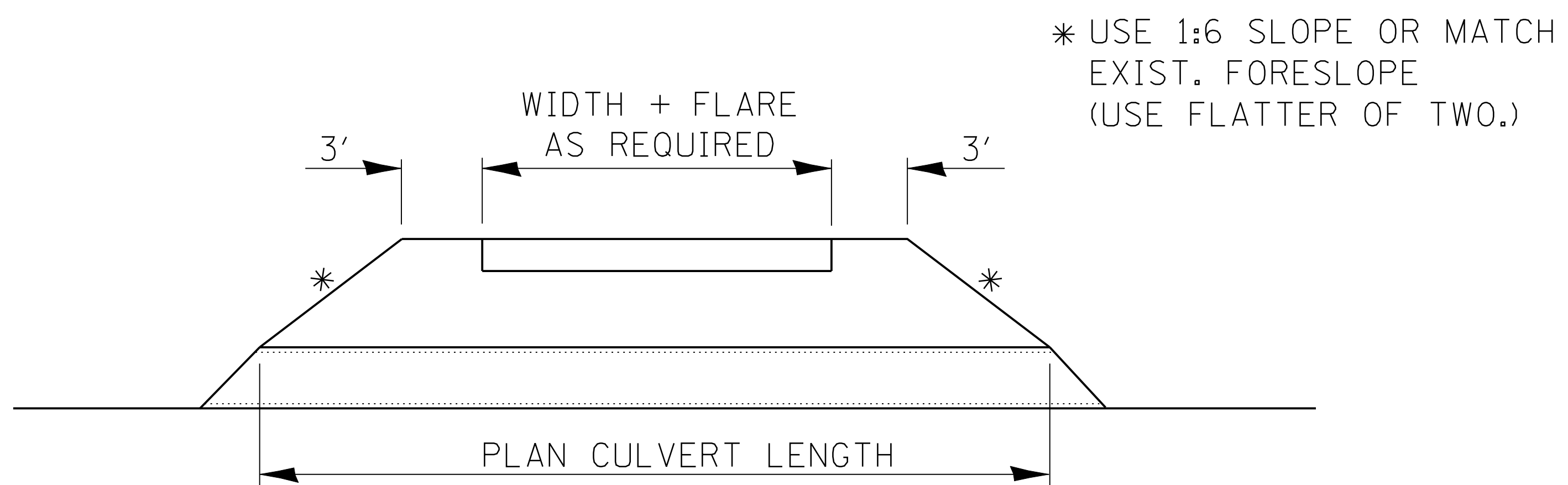


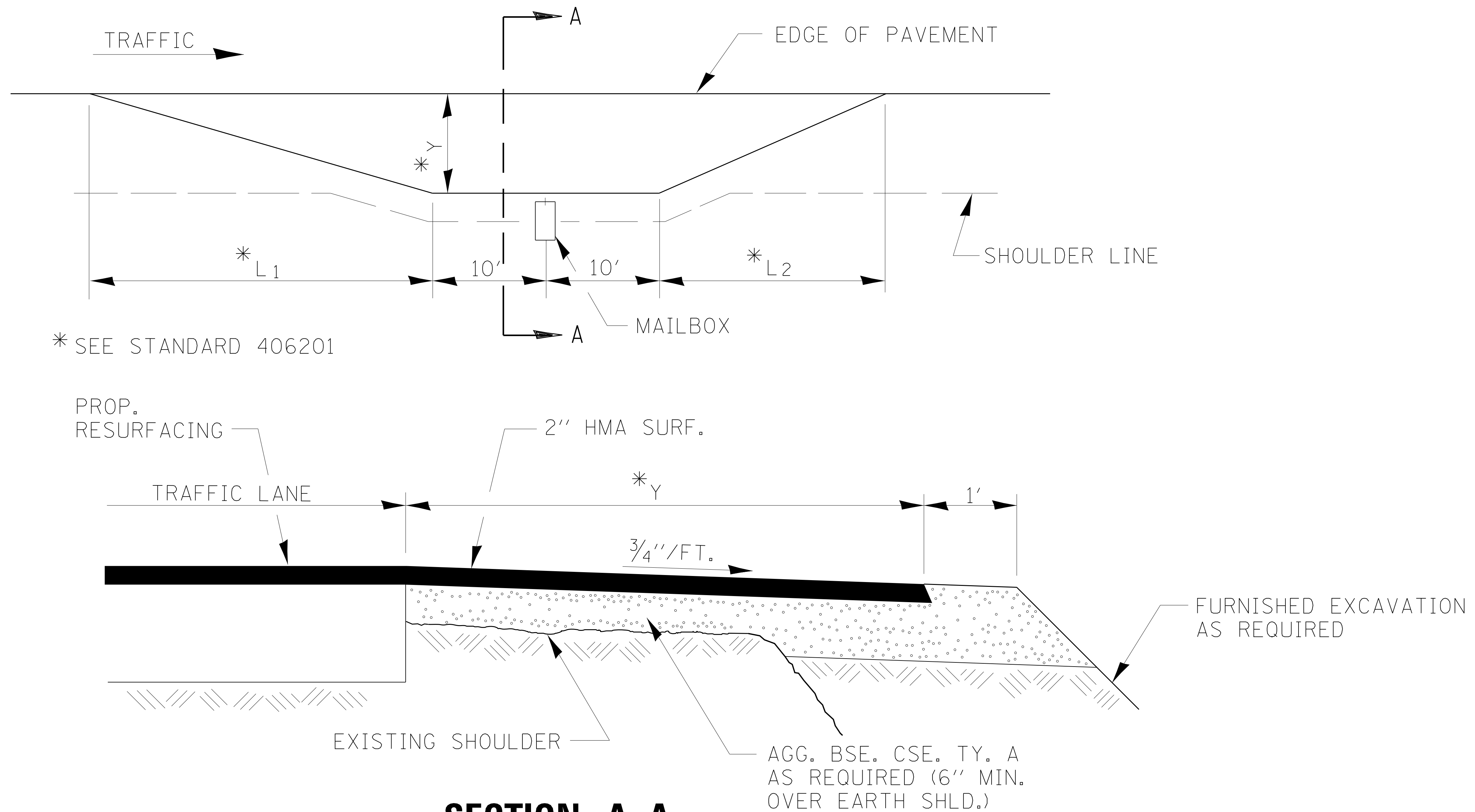
SECTION A-A



FIELD ENTRANCE DETAIL

402-1

DESIGNER NOTE: TO BE USED ON 3R PROJECTS WHEN REPLACING CULVERTS AND CONSTRUCTING NEW DITCHES.

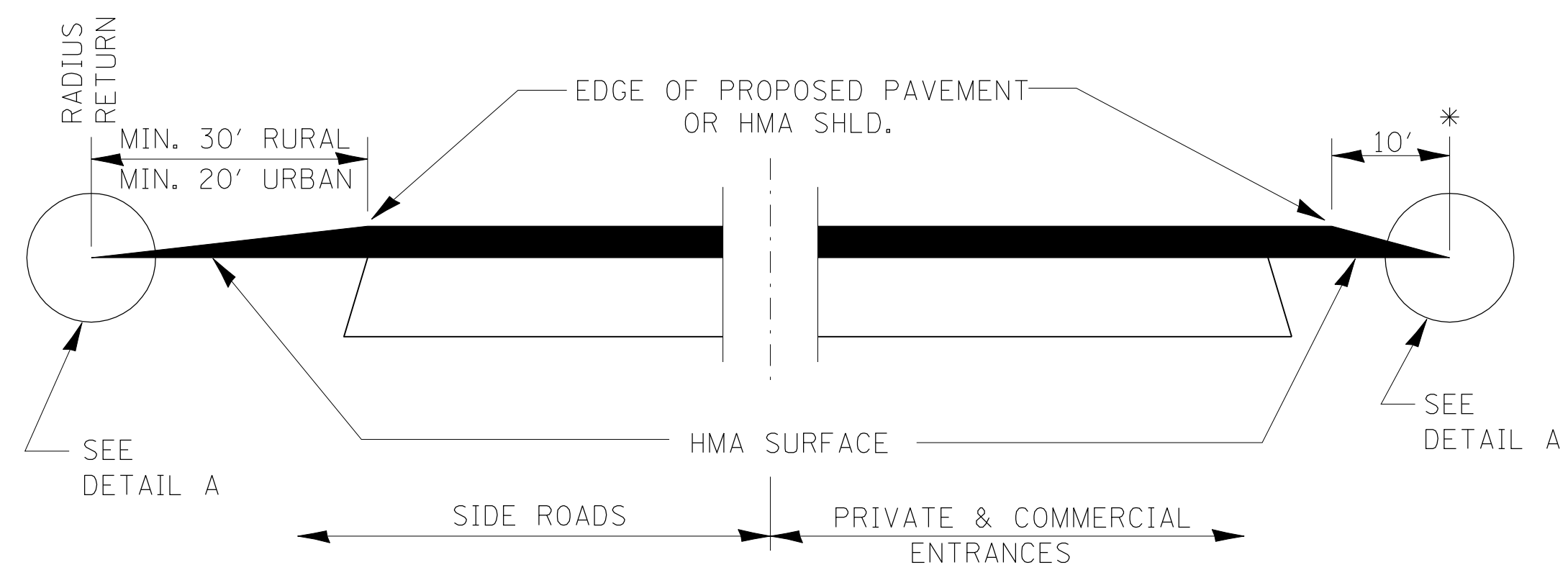


SECTION A-A

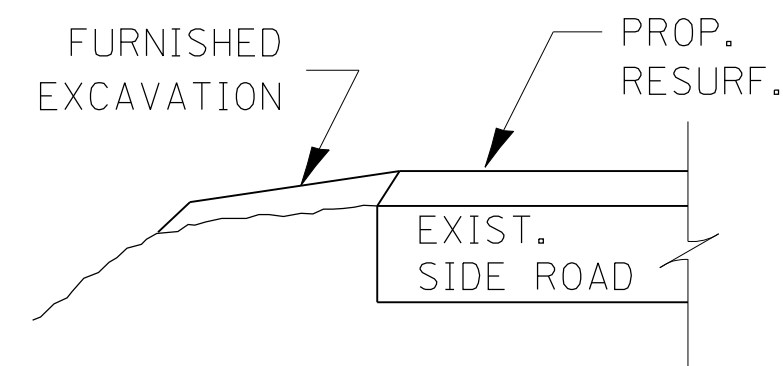
406-1

RURAL MAILBOX TURNOUT DETAILS

- DESIGNER NOTES**
- 1. INCLUDE STD. 406201**
 - 2. REVIEW BDE MANUAL 58-5**

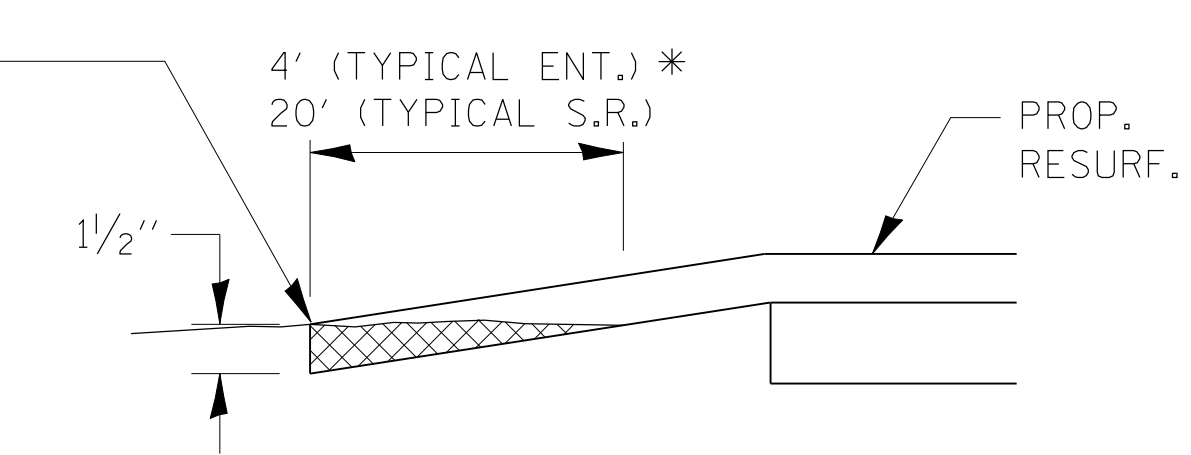


SECTION A-A
DETAILS AT ENTRANCES & SIDE ROADS

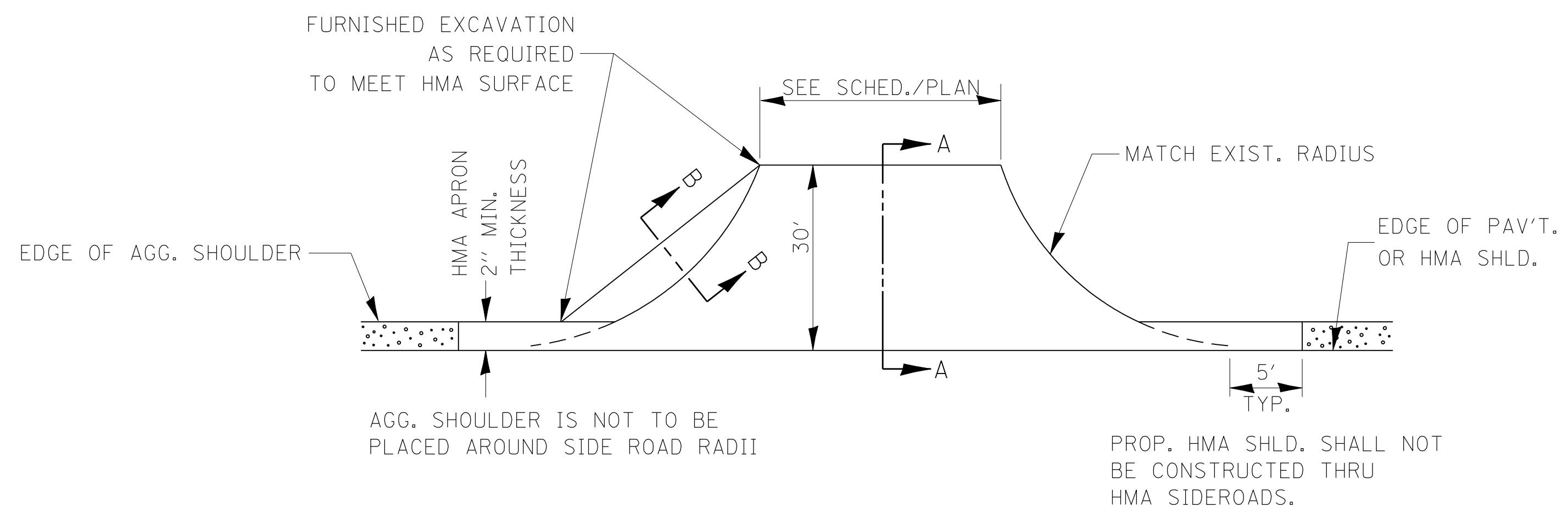


SECTION B-B

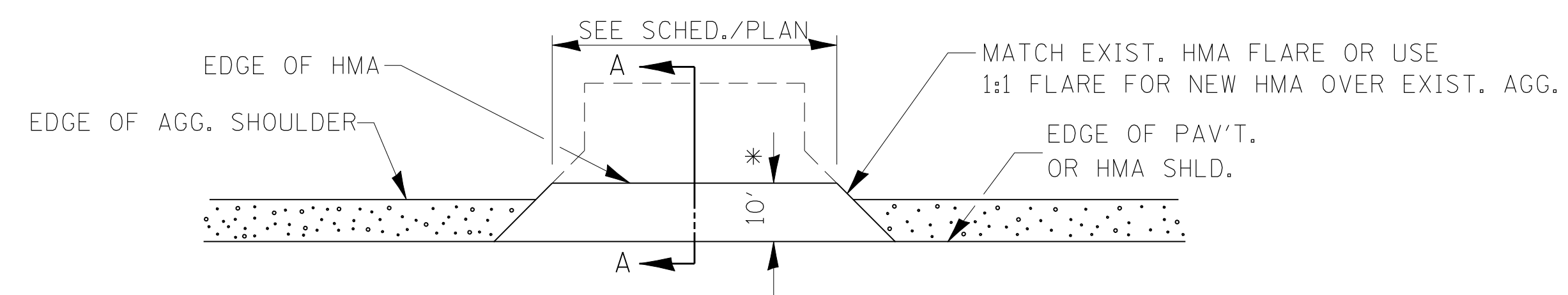
THE COST OF REMOVAL AT EXISTING HMA OR P.C.C. LOCATIONS SHALL BE PAID FOR PER SQ. YD. BY THE APPROPRIATE PAY ITEM. REMOVAL AT THE EXISTING AGG. LOCATIONS SHALL BE INCIDENTAL TO THE HMA. A-3 LOCATIONS SHALL BE FEATHER TAPERED.



DETAIL A



PLAN AT SIDE ROADS

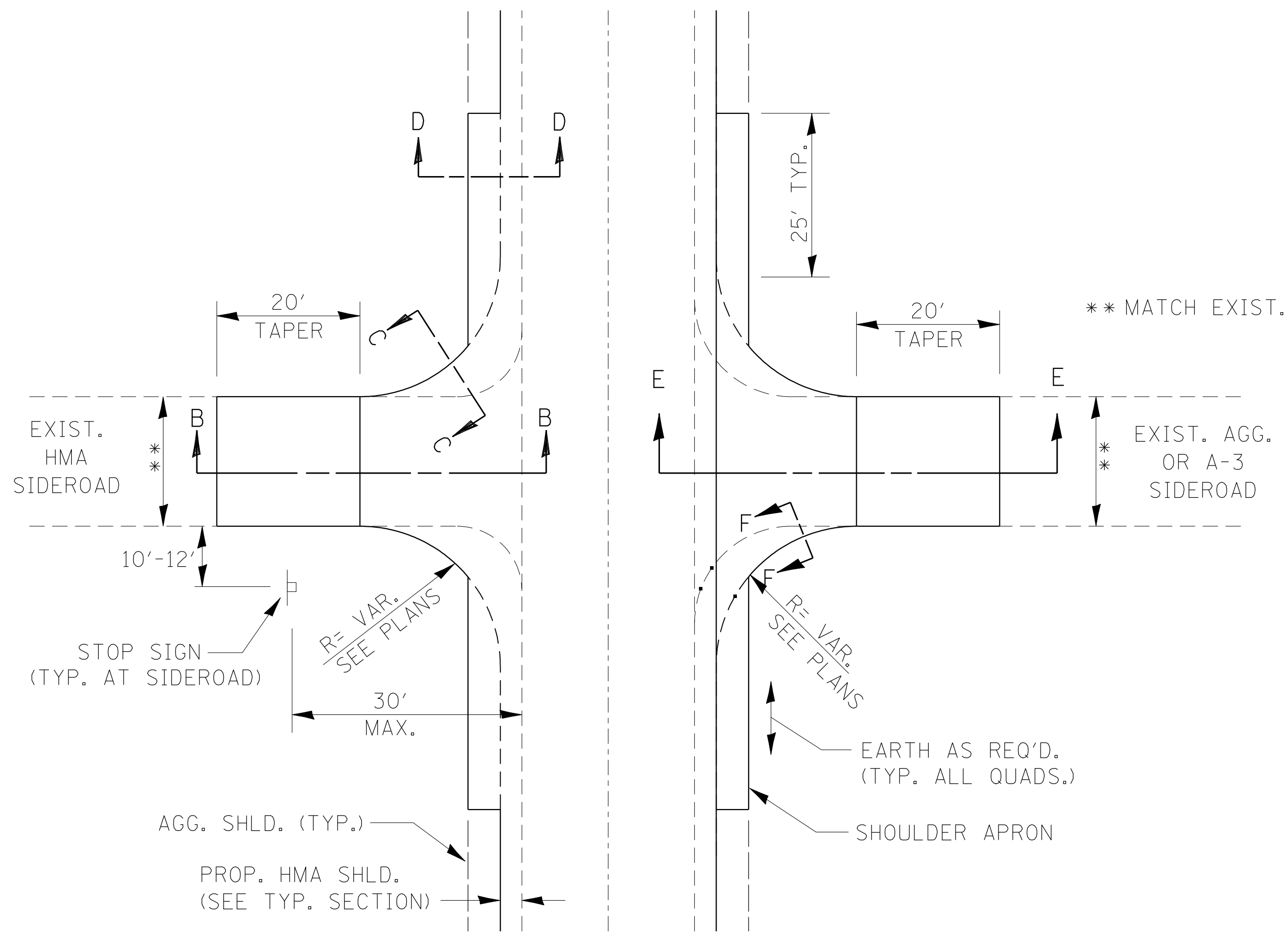


PLAN AT PRIVATE & COMMERCIAL ENTRANCES

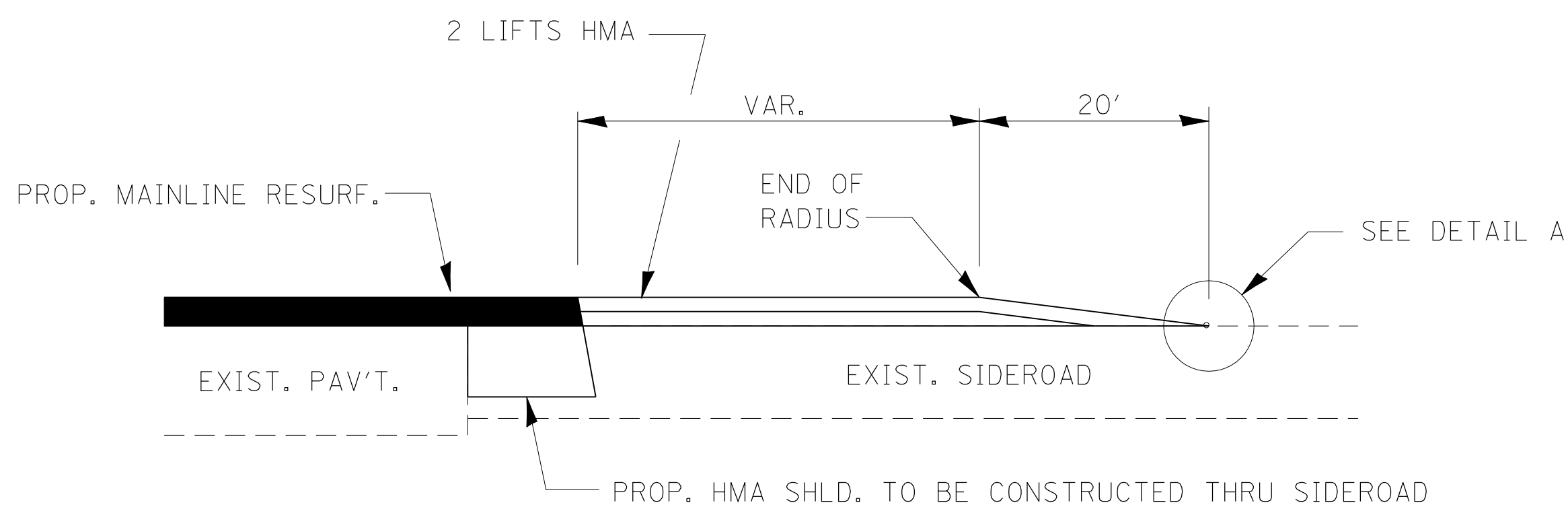
(DO NOT RESURFACE FIELD ENTRANCES)

* PROPOSED HMA RESURFACING AT PUBLIC EDUCATIONAL FACILITY ENTRANCES SHALL BE EXTENDED TO THE RIGHT-OF-WAY LIMITS.

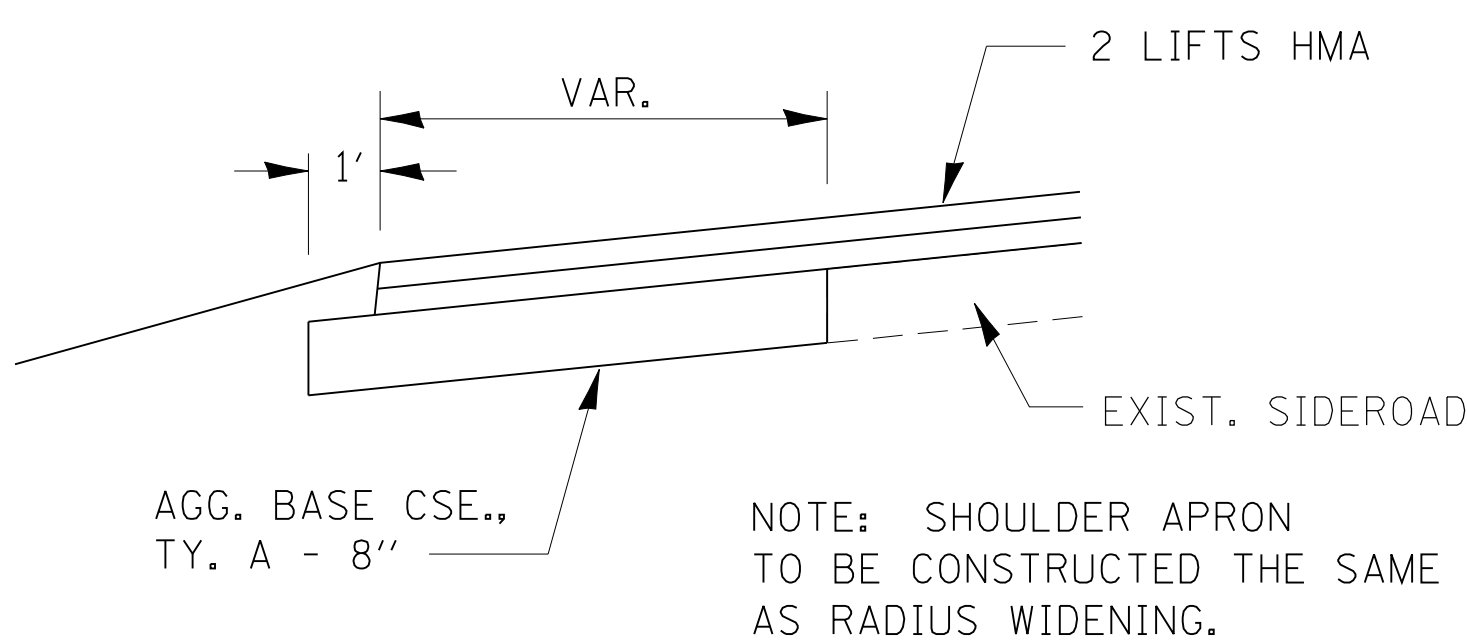
- DESIGNER NOTES:**
- THIS IS FOR USE ON BASIC RURAL RS AND W&RS PROJECTS.**
 - FURNISHED EXCAVATION SHALL BE INCLUDED AS A PAY ITEM.**
 - ALL ENTRANCE AND SIDEROAD WIDTHS, EXISTING MATERIAL TYPE, AND QUANTITIES MUST BE SHOWN IN THE SCHEDULE OR ON THE PLAN VIEW SHEETS.**



SIDEROAD DETAIL

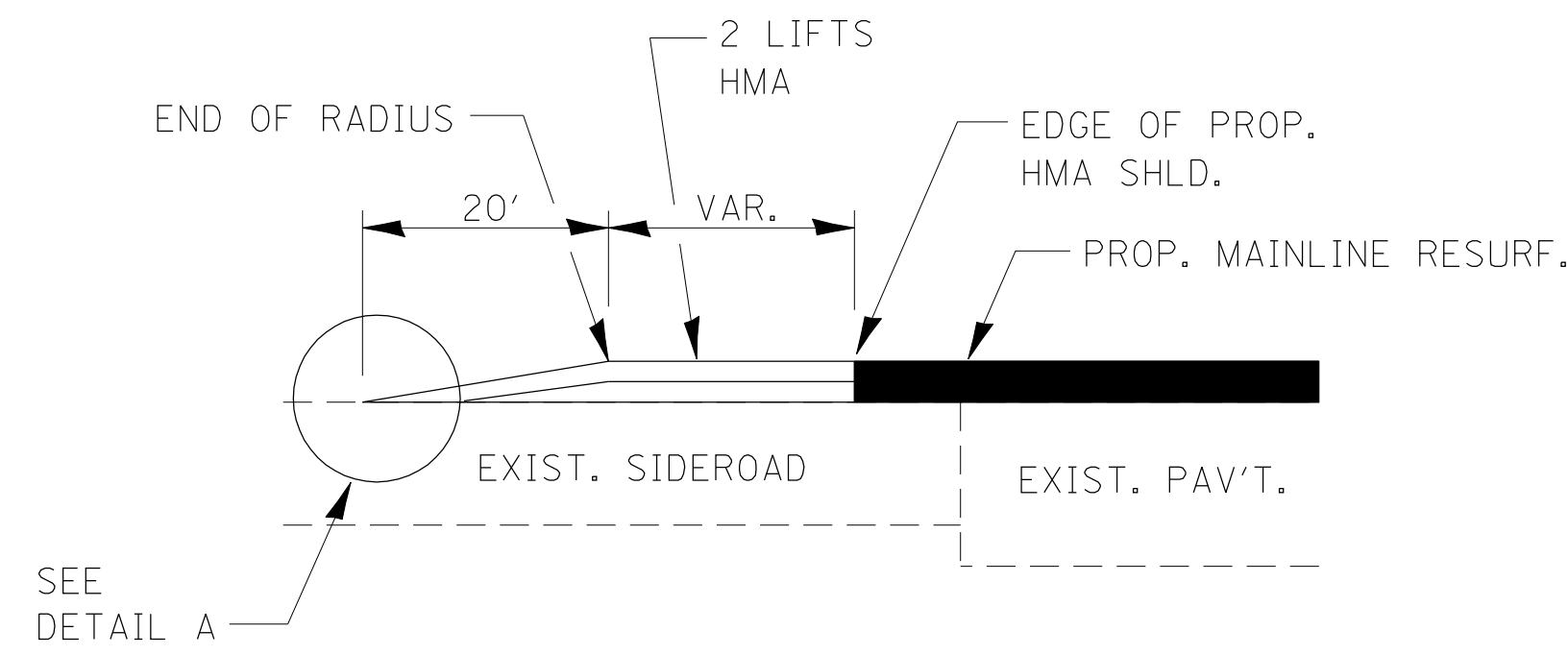


SECTION E-E

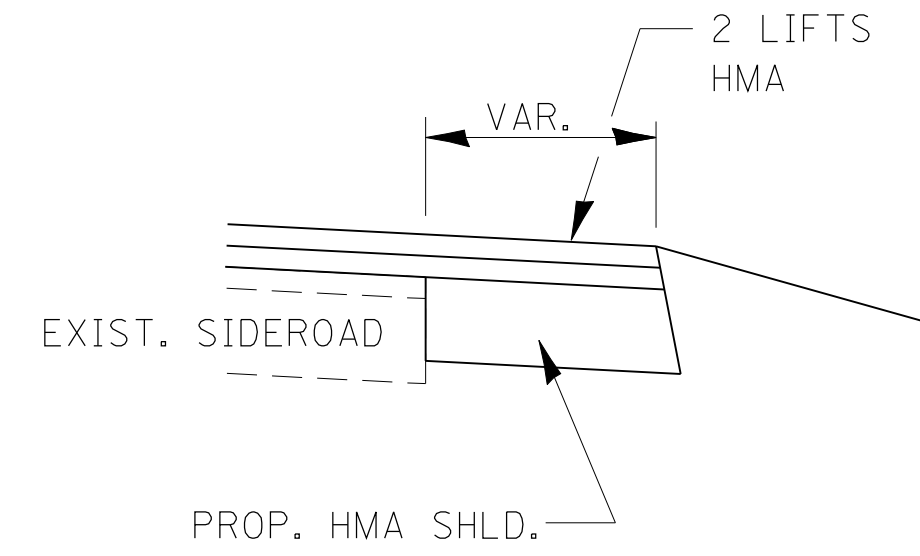


SECTION F-F

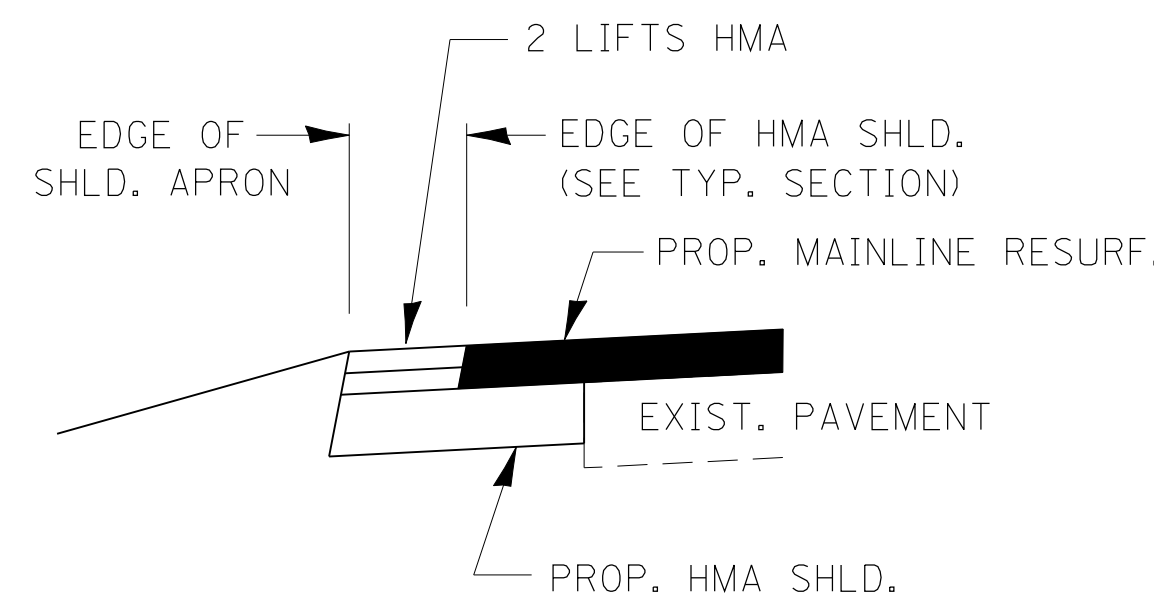
NOTE: SHOULDER APRON TO BE CONSTRUCTED THE SAME AS RADIUS WIDENING.



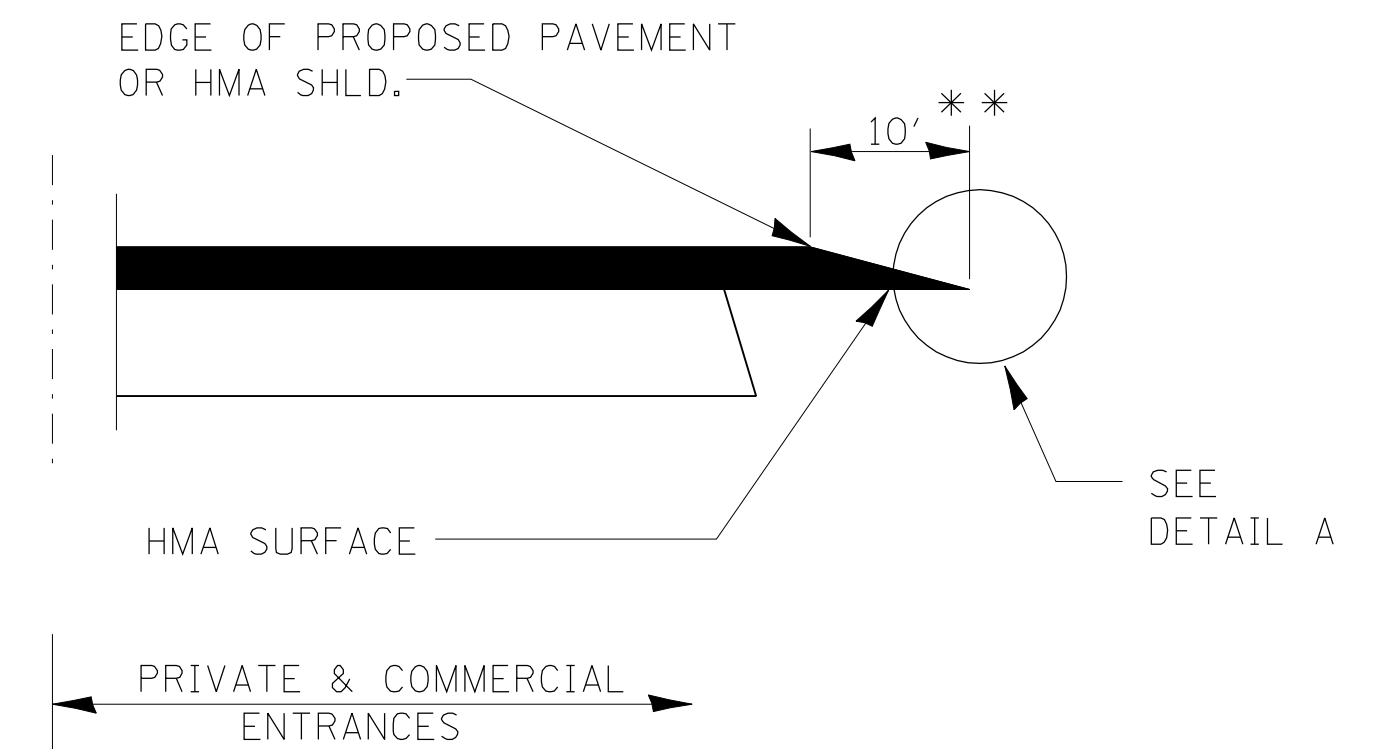
SECTION B-B



SECTION C-C

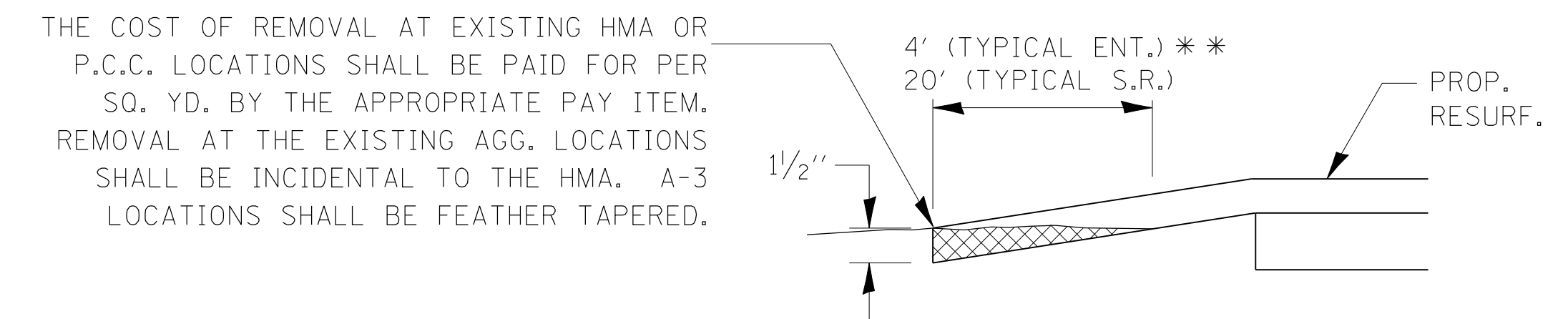


SECTION D-D



SECTION A-A

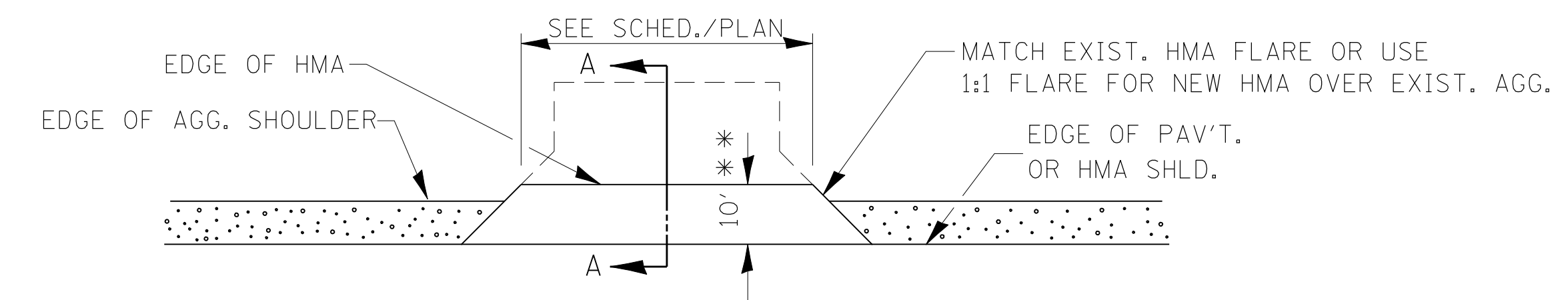
DETAILS AT ENTRANCES



DETAIL A

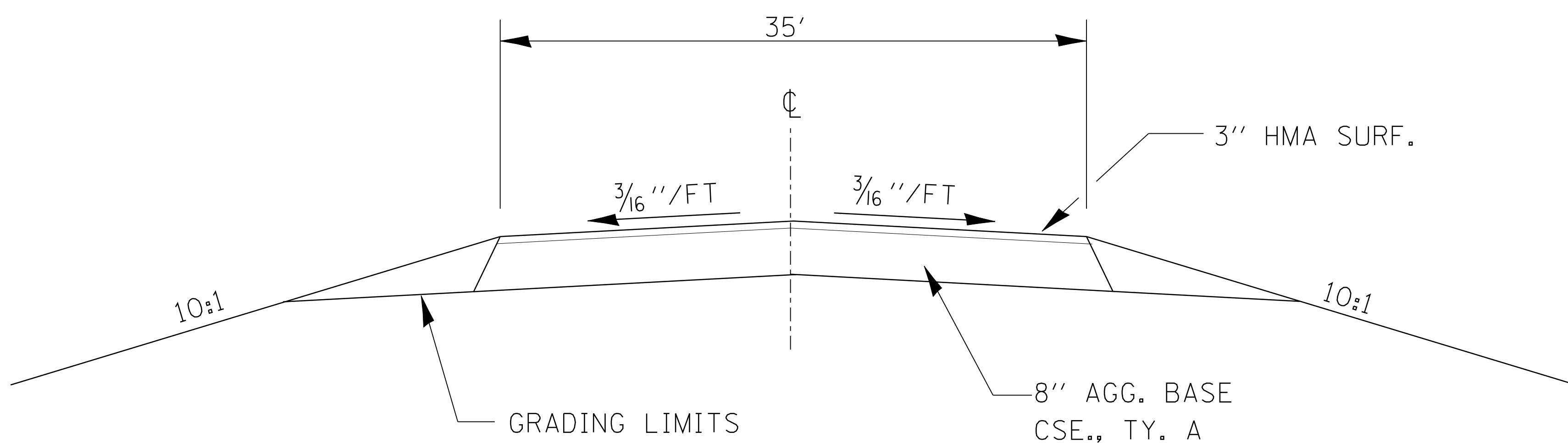
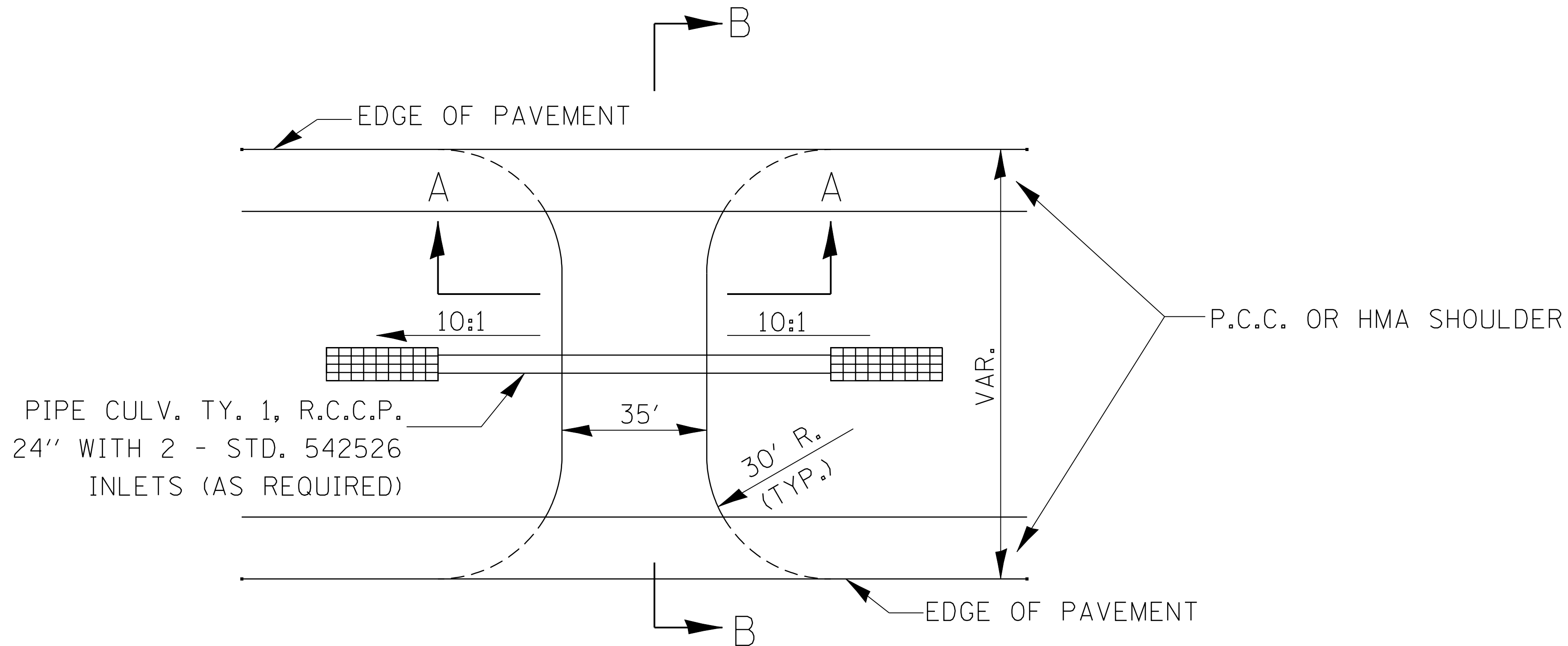
** PROPOSED HMA RESURFACING AT PUBLIC EDUCATIONAL FACILITY ENTRANCES SHALL BE EXTENDED TO THE RIGHT-OF-WAY LIMITS.

- DESIGNER NOTES:**
- 1. THIS IS FOR USE ON RURAL RESURFACINGS WHEN SIDEROAD RADII ARE TO BE RECONSTRUCTED.**
 - 2. THE ADEQUACY OF SIDEROADS SHALL BE VERIFIED IN THE FIELD. SIDEROAD RECONSTRUCTION MAY BE REQUIRED.**
 - 3. INCREASING THE HMA SHOULDER THICKNESS MAY BE REQUIRED AT HIGH VOLUME SIDEROADS.**
 - 4. ALL ENTRANCE AND SIDEROAD WIDTHS, EXISTING MATERIAL TYPE, AND QUANTITIES MUST BE SHOWN IN THE SCHEDULE OR ON THE PLAN VIEW SHEETS.**

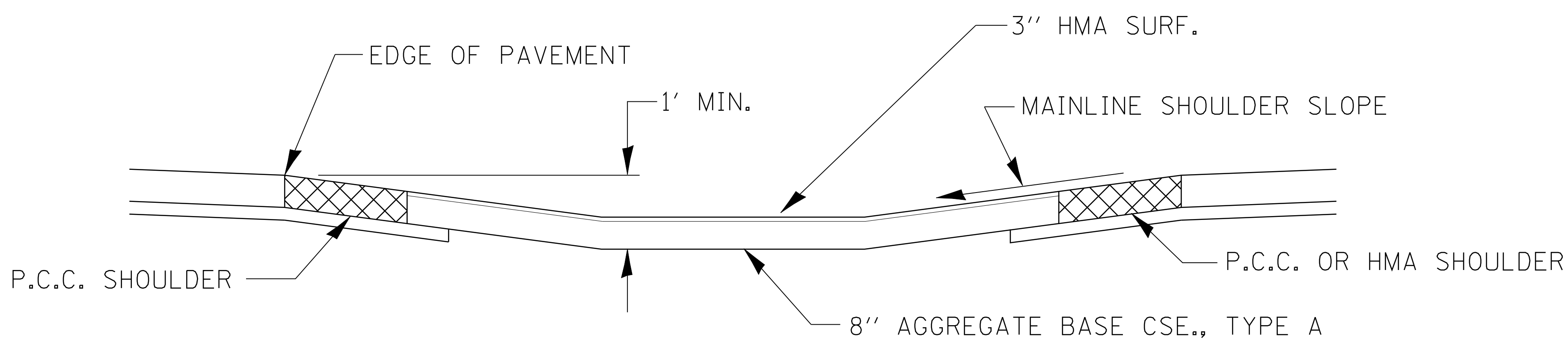


PLAN AT PRIVATE & COMMERCIAL ENTRANCES

(DO NOT RESURFACE FIELD ENTRANCES)

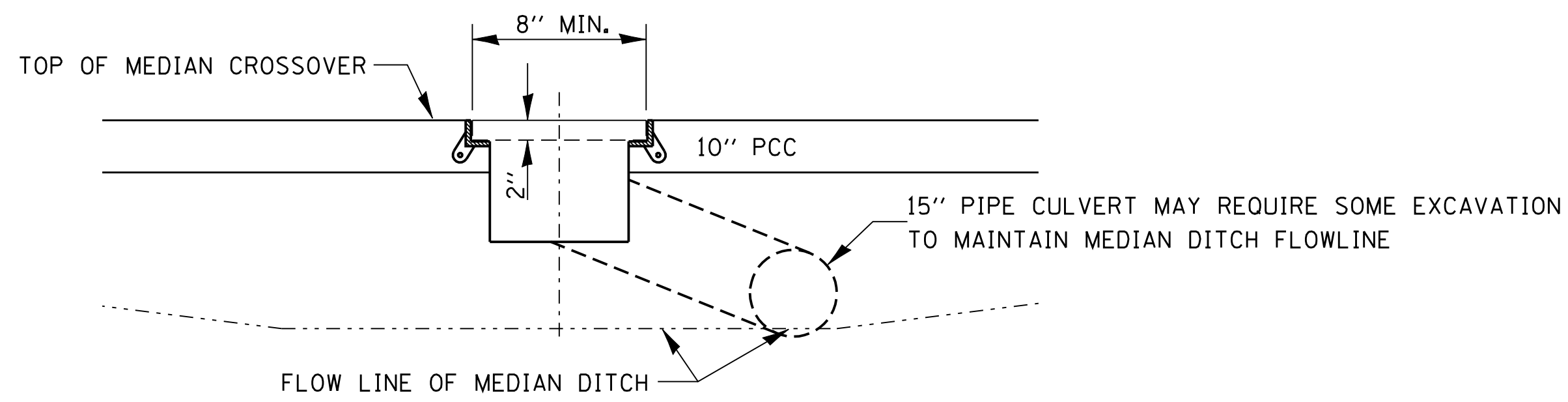


SECTION A-A

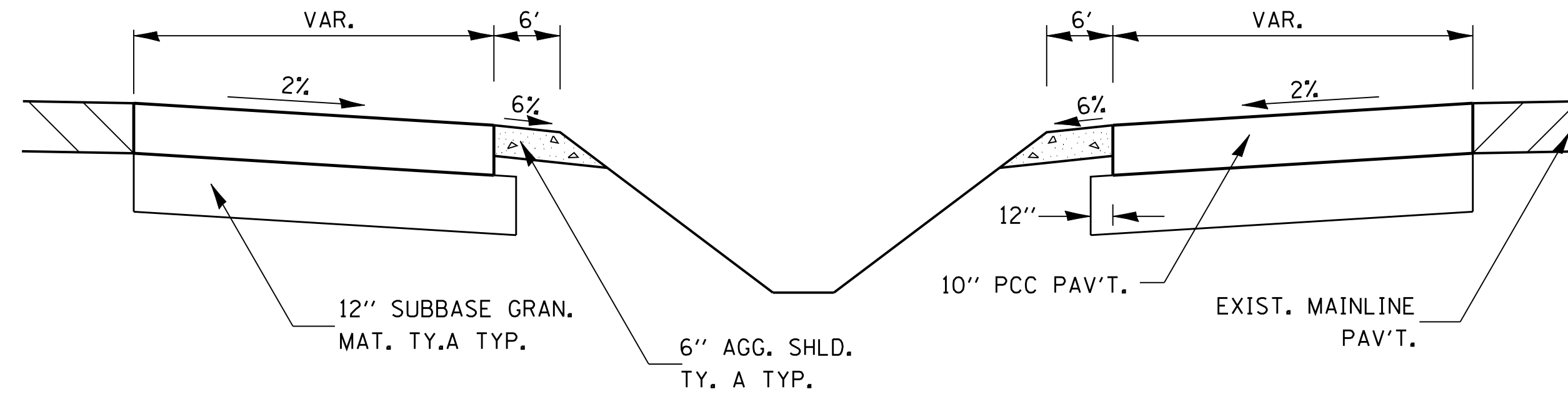
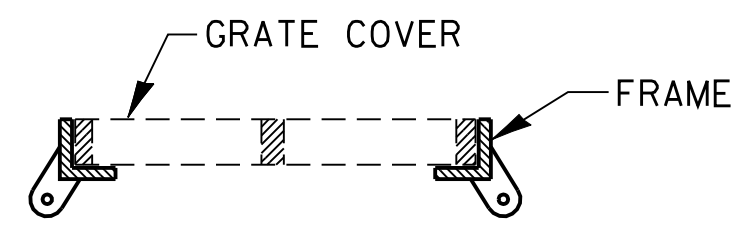


SECTION B-B

HMA MAINTENANCE CROSSOVER



SECTION A-A

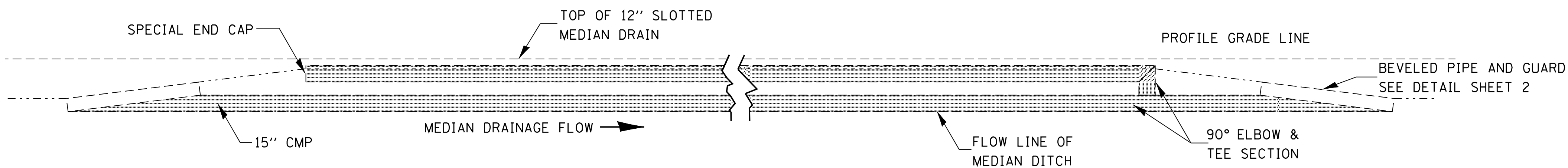


TYPICAL SECTION

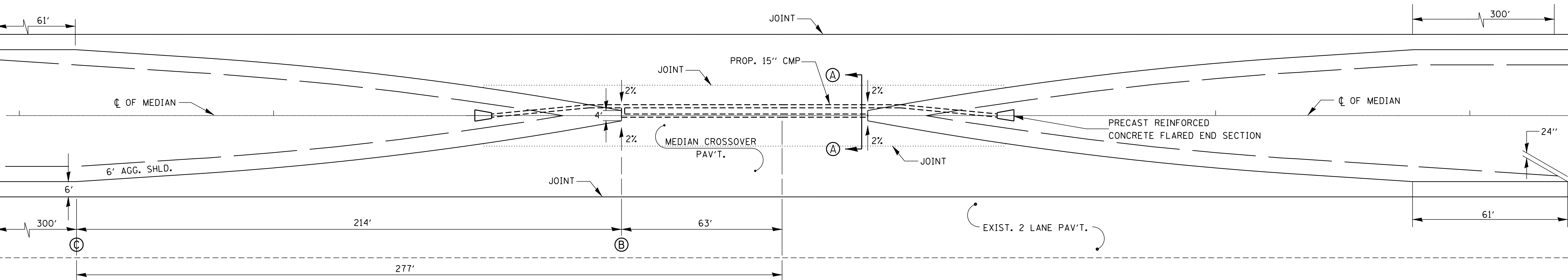
TABLE OF OFFSETS AND DROPS											
DISTANCE FROM LOCATION STATION	0	63.17'	75'	100'	125'	150'	175'	200'	225'	250'	277.49'
OFFSETS FROM INSIDE EDGE OF PAVEMENT	32'	30'	27.86'	23.67'	19.93'	16.64'	13.80'	11.40'	9.44'	7'	6'
DROP FROM INSIDE EDGE OF PAVEMENT	.64'	.60'	.56'	.47'	.40'	.33'	.28'	.23'	.19'	.16'	.24'

ⓑ

ⓒ



TYPICAL SECTION THRU CENTERLINE OF MEDIAN CROSSOVER



TYPICAL PLAN

1" = 20'

GENERAL NOTES:

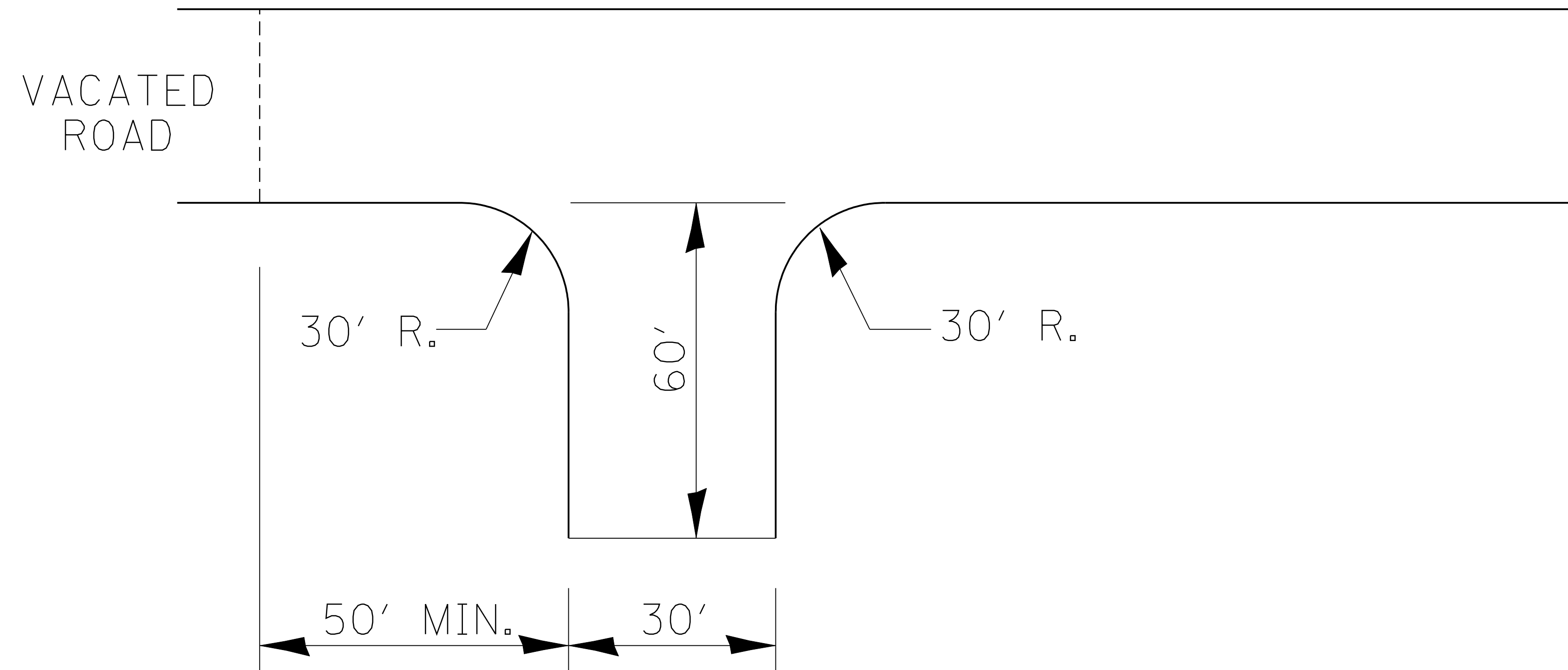
CONSTRUCTION OF MEDIAN CROSSOVER SHALL CONFORM TO THE REQUIREMENTS OF CURRENT STANDARD SPECIFICATIONS.

PRICE BID FOR CONTRACT ITEMS SHALL BE CONSIDERED FULL COMPENSATION FOR FURNISHING ALL NECESSARY MATERIALS AND LABOR TO CONSTRUCT THE MEDIAN CROSSOVER AS DETAILED.

UNLESS OTHERWISE SPECIFIED, WHEN THE MEDIAN CROSSOVER IS TO BE REMOVED, THE CONTRACTOR SHALL BE REQUIRED TO SAW FULL-DEPTH ALONG THE SHOULDER LINE 6' FROM THE EDGE OF PAVEMENT. THE 6' ADJACENT TO THE EDGE OF PAVEMENT SHALL REMAIN IN PLACE AND BE USED AS SHOULDERS. THE COST OF SAWING SHALL BE INCLUDED IN THE PAVEMENT REMOVAL.

JOINTS SHALL BE SAWED AT ONE THIRD OF THE MEDIAN WIDTH. ALL JOINTS SHALL BE SEALED.

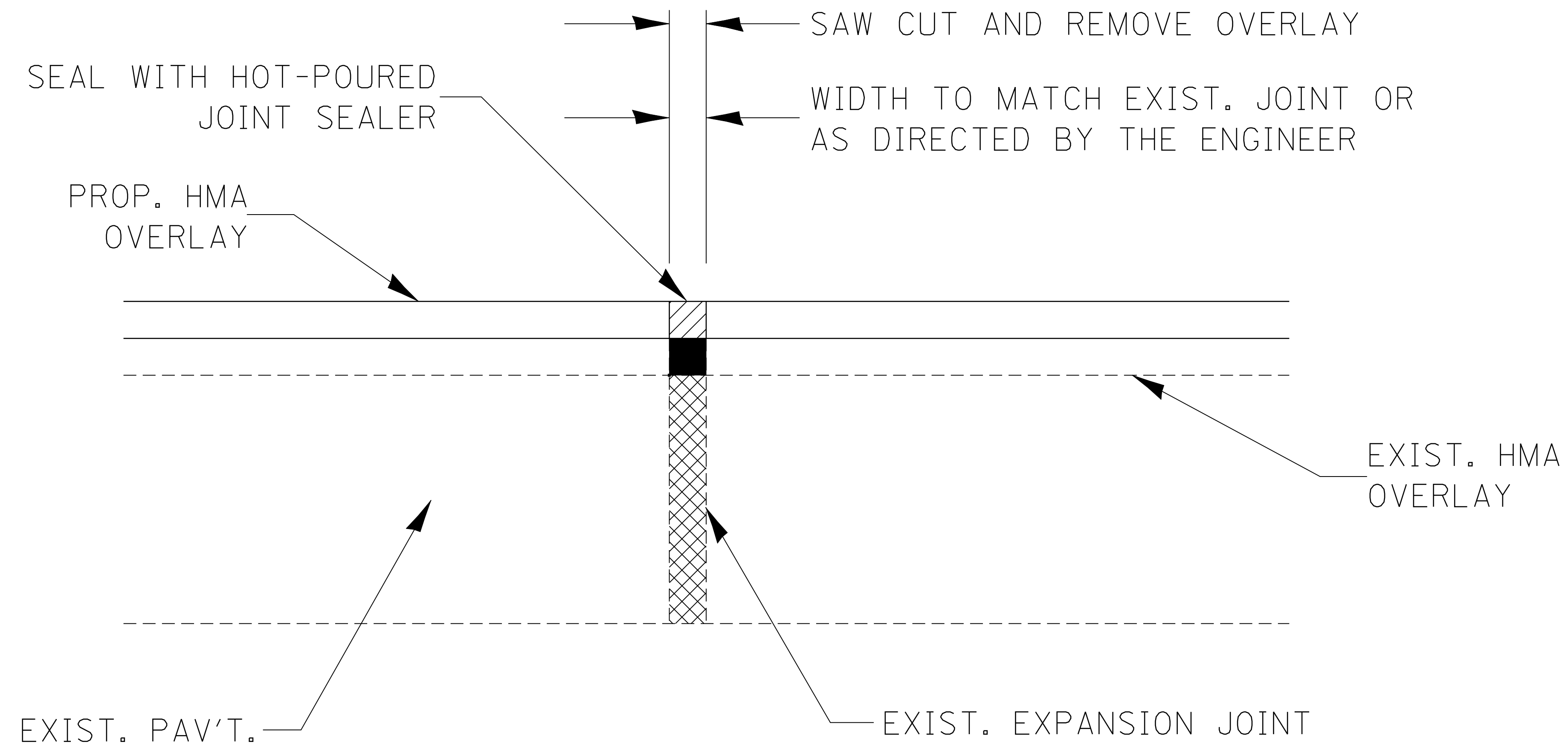
TRAFFIC CONTROL STANDARD 701416 IS TO BE USED WITH THIS DETAIL.



TYPICAL TURNAROUND ENTRANCE

NOTES:

1. ENTRANCE SURFACE: AGGREGATE, IF ROAD IS AGGREGATE; 2" OF INCIDENTAL HMA SURFACING IF ROAD IS PAVED.
2. ENTRANCE BASE: 8" AGGREGATE.
3. INSTALL PIPE CULVERT IF REQUIRED.

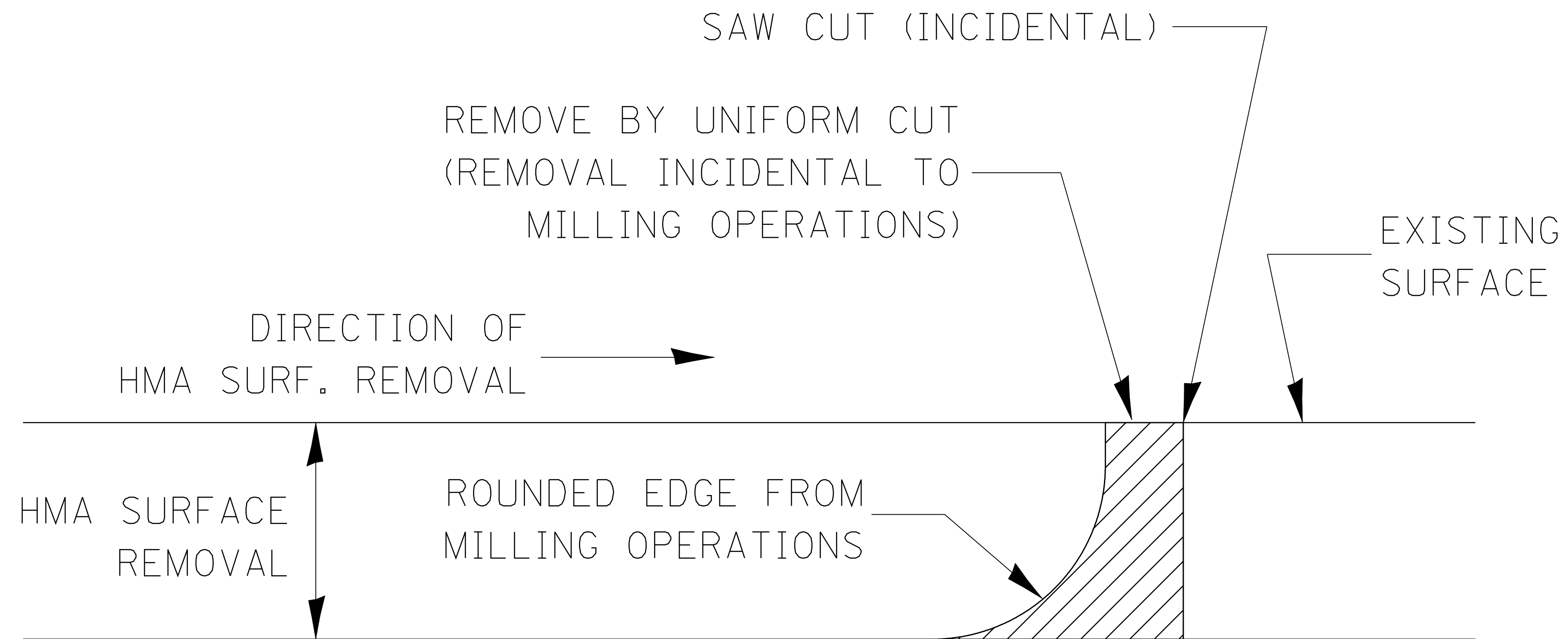


EXPANSION JOINT REHABILITATION DETAIL

GENERAL NOTES:

1. THE NEW HMA OVERLAY SHALL BE SAWED, REMOVED AND THE JOINT AREA CLEANED. PRIOR TO PLACING THE HOT-POURED JOINT SEALER, THE JOINT SHALL BE BLOWN OUT WITH COMPRESSED AIR.
2. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR EXPANSION JOINT REHABILITATION.

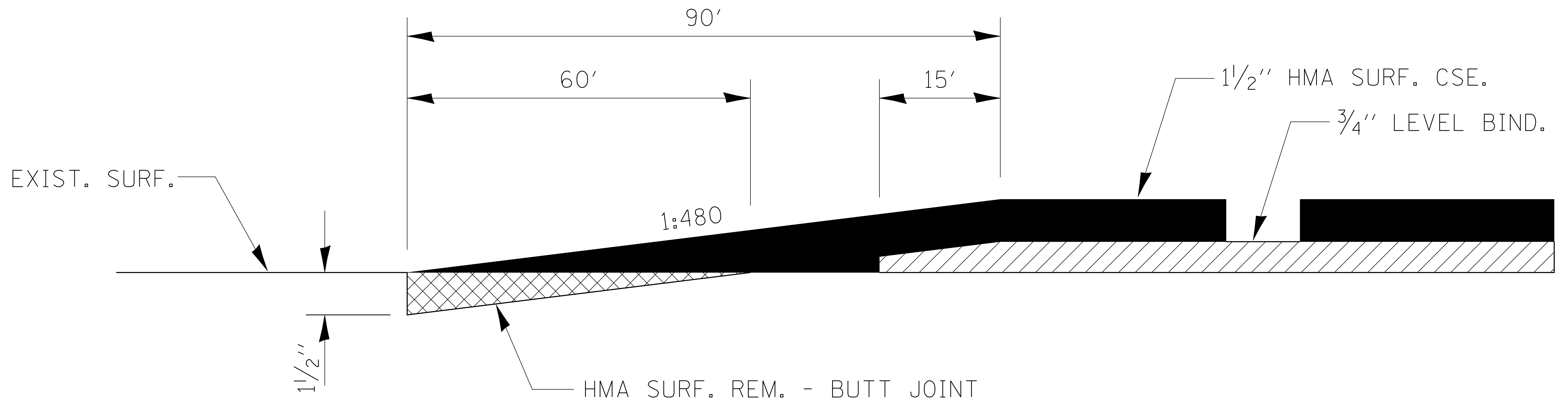
406-7



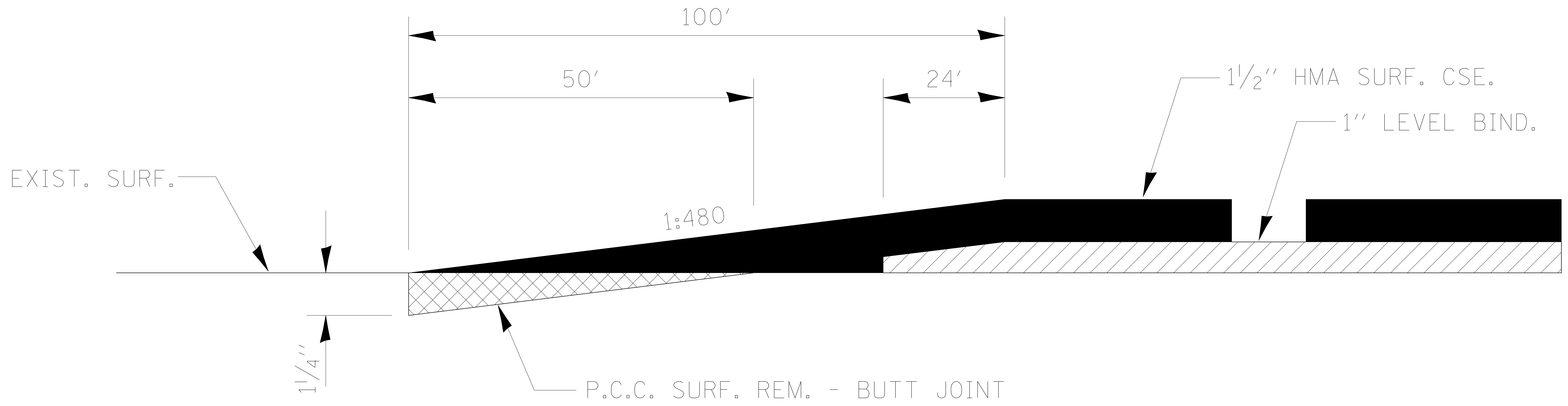
NOTE:

WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE,
 THEN A SAW CUT SHALL BE USED TO MANUFACTURE
 A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL.
 THE ENGINEER SHALL BE THE SOLE JUDGE
 CONCERNING THE USE OF THIS DETAIL

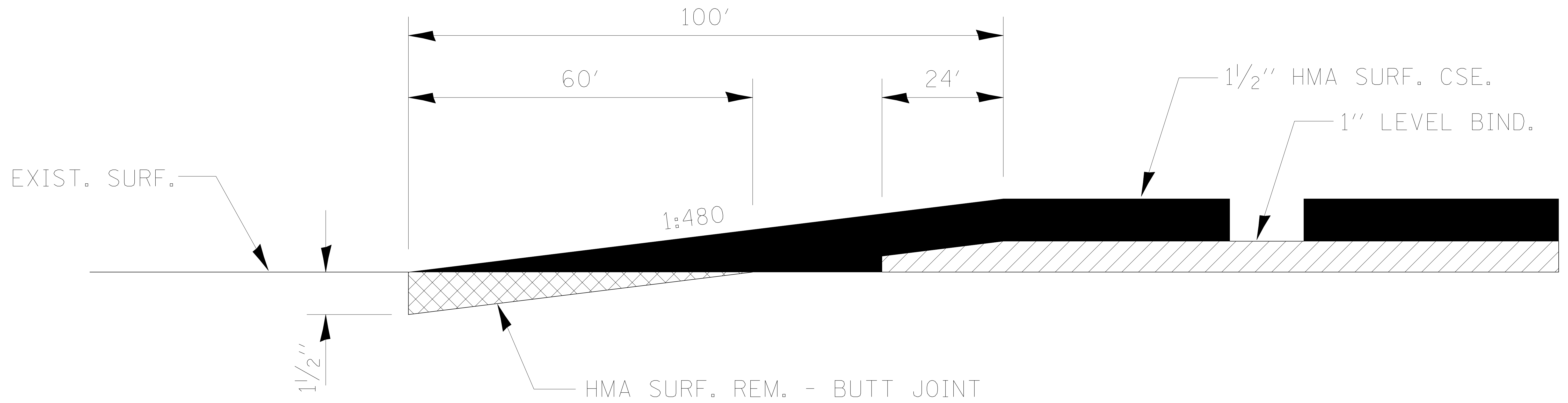
HMA DETAIL AT BUTT JOINTS



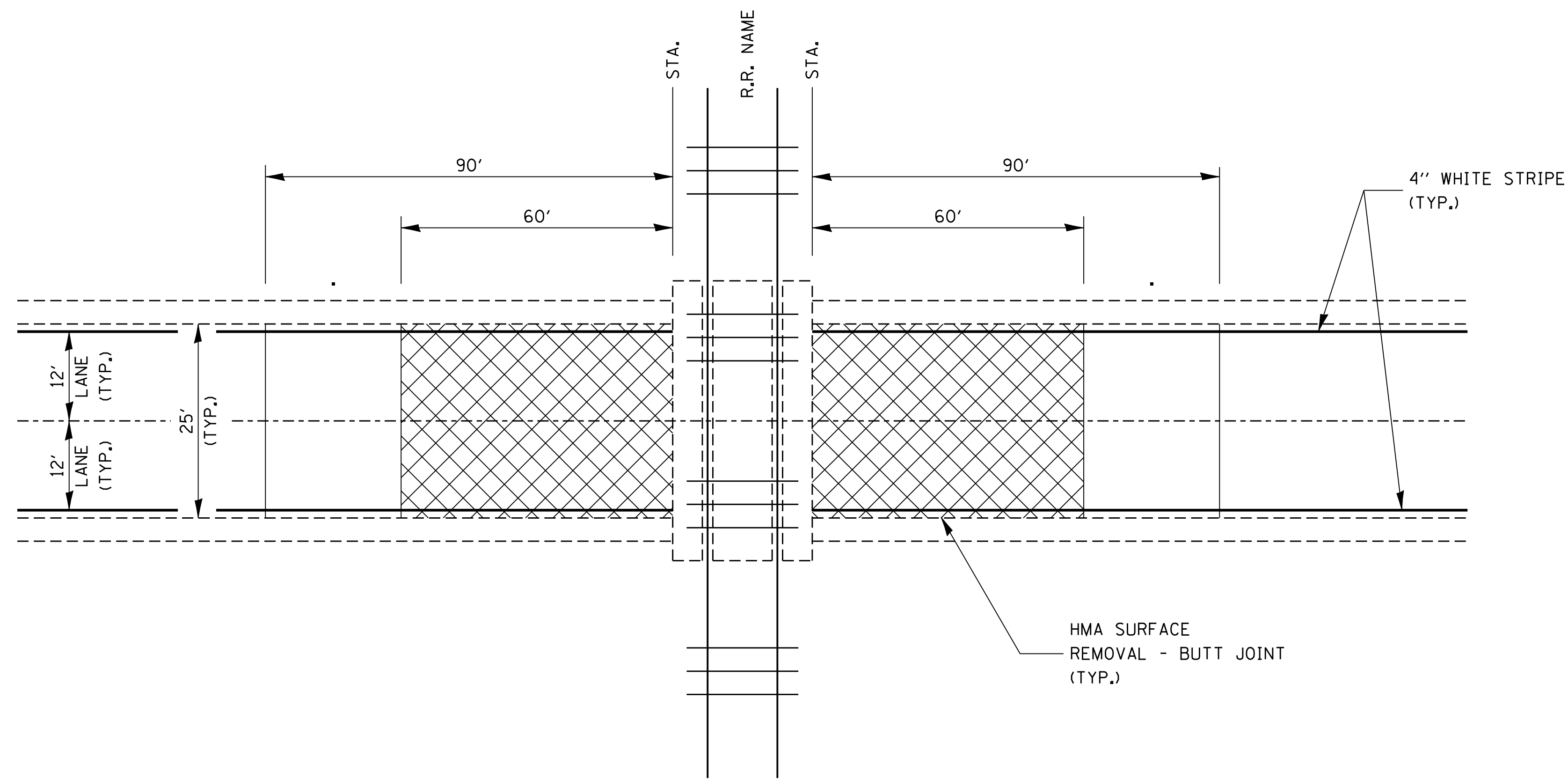
406-9



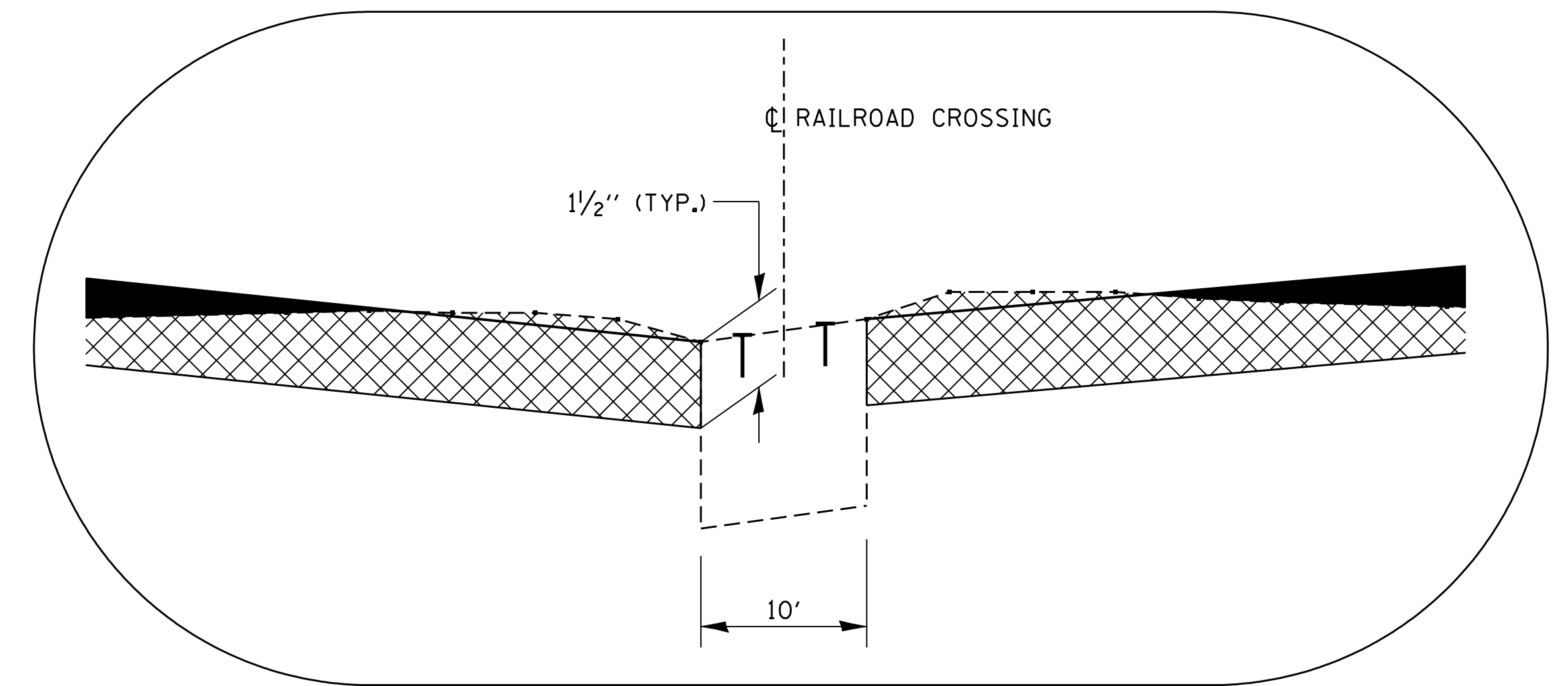
406-10



406-11

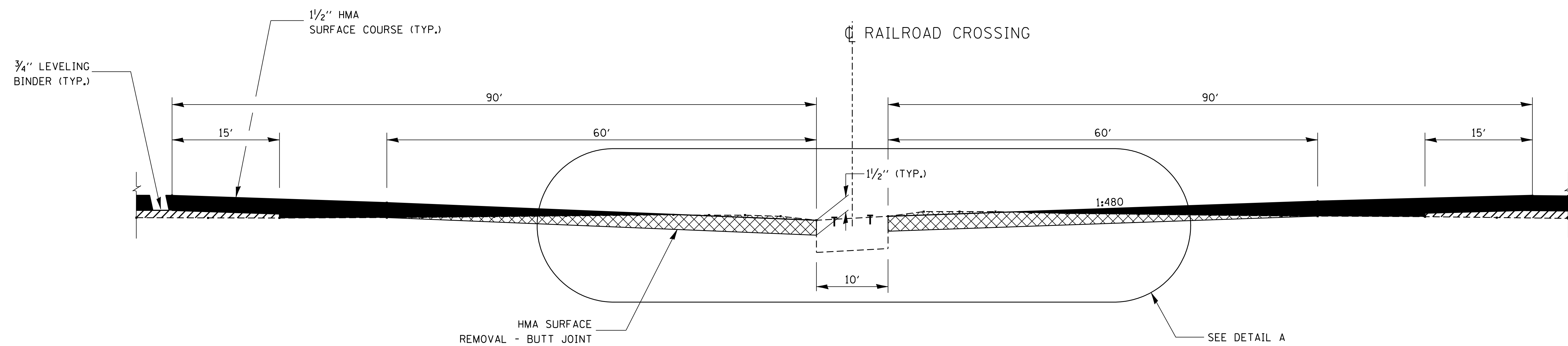


PLAN AT RAILROAD CROSSING

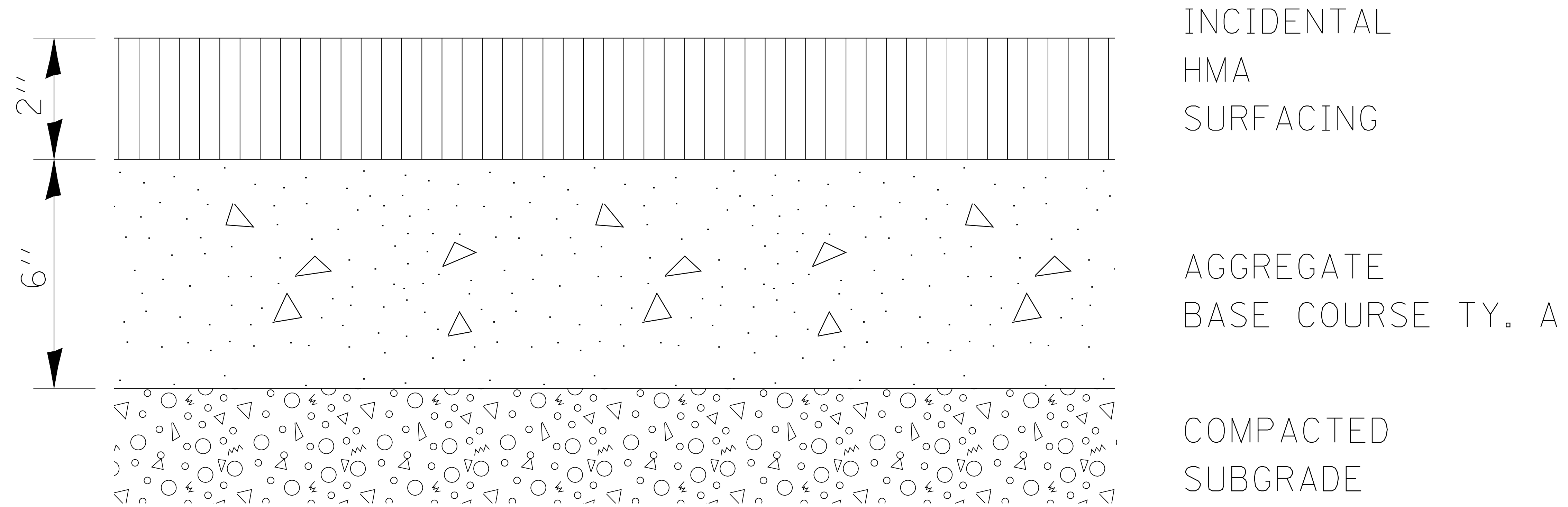


DETAIL A

**DESIGNER NOTE:
ADD STATIONING, RAILROAD NAME
AND ADDITIONAL RAILROAD TRACKS (IF REQUIRED)**

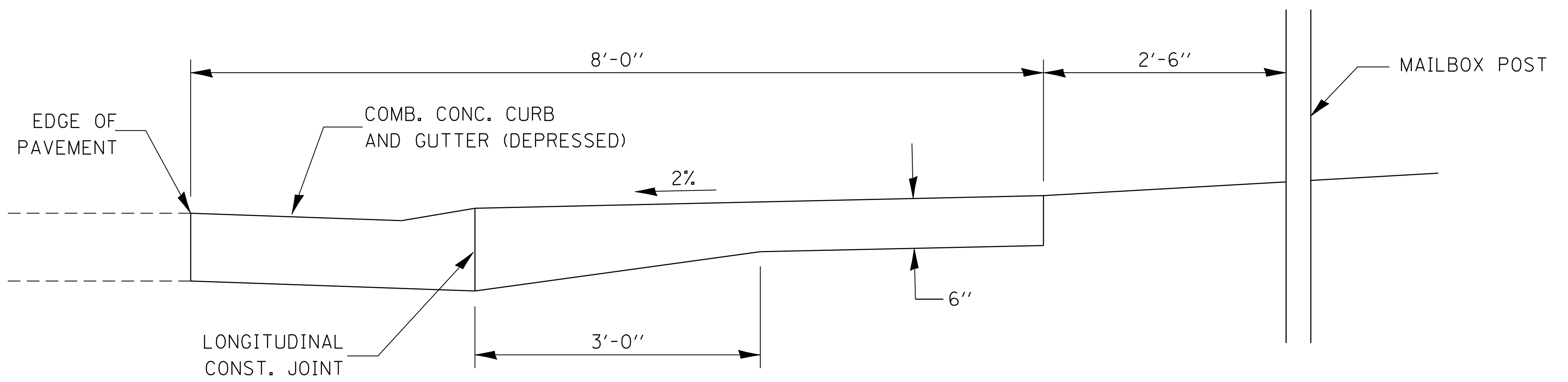


BUTT JOINT AT RAILROAD CROSSING

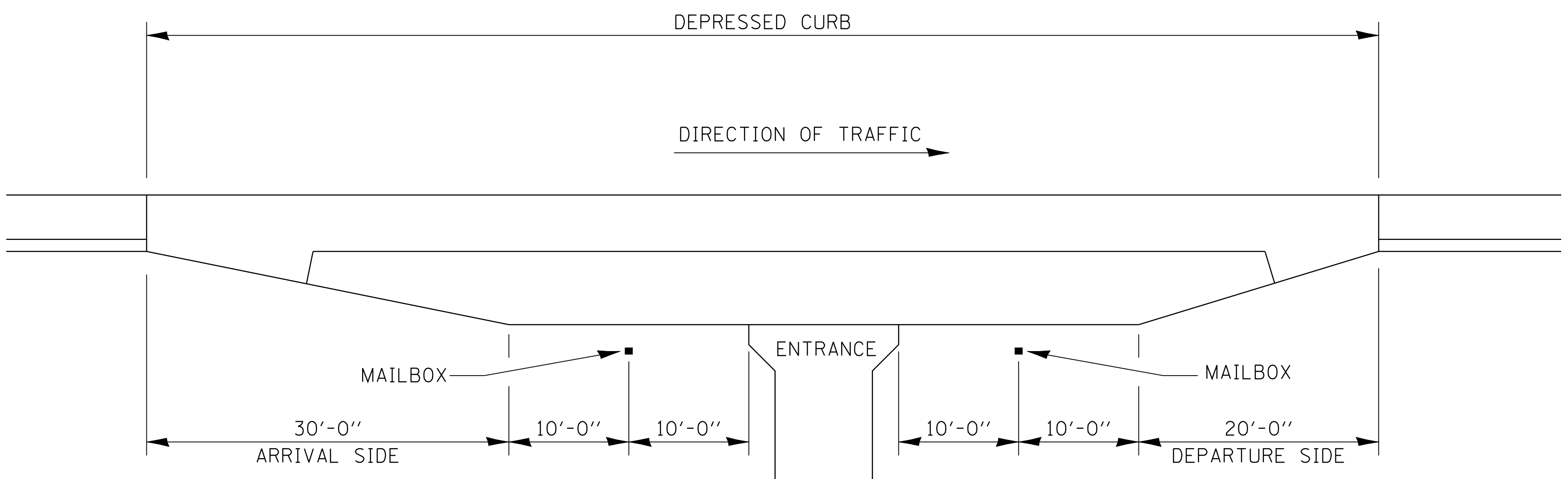
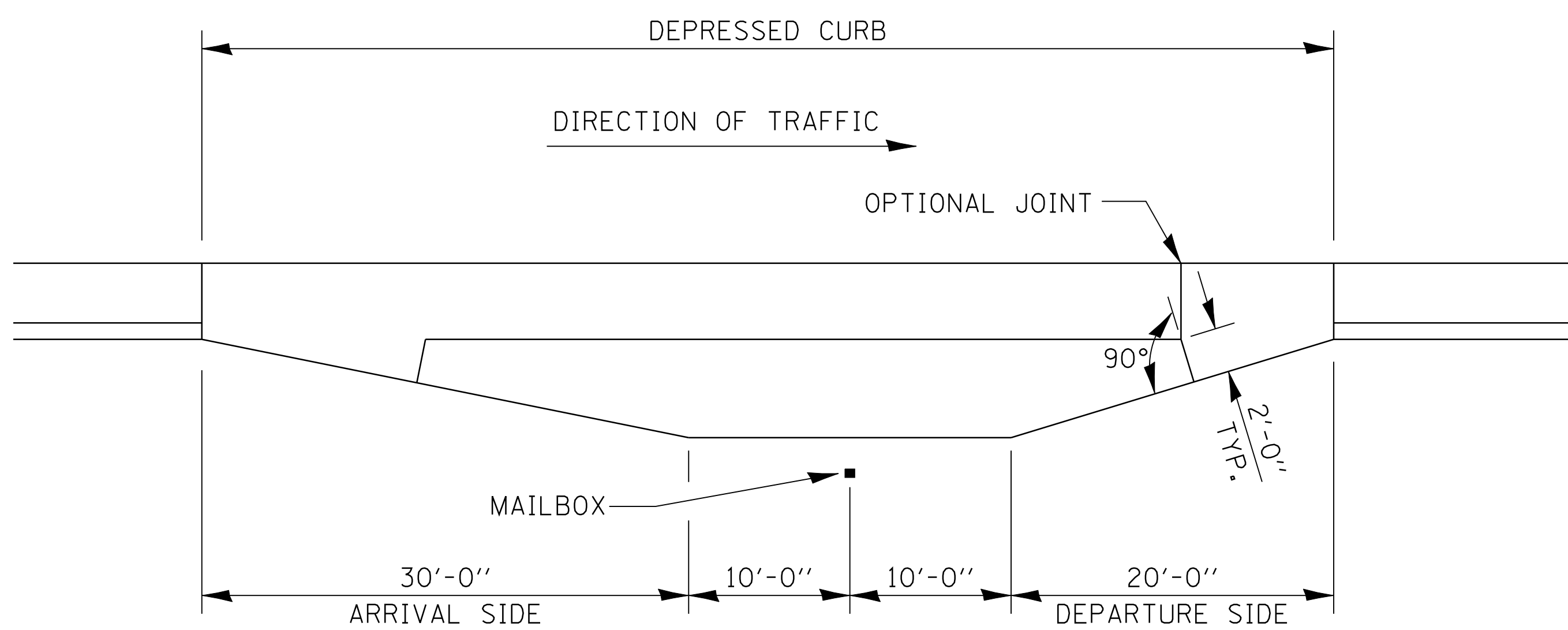


BICYCLE PATH OR SHARED-USE TRAIL CROSS SECTION

406-13



TYPICAL CROSS SECTION



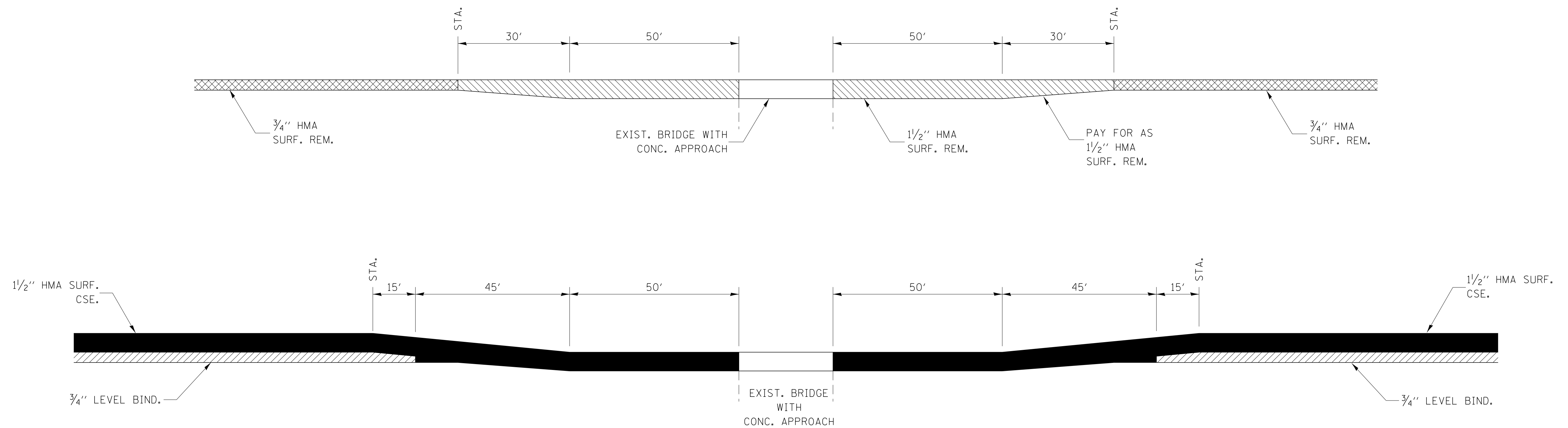
DETAIL OF MAILBOX TURNOUT IN CURB AND GUTTER SECTION
TYPICAL INSTALLATION

GENERAL NOTES

1. THE LONGITUDINAL CONSTRUCTION JOINT SHALL CONFORM TO SECTION 420.05 OF THE STANDARD SPECIFICATIONS.
2. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR P.C. CONCRETE DRIVEWAY PAVEMENT OF THE THICKNESS SPECIFIED ON THE PLANS WHICH PRICE SHALL INCLUDE THE LONGITUDINAL CONSTRUCTION JOINT, AND THE ADDITIONAL THICKNESS REQUIRED TO TRANSITION TO THE DEPRESSED COMBINATION CONCRETE CURB AND GUTTER.
3. MAINTAIN A MINIMUM 10' TANGENT SECTION FROM EACH SIDE OF MAILBOX.

406-14

MAILBOX TURNOUT WITH
URBAN TYPICAL

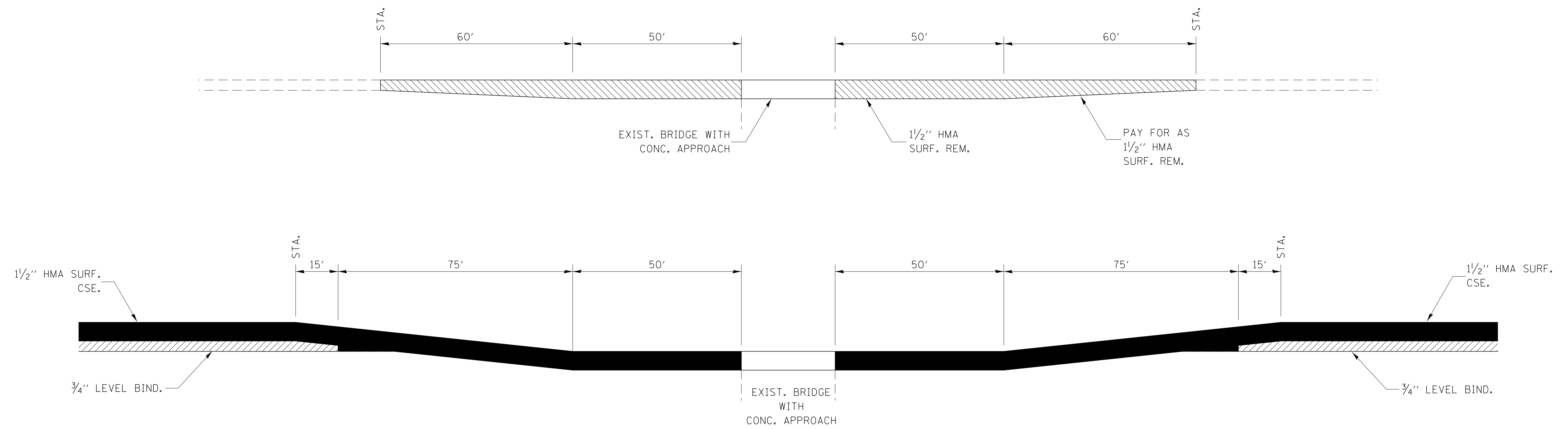


**DESIGNER NOTE:
BUTT JOINT DETAIL TO BE USED TO PREVENT DYNAMIC LOADING
ON ALL RESURFACING PROJECTS WHEN BRIDGE IS TO BE GAPPED**

**STRUCTURE BUTT JOINT
MILLING AND RESURFACING AT BRIDGE**

406-16

FILE NAME = \$FILEL\$	USER NAME = \$USER\$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE:		SHEET NO.	OF	SHEETS	STA.	TO	STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -										CONTRACT NO.				
	PLOT DATE = \$DATE\$	CHECKED -	REVISED -										FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		DATE -	REVISED -														

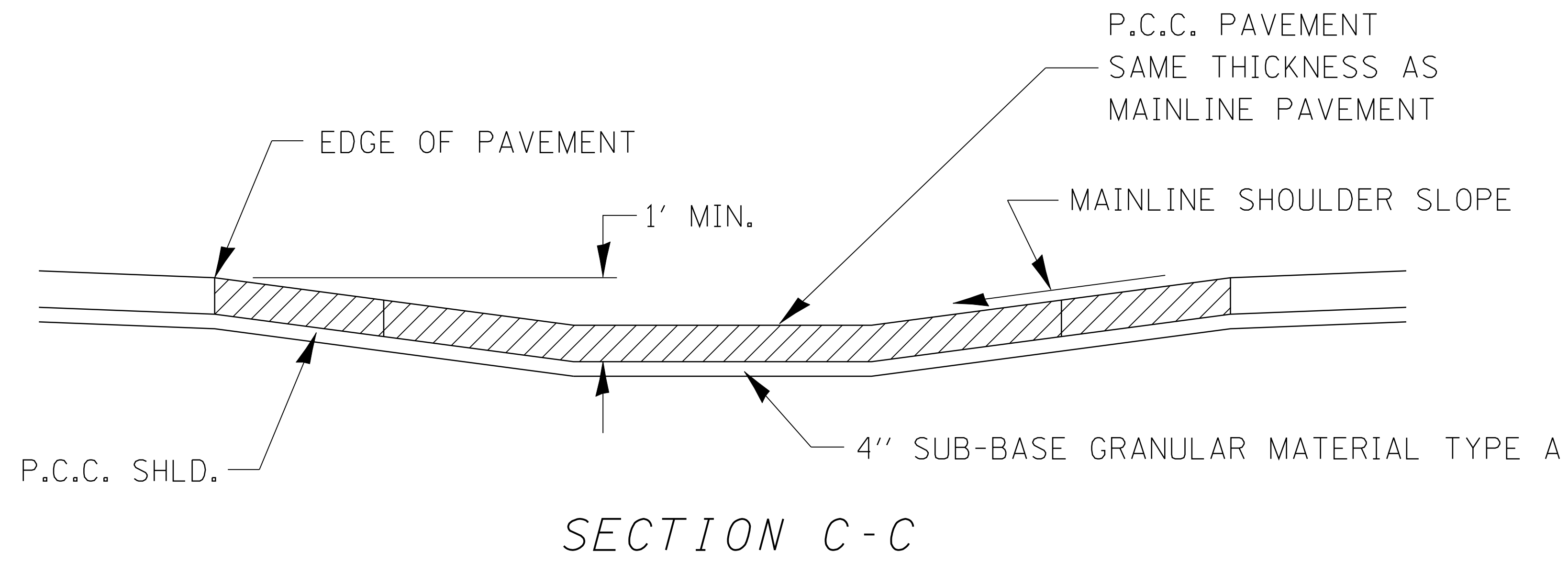
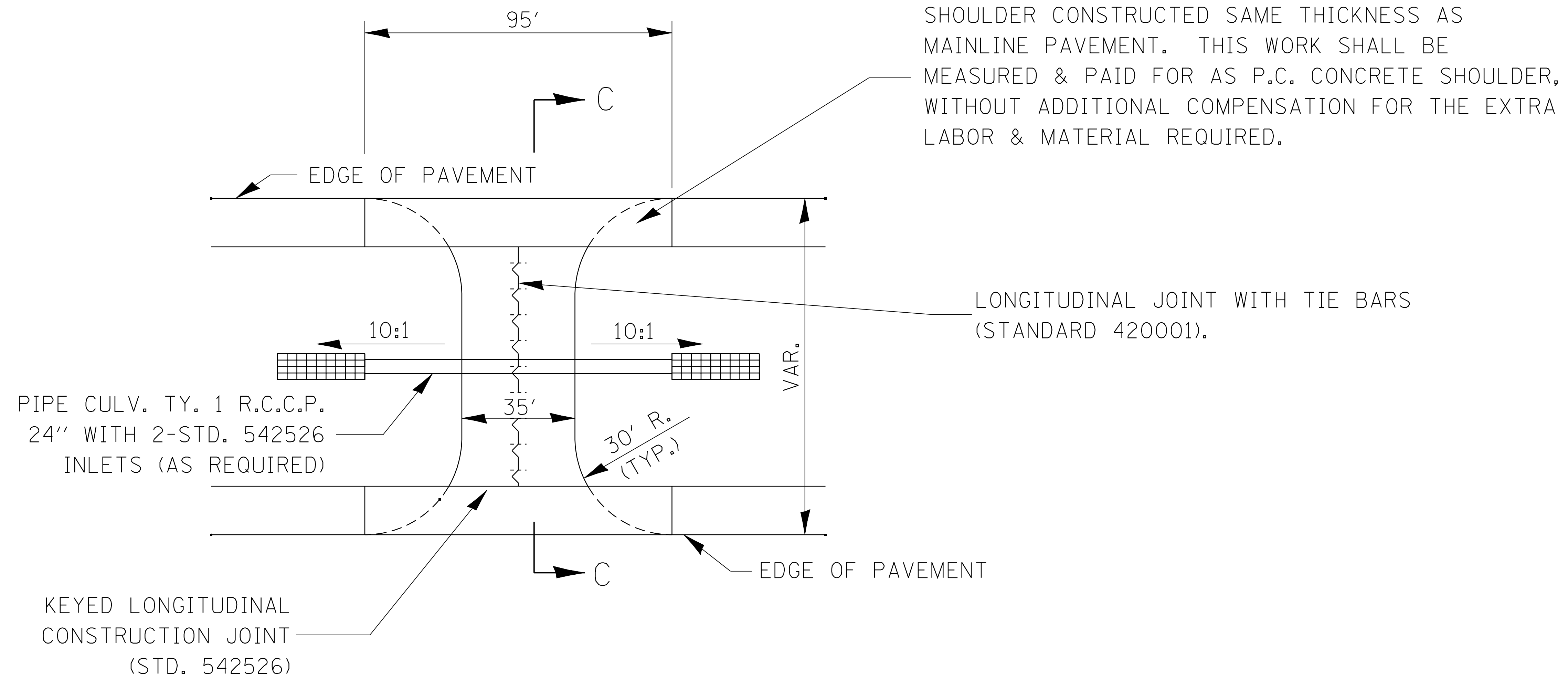


**DESIGNER NOTE:
 BUTT JOINT DETAIL TO BE USED TO PREVENT DYNAMIC LOADING
 ON ALL RESURFACING PROJECTS WHEN BRIDGE IS TO BE GAPPED**

**STRUCTURE BUTT JOINT
 MILLING AND RESURFACING AT BRIDGE**

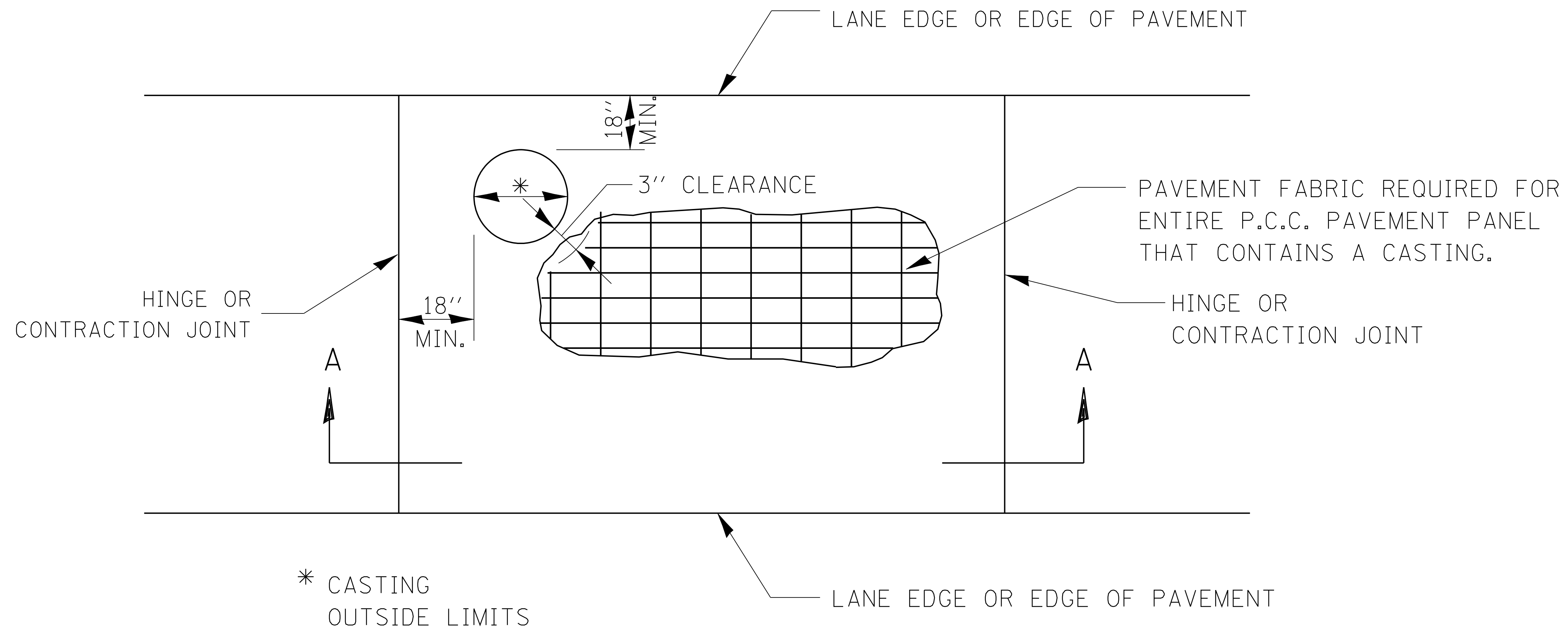
406-17

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCALE:		SHEET NO.	OF	SHEETS	STA.	TO	STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -										CONTRACT NO.				
		CHECKED -	REVISED -										ILLINOIS FED. AID PROJECT				
		DATE -	REVISED -														



CONCRETE MAINTENANCE CROSSOVER

420-1



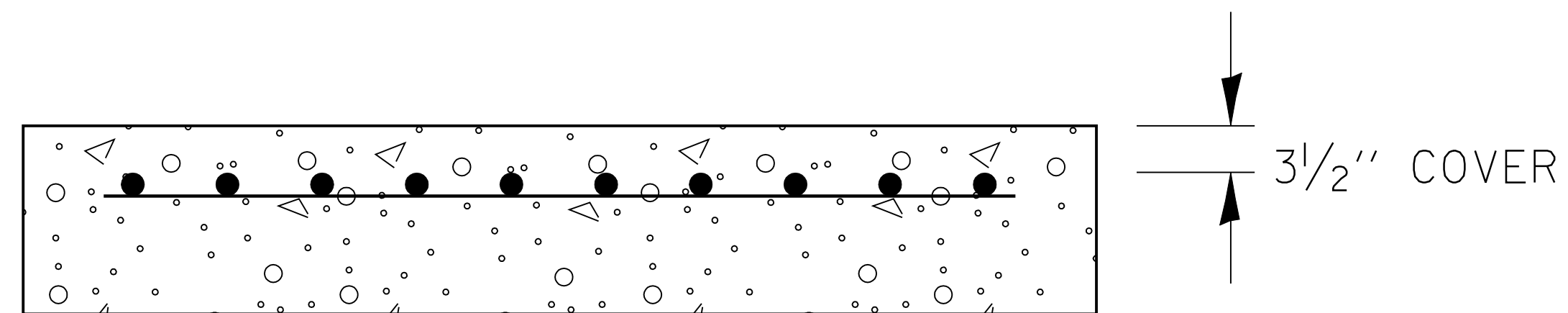
* CASTING
OUTSIDE LIMITS

GENERAL NOTES

THE CASTING SHALL BE SET TO GRADE, ANCHORED, AND INCORPORATED INTO THE P.C.C. PAVEMENT CONSTRUCTION. SEPARATE PAVEMENT BLOCKOUTS WILL NOT BE ALLOWED.

SEE STD. 420701 FOR ADDITIONAL PAVEMENT FABRIC DETAILS.

PAVEMENT FABRIC WILL BE PAID FOR SEPARATELY. THE QUANTITY OF PAVEMENT FABRIC WILL BE THE COMPUTED SURFACE AREA OF THE P.C.C. PAVEMENT PANEL IN WHICH THE PAVEMENT FABRIC IS INSTALLED. NO DEDUCTION WILL BE MADE FOR THE CASTING AREA.



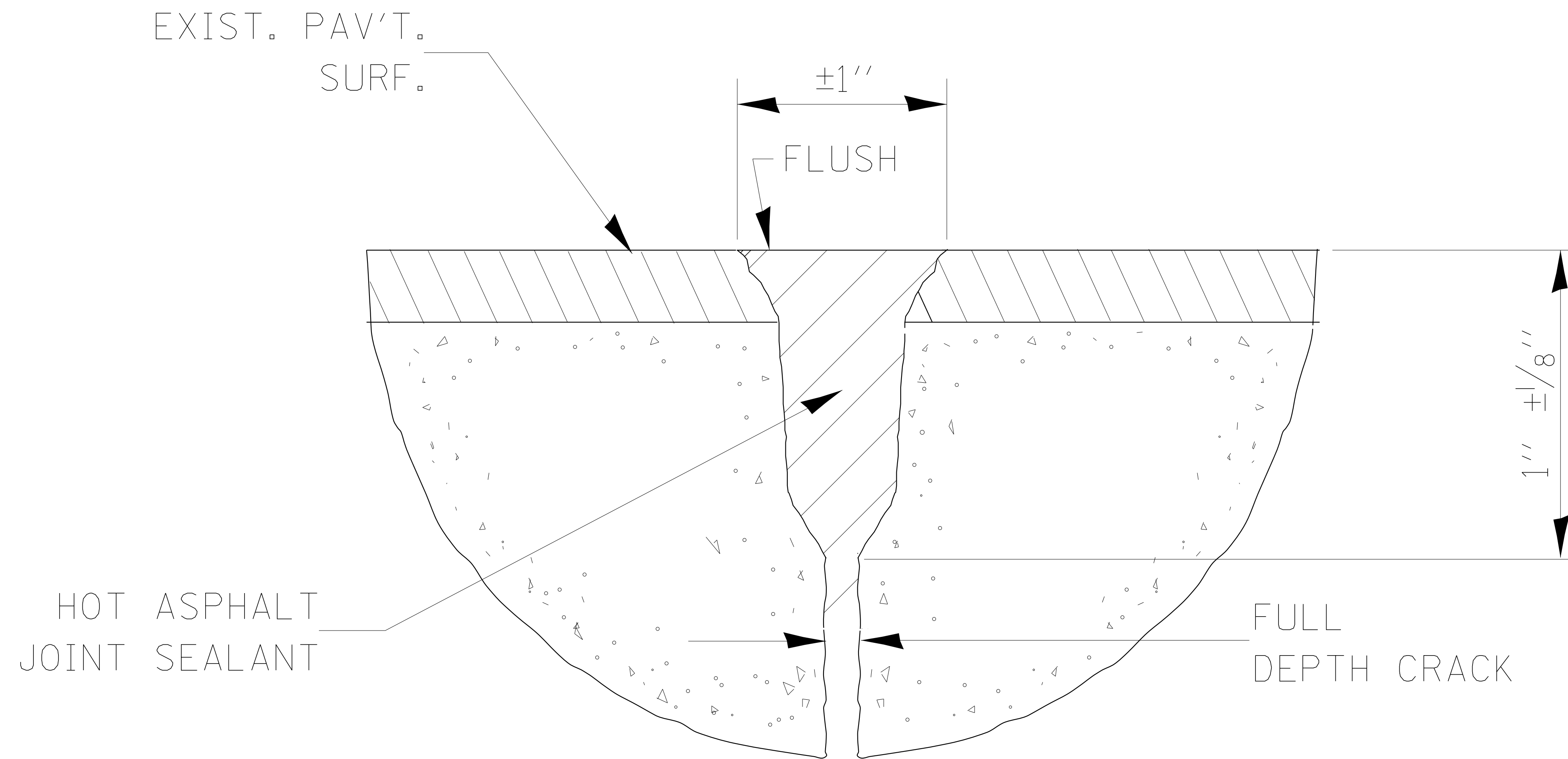
SECTION A-A

DESIGNER NOTES

INCLUDE STD. 420701
NEED PAY ITEM FOR PAVEMENT FABRIC

CASTINGS IN P.C.C. PAVEMENT

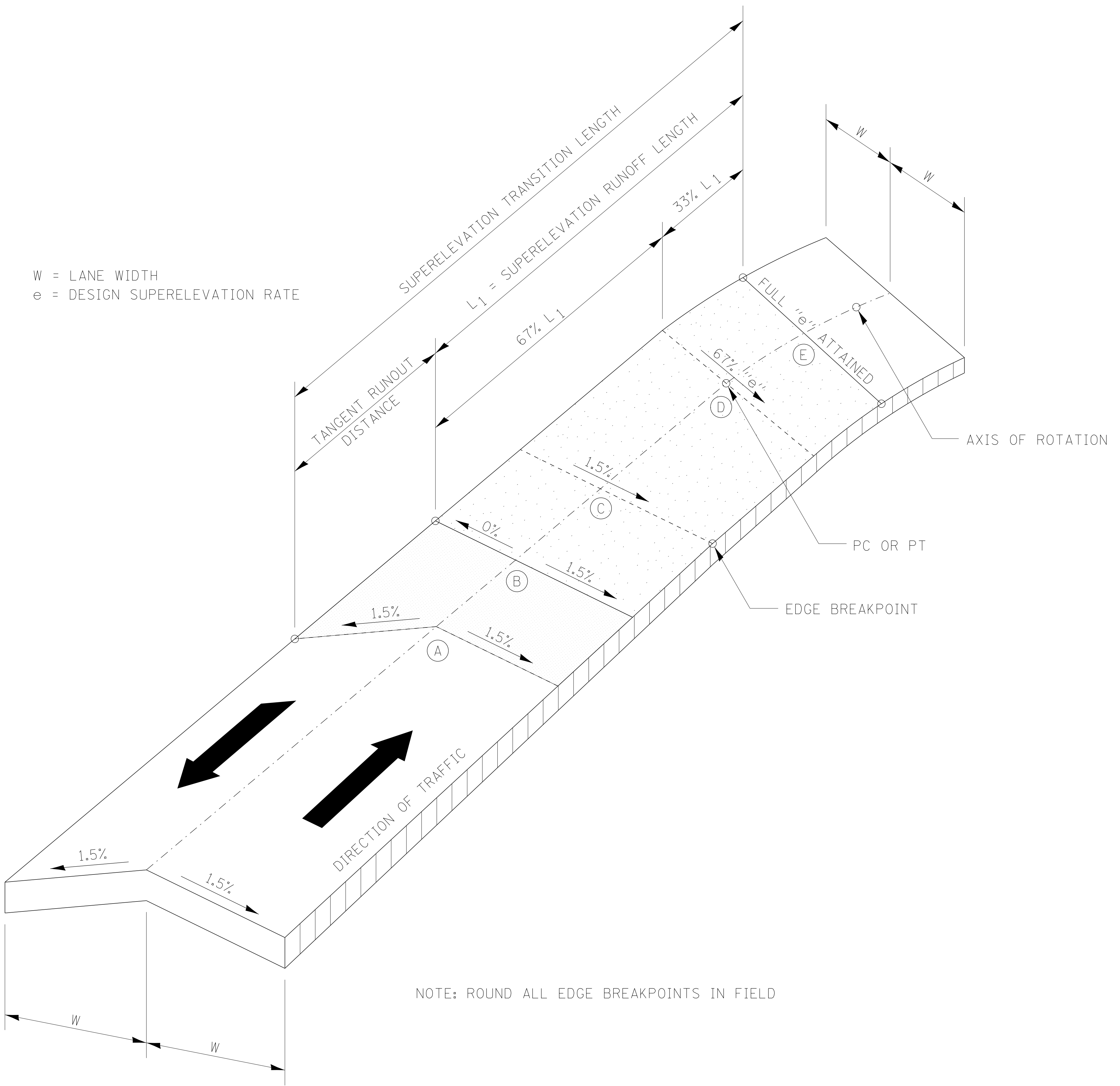
420-2



ROUTING & SEALING JOINTS

(CENTERLINE & TRANSVERSE PATCH BOUNDARIES)

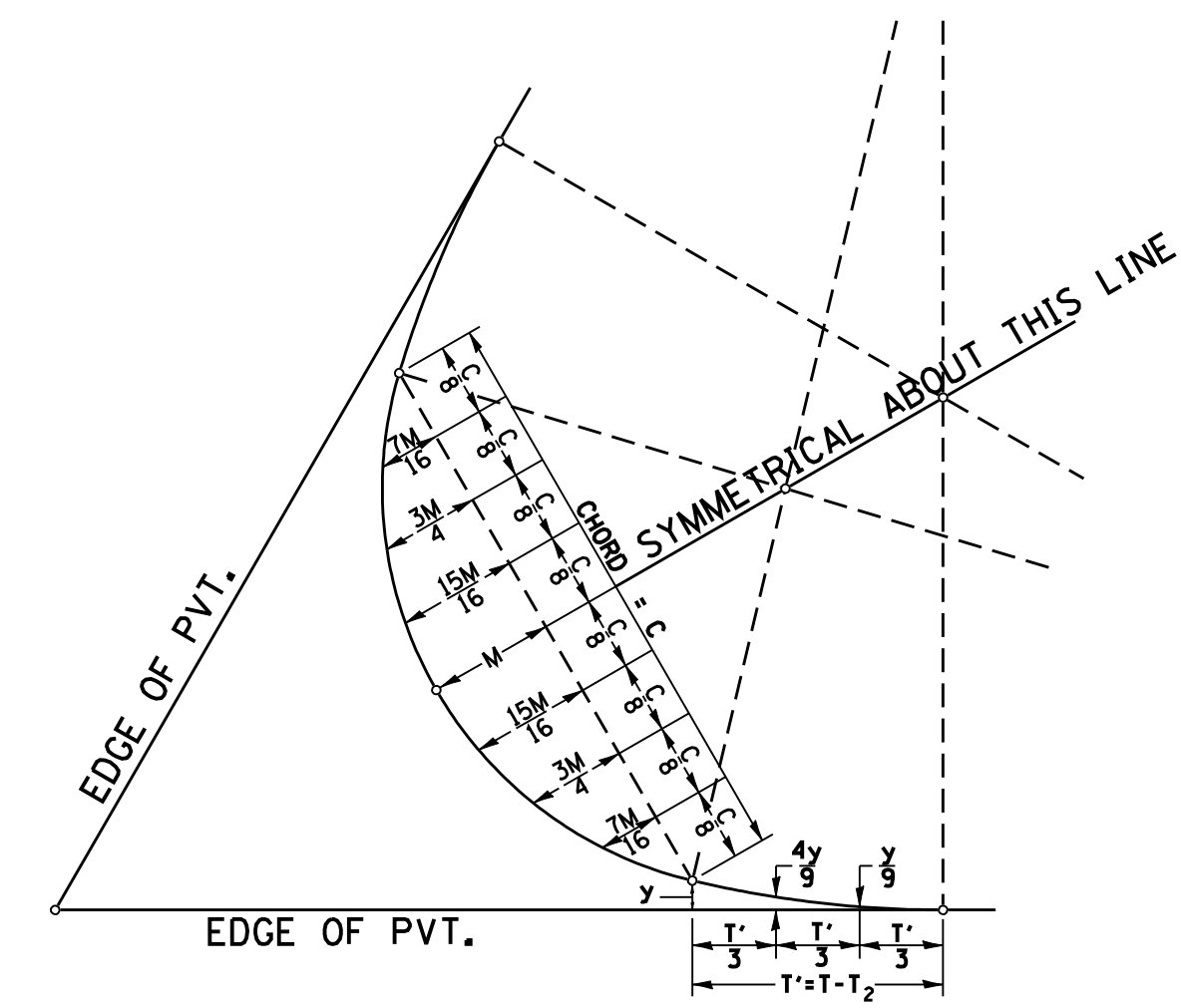
420-3



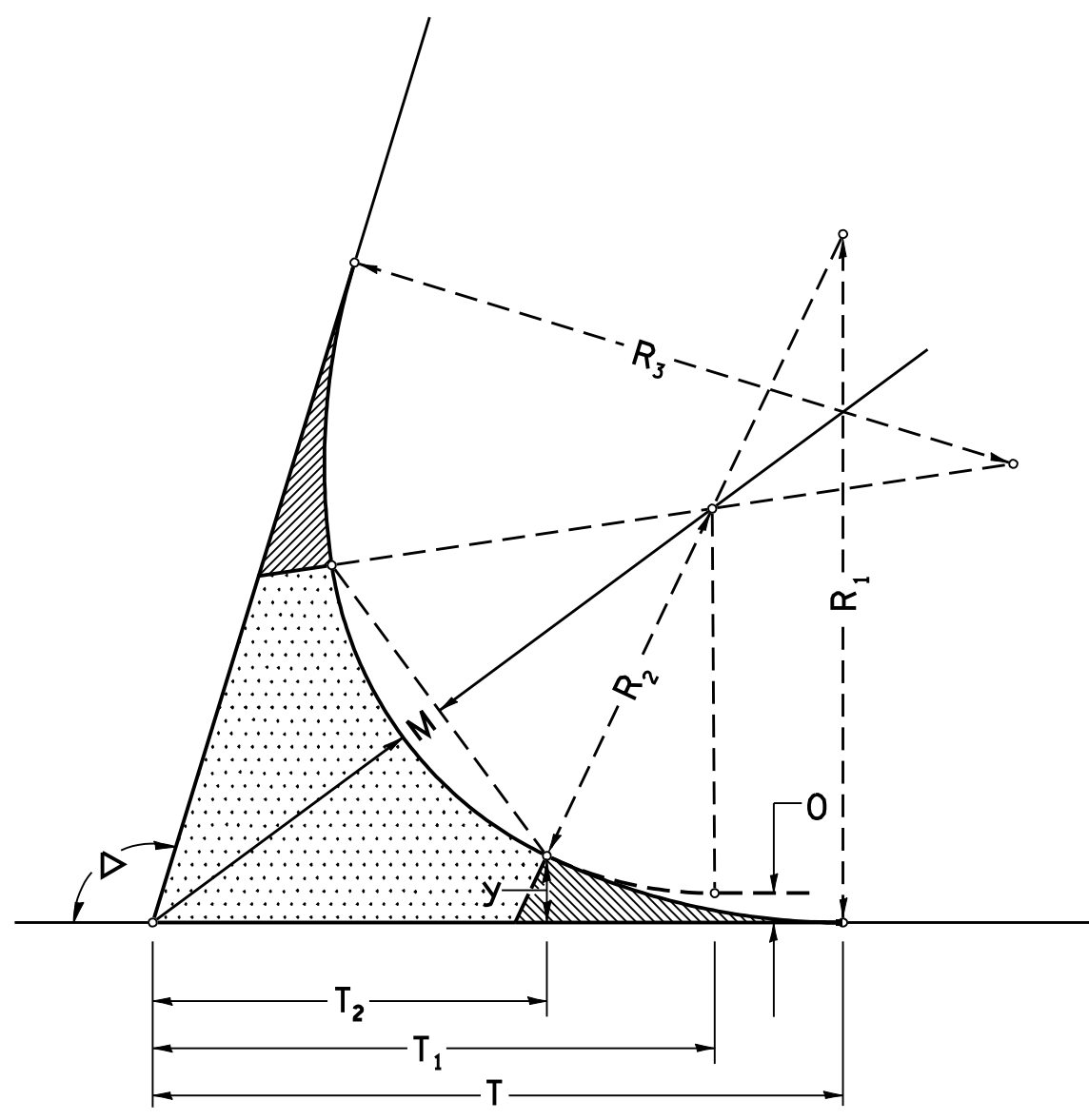
TRANSITION CURVE TABLE

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

SUPERELEVATION TRANSITION ON TWO-LANE HIGHWAY

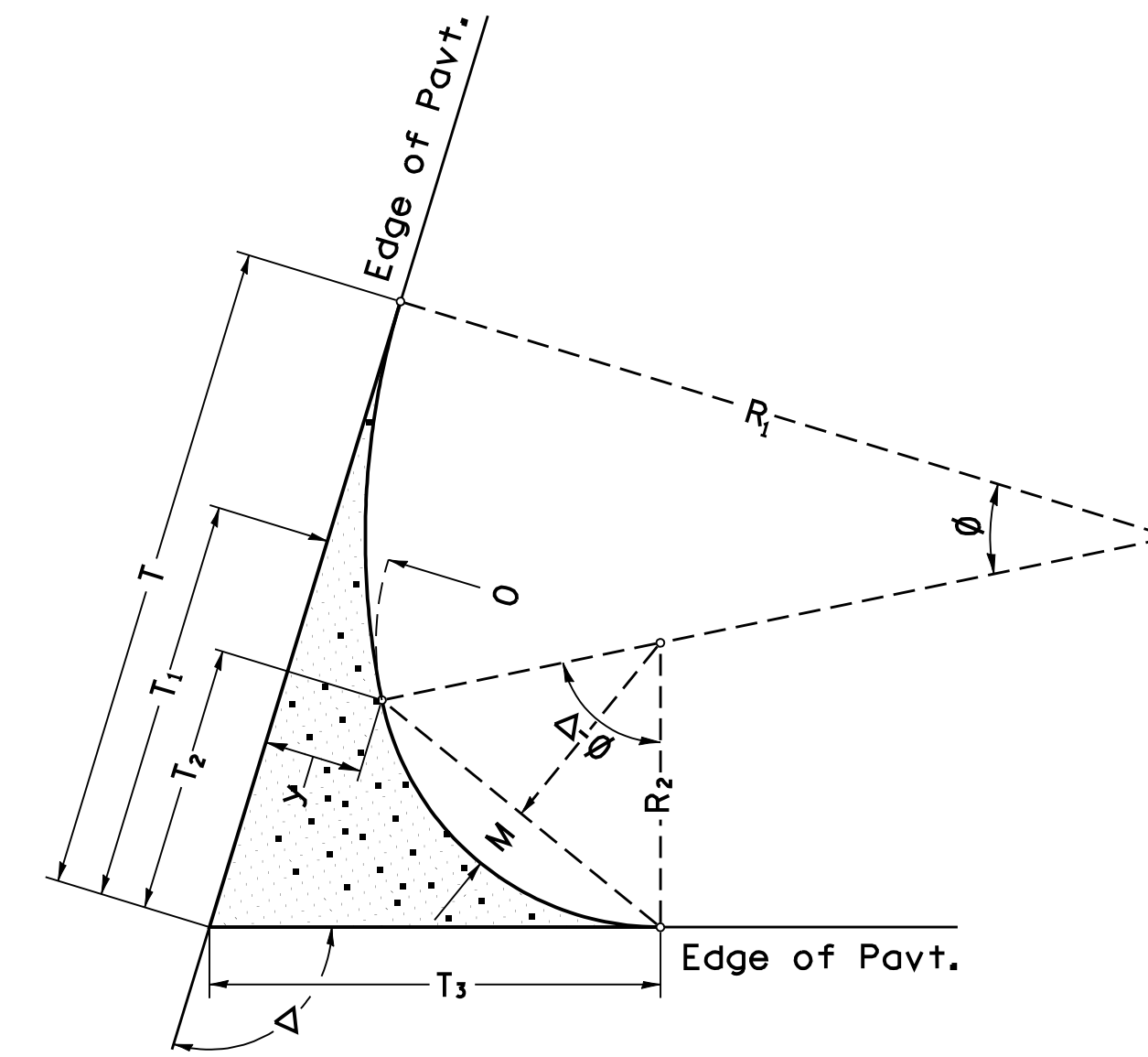


FIELD LAYOUT METHOD



SYMMETRICAL CURVES

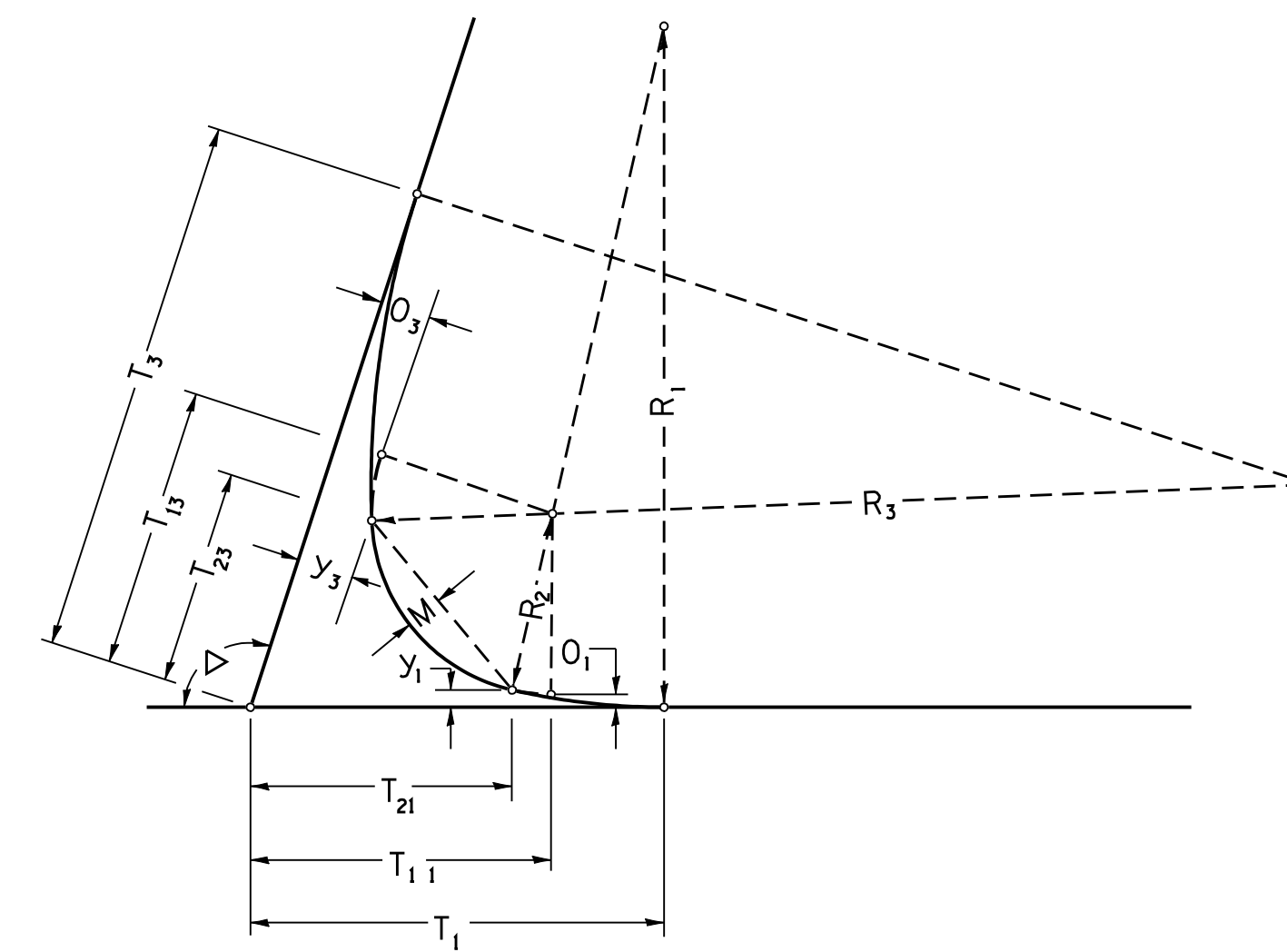
CURVE #	.	.	.	.	.	.	.
R ₁	.	.	.	.	.	.	.
R ₂	.	.	.	.	.	.	.
R ₃	.	.	.	.	.	.	.
θ	.	.	.	.	.	.	.
Δ	.	.	.	.	.	.	.
T	.	.	.	.	.	.	.
T ₁	.	.	.	.	.	.	.
T ₂	.	.	.	.	.	.	.
T'	.	.	.	.	.	.	.
y	.	.	.	.	.	.	.
$\frac{4y}{9}$	.	.	.	.	.	.	.
$\frac{y}{9}$	.	.	.	.	.	.	.
M	.	.	.	.	.	.	.
$\frac{15M}{16}$	.	.	.	.	.	.	.
$\frac{3M}{4}$	.	.	.	.	.	.	.
$\frac{7M}{16}$	.	.	.	.	.	.	.
C	.	.	.	.	.	.	.



TWO CENTER CURVES

CURVE #	.	.	.	.	.	.	.
R ₁	.	.	.	.	.	.	.
R ₂	.	.	.	.	.	.	.
R ₃	.	.	.	.	.	.	.
θ	.	.	.	.	.	.	.
Δ	.	.	.	.	.	.	.
T	.	.	.	.	.	.	.
T ₁	.	.	.	.	.	.	.
T ₂	.	.	.	.	.	.	.
T ₃	.	.	.	.	.	.	.
y	.	.	.	.	.	.	.
$\frac{4y}{9}$	.	.	.	.	.	.	.
$\frac{y}{9}$	.	.	.	.	.	.	.
M	.	.	.	.	.	.	.
$\frac{15M}{16}$	.	.	.	.	.	.	.
$\frac{3M}{4}$	.	.	.	.	.	.	.
$\frac{7M}{16}$	.	.	.	.	.	.	.
C	.	.	.	.	.	.	.

TWO AND THREE CENTER CURVE DATA

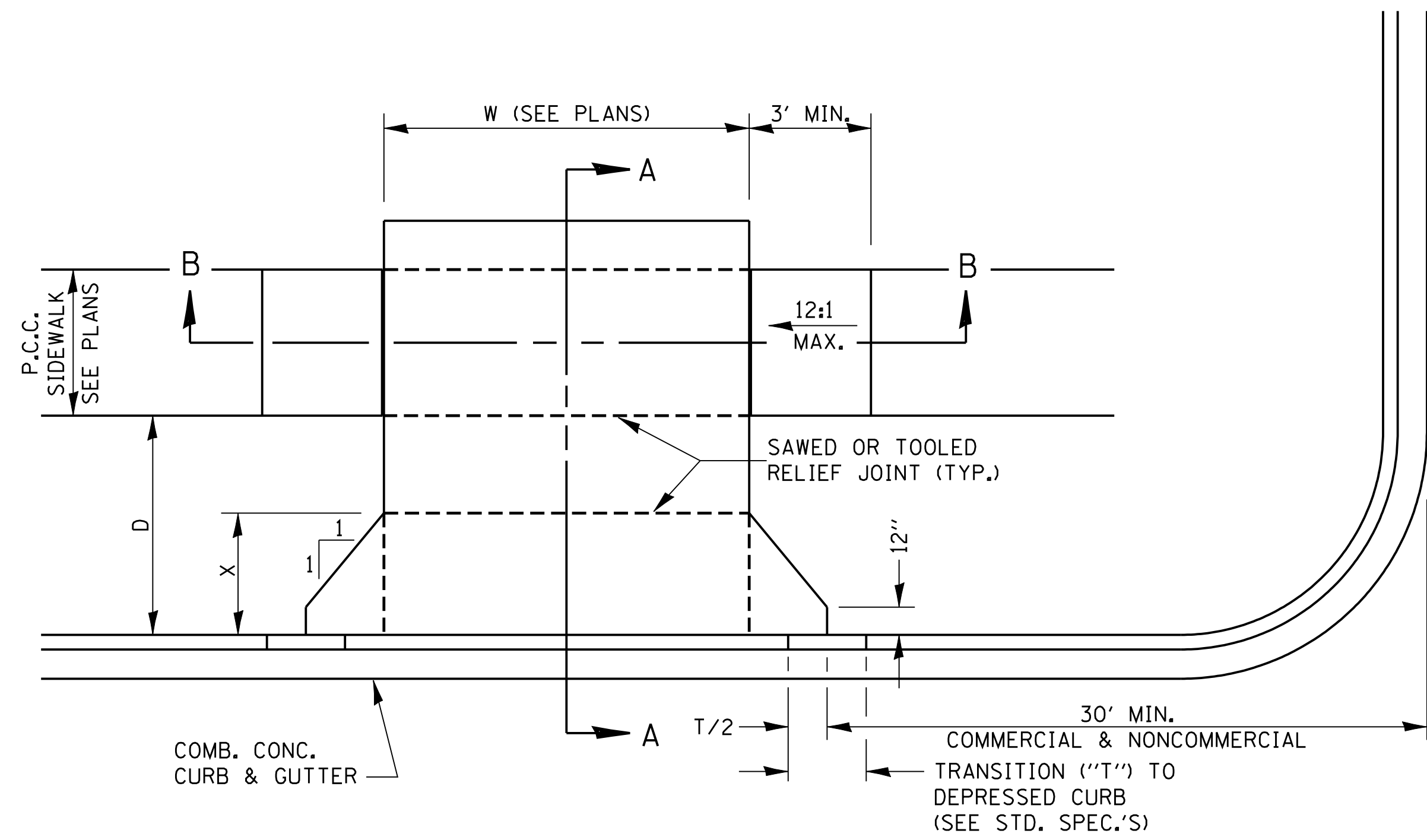


FOR ASYMMETRICAL CURVES

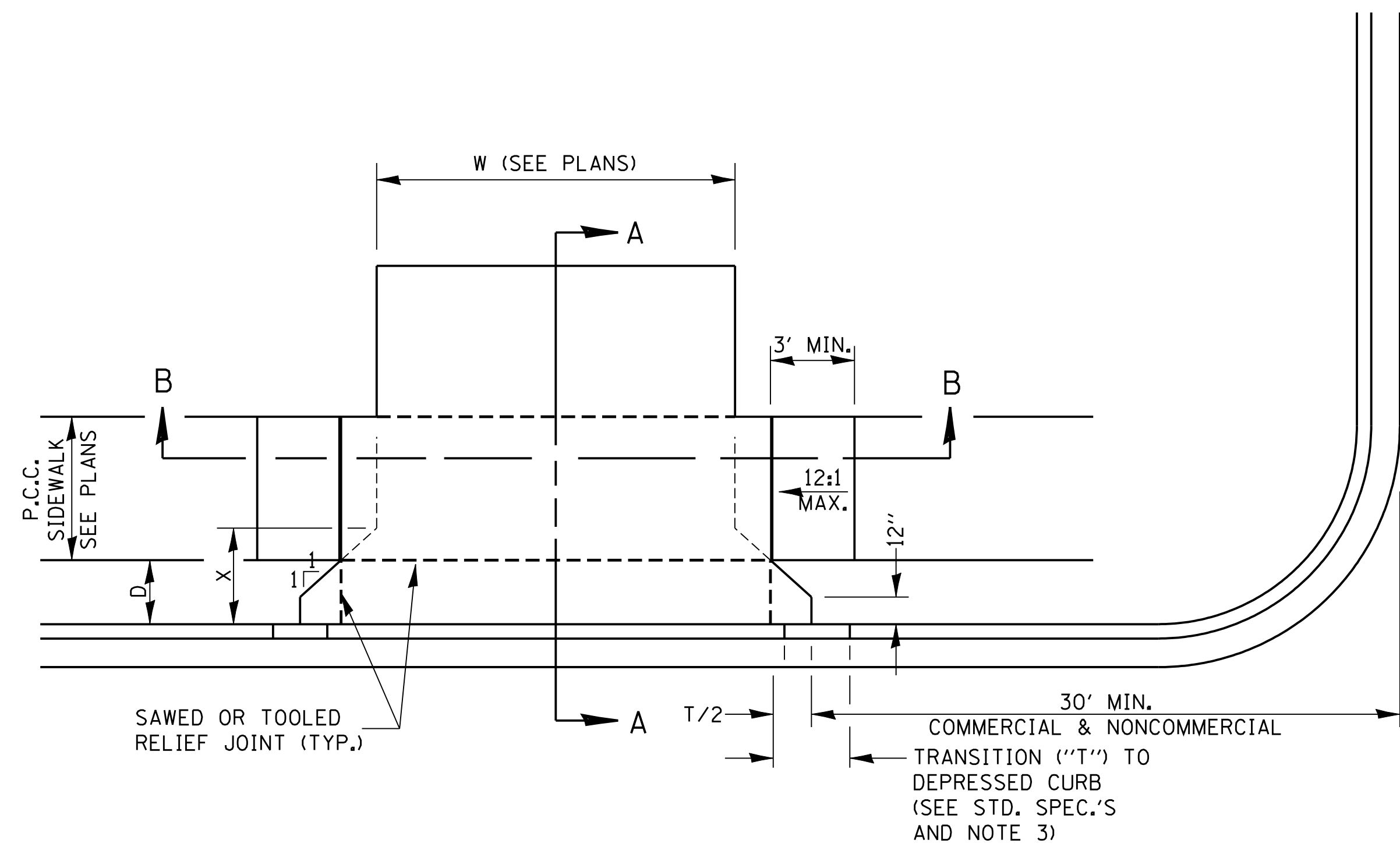
ASYMMETRICAL CURVES

CURVE #	.	.	.	.	.	.	.
R ₁	.	.	.	.	.	.	.
R ₂	.	.	.	.	.	.	.
R ₃	.	.	.	.	.	.	.
O ₁	.	.	.	.	.	.	.
O ₂	.	.	.	.	.	.	.
Δ	.	.	.	.	.	.	.
T ₁	.	.	.	.	.	.	.
T ₁₁	.	.	.	.	.	.	.
T ₂₁	.	.	.	.	.	.	.
T _{1'}	.	.	.	.	.	.	.
y ₁	.	.	.	.	.	.	.
$\frac{4y_1}{9}$	.	.	.	.	.	.	.
$\frac{y_1}{9}$	.	.	.	.	.	.	.
T ₃	.	.	.	.	.	.	.
T ₁₃	.	.	.	.	.	.	.
T ₂₃	.	.	.	.	.	.	.
T _{3'}	.	.	.	.	.	.	.
y ₃	.	.	.	.	.	.	.
$\frac{4y_3}{9}$	.	.	.	.	.	.	.
$\frac{y_3}{9}$	.	.	.	.	.	.	.
M	.	.	.	.	.	.	.
$\frac{15M}{16}$	.	.	.	.	.	.	.
$\frac{3M}{4}$	.	.	.	.	.	.	.
$\frac{7M}{16}$	.	.	.	.	.	.	.
C	.	.	.	.	.	.	.

ASYMMETRICAL THREE CENTER CURVES



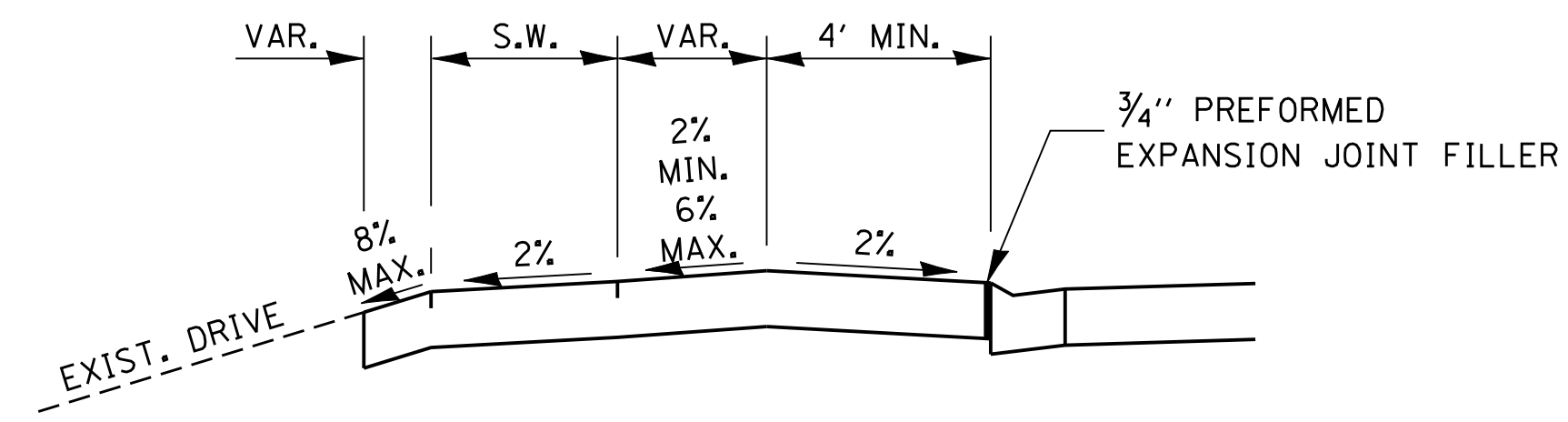
CASE I ($D \geq X$)



CASE I ($D < X$)

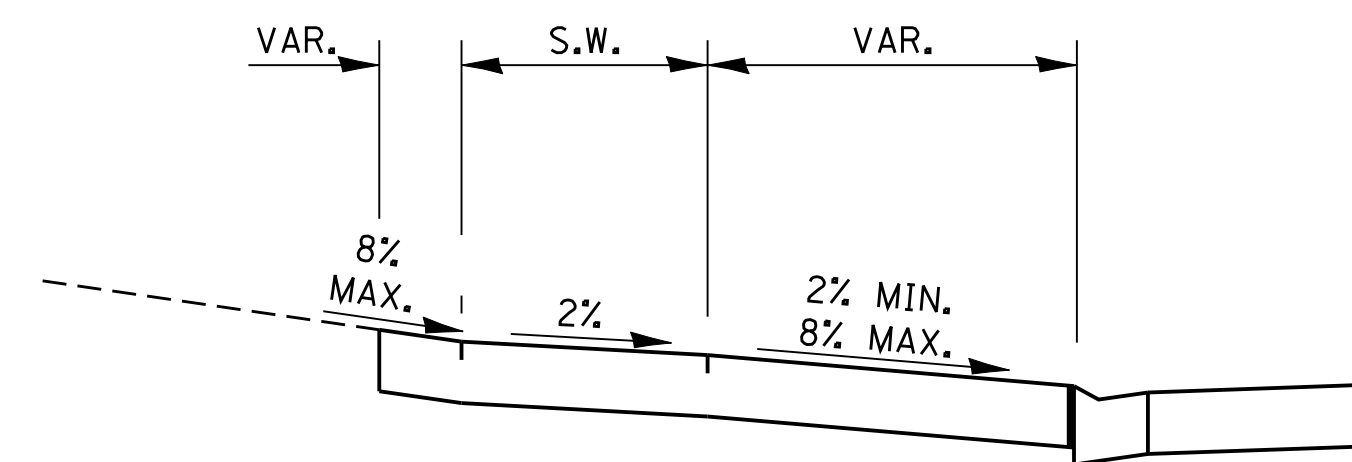
GENERAL NOTES:

1. $X = 7'$ (NON-COMMERCIAL) $X = 15'$ (COMMERCIAL)
2. COST OF EXPANSION JOINTS AND RELIEF JOINTS SHALL BE INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT.
3. AS THE DIMENSION "D" APPROACHES ZERO, THE TRANSITION TO DEPRESSED CURB SHALL BE NO STEEPER THAN 12:1

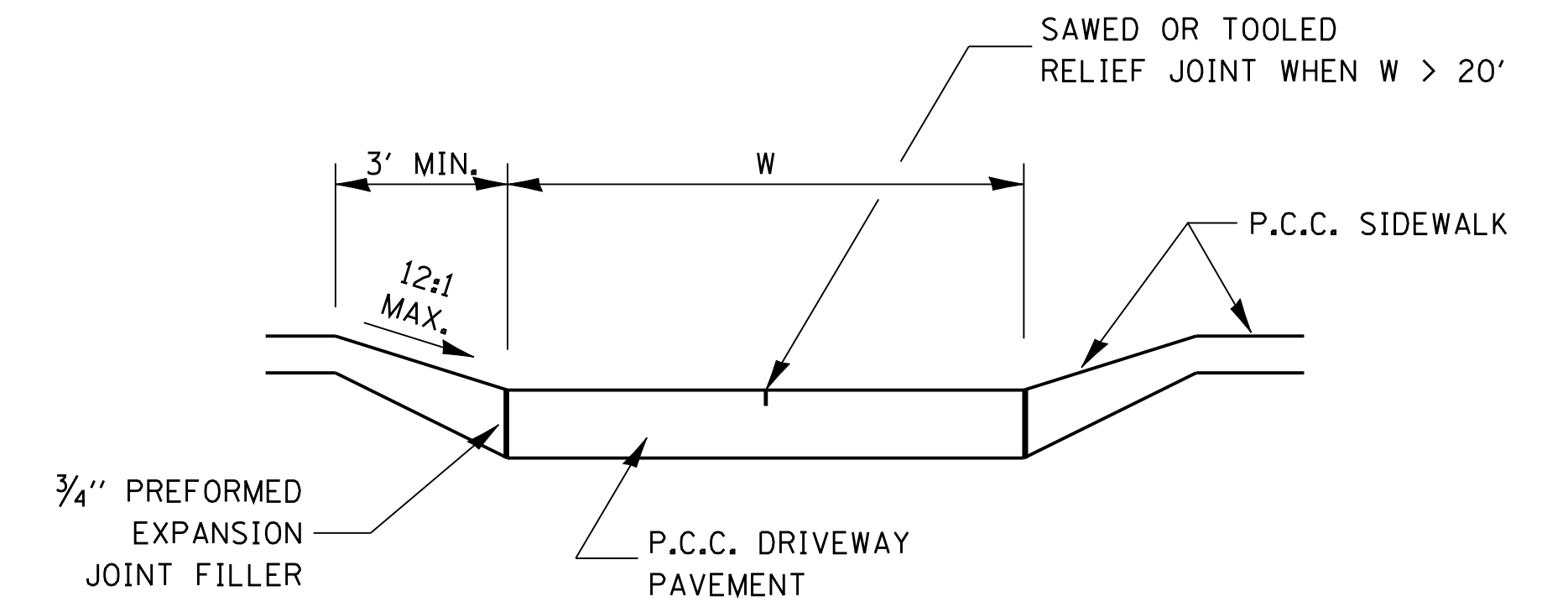


DEPRESSED ENTRANCE *
SECTION A-A

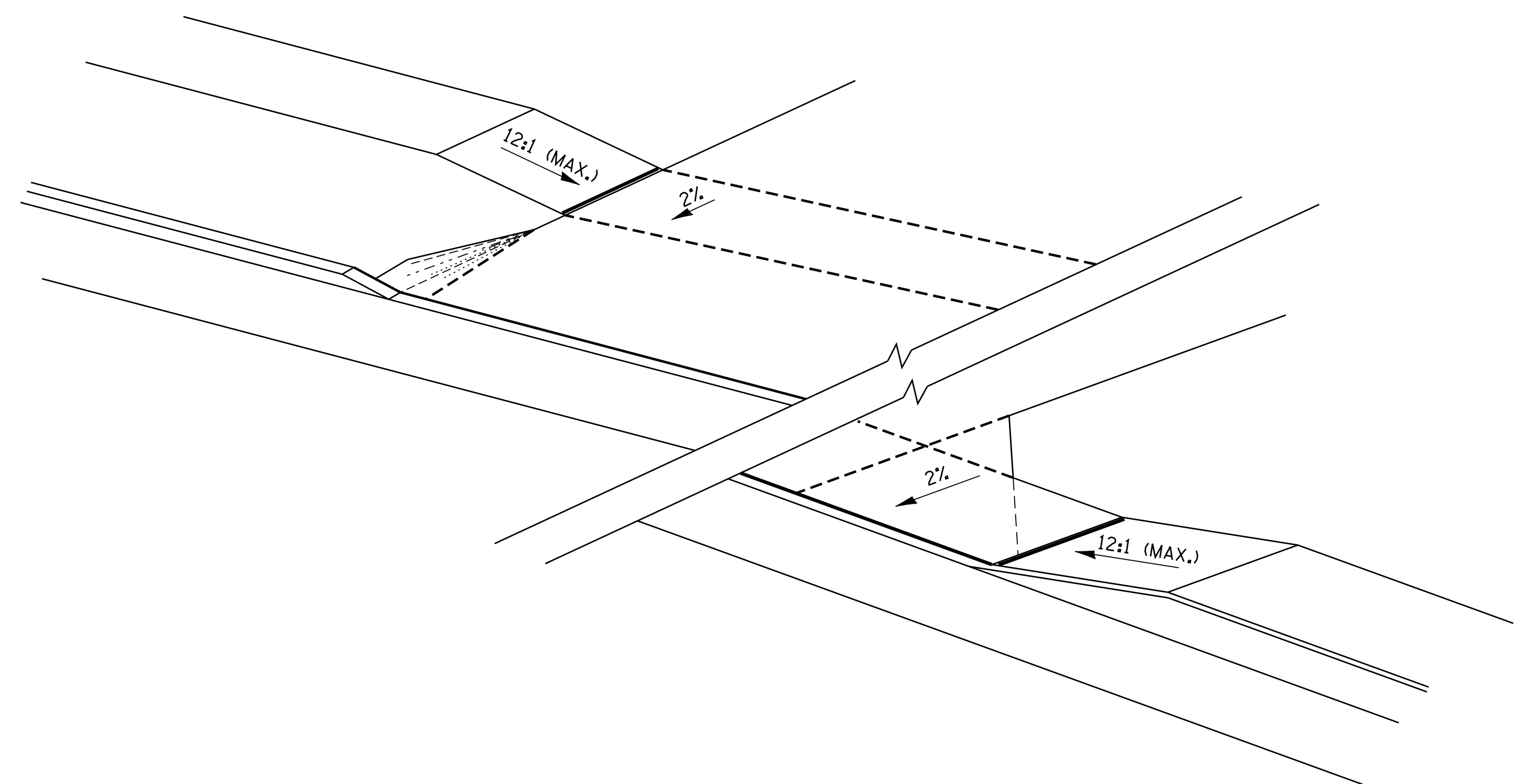
*(SEE X-SECTIONS FOR ENTRANCE PROFILE.)

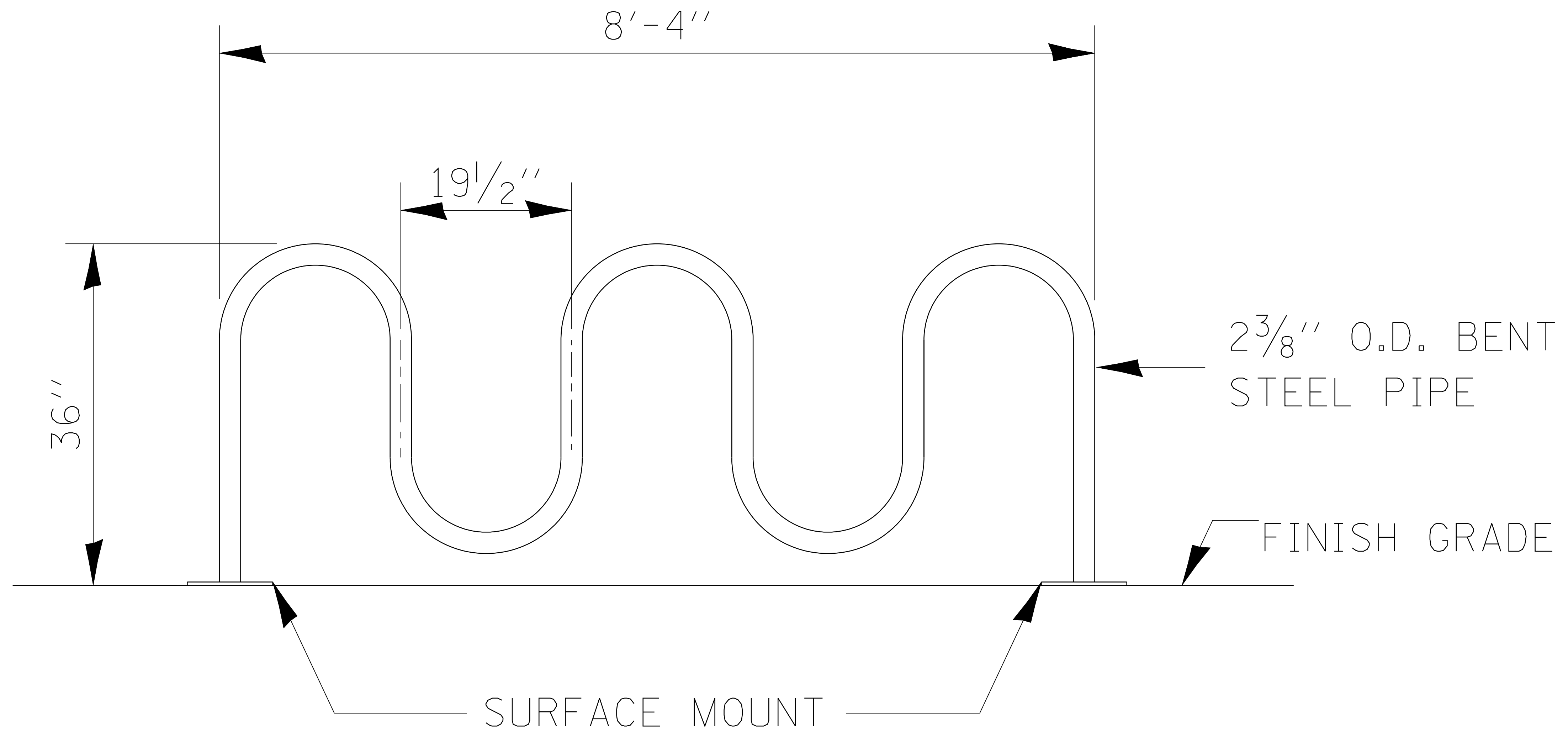


ELEVATED ENTRANCE *
SECTION A-A



SECTION B-B

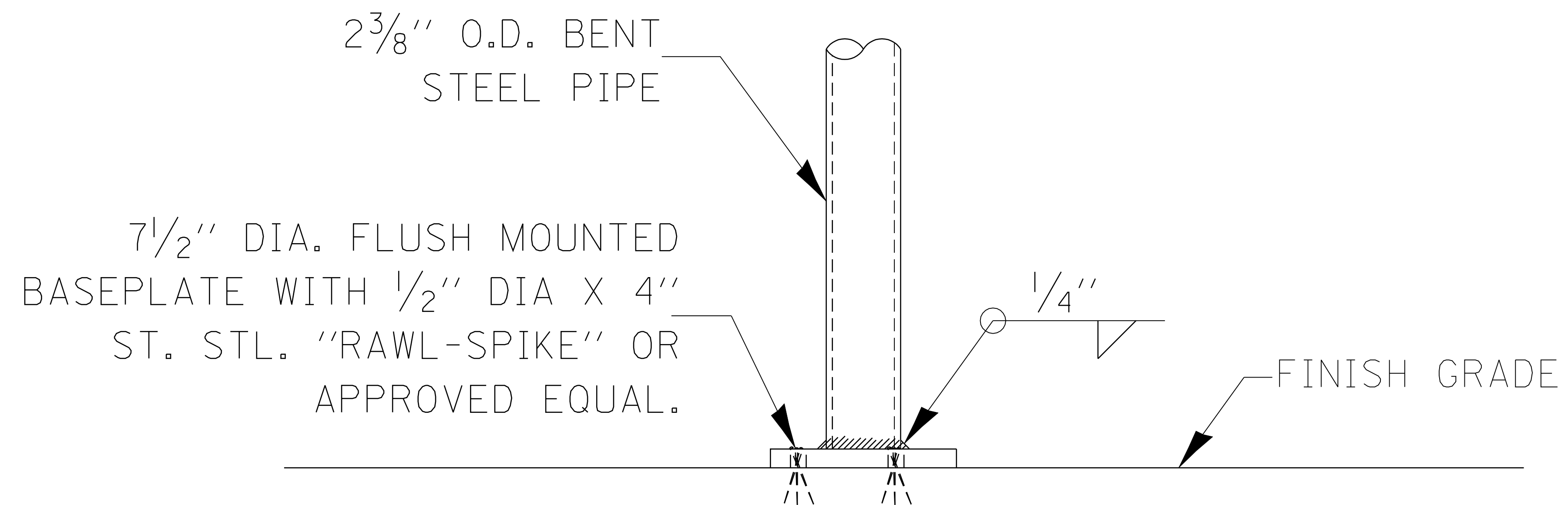
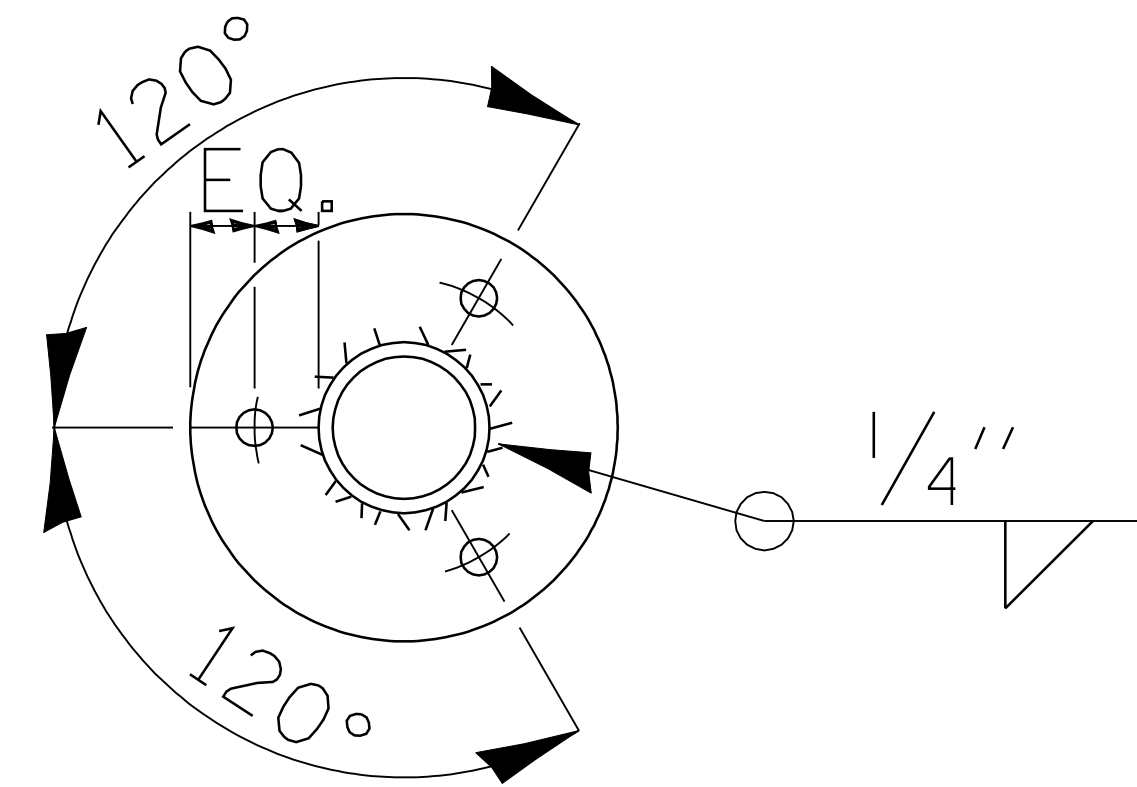




TYPE "A₅" BICYCLE RACK ELEVATION

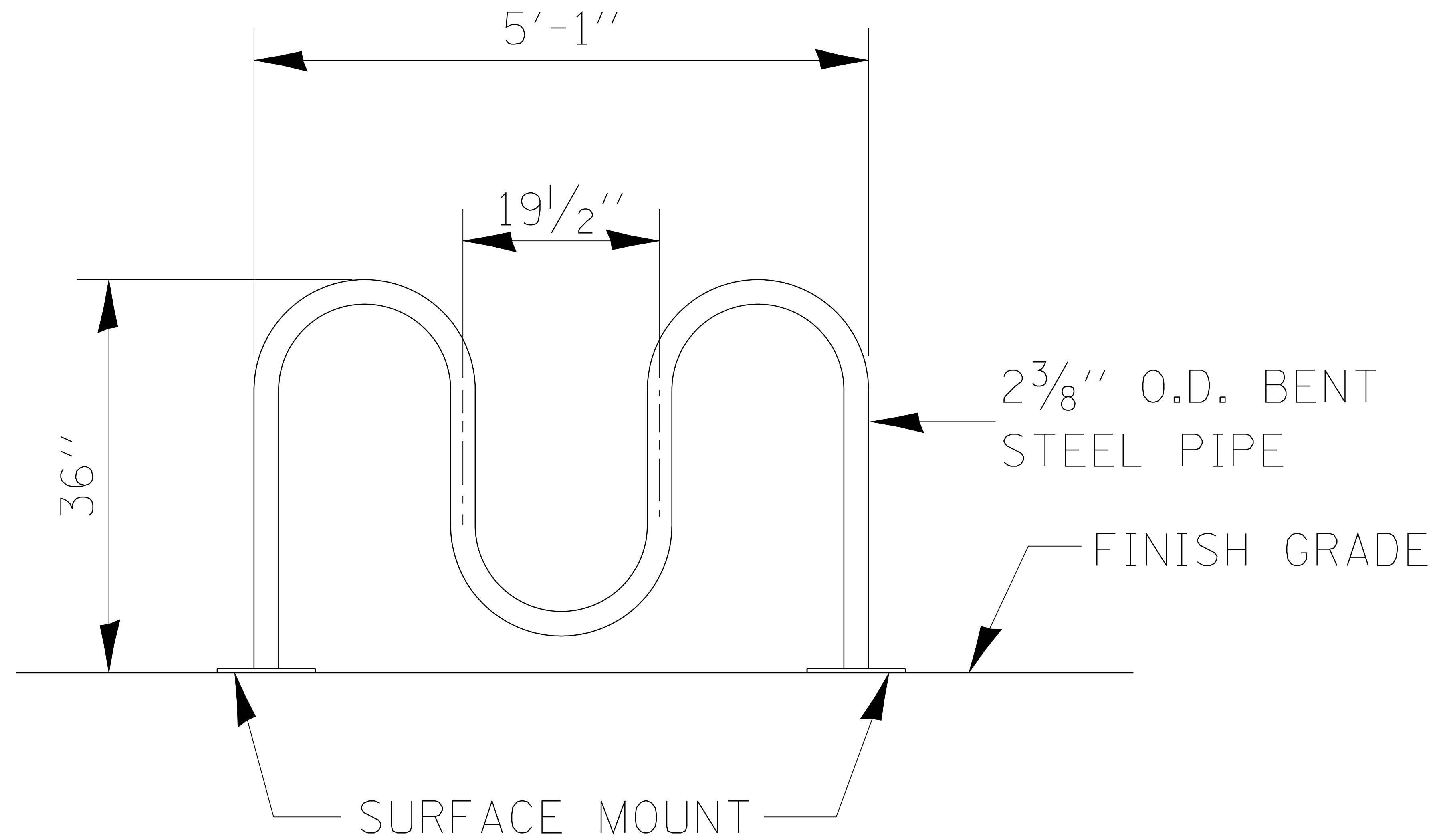
424-1

7 1/2" DIA. X 1/2" THICK BASE PLATE



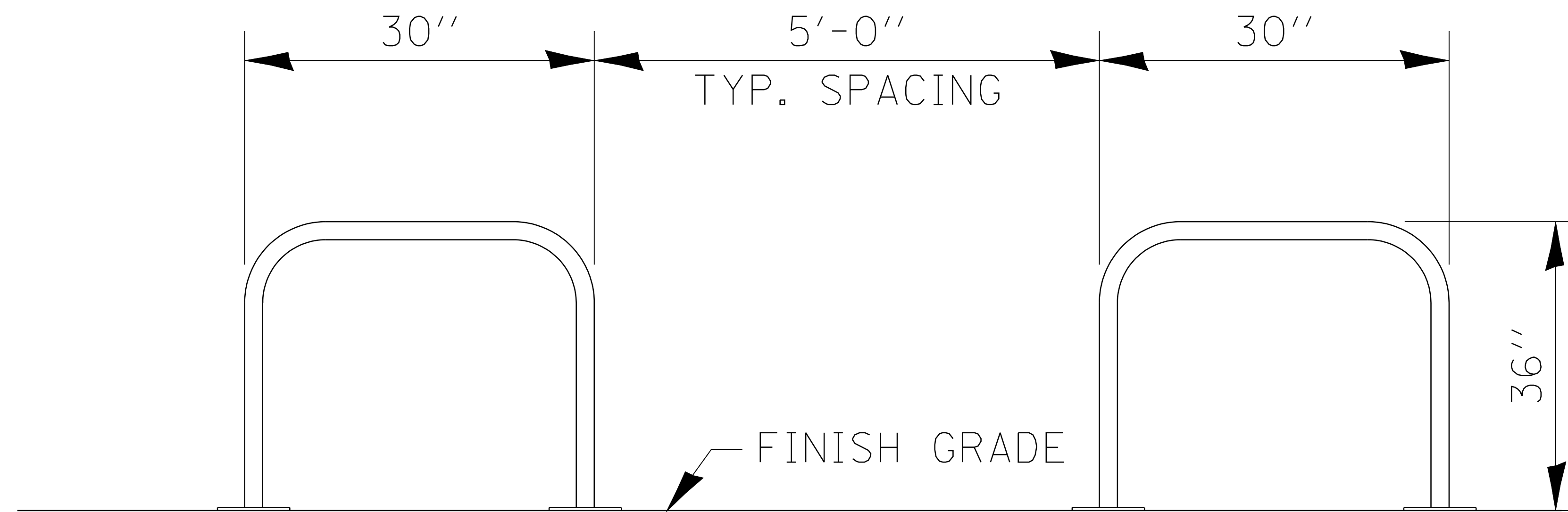
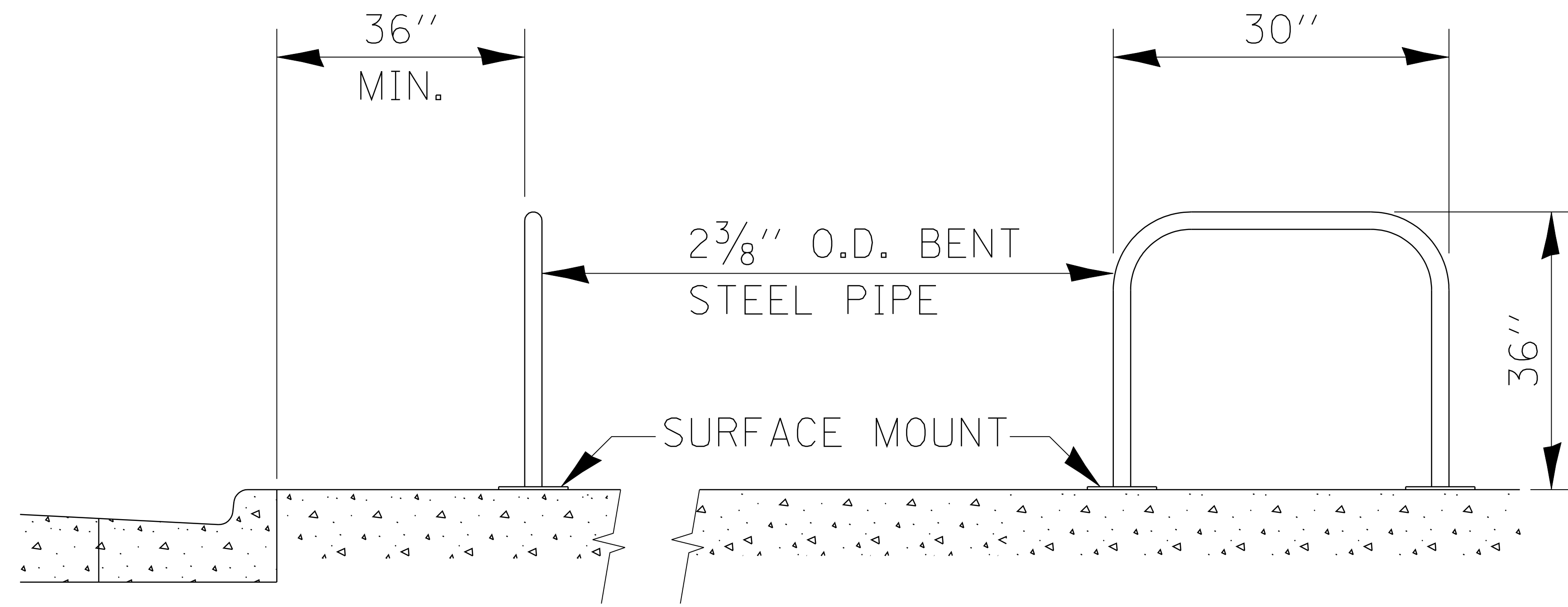
SURFACE MOUNT DETAIL

424-2



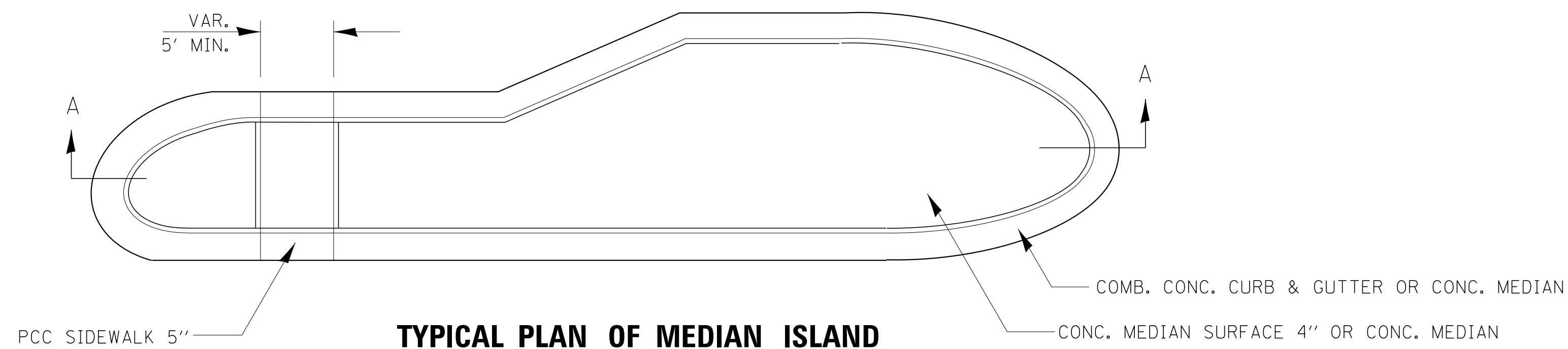
TYPE "A₃" BICYCLE RACK ELEVATION

424-3



TYPE "B" BICYCLE RACK

424-4



TYPICAL PLAN OF MEDIAN ISLAND

GENERAL NOTES

SEE STANDARDS 606001, 606301, 424031, AND PLAN SHEETS FOR STATION, OFFSETS, RADII, DIMENSIONS, AND DETAILS NOT SHOWN.

THE SIDEWALK SHOULD DRAIN TO THE LOW SIDE OF THE ISLAND. IF NECESSARY THE SIDEWALK SHALL BE SLOPED TO DRAIN AT A MAXIMUM 2% GRADE.

SEE THE PLAN SHEETS FOR THE TYPE OF CURB & GUTTER TO BE USED ON ISLANDS.

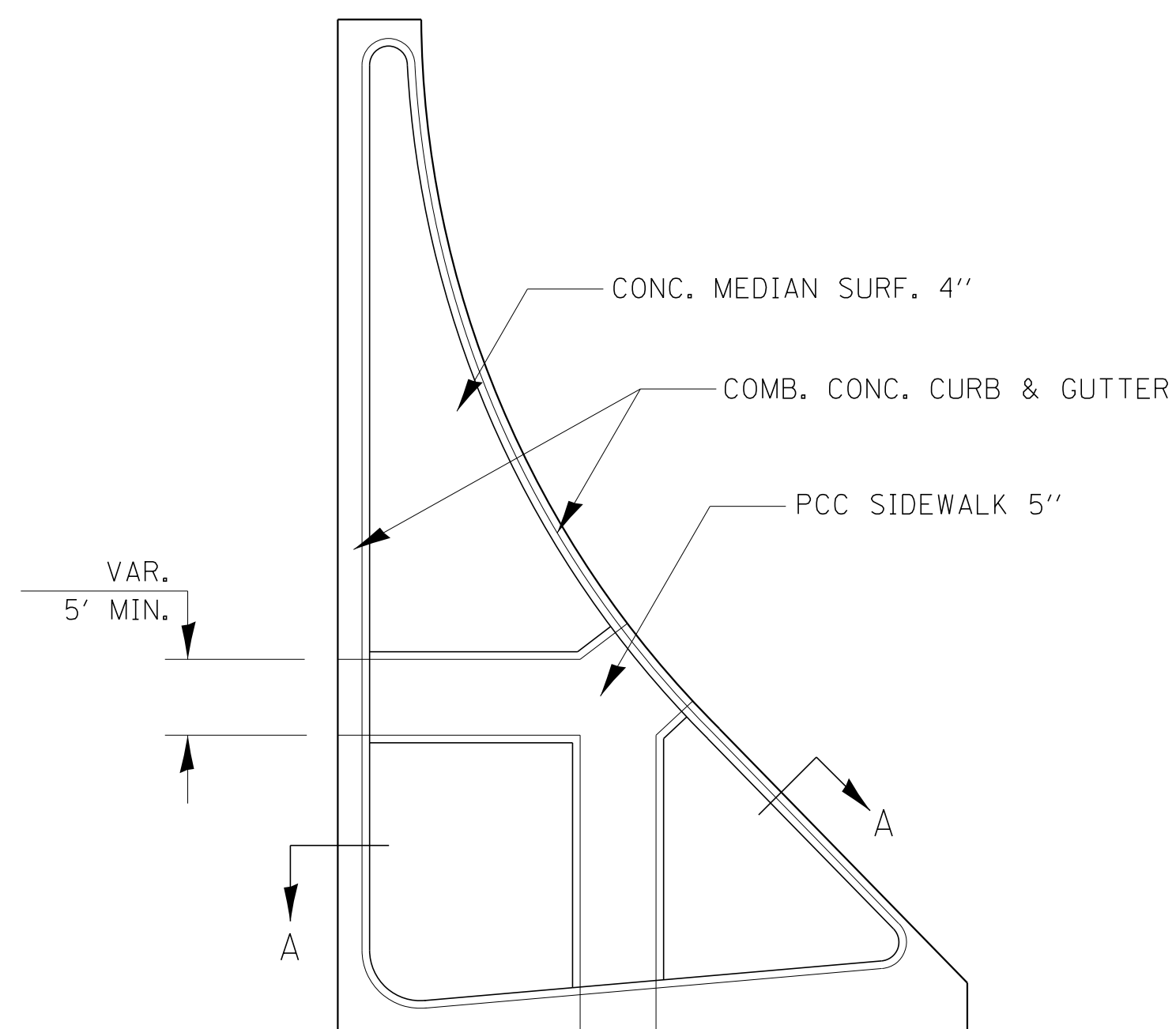
THE SIDEWALK SHOULD NOT BE CLOSER THAN 3' FROM THE CORNER OF THE ISLAND.

KEYED LONGITUDINAL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED WITHOUT TIE BARS.

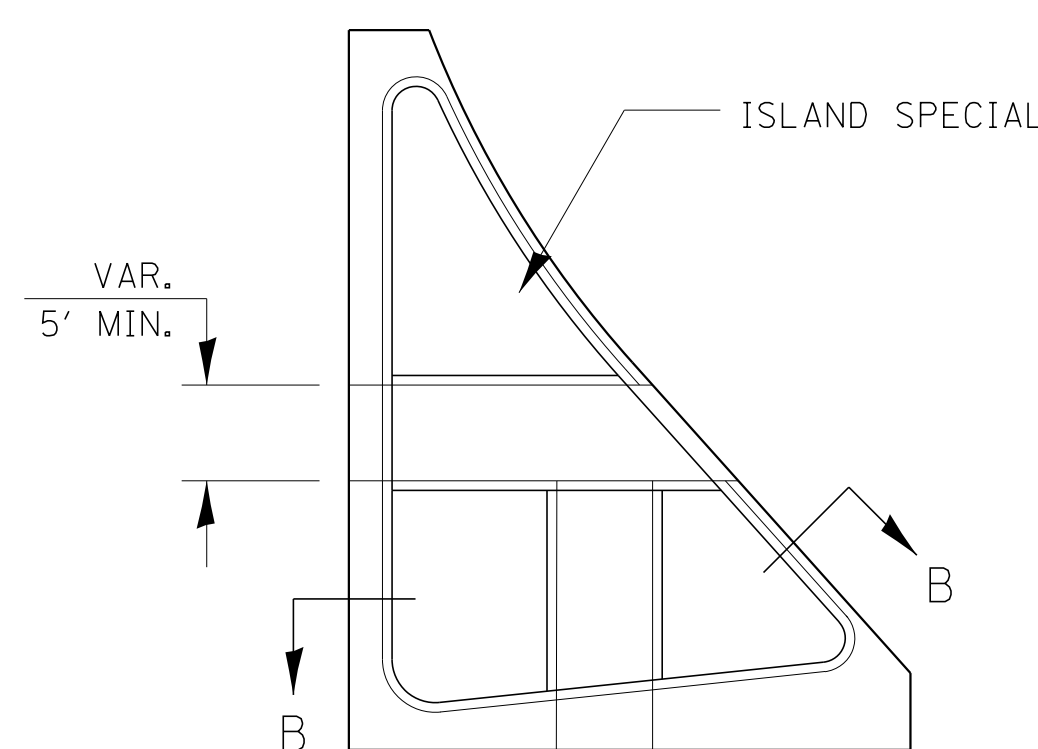
MEDIANS AND LARGE ISLANDS SHALL CONSIST OF PCC SIDEWALK 5", CONCRETE MEDIANS SURFACE 4", CONCRETE CURB, AND COMBINATION CONCRETE CURB & GUTTER, TYPE M OR B OR THE SIZE SPECIFIED. MEDIAN ISLAND CAN ALSO BE SOLID CONCRETE MEDIANS.

LOCATIONS, LAYOUTS, AND WIDTHS OF THE FLUSH SIDEWALK AREA, SHALL BE DETERMINED BY THE DESIGNER AND SHOWN ON THE PLANS.

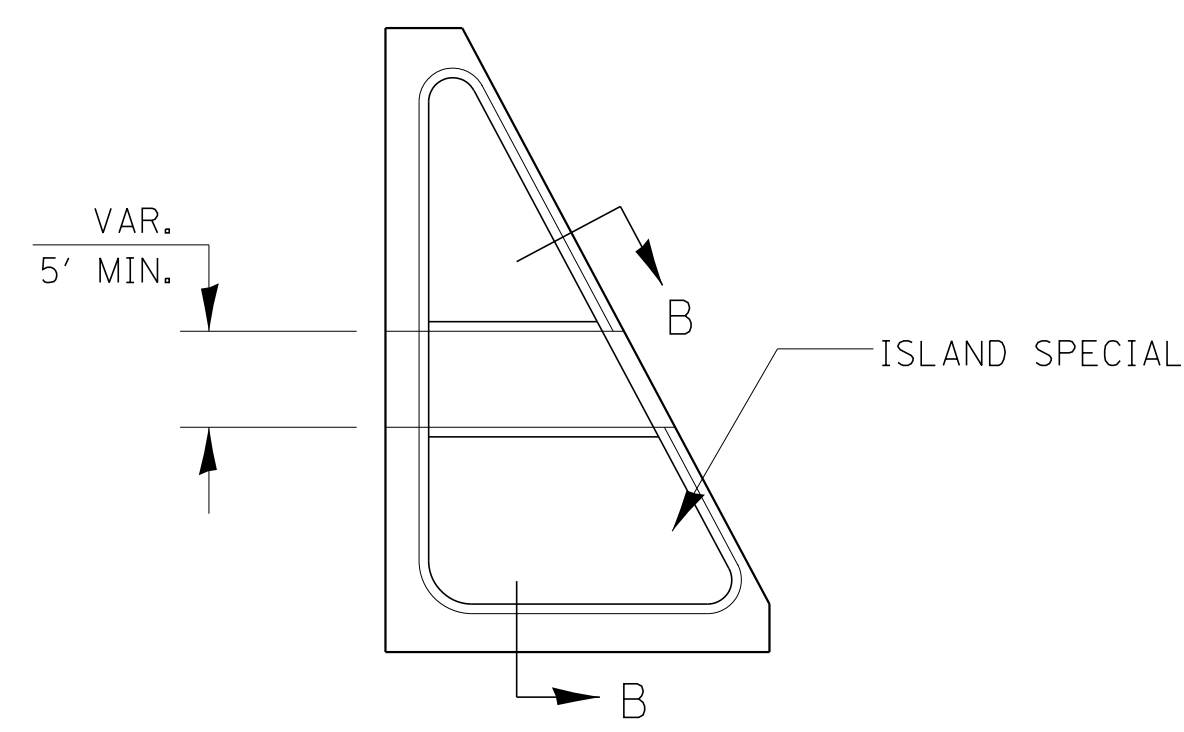
THE INTERMEDIATE AND SMALL ISLANDS WILL BE MEASURED FOR PAYMENT FROM E.O.P. TO E.O.P. USING EITHER OPTION 1 OR OPTION 2, AS DIRECTED BY THE ENGINEER, AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQ. FT. FOR CONCRETE MEDIAN (SPECIAL), WHICH SHALL INCLUDE THE CURB, COMBINATION CURB & GUTTER, SIDEWALK, AGGREGATE FILL, CONCRETE MEDIAN SURFACE, AND SOLID CONCRETE MEDIAN.



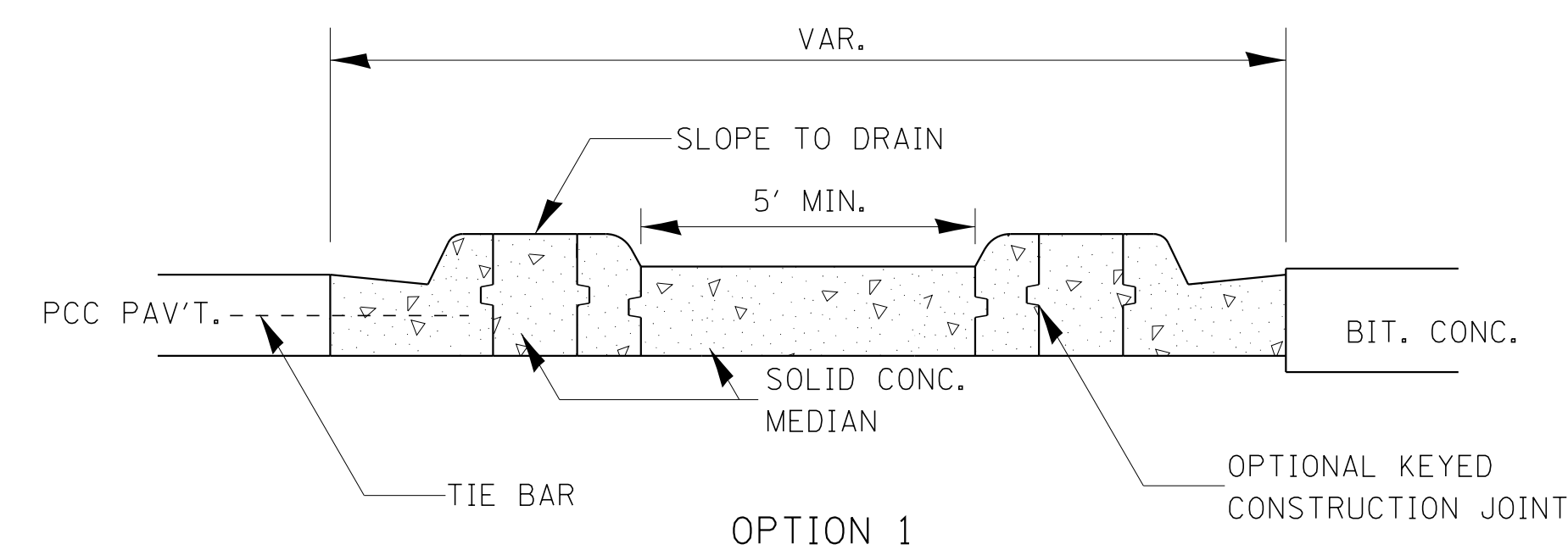
LARGE ISLAND
(FREE FLOW DESIGN)



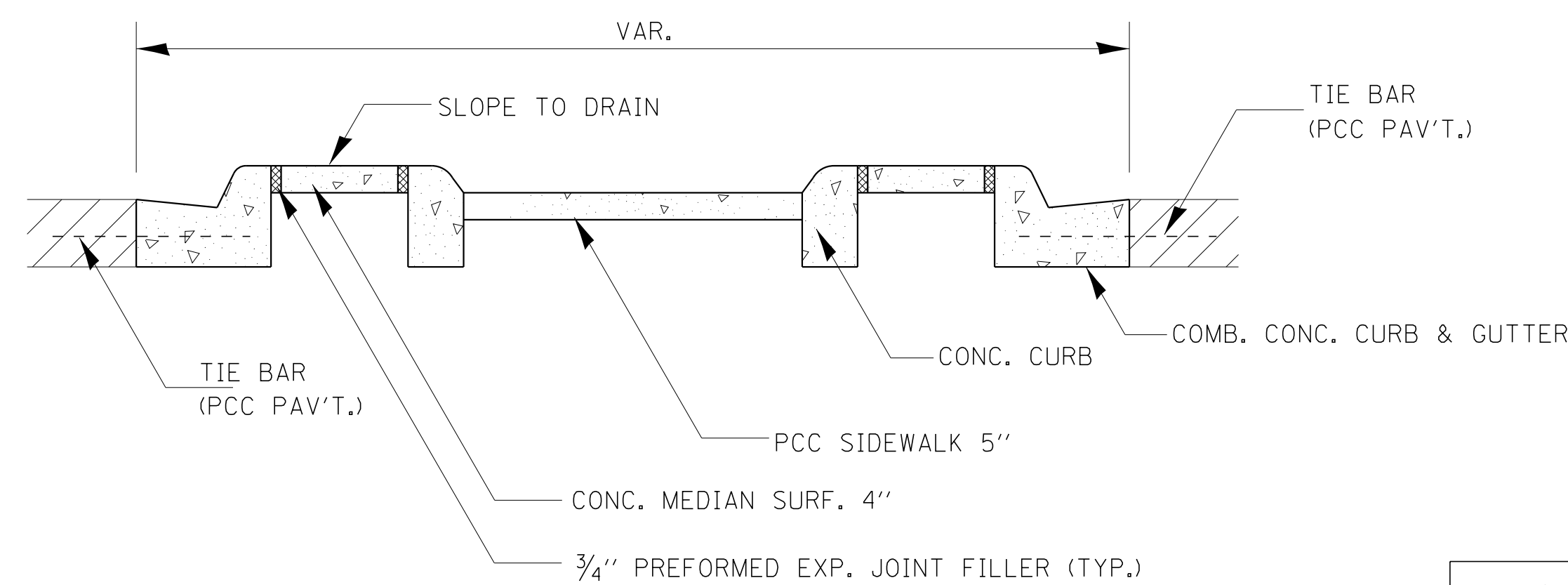
INTERMEDIATE ISLAND
(FOR RIGHT TURN LANE DESIGN)



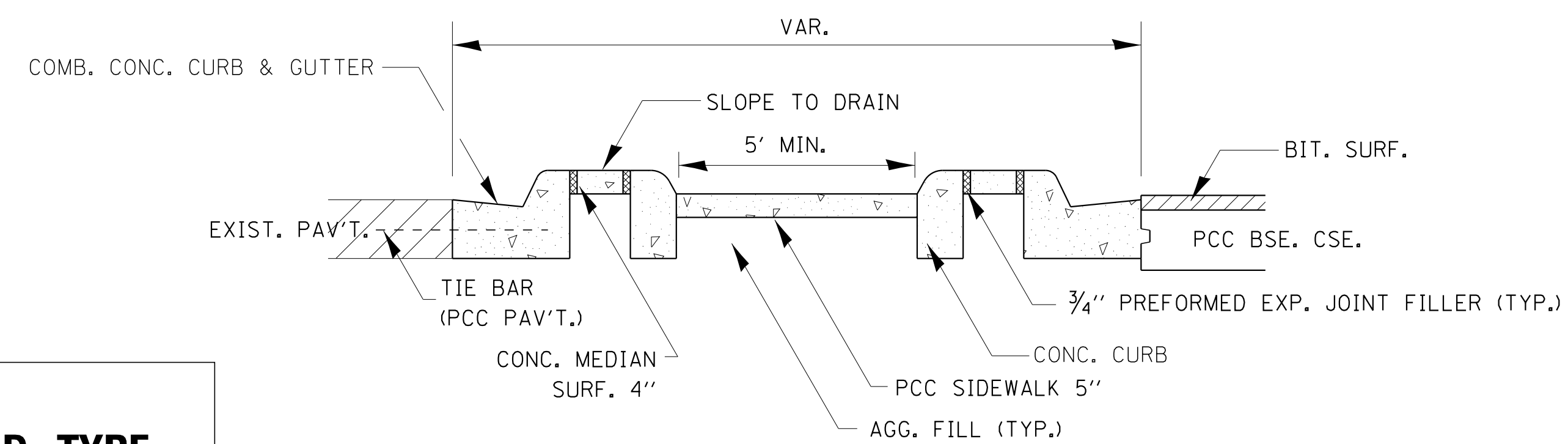
SMALL ISLAND
(FOR TYPICAL DESIGN)



OPTION 1



SECTION A-A



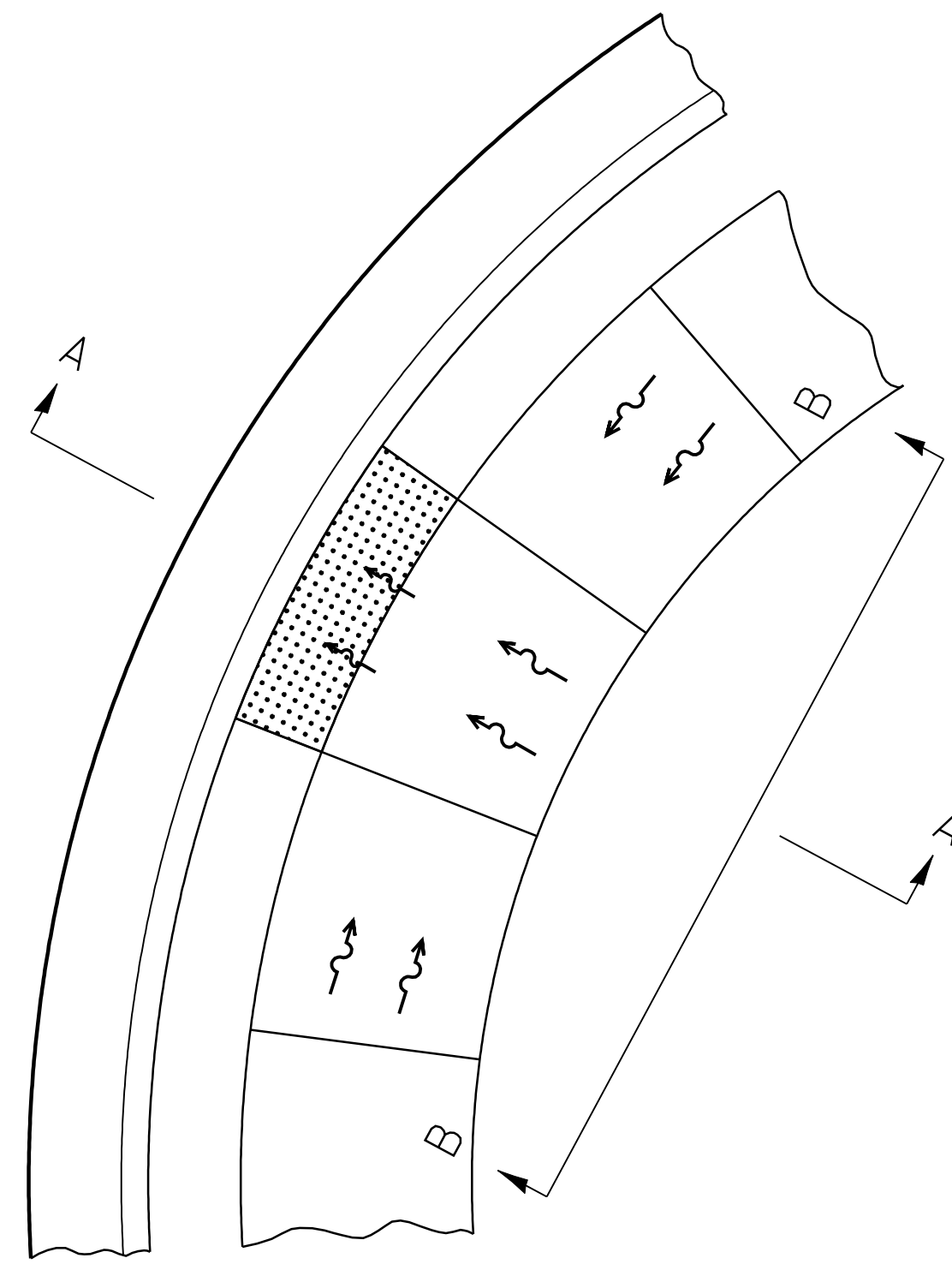
OPTION 2

SECTION B-B

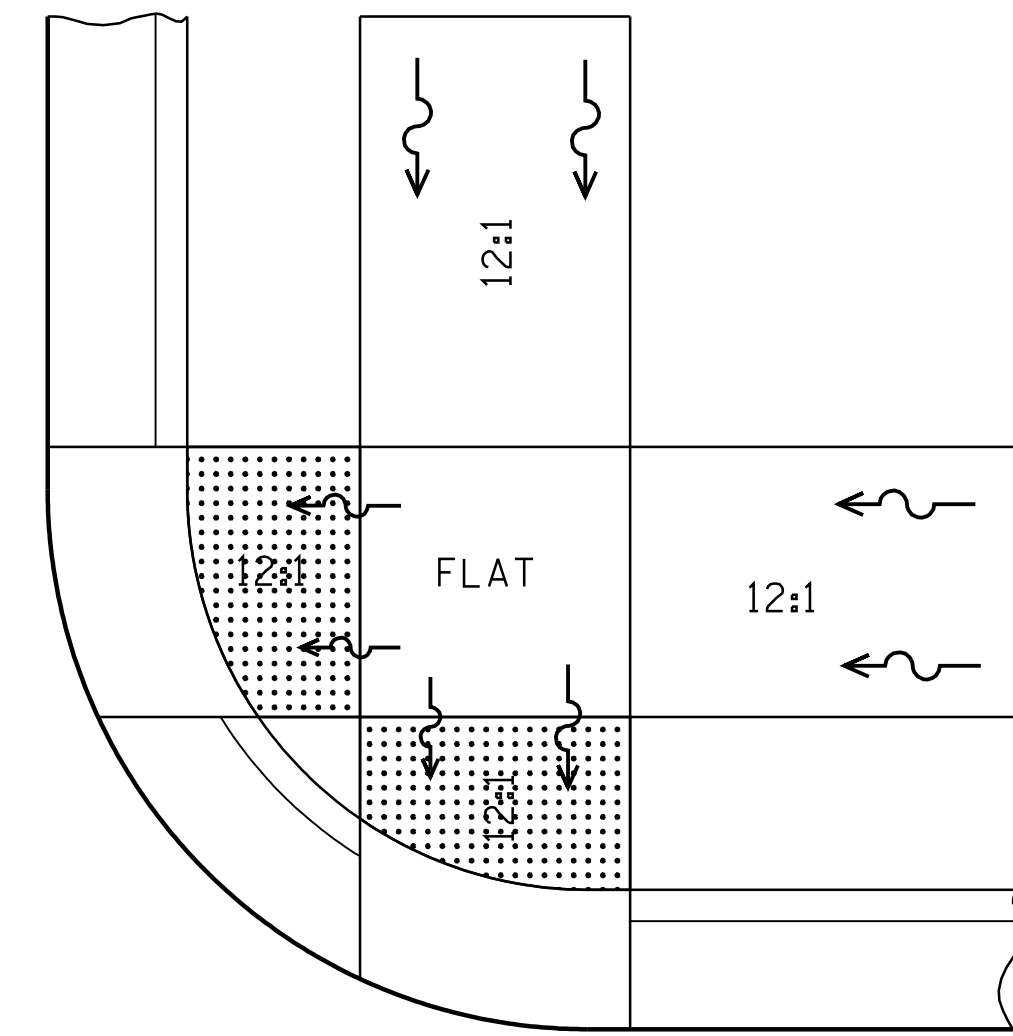
**DESIGNER NOTE:
DESIGNER SHOULD SPECIFY ISLAND TYPE
IN THE PLANS BASED ON BDE FUG. 36-2.E**

424.28

FILE NAME = \$FILEL\$	USER NAME = \$USER\$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PCC ISLANDS AND MEDIANS ACCESSIBLE TO THE DISABLED			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = \$SCALE\$	DRAWN -	REVISED -					SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO.	
	PLOT DATE = \$DATE\$	CHECKED -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									



SEE STANDARD 424001 FOR SIDE FLARE
DETAIL & SEE PLANS FOR RAMP TYPE.



NOTES:

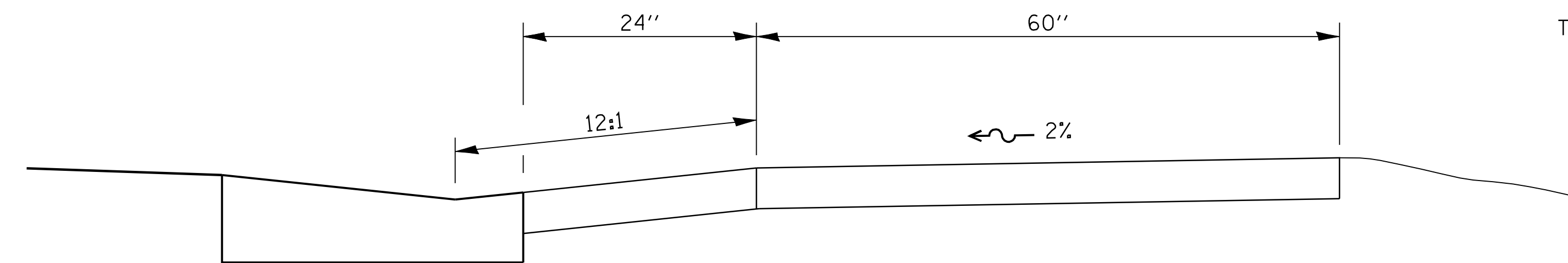
THIS DETAIL TO BE USED IN CONJUNCTION WITH STATE STANDARD 424001.

THE MAXIMUM ALLOWABLE CROSS SLOPE FOR SIDEWALK IS 2%.

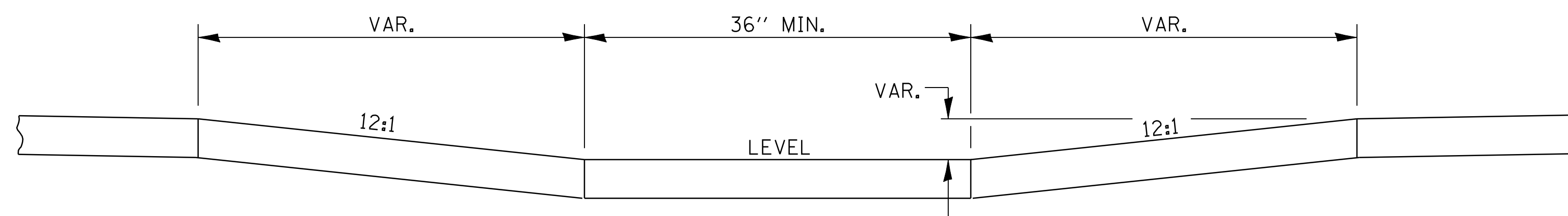
THE MAXIMUM ALLOWABLE SIDEWALK GRADE IS 8%.

IF SPACE LIMITATIONS PROHIBIT THE USE OF THE 12:1 SLOPE, THEN SLOPES BETWEEN 10:1 AND 12:1 ARE PERMITTED FOR A MAXIMUM RISE OF 6". SLOPES 8:1 AND 10:1 ARE ALLOWED FOR A MAXIMUM RISE OF 3". SLOPES STEEPER THAN 8:1 ARE NOT PERMITTED.

THE DEPRESSED CURB IS NOT STANDARD. THE RISE IS 1/2" INSTEAD OF 1 1/2".

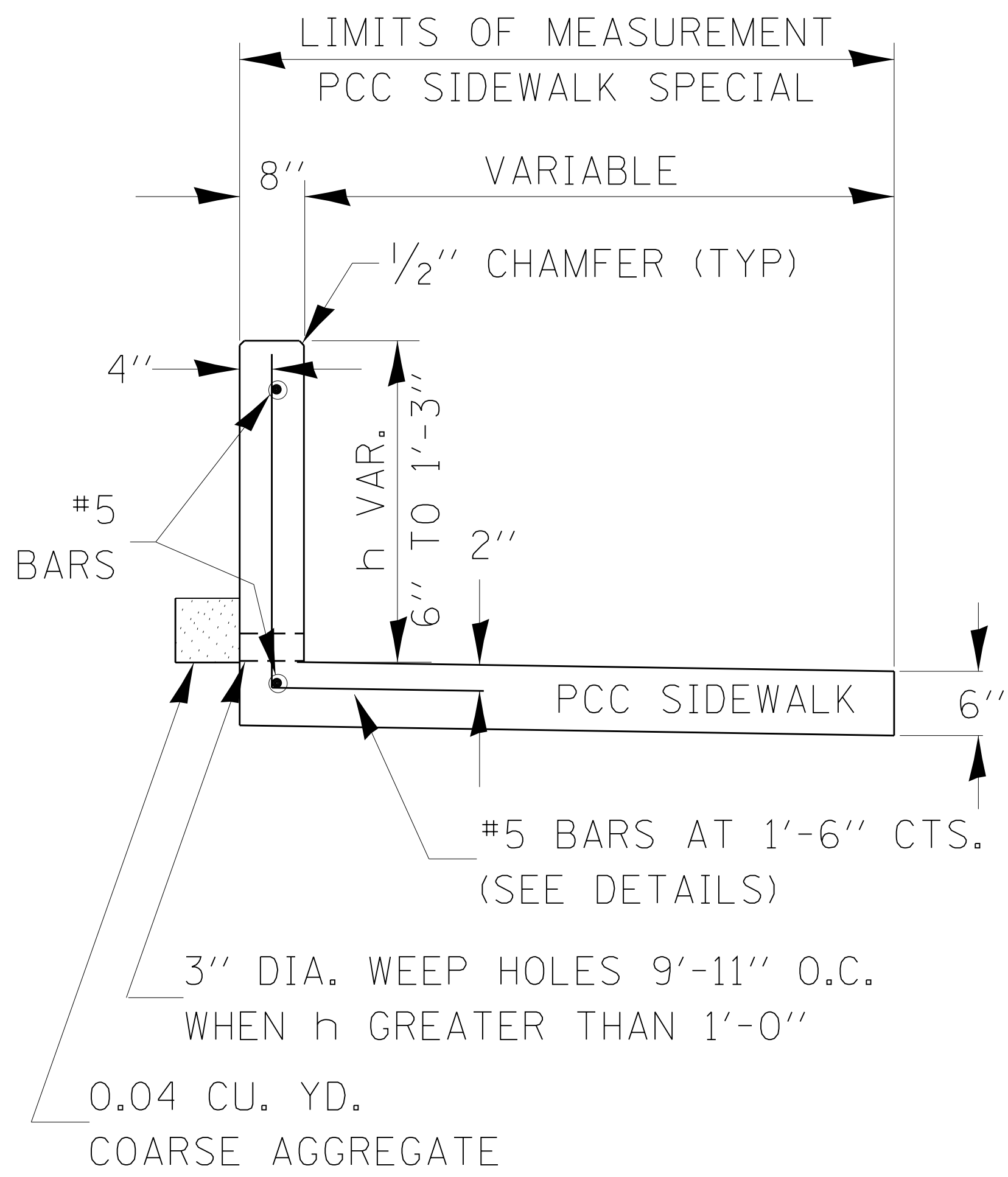


SECTION A-A

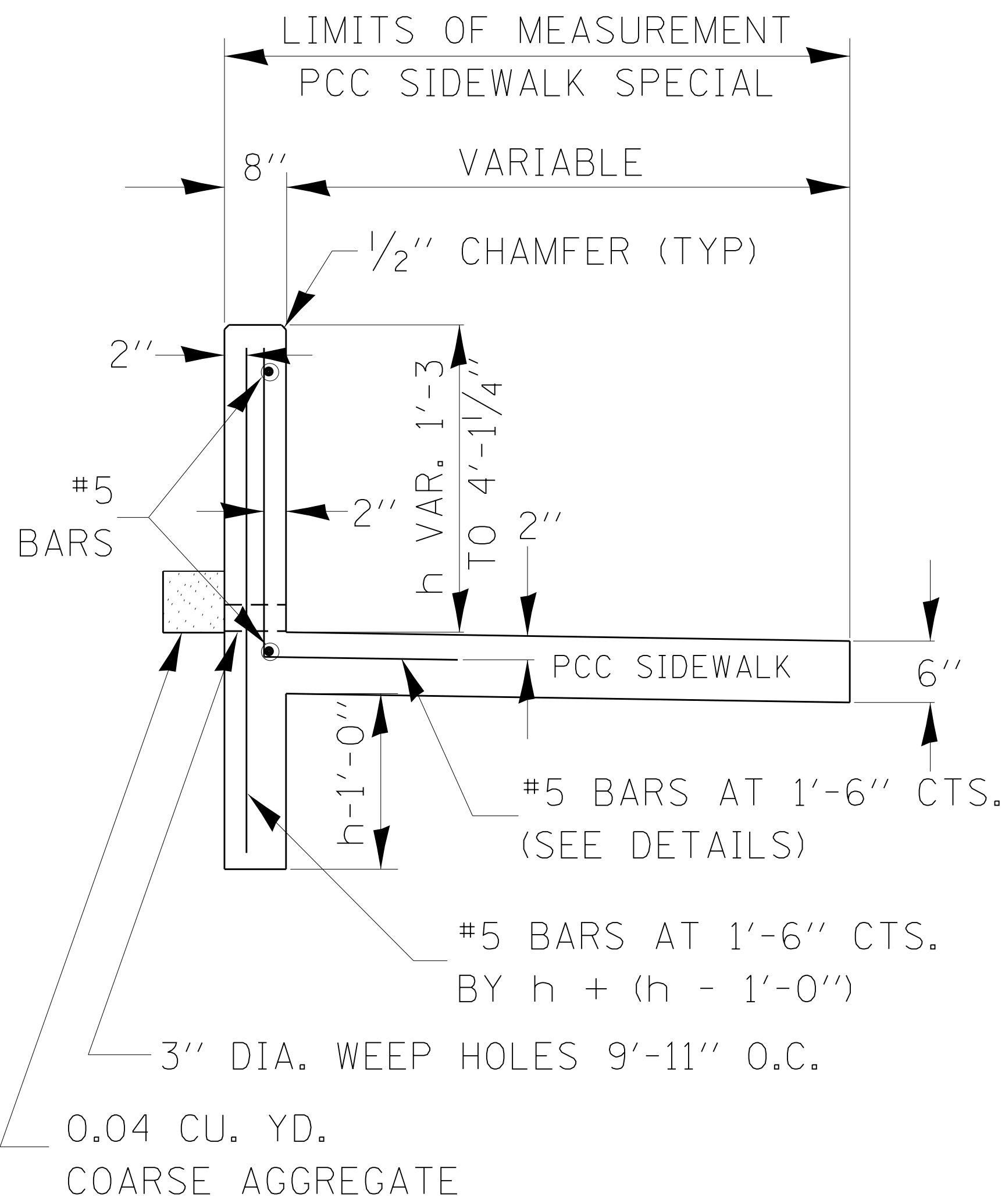


SECTION B-B

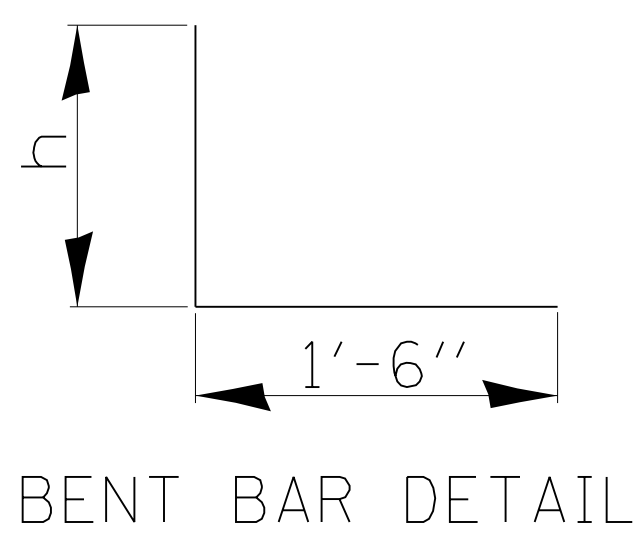
ADA SIDEWALK ACCESSIBILITY RAMP DETAIL



TYPE 1

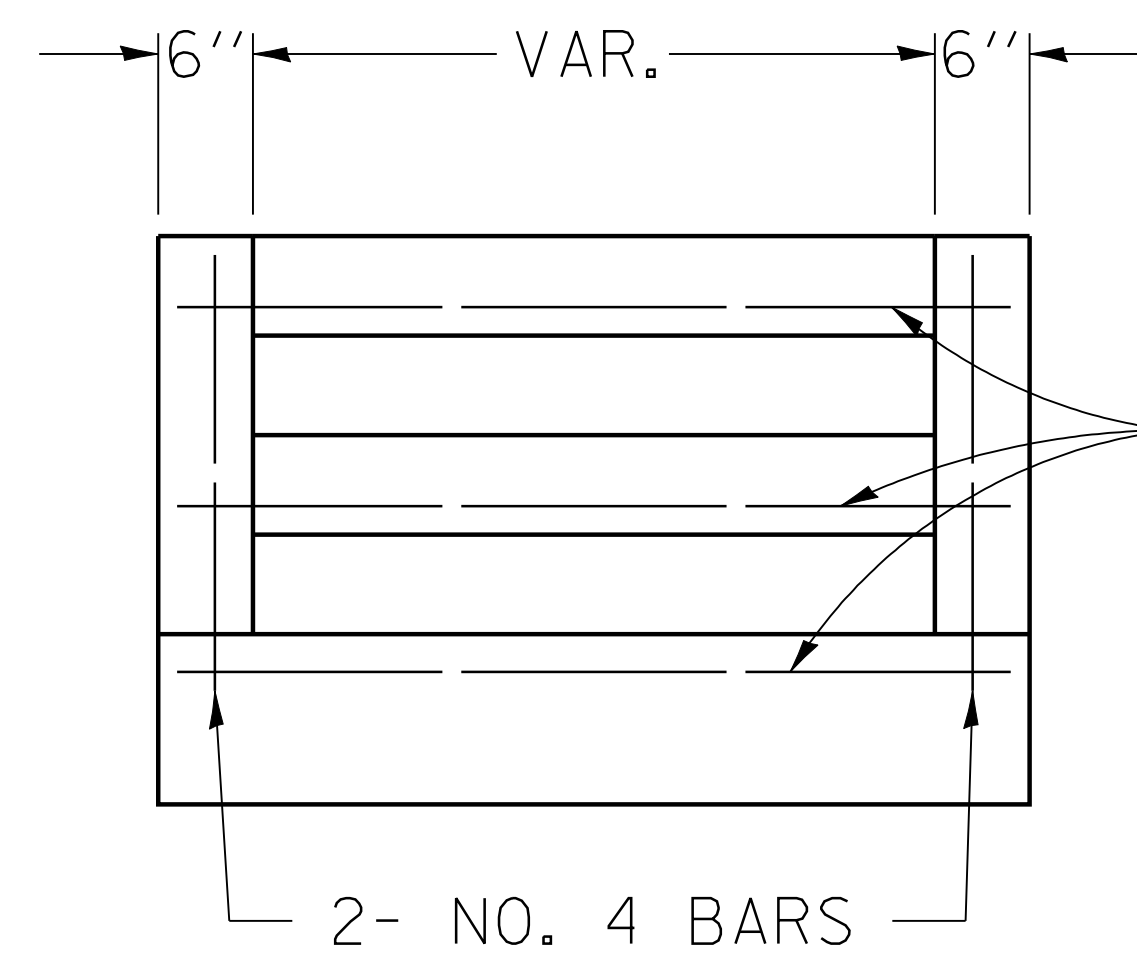


TYPE 2

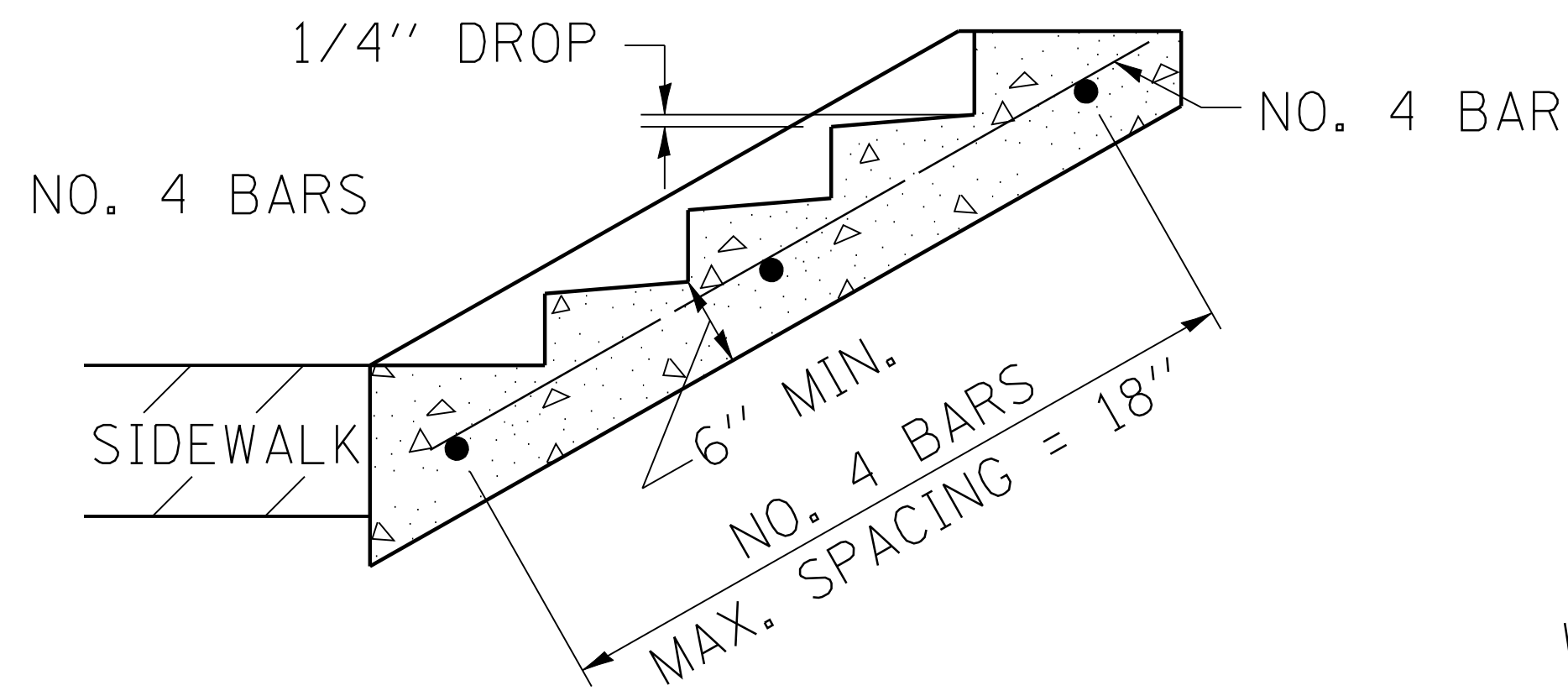


PCC SIDEWALK SPECIAL WITH RETAINING WALL

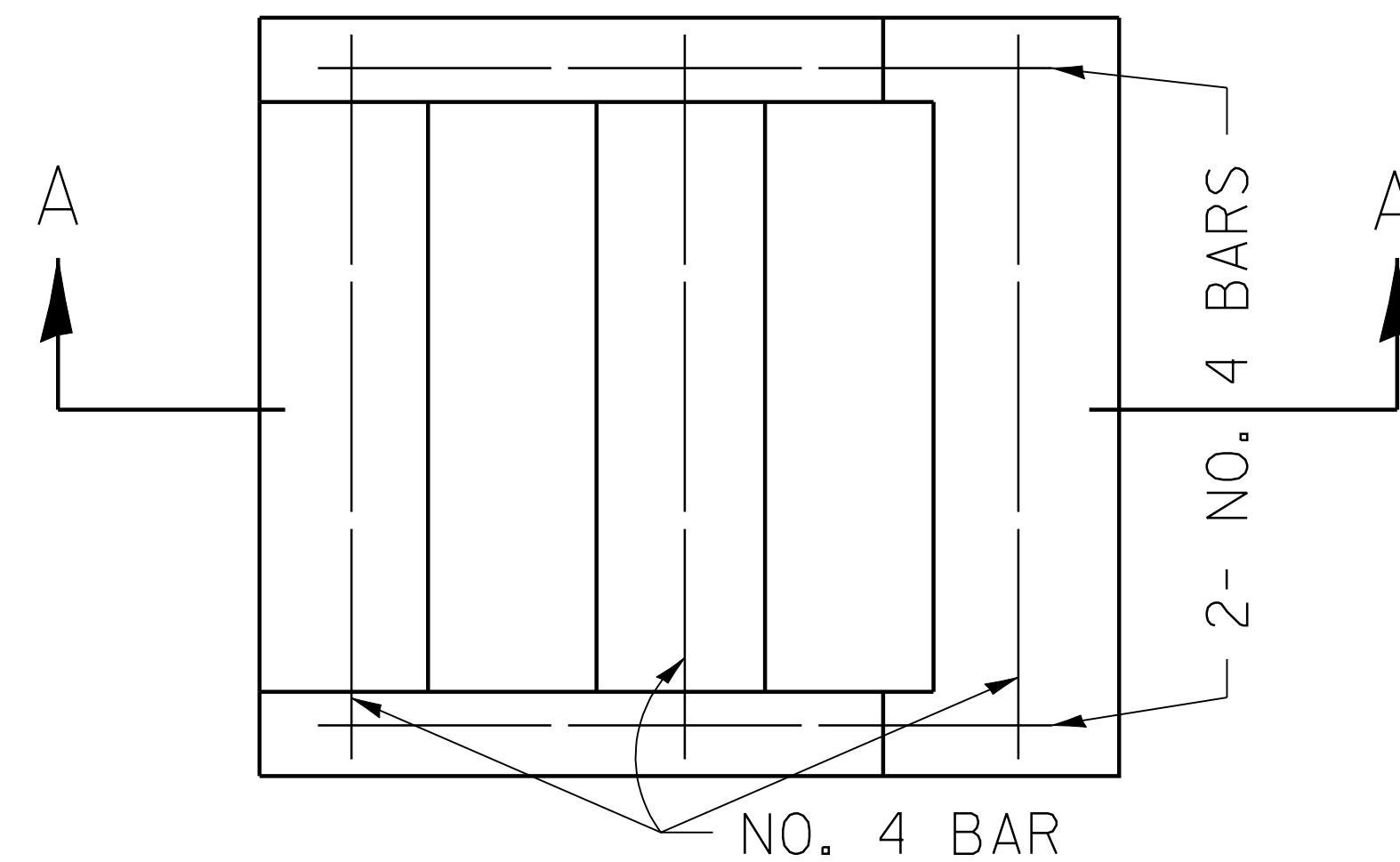
424-30



END ELEVATION



SECTION A-A



PLAN

TABLE OF TREADS & RISERS

SLOPE	TREAD	RISER
1:2	12"	6"
1:3	15"	5"
1:4	17"	4 1/4"

WHERE SLOPES FALL BETWEEN THOSE SHOWN IN THE TABLE ABOVE, THE STAIR RAIL SHOULD FIT THE SLOPE AND THE TREAD IN INCHES x THE RISER IN INCHES SHOULD BE BETWEEN 72 AND 78.

EXAMPLE:

FOR A 1:4 SLOPE USE $y =$ RISER HEIGHT $4y^2 = 75''$.
 SOLVING $y^2 = \frac{75''}{4}$, $y = 4.3''$ (USE 4 1/4" FOR CONVENIENCE.)

TREAD WOULD THEN BE $4 \frac{1}{4}'' \times 4 = 17''$

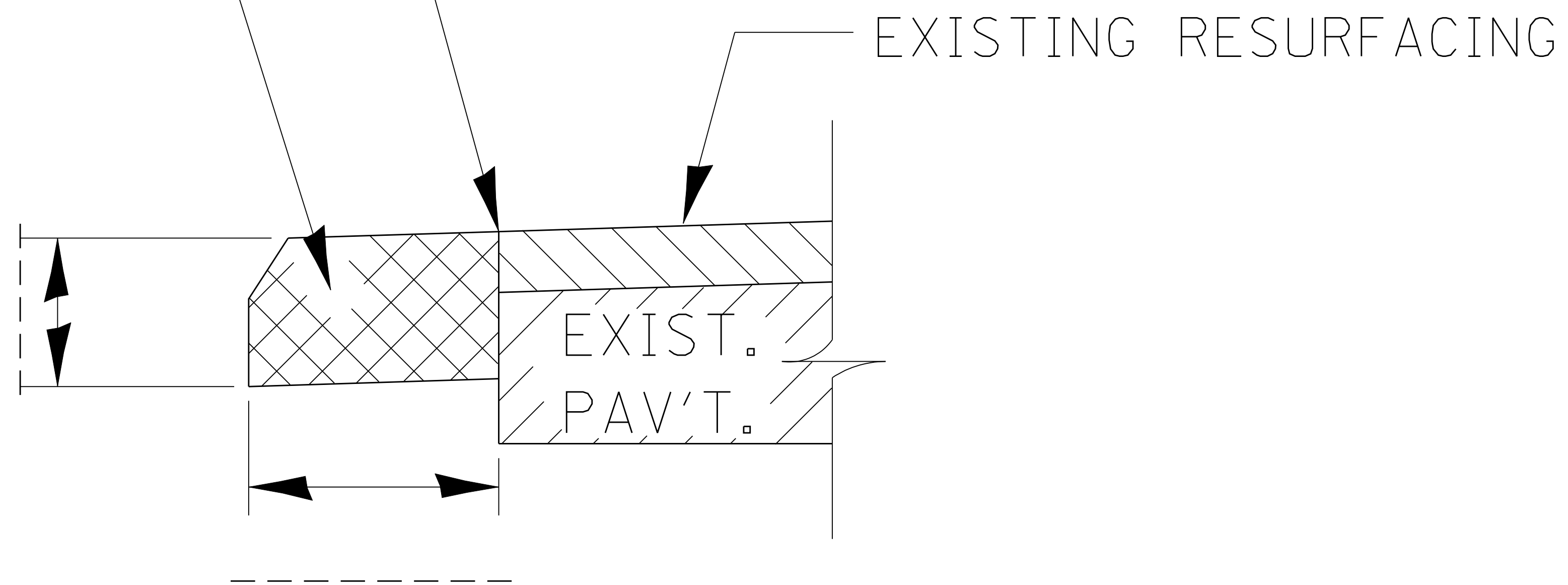
COST OF REINFORCEMENT BARS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LBS REINFORCEMENT BARS.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT, WHICH SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR CLASS SI CONCRETE STEPS.

DETAIL OF CONCRETE STEPS

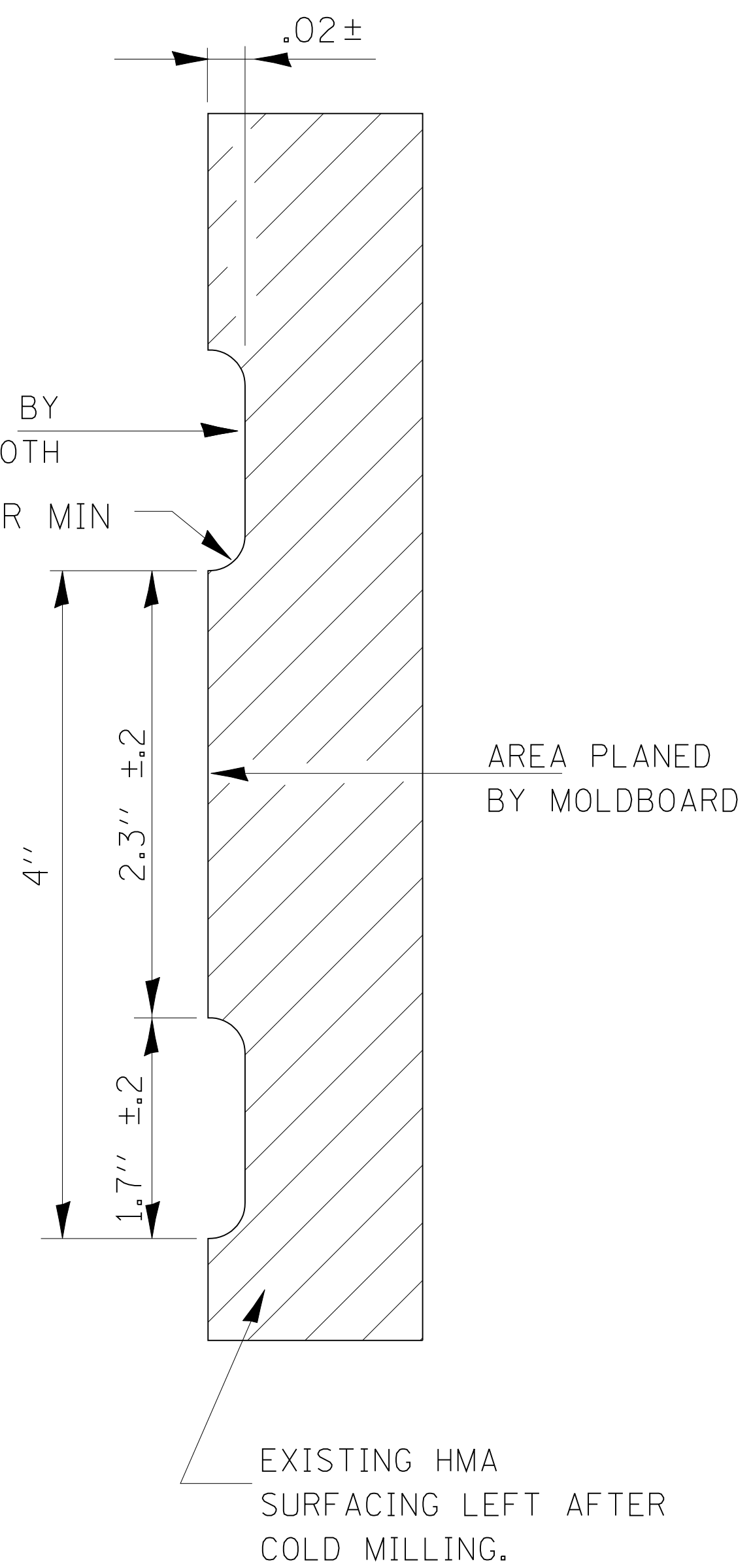
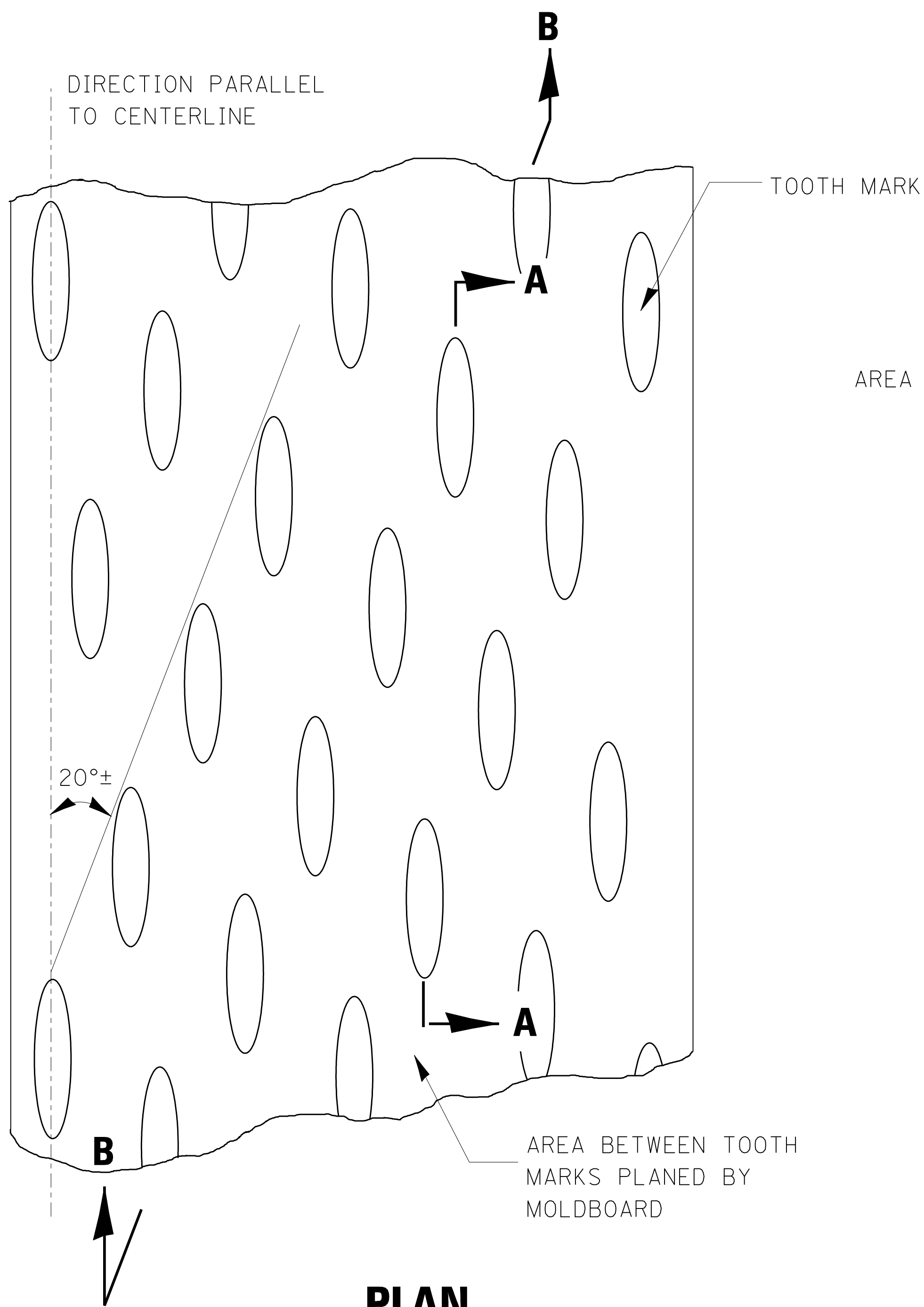
REMOVAL OF EXISTING HMA
SHOULDER TO BE PAID FOR
AS PAVED SHOULDER REMOVAL.

NEAT LINE REMOVAL TO BE CUT
WITH AN ASPHALT CUTTING WHEEL
ATTACHED TO A GRADER OR SIMILAR
METHOD APPROVED BY THE ENGINEER.

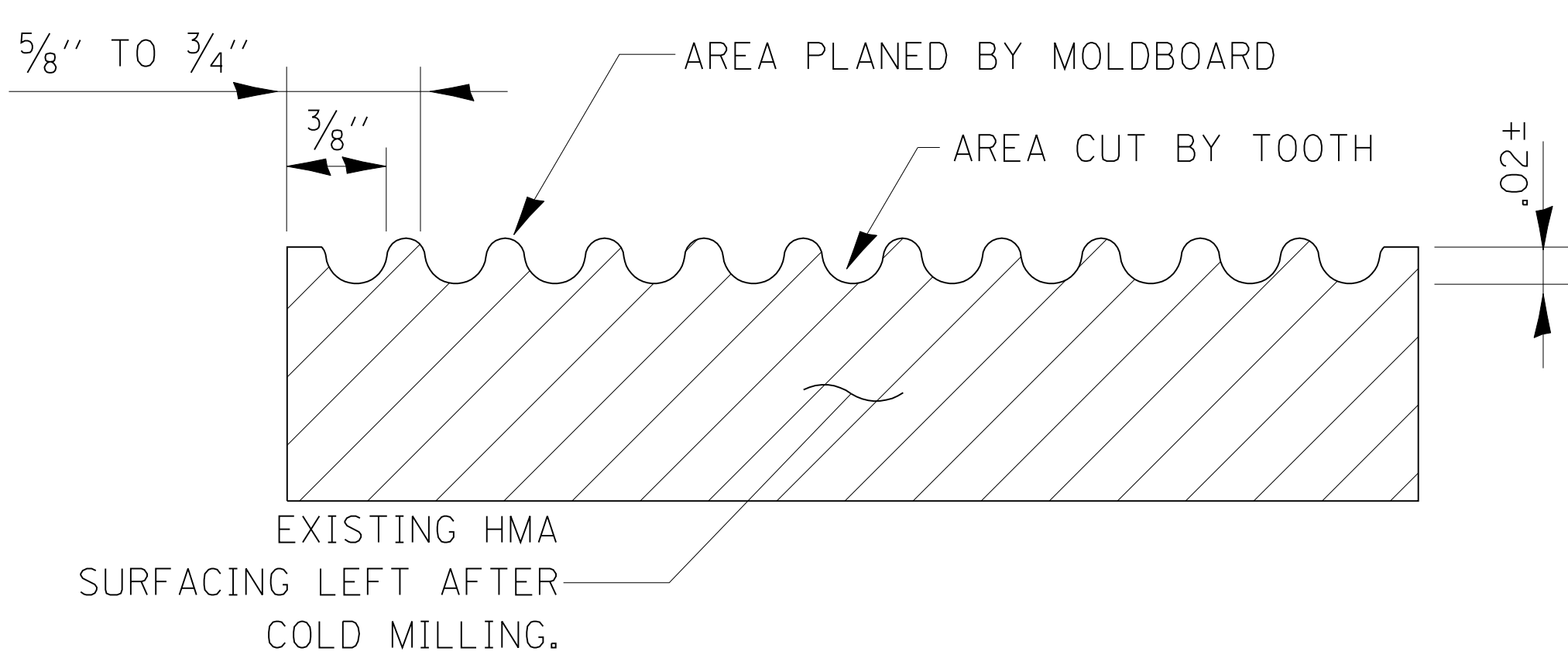


**REMOVAL OF EXISTING
HMA SHOULDER**

440-1



SECTION A-A

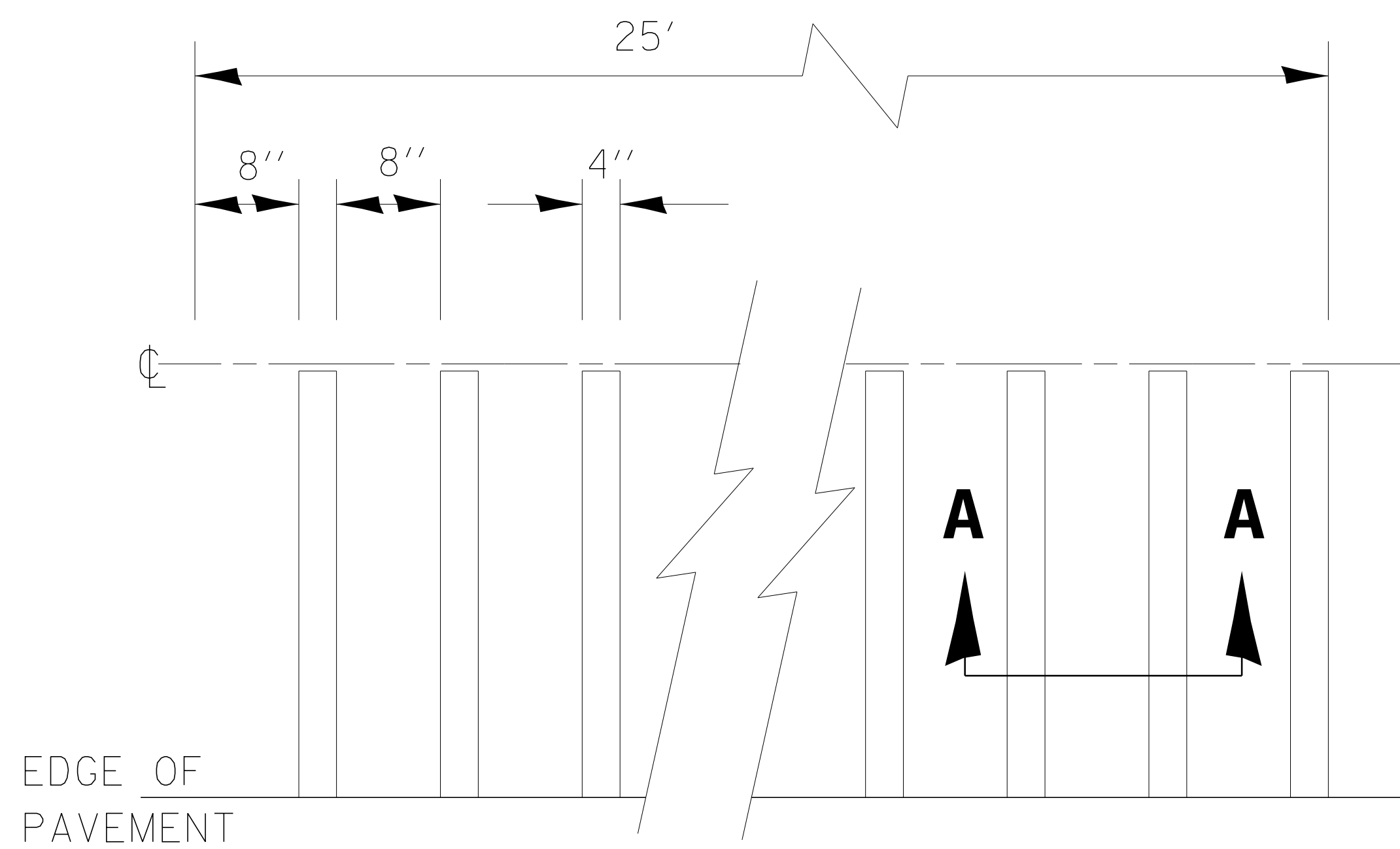
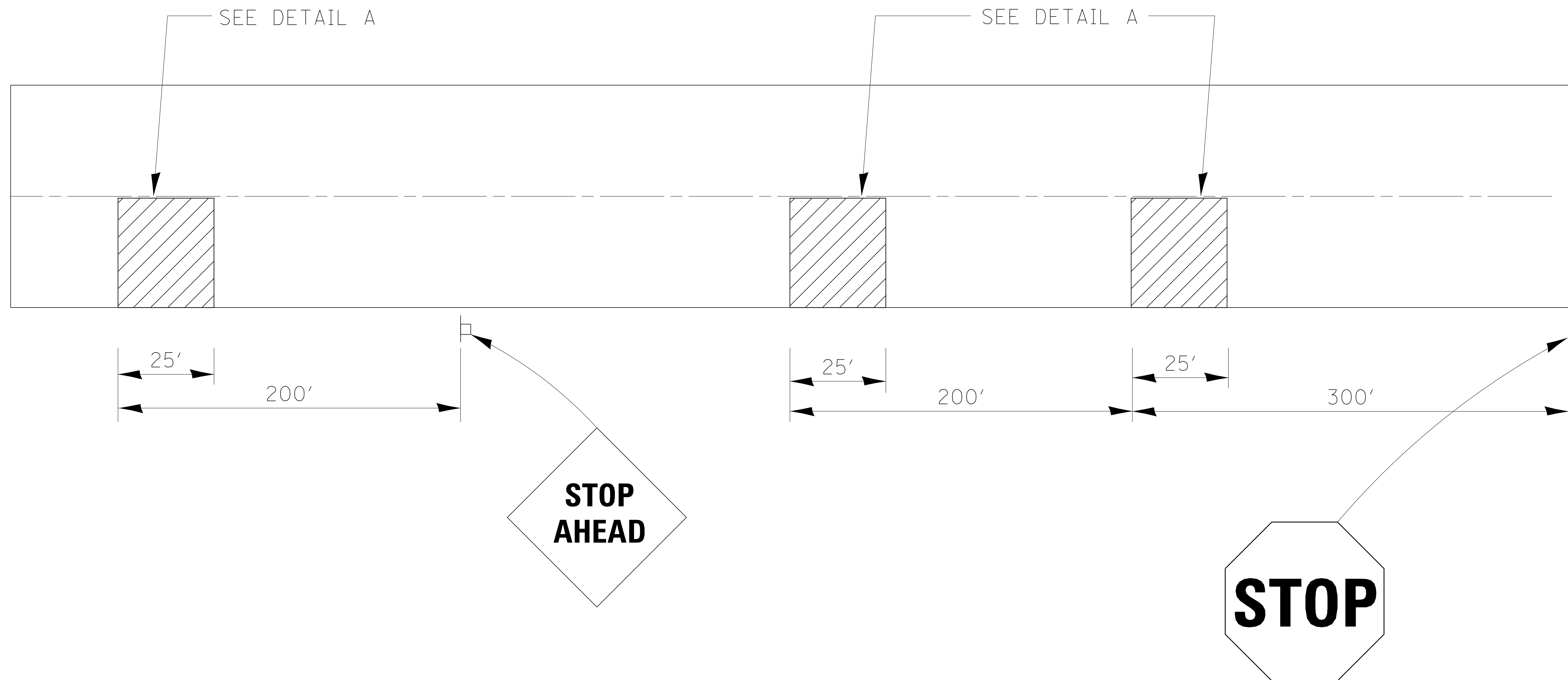


SECTION B-B
PROJECTED PERPENDICULAR
TO CENTERLINE

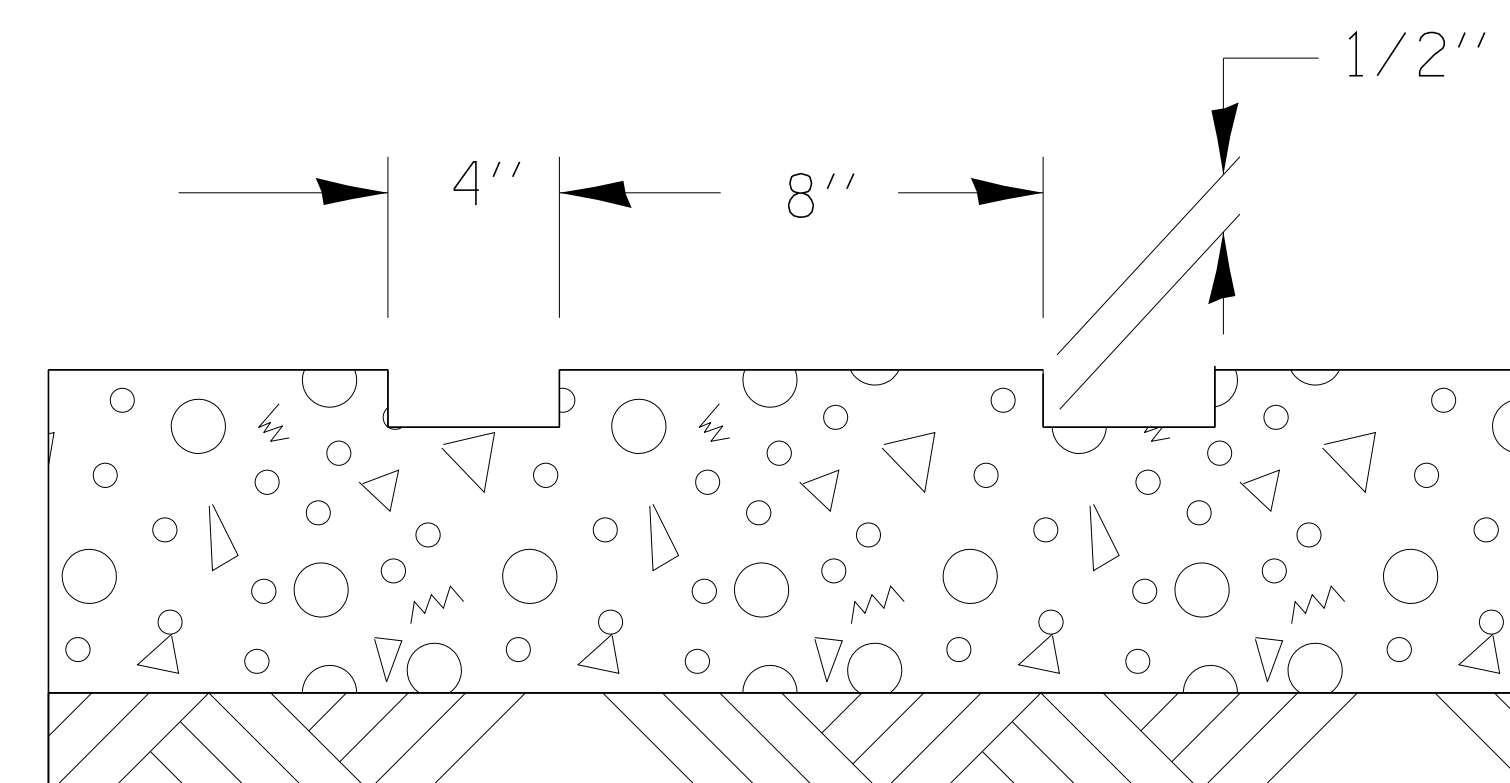
REQUIRED COLD MILLED SURFACE TEXTURE

1. COLD MILLING SHALL CONSIST OF TWO PROCESSES: CUTTING WITH CARBIDE TEETH MOUNTED ON A ROTATING DRUM, AND PLANING WITH A MOLDBOARD MOUNTED IMMEDIATELY BEHIND THE CUTTING DRUM.
2. OTHER SIMILAR PATTERNS WILL BE ACCEPTABLE IF THEY CONSIST OF A SMOOTH, FLAT PLANED SURFACE INTERSPERSED WITH A PATTERN OF DISCONTINUOUS LONGITUDINAL STRIATIONS.

DESIGNER NOTE:
TO BE USED WITH RECURRING CHECK SHEET
"HMA SURFACE CORRECTION"



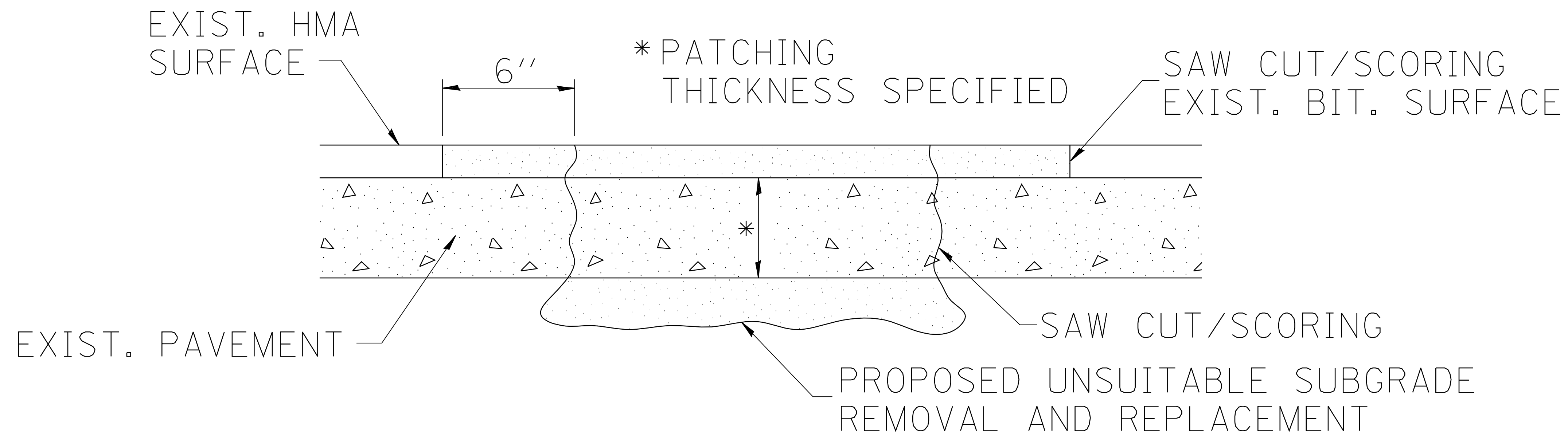
DETAIL A



SECTION A-A

**TYPICAL GROOVED RUMBLE STRIP
APPLICATION IN ADVANCE OF AN INTERSECTION**

440-3



SEQUENCE OF CONSTRUCTION

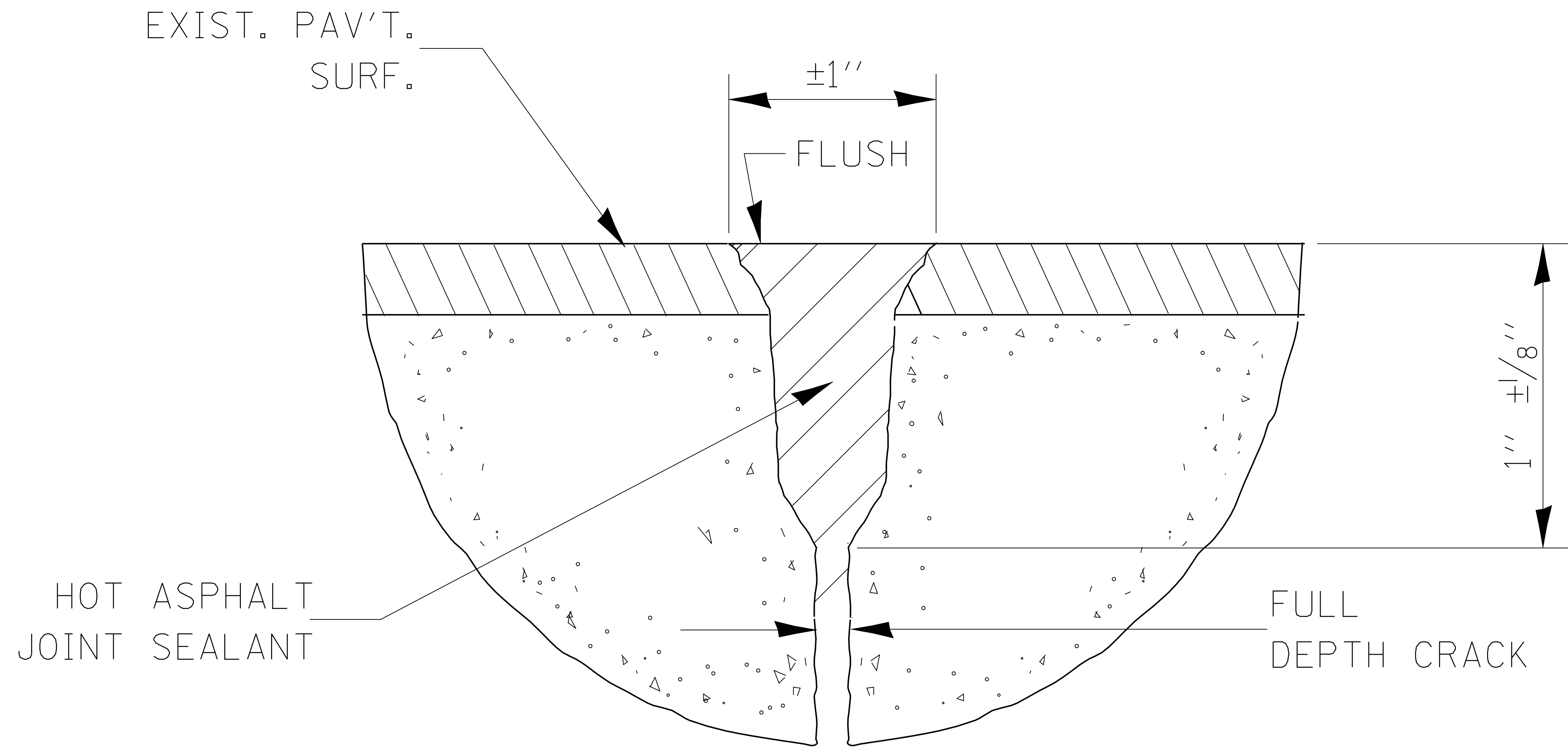
1. REMOVE THE EXISTING HMA SURFACE.
2. REMOVE AND REPLACE FULL DEPTH PATCHES.
3. REPLACE HMA SURFACE.

GENERAL NOTES

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12" WIDER ON EACH SIDE OF THE TRENCH.
2. FOR BASIS OF PAYMENT SEE SPECIAL PROVISION "PATCHING WITH HMA OVERLAY REMOVAL".

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

442-1



SEALING CRACKS (PAVEMENT) DETAIL

NOTE: ALL CRACKS LESS THAN $\frac{3}{8}$ " WIDTH REQUIRE ROUTING