OPERATION & MAINTENANCE MANUAL

DFI No.: D00834
Facility Type: Water Quality
Bioretention Pond

November, 2018

INDEX

1. Identification

Drainage Facility ID (DFI):	**D00834**
Facility Type:	Water Quality Bioretention Pond
Construction Drawings:	49V-019
Location:	District: 08
	Highway No.: 022
	Mile Post: 2.79; 2.99 (beg./end)
	Description: This facility is located along the west side of the OR 62 Expressway to the north of the Coker Butte Rd. overpass. Access is located via Coker Butte Rd.

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:	Ben Wewerka – OBEC Consulting Engineers
Facility construction:	2018
Contractor:	LTM, Inc. dba Knife River Materials

4. Storm Drain System and Facility Overview

A water quality bioretention pond is a basin that is designed to capture stormwater runoff and infiltrate it through a water quality mixture to remove pollutants. Pollutant removal is accomplished through physical, biological, and chemical treatment processes. The size of these facilities depends on the location and the amount of contributing impervious area.

This bioretention pond is located along the west side of the OR 62 Expressway to the north of the Coker Butte Rd. The drainage is collected by a series of inlets and conveyed to the facility by multiple 12-inch storm pipes. The drainage area includes northbound and southbound lanes of the OR 62 Expressway. All stormwater is conveyed into the bioretention pond and drains out through a Type D Outlet structure and outfalls into Upton Creek; see the Operational Plan, Appendix A.

A. Maintenance equipment access:
The facility can be accessed via Coker Butte Rd.

B. Heavy equipment access into facility:

☐ Allowed (no limitations)
☒Allowed (with limitations)
☐ Not allowed

C. Special Features:

☒ Amended Soils
☐ Porous Pavers
☐ Liners
☒ Underdrains

5. Facility Haz Mat Spill Feature(s)

The water quality bioretention pond can be used to store a volume of liquid by blocking the Type D outlet structure.

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.

The auxiliary outlet feature for this facility is:

☒ Designed into facility

☐ Other, as noted below

7. Maintenance Requirements

Routine maintenance table for non-proprietary stormwater treatment and storage/detention facilities have been incorporated into ODOT's Maintenance Guide. These tables summarize the maintenance requirements for ponds, swales, filter strips, bioslopes, and detention 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:

☒ Table 1 (general maintenance)
☒ Table 2 (stormwater ponds)
☐ Table 3 (water quality or 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:

Note: Special maintenance Requirements Require Concurrence from ODOT SR Hydraulics Engineer.

8. Waste Material Handling

Material removed from the facility is defined as waste by the Department of Environment Quality (DEQ). Refer to the roadwaste section of the ODOT Maintenance Yard Environmental Management System (EMS) Policy and Procedures Manual for disposal options:

http://www.oregon.gov/ODOT/Maintenance/Documents/ems_manual.pdf

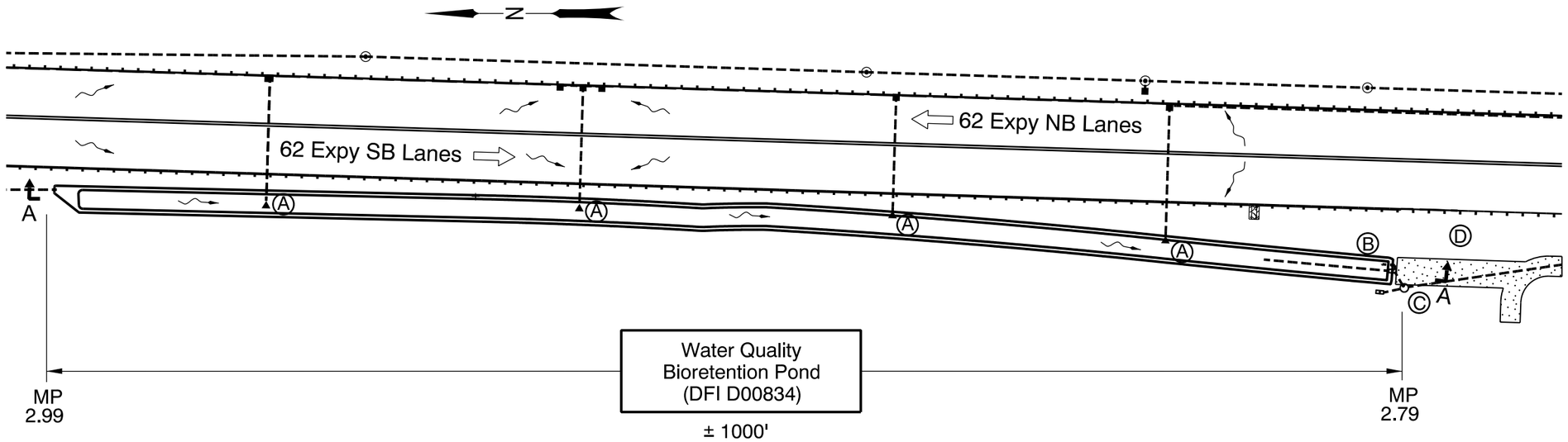
Contact any of the following for more detailed information about management of waste materials found on site:

ODOT Clean Water Unit	(503) 986-3008
ODOT Statewide Hazmat Coordinator	(503) 667-7442
ODOT Region 1 Hazmat Coordinator	(503) 731-8290
ODOT Region 2 Hazmat Coordinator	(503) 986-2647
ODOT Region 3 Hazmat Coordinator	(541) 957-3594
ODOT Region 4 Hazmat Coordinator	(541) 388-6186
ODOT Region 5 Hazmat Coordinator	(541) 963-1590
ODEQ Northwest Region Office	(503) 229-5263

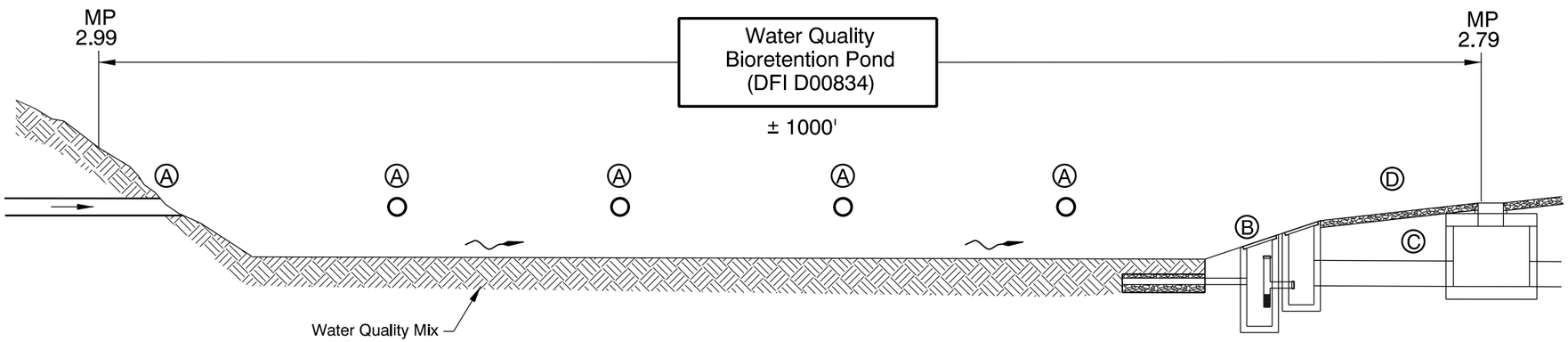
Appendix A

Content:

- **Operational Plan and Profile Drawing(s)**



PLAN
N.T.S.



SECTION A-A
N.T.S.

LEGEND:

- A — *Pond Inlet*
- B — *Pond Outlet*
- C — *Outfall*
- D — *Maintenance Access*
- and / or — *Manhole*
- and / or — *Inlet*
- *Storm Pipe (Facility)*
- *Storm Pipe*
- *Conveyance Direction*
- *Pavement / Facility Flow Path*
- *Traffic Flow Direction*

OREGON DEPARTMENT OF TRANSPORTATION

Prepared By: J. Gonzalez

Drafted By: J. Gonzalez

DFI D00834
MAINTENANCE DISTRICT 8 HWY 022
WATER QUALITY BIORENTENTION POND
HIGHWAY MP 2.79 TO 2.99
JACKSON

Appendix B

Content:

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

49V-019

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SHEET NO.	DESCRIPTION
1	Title Sheet
1A	Index Of Sheets Cont'd.

STATE OF OREGON

DEPARTMENT OF TRANSPORTATION

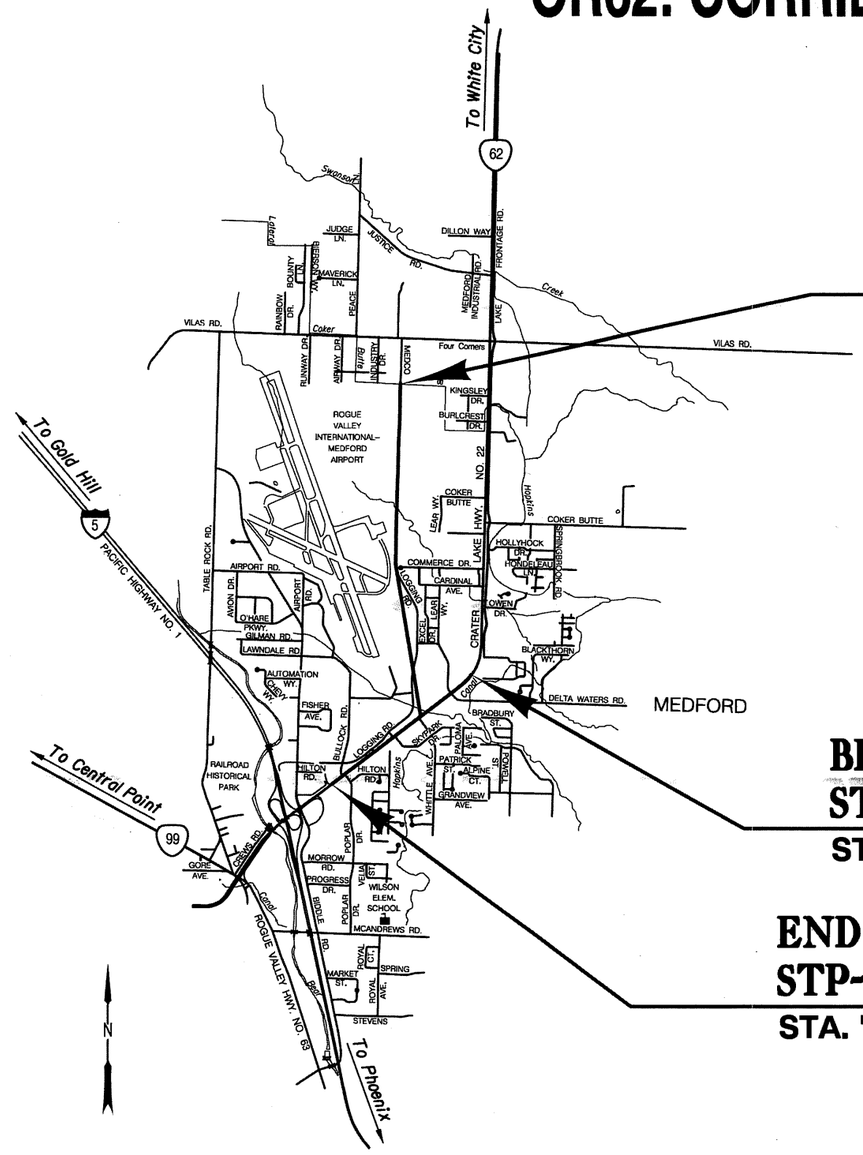
PLANS FOR PROPOSED PROJECT

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

OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)

CRATER LAKE HIGHWAY

JACKSON COUNTY
FEBRUARY 2016

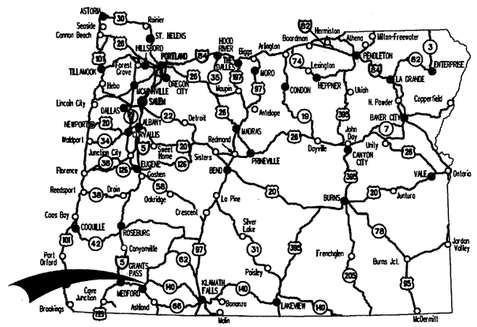


BEGINNING OF PROJECT
STP-S022(040)
STA. "B" 2197+00 (M.P. 1.69)

BEGINNING OF PROJECT
STP-S022(040)
STA. "EX" 2297+00 (M.P. 1.73)

END OF PROJECT
STP-S022(040)
STA. "NBB" 155+58 (M.P. 0.70)

Sec. 6, 7, 18, T. 37 S., R. 1 W., W.M.



Overall Length Of Project – 2.70 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. (Notes The Telephone Number For The Oregon Utility Center Is (503) 232-1987.)

PLANS PREPARED FOR
OREGON DEPARTMENT OF TRANSPORTATION

OBEC CONSULTING ENGINEERS
www.obec.com
CORPORATE OFFICE:
920 COUNTRY CLUB ROAD, SUITE 100B EUGENE, OREGON 97401-6089
REGIONAL OFFICES:
LAKE OSWEGO; SALEM; MEDFORD, OREGON; VANCOUVER, WASHINGTON

OREGON TRANSPORTATION COMMISSION

Tammy Baney	CHAIR
Sean O'Hollaren	COMMISSIONER
Alando Simpson	COMMISSIONER
Susan Morgan	COMMISSIONER
David Lohman	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

JAIME JORDAN - PROJECT MANAGER
Print name and title

_____
Concurrence by ODOT Chief Engineer

OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	STATE	1

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2C-20, 2C-21	Traffic Control Plan
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6	Alignment And General Construction
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OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION		1A

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OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION		1A-2

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RD300	- Trench Backfill, Bedding, Pipe Zone And Mult. Installations
RD302	- Street Cut
RD306	- Concrete Encasement, Cradle And Cap Details
RD312	- Subsurface Drain
RD316	- Sloped Ends For Metal Pipe
RD317	- Culvert Embankment Protection
RD318	- Sloped Ends For Concrete Pipe
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RD363	- Gutter Transition At Inlet
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RD365	- Frames & Grates for Concrete Inlets
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RD1010	- Inlet Protection Type 2, 3, 6 & 7
RD1015	- Inlet Protection Type 4
RD1032	- Sediment Barrier Type 8
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TM458	- Pedestrian Ramp Placement Details
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TM463	- Spanwire Mounting Details
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TM560, TM561	- Alignment Layout
TM570	- Traffic Delineators
TM571	- Traffic Delineators Steel Post Details
TM576	- Traffic Delineator Installation
TM602	- Triangular Base Breakaway Multi-Direction Slip Base
TM622, TM623, TM624, TM625, TM626, TM627	- Monotube Cantilever Sign Support
TM629, TM630	- Slip Base & Fixed Base Luminaire Supports
TM635	- Breakaway Sign & Luminaire Supports
TM652	- Traffic Signal Supports (Steel Details)
TM653	- Traffic Signal Supports (Foundation Requirements)
TM660	- Traffic Strain Pole Supports General Details And Design Criteria
TM661	- Traffic Strain Pole Supports Notes, Reactions and Details
TM670	- Wood Post Sign Supports
TM671	- 3 Second Gust Wind Speed Map
TM675	- Extruded Aluminum Panels
TM676	- Sign Attachments
TM677	- Sign Mounts
TM678	- Secondary Sign Mounting Details
TM680	- Signal Pole Mounts
TM681, TM687, TM688	- Perforated Steel Square Tube Sign Supports
TM800	- Tables, Abrupt Edge And PCMS Details
TM810	- Temporary Reflective Pavement Markers
TM820	- Temporary Barricades
TM821	- Temporary Sign Supports
TM830	- Temporary Concrete Barrier And Rumble Strips
TM831	- Temporary Impact Attenuators
TM840	- Closure Details
TM841, TM842, TM843	- Intersection Details
TM844	- Temporary Pedestrian Access Routing
TM851, TM852	- Non-Freeway Multi-Lane Sections

Standard Drawings located on the web at:
http://www.oregon.gov/ODOT/HWY/ENGSERVICES/standard_drawings_home.shtml

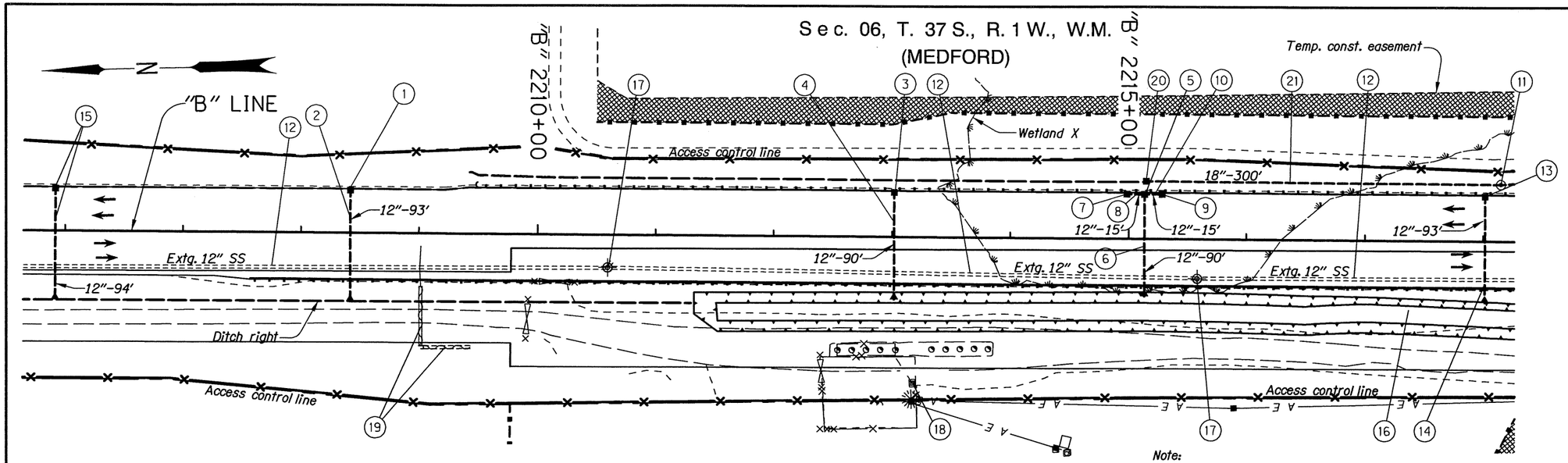
No.	DATE	REVISIONS	BY
1	1-27-16	Added std. drawing nos.	S.A.P.
2	2-16-17	Added std. drawing no.	S.A.P.

OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION		1A-3

49V-019

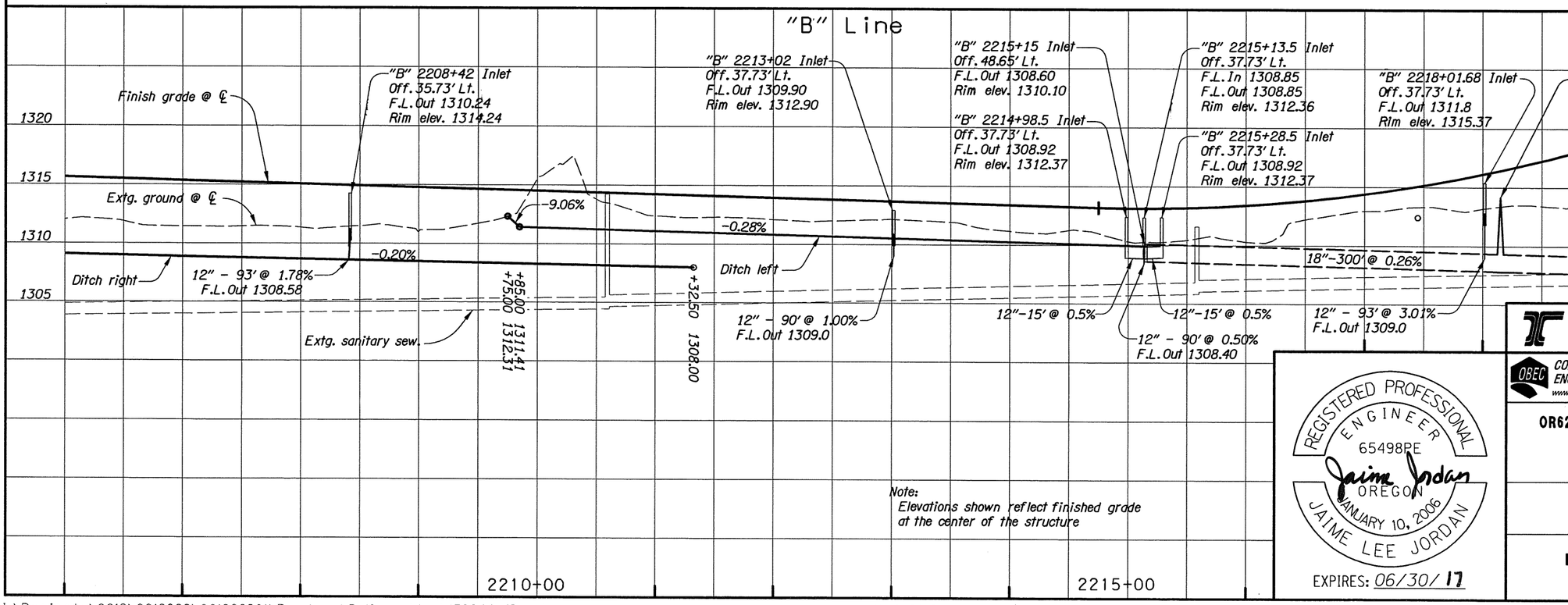
Sec. 06, T. 37 S., R. 1 W., W.M.
(MEDFORD)



Note:
1. All dimensions are in feet, unless otherwise noted

2. Sta. and offset notes reference center of structures

3. Protect all telephone pedestals unless otherwise shown.



Note:
Elevations shown reflect finished grade at the center of the structure

REGISTERED PROFESSIONAL ENGINEER
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Jaime Jordan
OREGON
JANUARY 10, 2006
JAIME LEE JORDAN
EXPIRES: 06/30/17

OREGON DEPARTMENT OF TRANSPORTATION

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REGIONAL OFFICES:
LAKE OSWEGO; SALEM; MEDFORD, OREGON; VANCOUVER, WASHINGTON

OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

Designed By - Jaime Jordan
Checked By - Ben Wewerka
Drafted By - S. Wolfer

DRAINAGE, UTILITIES & PROFILE

SHEET NO. 4B

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(1) *Sta. "B" 2208+41.68, 35.73' Lt.*
Const. Type "G-2" inlet

(2) *Sta. "B" 2208+41.68, 35.73' Lt. to*
Sta. "B" 2208+41.68, 57.67' Rt.
Inst. 12" storm sew. pipe - 93'
5' depth
Const. sloped end
Const. paved end slope - 26 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yd.
Riprap geotextile (Type 1) - 3 sq. yd.

(3) *Sta. "B" 2213+01.68, 37.73' Lt.*
Const. Type "G-2" inlet

(4) *Sta. "B" 2213+01.68, 37.73' Lt. to*
Sta. "B" 2213+01.68, 52.54' Rt.
Inst. 12" storm sew. pipe - 90'
5' depth
Const. sloped end
Const. paved end slope - 26 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yd.
Riprap geotextile (Type 1) - 3 sq. yd.

(5) *Sta. "B" 2215+13.5, 37.73' Lt.*
Const. Type "G-2" inlet

(6) *Sta. "B" 2215+13.5, 37.73' Lt. to*
Sta. "B" 2215+13.5, 52.67' Rt.
Inst. 12" storm sew. pipe - 90'
5' depth
Const. sloped end
Const. paved end slope - 26 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yd.
Riprap geotextile (Type 1) - 3 sq. yd.

(7) *Sta. "B" 2214+98.5, 37.73' Lt.*
Const. Type "G-2" inlet

(8) *Sta. "B" 2214+98.5, 37.73' Lt. to*
Sta. "B" 2215+13.5, 37.73' Lt.
Inst. 12" storm sew. pipe - 15'
5' depth

(9) *Sta. "B" 2215+28.5, 37.73' Lt.*
Const. Type "G-2" inlet

(10) *Sta. "B" 2215+28.5, 37.73' Lt. to*
Sta. "B" 2215+13.5, 37.73' Lt.
Inst. 12" storm sew. pipe - 15'
5' depth

(11) *Sta. "B" 2218+15.00, 48' Lt.*
Const. 48" storm sew. manhole
(See dwg. nos. RD335, RD336, RD344, RD345 & RD356)

(12) *Abandon and relocate sanitary sewer*
(By others)

(13) *Sta. "B" 2218+01.68, 37.73' Lt.*
Const. type "G-2" inlet

(14) *Sta. "B" 2218+01.68, 37.73' Lt. to*
Sta. "B" 2218+01.68, 54.97' Rt.
Inst. 12" storm sew. pipe - 93'
5' depth
Const. sloped end
Const. paved end slope - 26 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yd.
Riprap geotextile (Type 1) - 3 sq. yd.

(15) *See sht. 3B, notes 10 & 11*

(16) *Const. north bioretention pond (D00834)*
(For details, see sht. GE-2)

(17) *Abandon manhole*
(By others)

(18) *Remove utility pole*

(19) *Remove pipe - 90'*

(20) *Sta. "B" 2215+15.00, 48.65' Lt.*
Const. type "D" inlet
(See dwg. no. RD370)

(21) *Sta. "B" 2215+15, 48.65' Lt. to*
Sta. "B" 2218+15, 48' Lt.
Inst. 18" storm sew. pipe - 300'
10' depth

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OREGON
JANUARY 10, 2006
JAIME LEE JORDAN
EXPIRES: 06/30/17

OREGON DEPARTMENT OF TRANSPORTATION

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OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

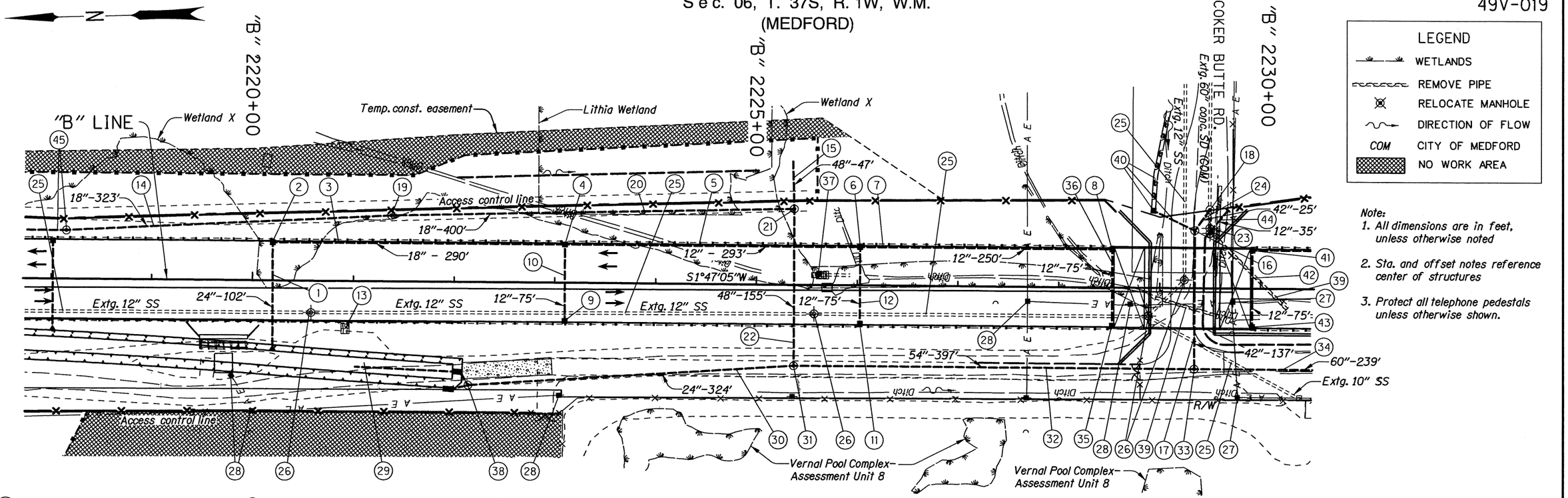
Designed By - Jaime Jordan
Checked By - Ben Wewerka
Drafted By - S. Wolfer

DRAINAGE NOTES

SHEET NO. 4C

49V-019

Sec. 06, T. 37S, R. 1W, W.M.
(MEDFORD)



LEGEND

- WETLANDS
- REMOVE PIPE
- RELOCATE MANHOLE
- DIRECTION OF FLOW
- COM CITY OF MEDFORD
- NO WORK AREA

Note:
1. All dimensions are in feet, unless otherwise noted
2. Sta. and offset notes reference center of structures
3. Protect all telephone pedestals unless otherwise shown.

(1) Sta. "B" 2220+20.00, 37.73' Lt. to Sta. "B" 2220+20.00, 63.70' Rt.
Inst. 24" storm sew. pipe – 102'
10' depth
Const. sloped end
Const. paved end slope – 30 Sq. Ft.
Const. riprap (Class 100) – 3 cu. yds.
Riprap geotextile (Type 1) – 6 sq. yds.

(2) Sta. "B" 2220+20.00, 37.73' Lt.
Const. type "G-2" inlet

(3) Sta. "B" 2220+20.00, 37.73' Lt. to Sta. "B" 2223+10.00, 37.73 Lt.
Inst. 18" storm sew. pipe – 290'
5' depth

(4) Sta. "B" 2223+10.00, 37.73' Lt.
Const. type "G-2" inlet

(5) Sta. "B" 2223+10.00, 37.73' Lt. to Sta. "B" 2226+03.00, 37.73' Lt.
Inst. 12" storm sew. pipe – 293'
5' depth

(6) Sta. "B" 2226+03.00, 37.73' Lt.
Const. type "G-2" inlet

(7) Sta. "B" 2226+03.00, 37.73' Lt. to Sta. "B" 2228+52.50, 37.73' Lt.
Inst. 12" storm sew. pipe – 250'
5' depth

(8) Sta. "B" 2228+52.50, 37.73' Lt.
Const. type "G-2" inlet

(9) Sta. "B" 2223+10, 37.73' Rt.
Const. type "G-2" inlet

(10) Sta. "B" 2223+10, 37.73' Lt. to Sta. "B" 2223+10, 37.73' Rt.
Inst. 12" storm sew. pipe – 75'
5' depth

(11) Sta. "B" 2226+03, 37.73' Rt.
Const. type "G-2" inlet

(12) Sta. "B" 2226+03, 37.73' Lt. to Sta. "B" 2226+03, 37.73' Rt.
Inst. 12" storm sew. pipe – 75'
5' depth

(13) Sta. "B" 2220+90, Rt.
Inst. slope protection
Class 50 riprap – 5 cu. yds.
Riprap geotextile (Type 2) – 15 yds.
(For details, see sht. GE-8)

(14) Sta. "B" 2218+15, 48' Lt. to Sta. "B" 2221+37.35, 65' Lt.
Inst. 18" storm sew. pipe – 323'
10' depth

(15) Sta. "B" 2225+37.35, 121.6' Lt. to Sta. "B" 2225+37.35, 75' Lt.
Inst. 48" storm sew. pipe – 47'
10' depth

(16) Sta. "B" 2229+34.62, 57' Lt.
Const. 72" storm sew. manhole
(See dwg. no. RD346)

(17) Sta. "B" 2229+34.62, 57' Lt. to Sta. "B" 2229+34.62, 80.00' Rt.
Inst. 42" storm sew. pipe – 137'
10' depth

(18) Sta. "B" 2229+49.47, 77.53'
Const. flow control manhole, 84"
(For details, see sht. GE-7)

(19) Sta. "B" 2221+37.35, 65' Lt.
Const. 48" storm sew. manhole

(20) Sta. "B" 2221+37.35, 65' Lt. to Sta. "B" 2225+37.35, 75' Lt.
Inst. 18" storm sew. pipe – 400'
10' depth

(21) Sta. "B" 2225+37.35, 75' Lt.
Const. 84" storm sew. manhole

(22) Sta. "B" 2225+37.35, 75' Lt. to Sta. "B" 2225+37.35, 80' Lt.
Inst. 48" storm sew. pipe 155'
10' depth

(23) Sta. "B" 2229+49.46, 56.81' Lt.
Remove manhole

(24) Sta. "B" 2229+49.47, 77.53' Lt. to Sta. "B" 2229+34.62, 57' Lt.
Inst. 42" storm sew. pipe – 25'
10' depth
Connect to extg. storm sew. manhole

(25) Abandon and relocate sanitary sewer
(By others)

(26) Abandon manhole
(By others)

(27) Remove utility pole
(By others)

(28) Remove utility pole – 5

(29) See sht. 4B, note 16

(30) Sta. "B" 2222+14.18, 102.2' Rt. to Sta. "B" 2225+37.35, 80' Rt.
Inst. 24" storm sew. pipe – 324'
20' depth

(31) Sta. "B" 2225+37.35, 80' Rt.
Const. 96" storm sew. manhole

(32) Sta. "B" 2225+37, 80' Rt. to Sta. "B" 2229+34.62, 80' Rt.
Inst. 54" storm sew. pipe – 397'
20' depth

(33) Sta. "B" 2229+34.62, 80' Rt.
Const. 96" storm sew. manhole

(34) Sta. "B" 2229+34.62, 80' Rt. to Sta. "B" 2231+73.32, 80' Rt.
Inst. 60" storm sew. pipe – 239'
20' depth

(35) Sta. "B" 2228+52.50, 37.73' Rt.
Const. type "G-2" inlet

(36) Sta. "B" 2228+52.50, 37.73' Lt. to Sta. "B" 2228+52.50, 37.73' Rt.
Inst. 12" storm sew. pipe – 75'
5' depth

(37) Outlet control system to be removed

(38) North pond outlet control
(For details, see sht. GE-2)

(39) Remove pipe – 169'

(40) Const. water quality swale (CBS)
(For details, see sht. GE-5)

(41) Sta. "B" 2229+91.82, 37.73' Lt.
Const. type "G-2" inlet

(42) Sta. "B" 2229+91.82, 37.73' Rt. to Sta. "B" 2229+91.82, 37.73' Lt.
Inst. 12" storm sew. pipe – 75'
5' depth

(43) Sta. "B" 2229+91.82, 37.73' Rt.
Const. type "G-2" inlet

(44) Sta. "B" 2229+67.32, 77.10' Lt. to Sta. "B" 2229+44.7, 50' Lt.
Inst. 12" culv. pipe – 35'
5' depth
Const. sloped ends – 2

(45) See Sht. 4B, note 11 and note 21

REGISTERED PROFESSIONAL ENGINEER
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Jaime Jordan
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JANUARY 10, 2006
JAIME LEE JORDAN
EXPIRES: 06/30/17

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OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

Designed By - Jaime Jordan
Checked By - Ben Wewerka
Drafted By - S. Wolfer

DRAINAGE & UTILITIES

SHEET NO. 5B

49V-019

"B" LINE

"B" 2220+20 Inlet
Off. 37.73' Lt.
F.L. In 1317.69
F.L. Out 1317.59
Rim elev. 1321.69

"B" 2223+10 Inlet
Off. 37.73' Rt.
F.L. Out 1326.99
Rim elev. 1330.52

"B" 2223+10 Inlet
Off. 37.73' Lt.
F.L. In 1327.62
F.L. Out 1326.52
Rim elev. 1330.52

"B" 2226+03 Inlet
Off. 37.73' Rt.
F.L. Out 1332.48
Rim elev. 1335.98

"B" 2226+03 Inlet
Off. 37.73' Lt.
F.L. In 1332.11
F.L. Out 1332.01
Rim elev. 1336.01

"B" 2228+52.50 Inlet
Off. 37.73' Rt.
F.L. Out 1334.31
Rim elev. 1337.85

"B" 2228+52.50 Inlet
Off. 37.73' Lt.
F.L. Out 1333.85
Rim elev. 1337.85

"B" 2229+91.82 Inlet
Off. 37.73' Rt.
F.L. Out 1334.34
Rim elev. 1337.84

"B" 2229+91.82 Inlet
Off. 37.73' Lt.
F.L. In 1333.97
F.L. Out 1333.87
Rim elev. 1337.84

Structure no. 21643

Profile grade @ ℄

12"-293' @ 1.86%

12"-250' @ 0.70%

12"-75' @ 0.5%

12"-75' @ 0.5%

12"-75' @ 0.5%

12"-250' @ 0.70%

18"-290' @ 3.07%

12"-75' @ 0.5%

"B" 2225+37 Manhole
Off. 75' Lt.
F.L. In 1305.94 (N)
F.L. In 1306.13 (E)
F.L. Out 1305.93 (W)
Rim elev. 1315.96

"B" 2229+35 Manhole
Off. 57' Lt.
F.L. In 1310.35 (SE)
F.L. In 1313.93 (NE)
F.L. Out 1310.15
Rim elev. 1317.32

"B" 2229+49 Manhole
Off. 77.53' Lt.
F.L. In 1310.86 (E)
F.L. Out 1310.47 (NW)
Rim elev. 1317.5

24"-102'
@ 6.46%

F.L. Out 1311.00

"B" 2221+37.35 Manhole
Off. 65' Lt.
F.L. In 1306.98
F.L. Out 1306.98
Rim elev. 1315.96

48" - 47' @ 7.09%

"B" 2225+37, 121.6' Lt.
F.L. Out 1309.46

"B" 2229+44.7
Off. 50' Lt.
F.L. Out 1314.35

"B" 2229+67.32
Off. 77.10' Lt.
F.L. In 1314.53

Ground line @ ℄

12"-35' @ 0.50%

42"-25' @ 0.5%

42"-137'
@ 2.74%

48" - 155'
@ 0.5%

18" - 400' @ 026%

18" - 323' @ 0.26%

North Pond outlet control
F.L. Out 1305.87

24" - 324' @ 0.22%

Extg. sanitary sew.

54" - 397' @ 0.20%

60" - 239' @ 0.20%

"B" 2225+37 Manhole
Off. 80' Rt.
F.L. In 1305.15
F.L. Out 1305.15
Rim elev. 1319.60

"B" 2229+35 Manhole
Off. 80' Rt.
F.L. In 1304.36 (N)
F.L. In 1306.40 (E)
F.L. Out 1304.36 (S)
Rim elev. 1315.18

1345
1340
1335
1330
1325
1320
1315
1310
1305

2220+00
2225+00
2230+00

REGISTERED PROFESSIONAL ENGINEER
65498PE
Jaime Jordan
OREGON
JANUARY 10, 2006
JAIME LEE JORDAN
EXPIRES: 06/30/17

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OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

Designed By - Jaime Jordan
Checked By - Ben Wewerka
Drafted By - S. Wolfer

DRAINAGE & UTILITIES PROFILE

SHEET NO. 5C

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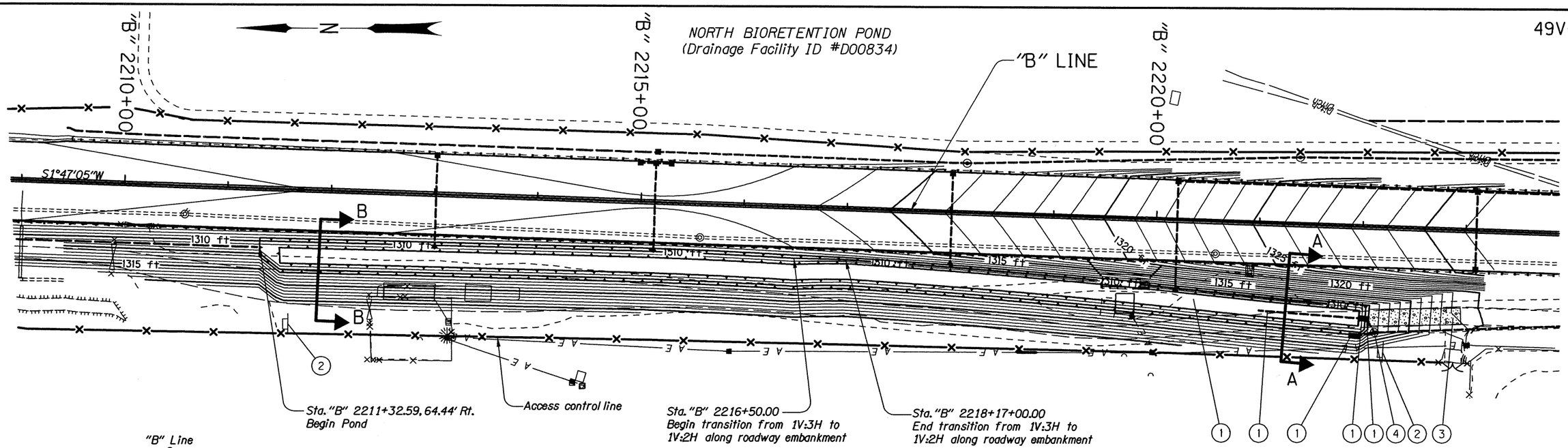
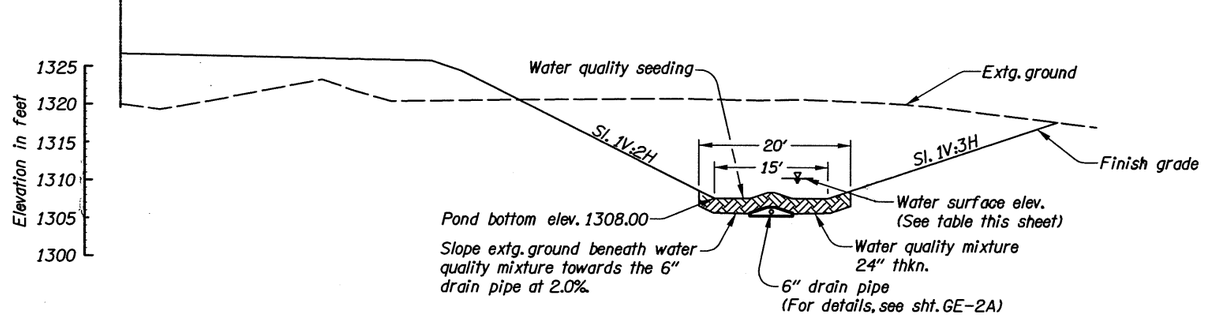
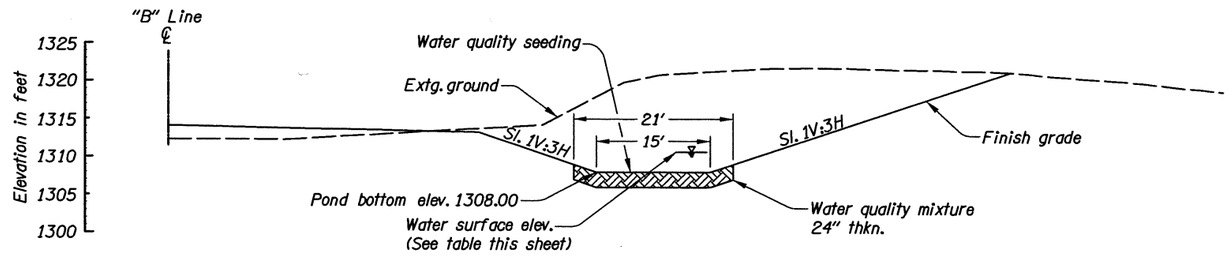
49V-019





SECTION A-A VIEW
1" = 20'



SECTION B-B VIEW

1. Const. bioretention pond, DFI# D00834
(For details, see sht. GE-2A & GE-2B)

2. Inst. facility field markers, type S2 - 2
(See drg. no. RD399)

3. Const. maintenance access road
Agg. base - 100 tons
Subgrade geotextile - 160 sq. yd.

4. Sta. "B" 2222+14.18, 102.17' Rt.
Const. manhole, 72" dia.

POND STORAGE DATA		
STORM EVENT	WATER SURFACE ELEVATION	STORAGE VOLUME
Water Quality	1308.91'	0.39 Ac-Ft
2 Year	1310.22'	1.15 Ac-Ft
10 Year	1310.43'	1.30 Ac-Ft
50 Year	1310.66'	1.47 Ac-Ft

Note:
1. Elevations shown are based on NAVD 1988 datum.
2. All dimensions shown are in feet unless otherwise noted.
3. Contour intervals shown at 1 ft. increments.
4. Apply water quality seed mix to the entire pond surface area.

REGISTERED PROFESSIONAL ENGINEER
79131
OREGON
JUNE 14, 2007
BENJAMIN P. WEWERKA
EXPIRES: 06/30/16

OREGON DEPARTMENT OF TRANSPORTATION

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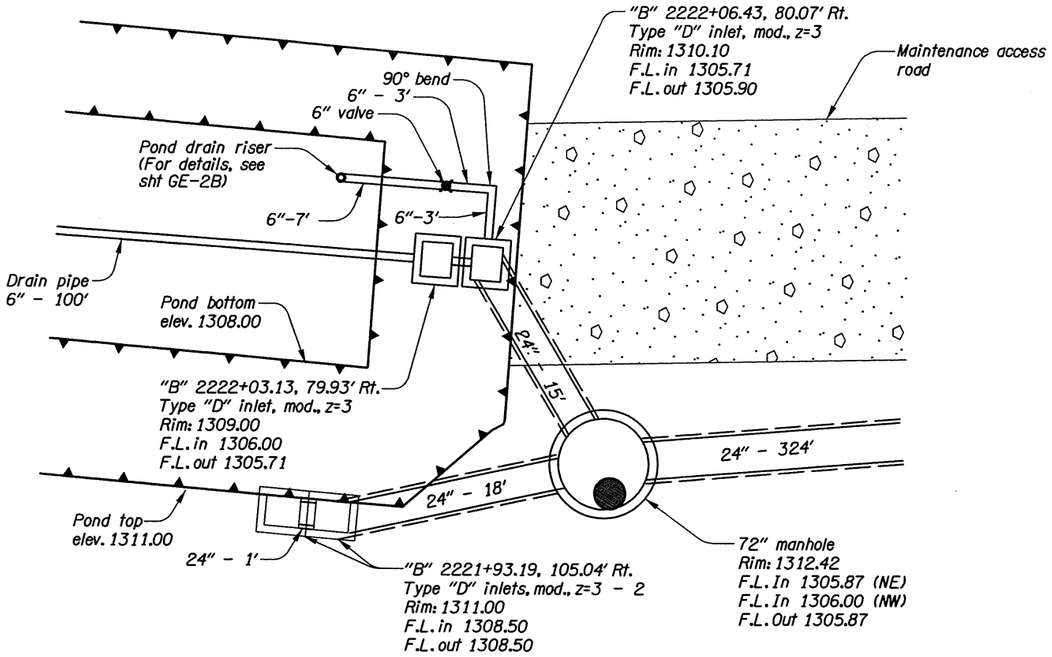
OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)
CRATER LAKE HIGHWAY
JACKSON COUNTY

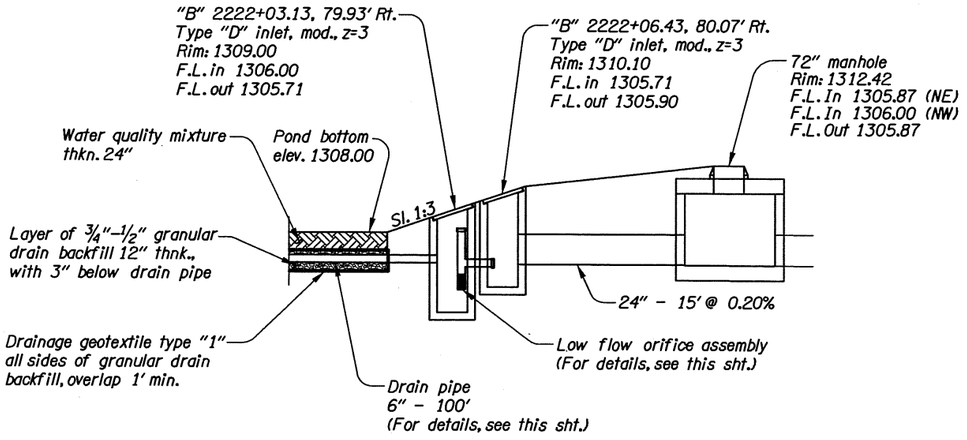
Designed By - Ben Wewerka
Checked By - Amy Jones
Drafted By - S. Wolfer

DRAINAGE PLAN

SHEET NO.
GE-2

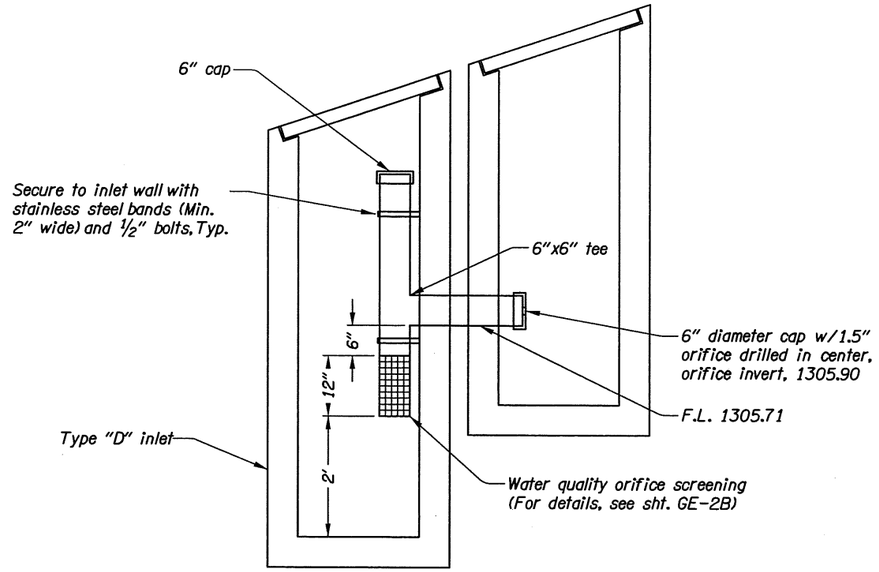


PLAN

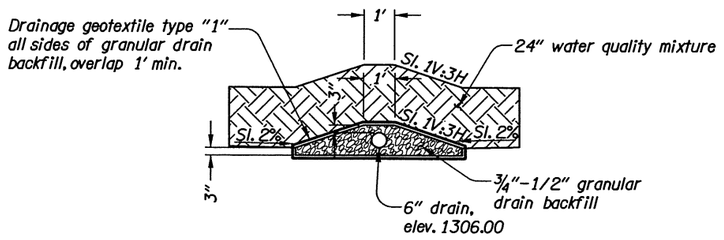


SECTION

OUTFALL STRUCTURE DETAIL



LOW FLOW ORIFICE ASSEMBLY



DRAIN PIPE DETAIL

OREGON DEPARTMENT OF TRANSPORTATION

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REGISTERED PROFESSIONAL ENGINEER
79131
OREGON
JUNE 14, 2007
BENJAMIN P. WEWERKA

EXPIRES: 06/30/16

OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)

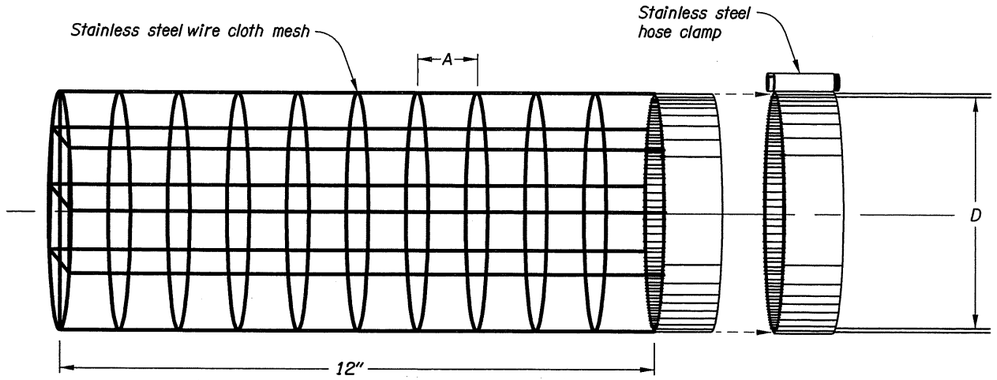
CRATER LAKE HIGHWAY

JACKSON COUNTY

Designed By - Ben Wewerka
Checked By - Amy Jones
Drafted By - S. Wolfer

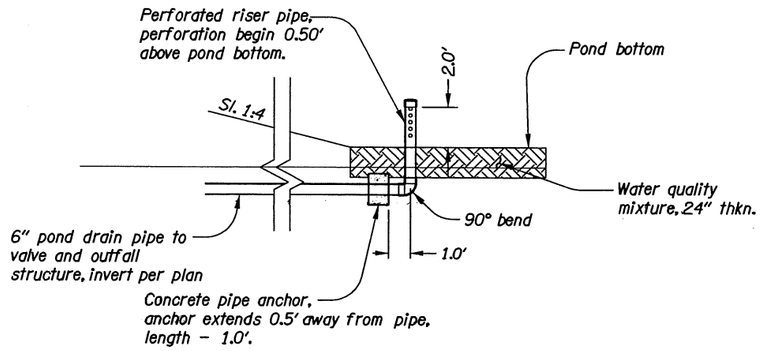
DETAILS

SHEET NO. GE-2A

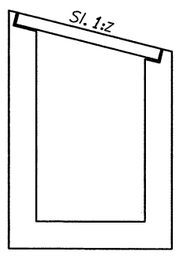


Facility	Riser Diameter (D)	Max. Opening Size (A)
D00834	6"	1"
D00835	6"	2"

WATER QUALITY ORIFICE SCREENING



POND DRAIN DETAIL



Notes:
For "z" see construction notes on plan views.
For details not shown see RD370.

MODIFIED TYPE "D" INLET

REGISTERED PROFESSIONAL ENGINEER
79131
OREGON
JUNE 14, 2007
BENJAMIN P. WEWERKA
EXPIRES: 06/30/16

OREGON DEPARTMENT OF TRANSPORTATION

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REGIONAL OFFICES:
LAKE OSWEGO; SALEM; MEDFORD, OREGON; VANCOUVER, WASHINGTON

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SHEET NO.
GE-2B