistance to eradicate vectors. Record time/date, weather, and site conditions when vector activity observed.

Appendix F:
Site Assessment and Preliminary Design Checklist

MAZZETTI
T 503.620.3232
121 SW Salmon Street, Suite 1000
Portland, OR 97204
T 541.686.8478
940 Willamette Street, Suite 310
Eugene, OR 97401

SITE ASSESSMENT AND PRELIMINARY DESIGN CHECKLIST

✓	Information needed	Attach supporting materials as needed
2.2.1 Site Information		
	Applicant contact information	Applicant name: Geoff Larsen Business name: Mazzetti Contact address, phone number, and e-mail: 940 Willamette Street, Suite 310, Eugene, OR 97401 503-601-5968 glarsen@mazzetti.com
	Project location	Site address: 19600 Molalla Avenue, Oregon City, 97045 Site description: Athletics complex located at northeast corner of CCC Campus. Major drainage basin: Newell Creek Is the project site located with the NROD as defined in OCMC 17.49? Y (Y/N) *Include a vicinity map of the site (including location of property in relation to adjacent properties, roads, and pedestrian/bike facilities).* ***SEE FIGURE 1***
	Project type	Identify types of development planned for the site such as commercial, industrial, single-family residential, multi-family residential, or other (describe): Institutional campus development - modernization of athletics facilities.
	Size of site	Size of site: 156.6 (acres) OR_____ (SF) Number of lots: Existing: 1 Proposed: 1 Amount of new and replaced impervious area: 13214 (SF)
2.2.2 Site Assessment *Note: Site assessment information may be available from the OCMaps online tool available through the City's website.*		
	Site Assessment Map	*Attach engineered scale Site Assessment Map, showing items below.*
	Topography Evaluate site and map slopes: *Flat: 0-10%* *Moderate: 10-25%* *Steep: 25% and greater*	*Surveyed or aerial-based mapping with 2-foot intervals for slopes 0-25% slope and 10-foot intervals for steeper.* Is the project site located within a *Geologic Hazard Areas*? N (Y/N) *Indicate Geologic Hazard Areas as defined by OCMC 17.04.510 and Geologic Hazards Overlay Zone as defined by OCMC 17.04.515.* ***SEE FIGURE 2***
	Soils and Groundwater NRCS Soil Report of site area	NRCS Hydrologic Soil Type (provide map if more than one type present): HSG C *Attach seasonal groundwater depth evaluation if available or required (for site with floodplain and/or wetland). Include depth to water table information from* NRCS. ***SEE APPENDIX D2 OF STORMWATER REPORT***
	Infiltration Assessment Determine soil capacity for onsite infiltration	Infiltration rates from NRCS Soil Report ("Ksat" in report) _____to_____ (inches/hour) OR ***SEE APPENDIX D1 OF STORMWATER REPORT (GEOTECHNICAL REPORT)*** If an infiltration test is performed, provide the documentation and factored infiltration rate. See **Appendix D** for the approved infiltration testing methods. Test type: Open Pit Falling Head 0.02 (inches/hour)

SITE ASSESSMENT AND PRELIMINARY DESIGN CHECKLIST		
	Hydrology – Conditions and Natural Features Map site floodplains, wetlands, streams, and location of outfalls	Clearly label on map all intermittent and perennial creeks/streams/rivers and wetlands, FEMA floodplains, and existing drainage systems (pipes, ditches, outfalls). Types of sensitive area(s) (wetlands, streams, etc.) Wetlands and Streams Floodplain No (Y/N) ***SEE FIGURE 3***
	Downstream Conveyance	Indicate the proposed point of discharge on the site plan. *Prepare and attach a Downstream Analysis as required by **Chapter 5**.* Adequate downstream capacity is available: Yes (Y/N) If downstream capacity is not available, proposed remedy (upsize pipes, additional on-site storm detention, etc.): ***REFER TO STORMWATER REPORT***
	Existing Vegetation Map trees and vegetation	Using aerial photos or survey, map all trees and vegetation. Note all existing trees 6-inch caliper and greater (DBH) on map. Delineate and identify other areas and types of existing vegetation. The local planning authority may require a formal tree survey. ***SEE FIGURE 3***
	Required Vegetated Buffers and Setbacks Assess and map buffers	Identify required vegetated buffer areas and other setback limits as defined by OCMC Title 17. ***SEE FIGURE 3***
	Land Use and Zoning	Existing Land Use Zoning designation(s): Institutional
	Access and Parking	Map proposed access points for all modes of transportation. ***SEE FIGURE 3***
	Utilities to Site and Surrounding Area	Map existing utilities including stormwater facilities, storm conveyance, sewer, water, electricity, phone/cable, gas, and any public storm system/facility downstream. ***SEE FIGURE 3***
2.2.3 Site Preliminary Design Objectives *(attach engineered scale Preliminary Site Plan)*		
	1. Preserve existing resources	**Required:** Show sensitive areas and buffers on site plan. Denote buffer areas that require enhancement. Show any proposed areas of encroachment and associated buffer mitigation areas. ***SEE FIGURE 3***
	2. Minimize site disturbance	**Required:** Delineate protection areas on site plan for areas to remain undisturbed during construction. ***REFER TO EROSION CONTROL PERMIT DRAWINGS***
	3. Minimize soil compaction	**Required:** Delineate and note temporary fencing on site plan for proposed infiltration facilities, vegetated stormwater management facilities, and re-vegetation areas. ***REFER TO EROSION CONTROL PERMIT DRAWINGS***
	4. Minimize imperviousness	**Required:** Delineate proposed impervious areas and proposed impervious area reduction methods on the site plan. A. Total proposed new/replaced impervious area: 134214 (SF) B. Area of proposed Green Roofs: 0 (SF) C. Area of proposed pervious pavements: 0 (SF) Describe type of pavers or pavement proposed: 0 D. Impervious area requiring management [A-(B+C)]: 134214 (SF)

SITE ASSESSMENT AND PRELIMINARY DESIGN CHECKLIST

2.2.4 Proposed Stormwater Management Strategy

	Proposed Stormwater Management Strategy	**Level 1 – Onsite retention of the 10-year design storm** _____ Full onsite retention/infiltration using LID facilities where there are infiltration rates of 2.0 inches per hour or greater (choose one or more applicable strategies from the next section): **Level 2 – Onsite stormwater management using LID facilities** *(include documentation for the following applicable limiting condition(s) and choose one or more applicable strategies from the next section):* X Low infiltration rates of less than 2.0 inches per hour _____ Location for stormwater management facilities limited to areas with fill _____ Steep slopes X High groundwater _____ Contaminated soils ***PROJECT WILL UTILIZE LEVEL 2 REFER TO STORMWATER REPORT*** _____ Conflict with required Source Controls (**Chapter 6**) _____ **Level 3 - Offsite stormwater management facilities/regional facilities** _____ **Level 4 - Fee in Lieu, as determined by the City**
	Preliminary Facility Selection	Check all that apply, *attach output from BMP Sizing Tool*, and show proposed Stormwater Management Facilities on Preliminary Site Plan. LID facilities: _____ Stormwater Planter (infiltration or filtration) X Rain Garden (infiltration or filtration) _____ Vegetated Swale (infiltration or filtration) _____ Detention Pond (infiltration or filtration) X Other* Underground Detention, Manufactured Treatment **Modifications must be approved by City per Section 1.6*
	Minimum Facility Size	A. Level 1 - Required surface area of onsite surface infiltration facilities: As determined by BMP sizing tool or engineered method: _____ (SF) OR storm facility which can infiltrate the full 10-year design storm: _____ (SF) B. Level 2 - Calculate required surface area of onsite LID facilities: As determined by BMP sizing tool or engineered method: 88957 (SF) *Or 10% of total impervious area (new and replaced): _____ (SF) C. Level 3 - Calculate required surface area of offsite/regional facilities: As determined by BMP sizing tool or engineered method: _____ (SF) D. **Level 4 - Fee in Lieu, as determined by the City _____ **10 % sizing factor only applicable for sites entirely within a Geologic Hazard Area (Section 2.2.4)*

SITE ASSESSMENT AND PRELIMINARY DESIGN CHECKLIST

2.2.5 Other Project Requirements

	Grading Permit	A city-issued grading permit shall be required before the commencement of any of the following filling or grading activities (Review OCMC 15.48 for requirements): *Fill and grading activities proposed to be undertaken in conjunction with a land use application, do not require a separate grading permit but are subject to the standards OCMC 15.48 and Chapter 3 of the Stormwater and Grading Design Standards. Approval of the construction plans submitted through the land use application process shall fulfill grading permit requirements.* A separate permit is not required. _____ (Y/N) Grading activities in excess of ten cubic yards of earth. Y_____ (Y/N) Grading activities divert existing drainage courses, (natural or man-made). N_____ (Y/N) Creation of impervious surfaces greater than two thousand square feet. Y_____ (Y/N) Excavation beyond the limits of a basement or footing excavation, having an unsupported soil height greater than five feet after the completion of such a structure. Y_____ (Y/N) Grading activities involving the clearing or disturbance of one-half acre or more. Y_____ (Y/N)
	Erosion Prevention and Sediment Control	Identify the required permits: Yes ESC Permit from the City *(sites that include 1,000+ SF new or replaced impervious area)* Yes 1200-C Permit from DEQ *(sites that disturb 1 acre or more land surface)*
	Source Control for High Use Sites	Identify whether the proposed development will include any of the following: No Fuel Dispensing Facilities and Surrounding Traffic Areas No Above-Ground Storage of Liquid Materials No Solid Waste Storage Areas, Containers, and Trash Compactors No Exterior Storage of Bulk Materials No Material Transfer Areas/Loading Docks No Equipment and/or Vehicle Washing Facilities No Development on Land With Suspected or Known Contamination No Covered Vehicle Parking Areas No Industrial and Commercial High Traffic Areas No Other land uses subject to the ODEQ 1200-Z Industrial Stormwater Permit
	Other Permits	Identify other natural resources related permits from local, state, or federal agencies that may be required as part of the proposed development activity. It is the responsibility of the applicant to identify and obtain required permits prior to project approval. List other anticipated permits:

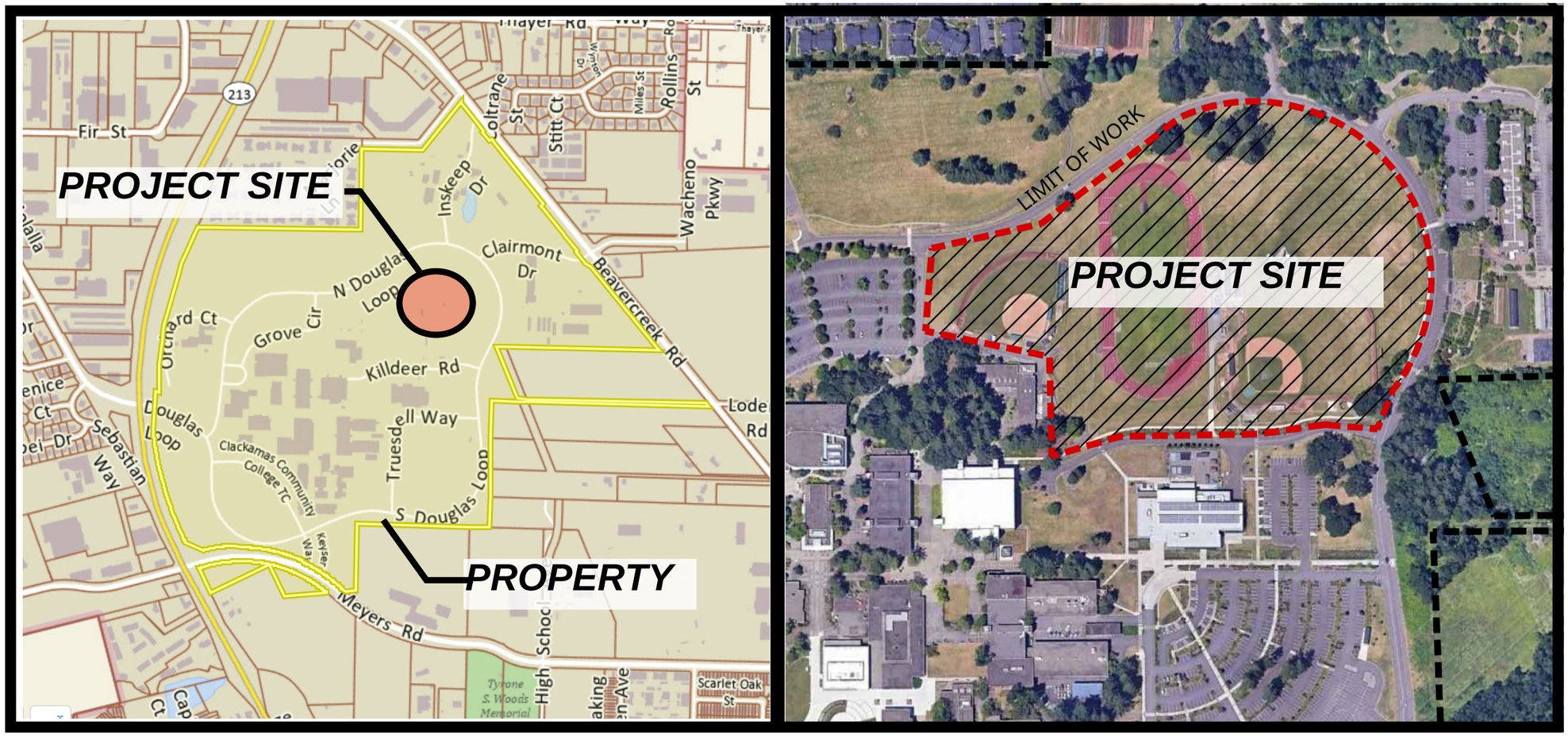


FIGURE 1 - VICINITY MAP
SITE ASSESSMENT DIAGRAMS
CCC ATHLETICS COMPLEX



GEOLOGIC HAZARD MAP

NOTES:

- **SITE CONTAINS MODERATE SLOPES (10-25%)**
- **NO GEOLOGIC HAZARD AREAS ARE IDENTIFIED PER OMC 17.04.510 AND THE GEOLOGIC HAZARD OVERLAY ZONE.**

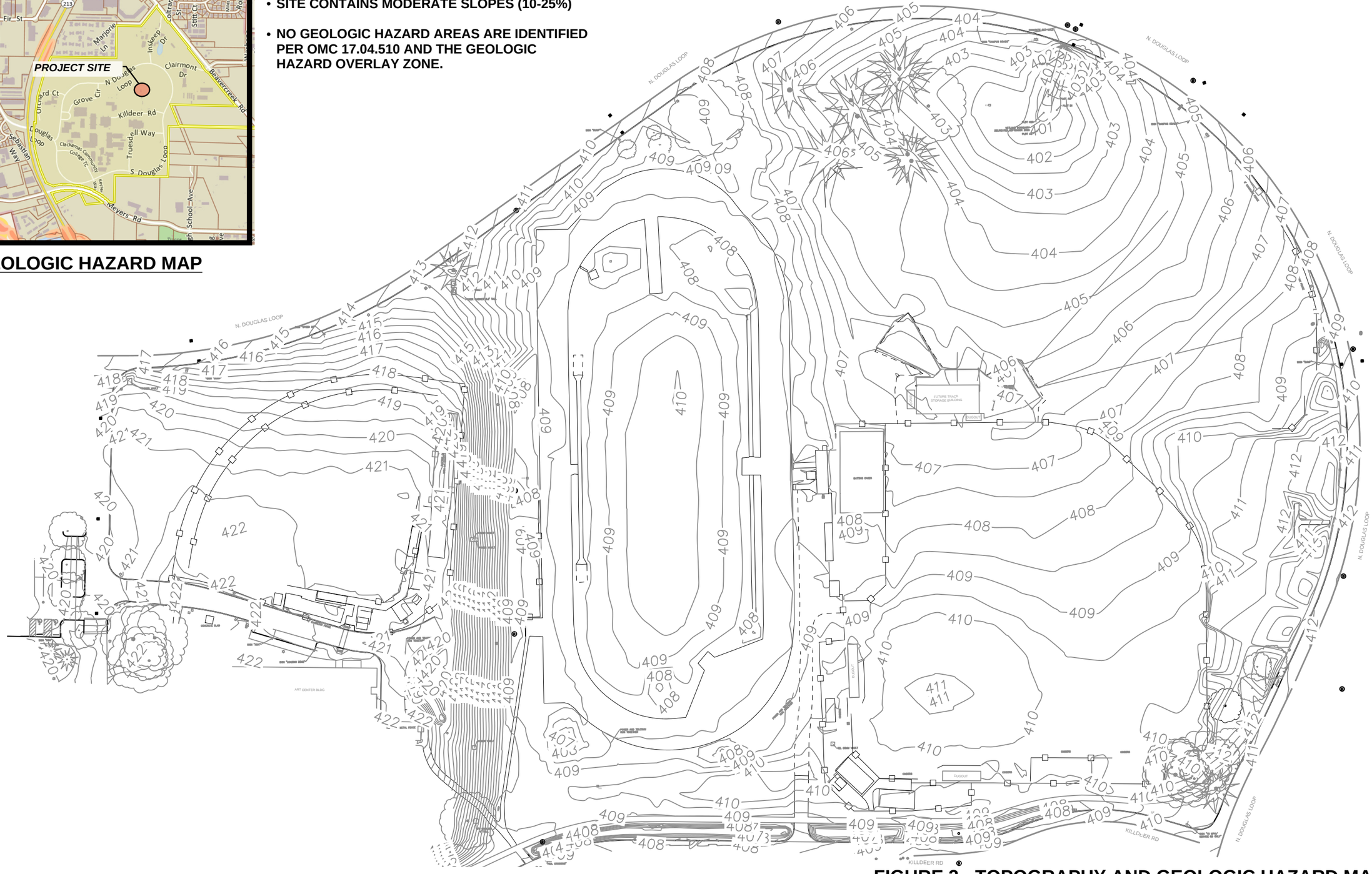
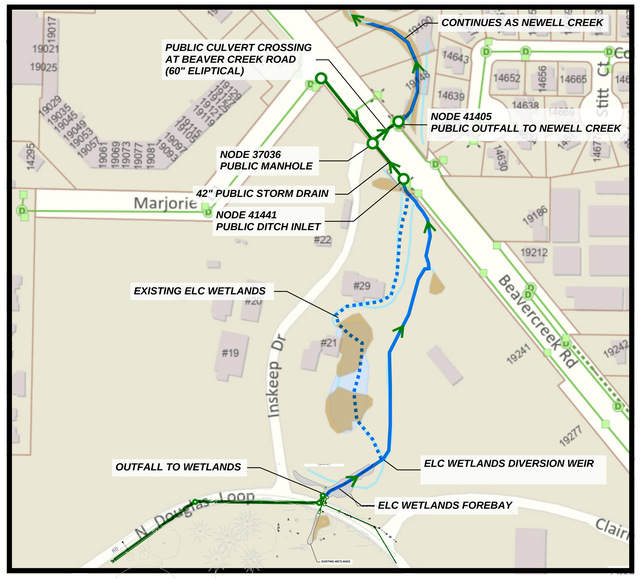


FIGURE 2 - TOPOGRAPHY AND GEOLOGIC HAZARD MAP

SITE ASSESSMENT DIAGRAMS

CCC ATHLETICS COMPLEX



ENVIRONMENTAL LEARNING CENTER WETLANDS
AND RECEIVING PUBLIC STORM DRAIN SYSTEM

CONTINUES THROUGH ELC WETLANDS

CONTINUES AS NEWELL CREEK TO PUBLIC NODE 41441 (SEE INSET DETAILTO LEFT)

ELC WETLANDS BYPASS WEIRS

ENVIRONMENTAL LEARNING CENTER (ELC)

OUTFALL TO WETLANDS

EXISTING ELC WETLANDS FOREBAY

MANHOLE

EXISTING WETLANDS

EXISTING TREES TO REMAIN, TYPICAL

REQUIRED 50' BUFFER

THROWS FIELDS

DOUGLAS LOOP RD

DOUGLAS LOOP ROAD

HAMMER THROW

SOCCER FIELD AND TRACK

SOFTBALL FIELD

EXISTING GRASSY SWALES TO BE REMOVED (CONSTRUCTED UNDER 2003 STUDIO ARTS PROJECT)

ART CENTER BLDG

BASEBALL FIELD

EXISTING RAIN GARDENS TO REMAIN (CONSTRUCTED UNDER 2015 HTIC PROJECT)

KILLDEER RD

HTIC BLDG

DRAINAGE FROM ADJACENT ONSITE AREA

DRAINAGE FROM ADJACENT ONSITE AREA AND OREGON CITY HIGH SCHOOL

PLAN SCALE
0 40' 80'
SCALE: 1"= 40'

FIGURE 3 - HYDROLOGY, CONVEYANCE, AND VEGETATION
SITE ASSESSMENT DIAGRAMS
CCC ATHLETICS COMPLEX

MAZZETTI 10/09/25

M:\Mazzetti\Projects\25\Engineering\02-25-010267 - CCC - Athletics Complex\04 Dwgs\CAD Projects\Civil\REFERENCES\Stormwater\251006_Stormwater Report Figures\Figure 1A-System Diagram-Exist.dwg 10/13/2025 8:26 AM GEOFF LARSEN

EXHIBIT F
Pre-Application Conference Notes

OREGON CITY

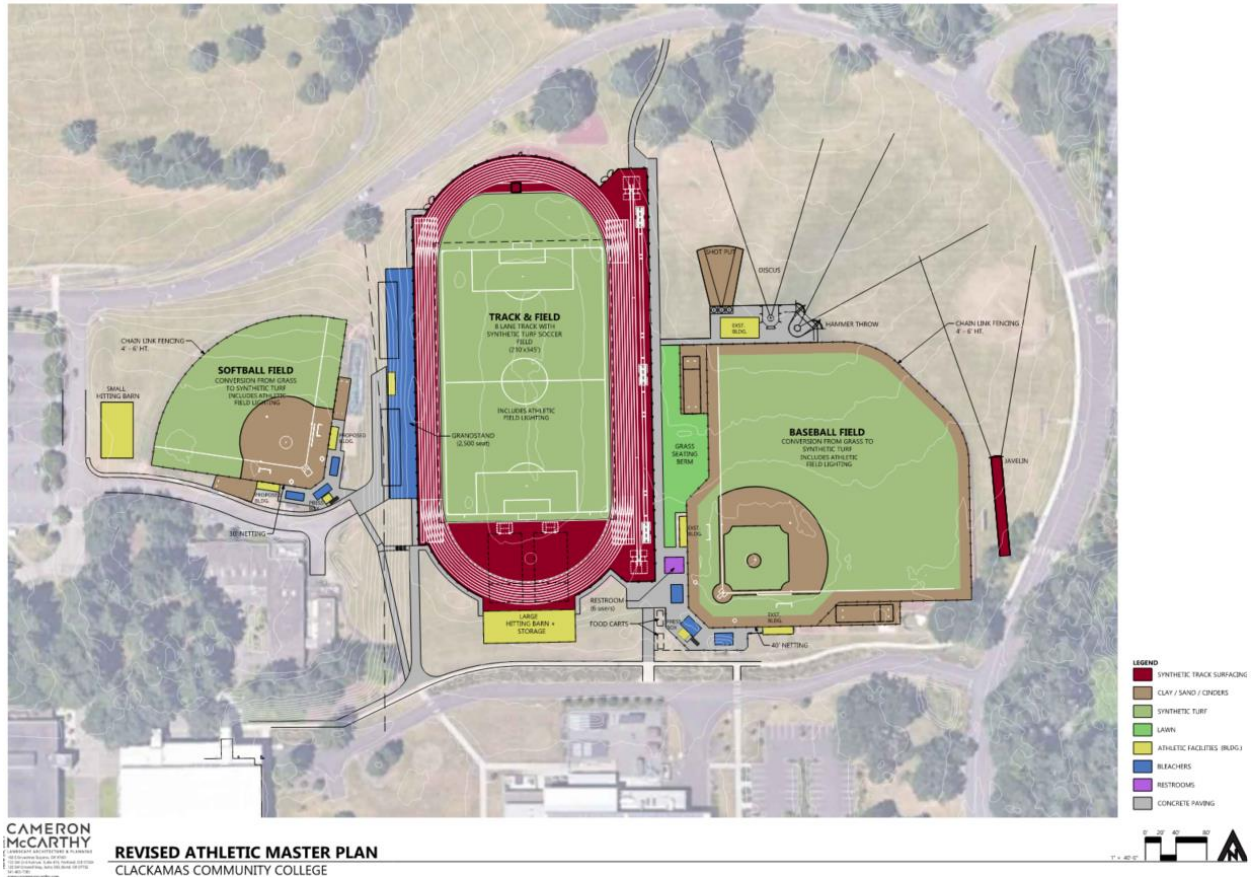
Community Development – Planning

695 Warner Parrott Road | Oregon City OR 97045
Ph (503) 722-3789 | Fax (503) 722-3880

Pre-Application Conference Notes: File # PA-25-00039

Meeting Date: August 21, 2025
Final Notes Sent: September 9, 2025

These non-binding pre-application conference notes reflect the applicant's submission to the City along with the discussion at the meeting. The applicant has one week from the receipt of the notes to notify City staff of any perceived mistake or omission in the notes; staff will then review and respond to the inquiry, and the inquiry will be added to the City's file. If no notification is received within 7 business days, the notes will be considered final and will not be modified. See additional disclaimers at the end of this document.



Proposed Project Description (Taken from applicant's submittal)**:**
The existing track and field will be replaced with a newly constructed track with a wider interior field which will be proposed project is to provide a new track and field facility with collegiate synthetic turf soccer field at its center. Also included is a partially covered grandstand to seat 2500 people. The grandstands are intended to serve events such as graduation while sporting events at the track and soccer field typically require less seating. Baseball and Softball facility improvements will include conversion from grass and partial grass fields to full synthetic turf. Backstops at both baseball and

softball will be replaced to improve spectator safety and site security. Pedestrian and vehicular access walkways will be added to address circulation patterns around the facilities. A proposed hitting barn with track storage is proposed for the south end of the track. This will be a pole barn style building that is not inhabitable and will not be a conditioned space. Similarly, a hitting barn is proposed near the softball field in a style to match the baseball hitting barn. New bleachers will replace the existing bleachers at both softball and baseball to allow the facilities to meet ADA requirements. New elevated press box buildings will also be added at both softball and baseball facilities. A new 6-user restroom building is proposed to be located for shared use between the renovated track and the baseball facility. The three proposed athletic field renovations (baseball, softball and soccer) will also include athletic field lighting. LED Lighting is proposed on 60'-70' height poles to reduce light pollution and be dark sky compliant. Lighting will be designed to limit light pollution to the project area.

The site plan attached with this application is in line with the 2017 athletic master plan that was included as part of the General Development Plan that received approval on 4/14, 2025 (GLUA-24-0020 /MAS-24-00001). The proposed project is proposed to be completed in 2 phases over the next couple years with the baseball and softball field improvements occurring in the fall winter of 2025 and the track, soccer field and accessory buildings being constructed in the summer of 2026.

General Information:

- Location: 19600 Molalla Ave, Oregon City, OR 97045
- Clackamas Map: 3-2E-09C, Taxlot 800
- Zoning: Institutional (I) District

Review Process:

- Type I Detailed Development Plan for Phase I (e.g., field resurfacing/landscaping, fences that meet OCMC 17.54.100, pedestrian paths). Compliance with OCMC 17.62.050 is required.

  Any items not part of Phase I can be reviewed with Phase II, including pedestrian paths, outdoor lighting, etc.

- Type II Detailed Development Plan for Phase II (e.g., track widening, vehicle access changes, retaining walls, structures over 3,000 SF) for compliance with OCMC 17.65 and 17.62.

Summary of the city's decision-making processes (OCMC 17.50.030):

Type I decisions do not require interpretation or the exercise of policy or legal judgment in evaluating approval criteria. Because no discretion is involved, Type I decisions do not qualify as a land use, or limited land use, decision. The decision-making process requires no notice to any party other than the applicant. The community development director's decision is final and not appealable by any party through the normal city land use process.

Type II decisions involve the exercise of limited interpretation and discretion in evaluating approval criteria, similar to the limited land use decision-making process under state law. Applications evaluated through this process are assumed to be allowable in the underlying zone, and the inquiry typically focuses on what form the use will take or how it will look. Notice of application and an invitation to comment is mailed to the applicant, recognized active Neighborhood Association(s) and property owners within three hundred feet. The Community Development Director accepts

*comments for a minimum of fourteen days and renders a decision. The Community Development Director's decision is appealable to the City Commission, by any party who submitted comments in writing before the expiration of the comment period. Review by the City Commission shall be on the record pursuant to OCMC **17.50.190** under ORS 197.195(5). The City Commission decision is the city's final decision and is subject to review by the Land Use Board of Appeals (LUBA) within twenty-one days of when it becomes final.*

Completeness review (OCMC 17.50.070):
Items required to determine the completeness of a Type II Land Use Application.

1. *Submittal of a **Land Use Application** through the **Online Portal** that includes:*
    i. *An accurate address and tax map and location of all properties that are the subject of the application;*
    ii. *Name, address, telephone number and authorization signature of all record property owners or contract owners, and the name, address and telephone number of the applicant, if different from the property owner(s)*
2. *Payment of the associated **Planning Fees** (see below).*
3. *Submittal of the following items within 180 days of submittal of the land use application and payment of the associated planning fees:*
    i. *A complete list of the permit approvals sought by the applicant;*
    ii. *A complete and detailed narrative description of the proposed development*
        1. *Planning Staff will forward you a Code Response Template that you can use as your narrative.*
    iii. *A discussion of the approval criteria for all permits required for approval of the development proposal that explains how the criteria are or can be met or are not applicable, and any other information indicated by staff at the pre-application conference as being required;*
    iv. *One copy of all architectural drawings and site plans shall be submitted for Type II—IV applications.*
    v. *Documentation indicating there are no liens favoring the city on the subject site.*
    vi. *A receipt from the county assessor's office indicating that all taxes for the lot or parcels involved are paid in full for the preceding tax year.*
    vii. *A current preliminary title report or trio for the subject property(ies)*
    viii. *A transportation impact study (if required) documenting the on- and off-site transportation impacts, as specified in OCMC 17.65.050.B.1.h.i. If such an analysis was submitted as part of the general development plan process, the scope of the report may be limited to any changes which have occurred during the interim and any information listed below which was not a part of the initial study.*

    The on-site portion of the analysis shall include the location, dimensions and names of all proposed streets, alleys, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle access ways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site. The map shall identify existing subdivisions and development and un-subdivided or unpartitioned land ownerships adjacent to the proposed development site and show how existing streets, alleys,

sidewalks, bike routes, pedestrian/bicycle access ways and utilities within two hundred fifty feet may be extended to and/or through the proposed development.

ix. The location within the development and in the adjoining streets of existing and proposed sewers, water mains, culverts, drain pipes, underground electric, cable television and telephone distribution lines, gas lines, and the location of existing aerial electric, telephone and television cable lines, if any, to be relocated within the development.

x. For portions of the project that would otherwise be subject to site plan and design review, a site plan or plans, to scale, containing the required information identified in OCMC 17.62.040.

xi. Additional documentation, as needed and identified by the community development director.

Timelines and Checklists:

A. **Type I Minor Site Plan & Design Review** Application and Addenda **(Phase I)**

B. Type II Land Use Process **(Phase II)**: **www.orcity.org/documentcenter/view/3286**
   a. **Site Plan & Design Review Checklist**

C. **Completeness Review** **(Phase II)**: 30 Days for initial review, up to 180 days after the Online Submittal of a **Land Use Application** and payment of associated **review fees**.

Comments:

Applicable Conditions of Approval from the General Development Plan (MAS-24-00001):

3. All future Detailed Development Plans that request adjustments from development standards will be required to undergo Detailed Development Plan reviews at the Type III level and meet the submission requirements and approval criteria of OCMC 17.65.060.
4. All adjustments granted in previous Master Plan approvals have expired and do not carry over to the new Master Plan framework. To be eligible for the same adjustments granted in previous Master Plan approvals, the applicant shall request any and all desired adjustments from the standards of the Oregon City Municipal Code in effect at the time of submission of the General Development Plan (i.e., August 1, 2024) within subsequent Type III Detailed Development Plan submissions. In so doing, the applicant shall demonstrate compliance with the approval criteria of OCMC 17.65.070 and propose mitigation measures that meet the approval criteria of this section with their submittals.
5. Detailed Development Plans that do not request adjustments may be reviewed through a Type I or Type II procedure, as applicable, according to OCMC 17.65.040 and 070.
6. Future Type II and Type III Detailed Development Plan applications under this General Development Plan shall demonstrate compliance with Traffic Impact Analysis guidelines and assess their impact on public utilities.

Detailed Development Plans – See **OCMC 17.65.060**

A. Submittal Requirements.

1. A transportation impact study documenting the on- and off-site transportation impacts, as specified in OCMC 17.65.050.B.1.h.i. If such an analysis was submitted as part of the general development plan process, the scope of the report may be limited to any

changes which have occurred during the interim and any information listed below which was not a part of the initial study.

The on-site portion of the analysis shall include the location, dimensions and names of all proposed streets, alleys, other public ways, sidewalks, bike routes and bikeways, pedestrian/bicycle access ways and other pedestrian and bicycle ways, transit streets and facilities, neighborhood activity centers, and easements on and within two hundred fifty feet of the boundaries of the site. The map shall identify existing subdivisions and development and un-subdivided or unpartitioned land ownerships adjacent to the proposed development site and show how existing streets, alleys, sidewalks, bike routes, pedestrian/bicycle access ways and utilities within two hundred fifty feet may be extended to and/or through the proposed development.

2. *The location within the development and in the adjoining streets of existing and proposed sewers, water mains, culverts, drain pipes, underground electric, cable television and telephone distribution lines, gas lines, and the location of existing aerial electric, telephone and television cable lines, if any, to be relocated within the development.*
3. *For portions of the project that would otherwise be subject to site plan and design review, a site plan or plans, to scale, containing the required information identified in OCMC 17.62.040.*
4. *For residential portions of the project not otherwise subject to site plan and design review, a site plan or plans, to scale, showing the proposed land uses and densities, building locations, lot patterns, circulation patterns, and open space locations and uses.*
5. *Any other information the community development director deems necessary to show that the proposed development will comply with all of the applicable Chapter 17 requirements.*

B. *Approval Criteria. The community development director shall approve an application for detailed development plan approval only upon findings that:*

1. *All development standards and impact mitigation meet the requirements of the approved general development plan, including conditions of approval.*
2. *Any other applicable zoning regulations that are not addressed in the general development plan are met, unless an adjustment to those regulations has been applied for and is approved. The approval standards applicable to adjustments required as part of a master plan or planned unit development are contained in OCMC 17.65.070.*
3. *The detailed development plan conforms with the base zone standards, applicable residential design standards, and applicable standards contained in Chapters 17.62, 17.52, 16.12, and 16.08 unless adjusted as provided in OCMC 17.65.070.*

Site Plan and Design Review Criteria in **OCMC 17.62**:

- Landscaping standards in **OCMC 17.62.050**.A*
- Pedestrian Circulation standards in **OCMC 17.62.050**.C*
- Building Materials standards in **OCMC 17.62.050**.H
- Building Location and details in **OCMC 17.62.055**.D and I*
- Outdoor Lighting standards in **OCMC 17.62.065**
- Refuse and Recycling standards in **OCMC 17.62.085**

*Items that can be modified under **OCMC 17.62.015**

Modifications to Site Plan & Design Review Criteria (**OCMC 17.62.015**)

Planning Staff may approve requested modifications if the following approval criteria are met:

a. *The modification will result in a development that better meets the applicable design guidelines; and*
b. *The modification meets the intent of the standard. On balance, the proposal will be consistent with the purpose of the standard for which a modification is requested.*

Items to Consider:

Items that Staff will need clarity on:

A. Structure footprint and floor area calculations, by structure and in total.
B. Total impervious surface addition to the project area.
C. Assessment of impact on parking as it relates to OCMC 17.52.

Other aspects that would assist with the review of this proposal might include:

- A photometric plan from a lighting engineer that demonstrates compliance with the outdoor lighting standards of OCMC 17.62.065.
- A detailed explanation of how the proposed modifications to Site Plan & Design Review standards meet the approval criteria of OCMC 17.62.015.B.

Items to include in application and plans, if applicable.

- If any existing trees are to be removed, a Tree Protection and Mitigation Plan conforming to **OCMC 17.41** is required. If Phase I requires tree removals, then this aspect can be reviewed through **Addendum 4b** of the **Type I Minor Site Plan & Design Review form.**
- Fences, hedges, walls, and retaining walls conforming to OCMC **17.54.100**.

Development Services Division (Utilities/Public Improvements/SDC's/Geologic Hazards Overlay District, etc.): See separate notes from Public Works Development Services Division.

Neighborhood Association

If a Land Use Application is submitted for this project by March 19, 2026, a Neighborhood Association meeting is not required, since the meeting for the General Development Plan will cover this review, as well. If the application is submitted after March 19, 2026, a new Neighborhood Association Meeting will be required. The site is in the Caufield Neighborhood Association.

Caufield Neighborhood Association
Chair: Rachel Guirsch, Email: **caufieldna@gmail.com**

- Please include the Citizen Involvement Committee Chair, Linda Baysinger, in any Neighborhood Association meeting requests, notifications or correspondence. Linda can be reached at: **team.baysinger@comcast.net**.

Oregon City Municipal Code Criteria:

The following chapters of the Oregon City Municipal Code (OCMC) may be applicable to this proposal:

OCMC 12.04 – Streets, Sidewalks and Public Places
OCMC 12.08 – Public and Street Trees
OCMC 13.12 – Stormwater Management
OCMC 15.48 – Grading, Filling and Excavating
OCMC 16.12 – Minimum Public Improvements and Design Standards for Development
OCMC 17.39 – Institutional (I) District
OCMC 17.41 – Tree Protection & Mitigation Standards
OCMC 17.47 – Construction Site Runoff Controls
OCMC 17.50 – Administrative Processes
OCMC 17.52 – Off-Street Parking and Loading
OCMC 17.54 – Supplemental Zoning Regulations And Exceptions
OCMC 17.62 – Site Plan and Design Review
OCMC 17.65 – Master Plans

A code response template will be provided by city staff following the pre-application conference.

Other notes:

- We encourage a diversity of tree species throughout your development.
- Native and Nuisance Plant and Street Tree Lists:

A. Native Plants: **www.orcity.org/documentcenter/view/5195**
B. Nuisance Plants: **www.orcity.org/documentcenter/view/5196**
C. Street Trees: **www.orcity.org/documentcenter/view/3584**

Applications and 2025 Review Fees anticipated:

Planning review Fee Schedule: **2025 Planning Fees**:

- Type I Detailed Development Plan: $943
- Type II Detailed Development Plan:

Site Plan & Design Review / Detailed Master Plan / Manufactured Home Park Review	
- less than $500,000	$2,855 plus 0.007 X project cost
- $500,000 to $3,000,000	$4,743 plus 0.005 X project cost
- over $3,000,000	$16,082 plus 0.003 X project cost
	maximum fee = $75,337

- Traffic Analysis Fees: See **Engineering Fee Schedule**
- Incomplete Applications: No charge for 1st incomplete submittal, $381 for each incomplete submittal thereafter
- Re-notice fee: $794

Planning Division

Jude Thaddaeus, Assistant Planner, reviewed this pre-application.
jthaddaeus@orcity.org; (503) 496-1540

Building Division:

Your application was forwarded to the Oregon City Building Division for comments regarding the building permit process and applicable building codes. If you have any questions, please contact **permits@orcity.org**.

Jim Sayers, Building Official, may be reached at **jsayers@orcity.org** or (503) 496-1517.

Clackamas Fire District:
Questions can be directed to Mike Boumann, Lieutenant Deputy Fire Marshal of Clackamas Fire District #1. You may contact Mr. Boumann at (503)742-2660 or **michaelbou@ccfd1.com**.

Public Disclosure:

The purpose of a pre-application meeting is to introduce the impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal (City Code 17.50.050). Omissions or failures by staff to identify all relevant applicable land use requirements or how they might affect a proposal may occur, either as a result of a limited pre-application submittal or the consideration of discretionary criteria.

All pre-application conference related communications, including these notes, are informational only. They do not substitute for a public hearing and no land use decision is rendered at this phase. Notwithstanding any representations by City staff at a preapplication conference, staff is not authorized to waive any requirements of the Oregon City Municipal Code, and any omission or failure by staff to recite to an applicant all relevant applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.

Pre-application conferences are required by Section 17.50.050 of the City Code, as follows:

A. *A pre-application conference shall be valid for a period of six months from the date it is held. If no application is filed within six months of the conference or meeting, the applicant must schedule and attend another conference before the City will accept a permit application. The community development director may waive the preapplication requirement if, in the Director's opinion, the development does not warrant this step. In no case shall a pre-application conference be valid for more than one year.*

Additional Notes for Contractors and Consultants:

1. ***All contractors and consultants shall obtain a City of Oregon City business license or a Metro License.***
2. ***The general contractor shall ensure that ALL subcontractors are properly licensed.***
3. *All subcontractors shall be properly licensed by the State of Oregon (including out-of-state contractors).*
4. *Each contractor is responsible for knowing the provisions of the code under which the project is being constructed.*

OREGON CITY

Public Works – Development Services

13895 Fir Street| Oregon City OR 97045
Ph (503) 657-0891

DEVELOPMENT SERVICES
PRE-APPLICATION MEETING NOTES

Planning Project Number:	PA 25-39
Address:	19600 Molalla Ave
Map Number(s):	3-2E-09C
Tax Lot(s):	00800
Project Name:	CCC Athletic Fields DDP
Meeting Date:	August 21, 2025
Reviewer(s):	Sang Pau | spau@orcity.org |971-204-4629

Public Disclosure:
The information provided shows the possible impacts, limitations, requirements, approval standards, fees and other information that may affect the proposal (City Code 17.50.050). Omissions or failures by staff to recite all relevant applicable land use requirements to an applicant may occur, either as a result of a limited pre-application submittal or staff's interpretation of the codes at that time.

All pre-application conference related communications, including these notes, are informational only. They do not substitute for a public hearing and no land use decision is rendered at the pre-application conference. Notwithstanding any representations by City staff at a preapplication conference, staff is not authorized to waive any requirements of the Oregon City Municipal Code, and any omission or failure by staff to recite all relevant or applicable land use requirements shall not constitute a waiver by the City of any standard or requirement.

The Development Process: https://www.orcity.org/1105/Land-Use



Pre-Application	**Application**	**Bonding**
Completeness	**City Review**	**Shop Drawing Approval**
Public Notice/Comment	**Consultant Revision**	**Onsite Specific PreCon Mtgs**
Staff Report	**Continued back and forth**	**Onsite Specific Inspections**
Issuance	**Issuance**	**Testing**
Appeal	**Pre-Construction Meeting**	**Closeout**

General Comments

1. A complete land use application will typically include a preliminary stormwater report and preliminary construction plans showing all required improvements (E.G., roads, sidewalks, sewer,

water, stormwater facilities, grading, and erosion control). The application should also include a narrative responding to all sections of the Oregon City Municipal Code (OCMC) applicable to the proposed development. See provided checklists at https://www.orcity.org/1065/Engineering-Development-Services-Checkli

2. The City will issue a Staff Report in response to the contents of the application package provided by the applicant. Once a Staff Report is issued, staff strongly encourages a pre-design meeting with the project engineer to discuss plan requirements, conditions of approval, and process.

3. Conditions of approval contained in the Staff Report will dictate what is needed after the land use decision is issued (providing the appropriate documents E.G., construction plans, reports, etc.).

4. The contractor for the applicant will be required to attend a pre-construction meeting prior to any work beginning onsite.

5. PLEASE NOTE: A project will NOT be recommended for occupancy by Public Works to the Building Division until all public improvements are accepted by the Public Works Department.

6. PLEASE NOTE: Once the land use decision is made, permits need to be sought to be able to start construction. This process may take many months after the land use decision is made. The applicant will need to submit separately to Public Works/Engineering and Building.

7. PLEASE NOTE: **All** permits from Public Works, including an erosion control permit, must be obtained prior to any work beginning on the site and in the right-of-way (ROW).

Stormwater

1. The Oregon City Stormwater and Grading Design Standards can be found online at: https://www.orcity.org/1227/Stormwater-Grading-Design-Standards

2. Projects within the General Thresholds (Section 1.2.1) of the Stormwater and Grading Design Standard are subject to the requirements of the City's Stormwater and Grading Design Standards. The project, as described in the Pre-Application submittal, appears to trigger Part A (see below) of the General Thresholds.

   A. Development activities that result in 5,000 square feet of new or replaced impervious surface, cumulative over a 5-year period.

3. Where compliance with the Stormwater and Grading Design Standards is required, applicants must submit a completed Site Assessment and Planning Checklist (and other items as described in Section 9.1.1 of the Stormwater and Grading Design Standards) as part of the land use application review process. At a minimum, to receive Completeness Approval, the applicant should submit a preliminary stormwater report addressing the following items from Section 9.1.1 of the City's Stormwater and Grading Design Standards.
   A. Stormwater management strategy

B. A site plan showing an adequately sized stormwater facility based on Stormwater Best Management Practices (BMP) Sizing Tool or sized using the Engineered Method (as defined by City's Stormwater and Grading Design Standards).
C. A geotechnical report or a Natural Resource Conservation Service (NRCS) soils report documenting onsite infiltration and soil conditions in support of a proposed stormwater management strategy.
D. Downstream analysis which extends to the distance where the project site contributes less than 15 percent of the cumulative tributary drainage area or 1,500 feet downstream of the approved point of discharge, whichever is greater, as required by Chapter 5 of the Stormwater and Grading Design Standards.

4. If new athletic fields are proposed as pervious surface, they must retain the 10-year design storm.

5. The proposal provided with the pre-application submittal has conceptually provided the required stormwater improvements.

6. If there are topographical constraints for utilization of vegetated facilities, the development may utilize manufactured technologies. The product proposed for use must be an Approved Manufactured Stormwater Treatment Technology according to list from the City of Portland.

7. The nearest downstream public stormwater facility is located within Beavercreek Road. It connects to a portion of the Newell Creek that runs within the development and directs flows north through a 42-inch pipe to the "Newell" basin.

Water

1. All proposed water infrastructure improvements appear to be private.

Sanitary Sewer

1. All proposed sanitary sewer infrastructure improvements appear to be private.

Transportation

1. The proposed changes to the track and field won't trigger the need for any traffic analysis.

Occupancy

1. Development Services will not recommend final occupancy of the building until construction of public improvements and private stormwater management facilities is completed with all construction punch list items addressed and all required documents are provided.

Other

1. Access and Water Supply Plan Review by Clackamas County Fire District No.1 is required. Following instruction found at https://clackamasfire.com/access-and-water-supply-plan-review-submittal/.

2. All public improvements and stormwater management facilities will need inspection by the applicant's civil engineer. The City only provides inspection oversight.

FINAL REMINDERS

1. **These notes are the best available based on the submittal and the understanding at the time of pre-application. The notes are NOT a guarantee of requirements.**
2. **Stormwater improvements must be completed before final occupancy.**
3. **Land Use MUST be completed prior to permit. The Land Use Approval is NOT a permit. A separate Building and Engineering Permit Submittal after land use is required when seeking a permit for construction.**

Supplemental Information:

I. Documentation required before any construction plan review can begin by Public Works (which is after a land use decision has been made):

A. Complete Engineering Plans (Public Improvements, all stormwater facilities, site grading and erosion control)
B. Preliminary Cost Estimate for construction of Public Improvements, all stormwater facilities, site grading and erosion control.
C. Plan Review Fee
D. Complete Storm Water Report and Site Assessment and Planning Checklist

II. Documentation required before any construction plan can be deemed approved by Public Works (to be able to start construction or obtain a building permit):

a. Inspection Fee
b. Final Cost Estimate of Public Improvements
c. Approved Engineering Plan stamped and signed by an Oregon Professional Engineer
d. Approved Storm Water Report stamped and signed by an Oregon Professional Engineer
e. NPDES 1200-C Permit
f. Developer/Engineer Agreement

III. Documentation required before Public Works will recommend Certificate of Occupancy:

a. Engineer of Record Certificate of Completion
b. Completed Punchlist
c. Record Stormwater maintenance Easements

IV. Possible Fees

a. Plan Review Fee
b. Inspection Fee
c. Erosion Control Fee
d. Document Processing and Recording Fee

e. Engineering Permit Fees and System Development Charges: https://www.orcity.org/1067/Engineering-Services-Fees

Note: These listed fees were most current at the time of this pre-application meeting. Additional fees may apply beyond the pre-application meeting.

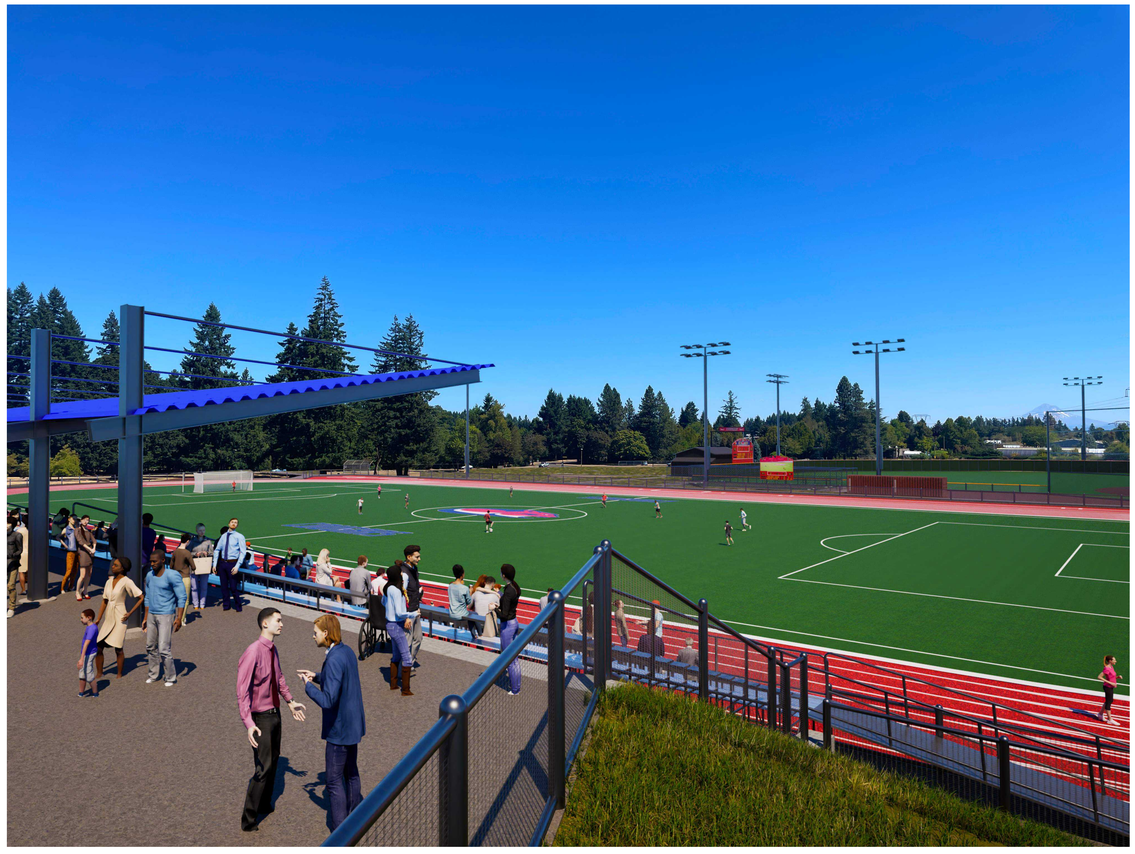
EXHIBIT G
Renderings


Google Earth









CAMERON McCARTHY
LANDSCAPE ARCHITECTURE & PLANNING
160 E Broadway Eugene, OR 97401
133 SW 2nd Avenue, Suite 410, Portland, OR 97204
120 SW Crowell Way, Suite 300, Bend, OR 97702
541-485-7385
www.cameronmccarthy.com

CLACKAMAS COMMUNITY COLLEGE ATHLETICS FACILITIES IMPROVEMENTS

CLACKAMAS COMMUNITY COLLEGE
19600 Molalla Ave, Oregon City, OR 97045

FOR INFORMATION ONLY

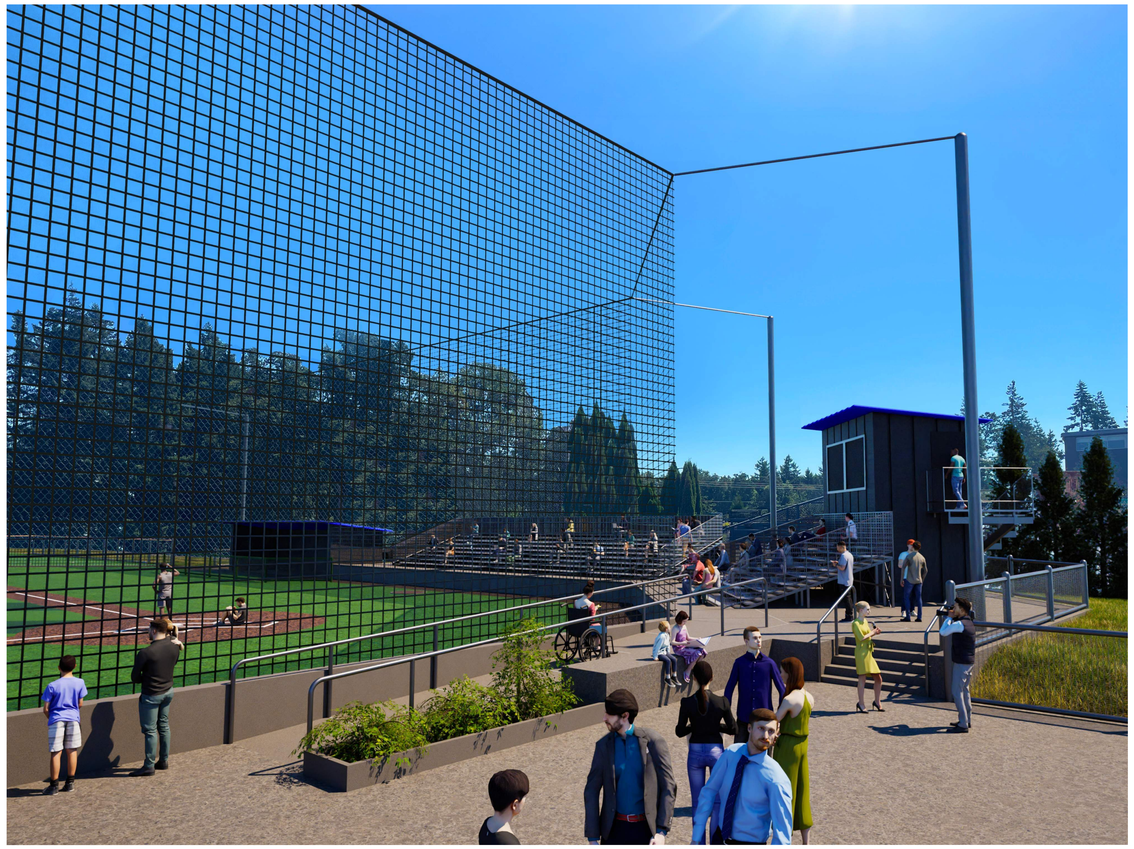
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Checked:	JG
Project #:	25.020
Date:	Aug. 15, 2025

Rev. #:	Date:

50% DESIGN DEVELOPMENT

SHEET TITLE
BEFORE & AFTER RENDERINGS









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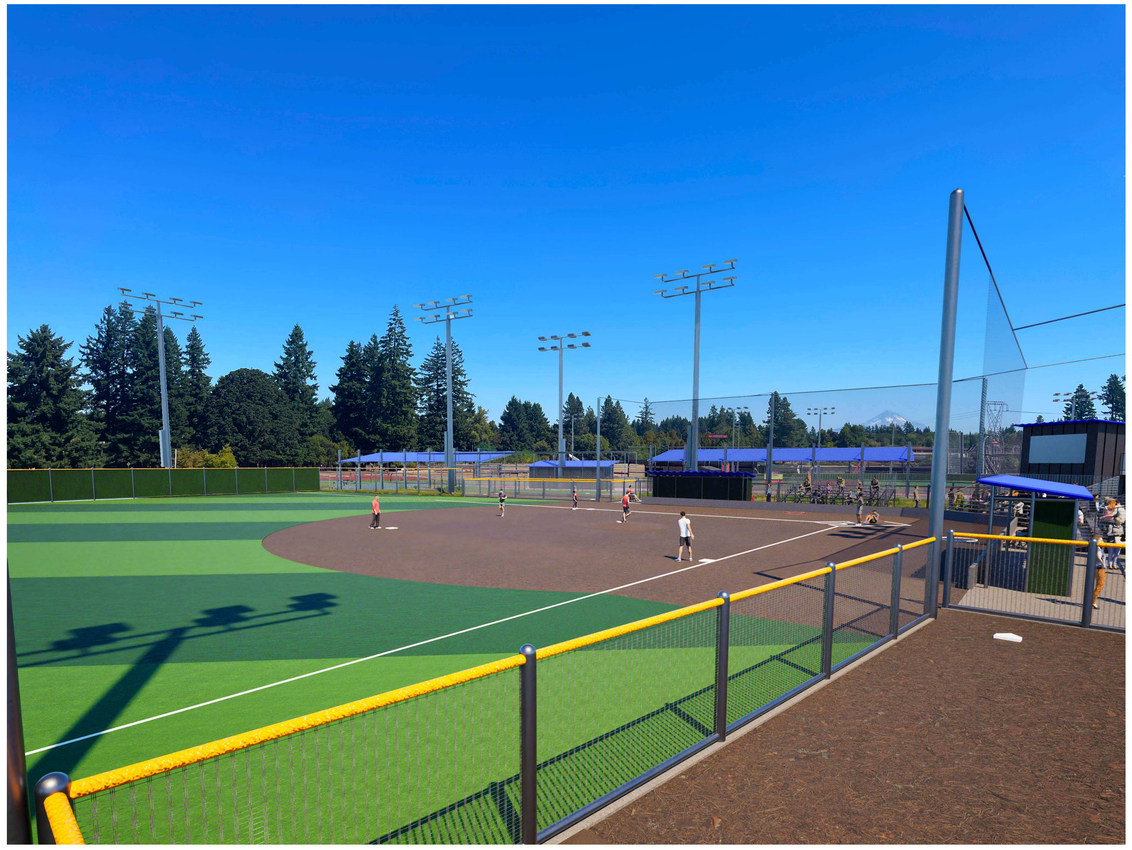
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50% DESIGN DEVELOPMENT

SHEET TITLE
BEFORE & AFTER RENDERINGS

EXHIBIT H
Wetland Report

DRAFT
Determination and Delineation of Wetlands and Waters

Clackamas Community College Sports Field, Oregon City, Oregon

Prepared for:

Cameron McCarthy Landscape Architecture and Planning
133 SW 2nd Avenue, Suite 410
Portland, Oregon 97204
(503) 664-7371

Prepared by:

Winterbrook Planning
610 SW Alder Street, Suite 810
Portland, Oregon 97205
(503) 827-4422

October 3, 2025

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Figure 4. Soil Survey Map
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Appendices

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Appendix B – Data Sheets
Appendix C – Photographs
Appendix D – Aerial Photographs
Appendix E – Literature Citations

Site Directions

- From Portland take Interstate 84 east, then Interstate 205 south
- Take OR 213 south
- Turn left at sign for Clackamas Community College, South Douglas Loop
- Turn left at North Douglas Loop
- Site is on right at intersection with Inskeep Drive

1.0 Introduction

Winterbrook Planning was retained by Cameron McCarthy Landscape Architecture and Planning to prepare a wetland determination and delineation at the site of a proposed sports field on the campus of Clackamas Community College in Oregon City, Oregon.

The project, CCC Athletic Improvements, is an artificial field turf installation to replace the existing natural grass surface. The design team identified a shallow natural depression at the northern end of the construction site as a potential area of concern, due to anticipated utility construction activities passing through it.

The study area comprises a small part of tax lot 800 in Township 3S, Range 2E, Section 9. See Figure 1, Vicinity Map and Figure 2, Tax Lot Map for the location.

Fieldwork was performed on September 19, 2025, using the Routine Onsite Methodology of the 1987 Federal Interagency Wetland Delineation Manual and the 2008 Western Mountains, Valleys and Coast Regional Supplement.

2.0 Site Description

The study area is located in a shallow natural depression at the northern end of the Clackamas Community College baseball field, bordered by N. Douglas Loop (see Appendix D, Aerial Photographs). The baseball field slopes gradually north toward the road.

A culvert passes beneath the roadway which captures any surface runoff or groundwater that drains across the field. The culvert connects the depression to a channel and two ponds on the grounds of the Inskeep Environmental Learning Center, which together form the headwaters of Newell Creek.

There is a small grove of trees to the west of the study area, and two small trees on the slope next to the culvert. Otherwise, vegetation consists of mowed non-native grasses.

The mapped soil series in the Clackamas County Soil Survey is Bornstedt silt loam, 0-8% slopes.

Current and Previous Land Uses. Prior to construction of the baseball field, the study area was in agricultural use.

3.0 Site Alterations

The study area is bounded on the north side by the embankment for North Douglas Loop. The ground has been contoured to create a short swale that directs runoff to the mouth of the culvert.

A trunk sanitary sewer line crosses the swale in a curve, within a 15-foot easement. Three other lateral sanitary lines cross the study area from the south. Prior utility construction has resulted in disturbance of the native soil, and incorporation of gravel and crushed rock in the soil profile. There is also a sanitary pump station west of the culvert. Various other utility lines run parallel to the embankment.

4.0 Precipitation Data and Analysis

Observed climatological data and the WETS table for the Oregon City 5.5 ESE weather station were accessed from the AgACIS website. Table 1 summarizes precipitation for the 2024-25 water year through the September 19 field visit.

Table 1. Monthly Precipitation

Month	Average (ins)	30% Chance Will Have Less Than (ins)	30% Chance Will Have More Than (ins)	Observed Precipitation (ins.)	Normal Range?
October 2024	3.48	1.93	4.24	3.68	Yes
November 2024	6.74	4.48	8.07	7.88	Yes
December 2024	7.31	5.01	8.72	9.35	Above
January 2025	6.59	4.35	7.91	2.71	Below
February 2025	5.51	3.92	6.53	7.73	Above
March 2025	4.69	3.56	5.46	7.70	Above
April 2025	3.46	2.49	4.08	2.29	Below
May 2025	2.70	1.78	3.24	2.82	Yes
June 2025	1.81	1.13	2.18	0.85	Below
July 2025	0.83	0.33	0.98	0.02	Below
August 2025	1.03	0.29	1.12	0.73	Yes
September 2025 (through 9/19)	1.11	0.56	1.32	0.75	Yes
TOTALS	**45.26**	**29.83**	**53.85**	**46.51**	**Yes**
Two weeks prior to visit				0.75	Yes

Total precipitation for the water year to date (46.5 inches) had been close to the average for the project vicinity. However, precipitation for the previous three full months (1.62 inches) had been about two inches below average (3.67 inches) and below the normal range (less than 1.75 inches). The previous 14 days had seen 0.75 inches of precipitation, which is within the normal range, most of which occurred on September 14. There was none on the day of the investigation. In summary, the spring and summer months preceding the site investigation had seen generally below normal precipitation.

5.0 Methods

Winterbrook Planning conducted a wetland investigation on September 19, 2025, according to the standard on-site routine methodology in the COE 1987 Manual (Environmental Laboratory 1987), and the Western Mountains, Valleys, and Coast Regional Supplement

(2008).

Before the site visit, we obtained the following information for the site: historical and current aerial photographs, soil survey mapping, and precipitation data. We also reviewed the Oregon City Local Wetland Inventory and the DEQ list of Section 303(d) "Water Quality Limited Streams". We obtained a map of existing conditions from the survey team, Compass Land Surveyors.

The site investigation focused on the depression and the short swale leading to the culvert. Plots A1-A3 were established in a linear transect moving upslope from the culvert. Plot B1 was established at a right angle to the transect to characterize the lateral slope. An additional plot (H2O#1) was established to check for indicators of wetland hydrology only.

Given the time of year and low recent rainfall, we did not expect necessarily to observe a water table or saturation in the upper soil profile. For this reason, we focused first on easily observable surface indicators of the possible presence of wetland hydrology: local depressions, algal mats, surface soil cracks, patches of sparse vegetation, or plants rated FACW or OBL. After digging soils pits, we examined the soil profile closely for the presence of oxidized rhizospheres along living roots, using a hand lens.

Having determined the transition point from wetland to upland, we delineated the wetland boundary. Plots and boundary were marked with numbered flagging. Later, they were professionally surveyed by the survey team (see below for accuracy statement). We took ground photographs, including one of a soil profile, to characterize the site.

6.0 Description of Wetlands and Other Waters of the State

The field investigation documented one wetland in the study area. See Figure 5, Wetland Map.

Wetland 1: We identified one wetland area (633 sq. ft., 0.15 acre) extending from the culvert out into the baseball field, in an elongated shape following the bottom of the swale, and slightly wider at the south end. The wetland is classified as Palustrine Emergent (Cowardin Classification) and Slope Valley (HGM Classification).

Only Plot A1 had native plant species in it, a clump of soft rush (*Juncus effusus,* FACW) in the entrance to the culvert. Elsewhere, the site is dominated by two introduced grasses: tall fescue (*Schedonorus arundinaceus,* FAC) and creeping bentgrass (*Agrostis stolonifera,* FAC). As all these species are rated FAC or wetter, hydrophytic vegetation is present throughout the study area.

All plots were found to have indicators of hydric soil (either F3, Depleted Matrix or F6, Redox Dark surface). The soil is predominantly silt loam, but gravel and rock were found in Plot A2, which prevented digging deeper than 9 inches. This is an indication of disturbance to install the sanitary sewer line. The presence of these hydric soil indicators means only that there are periods of soil saturation which causes soluble iron oxide (ferrous oxide) to dissolve and translocate, where it later becomes converted to insoluble iron (ferric oxide) concentrations as the soil dries out.

We observed no surface indicators of seasonal inundation or flow. The soil was dry throughout. The only place surface moisture was present was inside the culvert, from recent rainfall. There was also no defined channel with bed or banks, only a flat-bottomed drainage swale.

Careful examination with a hand lens in Plots A1 and A2 revealed numerous oxidized rhizospheres (ORs) along the root channels of live roots, and coating the roots themselves. The prevalence of ORs in these plots exceeded 2%, which is the requirement for this indicator.

In Plot A3, a single OR was observed along a living root. There were also oxidized pore linings, some of which were associated with dead roots. We observed several live roots which passed directly through iron concentrations, but without forming iron oxide coatings. None of these features meet the requirement for the wetland hydrology indicator. We determined that Plot A3 is just upslope of the area that remains saturated and anaerobic during the early growing season for sufficient duration to cause the plant stress that leads to formation of ORs. It is therefore outside the wetland boundary.

In order to locate the wetland boundary between Plots A2 and A3, we dug a "hydrology only" plot to check for the presence of ORs. We observed common ORs in the upper 5 inches of soil. We determined that this plot meets wetland hydrology and located the wetland boundary midway between it and Plot A3.

Plot B1 was established upslope of the bottom of the swale to the east, to determine the lateral extent of wetland conditions, and was determined to be non-wetland based on the absence of ORs.

Two personal contacts were made during the investigation which corroborated our findings. Bethany Wray, Continuing Education Coordinator at the Environmental Learning Center (ELC), confirmed that the swale is known as the furthest headwater of Newell Creek, which forms a channel in the ELC, and connects downstream to its perennial channel in the Newell Creek canyon park.

We also spoke to Jim Hoppel, the college baseball coach, who said he has never seen standing water in the vicinity of the swale in the 20 years of his experience on the site. He says the baseball team begins practice in February.

Basis of Delineation: The wetland boundary was based on the point on the gradual slope, where there were no oxidized rhizospheres on living roots or other wetland hydrology indicators.

7.0 Mapping Method and Accuracy Statement

The wetland boundary and sample plots were professionally surveyed by Compass Land Surveyors. Equipment used was a Leica T-15 3-second GPS unit. The horizontal level of accuracy is within 0.01 foot.

8.0 Additional Information

Wetland 1 is shown in the Oregon City Local Wetland Inventory as a Palustrine Emergent wetland (NE9B), a headwater of Newell Creek (see Figure 3B). The extent of the wetland as delineated corresponds closely to the LWI mapping.

Newell Creek is listed by the Department of Environmental Quality as a Section 303(d) "Water Quality Limited Stream".

9.0 Results and Conclusions

One wetland, Wetland 1 (633 sq. ft., 0.15 acre), is present in the study area. It forms the ultimate headwater of Newell Creek, a DEQ "water quality limited stream".

10.0 Disclaimer

This report documents the investigation, best professional judgment and conclusions of the investigator. It is correct and complete to the best of the author's knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and "other waters" and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

This report does not address federal jurisdiction under the Clean Water Act (1972 as amended 1977), as administered by the Corps of Engineers. Given the 2023 US Supreme Court ruling in the *Sackett vs EPA* case, the extent of federal jurisdiction over wetlands has changed. The ruling required a continuous surface connection between a wetland and a tributary stream for the Federal government to take jurisdiction. The Corps is currently developing new guidance on the definition of "waters of the United States" and the reach of its jurisdiction.

APPENDIX A

FIGURES



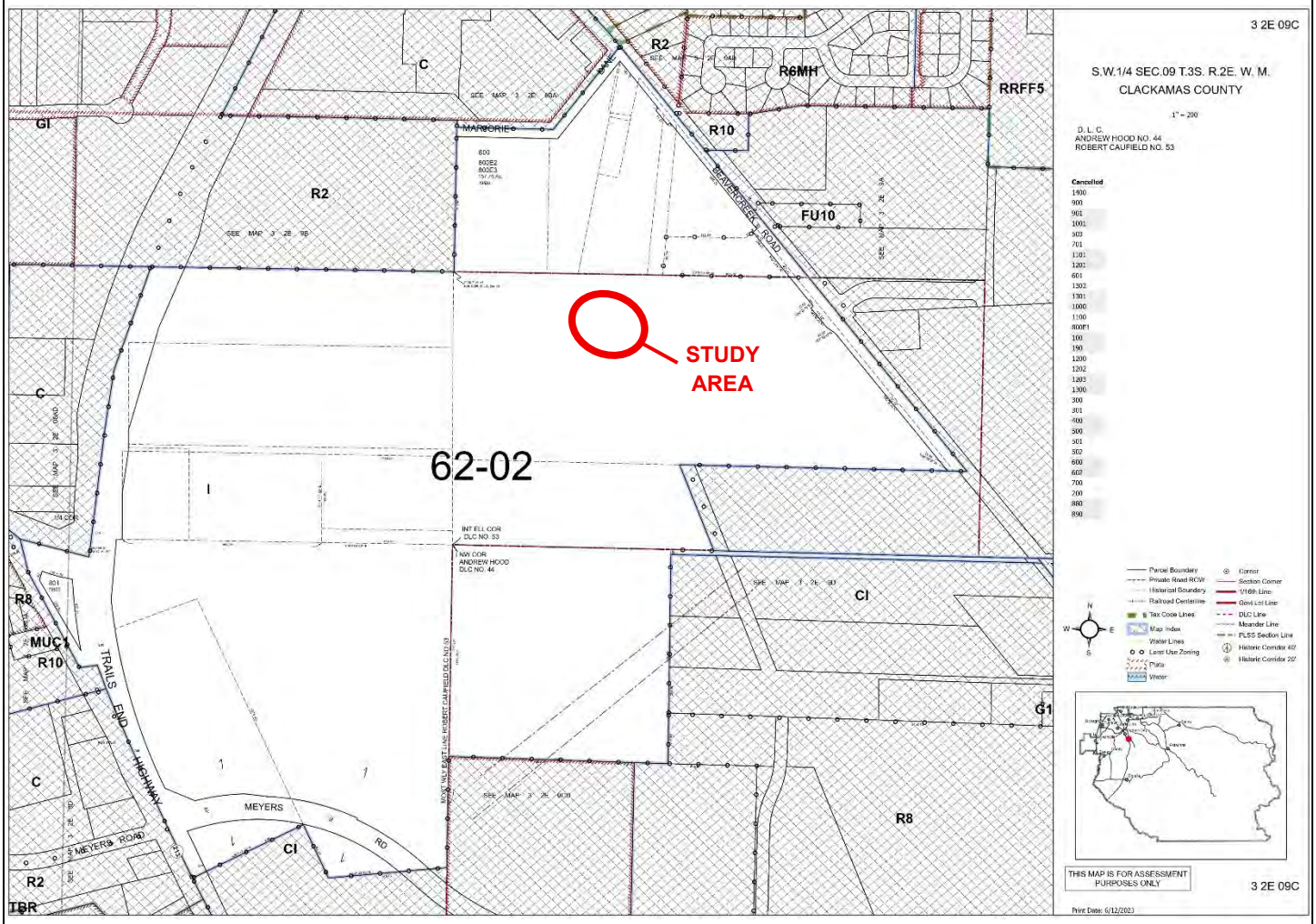
WINTER BROOK

VICINITY MAP

Clackamas Community College – Oregon City Campus
City of Oregon City
Clackamas County, Oregon

Source: Oregon Explorer – DLCD Planner's Map Viewer

Figure 1

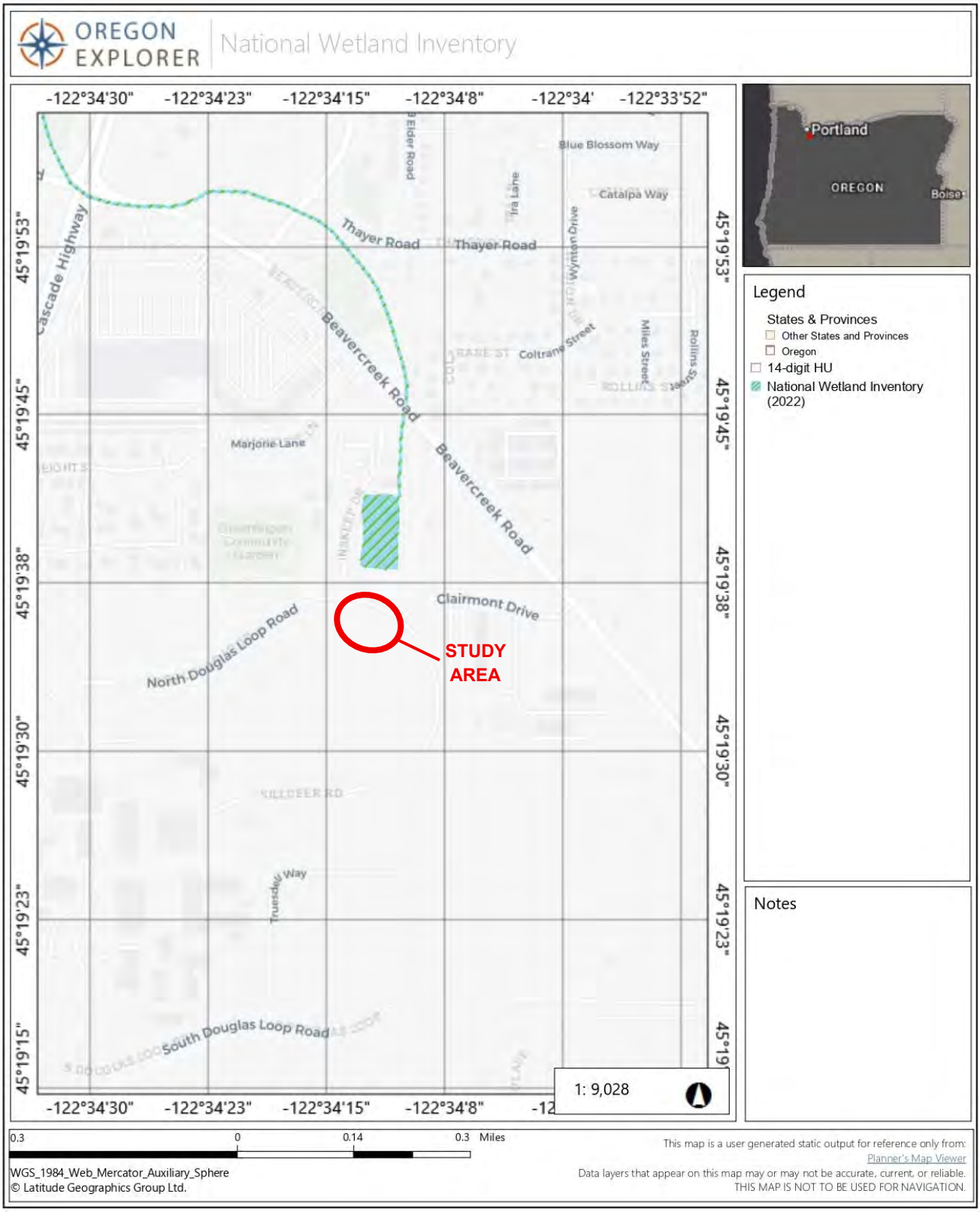


TAX LOT MAP

Clackamas Community College – Oregon City Campus
City of Oregon City
Clackamas County, Oregon

Source: Clackamas County Survey Research Tool

Figure
2



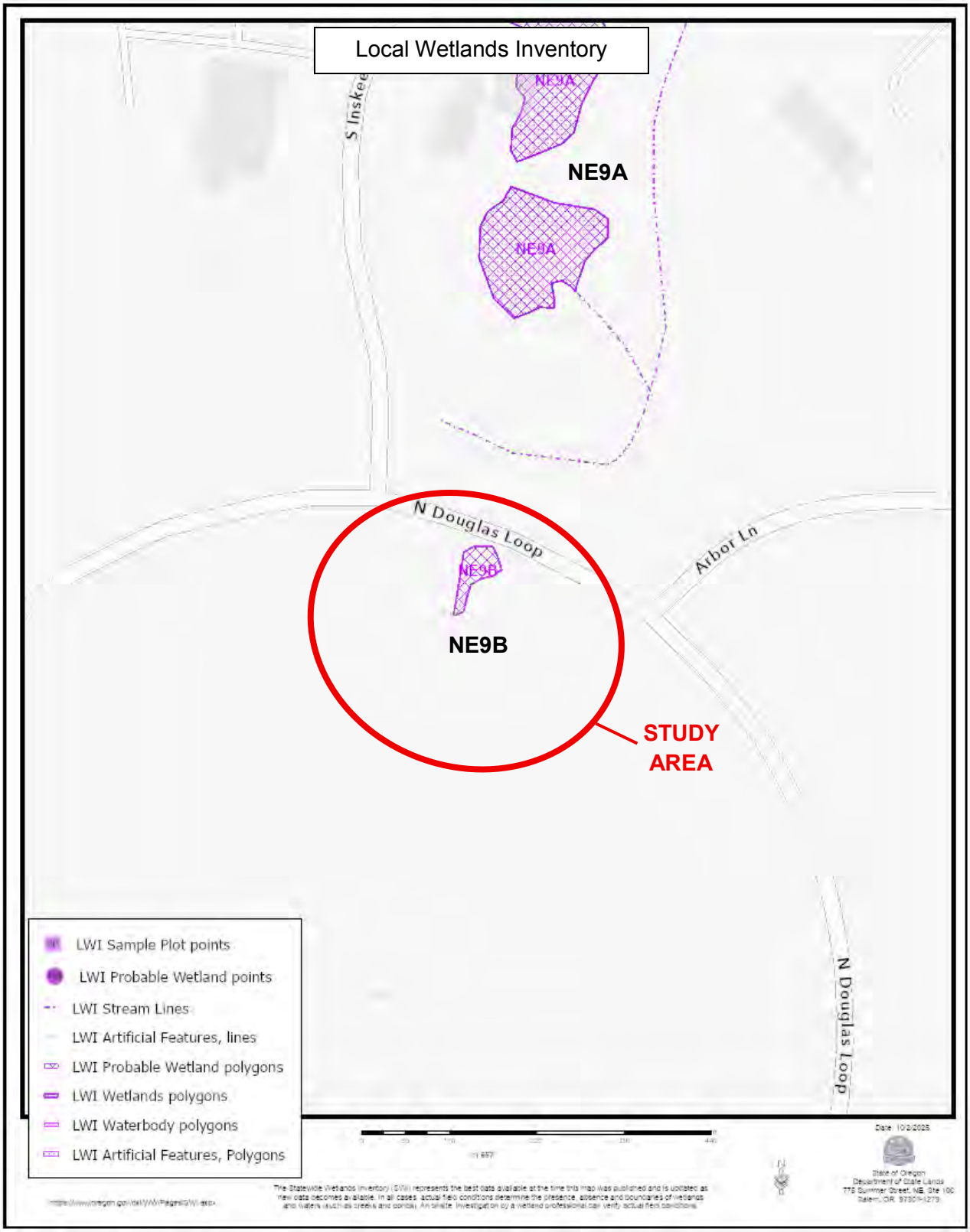
WINTER BROOK

NATIONAL WETLAND INVENTORY MAP

Clackamas Community College – Oregon City Campus
City of Oregon City
Clackamas County, Oregon

Source: Oregon Explorer – DLCD Planner's Map Viewer

Figure
3A



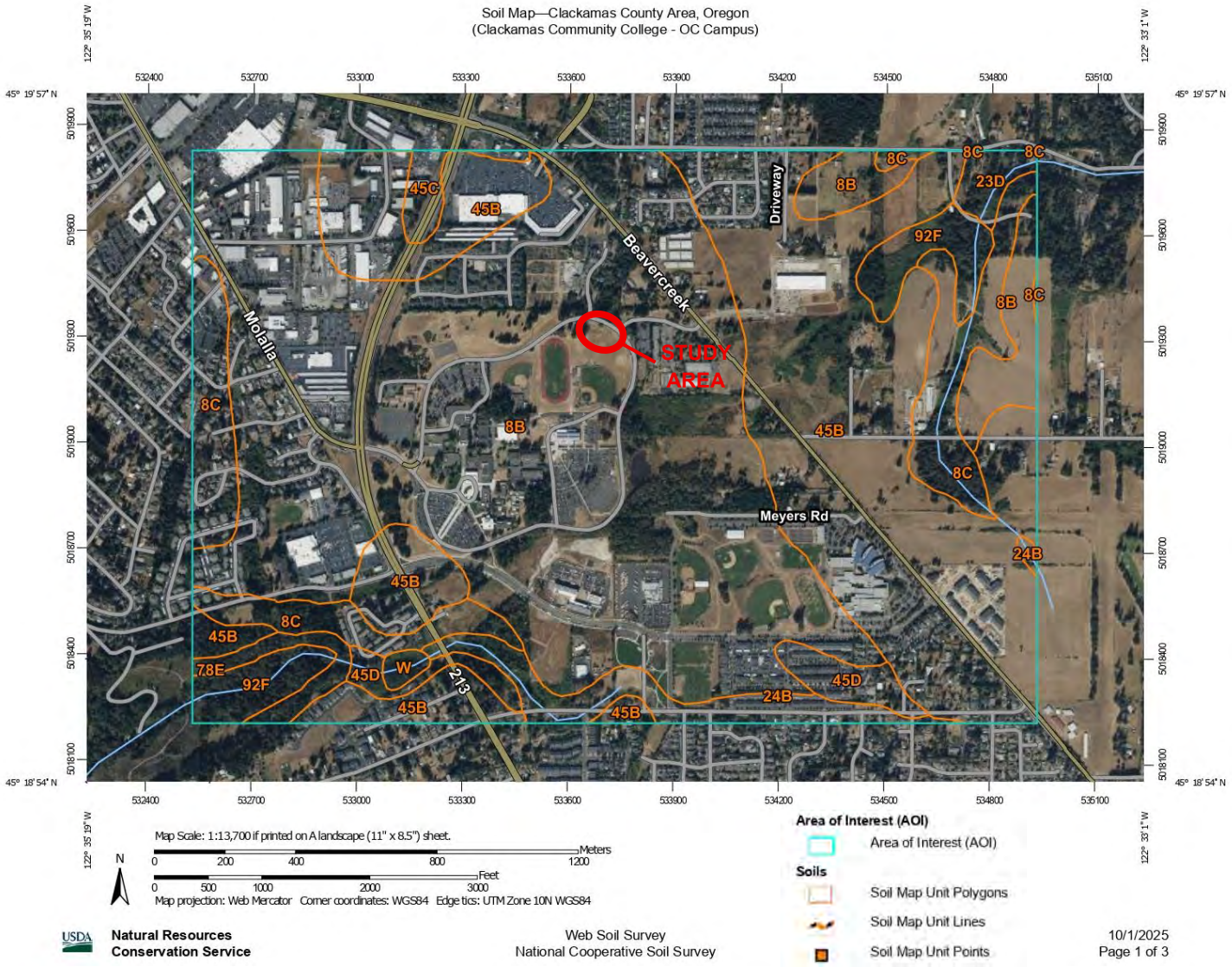
WINTER BROOK

LOCAL WETLANDS INVENTORY MAP

Clackamas Community College – Oregon City Campus
City of Oregon City
Clackamas County, Oregon

Source: DSL Statewide Wetlands Inventory Map

Figure
3B



Map Unit	Soil Series	Hydric
8B	Bornstedt silt loam, 0 to 8 percent slopes	No
8C	Bornstedt silt loam, 8 to 15 percent slopes	No
23D	Cornelius silt loam, 15 to 30 percent slopes	No
24B	Cottrell silty clay loam, 2 to 8 percent slopes	No
45B	Jory silty clay loam, 2 to 8 percent slopes	No
45C	Jory silty clay loam, 8 to 15 percent slopes	No
45D	Jory silty clay loam, 15 to 30 percent slopes	No
78E	Saum silt loam, 30 to 60 percent slopes	No
92F	Xerochrepts and Haploxerolls, very steep	No
W	Water	Yes

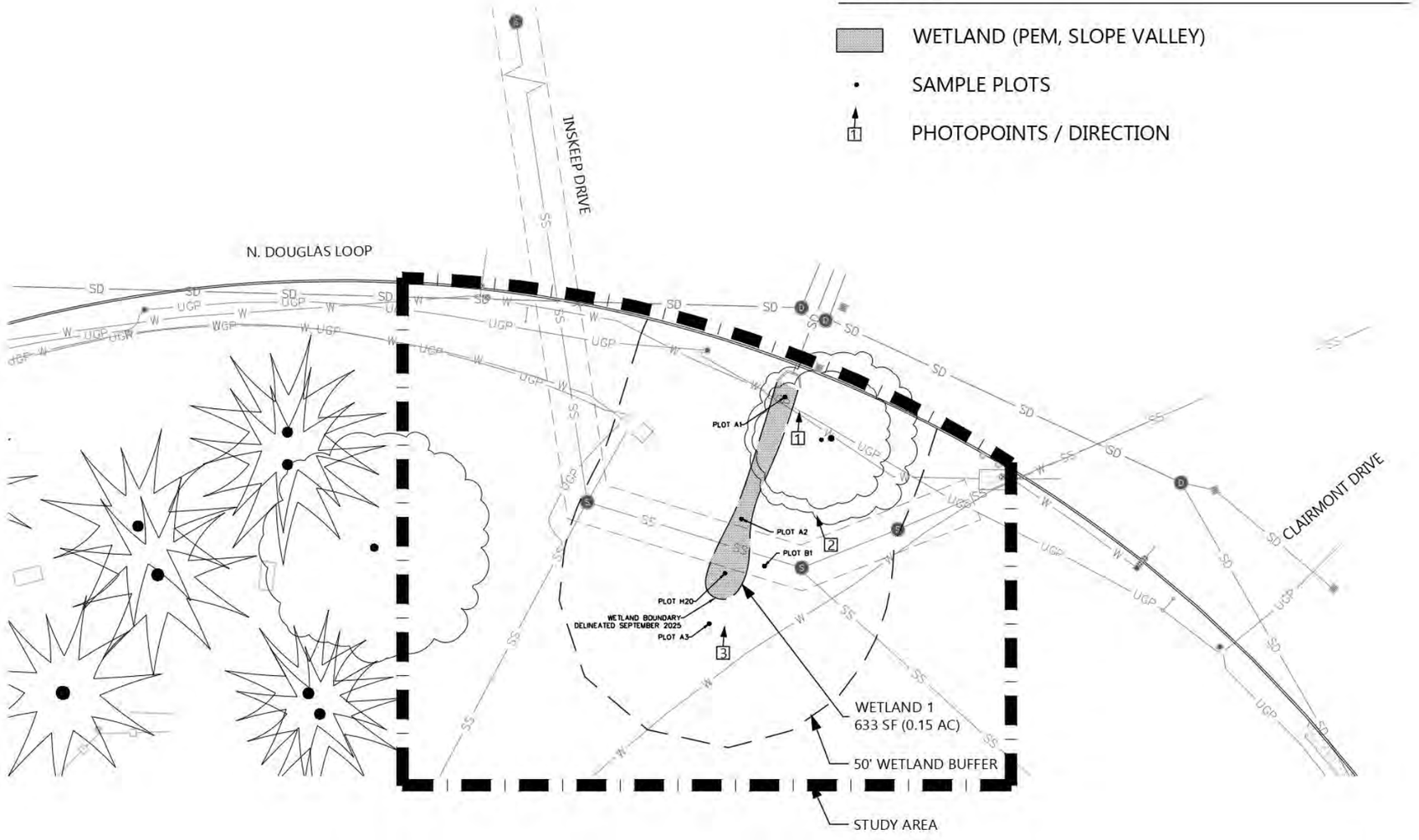
SOIL SURVEY MAP

Clackamas Community College – Oregon City Campus
City of Oregon City
Clackamas County, Oregon

Source: USDA NRCS Web Soil Survey

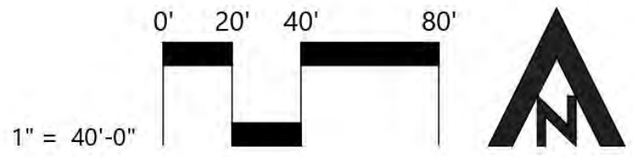
Figure 4

Clackamas Community College Sports Field



CCC ATHLETICS - WETLAND MAPPING

ACCURACY STATEMENT: Wetland Boundary.Sample Plots professionally surveyed by Compass Land Surveyors. Equipment: Leica T-15 3-Sec GPS Unit, Horizontal Accuracy within 0.01 foot.



WINTER BROOK

WETLAND DELINEATION MAP

Clackamas Community College – Oregon City Campus
City of Oregon City
Clackamas County, Oregon

Source: Prepared by Cameron McCarthy Landscape Architecture and Planning

Figure 5

APPENDIX B

DATA SHEETS

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Clackamas C.C. Sports Field City/County: Oregon City Sampling Date: 9/19/25
Applicant/Owner: Cameron McCarthy State: OR Sampling Point: A1
Investigator(s): Philip Quarterman Section, Township, Range: T3S, R2E, Section 9
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 1%
Subregion (LRR): A Lat: 45.3267 N Long: -122.5702 W Datum: NAD 83
Soil Map Unit Name: Bornstedt silt loam, 0-8% NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	X	No	

Is the Sampled Area within a Wetland? **Yes X No**

Remarks: In drainage swale near culvert

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	N/A	= Total Cover	

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	N/A	= Total Cover	

Herb Stratum (Plot size: 20x)			
1. *Juncus effusus*	35	Y	FACW
2. *Agrostis stolonifera*	60	Y	FAC
3. *Holcus lanatus*	5	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: 20x)			
1. *Rubus armeniacus*	10	Y	FAC
2.			
	10	= Total Cover	

% Bare Ground in Herb Stratum N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No**

Remarks:

SOIL

Sampling Point: A1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5 in.	10YR 4/2	100					Silt loam	
5-13+	10YR 4/2	40	7.5YR 4/6	60	C	M/PL	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil dry to surface, but some surface moisture visible inside culvert 10 feet away, from recent rainfall. Numerous oxidized rhizospheres along living roots

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Clackamas C.C. Sports Field City/County: Oregon City Sampling Date: 9/19/25
Applicant/Owner: Cameron McCarthy State: OR Sampling Point: A2
Investigator(s): Philip Quarterman Section, Township, Range: T3S, R2E, Section 9
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 1%
Subregion (LRR): A Lat: 45.3267 N Long: -122.5702 W Datum: NAD 83
Soil Map Unit Name: Bornstedt silt loam 0-8% NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes	X	No	

Is the Sampled Area within a Wetland? **Yes X No ___**

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	N/A	= Total Cover	

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	N/A	= Total Cover	

Herb Stratum (Plot size: 5ft r)			
1. *Schedonorus arundinaceus*	40	Y	FAC
2. *Agrostis stolonifera*	60	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: N/A)		
1.		
2.		
	N/A	= Total Cover

% Bare Ground in Herb Stratum N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No ___**

Remarks:

SOIL

Sampling Point: A2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6 in.	10YR 3/2	50	7.5YR 4/6	40	C	M/PL	Silt loam	Fe concs
			7.5YR 3/1	10	C	M		Mn concs
6-9 in	10YR 3/2	40	7.5YR 4/4	35	C	M	Silt loam	Mixed with gravel/rock
			7.5YR 3/1	25	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks: Gravel and rock prevent digging a deeper pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** **X** **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil dry to surface. Abundant oxidized rhizospheres along living roots in upper 6 in layer.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Clackamas C.C. Sports Field City/County: Oregon City Sampling Date: 9/19/25
Applicant/Owner: Cameron McCarthy State: OR Sampling Point: A3
Investigator(s): Philip Quarterman Section, Township, Range: T3S, R2E, Section 9
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 1%
Subregion (LRR): A Lat: 45.3267 N Long: -122.5702 W Datum: NAD 83
Soil Map Unit Name: Bornstedt silt loam, 0-8% NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? **Yes** ___ **No** **X**

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	N/A	= Total Cover	

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	N/A	= Total Cover	

Herb Stratum (Plot size: 5ft r)			
1. *Schedonorus arundinaceus*	50	Y	FAC
2. *Agrostis stolonifera*	50	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: N/A)		
1.		
2.		
	N/A	= Total Cover

% Bare Ground in Herb Stratum N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** ___

Remarks:

SOIL

Sampling Point: A3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5 in.	10YR 3/2	50	10YR 4/4	30	C	M/PL	Silt loam	
			2.5Y 5/1	20	D	M		
5-14 in	10YR 4/2	30	7.5YR 4/4	40	C	M	Silt loam	Mn coatings on ped faces
			10YR 3/1	30	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil dry to surface. Only one (<2% volume) oxidized rhizosphere observed along living root in upper 5 in layer. A few pore linings associated with dead roots in upper 5 in. Live roots pass directly through Fe concentrations with no Fe coatings

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Clackamas C.C. Sports Field | City/County: Oregon City | Sampling Date: 9/19/25
Applicant/Owner: Cameron McCarthy | State: OR | Sampling Point: B1
Investigator(s): Philip Quarterman | Section, Township, Range: T3S, R2E, Section 9
Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): concave | Slope (%): 1%
Subregion (LRR): A | Lat: 45.3267 N | Long: -122.5702 W | Datum: NAD 83
Soil Map Unit Name: Bornstedt silt loam, 0-8% | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___
Are Vegetation ___ , Soil ___ , or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	X	No	
Hydric Soil Present?	Yes	X	No	
Wetland Hydrology Present?	Yes		No	X

Is the Sampled Area within a Wetland? **Yes** ___ **No** **X**

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: N/A)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	N/A	= Total Cover	

Sapling/Shrub Stratum (Plot size: N/A)			
1.			
2.			
3.			
4.			
5.			
	N/A	= Total Cover	

Herb Stratum (Plot size: 5ft r)			
1. *Schedonorus arundinaceus*	40	Y	FAC
2. *Agrostis stolonifera*	60	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100	= Total Cover	

Woody Vine Stratum (Plot size: N/A)		
1.		
2.		
	N/A	= Total Cover

% Bare Ground in Herb Stratum N/A

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **X** **No** ___

Remarks:

SOIL

Sampling Point: B1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3 in.	10YR 3/2	100					Silt loam	
3-12 in.	10YR 3/2	30	7.5YR 4/6	50	C	M	Silt loam	Fe concs
			7.5YR 3/1	20	C	M		Mn concs

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: N/A

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil dry to surface. No oxidized rhizospheres present

APPENDIX C

PHOTOGRAPHS



Photo 1: Culvert at N. Douglas Loop



Photo 2: View of Swale Looking North



Photo 3: Wetland A as Delineated. Plot A3 in Foreground



Photo 4: Oxidized Rhizospheres at 5 Inches in Plot A2

APPENDIX D

AERIAL PHOTOGRAPHS



2025 Aerial



2015 Aerial

APPENDIX E

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EXHIBIT I
Draft Geotechnical Report

Geotechnical Investigation
Athletic Master Plan
Clackamas Community College: Oregon City Campus

Oregon City, Oregon

July 8, 2025
(REVISED)

Prepared for

Tarkett Sports
19600 SW 129th Avenue, Suite A
Tualatin, OR 97062

Prepared by

16520 SW Upper Boones Ferry Road, Suite 100
Tigard, OR 97224-7661
(503) 641-3478 | www.gri.com

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FIGURES

Figure 1: Vicinity Map
Figure 2: Conceptual Plan
Figure 3: Site Map
Figure 4: Surcharge-Induced Lateral Pressure

FIGURES (Continued)

Figure 5: Overexcavation Detail
Figure 6: Typical Subdrainage Details

APPENDICES

Appendix A: Field Explorations and Laboratory Testing
Appendix B: Site-Specific Seismic Hazard Evaluation
Appendix C: Geoprofessional Business Association Guidance Document

1 INTRODUCTION

As requested, GRI completed a geotechnical investigation for the proposed Athletic Master Plan project located at the Clackamas Community College (CCC) Oregon City Campus in Oregon City, Oregon. The general location of the project is shown on the Vicinity Map, Figure 1. The purpose of the investigation was to provide an evaluation of the subsurface conditions at the site and develop recommendations regarding the planned improvements to the athletic facilities. The investigation consisted of subsurface explorations, laboratory testing, and engineering analyses.

2 PROJECT DESCRIPTION

We understand the project is still in the conceptual phase, and key aspects such as drainage plans and structure loading are still being finalized. However, the conceptual plan set indicates the proposed improvements at the site will include reconstruction of the softball and baseball stadiums, softball/lacrosse field, and the track, as well as supporting structures for the athletic facilities, where indicated on the Conceptual Plan, Figure 2. We anticipate the project will be designed in accordance with the 2022 *Oregon Structural Specialty Code* (OSSC).

3 SITE DESCRIPTION

3.1 General

The site is on the order of 18 acres in size and is bordered to the north and east by N Douglas Loop and to the south and west by existing CCC buildings and associated parking lots. The site is currently developed with baseball, softball, and soccer/lacrosse fields; a rubber-surfaced track; and lightly loaded supporting structures, as shown on the Site Map, Figure 3. Access to the fields is provided by small, paved paths from the south. The northeast portion of the site contains two baseball/softball dirt infields. The undeveloped portions of the site are surfaced with grass. Several trees are present northeast of the track.

3.2 Topography

The softball field is positioned on a flat area approximately 10 feet higher in elevation than the track, soccer field, and baseball field. East of the softball field, the ground surface slopes down at approximately 5H:1V (Horizontal to Vertical) to the existing track. In the northeast portion of the site, the surface slopes downward gently to the northeast to a drainage ditch and culvert that run under N Douglas Loop.

3.3 Geology

Based on our review of the available geologic literature, our experience with other nearby projects, and the explorations made for this investigation, the site is mantled by residual soils produced by weathering of the upper surface of the lithologic unit known as Boring Lava (Wells et al., 2020). Boring Lava generally consists of light gray, open-textured olivine

basalt and breccias. The residual soils derived from weathering of the basalt typically consist of red-brown, clayey silt to silty clay with interspersed cobble-, boulder-, and larger-sized rock fragments. The degree of weathering in the rock typically decreases with depth. The weathered top of the Boring Lava in this area can be overlain by a thin (up to 10 feet thick) layer of undifferentiated sediments consisting of clay with varying amounts of silt and sand. Lava tubes have been documented in this unit on the slopes above the Canemah neighborhood of Oregon City (Madin, 2009).

4 SUBSURFACE CONDITIONS

4.1 General

Subsurface materials and characteristics at the site were investigated during two separate mobilizations. On May 12 and 13, 2025, GRI drilled six borings designated B-1 through B-6. On June 9 and 10, 2025, GRI excavated nine test pits designated TP-1 through TP-9. The explorations were completed within the current athletic fields in grassy areas in or around the proposed developments. The approximate locations of the explorations are shown on Figure 2. The six borings were advanced to depths ranging between approximately 10.1 feet and 40.1 feet, and the nine test pits were advanced to depths ranging between approximately 3.3 feet and 8.3 feet.

Logs of the explorations are shown on Figures 1A through 11A in Appendix A. The soil and rock samples obtained from the explorations were returned to our laboratory for further examination and physical testing. The terms and symbols used to describe the soil and rock encountered in the explorations are summarized in Tables 1A and 2A and shown on the attached legend. Laboratory index test results are shown on the graph portion of each exploration log and summarized in Table 3A.

4.2 Soils

For the purpose of discussion, the materials disclosed by our investigation have been grouped into the following categories based on their physical characteristics and engineering properties. They are listed as they were encountered below the ground surface:

a. Possible FILL
b. Undifferentiated Sediment
c. CLAY, SILT, and SAND (Residual Soil)
d. BORING LAVA

The following paragraphs provide a description of the materials encountered and a discussion of the groundwater conditions at the site.

a. Possible FILL

A 3- to 6-inch-thick heavily rooted zone consisting of sod was observed at the ground surface in all borings and test pits. Test pits TP-2, TP-3, and TP-8 encountered fill from the ground surface to depths of 1.5 feet, 1.0 feet, and 0.8 feet, respectively. The fill encountered in test pit TP-2 is potentially on-site residual soil fill consisting of silty clay to clayey silt with trace to some fine- to coarse-grained sand and trace angular to subangular gravel. The residual soil fill is red-brown and iron-stained with medium to high plasticity.

The fill encountered in test pits TP-3 and TP-8 is fine- to medium-grained sand with variable silt content, ranging from some silt to silty. The sand fill is light gray and micaceous.

b. Undifferentiated Sediment

Undifferentiated sediment consisting of silt to silty clay was encountered below the fill in test pits TP-2 and TP-3 and at the ground surface in test pit TP-7. The undifferentiated sediment is typically gray with occasional orange mottling and low to medium plasticity.

c. CLAY, SILT, and SAND (Residual Soil)

Residual soil consisting of varying proportions of clay, silt, and sand was encountered in all borings and test pits TP-1 and TP-3 through TP-9, ranging from silty clay to clayey silt, with sand content ranging from trace sand to sandy and containing up to some gravel. Boring B-1 was terminated in residual soil at a depth of 21.5 feet. In boring B-5, a 1-foot-thick layer of silty, clayey sand was encountered from 5 feet to 6 feet. The residual soil is typically red-brown to yellow-brown with streaks of red, yellow, orange, gray, and black.

Observation of drilling action during advancement of the borings and rock fragments retrieved in samples indicate the presence of abundant cobbles and boulders within the residual soil unit. Generally, the consistency of the residual soils encountered at the site ranges from medium stiff to stiff.

d. BORING LAVA

Decomposed Boring Lava was encountered below the residual soil in borings B-3 through B-6 and in test pits TP-1, TP-5, and TP-9. The Boring Lava encountered displays varying degrees of weathering, ranging from completely decomposed to fresh, and was recovered as rock fragments or predominantly fine-grained soils with relict rock texture. Observation of drilling action during advancement of the borings and rock fragments retrieved in samples indicate the presence of abundant cobble- and boulder-sized rock fragments within the decomposed Boring Lava.

The decomposed Boring Lava recovered as sandy silt with a trace of gravel in borings B-3 and B-6 contains fine sand and angular, gravel-sized rock fragments and is typically gray

or brown streaked with orange, yellow, and red. The relative consistency of the decomposed Boring Lava in borings B-3 and B-6 is typically very hard and transitions to less-weathered rock at depths of about 4 feet and 11.5 feet, respectively.

The decomposed Boring Lava encountered in borings B-4 and B-5 was retrieved as silty, sandy rock fragments composed of fine to coarse sand and angular, gravel-sized rock fragments. It is generally light brown to light gray streaked with brown, yellow, and orange. The relative density of the decomposed Boring Lava in borings B-4 and B-5 is typically very dense and transitions to less-weathered rock at depths of about 9 feet and 23 feet, respectively.

The decomposed Boring Lava encountered in test pits TP-1, TP-5, and TP-9 consists of clayey SILT with trace to some fine- to coarse-grained sand and up to 3-inch-diameter rock fragments. It is generally red-brown to gray with iron staining and orange and black streaking and mottling. The decomposed Boring Lava generally has medium to high plasticity. The decomposed Boring Lava transitions to less-weathered rock at depths of 4.8 feet, 8.0 feet, and 4.5 feet in test pits TP-1, TP-5, and TP-9, respectively.

Less-weathered rock of the Boring Lava formation was encountered below the residual soil in boring B-2 and test pits TP-3, TP-4, TP-6, TP-7, and TP-8; below the undifferentiated sediment in test pit TP-2; and below the decomposed Boring Lava in borings B-3, B-4, B-5, and B-6 and test pits TP-1, TP-5, and TP-9. It extended to the maximum depths to which those borings and test pits were advanced. Rock encountered in the borings is generally gray to dark gray and blue-gray. Rock encountered in the test pits is generally gray with orange-, black-, iron-, and/or manganese-stained rock surfaces, non-vesicular, completely decomposed to moderately weathered, and extremely weak (R0) to medium strong (R3). Characteristics of Boring Lava, such as vesicularity, degree of weathering, hardness designation, and fracture presence or spacing, could not be characterized in the borings due to the drilling techniques utilized in this project. However, based on our experience at the campus, we anticipate the Boring Lava in this area is generally non-vesicular, decomposed to fresh, and extremely weak (R0) to strong (R4) and has a Rock Quality Designation (RQD) ranging from 0% to 94%, indicating a rock quality ranging from poor to excellent. Typically, the rock hardness and RQD tend to increase with depth, and the degree of weathering tends to decrease with depth. Borings B-2 through B-6 were terminated in rock that yielded Standard Penetration Test (SPT) blow counts of 50 blow counts per 1 inch (practical refusal). All test pits were terminated in weak (R1) to medium strong (R3) Boring Lava.

4.3 Groundwater

The borings advanced for this investigation were completed using mud rotary techniques, which do not allow direct measurement of groundwater levels at the time of drilling. Test pits TP-2, TP-4, TP-5, TP-7, and TP-8 encountered light to moderate groundwater seepage at depths ranging from 5 feet to 8 feet. Groundwater seepage was not encountered in the remaining test pits. Our review of U.S. Geological Survey (USGS) groundwater data (Snyder, 2008) suggests groundwater at the sites typically occurs at depths of 20 feet to 25 feet. Previous subsurface explorations completed by GRI at the campus disclosed groundwater levels of about 12.5 feet to 16 feet below the ground surface. Explorations completed by GRI across N Douglas Loop northeast of the campus encountered groundwater as shallow as 2.7 feet below the ground surface. We anticipate the groundwater level at the site will fluctuate seasonally. Due to the relatively low permeability of the soils that mantle the site, we anticipate shallow perched groundwater conditions will also develop in the near-surface soils, particularly during the wet winter months and following periods of prolonged precipitation.

4.4 Infiltration Testing

Two infiltration tests were conducted in general conformance with the open pit falling head procedure described in Appendix D of the March 2020 *Oregon City Stormwater and Grading Design Standards*. The test results are summarized in the "Stormwater Infiltration" section of this report.

5 FINDINGS AND RECOMMENDATIONS

5.1 General

Subsurface explorations for this investigation encountered residual soils consisting of silty clay to clayey silt. Based on our experience in the area, the relative consistency of the residual soil is generally medium stiff to stiff. The residual soil transitions into decomposed Boring Lava, underlain by intact Boring Lava, as shallow as four feet below the existing ground surface.

In our opinion, foundation support for new structures can be provided by conventional spread and wall foundations established in firm, undisturbed native soil or compacted structural fill. The primary geotechnical considerations associated with the construction of the proposed improvements include the presence of fine-grained soils at the ground surface that are moisture sensitive, the presence of cobbles and boulders within the anticipated depth of excavation, and the potential for shallow, perched groundwater conditions. The following sections of this report provide our conclusions and recommendations for use in the design and construction of the proposed additions.

5.2 Seismic Considerations

5.2.1 Design Acceleration Parameters

We understand seismic design for the project is being completed in accordance with the 2022 OSSC and American Society of Civil Engineers (ASCE) 7-16. A site-specific seismic-hazard study was completed for the project to fulfill the requirements of amended Section 1803 of the 2022 OSSC for special occupancy structures. Details of the site-specific seismic-hazard study and development of the recommended response spectrum are provided in Appendix B.

A ground-motion hazard analysis was completed in accordance with Section 21.2 of ASCE 7-16 to develop the site-specific ground motion values. Based on our review of available geologic and subsurface information for the project area and the results of subsurface explorations and the seismic cone penetration testing completed for this project, it is our opinion the site can generally be classified as Site Class D in accordance with Chapter 20 of ASCE 7-16. The recommended response spectra for structural design were developed by comparing the site-specific spectra based on ground motion hazard analysis with the code-based spectra based on Site Class D conditions. For dynamic analysis using the equivalent lateral force design procedure, the 0.2- and 1.0-second Risk-Targeted Maximum Considered Earthquake (MCE_R) and design acceleration parameters are developed in accordance with Section 21.4 of ASCE 7-16. Table 5-1 summarizes the recommended MCE_R- and design-level spectral response parameters for the Site Class D condition developed at the site in accordance with Section 21.4 of ASCE 7-16.

Table 5-1: RECOMMENDED SEISMIC DESIGN PARAMETERS (2022 OSSC / ASCE 7-16)

Seismic Parameter	Recommended Value
Site Class	D
MCE_R Spectral Response Acceleration Parameter at Short Periods, S_{MS}	1.05 g
MCE_R Spectral Response Acceleration Parameter at 1.0-Second Period, S_{M1}	0.78 g
Design Spectral Response Acceleration Parameter at Short Periods, S_{DS}	0.70 g
Design Spectral Response Acceleration Parameter at 1.0-Second Period, S_{D1}	0.52 g

Abbreviations: OSSC = *Oregon Structural Specialty Code*; ASCE = American Society of Civil Engineers; MCE_R = Risk-Targeted Maximum Considered Earthquake

5.2.2 Other Seismic Hazards

Based on subsurface conditions and site topography, the risk of liquefaction, earthquake-induced slope instability, and/or lateral spreading is low. The risk of damage by a tsunami and/or seiche at the site is absent. Based on USGS maps, the Bolton Fault is the closest crustal fault identified as a hazard to the site, located approximately 4.5 kilometers (km) from the site. The CSZ is mapped approximately 90 km west of the site (Petersen et al.,

2014). Unless occurring on a previously unmapped or unknown fault, the risk of fault rupture at the site is low.

5.3 Earthwork

5.3.1 General

The fine-grained soils that mantle the site are moisture sensitive, and perched groundwater is likely to approach the ground surface during the wet winter months and following periods of sustained precipitation. Therefore, it is our opinion that earthwork can be completed most economically during the dry summer months, which typically extend from June to mid-October. It has been our experience that the moisture content of the upper few feet of fine-grained soils will decrease during extended warm, dry weather. However, below this depth, the moisture content of the soil tends to remain relatively unchanged and well above the optimum moisture content for compaction. As a result, the contractor must use construction equipment and procedures that prevent disturbance and softening of the subgrade soils. To minimize disturbance of the moisture-sensitive fine-grained soils, site grading can be completed using track-mounted hydraulic excavators. Excavations should be finished using a smooth-edged bucket to produce a firm, undisturbed surface.

Cobbles, boulders, and large rock fragments are present within the near-surface soils. Removal of these large particles may result in subgrade disturbance. If the subgrade is disturbed during construction, soft, disturbed soils should be overexcavated to firm soil and backfilled with structural fill.

To reduce the risk of subgrade disturbance resulting from wet ground conditions, constructing granular work pads and haul roads will be required to protect the fine-grained subgrade and provide a firm working surface for construction activities.

5.3.2 Site Preparation

The existing structures located within the extent of the proposed improvements and associated foundations, if any, should be demolished as a part of site preparation activities. Any soils disturbed during the removal of the foundations and any soft or otherwise unsuitable soils in the footprint of the new facilities should be excavated and removed. The excavations should be backfilled in accordance with the “Structural Fill” section of this report.

The ground surface within all building areas, paved areas, walkways, and areas to receive structural fill should be stripped of existing vegetation, surface organics, and loose surface soils or fill. All trees, brush, and surficial organic material should be removed from within the limits of the proposed improvements. Excavations required to remove unsuitable soils,

brush, and trees should be backfilled with structural fill. Organic strippings should be disposed of off site or stockpiled on site for use in landscaped areas.

Following stripping or excavation to design elevation, the exposed subgrade should be evaluated by a qualified member of GRI's geotechnical engineering staff or an engineering geologist. Cobbles or boulders encountered at subgrade elevation may need to be overexcavated and replaced with compacted structural fill. Proof rolling with a loaded dump truck may be part of this evaluation. Any soft areas or areas of unsuitable material disclosed by the evaluation should be overexcavated to firm material and backfilled with compacted structural fill.

5.3.3 Site Grading

Final site grades are not available at this preliminary stage. However, we anticipate areal cuts and fills for the project will generally be less than about 2 feet, and cuts and fills to support retaining wall construction may be on the order of 5 feet to 10 feet. If planned cuts or fills exceed this thickness, GRI should be contacted to review site grading. In general, grading across the project site should also provide for positive drainage of surface water away from buildings, retaining walls, adjacent properties, and slopes to reduce the potential for erosion and ponding. Permanent cut and fill slopes should be no steeper than 2H:1V.

5.3.4 Granular Work Pads and Haul Roads

As noted above, if construction occurs during wet ground conditions, granular work pads will be required to protect the underlying subgrade and provide a firm working surface for construction activities. In our opinion, an 18-inch-thick granular work pad should be sufficient to prevent disturbance of the subgrade by lighter construction equipment and limited traffic by dump trucks. Haul roads and other high-density traffic areas, including the use of Gradalls and forklifts, will require a minimum of 18 inches to 24 inches of fragmental rock, up to 6-inch nominal size, to reduce the risk of subgrade deterioration. The use of a woven geotextile fabric or geogrid over the subgrade may reduce the need for maintenance during construction. Granular haul roads and work pads can also be constructed by placing a thickened section of the pavement section crushed rock base (CRB) and subsequently spreading and grading the excess CRB after earthwork is complete.

As an alternative to the use of a thickened section of crushed rock to support construction activities and protect the subgrade, the subgrade soils can be treated with cement. On a preliminary basis, it has been our experience in this area that treating the subgrade soils to a depth of 12 inches to 18 inches with about a 6% to 10% admixture of cement overlain by 6 inches to 12 inches of crushed rock will support construction equipment and provide a good all-weather working surface. If cement treatment is being considered, GRI should

be contacted prior to construction to assist with refining the preliminary cement admixture estimates noted above.

5.3.5 Prior Site Development

Site improvements within previously developed areas include the risk of encountering undocumented or poorly documented improvements and infrastructure. Although not encountered within the subsurface explorations completed at the site, the possibility does exist to encounter existing underground improvements. Any remnants of previous improvements should be removed within the footprints of the new structures and other improvements. All debris should be removed from the site, and excavations should be backfilled with structural fill.

5.4 Excavation

5.4.1 General

Based on our preliminary understanding of the project, we anticipate the depth of cuts to establish final site grades will generally be less than 2 feet, and the depths of excavations for retaining walls and utility trenches may be on the order of 5 feet to 10 feet. The method of excavation and design of excavation support are the responsibility of the contractor and are subject to applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) excavation and trench safety standards. The means, methods, and sequencing of construction operations and site safety are also the contractor's responsibility. The information provided below is for the use of our client and should not be interpreted to imply we are assuming responsibility for the contractor's actions or site safety.

5.4.2 Groundwater Management

We anticipate that perched groundwater is likely to be encountered in excavations. Groundwater seepage, running-soil conditions, and unstable excavation sidewalls or excavation subgrades, if encountered during construction, will require dewatering of the excavation and sidewall support. The impact of these conditions can be reduced by completing excavations during the summer months, when perched groundwater levels are lowest, and by limiting the depths of the excavations.

We anticipate perched groundwater inflow can generally be controlled by pumping from sumps. To facilitate dewatering, it will be necessary to overexcavate the base of the excavation to permit the installation of a granular working blanket. We estimate the required thickness of the granular working blanket will be on the order of 1 foot or as required to maintain a stable excavation base. The actual required depth of overexcavation will depend on the conditions exposed in the excavations and the effectiveness of the contractor's dewatering efforts. The thickness of the granular blanket must be evaluated

based on field observations during construction. We recommend the use of relatively clean material such as 2- to 4-inch-minus crushed rock with less than about 5% passing the No. 200 sieve (washed analysis) for this purpose. The use of geotextile fabric over the excavation base will assist in subgrade stability and dewatering.

5.4.3 Temporary Excavations

The inclination of temporary excavation slopes will depend, in part, on the perched-groundwater conditions encountered at the time of construction and the contractor's ability to control these conditions. In this regard, we anticipate that temporary excavation slopes can be cut at 1H:1V to a maximum depth of 10 feet if groundwater levels are maintained at least 2 feet below the bottom of the excavation. Flatter slopes will be necessary if significant seepage conditions are encountered. Some minor amounts of sloughing, slumping, or running of temporary slopes should be anticipated shortly after groundwater seepage occurs. A blanket of relatively clean, well-graded, crushed rock placed on the slopes may be required to reduce the risk of raveling soil conditions if temporary excavation slopes encounter perched groundwater. We recommend the use of relatively clean, free-draining material, such as 2- to 4-inch-minus crushed rock, for this purpose. The thickness of the granular blanket should be evaluated based on actual conditions but would likely be in the range of 12 inches to 24 inches.

In our opinion, the short-term stability of temporary slopes will be adequate if surcharge loads due to construction traffic, vehicle parking, material laydown, etc., are maintained at an equal distance to the height of the slope away from the top of the open cut. Additional lateral loading due to surcharge loads can be evaluated using the criteria shown on Figure 3. Other measures that should be implemented to reduce the risk of localized failures of temporary slopes include the following: 1) using geotextile fabric to protect the exposed cut slopes from surface erosion; 2) providing positive drainage away from the tops and bottoms of the cut slopes; 3) constructing and backfilling walls as soon as practical after completing the excavation; 4) backfilling overexcavated areas as soon as practical after completing the excavation; and 5) periodically monitoring the area around the top of the excavation for evidence of ground cracking. It must be emphasized that following these recommendations will not guarantee that sloughing or movement of the temporary cut slopes will not occur; however, the measures should serve to reduce the risk of a major slope failure. It should also be realized that blocks of ground and/or localized slumps may tend to move into the excavation during construction.

The explorations encountered intact Boring Lava as shallow as four feet below the existing ground surface. The surface of the rock may vary between relatively short distances. Additionally, in our experience, the residual soil and decomposed rock layers may contain cobbles, boulders, or larger rock fragments. The degree of weathering typically decreases

with depth. Based on our experience with similar projects and materials, we anticipate it will be difficult to excavate into the Boring Lava using a large hydraulic excavator equipped with a rock bucket with carbide teeth. Therefore, it should be anticipated that rock excavation techniques, such as percussion and chipping methods, may be required if the excavations must be advanced into the Boring Lava. The rate of excavation can be slow and highly variable even when using a percussion hammer, especially for deeper excavations.

5.4.4 Utility Excavations

In our opinion, there are three major considerations associated with the design and construction of new utilities:

1. Provide stable excavation side slopes or support for trench sidewalls to minimize loss of ground.
2. Provide a safe working environment during construction.
3. Minimize post-construction settlement of the utility and ground surface.

According to current OSHA regulations, the fine-grained soils encountered in the explorations may be classified as Type B. In our opinion, trench excavations should be laterally supported or alternatively provided with sideslopes of 1H:1V or flatter, provided static groundwater or seepage is not encountered. If groundwater is encountered, the sideslopes should be sloped at 1.5H:1V or flatter. In our opinion, adequate lateral support may be provided by common methods, such as the use of a trench shield or hydraulic shoring systems.

5.5 Structural Fill

5.5.1 General

We anticipate structural fill required to achieve subgrade elevation for the planned improvements will generally be less than 2 feet. Structural fills on the order of 10 feet are anticipated for retaining wall construction. In general, structural fills should consist of imported or on-site, organic-free soils and should extend a minimum horizontal distance of 5 feet beyond the edge of new foundations and 1 foot beyond the limits of ancillary improvements, such as the edges of new sidewalks, hardscapes, or pavements.

5.5.2 On-Site Fine-Grained Fill

In general, approved, organic-free, fine-grained soils used to construct structural fills should have a maximum size of 2 inches and be placed in 8-inch-thick lifts (loose) and compacted using segmented-pad or sheepsfoot rollers to a density not less than 95% of the maximum dry density, as determined by ASTM D690. Cobbles and boulders are

abundant within the soils encountered at the project site and will need to be removed prior to using on-site soil as fill.

In our opinion, the moisture content of fine-grained soil at the time of compaction should be controlled to within 3% of optimum moisture content for compaction. It has been our experience that the moisture contents of near-surface, fine-grained soils such as those encountered at the project site are typically above optimum throughout the majority of the year. Aeration and drying will be required to meet the requirements for proper compaction. The required drying can best be accomplished by spreading the material in thin lifts and tilling. Drying rates are dependent on weather factors such as wind, temperature, and relative humidity. Typically, higher plasticity fine-grained soils take longer to dry than lower plasticity soils. Therefore, spatial variation in percentages of sand, silt, and clay can result in inconsistent drying. In this regard, aeration and moisture control of on-site fill soils will likely require a significant amount of time and area over extended periods of warm, dry weather or cement amendment. If fine-grained soils are compacted at a moisture content that is above recommended, the specified density cannot be achieved, and the fill material will be relatively weak and possibly compressible. Cement amendment of on-site, fine-grained soils may be an option to stabilize structural fill soils if the soil cannot be suitably moisture conditioned.

On-site, fine-grained soils and site strippings free of debris may be used as fill in non-structural landscaped areas where overlying hardscapes such as sidewalks or pavements will not be constructed. These materials should be placed at about 90% of the maximum dry density, as determined by ASTM D698. The moisture contents of soils placed in landscaped areas are not as critical as the moisture contents of soils placed in structural areas, provided construction equipment can effectively handle the materials. However, fine-grained soils compacted to less than 95% of the maximum dry density, as determined by ASTM D698, or at a moisture content outside 3% of optimum may result in excessive settlement of fill soils.

5.5.3 Imported Granular Fill

Imported granular material would be most suitable for the construction of the structural fills. Granular material, such as sand, sandy gravel, or crushed rock, with a maximum size of 2 inches and less than 5% passing the No. 200 sieve (washed analysis) would be suitable structural fill material. Granular fill should be placed in lifts and compacted with vibratory equipment to at least 95% of the maximum dry density, as determined in accordance with ASTM D698. Compaction of granular fill material greater than about 1.5 inches should be evaluated based on visual observation of compaction equipment and proof rolls. Appropriate lift thicknesses will depend on the type of compaction equipment used. For example, if hand-operated, vibratory-plate equipment is used, lift thicknesses should be

limited to about 6 inches to 8 inches. Based on field-density testing, if smooth-drum vibratory rollers are used, lift thicknesses up to about 12 inches may be appropriate, and if backhoe- or excavator-mounted vibratory plates are used, lift thicknesses of up to about 2 feet may be acceptable.

5.5.4 Utility Trench Backfill

All utility trench excavations within building, hardscape, and pavement areas should be backfilled with relatively clean, granular material, such as sand, sandy gravel, or crushed rock, of up to 1½-inch maximum size and having less than about 5% passing the No. 200 sieve (washed analysis). The bottom of the excavation should be thoroughly cleaned to remove loose materials, and the utilities should be underlain by a minimum-6-inch thickness of bedding material conforming to the utility manufacturer's installation specifications. The granular backfill material should be compacted to at least 95% of the maximum dry density, as determined by ASTM D698. The use of hoe-mounted vibratory-plate compactors is usually the most efficient for this purpose. Flooding or jetting as a means of compacting the trench backfill should not be permitted.

5.5.5 Field and Track Subgrade

For subgrade preparation of the track and turf field subgrade, we recommend considering either cement treatment or placement of CRB course to support field construction and future field maintenance. At a minimum, we recommend that cement treatment extend to approximately 12 inches to 18 inches below subgrade elevation and be completed in accordance with the recommendations outlined in the "Granular Work Pads and Haul Roads" section of this report. Alternatively, cement treatment may be replaced with a 2-foot-thick section of CRB course meeting the requirements outlined in the Structural Fill section of this report. Construction of firm subgrade beneath the field will be critical for field performance and facilitate future maintenance, repair, and replacement of the turf at the end of its design life.

5.6 Stormwater Infiltration

Infiltration tests were completed at depths of about 5.2 feet and 3.5 feet within the test pits excavated for the project. The tests were completed in general accordance with the open pit falling head procedure as described in Appendix D of the March 2020 *Oregon City Stormwater and Grading Design Standards*. The infiltration testing resulted in a measured infiltration rate of 0.5 inches per hour. We recommend applying a factor of safety of 2.0 for design of on-site infiltration facilities. We understand cement amendment is being considered for subgrade stabilization at the track and field. We recommend considering an infiltration rate of 0 inches per hour in cement-amended soils.

5.7 Foundation Support

5.7.1 General

Structural loads are currently unknown; however, we anticipate the maximum column loads will generally be less than about 100 kips. In our opinion, the proposed structural loads can be supported on conventional spread footings in accordance with the following design criteria.

5.7.2 Footing Subgrade Preparation

The base of all new footings should be established in the firm native soil that mantles the site or crushed rock structural fill. Overexcavations to native soil should extend horizontally beyond the edge of footings and settlement-sensitive structures, as indicated on the Surcharge-Induced Lateral Pressure, Figure 4. The base of all new footings should be established at a minimum embedment depth of 18 inches below the lowest adjacent finished grade. The footing width should not be less than 24 inches for isolated column footings and 18 inches for wall footings. Final excavations for all foundations should be made with a smooth-edged bucket and all footing subgrades should be observed by a member of GRI's geotechnical engineering staff. Soft or otherwise unsuitable material encountered at the foundation subgrade level should be overexcavated and backfilled with crushed rock structural fill. Local areas of softer subgrade may require deeper overexcavation and should be evaluated by a member of GRI's geotechnical engineering staff. We recommend the contract documents provide unit costs for subgrade overexcavation and structural backfill. Our experience indicates that the subgrade soils are easily disturbed by excavation and construction activities. Due to these considerations, we recommend installing a minimum-3-inch-thick working pad layer of compacted crushed rock in the bottom of all footing excavations. Relatively clean, ¾-inch-minus crushed rock having less than about 5% fines passing the No. 200 sieve (washed analysis) is suitable for this purpose.

5.7.3 Allowable Bearing Pressure

Our allowable bearing pressures are based on the estimated column and wall loads and the results of our subsurface explorations. Footings established in accordance with the above criteria in the native soil or compacted crushed rock structural fill can be designed based on an allowable soil bearing pressure of 3,500 pounds per square foot. This value applies to the total of dead load and/or frequently applied live loads and can be increased by one-third for the total of all loads: dead, live, and wind or seismic.

5.7.4 Static and Dynamic Settlement

We estimate the total static settlement of spread and wall footings designed in accordance with the recommendations presented above will be less than 1 inch for footings supporting columns up to 100 kips. Differential static settlements between adjacent,

comparably loaded and similarly supported footings should be less than half the total settlement. Differential static settlements between footings supported on differing subsurface conditions may approach total settlements.

5.7.5 Horizontal Forces

Horizontal shear forces can be resisted partially or completely by frictional forces developed between the base of the footings and the underlying soil and by soil passive resistance. The total frictional resistance between the footing and the soil is the normal force times the coefficient of friction between the soil and the base of the footing. We recommend ultimate values of 0.35 and 0.55 for the coefficient of friction for footings cast on firm native soil or granular crushed rock structural fill material, respectively. The normal force is the sum of the vertical forces (dead load plus real live load). If additional lateral resistance is required, passive earth pressures against embedded footings can be computed based on an equivalent fluid. Footing pressures for horizontal backfill conditions can be computed having a unit weight of 300 pounds per cubic foot (pcf) against native soil or compacted structural fill. The design passive earth pressure would be applicable only if the footing is cast neat against undisturbed native soil or if backfill for the footings is placed as granular structural fill and assumes up to 0.01H inches of lateral movement of the structure will occur to develop this resistance, where H is the depth of embedment to the bottom of the footing. This value also assumes the permanent ground surface in front of the foundation is horizontal (i.e., it does not slope downward away from the toe of the footing).

5.8 Retaining Walls

5.8.1 General

Based on the conceptual drawings, we understand a retaining wall is planned behind the new grandstand structure west of the track. Additionally, we anticipate portions of the improvements, such as Americans with Disabilities Act access ramps, may be partially embedded and may require retaining walls. For this report, we assumed site retaining walls would consist of conventional cast-in-place or gravity walls supported on shallow foundations. Foundation design and subgrade preparation should conform to the recommendations provided above for foundation support.

5.8.2 Lateral Earth Pressures

Lateral earth pressures for designing retaining walls depend on the type of construction (i.e., the ability of the wall to yield). Possible conditions are 1) a wall laterally supported at its base and top and, therefore, unable to yield to the active state and 2) a retaining wall, such as a typical cantilever or gravity wall, which yields to the active state by tilting about its base. A conventional basement wall and cantilever retaining wall are examples of non-yielding and yielding walls, respectively. For completely drained, horizontal backfill,

yielding and non-yielding walls may be designed based on equivalent fluid unit weights of 35 pcf and 55 pcf, respectively. For walls retaining a fully drained, sloping backfill of 2H:1V, the equivalent fluid weights should be modified to 55 pcf and 80 pcf for yielding and non-yielding walls, respectively. To account for seismic loading, the Agusti and Sitar (2013) method was used to develop lateral earth pressures on permanent embedded structures. For horizontal backslope conditions, the earth pressures should be increased by 8 pcf and 16 pcf for yielding and non-yielding walls, respectively. For 2H:1V backslope conditions, the earth pressures should be increased by 24 pcf and 52 pcf for yielding and non-yielding walls, respectively. This results in a triangular distribution, with the resultant acting at ⅓H up from the base of the wall, where H is the height of the exposed wall in feet. These pressures are unfactored, real loads and should be adjusted based on the design methodology and referenced code.

5.8.3 Wall Drainage

The lateral earth pressure design criteria presented above are appropriate if the retaining walls are fully drained. Perched groundwater may occur within the shallow, fine-grained soils and existing utility trenches during periods of prolonged or intense precipitation. Based on these considerations, we recommend the installation of a permanent drainage system behind all of the retaining walls. The drainage system can either consist of a drainage blanket of crushed rock or continuous drainage panels between the retained soil/backfill and the face of the wall. The drainage blanket should have a minimum width of 12 inches and consist of crushed drain rock that contains less than 2% fines content (washed analysis). A nonwoven geotextile fabric should separate the drain rock and wall backfill. A typical drainage system for retaining walls constructed with a drainage blanket is shown on the Overexcavation Detail, Figure 5. The drainage blanket or drainage panels should extend to the base of the wall, where water should be collected in a perforated pipe and discharged to a suitable outlet, such as a sump or approved storm drain. In addition, the wall design should include positive drainage measures to prevent ponding of surface water behind the top of the wall.

5.8.4 Backfill Compaction

Overcompaction of backfill behind walls should be avoided. Heavy compactors and large pieces of construction equipment should not operate within 5 feet of any embedded wall to avoid the buildup of excessive lateral earth pressures. Compaction close to the walls should be accomplished with hand-operated, vibratory-plate compactors. Overcompaction of backfill could significantly increase lateral earth pressures behind walls. Additional lateral loading to walls due to surcharge loads can be evaluated using the criteria shown on Figure 3.

5.9 Subdrainage/Floor Support

In general, we recommend floor slabs be established in the native residual soil that underlies the site. In areas where soft or disturbed soils are encountered at slab subgrade elevation, we recommend overexcavating to native subgrade or constructing a minimum 6-inch-thick section of granular structural fill over a woven geotextile fabric beneath the slab base course. To provide a capillary break and reduce the risk of damp floors, slab-on-grade floors should be underlain by a minimum of 8 inches of free-draining, clean rock. This material should consist of angular rock such as 1½- to ¾-inch, open-graded crushed rock with less than 2% passing the No. 200 sieve (washed analysis) and should be capped with a 2-inch-thick layer of compacted, ¾-inch-minus crushed rock to improve workability, as indicated on Figure 5. The slab base course section should be placed in one lift and compacted to at least 95% of the maximum dry density, as determined by ASTM D698, or until well keyed. In areas where floor coverings will be provided or moisture-sensitive materials stored, it would be appropriate to also install a vapor-retarding membrane. The membrane should be installed as recommended by the manufacturer. In addition, a foundation drain should be installed around the building perimeter to collect water that could potentially infiltrate beneath the foundations. All groundwater collected should be drained by gravity or pumped from sumps into an approved stormwater disposal facility. If the water is pumped, an emergency power supply or battery backup should be included to prevent flooding due to power loss during a storm or high groundwater events. The perimeter foundation drain should be placed at the base of the footing and embedded within free-draining, clean, angular rock, such as 1½- to ¾-inch crushed rock with less than 2% passing the No. 200 sieve (washed analysis).

For structures established below final site grades, slabs should be underlain by a subdrainage system in addition to the slab base course and vapor-retarding membrane, as indicated on Figure 5. A subdrainage system will reduce the buildup of hydrostatic pressures on the floor slab and the risk of groundwater entering through embedded walls and floor slabs. Beneath embedded floor slabs, the center-to-center spacing of the underslab drainpipes should not exceed 20 feet. All groundwater collected should be drained by gravity or pumped from sumps into an approved stormwater disposal facility. If the water is pumped, an emergency power supply or battery backup should be included to prevent flooding due to power loss during a storm or high-groundwater events.

6 DESIGN REVIEW AND CONSTRUCTION SERVICES

We welcome the opportunity to review and discuss construction plans and specifications for this project as they are being developed. In addition, GRI should be retained to review all geotechnical-related portions of the plans and specifications to evaluate whether they are in conformance with the recommendations provided in our report. To observe compliance with the intent of our recommendations, the design concepts, and the plans

and specifications, it is our opinion that all construction operations dealing with earthwork, retaining walls, foundations, and pile installations should be observed by a GRI representative. Our construction-phase services will allow for timely design changes if site conditions are encountered that are different from those described in our report. If we do not have the opportunity to confirm our interpretations, assumptions, and analyses during construction, we cannot be responsible for the application of our recommendations to subsurface conditions different from those described in this report.

7 LIMITATIONS

This report has been prepared to aid the project team in the design of this project. The scope is limited to the specific project and location described herein, and our description of the project represents our understanding of the significant aspects of the project relevant to earthwork and design and construction of the improvements outlined on the Master Athletic Plan conceptual drawing. In the event any changes in the design and location of the project elements as outlined in this report are planned, we should be given the opportunity to review the changes and modify or reaffirm the conclusions and recommendations of this report in writing.

The conclusions and recommendations in this report are based on the data obtained from the subsurface explorations at the locations shown on Figure 2 and other sources of information discussed in this report. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is acknowledged variations in subsurface conditions may exist between exploration locations. This report does not reflect variations that may occur between these explorations. The nature and extent of variation may not become evident until construction. If subsurface conditions during construction differ from those encountered in the explorations, we should be advised at once so we can observe and review these conditions and reconsider our recommendations where necessary.

We have included as Appendix C the Geoprofessional Business Association guidance document "Important Information about This Geotechnical-Engineering Report" to assist you and others in understanding the use and limitations of this report. We recommend you read this document.

Submitted for GRI,

Thomas J. O'Dell, PE	Tovey M. Brown, PE	Melissa Preciado
Associate	Project Engineer	Staff Engineer

This document has been submitted electronically.

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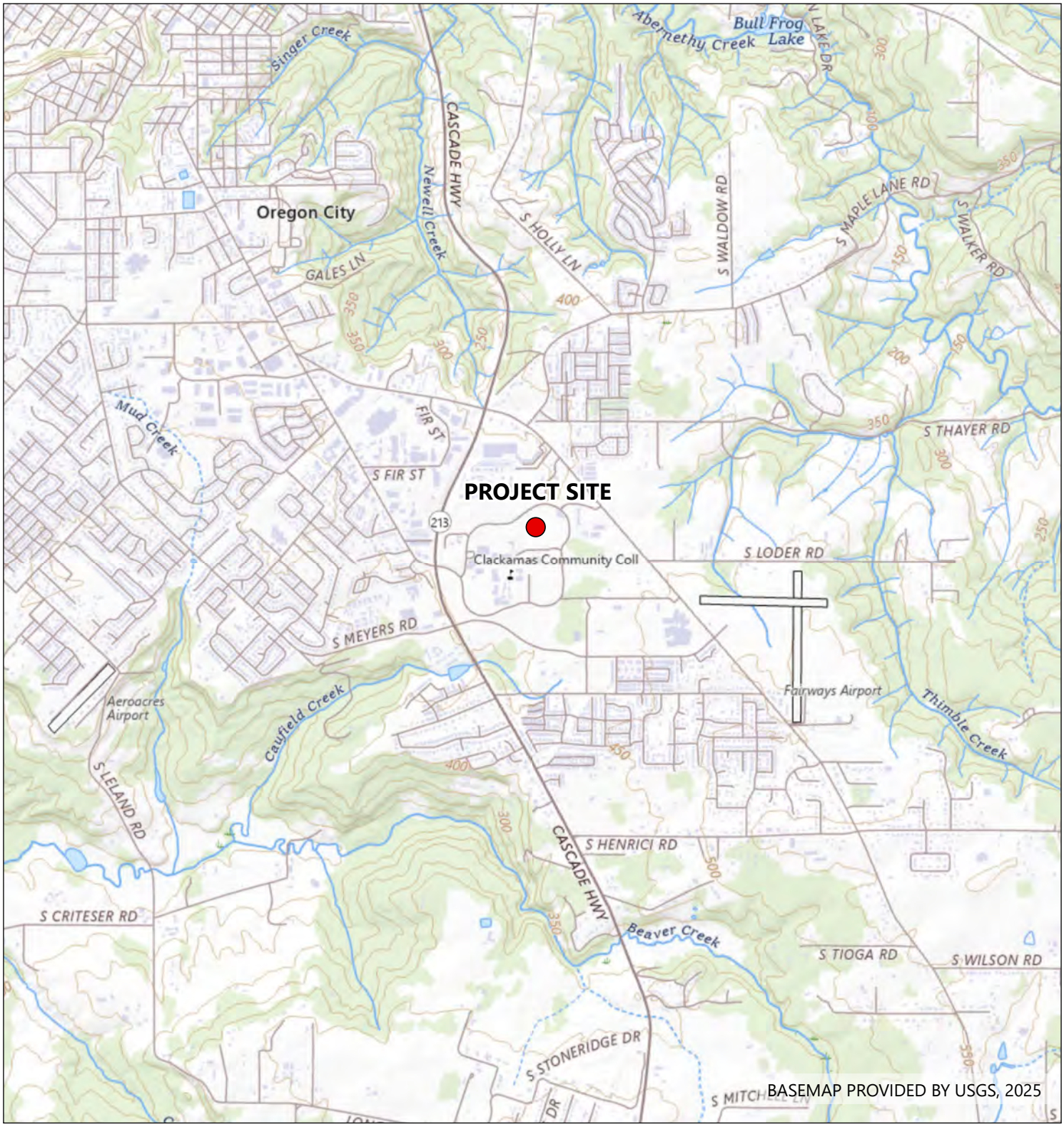
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0 0.5 1

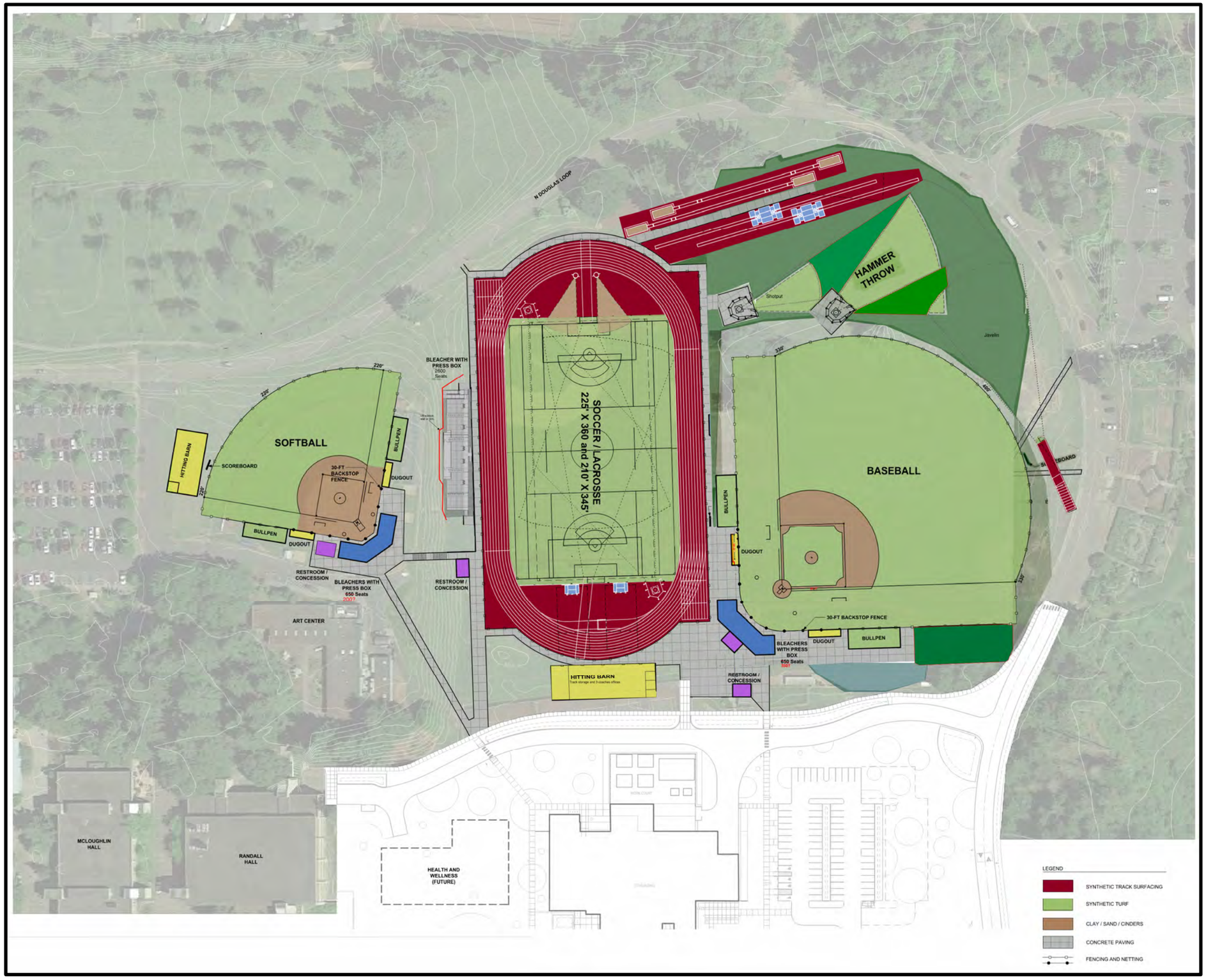
1 INCH = 0.5 MILES

GRI

TARKETT SPORTS
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ATHLETIC MASTER PLAN

VICINITY MAP

JUL. 2025 JOB NO. 7090-A FIG. 1

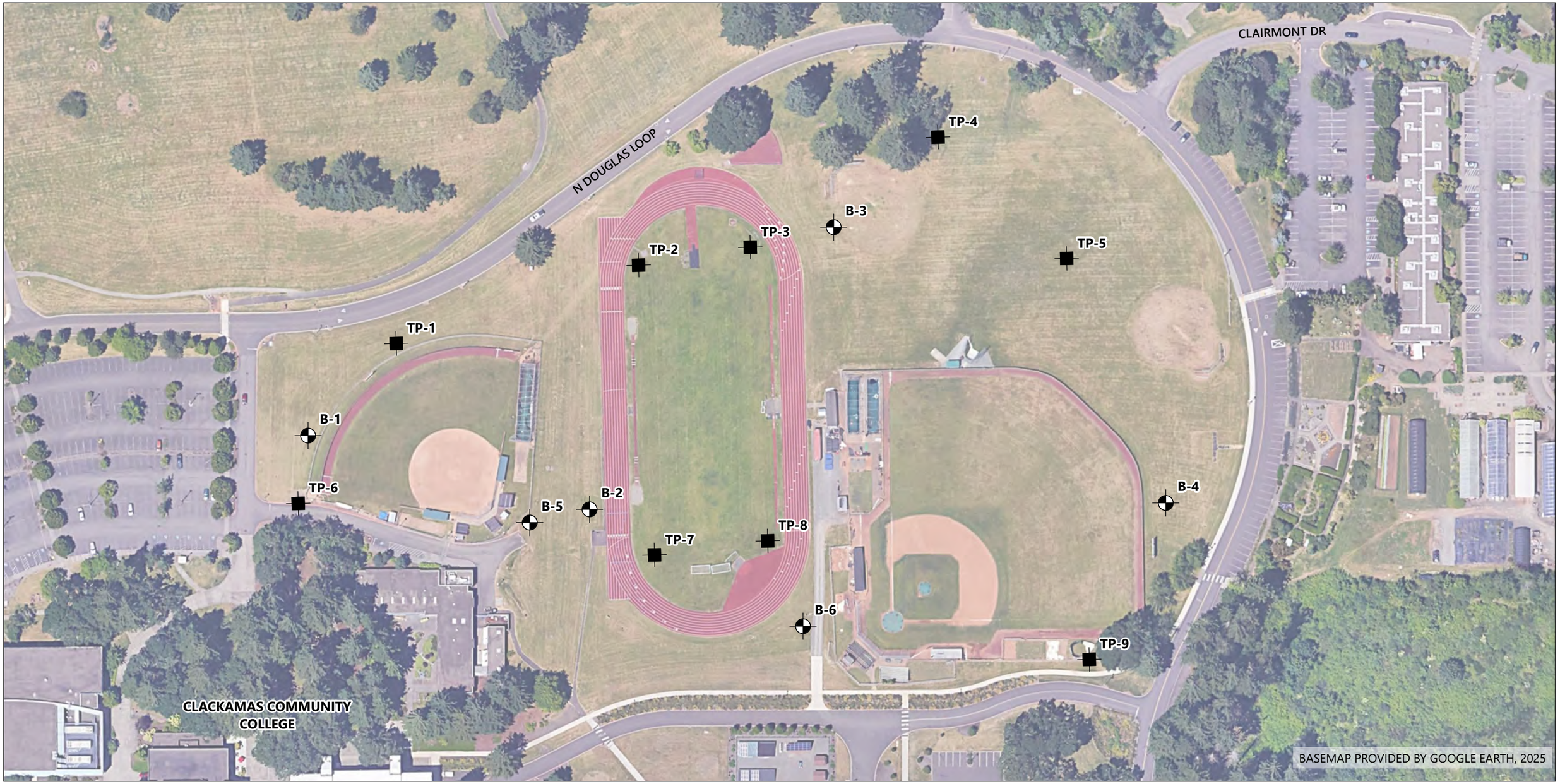


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CONCEPTUAL PLAN

JUL. 2025 JOB NO. 7090-A



LEGEND:

- APPROXIMATE LOCATION OF BORING COMPLETED BY GRI (MAY 12 AND 13, 2025)
- APPROXIMATE LOCATION OF TEST PIT COMPLETED BY GRI (JUNE 9 AND 10, 2025)

N

0 125 250

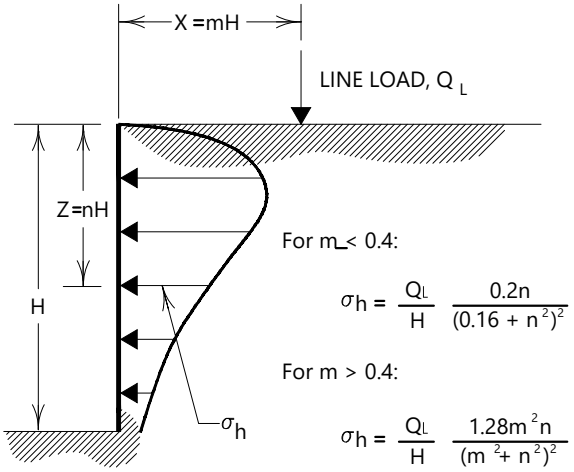
1 INCH = 125 FEET

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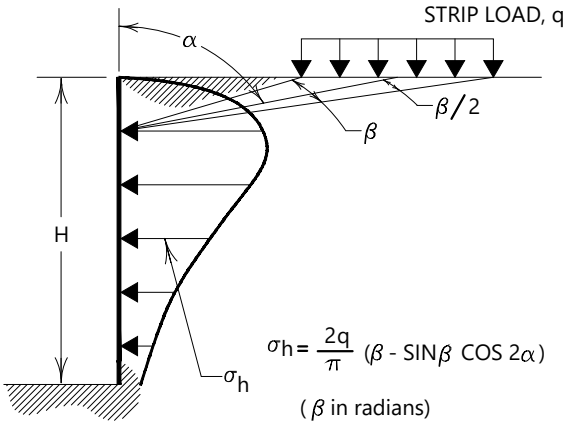
TARKETT SPORTS
CLACKAMAS COMMUNITY COLLEGE
ATHLETIC MASTER PLAN

SITE MAP

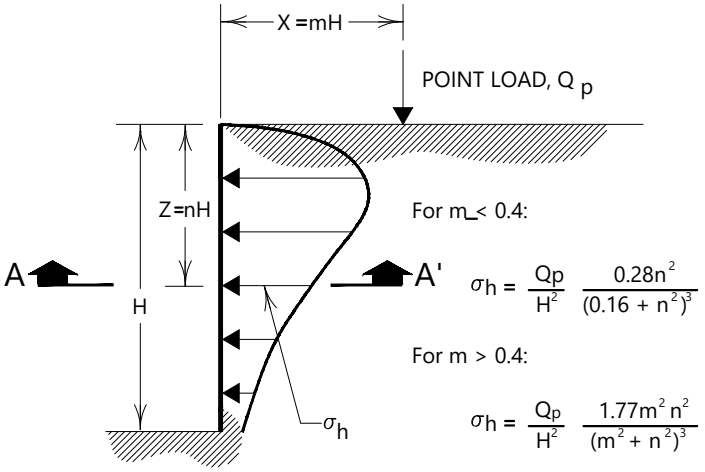
JUL. 2025 JOB NO. 7090-A FIG. 3

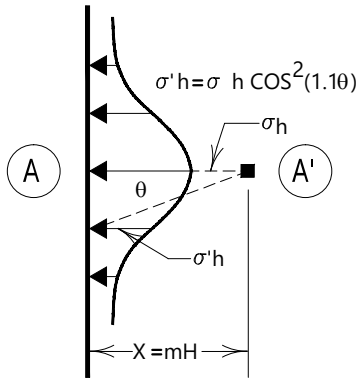


LINE LOAD PARALLEL TO WALL



STRIP LOAD PARALLEL TO WALL





DISTRIBUTION OF HORIZONTAL PRESSURES

VERTICAL POINT LOAD

NOTES:

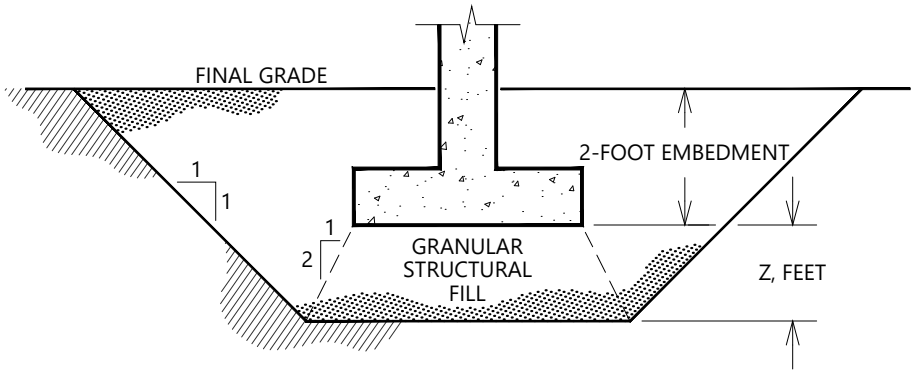
1. THESE GUIDELINES APPLY TO RIGID WALLS WITH POISSON'S RATIO ASSUMED TO BE 0.5 FOR BACKFILL MATERIALS.
2. LATERAL PRESSURES FROM ANY COMBINATION OF THE ABOVE LOADS MAY BE DETERMINED BY THE PRINCIPLE OF SUPERPOSITION.

GRI

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SURCHARGE-INDUCED LATERAL PRESSURE

JUL. 2025 JOB NO. 7090-A FIG. 4



LIMITS OF OVEREXCAVATION

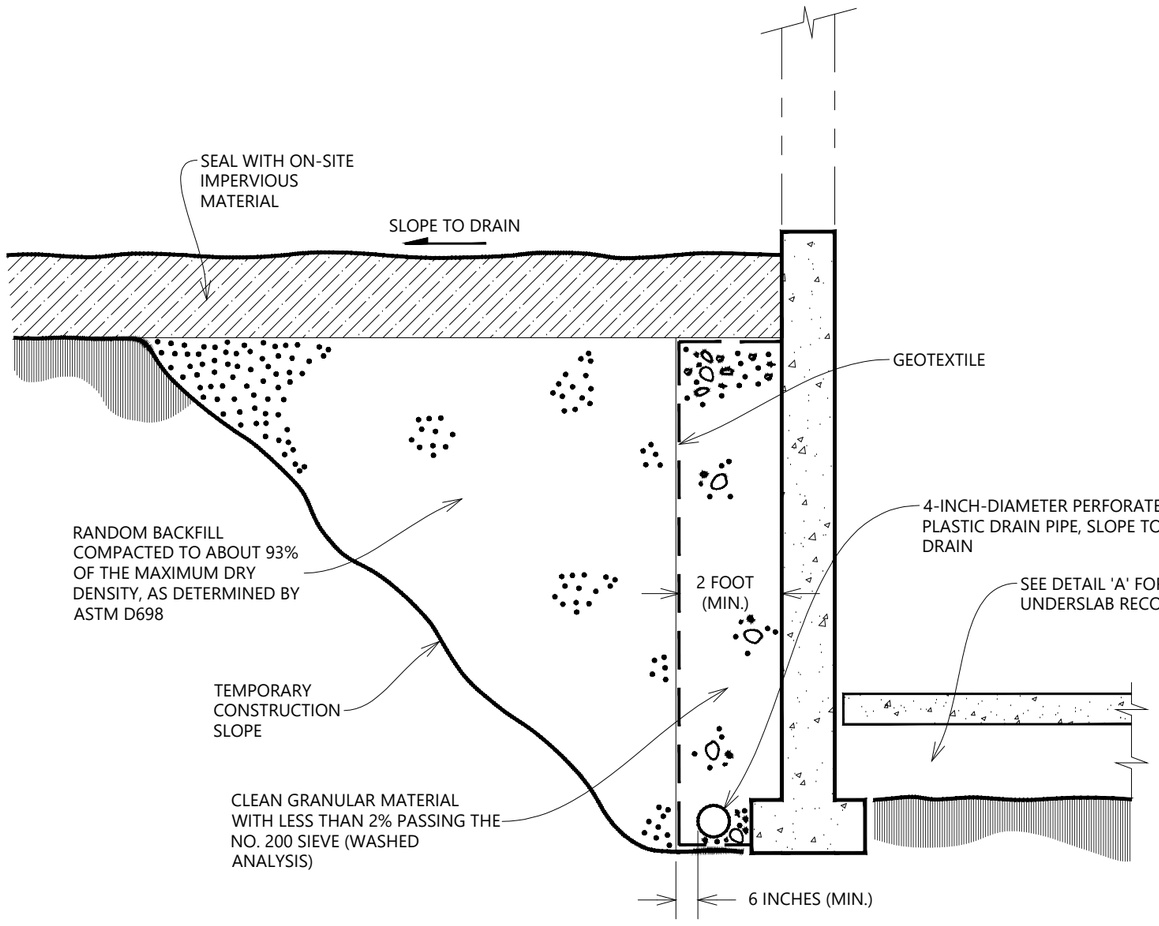
NOT TO SCALE

GRI

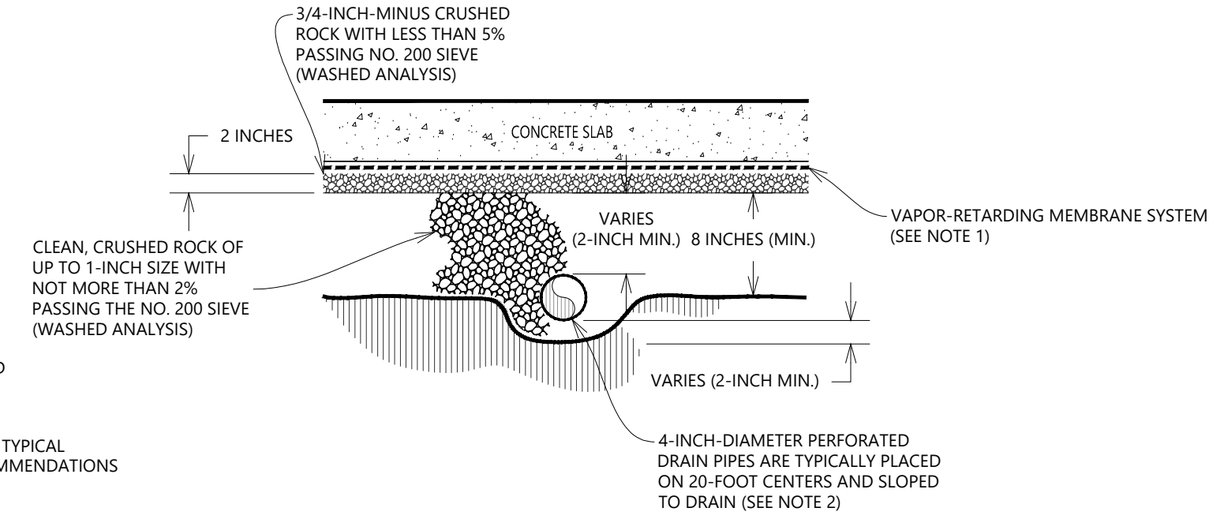
TARKETT SPORTS
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OVEREXCAVATION DETAIL

JUL. 2025 JOB NO. 7090-A FIG. 5



PERIMETER DRAIN



DETAIL 'A'
NOT TO SCALE

UNDERSLAB DRAIN

NOTES:

1. A VAPOR-RETARDING MEMBRANE SYSTEM IS RECOMMENDED FOR MOISTURE-SENSITIVE AREAS.
2. DETAILS REGARDING INSTALLATION OF THE SYSTEM SHOULD BE REVIEWED BY THE DESIGN TEAM.

GRI

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TYPICAL SUBDRAINAGE DETAILS

JUL. 2025 JOB NO. 7090-A FIG. 6

APPENDIX A

Field Explorations and Laboratory Testing

APPENDIX A

FIELD EXPLORATIONS AND LABORATORY TESTING

A.1 FIELD EXPLORATIONS

A.1.1 General

Subsurface materials and conditions at the site were evaluated on May 12 and 13, 2025, with six borings designated B-1 through B-6, and on June 9 and 10, 2025, with nine test pits designated TP-1 through TP-9. The borings were advanced to depths of about 10.1 feet to 40.1 feet below existing site grades at the approximate locations shown on the Site Map, Figure 2. The subsurface exploration work was coordinated and documented by a GRI representative, who maintained a log of the materials and conditions disclosed during the course of the work. A description of the subsurface explorations completed for this project is provided below.

A.1.2 Machine-Drilled Borings

The borings were completed using a track-mounted drill rig provided and operated by Western States Soil Conservation, Inc., of Hubbard, Oregon. Disturbed and undisturbed soil samples were obtained using a standard split-spoon sampler, and the Standard Penetration Test (SPT) was conducted by driving the sampler into the soil at a distance of 18 inches using a 140-pound hammer dropped 30 inches. The number of blows required to drive the standard split-spoon sampler the last 12 inches is known as the Standard Penetration Resistance (SPT N-value). SPT N-values provide a measure of the relative density of cohesionless soils and the relative consistency of cohesive soils. Samples obtained from the borings were placed in airtight containers and returned to our laboratory for further classification and testing. In addition, relatively undisturbed soil samples were obtained from the borings by pushing a 3-inch outside-diameter Shelby tube into the undisturbed soil at a distance of up to 24 inches using the hydraulic ram of the drill rig. The soil exposed at the ends of the Shelby tube was examined and classified in the field. After classification, the tubes were sealed with rubber caps and returned to our laboratory for further examination and testing.

Logs of the borings are provided on Figures 1A through 6A. The logs present a descriptive summary of the various types of materials encountered in the borings and note the depth at which the materials and/or characteristics of the materials change. To the right of the descriptive summary, the numbers and types of samples are indicated. To the right of the material description, SPT N-values are shown graphically, along with other laboratory test data, where applicable. The terms and symbols used to describe the materials encountered in the borings are defined in Tables 1A and 2A and the attached legend.

A.1.3 Test Pits

Nine test pit excavations, designated TP-1 through TP-9, were advanced to depths of about 3.3 feet to 8.3 feet using a track-mounted excavator provided and operated by Western States Soil Conservation, Inc., of Hubbard, Oregon. Disturbed samples were collected in the test pits at selected depths, typically using a hand trowel on the sidewall of the test pit or by collecting material from the excavator bucket after digging. Samples obtained from the test pits were placed in airtight sample bags and returned to our laboratory for further examination and testing.

Logs of the test pits are provided on Figures 7A through 15A. Each log presents a summary of the various types of materials encountered in the test pits and notes the depths at which the materials and/or characteristics of the materials change. To the right of the descriptive summary, the numbers and types of samples are indicated. Farther to the right, the natural moisture contents, where applicable, are shown graphically. The terms and symbols used to describe the materials encountered in the test pits are defined in Tables 1A and 2A and the attached legend.

A.2 LABORATORY TESTING

A.2.1 General

The samples obtained from the borings were examined in our laboratory, where the physical characteristics of the samples were noted and the field classifications modified where necessary. At the time of classification, the natural moisture content of each sample was determined. Additional testing included grain-size analyses, Torvane shear-strength measurements, dry unit weight determinations, and one-dimensional consolidation testing. A summary of the laboratory test results is provided in Table 3A. The following sections describe the testing program in more detail.

A.2.2 Natural Moisture Content

Natural moisture content determinations were performed in conformance with ASTM International (ASTM) D22216. The results are shown on Figures 1A through 15A and summarized in Table 3A.

A.2.3 Grain Size Analysis (Washed-Sieve Method)

To assist in classification of the soils, samples of known dry weight were washed over a No. 200 sieve. The material retained on the sieve is oven-dried and weighed. The percentage of material passing the No. 200 sieve is then calculated. The results are shown on Figures 1A through 6A, where applicable, and summarized in Table 3A.

A.2.4 Atterberg Limits

Atterberg limits tests were performed for selected samples in conformance with ASTM D4318. The test results are shown on the Plasticity Chart, Figure 16A, and summarized in Table 3A.

A.2.5 Torvane Shear Strength

The approximate undrained shear strength of undisturbed soil samples was measured using the Torvane shear device. The Torvane is a handheld apparatus with vanes, which are inserted into the soil. The torque required to fail the soil in shear around the vanes is measured using a calibrated spring. The results of the Torvane shear-strength measurements are shown on Figures 1A through 6A.

A.2.6 Undisturbed Unit Weight

The unit weight (or density) of an undisturbed soil sample was determined in the laboratory in conformance with ASTM D2937. The results are shown on Figures 1A through 6A and summarized in Table 3A.

A.2.7 One-Dimensional Consolidation

A one-dimensional consolidation test was performed in conformance with ASTM D2435 on a relatively undisturbed soil sample extruded from a Shelby tube to obtain data on the compressibility characteristics and stress history of the soil. The test results are summarized on Figure 13A in the form of a curve showing percent strain versus applied effective stress. The initial dry unit weight and moisture content of the sample are also shown on the figure.

Table 1A

GUIDELINES FOR DESCRIPTION OF SOIL[1]

Description of Relative Density for Cohesionless (Coarse-Grained) Soils

Relative Density	Standard Penetration Resistance (N-values) blows/foot (ft)	3-inch Sampler, 140-lb hammer approx. N-Value (blows/ft)[2]	3-inch Sampler, 300-lb hammer approx. N-Value (blows/ft)[1]
Very Loose	0 - 4	0 – 10	0 – 5
Loose	4 - 10	10 – 24	5 – 11
Medium Dense	10 - 30	24 – 73	11 – 34
Dense	30 - 50	73 – 122	34 – 57
Very Dense	over 50	over 122	over 57

Description of Relative Consistency for Cohesive (Fine-Grained) Soils

Relative Consistency	Standard Penetration Resistance (N-values) blows/ft	3-inch Sampler, 140 lb hammer approx. N-Value (blows/ft)[1]	3-inch Sampler, 300 lb hammer approx. N-Value (blows/ft)[2]	Torvane or Undrained Shear Strength, tsf
Very Soft	0 - 2	0 – 3	0 – 1	less than 0.125
Soft	2 - 4	3 – 6	1 – 3	0.125 - 0.25
Medium Stiff	4 - 8	6 – 12	3 – 6	0.25 - 0.50
Stiff	8 - 15	12 – 23	6 – 11	0.50 - 1.0
Very Stiff	15 - 30	23 – 46	11 – 22	1.0 - 2.0
Hard	30 – 60	46 – 92	22 – 43	over 2.0
Very Hard	over 60	over 92	over 43	

Grain-Size Classification	Modifier for Subclassification		
		Primary Constituent SAND or GRAVEL	Primary Constituent SILT or CLAY
Boulders: >12 inches *Cobbles:* 3 inches - 12 inches *Gravel:* ¼ inch - ¾ inch (fine) ¾ inch - 3 inches (coarse) *Sand:* No. 200 - No. 40 sieve (fine) No. 40 - No. 10 sieve (medium) No. 10 - No. 4 sieve (coarse) *Silt/Clay:* Pass No. 200 sieve	Adjective	Percentage of Other Material (By Weight)	
	trace:	<15 (sand, gravel)	<15 (sand, gravel)
	some:	15 - 30 (sand, gravel)	15 - 30 (sand, gravel)
	sandy, gravelly:	30 - 50 (sand, gravel)	30 - 50 (sand, gravel)
	trace:	<5 (silt, clay)	*Relationship of clay and silt determined by plasticity index test*
	some:	5 - 12 (silt, clay)	
	silty, clayey:	12 - 50 (silt, clay)	

1. Soil descriptions are developed using visual-manual procedures (ASTM D2488) and generally follow ODOT Geotechnical Design Manual (Chapter 5) guidelines.
2. Oversized sampler (OD = 3 inches, ID = 2.4 inches) blow counts converted to SPT N-Value using equations provided by Burmister, D.M., 1948, The importance and practical use of relative density in soil mechanics: Proceedings of ASTM, v. 48:1249.

Table 2A

GUIDELINES FOR CLASSIFICATION OF ROCK

Relative Rock Weathering Scale

Term	Field Identification
Fresh	Crystals are bright. Discontinuities may show some minor surface staining. No discoloration in rock fabric.
Slightly Weathered	Rock mass is generally fresh. Discontinuities are stained and may contain clay. Some discoloration in rock fabric. Decomposition extends up to 1 in. into rock.
Moderately Weathered	Rock mass is decomposed 50% or less. Significant portions of rock show discoloration and weathering effects. Crystals are dull and show visible chemical alteration. Discontinuities are stained and may contain secondary mineral deposits.
Predominantly Decomposed	Rock mass is more than 50% decomposed. Rock can be excavated with geologist's pick. All discontinuities exhibit secondary mineralization. Complete discoloration of rock fabric. Surface of core is friable and usually pitted due to washing out of highly altered minerals by drilling water.
Decomposed	Rock mass is completely decomposed. Original rock "fabric" may be evident. May be reduced to soil with hand pressure.

Relative Rock Strength Scale

Term	Hardness Designation	Field Identification	Approximate Unconfined Compressive Strength
Extremely Weak	R0	Can be indented with difficulty by thumbnail. May be moldable or friable with finger pressure.	35 - 150 psi
Very Weak	R1	Crumbles under firm blows with point of a geology pick. Can be peeled by a pocketknife and scratched with fingernail.	150 - 725 psi
Weak	R2	Can be peeled by a pocketknife with difficulty. Cannot be scratched with fingernail. Shallow indentation made by firm blow of geology pick.	725 – 3,500 psi
Medium Strong	R3	Can be scratched by knife or pick. Specimen can be fractured with a single firm blow of hammer/geology pick.	3,500 – 7,250 psi
Strong	R4	Can be scratched with knife or pick only with difficulty. Several hard hammer blows required to fracture specimen.	7,250 – 14,500 psi
Very Strong	R5	Cannot be scratched by knife or sharp pick. Specimen requires many blows of hammer to fracture or chip. Hammer rebounds after impact.	14,500 – 36,250 psi
Extremely Strong	R6	Can only be chipped with a rock hammer	>36,250 psi

RQD and Rock Quality

Relation of RQD and Rock Quality	
RQD (Rock Quality Designation), %	Description of Rock Quality
0 - 25	Very Poor
25 - 50	Poor
50 - 75	Fair
75 - 90	Good
90 - 100	Excellent

Terminology for Planar Surface		
Bedding	Joints and Fractures	Spacing
Laminated	Very Close	< 2 in.
Thin	Close	2 in. – 12 in.
Medium	Moderately Close	12 in. – 36 in.
Thick	Wide	36 in. – 10 ft
Massive	Very Wide	> 10 ft

Table 3A

SUMMARY OF LABORATORY RESULTS

Sample Information						Atterberg Limits			
Location	Sample	Depth, ft	Elevation, ft	Moisture Content, %	Dry Unit Weight, pcf	Liquid Limit, %	Plasticity Index, %	Fines Content, %	Soil Type
B-1	S-1	2.5	--	29	--	--	--	81	Silty CLAY
	S-2	5.0	--	51	--	--	--	--	Silty CLAY
	S-3	7.5	--	58	--	--	--	--	Clayey SILT
	S-4	10.0	--	57	--	--	--	--	Clayey SILT
	S-5	12.5	--	56	--	--	--	--	Clayey SILT
	S-6	15.0	--	65	--	--	--	--	Clayey SILT
	S-7	20.0	--	74	--	--	--	60	Clayey SILT
B-2	S-1	2.5	--	61	--	69	31	--	Clayey SILT
B-3	S-1A	2.5	--	38	--	--	--	--	Silty CLAY
	S-1B	3.0	--	19	--	--	--	--	Sandy SILT
	S-2	5.0	--	15	--	--	--	25	BASALT
B-4	S-1	2.5	--	39	--	55	20	--	Clayey SILT
	S-2	5.0	--	44	--	--	--	--	Clayey SILT
B-5	S-2A	5.5	--	41	--	--	--	36	Silty SAND
	S-2B	6.0	--	31	--	--	--	68	Sandy SILT
	S-2C	6.3	--	28	101	49	15	--	Sandy SILT
	S-3	7.0	--	44	--	--	--	--	Sandy SILT
	S-4	10.0	--	54	--	--	--	--	Clayey SILT
	S-5	12.5	--	17	--	--	--	28	Silty GRAVEL
	S-6	15.0	--	29	--	--	--	--	Silty GRAVEL
B-6	S-1	2.5	--	30	--	--	--	--	Silty CLAY
	S-2	5.0	--	31	--	--	--	63	Silty CLAY
TP-1	X-1	1.0	--	17	--	--	--	--	Clayey SILT
	X-2	2.0	--	28	--	--	--	--	Clayey SILT
	X-3	4.8	--	40	--	--	--	--	BASALT
TP-2	X-1	0.8	--	28	--	--	--	--	FILL
	X-2	1.5	--	28	--	--	--	--	SILT
	X-3	2.0	--	27	--	--	--	--	SILT
TP-3	X-1	1.0	--	28	--	--	--	--	Silty CLAY
	X-2	2.0	--	27	--	--	--	--	Clayey SILT
TP-4	X-1	0.8	--	14	--	--	--	--	Clayey SILT
	X-2	1.5	--	22	--	--	--	--	Clayey SILT
	X-3	2.5	--	27	--	--	--	--	Clayey SILT
	X-4	3.8	--	28	--	--	--	--	Clayey SILT
	X-5	4.8	--	45	--	--	--	--	BASALT
TP-5	X-1	1.0	--	11	--	--	--	--	Clayey SILT
	X-2	2.5	--	22	--	--	--	--	Clayey SILT
	X-3	3.5	--	23	--	--	--	--	Clayey SILT
	X-4	5.0	--	29	--	--	--	--	Clayey SILT
	X-5	5.5	--	28	--	--	--	--	Clayey SILT

Table 3A

SUMMARY OF LABORATORY RESULTS

Sample Information						Atterberg Limits			
Location	Sample	Depth, ft	Elevation, ft	Moisture Content, %	Dry Unit Weight, pcf	Liquid Limit, %	Plasticity Index, %	Fines Content, %	Soil Type
TP-5	X-6	8.0	--	45	--	--	--	--	BASALT
TP-6	X-1	0.5	--	28	--	--	--	--	Clayey SILT
	X-2	1.3	--	21	--	--	--	--	Clayey SILT
	X-3	2.3	--	30	--	--	--	--	Clayey SILT
TP-7	X-1	0.5	--	33	--	--	--	--	Silty CLAY
	X-2	1.0	--	34	--	--	--	--	Silty CLAY
	X-3	2.0	--	25	--	--	--	--	Clayey SILT
	X-4	3.0	--	33	--	--	--	--	BASALT
TP-8	X-1	1.0	--	26	--	--	--	--	Clayey SILT
	X-2	3.0	--	30	--	--	--	--	Clayey SILT
	X-3	4.0	--	29	--	--	--	--	BASALT
	X-4	5.0	--	35	--	--	--	--	BASALT
TP-9	X-1	1.0	--	18	--	--	--	--	Silty CLAY
	X-2	2.0	--	21	--	--	--	--	Silty CLAY
	X-3	4.0	--	24	--	--	--	--	Clayey SILT
	X-4	4.5	--	34	--	--	--	--	BASALT

BORING AND TEST PIT LOG LEGEND

SOIL SYMBOLS

Symbol	Typical Description
	LANDSCAPE MATERIALS
	FILL
	GRAVEL; clean to some silt, clay, and sand
	Sandy GRAVEL; clean to some silt and clay
	Silty GRAVEL; up to some clay and sand
	Clayey GRAVEL; up to some silt and sand
	SAND; clean to some silt, clay, and gravel
	Gravelly SAND; clean to some silt and clay
	Silty SAND; up to some clay and gravel
	Clayey SAND; up to some silt and gravel
	SILT; up to some clay, sand, and gravel
	Gravelly SILT; up to some clay and sand
	Sandy SILT; up to some clay and gravel
	Clayey SILT; up to some sand and gravel
	CLAY; up to some silt, sand, and gravel
	Gravelly CLAY; up to some silt and sand
	Sandy CLAY; up to some silt and gravel
	Silty CLAY; up to some sand and gravel
	PEAT

BEDROCK SYMBOLS

Symbol	Typical Description
	BORING LAVA
	MUDSTONE
	SILTSTONE
	SANDSTONE

SURFACE MATERIAL SYMBOLS

Symbol	Typical Description
	Asphalt concrete PAVEMENT
	Portland cement concrete PAVEMENT
	Crushed rock BASE COURSE

SAMPLER SYMBOLS

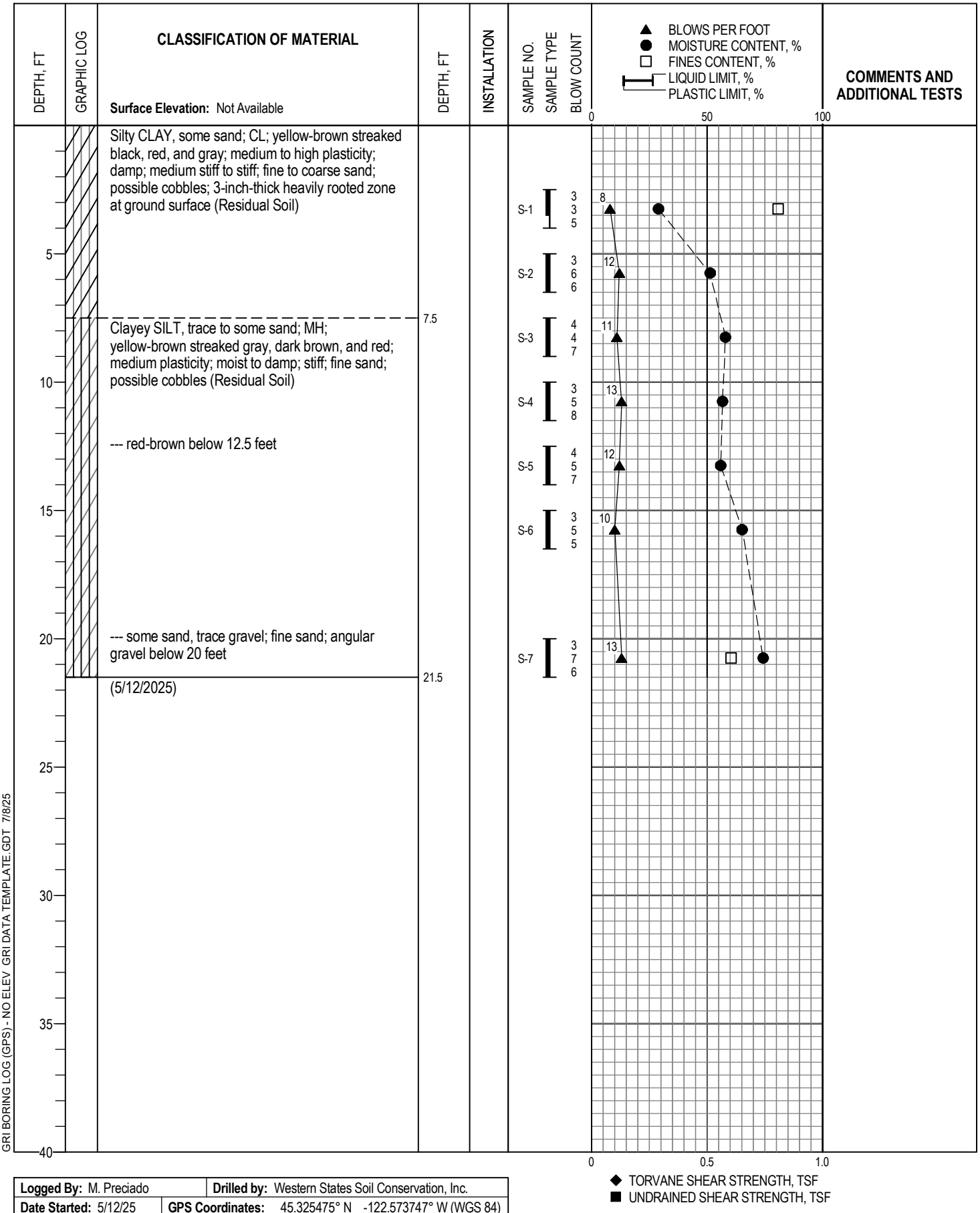
Symbol	Sampler Description
	2.0 in. O.D. split-spoon sampler and Standard Penetration Test with recovery (ASTM D1586)
	Shelby tube sampler with recovery (ASTM D1587)
	3.0 in. O.D. split-spoon sampler with recovery (ASTM D3550)
	Grab Sample
	Rock core sample interval
	Sonic core sample interval
	Push probe sample interval

INSTALLATION SYMBOLS

Symbol	Symbol Description
	Flush-mount monument set in concrete
	Concrete, well casing shown where applicable
	Bentonite seal, well casing shown if applicable
	Filter pack, machine-slotted well casing shown where applicable
	Grout, vibrating-wire transducer cable shown where applicable
	Vibrating-wire pressure transducer
	1-in.-diameter solid PVC
	1-in.-diameter hand-slotted PVC
	Grout, inclinometer casing shown where applicable

FIELD MEASUREMENTS

Symbol	Typical Description
	Groundwater level during drilling and date measured
	Groundwater level after drilling and date measured
	Rock/sonic core or push probe recovery (%)
	Rock quality designation (RQD, %)

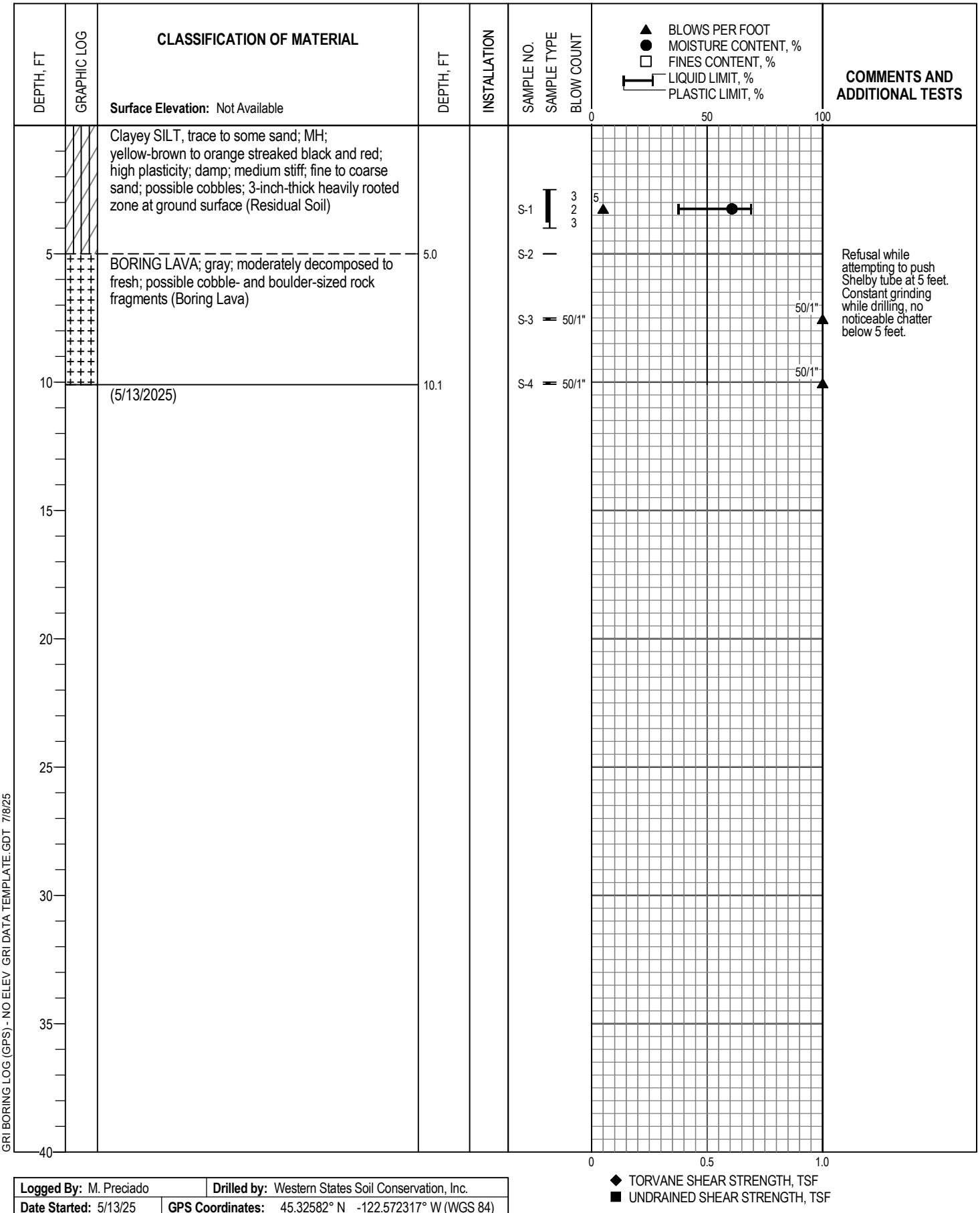


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/12/25	**GPS Coordinates:** 45.325475° N -122.573747° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-1

JUL. 2025 JOB NO. 7090-A FIG. 1A

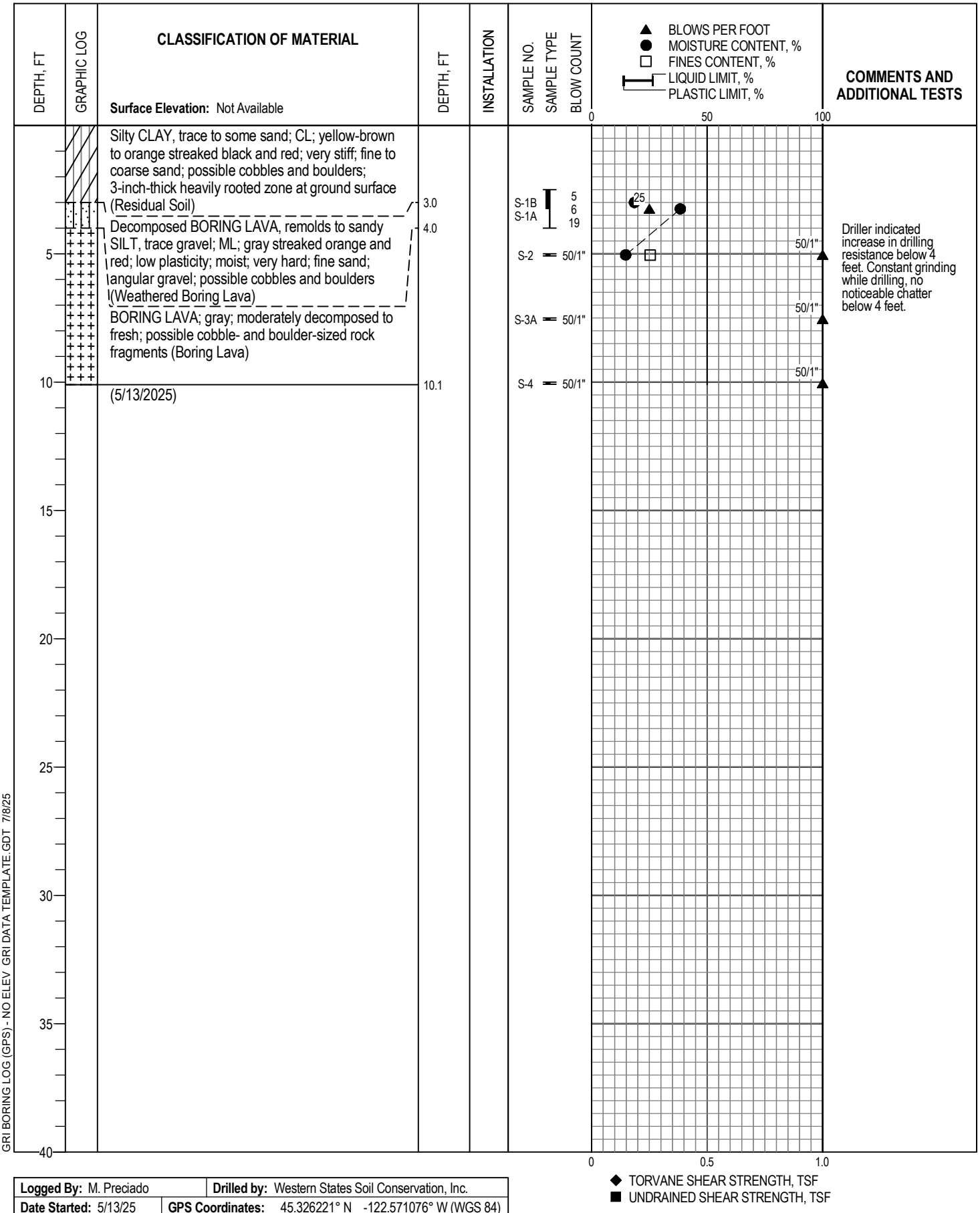


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.32582° N -122.572317° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-2

JUL. 2025 JOB NO. 7090-A FIG. 2A



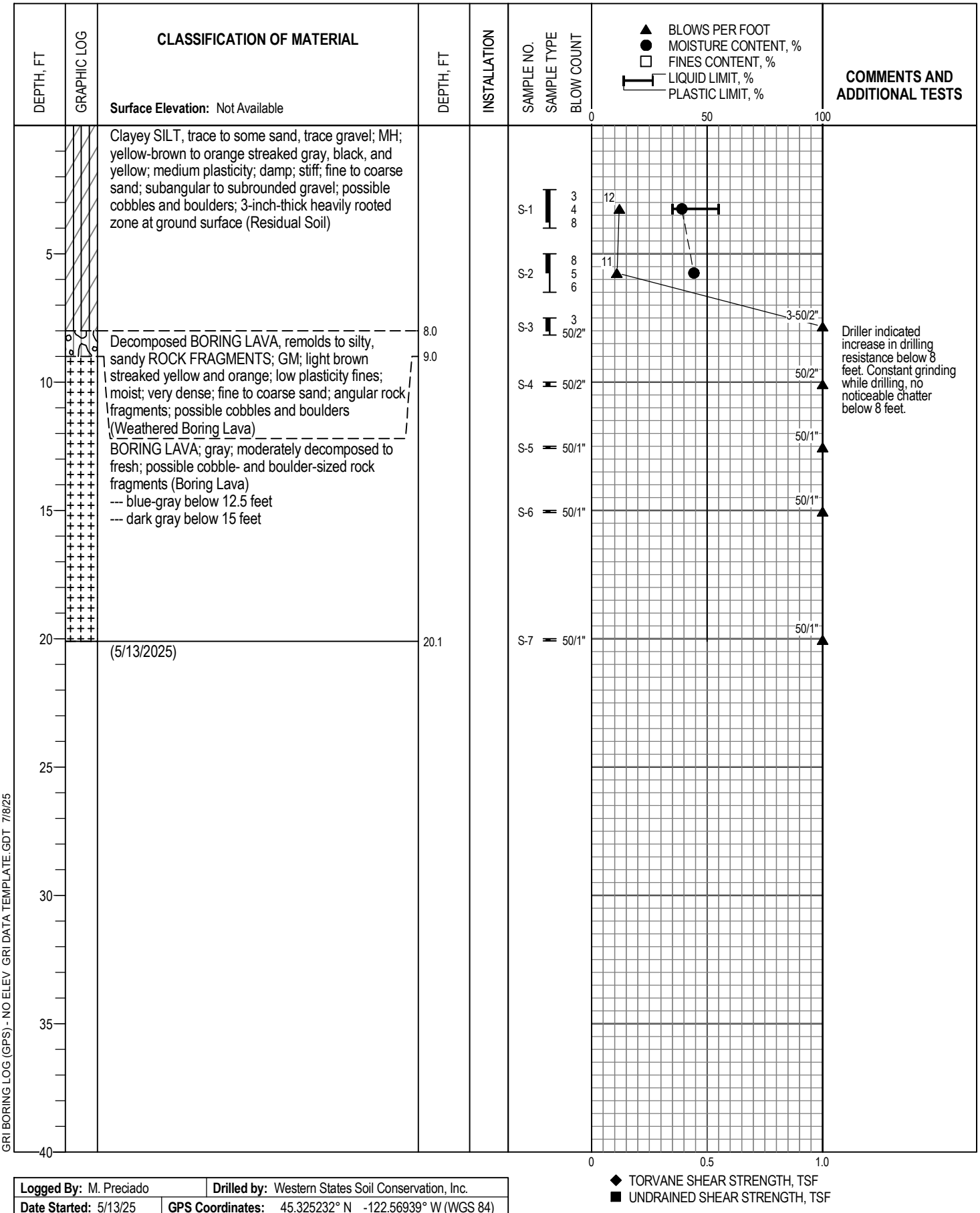
GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.326221° N -122.571076° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

GRI

BORING B-3

JUL. 2025 JOB NO. 7090-A FIG. 3A

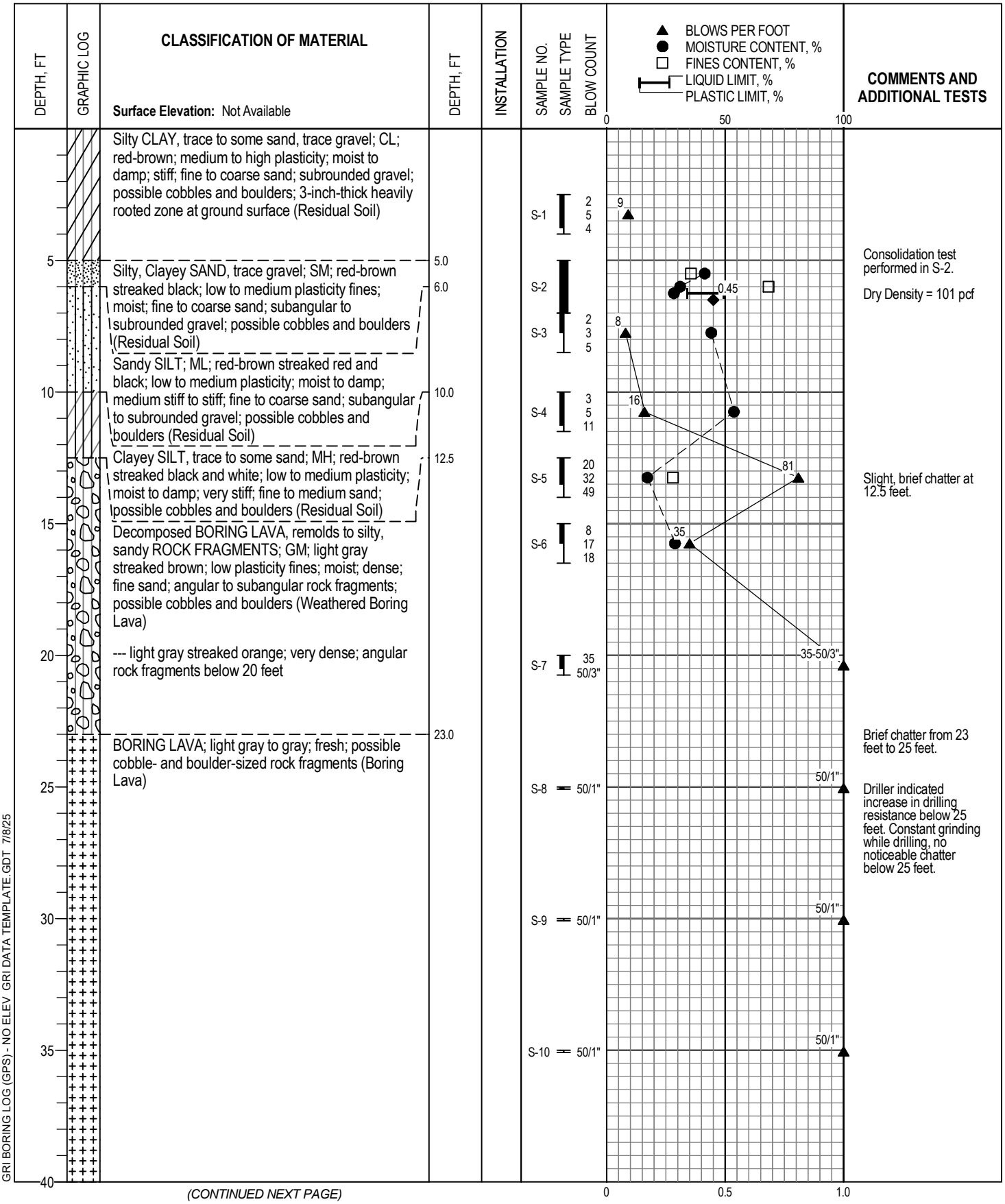


GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.325232° N -122.56939° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-4

JUL. 2025 JOB NO. 7090-A FIG. 4A



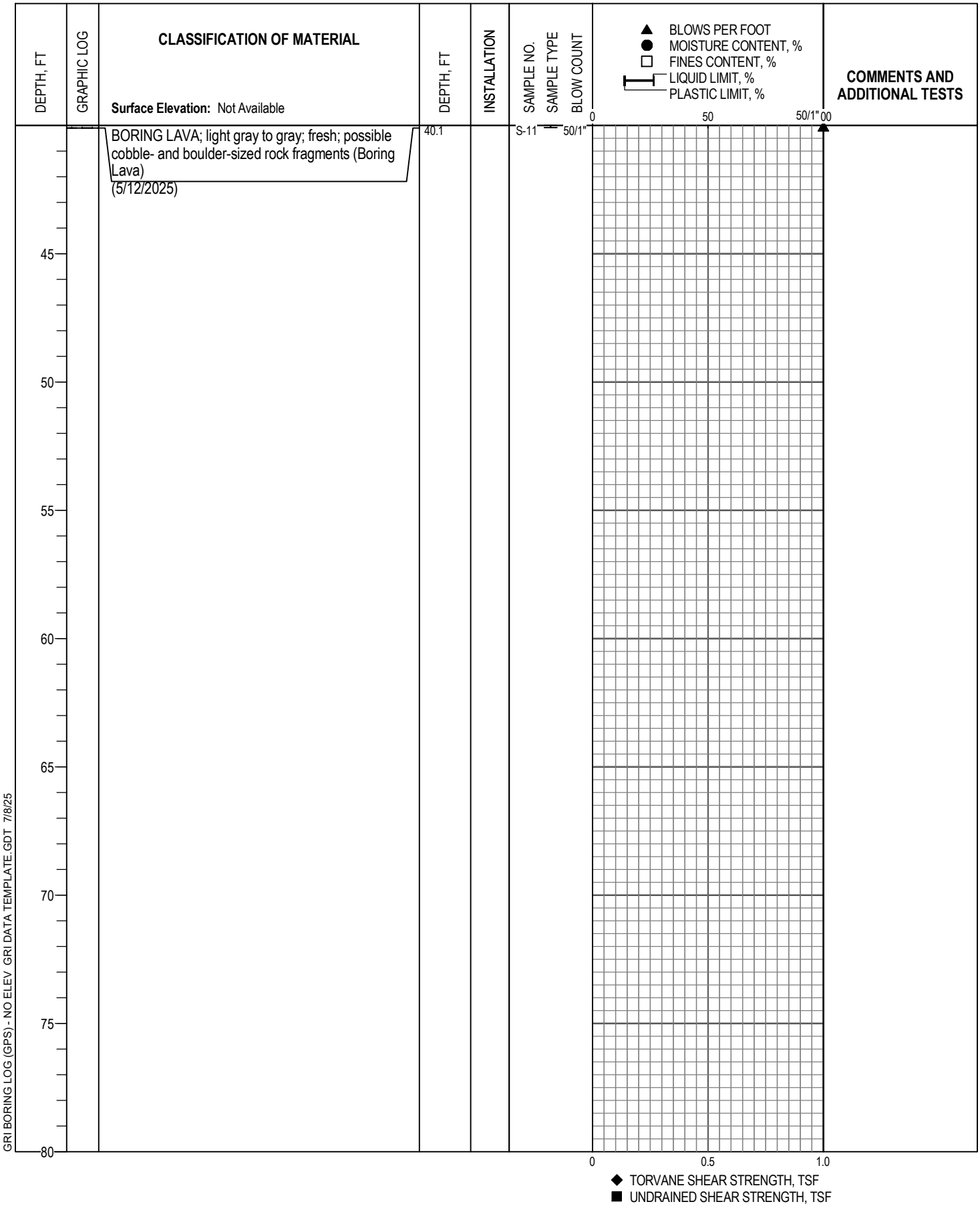
(CONTINUED NEXT PAGE)

GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/12/25	**GPS Coordinates:** 45.325163° N -122.572621° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-5

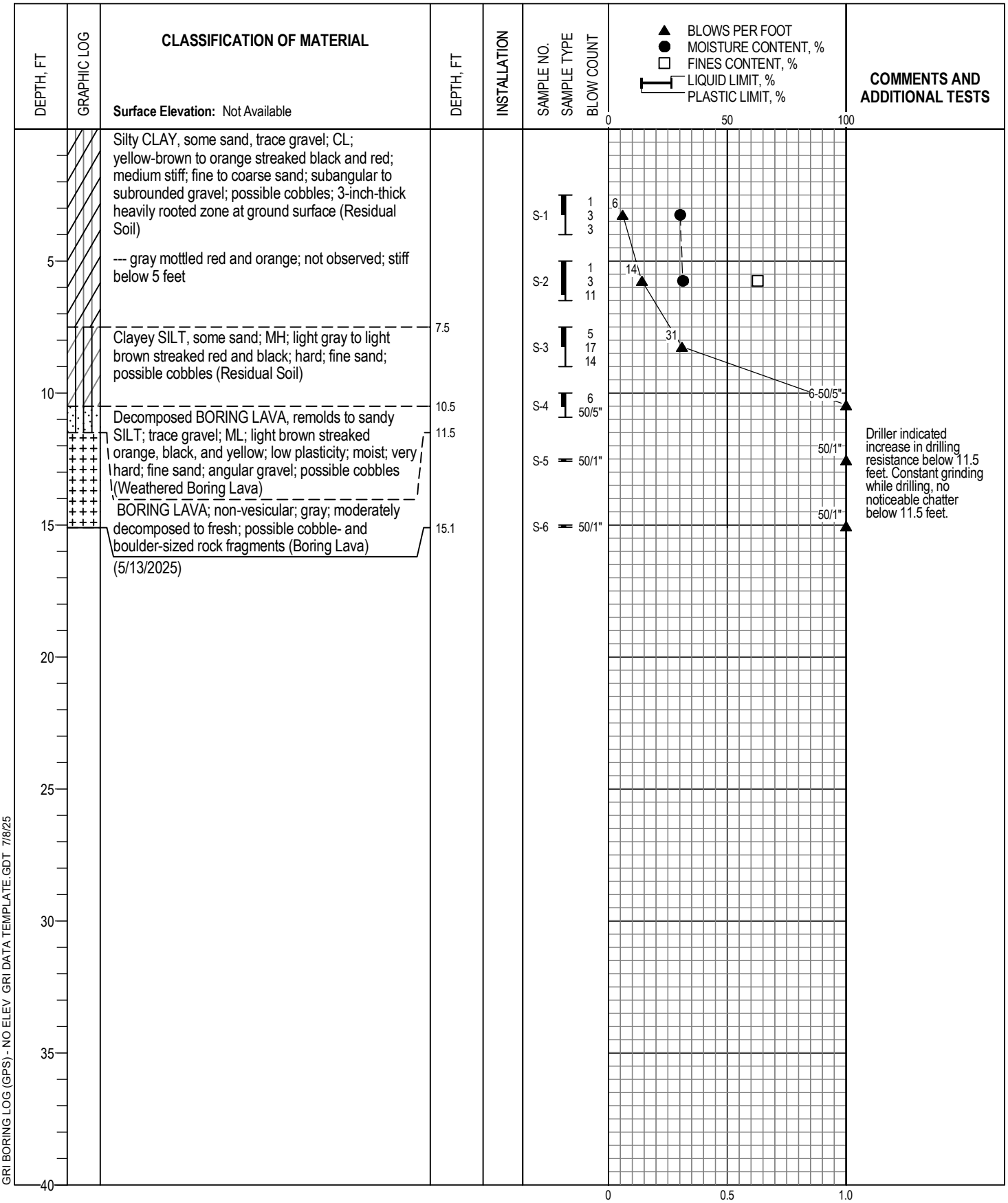
JUL. 2025 JOB NO. 7090-A FIG. 5A



GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

BORING B-5

JUL. 2025 JOB NO. 7090-A FIG. 5A



GRI BORING LOG (GPS) - NO ELEV GRI DATA TEMPLATE.GDT 7/8/25

Logged By: M. Preciado		**Drilled by:** Western States Soil Conservation, Inc.	
Date Started: 5/13/25	**GPS Coordinates:** 45.324791° N -122.571233° W (WGS 84)		
Drilling Method: Mud Rotary **Equipment:** CME 55 Track-Mounted Drill Rig **Hole Diameter:** 4 in.		**Hammer Type:** Auto Hammer **Weight:** 140 lb **Drop:** 30 in. **Energy Ratio:** 0.872	
Note: See Legend for Explanation of Symbols			

BORING B-6

JUL. 2025 JOB NO. 7090-A FIG. 6A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-1 **Surface Elevation:** Not Available

Clayey SILT, trace to some sand, trace gravel, contains organics; MH; brown to red-brown; medium to high plasticity; dry; fine to coarse sand; subangular to subrounded gravel; organics consist of fine scattered roots; 3-inch-thick heavily rooted zone at ground surface (Residual Soil) — 3.0

---moist below 1.5 feet

Decomposed BORING LAVA, remolds to clayey SILT, trace to some sand; MH; red-brown; medium to high plasticity; moist; fine sand (Weathered Boring Lava) — 4.8

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces; moderately weathered; extremely weak to very weak (R0-R1); excavates to subangular rock fragments in a clayey silt to silty clay matrix (Boring Lava) — 6.5

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 6.5 feet

X-1, X-2, X-3, X-4

10-inch maximum observed rock fragment diameter during excavation of Boring Lava.
No seepage observed at the bottom of excavation.

TORVANE SHEAR STRENGTH, TSF (0 – 0.5 – 1.0)

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.325805° N -122.573299° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-2 **Surface Elevation:** Not Available

Silty CLAY to Clayey SILT; trace to some sand; trace gravel; MH; red-brown and iron-stained; medium to high plasticity; dry; fine to coarse sand; angular to subangular gravel (Fill) — 1.5

SILT, trace sand; ML; gray; low to medium plasticity; moist; fine sand (Undifferentiated Sediment) — 2.5

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces; predominantly decomposed; very weak (R1); excavates to subangular rock fragments in a clayey silt to silty clay matrix (Boring Lava)

---moderately weathered to predominantly decomposed; very weak to weak (R1-R2) below 6.8 feet — 7.0

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 7 feet

X-1, X-2, X-3, X-4, X-5

12-inch maximum observed rock fragment diameter during excavation of Boring Lava.
Light seepage observed at the bottom of excavation.

TORVANE SHEAR STRENGTH, TSF (0 – 0.5 – 1.0)

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.326085° N -122.572067° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 7A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-3 **Surface Elevation:** Not Available

SAND, some silt to silty; SP-SM; light gray; nonplastic silt; dry; fine to medium; micaceous; 6-inch-thick heavily rooted zone at ground surface (Fill) — 1.0

Silty Clay to Clayey SILT; trace to some sand; CL; gray mottled brown; low to medium plasticity; moist; medium stiff; fine to coarse sand; micaceous (Undifferentiated Sediment) — 2.0

Clayey SILT, trace sand; MH; red-brown; medium to high plasticity; moist; very stiff; fine to coarse sand (Residual Soil) — 3.0

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces; predominantly to moderately decomposed; extremely weak to weak (R0-R2); excavates to subangular to rounded rock fragments (Boring Lava) — 3.3

(6/9/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 3.25 feet

5

10

X-1 X-2 X-3

Pea gravel drainaige material observed at 1.0 feet.

10-inch maximum observed rock fragment diameter during excavation of Boring Lava.
No seepage observed at the bottom of excavation.

0 – 0.5 – 1.0 ◆ TORVANE SHEAR STRENGTH, TSF

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/9/25 | **GPS Coordinates:** 45.326149° N -122.5715° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-4 **Surface Elevation:** Not Available

Clayey SILT, trace sand, contains organics; MH; red-brown and iron-stained; medium to high plasticity; dry; very stiff; fine sand; organics consist of fine scattered roots; 6-inch-thick heavily rooted zone at ground surface (Residual Soil)
---moist below 1.5 feet
---red-brown mottled gray below 2.5 feet — 4.8

BORING LAVA; non-vesicular; gray with iron- and manganese-stained rock surfaces; predominantly decomposed to moderately weathered; very weak to weak (R1-R2); excavates to subangular to rounded rock fragments (Boring Lava)
---moderately weathered below 5 feet — 5.3

(6/9/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 5.3 feet

5

10

X-1 X-2 X-3 X-4 X-5 X-6

6-inch maximum observed rock fragment diameter during excavation of Boring Lava.
Light seepage observed at the bottom of excavation.

0 – 0.5 – 1.0 ◆ TORVANE SHEAR STRENGTH, TSF

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/9/25 | **GPS Coordinates:** 45.326543° N -122.570546° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 8A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-5 **Surface Elevation:** Not Available

Clayey SILT, trace sand, contains organics; MH; brown; medium plasticity; dry; fine to coarse sand; organics consist of fine scattered roots; 6-inch-thick heavily rooted zone at ground surface (Residual Soil)
---moist to damp below 2 feet
---red-brown and iron-stained; medium stiff below 2.5 feet
---medium stiff to stiff below 3.5 feet

5.0

Decomposed BORING LAVA, remolds to clayey SILT, contains rock fragments; MH; gray mottled orange and brown; medium to high plasticity; damp; rock fragments consist of up to 3-inch-diameter Boring Lava (Weathered Boring Lava)

8.0
8.3

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces and fractures; predominantly decomposed to moderately weathered; weak to medium strong (R2-R3); excavates to subangular to subrounded rock fragments (Boring Lava)

(6/9/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 8.3 feet

5
10
15

X-1
X-2
X-3
X-4
X-5
X-6

0 – 0.5 – 1.0 TORVANE SHEAR STRENGTH, TSF

4-inch maximum observed rock fragment diameter during excavation of Boring Lava.
Moderate seepage observed at the bottom of excavation.

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator
Date Started: 6/9/25 | **GPS Coordinates:** 45.326109° N -122.569893° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-6 **Surface Elevation:** Not Available

Clayey SILT, trace sand and gravel; MH; brown; medium to high plasticity; dry; fine to coarse sand; rounded gravel; 6-inch-thick heavily rooted zone at ground surface (Residual Soil)
---2.5-foot-diameter boulder observed at 1 foot
---red-brown below 1.5 feet

3.0
3.3

BORING LAVA; non-vesicular; gray with orange- and black-stained rock surfaces and fractures; moderately weathered; weak to medium strong (R2-R3); excavates to angular to subrounded rock fragments (Boring Lava)

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 3.3 feet

5
10

X-1
X-2
X-3
X-4

0 – 0.5 – 1.0 TORVANE SHEAR STRENGTH, TSF

8-inch maximum observed rock fragment diameter during excavation of Boring Lava.
No seepage observed at the bottom of excavation.

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator
Date Started: 6/10/25 | **GPS Coordinates:** 45.325307° N -122.573852° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 9A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS

TP-7 **Surface Elevation:** Not Available

Silty CLAY to Clayey SILT, trace to some sand; MH/CL; gray mottled orange; medium plasticity; moist; medium stiff; fine to medium sand; micaceous; 3-inch-thick heavily rooted zone at ground surface (Undifferentiated Sediment) — 1.3

---stiff below 1 foot — 2.5

Clayey SILT, trace sand; MH; yellow-brown; medium plasticity; moist; medium stiff; fine sand (Residual Soil)

BORING LAVA; non-vesicular; brown and orange; decomposed to predominantly decomposed; yellow-brown mottled gray with iron-stained rock surfaces; extremely weak to very weak (R0-R1); excavates to silty clayey subangular rock fragments (Boring Lava)

---brown and orange below 4 feet

---gray with orange- and black-stained rock surfaces; moderately to slightly weathered; weak to medium strong (R2-R3) below 7.25 feet — 7.5

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 7.5 feet

X-1, X-2, X-3, X-4, X-5, X-6

6-inch maximum observed rock fragment diameter during excavation of Boring Lava.

Moderate seepage observed at the bottom of excavation.

TORVANE SHEAR STRENGTH, TSF (0 – 0.5 – 1.0)

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.325047° N -122.571987° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

TP-8 **Surface Elevation:** Not Available

Silty SAND, contains organics; SM; light gray; dry; fine to medium sand; organics consist of scattered fine roots; micaceous; 4-inch-thick heavily rooted zone at ground surface (Fill) — 0.8

Clayey SILT, trace sand, contains organics; MH; brown mottled red and dark gray; medium to high plasticity; moist; stiff; fine to coarse sand (Residual Soil) — 3.5

---iron-stained; medium stiff; organics not observed below 2 feet

---some gravel below 3 feet

BORING LAVA; non-vesicular; light brown with iron- and manganese-stained rock surfaces; decomposed to predominantly decomposed; extremely weak to very weak (R0-R1); excavates to subangular to rounded rock fragments (Boring Lava) — 7.0

(6/10/2025)

Practical refusal encountered on weak to medium strong Boring Lava at a depth of 7 feet

X-1, X-2, X-3, X-4, X-5

6-inch maximum observed rock fragment diameter during excavation of Boring Lava.

Moderate seepage observed at the bottom of excavation.

TORVANE SHEAR STRENGTH, TSF (0 – 0.5 – 1.0)

Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/10/25 | **GPS Coordinates:** 45.325108° N -122.57147° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GRI BORINGS

JUL. 2025 JOB NO. 7090-A FIG. 10A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT / DEPTH, FT	SAMPLE NO. / SAMPLE TYPE	MOISTURE CONTENT, % / FINES CONTENT, % / LIQUID LIMIT, % / PLASTIC LIMIT, % (0 – 50 – 100)	COMMENTS AND ADDITIONAL TESTS
TP-9		**Surface Elevation:** Not Available			0 – 50 – 100	
		Silty CLAY to Clayey SILT, trace sand, contains organics; CL; red-brown to red; medium to high plasticity; moist to damp; very stiff; fine sand; organics consist of fine scattered roots; 5-inch-thick heavily rooted zone at ground surface (Residual Soil)		X-1		
				X-2		
		Decomposed BORING LAVA; remolds to clayey SILT, trace to some sand; MH; red-brown and iron-stained, streaked black; medium to high plasticity; moist; fine to coarse sand (Weathered Boring Lava)	3.0	X-3		
			4.5	X-4		
5		BORING LAVA; non-vesicular; brown with orange- and black-stained rock surfaces; predominantly decomposed; extremely weak to very weak; (R0-R1); excavates to subangular to rounded rock fragments (Boring Lava) ---predominantly decomposed to moderately weathered; very weak to weak (R1-R2)	5.3	X-5		6-inch maximum observed rock fragment diameter during excavation of Boring Lava. No seepage observed at the bottom of excavation.
		(6/9/2025)				
10		Practical refusal encountered on weak to medium strong Boring Lava at a depth of 5.3 feet				
					0 – 0.5 – 1.0 TORVANE SHEAR STRENGTH, TSF	

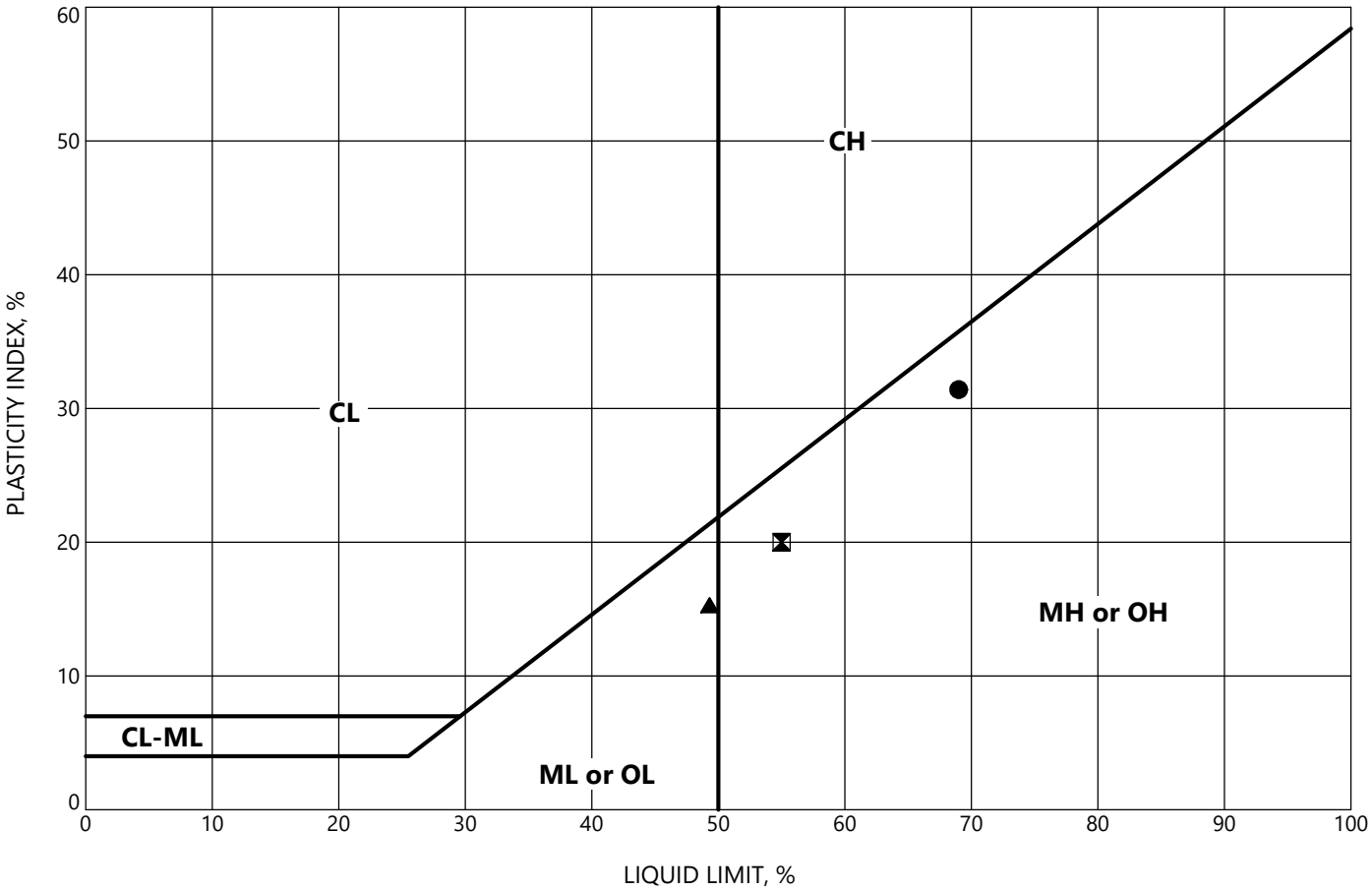
Logged By: M. Preciado | **Excavated by:** Western States Soil Conservation, Inc. | **Equipment:** Track-Mounted Excavator

Date Started: 6/9/25 | **GPS Coordinates:** 45.324671° N -122.569779° W (WGS 84) | **Note:** See Legend for Explanation of Symbols

GRI HA LOG (GPS) - 2 PP GRI DATA TEMPLATE.GDT 7/8/25

GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE-GRAINED SOIL GROUPS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
ML	INORGANIC CLAYEY SILTS TO VERY FINE SANDS OF SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY

GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE-GRAINED SOIL GROUPS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
MH	INORGANIC SILTS AND CLAYEY SILT
CH	INORGANIC CLAYS OF HIGH PLASTICITY



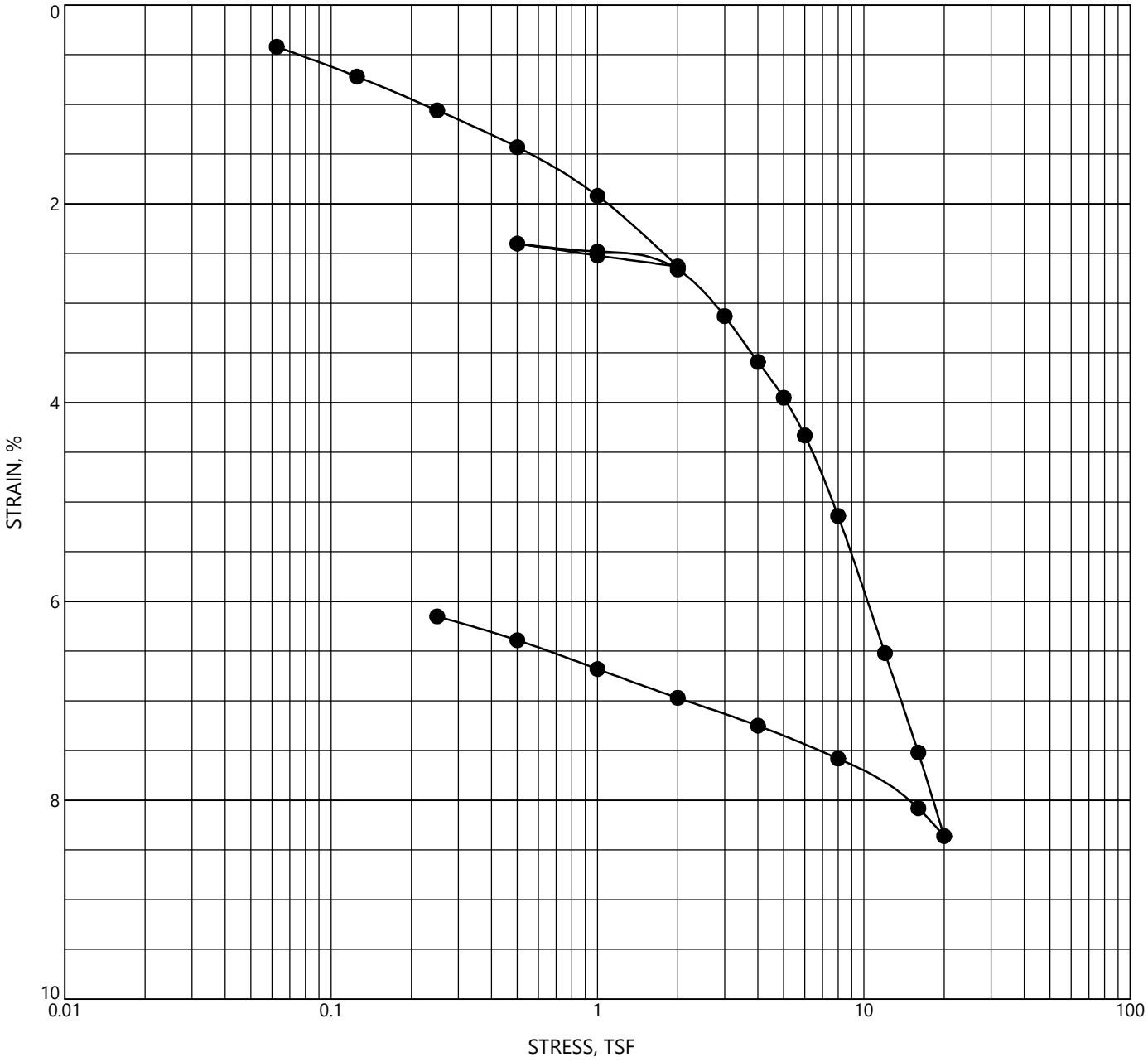
	Location	Sample	Depth, ft	Classification	LL	PL	PI	MC, %
●	B-2	S-1	2.5	Clayey SILT, trace to some sand; MH	69	38	31	61
⊠	B-4	S-1	2.5	Clayey SILT, trace to some sand, trace gravel; MH	55	35	20	39
▲	B-5	S-2C	6.3	Sandy SILT; ML	49	34	15	28

ATTERBERG-PLASTICITY 3 PER PAGE GRI DATA TEMPLATE.GDT 7/3/25

GRI

PLASTICITY CHART

JUL. 2025 JOB NO. 7090-A FIG. 12A



	Location	Sample	Depth, ft	Classification	Initial γ_d, pcf	Initial MC, %
●	B-5	S-2B	6.0	Sandy SILT; ML	99	31

CONSOL STRAIN GRI-0 TO 25-1 PER PAGE GRI DATA TEMPLATE.GDT 7/3/25

GRI

CONSOLIDATION TEST

JUL. 2025 JOB NO. 7090-A FIG. 13A

APPENDIX B

Site-Specific Seismic Hazard Evaluation

APPENDIX B

SITE-SPECIFIC SEISMIC HAZARD EVALUATION

B.1 GENERAL

GRI completed a site-specific seismic hazard evaluation for the proposed Athletic Master Plan project at the Clackamas Community College Oregon City Campus in Oregon City, Oregon. The proposed improvements for the project will include reconstruction of the softball and baseball stadiums, softball/lacrosse field, and the track, as well as supporting structures for the athletic facilities. The primary purpose of this work was to review the potential seismic hazards associated with regional and local seismicity. We understand the project will be designed in accordance with the current 2022 *Oregon Structural Specialty Code* (OSSC) and the American Society of Civil Engineers (ASCE) 7-16 Document, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE 7-16). ASCE 7-16 requires evaluation of seismic hazards based on the Risk-Targeted Maximum Considered Earthquake (MCE_R), which is defined in Chapter 21 of ASCE 7-16 as the response spectrum expected to achieve a 1% probability of building collapse within a 50-year period. We understand that the proposed improvements are considered a risk category of III in accordance with Section 1604.5 of the 2022 OSSC. As large public assembly structures, the proposed improvements meet the criteria for special occupancy and therefore require a site-specific seismic hazard evaluation under the 2022 OSSC.

Our site-specific seismic hazard evaluation was based on the potential for regional and local seismic activity, as described in the existing scientific literature, and the subsurface conditions at the site, as disclosed by the subsurface explorations completed for this project and review of available subsurface information for the project area. Specifically, our work included the following tasks:

1. A review of available literature, including published papers, maps, open-file reports, seismic histories and catalogs, and other sources of information regarding the tectonic setting, regional and local geology, and historical seismic activity that might have a significant effect on the site.

2. Compilation, examination, and evaluation of available subsurface information at the site and surrounding areas, including classification and laboratory analyses of soil samples and shear-wave velocity (V_S) measurements. This information was used to prepare a generalized subsurface profile for the site.

3. Identification of potential seismic sources appropriate for the site and characterization of those sources in terms of magnitude, distance, and acceleration response spectra.

4. Engineering analyses based on the generalized subsurface profile and generalized design earthquakes resulting in conclusions and recommendations concerning the following:

    a. Specific seismic events and characteristic earthquakes that might have a significant effect on the project site

    b. The potential for ground motion amplification at the site

    c. Site-specific acceleration-response spectra for design of structures at the site

This appendix describes the work accomplished and summarizes our conclusions and recommendations regarding seismic design for the project.

B.2 TECTONIC AND GEOLOGIC SETTING

On a regional scale, the site is in the northern limits of the Willamette-Puget Sound lowland trough of the Cascadia convergent tectonic system. The lowland areas consist of broad north-south trending basins in the underlying geologic structure between the Coast Range to the west and the Cascade Mountains to the east. The lowland trough is characterized by alluvial plains with areas of buttes and terraces. The site is approximately 100 kilometers (km) inland from the down-dip edge of the seismogenic extent of the Cascadia Subduction Zone (CSZ), an active convergent-plate boundary along which remnants of the Farallon Plate (the Gorda, Juan de Fuca, and Explorer plates) are being subducted beneath the western edge of the North American continent. The subduction zone is a broad, eastward-dipping zone of contact between the upper portion of the subducting slabs of the Gorda, Juan de Fuca, and Explorer plates and the overriding North American Plate, as shown on the Tectonic Setting Summary, Figure 1B.

On a local scale, the site is in the southeast portion of the Portland Basin, a well-defined structural basin bounded by high-angle, northwest-trending, right-lateral, strike-slip faults. Where applicable, the distribution of these faults relative to the site is shown on the Regional Geologic Map, Figure 2B. Additional faults identified by the U.S. Geological Survey (USGS) are shown on the Local Fault Map, Figure 3B. Information regarding the continuity and potential activity of these faults is lacking due largely to the scale at which geologic mapping in the area has been conducted and the presence of thick, relatively young, basin-filling sediments that obscure underlying structural features. Active faults may be present within the basin, but clear stratigraphic and/or geophysical evidence

regarding their location and extent is not presently available. Additional discussion regarding crustal faults is provided in the Local Crustal Event section below.

B.3 SEISMIC SETTING

B.3.1 General

Because of the proximity of the site to the CSZ and its location within the Portland Basin, three seismic sources contribute to the potential for damaging earthquake motions at the site. Two of these sources are associated with tectonic activity related to the CSZ: subduction-zone events related to sudden slip between the upper surface of the Juan de Fuca plate and the lower surface of the North American plate and subcrustal (intraslab) events related to deformation and volume changes within the deeper portion of the subducted Juan de Fuca plate). The third source is associated with movement on relatively shallow faults within and adjacent to the Portland Basin. Each source is considered capable of producing damaging earthquakes in the Pacific Northwest; however, there are no historical records of significant subcrustal (intraslab) earthquakes (M_W >6.0) in northwest Oregon and southwest Washington. Wong (2005) hypothesizes that, due to subduction-zone geometry, geophysical conditions, and local geology, southwest Washington and northwest Oregon may not be subject to intraslab earthquakes.

Based on our review of historical records and evaluation of U.S. Geological Survey (USGS) national seismic hazard maps, the two primary types of seismic sources at the site are the CSZ interface and local crustal faults.

B.3.2 Cascadia Subduction Zone

Coastal paleoseismic evidence, offshore geological studies, and historical tsunami accounts indicate the CSZ is capable of producing large-magnitude, megathrust earthquakes (M_W 8 to M_W 9) at the interface between the Juan de Fuca and North American plates (Atwater et al., 1995; Goldfinger et al., 2012). Geological studies indicate these megathrust earthquakes have occurred repeatedly in the past 10,000 years (Walton et al., 2021). A combination of paleoseismic and geologic studies (Kelsey et al., 2005) and geodetic studies (Savage et al., 2000) indicate a rate of strain accumulation consistent with the assumption that the CSZ is locked beneath offshore northern California, Oregon, Washington, and southern British Columbia (Fluck et al., 1997; Wang et al., 2001). Numerous geological and geophysical studies suggest the CSZ may be segmented (Hughes and Carr, 1980; Weaver and Michaelson, 1985; Guffanti and Weaver, 1988; Goldfinger, 1994; Kelsey and Bockheim, 1994; Mitchell et al., 1994; Personius, 1995; Nelson and Personius, 1996; Witter, 1999), but the most recent studies suggest that, for the last great earthquake in 1700, most of the subduction zone ruptured in a single M_W 9.0 earthquake (Satake et al., 1996; Atwater and Hemphill-Haley, 1997; Clague et al., 2000). There is consensus within the scientific community that the most recent great earthquake

occurred along the CSZ in January 1700 (Atwater et al., 2015) based on paleoseismic evidence and historical records of an orphan tsunami in Japan. Tsunami modeling completed for the 1700 orphan tsunami indicated that the 1700 earthquake ruptured the whole length of the CSZ and had a moment magnitude of about M_W 9.0 (Satake et al., 2003).

The average recurrence interval for a CSZ megathrust event is estimated to be around 350 years to 600 years based on prehistoric geologic evidence (Atwater & Hemphill-Haley, 1997; Kelsey et al., 2002; and Witter et al., 2003). Tsunami inundation in buried marshes along the Washington and Oregon coasts and stratigraphic evidence from the Cascadia margin support these recurrence intervals (Kelsey et al., 2005; Goldfinger et al., 2003). Goldfinger et al. (2003, 2012, 2017) evaluated turbidite evidence at the heads of Cascadia submarine canyons, the results of which indicated the occurrence of more than 40 great earthquakes over the past 10,000 years with partial or entire length rupture of the CSZ. About 20 of the earthquake events are associated with partial ruptures concentrated in the southern part of the margin and have estimated recurrence intervals of about 220 years to 320 years. About 19 of the events are associated with a rupture of the full CSZ, characterized by an earthquake with a moment magnitude (M_W) of about 8.5 to 9.1 or greater. Considering a combination of recent paleoseismic, geodetic, and geologic research, the average recurrence interval for a full-rupture CSZ earthquake is estimated to be about 500 years to 540 years (Walton et al., 2021).

The 2014 USGS Probabilistic Seismic Hazard Analysis (PSHA) assumes four potential locations (three alternative down-dip edge options and one up-dip edge option) for the eastern edge of the earthquake rupture zone for the CSZ, as shown on the Location of Surface Traces for Up-Dip Edge & Three Down-Dip Edge Options Used in 2014 NSHMs, Figure 4B. As discussed in Petersen et al. (2014), the 2014 USGS mapping effort represents the 2014 CSZ source model with full-CSZ ruptures with moment magnitudes from M_W 8.6 to M_W 9.3, supplemented by partial ruptures with smaller magnitudes (M_W 8.0 to M_W 9.1). There is also a possibility of several M_W 8 earthquakes that rupture the entire CSZ over a period of a few decades or less; however, this is not implemented in the current National Seismic Hazard Models (NSHMs). The partial ruptures were accounted for using a segmented model and an unsegmented model. The magnitude-frequency distribution showing the contributions to the earthquake rates from each model and how the estimated rates vary along the fault is presented on the Variation of Earthquake Rates Cascadia Subduction Zone, Figure 5B.

B.3.3 Local Crustal Event

Sudden crustal movements along relatively shallow, local faults in the project area, although rare, have been responsible for local crustal earthquakes. The precise relationship

between specific earthquakes and individual faults is not well understood because few of the faults in the area are expressed at the ground surface and there is a limited history of crustal events in the region. The history of local seismic activity is commonly used as a basis for determining the size and frequency to be expected of local crustal events. Although the historical record of local earthquakes is relatively short (the earliest reported seismic event in the area occurred in 1920), it can serve as a guide for estimating the potential for seismic activity in the area.

The locations of and general information regarding quaternary faults (i.e., those that have experienced movement during the last 2.6 million years and are considered potentially active) are available through the USGS Earthquake Hazards Program. The USGS Quaternary Fault and Fold Database shows the Bolton Fault is considered the closest mapped crustal fault identified as a hazard to the site. The USGS considers the Bolton Fault to have a characteristic earthquake magnitude of Mw 6.2 and to be located approximately 4.5 km from the site. The Portland Hills Fault, with a characteristic earthquake magnitude of M_W 7.0 and located about 7.2 km from the site, is also a significant contributor to the site's seismicity.

B.4 SITE-SPECIFIC SPECTRAL ACCELERATION VALUES

B.4.1 General

As previously stated, the seismic evaluation for the project is being completed in accordance with ASCE 7-16 and the 2022 OSSC. The proposed improvements are considered a risk category of III in accordance with Section 1604.5 of the 2022 OSSC. A ground motion hazard analysis was completed in accordance with Section 21.2 of ASCE 7-16 to evaluate the seismic response of the soils at the site and develop a recommended MCE_R response spectrum for the project. The recommended MCE_R response spectra at the ground surface are generally developed by comparing site-specific and code-based spectral values at the ground surface. The site-specific MCE_R spectral values are defined as the lesser of probabilistic and deterministic ground motions as described in Section 21.2 of ASCE 7-16. The ground motion associated with the probabilistic MCE_R represents a targeted risk level of 1% in the 50-year probability of collapse in the direction of maximum horizontal response with 5% damping. The deterministic MCE_R is calculated as an 84th-percentile, 5%-damped spectral response in the direction of maximum horizontal response obtained from a characteristic earthquake on a known active fault within the region. The code-based spectral values are developed using the procedures outlined in Chapter 11 of ASCE 7-16. The code-based response spectrum is developed using the mapped bedrock spectral acceleration parameters S_S and S_1 at the site and corresponding site amplification coefficients F_a and F_v to account for underlying soil conditions in accordance with Section 21.3 of ASCE 7-16.

B.4.2 Site-Specific MCE_R Response Spectrum

As previously mentioned, the site-specific MCE_R spectral response acceleration is defined by lesser spectral response accelerations from probabilistic ground motions and deterministic ground motions. The site-specific probabilistic seismic-hazard analysis (PSHA) was conducted using the USGS NSHM Hazard Tool. In accordance with the guidelines of ASCE 7-16, the site-specific PSHA represents the probabilistic ground motions as spectral response acceleration values with a 2,475-year recurrence interval (i.e., a 2% probability of exceedance in 50 years) in the geomean direction. The probabilistic MCE_R spectral values are then derived by applying directivity factors and risk coefficients to the site-specific PSHA values. The directivity factors adjust the spectral values from geometric mean to the direction of maximum horizontal response, and the risk coefficients incorporate the uniform collapse risk objective of 1% over a 50-year period.

Based on the results of the explorations completed for this project and our experience in the project area, the site class was assumed to be generally representative of Site Class D conditions. The resulting site-specific probabilistic spectral values are summarized in Table 1B.

Table 1B: SITE-SPECIFIC PROBABILISTIC MCE_R VALUES

Period, second	Probabilistic MCE_R, g
PGA	0.48
0.05	0.53
0.1	0.81
0.2	1.09
0.3	1.17
0.4	1.16
0.5	1.08
0.75	0.87
1	0.70
1.5	0.50
2	0.39
3	0.26
4	0.19
5	0.15

Abbreviations: MCE_R = Risk-Targeted Maximum Considered Earthquake; PGA = peak ground acceleration

The deterministic ground motions at the site can also be developed concurrently with the site-specific PSHA in accordance with Section 21.2.2 of ASCE 7-16. However, an exception is included in Section 21.2.2 of ASCE 7-16, allowing the deterministic analysis to be disregarded when the largest spectral response acceleration from the probabilistic ground motion is less than 1.2 Fa (i.e., Fa of 1.18 for Site Class D conditions). Therefore, the deterministic analysis was not completed for the site since the largest spectral response acceleration from the probabilistic ground motion, Sa = 1.17 g, is less than 1.2 Fa=1.42 g. Therefore, the probabilistic MCE_R spectral acceleration at any period defines the site-specific MCE_R spectrum at the site. The design response spectrum is typically defined as two-thirds of the MCE_R response spectrum.

B.4.3 Recommended Design Acceleration Parameters

The recommended response spectrum for structural design can be developed by comparing the site-specific MCE_R developed for the site with the code-based spectra based on site class and generic site-amplification factors. As previously discussed, the site is designated Site Class D based on the subsurface explorations completed at the site.

The code-based Site Class D spectrum was derived based on the 0.2- and 1.0-second spectral-acceleration values (S_S and S_1) at the bedrock and corresponding site coefficients, Fa and Fv, in accordance with Chapter 21 of ASCE 7-16 with proposed amendment in Subsection 1613.4.13 of 2022 OSSC. The modification typically applies to the value of Fv, suggested to be determined using straight-line interpolation between the value determined from ASCE 7-16 Section 21.3 (i.e., associated with 0% CSZ interface contribution) and the value from 2022 OSSC Table 1613.3.3(2) (i.e., associated with 100% CSZ interface contribution) based on the relative hazard contribution from the CSZ interface sources at a period of 1.0 second. The relative CSZ interface hazard contribution was obtained using the USGS Hazard Tool and the 2018 NSHM data for the 2,475-year hazard at a spectral period of 1.0 seconds. The USGS hazard tool shows about 77% contribution from the CSZ interface source at the site. The 0.2- and 1.0-second spectral values (S_S and S_1) for the site at bedrock are 0.80 and 0.36, respectively. The short-period site coefficient, Fa, which equals 1.18, was determined using Table 11.4-1 of ASCE 7-16. The long-period site coefficient, Fv, which equals 2.12, was determined using straight-line interpolation between the ASCE 7-16-recommended value of 2.5 and the 2022 OSSC value of 1.95 based on the relative CSZ interface hazard contribution. These site coefficients were applied in developing the Site Class D spectrum. ASCE 7-16 requires the site-specific spectral accelerations at the ground surface not be less than 80% of the spectral values determined for Site Class D.

Comparisons of the site-specific and the code-based MCE_R response spectra are shown on the MCE_R Response Spectra Comparison, Figure 6B. The code-based Site Class D

spectrum was derived based on the 0.2- and 1.0-second spectral-acceleration values (S_S and S_1) at the bedrock and corresponding site coefficients, F_a and F_v, in accordance with Chapter 21 of ASCE 7-16. The recommended MCE_R spectrum can be obtained by enveloping the site-specific response spectra obtained from the ground-motion hazard analysis and the code-based 80% of Site Class D spectral values (i.e., code minimum) in accordance with Section 21.3 of ASCE 7-16 and amendment provided in Section 1613.4.14 of the 2022 OSSC. The figure indicates that the site-specific MCE_R spectrum was generally observed to be higher than the code-based 80% Site Class D spectral values. Therefore, the site-specific MCE_R spectrum represents the recommended MCE_R spectrum. Our recommended MCE_R and design response spectral values for design of the project are summarized in Table 2B. The table presents the traditional two-period spectral values that can be used in seismic design of the project with the equivalent lateral-force procedure. The design response spectrum is developed by taking two-thirds of the MCE_R response spectral values. The spectral values are derived in accordance with the guidelines provided in Section 21.4 of ASCE 7 16. In accordance with Section 21.4, the 0.2-second MCE_R spectral value can be taken as 90% of the maximum spectral acceleration obtained from the site-specific response spectrum at any period within the range of 0.2 seconds to 5.0 seconds. The 1.0-second MCE_R spectral value can be derived based on the maximum value of the product of spectral acceleration and corresponding periods for periods ranging from 1.0 seconds to 5.0 seconds for sites with a V_{s30} value less than 1,450 feet per second but not less than 100% of the spectral value at 1.0 second.

Table 2B: RECOMMENDED SEISMIC DESIGN PARAMETERS OBTAINED FROM GROUND MOTION HAZARD ANALYSIS

Seismic Parameter	Recommended Value
Site Class	D
MCE_R Spectral Response Acceleration Parameter at Short Periods, S_{MS}	1.05 g
MCE_R Spectral Response Acceleration Parameter at 1.0-Second Period, S_{M1}	0.78 g
Design Spectral Response Acceleration Parameter at Short Periods, S_{DS}	0.70 g
Design Spectral Response Acceleration Parameter at 1.0-Second Period, S_{D1}	0.52 g

Abbreviation: MCE_R = Risk-Targeted Maximum Considered Earthquake

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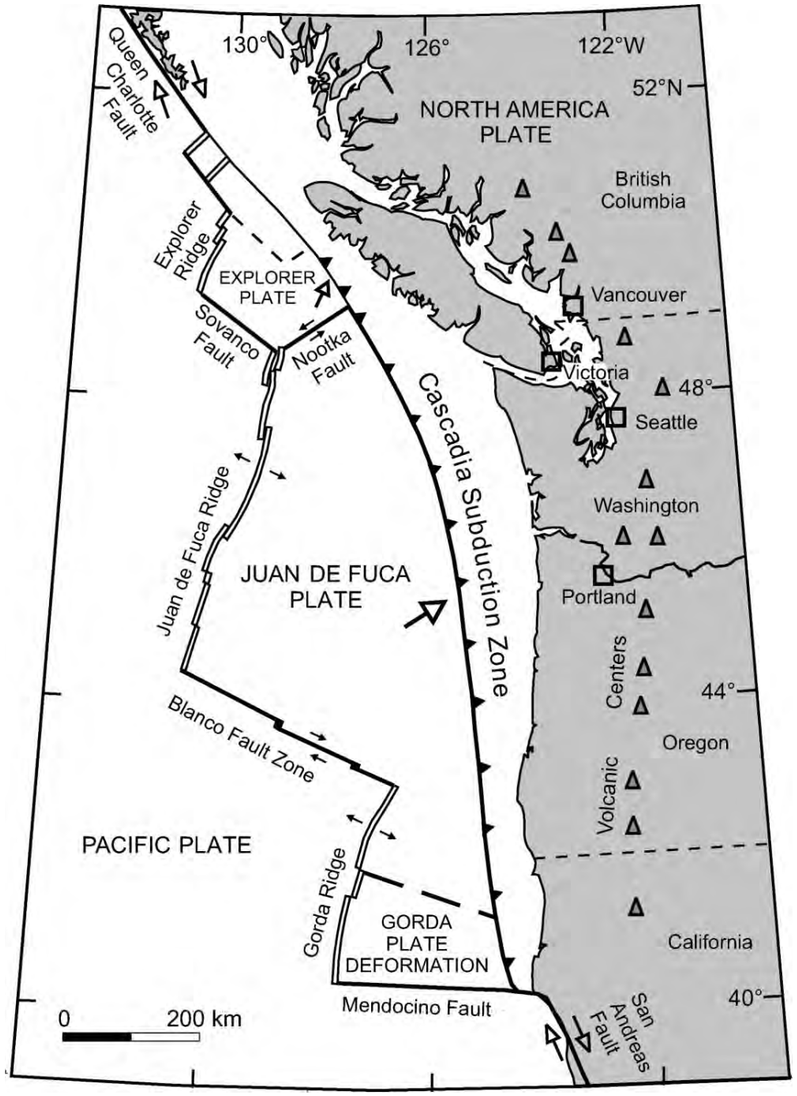
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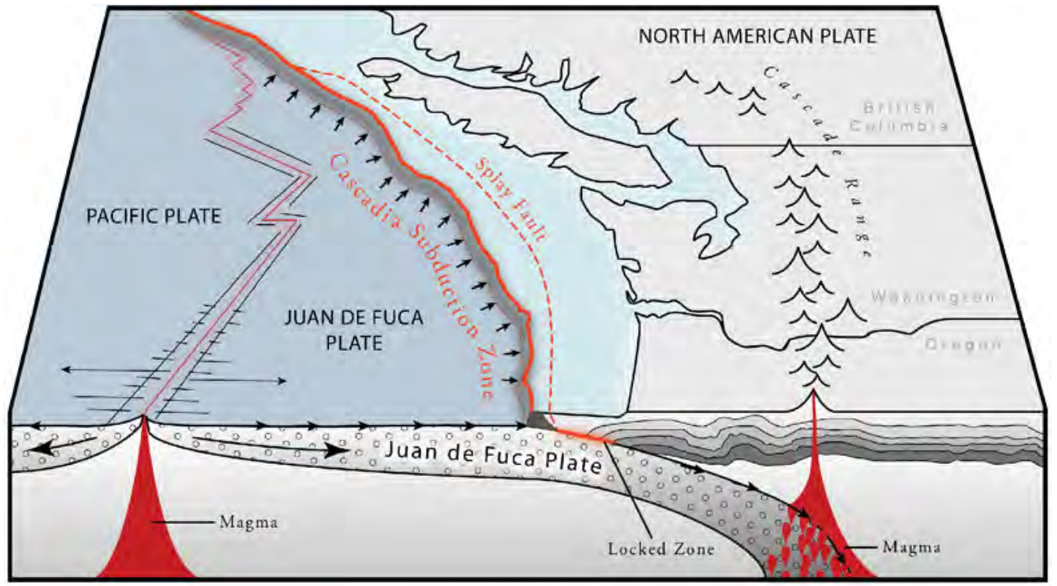
Witter, R. C., Kelsey, H. M., and Hemphill-Haley, E., 2003, Great Cascadia earthquakes and tsunamis of the past 6700 years, Coquille River estuary, southern coastal Oregon, *Geological Society of America Bulletin*, vol. 115, pp. 1,289–1,306.

Wong, I., 2005, Low potential for large intraslab earthquakes in the central Cascadia Subduction Zone, *Bulletin of the Seismological Society of America*, vol. 95, no. 5.



A) TECTONIC MAP OF PACIFIC NORTHWEST, SHOWING ORIENTATION AND EXTENT OF CASCADIA SUBDUCTION ZONE (MODIFIED FROM DRAGERT ET AL., 1994)

Cascadia Subduction Zone Setting

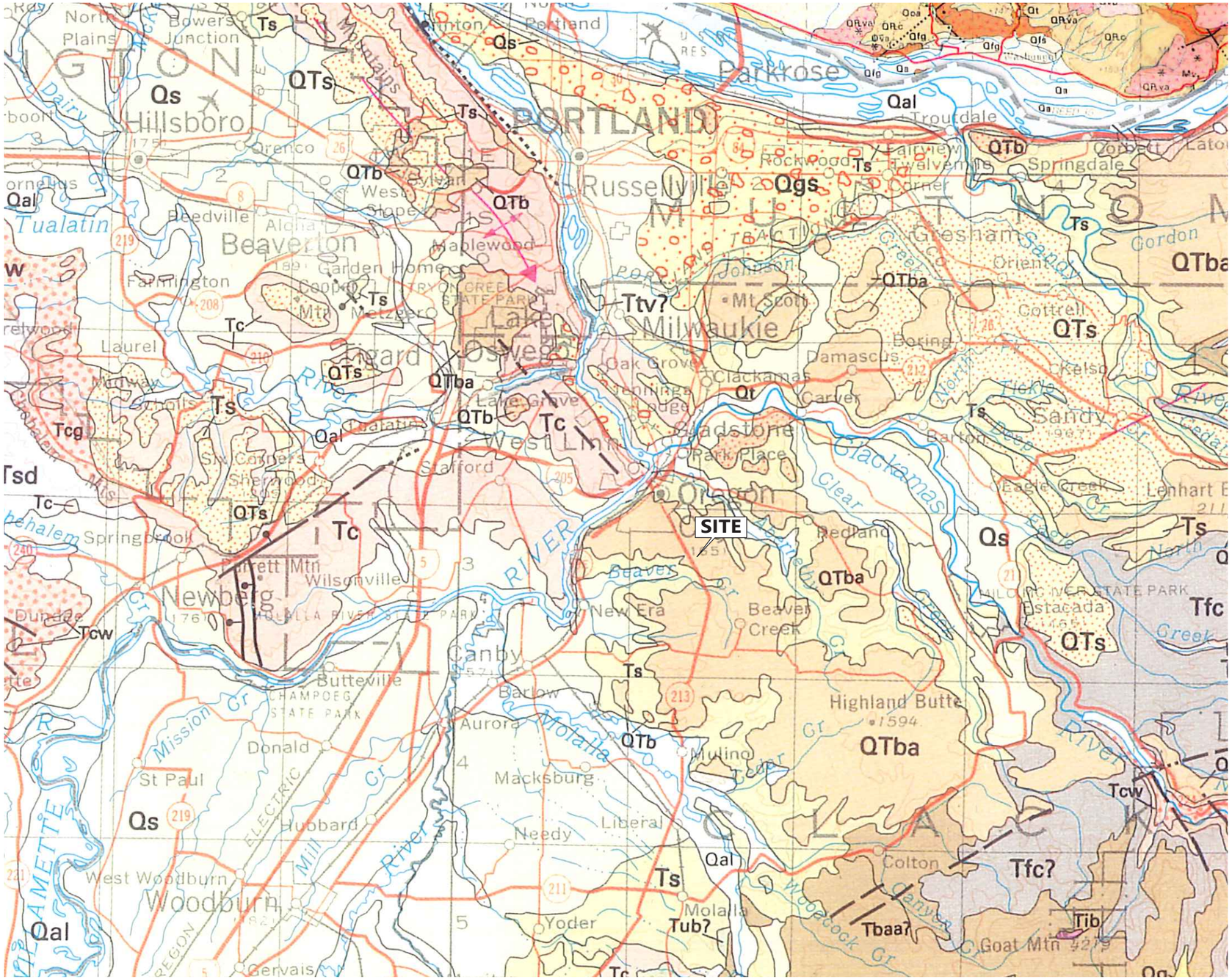


CASCADIA SUBDUCTION ZONE SETTING, TSUNAMI INUNDATION MAPS (OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRY, 2013)

GRI

TECTONIC SETTING SUMMARY

JUL. 2025 JOB NO. 7090-A FIG. 1B



Contact — Approximately located

Fault — Dashed where inferred; dotted where concealed; queried where doubtful; ball and bar on downthrown side

Thrust fault — Dashed where inferred; dotted where concealed; queried where doubtful; sawteeth on upper plate

Strike and dip of bed

FROM:

WALSH, T. J., KOROSEC, M. A., PHILLIPS, W. M., LOGAN, R. L., AND SCHASSE, H. W., 1987, GEOLOGIC MAP OF WASHINGTON-SOUTHWEST QUADRANT; 1:250,000: WASHINGTON DIVISION OF GEOLOGY AND EARTH RESOURCES, 6M-34

WALKER, G. W., AND MACLEOD, N. S., 1991, GEOLOGIC MAP OF OREGON: U.S. GEOLOGICAL SURVEY

N

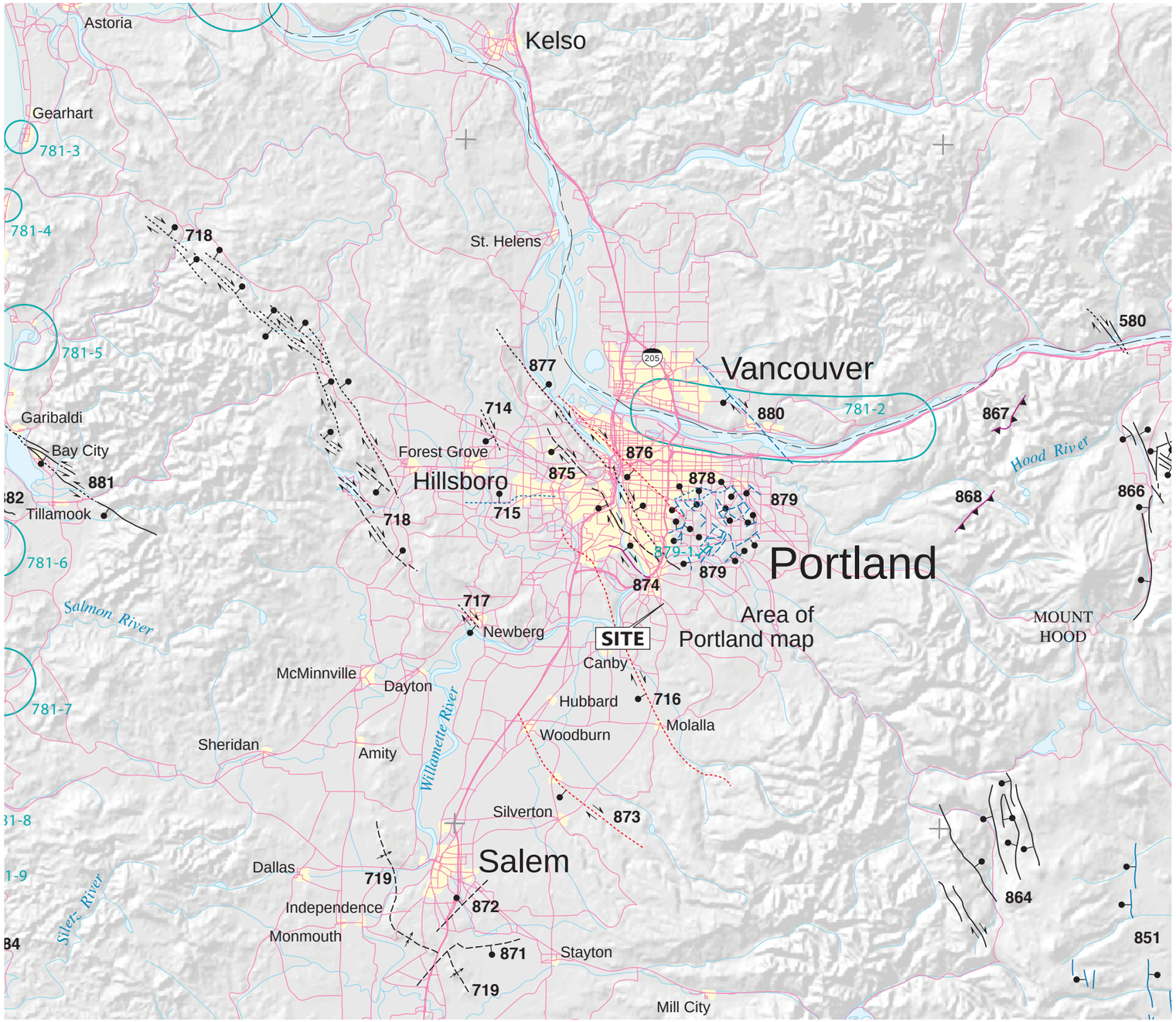
0 5 10 MILES

0 5 10 KILOMETERS

GRI

REGIONAL GEOLOGIC MAP

JUL. 2025 JOB NO. 7090-A FIG. 2B



TIME OF MOST RECENT SURFACE RUPTURE

- Holocene (<10,000 years) or post last glaciation (<15,000 years; 15 ka); no historic ruptures in Oregon to date
- Late Quaternary (<130,000; post penultimate glaciation)
- Late and middle Quaternary (<750,000 years; 750 ka)
- Quaternary, undifferentiated (<1,600,000 years; <1.6 Ma)
- Class B structure (age or origin uncertain)

SLIP RATE

- >5 mm/year
- 1.0-5.0 mm/year
- 0.2-1.0 mm/year
- <0.2 mm/year

TRACE

- Mostly continuous at map scale
- Mostly discontinuous at map scale
- Inferred or concealed

STRUCTURE TYPE AND RELATED FEATUR

- Normal or high-angle reverse fault
- Strike-slip fault
- Thrust fault
- Anticlinal fold
- Synclinal fold
- Monoclinal fold
- Plunge direction of fold
- Fault section marker

DETAILED STUDY SITES

- 731-2 Trench site
- 781-2 Subduction zone study site

CULTURAL AND GEOGRAPHIC FEATURES

- Divided highway
- Primary or secondary road
- Permanent river or stream
- Intermittent river or stream
- Permanent or intermittent lake

FAULT NUMBER	NAME OF STRUCTURE
714	HELVETIA FAULT
715	BEAVERTON FAULT
716	CANBY-MOLALLA FAULT
717	NEWBERG FAULT
718	GALES CREEK FAULT ZONE
719	SALEM-EOLA HILLS HOMOCLINE
864	CLACKAMAS RIVER FAULT ZONE
867	EAGLE CREEK THRUST FAULT
868	BULL RUN THRUST FAULT
872	WALDO HILLS FAULT
873	MOUNT ANGEL FAULT
874	BOLTON FAULT
875	OATFIELD FAULT
876	EAST BANK FAULT
877	PORTLAND HILLS FAULT
878	GRANT BUTTE FAULT
879	DAMASCUS-TICKLE CREEK FAULT ZONE
880	LACAMAS LAKE FAULT
881	TILLAMOOK BAY FAULT ZONE

NOTE: NOT ALL QUATERNARY FAULTS ARE SHOWN.

FROM: PERSONIUS, S. F., ET AL., 2003, MAP OF QUATERNARY FAULTS AND FOLDS IN OREGON, USGS OPEN FILE REPORT OFR-03-095.

N

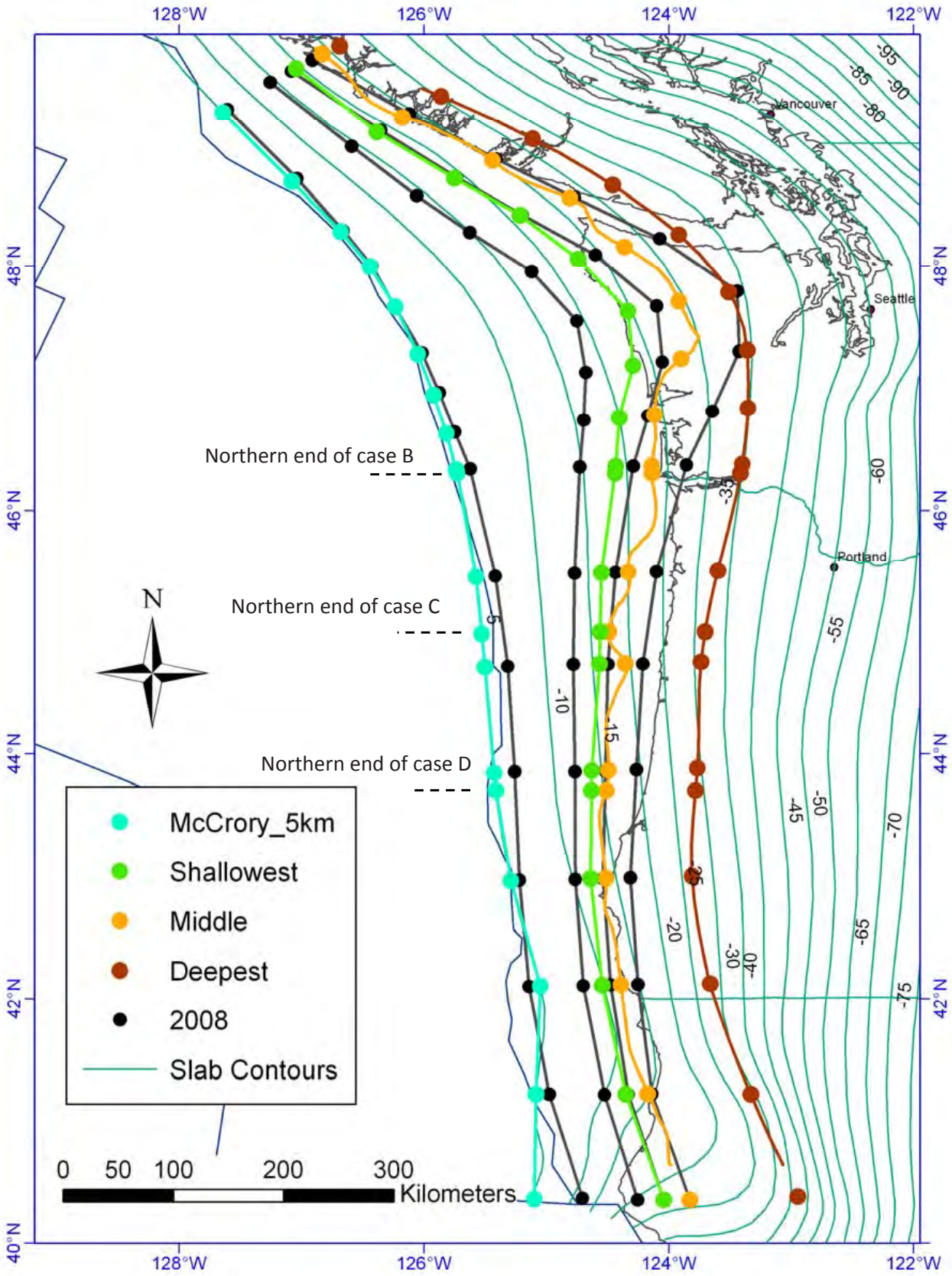
0 10 20 MILES

0 20 40 KILOMETERS

GRI

LOCAL FAULT MAP

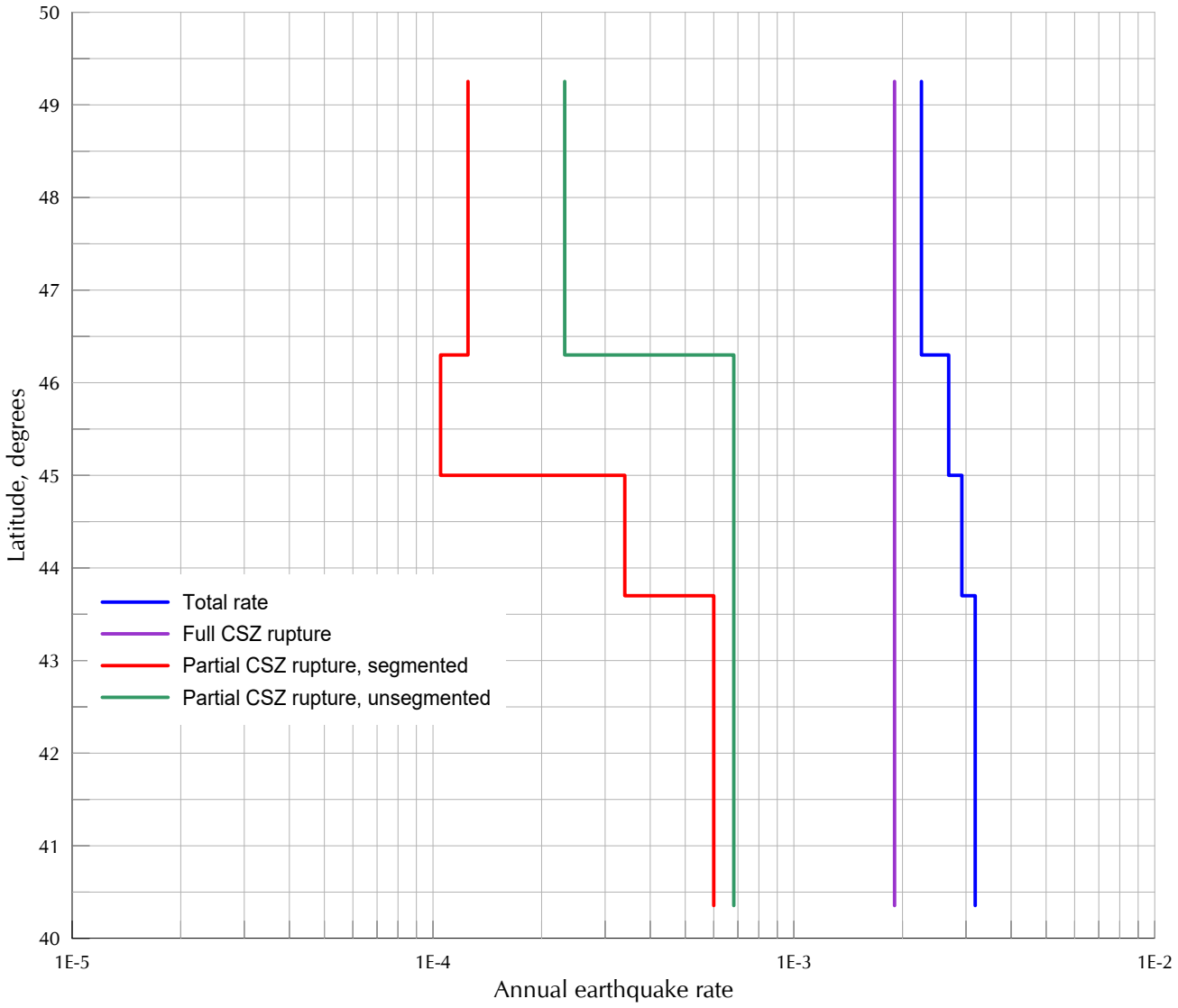
JUL. 2025 JOB NO. 7090-A FIG. 3B



GRI

LOCATION OF SURFACE TRACES FOR UP-DIP EDGE & THREE DOWN-DIP EDGE OPTIONS USED IN 2014 NSHMS (CHEN ET AL., 2014)

JUL. 2025 JOB NO. 7090-A FIG. 4B

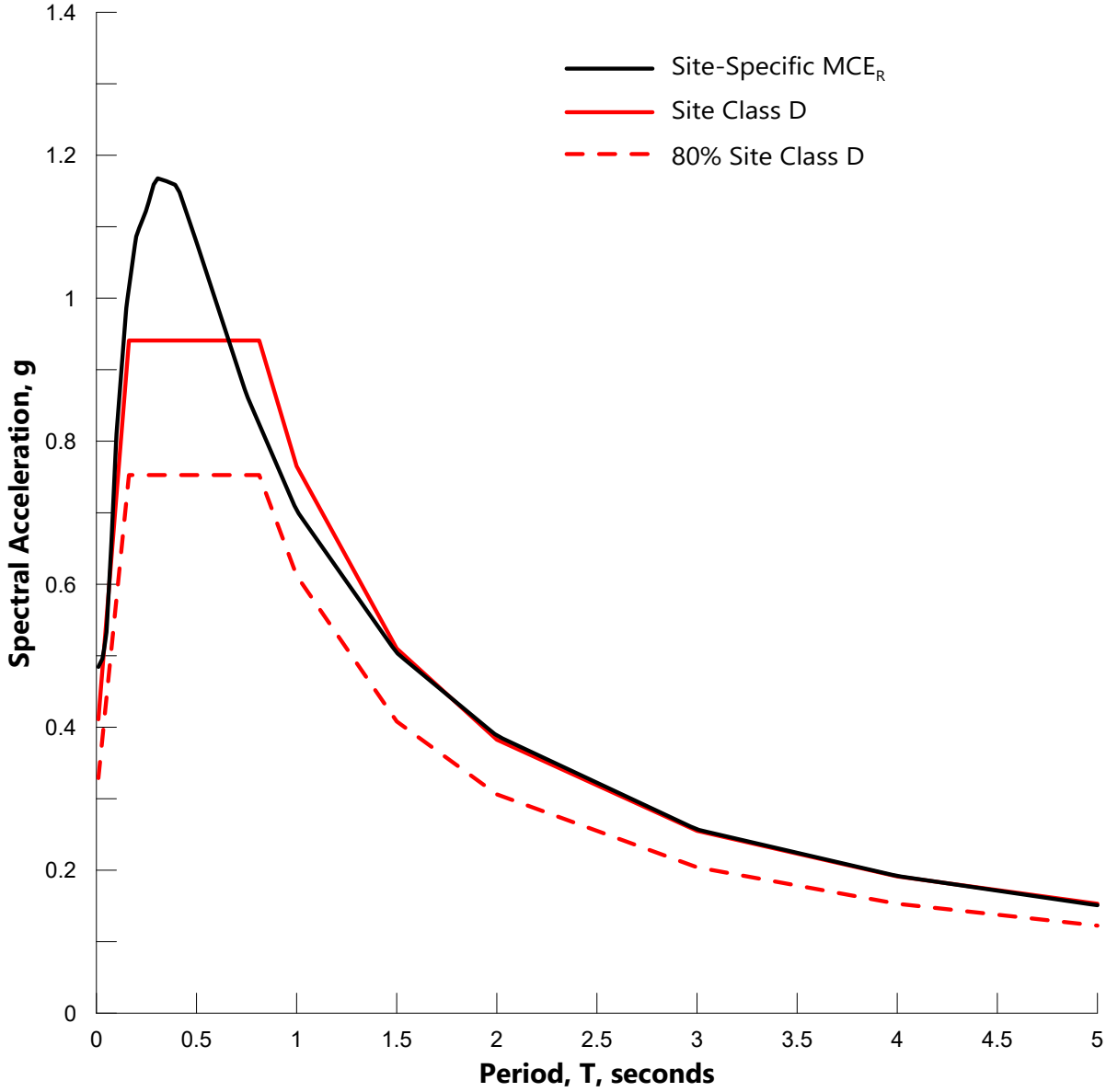


REFERENCE:
PETERSEN, M. D., MOSCHETTI, M. P., POWERS, P. M., MUELLER, C. S., HALLER, K. M., FRANKEL, A. D., ZENG, Y., REZAEIAN, S., HARMSEN, S. C., BOYD, O. S., FIELD, N., CHEN, R., RUKSTALES, K. S., NICO, L., WHEELER, R. L., WILLIAMS, R. A., AND OLSEN, A. H., 2014, DOCUMENTATION FOR THE 2014 UPDATE OF THE UNITED STATES NATIONAL SEISMIC HAZARD MAPS: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 2014–1091, 243 PP.

GRI

VARIATION OF EARTHQUAKE RATES
CASCADIA SUBDUCTION ZONE

JUL. 2025 JOB NO. 7090-A FIG. 5B



GRI

MCE$_R$ RESPONSE SPECTRA COMPARISON
(5% DAMPING)

JUL. 2025 JOB NO. 7090-A FIG. 6B

APPENDIX C

Geoprofessional Business Association Guidance Document

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

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EXHIBIT J
Proof of Contact for Archeological Monitoring Recommendations

Jason Gillies

From: CLEARANCE ORSHPO * OPRD <ORSHPO.Clearance@oprd.oregon.gov>
Sent: Monday, October 13, 2025 3:21 PM
To: Jason Gillies
Subject: RE: SHPO Archeology Review Submittal - CCC Athletics

External (orshpo.clearance@oprd.oregon.gov)

Report This Email FAQ Protection by INKY

THIS E-MAIL CONFIRMS RECEIPT OF AN ELECTRONIC SUBMISSION FOR AN HISTORIC RESOURCE/106 REVIEW

….THIS E-MAIL DOES NOT REPRESENT CONCLUSION OF THE REVIEW/106 CONSULTATION.....

We received a clearance submission on your above referenced project.

The assigned SHPO Case Number is 25-1262. Refer to this case number on all future correspondence.

This case has been placed in the appropriate Review Staff queue.

The SHPO receipt date is the initial date this complete submittal was received 10/10/2025.

Do not respond to this email.

From: Jason Gillies <jgillies@cameronmccarthy.com>
Sent: Friday, October 10, 2025 8:42 AM
To: CLEARANCE ORSHPO * OPRD <ORSHPO.Clearance@oregon.gov>
Subject: SHPO Archeology Review Submittal - CCC Athletics

You don't often get email from jgillies@cameronmccarthy.com. Learn why this is important

Please accept this submittal for archeology review, let us know if you have questions.

Jason Gillies (He/Him)
Landscape Architect, ASLA
Cameron McCarthy Landscape Architecture & Planning
Direct 503-664-7371
Office 541-485-7385

133 SW 2nd Avenue, Suite 410, Portland, Oregon 97204
www.cameronmccarthy.com

From: Chris Bailey <Chris.Bailey@grandronde.org>
Sent: Friday, October 10, 2025 2:35 PM
To: Claire Dosen
Cc: Cheryl Pouley; Briece Edwards
Subject: RE: Archeological Monitoring Recommendation Request for Development Project in Oregon City

Follow Up Flag: Follow up
Flag Status: Flagged

Caution: External (chris.bailey@grandronde.org)

First-Time Sender Details

Report This Email FAQ Protection by INKY

Greetings Claire,
The Historic Preservation Office of the Confederated Tribes of Grand Ronde Community of Oregon recommend that a cultural resource inventory be undertaken prior to the project activities, and that said study includes subsurface testing. We request a copy of the report with adequate time to comment on the findings. An Inadvertent Discovery Plan (IDP) needs be in place, and if archaeological and/or cultural resources are discovered during the project, that we are to be contacted immediately by phone. If you have any questions, please feel free to contact me.
Thank you,
Chris

Christopher Bailey
Cultural Protection Specialist
Historic Preservation Office
Confederated Tribes of the Grand Ronde Community of Oregon

chris.bailey@grandronde.org
503-879-1675

From: Claire Dosen <cdosen@cameronmccarthy.com>
Sent: Friday, October 10, 2025 1:08 PM
To: THPO <THPO@grandronde.org>
Cc: Consultation <Consultation@grandronde.org>
Subject: Archeological Monitoring Recommendation Request for Development Project in Oregon City

** This message has originated from an **External Source**. Please use proper judgment and caution when opening attachments, clicking links, or responding to this email. **

Hi Briece,

I am reaching out because I am working on a land use application for Oregon City and am required to contact the applicable Native American cultural representative to solicit input on the level of recommended archeological monitoring on-site. I reached out to the Commission on Indian Services and was directed to contact you.

Below is information on the project site and project scope. Please provide comments within 45 days and reach out with any questions you may have.

- Project location: 45°19'33.2"N 122°34'15.0"W (19600 Molalla Ave, Oregon City, OR 97045)
- Description of work: Athletic field renovations and complex expansion. See attachment for a detailed description.
- Basis of contact desired: to determine if archeological monitoring is needed on site and coordinate monitoring if needed.
- We do not have an inadvertent discovery plan in place for the project currently. We are still in the land use planning phase, but I have reached out to Oregon State Historic Preservation Office Archaeological Division for input as well.

Thanks,

Claire Dosen (She/Her)
Landscape Architect, ASLA
Cameron McCarthy Landscape Architecture & Planning
Direct 503-273-9028
Office 541-485-7385

160 East Broadway, Eugene, Oregon 97401
133 SW 2nd Avenue, Suite 410, Portland, Oregon 97204
120 SW Crowell Way, Suite 300, Bend, Oregon 97702

www.cameronmccarthy.com

From: Claire Dosen
Sent: Friday, October 10, 2025 1:12 PM
To: 'culturalresources@ctsi.nsn.us'
Subject: Archeological Monitoring Recommendation Request for Development Project in Oregon City
Attachments: CCC Athletics Pre Application Statement.pdf

To whom it may concern,

I am reaching out because I am working on a land use application for Oregon City and am required to contact the applicable Native American cultural representative to solicit input on the level of recommended archeological monitoring on-site. I reached out to the Commission on Indian Services and was directed to contact you.

Below is information on the project site and project scope. Please provide comments within 45 days and reach out with any questions you may have.

- Project location: 45°19'33.2"N 122°34'15.0"W (19600 Molalla Ave, Oregon City, OR 97045)
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Thanks,

Claire Dosen (She/Her)
Landscape Architect, ASLA
Cameron McCarthy Landscape Architecture & Planning
Direct 503-273-9028
Office 541-485-7385

160 East Broadway, Eugene, Oregon 97401
133 SW 2nd Avenue, Suite 410, Portland, Oregon 97204
120 SW Crowell Way, Suite 300, Bend, Oregon 97702

www.cameronmccarthy.com

From: Claire Dosen
Sent: Friday, October 10, 2025 1:13 PM
To: tearafarrowferman@ctuir.org
Subject: Archeological Monitoring Recommendation Request for Development Project in Oregon City
Attachments: CCC Athletics Pre Application Statement.pdf

Hi Teara,

I am reaching out because I am working on a land use application for Oregon City and am required to contact the applicable Native American cultural representative to solicit input on the level of recommended archeological monitoring on-site. I reached out to the Commission on Indian Services and was directed to contact you.

Below is information on the project site and project scope. Please provide comments within 45 days and reach out with any questions you may have.

- Project location: 45°19'33.2"N 122°34'15.0"W (19600 Molalla Ave, Oregon City, OR 97045)
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Thanks,

Claire Dosen (She/Her)
Landscape Architect, ASLA
Cameron McCarthy Landscape Architecture & Planning
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Office 541-485-7385

160 East Broadway, Eugene, Oregon 97401
133 SW 2nd Avenue, Suite 410, Portland, Oregon 97204
120 SW Crowell Way, Suite 300, Bend, Oregon 97702

www.cameronmccarthy.com

From: Claire Dosen
Sent: Friday, October 10, 2025 1:14 PM
To: lawrence.squiemphen@ctwsbnr.org
Cc: 106review@ctwsbnr.org
Subject: Archeological Monitoring Recommendation Request for Development Project in Oregon City
Attachments: CCC Athletics Pre Application Statement.pdf

Hi Lawrence,

I am reaching out because I am working on a land use application for Oregon City and am required to contact the applicable Native American cultural representative to solicit input on the level of recommended archeological monitoring on-site. I reached out to the Commission on Indian Services and was directed to contact you.

Below is information on the project site and project scope. Please provide comments within 45 days and reach out with any questions you may have.

- Project location: 45°19'33.2"N 122°34'15.0"W (19600 Molalla Ave, Oregon City, OR 97045)
- Description of work: Athletic field renovations and complex expansion. See attachment for a detailed description.
- Basis of contact desired: to determine if archeological monitoring is needed on site and coordinate monitoring if needed.
- We do not have an inadvertent discovery plan in place for the project currently. We are still in the land use planning phase, but I have reached out to Oregon State Historic Preservation Office Archaeological Division for input as well.

Thanks,

Claire Dosen (She/Her)
Landscape Architect, ASLA
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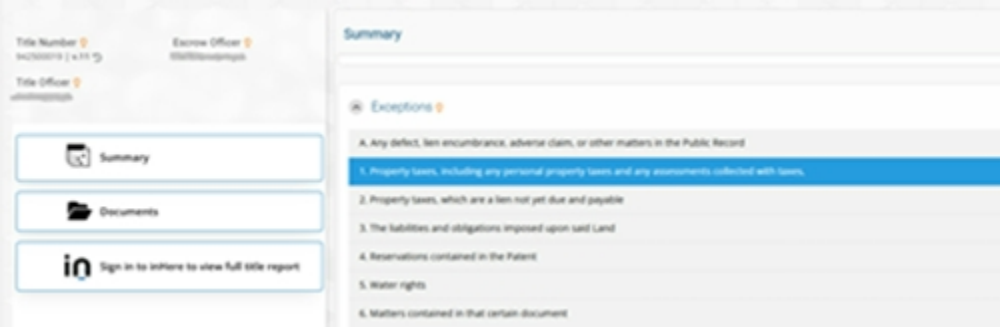
EXHIBIT K
Title Report

CHICAGO TITLE

Preliminary Report

File No.: 472525002502

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OWNERSHIP AND ENCUMBRANCES REPORT WITH GENERAL INDEX LIENS
Informational Report of Ownership and Monetary and Non-Monetary Encumbrances

To ("Customer"): Compass Land Surveyors
4101 SE International Way, Suite 406
Milwaukie, OR 97222

Customer Ref.: _____
Order No.: 472525002502
Effective Date: May 21, 2025 at 08:00 AM
Charge: $750.00

The information contained in this report is furnished by Chicago Title Company of Oregon (the "Company") as a real property information service based on the records and indices maintained by the Company for the county identified below. THIS IS NOT TITLE INSURANCE OR A PRELIMINARY TITLE REPORT FOR, OR COMMITMENT FOR, TITLE INSURANCE. No examination has been made of the title to the herein described property, other than as specifically set forth herein. Liability for any loss arising from errors and/or omissions is limited to the lesser of the charge or the actual loss, and the Company will have no greater liability by reason of this report. THIS REPORT IS SUBJECT TO THE LIMITATIONS OF LIABILITY STATED BELOW, WHICH LIMITATIONS OF LIABILITY ARE A PART OF THIS REPORT.

THIS REPORT INCLUDES MONETARY AND NON-MONETARY ENCUMBRANCES.

Part One - Ownership and Property Description

Owner. The apparent vested owner of property ("the Property") as of the Effective Date is:

Clackamas Community College, an Oregon municipal corporation, which acquired title as Clackamas County Area Education District

Premises. The Property is:

(a) Street Address:

19600 Molalla Avenue, Oregon City, OR 97045

(b) Legal Description:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Part Two - Encumbrances

Encumbrances. As of the Effective Date, the Property appears subject to the following monetary and non-monetary encumbrances of record, not necessarily listed in order of priority, including liens specific to the subject property and general index liens (liens that are not property specific but affect any real property of the named person in the same county):

EXCEPTIONS

SPECIFIC ITEMS AND EXCEPTIONS:

1. Taxes, including current year, have been assessed with an exemption. If the exempt status is terminated under the statute prior to the date on which the assessment roll becomes the tax roll in the year in which said taxes were assessed, an additional tax may be levied.

   Exemption: Schools and Charitable Property
   Tax Account No.: 00869778, 0157798 4 and 0502371 6

2. City Liens, if any, in favor of the City of Oregon City.

3. Rights of the public to any portion of the Land lying within the area commonly known as

   streets, roads and highways.

4. Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document;

   Reserved by: Robert M. Epperson and Margaret J. Epperson
   Purpose: Ingress and egress to install, maintain and operate electrical transmission lines
   Recording Date: March 8, 1955
   Recording No: Book 492 Page 673
   Affects: As described therein

5. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

   Granted to: United States of America
   Purpose: Electric transmission line
   Recording Date: August 26, 1955
   Recording No: Book 500 Page 380
   Affects: As described therein

6. Easement(s) for the purpose(s) shown below and rights incidental thereto as condemned by an instrument,

   Entitled: Judgment
   Court: Circuit
   Cause No.: 63-384
   In favor of: United States of America
   Purpose: Installation and maintenance of electrical transmission line
   Recording Date: August 14, 1963
   Recording No: Book 627 Page 495
   Affects: As described therein

7. Easement(s) for the purpose(s) shown below and rights incidental thereto as condemned by an instrument,

Entitled:	Judgment
Court:	Circuit
Cause No.:	63-412
In favor of:	United States of America
Purpose:	Installation and maintenance of electrical transmission line
Recording Date:	September 24, 1963
Recording No:	Book 628 Page 806
Affects:	As described therein

8. Easement(s) for the purpose(s) shown below and rights incidental thereto as reserved in a document;

Reserved by:	A.R. Lindsley and Livonia E. Lindsley
Purpose:	Road purposes
Recording Date:	March 3, 1970
Recording No:	70 4067
Affects:	Along portion of Market Road No. 11 as described therein

9. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Portland General Electric Company
Purpose:	Distribution line easement
Recording Date:	April 10, 1970
Recording No:	70 6698
Affects:	10 feet in width as described therein

10. Limited access to and from the Land as set forth in Deed shown below, which provides that there shall be no right of easement or right of access to, from or across the State Highway other than as expressly provided for in said Deed:

Grantor:	William Burpee and Margaret Jane Burpee, Clackamas County Area Education District, an Oregon corporation and Alice Evans
Grantee:	State of Oregon, by and through its State Highway Commission
Recording Date:	April 14, 1970
Recording No.:	70 6913

11. Limited access to and from the Land as contained in Decree of Condemnation entered in the proceedings as set forth below, which provides that there shall be no right of easement or right of access from the Land to the highway other than as expressly provided for in said Decree:

Suit No.:	84-1-274
County:	Clackamas
Court:	Circuit
In favor of:	State of Oregon, by and through its State Highway Commission
Name of Highway:	Beavercreek Road (Cascade Highway South)

Amended by Resolution
Recording Date: March 27, 1989
Recording No.: 89 12582

12. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Oregon City
Purpose:	Public utility easement E-1, E-2 Sanitary Sewer Trunk
Recording Date:	May 14, 1991
Recording No:	91 22130
Affects:	As described therein

13. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	The Followers of Christ of Oregon City, an Oregon corporation
Purpose:	Non-exclusive easement for utility purposes
Recording Date:	June 13, 1991
Recording No:	91 27747
Affects:	As described therein

14. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	North Willamette Telecom, an Oregon corporation
Purpose:	Communications line right-of-way
Recording Date:	March 20, 1992
Recording No:	92 15825
Affects:	As described therein

15. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Portland General Electric Company
Purpose:	Electric power line
Recording Date:	July 14, 1992
Recording No:	92 43050
Affects:	As described therein

16. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Portland General Electric Company
Purpose:	Underground electric distribution line
Recording Date:	April 26, 2001
Recording No:	2001-029633
Affects:	Westerly portion of property as described therein

17. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	Clackamas Community College and Clackamas County School District No. 62
Purpose:	Emergency, maintenance, and security vehicle, bicycle and pedestrian access way between District property line and South Douglas School Loop Road
Recording Date:	November 22, 2002
Recording No:	2002-114539
Affects:	20 feet in width as described therein

18. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to:	City of Oregon City
Purpose:	Temporary Construction
Recording Date:	December 10, 2002
Recording No:	2002-120829
Affects:	Westerly portion of property as described therein

19. Covenant including the terms and provisions thereof

By and Between: Clackamas Community College and City of Oregon City
Recording Date: January 24, 2003
Recording No.: 2003-009719

20. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Oregon City
Purpose: Permanent easement and right-of-way to construct, reconstruct, operate and maintain signs, slopes, utilities and sidewalks
Recording Date: October 19, 2004
and Re-Recording No: 2004-096533
Affects: As described therein

21. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Oregon City
Purpose: Dedication and Easement for pedestrian bridge spanning Newell Creek
Recording Date: November 8, 2004
Recording No: 2004-102957
Affects: As described therein

22. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: City of Oregon City
Purpose: Public pedestrian and bicycle easement
Recording Date: July 14, 2017
Recording No: 2017-047994
Affects: Reference is hereby made to said document for full particulars

Amendment(s)/Modification(s) of said Easement

Recording Date: January 24, 2018
Recording No: 2018-005105

23. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Portland General Electric Company
Purpose: Utilities
Recording Date: June 12, 2018
Recording No: 2018-035875
Affects: The Southwesterly portion, reference is hereby made to said document for full particulars

24. Declaration of Covenants and Restrictions

Recording Date: September 24, 2018
Recording No.: 2018-058895

25. Terms, provisions and conditions, including, but not limited to, maintenance provisions, and a covenant to share the costs of maintenance, contained in Maintenance covenant and access easement for privately owned stormwater management facilities

Recording Date: October 31, 2018
Recording No.: 2018-066693

and Re-Recording Date: March 7, 2022
and Re-Recording No: 2022-013809
Reason: Add City of Oregon City Operations and Maintenance Plan and add to Site Plan

26. Memorandum of Agreement and Acknowledgement of ODOT Assistance including the terms and provisions thereof,

Recording Date: April 3, 2019
Recording No: 2019-017239
Between: Clackamas Community College
And: State of Oregon, Department of Transportation (ODOT)

27. Declaration of Covenants and Restrictions

Recording Date: September 9, 2019
Recording No.: 2019-054226

28. Terms, provisions and conditions, including, but not limited to, maintenance provisions, and a covenant to share the costs of maintenance, contained in City of Oregon City Public Access and Maintenance Covenant

Recording Date: October 17, 2019
Recording No.: 2019-065408

29. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Kathleen Ann Berge, Trustee of the Kathleen Ann Berge Revocable Living Trust and Terry Emmert
Purpose: Access
Recording Date: January 3, 2020
Recording No: 2020-000416
Affects: Southwesterly portion, South of Meyers Road, reference is hereby made to said document for full particulars

30. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

Granted to: Clackamas County, a political subdivision of the State of Oregon
Purpose: Permanent right of way for road purposes
Recording Date: May 18, 2021
Recording No: 2021-049927
Affects: Reference is hereby made to said document for full particulars

End of Reported Information

There will be additional charges for additional information or copies. For questions or additional requests, contact:

Aaron Merkel
503-336-9173
aaron.merkel@titlegroup.fntg.com

Chicago Title Company of Oregon
1455 SW Broadway, Suite 1450
Portland, OR 97201

EXHIBIT "A"

Legal Description

For APN/Parcel ID(s): 00869778, 01577984 and 05023716
For Tax Map ID(s): 32E09C 00800, 32E09C 00800E2 and 32E09C 00800E3

PARCEL 1: That portion of the Northeast one-quarter of Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, lying within the Washington Williams Donation Land Claim No. 56, in the County of Clackamas and State of Oregon, described as follows:

Beginning at the intersection of the South line of said claim with the Westerly line of the Willamette Valley Southern Railroad Company right of way; thence North 3° 54' East along said right of way 722.08 feet to the Southwesterly line of Market Road No. 11; thence North 40° 59' 00" West along said Southwesterly road line 300 feet to the true point of beginning herein, said point also being the most Northerly corner of the tract conveyed to Sam Gregson, et ux, by Deed recorded in Book 602, Page 319; thence South 14° 39' 20" West a distance of 101.50 feet; thence South 8° 55' 00" West a distance of 150.00 feet; thence South 84° 31' 00" East a distance of 10.02 feet to the Northwest corner of the tract conveyed to the J. M. Smucker Company by Deed recorded in Book 602, Page 318; thence South 84° 31' East along the North line of said Smucker Tract 100.18 feet to the East line of the tract conveyed to Sam Gregson, et ux, by Deed recorded in Book 276, Page 502; thence North 8° 55' 00" East along said East line 160.79 feet, more or less, to the Southwesterly line of said Market Road No. 11; thence North 40° 59' 00" West along said road to the true point of beginning.

EXCEPT that portion conveyed to City of Oregon City for road by Deed recorded May 14, 1991 as Recorder's Fee No. 91-22128.

ALSO EXCEPT that portion conveyed to Clackamas County for road by Deed recorded October 25, 1995 as Recorder's Fee No. 95-066339.

PARCEL 2: Part of the Washington Williams Donation Land Claim #56 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning on the South line of said Donation Land Claim at the intersection thereof with the Westerly line of the Willamette Valley Southern Railroad Company right of way; thence North 3° 54' East along said Westerly right of way line 722.08 feet to the Southwesterly line of Market Road No. 11; thence North 40° 59' West along said Southwesterly road line 300 feet; thence South 8° 55' West 268 feet to the true point of beginning; thence South 8° 55' West 250 feet; thence South 81° 05' East 100 feet; thence North 8° 55' East 250 feet; thence North 81° 05' West 100 feet to the true point of beginning.

PARCEL 3: Part of the Washington Williams Claim No. 56 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning at the most Northerly corner of the Sam and Erana Gregson tract of land as described in deed recorded in Clackamas County deed record Book 276, Page 502; thence following the Northwesterly boundary of said tract South 8° 55' West 268.00 feet to an iron pipe marking the true point of beginning of the tract herein conveyed; from said true point of beginning; thence South 81° 05' East 100.00 feet to an iron pipe in the Southeast boundary of the aforesaid Gregson tract; thence following the last mentioned boundary North 8° 55' East 23.00 feet; thence North 84° 31' West 100.18 feet to the aforesaid Northwest boundary of the Gregson tract; thence following the last mentioned boundary South 8° 55' West 17.00 feet to the hereinbefore mentioned true point of beginning.

PARCEL 4: A tract of land located in the Washington Williams Claim No. 56, in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, and begin a portion of the tract of land conveyed by James W. Short,, et ux to Jack G. and Elizabeth Kassner, and recorded July 16, 1951, in Book 446, Page 421, deed records, more particularly described as follows:

EXHIBIT "A"

Legal Description

Beginning at a stone in the South boundary of the said William Claim that is South 89° 00' West 297.00 feet distant from a stone located at the intersection of the West boundary of the Willamette Valley Southern Railway with the South boundary of the said claim, said beginning point also being the Southeasterly corner of the said Kassner tract. From said beginning point; thence North 8° 55' East 961.45 feet to an iron pipe located in the Southwesterly boundary of Market Road No. 11; thence following said road boundary North 40° 59' West 60.00 feet to an iron pipe; thence South 36° 36' West 429.62 feet to a stone marking a re-entrant corner in the said Kassner tract; thence following the West boundary of the said Kassner tract, South 0° 29' East 652.70 feet to a stone located in the South boundary of the said Williams Claim; thence following said claim boundary, North 89° 00' East 140.61 feet to the point of beginning of the tract herein described.

EXCEPTING THEREFROM that portion conveyed to Sam Gregson, et ux by deed recorded April 20, 1962, in Book 602, Page 319, deed records.

PARCEL 5: A part of the Washington Williams and wife Donation Land Claim No. 56 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as:

Beginning at a stone sat in the South boundary line of said Donation Land Claim where the same intersects the Westerly side line of the right of way of the Willamette Valley Southern Railroad Company, said point being the Southeast corner of that certain 17.75 acre tract of land heretofore conveyed to Roselyn R. Robbins by deed recorded in Book 205, Page 465, deed records, being also located South 89° West 1454.6 feet from the Northeast corner of the Robert Caufield D.L.C. from said beginning point run North 3° 54' East tracing the Westerly side line of said railroad right of way 722.08 feet to an iron pipe driven in the Southwesterly side line of Market Road No. 11, also known as the Oregon City Ring Road; thence North 40° 59' West tracing the Southwesterly side line of said Market Road No. 11, 300.00 feet to an iron pipe; thence Southerly to an iron pipe in the South boundary line of said Washington Williams Donation Land Claim which is 297 feet Westerly of the place of beginning; thence North 89° East along the South line of said Dontaion Land Claim 297 feet to the place of beginning.

EXCEPTING THEREFROM a tract of land 100 feet by 518 feet in the Northwest corner thereof conveyed to Sam Gregson and wife by deed recorded January 28, 1941, in Book 276, Page 502, deed records.

ALSO EXCEPTING THEREFROM that portion contained in deed to Berry Heights Limited Partnership recorded July 12, 1995 as Fee No. 95-040110.

AND FURTHER EXCEPTING THEREFROM that portion conveyed to the City of Oregon City in Deed of Dedication recorded November 8, 2004 as Fee No. 2004-102957.

PARCEL 6: A tract of land located within the Northwest one-quarter of Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, and being a part of the Washington Williams Dontaion Land Claim No. 56, and also being a part of a certain parcel described as Tract II in a Contract of Sale recorded in Book 579, Page 117, deed records, being described as:

Beginning at a stone on the South line of said Donation Land Claim, South 89° 30' West 28.73 chains from the Northeast corner of the Robert Caufield Donation Land Claim; thence North 652.2 feet to a marked stone; thence South 89° 30' West, parallel to the South line of said Williams Donation Land Claim, 400.7 feet to an iron rod; thence South 652.2 feet to an iron rod on the South line of said Williams DonationLand Claim; thence North 89° 30' East 400.7 feet to the place of beginning.

EXCEPTING THEREFROM that portion contained in deed to Berry Heights Limited Partnership recorded July 12, 1995 as Fee No. 95-040110.

PARCEL 7: A parcel of land in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the Washington Williams Donation Land Claim No. 56, described as follows:

EXHIBIT "A"

Legal Description

Beginning at an iron pipe driven at the point of intersection of the South boundary of the Washington Williams D.L.C. with the Westerly side line of the Oregon City and Highland Road No. 337, said point being 793.25 feet West of a stone set at the Northeast corner of the Robert Caufield Donation Land Claim; thence West tracing the line between the Washington Williams Donation Land Claim, and the Robert Caufield Donation Land Claim, 601.12 feet to a stone set at the intersection of said claim line with the Easterly side line of the Clackamas Southern Railroad right of way; thence North 04° 54' East tracing the Easterly side line of said right of way 166.8 feet to a stone; thence East 448.4 feet to a stone set in the Westerly side of the above County Road; thence South 39° 50' East tracing the Westerly side line of said County Road, 216.2 feet to the place of beginning.

EXCEPTING THEREFROM that portion conveyed to the City of Oregon City in Deed of Dedication recorded October 19, 2004 as Fee No. 2004-096532.

PARCEL 8: A parcel of land in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning at a stone on the Southwesterly line of Market Road No. 11 that is North 40° 50' West 216.2 feet distant from an iron pipe in the South boundary of the Washington Williams Donation Land Claim, which iron pipe is South 89° West 793.25 feet from a stone at the Northeast corner of the Robert Caufield D.L.C; thence South 89° West 106.75 feet to an iron pipe; running thence Northeasterly in a straight line of 81.42 feet to an iron pipe on the Southwesterly line of Market Road No. 11, which pipe is North 40° 50' West 68.25 feet from the place of beginning; thence South 40° 50' East 68.25 feet to the place of beginning.

PARCEL 9: Part of the Washington Williams Donation Land Claim No. 56, Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning at a point in the center line of the Oregon City and Ring County Road which is North 40° 50' West 216.2 feet from an iron rod driven at the point of intersection of said road line with the South line of Washington William Donation Land Claim, said point of intersection being South 89° West 753.6 feet from the Northeast corner of the Robert Caufield Donation Land Claim; thence North 40° 50' West, along the center line of said road, 690.95 feet to an iron rod in the Easterly line of the right of way of the Willamette Valley Southern Railroad Co.; thence South 3° 54' West, along said Easterly line, 532.25 feet to an iron pipe; thence North 89° East 488.07 feet to the point of beginning.

EXCEPT that portion conveyed to A.R. Lindsey, et ux, by deed recorded in Book 494, Page 122, Clackamas County deed records.

ALSO EXCEPTING THEREFROM that portion contained in Bargain and Sale Deed to Berry Heights Limited Partnership recorded July 12, 1995 as Fee No. 95-040110.

PARCEL 10: A parcel of land in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning on the North line of the Robert Caufield Donation Land Claim No. 53 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, which point is 34.70 chains West of the Northeast corner of said Donation Land Claim, said point is also the Northeast corner of that tract conveyed to Amiel Walker by Deed 264, Page 369, records of Clackamas County, Oregon; thence South 12.44 chains to the Northwest corner of that tract conveyed to H. Tudor in Book 65, Page 321, deed records of Clackamas County, Oregon; thence East along the North line of said tract, 33.64 chains to the center of the Oregon City and Highland County Road; thence North 41° 41' West along said County Road 16.67 chains to the North line of said Donation Land Claim; thence West along the North line of said D.L.C. 22.54 chains to the place of beginning.

EXHIBIT "A"

Legal Description

PARCEL 11: A parcel of land in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Commencing in the center of the Oregon City and Molalla Road at a point 2.60 chains East of the Northwest corner of the Robert Caufield Donation Land Claim, in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, running thence South 30° East in the center of said road 5.50 chains to a stake; thence East 35.68 chains to a stake; thence North to intersect with the North line of said Caulfield Claim; thence West on the said North line to the place of beginning.

EXCEPTING THEREFROM that portion lying within the boundaries of public roads.

ALSO EXCEPTING THEREFROM that portion contained in deed to Oregon City recorded September 13, 1971 as Fee No. 71-22929.

ALSO EXCEPTING THEREFROM that portion conveyed to The Followers of Christ of Oregon City, an Oregon corporation by deed recorded June 13, 1991 as Fee No. 91 27747.

ALSO EXCEPTING THEREFROM that portion conveyed to ICON Construction & Development, LLC, by deed recorded October 3, 2005 as Fee No. 2005-097209.

PARCEL 12: Part of the Robert Caufield and wife Donation Land Claim No. 53 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as:

Beginning at the Northeast corner of the Robert Caufield and wife Donation Land Claim No. 53 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, thence South 18 chains; thence West 34.70 chains to the Northwest corner of the Andrew Hood Donation Land Claim; thence North 13.22 chains to the place of beginning of the tract herein described; from said beginning point run thence West 1397.00 feet; thence South 437.6 feet; thence East 1397.00 feet; thence North 437.6 feet to the true point of beginning.

ALSO a tract of land beginning 467.6 feet South and 563.00 feet West of the beginning point of the above described land; thence South 380.3 feet; thence West 573.2 feet, more or less, to the Southeast corner of a tract conveyed to M.F. Bess and J.E. Bess by deed recorded in Book 174, page 412, deed records, thence North 380.3 feet along the East line of said Bess tract to a point; thence East 573.2 feet to the place of beginning;

Also a strip of land lying in the Robert Caufield Donation Land Claim No. 53 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, more particularly described as follows:

Beginning at the Northeast corner of said Caufield Donation Land Claim; thence South 1188 feet;, thence West 2290.2 feet; thence North 404.92 feet to the true point of beginning of the tract to be described; thence West 1147 feet, more or less, to the Southeast corner of that certain 30 foot roadway reserved in deed to F.R.. Beals, recorded October 14, 1913 in deed Book 133, Page 46, records of Clackamas County, Oregon; thence North 30 feet; thence East 1147 feet, more or less to a point due North of the point of beginning; thence South 30 feet to the point of beginning.

PARCEL 13: A parcel of land in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Commencing at the Southeast corner of the Robert Caufield Donation Land Claim in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, running thence West on the South line of said claim 34.70 chains to the Northwest corner of the Andrew Hood Donation Land Claim; thence North 5.56 chains to a stone; thence East 33.64 chains to the center of the Oregon City and Highland Road; thence South 41° 40' East tracing the center line

of said road 7.45 chains; thence West 3.90 chains to the place of beginning

EXCEPTING THEREFROM that part thereof conveyed to Clackamas Southern Railway Company by deed recorded March 6, 1914, in Book 134, Page 392, deed records of Clackamas County, Oregon.

ALSO EXCEPTING THEREFROM all of that property East of the Clackamas Southern Railway Company Railroad.

PARCEL 14: Part of the Robert Caufield Donation Land Claim No. 53, in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows to wit:

Beginning at a point which is 2.60 chains East and South 30° East 900.5 feet and East 681.00 feet from the Northwest corner of the Caufield Donation Land Claim, which beginning point is also the Northeast corner of that tract of land conveyed to Gordon Roberts by deed recorded October 21, 1935, in Book 229, Page 297, County of Clackamas Records; from said beginning point running thence East 286.6 feet, more or less, along the South line of a 30 foot strip dedicated to the public by instrument recorded February 28, 1950, in Book 428, Page 288, deed records, to the Northwest corner of that tract of land described second in that deed to Christian Grasli recorded February 7, 1918, in Book 148, Page 453; running thence South along the West line of said Grasli tract 380.3 feet to the Southwest corner thereof; thence running West 286.6 feet to the East line of a tract conveyed to John W. Shephard, et ux, by deed recorded in Book 411, page 547, deed records; thence North along the East line of said Shephard tract and along the East line of the aforementioned Roberts tract 380.3 feet to the place of beginning.

AND ALSO a tract of land in the Northwest quarter of Section 9, Township 3 South, Range 2 East of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows to wit:

A portion of that certain road, 30 feet in width, deeded to the public by L.E. Kuppenbender, Opalo M. Kuppenbender, Ben Kuppenbender, Mary Kuppenbender, Hubert Kuppenbender and Anna Kuppenbender by deed dated February 6, 1950, and recorded in Book 428, Page 499, Deed Records of Clackamas County, said portion being all that part of said road lying East of the Southerly projection of the East boundary of that tract of land conveyed to Edward J. Wanke and Leola Wanke, husband and wife, by deed recorded April 24, 1952, in Book 455, Page 739, Deed Records of Clackamas County.

PARCEL 15: Part of the Robert Caufield and wife Donation Land Claim No. 53, in Sections 8 and 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as follows:

Beginning at a point on the East line of said Caufield claim at the Northwest corner of the Andrew Hood Donation Land Claim No. 44, thence Southerly along the East line of said Caufield Claim 2399.35 feet; thence West 568.53 feet to the center of the County Road which is known as Secondary State Highway No. 160; thence North 29° 43' West along center of said road 3001.7 feet; thence North 89° 53' East 617.53 feet; thence South 0° 07' East 211.2 feet; thence North 89° 53' East 859.8 feet; thence North 0° 07' West 380.8 feet; thence North 89° 53' East 519.5 feet to the East line of the South portion of said Caufield claim extended North; thence South along said line of the place of beginning.

EXCEPTING THEREFROM A tract of land conveyed to Albert Sandberg and wife by deed recorded in Book 200, Page 77, records of Clackamas County, described about as:

Beginning at a point on the East line of said Caufield claim which is 2399.35 feet Southerly from the Northwest corner of the Andrew Hood Donation Land Claim No. 44; thence West 568.53 feet to the center of Secondary Highway No. 160, thence North 29° 43' West along the center of said road 1081.00 feet; thence North 63° 17' East 538.00 feet; thence South 26° 17' East 253.35 feet; thence North 84° 00' East 512.75 feet to the West line of said Hood claim; thence Southerly along claim line to the place of beginning.

EXHIBIT "A"

Legal Description

ALSO EXCEPTING THEREFROM a tract conveyed to John W. Shepherd and wife by deed recorded in Book 411, Page 547, records of Clackamas County, described as:

Beginning at an iron pipe South 89° 53' West 1379.3 feet distant from the Northwest corner of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon; thence North 0° 07' West 211.2 feet; thence South 89° 53' West 617.53 feet to the center line of Market Road No. 22, also known as Secondary State Highway No. 160; thence following said center line South 29° 43' East 242.96 feet; thence North 89° 53' East 497.55 feet to the place of beginning.

ALSO EXCEPTING THEREFROM a tract conveyed to the State of Oregon, April 14, 1970, Fee No. 70-06913.

ALSO EXCEPTING THEREFROM that portion conveyed to the City of Oregon City conveyed in Deed of Dedication recorded August 17, 2018, Recording No. 2018-051289.

ALSO EXCEPTING THEREFROM that portion conveyed to Oregon City Medical Plaza, LLC an Oregon limited liability company, recorded February 18, 2022, Recording No. 2022-010377.

PARCEL 16: That part of the Andrew Hood Donation Land Claim No. 44 in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, described as:

Beginning at the Northwest corner of said claim; thence South 13.80 chains; thence South 89° 56' East 14.33 chains to the one-quarter section line; thence North 13.64 chains to a point .30 chains South of the North line of said Hood Donation Land Claim; thence South 89° 49' East 24.17 chains to the center of the County Road (Market Road No. 11); thence North 40° 45' West to a point in the North line of said Hood Donation Land Claim; thence North 89° 49' West 38.25 chains to the point of beginning.

PARCEL 17: A strip of land 60 feet in width situate in Section 9, Township 3 South, Range 2 East, of the Willamette Meridian, in the City of Oregon City, County of Clackamas and State of Oregon, lying between the center line of Highland Road (Market Road No. 11) and South property line of Martin Robbins land in said section, being a portion of that certain 60 foot right-of-way conveyed to Martin Robbins et ux by deed dated May 15, 1913, and recorded May 15, 1913 in Page 639, of Book 130, records of deeds of Clackamas County, Oregon.

LIMITATIONS OF LIABILITY

"CUSTOMER" REFERS TO THE RECIPIENT OF THIS REPORT.

CUSTOMER EXPRESSLY AGREES AND ACKNOWLEDGES THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE, TO DETERMINE THE EXTENT OF LOSS WHICH COULD ARISE FROM ERRORS OR OMISSIONS IN, OR THE COMPANY'S NEGLIGENCE IN PRODUCING, THE REQUESTED REPORT, HEREIN "THE REPORT." CUSTOMER RECOGNIZES THAT THE FEE CHARGED IS NOMINAL IN RELATION TO THE POTENTIAL LIABILITY WHICH COULD ARISE FROM SUCH ERRORS OR OMISSIONS OR NEGLIGENCE. THEREFORE, CUSTOMER UNDERSTANDS THAT THE COMPANY IS NOT WILLING TO PROCEED IN THE PREPARATION AND ISSUANCE OF THE REPORT UNLESS THE COMPANY'S LIABILITY IS STRICTLY LIMITED. CUSTOMER AGREES WITH THE PROPRIETY OF SUCH LIMITATION AND AGREES TO BE BOUND BY ITS TERMS

THE LIMITATIONS ARE AS FOLLOWS AND THE LIMITATIONS WILL SURVIVE THE CONTRACT:

ONLY MATTERS IDENTIFIED IN THIS REPORT AS THE SUBJECT OF THE REPORT ARE WITHIN ITS SCOPE. ALL OTHER MATTERS ARE OUTSIDE THE SCOPE OF THE REPORT.

CUSTOMER AGREES, AS PART OF THE CONSIDERATION FOR THE ISSUANCE OF THE REPORT AND TO THE FULLEST EXTENT PERMITTED BY LAW, TO LIMIT THE LIABILITY OF THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS AND ALL OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS FOR ANY AND ALL CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, COSTS, DAMAGES AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY'S FEES, HOWEVER ALLEGED OR ARISING, INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM BREACH OF CONTRACT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF WARRANTY, EQUITY, THE COMMON LAW, STATUTE OR ANY OTHER THEORY OF RECOVERY, OR FROM ANY PERSON'S USE, MISUSE, OR INABILITY TO USE THE REPORT OR ANY OF THE MATERIALS CONTAINED THEREIN OR PRODUCED**, SO THAT THE TOTAL AGGREGATE LIABILITY OF THE COMPANY AND ITS AGENTS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS SHALL NOT IN ANY EVENT EXCEED THE COMPANY'S TOTAL FEE FOR THE REPORT.**

CUSTOMER AGREES THAT THE FOREGOING LIMITATION ON LIABILITY IS A TERM MATERIAL TO THE PRICE THE CUSTOMER IS PAYING, WHICH PRICE IS LOWER THAN WOULD OTHERWISE BE OFFERED TO THE CUSTOMER WITHOUT SAID TERM. CUSTOMER RECOGNIZES THAT THE COMPANY WOULD NOT ISSUE THE REPORT BUT FOR THIS CUSTOMER AGREEMENT, AS PART OF THE CONSIDERATION GIVEN FOR THE REPORT, TO THE FOREGOING LIMITATION OF LIABILITY AND THAT ANY SUCH LIABILITY IS CONDITIONED AND PREDICATED UPON THE FULL AND TIMELY PAYMENT OF THE COMPANY'S INVOICE FOR THE REPORT.

THE REPORT IS LIMITED IN SCOPE AND IS NOT AN ABSTRACT OF TITLE, TITLE OPINION, PRELIMINARY TITLE REPORT, TITLE REPORT, COMMITMENT TO ISSUE TITLE INSURANCE, OR A TITLE POLICY, AND SHOULD NOT BE RELIED UPON AS SUCH. THE REPORT DOES NOT PROVIDE OR OFFER ANY TITLE INSURANCE, LIABILITY COVERAGE OR ERRORS AND OMISSIONS COVERAGE. THE REPORT IS NOT TO BE RELIED UPON AS A REPRESENTATION OF THE STATUS OF TITLE TO THE PROPERTY. THE COMPANY MAKES NO REPRESENTATIONS AS TO THE REPORT'S ACCURACY, DISCLAIMS ANY WARRANTY AS TO THE REPORT, ASSUMES NO DUTIES TO CUSTOMER, DOES NOT INTEND FOR CUSTOMER TO RELY ON THE REPORT, AND ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE ON THE REPORT OR OTHERWISE.

IF CUSTOMER (A) HAS OR WILL HAVE AN INSURABLE INTEREST IN THE SUBJECT REAL PROPERTY, (B) DOES NOT WISH TO LIMIT LIABILITY AS STATED HEREIN AND (C) DESIRES THAT ADDITIONAL LIABILITY BE ASSUMED BY THE COMPANY, THEN CUSTOMER MAY REQUEST AND PURCHASE A POLICY OF TITLE INSURANCE, A BINDER, OR A COMMITMENT TO ISSUE A POLICY OF TITLE INSURANCE. NO ASSURANCE IS GIVEN AS TO THE INSURABILITY OF THE TITLE OR STATUS OF TITLE. CUSTOMER EXPRESSLY AGREES AND ACKNOWLEDGES IT HAS AN INDEPENDENT DUTY TO ENSURE AND/OR RESEARCH THE ACCURACY OF ANY INFORMATION OBTAINED FROM THE COMPANY OR ANY PRODUCT OR SERVICE PURCHASED.

NO THIRD PARTY IS PERMITTED TO USE OR RELY UPON THE INFORMATION SET FORTH IN THE REPORT, AND NO LIABILITY TO ANY THIRD PARTY IS UNDERTAKEN BY THE COMPANY.

CUSTOMER AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT WILL THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, AND ALL OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES AND SUBCONTRACTORS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES, OR LOSS OF PROFITS, REVENUE, INCOME, SAVINGS, DATA, BUSINESS, OPPORTUNITY, OR GOODWILL, PAIN AND SUFFERING, EMOTIONAL DISTRESS, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, BUSINESS INTERRUPTION OR DELAY, COST OF CAPITAL, OR COST OF REPLACEMENT PRODUCTS OR SERVICES, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED ON BREACH OF CONTRACT, TORT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTIES, FAILURE OF ESSENTIAL PURPOSE, OR OTHERWISE AND WHETHER CAUSED BY NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE OR ANY OTHER CAUSE WHATSOEVER, AND EVEN IF THE COMPANY HAS BEEN ADVISED OF THE LIKELIHOOD OF SUCH DAMAGES OR KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY FOR SUCH DAMAGES.

END OF THE LIMITATIONS OF LIABILITY

EXHIBIT L
County Assessor's Office Receipt

Not applicable. Clackamas Community College is a government tax district, and such is exempt from property taxes by Oregon statute definition.

EXHIBIT M
List of Permits Sought

- Building Permit from OC Building Department – Grandstand @ Track
- Building Permit from OC Building Department – Retaining Wall
- Building Permit from OC Building Department – Grandstand Cover
- Building Permit from OC Building Department – Hitting Bars
- Building and Demo Permit from OC Building Department – Restrooms
- Plumbing Permit from OC Building Department – Site Plumbing
- Electrical Permit from OC Building Department – Site Electrical
- Plumbing Permit from OC Building Department – Restroom Plumbing
- Electrical Permit from OC Building Department – Restroom Electrical
- Electrical Permit from OC Building Department – Athletic Field Lighting
- Demo Permit from OC Building Department – Accessory Structures
- Grading Permit – Covered under Land Use Application
- Erosion Control Permit – OC Public Works

CCC Athletics
NROD Avoidance

