OPERATION & MAINTENANCE MANUAL

DFI No. : D00880
Facility Type: Water Quality Extended Detention Dry Pond

NOVEMBER 2018

INDEX

1. Identification

Drainage Facility ID (DFI):	**D00880**
Facility Type:	Water Quality Extended Detention Dry Pond
Construction Drawings:	48V-092
Location:	District: 08
	Highway No.: 001
	Mile Post: 12.84; 12.91 (beg./end)
	Description: This facility is located between I-5 Northbound and the I-5 Northbound On-Ramp for the rest area. Primary access to the facility can be obtained from the gravel access road at the North end of the facility. Secondary access can be made at the South end of the facility. Both access points are from the roadway on the West side of the Rest area.

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:	DeLanie Cutsforth – Region 3 Tech Center, White City, (541) 774-6326
Facility construction: Contractor:	N/A

4. Storm Drain System and Facility Overview

The extended detention dry pond is located on the northbound side of I-5 adjacent to the I-5 On-Ramp. The drainage is collected by a series of inlets and conveyed to the facility by a 24-inch storm. The drainage area includes the northbound on-ramp and the northbound lanes of I-5. All stormwater is conveyed into the Extended Dry Detention Pond and drains out through a Type D Outlet structure and outfalls into the stormwater drainage system; see the Operational Plan, Appendix A.

The pond is designed to treat highway stormwater runoff through filtration by plants and infiltration into water quality soils. The pond is designed to detain runoff by metering the outflow during storms. This is done by an orifice in the lower type D pond outlet. There is also a pond underdrain that will allow runoff to infiltrate through the soils before exiting the system. There may be runoff in the pond for several days after a storm while infiltration is occurring. During a larger storm, the lower type D inlet may be submerged.

A. Maintenance equipment access:
The facility can be accessed from the south and north ends of the pond via a maintenance access road. Areas of the pond may be soft when wet and large equipment access in the pond bottom should be limited to times when the pond is dry to avoid damage to the facility.

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 extended detention dry 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. A manhole with an open metal conical top will pass auxiliary flows for this pond. It is located near the primary and secondary Type "D" outlets at the North end of the pond and is accessible via the access road at the North end.

The auxiliary outlet feature for this facility is:

☒ Designed into facility

☐ Other

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 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 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

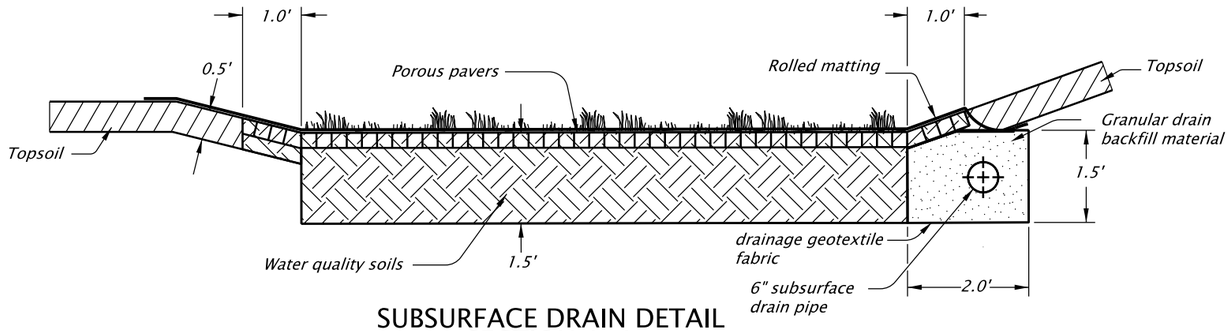
Contact any of the following for more detailed information about management of waste materials found on site:

ODOT Clean Water Unit	(503) 986-3008
ODOT Statewide Hazmat Coordinator	(503) 229-5129
ODOT Region Hazmat Coordinator	(503) 731-8304
ODEQ Northwest Region Office	(503) 229-5263

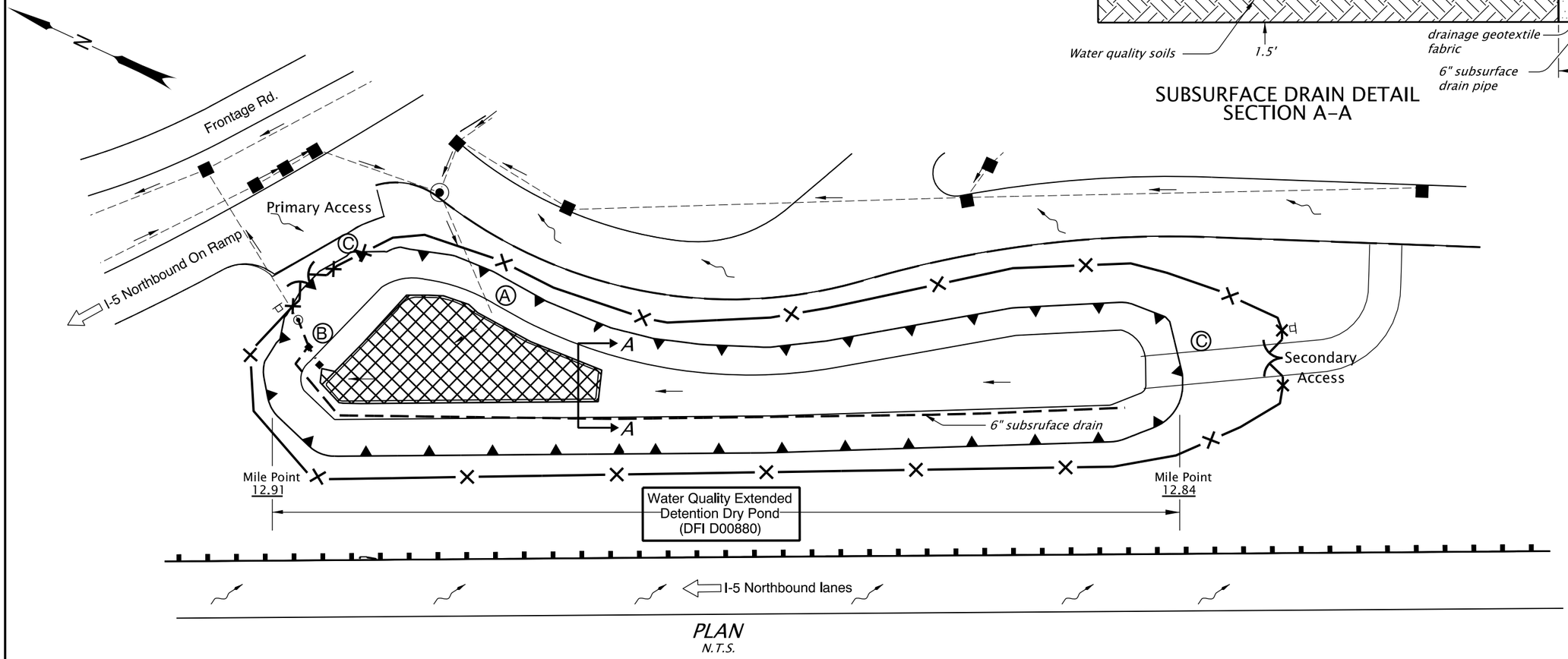
Appendix A

Content:

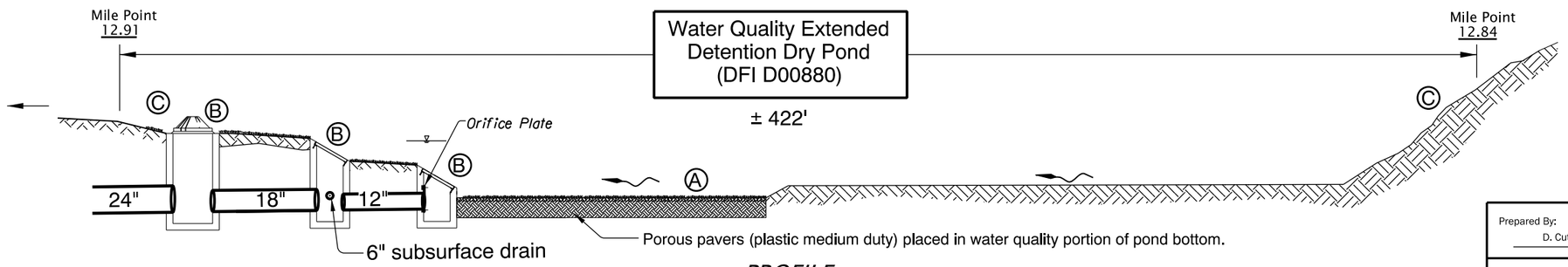
- **Operational Plan and Profile Drawing(s)**



SUBSURFACE DRAIN DETAIL
SECTION A-A



PLAN
N.T.S.



PROFILE
N.T.S.

LEGEND:

- Ⓐ Pond Inlet
- Ⓑ Pond Outlet
- Ⓒ 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: D. Cutsforth

Drafted By: D. Cutsforth

DFI D00880
MAINTENANCE DISTRICT 8 HWY 001
EXTENDED DRY DETENTION POND
HIGHWAY MP 12.84 - 12.91
JACKSON

Appendix B

Content:

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

48V-092

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
1A & 1A-2	Index Of Sheets Cont. & Std. Drg. Nos.

STATE OF OREGON

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT

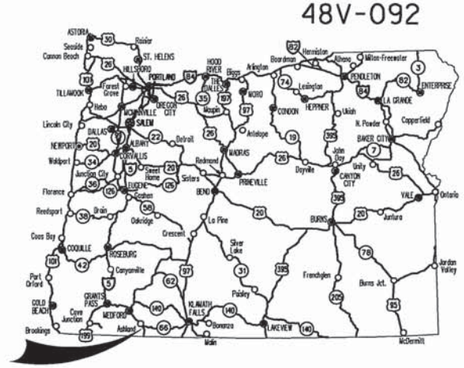
GRADING, PAVING, DRAINAGE, GUARDRAIL & SIGNING

I-5: SISKIYOU REST AREA (ASHLAND)

PACIFIC HIGHWAY

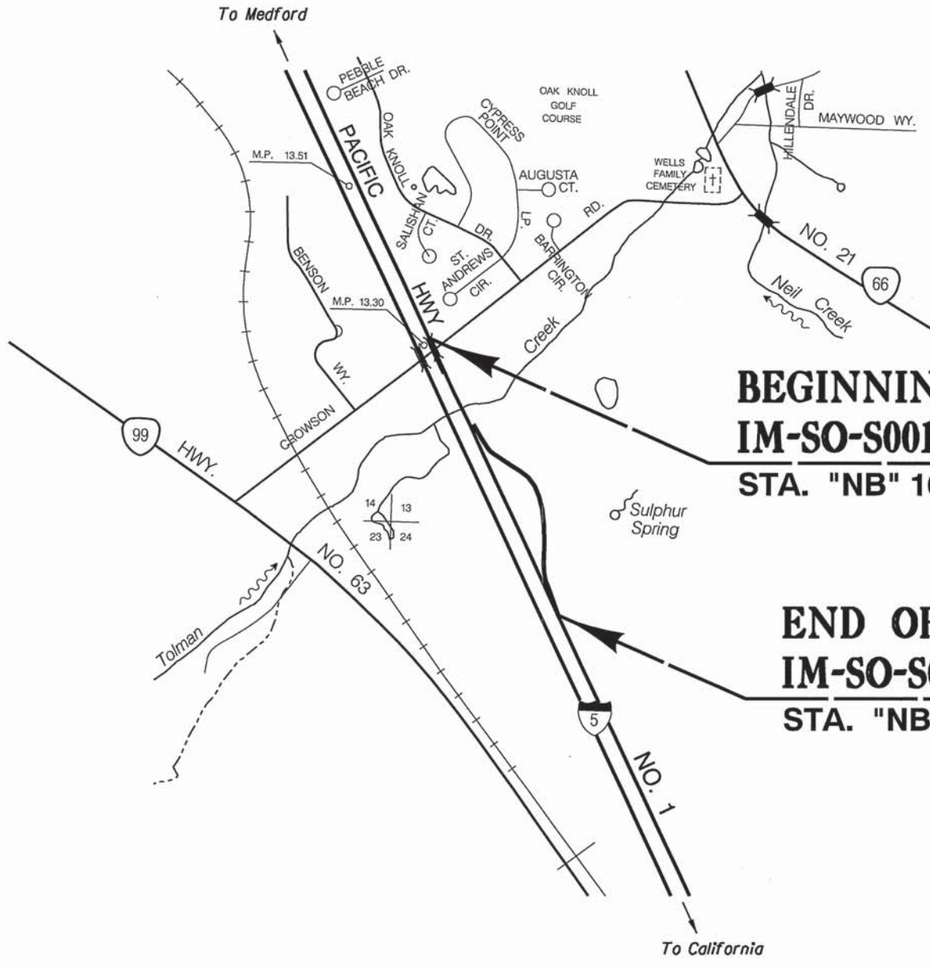
JACKSON COUNTY

SEPTEMBER 2015



Overall Length Of Project - 1.40 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.)



BEGINNING OF PROJECT
IM-SO-S001(304)
STA. "NB" 1614+97.87 (M.P. 13.69)

13 | 18
24 | 25

END OF PROJECT
IM-SO-S001(304)
STA. "NB" 1668+99.82 (M.P. 12.29)

N

T. 39 S., R. 1E., W.M.

OREGON TRANSPORTATION COMMISSION

Tammy Baney	CHAIR
David Lohman	COMMISSIONER
Susan Morgan	COMMISSIONER
Alando Simpson	COMMISSIONER
Sean O'Hollaren	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 7-15-15

MARK THOMPSON, TECH. CENTER MGR.
Print name and title

_____
Concurrence by ODOT Chief Engineer

I-5: SISKIYOU REST AREA (ASHLAND)
PACIFIC HIGHWAY
JACKSON COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	IM-SO-S001 (304)	1

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1:1200 - 001

INDEX OF SHEETS, CONT'D.

SHEET NO.	DESCRIPTION
1C	Survey Control Sheet
2 Thru 2A-11	Typical Sections
1 2B Thru 2B-12	Details
2C Thru 2C-4	Traffic Control
2D Thru 2D-4	Pipe Data Sheets
3	Alignment
3A	General Construction
3A-2	General Construction Notes
3B	Drainage & Utilities
3B-2	Drainage & Utilities Notes
3C & 3C-2	Profile
3E	Site Utility Plan
4	Alignment
4A	General Construction
4B	Drainage & Utilities
4B-2	Drainage & Utilities Notes
4C & 4C-2	Profile
4E	Site Utility Plan
5	Alignment
5A	General Construction
5B	Drainage & Utilities
5B-2	Drainage & Utilities Notes
5C Thru 5C-3	Profile
5D	Site Civil Plan
5E	Site Utility Plan
6	Alignment
6A	General Construction
6B	Drainage & Utilities
6C & 6C-2	Profile
2 6D	Site Civil Plan
7	Alignment
7A	General Construction
7B	Drainage & Utilities, Profile

GEO/HYDRO	
SHEET NO.	DESCRIPTION
GA	Erosion Control Details
GA-2 Thru GA-7	Erosion Control Plan
GJ & GJ-2	Stormwater Plan
GJ-3 Thru GJ-6	Stormwater Details
GM & GM-2	Excess Material Disposal Site
GN	Planting Details & Plant Materials Schedule
GN2 & GN3	Planting Plan

RETAINING WALL #20972	
SHEET NO.	DESCRIPTION
95441	West Wall - Plan and Elevation
95442	General Notes
95443	Foundation Data Sheet
95444	Details

RETAINING WALL #20973	
SHEET NO.	DESCRIPTION
95445	Plan and Elevation
95446	General Notes
95447	Foundation Data Sheet
95448	Details

RETAINING WALL #20974	
SHEET NO.	DESCRIPTION
95449	MSE - Plan and Elevation
95450	MSE Wall Design Notes
95451	Foundation Data Sheet

BRIDGE MODIFICATIONS #08746N	
SHEET NO.	DESCRIPTION
95452	Plan, Elevation, and Details

PERMANENT PAVEMENT MARKINGS	
SHEET NO.	DESCRIPTION
ST Thru ST-3	Striping Details
ST-4 Thru ST-9	Striping Plan

PERMANENT SIGNING	
SHEET NO.	DESCRIPTION
S-15432 Thru S-15435	Signing Plan
S-15436 Thru S-15438	Signing Details
S-15439 Thru S-15441	Sign and Post Data Table

ILLUMINATION	
SHEET NO.	DESCRIPTION
I-02414 Thru I-02417	Illumination Plan
I-02418 & I-02419	Illumination Details

ELECTRICAL	
SHEET NO.	DESCRIPTION
E-1	One Line Diagram/Panel Schedule
E-2	Details
E-3	Electrical Site Plan - North
E-4	Electrical Site Plan - Middle
E-5	Details

Standard Drg. Nos.

RD120 - Concrete Stairway
RD130 - Bollards
RD140 - Roadway Cross Slopes Superelevated Sections

RD250 - Thrust Blocking
RD258 - Valve Box and Operator Extension Assembly
RD262 - Typical Main Dead-End Blowoff Assembly
RD266 - Manual Air-Release Assembly (3/4 inch)
RD278 - Water Meter Assembly (Larger than 2")

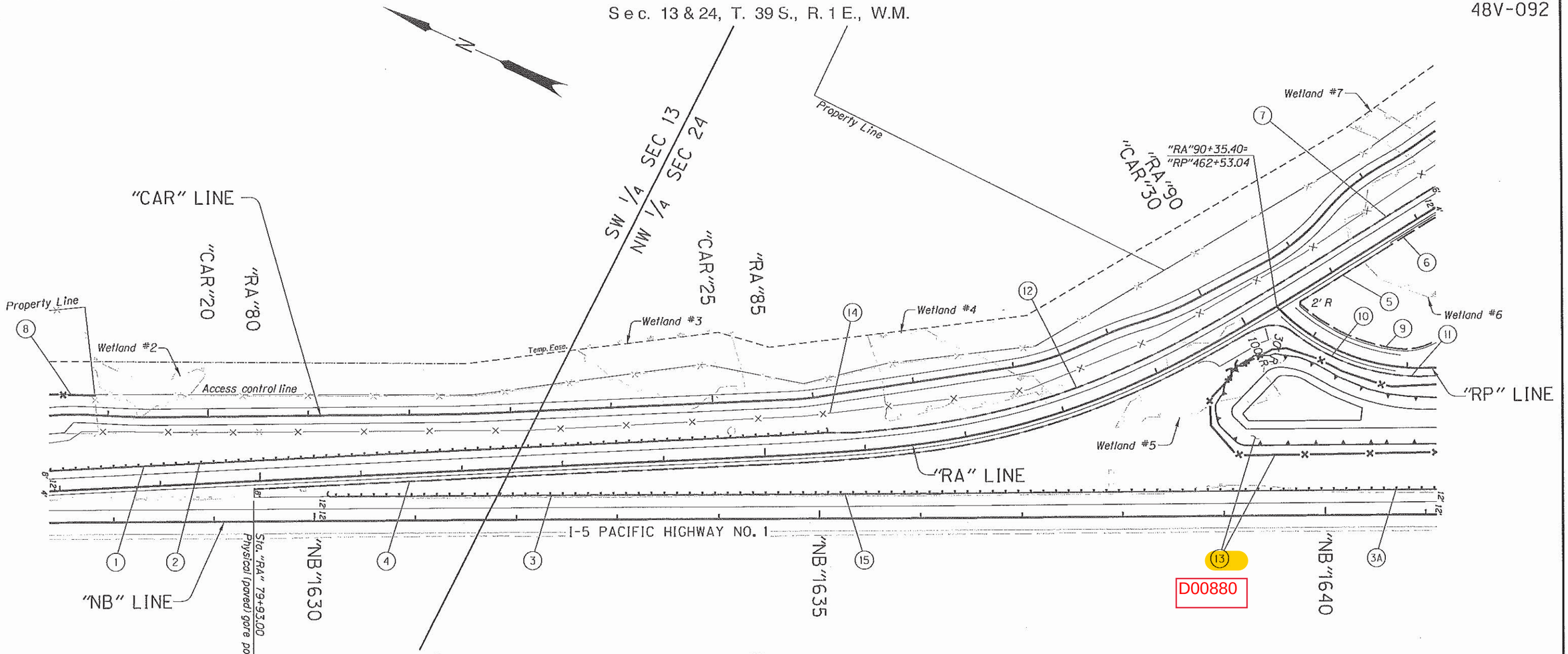
RD300 - Trench Backfill, Bedding, Pipe Zone and Multiple Installations
RD302 - Street Cut
RD306 - Concrete Encasement, Cradle, And Cap Details
RD312 - Subsurface Drain
RD316 - Sloped Ends for Metal Pipe
RD318 - Sloped Ends for Concrete Pipe
RD319 - Miscellaneous Culvert Details
RD320 - Paved End Slope for Culverts 60" Maximum Pipe Size
RD325 - Coupling Bands for Corrugated Metal Pipe
RD326 - Coupling Bands for Corrugated Metal Pipe
RD327 - Coupling Bands for Corrugated Metal Pipe
RD330 - Pipe Slope Anchors - Metal
RD334 - Locator Post
RD335 - Standard Storm Sewer Manhole
RD336 - Standard Manhole Details
RD337 - Manhole Safety Ladder
RD338 - Standard Sanitary Sewer Manhole
RD339 - Pipe To Structure Connections
RD340 - Storm Sewer Pollution Control Manhole
RD342 - Shallow Manholes
RD344 - Standard Manhole Base Section
RD345 - Pipe to Manhole Connections
RD346 - Large Precast Manhole
RD348 - Manhole with Inlet
RD356 - Manhole Covers and Frames
RD358 - Manhole Slope Protectors
RD363 - Gutter Transition
RD364 - Concrete Inlets Type G-1, G-2, G-2M, & G-2MA
RD365 - Frames & Grates for Concrete Inlets
RD366 - Concrete Inlets Type CG-1, CG-2
RD367 - Curb Inlet Channel
RD370 - Ditch Inlet Type D
RD371 - Concrete Inlet Base Type CG-3
RD372 - Concrete Inlet Top, Option 1 Type CG-3
RD373 - Concrete Inlet Top, Option 2 Type CG-3
RD376 - Miscellaneous Drainage Structures Siphon Box, Inlet Cap & Inlet Adjustment
RD380 - Fill Height Tables for Aluminum & Steel Corrugated Pipe
RD384 - Fill Height Tables for Aluminum & Steel Spiral Rib Pipe
RD386 - Fill Height Table for Circular Concrete Pipe
RD388 - Fill Height Tables for PVC Pipe
RD390 - Fill Height Table for Corrugated HDPE Pipe
RD393 - Fill Height Tables for Polypropylene Pipe
RD398 - Culvert ID Marker

No.	DATE	REVISIONS	BY
1	08-18-15	Added Detail sheet nos. 2B-11, 2B-12	CZ
2	09-09-15	Added Site Civil Plan sheet no. 6D	CZ

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

I-5: SISKIYOU REST AREA (ASHLAND)
PACIFIC HIGHWAY
JACKSON COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	IM-S0-S001 (304)	1A



(1) See sht. 3A, note 10
Const guardrail
Const. end terminal, non-flared
Test level 3, L=37.5'
E=2', W=2'

(2) See sht. 3A, note 11
Const. P.C. conc. drainage curb

(3) Sta. "NB" 1630+15.00, Lt. to
Sta. "NB" 1645+52.24, Lt.
Const. guardrail - 1500' (Type 2A)
Const. anchor (Type 1 modified)
Inst. end piece (Type B)
Const. guardrail terminal, non-flared

(3A) Sta. "NB" 1639+50.00 to
Sta. "NB" 1641+80.00
Extra for 8' guardrail posts - 36'

(4) Sta. "RA" 79+93.00, Rt. to
Sta. "RA" 90+28.00, Rt.
Const. low profile mountable curb

(5) Sta. "RA" 90+58.00, Rt. to
Sta. "RA" 91+65.00, Rt.
Const. std. curb

(6) Sta. "RA" 91+65.00, Rt. to
Sta. "RA" 100+57.00, Rt.
Const. curb and gutter

(7) Sta. "RA" 91+65.00, Lt. to
Sta. "RA" 100+57.00, Lt.
Const. std. curb
(For details, see sht. 2B-2)

(8) See sht. 3A, note 14
Const. type CL-6R fence
(Chain link fabric, metal fence posts, braces and appurtenances shall be black.)
Connect to extg.

(9) Sta. "RP" 462+69.30, Lt. to
Sta. "RP" 475+82.00, Lt.
Const. curb and gutter

(10) Sta. "RP" 462+68.00, Rt. to
Sta. "RP" 463+87.00, Rt.
Const. low profile mountable curb

(11) Sta. "RP" 463+87.00, Rt. to
Sta. "RP" 475+82.00, Rt.
Const. std. curb
(For details, see sht. 2B-2)

(12) Sta. "RA" 85+62.00, Lt. to
Sta. "RA" 91+65.00, Lt.
Const. low profile mountable curb

(13) Const. North Bioretention Pond
(For drg. nos., see sht. 1A)

(14) Future fence
(Not in Contract)

(15) Sta. "NB" 1630+15.00, Lt. to
Sta. "NB" 1636+20.00, Lt.
Const. P.C. conc. drainage curb

REGISTERED PROFESSIONAL ENGINEER
63243
OREGON
JULY 9, 2001
CHRIS R. ZELMER
EXPIRES: JUNE 30, 2016

OREGON DEPARTMENT OF TRANSPORTATION

REGION 3 - TECHNICAL CENTER

I-5: SISKIYOU REST AREA (ASHLAND)
PACIFIC HIGHWAY
JACKSON COUNTY

Design Team Leader - Mike Morris
Designed By - Chris Zelmer
Drafted By - David Knox

GENERAL CONSTRUCTION

SHEET NO. 4A

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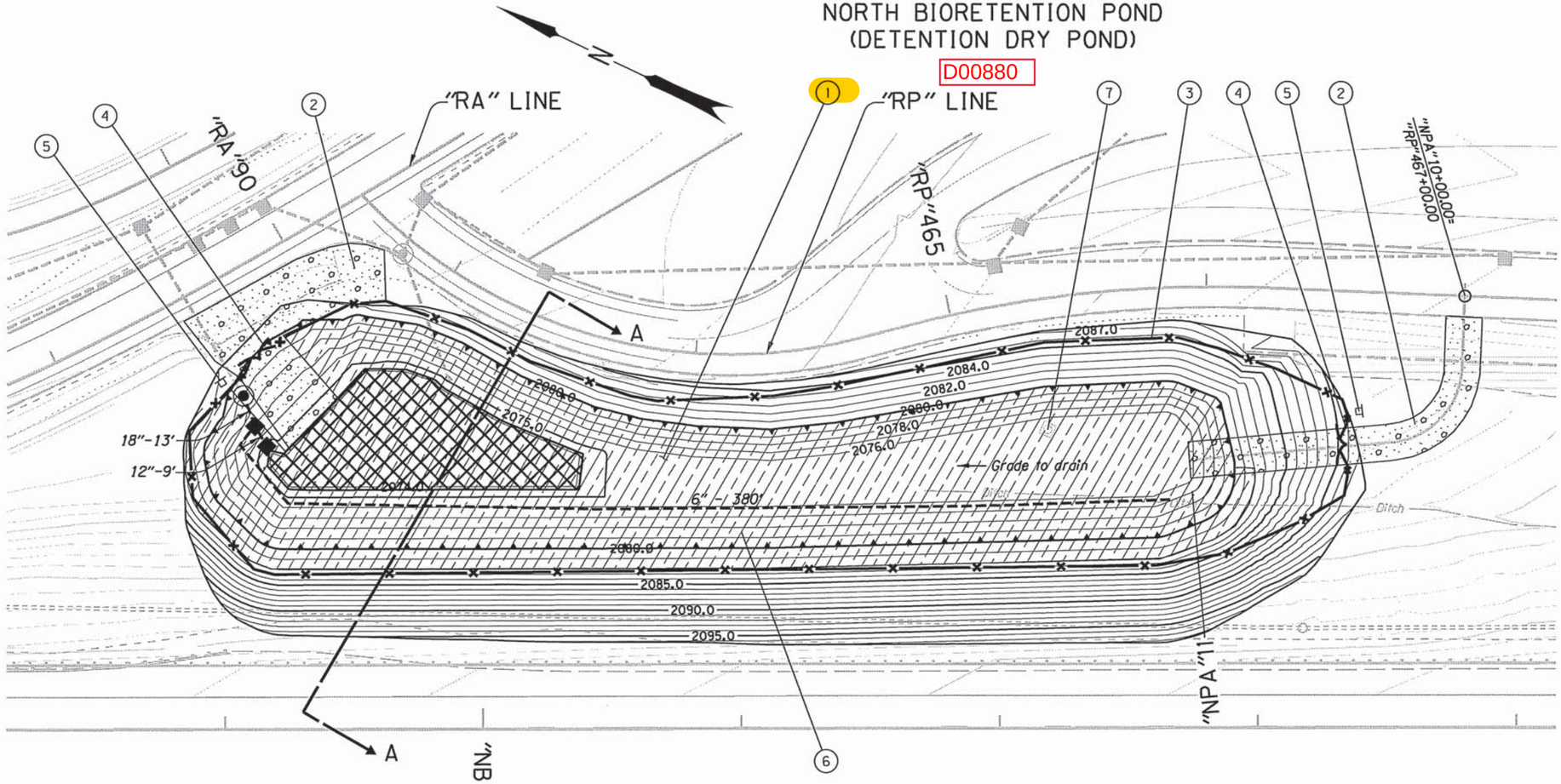
Rotation: 0° Scale: 1"=100'

NORTH BIORETENTION POND
(DETENTION DRY POND)



1. Const. bioretention pond, North
   (For details, see sht. GJ-3 thru GJ-6)
2. Const. Aggregate Access Road
   (For Typical Section, see sht. 2A-9)
3. Const. type CL-4 fence - 975 ft.
   (Chain link fabric, metal fence posts, braces and appurtenances shall be black.)
   (See drg. no. RD815)
4. Sta. "RA" 89+67.5, 33.8 ft. Rt. &
   Sta. "RP" 466+10.4, 42.9 ft. Rt.
   Inst. 4'x16' chain link double gate - 2
   (Chain link fabric, metal fence posts, braces and appurtenances shall be black.)
   (See drg. no. RD815)
5. Inst. field facility marker, type "S2" - 2
   (For details, see sht. GJ-6)
6. Const. bioretention irrigation system
7. Maintain and protect artesian well cap

- Aggregate Base
- Porous Pavers & Water Quality Mixture
- Irrigation
- Top of Pond
- Fence

Note:
1. All dimensions are in feet, unless otherwise noted.
2. For drainage details not shown, see shts. 4B & 5B.
3. For section A-A details, see sht. GJ-4.
4. The contractor shall be aware that significant amounts of ground water are likely to be encountered in the area of the North Bioretention Pond. Necessary precautions and dewatering measures should be expected.

HYDRAULIC DATA		
WATER SURFACE Elevation	STORAGE VOLUME	BASE FLOOD
2075.21' - Water Quality	0.32 Acre-Ft.	50% of 2-Yr.
2075.14' - Lower Control Structure Flow	0.25 Acre-Ft.	42% of 2-Yr.
2076.10' - Upper Control Structure Flow	1.10 Acre-Ft.	10-Yr.

REGISTERED PROFESSIONAL ENGINEER
65698PE
DeLanie Cutsforth
OREGON
JULY 12, 2005
DELANIE L. CUTSFORTH
EXPIRES: 12-31-2015

OREGON DEPARTMENT OF TRANSPORTATION

REGION 3 - TECHNICAL CENTER

I-5: SISKIYOU REST AREA (ASHLAND)
PACIFIC HIGHWAY
JACKSON COUNTY

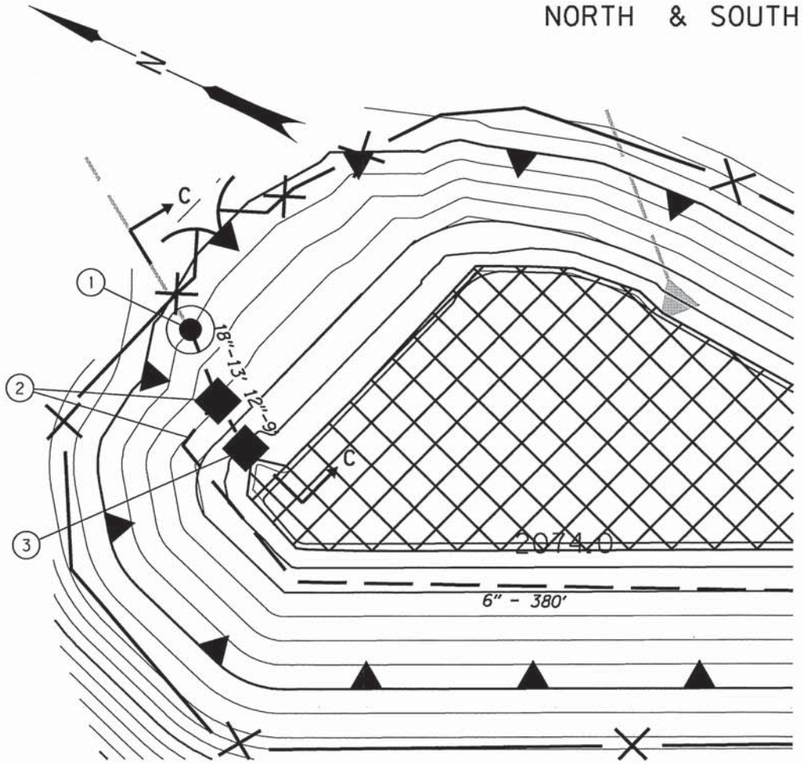
Design By - DeLanie Cutsforth
Reviewed By - Wade Holaday
Drafted By - David Knox

STORMWATER PLAN

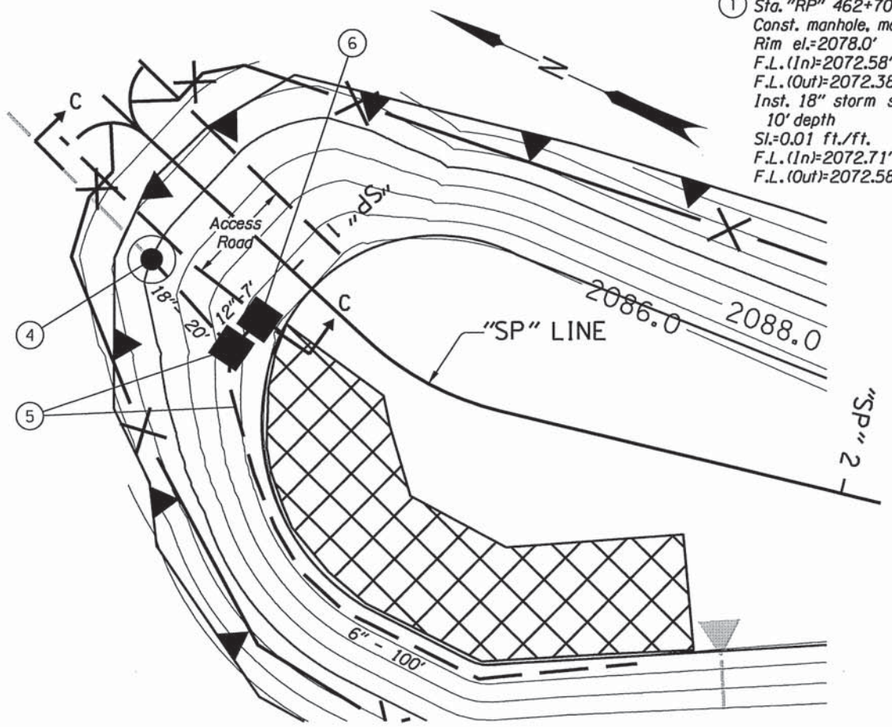
SHEET NO. GJ

NORTH & SOUTH POND OUTLET STRUCTURES

48V-092

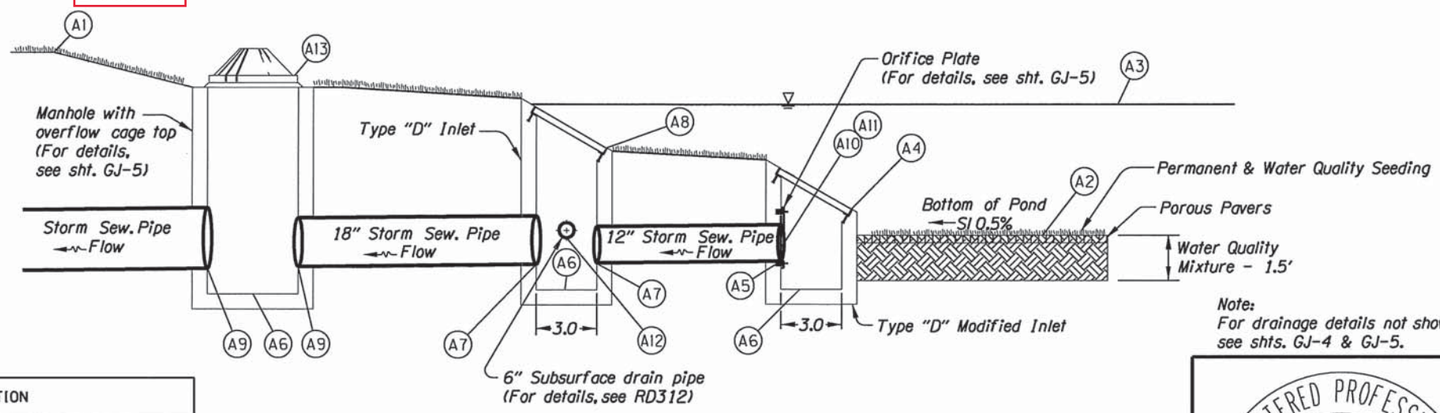


NORTH POND OUTLET PLAN VIEW



SOUTH POND OUTLET PLAN VIEW

D00880



SECTION C-C

	ELEVATION		DESCRIPTION
	North Pond	South Pond	
A1	2080.00'	2091.00'	Top of pond elev.
A2	2074.00'	2085.50'	Bottom of pond min. elev.
A3	2076.88'	2087.73'	Max. water surface elev.
A4	2074.90'	2086.90'	Elev. of lip of lower type "D" inlet
A5	2072.80'	2084.30'	Invert-in elev. of 12" storm sew. pipe
A6	2070.60'	2082.00'	Max. sump elev. of type "D" inlet & manhole
A7	2072.71'	2084.23'	Invert-out elev. of 12" storm sew. pipe
A8	2077.0'	2087.30'	Elev. of lip of upper type "D" inlet
A9	2072.58'	2084.00'	Invert-in elev. of outlet pipe
A10	2073.25	2084.75'	Orifice center elev.
A11	6.0"	4.0"	Orifice diameter
A12	2073.0'	2084.50'	Invert-out elev. of 6" subsurface drain pipe
A13	2078.0'	2088.70'	Overflow cage rim elev.

Water Quality Mixture

Porous Pavers

(1) Sta. "RP" 462+70.7, 87.9' Rt.
Const. manhole, modified with cage top
Rim el.=2078.0'
F.L.(In)=2072.58'
F.L.(Out)=2072.38'
Inst. 18" storm sew. pipe - 13'
10' depth
Sl.=0.01 ft./ft.
F.L.(In)=2072.71'
F.L.(Out)=2072.58'

(2) Sta. "RP" 462+78.3, 94.0' Rt.
Const. type "D" inlet
Rim el.=2077.0'
F.L.=2070.60'
Inst. 12" storm sew. pipe - 9'
10' depth
Sl.=0.01 ft./ft.
F.L.(In)=2072.80'
F.L.(Out)=2072.71'
Inst. 6" perforated drain pipe - 380'
15' depth
Sl.=0.0056 ft./ft.
F.L.(In)=2075.0'
F.L.(Out)=2073.0'

(3) Sta. "RP" 462+84.0, 97.2' Rt.
Const. type "D" inlet, modified with orifice plate
Rim el.=2074.9'
F.L.=2070.60'

(4) Sta. "SP" 0+81.73, 14.4' Rt.
Const. manhole, modified with cage top
Rim el.=2088.7'
F.L.(In)=2084.00'
F.L.(Out)=2083.80'
Inst. 18" storm sew. pipe - 20'
10' depth
Sl.=0.012 ft./ft.
F.L.(In)=2084.23'
F.L.(Out)=2084.00'

(5) Sta. "SP" 1+01.38, 16.2' Rt.
Const. type "D" inlet
Rim el.=2087.30'
F.L.=2082.00'
Inst. 12" storm sew. pipe - 7'
15' depth
Sl.=0.01 ft./ft.
F.L.(In)=2084.30'
F.L.(Out)=2084.23'
Inst. 6" perforated drain pipe - 100'
15' depth
Sl.=0.005 ft./ft.
F.L.(In)=2085.0'
F.L.(Out)=2084.50'

(6) Sta. "SP" 1+01.59, 9.6' Rt.
Const. type "D" inlet, modified with orifice plate
Rim el.=2086.9'
F.L.=2082.0'

Note:
For drainage details not shown, see shts. GJ-4 & GJ-5.

REGISTERED PROFESSIONAL ENGINEER
65698PE
DeLanie Cutsforth
OREGON
JULY 12, 2005
DELANIE L. CUTSFORTH

EXPIRES: 12-31-2015

OREGON DEPARTMENT OF TRANSPORTATION

REGION 3 - TECHNICAL CENTER

I-5: SISKIYOU REST AREA (ASHLAND)
PACIFIC HIGHWAY
JACKSON COUNTY

Design By - DeLanie Cutsforth
Reviewed By - Wade Holaday
Drafted By - David Knox

STORMWATER DETAILS

SHEET NO. GJ-3

\\wpdotfpsr821\userseng\hwye33g\ODOT_DATA\Projects\09436_SiskiyouRestArea\01_Working\Sheets_GJ\09436.gj2 :: Pond Outlet Details 7/1/2015 2:52:19 PM hwye33g

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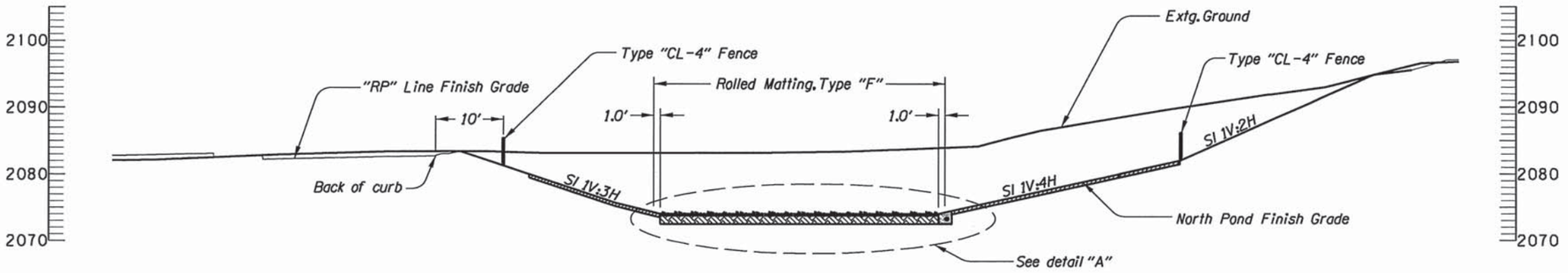
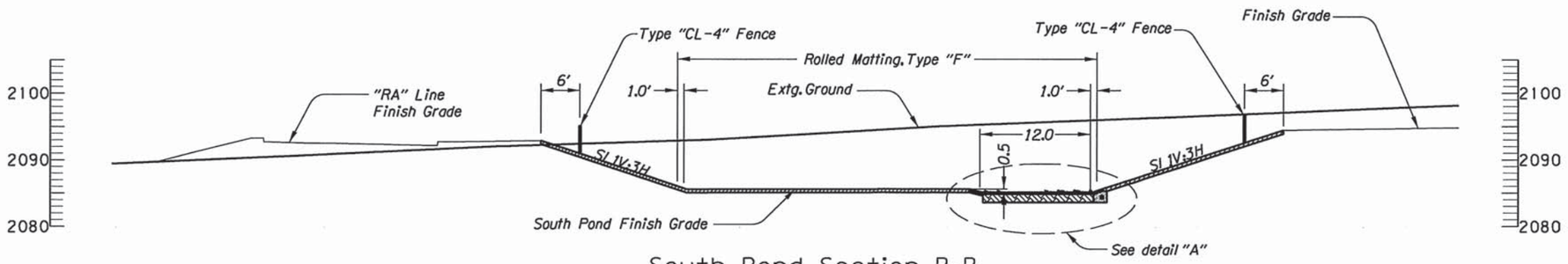
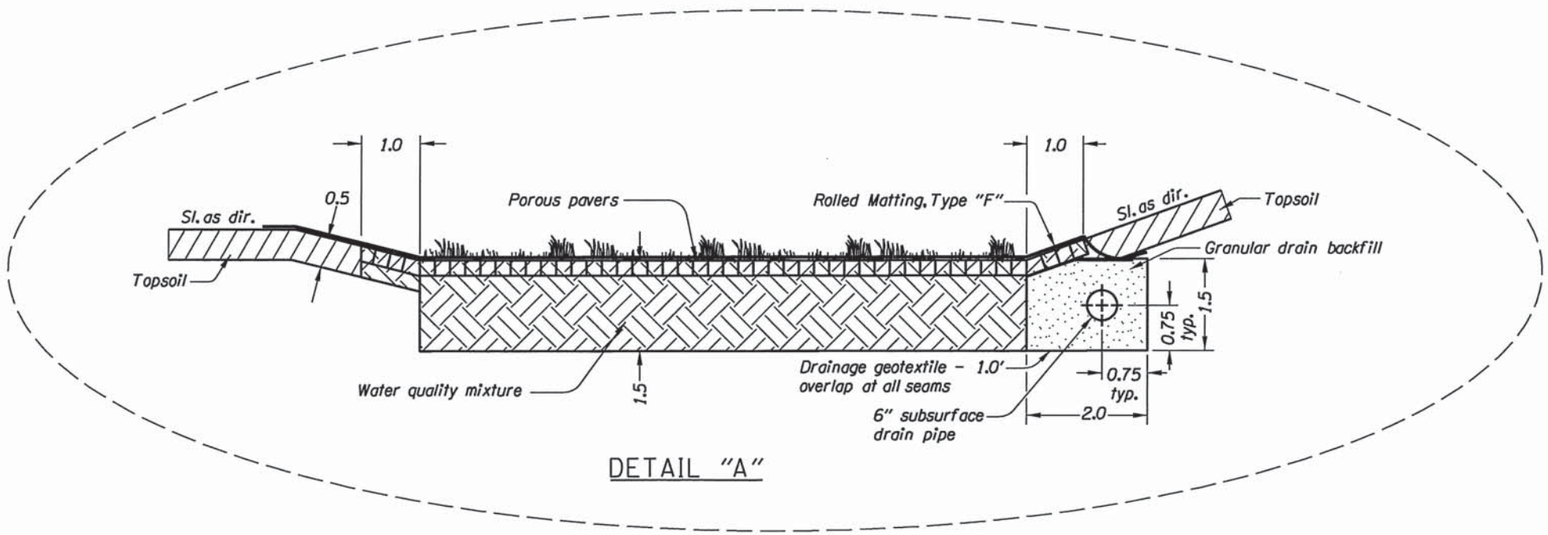


North Pond Section A-A

D00880



South Pond Section B-B



DETAIL "A"

Topsoil

Water quality mixture

Granular drain backfill

Notes:
1) All elevations shown are based on NAVD 1988 datum.
2) All dimensions shown are in feet unless otherwise noted.

REGISTERED PROFESSIONAL ENGINEER
65698PE
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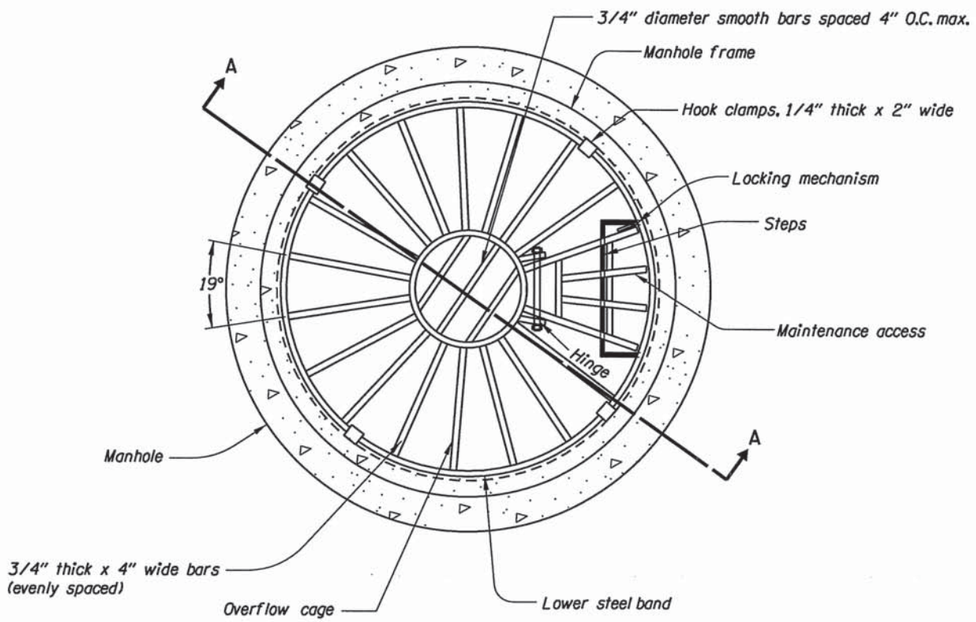
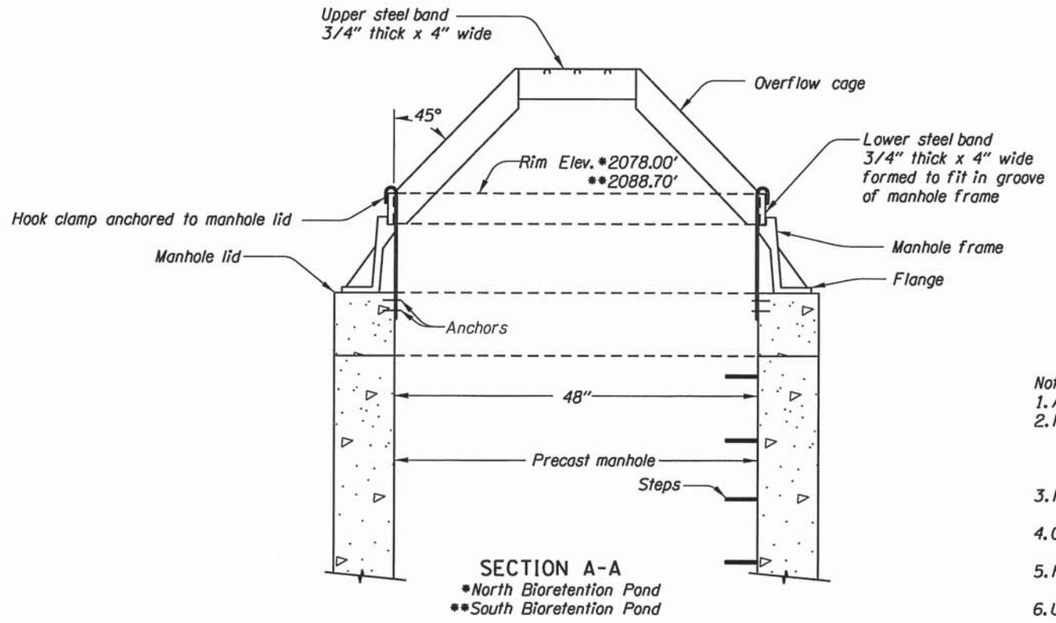
STORMWATER DETAILS

SHEET NO. GJ-4

MODIFIED MANHOLE WITH OVERFLOW CAGE TOP

(Not to scale)





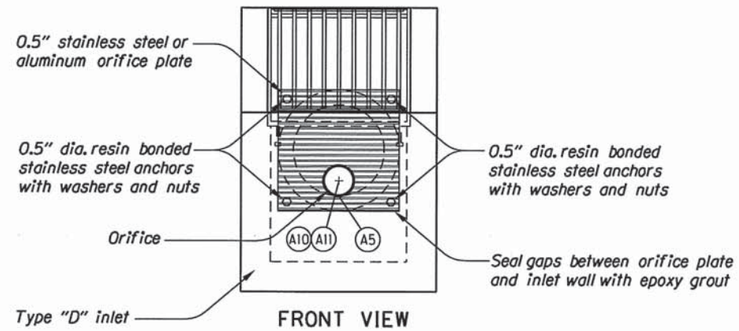
SECTION A-A

*North Bioretention Pond

**South Bioretention Pond

ORIFICE PLATE DETAIL

(Not to scale)



FRONT VIEW

Notes:

1. *All metal parts corrosion resistant.*
2. *Provide maintenance access by welding 4 cross bars to vertical bars as shown. Hinge upper ends with bolted flanges and provide locking mechanism on lower end. Locate ladder steps directly below.*
3. *Place 4 hook clamps over lower steel bar. Anchor to mahole lid.*
4. *Construct overflow cage with 3/4"x 4" square edge steel bars. Weld all joints.*
5. *Hot-dip galvanize overflow cage and all steel parts after fabrication.*
6. *Use galvanized or stainless steel for all fasteners and hardware.*
7. *To be accompanied by drg. nos. RD336, RD346 & RD356.*

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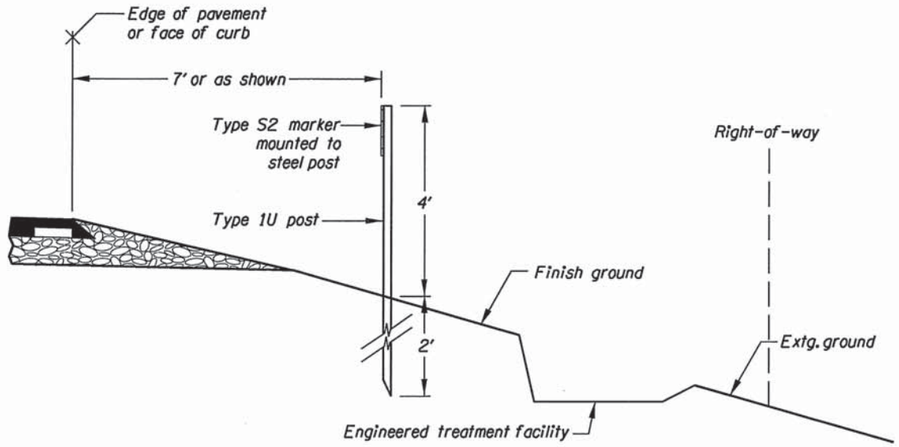
STORMWATER DETAILS

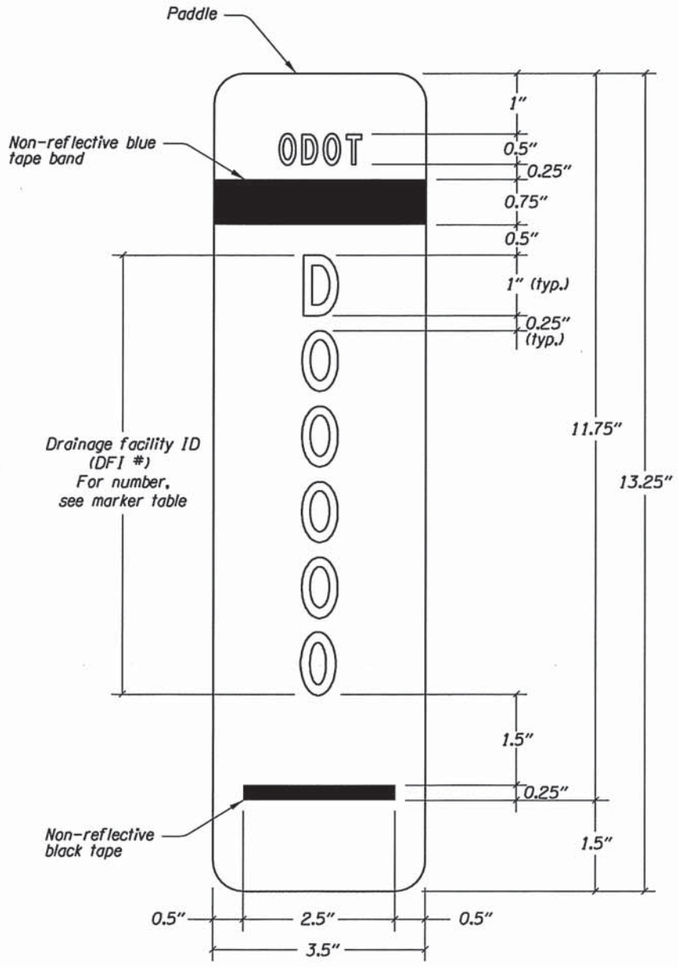
SHEET NO. GJ-5

STORMWATER DRAINAGE FACILITY IDENTIFICATION

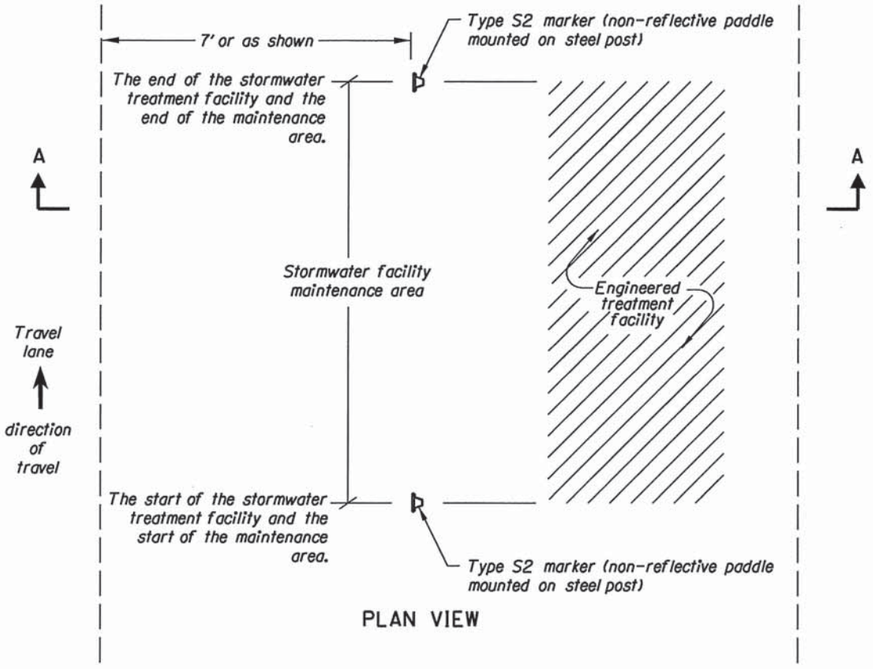
48V-092



SECTION A-A



TYPE S2 MARKER



PLAN VIEW

INSTALLATION DETAIL

MARKER TABLE

FACILITY NAME	FACILITY LOCATION	DFI #	TYPE S2 MARKER	
	STATION		BEGIN	END
North Bioretention Pond	"C" 12+57.6	00880	✓	
North Bioretention Pond	"C" 13+57.6	00880		✓
South Bioretention Pond	"C" 5+98.4	00881	✓	
South Bioretention Pond	"C" 7+84.9	00881		✓

Notes:

1. *Paddle:*
   - *Aluminum sheet, nominal thickness 0.050"*
   - *White non-reflective background*
   - *Mount paddle to one (1) type 1U steel post using 3/16" diameter aluminum blind rivets and washers. See standard drawing TM570 detail labeled "Steel Posts" for mounting a traffic target. Install paddle onto Type 1U steel post using same hole pattern.*
   - *Text and numbers are type C font in non-reflectorized black*
   - *Band is non-reflective blue tape*
   - *Do not mount paddle to other highway signing posts*
   - *Install paddle parallel to travel lane*
   - *Prepare paddle for each "DFI" noted in the marker table*
2. *Steel Posts:*
   - *See drg. no. TM571 for type 1U steel post dimensions*
3. *Place 7 feet from edge of pavement or as directed.*
4. *See marker table for installation locations.*

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STORMWATER DETAILS

SHEET NO. GJ-6

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