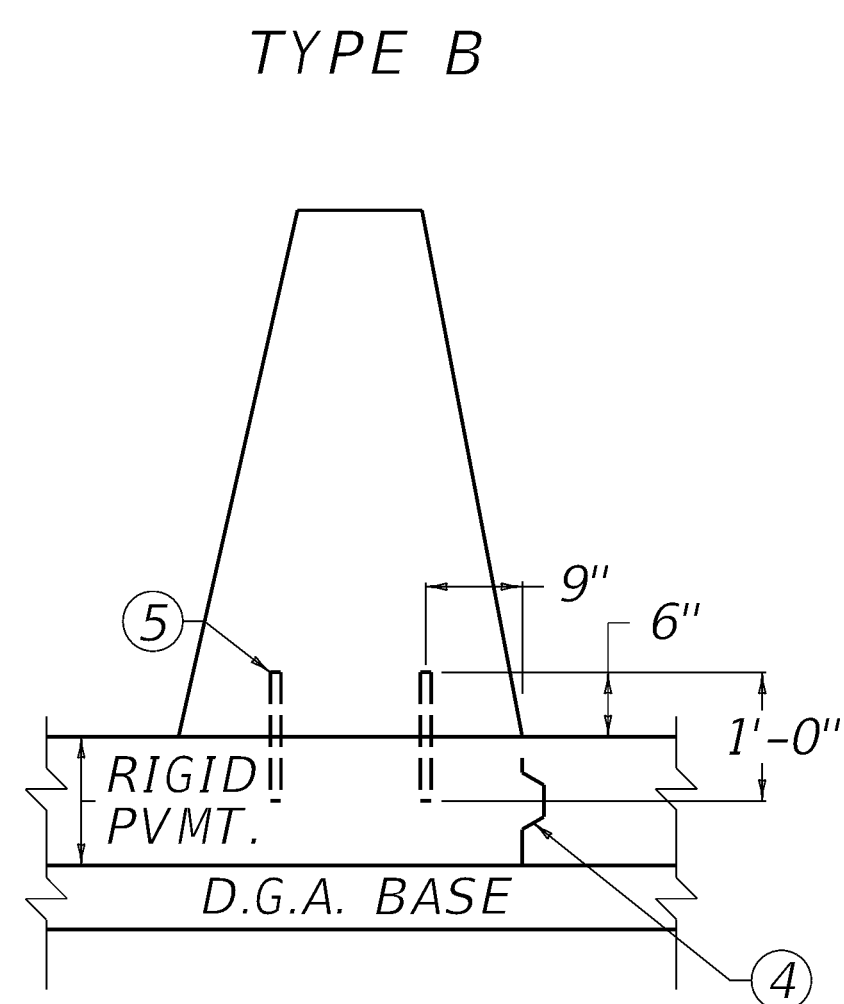
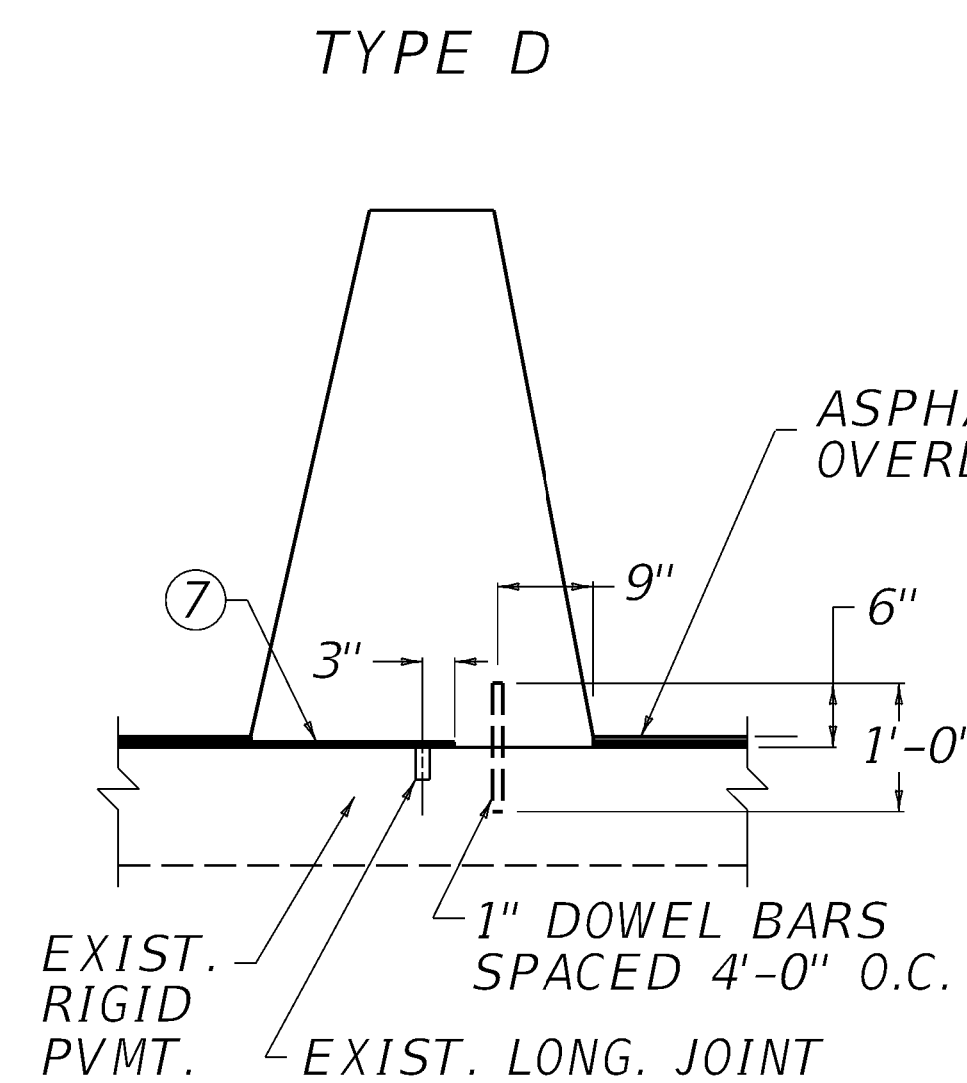
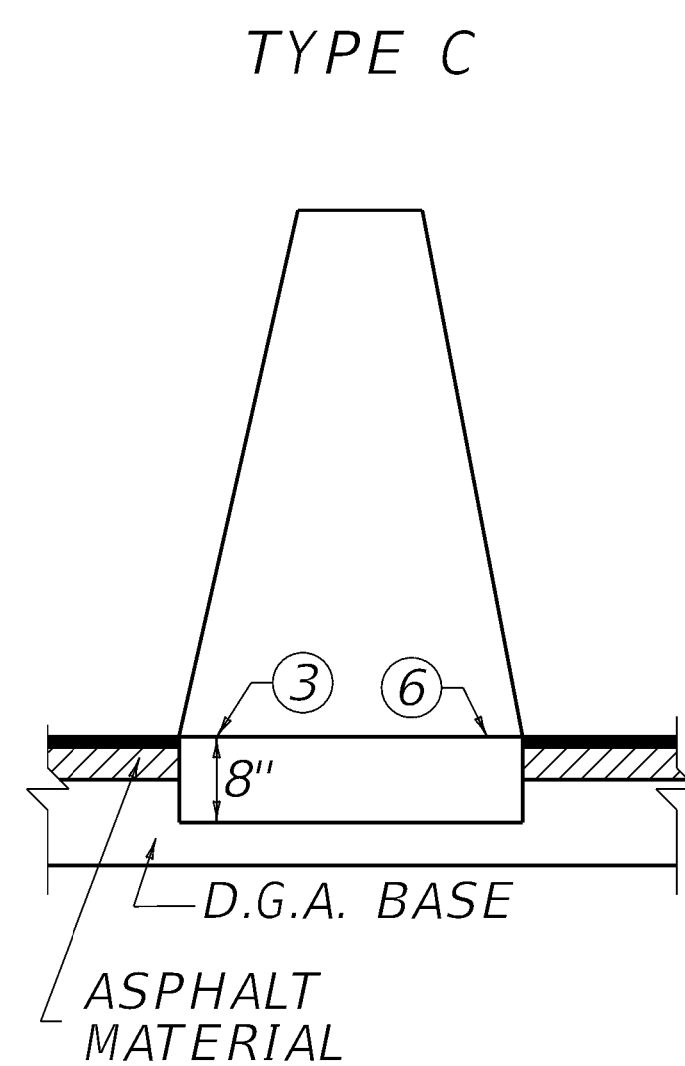


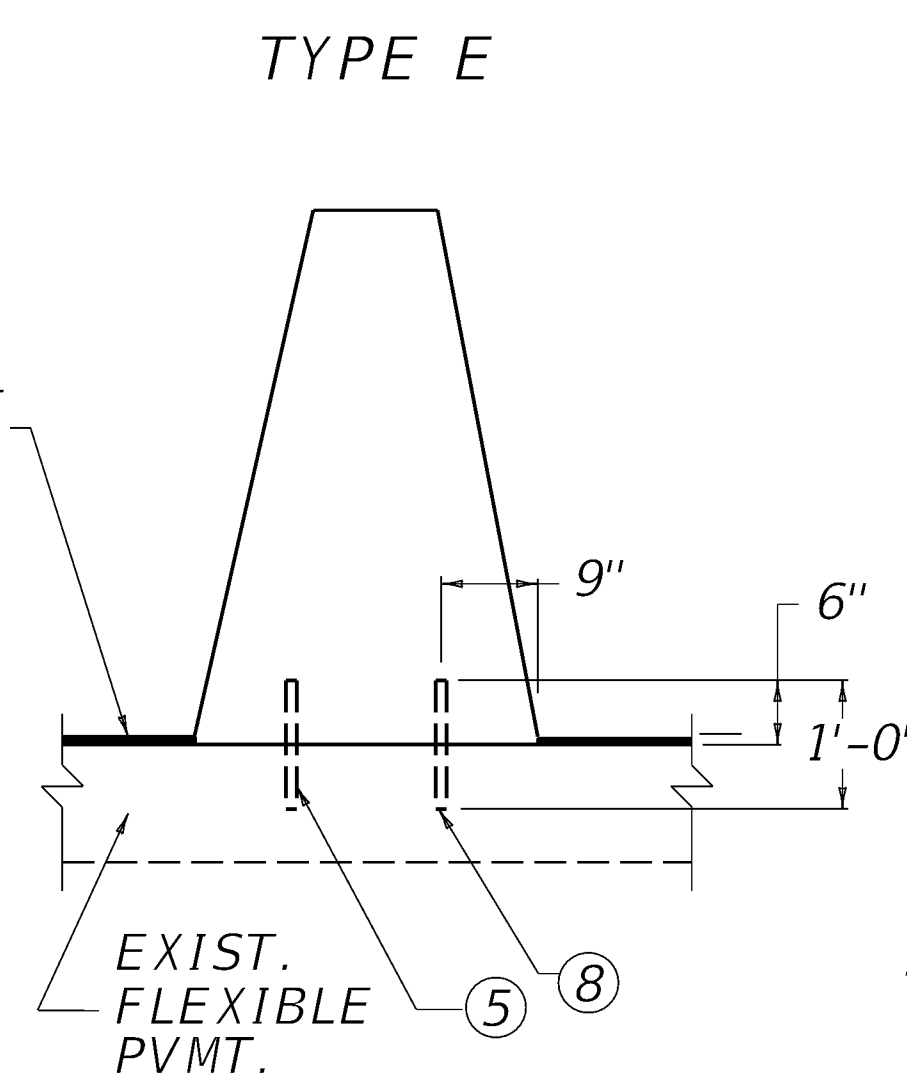
NEW RIGID PAVEMENT



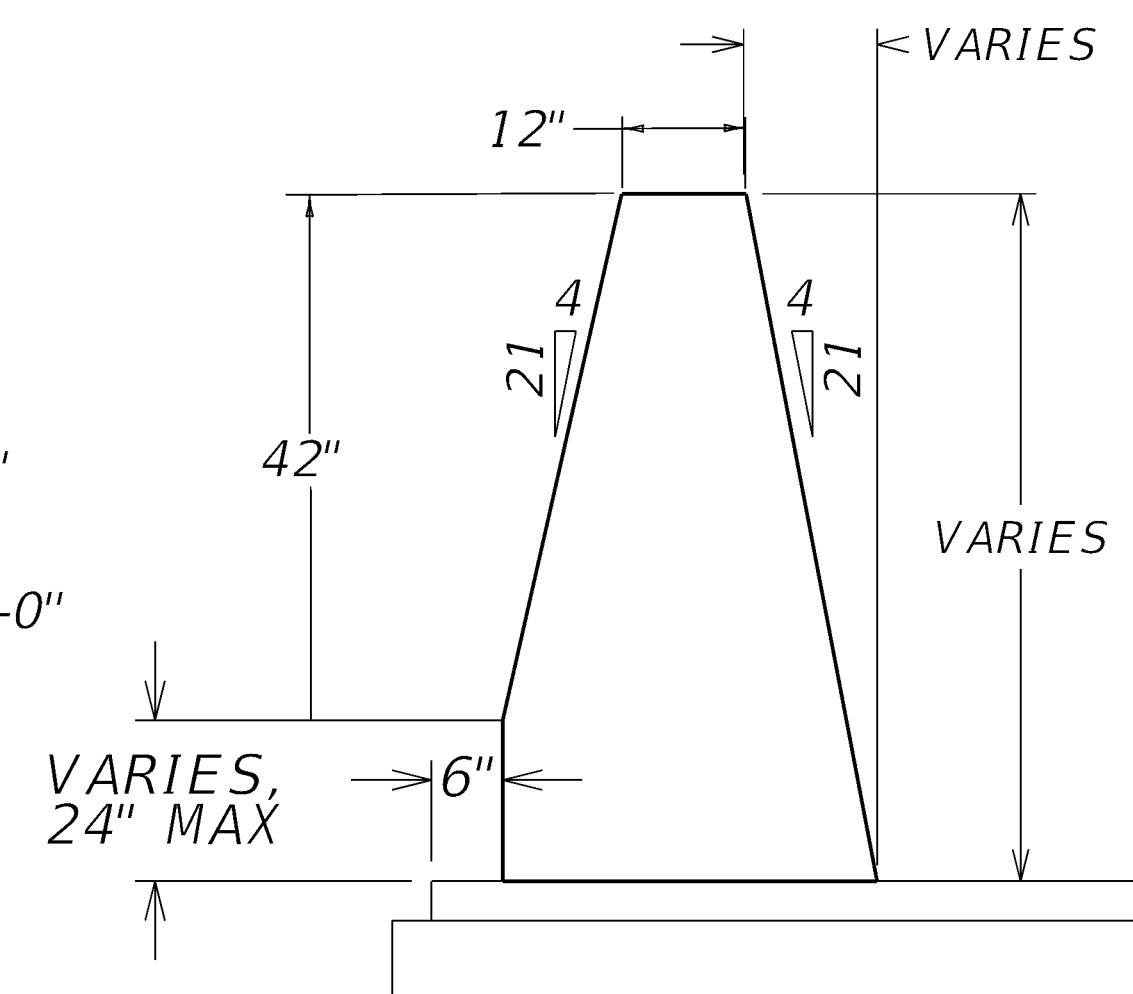
NEW FLEXIBLE PAVEMENT



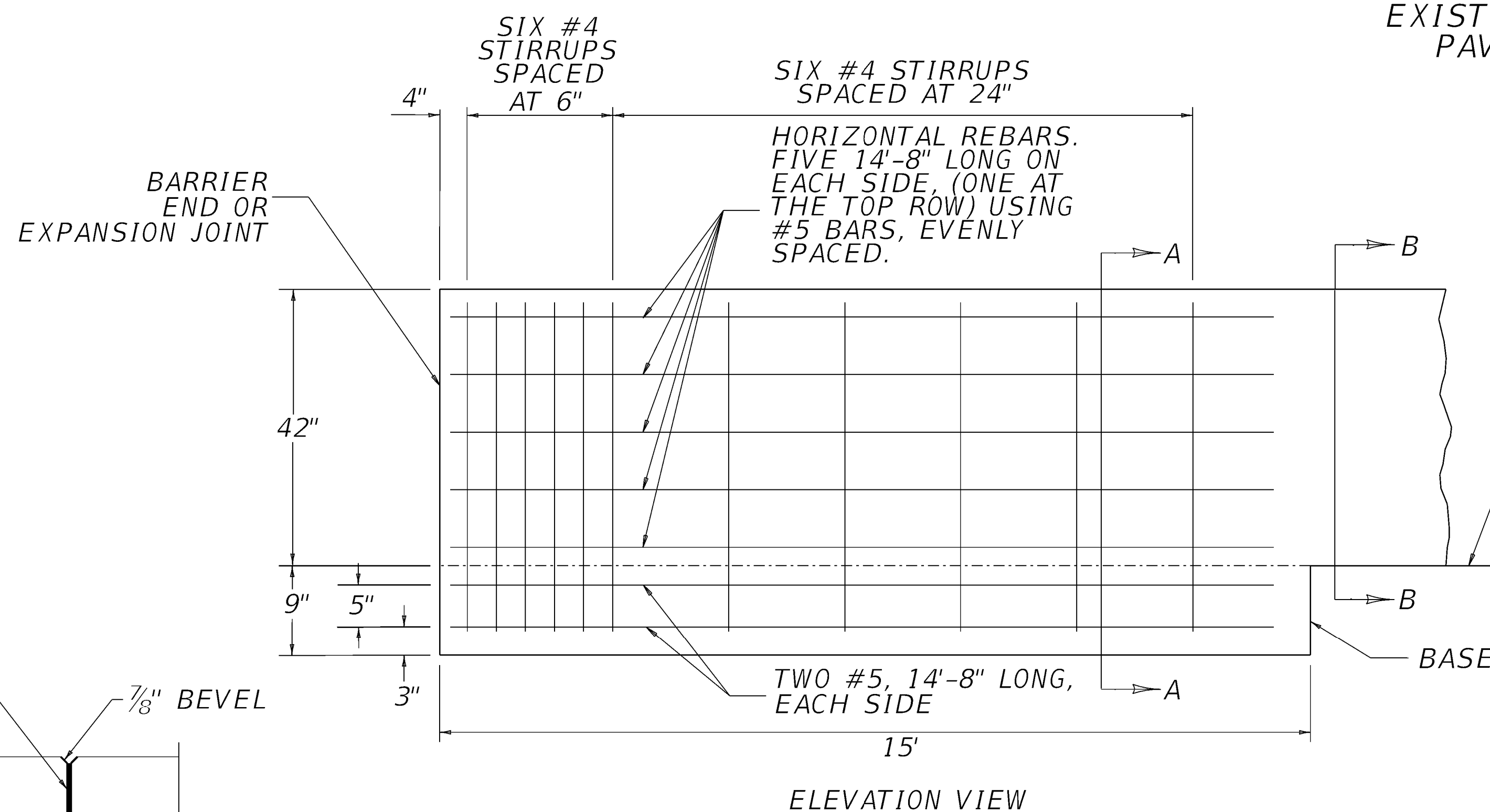
NEW FLEXIBLE OVERLAY OVER EXISTING RIGID PAVEMENT



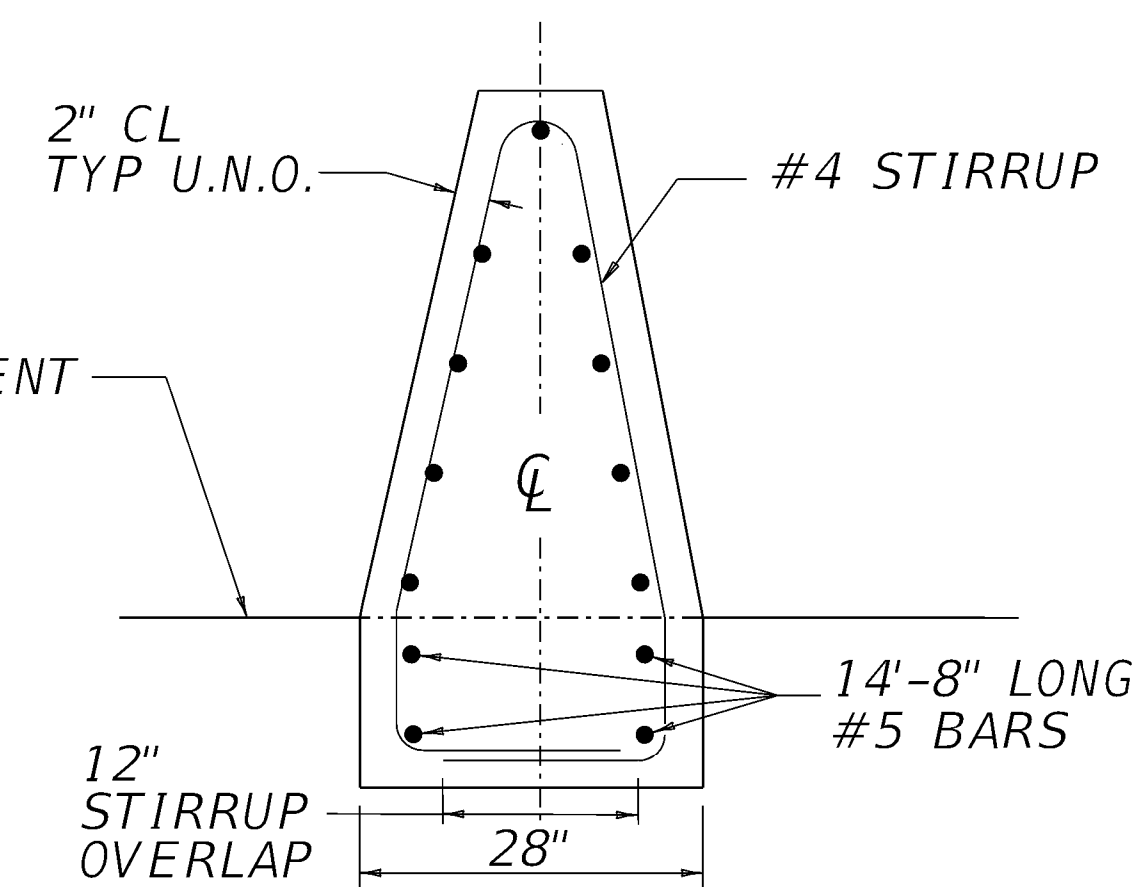
NEW FLEXIBLE OVERLAY OVER EXISTING FLEXIBLE PAVEMENT



ASYMMETRICAL WALL SECTION

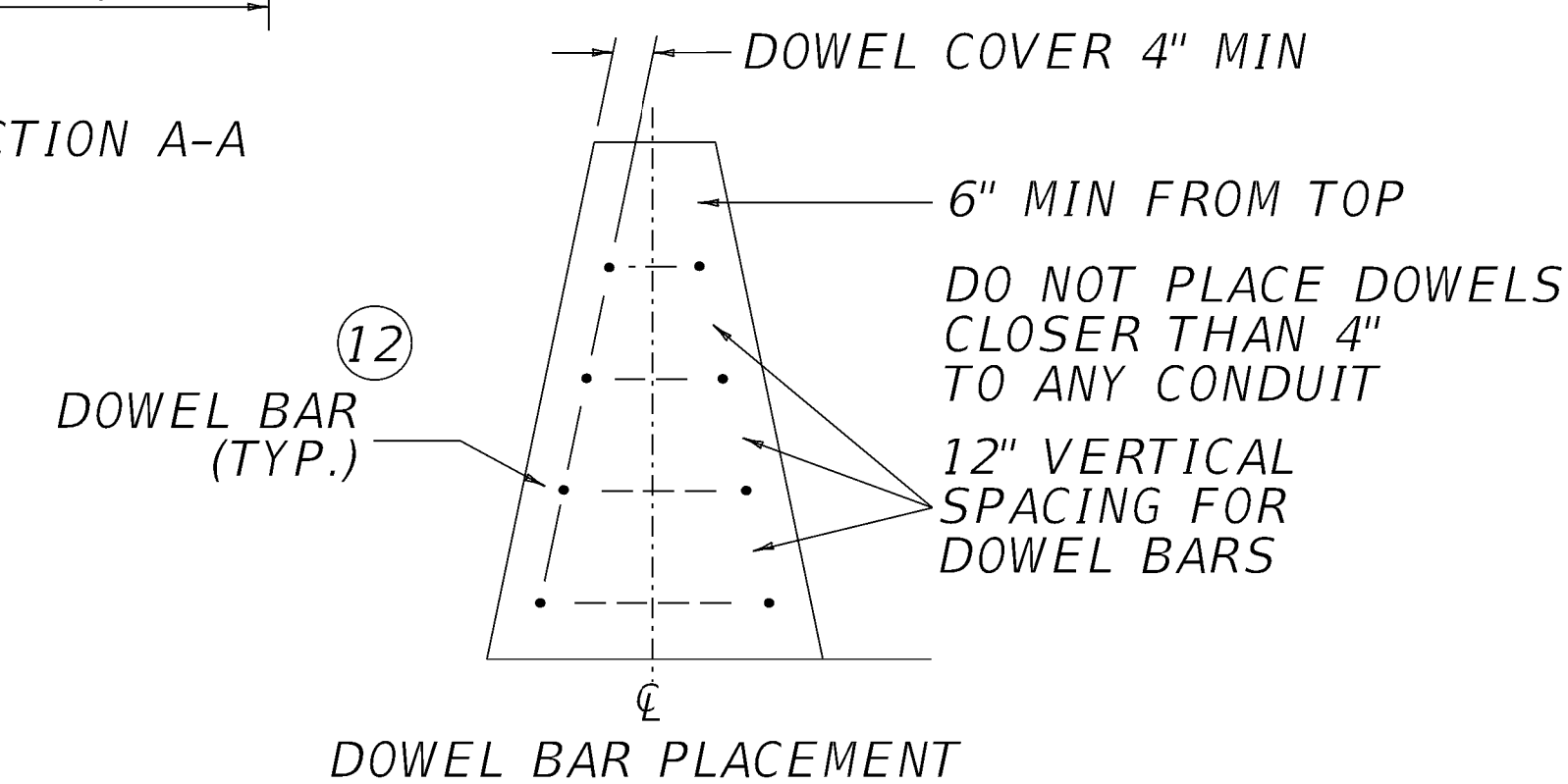


ELEVATION VIEW

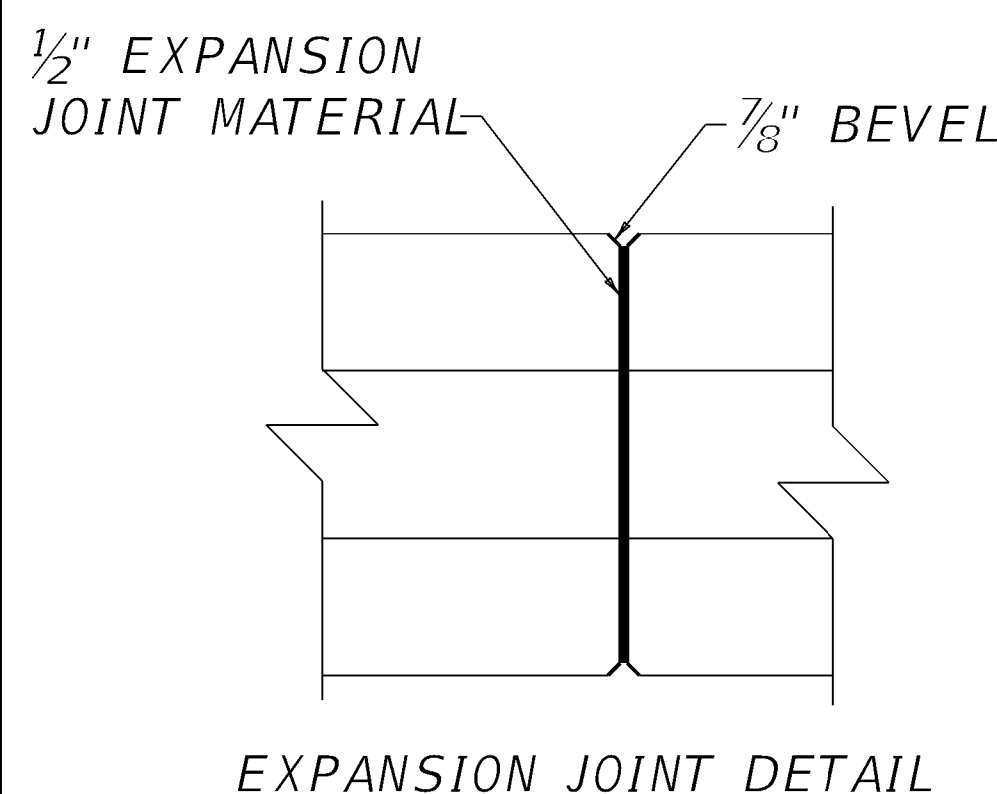


SECTION A-A

END ANCHORAGE 11



SECTION B-B CONSTRUCTION JOINT DOWEL BAR PLACEMENT



EXPANSION JOINT DETAIL

APPROXIMATE QUANTITIES PER LINEAR FOOT

TYPE	CONC.- CUYD	STEEL - LBS
A	0.28	▲ 1.34
B	0.22	1.34
C	0.28	▲ 1.34
D	0.22	0.67
E	0.22	1.34

CONCRETE QUANTITIES SHOWN INCLUDE 8" BASE THICKNESS FOR TYPE A AND C, BUT DO NOT INCLUDE QUANTITIES NECESSARY FOR ASPHALT OVERLAY THICKNESS SHOWN FOR TYPE D AND E.
▲ WHEN REQUIRED

~ NOTES ~
SEE CURRENT SHEET, SHEET 002, FOR ALL NOTES.
USE WITH CURRENT SHEET, SHEET 002.

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

SUBMITTED: 02/28/2025
DATE
DIVISION DIRECTOR
APPROVED
STATE HIGHWAY ENGINEER

BARRIERS




COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS


CONCRETE BARRIER WALLS

SHEET 001: CONCRETE MEDIAN BARRIER TL3 42 IN

SEPIA NUMBER
SEPIA 042

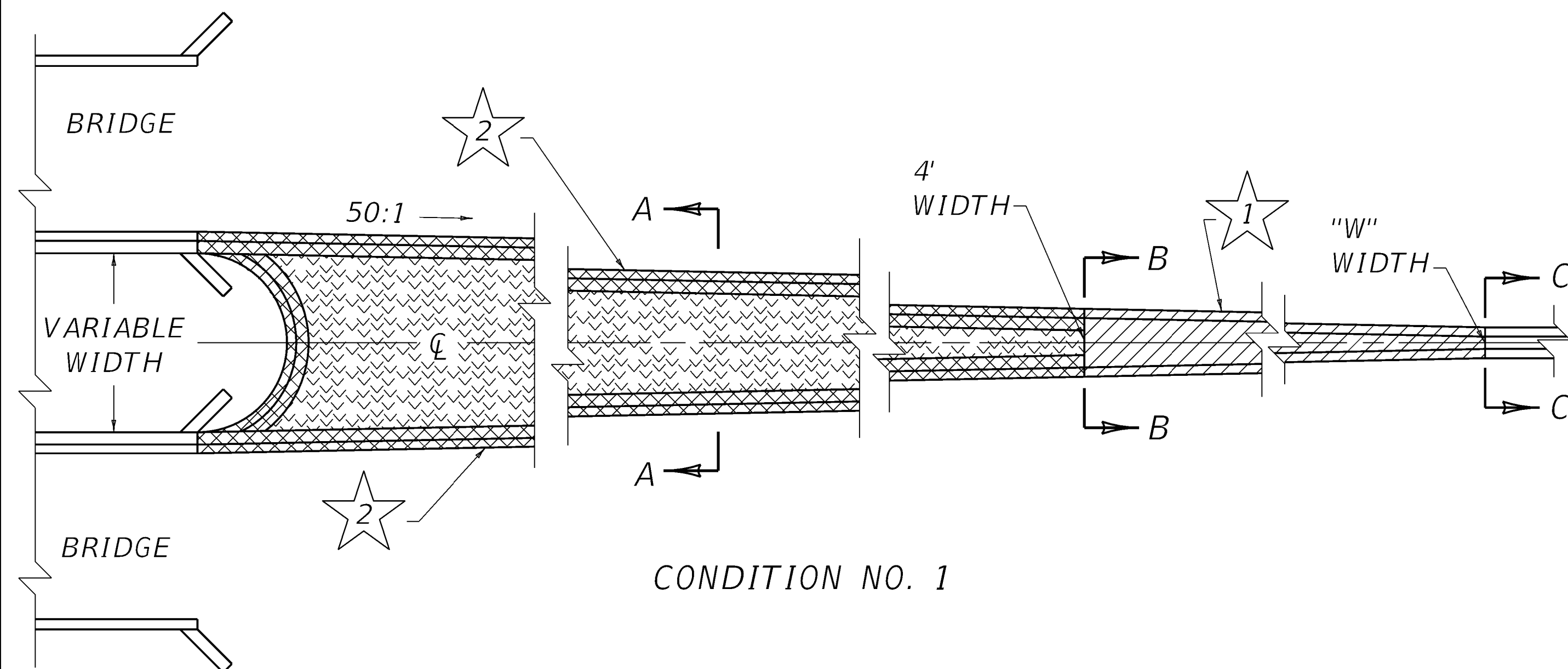
- ~ NOTES ~
- FOR WALLS IN TRANSITION AND SEPARATE SEGMENT WALLS, SEE CURRENT SHEET, SHEET 003, FOR APPROPRIATE BID ITEMS.
 - THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR CONCRETE MEDIAN BARRIER SHALL BE FULL COMPENSATION FOR ALL MATERIALS (INCLUDING THE BASE IN TYPES A AND C AND ALL REINFORCING STEEL), EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
 - WHEN A CONSTRUCTION JOINT IS USED, DOWEL BARS WILL BE REQUIRED AS SHOWN WITH TYPE B BARRIER. SEE NOTE 5.
 - LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS IS REQUIRED AND SHALL BE PLACED AT THE LOCATION SHOWN OR MAY BE INSTALLED AT THE CORRESPONDING POINT ON THE OPPOSITE SIDE OF THE BARRIER, AT THE OPTION OF THE CONTRACTOR. IT SHALL BE REQUIRED ON THE LOW SIDE OF A SUPERELEVATED SECTION. CONSTRUCTION JOINT PERMITTED WHEN FIXED FORMS OR SLIP FORMS ARE USED.
 - 1" DOWEL BARS SPACED 4'-0" O.C. AND STAGGERED 2'-0".
 - POLYETHYLENE (6 MILS THICK) BOND BREAKER.
 - PAVEMENT SHALL BE DRILLED AND BARS GROUTED.
 - BARS SHALL BE EITHER DRILLED AND GROUTED OR DRIVEN.
 - 3" RACEWAY (TYPICAL) SEE ELSEWHERE IN THE PLANS FOR LOCATION AND PAYMENT FOR RACEWAY WHEN REQUIRED.
 - CONSTRUCT 42" CONCRETE MEDIAN BARRIER USING CONCRETE CLASS AA WITH A STRENGTH OF 4000PSI.
 - REINFORCED END ANCHORAGES ARE REQUIRED AT THE ENDS OF CONCRETE BARRIER RUNS. CONSTRUCT THE LAST 15' USING THE END ANCHORAGE DETAIL AS SHOWN HERE. AT EXPANSION JOINTS, CONSTRUCT AN END ANCHORAGE ON BOTH SIDES OF JOINT, WITH A MAX GAP OF 2" FOR THE OPEN JOINT. THE MAX EXPANSION JOINT SPACING SHALL BE 800'. THIS ANCHORAGE IS NOT NEEDED AT CONSTRUCTION JOINTS.
 - BARRIER RUNS WITH ABUTTING VERTICAL SURFACES AT EITHER REQUIRED OR PERMISSIBLE CONSTRUCTION JOINTS ARE TO BE DOWELED TO EACH OTHER BY USE OF $\frac{3}{4}$ " DIAMETER BY 18" LONG EPOXY COATED DEFORMED DOWEL BARS. BARS ARE TO BE PLACED AS SHOWN ON THE DOWEL BAR PLACEMENT DETAIL ON SEPIA 018. PROVIDE A 4" CLEARANCE TO BARRIER SURFACES AND TO ANY RACEWAYS. PAYMENT FOR DOWELS IS INCIDENTAL TO THE BID ITEM.
 - CONSTRUCT USING EPOXY COATED REINFORCEMENT THROUGHOUT WHEN MEDIAN BARRIER IS INSTALLED ON A STRUCTURE.

BID ITEM AND UNIT TO BID
CONC MEDIAN BARRIER TYPE  TL3 42" LF

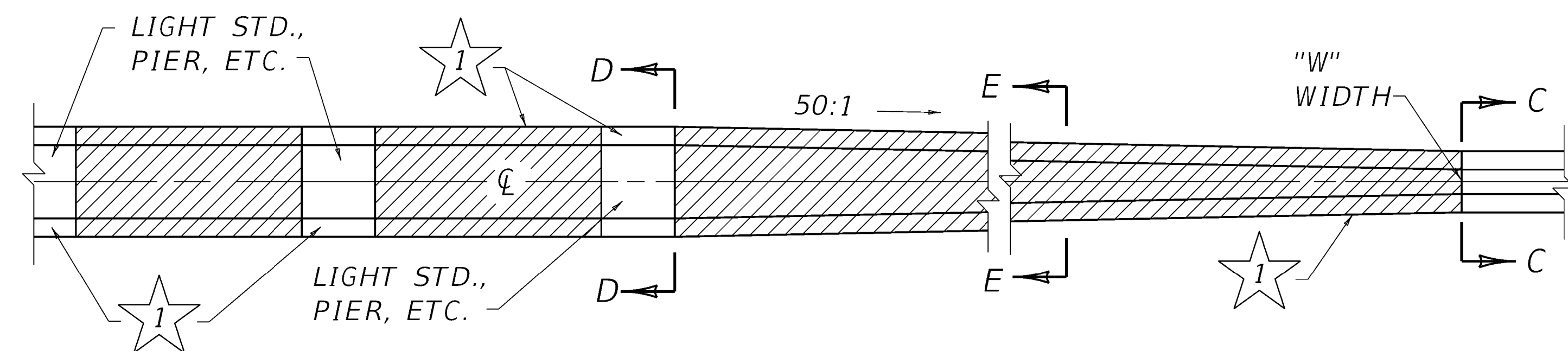
 A, B, C, D, OR E DEPENDING ON PAVEMENT TYPE.

USE WITH CURRENT SHEETS, SHEET 001 AND SHEET 003.

BARRIERS



CONDITION NO. 1





CONDITION NO. 2


~ NOTES ~

1. TRANSITION CONDITION NO. 1, 2 AND 3 ALONG WITH SYMMETRICAL AND ASYMMETRICAL BARRIER SECTIONS ARE DEPICTED ON THIS DRAWING FOR ILLUSTRATION PURPOSES ONLY AT STRUCTURES AND FIXED OBJECTS. (SEE PLANS FOR ADDITIONAL DETAILS)
2. ALL PAVEMENT, FILL MATERIAL, PIPE DRAINAGE (EXCLUSIVE OF WEEP HOLE PIPE) PLACED BETWEEN SEGMENTS OF THE BARRIER SHALL BE SHOWN SEPARATELY OR INCLUDED WITH OTHER LIKE PAY ITEMS ON THE PROJECT.
3. FOR APPLICATION DETAILS TO NEW OR EXISTING PAVEMENT SEE CUR. SHEET, SHEET 001.
- ④ SEE ELSEWHERE IN PLANS FOR SIZE, LOCATION AND PAYMENT FOR RACEWAY WHEN REQUIRED.
- ⑤ 4" PIPE FOR WEEP HOLES SPACED ON 20' CENTERS AND STAGGERED 10' WITH EACH WALL.

BID ITEM AND UNIT TO BID:

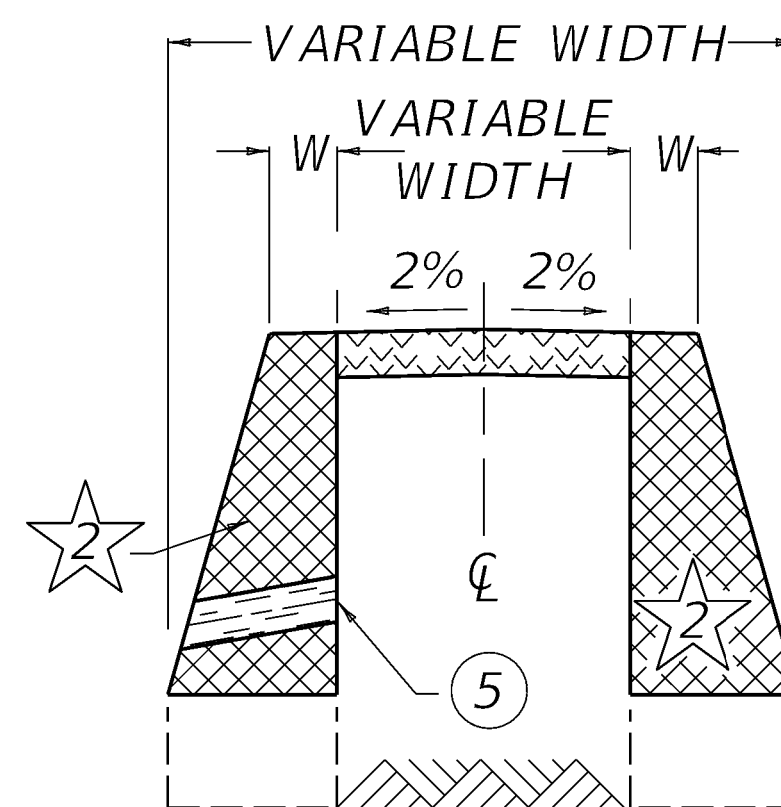
CONCRETE MEDIAN BARRIER TYPE   TL3 42" LF

 A, B, C, D OR E DEPENDING ON PAVEMENT APPLICATION.

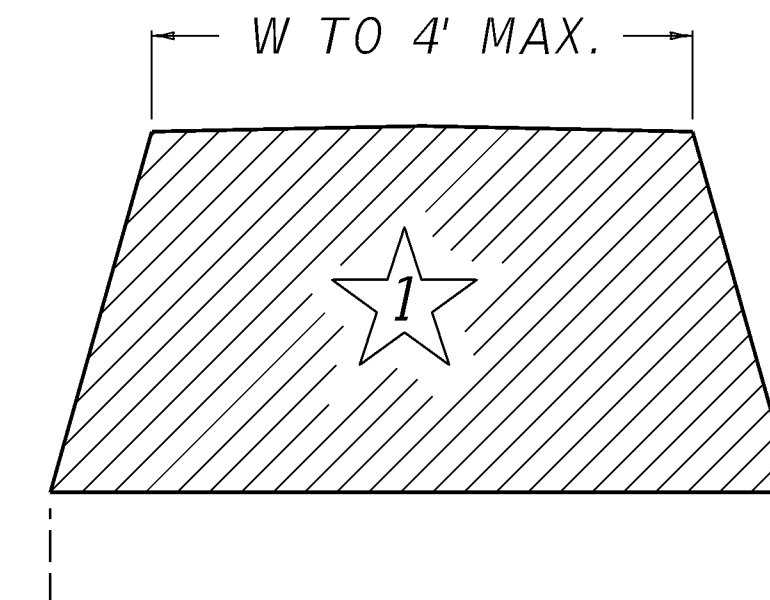
 1 = SOLID SEGMENT- DENOTES BARRIER WALL WITH:
a. TRANSITION FROM "W" WIDTH TO MAX. WIDTH OF 4'.
b. CONSTANT WIDTH WALL GREATER THAN "W" WIDE BUT NOT GREATER THAN 4' WIDE. (EX.: WALL BETWEEN BRDG. PIERS).
2 = SEPARATE SEGMENT

THE METHOD OF MEASUREMENT FOR CONCRETE MEDIAN BARRIER FOR EACH TYPE WILL BE IN LINEAR FEET MEASURED ALONG THE TOP CENTERLINE OF THE BARRIER.

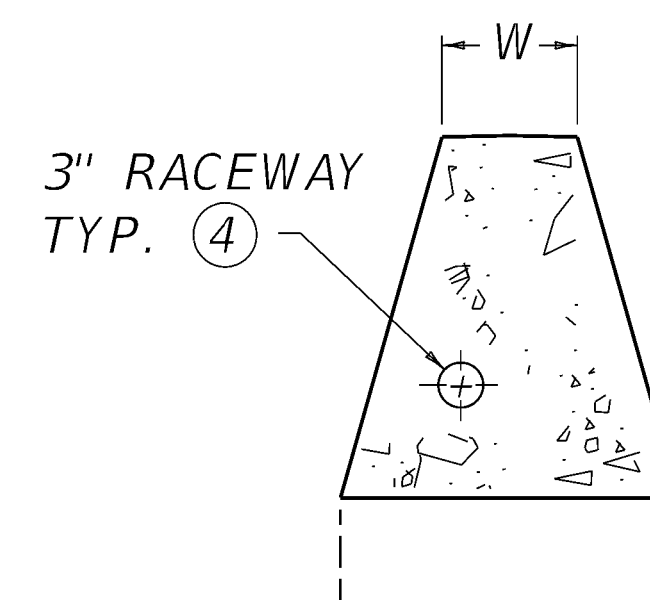
USE WITH CURRENT SHEET, SHEET 001.



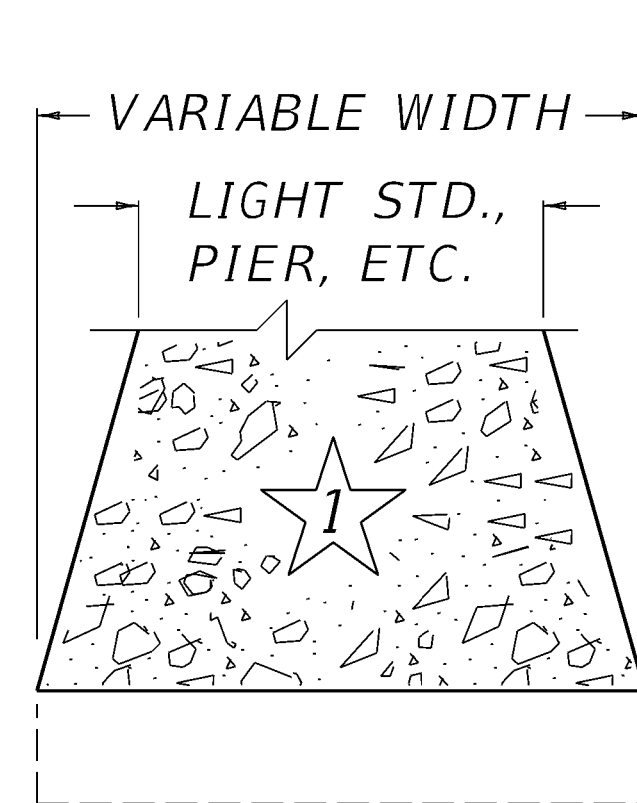
SECTION A-A



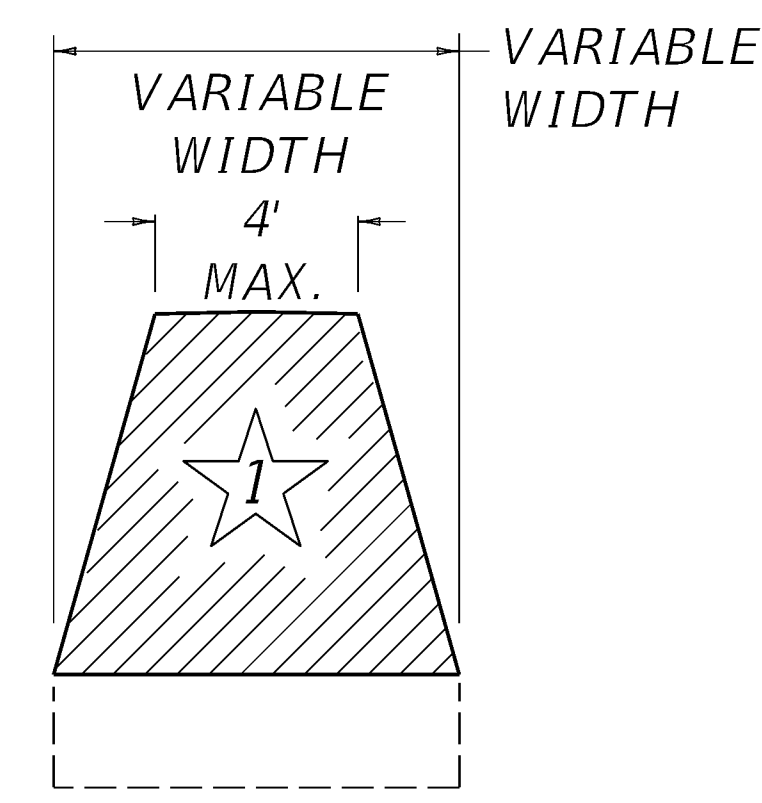
SECTION B-B



NORMAL SECTION C-C



SECTION D-D



SECTION E-E



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE BARRIER WALLS

SHEET 003: CONCRETE MEDIAN BARRIER TL3 42 IN
HORIZONTAL TRANSITIONS

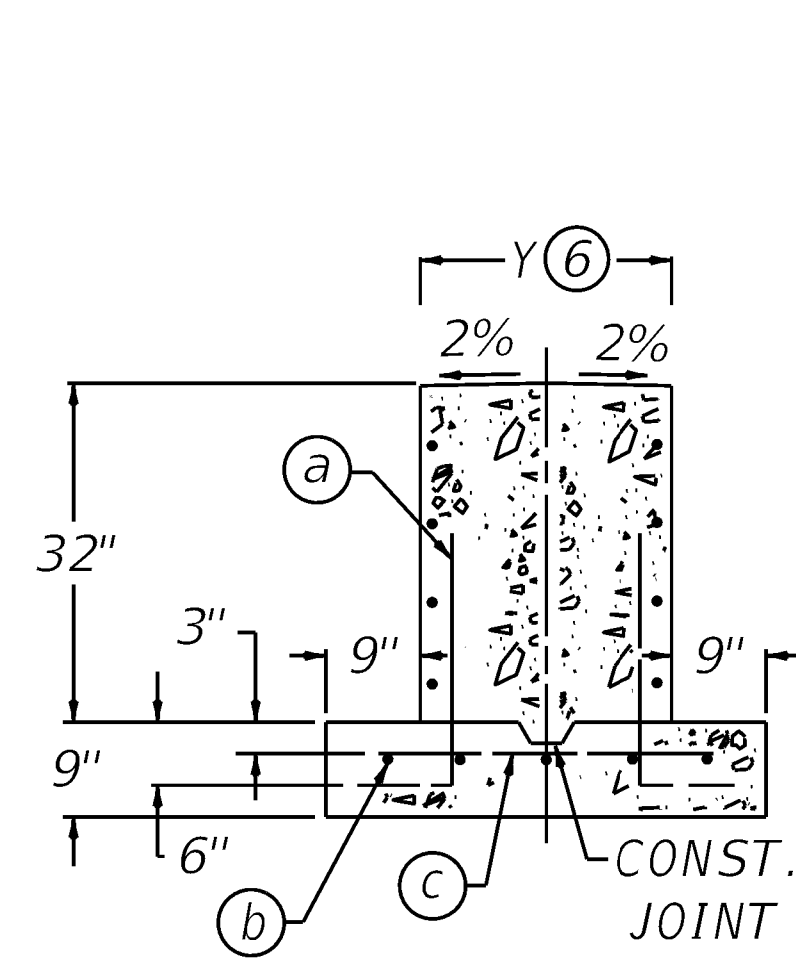
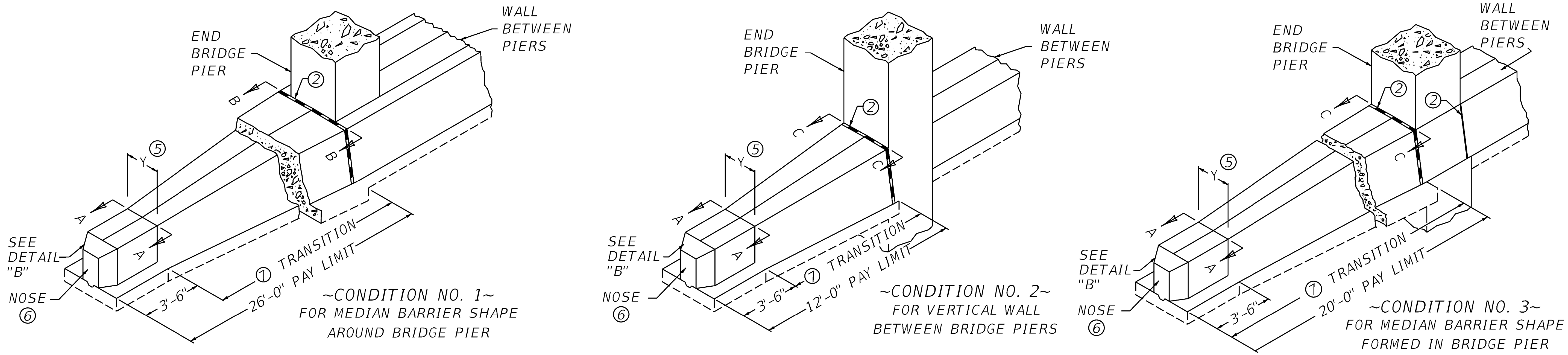
SEPIA NUMBER
SEPIA 042

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

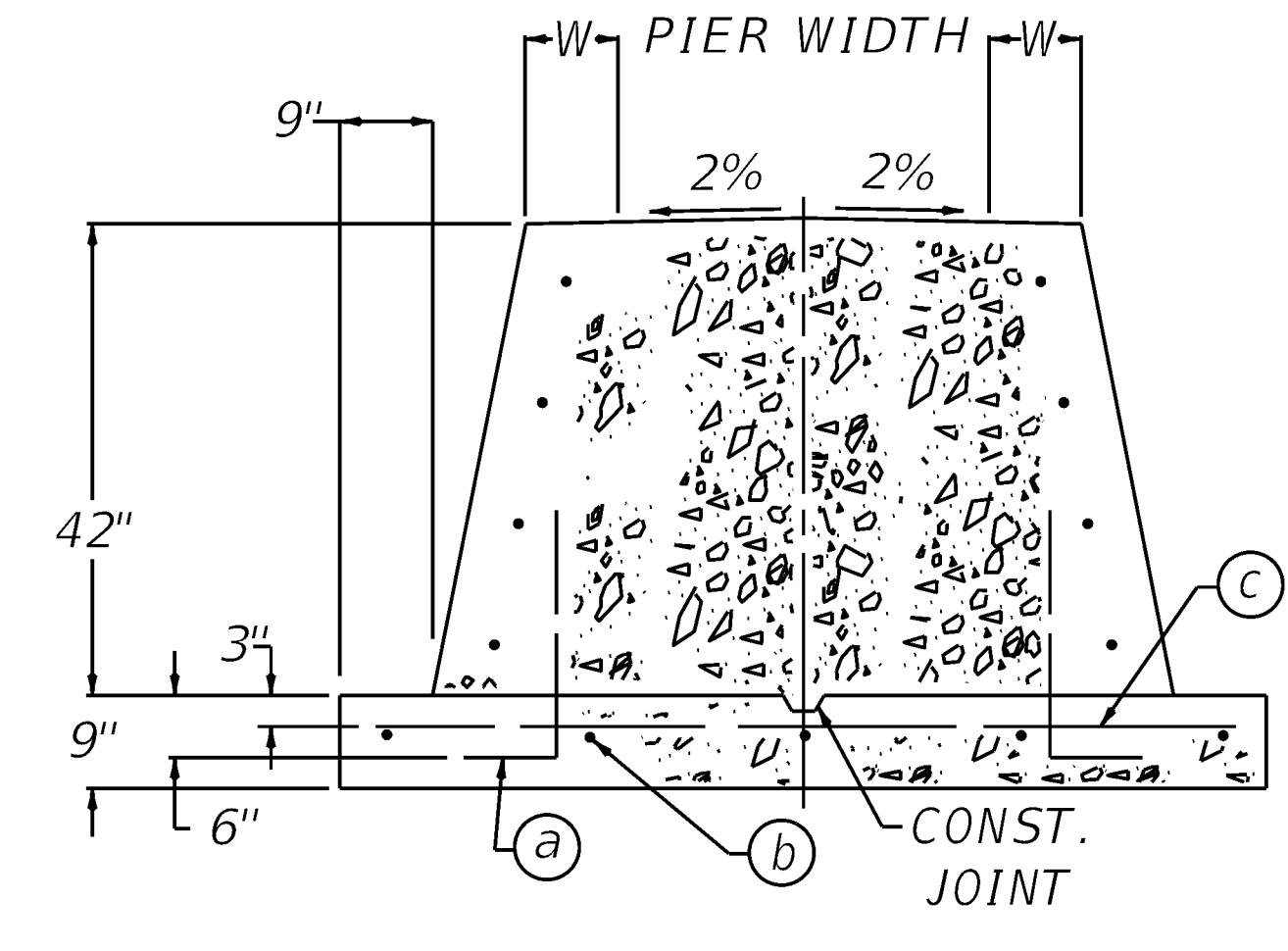
SUBMITTED *W. J. Jayne* 02/28/2025
DIVISION DIRECTOR DATE

APPROVED _____ DATE
STATE HIGHWAY ENGINEER

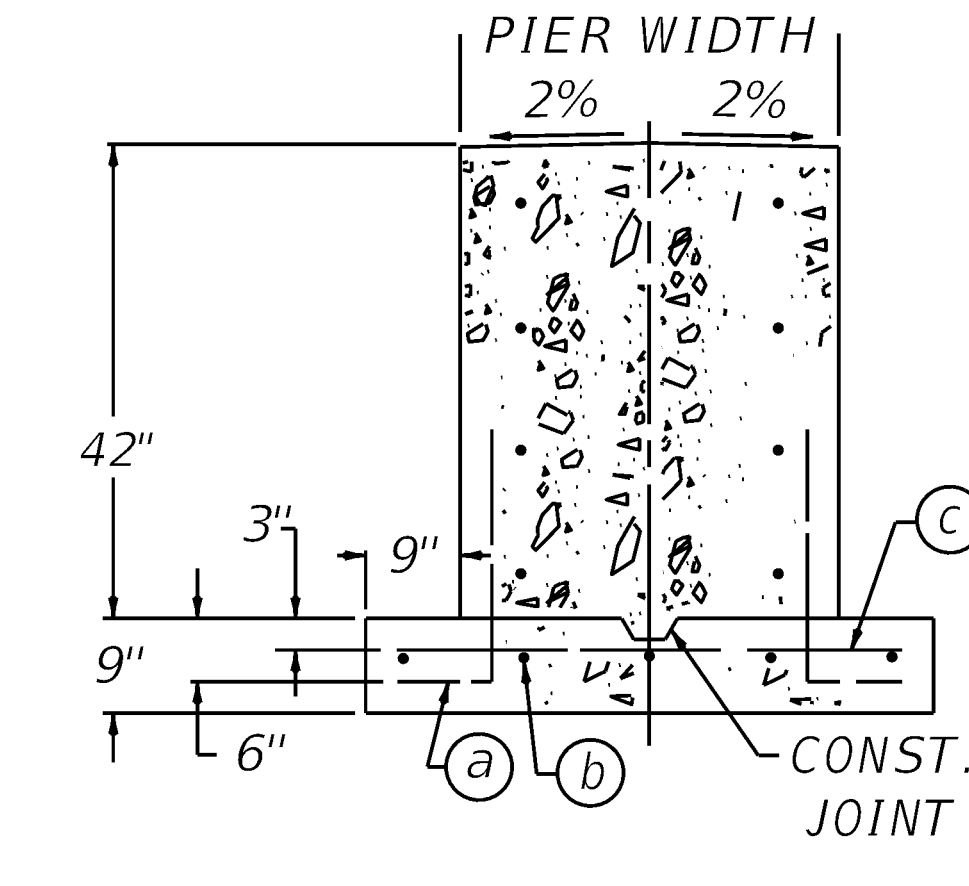
BARRIERS



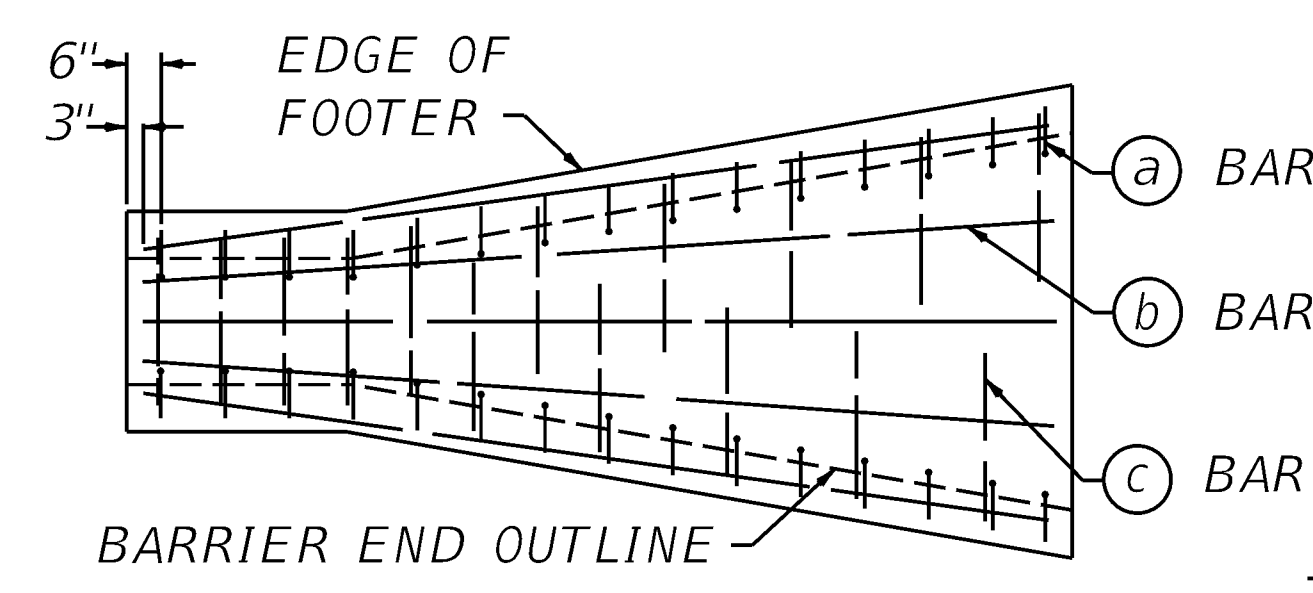
SECTION A-A



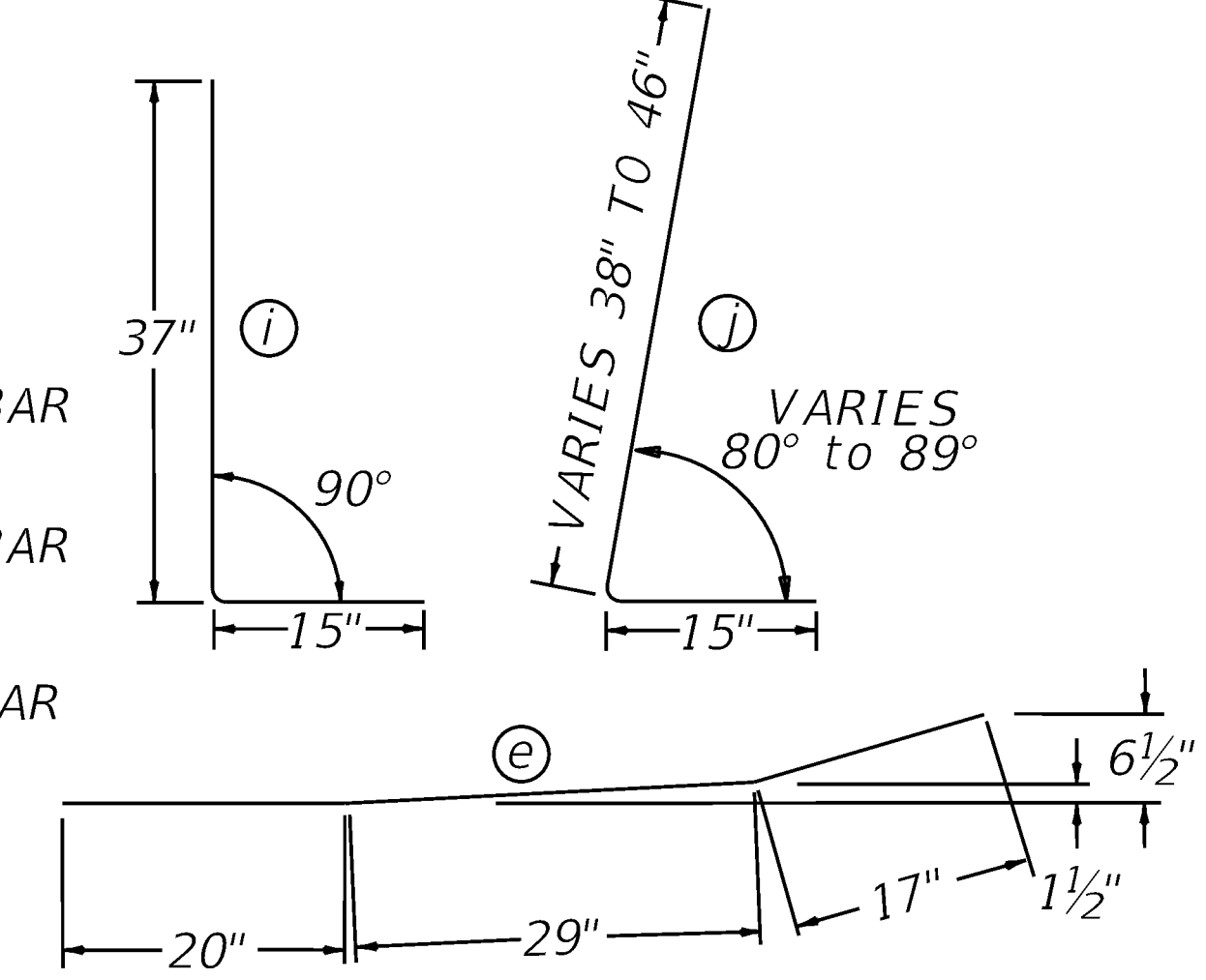
SECTION B-B



SECTION C-C



TYPICAL STEEL PLACEMENT

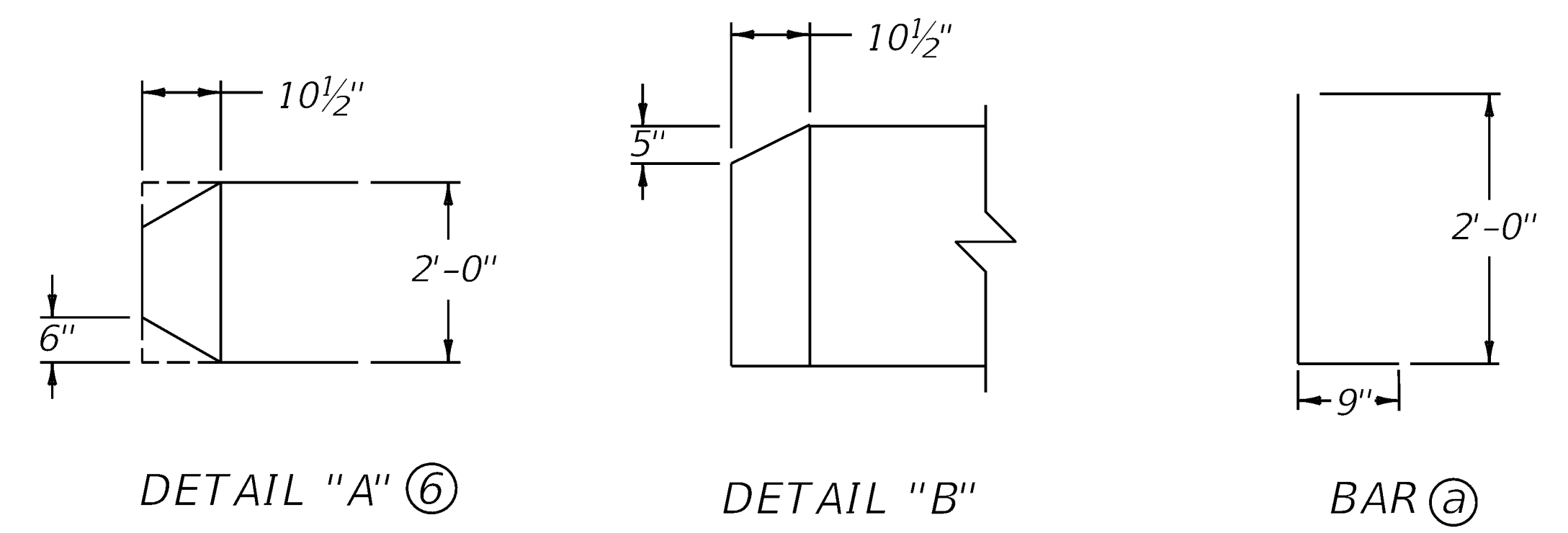


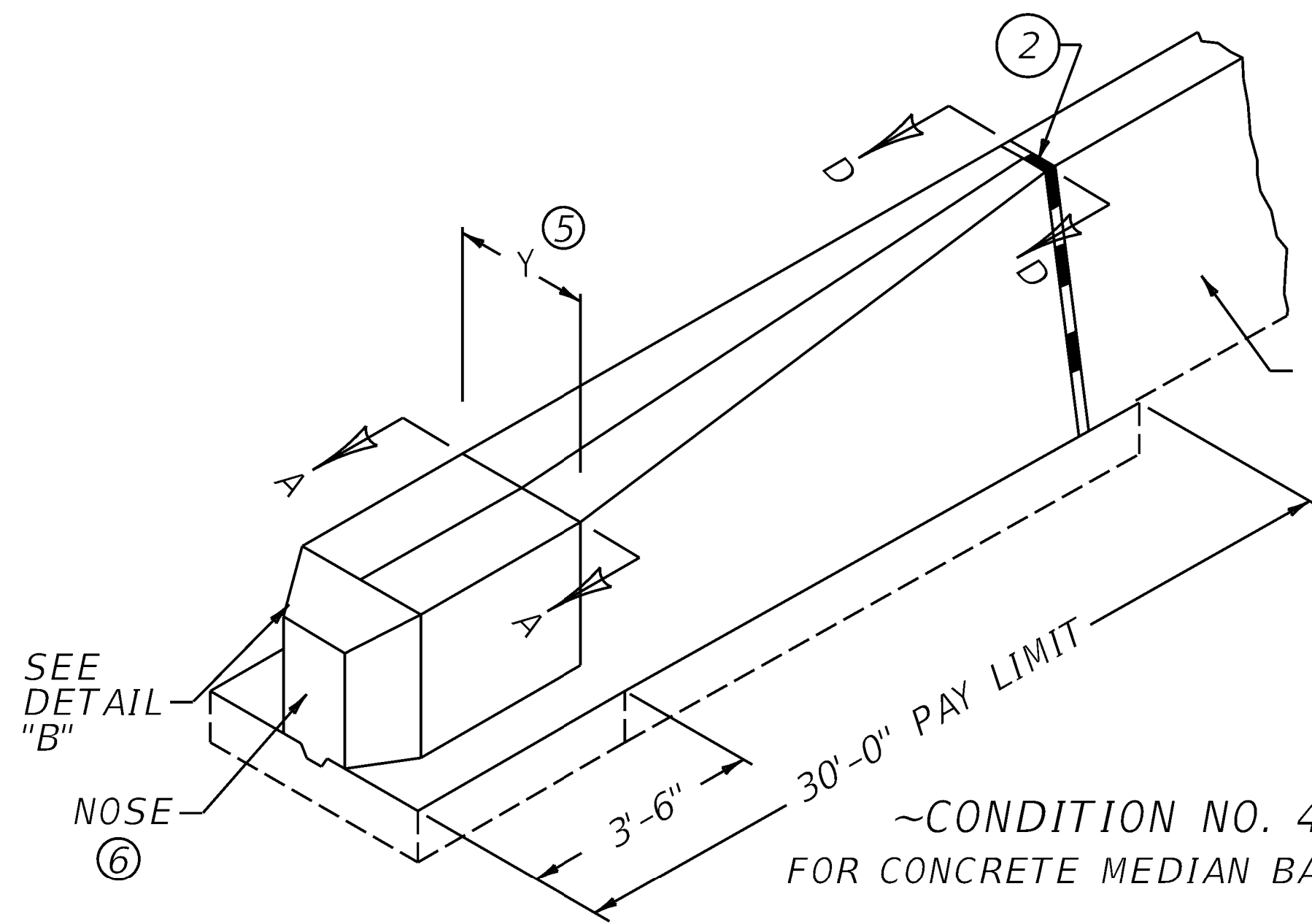
BENDING DIAGRAMS

CONDITION NO.	NO. 5 STEEL REINFORCEMENT BARS										CUBIC YARD (4) CLASS "A" CONC.		
	W	BAR (a)		BAR (b)		BAR (c) Y=1'-6"		BAR (c) Y=2'-0"		Y=2'-0"	Y=1'-6"		
		QTY.	LGTH.	QTY.	LGTH.	QTY.	LGTH.	LBS.	QTY.			LGTH.	LBS.
1	6"	52	2'-9"	5	25'-8"	52	2'-8"	429	52	3'-2"	456	13.35	12.41
2	-	24			11'-8"	24		197	24		210	4.46	3.98
3	-	40			19'-8"	40		329	40		350	7.70	6.96

(d) SEE NOTE 7 ON SHEET 005 FOR LONGITUDINAL DOWELS

~NOTES~
SEE CURRENT SHEET, SHEET 005, FOR ALL NOTES.
USE WITH CURRENT SHEET, SHEET 005.





BRIDGE TERMINAL
ASSEMBLY OR IMPACT
ATTENUATOR

CONCRETE END
FLARE (4:1 TAPER)

FACE OF RAIL

FACE OF CURB

PCJ

BASE

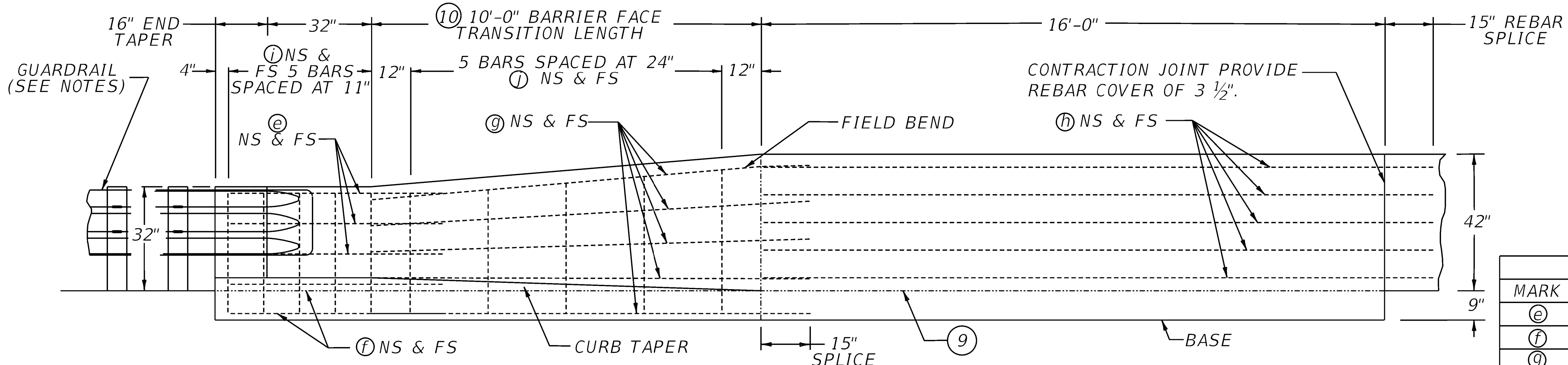
CONCRETE
BARRIER

TOP
WIDTH
12"

BASE

PLAN
(REINFORCING NOT SHOWN)

NS = NEAR SIDE
FS = FAR SIDE



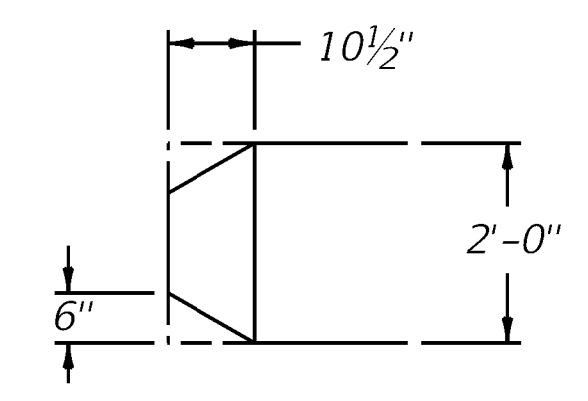
~NOTES~
SEE CURRENT SHEET, SHEET 005, FOR ALL
NOTES

ELEVATION
BARRIER END SECTION TYPE B

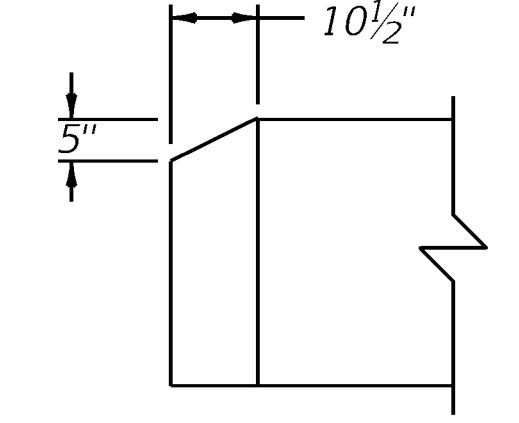
USE WITH CURRENT SHEET, SHEET 005.

CONDITION NO.	NO. 5 STEEL REINFORCEMENT BARS										CUBIC YARD ④		
	W	BAR ②		BAR ③		BAR ④ Y=1'-6"		BAR ④ Y=2'-0"		CLASS "A" CONC.			
		QTY	LGTH.	QTY	LGTH.	QTY	LGTH	LBS.	QTY	LGTH	LBS.	Y=2'-0"	Y=1'-6"
4	12"	60	2'-9"	5	29'-8"	30	2'-8"	411	30	3'-2"	427	7.98	7.01

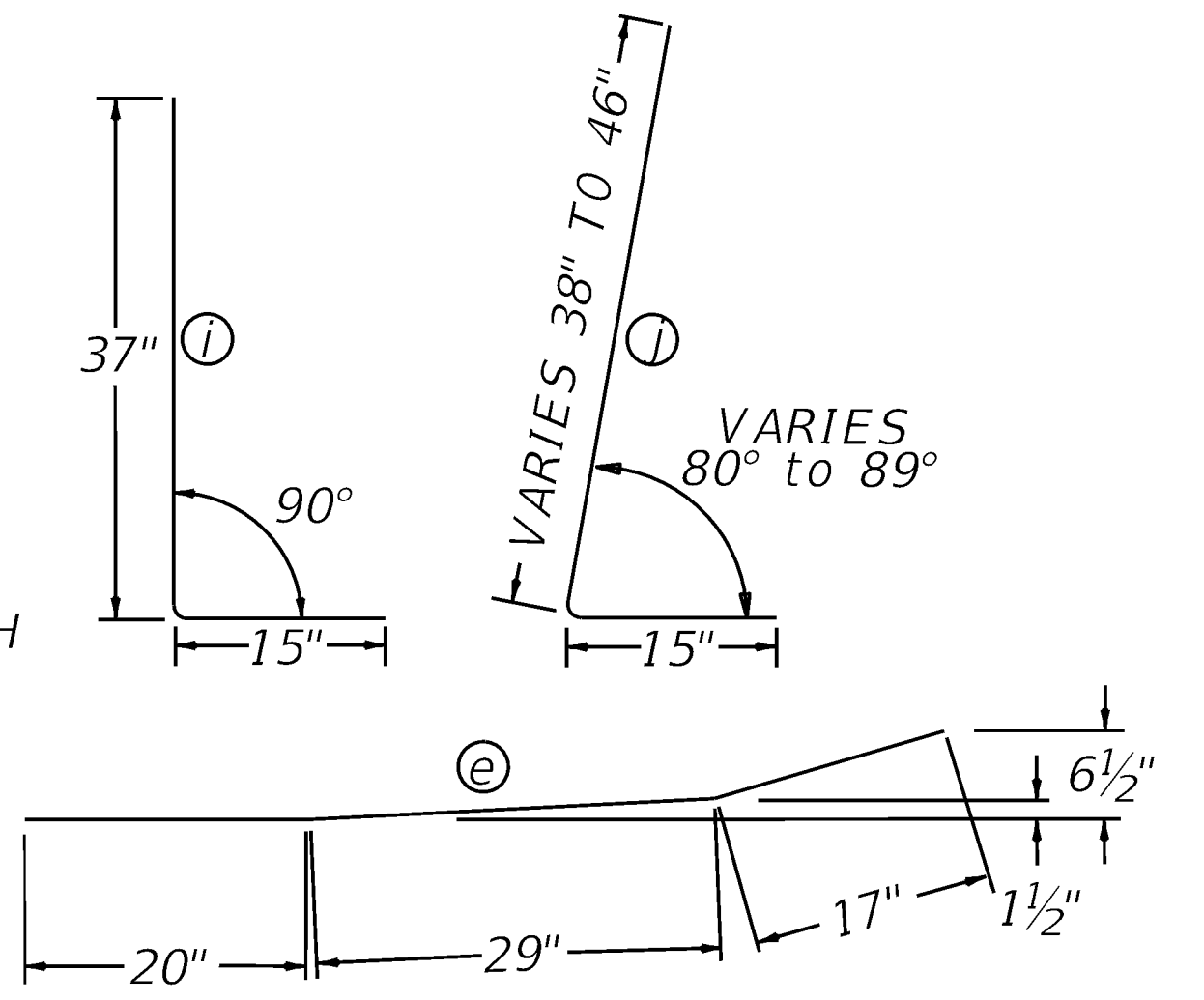
④ SEE NOTE 7 ON SHEET 005 FOR LONGITUDINAL DOWELS



DETAIL "A" ⑤



DETAIL "B"



BENDING DIAGRAMS

TYPE B STEEL LIST				
MARK	BAR	SHAPE	NO.	LENGTH
②	#5	BENT	6	5'-6"
③	#5	STRAIGHT	4	5'-6"
④	#5	STRAIGHT	10	11'-1"
⑤	#5	STRAIGHT	10	17'-2"
⑥	#6	BENT	10	4'-2"
⑦	#6	BENT	2 SERIES OF 5	VARIES 4'-3" TO 5'-3"



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE BARRIER WALLS

SHEET 004B: CONCRETE MEDIAN BARRIER TL3 42 IN
END SECTIONS

SEPIA NUMBER
SEPIA 042

REVISION DATE: 12.12.2024
REVISION NUMBER: 1

SUBMITTED: 02/28/2025
DATE
DIVISION DIRECTOR
APPROVED: W. J. Jayson
STATE HIGHWAY ENGINEER

BARRIERS

- ~ NOTES ~
1. THE CONTRACT UNIT PRICE SHALL INCLUDE ALL MATERIALS, TOOLS, COMPLETE THE WORK IN ACCORDANCE WITH THIS DRAWING.
 2. 1/2" PREMOLDED EXPANSION JOINT MATERIAL REQUIRED.
 3. STEEL REINFORCING BARS SHALL BE EVENLY SPACED AS SHOWN AND SHALL BE GRADE 40 MINIMUM.
 4. CONCRETE QUANTITIES FOR CONDITION NO.'S. 1, 2, AND 3 ARE BASED ON A BRIDGE PIER WIDTH OF 3'-0".
 5. Y=2'-0" FOR CRASH CUSHION TYPE VI, AND Y=1'-6" FOR GUARDRAIL CONNECTOR TO CONCRETE MEDIAN BARRIER END.
 6. USE CONCRETE END FLARE DETAIL "A" FOR VALTIR'S QUADGUARD CRASH CUSHION ALTERNATE. ALL OTHER CONNECTIONS REQUIRE A SQUARE NOSE.
 7. WHEN THE CONCRETE MEDIAN BARRIER END IS PLACED AT A PIER WIDER THAN 3'-0" THE BARRIER END TRANSITION SHALL BE CONSTRUCTED ON A 12:1 MIN. TAPER AND ADDITIONAL CONCRETE AND STEEL QUANTITIES SHALL BE CALCULATED.
 8. THIS END SECTION IS TO BE USED IN MEDIAN APPLICATIONS WHEN TRAFFIC IS ON BOTH SIDES AND ATTACHES TO A SINGLE SLOPE BARRIER. PROVIDE 2" CONCRETE COVER OVER REBARS, UNLESS SPECIFIED ELSEWISE.
 9. PCJ: PERMISSABLE CONSTRUCTION JOINT. IN THE UNREINFORCED BASE SECTIONS, BARRIER MAY BE PLACED ON TOP OF CONCRETE BASE IF DOWELED.
 10. TO PREVENT VEHICLE SNAGGING IN BARRIER FACE TRANSITIONS, SMOOTH TRANSITIONS FROM VERTICAL FACES TO THE SINGLE SLOPE FACES ARE MADE OVER A 10' DISTANCE.

BID ITEMS AND UNIT TO BID:
STEEL REINFORCEMENT LB
CONCRETE-CLASS AA CUYD

USE WITH CURRENT SHEETS, SHEETS 004A AND 004B.

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

SUBMITTED
W. T. Jayne
DIVISION DIRECTOR

02/28/2025
DATE

APPROVED

STATE HIGHWAY ENGINEER

DATE

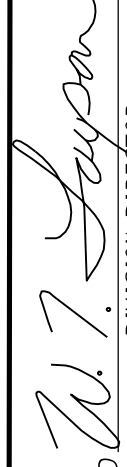
BARRIERS



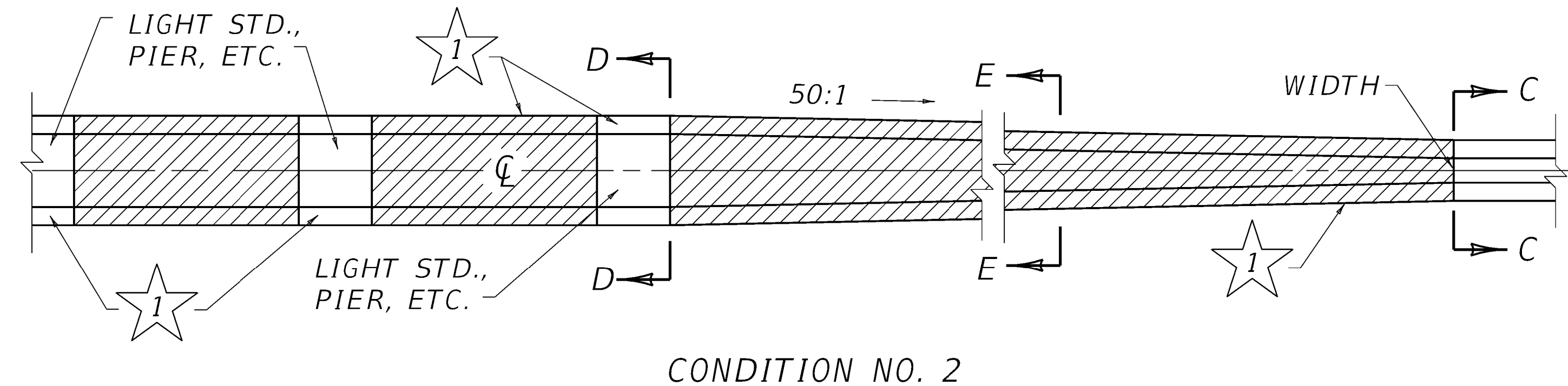
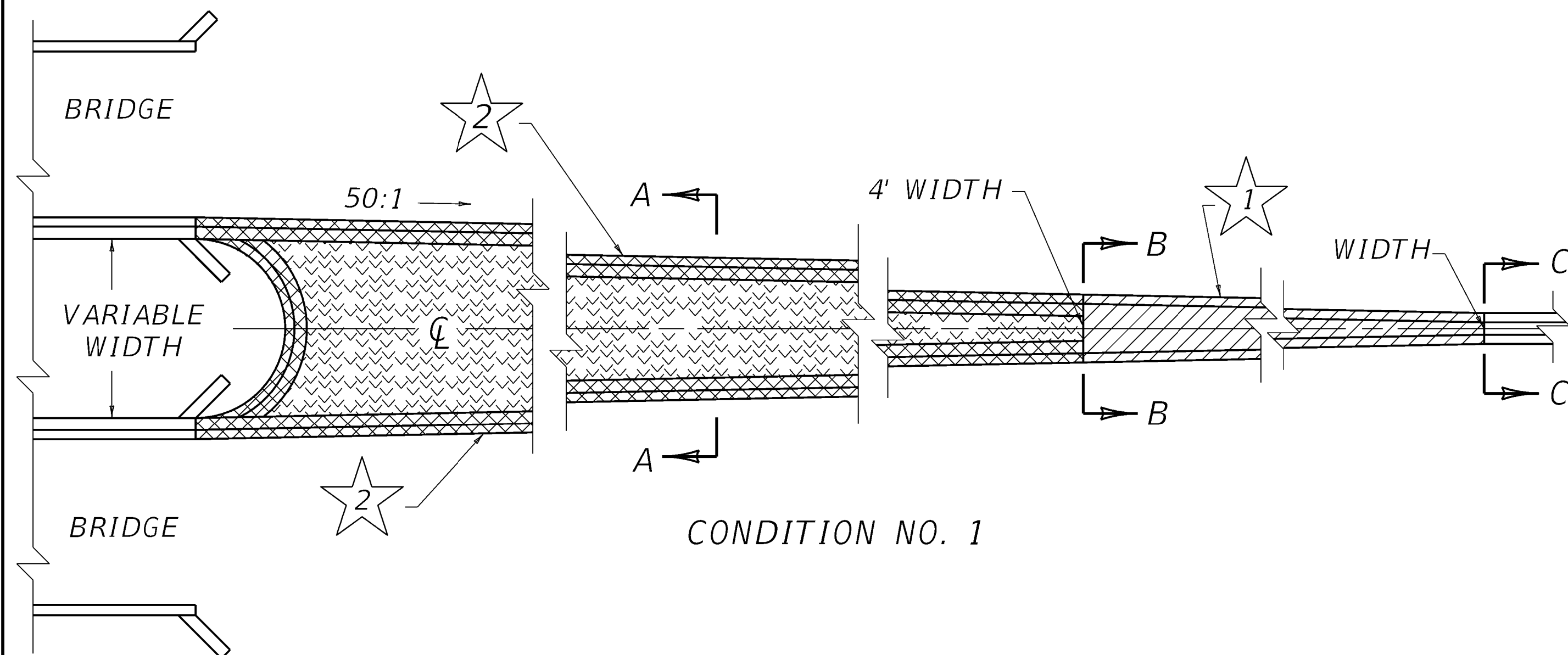
- ~ NOTES ~
- ① FOR RIGID PAVEMENT, LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS IS REQUIRED AND SHALL BE PLACED AT THE LOCATION SHOWN OR MAY BE INSTALLED AT THE CORRESPONDING POINT ON THE OPPOSITE SIDE OF THE BARRIER, AT THE OPTION OF THE CONTRACTOR. IT SHALL BE REQUIRED ON THE LOW SIDE OF A SUPERELEVATED SECTION.
2. 3" RACEWAY (TYPICAL). SEE ELSEWHERE IN THE PLANS FOR LOCATION AND PAYMENT FOR RACEWAY WHEN REQUIRED.
3. FOOTING CAN BE MONOLYTHICALLY POURED OR DOWELED WITH 2-#8 X 8" @ 2'-0" SPACING. THE FOOTING IS REQUIRED AT CONCRETE BARRIER ENDS.
- ④ SEE TYPE "A" OR "B" BARRIER DETAIL FOR WALL DIMENSIONS. SEE BRIDGE DRAWINGS FOR TYPE "B", WHEN APPLICABLE.
- ⑤ TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED PER STANDARD SPECIFICATONS FOR ROAD AND BRIDGE CONSTRUCTION.
6. CONSTRUCT USING CONCRETE CLASS AA WITH A STRENGTH OF 4000 PSI.
7. CONSTRUCT USING EPOXY COATED REINFORCEMENT THROUGHOUT WHEN MEDIAN BARRIER IS INSTALLED ON A STRUCTURE.
- ⑧ REINFORCED END ACHORAGES ARE REQUIRED AT THE ENDS OF CONCRETE BARRIER RUNS. CONSTRUCT THE LAST 10' USING THE END ANCHORAGE DETAIL AS SHOWN HERE. AT EXPANSION JOINTS, CONSTRUCT AN END ANCHORAGE ON BOTH SIDES OF JOINT, WITH A MAX GAP OF 2" FOR THE OPEN JOINT. THE MAX EXPANSION JOINT SPACING SHALL BE 800'. THIS ANCHORAGE IS NOT NEEDED AT CONSTRUCTION JOINTS; PROVIDE DOWEL BAR CONNECTIONS INSTEAD.
- ⑨ WHEN SPLICED, LAP #5 CONTINUOUS BARS 2'-5" MINIMUM. PROVIDE 2" CLEAR COVER TO REINFORCEMENT AT ALL LOCATIONS.
10. THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR CONCRETE MEDIAN BARRIER SHALL BE FULL COMPENSATION FOR ALL MATERIALS (INCLUDING ALL REINFORCING STEEL), EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
- ⑪ REINFORCING STIRRUP NOT REQUIRED FOR OFFSETS LESS THAN 1'-0".
- ⑫ ROADBED SURFACES OFFSET (RANGES)
- 1 ½" TO 3" - NO ADDITIONAL REINFORCEMENT IS REQUIRED.
- 3" < 8" - USE 2, #4 BARS AT 3" ABOVE THE LOWER ROADBED SURFACE.
- 8" ≤ 12" - USE 2, #4 BARS AT 3" ABOVE THE LOWER ROADBED SURFACE AND 2, #4 BARS AT 8" ABOVE THE LOWER ROADBED SURFACE.
- 12" < 36"- USE 2, #4 BARS AT 3" ABOVE THE LOWER ROADBED SURFACE AND 2, #4 BARS AT EVERY 8" INCREMENT VERTICAL SPACING ABOVE THE FIRST 2 BARS.
- ⑬ CONCRETE OF THE SINGLE SLOPE BARRIER WALL MAY EXTEND INTO PAVEMENT LAYERS FOR CONSTRUCTIBILITY (KEYED-IN). THE CONCRETE QUANTITY PRESENTED IN THE TABLE ON SHEET 006 IS FOR THE TOP OF PAVEMENT OPTION. DEPTH INTO PAVEMENT CAN BE VARIABLE.
- BID ITEM AND UNIT TO BID
- CONC MEDIAN BARRIER TYPE  TL5 56 IN LF
-  A OR B DEPENDING ON LOCATION.
- USE WITH CURRENT SHEET, SHEET 006.

BARRIERS

REVISION DATE: 04.02.2025
REVISION NUMBER: 2

SUBMITTED  04/02/2025
DIVISION DIRECTOR DATE
APPROVED _____ STATE HIGHWAY ENGINEER DATE





~ NOTES ~

1. TRANSITION CONDITION NO. 1, 2 AND 3 ALONG WITH SYMMETRICAL AND ASYMMETRICAL BARRIER SECTIONS ARE DEPICTED ON THIS DRAWING FOR ILLUSTRATION PURPOSES ONLY AT STRUCTURES AND FIXED OBJECTS. (SEE PLANS FOR ADDITIONAL DETAILS)
2. ALL PAVEMENT, FILL MATERIAL, PIPE DRAINAGE (EXCLUSIVE OF WEEP HOLE PIPE) PLACED BETWEEN SEGMENTS OF THE BARRIER SHALL BE SHOWN SEPARATELY OR INCLUDED WITH OTHER LIKE PAY ITEMS ON THE PROJECT. WEEP HOLES ARE INCIDENTAL TO THE BID ITEM.
3. FOR DETAILS PERTAINING TO ROADWAY OR BRIDGE APPLICATIONS, SEE CURRENT BRIDGE DRAWING. THE METHOD OF MEASUREMENT FOR CONCRETE MEDIAN BARRIER FOR EACH TYPE WILL BE IN LINEAR FEET MEASURED ALONG THE TOP CENTERLINE OF THE BARRIER.

④ SEE ELSEWHERE IN PLANS FOR LOCATION AND PAYMENT FOR RACEWAY WHEN REQUIRED.


⑤ 4" PIPE FOR WEEP HOLES SPACED ON 20' CENTERS AND STAGGERED 10' WITH EACH WALL.

⑥ VARIABLE WIDTH.

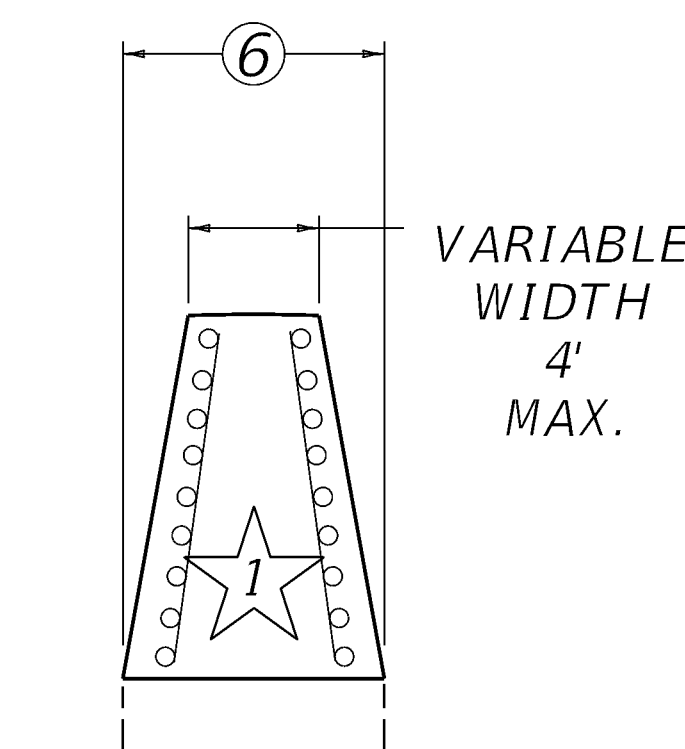
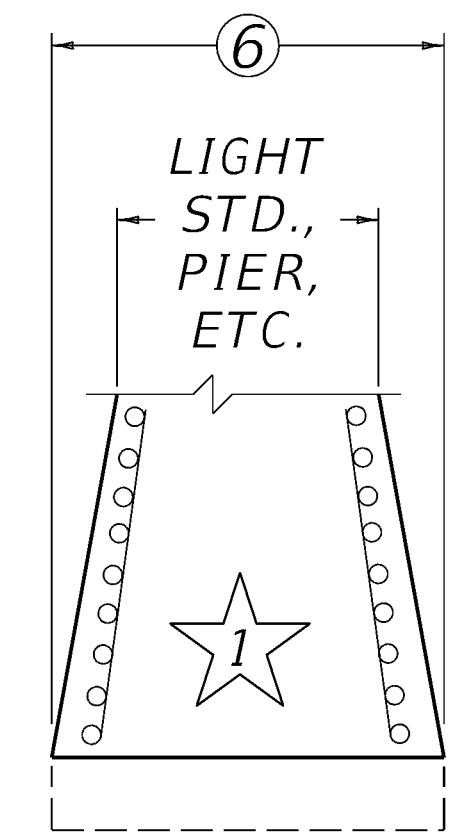
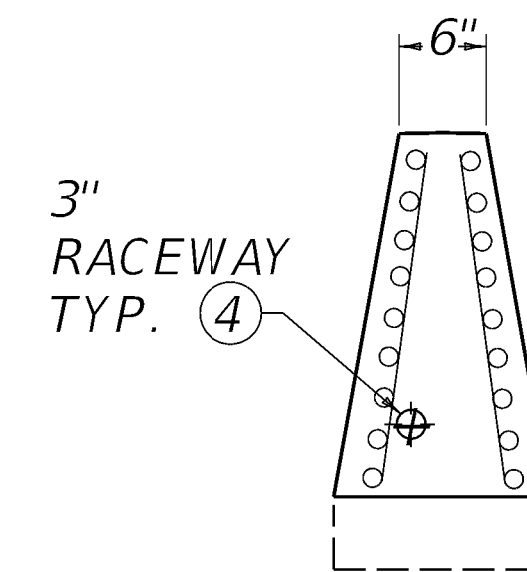
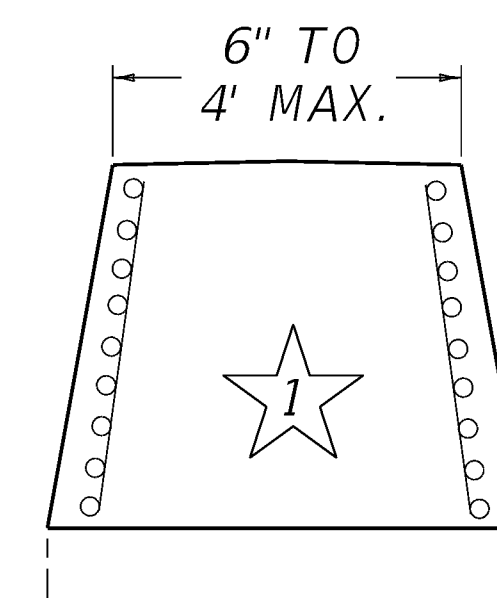
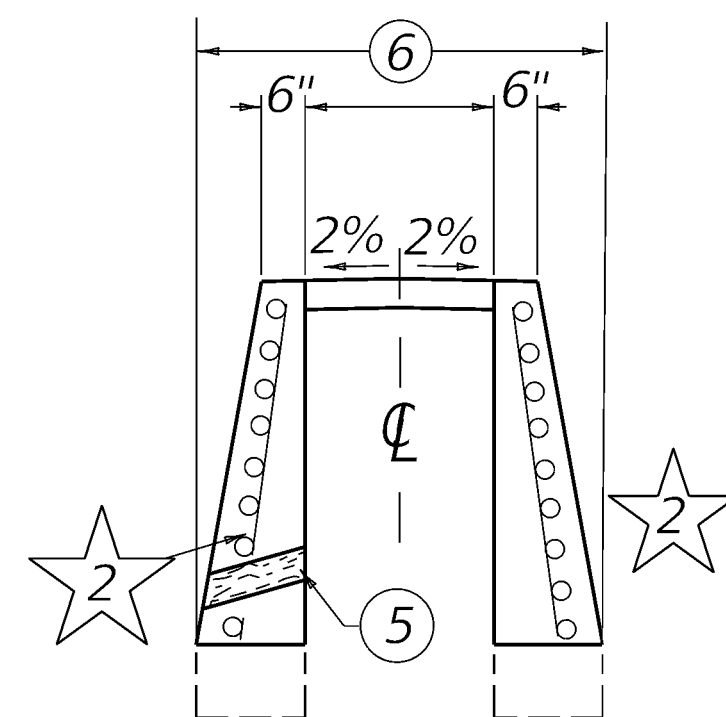
7. CONSTRUCT USING CONCRETE CLASS AA WITH A STRENGTH OF 4000 PSI.

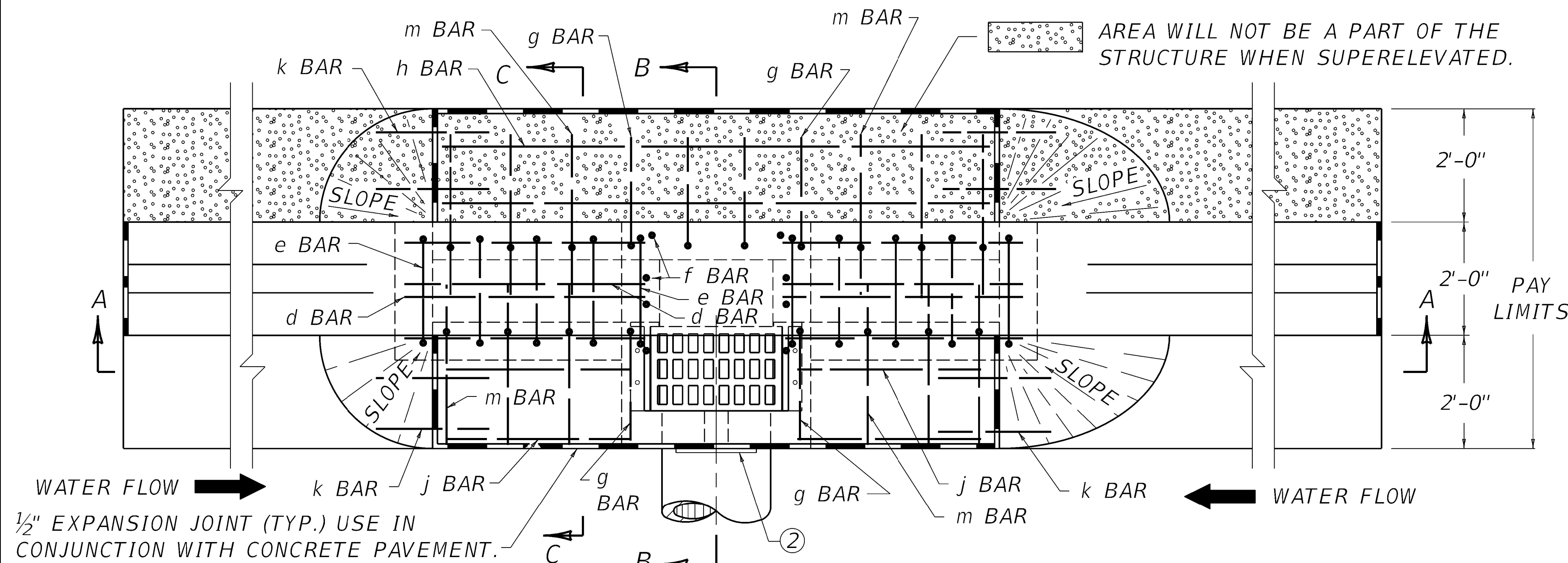
BID ITEM AND UNIT TO BID

CONCRETE MEDIAN BARRIER TYPE  TL5 56" TALL WALL LF

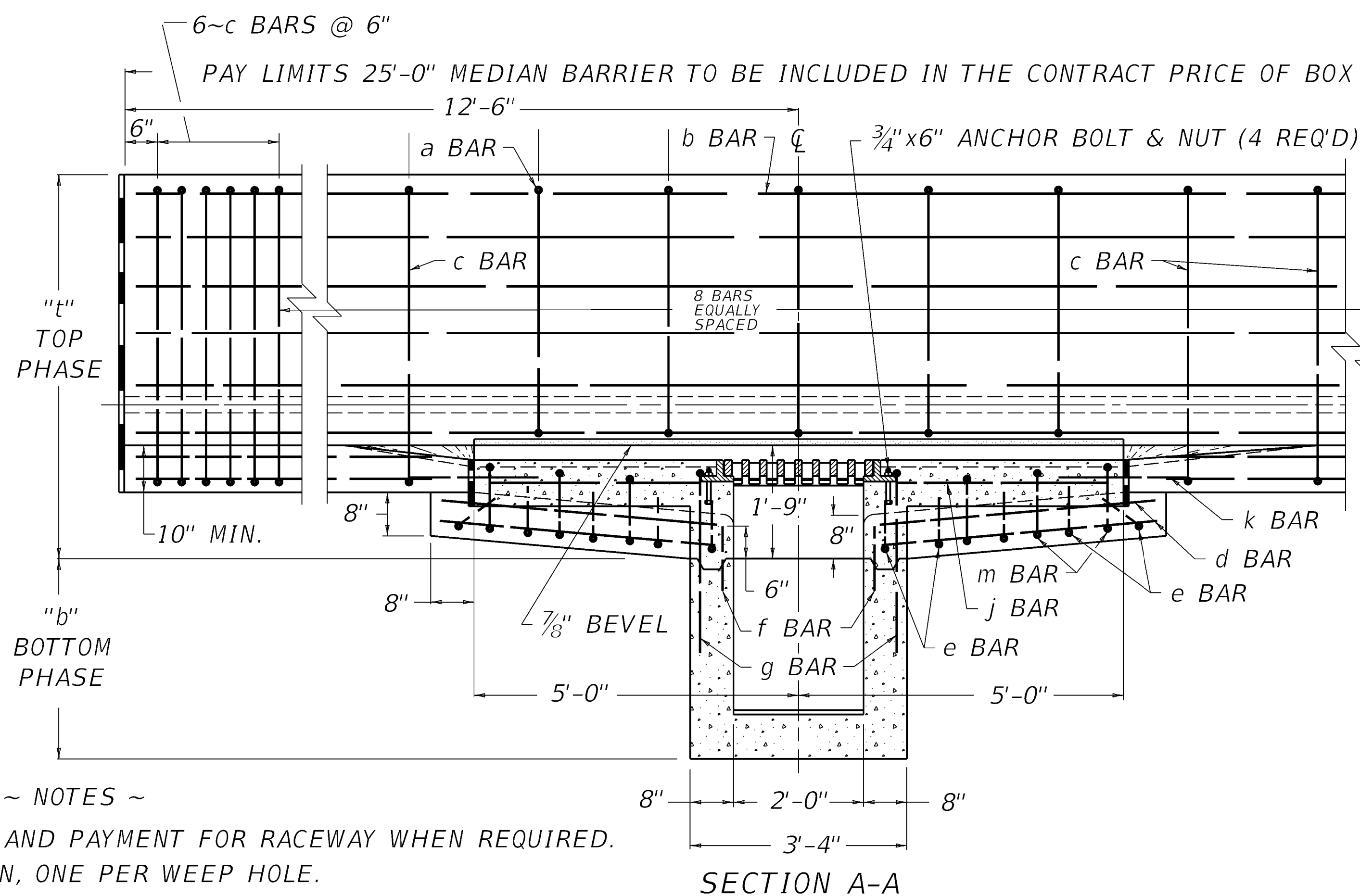
-  1 = SOLID SEGMENT- DENOTES BARRIER WALL WITH:
- a. TRANSITION FROM "W" WIDTH TO MAX. WIDTH OF 4'.
 - b. CONSTANT WIDTH WALL GREATER THAN "W" WIDE BUT NOT GREATER THAN 4' WIDE. (EX.: WALL BETWEEN BRDG. PIERS).
- 2 = SEPARATE SEGMENT

USE WITH CURRENT SHEET, SHEET 006.

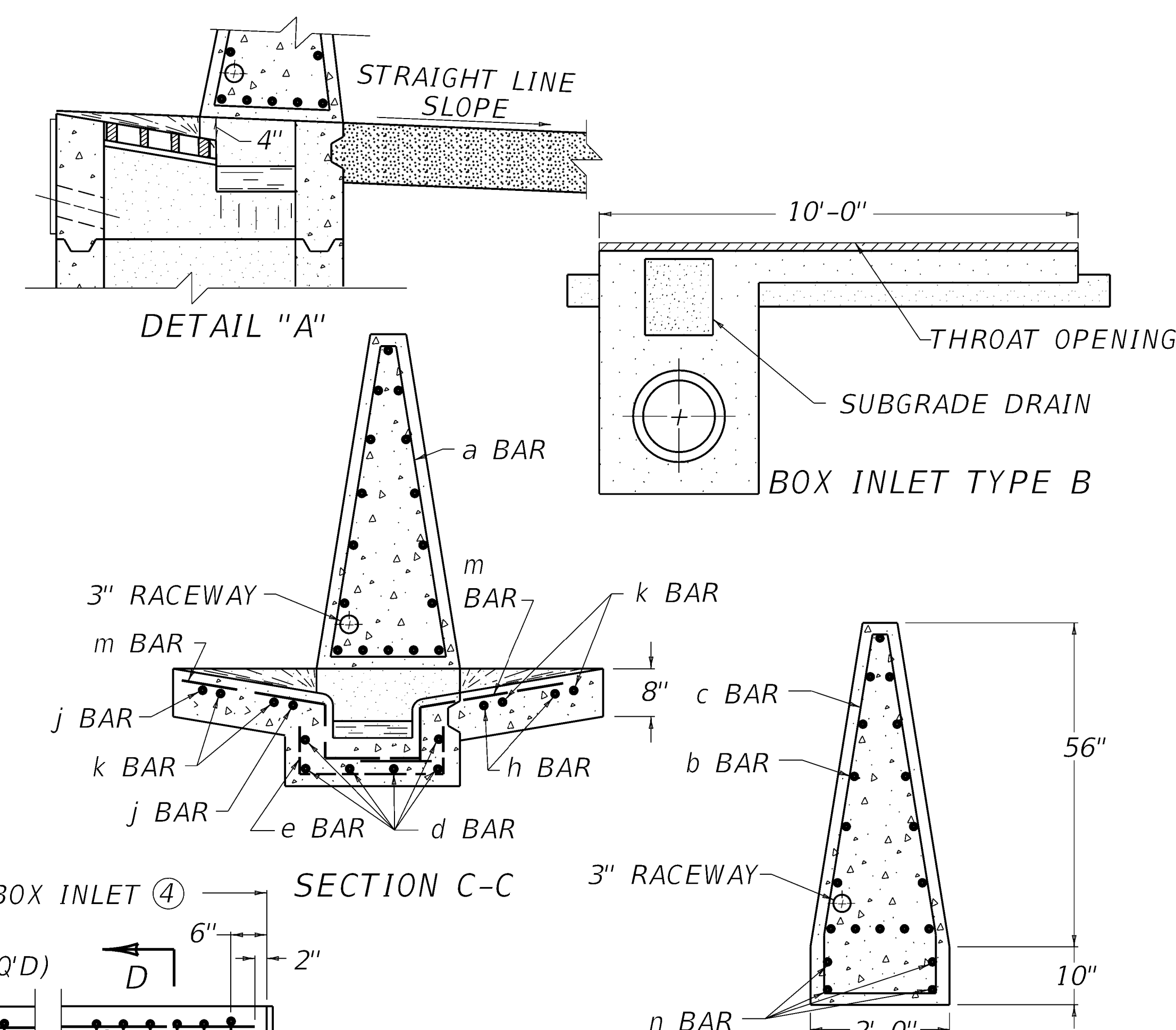




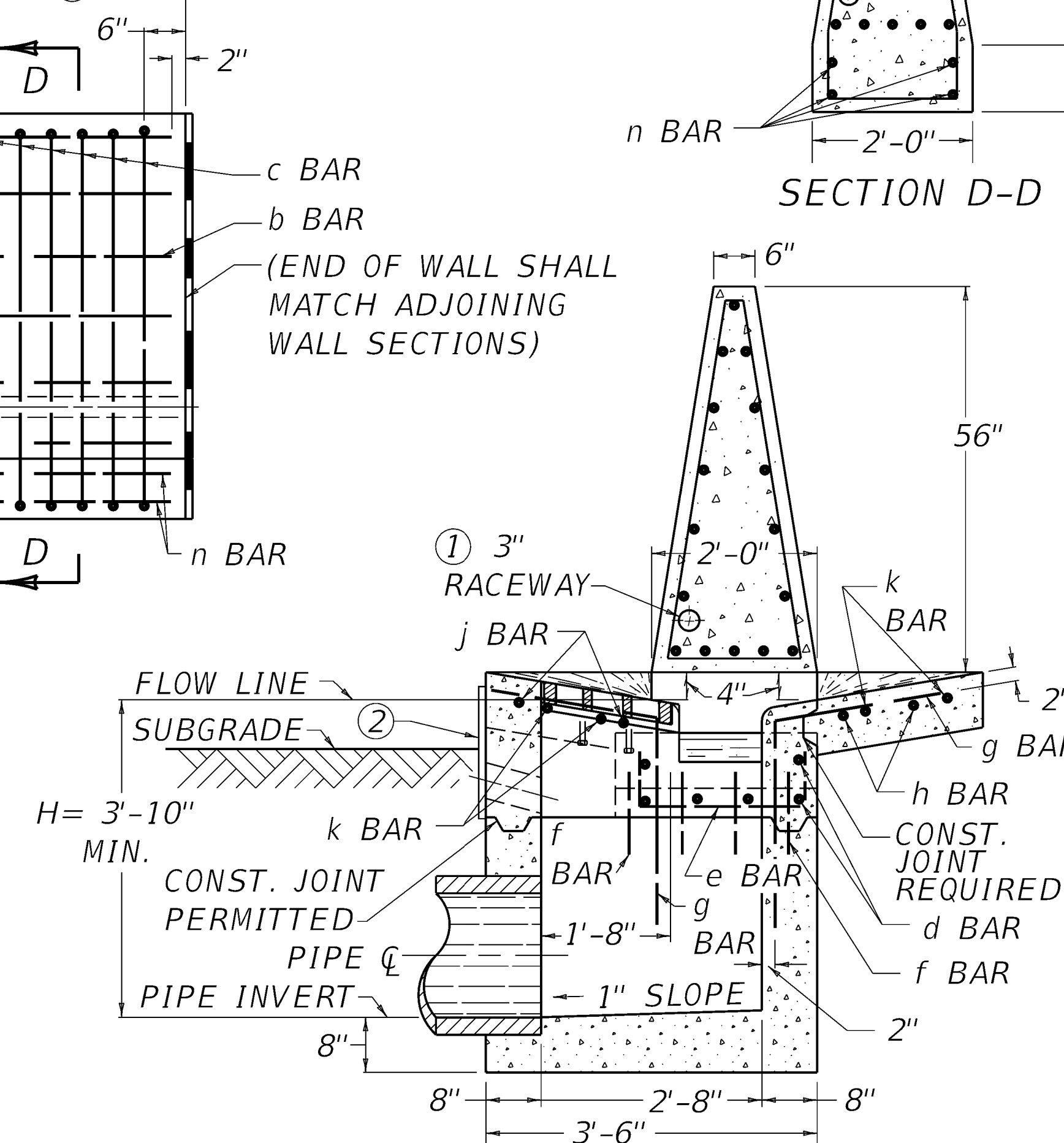
PLAN VIEW (BOX INLET TYPE A)



SECTION A-A



SECTION C-C



SECTION B-B

- ~ NOTES ~
- SEE PLANS FOR SIZE, LOCATION, AND PAYMENT FOR RACEWAY WHEN REQUIRED.
 - FABRIC WRAPPED BACKFILL DRAIN, ONE PER WEEP HOLE.
 - ALL WALLS AND SLABS ARE 8" THICK UNLESS OTHERWISE SHOWN.
 - MEDIAN BARRIER WALL MAY BE CAST-IN-PLACE, FIXED, OR SLIP-FORMED.
 - WALL REINFORCEMENT IS DETAILED FOR CAST-IN-PLACE WALLS AND SLIP FORMED WALLS. SEE CURRENT SHEET, SHEET 006, FOR STEEL DETAIL.
 - DETAIL "A" SHOWS BOX INLET AND THE 25' CONCRETE MEDIAN BARRIER IN SUPERELEVATION.
 - PLAN VIEW DOES NOT SHOW STEEL REINFORCEMENT IN THE CONCRETE MEDIAN BARRIER.

USE WITH CURRENT SHEETS, SHEET 006 AND SHEET 010.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE BARRIER WALLS

SHEET 009: CONCRETE MEDIAN BARRIER BOX INLET TL5 56 IN

SEPIA NUMBER
SEPIA 042

BARRIERS

SUBMITTED *W. T. Jayne* 02/28/2025
DIVISION DIRECTOR DATE

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

APPROVED _____ DATE _____
STATE HIGHWAY ENGINEER

REINFORCEMENT BARS FOR BOX INLET

BAR	BOX TYPE							
	A1	A2	A1	A2	B1	B2	B1	B2
	QTY.		LENGTH		QTY.		LENGTH	
e	10		3'-3"		9		3'-3"	
d	12		4'-3"		6		7'-5"	
f	8		1'-0"		8		1'-0"	
g	2	6	4'-6"		1	5	4'-6"	
h	0	2	0	9'-8"	0	2	0	9'-8"
j	4		3'-3"		2		7'-0"	
k	4	8	2'-0"		4	8	2'-0"	
m	6	12	4'-1"		6	12	4'-1"	

APPROX. QUANTITIES FOR INLET

TYPE	CLASS "A" CONC. CU. YDS.	STEEL LBS.
A1	3.96	153
A2	3.96	226
B1	3.89	139
B2	3.89	212

APPROX. QTYS. FOR 25' CONC. MEDIAN BARRIER⑧

BAR a		BAR b		BAR c		BAR n		STEEL	CONC.
QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	QTY.	LENGTH	LBS.	CU. YDS.
5	11'-6"	16	24'-8"	16	13'-2"	8	7'-2"	753	6.33

~ NOTES ~

- ALL STEEL REINFORCEMENT BARS SHALL BE NO. 5 BARS.
- THE RATE OF INCREASE OF ADDITIONAL CLASS "A" CONCRETE PER FT. OF HEIGHT ABOVE THE MINIMUM 3'-10" SHALL BE 0.35 CU. YD.S FOR A TYPE 12 AND 0.37 CU. YDS. FOR A TYPE 14 BOX INLET.
- PLACE ALL STEEL REINFORCEMENT 2" MINIMUM FROM OUTSIDE FACE OF WALL, EXCEPT AS OTHERWISE SHOWN.
- SEE CURRENT SHEET, SHEET 006 , FOR STEEL REINFORCEMENT IN BOTTOM OF BOX WHEN H = 8'-0" TO 15'-0".
- USE CHAMBER DIMENSIONS TO BEST FIT AND EQUALLY SPACE REINFORCEMENT STEEL.
- A SYMMETRICAL WALL IS DETAILED, AN ASYMMETRICAL WALL MAY BE REQUIRED (SEE PLANS).
- ⑦ 2'-6" FOR MIN. HEIGHT OF 3'-10"
- ⑧ STEEL AND CONCRETE QUANTITIES ARE FOR BOTH CAST-IN-PLACE AND SLIP FORM WALL.

BID ITEM AND UNIT TO BID

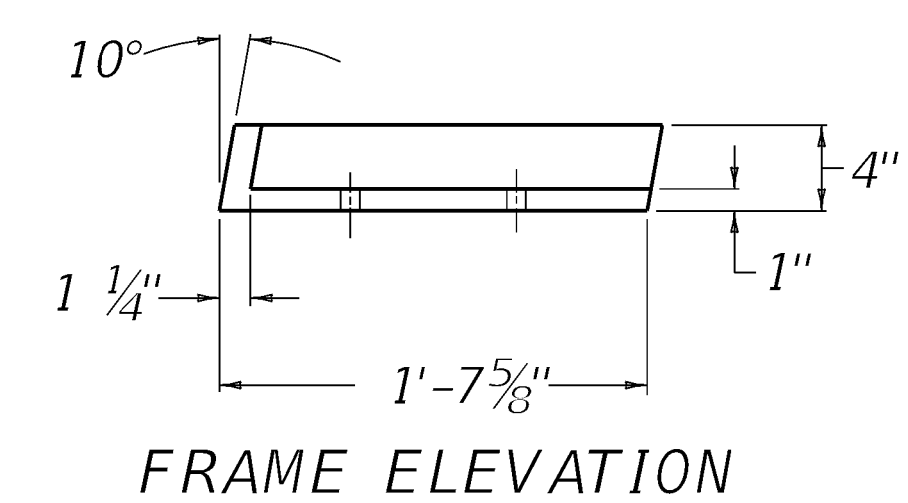
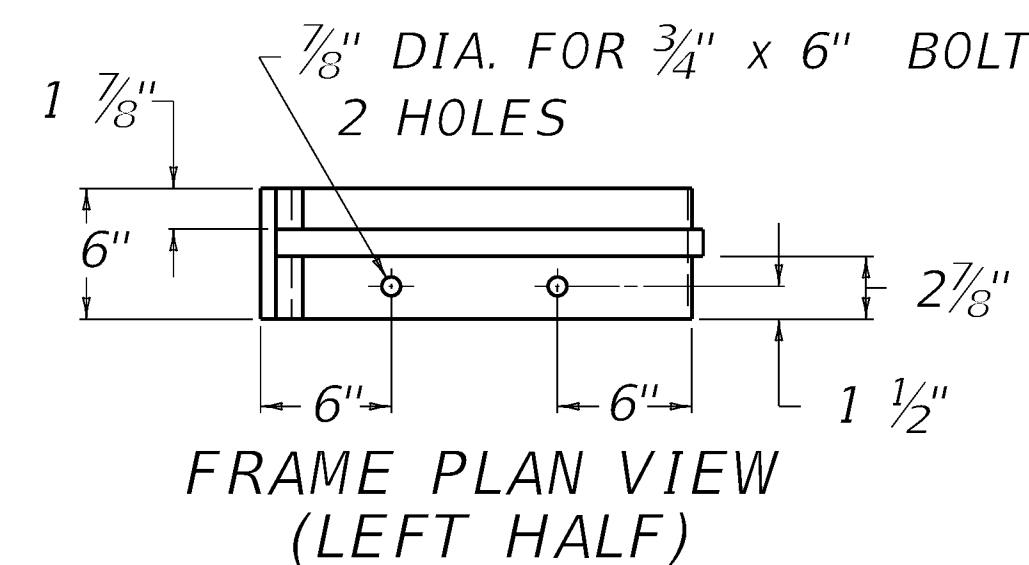
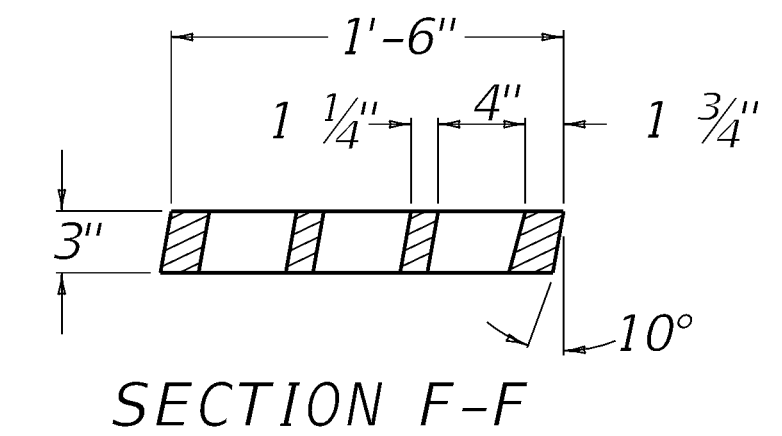
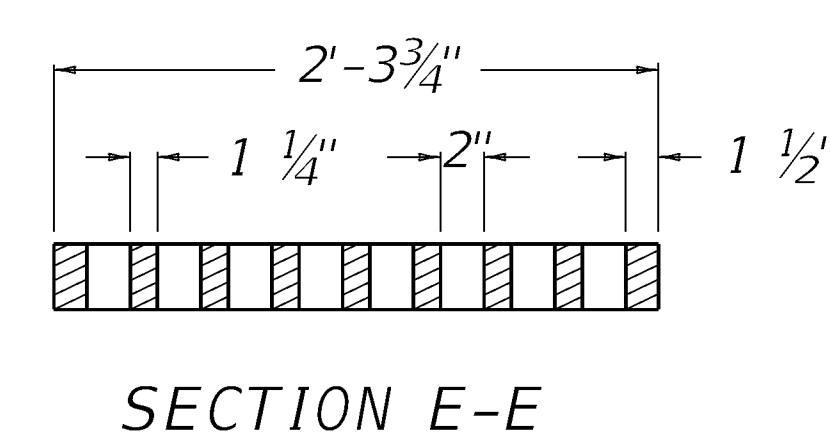
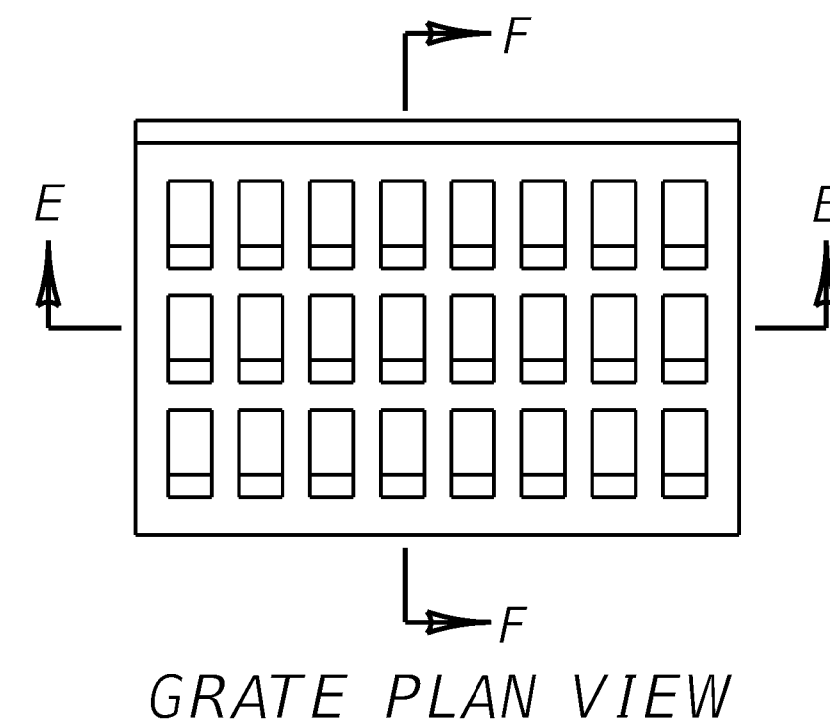
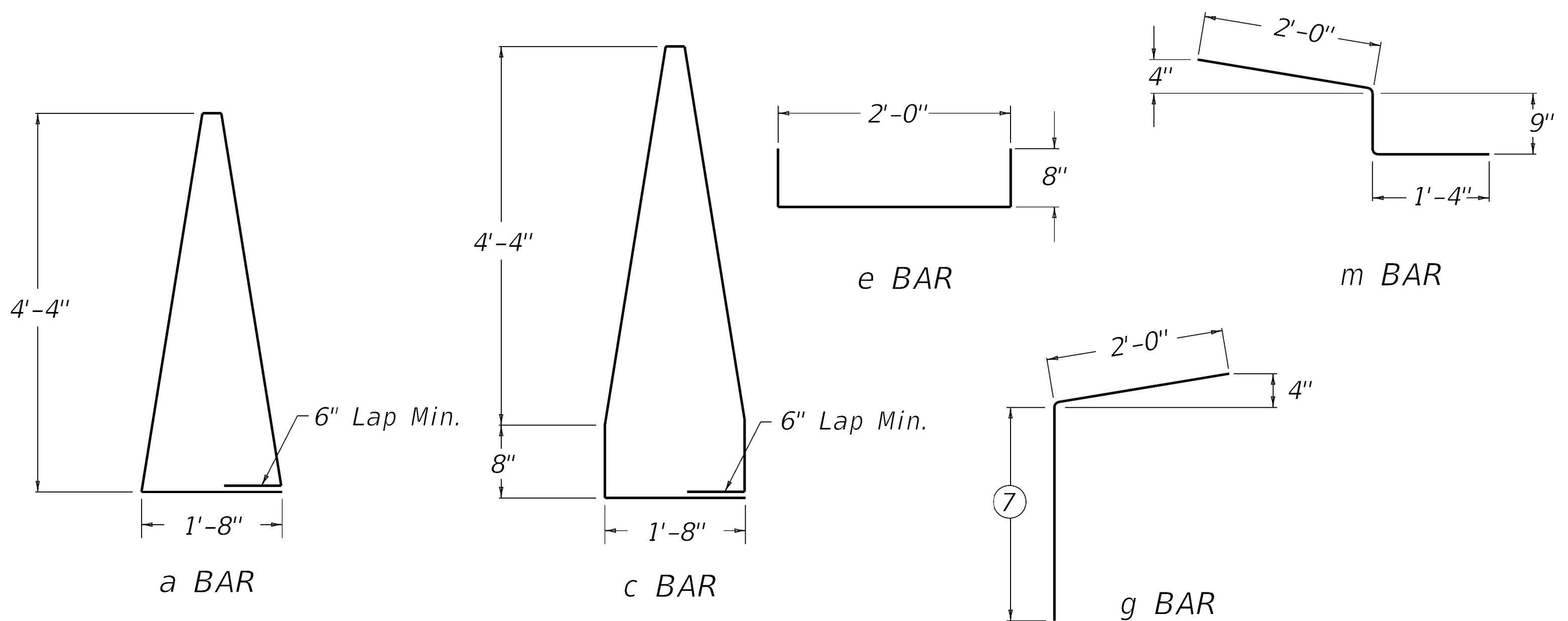
CONC. MED BARR BOX INLET TY \otimes \oplus \triangle TL5 56" TALL WALL EACH

\otimes = "A" FOR SAG VERTICALS
"B" FOR STRAIGHT GRADE \oplus = 1 FOR OPENING ON ONE SIDE OF BOX INLET
2 FOR OPENING ON BOTH SIDES OF BOX INLET

\triangle (b) = BOTTOM PHASE
(†) = TOP PHASE

~NO (b) OR (†) SUFFIX PRESENT INDICATES COMPLETE INLET~

USE WITH CURRENT SHEETS, SHEET 006 AND SHEET 009.



BARRIERS

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

SUBMITTED *W. T. Japan* 02/28/2025
DIVISION DIRECTOR DATE
APPROVED STATE HIGHWAY ENGINEER DATE



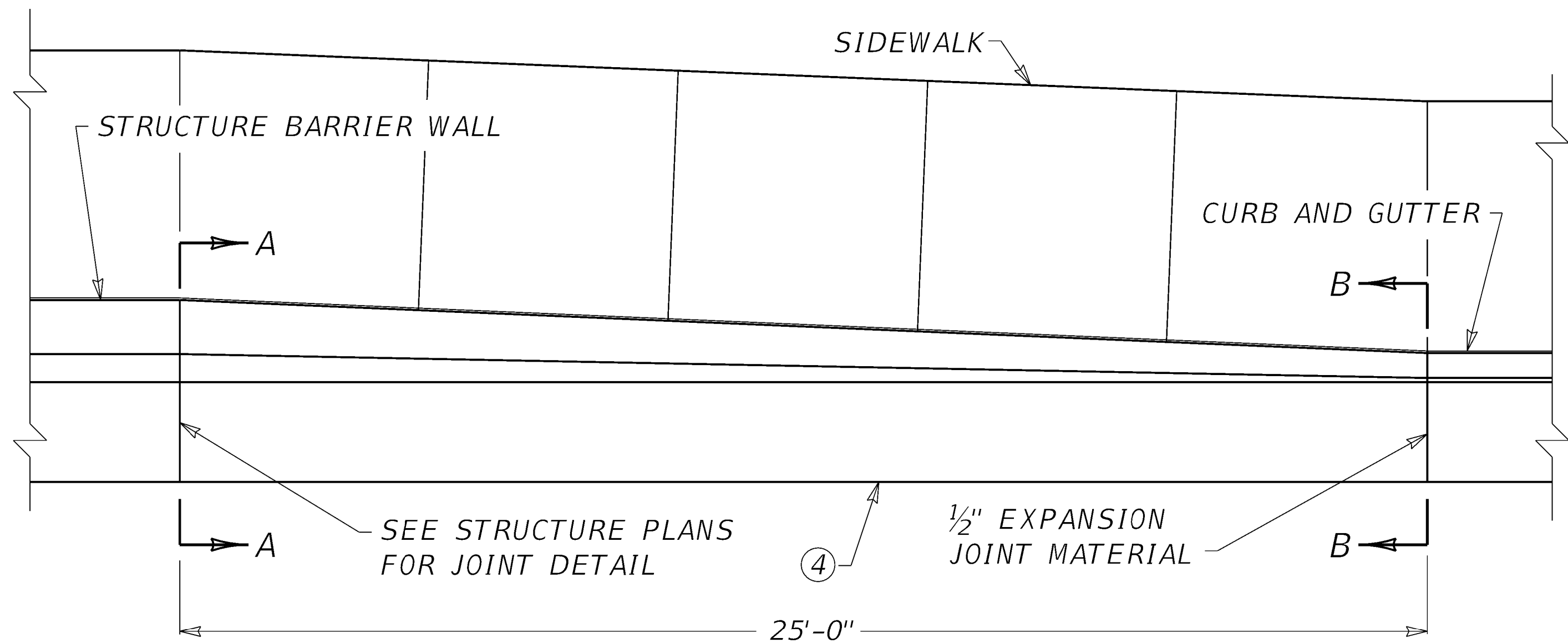
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



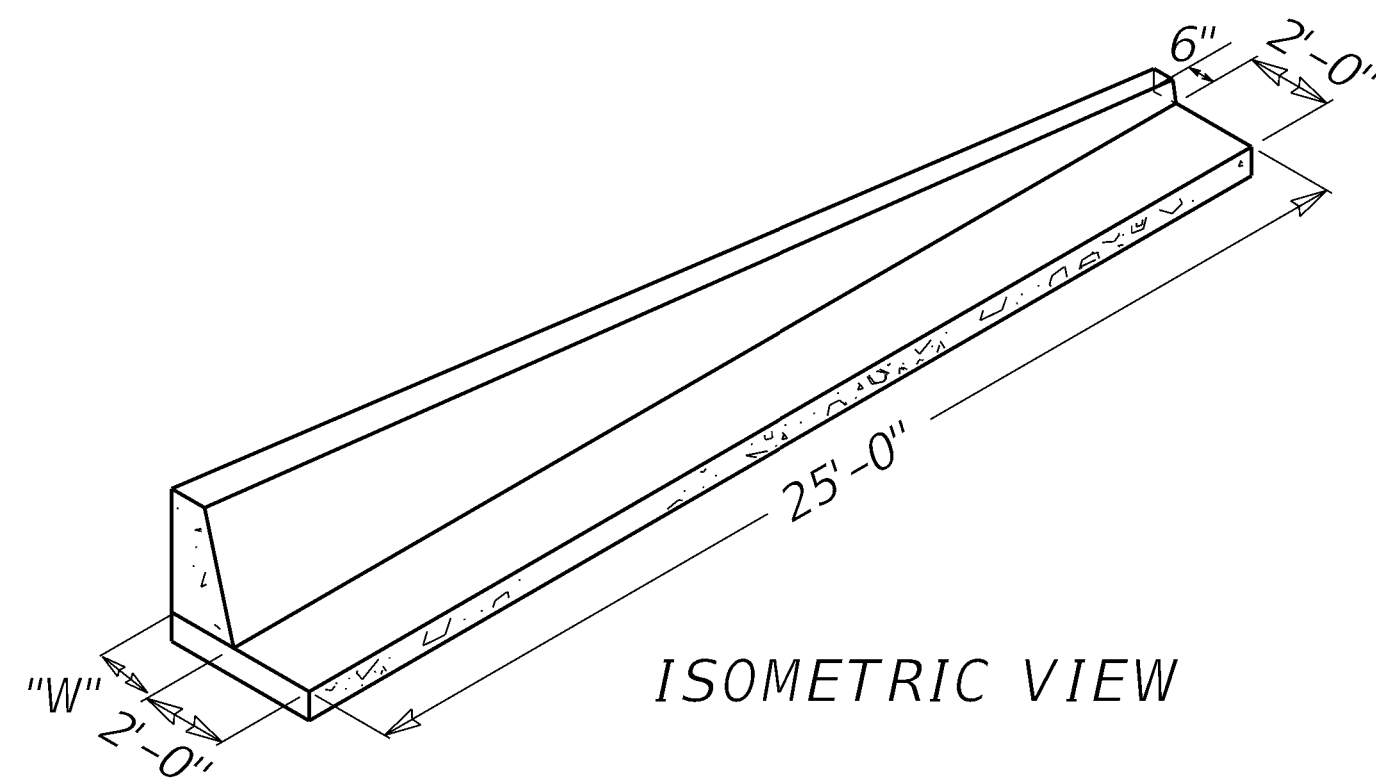
CONCRETE BARRIER WALLS

SHEET 010: CONCRETE MEDIAN BARRIER BOX INLET TL5 56 IN
DETAILS

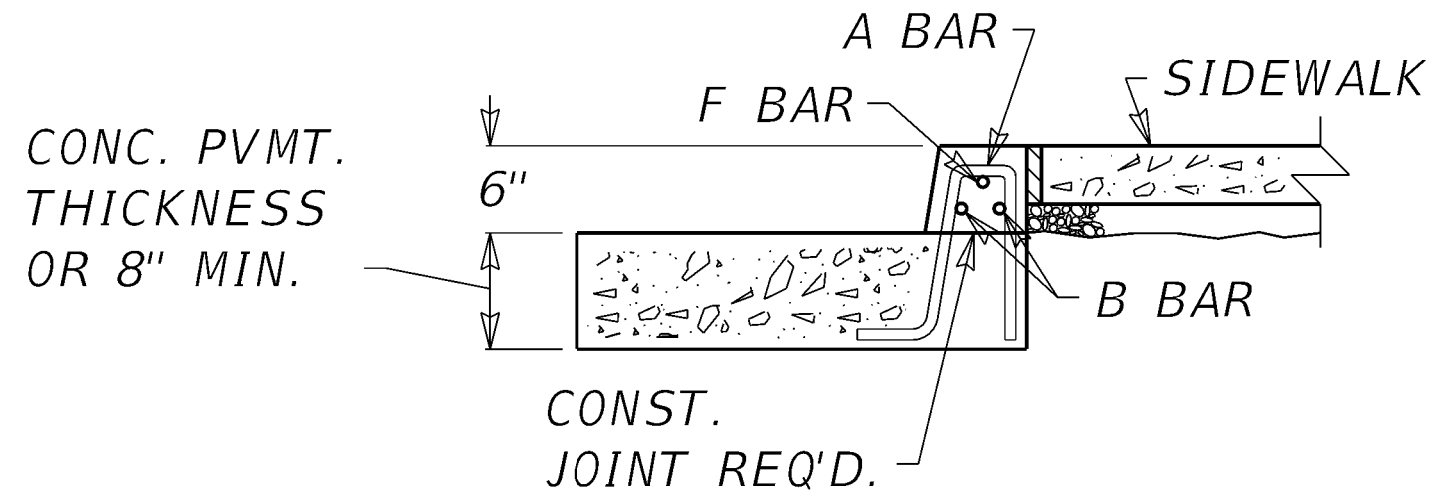
SEPIA NUMBER
SEPIA 042



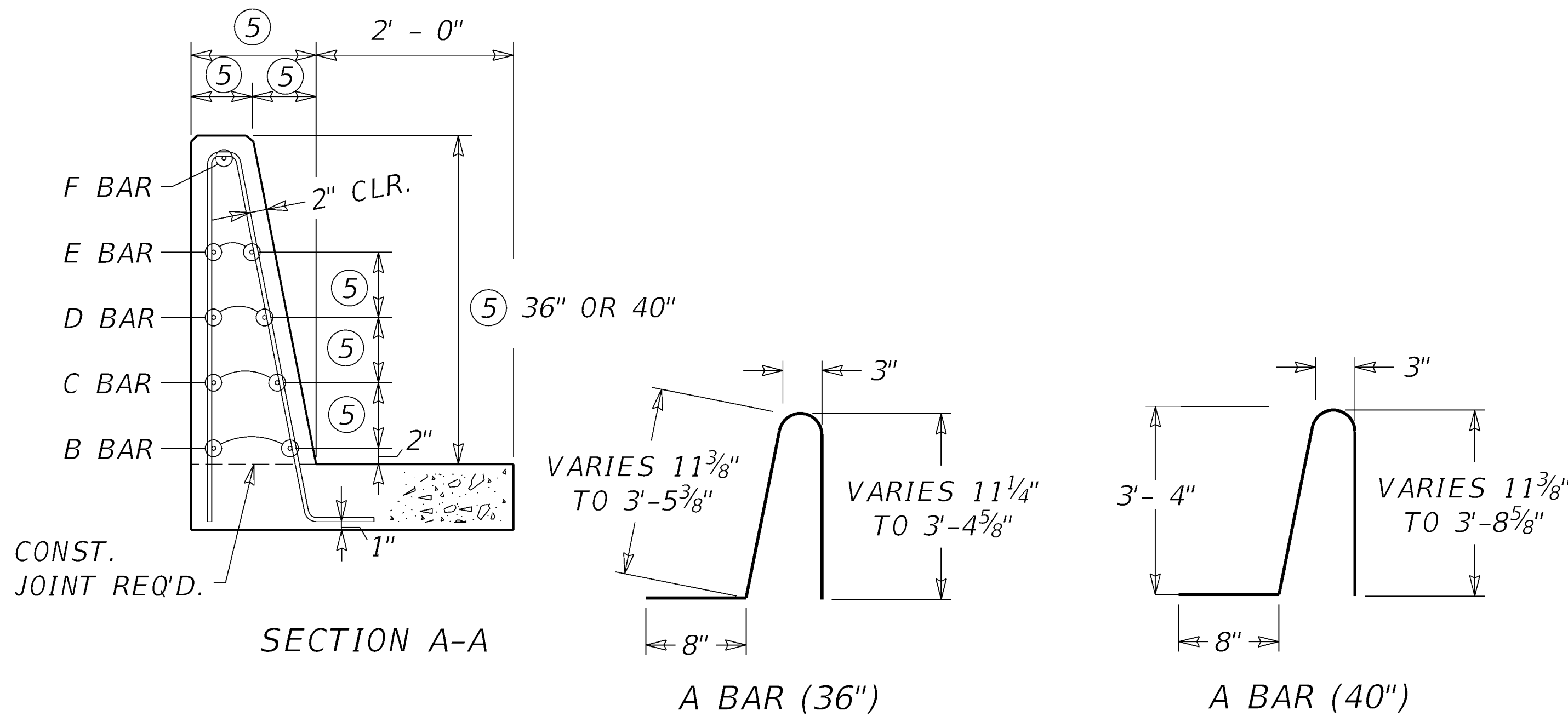
PLAN VIEW



ISOMETRIC VIEW



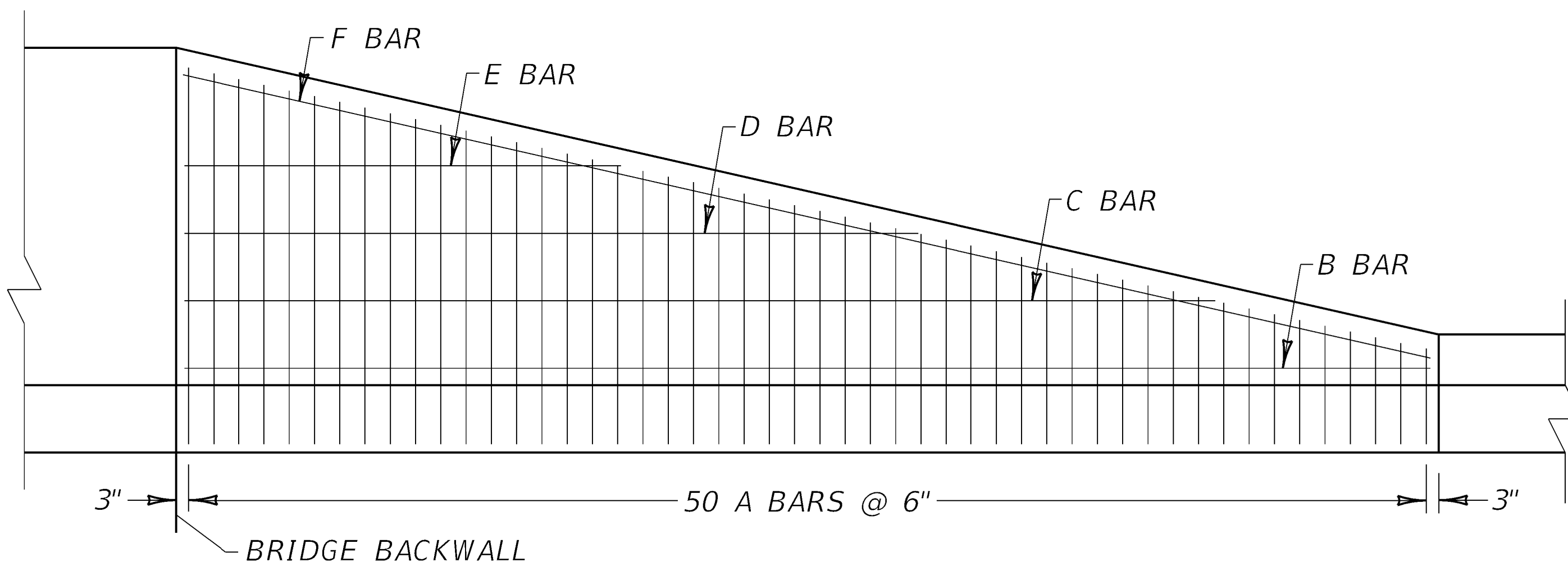
SECTION B-B



SECTION A-A

A BAR (36")

A BAR (40")



ELEVATION VIEW

~ NOTES ~

1. THE CONTRACT UNIT PRICE EACH FOR THE CURB TO BARRIER WALL TRANSITION SHALL INCLUDE CONCRETE, FORMS, STEEL REINFORCEMENT, EXPANSION JOINT MATERIAL, AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION.
2. FOR ILLUSTRATION PURPOSES THE DETAILS DEPICT THE CURB TO BARRIER WALL TRANSITION CONNECTING TO A STANDARD CURB, HOWEVER THE CURB TO BARRIER WALL TRANSITION MAY BE CONSTRUCTED TO MATCH ANY ADJOINING CURB.
3. THE AMOUNT OF CLASS "A" CONCRETE REQUIRED FOR A TRANSITION SECTION WITH A 7 1/2" WIDE TOP IS APPROXIMATELY 3.2 CU. YDS. (36") & 3.4 CU. YDS. (40")
- ④ WHEN THE CURB TO BARRIER WALL TRANSITION ABUTS RIGID PAVEMENT A LONGITUDINAL SAWED CONSTRUCTION JOINT SHALL BE INSTALLED IN ACCORDANCE WITH CUR. STD. DWG. RPS-010.
- ⑤ SEE STRUCTURE PLANS FOR DIMENSIONS. REFER TO BHS-009 AND BHS-010 .
6. CURB TO BARRIER WALL TRANSITION NOT FOR USE ON APPROACH ENDS ON HIGH SPEED N.H.S.
BID ITEM AND UNIT TO BID
CURB TO BARRIER WALL TRANS EACH
USE WITH CUR. STD. DWGS. RPS-010, BHS-009, BHS-010

BILL OF REINFORCEMENT (40")				
BAR	QTY.	SIZE	LENGTH	TOTAL LBS. OF STEEL
A	50	4	Varies	290
B	2	4	24'-8"	
C	2	4	20'-5"	
D	2	4	14'-6"	
E	2	4	8'-7"	
F	1	4	24'-10"	

BILL OF REINFORCEMENT (36")				
BAR	QTY.	SIZE	LENGTH	TOTAL LBS. OF STEEL
A	50	4	Varies	273
B	2	4	24'-8"	
C	2	4	19'-10"	
D	2	4	13'-2"	
E	2	4	6'-5"	
F	1	4	24'-9"	



APPROXIMATE DELINEATOR SPACING	
TANGENT-RAMPS	100'
TANGENT	200-530'
CURVE	50'

SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

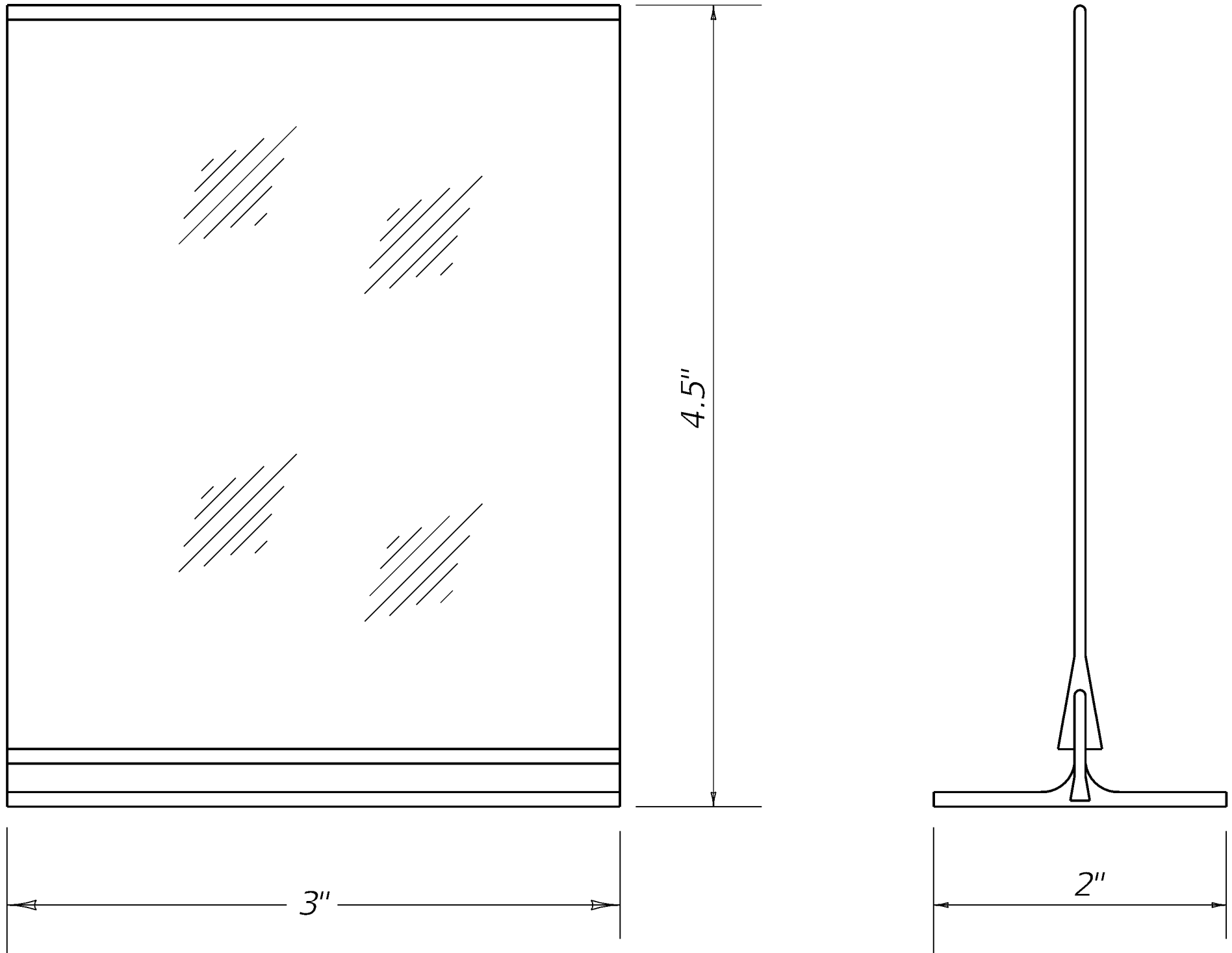
CURVE SPACING IS A FUNCTION OF CURVE RADIUS AND IS FOUND IN TABLE 2F-1 OF THE MUTCD.

~ NOTES ~

1. BARRIER WALL DELINEATORS SHALL BE REQUIRED ON ALL BARRIER WALLS.
2. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
3. THE COLOR OF DELINEATORS SHALL MATCH THE COLOR OF THE EDGELINE THAT THEY SUPPLEMENT. IN GENERAL, DELINEATORS ON BARRIER WALL ALONG THE LEFT SIDE OF DRIVING LANES SHALL BE YELLOW, AND DELINEATORS ON BARRIER WALL ALONG THE RIGHT SIDE OF DRIVING LANES SHALL BE WHITE. DELINEATORS IN BOTH DIRECTIONS ON A TWO-LANE, TWO-WAY ROADWAY SHALL BE BI-DIRECTIONAL WHITE.
4. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS. THE DELINEATOR SHAPE AND DIMENSIONS ARE FOR ILLUSTRATION PURPOSES ONLY. KYTC STANDARD SPEC 508.02.10, DELINEATORS FOR BARRIERS, STATES TO USE STIMSONITE MARKER 962, AKT CORPORATION MARKER NO. 181, OR A DEPARTMENT APPROVED EQUAL.
5. THE DELINEATOR UNIT SHALL HAVE THE REFLECTIVE SURFACE INSTALLED FACING TRAFFIC.
6. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMENDATION.
7. DELINEATORS SHALL BE ATTACHED TO CONCRETE MEDIAN BARRIER WITH AN APPROVED ADHESIVE.
8. DELINEATOR SHEETING SHALL BE TYPE IX, YELLOW OR WHITE.
9. DELINEATORS SHOULD BE MOUNTED AT A HEIGHT OF APPROXIMATELY 4' ABOVE PAVEMENT. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT THE SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL.
10. FOR BARRIER WALLS 50" OR LESS IN HEIGHT, DELINEATORS MAY BE INSTALLED ON TOP OF THE BARRIER WALL. FOR MEDIAN BARRIER WALLS 50" OR LESS IN HEIGHT THAT SEPARATE TWO-WAY TRAFFIC, BI-DIRECTIONAL YELLOW DELINEATORS MAY BE INSTALLED ON THE TOP OF THE BARRIER WALL IN LIEU OF SIDE-MOUNTED MONO-DIRECTIONAL YELLOW DELINEATORS.
11. IF BARRIER WALL IS PRESENT AT OFF RAMPS, THE BACKSIDE OF THE DELINEATOR SHOULD BE RED RETROREFLECTIVE SHEETING. RED SHEETING ON THE BACK SIDE CAN BE USED IN ANY SITUATION TO DISCOURAGE WRONG WAY DRIVING.

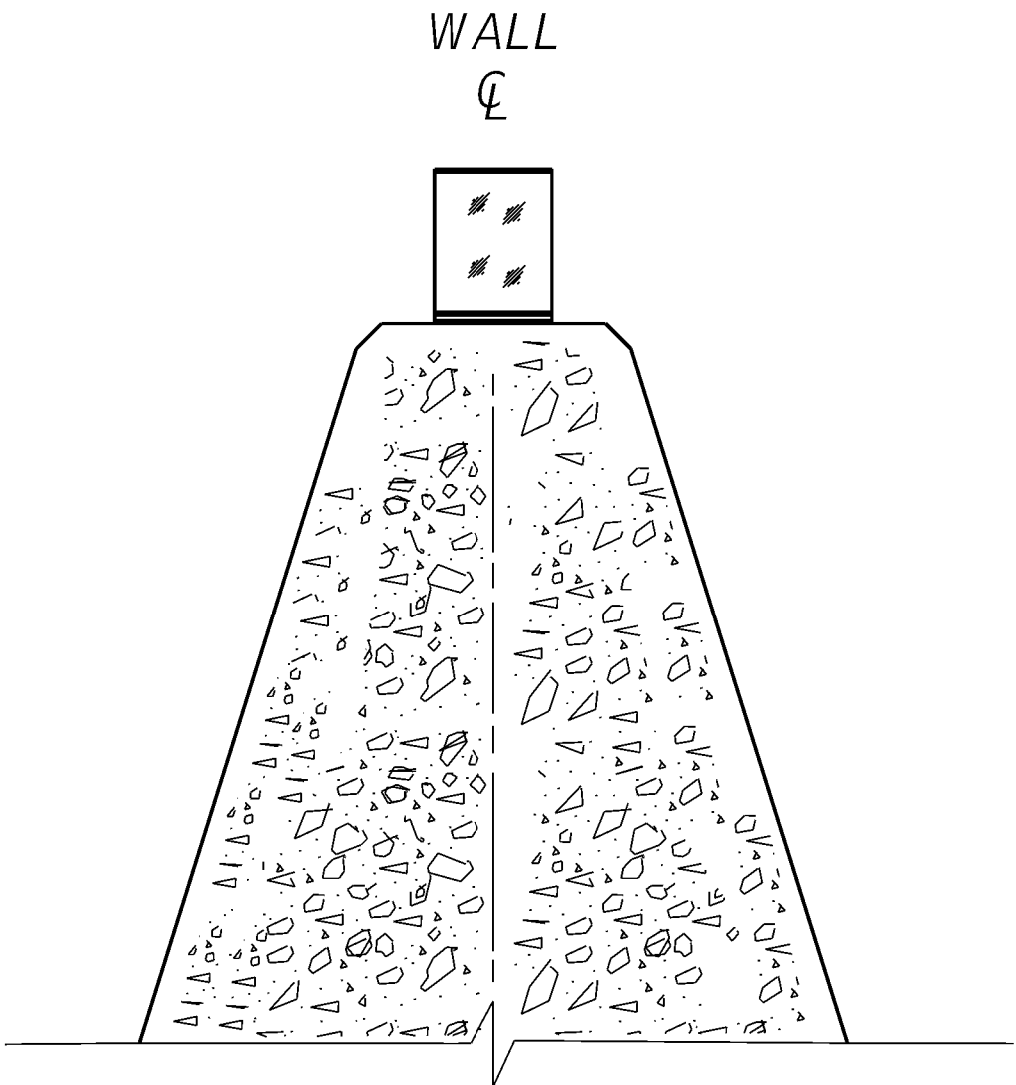
BID ITEM AND UNIT TO BID

DELINEATOR FOR BARRIER WALL - M/W	EACH
DELINEATOR FOR BARRIER WALL - M/Y	EACH
DELINEATOR FOR BARRIER WALL - B/Y	EACH
DELINEATOR FOR BARRIER WALL - B/W	EACH

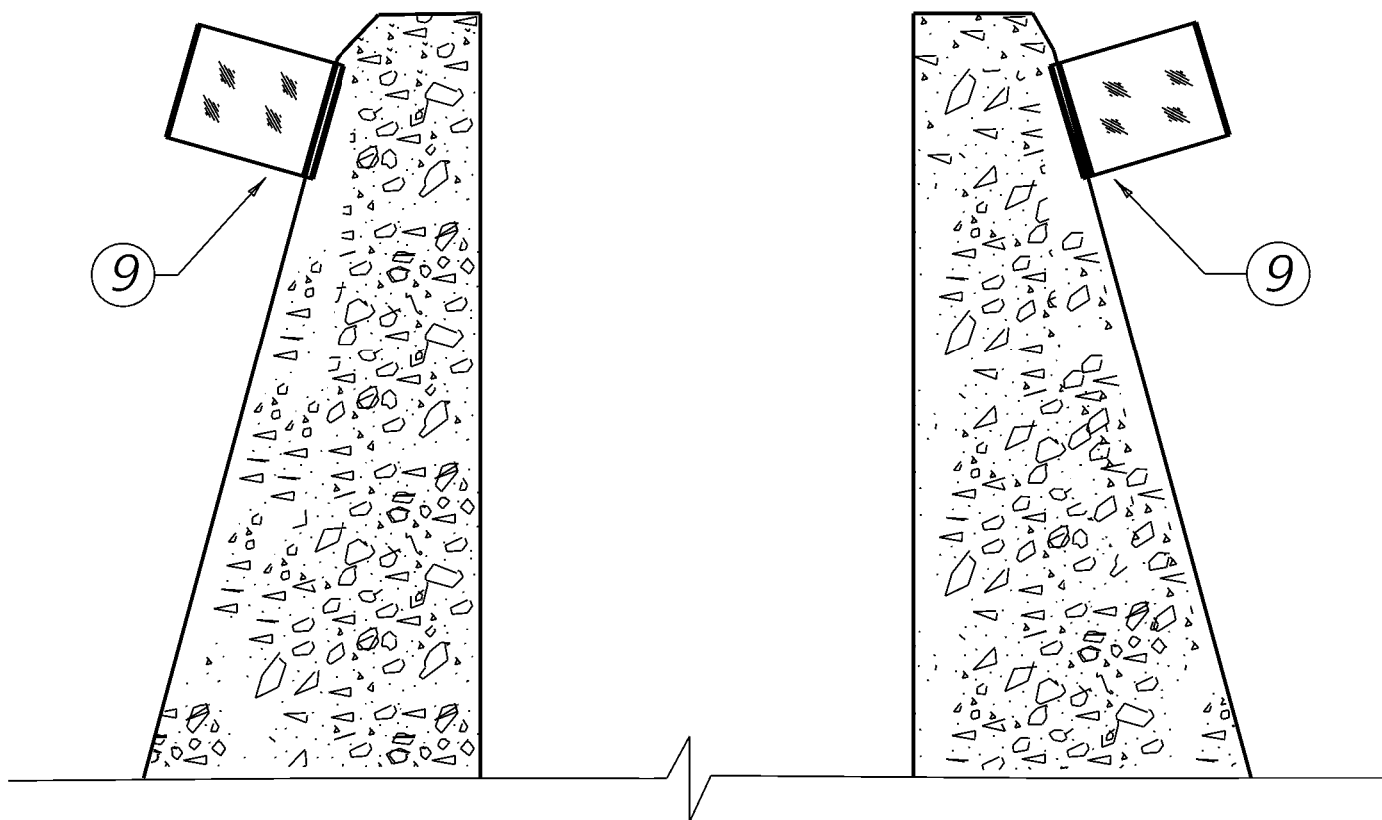


FRONT ELEVATION

SIDE ELEVATION



NORMAL (SOLID) WALL SECTION 10



(SEPARATE SEGMENT) WALL SECTION

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

SUBMITTED W. J. Jayne 02-28-2025
DIVISION DIRECTOR DATE

APPROVED _____ DATE _____
STATE HIGHWAY ENGINEER

BARRIERS



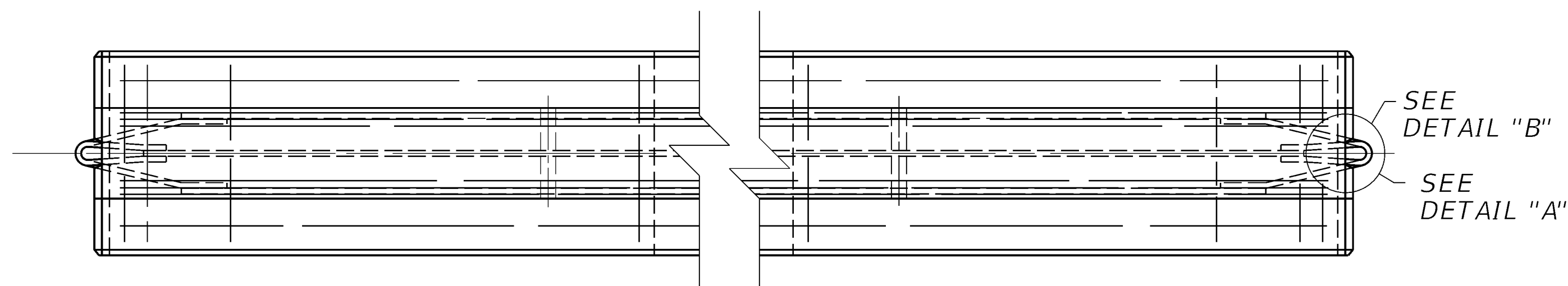
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



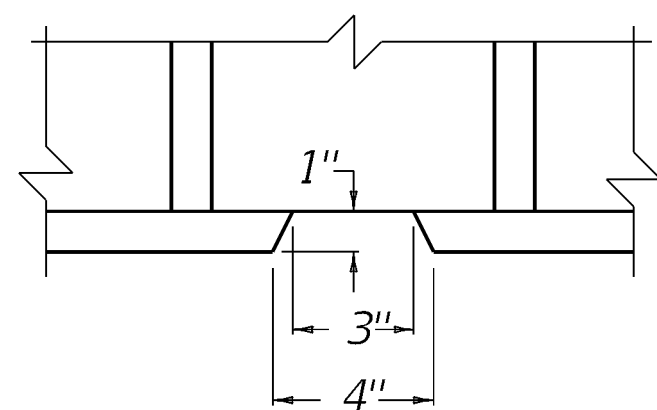
CONCRETE BARRIER WALLS

SHEET 012: DELINEATORS FOR CONCRETE BARRIERS

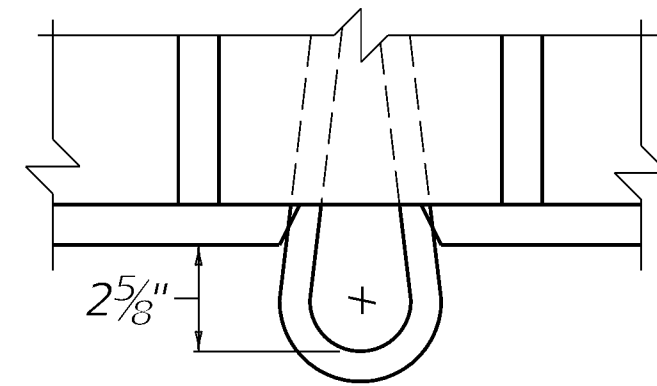
SEPIA NUMBER
SEPIA 042



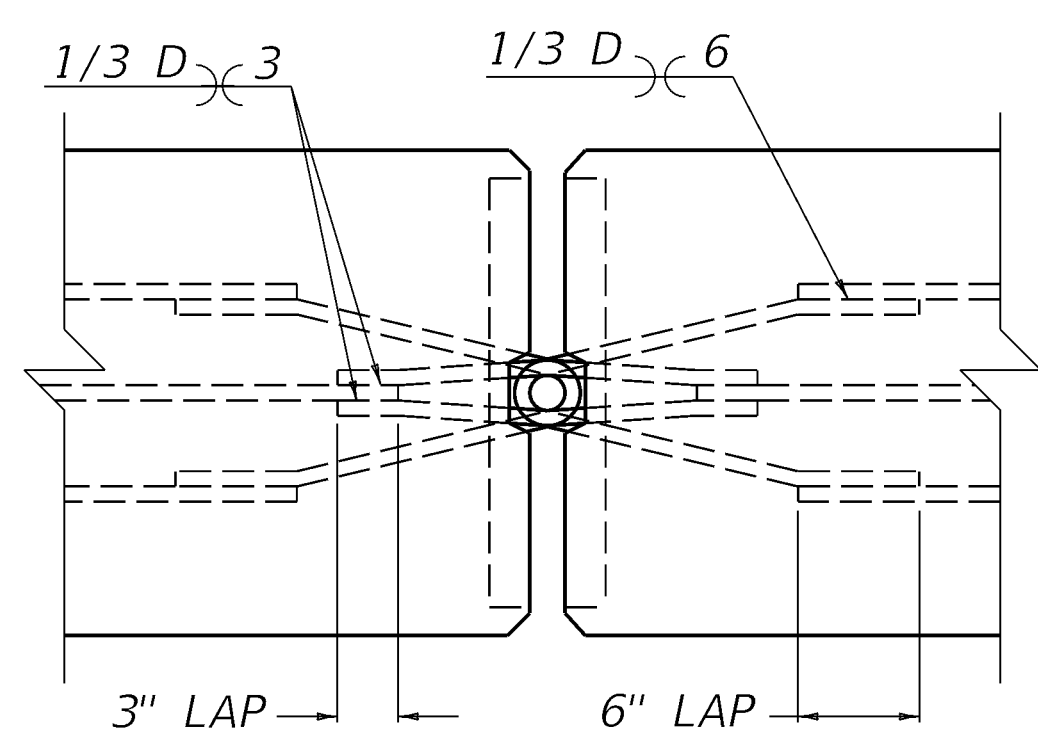
PLAN VIEW



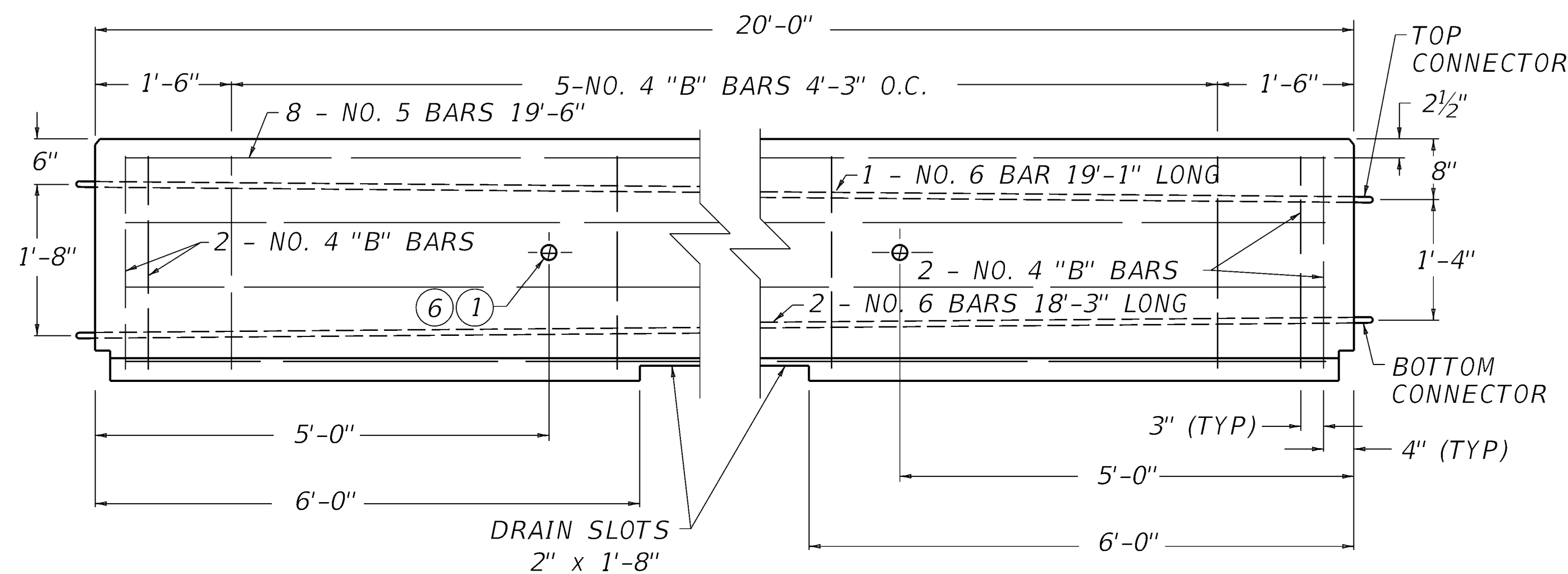
DETAIL "A"



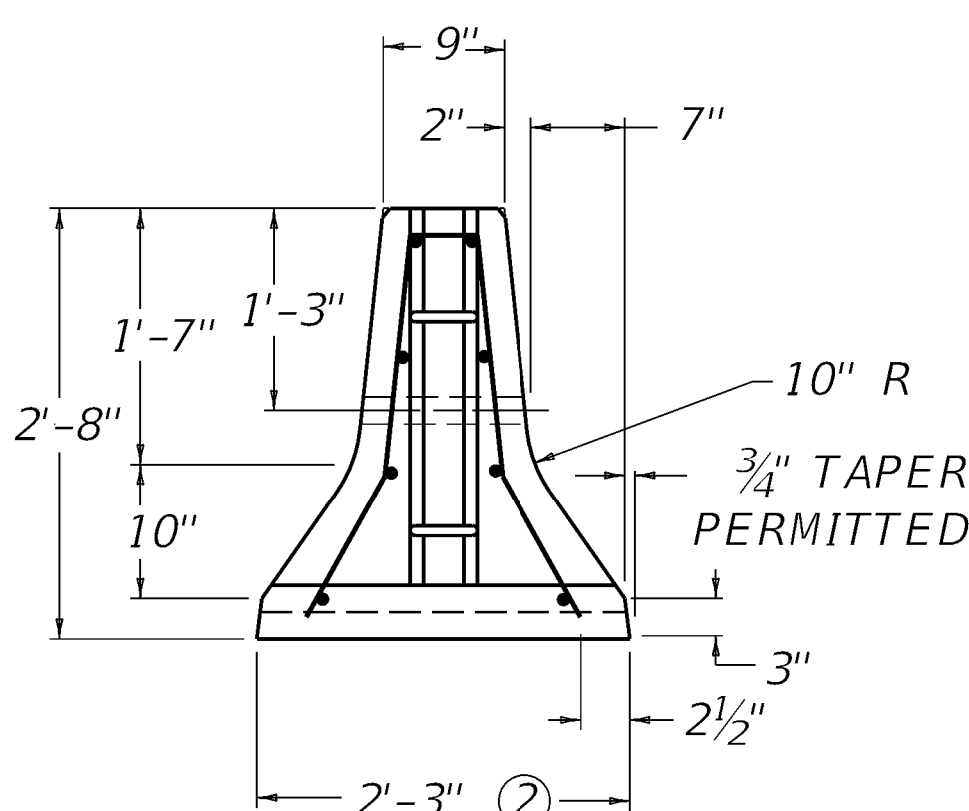
DETAIL "B"



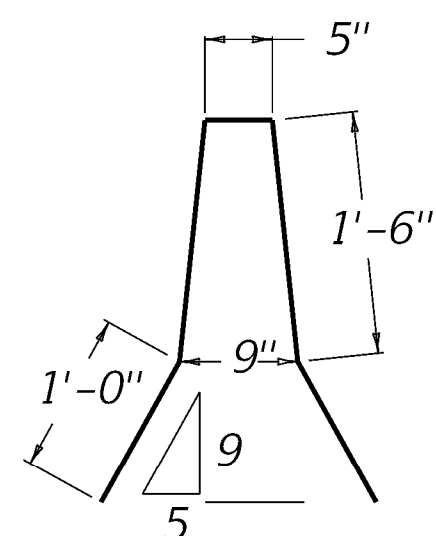
PLAN OF CONNECTION DETAIL



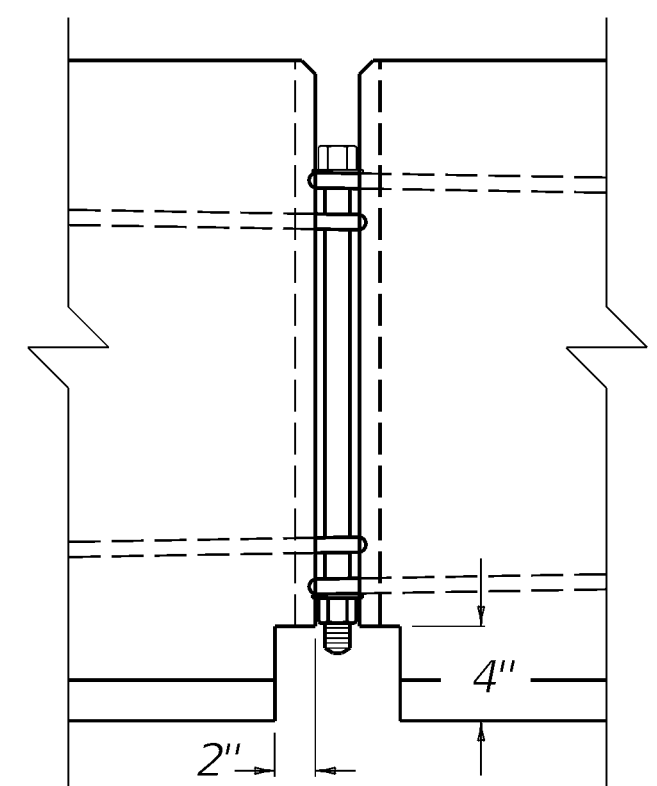
ELEVATION VIEW



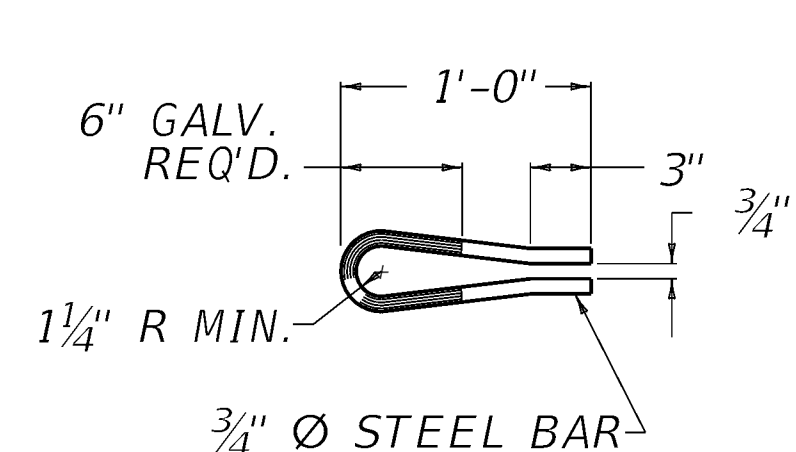
RIGHT ELEVATION VIEW



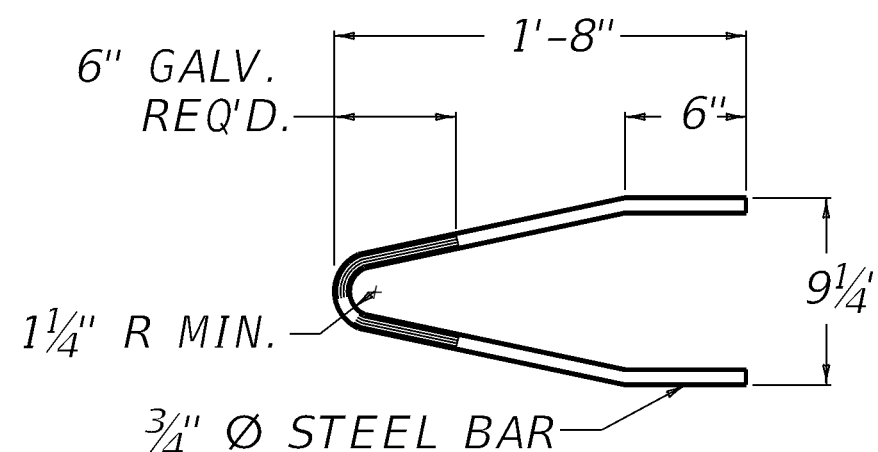
DETAIL OF "B" BAR



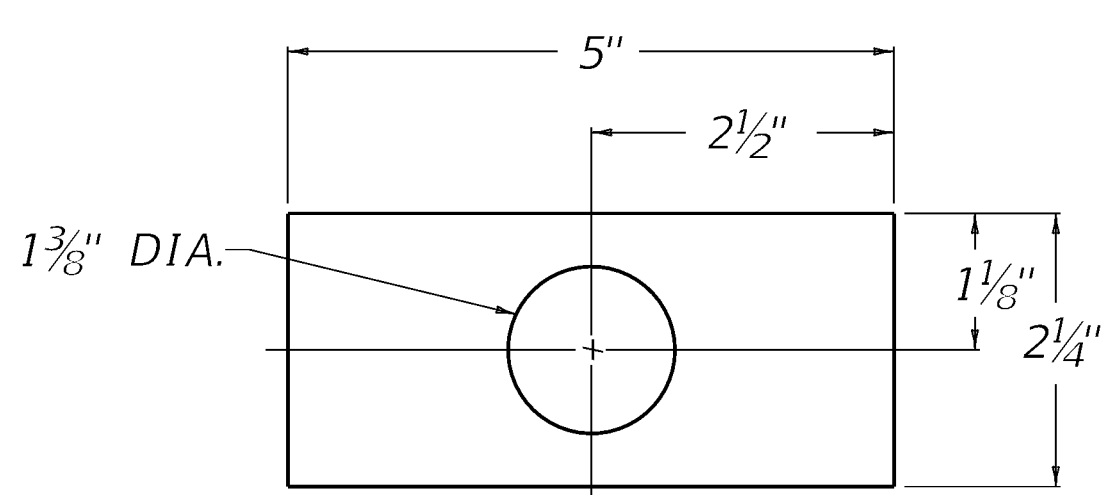
ELEVATION OF CONNECTON DETAIL



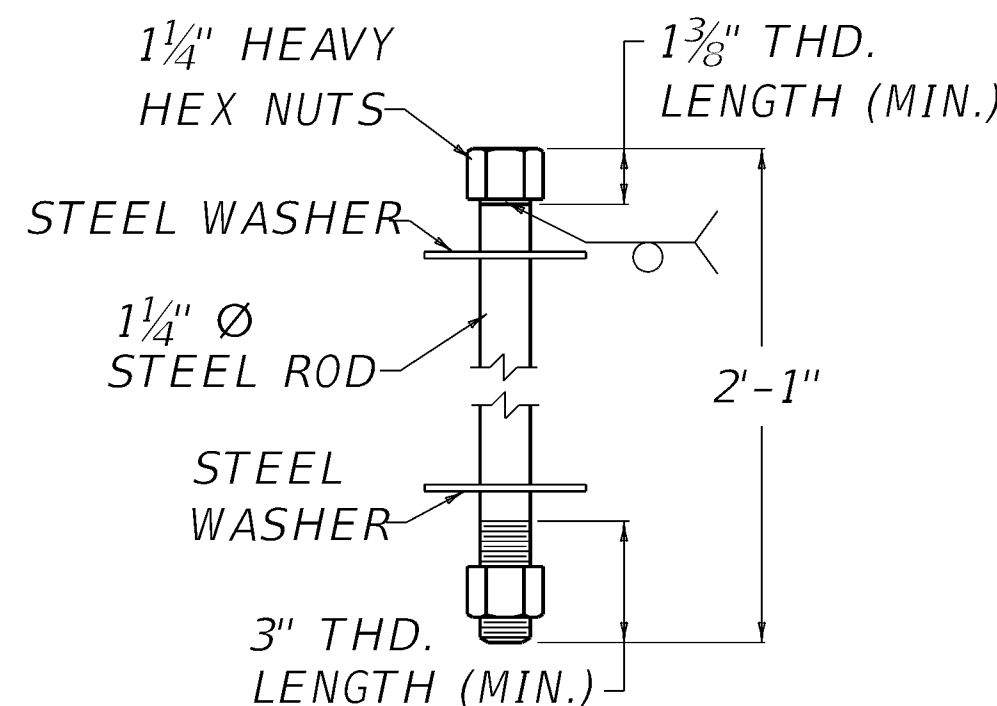
TOP CONNECTOR
(HOT DIP GALVANIZE AFTER FORMING)



BOTTOM CONNECTOR
(HOT DIP GALVANIZE AFTER FORMING)



1/2" THICK STEEL WASHER



CONNECTOR PIN

~ NOTES ~

- ① 2" DIA. LIFTING HOLE - 2 REQUIRED FOR EACH SECTION. FORMED WITH 2" P.V.C. PIPE OR EQUAL.
- ② TAPER NOT INCLUDED IN BASE WIDTH.
3. SHOP DRAWINGS SHALL BE APPROVED PRIOR TO MANUFACTURE.
- ④ BASED ON 150 LBS./CU. FT.
5. PLACE ALL STEEL REINFORCEMENT A CLEAR DISTANCE OF 2" MIN. FROM OUTSIDE FACE OF WALL, EXCEPT WHERE SHOWN OTHERWISE.
- ⑥ LIFTING BARS SHALL BE REQUIRED TO PREVENT SPALLING OF CONCRETE AROUND HOLES.
7. PREVIOUS WALL MANUFACTURED ACCORDING TO STANDARD DRAWING RBM-115 MAY STILL BE USED. ANY NEW BARRIER WALL TYPE 9T MANUFACTURED SHALL COMPLY TO THIS STANDARD DRAWING.
8. A PERMISSABLE ALTERNATE FOR THE PIN AND LOOP CONNECTOR IS JJ HOOK MANUFACTURED BY EASI-SET INDUSTRIES OUT OF MIDLAND, VA. SEE MANUFACTURER'S SHOP DRAWINGS FOR DETAILS ON JJ HOOK CONNECTOR AND RECOMMENDED REINFORCEMENT. THE BARRIER WALL'S DIMENSIONS, SHAPE, LENGTH AND THE DRAIN SLOT DIMENSIONS AND LOCATIONS SHALL MATCH THIS DRAWINGS CURRENT DIMENSIONS.

BID ITEM AND UNIT TO BID
CONCRETE BARRIER WALL TYPE 9T

LF

USE WITH CUR. STD. DWG. RBM-120

APPROXIMATE QUANTITIES

20'		
REINF.	CONC.	WEIGHT ④
LBS.	CU. YD./FT.	TONS
195	0.12	5.0

REVISION DATE: 07.23.2024
REVISION NUMBER: 0

SUBMITTED 02/28/2025
DIVISION DIRECTOR

W. J. Jayne

APPROVED STATE HIGHWAY ENGINEER

BARRIERS



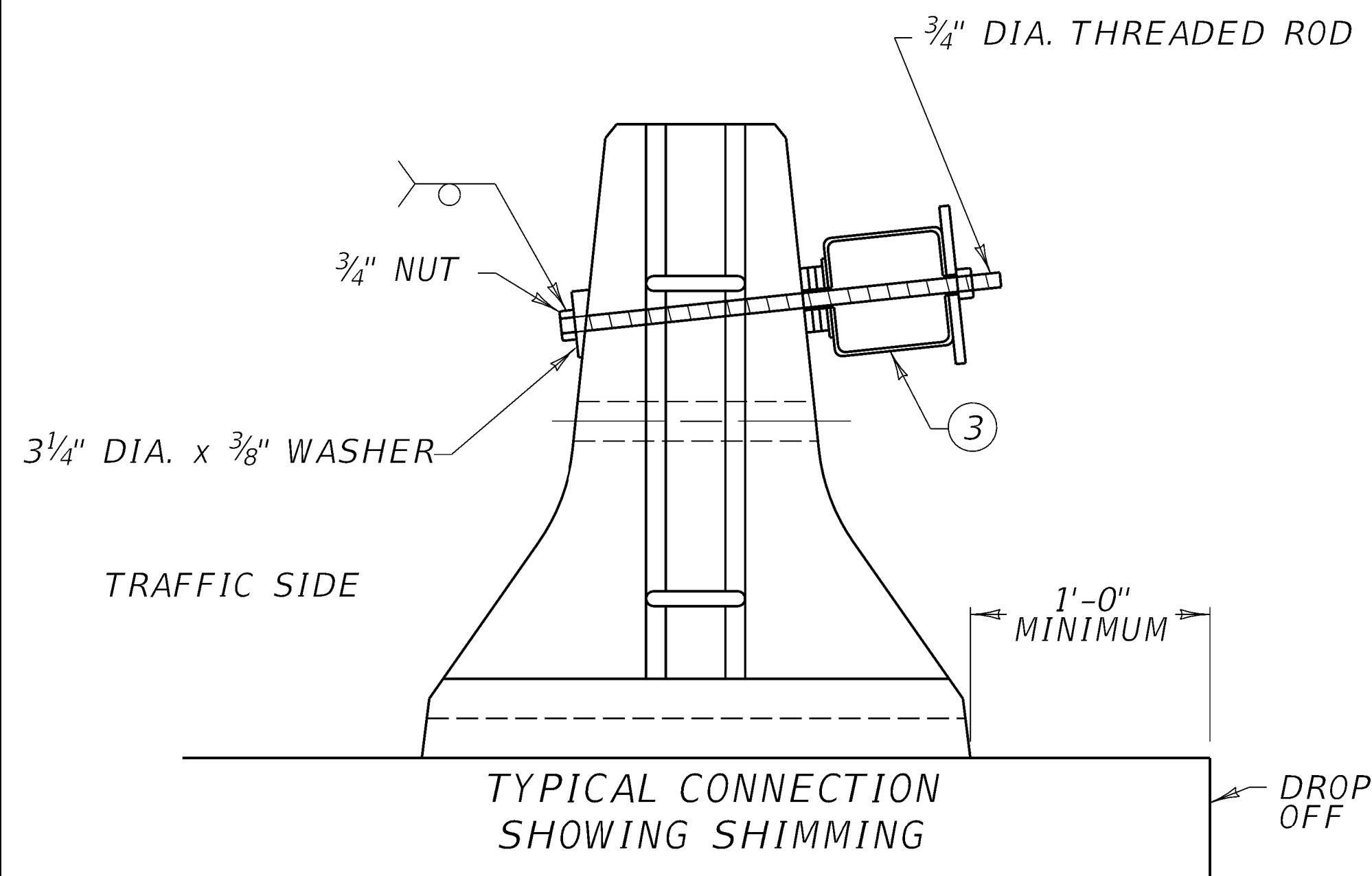
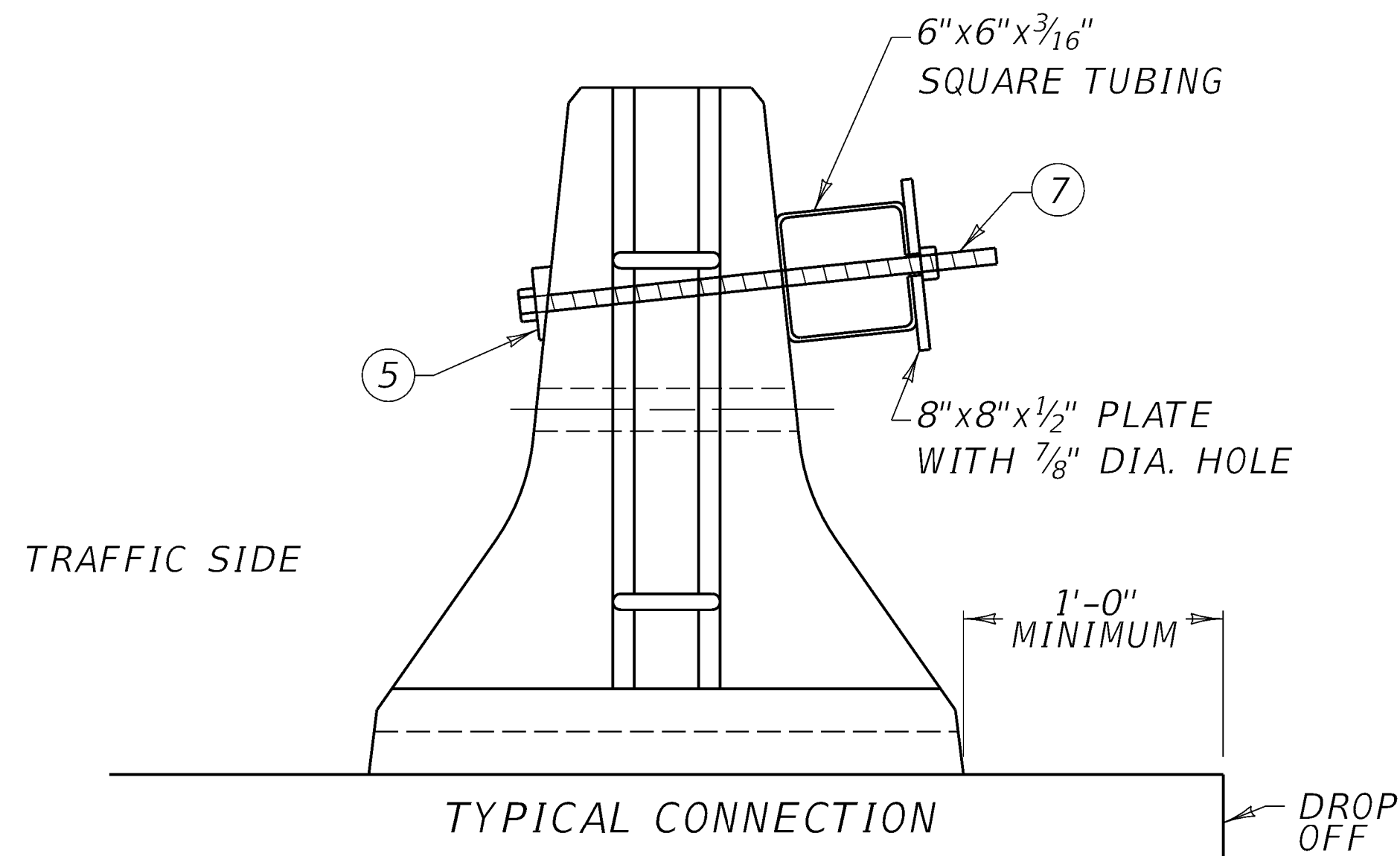
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CONCRETE BARRIER WALLS

SHEET 013: CONCRETE BARRIER WALL TYPE 9T (TEMPORARY)

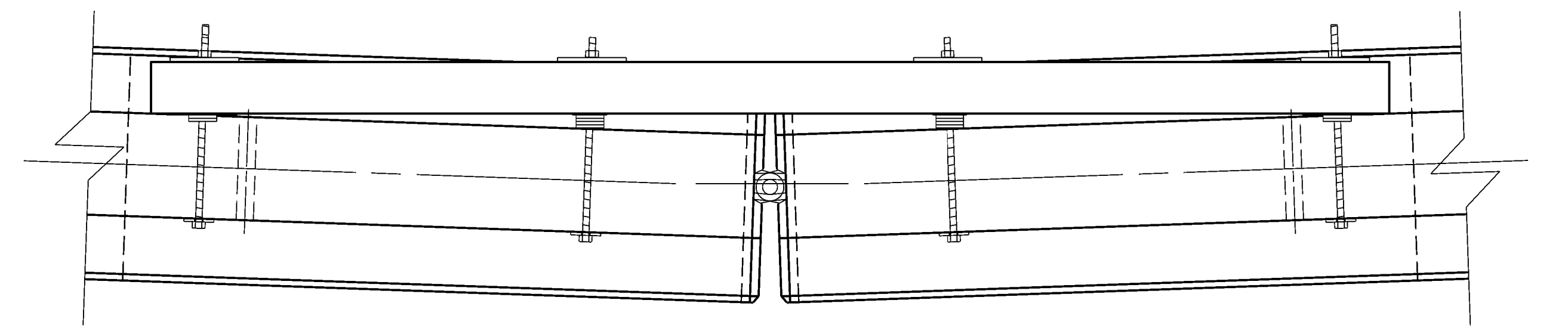
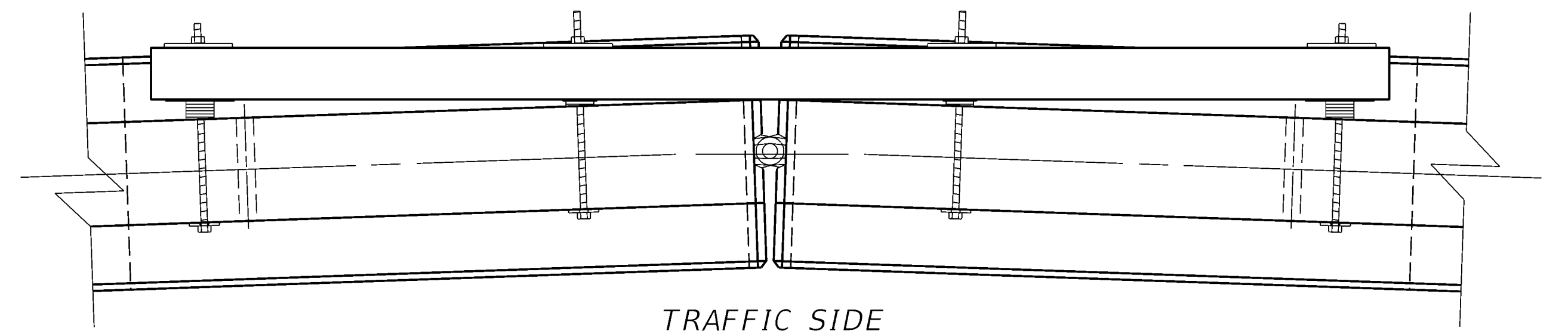
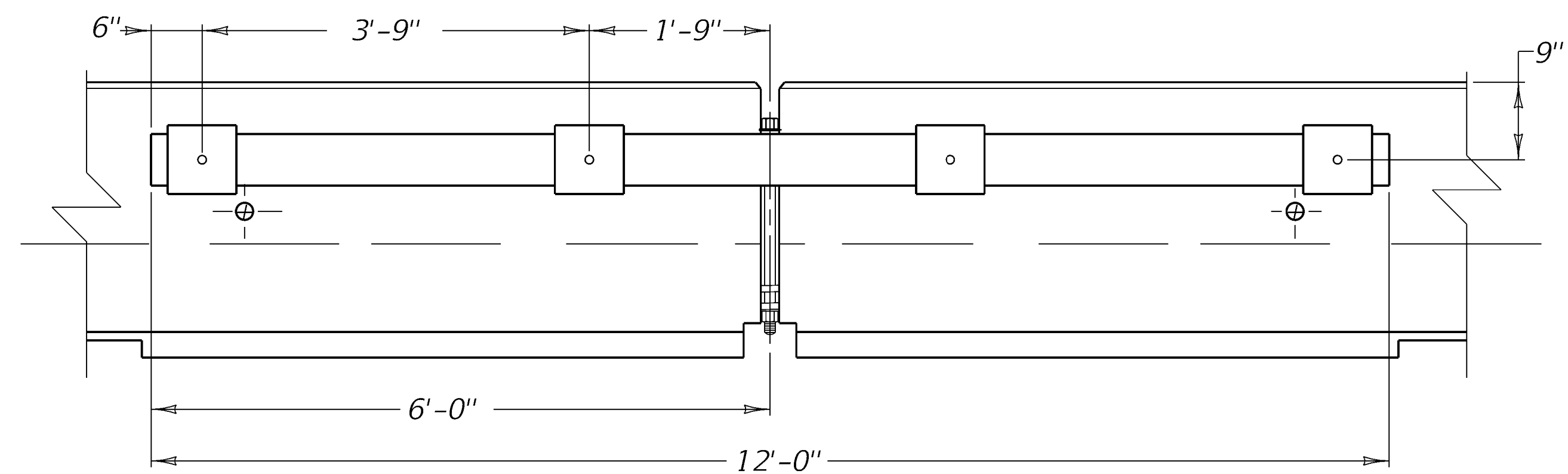
SEPIA NUMBER
SEPIA 042



~ NOTES ~

1. STIFFENED BARRIER WALL IS REQUIRED IN WORK ZONES WHEN THE EDGE OF THE WALL FURTHEST FROM TRAFFIC IS LOCATED WITHIN 3'-0" OF THE BRIDGE DECK EDGE PARALLEL TO THE DIRECTION OF TRAFFIC. MAY ALSO BE USED IN OTHER TEMPORARY SITUATIONS WHERE SUBSTANTIAL DROP OFFS EXIST. MAINTAIN 1'-0" MINIMUM FROM EDGE OF BARRIER TO DROP OFF.
2. STIFFENER SHALL BE INSTALLED WHEN BARRIER IS SET AND BEFORE EXPOSED TO TRAFFIC.
- ③ SQUARE TUBING SHALL BE 50 GRADE STRUCTURAL STEEL.
4. WHEN BARRIER WALL SECTIONS ARE PLACED ON A RADIUS, THE AREA BETWEEN THE SQUARE TUBING AND BARRIER WALL SHALL BE SHIMMED AS SHOWN ABOVE. SHIM SHALL CONSIST OF ONE SQUARE PLATE (4" NEAR END OF BARRIER WALL SECTION, 8" NEAR END OF TUBING SECTIONS) $\frac{3}{16}$ " THICK WITH AS MANY $\frac{3}{4}$ " DIA. x $\frac{3}{8}$ " THICK WASHERS AS NEEDED.
- ⑤ BEVEL WASHER TO BE PARALLEL WITH PLANE OF BARRIER AND BOLT HEAD. (TYP.)
6. ALL MATERIALS, LABOR INVOLVED WITH THIS PROCESS TO BE INCIDENTAL TO LINEAR FEET OF WALL.
- ⑦ ROD PERPENDICULAR TO BARRIER WALL SURFACE. (TYP.)

USE WITH CUR. STD. DWG. RBM-115



REVISION DATE: 07.23.2024
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02/28/2025
DATE

SUBMITTED: *W. J. Gayson*
DIVISION DIRECTOR
APPROVED: _____
STATE HIGHWAY ENGINEER

BARRIERS



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



CONCRETE BARRIER WALLS

SHEET 014: BOX BEAM STIFFENING PF TEMPORARY
CONCRETE BARRIER

SEPIA NUMBER
SEPIA 042