



Centralia Alpha MP 15.79 Culvert Replacement

Prepared for: Lewis County Public Works

Lift Gear Required:

- (4) 16-Ton Dog Bone Clutch
- (4) 8-Ton Dog Bone Clutch
- (2) 8-Ton Burke Ring Clutch

Table of Contents:

Sheet	Description	Item
1.	Cover Sheet	
2.	Plan View	
3.	Side View	
4.	End Views	
5.	Details	
6.	Culvert Lifting & Handling	
7.	Top Slab at Ends	A
8.	Top Slab at Center	B
9.	Culvert at End	C
10.	Culvert at Center	D
11.	Culverts at Reinforcing	
12.	Wing Wall	E
13.	Wing Wall	F
14.	Wing Wall	G
15.	Wing wall	H
16.	Wing Wall	I
17.	Wing Wall	J
18.	Wing Wall Lifting & Handling	
19.	Mold Setup	

GENERAL NOTES:

- The below notes shall apply unless noted otherwise on the plans or specifications. In the case of conflict with the plans or specifications, the more restrictive requirements shall apply.
- Weights listed are approximate.

REFERENCE SPECIFICATIONS:

Design Criteria: AASHTO Bridge Design Specifications.
 Manufacture: ASTM C1786

MATERIALS:

- Aggregate conforms to ASTM C33. Aggregates are WSDOT Approved.
- Portland Cement conforms to ASTM C150.
- Fly ash conforms to ASTM C618 and AASHTO M295 Class C or F as required by WSDOT Standard Specifications.
- All bar reinforcing steel conforms to ASTM A706 Grade 60.
- Welded wire fabric conforms to ASTM A1064, 70 KSI.
- Admixtures conform to ASTM C494.
- Concrete minimum compressive strength (at 28 days) 5000 PSI.
- Concrete strip strength is 2500 PSI. See Calcs showing 2500 PSI is adequate for stripping.

DELIVERY AND INSTALLATION:

- The contractor provides rigging and off loading at the job site.
- The contractor provides all weld plates and accessories which are not cast directly in the concrete.
- Follow any installation procedures described in the project documents. More restrictive requirements outlined in the project documents or a corresponding geotechnical report take precedence.
- The subgrade preparation and backfill sections of these notes provide basic installation criteria.

SUBGRADE PREPARATION:

- All loose and disturbed soil shall be removed prior to placing box sections.
- The box sections and wingwalls shall be placed according to the Plans and Specs.

BOX JOINTS:

- Box units laid sequentially form a joint which requires joint wrap to prevent soil infiltration. Solid grout all joints with non-shrink grout.
- The legs of the 3-sided section key into deck slab. The key is cleaned of all debris. Shim plates are used in the keyway to collimate sections.
- All joints are troweled smooth and solid. Use a non-shrink grout conforming to ASTM C1107 and butyl tape conforming to ASTM C877.

BACKFILL:

- Backfill shall consist of well graded soil free of organics and deleterious material.
- Backfill shall be placed in 6" lifts.
- Free draining rock backfill shall be 24" width minimum from back face of wall and Culvert. Tidal affects are addressed with this free-draining material and weep holes.

<input type="checkbox"/> NO EXCEPTIONS	<input type="checkbox"/> REVISE & RESUBMIT
<input checked="" type="checkbox"/> MAKE CORRECTIONS NOTED	<input type="checkbox"/> REJECTED SEE REMARKS

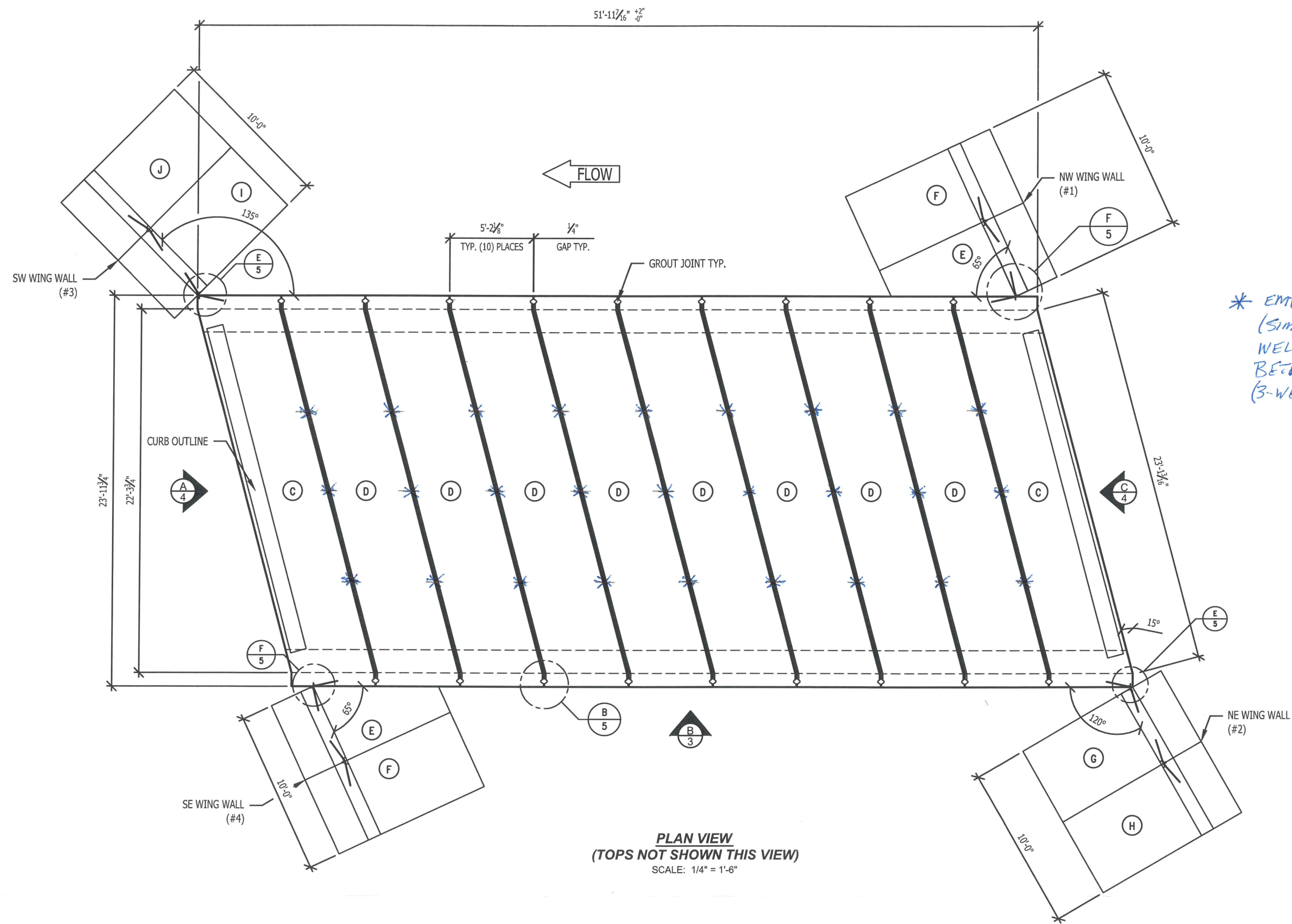
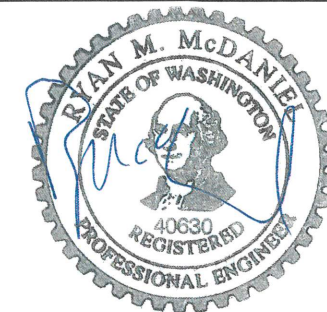
Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the contract plans and special provisions. This check is only for review of general conformance with the design concept of the project and general compliance with information given in the contract documents. **The contractor is responsible for confirming and correlating all quantities and dimensions and performing his work in a safe and satisfactory manner.**

BY: [Signature] DATE: _____

LEWIS COUNTY PUBLIC WORKS
 2025 NE KRESKY AVE, CHEHALIS, WA 98532

SHEETS 1-18 DATED 5/4/22

(360) 335-8400 Phone		www.columbiaprecastproducts.com	
(360) 335-8402 Fax			
SALES	PB	DRAWN BY	JPM
		DATE	5/4/22
		SCALE	NOTED
22' x 9' Split Box Culvert			
Centralia Alpha MP 15.79 Culvert Replacement			
Lewis County Public Works			
TITAN #		11"x17"	SHEET 1 OF 18



* EMBEDDED ASSEMBLY (SIMILAR TO SHE 5) FOR WELD TIE CONNECTIONS BETWEEN TOP SLAB UNITS (3-WELD TIES PER JOINT)

- NOTES:
- REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 - WEIGHTS LISTED ARE APPROXIMATE.

PRODUCT LIST			
ITEM	QTY	DESCRIPTION	WEIGHT (ea.)
A	1	Top Slabs at Ends w/Curb	35,540 LBS
B	1	Top Slabs at Center	30,930 LBS
C	1	Culvert at End	33,630 LBS
D	1	Culvert at Center	33,630 LBS
E	8	Wing Wall - E	33,170 LBS
F	2	Wing Wall - F	12,890 LBS
G	2	Wing Wall - G	13,640 LBS
H	1	Wing Wall - H	15,080 LBS
I	1	Wing Wall - I	15,080 LBS
J	1	Wing Wall - J	14,800 LBS
K	1	----	14,220 LBS
L	8	Conwrap CS212 Joint Sealant - 9" x 50' Roll	20 LBS

PLAN VIEW
(TOPS NOT SHOWN THIS VIEW)
SCALE: 1/4" = 1'-6"

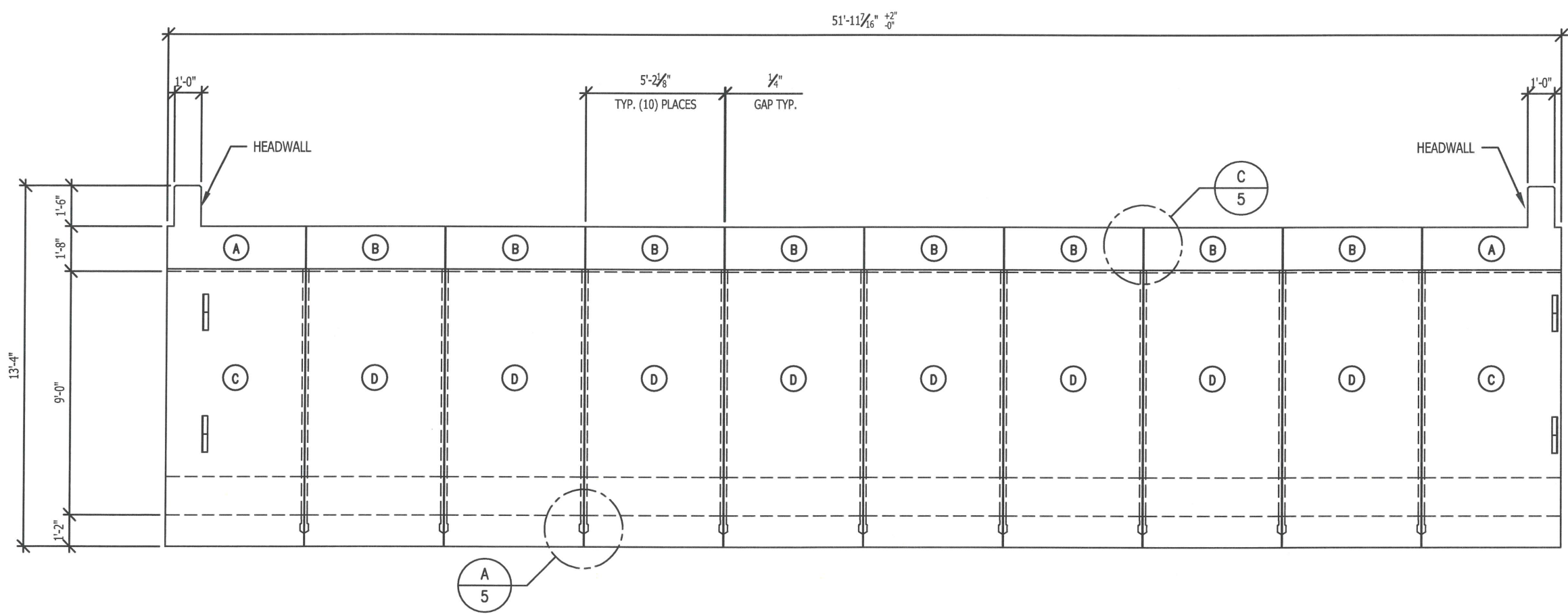
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22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works

TITAN # _____ 11"x17" SHEET 2 OF 18



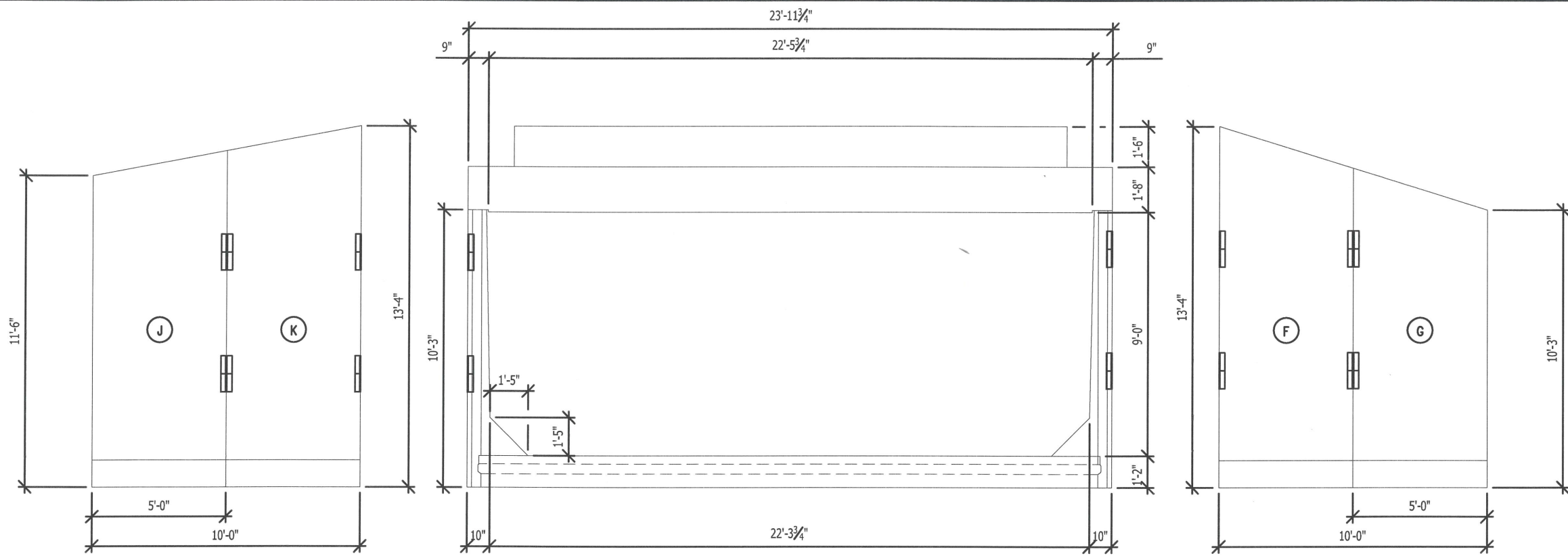
B
3
SIDE VIEW
SCALE: 1/4" = 1'-2"

- NOTES:**
- REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 - REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.

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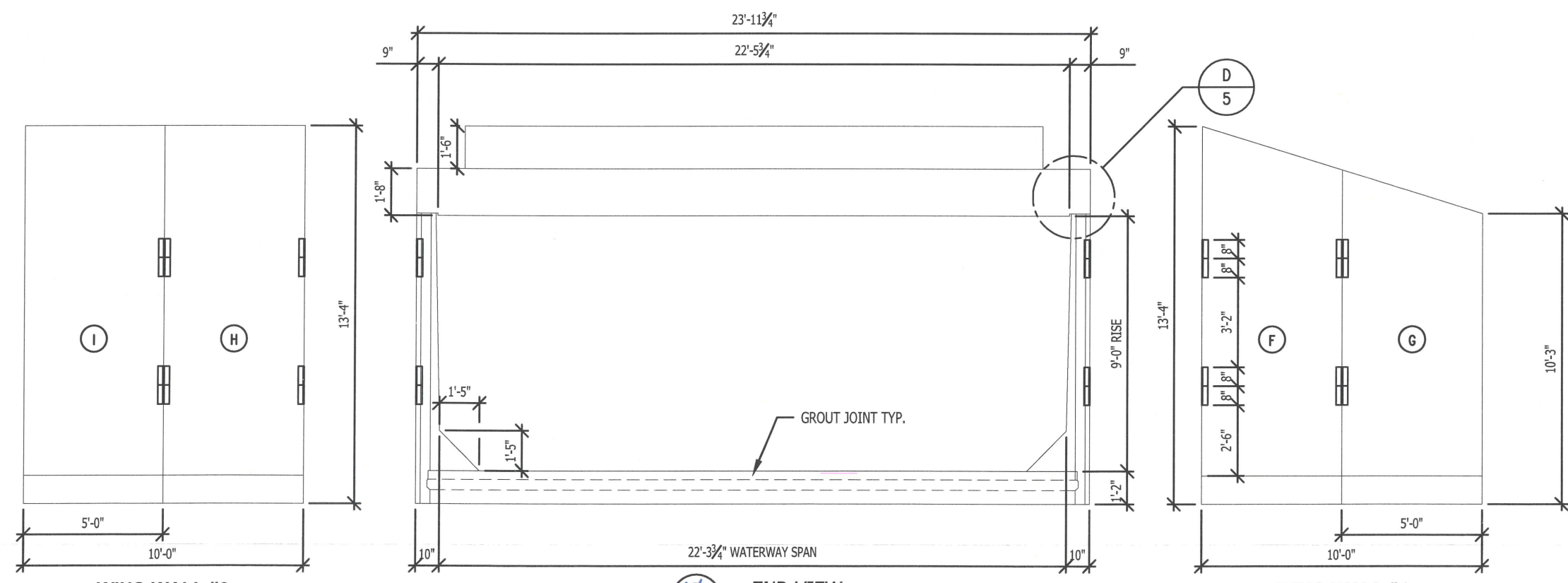
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TITAN #	11"x17"						SHEET 3 of 18



WING WALL #3

WING WALL #4

A
4
END VIEW
SCALE: 1/4" = 1'-2"



WING WALL #2

WING WALL #1

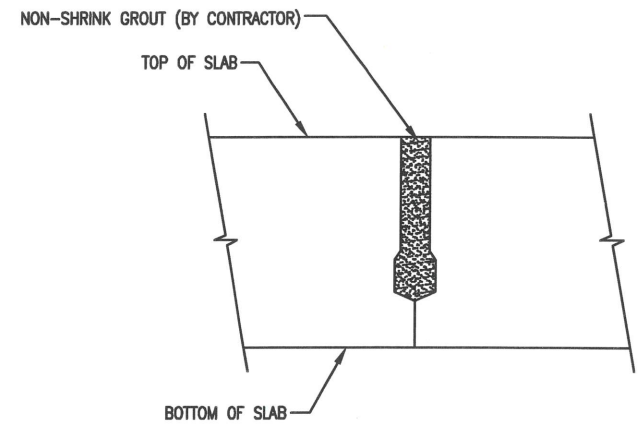
C
4
END VIEW
SCALE: 1/4" = 1'-2"

NOTES:
 1. REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 2. REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.

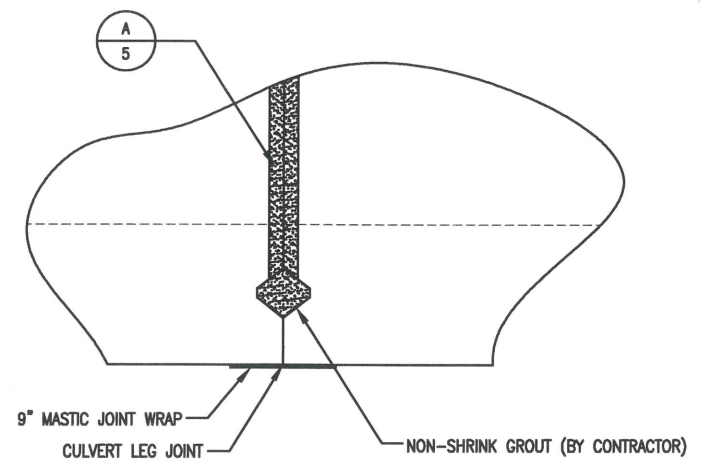
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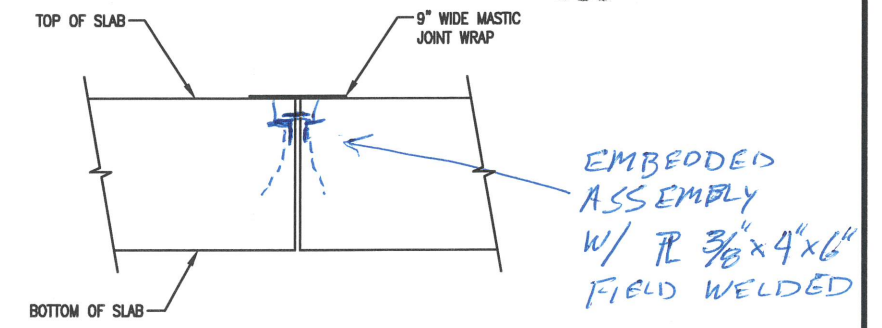
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TITAN #	11"x17"						SHEET 4 of 18



A
5
BASE SLAB JOINT



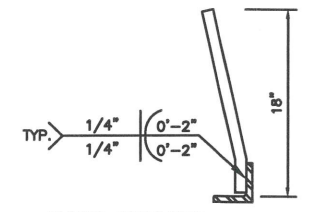
B
5
KEYWAY AT LEG JOINT



C
5
TOP SLAB JOINT DETAIL

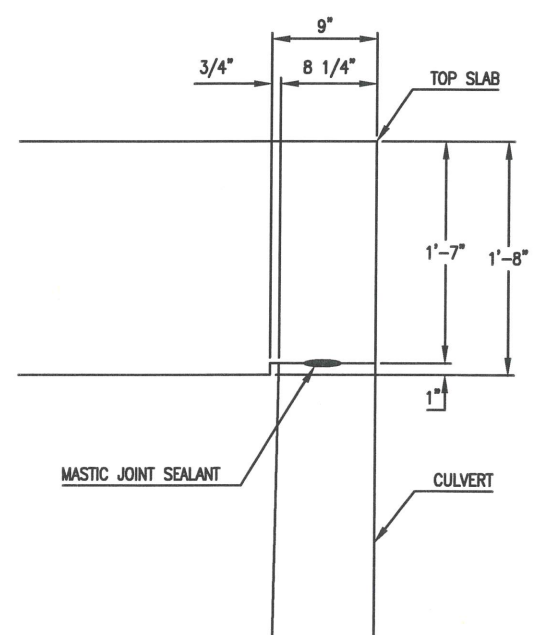
EMBEDDED ASSEMBLY W/ # 3/8" x 4" x 6" FIELD WELDED

*** ALL METAL TO RECEIVE CORROSION INHIBITOR COATING PRIOR TO GROUTING

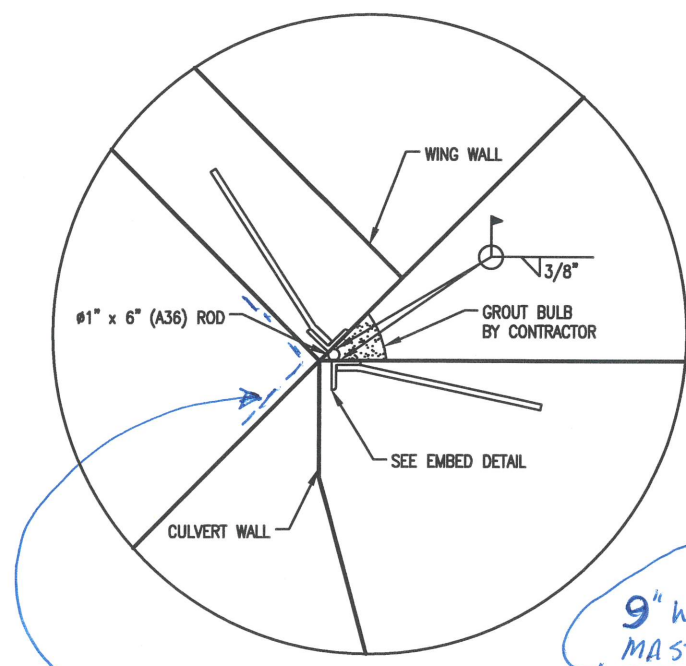


EMBED ASSEMBLY
L 2-1/2 x 2-1/2 x 3/8 x 0'-8"
WITH #4 x 18" @ 4" O.C. BENT @ 12" BETWEEN 2" & 16"

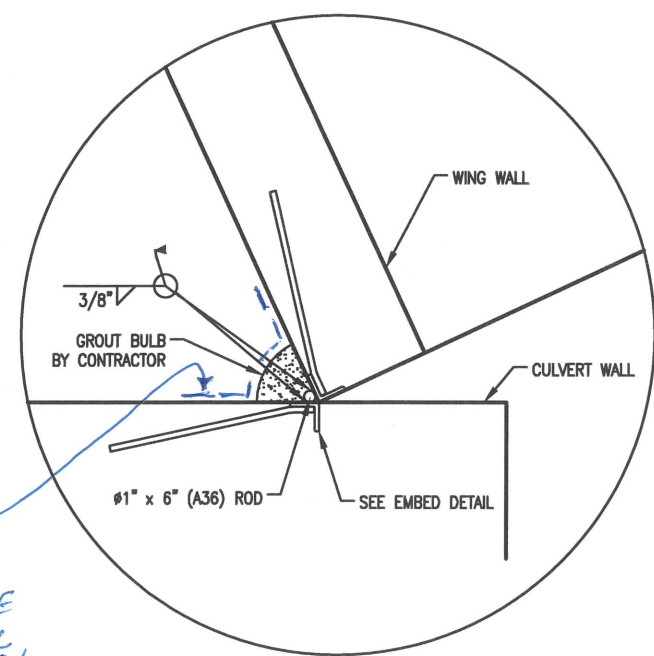
- NOTES:
- REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 - REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.
 - REFER TO SHEETS 7, 8, 9, & 10 FOR ANCHOR LOCATIONS.



D
5
KEYWAY AT TOP SLAB



E
5
WINGWALL CONNECTION DETAIL



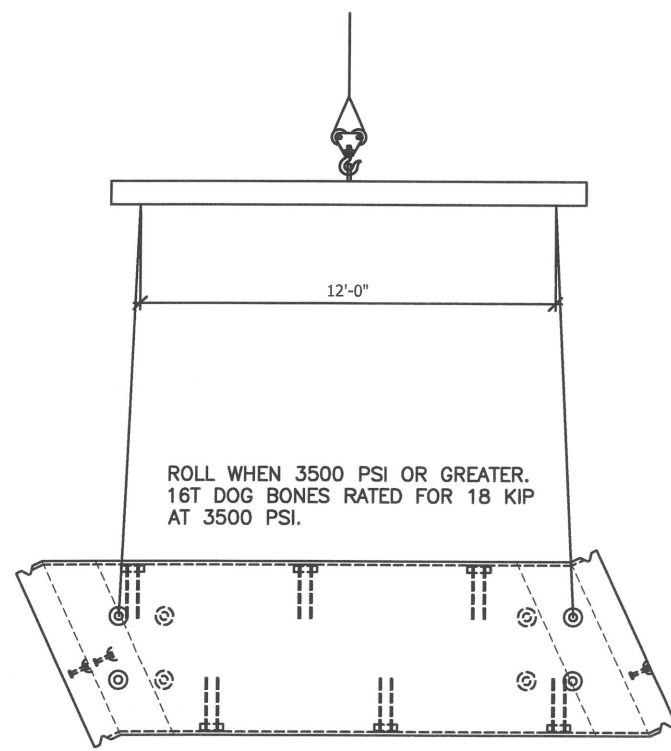
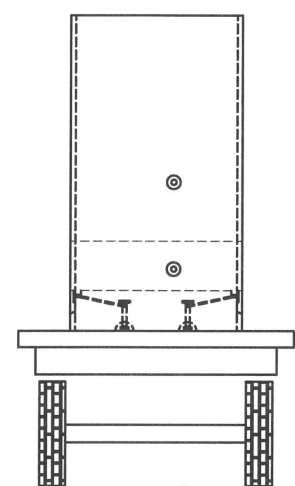
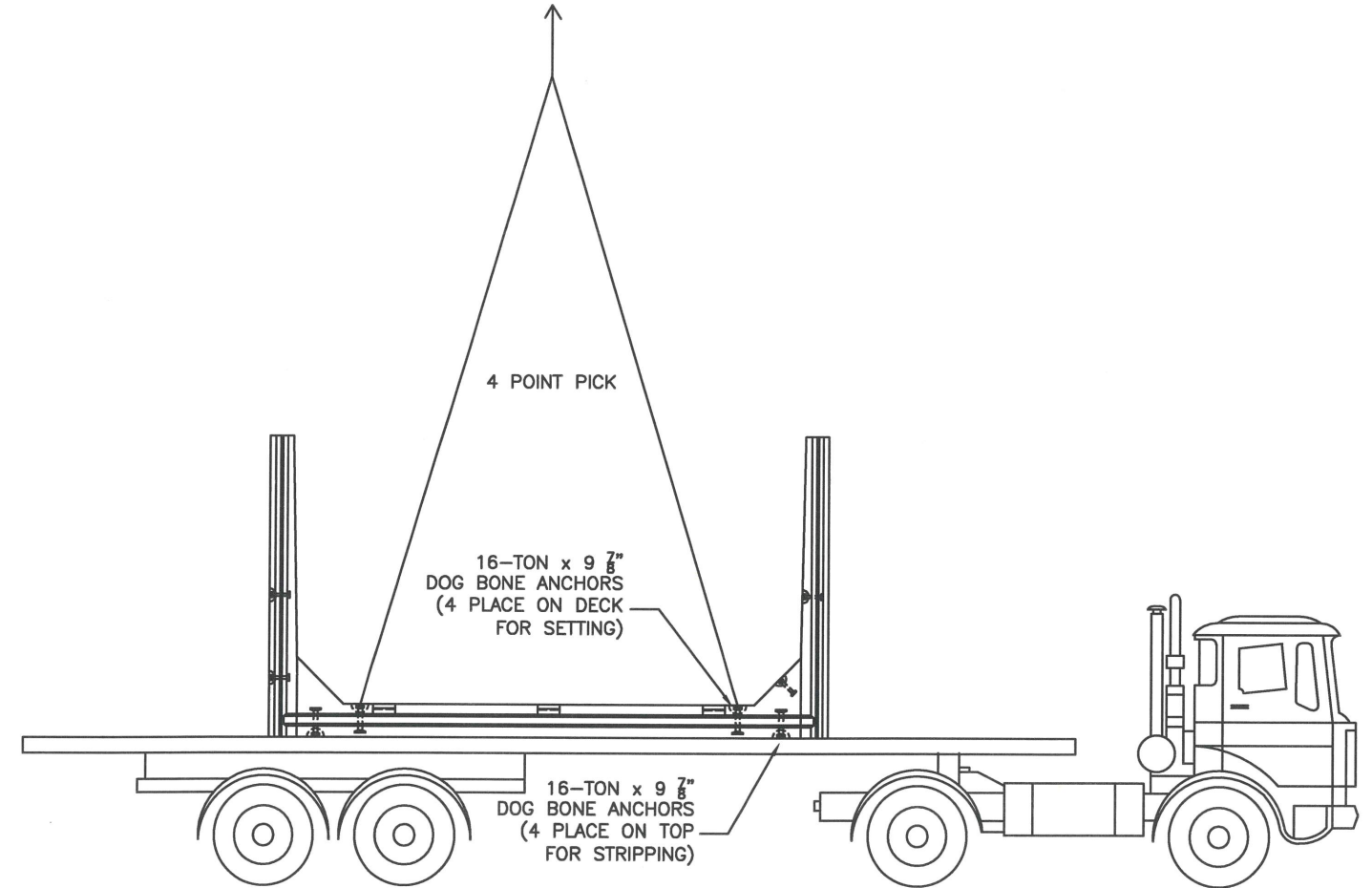
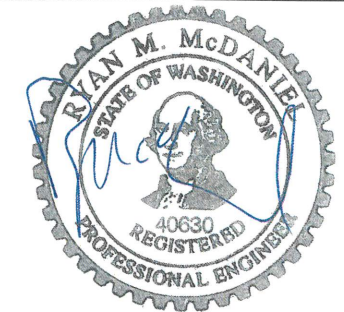
E
5
WINGWALL CONNECTION DETAIL

9" WIDE MASTIC TAPE ON SOIL SIDE OF WINGWALL

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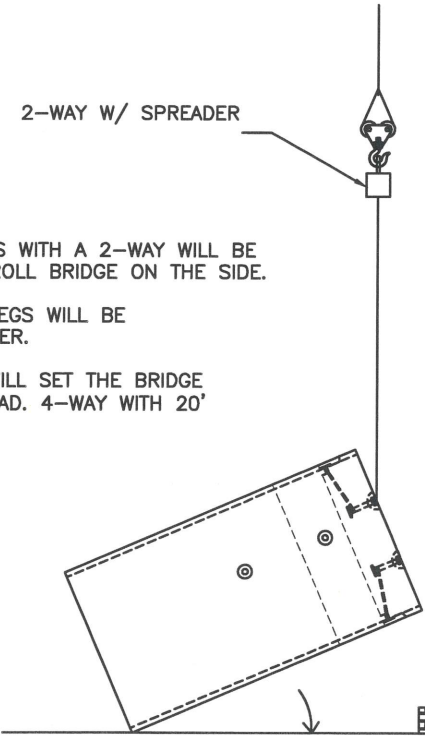
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22' x 9' Split Box Culvert							
Centralia Alpha MP 15.79 Culvert Replacement							
Lewis County Public Works							
TITAN #	11"x17"						SHEET 5 OF 18



NOTE: THIS CORNER MUST BE CUSHIONED DURING ROLLING OR DAMAGE MAY OCCUR.

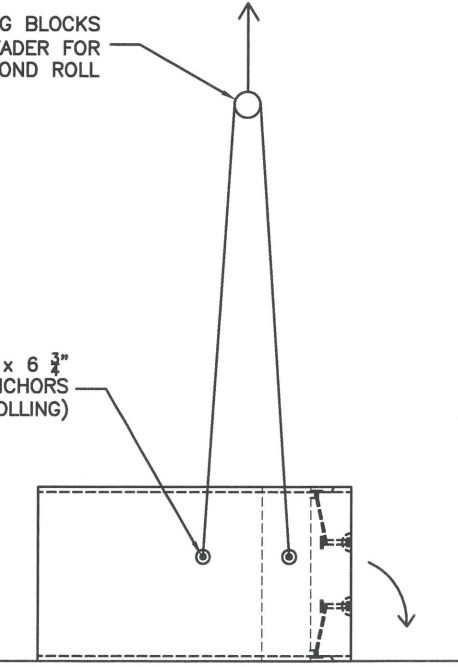
- PICK 1: THE DECK LIFTERS WITH A 2-WAY WILL BE USED BY THE PLANT TO ROLL BRIDGE ON THE SIDE.
- PICK 2: THE LIFTERS IN LEGS WILL BE USED TO ROLL BRIDGE OVER.
- PICK 3: THE NEXT PICK WILL SET THE BRIDGE ON THE TRUCK AND UNLOAD. 4-WAY WITH 20' LENGTHS MIN.



- ① ROLL ON GROUND WITH DECK ROLLING LIFTERS ONLY
- ② REHOOK FOR 2ND ROLL

UTILIZE ROLLING BLOCKS WITH 16' SPREADER FOR SECOND ROLL

8-TON x 6 3/4" DOG BONE ANCHORS (4 PLACES FOR ROLLING)



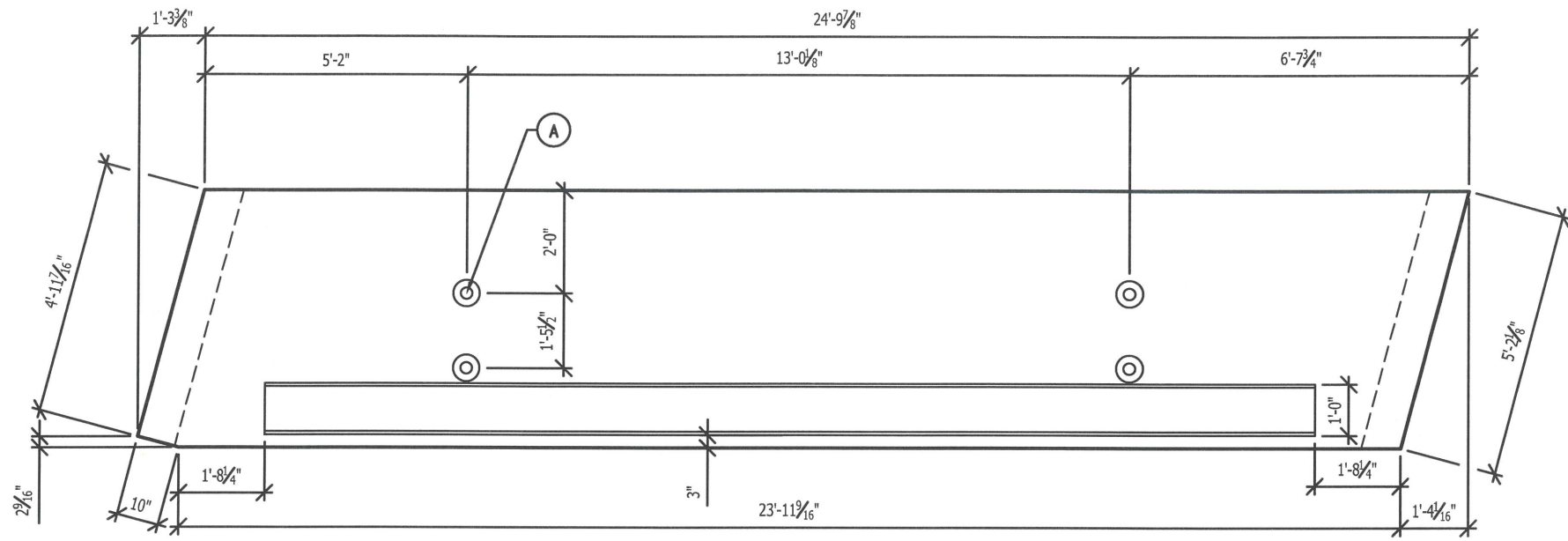
ROLL WHEN 3500 PSI OR GREATER. 8T DOG BONES RATED FOR 11 KIP AT 3500 PSI.

- NOTES:
1. REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 2. REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.
 3. REFER TO SHEETS 10, 11 & 12 FOR ANCHOR LOCATIONS.

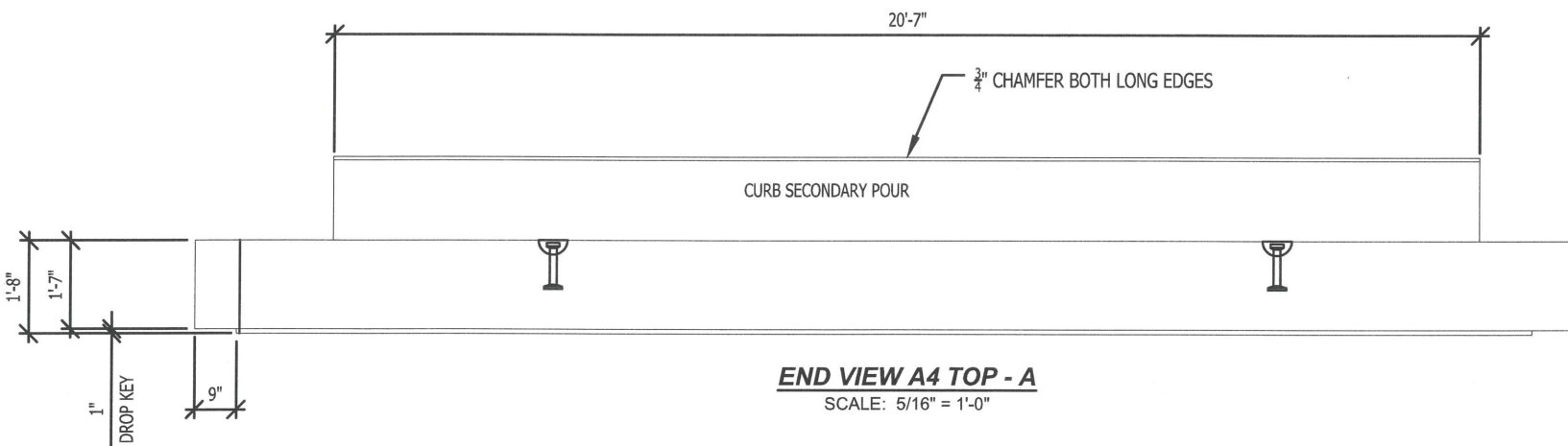
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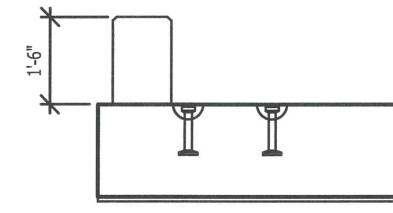
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22' x 9' Split Box Culvert								
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TITAN #							11"x17"	SHEET 6 OF 18



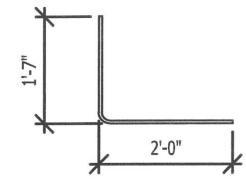
PLAN VIEW TOP - A
SCALE: 5/16" = 1'-0"



END VIEW A4 TOP - A
SCALE: 5/16" = 1'-0"



SIDE VIEW A3 TOP - A
SCALE: 5/16" = 1'-0"



DETAIL R4
SCALE: 5/16" = 1'-0"

- NOTES:
- QUANTITIES LISTED BELOW ARE FOR ONE TOP SLAB. TWO (2) TOP SLABS AT ENDS ARE REQUIRED.
 - REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 - REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.
 - WEIGHTS LISTED ARE APPROXIMATE.

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R4	25	4 BAR	3'-7"	L BAR
R5	1	4 BAR	20'-1"	STRAIGHT

BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	1.14 YDS	CPP MIX 5000 SCC
	71 LBS	#4 REBAR

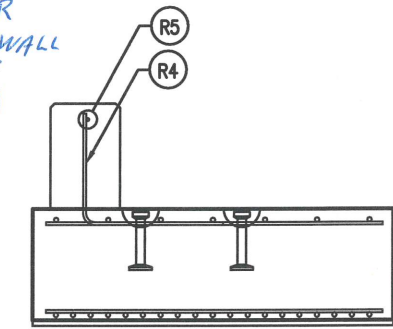
PRODUCT	WEIGHT
Headwall /Curb	4,630 LBS

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	45	6 BAR	24'-5"	STRAIGHT
R2	50	6 BAR	4'-8"	STRAIGHT
R3	26	3 BAR	4'-8"	STRAIGHT

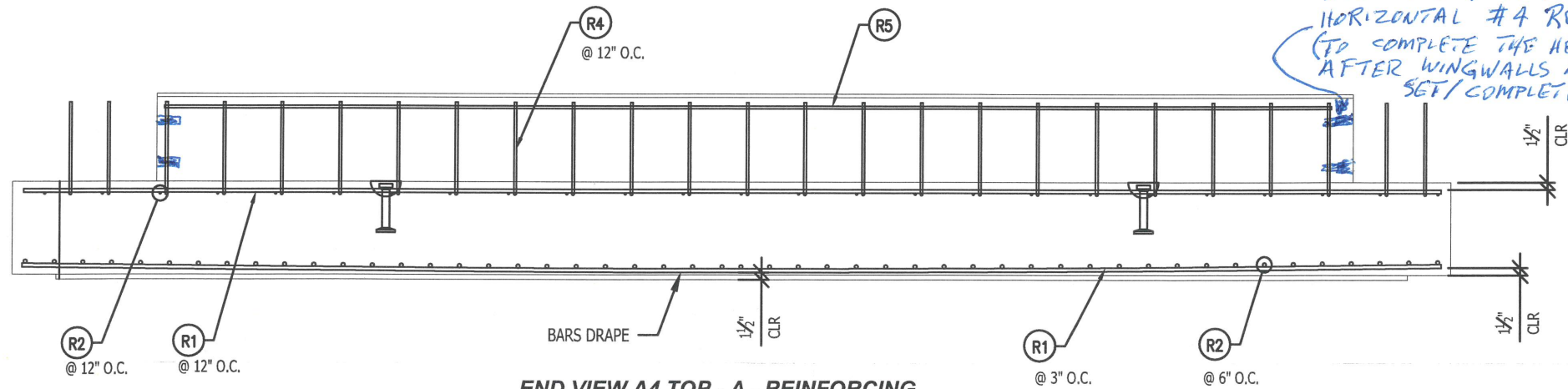
BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	7.63 YDS	CPP MIX 5000 SCC
	46 LBS	#4 REBAR
	2003 LBS	#6 REBAR
A	4 EA	DB-52 DOGBONE 16-TON x 9.875

PRODUCT	WEIGHT
Top Slabs at Ends w/Curb	35,540 LBS

AT EACH SIDE INSERTS FOR TWO HORIZONTAL #4 REBAR (TO COMPLETE THE HEADWALL AFTER WINGWALLS ARE SET/COMPLETED)



SIDE VIEW A3 TOP - A - REINFORCING
SCALE: 3/8" = 1'-0"

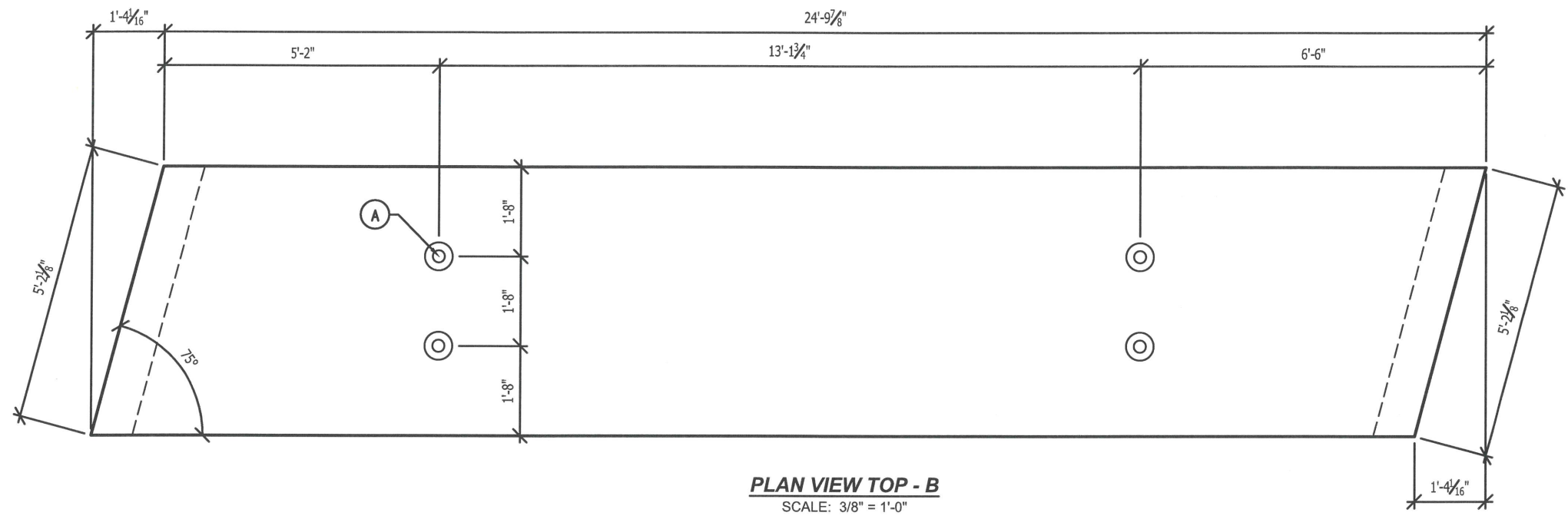


END VIEW A4 TOP - A - REINFORCING
SCALE: 3/8" = 1'-0"

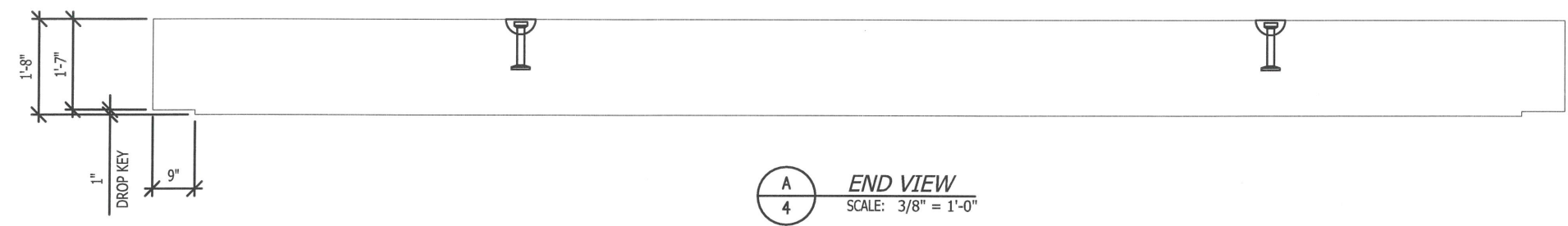
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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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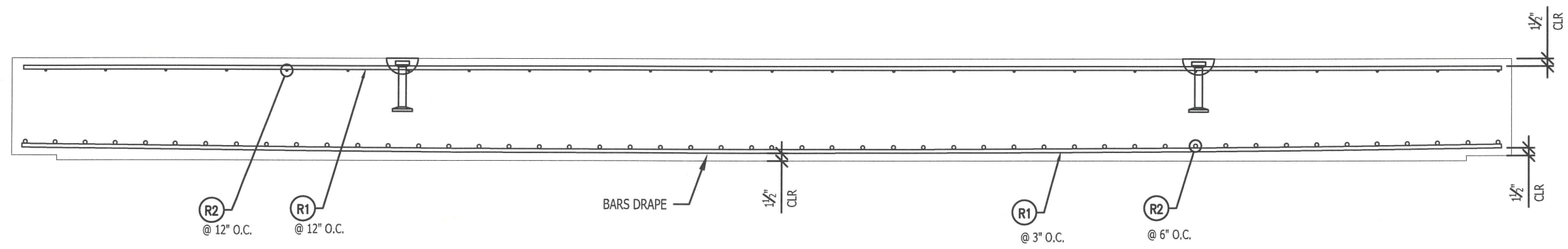
22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works



PLAN VIEW TOP - B
SCALE: 3/8" = 1'-0"



END VIEW
SCALE: 3/8" = 1'-0"



END VIEW - REINFORCING
SCALE: 1/2" = 1'-0"

- NOTES:**
1. QUANTITIES LISTED BELOW ARE FOR ONE TOP SLAB. EIGHT (8) TOP SLABS AT CENTER ARE REQUIRED.
 2. REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 3. REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.
 4. WEIGHTS LISTED ARE APPROXIMATE.

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	45	6 BAR	24'-5"	STRAIGHT
R2	50	6 BAR	4'-8"	STRAIGHT
R3	26	3 BAR	4'-8"	STRAIGHT

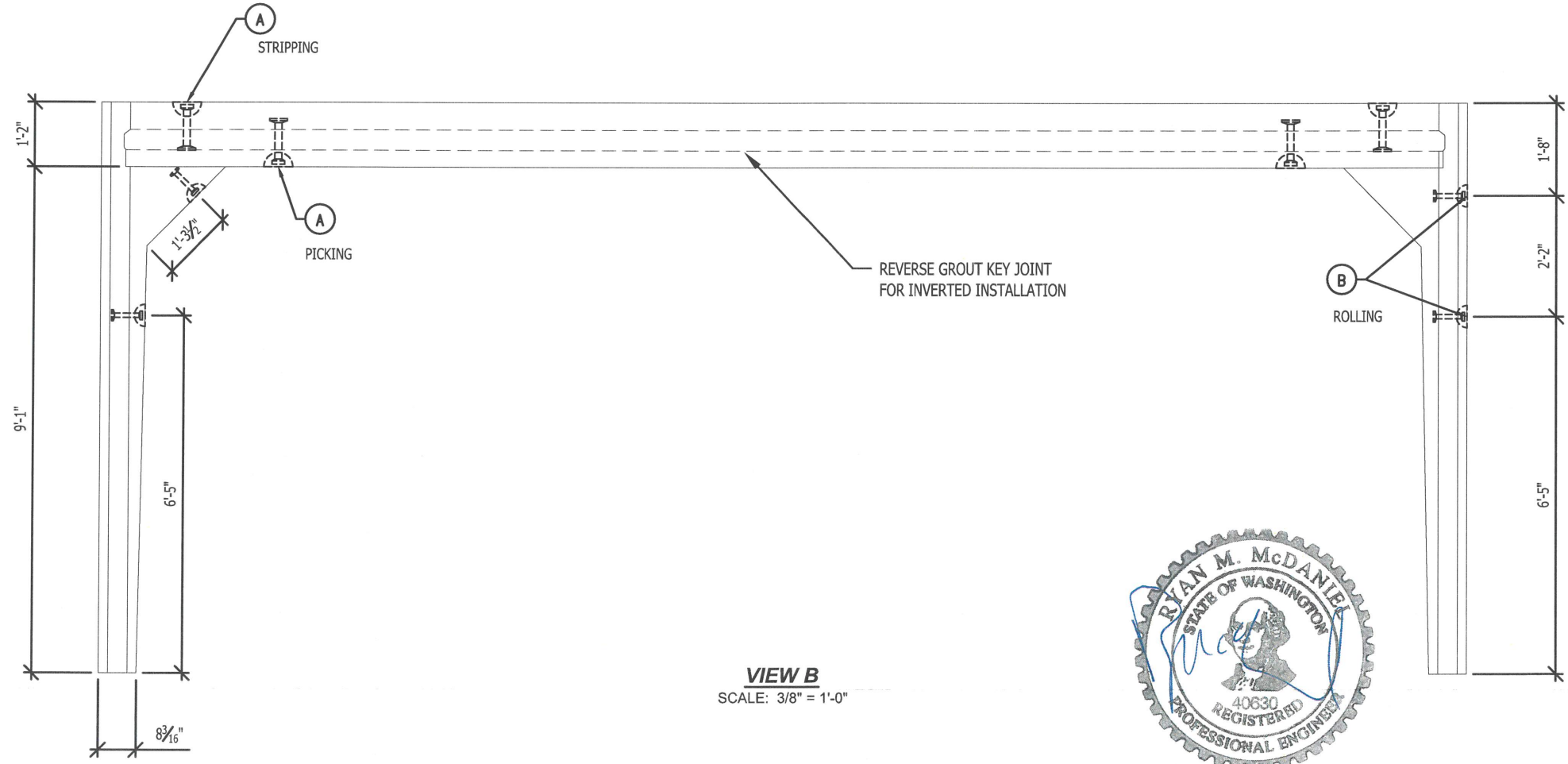
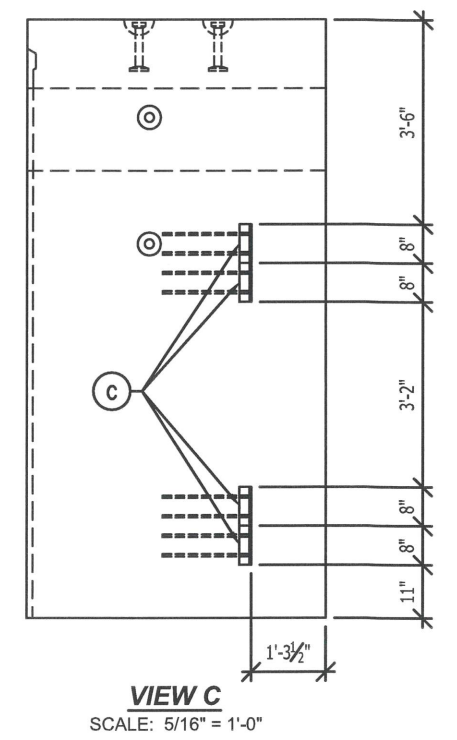
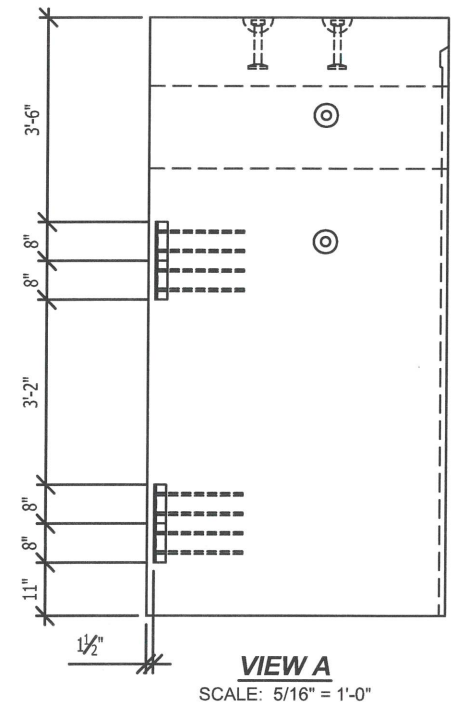
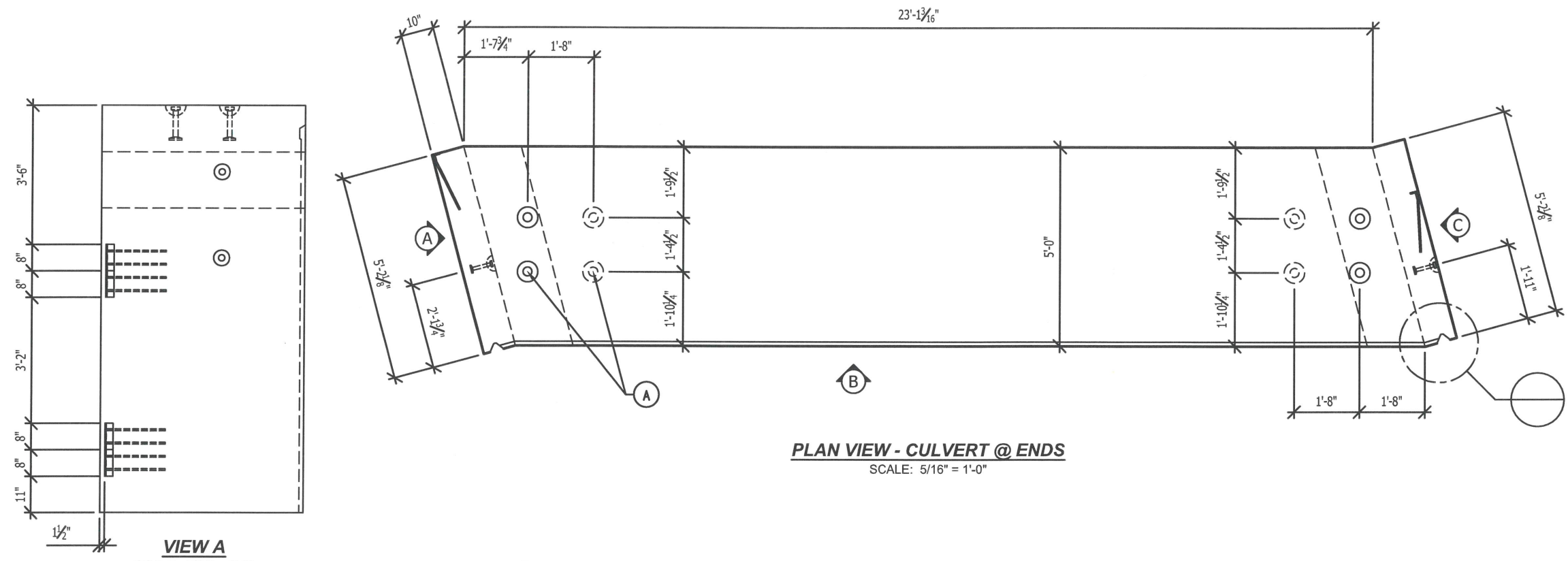
BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	7.64 YDS	CPP MIX 5000 SCC
	46 LBS	#4 REBAR
	2003 LBS	#6 REBAR
A	4 EA	DB-52 DOGBONE 16-TON x 9.875

PRODUCT	WEIGHT
Top Slabs at Center	30,930 LBS

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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
22' x 9' Split Box Culvert Centralia Alpha MP 15.79 Culvert Replacement Lewis County Public Works							
TITAN #	11"x17"						SHEET 8 OF 18



- NOTES:**
- QUANTITIES LISTED BELOW ARE FOR ONE CULVERT SECTION. ONE (1) CULVERT AT OUTLET IS REQUIRED.
 - SHOWN RIGHT SIDE UP (AS CAST) FOR PRODUCTION PERSONNEL.
 - REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 - REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.
 - CONTRACTOR TO SUPPLY ANY HARDWARE.
 - REFER TO SHEET 11 FOR CULVERT REINFORCING DETAILS.
 - WEIGHTS LISTED ARE APPROXIMATE.

BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	8.30 YDS	CPP MIX 5000 SCC
	125 LBS	#3 REBAR
	1080 LBS	#6 REBAR
A	8 EA	DB-52 DOGBONE 16-TON x 9.875
B	4 EA	DB-52 DOGBONE 8-TON x 6.75
C	8 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

PRODUCT	WEIGHT
Culvert at End	33,630 LBS



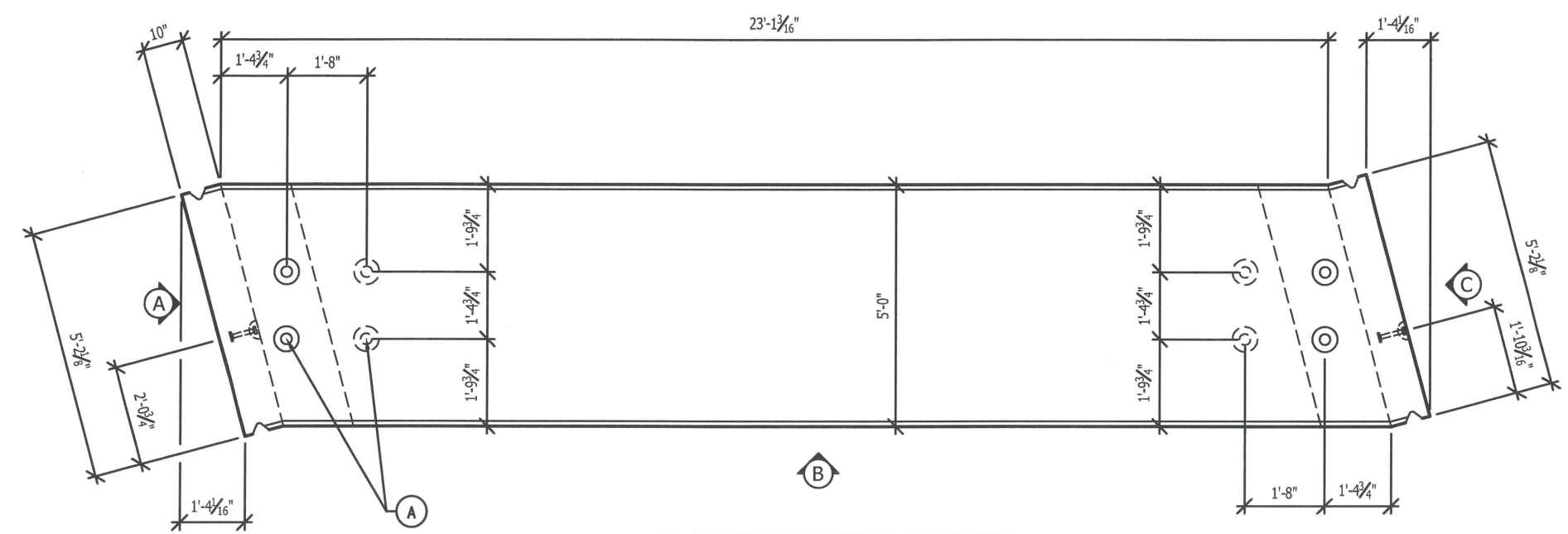
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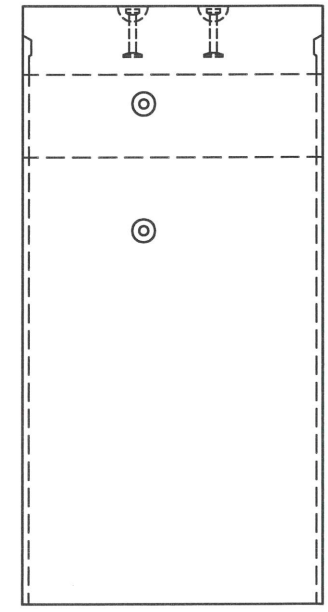
SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works

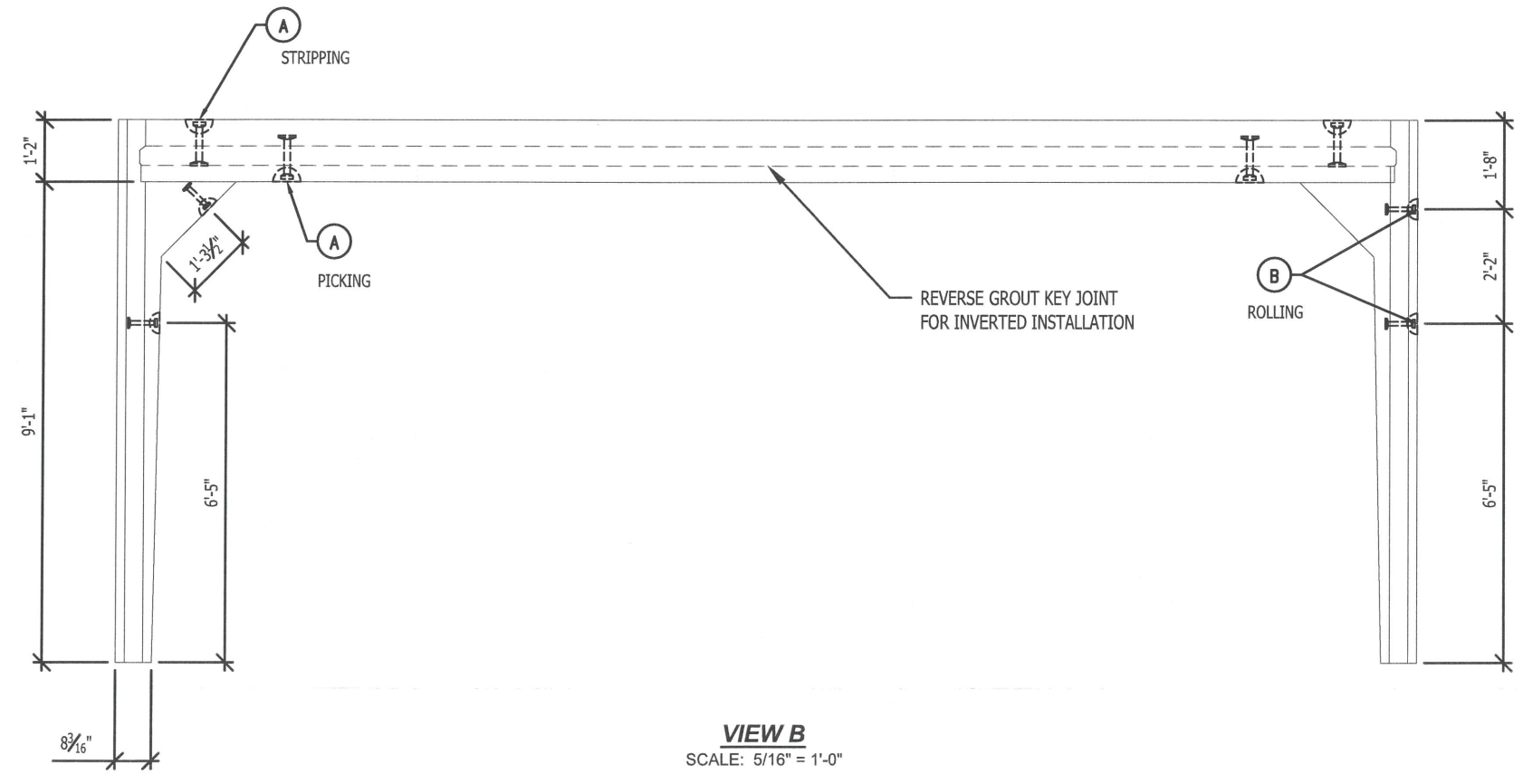
TITAN # _____ 11"x17" SHEET 9 OF 18



PLAN VIEW CULVERTS @ CENTER
SCALE: 5/16" = 1'-0"



VIEW C
SCALE: 5/16" = 1'-0"



VIEW B
SCALE: 5/16" = 1'-0"

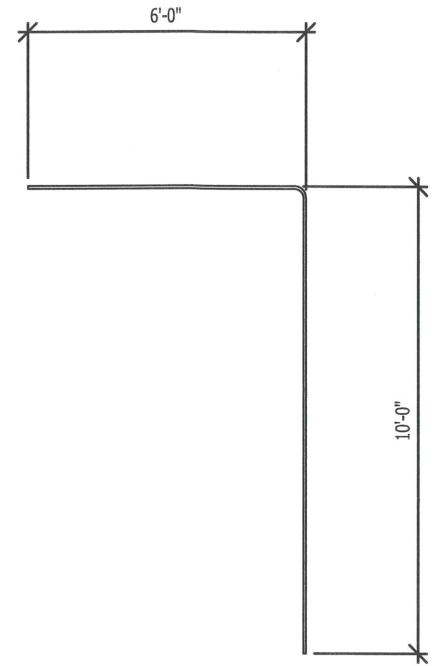
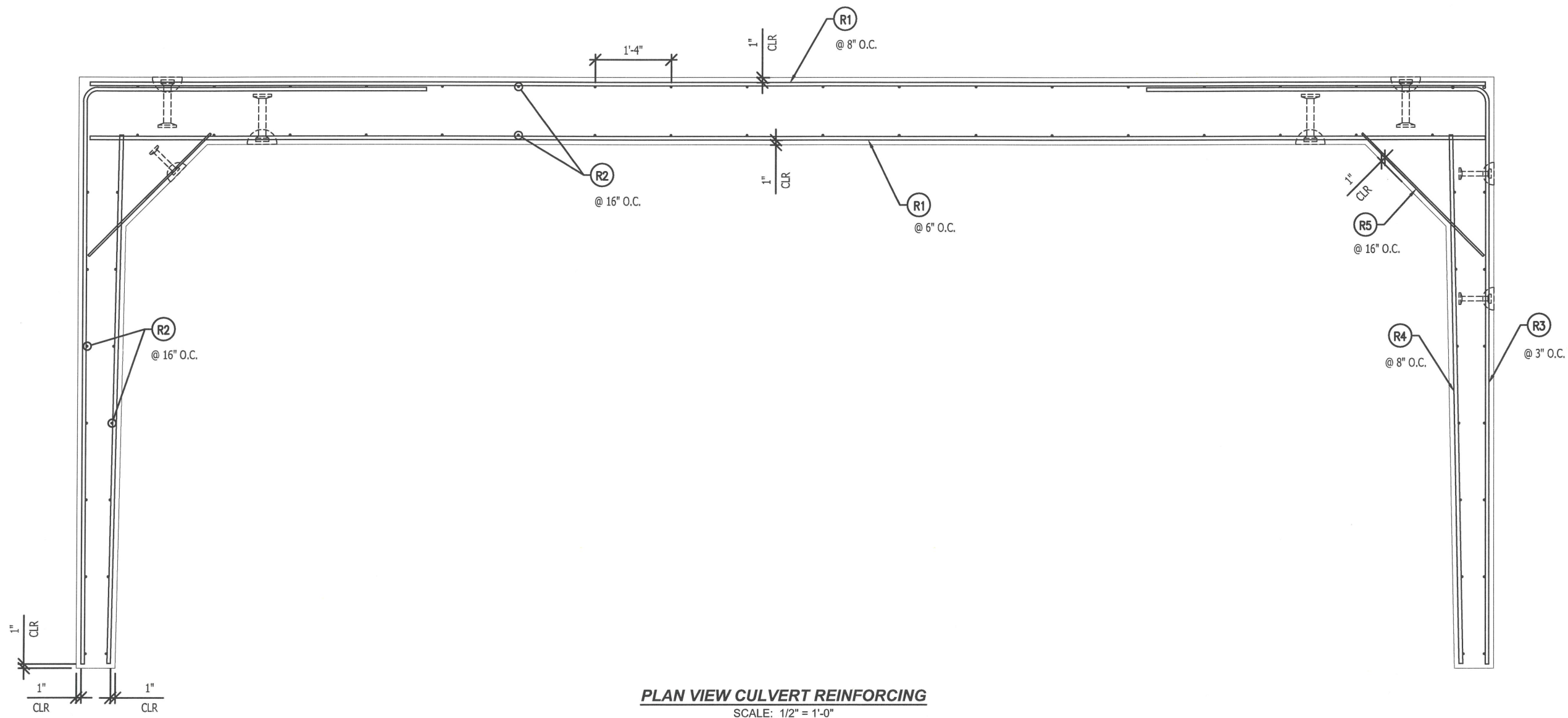
BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	8.30 YDS	CPP MIX 5000 SCC
	125 LBS	#3 REBAR
	1080 LBS	#6 REBAR
A	8 EA	DB-52 DOGBONE 16-TON x 9.875
B	4 EA	DB-52 DOGBONE 8-TON x 6.75

PRODUCT	WEIGHT
Culvert at Center	33,630 LBS

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Lewis County Public Works							
TITAN #	11"x17"						SHEET 10 OF 18



DETAIL R3
SCALE: 1/2" = 1'-0"

PLAN VIEW CULVERT REINFORCING
SCALE: 1/2" = 1'-0"

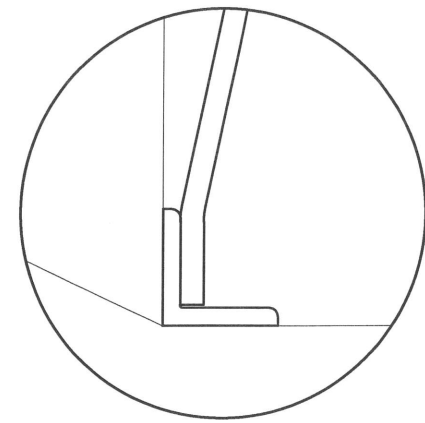
- NOTES:**
1. QUANTITIES LISTED BELOW ARE FOR ONE CULVERT SECTION.
 2. SHOWN RIGHT SIDE UP (AS CAST) FOR PRODUCTION PERSONNEL.
 3. REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 4. REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.
 5. WEIGHTS LISTED ARE APPROXIMATE.

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	19	6 BAR	24'-5"	STRAIGHT
R2	66	3 BAR	4'-8"	STRAIGHT
R3	8	6 BAR	16'-0"	L BAR
R4	14	6 BAR	9'-2"	STRAIGHT
R5	8	3 BAR	3'-0"	STRAIGHT

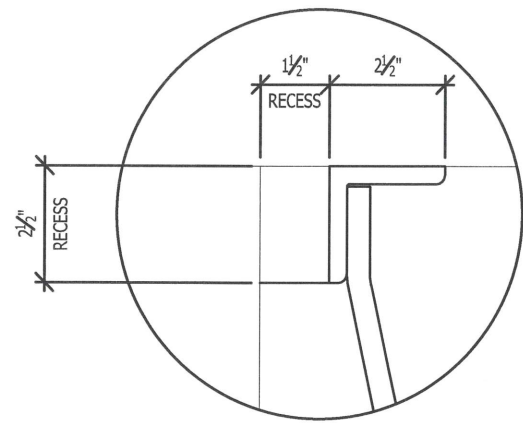


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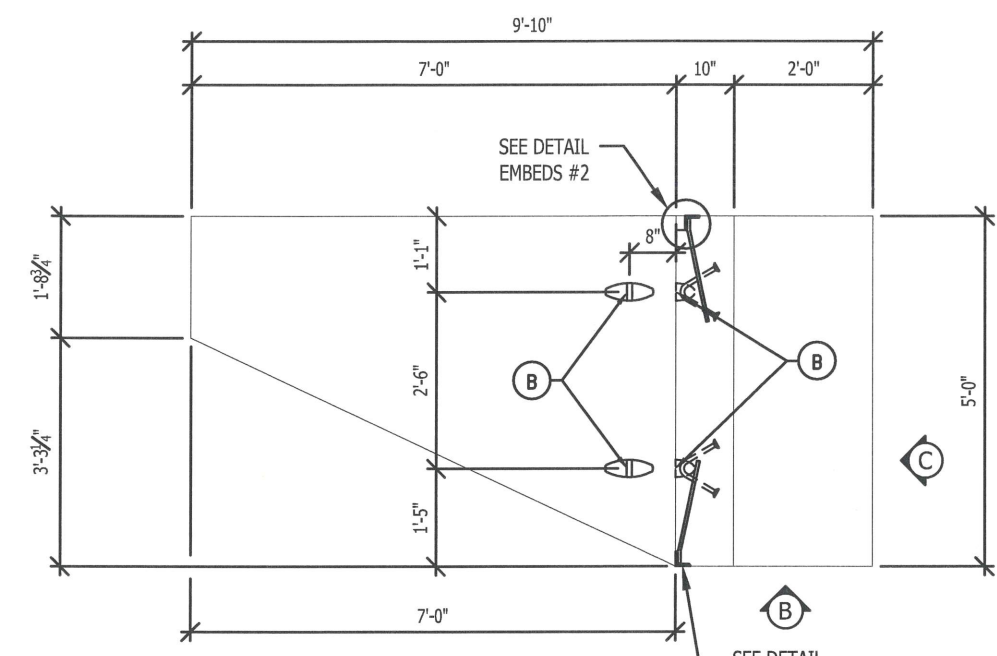
SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
22' x 9' Split Box Culvert							
Centralia Alpha MP 15.79 Culvert Replacement							
Lewis County Public Works							



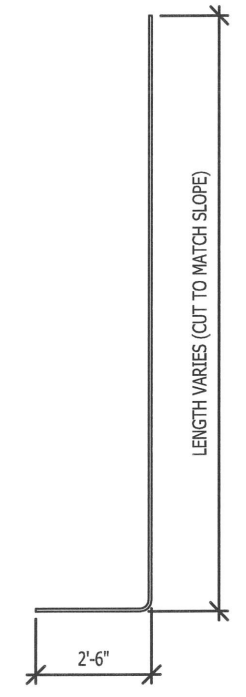
DETAIL EMBEDS #1
SCALE: 3" = 1'-0"



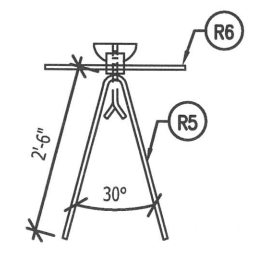
DETAIL EMBEDS #2
SCALE: 3" = 1'-0"



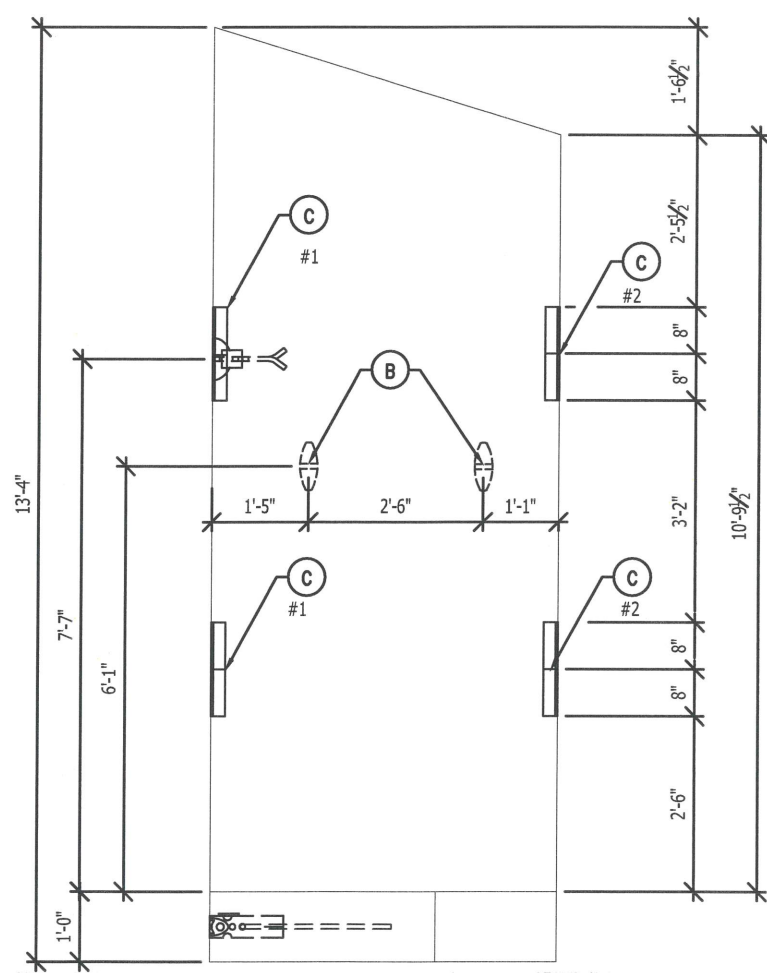
PLAN VIEW WING WALL E
SCALE: 3/8" = 1'-0"



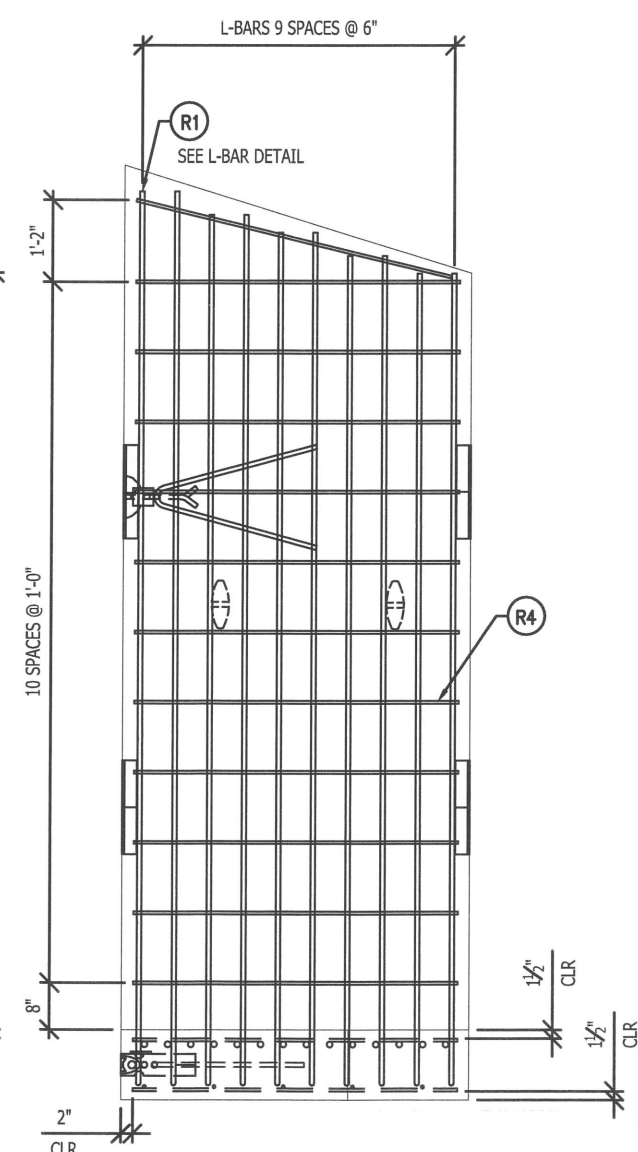
DETAIL R1 - L-BARS
SCALE: 1/4" = 1'-0"



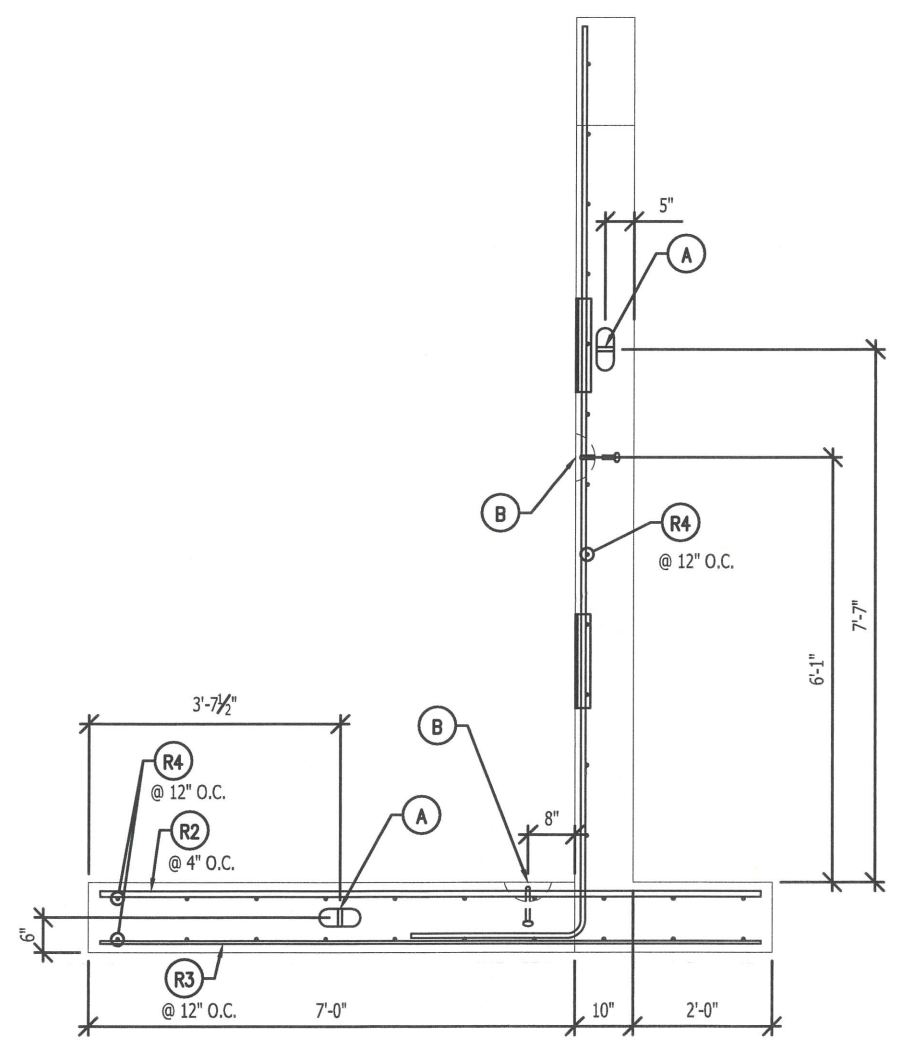
DETAIL R5
SCALE: 1/4" = 1'-0"



VIEW C
SCALE: 3/8" = 1'-0"



VIEW C - REINFORCING
SCALE: 3/8" = 1'-0"



VIEW B
SCALE: 3/8" = 1'-0"

NOTE:
BAR SPACING AND BAR MARK LISTED IN VIEW B & C

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	10	6 BAR	15'-2"	L BAR
R2	14	8 BAR	9'-6"	STRAIGHT
R3	5	4 BAR	9'-6"	STRAIGHT
R4	34	4 BAR	4'-8"	STRAIGHT
R5	2	6 BAR	5'-0"	TENSION
R6	2	6 BAR	2'-0"	STRAIGHT

BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	8.19 YDS	CPP MIX 5000 SCC
	138 LBS	#4 REBAR
	225 LBS	#6 REBAR
	355 LBS	#8 REBAR
A	2 EA	8T-RL-7 ERECTION ANCHOR
B	4 EA	MB8671-V-Anchor-8-671
C	8 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

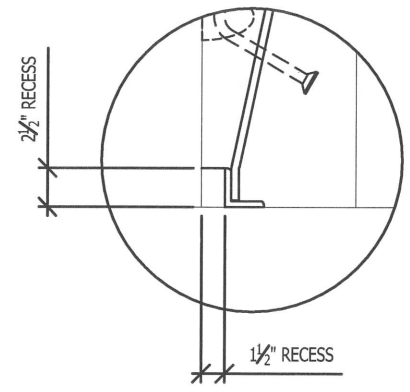
PRODUCT	WEIGHT
Wing Wall - E	33,170 LBS

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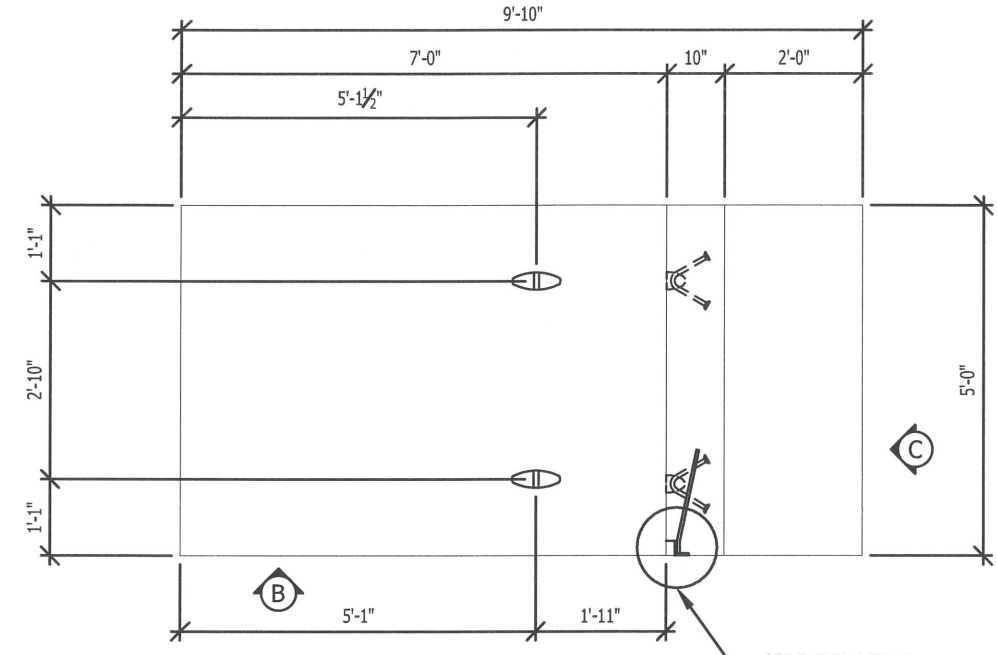
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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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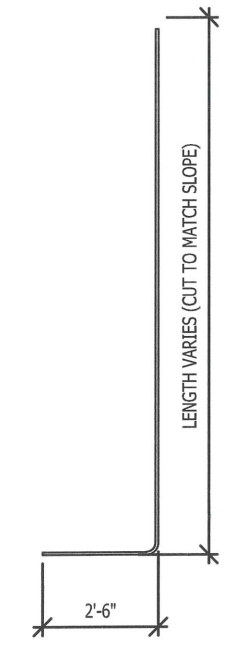
22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works



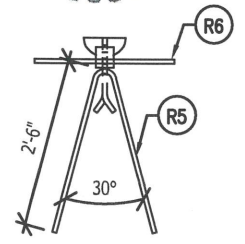
DETAIL EMBED
SCALE: 1" = 1'-0"



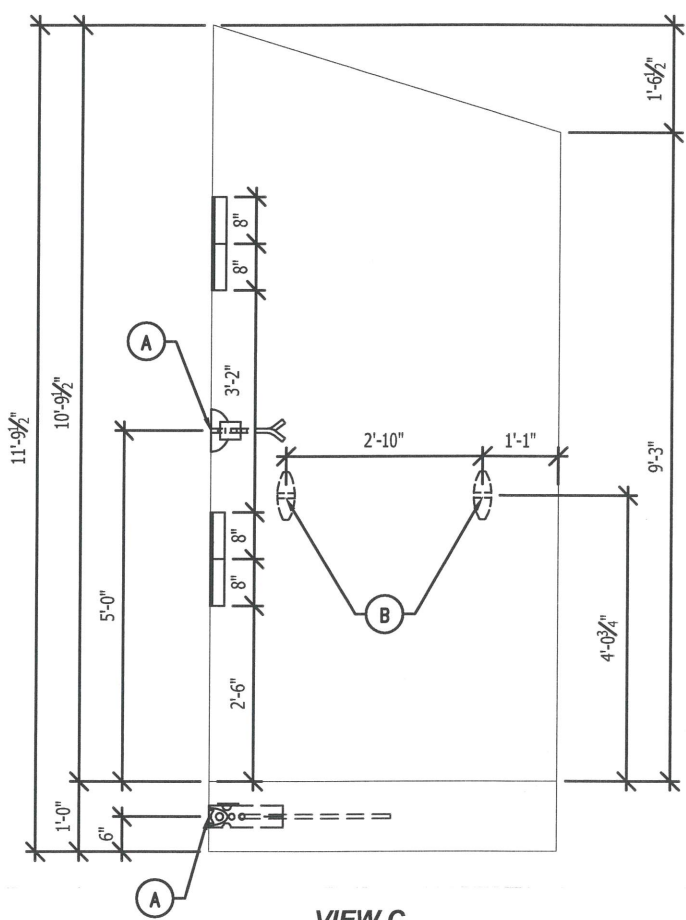
PLAN VIEW WING WALL F
SCALE: 3/8" = 1'-0"



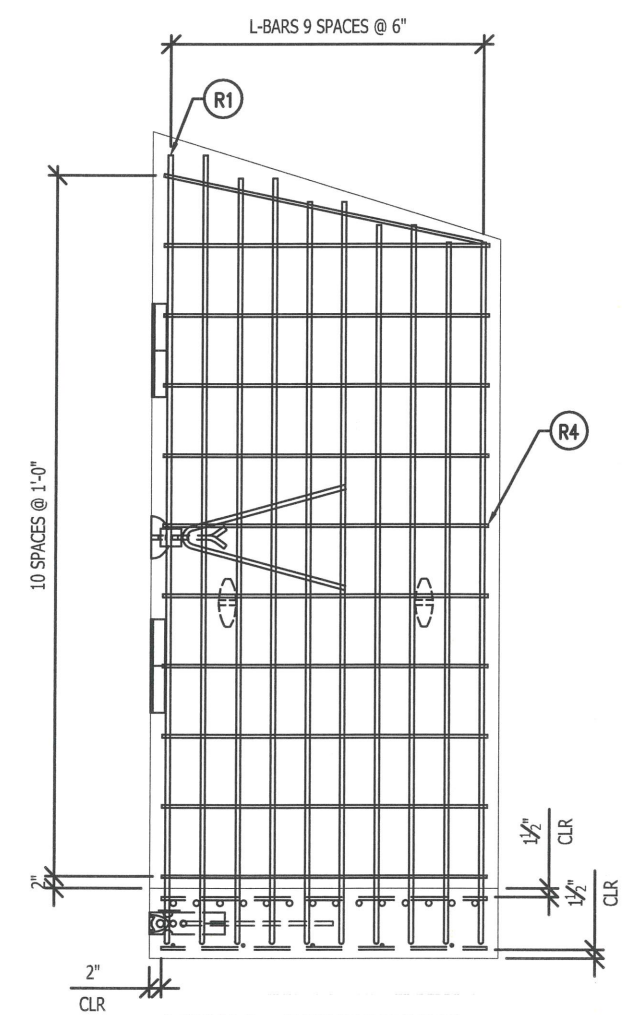
DETAIL R1-L-BARS
SCALE: 1/4" = 1'-0"



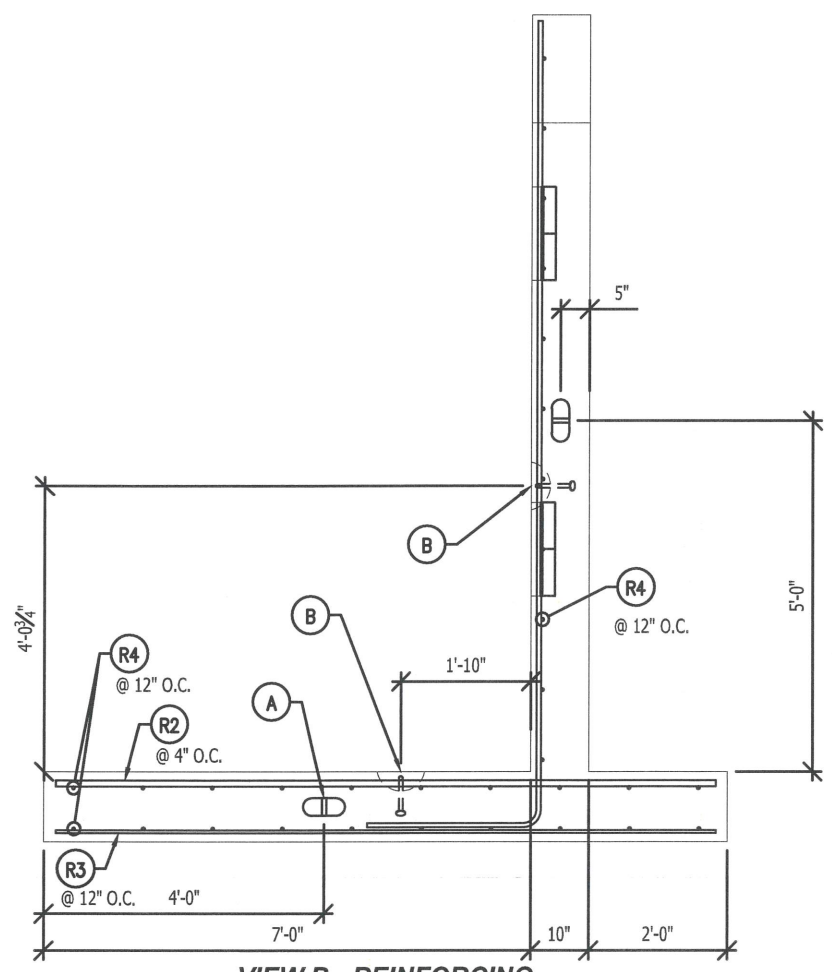
DETAIL R5
SCALE: 1/4" = 1'-0"



VIEW C
SCALE: 3/8" = 1'-0"



VIEW C - REINFORCING
SCALE: 3/8" = 1'-0"



VIEW B - REINFORCING
SCALE: 3/8" = 1'-0"

NOTE:
BAR SPACING AND BAR MARK LISTED IN VIEW B & C

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	10	6 BAR	13'-9"	L BAR
R2	14	8 BAR	9'-6"	STRAIGHT
R3	5	4 BAR	9'-6"	STRAIGHT
R4	34	4 BAR	4'-8"	STRAIGHT
R5	2	6 BAR	5'-0"	STRAIGHT
R6	2	6 BAR	2'-0"	STRAIGHT

BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	3.18 YDS	CPP MIX 5000 SCC
	138 LBS	#4 REBAR
	202 LBS	#6 REBAR
	355 LBS	#8 REBAR
A	2 EA	8T-RL-7 ERECTION ANCHOR
B	4 EA	MB8671-V-Anchor-8-671
C	4 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

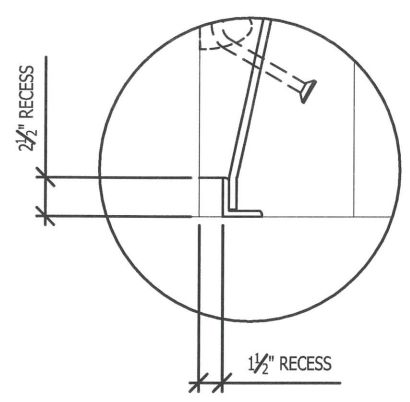
PRODUCT	WEIGHT
Wing Wall - F	12,890 LBS

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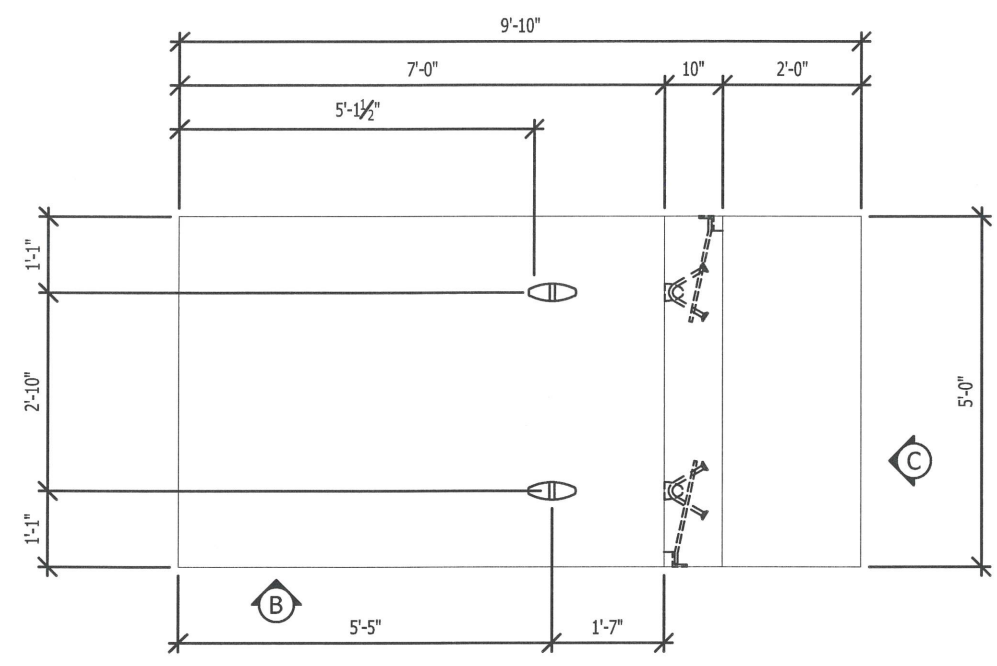
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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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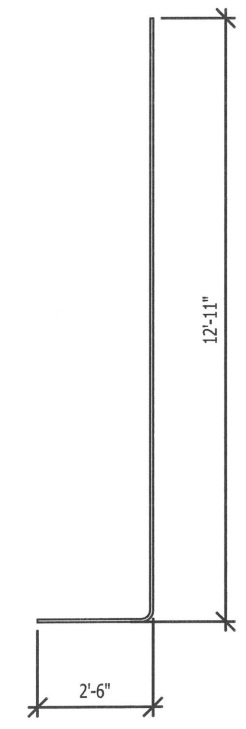
22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works



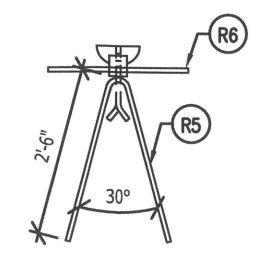
**DETAIL EMBEDS
(BOTH SIDES)**
SCALE: 1" = 1'-0"



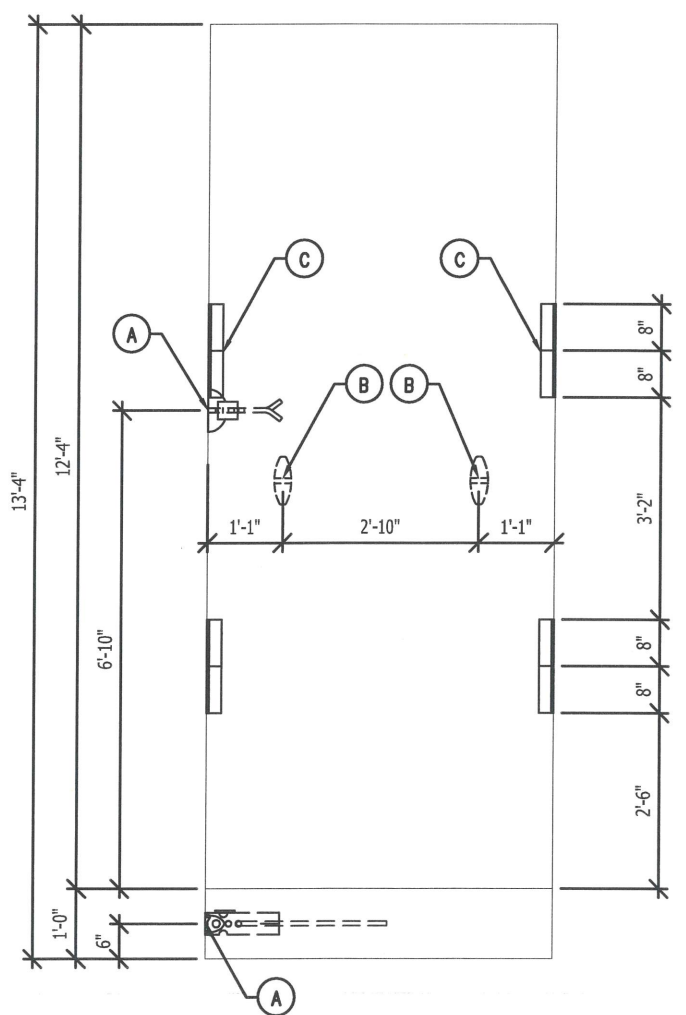
PLAN VIEW WING WALL G
SCALE: 3/8" = 1'-0"



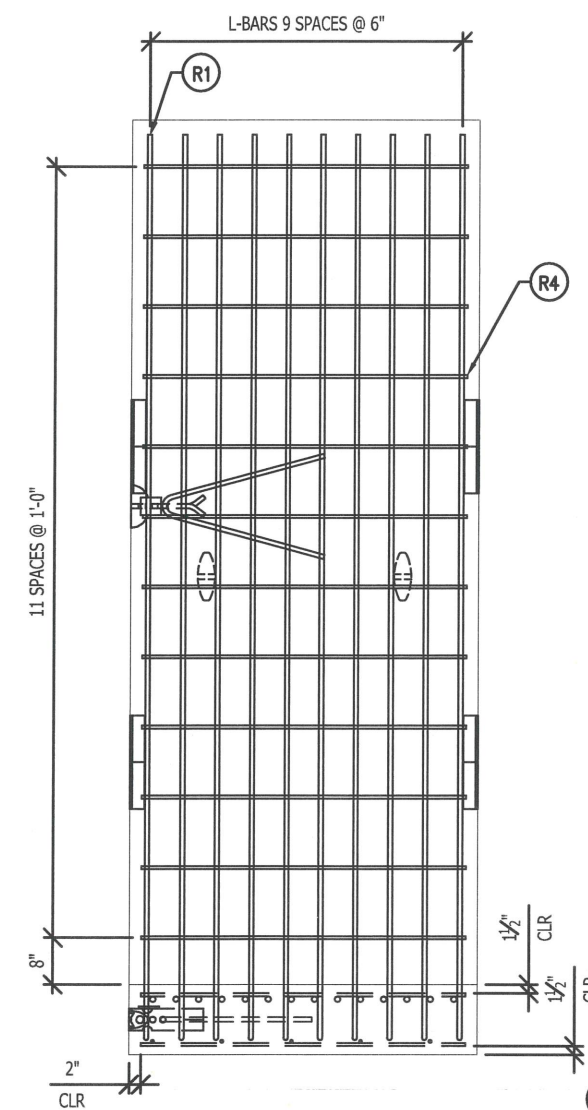
DETAIL R1 - L-BARS
SCALE: 1/4" = 1'-0"



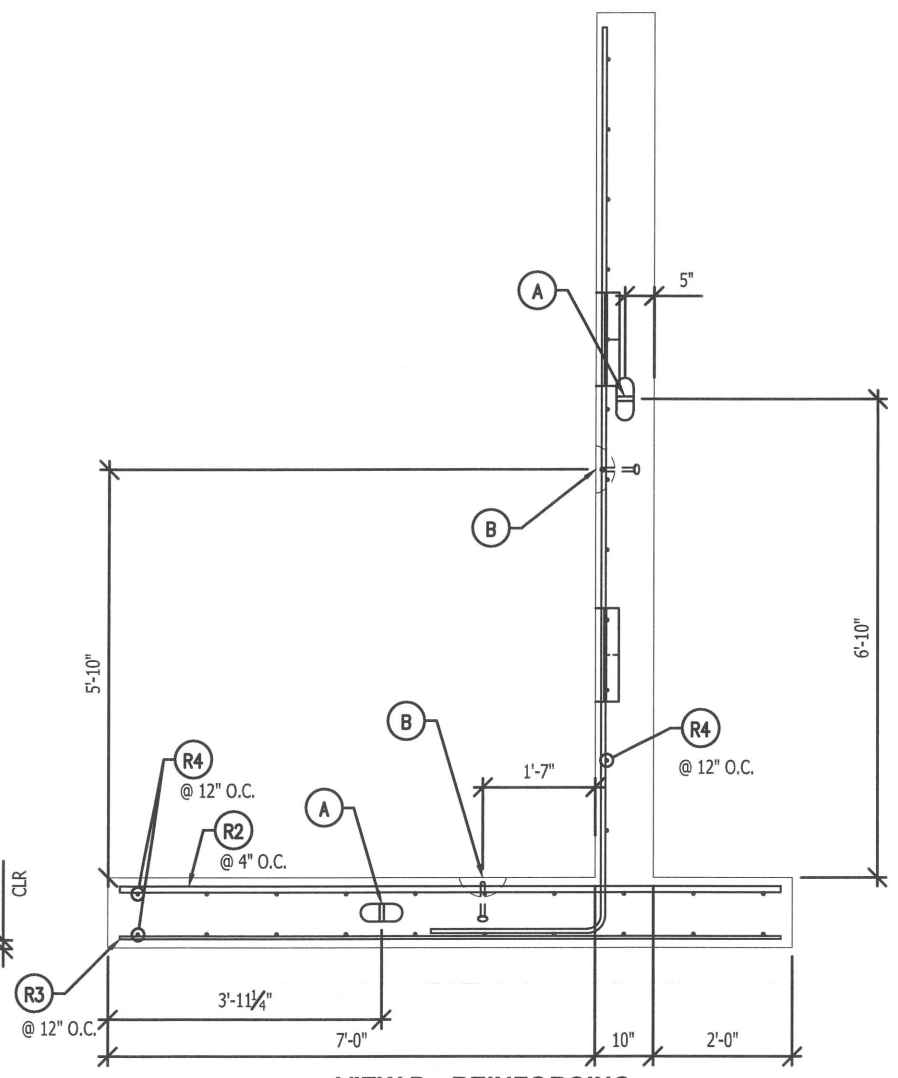
DETAIL R5
SCALE: 3/8" = 1'-0"



VIEW C
SCALE: 3/8" = 1'-0"



VIEW C - REINFORCING
SCALE: 3/8" = 1'-0"



VIEW B - REINFORCING
SCALE: 3/8" = 1'-0"

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	10	6 BAR	13'-9"	L BAR
R2	14	8 BAR	9'-6"	STRAIGHT
R3	5	4 BAR	9'-6"	STRAIGHT
R4	34	4 BAR	4'-8"	STRAIGHT
R5	2	6 BAR	5'-0"	STRAIGHT
R6	2	6 BAR	2'-0"	STRAIGHT

BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	3.37 YDS	CPP MIX 5000 SCC
	138 LBS	#4 REBAR
	250 LBS	#6 REBAR
	355 LBS	#8 REBAR
A	2 EA	8T-RL-7 ERECTION ANCHOR
B	4 EA	MB8671-V-Anchor-8-671
C	8 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

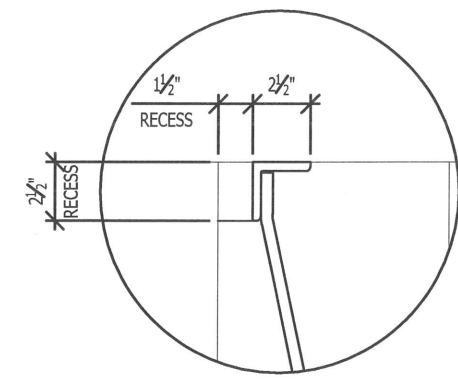
PRODUCT	WEIGHT
Wing Wall - G	13,640 LBS

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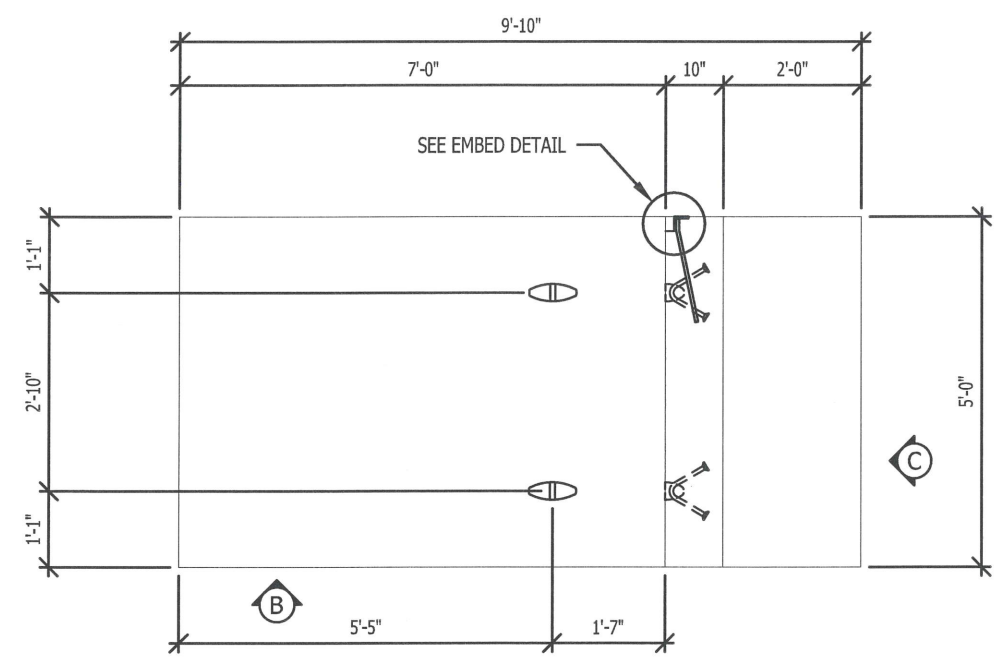
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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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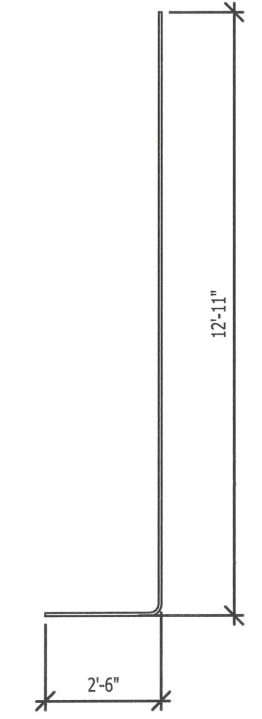
22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works



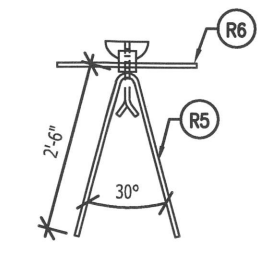
DETAIL EMBED
SCALE: 1-1/2" = 1'-0"



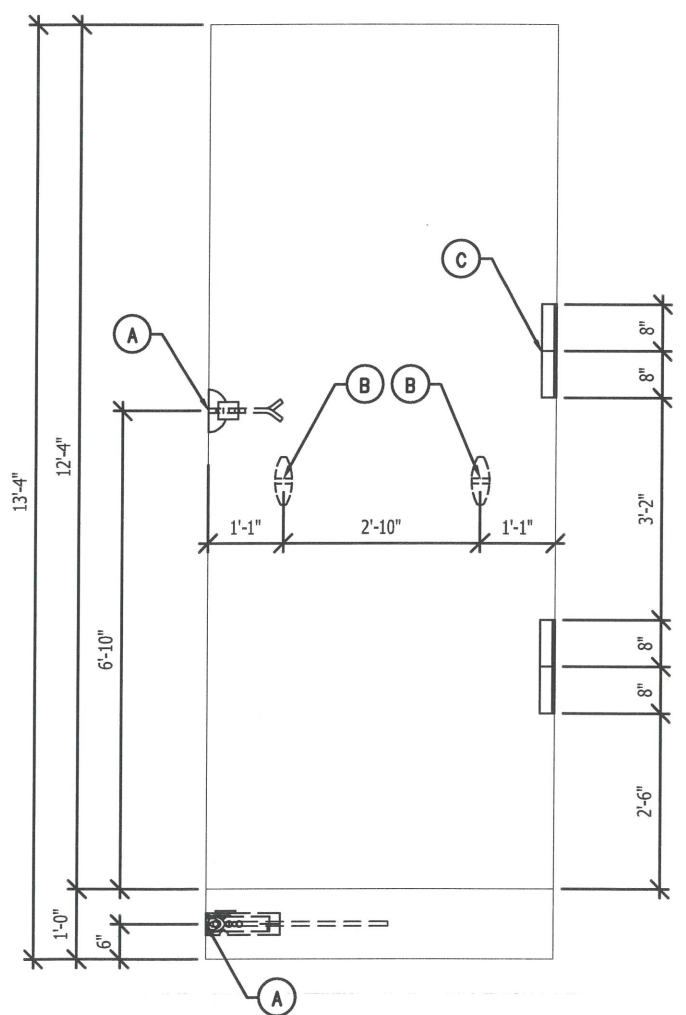
PLAN VIEW WING WALL H
SCALE: 3/8" = 1'-0"



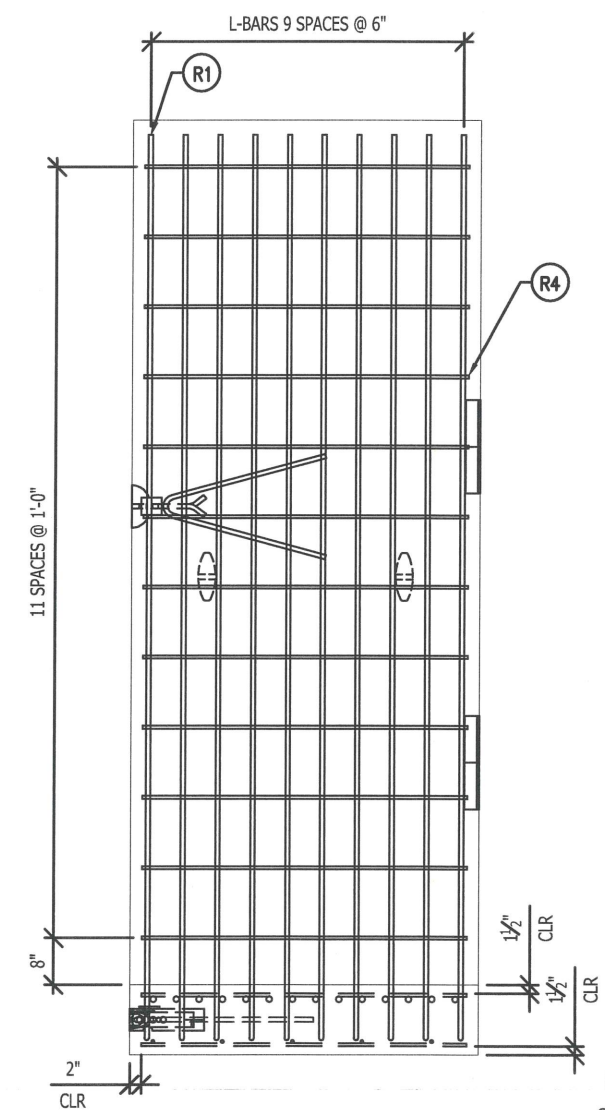
DETAIL R1 - L-BARS
SCALE: 1/4" = 1'-0"



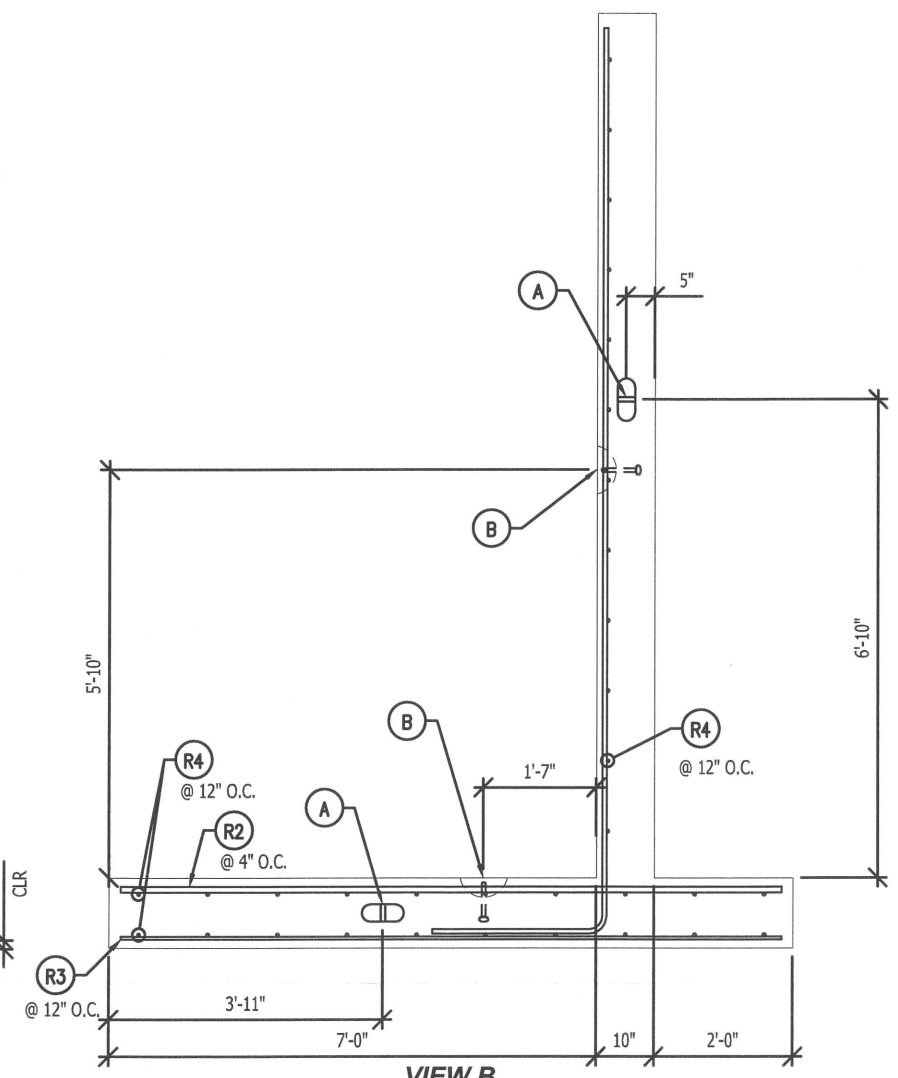
DETAIL R5
SCALE: 3/8" = 1'-0"



VIEW C
SCALE: 3/8" = 1'-0"



VIEW C
SCALE: 3/8" = 1'-0"



VIEW B
SCALE: 3/8" = 1'-0"

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	10	6 BAR	13'-9"	L BAR
R2	14	8 BAR	9'-6"	STRAIGHT
R3	5	4 BAR	9'-6"	STRAIGHT
R4	34	4 BAR	4'-8"	STRAIGHT
R5	2	6 BAR	5'-0"	STRAIGHT
R6	2	6 BAR	2'-0"	STRAIGHT

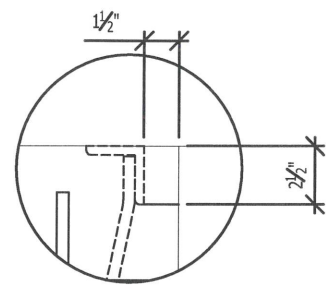
BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	3.72 YDS	CPP MIX 5000 SCC
	138 LBS	#4 REBAR
	250 LBS	#6 REBAR
	355 LBS	#8 REBAR
A	2 EA	8T-RL-7 ERECTION ANCHOR
B	4 EA	MB8671-V-Anchor-8-671
C	4 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

PRODUCT	WEIGHT
Wing Wall - H	15,080 LBS

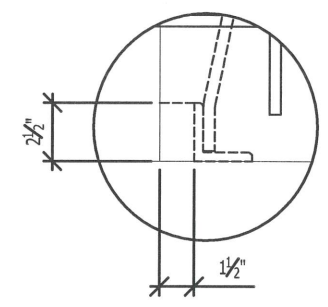
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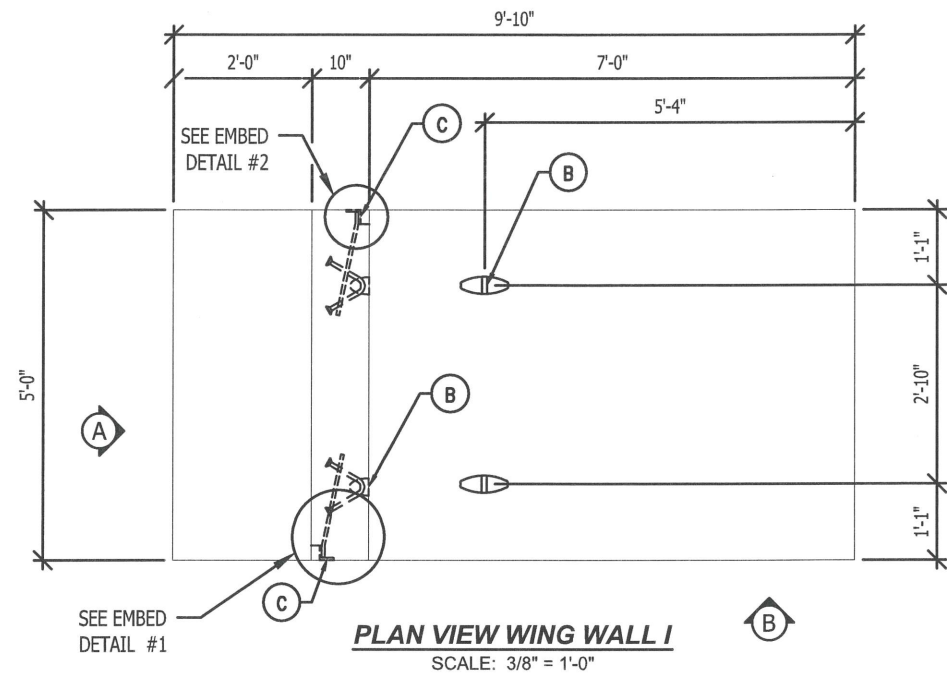
SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
22' x 9' Split Box Culvert Centralia Alpha MP 15.79 Culvert Replacement Lewis County Public Works							



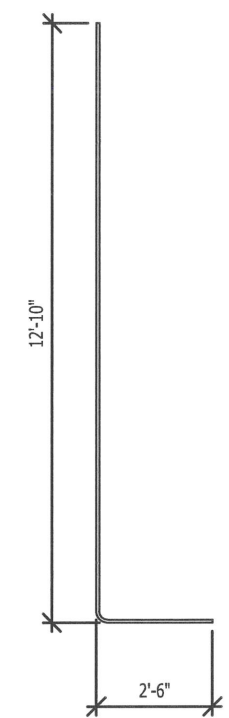
DETAIL EMBED #2
SCALE: 1-1/2" = 1'-0"



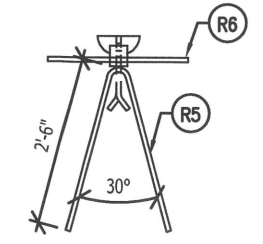
DETAIL EMBED #1
SCALE: 1-1/2" = 1'-0"



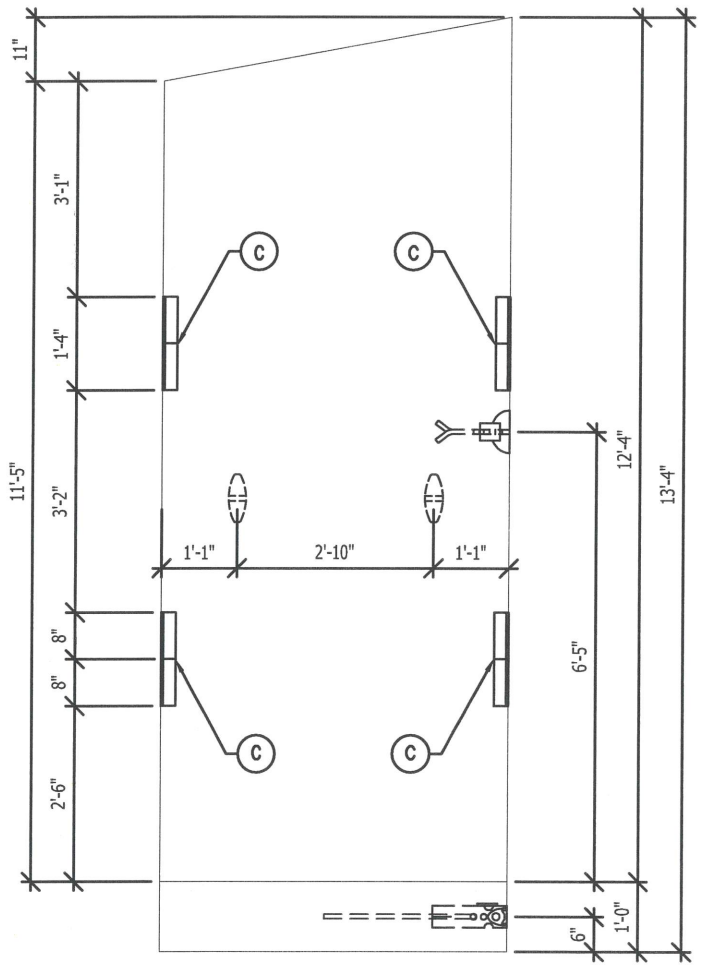
PLAN VIEW WING WALL I
SCALE: 3/8" = 1'-0"



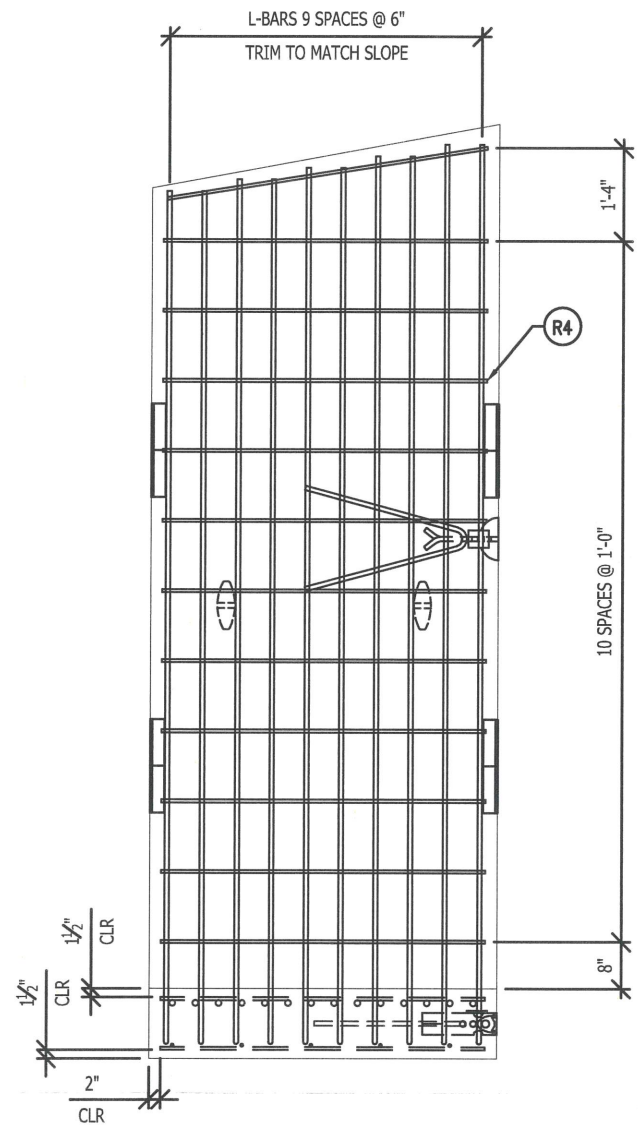
DETAIL R1 - L-BARS
SCALE: 1/4" = 1'-0"



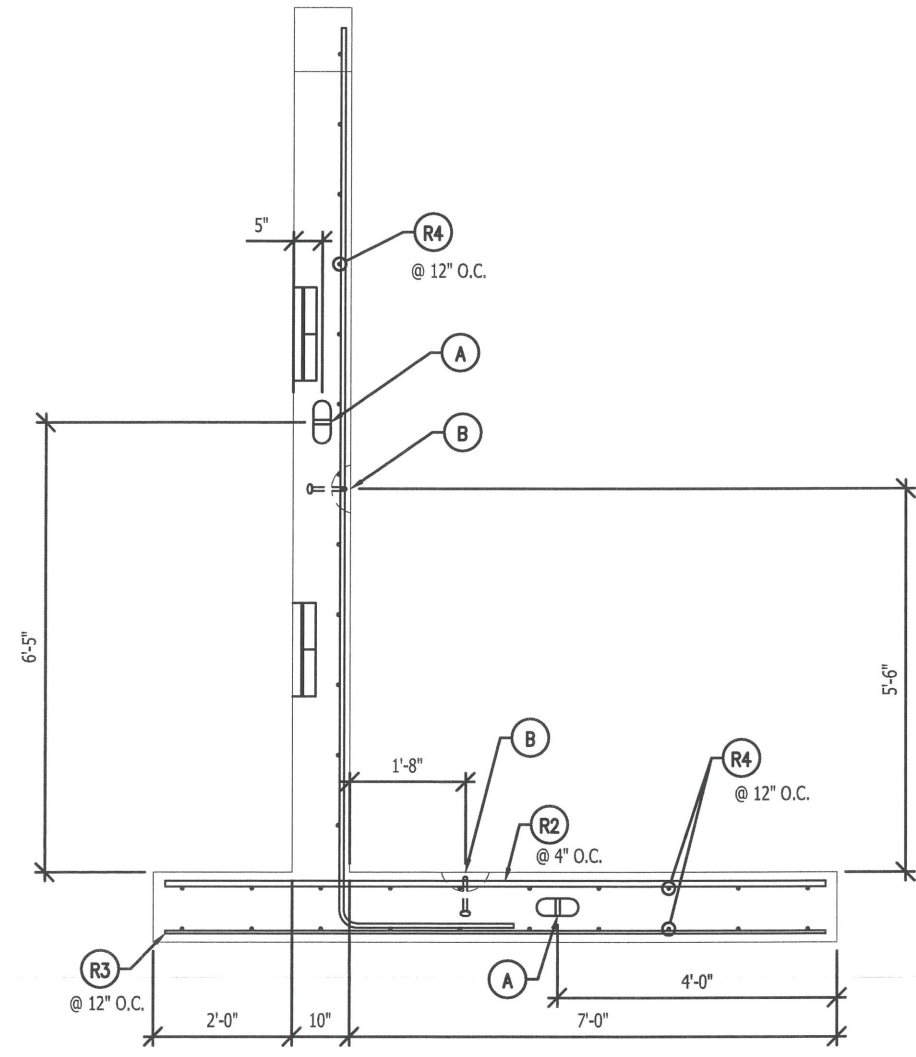
DETAIL R5
SCALE: 3/8" = 1'-0"



VIEW A
SCALE: 3/8" = 1'-0"



VIEW A - REINFORCING
SCALE: 3/8" = 1'-0"



VIEW B - REINFORCING
SCALE: 3/8" = 1'-0"

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	10	6 BAR	13'-9"	L BAR
R2	14	8 BAR	9'-6"	STRAIGHT
R3	5	4 BAR	9'-6"	STRAIGHT
R4	34	4 BAR	4'-8"	STRAIGHT
R5	2	6 BAR	5'-0"	STRAIGHT
R6	2	6 BAR	2'-0"	STRAIGHT

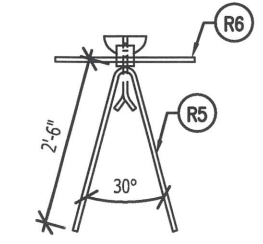
BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	3.72 YDS	CPP MIX 5000 SCC
	138 LBS	#4 REBAR
	249 LBS	#6 REBAR
	355 LBS	#8 REBAR
A	2 EA	8T-RL-7 ERECTION ANCHOR
B	4 EA	MB8671-V-Anchor-8-671
C	8 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

PRODUCT	WEIGHT
Wing Wall - I	15,080 LBS

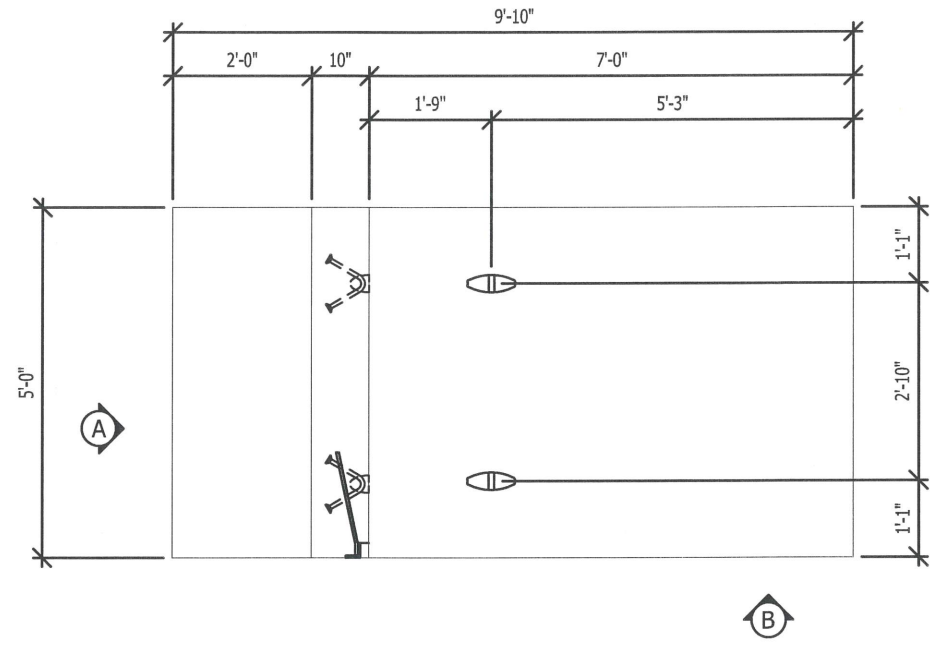
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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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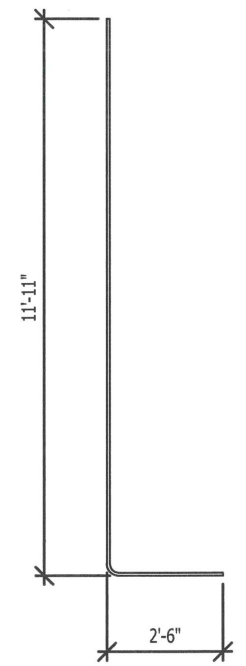
22' x 9' Split Box Culvert
 Centralia Alpha MP 15.79 Culvert Replacement
 Lewis County Public Works



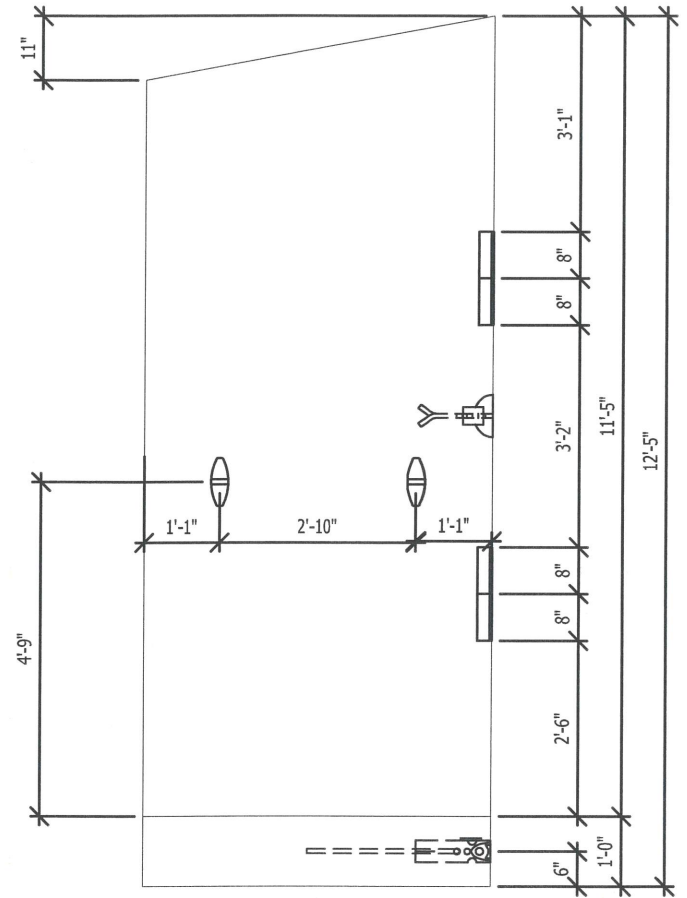
DETAIL R5
SCALE: 3/8" = 1'-0"



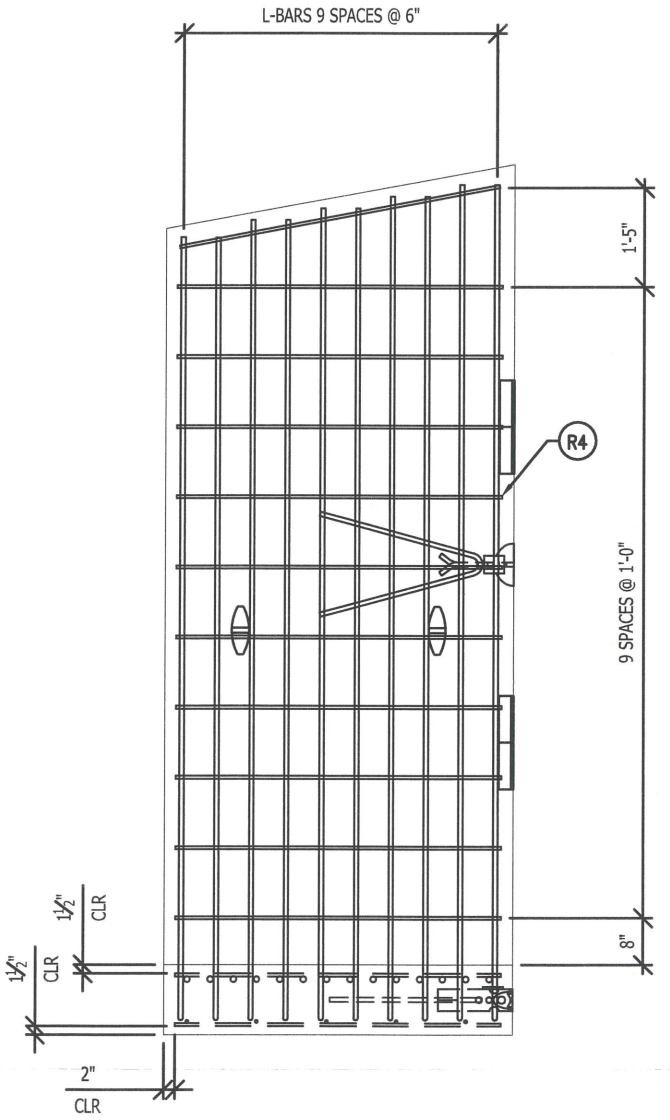
PLAN VIEW WING WALL J
SCALE: 3/8" = 1'-0"



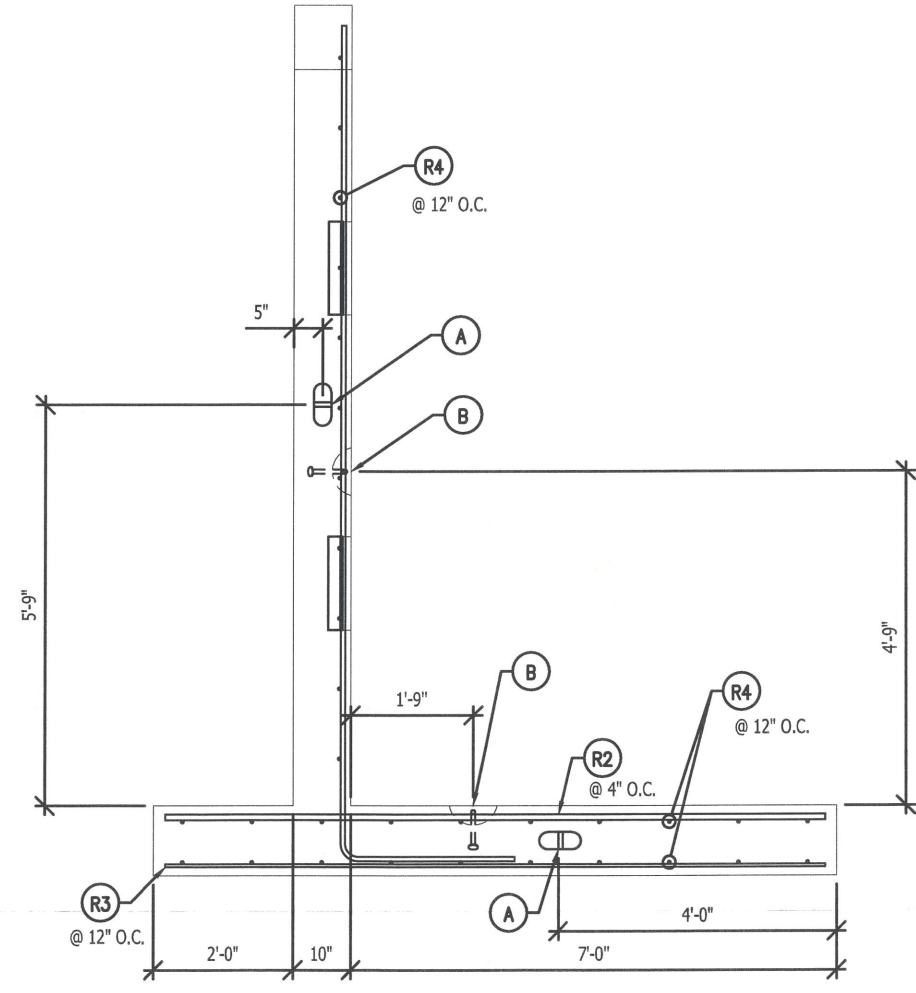
DETAIL R1 - L-BARS
SCALE: 3/8" = 1'-0"



VIEW A
SCALE: 3/8" = 1'-0"



VIEW A - REINFORCING
SCALE: 3/8" = 1'-0"



VIEW B
SCALE: 3/8" = 1'-0"

CUT LIST:				
MARK	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	10	6 BAR	13'-9"	L BAR
R2	14	8 BAR	9'-6"	STRAIGHT
R3	5	4 BAR	9'-6"	STRAIGHT
R4	34	4 BAR	4'-8"	STRAIGHT
R5	2	6 BAR	5'-0"	STRAIGHT
R6	2	6 BAR	2'-0"	STRAIGHT

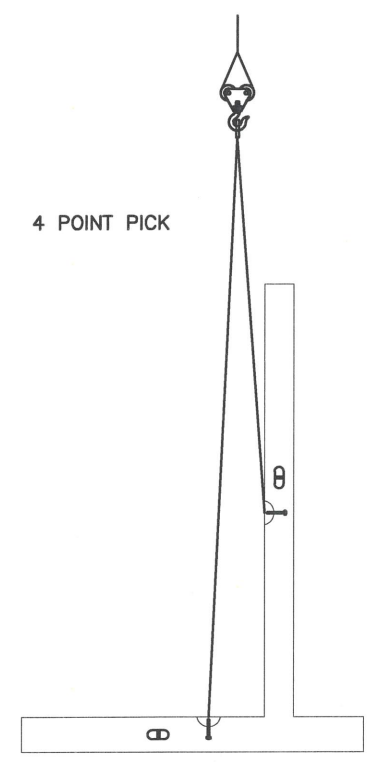
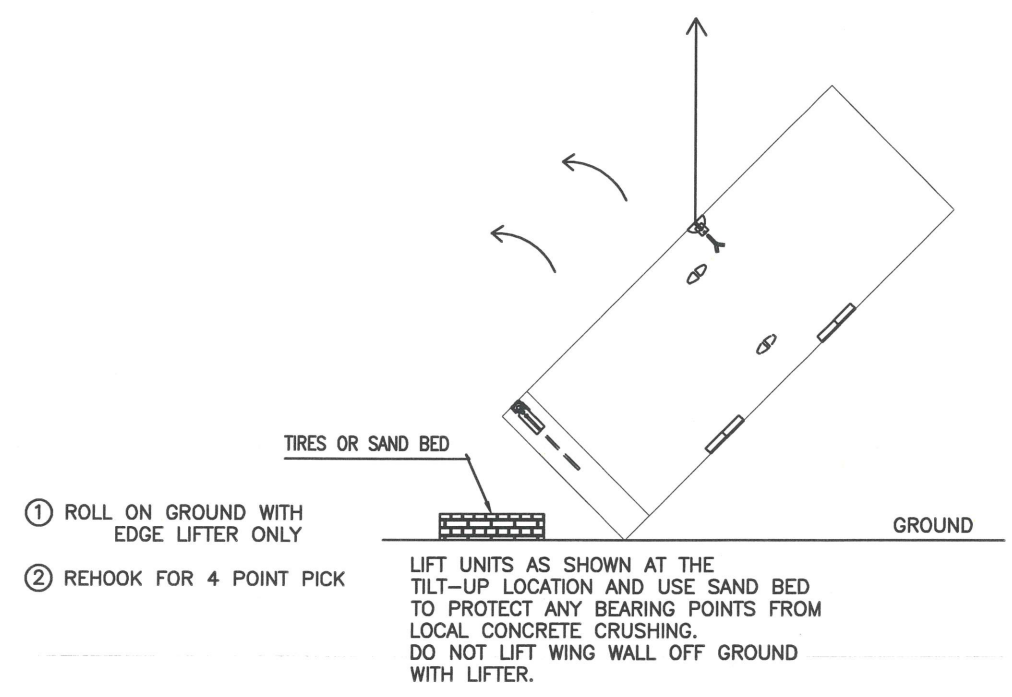
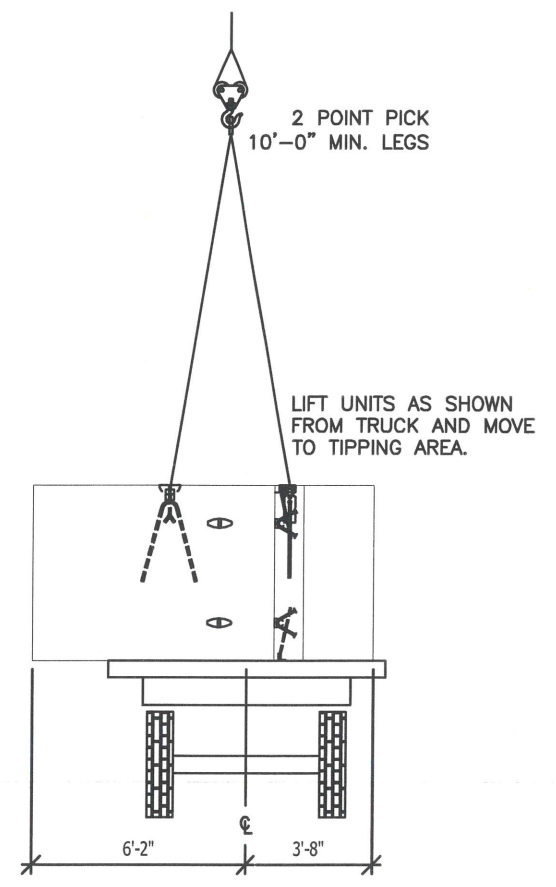
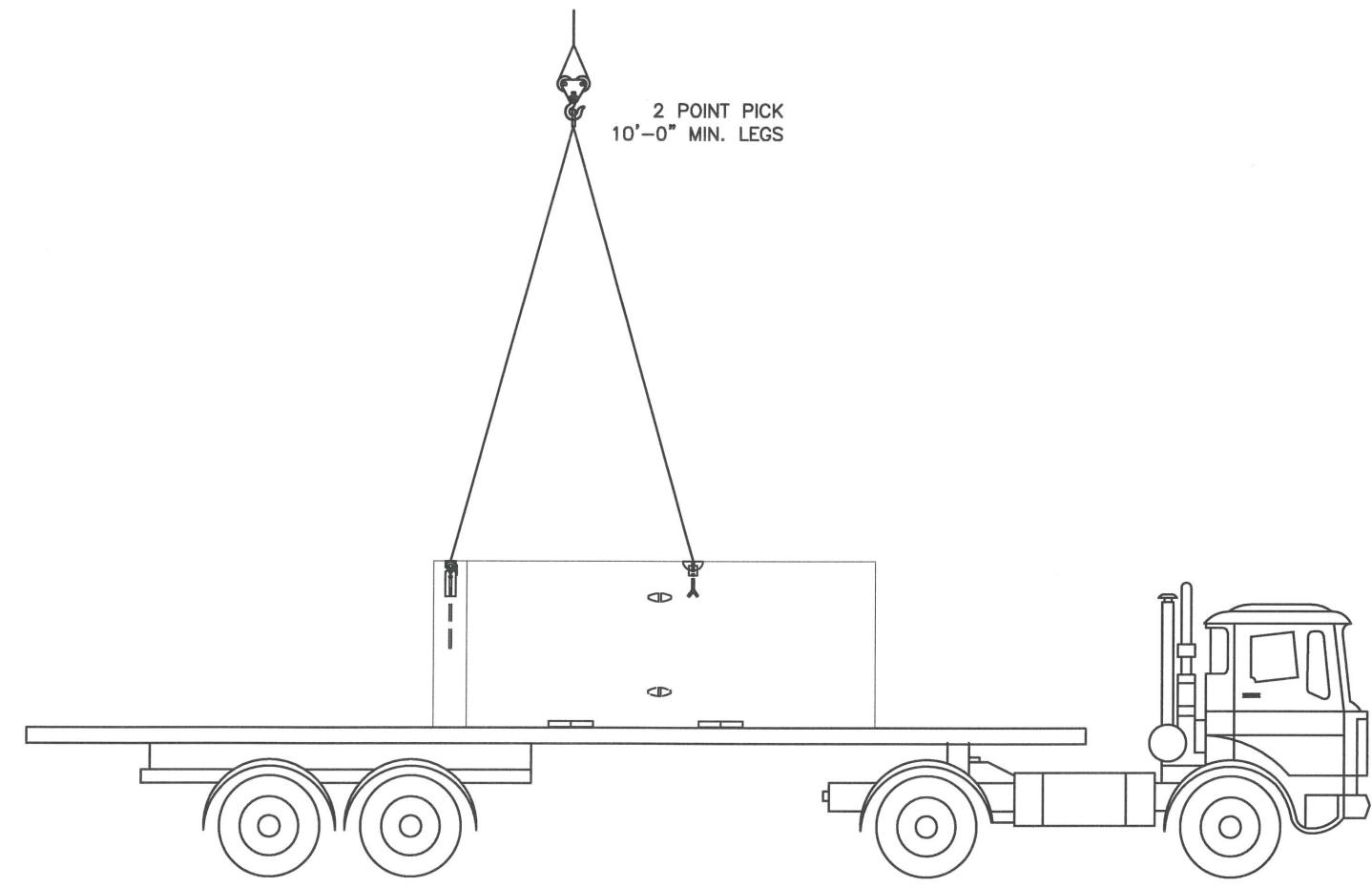
BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
	3.65 YDS	CPP MIX 5000 SCC
	138 LBS	#4 REBAR
	240 LBS	#6 REBAR
	355 LBS	#8 REBAR
A	2 EA	8T-RL-7 ERECTION ANCHOR
B	4 EA	M88671-V-Anchor-8-671
C	4 EA	EMBED ASSEMBLY (SEE DETAILS SHEET 5)

PRODUCT	WEIGHT
Wing Wall - J	14,800 LBS

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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
22' x 9' Split Box Culvert							
Centralia Alpha MP 15.79 Culvert Replacement							
Lewis County Public Works							
TITAN #	11"x17"						SHEET 17 OF 18



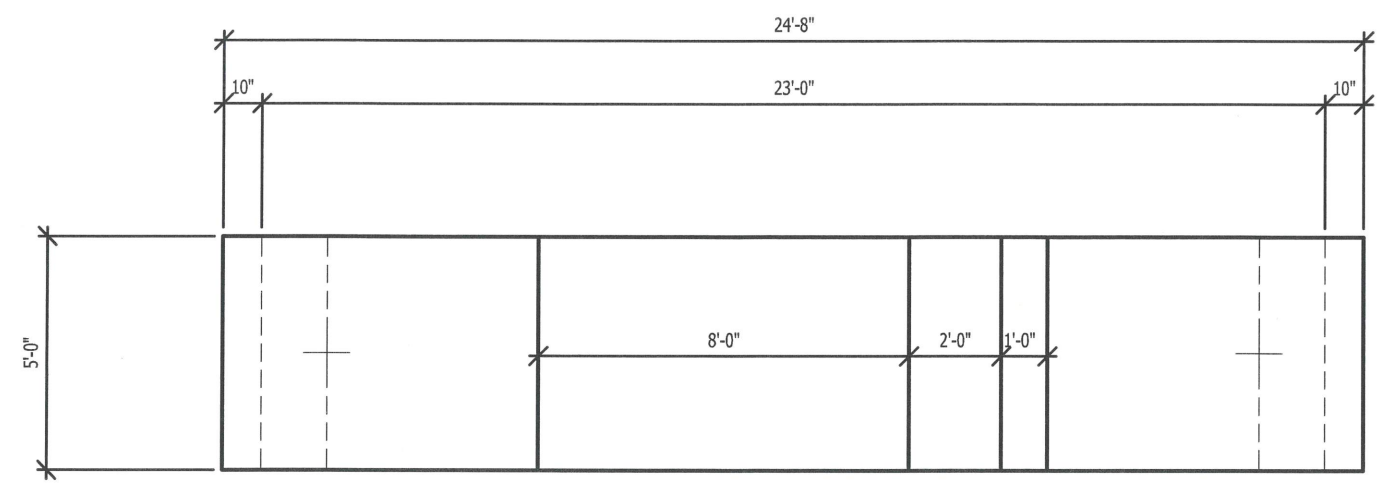
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SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED
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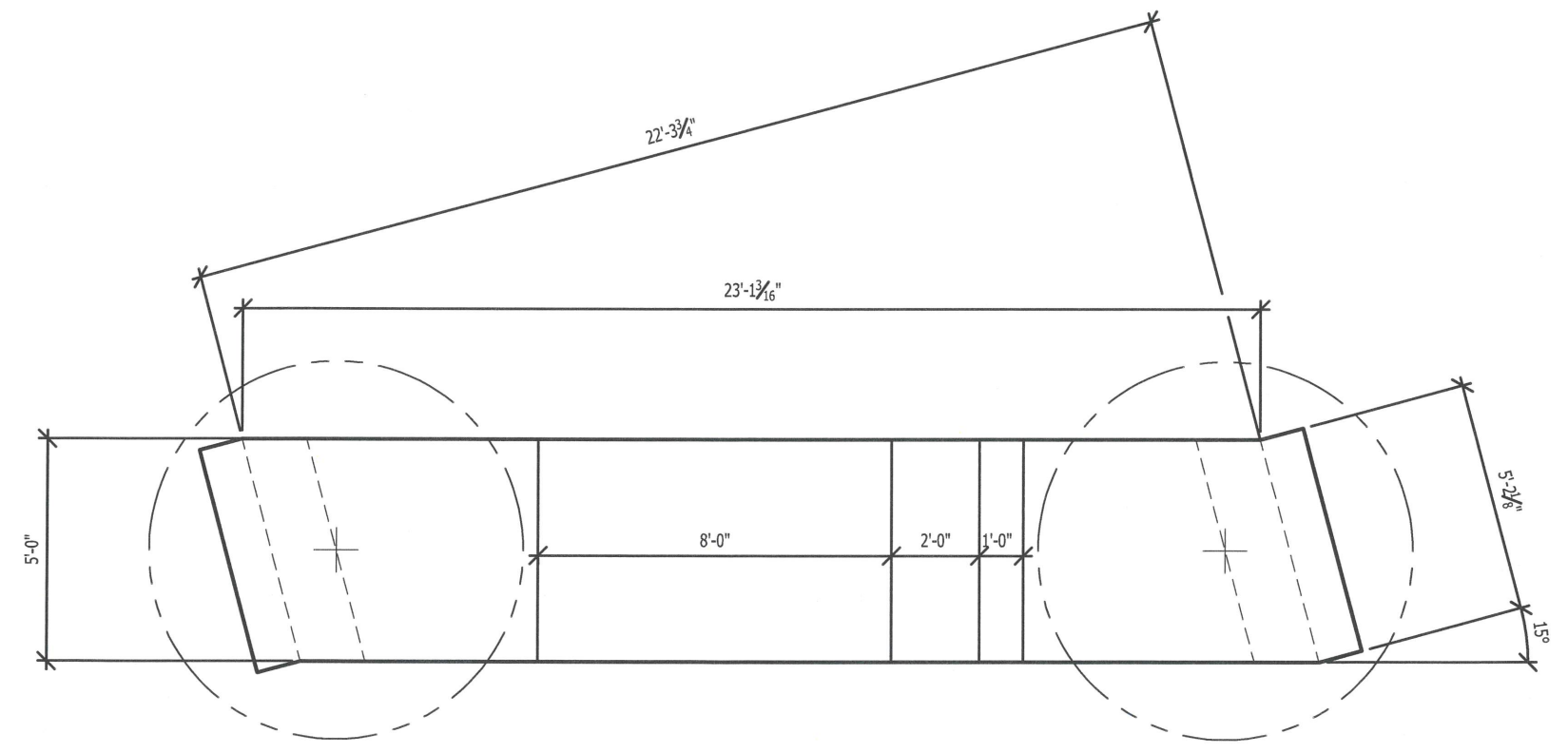
22' x 9' Split Box Culvert
Centralia Alpha MP 15.79 Culvert Replacement
Lewis County Public Works

TITAN # _____ 11"x17" SHEET 18 OF 18



STEP 1: ADD 11'-0" ADDITIONAL DECKING

SHOP NOTE:
SKEW WILL BE THE CORRECT LAYOUT
DIRECTION AFTER ROLLING PRODUCT.



STEP 2: SKEW LEGS 15° AS SHOWN

- NOTES:**
- REFER TO SHEET 1 FOR DESIGN NOTES AND TABLE OF CONTENTS.
 - REFER TO SHEET 2 FOR PRODUCT QUANTITIES AND WEIGHTS.

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(360) 335-8402 Fax www.columbiaprecastproducts.com

SALES	PB	DRAWN BY	JPM	DATE	5/4/22	SCALE	NOTED	
22' x 9' Split Box Culvert								
Centralia Alpha MP 15.79 Culvert Replacement								
Lewis County Public Works								
TITAN #							11"x17"	SHEET 18 OF 18