

DISTRICT 2 STANDARDS

4-13-16

½ SIZE

- 10.2 Inlets, Special
- 11.2 Inlets, Special (Type A Gutter)
- 12.2 Double Inlet, Special
- 13.2 Frame & Grate for Inlets, Special
- 13.2a Frame & Grate for Inlets, Special
- 13.2b Frame & Grate for Inlets, Special
- 13.2c Frame & Grate for Inlets, Special
- 13.2d Frame & Grate for Inlets, Special
- 14.2 Inlets, Special, No. 1
- 15.2 Inlets, Special, No. 2
- 20.2 Standard Inlet for Type A Gutter (Special)
- 21.2 Standard Inlet for Curb & Gutter
- 30.2 Field Tile Junction Vaults 2' and 3' Dia.
- 31.2 Treatment of Field Tile Systems Under Ditches
- 32.2 Sign Panel - Type 1 (Special)
- 33.2 Special Drainage Outlet
- 34.2 Inlet Stand Pipe
- 35.2 Guardrail Erosion Control Treatments
- 36.2 Paved Ditch (Special)
- 37.2 Underdrain for Across Road (AR) Culverts
- 44.2 Reserved Parking Sign Detail
- 45.2 Superelevation Transition on Two-Lane Highway
- 46.2 Hot-Mix Asphalt Approaches and Mailbox Returns for Single Lift (SMART) Resurfacing Projects
- 47.2 Hot-Mix Asphalt Approaches and Mailbox Returns for Two Lifts (3P) Resurfacing Projects
- 48.2 Safety Edge (SMART Projects)
- 49.2 Safety Edge (3P Projects)
- 61.2 Slotted Drain Pipe for Type A Gutter (Special)
- 63.2 Pipe Handrail for Steps
- 64.2 Pipe Handrail, Special – for Retaining Walls
- 66.2 Permanent Survey Markers, Type II
- 73.2 Automatic Flap Gate
- 81.2 Riprapped Culvert Energy Basin
- 89.2 Termination of Dead End Roads
- 90.2 Mechanical Joints for Concrete Pipe and Box Culverts
- 93.2 Typical Aggregate Base Sideroad
- 94.2 Traffic Control & Protection at Turn Bays (To Remain Open to Traffic)

District 2 Standards Designer Notes

½ Size District 2 Standards

- 10.2 This is used for drainage in a curb & gutter section. The diagonal grate is included in the cost. The diagonal grate is bicycle safe. If the inlet is in a driveway which has a depressed curb, the grate on the bottom left hand side will be used. The cost of this grate is also included in the cost of the inlet special. When using this do not include 13.2, 13.2a, 13.2b, 13.2c or 13.2d.
- 11.2 This is used for drainage in a Type A gutter. The grate is included in the cost of the inlet.
- 12.2 This is used when extra inlet capacity is needed. For example, in a sag condition.
- 13.2 These are different types of frame & grates for inlet specials. One of these can
13.2a be used to replace broken frame & grates on inlets to be adjusted or
13.2b reconstructed. Select the one that matches the existing. All of them are
13.2c bicycle safe.
13.2d
- 14.2 This has been used in medians where the gutter flag is less than 24".
- 15.2 This has been used in medians where the curb is only 2"± high. For example, near the nose of a ramped median.
- 20.2 Use this on the inlet end of Type A Gutter (Special)
- 21.2 Use this on the inlet end of Combination Concrete Curb & Gutter
- 30.2 If there is existing field tile on your job or think there could be field tile, include this standard. Also include a pay item for junction vaults.
- 31.2 If there is storm sewer or field tile under a ditch with 24" or less of cover, include this standard. Include the pay item for Miscellaneous Concrete.
- 32.2 Use this where the bridge is less than 24" wider than the roadway surface. This is very rare on a state route, but should be used on bridges on detour routes on County or Township roads.
- 33.2 This is a special drainage outlet to be used on existing pavements with drainage problems. The existing underdrains might not be working, or there is water pumping out of the joint between the pavement and shoulder.
- 34.2 This can be used to replace existing field tile stand pipes. The existing stand pipe is usually an orange perforated 6" pipe, 24" to 36" high, near the outlet end of a culvert. This could also be a new installation if requested by the property owner during Phase I or during negotiations.

District 2 Standards Designer Notes

7-20-16

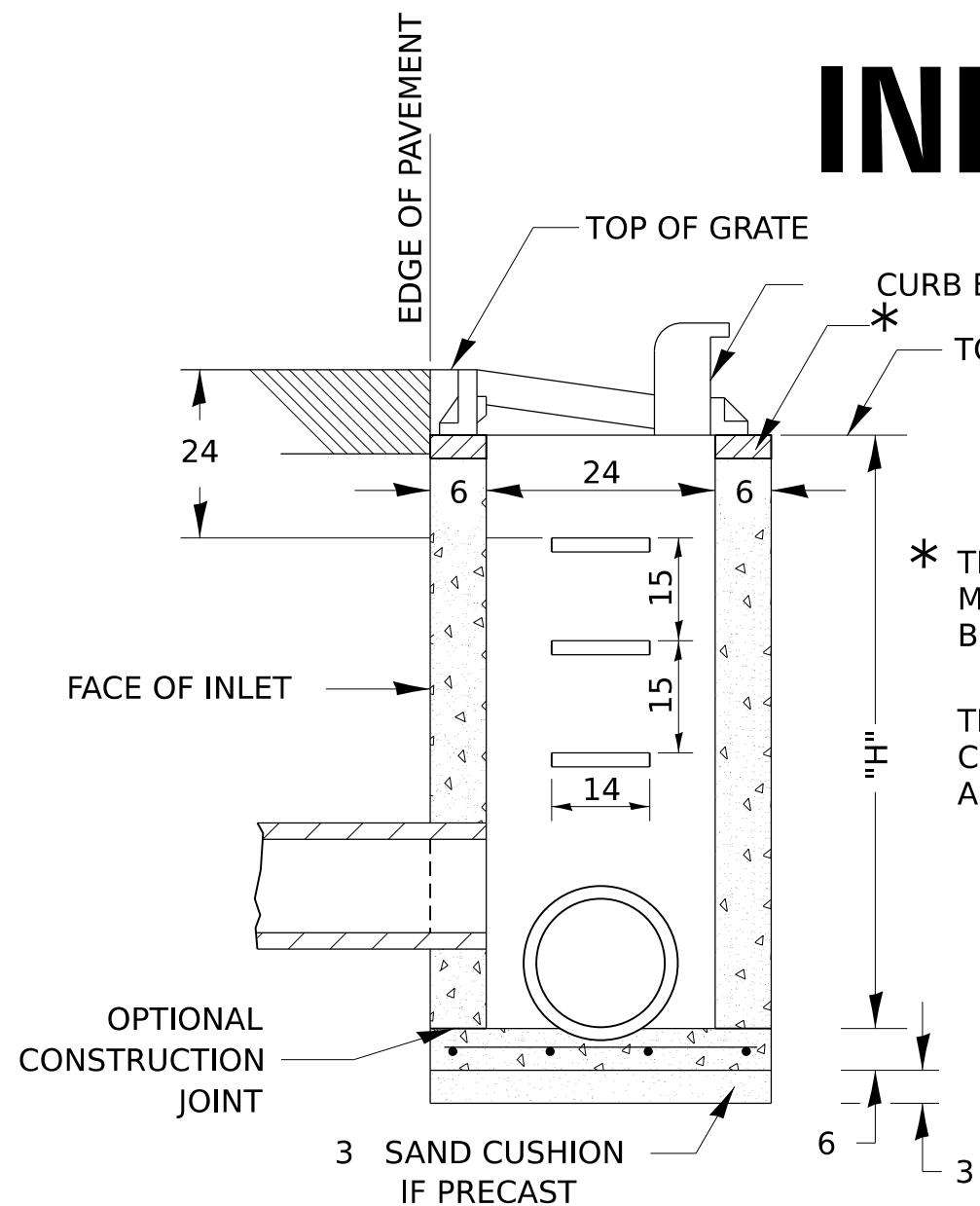
- 35.2 This is an erosion control treatment at guardrail that Operations has used for years. The downside is the erosion control curb tends to further tilt the guardrail over time. This can be used to replace existing erosion control curb or at selected locations. A better treatment for slopes at guardrail is Perimeter Erosion Barrier, Special (Dist. Std. 8.4).
- 36.2 Paved ditch is rarely used in District 2. It tends to crack and water seeps under the concrete, causing it to be undermined. Once undermined it collapses, causing an erosion problem. Where it can be used is on very flat ditch grades, less than 0.2%. In this case, velocity is low, but the paved ditch could silt in. Operations could clean the paved ditch and the paved ditch establishes the grade line.
- 37.2 Include when installing or removing across road culverts in sags or on grades greater than 2%. The purpose of this is to prevent water pumping out of the joints of the pavement patch. Add the pay items for Pipe Underdrains, Type 2 and Concrete Headwalls for Pipe Drains.
- 44.2 This is to be used on all disabled parking stalls.
- 45.2 Include this on projects that correct existing superelevations, or on new pavements on superelevations. Not to be used on 3P or Smart projects because existing superelevations are not changed.
- 46.2 Include this on all Smart resurfacing projects.
- 47.2 Include this on all 3P resurfacing projects.
- 48.2 Include in Smart resurfacing projects with paved shoulders 3' or less.
- 49.2 Include in 3P resurfacing projects with paved shoulders 3' or less.
- 60.2 Deleted 4-15-15
- 61.2 This can be used to increase drainage in curb & gutter or Gutter, Type A (Special) where the longitudinal grade is less than 0.3%. Use 68.1 when constructing median crossovers.
- 63.2 Include this when constructing new steps.
- 64.2 Include this when handrails are needed on retaining walls. Not all retaining walls need handrails. Retaining walls that are supporting and adjacent to sidewalks or parking lots usually need a handrail. Landscaping walls to retain earth in front of a house usually don't need handrails.

District 2 Standards Designer Notes

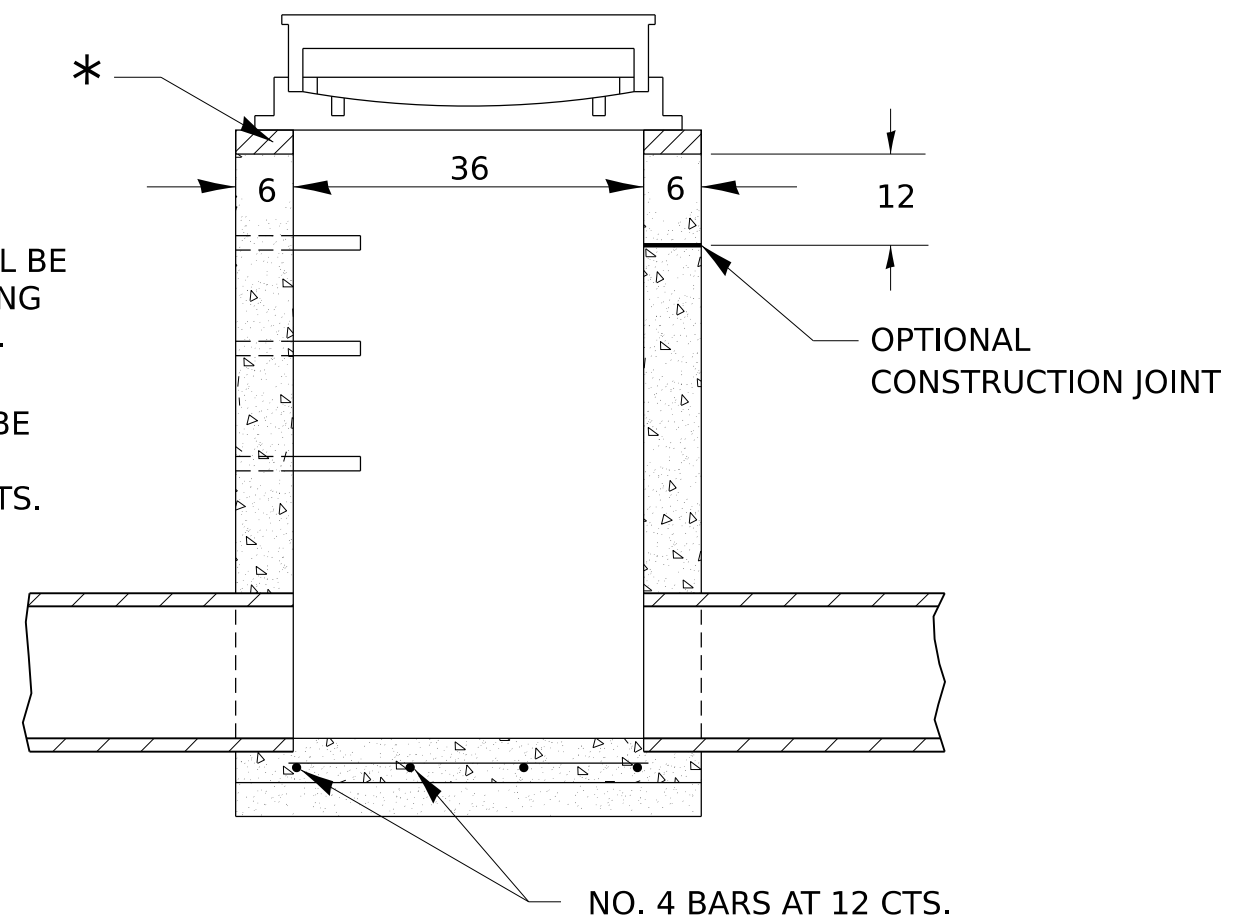
4-13-16

- 66.2 Include this when using the pay item for Permanent Survey Marks. Do not include Highway Standard 667101 because Standard 66.2 is 5' deep and requires a witness marker.
- 73.2 Use this on entrance pipes or berm pipes adjacent to a river or canal. This will prevent water from the river or canal backing up into the ditch.
- 81.2 This is one option to control erosion at the ends of culverts with very high velocities. There is a design process to determine the dimensions in the chart. Consult with the Hydraulics Engineer on its use.
- 89.2 Include this at the end of dead end roads like a cul-de-sac or hammer head turn around.
- 90.2 Use this at locations where pipe culverts or box culvert joints could separate. Most culverts do not require the ties, so this is rarely used. One application is where the culvert outlets into a river. There could be erosion at the end of the culvert so the end section or sections of the culvert could tip or fall off. In this case, only the last one or two sections were tied.
- 93.2 Include this when sideroads are constructed with 3"± of incidental on an aggregate base and the mainline has 8" HMA shoulders. This standard includes 4' HMA shoulders on the sideroad return, which will be placed monolithically when the return is resurfaced.
- 94.2 Include this on multi-lane roads when the traffic lane is closed adjacent to a left or right turn lane and the turn lane is to remain open to traffic.

INLETS, SPECIAL



SEC. A-A



SEC. B-B

NOTES

SEE STANDARD 602701 FOR DETAILS OF STEPS.

EXCEPT AS NOTED HEREON INLET SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.

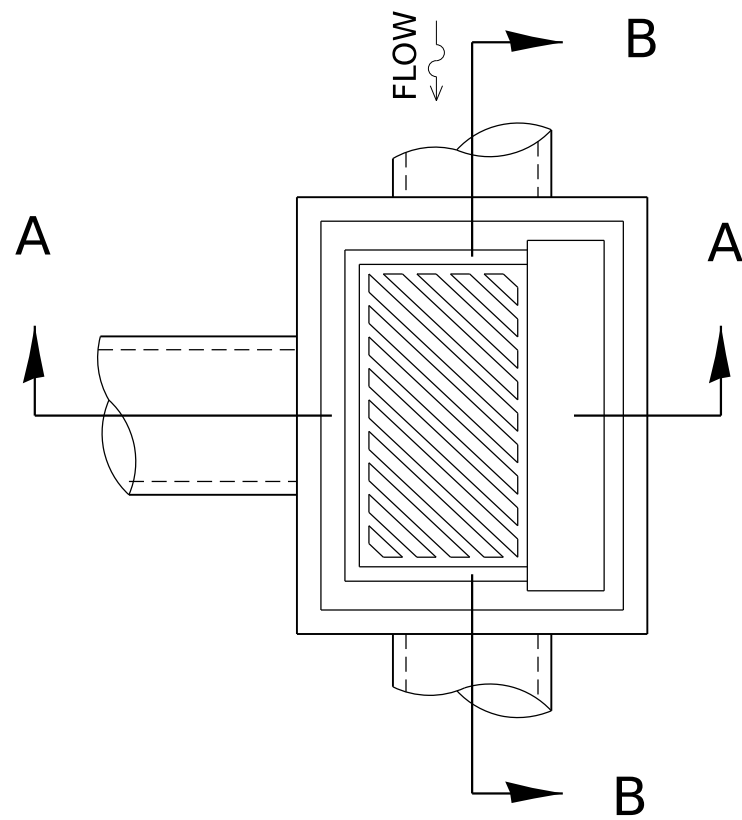
THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTED SECTIONS.

ALL VOIDS AROUND PIPE ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.

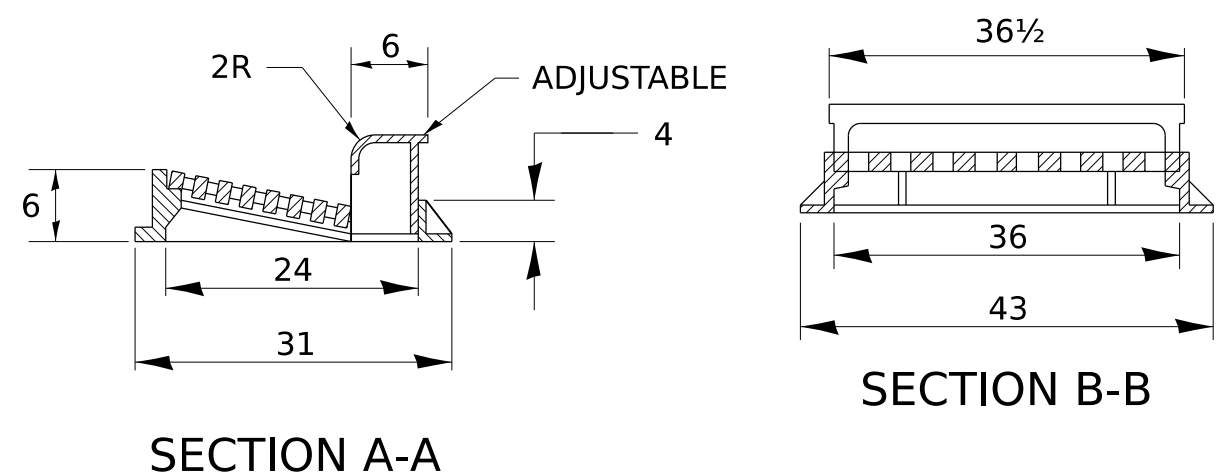
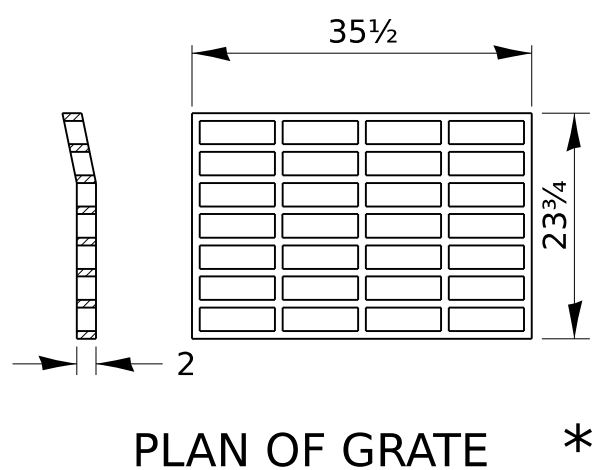
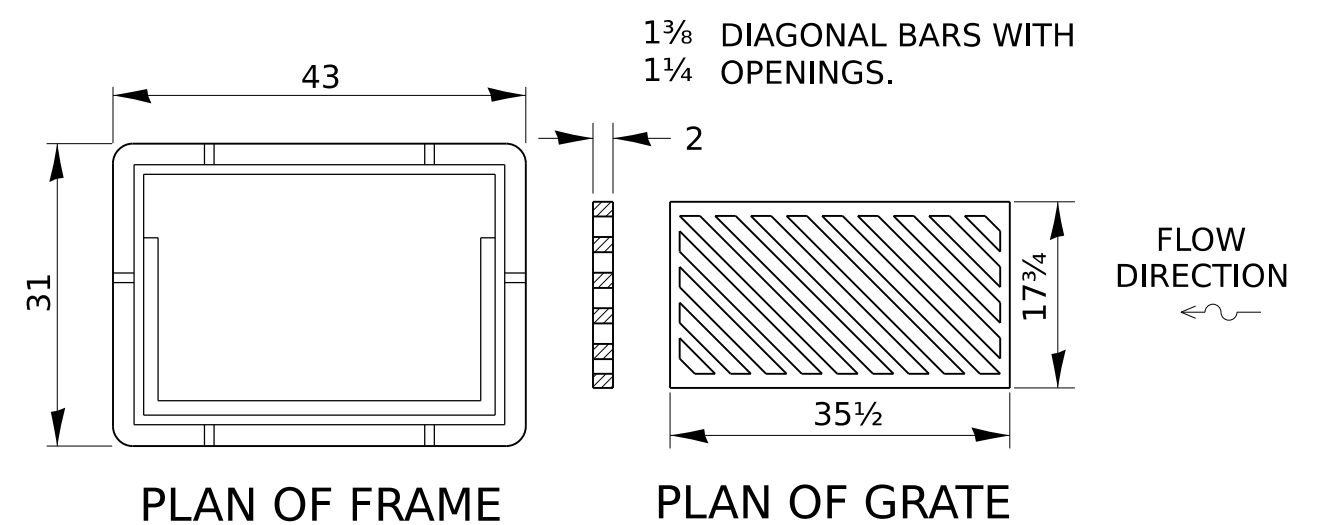
WEIGHT OF CAST IRON FRAME & GRATE = 530 lbs. ± . STEPS SHALL BE OMITTED WHEN DEPTH OF "H" IS LESS THAN 5 ft.

CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLES 504.01 THRU 504.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4,000 psi AFTER 28 DAYS.

THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE CAST IRON STEPS (IF USED), THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.



DETAIL OF FRAME & GRATE



ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

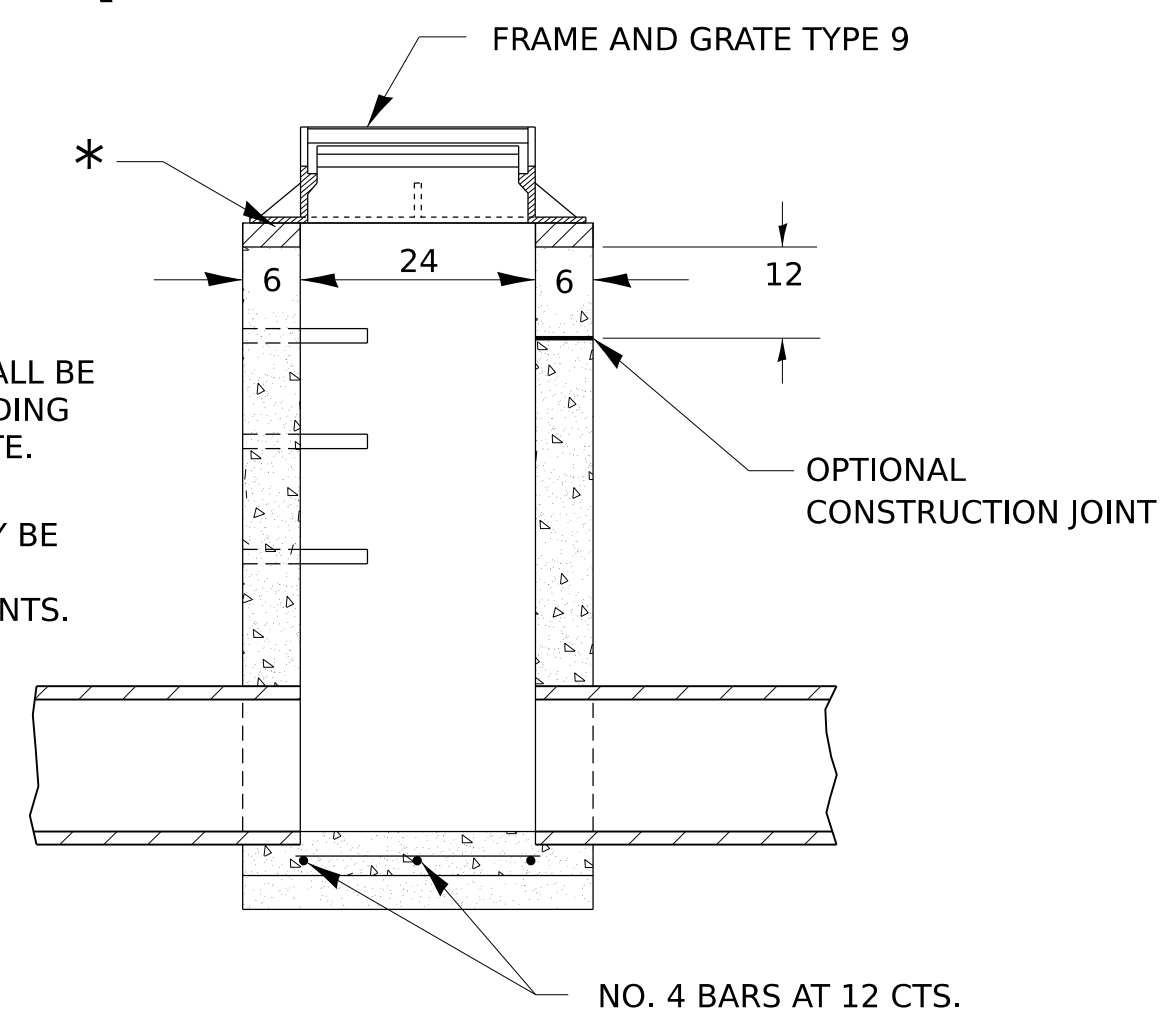
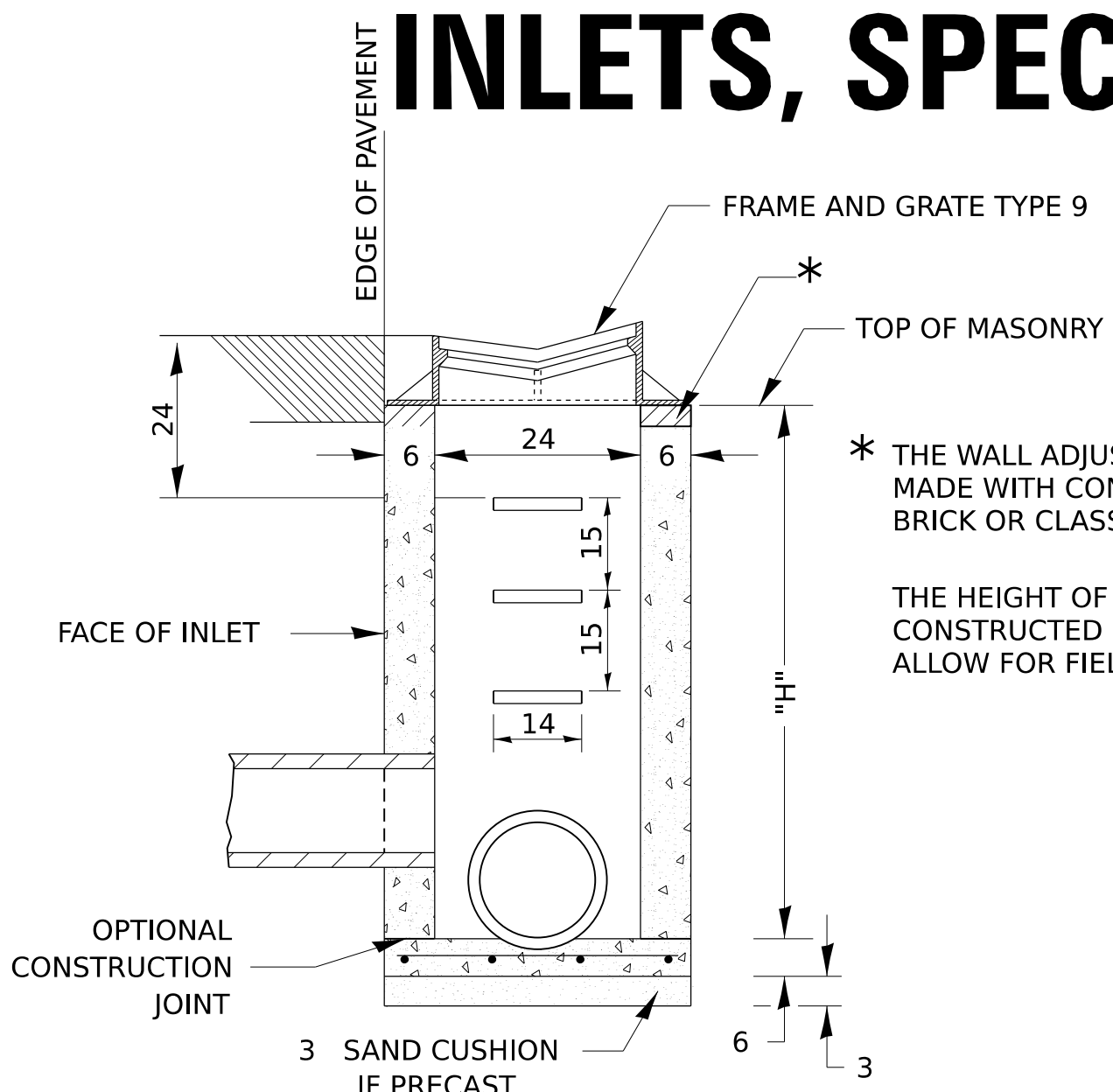
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PLOT DATE = 1/28/2025

REVISED -	1-05-16
REVISED -	6-27-14
REVISED -	10-13-11
REVISED -	

REGION 2 / DISTRICT 2 STANDARD				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

INLETS, SPECIAL (TYPE A GUTTER)

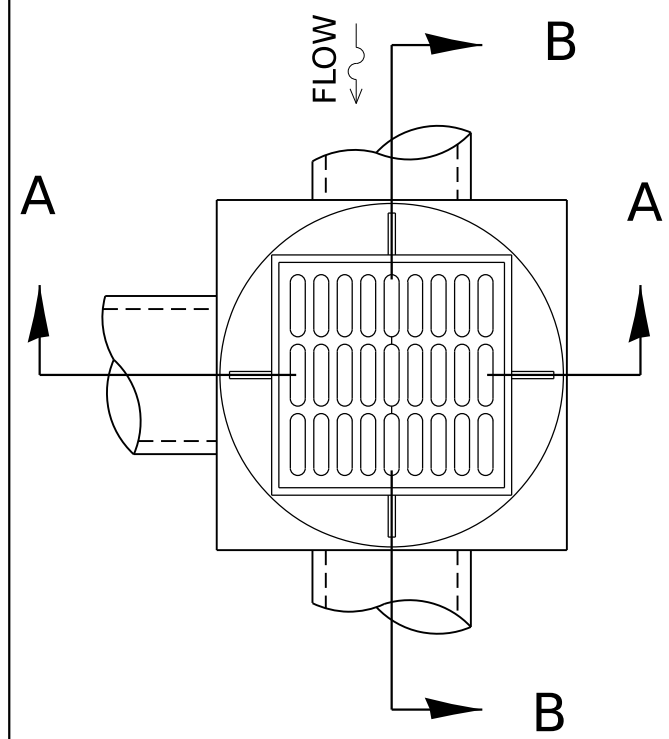


* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.

THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

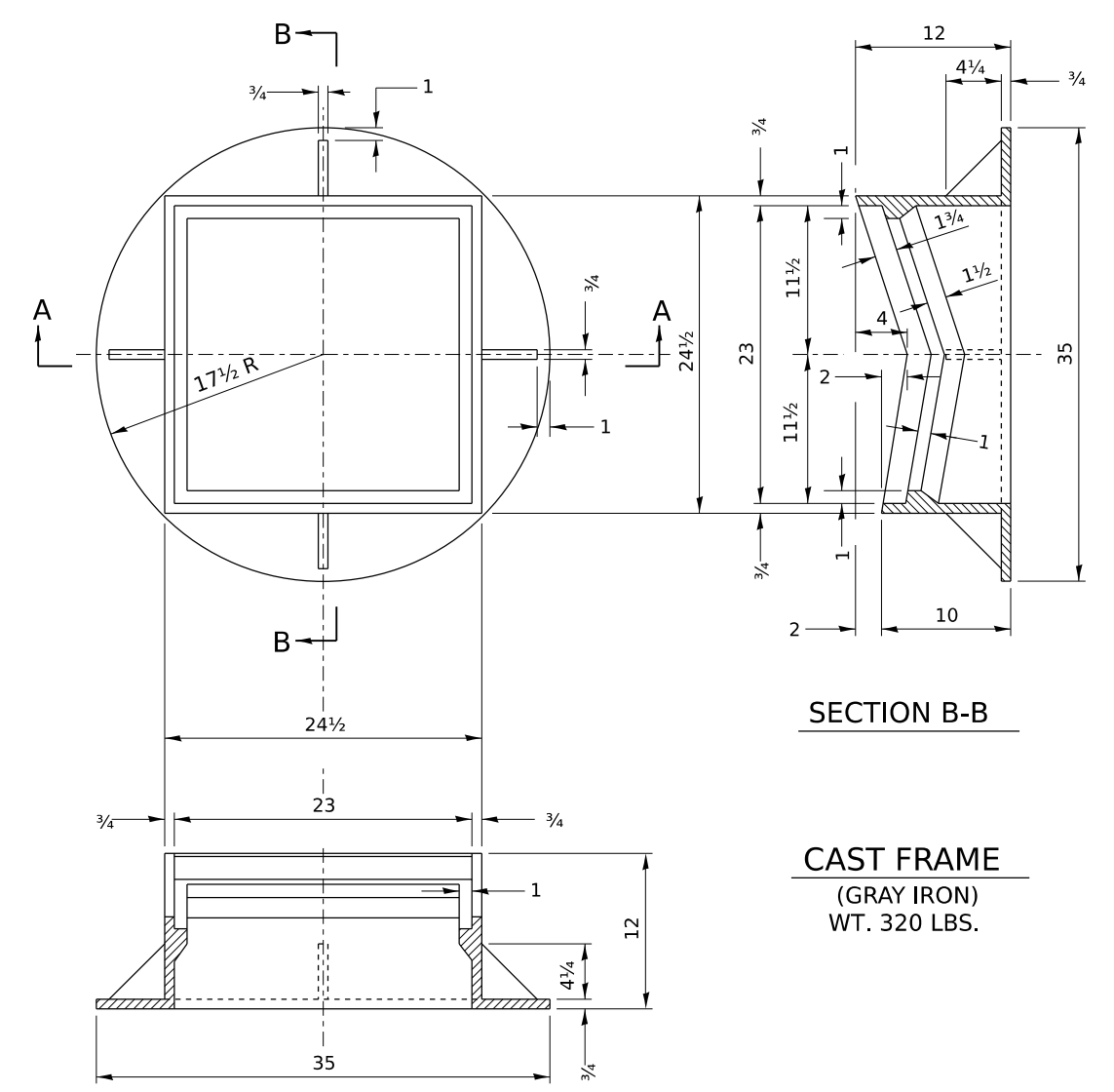
SEC. A-A

FRAME AND GRATES TYPE 9



NOTES

- SEE STANDARD 602701 FOR DETAILS OF STEPS.
- EXCEPT AS NOTED HEREON INLET SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.
- THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTED SECTIONS.
- ALL VOIDS AROUND PIPE ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.
- WEIGHT OF CAST IRON FRAME & GRATE = 440 LBS.
- STEPS SHALL BE OMITTED WHEN DEPTH OF "H" IS LESS THAN 5 FT.

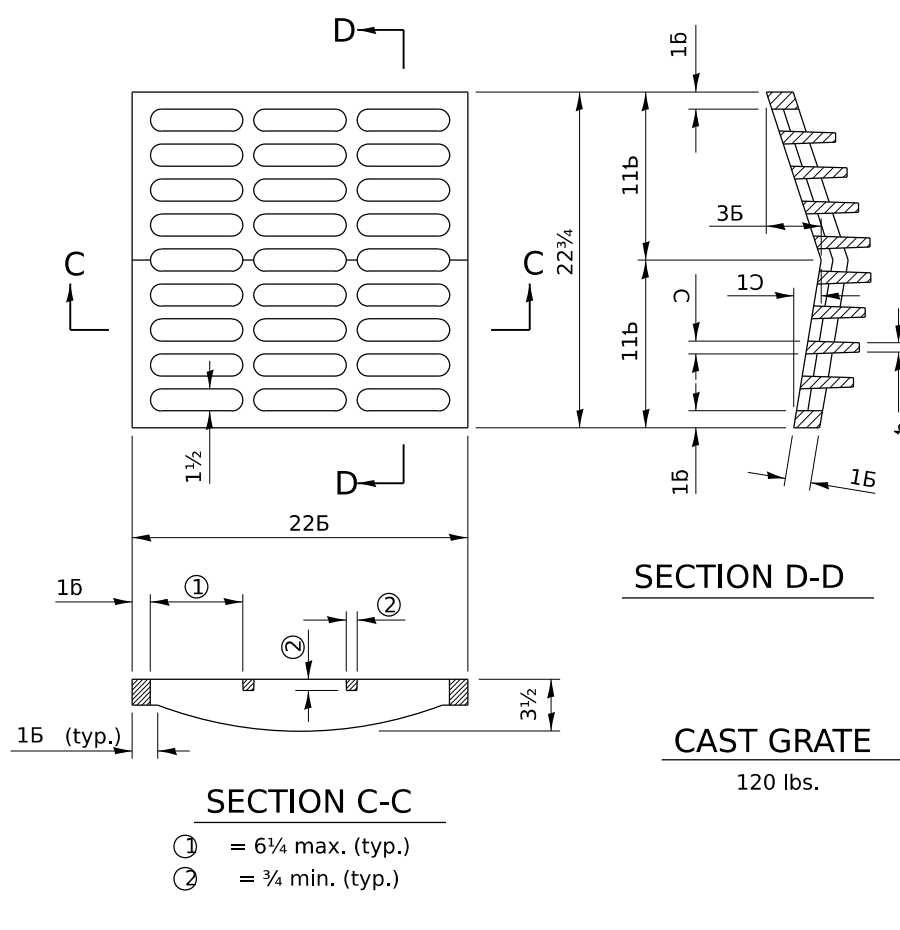
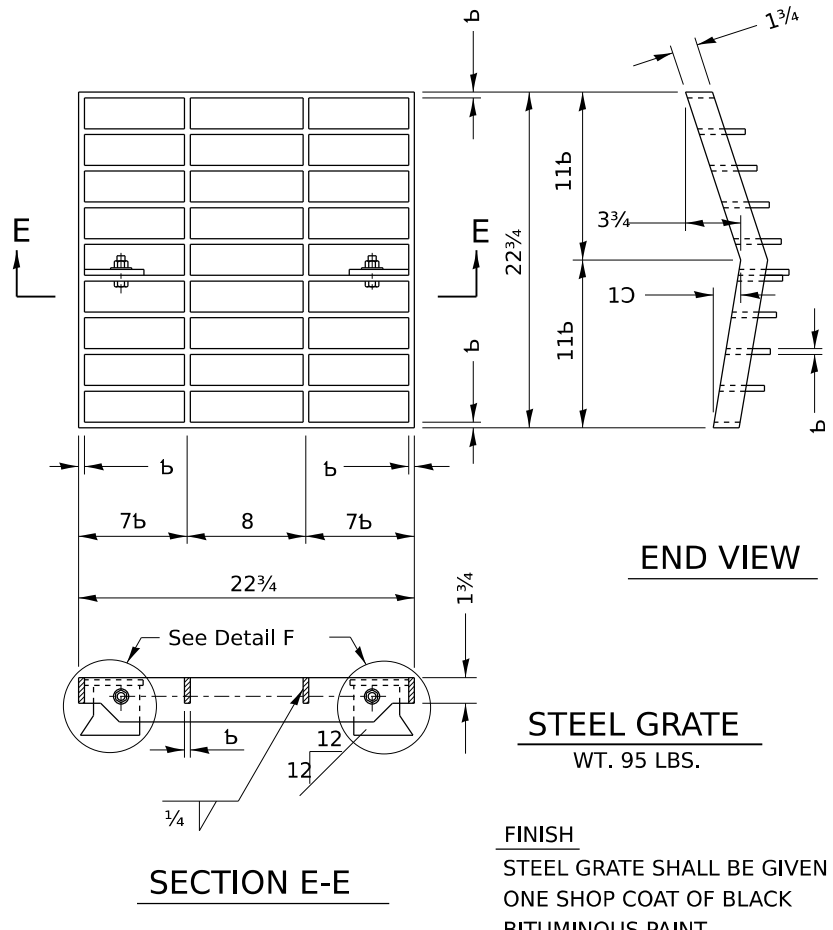
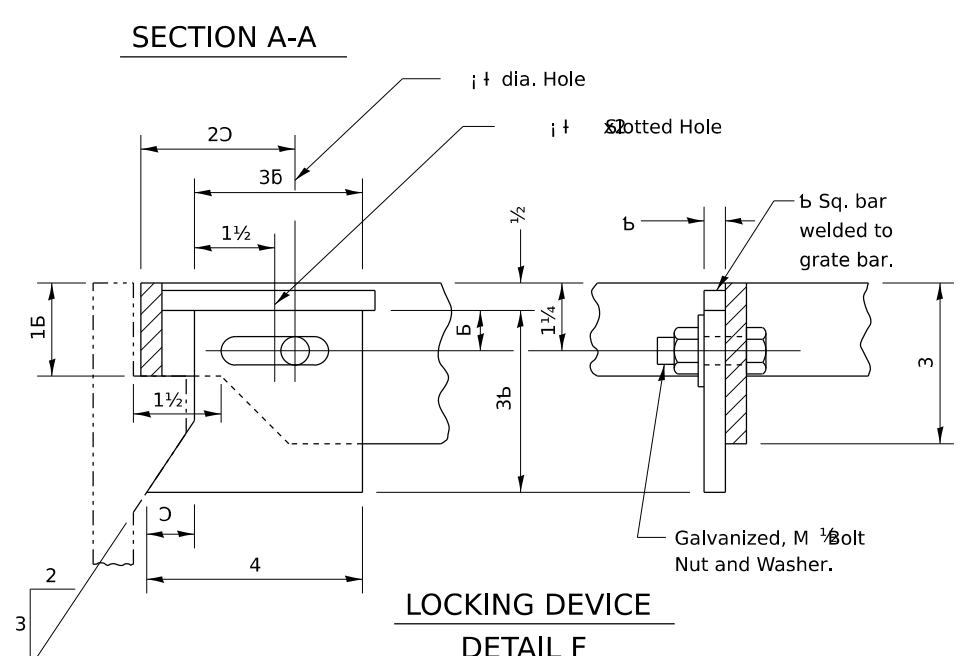


DETAIL OF FRAME & GRATE

NOTES

CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLES 504.01 THRU 504.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4,000 PSI AFTER 28 DAYS.

THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE STEPS (IF USED), THE PRECAST FLOOR SLAB, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.



GENERAL NOTES

THE MATERIAL FOR STEEL GRATE SHALL CONFORM TO ARTICLE 1006.04 OF THE STANDARD SPECIFICATIONS.

THE USE OF EITHER A CAST GRATE OR A STEEL GRATE WITH THE CAST FRAME SHALL BE THE OPTION OF THE CONTRACTOR.

THE CAST GRATE MAY BE MADE OF EITHER GRAY IRON OR DUCTILE IRON CONFORMING TO THE STANDARD SPECIFICATIONS. DUCTILE IRON CASTING SHALL BE GRADE 65-45-12

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

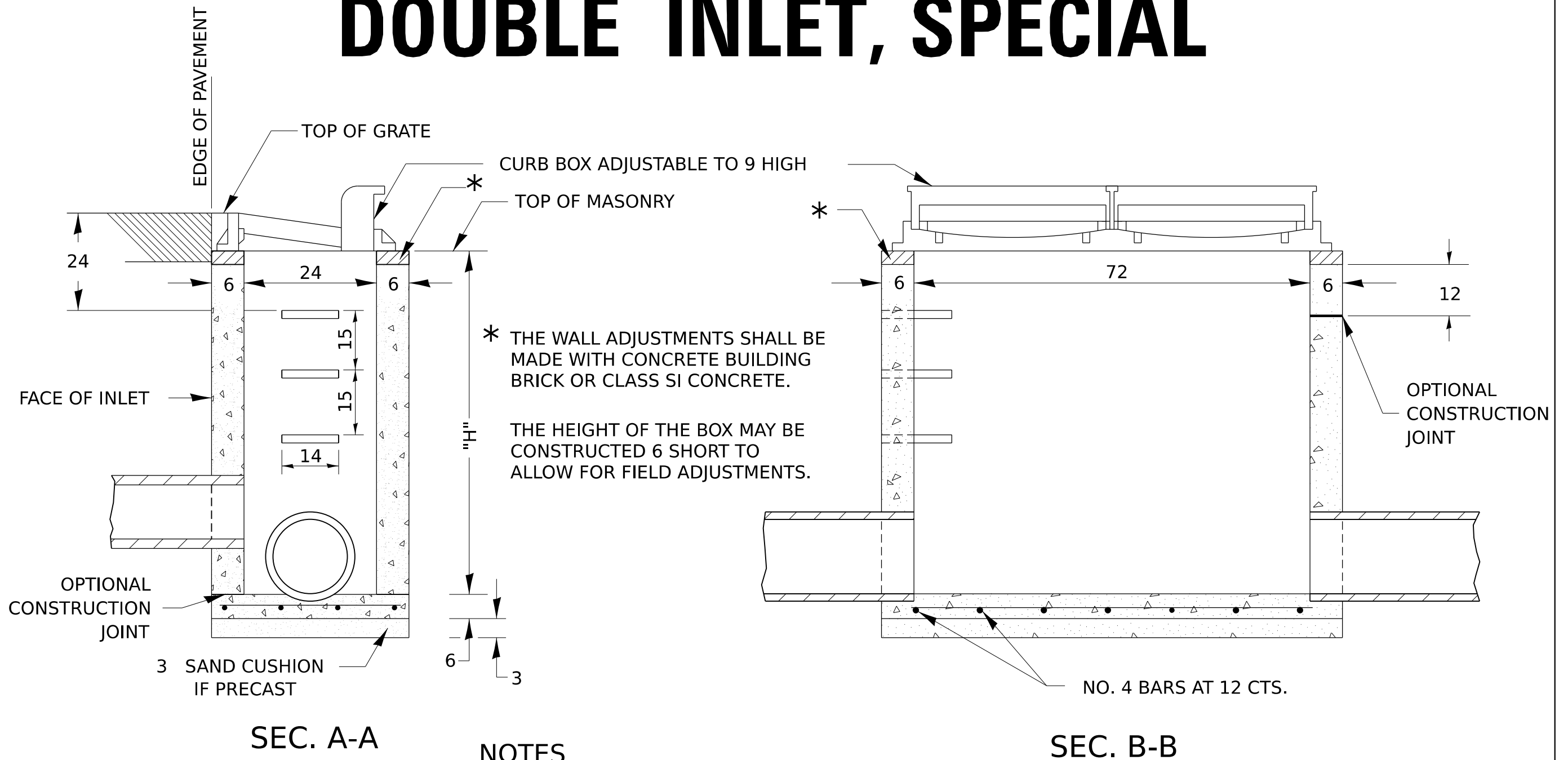
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PLOT DATE = 1/28/2025

REVISED -	1-05-16
REVISED -	6-27-14
REVISED -	10-13-11
REVISED -	

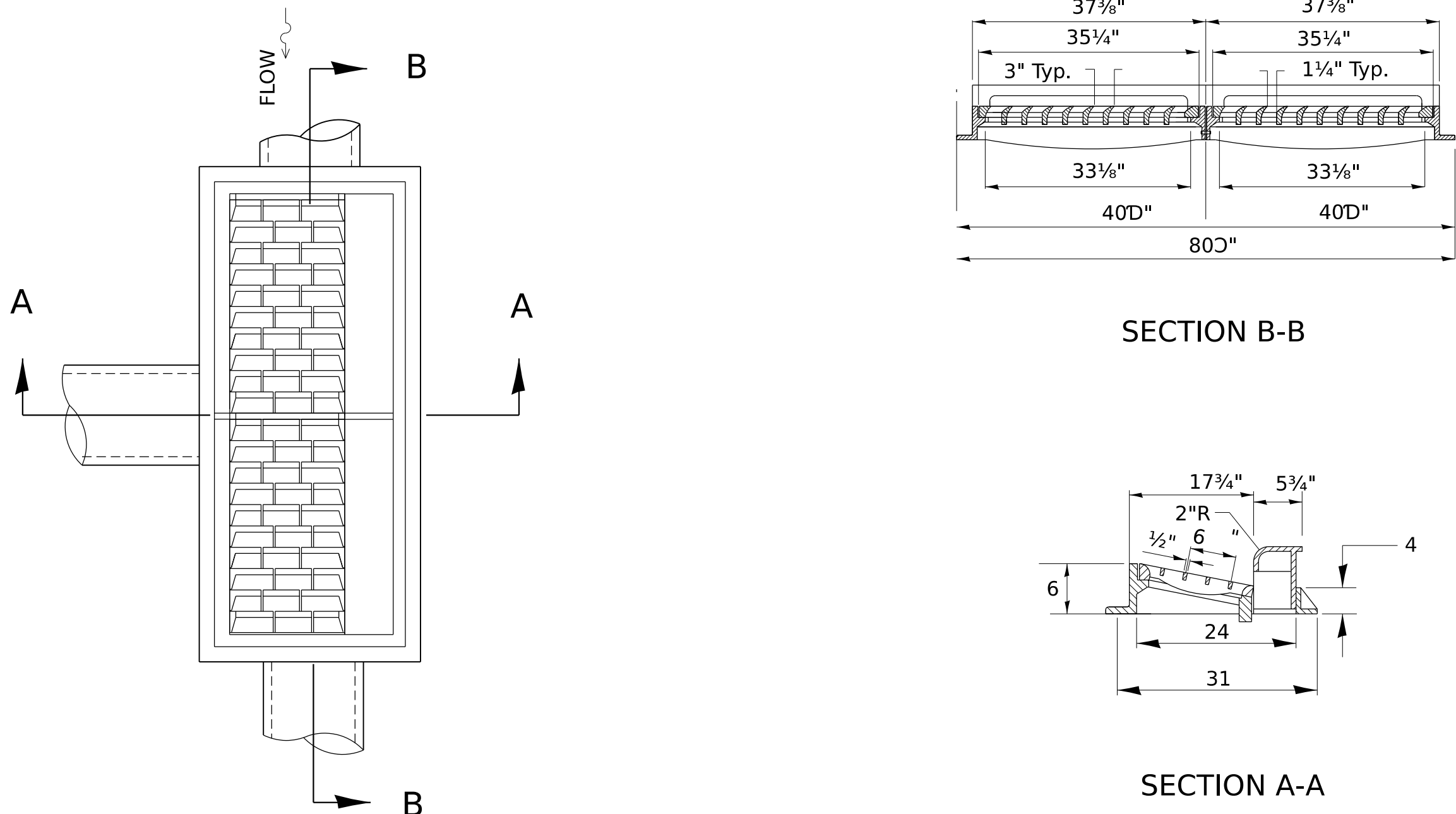
REGION 2 / DISTRICT 2 STANDARD				
SCALE:	SHEET	OF	SHEETS	STA.
				TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

DOUBLE INLET, SPECIAL



DETAIL OF FRAME & GRATE

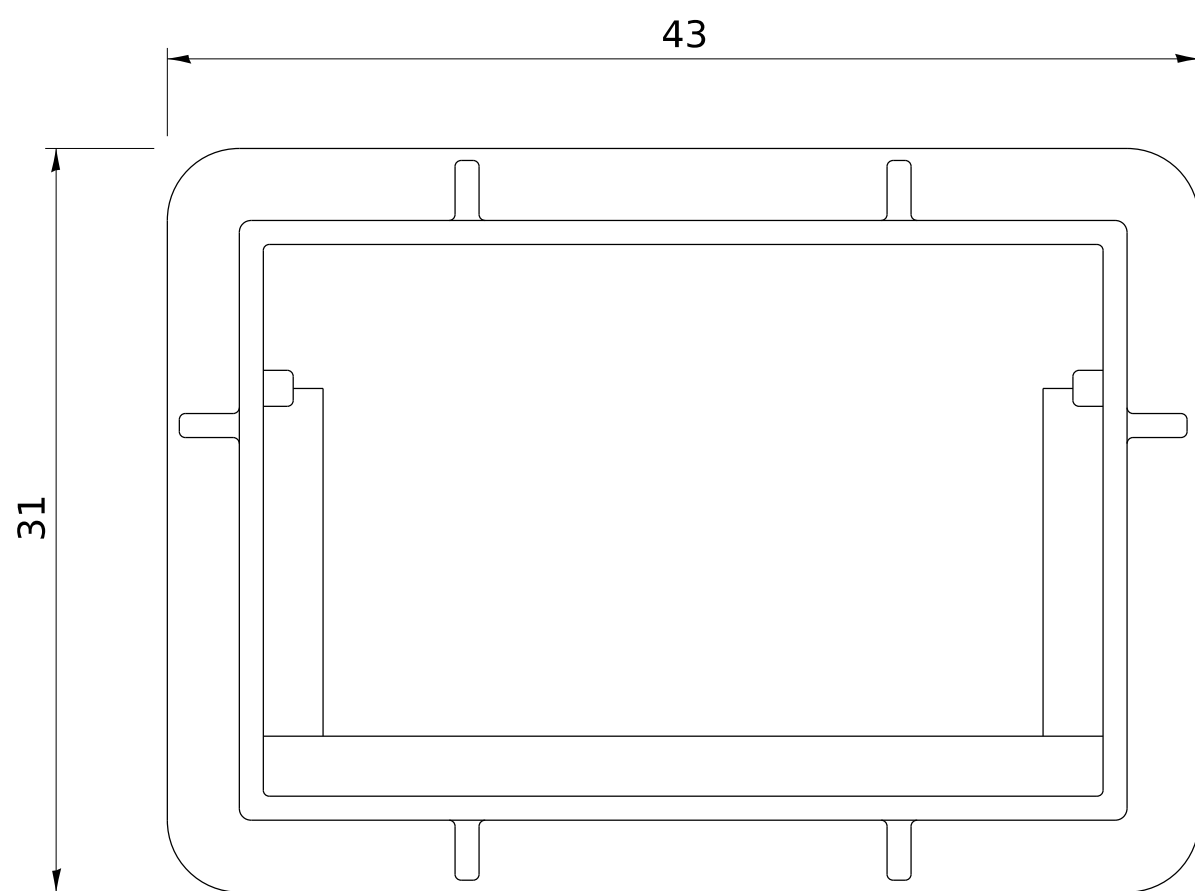


ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

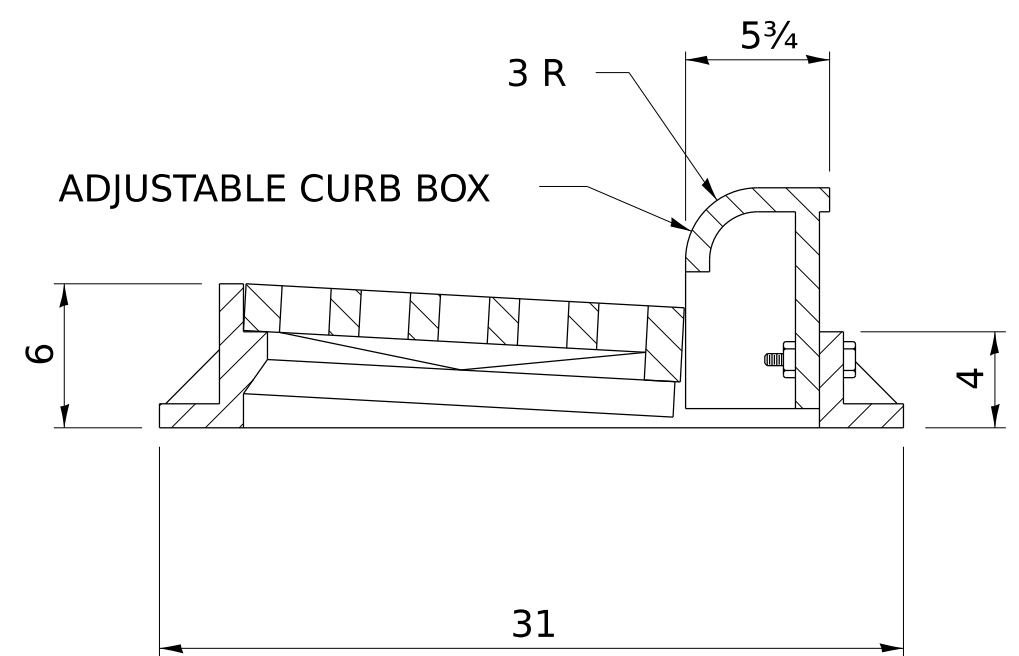
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PLOT DATE = 1/28/2025

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REVISED - 7-16-15					CONTRACT NO.				
REVISED - 10-13-11					ILLINOIS FED. AID PROJECT				
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

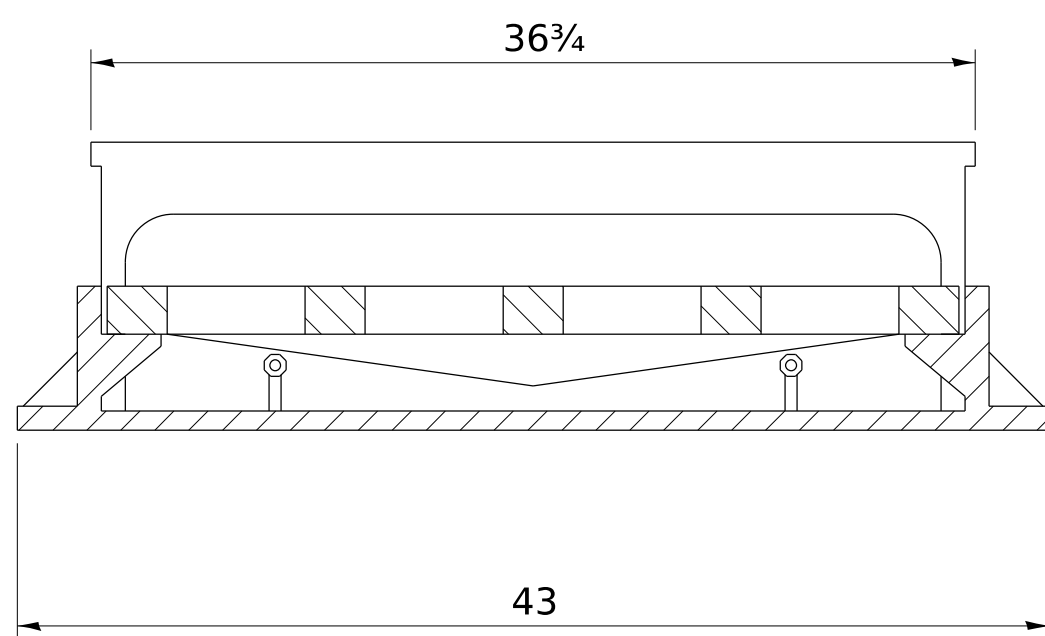
FRAME AND GRATE FOR INLETS, SPECIAL



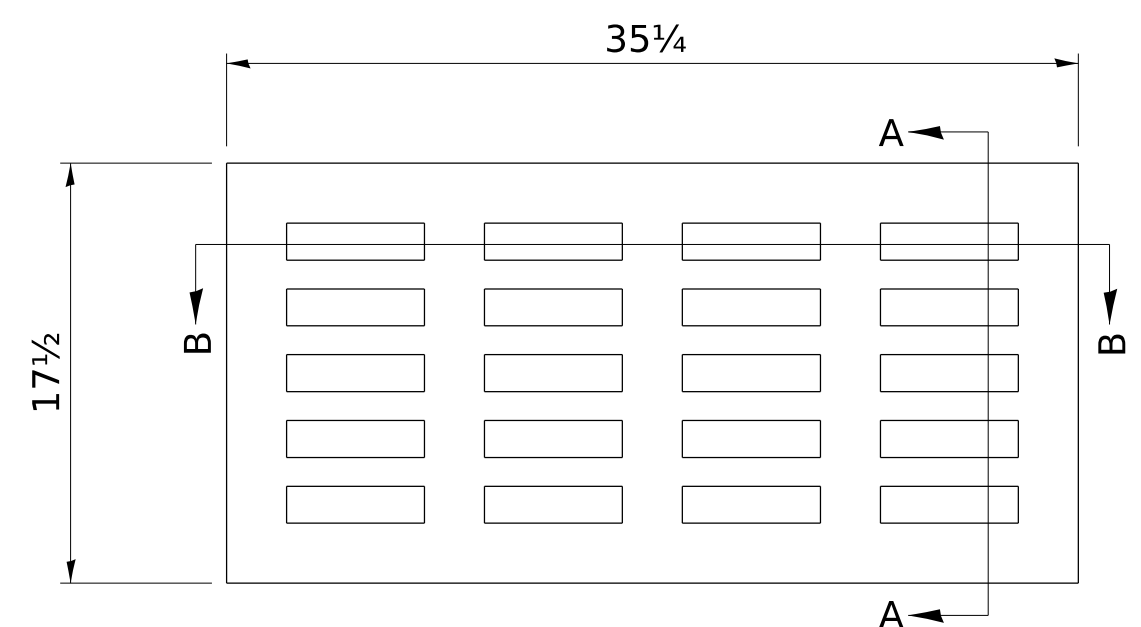
PLAN OF FRAME
WITHOUT GRATE AND CURB BOX



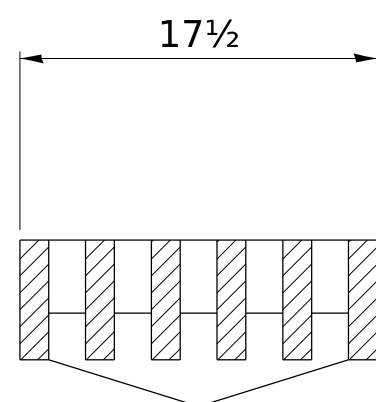
TRANSVERSE SECTION



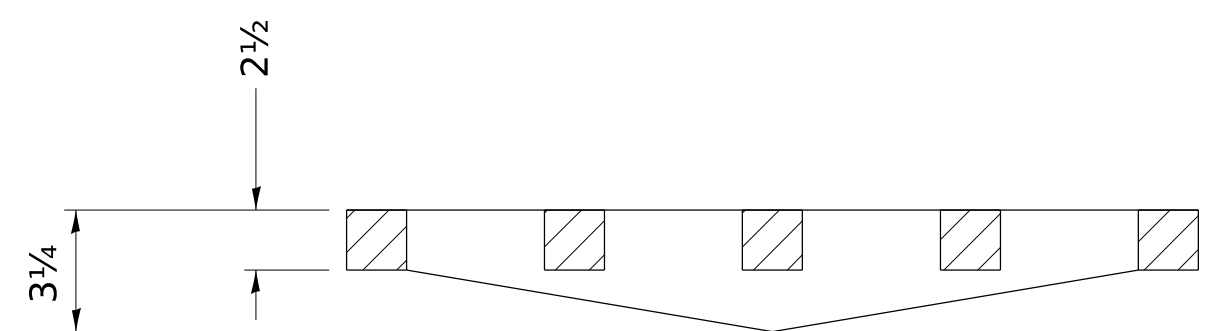
LONGITUDINAL SECTION



PLAN OF GRATE



SECTION A-A



SECTION B-B

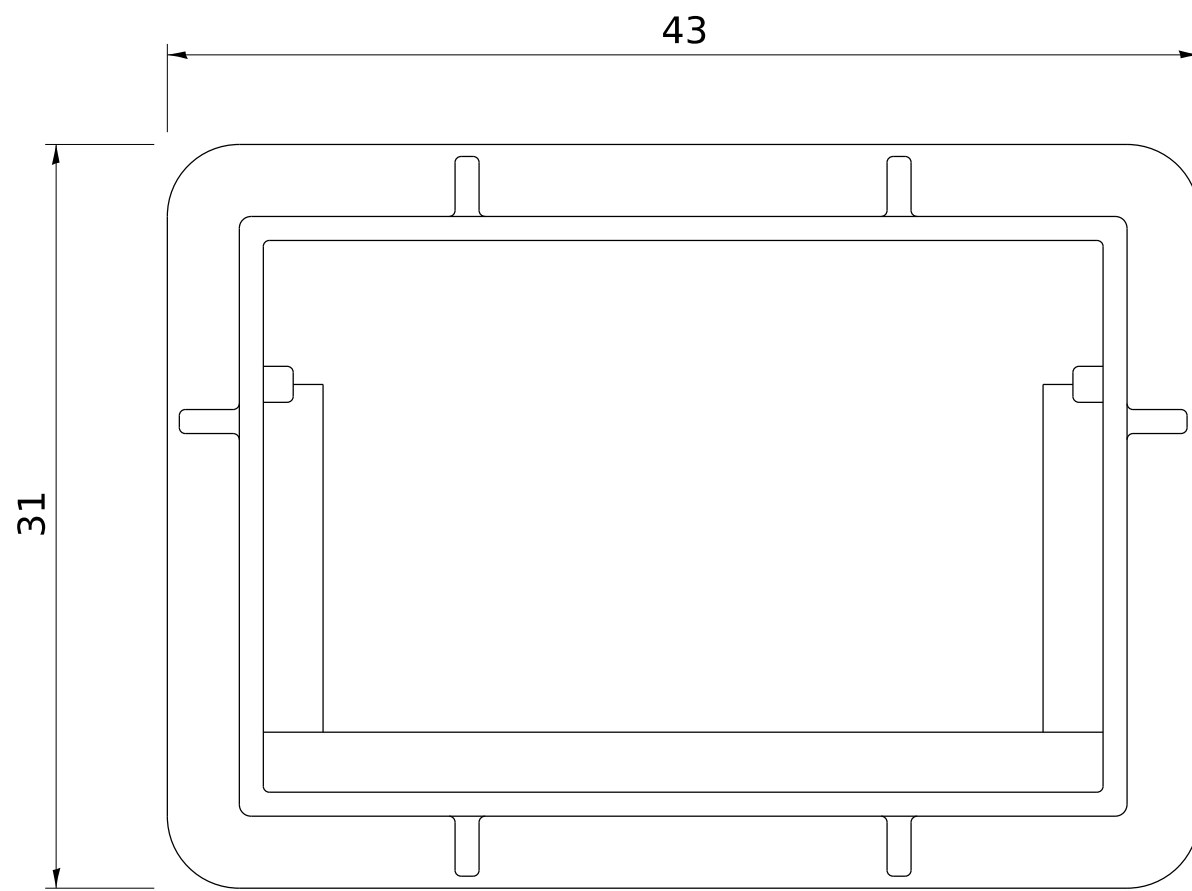
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R 3246 OR EQUIVALENT
APPROXIMATE WEIGHT - 495 LBS.

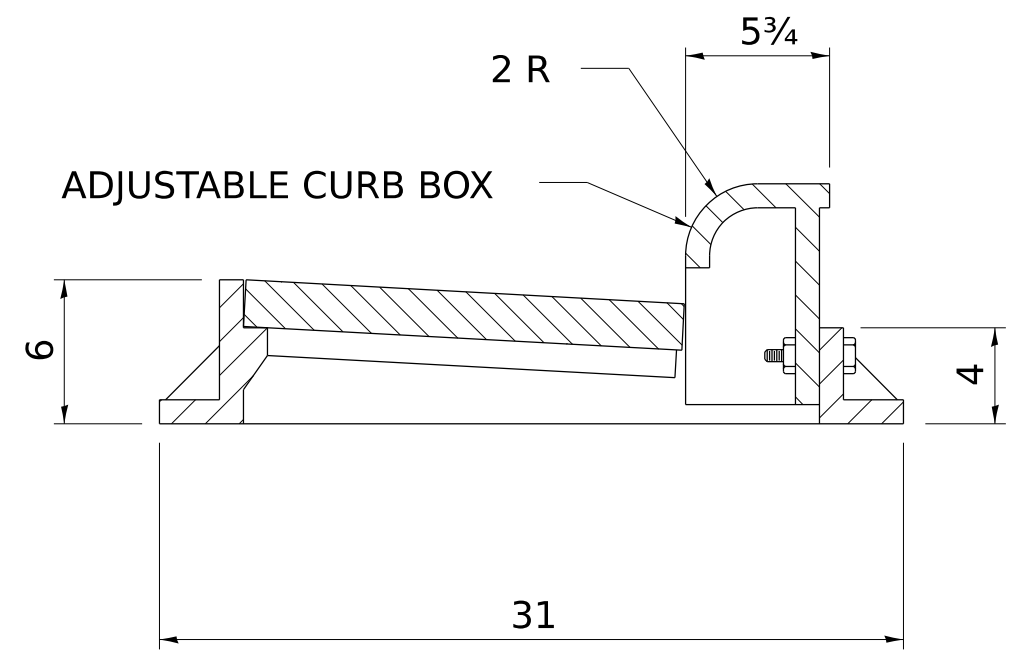
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PLOT DATE = 1/28/2025

REVISED - 6-27-14	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
REVISED - 10-13-11									CONTRACT NO.			
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	
REVISED -												

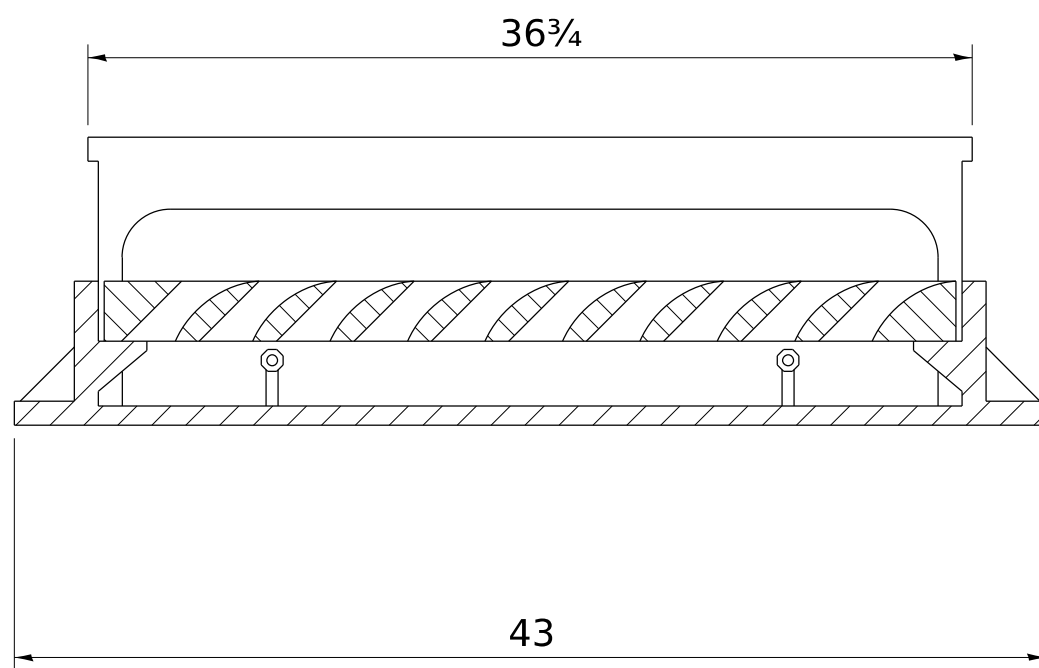
FRAME AND GRATE FOR INLETS, SPECIAL



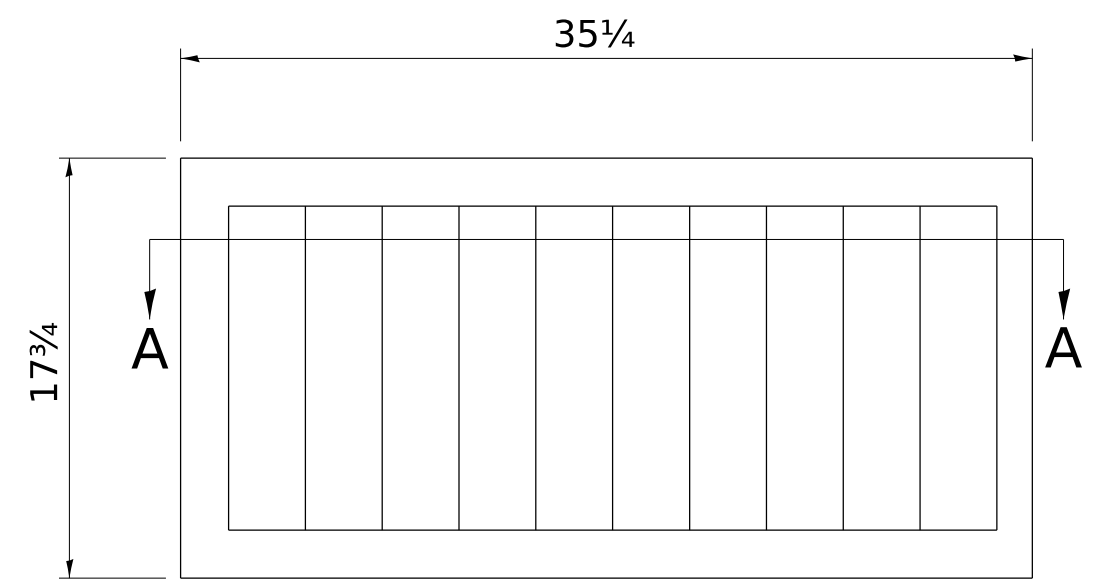
PLAN OF FRAME
WITHOUT GRATE AND CURB BOX



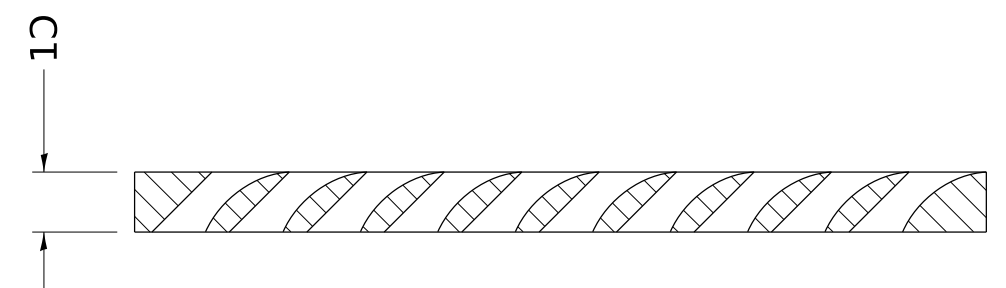
TRANSVERSE SECTION



LONGITUDINAL SECTION



PLAN OF GRATE



SECTION A-A

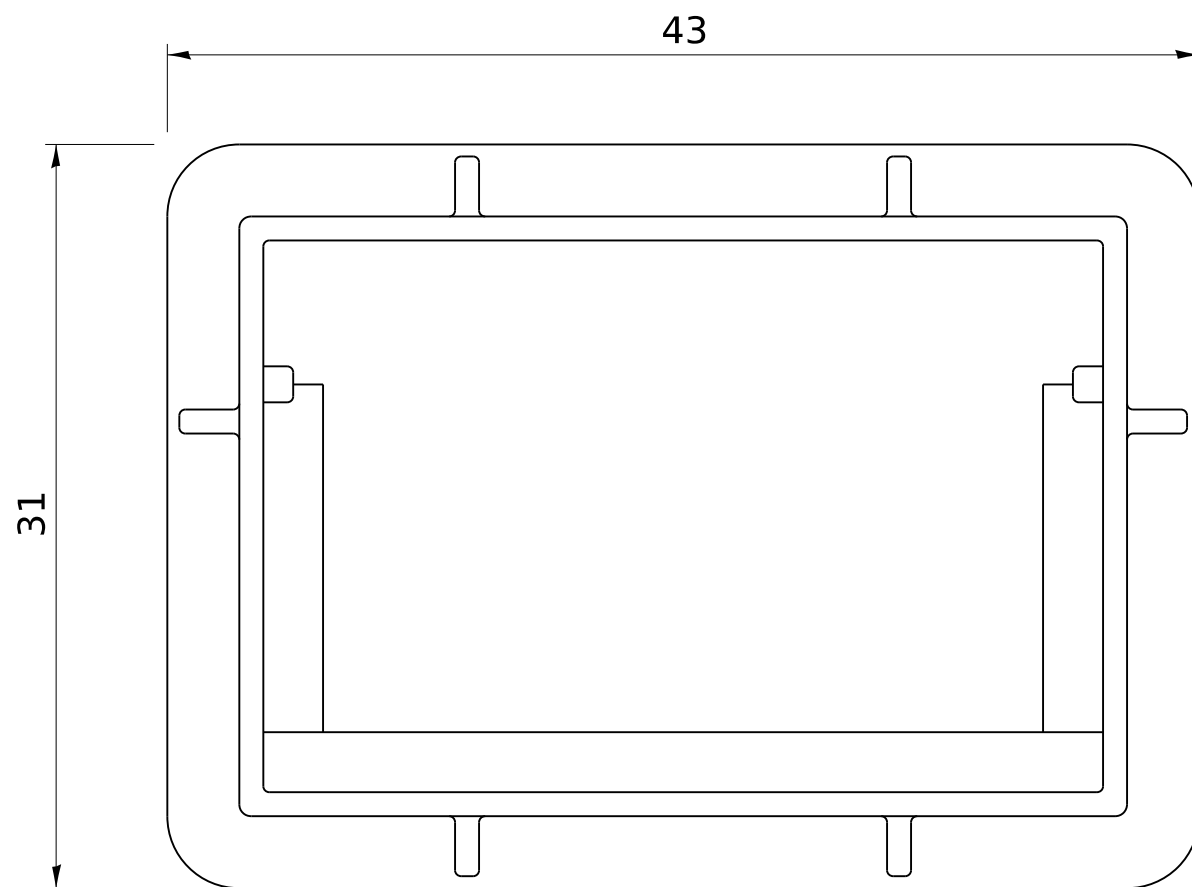
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R 3067 OR EQUIVALENT
APPROXIMATE WEIGHT - 465 LBS.

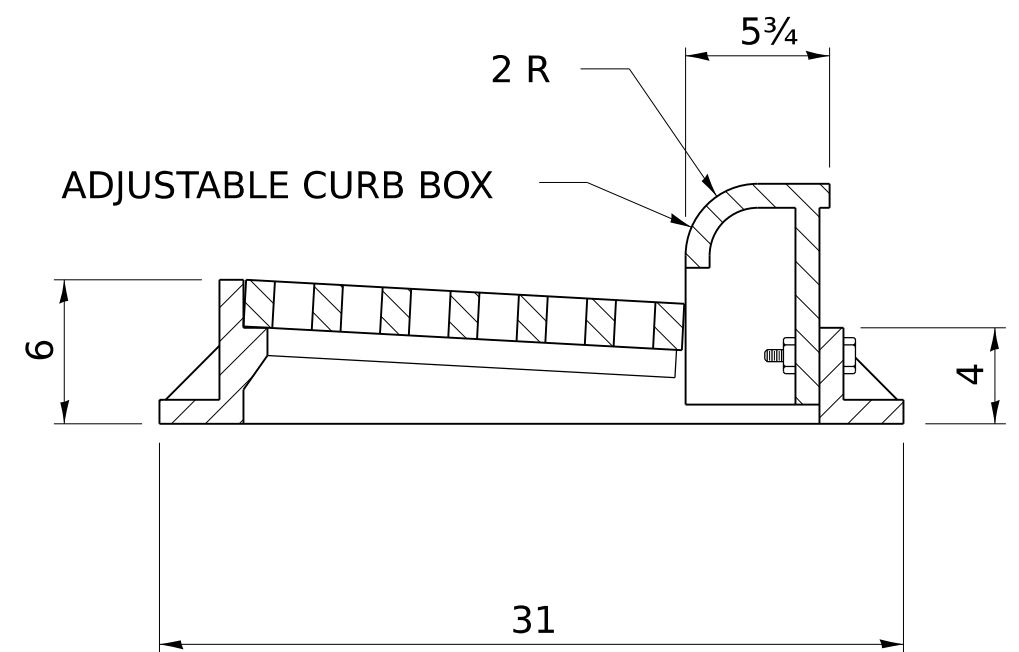
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PLOT DATE = 1/28/2025

REVISED - 6-27-14	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 10-13-11					CONTRACT NO.				
REVISED -									
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

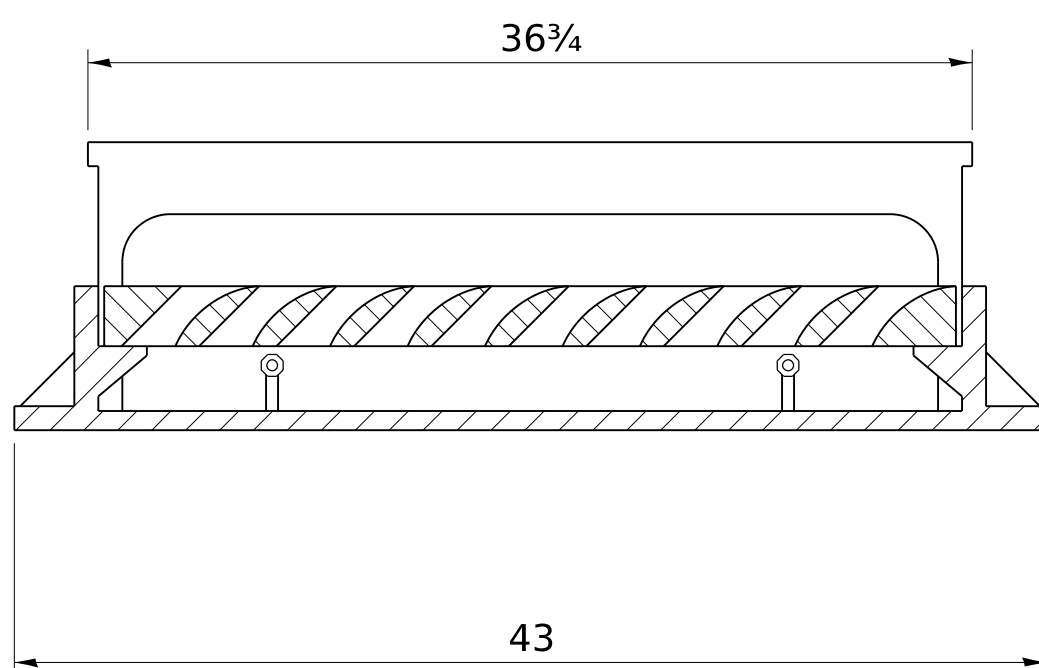
FRAME AND GRATE FOR INLETS, SPECIAL



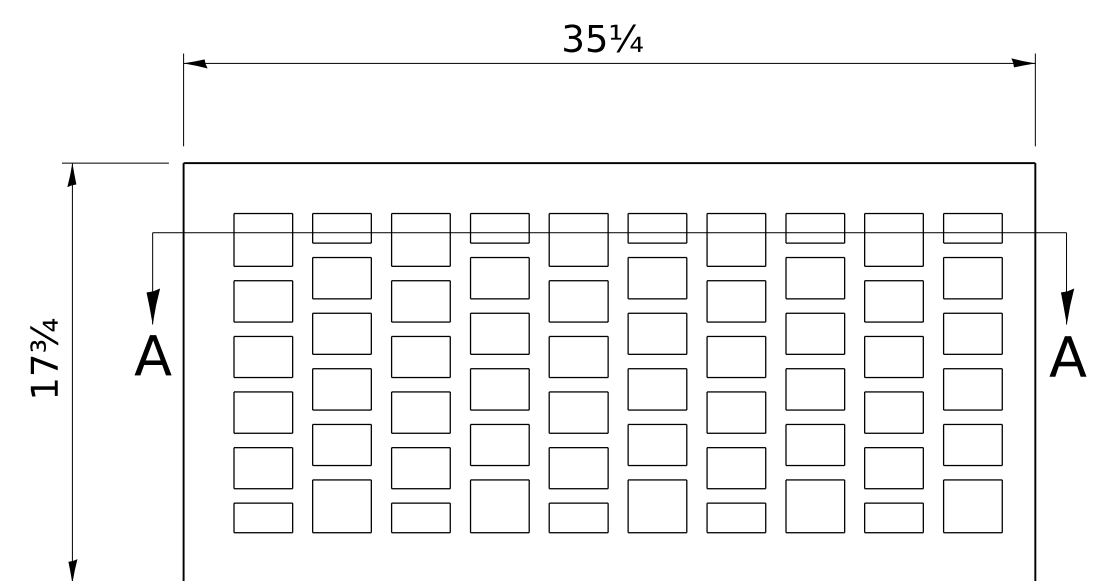
PLAN OF FRAME
WITHOUT GRATE AND CURB BOX



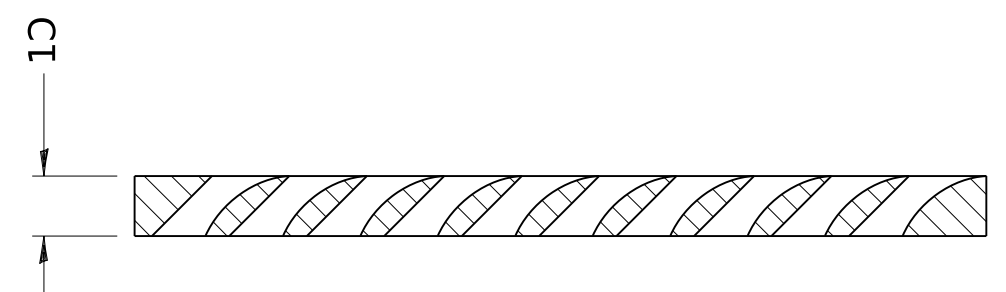
TRANSVERSE SECTION



LONGITUDINAL SECTION



PLAN OF GRATE



SECTION A-A

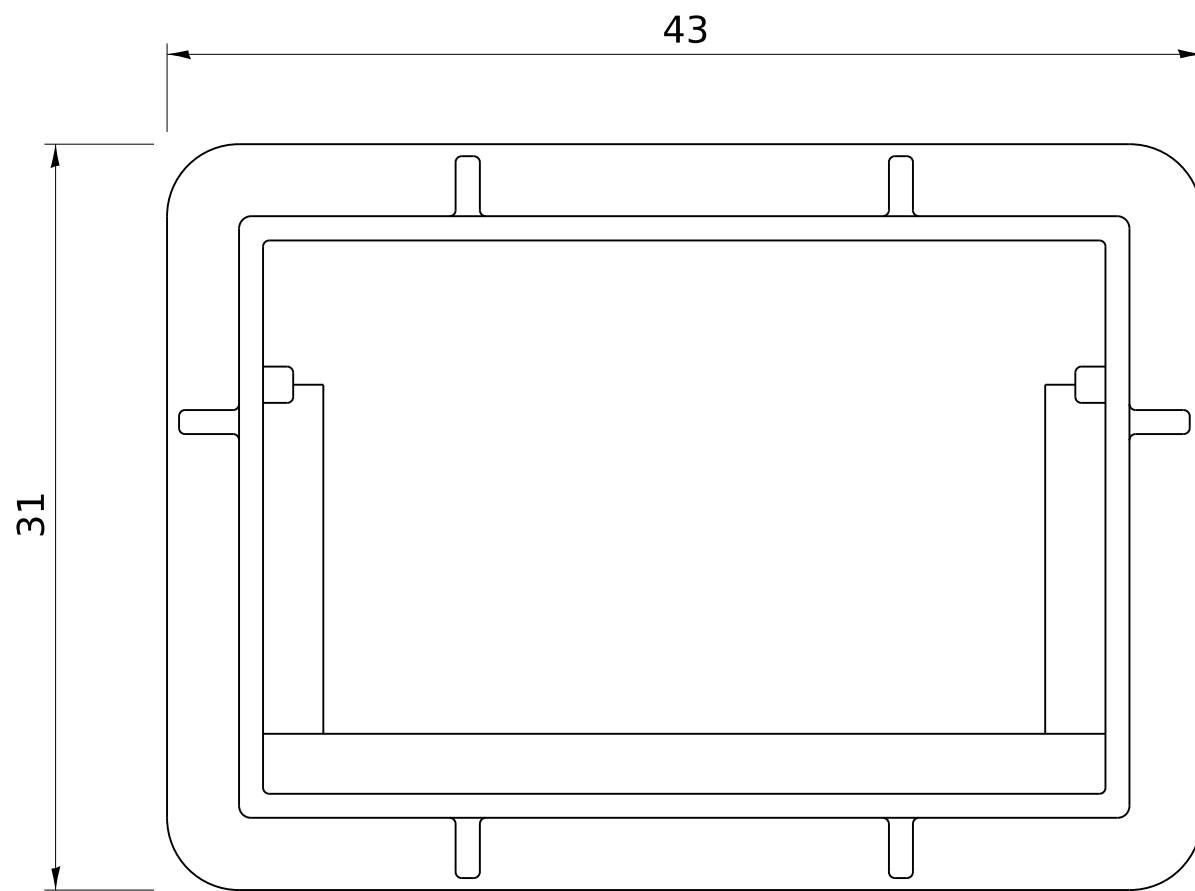
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R 3067 OR EQUIVALENT
APPROXIMATE WEIGHT - 490 LBS.

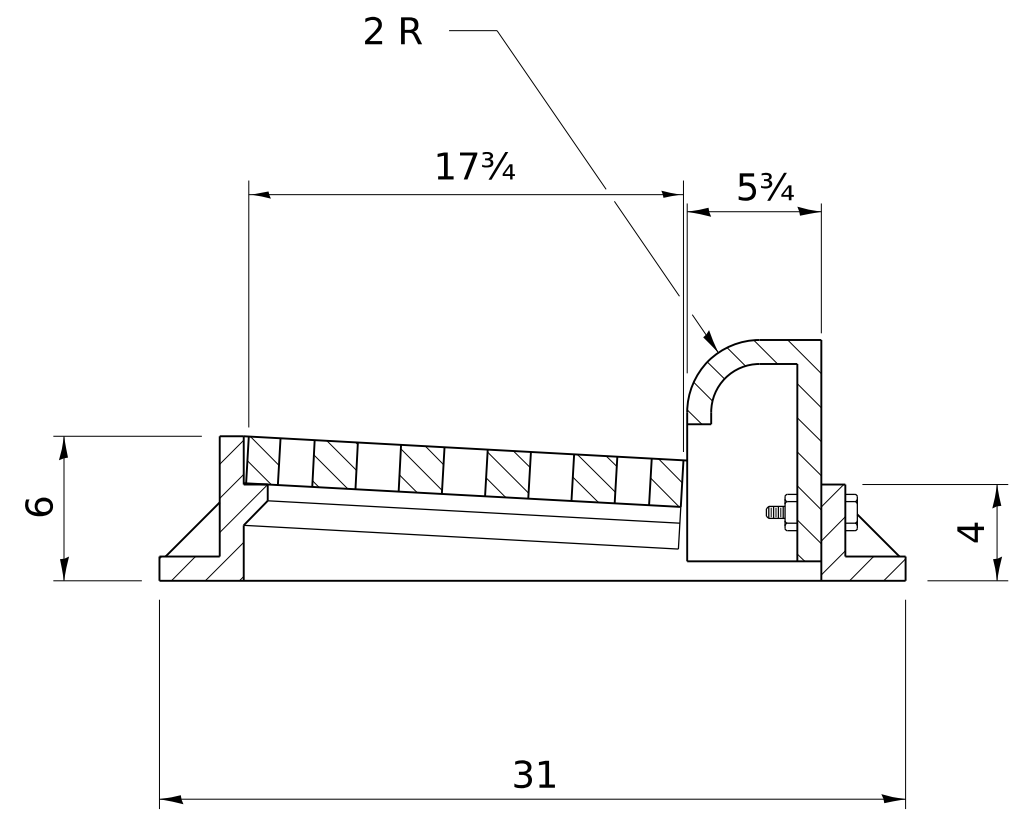
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PLOT DATE = 1/28/2025

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REVISED - 10-13-11					CONTRACT NO.				
REVISED -									
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

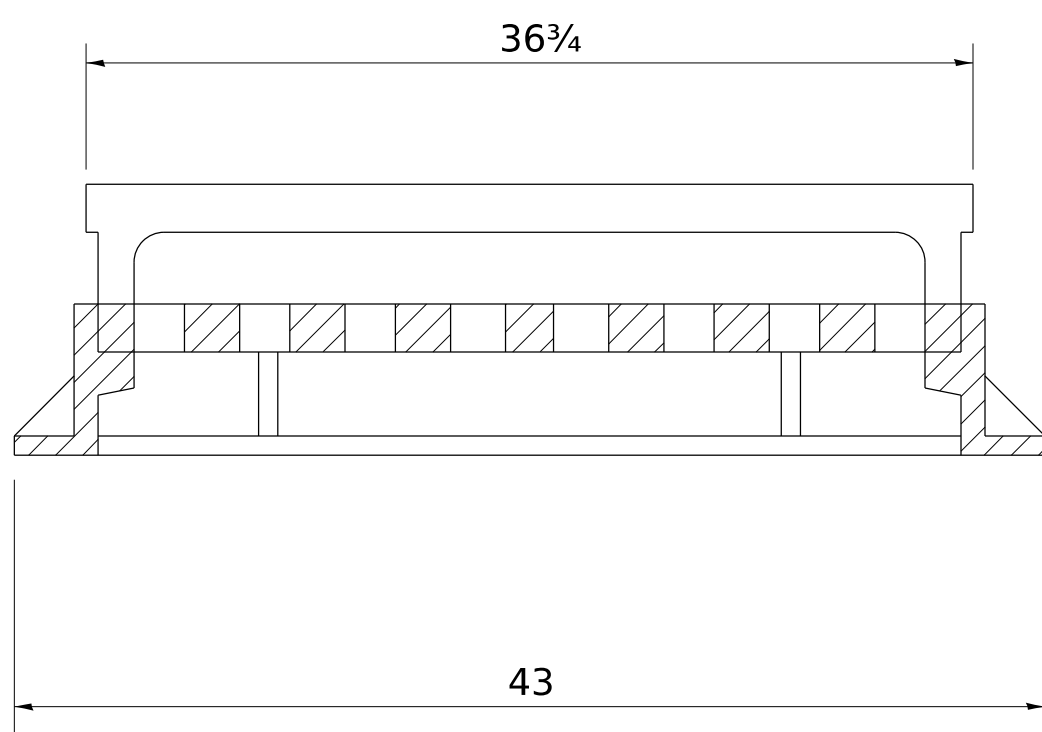
FRAME AND GRATE FOR INLETS, SPECIAL



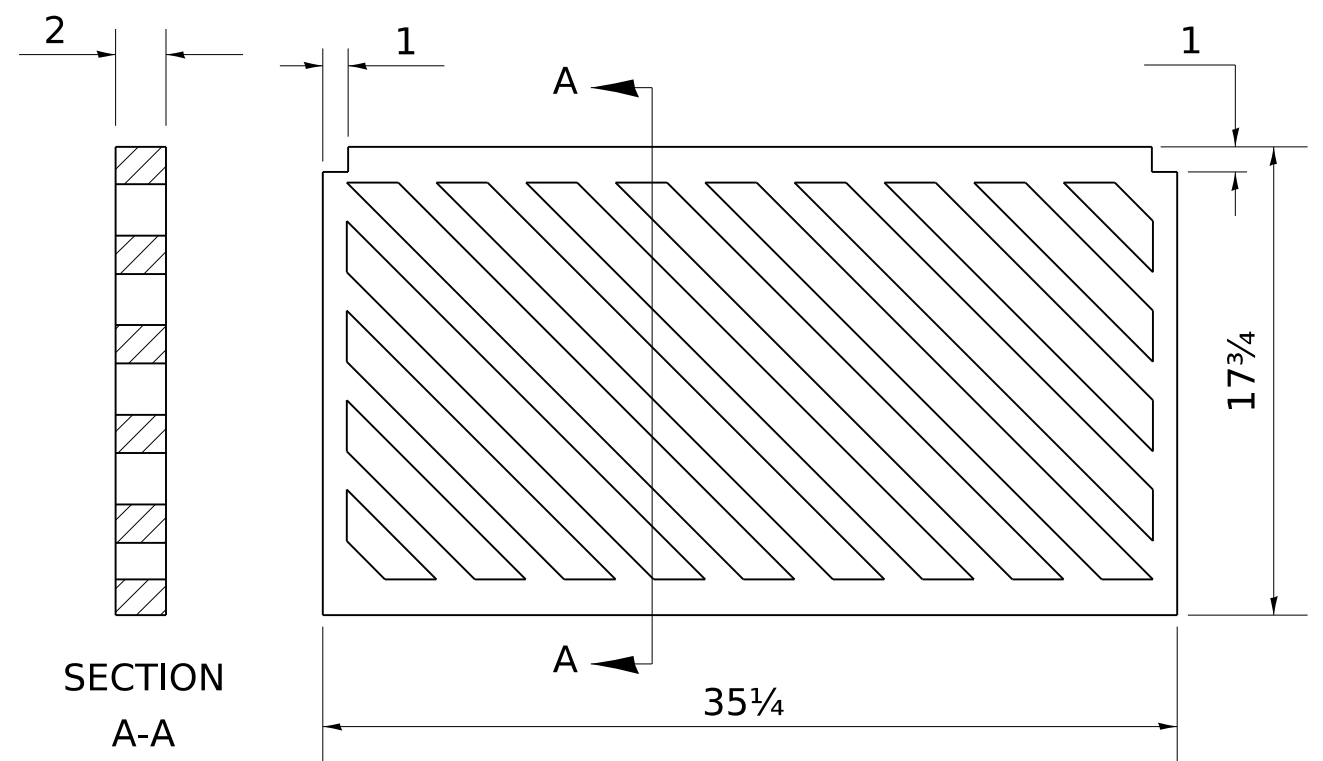
PLAN OF FRAME
WITHOUT GRATE AND CURB BOX



TRANSVERSE SECTION



LONGITUDINAL SECTION



PLAN OF GRATE

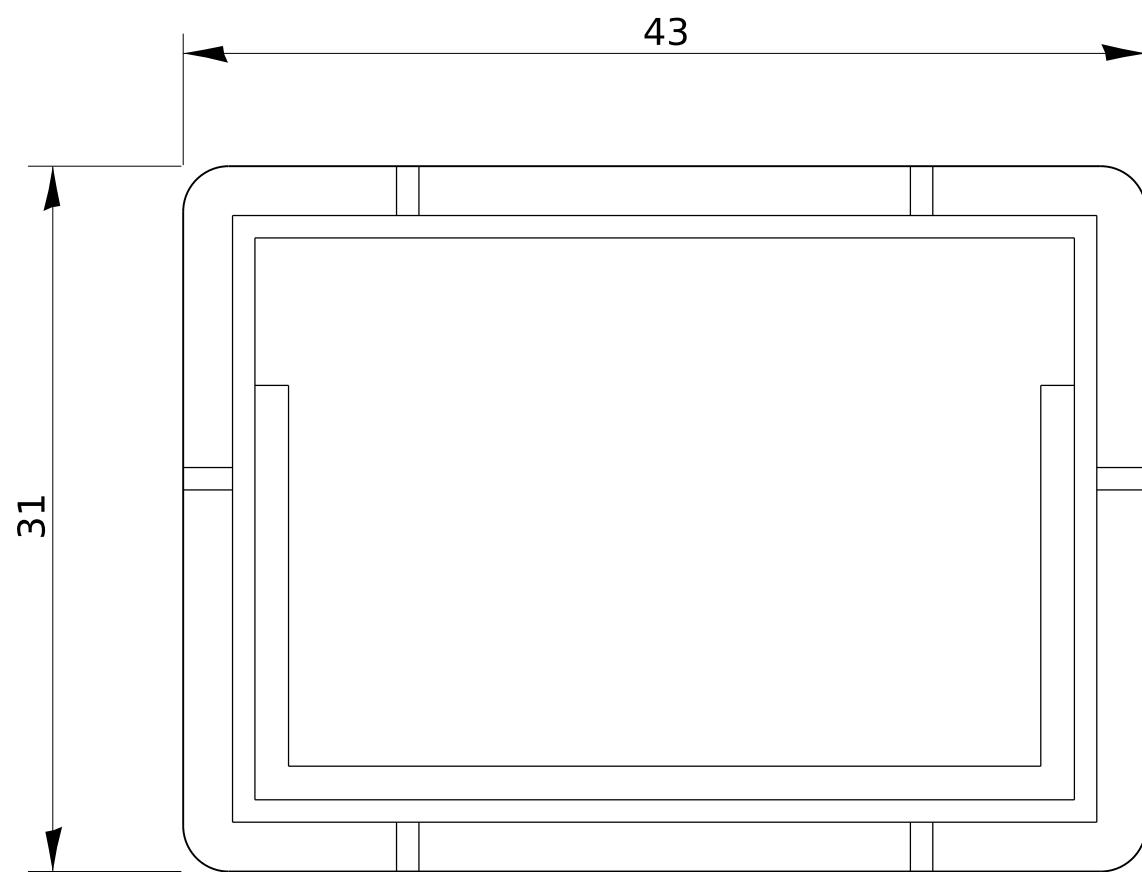
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

R 3067 OR EQUIVALENT
APPROXIMATE WEIGHT - 510 LBS.

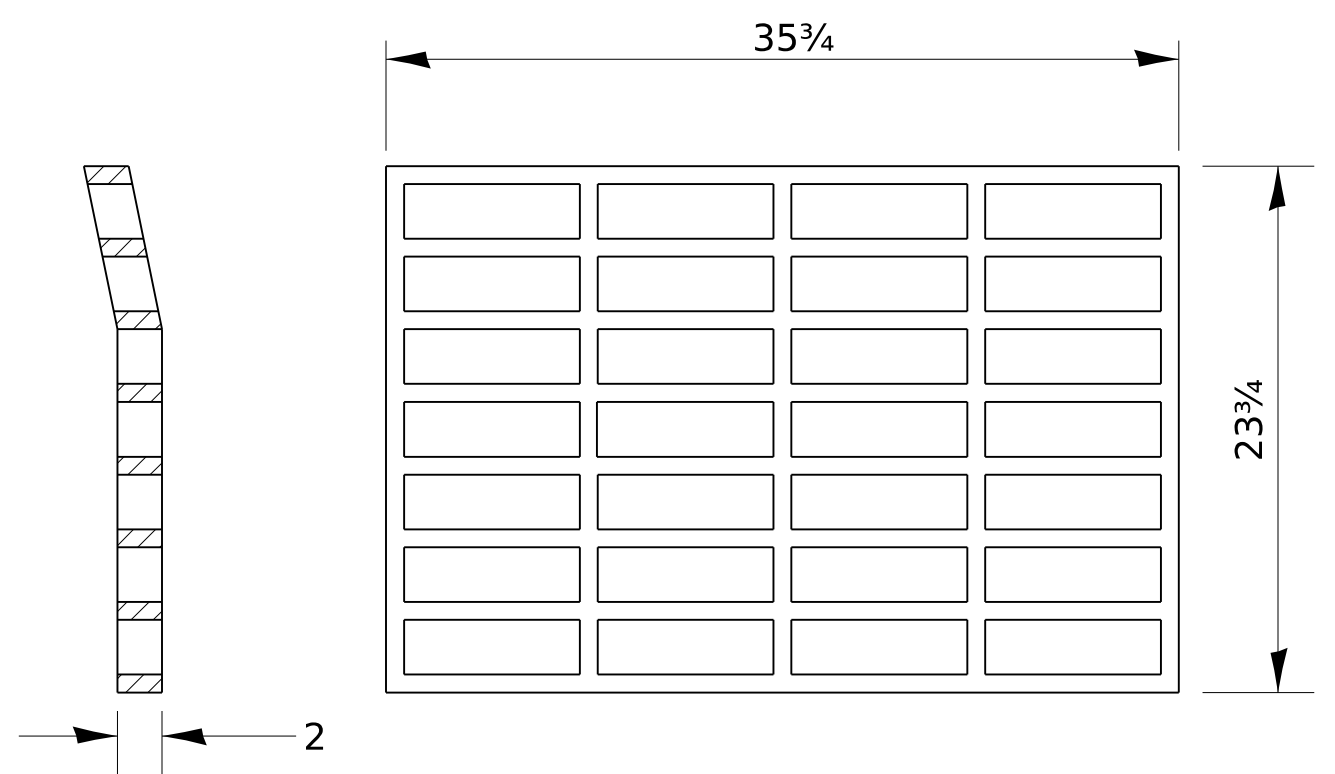
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PLOT DATE = 1/28/2025

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REVISED - 10-13-11									
REVISED -									
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SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	CONTRACT NO.			
						ILLINOIS FED. AID PROJECT			

FRAME AND GRATE FOR INLETS, SPECIAL

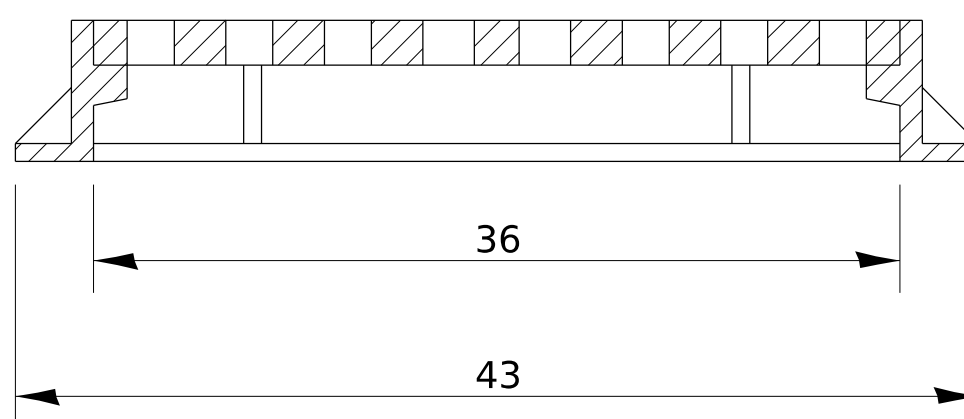


PLAN OF FRAME



PLAN OF GRATE *

* THIS GRATE TO BE USED WITHOUT CURB BOX WHEN INLET IS IN DRIVEWAY.



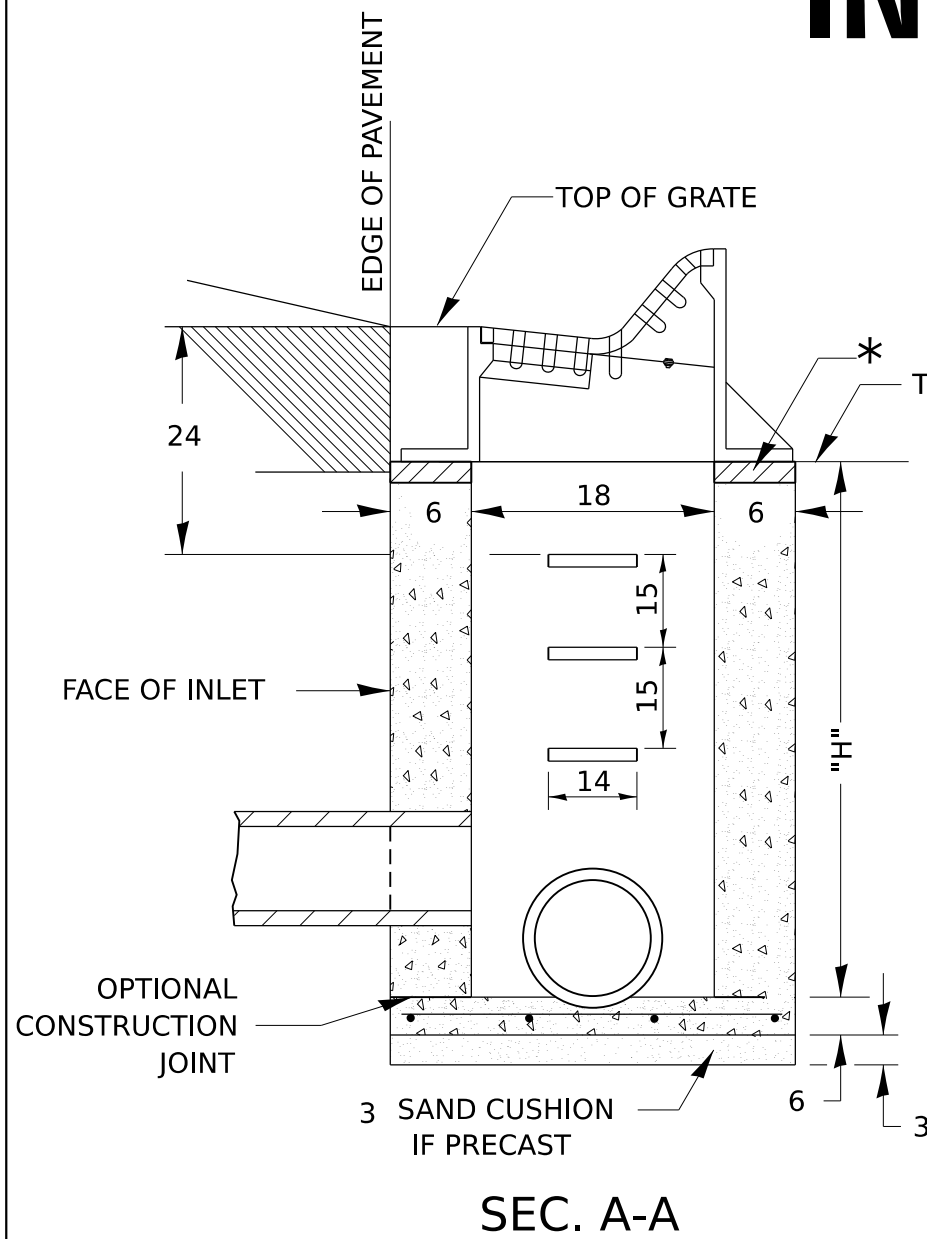
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

R-3290-A OR EQUIVALENT
APPROXIMATE WEIGHT OF CAST IRON FRAME & GRATE - 530 LBS.

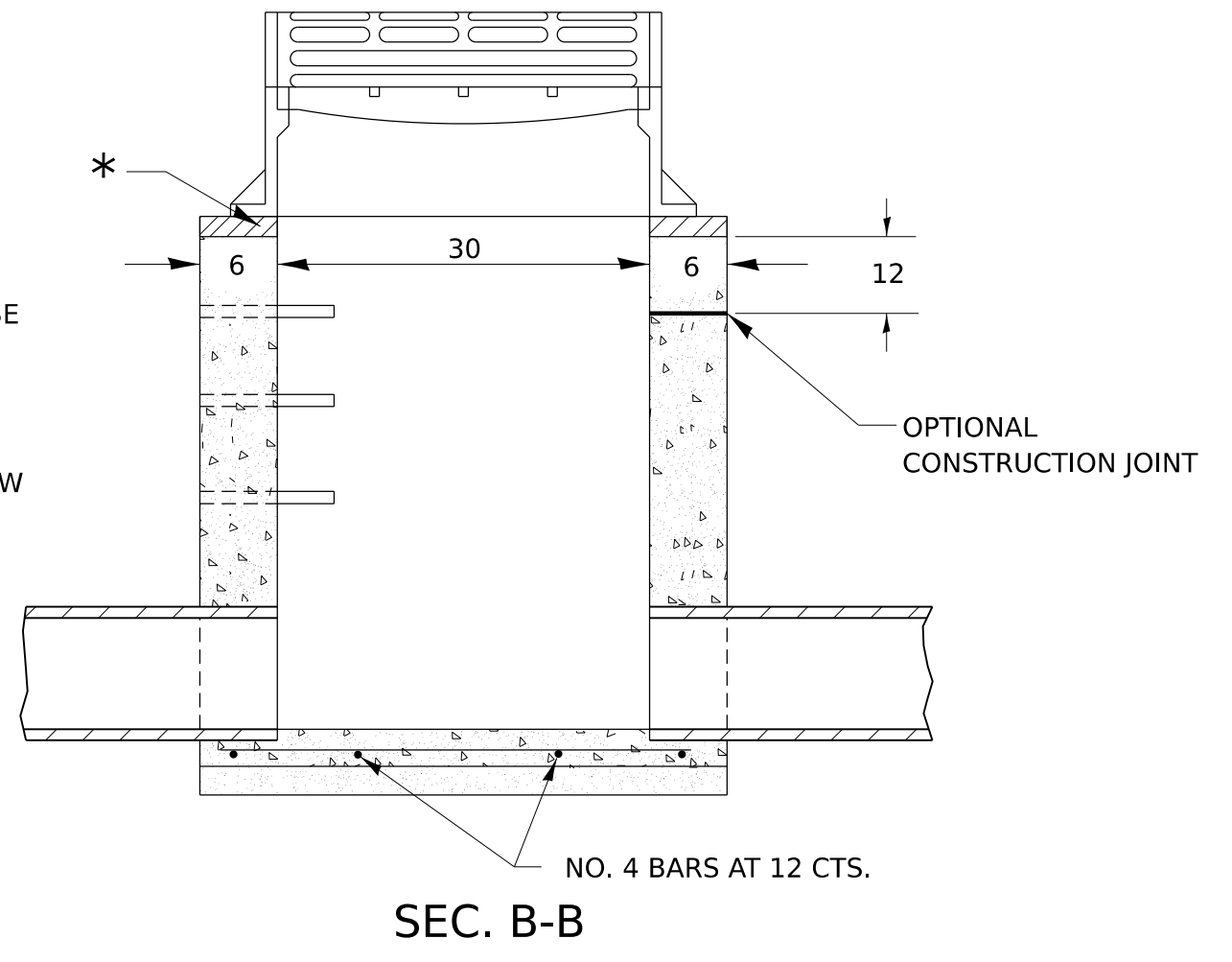
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PLOT DATE = 1/28/2025

REVISED - 4-14-15	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 6-27-14									
REVISED - 10-14-11									
REVISED -									
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	CONTRACT NO.			
						ILLINOIS FED. AID PROJECT			

INLETS, SPECIAL, NO. 1



SEC. A-A



SEC. B-B

* THE WALL ADJUSTMENTS SHALL BE MADE WITH CONCRETE BUILDING BRICK OR CLASS SI CONCRETE.

THE HEIGHT OF THE BOX MAY BE CONSTRUCTED 6 SHORT TO ALLOW FOR FIELD ADJUSTMENTS.

NOTES

SEE STANDARD 602701 FOR DETAILS OF STEPS.

EXCEPT AS NOTED HEREON INLET SPECIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.

THE SIDE WALLS MAY BE BUILT AS PRECAST SEGMENTED SECTIONS.

ALL VOIDS AROUND PIPE ENTRANCE, BOTH INSIDE AND OUTSIDE, SHALL BE SEALED WITH MORTAR.

STEPS SHALL BE OMITTED WHEN DEPTH OF "H" IS LESS THAN 5 FOOT.

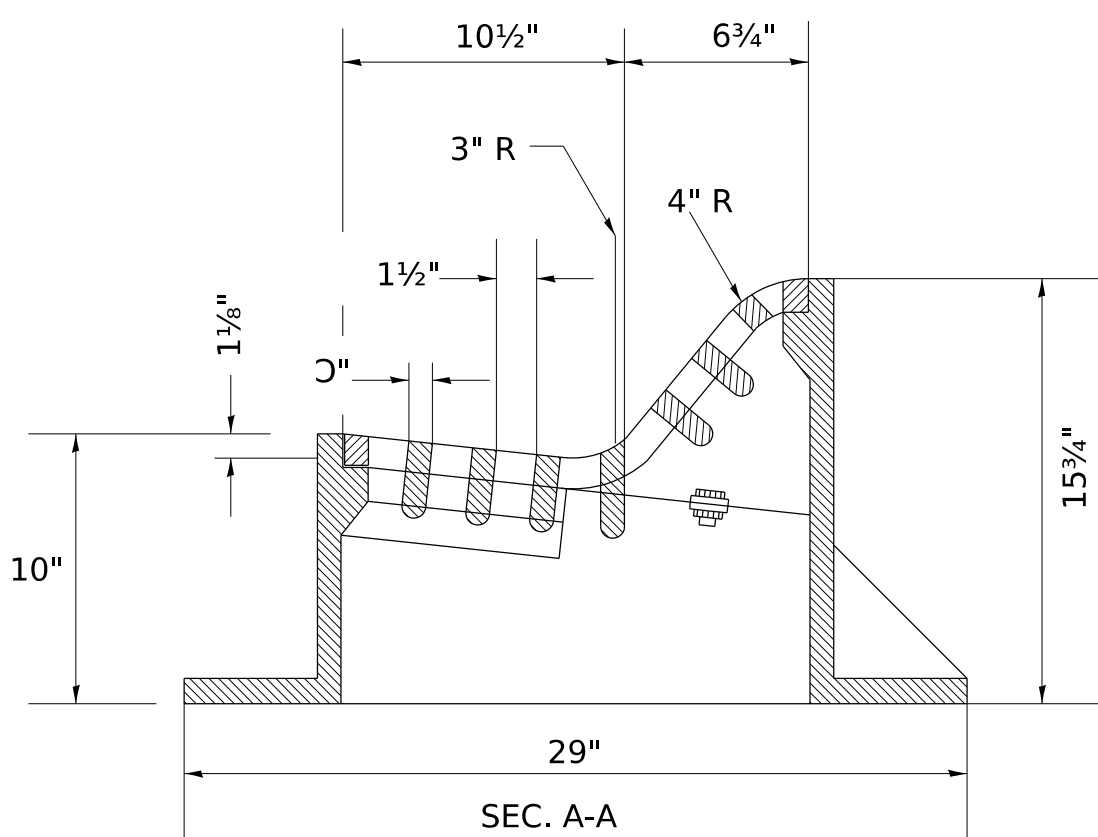
BOTH INLET SPECIAL NO. 1 SHALL DRAIN VERTICALLY TO THE ACROSS ROAD CULVERT LOCATED BENEATH.

CLASS SI CONCRETE OR PRECAST CONCRETE SHALL BE USED THROUGHOUT. PRECAST CONCRETE SHALL BE IN ACCORDANCE WITH ARTICLES 504.01 THRU 504.05 OF THE STANDARD SPECIFICATIONS EXCEPT THAT CONCRETE STRENGTH SHALL BE 4,000 psi AFTER 28 DAYS.

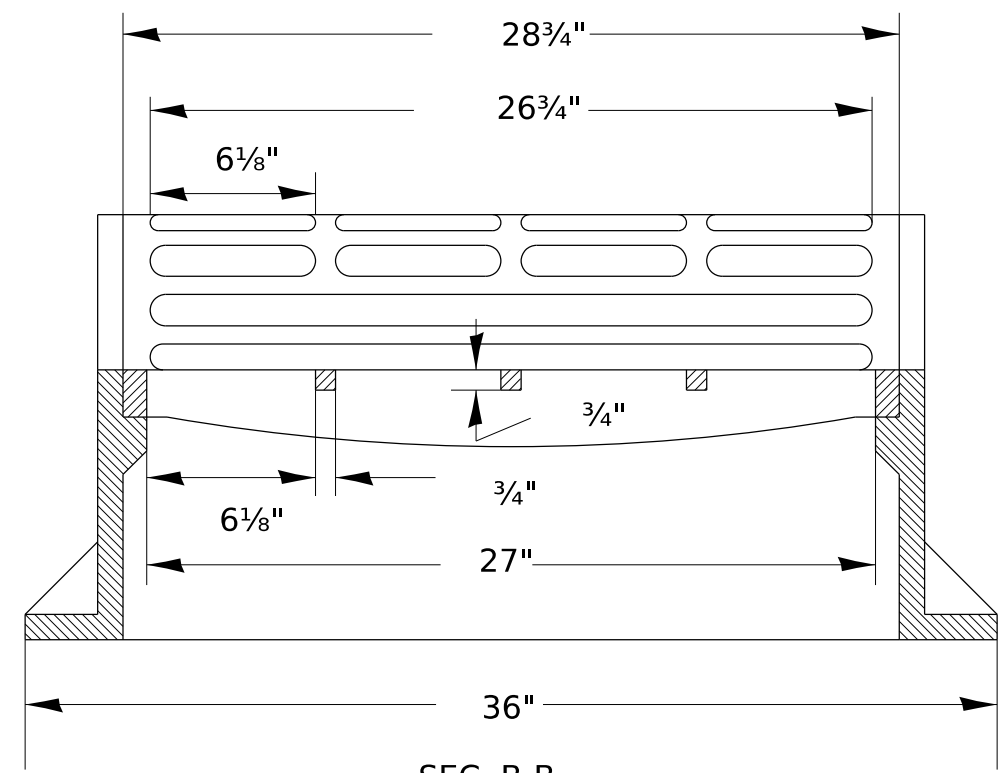
THE CONTRACT UNIT PRICE EACH FOR INLETS, SPECIAL, NO.1 SHALL INCLUDE THE COST OF CONSTRUCTING THE INLET BOX, FURNISHING AND INSTALLING THE FRAME AND GRATE, THE STEPS (IF USED), THE PRECAST FLOOR SLABS, SAND CUSHION (WHEN USED) AND REINFORCEMENT BARS.

FRAME AND GRATE # R-3503-B OR EQUIVALENT

DETAIL OF FRAME & GRATE



SEC. A-A



SEC. B-B

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

MODEL: 14pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

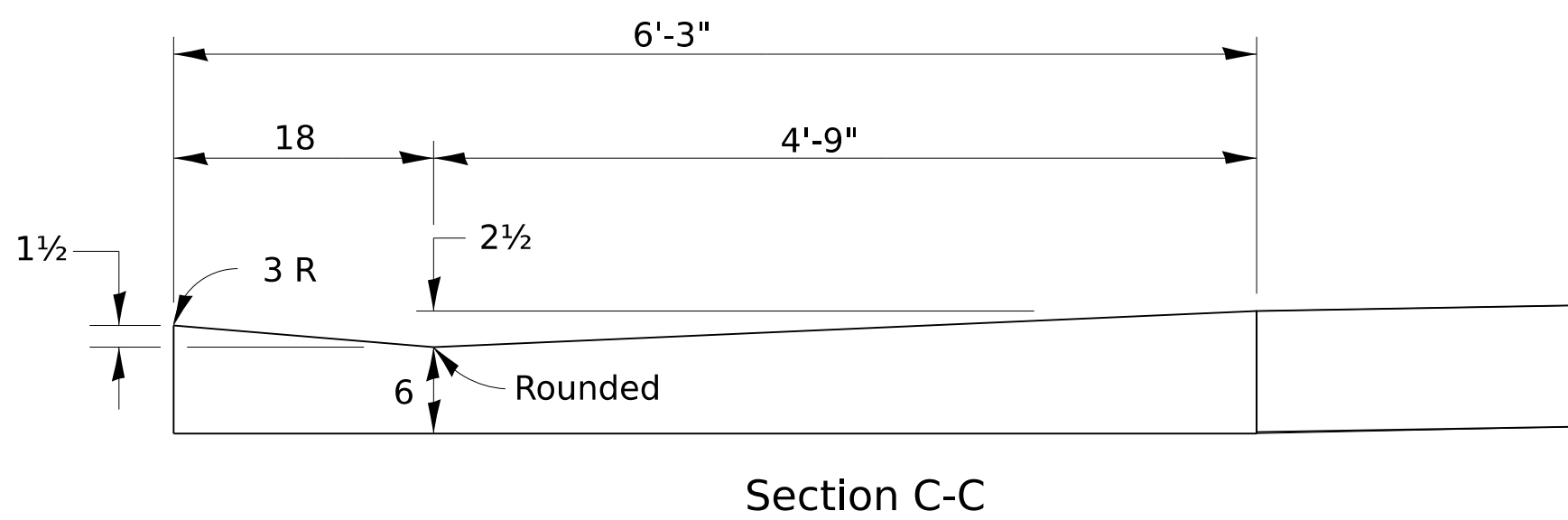
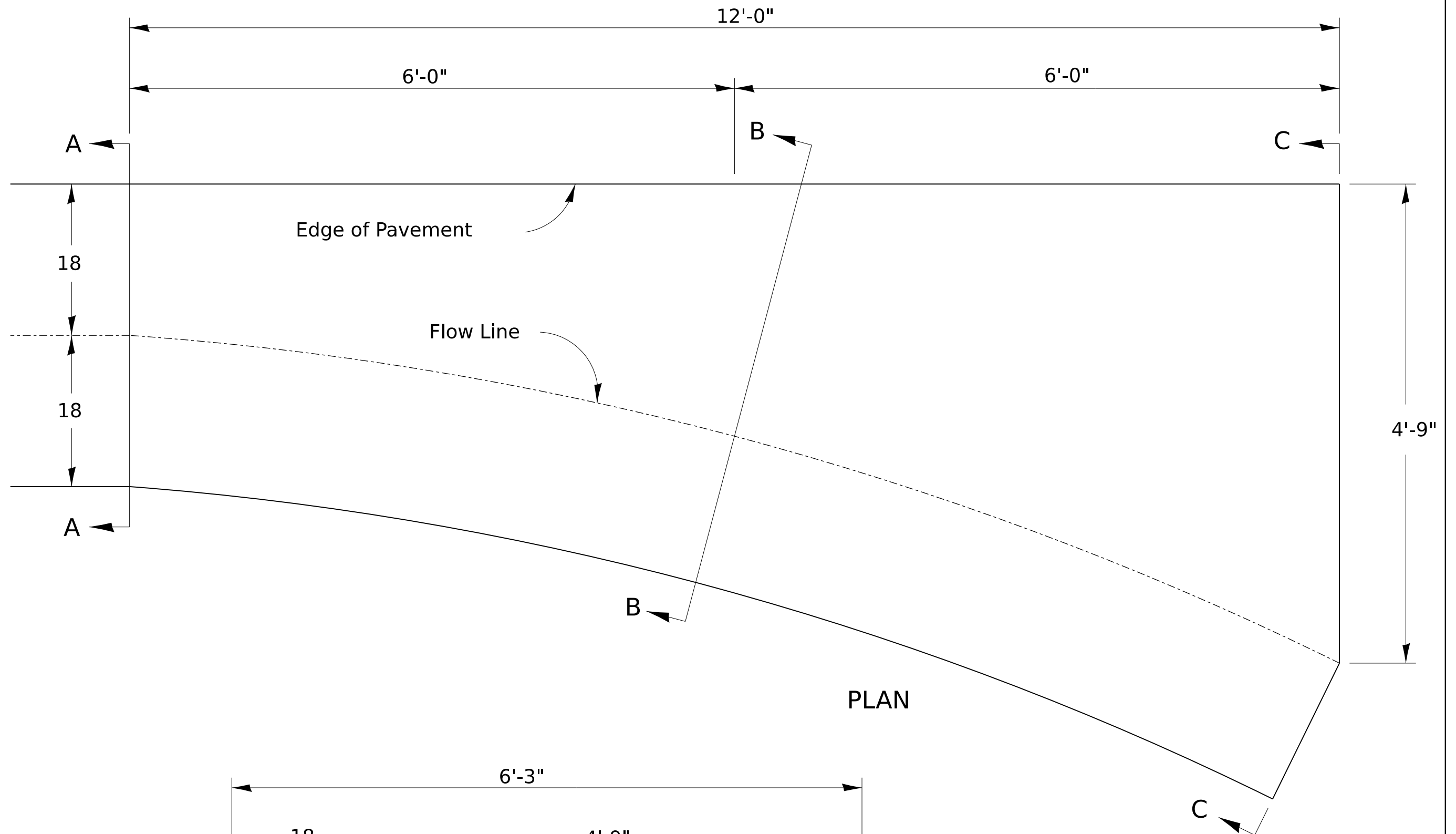
REVISED -	1-05-16
REVISED -	6-27-14
REVISED -	10-14-11
REVISED -	

REGION 2 / DISTRICT 2 STANDARD

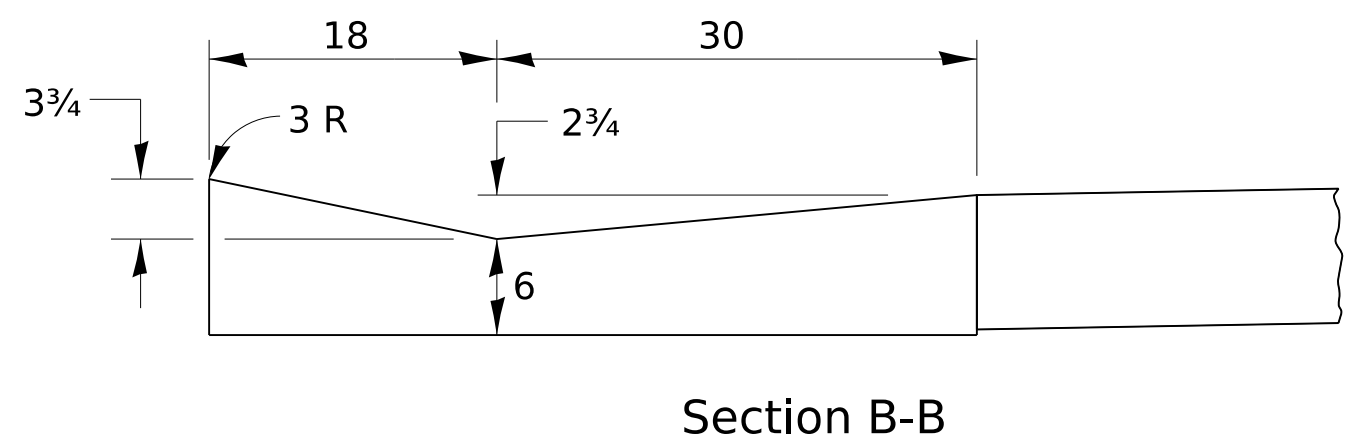
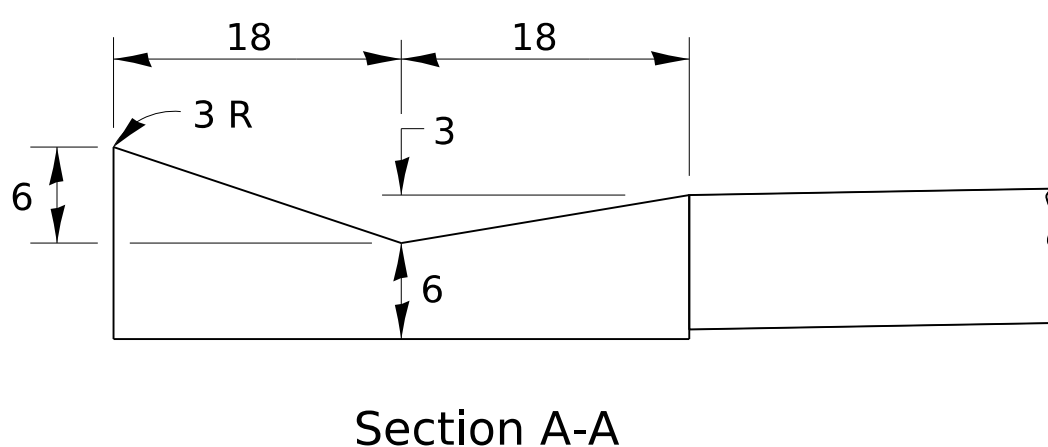
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

STANDARD INLET FOR TYPE A GUTTER (SPECIAL)



- QUANTITY -
Section A-A to C-C
1.2 Cu. Yds.
Class SI Concrete



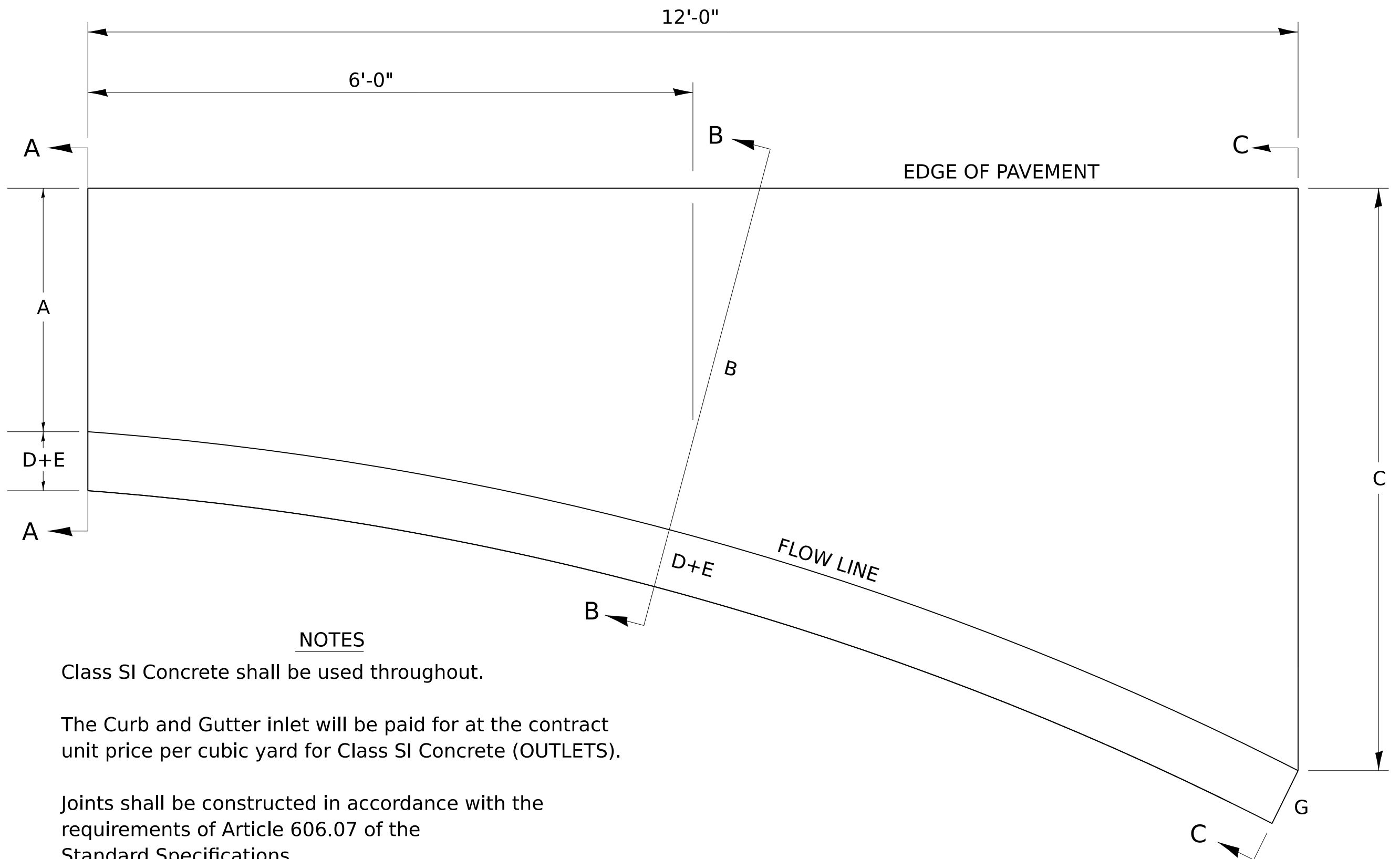
Class SI Concrete shall be used throughout.
The gutter inlet will be paid for at the contract
unit price per cubic yard for Class SI Concrete (OUTLETS)

ALL DIMENSIONS ARE IN INCHES UNLESS
OTHERWISE NOTED.

MODEL: 20pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 12-04-13	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -					CONTRACT NO.				
REVISED -									
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.

STANDARD INLET FOR CURB & GUTTER



NOTES

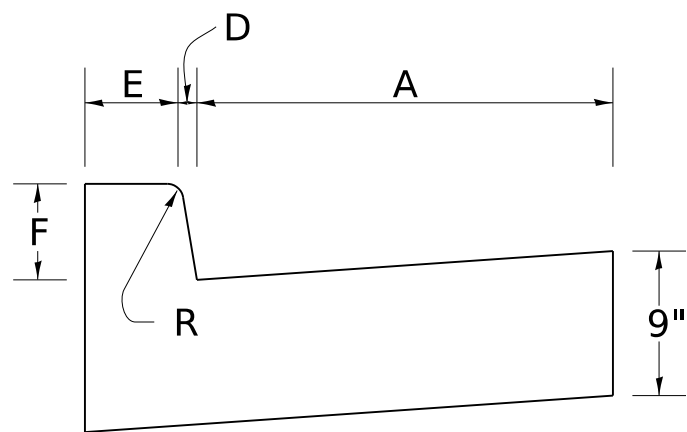
Class SI Concrete shall be used throughout.

The Curb and Gutter inlet will be paid for at the contract unit price per cubic yard for Class SI Concrete (OUTLETS).

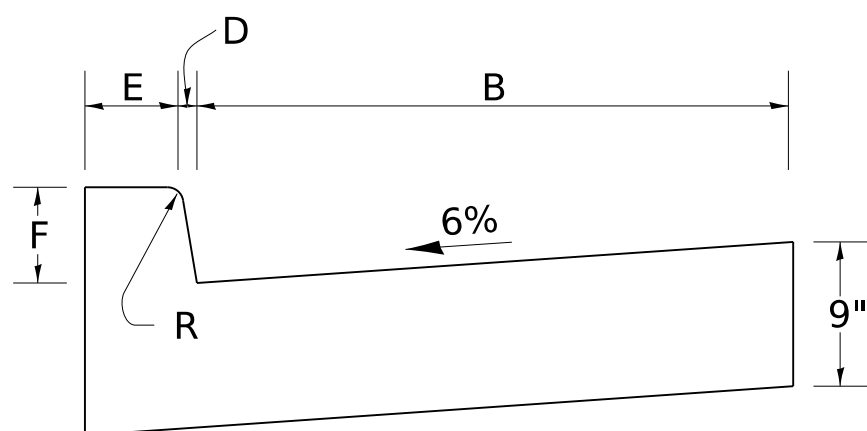
Joints shall be constructed in accordance with the requirements of Article 606.07 of the Standard Specifications.

When curb and gutter is constructed adjacent to flexible pavement, a 1" expansion joint shall be installed at construction joints.

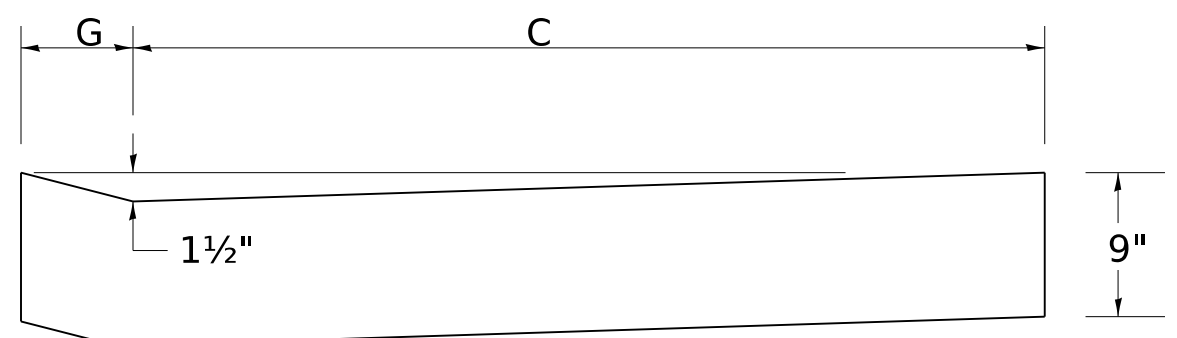
All dimensions are in inches unless otherwise noted.



SECTION A-A



SECTION B-B



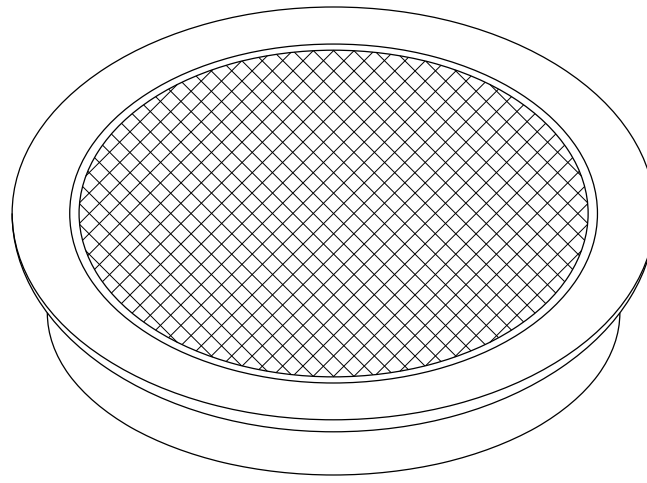
SECTION C-C

TYPE OF CURB & GUTTER	TABLE OF DIMENSIONS								CONCRETE QUANTITY A-A TO C-C (CU YDS)
	A	B	C	D	E	F	G	R	
B-6.06	6	15	4'	1	6	6	7	1	0.87
B-6.12	12	18.25	4'	1	6	6	7	1	0.95
B-6.18	18	27.25	4' 9"	1	6	6	7	1	1.18
B-6.24	24	32.4	4' 9"	1	6	6	7	1	1.30
M-4.06	6	17.8	3' 9"	4	3	4	7	3	0.75
M-4.12	12	18.25	4'	4	3	4	7	3	0.91
M-4.18	18	27.25	4' 9"	4	3	4	7	3	1.14
M-4.24	24	32.4	4' 9"	4	3	4	7	3	1.25
M-6.06	6	17.8	3' 9"	6	2	6	8	3	0.86
M-6.12	12	18.25	4'	6	2	6	8	2	0.96
M-6.18	18	27.25	4' 9"	6	2	6	8	2	1.20
M-6.24	24	32.4	4' 9"	6	2	6	8	2	1.30

MODEL: 21pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

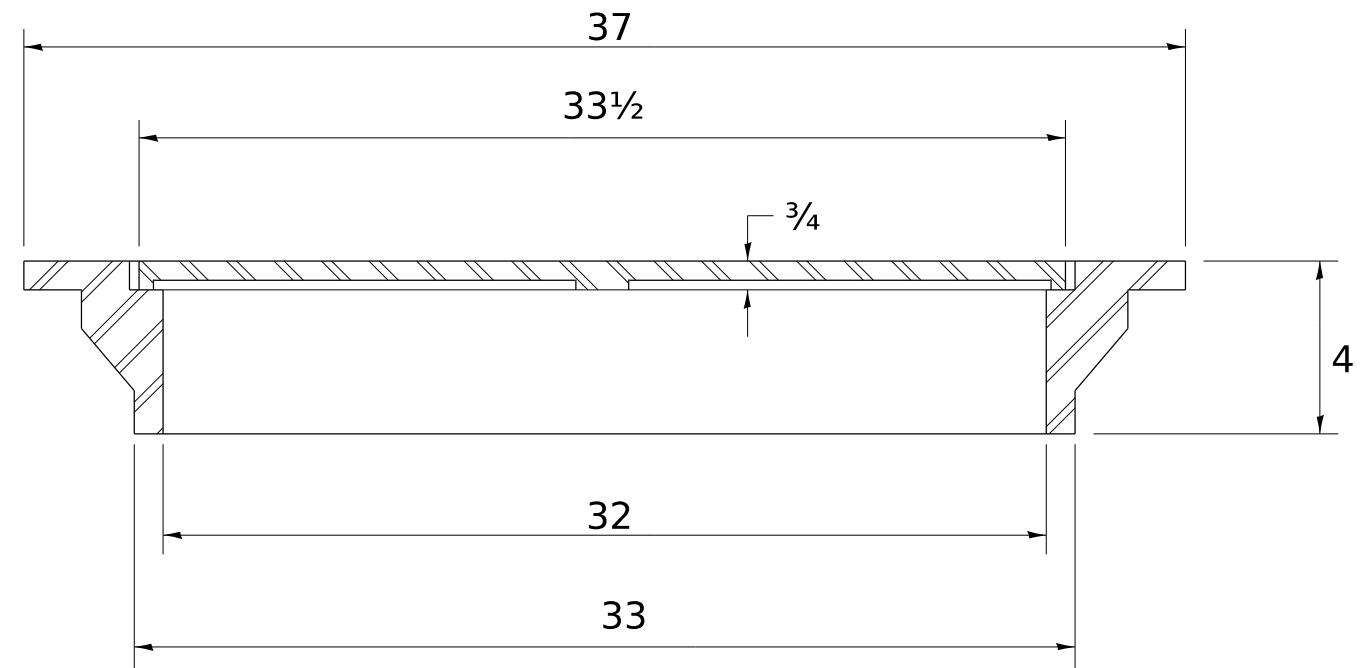
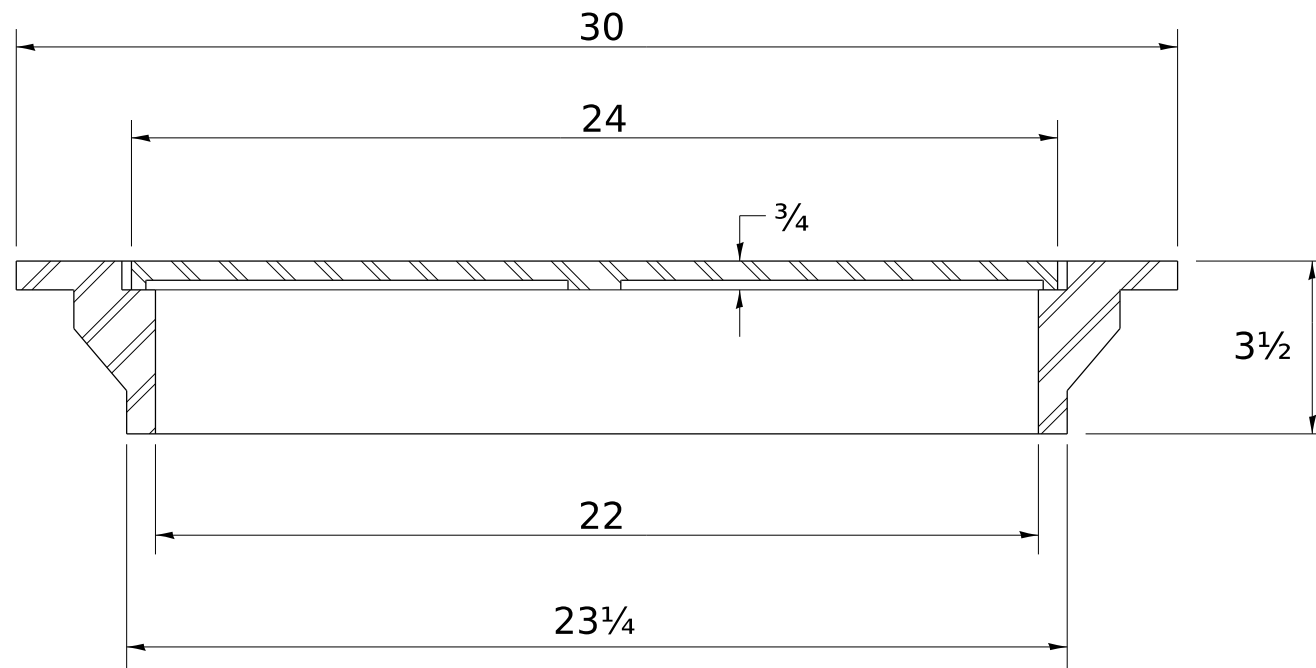
REVISED - 11-12-14	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
REVISED - 8-27-13									CONTRACT NO.				
REVISED - 10-10-06									ILLINOIS FED. AID PROJECT				
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

FIELD TILE JUNCTION VAULTS 2' AND 3' DIA.



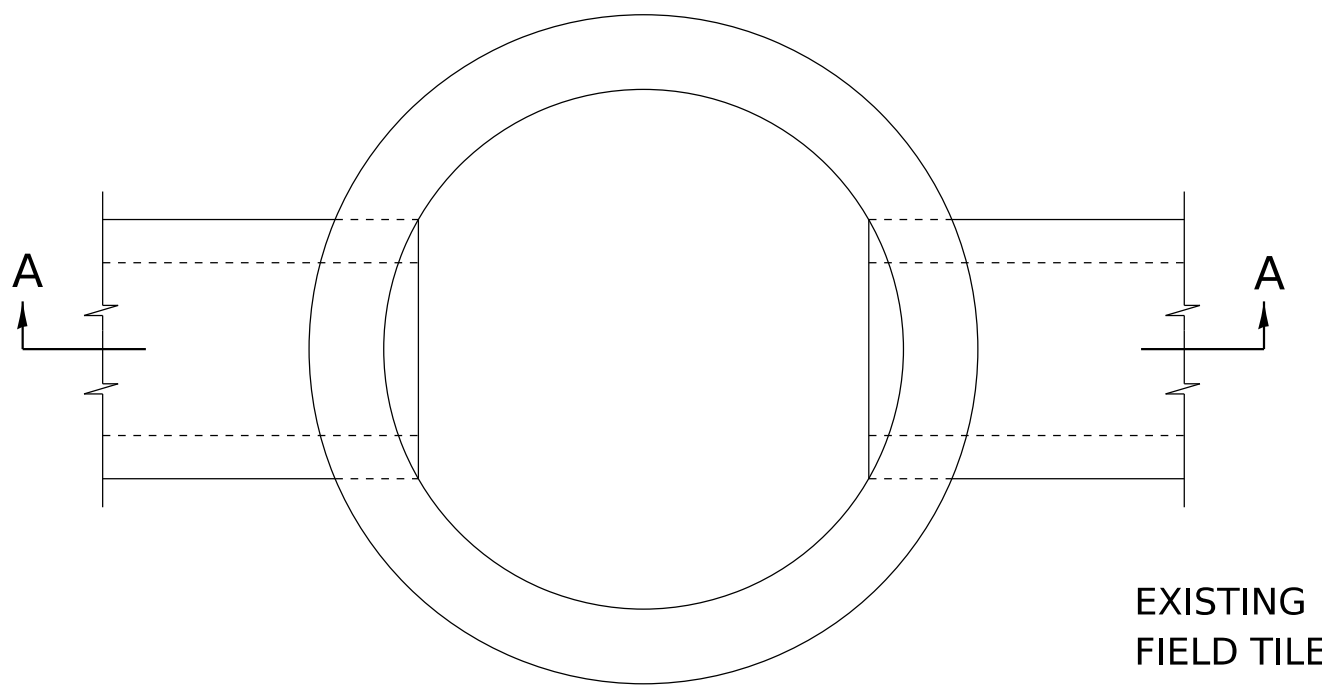
FRAME & LID FOR
2' VAULT

FRAME & LID FOR
3' VAULT

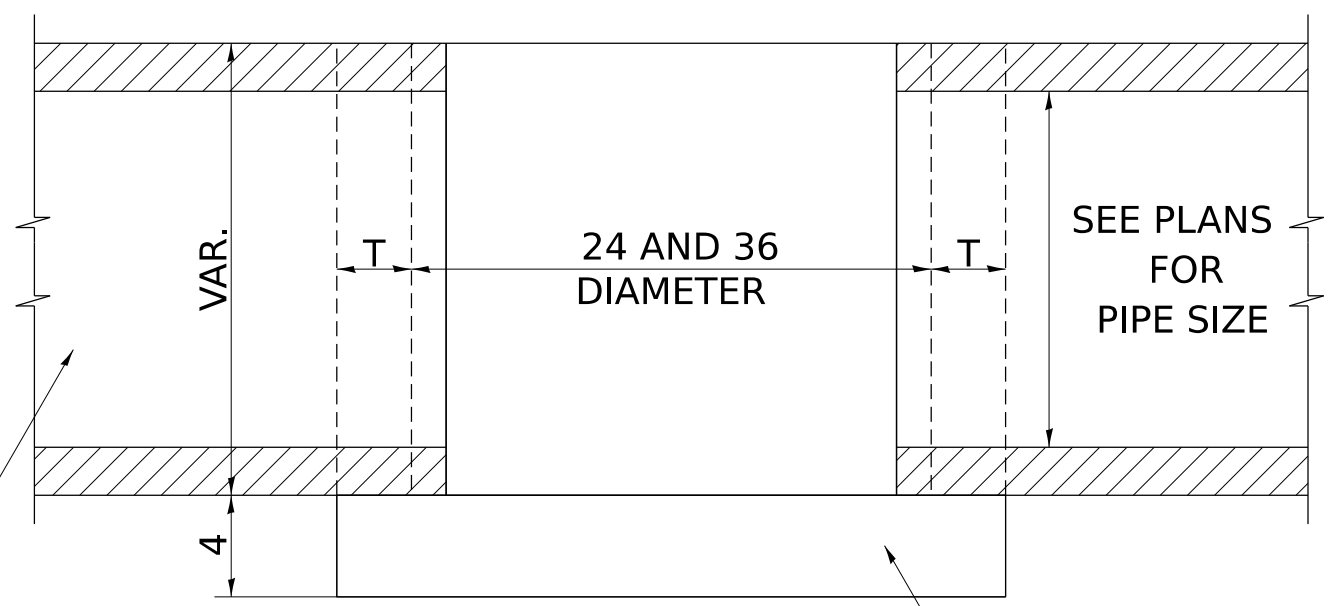


TOTAL WEIGHT: 146 LBS.

TOTAL WEIGHT: 280 LBS.



PLAN



CAST-IN-PLACE CONCRETE
SECTION A-A

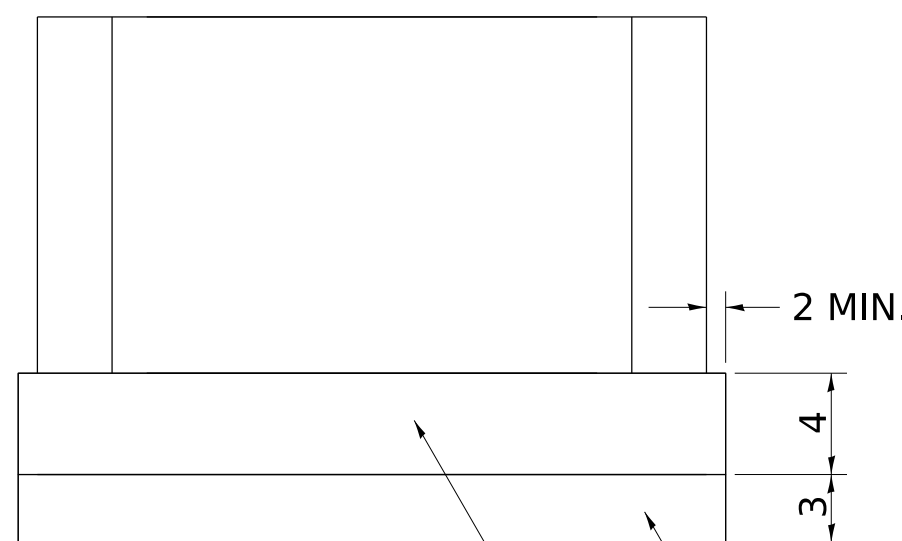
GENERAL NOTES:

THE FRAME AND LID IS REQUIRED ON ALL JUNCTION VAULTS.
THE FRAME AND LID SHALL BE INSTALLED FLUSH WITH THE GROUND.

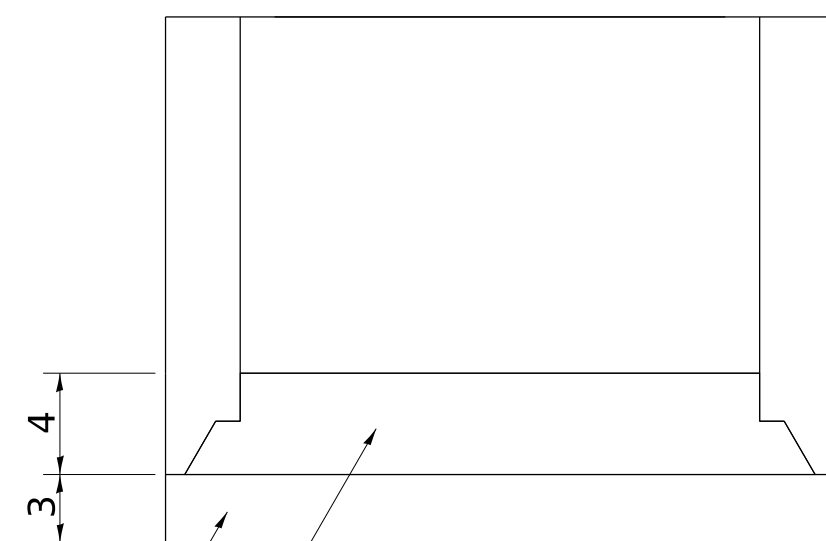
FRAME AND LIDS:

R-6040 OR EQUIVALENT (2')
R-6080 OR EQUIVALENT (3')

ALTERNATE MATERIALS FOR WALLS	T
BRICK MASONRY	8
CAST-IN-PLACE CONCRETE	6
CONCRETE MASONRY UNIT	5
PRECAST REINFORCED CONCRETE SECTION	3



PRECAST REINFORCED
CONCRETE SLAB



PREFABRICATED CONCRETE SLAB,
WHEN THE PRECAST REINFORCED
CONCRETE SECTION ALTERNATE
IS USED.

ALTERNATE METHODS

ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED.

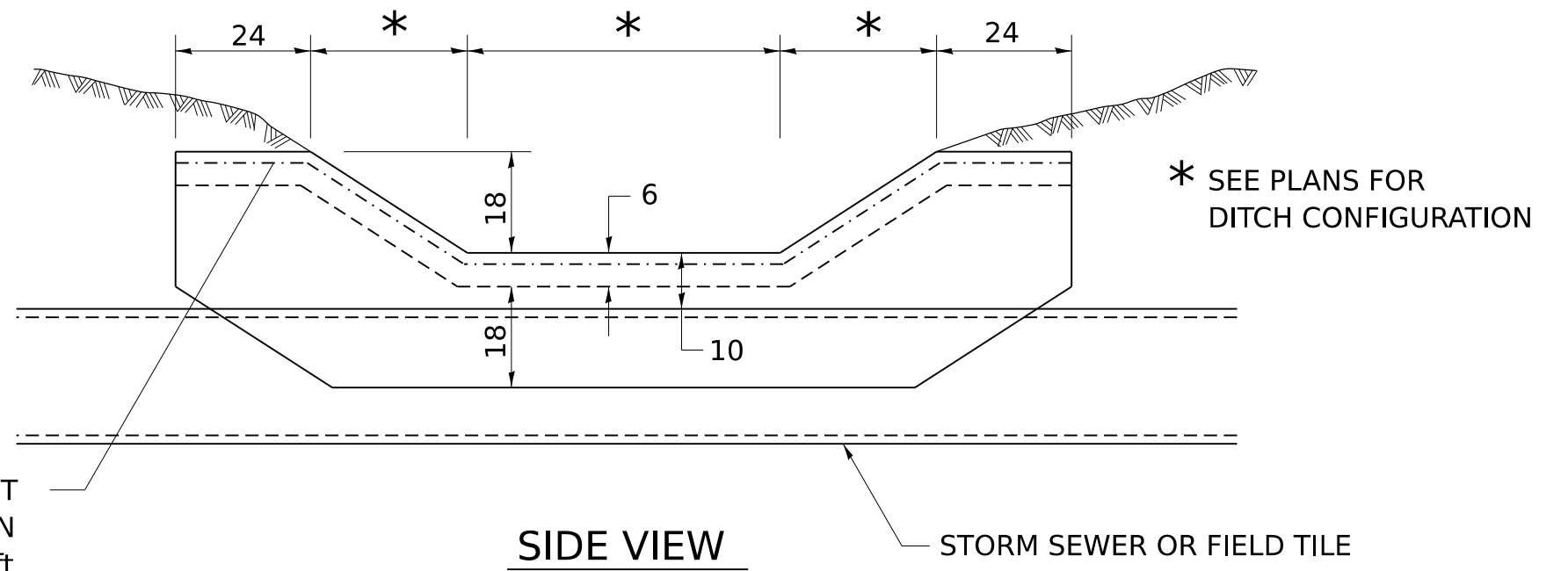
MODEL: 30pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 1-03-18	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 6-27-14					CONTRACT NO.				
REVISED - 10-14-11									
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

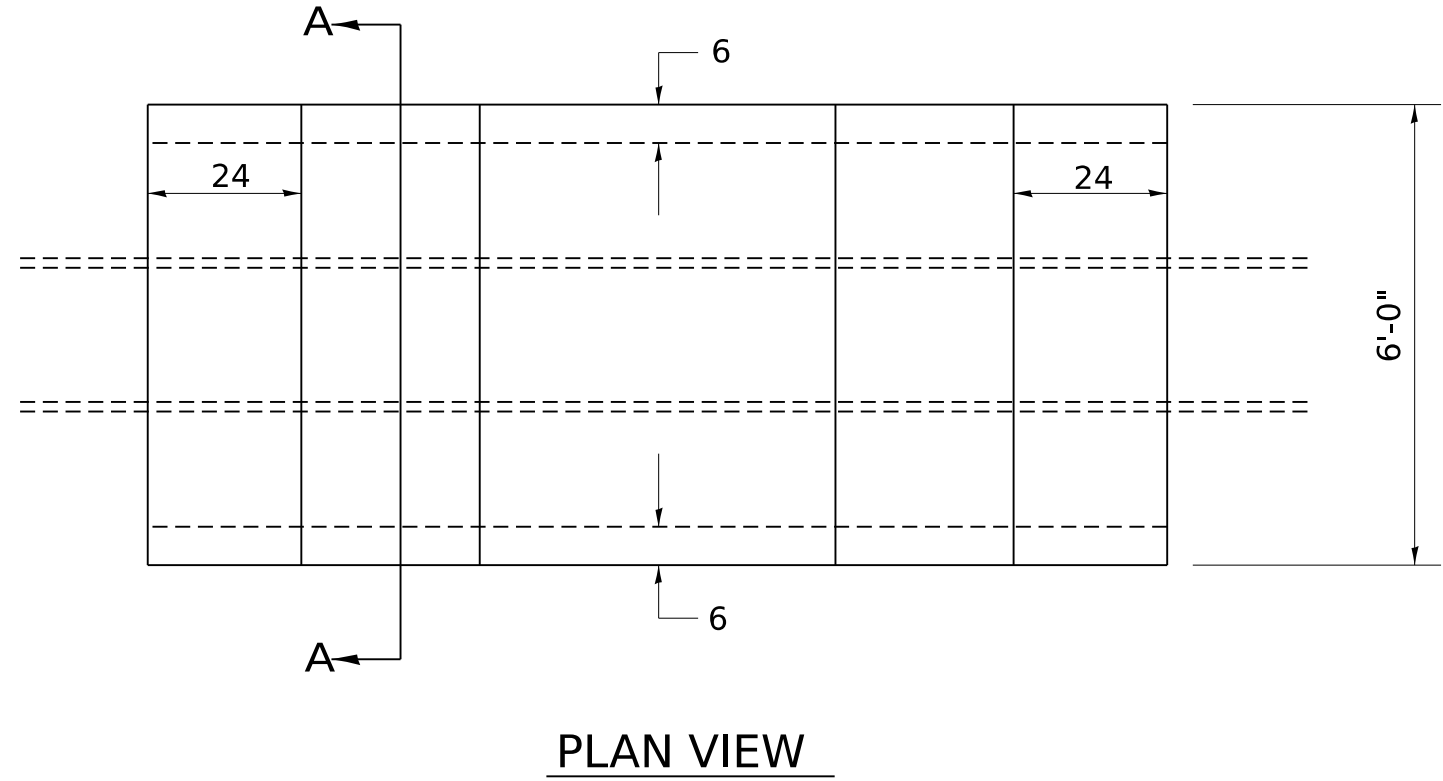
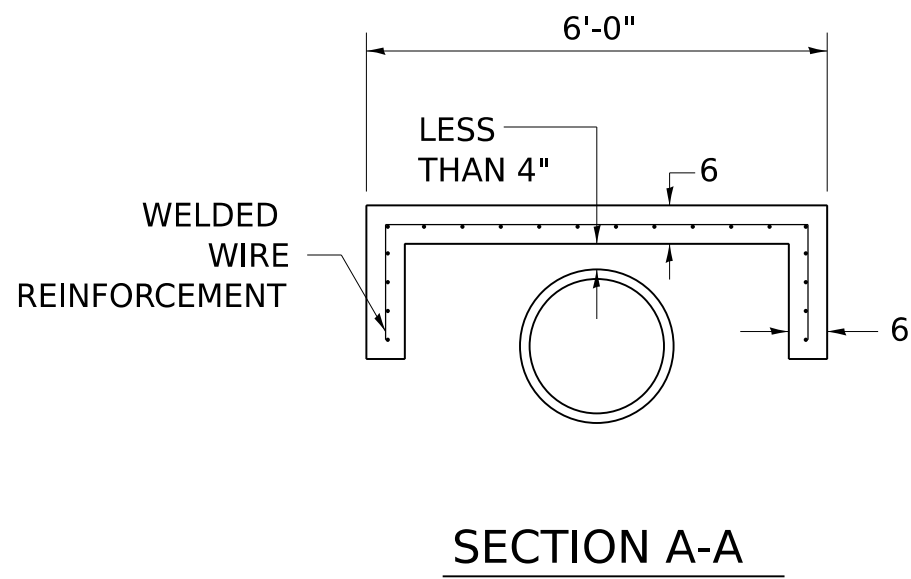
TREATMENT OF FIELD TILE SYSTEMS UNDER DITCHES

PAVED DITCH

TO BE USED IF COVER OVER THE PIPE AT THE BOTTOM OF THE DITCH IS LESS THAN 10 inches

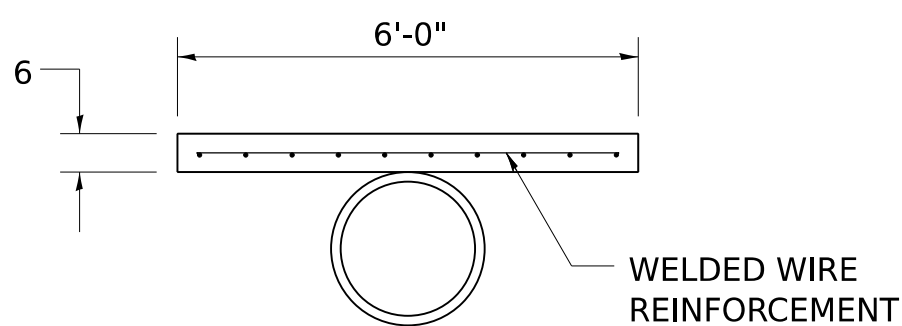
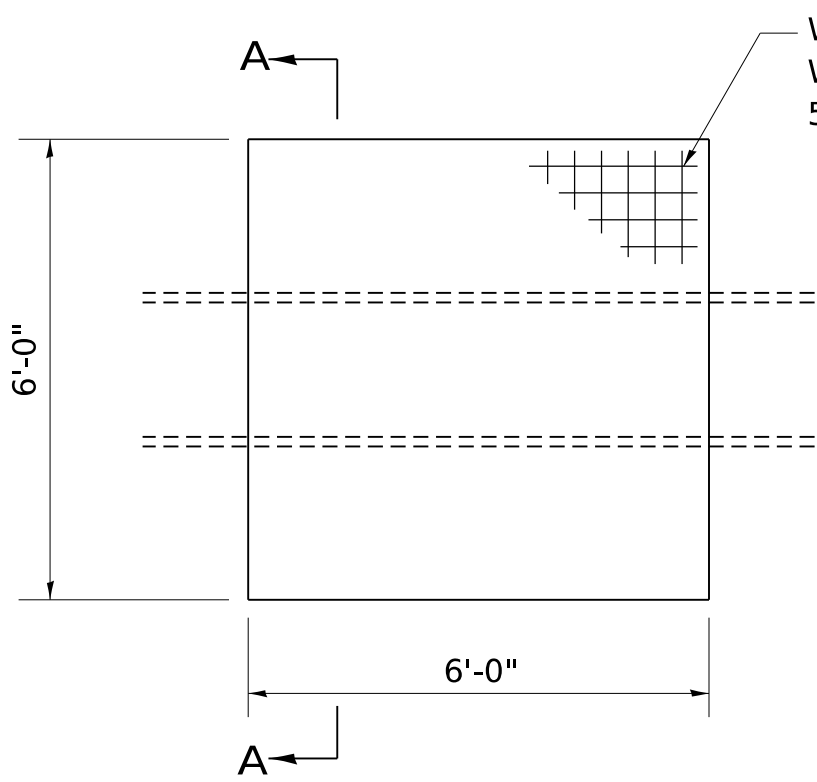
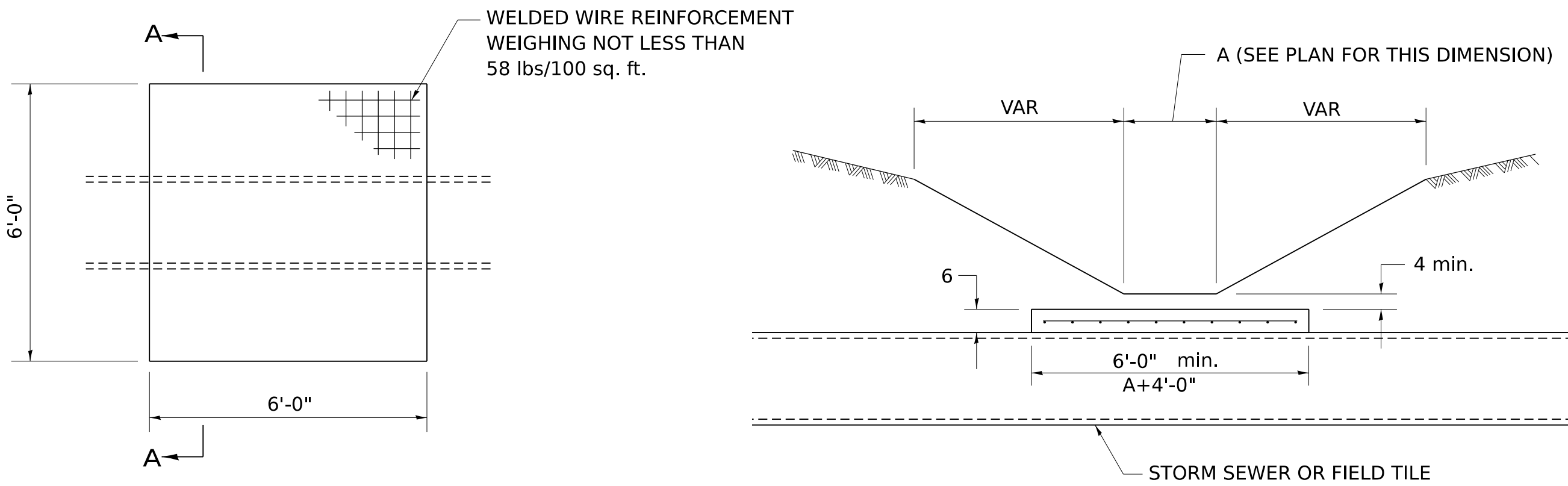


WELDED WIRE REINFORCEMENT WEIGHING NOT LESS THAN 58 lbs./100 sq. ft.



CONCRETE SLAB

TO BE USED IF COVER OVER THE PIPE AT THE BOTTOM OF THE DITCH IS 10 INCHES TO 24 INCHES



NOTES

THIS WORK SHALL BE DONE IN ACCORDANCE WITH ARTICLE 611.04 OF THE STANDARD SPECIFICATION.

THE CONCRETE SLAB AND PAVED DITCH WILL BE PAID FOR AT THE CONCRETE UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

MODEL: 31.p2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED -	1-05-16
REVISED -	10-14-11
REVISED -	
REVISED -	

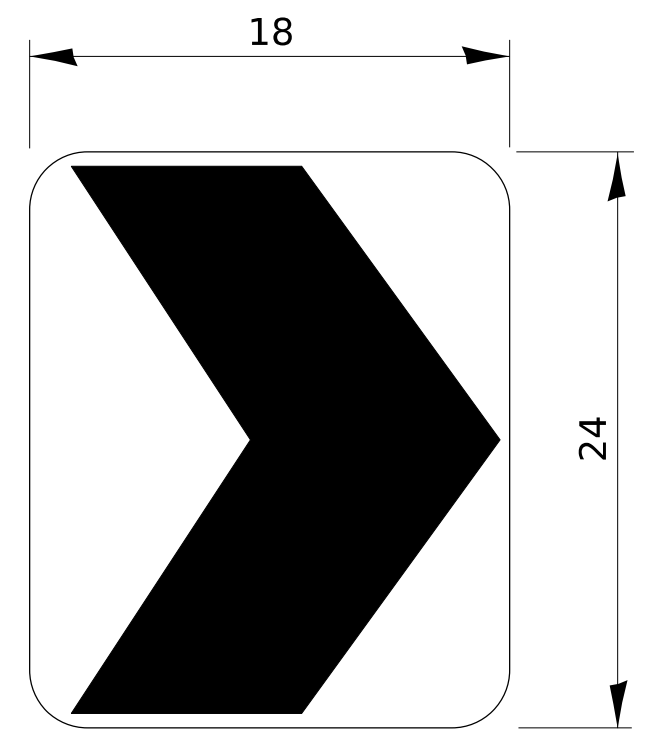
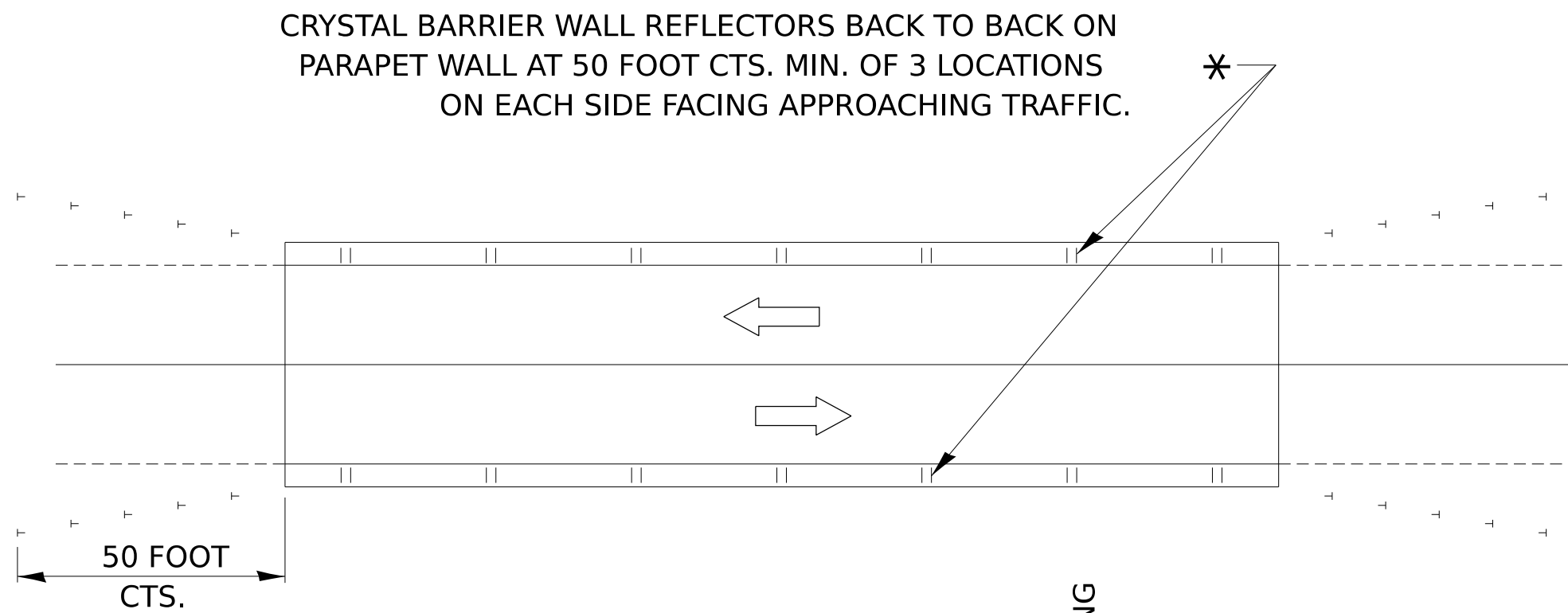
REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

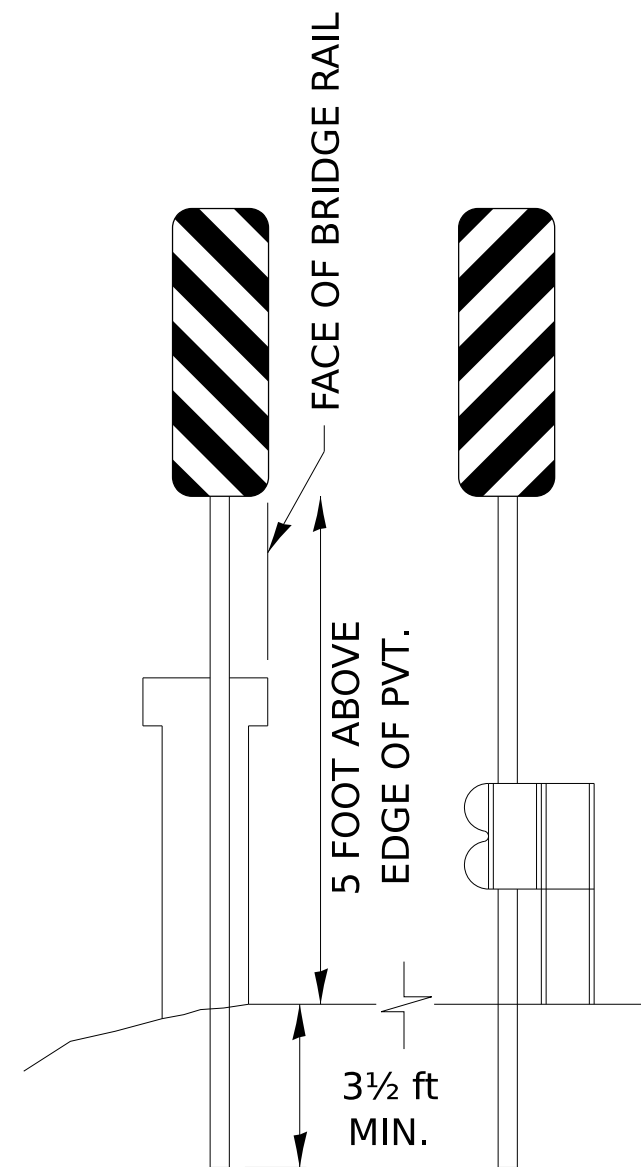
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

SIGN PANEL – TYPE 1 (SPECIAL)

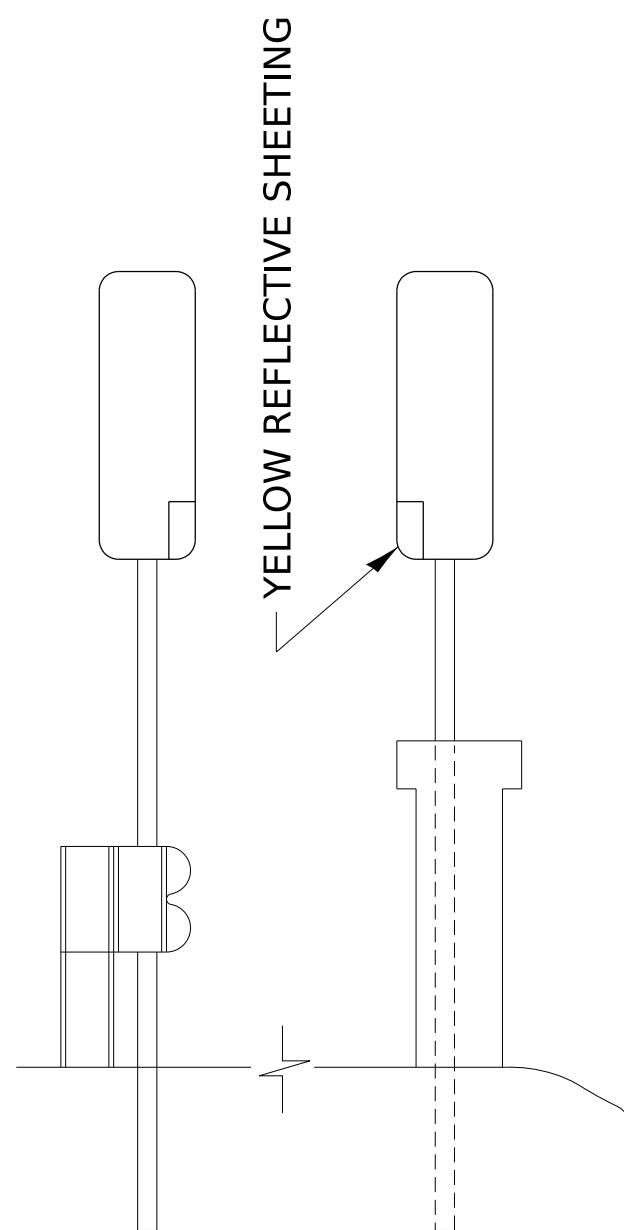
SIGN LAY OUT FOR NARROW BRIDGES ON TWO-WAY ROADWAYS
(WHERE THE BRIDGE IS LESS THAN 24 WIDER THAN THE ROADWAY SURFACE.)



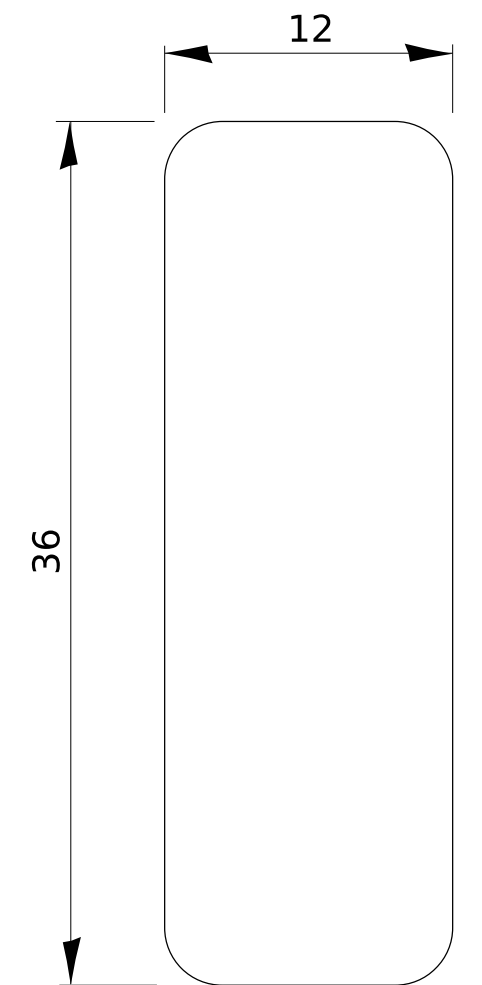
TYPICAL CHEVRON



FRONT VIEW



BACK VIEW



TYPICAL SIGN

NOTES

STRIPES ON THE FACE OF THE SIGN SHALL SLOPE TOWARDS THE EDGE OF PAVEMENT ON BOTH SIDES OF THE ROADWAY.

WHEN THE GUARDRAIL IS PRESENT THE DISTANCE FROM THE EDGE OF THE SIGN SHALL BE POSITIONED WITH THE FACE OF THE GUARDRAIL, AS SHOWN.

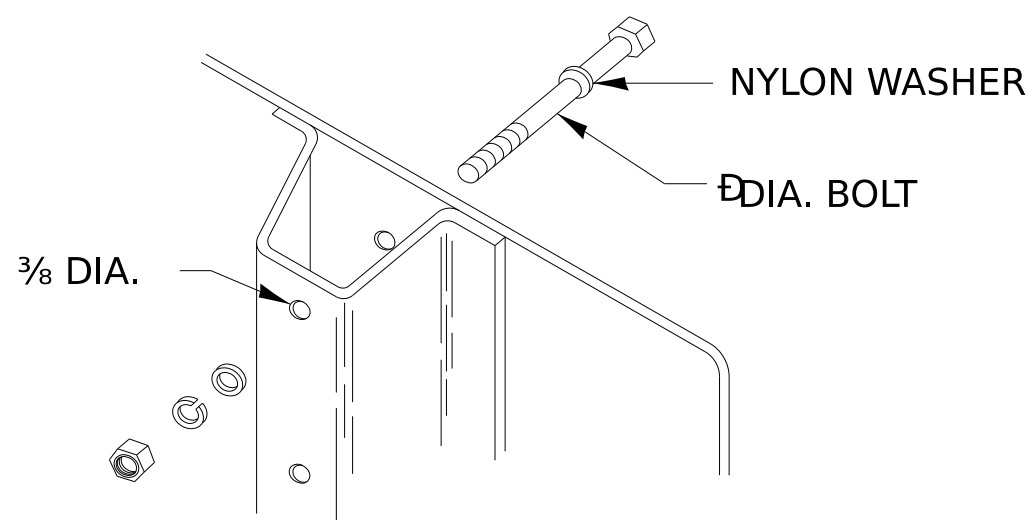
ALL MOUNTING HARDWARE SHALL BE ALUMINUM, STAINLESS STEEL, OR ZINC OR CADMIUM PLATED STEEL AND SHALL BE INCLUDED TO THE COST OF THE INSTALLATION.

PLACEMENT OF CHEVRON ALIGNMENT SIGNS ALONG THE 25 TO 1 TAPER WILL CONFORM TO THE DEPARTMENT OF TRANSPORTATION'S STANDARDS MANUAL UNDER THE SECTION FOR GUARDRAIL PLACEMENT.

ALL LEFT SIDE MARKERS SHALL BE OMITTED FOR FOUR-LANE, TWO-WAY BRIDGE APPLICATIONS.

* REFER TO THE BUREAU OF TRAFFIC'S SPECIFICATIONS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.



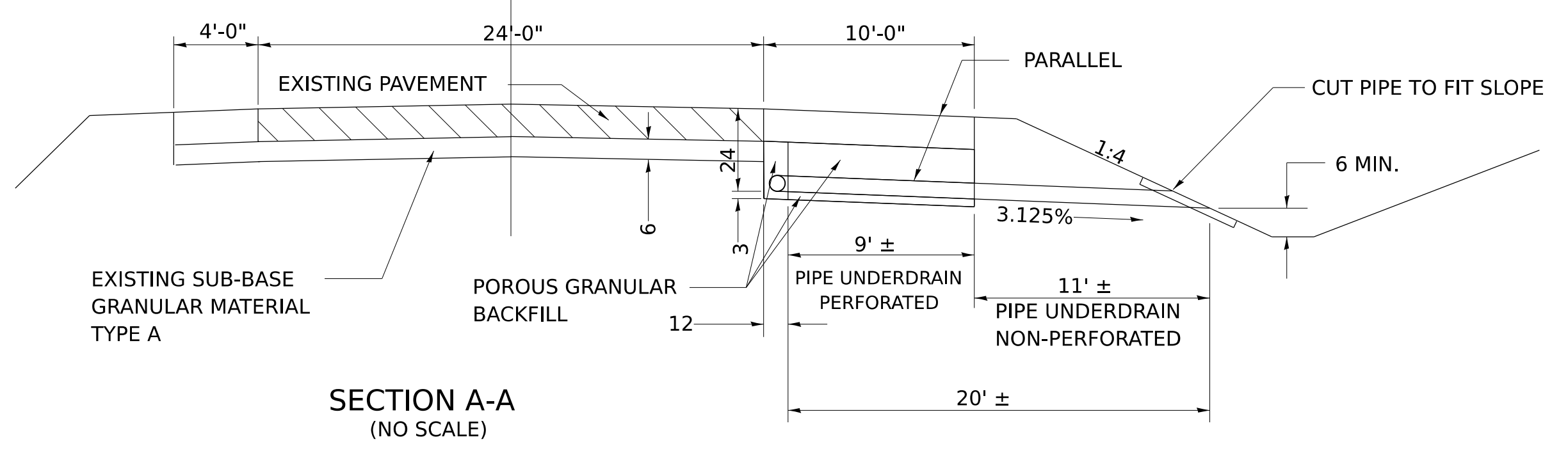
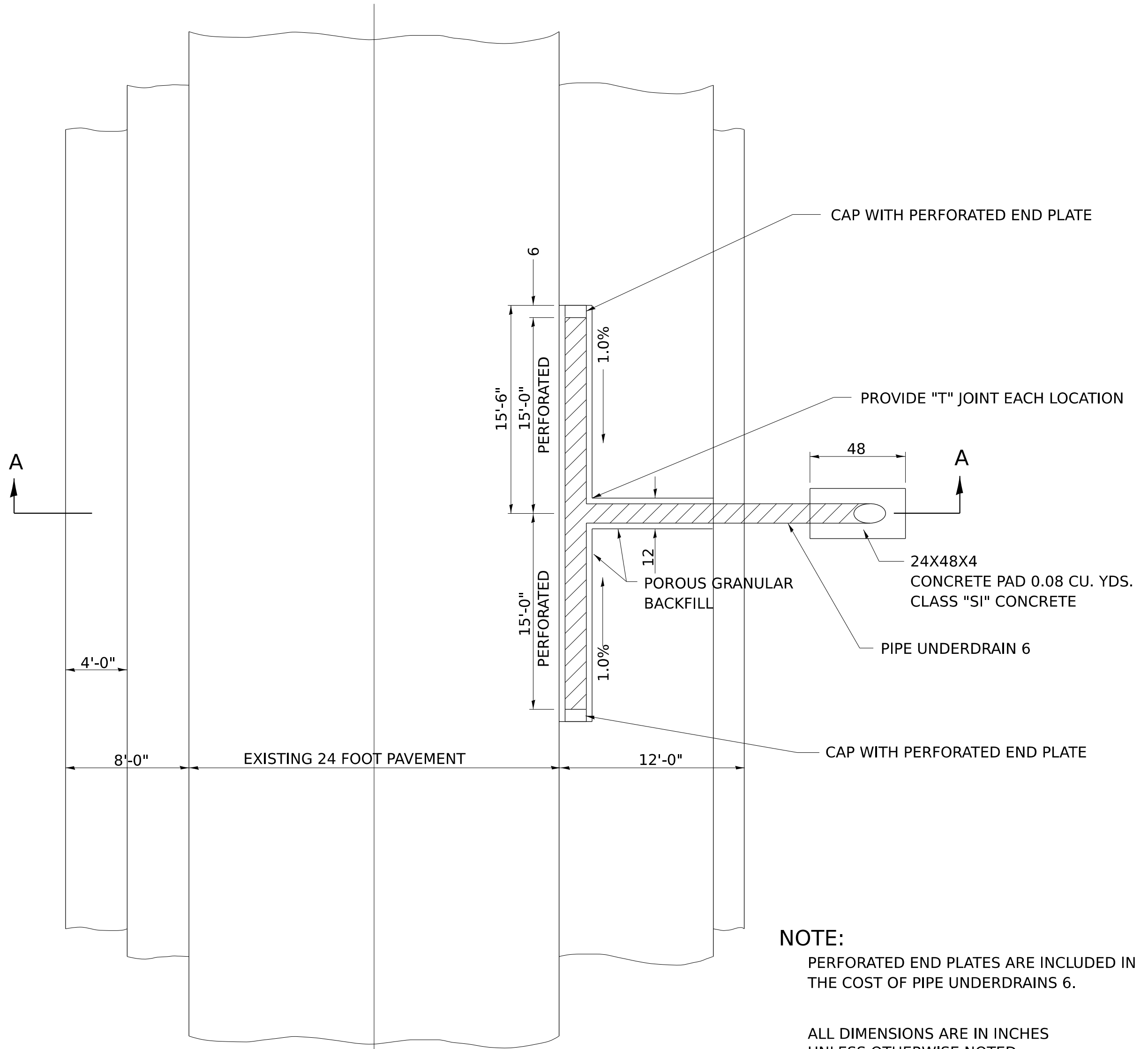
NOTE: MINIMUM OF TWO BOLTS PER POST REQUIRED.

DETAIL OF MOUNTING SIGN TO POST

MODEL: 32pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 6-27-14	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 10-14-11									CONTRACT NO.
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

SPECIAL DRAINAGE OUTLET



SECTION A-A
(NO SCALE)

MODEL: 33pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED -	1-05-16
REVISED -	10-14-11
REVISED -	
REVISED -	

REGION 2 / DISTRICT 2 STANDARD				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

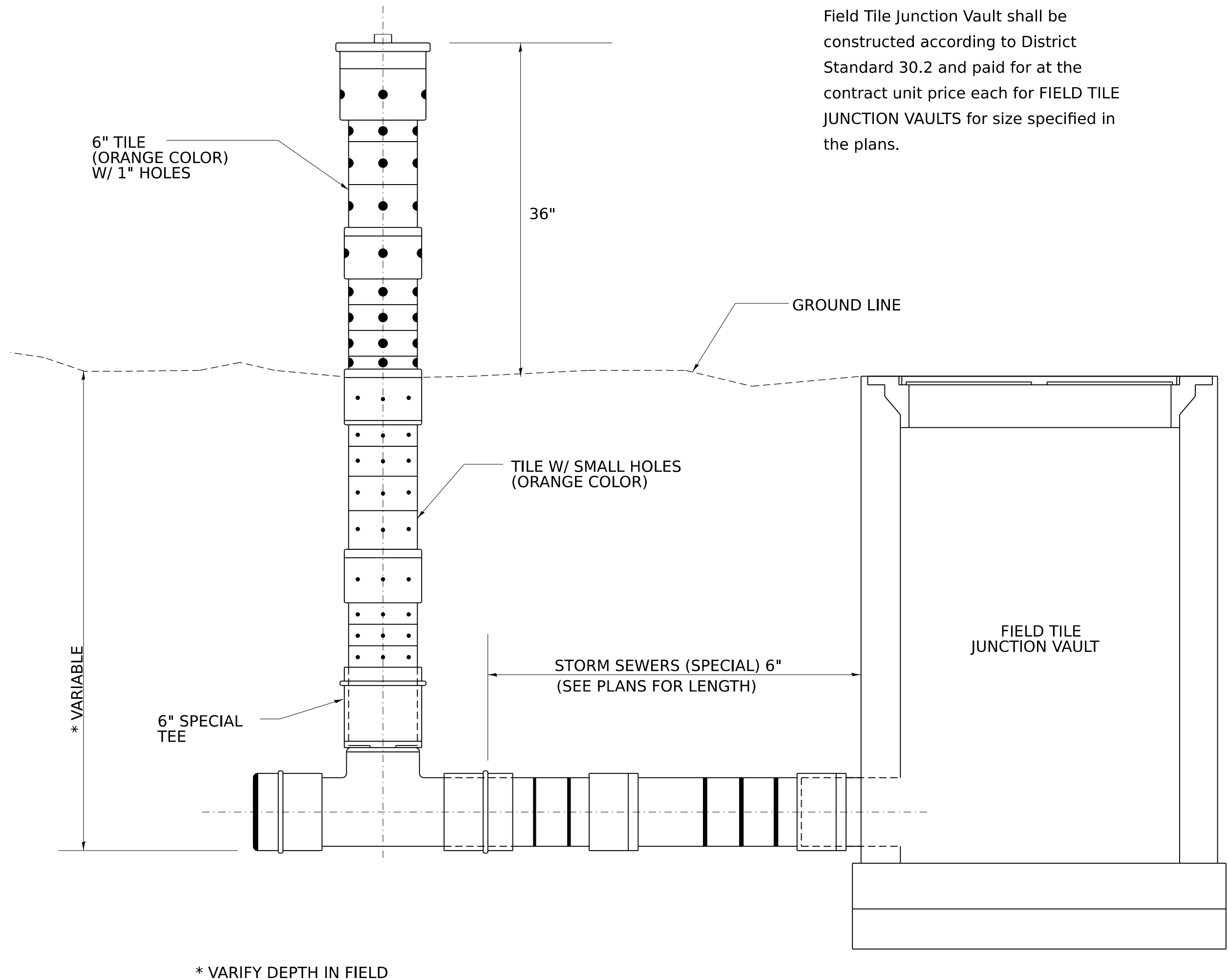
INLET STAND PIPE

Inlet Stand Pipe

Inlet Stand Pipe shall be included in the contract unit price per FOOT for STORM SEWERS (SPECIAL) 6". Which shall include the following items--one 36" above ground section with 1" holes, one variable depth below ground section with small holes, one 6" tee section, collars (if needed) and end caps (if needed) as directed by the engineer.

Storm Sewer shall be paid for at the contract unit price per foot for STORM SEWERS (SPECIAL) 6". According to Article 611.04.

Field Tile Junction Vault shall be constructed according to District Standard 30.2 and paid for at the contract unit price each for FIELD TILE JUNCTION VAULTS for size specified in the plans.



* VARIFY DEPTH IN FIELD

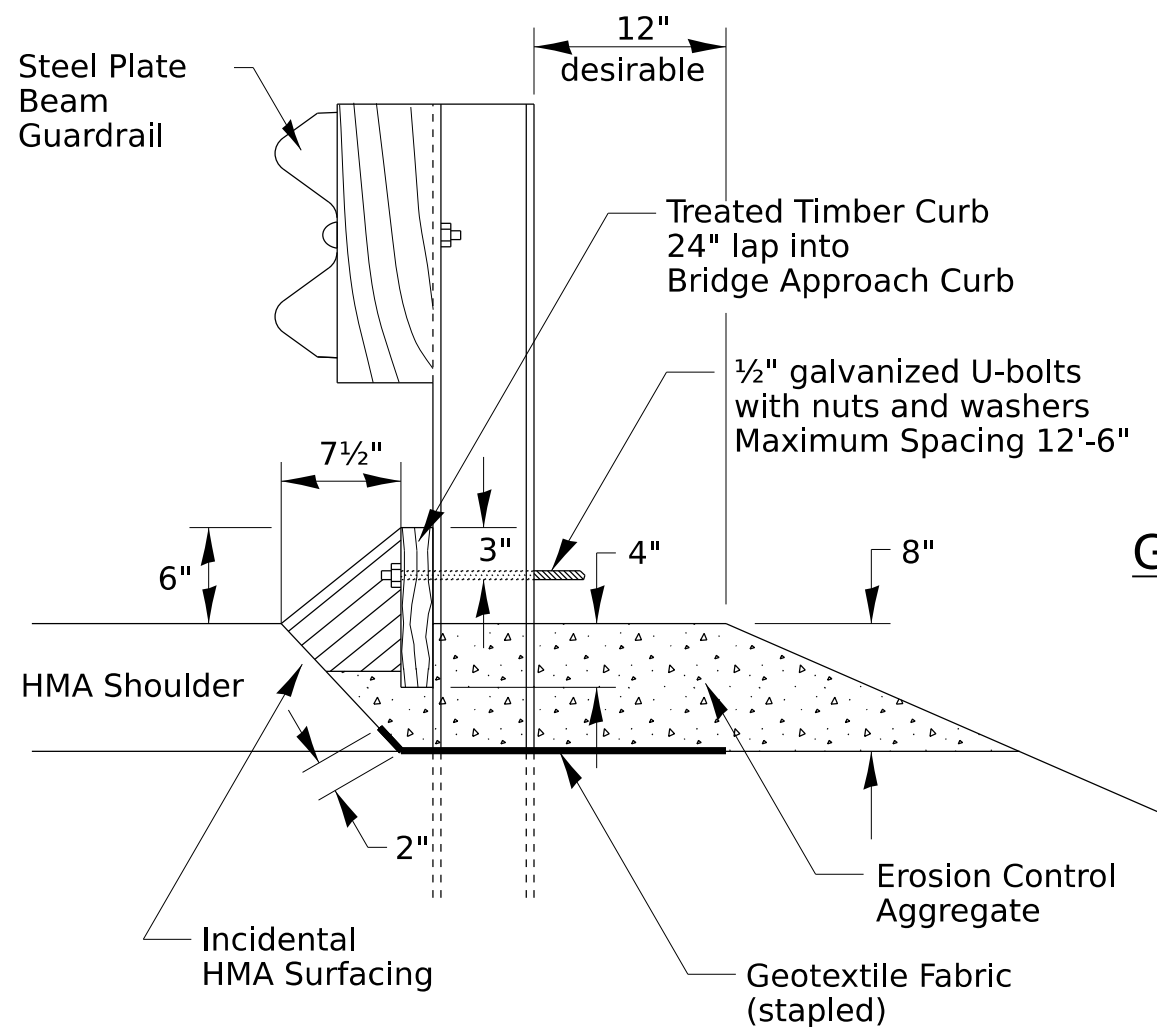
MODEL: 34pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 10-14-11	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
REVISED -									CONTRACT NO.				
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
REVISED -													

GUARDRAIL EROSION CONTROL TREATMENTS

GENERAL NOTES: EROSION CONTROL CURB

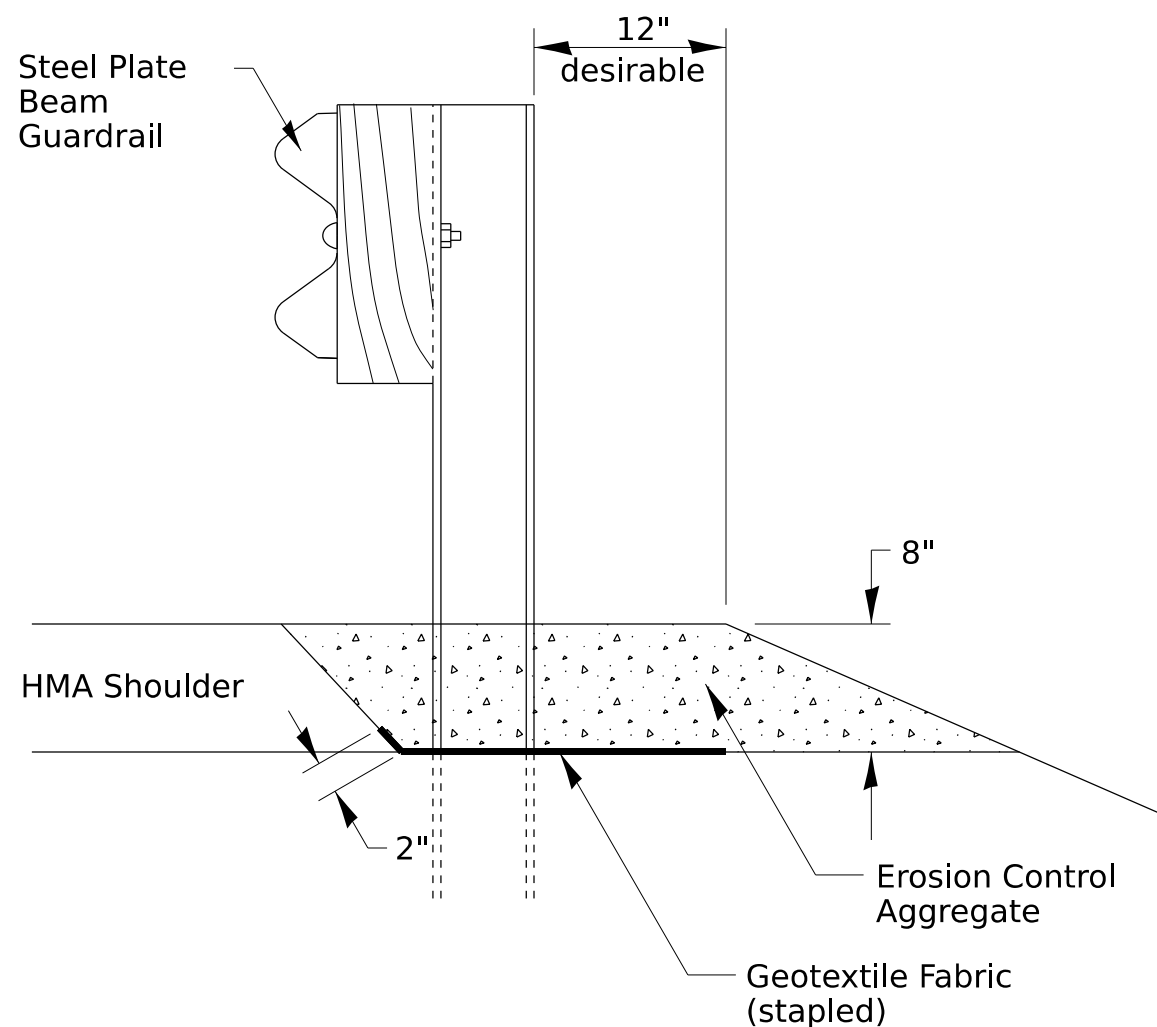
1. This work shall consist of grading as needed, installing hardware, 2" x 10" treated timber boards and incidental hot-mix asphalt surfacing in front of steel plate beam guardrail in accordance with plan details.
2. Timber shall be treated in accordance with Article 1007.12 Waterborne preservatives "asa" and "cca" shall have a minimum retention of 0.40 lbs./cu.ft.
3. This work will be paid for at the contract unit price per foot for EROSION CONTROL CURB (pay code Z0020800).



**TYPICAL SECTION
WITH EROSION CONTROL CURB**

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of furnishing and installing, Geotextile Fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile Fabric shall be placed with a 12" minimum overlay. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and aggregate are in place. If the guardrail is placed after the Geotextile Fabric and aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01 of the Standard Specifications.
 - B. The aggregate shall meet class D quality requirements as outlined in Article 1004.01 of the Standard Specifications with the following exceptions:
 - 1) Revise the maximum allowable percentage of weighted average loss when the material is subjected to 5 cycles of the Sodium Sulfate Soundness Test from 25% as shown under class D of the quality chart in Article 1004.01(b) of the Standard Specifications to 40%.
 - 2) Revise the maximum allowable percentage of wear as determined by the Los Angeles Abrasion Method from 45% as shown under as shown under class D of the quality chart in Article 1004.01(b) of the Standard Specifications to 65%.
 - 3) The sum of the percentage of weighted average loss when the material is subjected to 5 cycles of the Sodium Sulfate Soundness Test; and the percentage of wear as determined by the Los Angeles Abrasion Method, shall not exceed 95%.
 - C. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.
7. This work will be paid for at the contract unit price per ton for GUARDRAIL AGGREGATE EROSION CONTROL (pay code Z0001002).

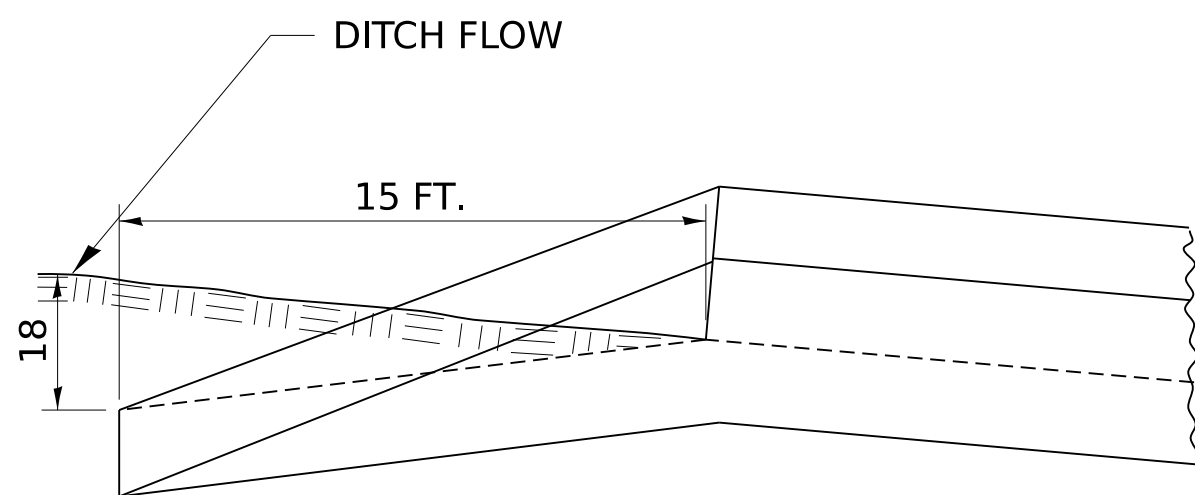
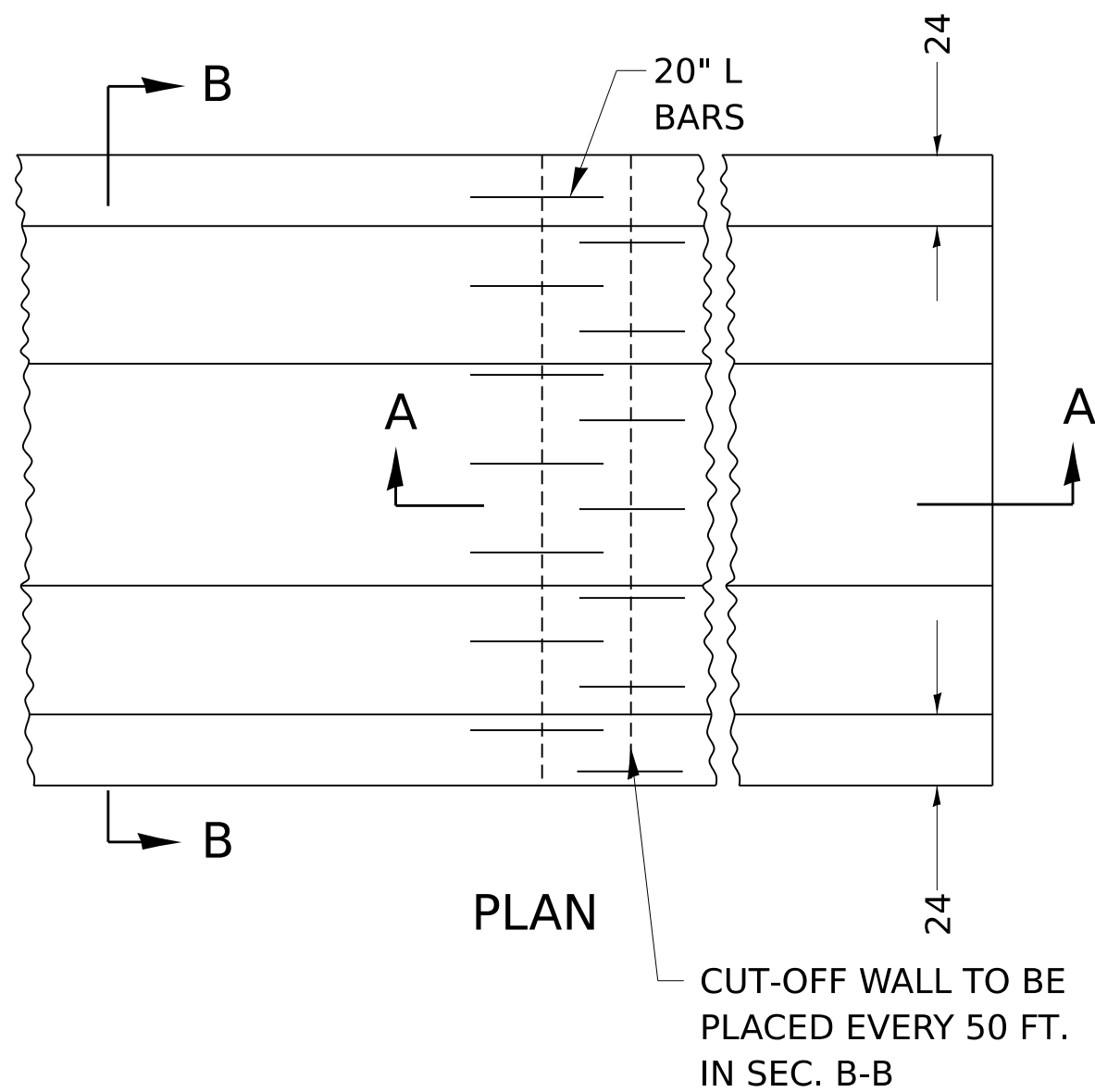
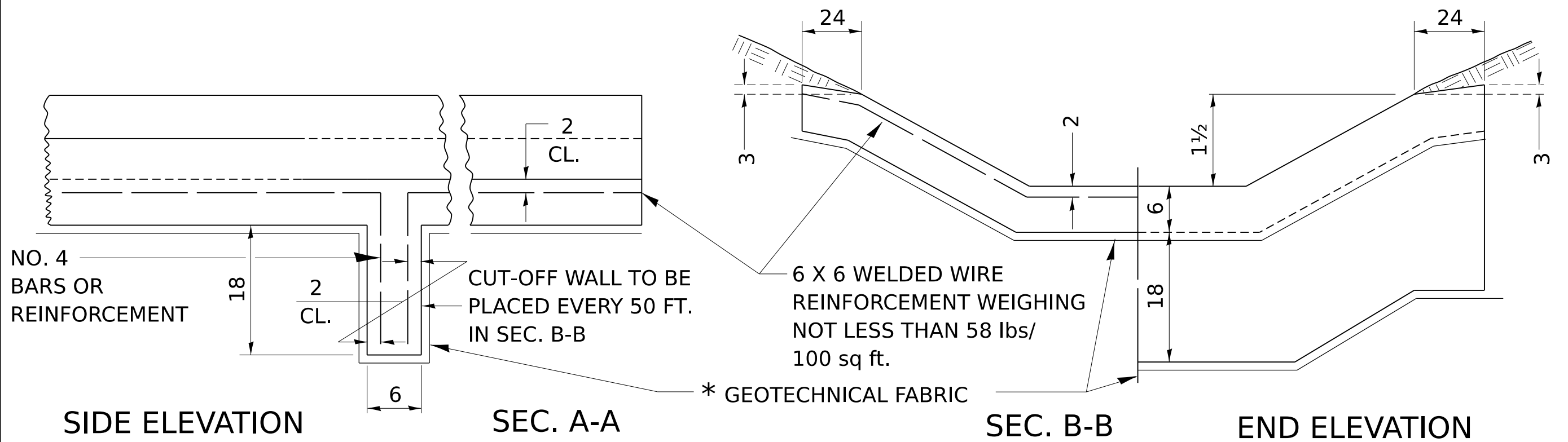


**TYPICAL SECTION
WITHOUT EROSION CONTROL CURB**

MODEL: 35pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 1-05-16	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 10-14-11									
REVISED -					CONTRACT NO.				
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

PAVED DITCH (SPECIAL)



SIDE ELEVATION SHOWING METHOD OF BURYING UP STREAM AND DOWN STREAM END OF PAVED DITCH.

(SEE NOTE)

NOTES:

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

WELDED WIRE REINFORCEMENT SHALL BE 6 X 6 MESH, NO. 4 GAUGE, 58 lbs/100 sq ft, CONFORMING TO THE REQUIREMENTS OF A.S.T.M. A1064.

1/2" PREMOULDED JOINT FILLER SHALL BE PLACED AT THE JUNCTION OF PAVED DITCH WITH ANY OTHER STRUCTURE.

CUT-OFF WALLS SHALL BE COSTRUCTED MONOLITHICALLY WITH THE PAVED DITCH.

AT THE OPTION OF THE CONTRACTOR, NO. 4 L 20 REINFORCING BARS PLACED AT 12 CENTERS LONGITUDINALLY IN PAVED DITCH AND VERTICALLY IN CUT-OFF WALLS IN LIEU OF THE WELDED WIRE FABRIC.

THE SOIL PLACED OVER THE 24 FLATTENED SECTION OF THE DITCH SHALL BE TAMPED FIRMLY. THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR PAVED DITCH.

PAVED DITCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARTICLES 606.01 THROUGH 606.13.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

* THE GEOTECHNICAL FABRIC IS INCLUDED IN THE PAVED DITCH.

BASIS OF PAYMENT

PAVED DITCH (SPECIAL) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT MEASURED IN PLACE INCLUDING THE COST OF FURNISHING AND PLACING THE JOINT FILLER, THE WELDED WIRE REINFORCEMENT OR THE NO. 4 REINFORCING BARS, AND THE NECESSARY EXCAVATION AND DISPOSAL OF SURPLUS MATERIALS.

MODEL: 36pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

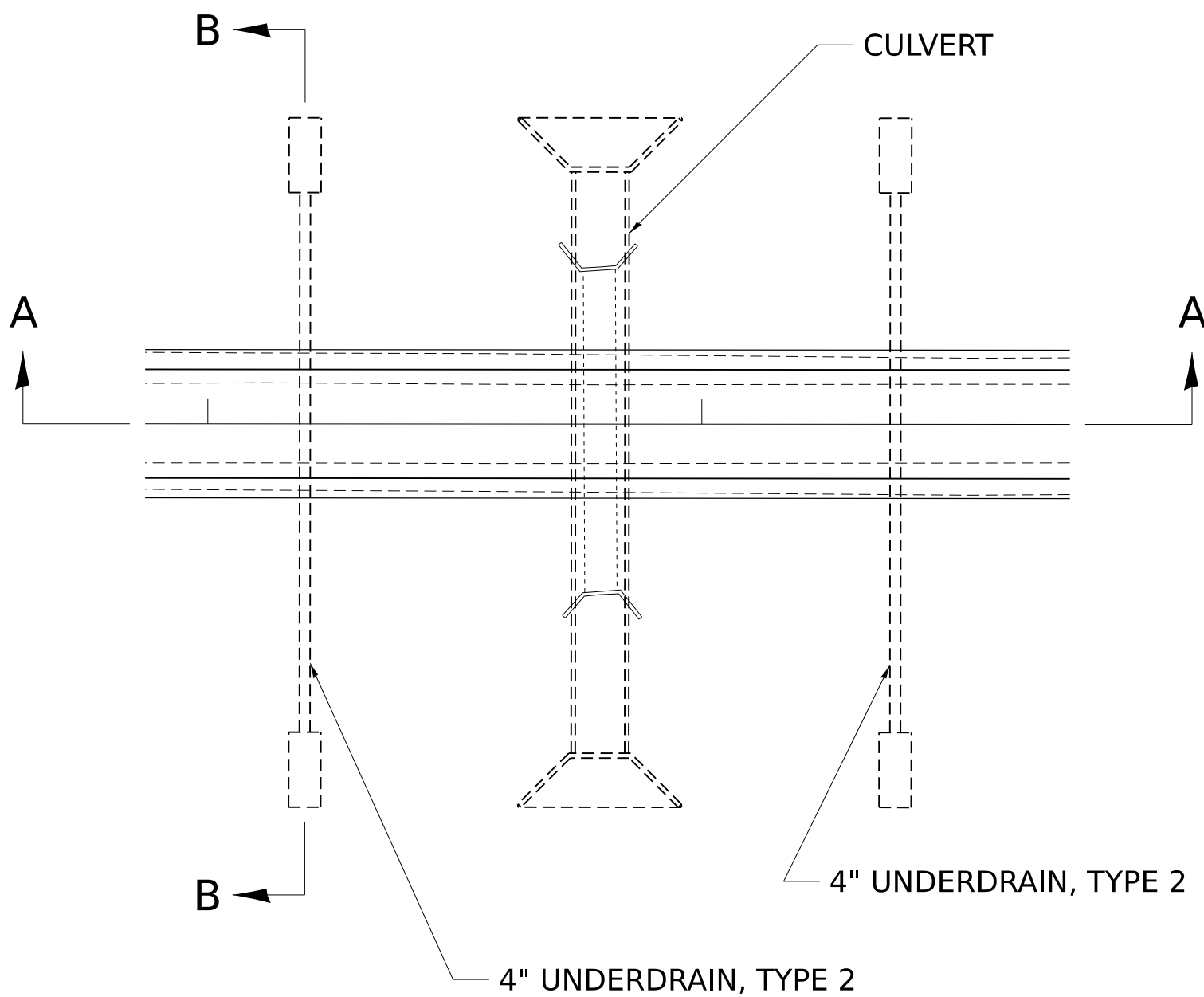
REVISED -	1-05-16
REVISED -	10-14-11
REVISED -	
REVISED -	

REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS		FED. AID PROJECT		

UNDERDRAIN FOR ACROSS ROAD (AR) CULVERTS



NOTES:

IN SAG CONDITIONS INSTALL PIPE UNDERDRAINS, TYPE 2, 4" ON BOTH SIDES OF CULVERT.

ON HIGHWAY GRADES GREATER THAN 2% INSTALL PIPE UNDERDRAINS, TYPE 2, 4" ON THE HIGH SIDE OF THE CULVERT.

THIS WORK SHALL BE COMPLETED ACCORDING TO SECTION 601 OF THE STANDARD SPECIFICATIONS.

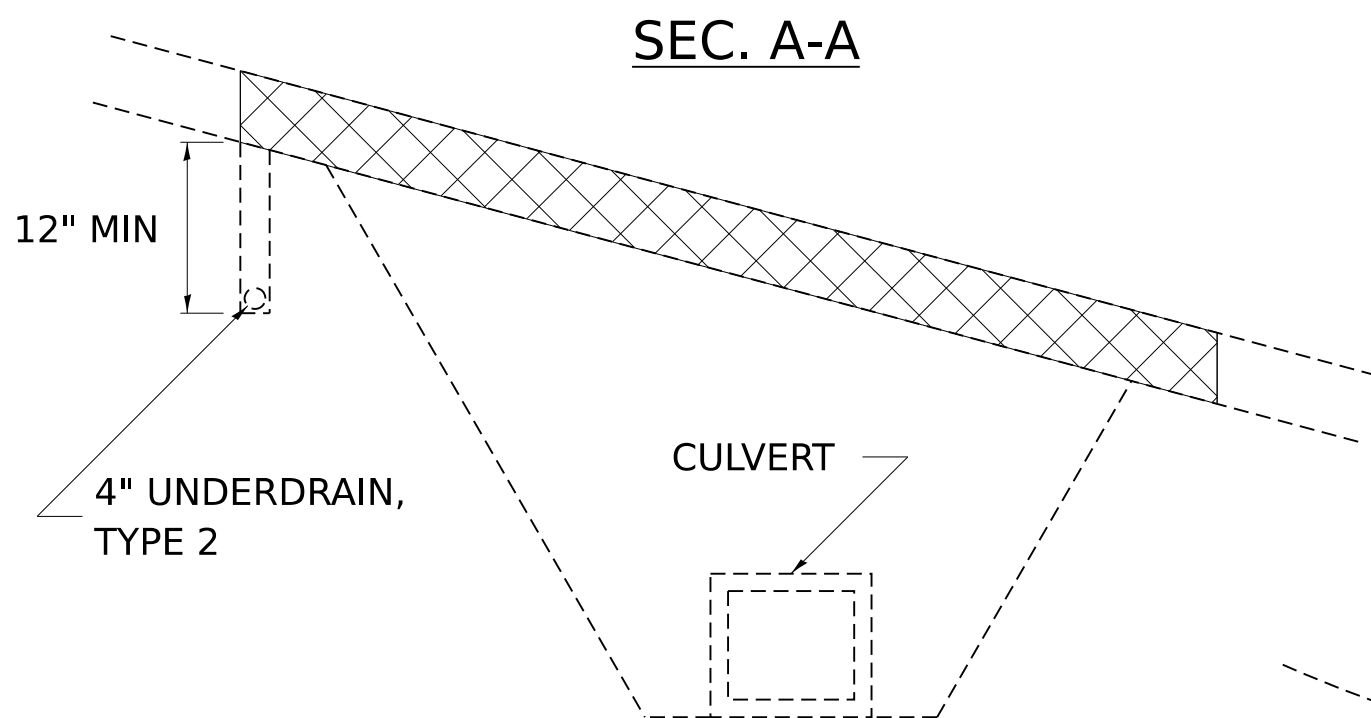
THE UNDERDRAIN SHALL EXTEND UNTIL INTERSECTING WITH THE SIDE SLOPES. THE PIPES SHALL DRAIN INTO CONCRETE HEADWALLS. (SEE ARTICLE 601.05 OF THE STANDARD SPECIFICATIONS AND HIGHWAY STANDARD 601101).

THE UNDERDRAIN SHALL BE A MINIMUM OF 12" BELOW THE EXISTING PAVEMENT.

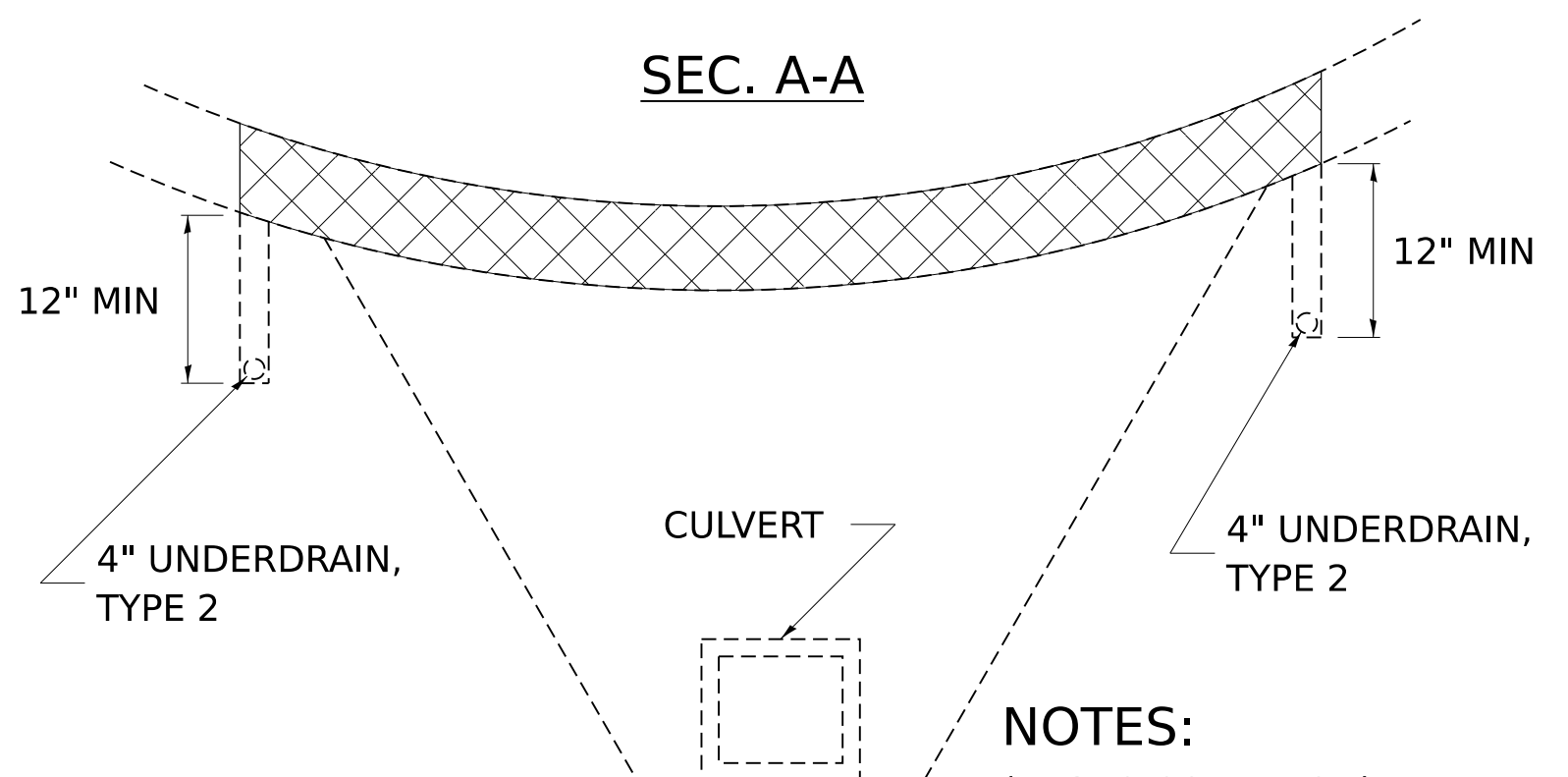
PIPE UNDERDRAINS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR PIPE UNDERDRAINS, TYPE 2, 4".

CONCRETE HEADWALLS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR CONCRETE HEADWALLS FOR PIPE DRAINS.

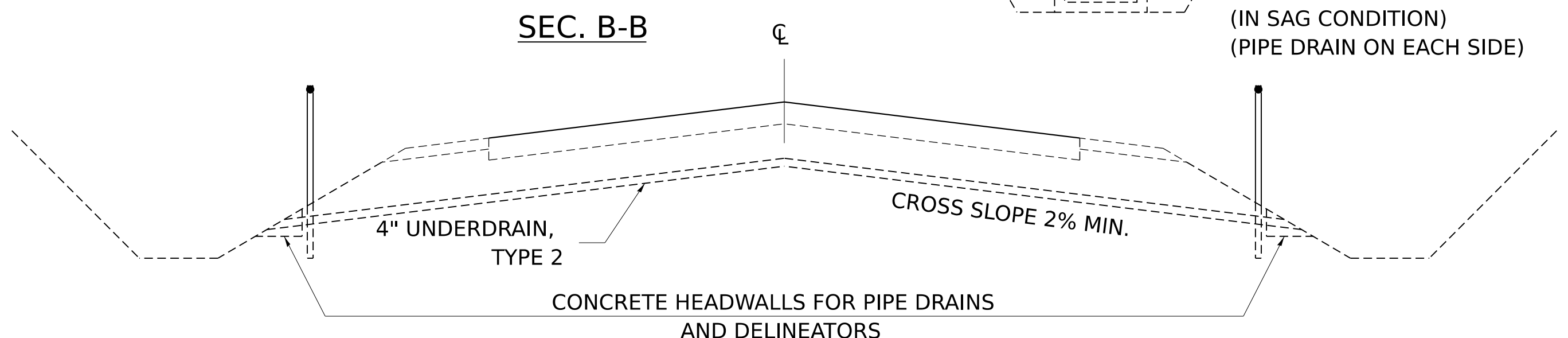
A DELINEATOR SHALL BE PLACED AT EACH CONCRETE HEADWALL. THESE BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR DELINEATORS.



NOTES:
(HIGHWAY GRADE GREATER THAN 2%)



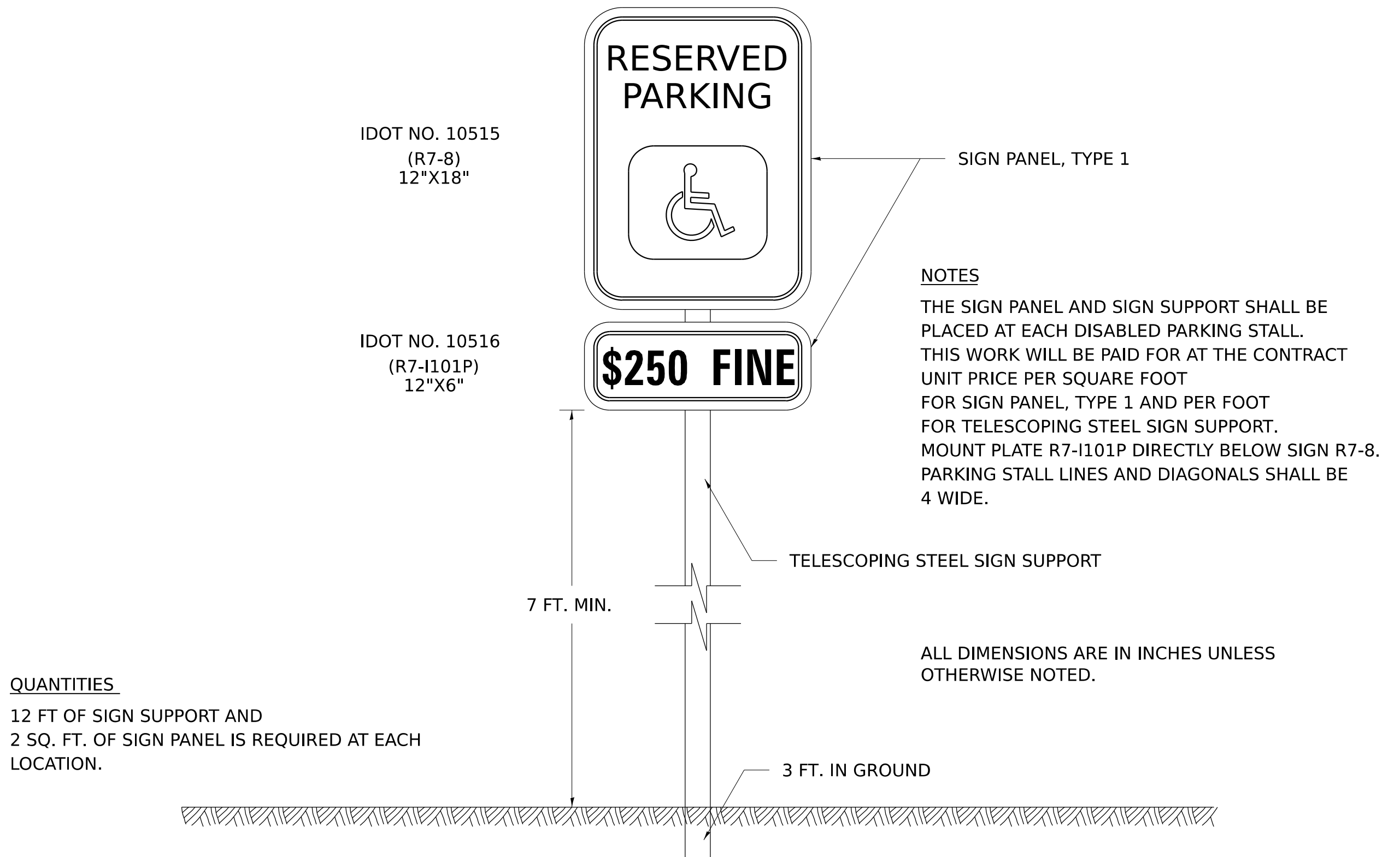
NOTES:
(IN SAG CONDITION)
(PIPE DRAIN ON EACH SIDE)



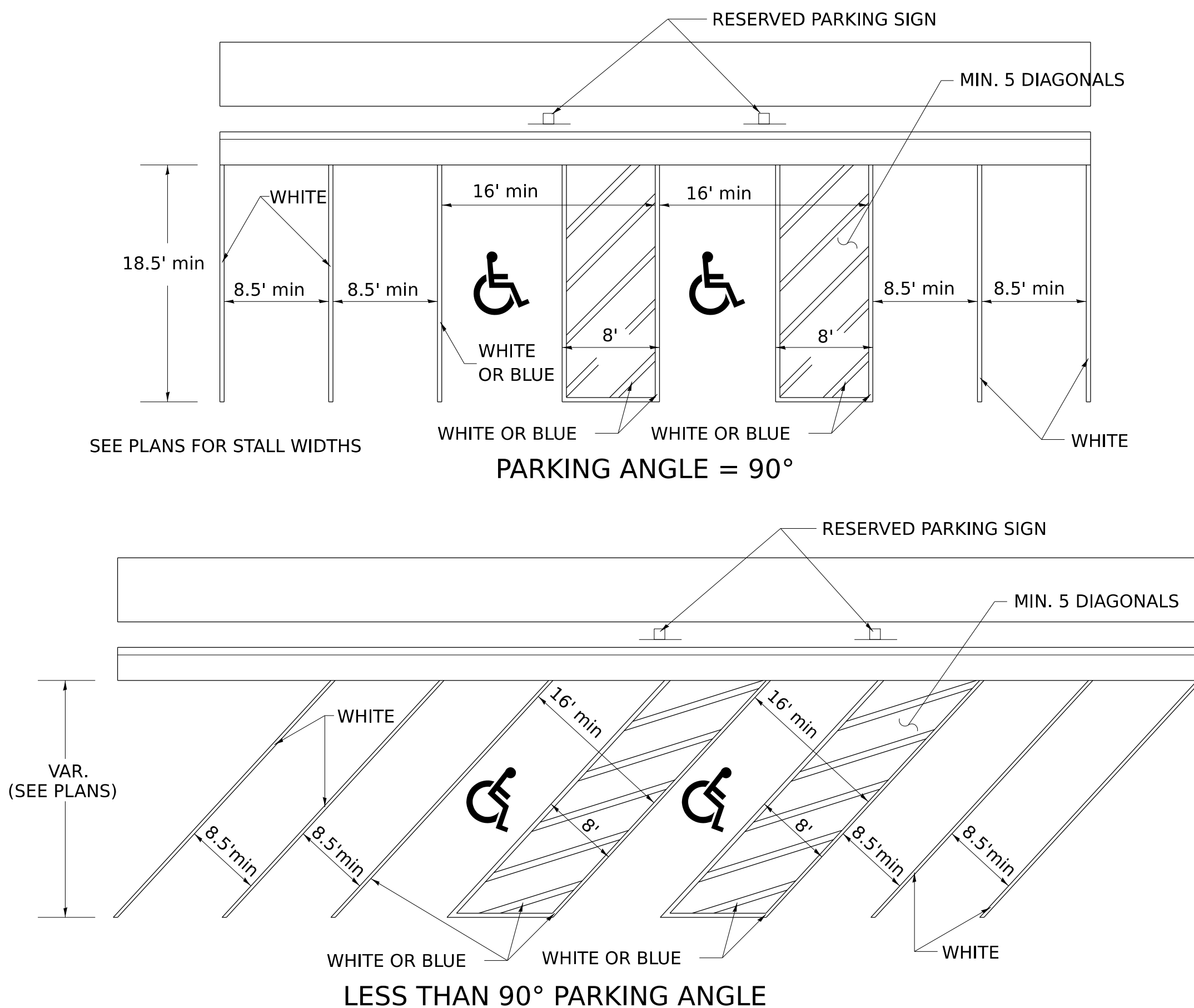
MODEL: 37.p2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 8-03-17	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
REVISED - 7-13-16									CONTRACT NO.			
REVISED - 1-05-16									ILLINOIS FED. AID PROJECT			
REVISED - 6-27-14					SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	

RESERVED PARKING SIGN DETAIL



DISABLED PARKING STRIPING



MODEL: 44pt2
 FILE NAME: District 2 Standard
 PLOT DATE = 1/28/2025

REVISED -	4-19-18
REVISED -	1-05-16
REVISED -	6-27-14
REVISED -	10-14-11

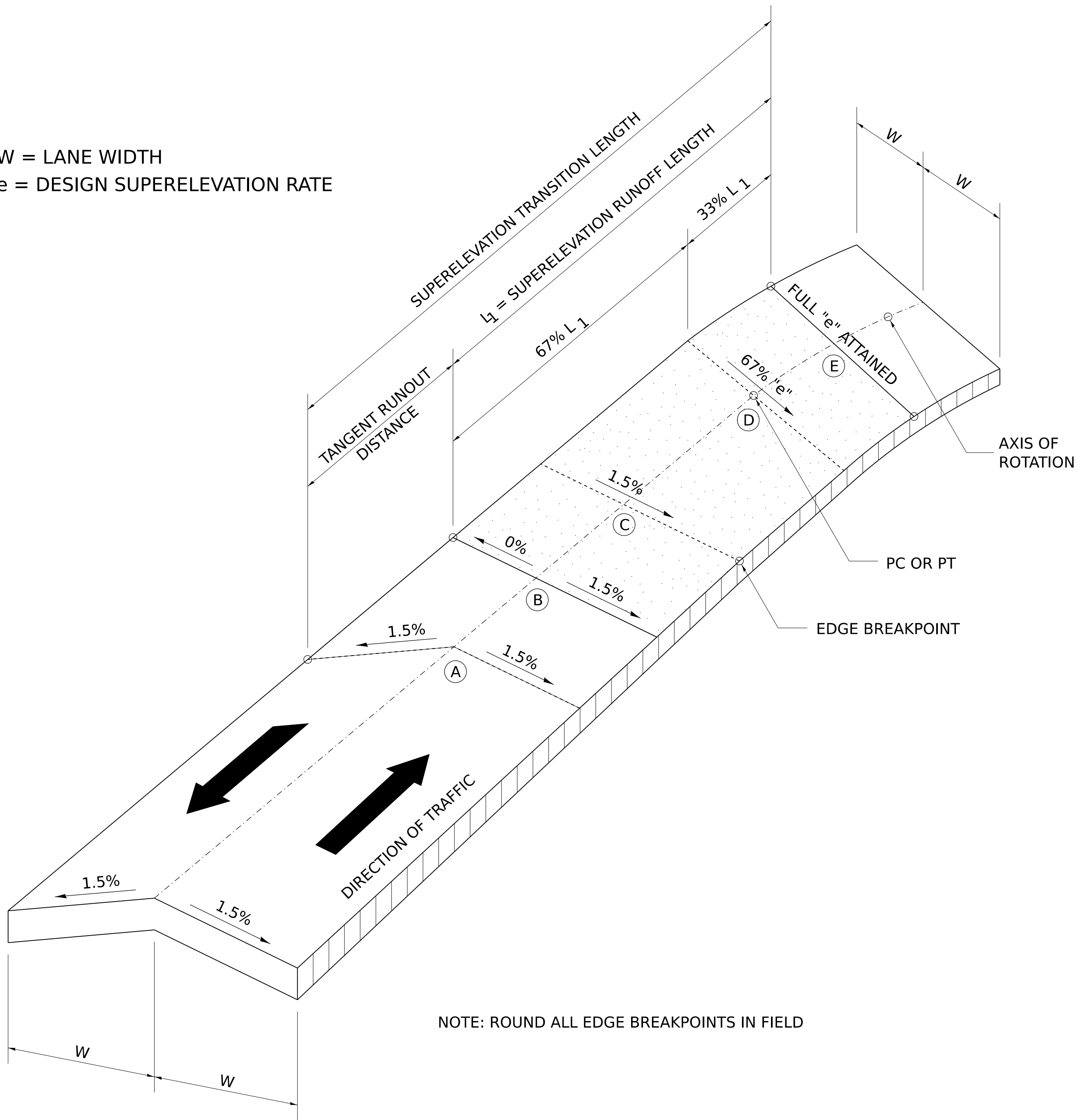
REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
ILLINOIS		FED. AID PROJECT		

SUPERELEVATION TRANSITION ON TWO-LANE HIGHWAY

W = LANE WIDTH
e = DESIGN SUPERELEVATION RATE



NOTE: ROUND ALL EDGE BREAKPOINTS IN FIELD

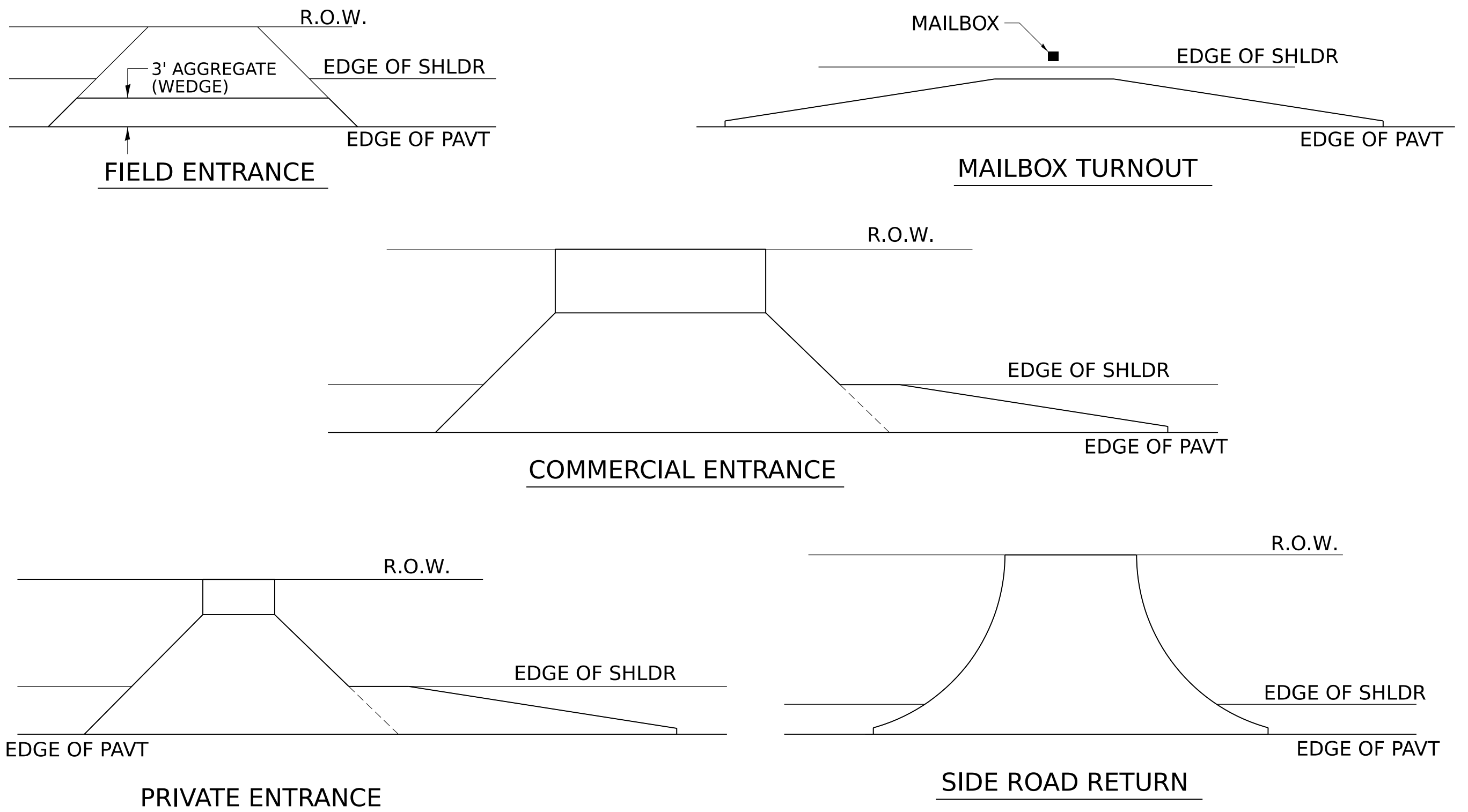
TRANSITION CURVE TABLE

CURVE PI STA.	SUPERELEVATION "e"	W	SUPERELEVATION TRANSITION LENGTH	TANGENT RUNOUT DISTANCE	SUPERELEVATION RUNOFF LENGTH

MODEL: 45pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 11-09-06	REGION 2 / DISTRICT 2 STANDARD			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
REVISED -				CONTRACT NO.					
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

HOT-MIX ASPHALT APPROACHES & MAILBOX RETURNS FOR SINGLE LIFT (SMART) RESURFACING PROJECTS

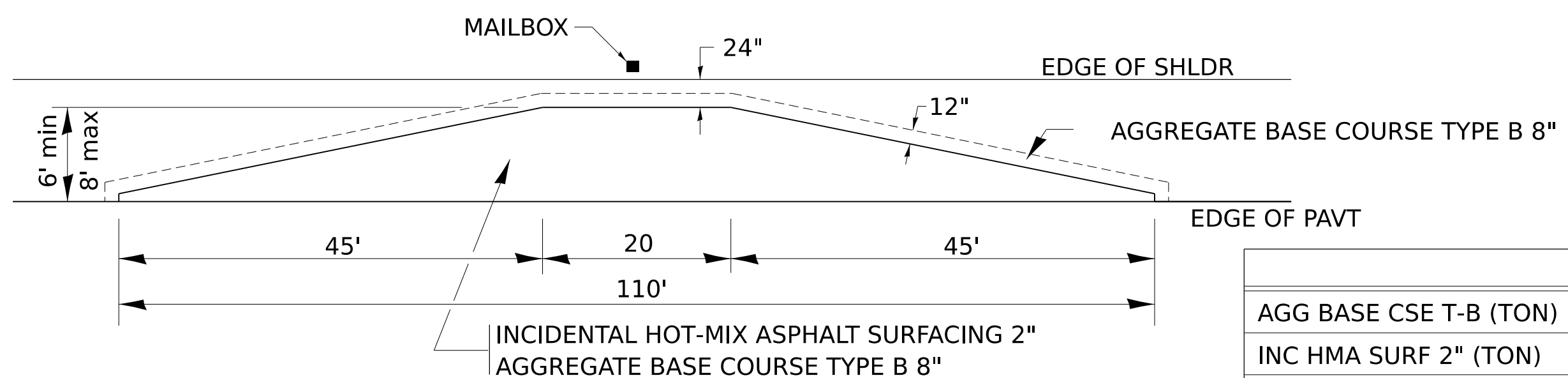


NOTE: EXISTING HMA PE's, CE's, SR's, & MB TURNOUTS
Place 1 1/2" Incidental Hot-Mix Asphalt Surfacing on entrance to conform to the existing configuration.

EXISTING AGG. PE's & CE's
Place 2" Incidental Hot-Mix Asphalt Surfacing on existing entrance to conform to the present configuration.

EXISTING AGG. SIDEROADS
Place 3" Incidental Hot-Mix Asphalt Surfacing on sideroad to conform to the present configuration.

EXISTING AGG. MAILBOX TURNOUTS
Existing Agg. Mailbox Turnouts shall be constructed as shown below.



	6'	8'
AGG BASE CSE T-B (TON)	24.5	31.1
INC HMA SURF 2" (TON)	7.3	9.8
BIT PRIME COAT (POUND)	120	161

MODEL: 46pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

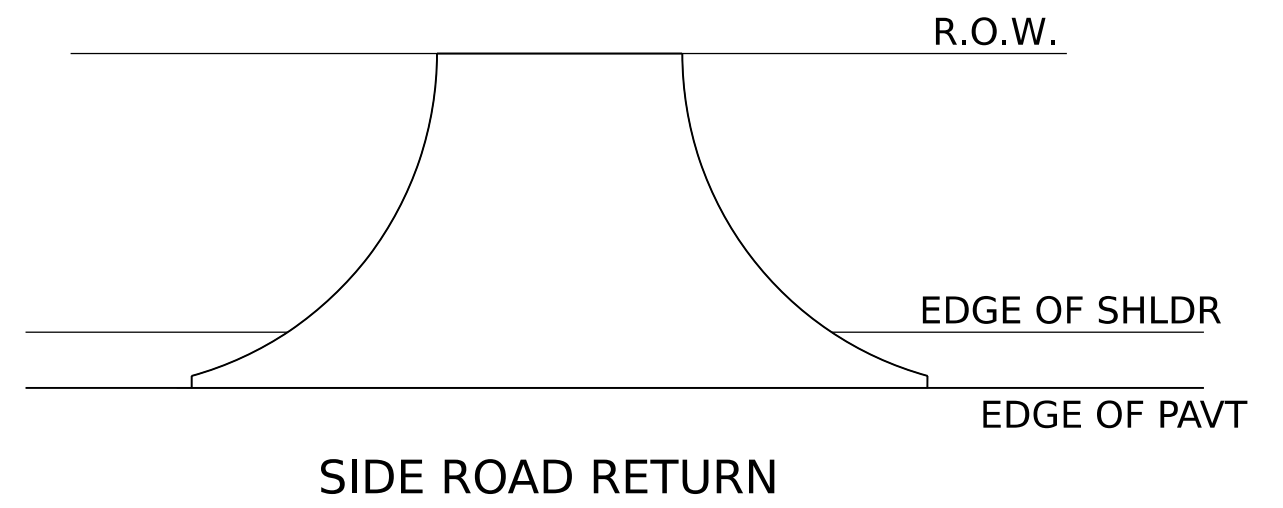
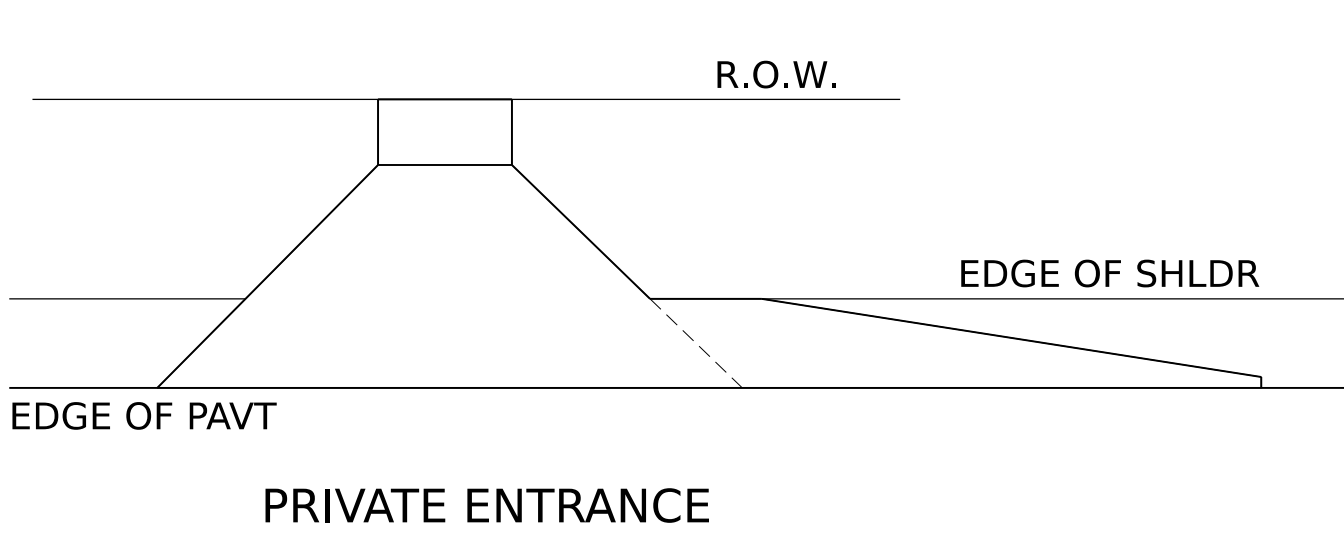
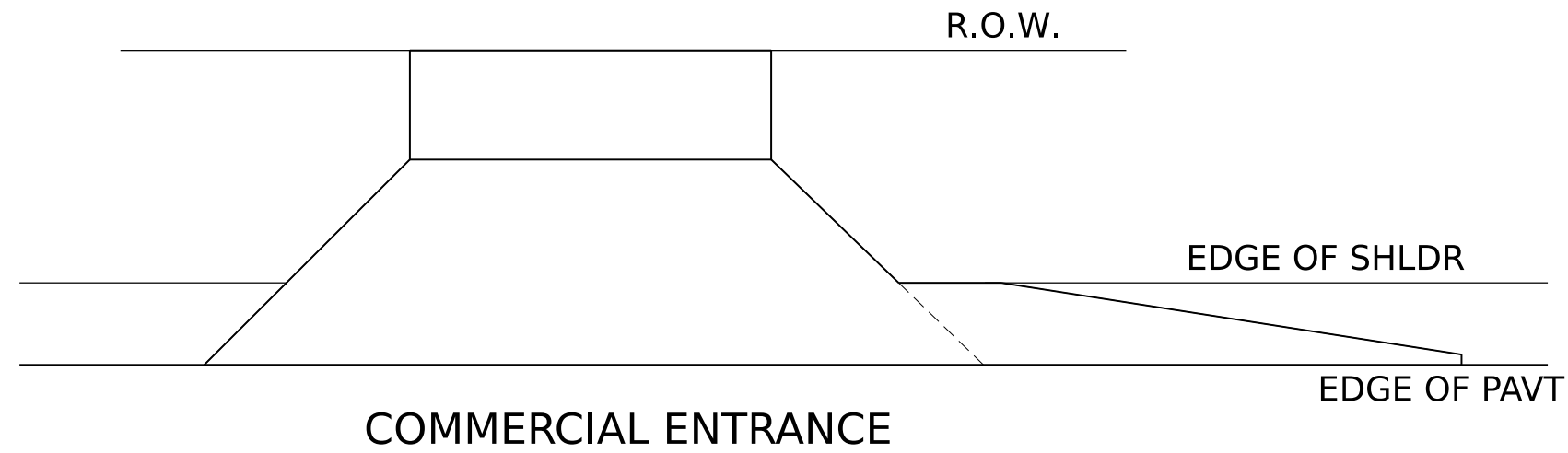
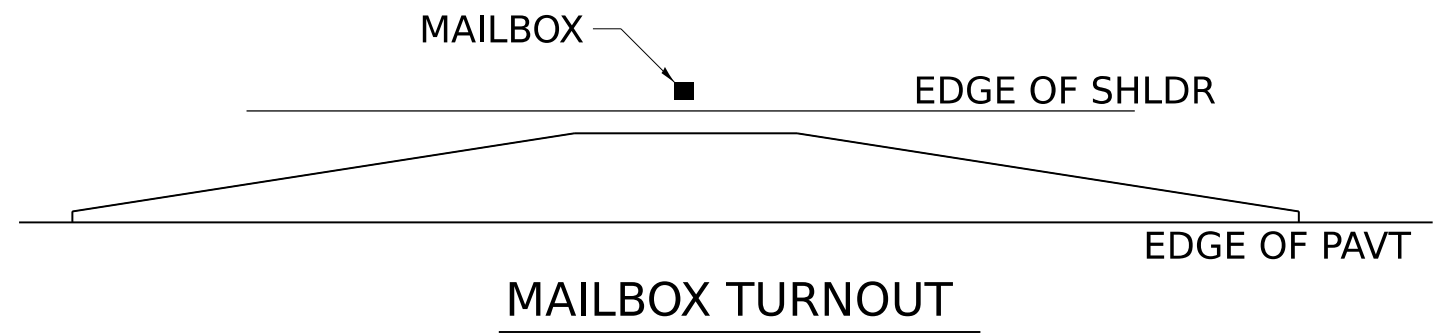
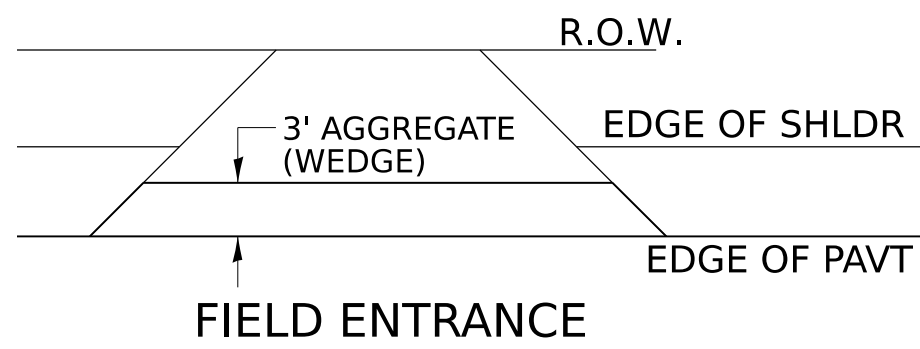
REVISED -	1-05-16
REVISED -	7-21-15
REVISED -	10-21-08
REVISED -	

REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

HOT-MIX ASPHALT APPROACHES & MAILBOX RETURNS FOR TWO LIFT (3P) RESURFACING PROJECTS

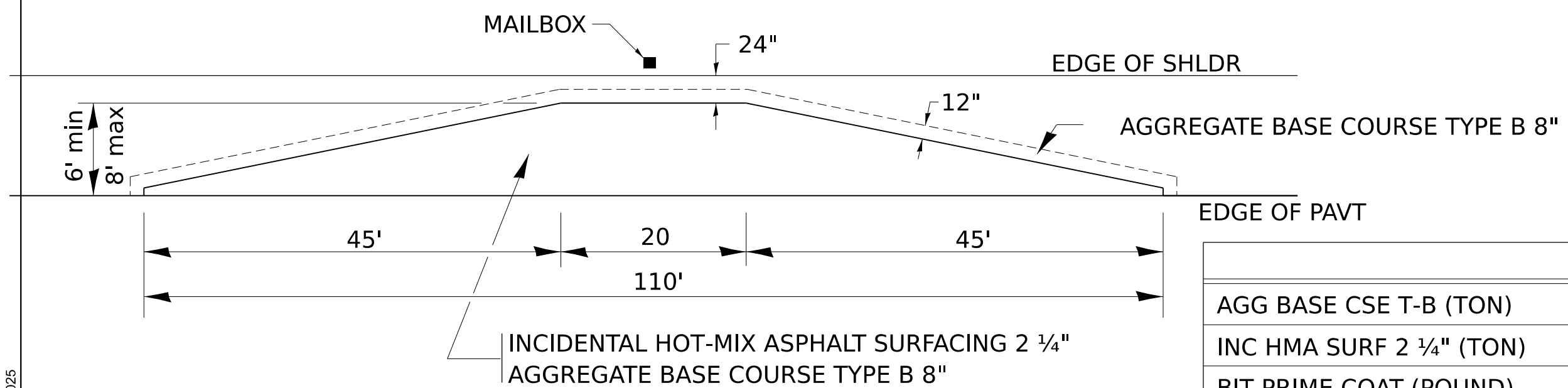


NOTE: EXISTING HMA PE's, CE's, SR's, & MB TURNOUTS
Place 2 ¼" Incidental Hot-Mix Asphalt Surfacing on entrance to conform to the existing configuration.

EXISTING AGG. PE's & CE's
Place 2 ¼" Incidental Hot-Mix Asphalt Surfacing on existing entrance to conform to the present configuration.

EXISTING AGG. SIDEROADS
Place 3" Incidental Hot-Mix Asphalt Surfacing on sideroad to conform to the present configuration.

EXISTING AGG. MAILBOX TURNOUTS
Existing Agg. Mailbox Turnouts shall be constructed as shown below.



	6'	8'
AGG BASE CSE T-B (TON)	24.5	31.1
INC HMA SURF 2 ¼" (TON)	8.2	11.0
BIT PRIME COAT (POUND)	120	161

MODEL: 477.ppt
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

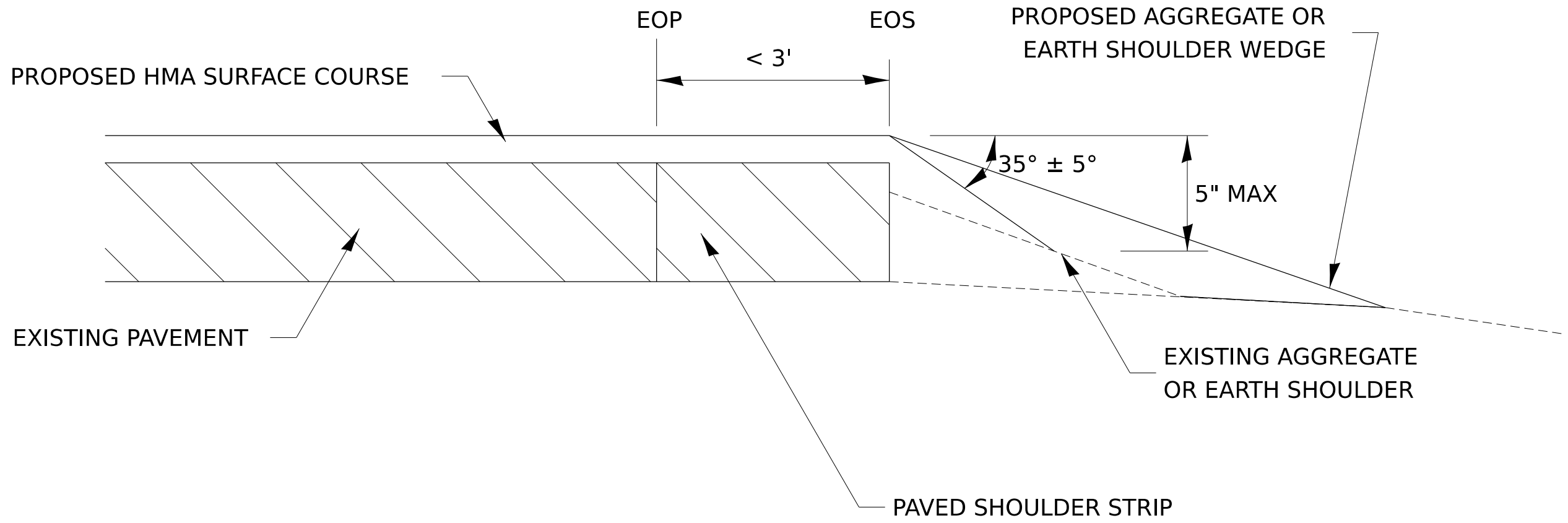
REVISED - 1-05-16
REVISED - 7-21-15
REVISED - 6-27-14
REVISED - 10-21-08

REGION 2 / DISTRICT 2 STANDARD

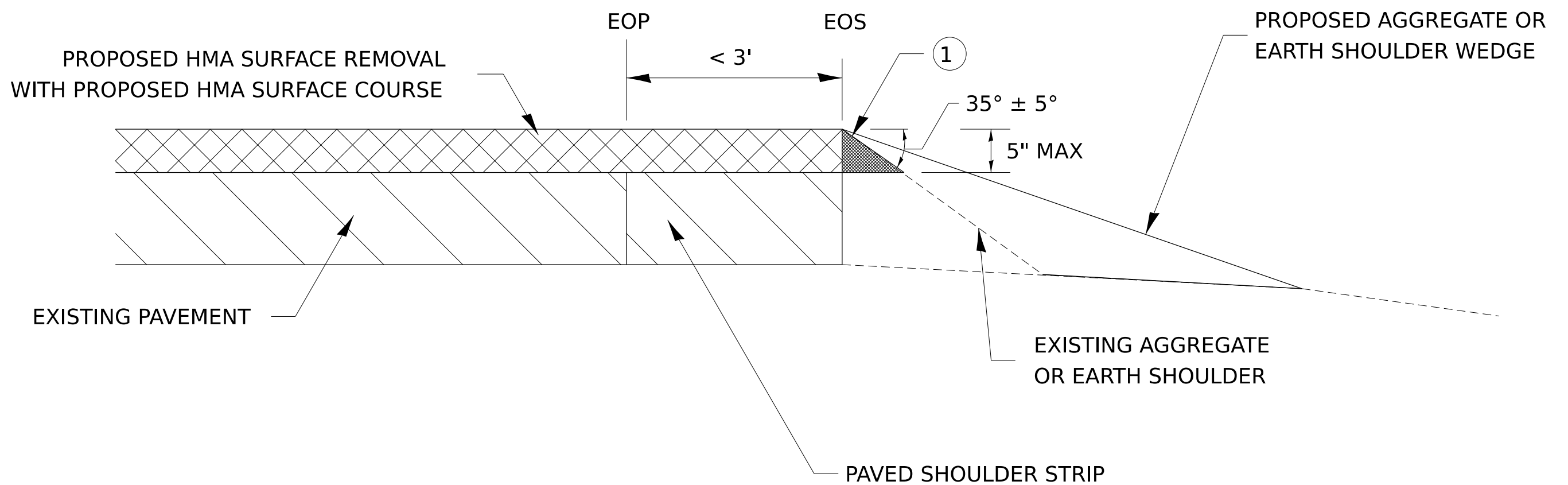
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

SAFETY EDGE (SMART PROJECT)



NO MILLING: ADJACENT SHOULDER FLUSH WITH OR LOWER THAN EXISTING PAVEMENT



MILLING: WITH ADJACENT SHOULDER FLUSH WITH OR HIGHER THAN MILLED SURFACE

NOTES : THE DEVICE WHICH FORMS THE SAFETY EDGE SHALL BE MOUNTED ON THE PAVER SCREED AGAINST THE END GATE AND SHALL BE REMOVABLE OR BE ABLE TO BE LIFTED WHEN NOT IN USE. THE DEVICE SHALL BE DESIGNED TO MAINTAIN CONTACT WITH SURFACE OF THE SHOULDER AND ALLOW AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. THE DEVICE SHALL ALSO CONSTRAIN THE HMA MATERIAL AND INCREASE THE CONSOLIDATION OF THE EXTRUDED PROFILE. THE USE OF A CONVENTIONAL SINGLE PLATE STRIKE-OFF WILL NOT BE ALLOWED.

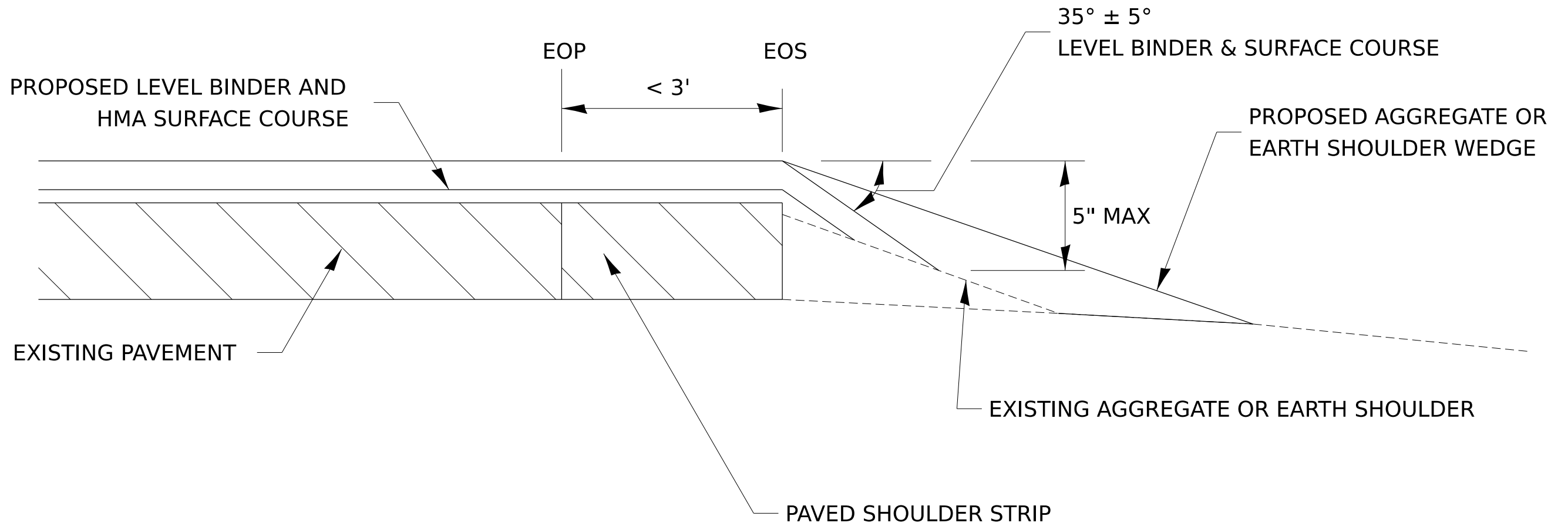
① PRIOR TO THE PLACEMENT OF THE HMA SAFETY EDGE, IF THE ADJACENT AGGREGATE OR EARTH SHOULDER IS HIGHER THAN THE MILLED SURFACE, THE AREA REQUIRED FOR PLACEMENT OF THE SAFETY EDGE SHALL BE BROUGHT FLUSH WITH THE MILLED SURFACE IN A MANNER APPROVED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE OF THE TYPE SPECIFIED.

ROLLERS WILL NOT BE ALLOWED ON THE SLOPED FACE OF THE SAFETY EDGE.

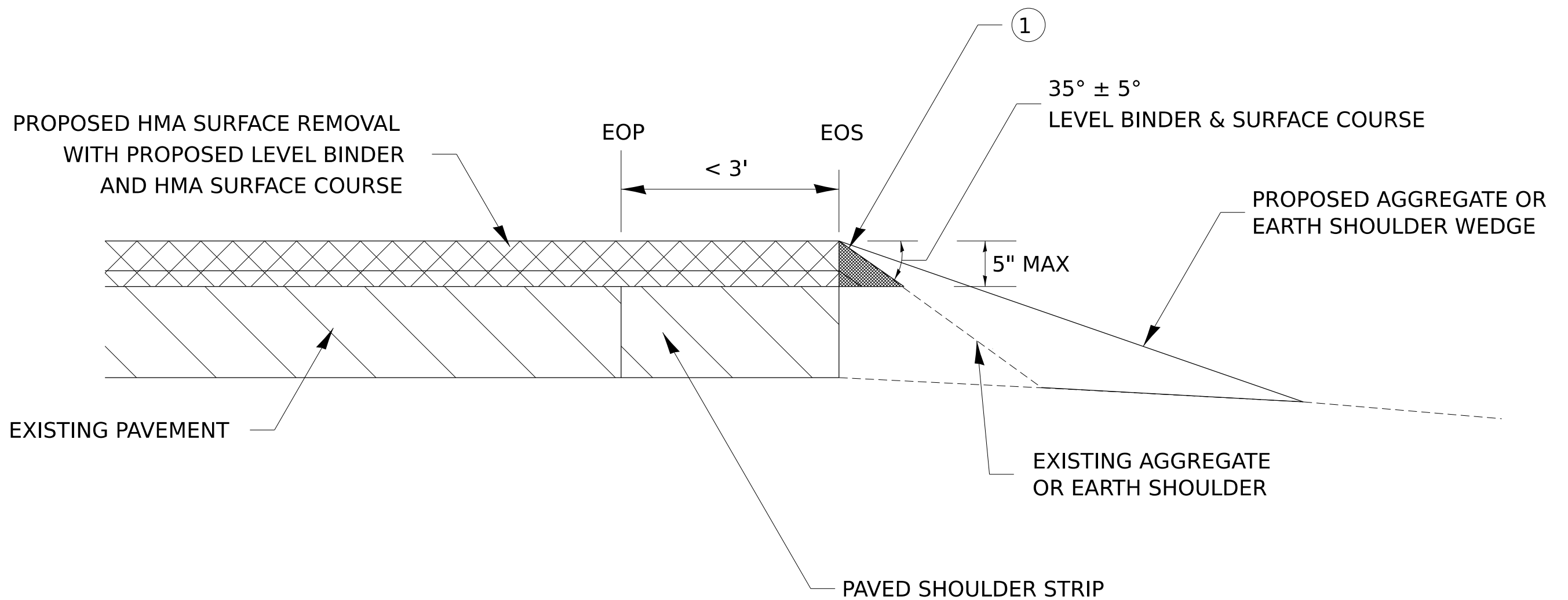
MODEL: 48pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 1-05-16	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
REVISED - 10-11-13									CONTRACT NO.			
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	
REVISED -												

SAFETY EDGE (3P PROJECTS)



NO MILLING: ADJACENT SHOULDER FLUSH WITH OR LOWER THAN EXISTING PAVEMENT



MILLING: WITH ADJACENT SHOULDER FLUSH WITH OR HIGHER THAN MILLED SURFACE

NOTES : THE DEVICE WHICH FORMS THE SAFETY EDGE SHALL BE MOUNTED ON THE PAVER SCREED AGAINST THE END GATE AND SHALL BE REMOVABLE OR BE ABLE TO BE LIFTED WHEN NOT IN USE. THE DEVICE SHALL BE DESIGNED TO MAINTAIN CONTACT WITH SURFACE OF THE SHOULDER AND ALLOW AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. THE DEVICE SHALL ALSO CONSTRAIN THE HMA MATERIAL AND INCREASE THE CONSOLIDATION OF THE EXTRUDED PROFILE. THE USE OF A CONVENTIONAL SINGLE PLATE STRIKE-OFF WILL NOT BE ALLOWED.

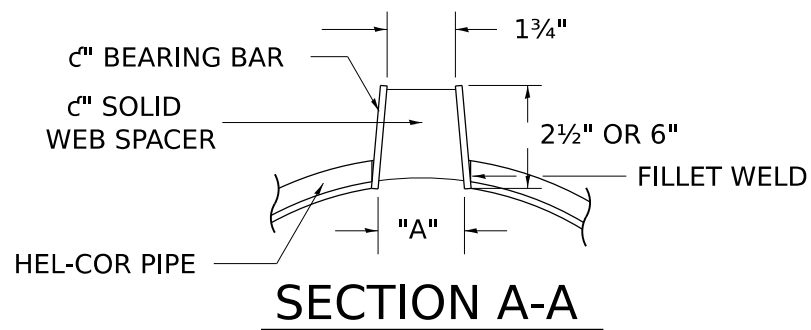
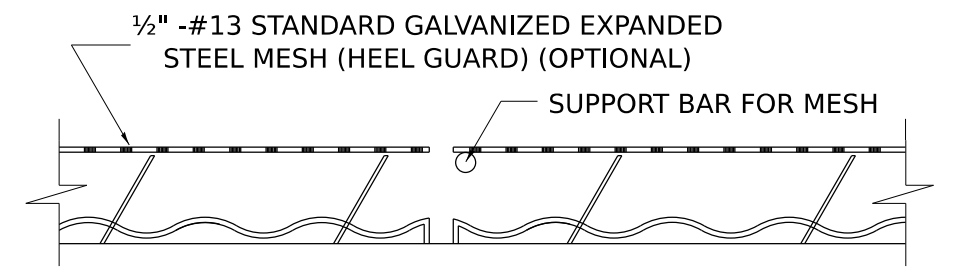
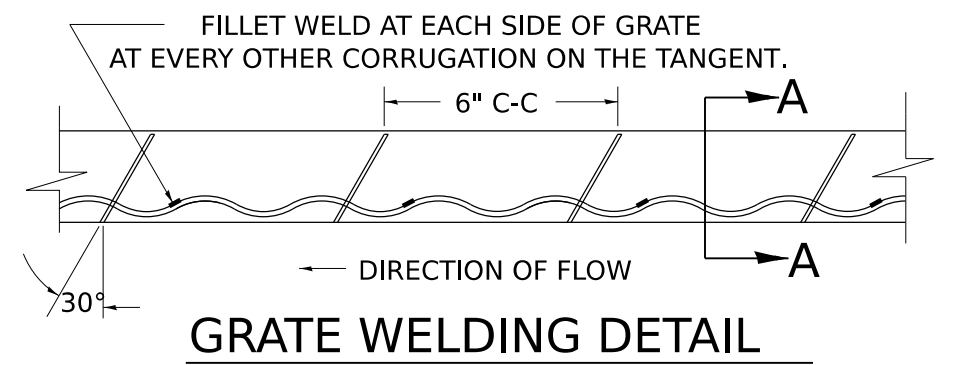
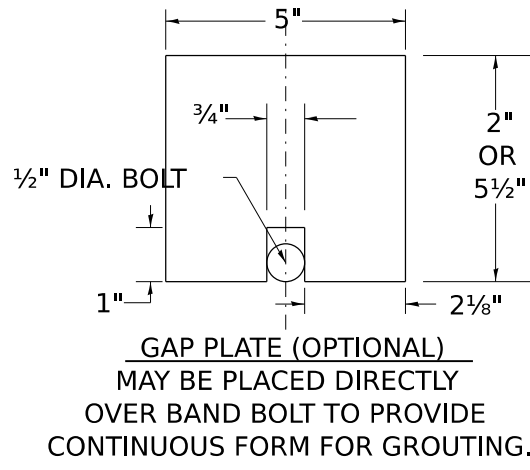
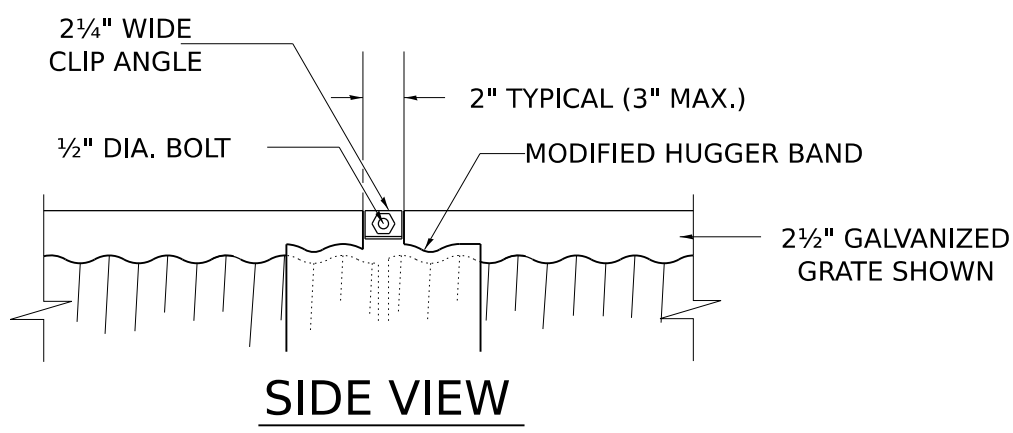
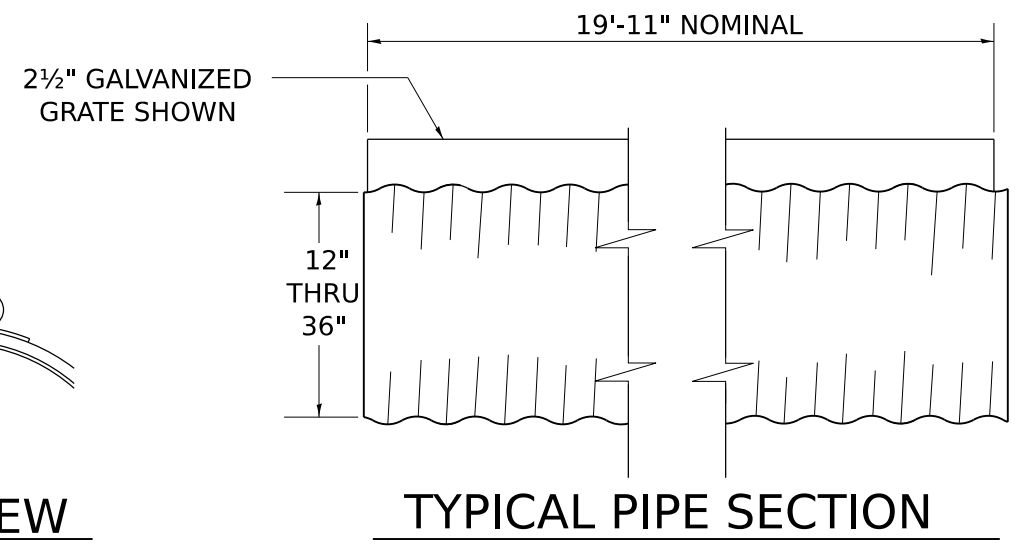
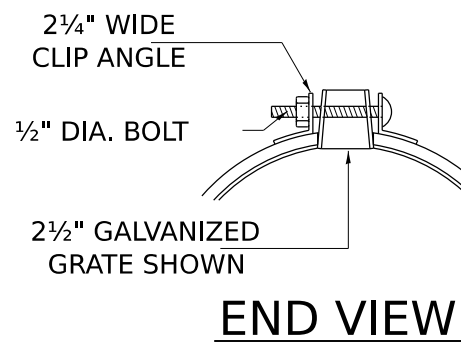
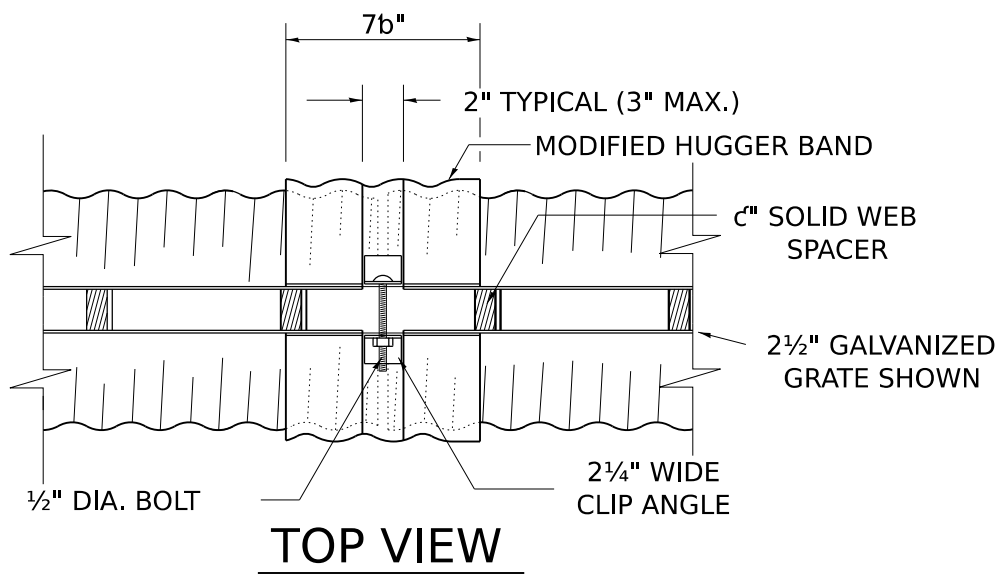
① PRIOR TO THE PLACEMENT OF THE HMA SAFETY EDGE, IF THE ADJACENT AGGREGATE OR EARTH SHOULDER IS HIGHER THAN THE MILLED SURFACE, THE AREA REQUIRED FOR PLACEMENT OF THE SAFETY EDGE SHALL BE BROUGHT FLUSH WITH THE MILLED SURFACE IN A MANNER APPROVED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER TON FOR HOT-MIX ASPHALT SURFACE COURSE OF THE TYPE SPECIFIED.

ROLLERS WILL NOT BE ALLOWED ON THE SLOPED FACE OF THE SAFETY EDGE.

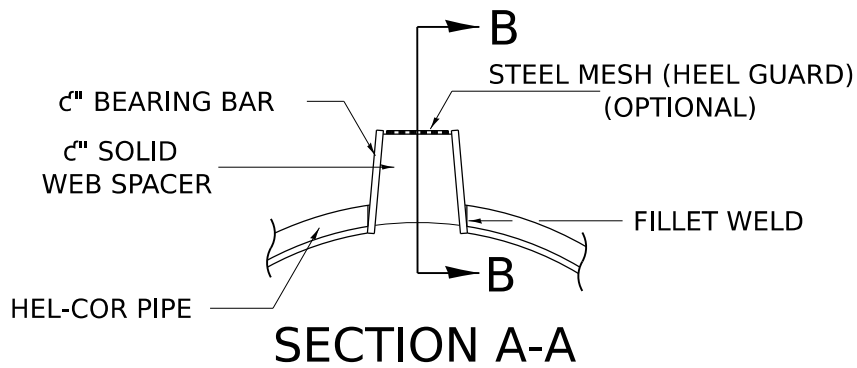
MODEL: 49p2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 1-05-16	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 10-11-13					CONTRACT NO.				
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

SLOTTED DRAIN PIPE FOR TYPE A GUTTER (SPECIAL)



SECTION A-A
STANDARD DETAIL



SECTION A-A
DETAIL WITH MESH

(TRAPEZOIDAL GALVANIZED GRATE SHOWN)

STANDARD SIZES		DIAMETER OF PIPE					
GAGE OF PIPE		12"	15"	18"	24"	30"	36"
16		X	X	X	X	X	X
14		X	X	X	X	X	X
12		N.A.	N.A.	N.A.	N.A.	X	X

GRATE TYPE	"A"	
VERT	2-1/2"	1-3/4"
VERT	6"	1-3/4"
TRAP	2-1/2"	2-1/4"
TRAP	6"	3"

VERT = VERTICAL
TRAP = TRAPIZOIDAL

SLOTTED DRAIN NOTES

- GRATING IS AVAILABLE IN DEPTHS OF 2 1/2" AND 6".
- VERTICAL GRATING (STRAIGHT SIDES) WITH VERTICAL SPACERS IS ALSO AVAILABLE.
- FOR 6" VERTICAL & TRAPIZOIDAL REQUIREMENTS, THE SLOTTED DRAIN BAND MAY BE FURNISHED WITH THE 4" TECHCO BAND ANGLE.
- DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- REFERENCE CONTECH BAND MANUAL DWG. NO. 1008466 FOR BAND DETAILS.

MANUFACTURING TOLERANCES

- VERTICAL BOW ± 3/8"
- HORIZONTAL BOW ± 5/8"
- TWIST ± 1/2"

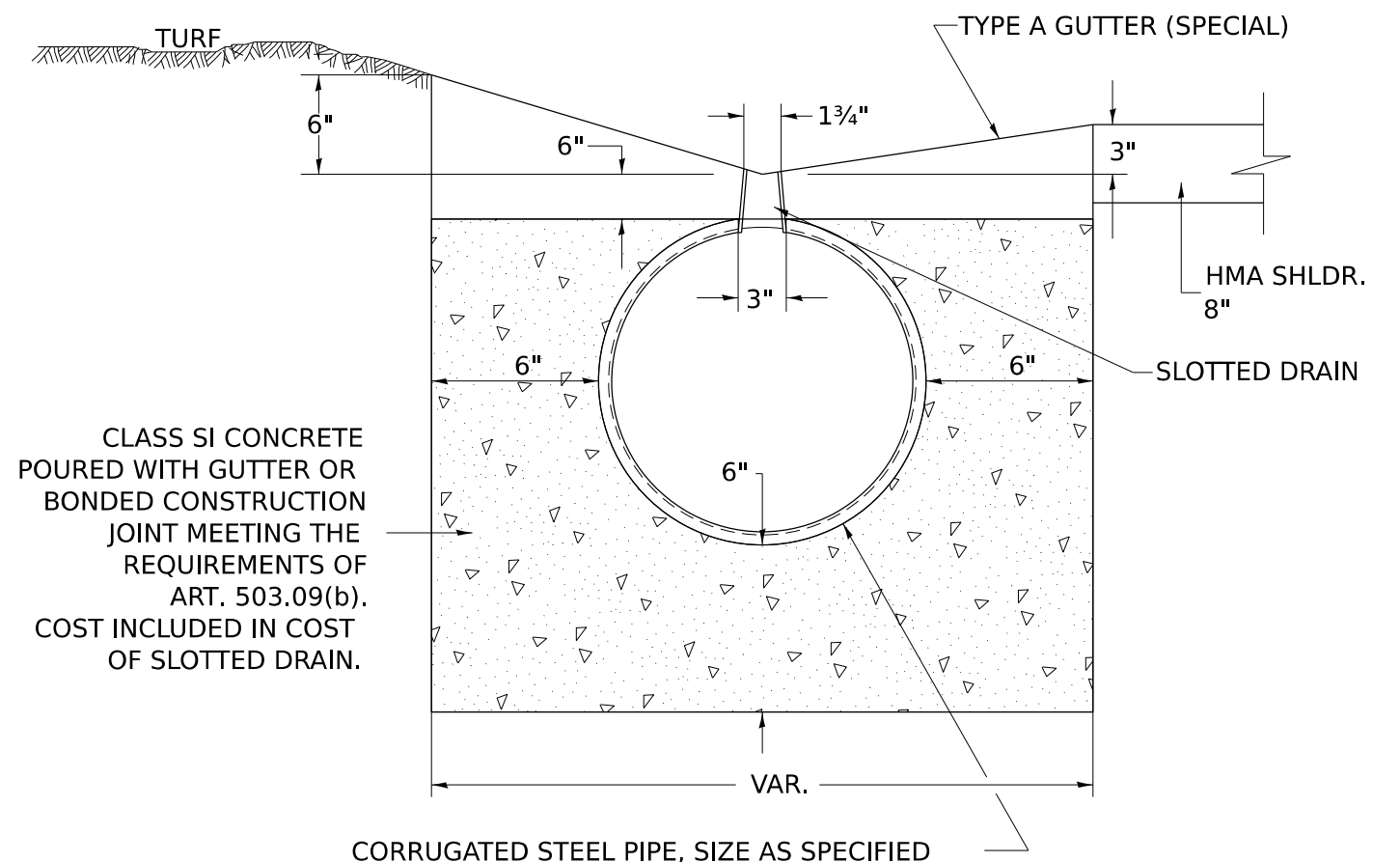
NOTES

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

THE SLOTTED DRAIN SHALL BE CORRUGATED PIPE CULVERT WITH INTEGRAL SLOTTED DRAINS. BEFORE PLACING THE CONCRETE ADJACENT TO THE PIPE, THE SLOT SHALL BE COVERED BY EITHER THIN, FLAT METAL SHEETING OR BY A BOARD NOTCHED TO FIT OVER THE GRATE BARS. THIS COVERING MUST FIT CLOSELY IN THE SLOT TO PREVENT ENTRY OF CONCRETE INTO THE PIPE. PAVING OVER THE SLOTTED DRAIN WILL THEN BE ONE CONTINUOUS OPERATION OVER THE PROTECTED DRAIN. THE PROTECTION FOR THE DRAIN SLOT SHALL THEN BE REMOVED. THE PIPE SHALL DRAIN INTO THE SIDE OF THE INLET. THE OPENING WHERE THE SLOT IS REMOVED SHALL BE COVERED TO PREVENT CONCRETE FROM ENTERING THE PIPE.

THE CORRUGATED STEEL PIPE USED IN THE SLOTTED DRAIN SHALL MEET THE REQUIREMENTS OF AASHTO M-36/ASTM A 760. THE CMP SHALL BE GALVANIZED OR ALUMINIZED STEEL TYPE 2. STEEL GRATING SHALL MEET THE GALVANIZING REQUIREMENTS OF AASHTO M-111. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR SLOTTED DRAIN PIPE, AND SHALL INCLUDE ELBOWS.

USE APPROVED END CAP TO PREVENT CONCRETE ENTRY INTO THE PIPE DURING GUTTER CONSTRUCTION ON THE UPSTREAM END OF PIPE.



CORRUGATED STEEL PIPE, SIZE AS SPECIFIED

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

MODEL: 61.p2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

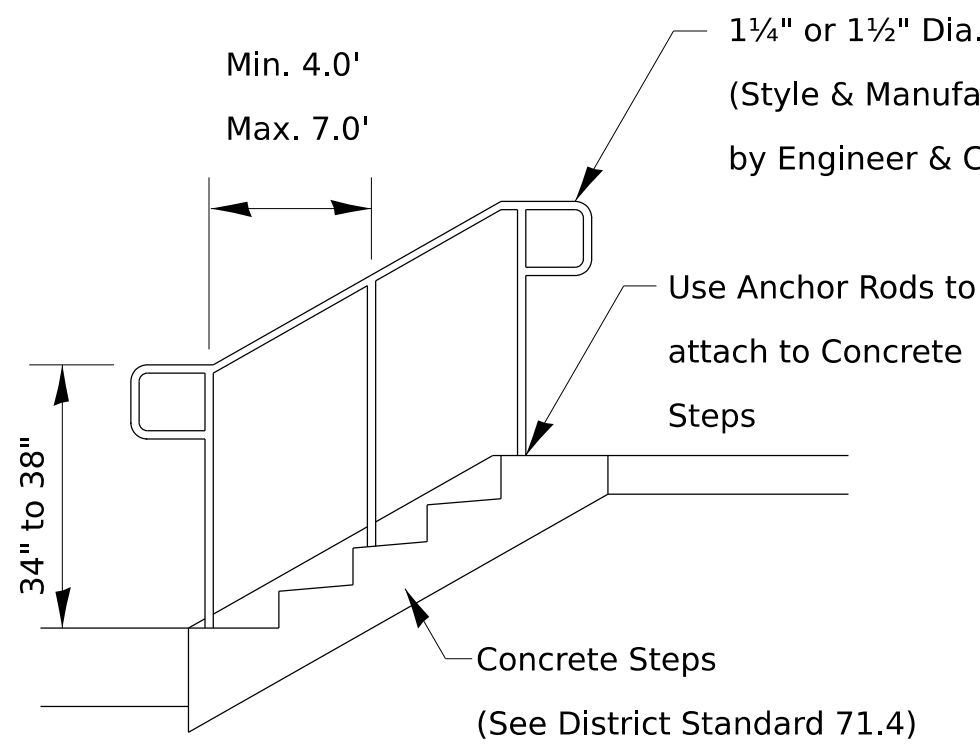
REVISED -	1-05-16
REVISED -	6-27-14
REVISED -	10-14-11
REVISED -	

REGION 2 / DISTRICT 2 STANDARD

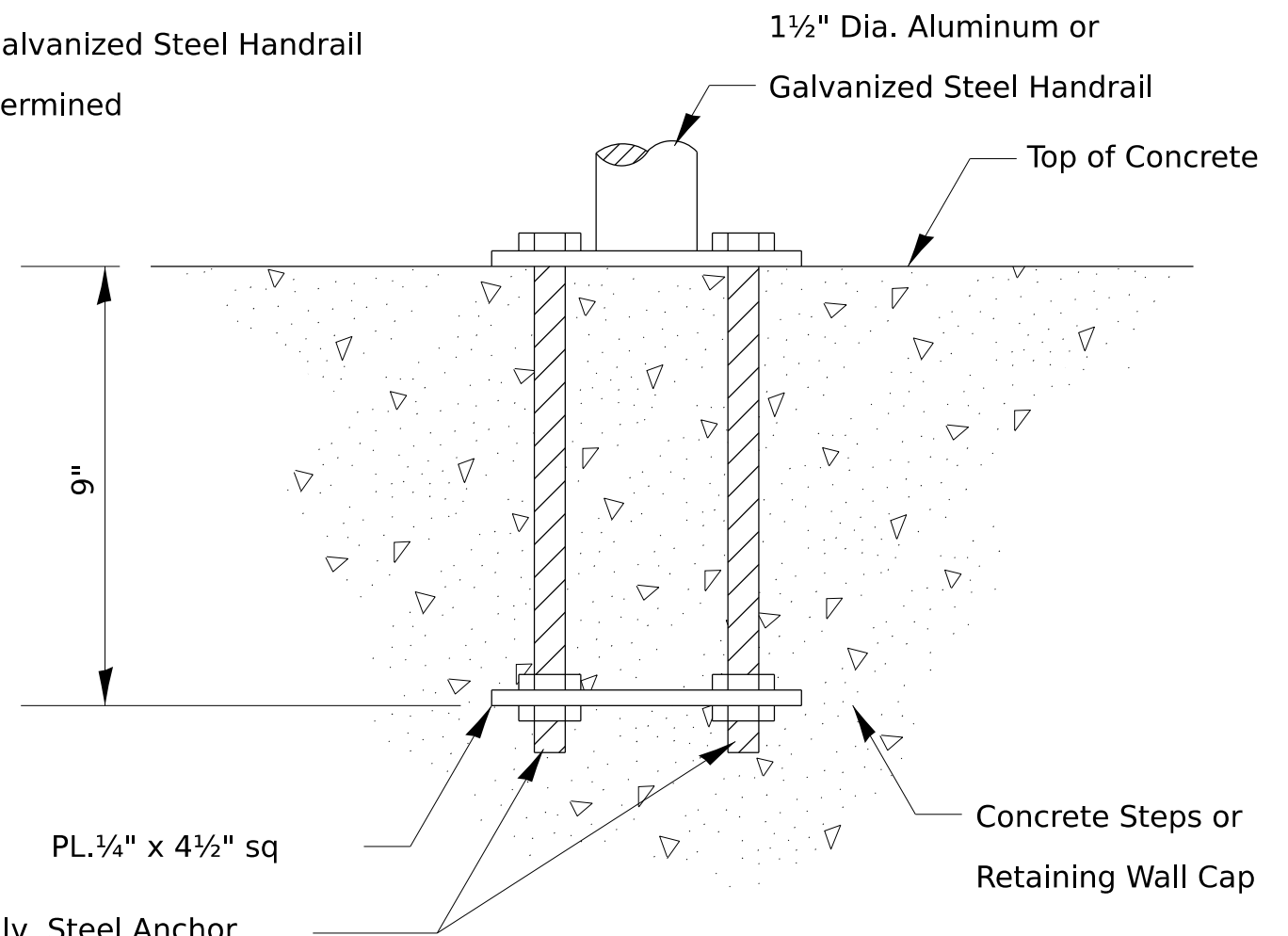
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PIPE HANDRAILS FOR STEPS



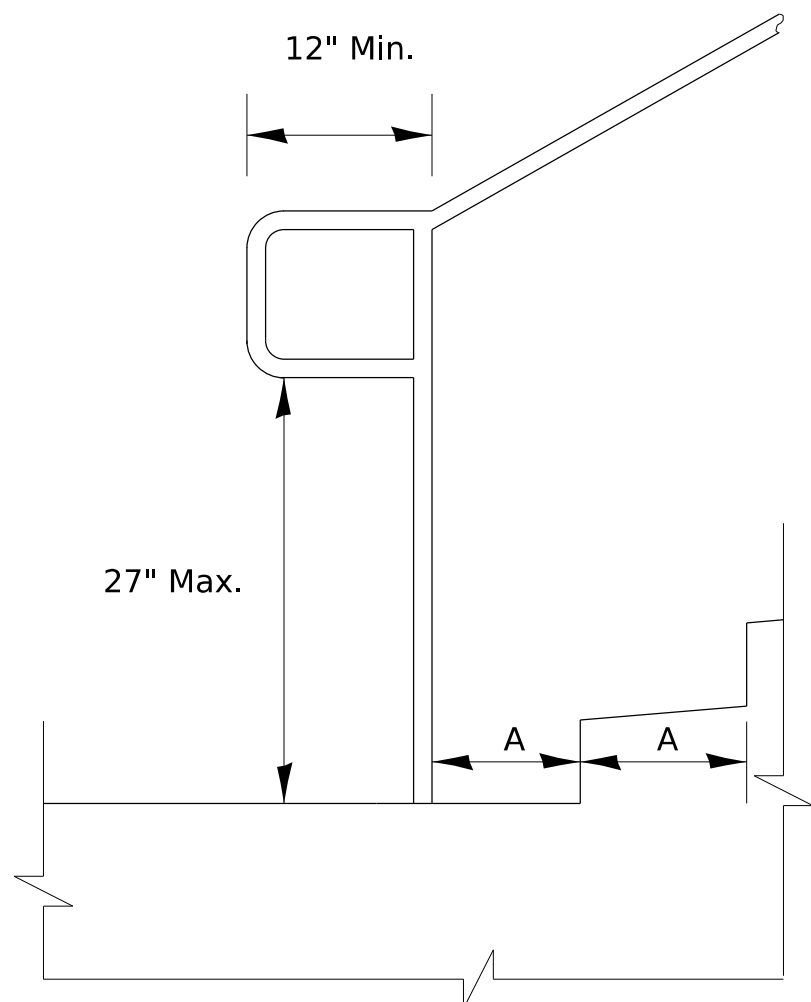
HANDRAIL FOR CONCRETE STEPS



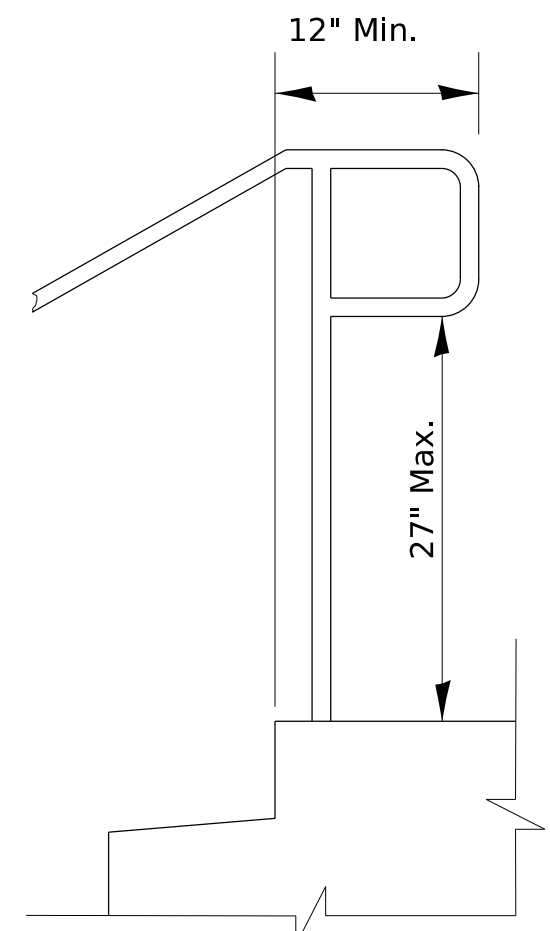
3/4" Dia. Galv. Steel Anchor Rod Thd'd both ends with Heavy Hex Nut Washer & two Hex Nuts

ANCHOR ROD DETAIL

(Included in the cost of Hand or Safety Rail)



Extension at Bottom of Run Detail



Extension at Top of Run Detail

Notes:

Stairways shall have continuous handrails both sides of all stairs.

The inside handrail on switchback or dogleg stairs shall always be continuous.

Gripping surfaces shall be uninterrupted by newel posts, other construction elements, or obstructions.

Ends of handrail shall be either rounded or returned smoothly to floor, wall, or post.

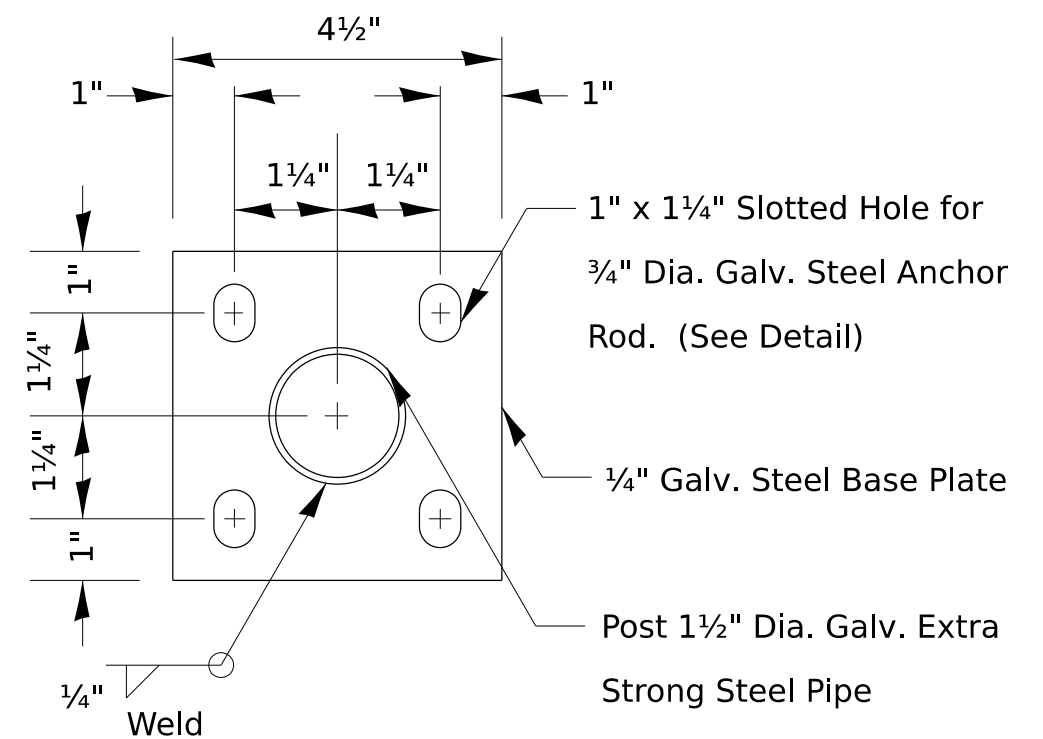
Hand & safety rails shall not rotate within their fittings.

The clear space between handrails and any wall shall be 1 1/2"

Handrail shall conform to Section 509 with the exception that all pipe and connections shall be welded galvanized or aluminum according to Article 1006.30, or 1006.34.

The diameter of the gripping surface of the handrail shall be 1-1/4" to 1-1/2"

This work shall be paid for at the contract unit price per FOOT for PIPE HANDRAIL.



POST BASE PLATE DETAIL

(Included in the cost of Hand or Safety Rail)

MODEL: 63pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

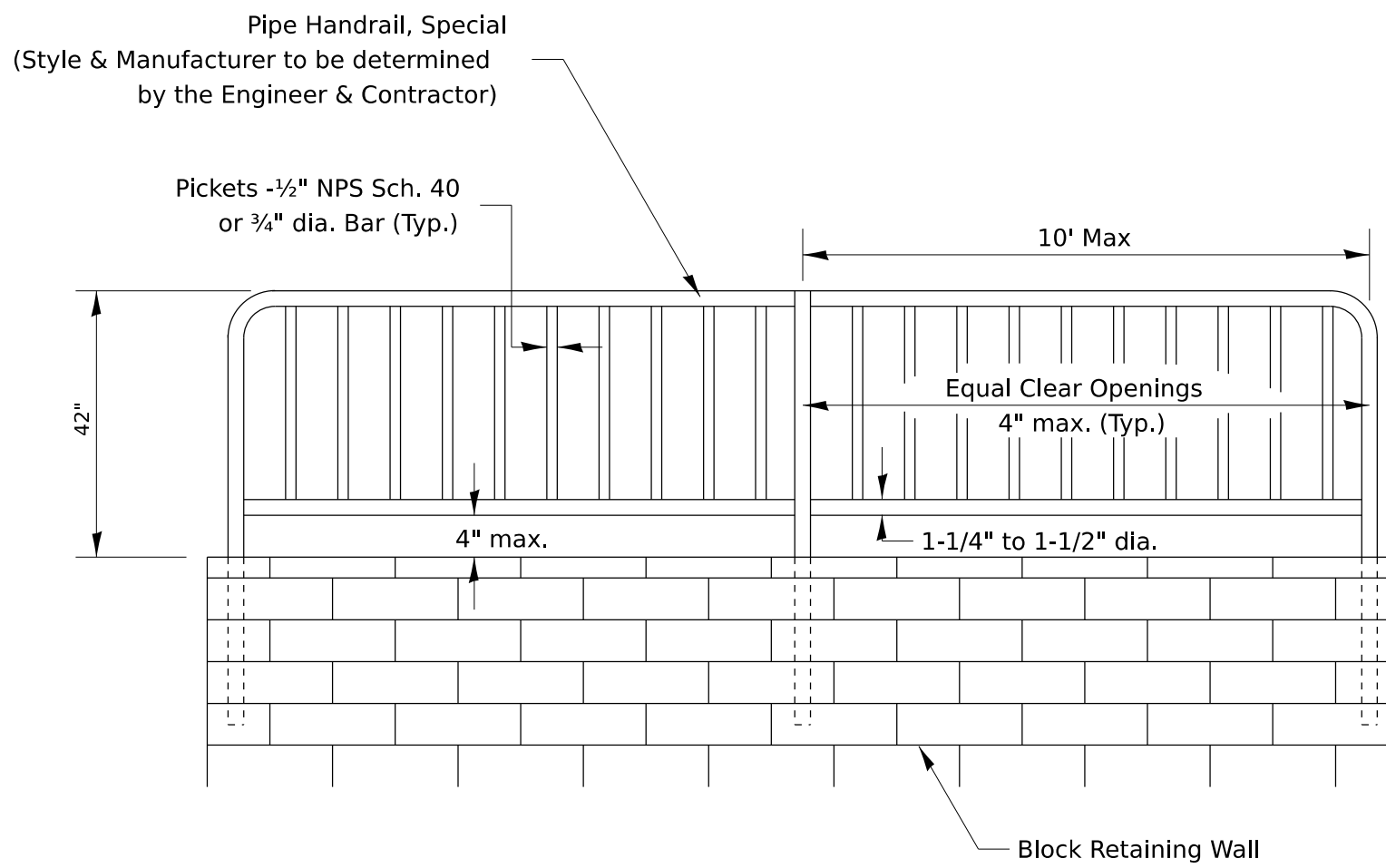
REVISED -	1-05-16
REVISED -	10-14-11
REVISED -	
REVISED -	

REGION 2 / DISTRICT 2 STANDARD

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		

PIPE HANDRAIL, SPECIAL – FOR RETAINING WALLS



PIPE HANDRAIL, SPECIAL - FOR RETAINING WALL
(See details for installation options)

Notes:

Gripping surfaces shall be uninterrupted by construction elements, or obstructions.

Ends of handrail shall be rounded.

Handrail shall not rotate within their fittings.

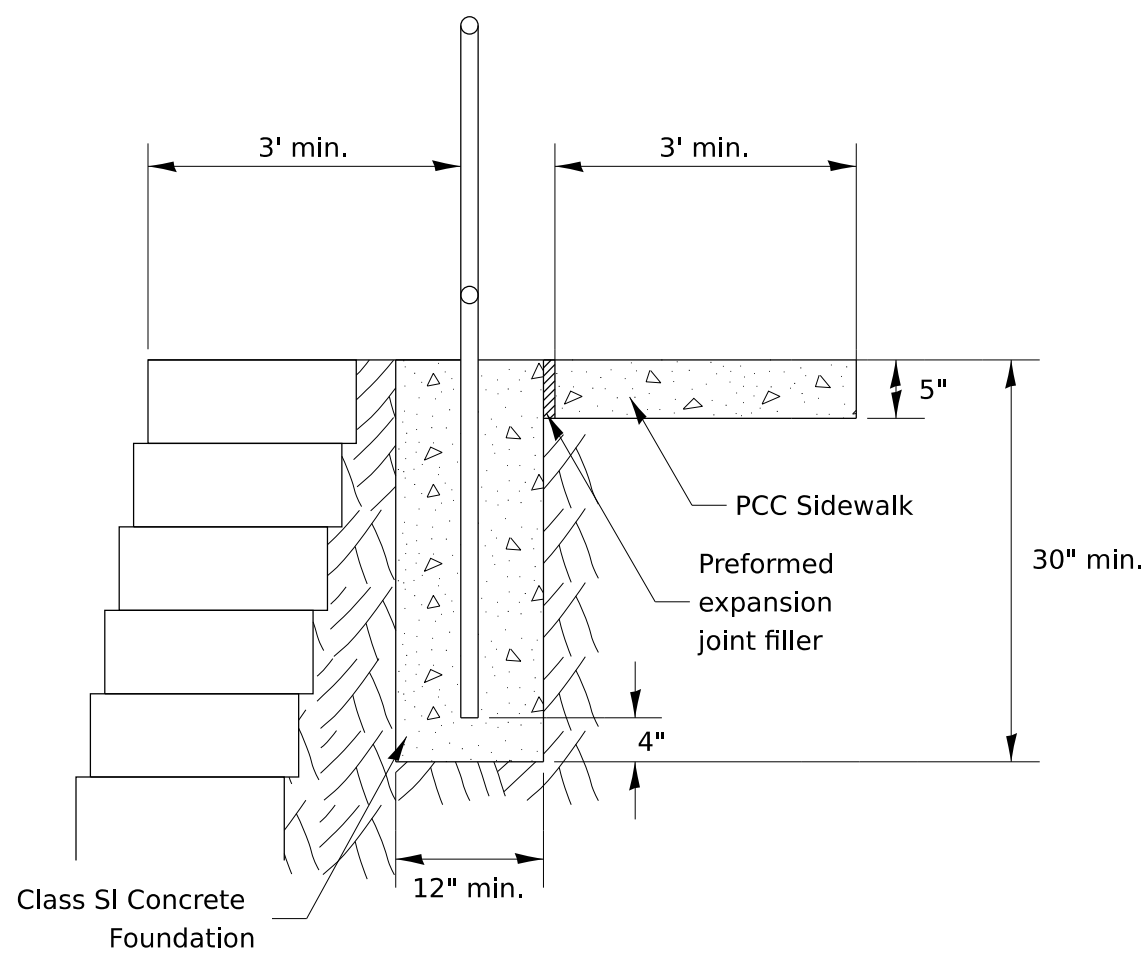
Handrail shall conform to Section 509 with the exception that all pipe and connections shall be welded galvanized or aluminum according to Article 1006.30, or 1006.34.

The diameter of the gripping surface of the handrail shall be 1-1/4" to 1-1/2"

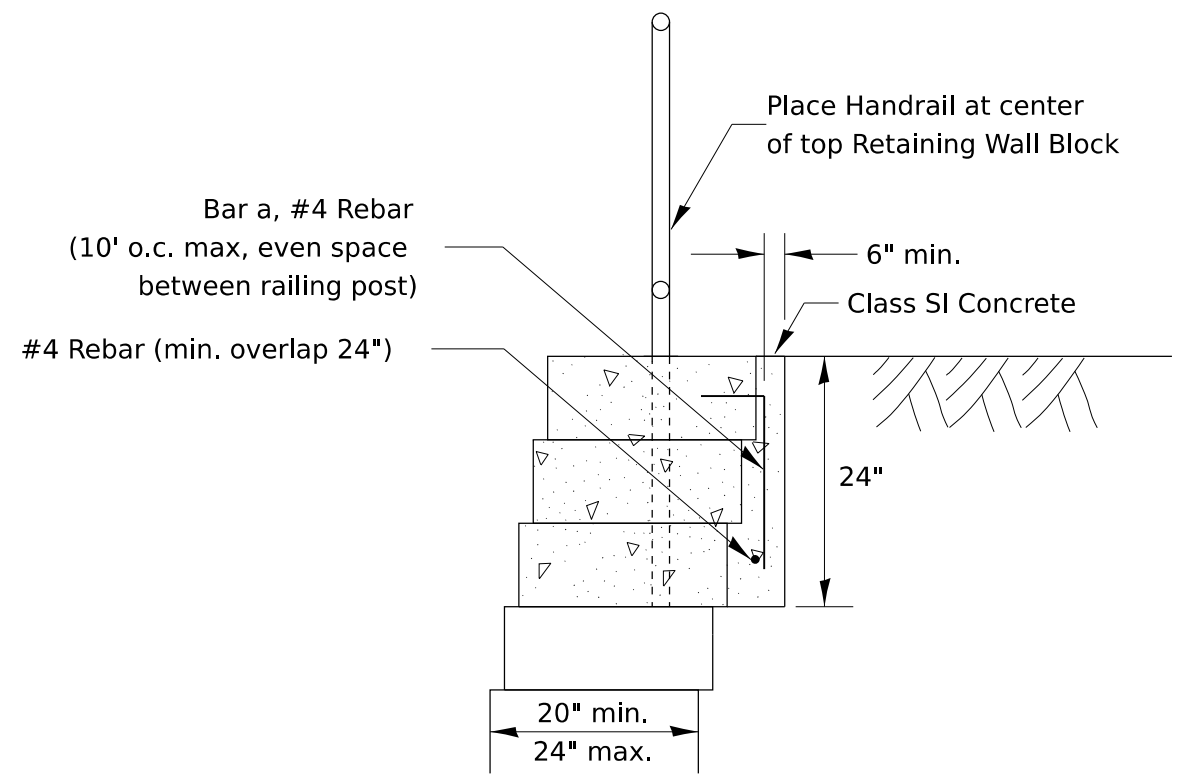
Handrail required when wall height difference is 4' or greater

Drilling of blocks will be necessary for reinforcement placement.

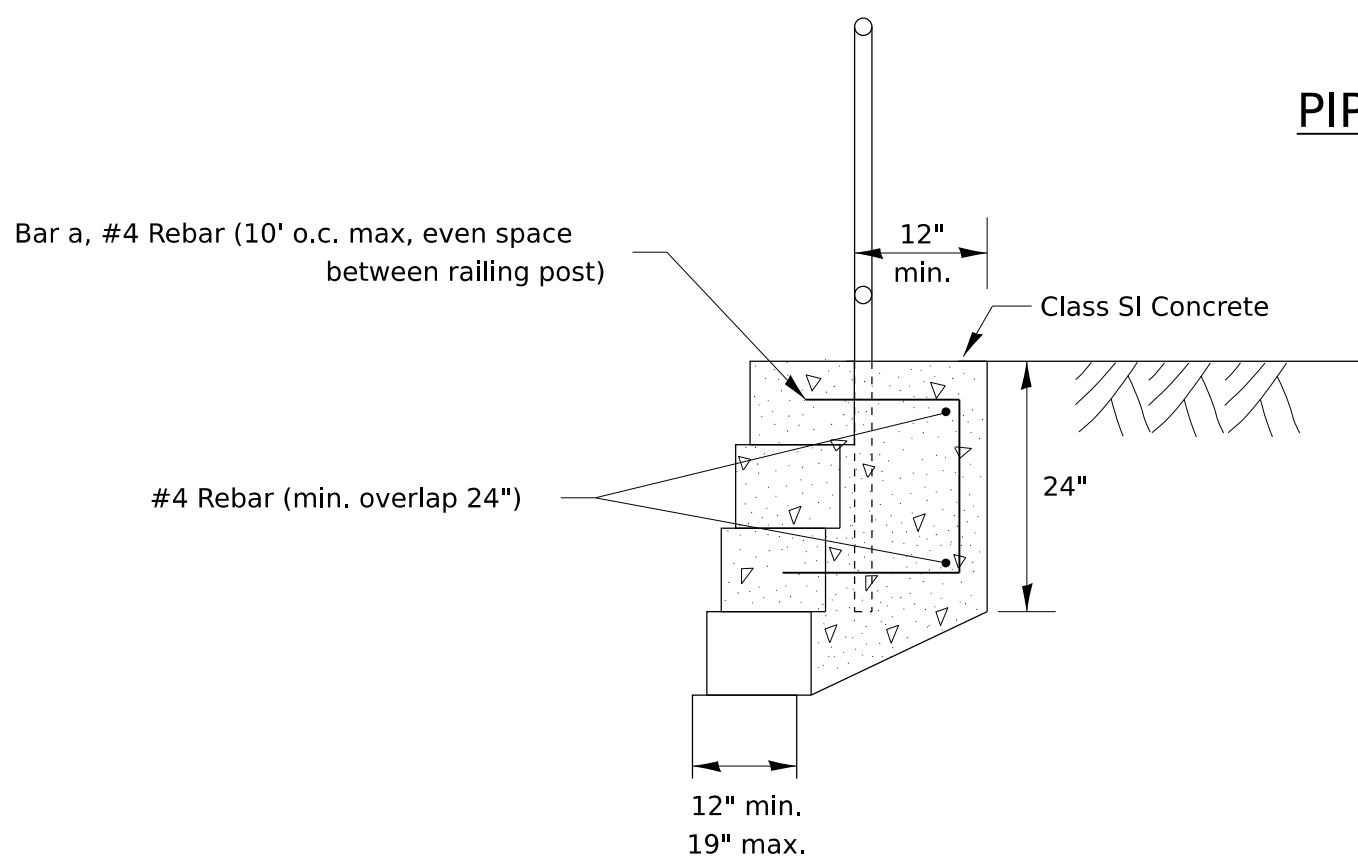
This work shall consist of furnishing and erecting Handrails as listed above and according to this detail. This work shall be paid for at the contract UNIT price per FOOT for PIPE HANDRAIL, SPECIAL.



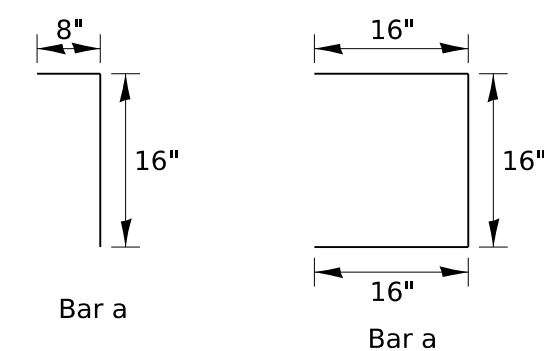
PIPE HANDRAIL, SPECIAL - FOR RETAINING WALL
(Option 1)



PIPE HANDRAIL, SPECIAL - FOR RETAINING WALL
(Option 2-Block depth greater than 20")



PIPE HANDRAIL, SPECIAL - FOR RETAINING WALL
(Option 3 - Block depth 12" to 19")



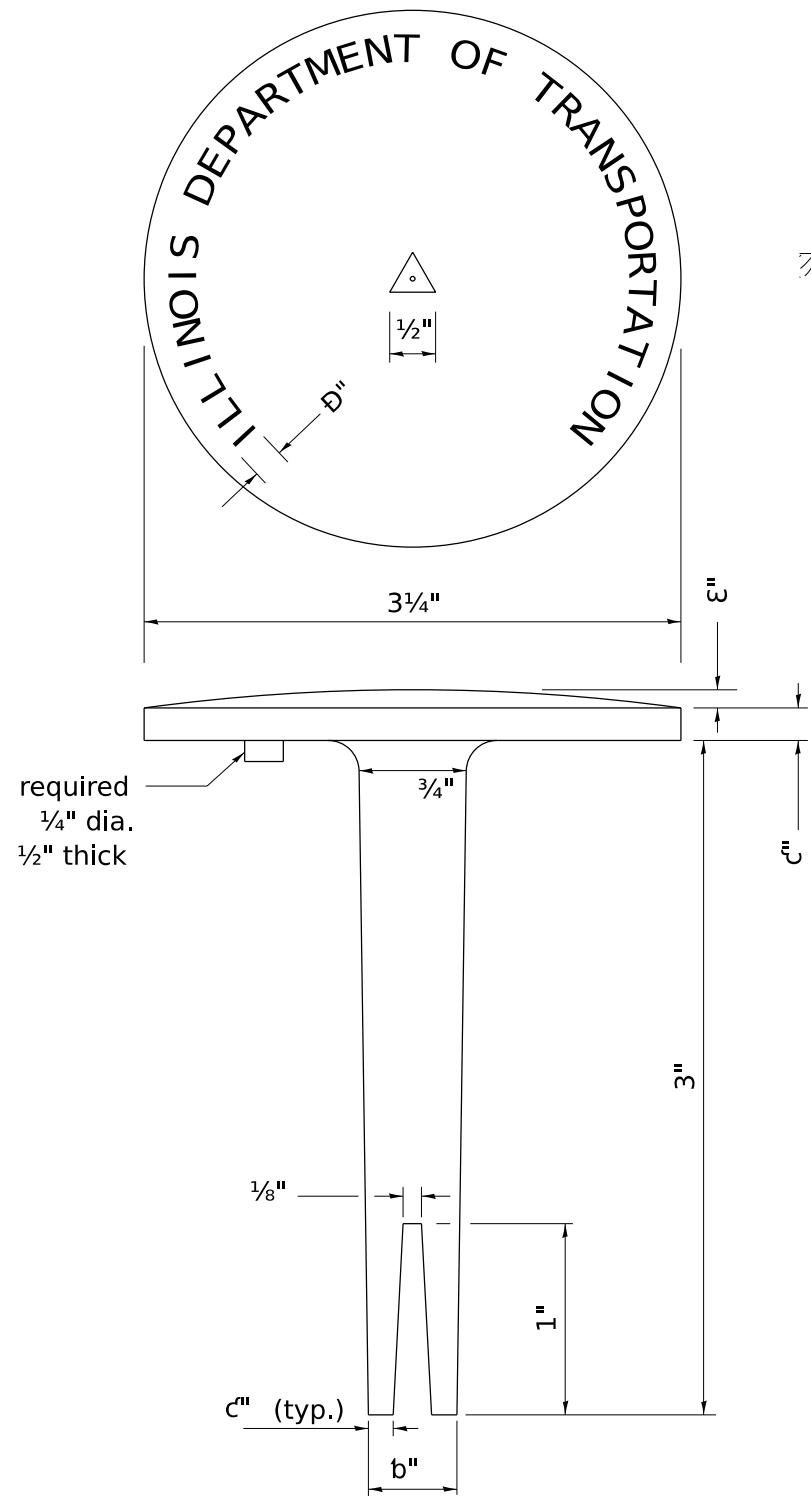
MODEL: 64pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED -	1-05-16
REVISED -	12-03-14
REVISED -	2-01-10
REVISED -	

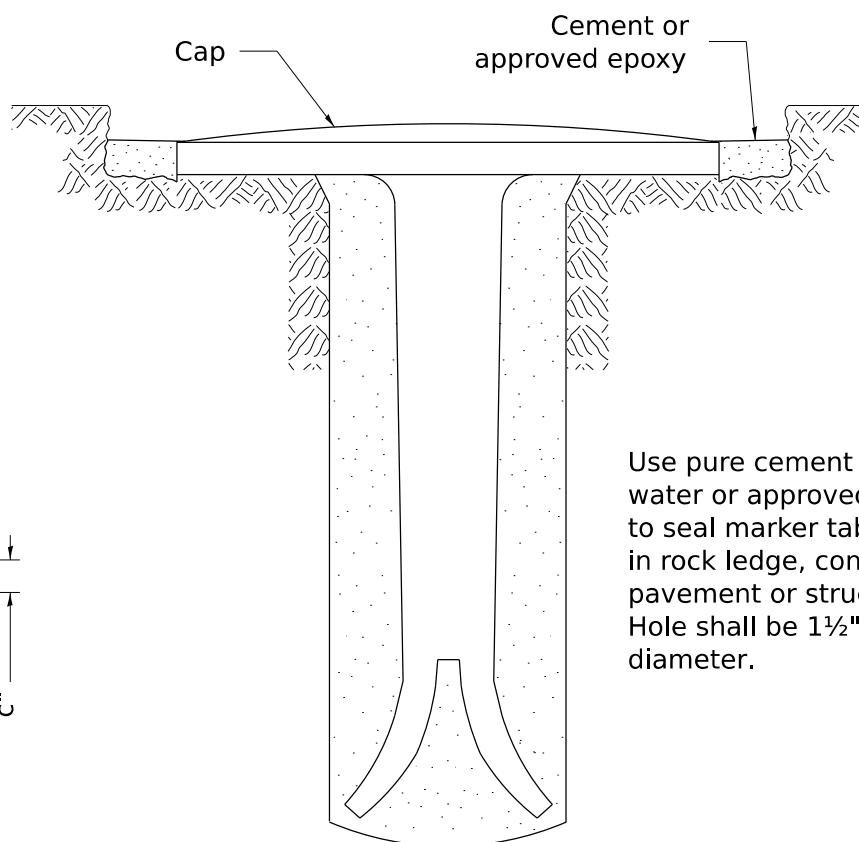
REGION 2 / DISTRICT 2 STANDARD				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PERMANENT SURVEY MARKERS, TYPE II

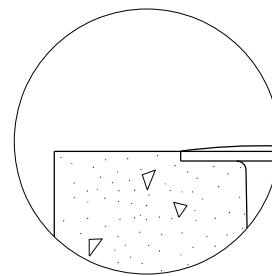


BRASS OR ALUMINUM TABLET



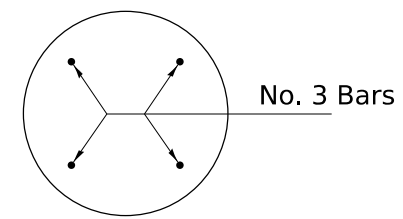
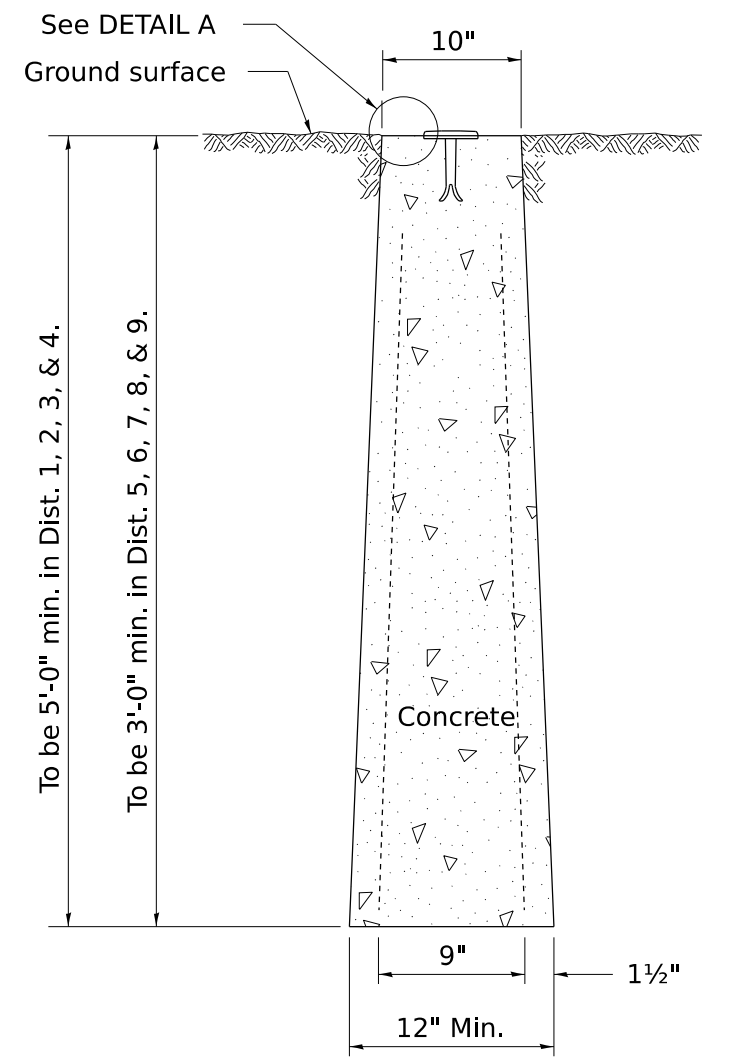
Tablet constructed in rock ledge or concrete.

TYPE II



DETAIL A

Use pure cement and water or approved epoxy to seal marker tablet in rock ledge, concrete pavement or structure. Hole shall be 1 1/2" diameter.

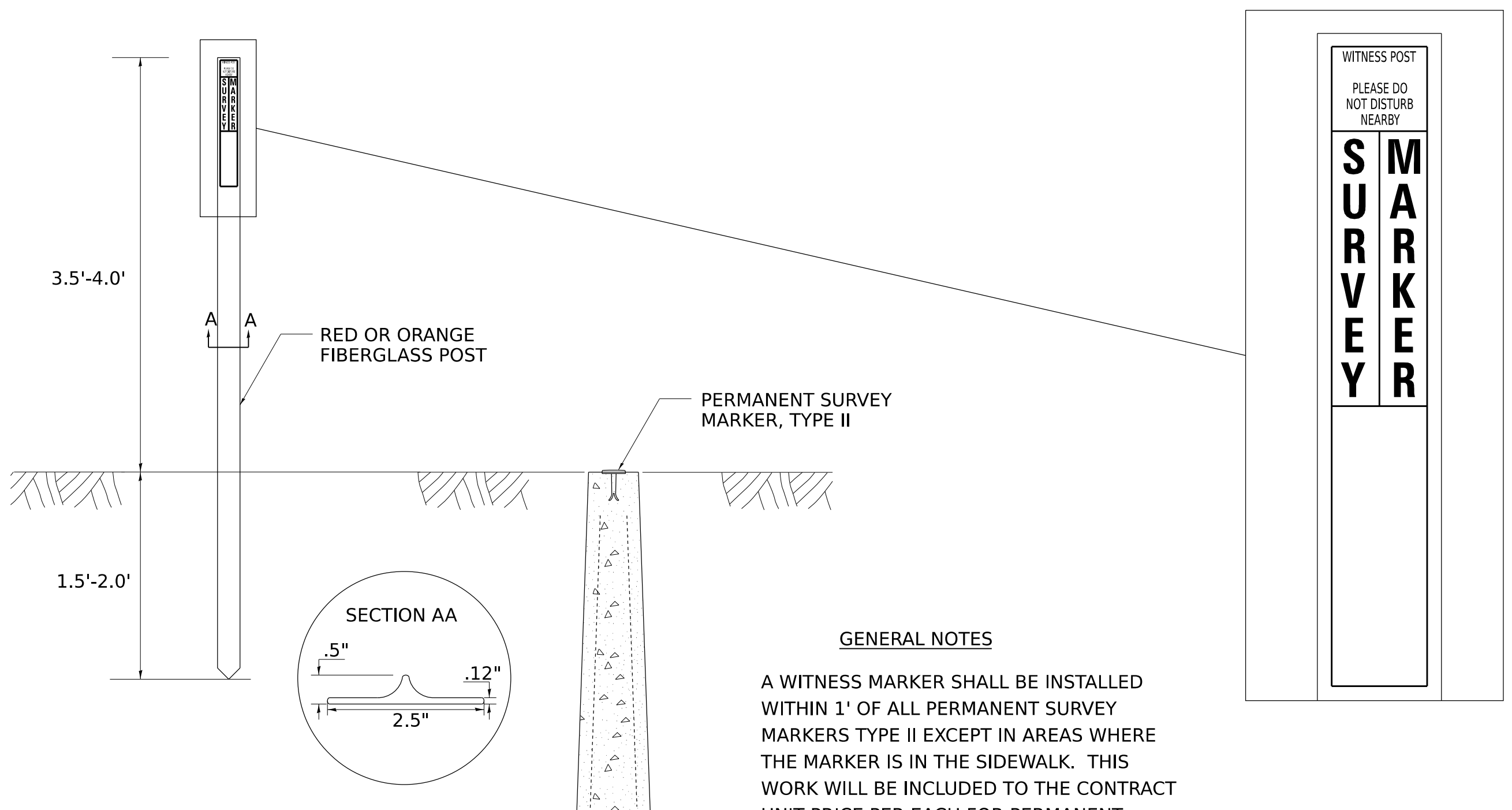


TYPE II

CAST-IN-PLACE MARKER

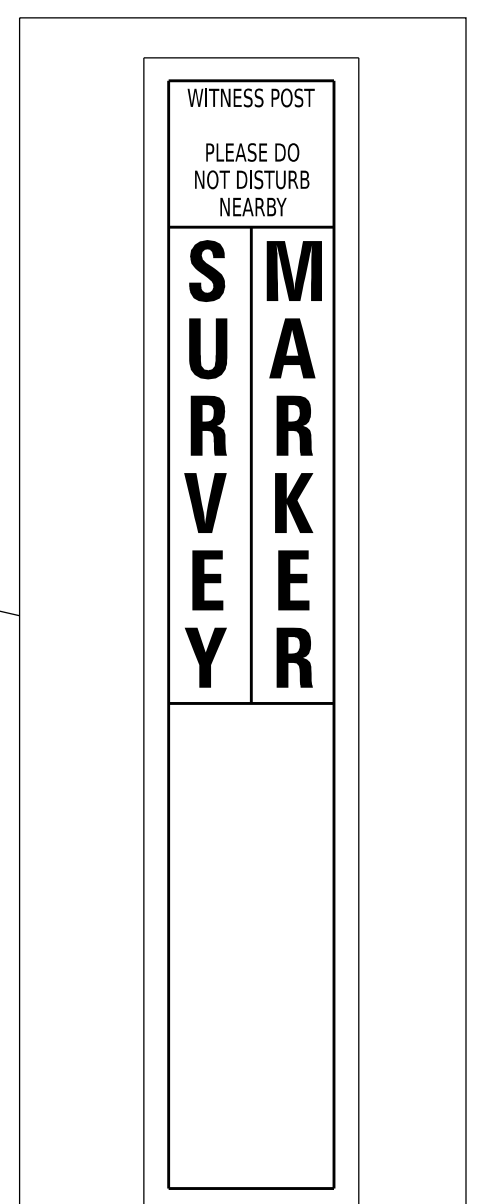
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

WITNESS MARKER FOR PERMANENT SURVEY MARKERS, TYPE II



GENERAL NOTES

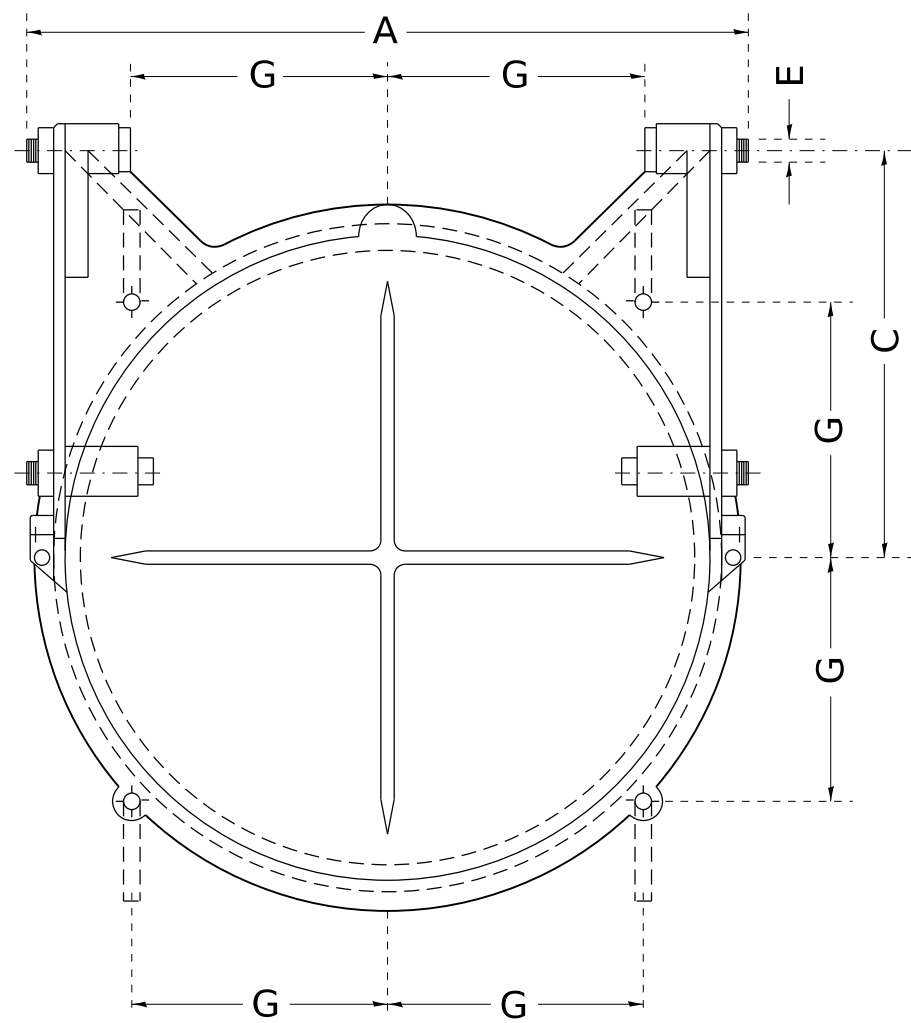
A WITNESS MARKER SHALL BE INSTALLED WITHIN 1' OF ALL PERMANENT SURVEY MARKERS TYPE II EXCEPT IN AREAS WHERE THE MARKER IS IN THE SIDEWALK. THIS WORK WILL BE INCLUDED TO THE CONTRACT UNIT PRICE PER EACH FOR PERMANENT SURVEY MARKERS, TYPE II.



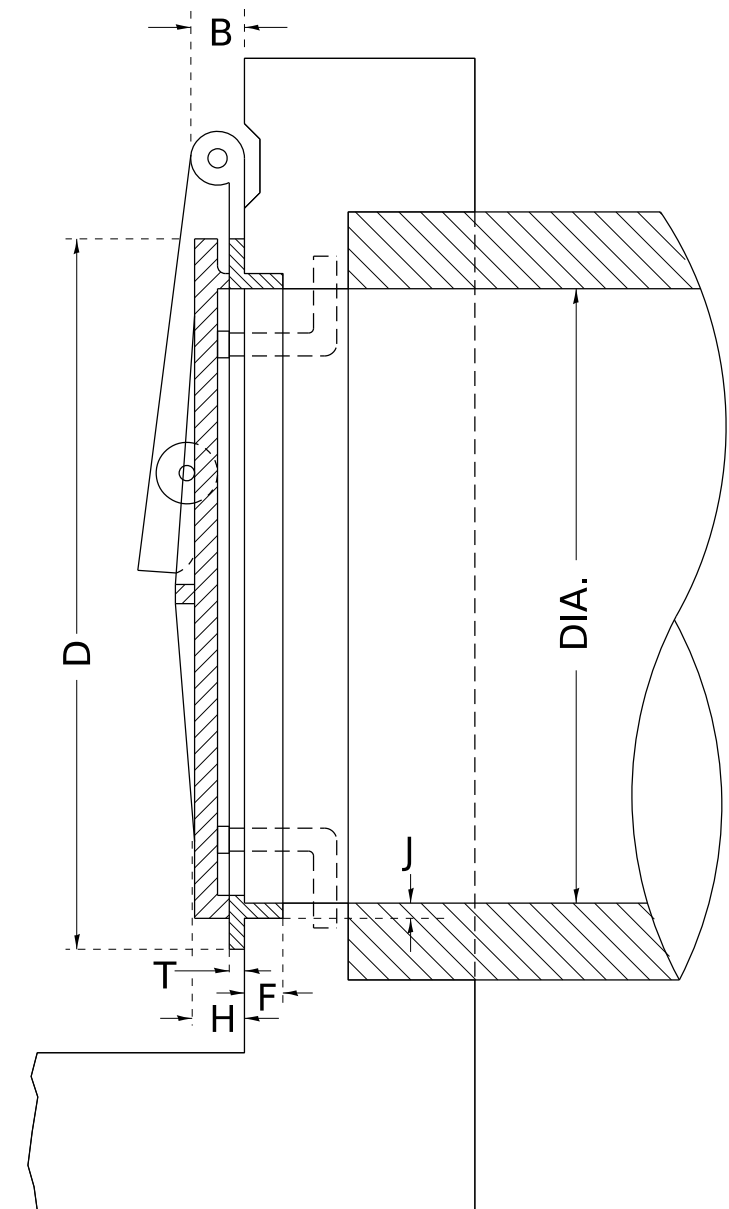
MODEL: 66pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 6-27-14	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 10-14-11					CONTRACT NO.				
REVISED -					ILLINOIS	FED. AID PROJECT			
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

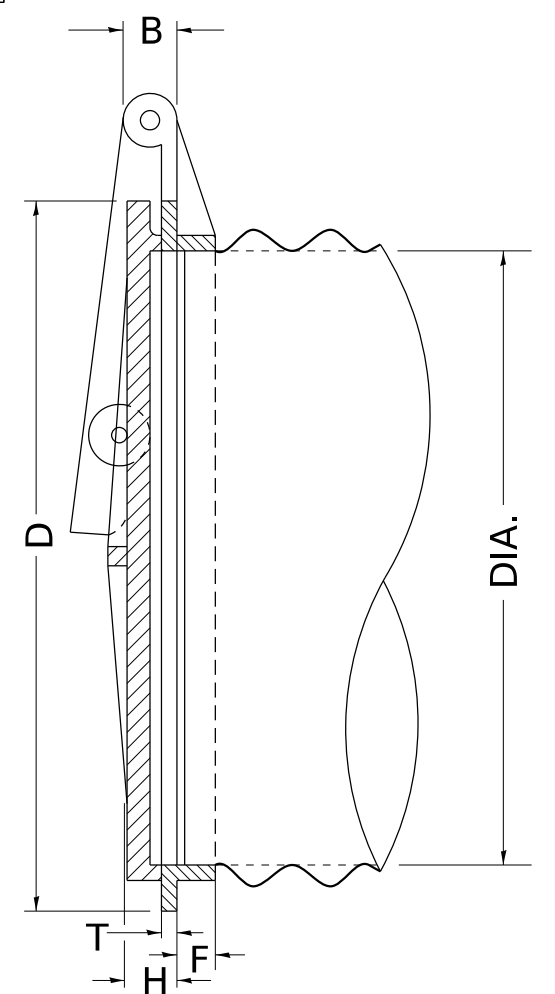
AUTOMATIC FLAP GATE



FRONT ELEVATION



SECTION



SECTION SHOWING METHOD OF APPLICATION TO CORRUGATED METAL PIPE

IT IS INTENDED THAT THE AUTOMATIC FLAP GATES SHALL BE A COMMERCIAL PRODUCT PRODUCED BY A RELIABLE MANUFACTURER. THE GATE MAY BE MADE OF CAST IRON, CAST STEEL OR OTHER SUITABLE MATERIALS. THE DESIGN MAY DIFFER FROM THE DRAWING IF IT WILL WORK IN A SATISFACTORY, TROUBLE FREE MANNER AND WILL WITHSTAND THE WATER PRESSURE AT THE INSTALLATION LOCATION. THE GATE SHALL BE APPROVED BY THE ENGINEER.

THE SIZE OF AUTOMATIC FLAP GATES SHALL REFER TO THE DIAMETER OF THE OUTLET PIPE OR OPENING.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR FLAP GATE OF THE SIZE SPECIFIED AND SHALL INCLUDE ALL MATERIALS AND COMPLETE INSTALLATION.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

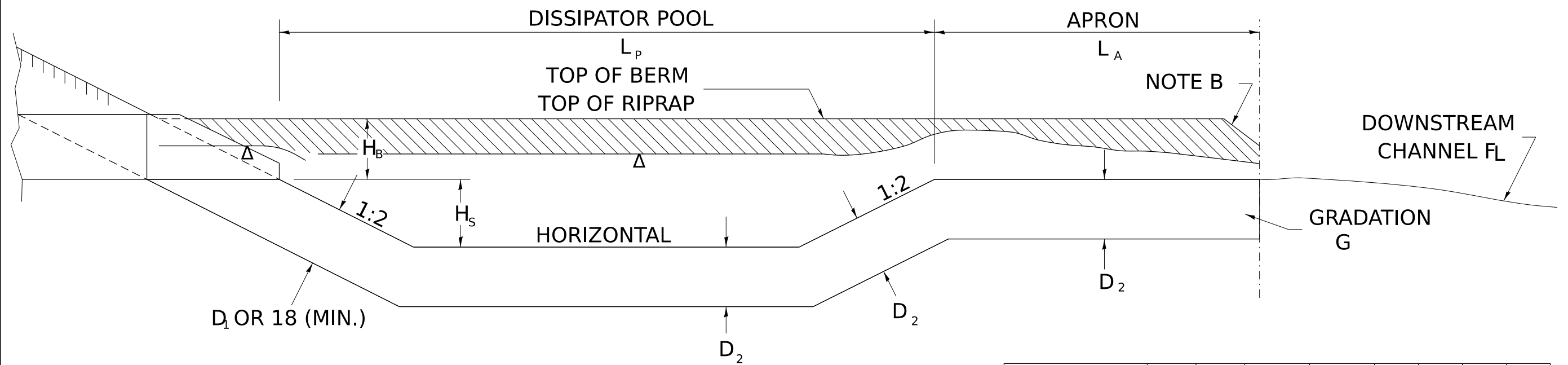
TABLE OF DIMENSIONS

DIAM	A	B	C	D	E	F	G	H	J	T
8	10 3/4	1 3/8	5 d	10	1/2	1 1/8	3 d	1 1/4	3/8	3/8
10	12 3/4	1 3/8	7 1/8	12 1/4	1/2	1 1/8	4 3/8	1 1/2	1/2	D
12	14 3/4	1 3/8	8 1/2	14 1/2	1/2	1 1/8	5 1/8	1 1/2	1/2	1/2
14	17 1/4	1 3/8	9 7/8	16 3/4	1/2	1 1/4	5 E	1 1/2	1/2	d
15	17 3/4	1 3/8	10 5/8	17 3/4	1/2	1 1/4	6 1/4	1 1/2	1/2	d
16	19 1/4	1 3/8	11 1/4	18 3/4	1/2	1 1/4	6 5/8	1 1/2	1/2	d
18	22 1/4	2	12 5/8	21	3/4	1 d	7 D	1 3/4	d	d
20	24 3/4	2	14 1/8	23 3/4	3/4	1 3/8	8 1/4	1 3/4	5/8	5/8
21	25 1/4	2	14 7/8	24 1/4	3/4	1 3/8	8 d	1 3/4	5/8	5/8
24	28 1/4	2	17	27 1/2	3/4	1 1/2	9 3/4	1 3/4	5/8	5/8
30	35 1/4	2 1/2	20 1/2	34	1	1 d	12	2	1 C	5/8
36	41 1/2	2 1/2	25	40 7/8	1	2 C	14 D	2 1/4	1 1/8	d
42	47 1/2	2 1/2	29 3/4	47	1	2 D	16 5/8	2 1/4	1 1/8	3/4
48	53 1/2	2 1/2	34	54	1	2 3/4	19 C	2 1/4	1 3/8	3/4
54	60 3/4	2 1/2	38	62 1/4	1 1/4	2 3/4	22	3	1 1/2	7/8
60	67	2 1/2	42	68 1/2	1 1/4	2 3/4	24 1/4	3	1 1/2	E
66	73 3/8	2 1/2	47	75	1 1/4	2 7/8	26 1/2	3	1 1/2	1
72	79	2 1/2	51	82	1 1/4	3	29	3	1 1/2	1
78	86	2 1/2	55 1/4	88 3/4	1 1/4	3 1/2	31 3/8	3	1 5/8	1 1/8
84	92 1/2	3 1/2	59 1/2	95 1/2	1 1/2	3 1/2	33 3/4	3	1 3/4	1 1/4

MODEL: 73p2
 FILE NAME: District 2 Standard
 PLOT DATE = 1/28/2025

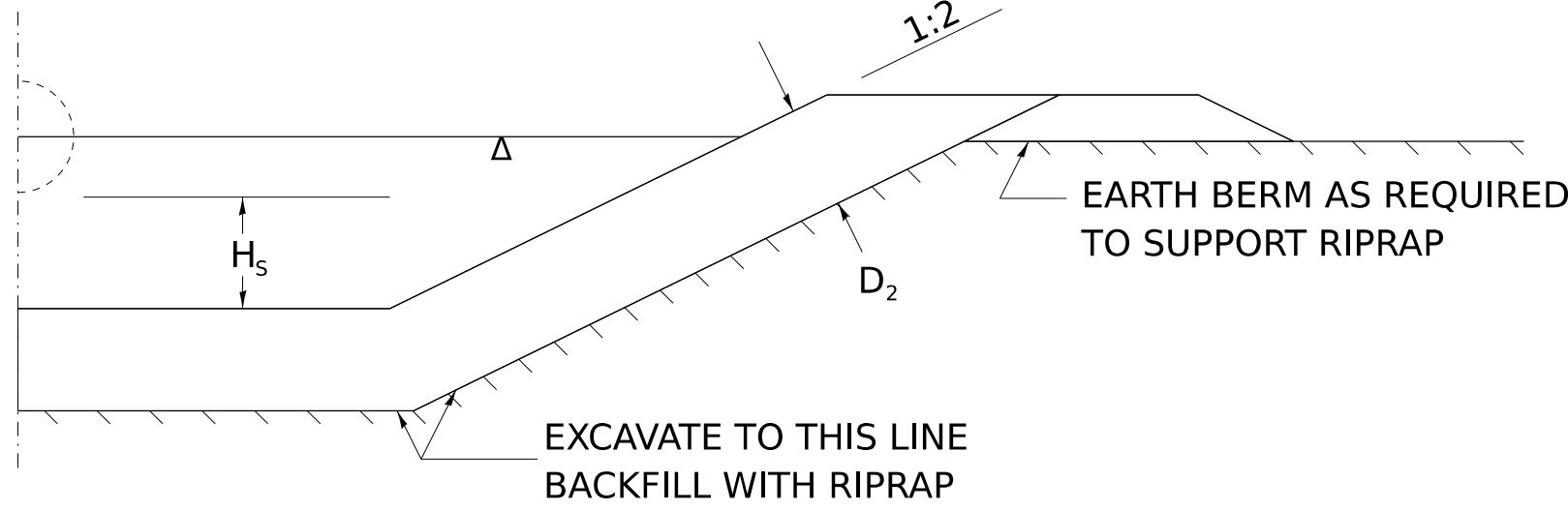
REVISED - 10-14-11	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -					CONTRACT NO.				
REVISED -					ILLINOIS FED. AID PROJECT				
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

RIPRAPPED CULVERT ENERGY BASIN



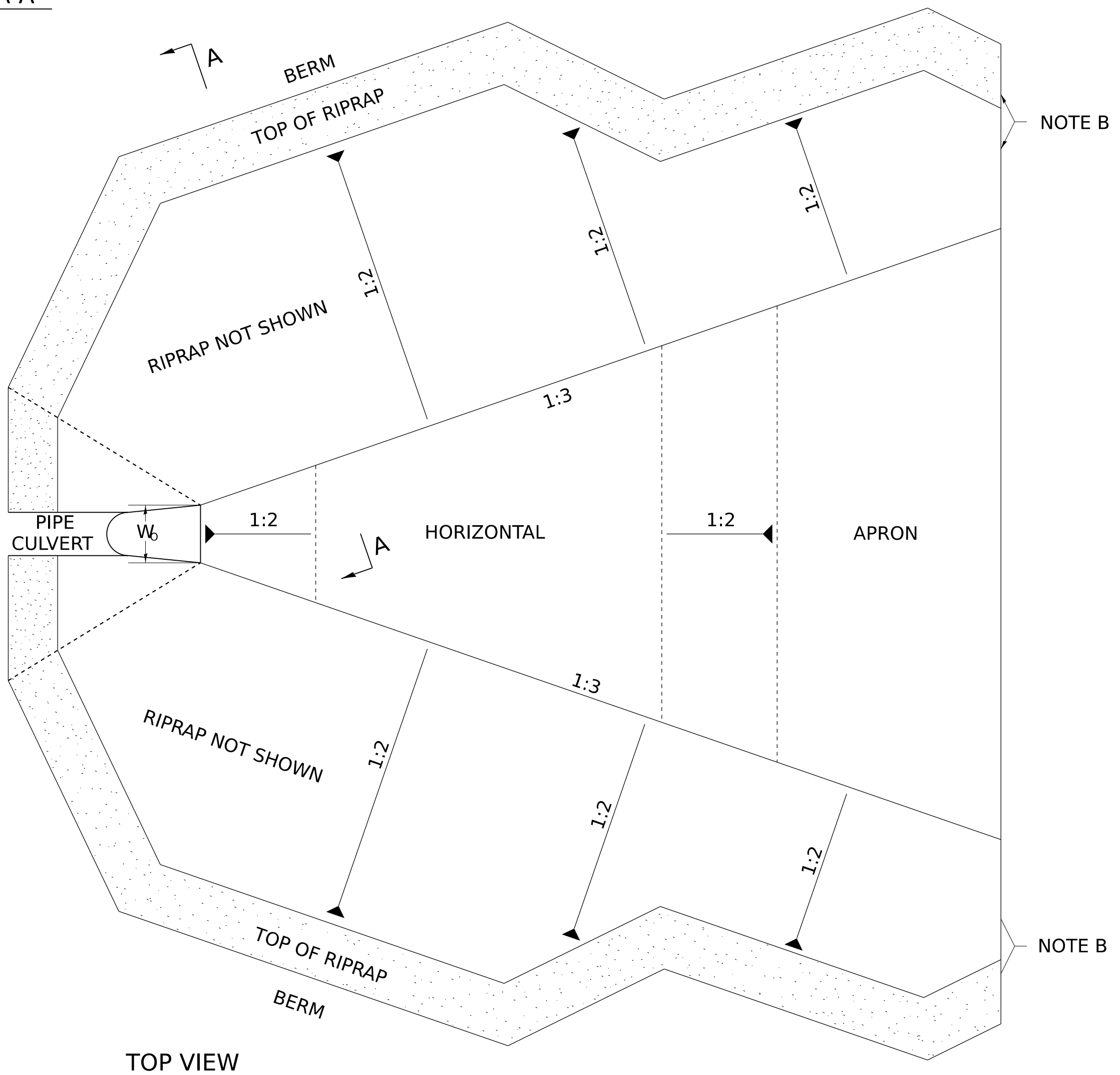
SECTION

STATION	G	W ₀	L _P	L _A	H _S	H _B	D ₁	D ₂



SECTION A-A

NOTE B: WARP BASIN TO CONFORM TO NATURAL STREAM CHANNEL.



TOP VIEW

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

MODEL: 81pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED -	1-05-16
REVISED -	10-14-11
REVISED -	
REVISED -	

REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

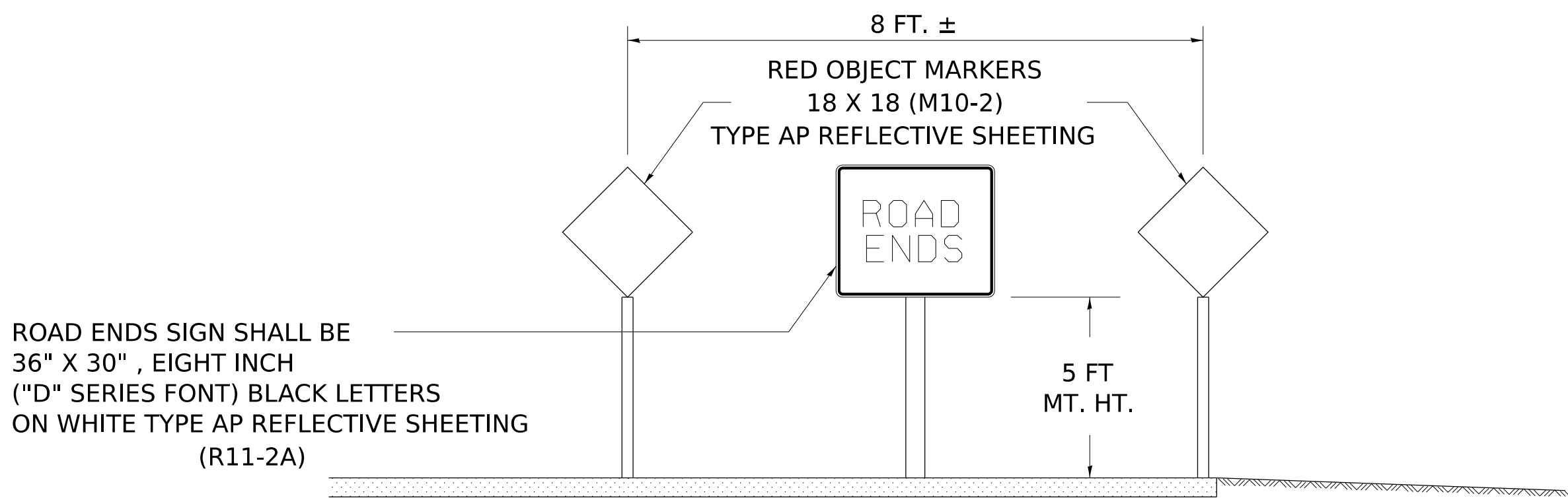
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

TERMINATION OF DEAD END ROADS

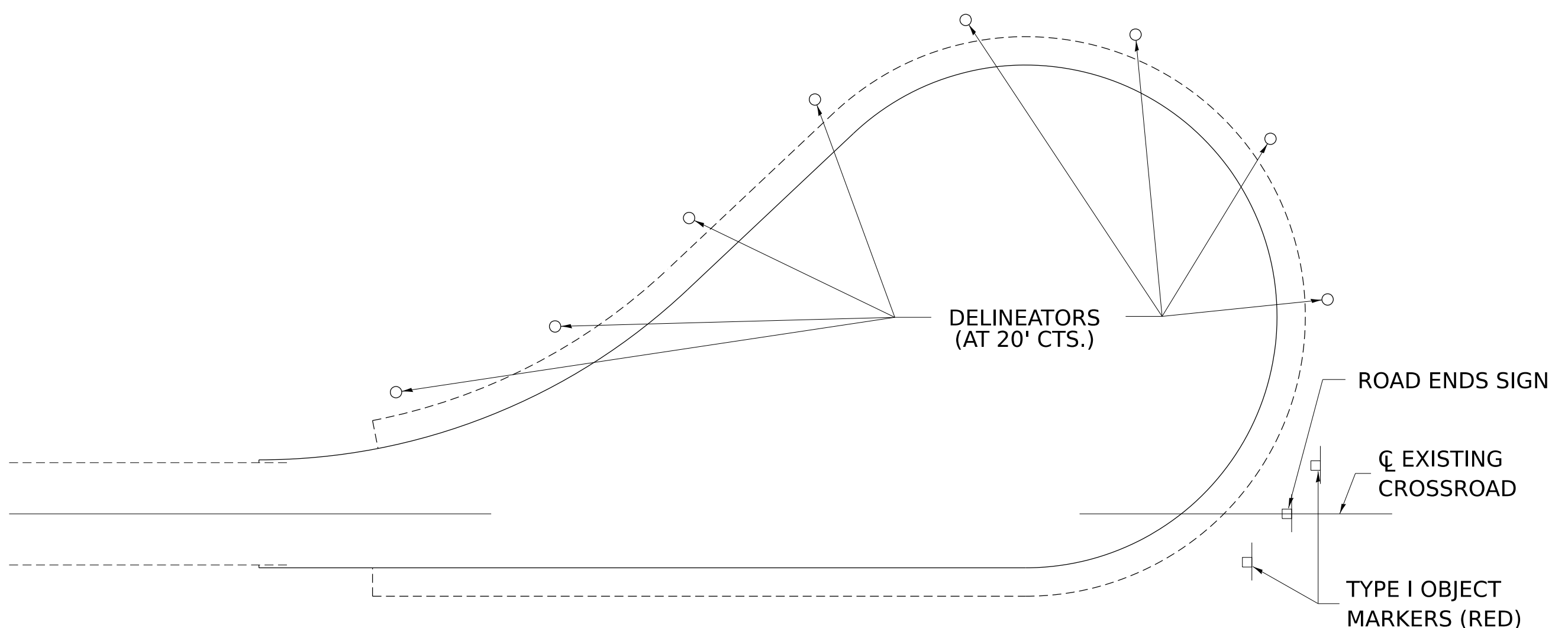
NOTES: A "NO OUTLET" (36"x36" YELLOW) SIGN SHALL BE ERECTED SLIGHTLY BEYOND THE LAST ROAD INTERSECTING THE ROAD WITH NO OUTLET. IF THIS INTERSECTION IS MORE THAN 1500 FT FROM TERMINATION POINT, OR IF SIGHT DISTANCE TO THE CLOSURE IS LESS THAN 500 FT, A ROAD ENDS 500 FT (WB-16) SIGN SHALL BE ERECTED 500 FT IN ADVANCE OF THE TERMINATION OF THE ROAD. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "TERMINATION OF DEAD END ROADS" WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL THE SIGNS AND DELINEATORS.

USE 4X6 WOOD POSTS INSTALLED IN ACCORDANCE WITH SECTION 730 OF STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS. USE APPLICABLE PARTS OF STANDARD 720001 FOR SIGN MOUNTING.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.



TERMINATION SIGNING



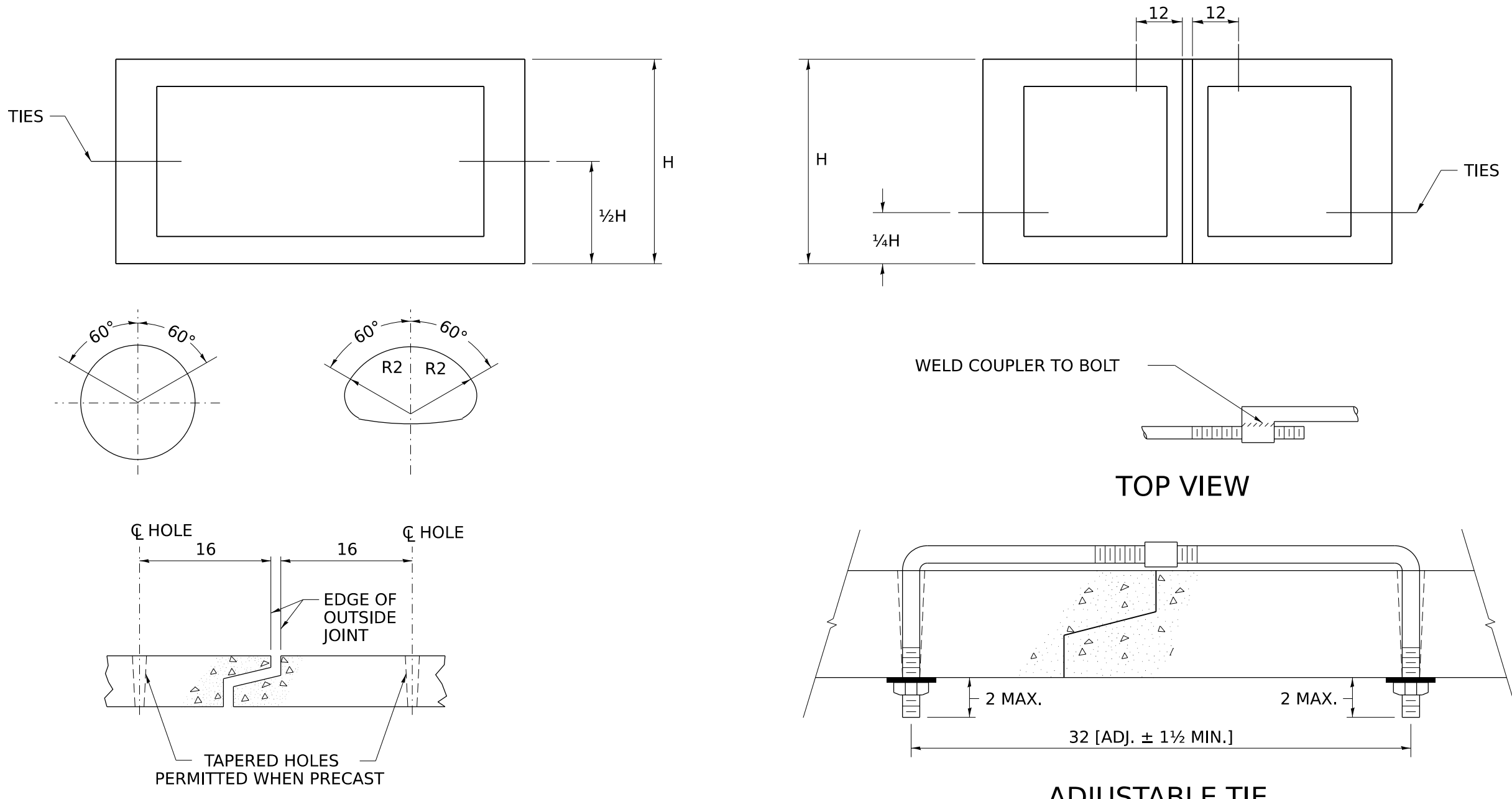
TRAFFIC CONTROL
TYPICAL CUL-DE-SAC

MODEL: 89pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 11-12-14	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 10-14-11									
REVISED -					CONTRACT NO.				
REVISED -					SCALE:	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT	

MECHANICAL JOINTS FOR CONCRETE PIPE AND BOX CULVERTS

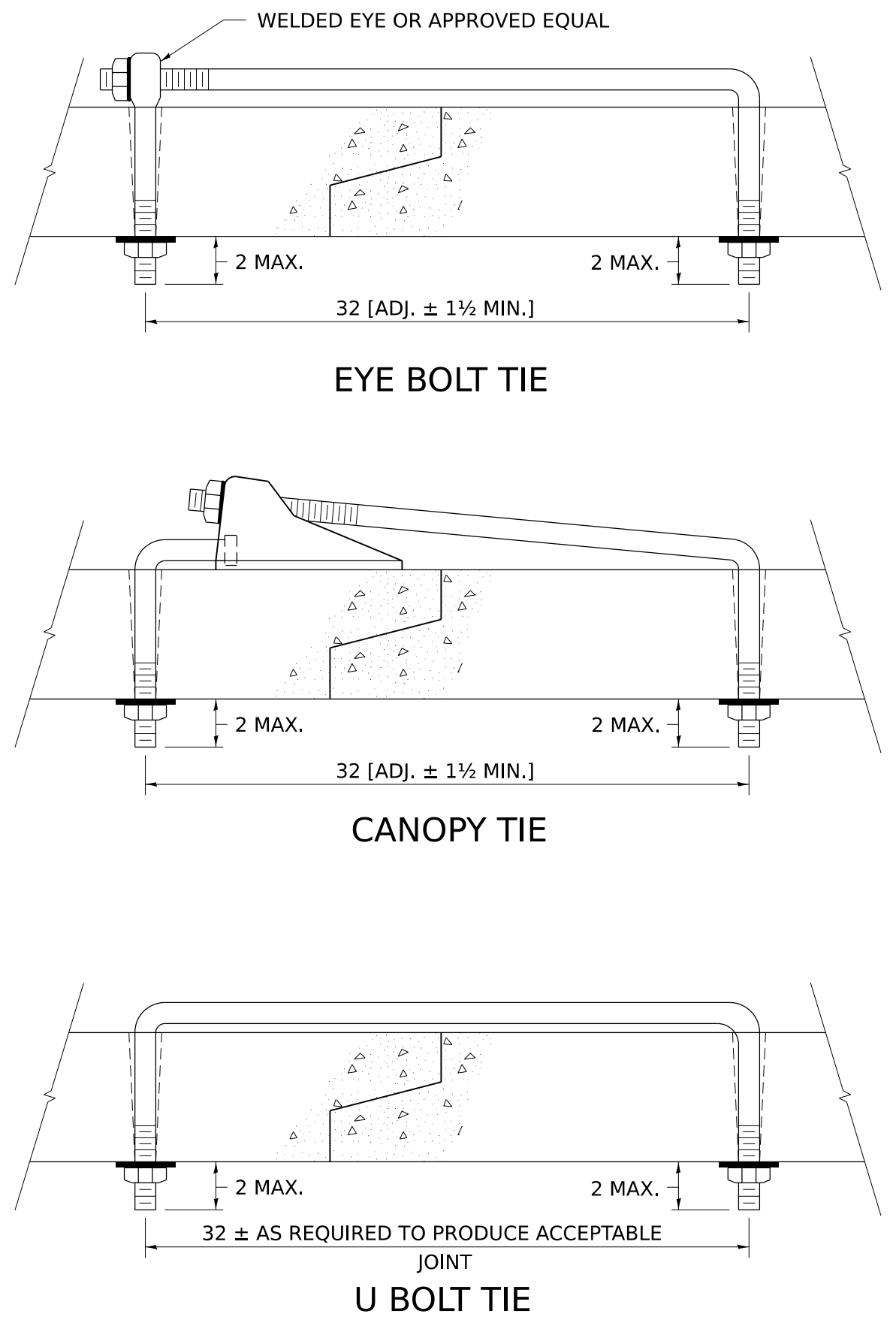
THE CULVERT TIES SHALL BE INCLUDED IN THE COST OF THE CONCRETE PIPE CULVERTS OR THE PRECAST CONCRETE BOX CULVERT. THE MECHANICAL TIES SHALL BE ON THE OUTSIDE OF THE CULVERT. THE NUTS AND WASHERS SHALL BE PLACED ON THE INSIDE OF OF THE CULVERT AND COVERED WITH MASTIC JOINT SEALER CONFORMING TO SECTION 1055 IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.



PLACEMENT OF HOLES		
BOX CULVERT FEET	PIPE SIZE INCHES	THREAD DIAMETER
	12	5/8 ROLLED THREADS (SEE NOTE 4)
	15	
	18	
	21	
	24	
	27	3/4 CUT OR ROLLED
3x2	30	
3x3	33	
4x2	36	
4x3	42	
4x4	48	
5x3	54	
5x4	60	
5x5	66	
6x*	72	
7x*	78	
8x*	84	
9x*	90	
10x*	96	
	102	
	108	
	120	1 1/4
11 X * AND GREATER	132	
	138	
	AND GREATER	

NOTES:

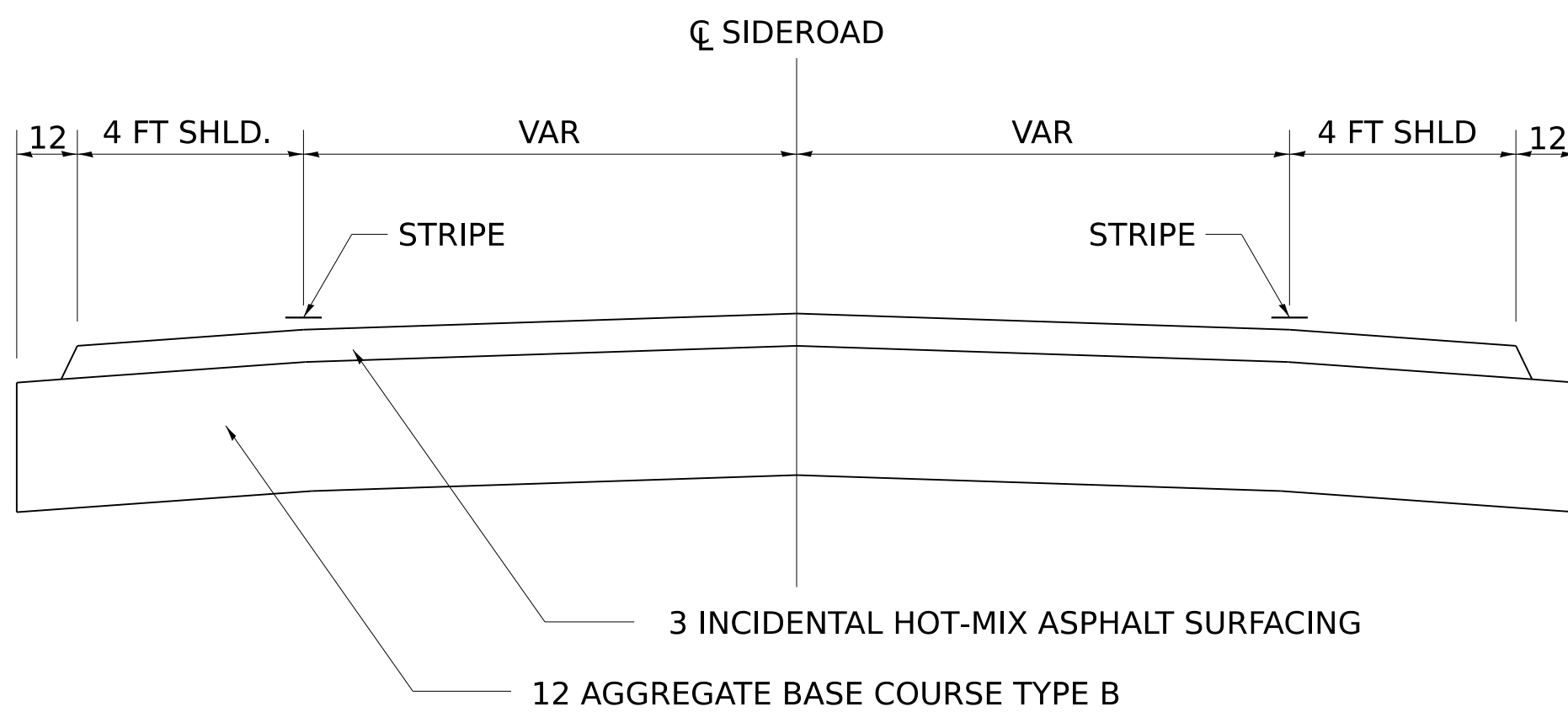
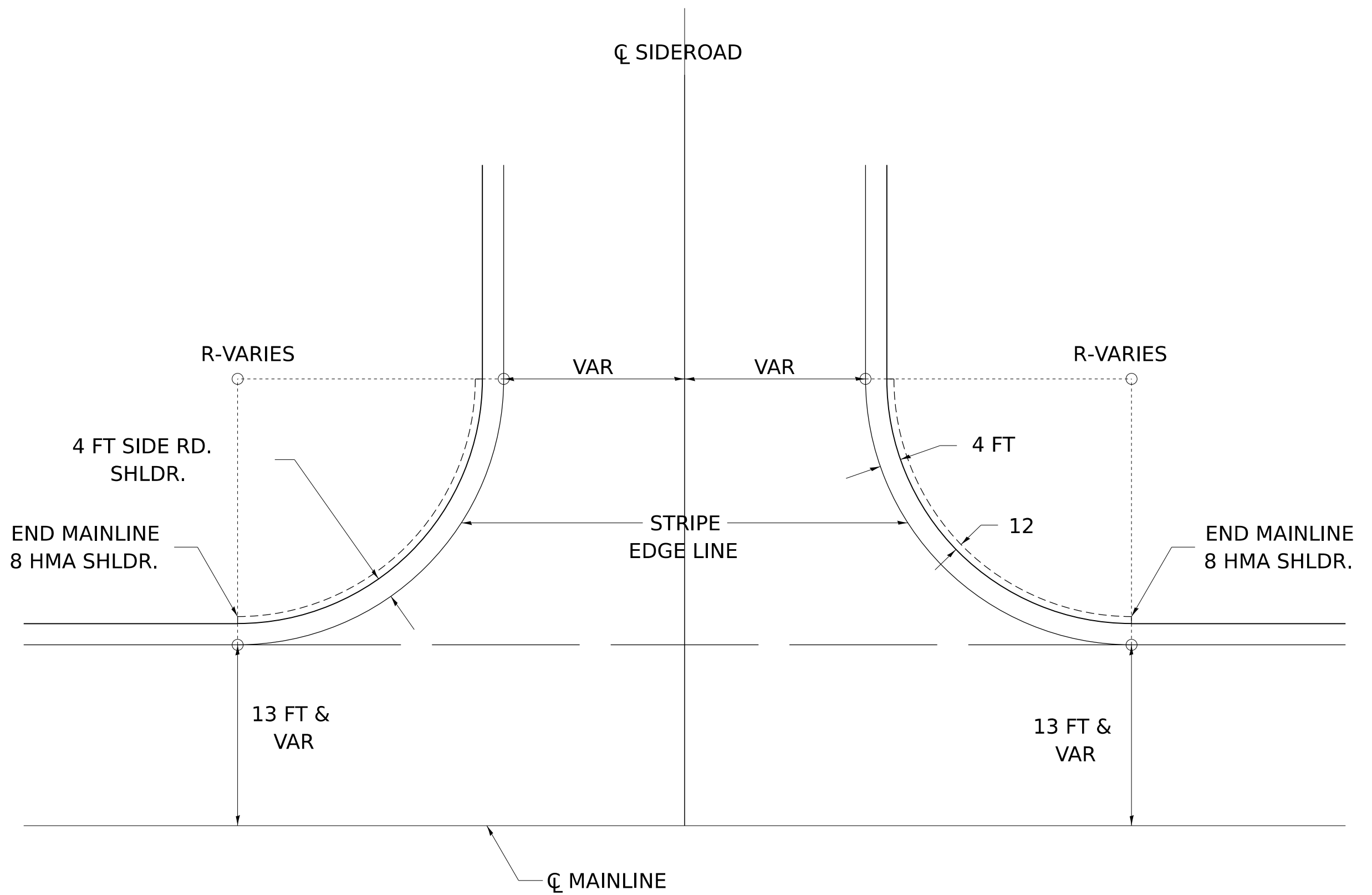
- HOLES SHALL BE CAST-IN OR DRILLED 16 FROM OUTSIDE EDGE OF JOINT.
- NUTS AND WASHERS ARE NOT REQUIRED ON INSIDE OF 27 DIAM. PIPE OR LESS.
- TIES ARE NOT REQUIRED FOR BELL PIPE 24 AND SMALLER. ON OTHER SIZES TIE MAY BE INSERTED FROM INSIDE.
- CUT THREADS MAY BE USED IF WASHER AND NUT ARE USED.
- PIPE SIZE LISTED IS INSIDE DIAM. OF ROUND PIPE OR EQUIVALENT DIAM. OF PIPE ARCH OR ELLIPTICAL.
- GALVANIZING OF TIES IS REQUIRED.
- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.



MODEL: 90pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 1-05-16	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED - 11-12-14									
REVISED - 10-14-11					CONTRACT NO.				
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.

TYPICAL AGGREGATE BASE SIDEROAD

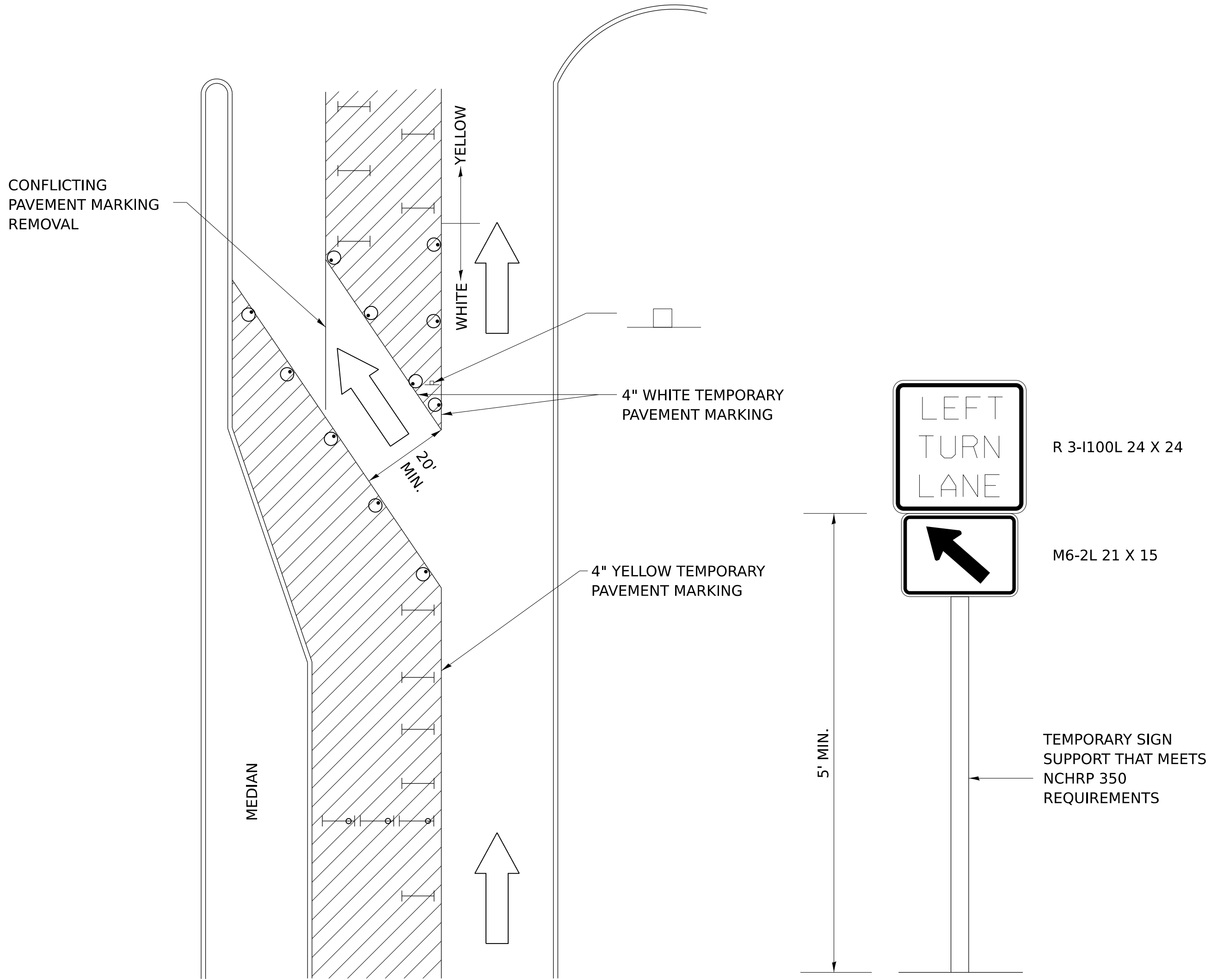


ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

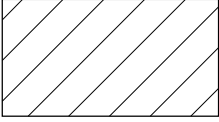
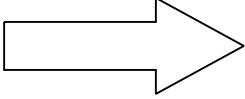
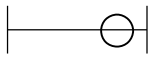

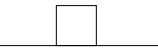

MODEL: 93pt2
FILE NAME: District 2 Standard
PLOT DATE = 1/28/2025

REVISED - 10-14-11	REGION 2 / DISTRICT 2 STANDARD				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -					CONTRACT NO.				
REVISED -									
REVISED -					SCALE:	SHEET	OF	SHEETS	STA.

TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)



LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE OR DRUM WITH FLASHING BURNING LIGHT
-  DRUM OR BARRICADE WITH STEADY BURN LIGHT
-  SIGN (SEE DETAIL)
-  TYPE I OR II CHECK BARRICADE WITH STEADY LIGHT BURN

GENERAL NOTES

- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 IN HEIGHT.
- STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS WILL BE MONODIRECTIONAL.
- TEMPORARY PAVEMENT MARKING SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
- THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 X 24 AND M6-2R 21 X 15 SHALL BE USED.
- THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
- TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.
- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

MODEL: 94pt2
 FILE NAME: District 2 Standard
 PLOT DATE = 1/28/2025

REVISED - 10-14-11	REGION 2 / DISTRICT 2 STANDARD			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REVISED -				CONTRACT NO.				
REVISED -	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	
REVISED -								