



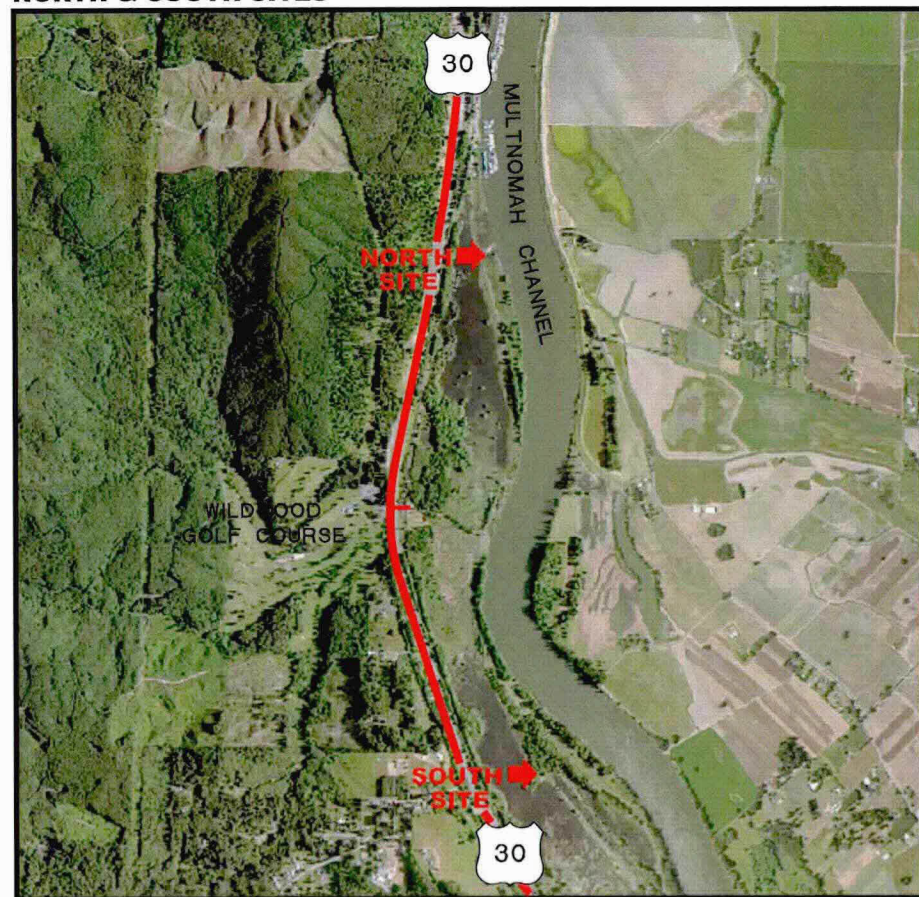
17700 S. E. MILL PLAIN BLVD. SUITE 100  
VANCOUVER, WA. 98683  
PH. (360) 885-2011

# US-OR-32-8 METRO: MULTNOMAH CHANNEL & SMITH BYBEE WATER CONTROL STRUCTURES FACILITY IMPROVEMENTS



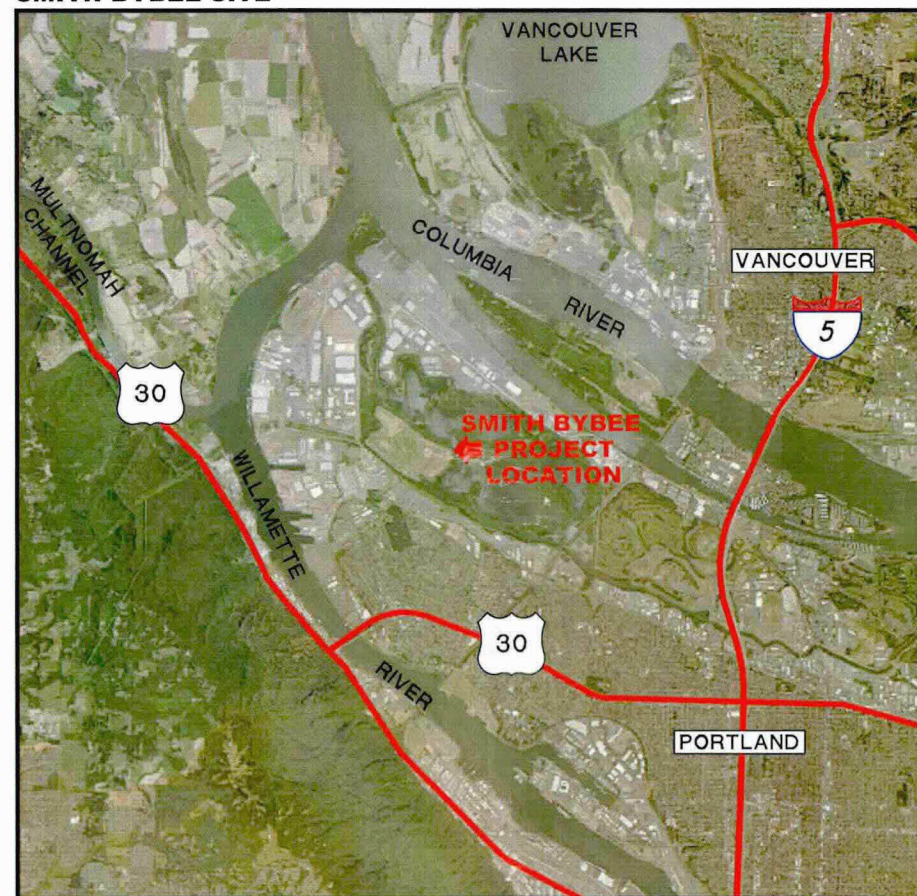
METRO

## MULTNOMAH CHANNEL NORTH & SOUTH SITES



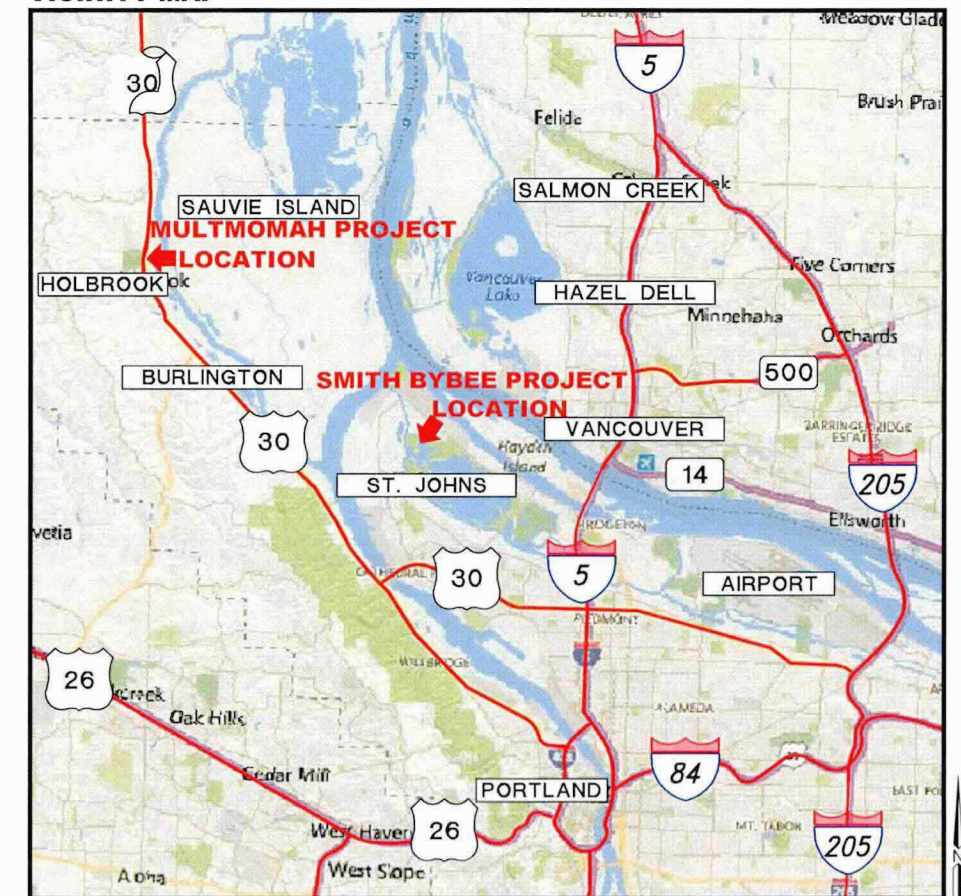
1" = 1/4 MILE

## SMITH BYBEE SITE



1" = 1 MILE

## VICINITY MAP



1" = 2 MILES

## SHEET INDEX

- 1 COVER SHEET
- 2 DRAWING INFORMATION
- 3 SITE ACCESS MULTNOMAH CHANNEL
- 4 SOUTH SITE EXISTING INFORMATION
- 5 SOUTH SITE EXISTING CULVERTS
- 6 SOUTH SITE MODIFICATIONS TRASHRACK, PLATFORM & RAILINGS
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### Unauthorized Changes & Uses

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PROJECT NO. US-OR-32-8 DATE: 2/3/17  
METRO: MULTNOMAH CHANNEL  
& SMITH BYBEE UNITS  
WATER CONTROL STRUCTURE IMPROVEMENTS  
LOCATION MAP

DESIGNED BY: GW  
DRAWN BY: DMC  
SURVEYED BY: JPS  
CHECKED BY:  
SHEET NO.  
1 OF 18



GENERAL NOTES:

1. Ducks unlimited makes no representations as to the existence or nonexistence of utilities. It is the responsibility of the contractor to comply with the provisions of all applicable utility notification regulations. The contractor will be liable for any damage to utilities caused by construction activities.
2. The engineer does not represent that the location of utilities shown on the plans are exact or complete. It shall be the responsibility of the contractor to determine the presence of, actual locations of and make provisions for all watercourses and utilities. The contractor shall verify location, depth and height. Their verification shall be coordinated by the contractor with the appropriate utility company.
3. The contractor shall exercise extreme caution when working in the vicinity of overhead power lines. Verify location in the field and protect in place.
4. The contractor shall comply with all local and state requirements relative to the notificatcion of the applicable unerground service alert.
5. At least 2 working days prior to beginning any digging or excavation work, the contractor shall notify underground service alert of **Southern California (a.k.a. DigAlert)** at www.digalert.org or by phone at 811, to determine locations of existing utilities.
6. In accordance with generally accepted construction practices, the contractor will be solely and completely responsible for the conditions of the job site including safety of all persons and property during performance of the work. The contractor shall ensure that all work is performed in accordance with occupational safety laws, including the design and construction of proper shoring of trenches. The duties of the project engineer do not include review of the adequacy of the contractor's safety in, on, or near the job site.
7. It is the responsibility of the contractor to be knowledgeable about the project specifications and permits. All work shall be completed in compliance with the contract documents. The contractor shall have copies of the most current approved plans, specifications and permit conditions on site during all work operations.
8. The project site and adjacent areas contain sensitive habitat areas for protected wildlife, and may include endangered species. The contractor shall protect wildlife and water quality, and minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
9. Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained on these plans or in the specifications, the contractor shall contact the construction manager for such further explanations as may be necessary.
10. Should the contractor find any discrepancies between the conditions existing in the field and the information shown on the drawings, he shall notify the construction manager before proceeding with construction.

still says Southern Cal.

SURVEY POINT DESCRIPTORS

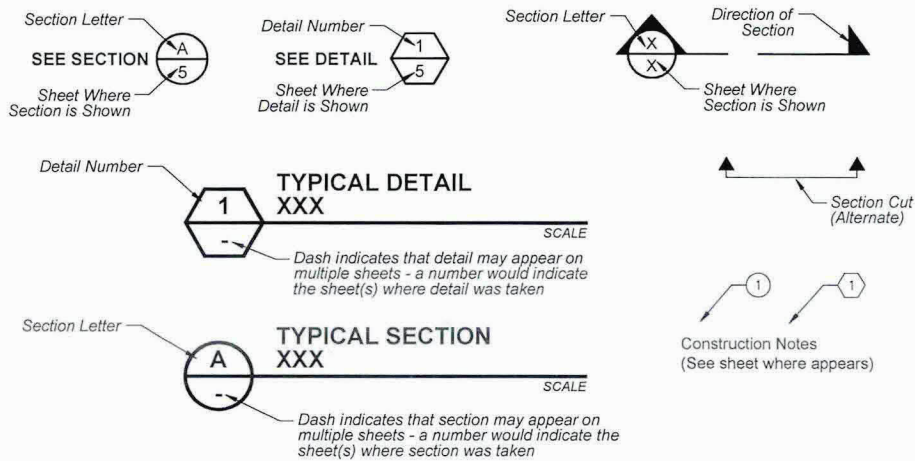
CTBM	Bench Mark (permanent)	RDSH	Road Shoulder
CTBT	Bench Mark (temporary)	RDSN	Road Sign
CTCP	Survey Control Point (permanent)	RDTO	Road, Toe of Slope
CTCT	Survey Control Point (temporary)	RDTP	Road, Top of Slope
DIFL	Ditch Flowline	SDMH	Storm Drain, Manhole
DIGB	Ditch Grade Break	SDPI	Storm Drain, Pipe Invert
DITO	Ditch Toe	SDPT	Storm Drain, Pipe Top
DITP	Ditch Top	SSMH	Sanitary Sewer, Manhole
ELBX	Electric, Box or Pullbox	SWFL	Swale Flowline
ELGY	Electric, Guy Wire	SWGB	Swale Grade Break
ELPP	Electric, Power Pole	SWTO	Swale Toe
ELSN	Electric, Warning Sign	SWTP	Swale Top
ELTR	Electric, Transformer	TFBL	Topo Feature, Building
ELTW	Electric, Tower	TFBR	Topo Feature, Brush
ELVT	Electric, Vault	TFCO	Topo Feature, Concrete (pad, slab, etc.)
FNAP	Fence Angle Point	TFFL	Topo Feature, Flowline
FNCR	Fence Corner	TFGB	Topo Feature, Grade Break
FNGT	Fence Gate	TFGS	Topo Feature, Ground Shot
FNLN	Fence Line	TFRK	Topo Feature, Rock Or Rocky Area Boundary
IRCO	Irrigation Concrete Pad	TFTL	Topo Feature, Tree line
IRCP	Irrigation Control Panel	TFTO	Topo Feature, Grade Break at Toe
IRPI	Irrigation Pipe Invert	TFTP	Topo Feature, Grade Break at Top
IRPM	Irrigation Pump	TFTR	Topo Feature, Tree
IRPT	Irrigation Pipe Top	WAEW	Edge of Water
IRVL	Irrigation Valve	WAHW	High Water Mark
IRWL	Irrigation Well	WAUW	Under Water Ground Shot
LVCL	Levee Centerline	WAWS	Water Surface
LVGB	Levee Grade Break	WCFL	Water Control Structure, Flowline/Invert at Structure
LVTO	Levee Toe of Slope	WCFR	Water Control Structure, Frame Top
LVTP	Levee Top of Slope	WCHW	Water Control Structure, Headwall
RDCL	Road, Centerline	WCPI	Water Control Structure, Pipe Invert at Outlet
RDED	Road, Edge of Dirt Road	WCPT	Water Control Structure, Pipe Top at Outlet
RDEG	Road, Edge of Gravel Road	WCST	Water Control Structure, Top of Structure
RDEP	Road, Edge of Paved Road	WCWW	Water Control Structure, Wing Wall
RDGB	Road Grade Break		

ABBREVIATIONS

AB	Aggregate Base	(N)	New
AC	Acre	N	North
APPROX	Approximate	NIC	Not In Contract
BM	Benchmark	NTS	Not To Scale
CAP	Corrugated Aluminum Pipe	OC	On Center
CC	Center to Center	OD	Outside Diameter
CF	Cubic Foot	PIP	Pressure Irrigation Pipe
CFS	Cubic Foot Per Second	PP	Power Pole
CL	Centerline	PSI	Pounds per Square Inch
CMP	Corrugated Metal Pipe	PVC	Polyvinyl Chloride
CMPA	Corrugated Metal Arch Pipe	QTY	Quantity
CONC	Concrete	R	Right
CP	Control Point	RCB	Reinforced Concrete Box
CY	Cubic Yard	RD	Road
DEMO	Demolish	REF	Reference Dimension
DIA	Diameter	REQD	Required
Dp	Pipe Diameter	ROW	Right Of Way
Dr	Riser Diameter	S	South
DU	Ducks Unlimited, Inc.	SCH	Schedule
D/S	Downstream	SS	Stainless Steel
E	East	SDR	Standard Dimension Ratio
EG	Existing Ground	SF	Square Feet
EL	Elevation	SHT	Sheet
EX, EXIST	Existing	SP	Special
FRG	Final Rough Grade	SPECS	Specifications
FG	Finished Grade	SY	Square Yard
FL	Flowline	STA	Station
FT	Foot, Feet	STD	Standard
FTG	Fitting, Footing	TBD	To Be Determined by Engineer
GA	Gauge	TBM	Temporary Benchmark
GB	Grade Break	TE	Top Elevation
H	Height	TEMP	Temporary
HDPE	High-Density Polyethylene	TOL	Top of Levee
ID	Inside Diameter	TOB	Top of Berm
IE	Invert Elevation	TYP	Typical
IN	Inch, Inches	USA	Underground Service Alert
INV	Invert	U/S	Upstream
IPS	Iron Pipe Size	VLV	Valve
L	Length, Left	W	Width, West (where applicable)
LBF	Pounds-Force	W/	With
LF	Linear Feet	WCS	Water Control Structure
MAINT	Maintenance	WS	Water Surface
MAX	Maximum	WSEL	Water Surface Elevation
MIN	Minimum	WWF	Welded Wire Fabric
MISC	Miscellaneous	X:1	Slope, Horizontal:Vertical

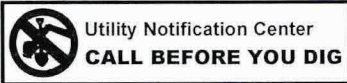
LEGEND & STANDARD SYMBOLS

DETAILING CONVENTIONS



BID SET

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REV NO.	DESCRIPTION	DATE	APPROVED
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PROJECT NO. **US-OR-32-8** DATE: **2/3/17**  
**METRO: MULTNOMAH CHANNEL & SMITH BYBEE UNITS**  
**WATER CONTROL STRUCTURE IMPOVEMENTS**

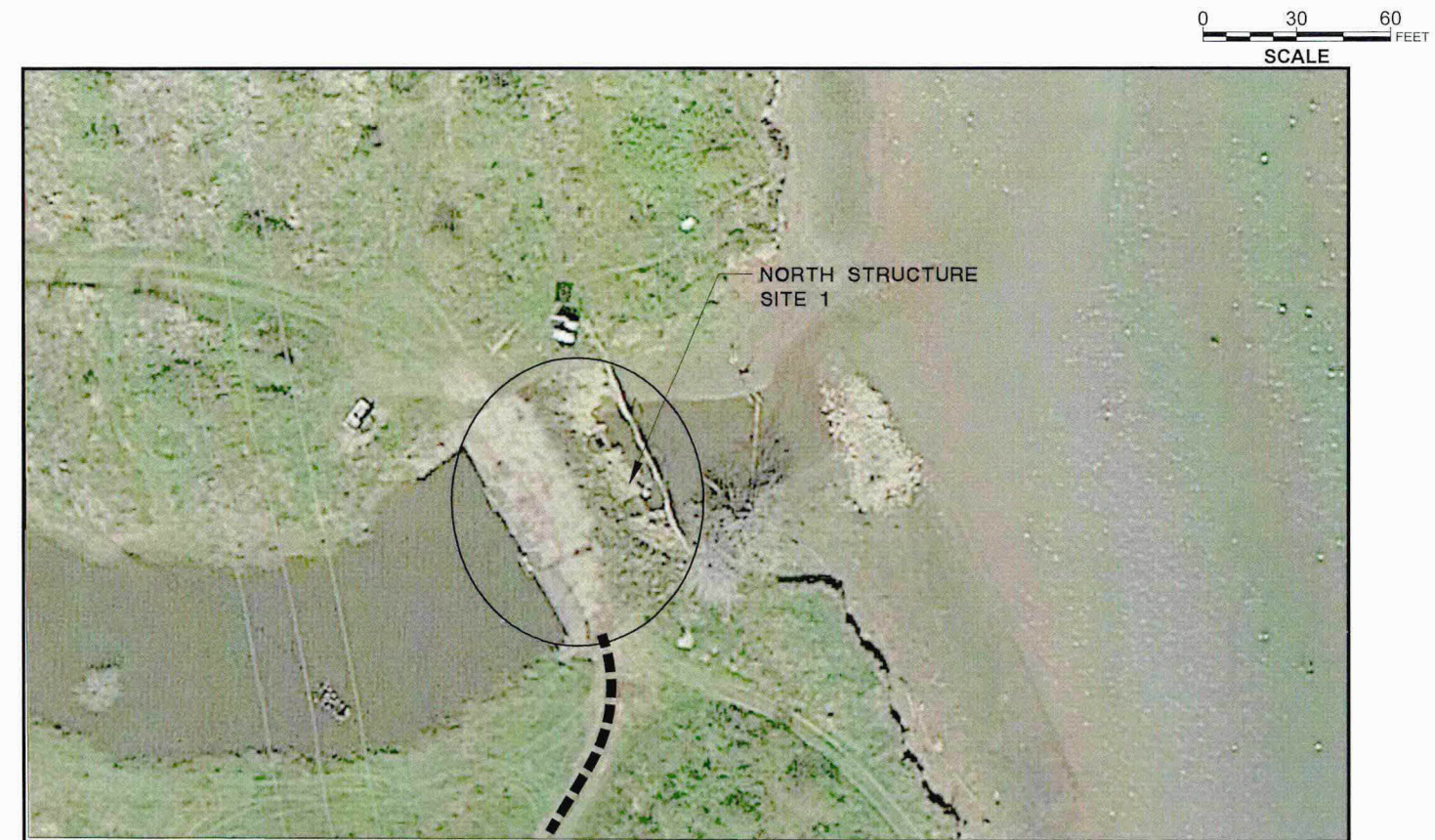
DRAWING INFORMATION

DESIGNED BY: **GW**  
DRAWN BY: **DMC**  
SURVEYED BY: **JPS**  
CHECKED BY:   
SHEET NO. **2 OF 18**

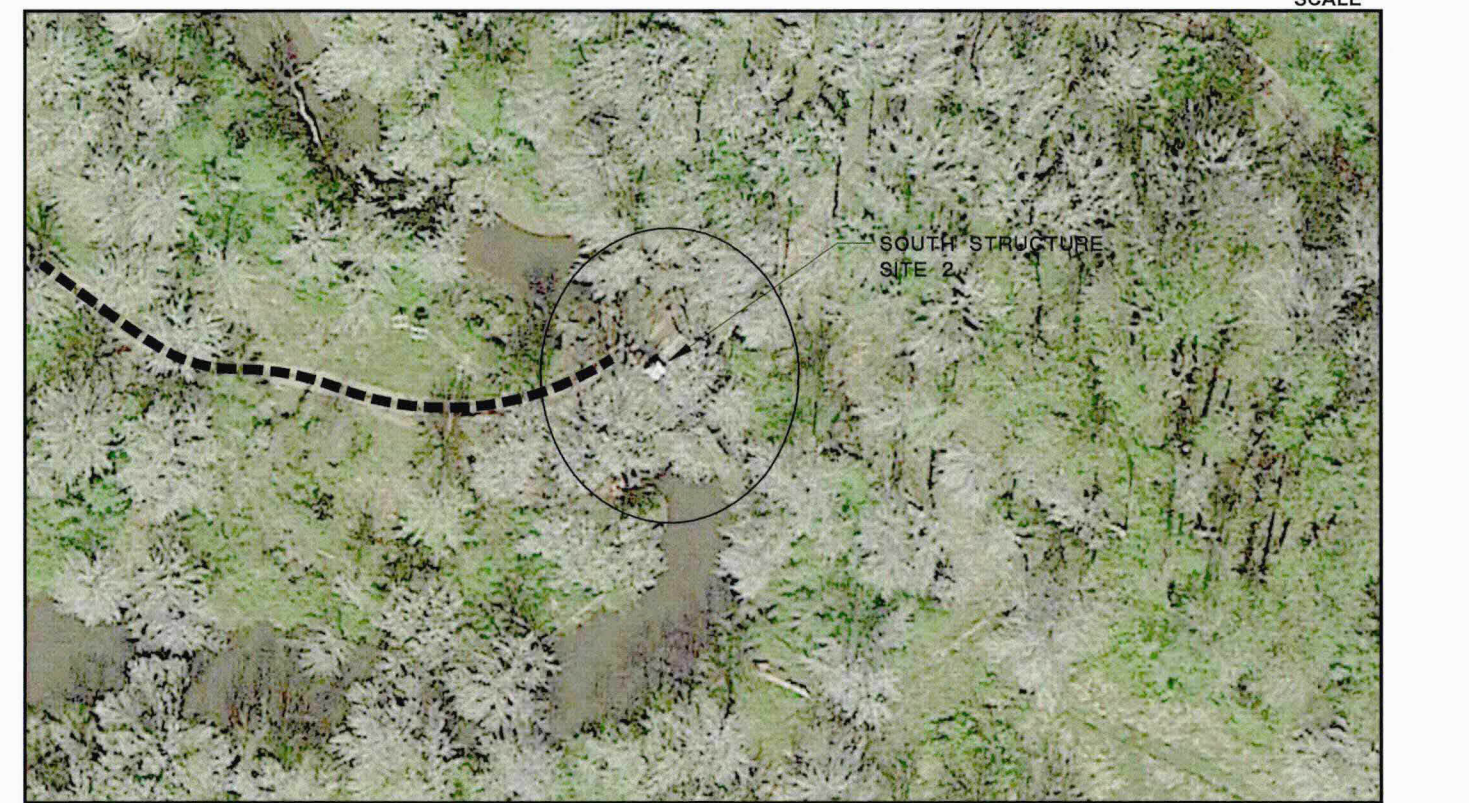




1 MULTNOMAH CHANNEL NORTH & SOUTH SITE  
3 SITE ACCESS PLAN



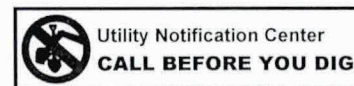
2 NORTH STRUCTURE  
3 SITE 1 EXISTING SITE PLAN



1 SOUTH STRUCTURE  
3 SITE 2 EXISTING SITE PLAN

# BID SET

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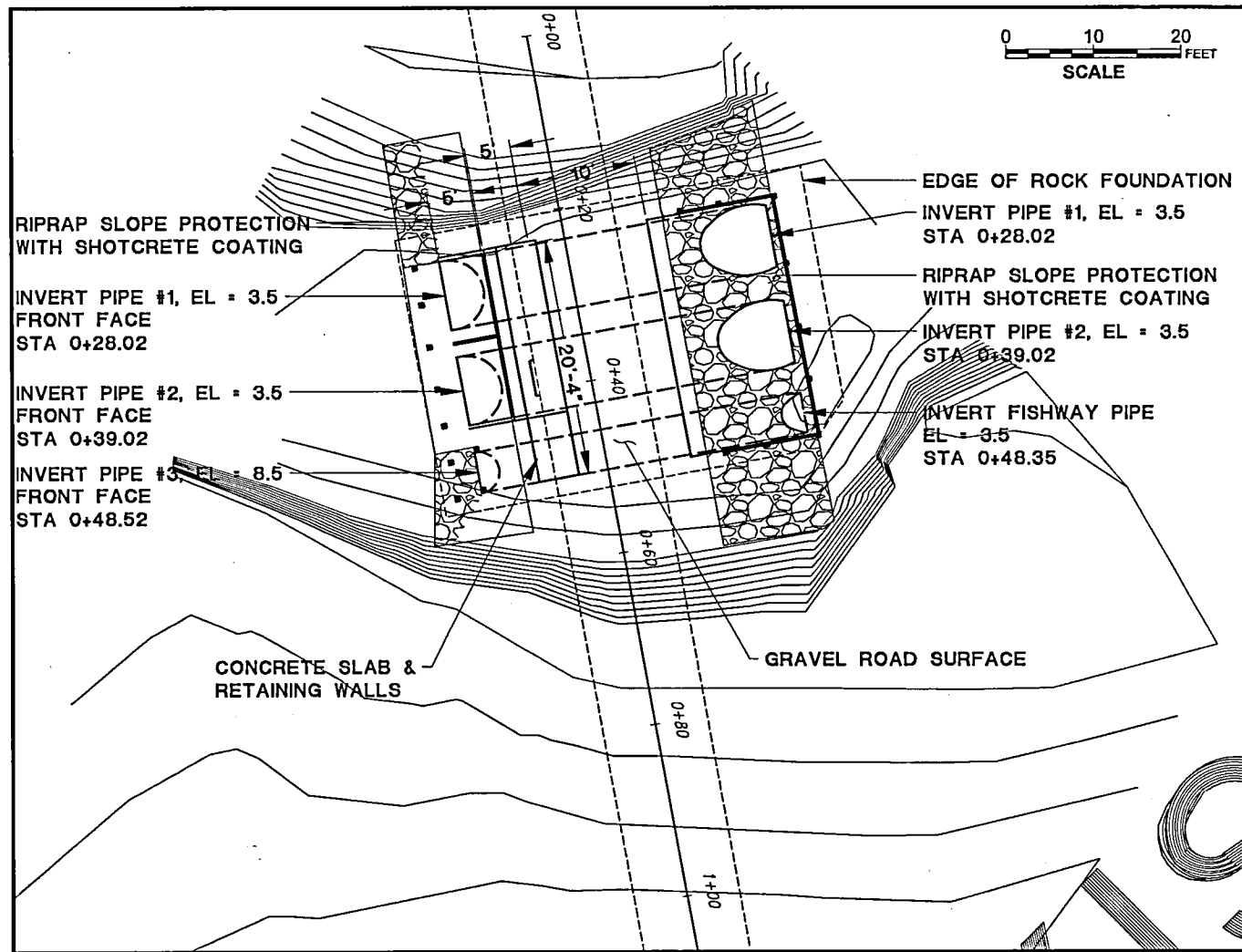


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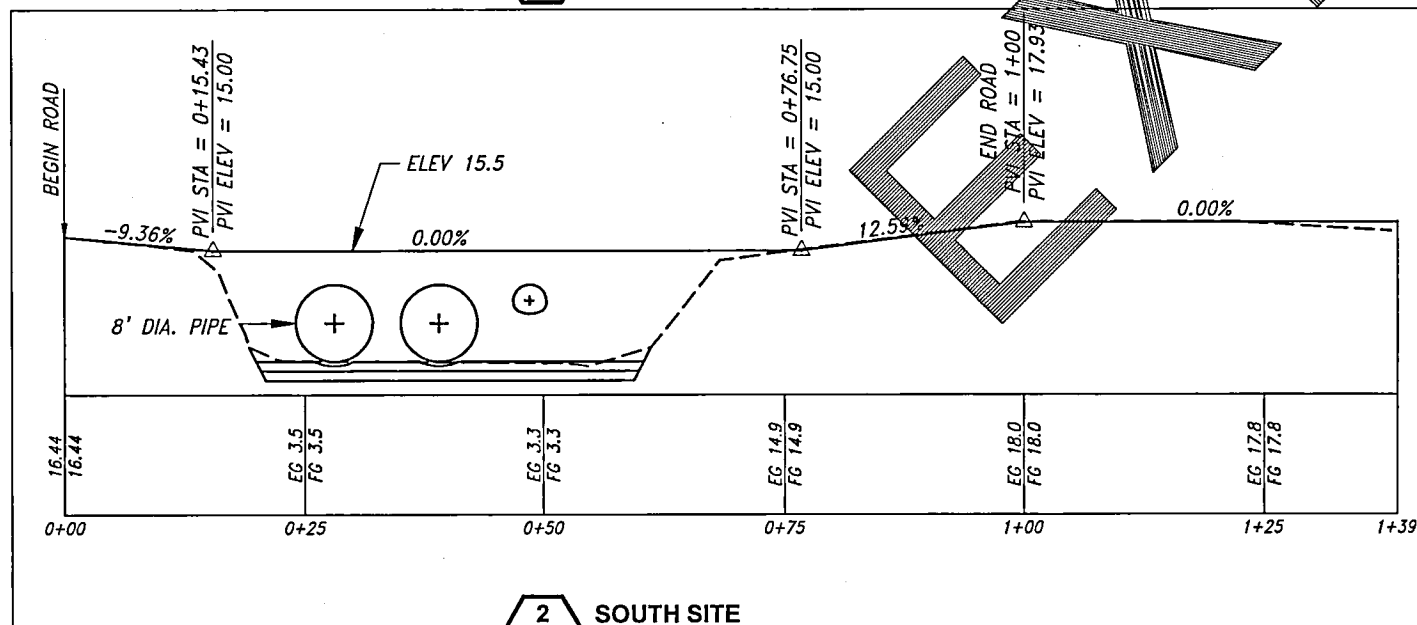


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WATER CONTROL STRUCTURE IMPROVEMENTS		SURVEYED BY: JPS
		CHECKED BY:
SITE ACCESS		SHEET NO. 3 of 18



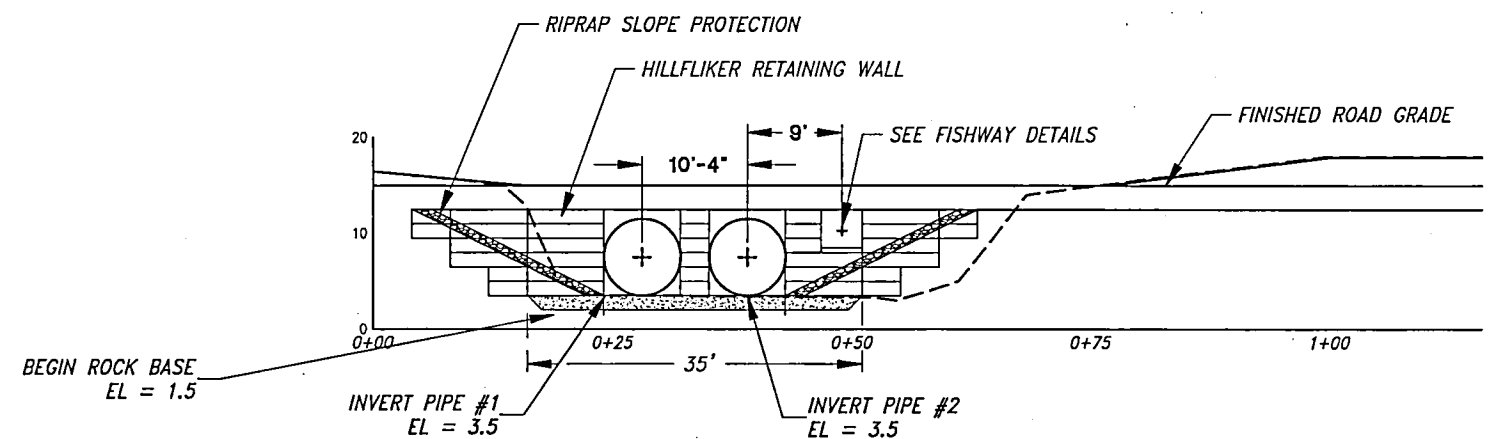
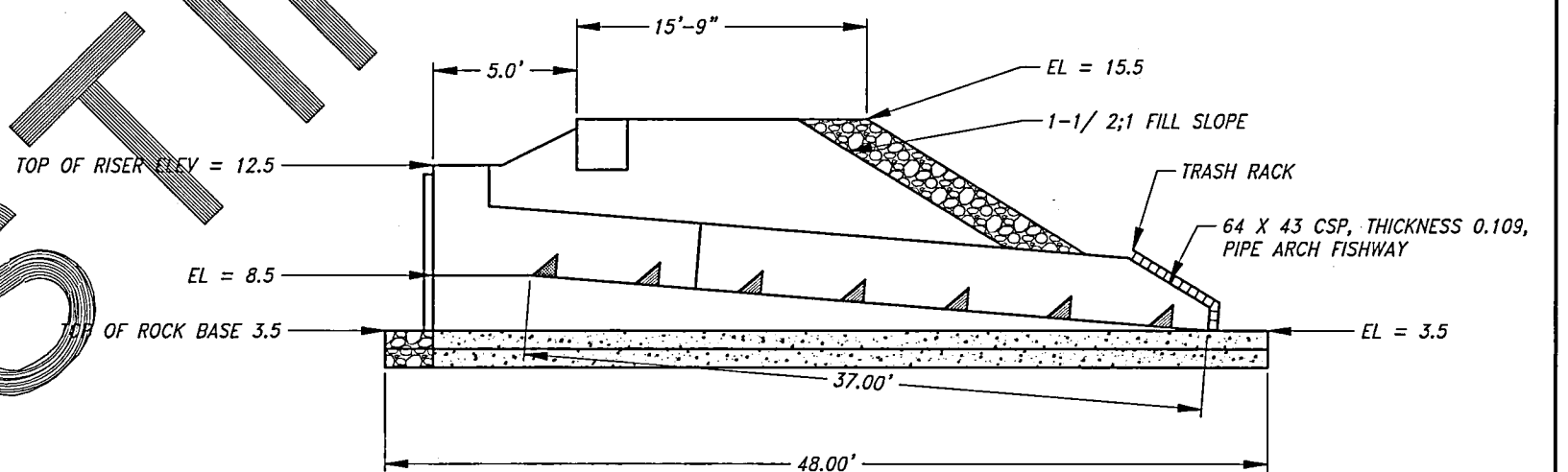
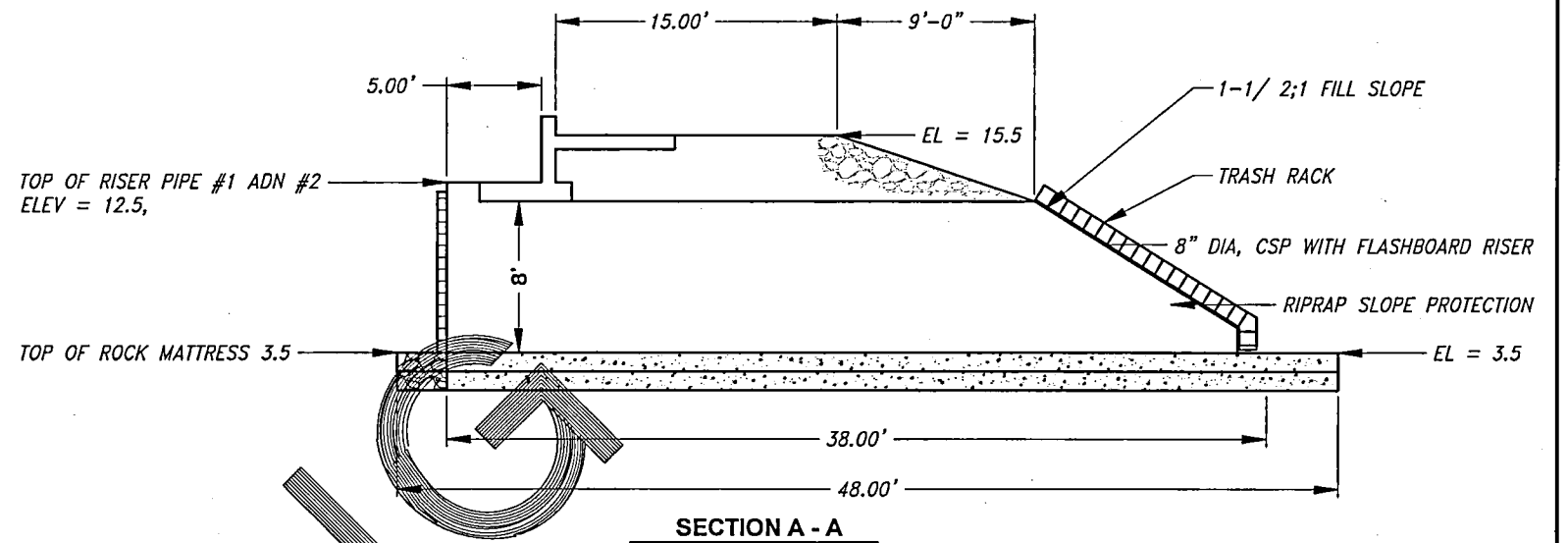


1 SOUTH SITE  
4 EXISTING PLAN VIEW



2 SOUTH SITE  
4 PROFILE

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3 FRONT FACE  
4 ELEVATION

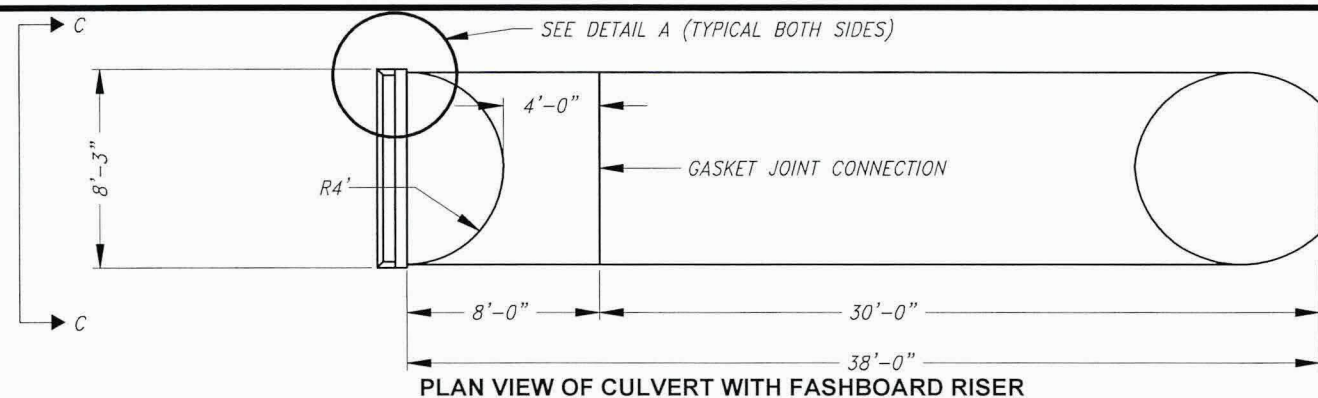
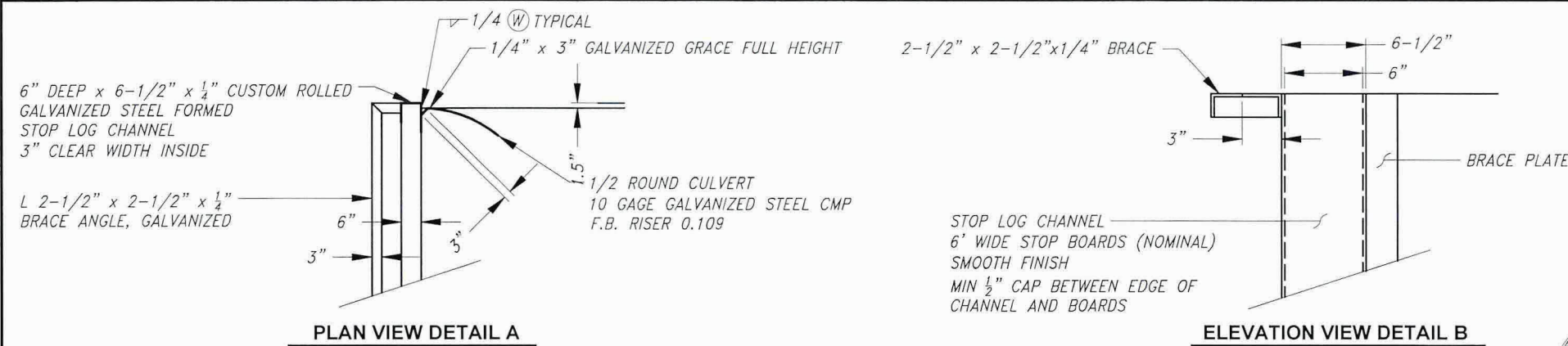
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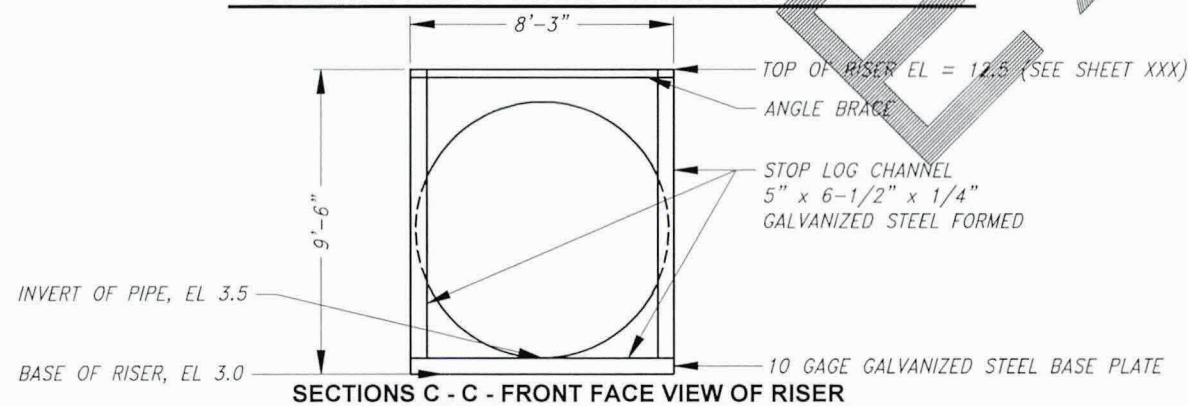
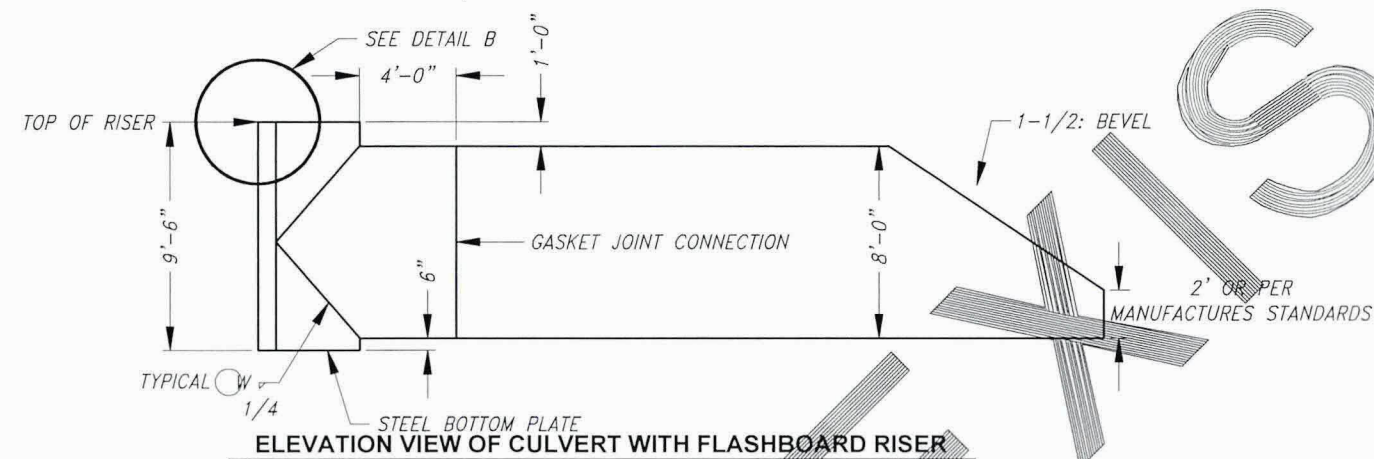
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METRO: MULTNOMAH CHANNEL	DRAWN BY: DMC	
SOUTH SITE	SURVEYED BY:	
EXISTING INFORMATION	CHECKED BY:	
EXISTING SITE PLAN & DETAILS	SHEET NO.	4 of 18

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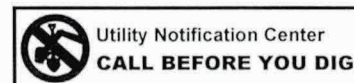




RISER AND CULVERT ARE BOTH 10 GAGE, RISER MAY BE GALVANIZED. CULVERT TO BE ALUMINUM STEEL



1 EXISTING DETAILS  
5 SOUTH SITE



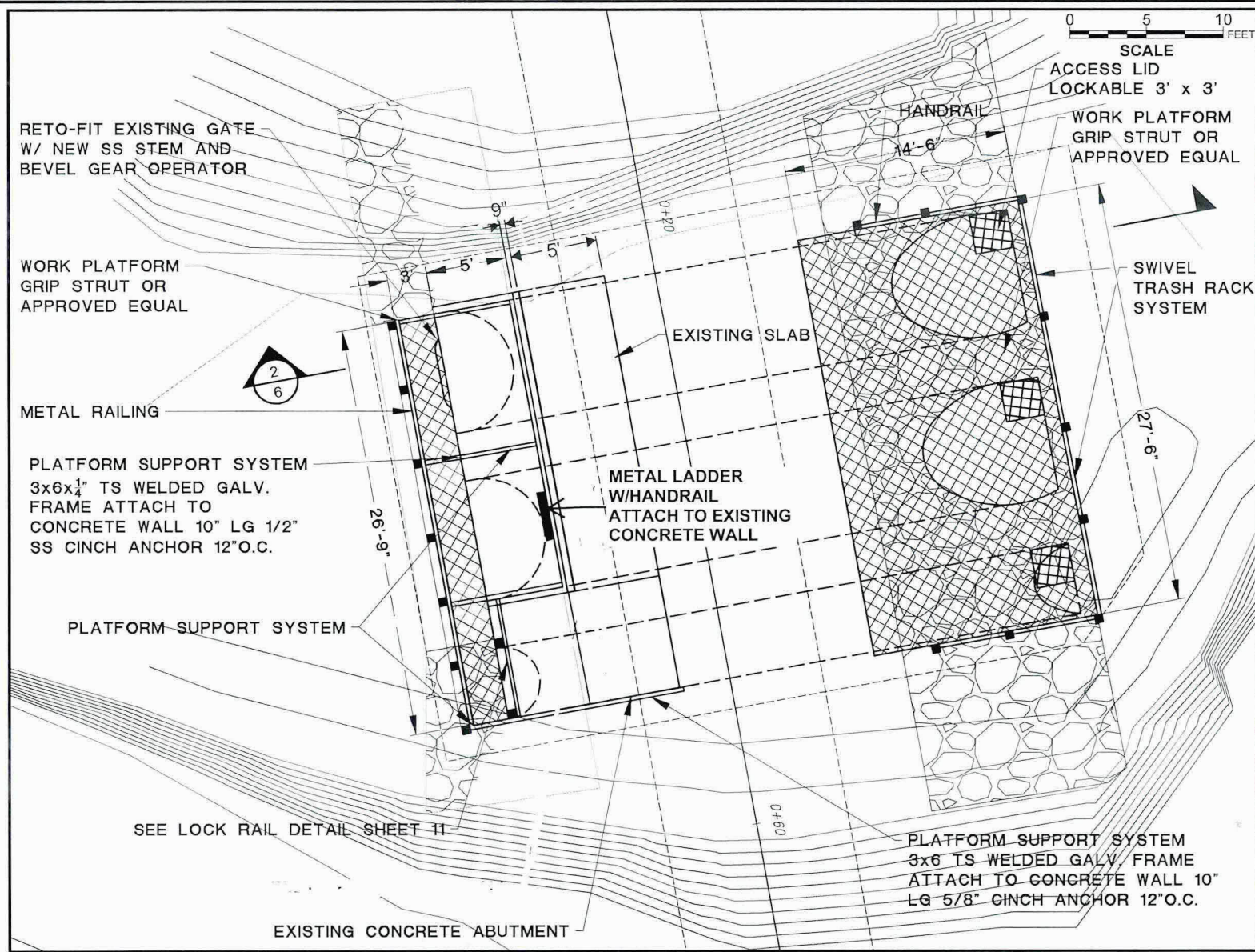
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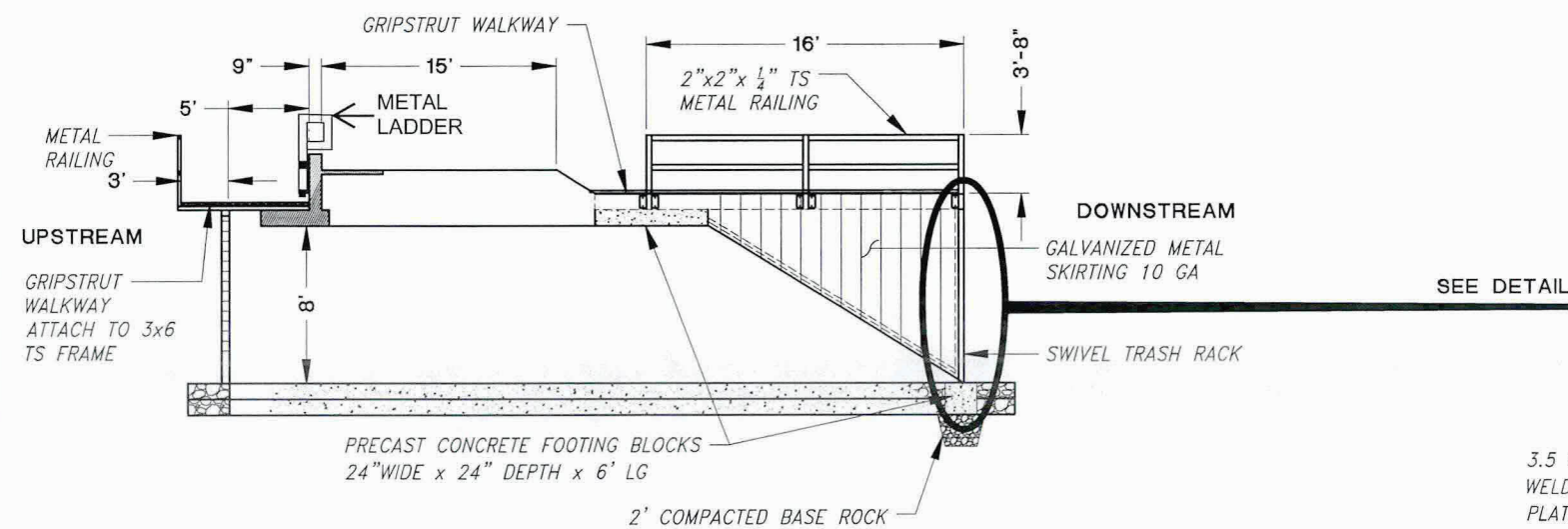
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REV. NO.	DESCRIPTION	DATE	APPROVED			
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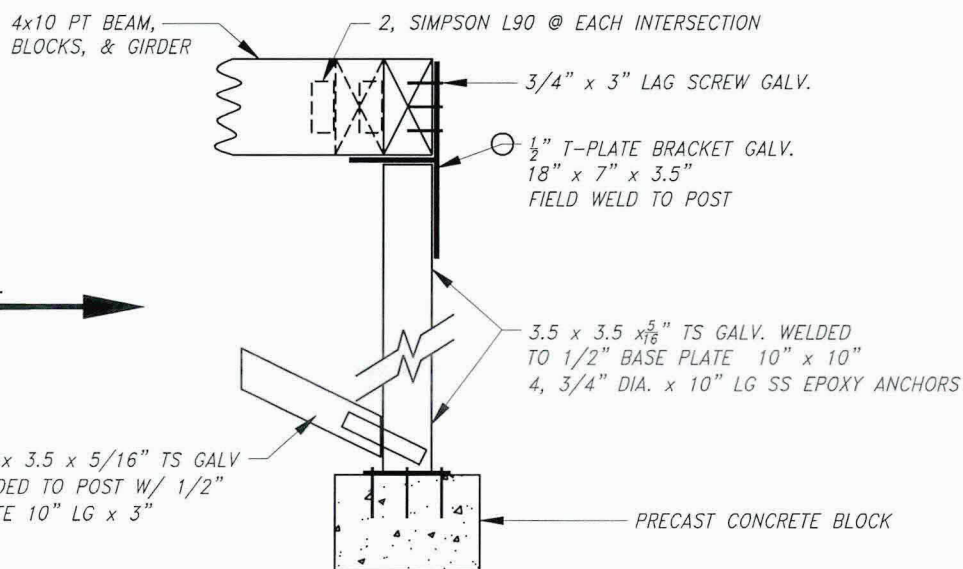
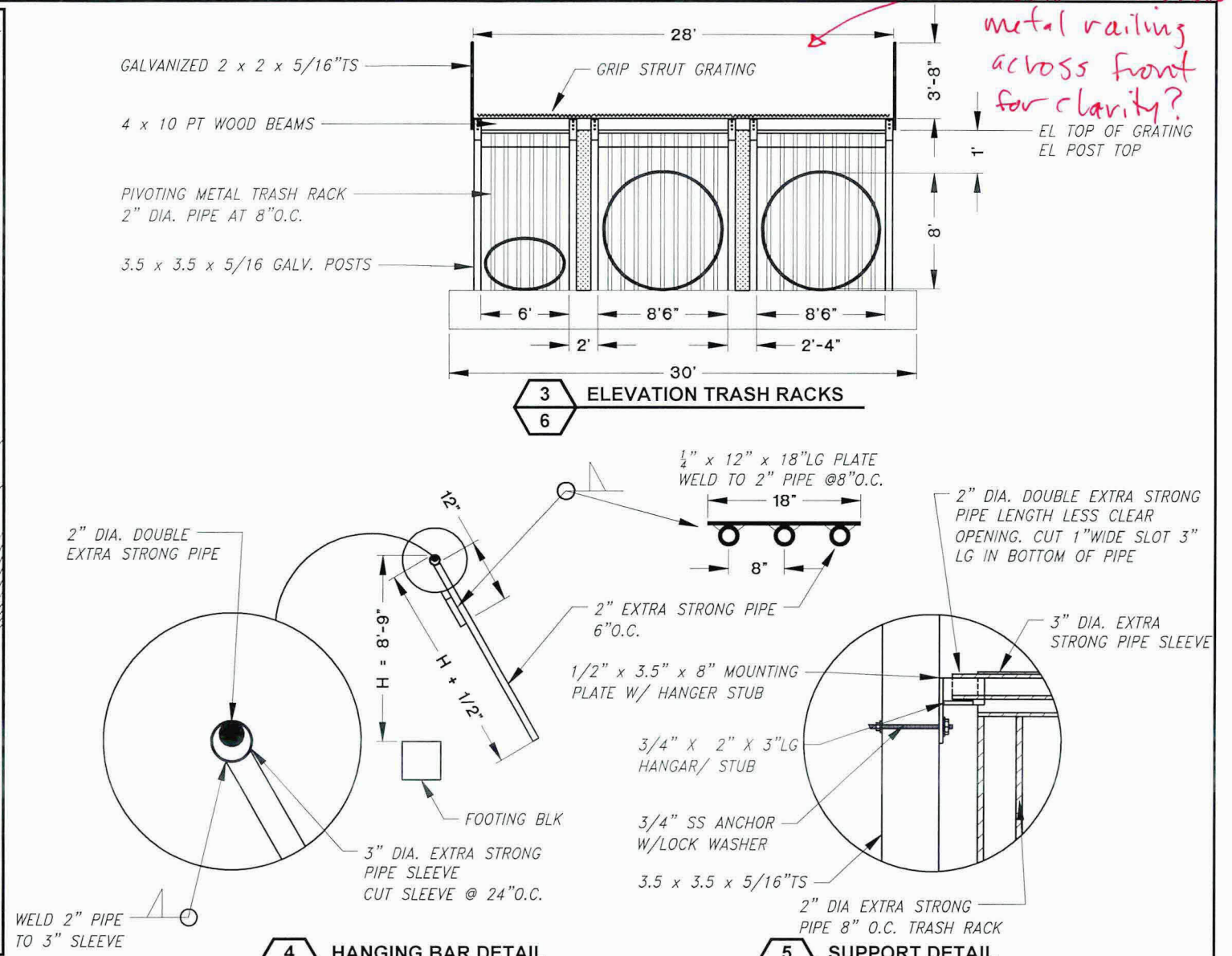
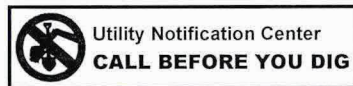


1 SOUTH SITE  
6 WCS IMPROVEMENTS



2 WOOD BEAM AND METAL SUPPORT STRUCTURE  
6 SECTION

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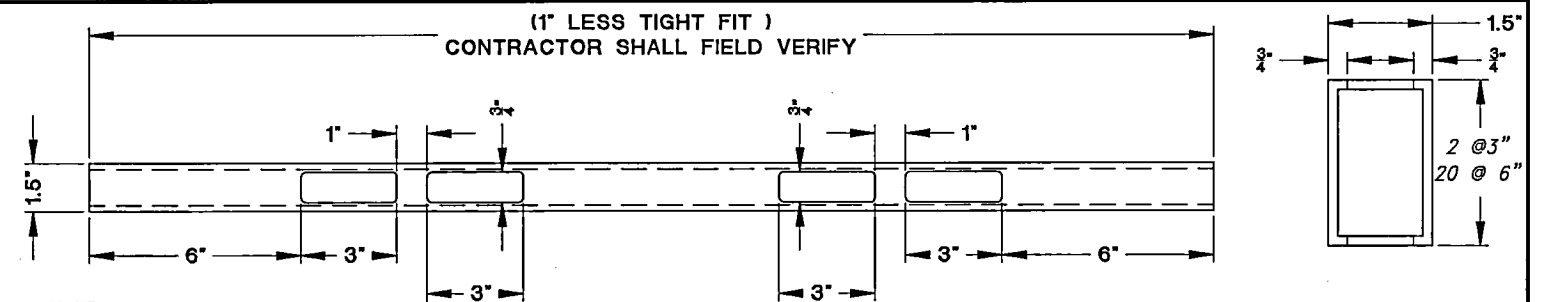
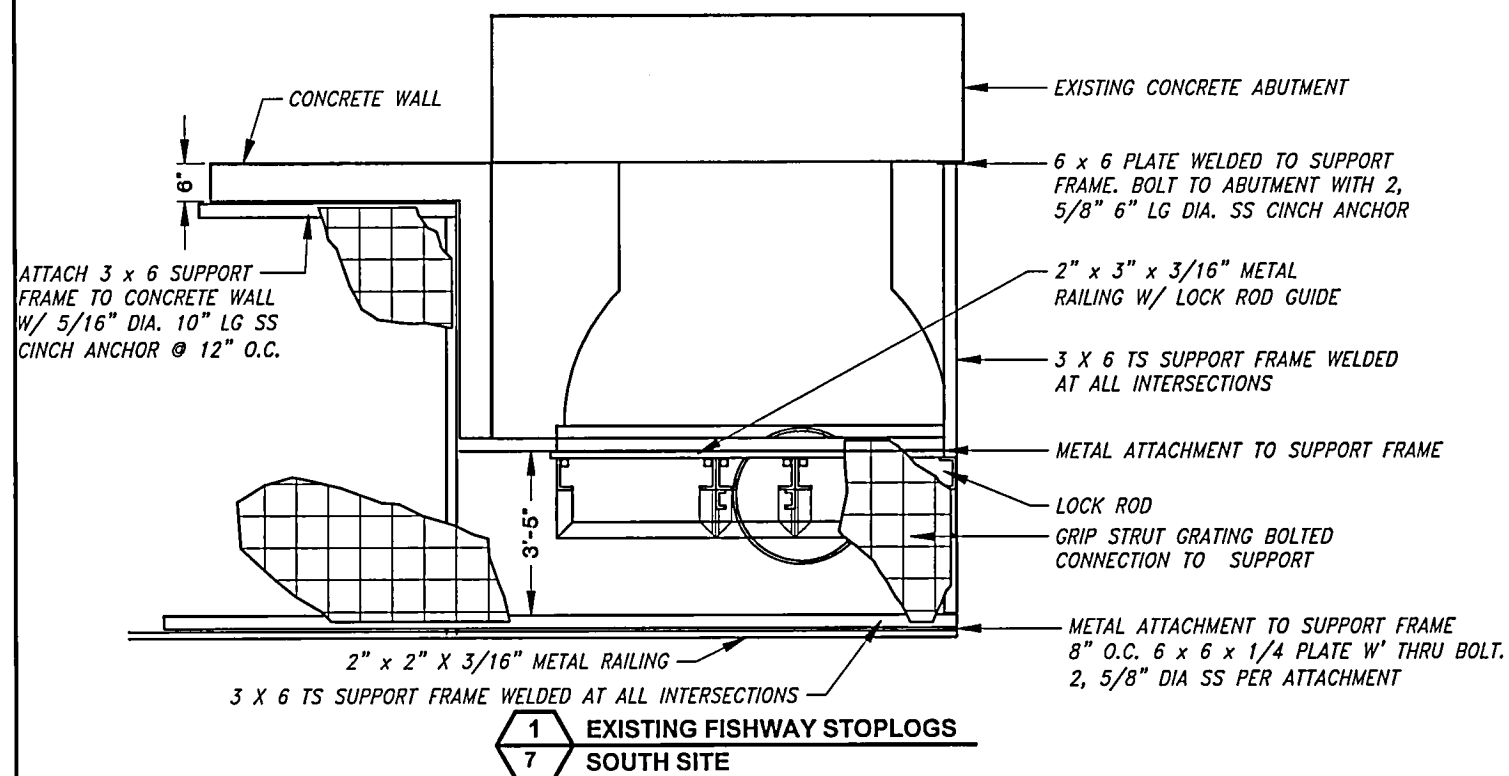
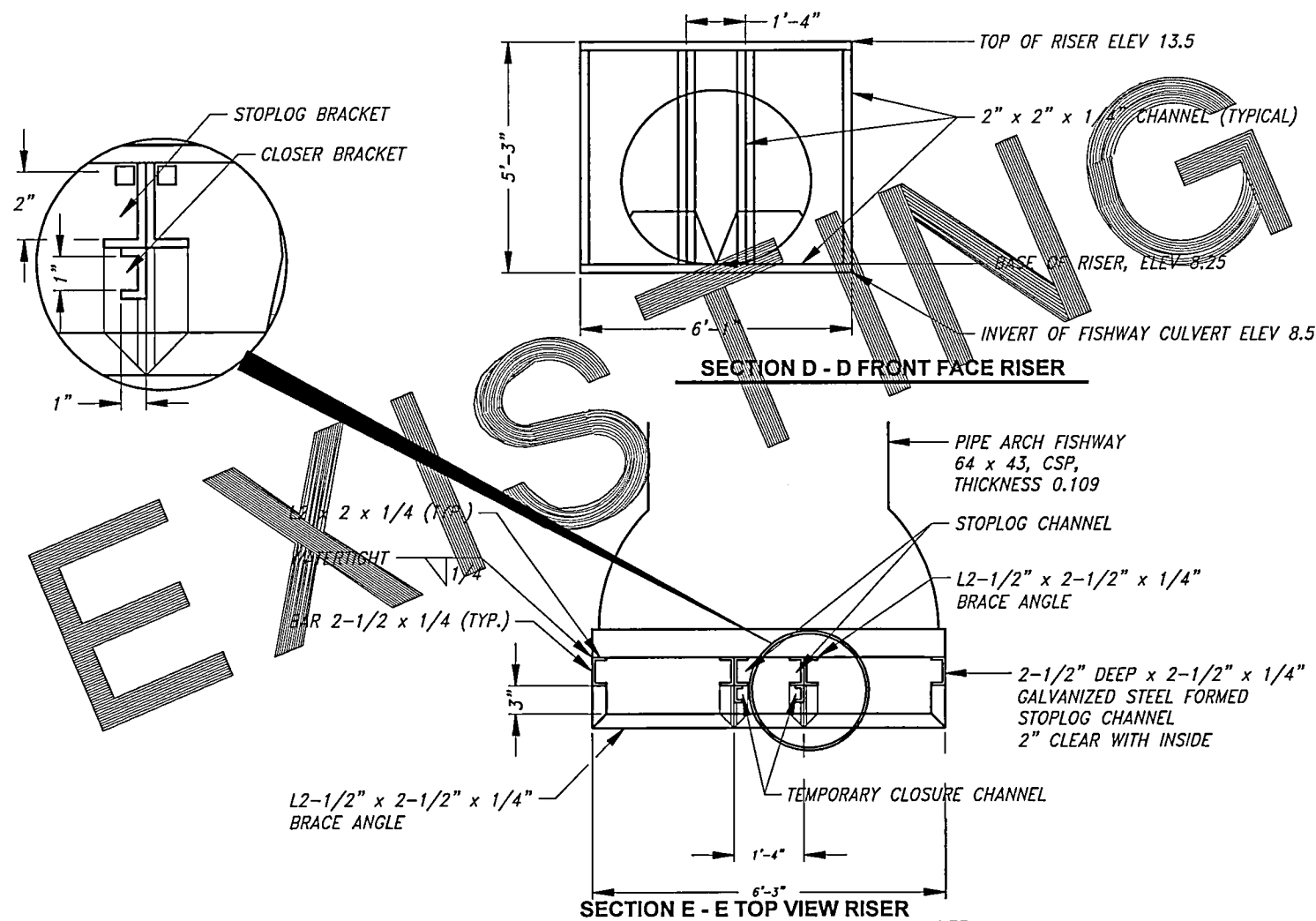
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PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: MULTNOMAH CHANNEL SOUTH SITE MODIFICATIONS		DRAWN BY: DMG
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		CHECKED BY:
		SHEET NO.
TRASH RACK, PLATFORMS & RAILINGS		6 of 18

**BID SET**





NOTE:  
ALL ALUMINUM STOPLOGS SHALL BE SUPPLIED BY THE CONTRACTOR

CONTRACTOR IS RESPONSIBLE FOR CUTTING STOPLOGS TO PROPER LENGTH AND FABRICATING THE HOLES IN ALL STOPLOGS AS SHOWN. THE 3/4" DIMENSION IS CRITICAL AND NEEDS TO BE CENTERED IN THE STOPLOG TO AVOID LEAKAGE. THE FINISHED SURFACE SHALL BE SMOOTH TO PROVIDE A FLAT SURFACE FOR THE STOPLOG.

ALUMINUM STOPLOGS: { 2 STOPLOGS, 1.5" x 3" x 1/2"  
20 STOPLOGS, 1.5" x 6" x 1/2"

Same as N. and S.B.

2 ALUMINUM STOPLOG  
7 TYPICAL

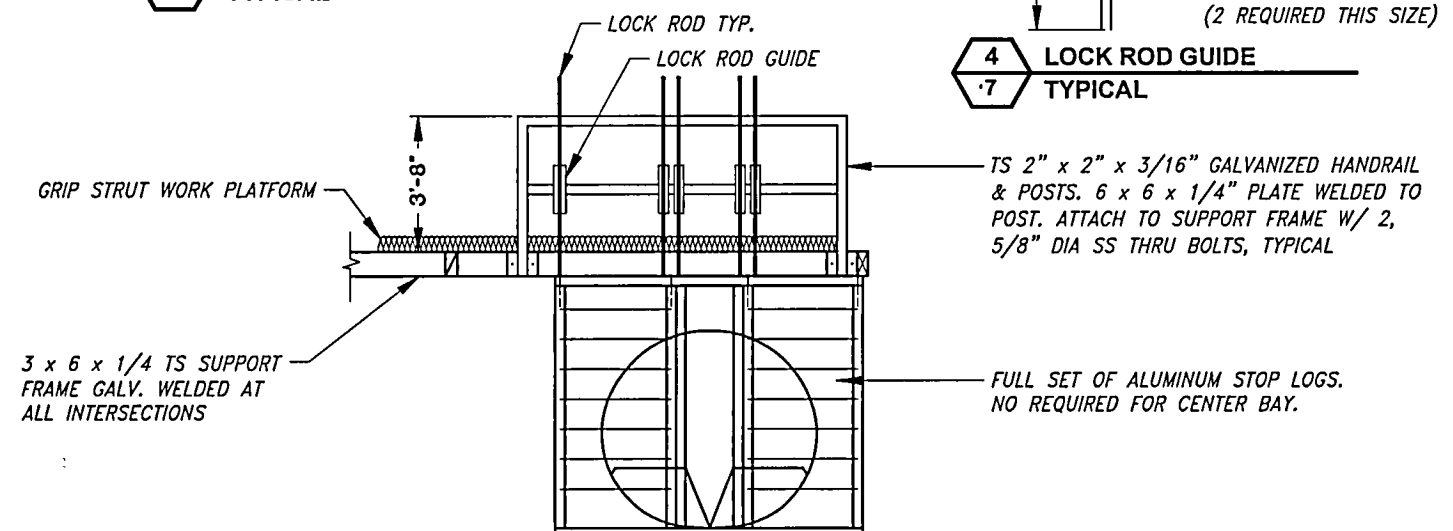
DRILL 1/2" HOLE THRU LOCK ROD GUIDE TO ACCOMMODATE PIN FOR PADLOCK. PROVIDE PIN WITH HOLE FOR PADLOCK. PADLOCK BY OWNER.

±1" GALV. SPACER. WELD TO HANDRAIL  
MIDDLE HORIZONTAL TS 2" x 2" x 1/4" HANDRAIL  
TS 2" x 2" x 1/4" x 12" LG LOCK ROD GUIDE. WELD TO SPACER. WELD SPACER TO CATWALK ANGLE.

3 LOCK ROD GUIDE  
7 TYPICAL

WELD 2" x 2" GALV. PL CAP TO TOP OF STEEL PIPE SO IT WILL CLEAR HANDRAIL  
DRILL 1/2" HOLE THRU LOCK ROD PIPE AT 6" SPACING TO ACCOMMODATE PIN FOR PADLOCK. PIN & PADLOCK WILL BE SUPPLIED BY THE DNR.  
DRILL HOLE EVERY 6" C-C (8 HOLES TOTAL)  
1" x 5'-6" STANDARD STEEL PIPE LOCK ROD, GALVANIZED. (2 REQUIRED THIS SIZE)

4 LOCK ROD GUIDE  
7 TYPICAL



5 STOPLOGS & LOCK RAIL SYSTEM  
7 SOUTH SITE

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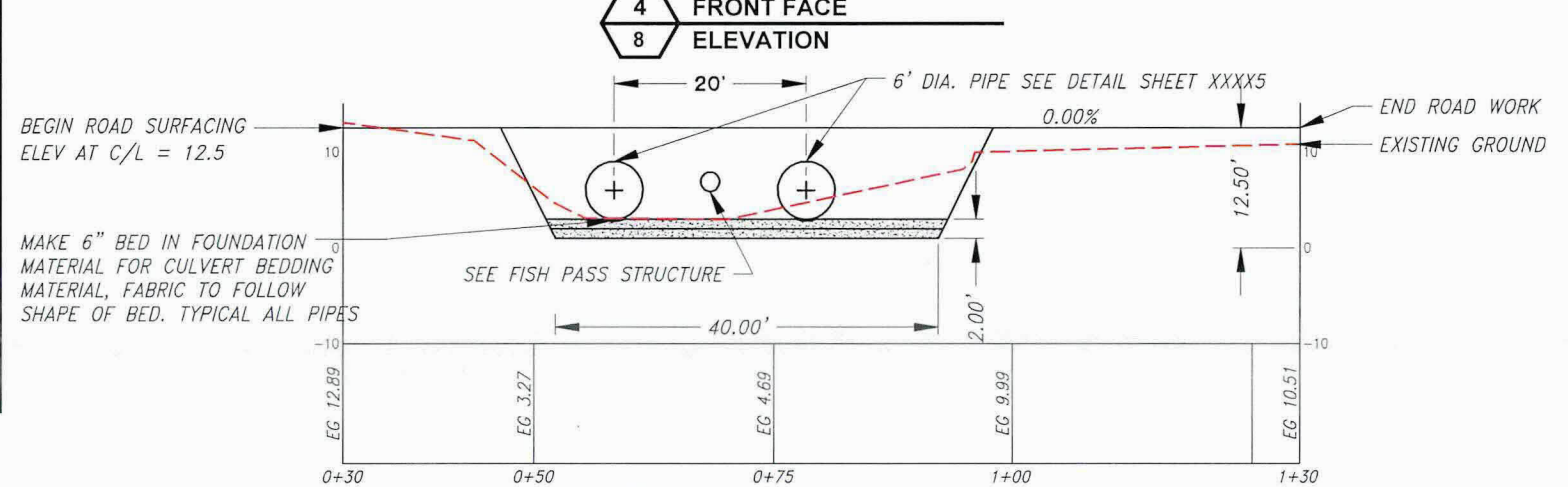
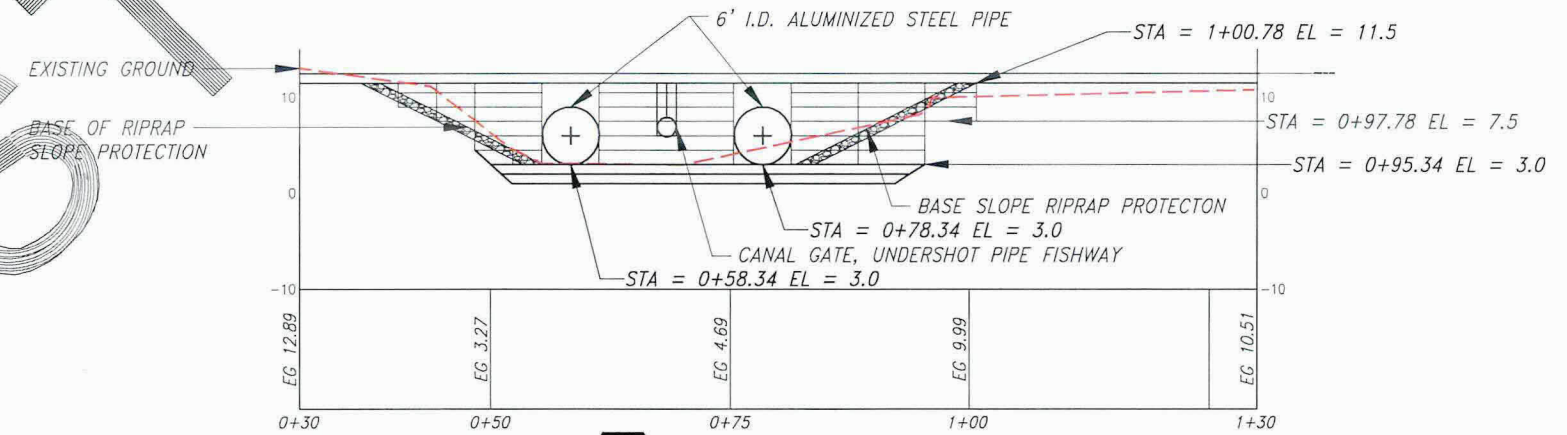
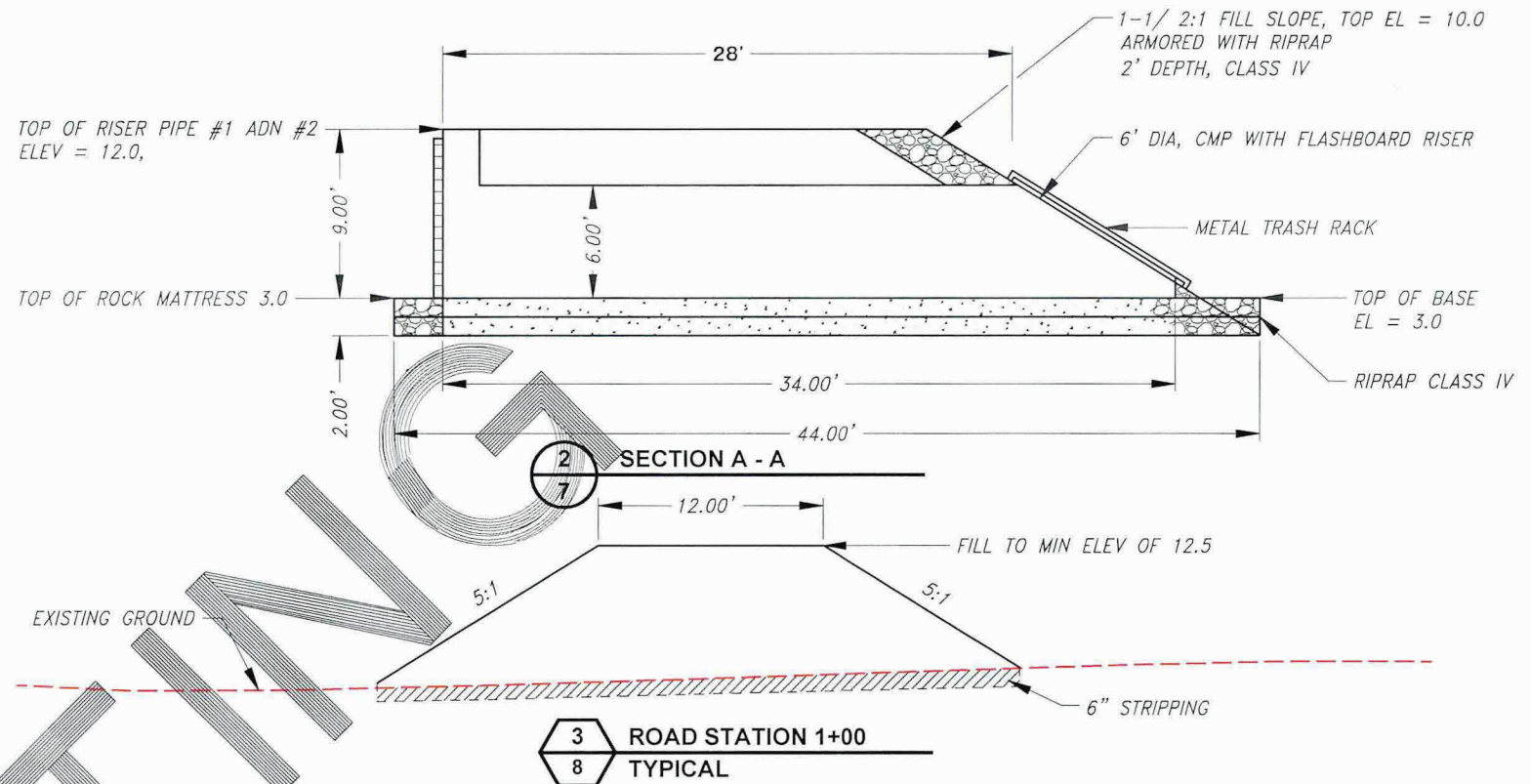
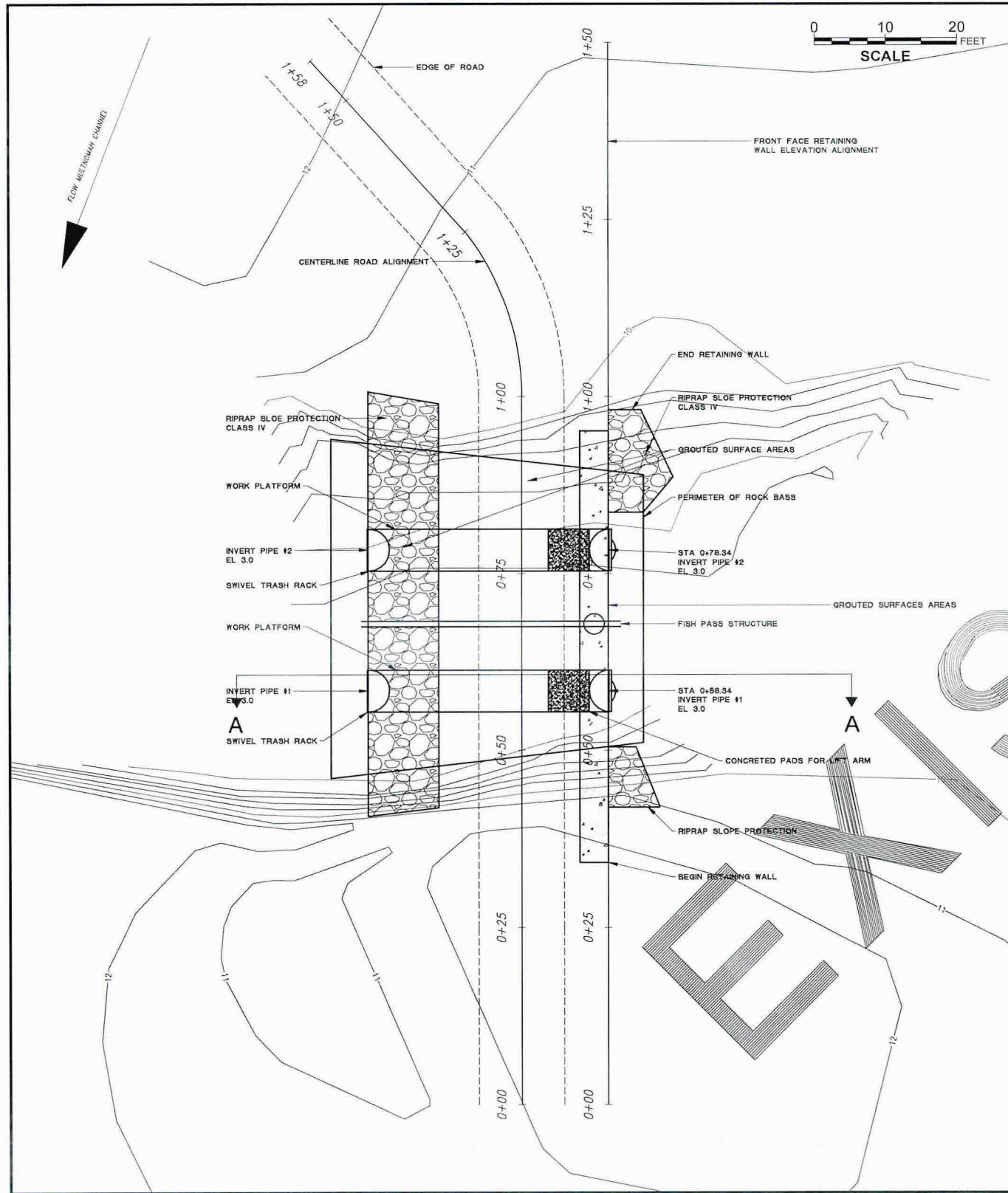


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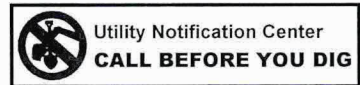


PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: MULTNOMAH CHANNEL		DRAWN BY: DMC
SOUTH SITE		SURVEYED BY:
MODIFICATIONS UPSTREAM SIDE		CHECKED BY:
PLATFORM, ALUMINUM STOPLOGS, RAILINGS & LOCK RAIL SYSTEM		SHEET NO. 7 of 18





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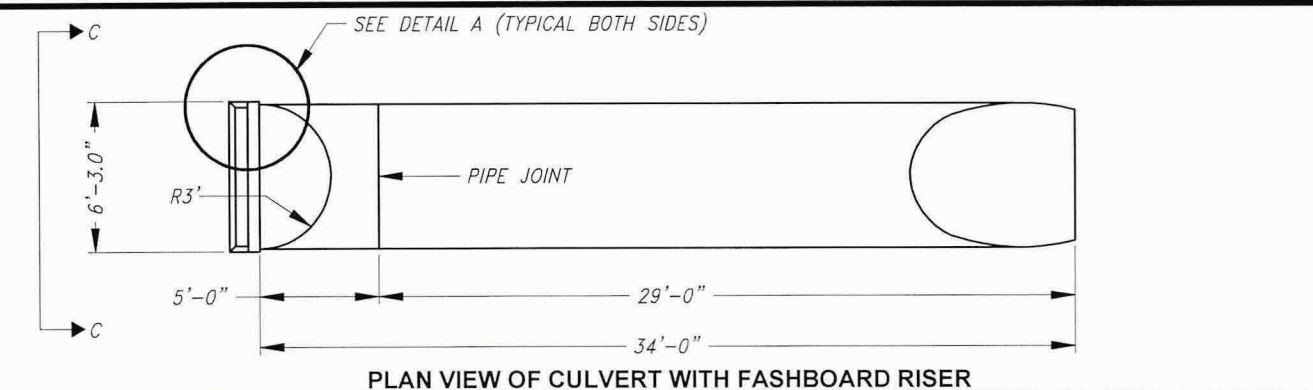
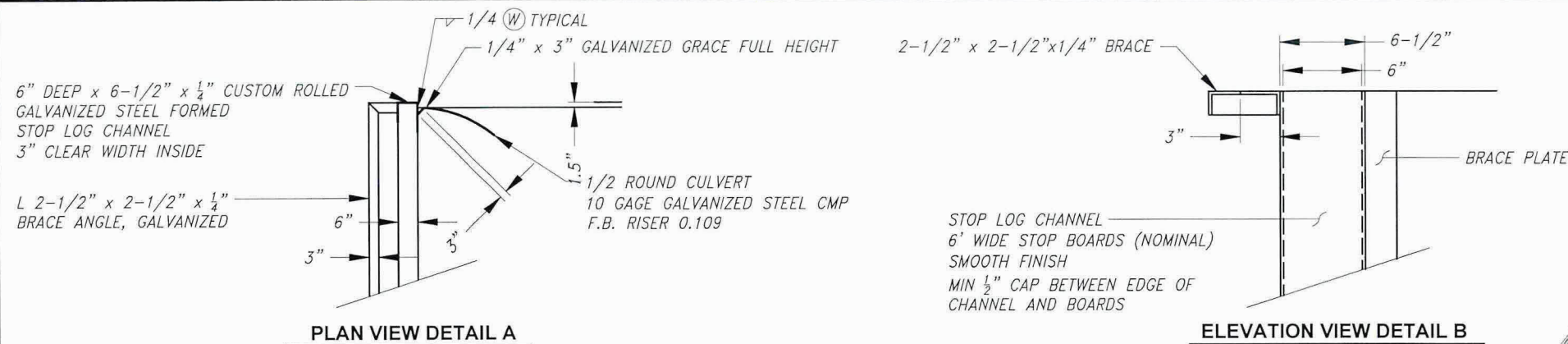
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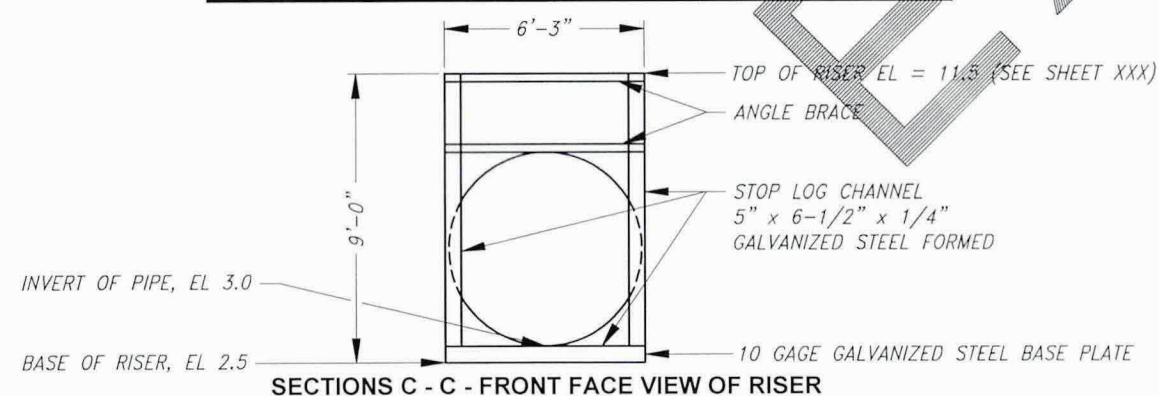
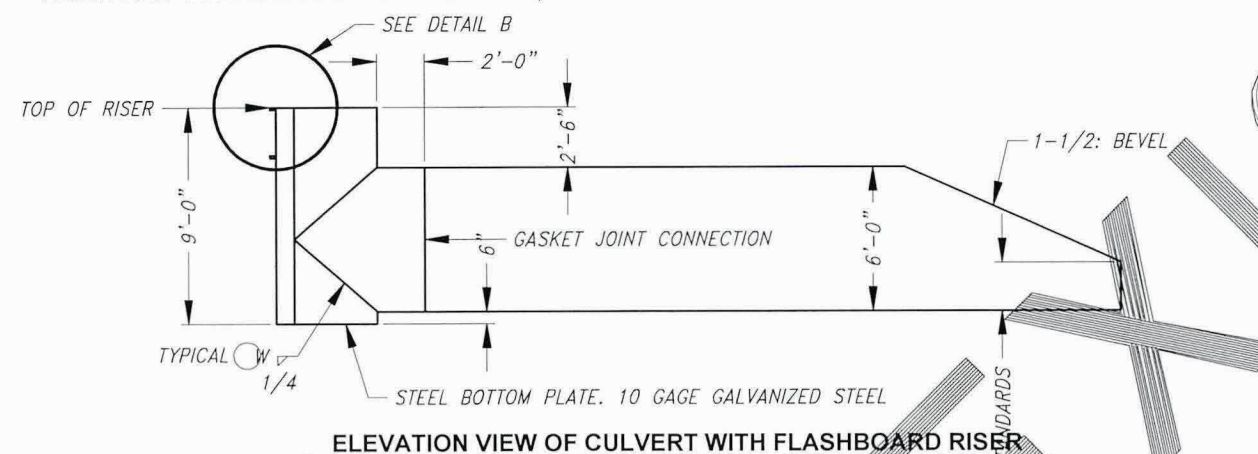
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METRO: MULTNOMAH CHANNEL		DRAWN BY: DMC
NORTH SITE		SURVEYED BY:
EXISTING INFORMATION		CHECKED BY:
EXISTING SITE PLAN		SHEET NO. 8 of 18

**BID SET**





RISER AND CULVERT ARE BOTH 10 GAGE, RISER MAY BE GALVANIZED. CULVERT TO BE ALUMINUM STEEL



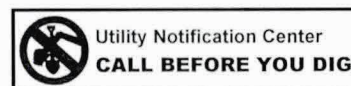
1 EXISTING DETAILS  
9 NORTH SITE



2 GATE PHOTO  
9

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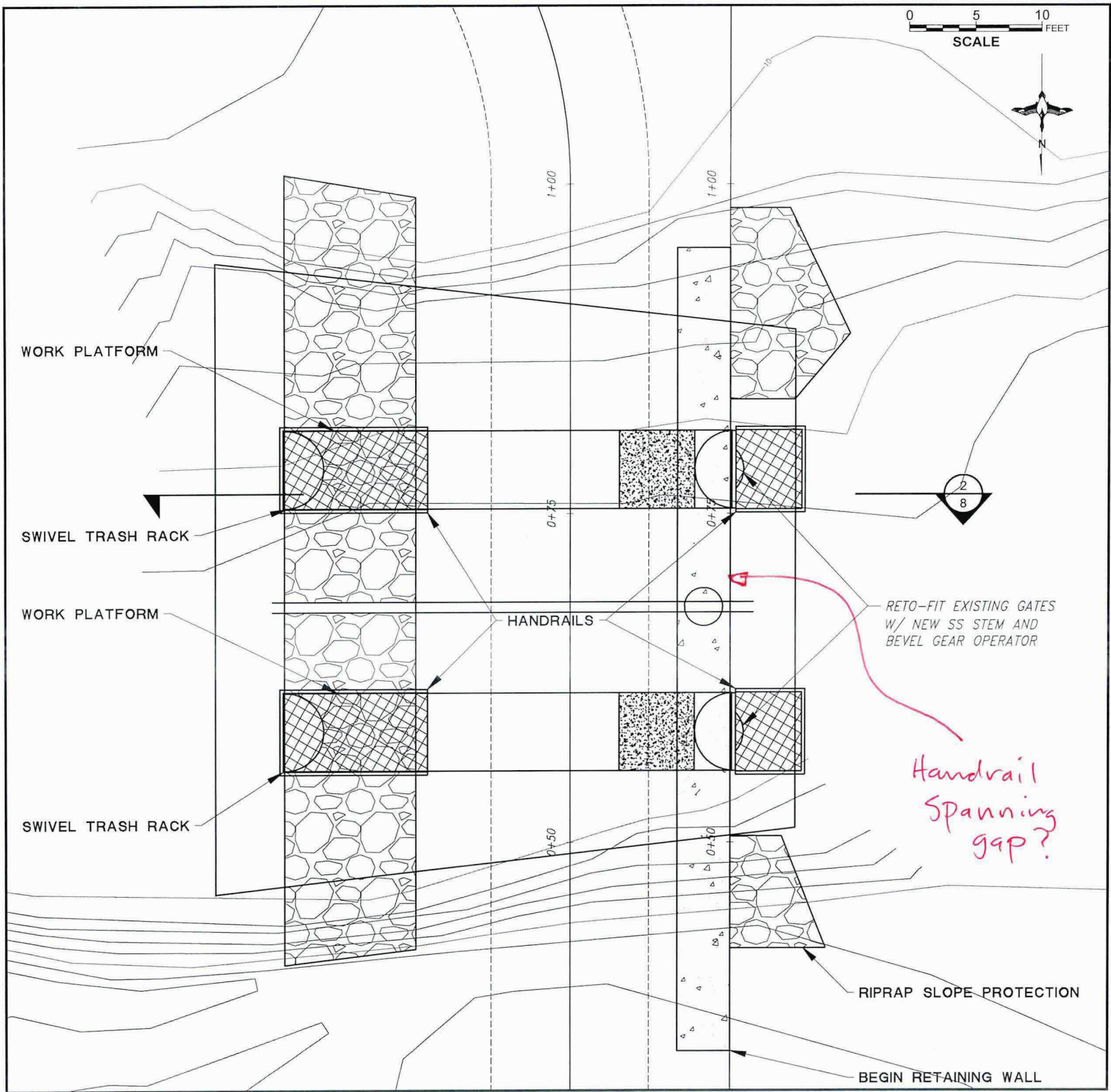
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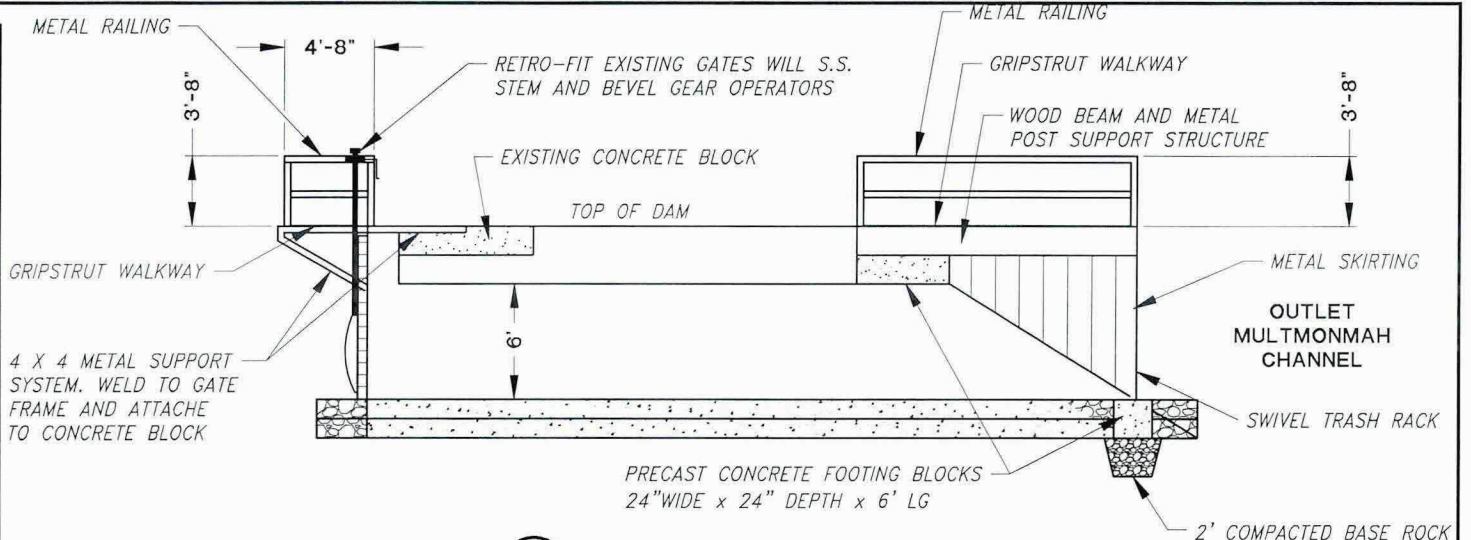
PROJECT NO. US-OR-32-8 DATE: 2/3/17  
**METRO: MULTNOMAH CHANNEL  
 NORTH SITE  
 EXISTING INFORMATION**  
 EXISTING CULVERT

DESIGNED BY: GW  
 DRAWN BY: DMC  
 SURVEYED BY:  
 CHECKED BY:  
 SHEET NO.  
**9 of 18**

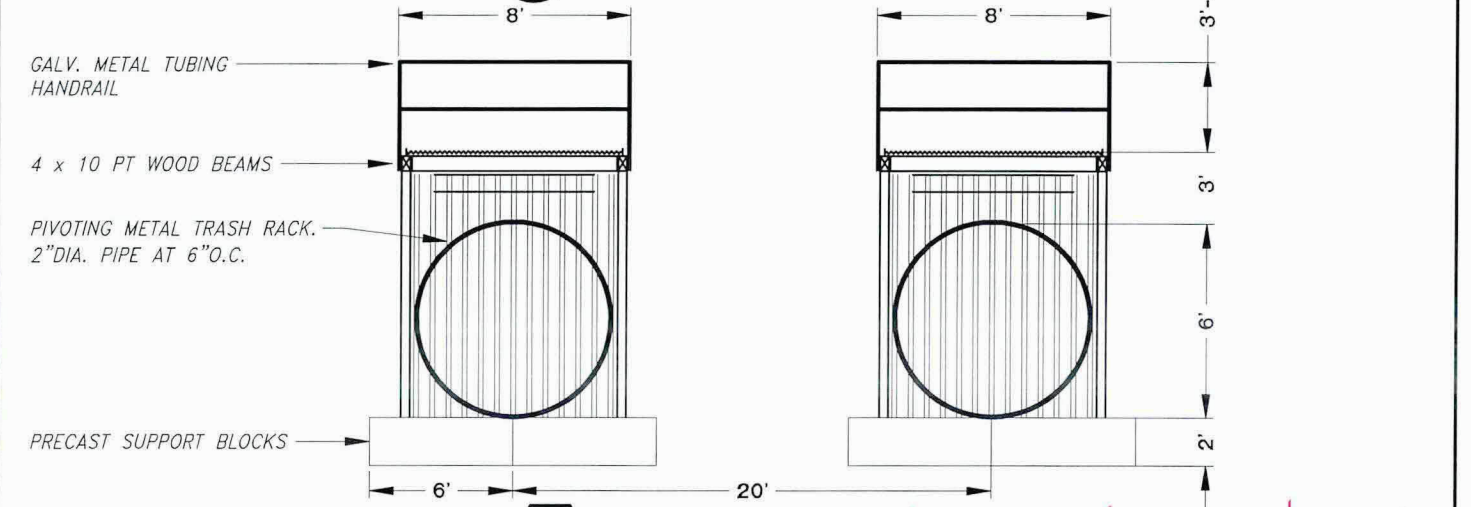




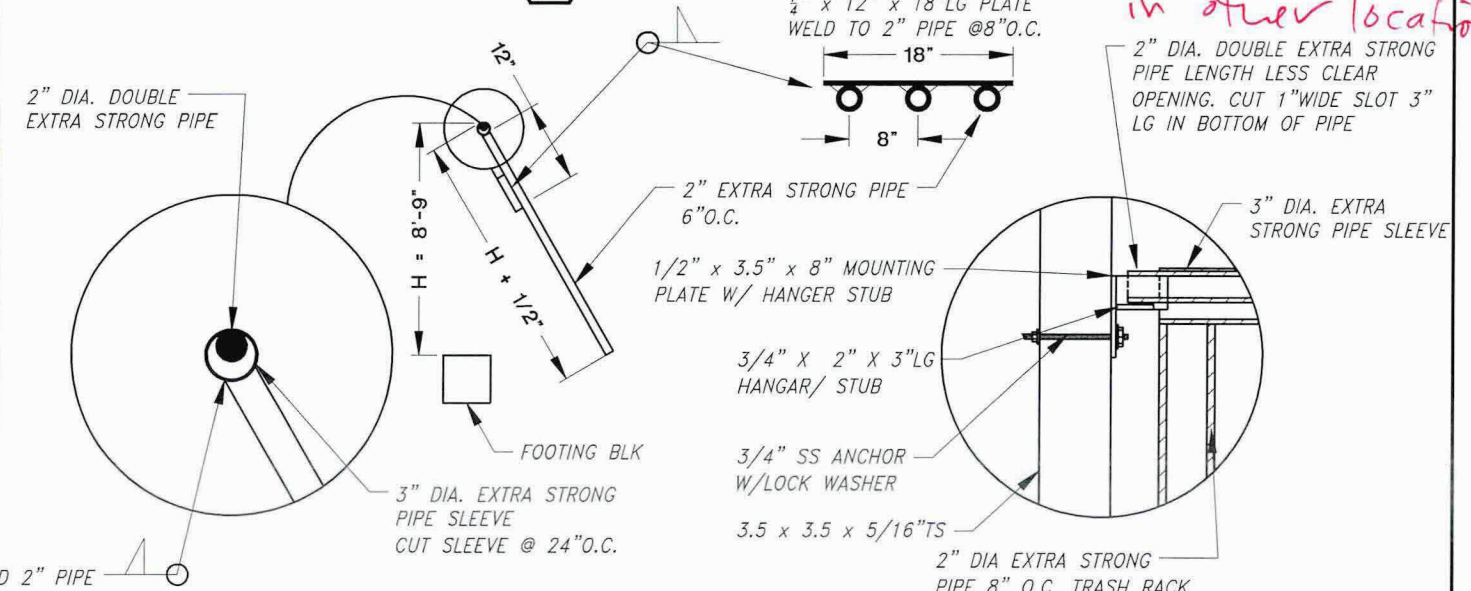
1 NORTH SITE  
10 PROPOSED PLAN



2 WOOD BEAM AND METAL SUPPORT STRUCTURE  
10 SECTION



3 OUTLET SWIVEL GATES  
10 ELEVATION



4 HANGING BAR DETAIL  
10 TRASH RACK

5 SUPPORT DETAIL  
10 TRASH RACK

BID SET

**Unauthorized Changes & Uses**  
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.

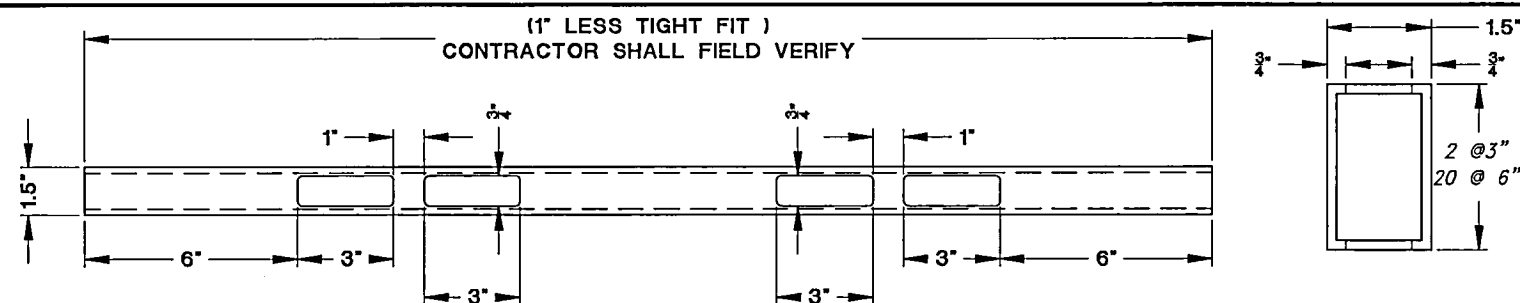
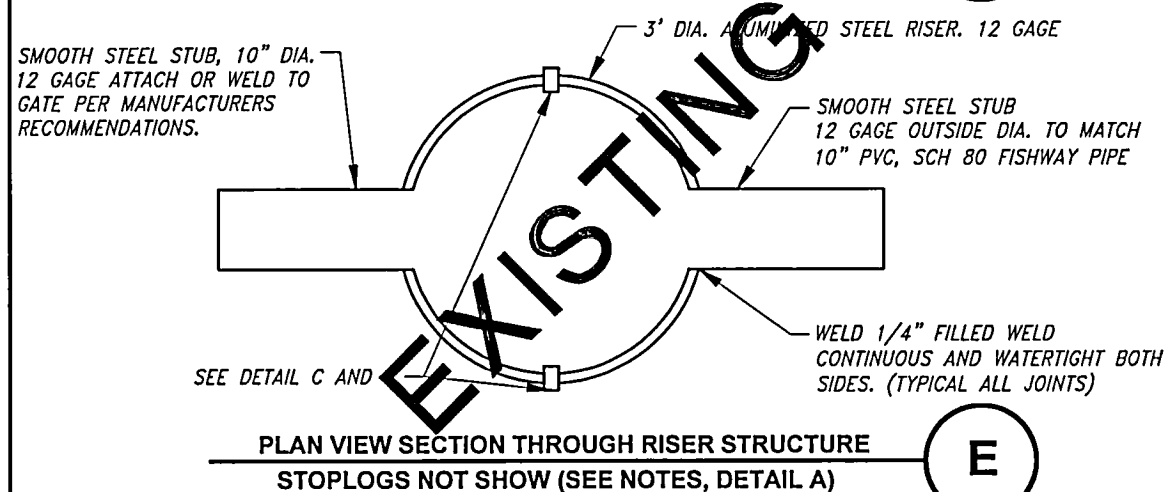
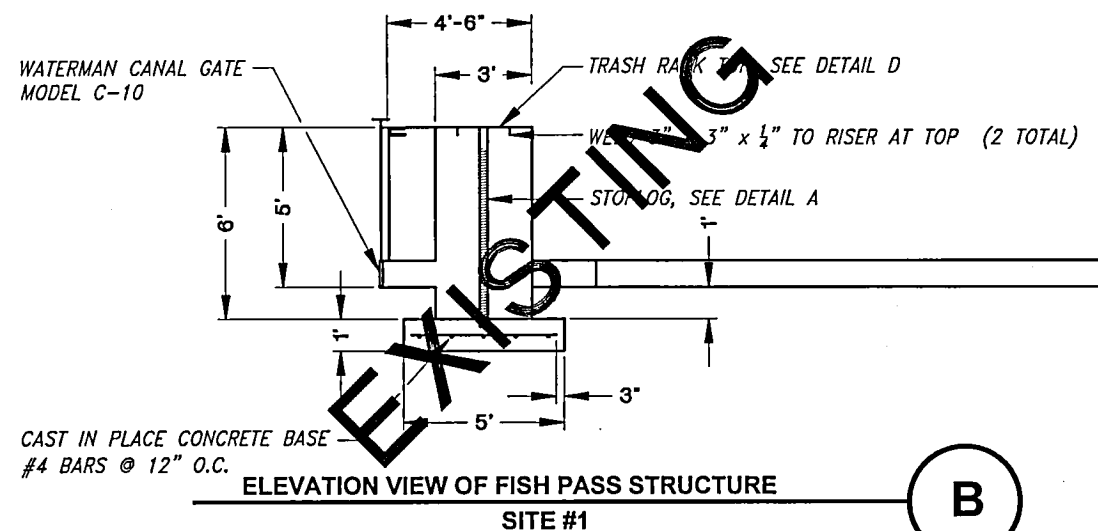
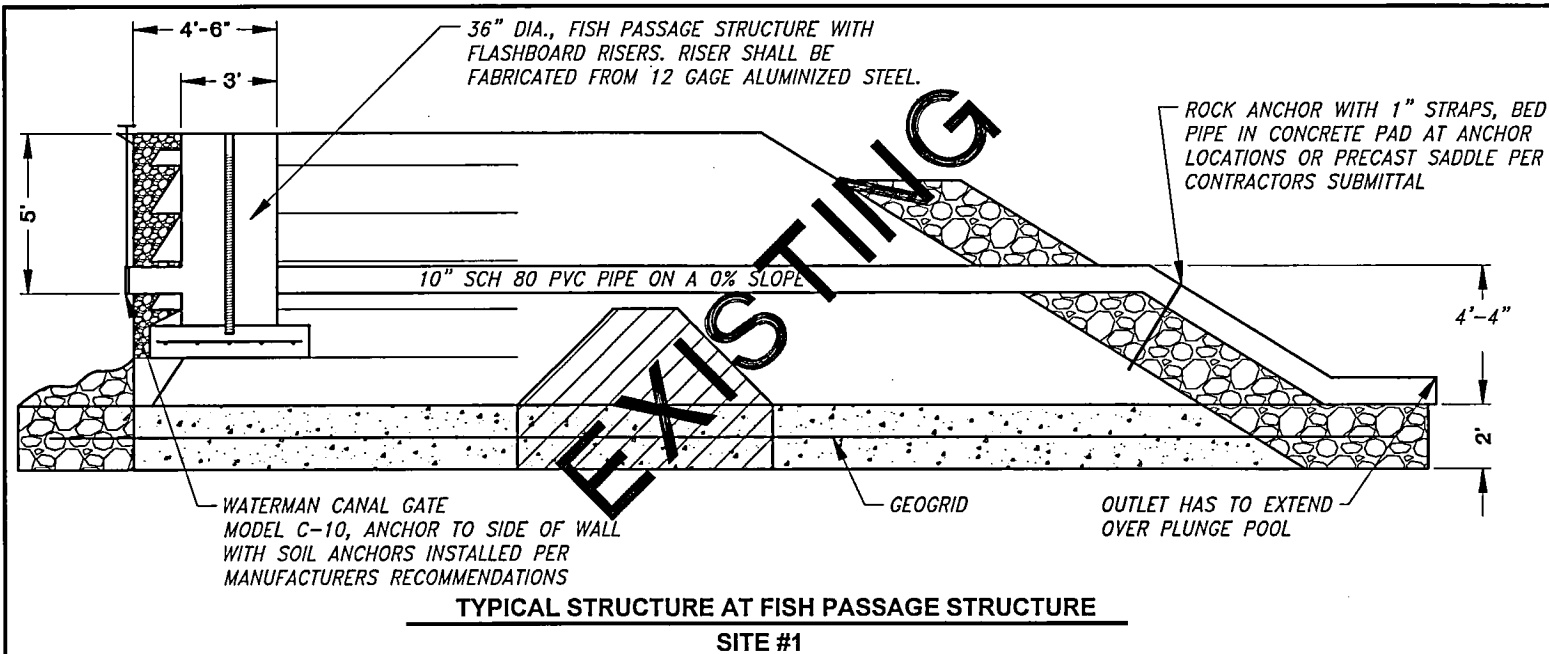


REVISIONS				
REV. NO.	DESCRIPTION	DATE	APPROVED	
1				
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PROJECT NO. US-OR-32-8	DATE 2/3/17	DESIGNED BY: GW
METRO: MULTINOMAH CHANNEL		DRAWN BY: DMC
NORTH SITE MODIFICATIONS		SURVEYED BY:
TRASH RACK, PLATFORMS & RAILINGS		CHECKED BY:
		SHEET NO. 10 of 18



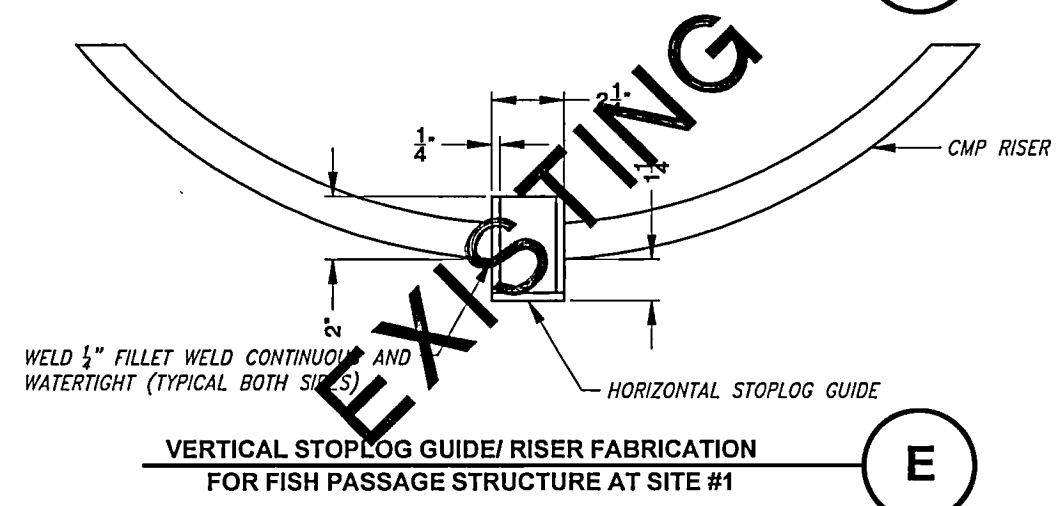
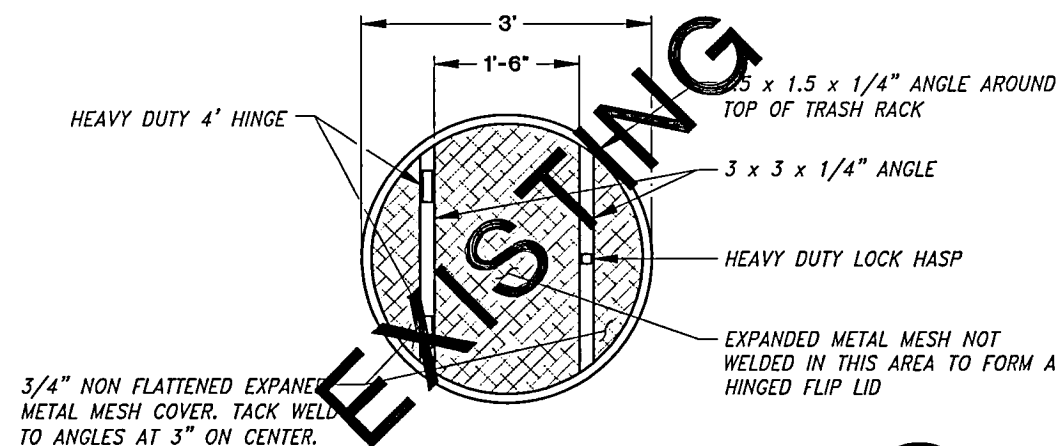


**NOTE:**  
ALL ALUMINUM STOPLOGS SHALL BE SUPPLIED BY THE CONTRACTOR

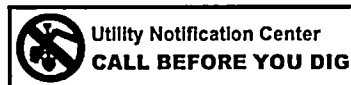
CONTRACTOR IS RESPONSIBLE FOR CUTTING STOPLOGS TO PROPER LENGTH AND FABRICATING THE HOLES IN ALL STOPLOGS AS SHOWN. THE 1/2" DIMENSION IS CRITICAL AND NEEDS TO BE CENTERED IN THE STOPLOG TO AVOID LEAKAGE. THE FINISHED SURFACE SHALL BE SMOOTH TO PROVIDE A FLAT SURFACE FOR THE STOPLOG.

ALUMINUM STOPLOGS:  
2 STOPLOGS, 1.5" x 3" x 1/4"  
10 STOPLOGS, 1.5" x 6" x 1/4"

**2 ALUMINUM STOPLOG**  
**12 TYPICAL**



**Unauthorized Changes & Uses**  
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.



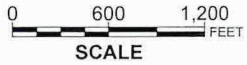
REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
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PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: MULTNOMAH CHANNEL NORTH SITE MODIFICATIONS		DRAWN BY: DMC
FISH PASSAGE STRUCTURE ALUMINUM STOPLOGS		SURVEYED BY:
		CHECKED BY:
		SHEET NO. 11 of 18

**BID SET**



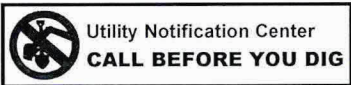


1 SMITH BYBEE  
12 VICINITY MAP



2 SMITH BYBEE  
12 SITE ACCESS

**Unauthorized Changes & Uses**  
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REVISIONS				
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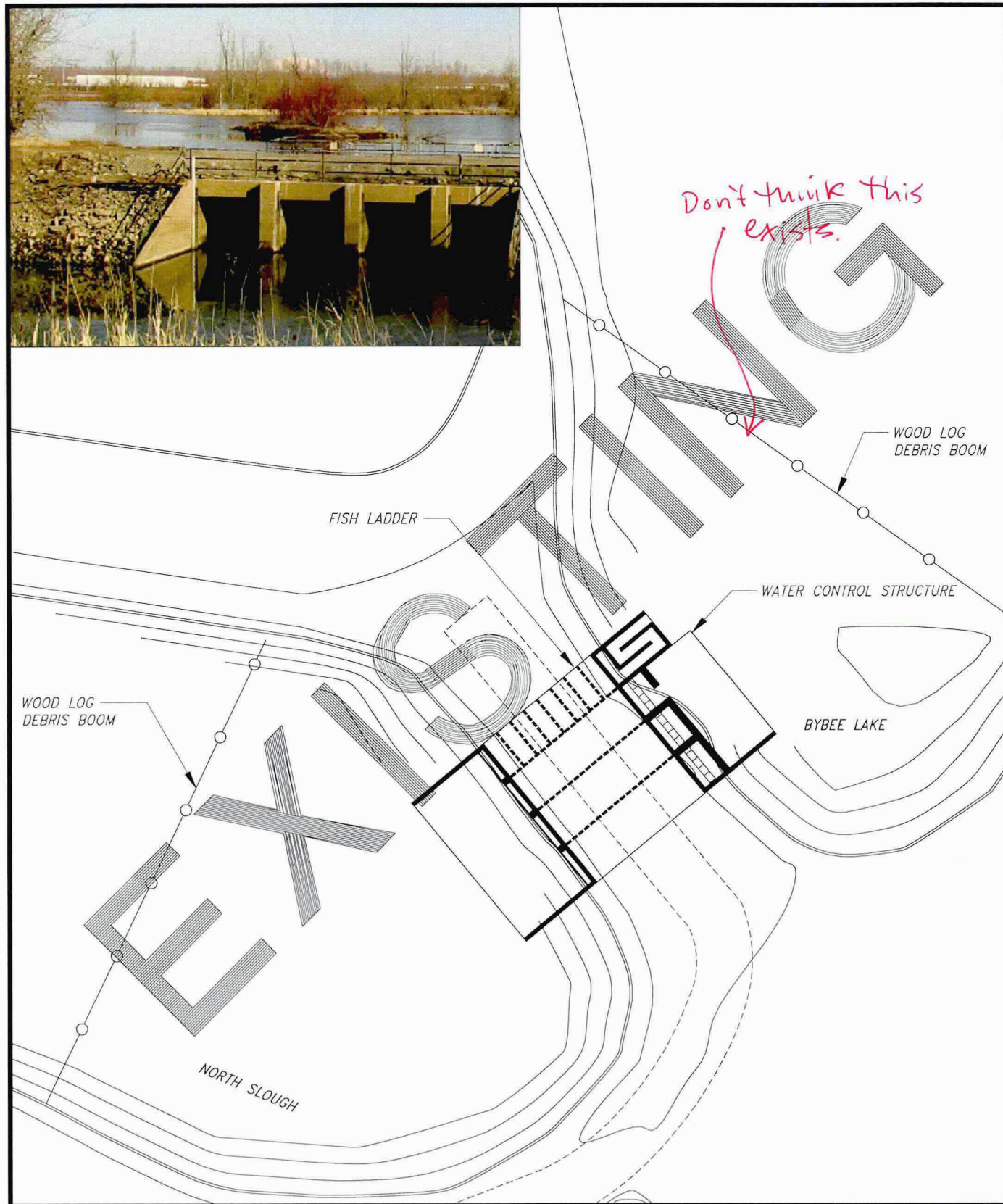


PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
WATER CONTROL STRUCTURE IMPROVEMENTS		SURVEYED BY:
SITE ACCESS		CHECKED BY:
		SHEET NO. 12 of 18

**BID SET**

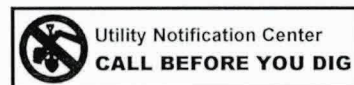


0 15 30  
SCALE FEET

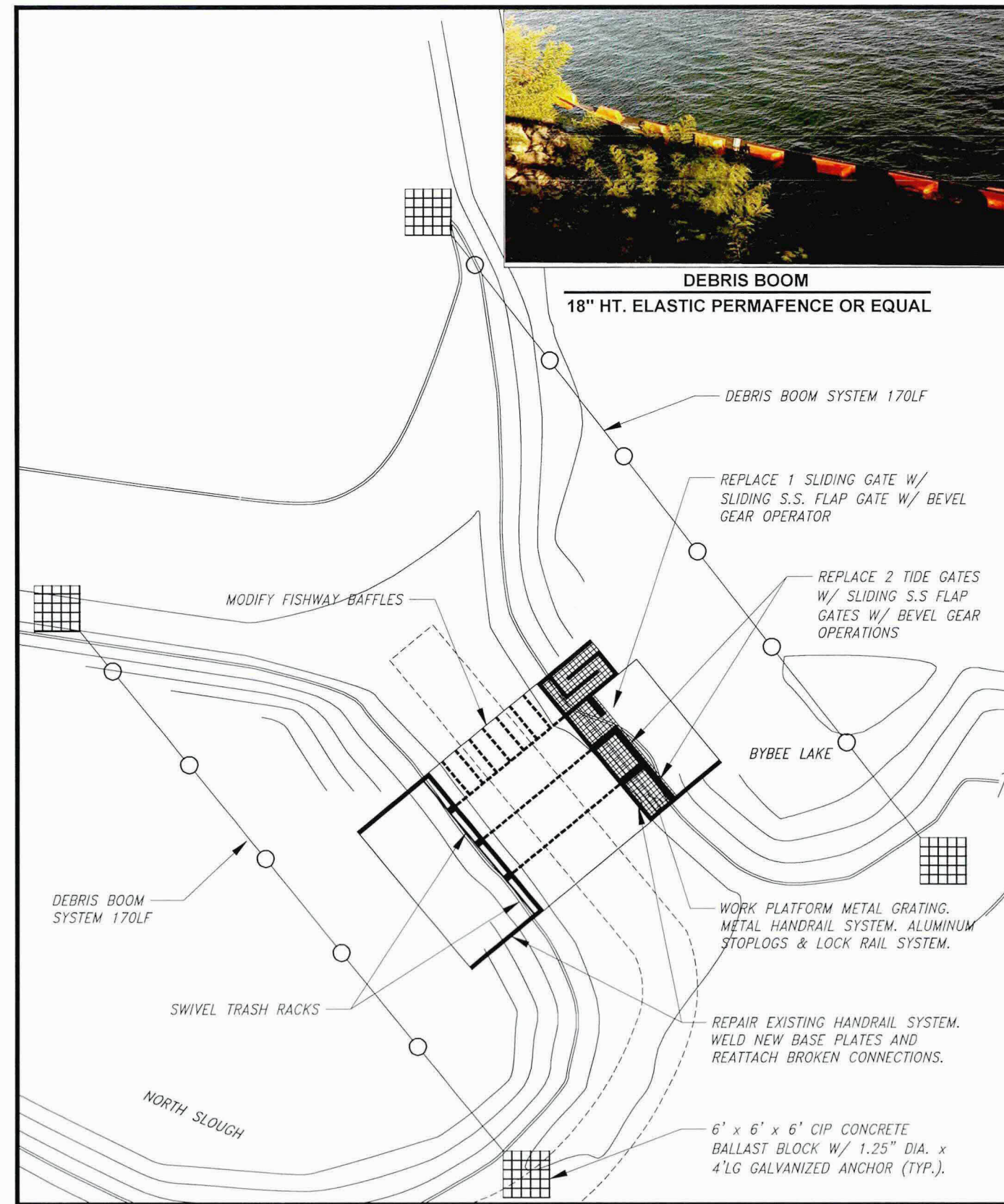


1 EXISTING SITE PLAN  
13

**Unauthorized Changes & Uses**  
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.



0 15 30  
SCALE FEET



2 WCS IMPROVEMENTS  
13

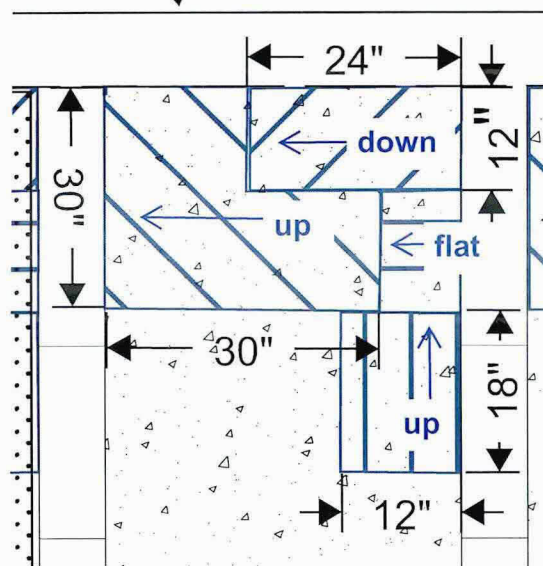
REVISIONS				
REV. NO.	DESCRIPTION	DATE	APPROVED	
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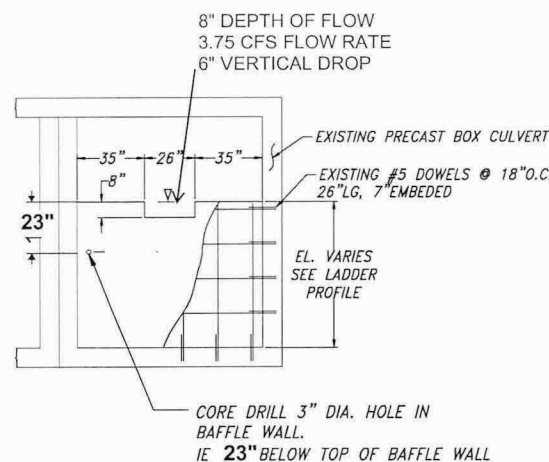
PROJECT NO. US-OR-32-8	DATE 2/3/17	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
MODIFICATIONS		SURVEYED BY:
SITE PLAN DEBRIS BOOM, GATES, PLATFORM, RAILINGS & FISH LADDER		CHECKED BY:
		SHEET NO. 13 of 18

BID SET

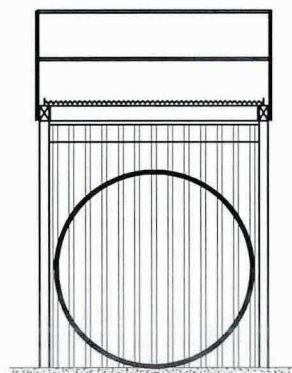




**6 PLAN VIEW DETAIL ESCAPE RAMPS**  
14  
SEE SHEET 4 FOR ADDITIONAL DETAILS

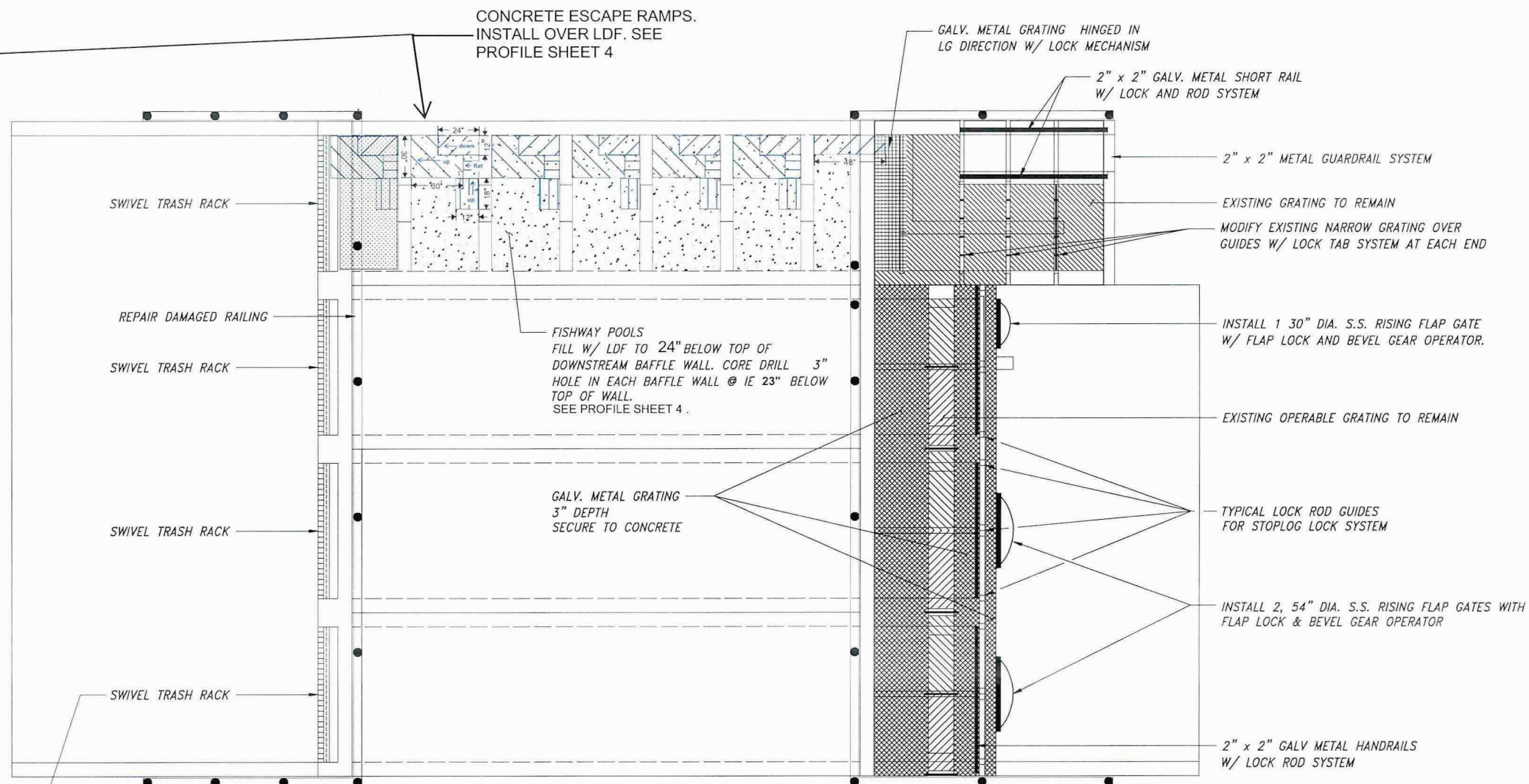
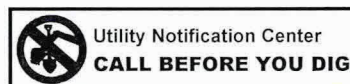


**2 FISH LADDER BAFFLES IMPROVEMENTS**  
14

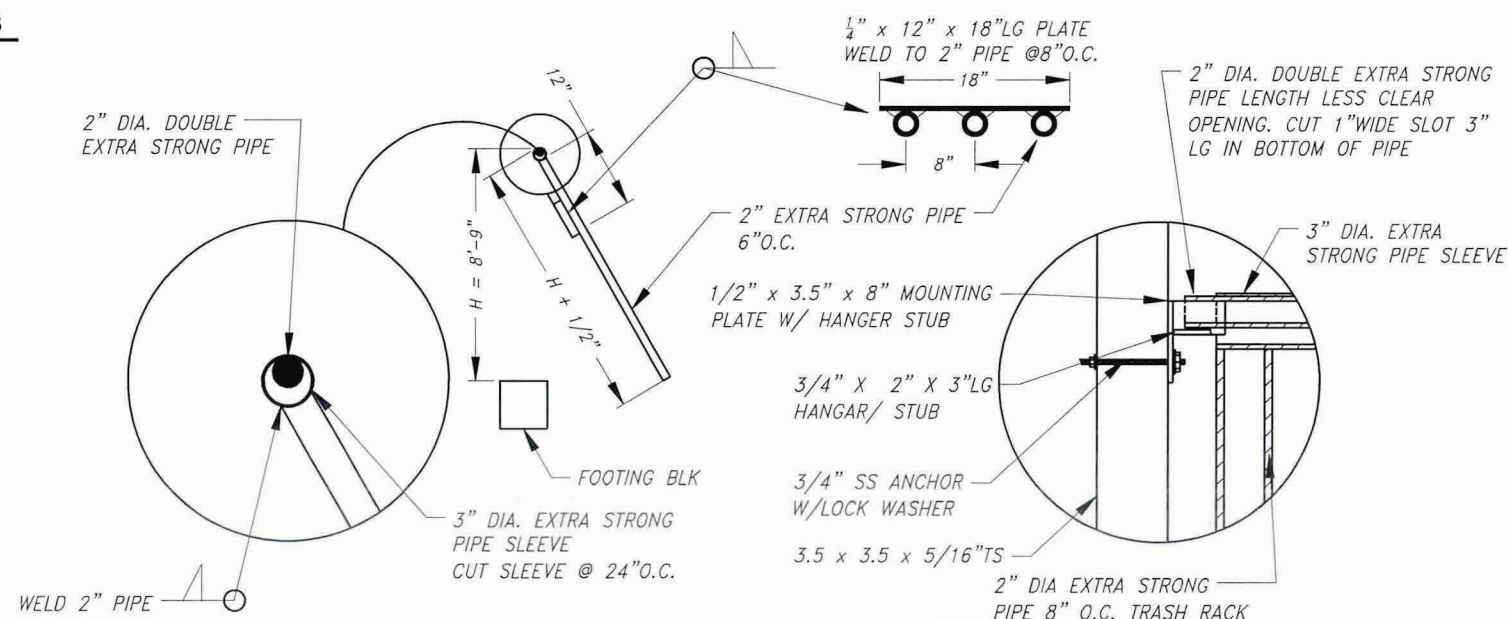


**3 TRASH RACK**  
14

*A note that these will not be included in bid?*



**1 WCS IMPROVEMENTS WCS PLAN VIEW**  
14



**4 HANGING BAR DETAIL TRASH RACK**  
14

**5 SUPPORT DETAIL TRASH RACK**  
14

**BID SET**

**Unauthorized Changes & Uses**  
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REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
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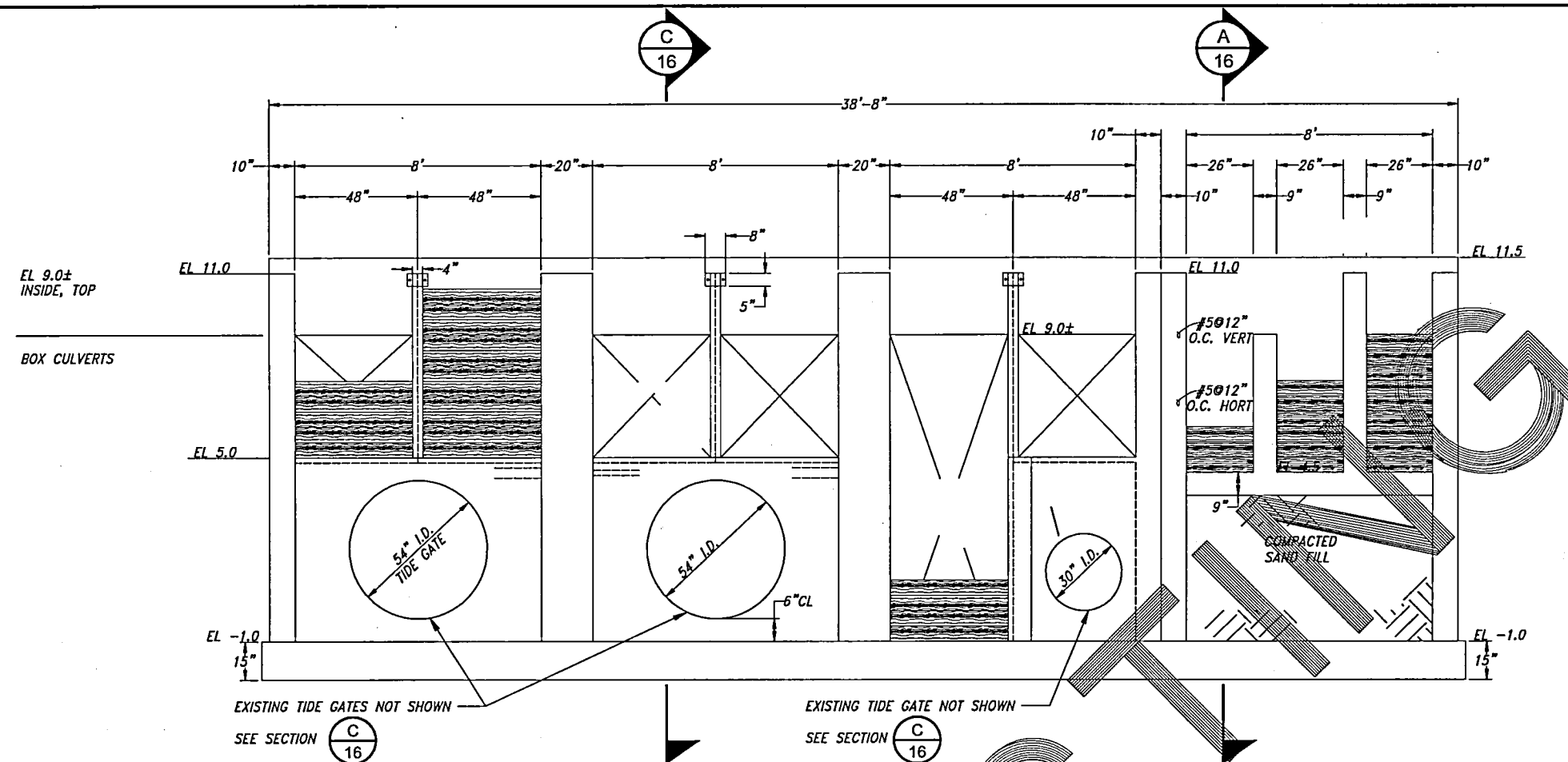


PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
MODIFICATIONS		SURVEYED BY:
PLAN FISH LADDER, TRASH RACK, PLATFORM, RAILINGS, LOCKRODS & GATES		CHECKED BY:
		SHEET NO. 14 OF 18

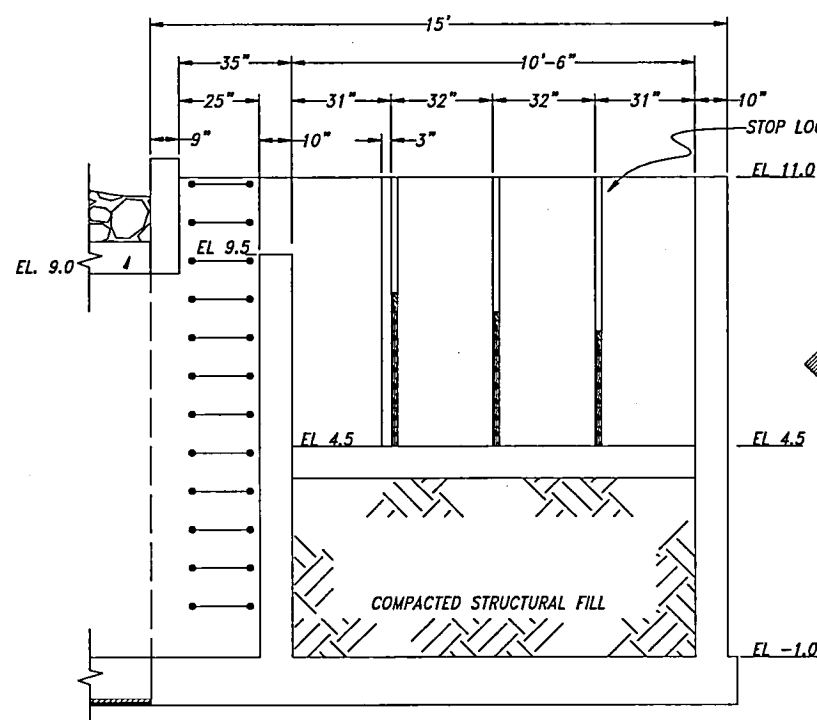




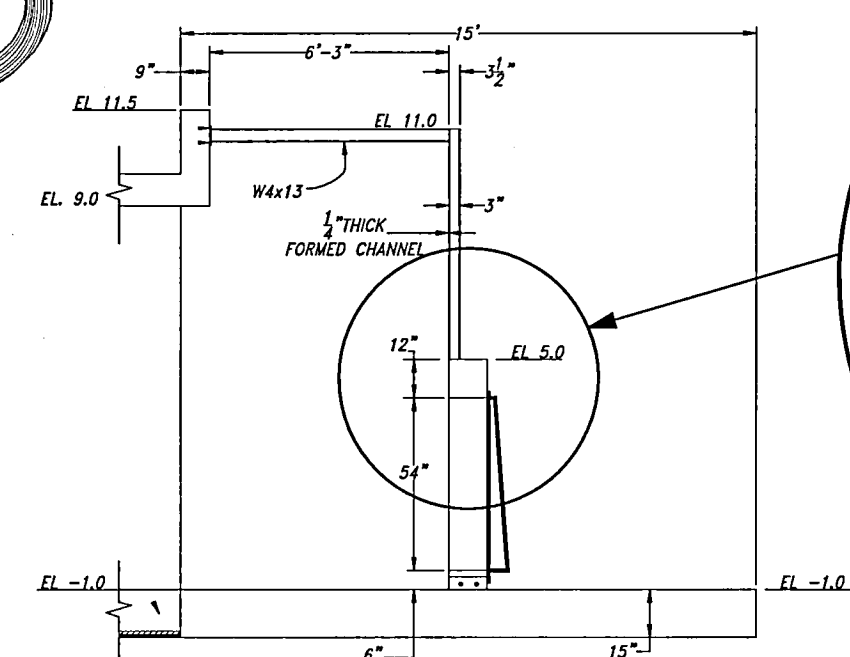




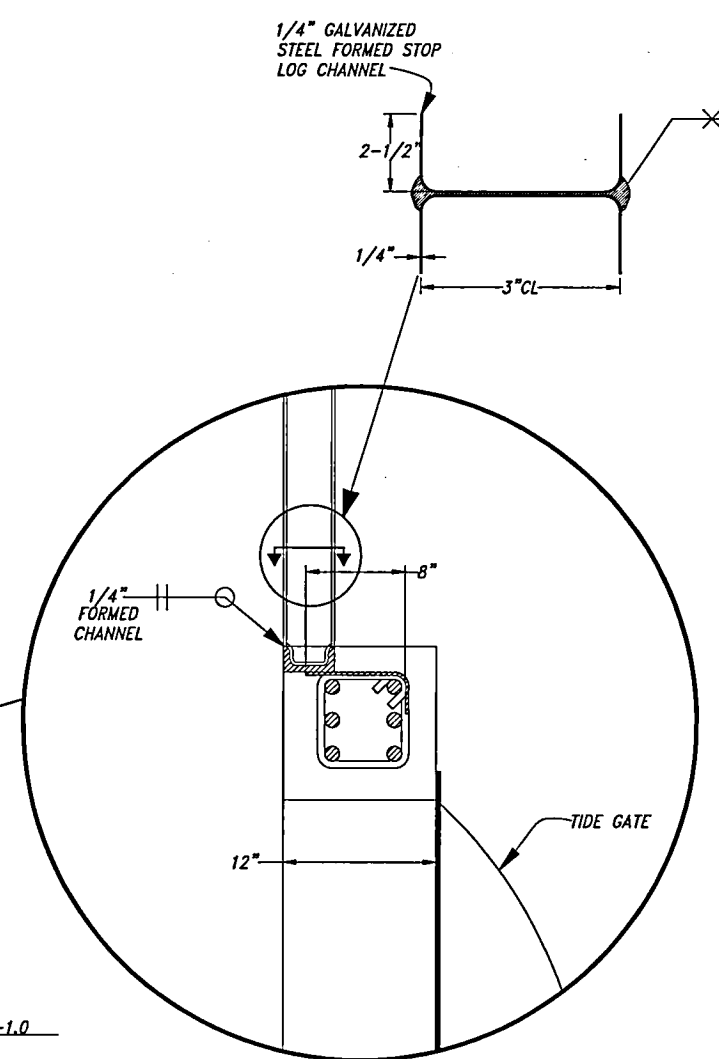
**B HEADWORKS ELEVATION**  
16



**A ADJUSTABLE LADDER SECTION**  
16 NOT TO SCALE



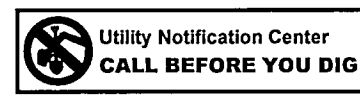
**C TIDE GATE SECTION**  
16 NOT TO SCALE



**1 EXISTING WATER CONTROL STRUCTURE**  
16

**BID SET**

**Unauthorized Changes & Uses**  
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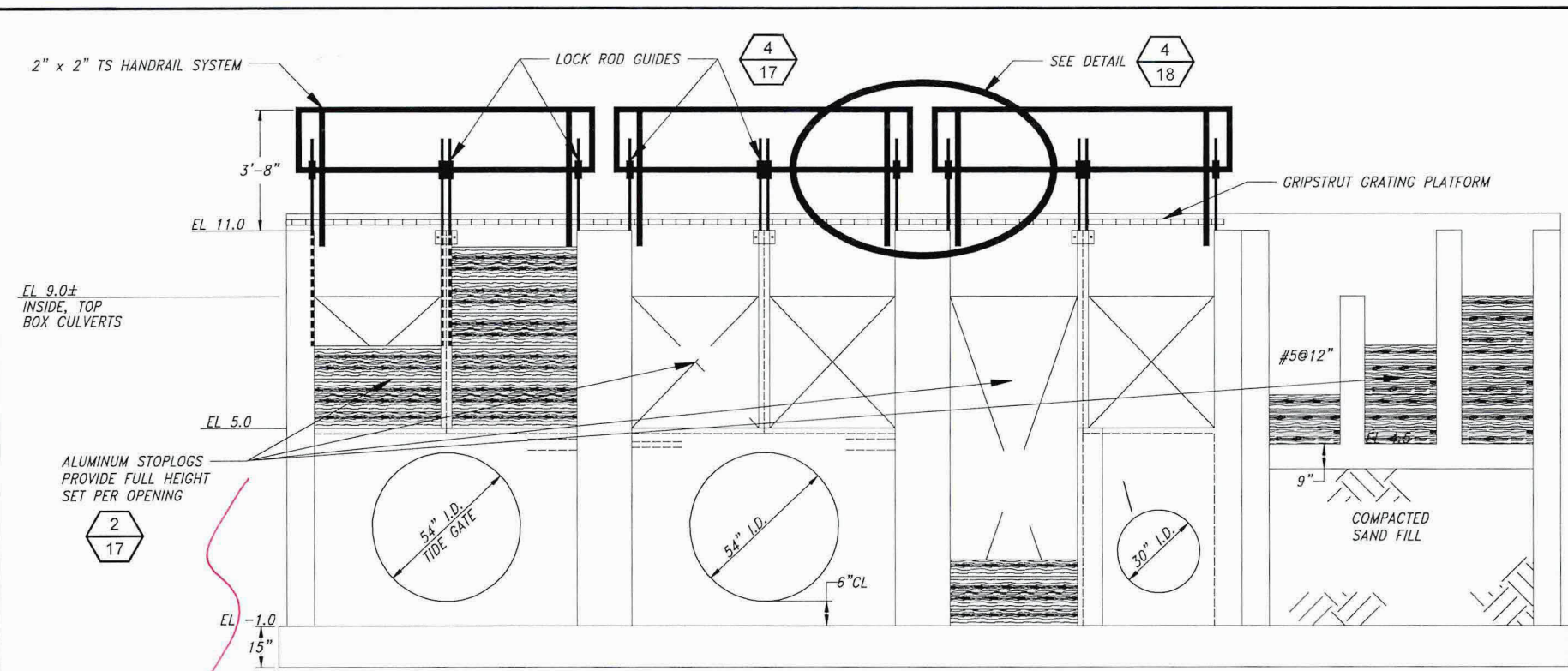


REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
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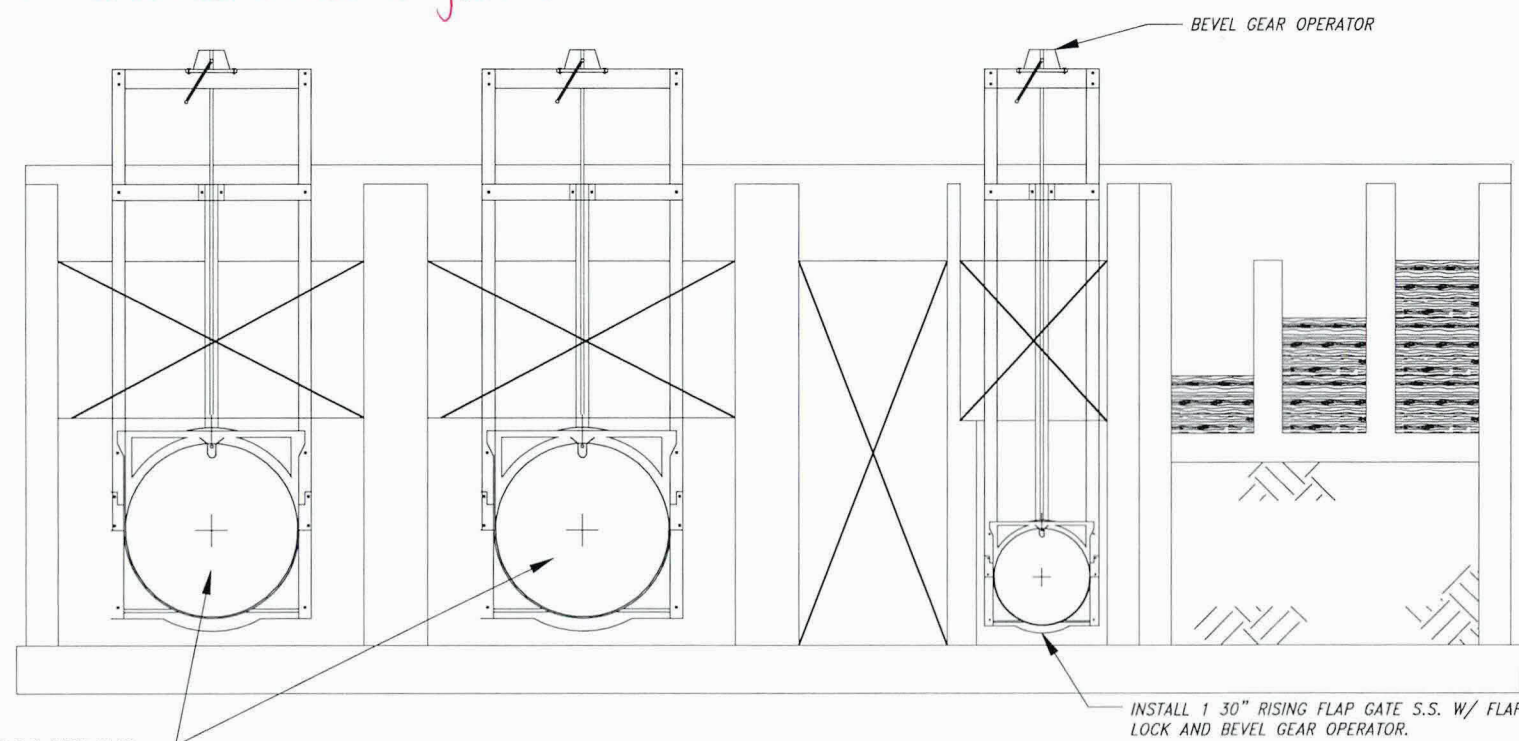
PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
EXISTING INFORMATION		SURVEYED BY:
		CHECKED BY:
EXISTING WCS DETAILS		SHEET NO. 16 of 18



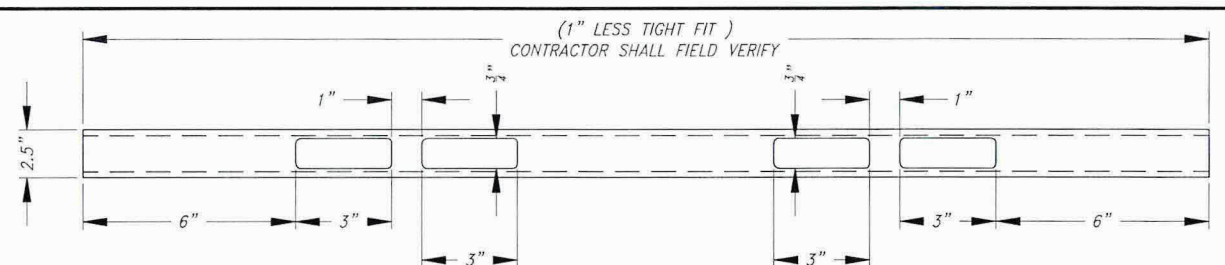


**1 STOPLOGS & LOCK ROD RAIL SYSTEM IMPROVEMENTS**  
**17 ELEVATION**

*this with also  
standardize sizes right?*



**2 GATES IMPROVEMENTS**  
**17 ELEVATION**



**NOTE:**  
 ALL ALUMINUM STOPLOGS SHALL BE SUPPLIED BY THE CONTRACTOR

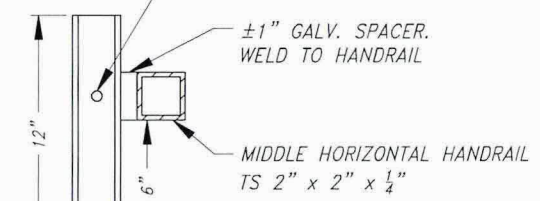
CONTRACTOR IS RESPONSIBLE FOR CUTTING STOPLOGS TO PROPER LENGTH AND FABRICATING THE HOLES IN ALL STOPLOGS AS SHOWN. THE  $\frac{3}{4}$ \"/>

ALUMINUM STOPLOGS: 2 STOPLOGS, 1.5\"/>

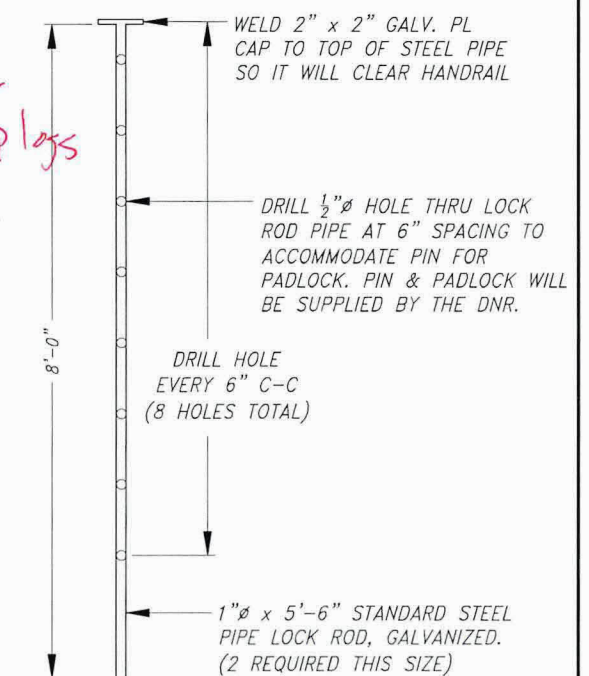
**3 ALUMINUM STOPLOG**  
**17 TYPICAL**

*Same # and dimensions as multich. stoplogs*

DRILL  $\frac{1}{2}$ \"/>

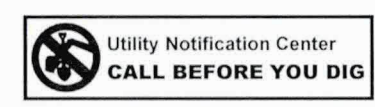


**4 LOCK ROD GUIDE**  
**17 TYPICAL**



**5 LOCK ROD GUIDE**  
**17 TYPICAL**

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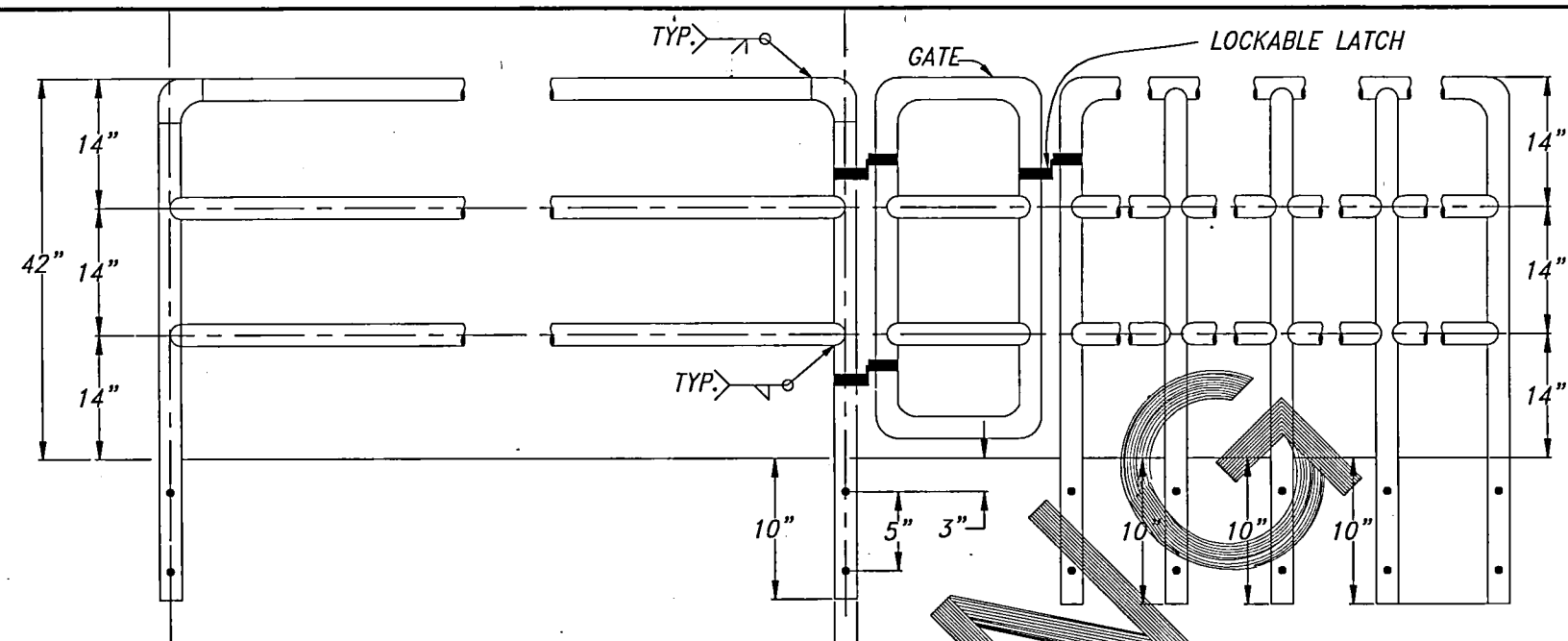
REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
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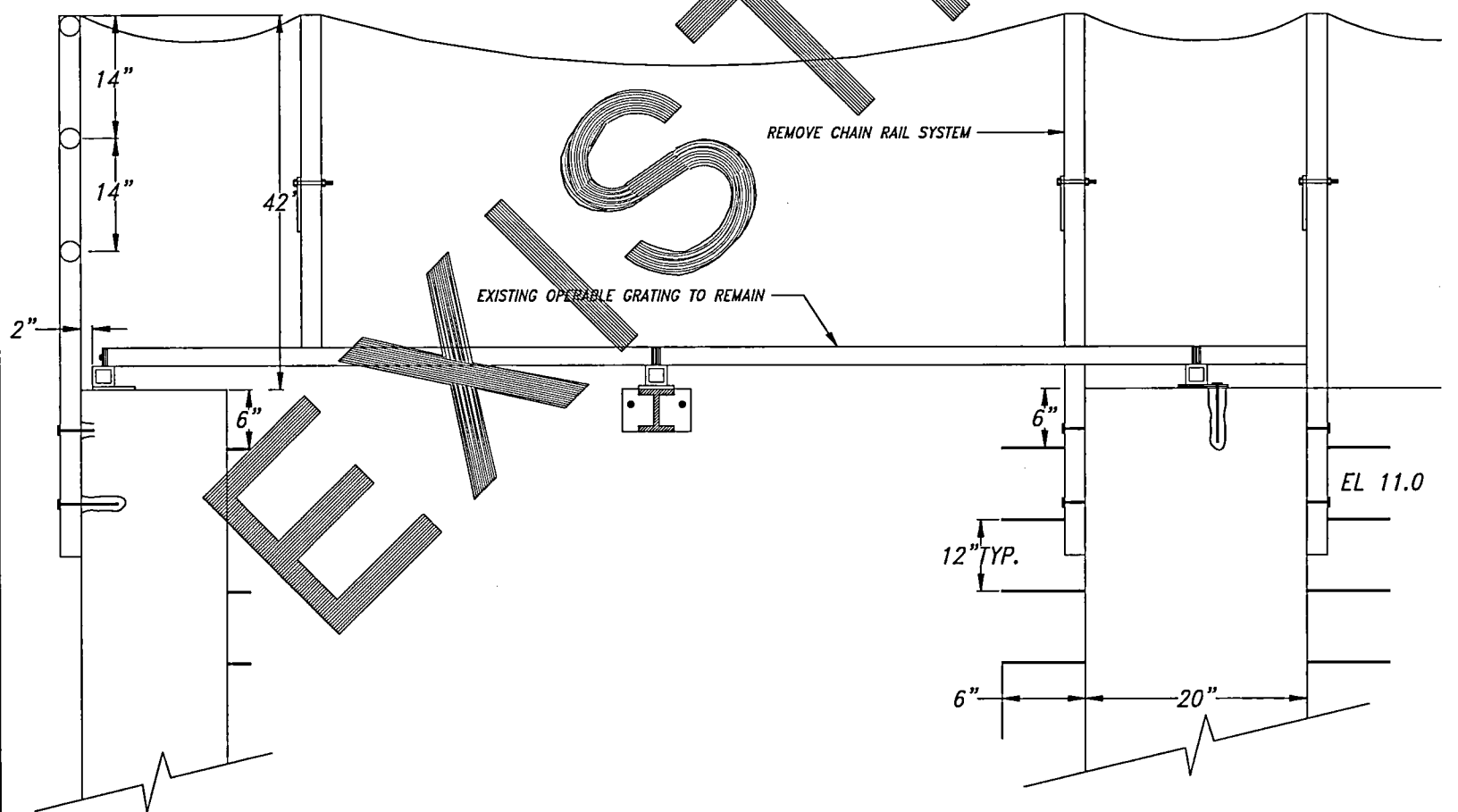
PROJECT NO. US-OR-32-8	DATE: 2/3/17	DESIGNED BY: GW
METRO: SMITH BYBEE		DRAWN BY: DMC
MODIFICATIONS		SURVEYED BY:
ELEVATIONS/DETAILS		CHECKED BY:
GATES, PLATFORM, RAILINGS, LOCKRODS & STOPLOGS		SHEET NO.
		<b>17 of 18</b>

**BID SET**



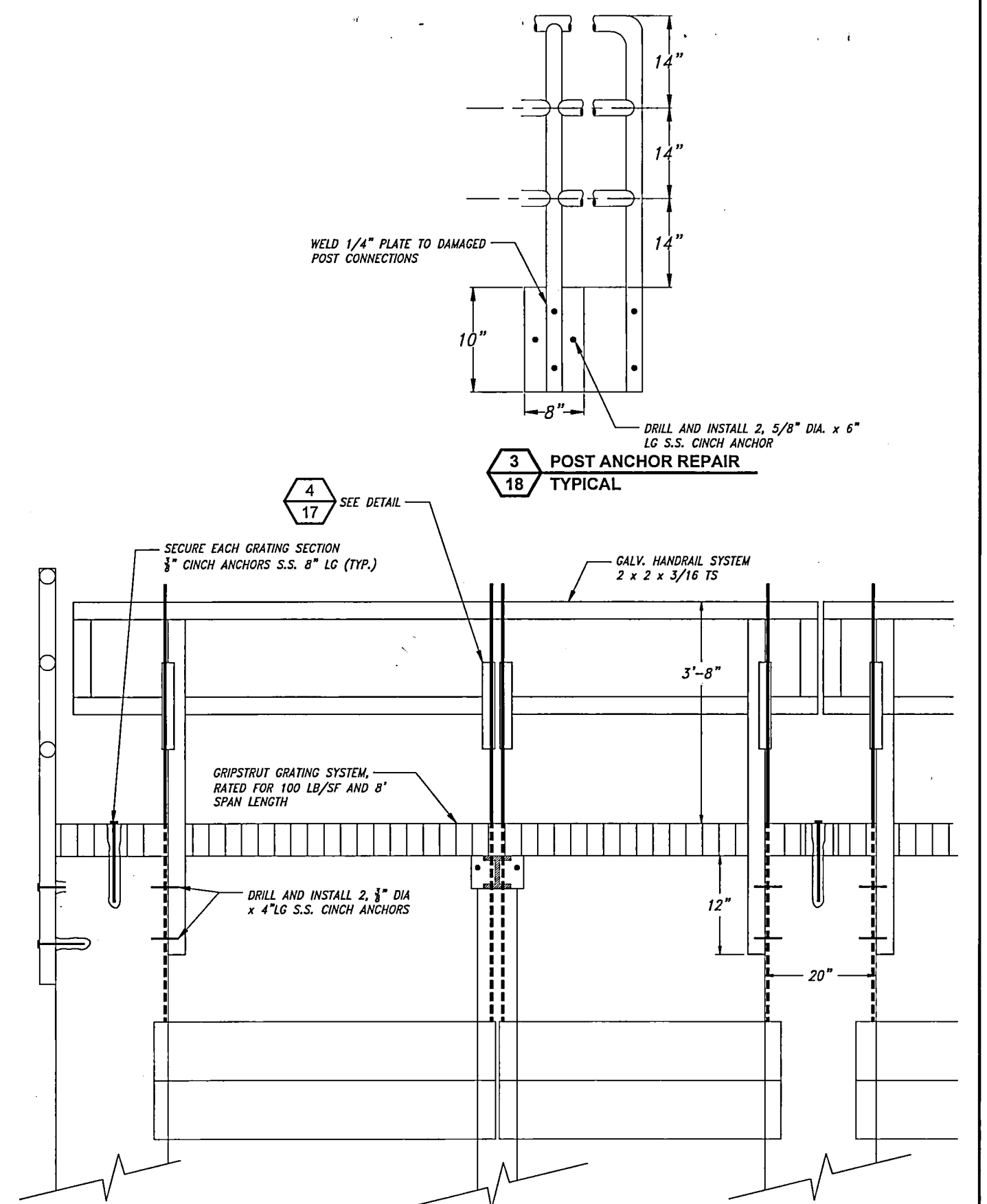
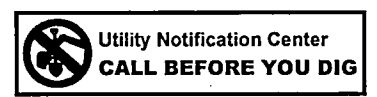


**1 GUARDRAIL SYSTEM**  
**18 EXISTING**



**2 CHAIN RAIL & GRATING SYSTEM**  
**18 EXISTING**

**Unauthorized Changes & Uses**  
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**4 METAL GRATING RAILING**  
**18 IMPROVEMENTS**

REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED
1			
2			
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PROJECT NO. <b>US-OR-32-8</b>	DATE: <b>2/3/17</b>	DESIGNED BY: <b>GW</b>
<b>METRO: SMITH BYBEE</b>		DRAWN BY: <b>DMC</b>
<b>MODIFICATIONS</b>		SURVEYED BY:
<b>ELEVATIONS/DETAILS</b>		CHECKED BY:
<b>PLATFORM, RAILINGS, LOCKRODS &amp; STOPLOGS</b>		SHEET NO. <b>18 of 18</b>

**BID SET**