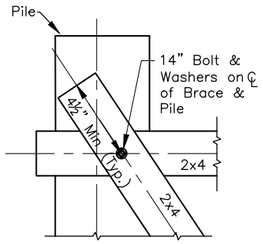

DETAIL A
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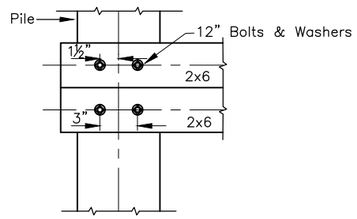

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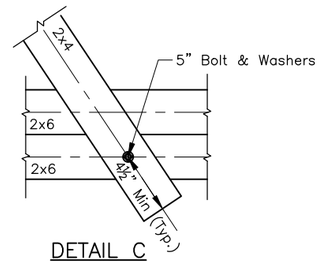

DETAIL C
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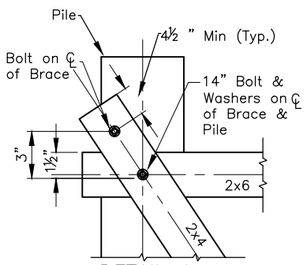
DETAILS FOR 15" AND 18" CMP
n.t.s.



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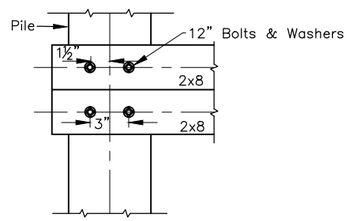

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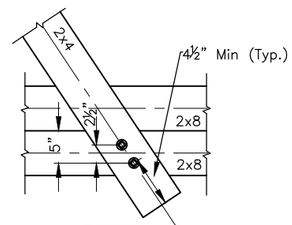
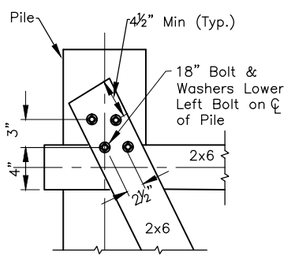


DETAIL C
n.t.s.

DETAILS FOR 21" AND 24" CMP
n.t.s.



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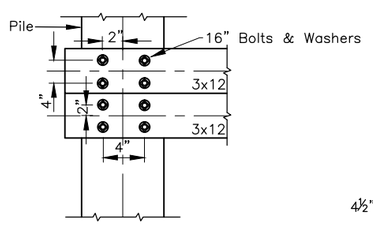

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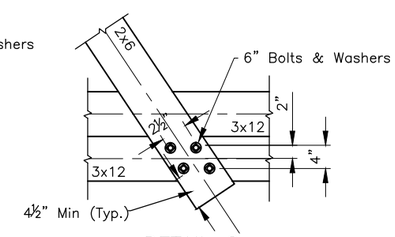
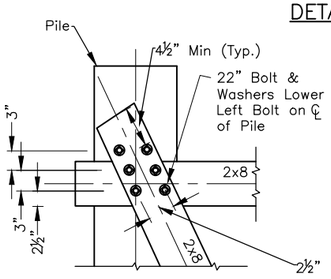


DETAIL C
n.t.s.

DETAILS FOR 30" AND 36" CMP
n.t.s.



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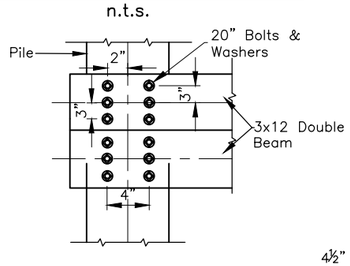

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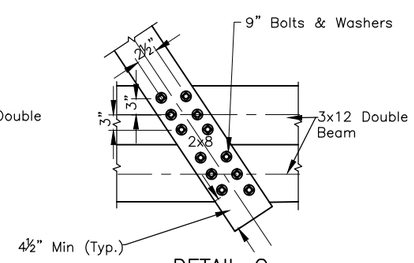
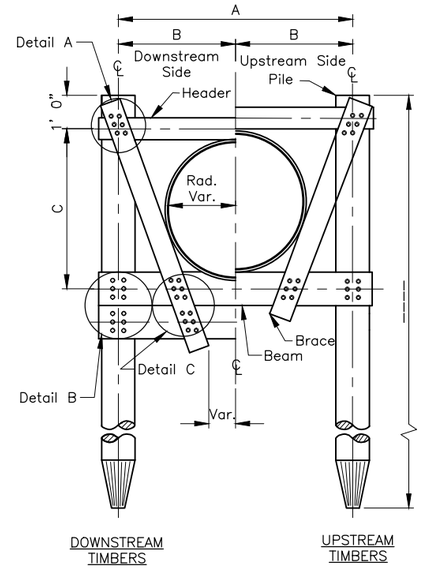


DETAIL C
n.t.s.

DETAILS FOR 42" AND 48" CMP
n.t.s.



TYPICAL BENT ELEVATION
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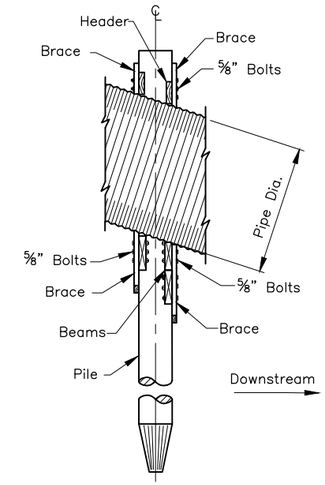
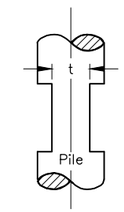


TYPICAL SECTION ON ℄
n.t.s.



PILE SIZE	t
8"	5"
12"	7"
16"	6"

Max. Tolerance on t = Minus 1"

NOTCH DETAIL
n.t.s.

BILL OF MATERIALS

Pipe Diameter(Inches)			15	18	21	24	30	36	42	48
Item	Size	Qty	Item Lengths (Ft.&In.)							
* * Piles	* 25"	2								
* * Piles	* 38"	2								
* * Piles	* 50"	2								
Headers	2x4	1	3–6	4–6						
Headers	2x6	1			5–0	5–0	7–0	7–0		
Headers	2x8	1							8–0	9–0
Braces	2x4	4	3–6	4–0	4–6	5–0				
Braces	2x6	4					6–0	7–0		
Braces	2x8	4							7–6	8–6
Beams	2x6	3	3–6	4–6						
Beams	2x8	3			5–0	5–0				
Beams	3x12	3					7–0	7–0		
Beams	3x12	6							8–0	9–0
Bolts w/Nuts	⅝" ø	4	0–5	0–5						
Bolts w/Nuts	⅝" ø	8			0–5	0–5				
Bolts w/Nuts	⅝" ø	16					0–6	0–6		
Bolts w/Nuts	⅝" ø	24							0–9	0–9
Bolts w/Nuts	⅝" ø	2	1–2	1–2						
Bolts w/Nuts	⅝" ø	4			1–2	1–2				
Bolts w/Nuts	⅝" ø	8					1–6	1–6		
Bolts w/Nuts	⅝" ø	12							1–10	1–10
Bolts w/Nuts	⅝" ø	8	1–0	1–0						
Bolts w/Nuts	⅝" ø	8			1–0	1–0				
Bolts w/Nuts	⅝" ø	16					1–4	1–4		
Bolts w/Nuts	⅝" ø	24							1–8	1–8
Flat Washers	⅝" ø	28	✓	✓						
Flat Washers	⅝" ø	40			✓	✓				
Flat Washers	⅝" ø	80					✓	✓		
Flat Washers	⅝" ø	120							✓	✓

* Minimum circumference 3 feet from butt

* * NOTE: Enter actual length of piling based on site conditions.

TABLE OF DIMENSIONS

Pipe Diam.(In)	A	B	C*
15	2'–4"	1'–2"	1'–11"
18	2'–8"	1'–4"	2'–2"
21	3'–4"	1'–8"	2'–5"
24	3'–8"	1'–10"	2'–8"
30	4'–8"	2'–4"	3'–6"
36	5'–4"	2'–8"	4'–0"
42	6'–0"	3'–0"	4'–6"
48	7'–2"	3'–7"	5'–0"

*MAXIMUM ALLOWABLE LENGTH

NOTES:

Lumber shall be Southern Pine (unfinished surface), No. 2 Dense (MC+19), in conformance with the latest edition of grading rules by the Southern Pine Inspection Bureau.

Timber Piles shall meet the requirements of ASTM D25–99 and shall be Class B, Southern Pine.

Timber piles shall be treated in conformance with ASTM D 1760. The prescribed pressure treatment shall be stated in the specifications.

Braces and Headers shall be placed against and bolted tangent to the pipe.

Washers shall be circular cut washers conforming to the requirements of A.S.T.M. Specification A–36. Bolts shall conform to A.S.T.M. Specification A–307. Bolts, nuts, and washers shall be hot dip zinc coated in accordance with the requirements of class C, A.S.T.M. Specification A–153, or stain–less steel class 304 or 316. Bolts shall have a 6 inch minimum thread length.

Beams will be placed face to face for 42" and 48" CMP.

Notch the top of the upper downstream Beam to fit the slope of the Pipe. (See Typical Bent Elevation)

Slotted Flume Support Details

Standard DWG. No. FL–410A2(Rev).dwg

Date 7/19/2010 | Sheet 2 of 2

Revisions

Date	Approved	Title
07/11	JT Wilson	ST Con Eng

Date
Designed
Drawn
Checked
Approved

Slotted Flume Support Details

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
FL–410A2(Rev).dwg

Drawing No.

7/19/2010

Sheet of