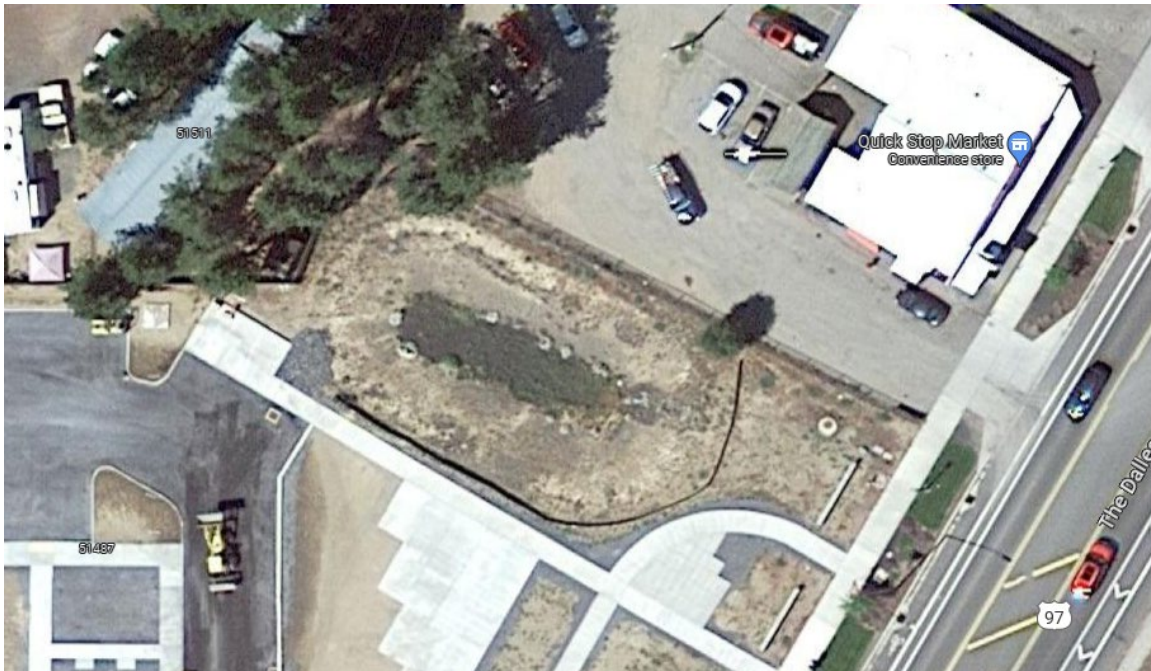


OPERATION & MAINTENANCE MANUAL

DFI No. : D01132

**Facility Type: Infiltration area for
water quality and flow control**



December, 2017

INDEX

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2. FACILITY CONTACT INFORMATION 1

3. CONSTRUCTION..... 1

4. STORM DRAIN SYSTEM AND FACILITY OVERVIEW 2

5. FACILITY HAZ MAT SPILL FEATURE(S)..... 3

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APPENDIX A: Operational Plan and Profile Drawing(s)

APPENDIX B: ODOT Project Plan Sheets

1. Identification

Drainage Facility ID (DFI): **D01132**

Facility Type: Infiltration area for water quality and flow control

Construction Drawings: (V-File Number) 51V-032

Location: District: 11
Highway No.: 004 (US97)
Mile Post: 167.81; 167.82

Description: This facility is located on the west side of US97, approximately 150 feet north of 4th Street. The pond is located behind the sidewalk on a City of La Pine property that will be the future Transit Center in La Pine.

2. Facility Contact Information

Contact the Engineer of Record, Region Technical Center, or Geo-Environmental's Senior Hydraulics Engineer for:

- Operational clarification
- Maintenance clarification
- Repair or restoration assistance

Engineering Contacts:

Region Technical Center Hydro Unit Manager

Or

Geo-Environmental Senior Hydraulics Engineer (503) 986-3365.

3. Construction

Engineer of Record: Wade Coatney, ODOT Region 4 Hydraulics Designer
Ph: 541-388-6234
Email: wade.j.coatney@odot.state.or.us

Facility construction: [2018]

Contractor:

4. Storm Drain System and Facility Overview

A water quality bioretention pond is a basin that is designed to retain and infiltrate stormwater up to and including the check storm (100-year design recurrence storm). This pond does not have an outlet or overflow mechanism. This facility is designed to fully infiltrate the design and check storm within 24 hours. The pond depth is approximately 8 feet with a bottom width and length of 15 feet and 70 feet, respectively. The total size of the pond is approximately 63 feet wide and 120 feet long.

The pond is located on the West side of US97, approximately 150 feet north of 4th Street in the City of La Pine. The pond can be accessed via Huntington Road (a City of La Pine Road that is just west of US97 and semi-parallel). A small driveway exists that allows access to the site.

The drainage basin for this facility is roadway runoff from the western half of US97 from 450 feet north of 3rd Street to Huntington Road. Storm sewer facilities collect and convey stormwater from either end of the drainage basin to the pond. The storm sewer system runs are approximately 850 feet long on either side of the pond. All inlets in the run are type CG-3 inlets with a 1.5 foot sump to collect sediment. A 48" sedimentation manhole exists adjacent to the pond, as one final point of sediment removal prior to stormwater entering the pond. There is no continuous gradient through this section of highway; as such there are many small, localized sag points. Inlets are placed tightly throughout the drainage basin to help compensate for the low gradient.

A. Maintenance equipment access:

Access is allowed to the property via a driveway on Huntington Road, just west of US97. Large vehicles should not access the bottom of the pond. Small vehicles may need to access the bottom of the facility to remove sediment.

B. Heavy equipment access into facility:

- Allowed (no limitations)
- Allowed (with limitations)
- Not allowed

C. Special Features:

- Amended Soils

- Cinder Rock Mulch Bottom
- Liners
- Underdrains



Photo 1: Infiltration area designed to infiltrate the 100 year storm, thus there is no outlet.

5. Facility Haz Mat Spill Feature(s)

The bioretention pond can be used to store a large volume of liquid without any modifications. The facility will retain and infiltrate any liquid entering the facility. If it is desired to keep liquid from entering the pond, the pipe inlet or outlet into the sedimentation manhole should be blocked.

6. Auxiliary Outlet (High Flow Bypass)

Auxiliary Outlets are provided if the primary outlet control structure can not safely pass the projected high flows. Broad-crested spillway weirs and over flow risers are the two most common auxiliary outlets used in stormwater treatment facility design. The auxiliary outlet feature is either a part of the facility or an additional storm drain feature/structure.

This facility does not have an Auxiliary Outlet.

The auxiliary outlet feature for this facility is:

- Designed into facility

tanks and vaults. Special maintenance requirements in addition to the routine requirements are noted below when applicable.

The ODOT Maintenance Guide can be viewed at the following website:

<http://www.oregon.gov/ODOT/HWY/OOM/MGuide.shtml>

Maintenance requirements for proprietary structures, such as underground water quality manholes and/or vaults with filter media are noted in Appendix C when applicable.

The following stormwater facility maintenance table (See ODOT Maintenance Guide) should be used to maintain the facility outlined in this Operation and Maintenance Manual or follow the Maintenance requirements outlined in Appendix C when proprietary structure is selected below:

Mark as Required and always include Table 1:

- Table 1 (general maintenance)
- Table 2 (stormwater ponds)
- Table 3 (water quality biofiltration swales)
- Table 4 (water quality filter strips)
- Table 5 (water quality bioslopes)
- Table 6 (detention tank)
- Table 7 (detention vault)
- Appendix C (proprietary structure)
- Special Maintenance requirements:

This facility has been designed with a **cinder rock mulch** surface to allow for a larger storage capacity, as well as low maintenance and requested aesthetics by City of La Pine. Upon regular inspections the cinder rock mulch should be inspected and evaluated for sedimentation. The surface may become crusted with fines and not allow infiltration. If this occurs, the cinder rock mulch should be raked up to break the crusted surface. If the facility becomes “choked” or “clogged” with sediment, the cinder rock mulch should be dug out, sifted and returned with little to no fines. The cinder rock mulch can also be removed and replaced with new cinder rock mulch.

8. Waste Material Handling

Material removed from the facility is defined as waste by DEQ. Refer to the roadwaste section of the ODOT Maintenance Yard Environmental Management System (EMS) Policy and Procedures Manual for disposal options: <http://egov.oregon.gov/ODOT/HWY/OOM/EMS.shtml>

Contact any of the following for more detailed information about management of waste materials found on site:

ODOT Clean Water Unit	(503) 986-3008
ODOT Statewide Hazmat Coordinator	(503) 229-5129
ODOT Region Hazmat Coordinator	(541) 388-6088
ODEQ Northwest Region Office	(503) 229-5263

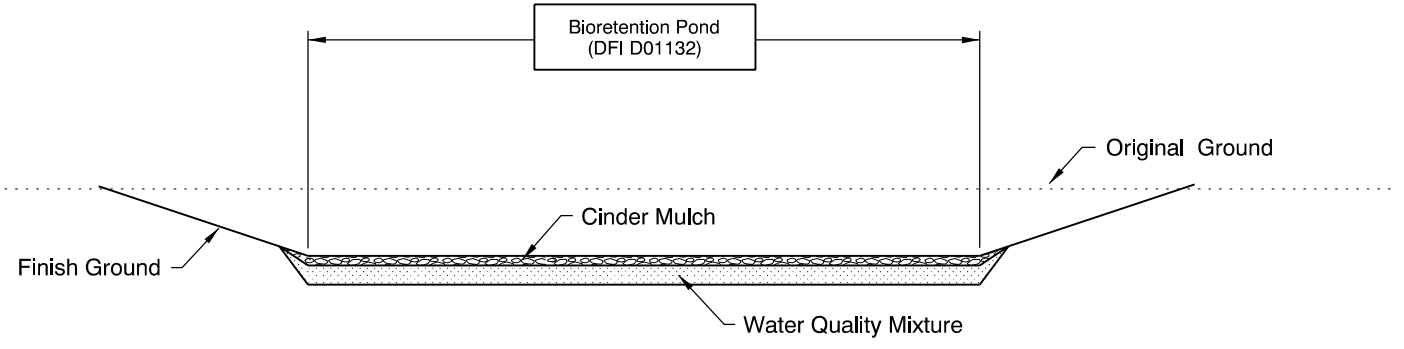
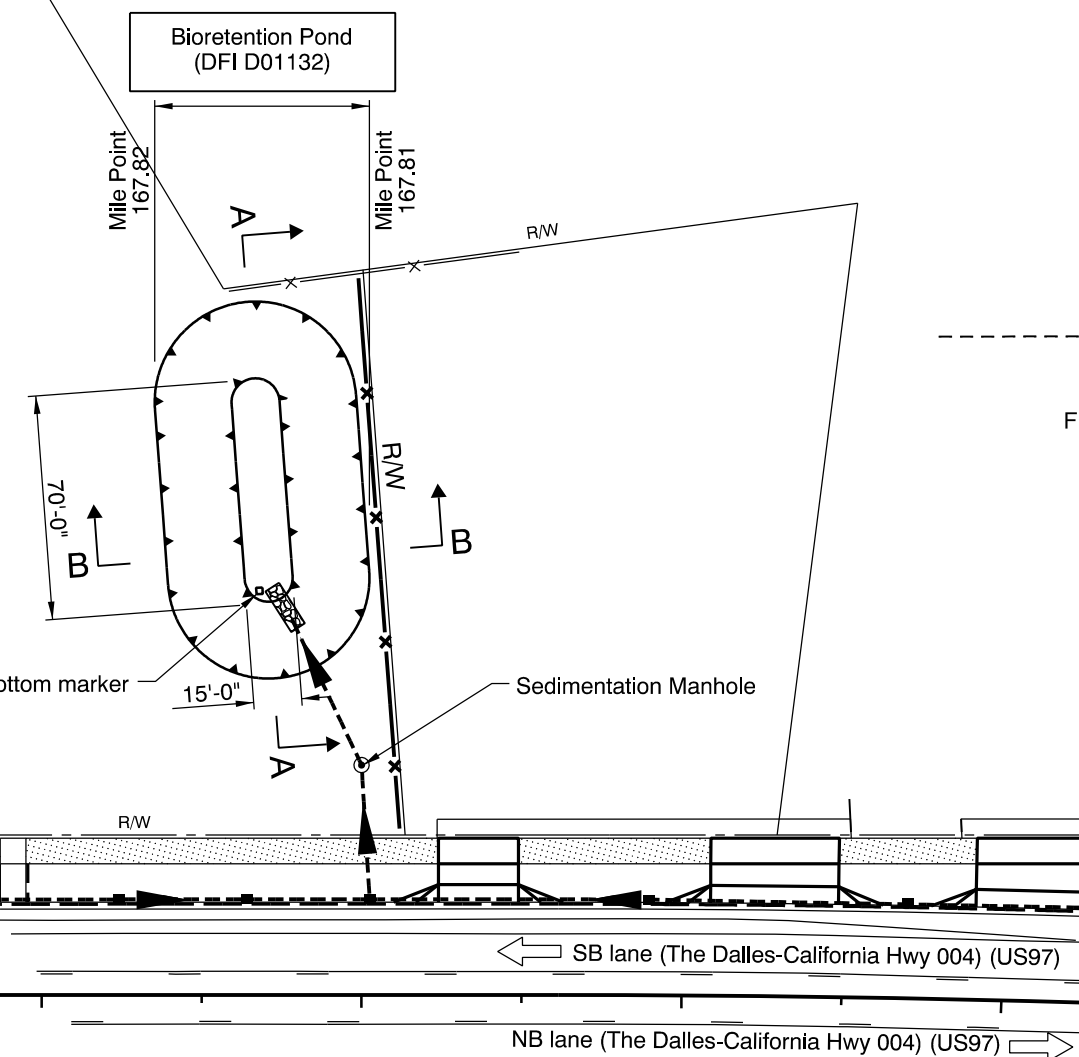
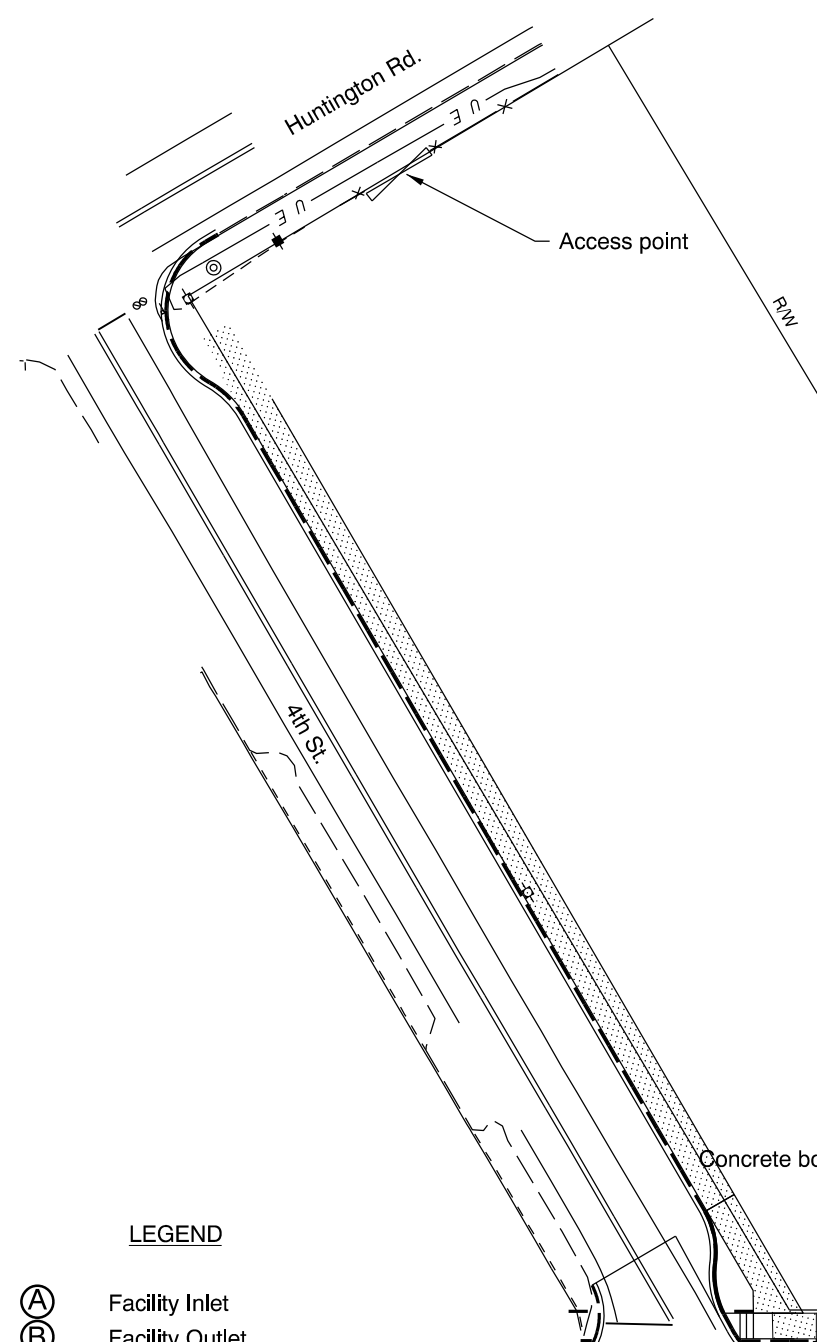
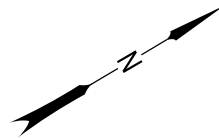
DRAFT

Appendix A

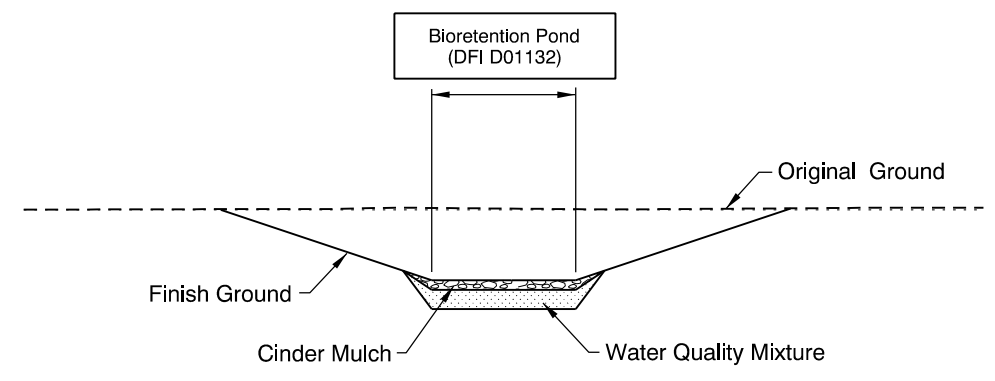
Content:

- Operational Plan and Profile Drawing(s)

DRAFT



SECTION A-A



SECTION B-B

LEGEND

- (A) Facility Inlet
- (B) Facility Outlet
- Type CG-3 Inlet
- - - Storm Pipe (Facility)
- ▨ Class 100 Riprap
- ~ Pavement/Facility Flow Path
- ▲ Storm Pipe Flow Path

1490+00 1489+00 1488+00 1487+00

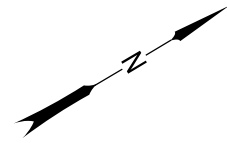
PLAN

Prepared By:
Wade J. Coatney

Drafted By:
Michael L. Graves

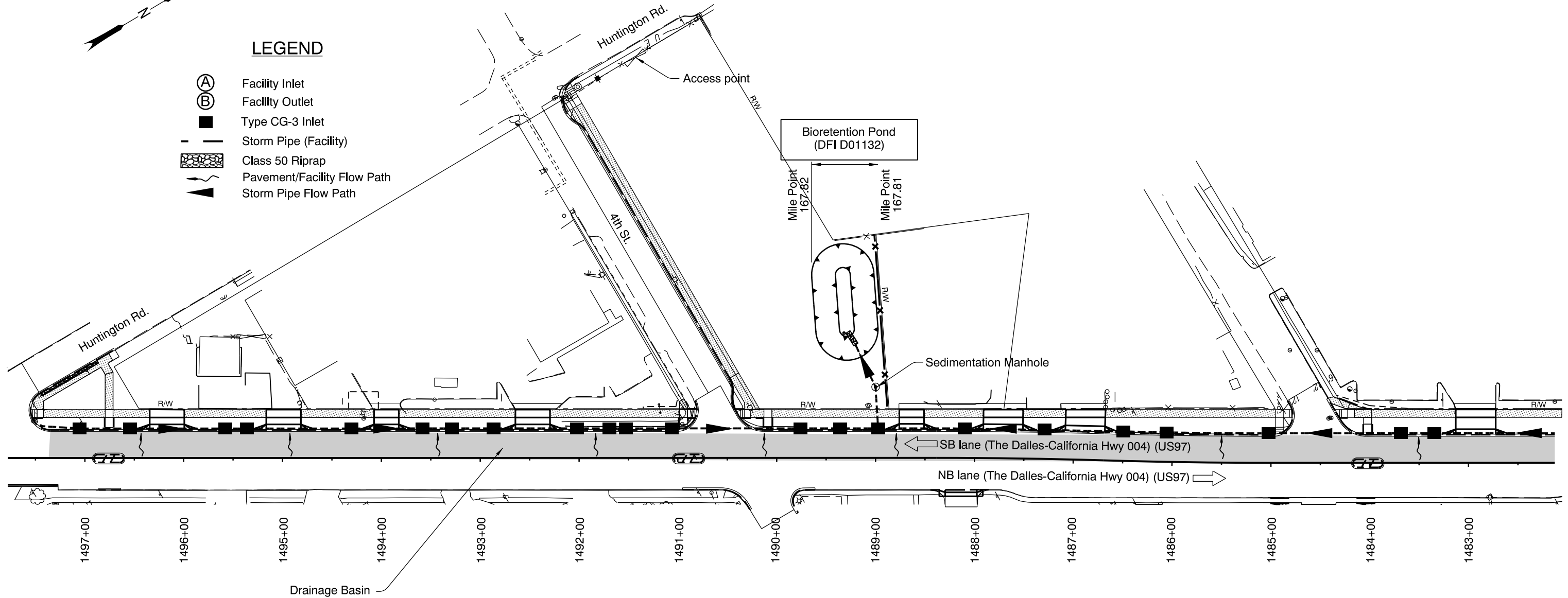
OREGON DEPARTMENT OF TRANSPORTATION

DFI D01132
MAINTENANCE DISTRICT 11 HWY 004
BIORETENTION POND
 THE DALLES-CALIFORNIA HIGHWAY MP 167.81
 DESCHUTES COUNTY



LEGEND

- (A) Facility Inlet
- (B) Facility Outlet
- Type CG-3 Inlet
- - - Storm Pipe (Facility)
- ▨ Class 50 Riprap
- ~ Pavement/Facility Flow Path
- ▲ Storm Pipe Flow Path



PLAN

OREGON DEPARTMENT OF TRANSPORTATION

Prepared By:
Wade J. Coatney

Drafted By:
Michael L. Graves

DFI D01132
MAINTENANCE DISTRICT 11 HWY 004
BIORETENTION POND
 THE DALLES-CALIFORNIA HIGHWAY MP 167.81
 DESCHUTES COUNTY

Appendix B

Content:

- **ODOT Project Plan Sheets**
 - *Cover/Title Sheet*
 - *Water Quality/Detention Plan Sheets*
 - *Other Details*

DRAFT

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT

GRADING, DRAINAGE, PAVING, SIGNING, ILLUMINATION,
SIGNALS & ROADSIDE DEVELOPMENT

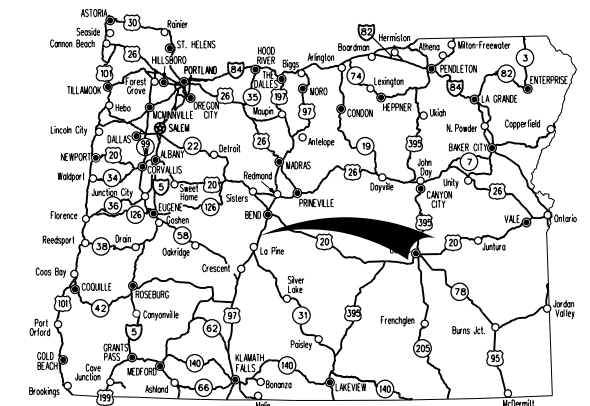
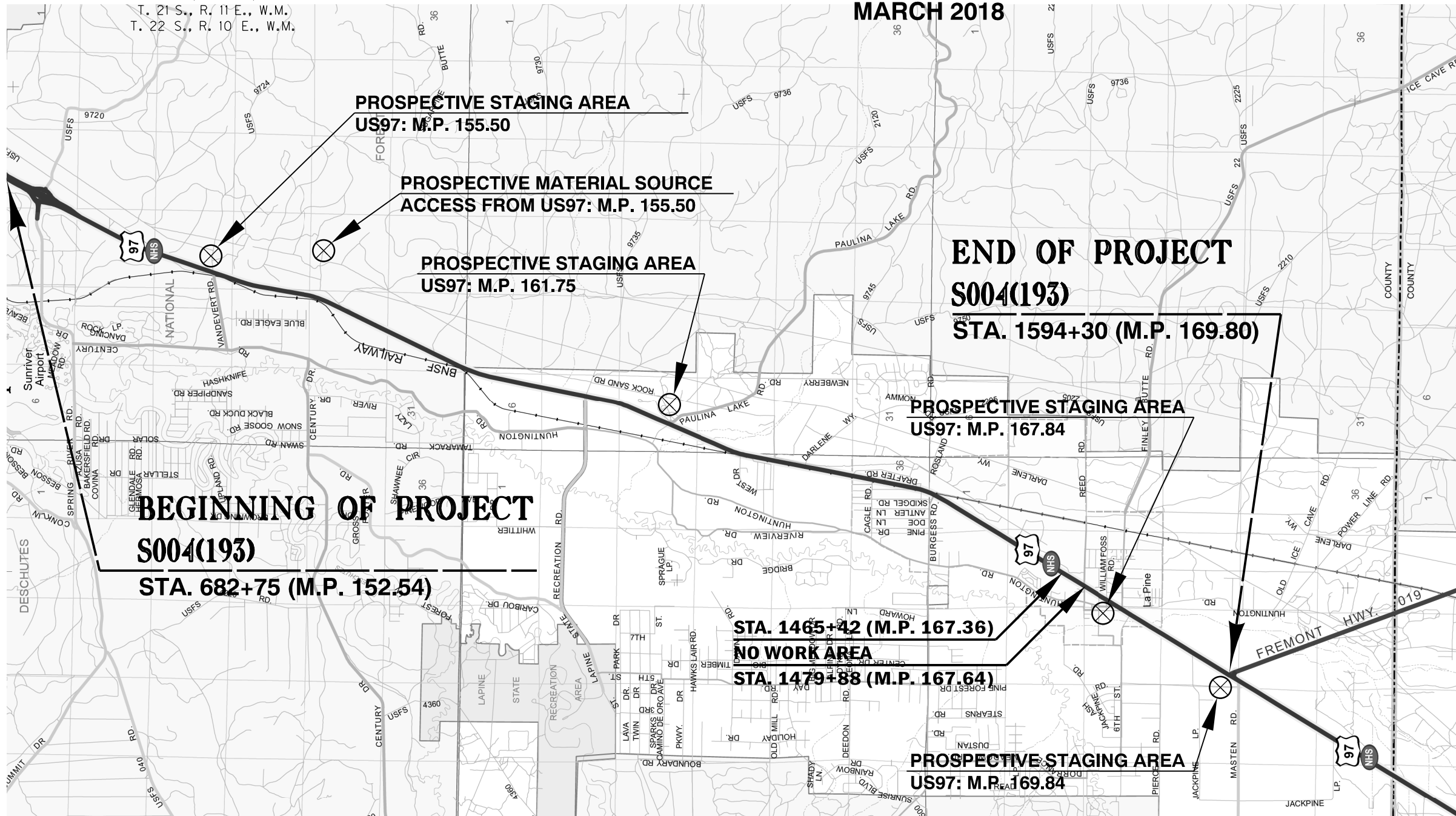
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC.
THE DALLES-CALIFORNIA HIGHWAY

DESCHUTES COUNTY
MARCH 2018

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A01	Title Sheet
A02	Index Of Sheets Cont'd. & Std. Drg. Nos.
A03 & A04	Control Data Sheet



T. 20 S., R. 11 E., W.M.
T. 21 S., R. 11 E., W.M.
T. 22 S., R. 10 E., W.M.



Overall Length Of Project - 17.26 Miles

ATTENTION:
Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through OAR 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Center Is (503) 232-1987.)

LET'S ALL
WORK TOGETHER
TO MAKE THIS
JOB SAFE

OREGON TRANSPORTATION COMMISSION
Tammy Baney CHAIR
Bob Van Brocklin COMMISSIONER
Alando Simpson COMMISSIONER
Sean O'Hollaren COMMISSIONER
Paula Brown COMMISSIONER
Matthew L. Garrett DIRECTOR OF TRANSPORTATION

These plans were developed using ODOT design standards. Exceptions to these standards, if any, have been submitted and approved by the ODOT Chief Engineer or their delegated authority.

Approving Authority: _____
Signature & date
Jon Heacock, Region 4 TCM
Print name and title

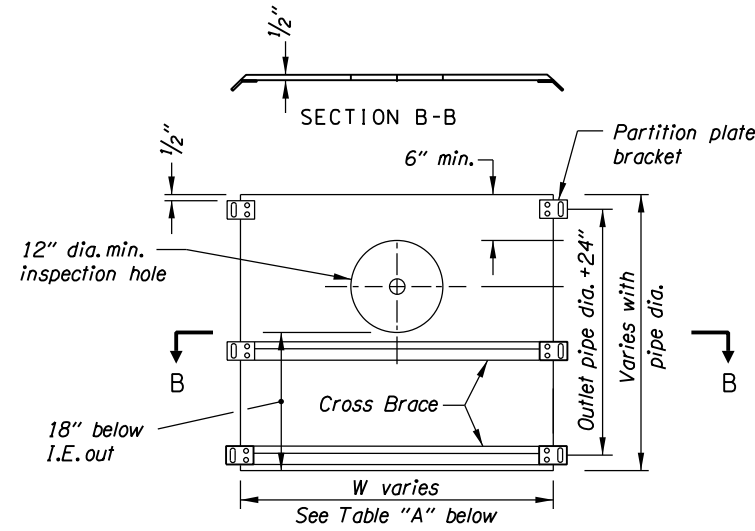
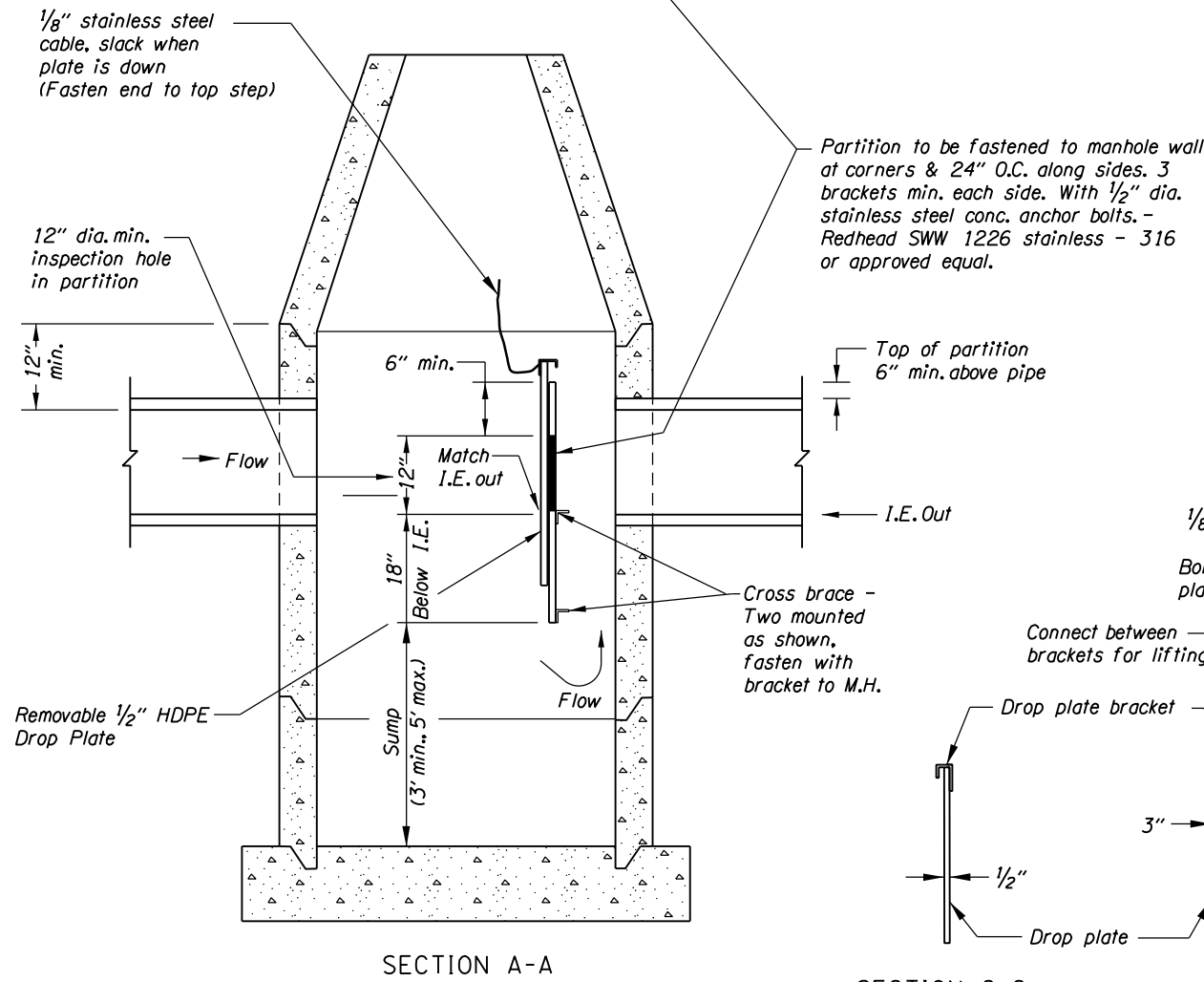
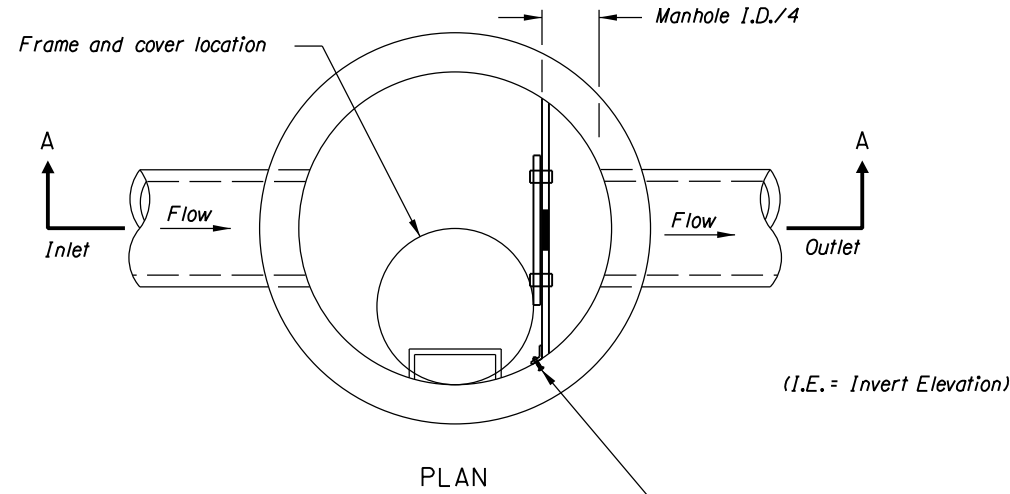
Concurrence by ODOT Chief Engineer

FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC.
THE DALLES-CALIFORNIA HIGHWAY

DESCHUTES COUNTY		
FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	S004(193)	A01

PE002424-000

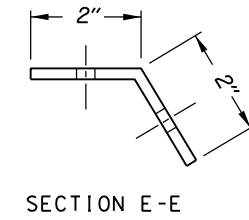
(For details not shown, see drg. nos. RD340 & RD346)



PARTITION PLATE

TABLE "A"

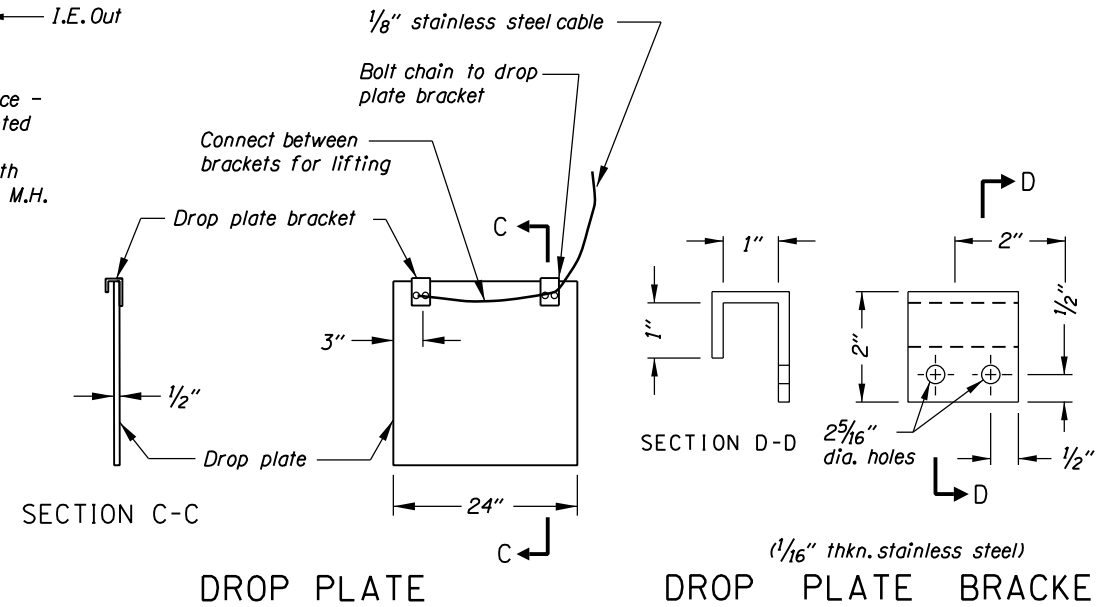
M.H. Dia. (in)	W (in)
48	42
54	47
60	52
72	62
96	83



PARTITION PLATE BRACKET

GENERAL NOTES FOR ALL DETAILS:

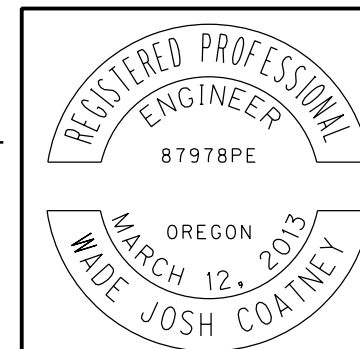
1. Hardware, fasteners and anchors to be stainless steel; use 1/8" stainless steel cable.
2. See pipe data sheet and plan sheets for pipe size(s).
3. See pipe data sheet and plan sheets for manhole sizes(s).
4. See pipe data sheet and plan sheets for sump depth.
5. Removable drop plate and partition to be constructed of High Density Polyethylene (HDPE), 1/2" thick ASTM D1248-78 and installed prior to manhole cone or top.
6. Manhole and pipe connection details per manhole standard drawings.
7. Cross brace L 2 1/2" x 1 1/2" x 3/16" hot dip galvanize, ASTM A-123. Two per partition plate - Full width. Fasten to partition with stainless bolt, nut & washer at 18" ctrs. Fasten to M.H. at ends using partition plate brackets.
8. Hardware, fasteners, anchors, fittings, appurtenances, labor and equipment is incidental to sedimentation manhole item.



DROP PLATE

DROP PLATE BRACKET

SEDIMENTATION MANHOLE



<p>OREGON DEPARTMENT OF TRANSPORTATION</p>	
<p>FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY</p>	
Designer: Wade J. Coatney	Reviewer: David L. McDonald
Drafter: Joseph J. Rodriguez	Checker: N/A
DETAILS	
SHEET NO. BB11	

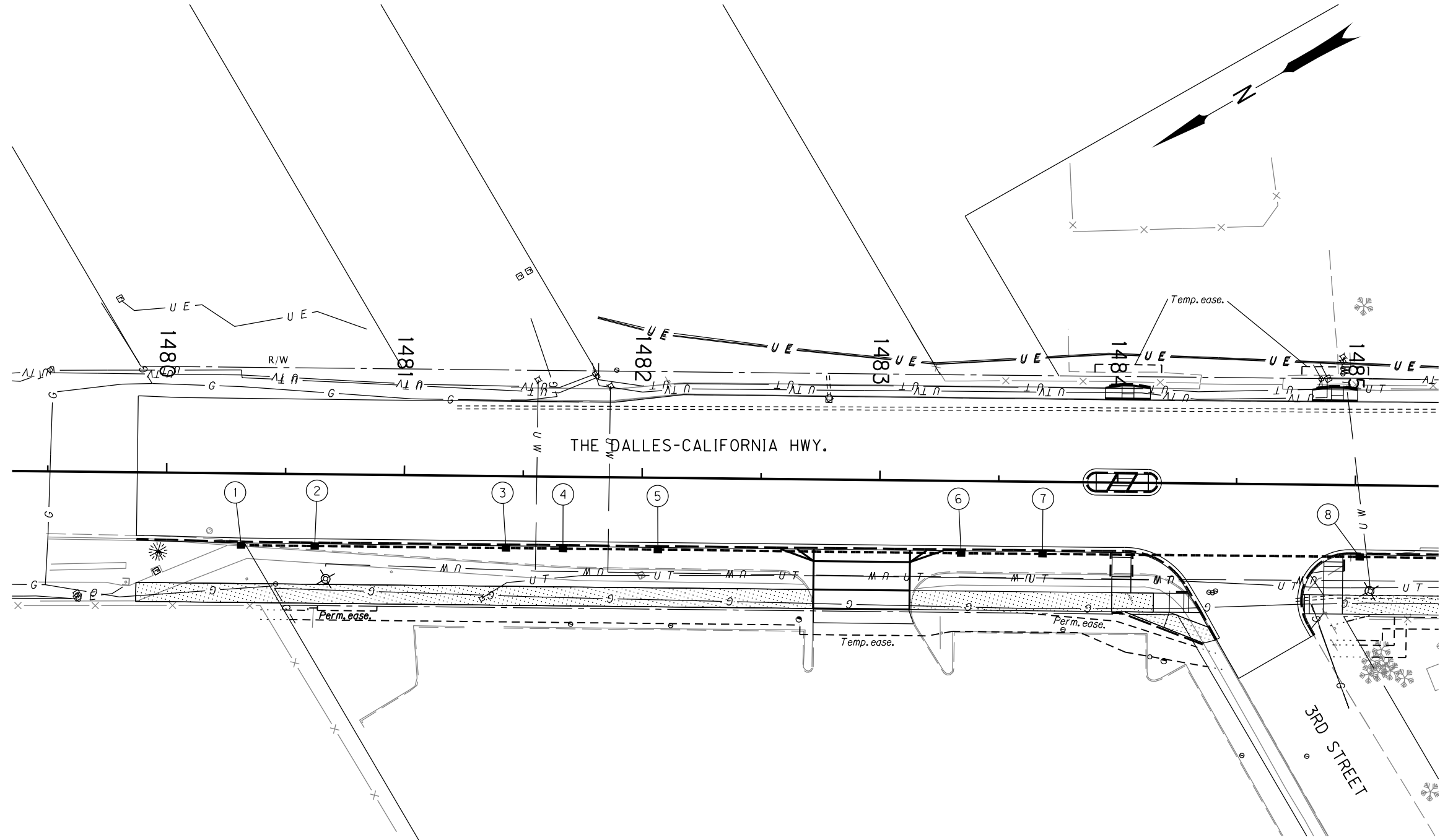
RENEWS: 12-31-2017

FINAL ELECTRONIC DOCUMENT
AVAILABLE UPON REQUEST

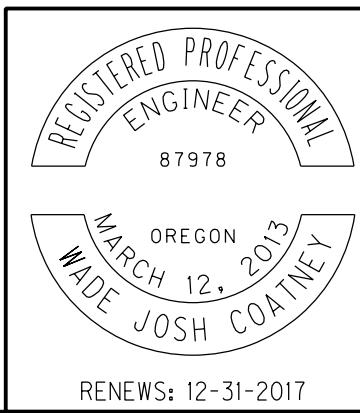
Rotation: 0° Scale: 1"=100'


Sec. 14, T. 22 S., R. 10 E., W.M.

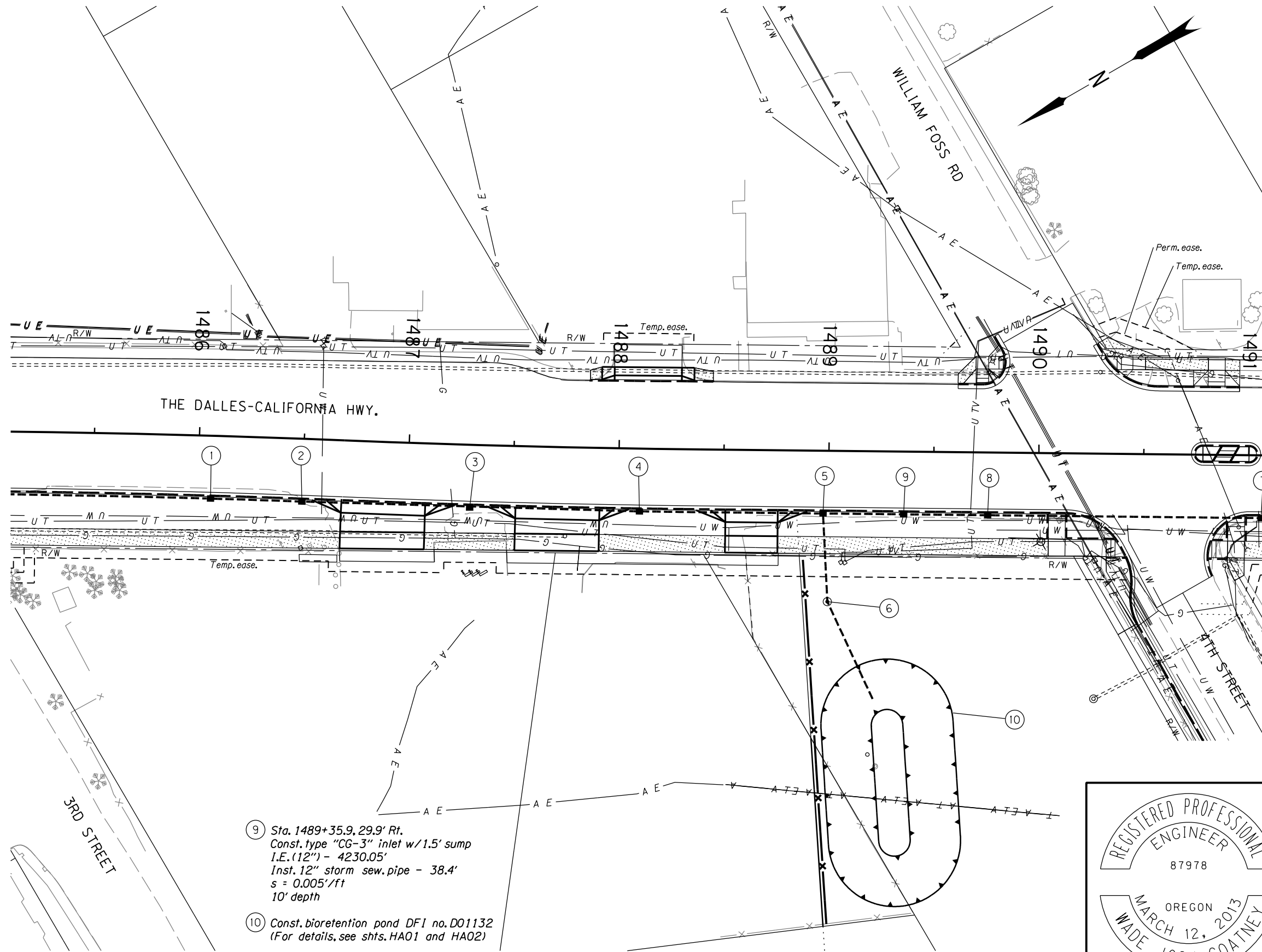
51V-032



- ① Sta. 1480+31.6, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4233.23'
Inst. 12" storm sew. pipe - 31.0'
s = 0.004'/ft
5' depth
(See drg. nos. RD300, RD302, RD336, RD339, RD364, RD371 and RD372)
- ② Sta. 1480+62.6, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4233.11'
Inst. 12" storm sew. pipe - 80.4'
s = 0.004'/ft
5' depth
- ③ Sta. 1481+43.0, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.79'
Inst. 12" storm sew. pipe - 24.0'
s = 0.004'/ft
5' depth
(See drg. nos. RD386, RD388 and RD393)
- ④ Sta. 1481+67.0, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.69'
Inst. 12" storm sew. pipe - 39.9'
s = 0.004'/ft
5' depth
- ⑤ Sta. 1482+06.9, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.53'
Inst. 12" storm sew. pipe - 127.6'
s = 0.004'/ft
5' depth
- ⑥ Sta. 1483+34.5, 30.1' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.02'
Inst. 12" storm sew. pipe - 34.2'
s = 0.004'/ft
5' depth
- ⑦ Sta. 1483+68.7, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4231.89'
Inst. 12" storm sew. pipe - 133.4'
s = 0.004'/ft
5' depth
- ⑧ Sta. 1485+02.1, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4231.35'
Inst. 12" storm sew. pipe - 103.5'
s = 0.004'/ft
5' depth



 OREGON DEPARTMENT OF TRANSPORTATION	
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY	
Designer: Wade J. Coatney	Reviewer: David L. McDonald
Drafter: Joseph J. Rodriguez	Checker: N/A
DRAINAGE & UTILITIES	
SHEET NO. CO3A	

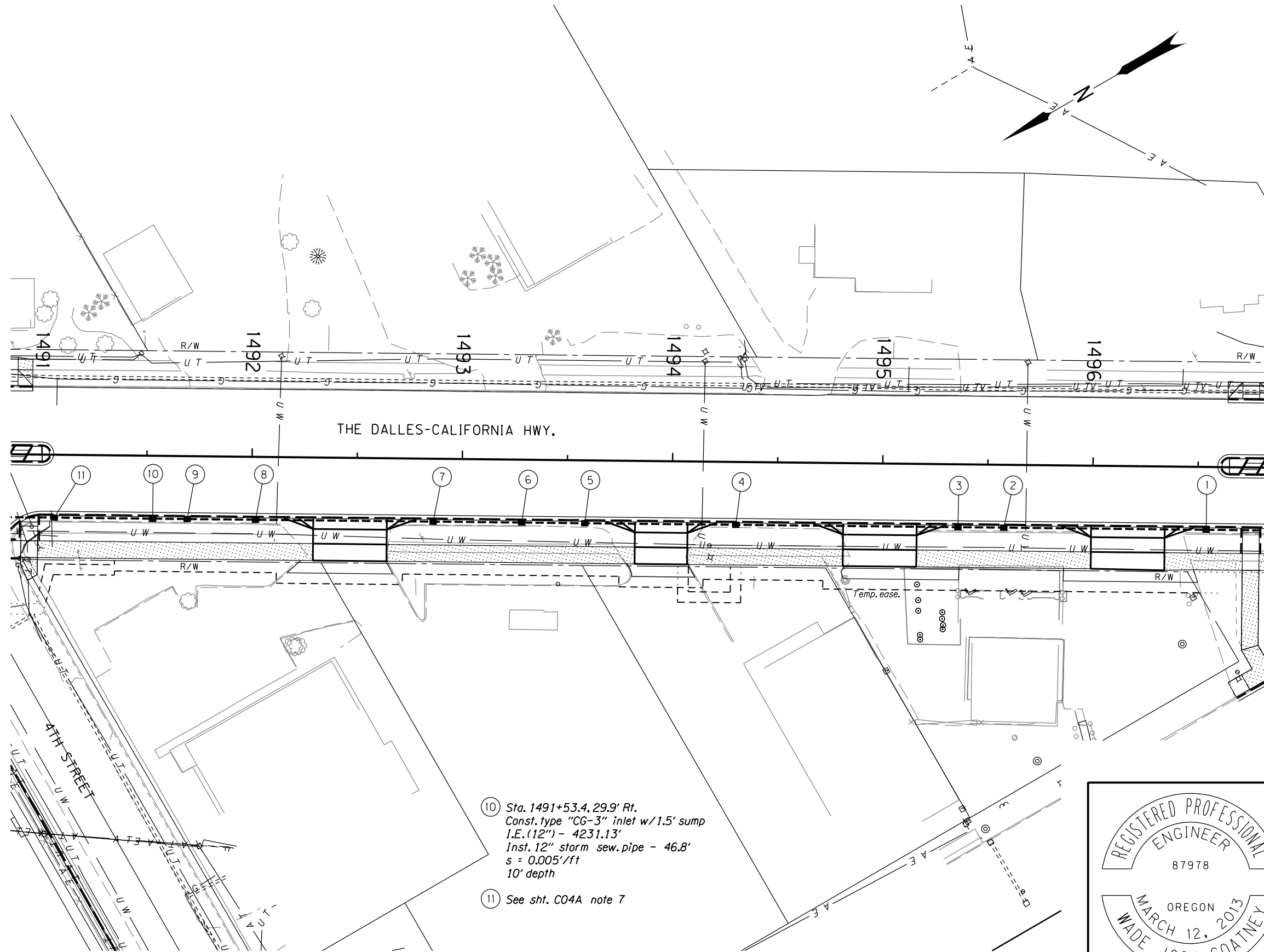


- ① Sta. 1486+06.2, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.94'
Inst. 12" storm sew. pipe - 43.5'
s = 0.004'/ft
5' depth
- ② Sta. 1486+49.9, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.76'
Inst. 12" storm sew. pipe - 80.0'
s = 0.004'/ft
10' depth
- ③ Sta. 1487+29.7, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.44'
Inst. 12" storm sew. pipe - 80.9'
s = 0.004'/ft
10' depth
- ④ Sta. 1488+10.1, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.12'
Inst. 12" storm sew. pipe - 87.5'
s = 0.004'/ft
10' depth
- ⑤ Sta. 1488+97.5, 30.0' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12" North) - 4229.77'
I.E.(12" South) - 4229.86'
I.E.(18" Out) - 4229.77'
Inst. 18" storm sew. pipe - 42.1'
s = 0.004'/ft
10' depth
- ⑥ Sta. 1488+99.9, 72.5' Rt.
Const. sedimentation manhole - 48" dia.
(For details, see sht. BB11)
I.E.(18") - 4229.60'
Inst. 18" storm sew. pipe - 52.3'
s = 0.004'/ft
10' depth
Const. sloped end
(See drg. nos. RD318, RD340 and RD346)
- ⑦ Sta. 1491+06.2, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.90'
Inst. 12" storm sew. pipe - 130.3'
s = 0.005'/ft
10' depth
- ⑧ Sta. 1489+75.9, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.25'
Inst. 12" storm sew. pipe - 40.0'
s = 0.005'/ft
10' depth

- ⑨ Sta. 1489+35.9, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4230.05'
Inst. 12" storm sew. pipe - 38.4'
s = 0.005'/ft
10' depth
- ⑩ Const. bioretention pond DFI no. D01132
(For details, see shts. HA01 and HA02)

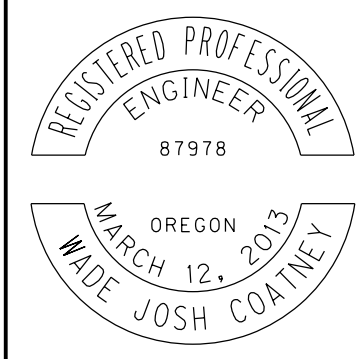


OREGON DEPARTMENT OF TRANSPORTATION	
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY	
Designer: Wade J. Coatney Drafter: Joseph J. Rodriguez	Reviewer: David L. McDonald Checker: N/A
DRAINAGE & UTILITIES	
SHEET NO. C04A	




- ① Sta. 1496+54.1, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4233.64'
Inst. 12" storm sew. pipe - 96.3'
s = 0.005'/ft
5' depth
- ② Sta. 1495+57.9, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4233.16'
Inst. 12" storm sew. pipe - 21.8'
s = 0.005'/ft
5' depth
- ③ Sta. 1495+36.0, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4233.05'
Inst. 12" storm sew. pipe - 105.6'
s = 0.005'/ft
5' depth
- ④ Sta. 1494+30.4, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.52'
Inst. 12" storm sew. pipe - 71.9'
s = 0.005'/ft
5' depth
- ⑤ Sta. 1493+58.5, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.16'
Inst. 12" storm sew. pipe - 30.0'
s = 0.005'/ft
5' depth
- ⑥ Sta. 1493+28.6, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4232.01'
Inst. 12" storm sew. pipe - 42.1'
s = 0.005'/ft
5' depth
- ⑦ Sta. 1492+86.4, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4231.80'
Inst. 12" storm sew. pipe - 84.5'
s = 0.005'/ft
10' depth
- ⑧ Sta. 1492+02.0, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4231.38'
Inst. 12" storm sew. pipe - 32.5'
s = 0.005'/ft
10' depth
- ⑨ Sta. 1491+69.4, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4231.22'
Inst. 12" storm sew. pipe - 16.5'
s = 0.005'/ft
10' depth

- ⑩ Sta. 1491+53.4, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4231.13'
Inst. 12" storm sew. pipe - 46.8'
s = 0.005'/ft
10' depth
- ⑪ See sht. C04A note 7

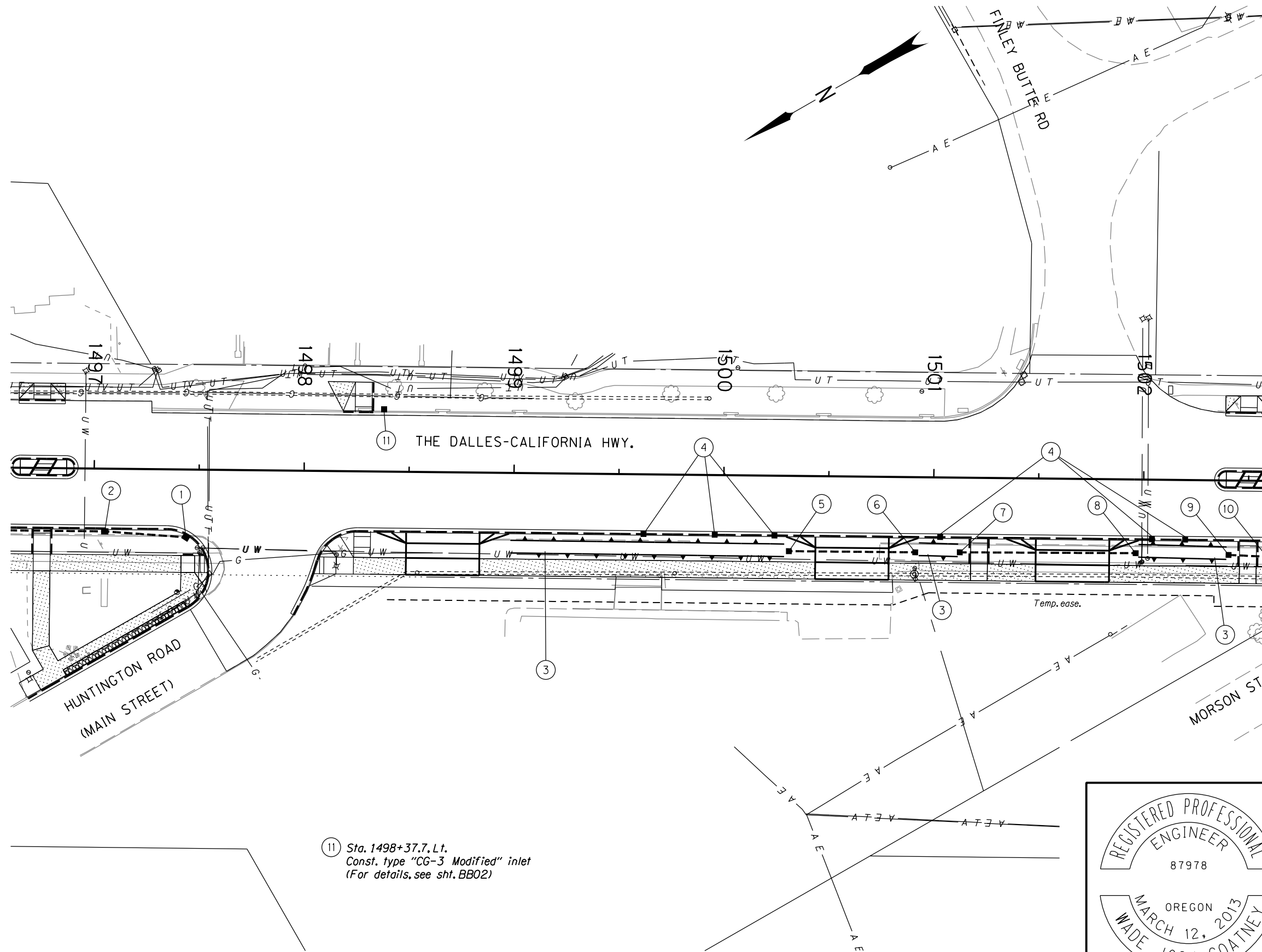


RENEWS: 12-31-2017

 OREGON DEPARTMENT OF TRANSPORTATION	
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY	
Designer: Wade J. Coatney	Reviewer: David L. McDonald
Drafter: Joseph J. Rodriguez	Checker: N/A
DRAINAGE & UTILITIES	
SHEET NO. C05A	

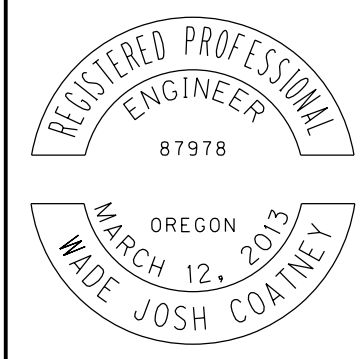
Sec. 14 & 15, T. 22 S., R. 10 E., W.M.

51V-032



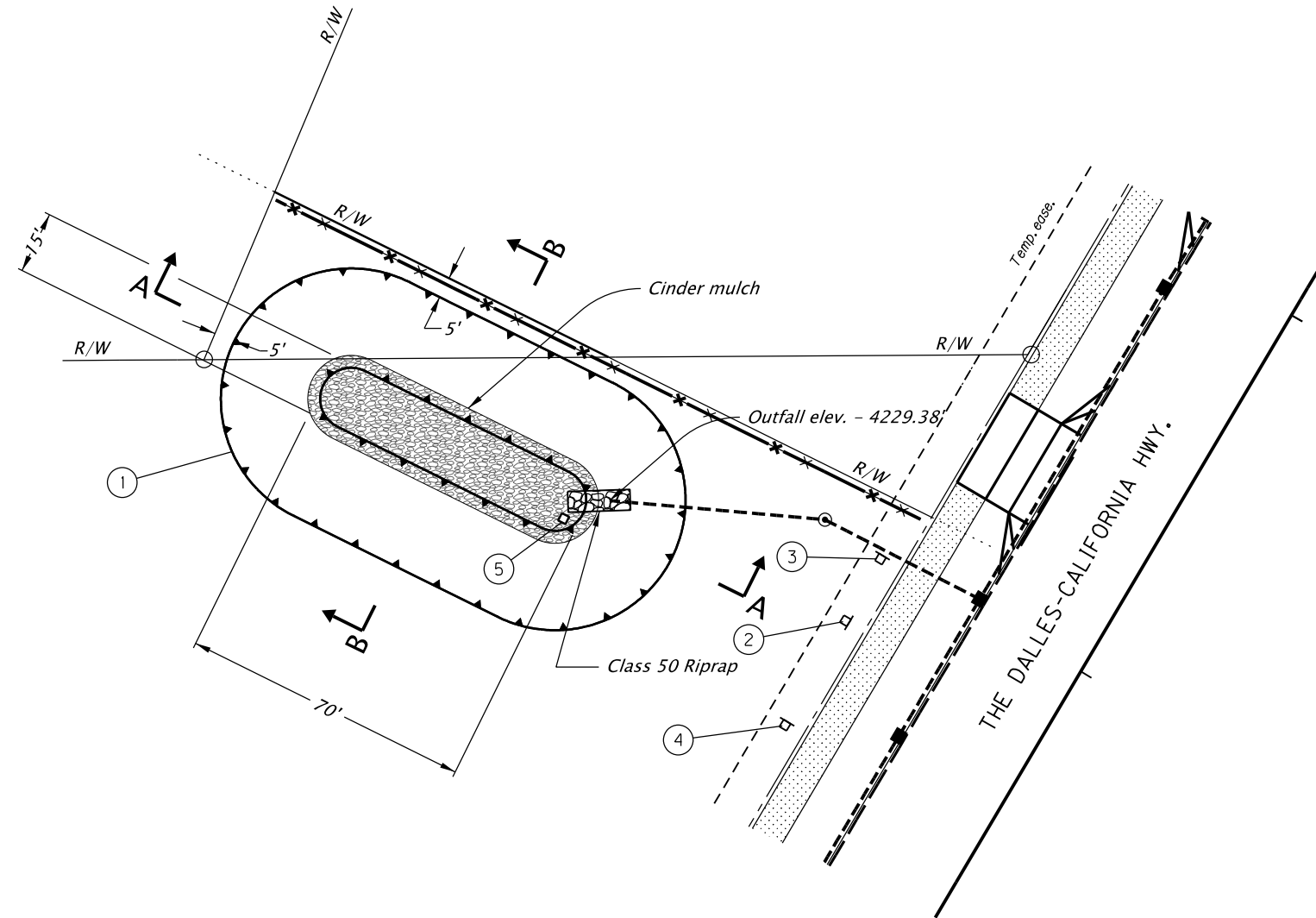
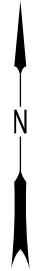
- ① Sta. 1497+44.0, 32.3' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4234.11'
Inst. 12" storm sew. pipe - 38.7'
s = 0.006'/ft
5' depth
- ② Sta. 1497+05.3, 29.9' Rt.
Const. type "CG-3" inlet w/1.5' sump
I.E.(12") - 4233.89'
Inst. 12" storm sew. pipe - 51.2'
s = 0.005'/ft
5' depth
- ③ Const. bioretention pond DFI no. DO1133
(For details, see sht. HA03 and HA04)
- ④ Const. type "CG-3 Modified" inlet - 6
(For details, see sht. BB02 and HA03)
- ⑤ Sta. 1500+31.3, 35.9' Rt.
Const. type "G1" inlet
Grate elev. - 4236.19'
Inst. 12" storm sew. pipe - 60.2'
I.E.(12") - 4234.04'
s = 0.000'/ft
5' depth
(See drg. nos. RD364 and RD365)
- ⑥ Sta. 1500+91.5, 35.8' Rt.
Const. type "G1" inlet
Grate elev. - 4236.29'
I.E.(12") - 4234.04'
- ⑦ Sta. 1501+12.7, 35.5' Rt.
Const. type "G1" inlet
Grate elev. - 4236.42'
Inst. 12" storm sew. pipe - 83.8'
I.E.(12") - 4234.29'
s = 0.000'/ft
5' depth
- ⑧ Sta. 1501+96.5, 35.1' Rt.
Const. type "G1" inlet
Grate elev. - 4236.42'
I.E.(12") - 4234.29'
- ⑨ Sta. 1502+40.8, 35.4' Rt.
Const. type "G1" inlet
Grate elev. - 4236.27'
Inst. 12" storm sew. pipe - 18.2'
I.E.(12") - 4234.21'
s = 0.000'/ft
5' depth
- ⑩ Sta. 1502+59.0, 36.1' Rt.
Const. type "G1" inlet
Grate elev. - 4236.26'
I.E.(12") - 4234.21'

⑪ Sta. 1498+37.7, Lt.
Const. type "CG-3 Modified" inlet
(For details, see sht. BB02)



RENEWS: 12-31-2017

OREGON DEPARTMENT OF TRANSPORTATION	
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY	
Designer: Wade J. Coatney Drafter: Joseph J. Rodriguez	Reviewer: David L. McDonald Checker: N/A
DRAINAGE & UTILITIES	
SHEET NO. CO6A	

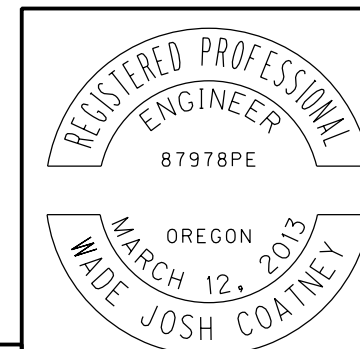


PLAN
Scale: 1"=40'

- ① Const. bioretention pond DFI no. D01132
Exc. - 1,030 cu. yd.
Cinder Mulch - 35 cu. yd.
Amended Soil - 90 cu. yd.
Drainage Geotextile - 375 sq. yd.
- ② Inst. Type "S2" field facility marker
DFI D01132
(See drg. no. RD398)
- ③ Inst. Type "S1" field facility marker - Red
- ④ Inst. Type "S1" field facility marker - Green
- ⑤ Const. conc. bottom marker
1.5' x 1.5'
Elev. - 4227.50'

NOTES:

- 1. For cross sections shown, see sheet "HA02".
- 2. For sod and plant locations, see Planting Plans
- 3. Coordinate final location of Type "S1" and "S2" field facility markers with ODOT Maintenance



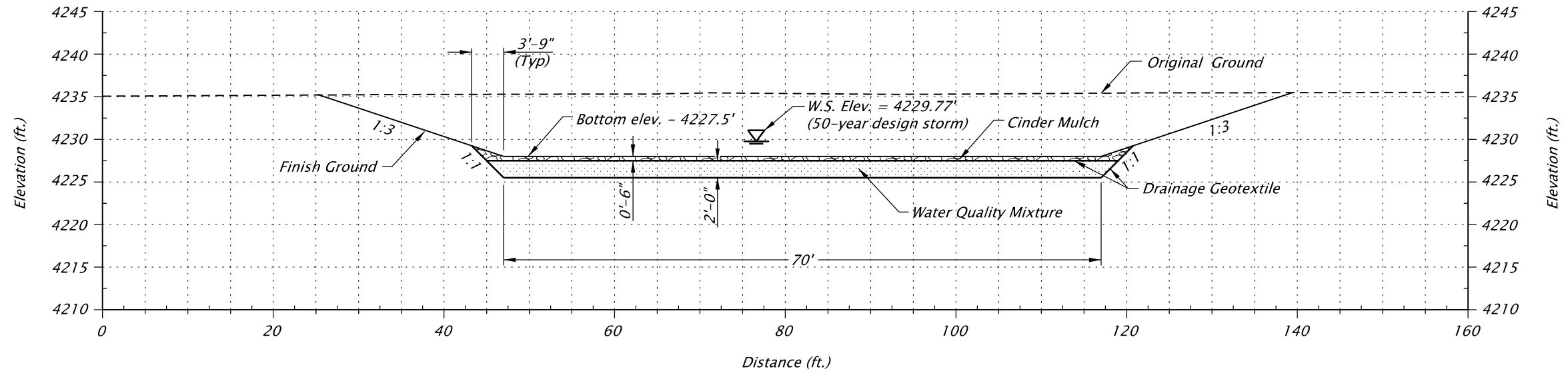
OREGON DEPARTMENT OF TRANSPORTATION		
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY		
Designer: Wade J. Coatney	Reviewer: David L. McDonald	
Drafter: Michael L. Graves	Checker: Name	

DFI NO.
D01132

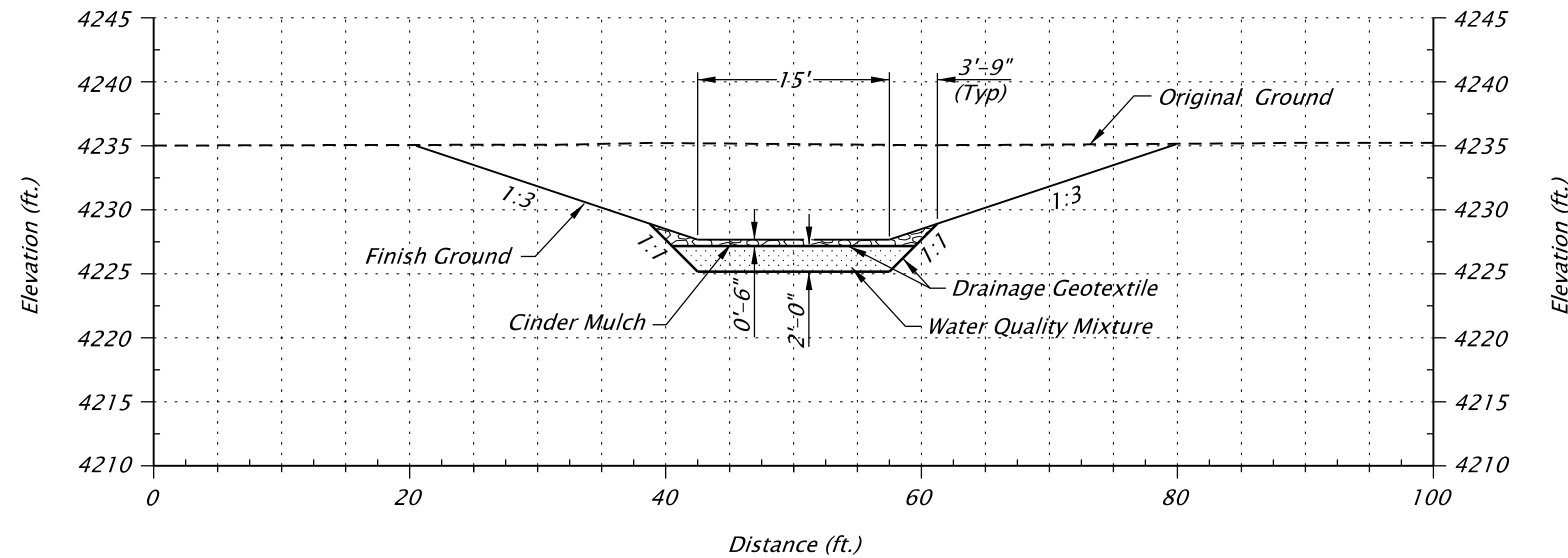
RENEWS: 12-31-2017

WATER QUALITY POND PLAN

SHEET NO.
HA01



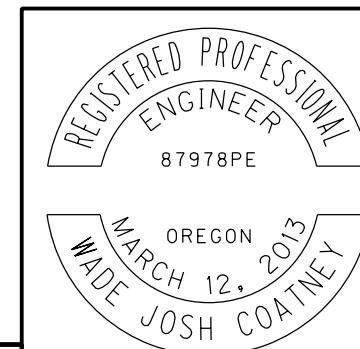
SECTION A-A
Scale: 1"=15'



SECTION B-B
Scale: 1"=15'

NOTES:

1. For location of cross sections shown, see sheet "HA01".



OREGON DEPARTMENT OF TRANSPORTATION		
FFO-US97: SUNRIVER INTERCHANGE - OR31 SEC. THE DALLES-CALIFORNIA HIGHWAY DESCHUTES COUNTY		
Designer: Wade J. Coatney	Reviewer: David L. McDonald	
Drafter: Michael L. Graves	Checker: Name	
WATER QUALITY POND CROSS SECTIONS		SHEET NO. HA02

DFI NO.
D01132

RENEWS: 12-31-2017

FINAL ELECTRONIC DOCUMENT
AVAILABLE UPON REQUEST