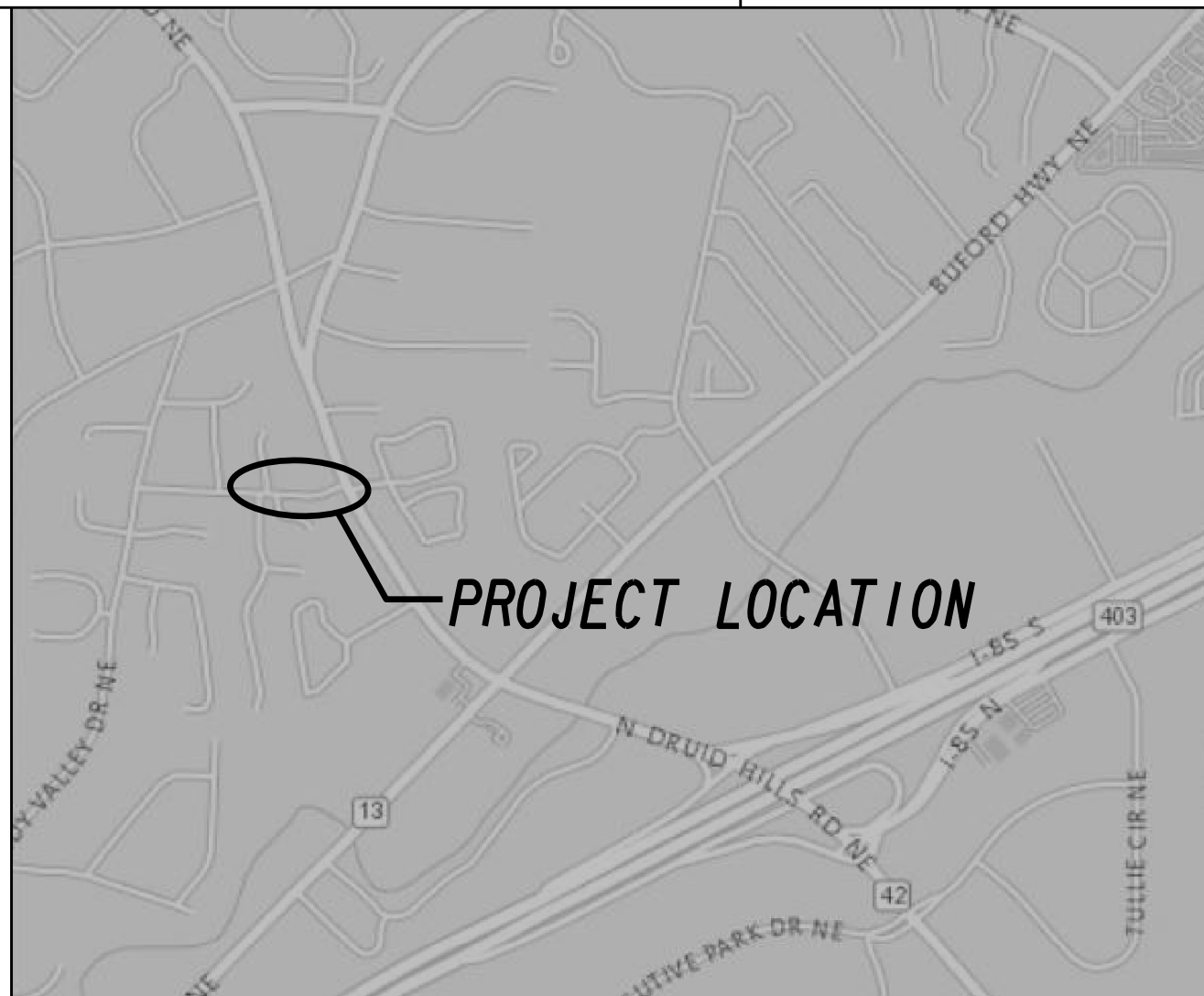


# CITY OF BROOKHAVEN DEPARTMENT OF PUBLIC WORKS

## PLAN OF PROPOSED CHILDERS ROAD SIDEWALK PROJECT NUMBER: WALK 16-112



LOCATION SKETCH

**CITY OF BROOKHAVEN**  
MAYOR, JOHN ARTHUR ERNST JR.  
CITY COUNCIL DISTRICT 1: LINLEY JONES  
CITY COUNCIL DISTRICT 2: JOHN PARK  
CITY COUNCIL DISTRICT 3: BATES MATTISON  
CITY COUNCIL DISTRICT 4: JOE GEBBIA  
CITY MANAGER: CHRISTIAN SIGMAN

**24-HOUR CONTACT:**  
CITY OF BROOKHAVEN DEPARTMENT OF PUBLIC WORKS  
PHONE NUMBER: 404-637-0500  
EMAIL: ANDREW.T.HOMPSON@BROOKHAVENGAV.GOV

TOTAL PROJECT AREA: 0.8 AC  
TOTAL DISTURBED AREA: 0.2 AC  
SPEED LIMIT: 25 MPH  
CHILDERS ROAD  
SPEED LIMIT: 45 MPH  
N DRUID HILLS ROAD  
DESIGNED IN ENGLISH UNITS.

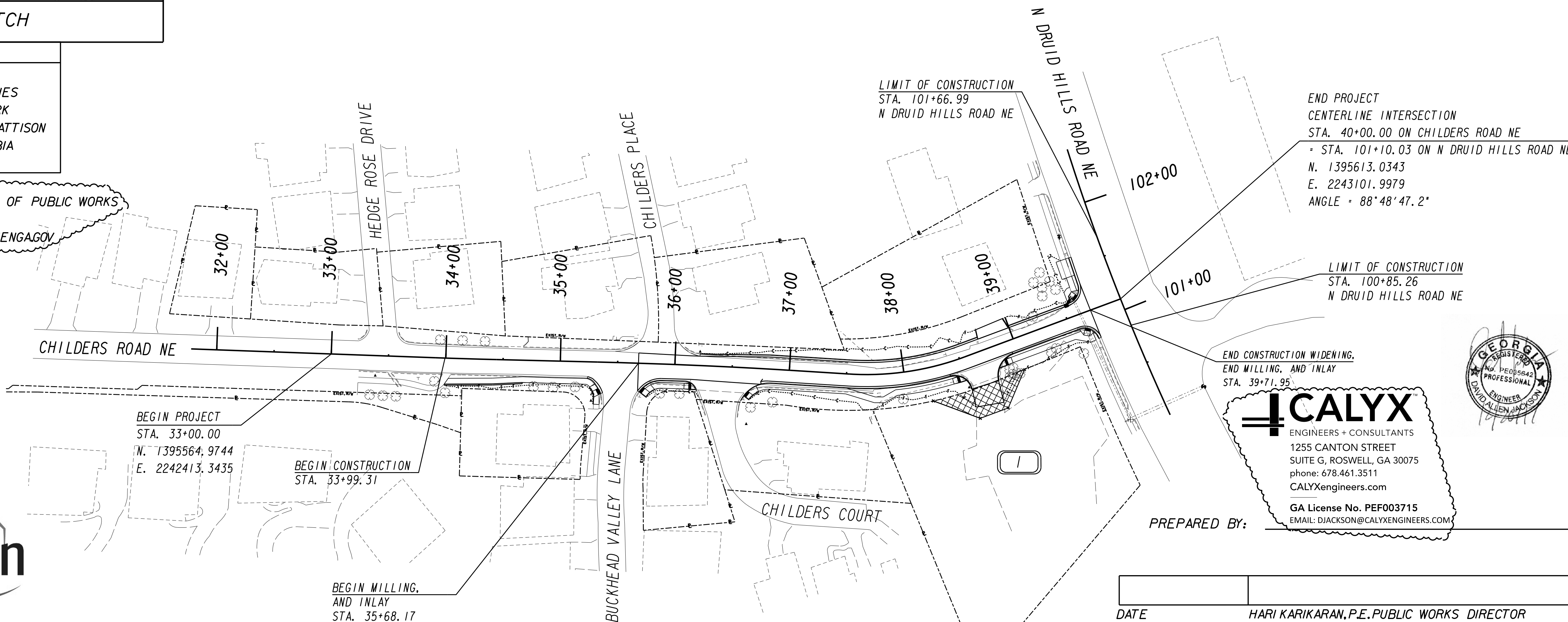
THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.



**NOTE:**  
ALL WORK TO BE DONE IN ACCORDANCE WITH STANDARD SPECIFICATIONS OF THE DEPARTMENT OF TRANSPORTATION OF GEORGIA CURRENT EDITION AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102D4, 102D5, AND 104D3 OF THE SPECIFICATIONS.

**NOTE:**  
ALL REFERENCES IN THIS DOCUMENT, WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA," "STATE HIGHWAY DEPARTMENT," "GEORGIA STATE HIGHWAY DEPARTMENT," "HIGHWAY DEPARTMENT," OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.



**END PROJECT CENTERLINE INTERSECTION**  
STA. 40+00.00 ON CHILDERS ROAD NE  
• STA. 101+10.03 ON N DRUID HILLS ROAD NE  
N. 1395613.0343  
E. 2243101.9979  
ANGLE = 88° 48' 47.2"

**LIMIT OF CONSTRUCTION**  
STA. 100+85.26  
N DRUID HILLS ROAD NE

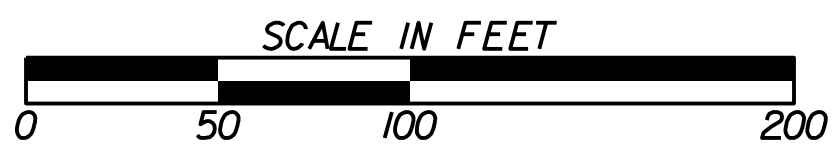
**END CONSTRUCTION WIDENING, END MILLING, AND INLAY**  
STA. 39+71.95

**CALYX**  
ENGINEERS + CONSULTANTS  
1255 CANTON STREET  
SUITE G, ROSWELL, GA 30075  
phone: 678.461.3511  
CALYXengineers.com  
GA License No. PEF003715  
EMAIL: DJACKSON@CALYXENGINEERS.COM



PREPARED BY:

	FEET
LENGTH OF PROJECT	1000
EXISTING TRAVEL LANES	1000
NEW TRAVEL LANES	0
EXISTING SIDEWALK	0
NEW SIDEWALK	575
EXISTING FIBER OPTIC	N/A
NEW FIBER OPTIC INSTALLATIONS	N/A

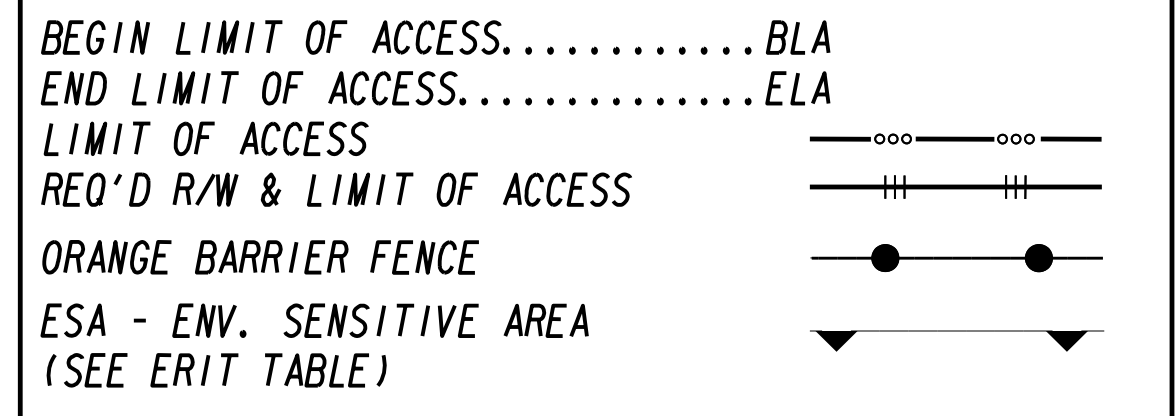
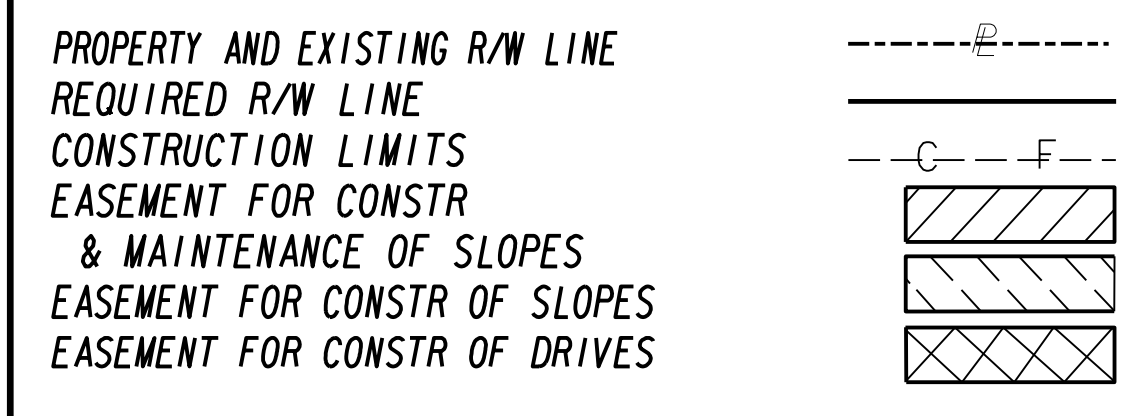
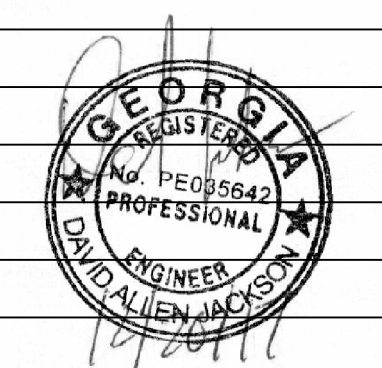


DATE	HARI KARIKARAN, P.E. PUBLIC WORKS DIRECTOR
PLANS COMPLETED	12/20/17
REVISIONS	
	01/05/18 - DWG NO. 01-0001, 02-0001, 03-0001, 54-0001, 54-0002, D-24A, D-24C

DRAWING No.  
**01-0001**

DRAWING NO.	DESCRIPTION
01-0001	COVER SHEET
02-0001	INDEX
03-0001	REVISION SUMMARY
04-0001 TO 04-0002	GENERAL NOTES
05-0001 TO 05-0002	TYPICAL SECTIONS
06-0001	SUMMARY OF QUANTITIES
13-0001 TO 13-0002	CONSTRUCTION PLANS
17-0001	DRIVEWAY PROFILES
19-0001	STAGING PLAN
22-0001	DRAINAGE PROFILES
23-0001 TO 23-0008	CROSS SECTIONS
24-0001 TO 24-002	UTILITY PLANS
26-0001 TO 26-002	SIGNING AND MARKING PLANS
31-0001	RETAINING WALL ENVELOPES
38-0001	SPECIAL CONSTRUCTION DETAIL - HANDRAIL
GA STANDARDS	
1019A	DROP INLETS (08/1999)
1019A-P	PRECAST DROP INLETS (08/1999)
1030D(1)	CONCRETE AND METAL PIPE CULVERTS SHEET 1 OF 3 (09/2001)
1030D(2)	CONCRETE AND METAL PIPE CULVERTS SHEET 2 OF 3 (09/2001)
1030D(3)	CONCRETE AND METAL PIPE CULVERTS SHEET 3 OF 3 (09/2001)
1030P	THERMOPLASTIC PIPE (09/2016)
9031L	GRAVITY WALL TYPICAL SECTIONS, RAISING HEADWALL, AND TYPICAL PIPE PLUG (09/2016)
9031U	JUNCTION BOXES (PRECAST OR BUILT-IN-PLACE) PIPE COLLARS, PIPE ELBOW, AND PIPE CURVED ALIGNMENTS (07/1985)
9032B	CONCRETE CURB AND GUTTER, CONCRETE CURBS, CONCRETE MEDIANS (11/2011)
9100	TRAFFIC CONTROL GENERAL NOTES, STANDARD LEGEND, AND MISCELLANEOUS DETAILS (03/2006)
9102	TRAFFIC CONTROL DETAIL FOR LANE CLOSURE ON TWO-LANE HIGHWAY (03/2006)
GA DETAILS	
A-1	DRIVEWAYS WITH TAPERED ENTRANCES CONCRETE VALLEY GUTTERS (07/2011)
A-2	CONCRETE VALLEY GUTTER AT STREET INTERSECTION 6 (07/2011)
A-3	CONCRETE SIDEWALK DETAILS CURB CUT (WHEELCHAIR) RAMPS (09/2016)
A-4	DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING, AND ALIGNMENT REQUIREMENTS (06/2009)
T-01	SIGN PLATES (01/2000)
T-02	DETAILS FOR TYPICAL FRAMING (03/2000)
T-03A	TYPE 7, 8, AND 9 SQUARE TUBE POST INSTALLATION DETAIL (07/2002)
T-11A	DETAILS OF PAVEMENT MARKING PLACEMENT ON NON-LIMITED ACCESS ROADWAY (09/2016)

DRAWING NO.	DESCRIPTION
52-0001 TO 52-0007	EROSION CONTROL LEGEND AND UNIFORM CODE SHEETS
54-0001 TO 54-0002	EROSION CONTROL BMP LOCATION DETAILS
EROSION CONTROL DETAILS	
D-24A	TEMPORARY SILT FENCE (01/2011)
D-24C	TEMPORARY SILT FENCE J-HOOKS, INLET SEDIMENT TRAPS (01/2011)
D-35	PERMANENT SOIL REINFORCEMENT MATS (TURF REINFORCEMENT MATS) INSTALLATION ON DITCHES (01/2011)
D-54	SOD INSTALLATION (04/2016)
60-0001 TO 60-0003	RIGHT OF WAY PLANS



REVISION DATES	
01/05/18	

INDEX			
CHILDERS ROAD SIDEWALK			
CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
			DRAWING No. <b>02-0001</b>



GENERAL NOTES

PROJECT SPECIFIC NOTES

UTILITY OWNER	CONTACT	SERVICE	CONTACT NUMBER
SOUTHERN COMPANY GAS	GINNY MAULDIN-KINNEY	GAS	404-584-3176
AT&T	DAVID WAGONER	TELECOMMUNICATION	404-532-7704
COMCAST	CHARLES ROSS	CABLE	770-559-6994
DEKALB WATERSHED MANAGEMENT	RUDY CHEN	WATER AND SEWER	770-621-7213
GPC	LAMONTE WASLIEN	POWER	404-947-0729
HOTWIRE COMMUNICATIONS	MIGUEL CASTILLO	TELECOMMUNICATION	678-293-8318
LEVEL 3 COMMUNICATIONS	MICHAEL MAYES	TELECOMMUNICATION	404-394-0597
WINDSTREAM	ANDY EASTMAN	TELECOMMUNICATION	319-790-6195
VERIZON	DENNIS RAINEY	TELECOMMUNICATION	678-778-7251
XO COMMUNICATIONS	BARRY LONG	TELECOMMUNICATION	678-431-5358
ZAYO FIBER	TODD SWAFFORD	FIBER	678-666-2482

- DRIVEWAYS WILL BE PAVED FROM THE OUTSIDE EDGE OF THE TRAVEL LANE TO THE TIE-IN POINT OF THE EXISTING DRIVEWAY OR TO THE REQUIRED RIGHT OF WAY LINE, WHICHEVER IS FARTHEST AWAY FROM THE CENTERLINE. WHERE REQUIRED, DRIVEWAYS SHALL BE CONSTRUCTED AS FOLLOWS:

RESIDENTIAL CONCRETE DRIVES:  
6 IN DRIVEWAY CONCRETE  
6 IN CONCRETE VALLEY GUTTER

RESIDENTIAL ASPHALT DRIVES:  
1-1/2" ASPH. CONC. 12.5 MM SUPERPAVE, 165 LB/SY  
6" GRADED AGGREGATE BASE

COMMERCIAL CONCRETE DRIVES:  
8 IN DRIVEWAY CONCRETE  
8 IN CONCRETE VALLEY GUTTER

COMMERCIAL ASPHALT DRIVES:  
1-1/2" ASPH. CONC. 12.5 MM SUPERPAVE, 165 LB/SY  
2" ASPH. CONC. 19 MM SUPERPAVE, 220 LB/SY  
6" GRADED AGGREGATE BASE

- NEW PAVEMENT/SURFACING IS REQUIRED ACROSS ALL PROPERTY FRONTAGES TO EXISTING CENTERLINE, TO BE INSTALLED PER BROOKHAVEN STANDARD DETAILS OR AS ADDITIONALLY DIRECTED BY BROOKHAVEN TRAFFIC ENGINEER.
- ALL TRAFFIC CONTROL AND WARNING DEVICES MUST BE SHOWN AND PLACED PER MUTCD.
- TEMPORARY TRAFFIC CONTROL AND WARNING DEVICES SHALL BE PLACED PRIOR THE COMMENCEMENT OF ANY ROAD IMPROVEMENT WORK ON CITY ROADS AND SHALL REMAIN IN PLACE UNTIL THE CONCLUSION OF ALL SIGNING AND STRIPING WORK.
- ALL SIGNS SHALL CONFORM TO THE MUTCD STANDARDS AND SANDY SPRINGS STANDARDS FOR COLOR, SIZE, REFLECTIVITY, HEIGHT, AND PLACEMENT
- STRIPING (WHITE AND YELLOW) AND ARROW MARKINGS SHALL BE APPLIED USING GDOT STANDARDS FOR THERMOPLASTIC STRIPING.
- WHEN NECESSARY, EXISTING STRIPING SHALL BE REMOVED BY GRINDING, UNLESS SPECIFIED BY THE BROOKHAVEN TRAFFIC ENGINEER.
- ALL FINAL SIGNAGE MUST BE INSTALLED CONCURRENTLY WITH THE PERFORMANCE OF THE STRIPING WORK.
- CONTACT THE BROOKHAVEN TRAFFIC ENGINEER (678-382-6700) ONE WEEK PRIOR TO COMMENCEMENT OF ANY STRIPING WORK.
- CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE AS-BUILT STATUS OF DOWNSTREAM DRAINAGE IMPROVEMENTS PRIOR TO BEGINNING CONSTRUCTION AND ADVISE THE ENGINEER OF ANY DIFFERENCES NOTED BETWEEN FIELD CONDITIONS AND WHAT IS DEPICTED ON THE CONSTRUCTION DOCUMENTS.
- SAWCUT MUST BE USED IN ANY AREA WHERE NEW PAVEMENT WILL ABUT EXISTING PAVEMENT.
- NO CLOSURES OF OR ENCROACHMENTS INTO THE PEDESTRIAN, BICYCLE, OR VEHICULAR TRAVEL AREAS SHALL BE DONE WITHOUT PRIOR APPROVAL FROM THE BROOKHAVEN TRAFFIC ENGINEER. ALL PROPOSED PLANS FOR CLOSURES AND ENCROACHMENTS SHALL BE SUBMITTED AT LEAST TWO WEEKS PRIOR TO INTENDED BEGINNING AND MUST BE APPROVED PRIOR TO COMMENCEMENT.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL BORROW/WASTE PITS NEEDED FOR THE PROJECT AT NO ADDITIONAL COST TO THE CITY. ALL DEBRIS AND WASTE FROM THE PROJECT WILL BE DISPOSED OF PROPERLY BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO THE EXISTING IRRIGATION SYSTEM WHICH OCCURS AS A RESULT OF ANY WORK ASSOCIATED WITH THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES IMPACTED BY THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MARKING AND LOCATING EXISTING UTILITIES AS WELL AS ANY DAMAGE OR INTERRUPTION IN SERVICE DUE TO CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROJECT. ANY INTERRUPTION IN SERVICE WILL BE COORDINATED AT LEAST 48-HOURS IN ADVANCE WITH THE IMPACTED UTILITY.
- TRIM ALL TREE LIMBS TO PROVIDE AN 8' VERTICAL CLEARANCE ABOVE THE PROPOSED SIDEWALK AND 2' HORIZONTAL CLEARANCE BEHIND THE PROPOSED SIDEWALK. THE COST OF THIS WORK TO BE INCLUDED IN THE PAY ITEM NO. \*210-0100 - GRADING COMPLETE - LUMP SUM.\*
- CITY ARBORIST HAS REVIEWED THE PROJECT
- THIS PROJECT DOES NOT INCREASE THE IMPERVIOUS AREA WITHIN THE PROJECT SITE BY MORE THAN 5000 SF.

SIDEWALK CONSTRUCTION NOTES

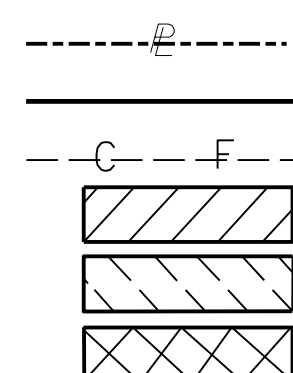
- USE 3/8" X 4" EXPANSION JOINTS AT CHANGE OF DIRECTIONS, CURBS, RIGID STRUCTURES AND RIGID PAVEMENT. ON STRAIGHT RUNS PROVIDE EXPANSION JOINTS EVERY 24 FEET.
- TOOL ALL EXPOSED EDGES AND JOINTS TO 1/4" RADIUS
- BROOM FINISH PERPENDICULAR TO TRAVEL.
- PROVIDE 3/4" DEEP SAW CUT CONTRACTION JOINTS EVERY 5'-0".



Change what's below.  
Call before you dig.  
(800)282-7411



PROPERTY AND EXISTING R/W LINE  
REQUIRED R/W LINE  
CONSTRUCTION LIMITS  
EASEMENT FOR CONSTR  
& MAINTENANCE OF SLOPES  
EASEMENT FOR CONSTR OF SLOPES  
EASEMENT FOR CONSTR OF DRIVES



BEGIN LIMIT OF ACCESS.....BLA  
END LIMIT OF ACCESS.....ELA  
LIMIT OF ACCESS  
REQ'D R/W & LIMIT OF ACCESS  
ORANGE BARRIER FENCE  
ESA - ENV. SENSITIVE AREA  
(SEE ERIT TABLE)



REVISION DATES

NO.	DATE	DESCRIPTION

GENERAL NOTES

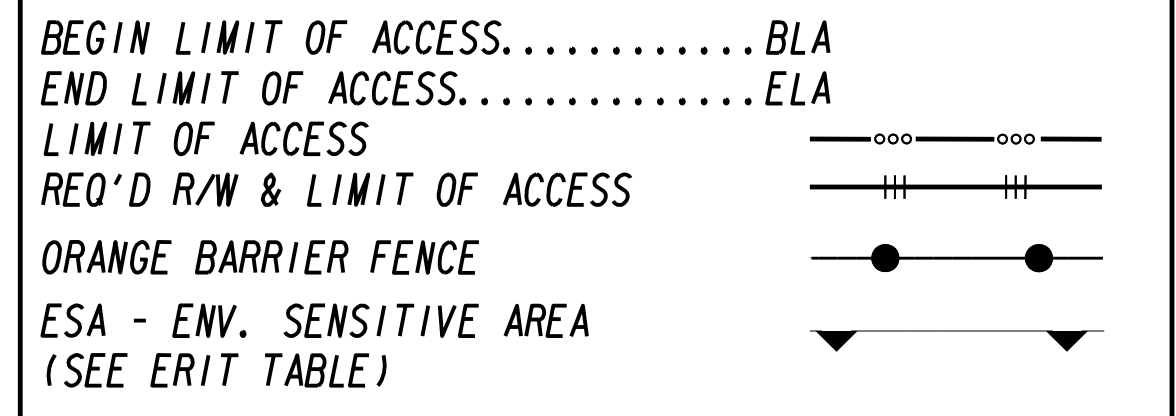
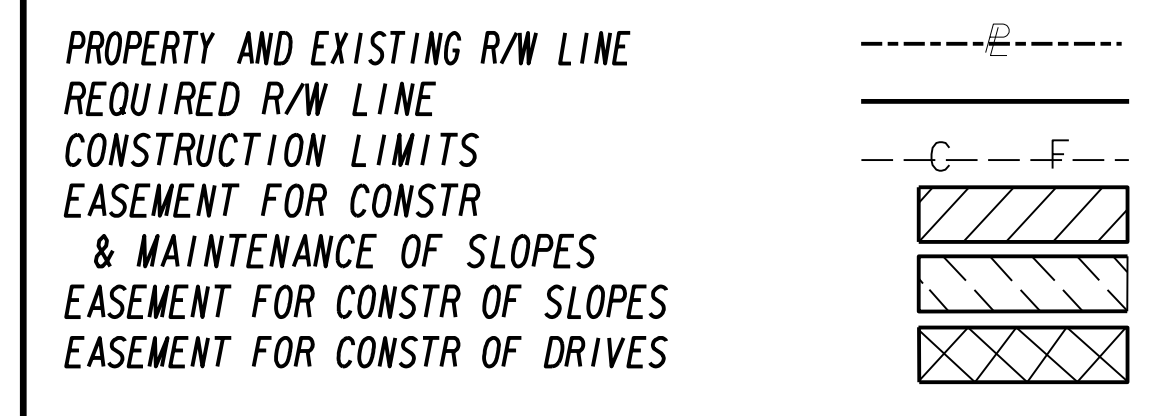
CHILDERS ROAD SIDEWALK

CHECKED:	DATE:	DRAWING No. <b>04-0001</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

UTILITY LINECODES				
	EXISTING	TO BE REMOVED	PROPOSED	TYPE OF UTILITY
OVERHEAD	~E~E~E~E~E~E	~X~E~E~E~E~E	~E~E~E~E~E	ELECTRIC
	~E~T~E~T~E~T	~X~E~T~E~T~E	~E~T~E~T~E~T	ELECTRIC/TELECOMMUNICATIONS
	~E~TV~E~TV~E~TV	~X~E~TV~E~TV~E	~E~TV~E~TV~E~TV	ELECTRIC/CABLE TV
	~E~T~TV~E~T~TV	~X~E~T~TV~E~T~TV	~E~T~TV~E~T~TV	ELECTRIC/TELECOMMUNICATIONS/CABLE TV
	~GW~GW~GW~GW~GW	~X~GW~GW~GW~GW	~GW~GW~GW~GW~GW	GUY WIRE
	~T~T~T~T~T~T	~X~T~T~T~T~T	~T~T~T~T~T~T	TELECOMMUNICATIONS
UNDERGROUND	~T~TV~T~TV~T~TV	~X~T~TV~T~TV~T	~T~TV~T~TV~T~TV	TELECOMMUNICATIONS/CABLE TV
	~TV~TV~TV~TV~TV	~X~TV~TV~TV~TV	~TV~TV~TV~TV~TV	CABLE TV

UNDERGROUND	-----E-----	--X--E--X--	-----E-----	ELECTRIC
	-----T-----	--X--T--X--	-----T-----	TELECOMMUNICATIONS
	-----TV-----	--X--TV--X--	-----TV-----	CABLE TV
	-----W-----	--X--W--X--	-----W-----	WATER
	====**W====	--X--**W--X--	====**W====	WATER FOR LABELED PIPE SIZES
	-----NW-----	--X--NW--X--	-----NW-----	NON-POTABLE WATER
	====**NW====	--X--**NW--X--	====**NW====	NON-POTABLE WATER FOR LABELED PIPE SIZES
	-----STM-----	--X--STM--X--	-----STM-----	STEAM
	====**STM====	--X--**STM--X--	====**STM====	STEAM FOR LABELED PIPE SIZES
	----->SS-----	--X-->SS--X--	----->SS-----	SANITARY SEWER WITH FLOW DIRECTION
	====>SS====	--X-->SS--X--	====>SS====	SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES
	----->SFM-----	--X-->SFM--X--	----->SFM-----	SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION
	-----G-----	--X--G--X--	-----G-----	GAS
	====**G====	--X--**G--X--	====**G====	GAS FOR LABELED PIPE SIZES
	-----P-----	--X--P--X--	-----P-----	PETROLEUM
====**P====	--X--**P--X--	====**P====	PETROLEUM FOR LABELED PIPE SIZES	

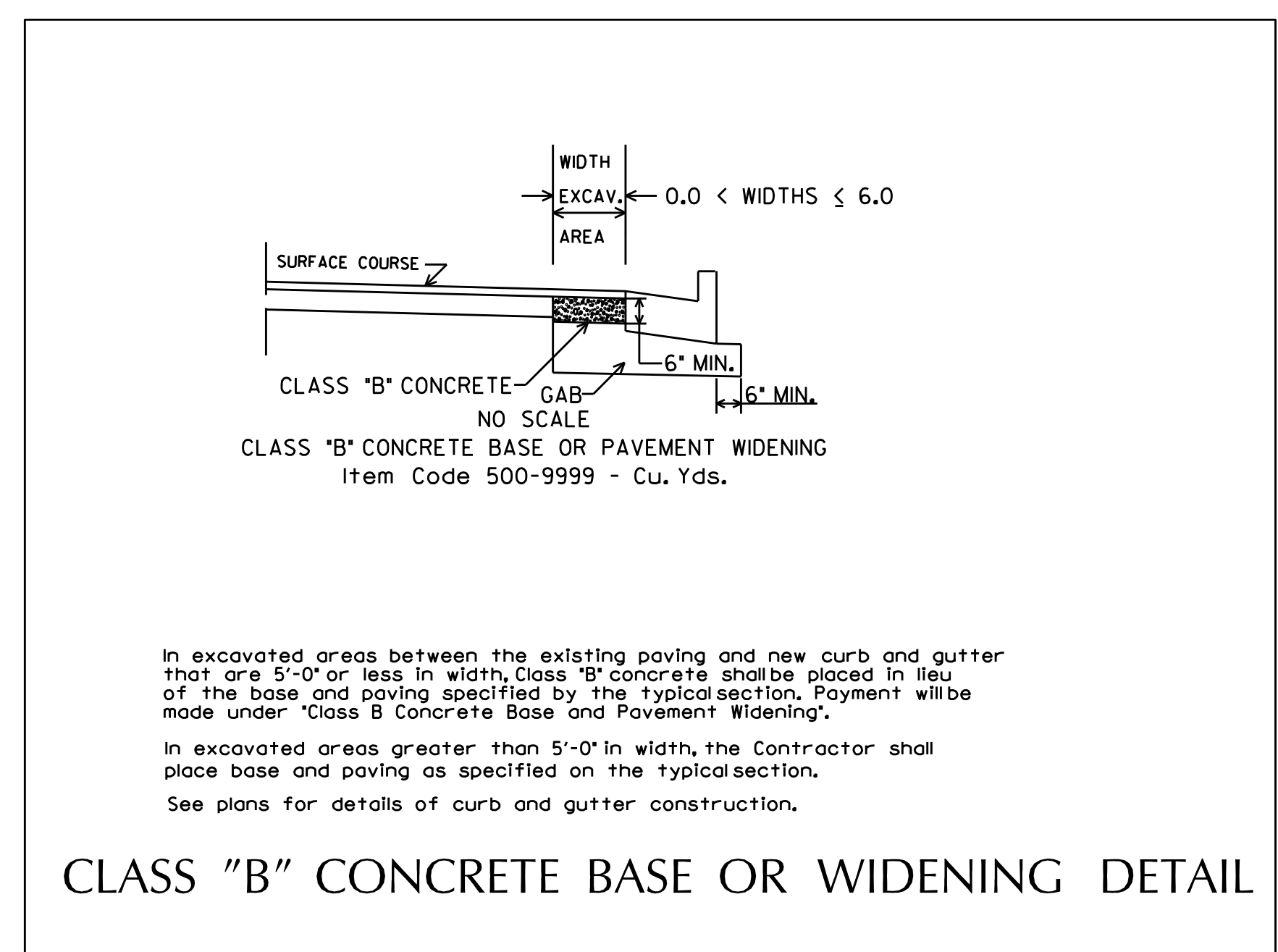
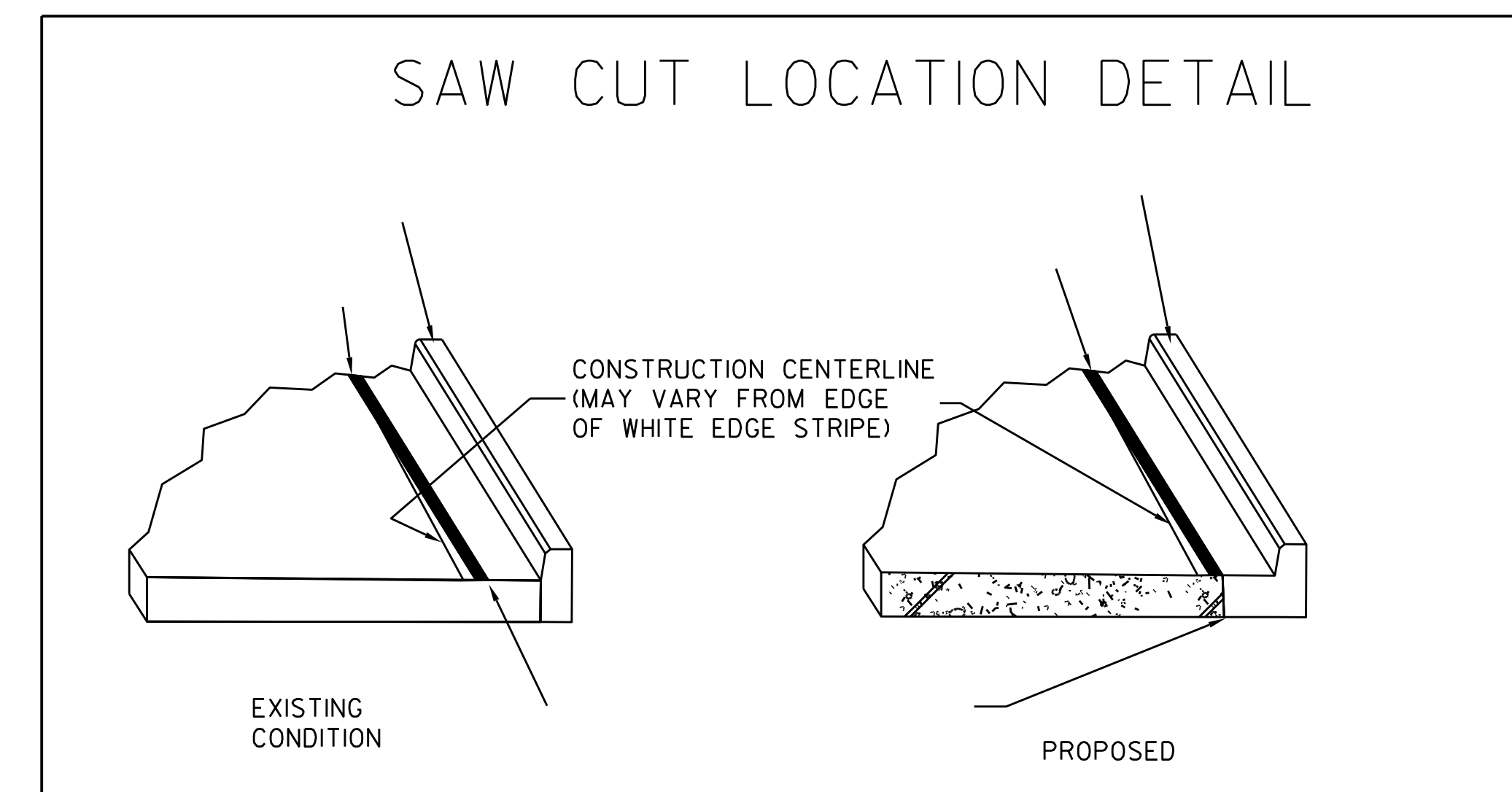
UTILITY SYMBOLS								
EXISTING	PROPOSED	TEMPORARY	EXISTING	PROPOSED	TEMPORARY	EXISTING	PROPOSED	TEMPORARY



REVISION DATES	

GENERAL NOTES			
CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	CHECKED:	DATE:
BACKCHECKED:	DATE:	CORRECTED:	DATE:
VERIFIED:	DATE:	DRAWING No. 04-0002	





### ALLOWABLE RANGES TABLE

FOR THIS PROJECT, CROSS SLOPES THAT ARE ADJUSTED TO "BEST FIT" EXISTING PAVEMENT SLOPES ARE SUBJECT TO THE FOLLOWING LIMITS:

**A. NORMAL CROWN**

SECTION WITH GRADES 0.5% OR GREATER	SECTION WITH GRADES LESS THAN 0.5%
0.0150 FT/FT - MINIMUM	0.0156 FT/FT - MINIMUM
0.0208 FT/FT - DESIRABLE	0.0208 FT/FT - DESIRABLE
0.0250 FT/FT - MAXIMUM	0.0300 FT/FT - MAXIMUM

**B. SUPERELEVATION RATE**

S.E. RATE SHOWN ON PLANS OR SE RATE EXISTING IN FIELD, WHICHEVER IS GREATER.

**C. SUPERELEVATION TRANSITION LENGTH (LENGTH FROM FLAT POINT TO FULL SE)**

RATE OF CHANGE	CORRESPONDING DIFFERENCE IN GRADE BETWEEN PIVOT POINT AND EDGE OF PAVEMENT
MINIMUM 1:150	0.67%
DESIRABLE 1:200	0.50%
MAXIMUM 1:300	0.33%

LENGTH SHALL BE SET TO AVOID CREATING A FLAT GUTTER GRADE ON LOW SIDE AND TO AVOID FLAT CROSS SLOPES AT OR NEAR THE LOW POINT OF VERTICAL CURVES.

**D. POSITIONING OF SUPERELEVATION TRANSITION LENGTH ON SIMPLE CURVES**

50% OF TRANSITION INSIDE CURVE - MAXIMUM  
33% OF TRANSITION INSIDE CURVE - DESIRABLE  
20% OF TRANSITION INSIDE CURVE - MINIMUM

NOTE: CROWN WIPE-OUT SHALL BE AT THE SAME RATE AS THE SE TRANSITION.

**E. SMOOTHING OF BREAKS IN EDGE PROFILE AT BEGIN AND END OF TRANSITION SHALL BE ACCOMPLISHED BY VERTICAL CURVE WITH A MINIMUM LENGTH (IN FEET) EQUAL TO THE SPEED DESIGN (IN MPH).**



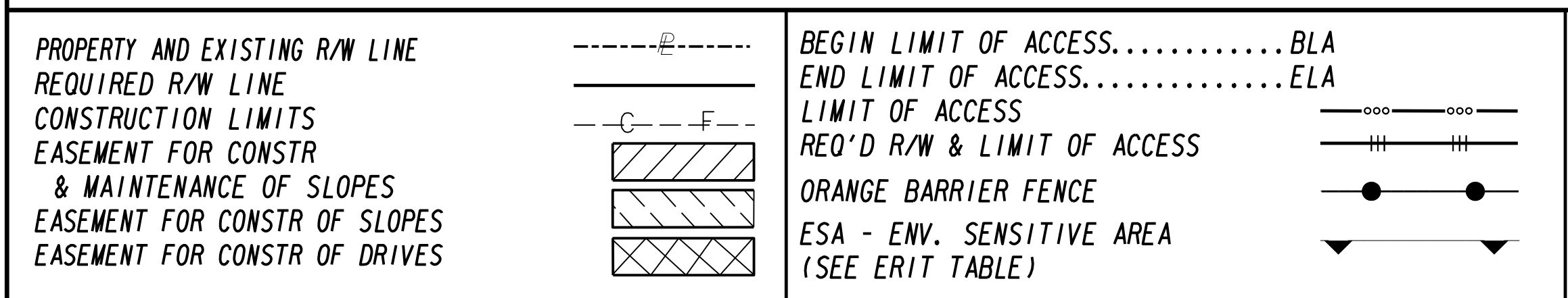
- PAVEMENT DESIGN**
- (A) RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GROUP 2 ONLY, INCL BITUM MATL & H LIME (165 LB/SY)
  - (B) CLASS B CONCRETE
  - (C) 10" GRADED AGGREGATE BASE CRS, INCL MATL
  - (D) RECYCLED ASPHALT LEVELING, INCL BITUM MATL & H LIME - AS REQUIRED
  - (E) 8" X 24" CURB AND GUTTER TYPE 2
  - (F) 4" CONCRETE SIDEWALK; 8" THICKNESS IN CURB RETURN RADI AND RAMPS
  - (G) SOD

**NOTES:**

- GUTTER ON HIGH SIDE OF SUPERELEVATION TO SPILL AT SE RATE.

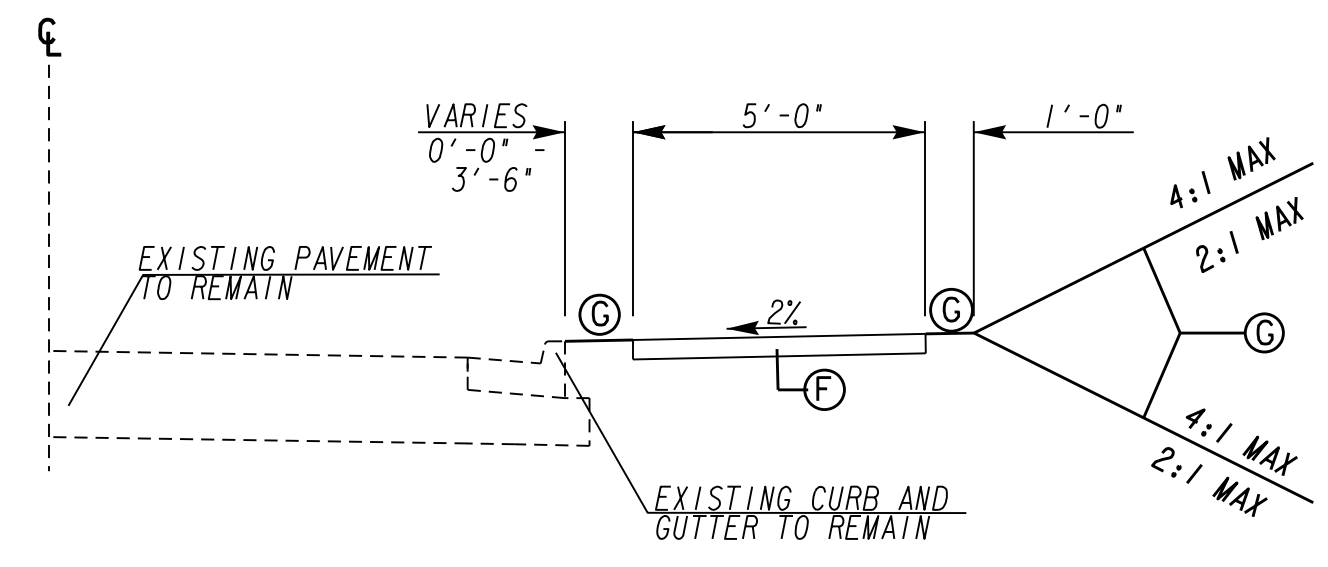
USE CLASS B CONCRETE, WITH RECYCLED ASPH SURFACE COURSE (12.5 MM) TO WIDEN PAVEMENT WHERE TOTAL PAVEMENT WIDTH IS LESS THAN 5 FEET.

SHOULDER MAY BE GRADED AWAY FROM ROADWAY TO FACILITATE THE SLOPE TIE TO EXISTING GROUND.

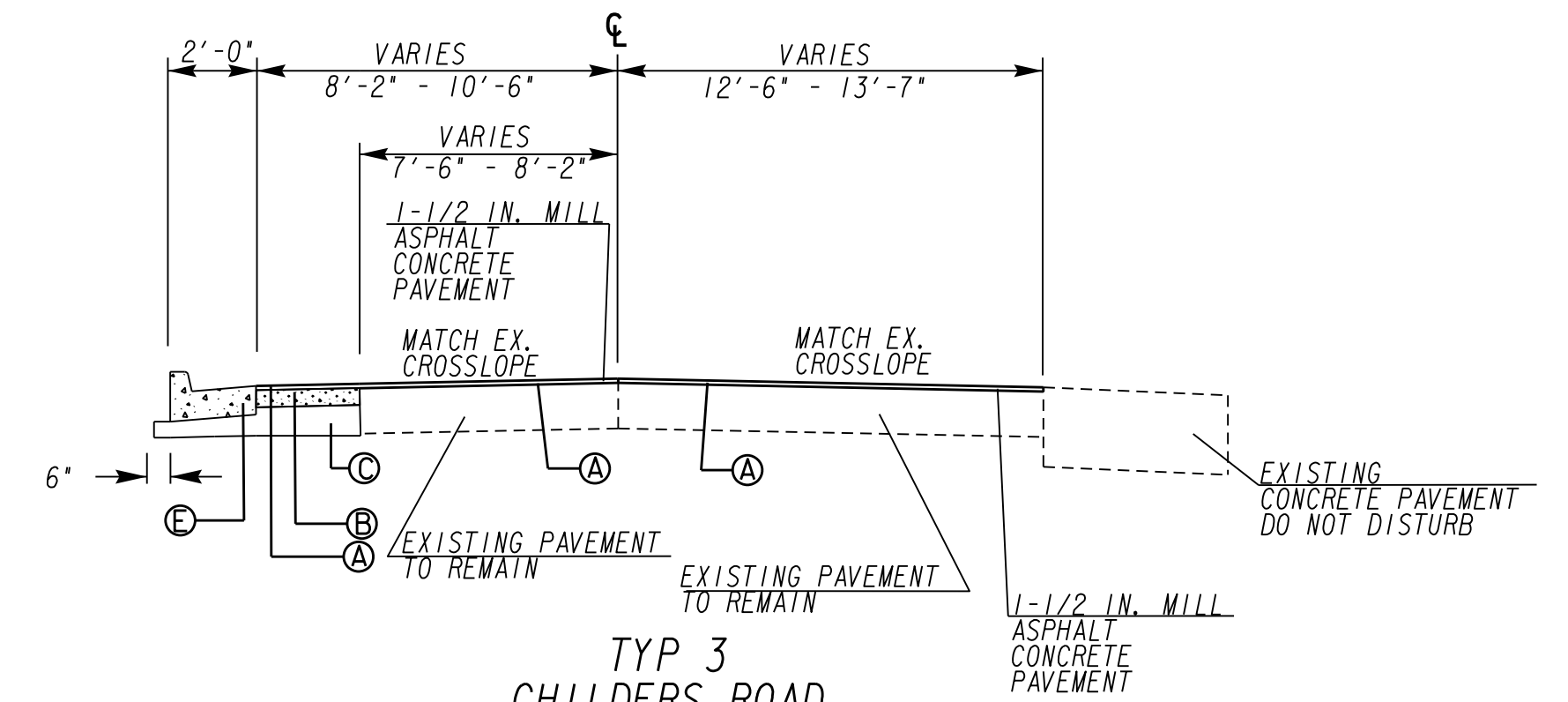
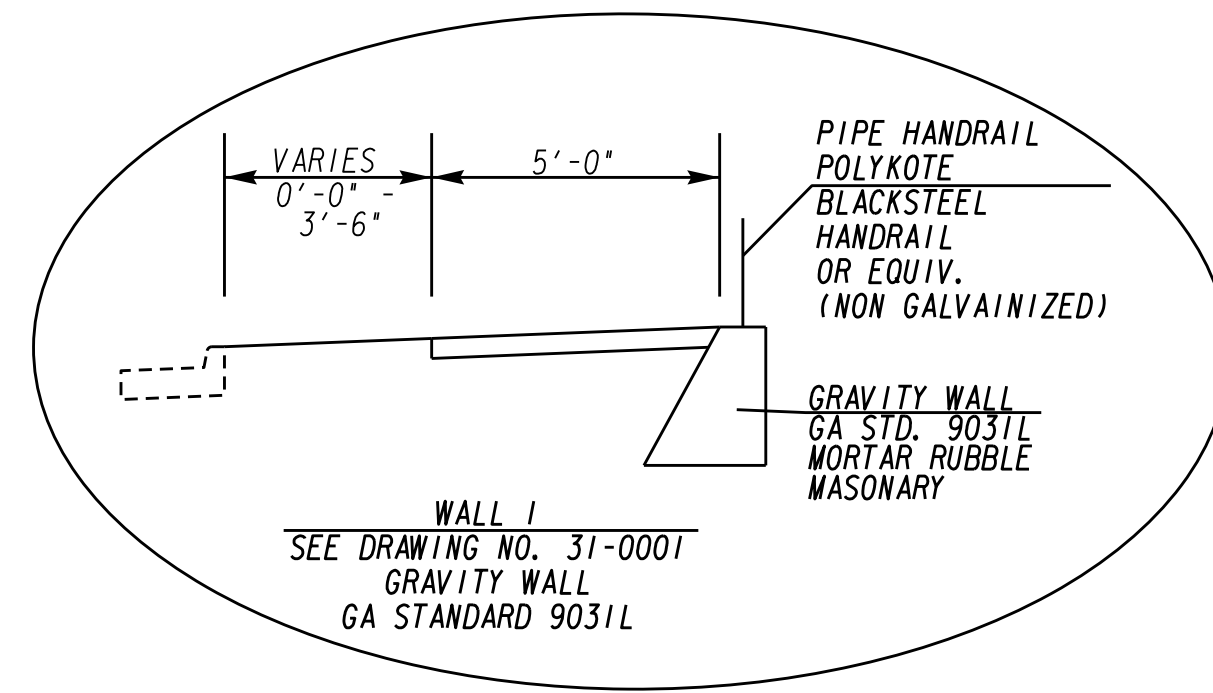


N. T. S.

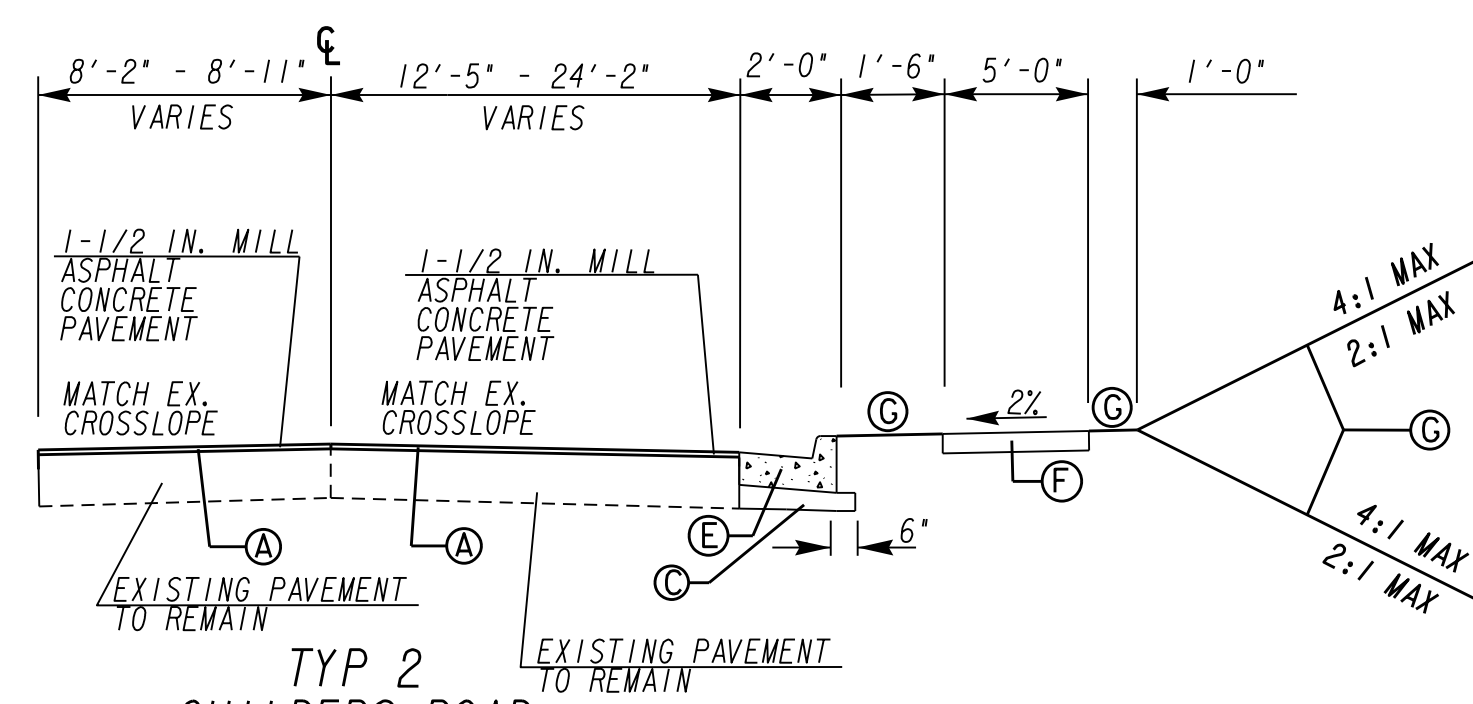
REVISION DATES		TYPICAL SECTIONS	
		CHILDERS ROAD SIDEWALK	
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	05-0002	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



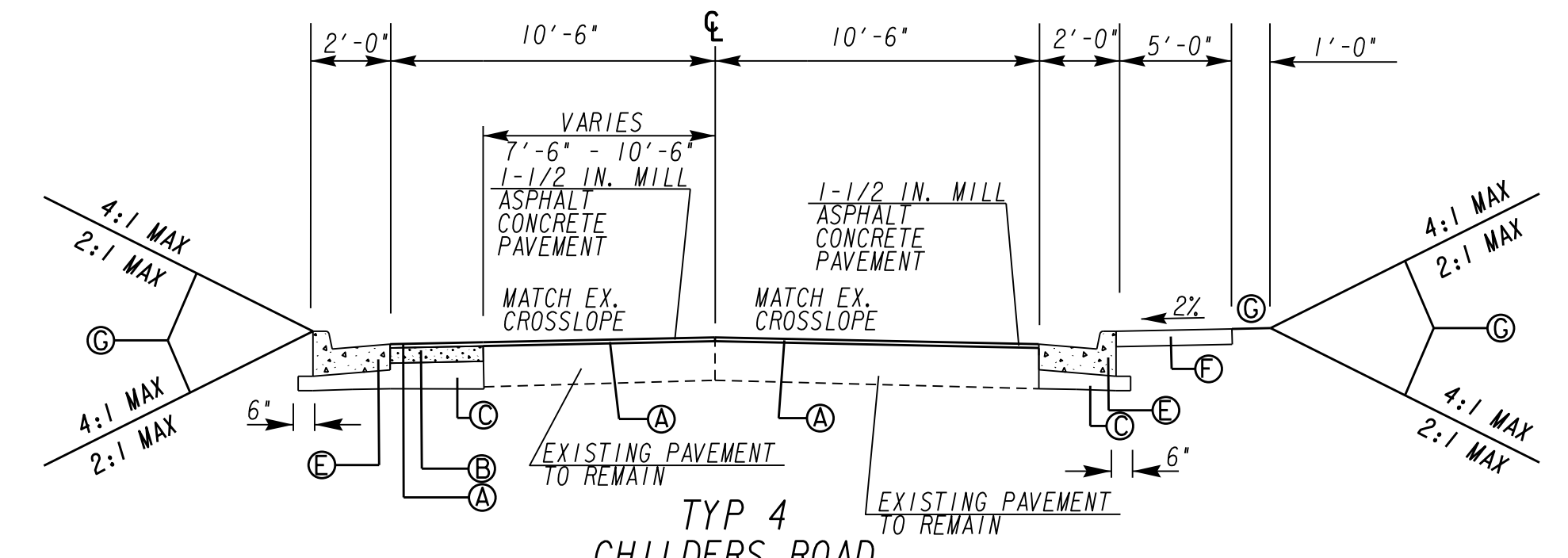
TYP 1  
CHILDERS ROAD  
STA. 33+99 TO STA. 35+68



TYP 3  
CHILDERS ROAD  
STA. 36+22 TO STA. 36+69

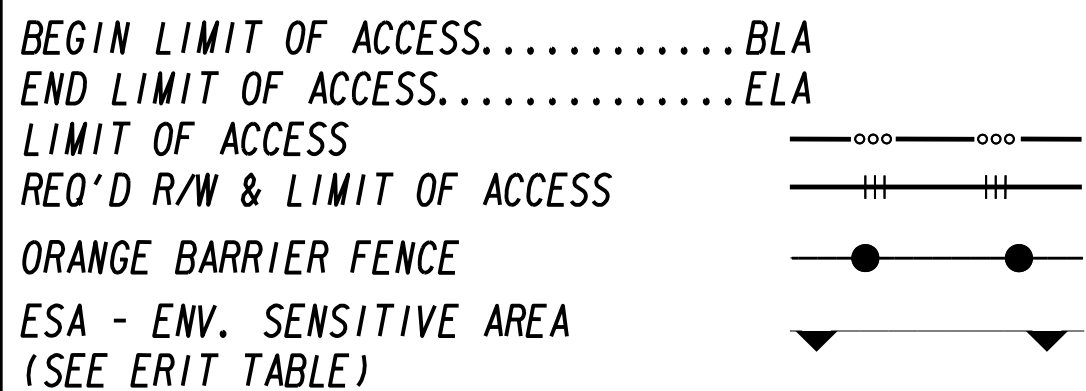
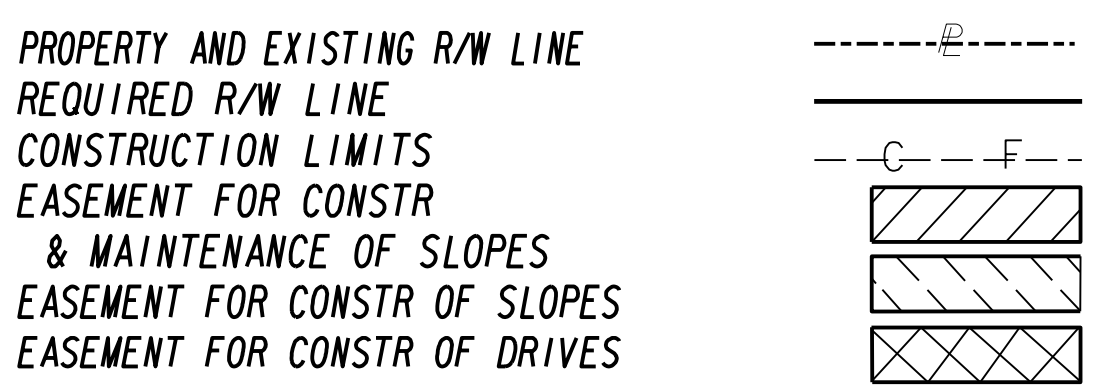


TYP 2  
CHILDERS ROAD  
STA. 35+68 TO STA. 36+22



TYP 4  
CHILDERS ROAD  
STA. 36+69 TO STA. 40+00

- PAVEMENT DESIGN**
- (A) RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GROUP 2 ONLY, INCL BITUM MATL & H LIME (165 LB/SY)
  - (B) CLASS B CONCRETE
  - (C) 10" GRADED AGGREGATE BASE CRS, INCL MATL
  - (D) RECYCLED ASPHALT LEVELING, INCL BITUM MATL & H LIME - AS REQUIRED
  - (E) 8" X 24" CURB AND GUTTER TYPE 2
  - (F) 4" CONCRETE SIDEWALK; 8" THICKNESS IN CURB RETURN RADI AND RAMPS
  - (G) SOD



N. T. S.

REVISION DATES		TYPICAL SECTIONS	
		CHILDERS ROAD SIDEWALK	
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	05-0001	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



**NOTES:**  
1. GUTTER ON HIGH SIDE OF SUPERELEVATION TO SPILL AT SE RATE.  
USE CLASS B CONCRETE, WITH RECYCLED ASPH SURFACE COURSE (12.5 MM) TO WIDEN PAVEMENT WHERE TOTAL PAVEMENT WIDTH IS LESS THAN 5 FEET.  
SHOULDER MAY BE GRADED AWAY FROM ROADWAY TO FACILITATE THE SLOPE TIE TO EXISTING GROUND.

# SUMMARY OF QUANTITIES

## ROADWAY QUANTITIES

PAY ITEM	CONCRETE SIDEWALK, 4 IN (SY)	CONCRETE SIDEWALK, 8 IN (SY)	CLASS B CONC. BASE OR PVMT WIDENING (CY)	MILL ASPH CONC PVMT, VARIABLE DEPTH (SY)	RECYCLED ASPH CONC PATCHING, INCL BITUM MATL & H LIME (TN)	RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP ONLY, INCL BITUM MATL & H LIME (TN)	GRADED AGGREGATE BASE CRS, INCL MATL (TN)	TACK COAT (GL)	CONCRETE HEADER CURB, 6 IN, TYP 2 (LF)	CONC CURB & GUTTER, 8 IN X 24 IN, TP 2 (LF)
441-0104	441-0108	500-999	432-0205	402-1802	402-3113	310-1101	413-0750	441-5004	441-6216	
CHILDERS ROAD	213	102	21	843	0	80	179	30	37	697
SUBTOTAL:	213	102	21	843	0	80	179	30	37	697
AS DIRECTED BY ENGINEER:	17	18	9	7	10	10	11	30	3	3
TOTALS:	230	120	30	850	10	90	190	60	40	700

## DRIVEWAY QUANTITIES

PAY ITEM	DRIVEWAY CONCRETE, 8 IN TK (SY)	CONC VALLEY GUTTER, 8 IN (SY)
441-0018	441-4030	
DW STA.		
38+66, RT	48	72
38+85, LT		26
SUBTOTAL:	48	98
AS DIRECTED BY ENGINEER:	2	12
TOTALS:	50	110

## DRAINAGE QUANTITIES

STRUCTURE	LOCATION	STORM DRAIN PIPE	DROP INLET (1019A)	RECONSTRUCT MISC DRAINAGE
		18 IN. H=1'-10' LF	6'-0" OR LESS EA	EA
A-1	39+61, LT	9		1
A-2	39+54, LT		1	
SUBTOTAL:		9	1	1
AS DIRECTED BY ENGINEER:		1		
TOTALS:		10	1	1

## LUMP SUM QUANTITIES

PAY ITEM	PAY ITEM DESCRIPTION	UNITS
150-1000	TRAFFIC CONTROL (WALK 16-112)	LS
210-0100	GRADING COMPLETE (WALK 16-112)	LS

## RETAINING WALL QUANTITIES

PAY ITEM	PAY ITEM DESCRIPTION	UNITS	QUANTITY	AS DIRECTED BY ENGINEER	TOTAL
515-4000	POLYKOTE BLACK STEEL PIPE HANDRAIL OR EQUIV. (GALV. STEEL PIPE PROHIBITED)	LF	68	2	70
607-1000	MORTAR RUBBLE MASONRY	CY	11	9	20

## EROSION CONTROL QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNITS	SUB TOTAL	AS DIRECTED BY ENGINEER	TOTAL
163-0232	TEMPORARY GRASSING	AC	0.5	0.5	1
163-0240	MULCH	TN	5	5	10
163-0550	CONSTRUCT AND REMOVE INLET SEDIMENT TRAPS	EA	1	0	1
165-0105	MAINTENANCE OF INLET SEDIMENT TRAPS	EA	1	0	1
171-0010	TEMPORARY SILT FENCE, TYPE A	LF	793	57	850
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TYPE A	LF	425	0	425
700-7000	AGRICULTURAL LIME	TN	3	3	6
700-8000	FERTILIZER MIXED GRADE	TN	0.5	0.5	1
700-9300	SOD	SY	500	70	570
716-2000	EROSION CONTROL MATS, SLOPES	SY	500	70	570

## UTILITY ADJUSTMENT

PAY ITEM	PAY ITEM DESCRIPTION	UNITS	QUANTITY
611-8055	ADJUST MINOR STRUCTURE TO GRADE (PULL BOX)	EA	1
611-8140	ADJUST WATER VLAVE BOX TO GRADE	EA	2

## MARKING QUANTITIES

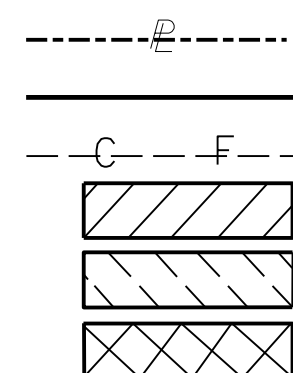
ROAD	THERMOPLASTIC 5" SOLID YELLOW (LF)	THERMOPLASTIC 8" SOLID WHITE (LF)	THERMOPLASTIC 24" SOLID WHITE (LF)
PAY ITEM	653-1502	653-1804	653-1704
CHILDERS ROAD	100	116	11
SUB TOTAL:	100	116	11
AS DIRECTED BY ENGINEER:	0	14	0
TOTAL:	100	130	11

## SIGNING QUANTITIES

Road	STATION	LT/RT	HIGHWAY SIGNS						SQUARE TUBE POST			
			SIGN CODE	636-1020 TP 1 MATL, REFL SHEETING TYPE 3		636-1045 TP 2 MATL, REFL SHEETING TYPE 11		636-2070 TYPE 7				
				SIZE	QUANTITY	SQ FT	SIZE	QUANTITY	SQ FT	LENGTH (FEET)	QUANTITY	TOTAL LENGTH
CHILDERS ROAD	38+40	LT	R2-1 (24) (25)	24X30	1	5.00				14	1	14
	39+55	RT	R1-1(30)				36" OCT	1	5.18	14	1	14
SUB TOTAL:					1	5		1	5	28	2	28
AS DIRECTED BY ENGINEER:						1.00			1.00			0
TOTAL:						6			6			28



PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES



---@--- BEGIN LIMIT OF ACCESS.....BLA  
 --- END LIMIT OF ACCESS.....ELA  
 --- LIMIT OF ACCESS  
 --- REQ'D R/W & LIMIT OF ACCESS  
 --- ORANGE BARRIER FENCE  
 --- ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



### REVISION DATES

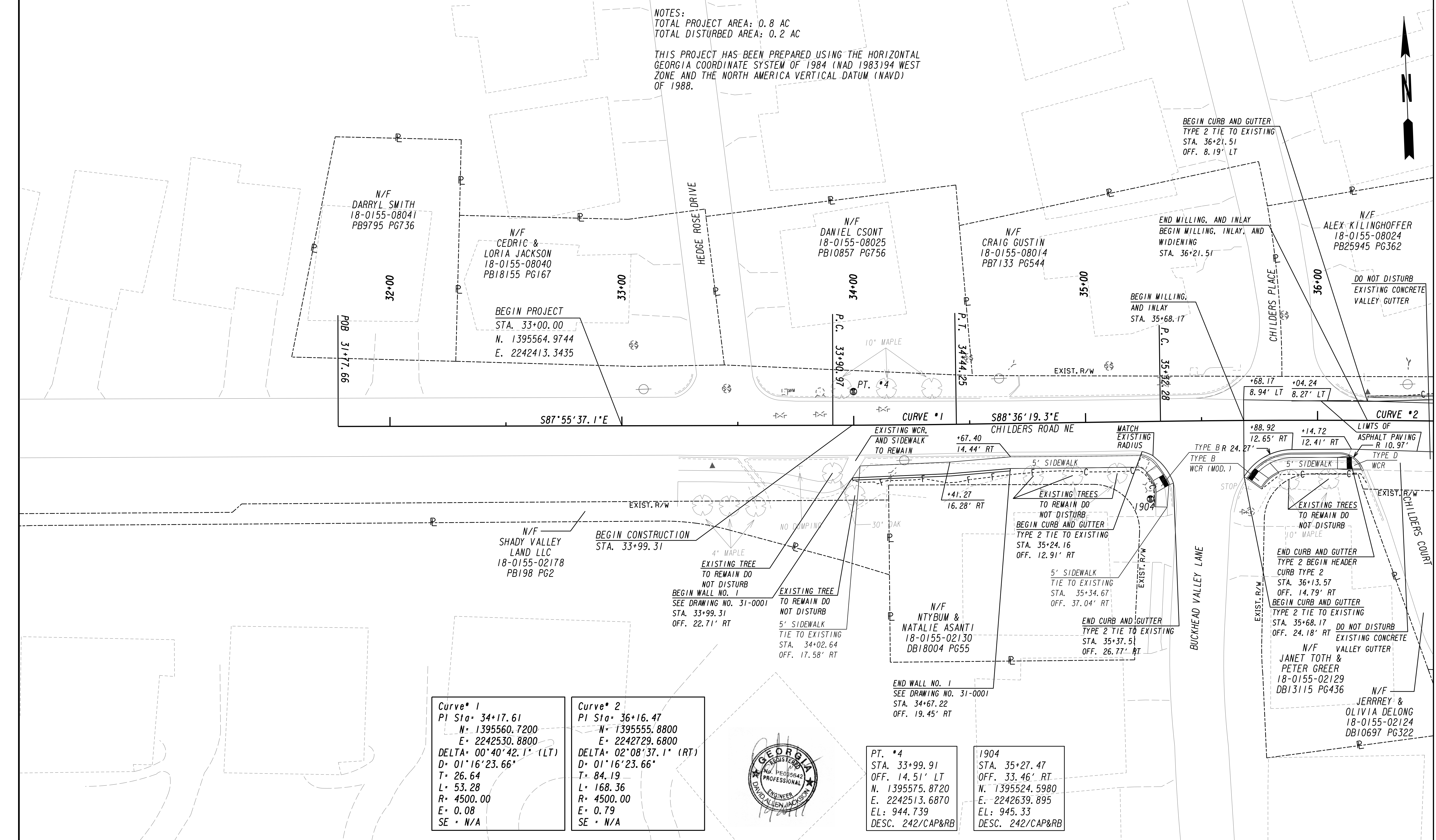
NO.	DATE	DESCRIPTION

### SUMMARY QUANTITIES CHILDERS ROAD SIDEWALK

CHECKED:	DATE:	DRAWING No.
		06-0001
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

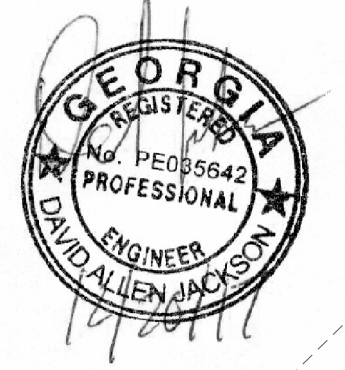


NOTES:  
 TOTAL PROJECT AREA: 0.8 AC  
 TOTAL DISTURBED AREA: 0.2 AC  
 THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983) 94 WEST ZONE AND THE NORTH AMERICA VERTICAL DATUM (NAVD) OF 1988.



**Curve # 1**  
 PI Sta= 34+17.61  
 N= 1395560.7200  
 E= 2242530.8800  
 DELTA= 00°40'42.1" (LT)  
 D= 01°16'23.66"  
 T= 26.64  
 L= 53.28  
 R= 4500.00  
 E= 0.08  
 SE = N/A

**Curve # 2**  
 PI Sta= 36+16.47  
 N= 1395555.8800  
 E= 2242729.6800  
 DELTA= 02°08'37.1" (RT)  
 D= 01°16'23.66"  
 T= 84.19  
 L= 168.36  
 R= 4500.00  
 E= 0.79  
 SE = N/A

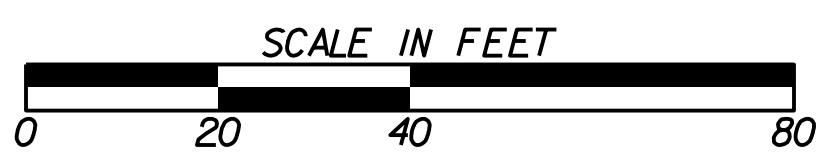


PT. #4  
 STA. 33+99.91  
 OFF. 14.51' LT  
 N. 1395575.8720  
 E. 2242513.6870  
 EL: 944.739  
 DESC. 242/CAP&RB

1904  
 STA. 35+27.47  
 OFF. 33.46' RT  
 N. 1395524.5980  
 E. 2242639.895  
 EL: 945.33  
 DESC. 242/CAP&RB

PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

---@--- BEGIN LIMIT OF ACCESS.....BLA  
 --- END LIMIT OF ACCESS.....ELA  
 --- LIMIT OF ACCESS  
 --- REQ'D R/W & LIMIT OF ACCESS  
 --- ORANGE BARRIER FENCE  
 --- ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



REVISION DATES	

CONSTRUCTION PLAN			
CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	13-0001	
CORRECTED:	DATE:		
VERIFIED:	DATE:		

NOTES:  
 TOTAL PROJECT AREA: 0.8 AC  
 TOTAL DISTURBED AREA: 0.2 AC  
 THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983)94 WEST ZONE AND THE NORTH AMERICA VERTICAL DATUM (NAVD) OF 1988.

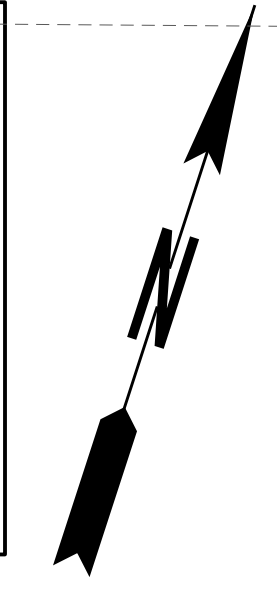
Curve\* 3  
 PI Sta= 38+04.41  
 N= 1395544.2800  
 E= 2242917.2800  
 DELTA= 23°57'15.1" (LT)  
 D= 23°32'02.26"  
 T= 51.65  
 L= 101.79  
 R= 243.46  
 E= 5.42  
 SE = N/A

Curve\* 4  
 PI Sta= 101+24.43  
 N= 1395624.8915  
 E= 2243093.1847  
 DELTA= 07°08'36.9" (RT)  
 D= 02°52'27.32"  
 T= 124.43  
 L= 248.54  
 R= 1993.41  
 E= 3.88  
 SE = N/A

Curve\* 2  
 PI Sta= 36+16.47  
 N= 1395555.8800  
 E= 2242729.6800  
 DELTA= 02°08'37.1" (RT)  
 D= 01°16'23.66"  
 T= 84.19  
 L= 168.36  
 R= 4500.00  
 E= 0.79  
 SE = N/A

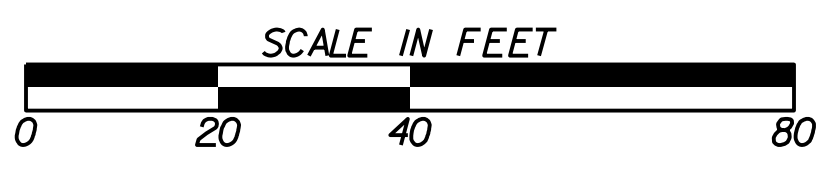
PT. \*3  
 STA. 37+68.81  
 OFF. 16.75' RT  
 N. 1395530.2570  
 E. 2242881.8370  
 EL: 935.002  
 DESC: 242/CAP&RB

PT. \*2  
 STA. 101+16.31  
 OFF. 43.32' RT  
 N. 1395634.7050  
 E. 2243140.0190  
 EL: 922.22  
 DESC: 242/CAP&RB



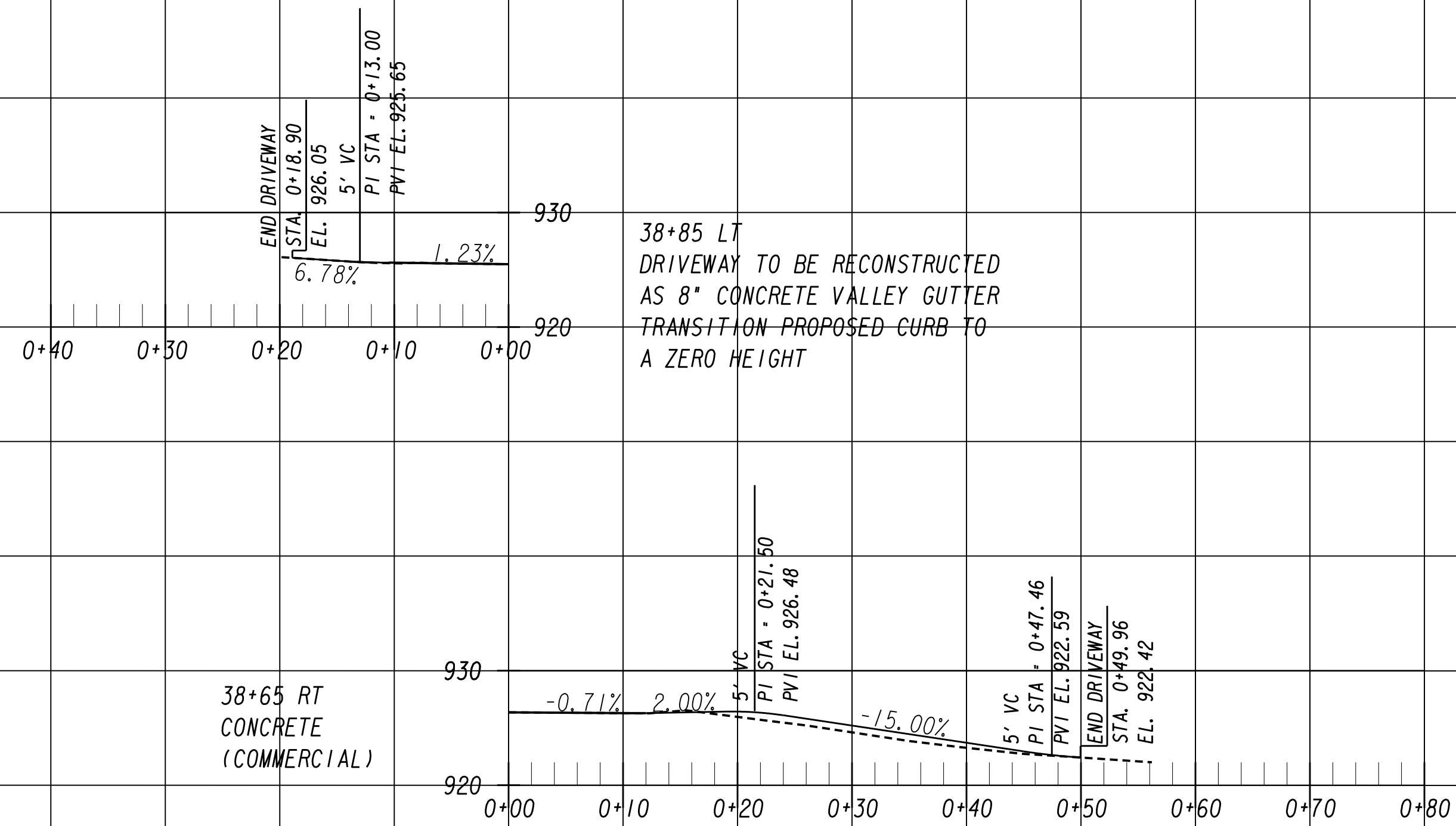
PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

---@--- BEGIN LIMIT OF ACCESS.....BLA  
 ---@--- END LIMIT OF ACCESS.....ELA  
 ---@--- LIMIT OF ACCESS  
 ---@--- REQ'D R/W & LIMIT OF ACCESS  
 [Hatched Box] ORANGE BARRIER FENCE  
 [Cross-hatched Box] ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



REVISION DATES	

CONSTRUCTION PLAN CHILDERS ROAD SIDEWALK			
CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
DRAWING No.			13-0002



HORIZONTAL: 1" = 10'  
VERTIAL: 1" = 10'

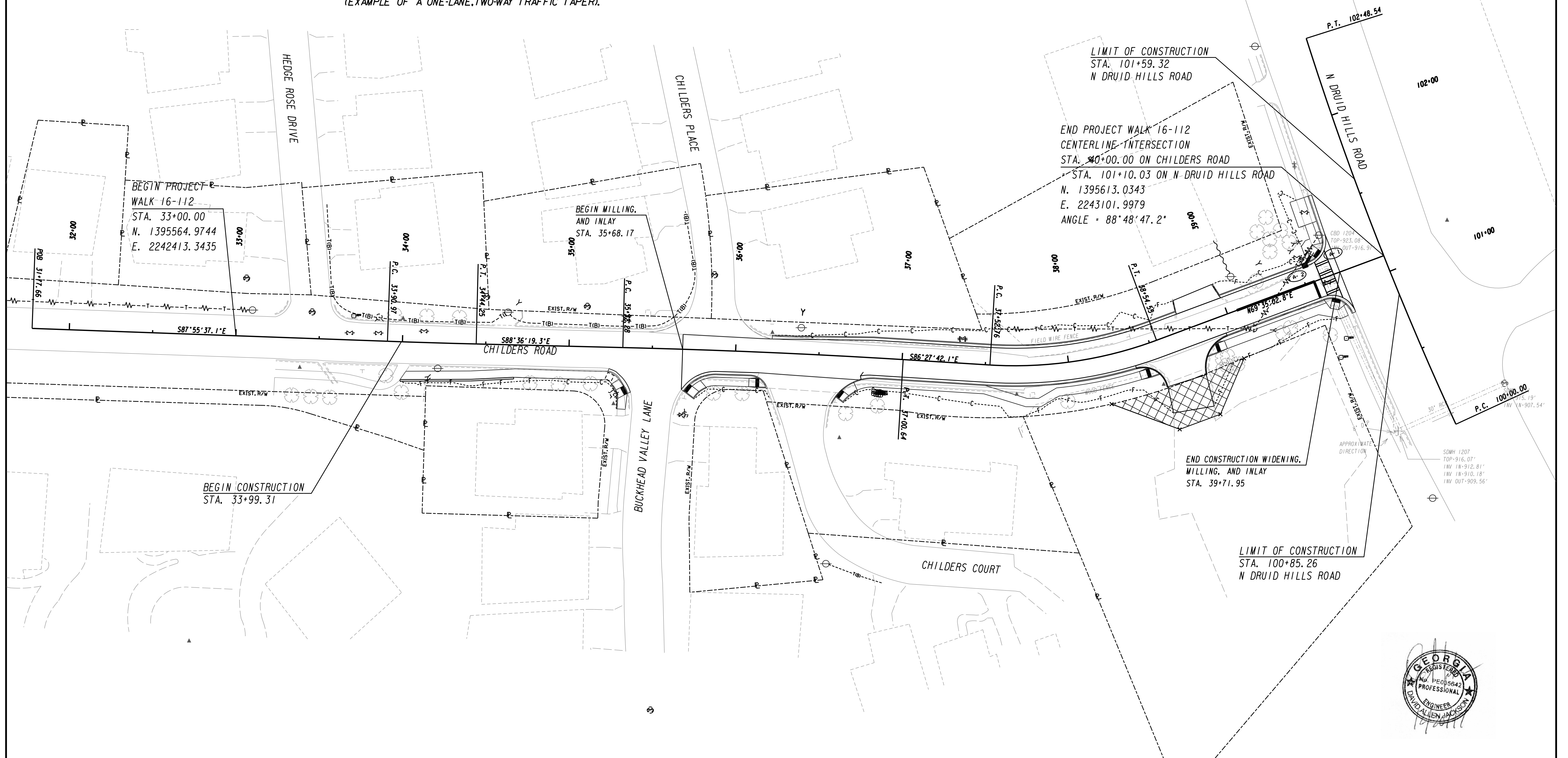
REVISION DATES

NO.	DATE	DESCRIPTION

DRIVEWAY PROFILES  
CHILDERS ROAD

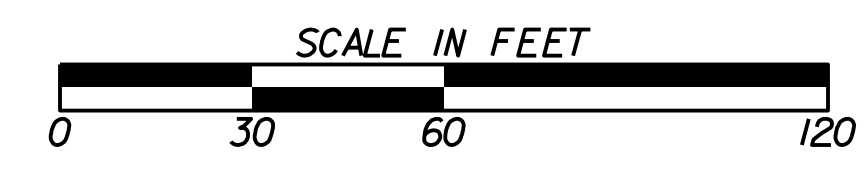
CHECKED:	DATE:	DRAWING No. <b>17-0001</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

1. CONTRACTOR IS ALLOWED THE USE OF TEMPORARY LANE CLOSURES THAT SHALL NOT INTERFERE WITH RUSH HOUR TRAFFIC.
2. CONTRACTOR RESPONSIBLE FOR CLEANING CONSTRUCTION EQUIPMENT TO PREVENT TRACKING OF SEDIMENT ONTO THE CITY'S STREETS.
3. CONTRACTOR RESPONSIBLE FOR CLEANING SEDIMENT FROM CITY'S STREETS.
4. CONTRACTOR RESPONSIBLE FOR DUST CONTROL.
5. REFER TO GA STD 9100,9102,AND THE MUTCD PART 6 TEMPORARY TRAFFIC CONTROL (LATEST EDITION) FIGURE 6C-3 (EXAMPLE OF A ONE-LANE,TWO-WAY TRAFFIC TAPER).



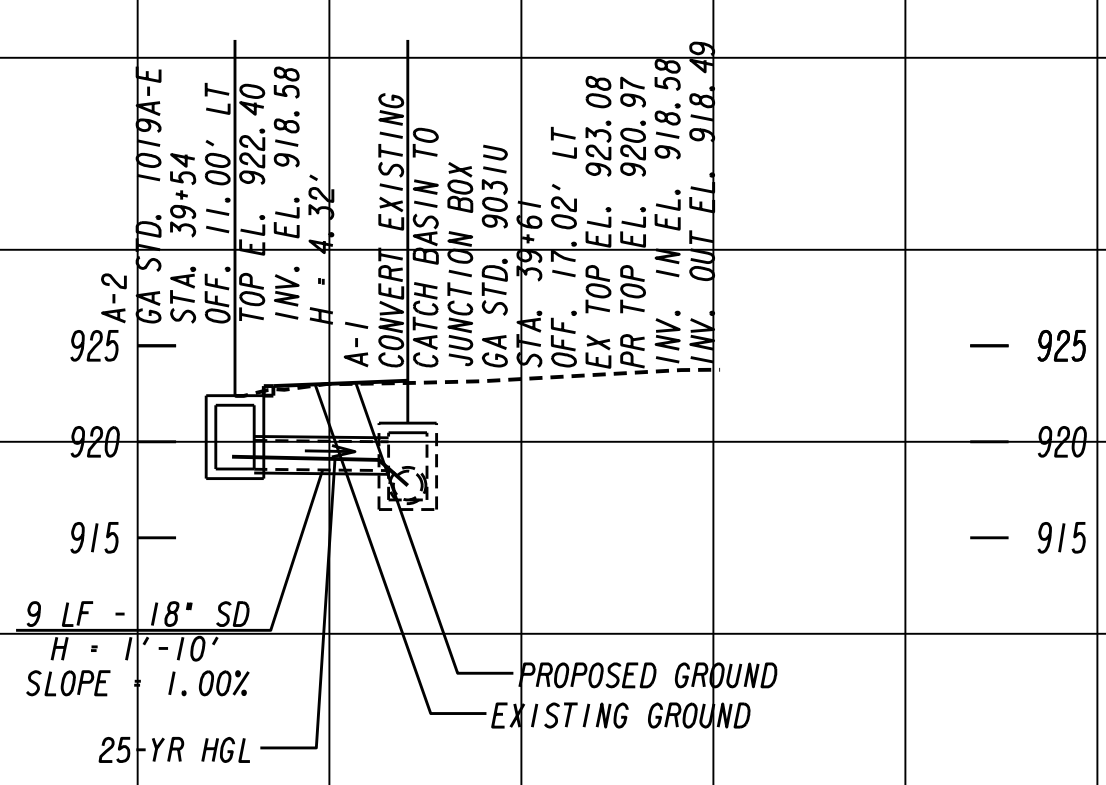
PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

---●--- BEGIN LIMIT OF ACCESS.....BLA  
 ---●--- END LIMIT OF ACCESS.....ELA  
 ---●--- LIMIT OF ACCESS  
 ---●--- REQ'D R/W & LIMIT OF ACCESS  
 [Hatched Box] ORANGE BARRIER FENCE  
 [Dotted Box] ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



REVISION DATES	

CONSTRUCTION STAGING PLAN CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	19-0001	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

---@--- BEGIN LIMIT OF ACCESS.....BLA  
 --- END LIMIT OF ACCESS.....ELA  
 --- LIMIT OF ACCESS  
 --- REQ'D R/W & LIMIT OF ACCESS  
 --- ORANGE BARRIER FENCE  
 --- ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



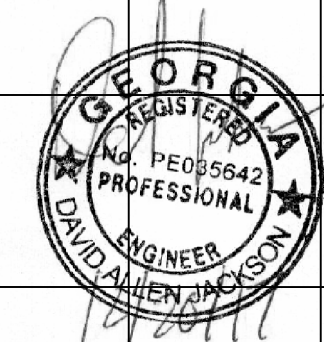
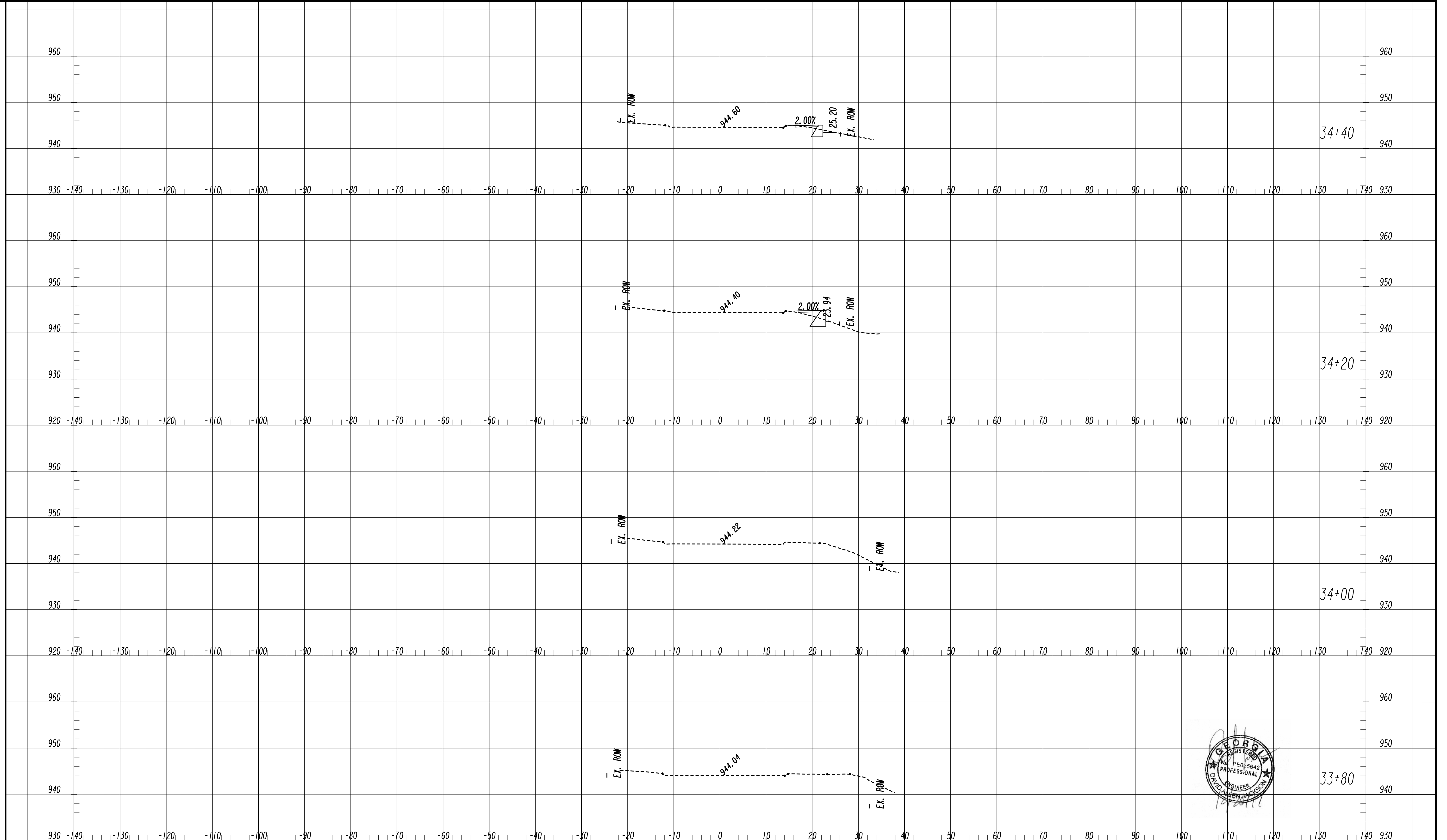
SCALE:  
 HORIZONTAL: 1" = 10'  
 VERTICAL: 1" = 10'

REVISION DATES	

**DRAINAGE PROFILES**  
CHILDERS ROAD

CHECKED:	DATE:
BACKCHECKED:	DATE:
CORRECTED:	DATE:
VERIFIED:	DATE:

DRAWING No.  
**22-0001**



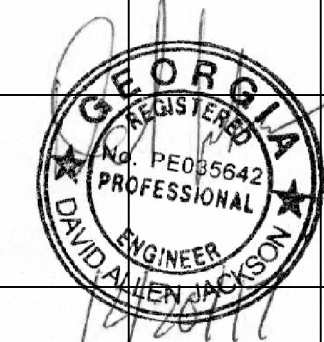
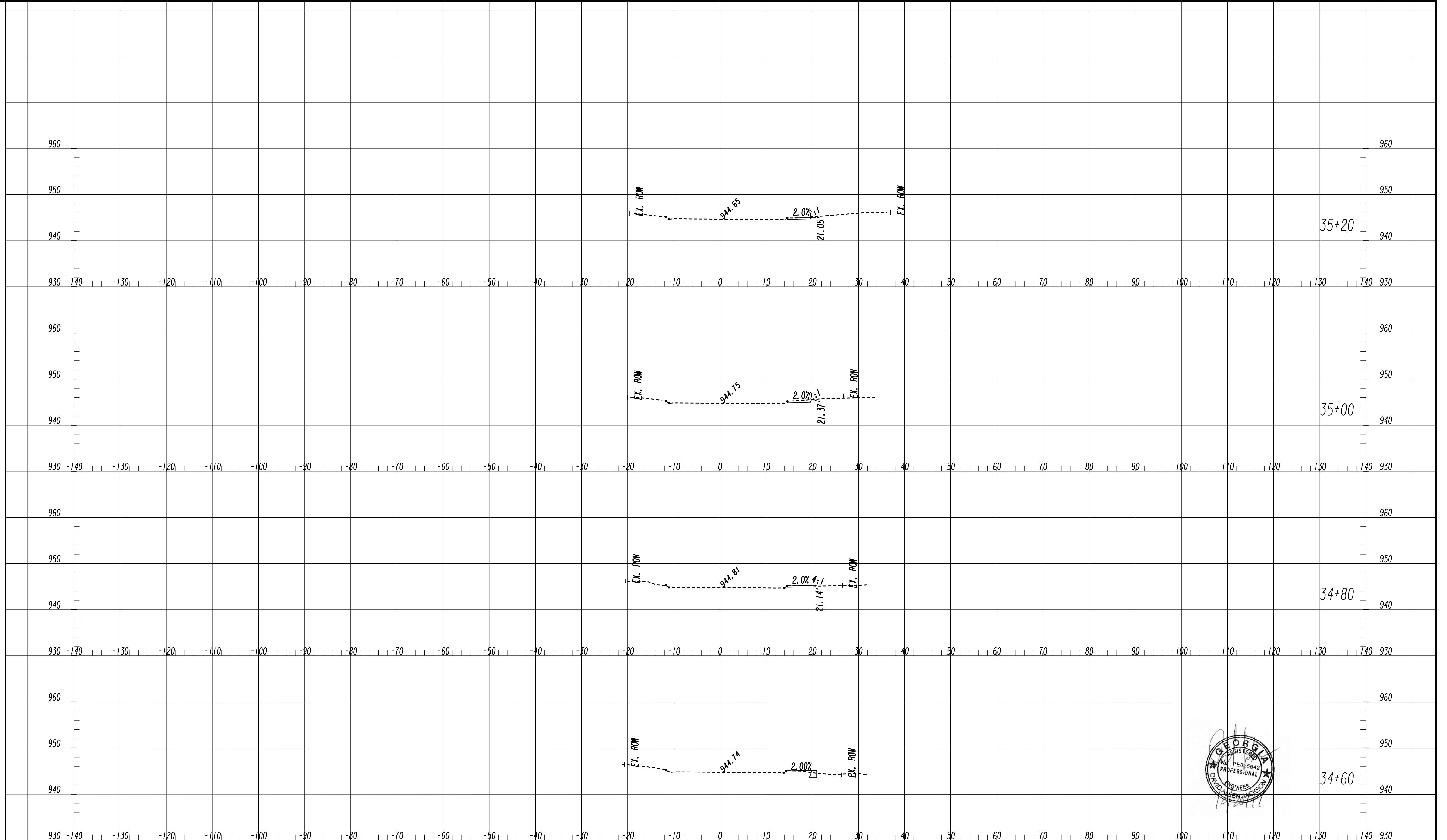
SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES

NO.	DATE	DESCRIPTION

CROSS SECTIONS  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0001</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

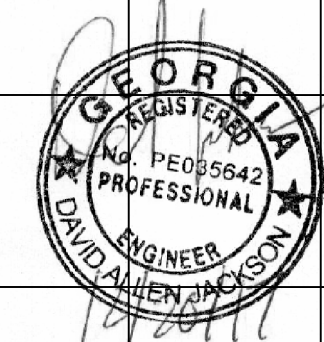
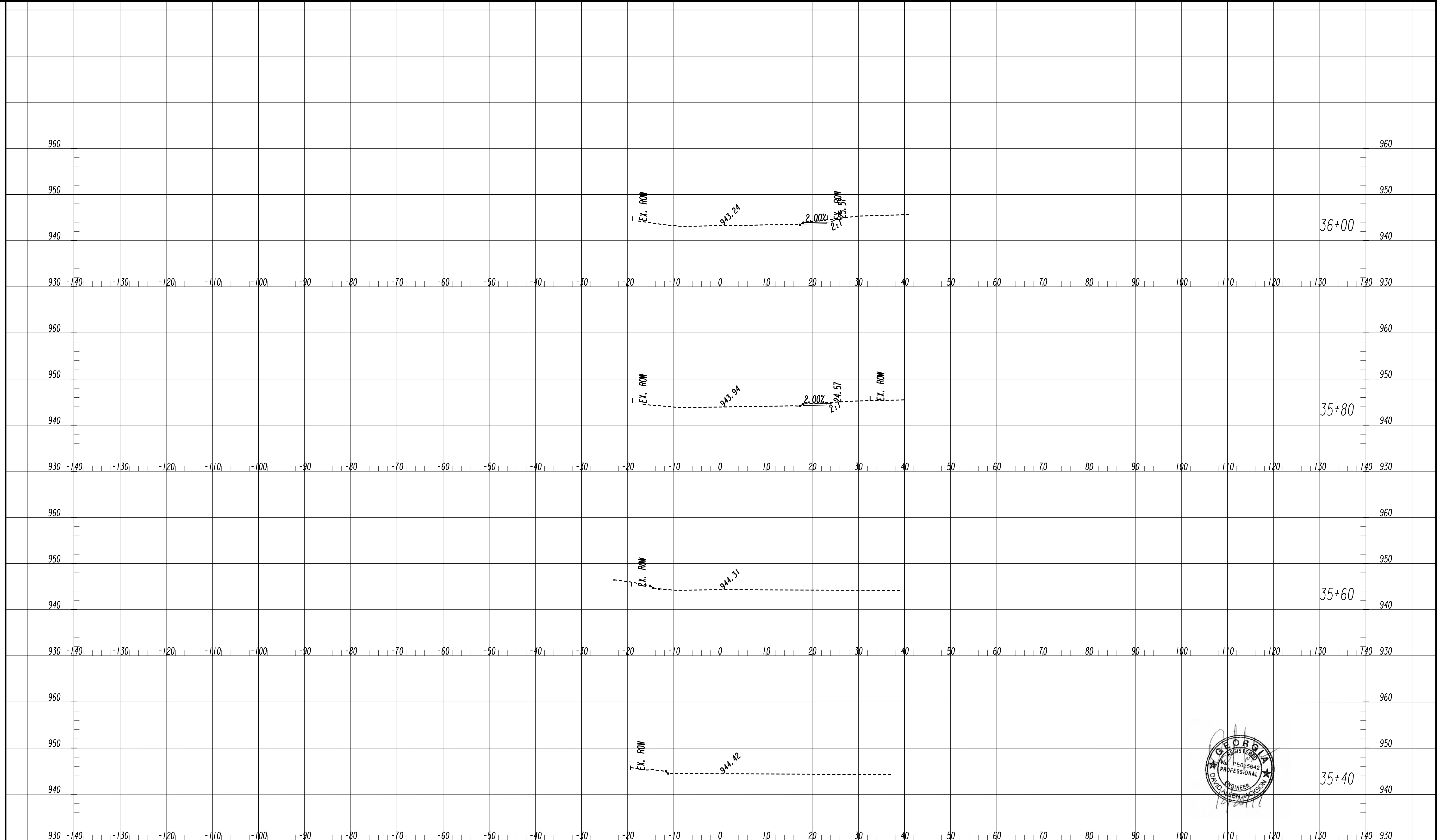


SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES


CROSS SECTIONS  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0002</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	



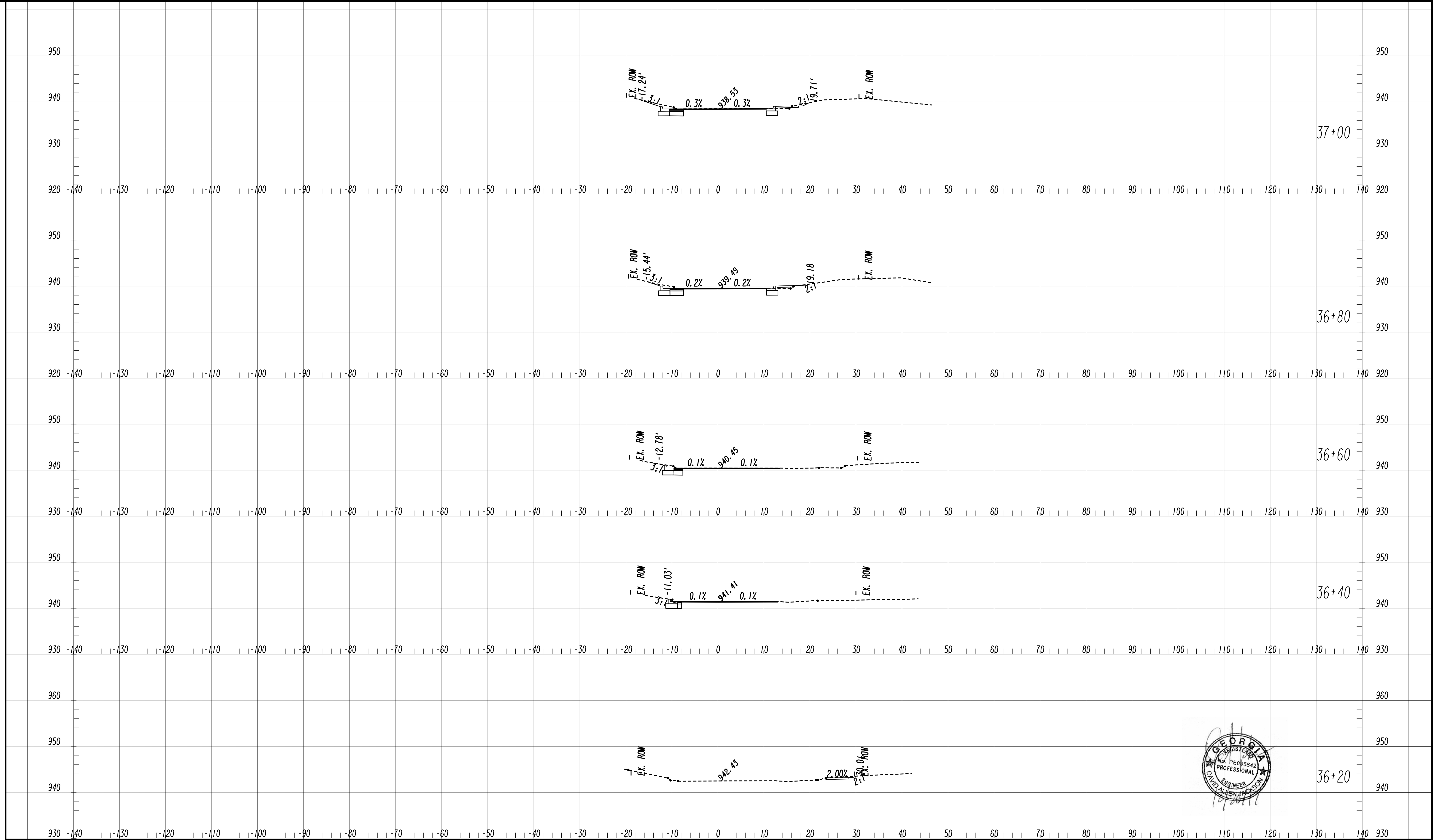
SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES


CROSS SECTIONS  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0003</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	



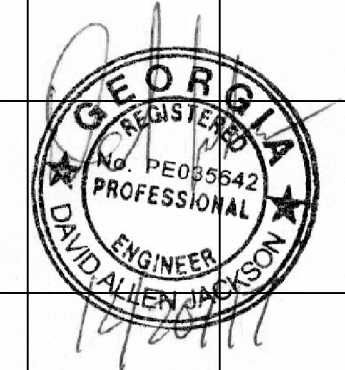
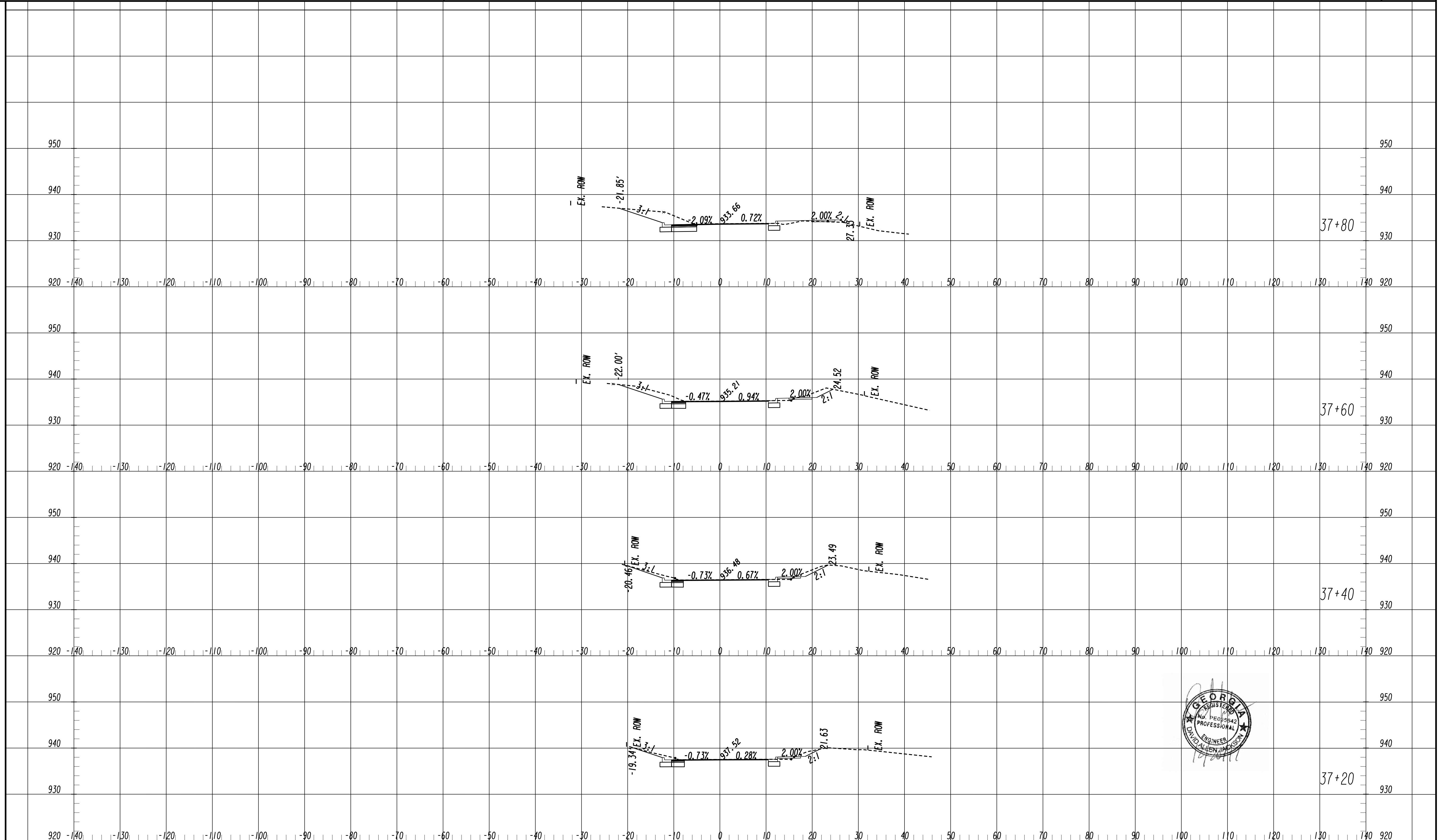


SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES	

**CROSS SECTIONS**  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0004</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

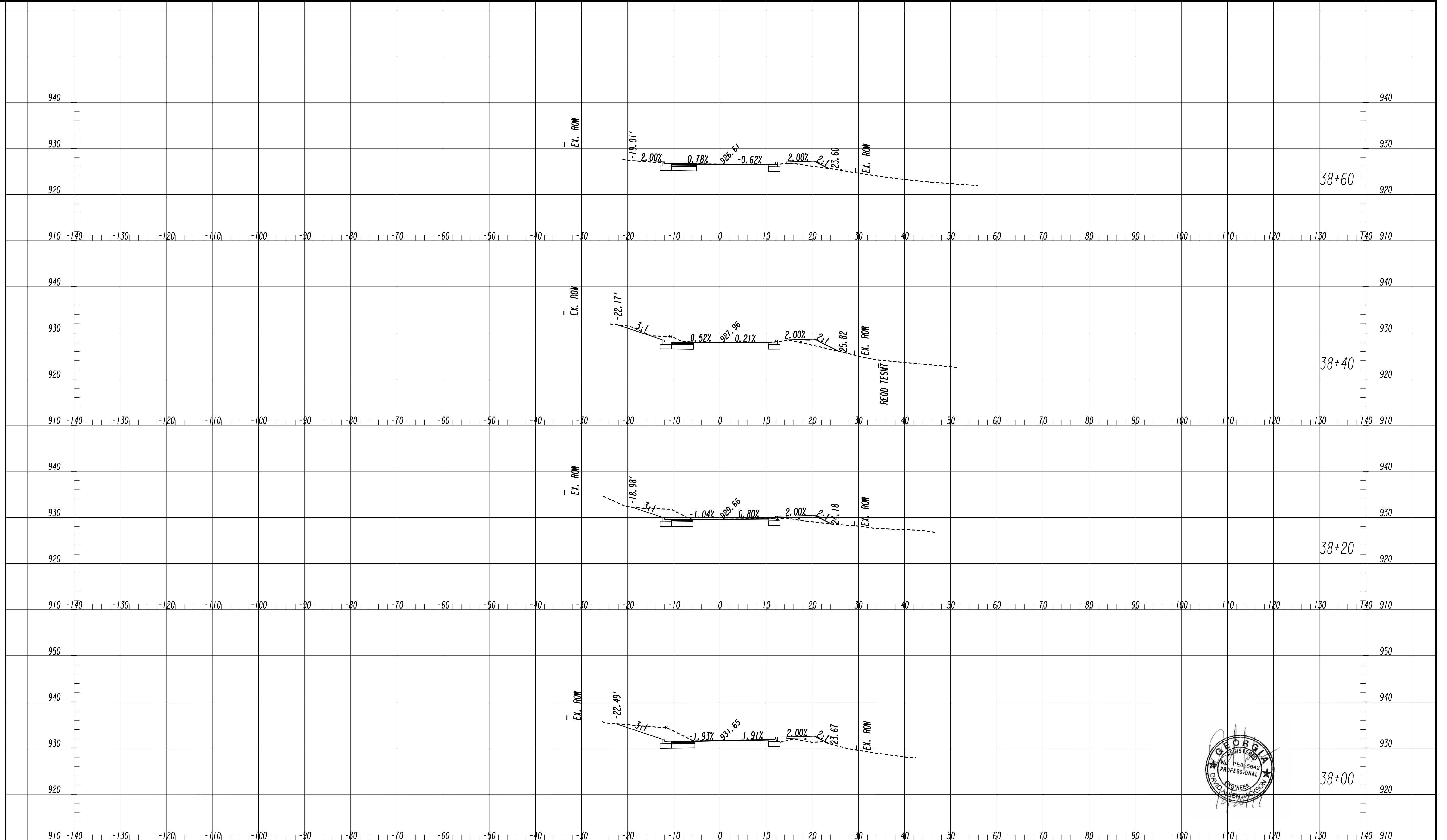


SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES	

CROSS SECTIONS  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0005</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

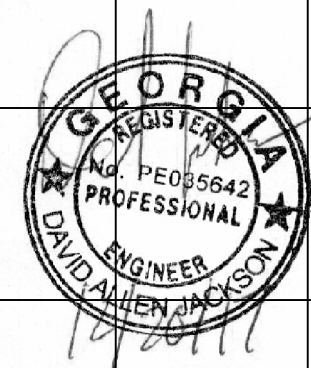
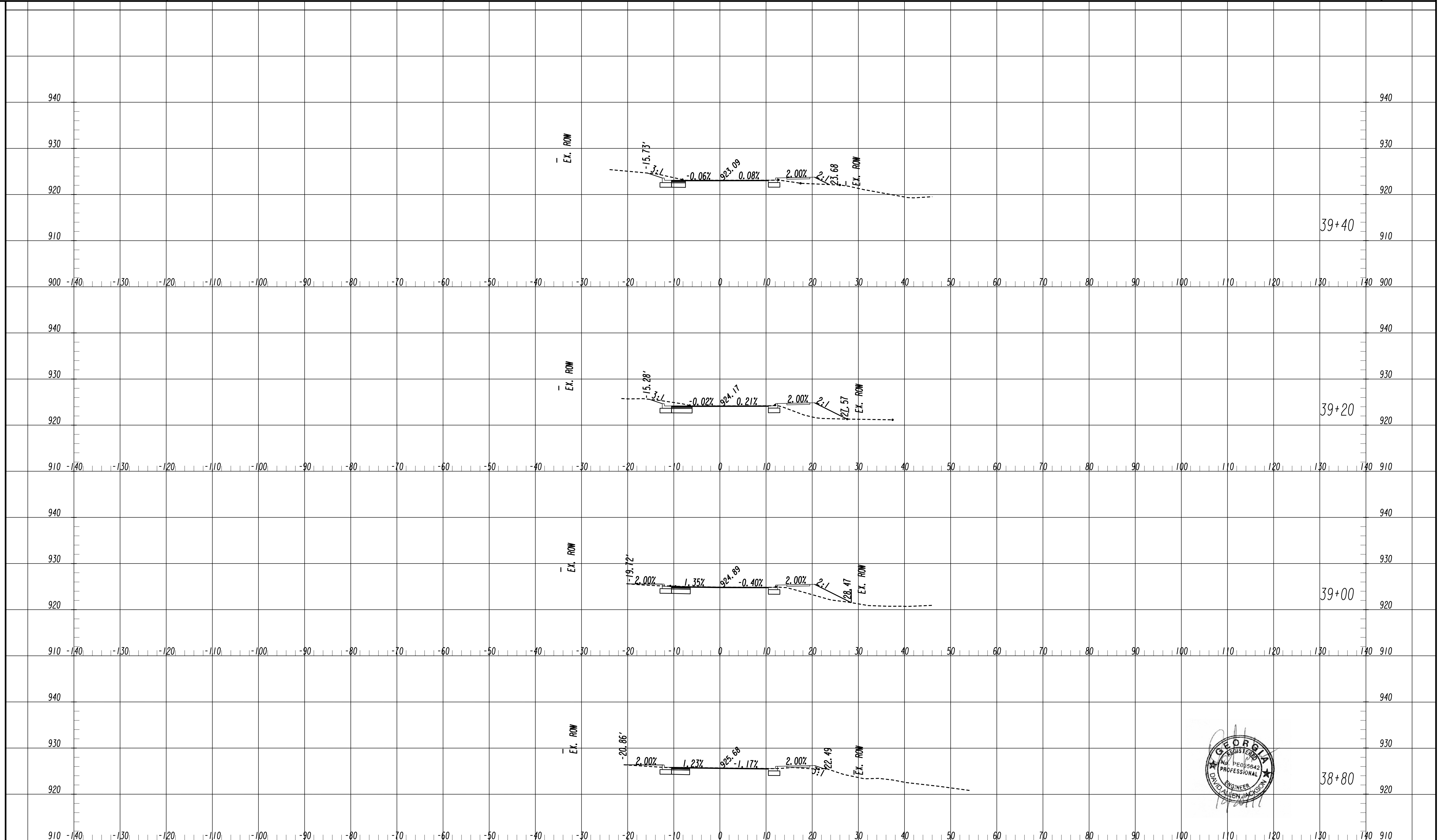


SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES


CROSS SECTIONS  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0006</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

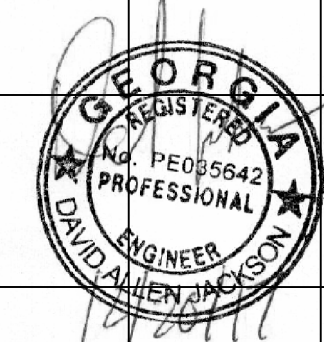
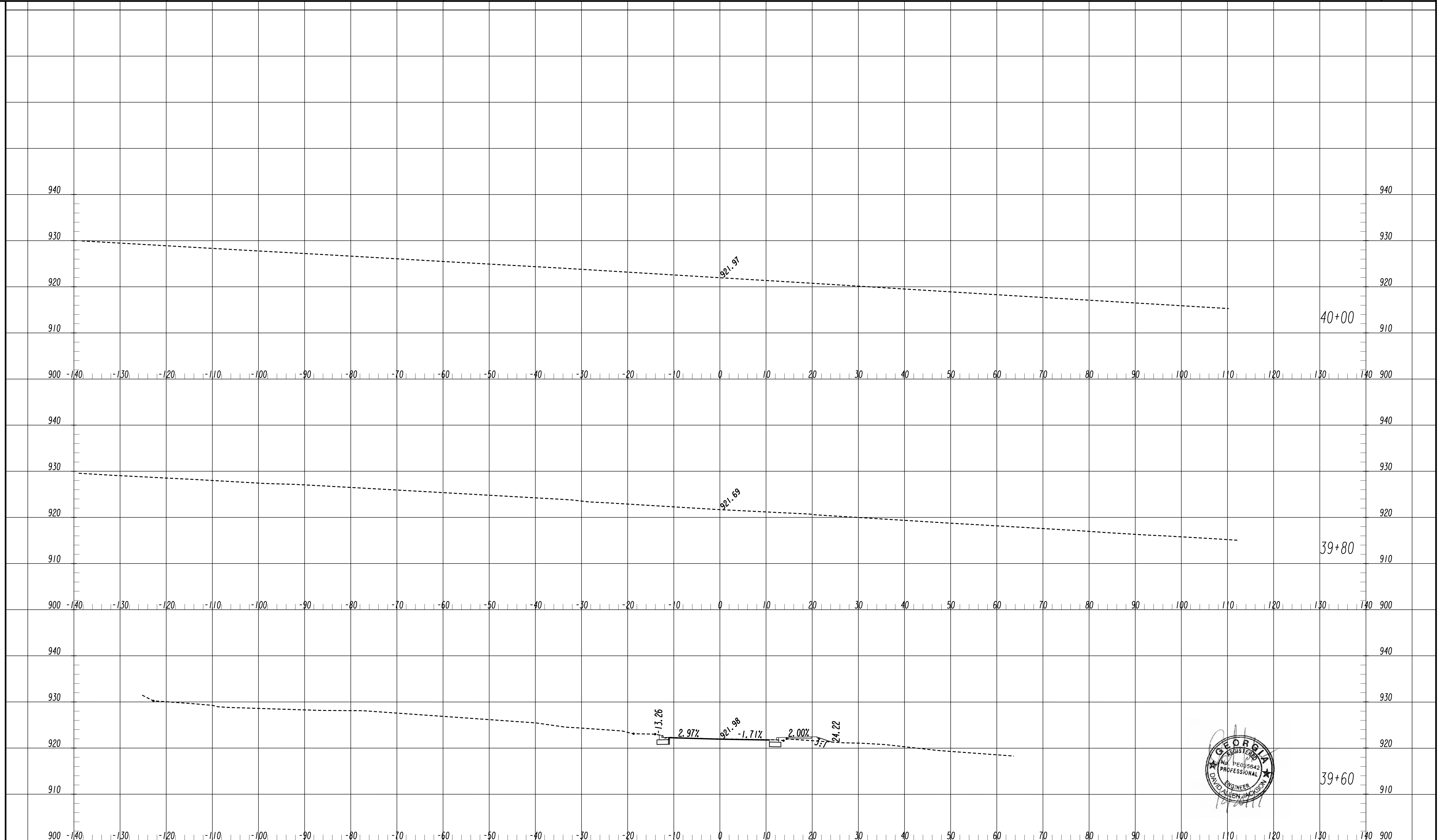


SCALE:  
HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES	

CROSS SECTIONS  
CHILDERS ROAD

CHECKED:	DATE:	DRAWING No. <b>23-0007</b>
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	



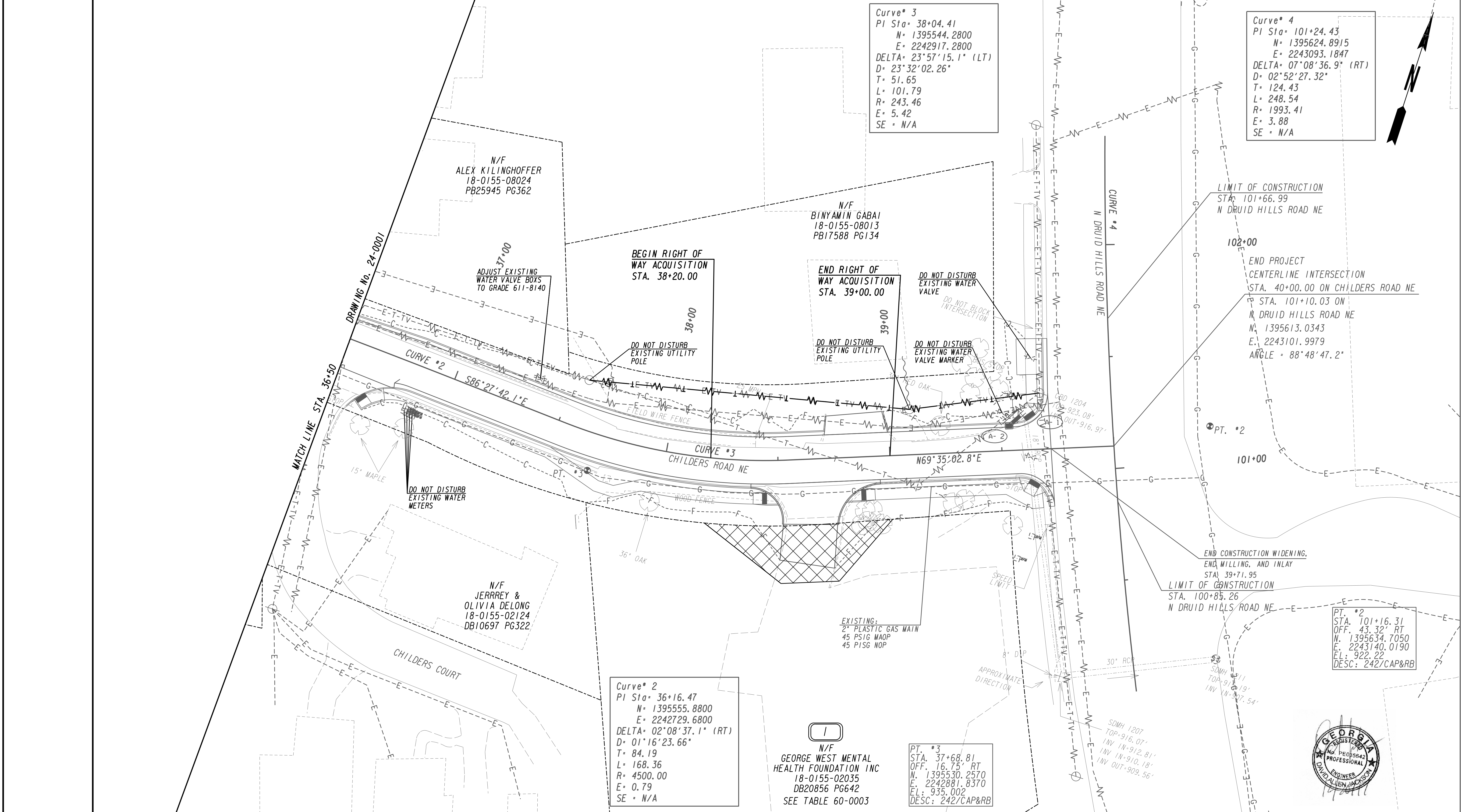
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HORIZONTAL: 1" = 10'  
VERTICAL: 1" = 10'

REVISION DATES


CROSS SECTIONS  
CHILDERS ROAD

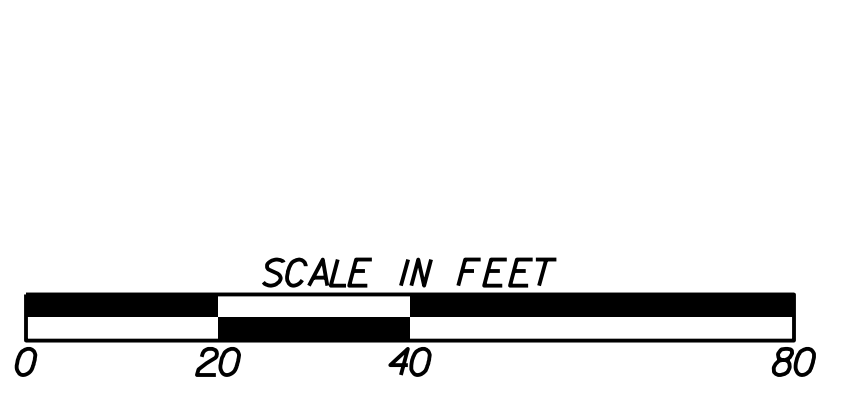
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BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	





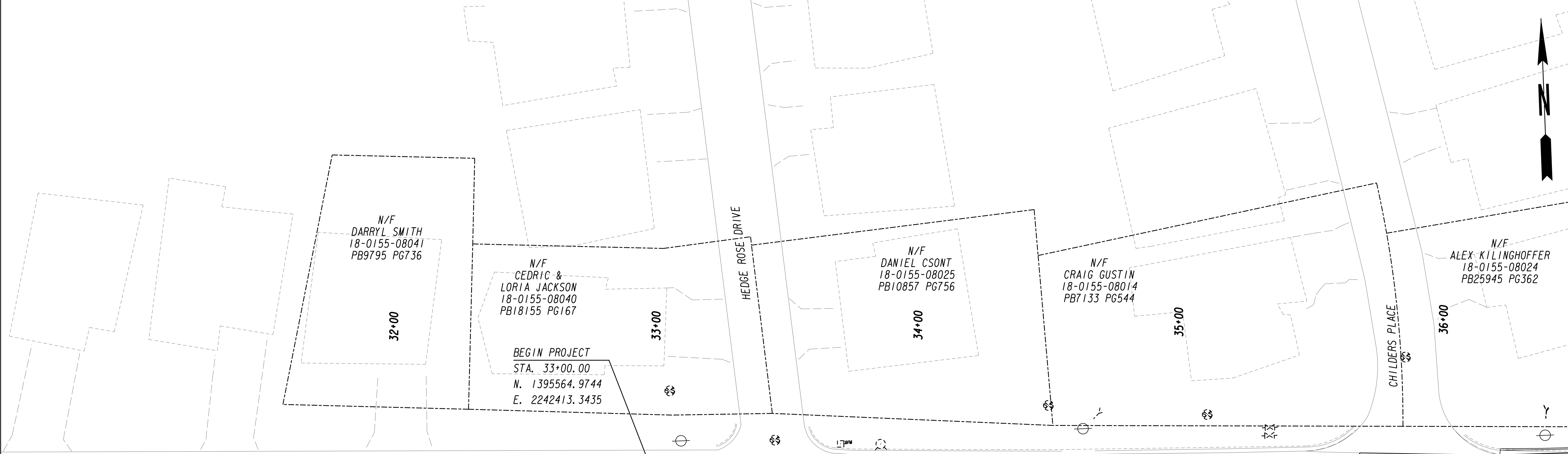
PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA  
 END LIMIT OF ACCESS.....ELA  
 LIMIT OF ACCESS  
 REQ'D R/W & LIMIT OF ACCESS  
 ORANGE BARRIER FENCE  
 ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



REVISION DATES	

UTILITY PLANS CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	24-0002	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



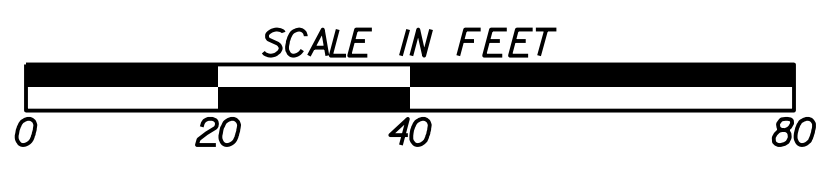
S87°55'37.1"E CURVE #1 S88°36'19.3"E CURVE #2  
CHILDERS ROAD NE

<p><b>Curve # 1</b>                  PI Sta= 34+17.61                  N= 1395560.7200                  E= 2242530.8800                  DELTA= 00°40'42.1" (LT)                  D= 01°16'23.66"                  T= 26.64                  L= 53.28                  R= 4500.00                  E= 0.08                  SE = N/A</p>	<p><b>Curve # 2</b>                  PI Sta= 36+16.47                  N= 1395555.8800                  E= 2242729.6800                  DELTA= 02°08'37.1" (RT)                  D= 01°16'23.66"                  T= 84.19                  L= 168.36                  R= 4500.00                  E= 0.79                  SE = N/A</p>
--	---



<p>PROPERTY AND EXISTING R/W LINE                  REQUIRED R/W LINE                  CONSTRUCTION LIMITS                  EASEMENT FOR CONSTR                  &amp; MAINTENANCE OF SLOPES                  EASEMENT FOR CONSTR OF SLOPES                  EASEMENT FOR CONSTR OF DRIVES</p>	
---	--

<p>BEGIN LIMIT OF ACCESS.....BLA                  END LIMIT OF ACCESS.....ELA                  LIMIT OF ACCESS                  REQ'D R/W &amp; LIMIT OF ACCESS                  ORANGE BARRIER FENCE                  ESA - ENV. SENSITIVE AREA                  (SEE ERIT TABLE)</p>	
--	--

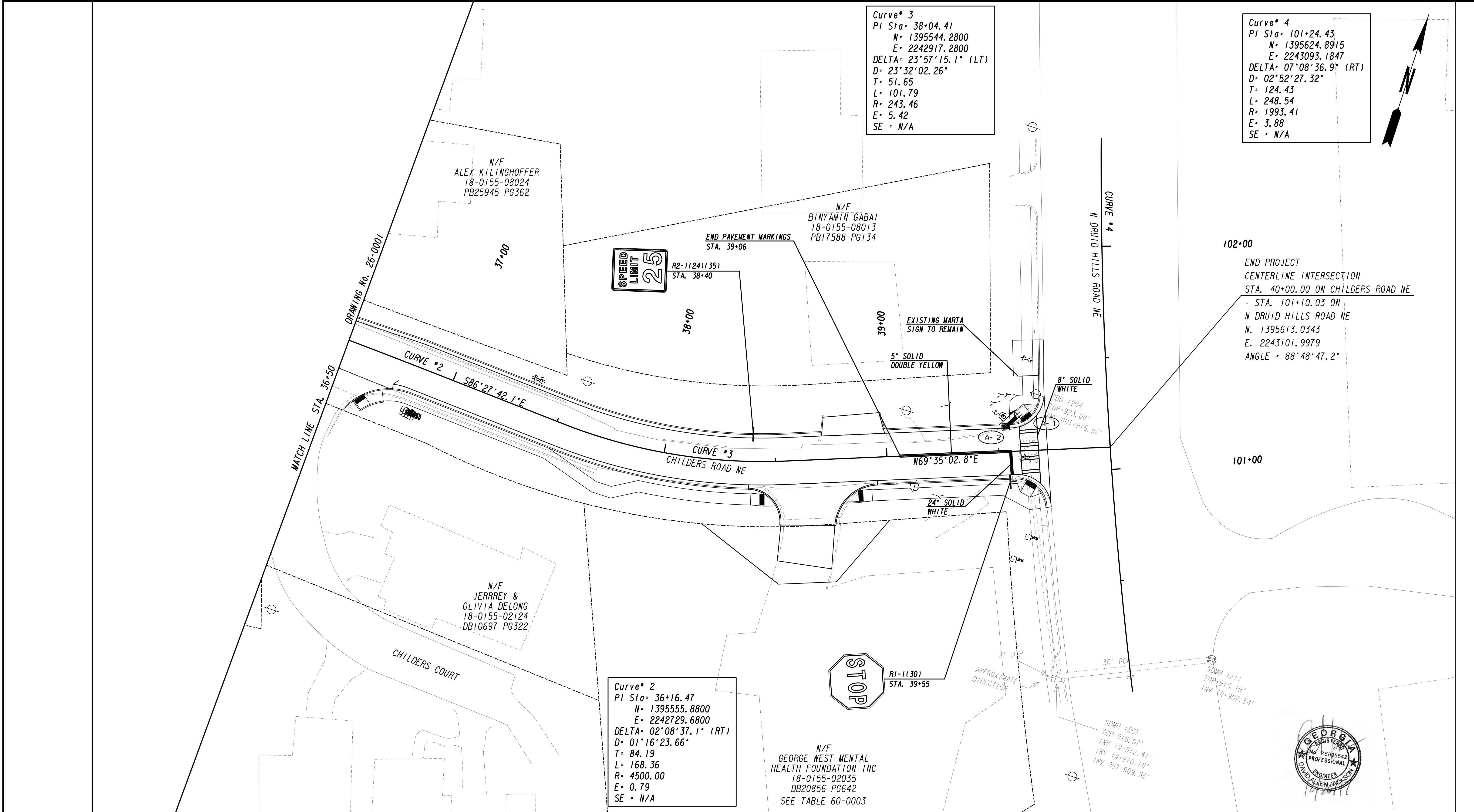


REVISION DATES	

SIGNING AND MARKING PLANS CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	26-0001	
CORRECTED:	DATE:		
VERIFIED:	DATE:		

DRAWING No. 26-0002  
MATCH LINE STA. 36+50



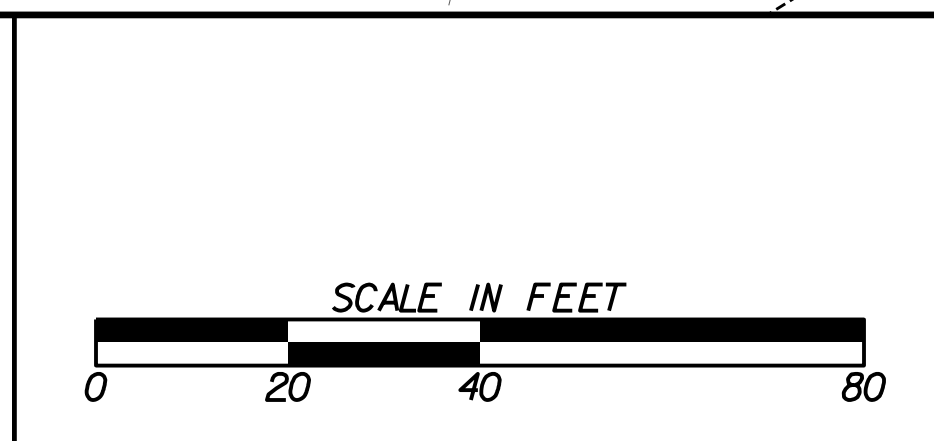


PROPERTY AND EXISTING R/W LINE	---
REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	---
EASEMENT FOR CONSTR OF SLOPES	---
EASEMENT FOR CONSTR OF DRIVES	---

BEGIN LIMIT OF ACCESS.....BLA	---
END LIMIT OF ACCESS.....ELA	---
LIMIT OF ACCESS	---
REQ'D R/W & LIMIT OF ACCESS	---
ORANGE BARRIER FENCE	---
ESA - ENV. SENSITIVE AREA (SEE ERIT TABLE)	---

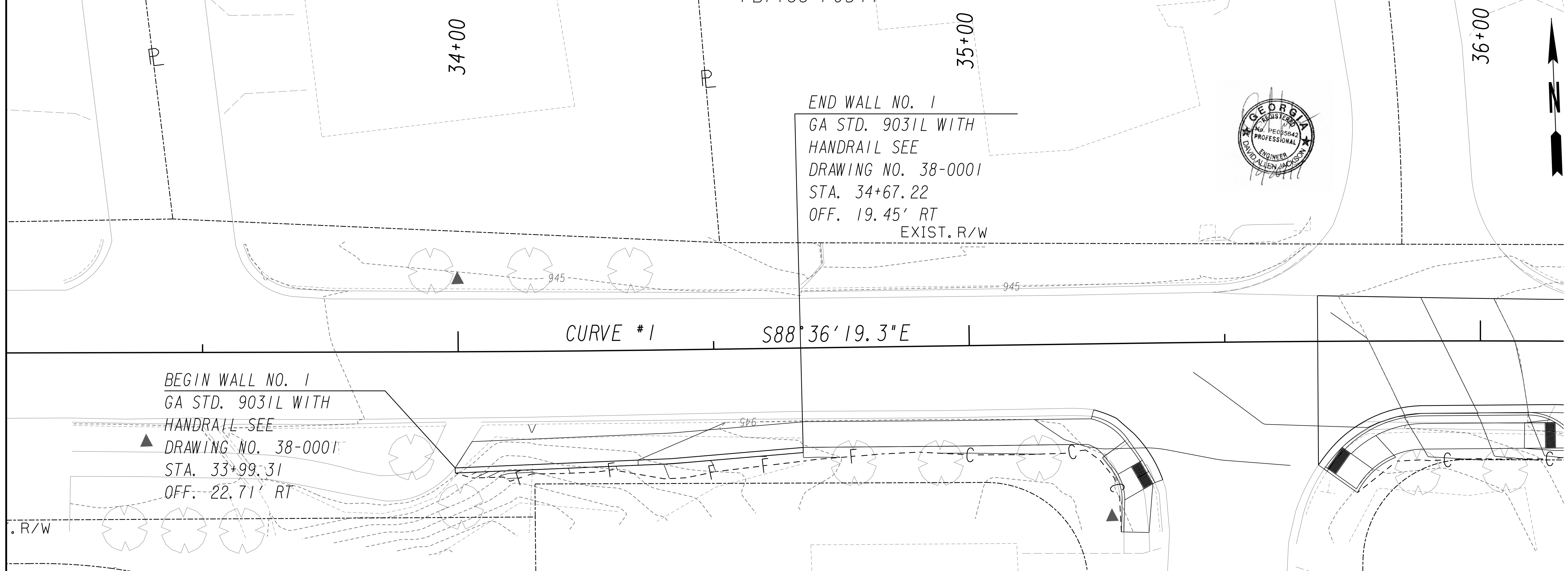
**CALYX**  
 ENGINEERS + CONSULTANTS

**Brookhaven**  
 GEORGIA



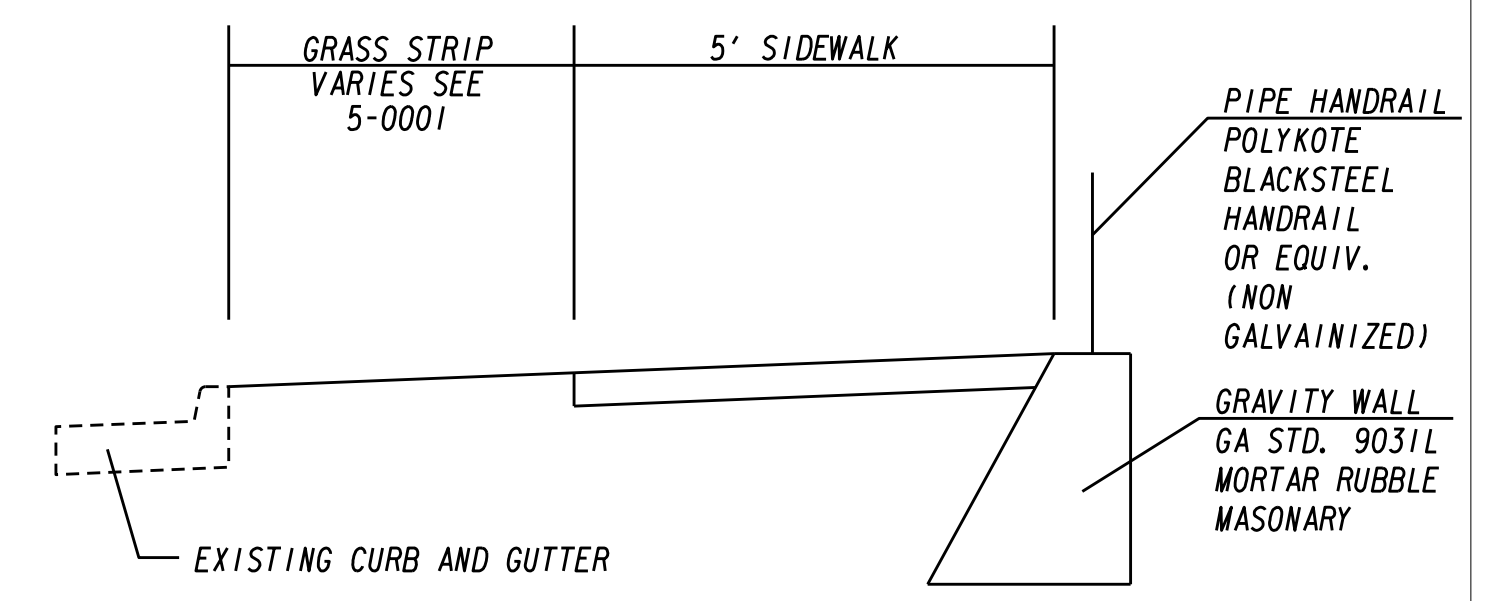
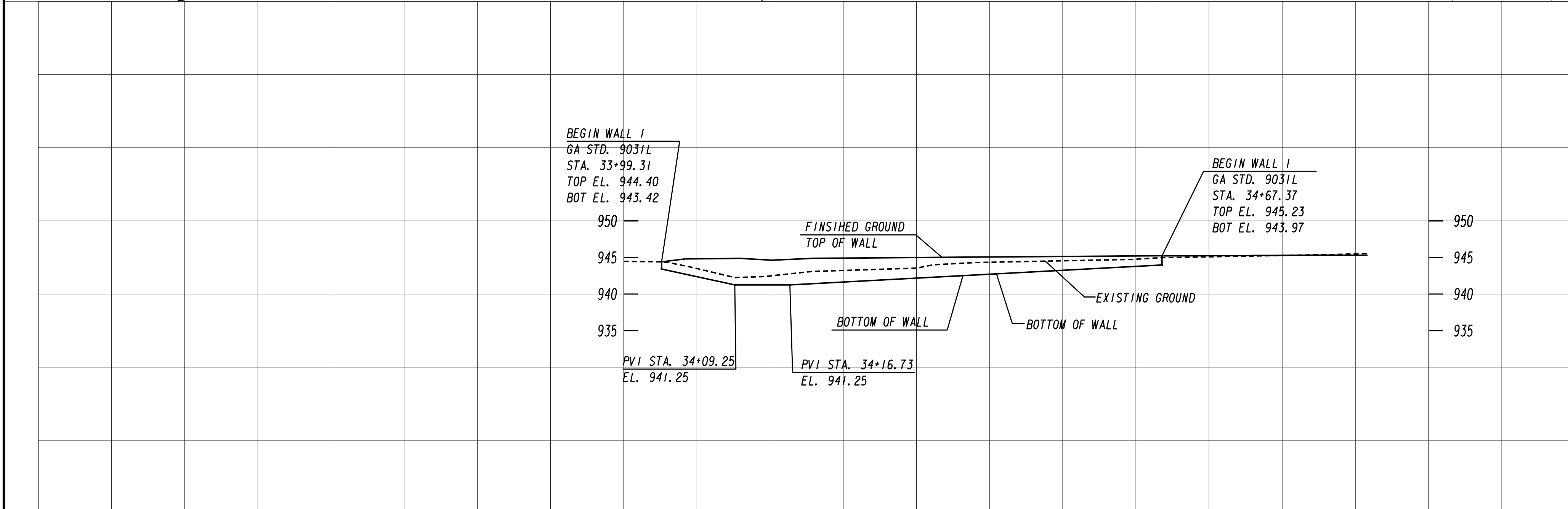
REVISION DATES	

SIGNING AND MARKING PLANS			
CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	26-0002	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



BEGIN WALL NO. 1  
 GA STD. 9031L WITH  
 HANDRAIL SEE  
 DRAWING NO. 38-0001  
 STA. 33+99.31  
 OFF. 22.71' RT

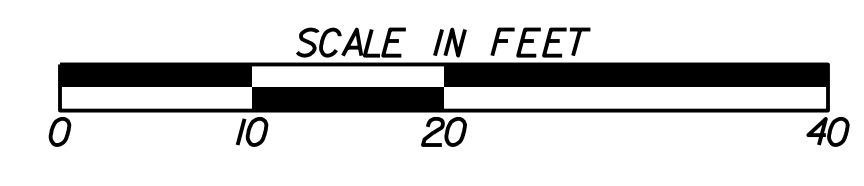
END WALL NO. 1  
 GA STD. 9031L WITH  
 HANDRAIL SEE  
 DRAWING NO. 38-0001  
 STA. 34+67.22  
 OFF. 19.45' RT  
 EXIST. R/W



WALL 1  
 GRAVITY WALL  
 GA STANDARD 9031L

PROPERTY AND EXISTING R/W LINE	---
REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	---
EASEMENT FOR CONSTR OF SLOPES	---
EASEMENT FOR CONSTR OF DRIVES	---

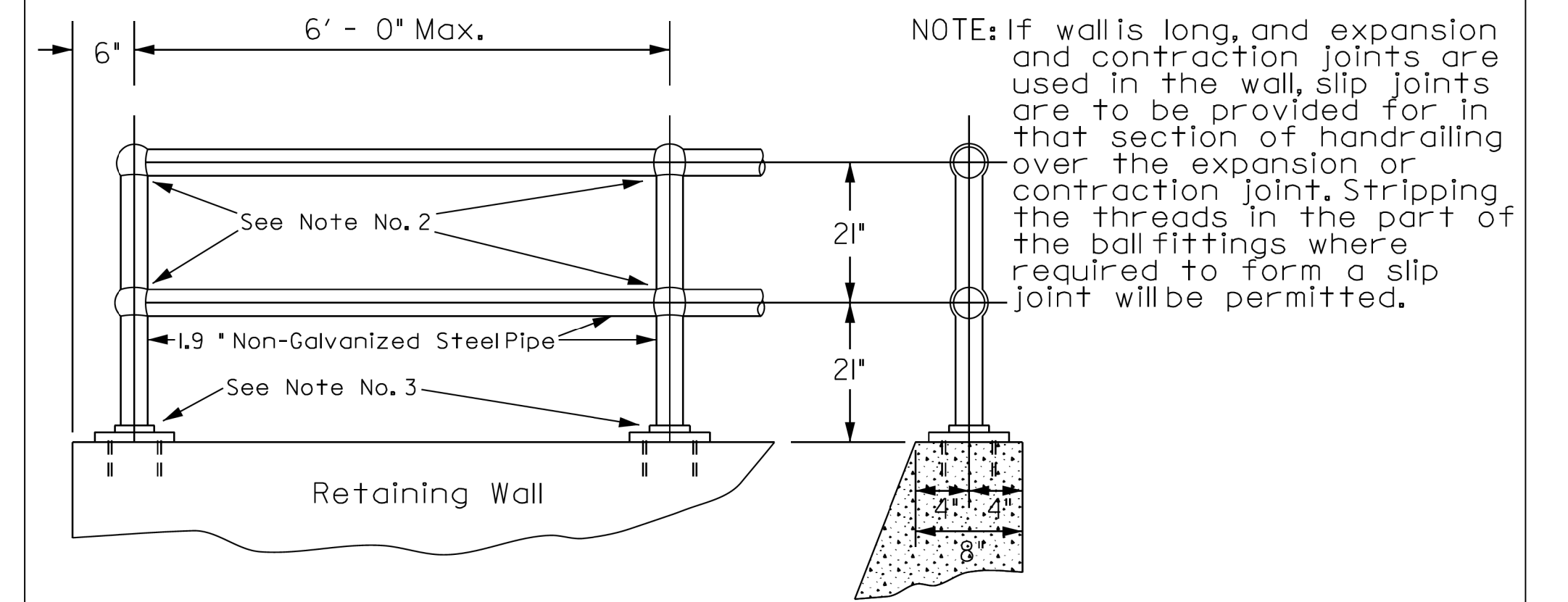
BEGIN LIMIT OF ACCESS.....BLA	---
END LIMIT OF ACCESS.....ELA	---
LIMIT OF ACCESS	---
REQ'D R/W & LIMIT OF ACCESS	---
ORANGE BARRIER FENCE	---
ESA - ENV. SENSITIVE AREA (SEE ERIT TABLE)	---



REVISION DATES	

RETAINING WALL ENVELOPES		
CHILDERS ROAD SIDEWALK		
WALL 1		
CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	31-0001
CORRECTED:	DATE:	
VERIFIED:	DATE:	

### HANDRAIL DETAIL FOR RETAINING WALL



NOTE: Pipe, pipe fittings, floor flanges and bolts shall be of an approved standard type.

1. HANDRAIL AND POST SHALL BE 1.9" NON-GALVANIZED STEEL PIPE, BLACK POWDER COATED OR 1.9" ALUMINUM BLACK POLYKOTE SS40 PIPE. ASSOCIATED HARDWARE SHALL ALSO BE BLACK POWDER COATED.
2. JOINTS -
  - a.) NON-GALVANIZED BLACK POWDER COATED STEEL FITTINGS OR COUPLINGS MAY BE USED AT JOINTS (AS SHOWN) IF RAIL IS PRE-FABRICATED.
  - OR--
  - b.) IF RAIL IS CONSTRUCTED ON-SITE, JOINTS MAY BE WELDED. IF WELDED, ALL EXPOSED JOINTS SHALL BE FINISHED BY GRINDING OR FILING TO GIVE A NEAT APPEARANCE. ALL DAMAGE TO STEEL SHALL BE REPAIRED IN ACCORDANCE WITH THE GA STANDARD SPECIFICATIONS. JOINTS TO BE PAINTED BLACK AFTER INSTALLATION.
3. FOOTINGS -
  - a.) POST MAY BE ANCHORED WITH 2 1/2" X 6 1/2" NON-GALVANIZED BLACK POWDER COATED FLOOR FLANGES WITH 4 - 1/2" X 9" NON-GALVANIZED BLACK POWDER COATED BOLTS (AS SHOWN).
  - OR--
  - b.) POST MAY BE GROUTED IN 6" DEEP, 3" DIAM. HOLE. TOTAL LENGTH OF POST WILL BE 6" GREATER THAN THAT IN DETAILS TO GIVE SAME USEABLE HEIGHT AS IF FLOOR FLANGES WERE USED.
4. 1.9" DENOTES O.D. FOR RAIL SECTIONS. I.D. - 1 1/2".



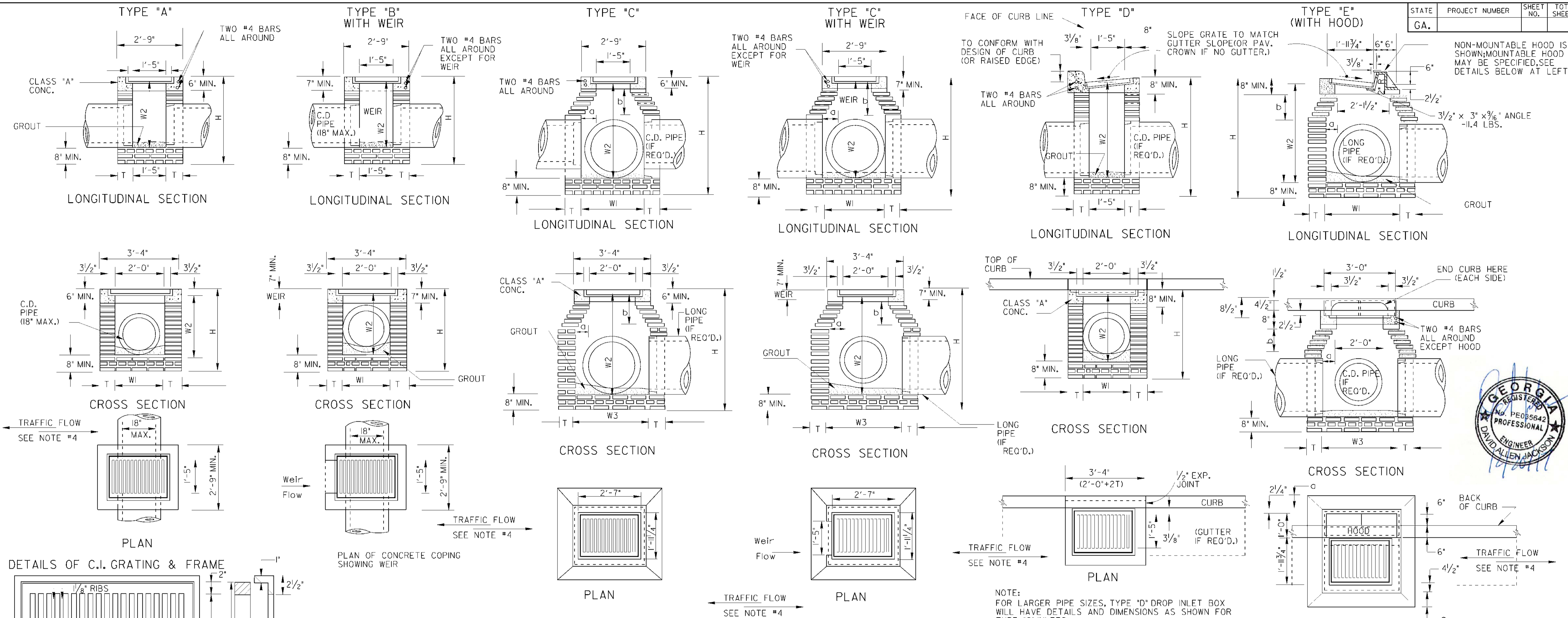
PROPERTY AND EXISTING R/W LINE	-----@-----
REQUIRED R/W LINE	=====
CONSTRUCTION LIMITS	---C---F---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF DRIVES	[Hatched Box]

BEGIN LIMIT OF ACCESS.....BLA	-----@-----
END LIMIT OF ACCESS.....ELA	=====
LIMIT OF ACCESS	---C---F---
REQ'D R/W & LIMIT OF ACCESS	[Hatched Box]
ORANGE BARRIER FENCE	[Hatched Box]
ESA - ENV. SENSITIVE AREA (SEE ERIT TABLE)	[Hatched Box]



REVISION DATES	

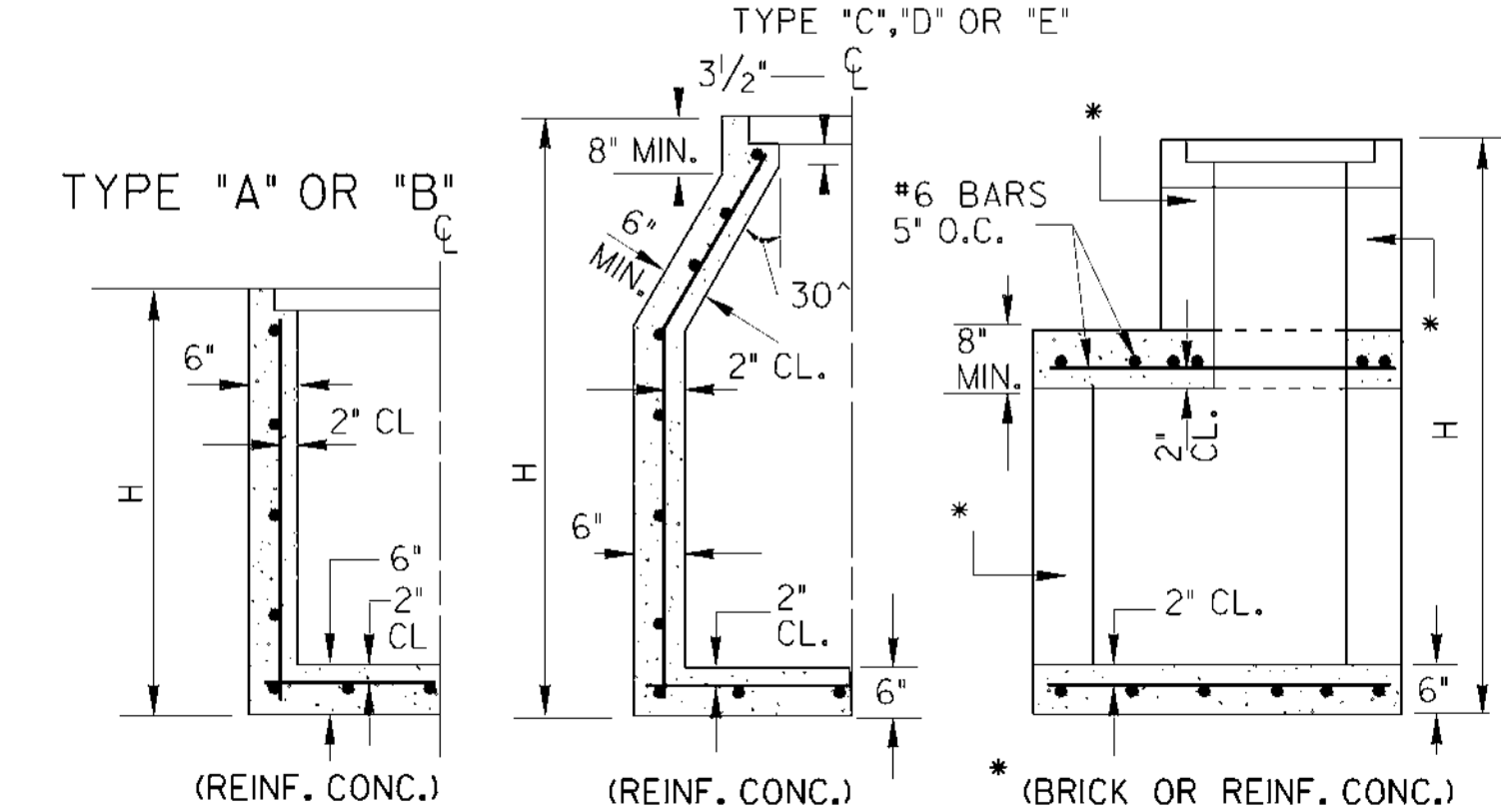
SPECIAL CONSTRUCTION DETAIL			
CHILDERS ROAD SIDEWALK			
PIPE HANDRAIL			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	38-0001	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



**SPECIAL NOTE:**  
STANDARD 1019A INLETS ARE FOR USE AT LOW POINTS & WHERE HYDRAULIC LOW CAPACITY GRATES ARE SUFFICIENT. WHERE HIGHER CAPACITY GRATES ARE NEEDED ON A CONTINUOUS GRADE, STANDARD 1019B IS RECOMMENDED.

**NOTE:**  
DETAILS NOT SHOWN FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO THAT SHOWN FOR BRICK MASONRY.

**CONSTRUCTION ALTERNATES**



**NOTE:** CONCRETE WALLS WILL BE REINFORCED WITH #4 BARS 12" O.C. BOTH WAYS, BUT WHERE H IS OVER 9 FT., AND PIPE IS OVER 30" I.D., THE HORIZONTAL STEEL, WHICH IS MORE THAN 9 FT. DEEP WILL BE INCREASED TO 6" SPACINGS. 6" CONC. BOTTOM SLABS WILL BE REINFORCED WITH #4 BARS 12" O.C. BOTH WAYS.

**NOTE:** FOR PRECAST ALTERNATES, SEE STD. 1019-A PRECAST AND/OR STD. 1040 PRECAST AND BUILT-IN-PLACE COMPONENTS MAY BE USED IN COMBINATIONS WHICH PROVIDE PROPER FITS AND STRUCTURAL ADEQUACY.

- GENERAL NOTES:**
- SPECIFICATIONS: GEORGIA STANDARD AND CURRENT EDITION, AND SUPPLEMENTS THERETO.
  - 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE RIGID PAVEMENT, CONCRETE SIDEWALK OR CONCRETE GUTTER MEETS DROP INLETS.
  - ALIGNMENT, NUMBER AND SIZES OF PIPES SHOWN ARE ONLY TYPICAL. SEE PLANS FOR ACTUAL PIPE CULVERT REQUIREMENTS.
  - ALL TYPE DROP INLETS WILL BE CONSTRUCTED (AS SHOWN), SO THAT THE GRATE BARS ARE PERPENDICULAR TO THE FLOW OF TRAFFIC EXCEPT ON LIMITED ACCESS PROJECTS OR WHERE BICYCLES ARE PROHIBITED.
  - BRICK MASONRY WITH CLASS "A" CONC. TOP PORTION IS SHOWN AS STANDARD CONSTRUCTION WITH ALTERNATES PERMITTED AS SHOWN, BOTTOM SLAB MAY BE 8" MIN. NON-REINFORCED CONCRETE, 8" BRICK OR 6" MIN. REINFORCED CONCRETE, SEE APPLICABLE STANDARDS FOR ALTERNATE PRECAST CONSTRUCTION.

**TABLE OF MINIMUM DIMENSIONS FOR DROP INLETS**

D	TYPES "A" or "B" BRICK OR REINF. CONC.			TYPE "C" OR "D" (BRICK)					TYPE "E" (BRICK)					TYPE "C", "D" OR "E" (REINFORCED CONCRETE)								
	W1	W2	H(min)	W1	W2	W3	Ø (MAX.)	b	H(min.)	W1	W2	W3	Ø (MAX.)	b	H(min.)	W1 type "C"	W1 type "E"	W2	W3	Ø (MAX.)	b	H(min.)
15"	2'-0"	2'-7"	3'-3/2"	2'-2 1/8"	2'-11"	2'-9 1/2"	0'-4 3/8"	0'-7 3/8"	3'-9 1/2"	3'-2 1/8"	3'-1"	3'-0 5/8"	0'-7 1/8"	1'-1 1/8"	3'-11 1/2"	2'-0"	2'-1"	2'-7"	2'-0"	3 1/2"	6"	3'-6"
18"	2'-0"	2'-10"	3'-1"	2'-2 1/8"	3'-2 1/2"	2'-9 1/8"	0'-4 3/8"	0'-7 7/8"	4'-1"	3'-2 1/8"	3'-4 1/2"	3'-0 5/8"	0'-7 1/8"	1'-1 1/8"	4'-1"	2'-0"	2'-1"	3'-0"	2'-0"	3 1/2"	6"	3'-11"
24"	~	~	~	2'-8 1/8"	3'-3 1/8"	3'-3 1/8"	0'-7 3/8"	0'-7 3/8"	4'-9"	3'-2 1/8"	3'-11 1/2"	3'-0 5/8"	0'-7 1/8"	1'-1 1/8"	4'-8 1/4"	2'-8"	2'-9"	3'-8"	2'-6"	6 1/2"	11 1/4"	4'-7"
30"	~	~	~	3'-7 1/4"	4'-0 1/4"	3'-10 1/8"	1'-0 1/8"	1'-9"	5'-10"	3'-5 1/2"	4'-8 3/8"	3'-4"	0'-8"	1'-1 1/8"	5'-6 3/8"	3'-4"	3'-6"	4'-9"	3'-0"	9 1/2"	16 1/2"	5'-10"
36"	~	~	~	4'-1 7/8"	6'-0 5/8"	4'-8 7/8"	1'-4 1/8"	2'-2 1/4"	6'-11 1/8"	3'-11 1/2"	5'-8 3/8"	3'-10"	0'-11"	1'-7 1/8"	6'-7 1/8"	3'-10"	4'-0"	5'-10"	3'-9"	1'-2"	2'-0"	6'-10"
42"	~	~	~	4'-5"	7'-1 3/4"	5'-0"	1'-6"	2'-7 3/8"	8'-0 1/4"	4'-6 1/2"	7'-5 1/8"	4'-5"	1'-2 1/2"	2'-1 3/8"	8'-4 3/8"	4'-5"	4'-6"	7'-0"	4'-3"	1'-9 1/2"	2'-5 1/2"	7'-11"
48"	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
54"	~	~	~	5'-0"	8'-2 3/4"	5'-7"	1'-9 1/2"	3'-1 1/4"	9'-1 1/4"	5'-1 1/2"	8'-6 1/8"	5'-0"	~	~	~	~	~	~	~	~	~	~
60"	~	~	~	5'-7"	9'-4"	6'-2"	2'-1"	3'-7 1/2"	10'-2 1/2"	5'-8 1/2"	9'-7 3/4"	5'-7"	1'-9 1/2"	3'-1 1/4"	10'-6 1/4"	5'-6"	5'-6"	9'-2"	5'-6"	2'-0 1/2"	3'-6 1/2"	10'-0"
	~	~	~	6'-2"	1'-4 7/8"	6'-9"	2'-4 1/2"	4'-1 3/8"	11'-3 1/4"	6'-3 1/2"	10'-8 3/8"	6'-2"	2'-1"	3'-1 3/8"	1'-7 3/8"	6'-0"	6'-0"	10'-3"	6'-0"	2'-3 1/2"	4'-0"	11'-1"

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

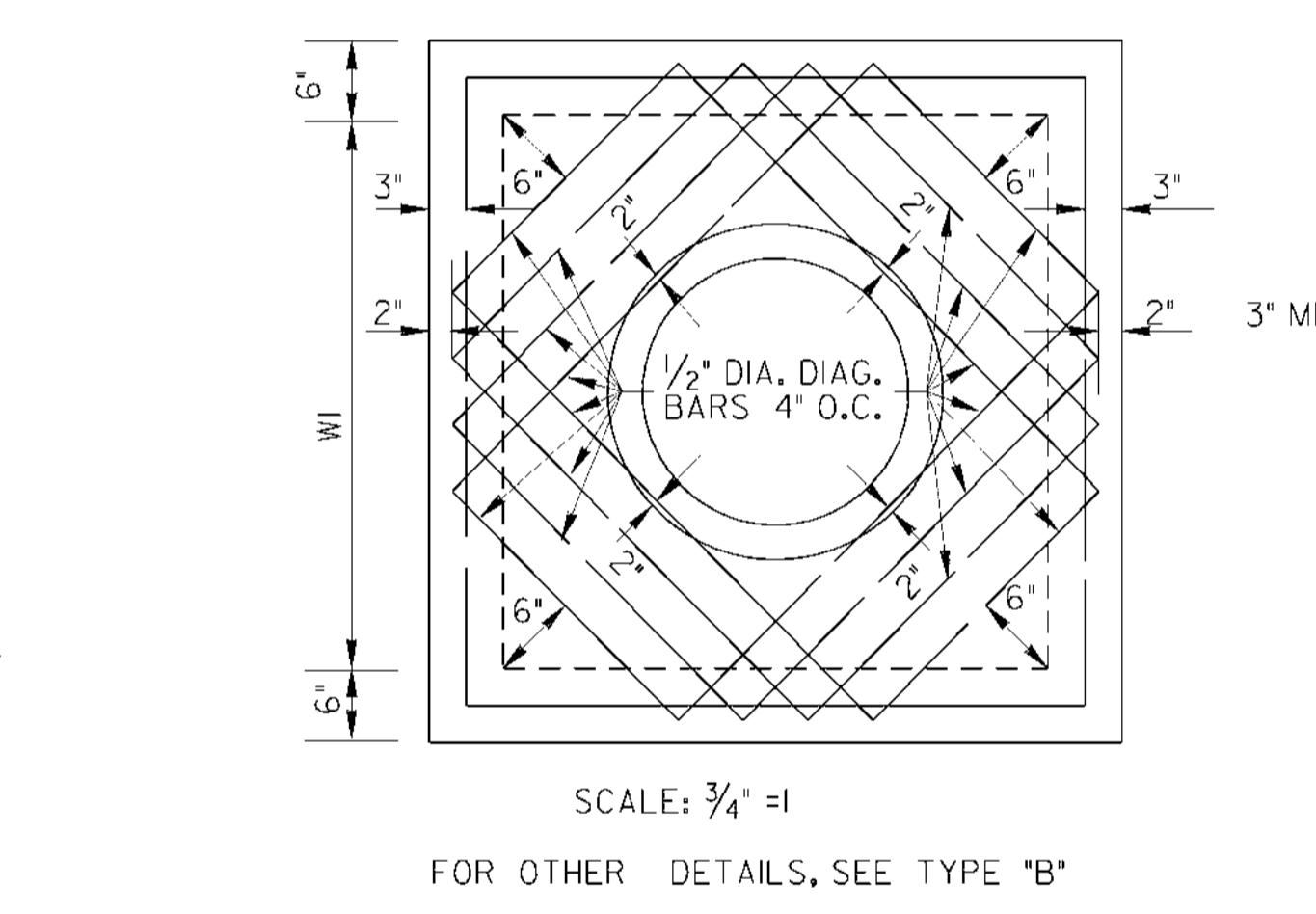
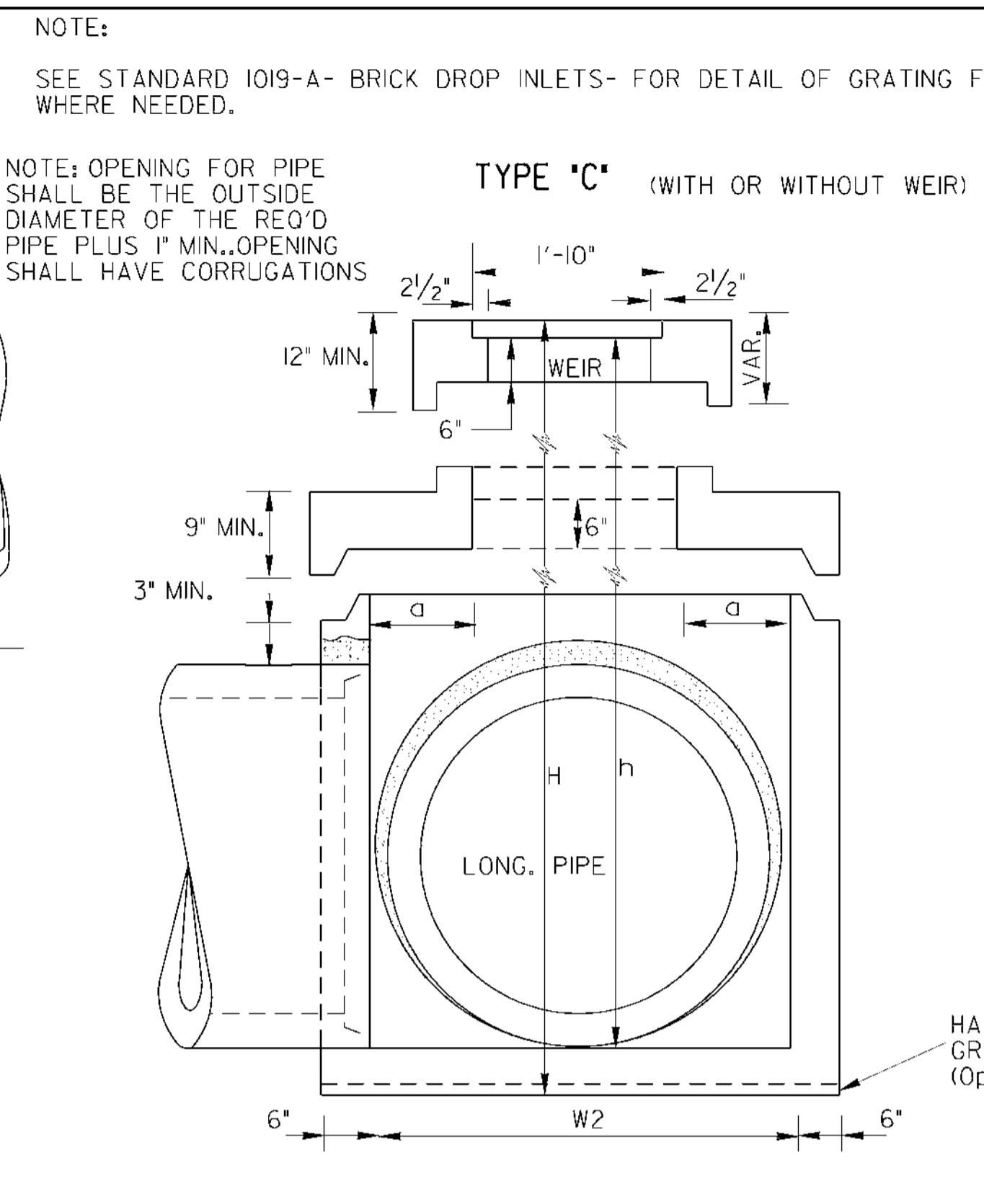
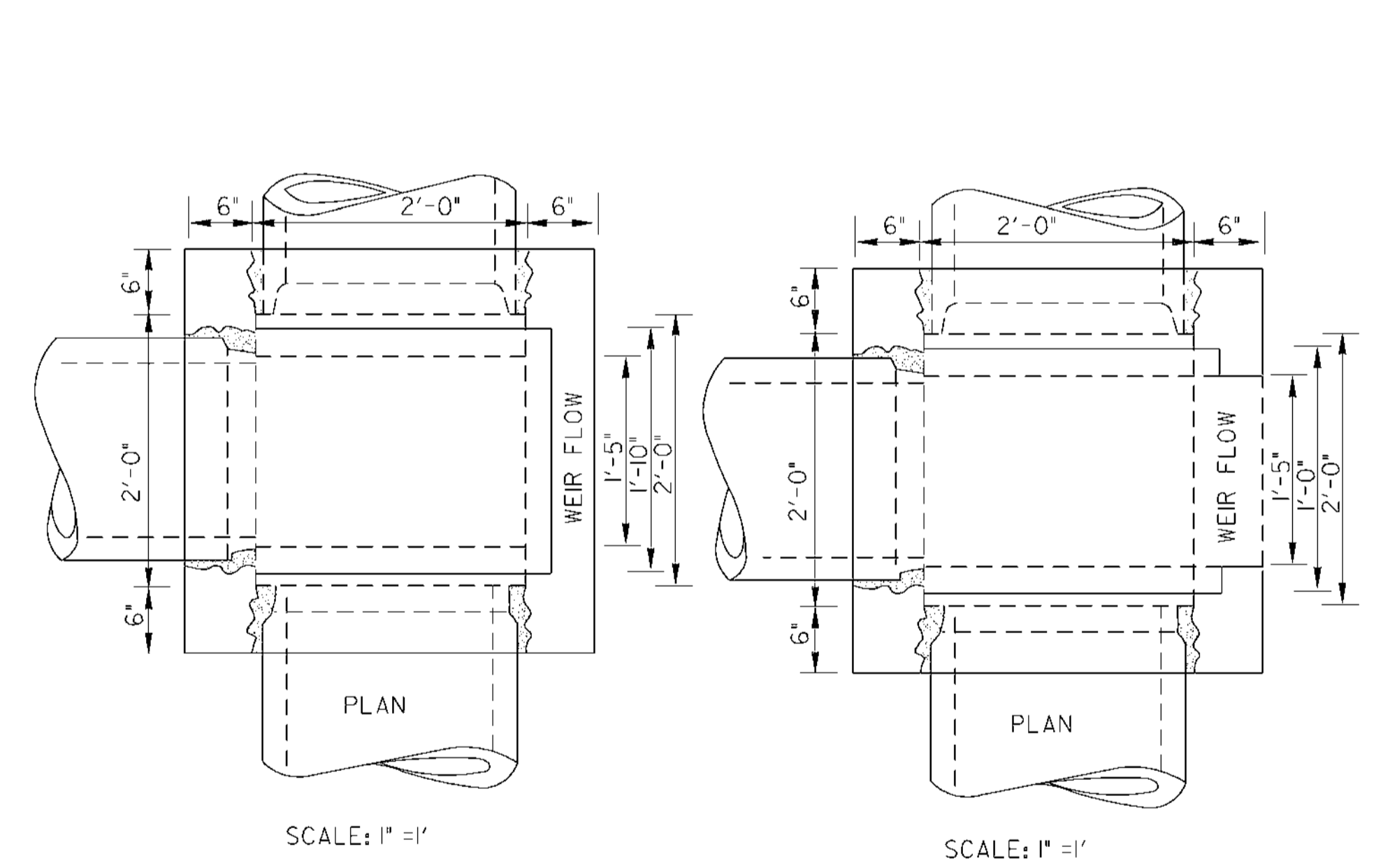
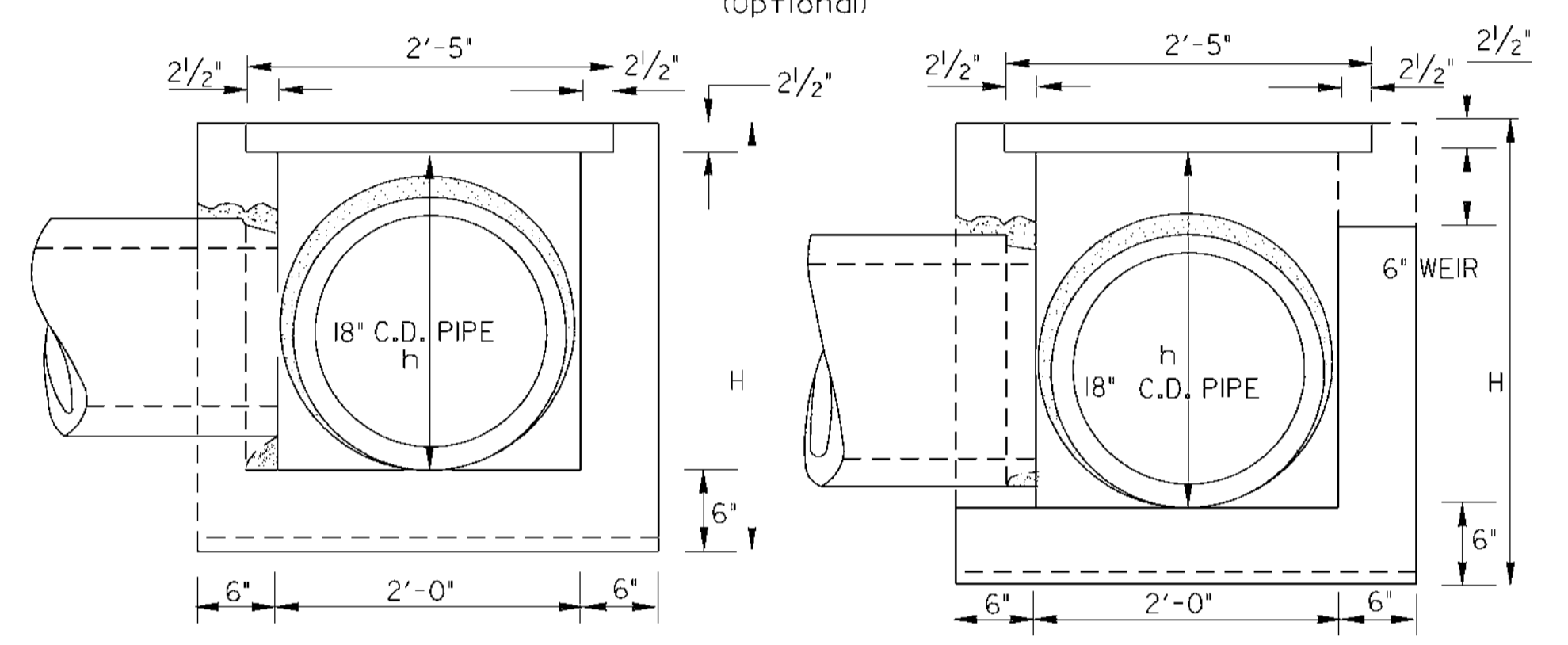
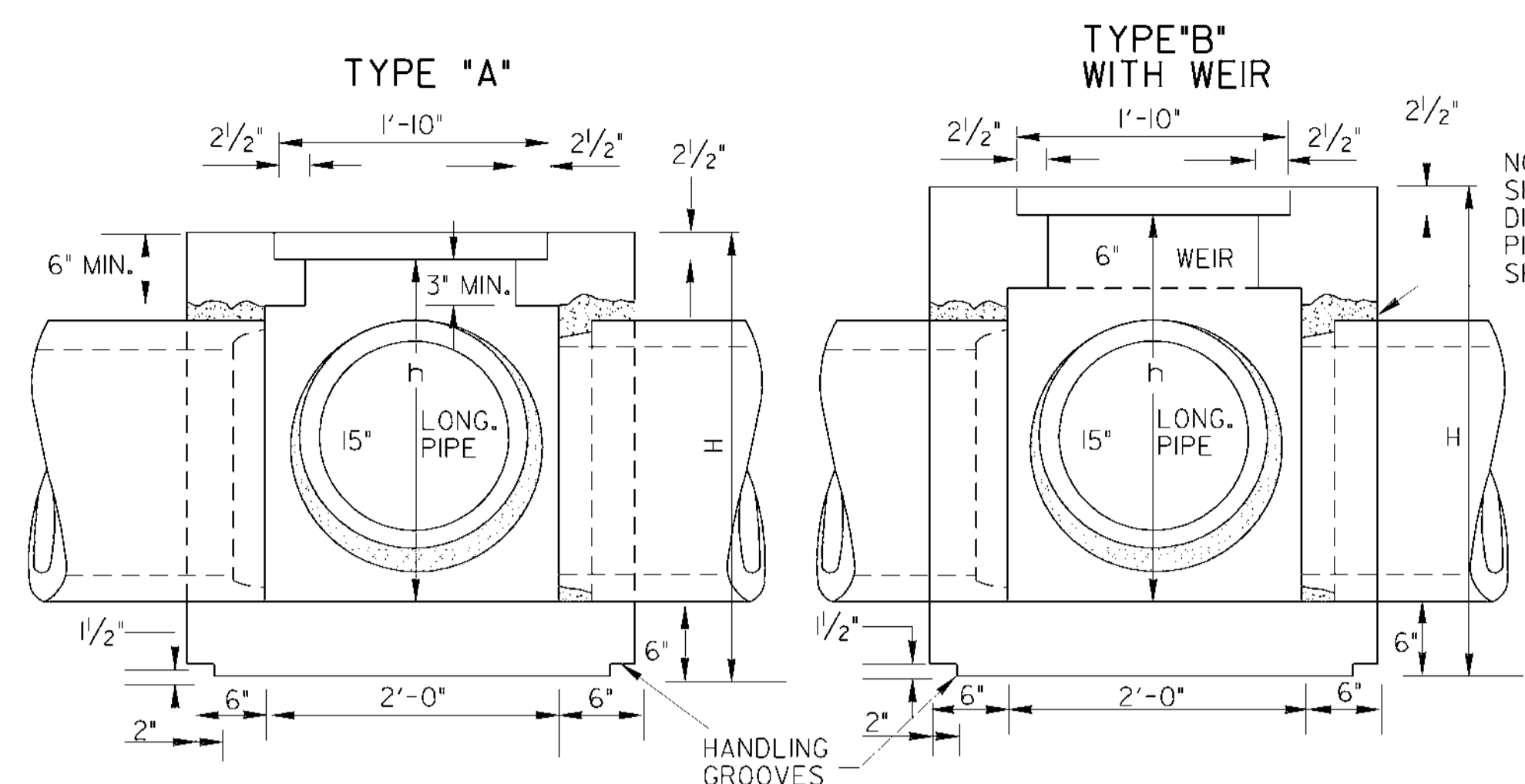
STANDARD DROP INLETS (BUILT-IN-PLACE)

SCALE AS SHOWN REV. & REDR. AUG., 1999

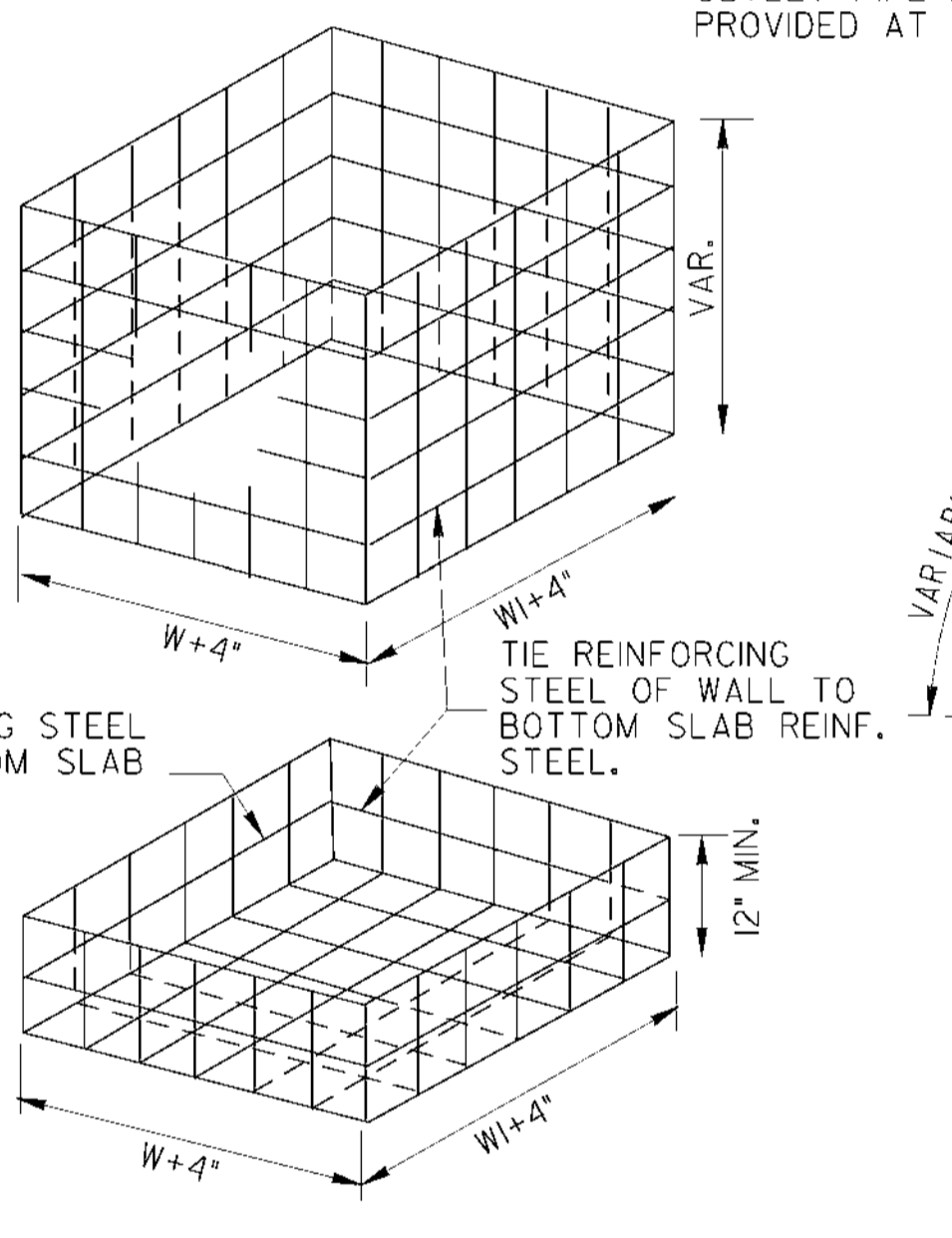
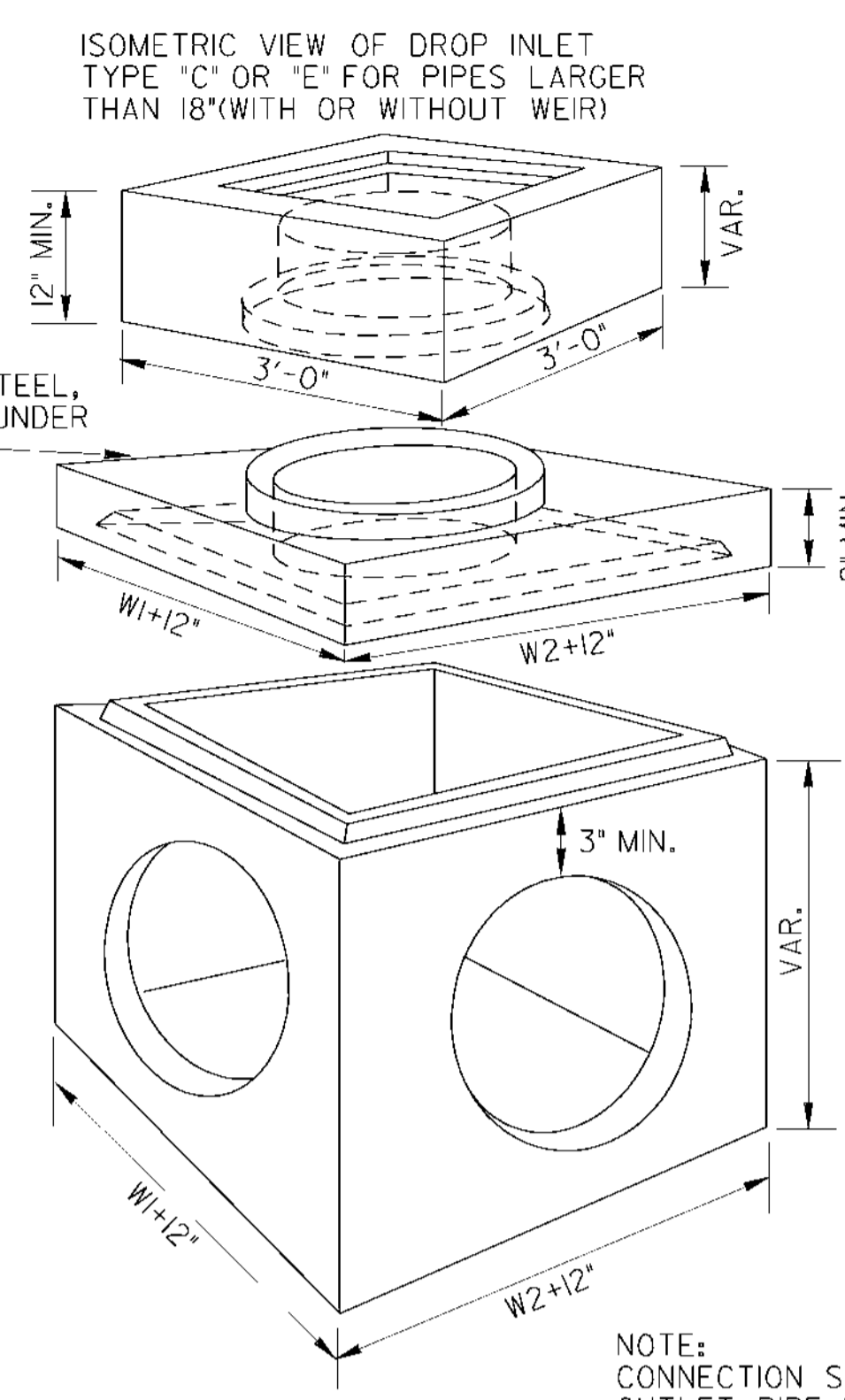
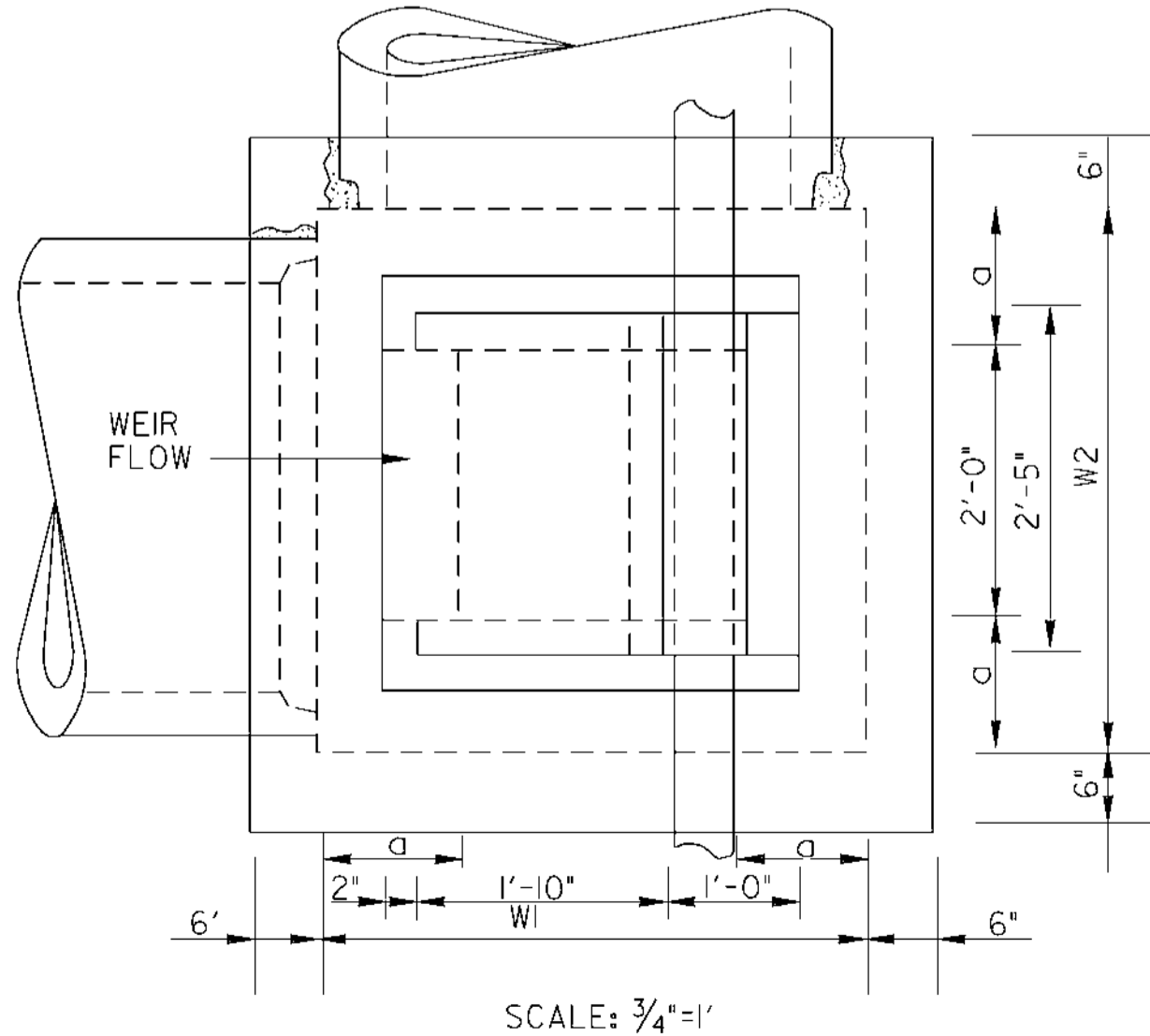
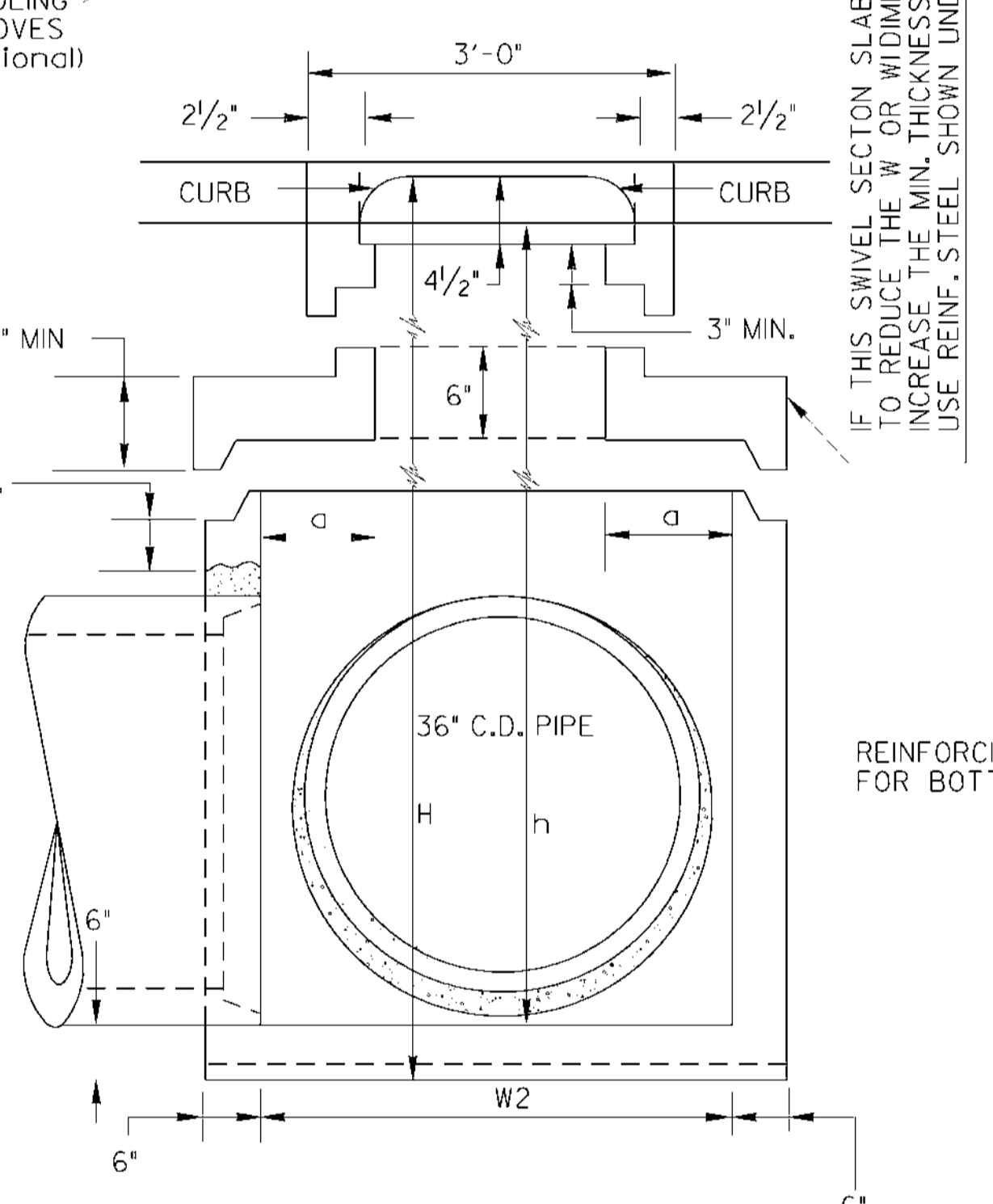
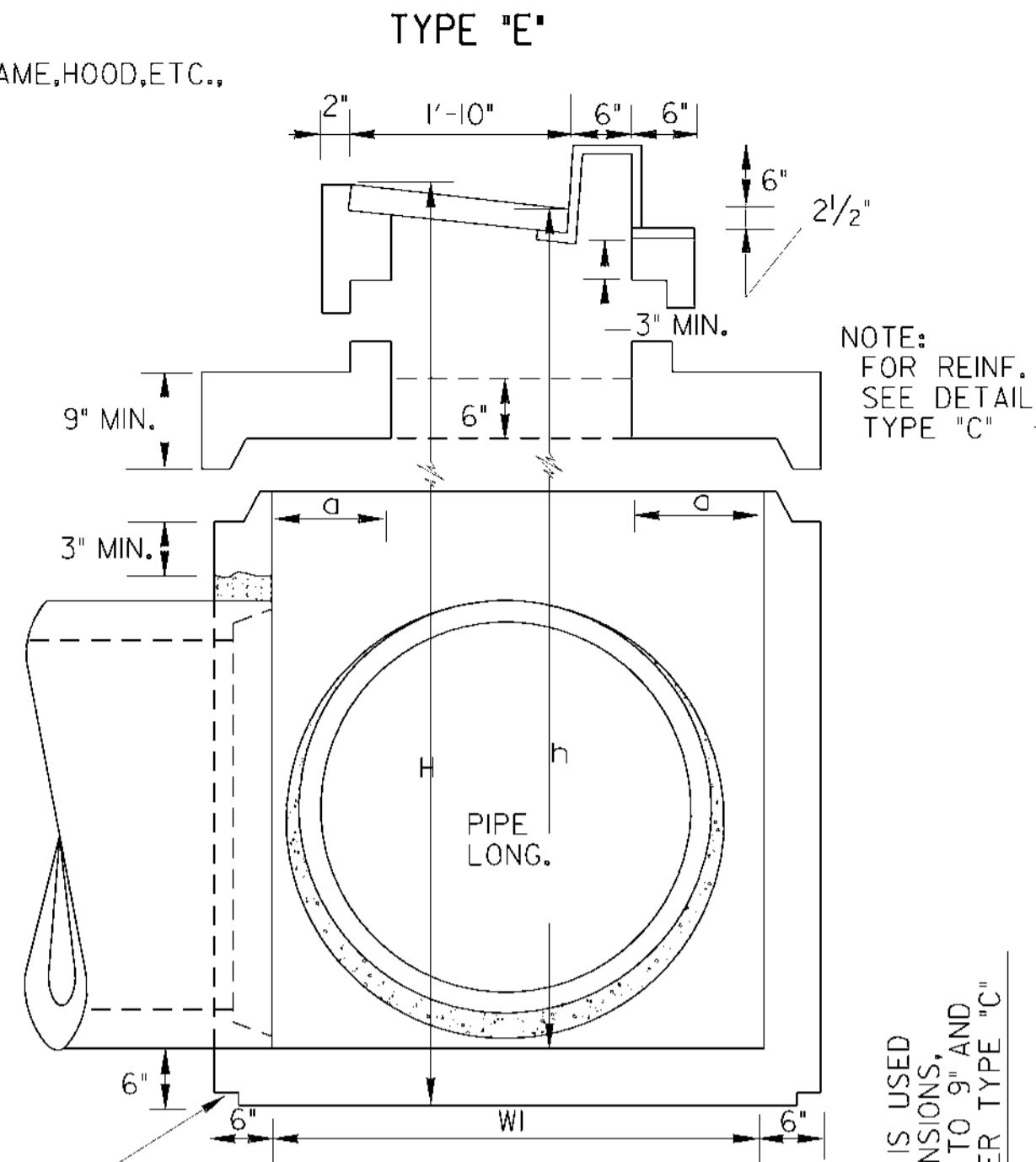
DES. (SUBMITTED) *Jamiah Kaul*  
REV. (APPROVED) *Paul L. Foltz*  
TRA. (APPROVED) *Paul L. Foltz*  
CHK. (APPROVED) *Paul L. Foltz*

NUMBER 1019A

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

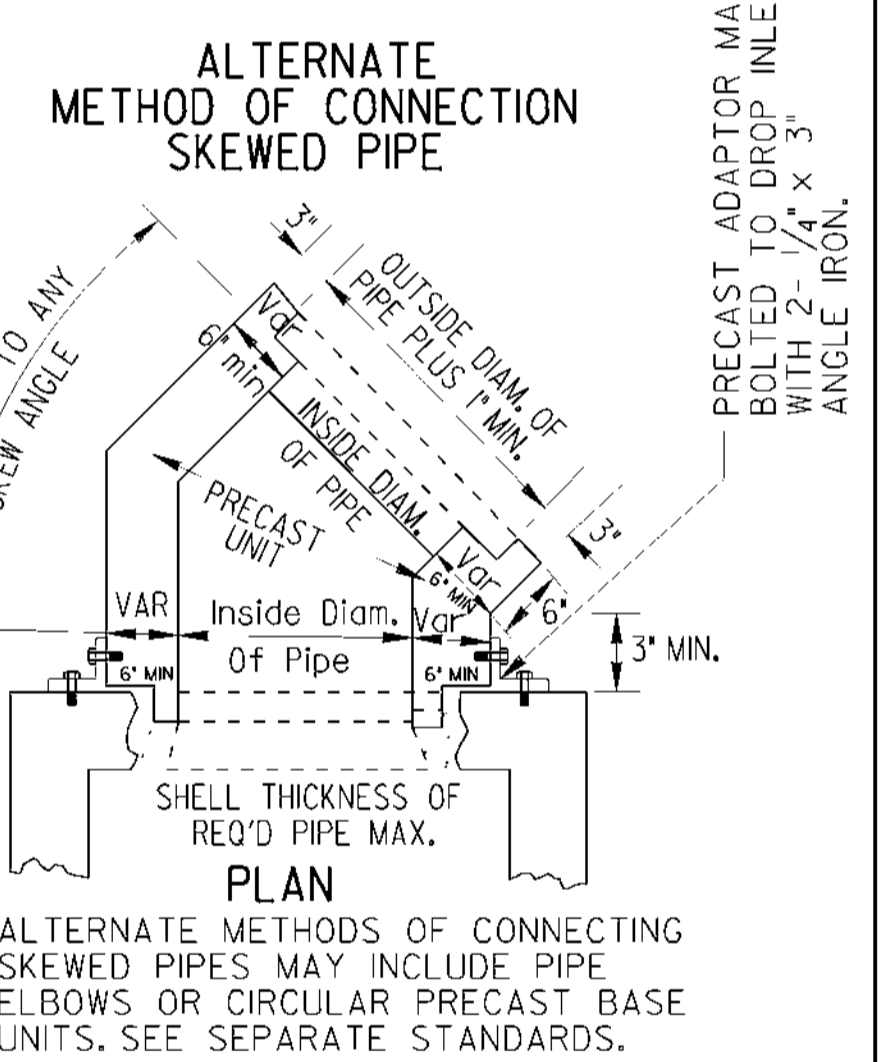
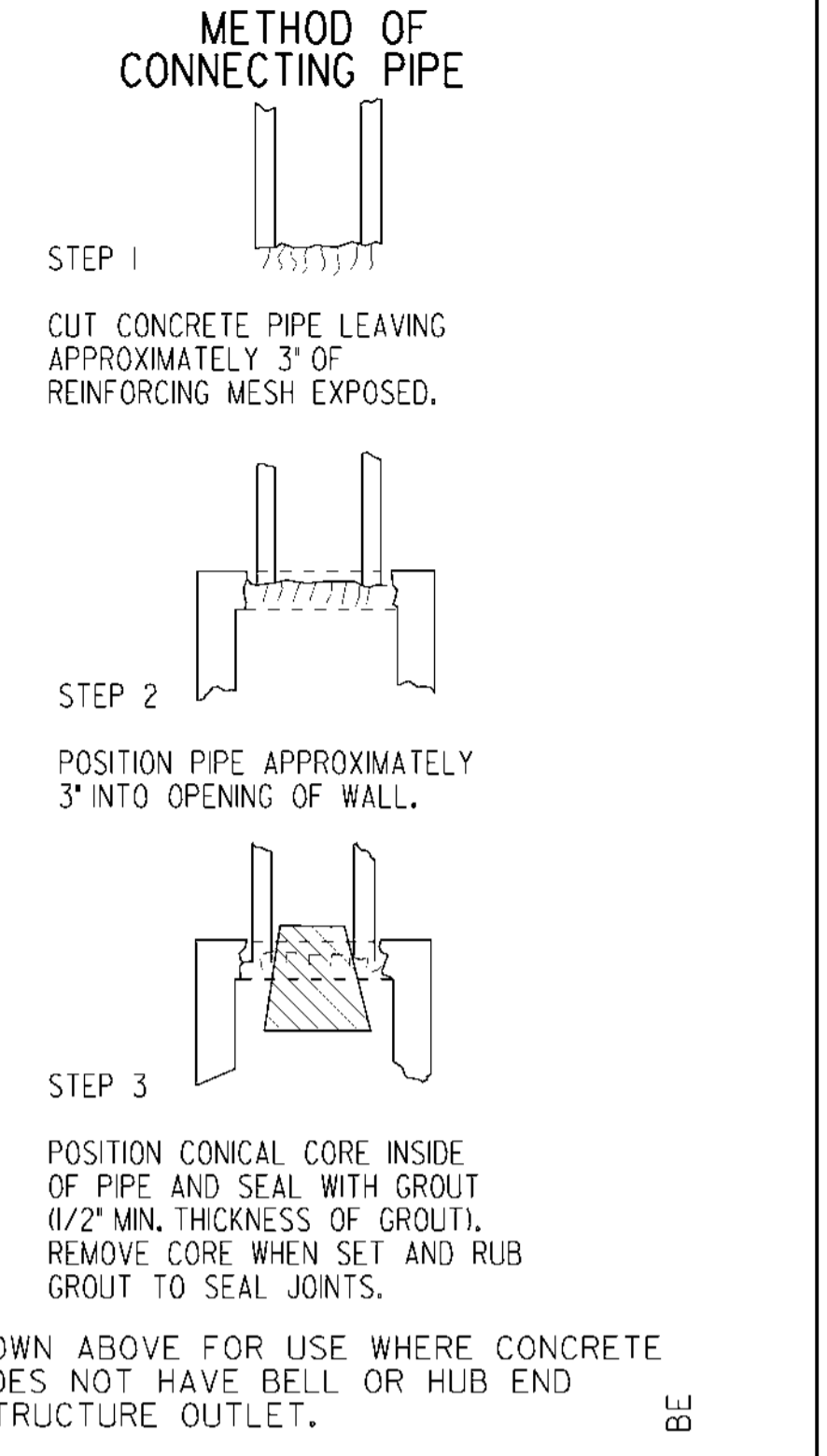


SCALE: 3/4" = 1'  
FOR OTHER DETAILS, SEE TYPE "B"



NOTE: REINFORCING STEEL SHALL BE No. 4 STEEL BARS AT 12" O.C. BOTH WAYS OR EQUIVALENT WIRE FABRIC REINFORCING.

SPECIAL NOTE: STANDARD 1019A INLETS ARE FOR USE AT LOW POINTS AND WHERE HYDRAULIC LOW CAPACITY GRATES ARE SUFFICIENT. WHERE HIGHER CAPACITY GRATES ARE NEEDED ON A CONTINUOUS GRADE, STANDARD 1019B IS RECOMMENDED.



PIPE SIZE	TYPE "A"		TYPE "B"		TYPE "C"				TYPE "E"			
	MIN. h	MIN. H	MIN. h	MIN. H	W1 or W2	a	MIN. h	MIN. H	W1 or W2	a	MIN. h	MIN. H
15"	2'-0"	2'-8 1/2"	2'-7"	3'-3 1/2"	2'-0"		2'-7"	3'-3 1/2"	2'-0"		2'-7"	3'-3 1/2"
18"	2'-3 1/2"	3'-0"	2'-10"	3'-6 1/2"	2'-0"		2'-10"	3'-6 1/2"	2'-0"		2'-10"	3'-6 1/2"
24"			3'-0"	0'-6"	4'-3 1/2"	5'-0"	3'-0"	0'-6"	4'-7"	5'-3"		
30"			3'-6"	0'-9"	4'-10 1/2"	5'-7"	3'-6"	0'-9"	5'-2"	5'-10"		
36"			4'-0"	1'-0"	5'-5 1/2"	6'-2"	4'-0"	1'-0"	5'-9"	6'-3"		
42"			4'-6"	1'-3"	6'-1 1/2"	6'-8"	4'-6"	1'-3"	6'-4"	7'-0"		
48"			5'-0"	1'-6"	6'-7 1/2"	7'-3"	5'-0"	1'-6"	6'-11"	7'-7"		
54"			5'-6"	1'-9"	7'-2 1/2"	7'-10"	5'-6"	1'-9"	7'-6"	8'-2"		
60"			6'-0"	2'-0"	7'-9 1/2"	8'-5"	6'-0"	2'-0"	8'-1"	8'-9"		

NOTE: SEE STANDARD 1019A (BRICK) AND STANDARD 1040 FOR CONSTRUCTION ALTERNATES BRICK MASONRY AND CIRCULAR PRECAST SECTIONS RESPECTIVELY.



DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

STANDARD  
PRECAST DROP INLETS

SCALE AS SHOWN

AUG. 1999

DATE	
REVISION	
DESIGNED	(SUBMITTED) <i>James A. Kasul</i>
DRAWN	STATE ROAD & AIRPORT DESIGN ENGINEER
TRACED	(APPROVED) <i>David L. Conley</i>
CHECKED	CHIEF ENGINEER

NUMBER  
1019A  
PRECAST

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

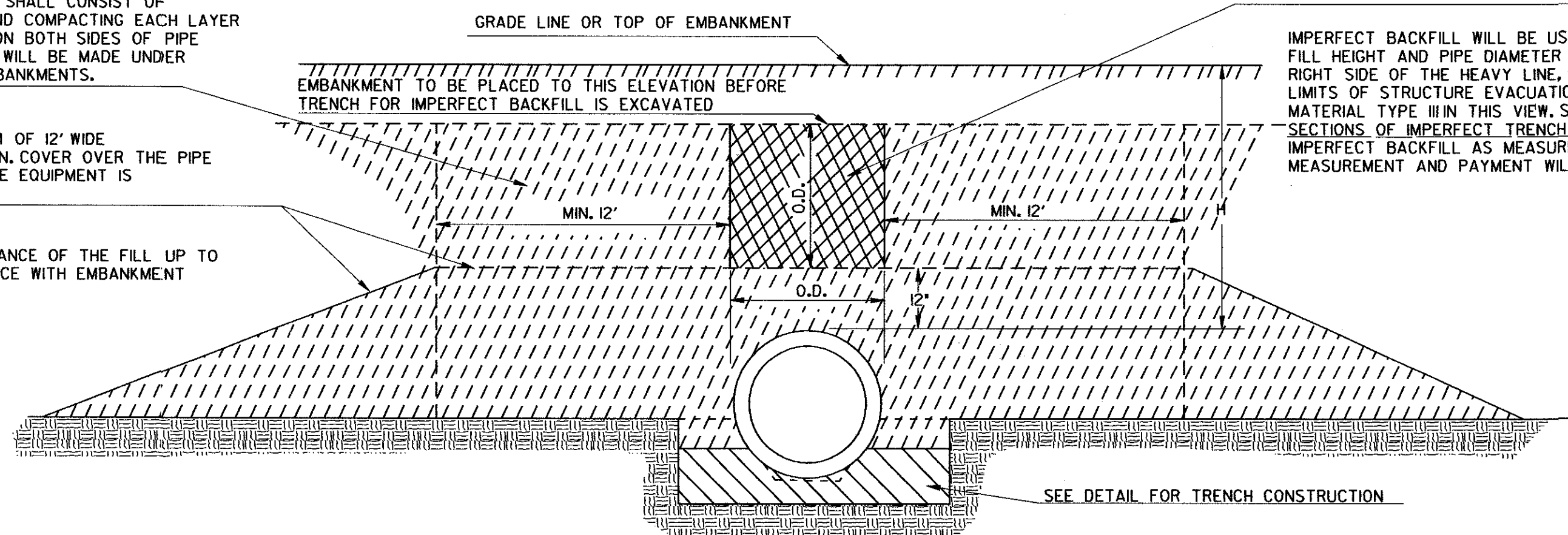
### NORMAL BACKFILL

BACKFILL, AS SHOWN BY THE BROKEN LINE SECTIONS, SHALL CONSIST OF PLACING COMPACTABLE SOIL IN 6" (LOOSE) LAYERS AND COMPACTING EACH LAYER (ACCORDING TO GEORGIA STANDARD SPECIFICATIONS) ON BOTH SIDES OF PIPE FOR ITS FULL LENGTH. MEASUREMENT AND PAYMENT WILL BE MADE UNDER ROADWAY EXCAVATION ITEMS FOR FORMATION OF EMBANKMENTS.

NORMAL EMBANKMENT SHALL BE PLACED A MINIMUM OF 12" WIDE ON EACH SIDE OF THE PIPE AND AT LEAST THE MIN. COVER OVER THE PIPE AND COMPACTED TO THE REQUIRED DENSITY BEFORE EQUIPMENT IS ALLOWED TO CROSS.

AFTER BACKFILL HAS BEEN COMPACTED, THE BALANCE OF THE FILL UP TO GRADE LINE SHALL BE CONSTRUCTED IN ACCORDANCE WITH EMBANKMENT SPECIFICATIONS

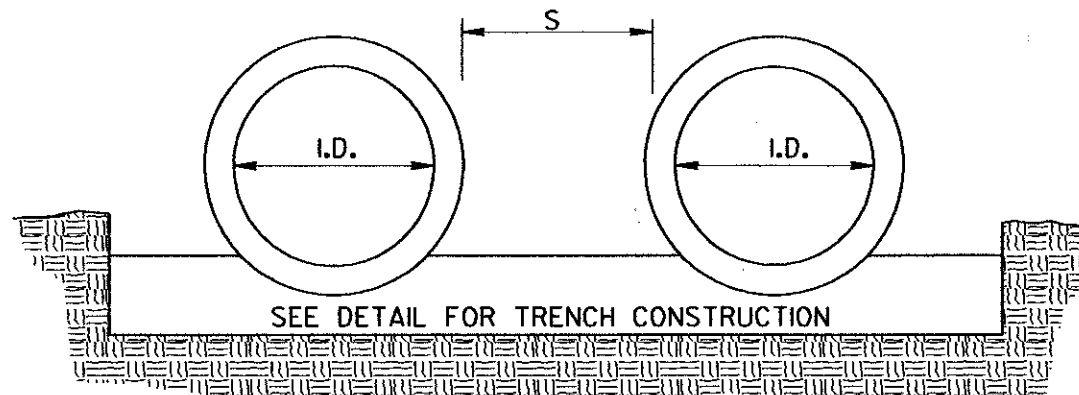
### LONGITUDINAL SECTION OF IMPERFECT TRENCH BACKFILL AND BACKFILL METHODS



### IMPERFECT BACKFILL

IMPERFECT BACKFILL WILL BE USED WITH CONCRETE PIPE IF FILL HEIGHT AND PIPE DIAMETER IN TABLE NO. 1 FALLS ON THE RIGHT SIDE OF THE HEAVY LINE, CROSS HATCHED AREA SHOWS LIMITS OF STRUCTURE EXCAVATION AND IMPERFECT BACKFILL MATERIAL TYPE III IN THIS VIEW. SEE DETAILS BELOW CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL FOR LIMITS OF IMPERFECT BACKFILL AS MEASURED OVER THE PIPE LENGTHWISE. MEASUREMENT AND PAYMENT WILL BE CONFINED TO THESE LIMITS.

### MULTIPLE PIPE CULVERT SPACING

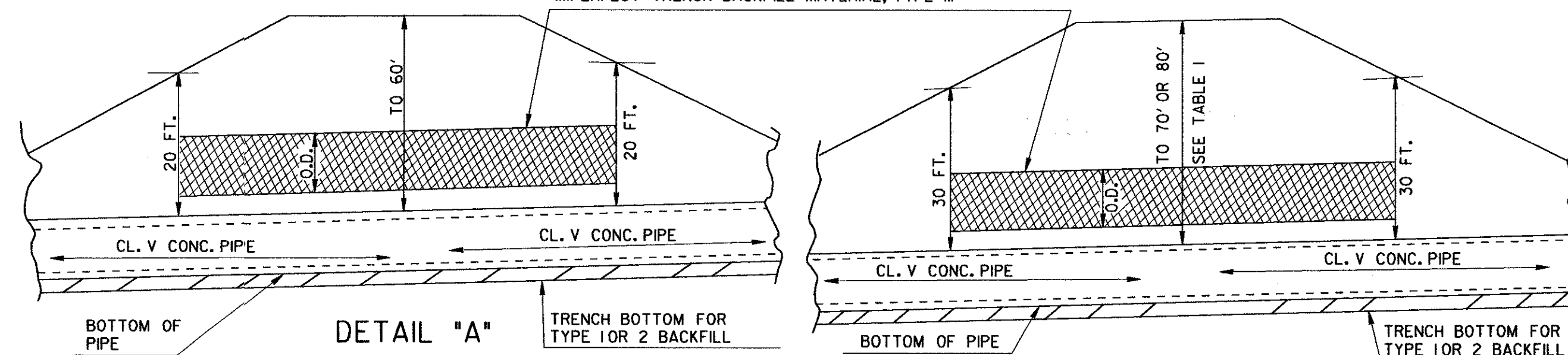


S=ONE INSIDE DIAMETER OF PIPE, OR 3 FEET, WHICHEVER IS SMALLER. FOR PIPE ARCH CULVERTS, SUBSTITUTE SPAN FOR INSIDE DIAMETER.

NOTE: FOR MULTIPLE LINES OF C.M. PIPE WITH METAL FLARED END SECTIONS, S MAY BE INCREASED ENOUGH TO AVOID OVERLAP OF END SECTION WINGTIPS. LOCATION OF METAL END SECTION SHOULD BE DETERMINED BEFORE PLACEMENT OF PIPE.

### CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL

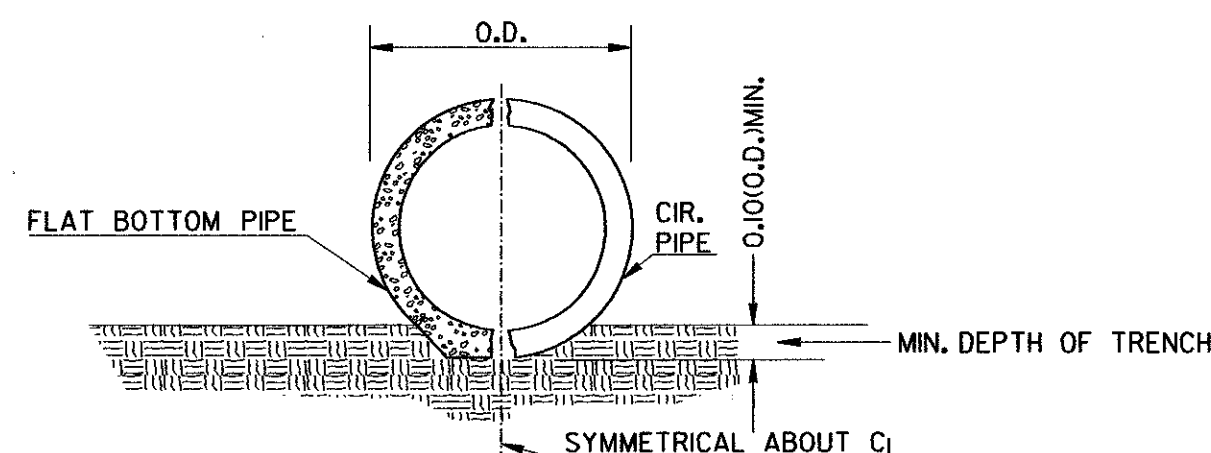
CROSS HATCHED AREAS SHOW LIMITS OF CONSTRUCTION & MEASUREMENT FOR STRUCTURE EXCAVATION & IMPERFECT TRENCH BACKFILL MATERIAL, TYPE III



(FOR CONCRETE PIPE DIAMETERS 78" & 84", WITH FILL HEIGHTS OVER 20 FT.)

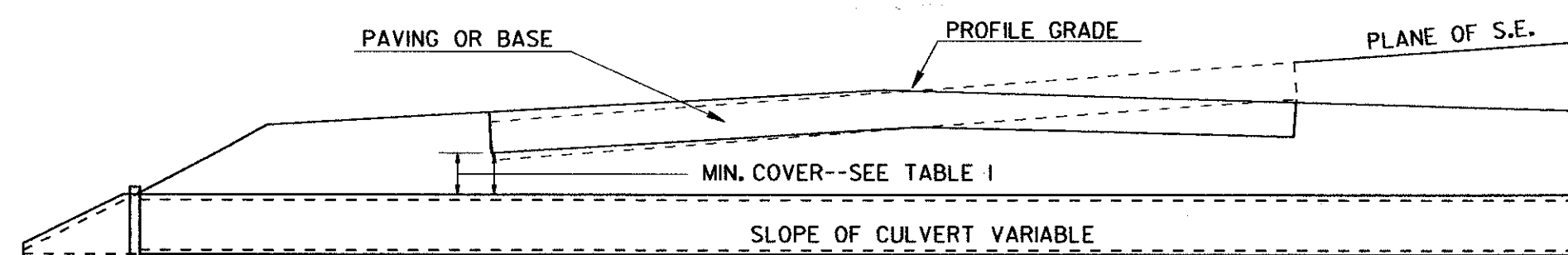
(FOR CONCRETE PIPE DIAMETERS 72" AND LESS WITH FILL HEIGHTS OVER 30 FT.)

### TRENCH CONSTRUCTION FOR SIDE DRAIN



NOTE: THE PIPE SHALL BE BEDDED TO LINE AND GRADE IN A FIRM FOUNDATION SHAPED TO FIT THE LOWER PART OF THE PIPE EXTERIOR. WHERE ROCK EXISTS, EXCAVATE AND BACKFILL WITH COMPRESSIBLE MATERIAL (UNCLASSIFIED EXCAVATION) A MINIMUM OF 6" BELOW THE PIPE.

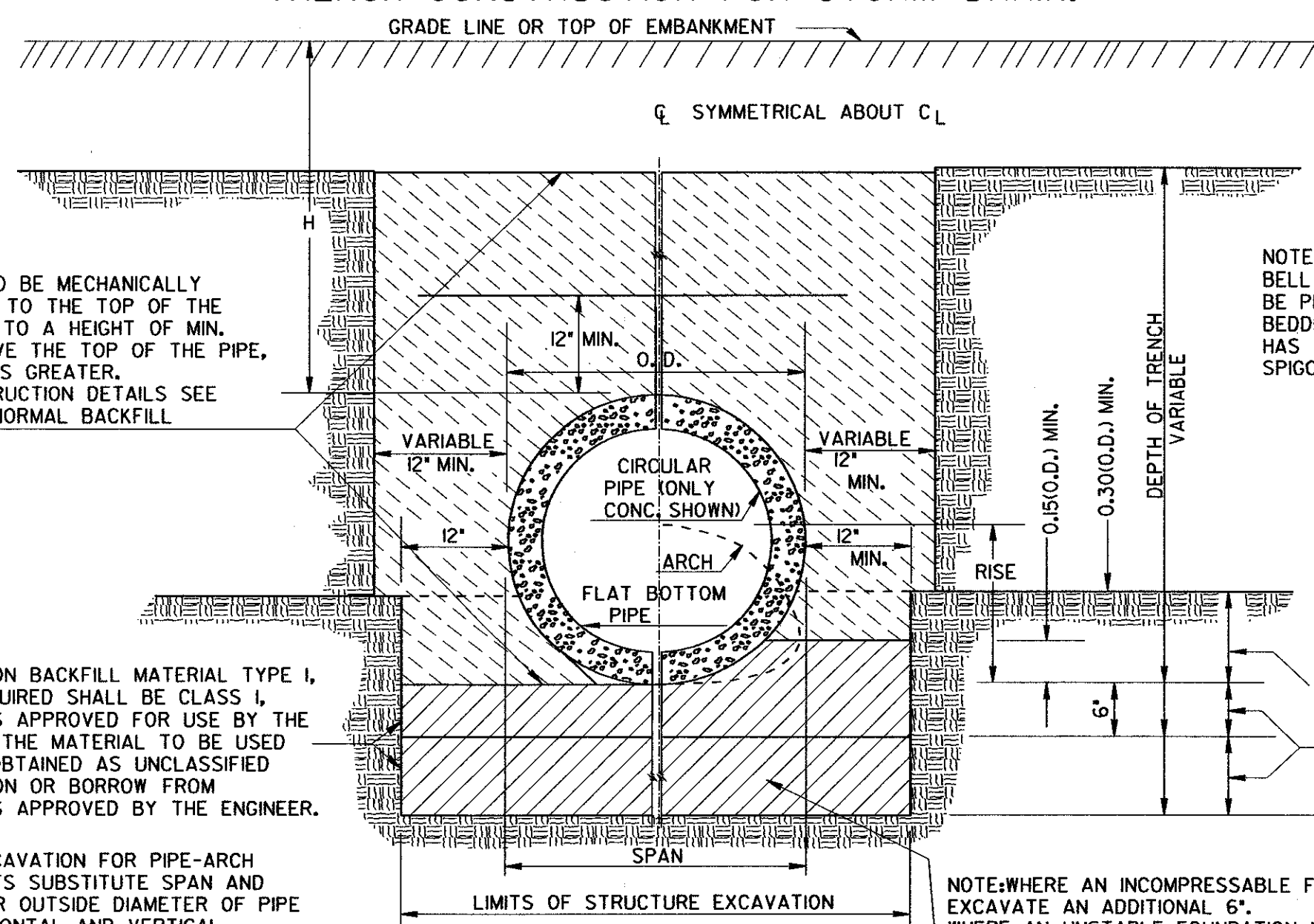
### DETAIL SHOWING MINIMUM COVER FOR PIPE CULVERTS



NOTE:

- FOR FILL HEIGHT TABLES SEE SHEET 2 OF 3 AND SHEET 3 OF 3.
- ONLY ONE CLASS OR THICKNESS OF PIPE WILL BE SPECIFIED FOR EACH INDIVIDUAL LOCATION. THE CLASS OR THICKNESS WILL BE DETERMINED BY THE MAXIMUM HEIGHT OF FILL.

### TRENCH CONSTRUCTION FOR STORM DRAIN.



BACKFILL TO BE MECHANICALLY COMPACTED TO THE TOP OF THE TRENCH OR TO A HEIGHT OF MIN. COVER ABOVE THE TOP OF THE PIPE, WHICHEVER IS GREATER. FOR CONSTRUCTION DETAILS SEE NOTE FOR NORMAL BACKFILL.

NOTE: BELL HOLES SHALL BE PROVIDED IN BEDDING IF PIPE HAS BELL AND SPIGOT JOINTS.

NOTE: TRENCH CONSTRUCTION IS REQUIRED FOR BOTH NORMAL OR IMPERFECT BACKFILL. ALL PIPES WITH BELL & SPIGOT JOINTS SHALL HAVE BELL HOLES IN BEDDING.

FOUNDATION BACKFILL MATERIAL TYPE I, WHEN REQUIRED SHALL BE CLASS I, OR II SOILS APPROVED FOR USE BY THE ENGINEER. THE MATERIAL TO BE USED WILL BE OBTAINED AS UNCLASSIFIED EXCAVATION OR BORROW FROM LOCATIONS APPROVED BY THE ENGINEER.

FOR EXCAVATION FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN AND RISE FOR OUTSIDE DIAMETER OF PIPE IN HORIZONTAL AND VERTICAL DIMENSIONS SPECIFIED IN DETAIL.

NOTE: PIPE SHALL BE BEDDED IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

NOTE: WHERE AN INCOMPRESSIBLE FOUNDATION EXISTS, EXCAVATE AN ADDITIONAL 6". WHERE AN UNSTABLE FOUNDATION MATERIAL IS ENCOUNTERED, EXCAVATE AN ADDITIONAL DEPTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER



DATE		DEPARTMENT OF TRANSPORTATION	
		STATE OF GEORGIA	
REVISION		STANDARD	
		CONCRETE & METAL PIPE CULVERTS	
		SHEET 1 OF 3	
		(TRENCH CONSTRUCTION, BEDDING, BACKFILLING)	
NO SCALE		REV. & REDR.: SEPT., 2001	
DES.	(SUBMITTED)	NUMBER	
DRW.	(APPROVED)	1030D	
TRA.			
CHK.			

TABLE NO. 1 ROUND PIPE - CONCRETE - CORRUGATED STEEL - CORRUGATED ALUMINUM  
MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM

Main table with columns: PIPE DIAMETER (INCHES), TYPE, MINIMUM COVER (INCHES), and HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE (1-10 to 70+). Rows include diameters from 12 to 120 inches and types like CONCRETE, STEEL, and ALUMINUM.

TABLE NO. 3 - INFORMATION ONLY  
COR. METAL THICKNESS EQUIVALENT GAGE

FOR CONDITIONS TO THE RIGHT OF THE HEAVY LINE, CLASS V CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO DETAIL "A" OR "B" ON SHEET 1 OF 3.

STEEL 1 OR ALUM 1 DENOTES CORRUGATION PROFILE 2 2/3" X 1/2"

STEEL 2 OR ALUM 2 DENOTES CORRUGATION PROFILE 3" X 1" (OR 5" X 1" FOR STEEL PIPE ONLY)

ALL STEEL AND ALUMINUM PIPE SHALL BE LOCK-SEAM OR WELDED-SEAM (HELICAL) CONSTRUCTION.

MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

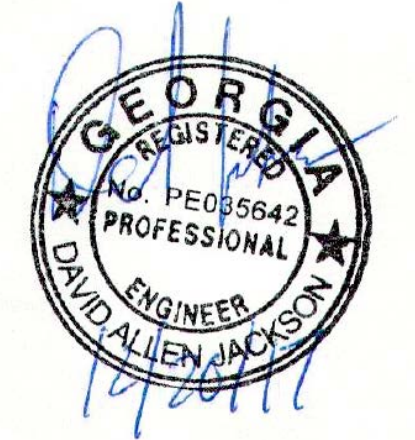
TRENCH CONSTRUCTION IS REQUIRED FOR CONDITIONS ON BOTH SIDES OF HEAVY LINE. SEE SHEET 1 OF 3.

FOR CONDITIONS TO RIGHT OF HEAVY LINE, CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO SPECIFICATIONS AND THIS STANDARD.

TABLE VALUES FOR ALUMINUM CORRUGATED PIPE (OR ALUMINUM SPIRAL RIB PIPE) ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, fy=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (fy=20,000 PSI), THE TABLE NO. 1 ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:

- A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 INCHES BECOMES 13.8 INCHES)
- B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FEET BECOMES 29.7-34.0 FEET)

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA STANDARD CONCRETE & METAL PIPE CULVERTS SHEET 2 OF 3 (FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE) NO SCALE OCTOBER 21, 1998



STATE PROJ  
GA. \_\_\_\_\_

GEN. REV. NOTES 9-26-01  
ADDED SEAM CONST. NOTE 3-9-99  
DATE

DES. (SUBMITTED) James A. Kaul  
TRA. (APPROVED) David L. Jackson  
CHK. CHIEF ENGINEER

NUMBER 1030D

TABLE NO. 1R ROUND PIPE - SPIRAL RIB STEEL - SPIRAL RIB ALUMINUM  
MINIMUM THICKNESS OF STEEL AND ALUMINUM  
HEIGHT OF FILL (FEET) ABOVE TOP OF PIPE

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL (FEET) ABOVE TOP OF PIPE												PIPE DIAMETER (INCHES)			
			1 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90				
12																		12
15																		15
18	STEEL R ALUM R	12	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .075	.064 .075	.064 .075	.079	.079	.079	18
24	STEEL R ALUM R	12	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .075	.064 .075	.064 .075	.064 .075	.064 .075	.064 .075	.064 .075	.079 .109	.079 .109	.079 .109	24
30	STEEL R ALUM R	12 15	.064 .060	.064 .060	.064 .060	.064 .060	.064 .075	.064 .075	.064 .075	.064 .075	.064 .075	.064 .105	.064 .105	.064 .105	.079 .109	.079 .109	.079 .109	30
36	STEEL R ALUM R	12 18	.064 .060	.064 .060	.064 .075	.064 .075	.064 .075	.064 .105	.064 .105	.064 .105	.064 .105	.079 .105	.079 .105	.079 .105	.079 .109	.079 .135	.079 .135	36
42	STEEL R ALUM R	12 21	.064 .075	.064 .075	.064 .075	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.079 .105	.079 .105	.079 .105	.079 .109	.079 .135	.079 .135	42
48	STEEL R ALUM R	12 24	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.079 .109	.079 .135	.079 .135	48
54	STEEL R ALUM R	15 24	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.064 .105	.079 .109	.079 .135	.079 .135	54
60	STEEL R ALUM R	15 24	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .105	.079 .109	.079 .135	.079 .135	60
66	STEEL R ALUM R	18 24	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .135	.079 .109	.079 .135	.079 .135	66
72	STEEL R ALUM R	18 27	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109 .109	.109 .135	.109 .135	72
78	STEEL R	21	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	78
84	STEEL R	21	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	.109	84
90																		90
96																		96
102																		102
108																		108
114																		114
120																		120

R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7-1/2"

TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH,  $f_y=24,000$  PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 ( $f_y=20,000$  PSI), ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:  
A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 IN. BECOMES 13.8 IN.)  
B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FT. BECOMES 29.7-34.0 FT.)

MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.  
TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

REVISION		DATE	
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA <b>STANDARD</b> CONCRETE & METAL PIPE CULVERTS SHEET 3 OF 3 (FILL HEIGHTS FOR SPIRAL RIB METAL PIPE & FOR PIPE ARCH)			
NO SCALE		SEPT., 2001	
BY	DESIGNED	(SUBMITTED)	NUMBER
	TRACED	STATE ROAD	10300
	CHECKED	(APPROVED)	
	REVISED	CHIEF ENGINEER	

TABLE NO. 2 (PIPE-ARCH)

TABLE SHOWING MINIMUM THICKNESS IN INCHES OF CORRUGATED STEEL AND CORRUGATED ALUMINUM PIPE-ARCH AND MAXIMUM HEIGHTS OF FILL IN FEET ABOVE THE TOP OF THE PIPE-ARCH.

DIAMETER OF PIPE OF EQUAL PERIPHERY, INCH	NOM.-MIN. SPAN INCH	NOM.-MIN. INCH	MIN. THICKNESS (INCHES)		COR. ALUMINUM	MIN. COVER (INCHES)	MAX.-HT. FILL (FEET)
			COR. STEEL	COR. ALUMINUM			
15	17	13	.064	.060	.060	18	13
18	21	15	.064	.060	.060	18	15
21	24	18	.064	.060	.060	18	12
24	28	20	.064	.060	.060	18	14
30	35	24	.064	.075	.075	18	13
36	42	29	.064	.075	.075	18	9
40	49	31	.079	.105	.105	18	7
42	46	36	.079	.105	.105	18	12
48	57	38	.109	.135	.135	18	7
54	64	43	.109	.135	.135	18	12
60	71	47	.138	.164	.164	18	7
66	77	51	.168	.168	.168	18	7
72	83	55	.168	.168	.168	18	15
78	87	59	.168	.168	.168	18	8
84	95	67	.109	.109	.109	18	14
90	103	71	.109	.109	.109	18	12

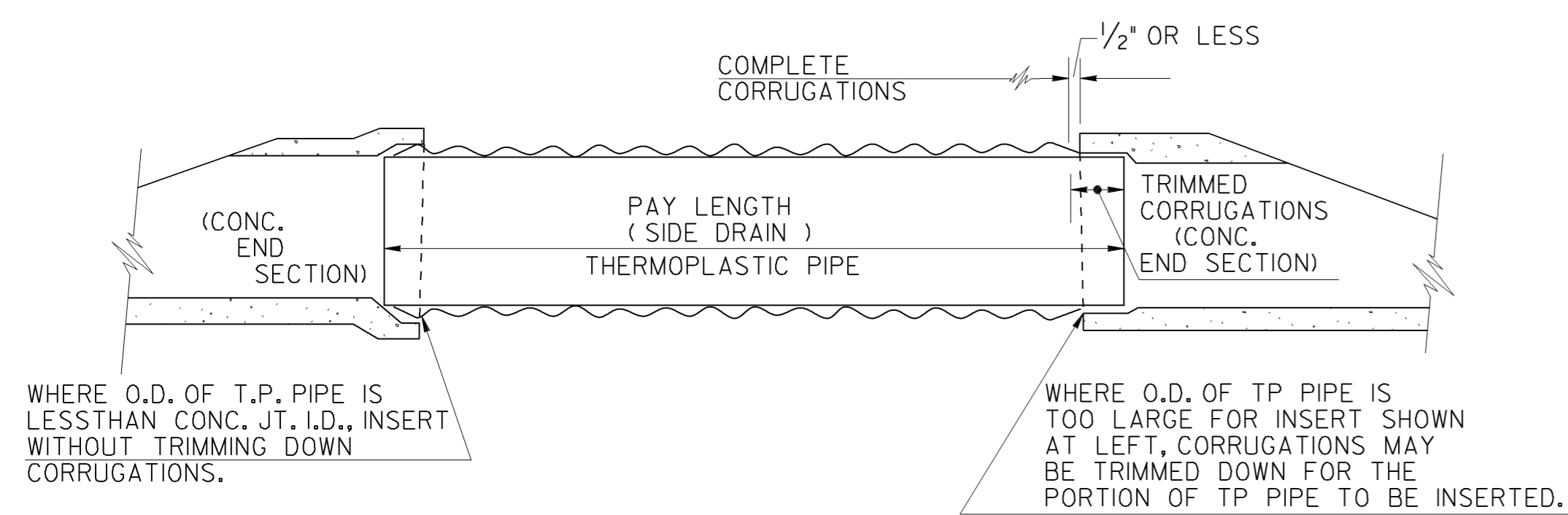


NOTE FOR TABLE NO. 2: COMBINATIONS FOR PIPE-ARCHES HAVING EQUAL PERIPHERY TO THAT SHOWN, MAY BE SUBSTITUTED IF LISTED IN AASHTO SPECIFICATION.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



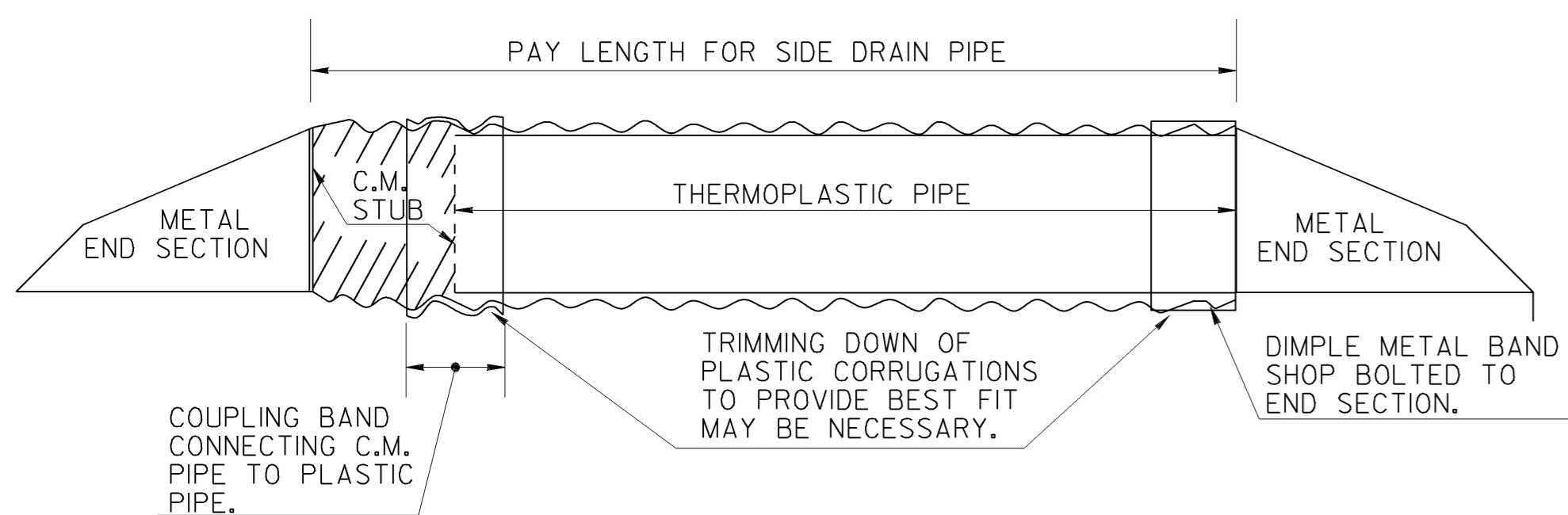
CONCRETE TO THERMOPLASTIC SIDE DRAIN OR CROSS DRAIN CONNECTION ALTERNATES



WHERE O.D. OF T.P. PIPE IS LESS THAN CONC. JT. I.D., INSERT WITHOUT TRIMMING DOWN CORRUGATIONS.

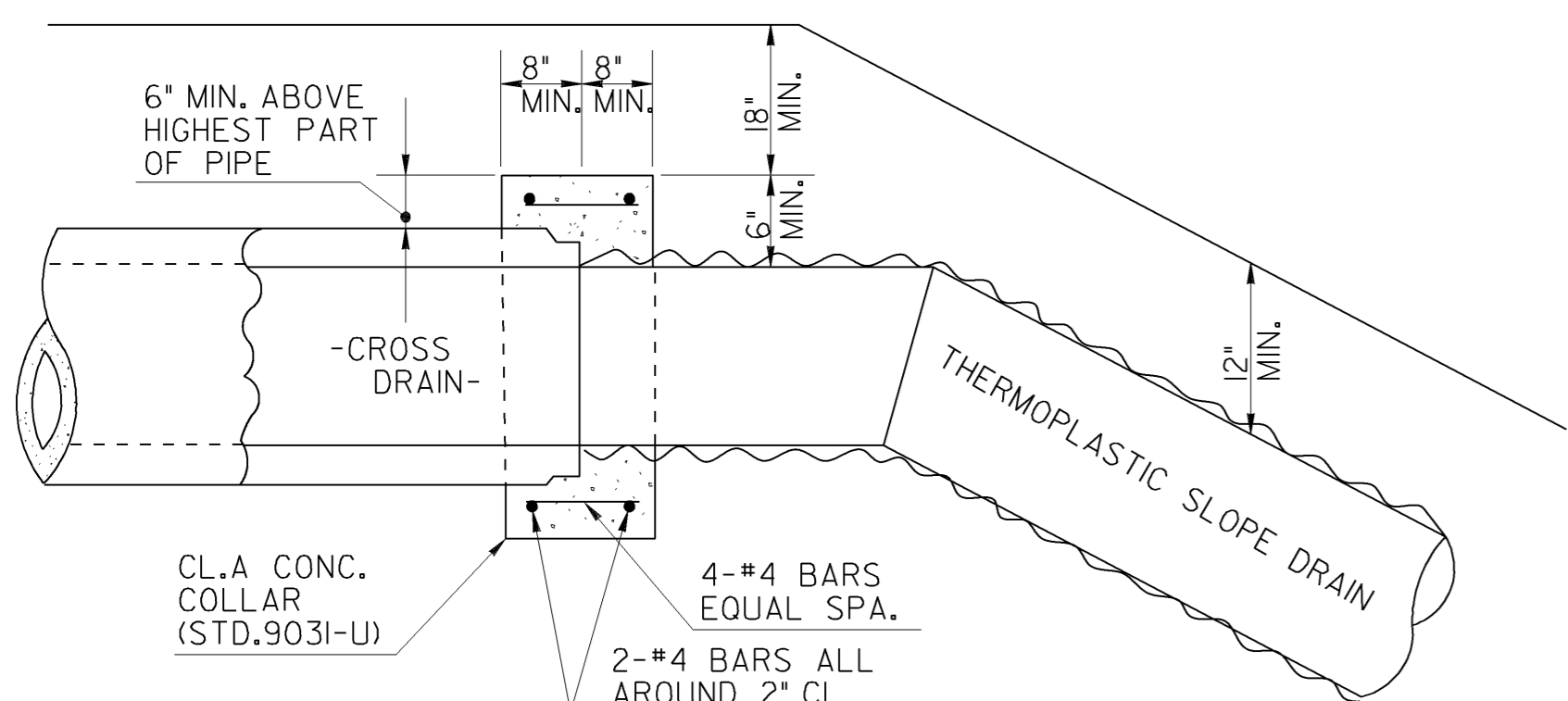
WHERE O.D. OF TP PIPE IS TOO LARGE FOR INSERT SHOWN AT LEFT, CORRUGATIONS MAY BE TRIMMED DOWN FOR THE PORTION OF TP PIPE TO BE INSERTED.

METAL TO THERMOPLASTIC SIDE DRAIN CONNECTION ALTERNATES (SEE GENERAL NOTE NO. 5)



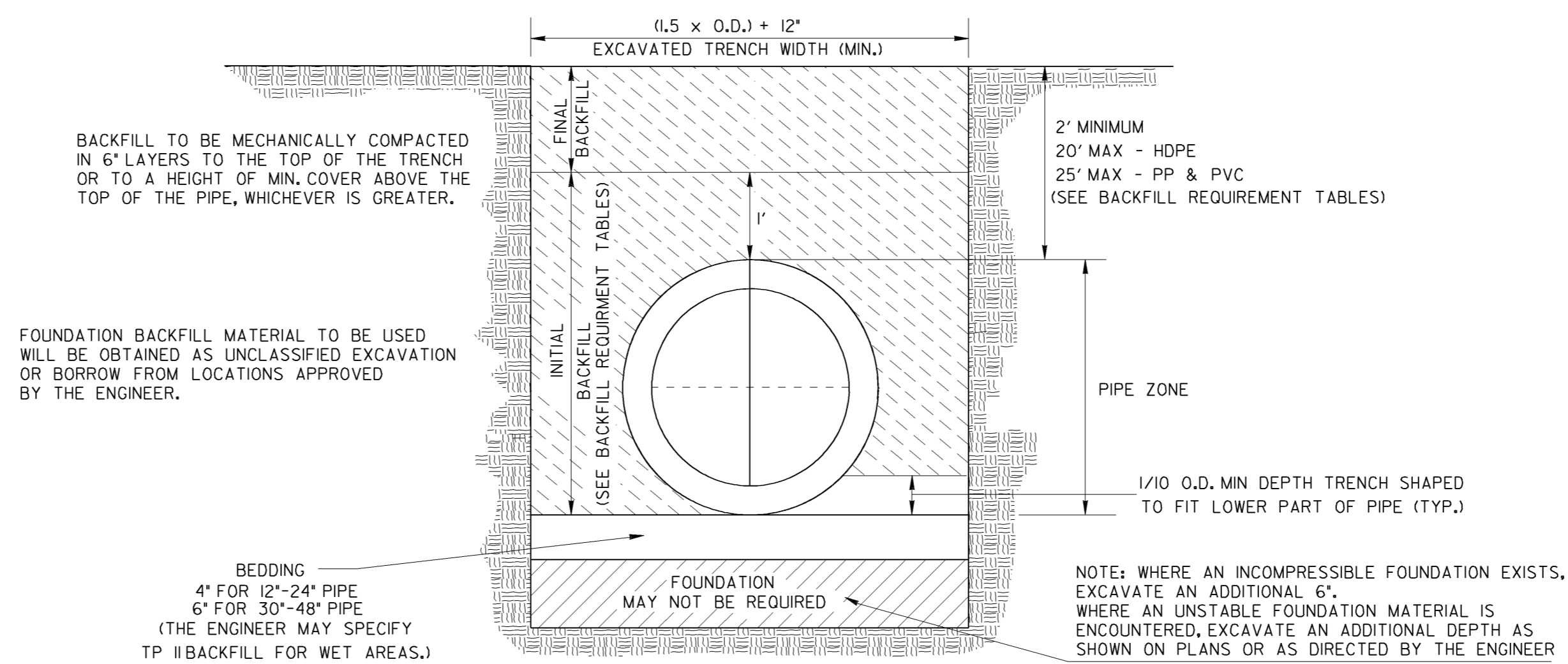
NOTE: FOR PLASTIC SIDE DRAIN CONNECTIONS TO SAFETY END SECTIONS, SEE THE SMOOTH TAPERED SLEEVE CONNECTOR DETAILS (SEE GA STANDARD I122 FOR SAFETY SLOPE END SECTIONS FOR SIDE DRAIN PIPES).

CROSS DRAIN TO THERMOPLASTIC SLOPE DRAIN CONNECTION



NOTES: PAYMENT FOR LIN. FT. OF PIPE SHALL INCLUDE THE CONCRETE COLLAR. CONCRETE COLLARS ARE ALSO PERMITTED FOR SIDE DRAIN CONNECTIONS. CONNECTIONS SHOWN ABOVE FOR SIDE DRAIN ARE NOT PERMITTED FOR SLOPE DRAIN CONNECTIONS.

THERMOPLASTIC PIPE TRENCH INSTALLATIONS



BACKFILL TO BE MECHANICALLY COMPACTED IN 6\"/>

FOUNDATION BACKFILL MATERIAL TO BE USED WILL BE OBTAINED AS UNCLASSIFIED EXCAVATION OR BORROW FROM LOCATIONS APPROVED BY THE ENGINEER.

BEDDING 4\"/>

NOTE: WHERE AN INCOMPRESSIBLE FOUNDATION EXISTS, EXCAVATE AN ADDITIONAL 6\"/>

MULTIPLE PIPE SPACING: A CLEAR SPACE EQUAL TO TWO TIMES THE INSIDE DIAMETER, OR 6 FT., WHICHEVER IS LESSER SHALL BE REQUIRED BETWEEN MULTIPLE LINES OF THERMOPLASTIC PIPE.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

ALLOWABLE PIPE SIZES

HIGH DENSITY POLYETHYLENE (HDPE) AASHTO M 294	POLYPROPYLENE (PP) AASHTO M 330	PROFILE WALL POLYVINYL CHLORIDE (PVC) AASHTO M 304	CORRUGATED SMOOTH INTERIOR POLYVINYL CHLORIDE (PVC) ASTM F 949
NOMINAL SIZE (IN.)	NOMINAL SIZE (IN.)	NOMINAL SIZE (IN.)	NOMINAL SIZE (IN.)
12	12	12	12
15	15	15	15
18	18	18	18
24	24	21	21
30	30	24	24
36	36	30	30
42	42	36	36
48	48	42	36
		48	

BACKFILL REQUIREMENT TABLES

STORM DRAIN INSTALLATIONS			
PIPE TYPE	MAX. FILL HEIGHT (FT)	INITIAL BACKFILL TYPE	FOUNDATION BACKFILL TYPE
HDPE	20	STRUCTURAL	CLASS II B2 OR BETTER
PVC	25	STRUCTURAL	CLASS II B3 OR BETTER
PP	25	STRUCTURAL	CLASS II B3 OR BETTER

SIDE DRAIN (DRIVEWAY) INSTALLATIONS (FILL HEIGHTS UP TO 10-FT)			
PIPE TYPE	MAX. FILL HEIGHT (FT)	INITIAL BACKFILL TYPE	FOUNDATION BACKFILL TYPE
HDPE	10	CLASS II B2 OR BETTER	CLASS II B2 OR BETTER
PVC	10	CLASS II B3 OR BETTER	CLASS II B3 OR BETTER
PP	10	CLASS II B3 OR BETTER	CLASS II B3 OR BETTER

SIDE DRAIN (DRIVEWAY) INSTALLATIONS (FILL HEIGHTS ABOVE 10-FT)			
PIPE TYPE	MAX. FILL HEIGHT (FT)	INITIAL BACKFILL TYPE	FOUNDATION BACKFILL TYPE
HDPE	20	STRUCTURAL	CLASS II B2 OR BETTER
PVC	25	STRUCTURAL	CLASS II B3 OR BETTER
PP	25	STRUCTURAL	CLASS II B3 OR BETTER

INITIAL BACKFILL & BEDDING QUANTITIES		
NOMINAL SIZE (IN.)	INITIAL BACKFILL (FT <sup>3</sup> /LF)	BEDDING (FT <sup>3</sup> /LF)
12	4.22	0.83
15	5.24	0.96
18	6.36	1.08
24	8.86	1.33
30	11.72	2.38
36	14.94	2.75
42	18.51	3.13
48	22.44	3.50

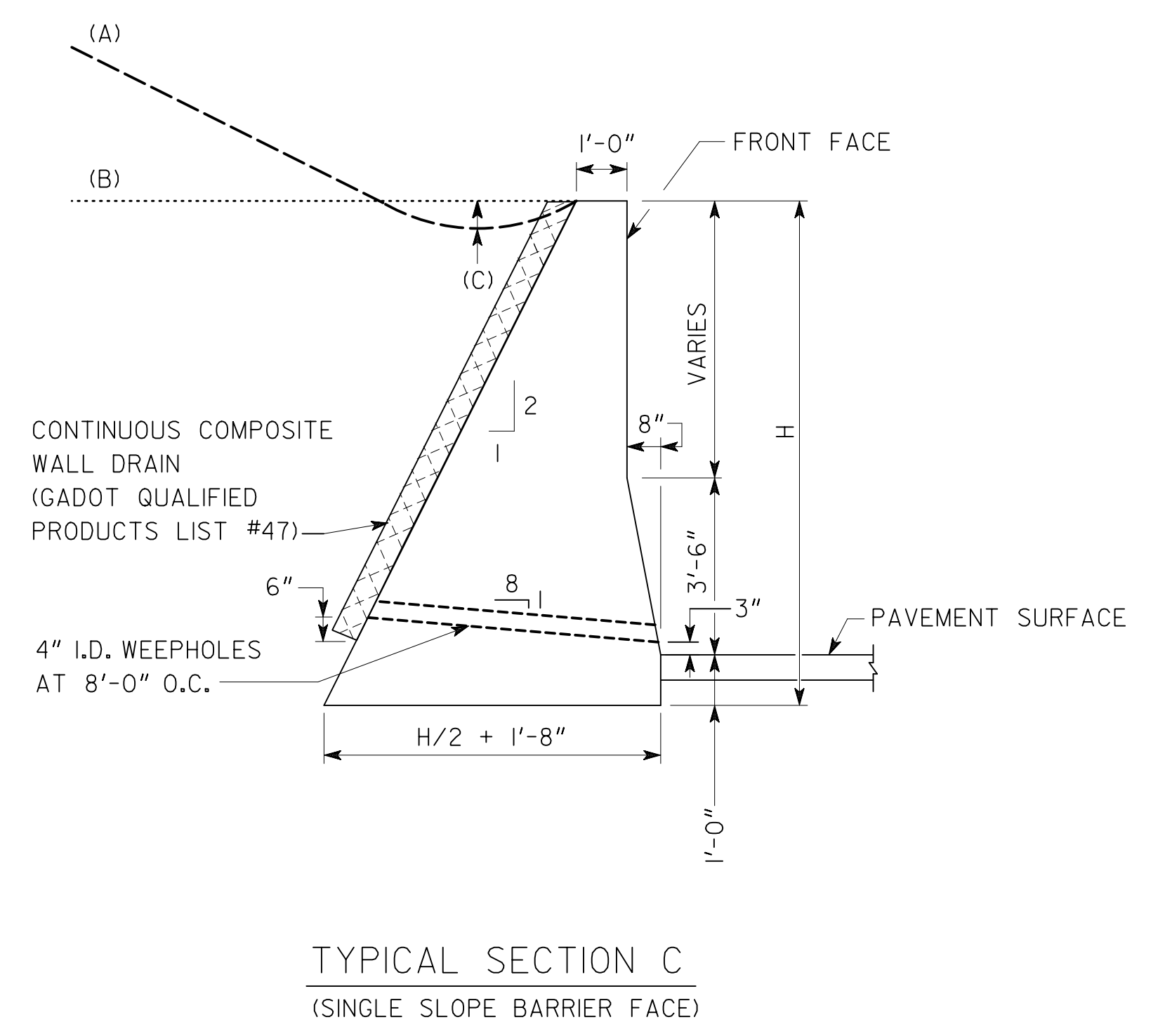
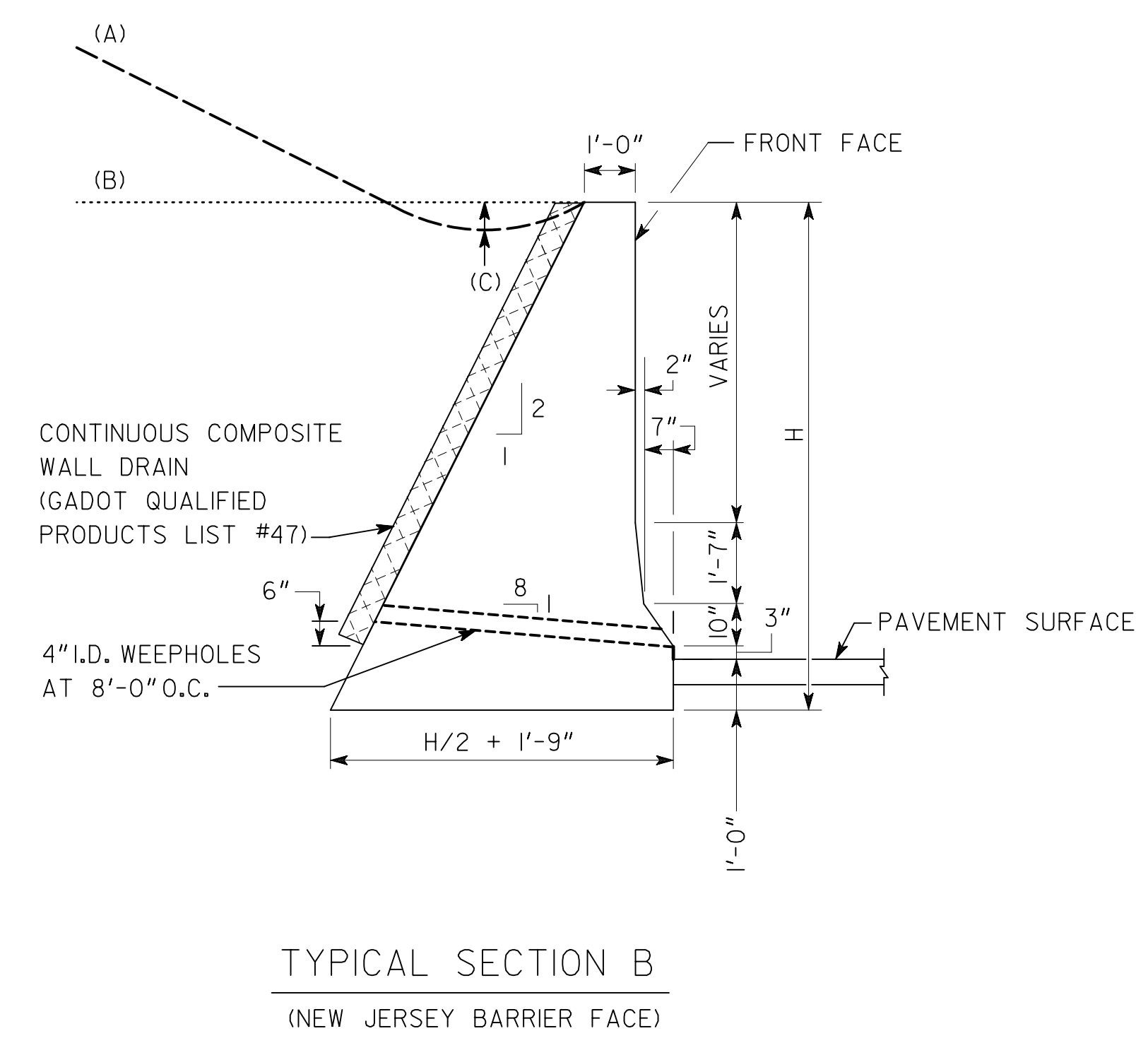
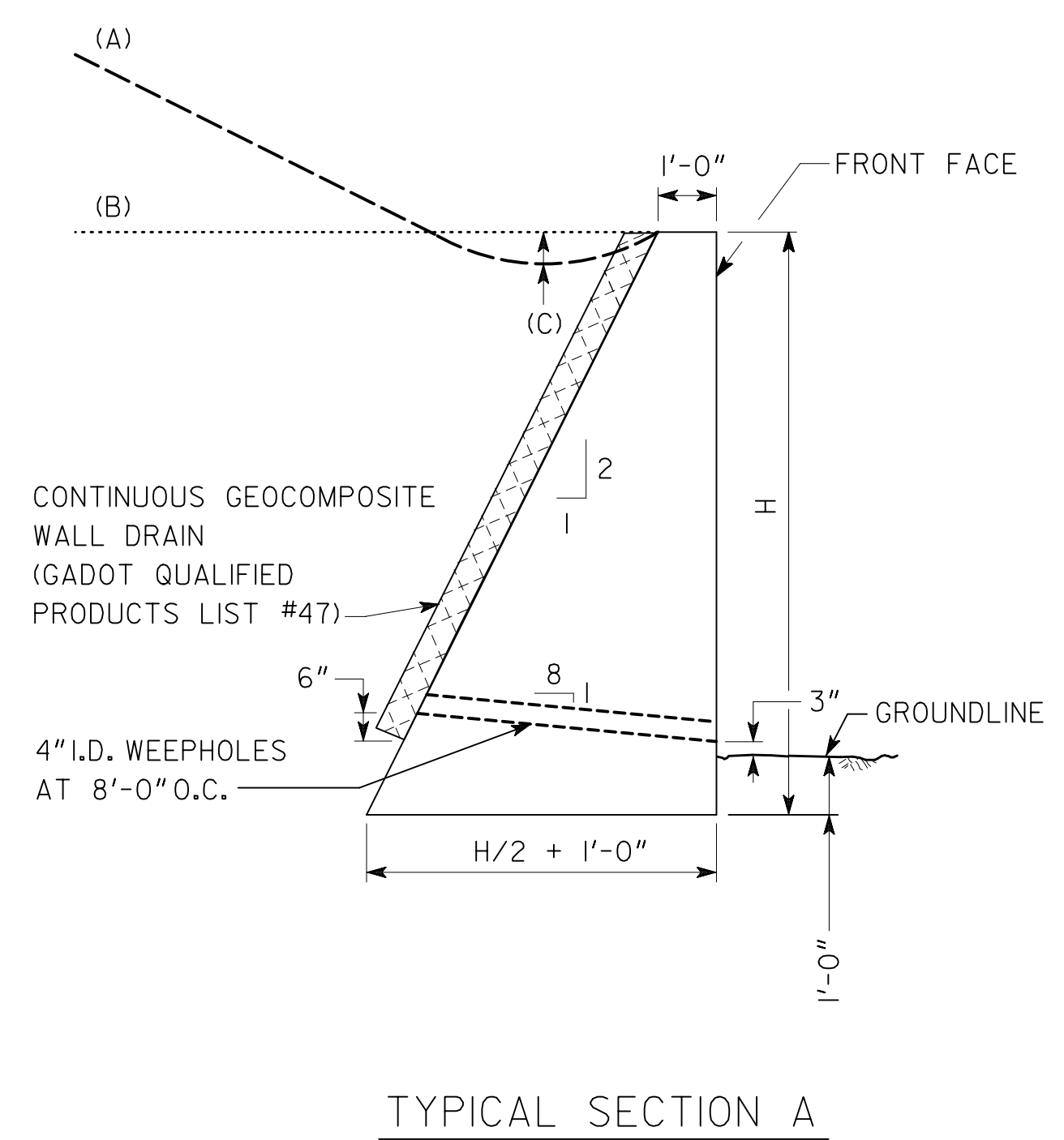
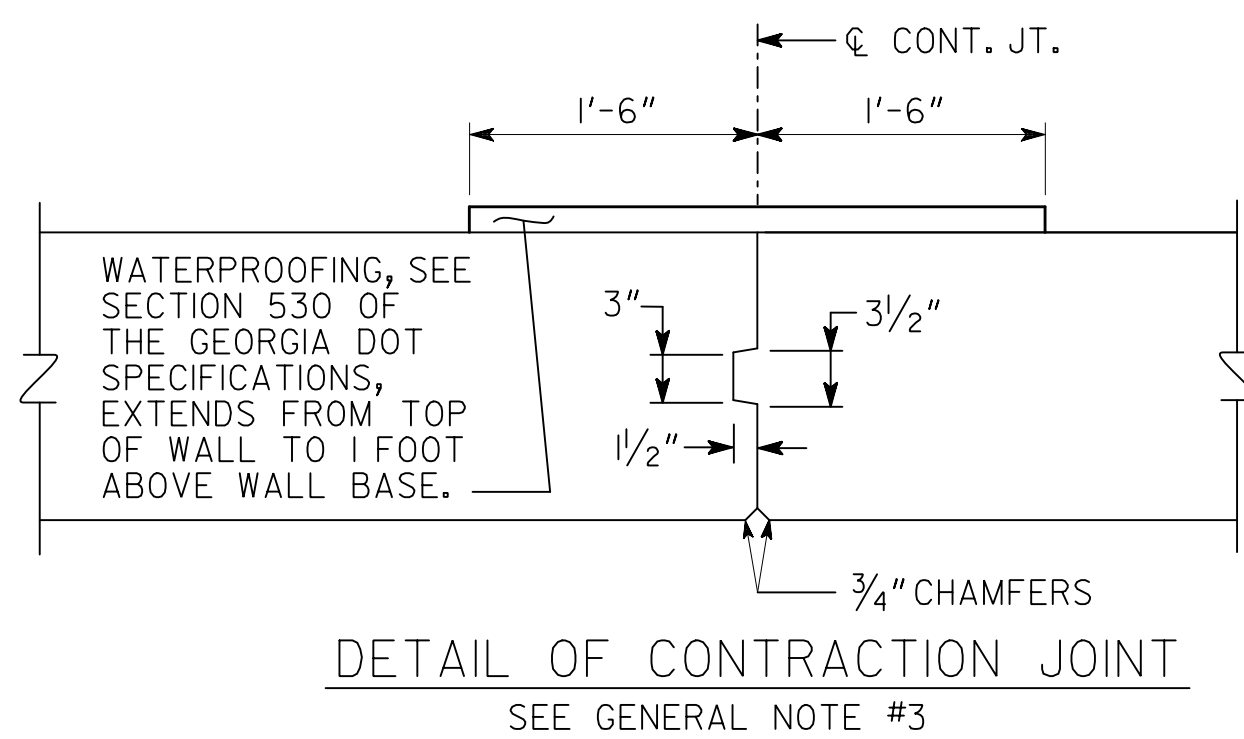
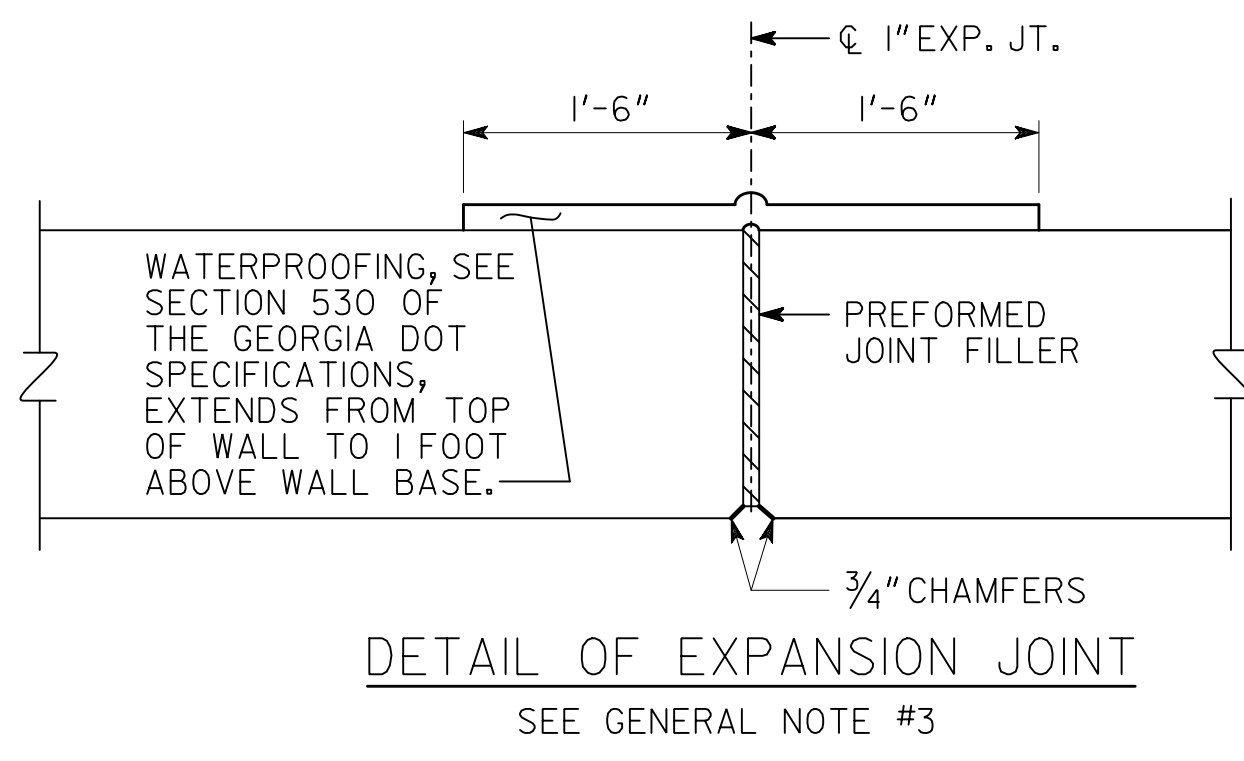
NOTE: BACKFILL AND BEDDING QUANTITIES ARE BASED ON TYPICAL I.D. OF PIPES

GENERAL NOTES:

- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
- THE MINIMUM COVER SHALL BE 24\"/>



DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION		STANDARD THERMOPLASTIC PIPE	
NO SCALE		REVISED SEPTEMBER, 2016	
BY	DESIGNED _____ TRACED _____ DRAWN B.J.O. CHECKED W.D.I.	(SUBMITTED) _____ STATE DESIGN POLICY ENGINEER (APPROVED) <i>Marion B. Pucko</i> CHIEF ENGINEER	NUMBER 1030P



(A) - SLOPED BACKFILL WITH DITCH  
(B) - FLAT BACKFILL  
(C) - DITCH DEPTH, 6" - 12" TYPICAL  
SEE PLANS FOR DESIGN

BACKSLOPE	MAXIMUM "H"*		
	TYP. SECTION A	TYP. SECTION B **	TYP. SECTION C **
FLAT	8'-6"	10'-0"	10'-0"
SLOPE TO 4:1	6'-3"	7'-0"	7'-0"
SLOPE TO 2:1	4'-6"	4'-9"	4'-9"

\* GREATER "H" PERMITTED IF APPROVED BY BRIDGE DESIGN.  
\*\* TYPICAL SECTION B SHALL HAVE A MINIMUM H OF 3'-8"  
TYPICAL SECTION C SHALL HAVE A MINIMUM H OF 4'-6"

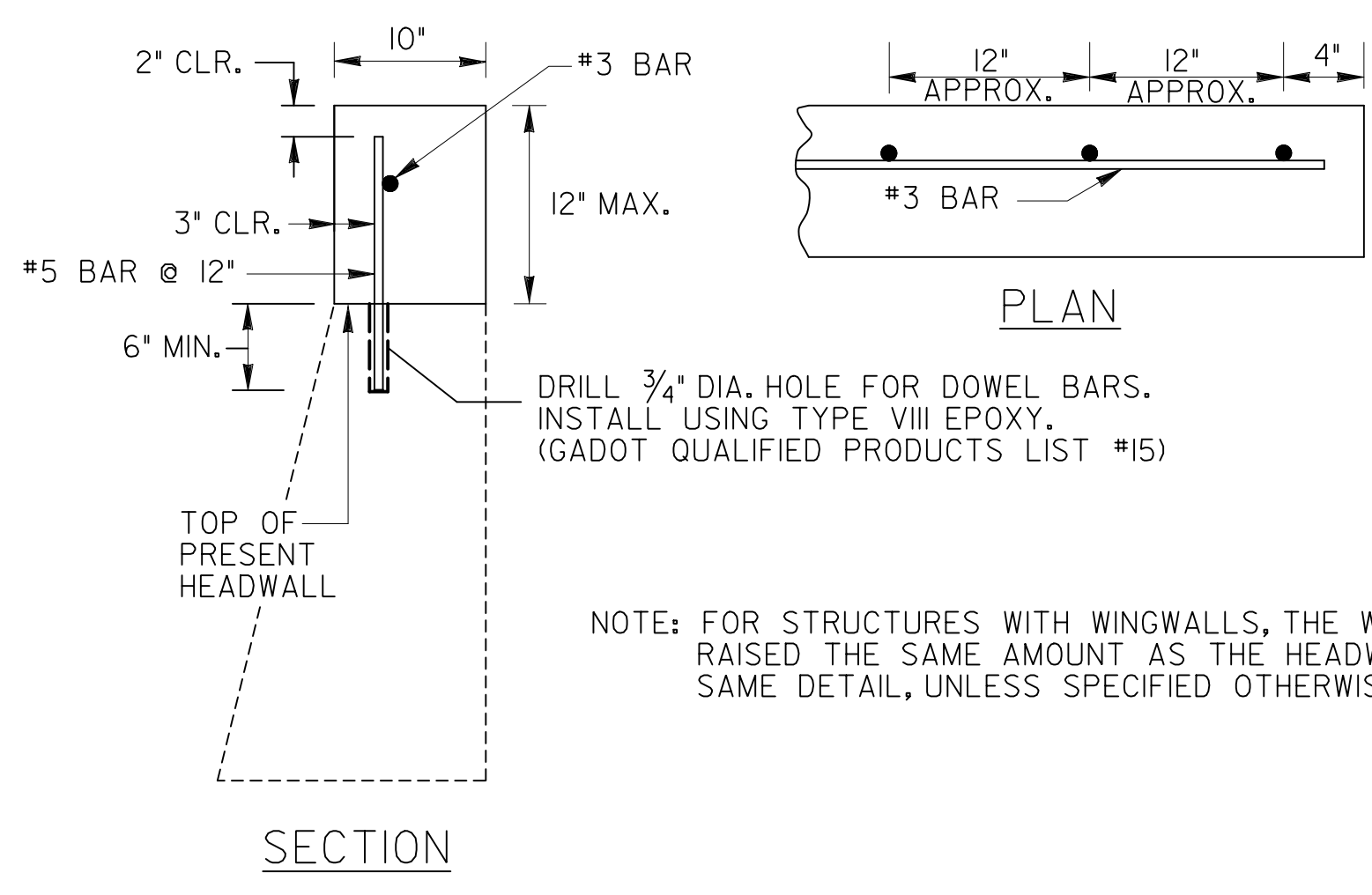
GENERAL NOTES:

- GRAVITY WALLS SHALL NOT BE USED WHEN HORIZONTAL DISTANCE FROM EDGE OF TRAVEL WAY TO FRONT FACE OF WALL IS LESS THAN (H + 1'0").
- GRAVITY WALLS DESIGNED FOR THE FOLLOWING SOIL PROPERTIES:

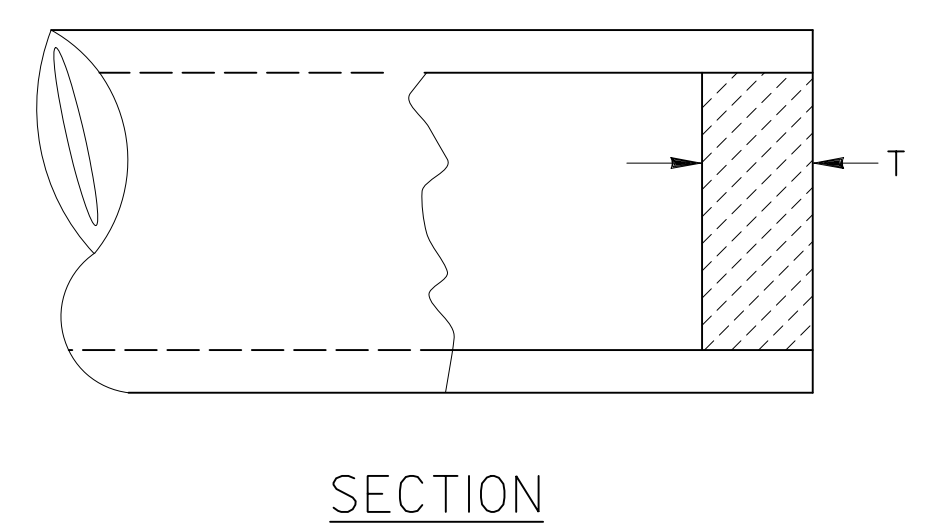
	FOUNDATION	BACKFILL
COHESION =	0 PSF	0 PSF
$\theta$ =	28°	28°
UNIT WEIGHT =	120 PCF	120 PCF
- EXPANSION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING OF 90'-0" AND EXTEND THROUGH THE WALL. CONTRACTION JOINTS SHALL BE LOCATED AT A MAXIMUM SPACING OF 30'-0".
- GRAVITY WALLS WITH A VERTICAL FRONT FACE SHALL BE PAID FOR AS "CLASS B CONCRETE OR MORTAR RUBBLE MASONRY, RETAINING WALL". GRAVITY WALLS WITH A BARRIER FRONT FACE SHALL BE PAID FOR AS "CLASS A CONCRETE, RETAINING WALL". WATERPROOFING, JOINT FILLER, WALL DRAIN, AND OTHER INCIDENTAL ITEMS SHALL BE INCLUDED IN OVERALL BID SUBMITTED.

- A CONCRETE DITCH DETAIL FOR THE TOP OF THE WALL SHOULD BE INCLUDED IN THE ROADWAY PLANS WHEN WATER IS FLOWING TOWARDS THE BACK OF THE WALL. SEE CONSTRUCTION DETAIL D-49.
- FINISH EXPOSED SURFACES OF THE WALL WITH A TYPE III FINISH.
- APPLY GRAFFITI PROOF COATING AS PER SECTIONS 500 AND 838 OF THE GEORGIA DOT SPECIFICATIONS.
- ALL NECESSARY FENCE AND HANDRAIL SHOULD BE INCLUDED IN THE ROADWAY PLANS WHEN APPROPRIATE.
- GRAVITY WALL TYPICAL SECTIONS A, B, AND C HAVE BEEN DESIGNED PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION, 2014.

DETAIL FOR RAISING HEADWALL

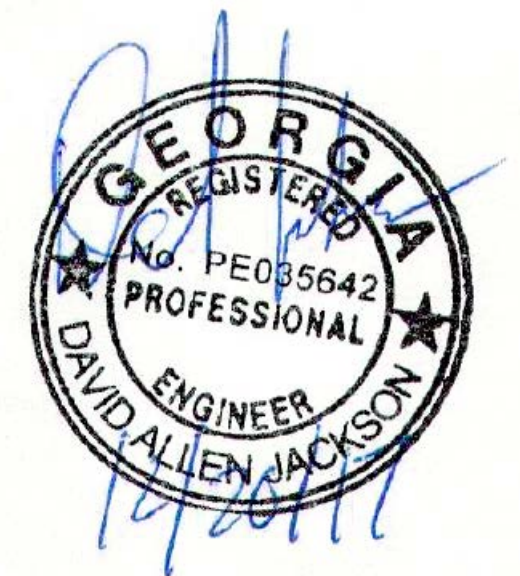


TYPICAL PIPE PLUG

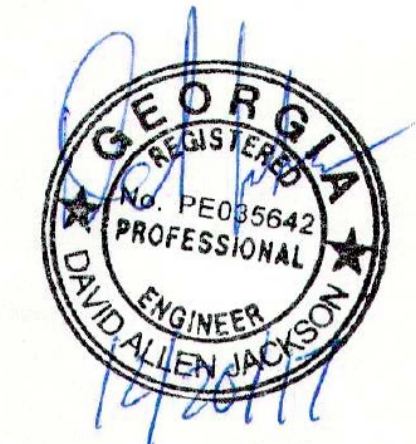


D	T (MIN)	PIPE PLUG (CU. YDS.)
12"	8"	0.0194
15"	8"	0.0303
18"	8"	0.0436
24"	8"	0.0776
30"	8"	0.1212
36"	8"	0.1745
42"	8"	0.2376
48"	8"	0.3103
54"	12"	0.5890
60"	12"	0.7272
66"	12"	0.8799
72"	12"	1.0472

NOTE: PLAN PAY QUANTITIES ARE TO REFLECT PIPE PLUGS AS CU. YDS. OF CL. B CONCRETE. ON CONSTRUCTION PLUGS MAY BE BUILT WITH BRICK MASONRY, MORTAR RUBBLE MASONRY, CL. A CONC., OR CL. B CONC. WITH NO ADJUSTMENT IN PAYMENT MADE FOR ALTERNATES.



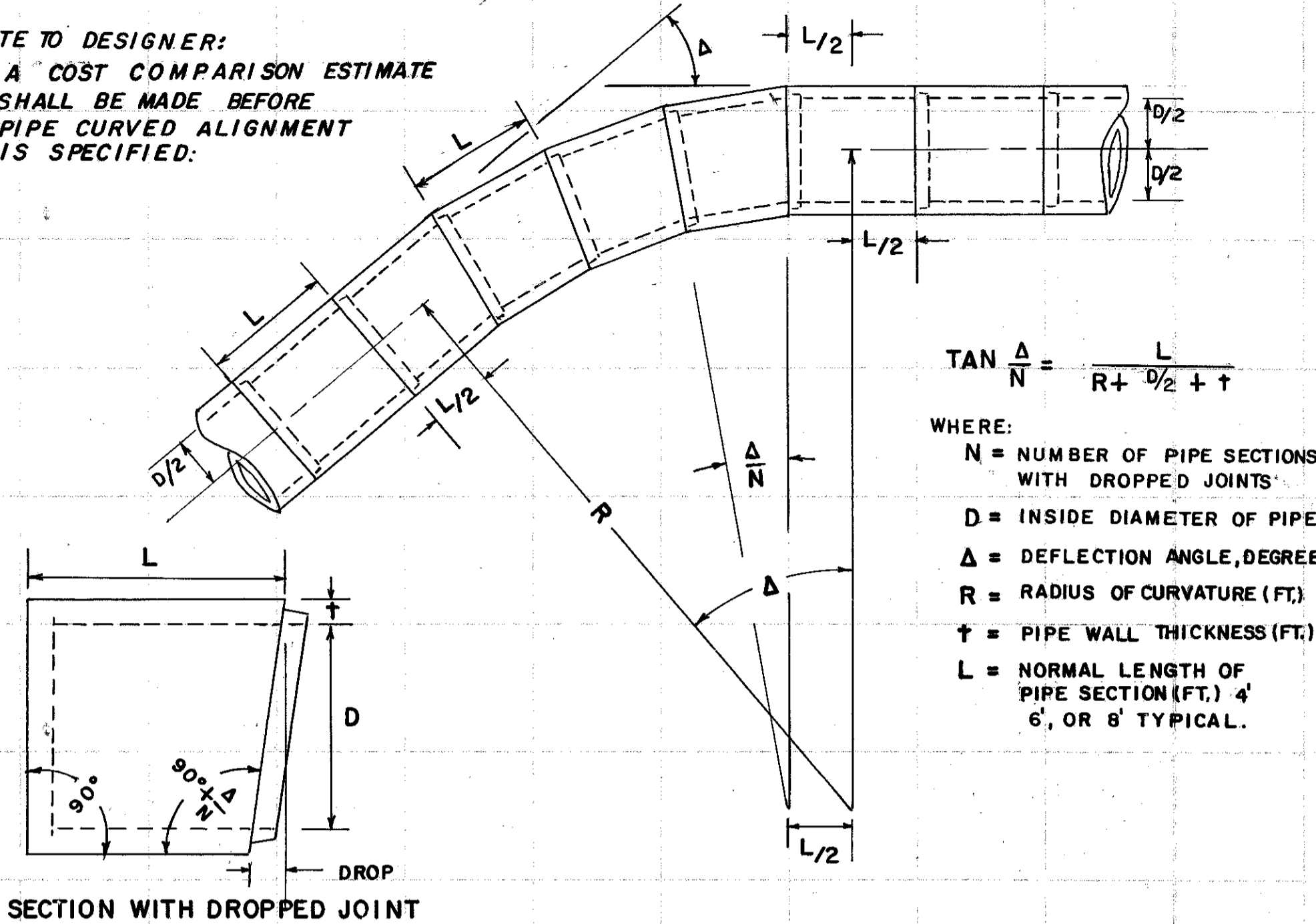
DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION		STANDARD GRAVITY WALL TYPICAL SECTIONS, RAISING HEADWALL, AND TYPICAL PIPE PLUG	
NO SCALE:		REV. & REDR. SEPT, 2016	
BY	REV. & C.E.W. (SUBMITTED)	STATE ROAD & AIRPORT DESIGN ENGR.	
CHK.	D.D.E. (APPROVED)	STATE HIGHWAY ENGINEER	
		NUMBER	9031L
		SHEET 1 OF 2	



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**PIPE CURVED ALIGNMENT USING SECTIONS WITH DROPPED JOINTS**

**NOTE TO DESIGNER:**  
A COST COMPARISON ESTIMATE SHALL BE MADE BEFORE PIPE CURVED ALIGNMENT IS SPECIFIED.



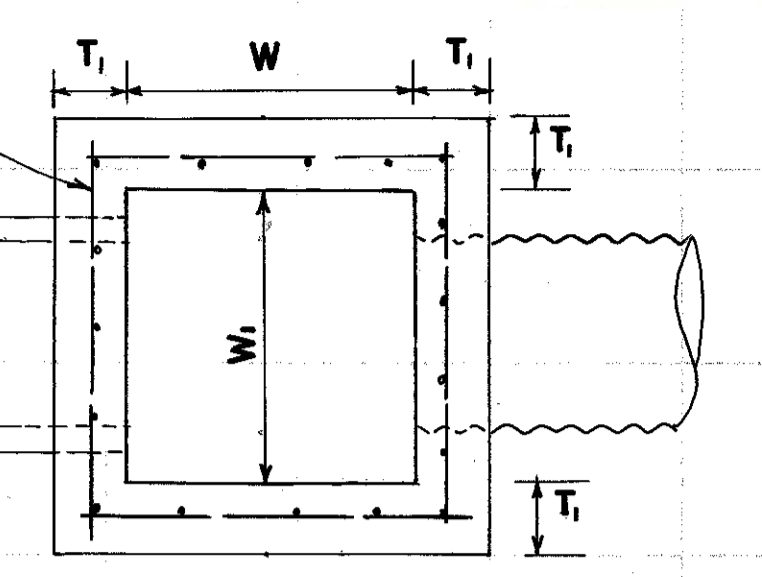
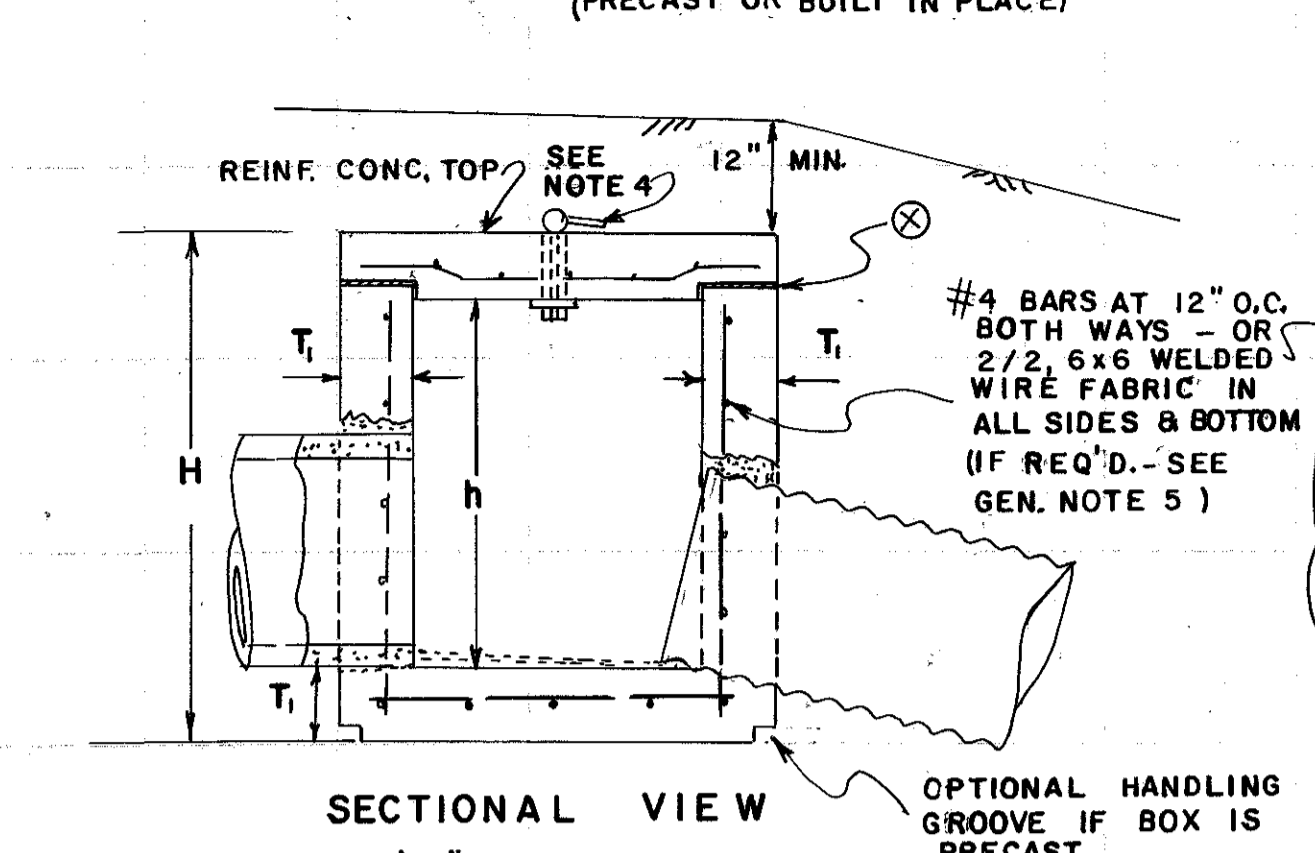
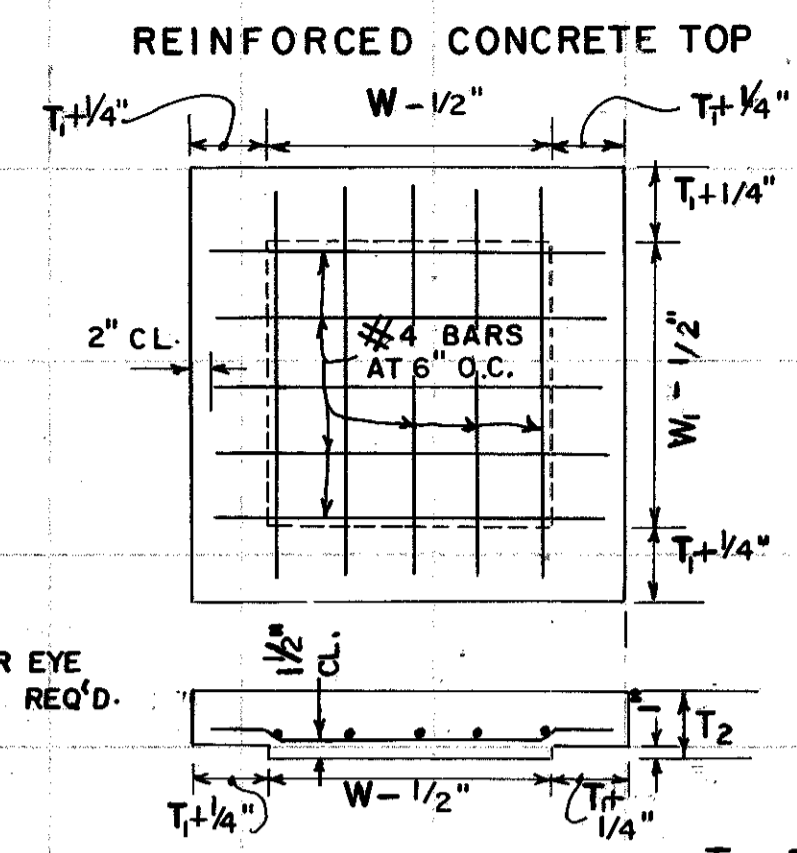
$$\tan \frac{\Delta}{N} = \frac{L}{R + \frac{D}{2} + t}$$

WHERE:  
N = NUMBER OF PIPE SECTIONS WITH DROPPED JOINTS  
D = INSIDE DIAMETER OF PIPE  
Δ = DEFLECTION ANGLE, DEGREES  
R = RADIUS OF CURVATURE (FT.)  
t = PIPE WALL THICKNESS (FT.)  
L = NORMAL LENGTH OF PIPE SECTION (FT.) 4', 6', OR 8' TYPICAL.

**NOTES FOR PIPE CURVED ALIGNMENT:**

- PLANS ARE TO SPECIFY ONLY THE PIPE DIAMETER "D", THE ANGLE "Δ", AND THE TANGENT ALIGNMENT.
- PIPE WALL THICKNESS "t", PIPE SECTION LENGTHS "L", AND DROP IN PIPE JOINT "Δ/N" VARIES ACCORDING TO PIPE PRODUCER AND IS BASED ON FEASIBILITY.
- THE RADIUS "R" AND THE NUMBER OF DROPPED JOINT PIPE SECTIONS "N" IS DETERMINED BY (1) & (2) ABOVE. MINOR MODIFICATIONS IN THE RADIUS "R" ARE NORMALLY MADE SO THAT "N" WILL BE A WHOLE NUMBER.
- PIPE SECTIONS SHALL BE ORIENTED SUCH THAT THE PLANE OF THE DROPPED JOINT IS AT RIGHT ANGLES TO THE THEORETICAL CURVED ALIGNMENT. THE TOP OF SECTIONS ARE TO BE MARKED SO THAT THE DEFLECTION ANGLE IS PROPERLY ORIENTED.
- DETAILS ARE SHOWN FOR CONCRETE PIPE. CURVED ALIGNMENT FOR C.M. PIPE SHALL BE AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
- PAYMENT PER LIN. FT. OF PIPE INCLUDES PIPE SECTIONS WITH DROPPED JOINTS.

**DETAILS OF CONCRETE JUNCTION BOX (PRECAST OR BUILT IN PLACE)**

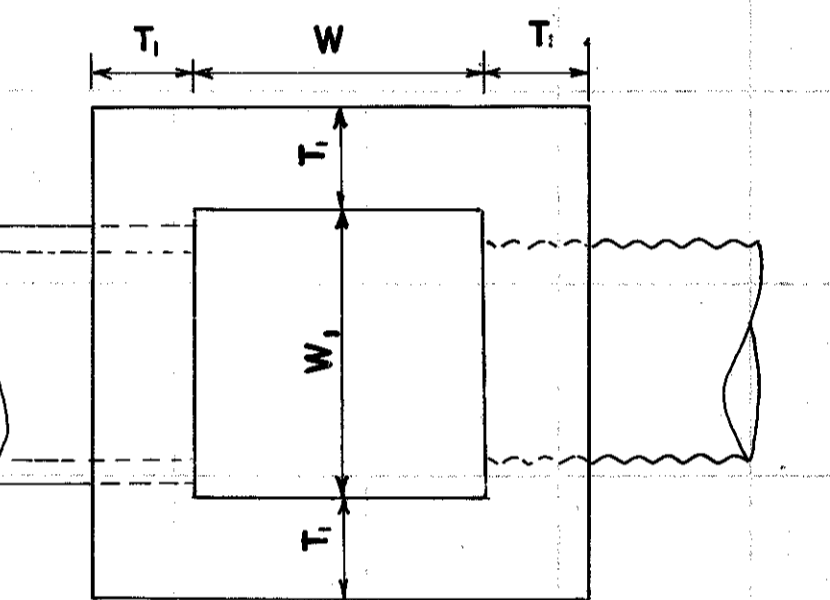
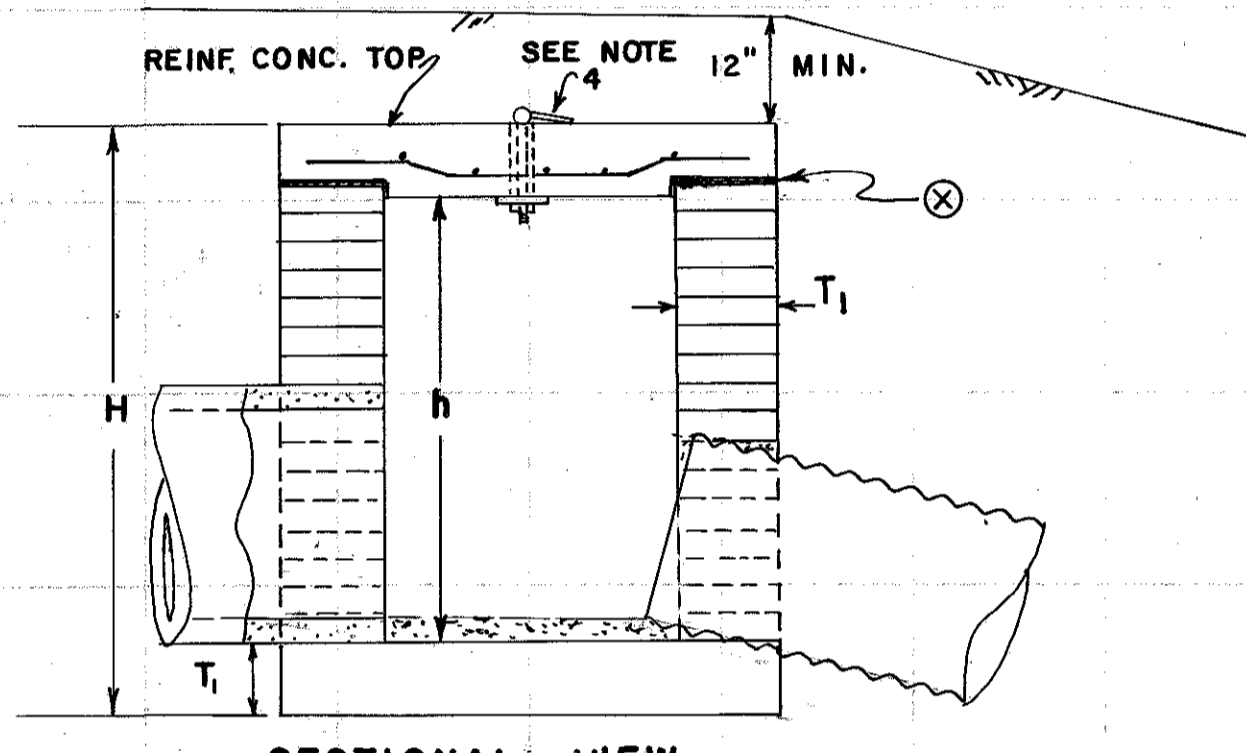


T<sub>2</sub> = 5 1/2" FOR W OR W<sub>1</sub> TO 3'-0"  
T<sub>2</sub> = 8" FOR W OR W<sub>1</sub> OVER 3'-0"

**DIMENSIONS FOR BRICK OR REINFC. CONC. BOX**

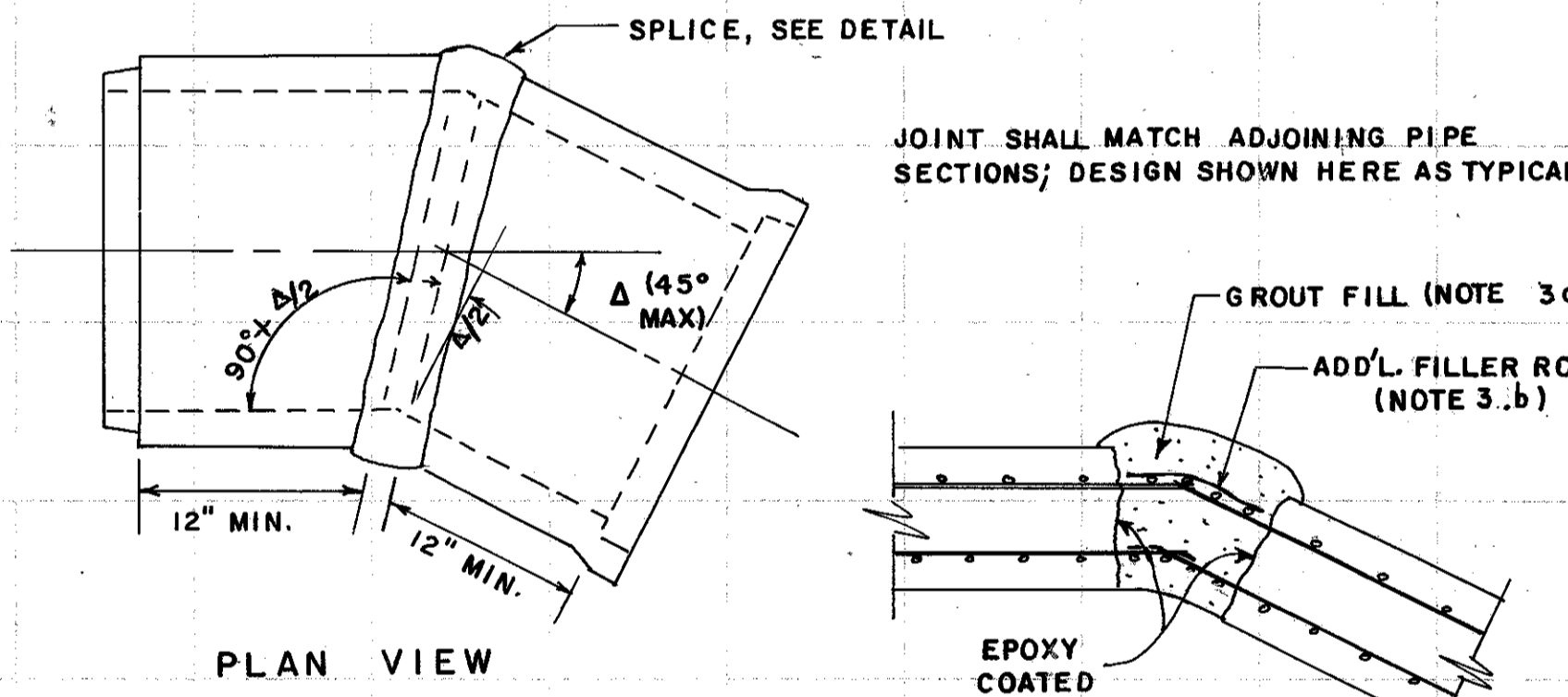
PIPE SIZE	MIN. W OR W <sub>1</sub>	MIN. h	MIN. H
15"	2'-0"	1'-9"	2'-9"
18"	2'-3"	2'-1"	3'-1"
24"	2'-10"	2'-6"	3'-8"
30"	3'-5"	3'-3"	4'-3"
36"	4'-0"	3'-10"	4'-9"
42"	4'-7"	4'-5"	5'-5"
48"	5'-2"	5'-0"	6'-0"

**DETAILS OF BRICK JUNCTION BOX**



FOR BRICK T = 8" (MAX. 10 FT. DEPTH)

**PIPE ELBOW SECTION (PRE-FABRICATED)**

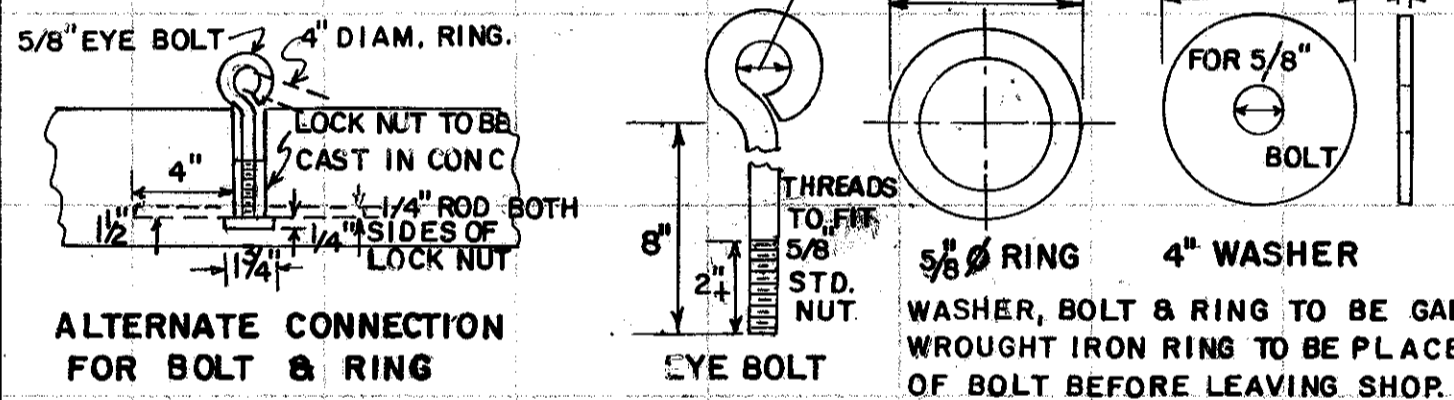


NOTE: SPLICE DETAIL IS SHOWN FOR DOUBLE GAGE REINFORCING, & IS SIMILAR FOR SINGLE GAGE REINFORCING, BUT WITH SINGLE SPLICE ALL AROUND BEING APPLICABLE.

**NOTES FOR PIPE ELBOW:**

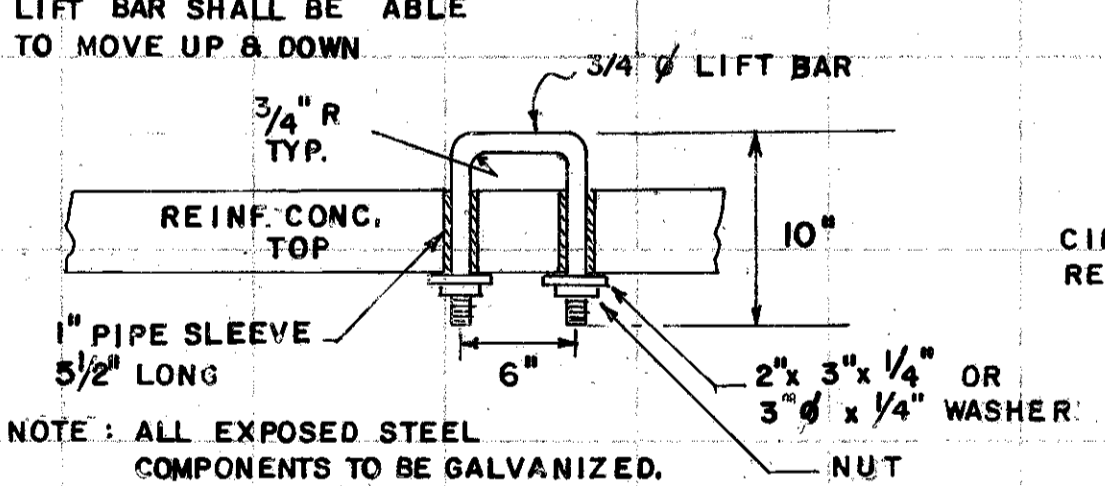
- PAYMENT FOR LIN. FT. OF PIPE INCLUDES ELBOWS.
- ELBOW ANGLE Δ SHALL VARY ACCORDING TO NEED, BUT SHALL NOT BE GREATER THAN 45°. THE CONTRACTOR SHALL INFORM PRODUCER AS TO ANGLE REQUIRED.
- (a) CONCRETE PIPE SHALL BE CUT BEFORE BEING CURED AND STEEL EXPOSED FROM EACH SIDE OF CUT.  
(b) EXPOSED STEEL SHALL BE REJOINED, FILLER RODS AT LEAST EQUAL TO RODS IN PIPE SHALL BE ADDED AS NEEDED FOR HANDLING STRENGTH & TO HOLD GROUT.  
(c) ALL VOID IN SPLICE SHALL BE PACKED WITH GROUT MORTAR RICH ENOUGH TO GIVE STRENGTH AT LEAST EQUAL TO REMOVED CONCRETE WITH INSIDE SMOOTHED OUT.
- C.M. PIPE ELBOW NOT SHOWN, BUT MAY BE SPECIFIED. SOLID WELD SHALL BE REQUIRED FOR C.M. ELBOW JOINT WITH GALVANIZING AND/OR COATINGS REPAIRED AS REQ'D.

**BOLT, RING & WASHER DETAILS**



ALTERNATE CONNECTION FOR BOLT & RING

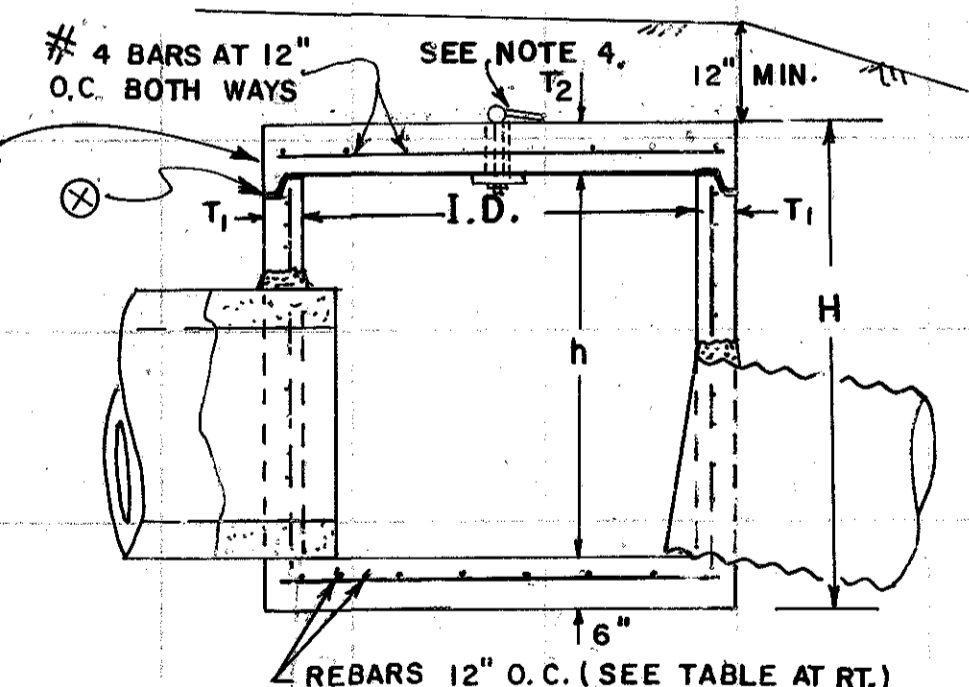
**STEEL LIFTING BAR DETAIL**



NOTE: ALL EXPOSED STEEL COMPONENTS TO BE GALVANIZED.

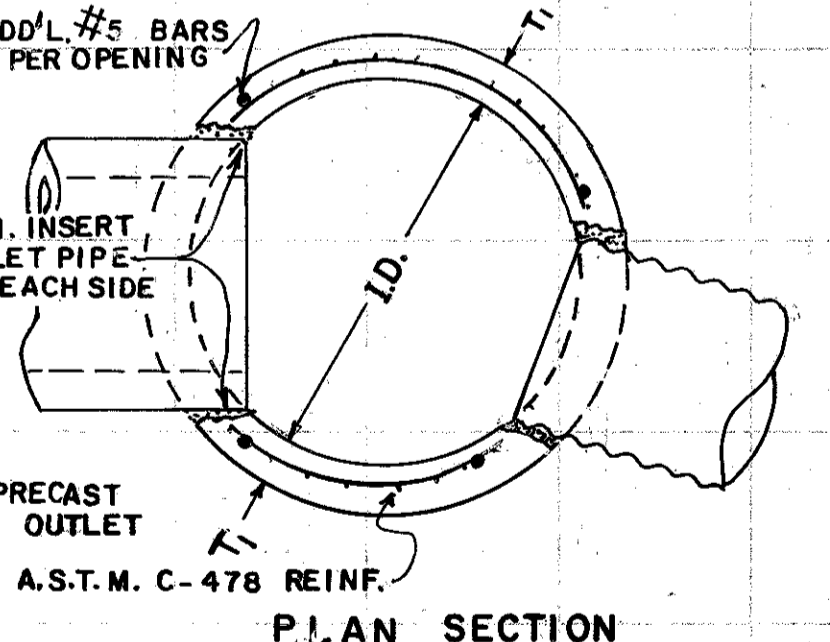
**DETAILS OF CIRCULAR PRECAST JUNCTION BOX**

(REINFORCING AND DESIGN SHALL COMPLY WITH A.S.T.M. C-478 EXCEPT AS OTHERWISE SHOWN. MATERIALS SHALL COMPLY WITH GA. STD. SPECIFICATIONS FOR PRECAST MANHOLES)



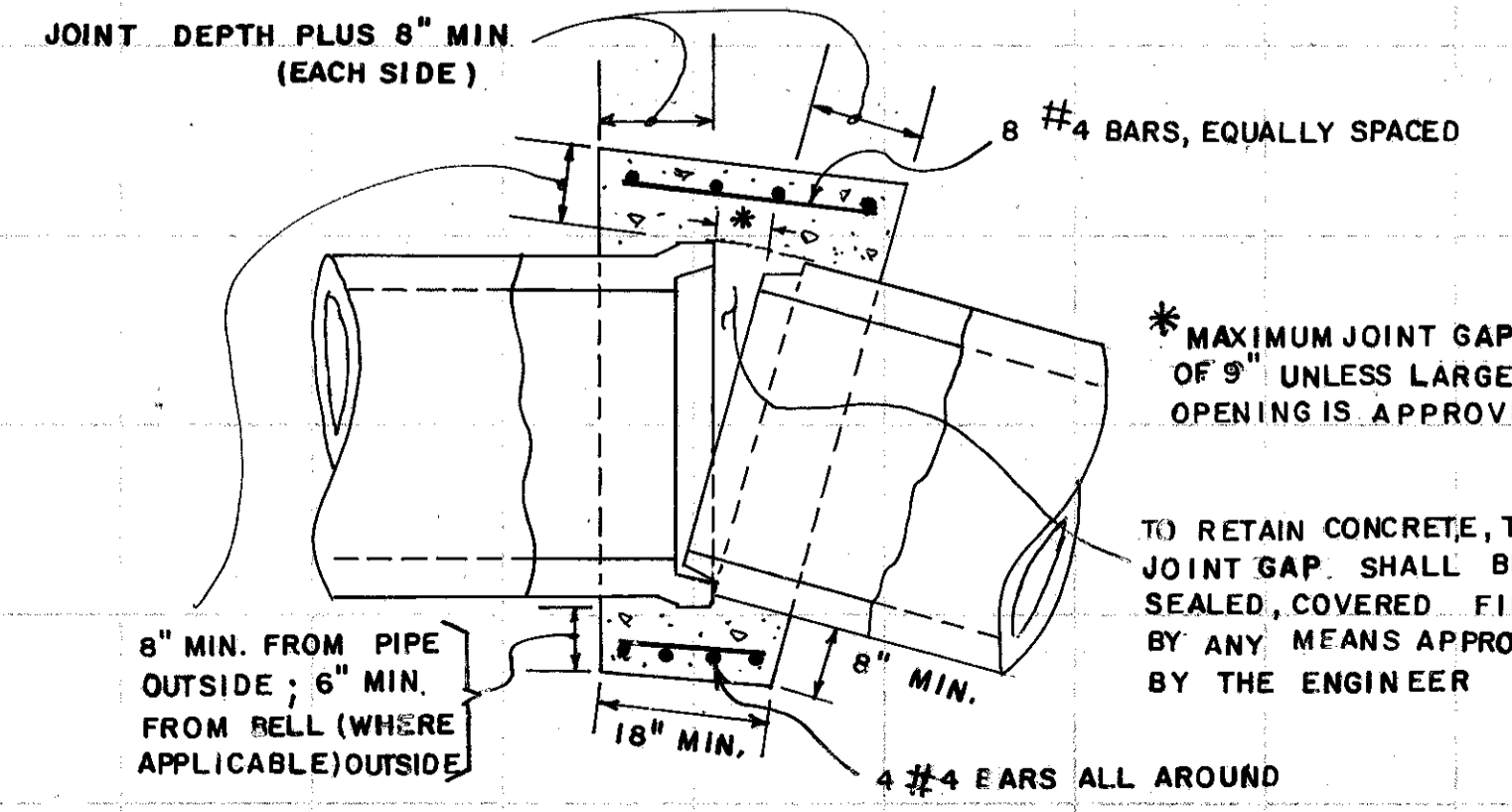
PIPE SIZE	MIN. h	MIN. H
15"	1'-10"	2'-10"
18"	2'-2"	3'-2"
24"	2'-9"	3'-9"
30"	3'-4"	4'-4"
36"	4'-0"	5'-2"
42"	4'-7"	5'-9"
48"	5'-2"	6'-3"

I.D.	T <sub>1</sub> (MIN.)	T <sub>2</sub> (MIN.)	MAX. PIPE CONC. C.M.	REBARS IN BOTTOM	
4'-0"	5"	6"	30"	36"	#5
5'-0"	5"	8"	42"	48"	#5
6'-0"	6"	8"	48"	54"	#6



NOTE: OPENINGS SHALL BE PRECAST FOR BOTH INLET AND OUTLET

**CONCRETE COLLAR FOR DEFLECTING PIPE**

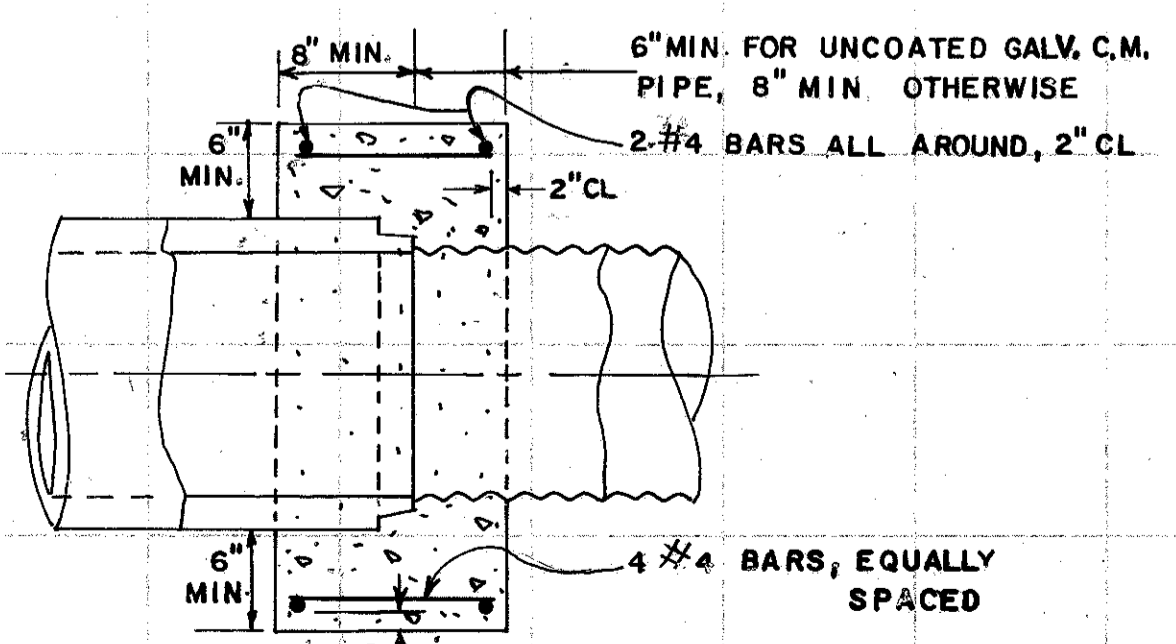


\* MAXIMUM JOINT GAP OF 9" UNLESS LARGER OPENING IS APPROVED

**NOTES FOR CONCRETE COLLARS:**

- PERIMETERS OF CONCRETE COLLARS DO NOT HAVE TO BE SMOOTH LINES. COLLARS MAY BE FORMED AGAINST COMPACTED OR UNDISTURBED SOIL. DIMENSIONS ARE MINIMUM. COLLAR MAY BE SQUARE, ROUND OR SHAPE MAY VARY SO LONG AS MINIMUM DIMENSIONS ARE OBTAINED.
- ALL CONCRETE COLLARS ARE TO BE CONSTRUCTED WITH CLASS A CONCRETE.
- PAYMENT FOR LIN. FT. OF PIPE INCLUDES COLLARS.

**CONCRETE COLLAR FOR JOINTING PIPE**



PLAN OR SIDE SECTION

**GENERAL NOTES:**

- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
- ILLUSTRATED PIPES, PIPE JOINTS, ALIGNMENT, SIZES, ETC. ARE SHOWN AS REPRESENTATIVE, ACTUAL REQUIREMENTS VARY PER LOCATION AS INDICATED IN THE PLANS.
- JUNCTION BOXES DO NOT HAVE TO BE CONSTRUCTED SQUARE. W&W DIMENSIONS MAY VARY ACCORDING TO PIPE SIZE.
- ALL JUNCTION BOX TOPS SHALL BE EQUIPPED WITH EITHER AN EYE BOLT & RING (SHOWN) OR A LIFTING BAR (ALTERNATE).
- REINFORCING IS REQUIRED FOR ALL PRECAST JUNCTION BOXES. REINFORCING MAY BE OMITTED FOR BUILT IN PLACE CONCRETE BOXES NOT OVER 10 FT. DEEP AND NOT LARGER THAN 3' x 3'. CONSTRUCTION JOINTS PERMITTED IF DOWELED OR KEYS. ALL JUNCTION BOX TOPS SHALL BE REINFORCED.

**DEPARTMENT OF TRANSPORTATION**  
STATE OF GEORGIA

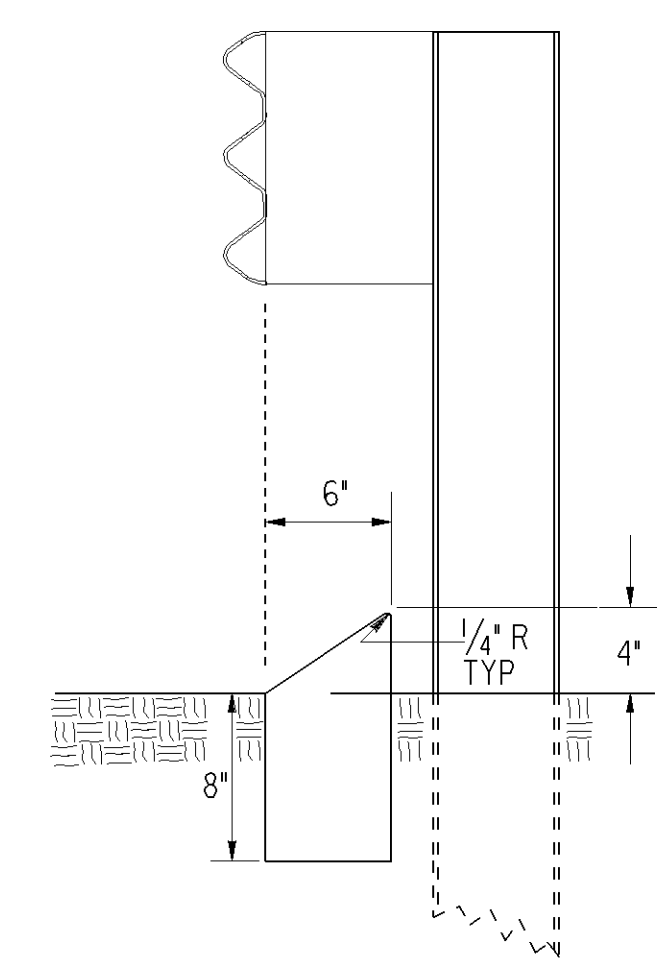
**STANDARD**  
PRECAST OR BUILT IN PLACE  
**JUNCTION BOXES**  
PIPE COLLARS, PIPE ELBOW  
& PIPE CURVED ALIGNMENT

NO SCALE  
REV. & REDR. JULY 1985  
DES. RML (SUBMITTED) *David Allen Jackson*  
DRW. RML STATE ROAD & AIRPORT DESIGN ENGR.  
TRA. GME (APPROVED) *Hal Rivers*  
CHK. RKC STATE HIGHWAY ENGINEER  
NUMBER  
**9031U**

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

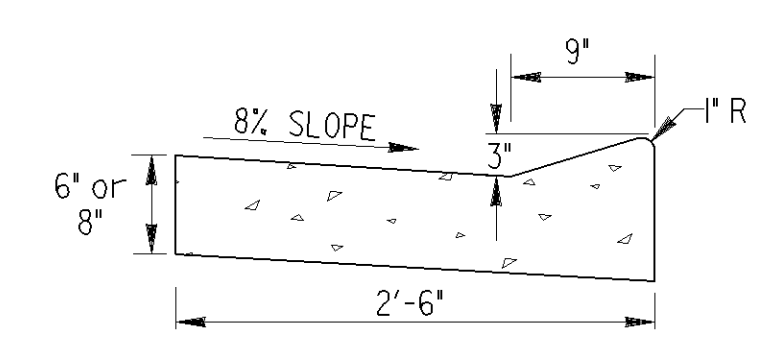
### RAISED EDGE WITH CONCRETE GUTTER

FACE OF CURB MUST ALIGN WITH BACK EDGE OF GUARDRAIL AND THE FACE OF THE OFFSET BLOCK.



TYPE 8

TYPE 8 CURB IS USED IN CONJUNCTION WITH GUARDRAIL CONNECTIONS TO CONCRETE BARRIER AS NOTED ON GA. STD. 4012C.

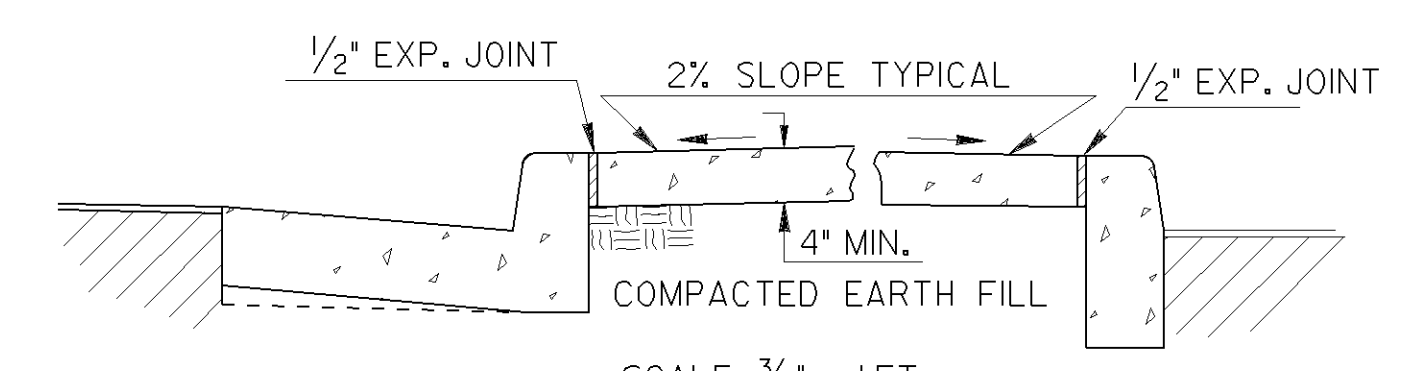


SCALE: 1" = 1 FT.

RAISED EDGE TO BE CONSTRUCTED WITH SAME CONCRETE MIX AS THE GUTTER AND SHALL BE FORMED MONOLITHIC WITH GUTTER. JOINTS IN RAISED EDGE SHALL MATCH THOSE IN THE GUTTER.

### CONCRETE MEDIAN (Between Curbs)

NOTE: CURB TYPES SHOWN ARE TYPICAL. OTHER TYPES MAY BE SPECIFIED.



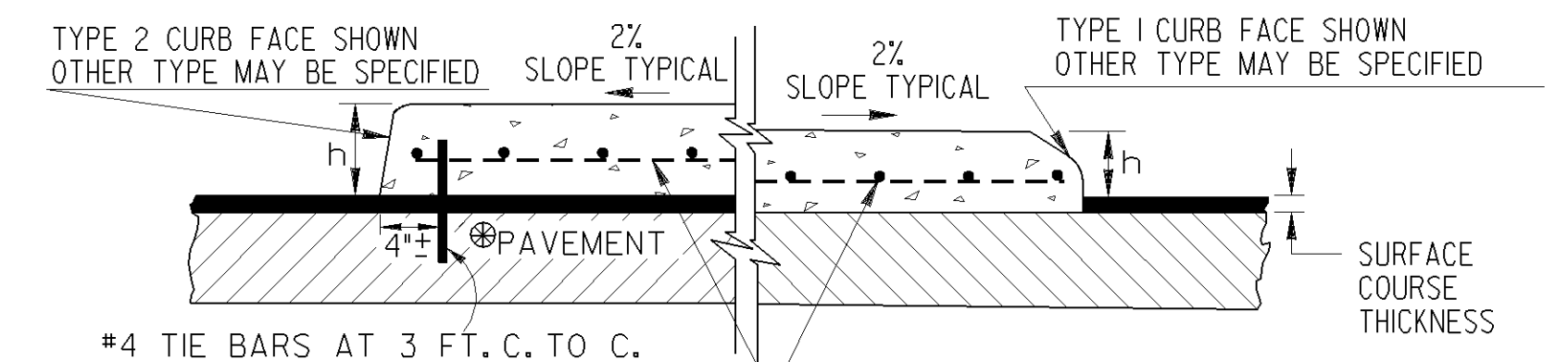
SCALE: 3/4" = 1 FT.

NOTE: WIDTH OF CONCRETE MEDIAN WILL BE AS SHOWN IN PLANS

### CONCRETE MEDIANS (Integral)

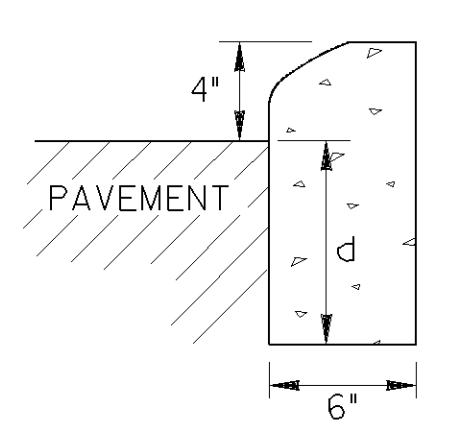
SCALE: 1" = 1 FT.

-WITH TIE BARS- -WITHOUT TIE BARS-



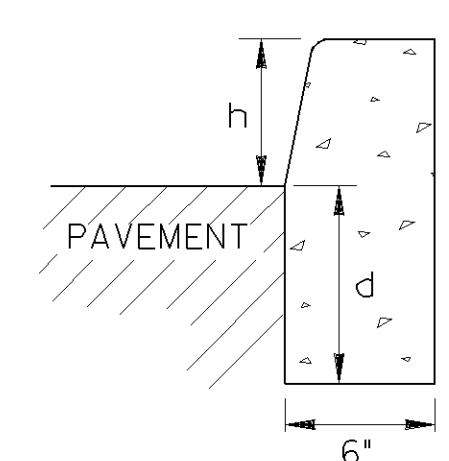
NOTE: IF FINAL SURFACE COURSE IS PRESENT OR MUST BE INSTALLED BEFORE THE CONCRETE MEDIAN CAN BE INSTALLED, THEN DOWELED IN CONCRETE MEDIAN IS REQUIRED.

### CONCRETE HEADER CURBS

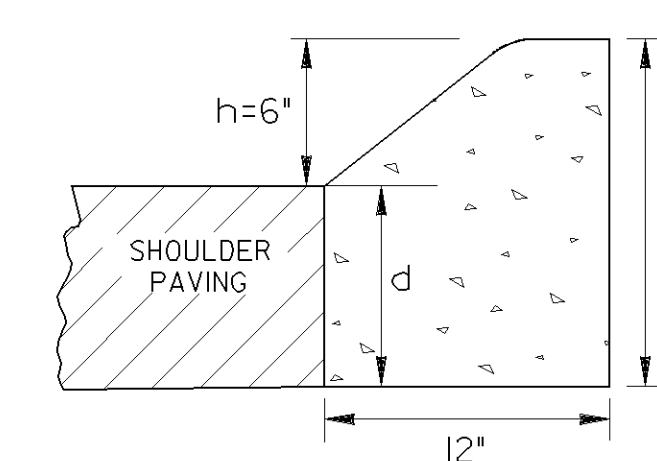


TYPE 1

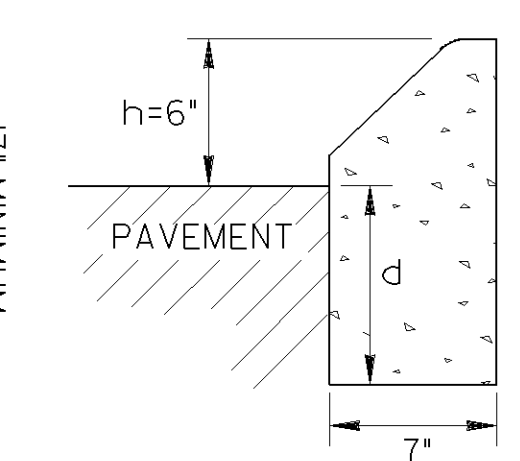
CURB TYPE	h	d
1	4'	6' min.
2	6'	8' min.
3	8'	10' min.
4	10'	12' min.
6	6'	7' min.
7	6'	8' min.
9	4'	8' min.



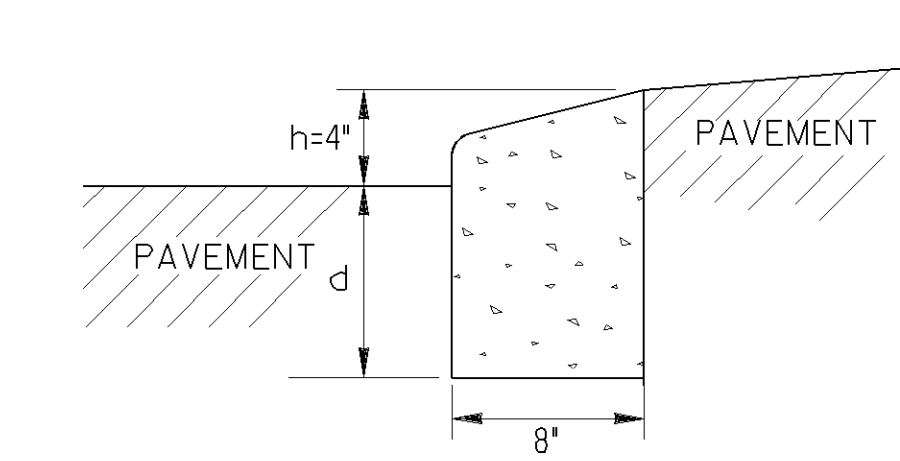
TYPE 2, 3 OR 4



TYPE 6



TYPE 7



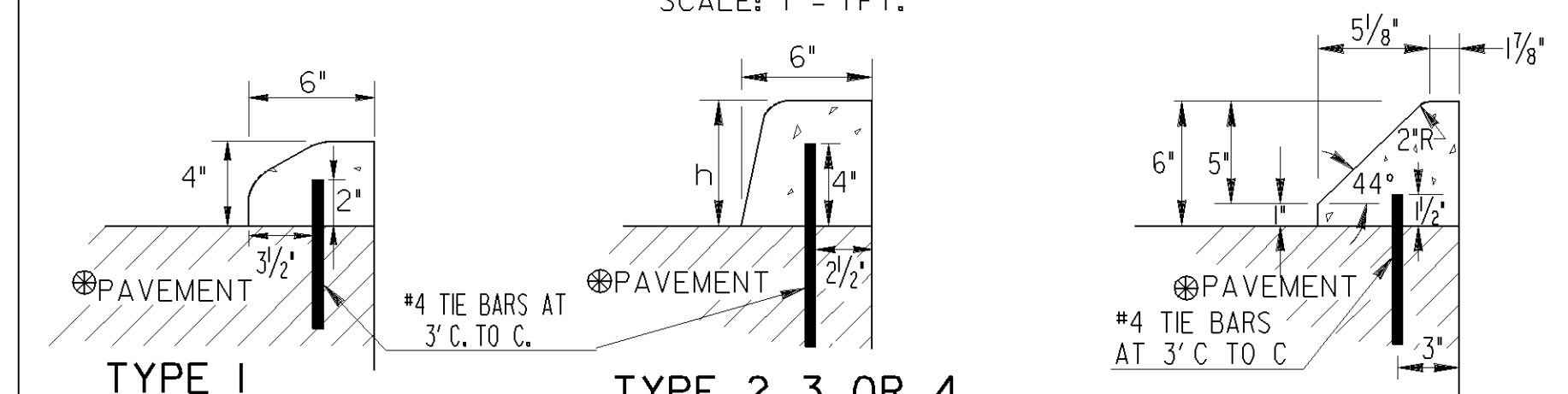
TYPE 9  
TRUCK APRON  
IN ROUNDABOUTS

SCALE: 1 1/2" = 1 FT.

THE DIMENSION d MAY BE INCREASED AT CONTRACTOR'S OPTION SO BOTTOM OF HEADER CURB WILL ALIGN WITH BOTTOM OF PAVEMENT TYPICAL SECTION.

### CONCRETE DOWELED INTEGRAL CURBS

SCALE: 1" = 1 FT.



- NOTES:
- CONCRETE CURB CAN BE INSTALLED AFTER INITIAL SET AS LONG AS TIE BARS ARE DRILLED INTO UNDERLYING CONCRETE PAVEMENT.
  - CONCRETE CURB CAN BE INSTALLED BEFORE INITIAL SET WITH DOWELS THAT ARE DRIVEN INTO UNDERLYING CONCRETE PAVEMENT.
  - JOINTS IN CURB AND CONCRETE MEDIAN WILL MATCH THOSE IN THE CONCRETE PAVEMENT.
  - ALL TYPES OF CONCRETE CURB CAN BE PLACED ON ASPHALT PAVEMENTS WHERE TIE BARS MAY BE EITHER DRIVEN OR DRILLED INTO THE UNDERLYING PAVEMENT. CONTRACTION JOINTS SHALL BE CONSTRUCTED IN CURB OR CONCRETE MEDIAN AT 20 FT. SPACING.

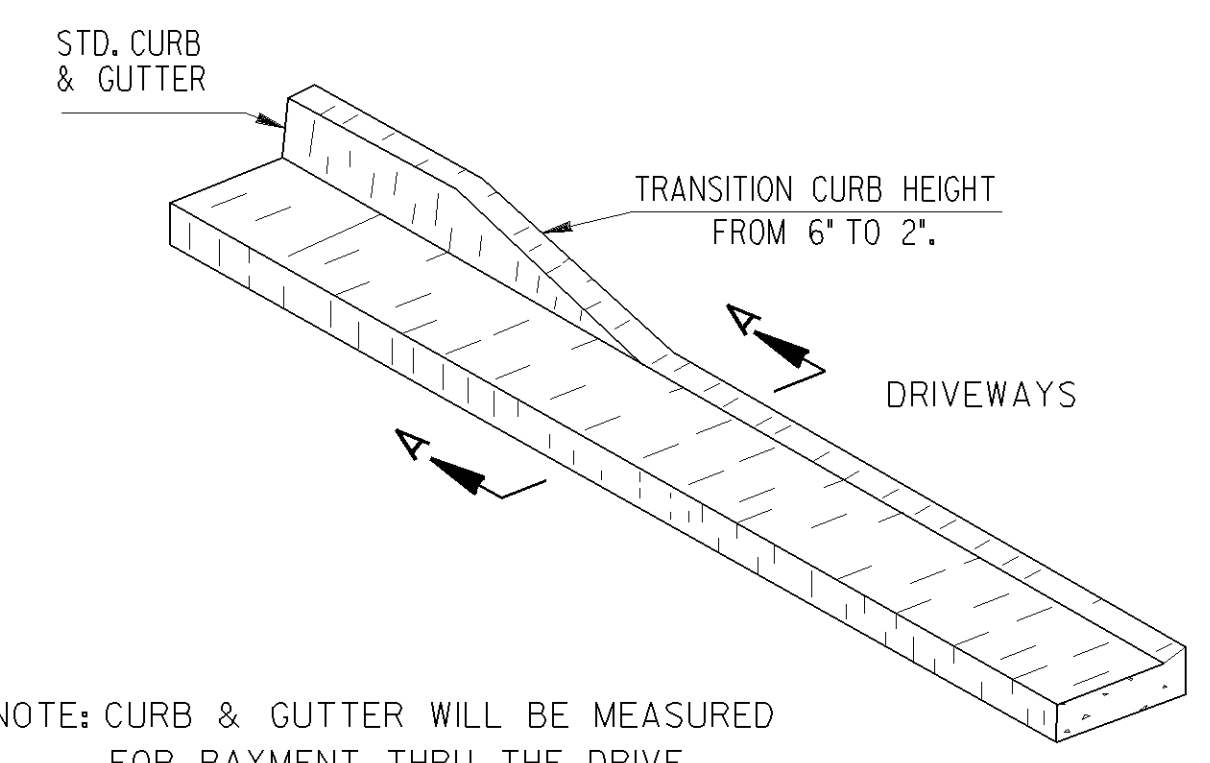
CURB TYPE	MINIMUM TIE BAR LENGTHS (FOR CONC. DOWELED CURBS OR CONC. MEDIAN)	
	P.C. CONC. PAV.	ASPHALT PAV.
1	6"	8"
2, 3 or 4	8"	12"
7	6"	8"

NOTE: TIE BARS FOR DOWELED CURBS MAY BE UNCOATED PLAIN OR DEFORMED BILLET-STEEL BARS (GRADE 40) AS USED FOR CONCRETE REINFORCEMENT, (AASHTO M-31)

### DETAILS OF RECESSED CURB FOR DRIVEWAYS

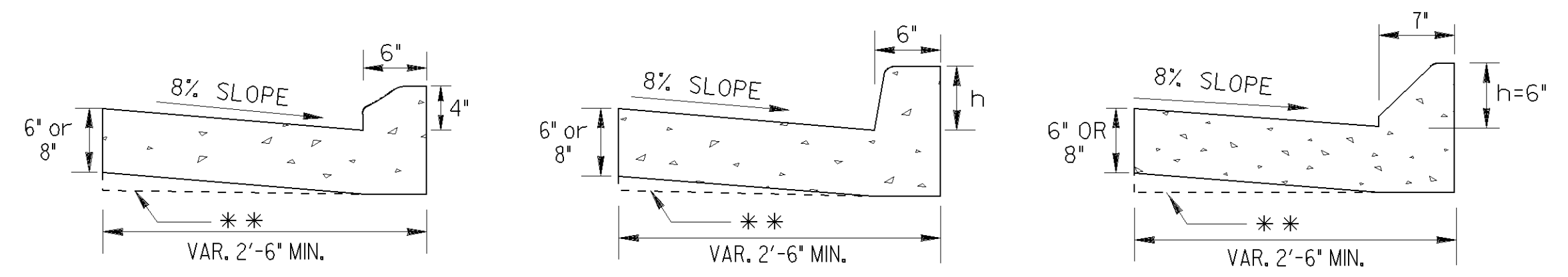
NO SCALE

PICTORIAL VIEW



NOTE: CURB & GUTTER WILL BE MEASURED FOR PAYMENT THRU THE DRIVE

### CONCRETE CURB & GUTTER



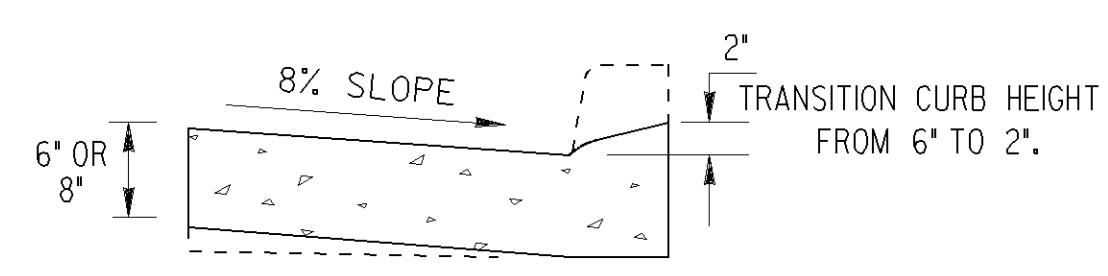
TYPE 1

TYPE 2, 3 OR 4

TYPE 7

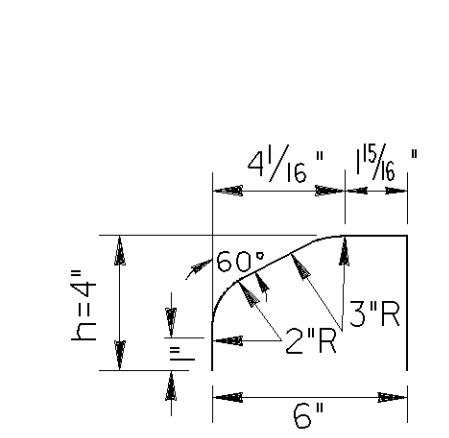
\*\* AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE, BUT THE GUTTER THICKNESS MUST NOT BE LESS THAN THE SPECIFIED 6' OR 8' AT ANY POINT.

### CURB FACE DESIGN



SECTIONAL VIEW  
SECTION A-A

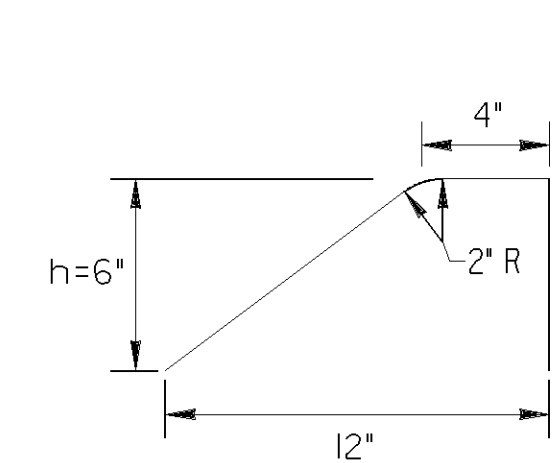
(SEE SEPARATE CONSTRUCTION DETAILS FOR DRIVEWAYS)



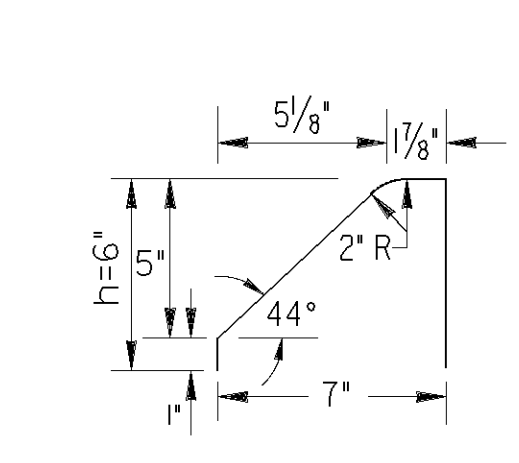
TYPE 1

TYPE	h
1	4'
2	5'
3	8'
4	10'
6	5'
7	6'
9	4'

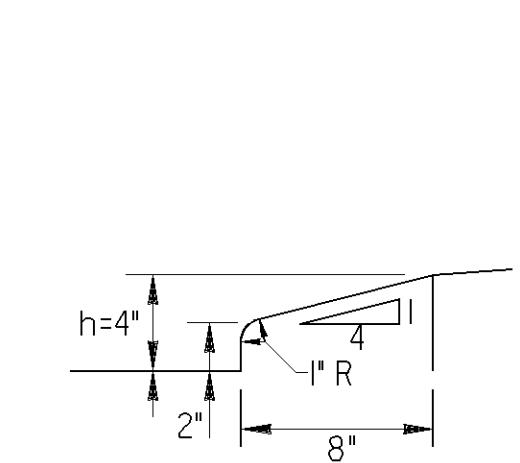
TYPE 2, 3 OR 4



TYPE 6



TYPE 7

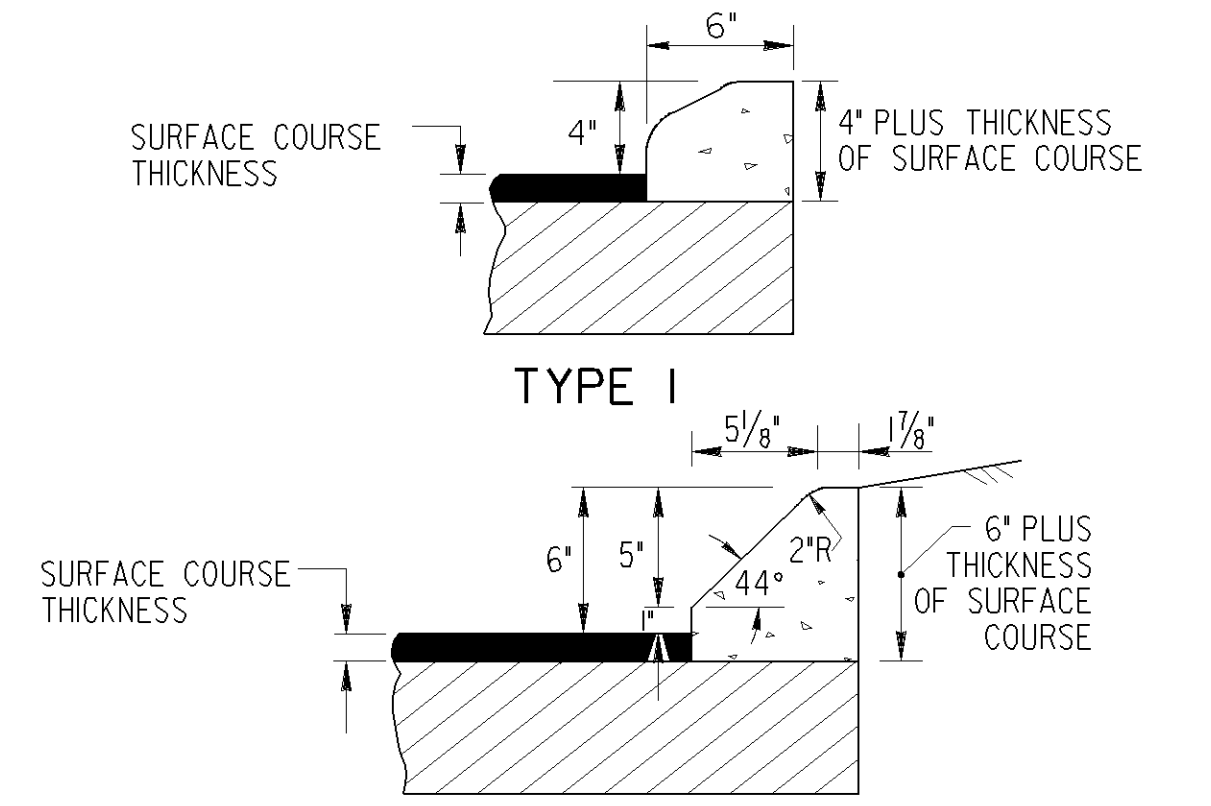


TYPE 9

SCALE: 2" = 1 FT.



### CONCRETE INTEGRAL CURB



TYPE 1

TYPE 7

SCALE: 1 1/2" = 1 FT.

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

STANDARD  
CONCRETE CURB & GUTTER  
CONCRETE CURBS, CONCRETE MEDIANS

SCALE: AS SHOWN REVISED AND REDRAWN OCT. 2011

TC	REV. TYPE 9 CURB DETAIL & REV. OVERALL LAYOUT	11-5-11		
GLO	REV. MEDIAN NOTE AND ADDED TYPE 9 CURB DETAIL	1-27-11		
BY	ADDED TYPE 9 CURB DETAIL	3-03		
REVISION		DATE		

DES. (SUBMITTED) *David Allen Jackson*  
STATE DESIGN POLICY ENGINEER  
TRA. (APPROVED) *Donald M. Pugh*  
CHIEF ENGINEER

NUMBER  
9032B

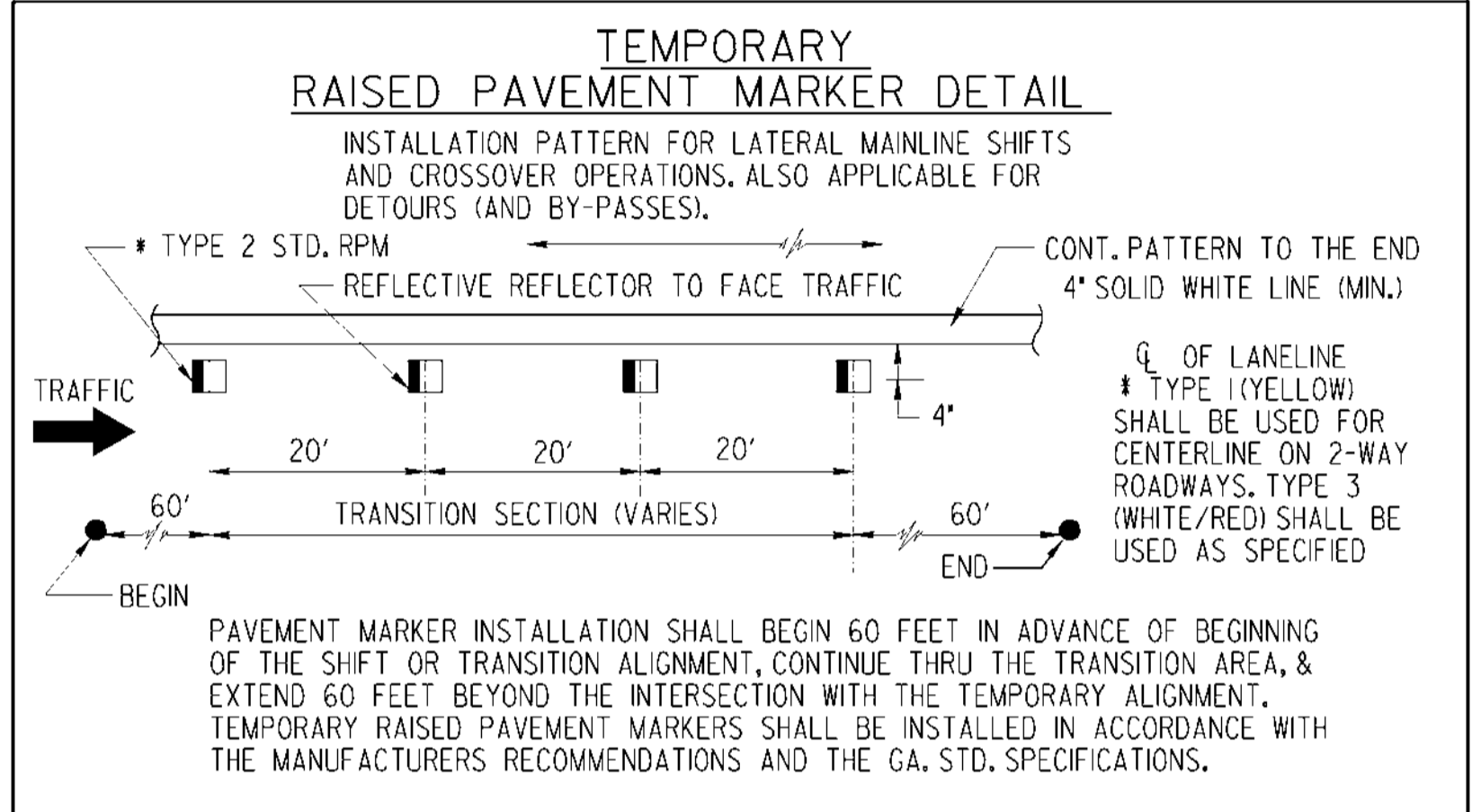
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

GENERAL NOTES :

- ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS; THE MUTCD; THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150)
- ALL TRAFFIC CONTROL DEVICES SHALL BE AS SHOWN, OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DEVICES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
- ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT ABOVE THE LEVEL OF PAVEMENT EDGE FOR DIRECTIONAL TRAFFIC OF TWO (2) LANES OR LESS AND A MINIMUM OF 7 FEET FOR DIRECTIONAL OF THREE (3) OR MORE LANES. ALL PORTABLE SIGNS AND SIGN MOUNTING DEVICES UTILIZED IN THE WORK SHALL BE NCHRP 350 COMPLIANT. PORTABLE SIGNS MAY BE USED WHEN THE DURATION OF THE WORK IS LESS THAN 3 DAYS.
- WHEN THE CONSTRUCTION AREA HAS ENTRANCE/EXIT RAMPS OR INTERSECTIONS, WORK WILL BE PERFORMED IN SUCH A MANNER TO PERMIT TRAFFIC TO OPERATE WITH THE LEAST AMOUNT OF INCONVENIENCE AS POSSIBLE. ADDITIONAL CHANNELIZATION AND SIGNING SHALL BE INSTALLED, AS REQUIRED, TO ALLOW TRAFFIC TO REMAIN AS OPERATIONAL AS POSSIBLE. WHEN ENTRANCE RAMPS/INTERSECTIONS ARE INOPERABLE, FLAGGERS WILL BE UTILIZED TO CONTROL AND PROHIBIT MOVEMENT INTO THE PROJECT AT THAT POINT UNTIL CONSTRUCTION HAS CLEARED THE RESTRICTION SUFFICIENT TO RETURN TO OPERATIONAL STATUS.
- FOR NIGHT TIME OPERATIONS, DRUMS SHALL HAVE, FOR THE LENGTH OF THE TAPER ONLY, A SIX (6") INCH ORANGE REFLECTIZED TOP STRIPE ON EACH DRUM IN THE TAPER AS REQUIRED IN SECTION 150. SPACING OF DEVICES SHALL BE AS SHOWN. DURING DAYLIGHT HOURS, CONES (28" MIN.) MAY BE USED IN ADVANCE OF AND THROUGHOUT WORK AREA.
- SIGN LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS BUT MUST BE WITHIN THE LIMITATIONS SET FORTH IN THE MUTCD.
- A PORTABLE SELF-SUSTAINED SEQUENTIAL OR FLASHING ARROW SIGN SHALL BE USED AT THE BEGINNING OF EACH LANE CLOSURE ON MULTI-LANE HIGHWAYS. ARROW PANELS SHALL NOT BE USED ON TWO-LANE TWO-WAY HIGHWAYS EXCEPT IN CAUTION MODE.
- WHEN NOT IN USE, PORTABLE SIGNS SHALL BE REMOVED FROM THE TRAVELWAY SO THAT THE MESSAGE IS NOT VISIBLE TO THE MOTORIST. INTERIM SIGNS THAT ARE PERMANENTLY MOUNTED SHALL BE COVERED WHEN NOT APPLICABLE. SEE SECTION 150.
- PROJECT SIGNS W20-1, G20-1 & G20-2 FOR THIS PROJECT SHALL BE COORDINATED WITH ADJACENT CONSTRUCTION PROJECTS. ONLY ONE SET OF SIGNS IS REQUIRED IN EACH DIRECTION FOR THE TOTAL LENGTH OF ALL PROJECTS- AT THE BEGINNING OF THE FIRST PROJECT AND AT THE ENDING OF THE LAST PROJECT. ADVANCE CONSTRUCTION SIGNS ARE NOT REQUIRED ON INTERMEDIATE PROJECTS, UNLESS CONSTRUCTION ON THE ADJACENT PROJECTS IS COMPLETED BEFOREHAND, THEN PROJECT CONSTRUCTION SIGNS WILL BE ADDED AS NECESSARY.
- ALL THE COST OF THE MATERIALS, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL SECTION 150, LUMP SUM, WHEN SHOWN AS A PAYMENT ITEM IN THE PROPOSAL. OTHERWISE, ALL THE COST WILL BE INCLUDED IN THE OVER-ALL BID SUBMITTED, EXCEPT ON CERTAIN PROJECTS SOME ITEMS MAY BE PAID FOR SEPARATELY BY THE UNIT WHEN SPECIFIED ON THE PLANS AND IN THE PROPOSAL.
- FOR FREEWAY CONSTRUCTION THE CONTRACTOR SHALL ARRANGE HIS WORK SO THAT THERE IS AN EXIT GORE SIGN AND AN EXIT DIRECTION SIGN IN PLACE FOR ALL EXIT RAMPS AT ALL TIMES.
- ALL CROSSROADS, SIDEROADS, RAMPS OR OTHER ENTRANCES TO MAINLINE CONSTRUCTION SHALL REQUIRE W20-1 SIGNS LOCATED AS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- MARKINGS AND/OR SIGNS IN CONFLICT WITH INTERIM TRAFFIC CONTROL SHALL BE REMOVED, RELOCATED OR COVERED; APPLICABLE EXISTING AND INTERIM MARKINGS AND/OR SIGNING SHALL BE MAINTAINED PER SECTION 150.
- ANY CHANNELIZING DEVICES (DRUMS OR BARRICADES) IN CONFLICT WITH CONCRETE BARRIERS SHALL BE OMITTED.
- CONTRACTOR SHALL PROVIDE THE NECESSARY TRAFFIC CONTROL DURING THE TIE-IN OPERATION.
- THE TRAFFIC CONTROL DEVICES SHOWN FOR ANY STAGE CONSTRUCTION SHALL REMAIN IN PLACE AND BE UTILIZED SO LONG AS NECESSARY FOR THE FOLLOWING STAGES AND SHALL BE REMOVED IMMEDIATELY WHEN NO LONGER REQUIRED. THE DEVICES MAY OR MAY NOT BE SHOWN ON THE PLANS FOR THESE FOLLOWING STAGES. REFER TO THE PLAN SHEET FOR THE INITIAL STAGE FOR THESE TRAFFIC CONTROLS.
- EXISTING GUIDE SIGNS SHALL REMAIN IN PLACE SO LONG AS THEY DO NOT CONFLICT WITH THE CONSTRUCTION OF THIS PROJECT. WHEN IN CONFLICT, THEY SHALL BE RELOCATED ON TEMPORARY POSTS AT THE LOCATION AS DIRECTED BY THE ENGINEER. ANY DISTANCE SHOWN ON THE SIGN SHALL BE ADJUSTED ACCORDINGLY. IF THE SIGNS CANNOT BE RELOCATED, THEN THE SIGN SHALL BE REMOVED AND STORED AT A PLACE DESIGNATED BY THE ENGINEER. IF NEITHER OF THE ABOVE CAN BE DONE, THEN THE CONTRACTOR SHALL PROVIDE INTERIM GUIDE SIGNS AS COVERED IN SECTION 150.
- (a) ON PROJECTS WITH LOW OR SOFT SHOULDERS, THE CONTRACTOR SHALL ERECT IMMEDIATELY AHEAD OF CONSTRUCTION OPERATIONS "LOW/SOFT SHOULDER" WARNING SIGNS AT THE PROJECT TERMINII, AT INTERVALS NOT TO EXCEED 1 MILE AND IMMEDIATELY PAST EACH CROSSROAD.  
  
(b) WHERE THE CONTRACTOR IS NOT RESPONSIBLE FOR SHOULDER CONSTRUCTION, THE DEPARTMENT WILL FURNISH THESE SIGNS FOR THE CONTRACTOR TO PICK UP, TRANSPORT, AND ERECT. THE DEPARTMENT WILL LATER REMOVE AND RETAIN THE SIGNS.

STANDARD LEGEND

- STRIPED DRUM
- ▨ TYPE III BARRICADES
- ⊗ SPECIAL BARRICADE WITH BI-DIRECTIONAL, TYPE 'C' STEADY BURNING LIGHT OR HIGHWAY SIGN AS SPECIFIED (SEE DETAIL)
- ⬢ SEQUENTIAL OR FLASHING ARROW
- ⊏ PORTABLE CHANGEABLE MESSAGE SIGN
- ⊏ PERMANENT TYPE POST MOUNTED SIGN
- ⊕ TEMPORARY POST MOUNTED SIGN
- Ⓚ PORTABLE MOUNTED SIGN - FLAGS NOT REQUIRED
- ▨ WORK AREA
- ▲ TRAFFIC CONE - 28" MIN. - (DAYTIME USE ONLY)
- FLAGGER WITH STOP-SLOW PADDLE
- ⊏ TRAFFIC IMPACT ATTENUATOR (CRASH CUSHION)
- TYPE I CLEAR (WHITE) DELINEATOR - SINGLE FACE
- TYPE I YELLOW DELINEATOR - SINGLE FACE
- ⊏ TYPE I CLEAR (WHITE) DELINEATOR DOUBLE FACE
- TYPE I YELLOW DELINEATOR DOUBLE FACE

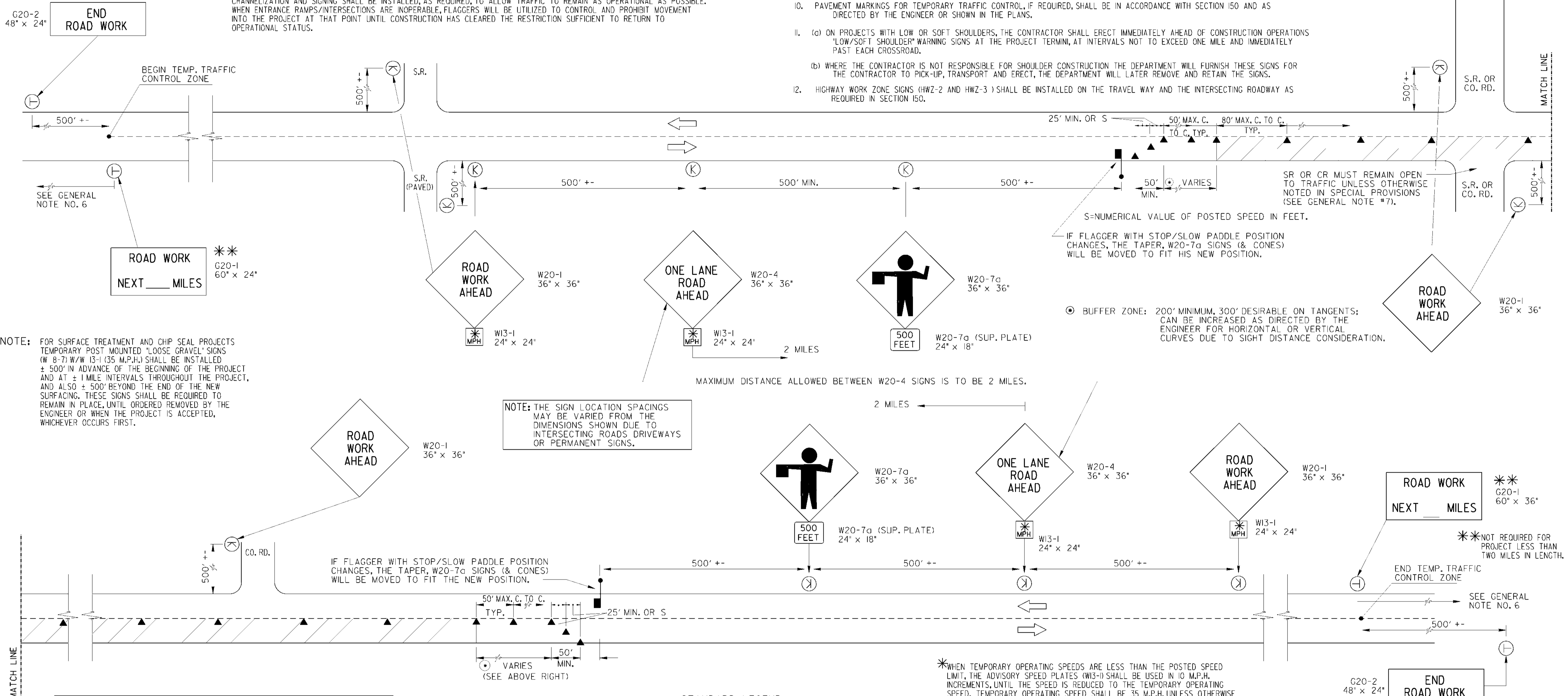


3-30-06		4-24-01		DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISED GENERAL NOTES AND LEGEND, DELETED TWO DETAILS.		SPEC. BAR. SH. SPEC.		REVISION		STANDARD TRAFFIC CONTROL GENERAL NOTES, STANDARD LEGEND, MISCELLANEOUS DETAILS	
GLO		BY		DES. _____ (SUBMITTED) <i>[Signature]</i> STATE ROAD & AIRPORT DESIGN ENGINEER TRA. _____ (APPROVED) <i>[Signature]</i> CHK. _____ CHIEF ENGINEER		NO SCALE AUG., 1999	
						NUMBER 9100	

**GENERAL NOTES:**

- ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS; THE MUTCD; THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150)
- ALL TRAFFIC CONTROL DEVICES SHALL BE AS SHOWN, OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DEVICES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
- ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT ABOVE THE LEVEL OF PAVEMENT EDGE FOR DIRECTIONAL TRAFFIC OF TWO (2) LANES OR LESS AND A MINIMUM OF 7 FEET FOR DIRECTIONAL OF THREE (3) OR MORE LANES. ALL PORTABLE SIGNS AND SIGN MOUNTING DEVICES UTILIZED IN THE WORK SHALL BE NCHRP 350 COMPLIANT. PORTABLE SIGNS MAY BE USED WHEN THE DURATION OF THE WORK IS LESS THAN 3 DAYS.
- WHEN THE CONSTRUCTION AREA HAS ENTRANCE/EXIT RAMP OR INTERSECTIONS, WORK WILL BE PERFORMED IN SUCH A MANNER TO PERMIT TRAFFIC TO OPERATE WITH THE LEAST AMOUNT OF INCONVENIENCE AS POSSIBLE. ADDITIONAL CHANNELIZATION AND SIGNING SHALL BE INSTALLED, AS REQUIRED, TO ALLOW TRAFFIC TO REMAIN AS OPERATIONAL AS POSSIBLE. WHEN ENTRANCE RAMP/INTERSECTIONS ARE INOPERABLE, FLAGGERS WILL BE UTILIZED TO CONTROL AND PROHIBIT MOVEMENT INTO THE PROJECT AT THAT POINT UNTIL CONSTRUCTION HAS CLEARED THE RESTRICTION SUFFICIENT TO RETURN TO OPERATIONAL STATUS.

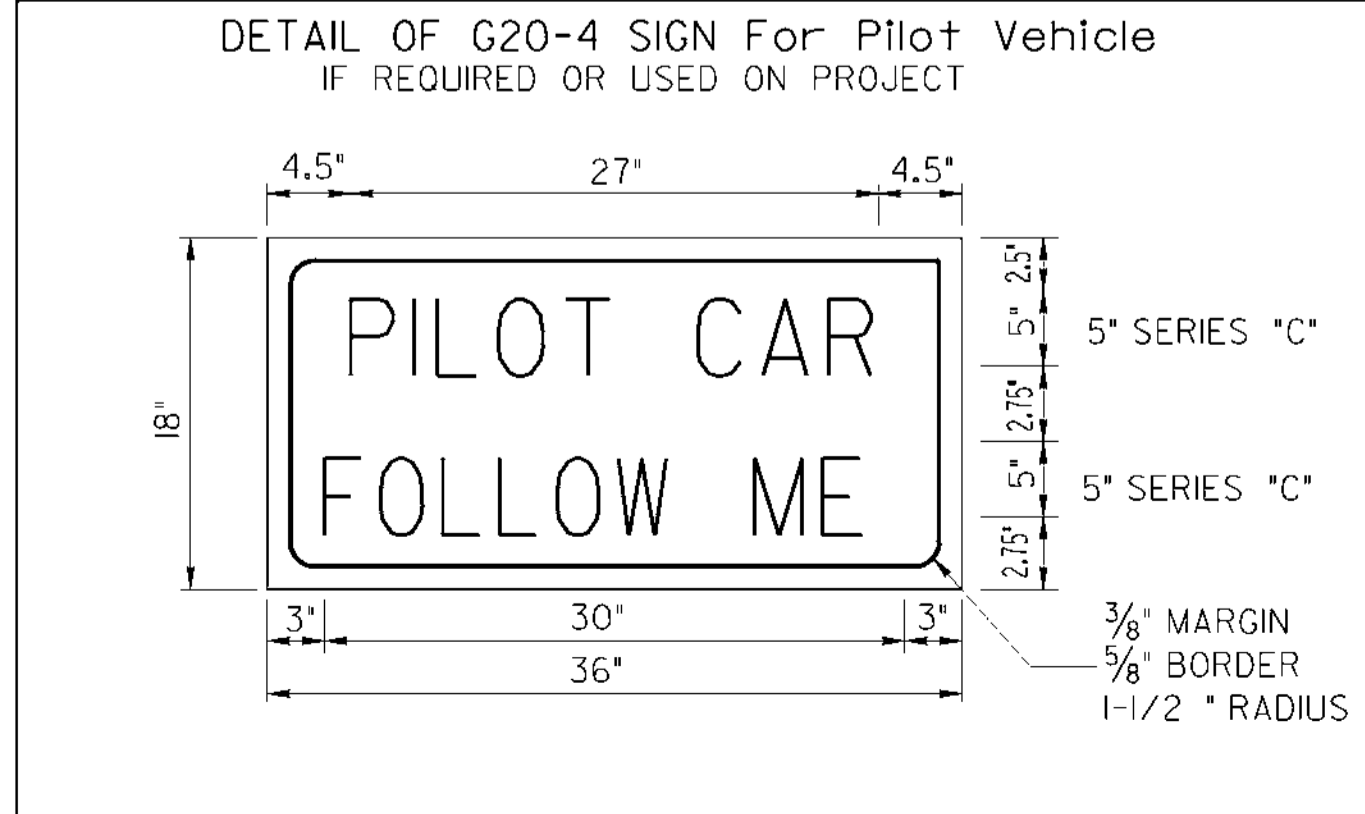
- FOR NIGHT TIME OPERATIONS, DRUMS SHALL HAVE, FOR THE LENGTH OF THE TAPER ONLY, A SIX (6) INCH ORANGE REFLECTORIZED TOP STRIPE ON EACH DRUM IN THE TAPER AS REQUIRED IN SECTION 150. SPACING OF DEVICES SHALL BE AS SHOWN. DURING DAYLIGHT HOURS, CONES (28" MIN.) MAY BE USED IN ADVANCE OF AND THROUGHOUT WORK AREA.
- SIGNS SHOWN HERE ARE IN ADDITION TO ALL ADVANCE WARNING SIGNS REQUIRED IN SECTION 150.
- FLAGGERS SHALL BE PROVIDED AS NECESSARY TO PROHIBIT WRONG DIRECTION OF TRAFFIC THRU WORK AREAS.
- WHEN NOT IN USE, PORTABLE SIGNS SHALL BE REMOVED FROM THE TRAVELWAY SO THAT THE MESSAGE IS NOT VISIBLE TO THE MOTORIST. INTERIM SIGNS THAT ARE PERMANENT MOUNTED SHALL BE COVERED WHEN NOT APPLICABLE. SEE SECTION 150.
- PAYMENT FOR TRAFFIC CONTROL SHALL BE PER SECTION 150.
- PAVEMENT MARKINGS FOR TEMPORARY TRAFFIC CONTROL, IF REQUIRED, SHALL BE IN ACCORDANCE WITH SECTION 150 AND AS DIRECTED BY THE ENGINEER OR SHOWN IN THE PLANS.
- (a) ON PROJECTS WITH LOW OR SOFT SHOULDERS, THE CONTRACTOR SHALL ERECT IMMEDIATELY AHEAD OF CONSTRUCTION OPERATIONS "LOW/SOFT SHOULDER" WARNING SIGNS AT THE PROJECT TERMINI, AT INTERVALS NOT TO EXCEED ONE MILE AND IMMEDIATELY PAST EACH CROSSROAD.
- (b) WHERE THE CONTRACTOR IS NOT RESPONSIBLE FOR SHOULDER CONSTRUCTION THE DEPARTMENT WILL FURNISH THESE SIGNS FOR THE CONTRACTOR TO PICK-UP, TRANSPORT AND ERECT, THE DEPARTMENT WILL LATER REMOVE AND RETAIN THE SIGNS.
- HIGHWAY WORK ZONE SIGNS (HWZ-2 AND HWZ-3) SHALL BE INSTALLED ON THE TRAVEL WAY AND THE INTERSECTING ROADWAY AS REQUIRED IN SECTION 150.



**NOTE:** FOR SURFACE TREATMENT AND CHIP SEAL PROJECTS TEMPORARY POST MOUNTED "LOOSE GRAVEL" SIGNS (W 8-7) W/W 13-1 (35 M.P.H.) SHALL BE INSTALLED ± 500' IN ADVANCE OF THE BEGINNING OF THE PROJECT AND AT ± 1 MILE INTERVALS THROUGHOUT THE PROJECT, AND ALSO ± 500' BEYOND THE END OF THE NEW SURFACING. THESE SIGNS SHALL BE REQUIRED TO REMAIN IN PLACE, UNTIL ORDERED REMOVED BY THE ENGINEER OR WHEN THE PROJECT IS ACCEPTED, WHICHEVER OCCURS FIRST.

**NOTE:** THE SIGN LOCATION SPACINGS MAY BE VARIED FROM THE DIMENSIONS SHOWN DUE TO INTERSECTING ROADS DRIVEWAYS OR PERMANENT SIGNS.

\*WHEN TEMPORARY OPERATING SPEEDS ARE LESS THAN THE POSTED SPEED LIMIT, THE ADVISORY SPEED PLATES (W13-1) SHALL BE USED IN 10 M.P.H. INCREMENTS, UNTIL THE SPEED IS REDUCED TO THE TEMPORARY OPERATING SPEED. TEMPORARY OPERATING SPEED SHALL BE 35 M.P.H. UNLESS OTHERWISE DETERMINED BY THE ENGINEER.



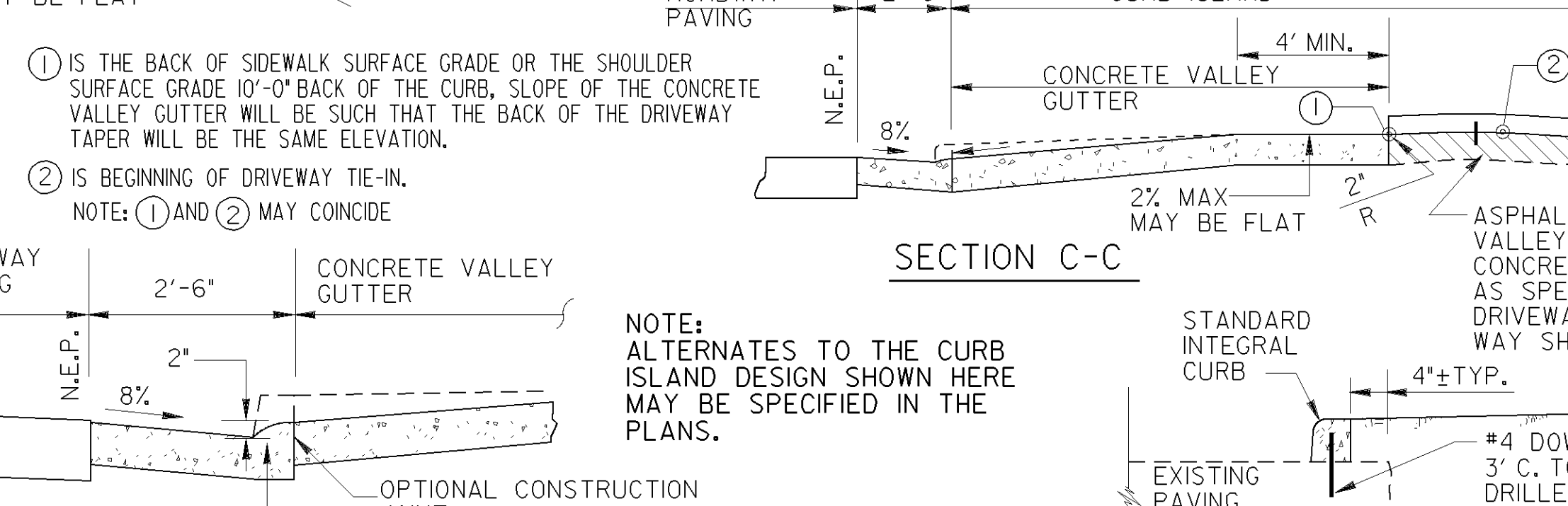
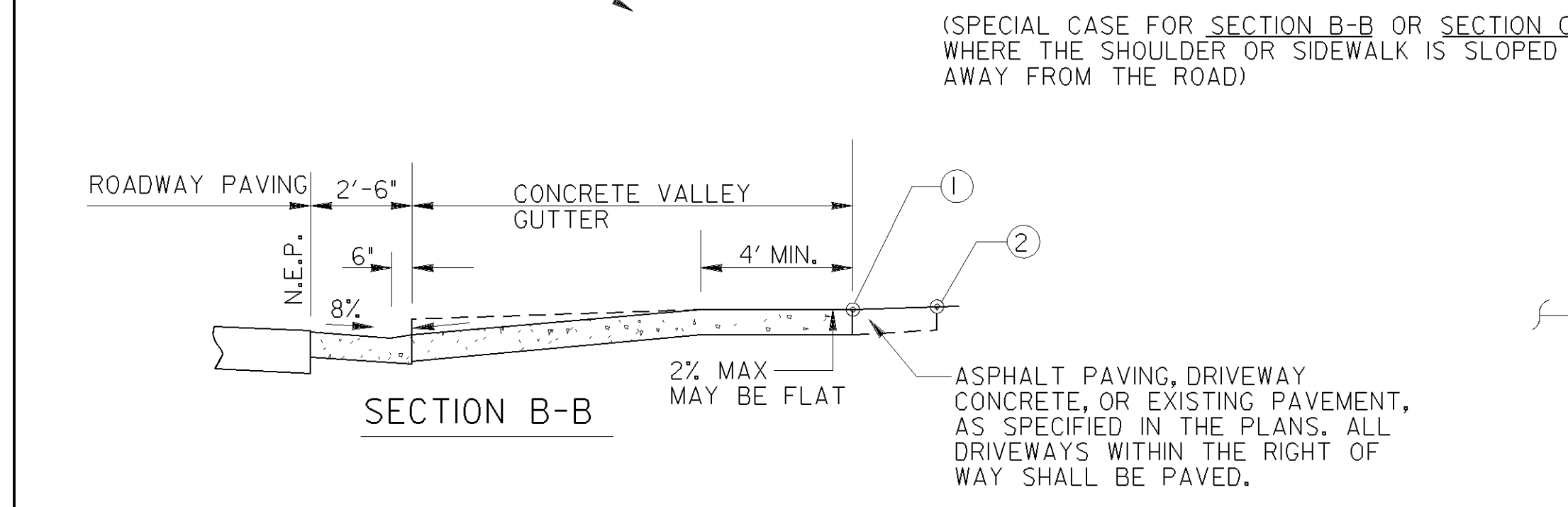
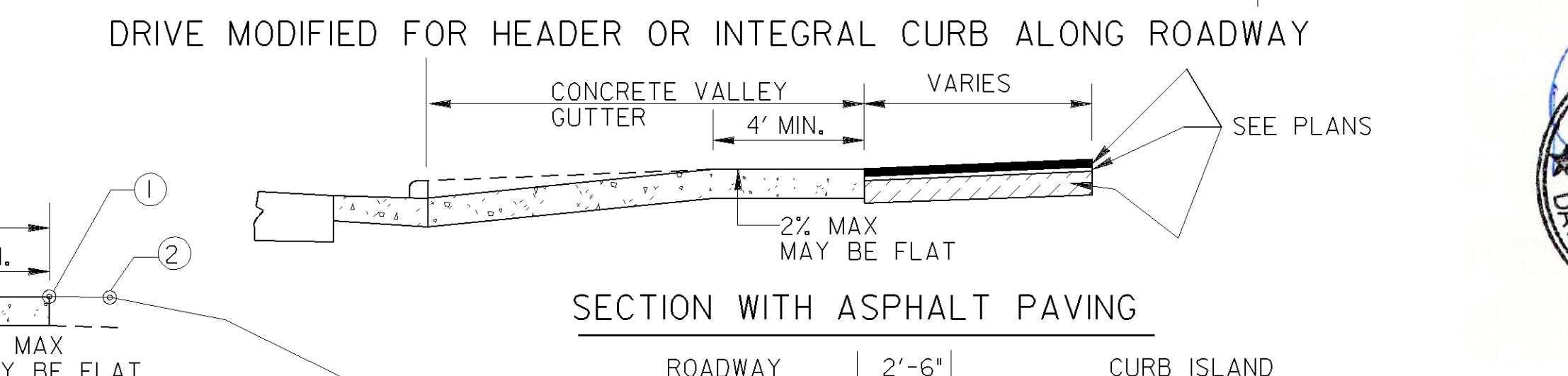
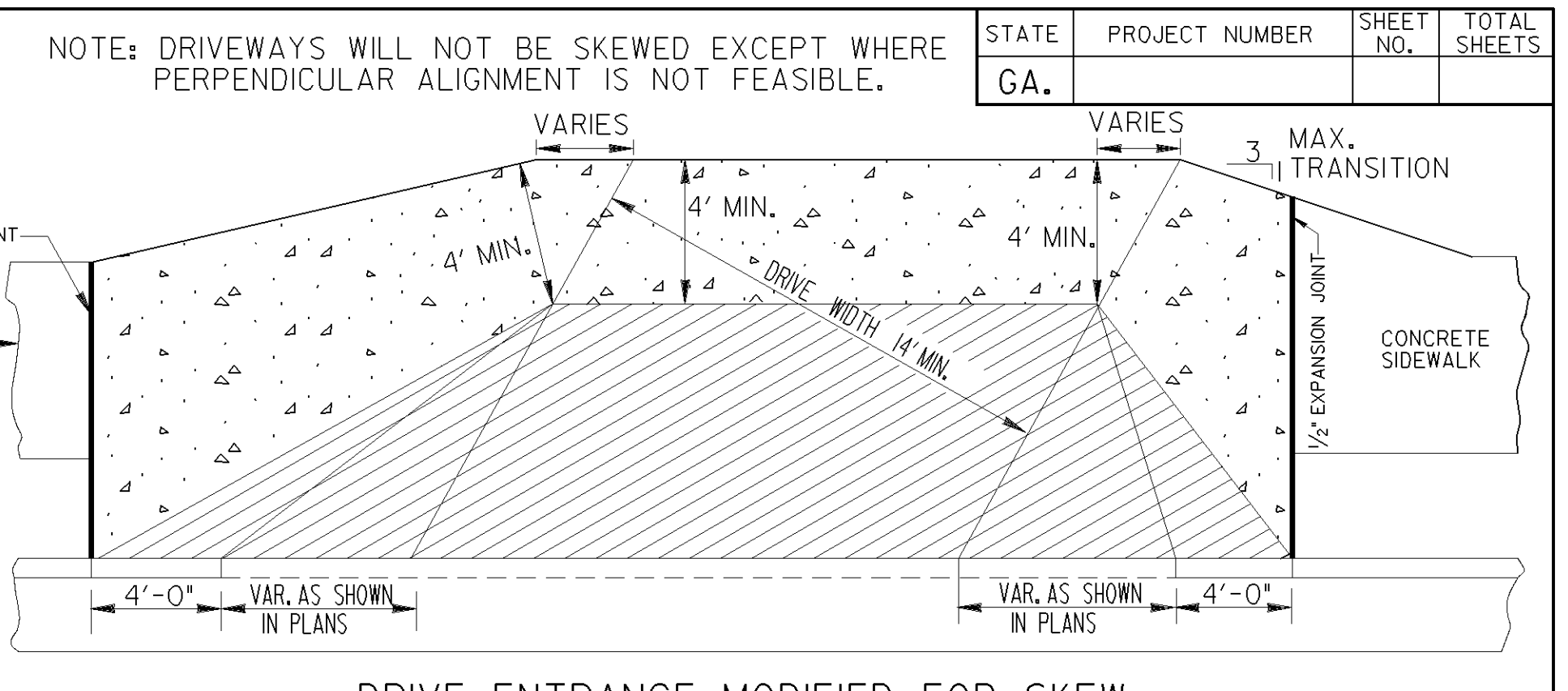
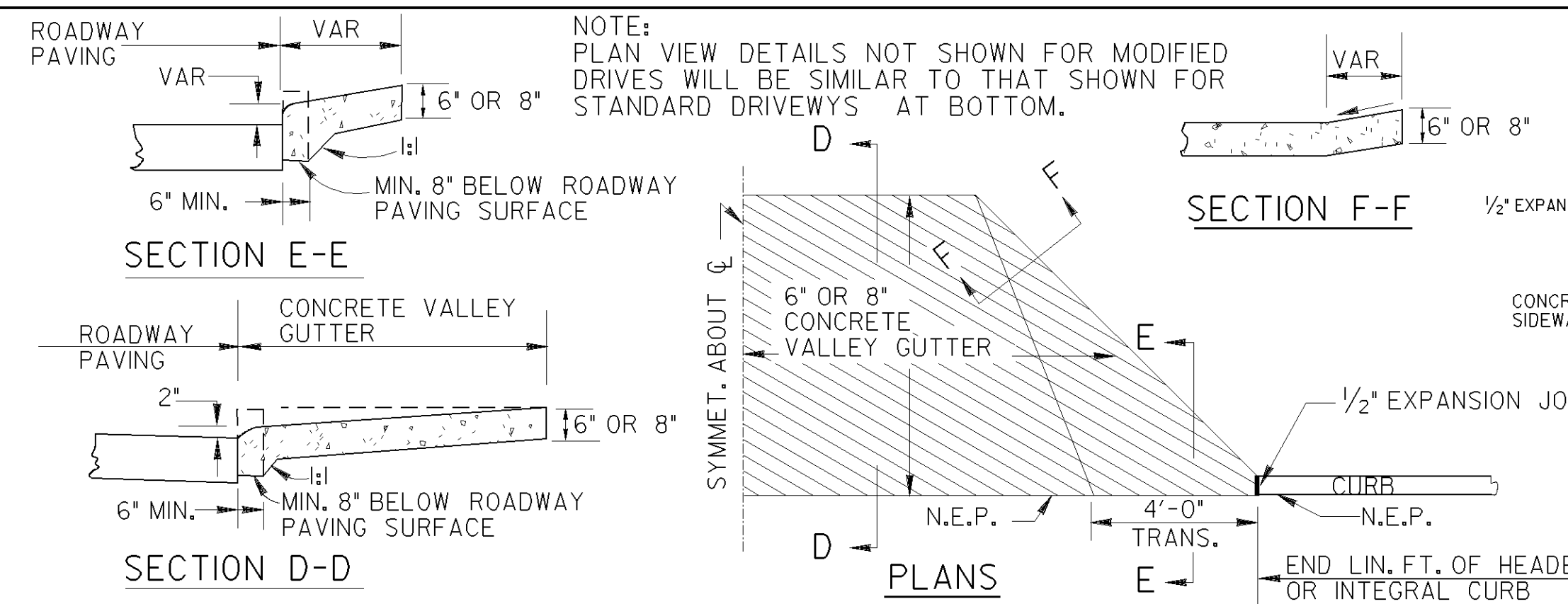
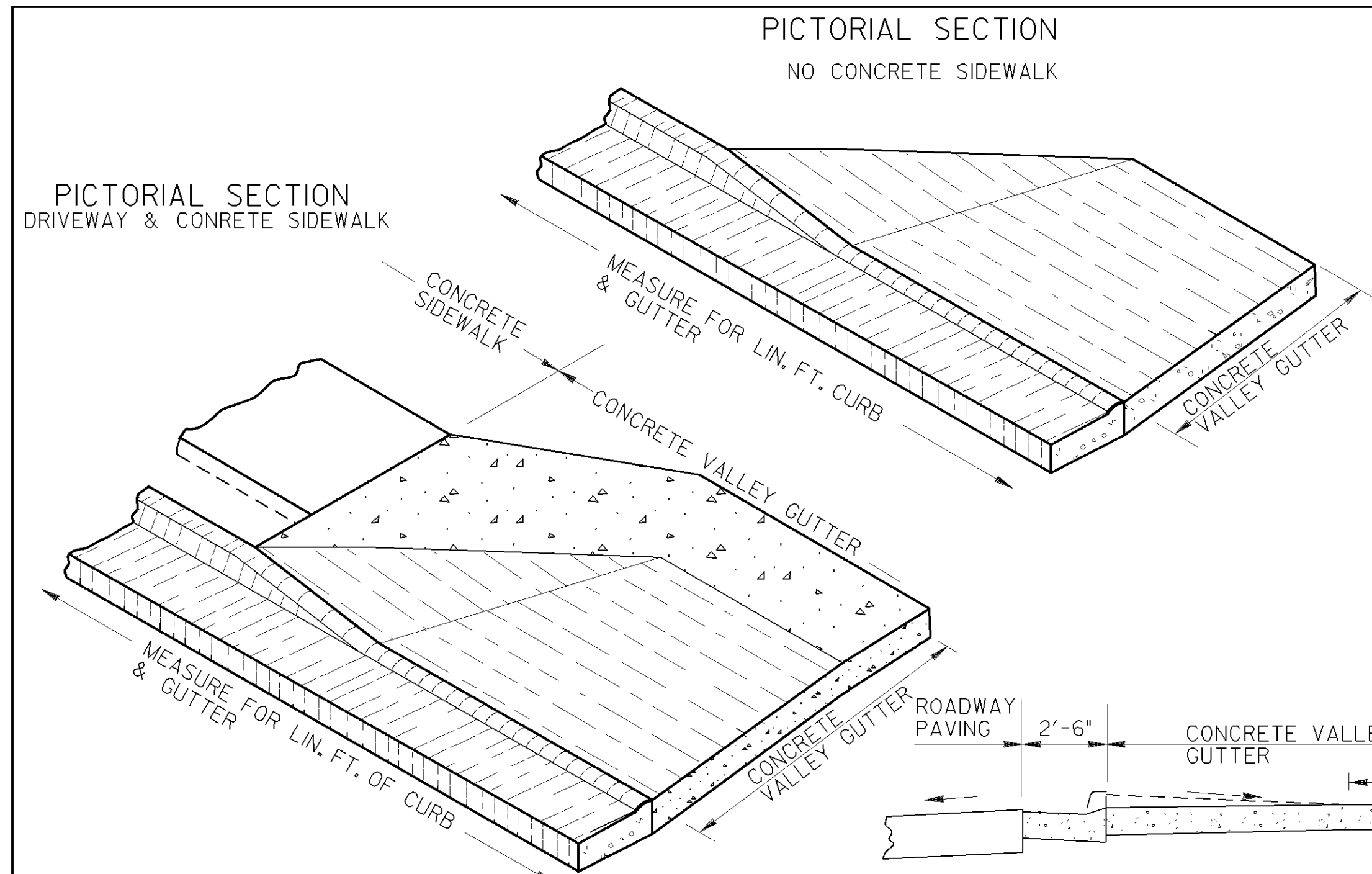
**STANDARD LEGEND**

- STRIPED DRUM
- PERMANENT TYPE POST MOUNTED SIGN (7' MOUNT HEIGHT)
- ⊕ TEMPORARY POST MOUNTED SIGN - (7' MOUNT HEIGHT)
- Ⓚ PORTABLE MOUNTED SIGN - MINIMUM HEIGHT OF 1 FT. ABOVE THE EDGE OF PAVEMENT; INSTALLED AS PER NCHRP 350 TESTING REQUIREMENTS.
- ▨ WORK AREA
- ▲ TRAFFIC CONE - 28" MIN. - DAYTIME USE ONLY
- FLAGGER WITH STOP-SLOW PADDLE

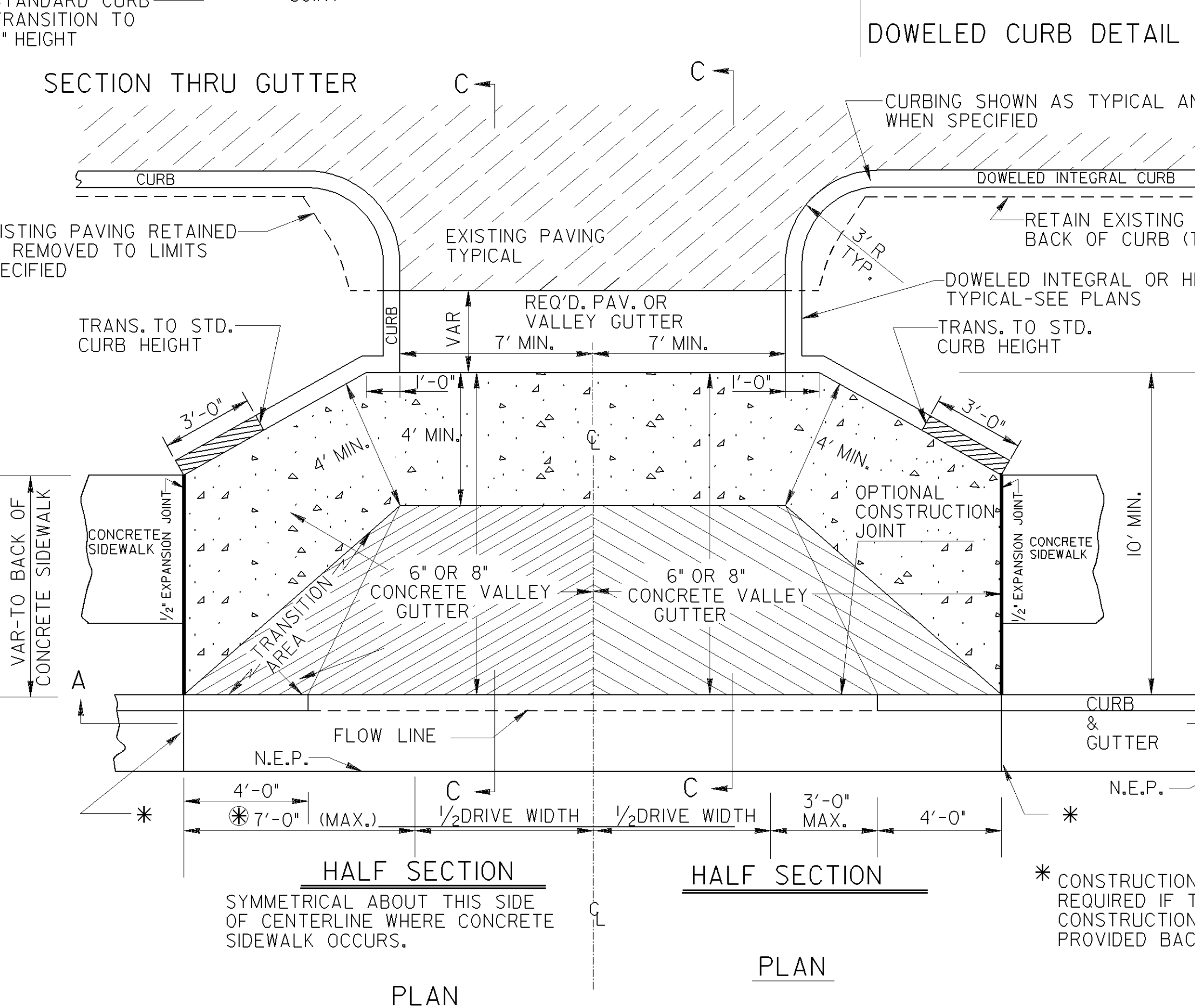
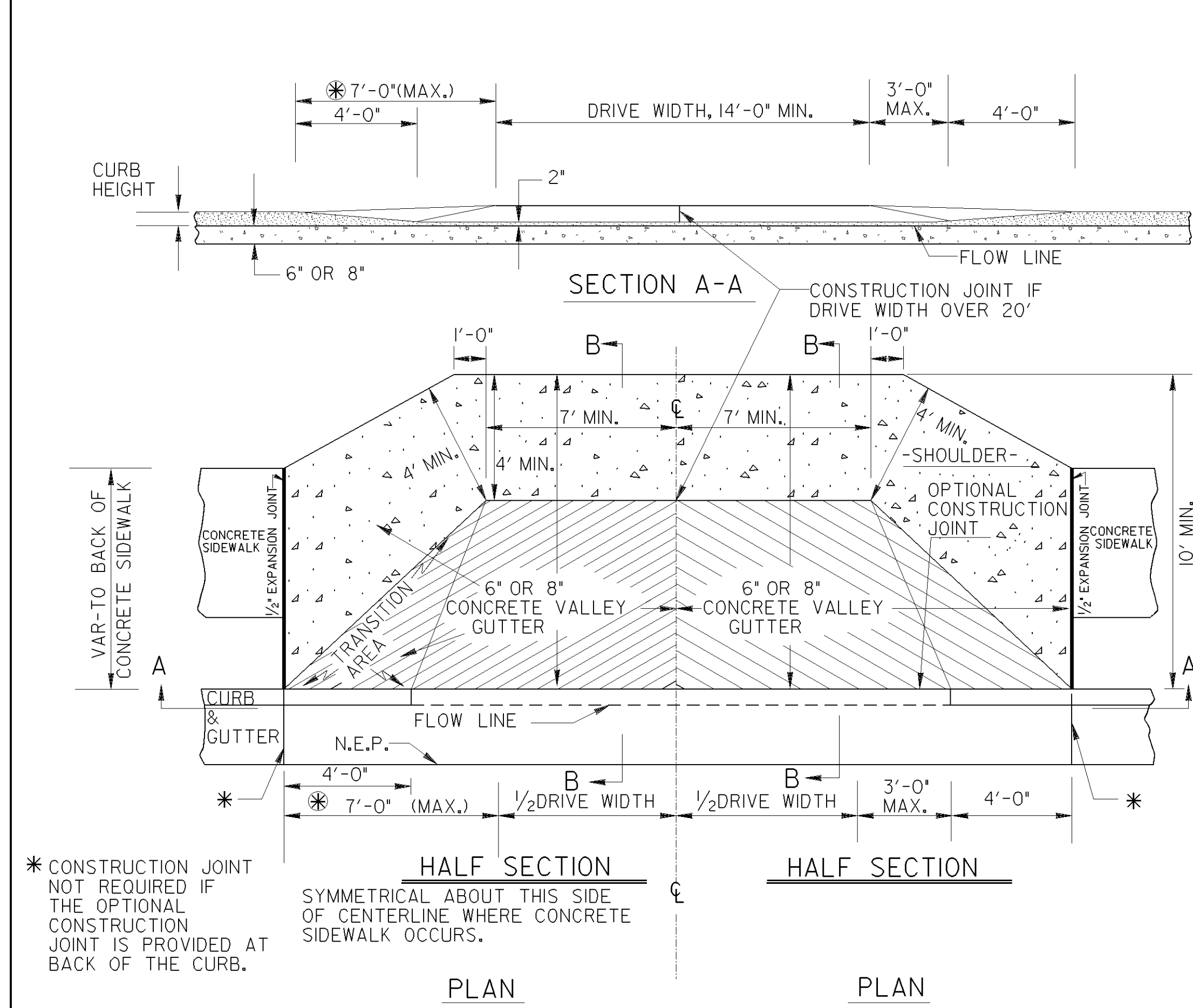


DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
STANDARD TRAFFIC CONTROL DETAIL FOR LANE CLOSURE ON TWO-LANE HIGHWAY	
NO SCALE	REV. & REDR. JULY, 1999
DES. _____ TRA. _____ CHK. _____	(SUBMITTED) <i>[Signature]</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>[Signature]</i> CHIEF ENGINEER
NUMBER <b>9102</b>	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



- GENERAL NOTES:**
- QUANTITIES SHALL BE MEASURED AS FOLLOWS:  
 (A) CONCRETE CURB & GUTTER ALONG ROADWAY---  
 LIN. FT. OF CURB & GUTTER SHALL BE MEASURED FOR PAYMENT CONTINUOUS THRU THE DRIVE ENTRANCES. PAYMENT FOR CURB & GUTTER SHALL INCLUDE DAPPING DOWN THE TOP PORTION OF THE CURB, SQ. YDS. OF CONCRETE VALLEY GUTTER SHALL BE MEASURED FOR PAYMENT TO THE BACK OF THE CURB LINE.  
 (B) HEADER (OR INTEGRAL) CURB ALONG ROADWAY---  
 LIN. FT. OF CURB SHALL BE MEASURED FOR PAYMENT TO THE BEGINNING OF DRIVE WAY, SQ. YDS. OF CONCRETE VALLEY GUTTER SHALL BE MEASURED FOR PAYMENT TO THE EDGE OF THE ROADWAY PAVING.
  - N.E.P. IS DEFINED AS THE POINT WHERE THE ROADWAY PAVING MEETS THE CURB & GUTTER, OR HEADER CURB, OR FACE OF THE INTEGRAL CURB.
  - DRIVES RECONSTRUCTED SHALL BE REPLACED IN KIND, I.E. ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND PAVED TO THE RIGHT OF WAY LINE.
  - SEE STANDARD 9032-B FOR DETAILS OF CONCRETE CURB & GUTTER, HEADER CURBS AND DOWELED INTEGRAL CURBS.
  - WIDTHS OF COMMERCIAL DRIVEWAYS SHALL COMPLY WITH CURRENT "RULES AND REGULATIONS FOR DRIVEWAY AND ENCROACHMENT CONTROL". WIDTHS OF RESIDENTIAL NON-COMMERCIAL DRIVEWAYS SHALL BE AS SPECIFIED IN THE PLANS.
  - THE SLOPE OF THE "TRANSITION AREA" OF THE CONCRETE VALLEY GUTTER SHALL NOT BE STEEPER THAN 8% (2:1) WHERE SIDEWALKS ARE LOCATED.
  - MAXIMUM DRIVEWAY GRADES SHOWN BELOW ARE INTENDED FOR RESIDENTIAL DRIVEWAYS WHERE FLATTER GRADES ARE NOT FEASIBLE. GRADES FOR COMMERCIAL DRIVEWAYS OR FOR TRUCKS SHALL NOT BE GREATER THAN 11% UNLESS SPECIFIED OTHERWISE.
- Guidelines For Usage On Metric Projects*
- When these details are incorporated into plans and/or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" = 25mm, 4" = 100mm, and 12" = 300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.



**DOELED CURB DETAIL**

STANDARD CURB TRANSITION TO 2" HEIGHT

OPTIONAL CONSTRUCTION JOINT

EXISTING PAVING

#4 DOWEL BARS, 12" LONG 3' C. TO C. DRIVEN OR DRILLED AND GROUTED IN

V.C.	MAXIMUM GI	
	CUT	FILL
5'	27%	16.61%
10'	28%	27%

V.C.	MAX. ALGEBRAIC GRADE CHANGE	
	SAG	CREST
5'	2%	25%
10'	25%	36%

**MAXIMUM DRIVEWAY GRADES** (SEE GEN. NOTE 7)

**RESIDENTIAL, COMMERCIAL OR NON-COMMERCIAL DRIVE**

**DRIVEWAY WITH CURB ISLAND** (SHOWN ADJACENT TO EXISTING PAVED PARKING AREA)

\* CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED AT BACK OF THE CURB.

\* CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED BACK OF CURB.

\* 7'-0" OR DISTANCE EQUAL TO THAT FROM BACK OF CURB TO BACK OF SIDEWALK, WHICHEVER IS LESSER

**This Detail Replaces Ga Standard 6050**

**DEPARTMENT OF TRANSPORTATION**  
STATE OF GEORGIA

**CONSTRUCTION DETAIL**  
**DRIVEWAYS WITH TAPERED ENTRANCES**  
**CONCRETE VALLEY GUTTERS**

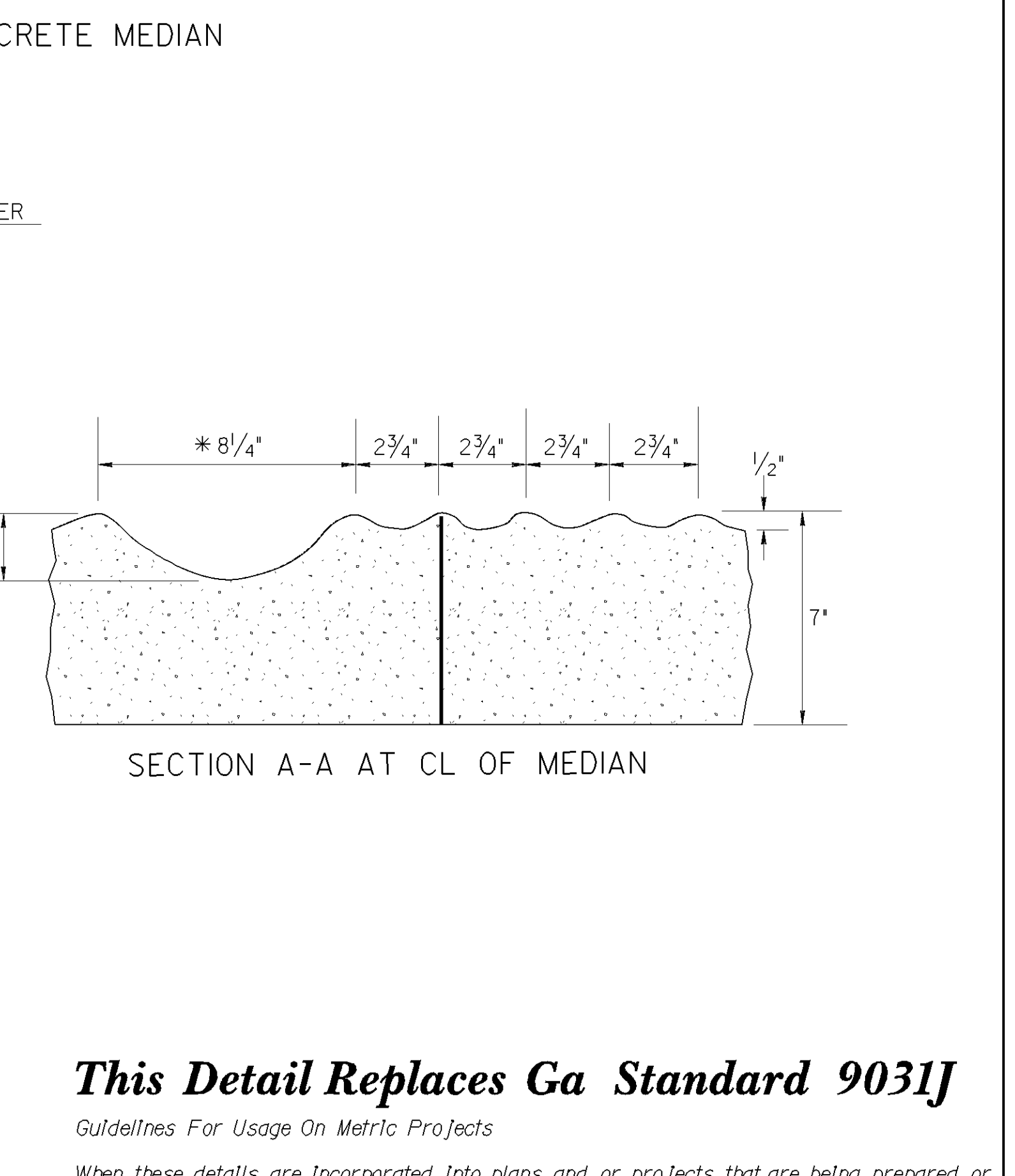
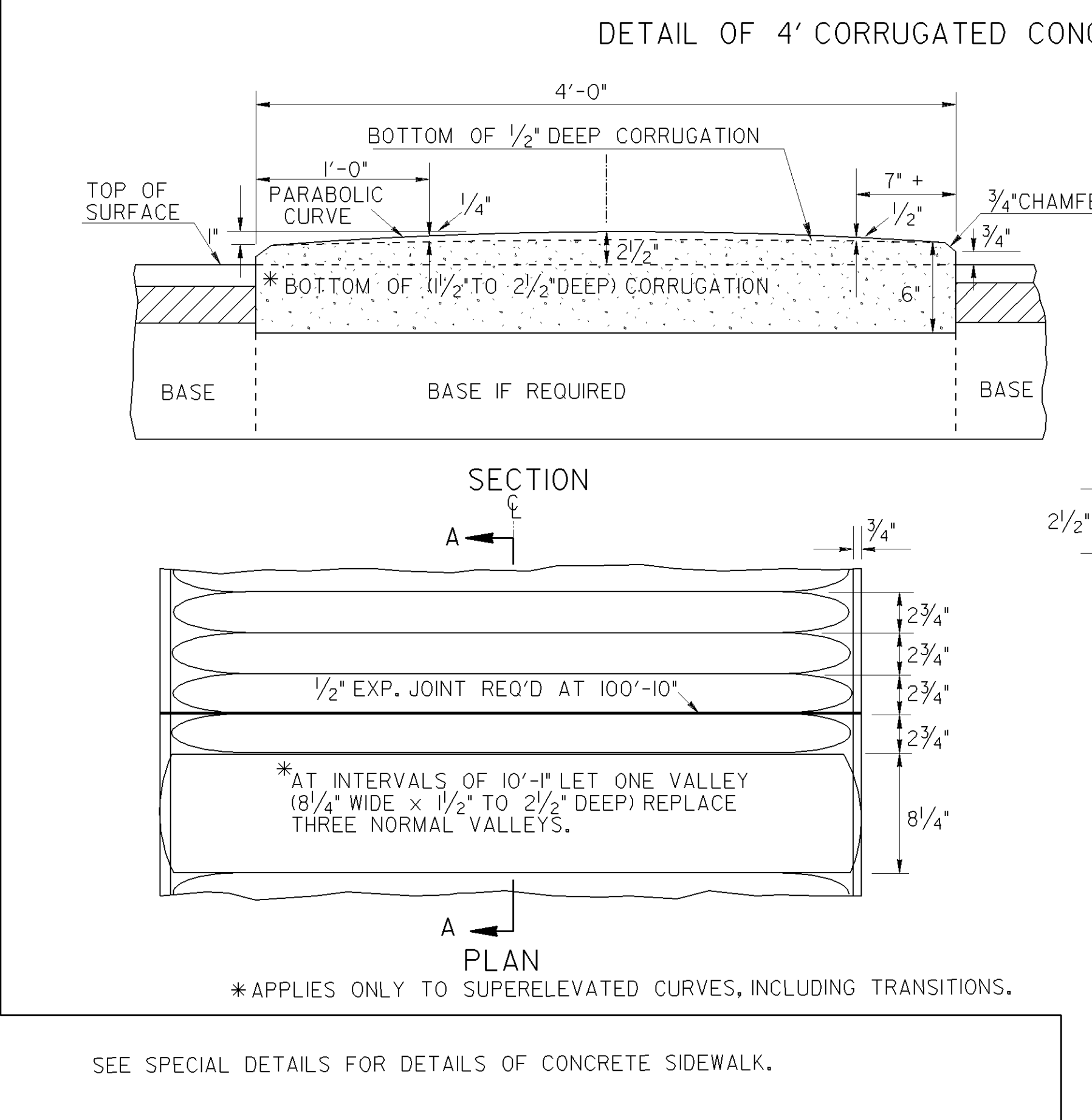
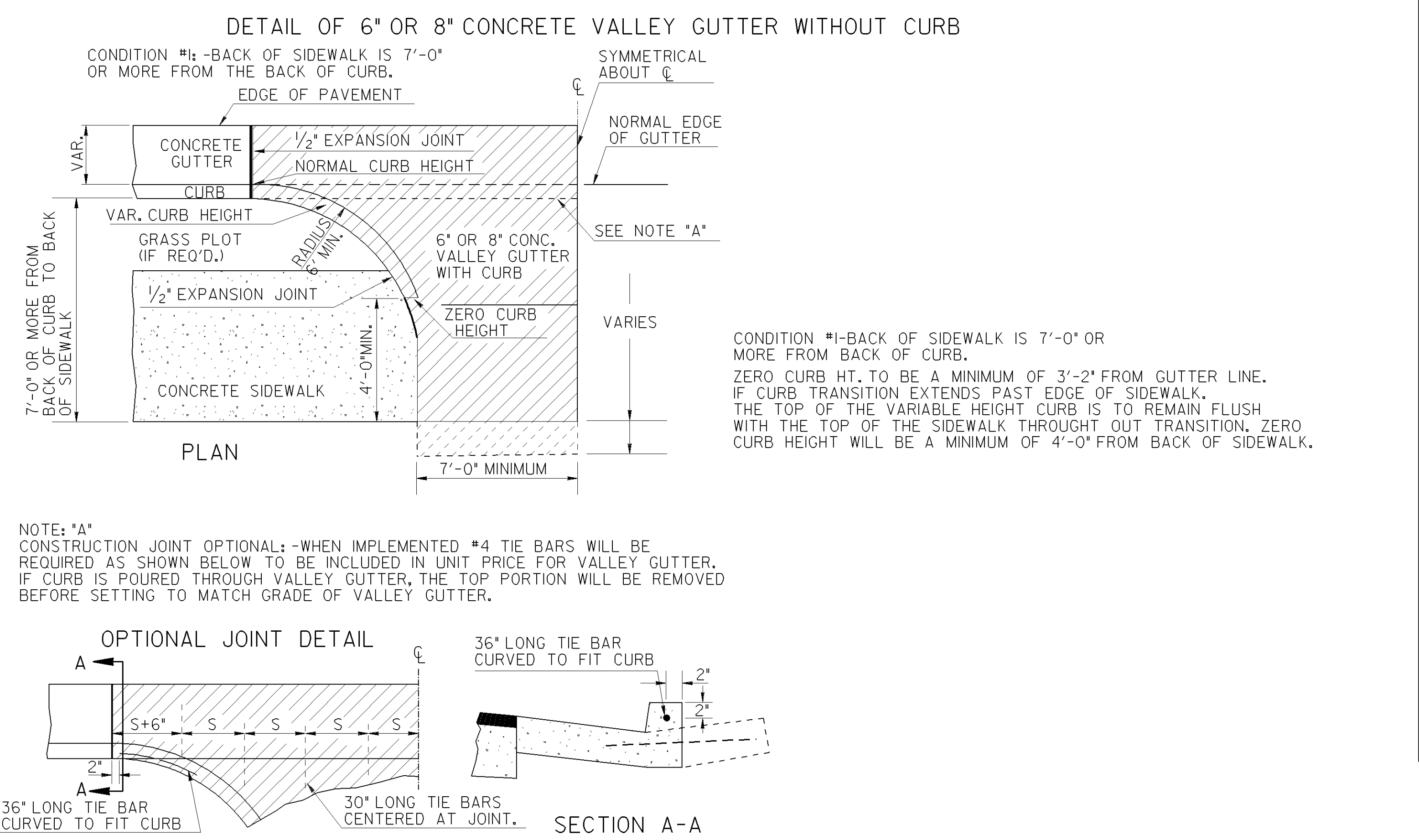
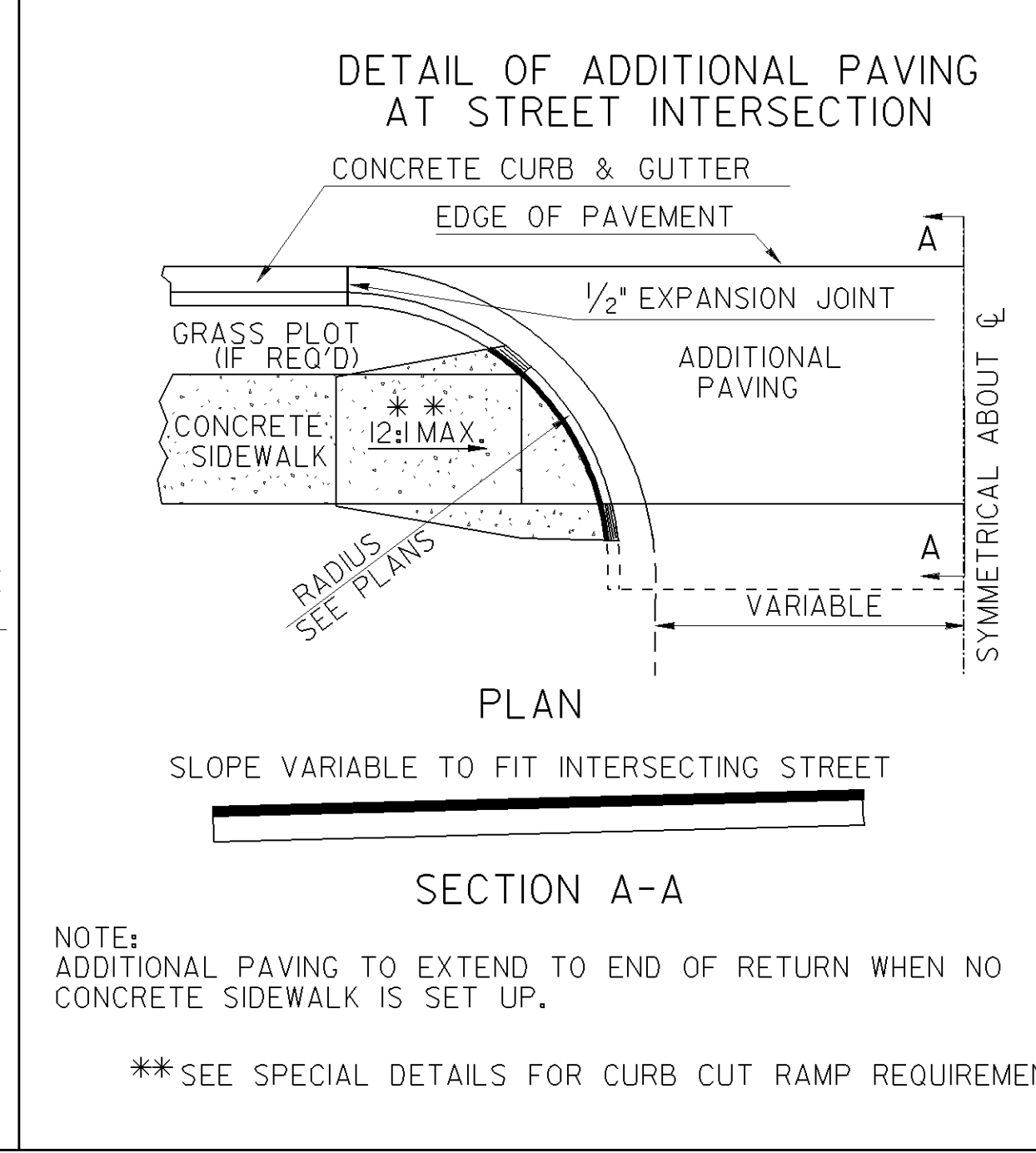
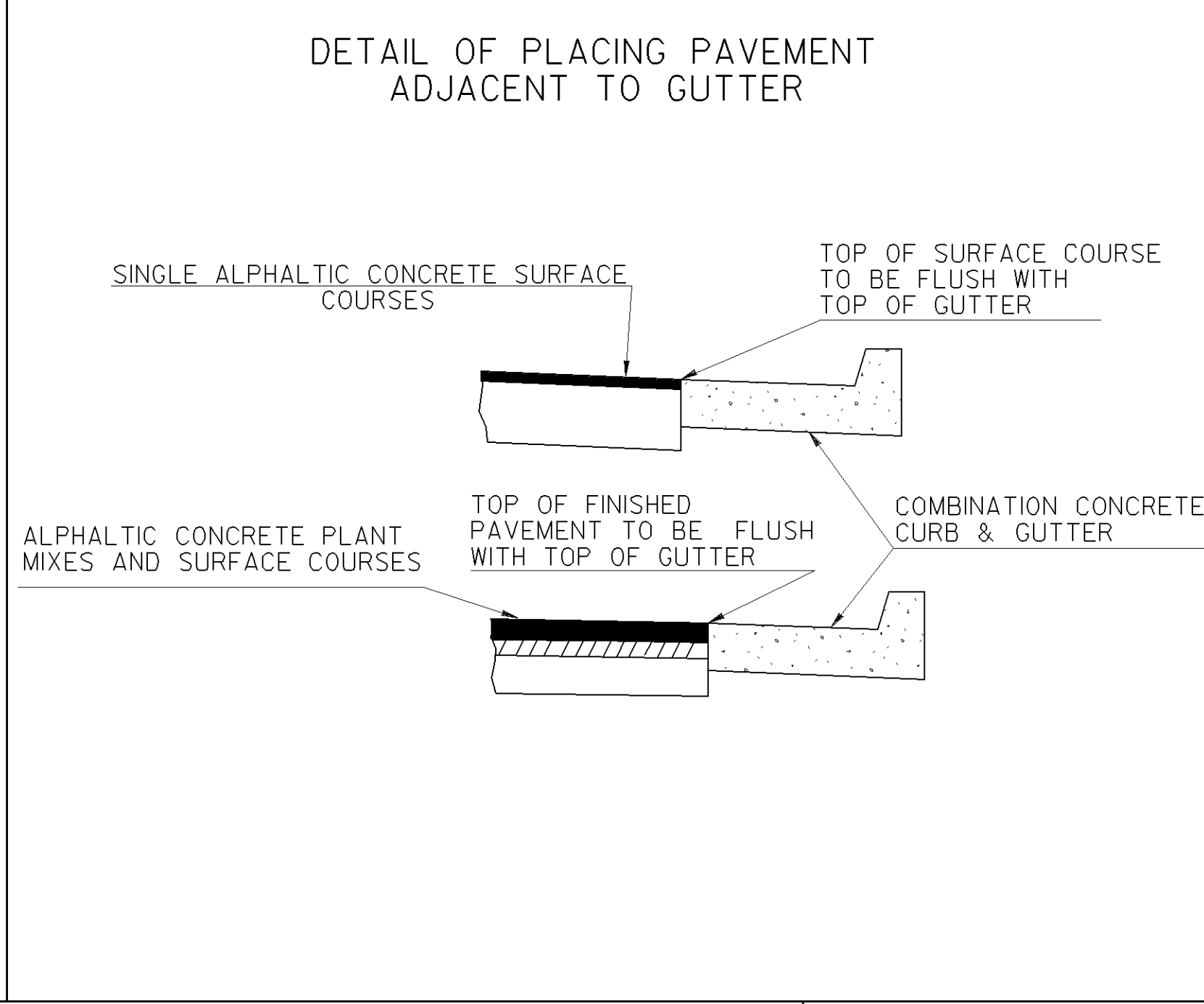
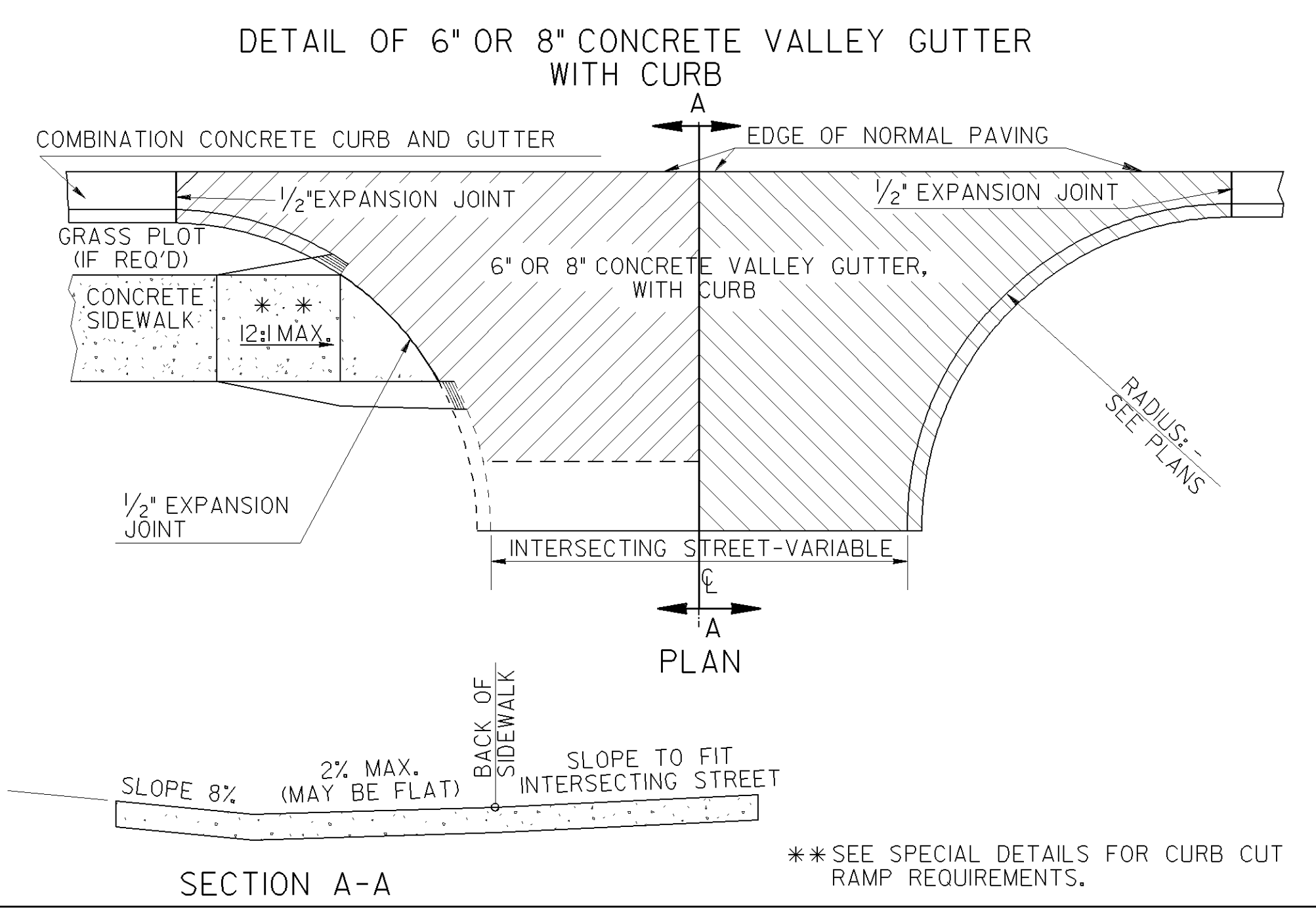
REV. PAVEMENT NOTES, REV.	7-21-11	DATE
12" TO 14" MIN., REV. SWALK	4-11-02	DATE
REVISED	4-3-02	DATE
BY	REVISION	DATE

NO SCALE

MARCH 12, 2002

NUMBER  
**AI**

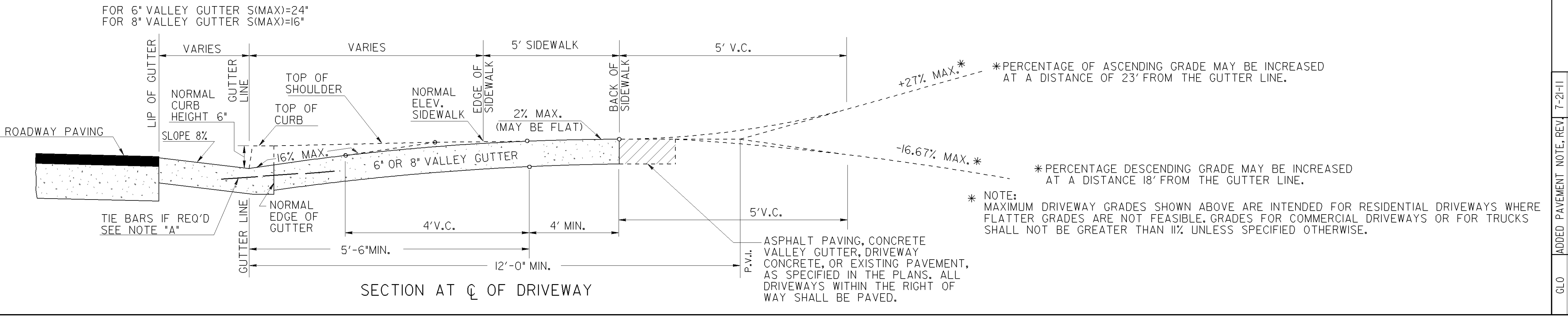
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



**This Detail Replaces Ga Standard 9031J**

Guidelines For Usage On Metric Projects

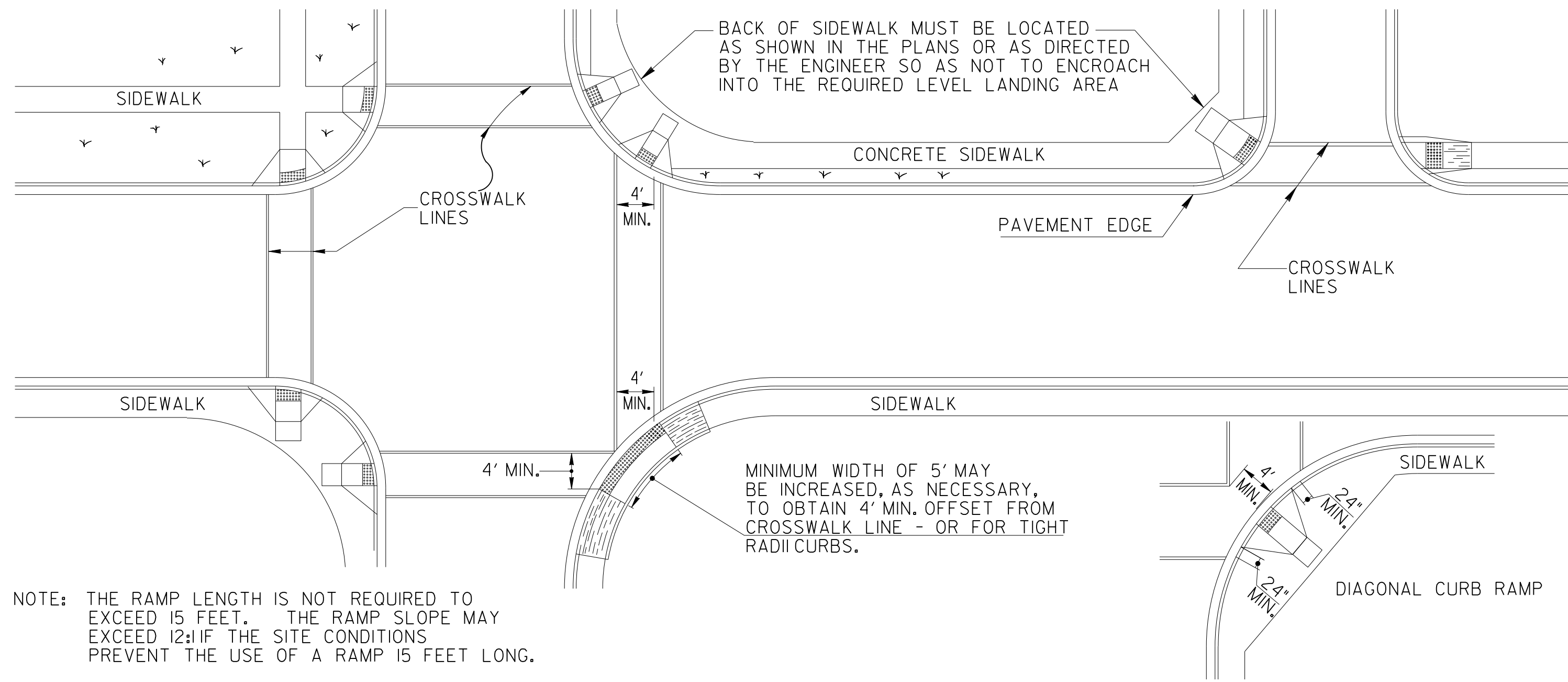
When these details are incorporated into plans and/or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1"=25mm, 4"=100mm, and 12" or 1'=300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.



DEPARTMENT OF TRANSPORTATION		STATE OF GEORGIA	
CONSTRUCTION DETAIL			
CONCRETE VALLEY GUTTER AT STREET INTERSECTION			
6" OR 8" CONCRETE VALLEY GUTTER AT DRIVE			
PLACING PAVEMENT ADJACENT TO GUTTER			
ADDITIONAL PAVING AT STREET INTERSECTION			
4' CORRUGATED CONCRETE MEDIAN			
NO SCALE		MARCH 12, 2002	
NUMBER		A2	



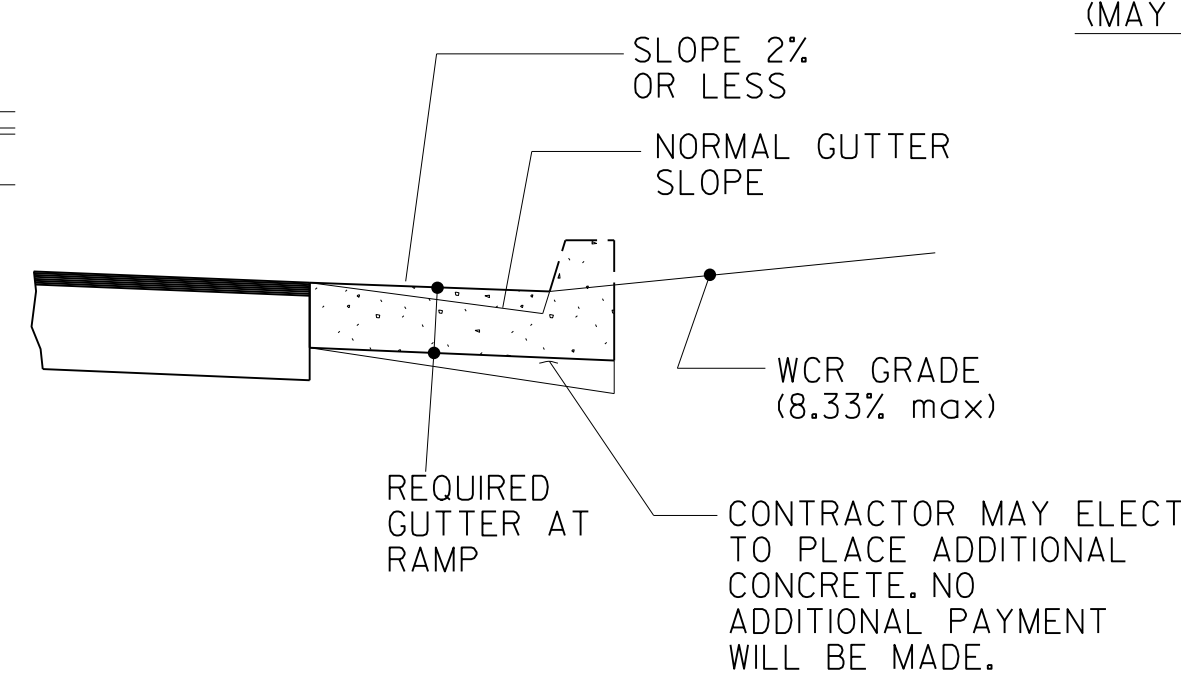
### TYPICAL LOCATIONS FOR CURB CUT RAMPS - PLAN VIEW



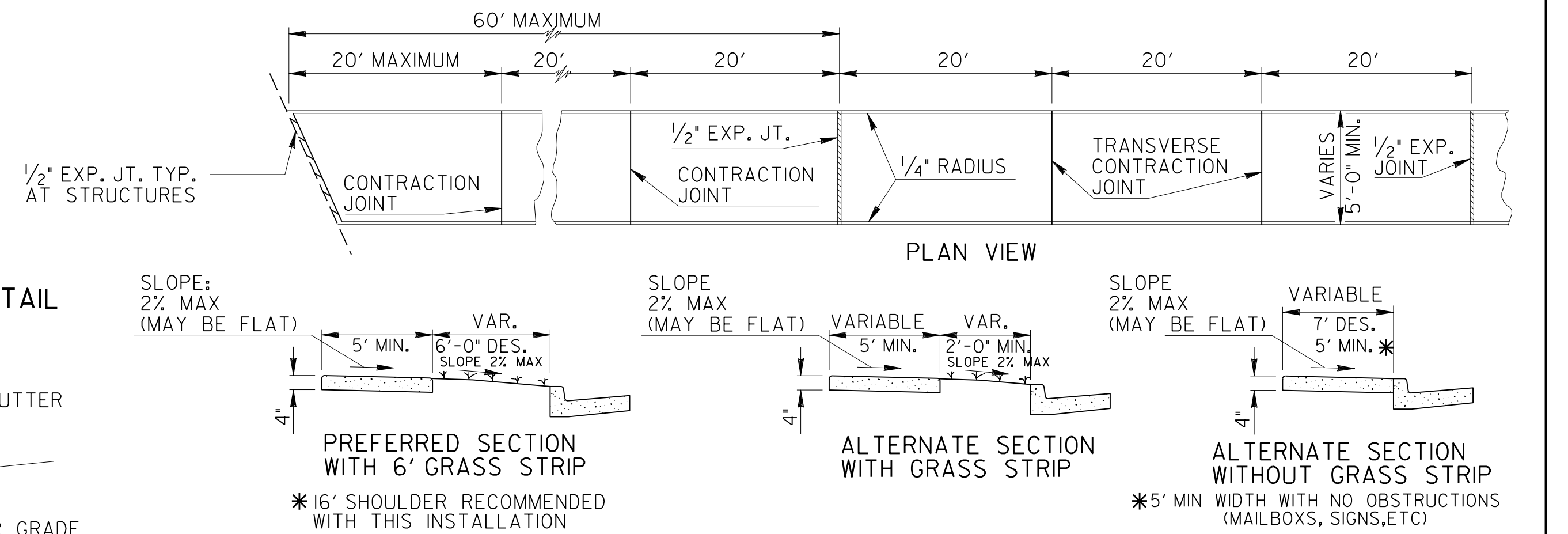
NOTE: THE RAMP LENGTH IS NOT REQUIRED TO EXCEED 15 FEET. THE RAMP SLOPE MAY EXCEED 12% IF THE SITE CONDITIONS PREVENT THE USE OF A RAMP 15 FEET LONG.



### GUTTER TRANSITION DETAIL



### CONCRETE SIDEWALK DETAILS



NOTES FOR CONCRETE SIDEWALK:

- A. CONCRETE TO BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BOOMS.
- B. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT. INTERVALS. ALL EDGES TO BE ROUNDED TO 1/4" RADIUS.
- C. 1/2" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS.

NOTES FOR CURB CUT RAMPS:

1. CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS OR CONTRACT SPECIFY OTHERWISE.
  - a) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED.
  - b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS.
  - c) WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED.
2. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMPS WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED FINISH.
3. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE.
4. WHERE RAMPS ARE LOCATED IN RADII, THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE.
5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOMETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAMP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12%.
6. 1 IN. FT. OF CURB AND GUTTER WILL INCLUDE THE TRANSITIONED CURB IN FRONT OF RAMPS. SO. YDS. OF CONCRETE SIDEWALK AND CONCRETE MEDIAN PAVING WILL INCLUDE RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR CURB RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR SAWING AND REMOVING EXISTING SIDEWALK OR CURB WHERE NECESSARY FOR RAMP CONSTRUCTION.
7. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT, THE PAVEMENT SHALL BE REMOVED TO PROVIDE A MINIMUM THICKNESS OF 3 INCHES OF CONCRETE AT ALL LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF THE PAVEMENT.
8. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL INTERSECTIONS WITH PUBLIC STREETS, SIGNALIZED COMMERCIAL DRIVEWAYS, AND COMMERCIAL DRIVEWAYS WITH AN AADT OF 25 VPD.

### Type A

(Perpendicular)  
(The Preferred Ramp)

Back of sidewalk shall be located as shown in the plans or as directed by the Engineer so as not to encroach into the required landing area.

DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	10 inches
2 inches	1'-8"
3 inches	2'-6"
4 inches	3'-4"
5 inches	4'-2"
6 inches	5 feet

### Type B

(Parallel)

(Normally used when space is not available for a landing at the top of a Type A Ramp)

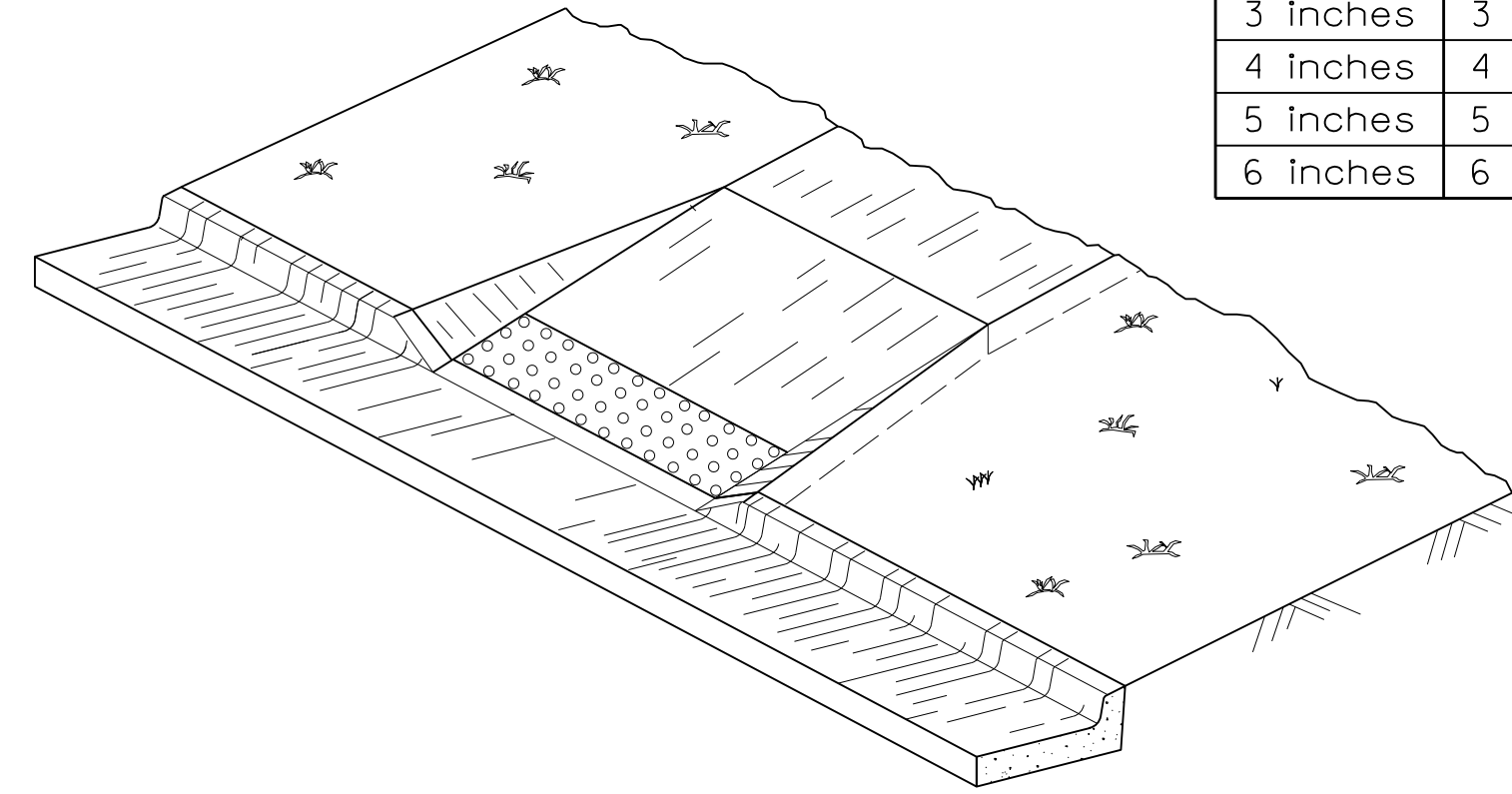
3 ft. wide landing to be used only with a 5 ft wide sidewalk with no offset to the back of the curb.

### Type D

(Perpendicular)

(Normally used when the sidewalk ties directly into the crosswalk)

DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	1 foot
2 inches	2 feet
3 inches	3 feet
4 inches	4 feet
5 inches	5 feet
6 inches	6 feet



IN AREAS WHERE THE GUTTER HAS A SLOPE 1" IN 1' END NORMAL GUTTER SLOPE AT A DISTANCE OF 6 TO 10 FEET FROM THE RAMP AND BEGIN TRANSITION TO A FLAT GUTTER SLOPE, NORMAL GUTTER SLOPE SHALL BE RESUMED AT A SIMILAR DISTANCE BEYOND THE RAMP.

### Type C

(Parallel)

### Skewed Ramp Details

(Applies to Type A Type D Ramps Only)

WHEN THE RAMP CENTERLINE IS NOT PERPENDICULAR TO THE CURB A LEVEL LANDING AREA WITH SLOPES LESS THAN 2% MUST BE PROVIDED AT THE BOTTOM OF THE RAMP.

BOTTOM OF RAMP SHALL BE PERPENDICULAR TO THE RAMP CENTERLINE.

Top of Ramp

SLOPE: 2% MAX.

SLOPE: 2% MAX.

SLOPE: 2% MAX.

SLOPE: 2% MAX.

SLOPE: 2% MAX.

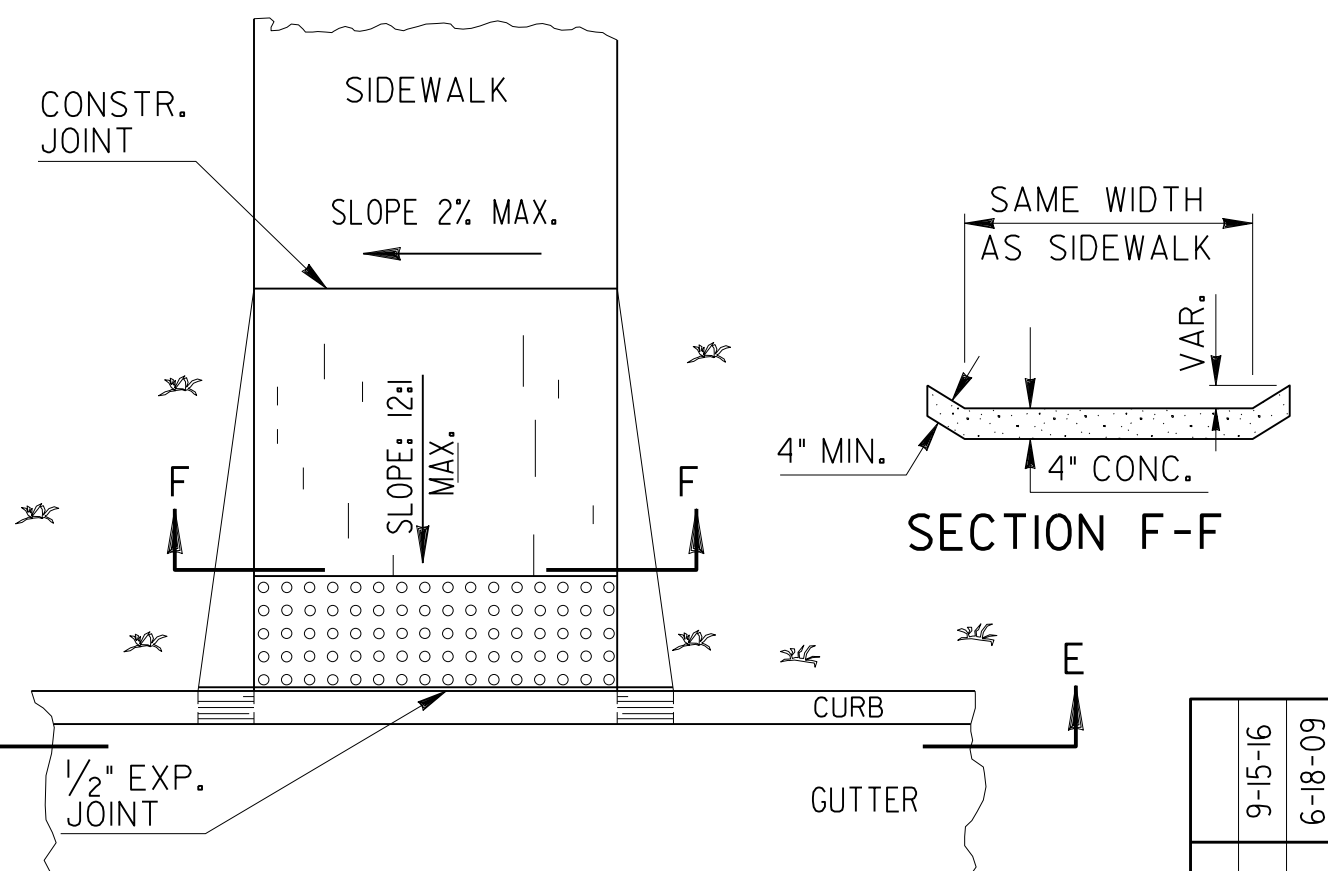
SLOPE: 2% MAX.

SLOPE: 2% MAX.

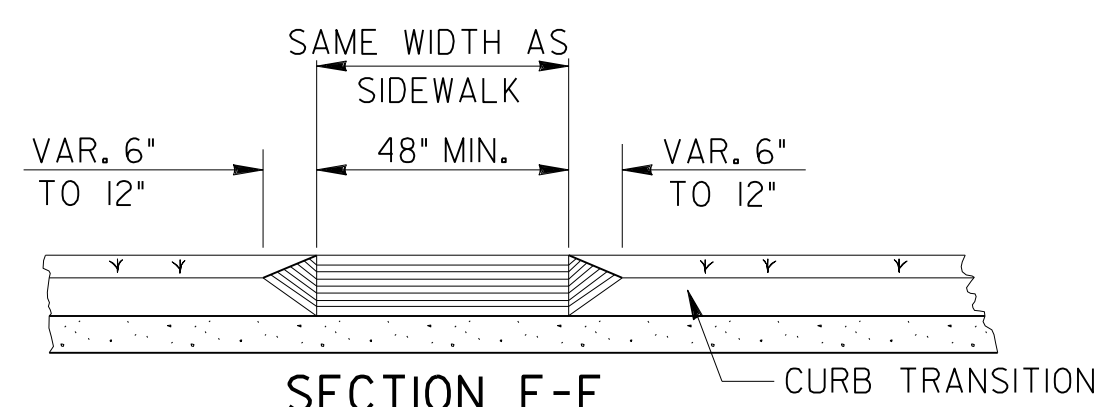
SLOPE: 2% MAX.

SLOPE: 2% MAX.

SLOPE: 2% MAX.



PLAN VIEW



SECTION E-E

### This Detail Replaces Ga Standard 9031W

Guidelines For Usage On Metric Projects

When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" = 25mm, 4" = 100mm, and 12" or 1' = 300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

REVISED	DATE	REVISION
9-15-16		
6-18-09		
6-18-09		
5-10-06		
2-21-03		
2-10-03		
7-29-02		
5-29-02		
5-23-02		
5-13-02		
4-29-02		
4-11-02		
4-3-02		
3-28-02		

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

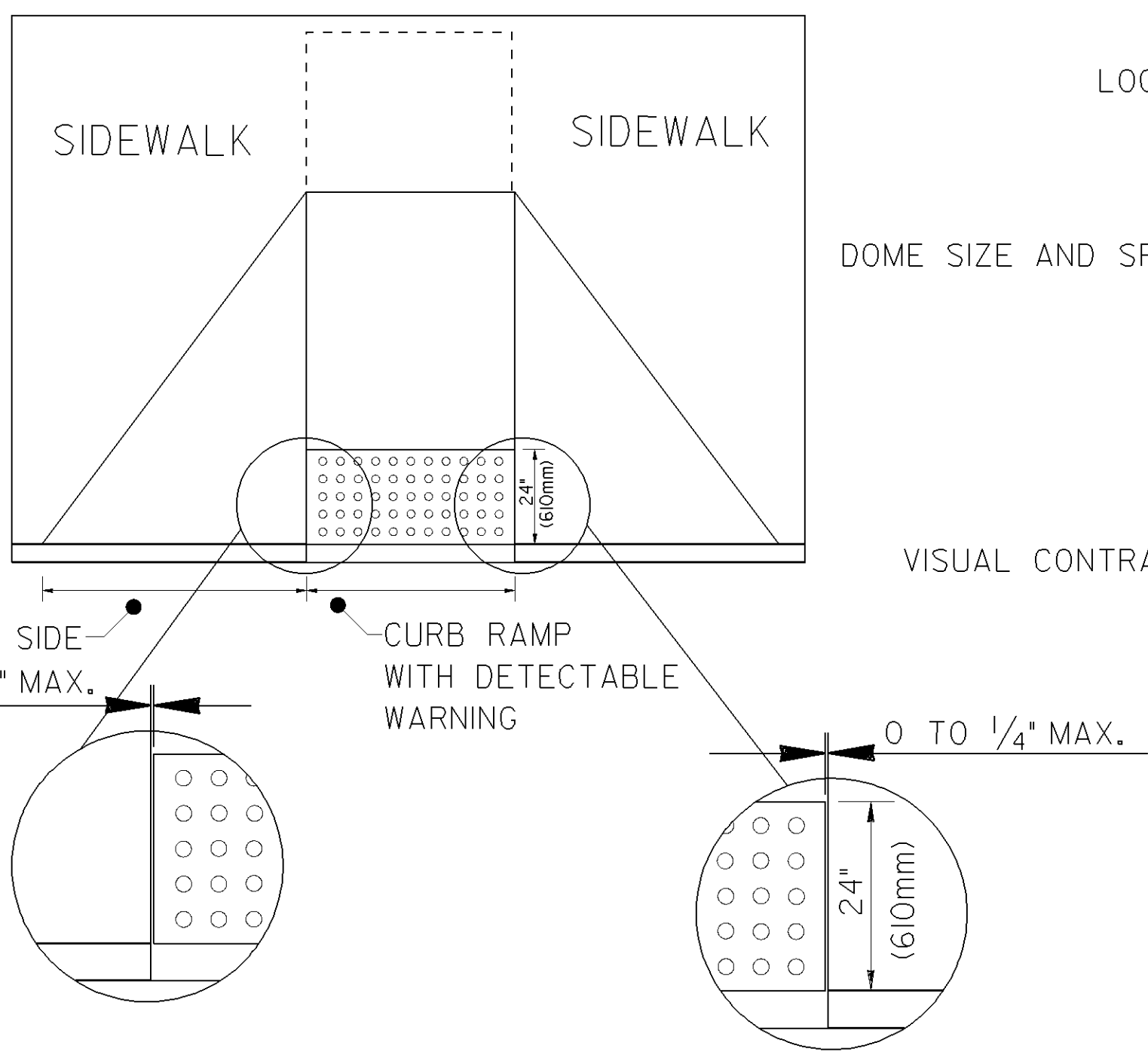
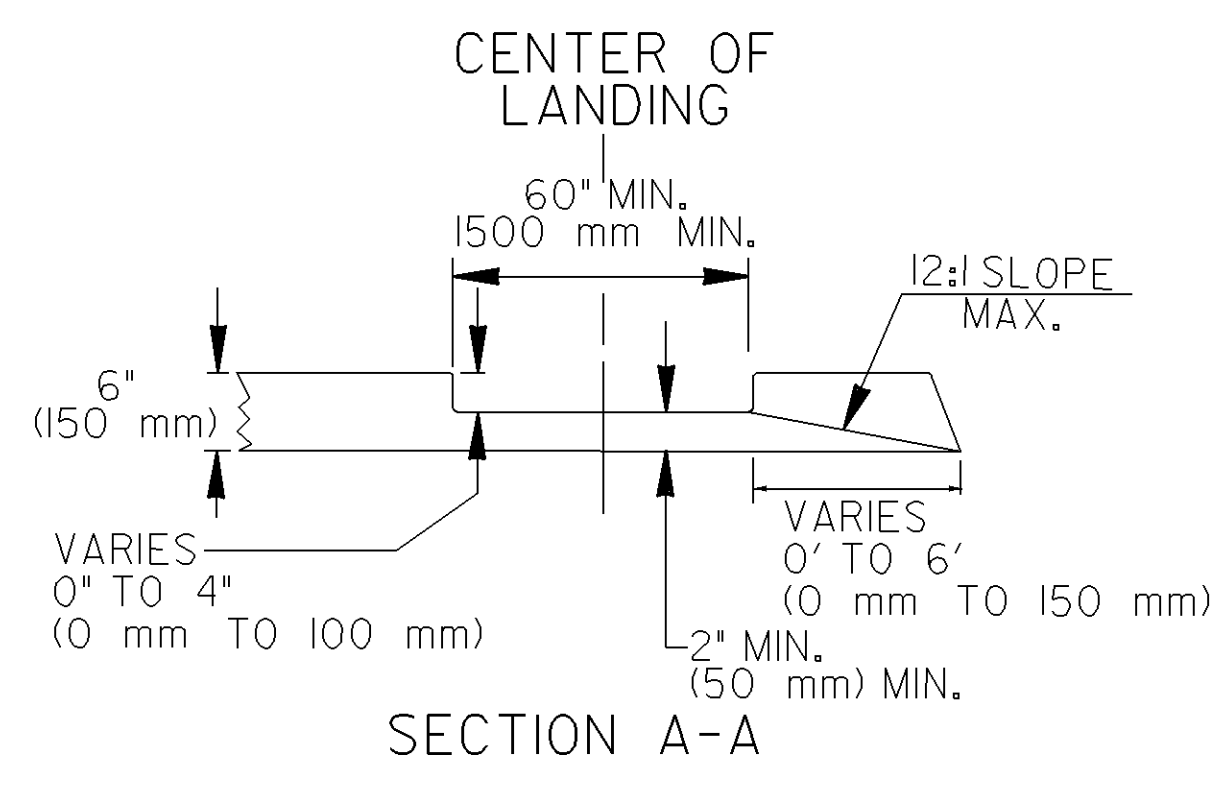
SPECIAL DETAIL  
CONCRETE SIDEWALK DETAILS  
CURB CUT (WHEELCHAIR) RAMPS

NO SCALE

MARCH 12, 2002

NUMBER  
A3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



**SIZE:** DETECTABLE WARNINGS SHALL BE 24 INCHES (610 mm) IN THE DIRECTION OF PEDESTRAIN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

**LOCATION:** THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES (150 mm TO 180mm) FROM THE CURB LINE OR OTHER POTENTIAL HAZARD, SUCH AS A REFLECTIVE POOL EDGE OR THE DYNAMIC ENVELOPE OF RAIL OPERATIONS.

**DOMES SIZE AND SPACING:** TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 INCH TO 1.4 INCH (23mm-36mm) AT THE BOTTOM, A DIAMETER OF 0.45 INCH TO 0.91 INCH (11mm-23mm) AT THE TOP, THE TOP DIAMETER SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER, A HEIGHT OF 0.2 INCH (5.1mm) AND A CENTER-TO-CENTER SPACING OF 2.40 INCHES (61mm) DESIRABLE 1.60 INCHES (41mm) MINIMUM MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT. DOMES SHALL HAVE A SQUARE ARRANGEMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

**VISUAL CONTRAST:** DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.

**MATERIALS:**

**NEW CONSTRUCTION**

THE DETECTABLE WARNINGS SHALL BE MADE OF MATERIALS SPECIFIED ON QPL 87.

**RETROFIT OF EXISTING RAMPS**

SURFACED APPLIED MATERIALS WILL ONLY BE APPROVED TO BE USED ON EXISTING WHEELCHAIR RAMPS.

**INSTALLATION:**

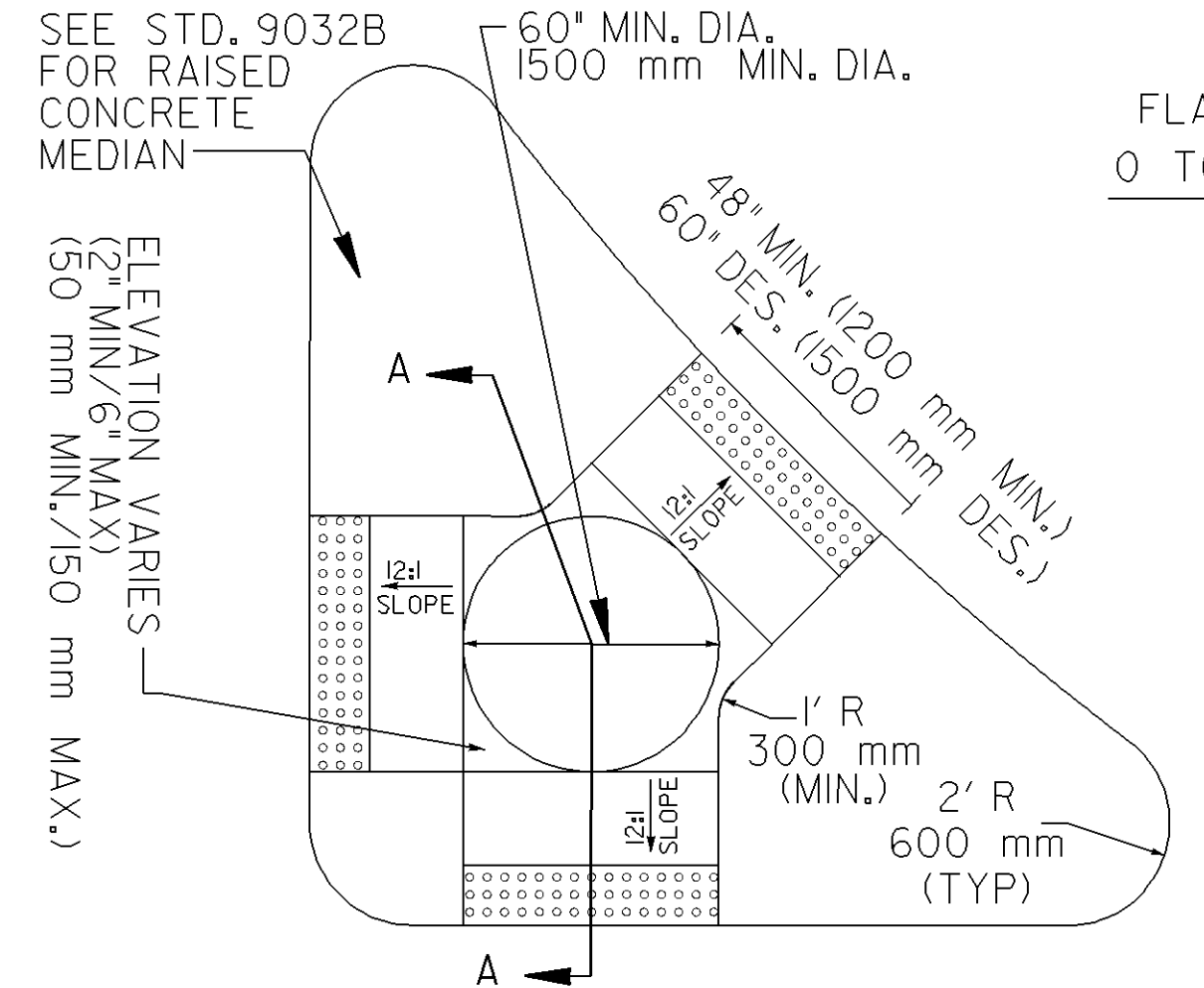
BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF 4" THICK.

CERAMIC TILE SHALL BE EPOXY IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMEND ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

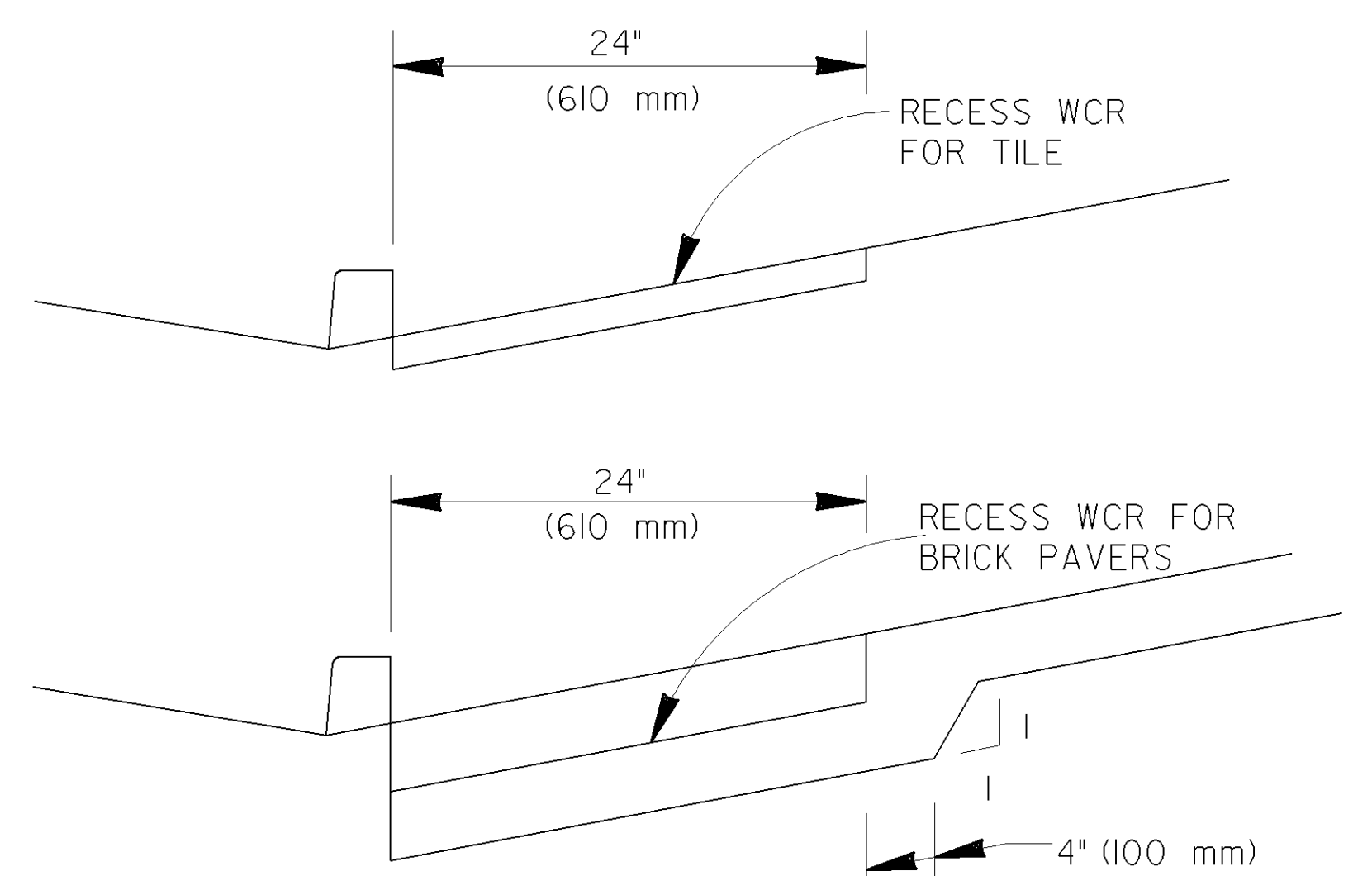
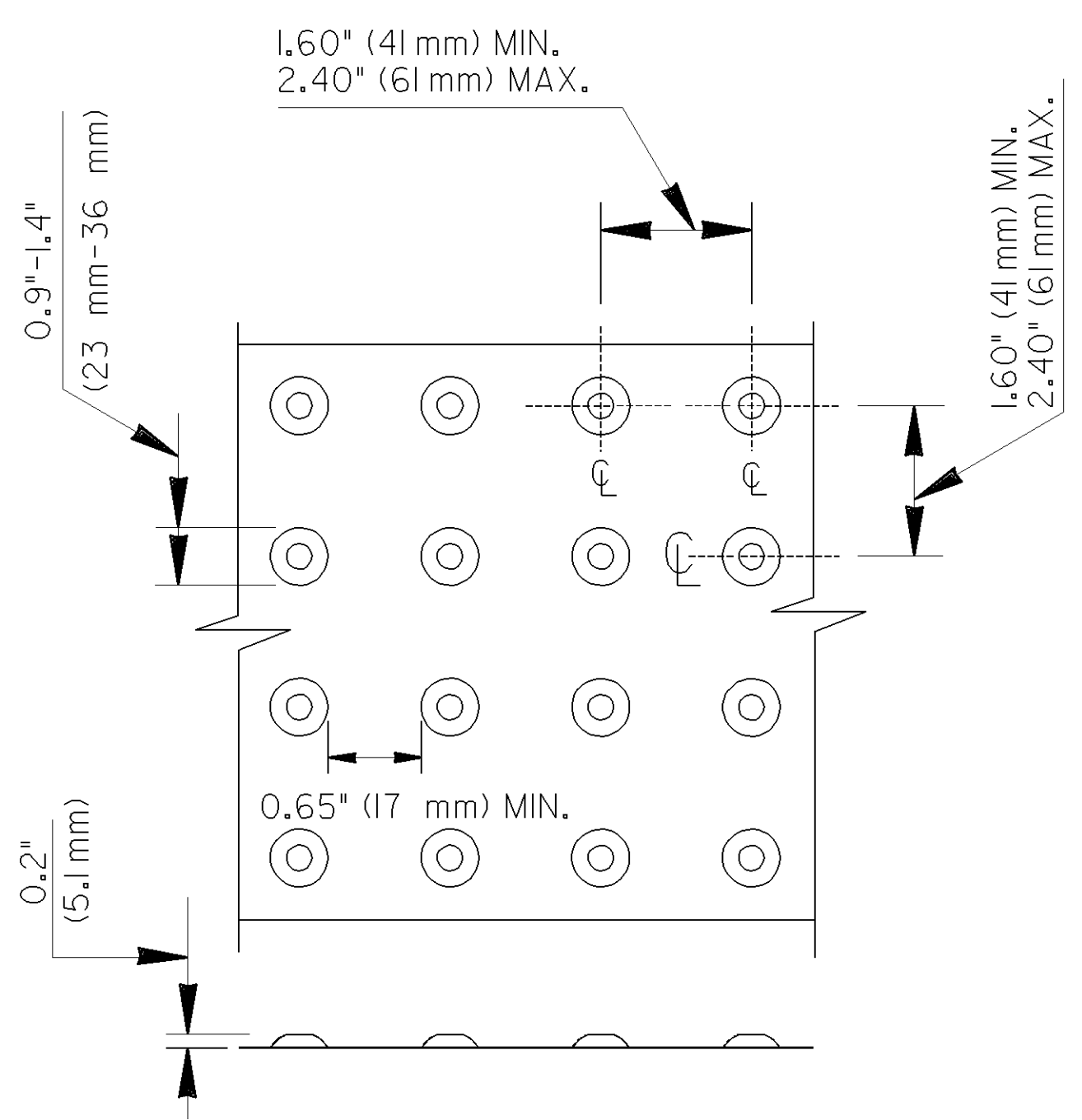
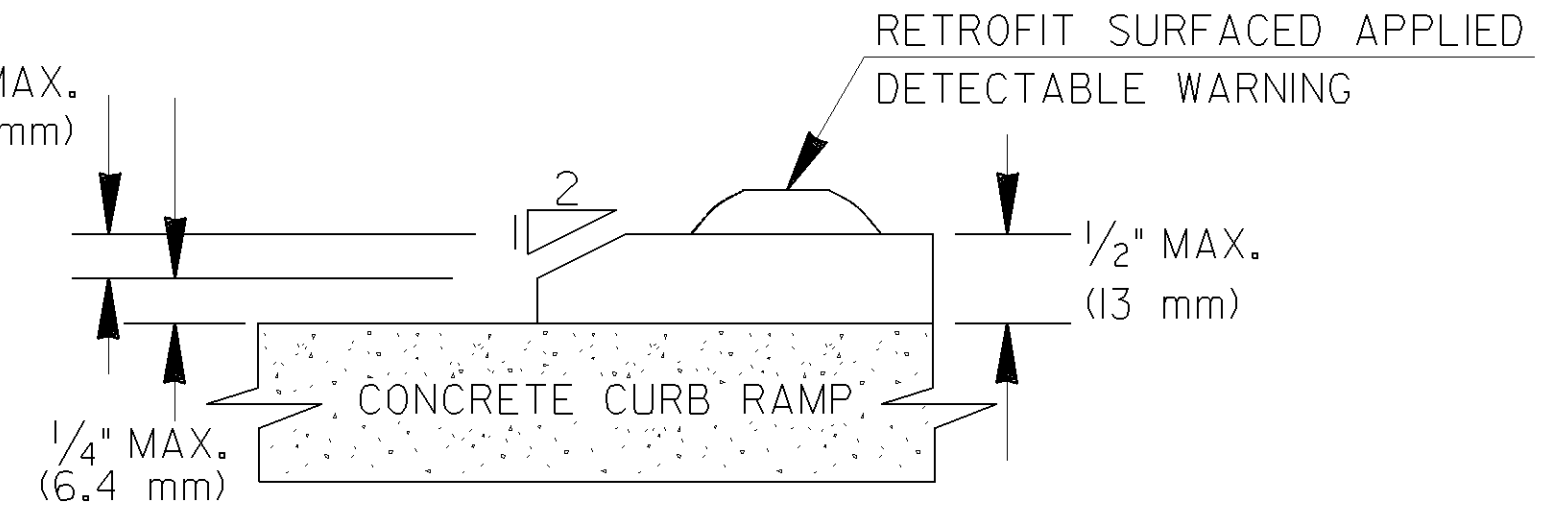
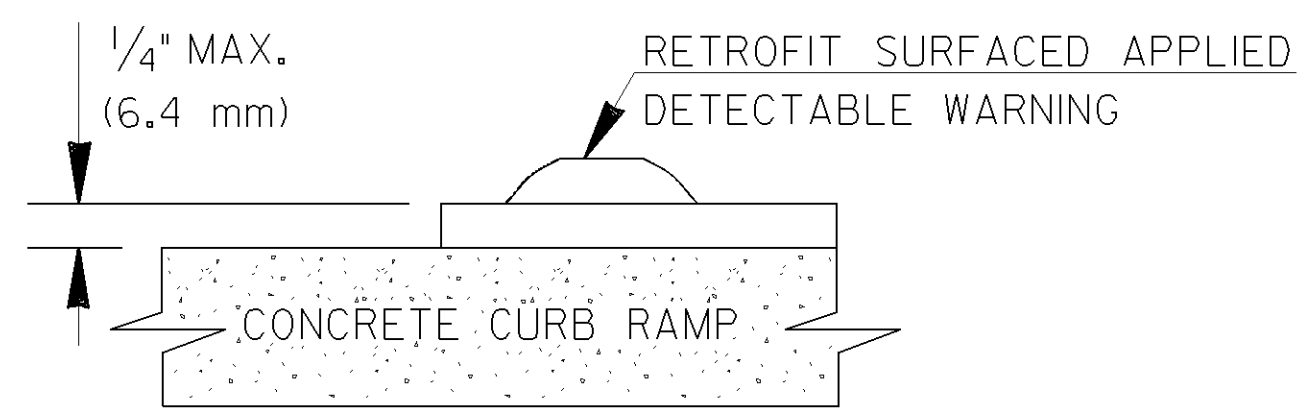
ALL OTHER MATERIALS SHALL BE INSTALLED ACCORDING TO MANUFACTURES DETAILS OR INSTRUCTION.

**GENERAL NOTES:**

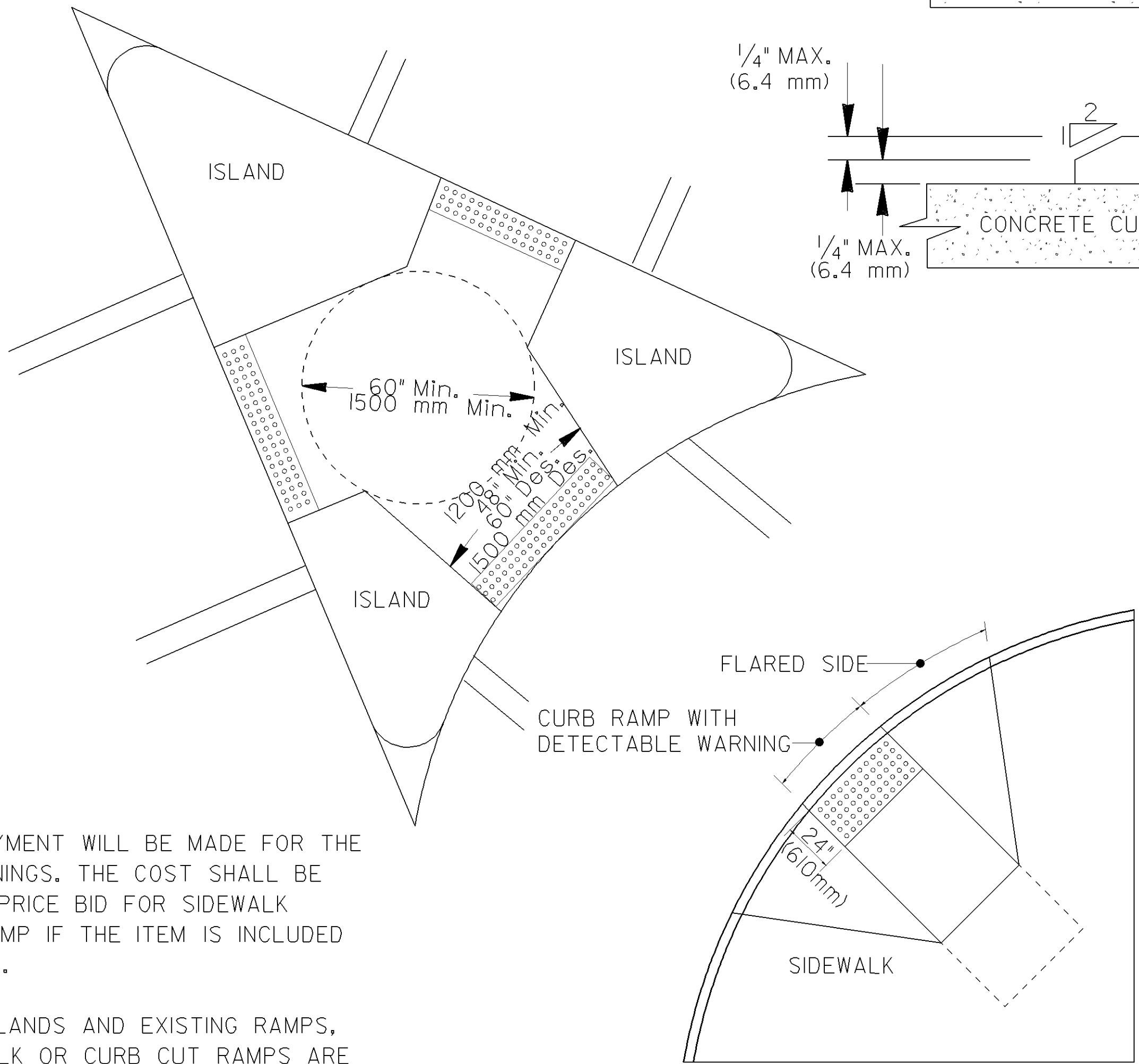
- RETROFIT SURFACED APPLIED MATERIALS ONLY:
- CHANGES IN LEVEL OF 1/4" (6.4 mm) HIGH MAXIMUM SHALL BE PERMITTED VERTICALLY ON SURFACED APPLIED MATERIALS.
  - CHANGES IN LEVEL BETWEEN 1/4" (6.4 mm) HIGH MINIMUM AND 1/2" (13mm) HIGH MAXIMUM SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 2:1.



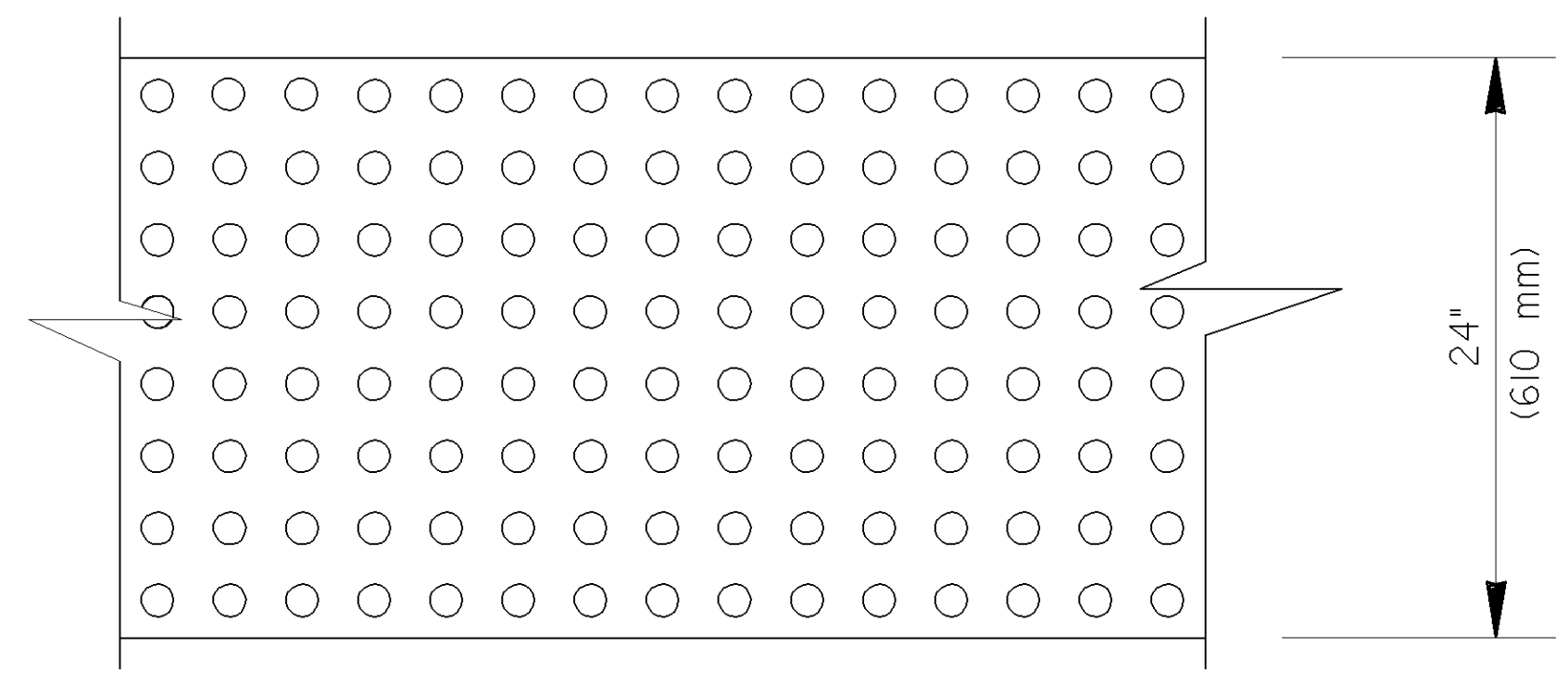
CONCRETE ISLAND WITH ELEVATED CUT THROUGH



FOR TILE OR BRICK PAVERS NO VERTICAL LIP OVER 1/8" (3 mm) IS ALLOWED



DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND



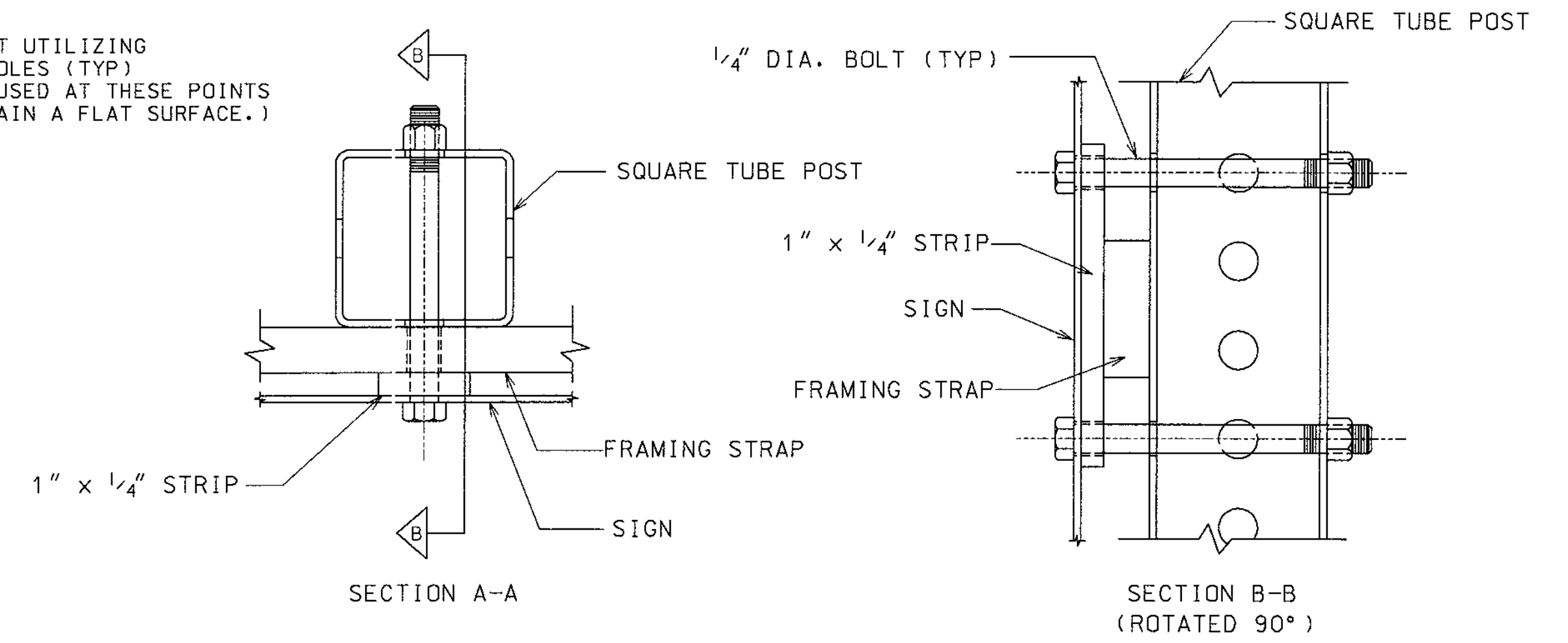
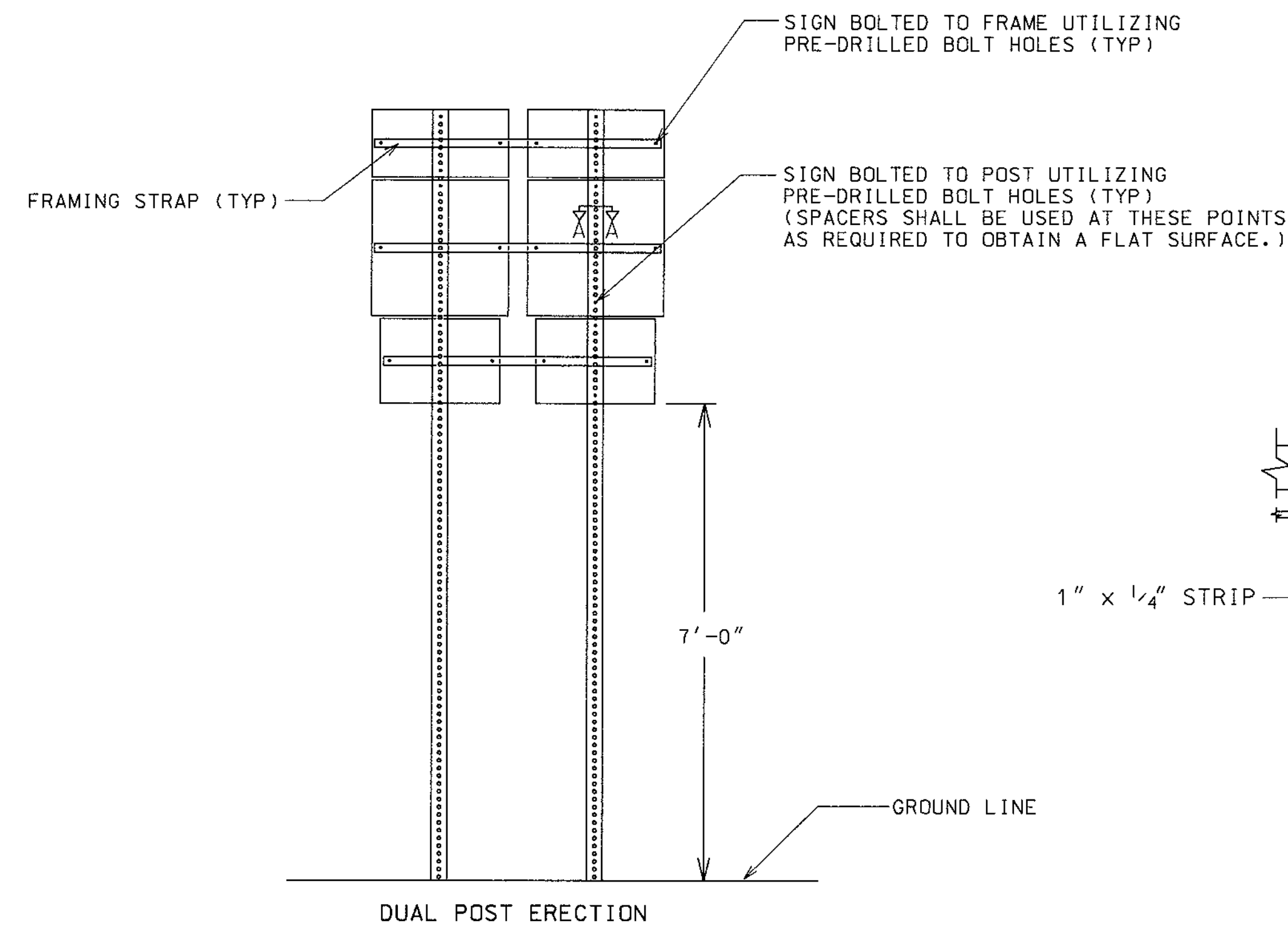
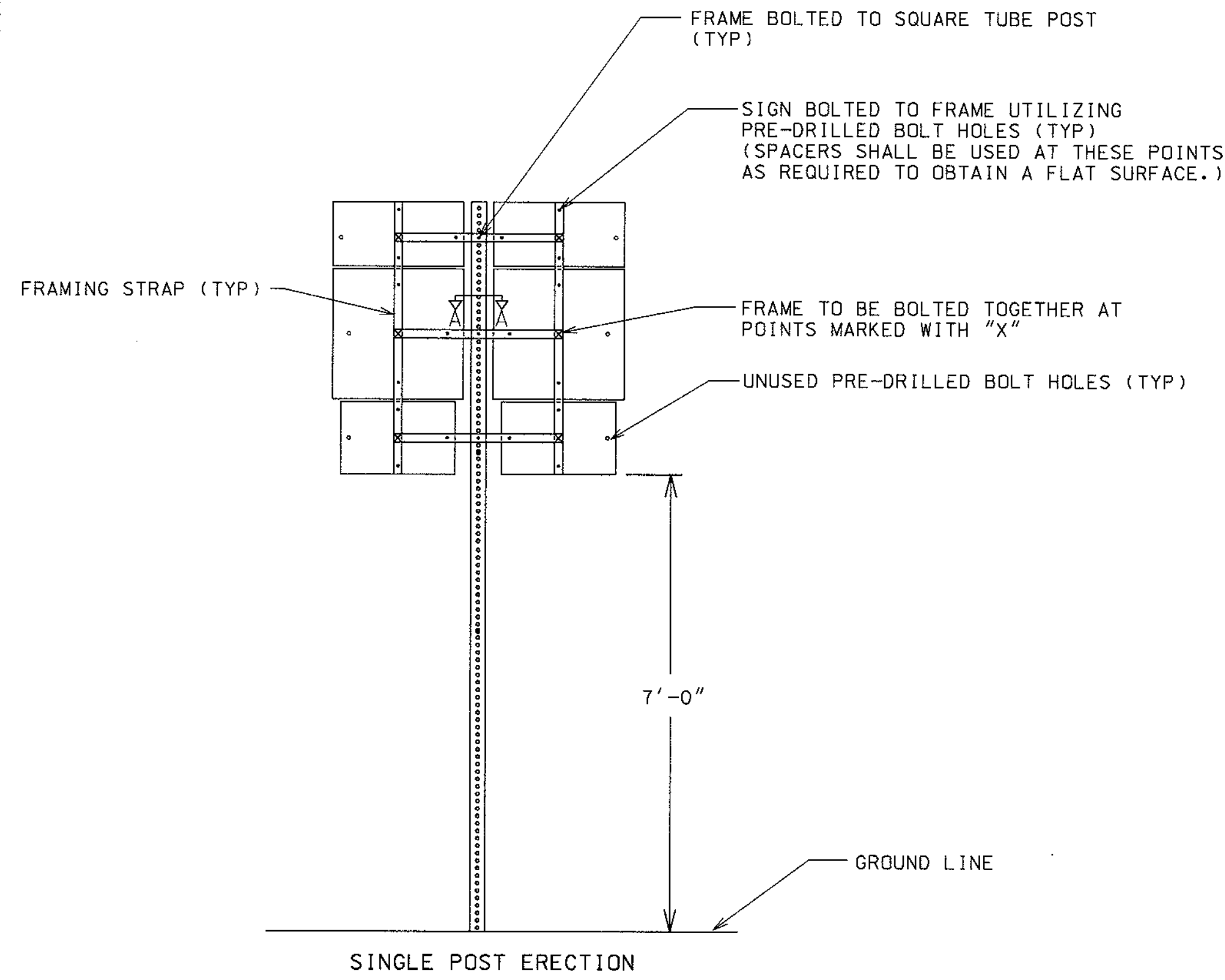
NO SEPARATE PAYMENT WILL BE MADE FOR THE DETECTABLE WARNINGS. THE COST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK (OR CURB CUT RAMP IF THE ITEM IS INCLUDED IN THE PROPOSAL).

FOR CUT-THRU ISLANDS AND EXISTING RAMPS, WHERE NO SIDEWALK OR CURB CUT RAMPS ARE IN THE PROPOSAL. THE COST OF THE DETECTABLE WARINGS SHALL BE INCLUDED IN THE OVERALL BID PRICE SUBMITTED.

6-18-09		10-2-06		11-4-02		7-29-02		DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
ADDED RETROFIT DETAIL		DETAIL AND GEN. NOTES		REVISED		REVISED		REVISION		SPECIAL DETAIL	
AND ADDED ALT. RAMP		ADDED TOLERANCE TO DTL.		AND NOTES.						DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT REQUIREMENTS	
GLO		GLO		GLO		BY				NO SCALE	
										MARCH 12, 2002	
										NUMBER A4	

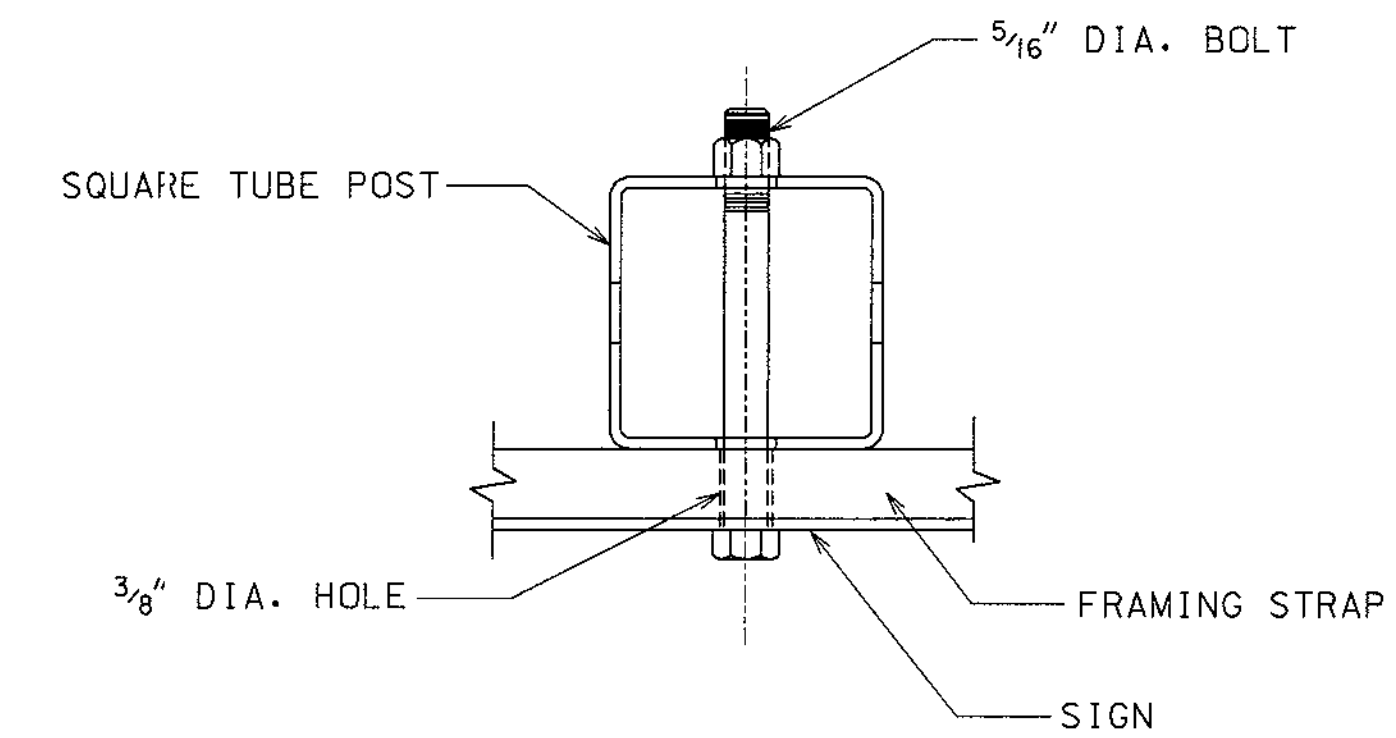


STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



OPTION #1 - FRAMING STRAP WITHOUT MOUNTING HOLE  
(ALL FRAMING STRAPS SHALL BE 1 1/2" x 1/2" x REQUIRED LENGTH)

TYPICAL ASSEMBLY UNIT (BACK VIEW)



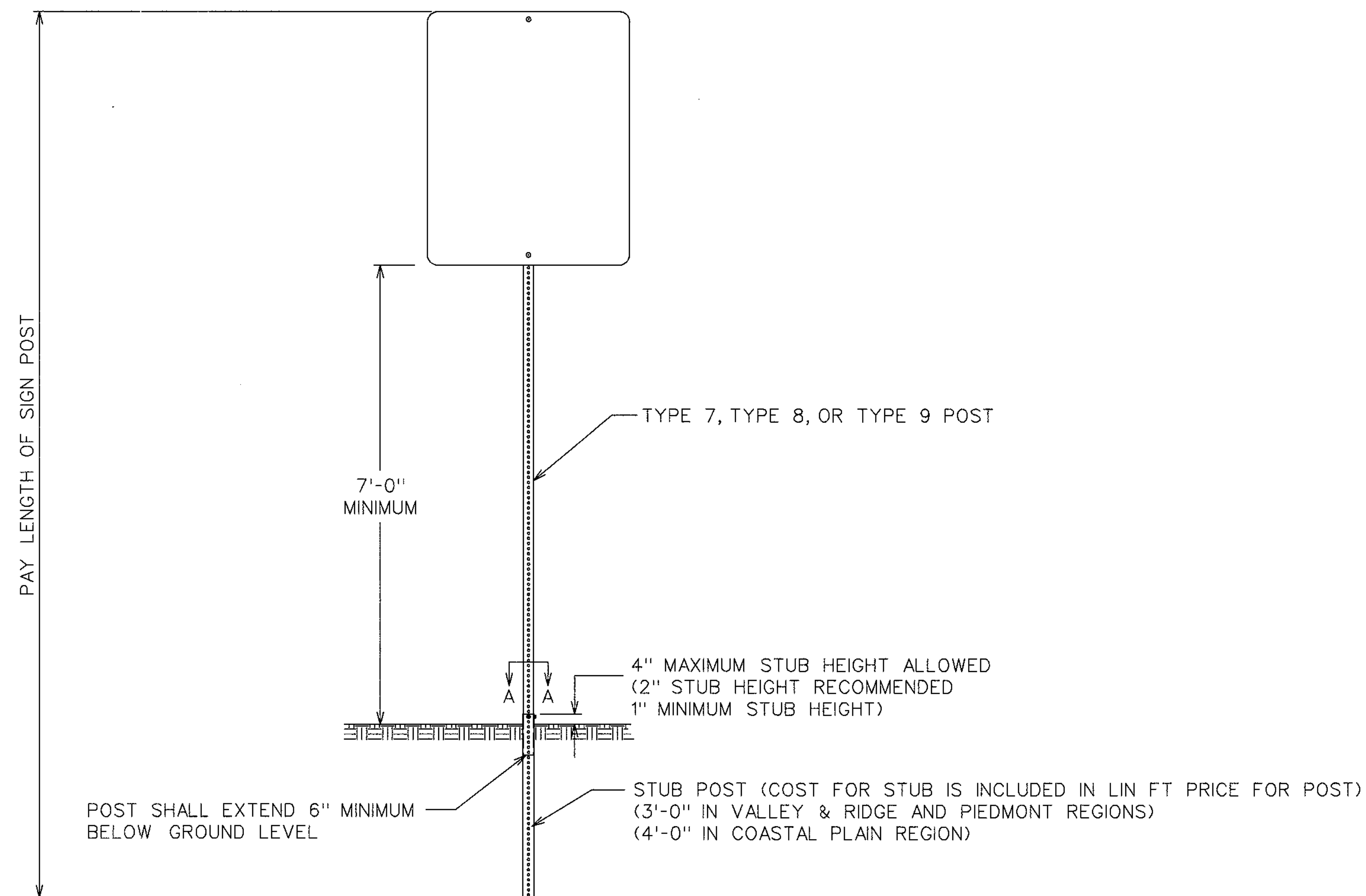
OPTION #2 - FRAMING STRAP WITH MOUNTING HOLE  
(ALL FRAMING STRAPS SHALL BE 2" x 1/2" x REQUIRED LENGTH)

GENERAL NOTES:

1. STYLE OF FRAMING IS OPTIONAL. ALTERNATE DESIGNS ARE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. FRAME SHALL BE DESIGNED SO AS TO HOLD THE ASSEMBLY IN A FIXED, RIGID POSITION.
2. FRAMING STRAPS SHALL BE GALVANIZED STEEL OR ALUMINUM.
3. STEEL SHALL BE A.S.T.M. DESIGNATION A-283, GRADE D, GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123.
4. ALUMINUM SHALL BE ALLOY 6061-T6.
5. BOLTS, NUTS, WASHERS, AND SPACERS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
6. FRAMING STRAPS ON A DUAL POST ERECTION SHALL NOT BE BOLTED TO THE POST.

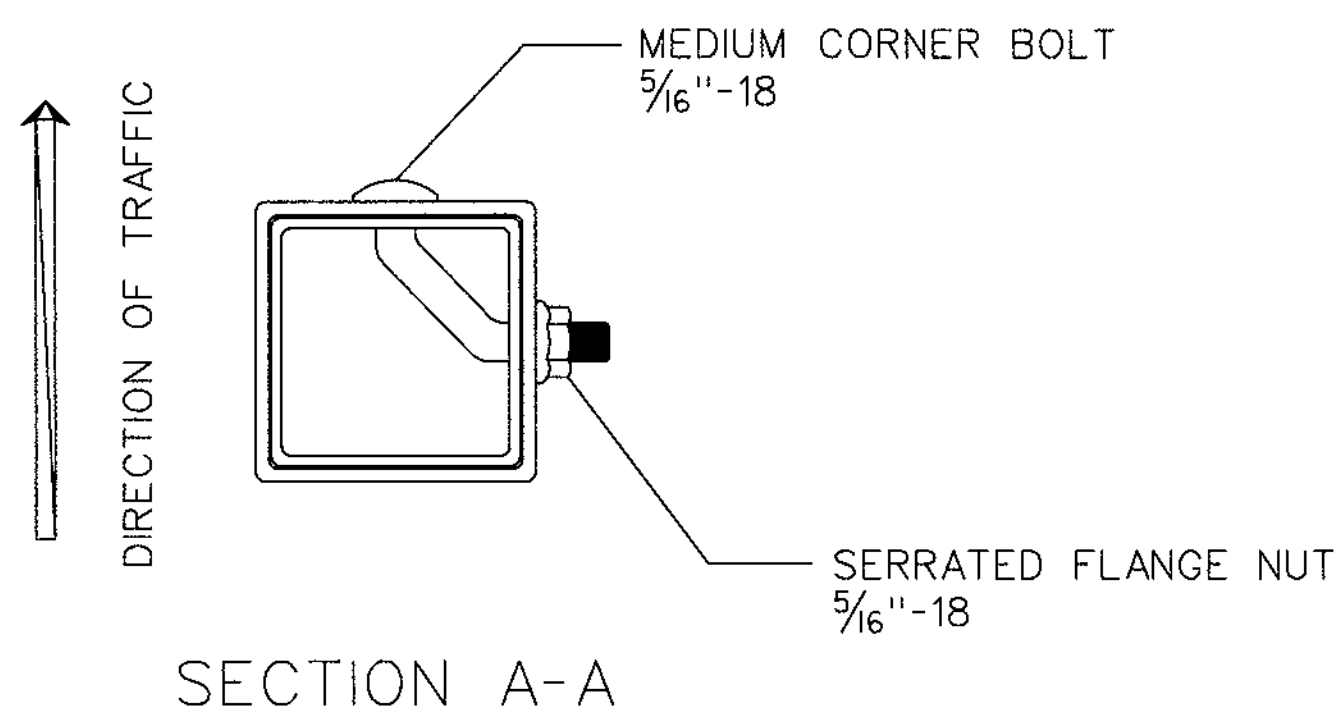


DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC OPERATIONS
3/31/00	CHANGED U-CHANNEL POST TO SQUARE TUBE POST	DETAILS FOR TYPICAL FRAMING
		NO SCALE
		JANUARY 2000



FRONT VIEW

POST	STUB SIZE
TYPE 7	2 1/4" x 2 1/4"
TYPE 8	2 3/4" x 2 3/4"
TYPE 9	2 1/2" x 2 1/2"



SECTION A-A

SIGN POST SELECTION CHART

70 MPH Wind Load Chart + 15% Gust Factor

Sign Centroid	SLIP BASE NOT REQUIRED				GROUND MOUNTED BREAKAWAY SIGN SUPPORT REQUIRED				
	TYPE 7 2" 14 ga.		TYPE 9 2-1/4" 14 ga	TYPE 8 2-1/2" 12 ga.	TYPE 8 2-1/2" 12 ga.		TYPE 8 w / TYPE 9 Insert 2-1/2" 12 ga. W / 2-1/4" 14 ga.		
	1 Post	2 Post	1 Post	1 Post	2 Post	3 Post	1 Post	2 Post	3 Post
	SQUARE FOOTAGE				SQUARE FOOTAGE				
6'	13.50	27.00	19.25	30.00	60.00	90.00	49.25	98.50	147.75
7'	11.60	23.20	16.50	25.75	51.50	77.25	42.25	84.50	126.75
8'	10.15	20.30	14.45	22.55	45.10	67.65	37.00	74.00	111.00
9'	9.00	18.00	12.85	20.00	40.00	60.00	32.85	65.70	98.55
10'	8.10	16.20	11.55	18.00	36.00	54.00	29.55	59.10	88.65
11'	7.40	14.80	10.50	16.40	32.80	49.20	26.90	53.80	80.70
12'	6.80	13.60	9.65	15.00	30.00	45.00	24.65	49.30	73.95
13'	6.25	12.50	8.90	13.85	27.70	41.55	22.75	45.50	68.25
14'	5.80	11.60	8.25	12.90	25.80	38.70	21.15	42.30	63.45
15'	5.00	10.00	6.45	10.10	20.20	30.30	16.55	33.10	49.65
16'	4.70	9.40	6.05	9.45	18.90	28.35	15.50	31.00	46.50
17'	4.40	8.80	5.70	8.90	17.80	26.70	14.60	29.20	43.80
18'	4.15	8.30	5.40	8.40	16.80	25.20	13.80	27.60	41.40
19'	3.95	7.90	5.10	7.95	15.90	23.85	13.05	26.10	39.15
20'	3.75	7.50	4.85	7.55	15.10	22.65	12.40	24.80	37.20

SIGN CENTROID IS DISTANCE FROM GROUND LEVEL TO BOTTOM OF SIGN PLUS HALF THE HEIGHT OF SIGN.  
 EXAMPLE: 24" X 48" SIGN THAT IS 7 FEET FROM GROUND TO BOTTOM OF SIGN. ADD HALF OF 48" (24" OR 2 FT) PLUS 7 FT. = 9' CENTROID.

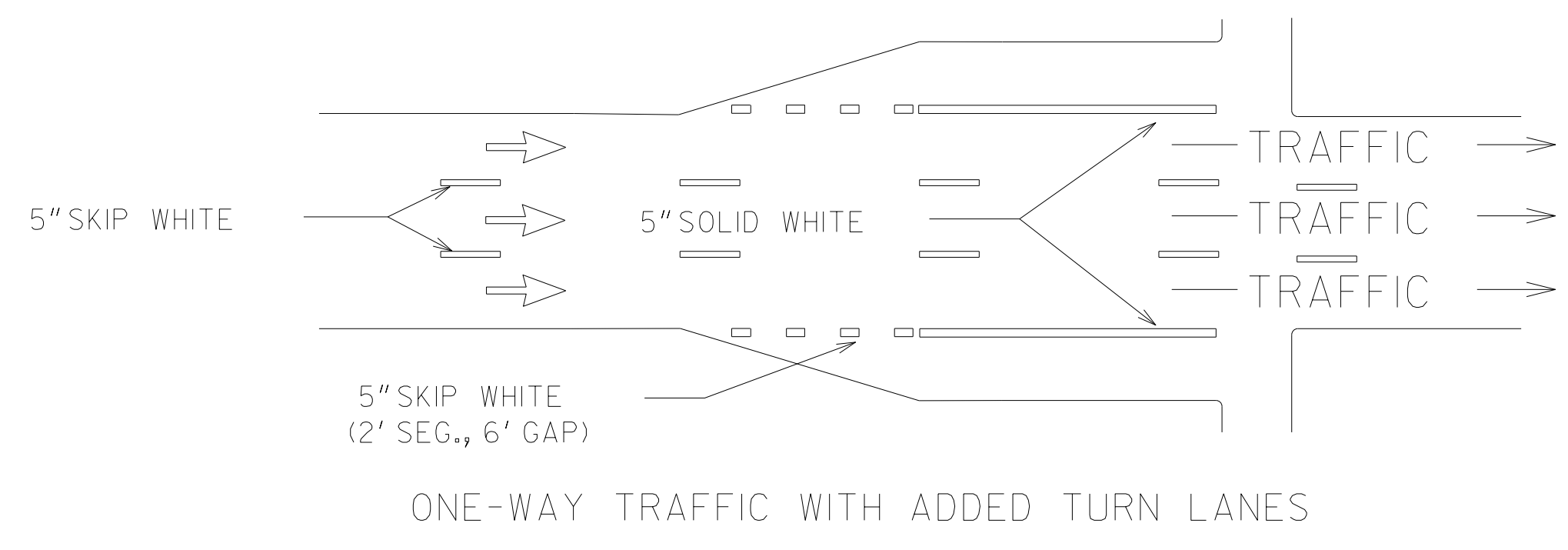
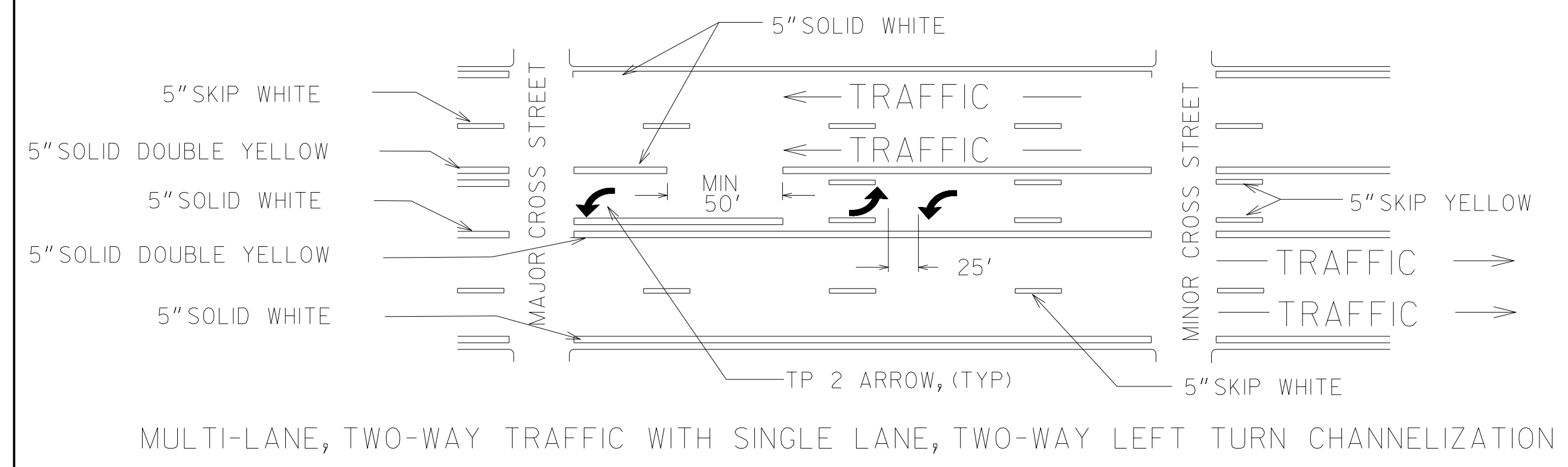
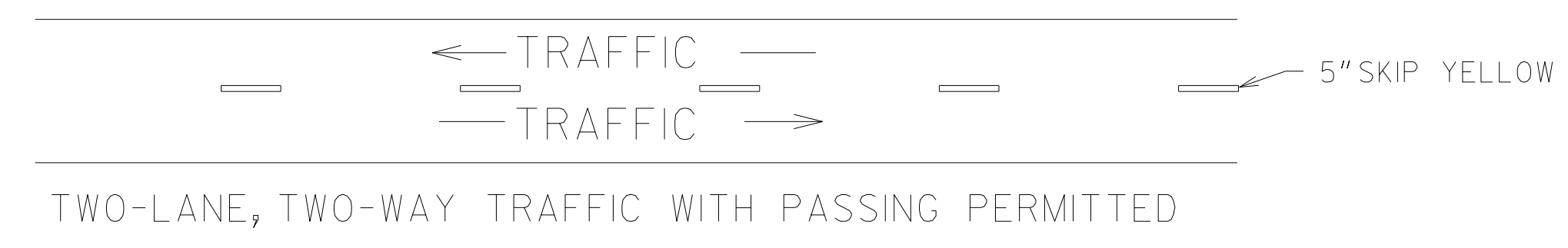
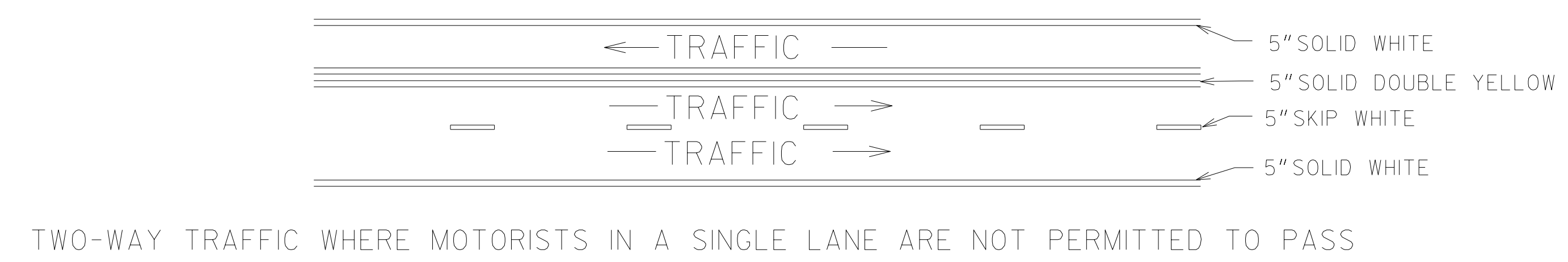
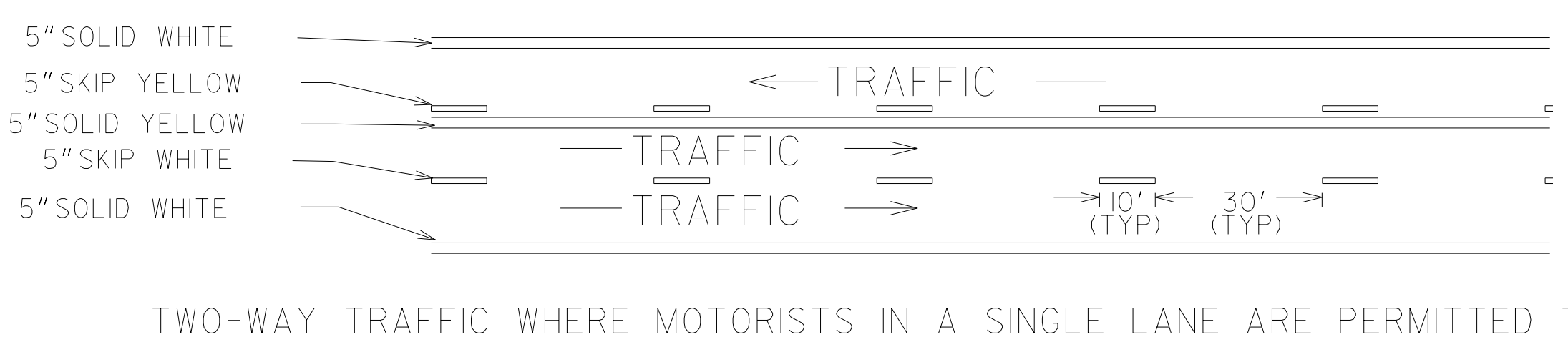
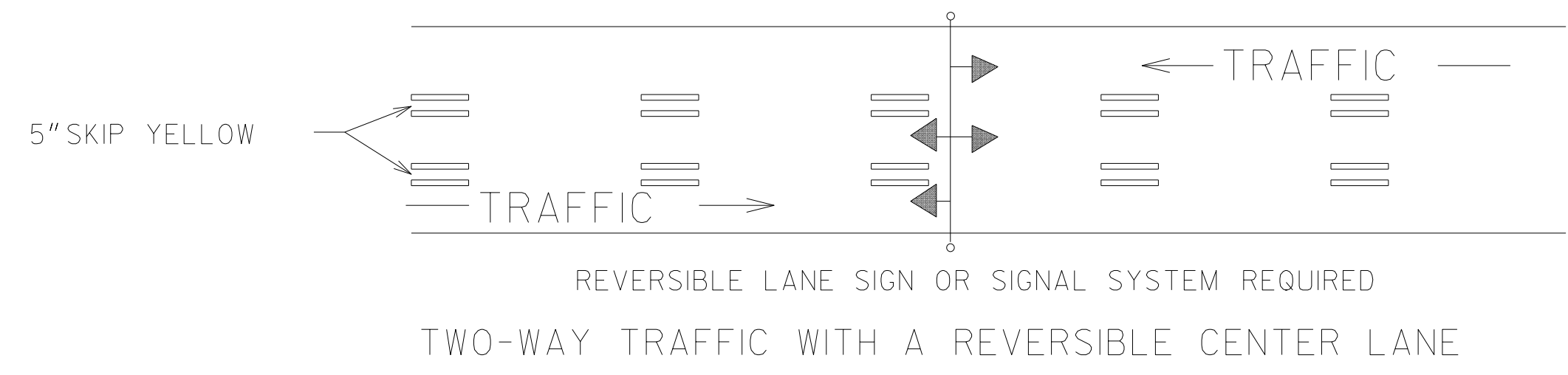
SIGN PLATE SHALL NOT EXCEED 48" IN WIDTH ON A SINGLE POST.

\* TYPE 9 INSERT SHALL BE A CONTINUOUS POST INSERTED INTO THE TYPE 8 POST WHERE REQUIRED. THE INSERT POST SHALL EXTEND FROM THE BOTTOM OF THE SLIP BASE UPPER ASSEMBLY TO 4" BELOW THE BOTTOM OF THE SIGN. THE INSERT POST SHALL NOT EXTEND ABOVE THE BOTTOM OF THE SIGN. PAYMENT FOR THE INSERT POST SHALL BE PER LINEAR FOOT OF TYPE 9 POST.

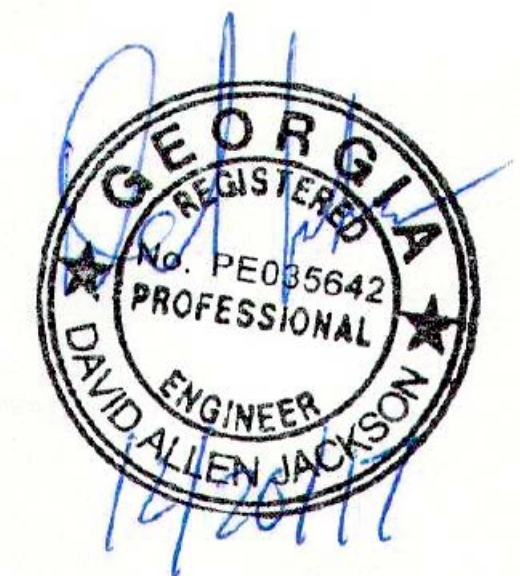
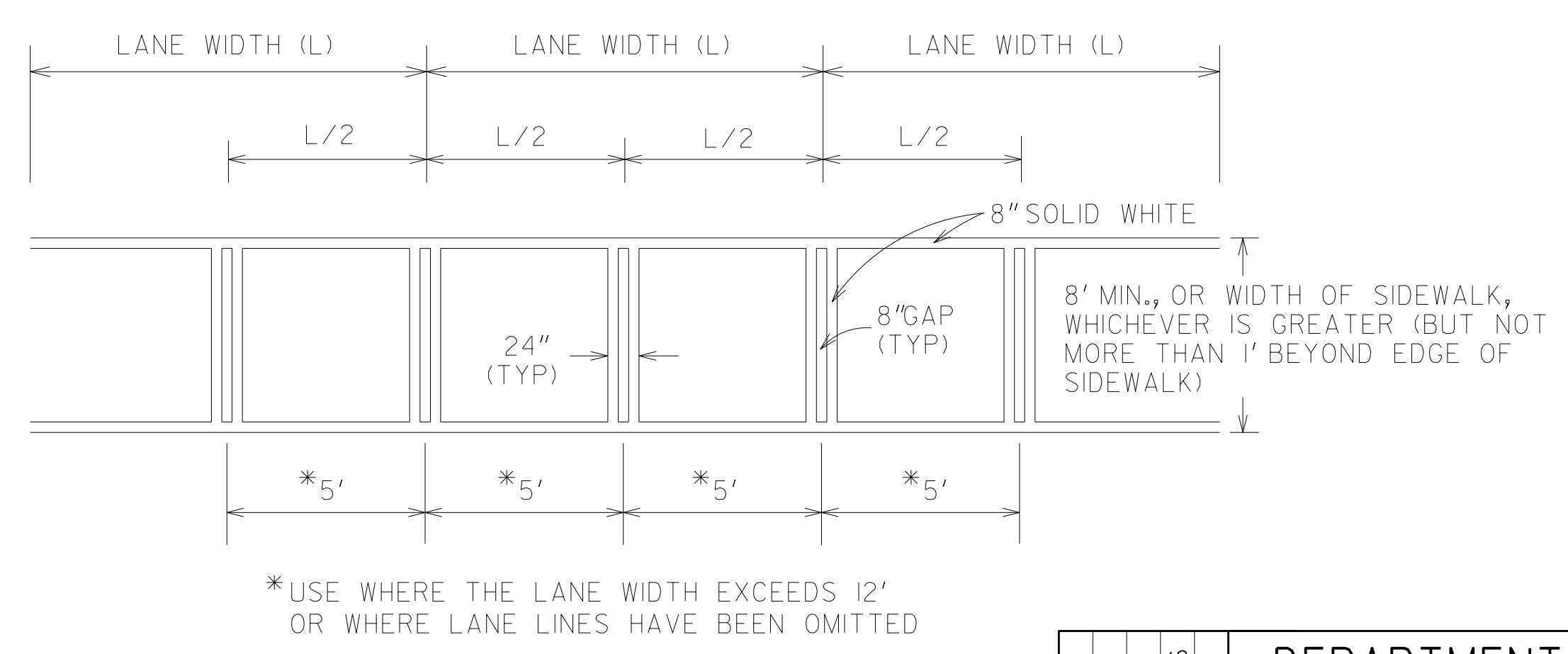
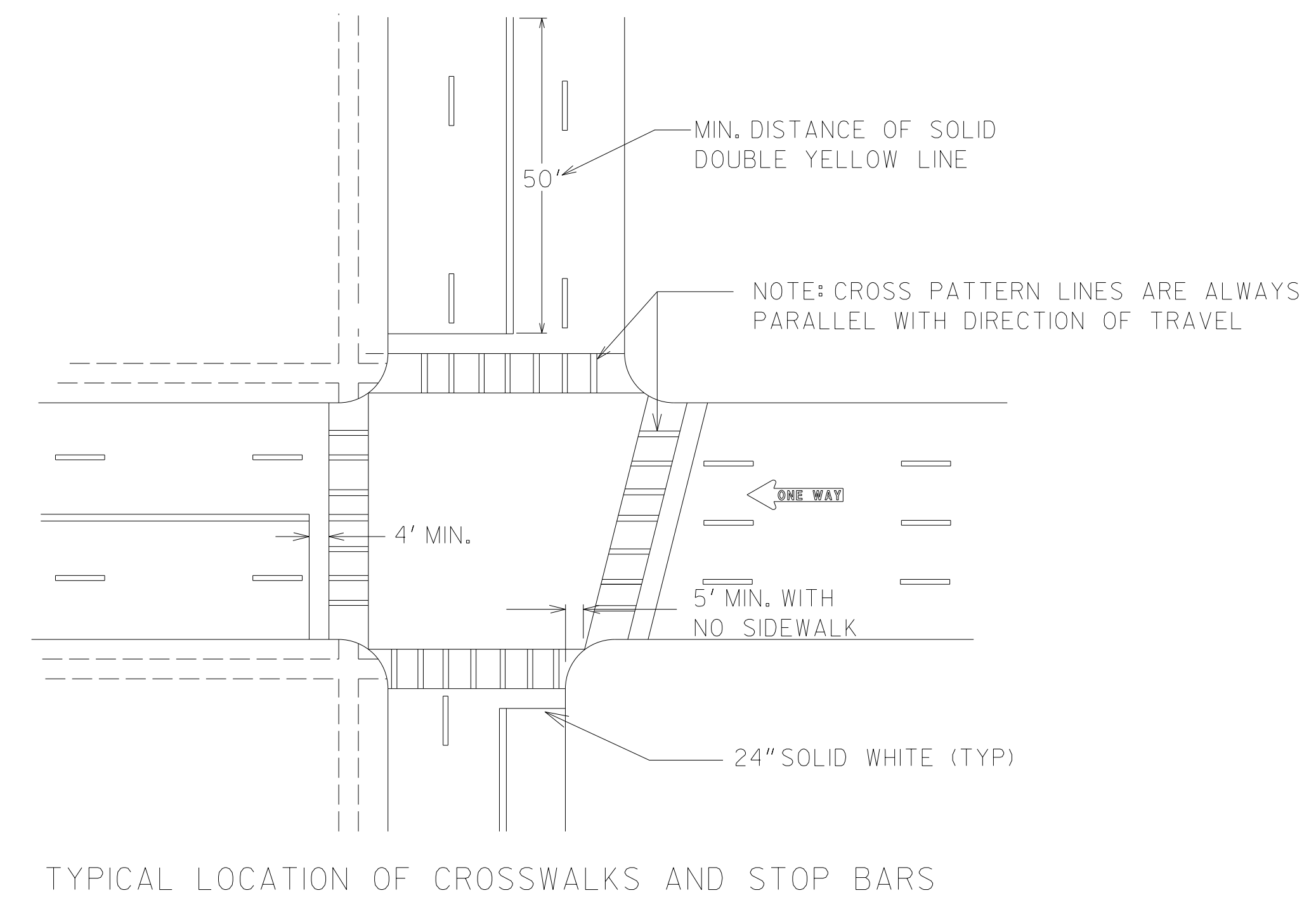
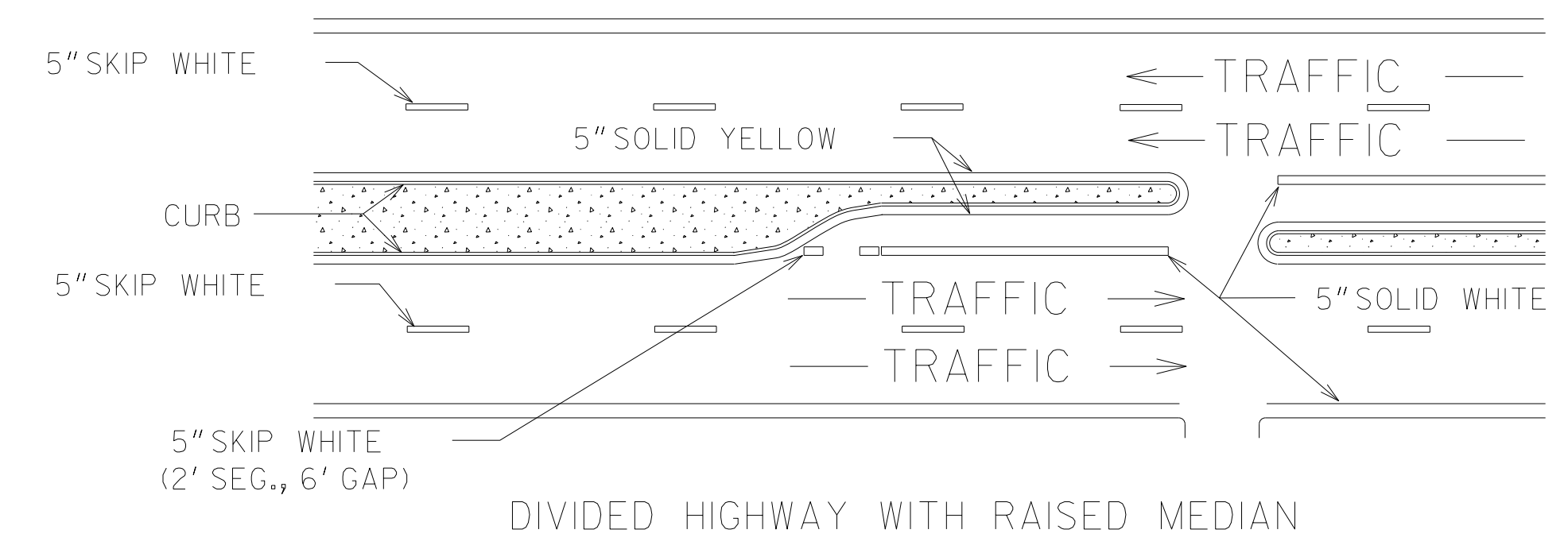
GROUND MOUNTED BREAKAWAY SIGN SUPPORT WILL BE MEASURED AND PAID FOR SEPARATELY. THE COST FOR THIS WORK SHALL INCLUDE THE UPPER AND LOWER ASSEMBLY, STUB POST, CLASS "A" CONCRETE, ALL HARDWARE NECESSARY TO COMPLETE THE INSTALLATION, AND BE INCLUDED IN THE BID PRICE SUBMITTED FOR ITEM 636-3010.



DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		TYPE 7, 8, AND 9 SQUARE TUBE POST INSTALLATION DETAIL
		NO SCALE JULY 2002



- GENERAL NOTES:
1. SPACING BETWEEN DOUBLE LINES SHALL BE EQUAL TO THE LINE WIDTH.
  2. EDGE LINES SHALL BE PLACED A MINIMUM OF 4 INCHES FROM THE NORMAL EDGE OF PAVEMENT.
  3. CONTRAST MARKINGS FOR SKIP STRIPING SHALL BE AS SHOWN IN DETAIL T-II B.



9-15-16		DATE		DEPARTMENT OF TRANSPORTATION	
STATE OF GEORGIA				CONSTRUCTION DETAILS	
PAVEMENT MARKING PLACEMENT		NON-LIMITED ACCESS ROADWAY		NO SCALE	
JANUARY 2000				NUMBER	
T-IIA					

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
	ORANGE BARRIER FENCE		ORANGE BARRIER FENCE DELINEATES ENVIRONMENTALLY SENSITIVE AREAS WHERE THE CONTRACTOR SHALL NOT CLEAR, GRUB, OR PLACE CONSTRUCTION MATERIALS OR EQUIPMENT WITHIN THIS AREA.
	LINE CODE 		
ESA	ENVIRONMENTALLY SENSITIVE AREA		AN ENVIRONMENTALLY SENSITIVE AREA (ESA) CONTAINS RESOURCES THAT ARE ENVIRONMENTALLY, CULTURALLY, OR HISTORICALLY SENSITIVE. ESAs INCLUDE, BUT ARE NOT LIMITED TO: STATE WATER BUFFERS, HISTORIC SITES, ARCHAEOLOGICAL SITES, AND PROTECTED ANIMAL AND PLANT SPECIES HABITATS.  IF WORK IS AUTHORIZED IN THIS AREA, THE WORK MUST BE PERFORMED IN ACCORDANCE WITH SECTION 107 AND ANY OTHER APPLICABLE SPECIAL PROVISIONS AND APPLICABLE PLAN NOTES.
	LINE CODE 		
Bf	BUFFER ZONE		A STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION, OR THE RE-ESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS, PONDS, WETLANDS, LAKES, AND COASTAL WATERS.  WHEN NECESSARY, BUFFER ZONES ARE TO BE PROTECTED BY ORANGE BARRIER FENCE.
	SYMBOL 		
Ds1	MULCH SECTION 163		THIS IS AN APPLICATION OF STRAW MULCH USED TO REDUCE SOIL EROSION AND STABILIZE THE SOIL. IT IS USED TO CONTROL EROSION IN AREAS WHERE PERMANENT VEGETATION IS OUT OF SEASON OR TO TEMPORARILY STABILIZE AREAS PRIOR TO FINAL GRADING.  MULCHING REQUIREMENTS ARE ADDRESSED BY STANDARD SPECIFICATIONS AND/OR THE PROJECT ENGINEER.
	SYMBOL 		THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
Ds2	TEMPORARY GRASSING SECTION 163,700		THE SOWING OF A QUICK GROWING SPECIES OF GRASS SUITABLE TO THE AREA AND SEASON. IT IS TYPICALLY USED TO CONTROL EROSION IN AREAS LONGER THAN MULCHING IS EXPECTED TO LAST.  TEMPORARY GRASSING SHOULD BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATIONS.
	SYMBOL 		THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ds3	PERMANENT GRASSING SECTION 700		THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON.  PERMANENT VEGETATION SHALL BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATION.  THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	SYMBOL 		
Ds4	SODDING CONSTRUCTION DETAIL D-54 SECTION 700,890		THE INSTALLATION OF A SPECIES OF GRASS SODDING SUITABLE TO THE AREA AND SEASON TO PROVIDE IMMEDIATE PERMANENT VEGETATION.  SODDING MAY BE SHOWN FOR HIGHLY SENSITIVE AREAS, TO IMPROVE AESTHETICS, OR FOR SPECIAL PLANTING REQUIREMENTS ON THE BASIS OF ENVIRONMENTAL COMMITMENTS OR LANDSCAPING REQUIREMENTS.  THE BMP PATTERN FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	PATTERN 		
F1-Co	FLOCCULANTS COAGULANTS SECTION 163,700, 895		FLOCCULANTS AND COAGULANTS ARE USED TO SETTLE SUSPENDED SEDIMENT, HEAVY METALS, AND HYDROCARBONS (TSS) IN SLOW MOVING RUNOFF FROM CONSTRUCTION SITES FOR WATER CLARIFICATION.  ANIONIC POLYACRYLAMIDES (PAM) MAY BE USED IN CONJUNCTION WITH BMPs WITHIN CHANNELS UPSTREAM OF A POST-CONSTRUCTION POND, TEMPORARY SEDIMENT BASIN, OR TEMPORARY SEDIMENT TRAP. FLOCCULANTS SHALL NOT BE USED DOWNSTREAM OF AFOREMENTIONED BMPs!  FLOCCULANTS/COAGULANTS ARE TO BE SHOWN ON PLANS WITH APPLICABLE BMP IF NEEDED. PAYMENT FOR PAM AS A FLOCCULANT WILL BE INCLUDED IN THE PRICE FOR THE INSTALLATION AND/OR MAINTENANCE OF THE BMP IT IS USED IN CONJUNCTION WITH. NO SEPARATE PAYMENT WILL BE MADE.
	SYMBOL 		POLYACRYLAMIDE
Sb	STREAMBANK STABILIZATION SECTION 702		STREAMBANK STABILIZATION IS THE USE OF READILY AVAILABLE NATIVE PLANT MATERIALS TO MAINTAIN AND ENHANCE STREAMBANKS, OR TO PREVENT, OR RESTORE AND REPAIR SMALL STREAMBANK EROSION PROBLEMS.  STREAMBANK STABILIZATION AREAS SHOULD BE SHOWN ON THE PLANS WHEN APPLICABLE TO THE PROJECT. REFER TO THE PROJECT'S STREAM AND STREAM BUFFER MITIGATION PLANS FOR PLANT SPECIES, LOCATIONS, AND OTHER PLANTING DETAILS.
	PATTERN 		

**NOTE:**

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".



NO SCALE

REVISION DATES		EROSION CONTROL LEGEND	
3/2/2017		UNIFORM CODE SHEET	
		SHEET 1 OF 7	
CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
			DRAWING No.
			52-0001

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ss	SLOPE STABILIZATION CONSTRUCTION DETAIL D-35 SECTION 716		SLOPE STABILIZATION (EROSION CONTROL MATTING) IS A PROTECTIVE COVERING USED TO PREVENT EROSION AND ESTABLISH TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, SHORE LINES, OR CHANNELS.  SLOPE STABILIZATION MAY BE A ROLLED EROSION CONTROL PRODUCT (RECP) OR A HYDRAULIC EROSION CONTROL PRODUCT (HECP).  SLOPE STABILIZATION SHALL BE USED ON ALL CUT OR FILL SLOPES OF 2.5:1 OR STEEPER AND WITHIN 50 FEET OF ALL CROSS DRAINS AND CULVERTS.  NOTE: ONLY COCONUT FIBER BLANKET OR WOOD FIBER BLANKET SHALL BE USED AS SLOPE STABILIZATION WITHIN BUFFERED AREAS.
		PATTERN 	
Tac	TACKIFIERS  SECTION 163, 700, 895		TACKIFIERS HYDRATE IN WATER AND READILY BLEND WITH OTHER SLURRY MATERIALS AND ARE USED TO TIE-DOWN FOR SOIL, COMPOST, SEED, STRAW, HAY OR MULCH.  TACKIFIERS REQUIREMENTS, SUCH AS ANIONIC POLYACRYLAMIDES (PAM) ARE ADDRESSED BY STANDARD SPECIFICATIONS AND ARE NOT TYPICALLY SHOWN ON THE PLANS. PAM IS TYPICALLY USED BY THE CONTRACTOR FOR TEMPORARY OR PERMANENT GRASSING.  REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR CRITERIA.
		SYMBOL 	
Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL D-24D SECTION 171		A CHECK DAM COMPOSED OF SYNTHETIC FIBER FABRIC, WIRE REINFORCED, POST, OVERFLOW WEIR, AND TURF REINFORCEMENT MATTING (TRM) SPLASHPAD PLACED IN DITCHES IN A SPECIAL CONFIGURATION WHICH CONTROLS ENERGY DISSIPATION AND FILTRATION OF STORM WATER. SEE CONSTRUCTION DETAIL D-24D FOR ADDITIONAL INFORMATION AND SPACING REQUIREMENTS.  THIS ITEM IS SUITABLE FOR USE IN ROADSIDE DITCHES THAT ARE PART OF INFRASTRUCTURE CONSTRUCTION PROJECTS AND WITHIN THE CLEAR ZONE.  IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
		SYMBOL 	
Cd-Fs	COMPOST FILTER SOCK CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163		A COMPOST FILTER SOCK CHECK DAM IS COMPOSED OF A PHOTODEGRADABLE OR BIODEGRADABLE KNITTED MESH MATERIAL CONTAINING A WEED FREE FILLER MATERIAL DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. THEY SHALL BE PROPERLY STAKED FOR DITCH APPLICATIONS.  REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR MATERIAL SPECIFICATIONS.  IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
		SYMBOL 	
Cd-Hb	BALED STRAW CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163		A BALE STRAW CHECK DAM IS COMPOSED OF BALES PREFERABLY BOUND WITH WIRE OR NYLON INSTEAD OF TWINE. BALES SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING ADJACENT BALES. THE DOWNSTREAM ROW OF BALES SHALL BE PLACED IN A TRENCH TO ALLOW THE TOP OF THE BALE'S LONG, WIDE SIDE TO BE LEVEL WITH THE GROUND AS A NON-ERODIBLE SPLASH PAD. PROPER STAKING IS ALSO REQUIRED FOR DITCH APPLICATIONS.  IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
		SYMBOL 	

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Cd-S	STONE CHECK DAM OR SANDBAG CHECK DAM  GA. STD 1031 SECTION 163, 603		STONE CHECK DAMS ARE CONSTRUCTED OF TYPE-3 RIP-RAP WITH GEOTEXTILE UNDERLINER. STONE CHECK DAMS ARE PREFERRED IN ROADWAY DITCHES OUTSIDE THE CLEAR ZONE. CONSIDERATION SHOULD BE GIVEN TO USING OTHER APPROPRIATE CHECK DAMS AND/OR BMPs WITHIN THE CLEAR ZONE.  SANDBAG CHECK DAMS ARE RECOMMENDED IN CONCRETE LINED CHANNELS FOR TEMPORARY VELOCITY CONTROL ONLY. ENSURE DISCHARGE POINT IS PROPERLY STABILIZED AND INCLUDE APPROPRIATE BMPs FOR SEDIMENT STORAGE UPSTREAM AND/OR DOWNSTREAM OF CONCRETE LINED CHANNELS.  IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
		SYMBOL 	
Ch-1	VEGETATED CHANNEL STABILIZATION  SECTION 700		A NEW OR EXISTING CHANNEL MAY BE LINED WITH PERMANENT VEGETATION ONLY FOR VELOCITIES UP TO 5.0 fps. THIS MEASURE SHALL BE DESIGNED IN ACCORDANCE WITH THE GDOT CHANNEL LINING DESIGN PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED.  TYPICALLY NOT SHOWN IN PLANS.
		LINE CODE 	
Ch-2R1	CHANNEL STABILIZATION RIP-RAP, TYPE 1 CONSTRUCTION DETAIL D-49 SECTION 603		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 1 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED.  "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
		LINE CODE 	
Ch-2R3	CHANNEL STABILIZATION RIP-RAP, TYPE 3 CONSTRUCTION DETAIL D-49 SECTION 603		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 3 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED.  "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
		LINE CODE 	

**NOTE:**

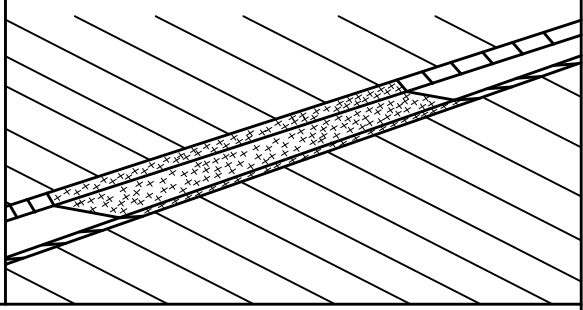
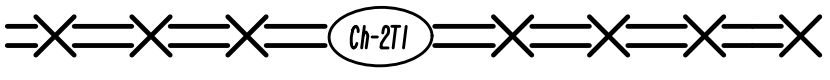
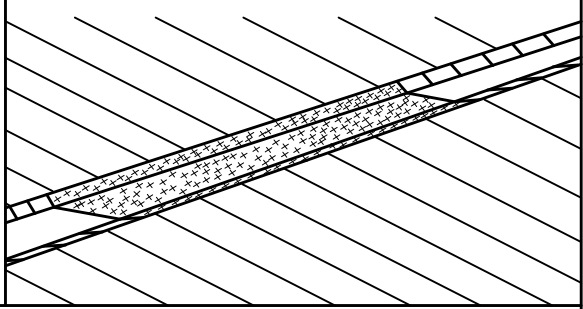
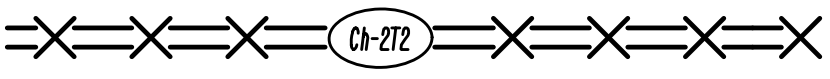
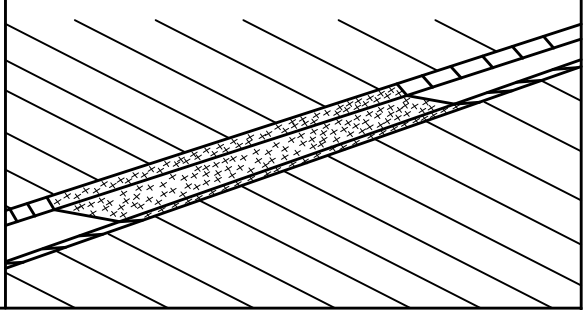
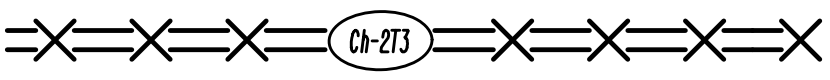
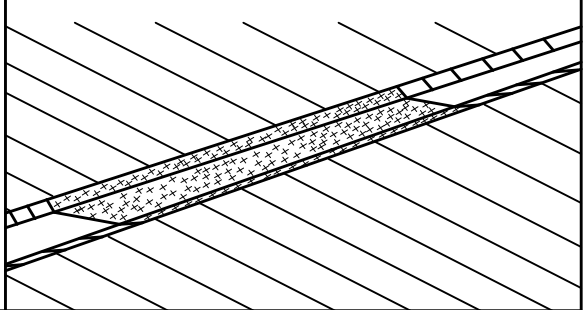
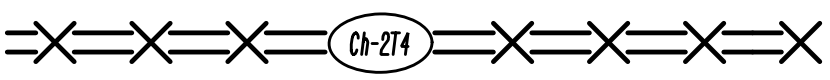
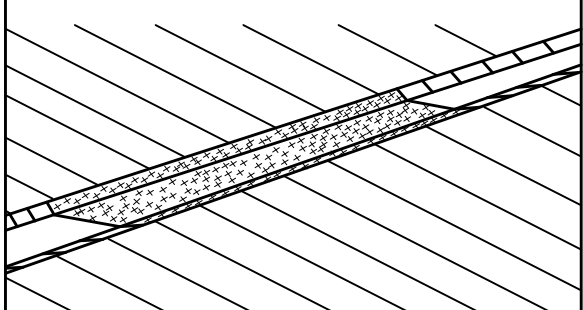
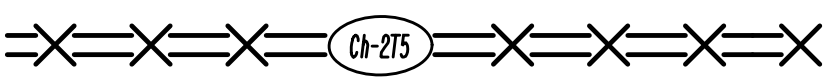
- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

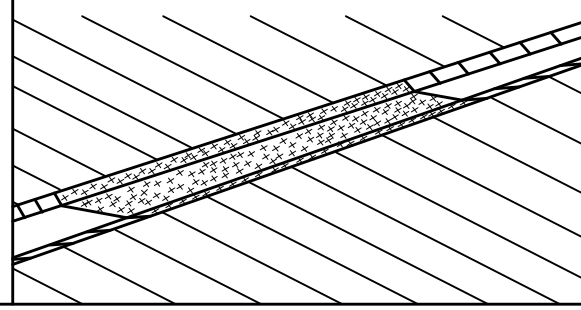
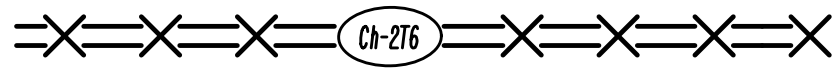
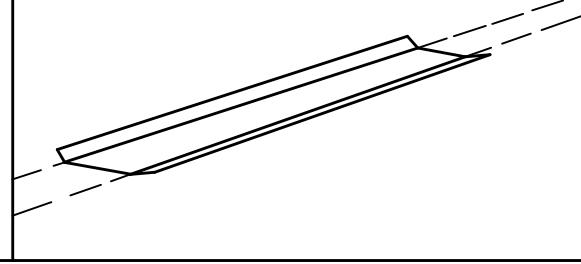

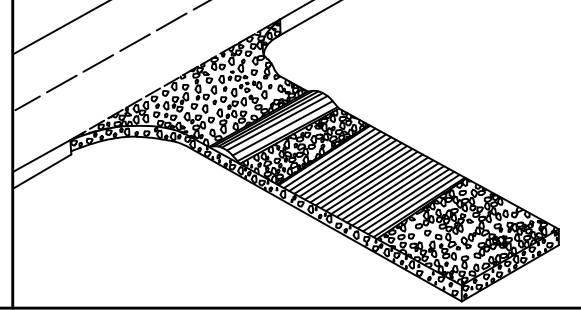

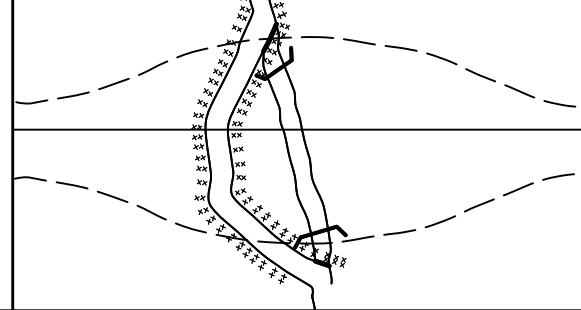



NO SCALE

REVISION DATES		EROSION CONTROL LEGEND	
3/2/2017		UNIFORM CODE SHEET	
		SHEET 2 OF 7	
CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
			DRAWING No.
			52-0002



CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T1	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-2 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T2	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-4 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T3	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-6 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T4	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-8 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T5	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-10 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T6	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-12 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-3	CONCRETE CHANNEL STABILIZATION		CHANNELS ARE LINED WITH CONCRETE FOR VELOCITIES >/- 10 fps. THIS ITEM CONSISTS OF CONSTRUCTING A 4" THICK CONCRETE CHANNEL. THE CONCRETE SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
	CONSTRUCTION DETAIL D-10, D-49 SECTION 441	LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.  RIP-RAP SHOULD BE USED TO DISSIPATE ENERGY DOWNSTREAM OF CONCRETE LINED CHANNELS.
Co	CONSTRUCTION EXIT		A CONSTRUCTION EXIT IS A STONE STABILIZED PAD THAT REDUCES OR ELIMINATES THE TRANSPORT OF MUD FROM CONSTRUCTION AREAS ONTO PUBLIC ROADS BY EQUIPMENT OR RUNOFF. BEST USED AT ACCESS POINTS, I.E. NEW LOCATION PROJECTS, BORROW PITS, WASTE PITS, ACCESS ROADS, ETC. SHOULD BE MINIMUM 20' WIDE, 50' LONG, 6" THICK, AND REQUIRES A GEOTEXTILE UNDERLINER. ON SITES WHERE THE GRADE TOWARD A PAVED AREA IS GREATER THAN 2%, A FULL WIDTH DIVERSION RIDGE 6" TO 8" HIGH WITH 3:1 SLOPES SHALL BE CONSTRUCTED APPROXIMATELY 15' UPSTREAM OF PAVED AREA. A TIRE WASHING AREA TO REMOVE MUD MAY ALSO BE REQUIRED PRIOR TO ENTRANCE ONTO PUBLIC ROADWAYS.
	CONSTRUCTION DETAIL D-41 SECTION 163, 800	SYMBOL 	ALL CONSTRUCTION EXIT REQUIREMENTS ARE INCLUDED IN THE PRICE OF THE CONSTRUCTION EXIT.
Dc-A	STREAM DIVERSION CHANNEL GEOTEXTILE, POLYETHYLENE FILM		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE OR POLYETHYLENE FILM. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 0 - 2.5 fps.
	SECTION 163	LINE CODE 	THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE.  CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.

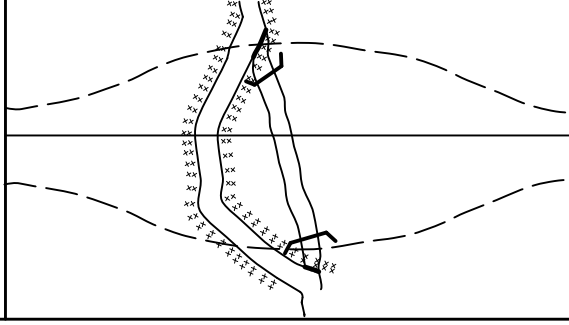

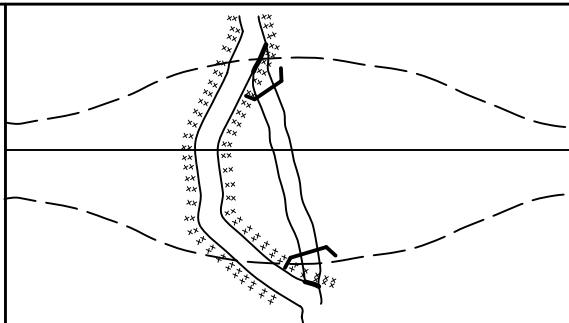

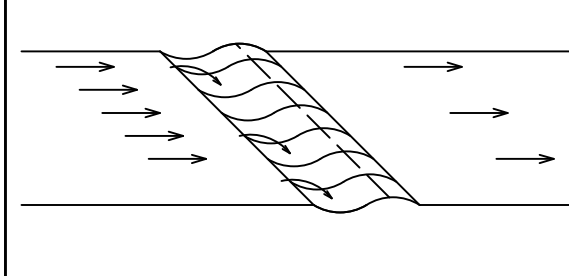
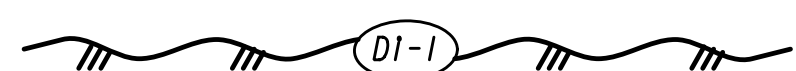
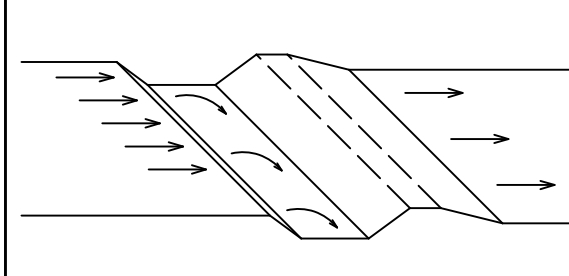
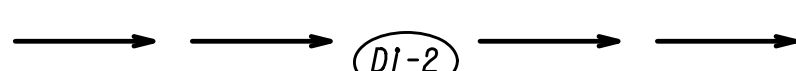
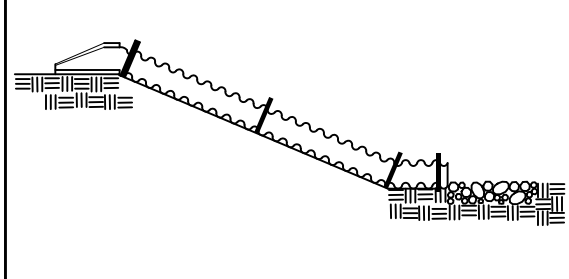
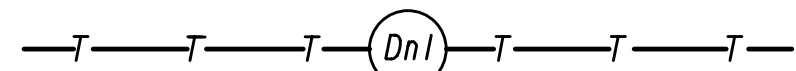
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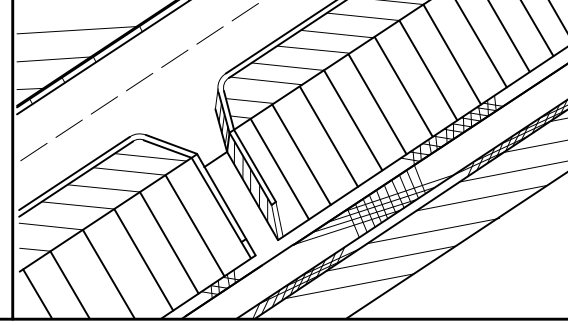
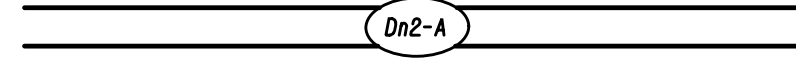
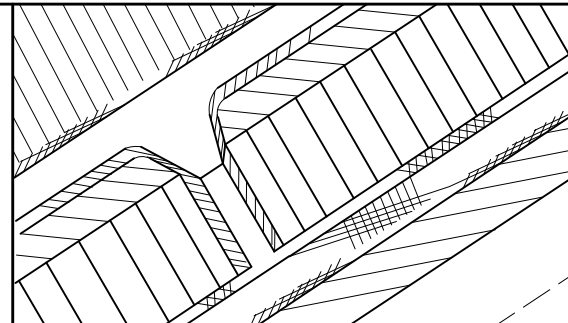

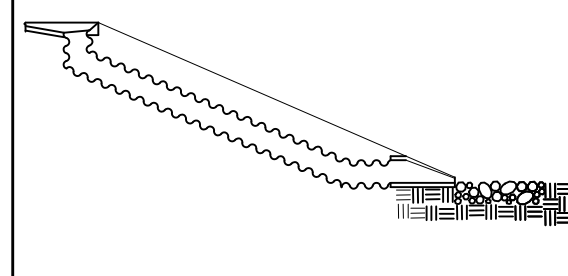
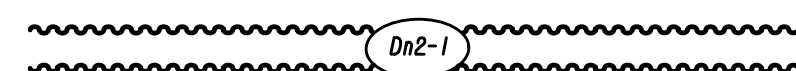
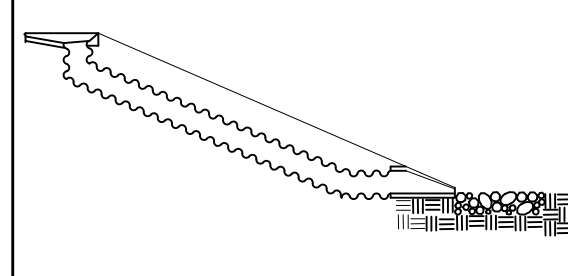
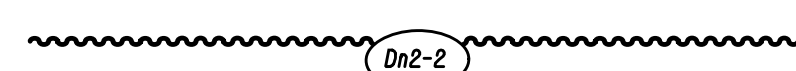
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NO SCALE

REVISION DATES		EROSION CONTROL LEGEND	
3/2/2017		UNIFORM CODE SHEET	
		SHEET 3 OF 7	
CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
		DRAWING No.	
		52-0003	

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dc-B	STREAM DIVERSION CHANNEL GEOTEXTILE ONLY SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE ONLY. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 2.5 - 9.0 fps.  THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE.  CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	LINE CODE 		
Dc-C	STREAM DIVERSION CHANNEL RIP-RAP & GEOTEXTILE SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH RIP-RAP AND GEOTEXTILE. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 9.0 - 13.0 fps.  THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE.  CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	LINE CODE 		
D1-1	DIVERSION BERM CONSTRUCTION DETAIL D-47 SECTION 205		A NON-DESIGNED TEMPORARY EARTHEN BERM WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO BE USED AT THE EDGE OF EMBANKMENT DURING THE GRADING OPERATION. THE BERMS ARE ALSO CONSTRUCTED ABOVE, ACROSS OR BELOW A SLOPE TO REDUCE THE LENGTH OF A SLOPE. THEY ARE USED TO INTERCEPT RUNOFF, PREVENTING SLOPE EROSION AND TO DIRECT THE RUNOFF TO A STABLE OUTLET, DOWN DRAINS *Dn1* OR CATCHMENT AREAS AND ON ALL GRADING PROJECTS.
	LINE CODE 		
D1-2	DIVERSION CHANNEL SECTION 205		A DESIGNED TEMPORARY OR PERMANENT CHANNEL WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO DIVERT OFFSITE RUNOFF AWAY FROM DISTURBED AREAS WITHIN THE PROJECT AREA. CHANNEL FOR OFFSITE RUNOFF SHALL BE STABILIZED WITH APPROPRIATE CHANNEL STABILIZATION.  REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA. A DIVERSION CHANNEL DETAIL MUST ALSO BE PROVIDED IN THE ESPCP.  RUNOFF FROM DISTURBED AREAS WITHIN THE PROJECT AREA SHALL NOT BE ALLOWED TO CONVERGE WITH OFFSITE RUNOFF WITHIN THIS DIVERSION.
	LINE CODE 		
Dn1	TEMPORARY DOWNDRAIN STRUCTURE FLEXIBLE CONSTRUCTION DETAIL D-19 SECTION 163		A TEMPORARY PIPE SLOPE DRAIN IS A PLASTIC FLEXIBLE PIPE TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TEMPORARY SLOPE DRAINS SHOULD BE PLACED AT INTERVALS OF 350 FEET ON 0% - 2% GRADES, 200 FEET ON STEEPER GRADES AND MORE FREQUENTLY AS DICTATED BY FIELD CONDITIONS. THE TYPICAL PIPE SIZE IS A CORRUGATED 10". THE PIPE WILL BE ANCHORED WITH STAKES AT INTERVALS NOT TO EXCEED 10'.  THE OUTLET AREA SHALL BE STABILIZED FOR VELOCITY DISSIPATION AND EROSION CONTROL.
	LINE CODE 		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dn2-A	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441		A CONCRETE FLUME TYPE "A" IS USED TO DIRECT SURFACE RUNOFF DOWN A ROADWAY SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN ALL DEPRESSED AREAS WHERE WATER WILL FLOW DOWN THE SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OTHER CRITERIA).
	LINE CODE 		
Dn2-B	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441		A CONCRETE FLUME TYPE "B" IS USED TO DIRECT SURFACE DITCH RUNOFF DOWN A BACK SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN DEPRESSED AREAS WHERE CONCENTRATED OFFSITE WATER REACHES THE CUT SLOPE. IT IS DESIGNED TO SAFELY CONVEY WATER DOWN THE CUT SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE 		
Dn2-1	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP1, 9017J TP1, DETAIL D-26 TP1 SECTION 576, 577		CONCRETE DRAIN INLET WITH METAL PIPE IS USED TO DRAIN CURBS, ON A GRADE, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE 		
Dn2-2	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP2, 9017J TP2, DETAIL D-26 TP2 SECTION 576, 577		CONCRETE DRAIN INLET AND METAL PIPE IS USED TO DRAIN CURB, IN A SAG, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE 		

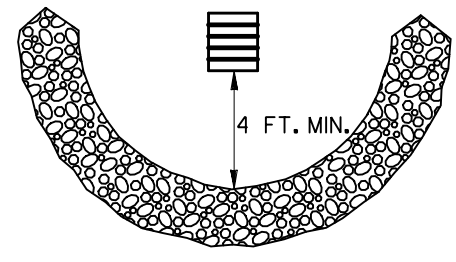

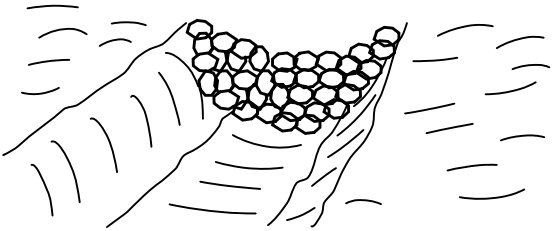

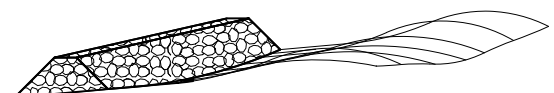
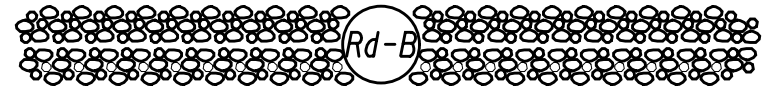
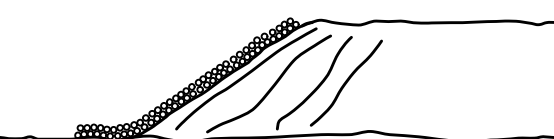

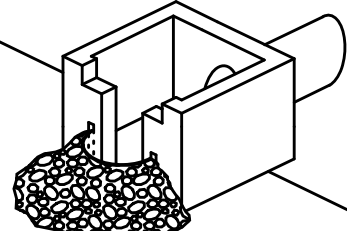

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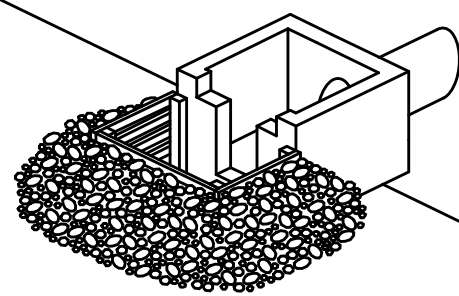

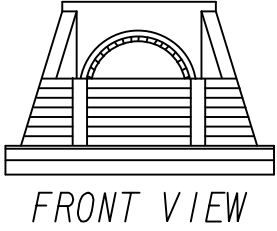

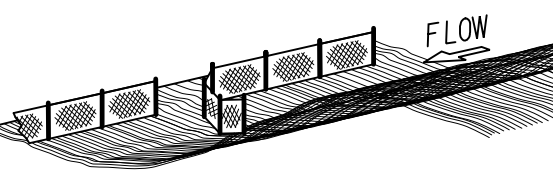
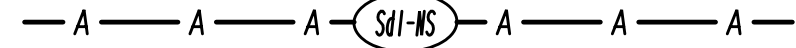
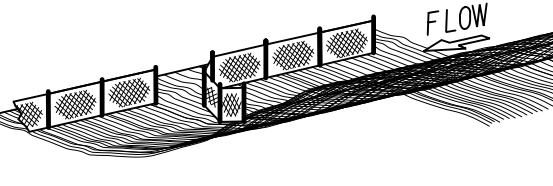
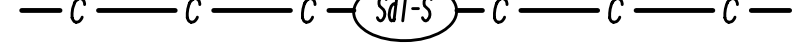
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REVISION DATES		EROSION CONTROL LEGEND	
3/2/2017		UNIFORM CODE SHEET	
		SHEET 4 OF 7	
CHECKED:	D. EAGLETON	DATE:	01/01/16
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			52-0004

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Fr	FILTER RING  CONSTRUCTION DETAIL D-46 SECTION 163		A TEMPORARY STONE BARRIER CONSTRUCTED AT DRAINAGE STRUCTURE INLETS AND POST-CONSTRUCTION POND OUTLETS. IT REDUCES RUNOFF VELOCITY AND HELPS PREVENT SEDIMENT FROM LEAVING SITE PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.  REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR ADDITIONAL INFORMATION ON USAGE.
	SYMBOL 		
Rd	ROCK FILTER DAM  CONSTRUCTION DETAIL D-43 SECTION 163, 603		ROCK FILTER DAMS ARE CONSTRUCTED OF TYPE 3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. THEY ARE PLACED ACROSS DRAINAGEWAYS WHICH DRAIN 50 ACRES OR LESS. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING ROCK FILTER DAMS.  THE DAM SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS.  ROCK FILTER DAMS SHOULD BE USED IN DITCHES PRIOR TO DISCHARGING INTO STREAMS, WETLANDS, OPEN-WATERS, OR OTHER ESAs.
	SYMBOL 		
Rd-B	STONE FILTER BERM  CONSTRUCTION DETAIL D-50 SECTION 163, 603		STONE FILTER BERMS ARE CONSTRUCTED SIMILAR TO ROCK FILTER DAMS FOR A LINEAR APPLICATION. THEY ARE CONSTRUCTED OF TYPE-3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING STONE FILTER BERMS.  STONE FILTER BERMS ARE IDEAL ALONG THE PERIMETER FOR SHEET FLOW AND/OR SHALLOW CONCENTRATED FLOW TO A COMMON LOW AREA WHERE PERIMETER SILT FENCE ALONE MAY BE INSUFFICIENT. THERE IS NO WELL-DEFINED CHANNEL FOR A STANDARD ROCK FILTER DAM, AND/OR CONSTRUCTING A ROCK OUTLET TEMPORARY SEDIMENT TRAP IS NOT APPLICABLE.
	LINE CODE 		
Rp	RIP-RAP  SECTION 603		RIP-RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND BRIDGE END ROLLS. RIP-RAP TYPE-1 SHOULD BE PLACED ON TOP OF A GEOTEXTILE UNDERLINER AT A MINIMUM 24" THICKNESS OR AS INDICATED ON THE PLANS.  RIP-RAP MAY ALSO BE USED AT DRAINAGE STRUCTURE OUTLETS WITHIN THE RIGHT-OF-WAY. HOWEVER, APPROPRIATE OUTLET PROTECTION SHOULD BE PROVIDED AT OUTFALLS. REFER TO STORM DRAIN OUTLET PROTECTION FOR ADDITIONAL INFORMATION ON USING RIP-RAP AT OUTFALLS.
	PATTERN 		
Rt-P	RETROFITTING PERFORATED HALF-ROUND PIPE  CONSTRUCTION DETAIL D-44 SECTION 163		A PERFORATED HALF-ROUND PIPE WITH STONE FILTER PLACED IN FRONT OF A PERMANENT STORMWATER DETENTION POND OUTLET STRUCTURE TO SERVE AS A TEMPORARY SEDIMENT FILTER.  SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 30 ACRES TOTAL DRAINAGE AREA.  SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA.  REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR DESIGN CRITERIA.
	SYMBOL 		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Rt-B	RETROFITTING SLOTTED BOARD DAM  CONSTRUCTION DETAIL D-45 SECTION 163		A SLOTTED BOARD DAM CONSISTS OF STONE AND/OR FILTER FABRIC AND BOARDS WITH 0.5' - 1.0' SPACING TO SERVE AS A TEMPORARY SEDIMENT FILTER.  PERMANENT STORMWATER DETENTION POND OUTLET: -DRAINAGE AREA UP TO 100 ACRES -DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA  ROADWAY DRAINAGE STRUCTURE: -OPEN END PIPES, WINGED HEADWALLS, OR CONCRETE WEIR OUTLETS WITH DRAINAGE AREA LESS THAN 30 ACRES  REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR DESIGN CRITERIA.
	SYMBOL 		
Rt-Sg1 Rt-Sg2 Rt-Sg3	RETROFITTING SILT CONTROL GATES  CONSTRUCTION DETAIL D-20 SECTION 163		A SILT CONTROL GATE CONSISTS OF BOARDS WITHOUT SPACING AND FILTER FABRIC TO BE USED FOR TEMPORARY SEDIMENT STORAGE ON ROADWAY PROJECTS AT THE INLET OF STRUCTURES WITH A DRAINAGE AREA UP TO 50 ACRES. THE DISTURBED AREA WITHIN THE DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. SILT CONTROL GATES SHOULD NOT BE USED ALONE, BUT WITH ANOTHER BMP DOWNSTREAM PRIOR TO DISCHARGE LEAVING PROJECT AREA.  DO NOT USE SILT GATES IN STATE WATERS.  Rt-Sg1-TYPE 1: USED ON BOX CULVERTS Rt-Sg2-TYPE 2: USED ON STRAIGHT HEADWALLS Rt-Sg3-TYPE 3: USED ON FLARED END SECTIONS AND TAPERED HEADWALLS
	SYMBOL 		
	FRONT VIEW		
SdI-NS	SEDIMENT BARRIER (NON-SENSITIVE) SILT FENCE TYPE A  CONSTRUCTION DETAIL D-24 SECTION 171		SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW.  TYPE-A SILT FENCE IS TYPICALLY USED IN NON-ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS LESS THAN 10'.  IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.
	LINE CODE 		
SdI-S	SEDIMENT BARRIER (SENSITIVE) SILT FENCE TYPE C  CONSTRUCTION DETAIL D-24 SECTION 171		SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW.  TYPE-C SILT FENCE IS TYPICALLY USED IN ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS 10' AND GREATER.  ALL ENVIRONMENTALLY SENSITIVE AREAS (ESAs) SHALL BE PROTECTED WITH A DOUBLE-ROW OF TYPE-C SILT FENCE REGARDLESS OF FILL HEIGHT. A SINGLE-ROW MAY BE USED FOR OTHER APPLICATIONS.  IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.
	LINE CODE 		

**NOTE:**

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA'.

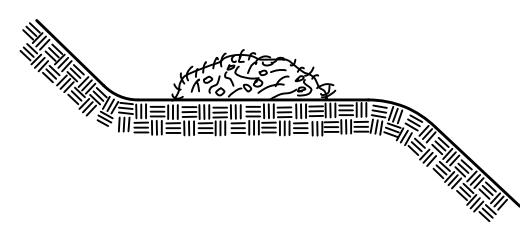
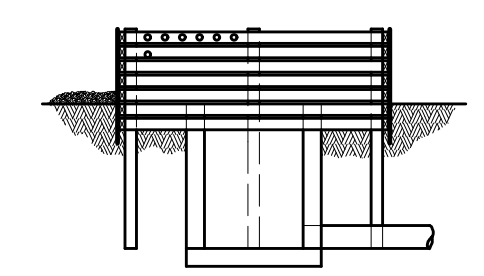
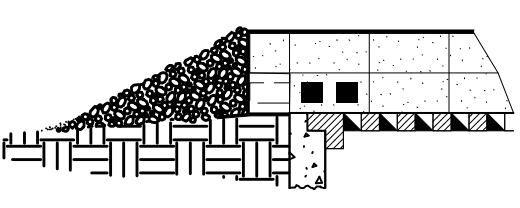
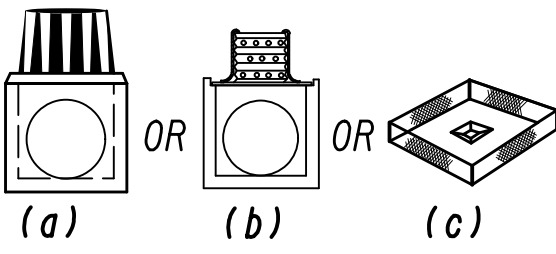
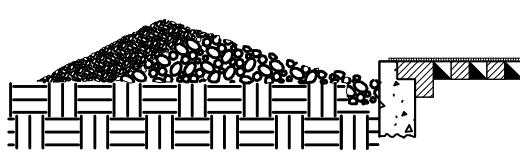


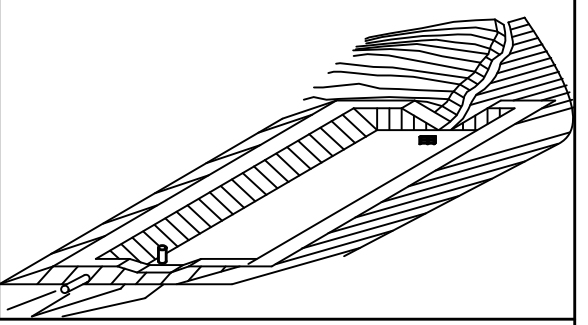
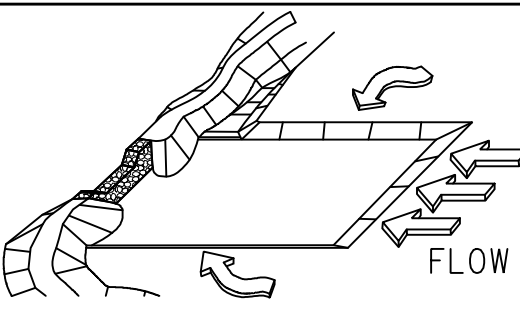
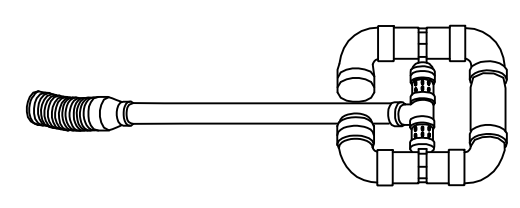
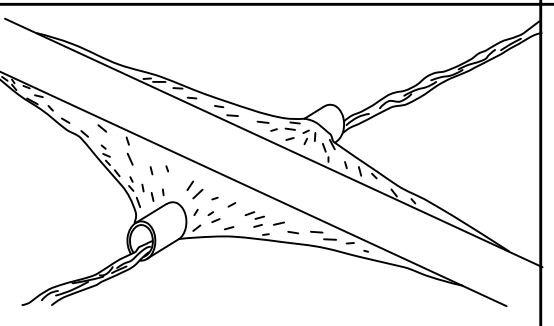
NO SCALE

REVISION DATES	
3/2/2017	

**EROSION CONTROL LEGEND**  
UNIFORM CODE SHEET  
SHEET 5 OF 7

CHECKED: D. EAGLETON	DATE: 01/01/16	DRAWING No.
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	52-0005

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd1-BB	SEDIMENT BARRIER BRUSH BARRIER  CONSTRUCTION DETAIL D-24B SECTION 201		THIS ITEM CONSISTS OF INTERMINGLED BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM. CONSTRUCTED AT THE TOE OF FILL SLOPES ONLY DURING THE CLEARING AND GRUBBING OPERATION. THE BARRIER SHOULD BE USED AT THE TOE OF FILL SLOPES ON GRADING PROJECTS IN RURAL AREAS WHERE SUFFICIENT RIGHT OF WAY OR EASEMENT IS AVAILABLE (10 FEET OR MORE). THE BARRIER SHOULD RUN ROUGHLY PERPENDICULAR TO THE FLOW OF WATER WHERE THIS DOES NOT CONFLICT WITH RIGHT-OF-WAY OR EASEMENT LIMITS. THEY WILL NOT BE PLACED IN WETLANDS.  TYPICALLY NOT SHOWN ON PLANS.  PAYMENT FOR THIS ITEM IS INCLUDED IN THE CLEARING AND GRUBBING COST. NO SEPARATE PAYMENT SHALL BE MADE.
		LINE CODE  * * * Sd1-BB * * *	
Sd2-B	INLET SEDIMENT TRAP (BAFFLE BOX) CONSTRUCTION DETAIL D-42 SECTION 163		BAFFLE BOX INLET SEDIMENT TRAP USED FOR INLETS RECEIVING HIGH FLOW RATE AND/OR VELOCITY. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES 7 cfs AND GREATER.
		SYMBOL  Sd2-B	
Sd2-Bg	INLET SEDIMENT TRAP (BLOCK & GRAVEL) CONSTRUCTION DETAIL D-42 SECTION 163		BLOCK AND GRAVEL DROP INLET PROTECTION USED FOR WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. CAN BE USED AT CULVERT INLETS. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 5 - 7 cfs.
		SYMBOL  Sd2-Bg	
Sd2-F	INLET SEDIMENT TRAP (FILTER FABRIC) CONSTRUCTION DETAIL D-42 SECTION 163		(a) A SEDIMENT BARRIER CONSISTING OF A PREFABRICATED FRAME WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (b) A SEDIMENT BARRIER CONSISTING OF A PERFORATED METAL STAND PIPE WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (c) TYPE C SILT FENCE WITH SUPPORTING FRAME CAN BE USED AS AN ALTERNATE TO INLET SEDIMENT TRAP FOR AREAS WITH SLOPES < 5%.  THIS ITEM IS USED TO PREVENT SILT FROM ENTERING THE PIPE SYSTEM. SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS. RECOMMENDED FOR INLET RECEIVING FLOW RATES THAT RANGE FROM 0 - 4 cfs.
		SYMBOL  Sd2-F	
Sd2-G	INLET SEDIMENT TRAP (GRAVEL) CONSTRUCTION DETAIL D42 SECTION 163		GRAVEL DROP INLET PROTECTION USED WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. STONE AND GRAVEL ARE USED TO TRAP SEDIMENT. THE SLOPE TOWARD THE INLET SHALL BE NO MORE THAN 3:1. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 3 - 5 cfs.
		SYMBOL  Sd2-G	

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd3	TEMPORARY SEDIMENT BASIN  CONSTRUCTION DETAIL D-22A, D-22B SECTION 163		A BASIN CREATED BY EXCAVATING AN AREA, DAMMING CONCENTRATED FLOW, OR A COMBINATION OF BOTH. THE BASIN IS DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DRAINAGE AREA. THE DRAINAGE AREA SHOULD NOT EXCEED 150 ACRES. BASINS TYPICALLY CONSISTS OF A DAM, PRINCIPAL SPILLWAY, AND AN EMERGENCY SPILLWAY. A FLOATING SURFACE SKIMMER SHALL BE REQUIRED AS PART OF THE PRINCIPAL SPILLWAY UNLESS INFEASIBLE. SUFFICIENT RIGHT-OF-WAY OR EASEMENT IS NEEDED FOR BASIN CONSTRUCTION AND MAINTENANCE ACCESS.  SEDIMENT BASINS SHALL BE CONSIDERED ON ALL PROJECTS, BUT MAY NOT BE PRACTICAL. BASINS SHOULD BE LOCATED TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND UTILITIES. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
		SYMBOL  Sd3	
Sd4-C	ROCK OUTLET TEMPORARY SEDIMENT TRAP  CONSTRUCTION DETAIL D-53 SECTION 163		TEMPORARY POND WITH ROCK OUTLET DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER DRAINAGE AREA. DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. DISTINGUISHED FROM TEMPORARY SEDIMENT BASIN BY LACK OF PRINCIPAL SPILLWAY. MAXIMUM POND DEPTH FROM BOTTOM OF POND TO EMERGENCY SPILLWAY IS 4 FEET.  A TEMPORARY SEDIMENT BASIN SHALL BE EVALUATED PRIOR TO CONSIDERING A TEMPORARY SEDIMENT TRAP. A TEMPORARY SEDIMENT TRAP IS IDEAL FOR SMALL AREAS WITH NO UNUSUAL DRAINAGE FEATURES AND EFFECTIVE AGAINST COARSE SEDIMENT, BUT NOT AGAINST SILT OR CLAY PARTICLES THAT REMAIN SUSPENDED.  REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
		SYMBOL  Sd4-C	
Sk	FLOATING SURFACE SKIMMER  CONSTRUCTION DETAIL D-22A, D-22B SECTION 163		A BUOYANT DEVICE THAT DRAINS WATER FROM THE SURFACE OF A TEMPORARY SEDIMENT BASIN AT A CONTROLLED FLOW RATE. THE INLET/ORIFICE SIZE IS DESIGNED TO DRAIN THE BASIN WITHIN 24 - 48 HOURS. THE SKIMMER INFORMATION SHALL BE PROVIDED IN CONJUNCTION WITH THE SEDIMENT BASIN INFORMATION IN PLANS. IF A SKIMMER IS INFEASIBLE, THE DESIGNER SHALL PROVIDE A WRITTEN JUSTIFICATION IN THE PLANS.  SKIMMERS ARE ATTACHED TO A RISER WITHOUT PERFORATIONS AND ACTS AS THE PRIMARY SPILLWAY. THE SKIMMER BMP SYMBOL SHALL BE SHOWN IN CONJUNCTION WITH THE TEMPORARY SEDIMENT BASIN BMP SYMBOL WHEN APPLICABLE.  REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR ADDITIONAL INFORMATION.
		SYMBOL  Sk	
Sr	TEMPORARY STREAM CROSSING  SECTION 107		A TEMPORARY STRUCTURE INSTALLED ACROSS A FLOWING STREAM OR WATERCOURSE FOR USE BY CONSTRUCTION EQUIPMENT. THIS BMP PROVIDES A MEANS TO CROSS STREAMS OR WATERCOURSES WITHOUT MOVING SEDIMENT INTO STREAMS, DAMAGING THE STREAM BED OR CHANNEL, OR CAUSING FLOODING. THIS BMP SHOULD NOT BE USED ON STREAMS WITH DRAINAGE AREAS GREATER THAN ONE SQUARE MILE, UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE THE ADDITIONAL DRAINAGE AREA BY THE DESIGN PROFESSIONAL. A CERTIFICATION STATEMENT AND SIGNATURE SHALL ACCOMPANY THE DESIGN.  THIS BMP SHALL BE DESIGNED ACCORDING TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".  FOR CONTRACTOR'S USE ONLY!
		SYMBOL  Sr	

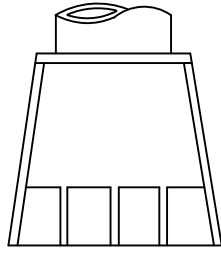
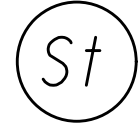
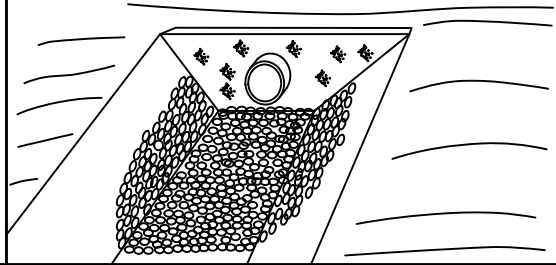
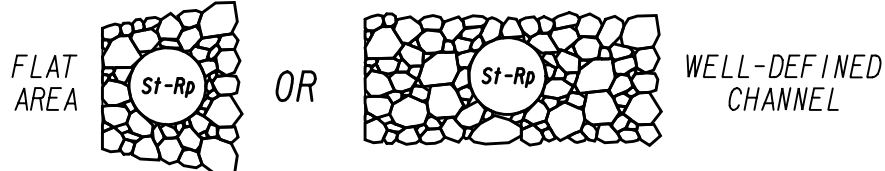
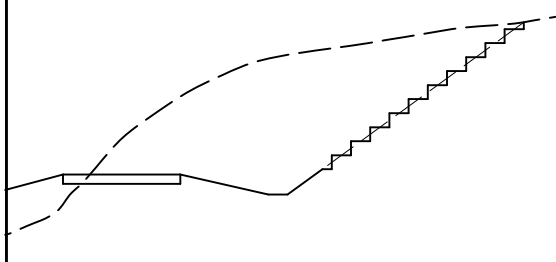
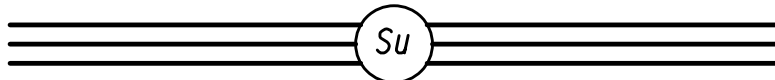
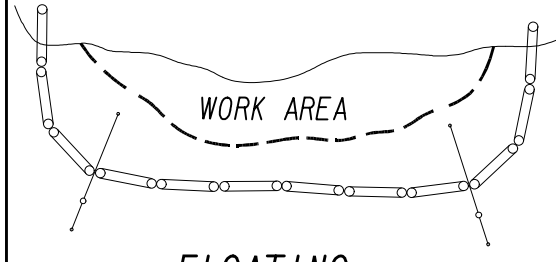
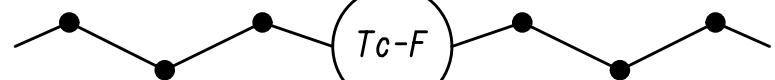
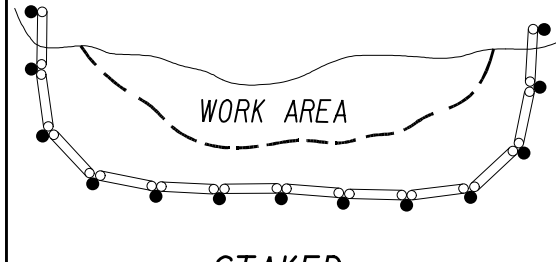
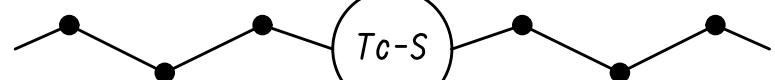
**NOTE:**

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".



NO SCALE

REVISION DATES		EROSION CONTROL LEGEND	
3/2/2017		UNIFORM CODE SHEET	
		SHEET 6 OF 7	
CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
		DRAWING No.	
		52-0006	

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
St	STORM DRAIN OUTLET PROTECTION  GA. STD. 1125 & 2332		A PIPE OR BOX CULVERT OUTLET HEADWALL WITH AN APRON AND DISSIPATOR BLOCKS IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM.  IT IS USED ON THE OUTLET OF ALL BOX CULVERTS AND ON 48" AND LARGER PIPES. MAY BE USED ON INLET FOR FLOWING STREAMS. USE ON SMALL PIPES WHEN OUTLET VELOCITY OF THE 25-YEAR STORM IS 12 fps AND GREATER.
	SYMBOL 		
St-Rp	STORM DRAIN OUTLET PROTECTION (RIP-RAP)  CONSTRUCTION DETAIL D-55 SECTION 603		RIP-RAP OUTLET PROTECTION IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE, CHANNEL, OR STRUCTURE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. THE MINIMUM DESIGN OF RIP-RAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM PEAK FLOW, BUT LARGER STORMS ARE RECOMMENDED.  TYPE-1 RIP-RAP AT A DEPTH OF 36" AND PLACED ON FILTER FABRIC IS PREFERRED FOR ALL d50 <math>\leq 1.2</math> FEET. TYPE-3 RIP-RAP AT A DEPTH OF 18" AND PLACED ON FILTER FABRIC MAY BE USED FOR d50 <math>\leq 0.7</math> FEET.
	PATTERN 		REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR REQUIRED DESIGN DIMENSIONS AND OTHER INFORMATION TO BE INCLUDED IN THE PLANS.
Su	SURFACE ROUGHENING SERRATED SLOPES CONSTRUCTION DETAIL S-7 SECTION 205		PROVIDING A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS, BY OPERATING A CLEATED DOZER ON THE SLOPE IN A VERTICAL DIRECTION. CREATING SERRATED SLOPES IN THE GRADING PROCESS TO CONSTRUCT BENCHES WILL REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION OF WATER.  IN MOST CASES THIS BMP IS NOT REQUIRED TO BE SHOWN ON THE PLANS, BUT REQUIRED TO BE COMPLETED BY THE CONTRACTOR UNDER ALL PROJECTS.  IF SERRATED SLOPES ARE SPECIFIED BY THE SOIL SURVEY, THEN THIS BMP SHALL BE SHOWN ON THE PLANS WHERE SERRATED SLOPES ARE TO BE USED.
	LINE CODE 		
Tc-F	TURBIDITY CURTAIN FLOATING  CONSTRUCTION DETAIL D-51 SECTION 170		A FLOATING TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED WHERE CONSTRUCTION IS REQUIRED IN A LARGE BODY OF WATER SUCH AS LAKES AND RIVERS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER.  THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs.  IT MAY ALSO BE REFERRED TO AS A FLOATING BOOM, SILT BARRIER, OR SILT CURTAIN.
	LINE CODE 		
Tc-S	TURBIDITY CURTAIN STAKED  CONSTRUCTION DETAIL D-51 SECTION 170		A STAKED TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED IN SHALLOW INUNDATED AREAS. IT MAY BE USED TO PROTECT A SMALL STREAM BEING REALIGNED OR RESTORED. IN THIS CASE, CURTAIN SHOULD EXTEND TO BOTTOM OF STREAMBED. THE HEIGHT SHOULD BE LIMITED TO 5 FEET UNLESS DIRECTED AND EXTEND 2 FEET ABOVE NORMAL WATER ELEVATION. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER.  THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs.  IT MAY BE REFERRED TO AS A SILT BARRIER OR SILT CURTAIN.
	LINE CODE 		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION

**NOTE:**

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".



NO SCALE

REVISION DATES		EROSION CONTROL LEGEND	
3/2/2017		UNIFORM CODE SHEET	
		SHEET 7 OF 7	
CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	
		DRAWING No. 52-0007	

**NOTES:**  
 24 HOUR CONTACT:  
 CITY OF BROOKHAVEN DEPARTMENT OF PUBLIC WORKS  
 PHONE NUMBER: 404-637-0500  
 EMAIL: ANDREW.THOMPSON@BROOKHAVENGA.GOV

CALYX ENGINEERS+CONSULTANTS  
 1255 CANTON STREET, SUITE G  
 ROSWELL, GA 30075  
 EMAIL: DJACKSON@CALYXENGINEERS.COM  
 PHONE NUMBER: 678.795.3600

CONTRACTOR RESPONSIBLE FOR CLEANING  
 CONSTRUCTION EQUIPMENT TO PREVENT TRACKING OF  
 SEDIMENT ONTO THE CITY'S STREETS.

TOTAL PROJECT AREA: 0.8 AC  
 TOTAL DISTURBED AREA: 0.2 AC

THIS PROJECT HAS BEEN PREPARED USING THE  
 HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD  
 1983) 194 WEST ZONE AND THE NORTH AMERICA VERTICAL  
 DATUM (NAVD) OF 1988.

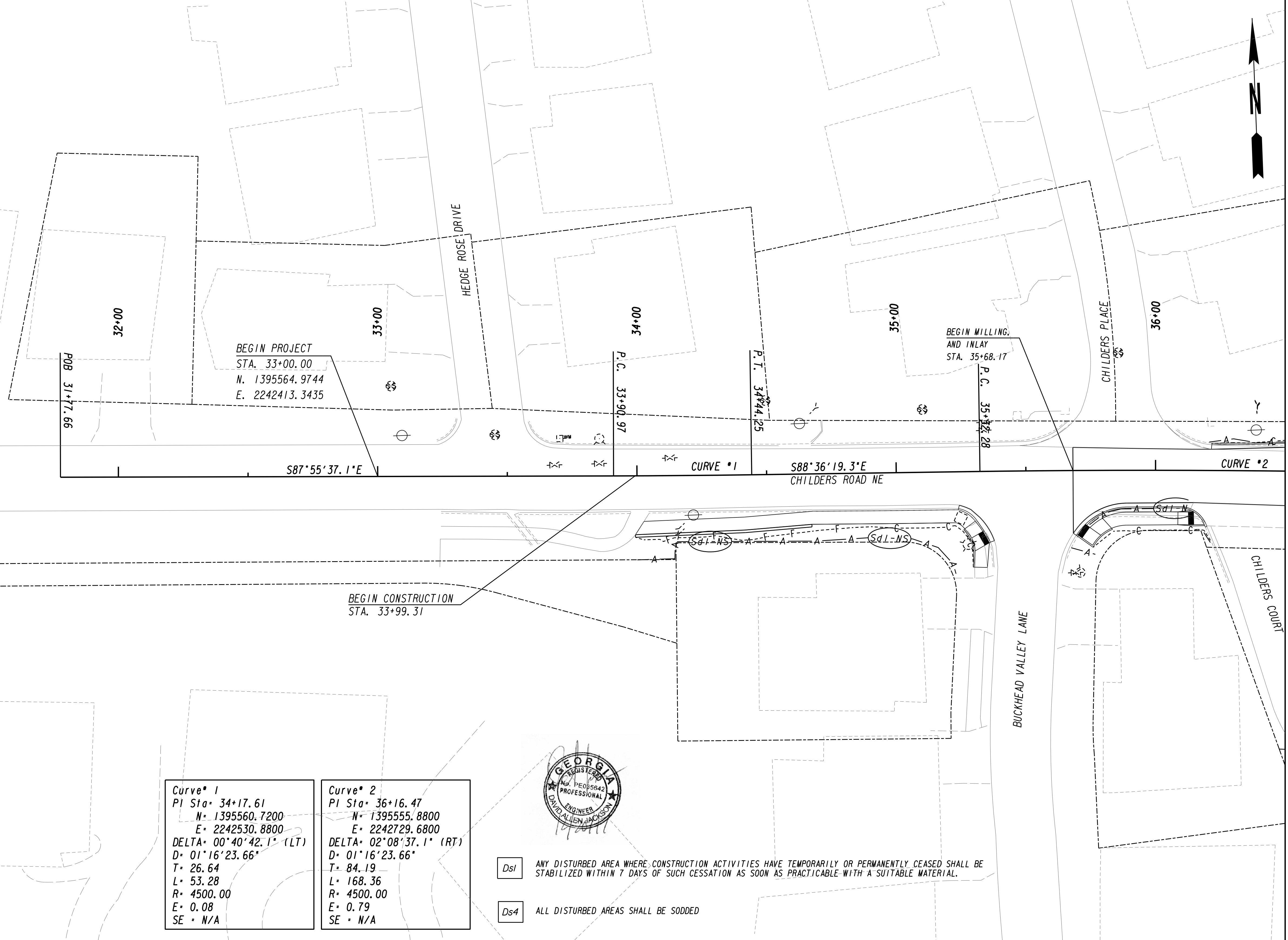
PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY,  
 THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY  
 AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS,  
 OR OTHER APPROPRIATE MEANS. THE LOCATION AND  
 EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL  
 OCCUR WITHIN THE APPROVED LIMITS INDICATED ON  
 THE APPROVED PLANS.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL  
 NECESSARY BARRICADES WHILE ROADWAY FRONTAGE  
 IMPROVEMENTS ARE BEING MADE.

FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL  
 EROSION CONTROL MEASURES WILL RESULT IN ALL  
 CONSTRUCTION BEING STOPPED ON THE JOB SITE  
 UNTIL SUCH MEASURES ARE CORRECTED CONSISTENT  
 WITH THE CITY OF BROOKHAVEN EROSION CONTROL  
 ORDINANCE.

A COPY OF THE APPROVED LAND DISTURBANCE PLAN  
 AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER  
 LAND DISTURBANCE ACTIVITY IS IN PROGRESS.

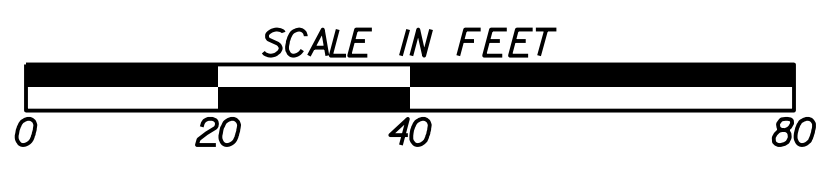
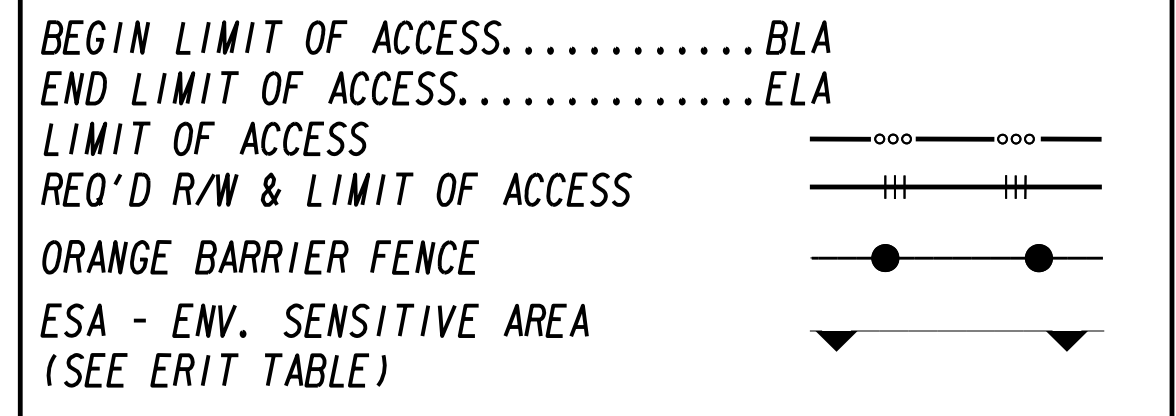
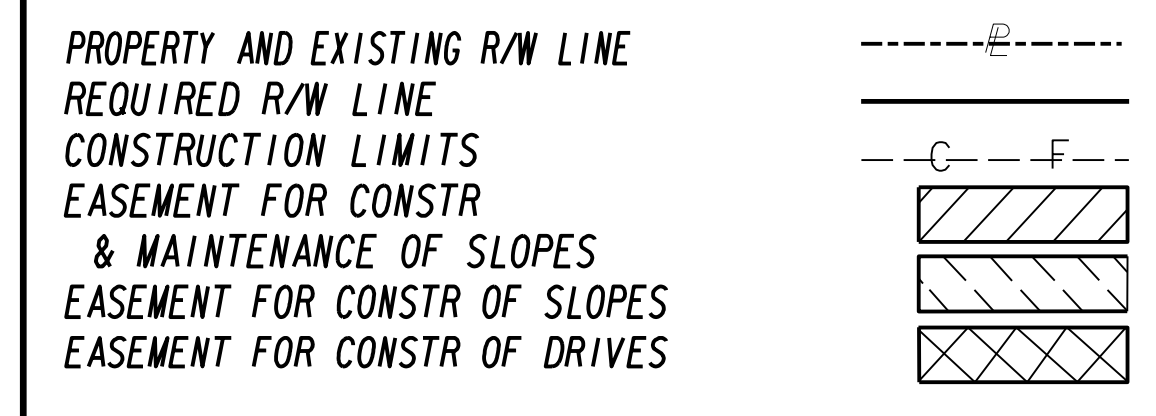
STATE WATERS ARE NOT, ONSITE OR WITHIN 200 FEET  
 OF THE SITE.



Curve # 1	Curve # 2
PI Sta= 34+17.61	PI Sta= 36+16.47
N= 1395560.7200	N= 1395555.8800
E= 2242530.8800	E= 2242729.6800
DELTA= 00°40'42.1" (LT)	DELTA= 02°08'37.1" (RT)
D= 01'16"23.66"	D= 01'16"23.66"
T= 26.64	T= 84.19
L= 53.28	L= 168.36
R= 4500.00	R= 4500.00
E= 0.08	E= 0.79
SE = N/A	SE = N/A



- Ds1 ANY DISTURBED AREA WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITHIN 7 DAYS OF SUCH CESSATION AS SOON AS PRACTICABLE WITH A SUITABLE MATERIAL.
- Ds4 ALL DISTURBED AREAS SHALL BE SODDED



REVISION DATES	
01/05/18	

BMP LOCATION DETAILS CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	54-0001	
CORRECTED:	DATE:		
VERIFIED:	DATE:		

**NOTES:**  
 24 HOUR CONTACT:  
 CITY OF BROOKHAVEN DEPARTMENT OF PUBLIC WORKS  
 PHONE NUMBER: 404-637-0500  
 EMAIL: ANDREW.THOMPSON@BROOKHAVENGA.GOV

CALYX ENGINEERS+CONSULTANTS  
 1255 CANTON STREET, SUITE G  
 ROSWELL, GA 30075  
 EMAIL: DJACKSON@CALYXENGINEERS.COM  
 PHONE NUMBER: 678.795.3600

CONTRACTOR RESPONSIBLE FOR CLEANING  
 CONSTRUCTION EQUIPMENT TO PREVENT TRACKING OF  
 SEDIMENT ONTO THE CITY'S STREETS.

TOTAL PROJECT AREA: 0.8 AC  
 TOTAL DISTURBED AREA: 0.2 AC

THIS PROJECT HAS BEEN PREPARED USING THE  
 HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD  
 1983) 94 WEST ZONE AND THE NORTH AMERICA VERTICAL  
 DATUM (NAVD) OF 1988.

PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY,  
 THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY  
 AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS,  
 OR OTHER APPROPRIATE MEANS. THE LOCATION AND  
 EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL  
 OCCUR WITHIN THE APPROVED LIMITS INDICATED ON  
 THE APPROVED PLANS.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL  
 NECESSARY BARRICADES WHILE ROADWAY FRONTAGE  
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FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL  
 EROSION CONTROL MEASURES WILL RESULT IN ALL  
 CONSTRUCTION BEING STOPPED ON THE JOB SITE  
 UNTIL SUCH MEASURES ARE CORRECTED CONSISTENT  
 WITH THE CITY OF BROOKHAVEN EROSION CONTROL  
 ORDINANCE.

A COPY OF THE APPROVED LAND DISTURBANCE PLAN  
 AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER  
 LAND DISTURBANCE ACTIVITY IS IN PROGRESS.

STATE WATERS ARE NOT, ONSITE OR WITHIN 200 FEET  
 OF THE SITE.

**Curve\* 3**  
 PI Sta: 38+04.41  
 N= 1395544.2800  
 E= 2242917.2800  
 DELTA= 23°57'15.1" (LT)  
 D= 23°32'02.26"  
 T= 51.65  
 L= 101.79  
 R= 243.46  
 E= 5.42  
 SE = N/A

**Curve\* 4**  
 PI Sta: 101+24.43  
 N= 1395624.8915  
 E= 2243093.1847  
 DELTA= 07°08'36.9" (RT)  
 D= 02°52'27.32"  
 T= 124.43  
 L= 248.54  
 R= 1993.41  
 E= 3.88  
 SE = N/A

**Curve\* 2**  
 PI Sta: 36+16.47  
 N= 1395555.8800  
 E= 2242729.6800  
 DELTA= 02°08'37.1" (RT)  
 D= 01°16'23.66"  
 T= 84.19  
 L= 168.36  
 R= 4500.00  
 E= 0.79  
 SE = N/A

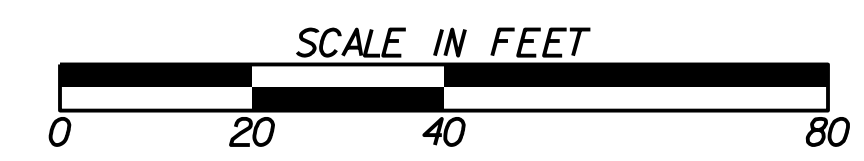
**Ds1** ANY DISTURBED AREA WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITHIN 7 DAYS OF SUCH CESSATION AS SOON AS PRACTICABLE WITH A SUITABLE MATERIAL.

**Ds4** ALL DISTURBED AREAS SHALL BE SODDED



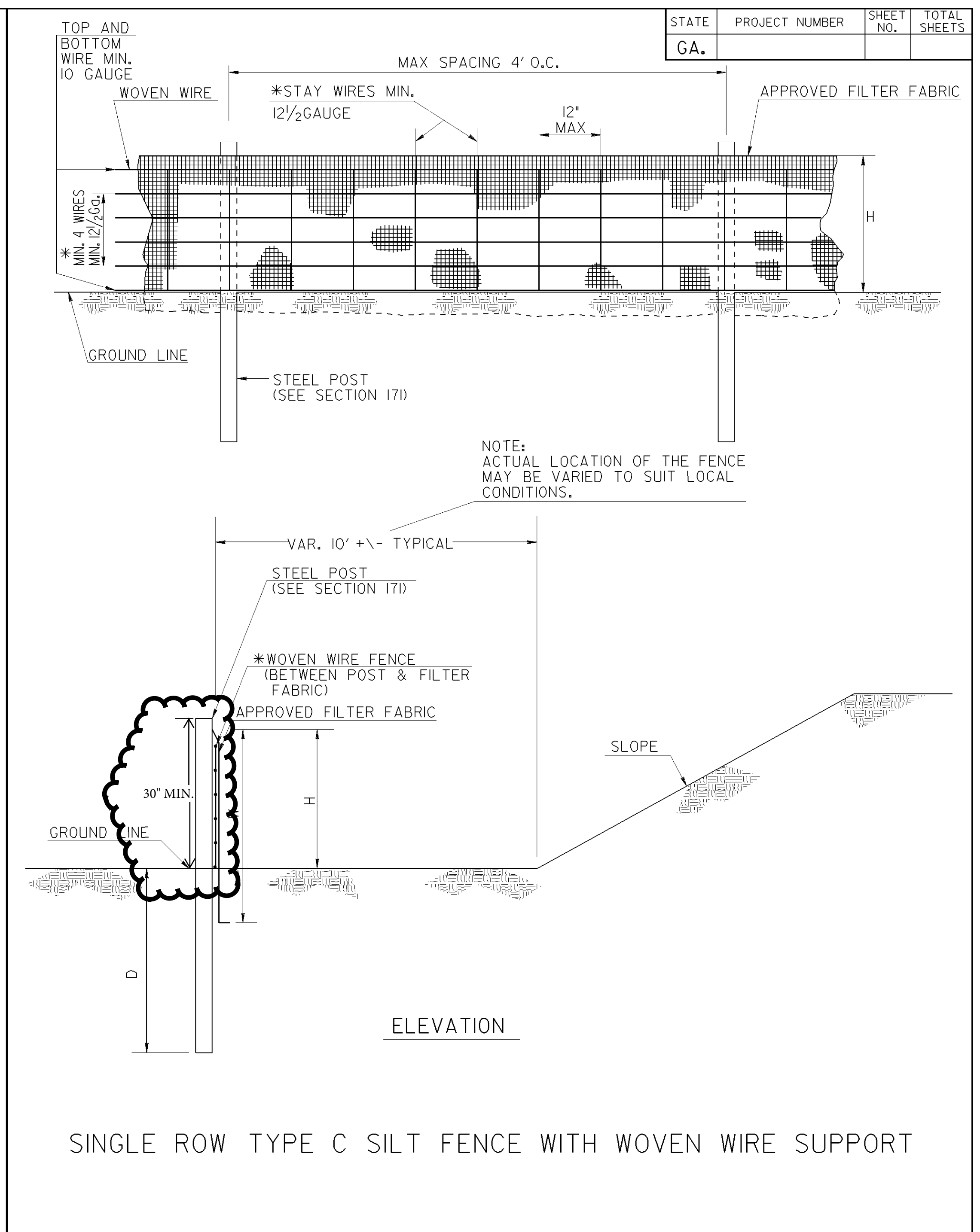
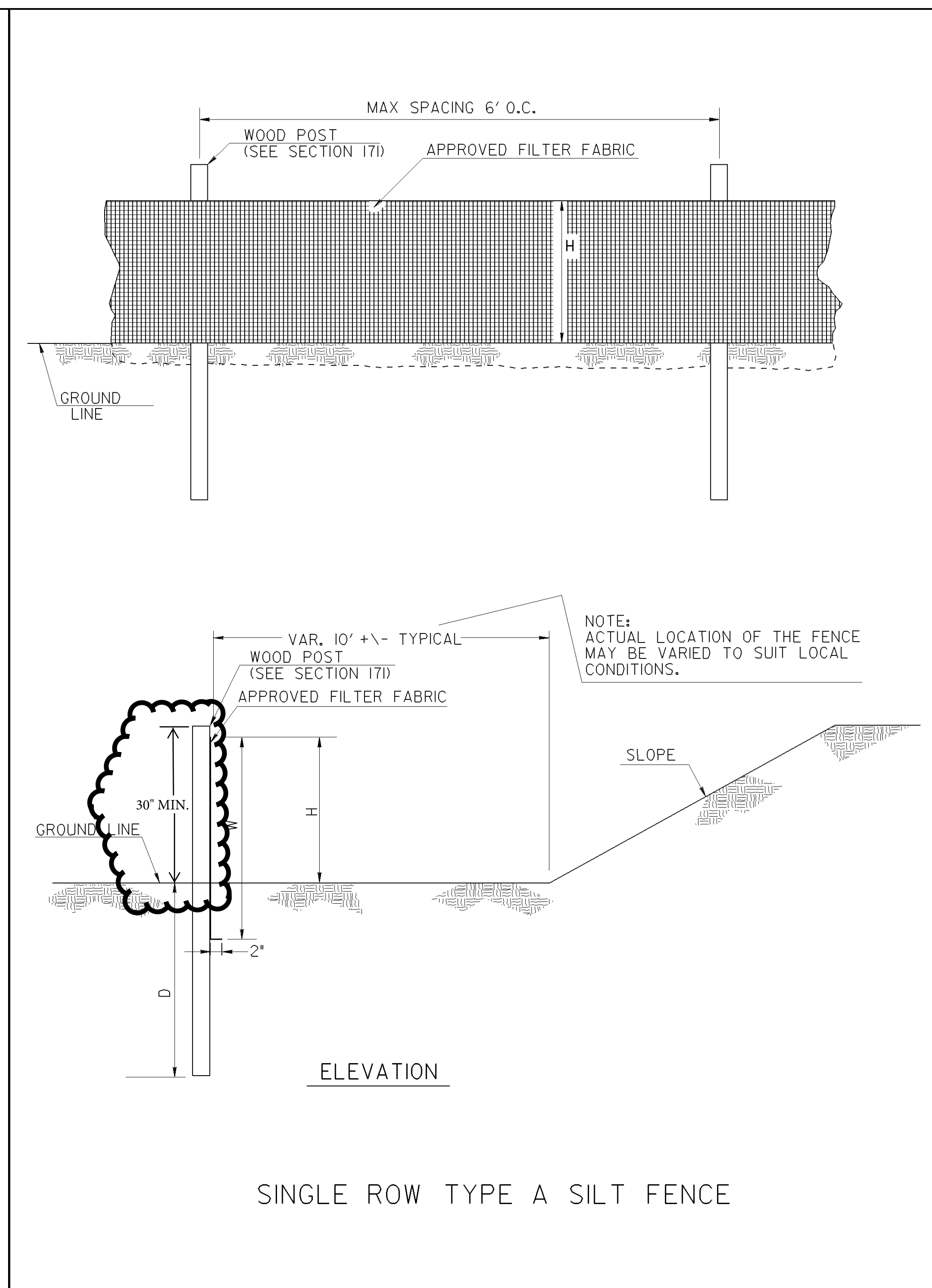
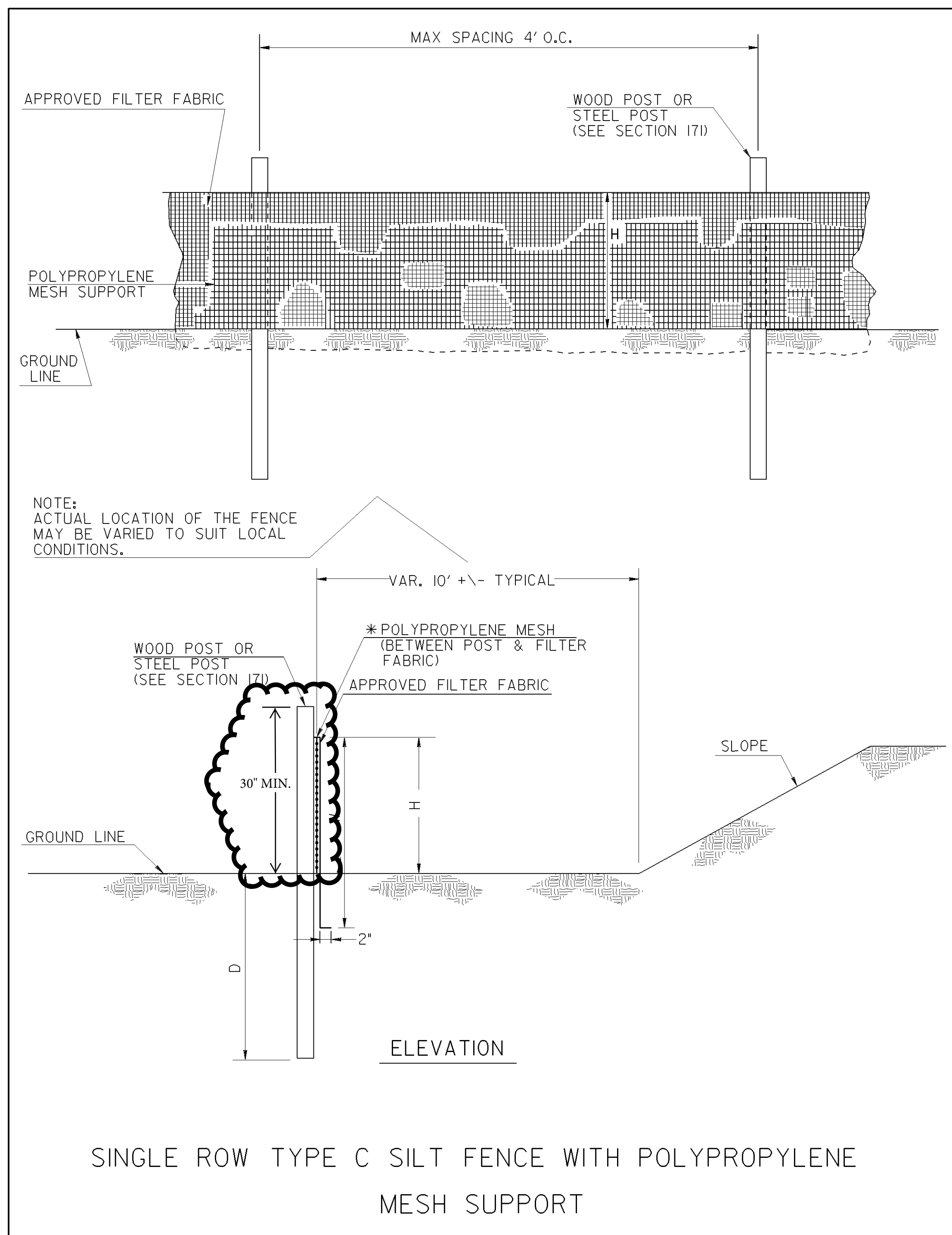
PROPERTY AND EXISTING R/W LINE  
 REQUIRED R/W LINE  
 CONSTRUCTION LIMITS  
 EASEMENT FOR CONSTR  
 & MAINTENANCE OF SLOPES  
 EASEMENT FOR CONSTR OF SLOPES  
 EASEMENT FOR CONSTR OF DRIVES

---@--- BEGIN LIMIT OF ACCESS.....BLA  
 ---@--- END LIMIT OF ACCESS.....ELA  
 ---@--- LIMIT OF ACCESS  
 ---@--- REQ'D R/W & LIMIT OF ACCESS  
 ---@--- ORANGE BARRIER FENCE  
 ---@--- ESA - ENV. SENSITIVE AREA  
 (SEE ERIT TABLE)



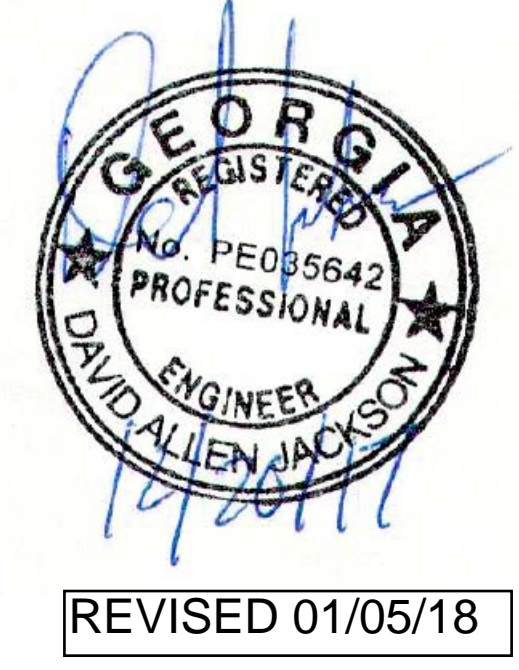
REVISION DATES	
01/05/18	

BMP LOCATION DETAILS CHILDERS ROAD SIDEWALK			
CHECKED:	DATE:	DRAWING No.	
BACKCHECKED:	DATE:	54-0002	
CORRECTED:	DATE:		
VERIFIED:	DATE:		



FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

- NOTES:
1. WIRE STAPLES SHALL BE AT LEAST 17 GAUGE, WITH LEGS AT LEAST 1/2 INCHES LONG AND A CROWN AT LEAST 3/4 INCHES WIDE. NAILS SHALL BE AT LEAST 14 GAUGE, 1 INCH LONG, WITH BUTTON HEADS AT LEAST 3/4 INCHES WIDE.
  2. NAILS OR STAPLES SHALL BE EVENLY PLACED WITH AT LEAST 5 PER POST FOR TYPE A FENCE AND 4 PER POST FOR TYPE C FENCE.
  3. THE VERTICAL WIRES FOR THE WOVEN WIRE SUPPORT FENCE SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12 1/2 GAUGE.
  4. TEMPORARY SILT FENCE INSTALLATION IS DIFFERENT THAN THE SILT RETENTION BARRIER INSTALLATION.
  5. SEE SECTION 171 FOR SILT FENCE SPECIFICATIONS.
  6. SEE SECTION 894 FOR FENCING SPECIFICATIONS.
  7. SEE QPL-36 FOR A LIST APPROVED SILT FENCE FABRIC.
  8. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.



DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

CONSTRUCTION DETAILS

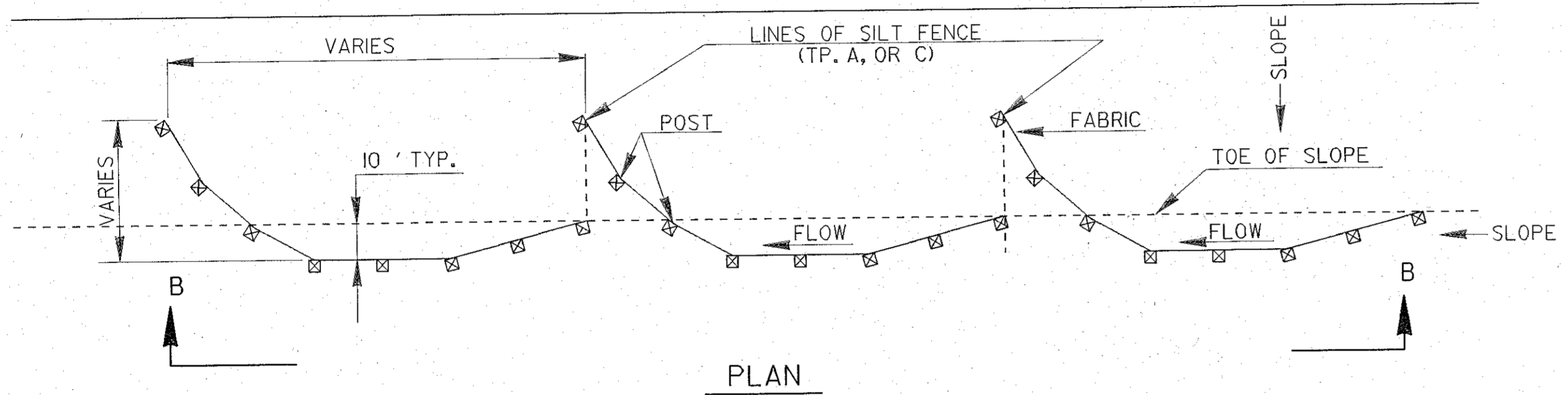
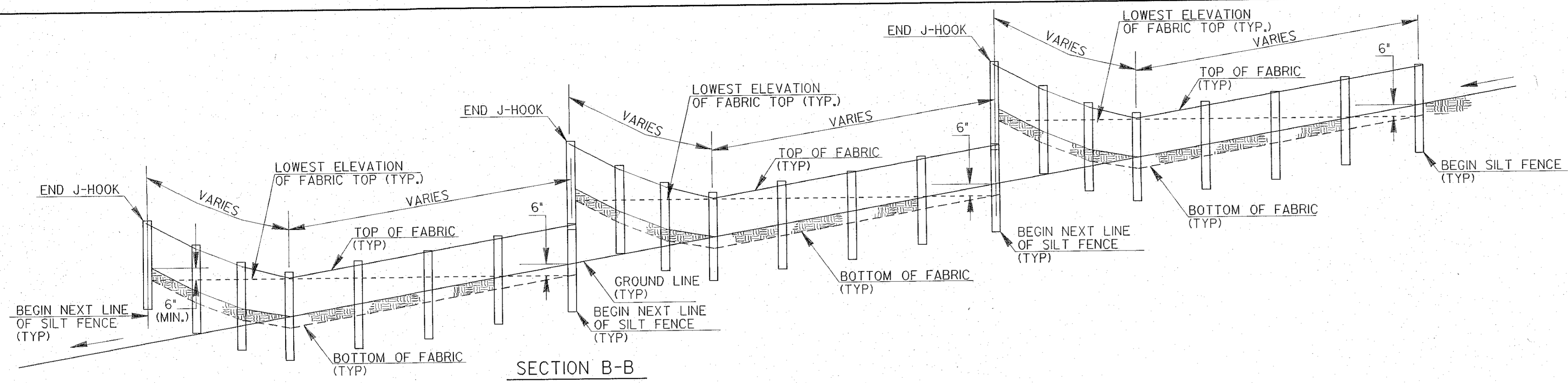
TEMPORARY SILT FENCE

NO SCALE

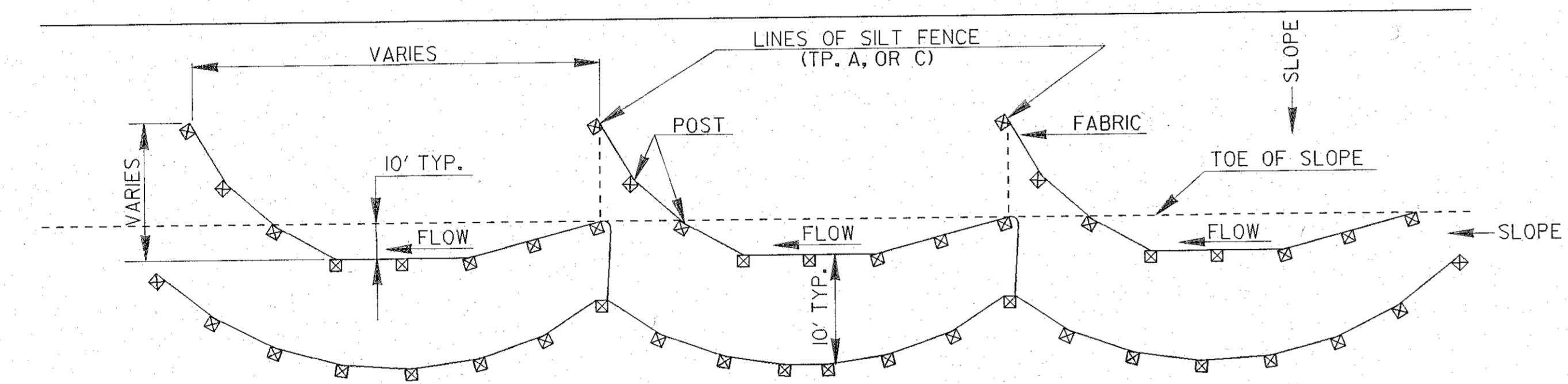
REV. AND REDRAWN JAN. 2011

NUMBER D-24A (SHEET 1 OF 4)





SINGLE ROW SILT FENCE

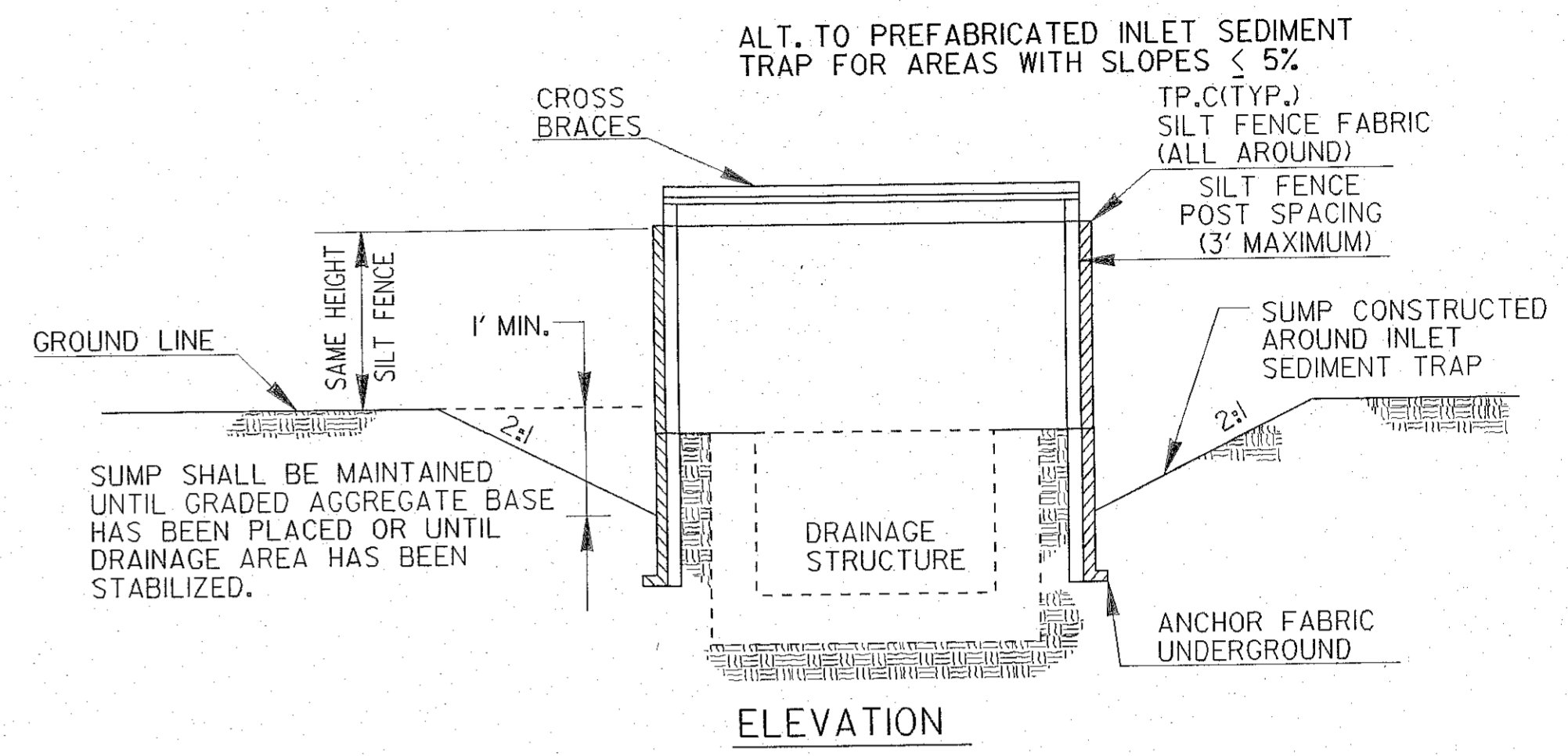


DOUBLE ROW SILT FENCE

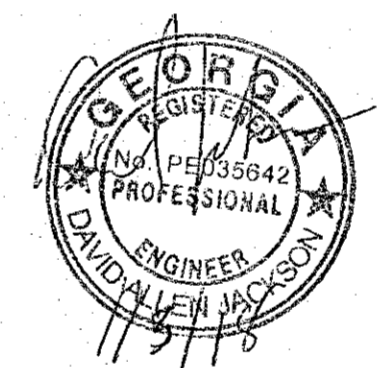
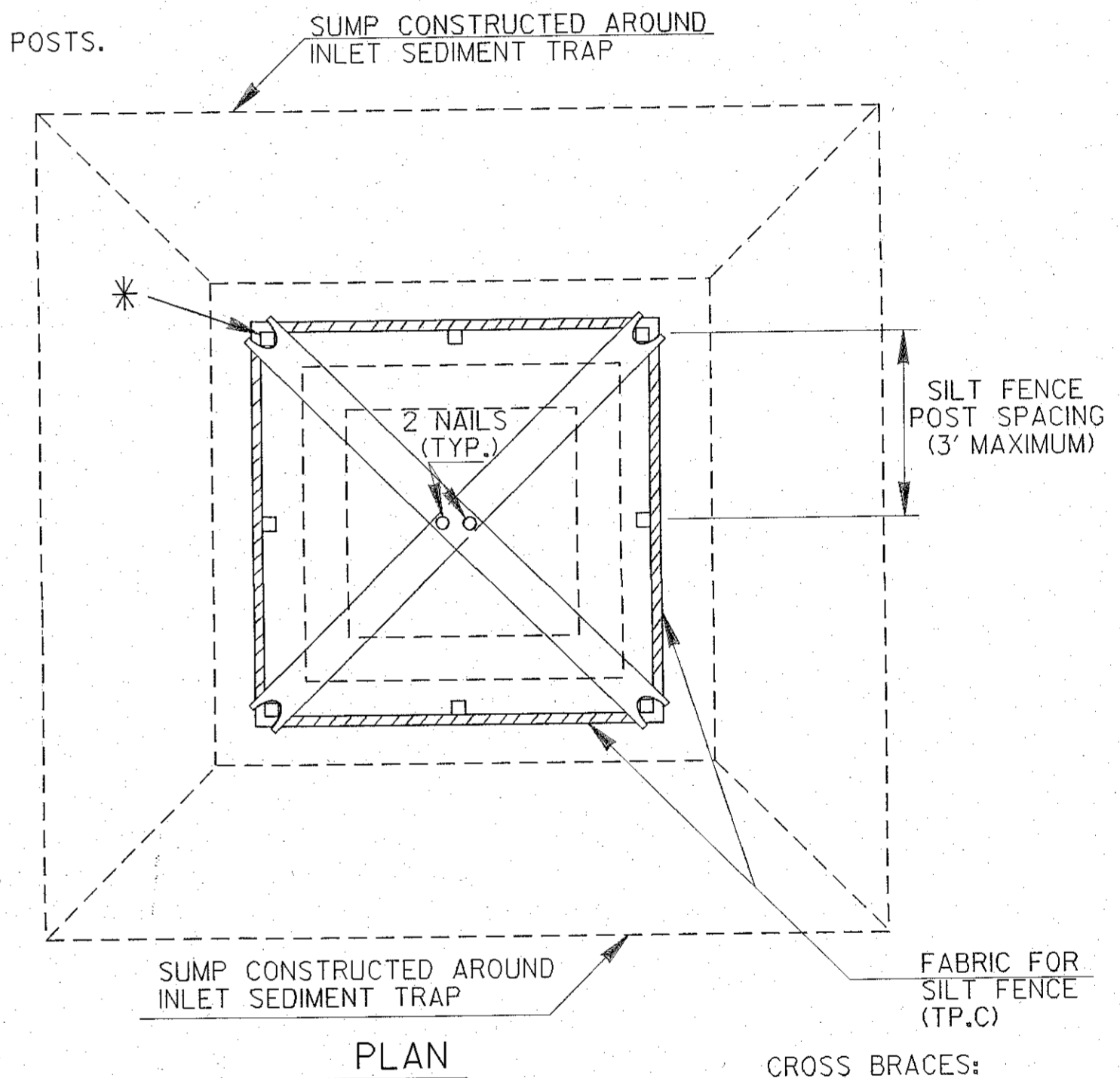
TYPICAL J HOOK SPACING		
SLOPE PERCENT	TYPE OF SILT FENCE	MINIMUM SPACING (FEET)
1% TO 2%	TYPE A	100' ±
2% TO 3%	TYPE A	50' ±
3% TO 4%	TYPE C	50' ±
4% TO 5%	TYPE C	25' ±

- NOTE:
- IF THE GRADE IS BETWEEN 0 TO 1 PERCENT, THE SILT FENCE SHALL BE PLACED ACROSS THE DITCH.
  - TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

TYPICAL LOCATION AROUND DROP INLETS



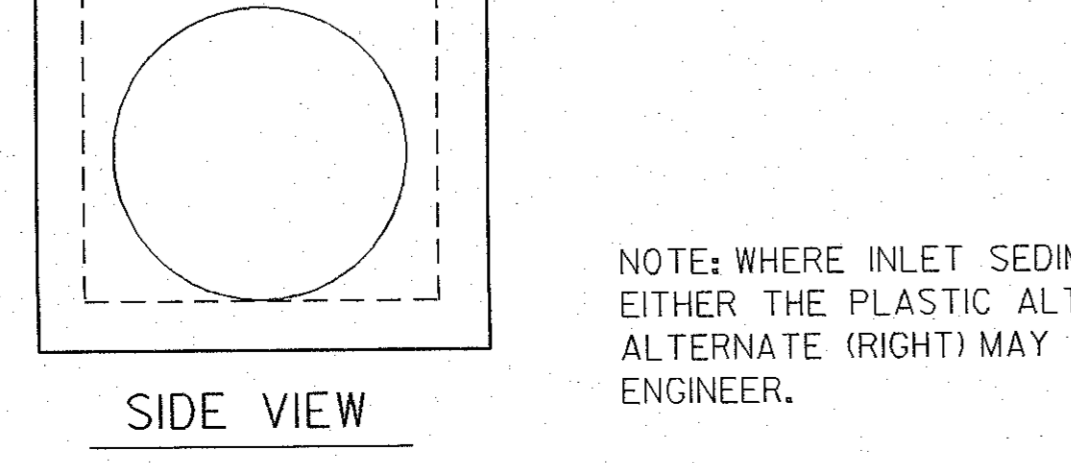
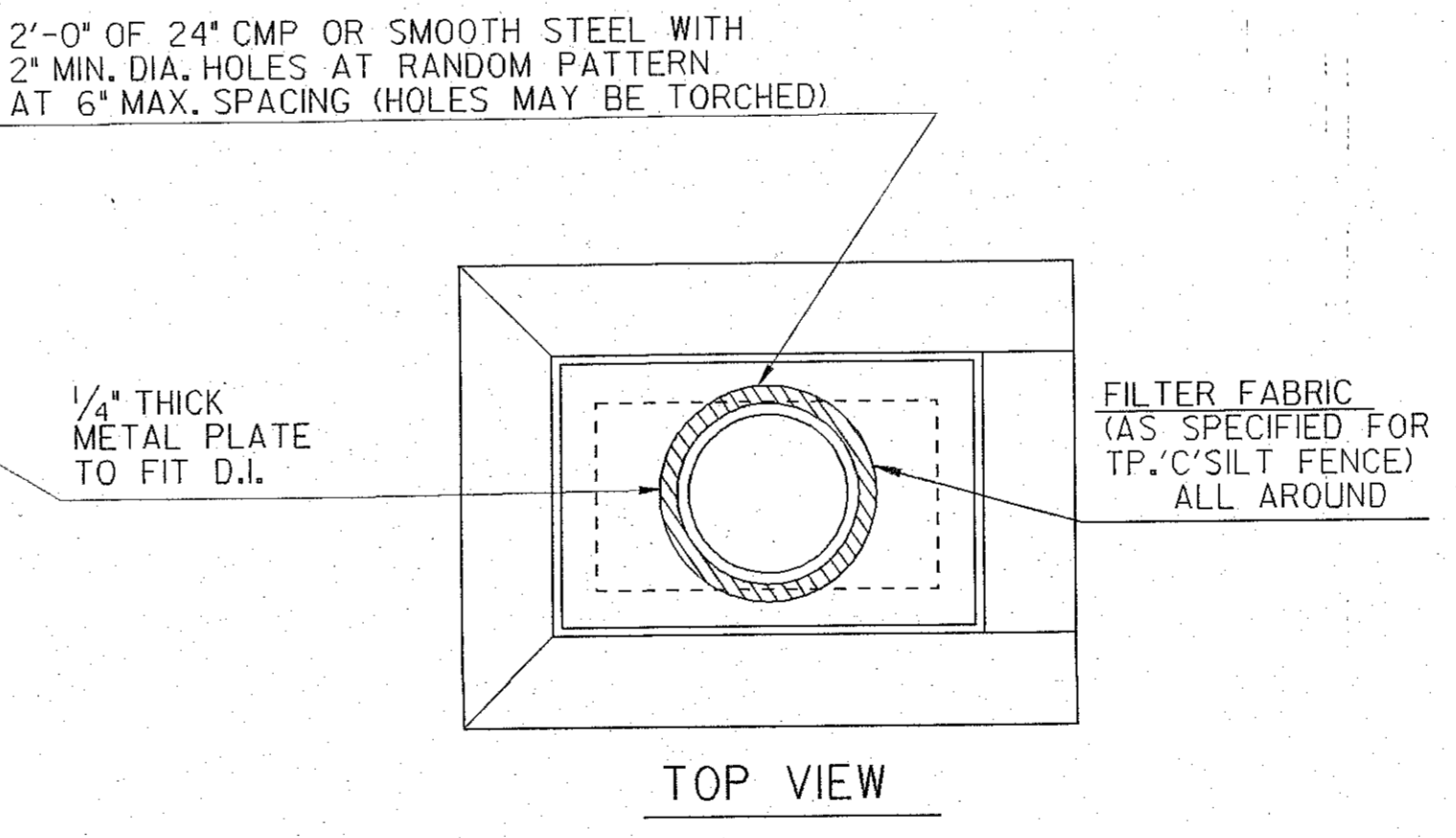
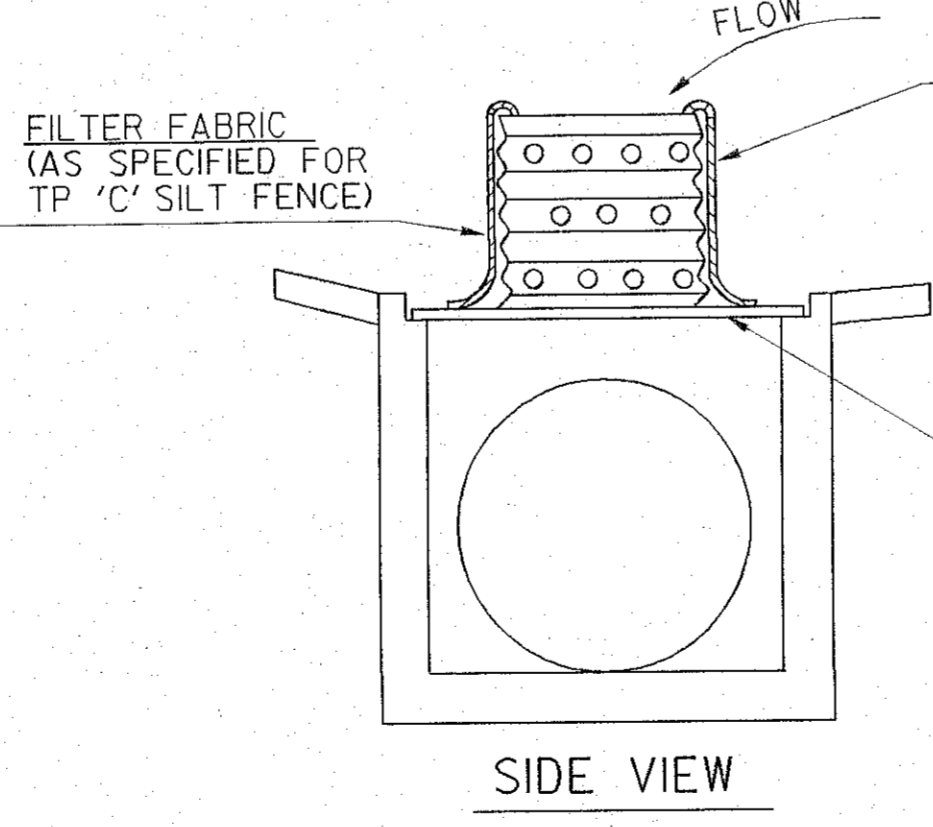
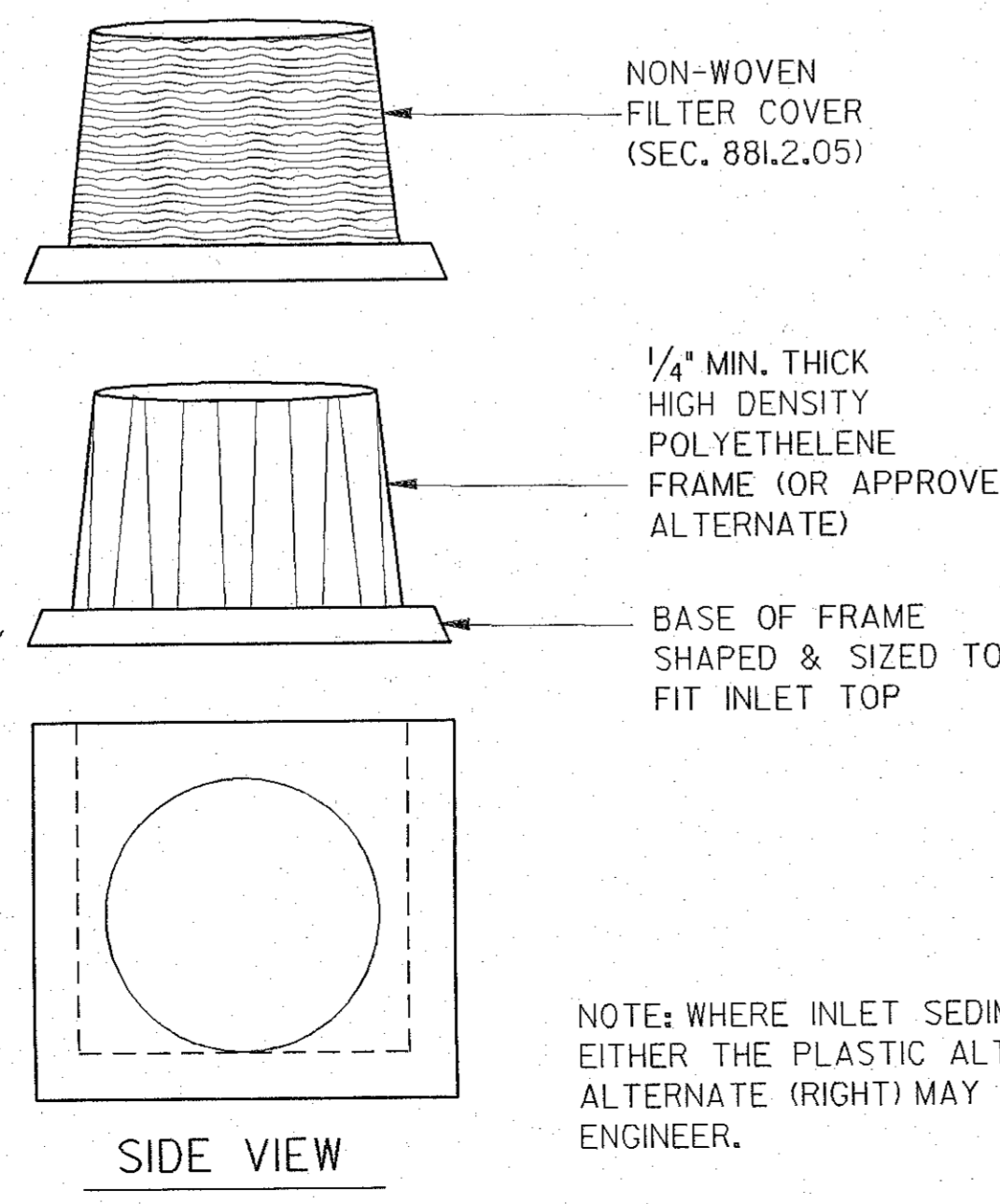
\* CROSS BRACING REQUIRED WHEN USING "ALTERNATE" TYPE C PRODUCTS WHICH USE WOOD POSTS.



(PLASTIC ALTERNATE)

(METAL ALTERNATE)

- NOTE: THE DRAINAGE AREA ENTERING THE INLET SEDIMENT TRAP SHALL BE NO GREATER THAN ONE ACRE.
- TYPICAL CONSTRUCTION SEQUENCE FOR INLET SEDIMENT TRAP ALTERNATE
- EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
  - PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.
  - SLIDE THE FILTER OVER THE FRAME.
  - FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE.
  - BACK FILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER, BACK FILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.
- NOTE: INLET SEDIMENT TRAP ALTERNATE SHALL BE AS APPROVED BY THE GA. D.O.T. OFFICE OF MATERIALS & RESEARCH. DETAILS & SPECIFICATIONS NOT SHOWN ARE PER THE MANUFACTURER'S REQUIREMENTS.



SIDE VIEW

TOP VIEW

NOTE: WHERE INLET SEDIMENT TRAPS ARE SPECIFIED, EITHER THE PLASTIC ALTERNATE (LEFT) OR THE METAL ALTERNATE (RIGHT) MAY BE USED AS APPROVED BY THE ENGINEER.

NOTE: INLET SEDIMENT TRAP AND INLET TO BE BUILT CONTINUOUS WITH PIPE

NOTE: SEE SEPARATE DETAILS FOR SILT FENCE AROUND DROP INLETS.

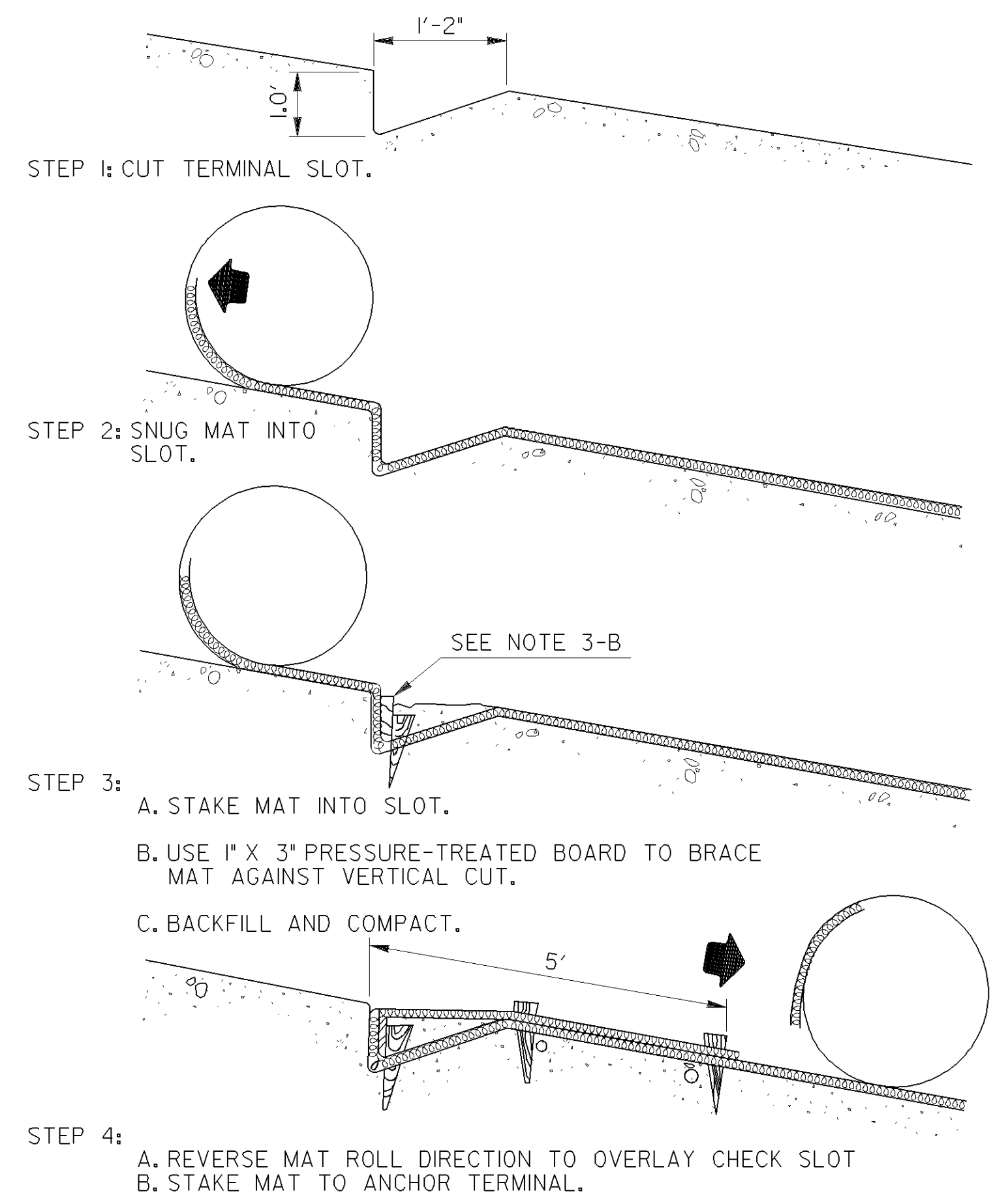
NOTE: PAYMENT AS INLET SEDIMENT TRAP PER EACH

INLET SEDIMENT TRAP - FOR DROP INLETS

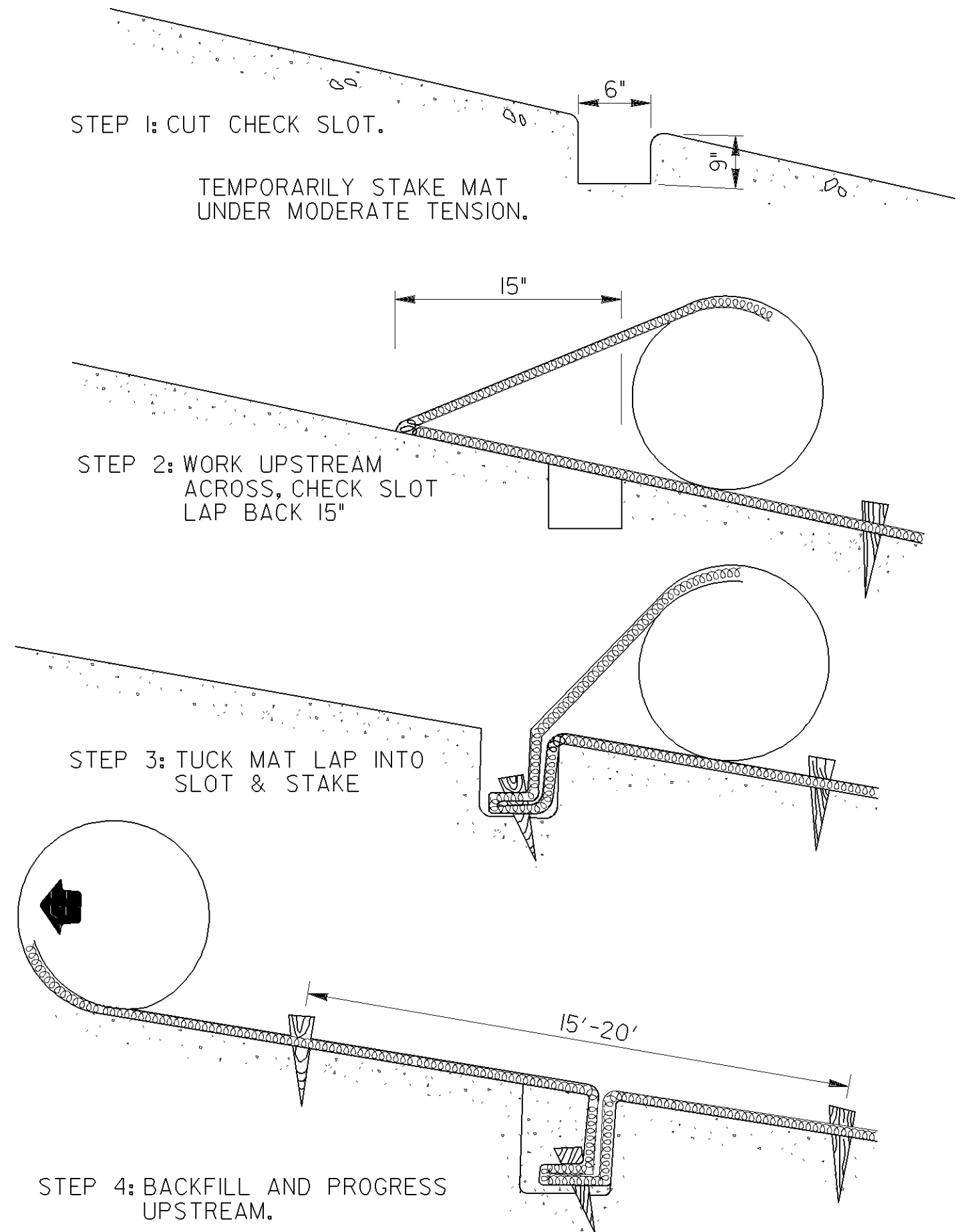
- NOTE: PAYMENT AS INLET SEDIMENT TRAP PER EACH.
- NOTE: SEE SEPARATE SHEET ENTITLED "TEMPORARY SILT FENCE DETAILS" FOR SILT FENCE ERECTION DETAILS.

DATE		DEPARTMENT OF TRANSPORTATION	
REVISION		STATE OF GEORGIA	
BY		CONSTRUCTION DETAILS	
		TEMPORARY SILT FENCE	
		J-HOOK, INLET SEDIMENT TRAPS	
		NO SCALE	
		JANUARY 2011	
		NUMBER	
		D-24C	
		(SHEET 3 OF 4)	

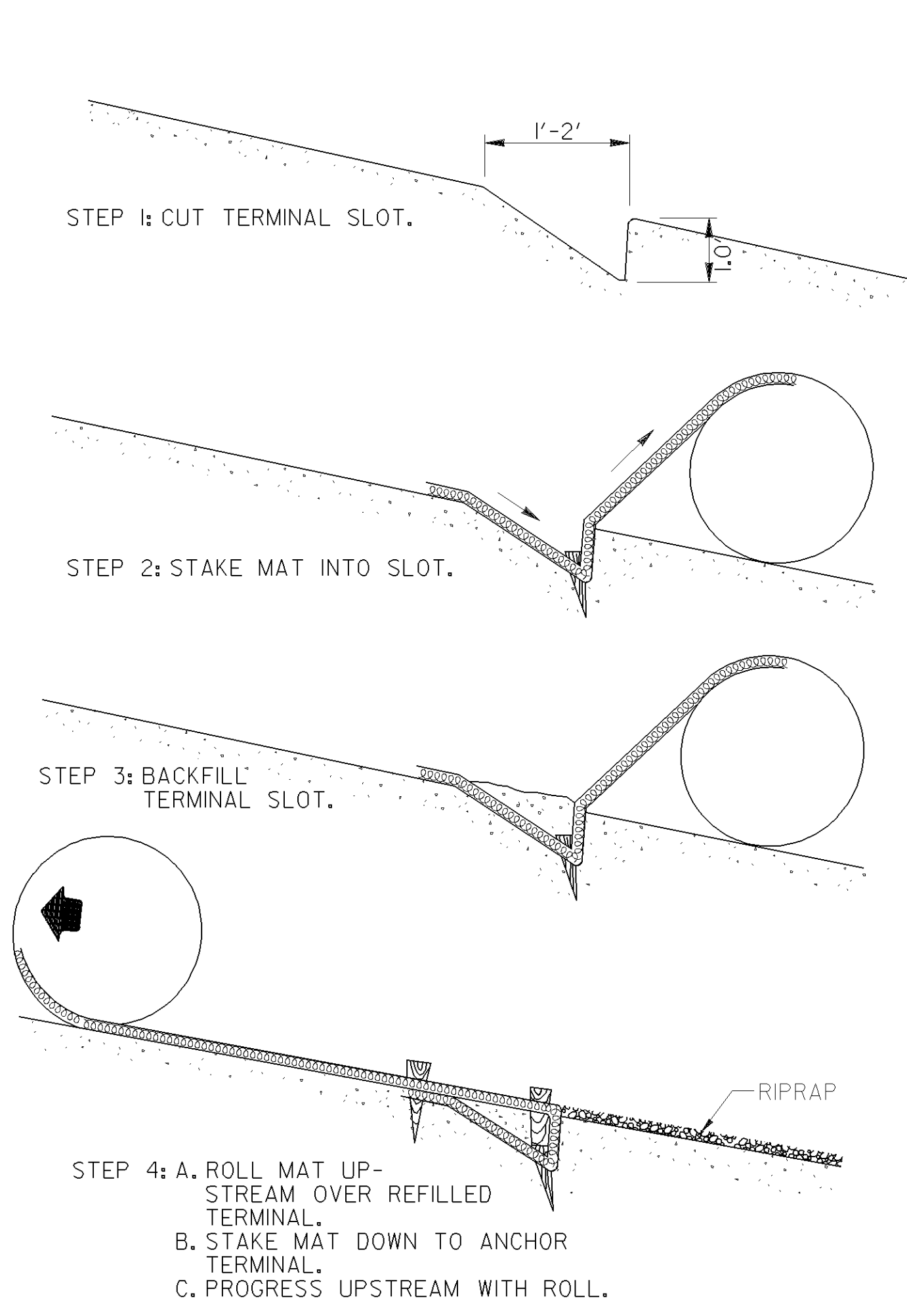
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



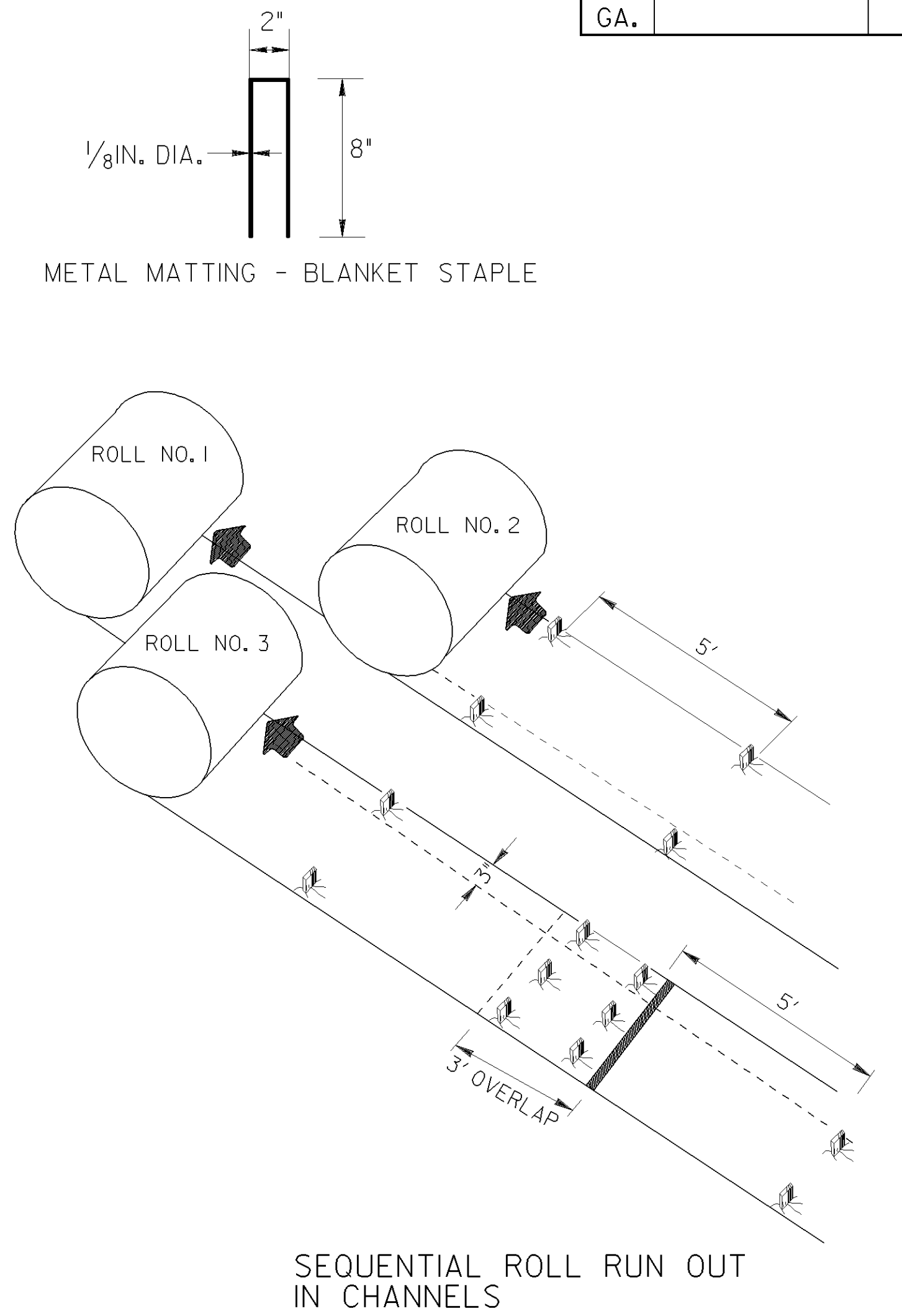
UPSTREAM TERMINAL



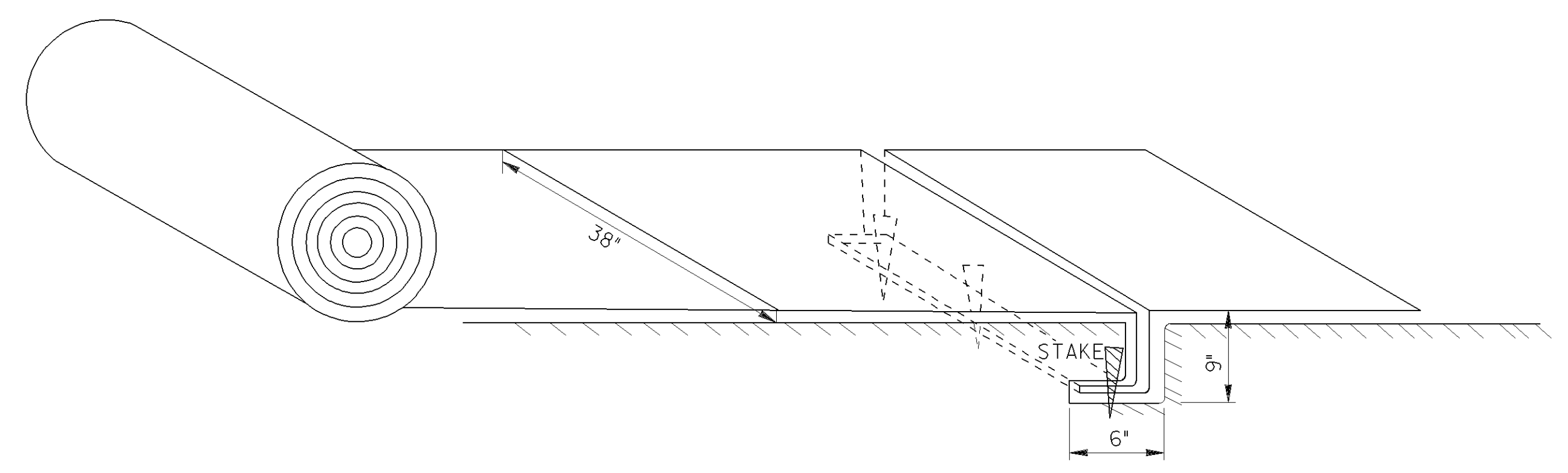
TRANSVERSE CHECK SLOT



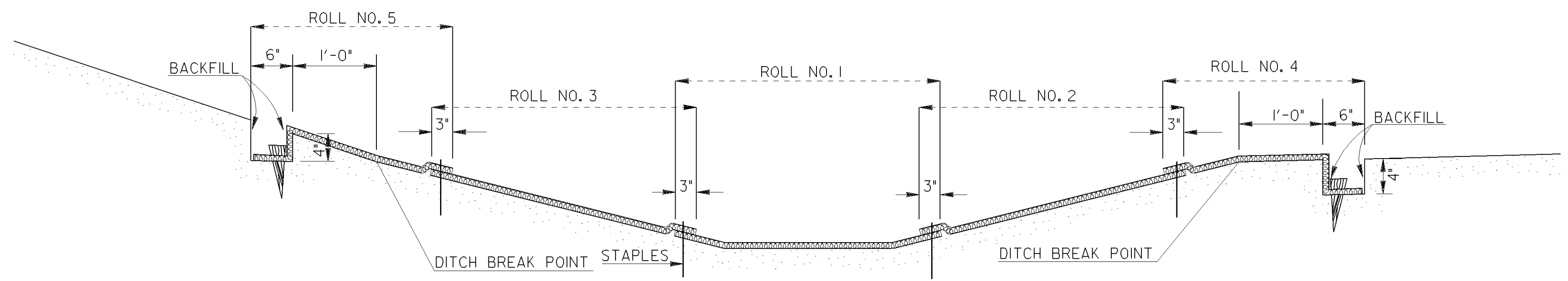
DOWNSTREAM TERMINAL



- GENERAL NOTES
1. INSTALLATION TO BE DONE AS PER MANUFACTURER'S RECOMMENDATIONS.
  2. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
  3. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
  4. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND FIRST ROLL. USE CENTER ROLL FOR ALIGNMENT TO CHANNEL CENTER.
  5. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE.
  6. USE 3" OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.
  7. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.
  8. METAL STAPLES MAY BE USED IN LIEU OF WOODEN STAKES.



PICTORAL VIEW OF TRANSVERSE SLOT



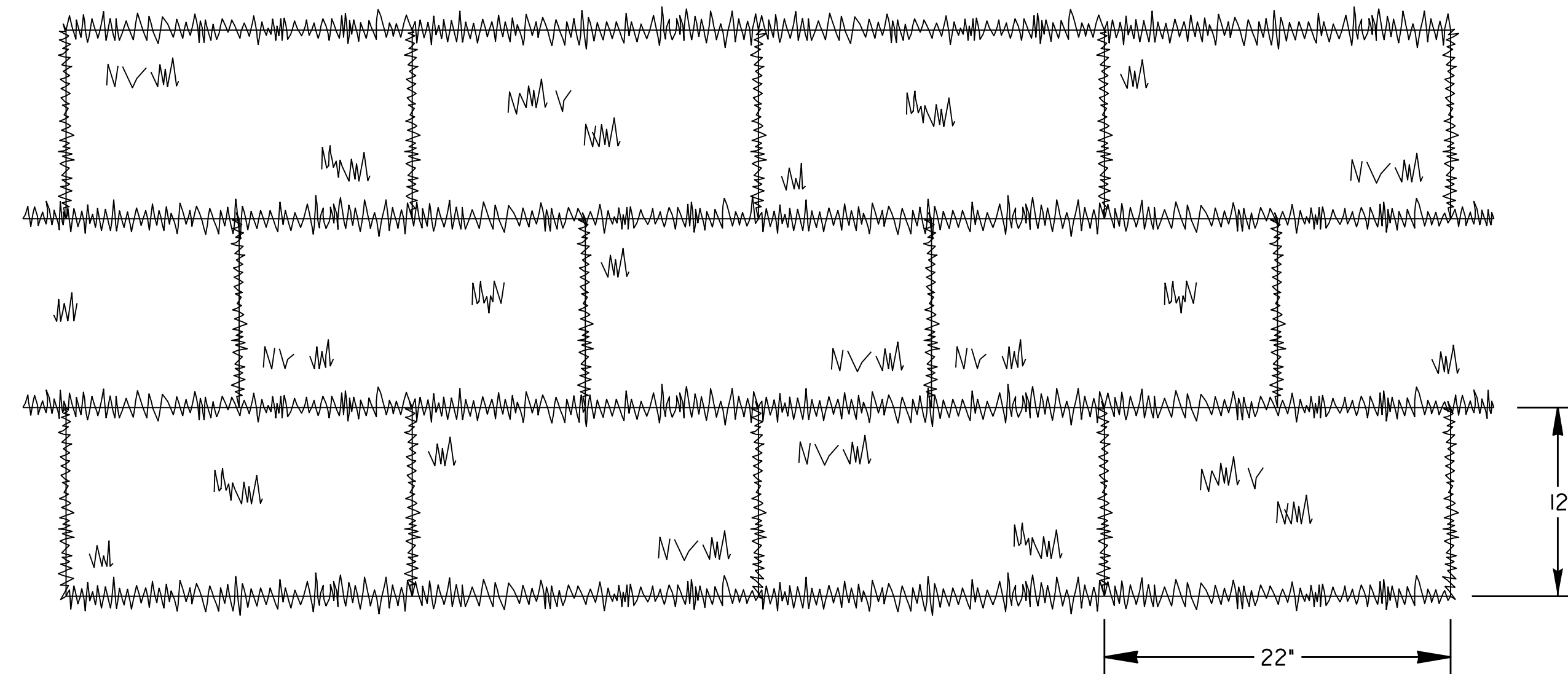
DITCH SECTION

NOTE: MAT TO BE PLACED ONE FEET ABOVE DITCH BREAK POINT OR ONE FOOT ABOVE THE 25 YEAR STORM.



REVISED SHEET LAYOUT & ADDED DITCH SECTION, ADDED METAL STAPLE.		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
T.P.C.		BY	CONSTRUCTION DETAILS PERMANENT SOIL REINFORCING MAT (TURF REINFORCING MATS) INSTALLATION ON DITCHES	
		DESIGNED	NO SCALE	
		DRAWN	AUGUST 1988	
		TRACED	NUMBER	
		CHECKED	D-35	

SOD LAYOUT

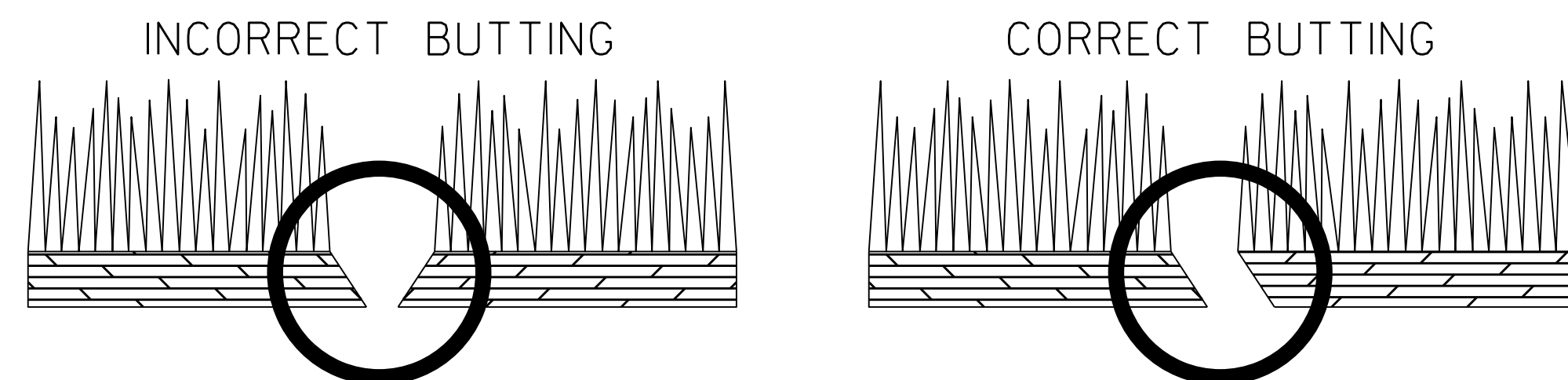


NOTE: SOD MAY BE EITHER 12" WIDE BY 22" LONG BLOCKS OR 21" WIDE BY 52" LONG ROLLS.

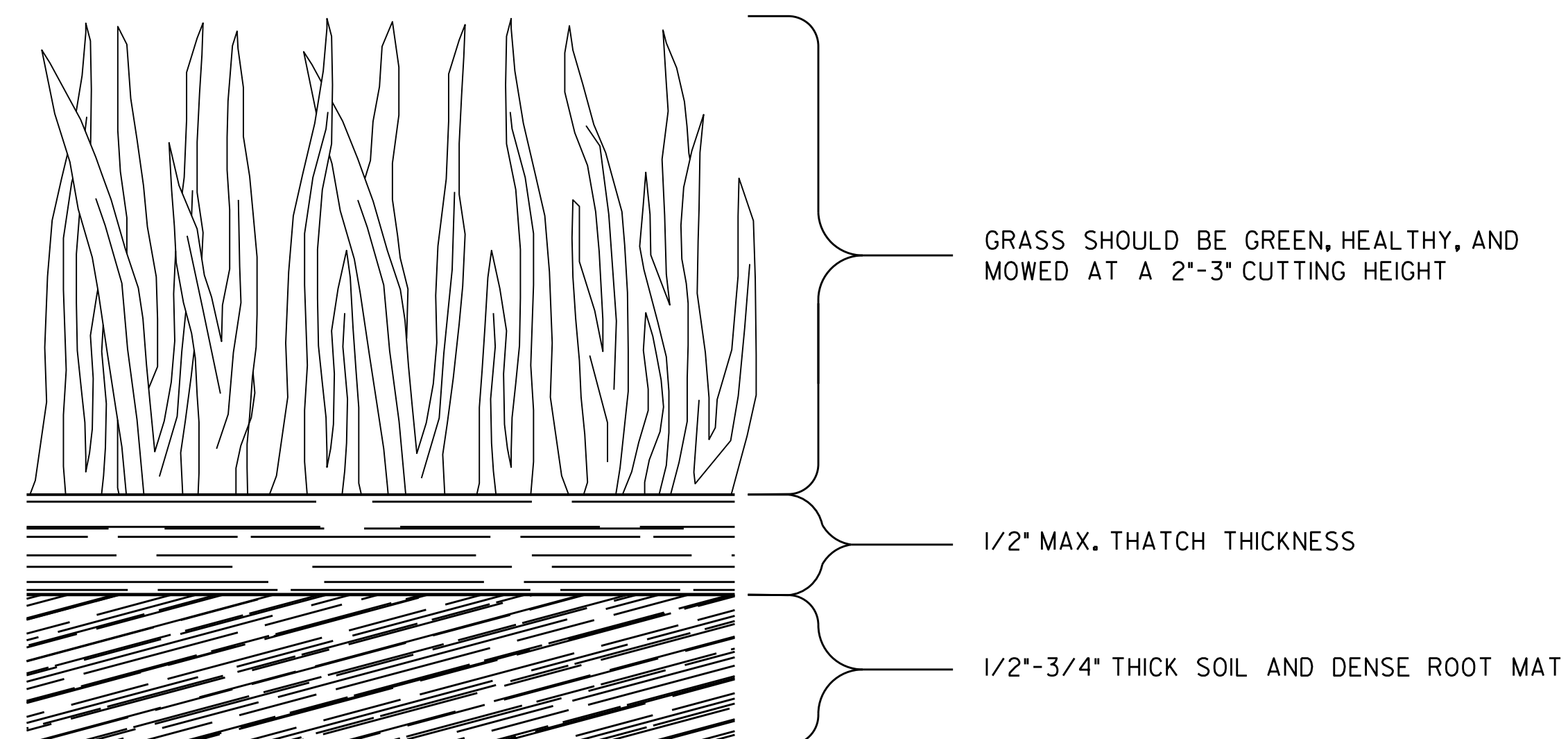
GENERAL NOTES:

1. SOD SHALL MEET SECTIONS 700 AND 890 OF THE STANDARD SPECIFICATIONS AND SUPPLEMENTS THERETO. SOD SHALL BE CUT INTO 12"Wx22"L BLOCKS OR 21"Wx52"L ROLLS.
2. PLACE SOD IN A STAGGERED PATTERN ENSURING FIRM CONTACT WITH THE SOIL. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER WITH THE AUTOMATIC SOD CUTTER ANGLES CORRECTLY MATCHED WITHOUT SPACES OR OVERLAP.
3. PLACE THE LONG SIDE OF SOD PERPENDICULAR TO DRAINAGE FLOW IF INSTALLED IN DITCHES.
4. STAKE SOD PLACED IN DITCHES OR SLOPES STEEPER THAN 2:1 OR ANY OTHER AREAS WHERE SOD SLIPPING MAY OCCUR. USE WOOD STAKES THAT ARE A MINIMUM OF 8" LONG AND A MAXIMUM OF 1" WIDE. DRIVE STAKES FLUSH WITH THE TOP OF SOD AND USE A MINIMUM OF 8 STAKES PER SQUARE YARD TO HOLD SOD IN PLACE.
5. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.
6. WATER THE SOD IMMEDIATELY AFTER INSTALLATION AND WATER TO A DEPTH OF 4" AS NEEDED.
7. MOW ESTABLISHED SOD TO A HEIGHT NOT LESS THAN 2"-3" AS NECESSARY.

ABUTTING SOD



SOD APPEARANCE



PAY ITEM:  
700-9300 SOD (SY)



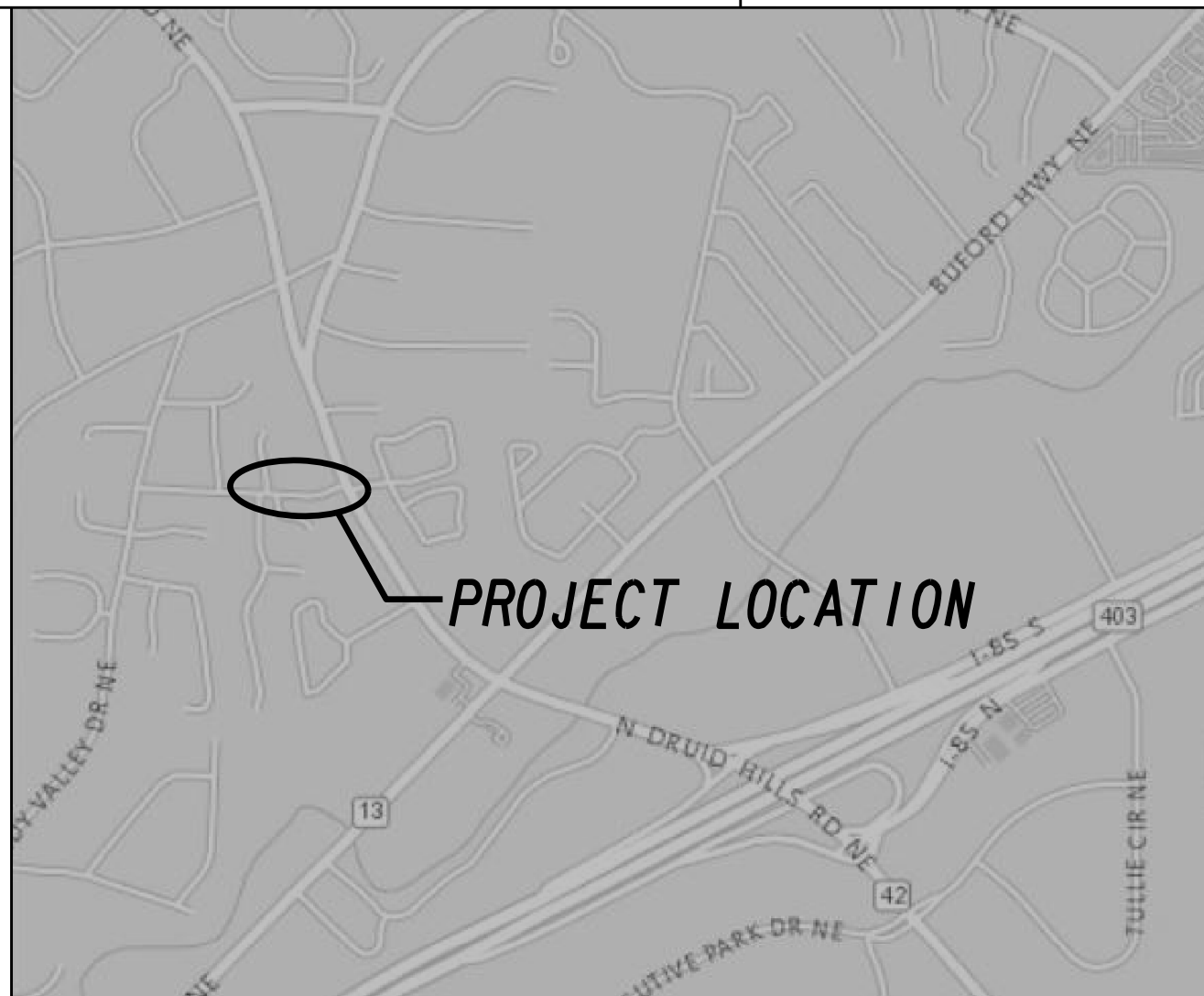
DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION	CONSTRUCTION DETAILS SOD INSTALLATION	
BY	DESIGNED _____ DRAWN <u>DLE</u> TRACED _____ CHECKED _____	NO SCALE 4-22-2016 NUMBER D-54

# CITY OF BROOKHAVEN DEPARTMENT OF PUBLIC WORKS

## PROPOSED RIGHT OF WAY CHILDERS ROAD SIDEWALK

PROJECT NUMBER: WALK 16-112

CONVENTIONAL SIGNS	
STATE OR COUNTY LINE	-----
CITY LIMIT LINE	-----
LAND LOT LINE	-----
PROPERTY LINE	-----
SURVEY OR BASE LINE	-----
RIGHT OF WAY LINE	EXISTING ..... REQUIRED ..... LIMIT OF ACCESS ..... RECD R/W & LIMIT OF ACCESS ..... R/W MARKERS .....
FENCE	-----
RAILROAD	-----
POWER LINE	-----
TELEPHONE LINE	-----
POWER/UTILITY POLES	-----
LIGHT POLES	-----



LOCATION SKETCH

CITY OF BROOKHAVEN  
MAYOR, JOHN ARTHUR ERNST JR.  
CITY COUNCIL DISTRICT 1: LINLEY JONES  
CITY COUNCIL DISTRICT 2: JOHN PARK  
CITY COUNCIL DISTRICT 3: BATES MATTISON  
CITY COUNCIL DISTRICT 4: JOE GEBBIA  
CITY MANAGER: CHRISTIAN SIGMAN

TOTAL PROJECT AREA: 0.8 AC  
TOTAL DISTURBED AREA: 0.2 AC  
SPEED LIMIT: 25 MPH  
CHILDERS ROAD  
SPEED LIMIT: 45 MPH  
N DRUID HILLS ROAD  
DESIGNED IN ENGLISH UNITS.

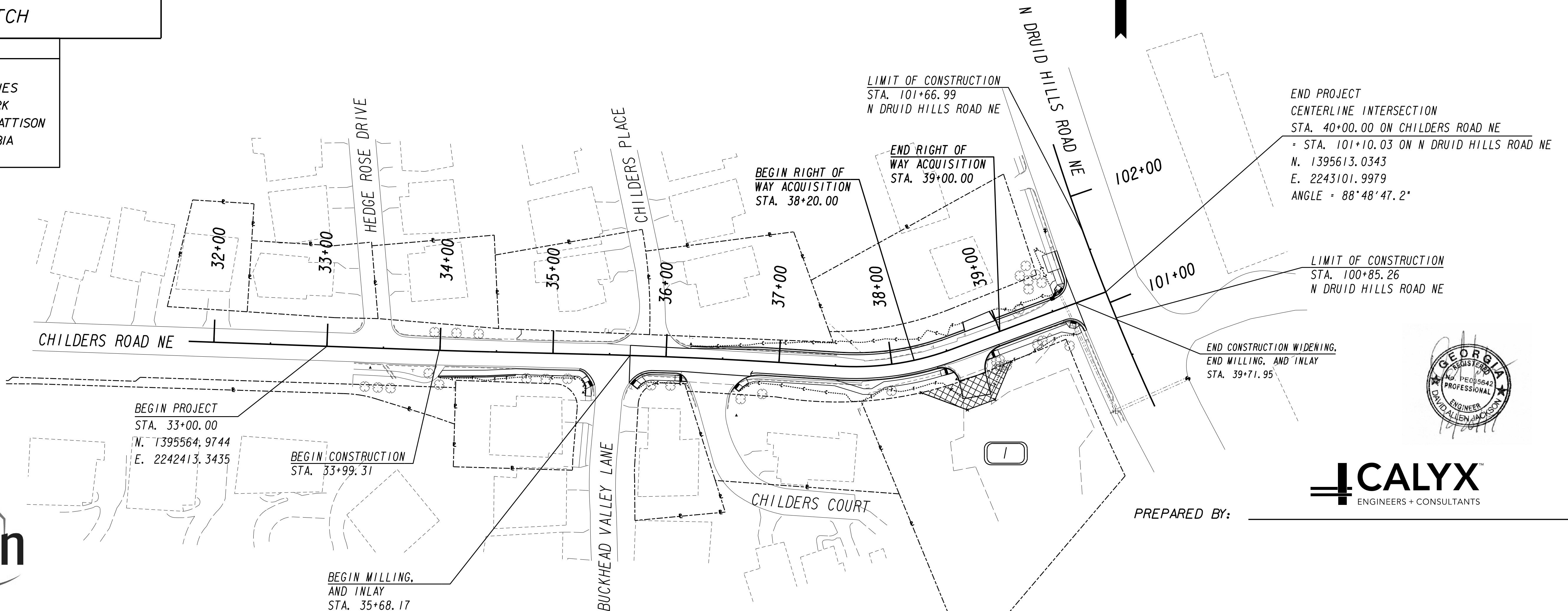
THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.



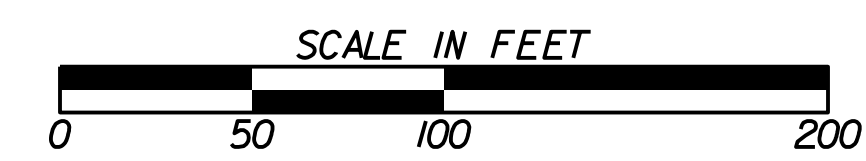
NOTE:  
ALL WORK TO BE DONE IN ACCORDANCE WITH STANDARD SPECIFICATIONS OF THE DEPARTMENT OF TRANSPORTATION OF GEORGIA CURRENT EDITION AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102D4, 102D5, AND 104D3 OF THE SPECIFICATIONS.

NOTE:  
ALL REFERENCES IN THIS DOCUMENT WHICH INCLUDES ALL PAPERS, WRITINGS, DOCUMENTS, DRAWINGS, OR PHOTOGRAPHS USED, OR TO BE USED IN CONNECTION WITH THIS DOCUMENT, TO "STATE HIGHWAY DEPARTMENT OF GEORGIA", "STATE HIGHWAY DEPARTMENT", "GEORGIA STATE HIGHWAY DEPARTMENT", "HIGHWAY DEPARTMENT", OR "DEPARTMENT" WHEN THE CONTEXT THEREOF MEANS THE STATE HIGHWAY DEPARTMENT OF GEORGIA, AND SHALL BE DEEMED TO MEAN THE DEPARTMENT OF TRANSPORTATION.



	FEET
LENGTH OF PROJECT	1000
EXISTING TRAVEL LANES	1000
NEW TRAVEL LANES	0
EXISTING SIDEWALK	0
NEW SIDEWALK	575
EXISTING FIBER OPTIC	N/A
NEW FIBER OPTIC INSTALLATIONS	N/A



END PROJECT CENTERLINE INTERSECTION  
STA. 40+00.00 ON CHILDERS ROAD NE  
= STA. 101+10.03 ON N DRUID HILLS ROAD NE  
N. 1395613.0343  
E. 2243101.9979  
ANGLE = 88° 48' 47.2"

LIMIT OF CONSTRUCTION  
STA. 100+85.26  
N DRUID HILLS ROAD NE

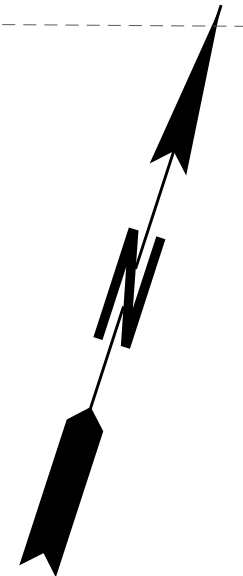
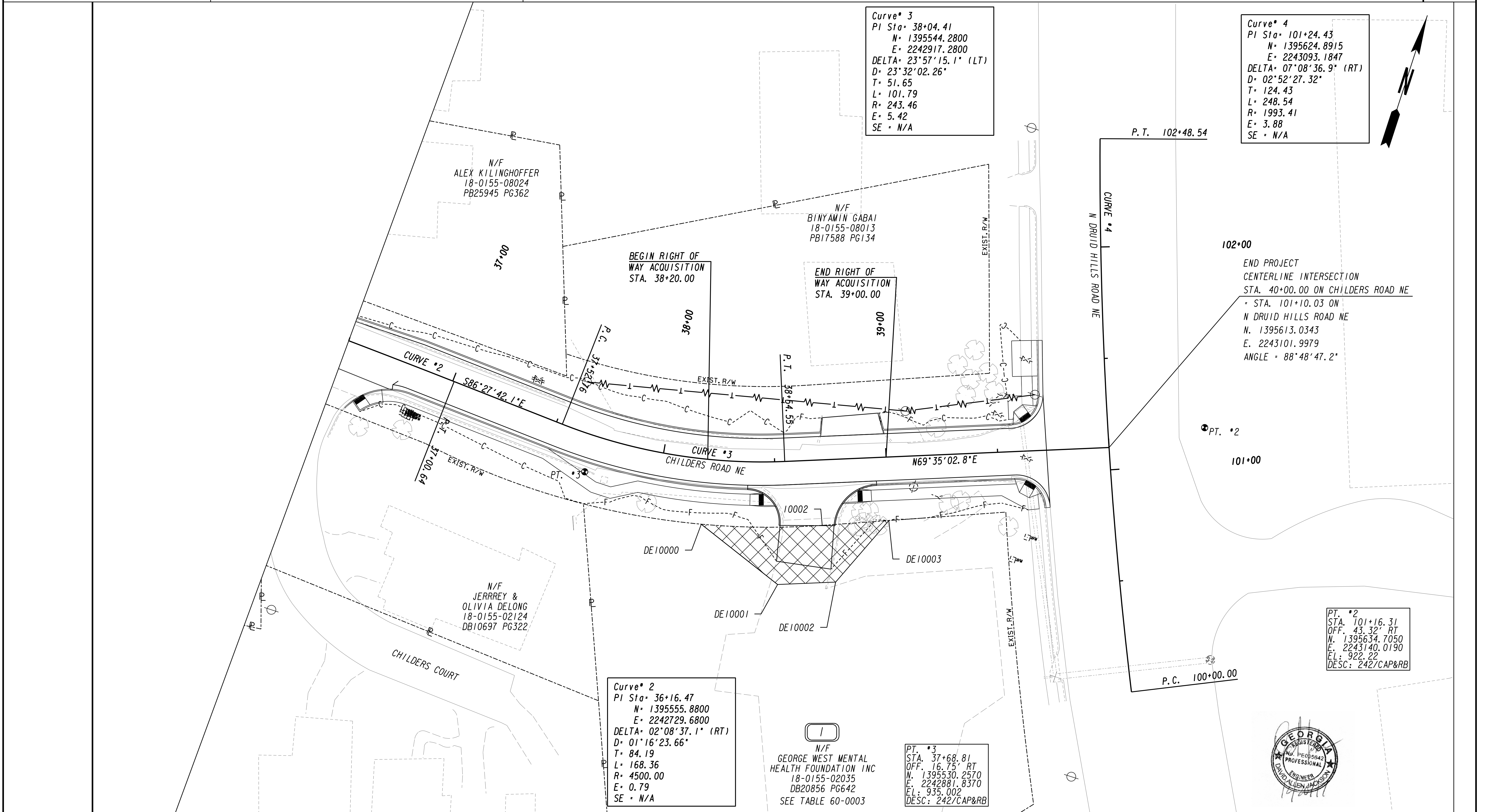
END CONSTRUCTION WIDENING,  
END MILLING, AND INLAY  
STA. 39+71.95



PREPARED BY: \_\_\_\_\_

PLANS COMPLETED 12/20/17	REVISIONS

DRAWING No.  
60-0001



PROPERTY AND EXISTING R/W LINE	---
REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	---
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES	▨
EASEMENT FOR CONSTR OF SLOPES	▩
EASEMENT FOR CONSTR OF DRIVES	▧

BEGIN LIMIT OF ACCESS.....BLA	---
END LIMIT OF ACCESS.....ELA	---
LIMIT OF ACCESS	---
REQ'D R/W & LIMIT OF ACCESS	---

SCALE IN FEET  
 0 20 40 80

DATE	REVISIONS	DATE	REVISIONS

CITY OF BROOKHAVEN	
RIGHT OF WAY MAP	
PROJECT NO: WALK 16-112	
COUNTY: DEKALB	
LAND LOT NO: 155	
LAND DISTRICT: 18	
GMD	
DATE 12/20/17 SH 2 OF 3	

DRAWING No.	60-0002
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GEORGE WEST MENTAL HEALTH FOUNDATION INC PARCEL 1  
DRIVEWAY EASEMENT  
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PNT	OFFSET/	STATION/	ALIGNMENT
DE10000	29.25 R	38+20.00	CHILDERS ROAD NE
ARC LENGTH = 54.27			
CHORD BEAR = N 72°34'26.8" E			
LNTH CHORD = 54.21			
RADIUS = 333.71			
DEGREE = 17°10'09.6"			
10002	29.34 R	38+70.12	CHILDERS ROAD NE
DE10003	28.47 R	39+00.00	CHILDERS ROAD NE
DE10002	55.00 R	38+75.00	CHILDERS ROAD NE
DE10001	55.00 R	38+50.00	CHILDERS ROAD NE
DE10000	29.25 R	38+20.00	CHILDERS ROAD NE

PARCEL 1  
SEE DRAWING NO. 60-0002  
NUMBER OF DRIVEWAYS 1  
REMAINDER = +/- 0.800 AC



PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES		BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS	DATE REVISIONS	DATE REVISIONS	CITY OF BROOKHAVEN RIGHT OF WAY MAP
		PROJECT NO: WALK 16-112 COUNTY: DEKALB LAND LOT NO: 155 LAND DISTRICT: 18 GMD DATE 12/20/17 SH 3 OF 3	DRAWING No. 60-0003		