CITY OF OREGON CITY
NATURAL RESOURCES COMMITTEE
(SPECIAL TIME) REVISED
AGENDA

Commission Chambers, 625 Center Street, Oregon City and Virtual via Zoom
Wednesday, August 11, 2021 at 7:00 PM

Ways to participate in this public meeting:
- *Attend in person, location listed above.*
- *Register to provide electronic testimony (email planning@orcity.org or call 503.722.3789 by 3 p.m. on the day of the meeting to register)*
- *Email planning@orcity.org (encouraged to submit written testimony via email by 3 p.m. on the day of the meeting)*
- *Mail to City of Oregon City, Attn: Planning Division, P.O. Box 3040, Oregon City, OR 97045*

CALL TO ORDER

ADOPTION OF THE AGENDA

Committee members have the opportunity to move items to New Business/Discussion Items from Communications if they are interested in discussion. The Committee may also add an item to the agenda with the consensus of the Committee.

PRESENTATIONS

1. Kendall Reid, Parks and Recreation Director

APPROVAL OF MINUTES

Please review minutes prior to meeting.

2. Draft NRC Minutes: 1.8.20, 4.10.19, 3.13.19, & 2.13.19

PUBLIC COMMENT

Citizens are allowed up to 3 minutes to present information relevant to the City but not listed as an item on the agenda. The Chair has the discretion to waive limitations. Prior to speaking, citizens shall complete a comment form and deliver it to the Staff Member. The Natural Resources Committee does not generally engage in dialog with those making comments but may refer the issue to the City Manager.

NEW BUSINESS

3. 1155 Kamm Street and 279 Warner Milne Road Development Proposal in the Natural Resources Overlay District

OLD BUSINESS

4. Street Tree List Update

COMMUNICATIONS

FUTURE AGENDA ITEMS

ADJOURNMENT

PUBLIC COMMENT GUIDELINES

Complete a Comment Card prior to the meeting and submit it to the City Recorder. When the Mayor/Chair calls your name, proceed to the speaker table, and state your name and city of residence into the microphone. Each speaker is given three (3) minutes to speak. To assist in tracking your speaking time, refer to the timer on the table.

As a general practice, the City Commission does not engage in discussion with those making comments.

Electronic presentations are permitted but shall be delivered to the City Recorder 48 hours in advance of the meeting.

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 at www.orcity.org 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.

City of Oregon City

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

Meeting Minutes - Draft

Natural Resources Committee

Wednesday, January 8, 2020 | **7:00 PM** | **Commission Chambers**

7:00 PM - Work Session

1. Interview Applicant - Devon Pilney

7:30 PM - Regular Meeting

1. Call to Order

Chair Warness called the meeting to order at 7:30 PM.

Present: 4 - Nancy Broshot, Doug Neeley, Mike Hamilton and Trent Warness

Absent: 1 - Marie Holladay

Staffers: 1 - Pete Walter

2. Agenda Analysis

3. Annual Election of New Officers

3a. Annual Election of Natural Resources Committee officers for 2020

A motion was made by Committee Member Neeley, seconded by Committee Member Hamilton, to elect Nancy Broshot as Chair for 2020. The motion carried by the following vote:

Aye: 4 - Nancy Broshot, Doug Neeley, Mike Hamilton and Trent Warness

A motion was made by Committee Member Warness, seconded by Committee Member Neeley, to elect Mike Hamilton as Vice Chair for 2020. The motion carried by the following vote:

Aye: 4 - Nancy Broshot, Doug Neeley, Mike Hamilton and Trent Warness

4. Approval of the Minutes

4a. Approval of Minutes for February 13, March 13, and April 10, 2019

This item was tabled to the next meeting.

5. Citizen Comments on Issues and Items not on the Agenda

Denyse McGriff, resident of Oregon City, thanked the Committee in advance for their future work on an ordinance regarding trees on public property.

6. Presentations

The presentation from Audobon was postponed until March.

7. General Business

7a. Heritage Tree Nominations for 910 Linn Ave, 810 Jackson St, and 412 Logus St

Pete Walter, Planner, reviewed the 2019 Heritage Tree nominations on private property. They were for a Sugar Maple at 901 Linn Avenue, American Sycamore at 810 Jackson Street, and Northern Red Oak at 412 Logus Street. He discussed the approval criteria.

Brian Carrier and Gretchen Nation owned the tree on Jackson Street. They had bought their house because of this tree and discussed the importance of maintaining the character of Oregon City and protecting the trees. They thought the fines for cutting down trees should be raised.

Carla Love said her neighbor owned the tree on Logus Street. She explained the history of the nearby houses and tree. The Barclay Hills Neighborhood Association had passed a tree resolution to preserve as many trees in the neighborhood as possible.

Dorothy Dahlsrud discussed the tree on Linn Avenue and why it was special. She suggested these trees be honored on Arbor Day this year.

Roger Fowler-Thias, resident of Oregon City, said the Oregon City Parks Foundation had been working in Water Board Park to save the tree canopy there. He discussed the importance of large trees to the environment.

Denyse McGriff, resident of Oregon City, discussed how these trees were connected to historic sites. She was in favor of these nominations.

A motion was made by Committee Member Broshot, seconded by Committee Member Hamilton, to approve the Heritage Tree nominations for 910 Linn Ave, 810 Jackson St, and 412 Logus St. The motion carried by the following vote:

Aye: 4 - Nancy Broshot, Doug Neeley, Mike Hamilton and Trent Warness

7b. Forest Edge Apartments NROD / Geologic Hazard / Site Plan Review (Planning Files GLUA 19-0008: SP-19-00127, NROD-19-00012, GEO 19-00012)

Mr. Walter summarized the Forest Edge Apartments NROD / Geologic Hazard / Site Plan Review application. The primary goal was to remove water from the hillside and provide an emergency access route for the existing development. The City Commission had called this application up for review. He explained the applicable criteria, stormwater outfall, dewatering wells, and service road reconnection.

Brian Lee, Pace Engineering, gave a background on the new owner of the property and the dewatering wells that had stabilized the soils.

There was discussion regarding the dewatering wells, stormwater management, safety of the groundwater going to the creek, geotechnical analysis, future development in steep slopes, and impacts to the surrounding area.

8. Member Reports

Chair Warness said Committee Member Holladay was resigning from the Committee.

A motion was made by Committee Member Neeley, seconded by Committee Member Hamilton, to recommend to the Mayor the appointment of Devon Pilney to the Natural Resources Committee. The motion carried by the following vote:

Aye: 4 - Nancy Broshot, Doug Neeley, Mike Hamilton and Trent Warness

9. Staff Reports

Mr. Walter reported on the policy for notification and decision making for tree removal on City owned property, Canemah wetlands application, Tyrone S Woods Memorial Park, Stormwater Master Plan update, Tree City USA application, Heritage Tree applications, Audobon presentation in March, Geologic Hazard Code update, Planning for Pollinators webinar, Comprehensive Plan update funding, and Scattering Canyon watershed improvement project.

10. Future Agenda Items

Patti Webb, resident of Oregon City, asked about the Canemah wetland application. Mr. Walter clarified it was for the wetland on the Canemah Cottage Homes development site. He further explained what was included in the application.

Mr. Walter reviewed upcoming agenda items.

Committee Member Neeley suggested a presentation from Metro on the trail system and property by the cemetery that Metro wanted to purchase.

11. Next Scheduled Meeting - February 12, 2020

12. Adjourn

Chair Warness adjourned the meeting at 8:43 PM.

City of Oregon City

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

Meeting Minutes - Draft

Natural Resources Committee

Wednesday, April 10, 2019 | **7:00 PM** | **Commission Chambers**

1. Call to Order

Vice Chair Warness called the meeting to order at 7:00 PM.

Present: 5 - Matt Kuhl, Doug Neeley, Marie Holladay, Mike Hamilton and Trent Warness

Absent: 2 - Jerry Herrmann and Nancy Broshot

Staffers: 4 - Pete Walter, Aleta Froman-Goodrich, John Lewis and Bob Balgos

2. Agenda Analysis

3. Election of Officers

Pete Walter, Planner, reviewed the Bylaws for the election of officers.

Trent Warness was nominated to be Chair and Matt Kuhl was nominated to be Vice Chair. The Secretary position was not filled.

There was discussion regarding removing the Secretary position from the Bylaws as it was not needed.

4. Presentations

Bob Balgos, Project Engineer; Aleta Froman-Goodrich, City Engineer; and John Lewis, Public Works Director; gave a presentation on the updates to the Stormwater Master Plan. They gave a background on the stormwater system and Stormwater Master Plan, planning context, Stormwater Master Plan process, identified problem areas, Master Plan recommendations, and proposed capital projects.

There was discussion regarding the stormwater system, projects in the plan, and funding.

Committee Member Neeley arrived at 7:30 PM.

5. Public Comments

There were no public comments on non-agenda items.

6. Old Business

6a. Recap and Discussion of the Feb. 25, 2019 Joint Planning Commission /

NRC Worksession

Mr. Walter gave a recap of the February 25, 2019 joint Planning Commission and NRC Work Session where the purpose of the NRC, NRC comments on Planning Commission and City Commission decisions, overview of projects and accomplishments, and future NRC Workplan were discussed.

There was discussion regarding thresholds for applications to come to the NRC, changes to the Heritage Tree program, possible private tree policy, and preserving large trees in the City.

7. New Business / Discussion Items

Mr. Walter reviewed the priorities on the NRC's Workplan that were put on the 2019-2021 Selected Activities List. Mr. Walter would add the suggestions from the Work Session to the Workplan and bring it back to the Committee.

8. Communications

Committee Member Neeley had made a presentation to the Parks and Recreation Advisory Committee about the NRC's goals and issues.

Mr. Walter gave an update on proposed Code amendments that would be going to the City Commission for approval and Beavercreek Road Concept Plan.

Committee Member Neeley discussed the landscaping modifications to the Cove site.

9. Future Agenda Items

Mr. Walter said there had been a request for a presentation by Brian Vaughn from Metro on Newell Creek Canyon and the Riverwalk. The Committee would also like a tour of the Riverwalk site.

Committee Member Neeley suggested the Greater Oregon City Watershed Council give a presentation on future projects.

10. Adjournment

Chair Warness adjourned the meeting at 8:17 PM.

City of Oregon City

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

Meeting Minutes - Draft

Natural Resources Committee

Wednesday, March 13, 2019 | **7:00 PM** | **Commission Chambers**

Regular Meeting

1. Call to Order

Chair Neeley called the meeting to order at 7:00 PM.

Present: 4 - Jerry Herrmann, Nancy Broshot, Doug Neeley and Dorothy Dahlsrud

Absent: 2 - Matt Kuhl and Trent Warness

Staffers: 1 - Pete Walter

2. Agenda Analysis

Chair Neeley discussed the interviews that had taken place before the meeting for two open Committee seats. The decision would be made at the end of the meeting.

Committee Member Hermmann suggested creating a committee for the Cove project to make suggestions for integrating the down woody material in the project, grading of the banks, and preservation of trees.

Pete Walter, Planner, shared the preliminary grading plans for Phase 2 of the Cove project.

3. Election of Officers

There was consensus to postpone this item until all the Committee openings had been filled.

4. Public Comments

There were no public comments on non-agenda items.

5. Old Business

Mr. Walter reviewed what was discussed at the February Work Session with the Planning Commission and NRC. He also discussed the upcoming projects that would be of interest to the NRC.

6. New Business/Discussion Items

Committee Member Broshot discussed proposed changes to the Heritage Tree Code.

There was discussion and clarification of the changes.

Committee Member Broshot would make the recommended edits and bring it back to the Committee.

Chair Neeley discussed how they would tally their votes for the candidates for the open Committee seats. The two candidates who received the most points were Marie Holladay and Michael Hamilton.

Chair Neeley suggested creating a Heritage Tree Subcommittee of the NRC and that Dorothy Dahlsrud be a member of that subcommittee. This suggestion would be discussed at the next meeting.

7. Communications

Committee Member Dahlsrud reported on how she was trying to promote the Vaux's Swifts in Oregon City. There was discussion regarding preserving the chimney downtown for the Swifts. She discussed other birds in the area and how they could promote birdwatching in the City. She also discussed ivy pulls that were happening in the City.

Committee Member Herrmann announced on June 1 the River Assets and Opportunities Task Force would hold boat tours. He discussed a grant that he was using to plant wildflowers on the Promenade and Museum of the Oregon Territory.

Chair Neeley discussed how the Clackamas River Partnership would be receiving grants for upcoming projects on Abernethy Creek and Newell Creek.

Committee Member Broshot discussed environmental studies programs at Linfield College.

There was discussion regarding the process for stream naming.

Mr. Walter discussed future agenda items. The Oregon City Enhancement and Arbor Day Celebration would be on April 6. He discussed how the NRC could submit articles for Trail News.

8. Future Agenda Items

9. Adjournment

Chair Neeley adjourned the meeting at 8:40 PM.

City of Oregon City

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

Meeting Minutes - Draft

Natural Resources Committee

Wednesday, February 13, 2019 **7:00 PM** **Commission Chambers**

1. Call to Order

Chair Neeley called the meeting to order at 7:00 PM.

Present: 6 - Jerry Herrmann, Matt Kuhl, Nancy Broshot, Doug Neeley, Dorothy Dahlsrud and Trent Warness

Staffers: 1 - Pete Walter

2. Agenda Analysis

The agenda was adopted as presented.

3. Public Comments

There were no public comments on non-agenda items.

4. Old Business

4a. Discussion / Preparation for Joint Work Session with Planning Commission

Pete Walter, Planner, said the joint Work Session between the Planning Commission and NRC would be held on February 25, 2019. He explained the purpose of the meeting.

It was suggested to add a discussion on the Cove project and the reduction of the buffer from 200 feet to 50 feet and requiring native plantings up to the 200 feet and beyond.

Chair Neeley discussed staff's recommendations to the City Commission regarding updating the tree regulations City-wide including Heritage Trees after the Comprehensive Plan was updated. Staff also thought $300 per year could be allocated to the NRC for arborist reports.

There was discussion regarding the nomination process and maintenance of Heritage Trees.

Chair Neeley reported on possible processes for geologic significance designation.

5. New Business/Discussion Items

5a. NRC Workplan Review

Mr. Walter gave a background on the NRC's Workplan including the Mission Statement and Committee responsibilities.

The NRC reviewed the Workplan goals and added and removed items from the list.

Committee Member Herrmann arrived at 7:42 PM.

There was discussion regarding the Cove development including native plantings and dark skies elements.

There was consensus to send a letter of appreciation to the Cove for moving forward with these recommendations.

There was further discussion regarding updating the City's tree code.

Committee Member Dahlsrud proposed a youth program where groups would identify and age trees in the City and put wanted posters on the trees to raise awareness of the Heritage Tree program. Chair Neeley suggested she take this idea to the Parks and Recreation Advisory Committee and Parks Department.

The NRC then prioritized the items on the Workplan.

Mr. Walter would make the recommended changes and send a copy to the NRC.

6. Approval of the Minutes

Draft NRC Minutes for April 11, 2018

A motion was made by Committee Member Dahlsrud, seconded by Committee Member Kuhl, to approve the NRC minutes for April 11, 2018. The motion carried by the following vote:

Aye: 6 - Jerry Herrmann, Matt Kuhl, Nancy Broshot, Doug Neeley, Dorothy Dahlsrud and Trent Warness

7. Communications

Mr. Walter reported that the City's application for Tree City USA had been approved. He gave an update on the Development Code amendments process, Willamette Falls Legacy Project, McLoughlin Canemah Trail project, Canemah wetlands, and Beavercreek Road Concept Plan implementation.

Committee Member Dahlsrud had been doing outreach to the various neighborhood associations on ivy removal and heritage trees and discussed educational opportunities and putting timelines on the larger trees in the City.

Committee Member Herrmann discussed the grading plan and down woody material for the Cove. He reported on recycling opportunities at the End of the Oregon Trail Center and the River Assets and Opportunities Task Force meeting.

Chair Neeley talked about the stream naming effort of the Greater Oregon City

Watershed Council. He also discussed a study on lamprey distribution.

8. Future Agenda Items

The Committee made suggestions for future agenda items.

9. Adjournment

Chair Neeley adjourned the meeting at 9:34 PM.

Oregon
Kate Brown, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

July 15, 2021

Ron Laughlin
401 6th Street
Oregon City, OR 97045

Re: WD # 2021-0272 **Approved**
Wetland Delineation Report for the Kamm Street Apartments
Clackamas County; T3S R2E S5CB TLs 1400 and1402

Dear Mr. Laughlin:

The Department of State Lands has reviewed the wetland delineation report prepared by Harper Houf Peterson Righellis Inc. for the site referenced above. Based upon the information presented in the report, we concur with the waterway boundaries as mapped in Figure 6 of the report. Please replace all copies of the preliminary wetland map with this final Department-approved map.

Within the study area, one drainage, with both ephemeral and intermittent reaches, was identified. The intermittent reach is subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). The ephemeral reach is exempt per OAR 141-085-0510(49).

This concurrence is solely for purposes of the state Removal-Fill Law. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Since measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction. Individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. If you have any questions, please contact the Jurisdiction Coordinator for Clackamas County, Chris Stevenson, PWS, at (503) 986-5246.

Sincerely,

Peter Ryan, SPWS
Aquatic Resource Specialist

Enclosures

ec: Ivy Watson, Harper Houf Peterson Righellis Inc.
Oregon City Planning Department (Maps enclosed for updating LWI)
Trey Fraley, Corps of Engineers
Michael De Blasi, DSL

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at: https://apps.oregon.gov/DSL/EPS/program?key=4.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.** A single PDF of the completed cover from and report may be e-mailed to: **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

Contact and Authorization Information

☐ Applicant ☒ Owner Name, Firm and Address:
Ron Laughlin
401 6th Street
Oregon City, OR 97045

Business phone # (503) 257-8105
Mobile phone # (optional) (503) 784-0206
E-mail: ronald.laughlin.law@gmail.com

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Ron Laughlin **Signature:** [signature]
Date: 5-11-2021 Special instructions regarding site access: ____

Project and Site Information

Project Name: Kamm Street Apartments

Latitude: 45.337114° Longitude: -122.596265°
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
Multi-family apartments

Tax Map # 32E05CB
Tax Lot(s) 1400, 1402

Tax Map #
Tax Lot(s)

Project Street Address (or other descriptive location):
1155 Kamm Street and 279 Warner Milne Road

Township 3S Range 2E Section 05 QQ SW 1/4

Use separate sheet for additional tax and location information

City: Oregon City County: Clackamas

Waterway: River Mile:

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Ivy Watson, Harper Houf Peterson Righellis Inc.
205 SE Spokane Street
Suite 200
Portland, OR 97202

Phone # (503) 221-1131
Mobile phone # (if applicable)
E-mail: ivyw@hhpr.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.
Consultant Signature: Ivy Watson Date: 05/11/2021

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No Study Area size: 0.86 Total Wetland Acreage: 0.0000

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr: ____
☐ Wetland restoration/enhancement project (not mitigation)
☐ Previous delineation/application on parcel
If known, previous DSL # ____

☐ Fee payment submitted $ 475
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # ____ Expiration date ____
☐ LWI shows wetlands or waters on parcel
Wetland ID code ____

For Office Use Only

DSL Reviewer: CS Fee Paid Date: ____ / ____ / ____ DSL WD # 2021-0272

Date Delineation Received: 05 / 21 /2021 Scanned: ☐ Electronic: ☒ DSL App.# ____

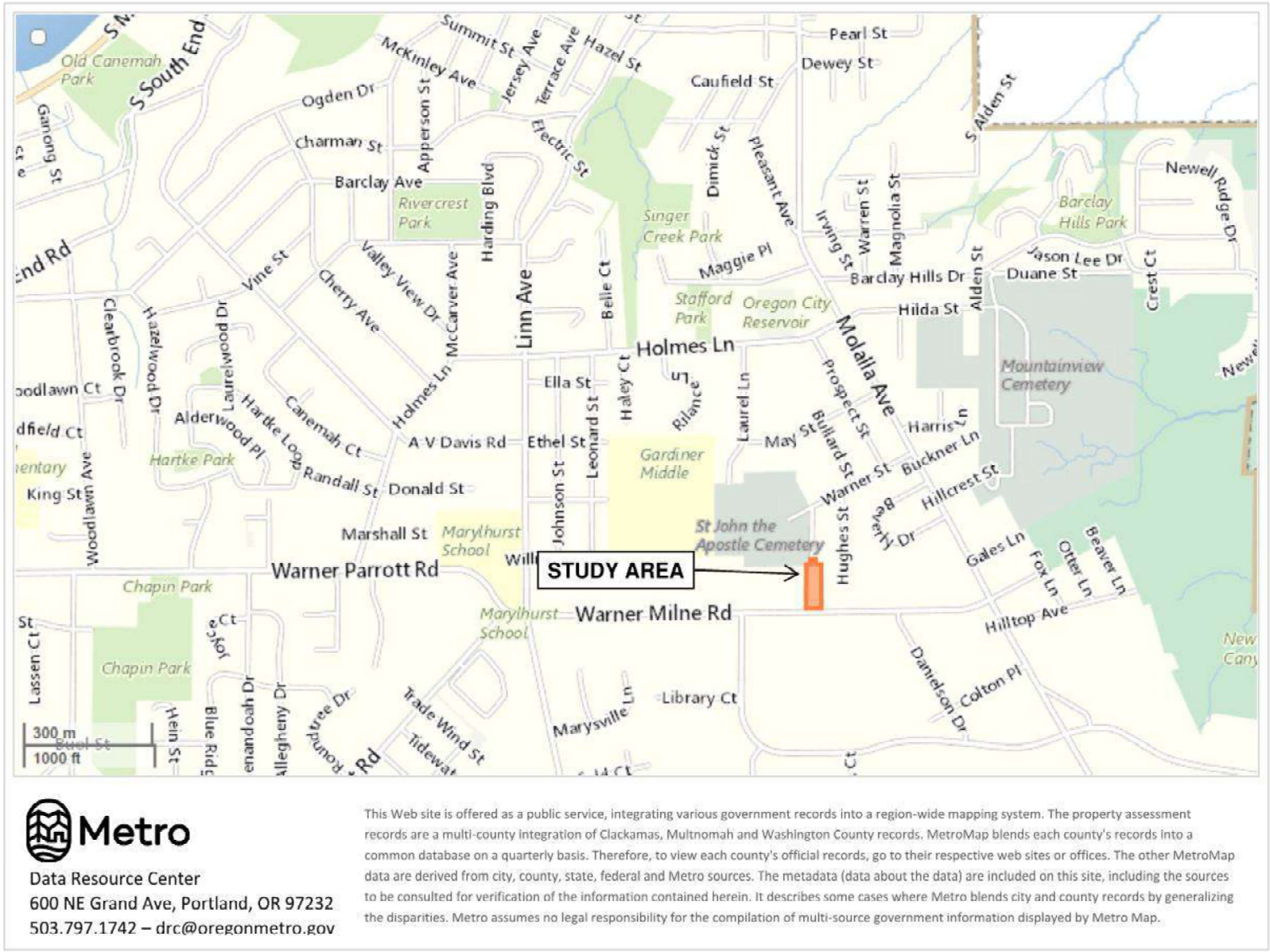


Figure 1: Vicinity Map

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

Harper Houf Peterson Righellis Inc.
ENGINEERS ♦ PLANNERS
LANDSCAPE ARCHITECTS ♦ SURVEYORS

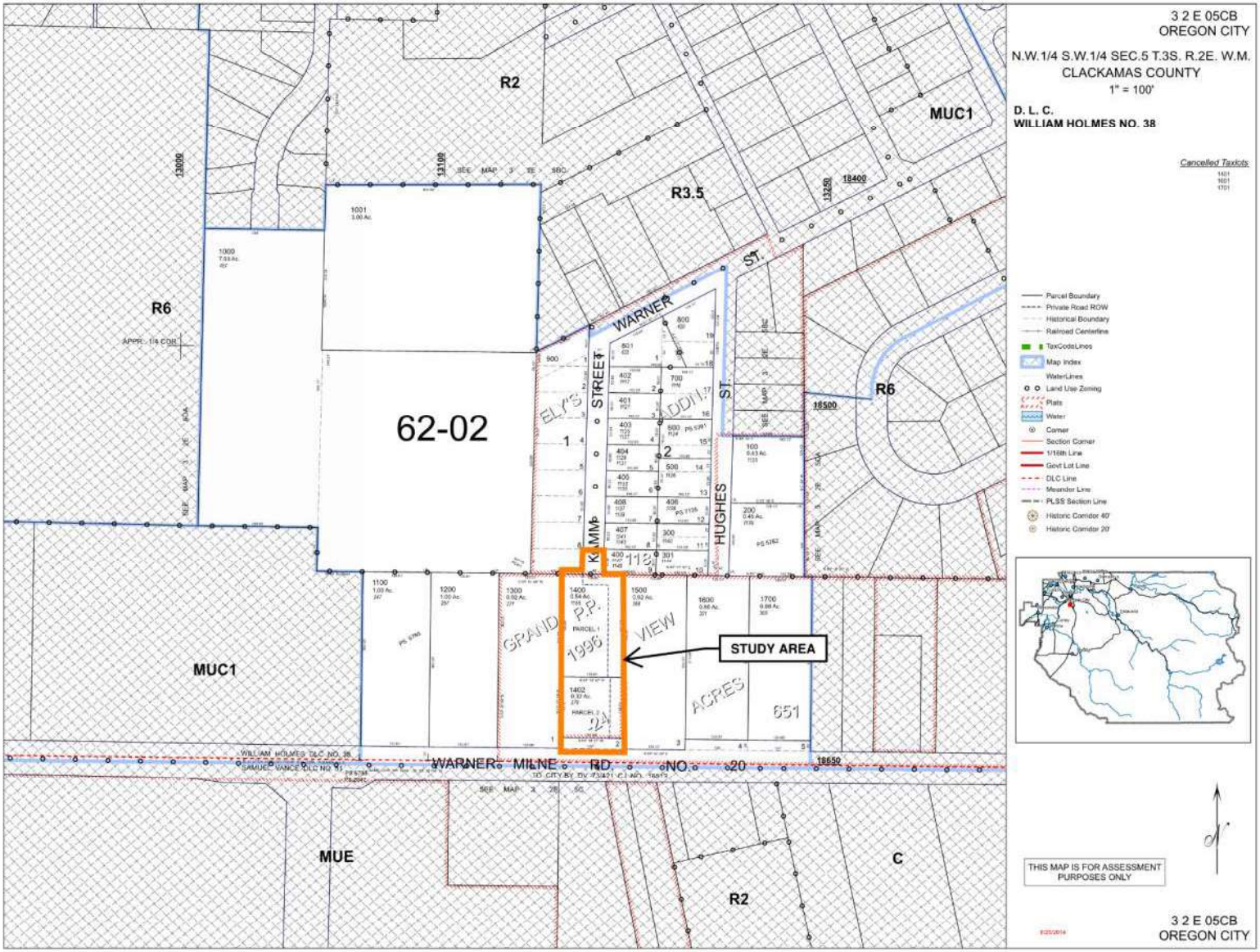
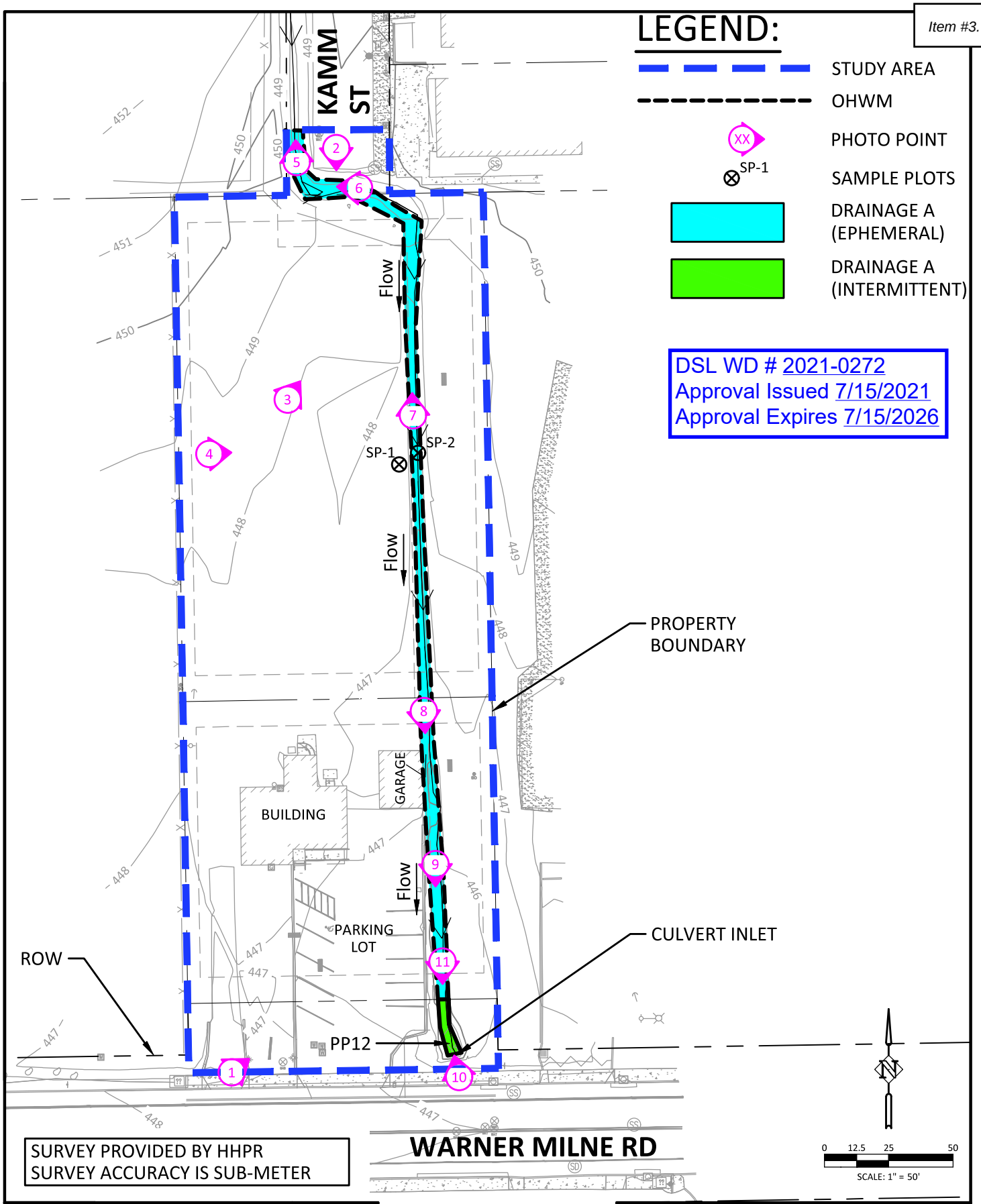


Figure 2: Tax Lot Map

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

Harper Houf Peterson Righellis Inc.
ENGINEERS ♦ PLANNERS
LANDSCAPE ARCHITECTS ♦ SURVEYORS



SHEET NO.				DESIGNED:
1				HHPR
				DRAWN: HHPR
				CHECKED: HHPR
JOB NO. JGW-01	DATE	NO.	DESCRIPTION	DATE: ---
	R E V I S I O N S			

Harper Houf Peterson Righellis Inc.
ENGINEERS◆PLANNERS
LANDSCAPE ARCHITECTS◆SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

FIGURE 6
KAMM STREET APARTMENTS
WETLAND DELINEATION
OREGON CITY, OREGON

Wetland and Waters of the U.S. and State Delineation Report

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

May 2021

Prepared by:

Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
PHONE: 503.221.1131 www.hhpr.com FAX: 503.221.1171

Prepared for:

Ron Laughlin
401 6th Street
Oregon City, Oregon 97045

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A. LANDSCAPE SETTING AND LAND USE

The study area addressed in this report encompasses two adjoining tax lots and public right-of-way (ROW) in Oregon City, Oregon: tax lot 32E05CB01400, located at 1155 Kamm Street, tax lot 32E05CB01402, located at 279 Warner Milne Road, and adjoining ROW for Kamm Street and Warner Milne Road.

The study area (Figure 6, Appendix A) is approximately 0.86 acres within the Abernethy Creek-Willamette River watershed (HUC12 1709000704). The study area is within Oregon City city limits. Surrounding land use is residential (single and multi-family), services, retail, city streets, vacant land to the west, and a cemetery to the northeast (Saint John the Apostle Cemetery). The study area is comprised of a building, garage, landscaping, and parking lot accessed from Warner-Milne Road and an open field in the back (abutting Kamm Street). The site is generally level. A drainage channel is present along the eastern edge of the site.

The USDA Natural Resource Conservation Service (NRCS) Web Soil Survey (2020) identifies one soil map unit within the study area (Figure 4): Bornstedt silt loam, 0 to 8 percent slopes (map unit symbol 8B). Bornstedt silt loam is moderately well drained and not rated as hydric. This map unit contains two minor components that are rated as hydric: Borges, comprising 5 percent of the map unit, and Aquults, comprising 1 percent of the map unit.

Vegetation within the study area is comprised of a disturbed field plant community dominated by non-native pasture grasses (e.g. tall fescue [*Schedonorus arundinaceus*], orchard grass [*Dactylis glomerata*], common velvet grass [*Holcus lanatus*], colonial bentgrass [*Agrostis capillaris*], sweet vernal grass [*Anthoxanthum odoratum*]), and soft brome [*Bromus hordeaceus*]) and weedy forbs (e.g. common dandelion [*Taraxacum officinale*], rough cat's ear [*Hypochaeris radicata*], white clover [*Trifolium repens*], Queen Anne's lace [*Daucus carota*], hairy bittercress [*Cardamine hirsuta*], stinking willie [*Jacobaea vulgaris*], English plantain [*Plantago lanceolata*], and purple dead nettle [*Lamium purpureum*]). Trees and Himalayan blackberry have been cleared from the site periodically, including in recent years. Remaining trees are located at the site boundary and include sweet cherry (*Prunus avium*), crabapple (*Malus* sp.), one Western red cedar (*Thuja plicata*), one ponderosa pine (*Pinus ponderosa*), one black cottonwood (*Populus balsamifera*), one Douglas fir (*Pseudotsuga menziesii*), and one Oregon white oak (*Quercus garryana*).

B. SITE ALTERATIONS

Soil in the drainage channel shows evidence that the channel was excavated at some point in the past (see SP2 data form). Google Earth archived aerial imagery (Google 2021) shows the channel in its current location since at least 2002. These aerials also show that periodic brush and tree clearing has been a part of routine maintenance on the Kamm

Street lot for at least the past two decades. As a result, the site vegetation has shifted multiple times between open field and thickets of Himalayan blackberry and saplings.

In conversation with HHPR during the field investigation, a neighboring resident (parcel to the east) stated that during storm events the channel used to backup and flood at the culvert under Warner Milne Road until the city replaced it with a larger culvert. Aerial images suggest that this culvert upgrade likely took place in 2010 (Google 2021).

C. PRECIPITATION DATA AND ANALYSIS

The field investigation was conducted on April 12 and 15, 2021. The Oregon City weather station recorded 0 inches of precipitation during the delineation period (April 12th to 15th) and 0.03 inches of precipitation in the 14 days prior to the site visit (AgACIS 2021). The total precipitation for the water year to-date (October 2020 through March 2021) was 38.31 inches. Precipitation in the 3 months prior to the site visit was compared to the normal range (Table 1) using a weighted time and antecedent precipitation method (USDA NRCS 2015).

Table 1. Summary of precipitation (inches) at the Oregon City, OR weather station for the three months prior to the delineation, compared to normal ranges (AgACIS 2021).

		WETS DATA							
	Month	30% Probability Less Than	Average Precipitation	30% Probability More Than	Recorded Precipitation	Weighting Factor	Weighted 30% Probability Less Than	Weighted 30% Probability More Than	Weighted Recorded Precipitation
3rd Month Prior	Jan 2021	4.35	6.59	7.91	9.71	1	4.35	7.91	9.71
2nd Month Prior	Feb 2021	3.92	5.51	6.53	5.32	2	7.84	13.06	10.64
1st Month Prior	Mar 2021	3.56	4.69	5.46	3.09	3	10.68	16.38	9.27
							22.87	**37.35**	**29.62**

Precipitation in the 3 months prior to the delineation site visits was within the normal range, as shown in Table 1. Climatic/hydrologic conditions during the delineation are considered normal based on this analysis. However, as no rain fell in the 14 days prior to, or during, the delineation, additional steps were taken to evaluate site hydrology. Specifically, an auger hole was excavated to 24 inches in the drainage channel to evaluate Group A indicators and hyporheic flow and a streamflow duration assessment was completed.

D. METHODS

Potential wetlands and waters were identified prior to the site visit via a review of relevant materials, including: MetroMaps (Metro 2021); US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) (2021); City of Oregon City Local

Wetland Inventory (LWI) (Shapiro Inc. 1999); USDA NRCS Web Soil Survey (2021); and Google Earth archived aerial imagery from 1994-2020 (Google 2021).

HHPR natural resources scientists conducted a wetland determination and Ordinary High Water Mark (OHWM) delineation within the study area on April 12 and 15, 2021. HHPR performed a pedestrian review of the entire site. Two sample plots were established to review and document areas where geomorphic position, vegetation, or other indicators suggested wetland presence.

HHPR followed the three-parameter wetland delineation method described in the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (2010). Vegetation, soil, and hydrologic data for sample plots was recorded on US Army Corps of Engineers (USACE) Western Mountains, Valleys, and Coast data forms version 2.0 (USACE 2010). Plant names and wetland indicator status on the data forms follow the 2018 National Wetland Plant List (USACE 2018).

The OHWM determination was based on physical characteristics observed during the site visit, as described in USACE Regulatory Guidance Letter No. 05-05 (dated December 7, 2005) and Oregon Removal-Fill Rules (Oregon Administrative Rules [OAR] 141-085-0515(3)). Streamflow duration was determined following the method described in *Streamflow Duration Assessment Method for Oregon* (Nadeau 2011).

E. DESCRIPTION OF ALL WETLANDS AND NON-WETLAND WATERS

No wetland was identified within the study area. With the exception of the drainage channel, the site is generally level. Vegetation across the site, including in the channel, is fairly uniform, dominated by non-native pasture grasses and non-native forbs. Two sample plots were documented. The first sample plot (SP1) was located in a micro-depression in the field near the drainage channel. This location was identified as the most likely to contain wetland based on proximity to the channel and localized dominance of facultative species (compared to dominance of facultative-upland species elsewhere). The second sample plot (SP2) was located in the bottom of the drainage channel. Neither plot met all three wetland parameters. SP1 met the Dominance Test for hydrophytic vegetation, but lacked hydric soil and wetland hydrology indicators. SP2 met the redox dark surface hydric soil indicator but lacked hydrophytic vegetation, due to the abundance of forbs with a Facultative-Upland rating (i.e. rough cat's ear, English plantain, and common dandelion). SP2 also lacked primary wetland hydrology indicators. Group A hydrology indicators were evaluated in the 16-inch deep soil pit and an auger hole excavated in the bottom of the pit to a depth of 24 inches below the soil surface. No surface water, water table, or saturation was present. SP2 met the Geomorphic Position indicator, but lacked other secondary indicators.

HHPR delineated one drainage channel (Drainage A) within the study area. Drainage A is an excavated channel along the east edge of the study area. North of the study area, Drainage A is a roadside ditch on the west side of Kamm Street. Drainage A then turns east around the end of Kamm Street, then south again and continues in a straight channel to a culvert under Warner Milne Road. South of Warner Milne Road (outside of the study area) Drainage A continues to the southeast in a series of open channels, pipes, and culverts, then converges with a stream and wetland complex between Warner Milne Road and Beaver Creek Road. After this, its path is difficult to trace due to long underground sections. Based on the LWI, it appears likely that water from the drainage eventually reaches Newell Creek. Drainage A is not designated as Essential Salmonid Habitat (ESH).

HHPR delineated two distinct reaches within the study area: an upstream ephemeral reach and a downstream intermittent reach. Streamflow duration assessment forms are provided in Appendix D. The location, characteristics, extent, and anticipated jurisdictional determination for each reach are described below.

E.1 Drainage A - Upstream Reach

The upstream reach of Drainage A extends for approximately 370 feet within the study area, from the Kamm Street to a point approximately 20 feet north of Warner Milne Road (see Figure 6, Appendix A). This reach includes the channel as it passes through the open field, adjacent to the garage, and by a portion of the parking lot.

Within the upstream reach, the channel of Drainage A is typically narrow (3 to 8 feet wide), straight, and u-shaped in cross-section. The channel is grass-lined with vegetation similar to the surrounding field (e.g. colonial bentgrass, tall fescue, bluegrasses [*Poa* spp.], rough cat's ear, common selfheal [*Prunella vulgaris*], common dandelion, and English plantain).

Few indicators of OHWM were present within this reach. Vegetation and substrate were fairly uniform and channel morphology appeared to be the result of excavation rather than flow. At the end of Kamm Street, where the channel bends sharply, and at the south end near the transition to the downstream reach, scour marks were observed on the bank. These were used to extend the OHWM into the rest of the channel.

The channel was dry during the field investigation and no saturation or hyporheic flow was detected in an auger hole to a depth of 24 inches (located at SP2). Where present, scour marks in this reach are interpreted as the result of high flows in response to storm events. Conversations with neighbors confirmed that the channel fills quickly in response to storm events and has been known to flood (i.e., the flow regime is flashy). No aquatic macroinvertebrates were found in this reach. The upstream reach was determined to be ephemeral using the decision tree provided on the Streamflow Duration Field Assessment Form (Nadeau 2011).

DSL in unlikely to take jurisdiction over the upstream reach of Drainage A per OAR 141-085-0515(3) because it is an ephemeral stream.

USACE is unlikely to take jurisdiction over the upstream reach of Drainage A as a Water of the US under Section 404 of the Clean Water Act as it is an ephemeral stream (33 CFR sections 328.3(b)(3)), meaning that surface water flowing and pooling is only in response to precipitation (CFR section 328.3(c)(3).

E.2 Drainage A – Downstream Reach

The downstream reach of Drainage A extends from Warner Milne Road to a point approximately 20 feet upstream. In the downstream reach the channel is mostly bare, with slightly undercut banks, and a pool (approximately 6 feet wide by 10 feet long) at the culvert inlet. The upstream extend of this reach was defined based on the point where the channel begins to consistently exhibit a bare bed and scour on the banks, and a lip where the channel drops down into the pool area. The channel was dry during the field investigation. Standing water was observed in the channel south of Warner Milne Road, downstream of the study area.

Various sources contribute to an increased volume of water in the downstream reach. Scour marks below the garage roof and next to the parking lot indicate significant runoff from these impervious surfaces during storm events. There is also a pipe outfall from the parking lot at the upstream reach boundary, but this was clogged with debris and did not appear to convey a significant volume of water. Near the inlet to the Warner Milne Road culvert, a pipe outfall discharges into the channel from storm drains in the street and possibly the parking lot to the east. Inside the culvert, another pipe outfall discharges stormwater from the street into the channel. These additional inputs correspond to the change in the character of the stream channel.

The macroinvertebrate survey identified the shells of several dozen aquatic snails (*Juga* sp.) and one living specimen amongst the riprap in the pool area by the culvert inlet. These likely migrate into the study area from downstream in winter and were stranded. The downstream reach was determined to be intermittent using the decision tree provided on the Streamflow Duration Field Assessment Form (Nadeau 2011).

DSL will likely take jurisdiction over the downstream reach of Drainage A as a stream per OAR 141-085-0515(3) because it is intermittent.

USACE may take jurisdiction over the downstream reach of Drainage A as a Water of the US under Section 404 of the Clean Water Act if it is determined to be a naturally occurring stream that contributes intermittent surface water flow to a traditional navigable water (Willamette River) in a typical year through one or more tributaries (33 CFR Sections 328.3(a)(2) and (c)(12), USACE and EPA 2020).

F. DEVIATION FROM LWI OR NWI

The study area is located within the City of Oregon City LWI (Shapiro Inc. 1999) (Figure 3a). The LWI shows a stream feature along the eastern edge of the study area that corresponds to Drainage A. The LWI does not specify the flow regime of the stream feature.

The NWI does not show any wetlands or waters within the study area (Figure 3b).

G. REQUIRED DISCLAIMER

This report documents the investigation, best professional judgement and conclusions of the investigator. It is correct and complete to the best of my 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 DSL in accordance with OAR 141-090-0005 through 141-090-0055.

H. MAPPING METHOD

HHPR natural resources staff flagged features in the field. Each flag was surveyed by HHPR Professional Land Surveyors to sub-meter accuracy.

I. ADDITIONAL INFORMATION

None.

J. RESULTS AND CONCLUSIONS

Based on the results of the site investigation, HHPR identified one drainage channel (Drainage A) with two reaches (upstream and downstream), within the study area. Characteristics of these reaches are summarized below.

Drainage A—Upstream Reach:

- 370 linear feet within the study area
- Ephemeral
- Not designated ESH
- Likely non-jurisdictional to DSL and USACE

Drainage A—Downstream Reach:

- 20 linear feet within the study area

- Intermittent
- Not designated ESH
- Likely jurisdictional to DSL and USACE

K. REFERENCES

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Appendix A: Figures

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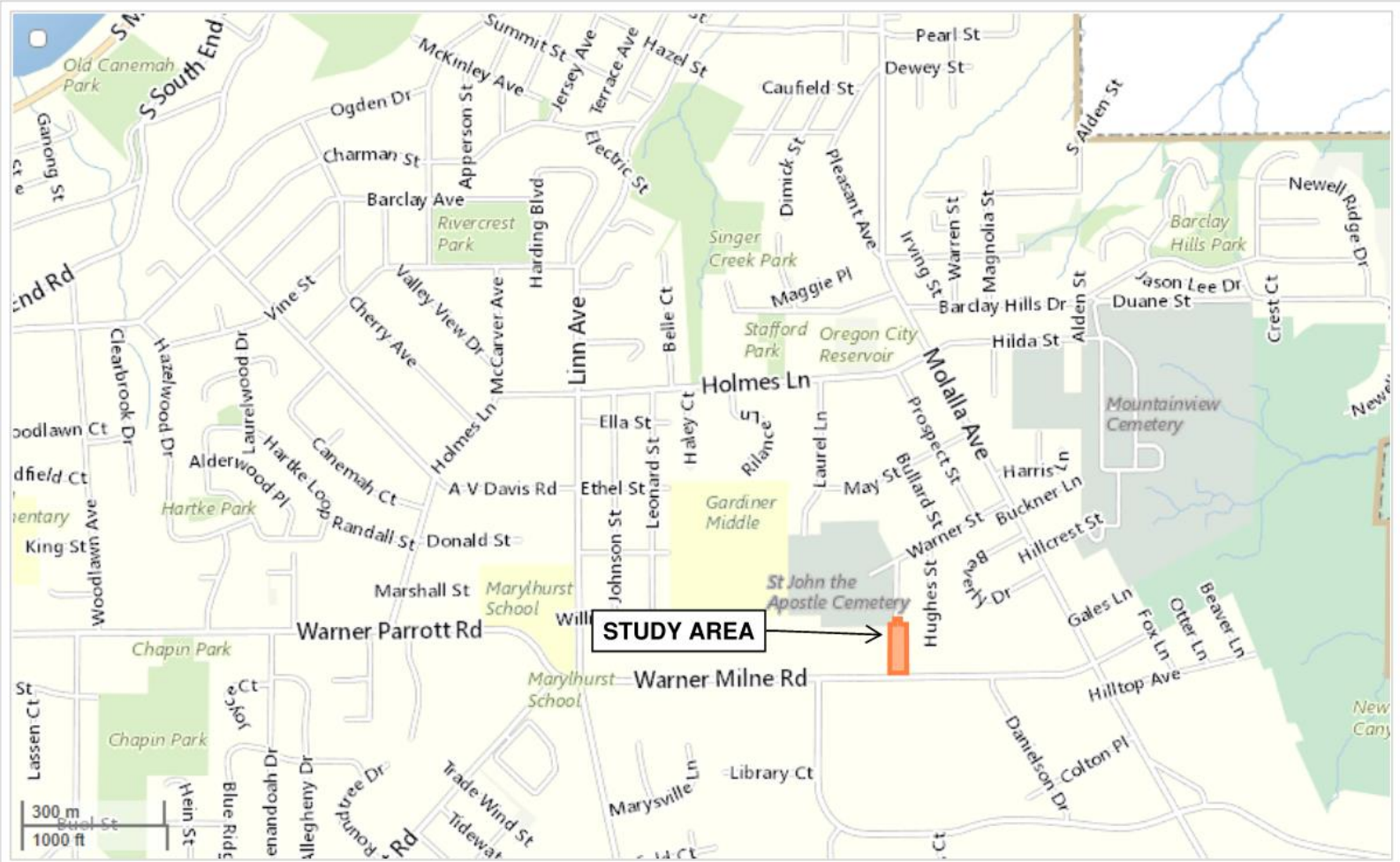

Metro

Data Resource Center
600 NE Grand Ave, Portland, OR 97232
503.797.1742 – drc@oregonmetro.gov

This Web site is offered as a public service, integrating various government records into a region-wide mapping system. The property assessment records are a multi-county integration of Clackamas, Multnomah and Washington County records. MetroMap blends each county's records into a common database on a quarterly basis. Therefore, to view each county's official records, go to their respective web sites or offices. The other MetroMap data are derived from city, county, state, federal and Metro sources. The metadata (data about the data) are included on this site, including the sources to be consulted for verification of the information contained herein. It describes some cases where Metro blends city and county records by generalizing the disparities. Metro assumes no legal responsibility for the compilation of multi-source government information displayed by Metro Map.

Figure 1: Vicinity Map

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

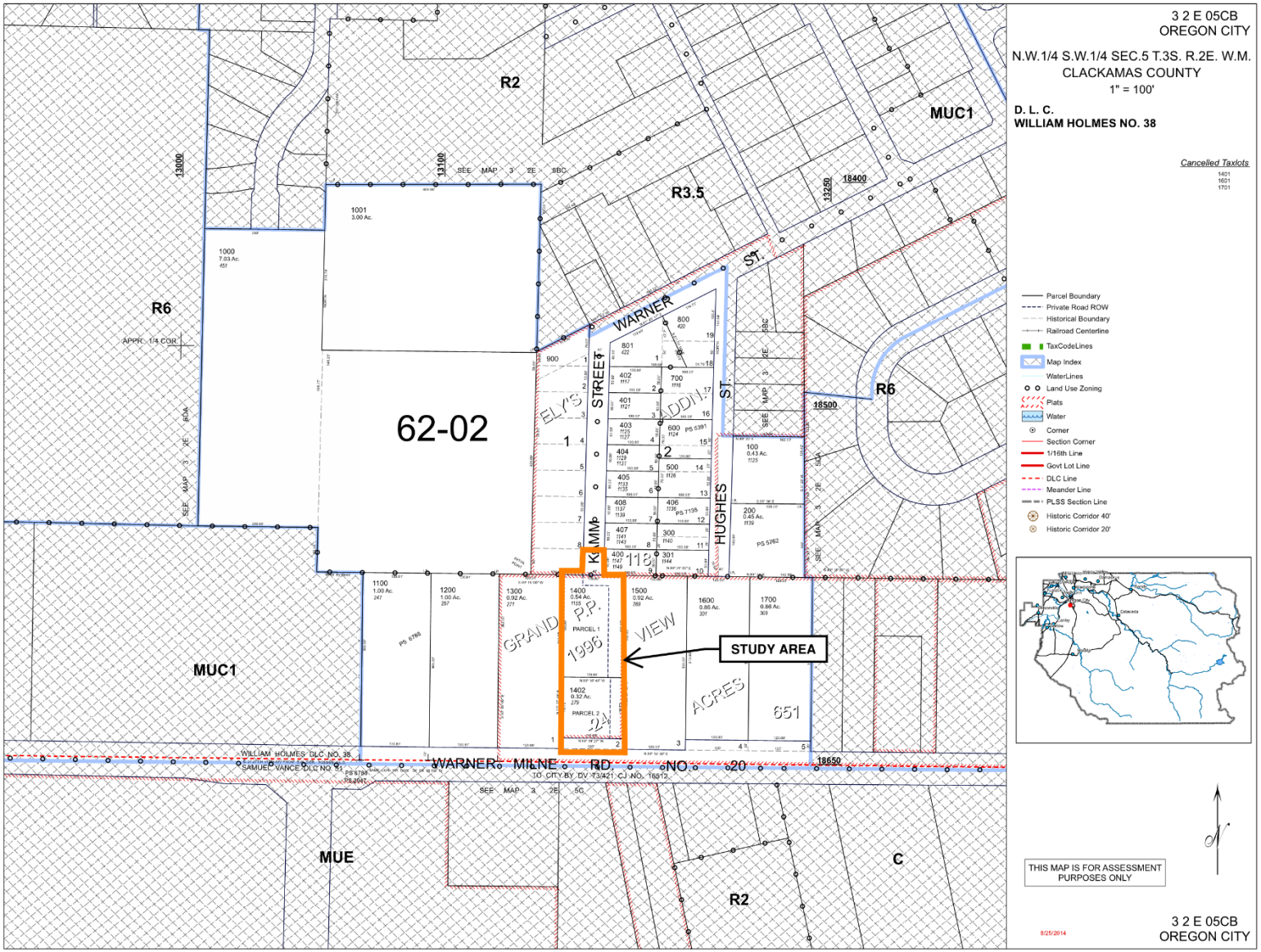

Figure 2: Tax Lot Map

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

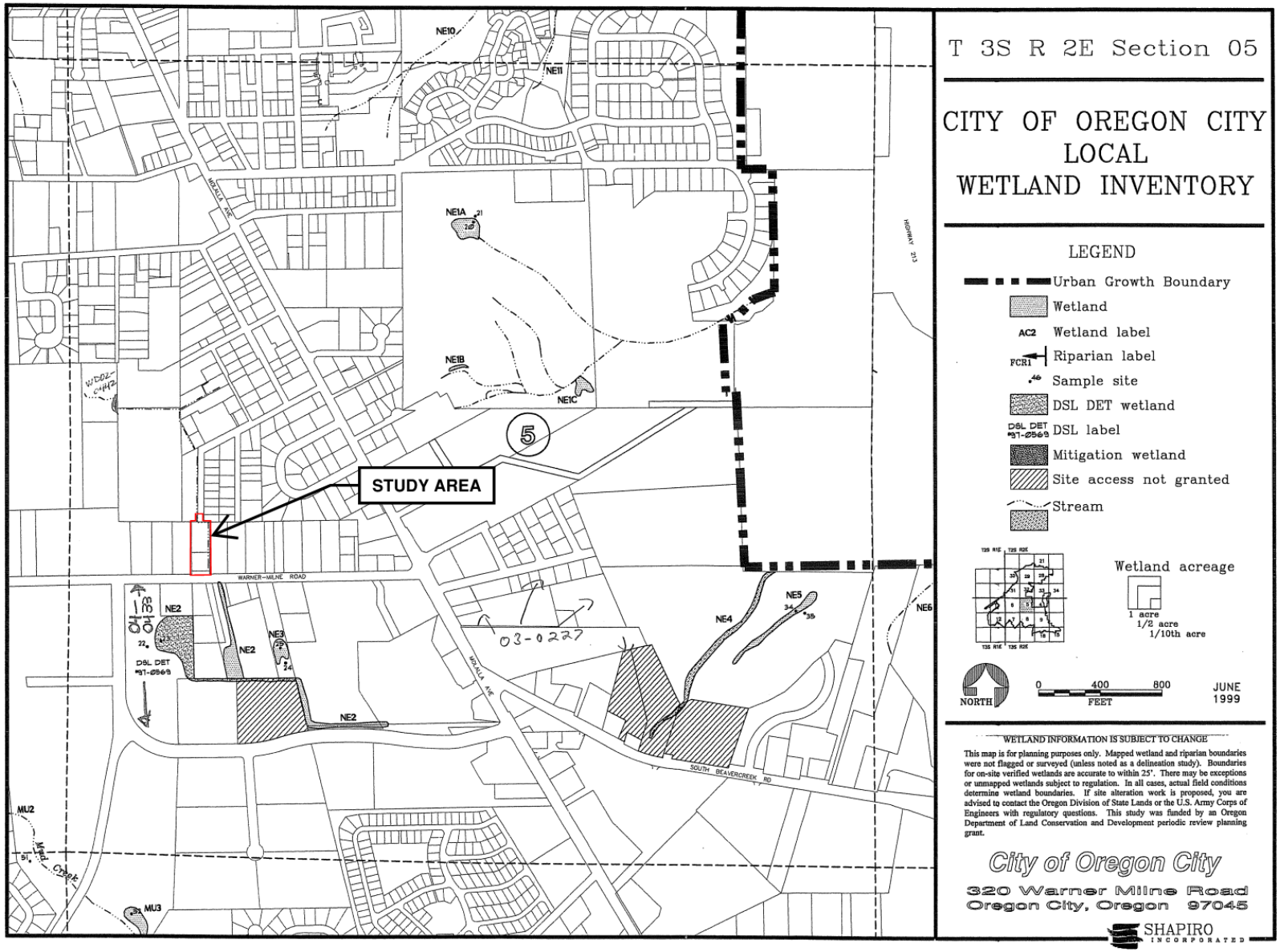

Figure 3a: Local Wetland Inventory

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands

April 26, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Figure 3b: National Wetland Inventory

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

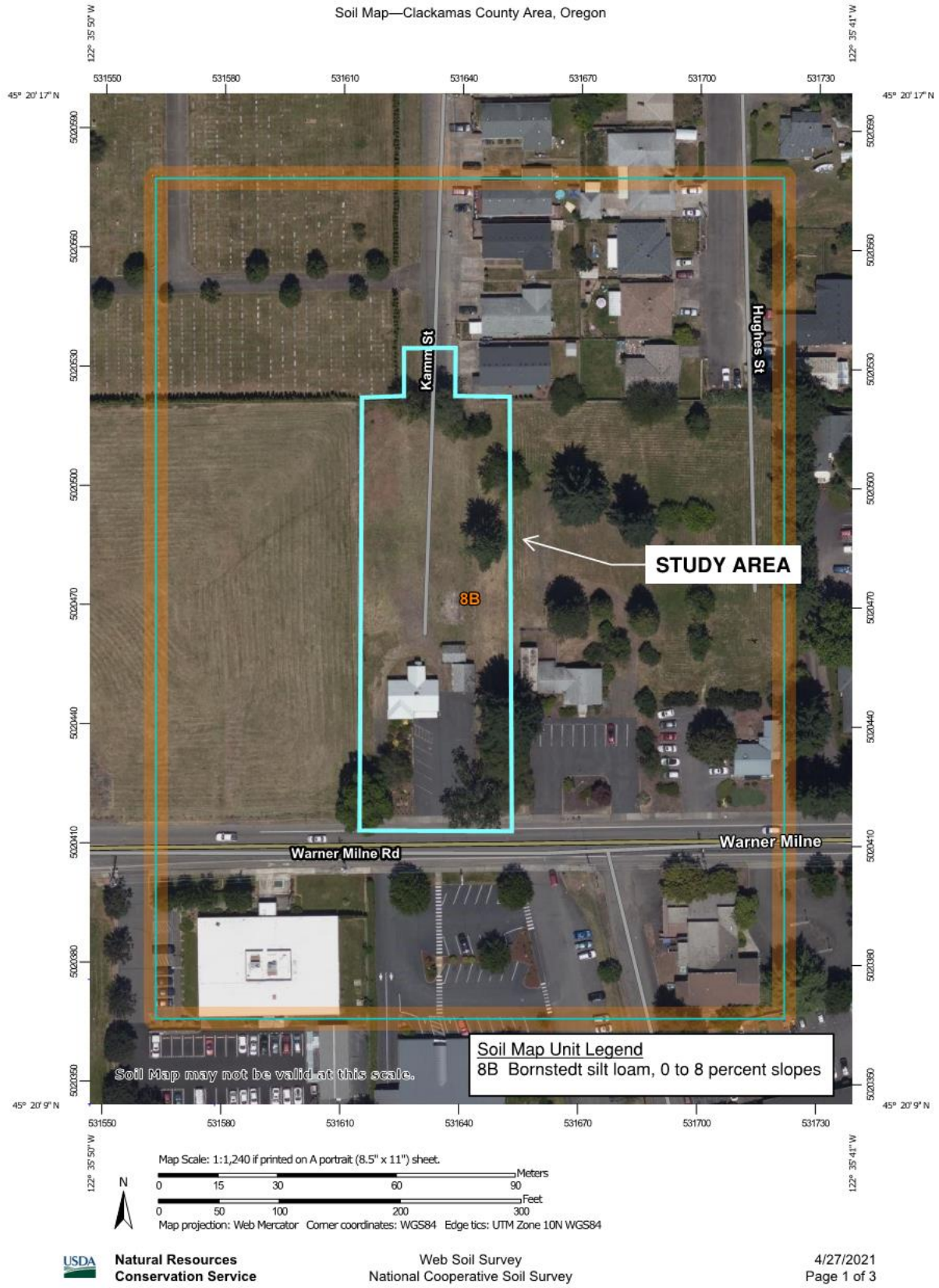

Figure 4: USDA NRCS Soil Survey Map

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

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LANDSCAPE ARCHITECTS ◆ SUR

Figure 5: Aerial Image

1155 Kamm Street and 279 Warner Milne Road
Oregon City, Oregon

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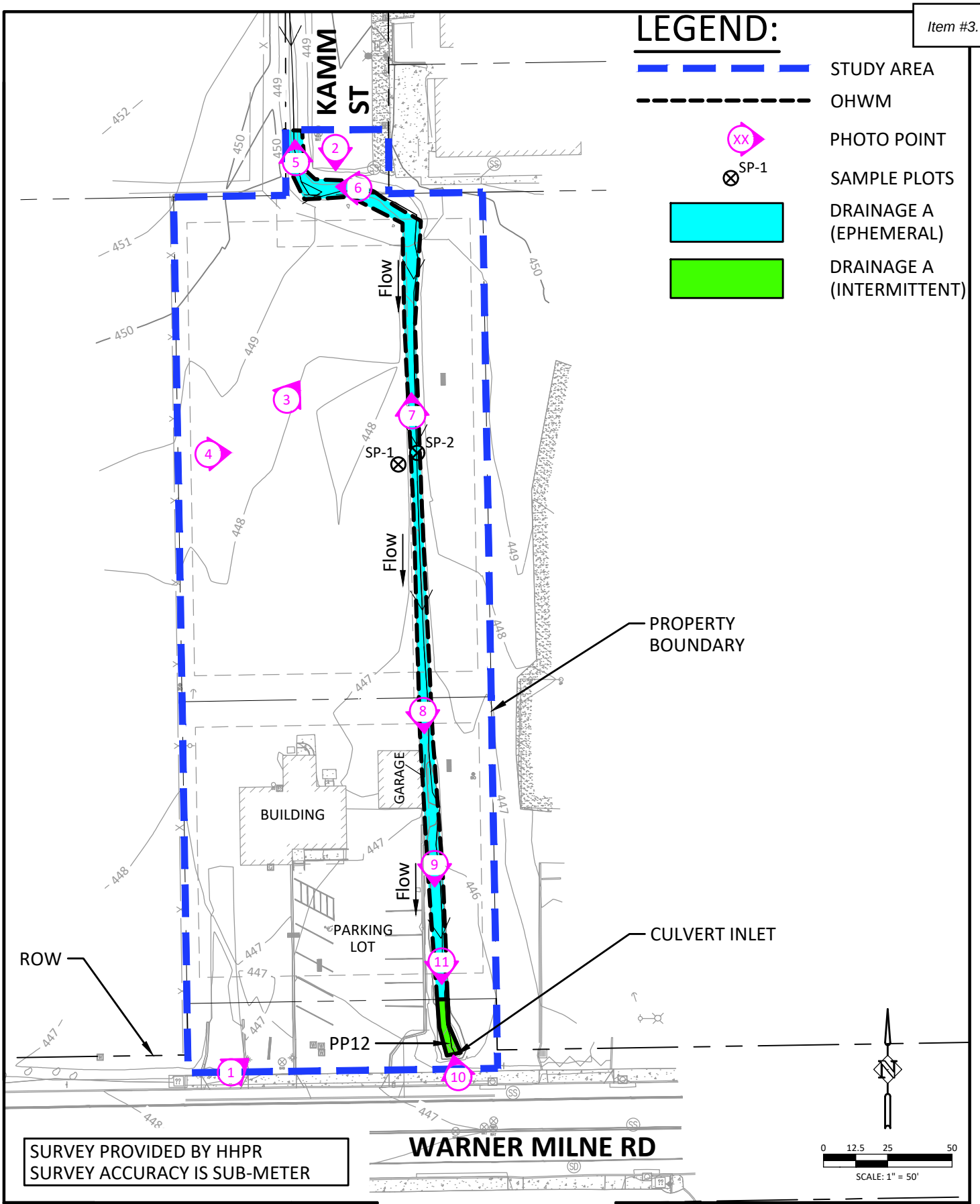

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1				HHPR
				DRAWN: HHPR
				CHECKED: HHPR
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FIGURE 6
KAMM STREET APARTMENTS
WETLAND DELINEATION
OREGON CITY, OREGON

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Appendix B: Data Forms

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WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Kamm St. Apartments | City/County: Oregon City | Sampling Date: 4/12/2021
Applicant/Owner: Ron Laughlin | State: OR | Sampling Point: SP1
Investigator(s): Kent Snyder, Ivy Watson | Section, Township, Range: 05, 3S, 2E
Landform (hillslope, terrace, etc.): terrace | Local relief (concave, convex, none): concave | Slope (%): 1
Subregion (LRR): NW Forests and Coasts | Lat: 45.337192° | Long: -122.596152° | Datum: WGS84
Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes | NWI classification: upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ 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		No	x
Wetland Hydrology Present?	Yes		No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks: Located on the bank on the west side of the ditch (channelized stream).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	10	Y	FAC
2.			
3.			
4.			
	10	= Total Cover	

Sapling/Shrub Stratum (Plot size: 5ft)			
1. None			
2.			
3.			
4.			
5.			
		= Total Cover	

Herb Stratum (Plot size: 5ft)			
1. *Agrostis capillaris*	55	Y	FAC
2. *Hypochaeris radicata*	15	N	FACU
3. *Anthoxanthum odoratum*	7	N	FACU
4. *Plantago lanceolata*	7	N	FACU
5. *Taraxacum officinale*	7	N	FACU
6. *Schedonorus arundinaceus*	5	N	FACU
7. *Dactylis glomerata*	2	N	FACU
8. *Poa trivialis*	2	N	FAC
9. *Prunella vulgaris*	2	N	FACU
10. *Ranunculus repens*	2	N	FAC
11. *Holcus lanatus*	1	N	FAC
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30ft)			
1. none			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 0

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: A few sprouts of Himalayan blackberry (*Rubus armeniacus)* are present (trace amount). This species was previously more abundant at this site, but has been controlled. Meadow foxtail (*Alopecurus pratensis*) is also occasional in the vicinity (~1%), but not present in the plot.

Though it meets the Dominance test, 45 percent of cover in herb layer is provided by FACU-rated species, suggesting that water is limited.

SOIL

Sampling Point: SP1

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	7.5YR 3/2	100					Sil/sicl	
5-7	7.5YR 3/2	96	7.5YR 3/1	2	D	M	sicl	faint
			7.5YR4/4	2	C	M		
7-16	7.5YR 4/3	70	5YR 2.5/1	10	C	M	Sicl	Mn
			7.5YR 4/6	10	C	M		
			7.5YR 4/4	5	C	M		faint
			7.5YR 3/4	5	C	M		faint

[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)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: Bottom of this pit is at a similar elevation as bottom of adjacent ditch.

Based on landscape position and general site character, this soil is not considered a problematic hydric soil (TF2). Weathering of basalt rock fragments in the soil matrix is interpreted as the primary contributor to redox features in matrix of the 7-16 inch depth. Drainage class is considered non-hydric SPD.

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): >16

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): >16

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Kamm St. Apartments City/County: Oregon City Sampling Date: 4/15/2021
Applicant/Owner: Ron Laughlin State: OR Sampling Point: SP2
Investigator(s): Kent Snyder, Ivy Watson Section, Township, Range: 05, 3S, 2E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): NW Forests and Coasts Lat: 45.337192° Long: -122.596152° Datum: WGS84
Soil Map Unit Name: Bornstedt silt loam, 0 to 8 percent slopes NWI classification: upland
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ 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	___	No	x
Hydric Soil Present?	Yes	x	No	___
Wetland Hydrology Present?	Yes	___	No	x

Is the Sampled Area within a Wetland? Yes ___ No x

Remarks: Located in stream channel (ditch), approximately 6 feet east of SP1.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus balsamifera*	10	Y	FAC
2.			
3.			
4.			
	10	= Total Cover	

Sapling/Shrub Stratum (Plot size: 5ft)			
1. None			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5ft)			
1. *Agrostis capillaris*	15	Y	FAC
2. *Hypochaeris radicata*	15	Y	FACU
3. *Ranunculus repens*	15	Y	FAC
4. *Plantago lanceolata*	15	Y	FACU
5. *Taraxacum officinale*	15	Y	FACU
6. *Poa annua*	10	N	FAC
7. *Poa trivialis*	10	N	FAC
8. *Prunella vulgaris*	10	N	FACU
9. *Schedonorus arundinaceus*	7	N	FAC
10. *Festuca rubra*	5	N	FAC
11. *Trifolium repens*	5	N	FAC
	125	= Total Cover	

Woody Vine Stratum (Plot size: 30ft)			
1. none			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 2

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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
___ 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 ___ No x

Remarks:
Additional species in the herb stratum:
Anthoxanthum odoratum, 2%, Not dominant, FACU
Dactylis glomerata, 1%, Not dominant, FACU

SOIL

Sampling Point: SP2

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
0-4	10YR 3/2	100					Sil	
4-9	10YR 3/2	58	10YR 3/3	35	C	M	sil	faint
			7.5YR 5/6	5	C	M		
			5YR 2.5/1	2	C	M		Mn
9-16	7.5YR 4/4	40	5YR 2.5/1	20	C	M	sicl	Mn
			10YR 4/1	20	D	M		
			10YR 4/3	10	C	M		Ped faces; faint
			7.5YR 5/6	5	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: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks: No oxidized rhizopheres (root channels or pore linings) present.

Soil below 9 inches is native subsoil, excavated into when ditch was made. Soil above (0 to 9 inches) likely a mix of post-excavation fill (based on angular rock fragments) and subsequent alluvium. Less than 2% rock fragments (pebbles) in soil.

The 9-16" depth contains the following additional redox feature: 10YR 3/3, 5%, C, M

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)
- x 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): >24

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): >24

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Auger hole excavated in bottom of pit to a depth of 24 inches from the surface contained no water or saturation.

Appendix C: Photographs

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Photograph 1: View to the northeast from the southwest corner of the study area, showing landscaping, parking lot, and buildings on the Warner Milne Road tax lot. Photograph taken April 12, 2021.

Photograph 2: View to the south from Kamm Street, showing the open field and building in the study area. Blue dashes indicate the approximate location of Drainage A. Photograph taken April 12, 2021.

Photograph 3: View looking northeast from the field towards the end of Kamm Street. Photograph taken April 12, 2021.

Photograph 4: View looking east across the field towards SP1 and 2. The blue dashes indicate the approximate location of Drainage A. Photograph taken April 12, 2021.

Photograph 5: View looking north from end of the study area along Drainage A. Kamm Street can be seen on the right. Photograph taken April 12, 2021.

Photograph 6: View looking west showing the Drainage A channel at the end of Kamm Street. Kamm Street is on the right. The field is to the left. Photograph taken April 12, 2021.

Photograph 7: View looking north towards Kamm Street showing the channel of Drainage A. Vegetation and morphology within the channel is typical of the upstream reach: vegetation similar to the surrounding field and a u-shaped cross section. Photograph taken April 12, 2021.

Photograph 8: View looking south towards Warner Milne Road showing the channel of Drainage A next to the garage. The yellow dashes indicate the approximate location of the boundary between the upstream and downstream reaches. Photograph taken April 12, 2021.

Photograph 9: View looking south towards Warner Milne Road showing the lower end of the upstream reach. A bare patch in the channel, scoured out by parking lot runoff following storm events can be seen in the foreground. Photograph taken April 12, 2021.

Photograph 10: View looking north, along Drainage A from the Warner Milne Road culvert. The downstream reach, with bare bed and riprap, can be seen in the foreground. The yellow dashes indicate the reach boundary. Photograph taken April 12, 2021.

Photograph 11: View to the south showing the inlet to the Warner Milne Road culvert and the pool area in the downstream reach of Drainage A. Photograph taken April 15, 2021.

Photograph 12: The blue arrow indicates the empty shell of an aquatic snail amongst riprap in the pool area at the culvert inlet. Many shells and one living snail were found here. Photograph taken April 15, 2021.

Photograph 13: View to the north towards Warner Milne Road showing Drainage A south of the study area. Standing water can be seen in the channel. Photograph taken April 12, 2021.

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Appendix D: Streamflow Duration Data Forms

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Appendix B: Streamflow Duration Field Assessment Form

Project # / Name Kamm St. Apartments	Assessor Ivy Watson
Address 1155 Kamm St	Date 4/15/2021
Waterway Name Drainage A	Coordinates at downstream end (ddd.mm.ss) Lat. N
Reach Boundaries Kamm St. to Parking Lot	Long. W
Precipitation w/in 48 hours (cm)	Channel Width (m)
☒ Disturbed Site / Difficult Situation (Describe in "Notes")	

Observed Hydrology

% of reach w/observed surface flow 0

% of reach w/any flow (surface or hyporheic) 0

# of pools observed 2 shallow scour pools (~1' wide x 2' long x 2" deep), both dry

Observations

Observed Wetland Plants (and indicator status):

Phalaris arundinacea - FACW
two small clumps observed, one in channel, one in adjacent field. Presence is interpreted as result of site disturbance rather than wetland/stream hydrology. Thus, not used as indicator.

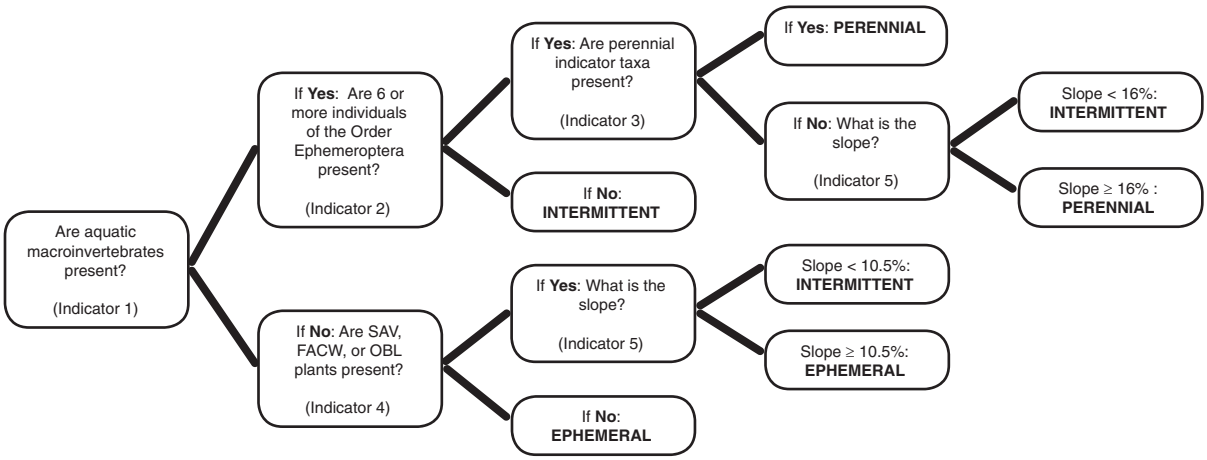
Observed Macroinvertebrates:

Taxon	Indicator Status	Ephemer-optera?	# of Individuals
Formidicidae (ants)	NA	No	~30
Oligochaeta (earth worms)	NA	No	9
Oniscidea (sow bugs)	NA	No	4
Tipula paludosa	NA	No	2
European cranefly larva			
Anisodactylus sp. (ground beetle)	NA	No	1

Indicators

1. Are aquatic macroinvertebrates present?	☐ Yes	☒ No
2. Are 6 or more individuals of the Order Ephemeroptera present?	☐ Yes	☒ No
3. Are perennial indicator taxa present? (refer to Table 1)	☐ Yes	☒ No
4. Are FACW, OBL, or SAV plants present? (Within ½ channel width)	☐ Yes	☒ No
5. What is the slope? (In percent, measured for the valley, not the stream)	1 %	

Conclusions



Single Indicators:
☐ Fish
☐ Amphibians

Finding:
☒ Ephemeral
☐ Intermittent
☐ Perennial

Notes: single indicator conclusions, description of disturbances or modifications that may interfere with indicators, etc.)

Difficult Situation:

- ☐ Prolonged Abnormal Rainfall / Snowpack
  - ☐ Below Average
  - ☐ Above Average
- ☒ Natural or Anthropogenic Disturbance
- ☐ Other: _____

Describe situation. For disturbed streams, note extent, type, and history of disturbance.

This is an urban site. Vegetation and soil within the site has been subject to anthropogenic disturbance for decades, possibly longer via ditching, fill, grading, clearing, and invasive species. Vegetation is currently dominated by non-native and invasive grasses and forbs. Two small clumps of reed canarygrass observed on site are consistent with disturbed conditions and not interpreted as an indicator of hydrology. This species regularly colonizes disturbed uplands including roadsides and waste sites. Channel morphology is the result of ditching and runoff from roofs/parking lots rather than sustained flow.

Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.

An auger hole in the stream channel found no water or saturation in 24-inch deep hole. The channel is 90% vegetated with pasture grasses and forbs similar to the adjacent upland field. FACU forbs are co-dominant with FAC grasses within the channel.

Ancillary Information:

- ☐ Riparian Corridor
- ☐ Erosion and Deposition
- ☐ Floodplain Connectivity

Observed Amphibians, Snake, and Fish:

Taxa	Life History Stage	Location Observed	Number of Individuals Observed

Appendix B: Streamflow Duration Field Assessment Form

Project # / Name Kamm St. Apartments	Assessor Ivy Watson
Address 1155 Kamm St	Date 4/15/2021
Waterway Name Drainage A	Coordinates at downstream end (ddd.mm.ss) Lat. N
Reach Boundaries Parking Lot to Warner Milne Rd Culvert	Long. W
Precipitation w/in 48 hours (cm)	Channel Width (m)
☒ Disturbed Site / Difficult Situation (Describe in "Notes")	

Observed Hydrology

% of reach w/observed surface flow 0

% of reach w/any flow (surface or hyporheic) 0

# of pools observed 1 pool at culvert, dry

Observations

Observed Wetland Plants (and indicator status):

None

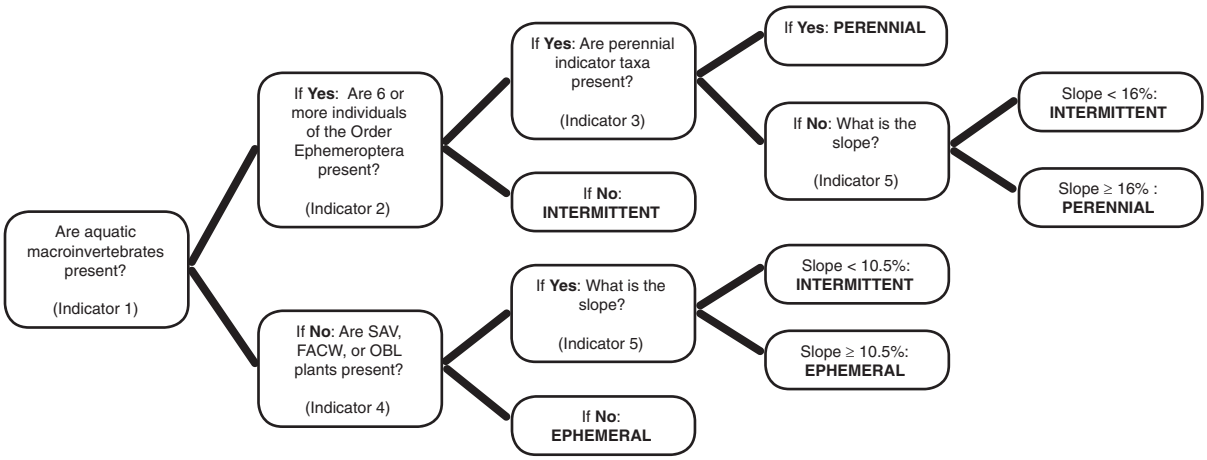
Observed Macroinvertebrates:

Taxon	Indicator Status	Ephemer-optera?	# of Individuals
Formidicidae (ants)	NA	No	~20
Oligochaeta (earth worms)	NA	No	5
Oniscidea (sow bugs)	NA	No	1
Anisodactylus sp. (ground beetle)	NA	No	3
Juga sp. (aquatic snail)	perennial	No	~50
Dermaptera (earwigs)	NA	No	1
Chilopoda (centipedes)	NA	No	1

Indicators

1. Are aquatic macroinvertebrates present?	☒ Yes	☐ No
2. Are 6 or more individuals of the Order Ephemeroptera present?	☐ Yes	☒ No
3. Are perennial indicator taxa present? (refer to Table 1)	☒ Yes	☐ No
4. Are FACW, OBL, or SAV plants present? (Within ½ channel width)	☐ Yes	☒ No
5. What is the slope? (In percent, measured for the valley, not the stream)	1 %	

Conclusions



Single Indicators:

☐ Fish

☐ Amphibians

Finding:

☐ Ephemeral

☒ Intermittent

☐ Perennial

Notes: single indicator conclusions, description of disturbances or modifications that may interfere with indicators, etc.)

Difficult Situation:

- ☐ Prolonged Abnormal Rainfall / Snowpack
  - ☐ Below Average
  - ☐ Above Average
- ☒ Natural or Anthropogenic Disturbance
- ☐ Other: _____

Describe situation. For disturbed streams, note extent, type, and history of disturbance.

This is an urban site. Vegetation and soil within the site has been subject to anthropogenic disturbance for decades, possibly longer via ditching, fill, grading, clearing, and invasive species. Vegetation is currently dominated by non-native and invasive grasses and forbs. Channel morphology and hydrology is impacted by ditching and runoff from roofs/parking lots. Area has been excavated and riprapped. A stormwater pipe discharges to the scour pool by the culvert and at least one more discharges into the culvert. Some backwater from the culvert likely occurs.

Additional Notes: (sketch of site, description of photos, comments on hydrological observations, etc.) Attach additional sheets as necessary.

Signs of increased flow and runoff from parking lot, roof, and pipe outfall. Channel downstream of culvert contained shallow standing water.

Juga sp. were found in riprap in a dry pool at the Warner Milne Road culvert inlet. Only one was alive--found in wet earth under a rock.

Ancillary Information:

- ☐ Riparian Corridor
- ☐ Erosion and Deposition
- ☐ Floodplain Connectivity

Observed Amphibians, Snake, and Fish:

Taxa	Life History Stage	Location Observed	Number of Individuals Observed

CITY OF OREGON CITY

Staff Report

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

To: Natural Resources Committee **Agenda Date:** 08/11/2021

From: Community Development Director

SUBJECT:

Street Tree List Update

STAFF RECOMMENDATION:

Discussion

EXECUTIVE SUMMARY:

The Oregon City Street Tree List was last updated in 2013 and the Natural Resources Committee is updating the list to address climate change as well as review the appropriateness of the species associated with each planter strip size.

BACKGROUND:

The Oregon City Street Tree List was last updated in 2013 and the Natural Resources Committee is updating the list to address climate change as well as review the appropriateness of the species associated with each planter strip size.

Street Trees

All trees provide benefits such as stormwater retention, wildlife habitat, and reduced energy consumption. A street tree is a community-owned tree that grows on City property, generally located within a planter strip between the sidewalk and the street. Oregon City Municipal Code Chapter 12.08 – *Public and Street Trees*[1] like most agencies, identifies the abutting property owner as the responsible party for sidewalk repairs and maintenance and replacement of abutting street trees. Having a code that regulates the care of public trees is one of the four requirements set forth by the Arbor Day Foundation for being a Tree City USA (regulation of trees on private property is not a Tree City USA requirement)[2]. The most significant factors contributing to the longevity of a street tree include:

- planting the right species,

[1] https://library.municode.com/or/oregon_city/codes/municipal_code?nodeId=TIT12STSIPUPL_CH12.08PUSTTR
[2] https://www.arborday.org/programs/treecityusa/standards.cfm

- in the right location,
- with the right method,
- with proper maintenance of the tree over time.

Though trees provide benefits, they can cause damage to abutting sidewalks when tree roots lift sidewalk panels. This in turn may create tripping hazards, for which the abutting property owner is potentially liable if they do not repair the sidewalk. Trees and their roots will grow wherever there is sufficient soil, space, water, air and nutrients. If the wrong tree is planted in the wrong place, or constraints exist such as clay soils and insufficient space, the life of the street tree, and the sidewalk, may be foreshortened considerably.

Since the City began consistently requiring street trees to be installed with land divisions in the 1980s, development standards have evolved significantly. Today, these standards specify minimum planter strip widths, minimum sidewalk width, curb and gutter sections, tree planting requirements, and pavement thickness have evolved to improve and extend the life of these amenities. The code has changed to require larger planting areas, review of tree species, and installation of root barriers.

City staff is currently reviewing our process for review and inspection of street trees that are planted by developers.

Street Tree List - Current

The last time the street tree list was updated was in 2013, also in response to widespread concerns about sidewalk damage. Starting in 2011, public outreach was extensive. In addition to the NRC, Planning Commission and City Commission, planning staff gave presentations to and sought input from the Barclay Hills, Caufield, Gaffney Lane, South End, Tower Vista, and McLoughlin Neighborhood Associations, the Citizen Involvement Committee, and the Transportation Advisory Committee. At that time, NRC – Tree Subcommittee member Erik Carr, a Certified Arborist working for Clackamas Soil and Water District, and NRC member Bryon Boyce, an avid naturalist and botanist, were particularly helpful reviewing the street tree list and providing advice on appropriate tree species for the list. Staff also reviewed current street tree lists from around the region including Gresham, Lake Oswego, Milwaukie, Gladstone, Tualatin, Beaverton, Hillsboro, West Linn, Tigard, and Metro, and talked to City of Portland tree inspectors about their procedures. The City Commission adopted the revised street tree by Resolution 13-27 in December 2013 (attached).

Climate change and street trees

Some cities are modifying their recommended street tree lists so that tree species are chosen which are more resilient to climate change. For example, the City of Portland has included “climate forward” species such as southern magnolia and live oaks in their updated list, since these species do well in extended droughts but can also manage cooler, wetter winters when they occur[3].

[3] https://www.portland.gov/trees/tree-planting/street-tree-planting-lists

The City Commission is appreciative that the Natural Resources Committee has been proactive in reviewing the Oregon City Street Tree list[4] in preparation for climate change. Additional considerations include the tree species hardiness and ability to withstand events such as the recent ice storm, although proper planting, maintenance and structural pruning is just as important to the long-term resilience of a tree than just choosing the right species. The City of Portland evaluated tree species for their list based on the following criteria:

- tree dimensions and growing habit to ensure that it is the "Right Tree, Right Place"
- site dimensions, soil volume, presence or absence of high voltage power lines
- status on the Portland Plant List (no nuisance trees)
- resistance to pests and disease
- ability to thrive in Portland's current and future climate
- current canopy diversity to ensure no tree types are overplanted
- good structure for a street tree to avoid conflicts with buildings, sidewalks, roads, cars, bikes, and people
- good strength to survive storms
- potential for wildlife habitat or pollinator attraction
- showy flowers and/or fall color
- minimal fruit or seed drop
- representation of trees native to the Willamette Valley
- local availability at nurseries or growers

Summary of Request from City Commission

While the NRC is reviewing the list for climate change, the City Commission would like the NRC's advice on the following items related to the street tree list:

- Street trees have caused significant damage to adjacent sidewalks. Though the City has adopted a street tree list and updated that list to address issues such as this, the City Commission requests that the NRC review the list with particular attention to tree species that will not cause damage to the adjacent sidewalk.
- The street tree list identifies replacement species for planter strips as narrow as 2.5 feet. The City Commission requests that the NRC identify the minimum width of a planter strip sufficient for planting.
- The City has a standard planting detail[5] which includes installation of a root barrier, but owners who are replacing trees are not required to install the barrier. The City Commission requests the NRC review the planting detail and assemble a list of planting tips to ensure that all trees have the best possible opportunity for success.

[4] https://www.orcity.org/sites/default/files/fileattachments/planning/page/4264/adopted_street_tree_list_12.4.2013_0.pdf

[5] https://mccmeetingspublic.blob.core.usgovcloudapi.net/oregoncity-meet-4fb1cd78cb8b4246a2314647384c1ff1/ITEM-Attachment-001-672cf0f5f1ac4fbf90c42af8cd9ca2d6.pdf

- The Planning Division maintains the following webpages under our "How Do I…?"[6] section to assist residents who are seeking information about street trees and the permitting process. Staff welcomes the NRC's suggestions for how to improve and better publicize this information.
    - How to Remove and Replace a Public / Street Tree
    - What is the Process to Plant a Street Tree In Front of My House?
    - How to Know if You Need a Tree Removal Permit

This discussion will continue the discussions from the April, June, and July meetings regarding the street tree species list.

OPTIONS:

1. Discussion and direction to City staff

BUDGET IMPACT:

Amount: $

FY(s): TBD

Funding Source(s): TBD

[6] https://www.orcity.org/planning/how-do-i

OREGON CITY STREET TREE LIST (Reso. 13-27, Adopted 12/04/2013)

Remove/Hi	COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?	Notes
	RECOMMENDED STREET TREES FOR 2.5' TO 3' PLANTING STRIP									
	Cornelian Cherry Dogwood	*Cornus mas*	15	20	Yes	upright rounded to upright spreading	medium to dark green			
	Eddie's White Wonder Dogwood	*Cornus nuttallii x Cornus florida*	40	15	Yes	Dense horizontal drooping habit.	Good fall color	White flowers		
	Flowering Dogwood	*Cornus florida*	20	25	Yes	Upright	Bright green, lighter underside turning glowing	Small clusters before leaves appear in May		
	Japanese Dogwood	*Cornus kousa*	25	25	Yes	Vine shaped	Lustrous medium green turning yellow to scarlet	Small clusters with raspberry like fruit, blooms later than most		
	Starlight Dogwood	*Cornus kousa X nuttallii*	30	20	Yes	Upright, oval	Deep green, Fall red	Large, creamy white flower, fruit 3/4" , orange		
	~~Carolina Silverbell~~	~~*Halesia carolina*~~	~~35~~	~~15'~~	~~Yes~~	~~Rounded, often low-branched~~	~~yellow to yellow-green autumn color.~~	~~White, bell-shaped flowers in spring offer mild interest;~~		moved to larger planting size
	Tschonoskii Crabapple	***Malus tschonoskii***	**30**	**15'**	**yes**	**Upright**	**fall foliage**	**flowers, fruit, fall foliage**		
	Bigleaf Snowbell Tree	*Styrax obassia*	35	25'	Yes	upright and pyramidal-oval when young, rounded with age.	dark green above, pubescent beneath	Flowers white, fragrant		
	Blireiana Plum	*Prunus x blireiana*	20	20'	Yes	often has large bumps.	first purple but fade to green	Blooms early spring, Flowers pink, fragrant. Fruit purplish red		Weak wood, not drought tolerant
	Chinese Fringetree	***Chionanthus reusus***	**20**	**25'**	**yes**	**Upright, oval**	**frangrant white "fringe-like" flowers**	**white fluffy flowers at branch tips**		
	Chinese Pistache	*Pistachia chinensis*	25	25'	Yes	Oval, Rounded or Umbrella	Fall.	Blue Drupe.		
	Crape Myrtle	*Lagerstroemia cultivars*	20	20'	Yes	Oval, Rounded, Umbrella or Vase	Dark green, usually with a slight gloss.	Summer.		
	Amur Maple	*Acer ginnala*	20	20	Yes	Round	Medium green turning orange to scarlet red	Bright red, winged fruit		
Hiatus	Hedge Maple	*Acer campestre*	35	30	Yes	Round to oval	Dark green turning yellow	Corky bark that is striking in winter		
Hiatus	Japanese Maple	*Acer palmatum*	25	25	Yes	Upright, low branching	yellow			
Hiatus	Paperbark Maple	*Acer griseum*	25	20	Yes	Narrow to rounded	brilliant red	thin strips		
Hiatus	Roughbark Maple	*Acer triflorum*	25	20'	Yes	Oval	scarlet in fall;	Flower yelllow.		
	Vine Maple	*Acer circinatum*	25	10	Yes	Upright, spreading	Medium green turning orange to bright red	Winged fruit resembling bow ties, thrives in shade	Native	
	Japanese Snowbell	*Styrax japonicus*	25	25'	Yes	Rounded, horizontal	Medium to dark green, glabrous above.	stamens		
	Japanese Tree Lilac	*Syringa reticulata*	25	20'	Yes	Pyramidal	Green	White panicles and yellow brown fruit		
Hiatus	Eastern Redbud	*Cercis canadensis*	35	30	Yes	Round	Rich green, heart shaped turning yellow	Small rosy pink flowers with 4-6 dried pods		Weak wood, not drought tolerant
	Lavelle Hawthorn	*Cratagus x lavalleii*	30	20	Yes	Upright, open	Glossy green turning bronze to copper red	White cluster flowers, showy orange-red fruit		
	Summer Sprite Linden	*Tilia cordata 'Halka'*	20	15'	Yes	appearance	Yellow fall color	JF Schmidt small varietal		prone to aphids and sticky sap drop below canopy

Remove/Hi	COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?	Notes
	RECOMMENDED STREET TREES FOR PLANTING IN 3' TO 4' PLANTING STRIP									
Hiatus	Trident Maple	*Acer buergeranum*	25	20	Yes	Oval to Round	Glossy green turning yellow orange red	Exfoliating bark, adaptable to varied conditions		
	Carolina Silverbell	*Halesia carolina*	35	15'	Yes	Rounded, often low branched	yellow to yellow green autumn color.	White, bell-shaped flowers in spring offer mild interest;		medium sized tree
	Vine Maple	*Acer circinatum*	25	10	Yes	Upright Spreading	Medium green turning bright orange and red	Northwest native maple, open delicate form, thrives in shade	Native	
	Amur Maple	*Acer ginnala*	20	20	Yes	Upright Round	Green turning yellow to scarlet red	Small fragrant flowers followed by winged fruit		
Hiatus	Rocky Mountain Glow Maple	*Acer grandidentatum "schmidt"*	25	15	Yes	Oval	Dark green turning bright red	Requires well drained soil		
Hiatus	Paperbark Maple	*Acer griseum*	30	20	Yes	Round	Green w/silver under, bright red orange in fall	Interesting cinnamon brown under exfoliating bark		
Hiatus	Japanese Maple	*Acer palmatum*	25	25	Yes	Upright, low branching	yellow	Many varieties including dwarf species		
Hiatus	Roughbark Maple	*Acer triflorum*	25	20	Yes	Dense and rounded	scarlet in fall			
	Pyramidal Serviceberry	*Amelanchier canadensis pyramidalis*	30	20	Yes	Very Upright	Dark green turning brilliant red and orange	White flowers in spring, dark purple fruit attract birds		not drought tolerant
	Allegheny Serviceberry	*Amelanchier laevis*	25	15	Yes	Upright and Oval	Green turning orange in fall	White flowers in spring, blue purple fruit attract birds		not drought tolerant
	Western serviceberry	*Amelanchier alnifolia*	25	25	Yes	Vertical, dense		Metro Green Street Tree**	Native	not drought tolerant
	Eddies White Wonder Dogwood	*Cornus nutalli X florida*	40	15	Yes	Dense horizontal drooping	Good fall color,	White flowers		not drought tolerant
	Starlight Dogwood	*Cornus kousa X nuttallii*	30	20	Yes	Upright, oval	Deep green, Fall red	Large, creamy white flower, fruit 3/4" , orange		not drought tolerant
	Crimson Cloud Hawthorn	*Crataegus laevigata "Crimson Cloud"*	25	18		Oval	Glossy green	Flowers are bright red with white center, bright red fruit		
	Columnar Goldenrain	*Koelreuteria paniculata fastigiata*	30	16		Narrow Fastigiate	Green turning yellow	poor conditions		
	Goldenrain Tree	*Koelreuteria paniculata*	30	20		Round, Open	Green turning yellow	poor conditions		
	Newport Plum	*Prunus cerasifera*	20	20		Oval to Round	Purplish Red	Single pink flowers		Weak wood, not drought tolerant
	Japanese Tree Lilac	*Syringa reticulata*	25	15	Yes	Pyramidal	Green	White panicles and yellow brown fruit		
	Ivory Silk Tree Lilac	*Syringa reticulata 'Ivory Silk'*	25	15	Yes	Pyramidal	Green	White panicles and yellow brown fruit		
	Skyrocket Oak	*Quercus robur "Fastigiata"*	45	15		Fastigate	Dark green turning yellow brown	Interesting oak for very narrow spaces		
	Summer Sprite Linden	*Tilia cordata 'Halka'*	20	15'	yes	oval	Med. Dark green leaves, excellent flowers for pollinators	drought tolerant, low maintenance, easy to transplant. Semi-dwarf growth habit		Resilient tree, establishes well, prone to aphids and sticky sap drop below canopy
	Sourwood	*Oxydendrum arboreum*	30	20'		Oval	summer	fragrant flower, excellent for honey, small oval fruit		resilient tree, drought resistant

Remove/Hi	COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?	Notes
	RECOMMENDED STREET TREES FOR PLANTING IN 4 ½' TO 5 ½' PLANTING STRIPS									
Hiatus	Queen Elizabeth Hedge Maple	*Acer campestre "Queen Elizabeth"*	35	30	Yes	Upright, Oval	Dark green turning yellow			
Hiatus	Rocky Mountain Glow Maple	*Acer grandidentatum 'Schmidt'*	25	15		Oval	dark green, orange/yellow in fall			
Hiatus	Paperbark Maple	*Acer griseum*	30	20	Yes	Round	Green w/silver under, bright red orange in fall	Interesting cinnamon brown under exfoliating bark		
	Pyramidal European Hornbeam	*Carpinus betulas "Fastigiata"*	35	20		Dense, Upright, Pyramid to Oval	Dark green turning yellow	Retains leaves into winter, small hard nutlets in clusters		strong wood, drought tolerant
	Frans Fontaine Hornbeam	*Carpinus betulas "Frans Fontaine"*	35	15		Broadly oval	Dark green turning yellow			strong wood, drought tolerant
	Chinese Dogwood	*Cornus kousa chinensis*	30	30		Round	Green turning red	White flowers and red pink fruit		not drought tolerant
	Cascara, chitum	***Frangula purshiana***	**30**	**25**	**yes**	**Upright**	**green turn yellow**	**black berries ok for humans but not tasty, good for wildlife**		**not drought tolerant**
	Lavelle Hawthorne	*Crataegus x lavelle*	30	20		Upright	Dark glossy green turning bronze red	White flowers, red persistent fruit		
	Saratoga Ginkgo	*Ginkgo biloba "Saratoga"*	30	30	Yes	Round	Greenish gold turning yellow	Avoid female plants, fruit is extremely messy and malodorous		strong wood, drought tolerant, pest/disease resistant. Beware stinky fruit on female trees
	Chitalpa	*xChitalpa tashkentensis*	30	30	Yes	Upright	pale pink flowers	tough and drought tolerant		Weak wood, not drought tolerant
	Amur Maackia	***Maackia amurensis***	**30**	**25'**	**yes**		**golden fall color**	**small white flower clusters, lovely fall color**		
	Autumn Gold Ginkgo	*Ginkgo biloba "Autumn Gold"*	45	35		Narrow broadening in age	Medium green turning gold/yellow	Seedless clone		
	Princeton Sentry Gingko	*Ginkgo biloba "Princeton Sentry"*	40	15		Narrowly pyramidal	Light green turning bright yellow			
	Osage organge	***Maclura pomifera***	**30**	**35**	**yes**	**oval**	**orange in the fall**	**heat and drought tolerant once established**		
	American Hornbeam	*Ostrya virginiana*	35	25		Oval	Medium green turning yellow	Male catkins visible in winter, greenish white nutlets		
Remove	Columnar Sargent Cherry	*Prunus sargentii 'Columnaris'*	35	15		Columnar	Green turning orange red	Deep pink flowers		Weak wood, not drought tolerant
Remove	Pink Flair Cherry	*Prunus sargentii 'JFSKW58'*	25	15		Narrow / Upright	Bright orange, red fall	gives winter appeal		Weak wood, not drought tolerant
Remove	Capital Pear	*Pyrus calleryana 'Capital'*	35	12		Columnar	Medium green turning reddish purple	White flowers in clusters, good for narrow spaces		
Remove	Chanticleer Pear	*Pyrus calleryana 'Glens Form'*	40	15		Pyramidal	Glossy green turning orange red	While flowers in clusters, good for narrow spaces		
Remove	Flowering Pear 'Cleveland Select'	*Pyrus calleryana "Cleveland Select"*	40	15		Upright, pyramidal	Glossy, dark green turning wine red to scarlet	White cluster flowers, early bloomer		
	Skyrocket Oak	*Quercus robur 'Fastigiata'*	45	15		Fastigiate	Dark green turning yellow brown	Interesting oak for very narrow spaces		
Remove	Japanese Stewartia	*Stewartia pseudocamellia*	40	20		Pyramidal	Dark green turning dark red	White camellia like flowers, mottled bark		not drought tolerant
	Chancellor Linden	*Tillia cordata 'Chancole'*	45	20		Pyramidal, upright	Dark green turning yellow	Yellow fragrant flowers attractive to bees		prone to aphids and sticky sap drop below canopy
	"WirelessTM" Zelkova"	*Zelkova serrata 'Schmidtlow'*	24	36	Yes	Broadly spreading vase	Medium green turning red			
	Mushshino Zelkova	*Zelkova serrata "Musashino"*	45	20		Very narrow upright vase	Medium green	ideal for narrow street, good canopy clearance		

Remove/Hi	COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?	Notes
	RECOMMENDED STREET TREES FOR PLANTING IN 6' TO 8' PARKING STRIPS									
Hiatus	State StreetTM Maple	*Acer miyabei 'Morton'*	45	30		Upright, oval	Dark green turning yellow	Native to Japan, endangered		
	European Hornbeam	*Carpinus betulus*	50	35		Oval to Round	Dark green to golden yellow	Holds leaves into winter		
	Hackberry	*Celtis occidentalis*	40	30		Oval	Dark green turning yellow	**Metro Green Street Tree		
	Katsura Tree	*Cercidiphyllum japonicum*	40	35		Oval	Blue green turning yellow scarlet			not drought tolerant
	Persian Ironwood	***Parrotia persica***	**35**	**20'**	**yes**	**Upright**	**orange/red fall colors, interesting bark mosaic of green, white, brown**	**lovely fall color and mosaic colored bark**		**strong wood, drought tolerant**
	Yellowwood	*Cladastris lutea*	40	35		Round	Yellow to bright green, orange/yellow fall	White fragrant flower clusters		
	Pacific Dogwood	*Cornus nutallii*	60	30		Broad upright	Deep green, bright fall color.		Native	weak wood, not drought tolerant, prone to diseas
	Tricolor Beech	*Fagus sylvatica 'Roseo-Marginata'*	40	30		Broad Oval	Purple with light pink border			
	Saratoga Ginko	*Ginko biloba 'Saratoga'*	30	30		Round	Green gold to yellow	Avoid female plants, fruit is extremely messy and malodorous		
	Autumn Gold Ginkgo	*Ginkgo biloba "Autumn Gold"*	45	35		Narrow broadening in age	Medium green turning gold/yellow	Seedless clone		
	Princeton Sentry Gingko	*Ginkgo biloba "Princeton Sentry"*	40	15		Narrowly pyramidal	Light green turning bright yellow			
	Shademaster Honeylocust	*Gleditsia triacanthos 'Shademaster'*	45	35		Vase	Dark green turning yellow			
	Skyline Honeylocust	*Gleditsia triacanthos 'Skyline'*	50	30		Broad pyramidal	Medium green turning golden			
	Halka Honeylocust	*Gleditsia triacanthos 'Christie'*	55	40		Upright	Green, yellow fall			
	Kobus Magnolia	*Magnolia kobus*	40	30		Round	Dark green	Evergreen leaves and flowers		
Yes	Royal Burgandy Cherry	*Prunus serrulata 'Royal Burgandy'*	30	20		Vase	Purple red to red and orange	Pink flowers		
Yes	Rancho Pear	*Pyrus calleryana 'Rancho'*	35	30		Narrow upright		White flowers		
Yes	Trinity Pear	*Pyrus calleryana 'Trinity'*	30	25		Broadly oval to round	Glossy green, orange/red fall	White flowers		
	Scarlet Oak	*Querus coccinea*	50	40		Broad Oval	Glossy green turning scarlet			
	Skymaster Oak	*Quercus robur 'Pyramich'*	50	25		Pyramidal	Dark green turning yellow			
	Forest Green Oak	*Quercus frainetto 'Schmidt'*	50	30		Upright w/ strong central leader	Glossy deep green			
	Glenleven Linden	*Tilia cordata 'Glenleven'*	45	30		Pyramidal	Medium green turning yellow			
	Greenspire Linden	*Tilia cordata 'Greenspire'*	40	30		Pyramidal, symmetrical	Dark green, yellow fall			
	Redmond Bigleaf Linden	*Tillia americana x euchlora "Redmond'*	35	25		Pyramidal	light green, yellow fall			
	Rancho Linden	*Tillia cordata 'Rancho'*	40	30		Vigorous pyramidal	Small leaves			
	Frontier Elm	*Ulmus 'Frontier'*	40	30		Broadly oval	Glossy green, burgundy fall	Disease tolerant		
	Accolade Elm	*Ulmus japonica x wilsonia*	70	60		Vase shaped w/ arching limbs	Glossy green, yellow fall	Resistant to elm leaf beetle and dutch elm disease		
	Triumph Elm	*Ulmus 'Morton Glossy'*	70	60		Upright oval to vase shaped	Glossy dark green, yellow fall			
	Green Vase Zelkova	*Zelkova serrata 'Green Vase'*	50	40		Vase shaped w/ upright arching limbs	Green, yellow fall			
	Halka Zelkova	*Zelkova serrata 'Halka'*	45	30		Vase	Medium green turning yellow	Cultivar		
	Village Green Zelkova	*Zelkova serrata 'Village Green'*	40	38		Vase to round	Deep green / rusty red fall	Not recommended for high wind areas		
	"WirelessTM" Zelkova"	*Zelkova serrata 'Schmidtlow'*	24	36		Broadly spreading vase	Medium green turning red	Cultivar		
	Musashino Zelkova	*Zelkova serrata 'Musashino'*	45	20		Very narrow upright vase	Medium green	Good for narrower street, clearance beneath canopy		
	Hardy rubber tree	***Eucommia ulmoides***	**45**	**40**		**Round**	**dark green, elm like leaves**	**latex "rubbery"**		
	Chinese Elm	***Ulmus parvifolia***	**40**	**50**		**Upright, vase, rounded**	**Semi-evergreen**	**Exfoliating bark, adaptable to varied conditions**	**No**	**strong wood**

Remove/Hi	COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?	Notes
	RECOMMENDED STREET TREES FOR PLANTING IN 8 ½' AND LARGER PARKING STRIPS									
	*Please Note: Species with a ** are from Metro's Illustrated Guide "Trees for Green Streets". They should be planted in an 8' or larger planter strip, or if in a tree well, at least 5' by 5' with removable pavers to make room for the tree as it grows.*									
	Grand fir	*Abies grandis*	100	40		Upright, vertical, dense	Needles	Metro Green Street Tree**	Native	
Hiatus	Sycamore Maple	*Acer pseudoplatanus*	60	50		Wide spread	Green turning yellow			
Hiatus	Wineleaf Sycamore Maple	*Acer pseudoplatanus 'Spaithii'*	30	50		Pyramidal	Dark green			
Remove	Red Horsechestnut	*Aesculus x carnea 'Briotii'*	60	45		Round	Dark green turning yellow	Red flowers		
	Globe Serviceberry	*Amelanchier canadensis oblongifolia*	60	40		Round	Green turning bright yellow red	White flowers		not drought tolerant
	Canoe or Paper Birch	*Betula papyrifera*	50	35		Oval	Dark green, yellow fall	The most permanent of the birches	Native	Weak wood, not drought tolerant
	Katsura Tree	*Cercidiphyllum japonicum*	40	35		Oval	Blue green turning yellow to scarlet			not drought tolerant
	Red Bud	*Cercis canadensis*	20	25		Open spreading	Medium green turning yellow	Pink flowers		not drought tolerant
	Deodar cedar	*Cedrus deodara*	80	60		Horizontal, dense		Metro Green Street Tree**		
	Atlas cedar	*Cedrus libani ssp. Atlantica*	60	60				Metro Green Street Tree**		
	Purple Rivers Beech	*Fagus sylvatica 'Riversii'*	60	40		Oval	Deep purple turning bronze			strong wood, drought tolerant
	Tricolor Beech	*Fagus slyvatica 'Roseo-Marginata'*	40	30		Broad Oval	Purple with light pink border			strong wood, drought tolerant
	Flame Ash	*Fraxinus oxycarpa 'Flame'*	35	30		Round	Green turning purple and red			vulnerable to Emerald Ash Borer (pest)
	Urbanite Ash	*Fraxinus pennsylvanica 'Urbanite'*	50	40		Broad pyramidal	Lustrous green turning bronze			vulnerable to Emerald Ash Borer (pest)
	Summit Ash	*Fraxinus pennsylvanica lanceolata*	45	25		Pyramidal	Medium green turning yellow			vulnerable to Emerald Ash Borer (pest)
	Saratoga Ginko	*Ginko biloba 'Saratoga'*	30	30		Round	Green gold to yellow			resistant. Beware stinky fruit on female trees
	Halka Honeylocust	*Gledisia triacanthos 'Christie'*	55	40		Upright	Green turning yellow			drought tolerant
	Kentucky Coffee Tree	*Gymnocladus dioicus*	70	40		Open	Green			strong wood, drought tolerant
	Dawn Redwood	*Metasequoia glyptostroboides*	70	25		Pyramidal to oval	Green, yellow fall	Decidious conifer, looks like a redwood in summer		
	Black Tupelo	*Nyssa sylvatica*	40	20	Yes	age	Dark green glossy, copper/red in fall			
	Sourwood	*Oxydendrum arboreum*	50	25		Pyramidal	Green to brilliant scarlet	White flowers		
	Chinese scholar tree	*Sophora japonica*	50	40		Oval	Green, yellow in fall	Metro Green Street Tree**,		
Hiatus	Yoshino Cherry	*Prunus x yedoensis*	30	30		Spreading	Green turning yellow	Pink or white flowers		sidewalk conflict issues
	London plane	*Platanus × acerifolia*	100	65		Spreading	Green turning red in fall	Metro Green Street Tree**,		
	Scarlet Oak	*Quercus coccinea*	50	40		Broad oval	Glossy green turning scarlet			
	Bur Oak	*Quercus macrocarpa*	80	40		Horizontal, dense	Glossy green above and paler below	susceptible to disease and pests		
	Shumard Oak	*Quercus shumardii*	70	50		Horizontal, open	Glossy, dark green, turning brown to red in fall	Large acorns, tolerates drought and seasonal flooding		
	Swamp White Oak	*Quercus bicolor*	60	45		Vertical, dense	below.	some tolerance to drought and urban conditions		tolerant
	Oregon White Oak	*Quercus garryana*	65	45		Vertical, dense	Dark green, round lobed	space	Native	drought tolerant, tough to transplant
	English Oak	*Quercus robur*	60	40		Vertical, dense	Dark green above, bluish green below,	drained soil		
	Red Oak	*Quercus rubra*	70	50		Round	Green turning red			
	Western red cedar	*Thuja plicata*	100	60		Pyramidal	Persistent, green	Metro Green Street Tree**, Does not like direct sun	Native	
	Accolade Elm	*Ulmus hybrids*	60	40		Vase	lustrous dark green and smooth	disease, elm leaf miner and elm leaf beetle		
	Halka Zelkova	*Zelkova serrata 'Halka'*	45	30		Vase	Medium green turning yellow			

OREGON NATIVE TREE SPECIES

Please Note: In general, native trees are NOT recommended as Street Trees within parking strips due to the large planting area required (at least 10' wide). There are some exceptions, which are listed above.
Large native trees are appropriate behind the sidewalk in a yard or park area. The city encourages the planting of native plants and trees where appropriate. For further information, please refer to the following resources:

OSU Extension Service Landscape Plants website		http://oregonstate.edu/dept/ldplants/native-or.htm#native
Oregon City Native Plant List		http://www.orcity.org/sites/default/files/Native%20Plant%20List.pdf
Portland Plant List		http://www.portlandonline.com/auditor/index.cfm?&a=322280&c=34460
Metro Trees for Green Streets	Booklet (For Purchase)	http://www.oregonmetro.gov/index.cfm/go/by.web/id=26337

OTHER LARGE TREES

Please Note: Many species of large trees are NOT recommended as Street Trees within parking strips due to the large planting area required (at least 10' wide) or because they have certain characteristics that make them unsuitable as street trees (e.g. intolerance of clay soils, dust, or weaker structure or wood). There are some exceptions, which are listed above.
Large trees may be appropriate behind the sidewalk in a yard or park area. The city encourages the planting of large trees where appropriate. For further information, please refer to the following resources:

Portland Plant List		http://www.portlandonline.com/auditor/index.cfm?&a=322280&c=34460
Metro Trees for Green Streets	Booklet (For Purchase)	http://www.oregonmetro.gov/index.cfm/go/by.web/id=26337

OREGON CITY STREET TREE LIST (Reso. 13-27, Adopted 12/04/2013)

COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?
RECOMMENDED STREET TREES FOR 2.5' TO 3' PLANTING STRIP								
Cornelian Cherry Dogwood	*Cornus mas*	15	20	Yes	upright rounded to upright spreading	medium to dark green		
Eddie's White Wonder Dogwood	*Cornus nuttallii x Cornus florida*	40	15	Yes	Dense horizontal drooping habit.	Good fall color	White flowers	
Flowering Dogwood	*Cornus florida*	20	25	Yes	Upright	Bright green, lighter underside turning glowing	Small clusters before leaves appear in May	
Japanese Dogwood	*Cornus kousa*	25	25	Yes	Vine shaped	Lustrous medium green turning yellow to scarlet	Small clusters with raspberry like fruit, blooms later than most	
Starlight Dogwood	*Cornus kousa X nuttallii*	30	20	Yes	Upright, oval	Deep green, Fall red	Large, creamy white flower, fruit 3/4" , orange	
Carolina Silverbell	*Halesia carolina*	35	15'	Yes	Rounded, often low branched	yellow to yellow green autumn color.	White, bell-shaped flowers in spring offer mild interest;	
Bigleaf Snowbell Tree	*Styrax obassia*	35	25'	Yes	upright and pyramidal-oval when	dark green above, pubescent beneath	Flowers white, fragrant	
Blireiana Plum	*Prunus x blireiana*	20	20'	Yes	rounded, dense branching, trunk often	first purple but fade to green	Blooms early spring, Flowers pink, fragrant. Fruit purplish red	
Chinese Pistache	*Pistachia chinensis*	25	25'	Yes	Oval, Rounded or Umbrella	Green. Red, Gold, Orange or Multicolored in Fall.	Inconspicuous. Flowers in Spring. Fruit Prolific, Red or Mostly	
Crape Myrtle	*Lagerstroemia cultivars*	20	20'	Yes	Oval, Rounded, Umbrella or Vase	Dark green, usually with a slight gloss.	Showy, Lavender, Pink, Red, Rose or White. Flowers in Summer.	
Amur Maple	*Acer ginnala*	20	20	Yes	Round	Medium green turning orange to scarlet red	Bright red, winged fruit	
Hedge Maple	*Acer campestre*	35	30	Yes	Round to oval	Dark green turning yellow	Corky bark that is striking in winter	
Japanese Maple	*Acer palmatum*	25	25	Yes	Upright, low branching	Green, yellow or red turning scarlet, orange or		
Paperbark Maple	*Acer griseum*	25	20	Yes	Narrow to rounded	Dark green above, silvery below turning brilliant	thin strips	
Roughbark Maple	*Acer triflorum*	25	20'	Yes	Oval	dark green, becoming yellow, orange and/or	Flower yelllow.	
Vine Maple	*Acer circinatum*	25	10	Yes	Upright, spreading	Medium green turning orange to bright red	Winged fruit resembling bow ties, thrives in shade	Native
Japanese Snowbell	*Styrax japonicus*	25	25'	Yes	Rounded, horizontal	Medium to dark green, glabrous above.	Flowers perfect, bell-shaped, 2 cm wide, white with yellow	
Japanese Tree Lilac	*Syringa reticulata*	25	20'	Yes	Pyramidal	Green	White panicles and yellow brown fruit	
Eastern Redbud	*Cercis canadensis*	35	30	Yes	Round	Rich green, heart shaped turning yellow	Small rosy pink flowers with 4-6 dried pods "	
Lavelle Hawthorn	*Cratagus x lavalleii*	30	20	Yes	Upright, open	Glossy green turning bronze to copper red	White cluster flowers, showy orange-red fruit	
Summer Sprite Linden	*Tilia cordata 'Halka'*	20	15'	Yes	Dense compact crown, sheared	Yellow fall color	JF Schmidt small varietal	

COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?
RECOMMENDED STREET TREES FOR PLANTING IN 3' TO 4' PLANTING STRIP								
Trident Maple	*Acer buergeranum*	25	20	Yes	Oval to Round	Glossy green turning yellow orange red	Exfoliating bark, adaptable to varied conditions	
Vine Maple	*Acer circinatum*	25	10	Yes	Upright Spreading	Medium green turning bright orange and red	Northwest native maple, open delicate form, thrives in shade	Native
Amur Maple	*Acer ginnala*	20	20	Yes	Upright Round	Green turning yellow to scarlet red	Small fragrant flowers followed by winged fruit	
Rocky Mountain Glow Maple	*Acer grandidentatum "schmidt"*	25	15	Yes	Oval	Dark green turning bright red	Requires well drained soil	
Paperbark Maple	*Acer griseum*	30	20	Yes	Round	Green w/silver under, bright red orange in fall	Interesting cinnamon brown under exfoliating bark	
Japanese Maple	*Acer palmatum*	25	25	Yes	Upright, low branching	Green, yellow or red turning scarlet, orange or	Many varieties including dwarf species	
Roughbark Maple	*Acer triflorum*	25	20	Yes	Dense and rounded	Dark green, becoming yellow, orange and/or		
Pyramidal Serviceberry	*Amelanchier canadensis pyramidalis*	30	20	Yes	Very Upright	Dark green turning brilliant red and orange	White flowers in spring, dark purple fruit attract birds	
Allegheny Serviceberry	*Amelanchier laevis*	25	15	Yes	Upright and Oval	Green turning orange in fall	White flowers in spring, blue purple fruit attract birds	
Western serviceberry	*Amelanchier alnifolia*	25	25	Yes	Vertical, dense		Metro Green Street Tree**	Native
Eddies White Wonder Dogwood	*Cornus nutalli X florida*	40	15	Yes	Dense horizontal drooping	Good fall color,	White flowers	
Starlight Dogwood	*Cornus kousa X nuttallii*	30	20	Yes	Upright, oval	Deep green, Fall red	Large, creamy white flower, fruit 3/4" , orange	
Crimson Cloud Hawthorn	*Crataegus laevigata "Crimson Cloud"*	25	18		Oval	Glossy green	Flowers are bright red with white center, bright red fruit	
Columnar Goldenrain	*Koelreuteria paniculata fastigiata*	30	6		Narrow Fastigiate	Green turning yellow	Yellow flowers in summer, brown persistent fruits, tolerant of	
Goldenrain Tree	*Koelreuteria paniculata*	30	20		Round, Open	Green turning yellow	Yellow flowers in summer, brown persistent fruits, tolerant of	
Newport Plum	*Prunus cerasifera*	20	20		Oval to Round	Purplish Red	Single pink flowers	
Japanese Tree Lilac	*Syringa reticulata*	25	15	Yes	Pyramidal	Green	White panicles and yellow brown fruit	
Ivory Silk Tree Lilac	*Syringa reticulata 'Ivory Silk'*	25	15	Yes	Pyramidal	Green	White panicles and yellow brown fruit	
Skyrocket Oak	*Quercus robur "Fastigiata"*	45	15		Fastigate	Dark green turning yellow brown	Interesting oak for very narrow spaces	
Summer Sprite Linden	*Tilia cordata 'Halka'*							

COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?
RECOMMENDED STREET TREES FOR PLANTING IN 4 ½' TO 5 ½' PLANTING STRIPS								
Queen Elizabeth Hedge Maple	*Acer campestre "Queen Elizabeth"*	35	30	Yes	Upright, Oval	Dark green turning yellow		
Rocky Mountain Glow Maple	*Acer grandidentatum 'Schmidt'*	25	15		Oval	dark green, orange/yellow in fall		
Paperbark Maple	*Acer griseum*	30	20	Yes	Round	Green w/silver under, bright red orange in fall	Interesting cinnamon brown under exfoliating bark	
Pyramidal European Hornbeam	*Carpinus betulas "Fastigiata"*	35	20		Dense, Upright, Pyramid to Oval	Dark green turning yellow	Retains leaves into winter, small hard nutlets in clusters	
Frans Fontaine Hornbeam	*Carpinus betulas "Frans Fontaine"*	35	15		Broadly oval	Dark green turning yellow		
Chinese Dogwood	*Cornus kousa chinensis*	30	30		Round	Green turning red	White flowers and red pink fruit	
Lavelle Hawthorne	*Crataegus x lavelle*	30	20		Upright	Dark glossy green turning bronze red	White flowers, red persistent fruit	
Saratoga Ginkgo	*Ginkgo biloba "Saratoga"*	30	30	Yes	Round	Greenish gold turning yellow	Avoid female plants, fruit is extremely messy and malodorous	
Autumn Gold Ginkgo	*Ginkgo biloba "Autumn Gold"*	45	35		Narrow broadening in age	Medium green turning gold/yellow	Seedless clone	
Princeton Sentry Gingko	*Ginkgo biloba "Princeton Sentry"*	40	15		Narrowly pyramidal	Light green turning bright yellow		
American Hornbeam	*Ostrya virginiana*	35	25		Oval	Medium green turning yellow	Male catkins visible in winter, greenish white nutlets	
Columnar Sargent Cherry	*Prunus sargentii 'Columnaris'*	35	15		Columnar	Green turning orange red	Deep pink flowers	
Pink Flair Cherry	*Prunus sargentii 'JFSKW58'*	25	15		Narrow / Upright	Bright orange, red fall	pink clusters, blooms laters (avoids frost), upright symmetry	
Capital Pear	*Pyrus calleryana 'Capital'*	35	12		Columnar	Medium green turning reddish purple	White flowers in clusters, good for narrow spaces	
Chanticleer Pear	*Pyrus calleryana 'Glens Form'*	40	15		Pyramidal	Glossy green turning orange red	While flowers in clusters, good for narrow spaces	
Flowering Pear 'Cleveland Select'	*Pyrus calleryana "Cleveland Select"*	40	15		Upright, pyramidal	Glossy, dark green turning wine red to scarlet	White cluster flowers, early bloomer	
Skyrocket Oak	*Quercus robur 'Fastigiata'*	45	15		Fastigiate	Dark green turning yellow brown	Interesting oak for very narrow spaces	
Japanese Stewartia	*Stewartia pseudocamellia*	40	20		Pyramidal	Dark green turning dark red	White camellia like flowers, mottled bark	
Chancellor Linden	*Tillia cordata 'Chancole'*	45	20		Pyramidal, upright	Dark green turning yellow	Yellow fragrant flowers attractive to bees	
"WirelessTM" Zelkova"	*Zelkova serrata 'Schmidtlow'*	24	36	Yes	Broadly spreading vase	Medium green turning red		
Mushshino Zelkova	*Zelkova serrata "Musashino"*	45	20		Very narrow upright vase	Medium green	ideal for narrow street, good canopy clearance	

COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?
RECOMMENDED STREET TREES FOR PLANTING IN 6' TO 8' PARKING STRIPS								
State StreetTM Maple	*Acer miyabei 'Morton'*	45	30		Upright, oval	Dark green turning yellow	Native to Japan, endangered	
European Hornbeam	*Carpinus betulus*	50	35		Oval to Round	Dark green to golden yellow	Holds leaves into winter	
Hackberry	*Celtis occidentalis*	40	30		Oval	Dark green turning yellow	**Metro Green Street Tree	
Katsura Tree	*Cercidiphyllum japonicum*	40	35		Oval	Blue green turning yellow scarlet		
Yellowwood	*Cladastris lutea*	40	35		Round	Yellow to bright green, orange/yellow fall	White fragrant flower clusters	
Pacific Dogwood	*Cornus nutallii*	60	30		Broad upright	Deep green, bright fall color.		Native
Tricolor Beech	*Fagus sylvatica 'Roseo-Marginata'*	40	30		Broad Oval	Purple with light pink border		
Saratoga Ginko	*Ginko biloba 'Saratoga'*	30	30		Round	Green gold to yellow	Avoid female plants, fruit is extremely messy and malodorous	
Autumn Gold Ginkgo	*Ginkgo biloba "Autumn Gold"*	45	35		Narrow broadening in age	Medium green turning gold/yellow	Seedless clone	
Princeton Sentry Gingko	*Ginkgo biloba "Princeton Sentry"*	40	15		Narrowly pyramidal	Light green turning bright yellow		
Shademaster Honeylocust	*Gleditsia triacanthos 'Shademaster'*	45	35		Vase	Dark green turning yellow		
Skyline Honeylocust	*Gleditsia triacanthos 'Skyline'*	50	30		Broad pyramidal	Medium green turning golden		
Halka Honeylocust	*Gleditsia triacanthos 'Christie'*	55	40		Upright	Green, yellow fall		
Kobus Magnolia	*Magnolia kobus*	40	30		Round	Dark green	Evergreen leaves and flowers	
Royal Burgandy Cherry	*Prunus serrulata 'Royal Burgandy'*	30	20		Vase	Purple red to red and orange	Pink flowers	
Rancho Pear	*Pyrus calleryana 'Rancho'*	35	30		Narrow upright		White flowers	
Trinity Pear	*Pyrus calleryana 'Trinity'*	30	25		Broadly oval to round	Glossy green, orange/red fall	White flowers	
Scarlet Oak	*Querus coccinea*	50	40		Broad Oval	Glossy green turning scarlet		
Skymaster Oak	*Quercus robur 'Pyramich'*	50	25		Pyramidal	Dark green turning yellow		
Forest Green Oak	*Quercus frainetto 'Schmidt'*	50	30		Upright w/ strong central leader	Glossy deep green		
Glenleven Linden	*Tilia cordata 'Glenleven'*	45	30		Pyramidal	Medium green turning yellow		
Greenspire Linden	*Tilia cordata 'Greenspire'*	40	30		Pyramidal, symmetrical	Dark green, yellow fall		
Redmond Bigleaf Linden	*Tillia americana x euchlora "Redmond'*	35	25		Pyramidal	light green, yellow fall		
Rancho Linden	*Tillia cordata 'Rancho'*	40	30		Vigorous pyramidal	Small leaves		
Frontier Elm	*Ulmus 'Frontier'*	40	30		Broadly oval	Glossy green, burgundy fall	Disease tolerant	
Accolade Elm	*Ulmus japonica x wilsonia*	70	60		Vase shaped w/ arching limbs	Glossy green, yellow fall	Resistant to elm leaf beetle and dutch elm disease	
Triumph Elm	*Ulmus 'Morton Glossy'*	70	60		Upright oval to vase shaped	Glossy dark green, yellow fall		
Green Vase Zelkova	*Zelkova serrata 'Green Vase'*	50	40		Vase shaped w/ upright arching limbs	Green, yellow fall		
Halka Zelkova	*Zelkova serrata 'Halka'*	45	30		Vase	Medium green turning yellow	Cultivar	
Village Green Zelkova	*Zelkova serrata 'Village Green'*	40	38		Vase to round	Deep green / rusty red fall	Not recommended for high wind areas	
"WirelessTM" Zelkova"	*Zelkova serrata 'Schmidtlow'*	24	36		Broadly spreading vase	Medium green turning red	Cultivar	
Musashino Zelkova	*Zelkova serrata 'Musashino'*	45	20		Very narrow upright vase	Medium green	Good for narrower street, clearance beneath canopy	

COMMON NAME	SCIENTIFIC NAME	MATURE HEIGHT (ft)	CANOPY SPREAD (ft)	POWER LINE OK?	STRUCTURE	FOLIAGE	FLOWERS, FRUIT, OTHER SPECIAL INTEREST	OREGON NATIVE?
RECOMMENDED STREET TREES FOR PLANTING IN 8 ½' AND LARGER PARKING STRIPS								
Metro's Illustrated Guide "Trees for								
Grand fir	*Abies grandis*	100	40		Upright, vertical, dense	Needles	Metro Green Street Tree**	Native
Sycamore Maple	*Acer pseudoplatanus*	60	50		Wide spread	Green turning yellow		
Wineleaf Sycamore Maple	*Acer pseudoplatanus 'Spaithii'*	30	50		Pyramidal	Dark green		
Red Horsechestnut	*Aesculus x carnea 'Briotii'*	60	45		Round	Dark green turning yellow	Red flowers	
Globe Serviceberry	*Amelanchier canadensis oblongifolia*	60	40		Round	Green turning bright yellow red	White flowers	
Canoe or Paper Birch	*Betula papyrifera*	50	35		Oval	Dark green, yellow fall	The most permanent of the birches	Native
Katsura Tree	*Cercidiphyllum japonicum*	40	35		Oval	Blue green turning yellow to scarlet		
Red Bud	*Cercis canadensis*	20	25		Open spreading	Medium green turning yellow	Pink flowers	
Deodar cedar	*Cedrus deodara*	80	60		Horizontal, dense		Metro Green Street Tree**	
Atlas cedar	*Cedrus libani ssp. Atlantica*	60	60				Metro Green Street Tree**	
Purple Rivers Beech	*Fagus sylvatica 'Riversii'*	60	40		Oval	Deep purple turning bronze		
Tricolor Beech	*Fagus slyvatica 'Roseo-Marginata'*	40	30		Broad Oval	Purple with light pink border		
Flame Ash	*Fraxinus oxycarpa 'Flame'*	35	30		Round	Green turning purple and red		
Urbanite Ash	*Fraxinus pennsylvanica 'Urbanite'*	50	40		Broad pyramidal	Lustrous green turning bronze		
Summit Ash	*Fraxinus pennsylvanica lanceolata*	45	25		Pyramidal	Medium green turning yellow		
Saratoga Ginko	*Ginko biloba 'Saratoga'*	30	30		Round	Green gold to yellow		
Halka Honeylocust	*Gledisia triacanthos 'Christie'*	55	40		Upright	Green turning yellow		
Kentucky Coffee Tree	*Gymnocladus dioicus*	70	40		Open	Green		
Dawn Redwood	*Metasequoia glyptostroboides*	70	25		Pyramidal to oval	Green, yellow fall	Decidious conifer, looks like a redwood in summer	
Black Tupelo	*Nyssa sylvatica*	40	20	Yes	Pyramidal when young, spreading w/	Dark green glossy, copper/red in fall		
Sourwood	*Oxydendrum arboreum*	50	25		Pyramidal	Green to brilliant scarlet	White flowers	
Chinese scholar tree	*Sophora japonica*	50	40		Oval	Green, yellow in fall	Metro Green Street Tree**,	
Yoshino Cherry	*Prunus x yedoensis*	30	30		Spreading	Green turning yellow	Pink or white flowers	
London plane	*Platanus × acerifolia*	100	65		Spreading	Green turning red in fall	Metro Green Street Tree**,	
Scarlet Oak	*Quercus coccinea*	50	40		Broad oval	Glossy green turning scarlet		
Bur Oak	*Quercus macrocarpa*	80	40		Horizontal, dense	Glossy green above and paler below	Not shade tolerant, needs ample space, somewhat susceptible	
Shumard Oak	*Quercus shumardii*	70	50		Horizontal, open	Glossy, dark green, turning brown to red in fall	Large acorns, tolerates drought and seasonal flooding	
Swamp White Oak	*Quercus bicolor*	60	45		Vertical, dense	Glossy green above, gray / white pubescent	some tolerance to drought and urban conditions	
Oregon White Oak	*Quercus garryana*	65	45		Vertical, dense	Dark green, round lobed	Autumn color is saddle brown, wildlife tree, Needs ample space	Native
English Oak	*Quercus robur*	60	40		Vertical, dense	Dark green above, bluish green below,	Tolerates drought / seasonal flooding, poor soils, prefers well-	
Red Oak	*Quercus rubra*	70	50		Round	Green turning red		
Western red cedar	*Thuja plicata*	100	60		Pyramidal	Persistent, green	Metro Green Street Tree**, Does not like direct sun	Native
Accolade Elm	*Ulmus hybrids*	60	40		Vase	lustrous dark green and smooth	Resembles American Elm, Reportedly tolerant of Dutch elm	
Halka Zelkova	*Zelkova serrata 'Halka'*	45	30		Vase	Medium green turning yellow		

OREGON NATIVE TREE SPECIES

Please Note: In general, native trees are NOT recommended as Street Trees within parking strips due to the large planting area required (at least 10' wide). There are some exceptions, which are listed above.
Large native trees are appropriate behind the sidewalk in a yard or park area. The city encourages the planting of native plants and trees where appropriate. For further information, please refer to the following resources:

OSU Extension Service Landscape Plants website		http://oregonstate.edu/dept/ldplants/native-or.htm#native
Oregon City Native Plant List		http://www.orcity.org/sites/default/files/Native%20Plant%20List.pdf
Portland Plant List		http://www.portlandonline.com/auditor/index.cfm?&a=322280&c=34460
Metro Trees for Green Streets	Booklet (For Purchase)	http://www.oregonmetro.gov/index.cfm/go/by.web/id=26337

OTHER LARGE TREES

Please Note: Many species of large trees are NOT recommended as Street Trees within parking strips due to the large planting area required (at least 10' wide) or because they have certain characteristics that make them unsuitable as street trees (e.g. intolerance of clay soils, dust, or weaker structure or wood). There are some exceptions, which are listed above.
Large trees may be appropriate behind the sidewalk in a yard or park area. The city encourages the planting of large trees where appropriate. For further information, please refer to the following resources:

Portland Plant List		http://www.portlandonline.com/auditor/index.cfm?&a=322280&c=34460
Metro Trees for Green Streets	Booklet (For Purchase)	http://www.oregonmetro.gov/index.cfm/go/by.web/id=26337

Recommended Street Tree guide

PREPARED BY THE ASHLAND TREE COMMISSION

CITY OF ASHLAND

ACKNOWLEDGMENTS

The Ashland Tree Commission wishes to thank past tree commissioners who have contributed to the preparation of the Recommended Street Tree List. They donated time, energy, and enthusiasm to the development of the list. The Commission is indebted to Sue Anne Frank, the University of Washington Center for Urban Horticulture, Puget Sound Power and Light Company, and the Washington State Department of natural Resources for the format of the tree profiles and for some of the information which was derived from their publication, “Urban Forestry Notebook”, and adapted to this region.

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Tree Commissioners

Rich Whitall, Chair
Dan Moore
Bryan Nelson
Bryan Holley
Greg Covey
January Jennings

Donn Todt, Parks Department Liaison
Cameron Hanson, City Council Liaison

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Recommended Street Trees: A Guide to Selection, Planting and Maintenance

The Urban Forest

Ashland enjoys a heritage of tree care dating back to the pioneers. In recent years, Ashland has consistently been named Tree City USA, a prestigious and gratifying award, by the National Arbor Day Foundation. The City of Ashland wishes to enhance and extend this heritage of tree care. The City wishes to encourage tree plantings that are functional as well as aesthetically pleasing. Appropriate tree selection today will assure a delightful and diverse urban forest tomorrow.

Diversity in an urban forest is an index to its health. Since arboreal diversity is a goal, the Ashland Tree Commission has created this guide to the many species and varieties that are best suited for planting along the City's streets or anywhere in the public right-of-way. These trees have been selected because they generally have a conservative, containable root system. In addition, they are less messy with less seed or fruit drop than many species. They also require limited care and pruning and have good resistance to most pests and diseases. Lastly, they provide shade and help create an attractive and healthy neighborhood environment.

The Recommended Street Tree List is not exhaustive. There are many additional trees that have great value as street trees. Many of these are described in the publications listed in the reference section. Trees other than those listed should be chosen to fit local conditions. The use of trees on the prohibited list for street trees is subject to approval by the Tree Commission.

Young Trees Need Special Care

The Recommend Street Tree List should be an aid to tree selection, but a healthy urban forest depends on more than correct selection. City trees depend on consistent care from the time they are planted.

Young trees are especially vulnerable under urban conditions. They are fragile and can be easily damaged. For protection, most newly-planted trees should be staked for only the first year. New trees should be deeply watered once a week for the first two summers and less often over the next two years. This will promote deep rooting as the tree will seek water further down in the soil. Fertilizers, too, should be phased out over a few years. Both over-fertilizing and over-watering lead to shallow-rooted trees which require regular "handouts" in order to survive.

Proper pruning of street trees when they are young is also important. City trees must co-exist with traffic, powerlines, buildings, and pedestrians. City ordinances require branches to be trimmed 8 feet above sidewalks and 14 feet above streets. Correct pruning is the best thing that can be done for a tree. Consult the references listed for more information about proper pruning techniques.

Site Design and Use Standards

APPROVAL STANDARDS: All development fronting on public or private streets shall be required to plant street trees in accordance with the following standards and chosen from the recommended list of street trees.

LOCATION FOR STREET TREES: Street trees shall be located behind the sidewalk except in cases where there is a designated planting strip in the right-of-way, or the sidewalk is greater than 8 feet wide. Street trees shall include irrigation, root barriers, and generally conform to the standards established by the Department of Community Development.

SPACING, PLACEMENT, AND PRUNING OF STREET TREES: All tree spacing may be made subject to special site conditions which may, for reasons such as safety, affect the decision. Any such proposed special condition shall be subject to the Staff Advisor's review and approval. The placement, spacing, and pruning of street trees shall be as follows:

1. Street trees shall be placed at the rate of one tree for every 30 feet of street frontage. Trees shall be evenly spaced, with variations to the spacing permitted for specific site limitations, such as driveway approaches.

2. Trees shall not be planted closer than 25 feet from the curb line of intersections of streets or alleys, and not closer than 10 feet from private driveways (measured at the back edge of the sidewalk), fire hydrants, or utility poles.

3. Street trees shall not be planted closer than 20 feet to light standards. Except for public safety no new light standard location shall be positioned closer than 10 feet to any existing street tree, and preferably such locations will be at least 20 feet distant.

4. Trees shall not be planted closer than 2 1/2 feet from the face of the curb except at intersections where it shall be 5 feet from the curb, in a curb return area.

5. Where there are overhead power lines, tree species are to be chosen that will not interfere with those lines.

6. Trees shall not be planted within 2 feet of any permanent hard surface paving or walkway. Sidewalk cuts in concrete for trees, or tree wells, shall be at least 25 square feet; however, larger cuts are encouraged because they allow additional air and water into the root system and add to the health of the tree. Tree wells shall be covered by tree grates in accordance with City specifications.

7. Trees, as they grow, shall be pruned to provide at least 8 feet of clearance above sidewalks and 14 feet above street roadway surfaces.

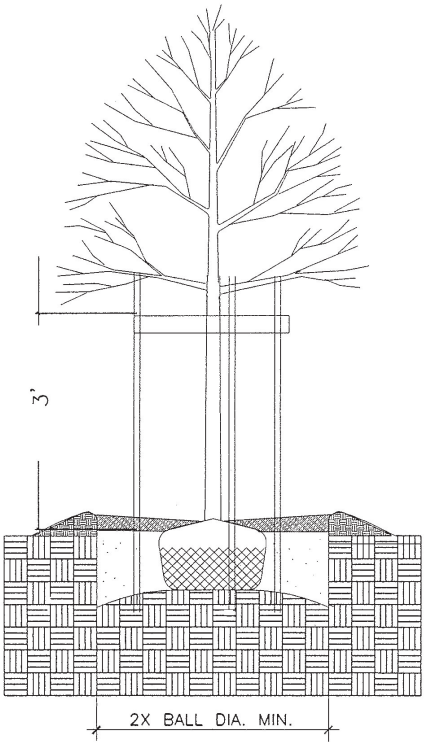
8. Existing trees may be used as street trees if there will be no damage from the development which will kill or weaken the tree. Sidewalks of variable width and elevation may be utilized to save existing street trees, subject to approval by the Staff Advisor.

REPLACEMENT OF STREET TREES: Existing street trees removed by development projects shall be replaced by the developer with those from the approved street tree list. The replacement trees shall be of size and species similar to the trees that are approved by the Staff Advisor.

RECOMMENDED STREET TREES: Street trees shall conform to the street tree list approved by the Ashland Tree Commission.

Planting Instructions

Proper planting of street trees will help assure their survival and get them off to a good start.



1. HOLE SIZE: Each hole should be about twice the diameter of the container or root ball. In soils that have good structure, the planting hole need only be deep enough to hold the root ball. Plant “high” or “proud” in all but sandy soils. The sides and bottom of the hole should be roughened with a shovel to intermingle the backfill and local native soil and to provide easier access for developing roots.

2. SOIL IMPROVEMENT: For most street tree planting, a back fill soil mix composed of 25% humus or soil amendment and 75% tree pit soil is recommended. In heavier clay soils, amendments are not recommended.

3. PLANTING: Place the tree in the hole with the roots spread in a natural position. The tree should stand at about the same depth that it grew in the nursery. Work the backfill soil firmly around the roots, watering it, if necessary, to settle and fill pockets. Fill the hole leaving a saucer-like depression to retain water. Handle balled and burlapped (B&B) plants by the ball only. The burlap should be untied from the tree trunk and tucked well below the soil level, but not completely removed. Remove all strings and tags from the trunk and branches. Wire cages should be flattened or clipped only after tree is in hole.

4. SELECTED PRUNING: Pruning may be necessary. B&B trees have often been pre-pruned by the nursery at the time of digging. Prune only to keep the normal shape of the tree. Cut just above a bud or close to a twig, branch, or trunk. Try to form a well developed crown with a strong leader and wide-angled branches.

5. FERTILIZER (OPTIONAL): When the hole for the tree is about 2/3 backfilled, slow-release fertilizer tablets may be evenly distributed around the rootball. The tablets should have an analysis of 20-5-10 N-P-K or similar balance.

6. STAKING: In many cases staking of new trees is unnecessary. Staking is beneficial in areas of potential vandalism, high winds and/or wet soil. Trees should be double staked with 7’ long stakes having a minimum diameter of two inches. The stakes should extend four to five feet above the ground. Ties should be one inch canvas web belting or rubber, looped loosely around the trunk in a figure-eight pattern and nailed to the tree stakes. The tree should remain staked for no more than one year.

7. WATERING: Water new trees once a week for the first two summers and less often over the next two years. Deep waterings should be applied slowly within the area under the spread of the trees crown and just beyond. Short frequent waterings wet only the top few inches of soil and encourage roots to grow near the surface. Ask at your local nursery if you have questions about planting, pruning, feeding or watering your new trees.

(Continued on page 8)

Tree Shapes and Sizes to Suit the Site

Consider the size and shape of trees for optimal placement in the landscape. The first consideration in selecting a tree is that the size and shape of the tree should suit the specific location in which it is planted. The following lists will help you select an appropriate tree for a particular circumstance.

PYRAMIDAL

Many trees that appear upright when young become pyramidal with age. As they mature, the lower branches get larger and begin to droop with weight. These lower branches should not interfere with vehicular or pedestrian traffic so pruning is sometimes needed. Although pruning may be required, some pyramidal trees nevertheless make good street trees. Medium to large pyramidal trees should not be planted under power lines.

EXAMPLES OF TREES HAVING A PYRAMIDAL SHAPE

SMALL TO MEDIUM TREES	MEDIUM TO LARGE TREES
Sourwood	Ginkgo
Kobus Magnolia	Evergreen Magnolia
	Tupelo or Sour Gum
	Littleleaf Linden

ROUNDED TO SPREADING

Small, round trees are preferred for some sites under utility lines while large, round trees are preferred for sites needing a dramatic impact on the streetscape. Many large, round trees have multiple tops which can be pruned to form a “V-shape” around powerlines as the trees mature. Wide-spreading trees require more thought before they are chosen as street trees. They either need to be placed further back form the street or need to be pruned with care to secure clearance over the roadway.

EXAMPLES OF TREES HAVING A ROUNDED TO SPREADING SHAPE

SMALL TO MEDIUM TREES	MEDIUM TO LARGE TREES
Hedge Maple	Norway Maple
Amur Maple	Flowering Ash
Eastern Redbud	Thornless Honeylocust
Crapemyrtle	Canyon Live Oak
Ornamental Crabapple	Scarlet Oak
Goldenrain Tree	
Variegated Box Elder	

OVAL

An upright oval shape is a good shape for a street tree, reaching up toward the sky without too much competition with vehicular traffic. Some oval-shaped trees reach to a lofty height with a single center trunk and are therefore unsuitable for planting underneath powerlines. Others having multiple leaders may be pruned to a `U-shape' around powerlines.

EXAMPLES OF TREES HAVING AN OVAL SHAPE

SMALL TO MEDIUM TREES	MEDIUM TO LARGE TREES
Trident Maple	Red Maple
Kousa Dogwood	Sugar Maple
American Hornbeam	American Ash
Washington Thorn	'Raywood' Ash
Paperbark Maple	Red Oak
Chinese Pistache	

COLUMNAR

Columnar trees are frequently used because there is not room enough for other tree types. Narrow branch angles result from branches that grow up instead of out. Branches of this type are structurally less strong than wider angled branches. Columnar trees should not be planted directly under powerlines.

EXAMPLES OF TREES HAVING A COLUMNAR SHAPE

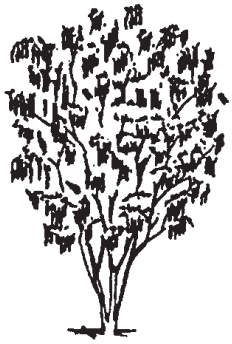
SMALL TO MEDIUM TREES	MEDIUM TO LARGE TREES
Upright Goldenrain	Upright English Oak
Flowering Crabapple vars.	`Armstrong' Red Maple
Flowering Cherry vars.	`Olmsted' Norway Maple
Flowering Pear vars.	`Columnar' Sugar Maple
	Columnar Norway Maple
	Carpinus betula 'Fastigiata

VASE-SHAPED

A vase-shaped (or V-shaped) tree is a favored form because the branches arch to form a shady canopy over both streets and sidewalks while staying out of the way of traffic and powerlines. Note: Some of the trees listed below naturally develop an upright-oval shape. However, pruning the lower limbs gives a vase shaped form.

EXAMPLES OF TREES HAVING A VASE SHAPE

SMALL TO MEDIUM TREES	MEDIUM TO LARGE TREES
European Hornbeam	Sargent Cherry
'Kwanzan' Flowering Cherry	Chinese Elm
Eastern Redbud	Zelkova
	American Yellowwood
	Kentucky Coffee Tree
	Persian Parrotia
	California Black Oak



Trees for Urban Conditions

City trees must contend with tremendous biological, physical, and chemical stresses: too much water or too little; hot summer temperatures; polluted air, water and soil; physical damage from vehicles and vandalism. Listed below are species that the Tree Commission recommends for withstanding the stress of urban conditions in downtown locations.

Red Maple
Norway Maple
Ginkgo
Thornless Honeylocust
Littleleaf Linden
European Hornbeam
Hedge Maple
Amur Maple
Goldenrain Tree
Red Oak
Flowering Pear
Kentucky Coffee Tree
'Raywood' Ash

Drought Tolerant Trees

The following is a list of trees on the Recommended Street Tree List that are somewhat drought tolerant **once they are well established in the landscape**.

Trident Maple
Hedge Maple
Amur Maple
Washington Thorn
`Raywood' Ash
Goldenrain Tree
Crapemyrtle
Flowering Crabapple
Flowering Pear
Littleleaf Linden
Norway Maple
`Green Mountain' Sugar Maple
`Autumn Purple' Ash
Flowering Ash
`Rosehill' Ash
Chinese Pistache
Canyon Live Oak
Chinese Elm
Zelkova

Solar Friendly Trees

These trees allow the maximum amount of solar radiation during the late autumn, winter and early spring.

Trident Maple
American Ash
Flowering Ash
Paperbark Maple
`Autumn Flame' Red Maple
`Crimson King' Norway Maple
`Schlesinger' Red Maple
`Legacy' Sugar Maple
Honeylocust
Sourgum
Sourwood
Amur Maple variety `Flame'
Crapemyrtle
Zelkova
Eastern Redbud
American Hornbeam
`October Glory' Red Maple
`Green Mountain' Sugar Maple
Sargent Cherry
`Raywood' Ash
Ginkgo

Trees with Seasonal Interest

BROADLEAF EVERGREEN TREES

Southern Magnolia
Canyon Live Oak

TREES WITH CONSPICUOUS FLOWERS

Eastern Redbud
Kousa Dogwood
Flowering Ash
Washington Hawthorne
Goldenrain Tree
Crapemyrtle
Flowering Crabapples
Flowering Pears
Flowering Plums
Flowering Cherries
American Yellowwood
Southern Magnolia
Chitalpa ‘Pink Dawn’, ‘White Cloud’

TREES THAT USUALLY HAVE GOOD AUTUMN COLOR

(R - Red, Y - Yellow, O - Orange, P - Purple)

Trident Maple	RYO	‘Rosehill’ Ash	YP
Washington Hawthorn	Y	`Sunburst’ Honeylocust	Y
Hedge Maple	Y	Ginkgo	Y
Amur Maple	RO	Chinese Pistache	RYP
Norway Maple	Y	Sargent Cherry	O
Eastern Redbud	Y	Scarlet Oak	RP
Kousa Dogwood	YO	Red Oak	RY
`Flame’ Ash	P	Baldcypress	O
`Raywood’ Ash	P	Paperbark maple	R
Crapemyrtle	RY	Chinese Elm	Y
Flowering Pear	RY	American Hornbeam	YO
Red Maple	RY	Tupelo	YO
Sugar Maple	RO		
`Autumn Purple’ Ash	P		
Sourwood	OR		

Trees And Powerlines

Many power outages are caused by trees. The City performs line clearance where tree limbs are in close proximity to live wires. You may assist the utility workers and the community by planting trees that cause the least interference with wires. One solution is to plant smaller trees that top out at or below the height of the lowest live electrical wire. These live wires are 18 feet or more above the ground. Another solution is to plant trees that naturally fork into a multi-trunked form. These trees may be easily pruned and shaped away from overhead wires. Avoid planting large, single trunked or pyramidal shaped trees directly under power lines. Select more appropriate trees by using this list.

SMALL STATURE TREES THAT USUALLY REMAIN BELOW POWER LINES:
Trident Maple
Kousa Dogwood
American Hornbeam
Washington Thorn
Sourwood
Hedge Maple
Amur Maple
Eastern Redbud
Goldenrain Tree
Crapemyrtle
Flowering Crabapple
Hybrid Serviceberry
Flowering Cherry
Flowering Plum

LARGER STATURE TREES WITH MULTILIMB STRUCTURE:
Norway Maple
Red Maple
Sugar Maple
European Hornbeam
American Ash
Flowering Ash
`Raywood' Ash
Thornless Honeylocust
Chinese Pistache
California Black Oak
Red Oak
Chinese Elm
Zelkova
Persian Parrotia
Chitalpa 'Pink Dawn', 'White Cloud'

Parking Lot Trees

Parking lots provide some the most challenging locations in which to grow trees. The following species perform better than most in these inhospitable situations. Consult the `Site Design and Use Standards' for details as to the provision of adequate root room and protection from vehicles.

Red Oak
Canyon Live Oak
Amur Maple
Norway Maple
Red Maple
Hedge Maple
Sargent Cherry
Ornamental Pear
Zelkova
Goldenrain Tree
Chinese Pistache
'Flame' Ash
'Raywood' Ash
American Ash
European Hornbeam
Thornless Honeylocust
'Kwanzan' Flowering Cherry
Crapemyrtle

Lithia Way Recommended Street Trees

Japanese Zelkova ‘Makino’ (Zelkova serrata) — Upright variety, vase shaped in youth. Yellow, orangish brown, to reddish fall color. Drought, heat, wind, and urban condition tolerant.

Littleleaf Linden ‘Corinthian’ (Tilia cordata) — Compact pyramidal in youth, more rounded with age. Lacy cluster of fragrant cream flowers. Poor soil, drought and air pollution tolerant.

Trident Maple (Acer buergerianum) — Up-right rounded crown. New growth often bronze to purple; yellow, orange, red fall color. Drought, wind, soil compaction, and air pollution tolerant.

Bigtooth Maple ‘Schmidt’ (Acer grandidentatum) — Upright oval to rounded – dense folliage. Orange, red or yellow fall color. Moderate drought tolerance.

MINIMUM PARKROW TREE REQUIREMENTS

4 Foot Parkrow

Amur Maple (*Acer ginnala*)
Serviceberry (*Amelanchier arborea*)
Upright European Hornbeam (*Carpinus betulus var. 'Fastigata'*)
Eastern Redbud (*Cercis canadensis*)
Kousa Dogwood (*Cornus kousa*)
Paul's Scarlet Hawthorn (*Crataegus laevigata*)
Washington Thorn (*Crataegus phaenopyrum*)
Goldenrain (*Koelreuteria paniculata*)
Crapemyrtle (*Lagerstroemia indica*)
Kobus Magnolia (*Magnolia kobus*)
Ornamental Flowering Crabapples (*Malus spp.*)
Sourwood (*Oxydenrum arboreum*)
Japanese Snowbell (*Styrax japonicus*)

5 Foot Parkrow

Bigtooth Maple *(Acer grandidentatum)*
Trident Maple (*Acer buergeranum*)
Paperbark Maple (*Acer griseum*)
Hedge Maple (*Acer campestre*)
American Hornbeam (*Carpinus caroliniana*)
Raywood Ash (*Fraxinus oxycarpa*)
Persian Parrotia (*Parrotia persica*)
Chinese Pistache (*Pistache chinensis*)
Flowering Cherries and Plums (*Prunus spp.*)
Flowering Pears (*Pyrus calleryana*)
European Mountain Ash (*Sorbus aucuparia*)

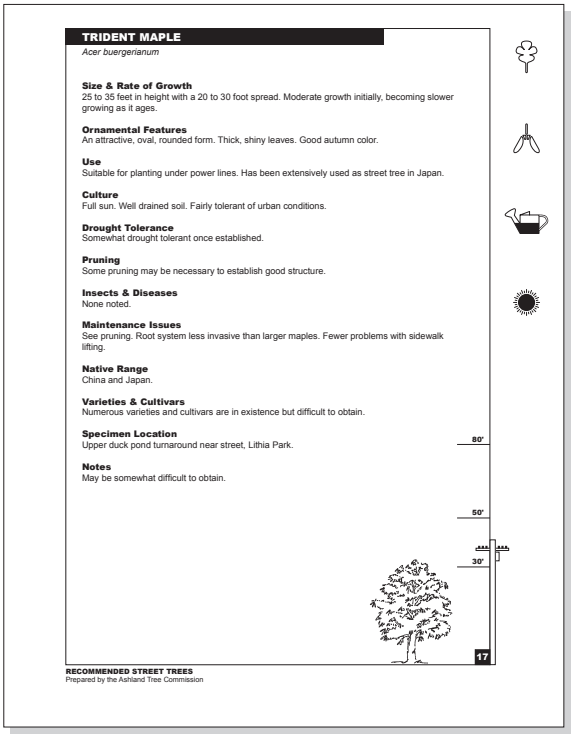
6 Foot Parkrow

'Armstrong' Maple (*Acer freemanii*)
Yellowood (*Cladrastis lutea*)
Flowering Ash (*Fraxinus ornus*)
Summit Ash (*Fraxinus pennsylvanica 'Summit'*)
Ginkgo (*Ginkgo biloba*)
Honeylocust (*Gleditsia triacanthos inermis*)
Kentucky Coffeetree (*Gymnocladus dioicus*)
Tupelo (*Nyssa sylvatica*)
Scarlet Oak (*Quercus coccinea*)
Canyon Live Oak (*Quercus chrysolepis*)
English Oak (*Quercus robur*)
Northern Red Oak (*Quercus rubra*)
Zelkova (*Zelkova serrata*)

7 Foot Parkrow and 8 Foot Parklow

Bald Cypress (*Taxodium distichum*)
Red Maple (*Acer rubrum vars.*)
Sugar Maple (*Acer saccharinum*)
Southern Magnolia (*Magnolia grandiflora*)
Oaks (*Quercus spp.*)
Idaho Locust (*Robinia pseudoacacia idahoensis*)
Littleleaf Linden (*Tilia cordata*)
Chinese Elm (*Ulmus parvifolia*)
Norway Maple (*Acer platanoides*)
American Ash (*Fraxinus americana*)

SYMBOLS



Leaf Type – The generalized leaf shape.

Fruit Type – The generalized category.

Drought Tolerance

Exposure

Height – Shown in relationship to a telephone pole. Specific heights are listed in the SIZE AND RATE OF GROWTH category for each plant. Tree shape is generalized.

Leaf Type

simple untoothed | simple toothed | simple lobed | compound | needle-like | scale-like

Fruit Type

balls & capsules | cone | winged | pod | nut | acorn | fleshy | berry

Drought Tolerance

good/very good | moderate | poor/fair

Exposure

full sun | partial shade

TRIDENT MAPLE

Acer buergerianum

Size & Rate of Growth
25 to 35 feet in height with a 20 to 30 foot spread. Moderate growth initially, becoming slower growing as it ages.

Ornamental Features
An attractive, oval, rounded form. Thick, shiny leaves. Good autumn color.

Use
Suitable for planting under power lines. Has been extensively used as street tree in Japan.

Culture
Full sun. Well drained soil. Fairly tolerant of urban conditions.

Drought Tolerance
Somewhat drought tolerant once established.

Pruning
Some pruning may be necessary to establish good structure.

Insects & Diseases
None noted.

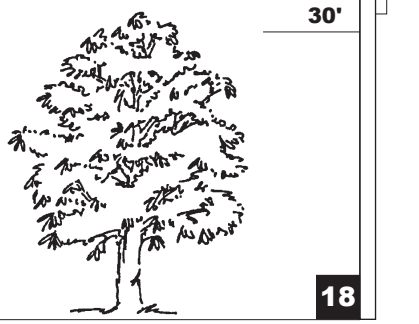
Maintenance Issues
See pruning. Root system less invasive than larger maples.
Fewer problems with sidewalk lifting.

Native Range
China and Japan.

Varieties & Cultivars
Numerous varieties and cultivars are in existence but difficult to obtain.

Specimen Location
Upper duck pond turnaround near street, Lithia Park.

Notes
May be somewhat difficult to obtain.



HEDGE MAPLE

Acer campestre

Size & Rate of Growth
30 to 40 feet in height with a spread of 30 to 35 feet. Moderate growth rate.

Ornamental Features
Rounded and dense. Leaves appear healthy throughout summer and early fall. Yellow autumn color.

Use
A good choice for planting under utility wires. One of the most adaptable small trees.

Culture
Full sun or light shade. Easily transplanted. pH adaptable. Air pollution tolerant.

Drought Tolerance
Tolerant of dry soils and compaction.

Pruning
Will tolerate severe pruning. Good compartmentalization of wounds. Pruning in winter or spring results in loss of sap. This should be avoided.

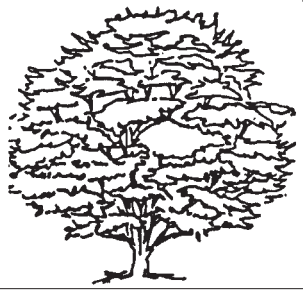
Insects & Diseases
Less subject to insects than many maple species.

Maintenance Issues
Pruning required to keep branches well above roadways.

Native Range
Europe, Near East, North Africa.

Varieties & Cultivars
Numerous varieties recognized. ‘Postelense’ is a shrub form with leaves that are golden yellow when young. ‘Evelyn’ has improved branch angles for street tree planting.

Specimen Location
Near bleachers of SOU ball fields on Iowa Street.



‘ARMSTRONG’, ‘AUTUMN BLAZE’ MAPLE

Acer x freemanii vars

Size & Rate of Growth
35 to 50 feet tall and variable spread. Moderate to rapid growth.

Ornamental Features
Hybrid between Red and Silver Maple. Combines the drought tolerance of the Silver Maple with the fall color and superior branching habit of the Red Maple.

Use
Root system is adapted to urban conditions.

Culture
Prefers full sun but will adapt to partial shade.

Drought Tolerance
Moderate. Requires summer water.

Pruning
Requires pruning to develop strong structure.

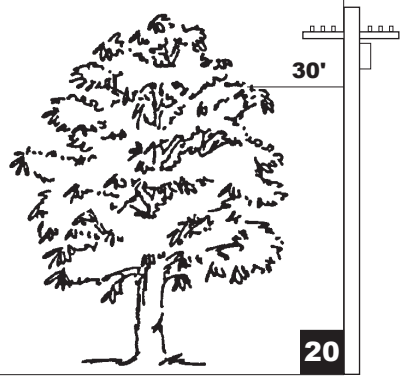
Insects & Diseases
Cottony scale.

Maintenance Issues
Strong root systems may heave sidewalks.

Native Range
Hybrid.

Varieties & Cultivars
‘Armstrong’ has an upright columnar habit. ‘Autumn Blaze’ is broadly oval. Both have outstanding orange-red fall foliage.

Specimen Locations
‘Armstrong’ Lithia Park shop area, between nursery and greenhouse.
‘Armstrong Blaze’ South of intersection of Pioneer and Winburn Way in Lithia Park.



AMUR MAPLE

Acer ginnala

Size & Rate of Growth
15 to 20 feet tall with an equal spread; moderate growth.

Ornamental Features
Dense shrub or small multi-stemmed tree with a rounded crown. Glossy green leaves have three small lobes. Fall color will vary depending on plant. Small yellow flowers are fragrant in early spring; followed by red winged seeds.

Use
Small specimen. Suitable for planting under wires.

Culture
Needs full sun to exhibit best fall color but will tolerate light shade. Adaptable to a wide range of soil conditions. Easily transplanted.

Drought Tolerance
Very good.

Pruning
Tolerates heavy pruning. May require pruning to maintain single-stemmed habit. Nurseries are growing single trunk specimens for street tree use.

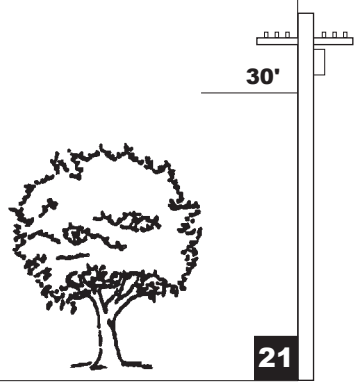
Insects & Diseases
None serious.

Maintenance Issues
See pruning.

Native Range
China, Mongolia, Korea, Japan.

Varieties & Cultivars
Acer ginnala var. semenowii - a shrubbier type which does well as a screen or barrier. Lustrous, dark green leaves turn red-purple in fall. ‘Flame’- consistently good autumn color.

Specimen Location
In front of 199 East Main.



BIGTOOTH MAPLE

Acer grandidentatum

Size & Rate of Growth
20 to 30 feet; slow to moderate growth rate.

Ornamental Features
Good autumn color.

Use
As a small street tree. Good branch structure for arching over sidewalks and roadways.

Culture
Full sun to part-shade. Needs good drainage. Adaptable to many soil types.

Drought Tolerance
Drought tolerant once established.

Pruning
Minimal pruning needed.

Insects & Diseases
Occasional leaf spot. Not seriously damaging. Possible sun scald on South and West sides of young trees if in sufficiently irrigated during establishment.

Maintenance Issues
None.

Native Range
South Idaho to Mexico. Most common is North Utah.

Varieties and Cultivars
'Rocky Mt. Glow' selected for good orange-red autumn color.

Specimen Location
Species on the East side of the Second Street parking lot. *Var. Rocky Glow*: through the downtown area on Main Street.

Note
A smaller, western version of the Eastern Sugar maple.

PAPERBARK MAPLE

Acer griseum

Size & Rate of Growth
20 to 30 feet in height with a 10 to 20 foot spread.

Ornamental Features
Upright oval or rounded form. Small trifoliate leaves turn red in autumn. Extremely attractive, peeling, reddish-brown bark.

Use
Small street tree.

Culture
Full sun. Prefers well drained, moist soil but performs well in clay soils also.

Drought Tolerance
Moderate. Does not tolerate extended drought especially in poor soil.

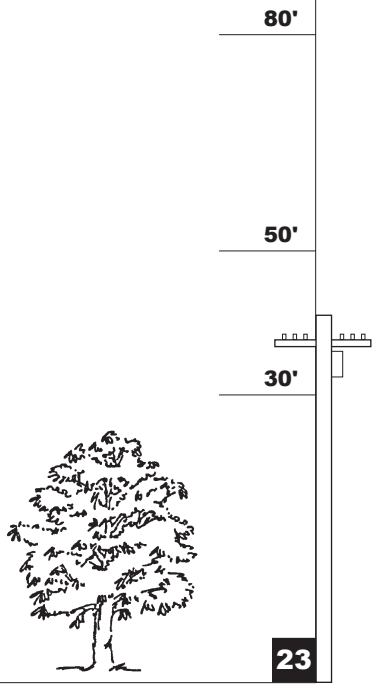
Pruning
Often needs pruning to encourage a central leader for street tree use.

Insects & Diseases
Possible sun scald damage to young trees if not consistently irrigated.

Maintenance Issues
See pruning.

Native Range
China.

Specimen Location
Within planter beds on E. Main and Pioneer St. and E. Main and 1st St. downtown.



NORWAY MAPLE

Acer platanoides

Size & Rate of Growth
Normally 40 to 50 feet tall, with a spread 2/3 of, or equal to, its height; moderate growth.

Ornamental Features
Large tree with dense, rounded crown. Leaves are four to seven inches wide. Individual flowers are small but form showy clusters. Purple foliaged varieties may be used as accents along the streetscape. Should be used cautiously due to aggressive surface root habit and frequent aphid infestations.

Use
Large street tree.

Culture
Prefers full sun. Tolerant of wide range of soil types and urban conditions.

Drought Tolerance
Moderate.

Pruning
Needs little pruning, except to keep lower branches clear of street right-of-way.

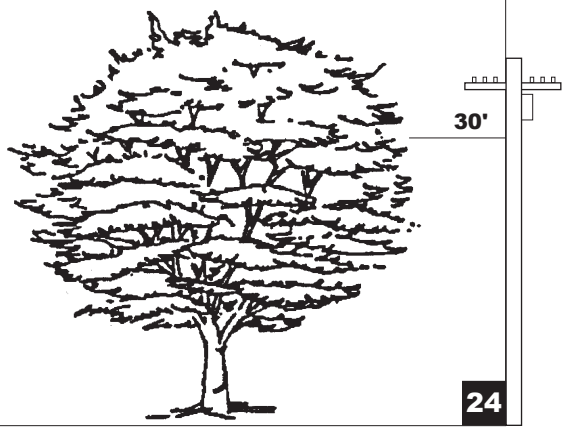
Insects & Diseases
Aphid infestations, especially in the spring, and verticillium wilt.

Maintenance Issues
This tree has dense surface rooting. Aphid infestations produce honeydew which can drip onto cars and sidewalks. May be suitable in the proper location. Other trees should be considered. Varieties are better suited than the species. Produces abundant seedlings – nuisance.

Native Range
Europe, northern Turkey, northern Iran.

Varieties & Cultivars
'Columnare' - smaller foliage, slower growing with narrow outline. 'Crimson King' - slower growing and maintains purple foliage throughout the growing season. 'Emerald Queen' - glossy dark green foliage, upright-oval outline. 'Schwedleri' - wide spreading with purplish-red spring foliage, turning dark green in summer.

Specimen Location
Species - in front of the High School at 885 Siskiyou.
'Crimson King' - Helman School playground.



RED MAPLE

Acer rubrum

Size & Rate of Growth
40 to 60 feet tall in cultivation with a variable spread; height may reach 120 feet in the wild; moderate to fast growth.

Ornamental Features
Upright oval habit develops with age. Red dominates the features of this tree. Twigs have a reddish cast. Buds are red, as are the emerging leaves. Fall color is variable from tree to tree, but is generally a rich scarlet color. Flowers on female trees are showy for maples - appearing red in March before the leaves emerge. Winged fruit is often red, maturing to brown.

Use
Root system is adapted to urban conditions.

Culture
Prefers full sun but will adapt to partial shade. Tolerates a variety of soil conditions, including wet soils.

Drought Tolerance
Poor to moderate. Requires summer water.

Pruning
Corrective pruning needed to remove narrow branch angles.

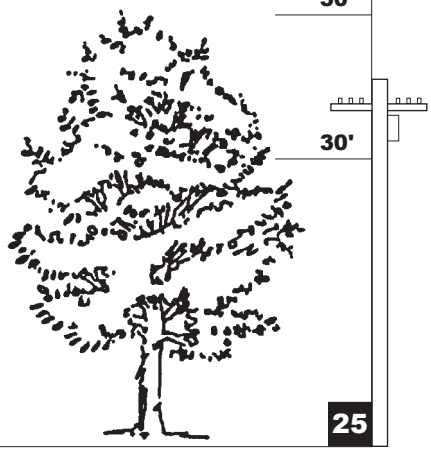
Insects & Diseases
Cottony Scale.

Maintenance Issues
Strong root system may heave sidewalks.

Native Range
Eastern and central United States.

Varieties & Cultivars
‘Columnare’. ‘October Glory’ - shiny leaves which show intense orange to red fall color.
‘Red Sunset’ - pyramidal to rounded outline. Brilliant orange to red fall color. 30 - 35’.

Specimen Location
‘October Glory’ - south of upper duck pond in Lithia Park.
‘Red Sunset’ - hillside west of tennis courts, Lithia park.
‘Autumn Blaze’ - intersection of Pioneer and Granite streets.
Lithia Park.



SUGAR MAPLE

Acer saccharum

Size & Rate Of Growth
50 to 80 feet in height with a spread of from 30 to 50 feet. Slow to moderate growth rate.

Ornamental Features
Beautiful irregular oval form and excellent orange autumn color.

Use
A good street tree if given enough root room and protected from hot exposures.

Culture
Full sun to light shade. Moist well drained soil is best. Not suitable for highly urban conditions.

Drought Tolerance
Has some drought tolerance once established.

Pruning
Not usually required.

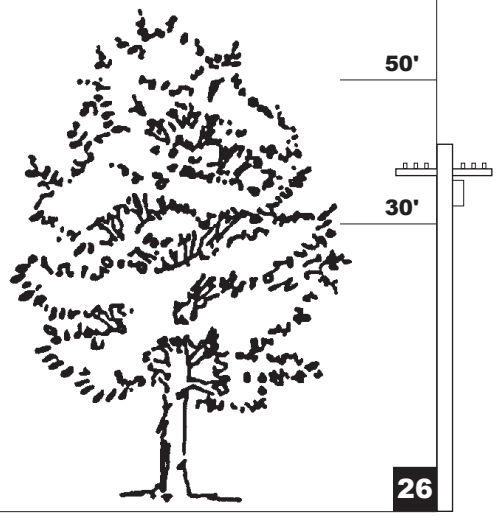
Insects & Diseases
Occasional aphid problems.

Maintenance Issues
Best if watered during summer. Strong roots may raise sidewalks.

Native Range
Eastern U.S.

Varieties & Cultivars
Several varieties have better heat and drought tolerance than the species. ‘Green Mountain’ is noted for good form, leaf scorch resistance. ‘Bonfire’ has excellent orange-red autumn color.

Specimen Location
‘Green Mountain’ - Lithia Park entrance between street and sidewalk.
‘Bonfire’ - Lithia Park at intersection of Granite and Pioneer.



PURPLEBLOW MAPLE, SHANTUNG MAPLE

Acer truncatum

Size & Rate of Growth
Small, rounded, broad crown with regular branching. Slow growth rate, reaching 20' in height and spread.

Ornamental Features
Upon emerging, leaves are reddish-purple, changing to dark green leaves, glossy green on upper side and paler beneath. Fall color an excellent yellow-orange-red.

Use
The features of this tough maple make it an ideal candidate for urban settings and residential settings.

Culture
Adaptable to varied soils: prefers a well-drained site.

Drought Tolerance
Extremely drought tolerant. Full sun provides for best landscape development.

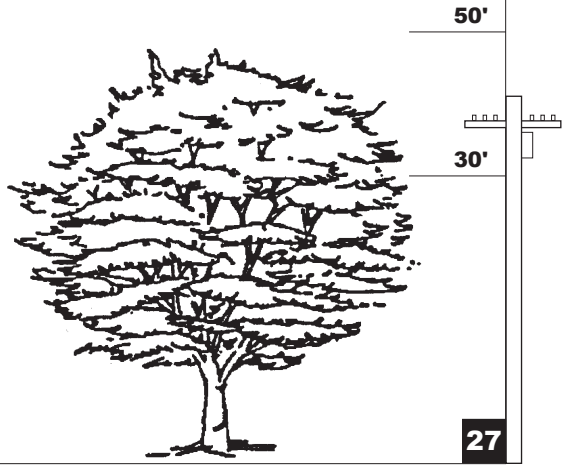
Insects & Diseases
None noted.

Maintenance Issues
Relatively problem free, based on limited data. Heavy fruiting suggests self sowing/volunteers within the landscape.

Native Range
Native to Northern China, Manchuria and Korea.

Varieties & Cultivars
'Akikaze Nishiki'-variegated leaves
'Fire Dragon'-bright fall color
Cultivar 'Keithsform' is a hybrid between Acer truncatum and Acer plantanoides (Norway Maple) Subsp. Mono-known as the Painted Maple, similar to Acer truncatum but more refined foliage, and form is vase-shaped with a dome canopy. Has more ornamental bark.

Specimen Location
Lithia Park Entrance prior to bridge, Calle Guanajuato planting strip parallel to Ashland Creek.



HYBRID SERVICEBERRY

Amelanchier x grandiflora

Size & Rate of Growth
15 to 25’ tall with a variable spread. Slow to moderate growth.

Ornamental Features
Rounded multi-trunk, upright vase habit. Open to moderate density.
White flower clusters in spring.

Use
A good street tree well adapted to planting beneath power lines.

Culture
Partial shade to full sun.

Drought Tolerance
Moderate drought tolerance. Good drainage is essential.

Pruning
Requires little pruning to develop strong structure.

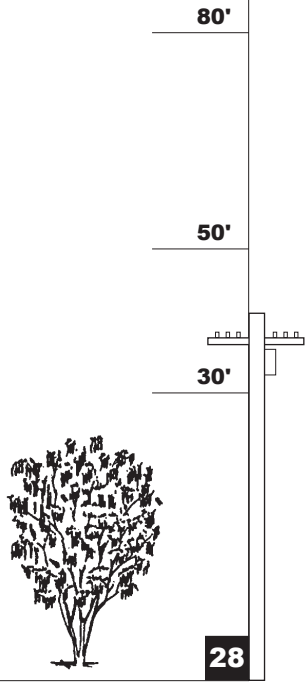
Insects & Diseases
Susceptible to rust, fire blight and various insects.

Maintenance Issues
Basal suckers may require annual removal.

Native Range
Eastern U.S.

Varieties & Cultivars
There are many cultivars which are superior to the original cross.

Specimen Location
Upper duck pond turnaround.



EUROPEAN HORNBEAM

Carpinus betulus

Size & Rate of Growth
40 to 60 feet tall with a 30 to 40 foot spread; moderate growth.

Ornamental Features
Young tree pyramidal, becoming rounded at maturity. Oval leaves dark green in summer, often turning yellow in late fall. Flowers are borne in clusters, each with a conspicuous three-lobed bract. The nut is borne at the base of the flower bract.

Use
Street tree. Upright form (see Fastigiata below) keeps branches away from street and sidewalks.

Culture
Prefers full sun but can tolerate light shade. Tolerates a wide variety of soil conditions but does best on well-drained sites. Tolerates the urban environment. Best if transplanted when young.

Drought Tolerance
Moderate.

Pruning
Withstands heavy pruning. Standard form would require pruning for street tree use.

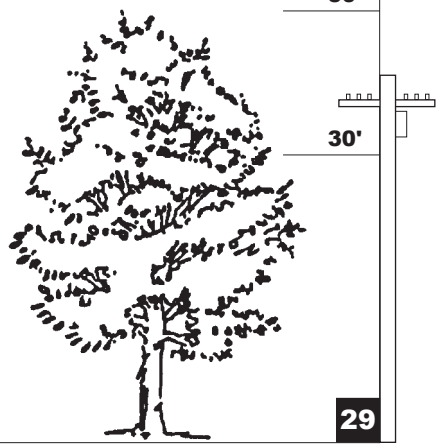
Insects & Diseases
None serious.

Maintenance Issues
See pruning.

Native Range
Europe to Iran.

Varieties & Cultivars
'Fastigiata' - multi-stemmed form which is upright in habit. Narrow in youth, the tree forms a dense pyramid as it matures. This is the most common form found in nurseries.

Specimen Location
Water Street parking lot. More mature specimens located in landscaped area southeast of library. 'Fastigiata' - west side of SOU computer building adjacent to parking lot.



AMERICAN HORNBEAM

Carpinus caroliniana

Size & Rate of Growth
20 to 30 feet in height with a 20 foot spread. Slow rate of growth.

Ornamental Features
Rounded to oval upright multi-trunk form. Good, soft yellow to yellow-orange autumn color. Interesting 'muscular' trunk form.

Use
As a small street tree where shade and/or a high water table are factors.

Culture
Moist soil. Partial shade.

Drought Tolerance
Low.

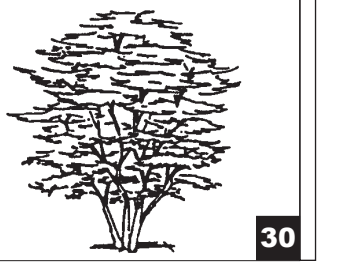
Pruning
Some pruning necessary for street and sidewalk clearance.

Insects & Diseases
None noted.

Maintenance Issues
See pruning.

Native Range
Eastern U.S.

Varieties & Cultivars
Small specimen south of the upper duck pond, Lithia Park. 135 Oak St. on corner of Oak and Lithia Way.



JAPANESE HORNBEAM

Carpinus japonica

Size and Rate of Growth
20 to 30 feet tall with an equal spread; slow growth rate

Ornamental Features
It is noted for its graceful form, attractive foliage and ornamental fruiting catkins, lush dark green leaves with prominent veining. Handsome small tree with rounded shape and densely branched; birch-like evergreen leaves ; leaf density is moderate, allowing speckles of sunlight through canopies on sometimes cloudy Pacific Northwest days. The fruit are light green then brown-ish, seed-bearing, pendant-like, leafy bracted racemes approximately 2 inches (similar in appearance to hops).

Use
A small specimen that is suitable for planting under wires. Japanese Hornbeams like to branch low upon early growth, and nurseries must put some effort into developing a crown that begins above the pedestrian flow; therefore, if planting near a walkway or driveway, specify that the nursery choose a specimen with limbs on the trunk that begins no lower than 5’ or 6’. An attractively shaped, low-maintenance understory tree for shady sites. May be grown in lawns or naturalized in woodland areas.

Culture
Japanese Hornbeam prefers partial shade but can tolerate full sun, in order to grow densely. Prefers moist well drained soil but tolerates a range of soil types, prefers organically rich soil. Transplants easily from containers.

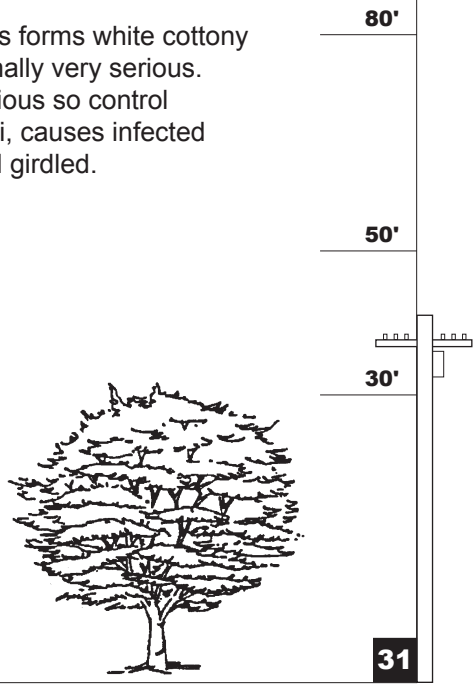
Drought Tolerance
Moderately drought tolerant once established, quite wind tolerant.

Pruning
Accepts repeated pruning, quickly healing scars. Prune back to the first pair of leaves on new shoots. The best times for minor pruning are early spring and after flowering. Major developmental pruning should be done in late winter, before bud burst.

Insects and Diseases
Pests: Relatively few insects attack hornbeam. Maple phenacoccus forms white cottony masses on the undersides of the leaves. Diseases: None are normally very serious. Several fungi cause leaf spots on Carpinus. Leaf spots are not serious so control measures are usually not needed. Canker, caused by several fungi, causes infected branches to dieback and entire trees die if the trunk is infected and girdled.

Maintenance Issues
See pruning.

Native Range
Japan



EASTERN REDBUD

Cercis canadensis

Size & Rate of Growth
20 to 30 feet tall with equal spread: moderate growth.

Ornamental Featurs
Often multi-stemmed but can be trained as a single-stemmed tree. Wide-spreading to rounded crown. Alternately arranged foliage is broad and heart-shaped at the base. Fall foliage color can be bright yellow. Flowers emerge before the foliage as clusters of rose colored blossoms borne directly on stems and the trunk. This tree often begins to flower at four to six years old. Fruits are brown pods two to three inches long.

Use
Street tree when trained to a single-stemmed habit. Container; parking lot island; buffer strip, small shade tree specimen; street tree.

Culture
Grows in full sun or light shade. Has the best development on moist, well-drained sites. Adaptable to acidic or alkaline soils. Benefits from some afternoon shade where hot.

Drought Tolerance
Low. Water in summer dry spells.

Pruning
May require pruning to establish single-stemmed habit. Regular pruning in the first few years improves form.

Insects & Diseases
Canker, leaf spot, and verticillium wilt. Usually not significant in this area.

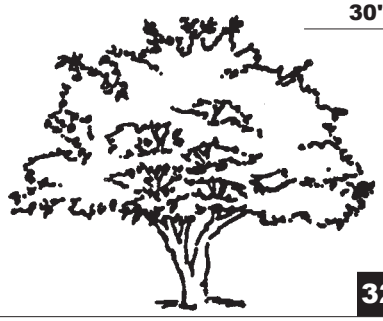
Maintenance Issues
Trunks need some protection from mechanical damage.

Native Range
Eastern United States. Missouri to New Jersey south to Mexico and Florida.

Varieties & Cultivars
'Alba' - a slower growing white flowering form. Exquisite in fall bloom. 'Forest Pansy' - attractive purple red leaves in the spring fading to green in the summer. 'Oklahoma' - prolific bloomer and drought tolerant.

Western Redbud *Cercis occidentalis*. Habit is more often a shrub or small tree. Bright purplish-pink flowers in spring for three weeks. Much more drought tolerant than Eastern Redbud. Water well the first and second year to promote establishment; little will be required after that period. Native to California. Difficult to transplant.

Specimen Location
235 Hillcrest.



32

‘PINK DAWN’ AND ‘WHITE CLOUD’

Chitalpa tashkentensis

Size and Rate of Growth
20-30’ in height with equal spread. Fast growing, three feet per year in favorable conditions

Ornamental Features
Flowers late spring until late fall. New blooms everyday in summer. Semi-open breezy structure. Leaves lanceolate, grey/green about 4 – 5” long and 1” wide.

Use
An attractive street tree, size permits planting under overhead utilities

Culture
Partial to full sun. Prefers well drained, alkaline soil

Drought Tolerance
Somewhat drought tolerant once established with irrigation in the first few years

Pruning
May require initial pruning to promote healthy structure

Insects & Disease
Powdery mildew may occur with warm, wet spring. May be susceptible to anthracnose, aphids, and verticillium.

Maintenance Issues
None known

Native Range
Intergenera cross of southern Catalpa (Catalpa bignonoides) and Desert Willow (Chilopsis linearis) Originally from USSR, adapted to southwestern US.

Varieties & Cultivars
Clone #1 “Pink Dawn” most common. Clone #2 “Morning Cloud” more pale pink to white flowers, more fastigate form & slightly larger size

Specimen Location
None locally

Notes
Wood strength listed as medium weak. Attractive to honeybees and hummingbirds.

YELLOWOOD

Cladrastus lutea

Size & Rate of Growth
30 to 50 feet in height with a 40 to 50 foot spread. Slow growing when young, becoming moderate.

Ornamental Features
Broad, rounded crown. Fragrant, white, wisteria-like blossoms in early summer. Yellow autumn color.

Use
As a street tree under appropriate conditions. Should be set well back from street to accommodate branching pattern and some litter problem.

Culture
Full sun. Moist, well-drained soil.

Drought Tolerance
Somewhat drought tolerant once established.

Pruning
Prune when young to shorten lateral branches. Prune only in summer and fall. Prune to avoid poor branch unions. Should be pruned up for street tree use.

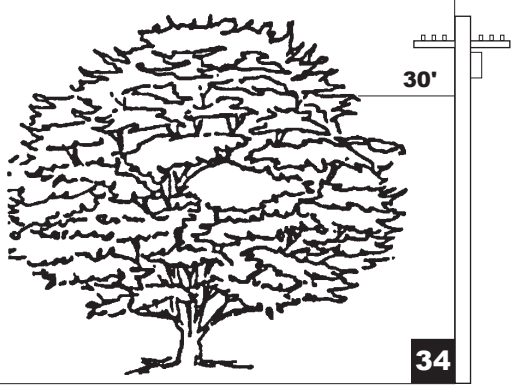
Insects & Diseases
None noted.

Maintenance Issues
See pruning.

Native Range
Eastern U.S.

Varieties & Cultivars
May be somewhat difficult to obtain.

Specimen Location
Small specimen on northeast side of Glenwood Park.



KOUSA DOGWOOD

Cornus kousa

Size & Rate of Growth
20 to 25 feet tall with variable spread; slow to moderate growth.

Ornamental Features
A multi-stemmed shrub or small tree, becoming rounded with maturity. Bark exfoliates with age, revealing a mosaic of gray, tan and brown. Leaves are dark green with deep venation. Flowers appear later than other flowering dogwoods. The flower bracts are creamy white, slender and pointed. The blossoms can last three weeks and may turn pinkish before falling. Fruit ripens in September and October and is reddish pink, resembling a raspberry. The fruit is edible, although mealy in texture.

Use
As a street tree where location isn't too exposed to hot sun. Suitable for planting under power lines.

Culture
Prefers light shade but will grow in full sun. Does best in acidic, well drained, consistently moist soil. Sometimes difficult to establish.

Drought Tolerance
Low to moderate. More drought tolerant than the Eastern Flowering Dogwood.

Pruning
May require pruning to establish single-stemmed habit.

Insects & Diseases
Less susceptible to Dogwood anthracnose than Pacific Dogwood or Eastern Flowering Dogwood.

Maintenance Issues
Pruning necessary for street and sidewalk clearance.

Native Range
Japan, Korea.

Varieties & Cultivars
Cornus kousa var. chinensis - slightly larger flower bracts. 'Milky Way' - a broad, bushy form which blooms profusely.

Specimen Location
Lithia Park across Winburn Way from Perozzi fountain.

PAUL'S SCARLET HAWTHORN

Crataegus laevigata var. Paul's Scarlet

Size & Rate of Growth
15 to 25 feet tall with a 15 to 20 foot spread. Moderate to rapid growth.

Ornamental Features
Oval irregular silhouette with fine texture. Double scarlet flowers. Deep red fruit is generally sparse.

Use
Good street tree

Culture
Tolerates most soils but prefers heavy dry loam. Grows best in full sun.

Drought Tolerance
Drought tolerant when established.

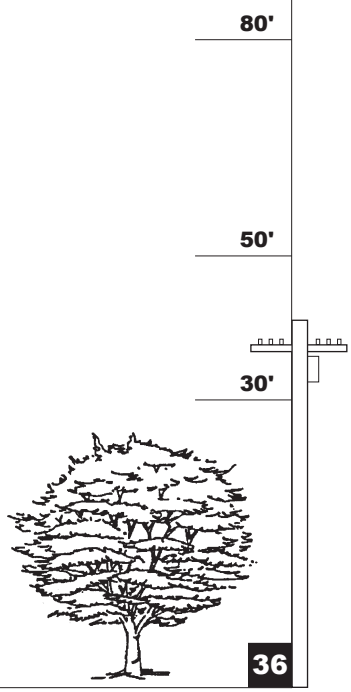
Pruning
Needs pruning to establish uniform habit and a single trunk. Suckers profusely.

Insects & Diseases
Susceptible to fire blight.

Maintenance Issues
Presence of thorns makes pruning an unpleasant task.

Native Range
Parent species is native to Europe and North Africa.

Specimen Location
460 B St.



WASHINGTON THORN

Crataegus phaenopyrum

Size & Rate of Growth
25 to 30 feet. broadly oval to rounded habit.

Ornamental Features
Two-to three-inch leaves with three to five pointed lobes emerge reddish-purple, turning to dark green in the summer. Fall color usually in shades of orange to red. White flower clusters appear in June. Bright red fruits emerge in the fall and persist until mid-March.

Use
Street tree; suitable for planting under power lines.

Culture
Prefers full sun in a well-drained soil. Tolerates slightly acidic to alkaline soils. Because it develops a taproot, transplanting is most successful when plant is young.

Drought Tolerance
Very good.

Pruning
Some structural pruning may be necessary. Prune when dormant.

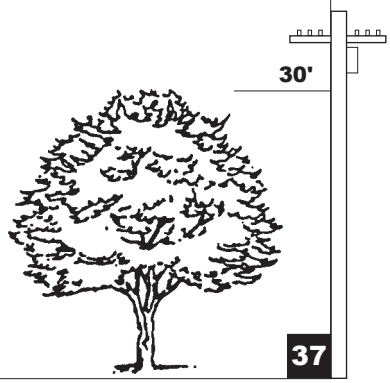
Insects & Diseases
Hawthorns are generally susceptible to many insect and disease problems. This particular species has shown more resistance to fire blight than other hawthorns.

Maintenance Issues
Slim, straight one-to three-inch thorns make this plant difficult to handle and it should not be used in high traffic areas. Thorny branches should be pruned above the height of small children.

Native Range
Eastern and central United States.

Varieties & Cultivars
'Fastigiata' - narrow, columnar form.

Specimen Location
North side upper duck pond, Lithia Park.
Corner of Euclid and Altamont.



AMERICAN ASH

Fraxinus americana

Size & Rate of Growth
50 to 65 feet in height with a spread of from 40 to 50 feet. Moderate to rapid growth rate.

Ornamental Features
Good oval shape. Usually good autumn color. Hue depends on variety. Colors early.

Use
A large stature street tree. Needs root room.

Culture
Full sun. Moist well drained soil best.

Drought Tolerance
Can tolerate some drought once established.

Pruning
May need some pruning to correct weak branch angles. Should be pruned in the fall.

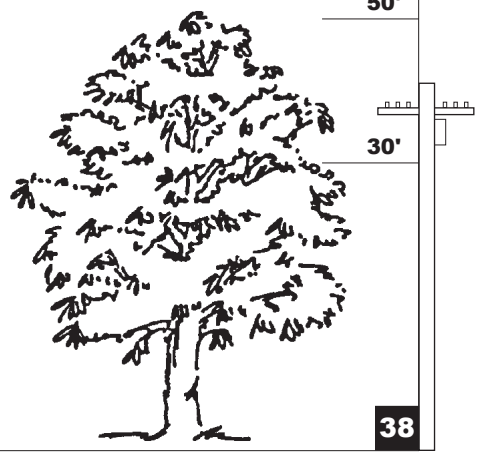
Insects & Diseases
Many insects and diseases in native range. Less of a problem in the West.

Maintenance Issues
Strong lateral root system may heave sidewalks.

Native Range
Eastern U.S.

Varieties & Cultivars
'Autumn Purple' (seedless) - excellent autumn color. 'Rosehill' - dark green summer foliage, bronze-red fall color. 'Cimmaron' (seedless) - more upright than other varieties. Excellent autumn color.

Specimen Location
'Autumn Purple' - YMCA Park between parking lot and Tolman Creek Road.



FLOWERING ASH

Fraxinus ornus

Size & Rate of Growth
40 to 60 feet in height with an equal spread. Moderate growth rate. Slower than many ashes.

Ornamental Features
Fragrant, showy, creamy white flowers in May; thick glossy, bright green foliage; soft yellow to purple fall color. Rounded to oval canopy.

Use
A good medium sized street tree with multi-season interest.

Culture
Prefers fertile, moist, deep soil and full sun for best flowering and growth.

Drought Tolerance
Somewhat tolerant of drought once established.

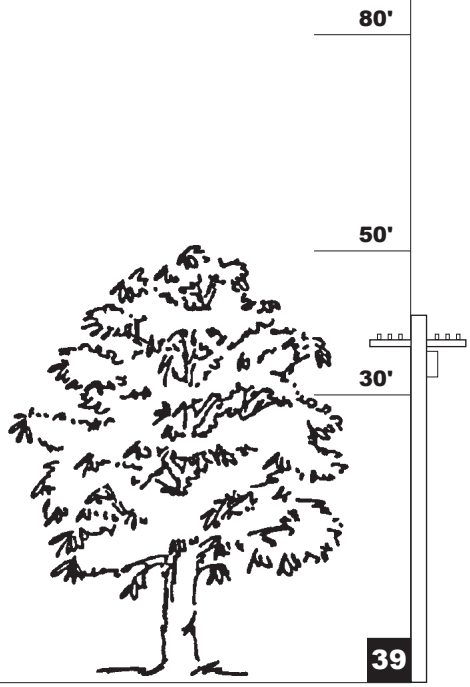
Pruning
No special requirements. Lower, wide-spreading limbs should be kept clear of street right of way.

Insects & Diseases
Susceptible when stressed by wet soil. Bores may infest the trunk of young trees.

Maintenance Issues
See ‘Pruning’. Produces a heavy crop of seeds.

Native Range
Southeastern Europe and Western Asia.

Specimen Location
Hargadine Street above Main Street.



‘RAYWOOD’ NARROWLEAF ASH

Fraxinus oxycarpa

Size & Rate of Growth
To 50 feet tall; 30 to 50 feet wide, depending on variety. Moderate growth.

Ornamental Features
Upright oval habit with an open, light-textured canopy. Compound leaves with small leaflets give the tree a delicate, lacy look. Fruit is one inch long including the wing.

Use
The species is not widely available but is known through its cultivars. The cultivars are commonly used as street trees.

Culture
A very adaptable tree. Prefers sunny locations. Transplants easily.

Drought Tolerance
Good.

Pruning
Early pruning may be needed to correct narrow branch angles; especially the variety ‘Flame’.

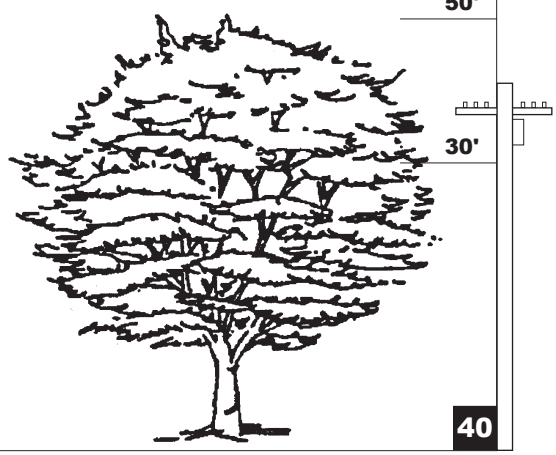
Insects & Diseases
None serious.

Maintenance Issues
The cultivar ‘Flame’ has narrow branch angles which may result in weak limb attachments. The varieties are seedless.

Native Range
Southern Europe to western Asia.

Varieties & Cultivars
‘Flame’ - has the branch angle problem mentioned above but shows good pest resistance and red fall color. ‘Raywood’ - narrow in youth but opening with age. Fast growing to 30 to 40 feet. Has a reddish purple to yellow fall color and is seedless.

Specimen Location
‘Raywood’ - just below children’s wading area in Lithia Park. ‘Flame’ - on North side of Iowa Street near SOU softball diamonds.



‘SUMMIT’ GREEN ASH

Fraxinus pennsylvanica

Size & Rate of Growth
40 to 50 feet tall and 40 feet wide with a rapid growth rate.

Ornamental Features
Very uniform branching in a symmetrical, broadly oval, upright habit with moderate density. Foliage is glossy medium green changing to a bright yellow in fall.

Use
Adapts well as a street tree in confined soil spaces. Once adapted will grow well in wet or dry areas.

Culture
Full sun.

Drought Tolerance
Tolerant.

Pruning
Prune when young to develop a strong central trunk. Remove upright aggressive branches.

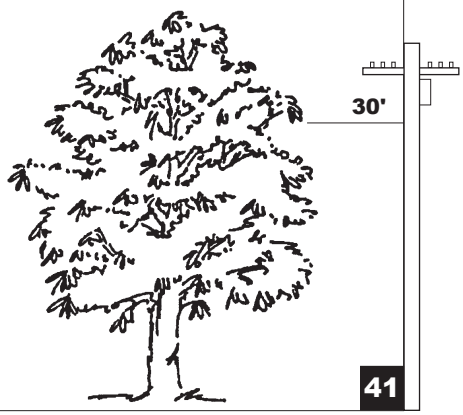
Insects & Diseases
Scale can be a problem.

Maintenance Issues
May lose branches in storms.

Native Range
Parent species native to the east coast of the U.S.

Varieties & Cultivars
‘Summit’, many other varieties are available.

Specimen Location
‘Summit’ - YMCA Park between parking lot and street.



GINKGO, MAIDENHAIR TREE

Ginkgo biloba

Size & Rate of Growth
50 to 60 feet tall in cultivation, with a variable spread; may grow to 90 feet tall in very favorable locations. Moderate growth, but slow initially.

Ornamental Features
Open and narrowly conical when young but becomes a broad, well-proportioned tree with age. Leaf has a distinctive fan shape. Foliage color is light green in the spring and summer, becoming bright yellow-gold in the fall. Flowers are inconspicuous. The fruit, when produced on female trees, is a seed with a fleshy covering about 1 to 1 inches long with a disagreeable odor.

Use
As a street tree where plenty of root room is provided.

Culture
Adaptable to a wide variety of growing conditions. Prefers full sun and is tolerant of air pollution. Transplants easily.

Drought Tolerance
Moderate once established.

Pruning
Needs little pruning, except to correct poor branch unions. May be deep crotched when mature.

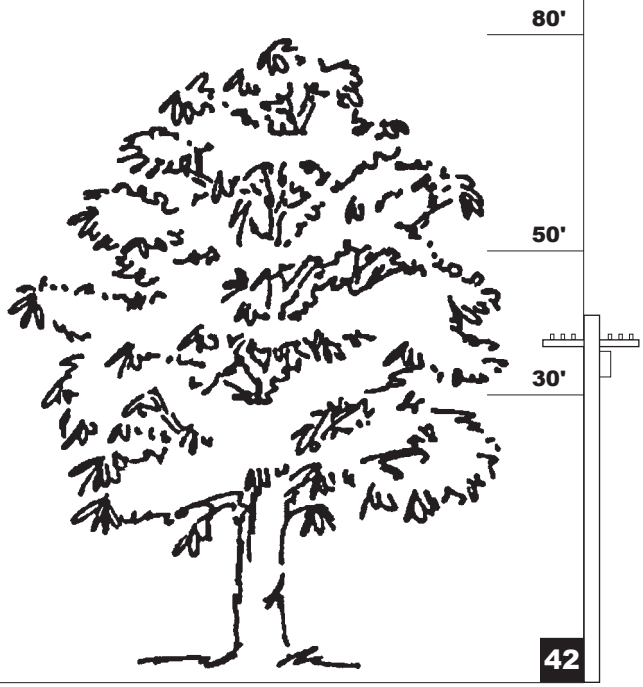
Insects & Diseases
None serious.

Maintenance Issues
The fleshy covering on the seed of female trees is extremely messy and foul-smelling. Seeds are not produced until the tree is 10 to 15 years old. To avoid the seeds, plant only male trees obtained from reliable sources. Brittle wood.

Native Range
Southeast China.

Varieties & Cultivars
'Fastigiata' - a narrowly columnar type. 'Autumn Gold' - upright in youth, becoming broadly spreading with age. 'Fairmount' - fast growing with a pyramidal form.

Specimen Location
Younger and more mature specimens are located in the Japanese-style garden in Lithia Park.
Younger street tree planting on corner of Lithia Way and Second St.
Mature – intersection of B and Pioneer.



THORNLESS HONEYLOCUST

Gleditsia triacanthos var. inermis

Size & Rate of Growth
50 to 80 feet with comparable width; fast growth when young, slowing with maturity.

Ornamental Features
Open, spreading habit which casts light shade. Young bark is smooth and flecked with silver; older trunks become brown-black. Pinnately compound leaves are bright green in summer, turning yellow in the fall. Greenish-yellow flowers in May are not showy but are fragrant. Fruit is an eight-inch reddish brown pod. The entire pod is curved. Many varieties are fruitless.

Use
Street tree where broadly spreading fine textured canopy is desired.

Culture
Prefers full sun. This tree tolerates high pH, salt, air pollution and other adverse conditions.

Drought Tolerance
Very good.

Pruning
Remove dead wood.

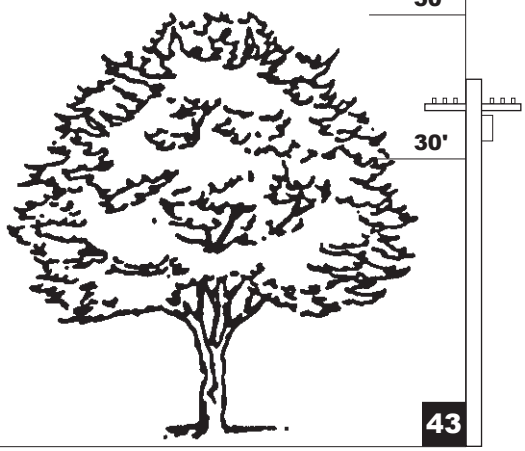
Insects & Diseases
Pod gall midge, borers, webworms. Leaves are subject to extreme disfiguration due to pod gall midge.

Maintenance Issues
Roots on mature plants may heave pavement if planted near sidewalks. Fruit pods are messy though most varieties are fruitless. Brittle wood. Canopy needs frequent pruning to accomodate road clearance.

Native Range
Eastern United States.

Varieties & Cultivars
Many available, including: ‘Moraine’ - broad outline, 40 to 50 feet. Fruitless. Shows some resistance to webworm infestations. ‘Shademaster’ - upright growth habit, foliage dark green, fruitless or nearly so. ‘Skyline’ - pyramidal form, compact and symmetrical. ‘Sunburst’ - broad rounded head; new growth golden, changing eventually to light green.

Specimen Location
‘Sunburst’ - just below Perozzi Fountain, Lithia Park.



KENTUCKY COFFEETREE

Gymnocladus dioicus

Size & Rate of Growth
50 to 60 feet in height with a 15 to 30 foot spread. Slow growth rate.

Ornamental Features
Ascending branches develop a vase-like form with a globose crown. Rugged winter branch pattern. Large compound leaves. Interesting fruit pods remain on tree during winter.

Use
As a street tree under appropriate conditions. Should be given sufficient root room. Branches arch high over streets. Adaptable to urban conditions.

Culture
Full sun. Rich moist, well drained soil for best growth.

Drought Tolerance
Well adapted to drought once established.

Pruning
No special requirements.

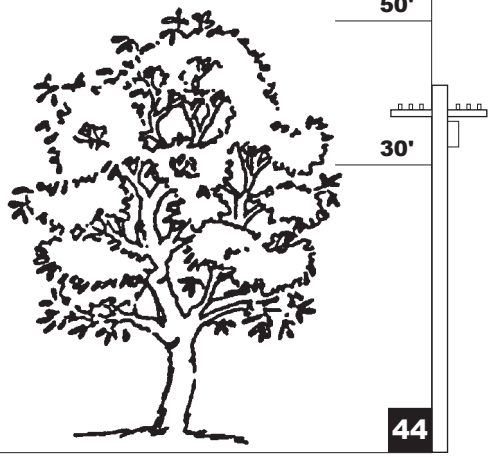
Insects & Diseases
None noted.

Maintenance Issues
Pods may be messy.

Native Range
Eastern U.S.

Varieties & Cultivars
May be somewhat difficult to obtain.

Specimen Location
No known location.



GOLDENRAIN TREE

Koelreuteria paniculata

Size & Rate of Growth
30 to 40 feet tall with equal spread; slow to moderate growth.

Ornamental Features
Rounded outline with branches spreading and ascending. Compound leaves have seven to fifteen leaflets with rich green summer color and yellow-brown fall color. Yellow flowers , in upright clusters, appear in summer. The fruits are papery, three-sided pods holding small, black seeds. The pods change from green to yellow to brown, often persistent through winter.

Use
Street tree suitable for planting under power lines.

Culture
Very adaptable tree. Thrives in full sun and withstands heat, wind and alkaline soils. Tolerates air pollution. Due to a deep root system, transplanting is most successful when plant is young.

Drought Tolerance
Good when becoming established, becoming very good at maturity.

Pruning
May require some pruning to establish a strong central leader and to direct low branches away from streets and sidewalks.

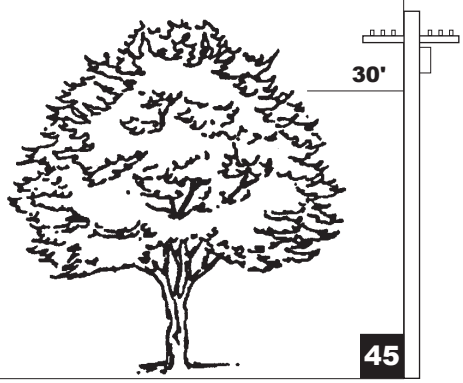
Insects & Diseases
None serious, although the coral spot fungus does appear occasionally.

Maintenance Issues
Some authors report weak wood problems. Fruit may also become messy. Sometimes reseeds in vicinity

Native Range
China, Korea.

Varieties & Cultivars
'Fastigiata' - narrowly upright habit, 25 feet tall, with a 4 to 6-foot spread. An unnamed variety with striking orange autumn color is being propagated in Ashland.

Specimen Location
299 Meade. Ashland Hospital property off Chestnut St., south of Maple St.



CRAPEMYRTLE

Lagerstroemia indica

Size & Rate of Growth
15 to 25 feet in height with a 10 to 15 foot spread. Slow growing.

Ornamental Features
Multi-trunk form. Colorful flowers in late summer and early fall when very few trees and shrubs are blooming. Good orange to red autumn color. Attractive multi-colored bark.

Use
Under low power lines or as accents in combination with trees that don't have conspicuous flowers.

Culture
Full sun. Susceptible to powdery mildew in shaded areas. Well drained soil.

Drought Tolerance
Drought tolerant once established.

Pruning
May need pruning to develop a central leader for street tree use.

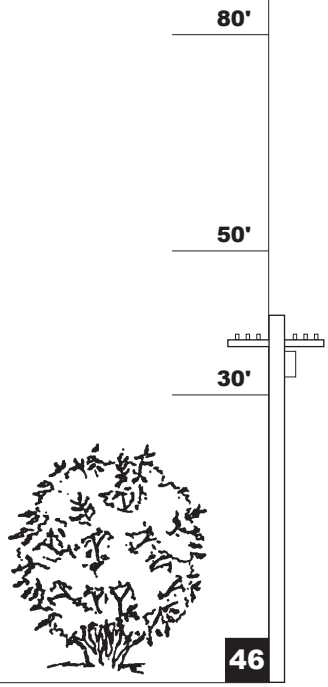
Insects & Diseases
Fungus problems that occur in other parts of the country are usually not a problem in this area. May occasionally have aphid problems.

Maintenance Issues
See pruning.

Native Range
China and Korea.

Varieties & Cultivars
Many varieties and cultivars based on growth habit and flower color.

Specimen Location
300 block of Helman and near the corner of Siskiyou and Sherman.



SOUTHERN MAGNOLIA

Magnolia grandiflora

Size & Rate of Growth
60 to 70 feet tall with a spread of 30 to 40 feet; slow to moderate growth.

Ornamental Features
Low-branching evergreen tree; dense, upright oval habit when young, spreading with age. Dark green leaves are five to ten inches long and drop at the end of their second year. Large, creamy-white flowers are very fragrant. Fruit is a rusty-brown cucumber-like pod which splits open to reveal red seeds.

Use
Large evergreen street tree.

Culture
Full sun to partial shade in moist, well-drained, neutral or slightly acidic soil. Magnolias in general prefer early spring transplanting.

Drought Tolerance
Low to moderate.

Pruning
Prune when young to avoid double leaders. Perform any needed pruning soon after flowering.

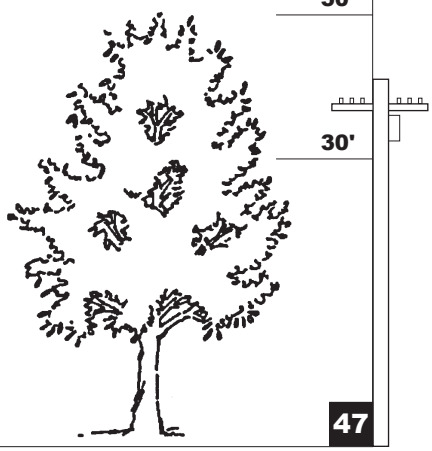
Insects & Diseases
None serious.

Maintenance Issues
A very beautiful but messy tree with leaves (which seem almost like plastic), flower parts, and seedheads littering the ground. The roots may lift nearby sidewalks. Surface rooting and dense year-round shade prevent healthy lawn growth beneath the tree. Should be located carefully.

Native Range
Southeastern United States.

Varieties & Cultivars
'Majestic Beauty' - leaves very long, broad and heavy. Height to 50 feet. 'Samuel Sommer' - strong ascending habit to 40 feet. Leaves with heavy, rusty red fuzziness on underside. 'Victoria' - parent plant grown in Victoria, B.C. Tree to 20 feet with very dark green leaves.

Specimen Location
153 Oak Street.



KOBUS MAGNOLIA

Magnolia kobus

Size & Rate of Growth
Develops a pyramidal head 30-40 feet tall with an equal spread. Moderate growth.

Ornamental Features
Slightly fragrant 4” white flowers followed by 2” red fruit. Bright yellow fall foliage.

Use
Small street tree.

Culture
Tolerant of all soil types.

Drought Tolerance
Moderate.

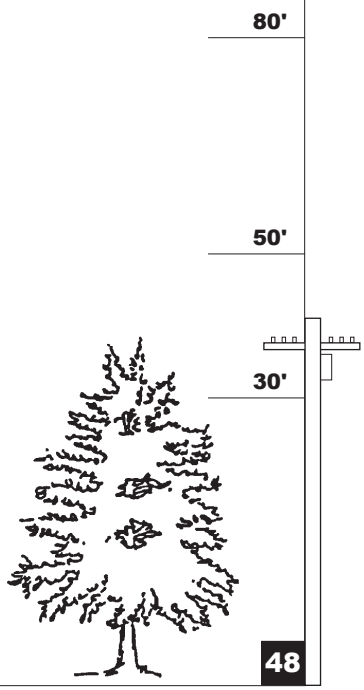
Pruning
Needs pruning when young to develop a strong central leader and discourage the tendency towards multiple trunks.

Insects & Diseases
None serious.

Maintenance Issues
Pruning necessary when young.

Native Range
Japan

Specimen Location
There is a strikingly beautiful grouped planting of this species in front of the BLM building in Medford (3040 Biddle Road).



ORNAMENTAL CRABAPPLES

Malus spp.

Size & Rate of Growth
Generally less than 30 feet tall; moderate growth.

Ornamental Features
Commonly small trees with a rounded to oval habit though the habit will vary depending on the species, variety, or cultivar. Foliage color is predominantly medium green with some plants having significant fall color. Most have beautiful flowers which bloom in May. Fruit is usually less than two inches, with the color ranging from pure red to pure yellow.

Use
A good tree for planting under power lines.

Culture
Full sun best for development of flowers. Generally prefer well-drained, moist, acidic soil.

Drought Tolerance
Most have moderate drought tolerance.

Pruning
Pruning may be necessary to keep wide-spreading branches clear of road right-of-way. Best done immediately after flowering since flower buds for the next season are initiated in mid-June to early July.

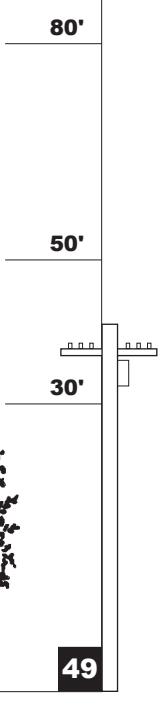
Insects & Diseases
Scale infestations or borers are the most serious insect problems. Some species and cultivars are more resistant to certain diseases than others. Consult local nursery professional or literature.

Maintenance Issues
Pruning must be performed regularly to ensure good structure. Should be located well away from curb. Some fruit may be messy on roads and sidewalks.

Native Range
Depends on species, variety, or cultivar.

Varieties & Cultivars
Many available, including: Malus floribunda - rounded, dense habit to 25 feet by 20 feet. Foliage dense, fine-textured. Flowers pink in bud, opening white. Fruit small, yellow and red, often not persistent. Good disease resistance. Good for wildlife. Malus ' Dolgo' - spreading to 40 feet by 40 feet. Needs pruning for good tree framework. Single white blossoms abundant in early spring. Bright red, oval fruit in August. Good disease resistance. Malus 'Snowdrift' - red buds open to white, abundant with long bloom period. Fruit orange-red, persistent. Scab resistant.

Specimen Location
Corner of Hillcrest and Iowa. Lithia Park south of the Rose Garden.



TUPELO, SOURGUM

Nyssa sylvatica

Size & Rate of Growth
30 to 50 feet in height with a 15 to 20 foot spread. Long lived, slow growing.

Ornamental Features
A pyramidal form with pendulous lower branches. Clean dark green foliage. Beautiful copper-orange autumn color.

Use
As a street tree, parking lot island, buffer strip highway shade tree where conditions are appropriate.

Culture
Full sun to semi-shade. Moist well-drained soil best; will tolerate wet soil.

Drought Tolerance
Poor to moderate once established. Planted in dry site, needs occasional irrigation during drought.

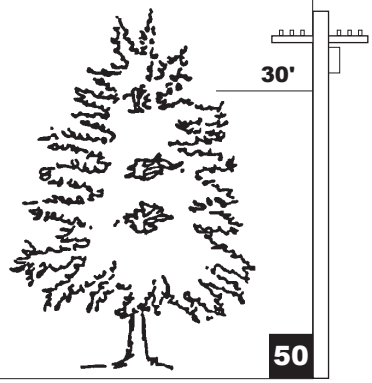
Pruning
Lower descending branches should be pruned for street tree use. Needs little or no pruning to develop strong structure. Resistant to limb breakage.

Inects & Diseases
None noted.

Maintenance Issues
See pruning. Causes some litter.

Native Range
Eastern U.S.

Specimen Location
Northeast side of Upper Duck Pond, Lithia Park, near water.



SOURWOOD

Oxydendrum arboreum

Size & Rate of Growth
25 to 30 feet in height with a 15 to 20 foot spread. Possibly taller under ideal conditions. Slow growth rate.

Ornamental Features
Pyramidal form with a rounded top. Glossy green leaves in summer. Flowers in late summer. Beautiful orange autumn color in late October. A row of Sourwood in fall color are memorable.

Use
As a street tree under appropriate conditions. Suitable for planting under power lines.

Culture
Light shade to full sun. Should not be planted in especially hot locations. Best with moist, well-drained soil.

Drought Tolerance
Low initial drought tolerance. Better when well established.

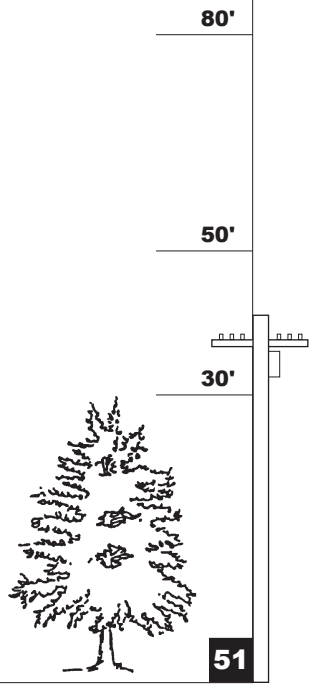
Pruning
Usually not necessary.

Insects & Diseases
None noted.

Maintenance Issues
None.

Native Range
Eastern U.S.

Specimen Location
Adjacent to Winburn Way on north side of Upper Duck Pond in Lithia Park.



PERSIAN PARROTIA

Parrotia persica

Size & Rate of Growth
20 to 30 feet in height, possibly higher, with a 15 to 20 foot spread. Slow to medium growth rate.

Ornamental Features
Deep lustrous green summer foliage. Multi-trunk form. Yellow orange, gold to orange to rosy pink, long lasting autumn color. Attractive mottled flaking bark. Flowers appear before leaves as red haze.

Use
As street tree under appropriate conditions. Upright branching pattern keeps limbs clear of street and sidewalks. Upright ascending vase-shaped form. May be an outstanding specimen tree.

Culture
Full sun to light shade. Moist sandy loam soil. Not tolerant of wet conditions.

Drought Tolerance
Not drought tolerant.

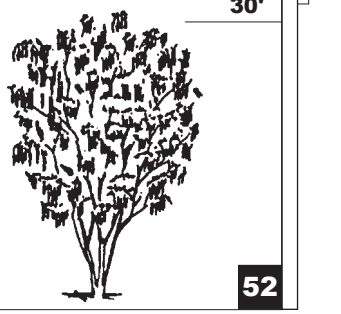
Pruning
Not usually necessary.

Insects & Diseases
None.

Maintenance Issues
Need protection from sun scald.

Native Range
Northwestern Iran.

Specimen Location
North end of small lawn in front of Parks Office, in Lithia Park. Along Wightman St. in front of student housing apts. Siskiyou Boulevard median in front of Omar's.



CHINESE PISTACHE

Pistache chinensis

Size & Rate Of Growth
40 to 50 feet in height with a similar spread. Slow to moderate growth rate.

Ornamental Features
Nicely formed oval-shaped tree with compound ash-like foliage. Brilliant yellow, orange, and red coloration in autumn.

Use
A very suitable street tree.

Culture
Full sun. Good drainage. Will tolerate less-than-ideal soils.

Drought Tolerance
Good once established.

Pruning
Must be pruned to initially develop good tree form.

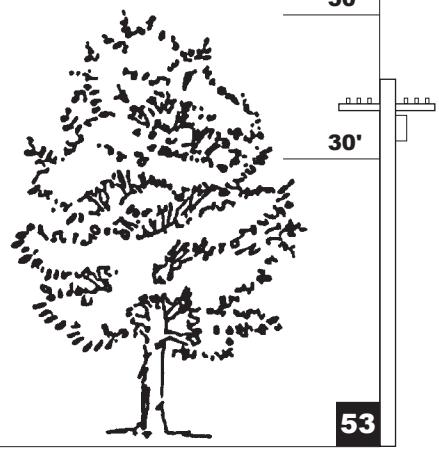
Insects & Diseases
None.

Maintenance Issues
See pruning. Staking often required on smaller trees. Fruit litter may be a problem on female trees.

Native Range
China.

Varieties & Cultivars
'Keith Davey' - male selection w/no fruit and having excellent autumn color.

Specimen Location
Center planting strip in parking lot of YMCA park. A mature specimen at the intersection of Bush and Almond.



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FLOWERING PLUM

Prunus cerasifera vars.

Size & Rate Of Growth
15 to 30 feet tall and 15 to 25 feet wide. Moderate growth rate.

Ornamental Features
Upright, dense rounded form. Very popular due to it's purple leaves. Light pink flowers in early spring.

Use
Good as a street tree.

Culture
Grows best in full sun to bring out the deep purple color of the leaves.

Drought Tolerance
Moderate drought resistance.

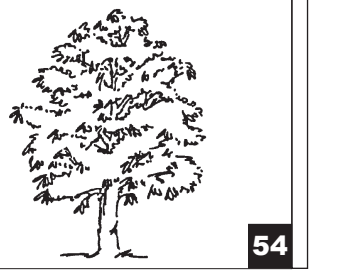
Pruning
Prune lightly at regular intervals to correct poor branching habits.

Insects & Diseases
Often succumbs to borers due to compacted soil.

Maintenance Issues
Fruit litter may be a problem with certain varieties.

Varieties & Cultivars
'Thundercloud' is the most commonly available but has fruit-bearing problems. 'Krauter Vesuvius' has darker purple leaves and bears less fruit. 'Newport' has reddish purple leaves, reddish fall color and no fruiting problems. The hybrid 'x Blireiana' has double flowers and seldom produces fruit.

Specimen Location
'Thundercloud' - 621 Siskiyou. 'x Bilieriana' - Holmes Ave. opposite baseball diamonds.



SARGENT CHERRY

Prunus sargentii

Size & Rate of Growth
20 to 35 feet tall, width slightly less than the height; moderate growth.

Ornamental Features
Symmetrical, round-topped habit. Attractive reddish-brown bark peels when older in coarse, curly strips. Leaves emerge reddish-bronze, turning dark green during the summer. Fall color is among the best for cherries - vivid red to bronze. Single pink flowers appear in clusters of two to six. Fruit is not very showy, dark purple-black in the summer. Fruit is often eaten by birds.

Use
Street tree.

Culture
Prefers sun in a fertile, well-drained soil. Highly intolerant of urban pollution. Readily transplanted.

Drought Tolerance
Fair when becoming established, moderate when mature.

Pruning
Slow to respond from pruning wounds. Prune to shape the tree when young, then avoid pruning as the tree matures.

Insects & Diseases
Brown rot, bacterial canker, scale, caterpillars and leaf rollers all may attack flowering cherries.

Maintenance Issues
See pruning. May sucker from base at or below graft.

Native Range
Northern Japan, Korea.

Varieties & Cultivars
'Columnaris' - a narrow form with potential as a street tree. 'Accolade' has semi-double deep pink flowers.

Specimen Location
Along East Main in front of Civic Center.

JAPANESE FLOWERING CHERRIES

Prunus serrulata

Size & Rate Of Growth
20-25 feet tall with 20 foot spread. Moderate growth rate.

Ornamental Features
Symmetrical multi-trunk, upright spreading with a vase or rounded habit. New leaves are bronzy. Spectacular flowers vary from white to deep pink depending upon the variety.

Use
Excellent street tree when given sufficient soil space. Can tolerate clay soils if they are well drained.

Culture
Prefers full sun with good drainage and ample moisture.

Drought Tolerance
Not drought tolerant.

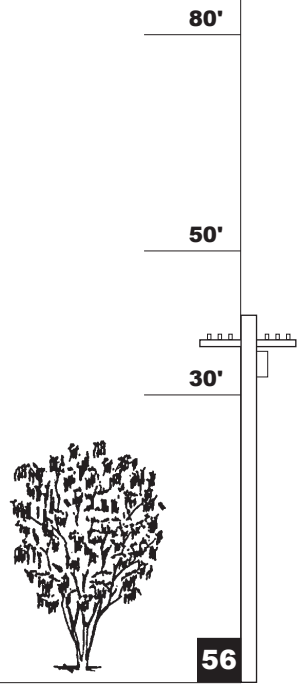
Pruning
Needs little pruning.

Insects & Diseases
Can suffer from cankers, virus and borers.

Maintenance Issues
Does not bear fruit but may need watching for borers.

Varieties & Cultivars
'Mt. Fuji' has profuse clusters of flowers which are pink in bud and open white. 'Kwanzan' has double, deep pink blooms. 'Amanogawa' has a columnar habit with deep pink flowers.

Specimen Location
'Kwanzan' - Upper Duck Pond in Lithia Park between pond and Winburn Way.



CALLERY PEAR

Pyrus calleryana

Size & Rate of Growth
30 to 50 feet tall with 20 to 35 foot spread; moderate to fast growth.

Ornamental Features
Generally conical, although broadening with age. Leaves are dark, glossy green in summer, turning to shades of scarlet in fall. Flowers appear before the leaves and are clusters of pure white blossoms with black stamens. Fruits are small, round and inconspicuous.

Use
Street tree tolerant of urban conditions.

Culture
Full sun exposure gives best growth. Tolerates a variety of soils. Adapts to polluted urban environments. Tolerates limited root room.

Drought Tolerance
Moderate.

Pruning
Occasionally a central leader will need to be trained. As the tree ages, prune to keep shape and remove dead wood. Remove narrow branch angles when young. Prune to keep branches clear of street and sidewalks.

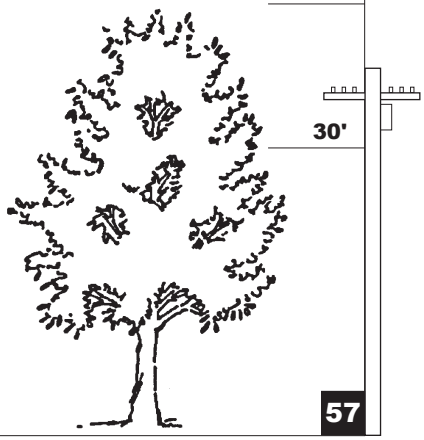
Insects & Diseases
Some varieties susceptible to fire blight and cedar-apple rust.

Maintenance Issues
If narrow branch angles are left unchecked, the branches can break and rip the trunk. Fruit litter can be a problem.

Native Range
China.

Varieties & Cultivars
‘Aristocrat’ - more open form with darker, narrow foliage. Narrow branch angles make it difficult to prune. These same narrow angles cause branch breakage in storms. ‘Chanticleer’ - much narrower than Bradford and thinner in texture. The width is equal to half the height. ‘Redspire’ - a less stiff pyramidal form than Bradford. Leaves turn yellow or red in the fall. ‘Autumn Flame’ - good branch angles, red fall color. Susceptible to fire blight.

Specimen Location
‘Autumn Flame’ - downtown on Main Street.
‘Chanticleer’ - downtown on Main Street.
‘Aristocrat’ - Helman School between playground and Helman Street.



CANYON LIVE OAK

Quercus chrysolepis

Size & Rate of Growth
30 to 60 feet in height with a spread of from 30 to 40 feet. Slow growth rate.

Ornamental Features
An evergreen native oak with a round headed or somewhat spreading form.

Use
As a drought tolerant accent tree where an evergreen is desired.

Culture
Full sun to considerable shade. Poorer growth habit in shade.

Drought Tolerance
Very drought tolerant once established.

Pruning
Some pruning usually necessary to establish a favorable structure.

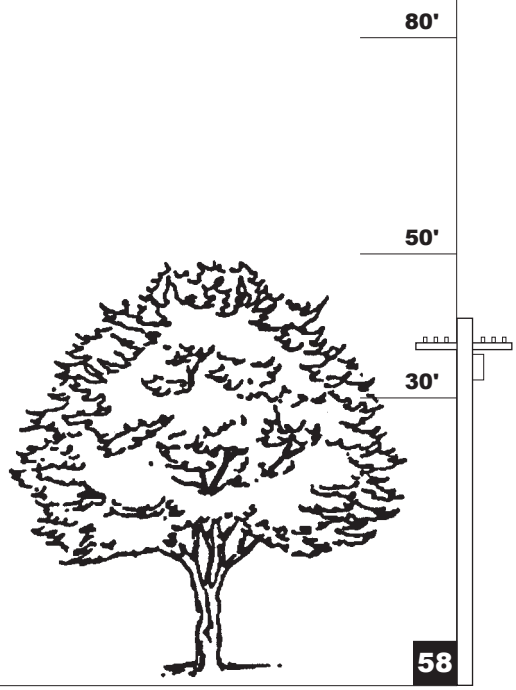
Insects & Diseases
Perhaps scale.

Maintenance Issues
See Pruning.

Native Range
Southwest Oregon, California.

Varieties & Cultivars
May be somewhat difficult to obtain, not readily available.

Specimen Location
To the right of the entrance to the office parking lot in Lithia Park.



SCARLET OAK

Quercus coccinea

Size & Rate of Growth
50 to 75 feet in height with a 40 to 50 foot spread. Somewhat slow growing.

Ornamental Features
Bright green leaves in summer and scarlet red in fall. Younger trees keep leaves in winter. Older trees may lose leaves in fall.

Use
A good large-canopied street tree where adequate space is provided.

Culture
Full sun. Deep, moist, well-drained soil. Summer irrigation usually required. Some problems with transplanting.

Drought Tolerance
Not greatly drought tolerant but deep roots help.

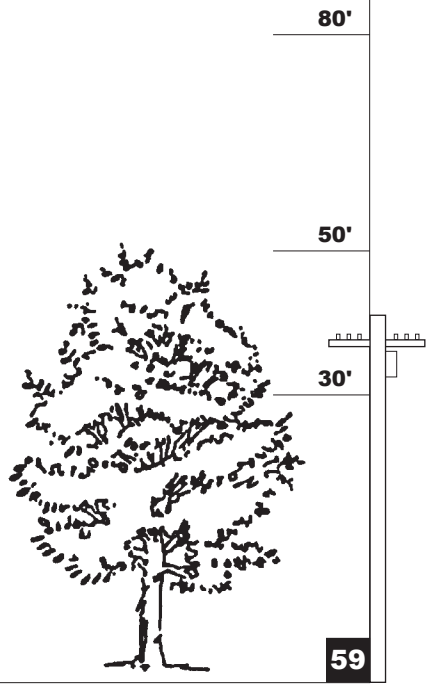
Pruning
Train and prune to develop good structure.

Insects & Diseases
No major problems.

Maintenance Issues
See Culture and Pruning. A better street tree than Pin Oak which has more lateral and weeping branches.

Native Range
Eastern United States.

Specimen Location
West side of parking lot, YMCA soccer fields on Tolman Creek Road.
Mature trees in front of SOU library.



ENGLISH OAK

Quercus robur

Size & Rate of Growth
60 to 70 feet tall and nearly as wide; moderate to fast growth.

Ornamental Features
Large, round-headed outline. Leaves dark green with three to seven pairs of rounded lobes. No fall color. Leaves either drop green or turn brown and persist. Acorn one to two inches long with the cup covering 1/3 of the nut.

Use
Large street tree. Variety ‘Fastigiata’ good where a large columnar tree is desired.

Culture
Prefers full sun but can tolerate light shade. Moderately tolerant of the urban environment.

Drought Tolerance
Good once established.

Pruning
Low branches may need to be removed to raise the crown.

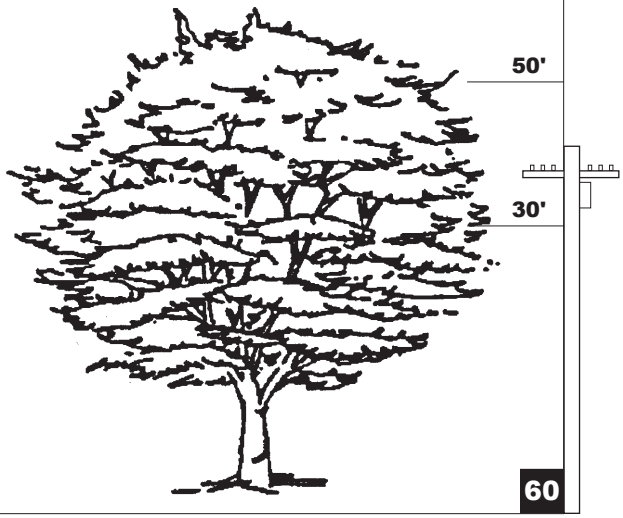
Insects & Diseases
Susceptible to mildew.

Maintenance Issues
Leaves remain on tree during winter.

Native Range
Europe, northern Africa, western Asia.

Varieties & Cultivars
‘Fastigiata’ - narrow, upright habit, much like Lombardy poplar. Will grow to 55 feet with a 10 to 15 foot width.

Specimen Location
SOU campus, adjacent to the psychology building on University Way.



RED OAK

Quercus rubra

Size & Rate of Growth
50 to 80 feet tall with a spread of 40 to 50 feet; moderate to fast growth.

Ornamental Features
Matures to a dome-shaped, wide-spreading, dense form with upwardly curving branches. High branching habit. As trees mature, the upper limbs show a dark streaking over the gray, as if paint had been spilled at the branch junction. New leaves and leaf stalks are often red when emerging. Leaves are dark green during summer, turning red to brown in fall. Acorn is small, about 3/4 to 1 inch.

Use
Large canopied street tree.

Culture
Grows best in full sun in moist, well-drained, acidic soils but will tolerate other conditions. Performs well in the urban environment. Not tolerant of extremely wet soils.

Drought Tolerance
Moderate once established. Needs summer irrigation in fast draining soils.

Pruning
Some pruning necessary to develop good street tree form.

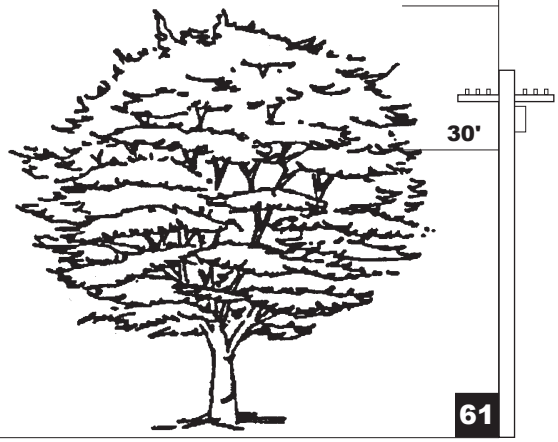
Insects & Diseases
Scale.

Maintenance Issues
Many develop chlorosis in high pH soils.

Native Range
Eastern North America.

Varieties & Cultivars
'Aurea' - new foliage emerges bright yellow in the spring.

Specimen Location
Two mature trees are located on lawn between the rose garden and Perozzi Fountain in Lithia Park.



CORK OAK

Quercus suber

Size and Rate of Growth
40 – 70’ in height with a 40 – 50’ spread. Slow growth, long-lived with a trunk as large as 4’ in diameter at maturity

Ornamental Features
Small evergreen leaves with a dense broad irregularly shape canopy

Use
A fine shade tree

Culture
Full sun. Tolerates a variety of soils from acid to alkaline

Drought Tolerance
Very drought tolerant once established with irrigation in the first few years

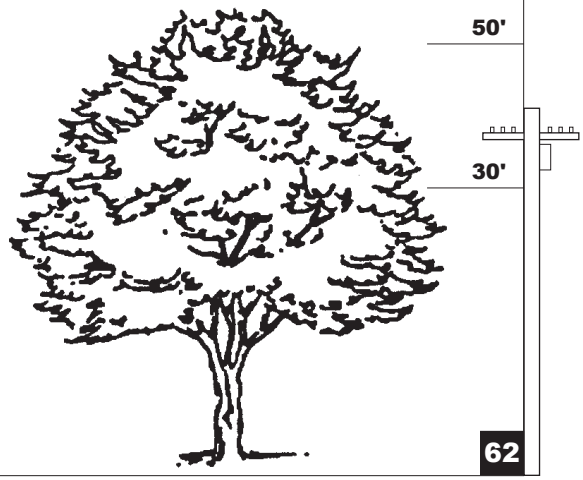
Pruning
Careful pruning during youth to create form

Insects & Disease
Deer tolerant

Maintenance Issues
None known

Native Range
Mediterranean Europe and North Africa

Specimen Location
292 Gresham on Holly Street side
233 4th Street



EUROPEAN MOUNTAIN ASH

Sorbus aucuparia

Size & Rate of Growth
35 to 45 feet tall, with a width 2/3 to equal the height; moderate growth.

Ornamental Features
Oval, dense habit. Leaflet color is dull green in summer, turning yellow, orange or red in fall. Individual creamy white flowers are small but are borne in a flat-topped cluster of from three to five inches in diameter in late spring. Fruit is orange-red, berry-like, in clusters; showy in midsummer. The fruit may persist through the winter unless eaten by birds. The weight of the fruit often bends the outer stems of the branches.

Use
Street tree. Good for wildlife.

Culture
Best growth occurs in full sun or light shade; average soils. Tolerates wind and heat.

Drought Tolerance
Poor.

Pruning
Remove narrow branch angles when young. Does not heal well from major pruning cuts or automobile damage.

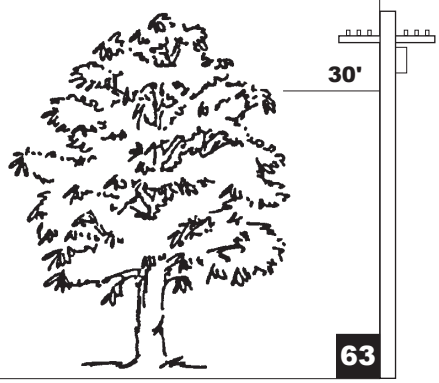
Insects & Diseases
Sun scald may be a problem where trunk is exposed to strong southwestern sunlight. Fire blight can be a serious problem.

Maintenance Issues
Fruit can be messy, especially over pavement, though birds often remove fruit.

Native Range
Europe, Asia Minor.

Varieties & Cultivars
'Cardinal Royal' - the large, bright red fruits color early. Many other Sorbus species, having less availability than S. aucuparia, might be worthwhile as street trees.

Specimen Location
320 Iowa.



JAPANESE SNOWBELL

Styrax japonicus

Size & Rate of Growth
20-30' tall with equal spread. Slow growing.

Ornamental Feataures
Lovely small tree with a broadly rounded head. Pendulous white flowers in spring followed by dry tan colored drupes. Bright yellow fall foliage.

Use
Small street tree. Could be used under power lines.

Culture
Full sun or partial shade. Needs ample moisture in summer. Does best in moist, acid, well-drained soil.

Drought Tolerance
Not drought resistant.

Pruning
Remove suckers to reveal graceful horizontal habit.

Insects & Diseases
None.

Maintenance Issues
Wide-spreading branches may be a hindrance to sidewalks and street traffic. Fruit debris may be a problem.

Native Range
Japan, China, Korea

Varieties & Cultivars
'Pink Chimes' has pink blooms on a more upright tree. 'Obassia' fragrant, oval in youth and more rounded at maturity.

Specimen Location
With Rhododendrons east of Perozzi fountain in Lithia Park.

BALDCYPRESS

Taxodium distichum

Size & Rate of Growth
50 to 70 feet in height with a 20 to 30 foot spread. Moderate growth rate; long lived.

Ornamental Features
A fine textured deciduous conifer. Slender, pyramidal habit. Foliage and appearance somewhat similar to that of the Dawn Redwood. The trunk is unusually flared at the base.

Use
As a street tree, especially where a narrow growing tree is desired. Buffer strip, shade tree specimen, clipped hedge or screen; urban tolerant.

Culture
Best in full sun with a moist sandy loam. Will tolerate wet or dry sites.

Drought Tolerance
Good once established.

Pruning
Usually unnecessary except to prune lower limbs away from sidewalks and street.

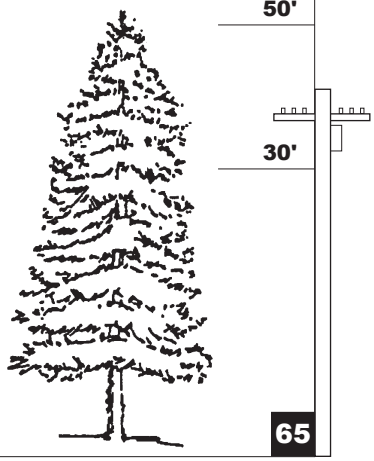
Insects & Diseases
Resistant.

Maintenance Issues
See Pruning. ‘Knees’ and shallow roots may heave sidewalks and push out curbs.

Native Range
Southeastern U.S.

Varieties & Cultivars
‘Shawnee Brave’ - 15 to 20 feet wide has a narrow, pyramidal form.

Specimen Location
YMCA soccer fields parking lot off Tolman Creek Road on northeast side of lot.
Elks Lodge parking lot bio-shale on Lithia Way.



LITTLELEAF LINDEN

Tilia cordata

Size & Rate of Growth
40 to 55 feet in height with a width of to 2/3 the height; moderate growth.

Ornamental Features
Broadly pyramidal to upright oval habit. Leaves are 1 to 3 inches long, equally broad or broader dark green above, silvery below. Fragrant yellow flowers are borne in two to three inch clusters in June or early July. Bees attracted to flowers. Fruits are small nutlets.

Use
Street tree and lawn specimen.

Culture
Prefers full sun, well-drained fertile soil. Tolerant of the urban environment.

Drought Tolerance
Moderate.

Pruning
Young trees benefit from staking and shaping to establish a strong central leader. Mature trees require infrequent corrective pruning.

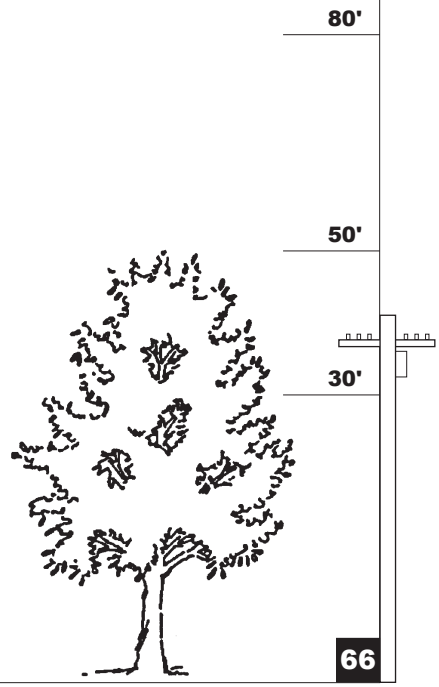
Insects & Diseases
Aphids.

Maintenance Issues
Aphid infestation may cause honeydew. Remove basal suckers.

Native Range
Europe.

Varieties & Cultivars
‘Pyramidalis’ - narrow habit.

Specimen Location
Parking lot behind 368 Main Street.



CHINESE ELM

Ulmus parvifolia

Size & Rate of Growth
40 to 60 feet tall; moderate to fast growth.

Ornamental Features
Wide spreading with pendulous twigs and branch ends. Mottled bark combines hues of grays, greens, oranges and browns. Leathery green leaves are one to three inches in length. In milder conditions, the leaves may remain evergreen over the winter. In more northern climates, they may have a fall color in tones of red, yellow, and purple. Small seeds have wings.

Use
Lawn specimen, street tree, and screen.

Culture
Full sun, moist, well-drained soils preferred. Will tolerate unfavorable conditions.

Drought Tolerance
Reasonably good.

Pruning
Frequent light thinning is preferred - occasional heavy pruning promotes a flush of unattractive growth. Prune in fall or winter.

Insects & Diseases
Shows resistance to Dutch elm disease, Elm leaf beetle and Japanese beetle.

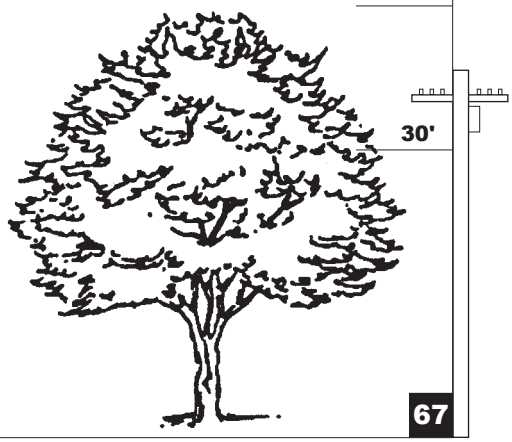
Maintenance Issues
Weak wood may result in damage during storms. Avoid injury to surface roots and lower trunk. Potential to lift sidewalks and pavement.

Native Range
China, Japan.

Varieties & Cultivars
'Blake' - branches sweep upward.

Specimen Location
No known location.

Note
This species is often confused with Ulmus pumila, the Siberian elm. The Siberian elm is inferior to the Chinese elm because the Siberian elm has weak wood, is a prolific seed producer which causes a litter problem, and is much more susceptible to annual elm leaf beetle damage.



ZELKOVA

Zelkova serrata

Size & Rate of Growth
50 to 80 feet tall; moderate to fast growth.

Ornamental Features
This elm tree relative is low branched, with a vase-shaped outline and a rounded top. As tree matures, the bark begins to exfoliate. Dark green leaves are oval and slightly rough on top. Fall color varies from red to yellow. Flowers and tiny woody fruits are inconspicuous.

Use
Street tree where sufficient root room is provided.

Culture
Full sun. Adaptable to many soil types but exhibits best growth in well-drained soils. Reasonably pollution tolerant. Transplants easily.

Drought Tolerance
Once the plant is well established, it shows good drought tolerance.

Pruning
Dense crown may be thinned when young. Since it tends to branch low, care must be taken to keep limbs from obstructing streets.

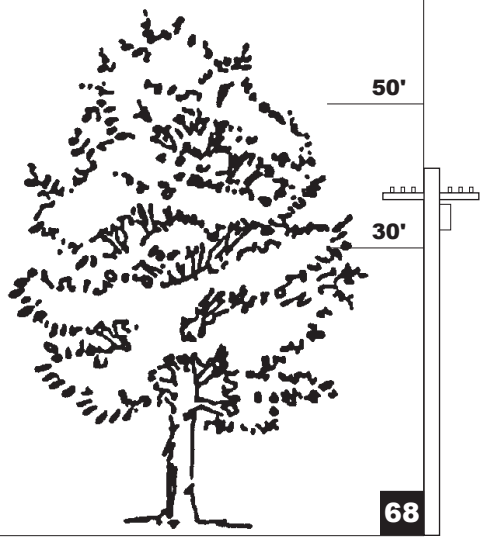
Insects & Diseases
Resistant to Dutch elm disease and elm leaf beetle.

Maintenance Issues
May be susceptible to damage from late frost when young.

Native Ranage
Japan.

Varieties & Cultivars
'Village Green' - fast growing form with smooth, straight trunk and superior fall color.
'Green Vase' - more upright branching structure.

Specimen Location
In playground at Helman School. In playground in Lithia Park.



NON-RECOMMENDED STREET TREES

The following trees may be of value as street trees when properly located and cared for. However, they may cause or be subject to the indicated problems.

Acer macrophyllum (Big Leaf Maple)
Reason: Doesn't react well to confined root space. Leaf scorch in summer.

Aesculus species (Horse Chestnuts)
Reason: Messy; roots heave sidewalks.

Ailanthus altissima (Tree of Heaven)
Reason: Invasive root system. If used, a male tree should be chosen.

Alnus species (Alder)
Reason: Wind damage, shallow invasive roots.

Catalpa speciosa (Western Catalpa)
Reason: Bark is thin and easily damaged by mechanical impact; branches drop, pods drop during summer causing a mess and may scorch.

Cornus mas (Cornelian cherry)
Reason: Falling fruit is messy and stains sidewalks.

Fraxinus velutina 'Modesto' (Modesto Ash)
Reason: Subject to Anthracnose. Often poor branch structure.

Labumum x watereri (Goldenchain)
Reason: Poisonous.

Morus alba (Fruitless Mulberry)
Reason: Invasive root system. Strong lateral branching.

Platanus acerifolia (Sycamore)
Reason: A tree of great beauty but has strong surface roots, subject to Anthracnose, messy, solar unfriendly.

Picea, Pseudotsuga, etc. (Evergreen Conifers)
Reason: Lateral branches tend to interfere with clearance. Mature trees dangerously self-prune lower limbs.

Quercus palustris (Pin Oak)
Reason: Lower branches tend to weep, obstruct traffic and visibility.

PROHIBITED STREET TREES

Although the Commission feels that total exclusion of any tree would be inappropriate, it recognizes that some trees may cause problems when used as street trees. The following species are normally prohibited for one or several of the following reasons: 1) their roots cause injury to sewers or pavements; 2) they are particularly subject to insects or diseases; 3) they cause safety and visibility problems along streets and at intersections; 4) they create messy sidewalks and pavements. These trees are prohibited for use as street trees except under special circumstances. Their use must be approved by the Planning Commission.

LATIN NAME	COMMON NAME
Juglans species	Walnut
Maclura pomifera	Osage Orange
Morus, Prunus, etc. (weeping)	Weeping varieties of various mulberries, crabapples, cherries, etc.
Morus alba	Fruiting Mulberry
Populus trichocarpa, tremuloides, etc.	Poplar & related species
Prunus, Pyrus, etc. (fruiting)	Commercial Fruit Trees
Salix babalonica	Weeping Willow
Ulmus americana	American Elm
Ulmus pumila	Siberian Elm

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