# OPERATION & MAINTENANCE MANUAL

## DFI No.: D00835
## Facility Type: Water Quality
## Bioretention Pond

**November, 2018**

**INDEX**

## 1. Identification

| | |
|---|---|
| Drainage Facility ID (DFI): | **D00835** |
| Facility Type: | Water Quality Bioretention Pond |
| Construction Drawings: | 49V-019 |
| Location: | District: 08 |
| | Highway No.: 022 |
| | Mile Post: 2.37; 2.51 (beg./end) |
| | Description: This facility is located along the east side of the OR 62 Expressway to the south of the Coker Butte Rd. overpass. Access is located via the OR 62 Expressway. |

## 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 east side of the OR 62 Expressway to the south of the Coker Butte Rd. overpass. The drainage is collected by a series of inlets and conveyed to the facility by multiple 12-inch storm pipes. Drainage from ditches to the south is also conveyed to the pond by a 42-inch storm pipe. 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 by a gate located along the east side of the OR 62 Expressway.

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

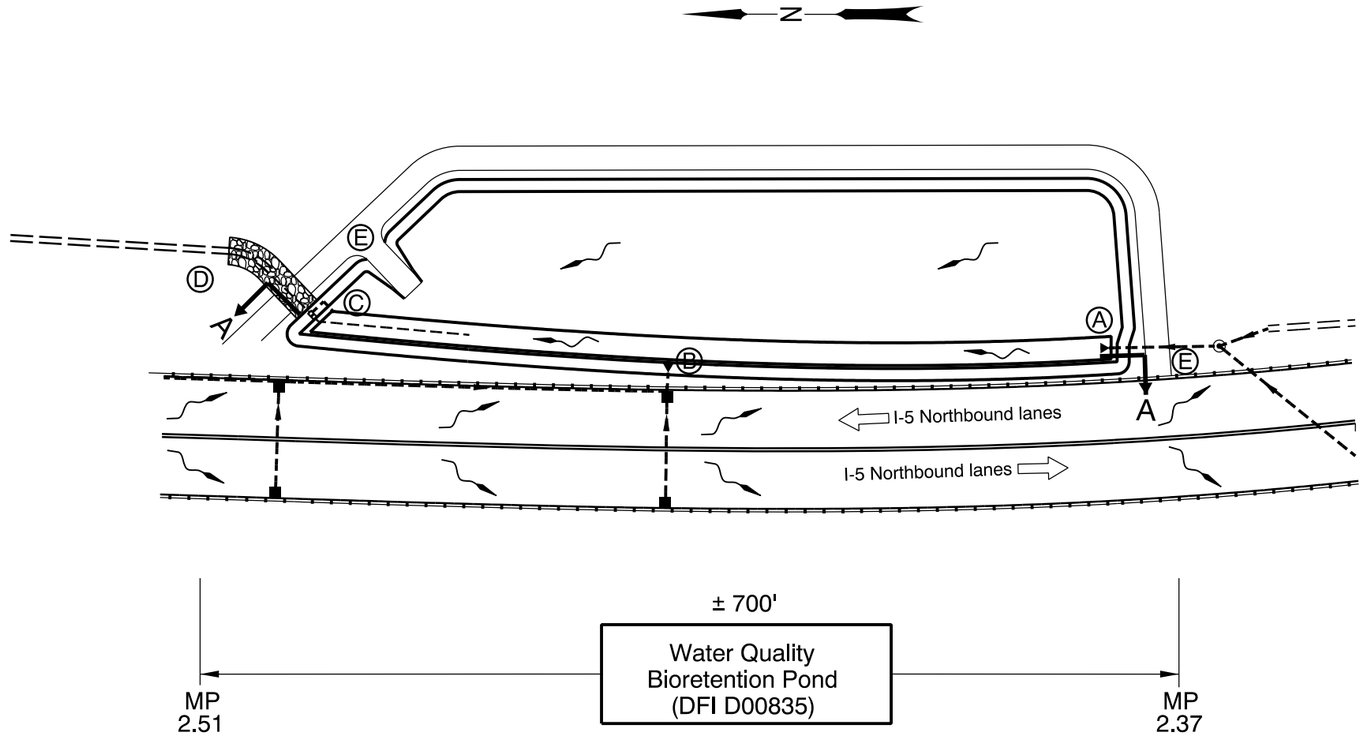
Contact any of the following for more detailed information about management of waste materials found on site:

| | |
|---|---|
| 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 |

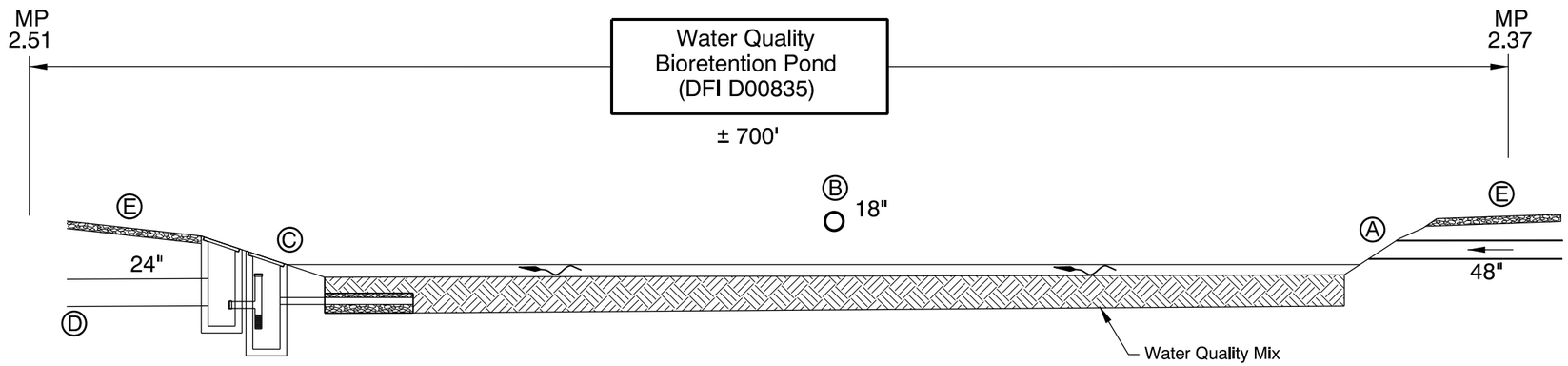
# Appendix A

**Content:**

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




*PLAN*
*N.T.S.*




*PROFILE*
*N.T.S.*

LEGEND:

- (A)-(B) Pond Inlet
- (C) Pond Outlet
- (D) Outfall
- (E) Maintenance Access
- ◉ and/or ◎ Manhole
- ■ and/or □ Inlet
- ---- Storm Pipe (Facility)
- ---- Storm Pipe
- ← Conveyance Direction
- ~ Pavement / Facility Flow Path

OREGON DEPARTMENT OF TRANSPORTATION

Prepared By: J. GONZALEZ

Drafted By: J. GONZALEZ

**DFI D00835**
**MAINTENANCE DISTRICT 08 HWY 022**
**WATER QUALITY BIORETENTION POND**
HIGHWAY MP 2.37 TO 2.51
JACKSON

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# Appendix B

**Content:**

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

49V-019

| INDEX OF SHEETS | |
|---|---|
| SHEET NO. | DESCRIPTION |
| 1 | Title Sheet |
| 1A | Index Of Sheets Cont'd. |

STATE OF OREGON

# DEPARTMENT OF TRANSPORTATION

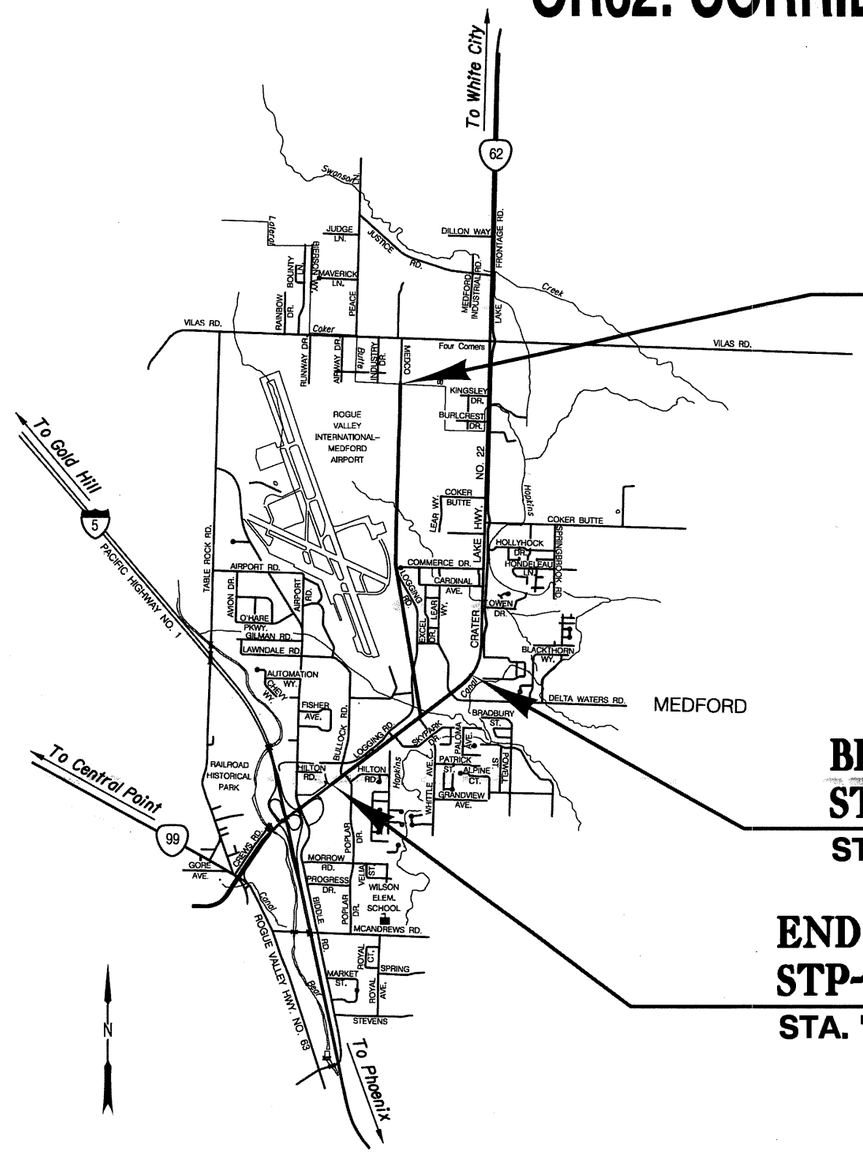
PLANS FOR PROPOSED PROJECT

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

# OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)

## CRATER LAKE HIGHWAY

**JACKSON COUNTY**
**FEBRUARY 2016**

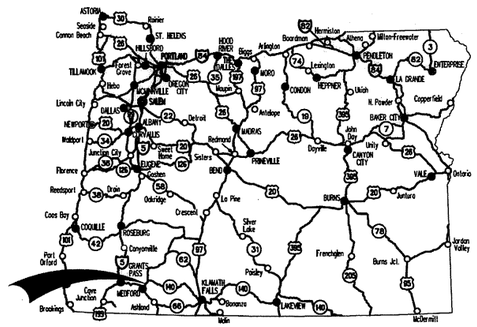



## BEGINNING OF PROJECT
**STP-S022(040)**
**STA. "B" 2197+00 (M.P. 1.69)**

## 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 |

I:\Projects\0019\0019092\001909201\Roadway\Deliverables\13994f_1.tsl 12/16/2015 1:39:55 PM

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| 2C, 2C-2 | Traffic Control Details |
| 2C-3 Thru 2C-5A Incl. | Traffic Control Plan Advance Signing |
| 2C-6 Thru 2C-19 Incl. | Traffic Control Plan |
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| 2C-19B | Traffic Control Plan Temporary Drainage |
| 2C-20, 2C-21 | Traffic Control Plan |
| 2C-21A | Traffic Control Plan Section |
| 2C-21B | Traffic Control Plan Temporary Drainage |
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| 2C-30A | Traffic Control Plan Temporary Drainage |
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| 5 | Alignment And General Construction |
| 5A, 5A-2 | Profiles |
| 5B | Drainage & Utilities |
| 5C | Drainage & Utilities Profile |
| 6 | Alignment And General Construction |
| 6A | Profiles |
| 6B | Drainage & Utilities |
| 6C | Drainage & Utilities Profile |
| 7 | Alignment And General Construction |
| 7A | Profile |
| 7B | Drainage, Utilities & Profile |
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| GE-3A Thru GE-3D Incl. | Details |
| GE-4 | Drainage Plan |
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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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| 95118 | Architectural Wall Treatment |
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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 |

| Std. Drg. Nos. | |
|---|---|
| RD100 | - Mailbox Support |
| RD101 | - Mailbox Installation |
| RD140 | - Roadway Cross Slopes Superelevated Sections |
| RD300 | - Trench Backfill, Bedding, Pipe Zone And Mult. Installations |
| RD302 | - Street Cut |
| RD306 | - Concrete Encasement, Cradle And Cap Details |
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| RD356 | - Manhole Cover & Frames |
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| RD362 | - Sanitary Cleanout |
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| RD700, RD701 | - Curbs |
| RD705 | - Islands |
| RD706 | - Traffic Separators And Transitions |
| RD707 | - Island Nose Treatments |
| RD710 | - Accessible Route Islands |
| RD715 | - Approaches And Non-Sidewalk Driveways |
| RD720 | - Sidewalks |
| 2 RD735 | - Curb Line Sidewalk Driveways or Alleys (Options F and G) ODOT Highways |
| RD750 | - Curb Line Sidewalk Driveways - Local Jurisdictions |
| RD755 | - Sidewalk Ramp Details |
| RD757 | - Sidewalk Ramp Replacement Options |
| RD759 | - Truncated Dome Detectable Warning Surface |
| RD770, RD771 | - Pedestrian Handrail |
| RD810 | - Barbed And Woven Wire Fences |

| Std. Drg. Nos. | |
|---|---|
| RD815 | - Chain Link Fence |
| RD820 | - Fence Gates |
| RD1000 | - Construction Entrances |
| RD1005 | - Check Dams Types 1, 3 & 4 |
| RD1010 | - Inlet Protection Type 2, 3, 6 & 7 |
| RD1015 | - Inlet Protection Type 4 |
| RD1032 | - Sediment Barrier Type 8 |
| BR165 | - Bridge End Panel |
| BR195 | - Bridge ID Marker |
| BR200 | - Concrete Bridge Rail Type "F" |
| BR203 | - Transition Concrete Bridge Rail To Guardrail |
| BR236 | - Trailing End Bridge Connection Conc. Bridge Rail To Guardrail |
| BR240, BR241, BR242, BR260 | - Protective Fencing |
| BR350 | - Temp. Diaphragm Beam For Prestressed Conc. Girders |
| BR420 | - 26" Precast Prestressed Slab |
| BR445 | - Precast Prestressed Boxes & Slabs |
| BR720 | - Standard Gravity Retaining Wall Details |
| BR760 | - Moment Slab On MSE Wall |
| BR800 | - Box Culvert Wingwalls Details |
| BR805 | - Box Culvert Extensions Details |
| BR830 | - Cast-In-Place Conc. Box Culverts |
| BR840, BR841 | - Standard Double Box Culvert Details |
| BR970 | - Luminaire Base On Structures With Mounting Details |
| TM200 | - Sign Installation Details |
| TM201 | - Miscellaneous Sign Placement Details |
| TM211 | - Signing Details US And Interstate Route Shields |
| TM212 | - Signing Details Oregon Route Signs |
| TM221 | - Signing Details Milepost Marker |
| TM222 | - Installation Details Milepost Marker Posts |
| TM223 | - Conventional Roads Directional Sign Layout Name Streets |
| TM224 | - Signing Details Directional Sign Layout |
| TM230, TM231, TM232, TM233 | - Mounting Details For Removable Legend |
| TM301 | - Illumination Control Cabinets |
| TM302 | - Pad-Mount Illumination Control Cabinet |
| TM452 | - Strain Pole Details |
| TM457 | - Vehicle, Ped. Signal & Push Button Mounting Details |
| TM458 | - Pedestrian Ramp Placement Details |
| TM460 | - Vehicle Signal Details |
| TM462 | - Adjustable Signal Head Mounting Details |
| TM463 | - Spanwire Mounting Details |
| TM465 | - Overhead Sign, Fire Preemption & Photoelectronic Details |
| TM467 | - Ped. Signal And Ped. Push Button Details |
| TM470 | - Color Code Charts |
| TM472 | - Traffic Signal Junction Boxes |
| TM475 | - Loop Details |
| TM480 | - Loop Entrance Details |
| TM482 | - Controller Cabinet And Foundation Details |
| TM485 | - Service Cabinets And Service Cabinet Wiring Details |

| Std. Drg. Nos. | |
|---|---|
| TM488 | - Terminal Cabinet Detail |
| TM490 | - Crosswalk Closure Detail |
| TM498 | - Interconnect Wiring Details |
| TM500, TM501, TM502, TM503 | - Pavement Marking Standard Details |
| TM515 | - Raised Pavement Markers |
| TM520, TM521 | - Durable Pavement Markings |
| TM530 | - Intersection Pavement Markings |
| TM531 | - Turn Arrow Marking Details |
| TM539 | - Median And Left Turn Channelization Details |
| 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

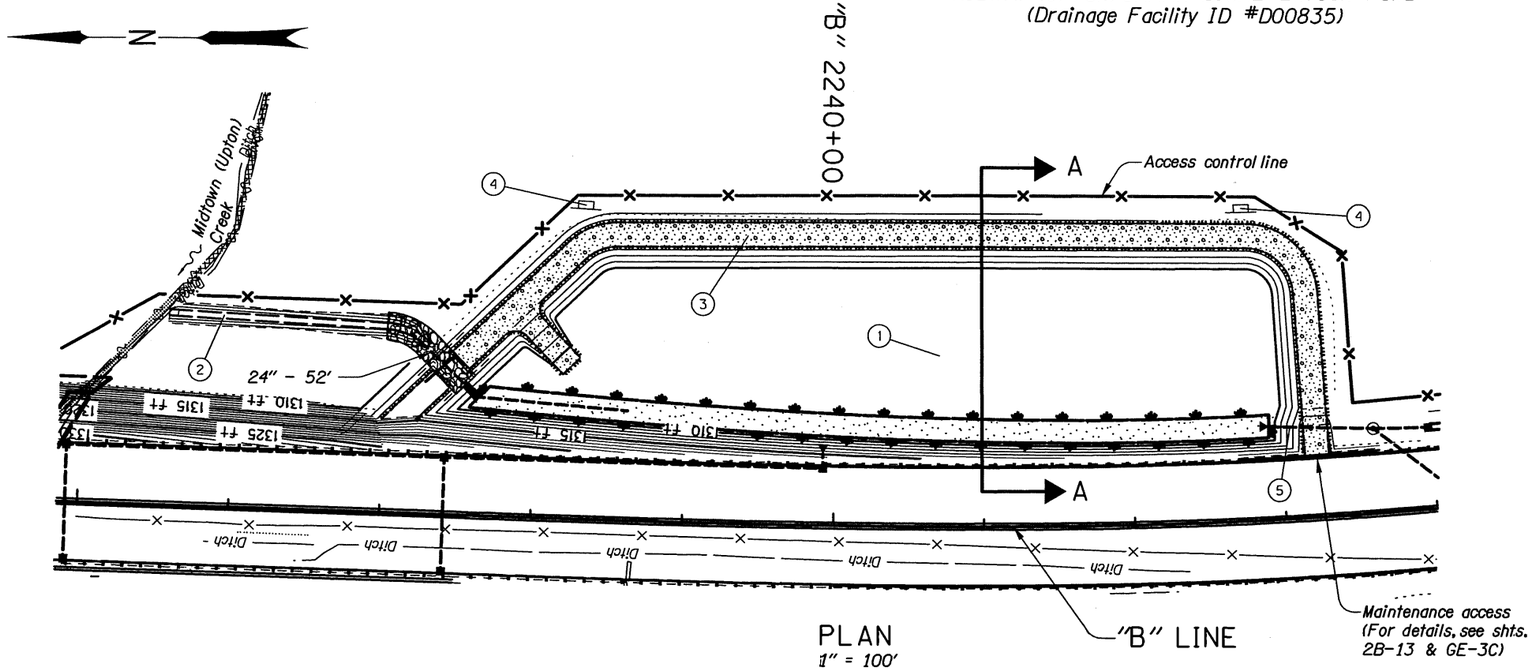
| No. | DATE | REVISIONS | BY |
|---|---|---|---|
| 1 | 1-27-16 | Added std. drawing nos. | S.A.P. |
| 2 | 2-16-17 | Added std. drawing no. | S.A.P. |

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

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

# MIDWAY (UPTON) CREEK BIORETENTION POND
(Drainage Facility ID #D00835)

49V-019




PLAN
1" = 100'

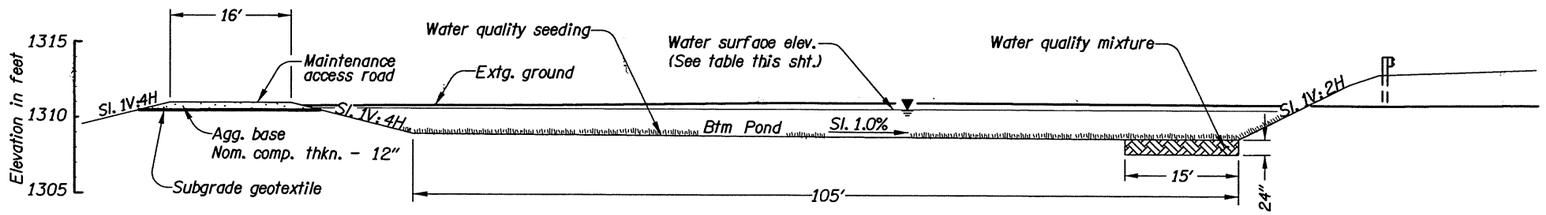
1. Const. Bioretention Pond, DFI #D00835
(For details, see shts. GE-2B, GE-3A, GE-3C, & GE-3D)

2. Const. 4' flat bottom ditch
Ditch excavation - 135 cu. yds.
(For details, see sht. GE-3B)

3. Const. maintenance access road
Agg. base - 1,070 tons
Subgrade geotextile - 2,032 sq. yds.
(For details, see sht. GE-3C)

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

5. See sht. 7B, note 13




SECTION A-A VIEW
1" = 20'

| POND STORAGE DATA | | |
|---|---|---|
| STORM EVENT | WATER SURFACE ELEVATION | STORAGE VOLUME |
| Water Quality | 1310.13' | 1.15 Ac-Ft |
| 2 Year | 1311.24' | 2.66 Ac-Ft |
| 10 Year | 1311.79' | 3.43 Ac-Ft |
| 50 Year | 1312.40' | 4.33 Ac-Ft |

LEGEND
- REGULATED WORK AREA
- NO WORK AREA

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

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-3

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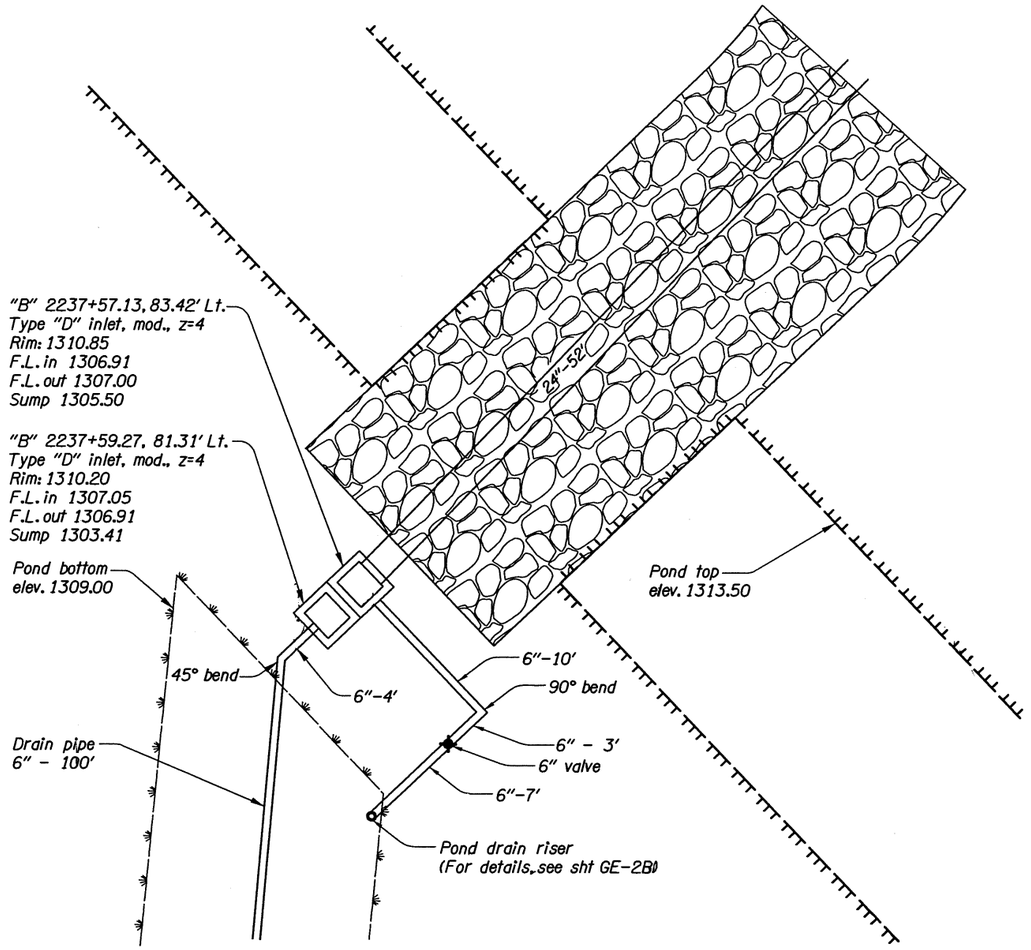
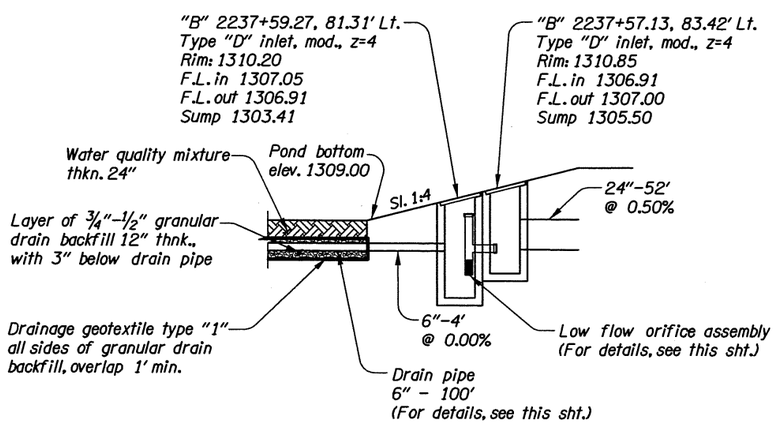


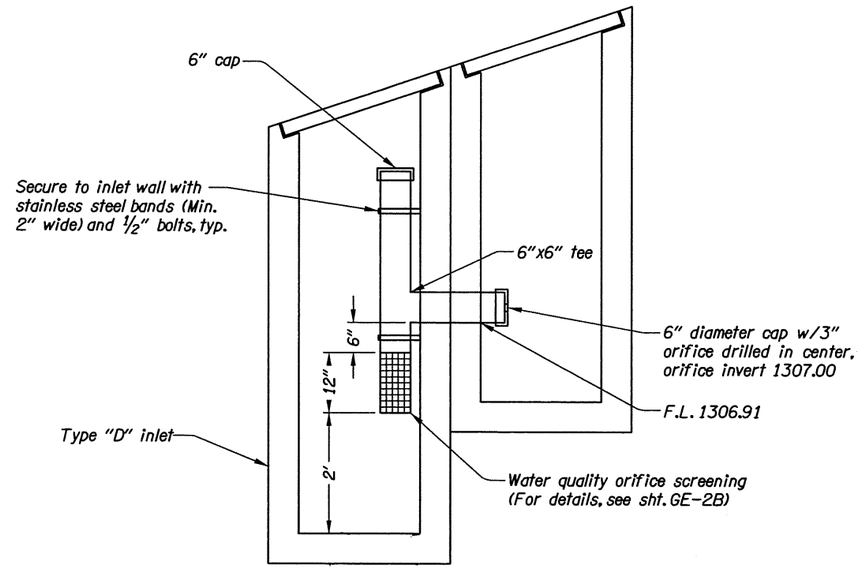

PLAN



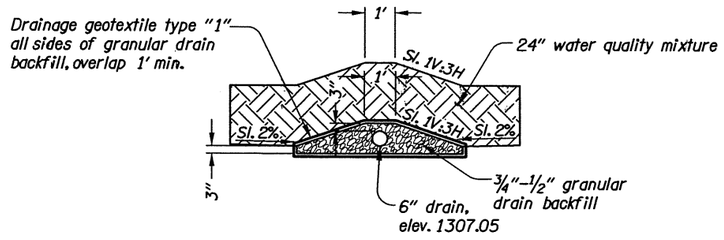

SECTION

OUTFALL STRUCTURE DETAIL

49V-019




LOW FLOW ORIFICE ASSEMBLY




DRAIN PIPE DETAIL

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JUNE 14, 2007
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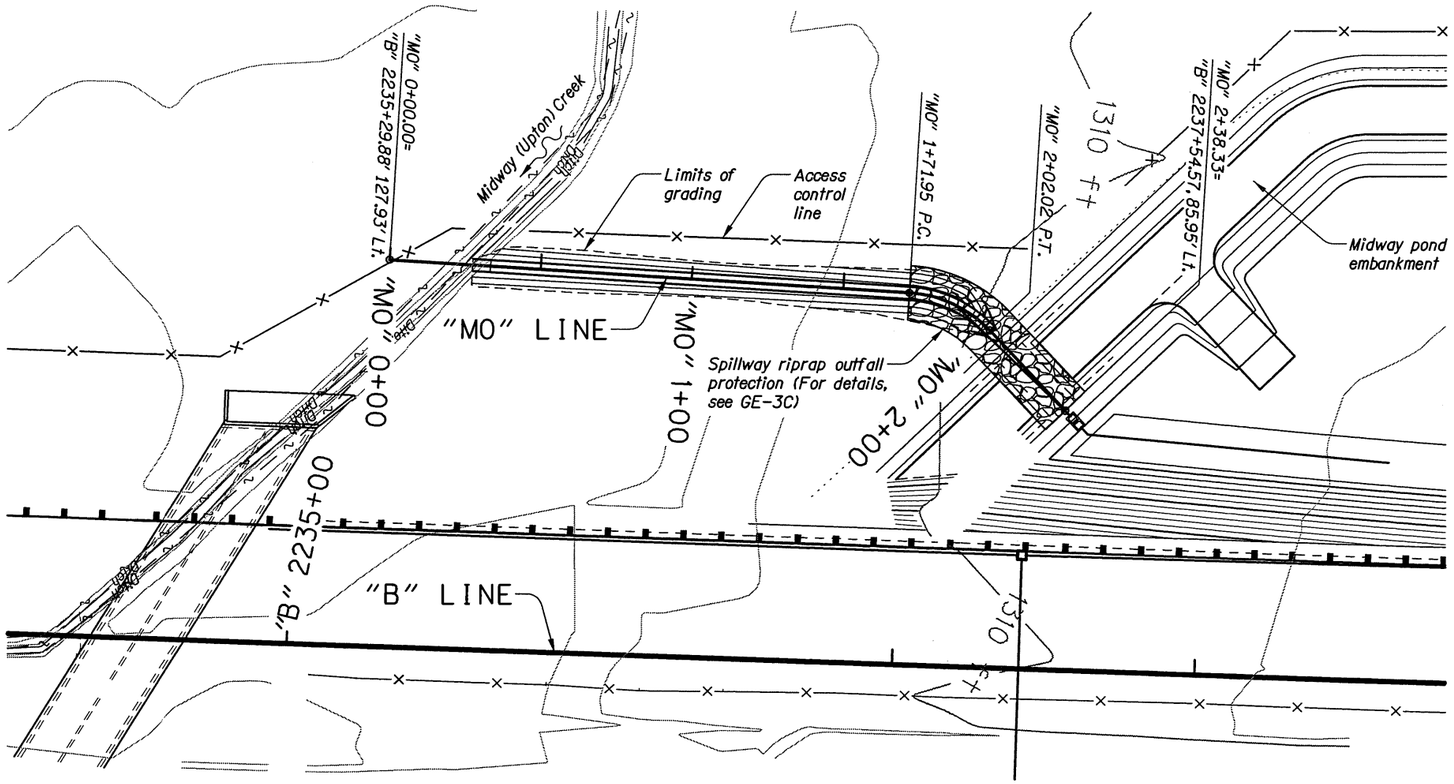
CRATER LAKE HIGHWAY

JACKSON COUNTY

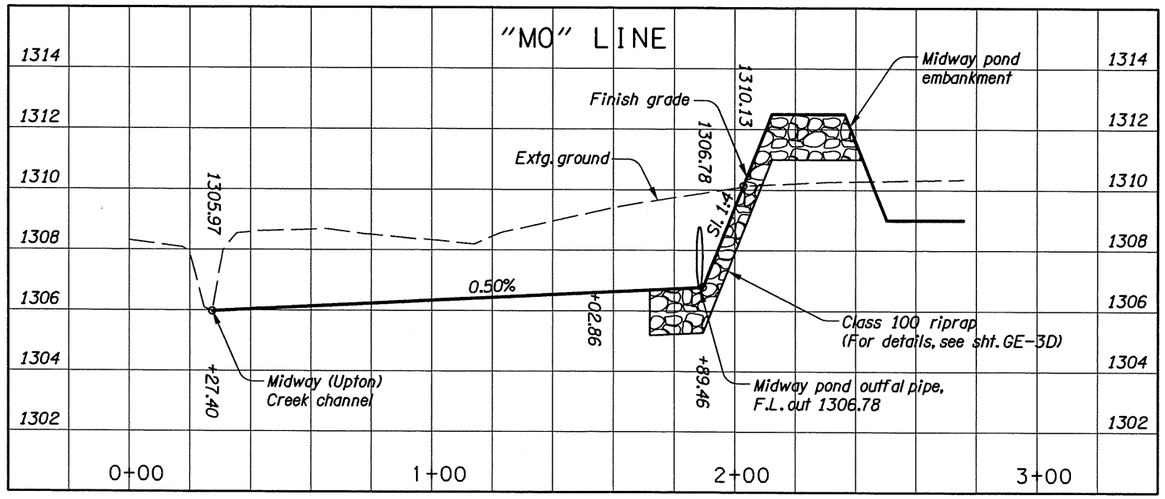
Designed By - Ben Wewerka
Checked By - Amy Jones
Drafted By - S. Wolfer

**DETAILS**

SHEET NO. GE-3A

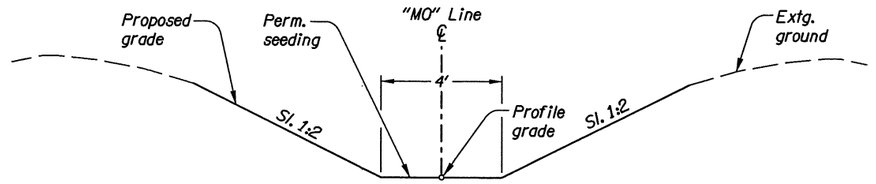



PLAN




PROFILE

## MIDWAY (UPTON) CREEK BIO-RETENTION POND OUTFALL DITCH




## OUTFALL DITCH TYPICAL SECTION

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

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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

**DETAILS**

SHEET NO. GE-3B

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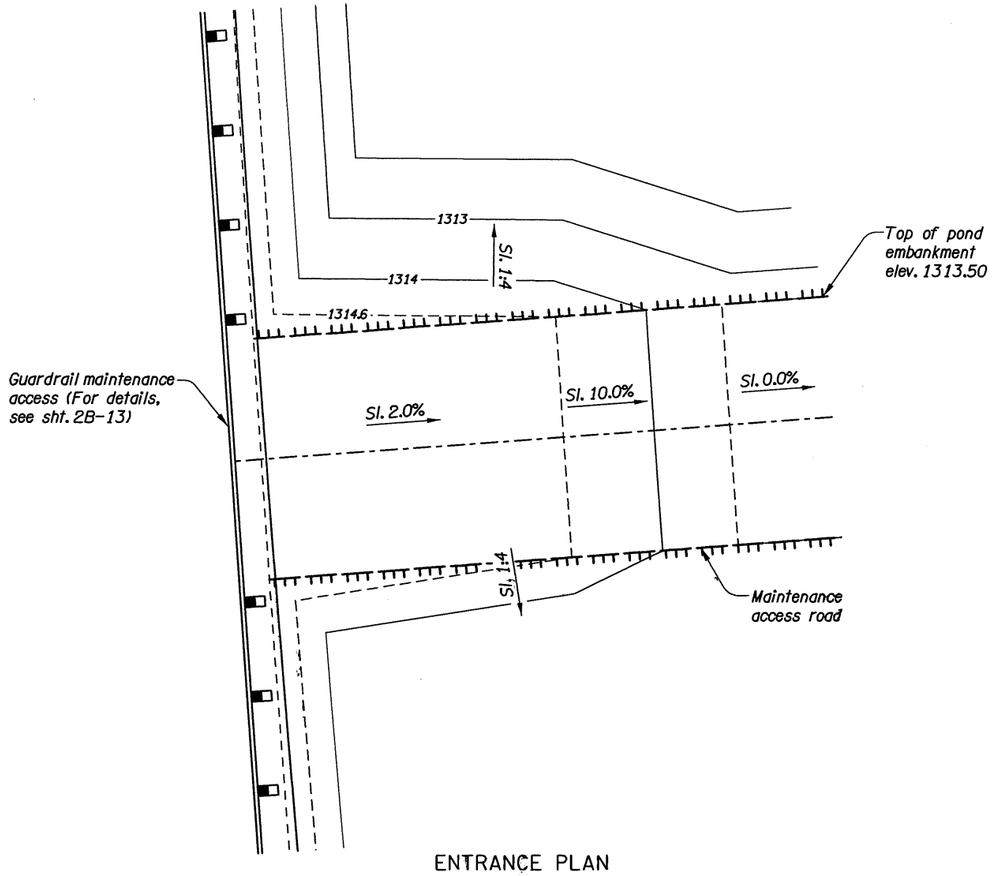
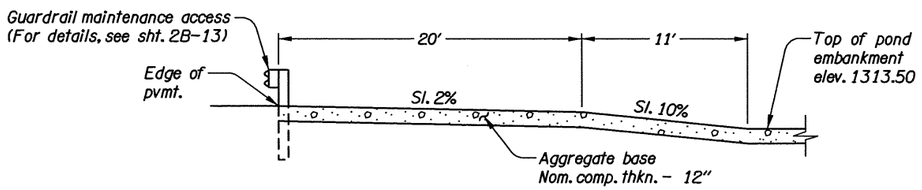
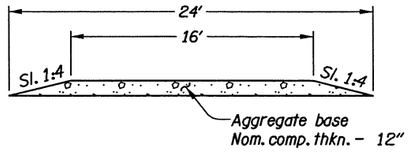
49V-019



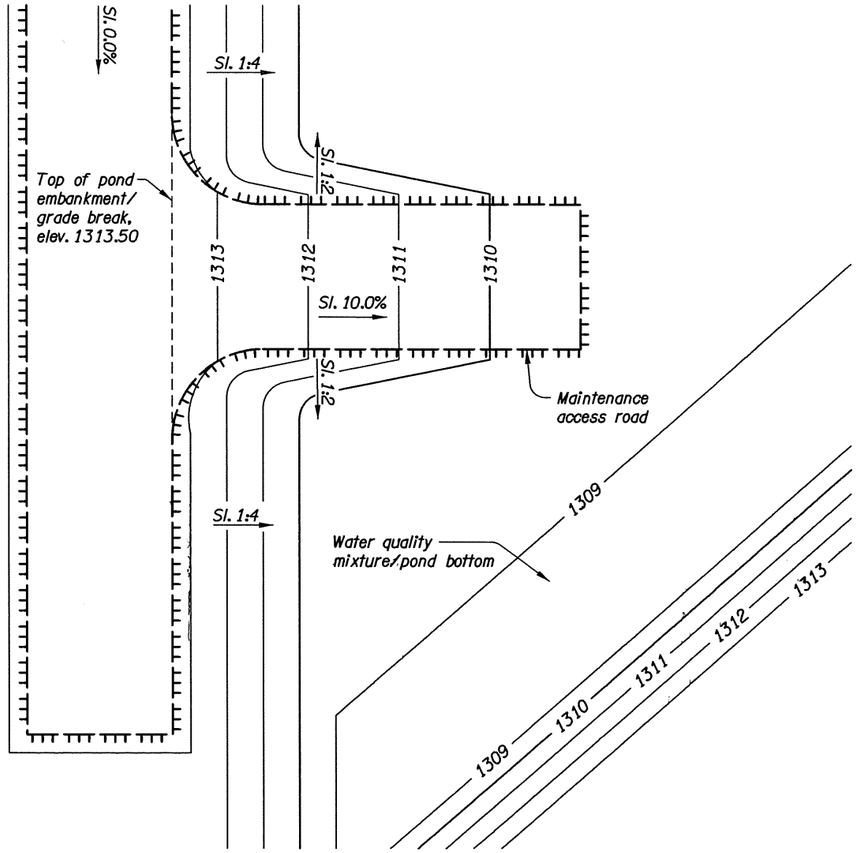

ENTRANCE PLAN




ENTRANCE PROFILE




TYPICAL SECTION




POND BOTTOM ACCESS PLAN

# MIDWAY POND MAINTENANCE ACCESS DETAIL

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

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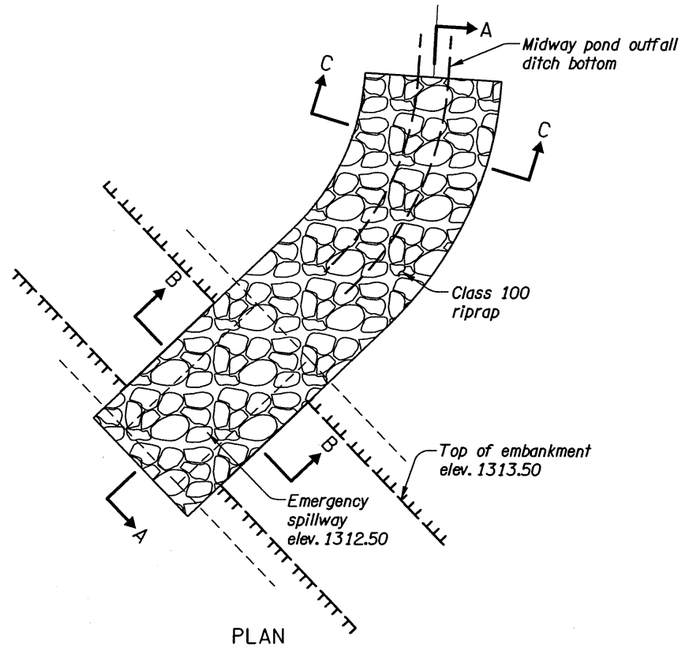
**OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)**
CRATER LAKE HIGHWAY
JACKSON COUNTY

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

**DETAILS**

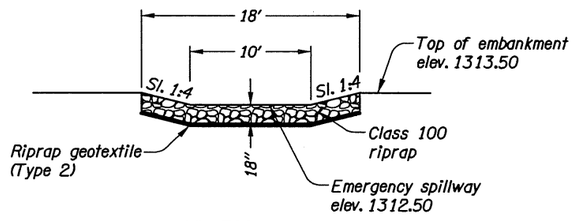
SHEET NO. GE-3C

49V-019

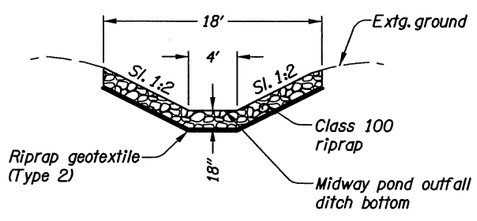



PLAN


SECTION A-A




SECTION B-B




SECTION C-C

# MIDWAY POND RIPRAP DETAIL

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

EXPIRES: 06/30/16

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**OR62: CORRIDOR SOLUTIONS UNIT 2 (MEDFORD)**

CRATER LAKE HIGHWAY

JACKSON COUNTY

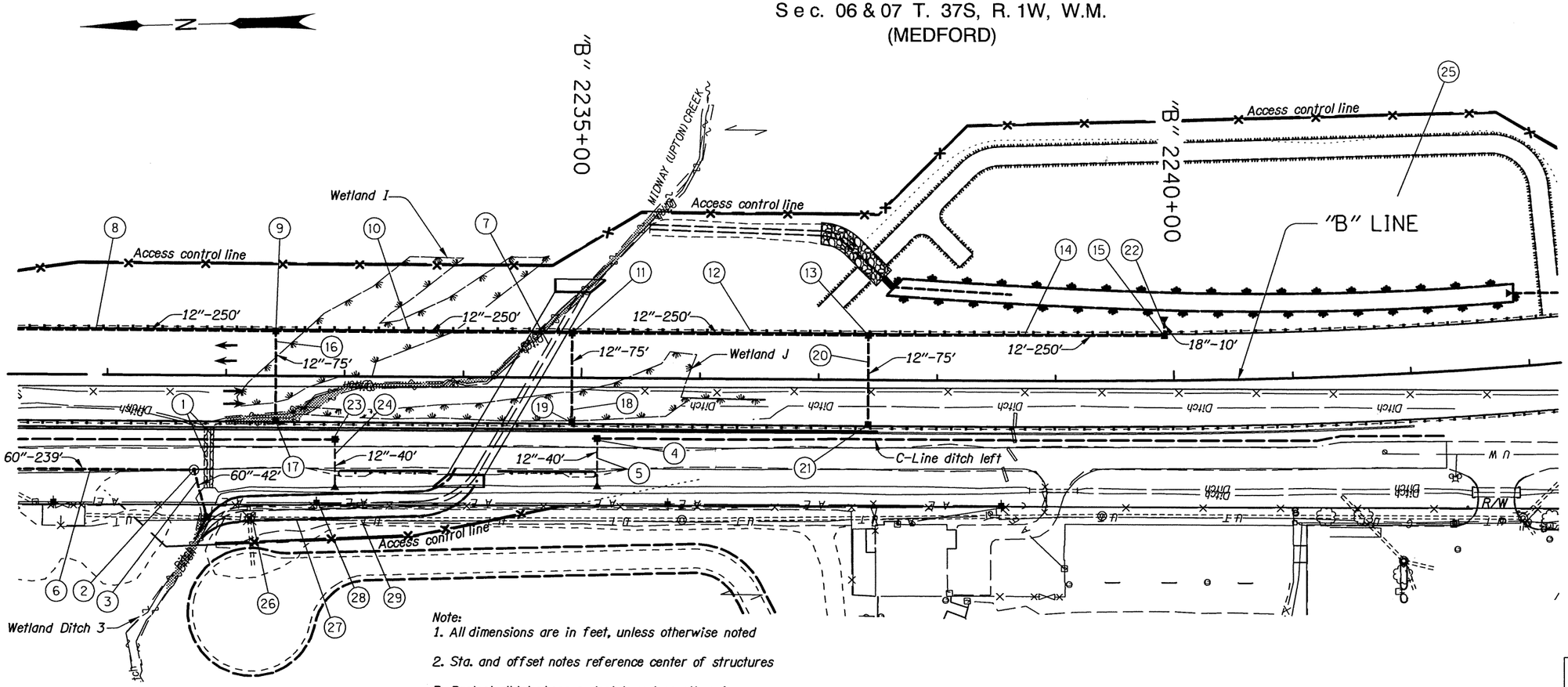
Designed By - Ben Wewerka
Checked By - Amy Jones
Drafted By - S. Wolfer

**DETAILS**

SHEET NO. GE-3D

Sec. 06 & 07 T. 37S, R. 1W, W.M.
(MEDFORD)

49V-019




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) Remove pipe - 104'

(2) Sta. "B" 2231+73.32, 80' Rt.
Const. 96" storm sewer manhole

(3) Sta. "B" 2231+73.32, 80' Rt.
to Sta. "B" 2231+84.33, 120.7' Rt.
Inst. 60" storm sew. pipe - 42'
20' depth
Const. sloped end
Const. paved end slope - 197 sq. ft.
Ensure 1' cover over pipe

(4) Sta. "B" 2235+13, 52.3' Rt.
Const. Type "D" inlet, modified, Z=3

(5) Sta. "B" 2235+13, 52.3' Rt. to
Sta. "B" 2235+13, 91.4' Rt.
Inst. 12" storm sew. pipe - 40'
5' depth
Const. sloped end
Const. paved end slope - 26 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yds.
Riprap geotextile (Type 1) - 3 sq. yds.

(6) See sht. 5B, note 34

(7) Const. dual 12' x 6' RCBC - 180'
Structure # 21642
(For details, see sht. GE, 95051)

(8) Sta. "B" 2229+91.82, 37.73' Lt. to
Sta. "B" 2232+41.83, 37.73 Lt.
Inst. 12" storm sew. pipe - 250'
5' depth

(9) Sta. "B" 2232+41.83, 37.73' Lt.
Const. type "G-2" inlet

(10) Sta. "B" 2232+41.83, 37.73' Lt. to
Sta. "B" 2234+91.83, 37.73 Lt.
Inst. 12" storm sew. pipe - 250'
5' depth

(11) Sta. "B" 2234+91.83, 37.73' Lt.
Const. type "G-2" inlet

(12) Sta. "B" 2234+91.83, 37.73' Lt. to
Sta. "B" 2237+41.83, 37.73 Lt.
Inst. 12" storm sew. pipe - 250'
5' depth

(13) Sta. "B" 2237+41.83, 37.73' Lt.
Const. type "G-2" inlet

(14) Sta. "B" 2237+41.83, 37.73' Lt. to
Sta. "B" 2239+91.83, 37.73 Lt.
Inst. 12" storm sew. pipe - 250'
5' depth

(15) Sta. "B" 2239+91.83, 37.73' Lt.
Const. type "G-2" inlet

(16) Sta. "B" 2232+41.83, 37.73' Lt. to
Sta. "B" 2232+41.83, 37.73 Rt.
Inst. 12" storm sew. pipe - 75'
5' depth

(17) Sta. "B" 2232+41.83, 37.73' Rt.
Const. type "G-2" inlet

(18) Sta. "B" 2234+91.83, 37.73' Lt. to
Sta. "B" 2234+91.83, 37.73 Rt.
Inst. 12" storm sew. pipe - 75'
5' depth

(19) Sta. "B" 2234+91.83, 37.73' Rt.
Const. type "G-2" inlet

(20) Sta. "B" 2237+41.83, 37.73' Lt. to
Sta. "B" 2237+41.83, 37.73 Rt.
Inst. 12" storm sew. pipe - 75'
5' depth

(21) Sta. "B" 2237+41.83, 37.73' Lt.
Const. type "G-2" inlet

(22) Sta. "B" 2239+91.83', 37.73 Lt. to
Sta. "B" 2239+91.83', 47.73' Lt.
Inst. 18" storm sew. pipe - 10'
5' depth
Const. sloped end
Const. paved end slope - 35 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yds.
Riprap geotextile (Type 1) - 3 sq. yd.

(23) Sta. "B" 2232+92, 54.35' Rt.
Const. Type "D" inlet, modified, Z=3

(24) Sta. "B" 2232+92, 54.35' Rt. to
Sta. "B" 2232+92, 94.35' Rt.
Inst. 12" storm sew. pipe - 40'
5' depth
Const. sloped end
Const. paved end slope - 26 sq. ft.
Const. loose riprap (Class 50) - 1.5 cu. yds.
Riprap geotextile (Type 1) - 3 sq. yds.

(25) Const. Midway bioretention pond (00835)
(For details, see sht. GE-3)

(26) Remove and relocate manhole
(For details, see RVSS Sanitary
Sewer Relocation Plans)

(27) Remove and relocate sanitary sew.
(For details, see RVSS Sanitary
Sewer Relocation Plans)

(28) Relocate utility pole
(By others)

(29) Relocate tel. line
(By others)

LEGEND

- SWALE
- WETLANDS
- REMOVE/ABANDON PIPE
- RELOCATE MANHOLE
- RIPRAP
- REGULATED WORK AREA

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

OREGON DEPARTMENT OF TRANSPORTATION

OBEC CONSULTING ENGINEERS
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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. 6B

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49V-019

"B" LINE

"B" 2232+41.83 Inlet
Off. 37.73' Rt.
F.L. out 1332.28
Rim elev. 1335.78

"B" 2232+41.83 Inlet
Off. 37.73' Lt.
F.L. in 1331.78
F.L. out 1331.68
Rim elev. 1335.78

Profile grade @ ℄

12"-250' @ 0.70%

12"-75' @ 0.67%

"B" 2334+91.83 Inlet
Off. 37.73' Rt.
F.L. out 1327.68
Rim elev. 1331.18

"B" 2334+91.83 Inlet
Off. 37.73' Lt.
F.L. in 1327.18
F.L. out 1327.08
Rim elev. 1331.18

12"-250' @ 1.82%

12"-75' @ 0.67%

"B" 2237+41.83 Inlet
Off. 37.73' Rt.
F.L. out 1321.28
Rim elev. 1324.78

"B" 2237+41.83 Inlet
Off. 37.73' Lt.
F.L. in 1320.13
F.L. out 1320.03
Rim elev. 1324.03

+29.87 1319.46 ℄ Bk.
1318.90 29' Lt. Ah.

12"-250' @ 2.80%

12"-75' @ 1.53%

"B" 2239+91.83 Inlet
Off. 37.73' Lt.
F.L. in 1313.42
F.L. out 1312.42
Rim elev. 1317.42

Profile grade @ 29' Lt.

12"-250' @ 2.67%

18"-10' @ 10%

F.L. Out 1311.42

"B" 2231+73.32 Manhole
Off. 80' Rt.
F.L. In 1303.88
F.L. Out 1303.88
Rim elev. 1314.16

"B" 2232+92.54.35' Rt.
F.L. Out 1308.60
Rim elev. 1311.60

12" - 40' @ 1.5%

"B" 2235+13.52.3' Rt.
F.L. Out 1308.0
Rim elev. 1310.90

12" - 40' @ 2.5%

Ground line @ ℄

Dual 12' X 6' RCBC

60" - 239'
@ 0.20%

F.L. Out 1303.80

60" - 42'
@ 0.17%

F.L. Out 1308.00

F.L. Out 1307.00

Extg. sanitary sewer

1340 1335 1330 1325 1320 1315 1310 1305 1300

2235+00

2240+00

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

OREGON DEPARTMENT OF TRANSPORTATION

OBEC CONSULTING ENGINEERS
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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. 6C

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