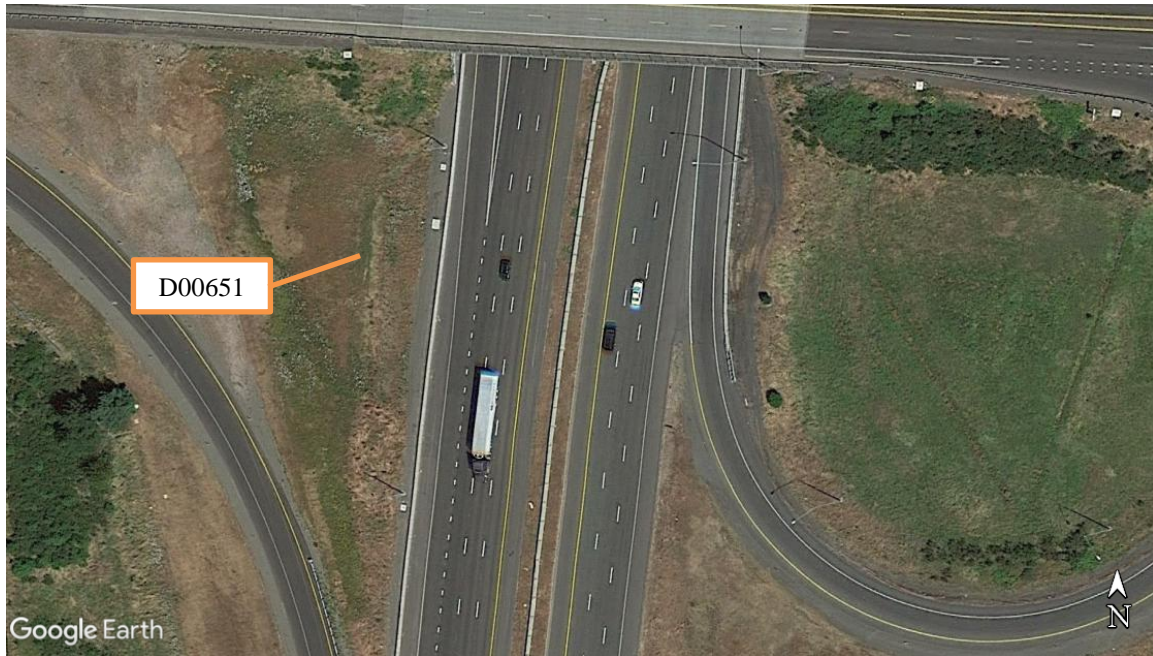


OPERATIONS AND MAINTENANCE MANUAL

DFI No. 00651

Facility Type: Biofiltration Swale



April, 2018

INDEX

1. Identification
2. Contact Information
3. Construction
4. Overview
5. Haz Mat Spill Feature
6. Auxiliary Outlet(High Flow Bypass)
7. Maintenance Requirements
8. Waste Material Handling

APPENDIX A: Operations Plan and Profile Drawing(s)

APPENDIX B: As-Construct Drawing(s)

1. Identification

Facility Types: Water Quality Biofiltration Swale 00651

Location: Pacific Highway 001
Milepost 251.45 to 251.49

2. Facility Contact Information

Chris Carman, ODOT Hydraulics Engineer (503) 986-2691.

3. Construction

Engineer of Record: ODOT Designer - Region 2 Tech. Center,
Chris Carman, (503) 986-2691

Facility construction: 2015
V-File: 48V-008

4. Overview

The swale is located in the SW infield of the I-5/Keubler Interchange. Treatment of pollutants from the highway are achieved through sedimentation and infiltration through the water quality mix shown in section B-B in the operational plan.

5. Facility Haz Mat Spill Feature

The swale can be used to store a volume of liquid by blocking the outlet of the swale. A barrier such as a temporary berm made of sandbags could be used to prevent liquid from draining from the swale.

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

This facility does not contain an auxiliary outlet feature. The facility was designed to receive runoff from the road and discharge into cross pipes.

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:

https://www.oregon.gov/ODOT/HWY/OOM/mg/02/act125_waterqualityfacil_andtables.pdf

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:

8. Waste Material Handling

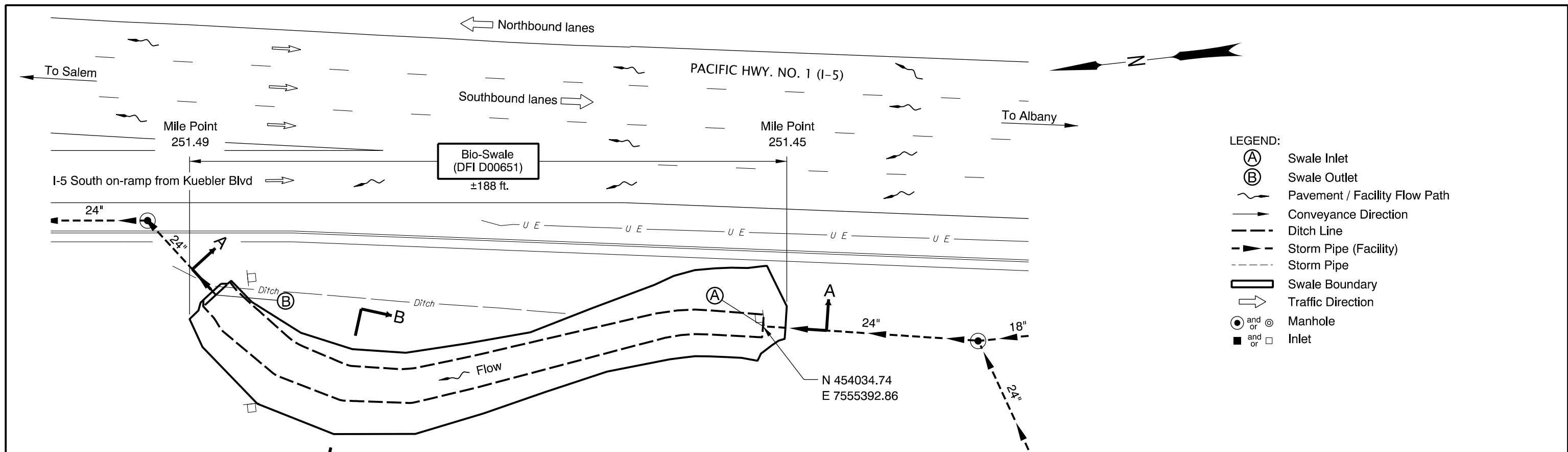
Material removed from the facility is defined as waste by DEQ. Refer to the roadwaste section 5.18 of the ODOT Maintenance Yard Environmental Management System (EMS) Policy and Procedures Manual for disposal options:

https://www.oregon.gov/ODOT/HWY/OOM/EMSdoc/ems_manual.pdf

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

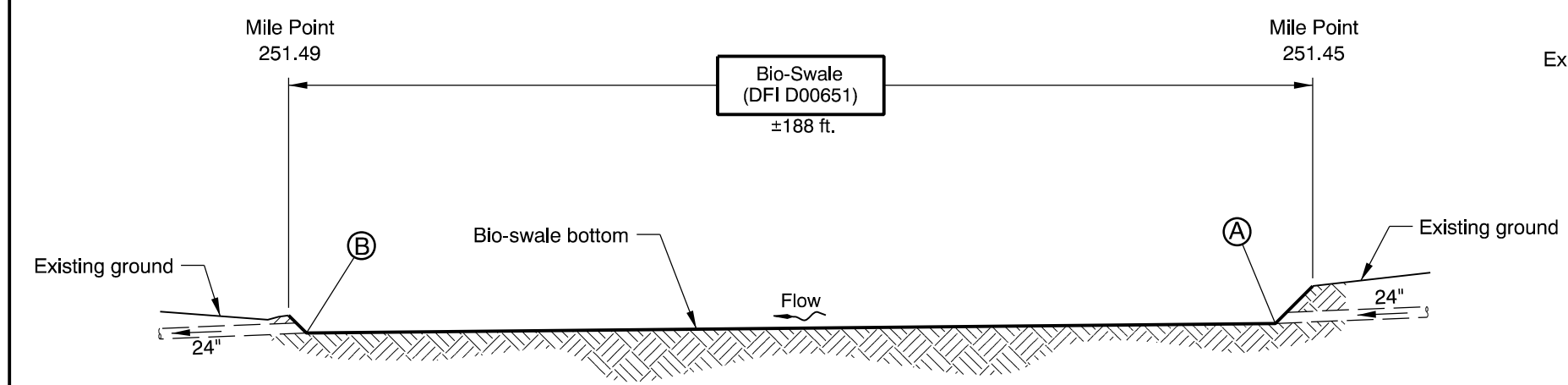
ODOT Clean Water Unit	(503) 986-3008
ODOT Statewide Hazmat Coordinator	(503) 229-5129
ODOT Region Hazmat Coordinator	(503) 986-2647
ODEQ Northwest Region Office	(503) 229-5263

APPENDIX A: Operational Plans

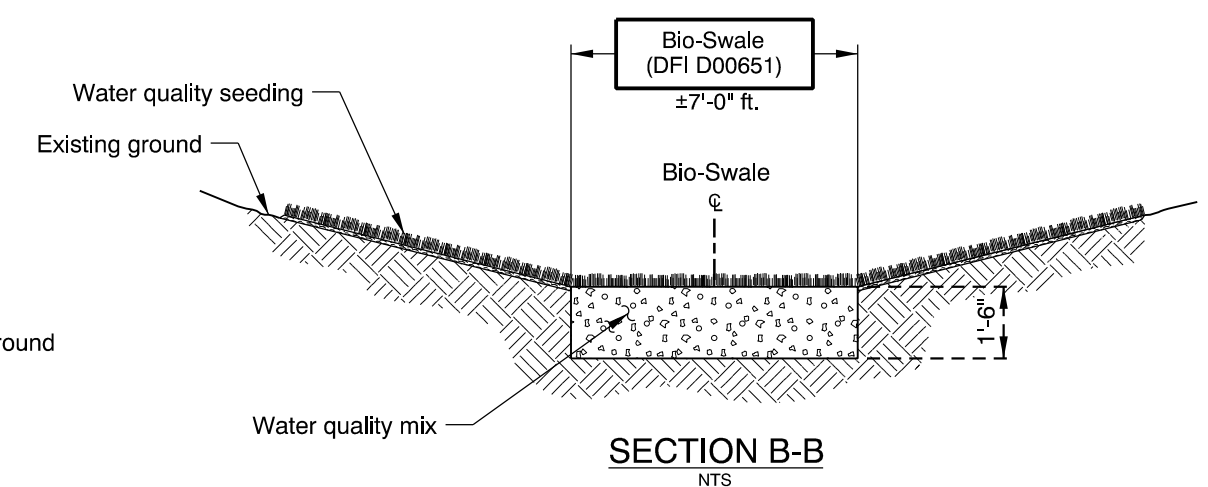


- LEGEND:**
- (A) Swale Inlet
 - (B) Swale Outlet
 - ~ Pavement / Facility Flow Path
 - Conveyance Direction
 - - - Ditch Line
 - ▲- Storm Pipe (Facility)
 - - - Storm Pipe
 - ▭ Swale Boundary
 - Traffic Direction
 - ⊙ and ⊚ Manhole
 - and □ Inlet

PLAN
NTS



SECTION A-A
NTS



SECTION B-B
NTS

**OREGON DEPARTMENT
OF TRANSPORTATION**

DFI D00651
MAINTENANCE DISTRICT 3 I-5 @ KUEBLER
WATER QUALITY BIOFILTRATION SWALE
 PACIFIC HIGHWAY MP 251.45
 MARION COUNTY

Prepared By:
Christopher Carman

Drafted By:
Jeff Coon

APPENDIX B: As-Construct Drawings

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
1A	Index Of Sheets Cont'd.
1A-2	Std. Drg. Nos.
1B	Plan Sheet Layout

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED PROJECT

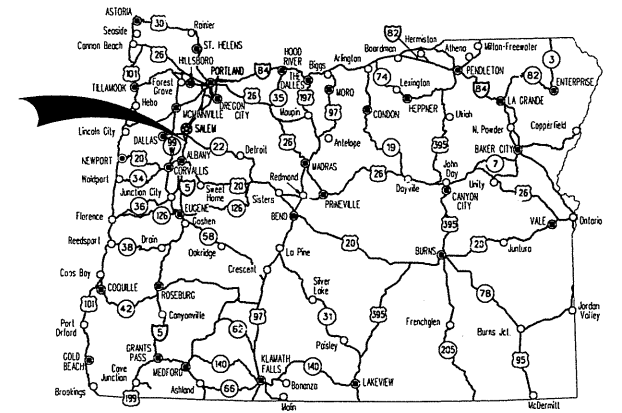
GRADING, DRAINAGE, STRUCTURE, PAVING, SIGNING,
ILLUMINATION, SIGNALS & ROADSIDE DEVELOPMENT

**FFO - I-5 @ KUEBLER INTERCHANGE -
S.B. RAMP IMPROVEMENTS (SALEM) SEC.**

PACIFIC HIGHWAY

MARION COUNTY

MARCH 2015



Overall Length Of Project - 1.61 Miles

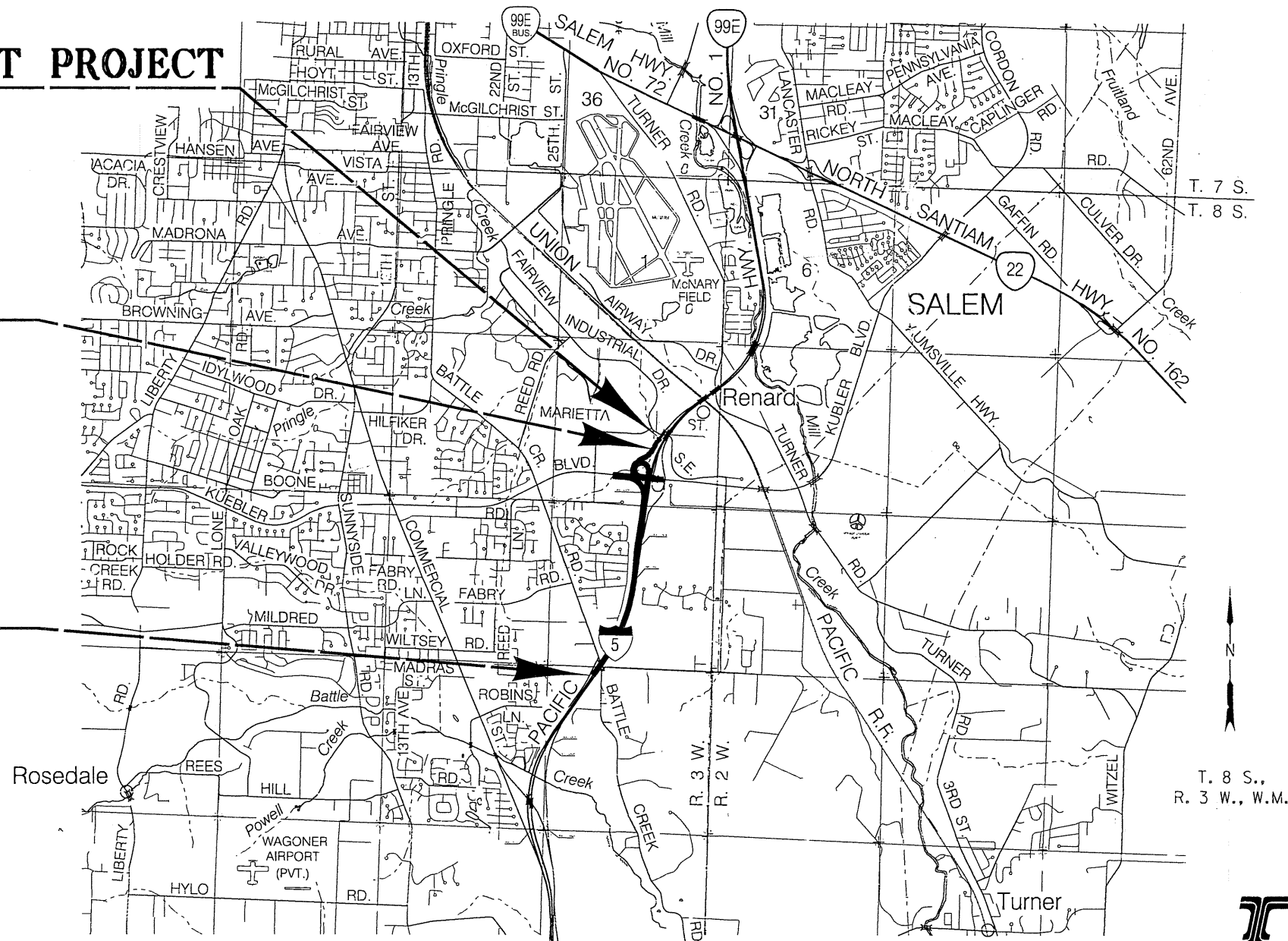
ATTENTION:
Oregon Law Requires You To Follow Rules Adopted By The Oregon Utility Notification Center. Those Rules Are Set Forth In OAR 952-001-0010 Through OAR 952-001-0090. You May Obtain Copies Of The Rules By Calling The Center. (Note: The Telephone Number For The Oregon Utility Center Is (503) 232-1987.)



**IM-SO-S001(427)
BEGINNING OF CONTRACT PROJECT**
STA. "DK" 485+84 (M.P. 251.76)

**IM-SO-S001(427)
BEGINNING OF PROJECT**
STA. "L" 497+20 (M.P. 251.54)

**IM-SO-S001(427)
END OF PROJECT**
STA. "SB" 570+25 (M.P. 250.15)



OREGON TRANSPORTATION COMMISSION
Catherine Mcter CHAIR
Tammy Baney COMMISSIONER
David Lohman COMMISSIONER
Susan Morgan COMMISSIONER
Alanco Simpson 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.

By: *James E. West* 1-8-15
Signature & date
James E. West - R2 Tech Center Manager
Print name and title
Thomas J. Hayes
Concurrence by ODOT Chief Engineer

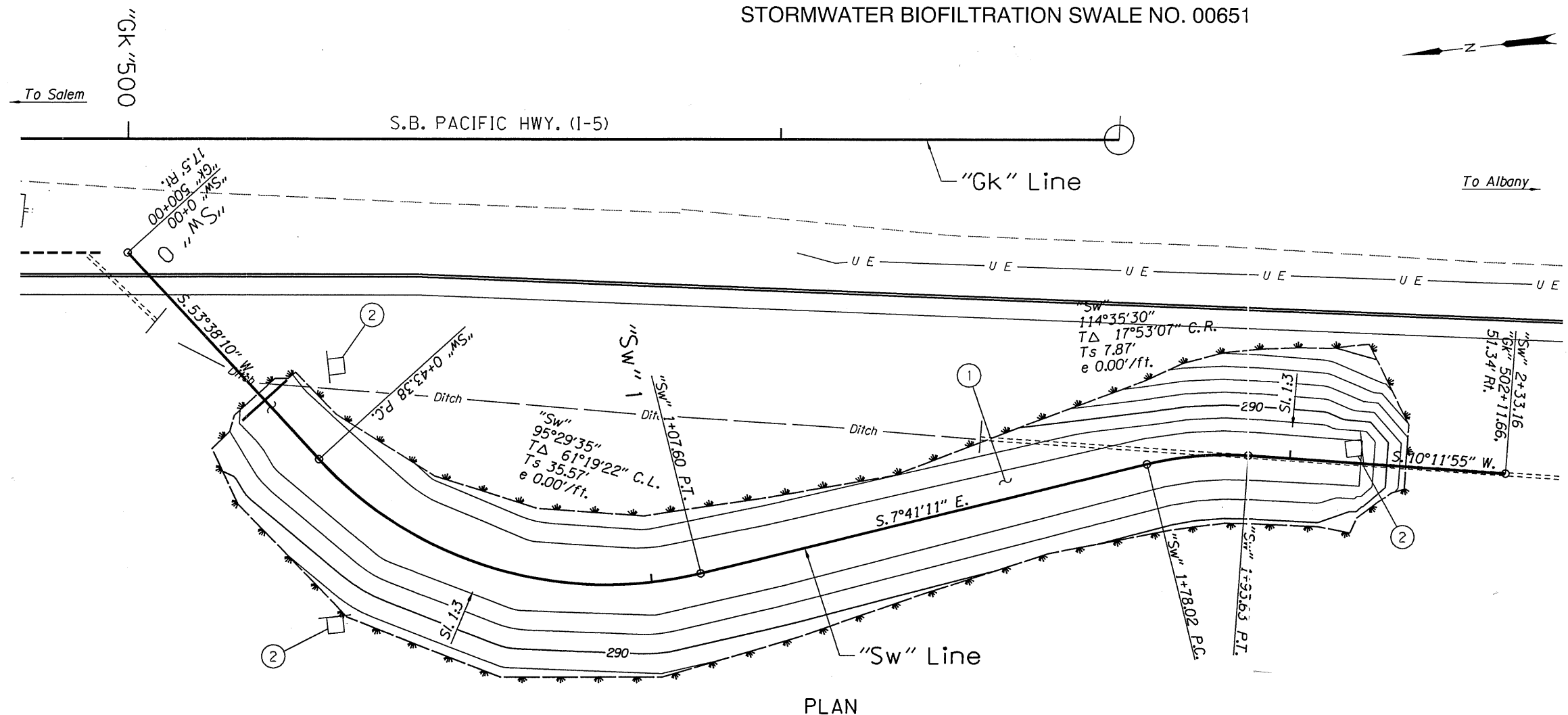
**FFO - I-5 @ KUEBLER INTERCHANGE -
S.B. RAMP IMPROVEMENTS (SALEM) SEC.**
PACIFIC HIGHWAY
MARION COUNTY

FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
OREGON DIVISION	IM-SO-S001(427)	1



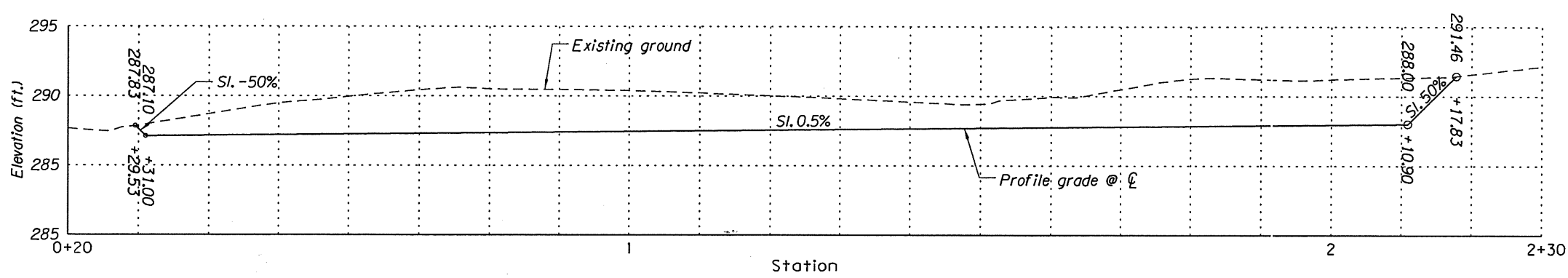
PE001730-010

STORMWATER BIOFILTRATION SWALE NO. 00651



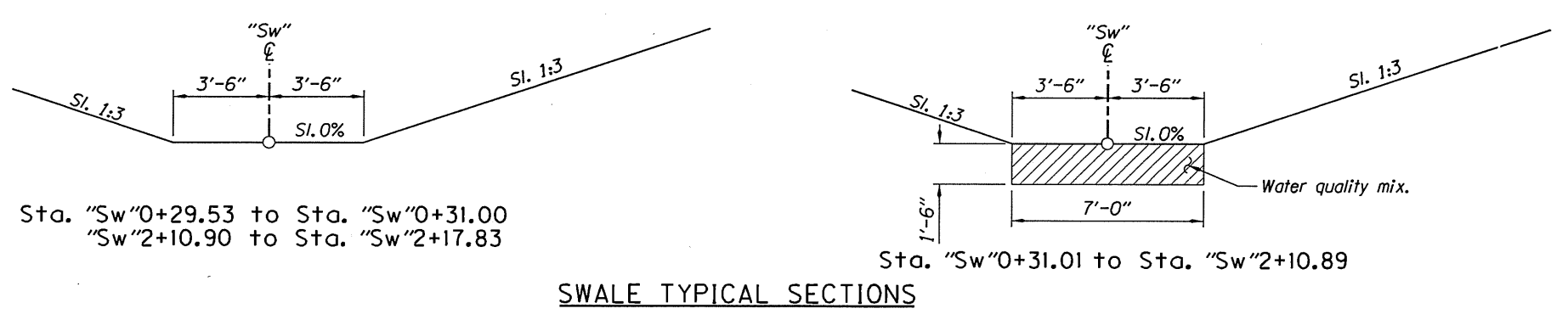
- ① Sta. "Sw"0+29.53 to Sta. "Sw"2+17.83
Const. water quality biofiltration swale no. 00651
Water quality mixture - 80 cu.yd.
General excavation - 335 cu.yd.
- ② Stormwater facility marker, Types 1 & 2
(See dwg. RD399)

PLAN

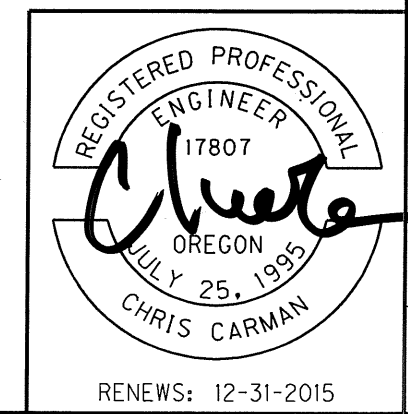


PROFILE ALONG "SW" LINE

Notes:
Slopes are shown as vert. to horiz.
For location, see Roadway plans.



SWALE TYPICAL SECTIONS



RENEWS: 12-31-2015

OREGON DEPARTMENT OF TRANSPORTATION	
REGION 2 TECH CENTER	
FFO - I-5 @ KUEBLER INTERCHANGE - S.B. RAMP IMPROVEMENTS (SALEM) SEC. PACIFIC HIGHWAY MARION COUNTY	
Reviewed By - Bruce Carmichael Designed By - Chris Carman Drafted By - Michael Skelton	
STORMWATER PLAN	SHEET NO. GJ-4