Bull Run TREATMENT PROJECTS | Pipelines

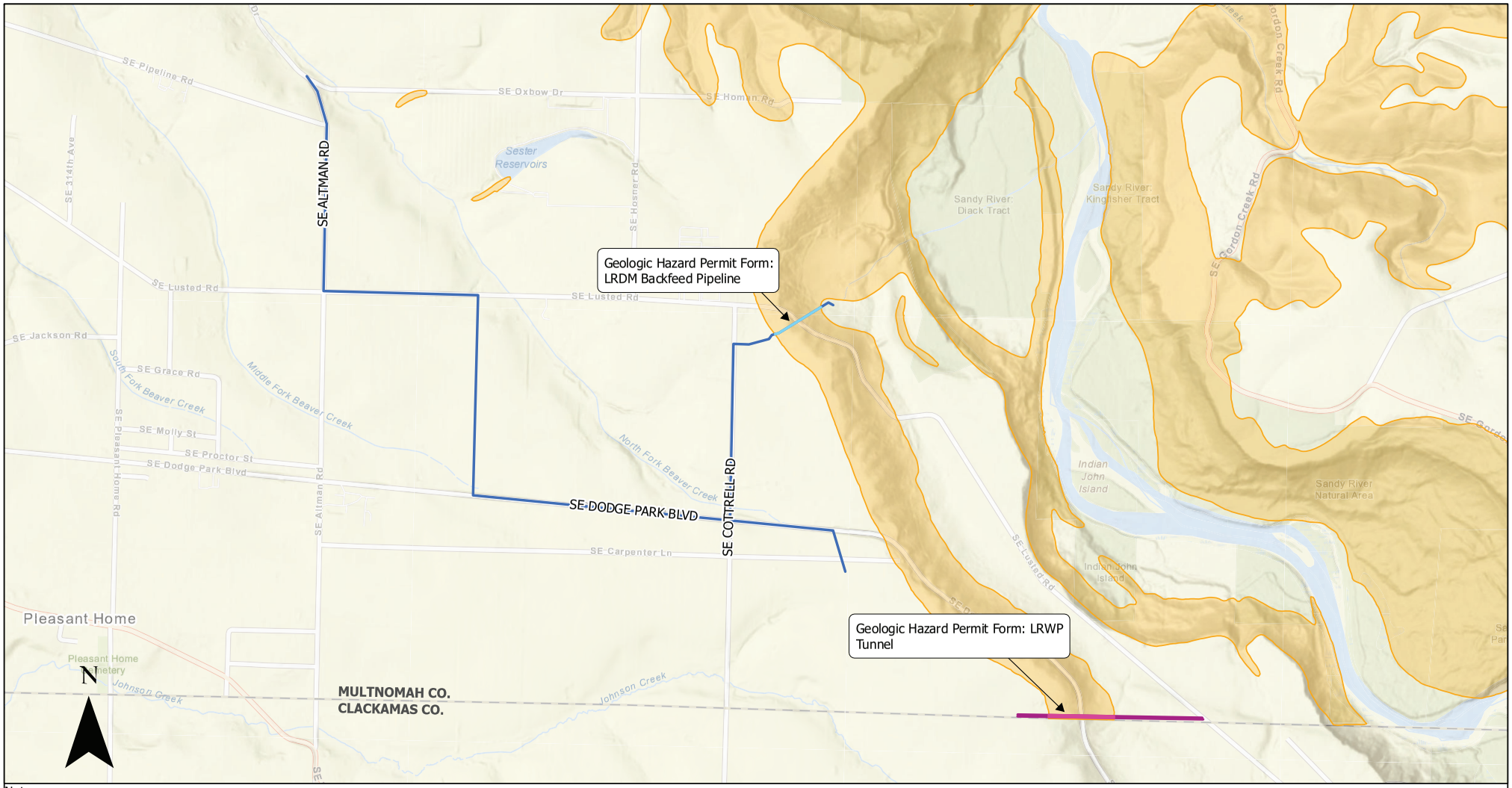
PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

CITY OF PORTLAND, OREGON 1851

# Geologic Hazards Permit (GHP) Form 1 Filtration Pipelines Project

**September 2022**

# Key Plan for Forms




Notes:

1. Slope hazard data from Multnomah County GIS.
2. Raw and Finished Water Pipeline alignments based on 60% Design Submittal.

## Legend

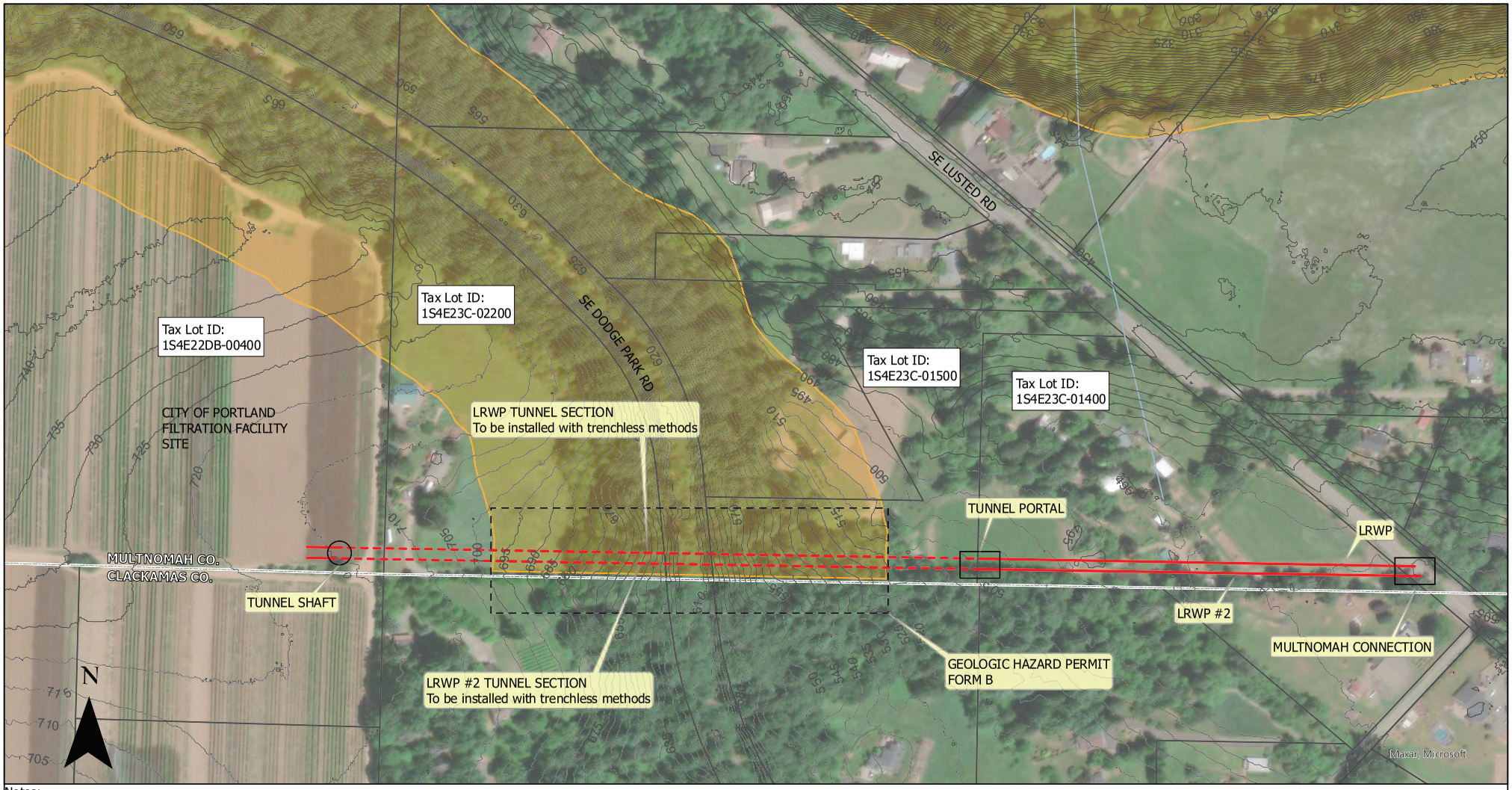
- Multnomah County Geologic Hazard Zone
- Finished Water Alignment - Outside Geologic Hazard Zone
- Finished Water Pipeline within Hazard Zone (Geologic Hazard Permit Form A)
- Raw Water Alignment - Outside Geologic Hazard Zone
- Raw Water Pipeline within Hazard Zone (Geologic Hazard Permit Form B)

0 600 1,200 Feet

McMILLEN JACOBS ASSOCIATES

| | |
|---|---|
| PORTLAND WATER BUREAU | SEPT 2022 |
| FILTRATION PIPELINES PROJECT | |
| GEOHAZARD PERMIT APPLICATION KEY PLAN | |

# Raw Water Pipeline – Tunnel within Geologic Hazard Zone – Form B




Notes:

1. Slope hazard data from Multnomah County GIS.
2. Tunnel and LRWP alignments based on 60% Design Submittal.
3. Elevations are given in Portland Vertical Coordinate System (PVCS=NAVD88-2.1 ft)

## Legend

- Multnomah County Geologic Hazard Zone
- Tax Lots
- Raw Water Alignment - Trenched
- Raw Water Alignment - Trenchless

0 100 200 Feet

McMILLEN JACOBS ASSOCIATES

| | |
|---|---|
| PORTLAND WATER BUREAU | SEPT 2022 |
| FILTRATION PIPELINES PROJECT | |
| GEOHAZARD PERMIT APPLICATION SITE PLAN | |

**Land Use Planning Division**
1600 SE 190th Ave, Ste 116
Portland OR 97233
Ph: 503-988-3043 Fax: 503-988-3389
multco.us/landuse

# GEOLOGIC HAZARDS PERMIT (GHP) Form 1:
## *GEOTECHNICAL RECONNAISSANCE AND STABILITY PRELIMINARY STUDY*

*Note: Response to each question below must be completed or verified by a Certified Engineering Geologist or Geotechnical Engineer, including a State of Oregon Registration Stamp and Number in the space provided on page four. The GHP Form 1 addresses Multnomah County Code Section 39.5085(C)(3)(c); 38.5515(C)(3)(c), Geologic Hazards Permits.*

**Site Address:** 1. 36322 SE Dodge Park Blvd, Boring, 97009
2. 36800 SE Lusted Rd, Boring, 97009

**Legal Description:** 1. Tax Lot ID No. 1S4E23C-02200
2. Tax Lot ID No. 1S4E23C-01500

**Property Owner's Name:** 1. Walter, Dean D & Walter, Patricia L
2. Bissell, Max L & Bissell, Fern E

**Firm Preparing Report:** McMillen Jacobs Associates

**Address:** 2000 SW First Avenue, Suite 410

**City:** Portland **State:** Oregon **Zip:** 97201

**Preparer's Name:** Jeff Quinn

**Phone Number:** 503.384.2938

## GENERAL PROPERTY INFORMATION

1. a. Maximum Slope on Property: Property 1: 0.5H:1V (horizontal:vertical) Property 2: 1.5:1V Area in which it is located: Property 1: Eastern margin Property 2: Western margin

Average Slope of Property: Property 1: Approximately 4H:1V (horizontal:vertical) Property 2: Approximately 3H:1V

b. Are there any wetlands or streambeds on the property? (Please Circle) Yes (No)

If yes, please show on topographical survey or sketch.

c. Volume of soil or earth material disturbed, stored, disposed of or used as fill: Volume of disposed earth material will be approximately 4,000 $yd^3$.

d. Total area of proposed ground disturbance: Construction within the geologic hazard overlay zone consists of two, 9-foot diameter tunnels approximately 850 feet long. The tunnel design includes temporary and permanent underground support systems to mitigate ground loss/settlement. Therefore, there will be no ground disturbance within the geologic hazard overlay zone (i.e., tunnel construction is not considered to be earthwork).

ZERO (square feet) ZERO (acres)

Were building plans considered when completing this form? (Please Circle) Yes (No)
If yes, please note the author and date the plans were prepared.

_____

2. What is the general topography of the property? Please attach a topographic survey or sketch with pertinent notes.

Topography is shown on the attached Site Plan. Topography within Property No. 1 (Tax Lot ID No.1S4E23C-02200) slopes to the east at approximately 10H:1V, increasing in steepness (i.e., up to 2.5H:1V) as it approaches SE Dodge Park Blvd. The steepest slope within Property No. 1 is the cut slope above/west of SE Dodge Park Blvd, which is approximately 18 feet tall, inclined at 0.5H:1V. Topography within Property No. 2 (Tax Lot ID No.1S4E23C-01500) descends east at approximately 2H:1V from the east edge of SE Dodge Park Blvd. The slope becomes more gradual with distance from SE Dodge Park Blvd, from 3H:1V to 10H:1V as it descends to the east.

3. Are there any visible signs of instability or other potentially adverse site features (Landslides, slumps, mud flow, creep, ravines, fills, cuts, seeps, springs, ponds, etc.) within the surrounding area for a minimum distance of 100 feet beyond the subject property boundaries? Describe and indicate on attached topographic survey or sketch.

No, there are no indications of slope instability or other potentially adverse site features within at least 100 feet of the site.

4. Is any earthwork proposed in connection with site development?

(Please Circle) Yes (No)

If yes, please indicate depth and extent of cuts/fills; describe fill types.

5. In your opinion, will the proposed earthwork cause potential stability problems for the subject and/or adjacent properties?

(Please Circle) Yes (No)

IF YES, EXPRESS PROBABILITY:

(Please Circle) Very Probable Possibly Possible, but remote

If Very Probable or Possibly, please explain.

6. In your opinion, will the proposed development (structures, foundations, parking area, streets, etc.) create potential stability problems for the subject and/or adjacent properties?

(Please Circle) Yes (No)

IF YES, EXPRESS PROBABILITY:

(Please Circle) Very Probable Possibly Possible, but remote

If Very Probable or Possibly, please explain.

7. In your opinion would the subsurface disposal of sewage effluent on the site (i.e., drain fields) have an adverse affect on stability of the site or adjacent area?

(Please Circle) Yes (No)

IF YES, EXPRESS PROBABILITY:

(Please Circle) Very Probable Possibly Possible, but remote

If Very Probable or Possibly, please explain.

8. If answer is Very Probable or Possibly to questions 4 or 5, is it your opinion, on the basis of a visual evaluation, that adequate stability might be achieved by preferred siting of the development, alternative foundation support, earthwork, drainage, etc.?

(Please Circle) Yes No

If yes, please explain.

9. Do you recommend additional geotechnical studies (i.e., mapping, testing pits or borings, stability analysis, etc.) prior to site development?

(Please Circle) Yes (No)

If yes, please explain.

Documentation of Proposed Structural Fill for Raw Water Pipeline Tunnels:

Structural fill will not be used to backfill the tunnels within the geohazard zone.

*By signing and affixing the required stamp below, the Certifying Engineering Geologist or Geotechnical Engineer certifies that the site is suitable for the proposed development.*

Signature _____

Date September 29, 2022

Affix Seal Here

REGISTERED PROFESSIONAL ENGINEER
80569PE
OREGON
June 7, 2012
JEFFREY P. QUINN
EXPIRES: 12/31/2022

**City of Portland**

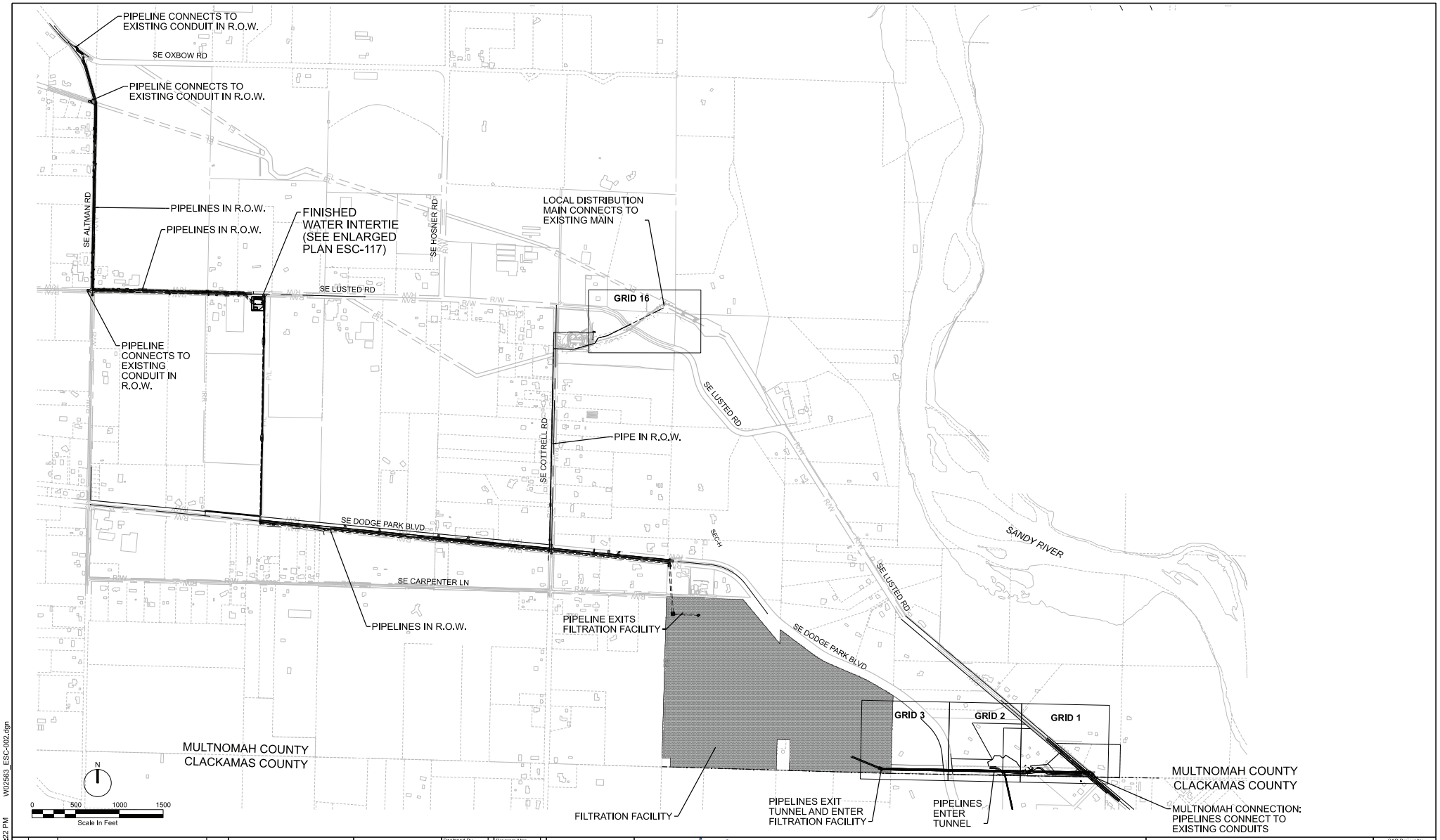
**Facility Pipelines Geohazard Permit Quantities**

Prepared by: McMillen Jacobs / Jacobs Engr

Revision No. 3 prepared by Todd Cotten and Jeff Quinn, 09/26/2022.

*Processed Material - defined as asphalt, aggregate, class B backfill, engineered fill, non-native road fill, concrete, CDF, CLSM, cellular concrete

| | | | | | | Excavation Volumes, CY | | | Stockpiled Material Quantities, CY | | Transportation Quantities, CY | | | | Total Volume per 1.c | Area of Disturbance | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C (equal to A - B) | D | E | F (equal to C - D) | G | H | I (equal to A - D - E - Pipe Volume) | J (equal to C + H) | K | L | |
| Item # | Description | length (feet) | diameter or width (feet) | Depth (feet) | Located In ROW Y/N | Total Excavated Volume (Earth Material & Existing Processed Material) | Volume Existing Processed Material Excavated | Volume Earth Material Excavated | Earth Material stored onsite to be reused | Existing Processed Material stored onsite to be reused | Earth Material Hauled Offsite | Excavated Processed Materials Hauled Offsite | Imported Earth Material (i.e. hauled onsite) | Imported Processed Material* | GHP Form 1 item 1.c "Total Volume of soil or earth material disturbed, stored, disposed of or used as fill" | GHP Form 1 item 1.d "Total area of proposed ground disturbance" (Square Feet) | GHP Form 1 item 1.d "Total area of proposed ground disturbance" (Acres) | Notes |
| **Raw Water Pipeline Tunnel Segments: Geologic Hazard Permit Form B** | | | | | | | | | | | | | | | | | | |
| 1 | Twin 9' Dia Tunnels – inside of geohazard Zone | 850 | 9 | - | N | 4006 | 0 | 4006 | 0 | 0 | 4006 | 0 | 0 | 2225 | 4006 | 0 | 0.00 | Backfill vol. is annular space between 9' tunnel & 6' water pipe |
| | Totals | | | | | 4,006 | - | 4,006 | - | - | 4,006 | - | - | 2,225 | 4,006 | - | 0.00 | |




W02563_ESC-002.dgn

09/28/2022 3:05:22 PM

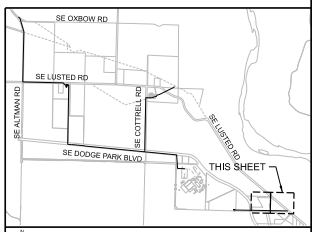
| No | Date | Description | Appd |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

## LEGEND

- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- COUNTY LINE
- P/L — PROPERTY LINE
- R/W — RIGHT-OF-WAY
- EXISTING STRUCTURES
- GEOHAZARD AREA

N

0 100 200 300
Scale In Feet




KEYPLAN

W02563_LU-100.dgn_Geohazard.dgn
09/29/2022 10:13:37 AM

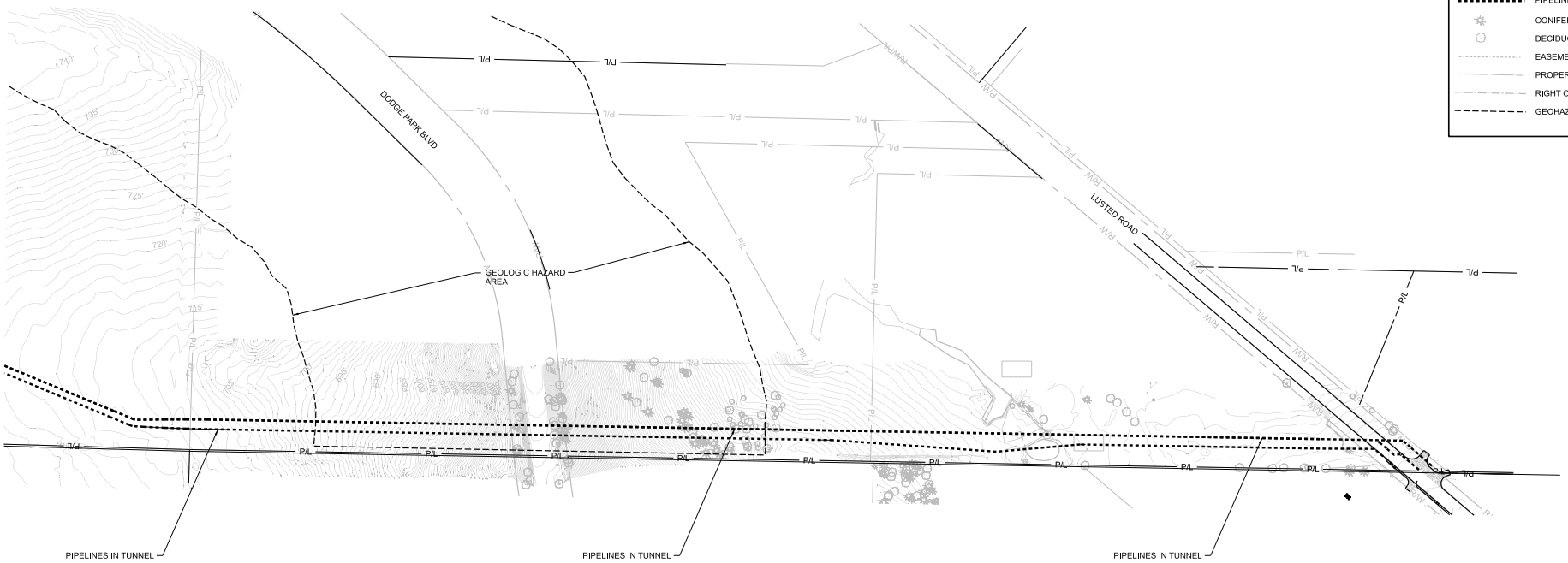
| No | Date | Description | Appd |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

## GENERAL SHEET NOTES

1. ALL WORK AREAS RESTORED TO EXISTING GRADE
2. REFER TO SEC RW-01 (APPENDIX A,3) FOR DETAILS FOR SEC WORK.
3. SEE SHEET GEN-L-061 FOR PLANT SCHEDULE AND SPEC 32 92 00 FOR SEEDING INFORMATION.

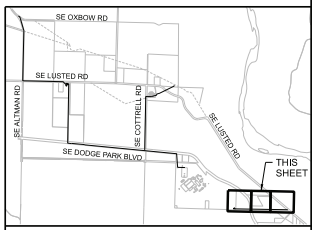
## LEGEND

- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- PROPERTY LINE
- RIGHT OF WAY
- GEOHAZARD AREA




N

0 100 200 300
Scale In Feet




KEYPLAN

| No | Date | Description | Appd |
|---|---|---|---|
| | | | |
| | | | |
| | | | |