

# NR 18-08 / US 18-02

Natural Resources Overlay District & Geologic Hazard Overlay Review  
For Boat Dock, Patio, and Access Stairs in Canemah  
11/14/2018 – Natural Resources Committee

Clackamas County Map 2-1E-36DD, Tax Lot 200



# Code Criteria

## Oregon City Municipal Code

- *Administration and Procedures are set forth in Chapter 17.50*
- *Natural Resource Overlay District in Chapter 17.49;*
- *Geologic Hazards in Chapter 17.44;*
- *Flood Management Overlay District in Chapter 17.42,*
- *Willamette River Greenway in Chapter 17.48; and*
- *R-6 Dwelling District in Chapter 17.08*

The City Code Book is available on-line at [www.orcity.org](http://www.orcity.org)



# Project Description

- The Applicant has river access through an easement that is located on Tax Lot 200, Map No. 2-1E-36DD. The property is owned by the Canemah Club.
- The boat dock, access stairs and patio were constructed starting in 2013. The applicant wishes to retain the existing improvements.
- The easement contains a permitted dock, and easement improvements including a concrete “Manor Stone” type block stairway for pedestrian access, low “Manor Stone” concrete block retaining walls, a rock retaining wall, a graded fine gravel patio with 356 square feet, and a Manor Stone block fire pit and approximately 259 square feet of a concrete patio.
- Additional site work included grading, removal of existing vegetation (mostly invasive) and new landscaping



# Project Description

- Note: The development is located below the “top of bank”. The site is small and consists of a steep rocky bank
- Current owners purchased the home with easement rights to the dock in 2015
- Code Enforcement process initiated in 2016
- On-land improvements trigger certain permitting requirements (however, floating docks are exempt from city planning requirements)
- To remedy the project impacts and assure code is met, the owners have applied for the applicable Land Use approvals
- Requires a Type III Review (Planning Commission)
- Planning Commission public hearing is scheduled for **November 26, 2018,**  
**7 p.m. at City Hall, 615 Center St, Oregon City**



# Permits

## Building Permits

- Floodway, possible structural permits for stairs, retaining walls

## Land Use (Planning)

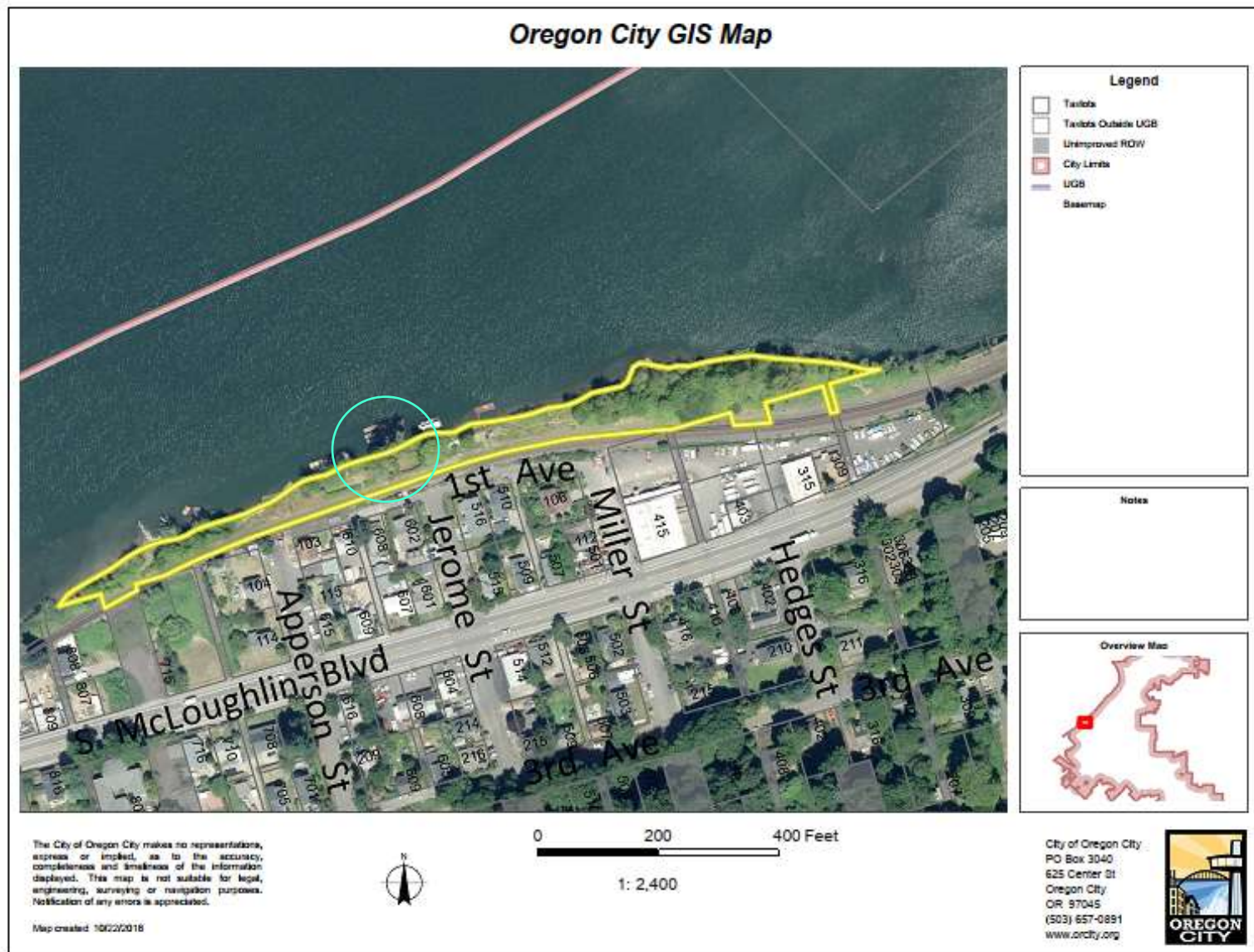
- Natural Resources Overlay District
  - Mitigation Plan and Report prepared by a qualified environmental professional
- Geologic Hazard Review
  - Geologic Assessment and Geotechnical Report prepared by a geotechnical engineer/licensed engineering geologist
  - Assess site grading, amount of cut and fill

## Public Works

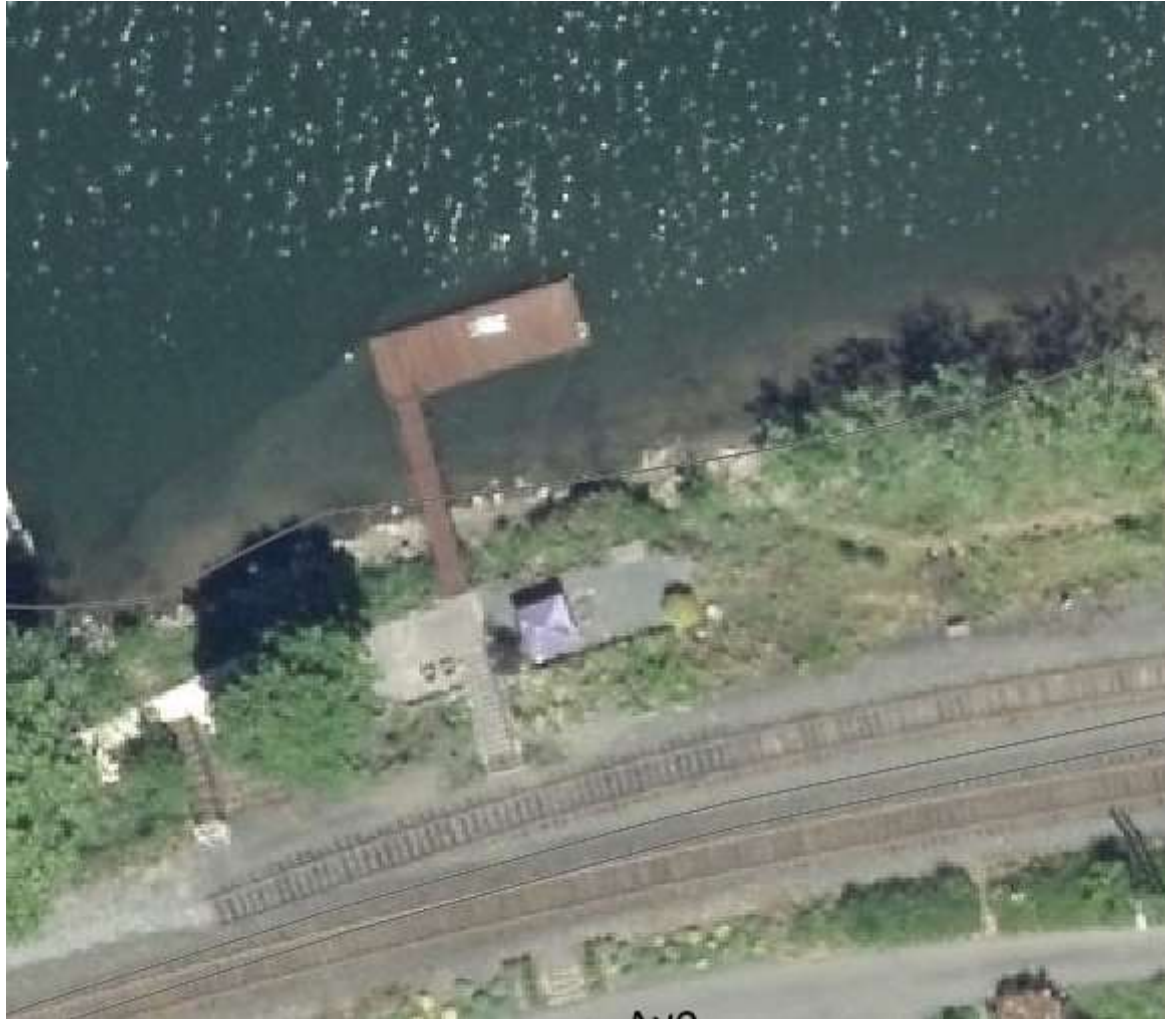
- Revocable Right-of-Way Permit for Staircase
- Grading Permit



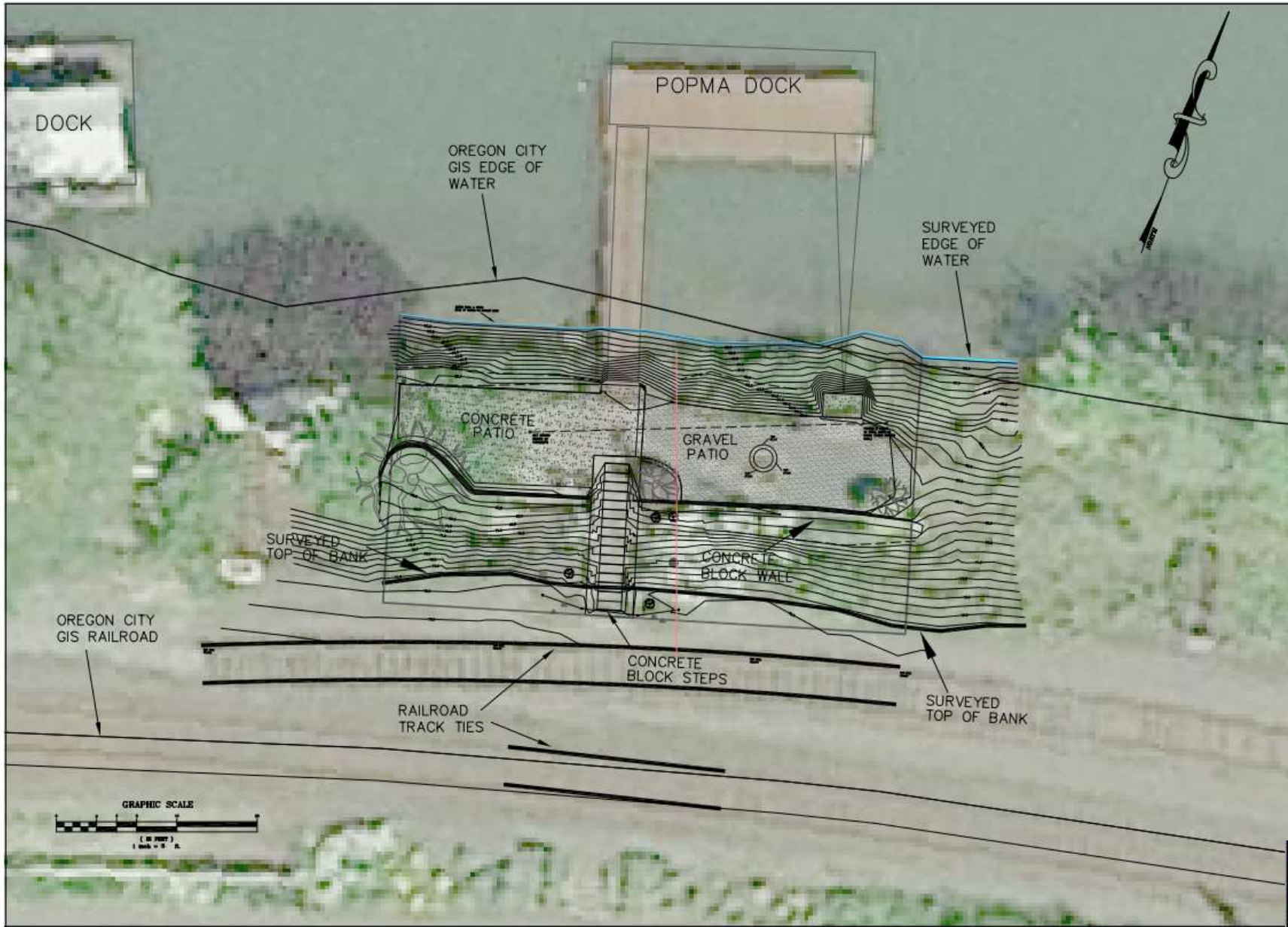
# Vicinity



# Site - Aerial Photo









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 Consulting Civil Engineer - Lead Engineer - S.E.E.

AS-CONSTRUCTED FINISH GRADING PLAN

**POPMA DOCK EASEMENT**

Located in the Southeast Quarter of the Southeast Quarter Section 36  
 Township 2 South, Range 1 East of the Willamette Meridian  
 City of Oregon City, Clackamas County, Oregon

Prepared for:  
 Brant and Carolyn Popma  
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 Oregon City, Oregon 97045  
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W.D. No. 1720  
 Design: 12/12/2018  
 Drawn: 12/12/2018  
 Date: 30 August 2018  
 Day: 10-27/2018

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**EAST GRAVEL PATIO AND WALL**



**RIVER BANK AND DOCK LOOKING NORTHEAST TOWARDS FALLS**



**RIVER BANK FROM DOCK LOOKING DOWNSTREAM**





**PATIO LOOKING UPSTREAM**



**PATIO DURING FLOODING**



**Exhibit 7D**  
**Looking Downstream**





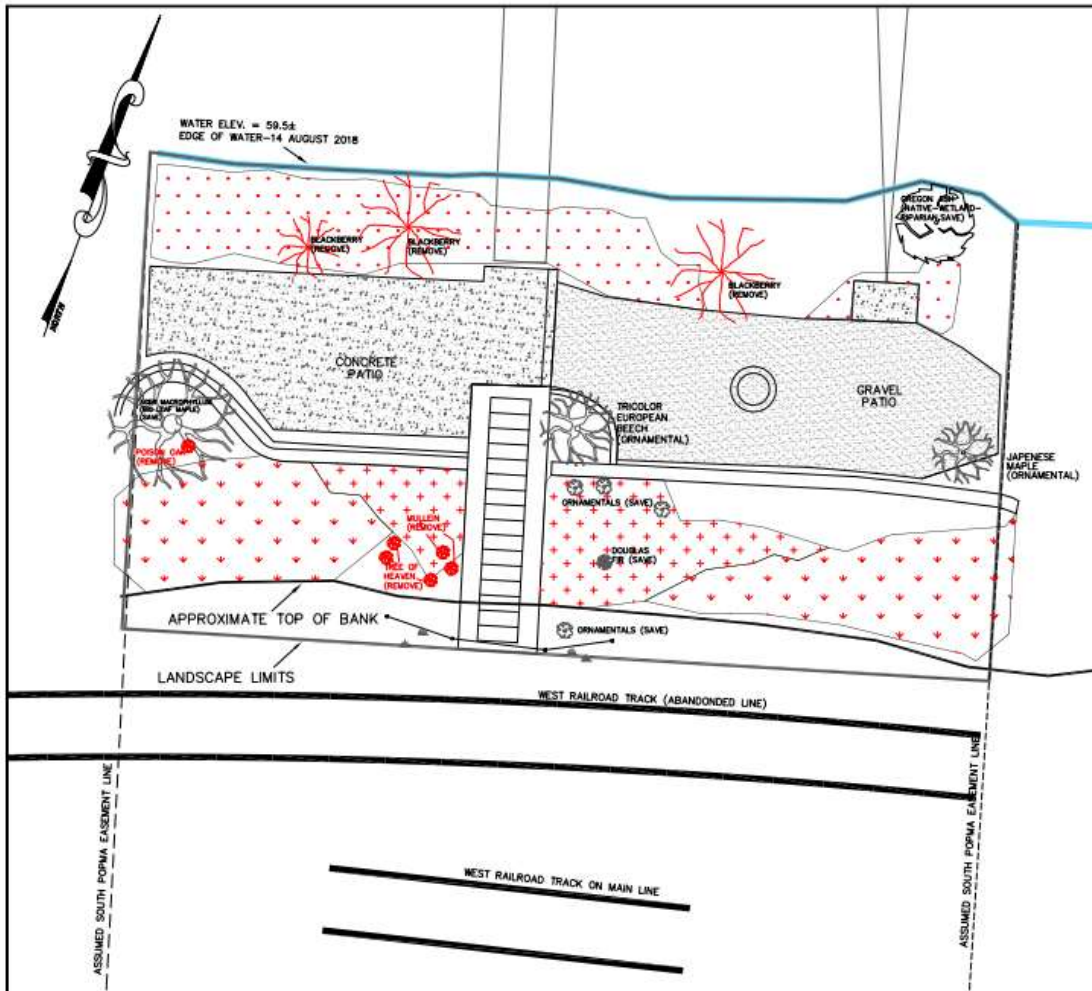
**Exhibit 7E**  
**Looking Upstream**

# Mitigation

- Note: The development is located below the “top of bank”. The site is small and consists of a steep rocky bank.
- Removal of non-native invasive vegetation from the easement area’s frontage on the river.
- Planting of appropriate native plant materials to enhance the resource values of the property’s frontage on the river.
- There is no vegetated corridor along this stretch of the Willamette River because of the existing site development and grading associated with the railroad.







## VEGETATION REMOVAL AREAS

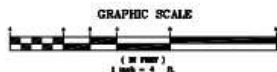
- Remove Noxious Reed  
Canary Grass
- Remove Noxious  
Ox-eye Daisy
- Remove Noxious, Invasive  
or Non Native Annuals or  
Perennials
- Remove Blackberry
- Remove Invasive Shrubs

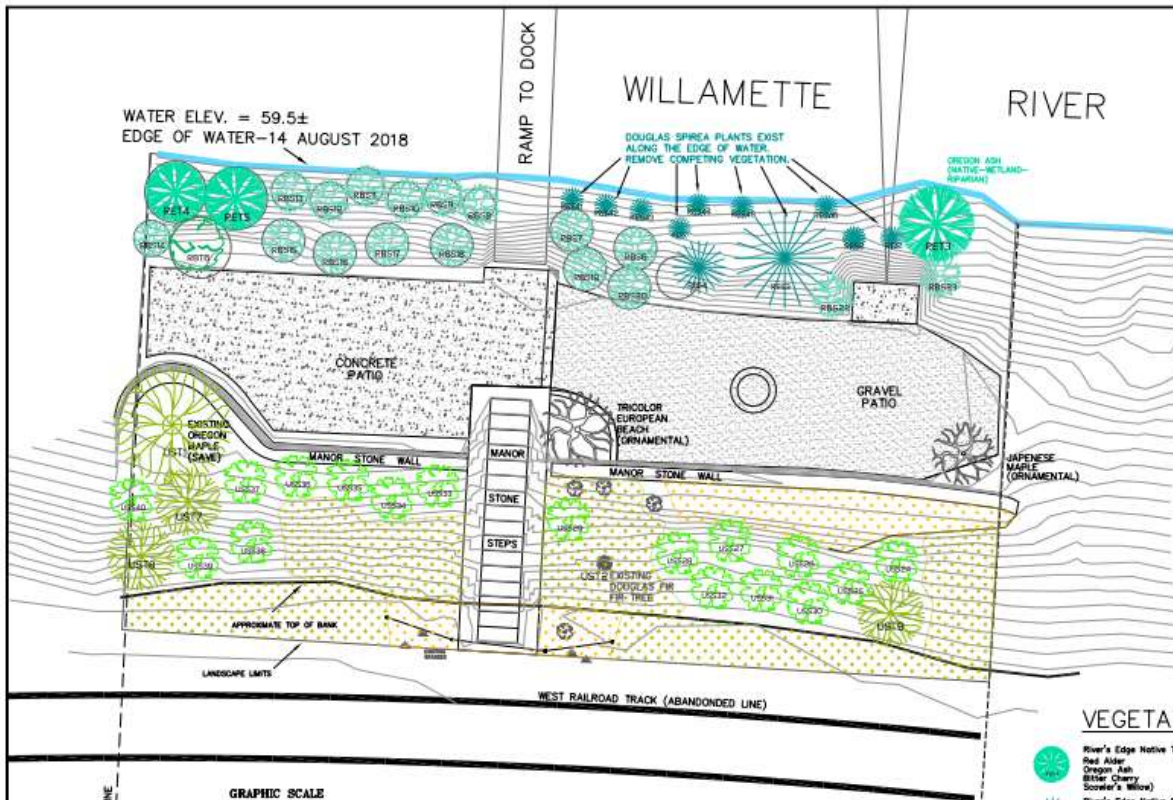
## VEGETATION REMOVAL NOTES

- River's Edge Noxious/Invasive/Non-Native Plant Species to Remove**
- Purple Loosestrife *Lythrum Salicaria* (perennial; seeds/stem fragments)
  - Reed Canary Grass *Phalaris arundinacea* (perennial; seeds/rhizomes/stem fragments)
  - Yellow Water Iris *Iris pseudacorus* (perennial; stem fragments detach/float, seeds, all parts toxic)
- River Bank Noxious/Invasive/Non-Native Plant Species to Remove**
- Himalayan Blackberry *Rubus discolor*
  - Reed Canary Grass *Phalaris arundinacea*
- Upland Slope Noxious/Invasive/Non-Native Plant Species to Remove**
- Ox-eye Daisy *Leucanthemum vulgare*
  - Tree Of Heaven *Ailanthus altissima* (noxious, allelopathic, suckering by root sprouts, winged seeds)
  - Himalayan Blackberry *Rubus discolor* (noxious, long runner roots)
  - Poison Oak *Toxicodendron diversilobum* (hazardous)
- Prickly Lettuce** *Lactuca scariola* (by seed annual and/or biennial)
- Taraxacum officinale** *Gnaphalium polycephalum* (biennial)
- Robert Geranium** *Geranium robertianum* (annual, or biennial)
- Mullein** *Verbascum thapsus* (biennial herb)
- Common Field Horsetail** *Equisetum arvense* (perennial in Oregon, rhizomes)
- Queen Anne's Lace** *Daucus carota* (by biennial/first growth/long taproot)
- Yellow Hawkweed** *Hieracium barbatum* (spread vegetatively from stolons, seeds)

## VEGETATION RETENTION NOTES

- River's Edge Native Plant Species to Retain (Neutral or Increase)**
- Douglas Spruce *Picea douglasii* (increase)
  - Oregon Ash *Fraxinus latifolia*
- River Bank Native Plant Species to Retain (Neutral or Increase)**
- Douglas Spruce *Picea douglasii* (increase)
  - Oregon Ash *Fraxinus latifolia*
- Various less significant very small-sized native wildflowers and weeds that will not affect remediation process**
- Upland Slope Native Plant Species to Retain (Neutral or Increase)**
- Big Leaf Maple *Acer macrophyllum*
  - Douglas Fir *Pseudotsuga menziesii* (seedling, make free-to-grow)
  - Fogwren (naturalized) *Digitaria purpurea*
  - Common Evening Primrose *Oenothera biennis*





### VEGETATION PLANTING SCHEDULE

- River's Edge Native Tree (RET#)
- River's Edge Native Shrub (RES#)
- River Bank Native Tree (RBT#)
- River Bank Native Shrub (RBS#)
- Upland Slope Bank Native Tree (UST#)
- Upland Slope Native Shrub (USS#)
- Upland Slope Native Ground Covers
- Existing Ornamentals (When Replaced, Replace with Natives)

### VEGETATION PLANTING SCHEDULE

- River's Edge Native Tree Species (Moist or Wet Soil; Full Sun or Part Shade)
    - Red Alder *Alnus rubra* (large deciduous tree 80R tall, 30-40R wide; tolerate seasonal flooding)
    - Oregon Ash *Fraxinus latifolia* (large deciduous tree 70R tall, 20R wide; great wetland/riparian tree)
    - Bitter Cherry *Prunus emarginata* (small deciduous tree 30R tall, 20R wide)
    - Snowy's Wince *Silva aculeolata* (small deciduous tree 30R tall, 30R wide)
  - River's Edge Native Shrub Species (Moist or Wet Soil; Full Sun or Part Shade)
    - Pacific Huckleberry *Psychocarpus capillatus* (deciduous shrub 8-12R tall, 4-7R wide)
    - Sweep Rose *Rosa pratincola* (deciduous shrub 6R tall, 2-3R wide)
    - Red Tidy Dogwood *Cornus sericea* (deciduous shrub 15R tall, 6-9R wide)
    - Douglas Spiraea *Spiraea douglasii* (deciduous shrub 6R tall, 3-7R wide; seeping, suckers)
  - River Bank Native Tree Species (Dry or Moist Soil; Full Sun or Part Shade)
    - Vine Maple *Acer circinnatum* (small deciduous tree 20-25R tall, 15-20R wide)
    - Servicberry *Amelanchier alnifolia* (deciduous shrub 6-18R tall, 10R wide)
  - River Bank Native Shrub Species (Dry or Moist Soil; Full Sun or Part Shade)
    - Moriche Rose *Rosa nutkana* var. *nutkana* (deciduous shrub 8-10R tall, 3-4R wide)
    - Thimbleberry *Rubus parviflorus* (deciduous shrub 4-6R tall, 2-3R wide)
    - Red-flowering Currant *Ribes sanguineum* var. *sanguineum* (deciduous shrub 4-10R tall, 3-10R wide)
    - Pacific Rush *Scirpus americanus* (perennial, grass-like 1-3R tall, 3-4 R wide)
    - Dog-ear Rush *Juncus tenuis* (perennial, iris-like 1-3R tall, 3-4 R wide)
  - Upland Slope Native Tree Species (Dry or Moist Soil; Full Sun)
    - Douglas Fir *Pseudotsuga menziesii* (120-240R tall, 30R wide; fast growing conifer)
    - Bigleaf Maple *Acer macrophyllum* (large deciduous tree 90R tall, 70R wide)
  - Upland Slope Native Shrub Species (Dry or Moist Soil; Full Sun)
    - Baldpate Rose *Rosa gymnocarpa* (small deciduous shrub 5R tall, 2-6R wide)
    - Common Snowberry *Symphoricarpos albus* (small deciduous shrub 3-6R tall, 6-13R wide)
  - Upland Slope Native Groundcover Species (Dry or Moist Soil; Full Sun)
    - Kiwifruit *Achillea millefolium* (perennial 1-2R tall, 2R wide)
    - Yarrow *Achillea millefolium* (perennial 1-2R tall, 2R wide)
    - Shrubby Milkwort *Asclepias speciosa* (perennial 3R tall, 1-2R wide)
    - Common Camassia *Camassia quamash* (perennial 2-2R tall, 0.5-1 R wide, needs dry summer soil)
    - Mossland Strawberry *Fragaria virginiana* sp. *polyphylla* (semi-evergreen perennial ground cover 0.2R, 1R)
    - Oregon Redwood Sedge *Carex lasiocarpa* (perennial ground cover, dry shade under Maple 5.6R tall, 2-3 R wide)
    - Oregon Stemsong *Sedum argenteum* (evergreen perennial succulent groundcover 0.6R tall, 1.5 R wide)
    - Brodiaea Stemsong *Sedum spectabile* (evergreen perennial succulent groundcover 0.6R tall, 1.5 R wide)
- Plant native plants in the area that is being controlled after the bulk of the invasive plants are removed. This will help to reestablish the area with desired species and prevent new and recurring invasions. Monitor the site. It is crucial to recheck every 6-12 months to assess the area and to pull the inevitable regrowth that has sprouted from vegetative below-ground reproduction and before new seed heads form. This will effectively prevent re-infestation.
- Upland Slope Non-native Ornamental Plant Species to Possibly Retain (Neutral impact on natives)
- Japanese Maple *Acer palmatum* (Acid)
  - Stemsong *Sedum* spp. L. (rapid spreading, not invasive)
  - Excellent "Pink Princess" *Euonymus alatus* (Eurasian "Tree") (Eurasian spp. are native to N. and S.America)
  - Tricolor European Beech *Fagus sylvatica* (Europe)
  - Blue Fescue *Festuca ovina* (grass 3R tall, 3R wide)
  - Stella de Oro Daylily *Hemerocallis Stella D'Oro*

### OREGON CITY DEVELOPMENT CODE REQUIREMENTS

All trees, shrubs and ground cover shall be selected from the Oregon City Native Plant List.

Plantings may vary in size dependent on whether they are live cuttings, bare root stock or container stock, however, no initial plantings may be shorter than 12 inches in height.

Bare ground must be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

Plant Spacing: Trees shall be planted at average intervals of seven (7) feet on center. Shrubs may be planted in single-species groups of no more than four (4) plants, with clusters planted on average between 8 and 10 feet on center.

Plant Diversity: Shrubs shall consist of at least three (3) different species. If 30 trees or more are planted, no more than one-third of the trees may be of the same genus.

An alternative planting plan using native plants may be approved in order to create a new wetland area, if it is part of a wetland mitigation plan that has been approved by the DSE or the U.S. Army Corps of Engineers (USACE) in conjunction with a wetland joint removal/ill permit application.

Monitoring and Maintenance: The mitigation plan shall provide for a 5-year monitoring and maintenance plan with annual reports in a form approved by the Director of Community Development. Monitoring of the mitigation site is the on-going responsibility of the property owner, design, or designer, who shall submit said annual report to the City's Planning Division, documenting plant survival rates of shrubs and trees on the mitigation site. Photographs shall accompany the report that indicate the progress of the mitigation. A minimum of 80% survival of trees and shrubs of those species planted is required at the end of the 5-year monitoring and maintenance period. Any invasive species shall be removed and plants that die shall be replaced in kind. Bare spots and areas of invasive vegetation larger than ten (10) square feet that remain at the end of the 5 year monitoring period shall be replanted or reseeded with native grasses and ground cover species.

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LANDSCAPE PLANTING PLAN  
**POPMA DOCK EASEMENT**  
 Located in the Southeast Quarter of the Southeast Quarter Section 36  
 Township 2 South, Range 1 East of the Willamette Meridian  
 City of Oregon City, Clackamas County, Oregon

Prepared for:  
 Brent and Carolyn Popma  
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 E-Mail: BOPopma@gmail.com

W.D. No. 1772  
 Design: 10/10/2018  
 Draw: 10/10/2018  
 Date: 10 August 2018  
 E-Mail: leonard@leahubbell.com

Sheet  
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## RIVER

WATER ELEV. = 59.5±  
EDGE OF WATER-14 AUGUST 2018

## RAMP TO DOCK

DOUGLAS SPIREA PLANTS EXIST  
ALONG THE EDGE OF WATER.  
REMOVE COMPETING VEGETATION

CRITICON, ASH  
CLATIVE—WETLAND  
BIRAPURAM

CONCRETE  
PATIO :

GRAVE  
PATIO

TRICOLOR  
EUROPEAN  
BEACH  
PERMANENT

JAPANESE  
MAPLE  
(ORNAMENTAL)

MANO
STONE
STEPS

LANDSCAPE LIMIT

WEST RAILROAD TRACK (ABANDONED LINE





# VEGETATION PLANTING SCHEDULE



## River's Edge Native Tree Species (Moist or Wet Soil; Full Sun or Part Shade)

Red Alder	<i>Alnus rubra</i> (large deciduous tree 80ft tall, 30–40ft wide; tolerates seasonal flooding)
Oregon Ash	<i>Fraxinus latifolia</i> (large deciduous tree 70ft tall, 25ft wide; great wetland/riparian tree)
Bitter Cherry	<i>Prunus emarginata</i> (small deciduous tree 30ft tall, 20ft wide)
Scowler's Willow	<i>Salix scouleriana</i> (small deciduous tree 35ft tall, 30ft wide)



## River's Edge Native Shrub Species (Moist or Wet Soil; Full Sun or Part Shade)

Pacific Ninebark	<i>Physocarpus capitatus</i> (deciduous shrub 8–12ft tall, 4–7ft wide)
Swamp Rose	<i>Rosa pisocarpa</i> (deciduous shrub 6ft tall, 2–3ft wide)
Red Twig Dogwood	<i>Cornus sericea</i> (deciduous shrub 15ft tall, 6–9ft wide)
Douglas Spirea	<i>Spiraea douglasii</i> (deciduous shrub 6ft tall, 3–7ft wide; existing, increase)



## Riverbank Native Tree Species (Dry or Moist Soil; Full Sun or Part Shade)

Vine Maple	Vine Maple	<i>Acer circinatum</i> (small deciduous tree 20–25ft tall, 15–20ft wide)
Serviceberry	Serviceberry	<i>Amelanchier alnifolia</i> (deciduous shrub 6–18ft tall, 10ft wide)



## Riverbank Native Shrub Species (Dry or Moist Soil; Full Sun or Part Shade)

Nootka Rose	Nootka Rose	<i>Rosa nutkana</i> var. <i>nutkana</i> (deciduous shrub 6–10ft tall, 3–4ft wide)
Thimbleberry	Thimbleberry	<i>Rubus parviflorus</i> (deciduous shrub 4–6ft tall, 2–3ft wide)
Red-flowering Current	Red-flowering Current	<i>Ribes sanguineum</i> var. <i>sanguineum</i> (deciduous shrub 4–10ft tall, 3–10ft wide)
Pacific Rush	Pacific Rush	<i>Juncus effusus</i> ssp. <i>pacificus</i> (evergreen perennial, grass-like 1–3ft tall, 3–4 ft wide)
Dagger-leaf Rush	Dagger-leaf Rush	<i>Juncus ensifolius</i> (perennial, Iris-like 1–3ft tall, 3–4 ft wide)



## Upland Slope Native Tree Species (Dry or Moist Soil; Full Sun)

Douglas Fir	Douglas Fir	<i>Pseudotsuga menziesii</i> (120–240ft tall, 30ft wide; fast growing conifer)
Bigleaf Maple	Bigleaf Maple	<i>Acer macrophyllum</i> (large deciduous tree 90ft tall, 70ft wide)



## Upland Slope Native Shrub Species (Dry or Moist Soil; Full Sun)

Baldhip Rose	Baldhip Rose	<i>Rose gymnocarpa</i> (small deciduous shrub 5ft tall, 2–8ft wide)
Common Snowberry	Common Snowberry	<i>Symphoricarpos albus</i> (small deciduous shrub 3–6ft tall, 6–13ft wide)



## Upland Slope Native Groundcover Species (Dry or Moist Soil; Full Sun)

Kinnikinnick	Arctostaphylos uva-ursi (small evergreen groundcover 5-8 inches tall, 2-15ft wide)
Yarrow	Yarrow Achillea millefolium (perennial 1-2ft tall, 2ft wide)
Showy Milkweed	Showy Milkweed Asclepius speciosa (perennial 3ft tall, 1-2ft wide)
Common Camas	Common Camas Camassia quamash (perennial 2-3ft tall, 0.5-1 ft wide, needs dry summer soil)
Woodland Strawberry	Woodland Strawberry Fragaria virginiana ssp. platypetala (semi-evergreen perennial ground cover 0.2ft, 1ft)
Oregon Redwood	Oregon Redwood Sorrel Oxalis oregana (perennial ground cover, dry shade under Maple 0.5ft tall, 2-3 ft wide)
Oregon Stonecrop	Oregon Stonecrop Sedum oregonum (evergreen perennial succulent groundcover 0.6ft tall, 1.5 ft wide)
Broadleaf Stonecrop	Broadleaf Stonecrop Sedum spathulifolium (evergreen perennial succulent groundcover 0.6ft tall, 1.5 ft wide)

Plant native plants in the area that is being controlled after the bulk of the invasive plants are removed. This will help to repopulate the area with desired species and prevent new and recurring invasions. Monitor the site. It is crucial to recheck every 6–12 months to reassess the area and to pull the inevitable regrowth that has sprouted from vegetative below-ground reproduction and before new seed heads form. This will effectively prevent re-infestation.



## Upland Slope Non-native Ornamental Plant Species to Possibly Retain (Neutral impact on natives)

Japanese Maple	Japanese Maple	<i>Acer palmatum</i> (Asia)
Stonecrop	Stonecrop	<i>Sedum</i> spp. L. (rapid spreading, not invasive)
Escallonia 'Pink Princess'	Escallonia 'Pink Princess'	<i>Escallonia x exoniensis 'Fradesii'</i> ( <i>Escallonia</i> spp. are native to N. and S.America)
Tricolor European Beech	Tricolor European Beech	<i>Fagus sylvatica</i> (Europe)
Blue Fescue	Blue Fescue	<i>Festuca ovina glauca 'Elija Blue'</i> (S.France)
Stella de Oro DayLily	Stella de Oro DayLily	<i>Hemerocallis 'Stella D'Oro'</i>

