

VICINITY MAP

# SOUTHERN FLOW CORRIDOR PRELIMINARY DESIGN

JUNE 4, 2015



PORT OF TILLAMOOK BAY



**APPLICANT/LANDOWNER:**

TILLAMOOK COUNTY  
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TILLAMOOK, OR 97141  
PH: (503) 842-1809  
CONTACT: PAUL LEVESQUE

**ON BEHALF OF:**

PORT OF TILLAMOOK BAY  
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**CIVIL ENGINEER:**

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PROJECT MANAGER: ANDREY CHERNISHOV, PE, CWRE

**PROJECT DESIGN:**

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**LEGEND**

	FILL REMOVAL LIMITS
	TREE PROTECTION AREA
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING GROUND SURFACE (PROFILES AND CROSS SECTIONS)
	PROPOSED GROUND SURFACE (PROFILES AND CROSS SECTIONS)
	EXISTING SPRUCE TREE (SHOWN ONLY NEAR/ON EXISTING BERM. ALDER TREES NOT SHOWN)
	EXISTING MURRELET POTENTIAL NEST TREE
	FLOATING SILT CURTAIN
	WOOD CHIP FILTER BERM

**ABBREVIATIONS**

@	AT	N	NORTH
AC	ASPHALT	NE	NORTH EAST
CB	CATCH BASIN	N/S	NOT TO SCALE
C/L	CENTERLINE	NW	NORTH WEST
CMP	CORRUGATED METAL PIPE	OHP	OVER HEAD POWER
CO	CLEAN OUT	P/L	PROPERTY LINE
COTG	CLEAN OUT TO GRADE	PVC	POLYVINYL CHLORIDE
CY	CUBIC YARDS	ROW	RIGHT OF WAY
DR	DRIVE	RT	RIGHT
DIP	DUCTILE IRON PIPE	S	SOUTH
E	EAST	SE	SOUTH EAST
ELEV	ELEVATION	SW	SOUTH WEST
EP	EDGE OF PAVEMENT	STM	STORM DRAIN
EX	EXISTING	SF	SQUARE FEET
FCS	FLOOD CONTROL STRUCTURE	SAN	SANITARY SEWER
GUT	GUTTER	ST	STREET
HDPE	HIGH DENSITY POLYETHYLENE	STA	STATION
HOR	HORIZONTAL	S=	SLOPE EQUALS
HOT	HIGHEST OBSERVED TIDE	S/W	SIDEWALK
HP	HIGH POINT	TB	THRUST BLOCK
IE	INVERT ELEVATION	TYP	TYPICAL
LF	LINEAR FEET	VER	VERTICAL
LN	LINE	W	WEST
LP	LOW POINT	W/	WITH
LT	LEFT	WTR	WATER
MH	MANHOLE		

**TAX LOT INFORMATION**

THIS PROJECT IS LOCATED IN A PORTION OF SECTION 22 AND 23 OF TOWNSHIP 1 SOUTH, RANGE 10 WEST OF THE WILLAMETTE MERIDIAN. COUNTY OF TILLAMOOK, STATE OF OREGON.

**VERTICAL DATUM**

THE ELEVATIONS SHOWN HEREON ARE BASED UPON NAVD 88 DATUM.

**LOCATE**

(48 HOUR NOTICE PRIOR TO EXCAVATION)

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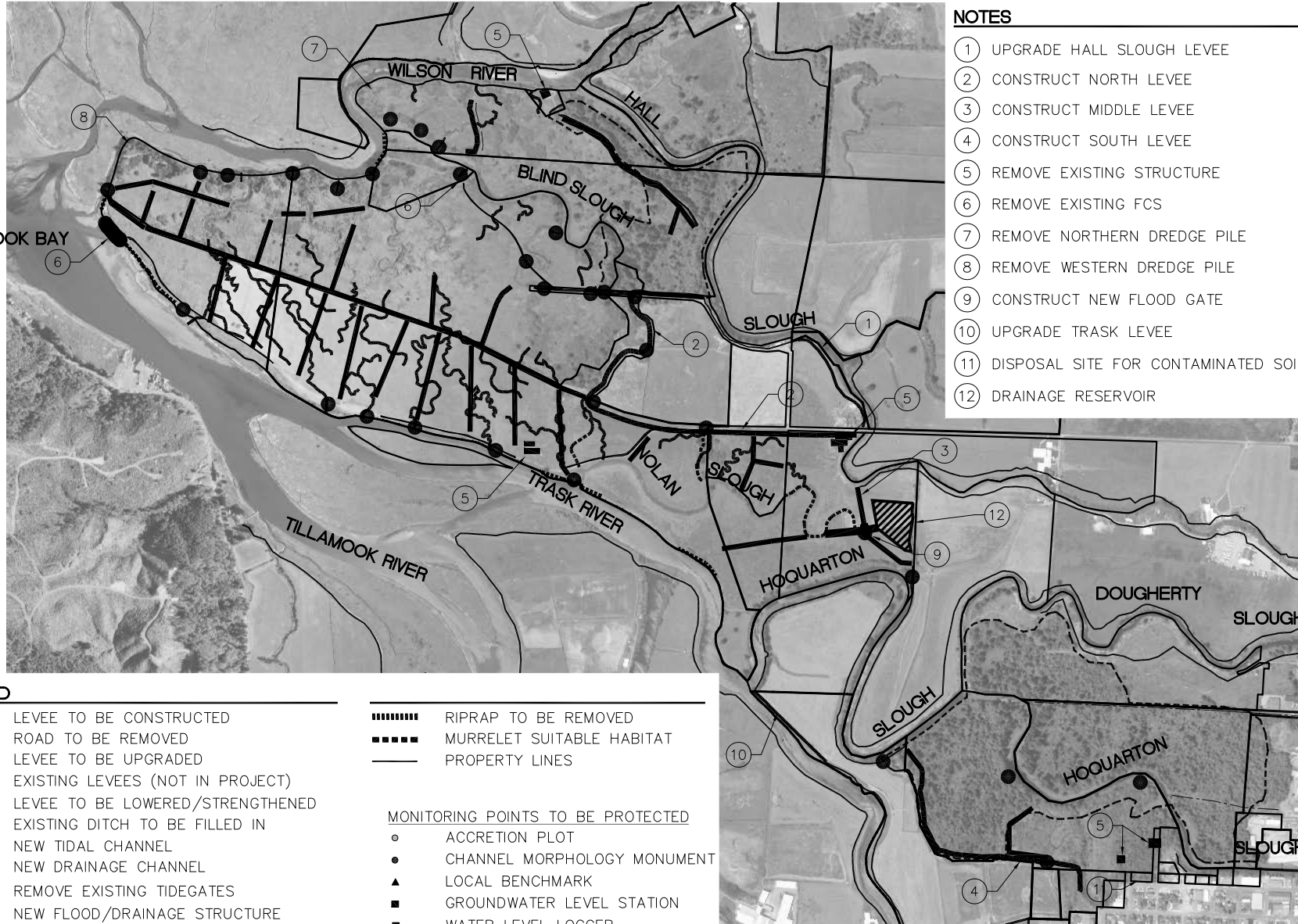
REV.	DATE	DESCRIPTION

0" = 100'  
IF THIS LINE IS NOT 0.5 INCH  
SCALE IS NOT AS SHOWN

OREGON SOLUTIONS  
500 SW MILL STREET, PORTLAND, OREGON 97201  
**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
COVER SHEET**



TILLAMOOK BAY



**NOTES**

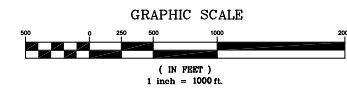
- ① UPGRADE HALL SLOUGH LEVEL
- ② CONSTRUCT NORTH LEVEL
- ③ CONSTRUCT MIDDLE LEVEL
- ④ CONSTRUCT SOUTH LEVEL
- ⑤ REMOVE EXISTING STRUCTURE
- ⑥ REMOVE EXISTING FCS
- ⑦ REMOVE NORTHERN DREDGE PILE
- ⑧ REMOVE WESTERN DREDGE PILE
- ⑨ CONSTRUCT NEW FLOOD GATE
- ⑩ UPGRADE TRASK LEVEL
- ⑪ DISPOSAL SITE FOR CONTAMINATED SOILS
- ⑫ DRAINAGE RESERVOIR

**LEGEND**

- |  |  |  |                           |
|--|--|--|---------------------------|
|  | LEVEE TO BE CONSTRUCTED                |  | RIPRAP TO BE REMOVED      |
|  | ROAD TO BE REMOVED                     |  | MURRELET SUITABLE HABITAT |
|  | LEVEE TO BE UPGRADED                   |  | PROPERTY LINES            |
|  | EXISTING LEVEES (NOT IN PROJECT)       |  |                           |
|  | LEVEE TO BE LOWERED/STRENGTHENED       |  |                           |
|  | EXISTING DITCH TO BE FILLED IN         |  |                           |
|  | NEW TIDAL CHANNEL                      |  |                           |
|  | NEW DRAINAGE CHANNEL                   |  |                           |
|  | REMOVE EXISTING TIDEGATES              |  |                           |
|  | NEW FLOOD/DRAINAGE STRUCTURE           |  |                           |
|  | CHANNEL RECONNECTION                   |  |                           |
|  | REMOVE FILL (LEVEES AND DREDGE SPOILS) |  |                           |
|  | WATER                                  |  |                           |
|  | REMOVE EXISTING STRUCTURE              |  |                           |
- 
- |  |  |
|--|--|
|  | <b>MONITORING POINTS TO BE PROTECTED</b> |
|  | ACCRETION PLOT                           |
|  | CHANNEL MORPHOLOGY MONUMENT              |
|  | LOCAL BENCHMARK                          |
|  | GROUNDWATER LEVEL STATION                |
|  | WATER LEVEL LOGGER                       |
- 
- |  |                       |
|--|-----------------------|
|  | TOPSOIL DISPOSAL AREA |
|  | CONTAMINATED SOIL     |

**PROJECT OVERVIEW**

SCALE: 1" = 1000'



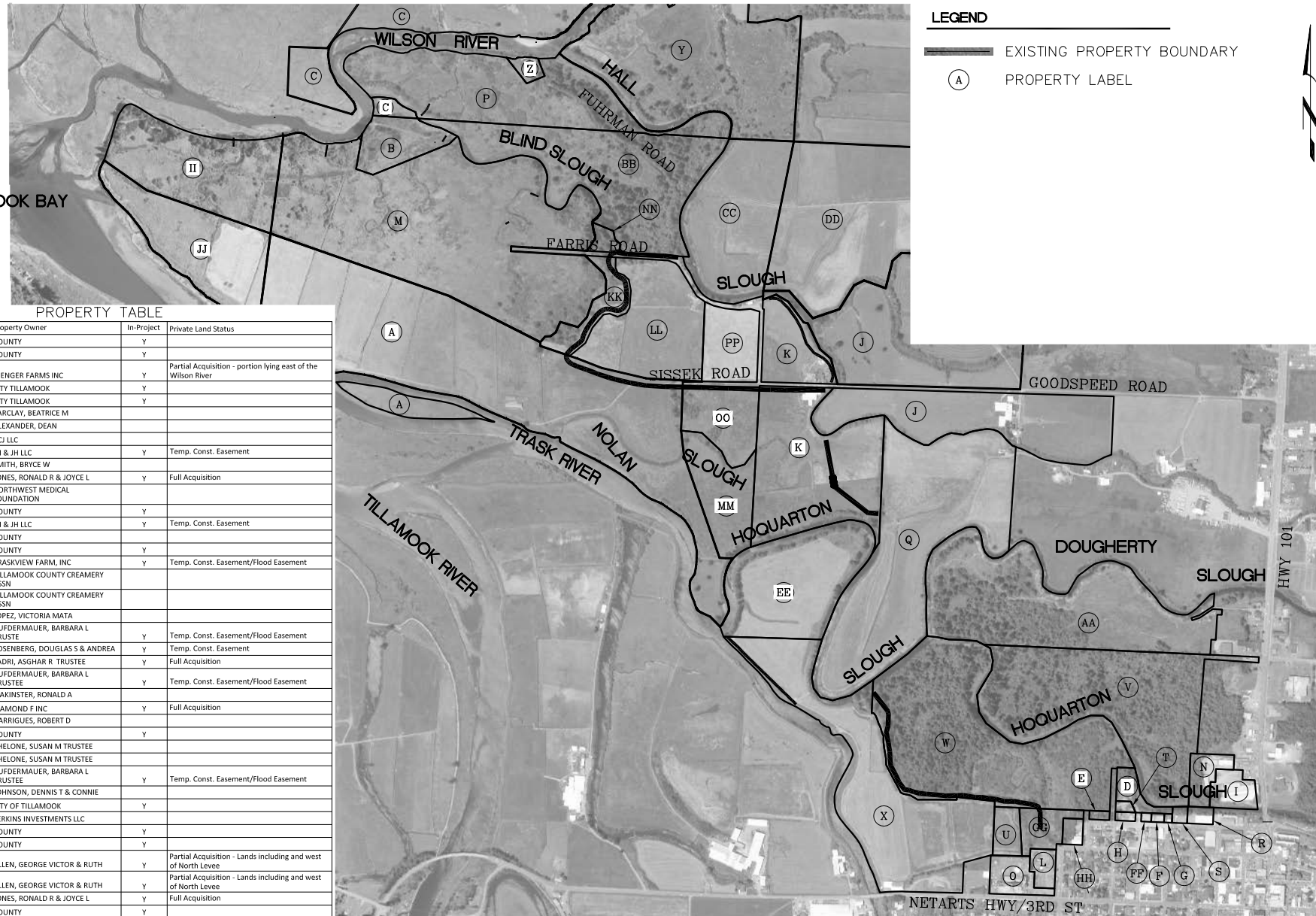
**H B H**  
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REV.	DATE	DESCRIPTION

0' 1" 0.5"  
 IF THIS LINE IS NOT 0.5 INCH  
 SCALE IS NOT AS SHOWN

OREGON SOLUTIONS  
 500 SW MILL STREET, PORTLAND, OREGON 97201  
**SOUTHERN FLOW CORRIDOR  
 TILLAMOOK, OREGON  
 PROJECT OVERVIEW**

TILLAMOOK BAY



**LEGEND**

————— EXISTING PROPERTY BOUNDARY

⊙ A PROPERTY LABEL

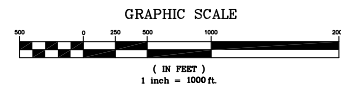


PROPERTY TABLE

Label	Taxlot #	Property Owner	In-Project	Private Land Status
A	900	COUNTY	Y	
B	800	COUNTY	Y	
C	100	GIENGER FARMS INC	Y	Partial Acquisition - portion lying east of the Wilson River
D	190	CITY TILLAMOOK	Y	
E	400	CITY TILLAMOOK	Y	
F	700	BARCLAY, BEATRICE M		
G	600	ALEXANDER, DEAN		
H	300	DCJ LLC		
I	1300	LH & JH LLC	Y	Temp. Const. Easement
J	700	SMITH, BRYCE W		
K	600	JONES, RONALD R & JOYCE L	Y	Full Acquisition
L	4400	NORTHWEST MEDICAL FOUNDATION	Y	
M	801	COUNTY	Y	
N	1400	LH & JH LLC	Y	Temp. Const. Easement
O	4700	COUNTY		
P	400	COUNTY	Y	
Q	900	TRASKVIEW FARM, INC	Y	Temp. Const. Easement/Flood Easement
R	501	TILLAMOOK COUNTY CREAMERY ASSN		
S	502	TILLAMOOK COUNTY CREAMERY ASSN		
T	200	LOPEZ, VICTORIA MATA		
U	4600	AUFDERMAUER, BARBARA L TRUSTE	Y	Temp. Const. Easement/Flood Easement
V	100	ROSENBERG, DOUGLAS S & ANDREA	Y	Temp. Const. Easement
W	200	SADRI, ASGHAR R TRUSTEE	Y	Full Acquisition
X	400	AUFDERMAUER, BARBARA L TRUSTEE	Y	Temp. Const. Easement/Flood Easement
Y	700	MAKINSTER, RONALD A		
Z	401	DIAMOND F INC	Y	Full Acquisition
AA	2200	GARRIGUES, ROBERT D		
BB	200	COUNTY	Y	
CC	100	CHELONE, SUSAN M TRUSTEE		
DD	500	CHELONE, SUSAN M TRUSTEE		
EE	1000	AUFDERMAUER, BARBARA L TRUSTEE	Y	Temp. Const. Easement/Flood Easement
FF	701	JOHNSON, DENNIS T & CONNIE		
GG	4500	CITY OF TILLAMOOK	Y	
HH	4501	PERKINS INVESTMENTS LLC	Y	
II	100	COUNTY	Y	
JJ	200	COUNTY	Y	
KK	700	ALLEN, GEORGE VICTOR & RUTH	Y	Partial Acquisition - Lands including and west of North Leves
LL	600	ALLEN, GEORGE VICTOR & RUTH	Y	Partial Acquisition - Lands including and west of North Leves
MM	1500	JONES, RONALD R & JOYCE L	Y	Full Acquisition
NN	300	COUNTY	Y	
OO	1400	COUNTY	Y	
PP	500	JONES, RONALD R & JOYCE L	Y	Full Acquisition
Right-of-Way		COUNTY	Y	Portions of Goodspeed, Sissek & Farris Rd.
Right-of-Way		CITY	Y	Douglas Ave Extension

**PROPERTY BOUNDARIES AND MONUMENTS**

SCALE: 1" = 1000'



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Prepared By: ABC Checked By: ABC Drawn By: ABC  
Scale: 1" = 1000' Date: 06-04-15

BY: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

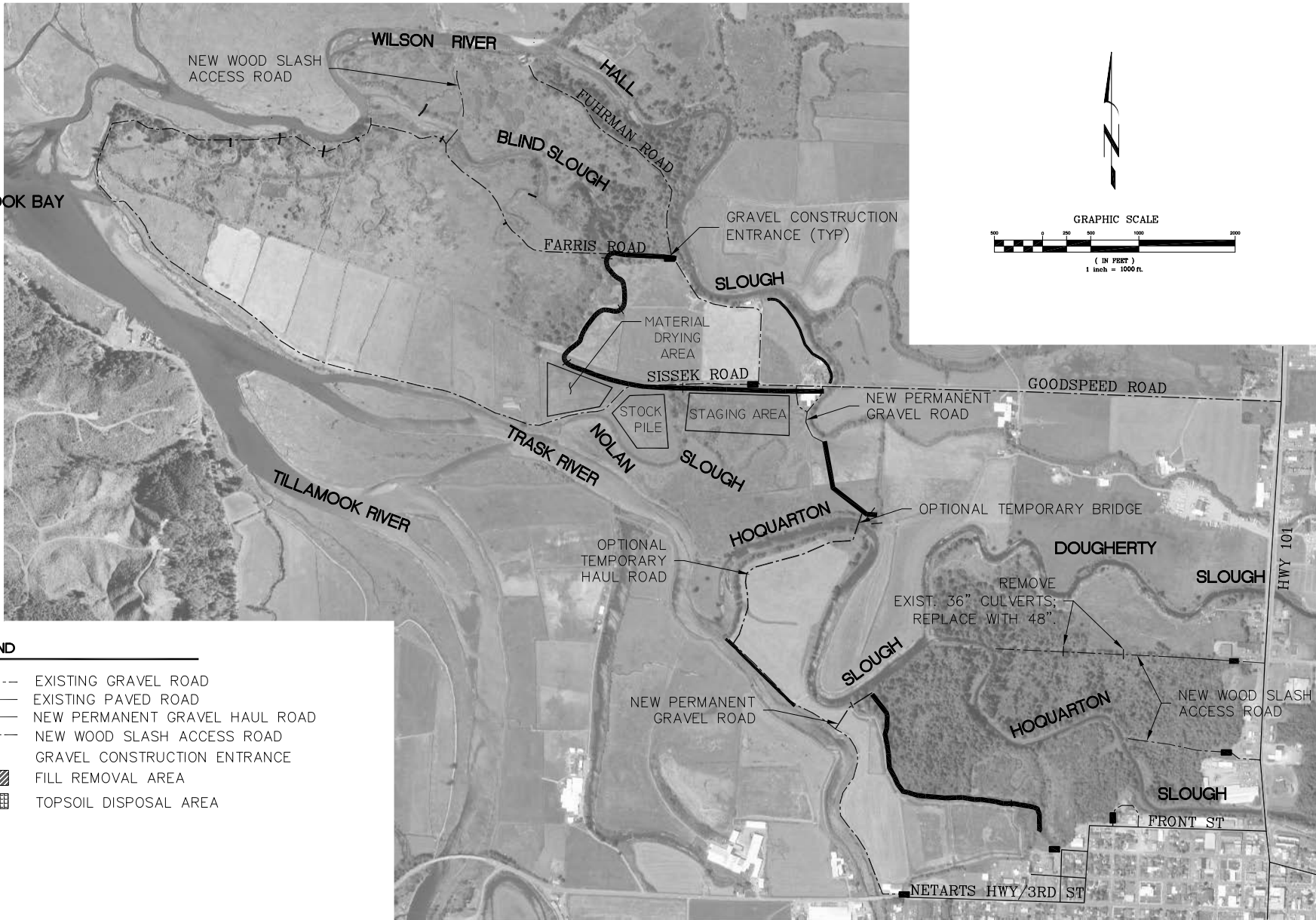
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
PROPERTY BOUNDARIES  
AND MONUMENTS**

DATE: 06-04-15  
3 OF 29  
2009-003-03

TILLAMOOK BAY

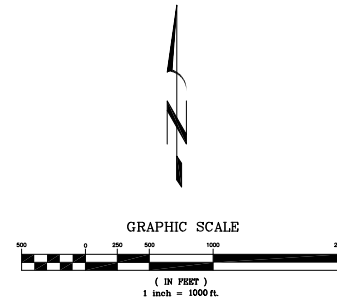


**LEGEND**

- EXISTING GRAVEL ROAD
- EXISTING PAVED ROAD
- NEW PERMANENT GRAVEL HAUL ROAD
- NEW WOOD SLASH ACCESS ROAD
- GRAVEL CONSTRUCTION ENTRANCE
- ▨ FILL REMOVAL AREA
- ▤ TOPSOIL DISPOSAL AREA

**ACCESS PLAN AND HAUL ROADS**

SCALE: 1" = 1000'



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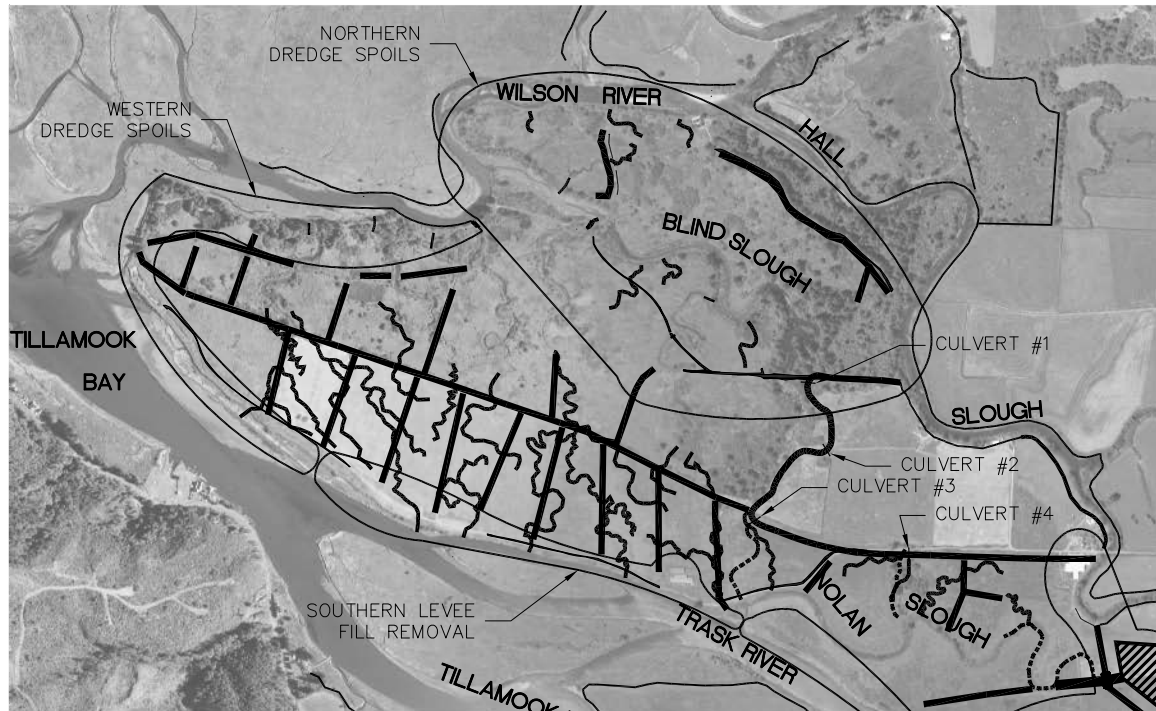
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
ACCESS PLAN AND  
HAUL ROADS**

Sheet No. **4** of **29**  
**06-04-15**  
**2009-003-03**





Project Element	Total Volume (cy)*	Total Area (ac)	Total Length (ft)	Levee Road Aggregate (cy)	Stripping/Topsill Volume (cy)**	Contaminated Volume (cy)	3' Summer Levee Volume (cy)	Clean Fill Volume (cy)
<b>CUT</b>								
North Levee	20	-	-	-	13,300	-	-	-
Middle Levee	0	-	-	-	2,200	-	-	-
South Levee	100	-	-	-	4,200	-	-	-
Trask Levee	10	-	-	-	700	-	-	-
Hall Slough Levee	50	-	-	-	1,200	-	-	-
Northern Dredge Piles	36,000	14.9	-	-	24,000	-	2,400	9,600
Western Dredge Piles	26,000	8.3	-	-	13,000	-	2,400	10,600
Southern Levee Fill Removal	22,000	7.4	-	-	12,000	-	2,700	7,300
South-Central Levee Fill Removal	14,500	5.6	-	-	9,000	-	800	4,700
Hoquarton South Fill Removal	23,000	5.4	-	-	9,000	-	1,700	12,300
Hoquarton North Fill Removal	21,000	3.3	-	-	5,000	-	1,700	14,300
Old Mill Site Fill Removal	43,000	7.8	-	-	13,000	21,000	300	8,700
Tidal Channels	35,000	5.4	29,200	-	9,000	-	-	26,000
Drainage Channels	11,000	5.6	3,500	-	4,000	-	-	7,000
Rip-Rap	3,000	1.0	2,800	-	-	-	-	-
<b>TOTAL</b>	<b>234,680</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>119,600</b>	<b>21,000</b>	<b>12,000</b>	<b>100,500</b>
<b>FILL</b>								
North Levee	79,000	8.3	4,991	2,800	3,900	-	-	72,300
Middle Levee	10,000	1.4	1,044	600	500	-	-	8,900
South Levee	19,000	2.6	2,764	1,500	600	-	-	16,900
Trask Levee	2,000	0.4	1,001	600	0	-	-	1,400
Hall Slough Levee	2,000	0.8	1,179	700	300	-	-	1,000
Old Mill Site Contaminated Soil	21,000	0.6	-	-	900	21,000	-	?
Ditch Fill	27,000	6.8	250,000	-	27,000	-	-	0
Topsill Disposal Area	98,400	192.0	-	-	98,400	-	-	0
Rip-Rap	3,000	-	1,044	-	-	-	-	-
<b>TOTAL</b>	<b>261,400</b>	<b>213</b>	<b>-</b>	<b>6,200</b>	<b>131,600</b>	<b>21,000</b>	<b>-</b>	<b>100,500</b>
Wood Slash Access Roads	3,000	0.9	-	-	-	-	-	-

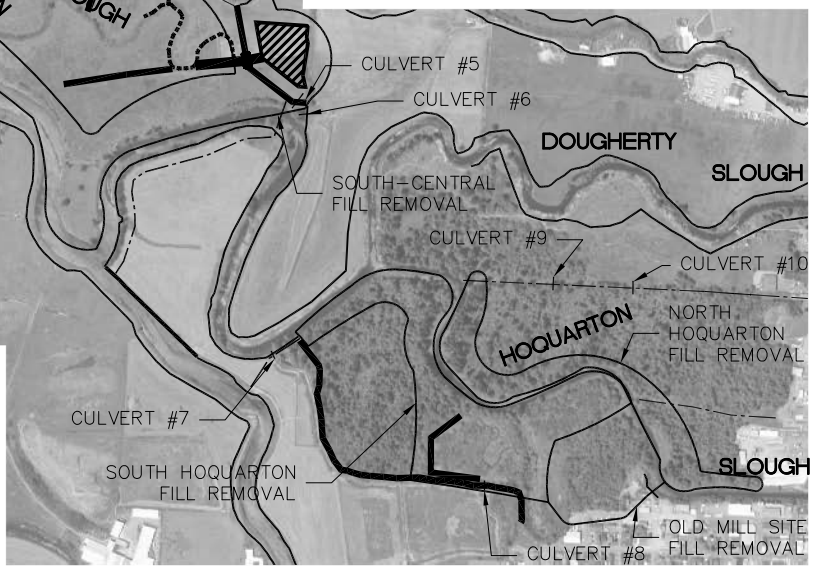
\*Volumes are based on Lidar surface data, which may be off as much as +/-20%.  
 \*\*Assuming 12" stripping (cut) depth and 6" topsill (fill) depth

**LEGEND**

- LEVEE TO BE CONSTRUCTED
- ROAD TO BE REMOVED
- LEVEE TO BE UPGRADED
- EXISTING LEVEES (NOT IN PROJECT)
- LEVEE TO BE LOWERED/STRENGTHENED
- EXISTING DITCH TO BE FILLED IN
- NEW TIDAL CHANNEL
- NEW DRAINAGE CHANNEL
- REMOVE FILL (LEVEES AND DREDGE SPOILS)
- WATER
- TOPSOIL DISPOSAL AREA

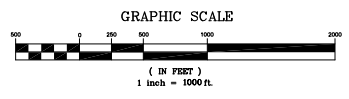
- NOTES**
- ① ALL FILL REMOVAL AND DISPOSAL AREAS TO BE HYDROSEEDED.
  - ② ALL LEVEES CONSTRUCTED OR DISTURBED SHALL BE MATTED AND SEED.

Culvert #	Diameter (ft)	Length (ft)	IE In (ft)	IE Out (ft)
1	6	120	2	2
2	6	120	2	2
3	6	110	2	2
4	6	110	2	2
5	6	110	2	2
6	6	120	2	2
7	6	48	2	2
8	6	80	2	2
9	4	40		
10	4	40		



**GRADING OVERVIEW**

SCALE: 1" = 1000'



**PROJECT**

**DATE**

**HBH**  
Consulting Engineers

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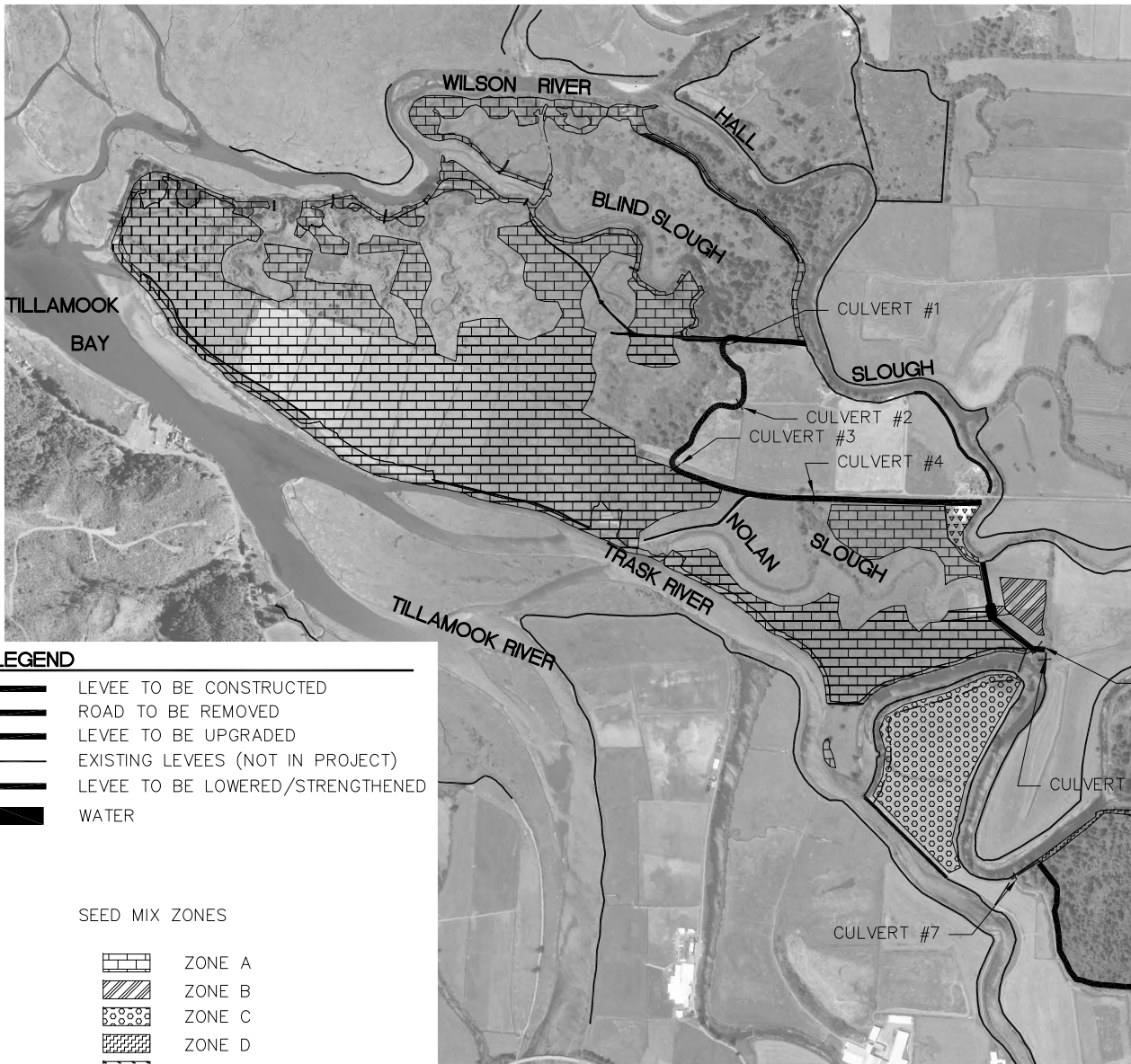
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Stamp: ABC  
Project: SOUTHERN FLOW CORRIDOR  
Sheet: 06-04-15

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SOUTHERN FLOW CORRIDOR TILLAMOOK, OREGON GRADING OVERVIEW

DATE: 06-04-15 5 of 23



**LEGEND**

	LEVEE TO BE CONSTRUCTED
	ROAD TO BE REMOVED
	LEVEE TO BE UPGRADED
	EXISTING LEVEES (NOT IN PROJECT)
	LEVEE TO BE LOWERED/STRENGTHENED
	WATER

**SEED MIX ZONES**

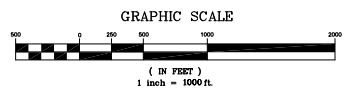
	ZONE A
	ZONE B
	ZONE C
	ZONE D
	ZONE E
	ZONE F

Zone	Zone Type	Construction Year 1 Grass/Sedge/Forb Seeding Candidate Species (*non-native)	Year 2 Planting	Notes		
A	Low Brackish Marsh	Agrostis stolonifera* Carex lyngbyei Potentilla anserina Deschampsia caespitosa Juncus balticus Achillea millefolium Phalaris arundinacea*	Creeping Bentgrass Lyngbye's sedge common silverweed tufted hair grass Baltic rush common arrow reed canegrass	No seeding to occur. Species list reflects expected natural recolonization based on reference site surveys by Institute for Applied Ecology		
B	Freshwater Diked Wetland	Carex stipata Carex obnupta Eleocharis palustris Juncus tenuis Juncus ensifolius Scirpus microcarpus Glyceria occidentalis Grindelia integrifolia Alopecurus geniculatus	Sawbreak sedge Slough Sledge Creeping spike rush Slender Rush Dagger-leaf Rush Small-fruited bulrush Western Mannagrass Entire-Leaved Gumweed Water Foxtail			
C	Private Pasture		Forage Pasture Mix*		None	Remains in Private Ownership
D	Tidal Freshwater Swamp	Hordeum brachyantherum Bromus carinatus Festuca rubra rubra Glyceria occidentalis Deschampsia caespitosa Agrostis exarata Carex obnupta Scirpus microcarpus	Meadow larkley CaliforniaBrome Native Red Fescue Northwestern Mannagrass Tufted Hairgrass Spike Bertgrass Slough Sedge Small-fruited bulrush		Sitka Spruce Swamp Tree community	
E	Levee/Containment Cell	Lolium multiflorum* Lolium perenne* Hordeum brachyantherum Bromus carinatus Festuca rubra rubra Glyceria occidentalis Deschampsia caespitosa Agrostis exarata Carex lyngbyei Juncus balticus	Annual Ryegrass Perennial Ryegrass Meadow larkley CaliforniaBrome Native Red Fescue Northwestern Mannagrass Tufted Hairgrass Spike Bertgrass Lyngbye's sedge Baltic rush		Misc. reseeded for minor erosion control and re-grading area repair	
F	Riparian	Hordeum brachyantherum Bromus carinatus Festuca rubra rubra Glyceria occidentalis Deschampsia caespitosa Agrostis exarata	Meadow larkley CaliforniaBrome Native Red Fescue Northwestern Mannagrass Tufted Hairgrass Spike Bertgrass		Sitka Spruce Swamp Tree community	Planting adjusted for higher and drier conditions than Tidal Freshwater Swamp Zone

General Notes: Species lists represent typical Pacific Northwest native coastal wetland plants, and will be modified based on commercial and/or local availability, cost, and local conditions. Tree/shrub plantings will be designed to minimize loss of flood conveyance. Additional hand planting of rare native flowers may occur in year 2.

**REVEGETATION OVERVIEW**

SCALE: 1" = 1000'



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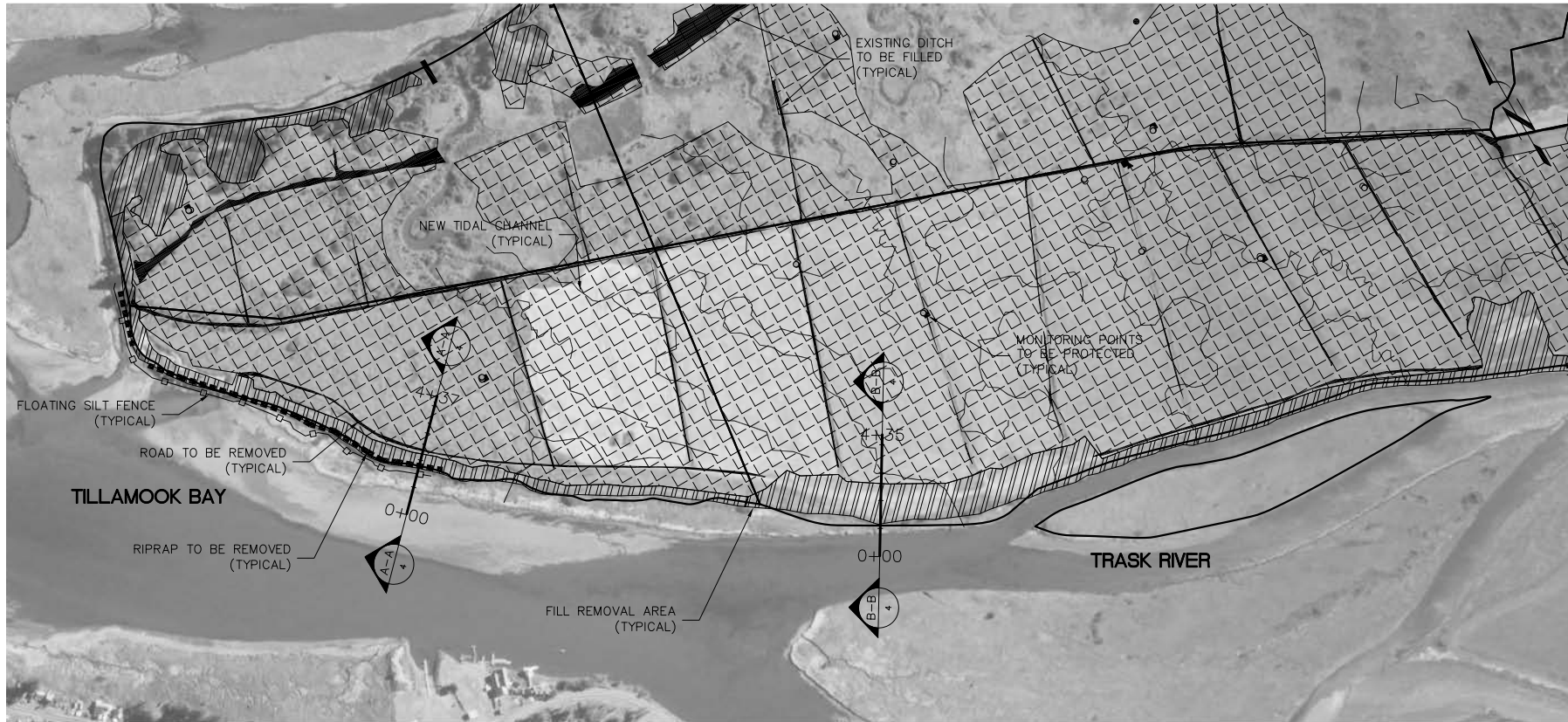
REV.	DATE	DESCRIPTION

0" 1000'  
IF THIS LINE IS NOT 0.5 INCH  
SCALE IS NOT AS SHOWN

OREGON SOLUTIONS  
500 SW MILL STREET, PORTLAND, OREGON 97201

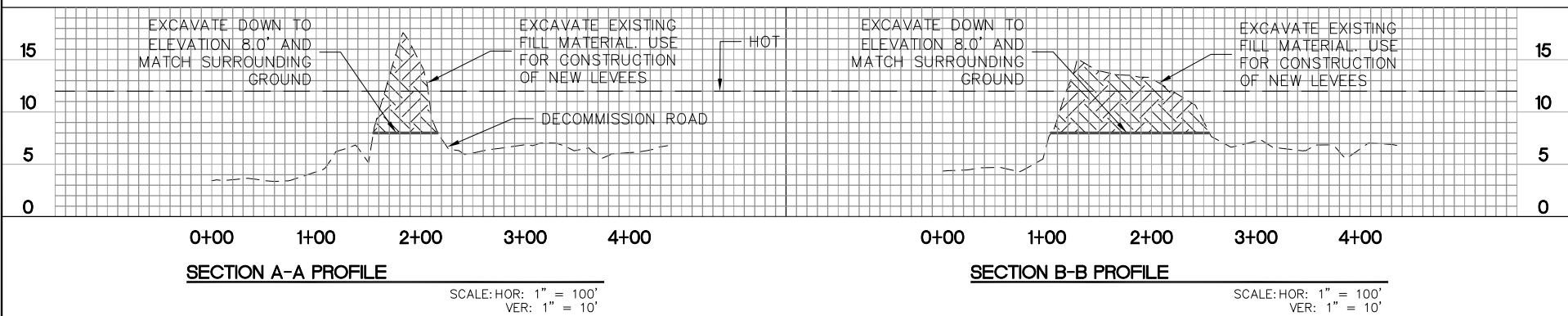
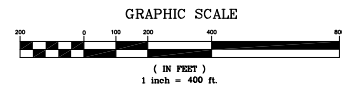
**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
REVEGETATION OVERVIEW**

DATE: 06-04-15  
SHEET NO. 6 OF 23  
06-04-15  
2009-003-03



**SECTIONS A-A AND B-B**

SCALE: 1" = 400'



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hydraulic  
consultants  
ENGINEERS

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Created By: ABC | Drawn By: ABC | Checked By: ABC | Stamp No.: ABC | Stamp No.: ABC | License: L12209-003-03 | Project: SOUTHERN FLOW CORRIDOR

REV.	DATE	DESCRIPTION

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
GRADING/ESC PLAN  
SECTIONS A-A AND B-B**

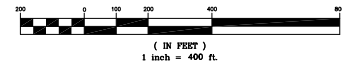
Sheet No. **7** of 29  
**06-04-15**  
**2009-003-03**



**SECTIONS C-C, D-D, AND G-G**

SCALE: 1" = 400'

GRAPHIC SCALE



EXCAVATE EXISTING FILL MATERIAL. USE FOR CONSTRUCTION OF NEW LEVEES

EXCAVATE DOWN TO ELEVATION 8.0' AND MATCH SURROUNDING GROUND

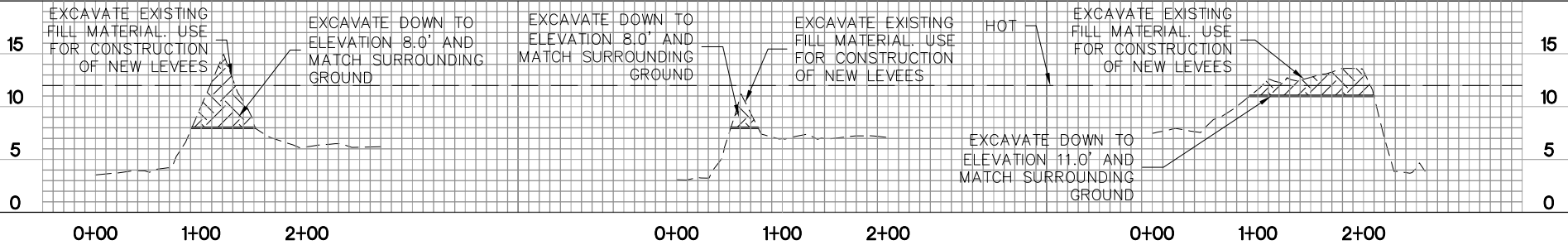
EXCAVATE DOWN TO ELEVATION 8.0' AND MATCH SURROUNDING GROUND

EXCAVATE EXISTING FILL MATERIAL. USE FOR CONSTRUCTION OF NEW LEVEES

HOT

EXCAVATE EXISTING FILL MATERIAL. USE FOR CONSTRUCTION OF NEW LEVEES

EXCAVATE DOWN TO ELEVATION 11.0' AND MATCH SURROUNDING GROUND



**SECTION C-C PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'

**SECTION D-D PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'

**SECTION G-G PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



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Stamp: ABC  
Project No.: CC-03-S-C-C

REV.	DATE	DESCRIPTION

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
GRADING/ESC PLAN**

**SECTIONS C-C, D-D AND G-G**

Sheet No. **08**  
**06-04-15**  
**2009-003-03**

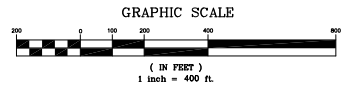
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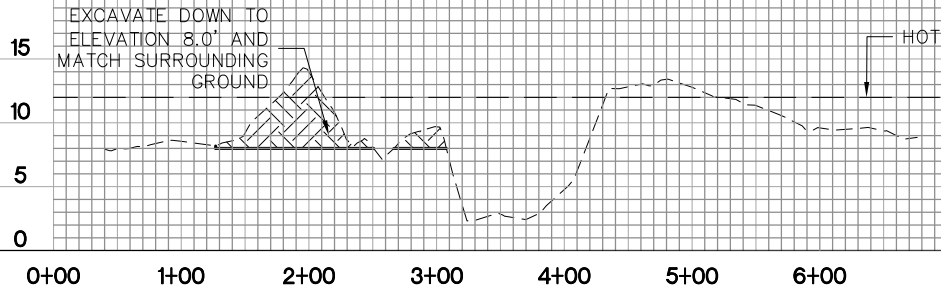


**SECTIONS E-E AND F-F**

SCALE: 1" = 400'

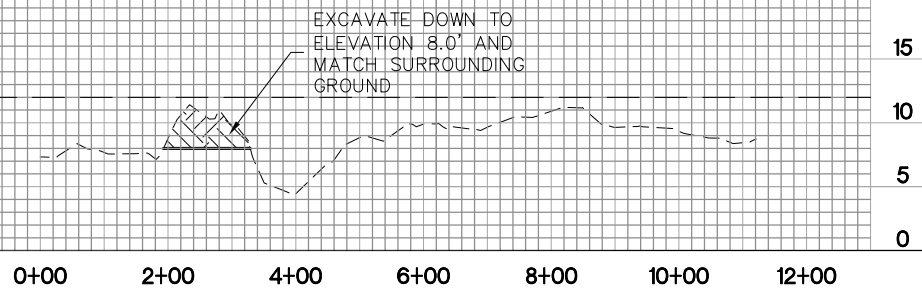


EXCAVATE DOWN TO ELEVATION 8.0' AND MATCH SURROUNDING GROUND



SCALE: HOR: 1" = 100'  
VER: 1" = 10'

EXCAVATE DOWN TO ELEVATION 8.0' AND MATCH SURROUNDING GROUND



SCALE: HOR: 1" = 200'  
VER: 1" = 10'



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Project No.: L1209-03-03-Grading/Plan/SecSections Date: 06-04-15

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
GRADING/ESC PLAN  
SECTIONS E-E AND F-F**

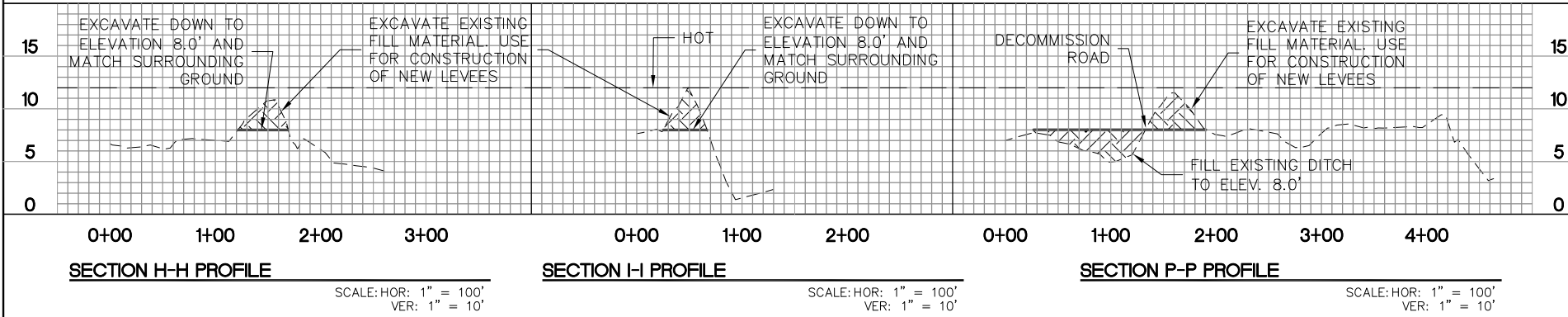
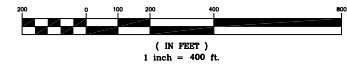




**SECTIONS H-H, I-I AND P-P**

SCALE: 1" = 400'

GRAPHIC SCALE



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REV.	DATE	DESCRIPTION

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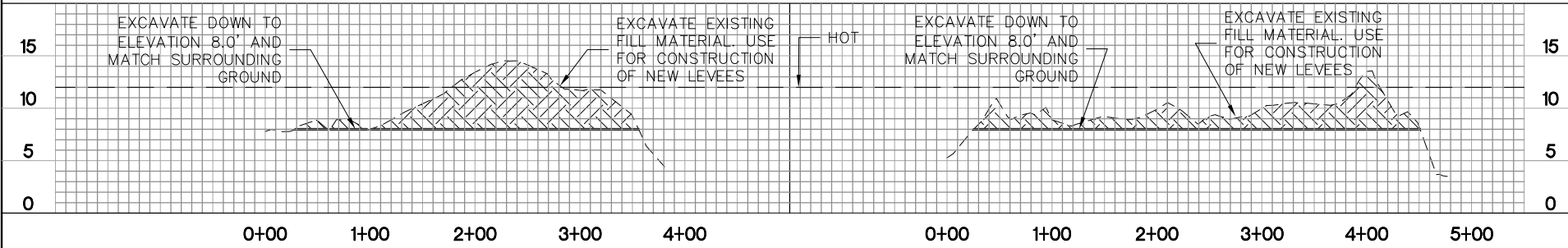
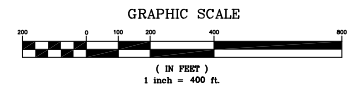
**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
GRADING/ESC PLAN  
SECTIONS H-H, I-I AND P-P**

Sheet No. **10** of 29  
06-04-15  
2009-003-03



**SECTIONS J-J AND K-K**

SCALE: 1" = 400'



**SECTION J-J PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'

**SECTION K-K PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



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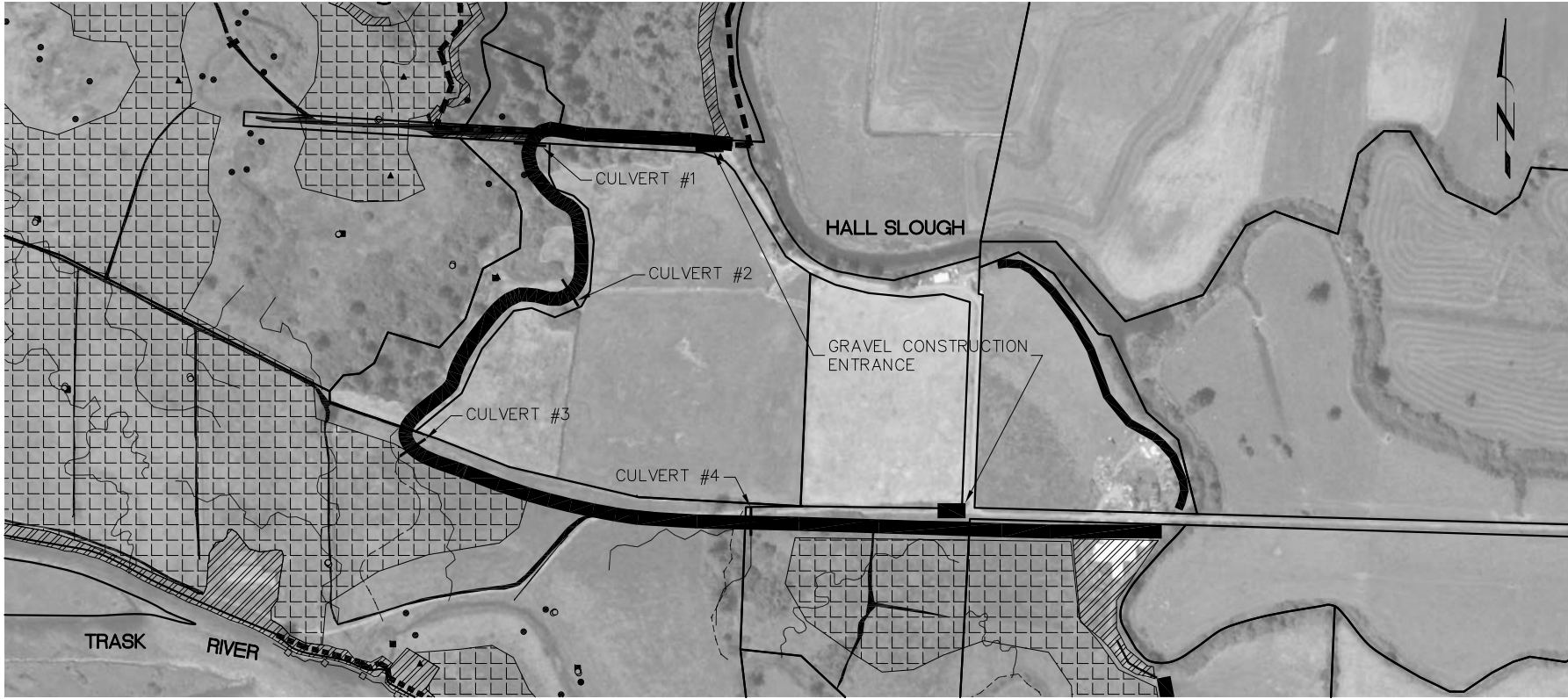
2316 Portland Road, Suite H  
Newberg, Oregon 97132  
Ph: 503.534.9553  
Fax: 503.537.9554  
mail@nhcconsulting.com

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Scale: 1" = 400'  
Date: 06-04-15  
Project: 2009-003-03

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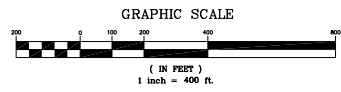
OREGON SOLUTIONS  
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
GRADING/ESC PLAN  
SECTIONS J-J AND K-K**



**NORTH LEVEE AREA**

SCALE: 1" = 400'



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Newberg, Oregon 97132

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
GRADING/ESC PLAN  
NORTH LEVEE AREA**

Sheet No. **12**  
of 29

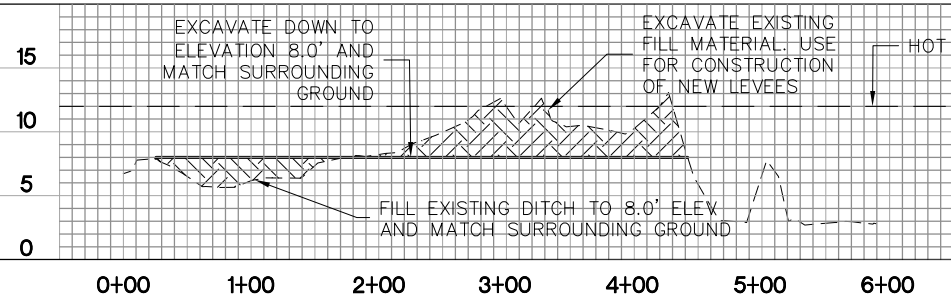
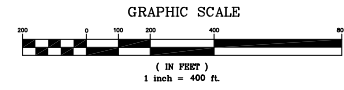
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2009-003-03



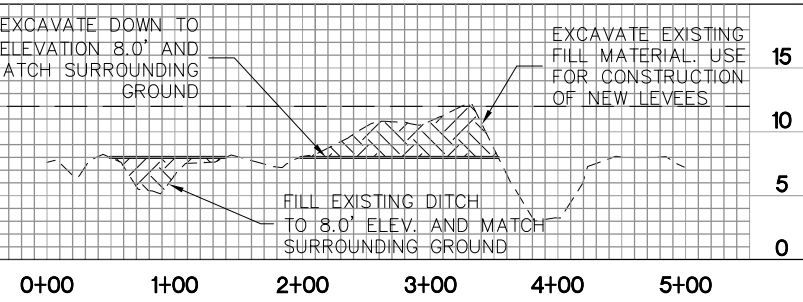
**SECTIONS L-L AND M-M**

SCALE: 1" = 400'



**SECTION L-L PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**SECTION M-M PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'

**PHILIP H. BROWN**  
OWNER

**H B H**  
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON**

**GRADING/ESC PLAN**

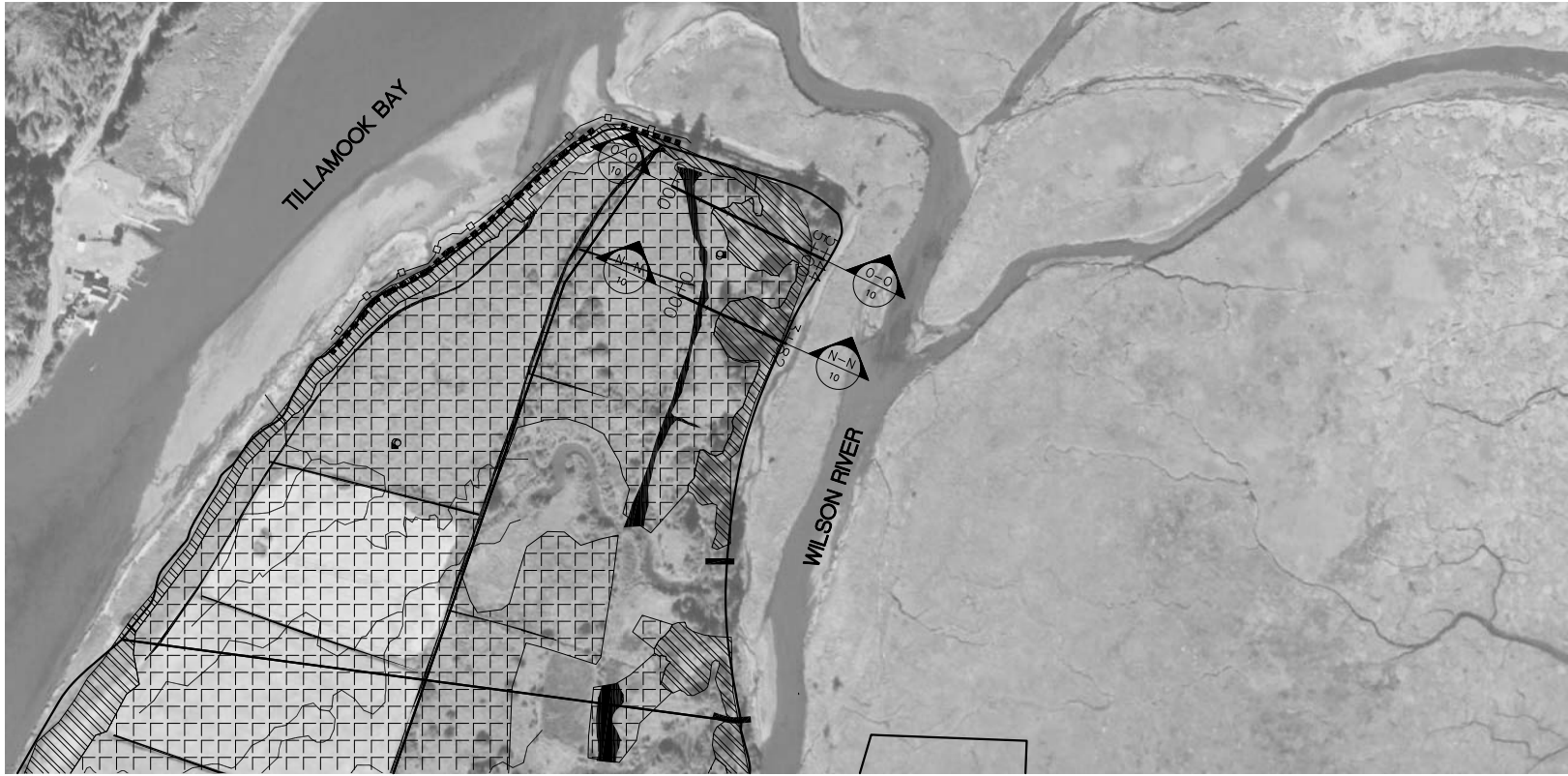
**SECTIONS L-L AND M-M**

13

06-04-15

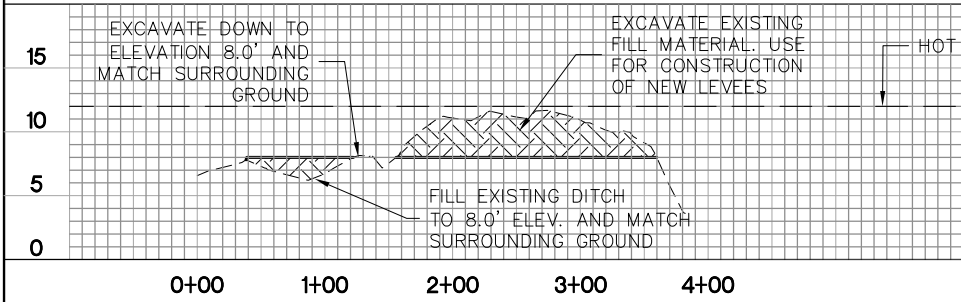
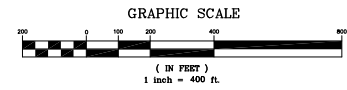
2009-003-03

Sheet No. 13 of 29



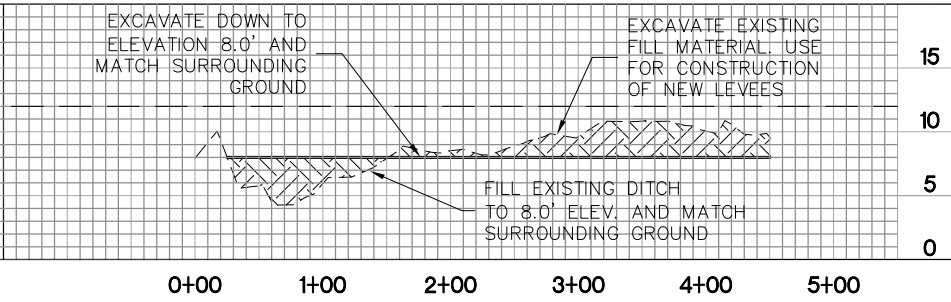
**SECTIONS N-N AND O-O**

SCALE: 1" = 400'



**SECTION N-N PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**SECTION O-O PROFILE**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



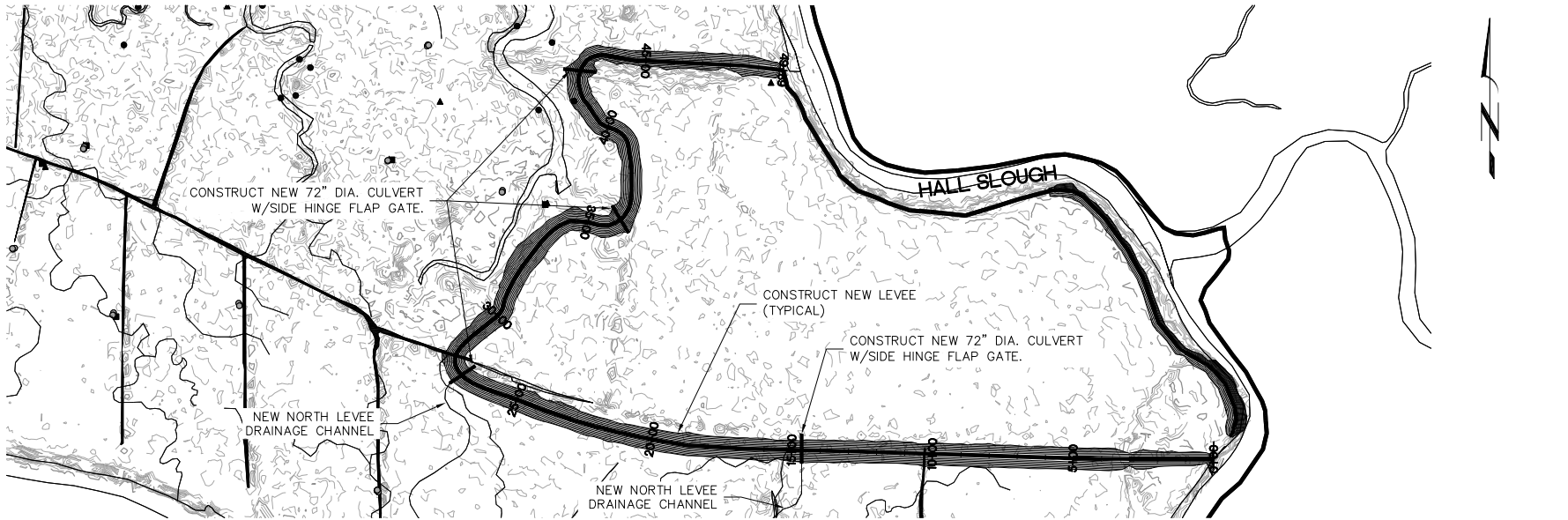
**H B H**  
**Consulting Engineers**  
2316 Portland Road, Suite H  
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Ph: 303.534.9553 Fax: 303.537.9554  
mail@hbhconsulting.com  
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14 of 29

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
FILL REMOVAL  
SECTIONS N-N AND O-O**

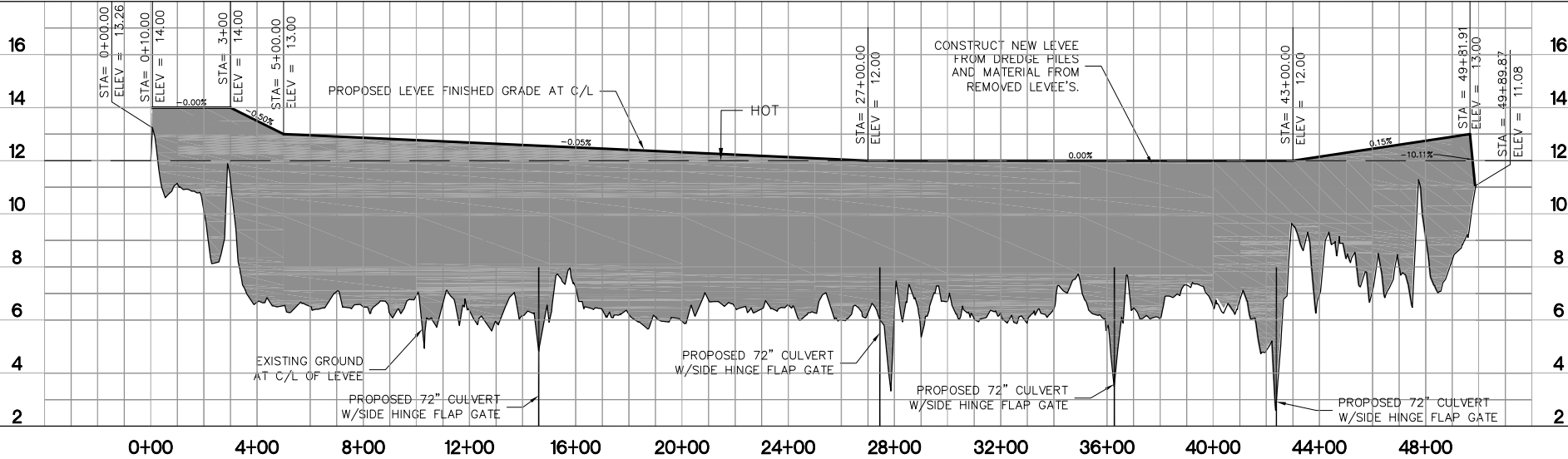
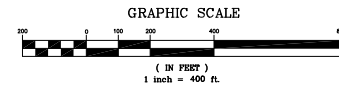
14  
06-04-15  
2009-03-03





**NORTH LEVEE PLAN**

SCALE: 1" = 400'



**NORTH LEVEE PROFILE**

SCALE: HOR: 1" = 400'  
 VER: 1" = 4'



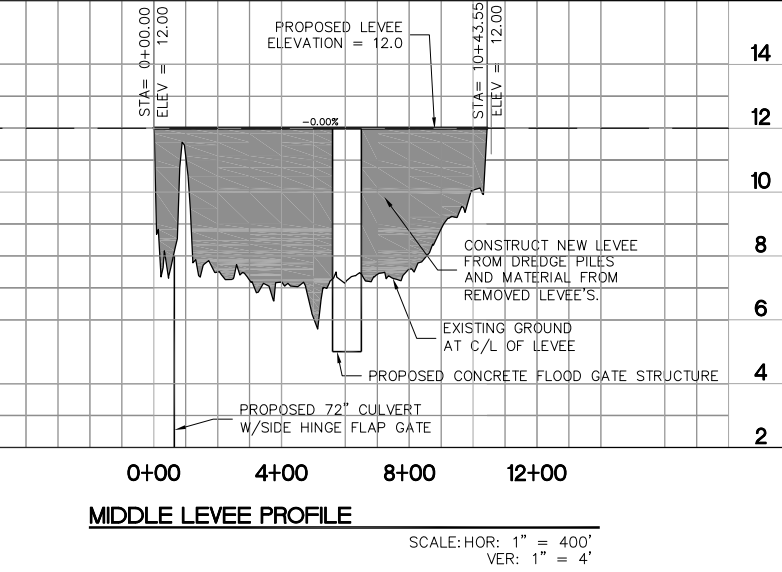
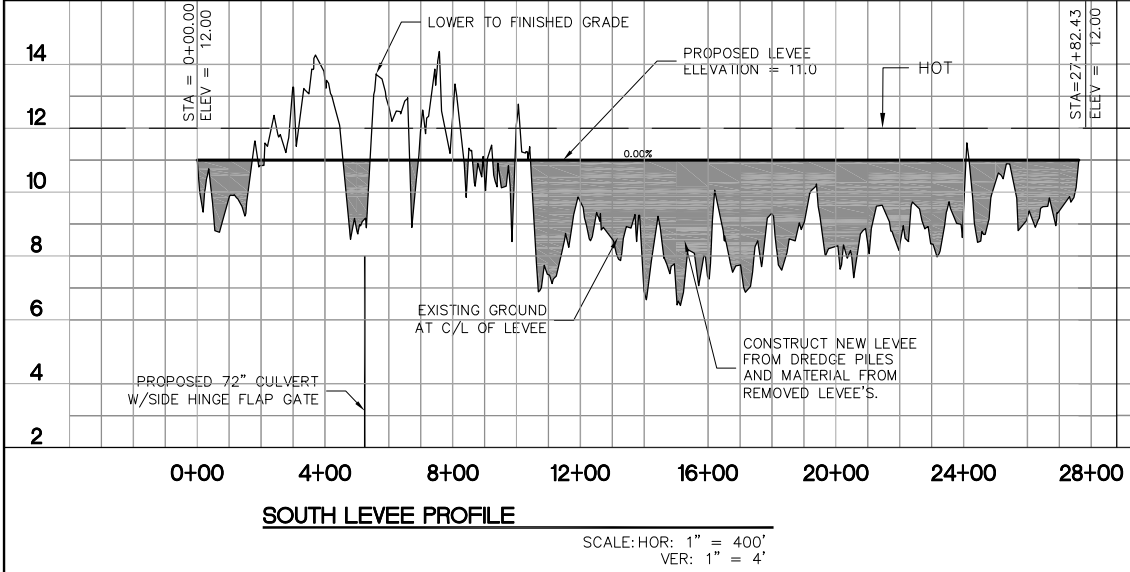
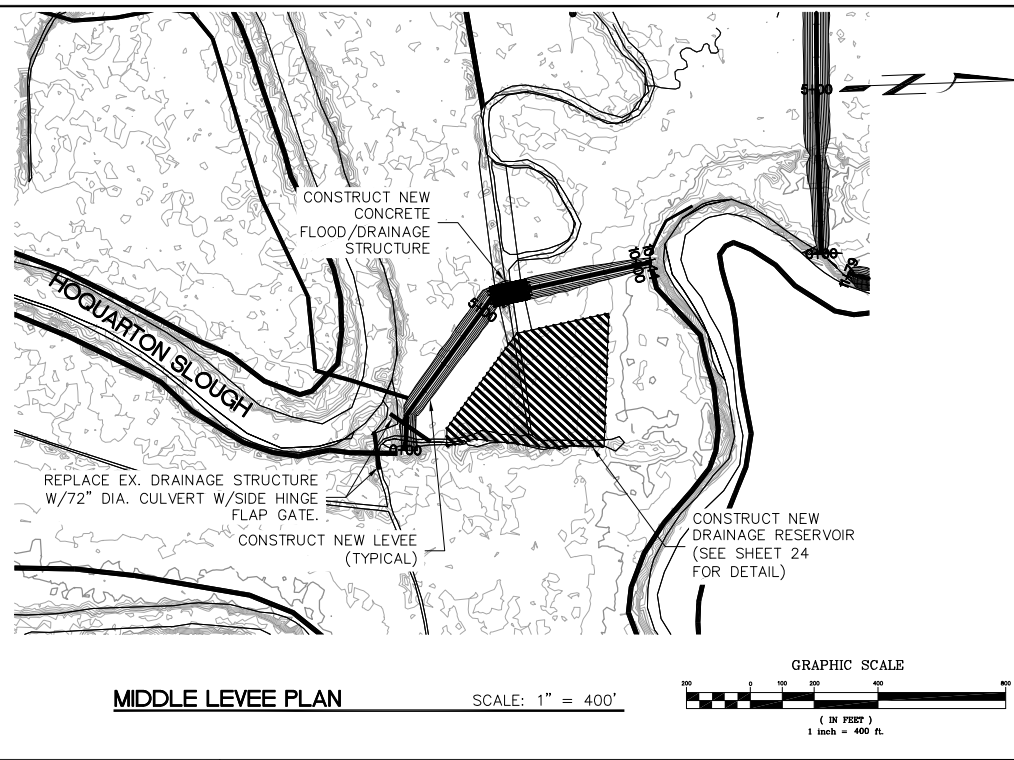
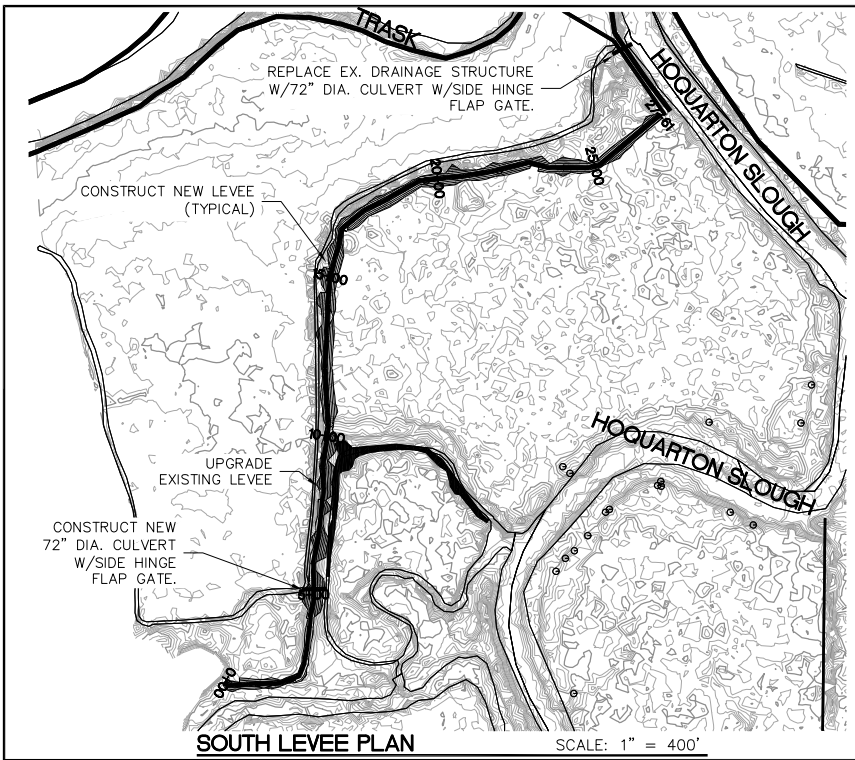
**H B H**  
**nbc** northwest hydraulic consultants  
 2316 Portland Road, Suite H  
 Newberg, Oregon 97132  
 Ph: 503-534-9553 Fax: 503-537-9554  
 mail@hbhconsulting.com

BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

REV.	DATE	DESCRIPTION

REV.	DATE	DESCRIPTION

OREGON SOLUTIONS  
 506 SW MILL STREET, PORTLAND, OREGON 97201  
**SOUTHERN FLOW CORRIDOR**  
**TILLAMOOK, OREGON**  
**NORTH LEVEE**  
**PLAN + PROFILE**



**REGISTERED PROFESSIONAL ENGINEER**  
**PLANNING**  
R. CHEWNING

**nbc**  
northwest hydraulic consultants

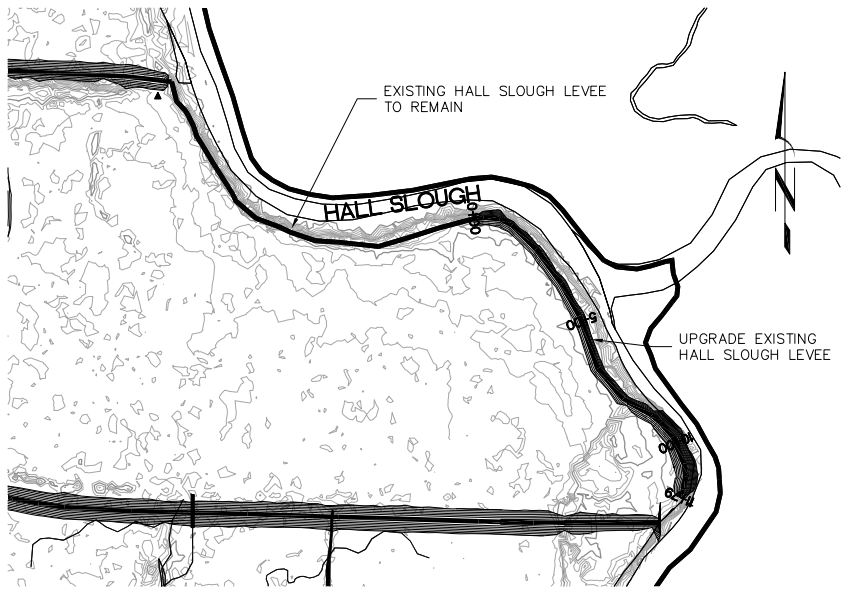
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Scale: Middle Levee

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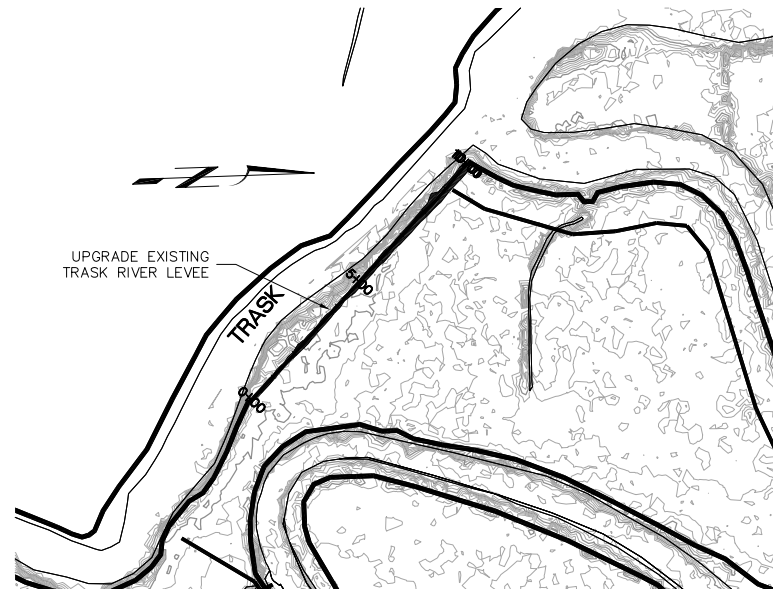
500 SW MILL STREET, PORTLAND, OREGON 97201  
**SOUTHERN FLOW CORRIDOR TILLAMOOK, OREGON**  
**MIDDLE AND SOUTH LEVEE PLAN + PROFILE**

16  
06-04-15  
2009-003-03



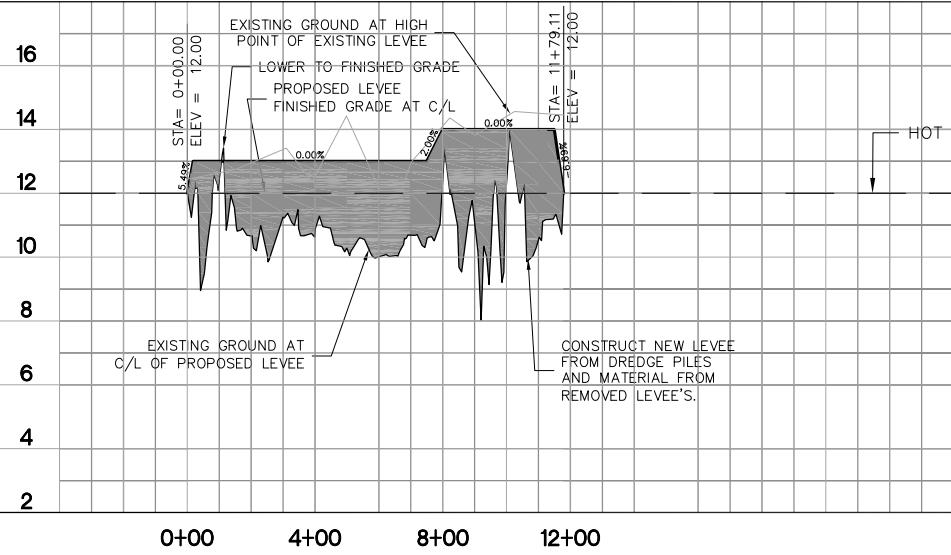
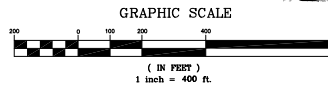
**HALL SLOUGH LEVEE UPGRADE PLAN**

SCALE: 1" = 400'



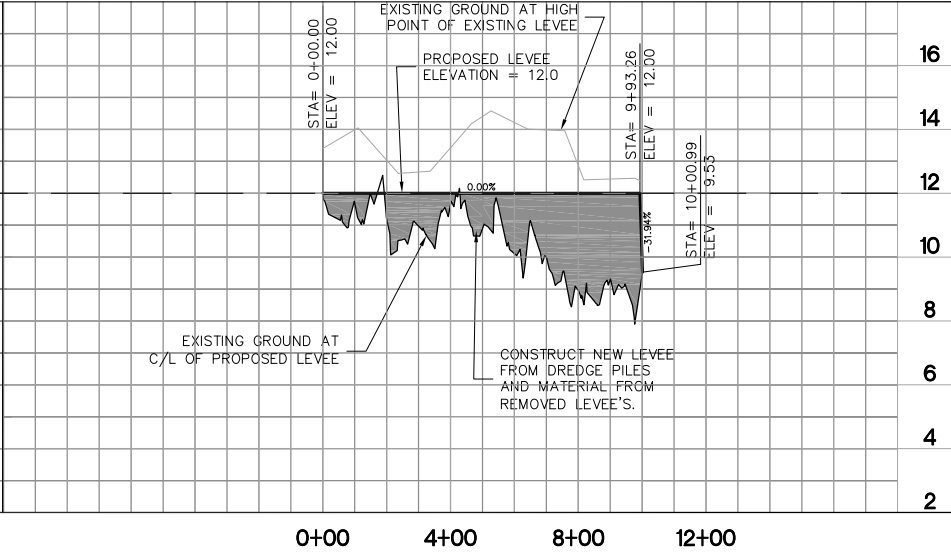
**TRASK RIVER LEVEE UPGRADE PLAN**

SCALE: 1" = 400'



**HALL SLOUGH LEVEE UPGRADE PROFILE**

SCALE: HOR: 1" = 400'  
VER: 1" = 4'



**TRASK RIVER LEVEE UPGRADE PROFILE**

SCALE: HOR: 1" = 400'  
VER: 1" = 4'

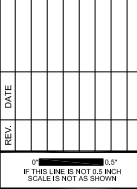


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Project: 09-03-03-001-001-001  
Sheet: 17 of 29

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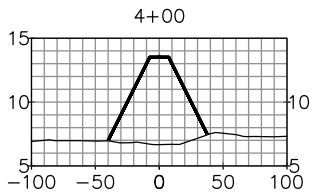
**SOUTHERN FLOW CORRIDOR**  
TILLAMOOK, OREGON

**HALL + TRASK LEVEE**  
PLAN + PROFILE

Sheet No. **17**

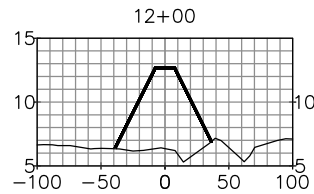
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2009-003-03



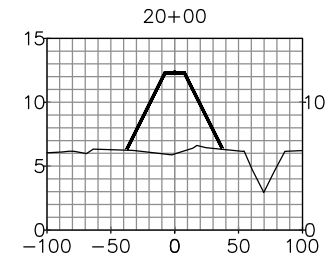
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SCALE: HOR: 1" = 100'  
VER: 1" = 10'



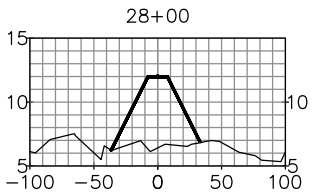
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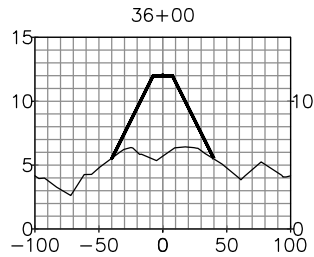
**NORTH LEVEL SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



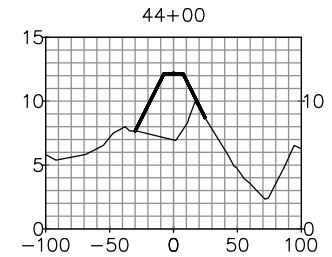
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SCALE: HOR: 1" = 100'  
VER: 1" = 10'



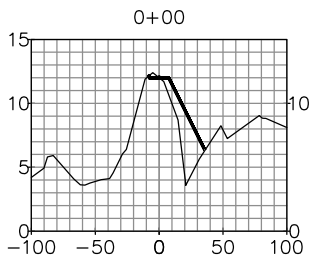
**NORTH LEVEL SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



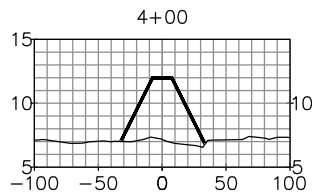
**NORTH LEVEL SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



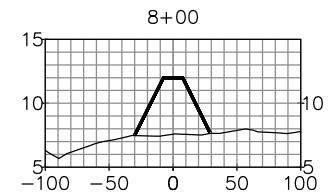
**MIDDLE LEVEL SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**MIDDLE LEVEL SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**MIDDLE LEVEL SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**hbc**  
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hydraulic  
consultants

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mail@hbcconsulting.com

Created By: ABC | Drawn By: ABC | Checked By: MCH | Stamp No.: 10006 | Scale: 1" = 100' | Project: 2009-03-03 | Location: NORTH SECTIONS

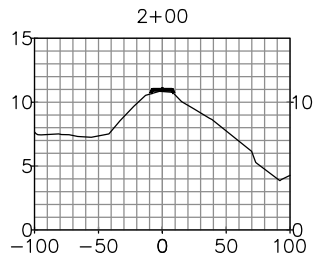
REV.	DATE	DESCRIPTION

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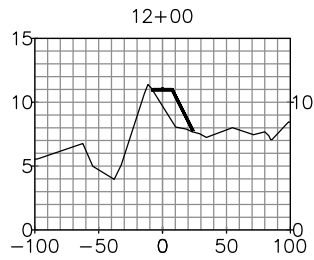
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500 SW MILL STREET, PORTLAND, OREGON 97201

**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
NORTH + MIDDLE LEVEL  
TYPICAL SECTIONS**



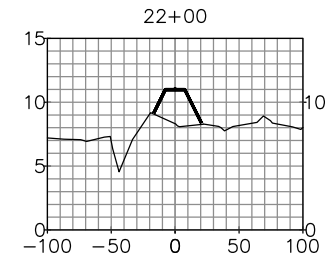
**SOUTH LEVEE SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



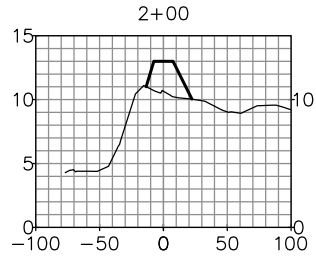
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VER: 1" = 10'



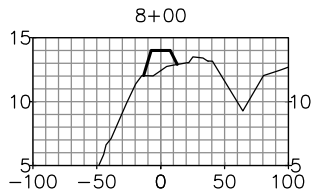
**SOUTH LEVEE SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



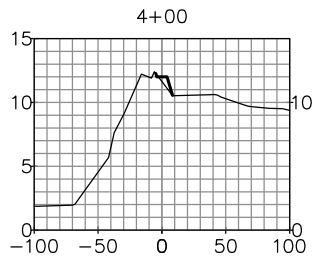
**HALL SLOUGH LEVEE SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



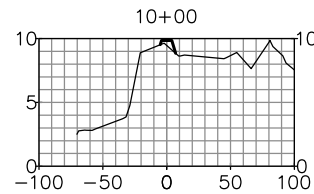
**HALL SLOUGH LEVEE SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**TRASK LEVEE SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



**TRASK LEVEE SECTION**

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



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Ph: 503.534.9553  
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mail@hbcconsulting.com  
Created By: ABC Drawn By: ABC Checked By: MCH Stamp No.: \_\_\_\_\_  
LIC:000-003-03/Imp/Point South Levee Newb Lvwat: SOUTH SECTIONS  
PK: \_\_\_\_\_

REV.	DATE	DESCRIPTION

0' 0.5' 1' 1.5' 2' 2.5' 3' 3.5' 4' 4.5' 5' 5.5' 6' 6.5' 7' 7.5' 8' 8.5' 9' 9.5' 10'

IF THIS LINE IS NOT 0.5 INCH SCALE IS NOT AS SHOWN

OREGON SOLUTIONS  
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON**  
**SOUTH, HALL, + TRASK LEVEE  
TYPICAL SECTIONS**

Sheet No. **19** of **29**  
**06-04-15**  
**2009-003-03**





**SITE PLAN**

SCALE: 1" = 100'



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hydraulic  
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Consulting  
Engineers

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Fax 303.537.9554  
mail@nhcconsulting.com

Checked By: ABC Drawn By: ABC  
Stamp No: 12345  
Project: L12009-003-03-03-03 SITE PLAN

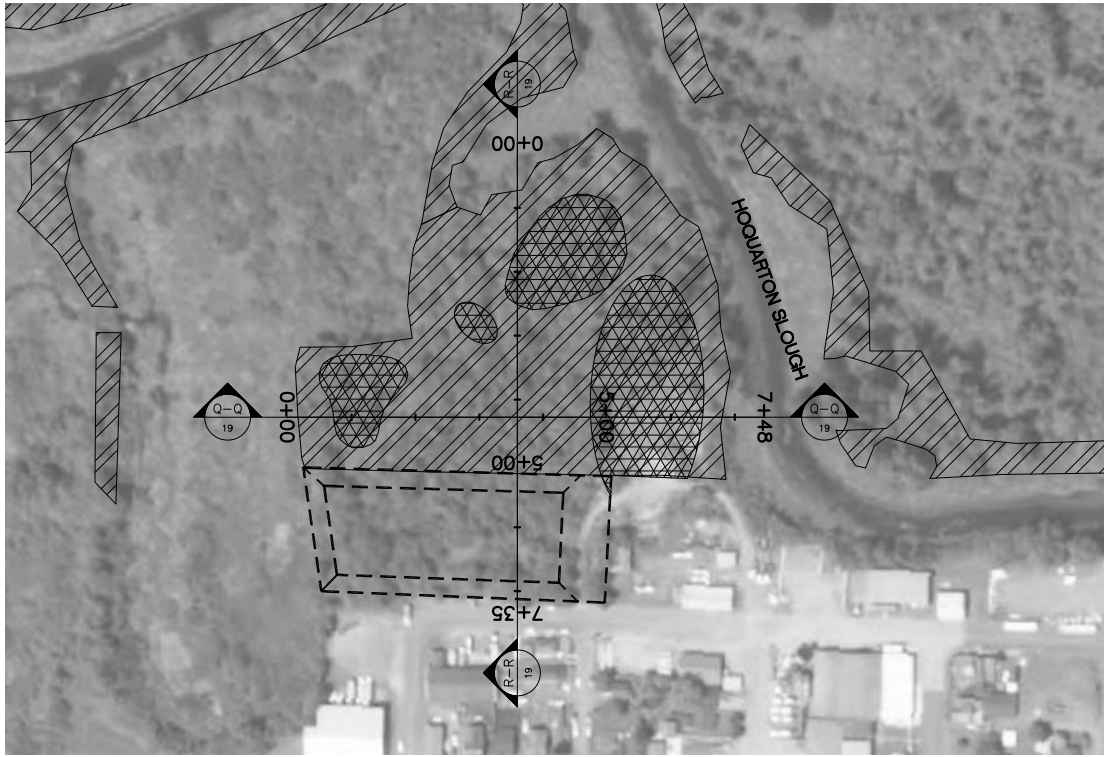
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IF THIS LINE IS NOT 0.5 INCH  
SCALE IS NOT AS SHOWN

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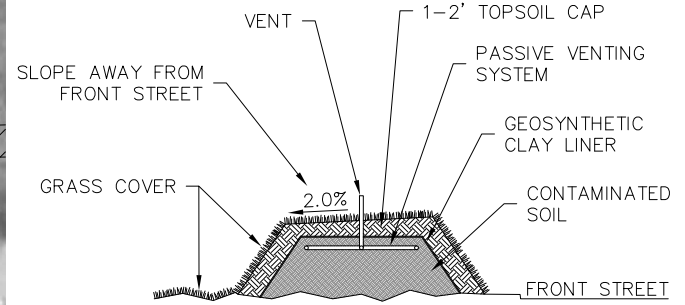
**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
PRELIMINARY SITE PLAN  
OLD MILL SITE**

Date: Sheet No. **20** of **29**  
**06-04-15**  
**2009-003-03**



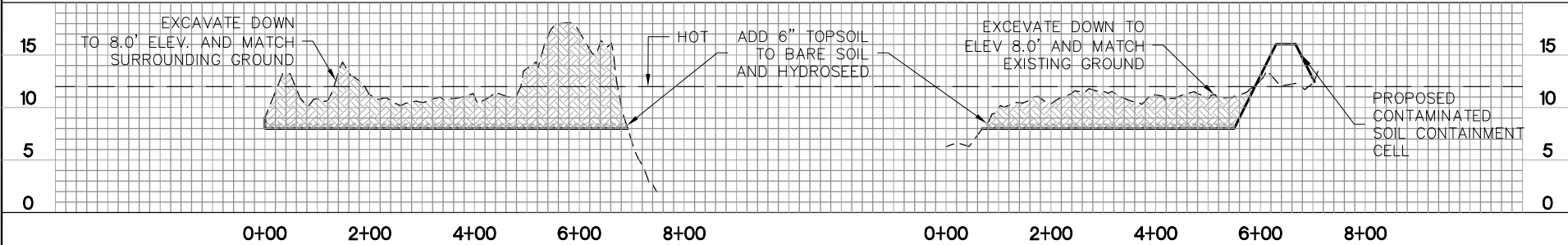
OLD MILL SITE PLAN VIEW

SCALE: 1" = 100'



CONTAINMENT CELL DETAIL

N.T.S.



SECTION Q-Q PROFILE

SECTION R-R PROFILE

SCALE: HOR: 1" = 100'  
VER: 1" = 10'

SCALE: HOR: 1" = 100'  
VER: 1" = 10'



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Newberg, Oregon 97132  
Ph: 503.534.9553  
Fax: 503.537.9554  
mhc@nhbcconsulting.com

BY: H B H  
CHECKED BY: ABC  
DRAWN BY: ABC  
SCALE: 1" = 100'

PROJECT: 2009-003  
SHEET NO.: 21

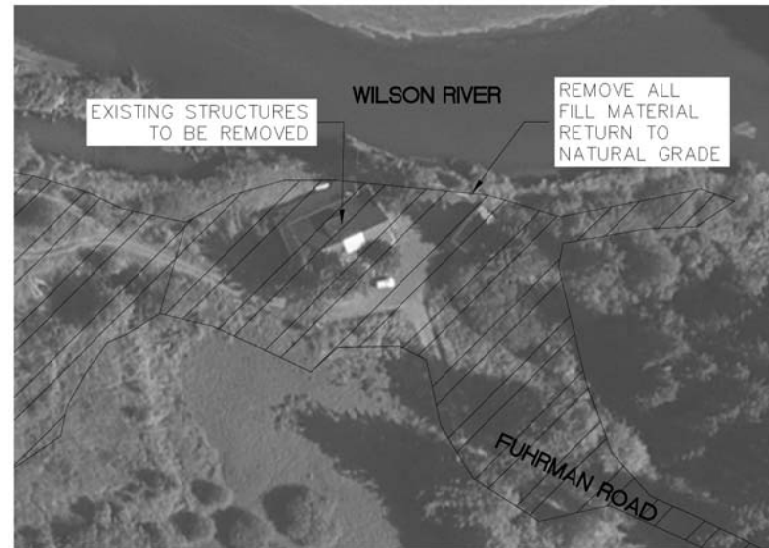
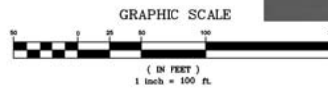
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
SECTIONS Q-Q + R-R  
OLD MILL SITE**



**JONES STRUCTURE REMOVAL**

SCALE: 1" = 100'



**FUHRMAN STRUCTURE REMOVAL**

SCALE: 1" = 100'



**BARN REMOVAL**

SCALE: 1" = 100'



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multimedia@nbc-engineers.com

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Drawn By: ABC  
Date: 06/04/15

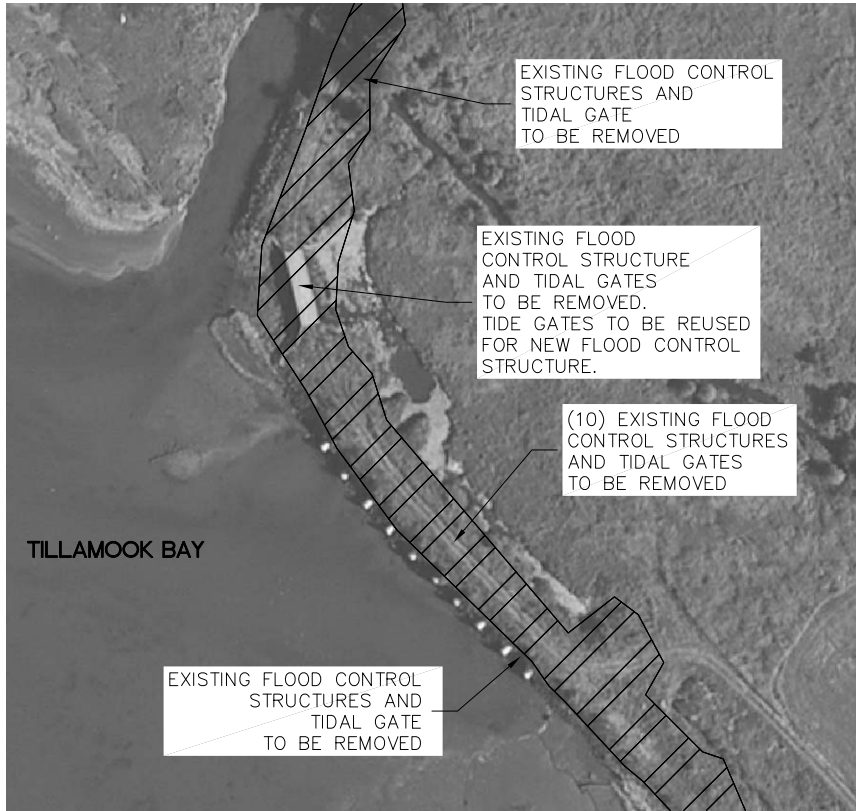
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Revision No.: 1  
Scale: 1" = 100'

REV.	DATE	DESCRIPTION

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506 SW MILL STREET, PORTLAND, OREGON 97205

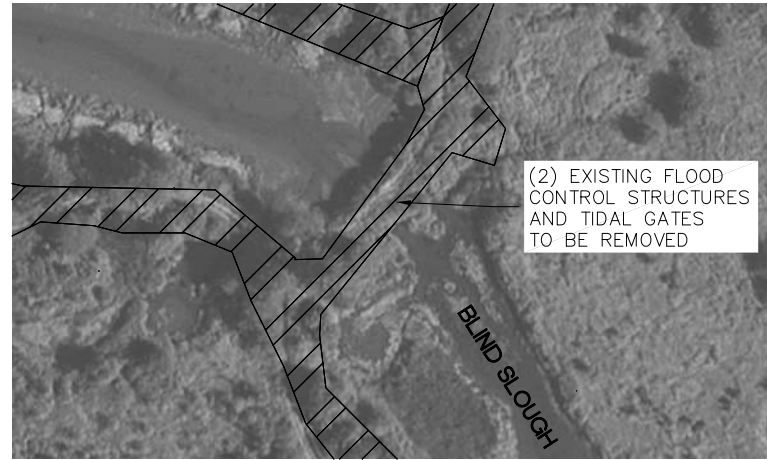
**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
STRUCTURE AND FILL  
REMOVAL**

Date: 06-04-15  
Sheet No: 22 of 29  
2009-003-03



**TILLAMOOK BAY TIDAL GATES**

SCALE: 1" = 100'



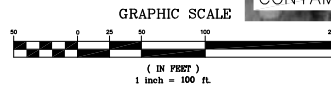
**BLIND SLOUGH TIDAL GATES**

SCALE: 1" = 100'



**FORMER MILL AREA**

SCALE: 1" = 100'



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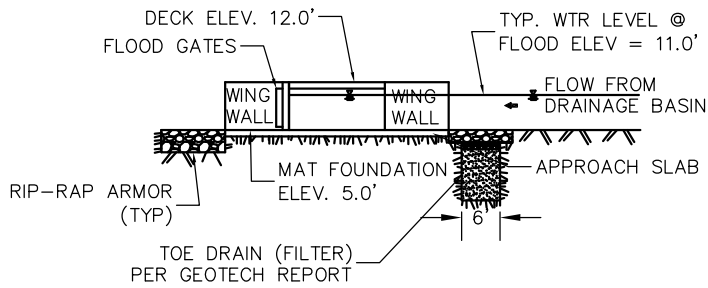
2316 Portland Road, Suite H  
Northridge, Oregon 97132  
Ph. 303.534.9353  
Fax 303.372.9354  
mhc@hbhconsulting.com

Prepared By: ABC Drawn By: ABC Checked By: MCH Stamp No: PRELIMINARY  
File: L:\2009-03-03\mg\Removal Structures\0003\0003.LAYOUT

REV.	DATE	DESCRIPTION

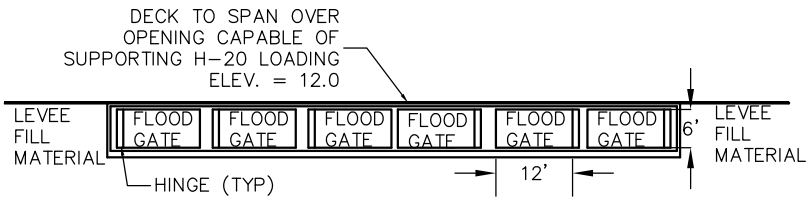
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
STRUCTURE AND FILL  
REMOVAL**



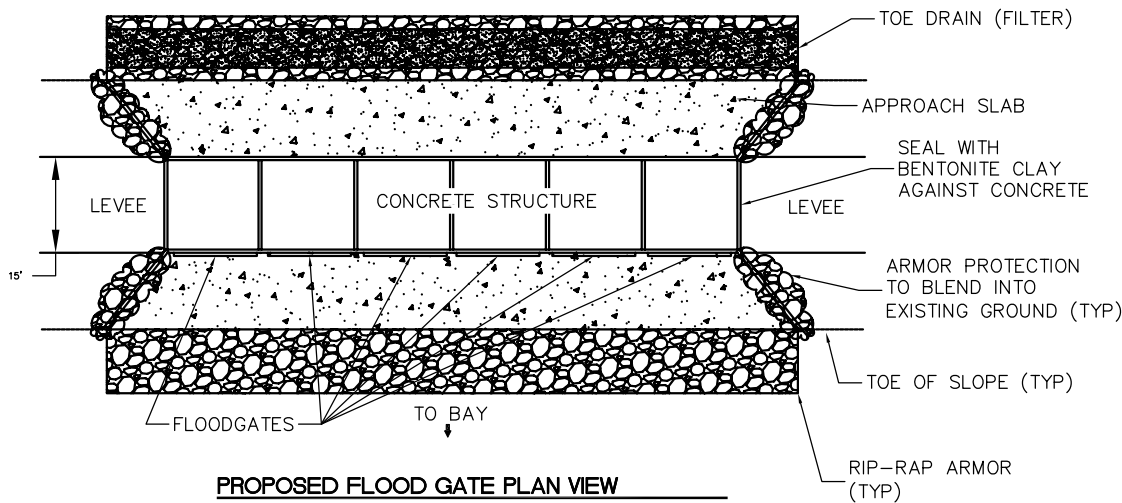
**PROPOSED FLOOD GATE SECTION VIEW**

N.T.S.



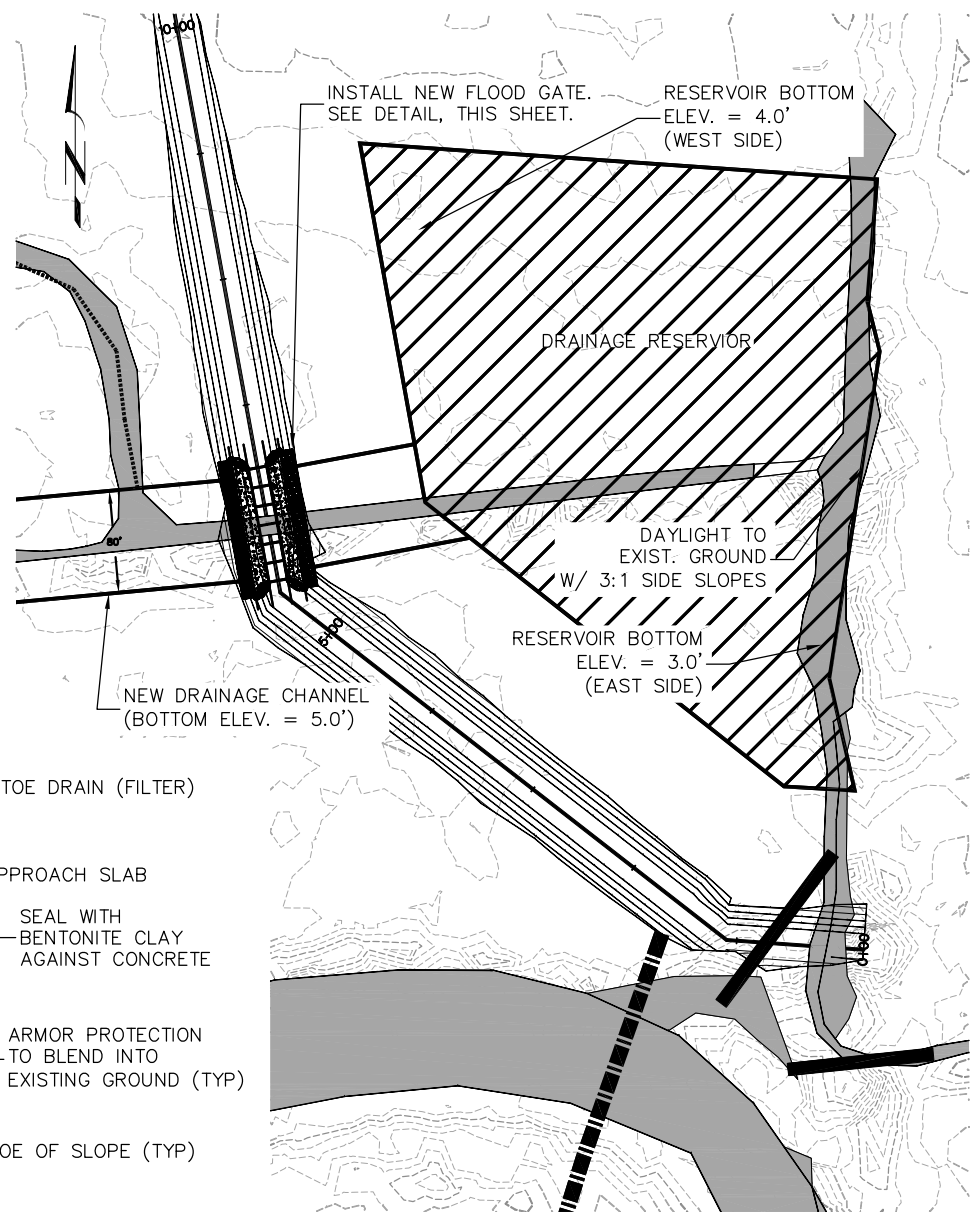
**PROPOSED FLOOD GATE ELEVATION VIEW**

N.T.S.



**PROPOSED FLOOD GATE PLAN VIEW**

N.T.S.



**PROPOSED FLOOD GATE LOCATION**

SCALE: 1" = 50'



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Scale: AS SHOWN

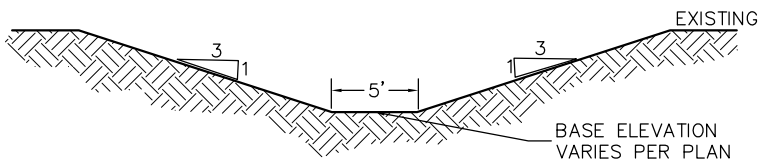
REV.	DATE	DESCRIPTION

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON**

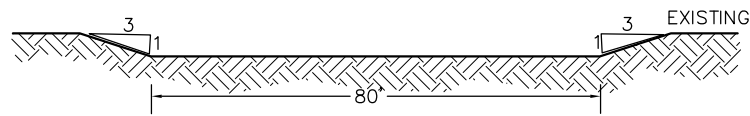
**TYPICAL DETAILS**





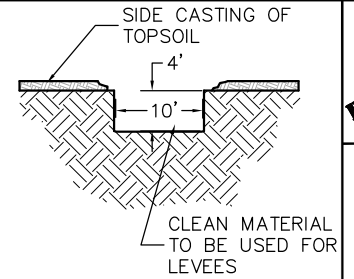
**NORTH LEEVE DRAINAGE CHANNEL**

N.T.S.



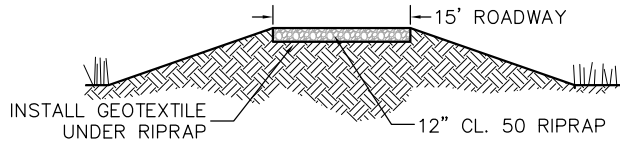
**MIDDLE LEEVE DRAINAGE CHANNEL**

N.T.S.



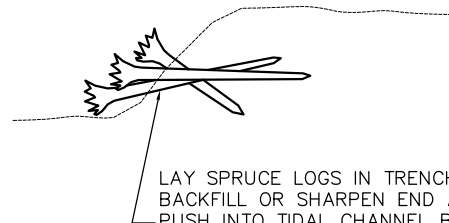
**TIDAL CHANNEL**

N.T.S.



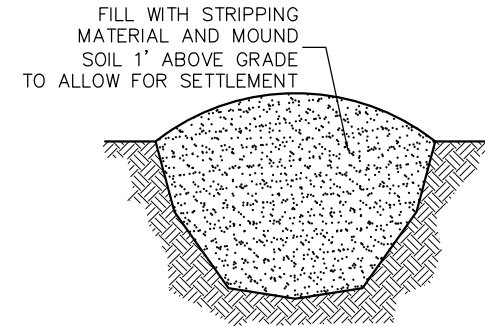
**TYPICAL ROAD SECTION TOP OF LEEVE AND NEW GRAVEL ROAD**

N.T.S.



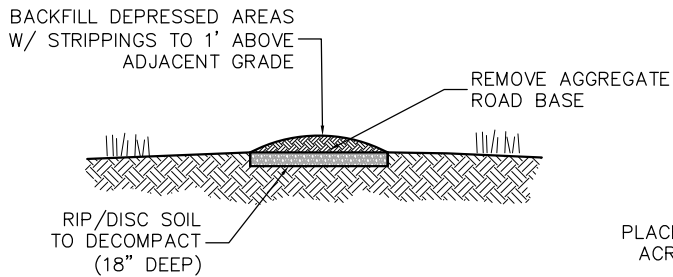
**LARGE WOODY DEBRIS PLACEMENT DETAIL**

N.T.S.



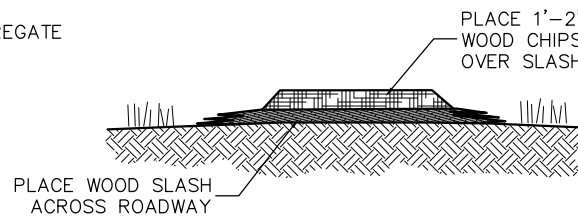
**DRAINAGE DITCH FILL DETAIL**

N.T.S.



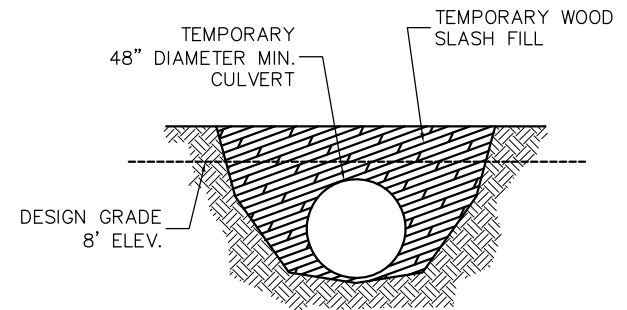
**ROAD DE-COMMISSIONING DETAIL**

N.T.S.



**WOOD SLASH ACCESS ROAD DETAIL**

N.T.S.



**TYPICAL TEMP. LEEVE BREACH CROSSING DETAIL**

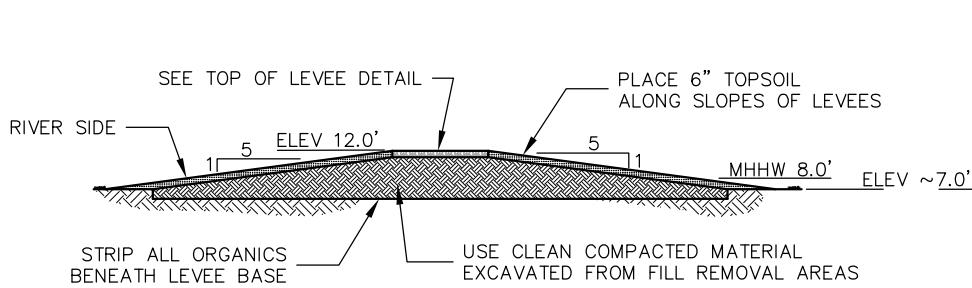
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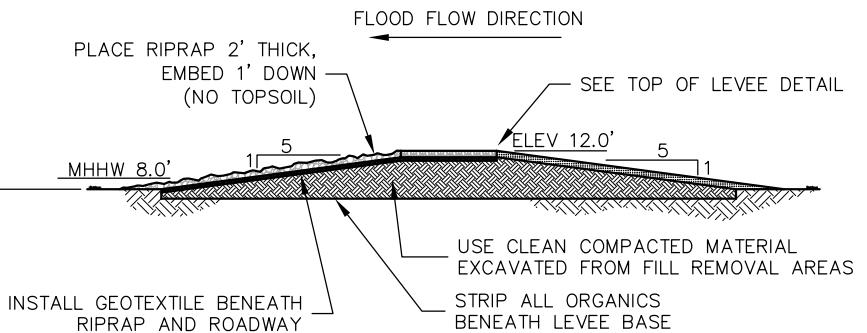
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northwest hydraulic consultants  
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Ph: 303.534.9533 Fax: 303.537.9534  
mail@hbcconsulting.com  
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File: L:\2009-003-03\Drawings\Permit\8401E\FULLS.DWG

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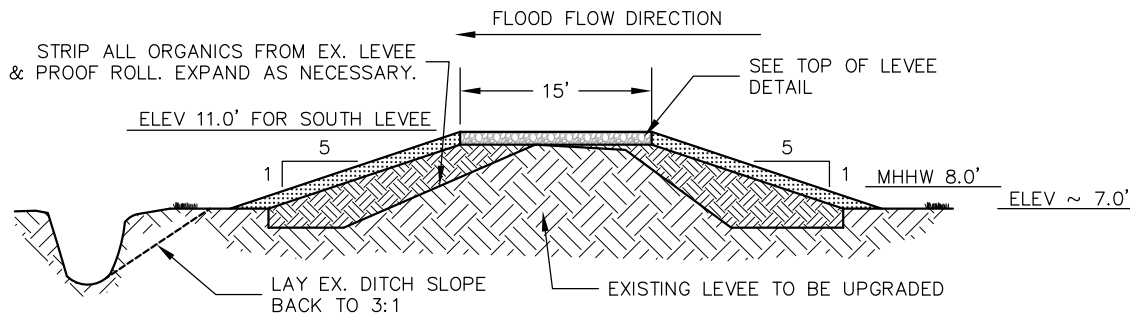
OREGON SOLUTIONS  
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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
TYPICAL DETAILS**



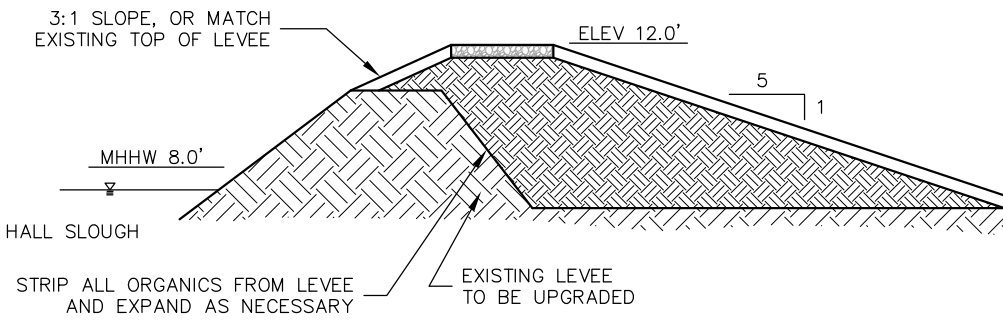
**TYPICAL NEW LEVEE SECTION  
(NORTH LEVEE)** N.T.S.



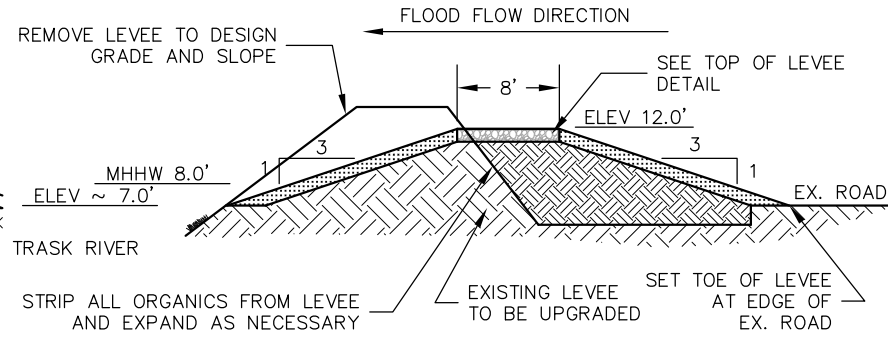
**TYPICAL NEW LEVEE SECTION  
(MIDDLE LEVEE)** N.T.S.



**TYPICAL UPGRADED LEVEE SECTION  
(SOUTH LEVEE)** N.T.S.



**TYPICAL RAISE LEVEE SECTION  
(HALL SLOUGH)** N.T.S.



**TYPICAL LOWER LEVEE SECTION  
(TRASK LEVEE)** N.T.S.



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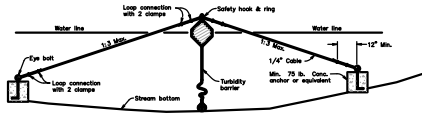
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IF THIS LINE IS NOT 0.5 INCH  
SCALE IS NOT AS SHOWN

OREGON SOLUTIONS  
500 SW MILL STREET, PORTLAND, OREGON 97201

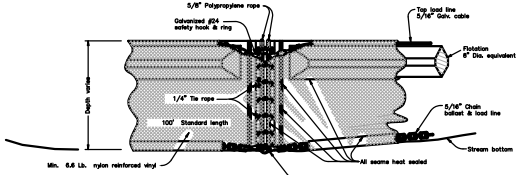
**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON**

**TYPICAL LEVEE SECTIONS**

SEDIMENT BARRIER FLOATING



SIDE VIEW



NOTE:  
Components of this barrier may be similar or identical to proprietary designs. Any infringement on the proprietary rights of the designer shall be the sole responsibility of the contractor. Substitutions must be as approved by the engineer.

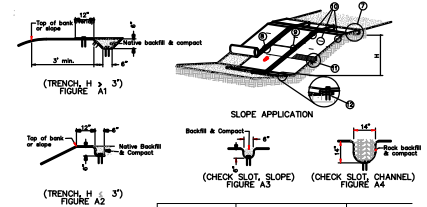
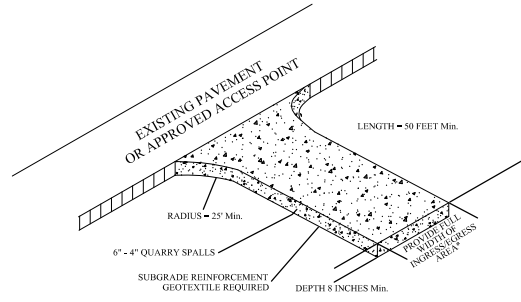
ANCHOR ASSEMBLY  
TURBIDITY BARRIER

ODOT DETAIL 6006 - TURBIDITY BARRIER

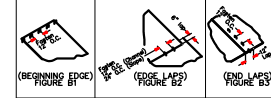
N.T.S.

GRAVEL CONSTRUCTION ENTRANCE

N.T.S.

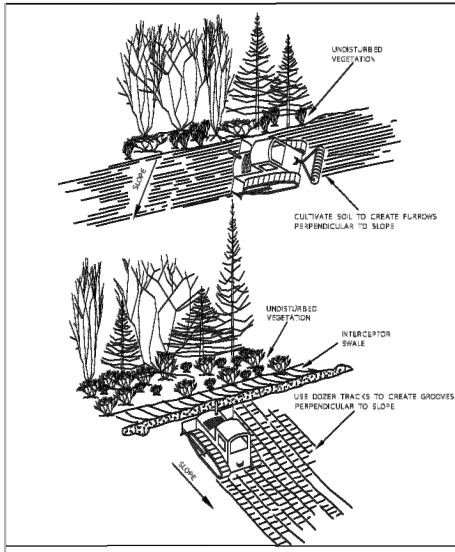


- Slope application:
- Anchor matting at top of slope (FIG. A3, FIG. A4) (FIG. B1)
  - Overlap mat edges 6" and fasten (FIG. B2). (Note: matting on edge overlaps for matting 25' or greater width.)
  - Overlap mat ends 12", stagger mats over each row, and fasten (FIG. B3)
  - Stagger alternate rows of fasteners placed at 12"
  - Contract check mat when specified or engineering limits are reached (FIG. A3, FIG. A4 & B1)
  - Extend mat 6" beyond toe of slope (FIG. B1)



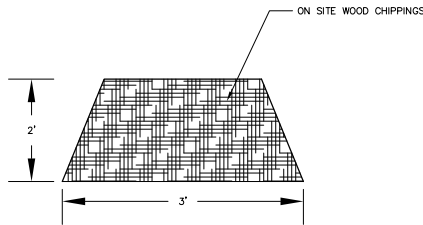
ODOT DETAIL 1055 - MATTING

N.T.S.



SURFACE ROUGHENING DETAIL

N.T.S.



WOOD CHIP BERM DETAIL

N.T.S.



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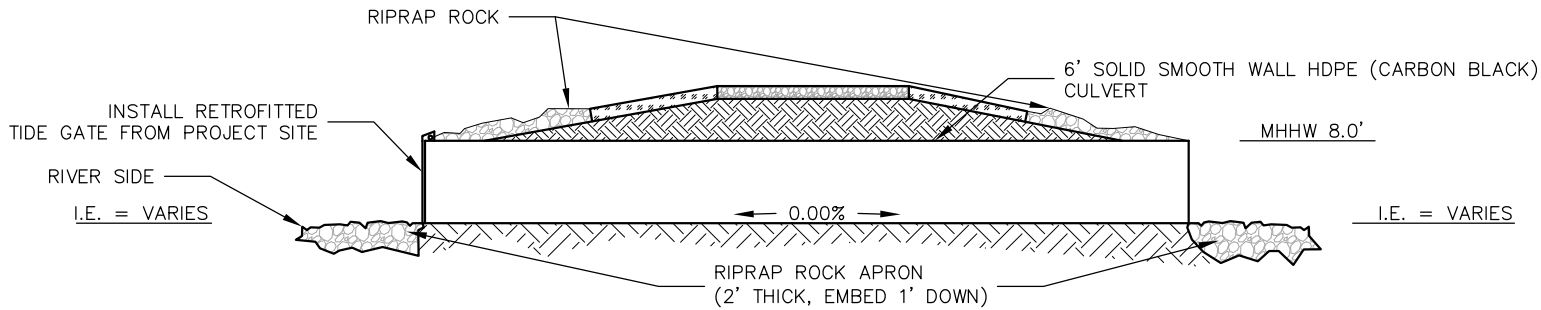
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Ph: 503.534.9533  
Fax: 503.537.9534  
mhc@nwhcconsulting.com

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File: L:\2009-003-03\map\beam\8406E.dwg Layout: 06-04-15

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0" = 16'-0"  
IF THIS LINE IS NOT 0.5 INCH  
SCALE IS NOT AS SHOWN

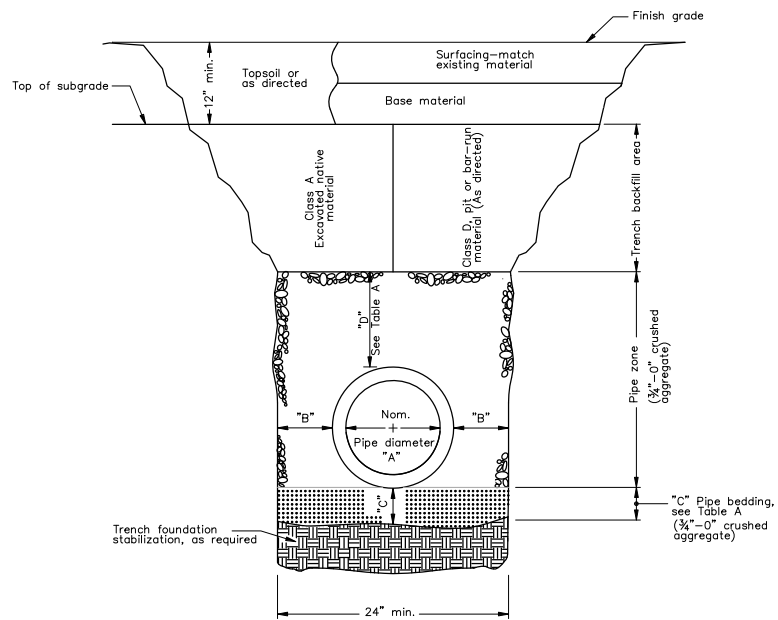
OREGON SOLUTIONS  
500 SW MILL STREET, PORTLAND, OREGON 97201  
**SOUTHERN FLOW CORRIDOR**  
TILLAMOOK, OREGON  
**EROSION CONTROL DETAILS**



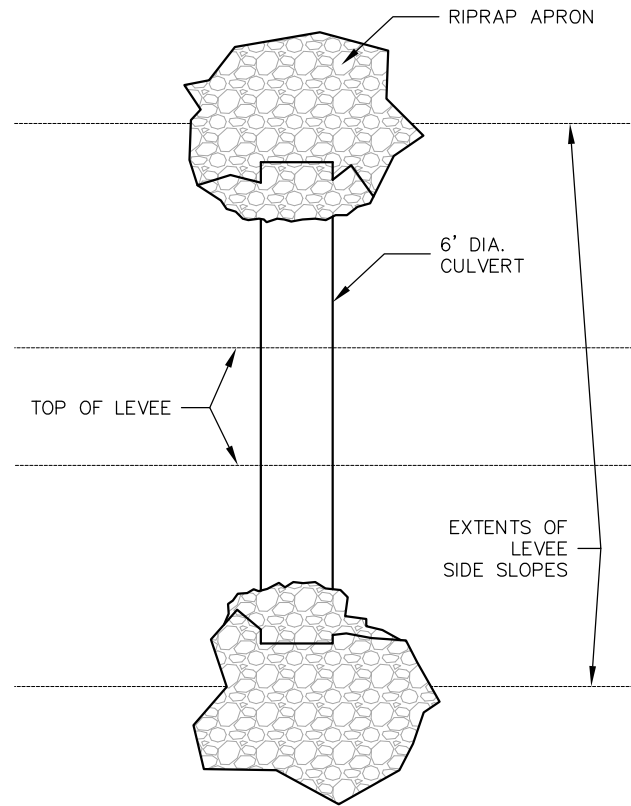
**TYPICAL NEW FLOOD/DRAINAGE CULVERT SECTION**  
N.T.S.

TABLE A

"A" (in)	"B" (in)	"C" (in)	"D" (in)
36	24	6	14
42	24	6	14
48	24	6	14
54	24	6	14
60	24	6	14
66	24	6	14
72	24	6	14



**TYPICAL CULVERT TRENCH BACKFILL DETAIL**  
N.T.S.



**NEW FLOOD/DRAINAGE CULVERT PLAN VIEW**  
N.T.S.



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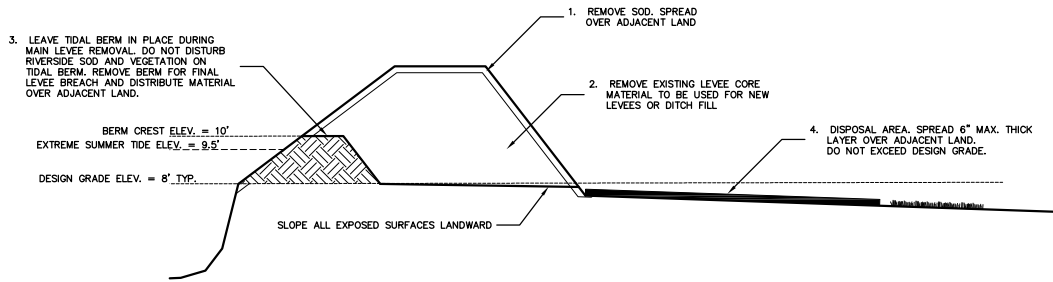
REV.	DATE	DESCRIPTION

0" = 100'  
IF THIS LINE IS NOT 0.5 INCH  
SCALE TO NOT AS SHOWN

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON**

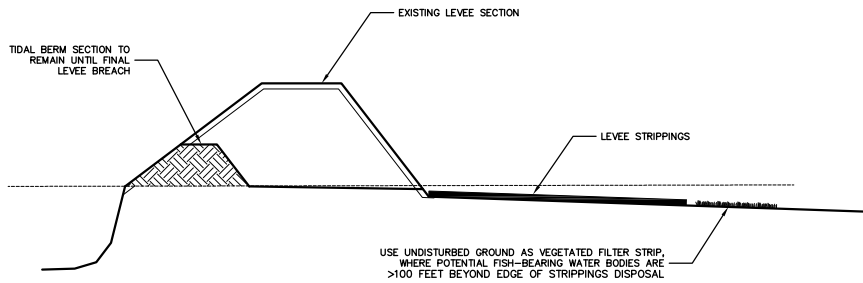
**TYPICAL CULVERT DETAILS**



**EXISTING LEVEE REMOVAL EXCAVATION SEQUENCING DETAIL**

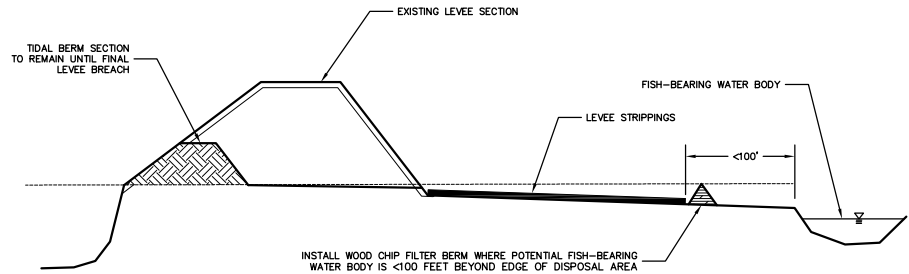
N.T.S.

**EXISTING LEVEE REMOVAL LANDWARD EROSION CONTROL DETAILS**



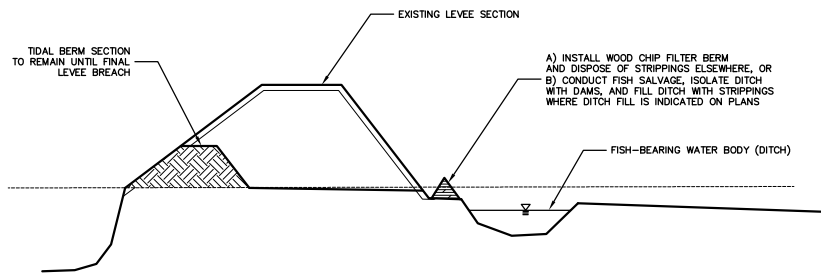
**VEGETATED FILTER STRIP SECTION**

N.T.S.



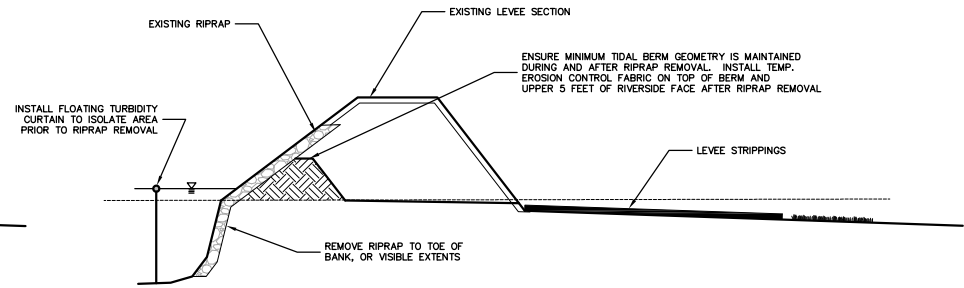
**WOOD CHIP FILTER BERM SECTION**

N.T.S.



**WOOD CHIP FILTER BERM/DITCH FILL SECTION**

N.T.S.



**RIPRAP REMOVAL SECTION**

N.T.S.



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Date: 06-04-15  
Project: 06-003-03

REV.	DATE	DESCRIPTION

0' 1" 2" 3" 4" 5" 6" 7" 8" 9" 10"  
IF THIS LINE IS NOT 0.5 INCH SCALE IS NOT AS SHOWN

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**SOUTHERN FLOW CORRIDOR  
TILLAMOOK, OREGON  
EROSION CONTROL OPTIONS  
DETAILS**

29  
06-04-15  
29 of 29  
2009-003-03

