



# Portland Water Bureau

## Bull Run Filtration Pipelines Project

LAND USE APPLICATION  
APPENDIX A.2  
A. SITE PLANS

**Final Design Review Approval**  
 Use: Utility Facility  
 MCC / Case #: T1-2024-0004  
 Date: 5/24/24  
 Signature: Lisa Estrin

SHEET NUMBER	SHEET NAME	DESCRIPTION
<b>PIPELINES</b>		
1	LU-000	COVERSHEET
2	LU-001	KEY PLAN
3	LU-002	ZONING MAP
4	LU-100	RAW WATER PIPELINE EXISTING CONDITIONS GRID 1, GRID 2, GRID 3
5	LU-102	FINISHED WATER PIPELINE EXISTING CONDITIONS GRID 4, GRID 5
6	LU-103	FINISHED WATER PIPELINE EXISTING CONDITIONS GRID 6, GRID 7
7	LU-104	FINISHED WATER PIPELINE EXISTING CONDITIONS GRID 8, GRID 9
8	LU-105	FINISHED WATER PIPELINE EXISTING CONDITIONS GRID 10, GRID 11
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10	LU-107	FINISHED WATER PIPELINE EXISTING CONDITIONS GRID 15, GRID 15
11	LU-108	FINISHED WATER PIPELINE EXISTING CONDITIONS GRID 16
12	LU-200	RAW WATER PIPELINE PROPOSED CONDITIONS GRID 1, GRID 2, GRID 3
13	LU-201	FINISHED WATER PIPELINE PROPOSED CONDITIONS GRID 4, GRID 5
14	LU-202	FINISHED WATER PIPELINE PROPOSED CONDITIONS GRID 6, GRID 7
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16	LU-204	FINISHED WATER PIPELINE PROPOSED CONDITIONS GRID 10, GRID 11
17	LU-205	FINISHED WATER PIPELINE PROPOSED CONDITIONS GRID 12, GRID 13
18	LU-206	FINISHED WATER PIPELINE PROPOSED CONDITIONS GRID 15, GRID 15
19	LU-207	FINISHED WATER PIPELINE PROPOSED CONDITIONS GRID 16
<b>FINISHED WATER INTERTIE</b>		
20	LU-500	FINISHED WATER INTERTIE CIVIL SITE PLAN
21	LU-501	FINISHED WATER INTERTIE LANDSCAPE PLAN
22	LU-502	FINISHED WATER INTERTIE VISUALIZATIONS

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No	Date	Description	Appd
Revision			
Survey			

PRELIMINARY  
NOT FOR  
CONSTRUCTION

Designed By	TWL	Program Mgr	XXX
Drawn By		Const Mgr	XXX
Checked By		Const Supvr	XXX
Project Mgr		Date	6/30/22

**WARNING**  
  
 If this bar does not measure 1" then the drawing is not to scale



XXX XXX

Date

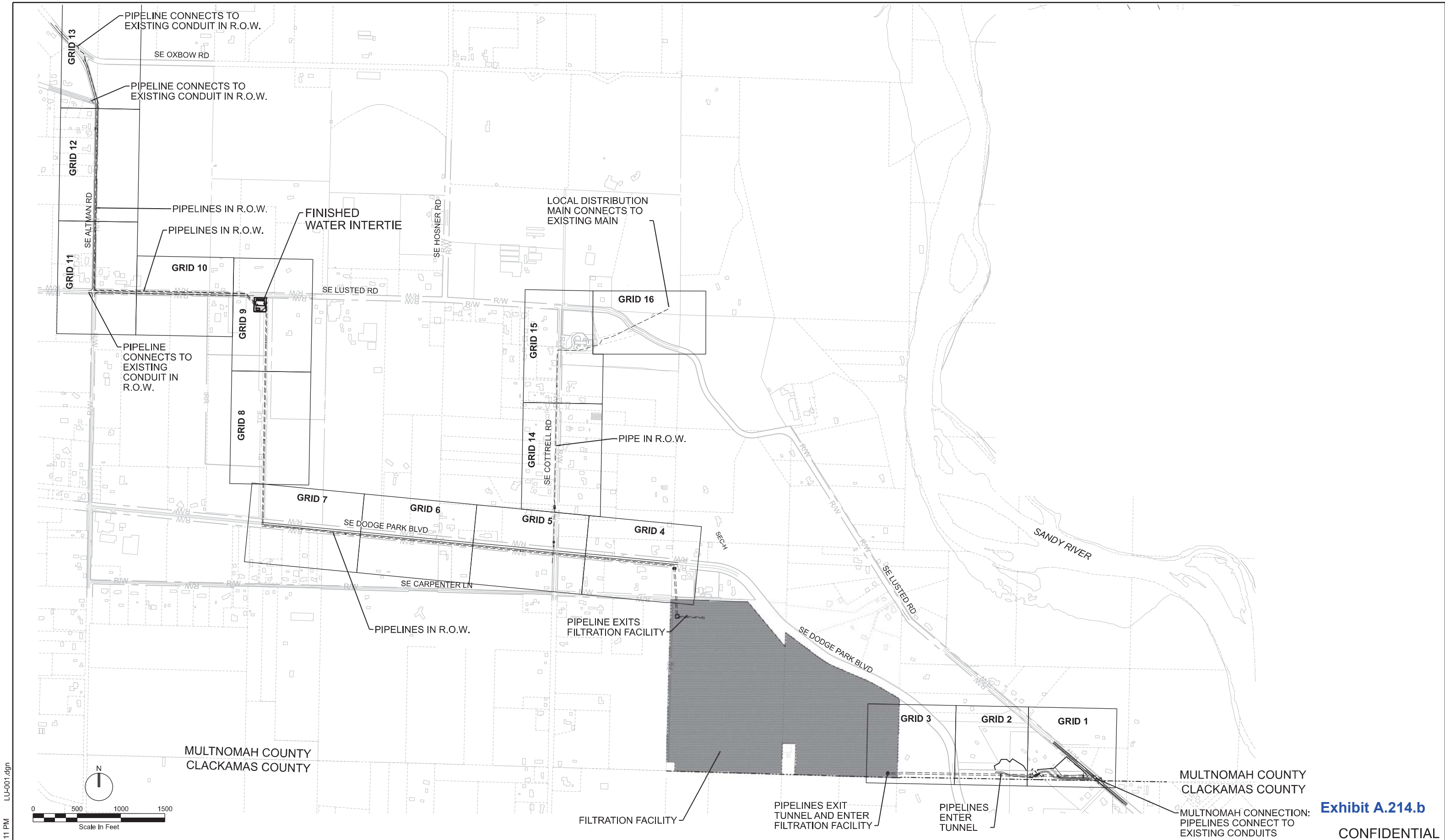


XXX XXX

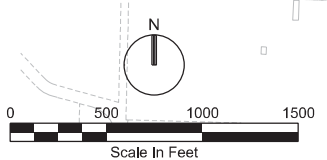
Date

Bull Run Filtration Pipelines  
 LAND USE APPLICATION  
 APPENDIX A.2  
 A. SITE PLANS  
 COVERSHEET

SAP Project No  
**W02563**  
 1/4 Section  
 Sheet No  
LU-000



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No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By  
Drawn By  
Checked By  
Project Mgr

Program Mgr  
Const Mgr  
Const Supvr  
Date  
6/30/22

**WARNING**  
If this bar does not measure 1" then the drawing is not to scale



XXX XXX  
Date  
XXX XXX  
Date



**Bull Run Filtration Pipelines**

**KEY PLAN**



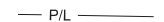


SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
LU-001

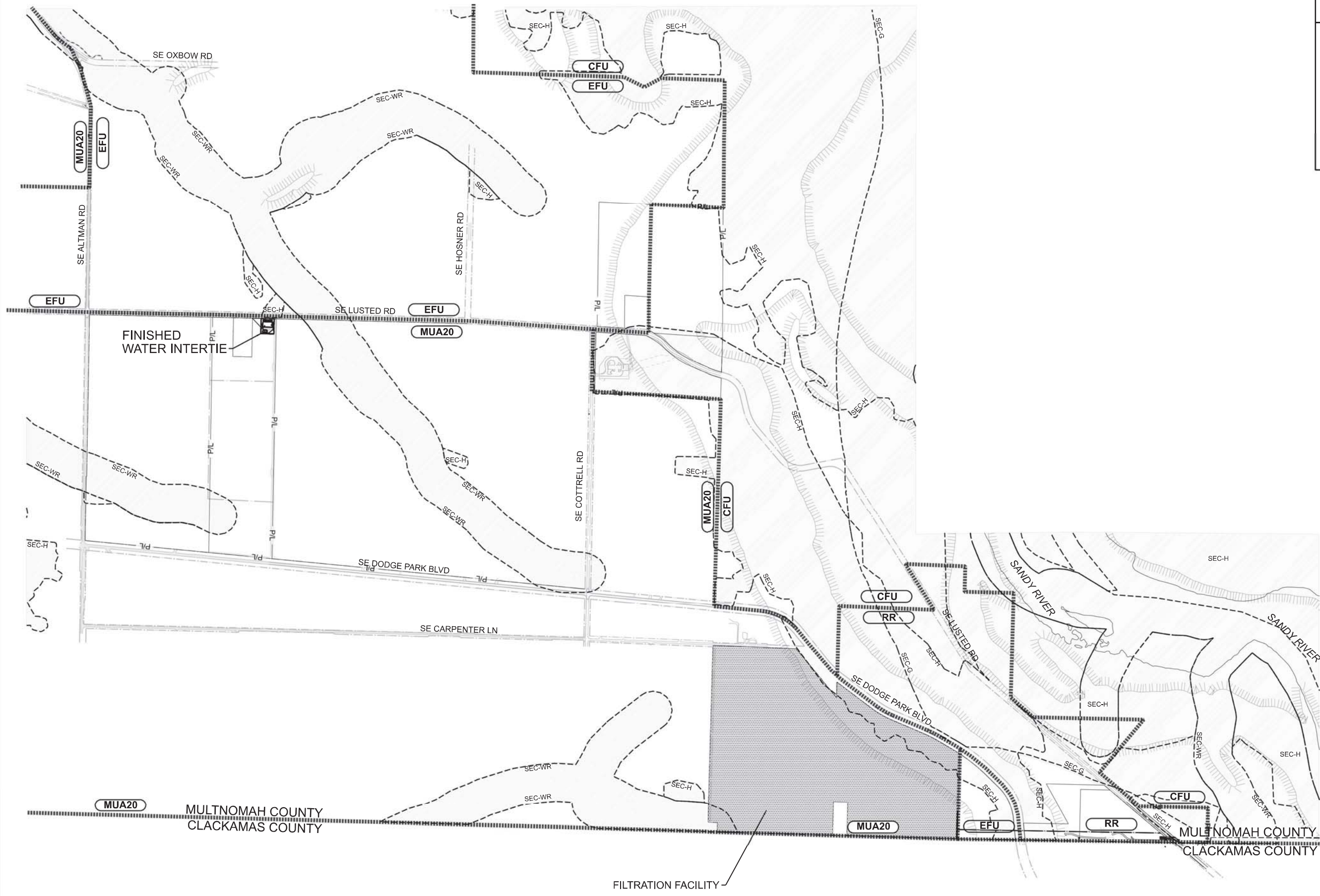
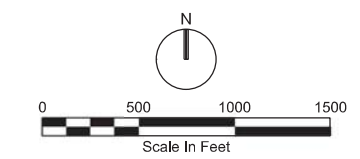
**Exhibit A.214.b**

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**LEGEND**

-  BASE ZONING
-  SEC ZONES
-  P/L PROPERTY
-  R/W RIGHT OF WAY
-  GEOLOGIC HAZARDS OVERLAY



MULTNOMAH COUNTY  
CLACKAMAS COUNTY

MULTNOMAH COUNTY  
CLACKAMAS COUNTY

**Exhibit A.214.c**

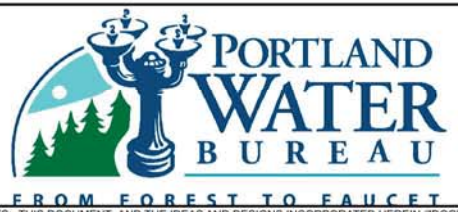
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No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	6/30/22

**WARNING**  
If this bar does not measure 1" then the drawing is not to scale



\_\_\_\_\_  
Date  
\_\_\_\_\_  
Date






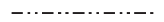

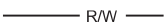

**Bull Run Filtration Pipelines**

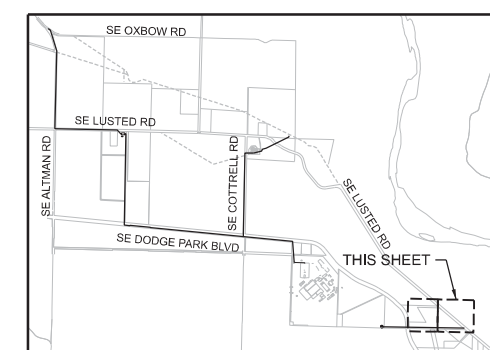
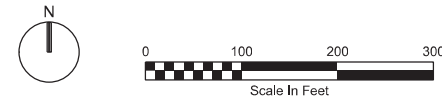
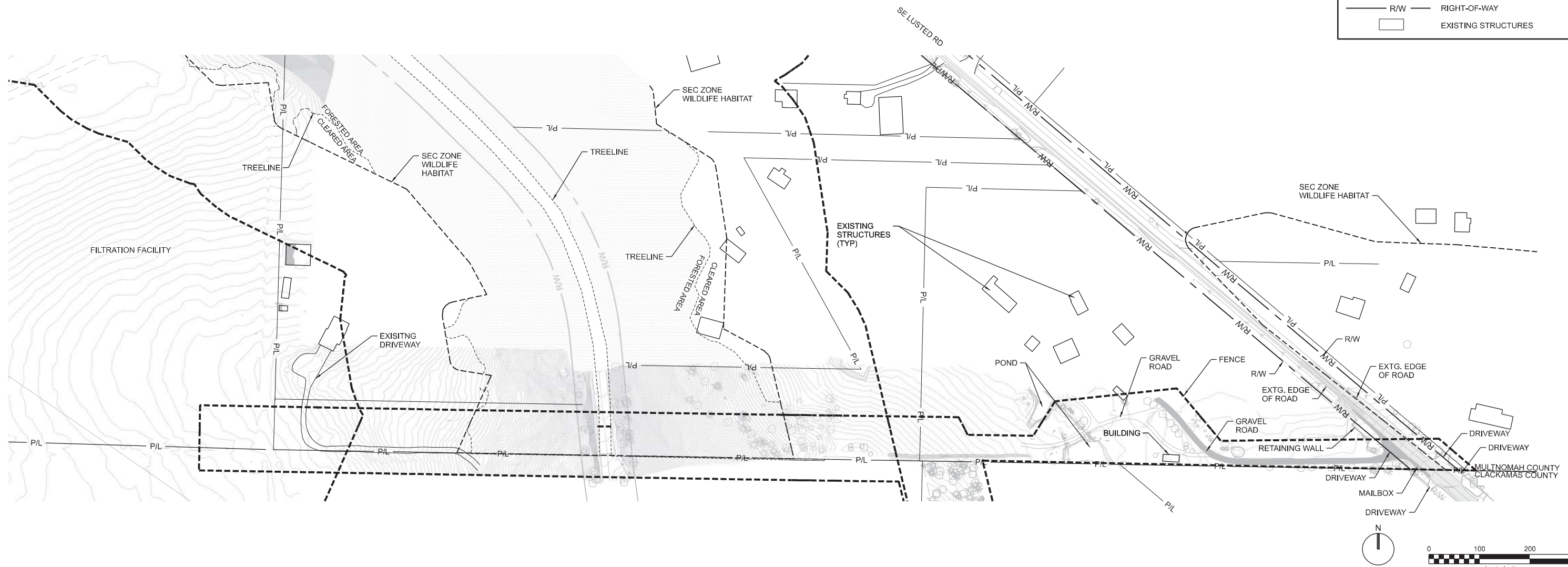
**ZONING MAP**

SAP Project No	<b>W02563</b>
1/4 Section	
Sheet No	LU-002

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



**KEYPLAN**  
Exhibit A.214.d

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No	Date	Description	Appd

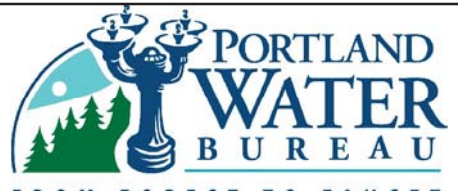
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NOT FOR  
CONSTRUCTION**

Designed By	RG	Program Mgr	XXX
Drawn By	JSL	Const Mgr	XXX
Checked By	RG	Const Supvr	XXX
Project Mgr	XXX	Date	6/30/22

**WARNING**



If this bar does not measure 1" then the drawing is not to scale



\_\_\_\_\_  
xxx xxx Date

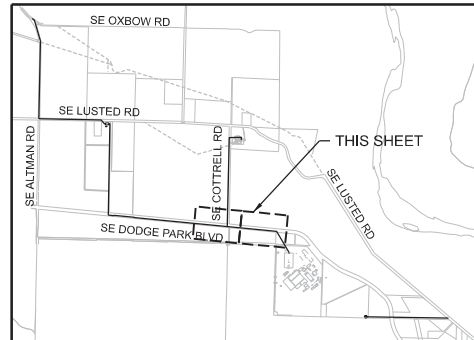
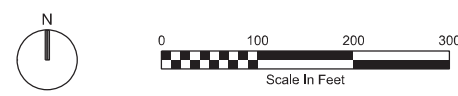
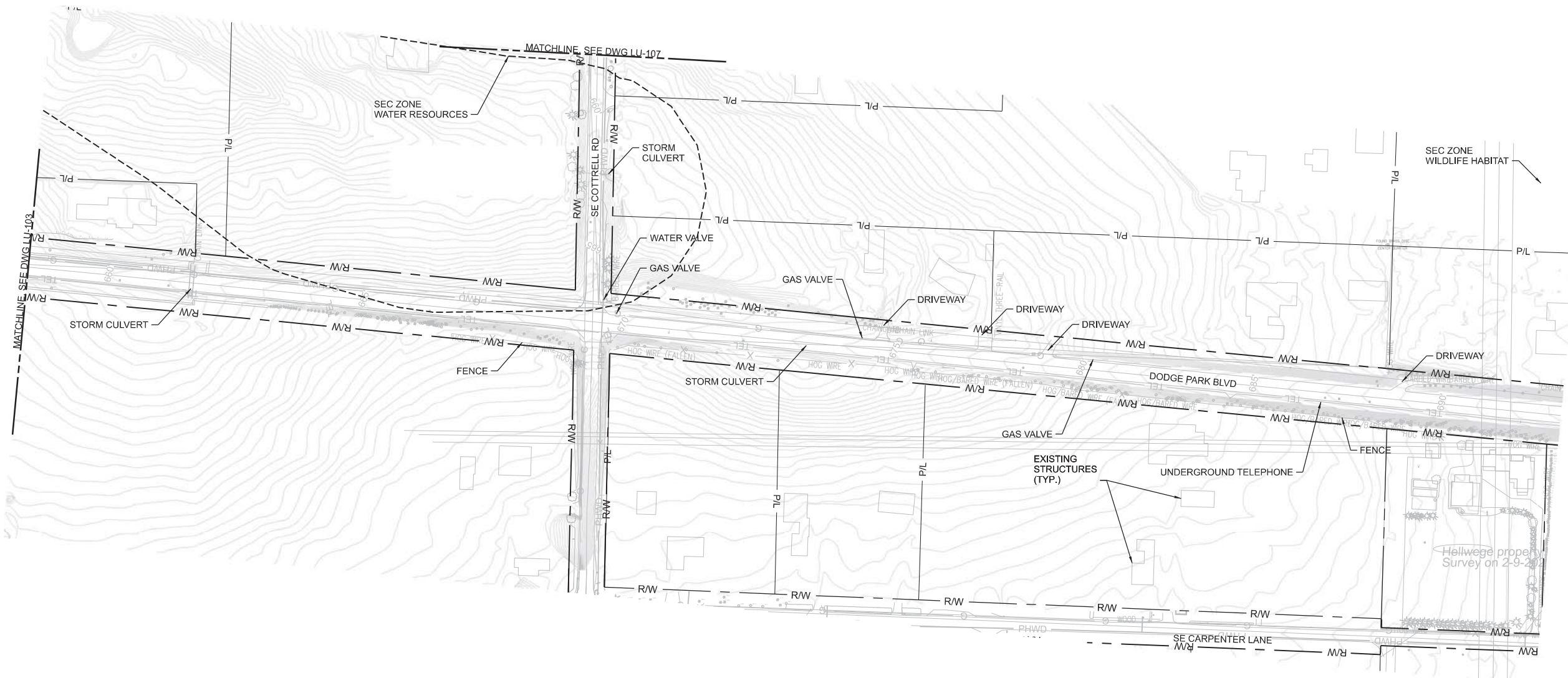
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**Bull Run Filtration Pipelines  
RAW WATER PIPELINE  
EXISTING CONDITIONS  
GRID 1, GRID 2, GRID 3**

SAP Project No	W02563
1/4 Section	3867
Sheet No	LU-100

LEGEND	
-----	SEC ZONE
⊛	CONIFEROUS TREE
○	DECIDUOUS TREE
⊠	ELECTRICAL VAULT
⊕	UTILITY POLE
⊞	WATER METER
— P/L —	PROPERTY LINE
— R/W —	RIGHT-OF-WAY
□	EXISTING STRUCTURES



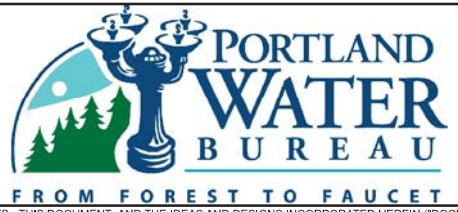
KEYPLAN  
**Exhibit A.214.e**

No	Date	Description	Appd
Revisions			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	RG	Program Mgr	XXX
Drawn By	JSL	Const Mgr	XXX
Checked By	RG	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



XXX XXX	Date
XXX XXX	Date

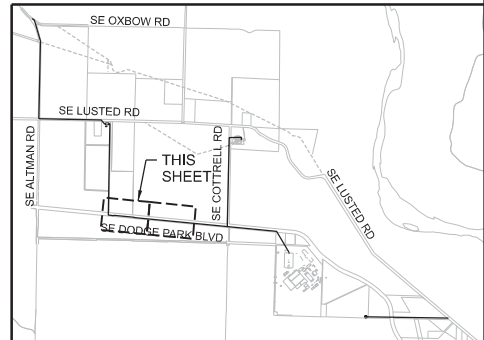


**Bull Run Filtration Pipelines  
FINISHED WATER PIPELINE  
EXISTING CONDITIONS  
GRID 4, GRID 5**

SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-102

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LEGEND	
---	SEC ZONE
☀	CONIFEROUS TREE
◯	DECIDUOUS TREE
◻	ELECTRICAL VAULT
⋄	UTILITY POLE
◻	WATER METER
---	P/L
---	R/W
◻	EXISTING STRUCTURES



KEYPLAN

Exhibit A.214.f

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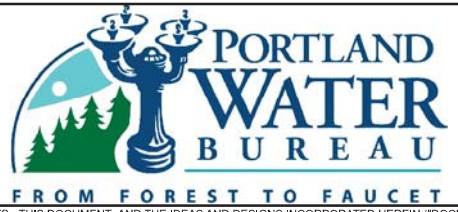
No	Date	Description	Appd
Revisions			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	RG	Program Mgr	XXX
Drawn By	JSL	Const Mgr	XXX
Checked By	RG	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**

If this bar does not measure 1" then the drawing is not to scale



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Date

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Date



**Bull Run Filtration Pipelines**

**FINISHED WATER PIPELINE**

**EXISTING CONDITIONS**

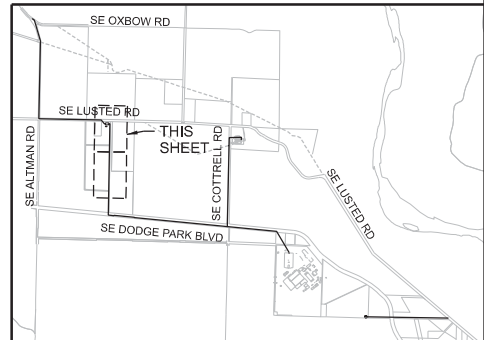
GRID 6, GRID 7

SAP Project No  
**W02563**

1/4 Section  
**3866**

Sheet No  
**LU-103**

LEGEND	
---	SEC ZONE
✳	CONIFEROUS TREE
◯	DECIDUOUS TREE
■	STORM INLET
□	ELECTRICAL VAULT
⋄	UTILITY POLE
◻	WATER METER
---	COUNTY LINE
— P/L —	PROPERTY LINE
— R/W —	RIGHT-OF-WAY
▨	EXISTING ROAD
◻	EXISTING STRUCTURES



KEYPLAN

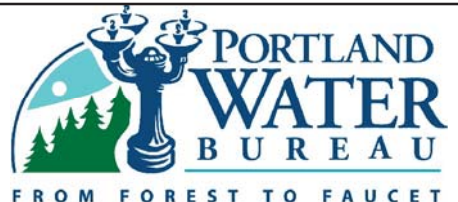
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No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	Program Mgr	XXX
Drawn By	Const Mgr	XXX
Checked By	Const Supvr	XXX
Project Mgr	Date	12/22/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale

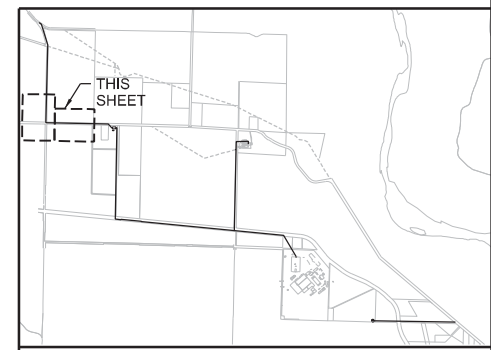
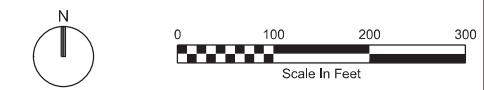
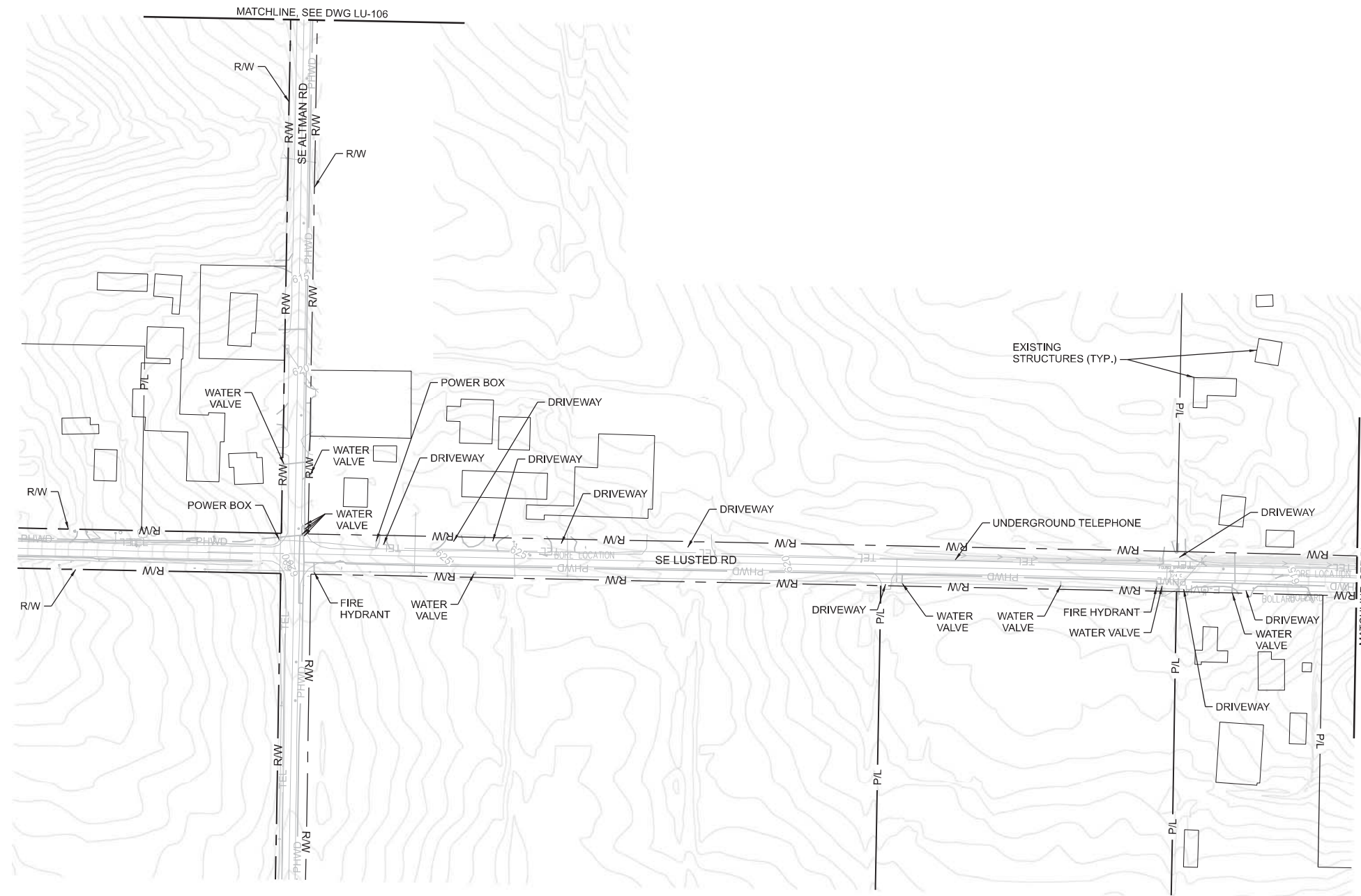


**Bull Run Filtration Pipelines  
FINISHED WATER PIPELINE**  
EXISTING CONDITIONS  
GRID 8, GRID 9

SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-104

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LEGEND	
	CONIFEROUS TREE
	DECIDUOUS TREE
	ELECTRICAL VAULT
	UTILITY POLE
	WATER METER
	SIGN
	COUNTY LINE
	PROPERTY LINE
	RIGHT-OF-WAY
	EXISTING STRUCTURES



KEYPLAN  
**Exhibit A.214.h**

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No	Date	Description	Appd
Revision			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	Program Mgr	XXX
Drawn By	Const Mgr	XXX
Checked By	Const Supvr	XXX
Project Mgr	Date	12/22/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



XXX XXX \_\_\_\_\_ Date  
XXX XXX \_\_\_\_\_ Date

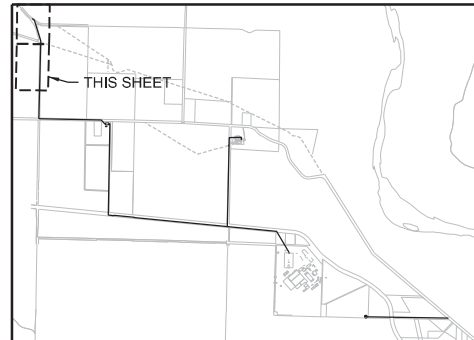
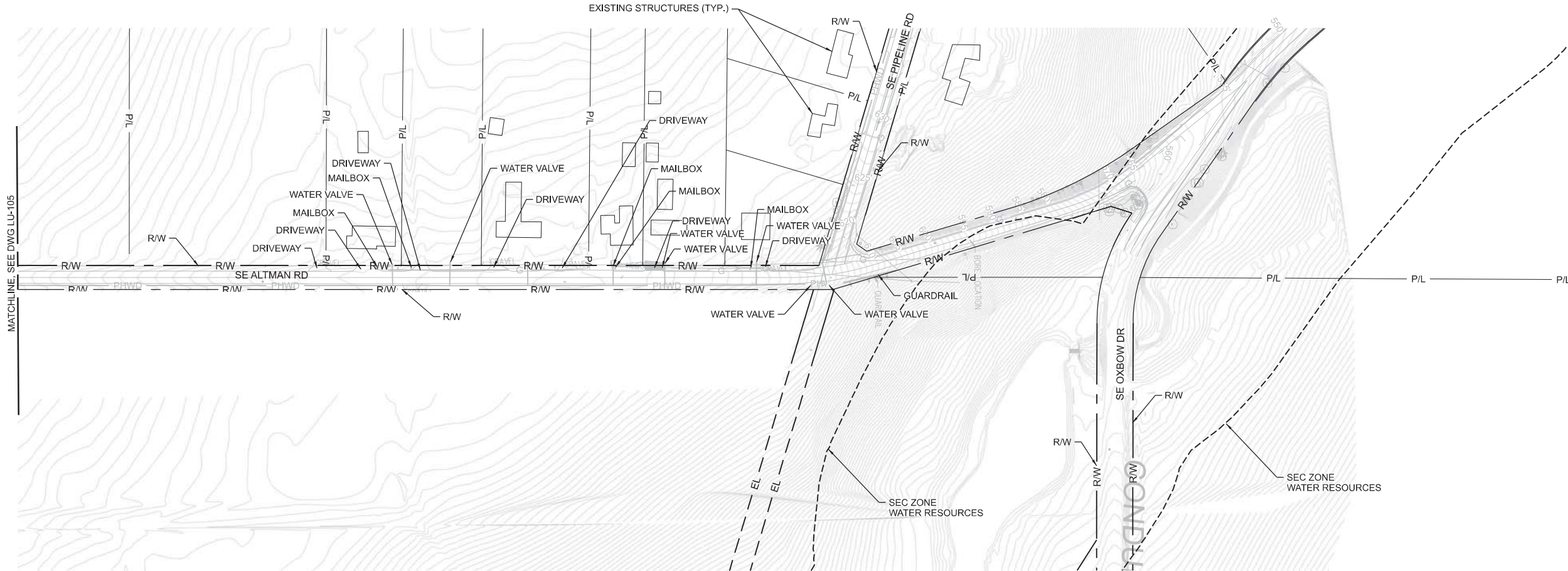


**Bull Run Filtration Pipelines  
FINISHED WATER PIPELINE**  
EXISTING CONDITIONS  
GRID 10, GRID 11

SAP Project No	W02563
1/4 Section	3868
Sheet No	LU-105



LEGEND	
---	SEC ZONE
✳	CONIFEROUS TREE
○	DECIDUOUS TREE
⊠	ELECTRICAL VAULT
⊕	UTILITY POLE
⊞	WATER METER
- - - - -	COUNTY LINE
— PL —	PROPERTY LINE
— R/W —	RIGHT-OF-WAY
- - - - - EL - - - - -	EASEMENT
□	EXISTING STRUCTURES



KEYPLAN

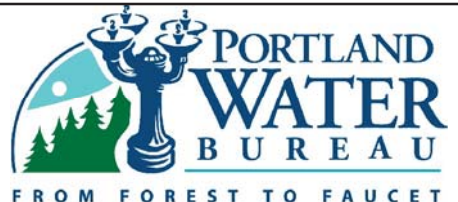
**Exhibit A.214.i**

No	Date	Description	Appd
Revisions			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	RG	Program Mgr	XXX
Drawn By	JSL	Const Mgr	XXX
Checked By	RG	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



\_\_\_\_\_  
Date  
XXX XXX

\_\_\_\_\_  
Date  
XXX XXX



**Bull Run Filtration Pipelines  
FINISHED WATER PIPELINE**

EXISTING CONDITIONS  
GRID 12, GRID 13

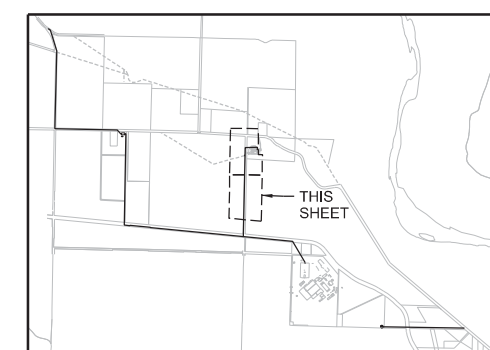
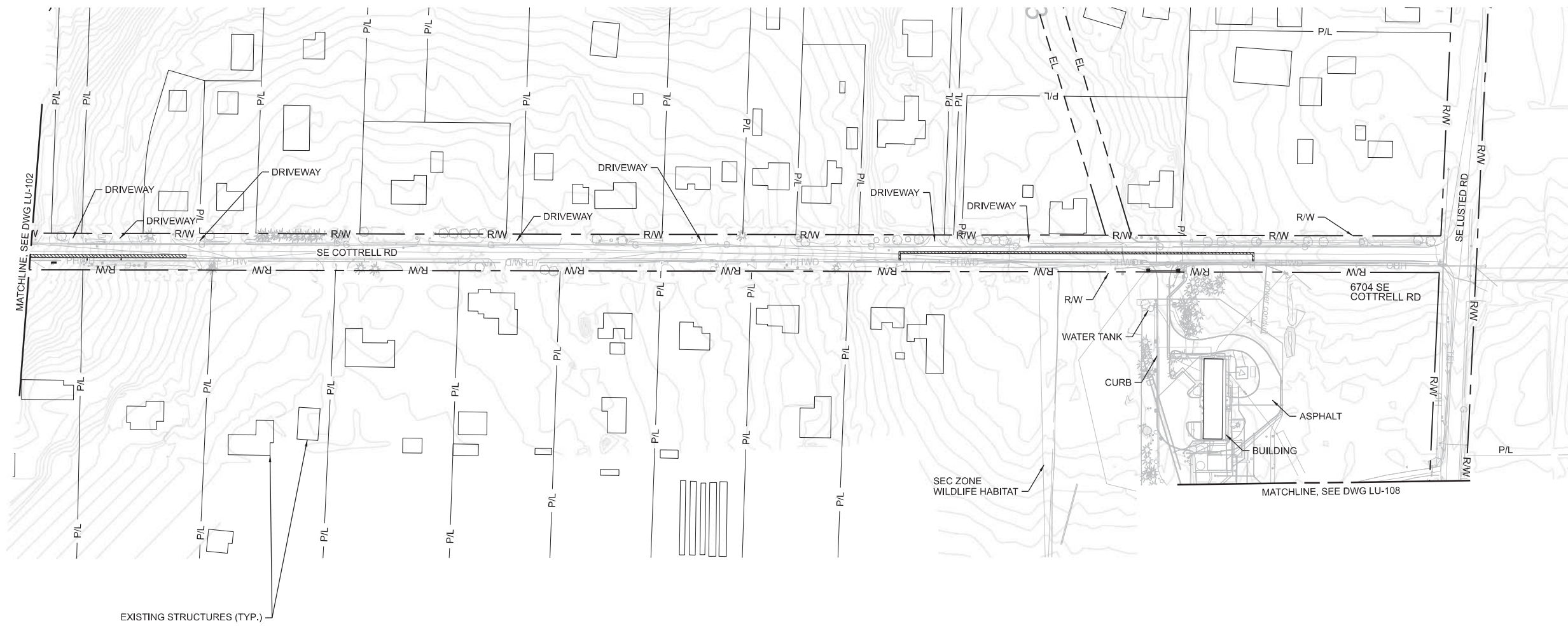
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1/4 Section	<b>3868</b>
Sheet No	<b>LU-106</b>

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LEGEND	
-----	SEC ZONE
✳	CONIFEROUS TREE
○	DECIDUOUS TREE
■	STORM INLET
□	ELECTRICAL VAULT
◆	UTILITY POLE
□	WATER METER
-----	COUNTY LINE
— P/L —	PROPERTY LINE
— R/W —	RIGHT-OF-WAY
- - - - - EL - - - - -	EASEMENT
□	EXISTING STRUCTURES



KEYPLAN

Exhibit A.214.j

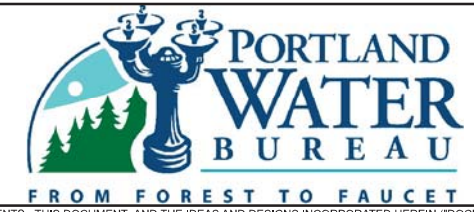
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No	Date	Description	Appd
Revisions			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	Const Supvr
Project Mgr	Date
	12/22/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



\_\_\_\_\_  
Date  
XXX XXX

\_\_\_\_\_  
Date  
XXX XXX

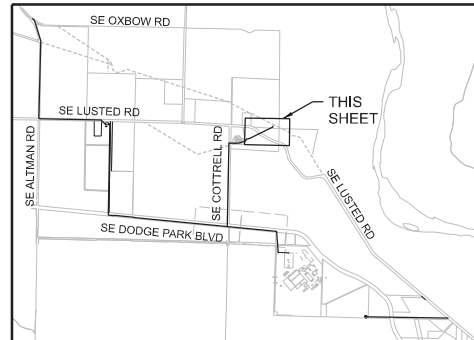
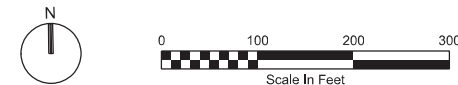
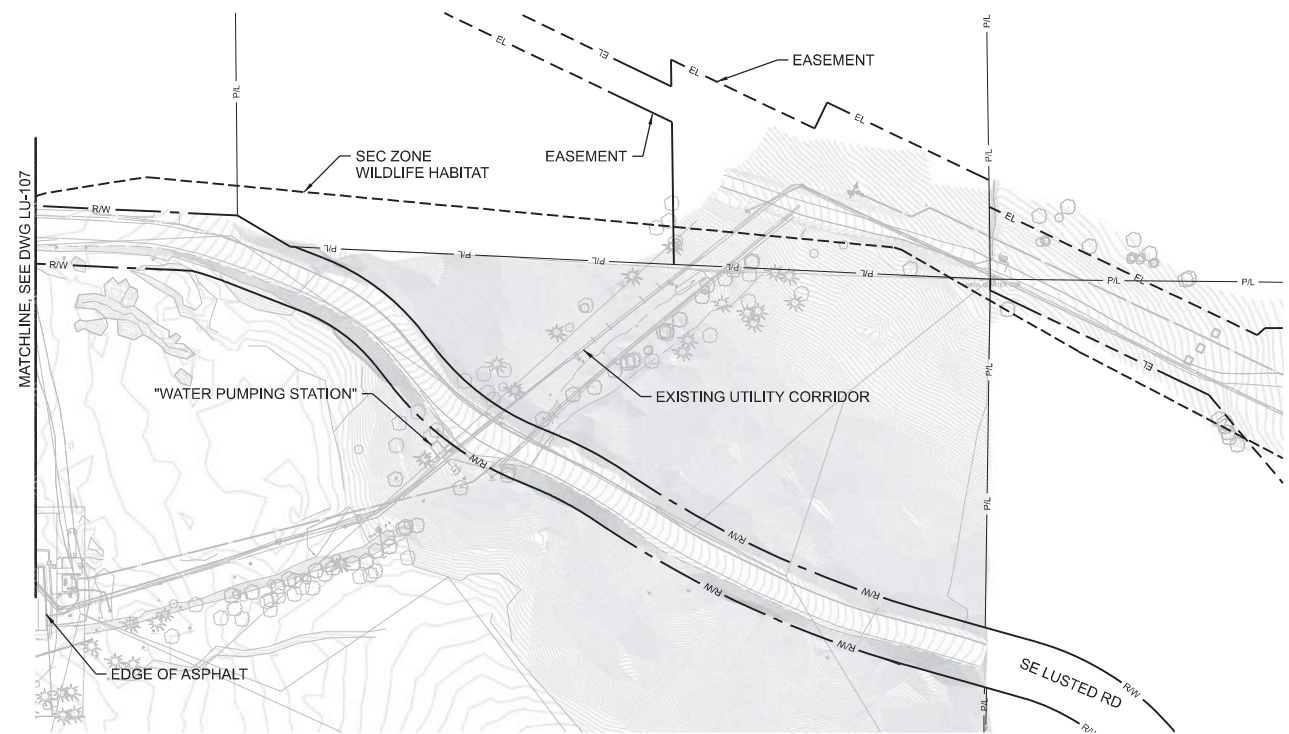


**Bull Run Filtration Pipelines  
FINISHED WATER PIPELINE**

EXISTING CONDITIONS  
GRID 14, GRID 15

SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-107

LEGEND	
-----	SEC ZONE
☼	CONIFEROUS TREE
○	DECIDUOUS TREE
-----	COUNTY LINE
— P/L —	PROPERTY LINE
— R/W —	RIGHT-OF-WAY
— EL —	EASEMENT



KEYPLAN  
**Exhibit A.214.k**

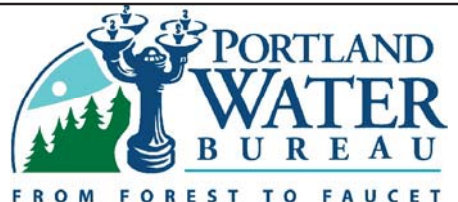
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No	Date	Description	Appd
Revisions			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	RG	Program Mgr	XXX
Drawn By	JSL	Const Mgr	XXX
Checked By	RG	Const Supvr	XXX
Project Mgr	XXX	Date	6/30/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



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Date  
\_\_\_\_\_  
Date



**Bull Run Filtration Pipelines  
FINISHED WATER PIPELINE**  
EXISTING CONDITIONS  
GRID 16

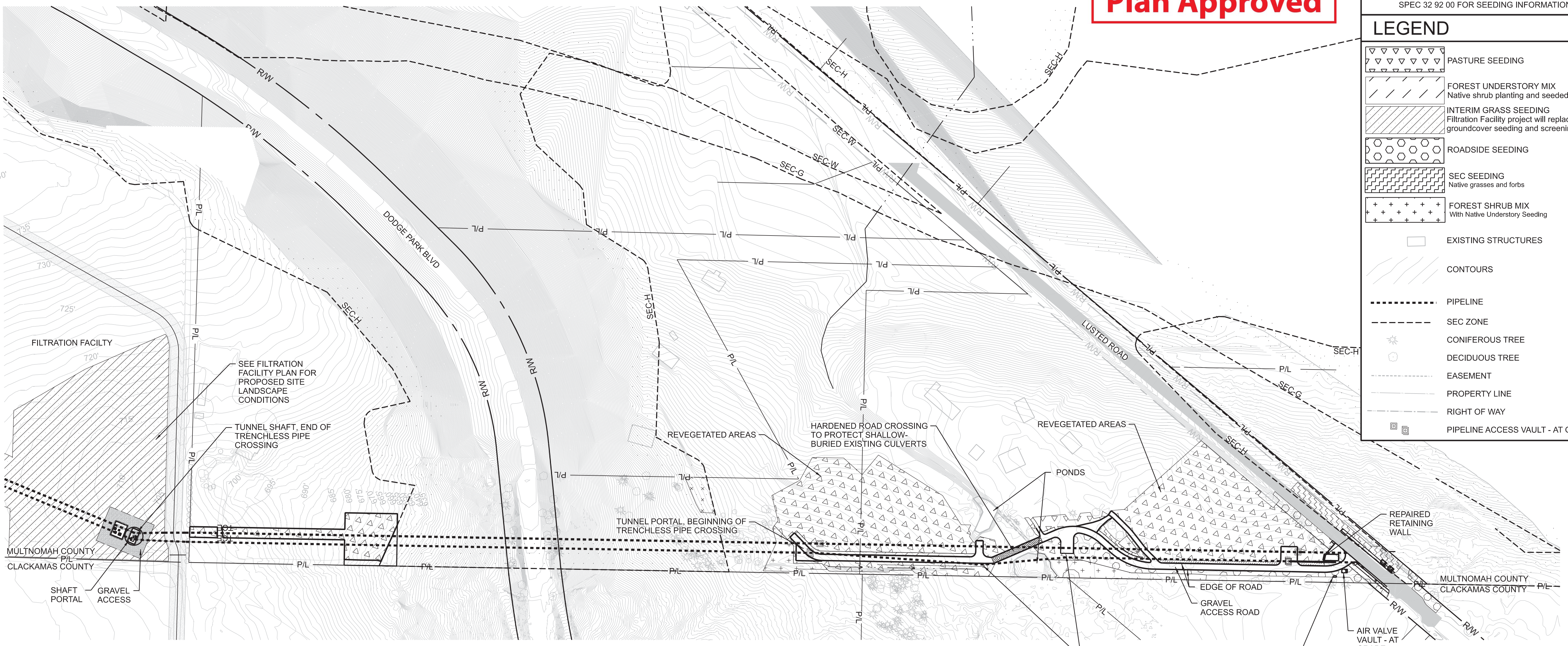
SAP Project No  
**W02563**  
1/4 Section  
3765  
Sheet No  
LU-108

**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.

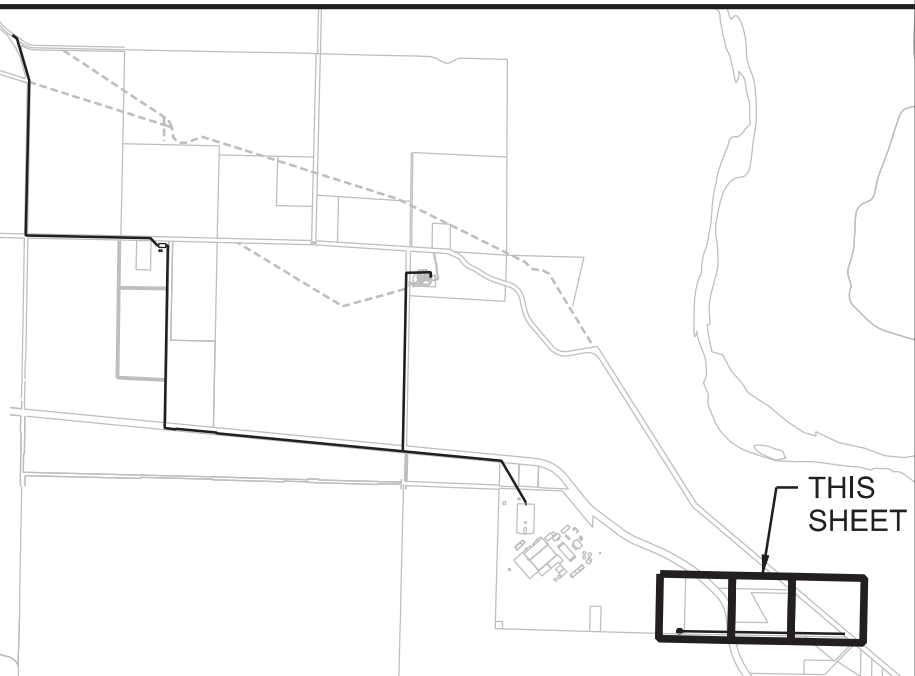
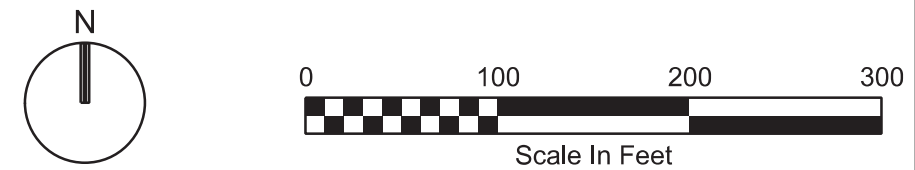
**LEGEND**

- PASTURE SEEDING
- FOREST UNDERSTORY MIX  
Native shrub planting and seeded groundcover
- INTERIM GRASS SEEDING  
Filtration Facility project will replace with native groundcover seeding and screening shrubs
- ROADSIDE SEEDING
- SEC SEEDING  
Native grasses and forbs
- FOREST SHRUB MIX  
With Native Understory Seeding
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- PROPERTY LINE
- RIGHT OF WAY
- PIPELINE ACCESS VAULT - AT GRADE



**NOTES:**  
 ROADSIDE SEEDING: (Ecology Mix by Sunmark Seeds, or approved Equal); apply at 43.5 pounds per acre.  
 - Festuca rubra var. sealink- Sealink Creeping Red Fescue (55% by weight)  
 - Festuca ovina var. azay blue- Azay Blue Sheep Fescue (18% by weight)  
 - Trifolium fragiferum- Strawberry Clover (8% by weight)  
 - Nemophila menziesii- Baby Blue Eyes (5% by weight)  
 - Limnanthes douglasii- Douglas' Meadowfoam (4% by weight)  
 - Armeria maritima- Thrift Seapink (2% by weight)  
 - Trifolium repens var Microclover- Microclover (3% by weight)  
 - Lobularia maritima- Sweet Alyssum Carpet of Snow (2.5% by weight)  
 - Achillea millefolium- Common Yarrow (1.5% by weight)  
 - Bellis perennis- Lawndaisy (1% by weight)  
 - Add Regreen 2 pounds per 5,000 square feet if seeding between mid-October and March.

SEC SEEDING: Owner provided, Contractor installed, and similar to:  
 - Bromus carinatus- California Brome 0.4 lbs/5000 s.f.  
 - Carex deweyana- Dewey's Sedge 0.1 lbs/5000 s.f.  
 - Deschampsia elongata- Slender hairgrass 0.3 lbs/5000 s.f.  
 - Elymus glaucus- Blue Wildrye 0.4 lbs/5000 s.f.  
 - Geum macrophyllum- Large-leaved Avens 0.2 lbs/5000 s.f.  
 - Glyceria elata- Tall Mannagrass 0.2 lbs/5000 s.f.  
 - Lupinus latifolium- Largeleaf Lupine 0.2 lbs/5000 s.f.  
 - Prunella lanceolata var. lanceolata- Selfheal 0.1 lbs/5000 s.f.  
 - Tellima grandiflora- Fringe Cups 0.2 lbs/5000 s.f.  
 - Add Regreen 2 pounds per 5,000 square feet if seeding between mid-October and March.



02/29/2024 10:10:56 AM W02563\_ANS00.dwg

No	Date	Description	Appd

ISSUED FOR CONFORMED SET ONLY  
 FOR STAMPED DESIGN PLEASE REFER TO JUNE 6, 2023 100% FINAL DESIGN PACKAGE

Designed By	DG	Program Mgr	DH
Drawn By	DG	Const Mgr	BN
Checked By	BN	CMII Eng Mgr	JB
Project Mgr	BN	Date	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



**Bull Run Filtration Pipelines**  
**RAW WATER PIPELINE**  
 PROPOSED CONDITIONS PLAN  
 GRID 1, GRID 2, GRID 3

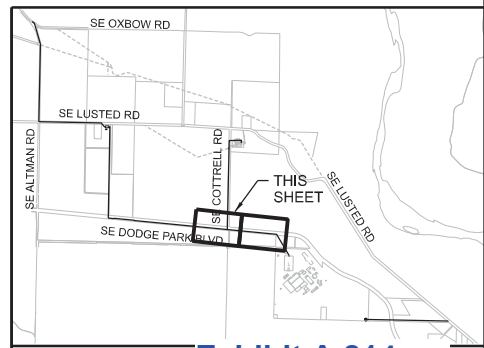
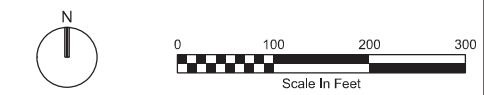
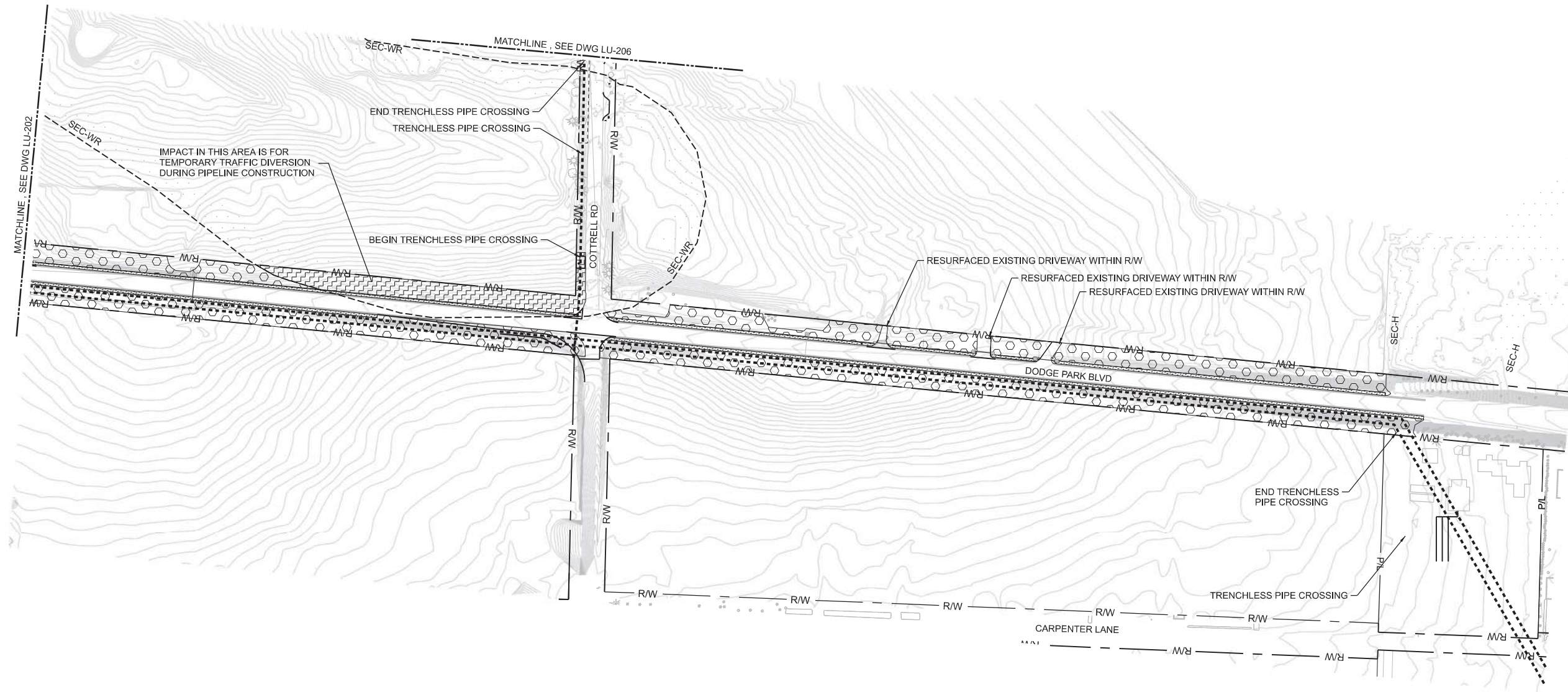
SAP Project No	W02563
1/4 Section	3967
Sheet No	LU-200

**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**

- ROADSIDE SEEDING
- SEC SEEDING  
Native grasses and forbs
- EXISTING TREES
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EL EASEMENT
- P/L PROPERTY LINE
- R/W RIGHT OF WAY



**Exhibit A.214.m**

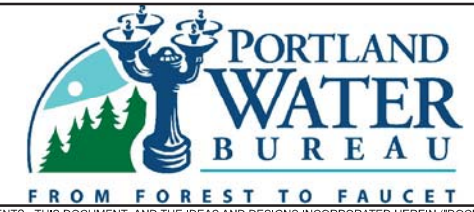
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No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**  
  
 If this bar does not measure 1" then the drawing is not to scale



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 Date  
 \_\_\_\_\_  
 Date



**Bull Run Filtration Pipelines  
FINISH WATER PIPELINE**  
  
 PROPOSED CONDITIONS PLAN  
 GRID 4, GRID 5

SAP Project No  
**W02563**  
 1/4 Section  
**3866**  
 Sheet No  
**LU-201**

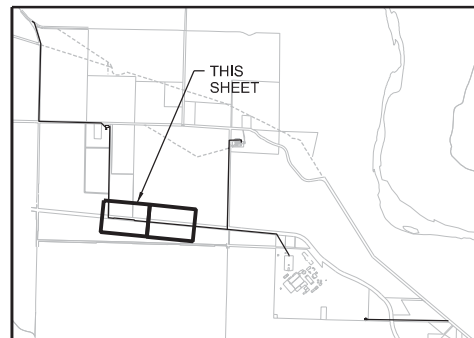
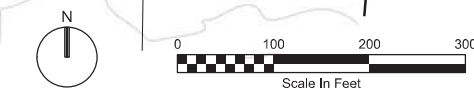
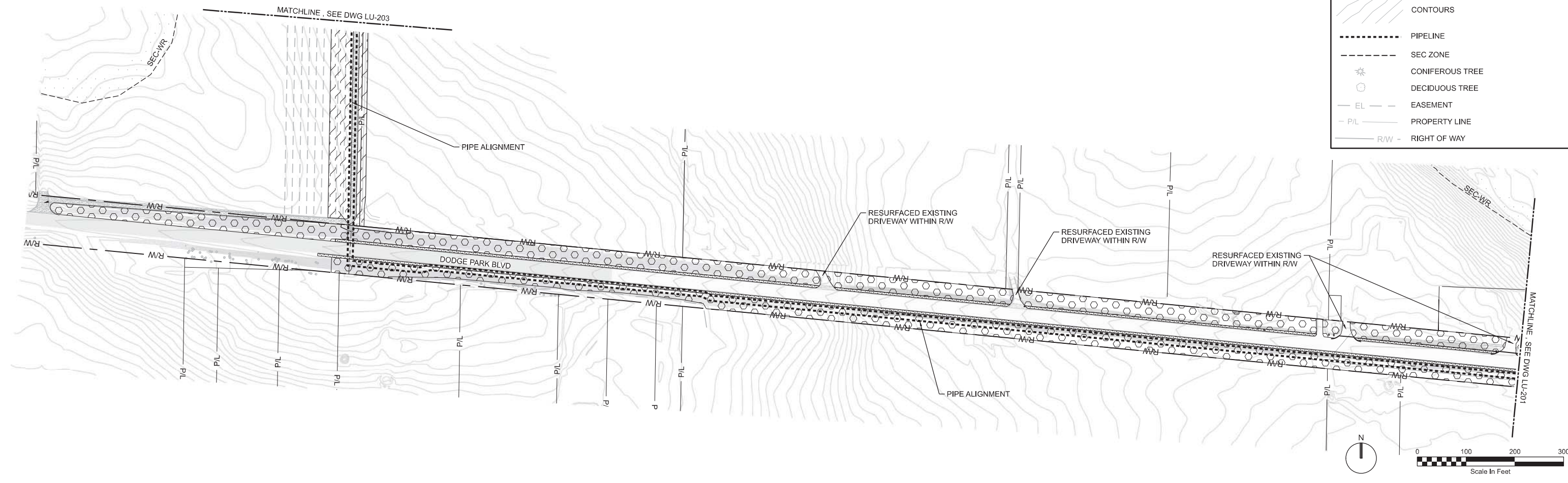


**GENERAL SHEET NOTES**

1. ALL WORK AREAS RESTORED TO EXISTING GRADE
2. SEE SHEET GEN-L-061 FOR PLANT SCHEDULE AND SPEC 32 92 00 FOR SEEDING INFORMATION.

**LEGEND**

- ROADSIDE SEEDING
- AGRICULTURAL SOIL TREATMENT
- GRAVEL ACCESS ROAD
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- PROPERTY LINE
- R/W - RIGHT OF WAY



**Exhibit A.214.n**

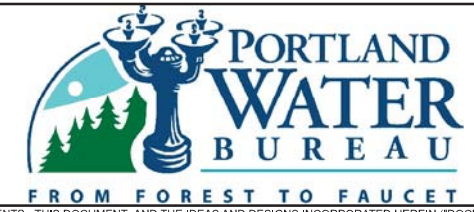
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No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



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\_\_\_\_\_  
Date



**Bull Run Filtration Pipelines  
FINISH WATER PIPELINE**  
PROPOSED CONDITIONS PLAN  
GRID 6, GRID 7

SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-202

GENERAL SHEET NOTES

1. ALL WORK AREAS RESTORED TO EXISTING GRADE
2. SEE SHEET GEN-L-061 FOR PLANT SCHEDULE AND SPEC 32 92 00 FOR SEEDING INFORMATION.
3. RESTORE EXISTING DRIVEWAYS IMPACTED DURING CONSTRUCTION.

LEGEND

- ROADSIDE SEEDING
- AGRICULTURAL SOIL TREATMENT
- GRAVEL ACCESS ROAD
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- P/L - PROPERTY LINE
- R/W - RIGHT OF WAY
- IRRIGATION LINE
- XX - PROPOSED FENCE

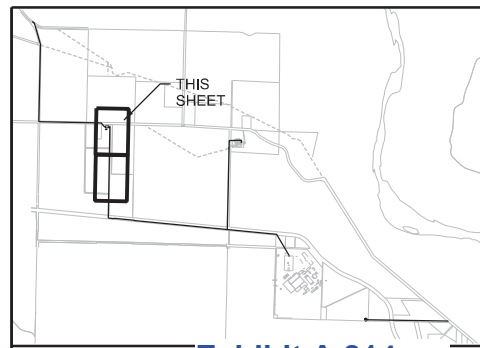
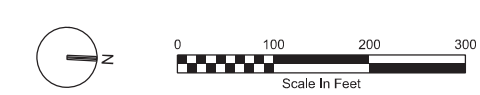
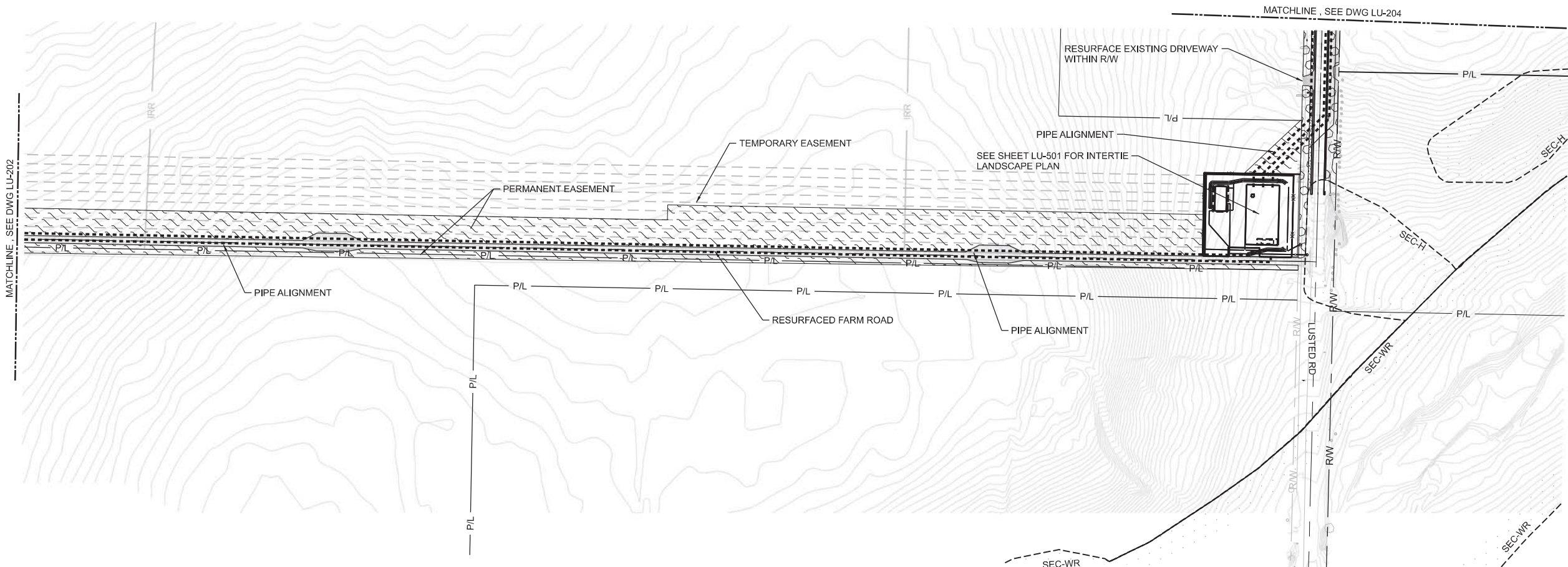


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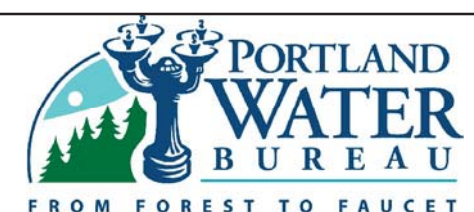
No	Date	Description	Appd

Survey			
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**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22



\_\_\_\_\_  
Date  
XXX XXX  
\_\_\_\_\_  
Date  
XXX XXX



**Bull Run Filtration Pipelines  
FINISH WATER PIPELINE**  
  
PROPOSED CONDITIONS PLAN  
GRID 8, GRID 9

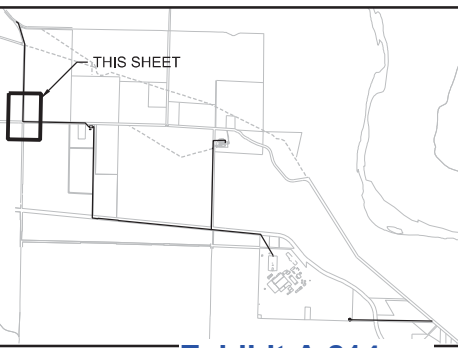
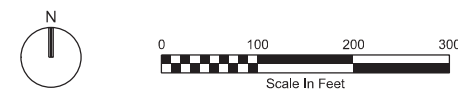
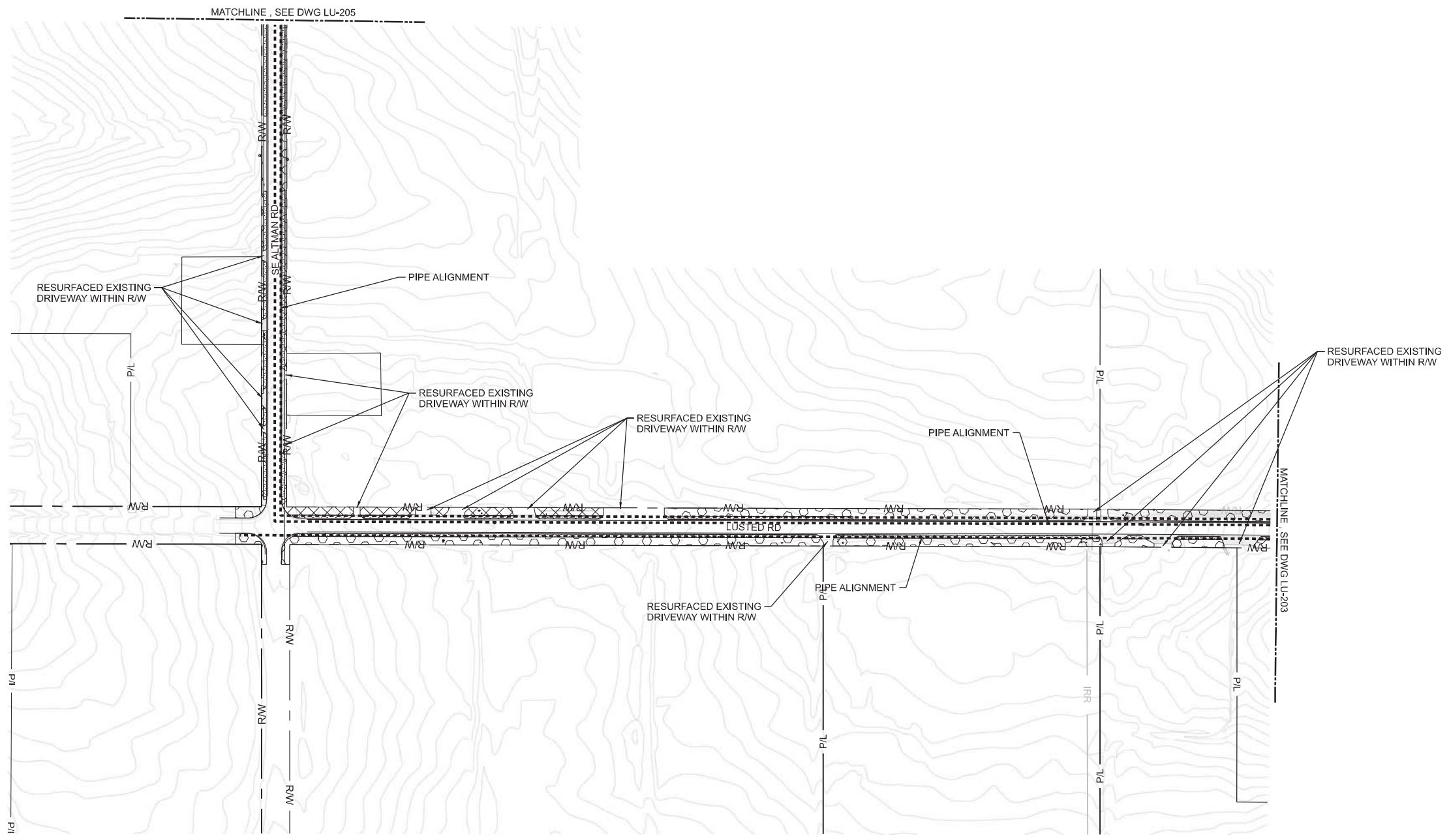
SAP Project No  
**W02563**  
1/4 Section  
**3866**  
Sheet No  
LU-203

**GENERAL SHEET NOTES**

1. ALL WORK AREAS RESTORED TO EXISTING GRADE
2. SEE SHEET GEN-L-061 FOR PLANT SCHEDULE AND SPEC 32 92 00 FOR SEEDING INFORMATION.
3. RESTORE EXISTING DRIVEWAYS IMPACTED DURING CONSTRUCTION.

**LEGEND**

- ROADSIDE SEEDING
- LAWN SEEDING
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- PROPERTY LINE
- RIGHT OF WAY
- IRRIGATION LINE



**Exhibit A.214.p**

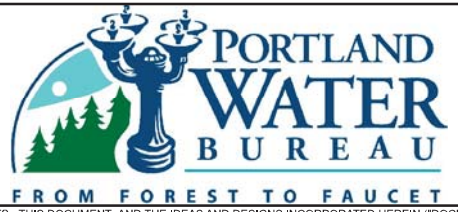
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No	Date	Description	Appd
Revisions			
Survey			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**  
  
 If this bar does not measure 1" then the drawing is not to scale



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 Date  
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 Date



**Bull Run Filtration Pipelines  
 FINISH WATER PIPELINE**  
 PROPOSED CONDITIONS PLAN  
 GRID 10, GRID 11

SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-204

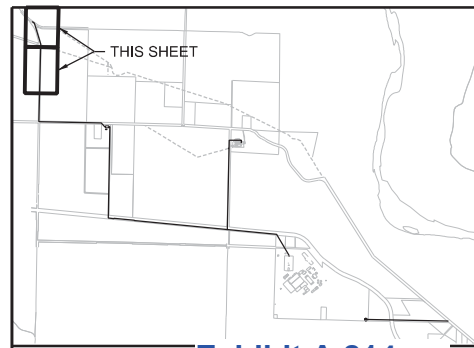
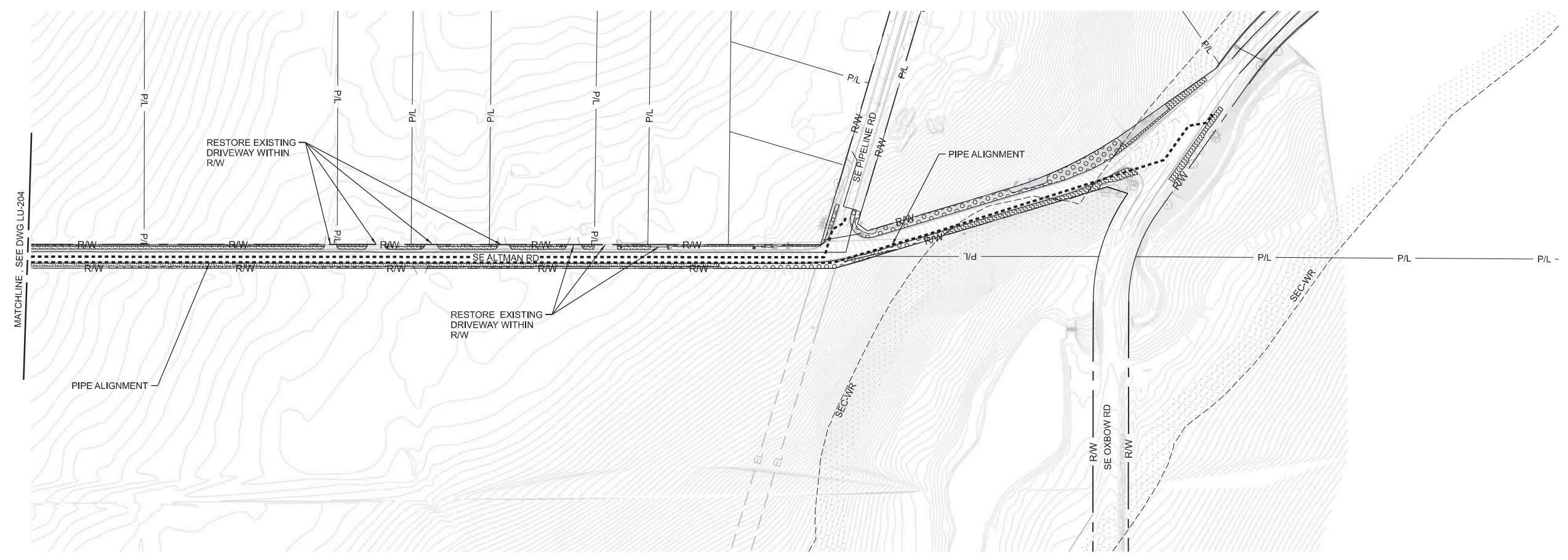


**GENERAL SHEET NOTES**

1. ALL WORK AREAS RESTORED TO EXISTING GRADE
2. REFER TO SEC LH-01 (APPENDIX A.3) FOR DETAILS SEC WORK.
3. SEE SHEET GEN-L-061 FOR LANDSCAPE PLANT SCHEDULE AND SPEC 32 92 00 FOR SEEDING INFORMATION
4. RESTORE EXISTING DRIVEWAYS IMPACTED DURING CONSTRUCTION

**LEGEND**

- SEC SEEDING  
Native grasses and forbs
- ROADSIDE SEEDING
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- P/L
- R/W

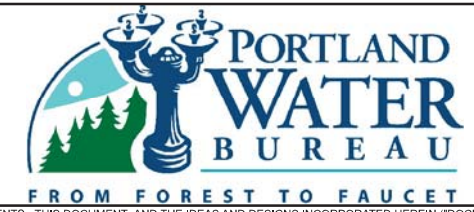


**Exhibit A.214.q**

No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22



\_\_\_\_\_  
Date  
XXX XXX

\_\_\_\_\_  
Date  
XXX XXX



**Bull Run Filtration Pipelines  
FINISH WATER PIPELINE**

PROPOSED CONDITIONS PLAN  
GRID 12, GRID 13

SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-205

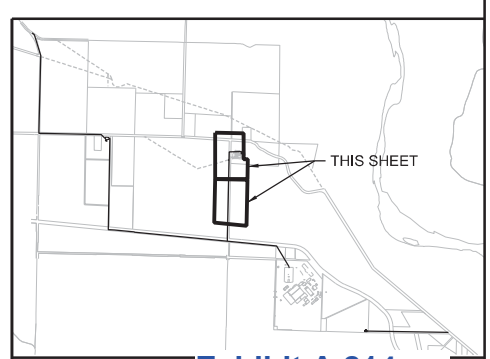
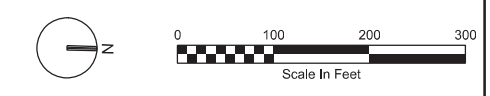
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### GENERAL SHEET NOTES

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

### LEGEND

- ROADSIDE SEEDING
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- PROPERTY LINE
- R/W - RIGHT OF WAY



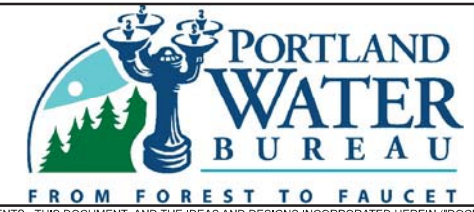
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No	Date	Description	Appd
Revisions			

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

**WARNING**  
If this bar does not measure 1" then the drawing is not to scale



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Date

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Date



**Bull Run Filtration Pipelines  
FINISH WATER PIPELINE**

PROPOSED CONDITIONS PLAN  
GRID 14, GRID 15

SAP Project No	W02563
1/4 Section	3666
Sheet No	LU-206

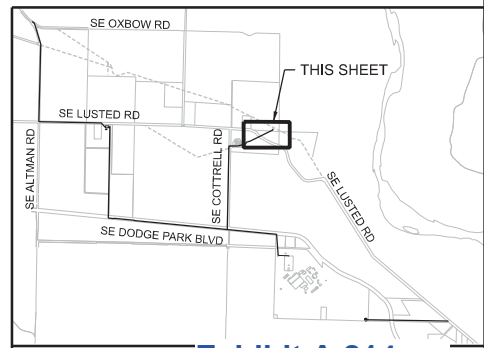
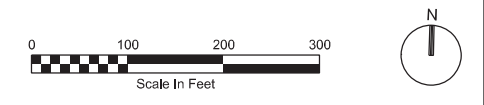
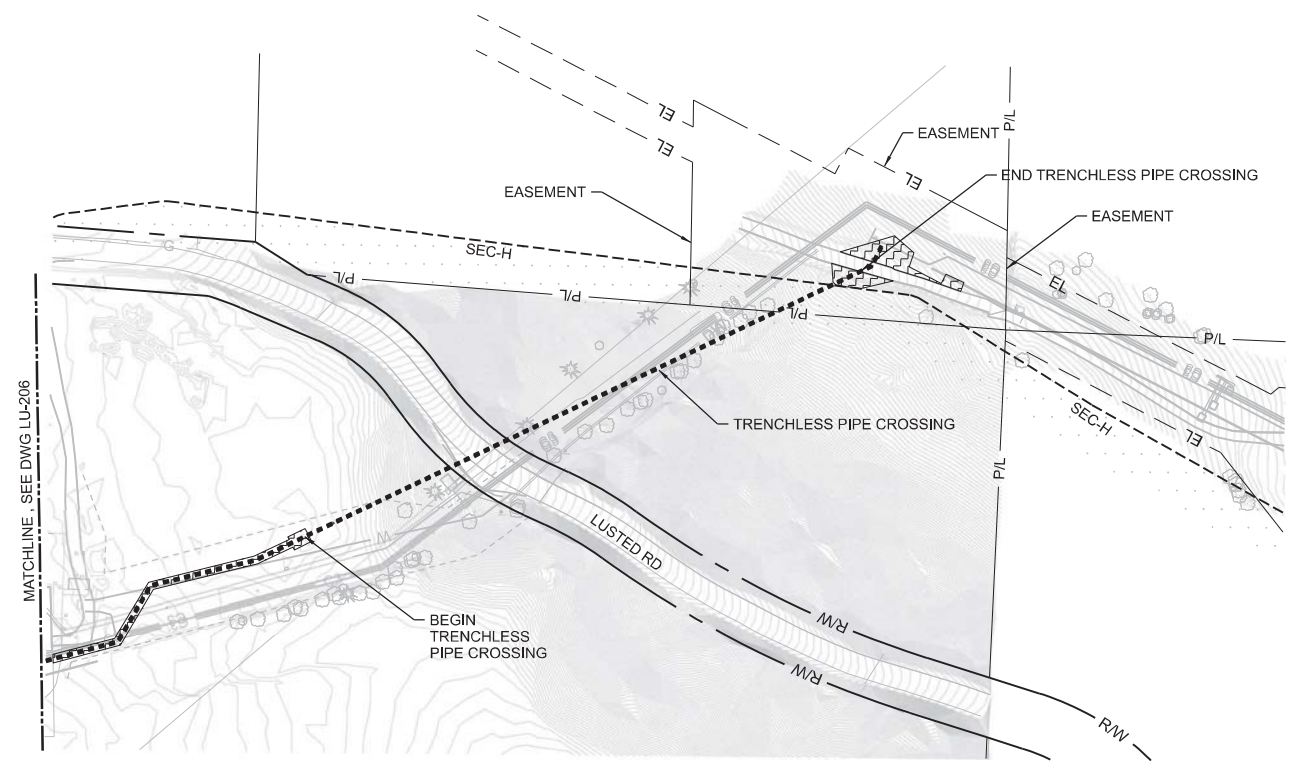


**GENERAL SHEET NOTES**

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

**LEGEND**

- SEC SEEDING  
Native grasses and forbs
- EXISTING STRUCTURES
- CONTOURS
- PIPELINE
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EASEMENT
- PROPERTY LINE
- R/W - RIGHT OF WAY



**K Exhibit A.214.s**

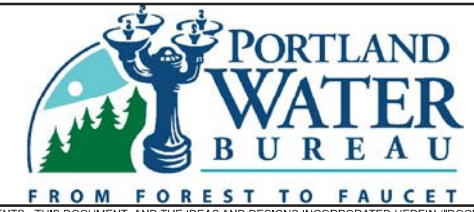
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No	Date	Description	Appd

**PRELIMINARY NOT FOR CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	6/30/22

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



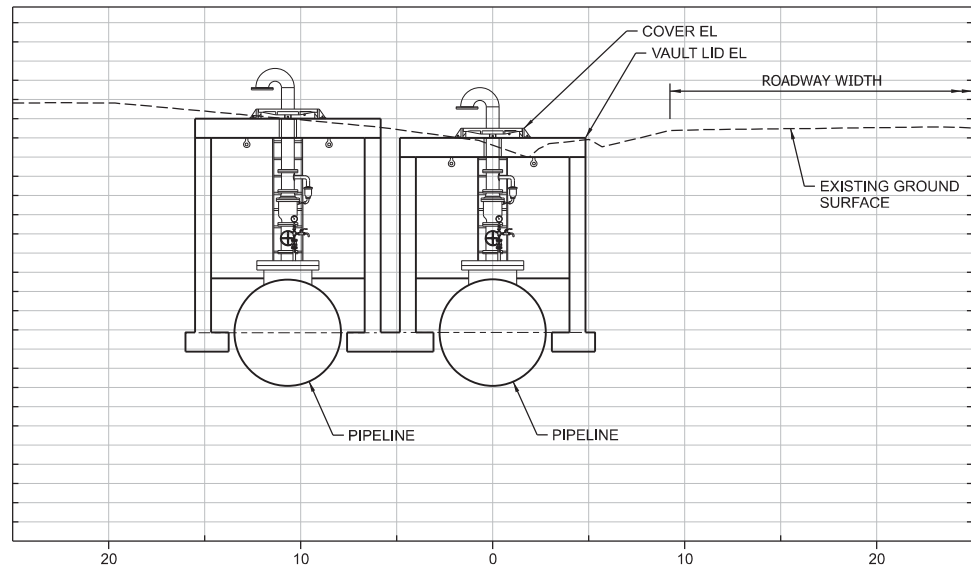
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\_\_\_\_\_  
Date



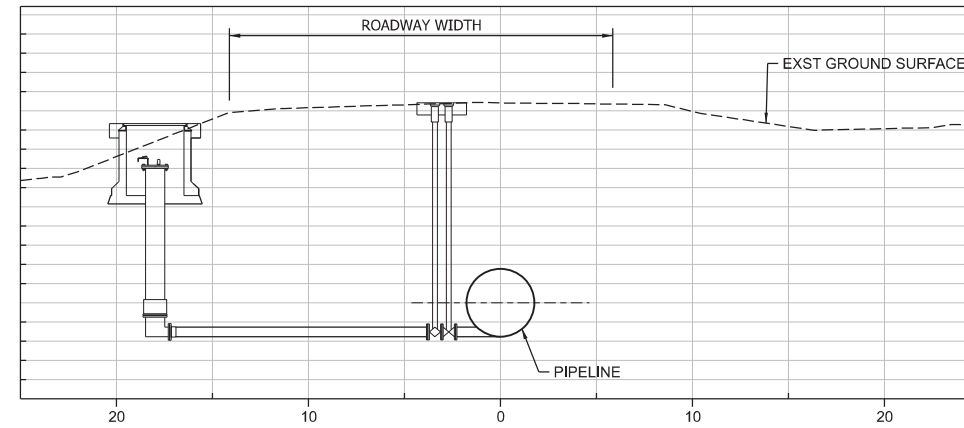
**Bull Run Filtration Pipelines  
FINISH WATER PIPELINE**  
PROPOSED CONDITIONS PLAN  
GRID 16

SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
**LU-207**

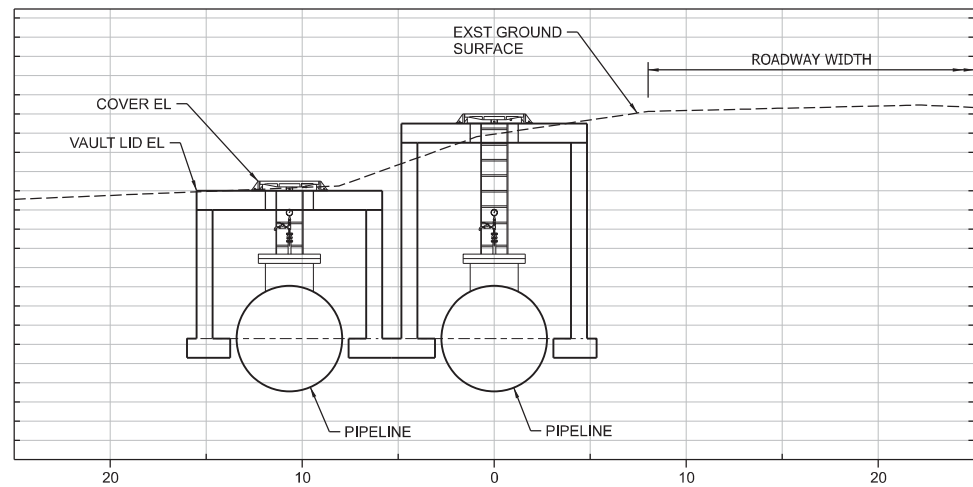
REUSE OF DOCUMENTS: THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN ("DOCUMENTS"), AS AN INSTRUMENT OF PROFESSIONAL SERVICE, WAS PREPARED BY JACOBS SOLEY FOR THE PURPOSE OF THIS PROJECT AND DESIGN CRITERIA. JACOBS IS RELEASED FROM ANY AND ALL LIABILITY OF ANY KIND ARISING OUT OF OR RELATING TO THE RE-USE OF THE DOCUMENTS, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT OR EXTENSIONS OF THIS PROJECT. © JACOBS 2022. ALL RIGHTS RESERVED.



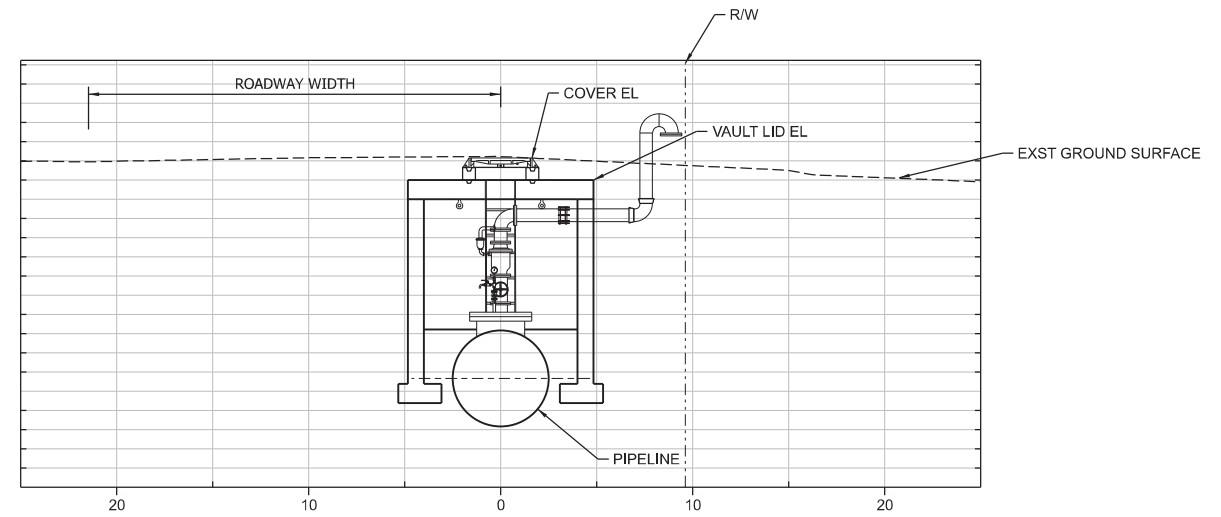
**1** TYPICAL APPURTENANCE DETAIL - STANDARD AIR VALVE  
1"=5'-0"



**3** TYPICAL APPURTENANCE DETAIL - DRAIN  
1"=5'-0"



**2** TYPICAL APPURTENANCE DETAIL - ACCESSWAY  
1"=5'-0"



**4** TYPICAL APPURTENANCE DETAIL - OFFSET AIR VALVE  
1"=5'-0"

Exhibit A.214.t

CONFIDENTIAL

01/10/2023 10:33:43 AM W02563\_LU-208.dgn

No	Date	Description	Appd
Revisions			
Survey			



PRELIMINARY  
NOT FOR  
CONSTRUCTION

Designed By	TWL	Program Mgr	XXX
Drawn By	AP	Const Mgr	XXX
Checked By	SDA	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22

WARNING



If this bar does not measure 1" then the drawing is not to scale



XXX XXX

Date

XXX XXX

Date



Bull Run Filtration Pipelines  
FINISHED WATER INTERTIE  
TYPICAL APPURTENANCE  
CROSS SECTIONS

SAP Project No  
W02563

1/4 Section

Sheet No

LU-208



**GENERAL SHEET NOTES**

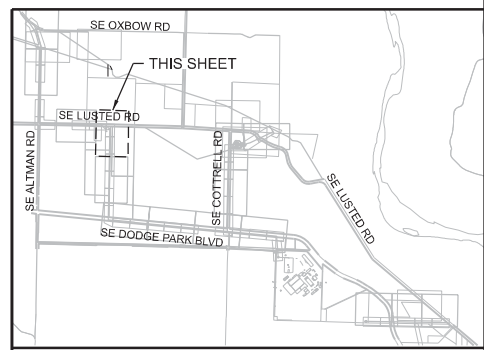
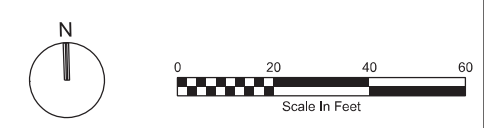
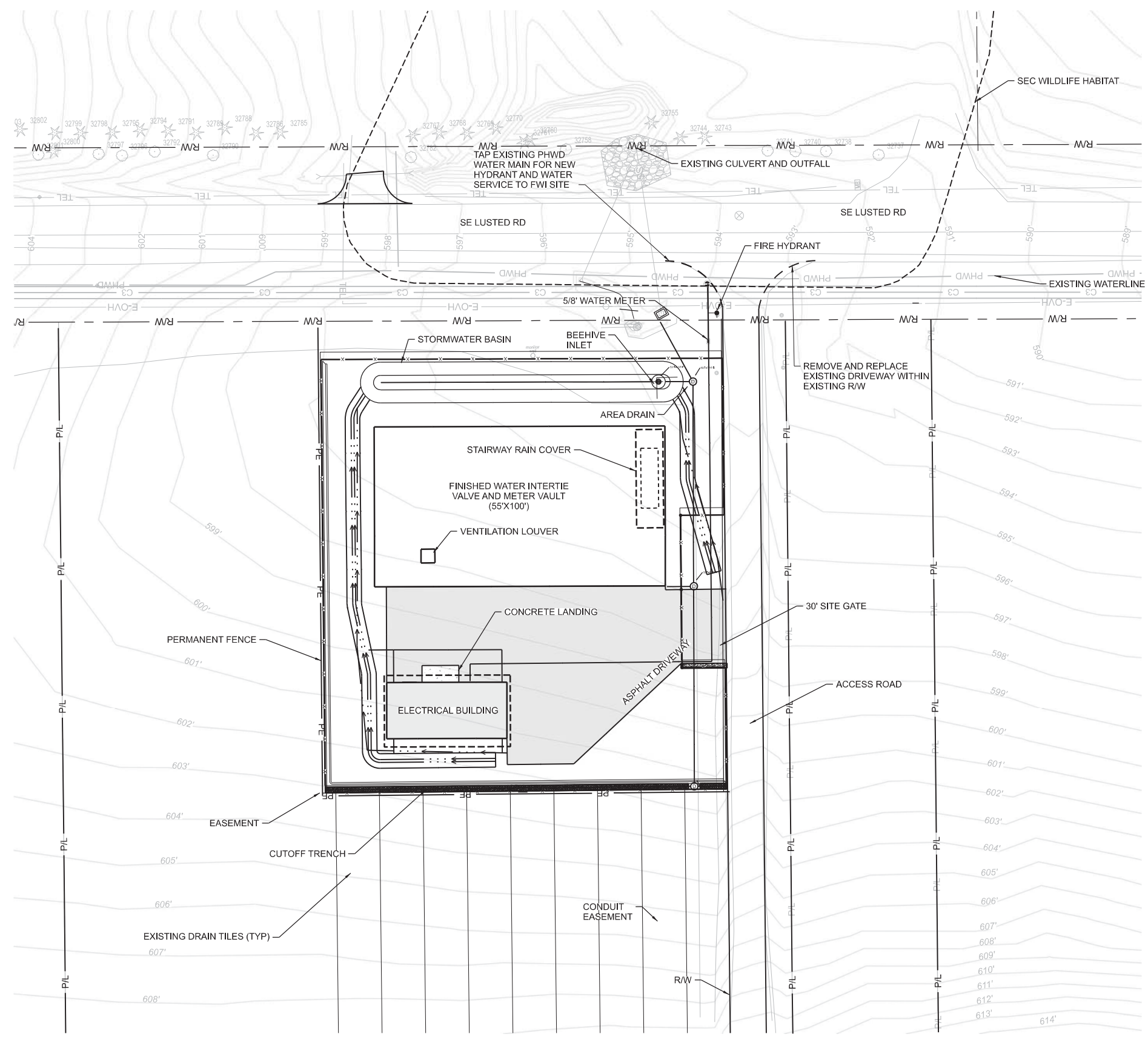
- SEE ARCHITECTURAL SHEETS FOR INTERTIE VAULT DETAILS
- SEE LANDSCAPE SHEETS FOR PLANTED YARD AREAS

**CONSTRUCTION NOTES**

- SHEET KEYNOTES APPLY TO SPECIFIC DRAWING ELEMENTS ON THE SHEET THEY ARE LOCATED.

**LEGEND**

- ACP FULL DEPTH RECONSTRUCTION MATCH COUNTY STANDARD SECTION OR MATCH EXISTING, WHICHEVER IS GREATER
- GRAVEL
- CONCRETE
- STORM DRAINAGE CULVERT
- SEC ZONE
- CONIFEROUS TREE
- DECIDUOUS TREE
- COUNTY LINE
- P/L PROPERTY LINE
- R/W RIGHT-OF-WAY
- EL EXISTING EASEMENT
- PE PROPOSED EASEMENT
- TCE TEMP CONSTRUCTION EASEMENT
- DITCH



KEYPLAN

**Exhibit A.214.u**

01/06/2023 3:08:53 PM W02563\_A11N510.dwg

No	Date	Description	Appd

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	RG	Program Mgr	XXX
Drawn By	USL	Const Mgr	XXX
Checked By	RG	Const Supvr	XXX
Project Mgr	XXX	Date	12/22/22



XXX XXX \_\_\_\_\_ Date \_\_\_\_\_  
 XXX XXX \_\_\_\_\_ Date \_\_\_\_\_



**Bull Run Filtration Pipelines  
FINISHED WATER INTERTIE  
SITE PLAN**

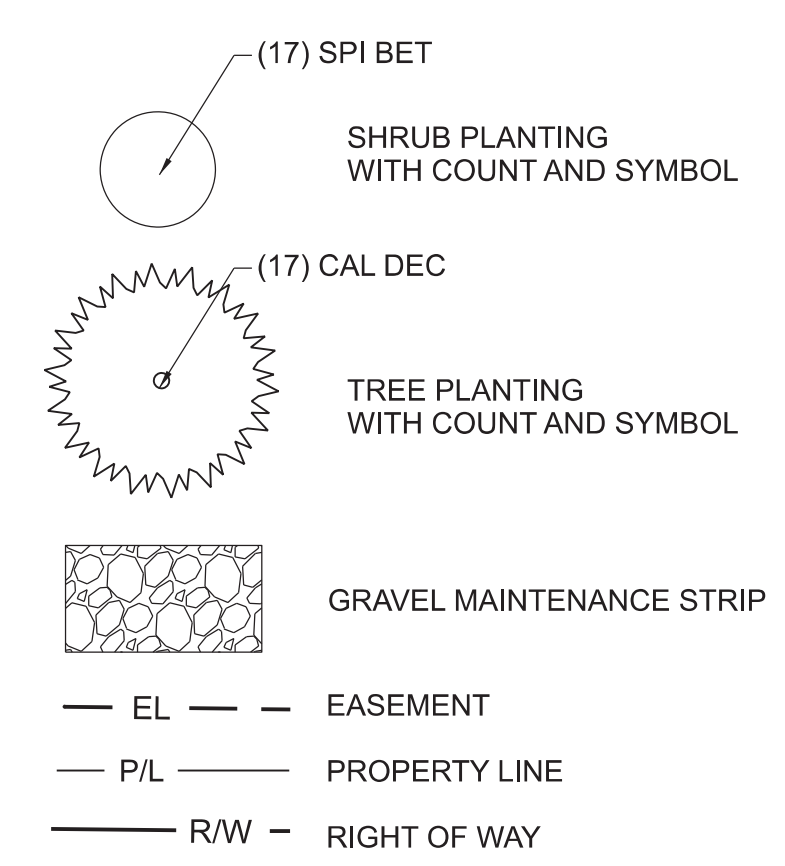
SAP Project No	W02563
1/4 Section	3866
Sheet No	LU-500



GENERAL SHEET NOTES

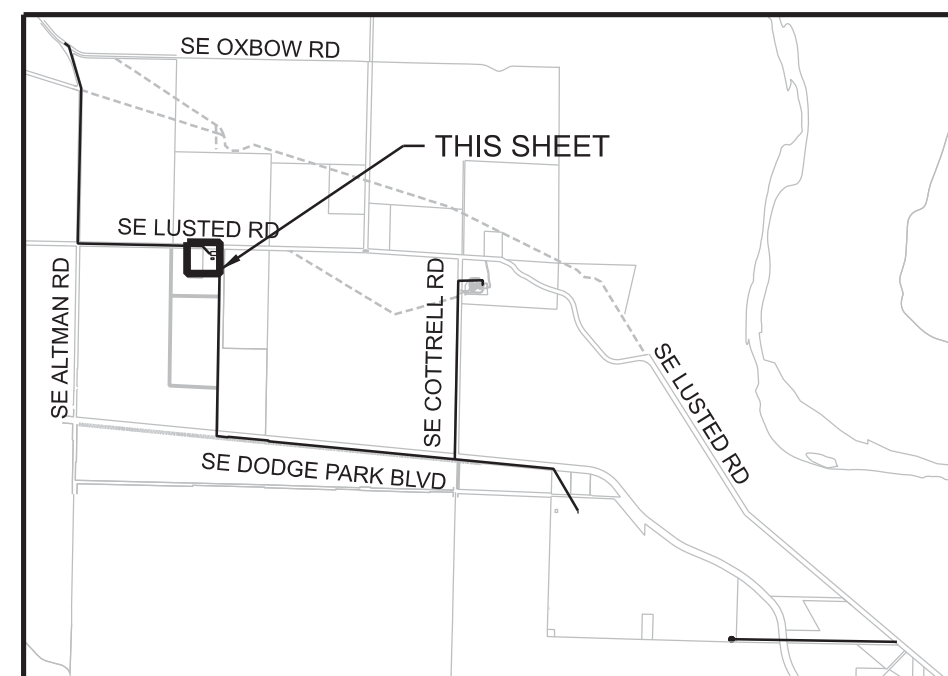
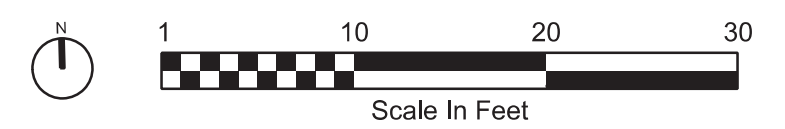
SHEET KEYNOTES

LEGEND

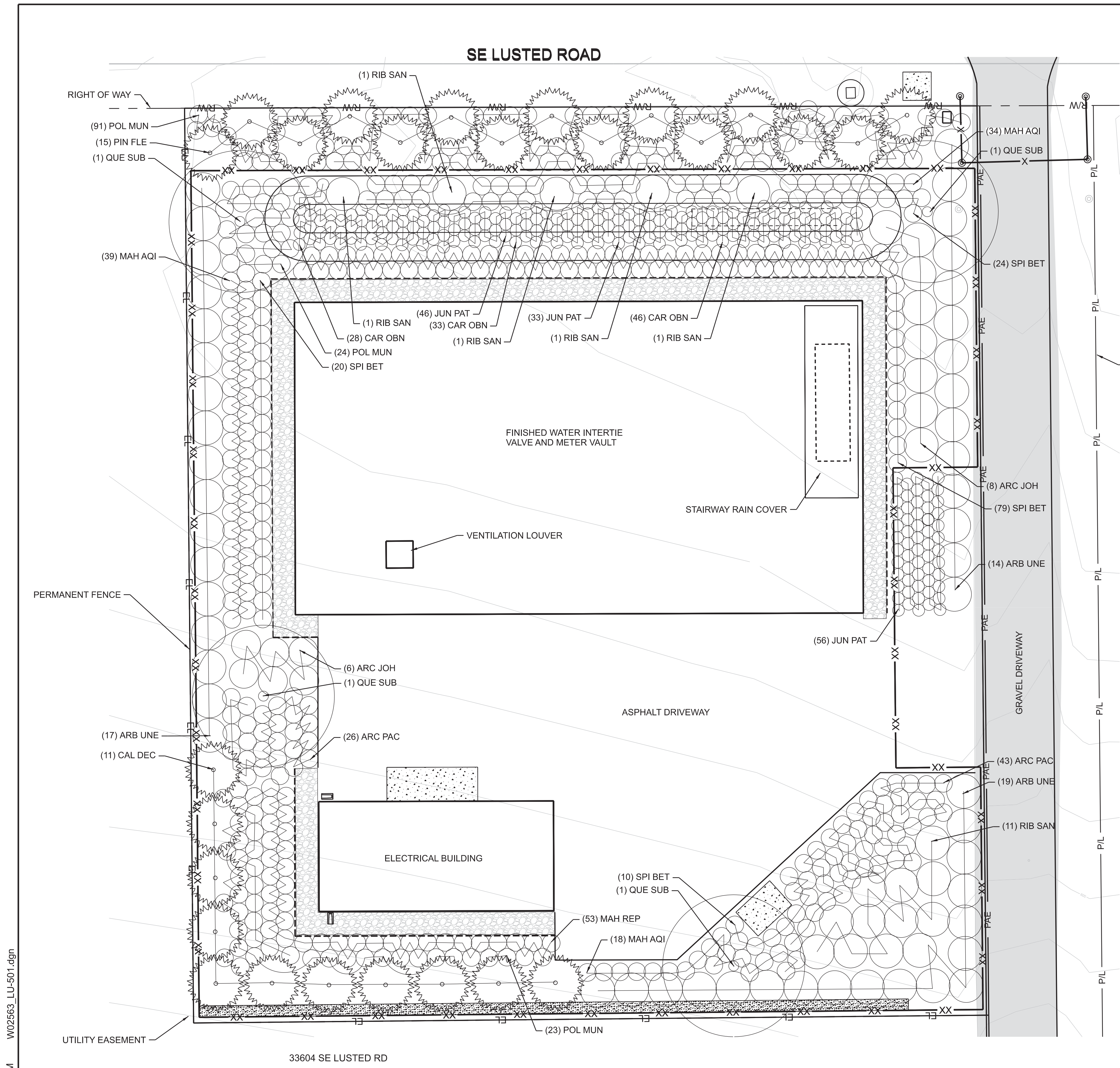


PLANT SCHEDULE

Finish Water Intertie			
Symbol	Botanical Name	Common Name	Planting Size
<b>Trees (outside pipeline corridor)</b>			
CAL DEC	<i>Calocedrus decurrens</i>	Incense Cedar	6'-8' height
PIN FLE	<i>Pinus flexilis 'Vanderwolf's Pyramid'</i>	Limber Pine	6'-8' height
QUE SUB	<i>Quercus suber</i>	Cork oak	2" caliper
<b>Shrubs and Groundcover</b>			
ARB UNE	<i>Arbutus unedo</i>	Strawberry Tree	6' tall, branched to the ground
ARC PAC	<i>Arctostaphylos 'Pacific Mist'</i>	Pacific Mist Manzanita	1 gal. container
ARC JOH	<i>Arctostaphylos 'John Dourley'</i>	'John Dourley'	5 gal. container
JUN PAT	<i>Juncus patens 'Elks Blue'</i>	Grey Rush	1 gal. container
MAH AQU	<i>Mahonia aquifolia</i>	Oregon Grape	5 gal. container
MAH REP	<i>Mahonia repens</i>	Creeping Mahonia	2 gal. container
POL MUN	<i>Polystichum munitum</i>	Sword Fern	1 gal. container
RIB SAN	<i>Ribes sanguineum</i>	Red Flowering Currant	5 gal. container
SPI BET	<i>Spiraea betulifolia var. Lucida</i>	Birchleaf Spirea	2 gal. container
<b>Stormwater Planting</b>			
CAR OBN	<i>Carex obnupta</i>	Slough Sedge	1 gal. container
JUN PAT	<i>Juncus patens 'Elks Blue'</i>	Grey Rush	1 gal. container
RIB SAN	<i>Ribes sanguineum</i>	Red Flowering Currant	5 gal. container
SPI BET	<i>Spiraea betulifolia var. Lucida</i>	Birchleaf Spirea	2 gal. container
MAH AQU	<i>Mahonia aquifolia</i>	Oregon Grape	5 gal. container



KEYPLAN



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No	Date	Description	Appd

ISSUED FOR CONFORMED SET ONLY  
FOR STAMPED DESIGN PLEASE REFER TO JUNE 6, 2023 100% FINAL DESIGN PACKAGE

Designed By	DG	Program Mgr	DH
Drawn By	DG	Const Mgr	BN
Checked By	BN	CMII Eng Mgr	JB
Project Mgr	BN	Date	9/29/23

**WARNING**  
If this bar does not measure 1" then the drawing is not to scale



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



Bull Run Filtration Pipelines  
FINISH WATER INTERTIE  
LANDSCAPE PLAN

SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
LU-501

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VISUALIZATION A



VISUALIZATION B



VISUALIZATION C



VISUALIZATION D

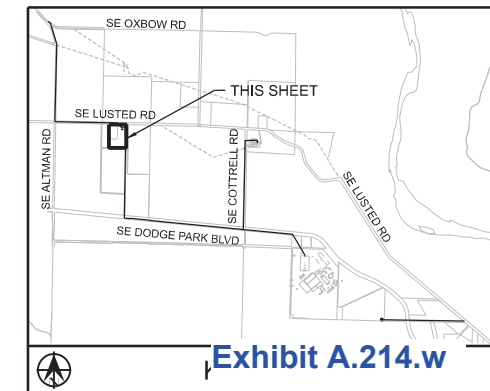
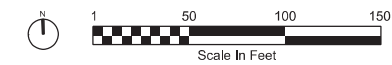
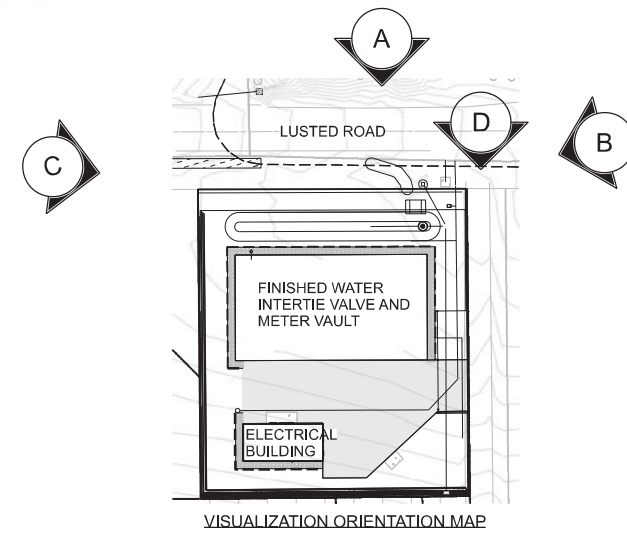


Exhibit A.214.w

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No	Date	Description	Appd
		Revision	
		Delivered	
		Revisions	
		Survey	

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

Designed By	DG	Program Mgr	XXX
Drawn By	DG	Const Mgr	XXX
Checked By	BN	Const Supvr	XXX
Project Mgr	XXX	Date	3/22/23

**WARNING**  
0 1"  
If this bar does not measure 1" then the drawing is not to scale



XXX XXX \_\_\_\_\_ Date  
XXX XXX \_\_\_\_\_ Date



**Bull Run Filtration Pipelines  
FINISHED WATER INTERTIE  
VISUALIZATIONS**

SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
**LU-502**