

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER PAGE
2	GENERAL NOTES AND LEGEND
3	TYPICAL SECTIONS
3A	MISCELLANEOUS DETAILS
4	QUANTITY SHEET
5	SUMMARY OF ESTIMATED QUANTITIES
6-8	PLAN & PROFILES
9-10	PAVEMENT MARKINGS AND SIGNAGE
11	SUGGESTED EROSION CONTROL
12-13	SUGGESTED SEQUENCE OF CONSTRUCTION

<u>SHEET NO.</u>	<u>STANDARD PLANS</u>	<u>REV. DATE</u>
200-201	BM-01 (2 SHEETS)	11/16/21
202-203	EC-01 (2 SHEETS)	10/01/08
204-206	DW-01 (3 SHEETS)	08/04/22
207-208	MB-01 (2 SHEETS)	04/04/22
209-213	PED-01 (5 SHEETS)	07/21/22
214	PM-01	02/28/19
215	PM-02	02/28/19
216	PM-05	02/28/19
217	PM-06	02/28/19
218-234	RS-01 (17 SHEETS)	07/01/22
235-238	TTC-00(A-D) (4 SHEETS)	07/02/18
239	TTC-03	07/02/18
240	TTC-04	07/02/18
241	TTC-18	07/02/18
242	TTC-19	07/02/18

<u>SHEET NO.</u>	<u>CROSS SECTIONS</u>
400-404	CROSS SECTION SHEETS

TOTAL SHEETS = 62

TRAFFIC DATA

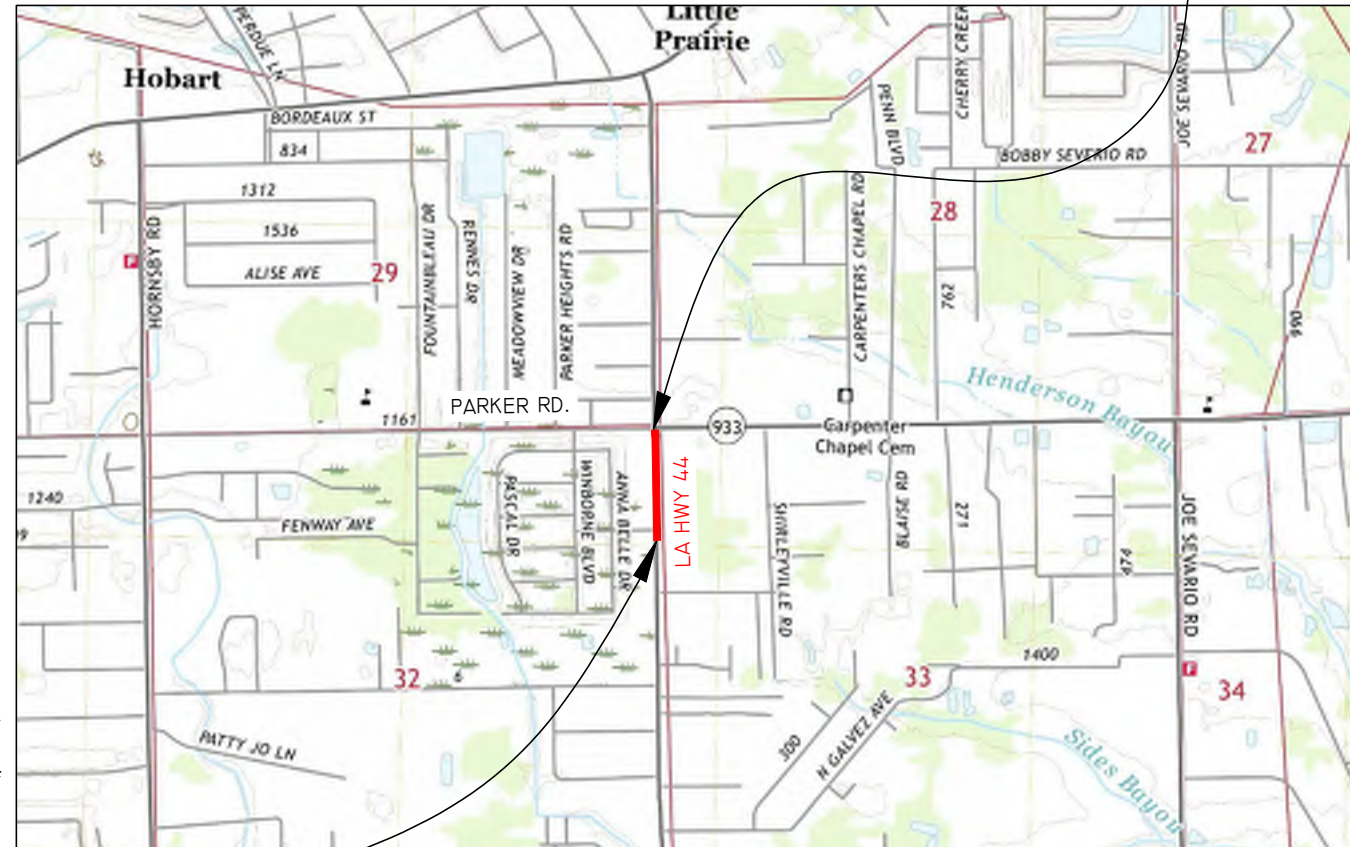
2018-2020 A.A.D.T. = 10,839
DESIGN SPEED = 45/55 MPH
POSTED SPEED = 45/55 MPH
DESIGN CLASSIFICATION = URBAN COLLECTOR

SURVEY

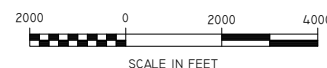
VERTICAL DATUM USED: NAVD 88
HORIZONTAL DATUM USED: NAVD 83
MAGNETIC VAR: NONE
BEARINGS ARE: GRID
TRANSIT BOOKS N/A

TYPE OF CONSTRUCTION

ASPHALTIC CONCRETE PAVEMENT, GRADING, BASE COURSE
DRAINAGE STRUCTURES, AND RELATED WORK.



LAYOUT MAP



NOTE:

THE 2016 OR LATEST EDITION OF THE LOUISIANA DOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS AMENDED BY THE PROJECT SPECIFICATIONS, SHALL GOVERN ON THIS PROJECT.

LENGTH AND LOCATION OF WORK


CONTROL SECTION	STATION		LOGMILE		ALGEBRAIC SUM OF ALL EQUATIONS	GROSS LENGTH	EXCEPTION	BRIDGE LENGTH		ROADWAY LENGTH	
	BEGIN	END	BEGIN	END	FEET	FEET	FEET	FEET	MILES	FEET	MILES
N. A.	105+09.39	115+80.37	N. A.	N. A.	N. A.	1448	N. A.	N. A.	N. A.	1071	0.20
					TOTAL LENGTH OF BRIDGES						
					TOTAL LENGTH OF ROADWAY					1071	0.20
					TOTAL MILES				0.20		

PRESIDENT
CLINT COINTMENT

ASCENSION PARISH COUNCIL

DISTRICT 1	OLIVER JOSEPH
DISTRICT 2	JOEL ROBERT
DISTRICT 3	TRAVIS TURNER
DISTRICT 4	BRETT ARCENEUX
DISTRICT 5	TODD VARNADO
DISTRICT 6	CHASE MELANCON
DISTRICT 7	BRIAN HILLENSBECK
DISTRICT 8	BLAINE PETITE
DISTRICT 9	PAM ALONSO
DISTRICT 10	DENNIS CULLEN
DISTRICT 11	MICHEAL MASON

RECOMMENDED FOR APPROVAL BY



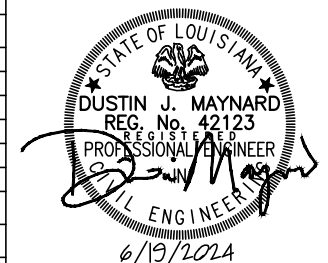
CONSULTANT

DATE 6/19/2024

APPROVED

DANIEL HELMS

DATE _____



GENERAL NOTES:

- THE CONTRACTOR IS ADVISED THAT EXISTING OVERHEAD AND UNDERGROUND UTILITIES SUCH AS (BUT NOT LIMITED TO) ELECTRICAL LINE AND POLES, TELEPHONE CABLES, GAS LINES, WATER LINES, AND SANITARY SEWERS EXIST IN THE AREA WHERE THE PROPOSED IMPROVEMENTS ARE TO BE INSTALLED. THE CONTRACTOR SHALL CONTACT LA ONE CALL OR THE APPROPRIATE UTILITY COMPANY FOR THE LOCATION OF THEIR UNDERGROUND SERVICE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN THE WORK AREA AS IS REQUIRED BY THE LOUISIANA UNDERGROUND UTILITIES AND FACILITIES DAMAGE PREVENTION LAW (LARS 40:1749.11 THROUGH 1749.26, INCLUSIVE). IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO LOCATE AND PROTECT EXISTING UTILITIES THAT HAVE BEEN PROPERLY MARKED DURING THE CONSTRUCTION OF THE CONTRACT. ANY DAMAGES TO PROPERLY MARKED EXISTING UTILITIES CAUSE BY EXECUTION OF THE CONTRACT, SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. THE OWNER DOES NOT ASSUME OR IMPLY TO ANY LIABILITY FOR PROPERLY MARKED EXISTING UTILITIES BELONGING TO OTHER UTILITY PROVIDERS THAT MAY OCCUPY OR OTHERWISE CONFLICT WITH THE CONSTRUCTION OF THE CONTRACT.
- PRIOR TO WORK COMMENCEMENT, THE CONTRACTOR IS RESPONSIBLE FOR FINAL VERIFICATION OF THE LOCATION OF THE UTILITIES SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONTACT LA ONE CALL (811 OR 1-800-272-3020) AND CITY PARISH DEPARTMENT OF PUBLIC WORKS TO HAVE UTILITIES LOCATED PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES FOR ALL AREAS OF CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE ACTIVITIES SO THAT TRAFFIC IS TO BE MAINTAINED AT ALL TIMES ON ALL STREETS IN THIS CONTRACT DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL PERSONNEL AND SIGNAGE IN ACCORDANCE WITH THE M.U.T.C.D. (LATEST EDITION). FOR THE SAFETY OF THE PUBLIC, BOTH LANES OF TRAFFIC ARE TO BE OPEN WHEN CONSTRUCTION IS NOT IN PROGRESS. THE CONTRACTOR SHALL PROVIDE SEQUENCE OF CONSTRUCTION DRAWINGS TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO BEGINNING CONSTRUCTION.
- WHENEVER NEW PAVING INTERSECTS OR MEETS EXISTING PAVING THAT IS TO REMAIN, THE NEW PAVING SHALL BE TRANSITIONED TO MATCH EXISTING PAVEMENT.
- SAW CUTTING WILL BE REQUIRED WHEN REMOVING PART OF EXISTING ASPHALT OR CONCRETE STREETS, DRIVES, WALKS AND PARKING AREAS. SAW CUTS WILL BE FULL DEPTH TO THE BOTTOM OF EXISTING BASE.
- THERE ARE A NUMBER OF OVERHEAD POWER LINES IN CLOSE PROXIMITY TO THIS PROJECT. SHOULD ANY POWER OR OTHER UTILITY POLES REQUIRE BRACING DURING THE COURSE OF CONSTRUCTION, THIS WORK WILL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED AT NO ADDITIONAL PAY.
- CONTRACTOR SHALL VERIFY EQUIPMENT CLEARANCE OF ALL OVERHEAD UTILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR TO MAINTAIN MAILBOXES TO ALLOW FOR MAIL DELIVERY DURING CONSTRUCTION ACTIVITIES (NO DIRECT PAY). ANY MAILBOXES DAMAGED DURING CONSTRUCTION WILL BE REPLACED IN KIND, TO THE SATISFACTION OF THE OWNER (NO DIRECT PAY).
- CONCRETE DRIVE AND CONCRETE WALK REMOVAL AND REPLACEMENT WILL BE TO THE R/W. IF REMOVAL IS REQUIRED BEYOND R/W, PERMISSION FROM PROPERTY OWNER IS TO BE ACQUIRED BY CONTRACTOR IN WRITING AND APPROVED BY PARISH PRIOR TO PLACEMENT.
- THE CONTRACTOR IS ADVISED THE HE MUST APPLY FOR A STORM WATER CONSTRUCTION PERMIT. THE REQUIREMENTS OF SUCH, INCLUDING PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHICH SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
- ALL QUANTITIES SHOWN ON THE PLANS ARE THEORETICAL, PAYMENT FOR QUANTITIES TO THE CONTRACTOR SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- THE WORK IN THIS CONTRACT SHALL CONFORM TO THE PROJECT PLANS AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE CURRENT EDITION OF THE LA DOTD STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, INCLUDING REVISIONS, AMENDMENTS AND SUPPLEMENTS. IN CASE OF A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS AND THE LA DOTD SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN UNLESS SPECIFIED BY PROJECT ENGINEER.
- ANY DAMAGE TO PROPERTY CAUSED BY THE CONTRACTOR'S ACTIVITIES WILL BE REPAIRED OR REPLACED PROMPTLY AT THE EXPENSE OF THE CONTRACTOR AND TO THE SATISFACTION OF THE OWNER.
- ALL EXISTING ROAD SIGNS DISTURBED DUE TO CONSTRUCTION ARE TO BE REINSTALLED AS PER PROJECT ENGINEER. ALL SIGNS DAMAGED DURING CONSTRUCTION, ARE TO REPLACED IN KIND (NO DIRECT PAY).
- THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. NO MATERIALS, EQUIPMENT OR ANY OTHER OBSTACLES SHALL BE LEFT OR STORED AT LOCATIONS WHICH IMPEDE THE RUNOFF OF STORM WATER FROM THE CONSTRUCTION SITE AND/OR ADJACENT PROPERTIES.
- THE CONTRACTOR SHALL TAKE SPECIAL CARE WHEN OPERATING NEAR ANY EXISTING OR RELOCATED UTILITIES. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR ANY DAMAGE TO ANY UTILITY CAUSED BY CONSTRUCTION ACTIVITIES.
- EXISTING DRAINAGE STRUCTURES TO REMAIN UNLESS NOTED OTHERWISE. COST OF REMOVAL OF DRAINAGE STRUCTURES IS TO BE INCLUDED IN THE COST OF ITEM 202-01-00100 REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
- CONTRACTOR SHALL FIELD VERIFY ALL TIE-IN ELEVATIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY REQUIRED CATCH BASIN TOP ELEVATIONS PRIOR TO ORDERING MATERIALS. ALL CATCH BASINS SHALL BE SET TO ENSURE POSITIVE DRAINAGE. ANY REQUIRED ADJUSTMENTS SHALL BE AT NO ADDITIONAL PAY.
- BEDDING MATERIAL FOR PIPES AND STRUCTURES SHALL BE INCLUDED WITH THE COSTS OF PIPES AND STRUCTURES.

TOPO LEGEND

○	BARRICADE POST	*	LIGHT POLE STANDARD
⊕	BASIN TOP	✉	MAILBOX
⊗	COMBINATION POLE	—	POWERLINE
⊗	DEADMAN POLE	●	POWER POLE
⊗	DRAINAGE MANHOLE TOP	⊡	POWER TRANSFORMER
⊕	DROP INLET TOP	⊡	POWER VAULT
●	FENCE POST	△	PRIMARY CONTROL
—	FENCELINE	●	PROPERTY CORNER
⬆	FIRE HYDRANT	⊠	R/W LDH MONUMENT
⊗	GAS METER	⊕	SECONDARY CONTROL
⊗	GAS UTILITY MARKER	⊗	SEWER CLEANOUT
⊗	GAS VALVE	⊗	SEWER MANHOLE TOP
—	GASLINE	⊡	SEWER PUMP
*	GENERAL/PRIVATE LIGHT POLE	○	SEWER SEPTIC TANK
○	GUY POLE	—	SEWERLINE

QUALITY LEVEL "B"

— — — — E(B) — — — —	UNDERGROUND ELECTRICAL
— — — — F/O(B) — — — —	UNDERGROUND FIBER OPTIC
— — — — FM(B) — — — —	UNDERGROUND FORCE MAIN
— — — — GAS(B) — — — —	UNDERGROUND GAS
— — — — O(B) — — — —	UNDERGROUND PIPELINE
— — — — SS(B) — — — —	UNDERGROUND SANITARY SEWER
— — — — T(B) — — — —	UNDERGROUND TELEPHONE
— — — — SD(B) — — — —	UNDERGROUND STORM DRAIN
— — — — TFO(B) — — — —	UNDERGROUND TRAFFIC FIBER
— — — — UNK(B) — — — —	UNDERGROUND UNKNOWN UTILITY
— — — — W(B) — — — —	UNDERGROUND WATER
— — T(B) — — (B)1 — —	TELEPHONE DUCT BANK

QUALITY LEVEL "C"

— — — — E(C) — — — —	UNDERGROUND ELECTRICAL
— — — — F/O(C) — — — —	UNDERGROUND FIBER OPTIC
— — — — FM(C) — — — —	UNDERGROUND FORCE MAIN
— — — — GAS(C) — — — —	UNDERGROUND GAS
— — — — O(C) — — — —	UNDERGROUND PIPELINE
— — — — SS(C) — — — —	UNDERGROUND SANITARY SEWER
— — — — T(C) — — — —	UNDERGROUND TELEPHONE
— — — — SD(C) — — — —	UNDERGROUND STORM DRAIN
— — — — TFO(C) — — — —	UNDERGROUND TRAFFIC FIBER
— — — — UNK(C) — — — —	UNDERGROUND UNKNOWN UTILITY
— — — — W(C) — — — —	UNDERGROUND WATER
— — T(C) — — (C)1 — —	TELEPHONE DUCT BANK

QUALITY LEVEL "D"

— — — — E(D) — — — —	UNDERGROUND ELECTRICAL
— — — — F/O(D) — — — —	UNDERGROUND FIBER OPTIC
— — — — FM(D) — — — —	UNDERGROUND FORCE MAIN
— — — — GAS(D) — — — —	UNDERGROUND GAS
— — — — O(D) — — — —	UNDERGROUND PIPELINE
— — — — SS(D) — — — —	UNDERGROUND SANITARY SEWER
— — — — T(D) — — — —	UNDERGROUND TELEPHONE
— — — — SD(D) — — — —	UNDERGROUND STORM DRAIN
— — — — TFO(D) — — — —	UNDERGROUND TRAFFIC FIBER
— — — — UNK(D) — — — —	UNDERGROUND UNKNOWN UTILITY
— — — — W(D) — — — —	UNDERGROUND WATER
— — T(D) — — (D)1 — —	TELEPHONE DUCT BANK

SURVEY NOTES:

THE LOCATIONS OF UNDERGROUND AND OTHER NONVISIBLE UTILITIES SHOWN HEREON HAVE BEEN DETERMINED FROM DATA EITHER FURNISHED BY THE AGENCIES CONTROLLING SUCH DATA AND/OR EXTRACTED FROM RECORDS MADE AVAILABLE TO US BY THE AGENCIES CONTROLLING SUCH RECORDS. WHERE FOUND, THE SURFACE FEATURES OF LOCATIONS ARE SHOWN. THE ACTUAL NONVISIBLE LOCATIONS MAY VARY FROM THOSE SHOWN HEREON. EACH AGENCY SHOULD BE CONTACTED RELATIVE TO THE PRECISE LOCATION OF ITS UNDERGROUND INSTALLATION PRIOR TO ANY RELIANCE UPON THE ACCURACY OF SUCH LOCATIONS SHOWN HEREON, INCLUDING PRIOR TO EXCAVATION AND DIGGING.

VERTICAL DATUM BASIS:

ELEVATIONS SHOWN ON THIS SURVEY ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) UTILIZING GEOID 12B. THEY ARE DERIVED FROM GPS OBSERVATIONS REFERENCED TO THE LOUISIANA STATE UNIVERSITY CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) NETWORK IN ACCORDANCE WITH LOUISIANA R.S. 50:173.1 COVERING VERTICAL CONTROL STANDARDS.

SERVITUDES:

THE SERVITUDES AND RESTRICTIONS SHOWN ON THIS SURVEY ARE LIMITED TO THOSE SET FORTH IN THE DESCRIPTION FURNISHED US AND THERE IS NO REPRESENTATION THAT ALL APPLICABLE SERVITUDES AND RESTRICTIONS ARE SHOWN HEREON. THE SURVEYOR HAS MADE NO TITLE SEARCH OR PUBLIC RECORD SEARCH IN COMPILING THE DATA FOR THIS SURVEY.

UTILITY INFORMATION

SUBSURFACE UTILITY INFORMATION SHOWN HEREON, WHICH WAS NOT DERIVED FROM DIRECT FIELD OBSERVATION, WERE TAKEN FROM MUNICIPAL GEOGRAPHIC INFORMATION SYSTEMS (GIS) DATA AVAILABLE; THESE DATA ARE SHOWN TO QUALITY LEVEL D STANDARDS. UNLESS OTHERWISE NOTED, GIS-DERIVED SUBSURFACE UTILITIES HAVE NOT BEEN FIELD VERIFIED BY THE SURVEYOR.

UTILITY QUALITY LEVEL

THE SUBSURFACE UTILITIES AS SHOWN ON THE MAP OF SURVEY WERE IDENTIFIED USING INDUSTRY STANDARD DETECTION METHODOLOGIES IN STRICT ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA. QUALITY LEVELS AND DEFINITIONS PER CI/ASCE STANDARD NO. 38-02:

QUALITY LEVEL D - QL-D: DEPICTED ACCORDING TO UTILITY RECORD INFORMATION AND IN-FIELD VISUAL INSPECTION. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QUALITY LEVEL C - QL-C: EXISTING UTILITY STRUCTURES HAVE BEEN FIELD LOCATED AND SURVEYED TO ASSIST IN THE DEPICTING THE UTILITIES SHOWN ON THE RECORDS. NO ELECTRONIC DESIGNATING INFORMATION WAS OBTAINED.

QUALITY LEVEL B - QL-B: INFORMATION WAS OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROPRIATE HORIZONTAL POSITION OF THE SUBSURFACE UTILITIES. QL-B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION.

QUALITY LEVEL A - QL-A: OBTAIN PRECISE HORIZONTAL AND VERTICAL POSITION OF THE UTILITY LINE BY EXCAVATING A TEST HOLE. THE TEST HOLE SHALL BE DONE USING VACUUM EXCAVATION OR COMPARABLE NON-DESTRUCTIVE EQUIPMENT IN A MANNER AS TO CAUSE NO DAMAGE TO THE UTILITY LINE.

TEMPORARY BENCHMARK (TBM):

TBM "J"
60D NAIL IN POWER POLE
N: 659828
E: 3410341.5
ELEVATION: 22.18' N.A.V.D. 88 GEOID 12B

TBM "K"
60D NAIL IN POWER POLE
N: 660429.5
E: 3410594.9
ELEVATION: 21.00' N.A.V.D. 88 GEOID 12B

TBM "L"
60D NAIL IN POWER POLE
N: 659788
E: 3411238.1
ELEVATION: 20.55' N.A.V.D 88 GEOID 12B

TBM "M"
60D NAIL IN POWER POLE
N: 659077.8
S: 3410616.4
ELEVATION: 20.87' N.A.V.D 88 GEOID 12B

LEGEND

	REMOVAL OF ASPHALT CONCRETE PAVEMENT AND BASE
	REMOVAL OF DRIVE
	REQUIRED MILLING
	PROPOSED AGGREGATED DRIVE
	PROPOSED CONCRETE
	PROPOSED ASPHALT CONCRETE

UTILITY COMPANIES AND CONTACT NUMBERS		
UTILITY	OWNER	CONTACT NUMBER
ELECTRIC	DEMCO	1-225-622-2549
ELECTRIC	ENTERGY	1-800-968-8243
PHONE/CABLE	COX	1-866-272-5777
PHONE/CABLE	EATEL	225-621-4300
WATER	BR WATER CO.	225-925-2011
NATURAL GAS	ATMOS SOUTHERN	888-505-3476
NATURAL GAS	NATURAL GAS	225-545-2569
NATURAL GAS	DENBURY NAT. GAS	225-665-1409

SHEET NUMBER2

ASCENSION PARISH

PARISH

SJT
DESIGNED
CHECKED

SJT
D.M.
DATE

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CONTROL
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NOTES AND
LEGEND

BY

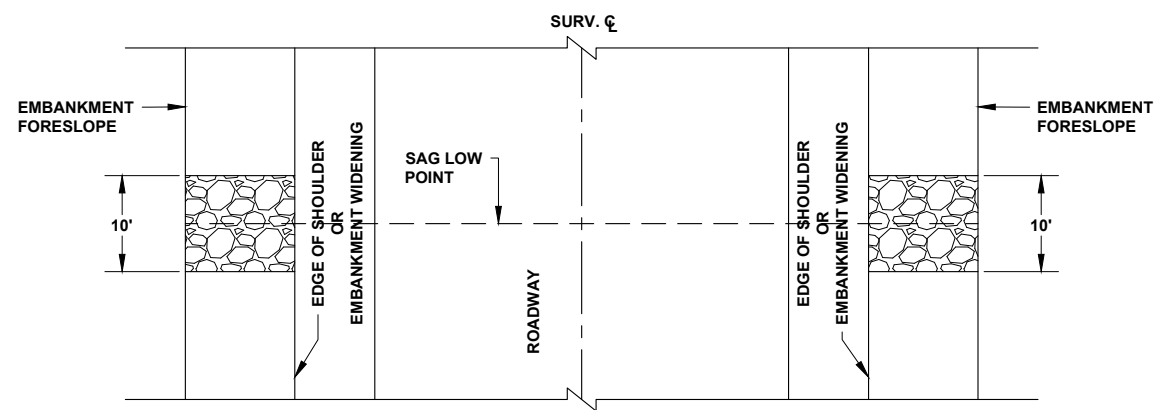
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DATE

GENERAL NOTES AND LEGEND

LA HWY 44 AT PARKER RD TEMPORARY TURN LANE

(225) 644-6523
www.mckimcreed.com
1022 S. Purpera Ave.
Gonzales, LA 70707-d298



1 DAYLIGHTING BASE COURSE DETAIL

NOTES:

EXTEND GEOTEXTILE FABRIC & CLASS II BASE COURSE TO EMBANKMENT FORESLOPE FOR A DISTANCE OF 10 FEET

<HILARIO> 06/25/24 8:41 AM I:\08391\0009\ENG\80-DRAWINGS\TEMP TURN LANE DESIGN\4 - QUANTITY SHEETS.DWG - 4

EARTHWORK			
STATION	STATION	GENERAL EXCAVATION	EMBANKMENT
		CU. YD.	CU. YD.
106+05.12	115+63.60	307	909
TOTAL		307	909

ASPHALT CONCRETE										
STATION	STATION	DESCRIPTION	2.5" THICK BINDER COURSE				2" THICK WEARING COURSE			
			LENGTH	WIDTH	AREA	WEIGHT	LENGTH	WIDTH	AREA	WEIGHT
			FEET	FEET	SQ. YD.	TON	FEET	FEET	SQ. YD.	TON
105+09.39	115+86.00	MAINLINE LA 44	1076.61	VARIES	1710.249	235.2	1076.61	VARIES	4601.345	506.1
TOTAL						235.2				506.1

BASE COURSE					
STATION	STATION	DESCRIPTION	LENGTH	CLASS II BASE COURSE (12" THICK)	
			FEET	WIDTH	SQ. YD.
105+09.39	115+64.15	LA 44 LANE WIDENING	1054.76	9.32	1093.2
TOTAL					1093.2

MILLING ASPHALT PAVEMENT					
STATION	STATION	DESCRIPTION	LENGTH	WIDTH	MILLING (2" AVG DEPTH)
			FEET	FEET	SQYD
106+05.12	115+80.37	MILLING OF LA 44	975	VARIES	2,974
TOTAL					2,974

DRIVEWAYS						
STATION	SIDE CL	TYPE	LENGTH FEET	WIDTH FEET	SQ. YARDS DRIVE (6") AGGREGATE	SQ. YARDS DRIVE (6") CONCRETE
108+36.60	RT	C	22.4	20.0	49.7	-
112+61.27	RT	C	22.1	13.6	33.4	-
113+41.76	RT	C	22.0	11.4	27.9	-
TOTAL					145.3	

PLASTIC PAVEMENT STRIPING & PAVEMENT MARKINGS									
STATION	STATION	DESCRIPTION	LENGTH LN FT	SOLID LINE 4 INCH	SOLID LINE 8 INCH	DOTTED LINE 8 INCH	SOLID LINE 24 INCH	TURN ARROWS	REFLECTORIZED RAISED PAVEMENT MARKERS (CLASS IV)
				MILE	MILE	MILE	LNFT	EACH	EACH
105+09.39	115+90.51	LA 44 MAINLINE	1081.1	0.810	0.161	0.0418	26	2	190
TOTAL				0.810	0.161	0.042	26	2	190

DRIVES AND WALKS REMOVAL					
STATION	SIDE CL	DESCRIPTION	LENGTH FEET	WIDTH FEET	SQ. YARDS DRIVE (6")
108+36.63	RT	AGGREGATE DRIVE	27.3	19.8	60
112+61.27	RT	AGGREGATE DRIVE	27.1	14.5	44
113+41.76	RT	AGGREGATE DRIVE	27.2	14.9	45
TOTAL					149

SAW CUTTING			
STATION (START)	STATION (END)	DESCRIPTION	SAW CUTTING ASPHALT PAVEMENT
			IN. FT.
105+09.06	105+09.06	BEGIN MILL & OVERLAY	44
115+51.14	115+51.14	END MILL & OVERLAY	67
105+09.06	115+51.14	SAW CUTTING EOP	35431
TOTAL			35,541

DESIGNED
CHECKED

SJT
DJM

DESIGNED
CHECKED

SJT
DJM

DATE
SHEET

JUNE 2024

QUANTITY SHEETS

PARISH

ASCENSION PARISH


CONTROL SECTION

STATE PROJECT

BY


NO.

DATE



QUANTITY SHEETS

LA HWY 44 AT PARKER RD TEMPORARY TURN LANE



McKIM & CREED

ARCHITECTS & ENGINEERS

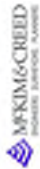
(225) 644-5523

www.mckimcreed.com

1022 S. Purgera Ave.

Gonzales, LA 70707-0298


SUMMARY OF ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
201-01-00100	CLEARING AND GRUBBING	ACRE	0.83
202-01-00100	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	1.0
202-02-00020	REMOVAL OF DRIVEWAYS	SQ. YD.	149
202-03-38000	RELOCATION OF SIGN	EACH	10
202-03-38020	RELOCATION OF SIGN POLE	EACH	8
203-01-00100	GENERAL EXCAVATION	CU. YD.	307
203-03-00100	EMBANKMENT	CU. YD.	909
203-08-00100	GEOTEXTILE FABRIC	SQ. YD.	16
204-02-00100	TEMPORARY HAY BALES	EACH	60
204-05-00100	TEMPORARY SEDIMENT CHECK DAMS (HAY)	EACH	15
204-06-00100	TEMPORARY SILT FENCING	LN. FT.	1897
302-01-00300	CLASS II BASE COURSE (CRUSHED STONE)	CU. YD.	8
302-02-12020	CLASS II BASE COURSE (12" THICK) (SOIL CEMENT)	SQ. YD.	1093.2
401-01-00100	AGGREGATE SURFACE COURSE (NET SECTION)	CU. YD.	24.7
502-01-00100	ASPHALT CONCRETE	TONS	759.3
509-01-00100	MILLING ASPHALT PAVEMENT	SQ. YD.	2974
701-03-01021	STORM DRAIN PIPE (18" RCP)	LN. FT.	34
701-04-01040	STORM DRAIN PIPE ARCH (24" RCPA)	LN. FT.	78
713-01-00100	TEMPORARY SIGNS AND BARRICADES	LUMP SUM	1.0
713-02-00100	TEMPORARY PAVEMENT MARKINGS (4" WIDTH)	LN. FT.	3900
713-06-00100	TEMPORARY REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	49
727-01-00100	MOBILIZATION	LUMP SUM	1.0
731-02-00100	REFLECTORIZED RAISED PAVEMENT MARKERS (YELLOW/YELLOW)	EACH	140
731-02-00100	REFLECTORIZED RAISED PAVEMENT MARKERS (WHITE/RED)	EACH	50
732-01-01080	PLASTIC PAVEMENT STRIPING (SOLID LINE) (24" WIDTH) (THERMOPLASTIC 90 MIL)	LNFT	26
732-02-02000	PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (THERMOPLASTIC 90 MIL)	MILE	0.810
732-02-02040	PLASTIC PAVEMENT STRIPING (SOLID LINE) (8" WIDTH) (THERMOPLASTIC 90 MIL)	MILE	0.161
732-03-02030	PLASTIC PAVEMENT STRIPING (DOTTED LINE) (8" WIDTH) (2' L) (THERMOPLASTIC 90 MIL)	MILE	0.042
732-04-01080	PLASTIC PAVEMENT LEGENDS & SYMBOLS (ARROW - LEFT TURN)	EACH	2
735-01-00100	MAILBOXES	EACH	4
735-02-00100	MAILBOX SUPPORTS (SINGLE)	EACH	4
739-01-00100	HYDRO-SEEDING	ACRE	0.562
740-01-00100	CONSTRUCTION LAYOUT	LUMP SUM	1.0
NS-500-00340	SAW CUTTING ASPHALTIC CONCRETE PAVEMENT	IN. FT	35541
S-001	SWPPP	LUMP SUM	1.0



(225) 644-5523
www.mcmcreed.com
1022 S. Purpera Ave.
Gonzales, LA 70707-0298

SUMMARY OF ESTIMATED QUANTITIES

LA HWY 44 AT PARKER RD TEMPORARY TURN LANE



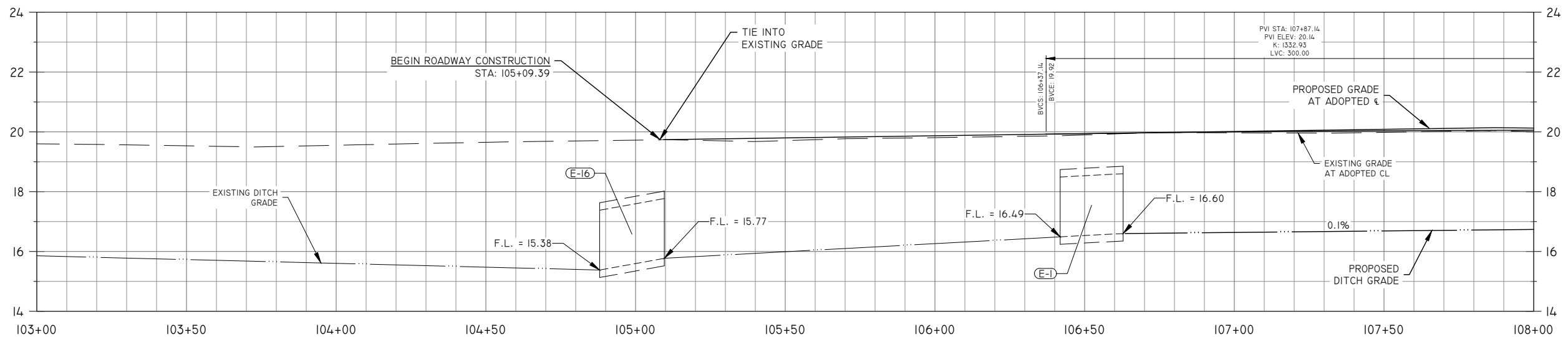
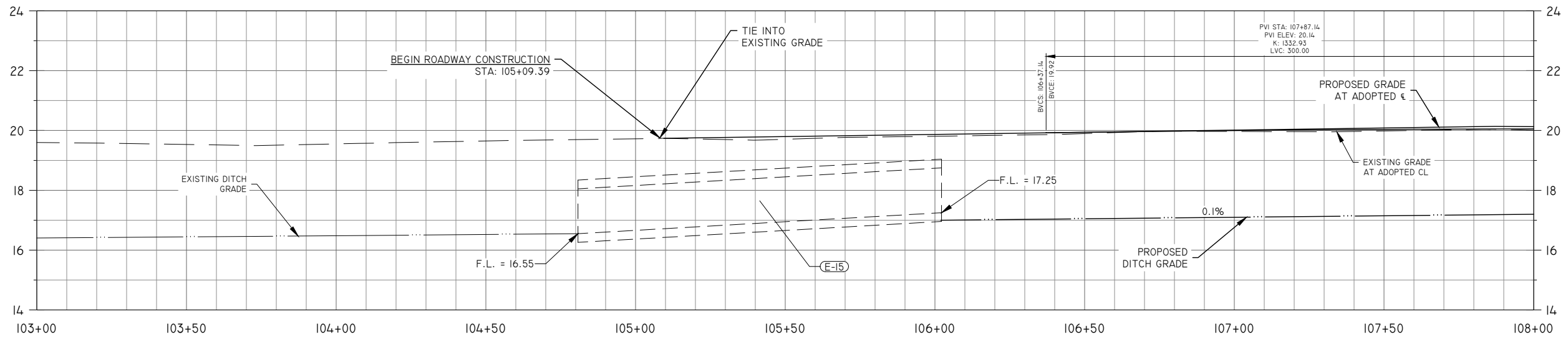
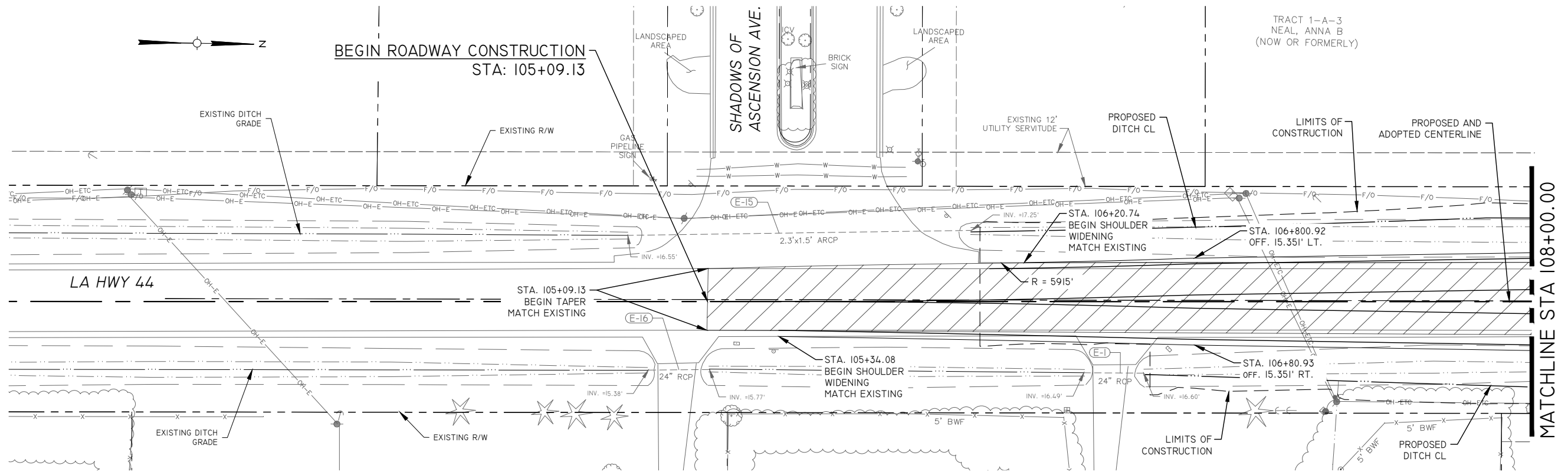
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CHECKED	DJM	CONTROL SECTION			
DATE	JUNE 2024	STATE PROJECT			
SHEET		ESTIMATED QUANTITIES			
NO.		BY			
DATE					

<HILARIO> 06/25/24 8:42 AM I:\08391\0009\ENG\80-DRAWINGS\TEMP TURN LANE DESIGN\6-9 PLAN AND PROFILES.DWG - 6

SCALES:
PLAN: 1" = 20'
PROFILE:
HORIZ: 1" = 20'
VERT: 1" = 2'

LEFT SIDE

RIGHT SIDE



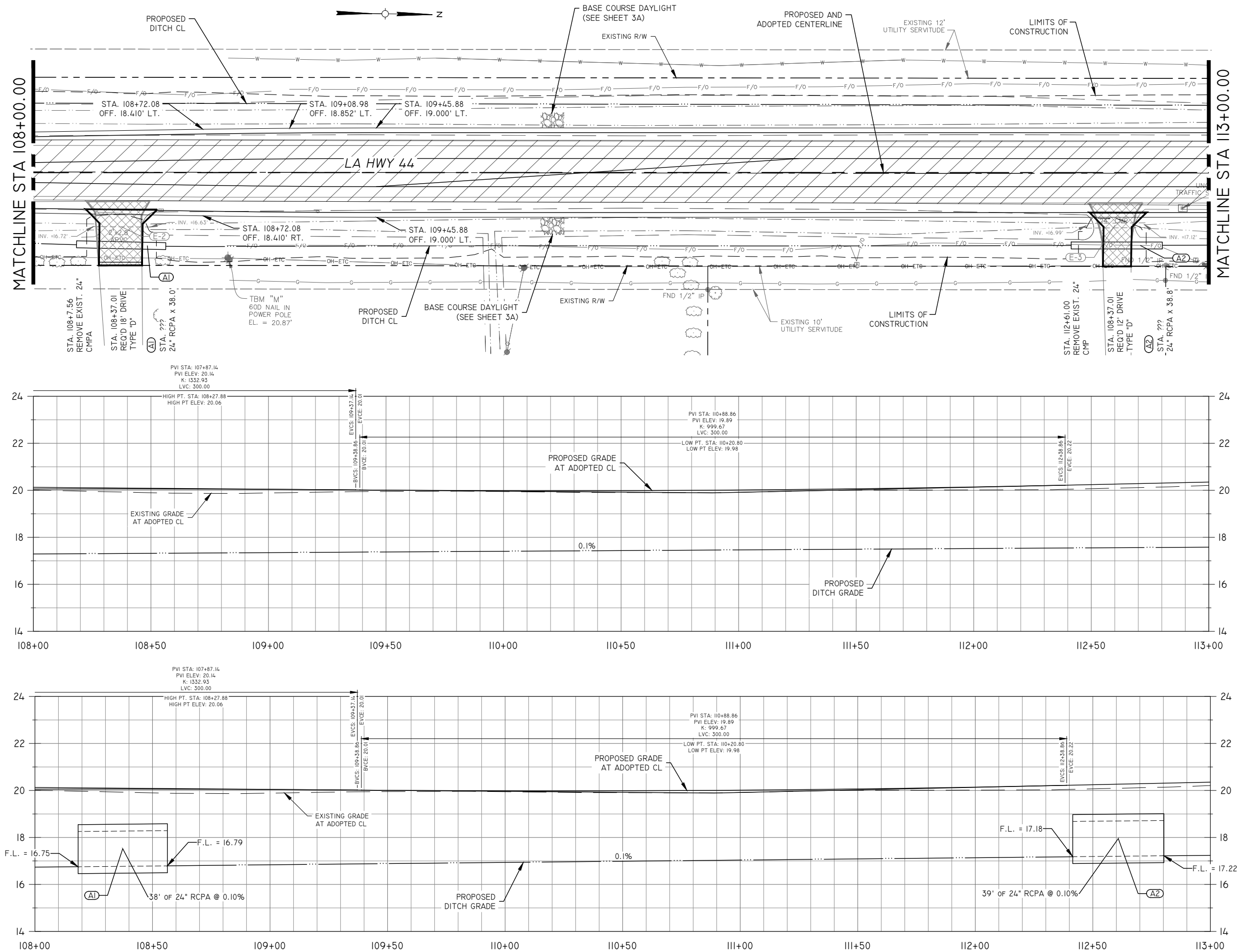
SHEET NUMBER		6	
PARISH		ASCENSION PARISH	
DESIGNED	CHECKED	DATE	BY
DATE	DATE	DATE	DATE
CONTROL SECTION		STATE PROJECT	
JUNE 2024		PLAN AND PROFILES	
NO.		DATE	
PLAN AND PROFILES			
LA HWY 44 AT PARKER RD TEMPORARY TURN LANE			
(225) 644-5523 www.mckimcreed.com 1023 S. Purpera Ave. Gonzales, LA 70707-0298			

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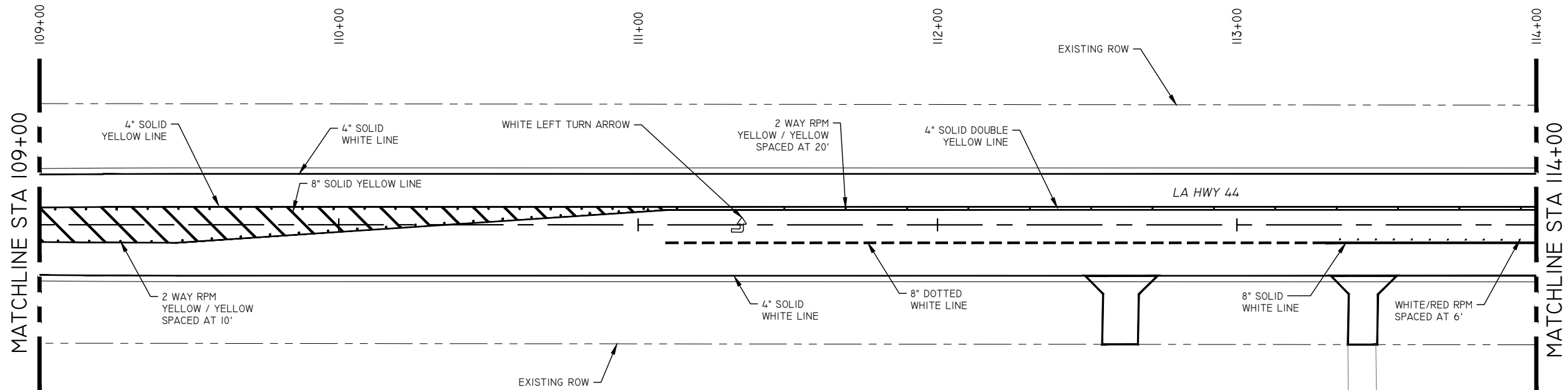
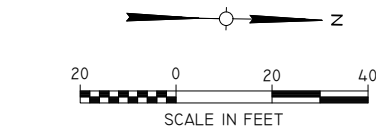
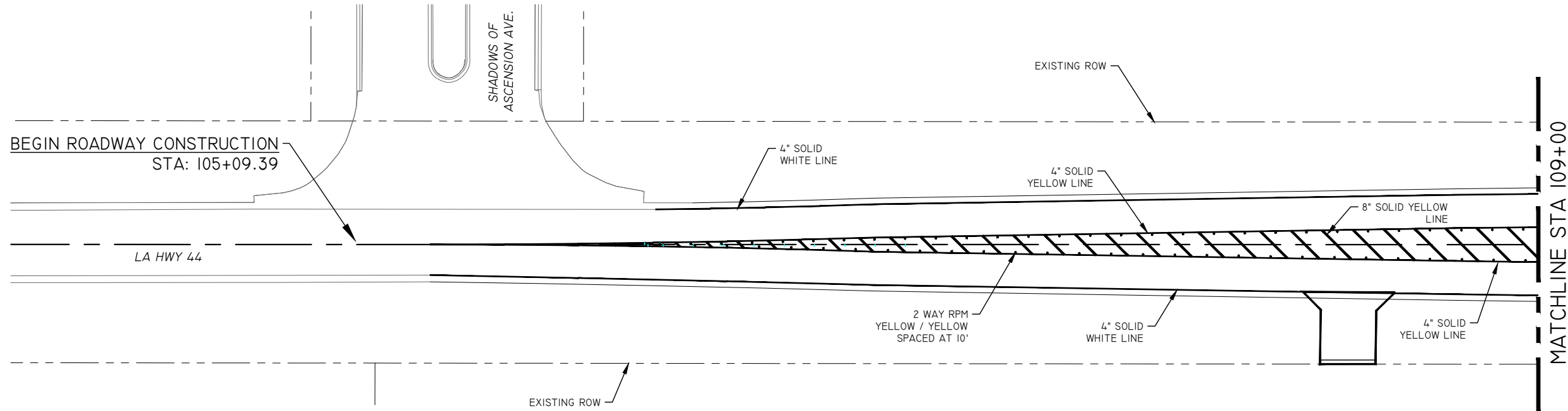
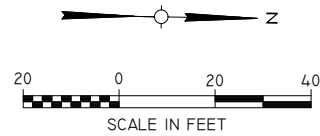
SCALES:
PLAN: 1" = 20'
PROFILE:
HORIZ: 1" = 20'
VERT: 1" = 2'

LEFT SIDE

RIGHT SIDE




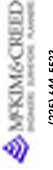
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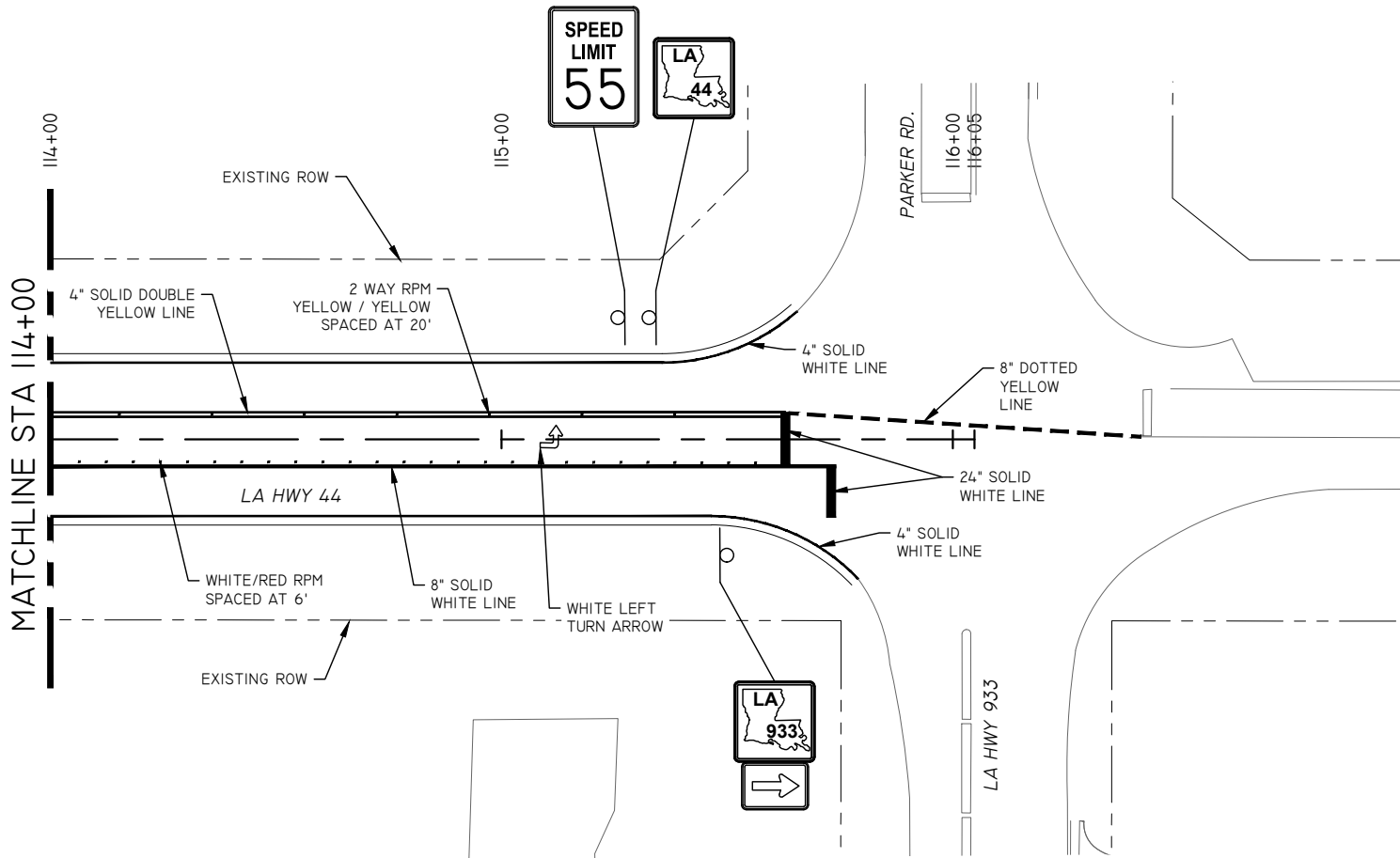
NOTES:

1. ALL SIGNING POSTS TO BE INSTALLED SHALL BE OF BREAKAWAY TYPE.
2. SEE LADOTD STANDARD PLANS PM-01, PM-02, PM-05, AND PM-06 FOR STRIPING REQUIREMENTS.
3. EXISTING SIGNS CONFLICTING WITH NEW SIGNING TO BE REMOVED UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER.

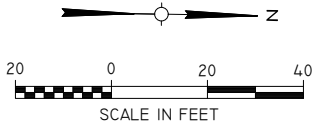
PAVEMENT MARKING AND
PERMANENT SIGNING LAYOUT

SHEET NUMBER		9	
ASCENSION PARISH			
DESIGNED	CHECKED	SJT	DJM
DATE	DATE	DATE	DATE
JUNE 2024		JUNE 2024	
SHEET		SHEET	
BY		BY	
DATE		DATE	
NO.		NO.	
			
PAVEMENT MARKINGS AND SIGNAGE			
LA HWY 44 AT PARKER RD TEMPORARY TURN LANE			
			
(225) 644-5523 www.mckimandcreed.com 1022 S. Purplea Ave. Gonzales, LA 70707-0298			

<HILARIO> 06/25/24 8:43 AM I:\08309\00009\ENG\80-DRAWINGS\TEMP TURN LANE DESIGN\10 PAVEMENT MARKINGS AND SIGNAGE.DWG - 10 PAVEMENT MARKINGS AND SIGNAGE



PAVEMENT MARKING AND
PERMANENT SIGNING LAYOUT

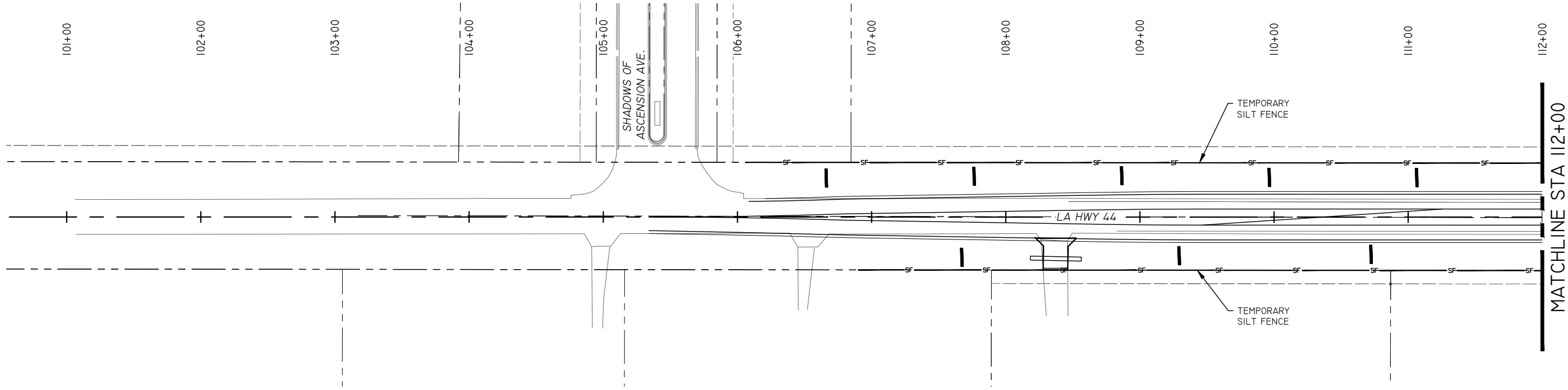
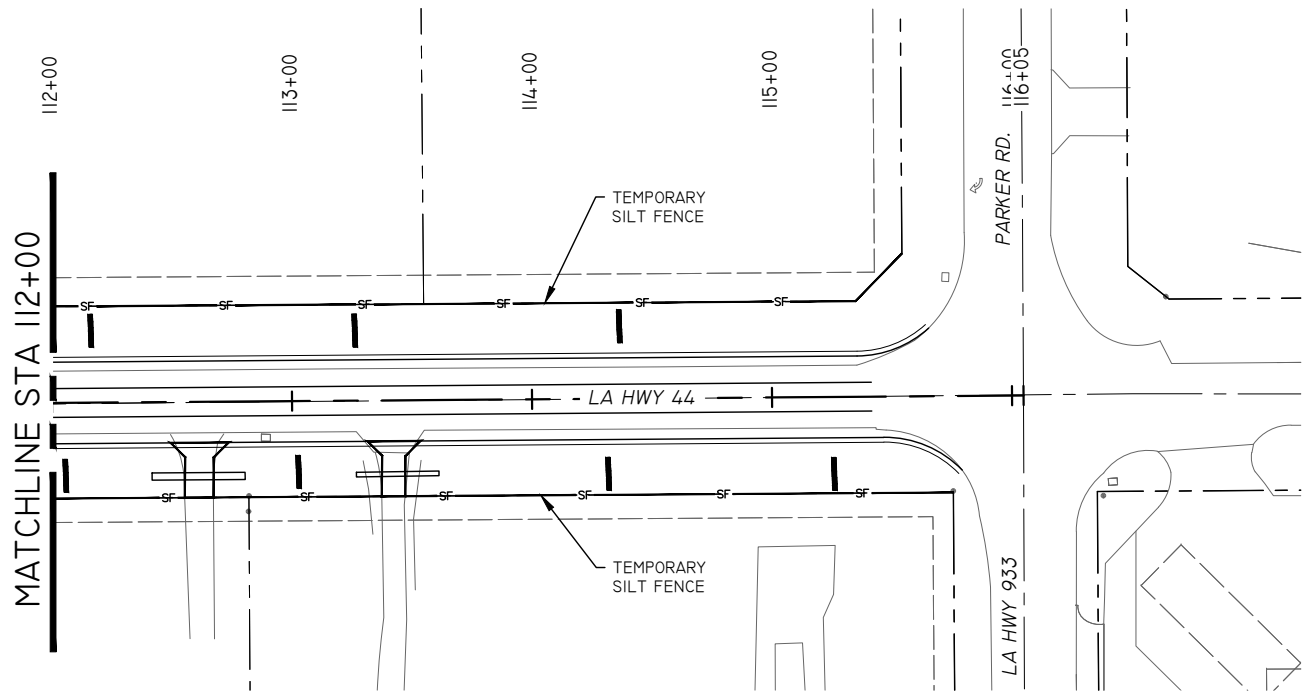


NOTES:

1. ALL SIGNING POSTS TO BE INSTALLED SHALL BE OF BREAKAWAY TYPE.
2. SEE LADOTD STANDARD PLANS PM-01, PM-02, PM-05, AND PM-06 FOR STRIPING REQUIREMENTS.
3. EXISTING SIGNS CONFLICTING WITH NEW SIGNING TO BE REMOVED UNLESS DIRECTED OTHERWISE BY THE PROJECT ENGINEER.

SHEET NUMBER		10	
PARISH		ASCENSION PARISH	
DESIGNED	CHECKED	SJT	DJM
DATE	SHEET	DATE	SHEET
JUNE 2024		JUNE 2024	
MARKINGS		MARKINGS	
AND SIGNAGE		AND SIGNAGE	
BY		BY	
NO.		NO.	
DATE		DATE	
PAVEMENT MARKINGS AND SIGNAGE		PAVEMENT MARKINGS AND SIGNAGE	
LA HWY 44 AT PARKER RD TEMPORARY TURN LANE		LA HWY 44 AT PARKER RD TEMPORARY TURN LANE	
MCKINNEY & CHIEED		MCKINNEY & CHIEED	
(225) 644-5523		(225) 644-5523	
www.mckinneyandcheed.com		www.mckinneyandcheed.com	
1022 S. Purpera Ave.		1022 S. Purpera Ave.	
Gonzales, LA 70707-0298		Gonzales, LA 70707-0298	

<HILARIO> 06/25/24 8:44 AM I:\08309\00009.ENG\80-DRAWINGS\TEMP TURN LANE DESIGN\11 SUGGESTED EROSION CONTROL.DWG - 11 SUGGESTED EROSION CONTROL



EROSION CONTROL NOTES:

1. LOCATIONS FOR EROSION CONTROL ITEMS ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL LOCATIONS OF EROSION CONTROL ITEMS INSTALLATION, SUBJECT TO APPROVAL BY PROJECT ENGINEER.
2. EROSION CONTROL MEASURES SHOWN SHALL BE CONSIDERED MINIMAL REQUIRED. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BASED ON SCHEDULE, ACTUAL SITE CONDITIONS AT TIME OF CONSTRUCTION, REQUIREMENTS OF LOCAL PERMITTING AGENCIES, OR WORK METHODS.
3. CONTRACTOR SHALL OBTAIN SWPPP APPROVAL FROM JURISDICTIONAL AGENCIES INCLUDING DEQ AND ASCENSION PARISH.
4. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT AND AFTER EVERY RAIN EVENT TO ENSURE SOIL SEDIMENTS DO NOT LEAVE THE SITE.

LEGEND

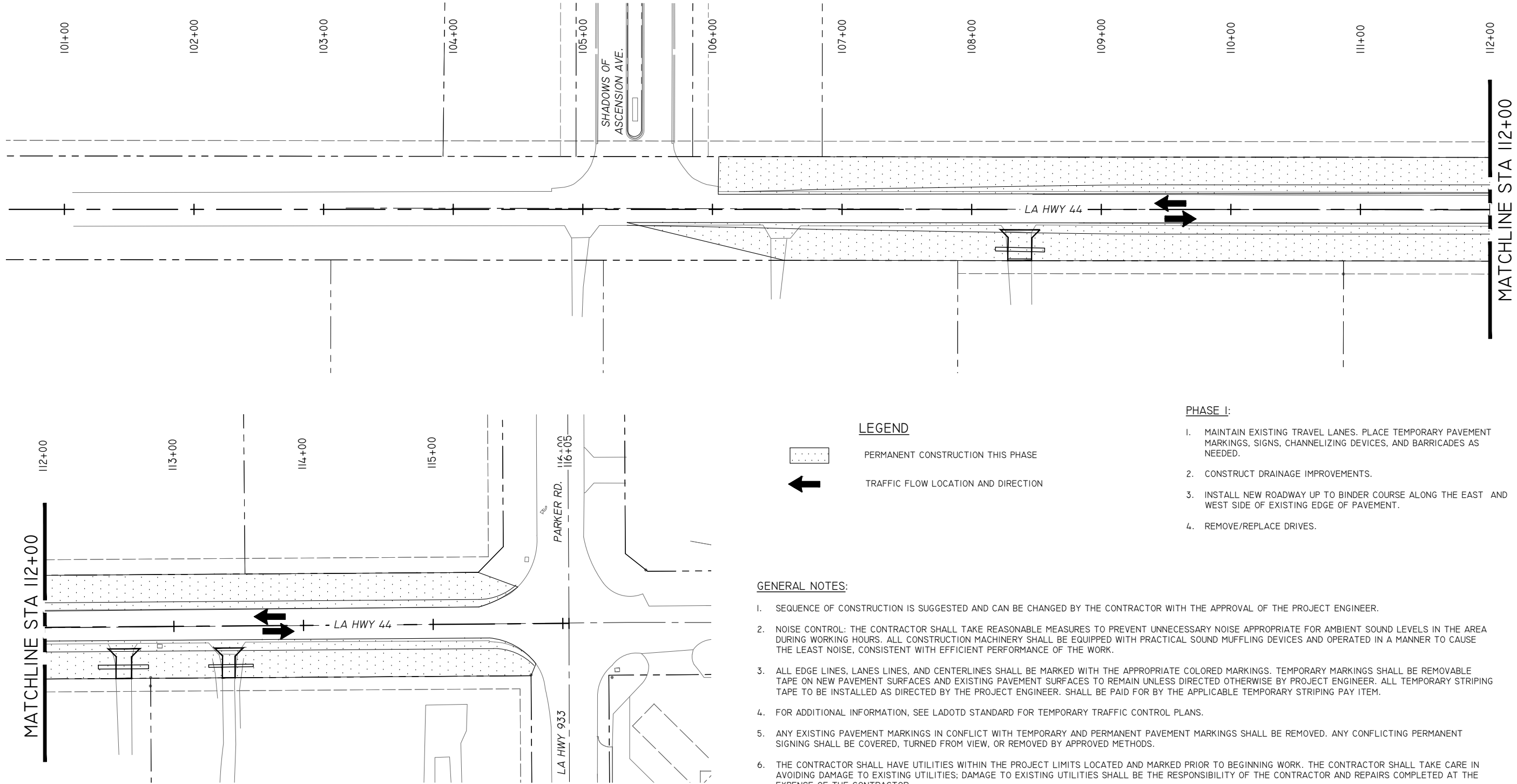
- SF — SILT FENCE
— SEDIMENT CHECK DAMN (HAY)

SUGGESTED EROSION CONTROL

LA HWY 44 AT PARKER RD TEMPORARY TURN LANE

DESIGNED	SJT	PARISH	ASCENSION PARISH	SHEET NUMBER	11
CHECKED	DJM	CONTROL SECTION			
DATE	JUNE 2024	STATE PROJECT			
BY					

<HILARIO> 06/25/24 8:44 AM I:\08391\0009\ENG\80-DRAWINGS\TEMP TURN LANE DESIGN\12 SUGGESTED SEQUENCE OF CONSTRUCTION.DWG - 12 SUGGESTED SEQUENCE OF CONSTRUCTION



LEGEND

- PERMANENT CONSTRUCTION THIS PHASE
- TRAFFIC FLOW LOCATION AND DIRECTION

PHASE I:

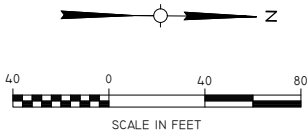
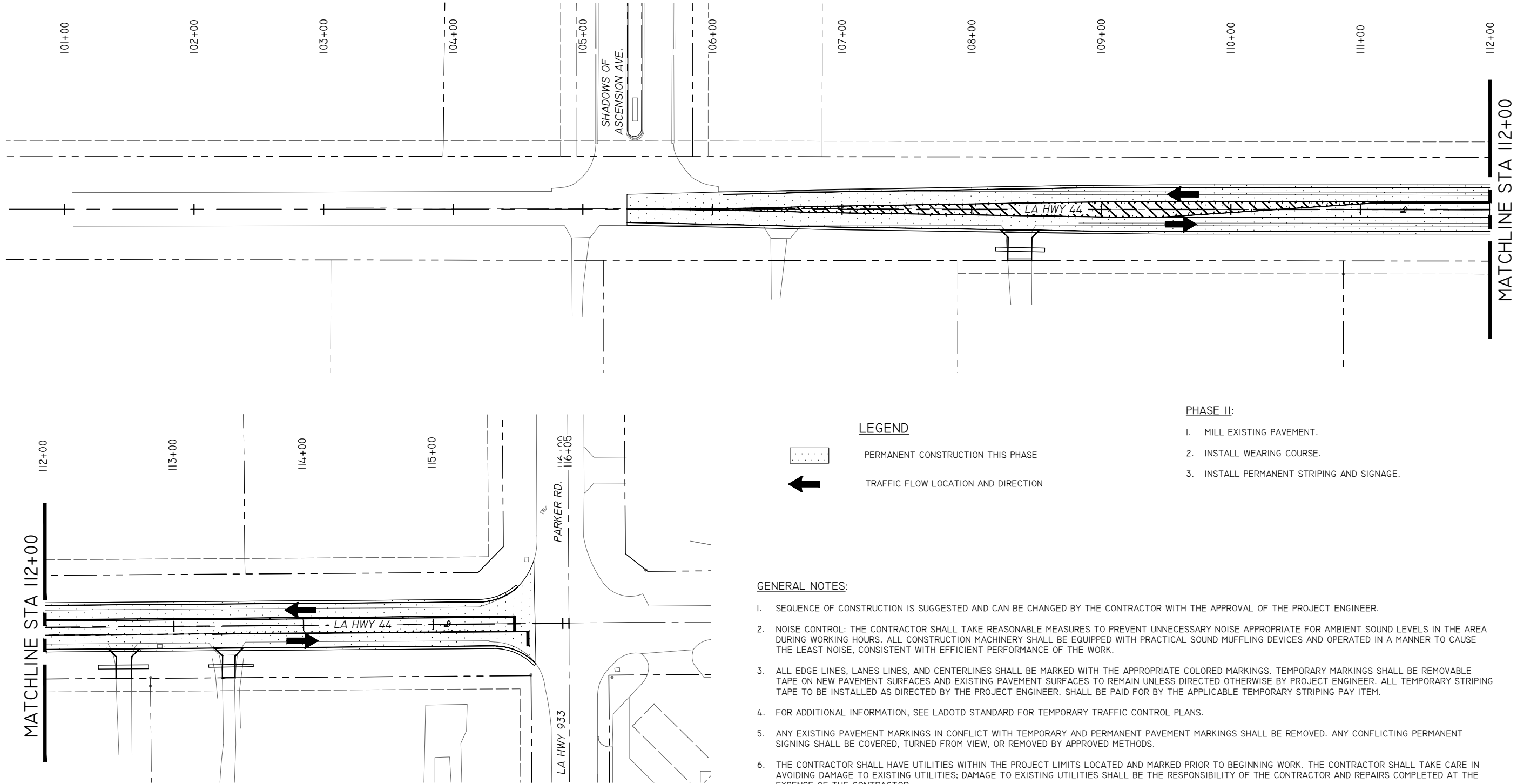
1. MAINTAIN EXISTING TRAVEL LANES. PLACE TEMPORARY PAVEMENT MARKINGS, SIGNS, CHANNELIZING DEVICES, AND BARRICADES AS NEEDED.
2. CONSTRUCT DRAINAGE IMPROVEMENTS.
3. INSTALL NEW ROADWAY UP TO BINDER COURSE ALONG THE EAST AND WEST SIDE OF EXISTING EDGE OF PAVEMENT.
4. REMOVE/REPLACE DRIVES.

GENERAL NOTES:



1. SEQUENCE OF CONSTRUCTION IS SUGGESTED AND CAN BE CHANGED BY THE CONTRACTOR WITH THE APPROVAL OF THE PROJECT ENGINEER.
2. NOISE CONTROL: THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PREVENT UNNECESSARY NOISE APPROPRIATE FOR AMBIENT SOUND LEVELS IN THE AREA DURING WORKING HOURS. ALL CONSTRUCTION MACHINERY SHALL BE EQUIPPED WITH PRACTICAL SOUND MUFFLING DEVICES AND OPERATED IN A MANNER TO CAUSE THE LEAST NOISE, CONSISTENT WITH EFFICIENT PERFORMANCE OF THE WORK.
3. ALL EDGE LINES, LANES LINES, AND CENTERLINES SHALL BE MARKED WITH THE APPROPRIATE COLORED MARKINGS. TEMPORARY MARKINGS SHALL BE REMOVABLE TAPE ON NEW PAVEMENT SURFACES AND EXISTING PAVEMENT SURFACES TO REMAIN UNLESS DIRECTED OTHERWISE BY PROJECT ENGINEER. ALL TEMPORARY STRIPING TAPE TO BE INSTALLED AS DIRECTED BY THE PROJECT ENGINEER. SHALL BE PAID FOR BY THE APPLICABLE TEMPORARY STRIPING PAY ITEM.
4. FOR ADDITIONAL INFORMATION, SEE LADOTD STANDARD FOR TEMPORARY TRAFFIC CONTROL PLANS.
5. ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY AND PERMANENT PAVEMENT MARKINGS SHALL BE REMOVED. ANY CONFLICTING PERMANENT SIGNING SHALL BE COVERED, TURNED FROM VIEW, OR REMOVED BY APPROVED METHODS.
6. THE CONTRACTOR SHALL HAVE UTILITIES WITHIN THE PROJECT LIMITS LOCATED AND MARKED PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL TAKE CARE IN AVOIDING DAMAGE TO EXISTING UTILITIES; DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRS COMPLETED AT THE EXPENSE OF THE CONTRACTOR.
7. ALL EQUIPMENT AND MATERIALS STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS TO BE DETERMINED BY THE CONTRACOR, AND MUST BE APPROVED BY THE PROJECT ENGINEER BEFORE IMPLEMENTATION.
8. CONSTRUCTION ACTIVITIES SHALL BE COORDINATED TO ALLOW ONE LANE OPEN AT ALL TIMES USING FLAGGING WHEN NECESSARY. ACCESS TO ALL DRIVEWAYS & TURNOUTS SHOULD BE PROVIDED BY THE CONTRACTOR DURING ALL PHASES OF CONSTRUCTION.
9. 10' MINIMUM LANE WIDTH SHALL BE MAINTAINED AT ALL TIMES.
10. THE CONTRACTOR MUST MAINTAIN DRAINAGE SATISFACTORY TO THE PROJECT ENGINEER THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
11. PLACE ADVANCED WARNING SIGNS PER LADOTD TEMPORARY TRAFFIC CONTROL STANDARD PLANS AND PER MUTCD PART 6. ADVANCED WARNING SIGNAGE SHALL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
12. SPACING BETWEEN CONES, TUBULAR MARKERS, DRUMS & BARRICADES SHOULD NOT EXCEED A DISTANCE EQUAL TO 1.0 TIMES THE SPEED LIMIT WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE EQUAL TO 2.0 TIMES THE SPEED LIMIT WHEN USED FOR TANGENT CHANNELIZATION.

SHEET NUMBER		12	
ASCENSION PARISH		PARISH	
CONTROL SECTION		CONTROL SECTION	
STATE PROJECT		STATE PROJECT	
JUNE 2024		DATE	
SEQUENCE OF CONSTRUCTION		SEQUENCE OF CONSTRUCTION	
BY		BY	
NO.		NO.	
DATE		DATE	
SUGGESTED SEQUENCE OF CONSTRUCTION		SUGGESTED SEQUENCE OF CONSTRUCTION	
LA HWY 44 AT PARKER RD TEMPORARY TURN LANE		LA HWY 44 AT PARKER RD TEMPORARY TURN LANE	
MCKINLEY & CHIEF		MCKINLEY & CHIEF	
(225) 644-5523		(225) 644-5523	
www.mckinleyandchief.com		www.mckinleyandchief.com	
1022 S. Purpera Ave.		1022 S. Purpera Ave.	
Gonzales, LA 70707-0298		Gonzales, LA 70707-0298	

<HILARIO> 06/25/24 8:44 AM I:\08391\0009\ENG\80-DRAWINGS\TEMP TURN LANE DESIGN\13 SUGGESTED SEQUENCE OF CONSTRUCTION.DWG - 13 SUGGESTED SEQUENCE OF CONSTRUCTION



LEGEND

-  PERMANENT CONSTRUCTION THIS PHASE
-  TRAFFIC FLOW LOCATION AND DIRECTION

PHASE II:

- MILL EXISTING PAVEMENT.
- INSTALL WEARING COURSE.
- INSTALL PERMANENT STRIPING AND SIGNAGE.

GENERAL NOTES:

- SEQUENCE OF CONSTRUCTION IS SUGGESTED AND CAN BE CHANGED BY THE CONTRACTOR WITH THE APPROVAL OF THE PROJECT ENGINEER.
- NOISE CONTROL: THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO PREVENT UNNECESSARY NOISE APPROPRIATE FOR AMBIENT SOUND LEVELS IN THE AREA DURING WORKING HOURS. ALL CONSTRUCTION MACHINERY SHALL BE EQUIPPED WITH PRACTICAL SOUND MUFFLING DEVICES AND OPERATED IN A MANNER TO CAUSE THE LEAST NOISE, CONSISTENT WITH EFFICIENT PERFORMANCE OF THE WORK.
- ALL EDGE LINES, LANES LINES, AND CENTERLINES SHALL BE MARKED WITH THE APPROPRIATE COLORED MARKINGS. TEMPORARY MARKINGS SHALL BE REMOVABLE TAPE ON NEW PAVEMENT SURFACES AND EXISTING PAVEMENT SURFACES TO REMAIN UNLESS DIRECTED OTHERWISE BY PROJECT ENGINEER. ALL TEMPORARY STRIPING TAPE TO BE INSTALLED AS DIRECTED BY THE PROJECT ENGINEER. SHALL BE PAID FOR BY THE APPLICABLE TEMPORARY STRIPING PAY ITEM.
- FOR ADDITIONAL INFORMATION, SEE LADOTD STANDARD FOR TEMPORARY TRAFFIC CONTROL PLANS.
- ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY AND PERMANENT PAVEMENT MARKINGS SHALL BE REMOVED. ANY CONFLICTING PERMANENT SIGNING SHALL BE COVERED, TURNED FROM VIEW, OR REMOVED BY APPROVED METHODS.
- THE CONTRACTOR SHALL HAVE UTILITIES WITHIN THE PROJECT LIMITS LOCATED AND MARKED PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL TAKE CARE IN AVOIDING DAMAGE TO EXISTING UTILITIES; DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND REPAIRS COMPLETED AT THE EXPENSE OF THE CONTRACTOR.
- ALL EQUIPMENT AND MATERIALS STAGING AREAS AND CONSTRUCTION ENTRANCE LOCATIONS TO BE DETERMINED BY THE CONTRACOR, AND MUST BE APPROVED BY THE PROJECT ENGINEER BEFORE IMPLEMENTATION.
- CONSTRUCTION ACTIVITIES SHALL BE COORDINATED TO ALLOW ONE LANE OPEN AT ALL TIMES USING FLAGGING WHEN NECESSARY. ACCESS TO ALL DRIVEWAYS & TURNOUTS SHOULD BE PROVIDED BY THE CONTRACTOR DURING ALL PHASES OF CONSTRUCTION.
- 10' MINIMUM LANE WIDTH SHALL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR MUST MAINTAIN DRAINAGE SATISFACTORY TO THE PROJECT ENGINEER THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
- PLACE ADVANCED WARNING SIGNS PER LADOTD TEMPORARY TRAFFIC CONTROL STANDARD PLANS AND PER MUTCD PART 6. ADVANCED WARNING SIGNAGE SHALL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
- SPACING BETWEEN CONES, TUBULAR MARKERS, DRUMS & BARRICADES SHOULD NOT EXCEED A DISTANCE EQUAL TO 1.0 TIMES THE SPEED LIMIT WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE EQUAL TO 2.0 TIMES THE SPEED LIMIT WHEN USED FOR TANGENT CHANNELIZATION.

SHEET NUMBER		13	
ASCENSION PARISH		PARISH	
CONTROL SECTION		SJT D.M.	
STATE PROJECT		DATE	
JUNE 2024		SEQUENCE OF CONSTRUCTION	
BY		NO.	
DATE		NO.	
SUGGESTED SEQUENCE OF CONSTRUCTION		LA HWY 44 AT PARKER RD TEMPORARY TURN LANE	
MCKINLEY & CHIEF		(225) 644-5523	
www.mckinleyandchief.com		1022 S. Purpera Ave.	
		Gonzales, LA 70707-0298	

09:45

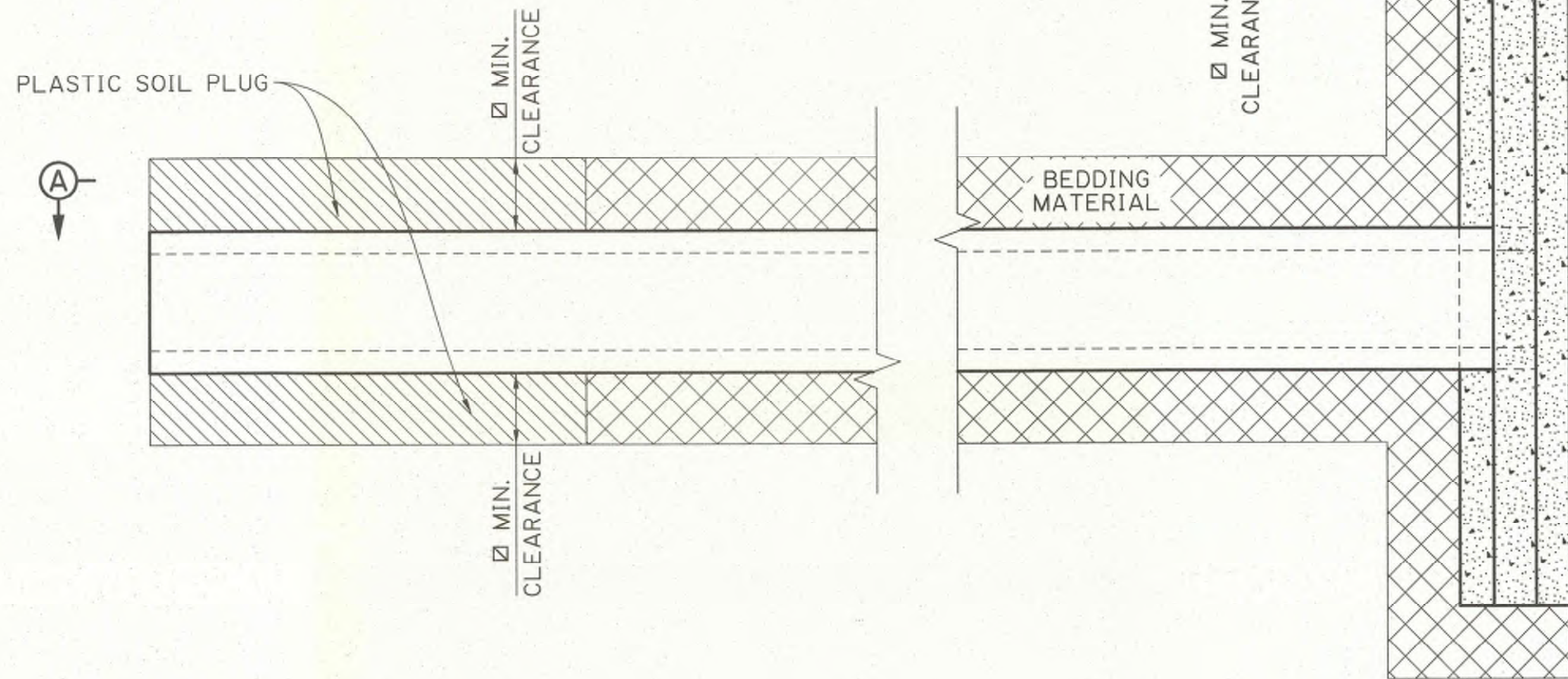
10/23/2023



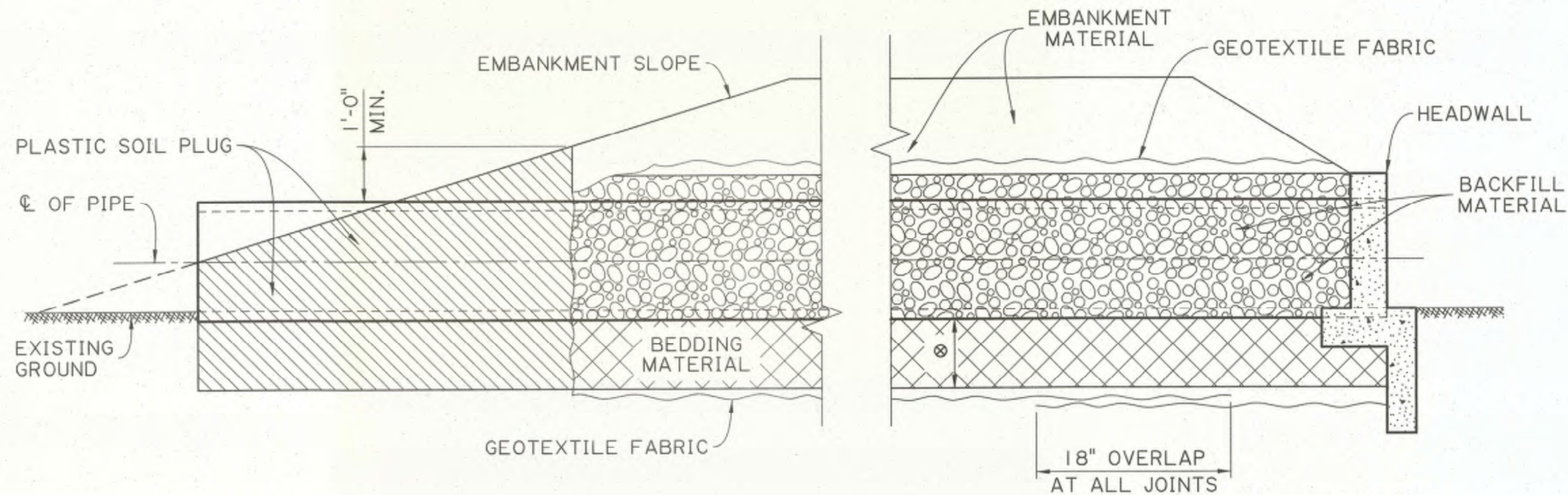
GENERAL NOTES :

1. REINFORCED CONCRETE PIPE AND FLEXIBLE PIPE ARE SHOWN AS TYPICAL STRUCTURES. DETAILS ALSO APPLY TO REINFORCED CONCRETE BOX CULVERT, REINFORCED CONCRETE PIPE ARCH, CORRUGATED METAL PIPE ARCH, AND CORRUGATED STRUCTURAL PLATE STRUCTURES.
2. CONSTRUCTION COVER REQUIREMENTS MAY EXCEED FINAL COVER.
3. CROSS DRAIN DETAILS APPLY TO ALL REACHES OF PIPE UNDER RIGID OR FLEXIBLE ROADWAYS.
4. FOR STRUCTURES INSTALLED OUTSIDE THE LIMITS OF THE ROADWAY, THE 12" OF FINAL BACKFILL ABOVE TYPE B BACKFILL UP TO THE EXISTING GROUND SHALL BE PLASTIC SOIL BLANKET MATERIAL. IF THE EMBANKMENT TO BE INSTALLED IS GREATER THAN 12" ABOVE EXISTING GROUND IN THE AREA OVER THE STRUCTURE, THEN THE PLASTIC SOIL BLANKET IS NOT REQUIRED AND TYPE B BACKFILL MAY EXTEND TO EXISTING GROUND.

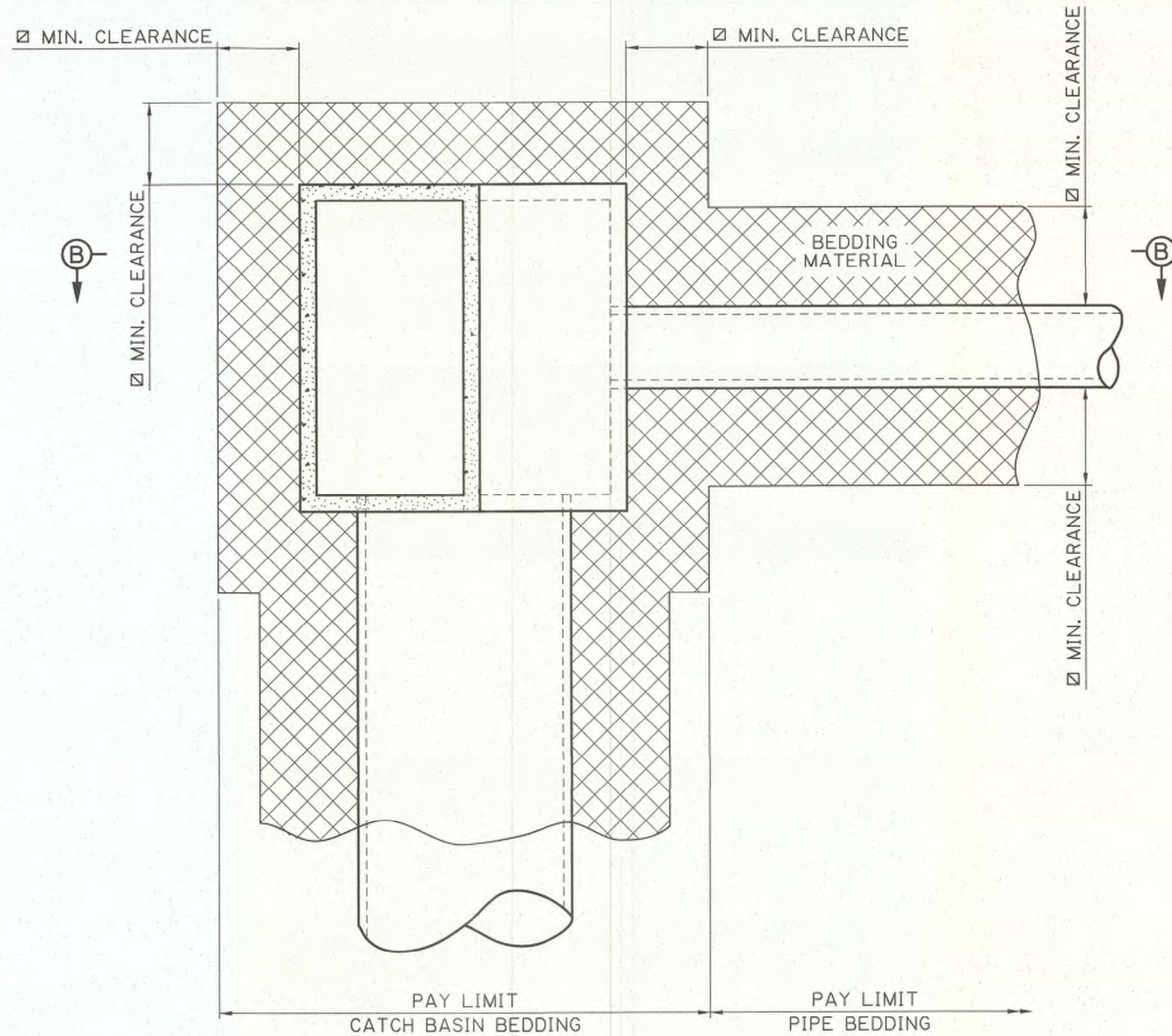
MINIMUM TRENCH CLEARANCE		
TYPE OF STRUCTURE	INSIDE DIAMETER	MIN. CLEARANCE
REINFORCED CONCRETE	ALL	18"
FLEXIBLE PIPE	<48"	18"
FLEXIBLE PIPE	≥48"	24"



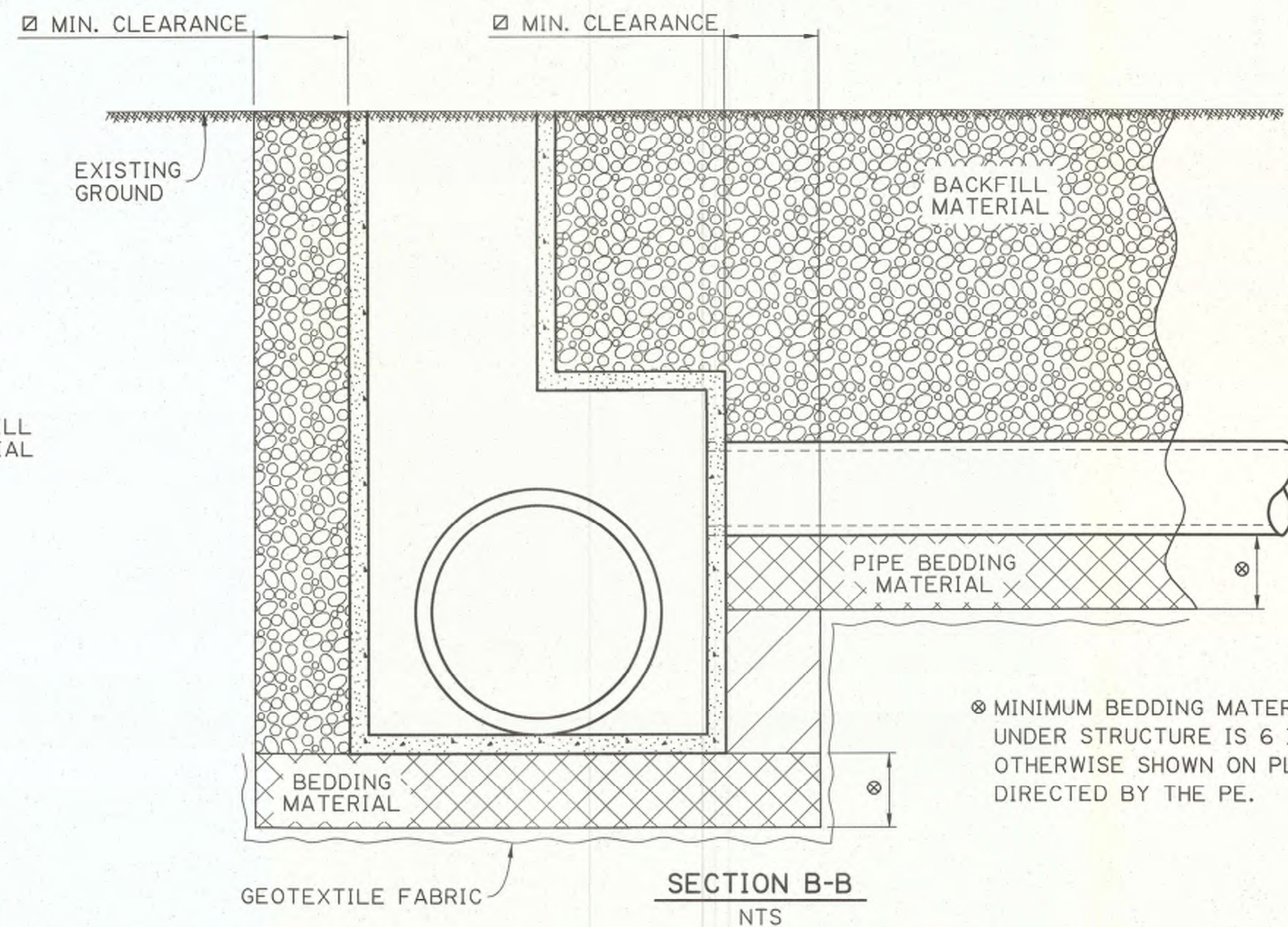
TYPICAL CROSS DRAIN INSTALLATION
WITH AND WITHOUT HEADWALL
(EMBANKMENT MATERIAL NOT SHOWN FOR CLARITY)
NTS



SECTION A-A
WITH AND WITHOUT HEADWALL
NTS



TYPICAL CATCH BASIN AND STORM DRAIN INSTALLATION
NTS



MINIMUM BEDDING MATERIAL THICKNESS
UNDER STRUCTURE IS 6 INCHES UNLESS
OTHERWISE SHOWN ON PLANS OR AS
DIRECTED BY THE PE.

SHEET NUMBER		200	
PARISH		CONTROL SECTION	
C. NICKEL		L. HASTINGS	
J. RAUSER		A. NICKEL	
DETAIL CHECK		REVIEW	
C. NICKEL		C. NICKEL	
STATE PROJECT		SERIES # 1 OF 2	

STATE OF LOUISIANA
CHRISTOPHER J. NICKEL
License No. 30572
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/23/2023

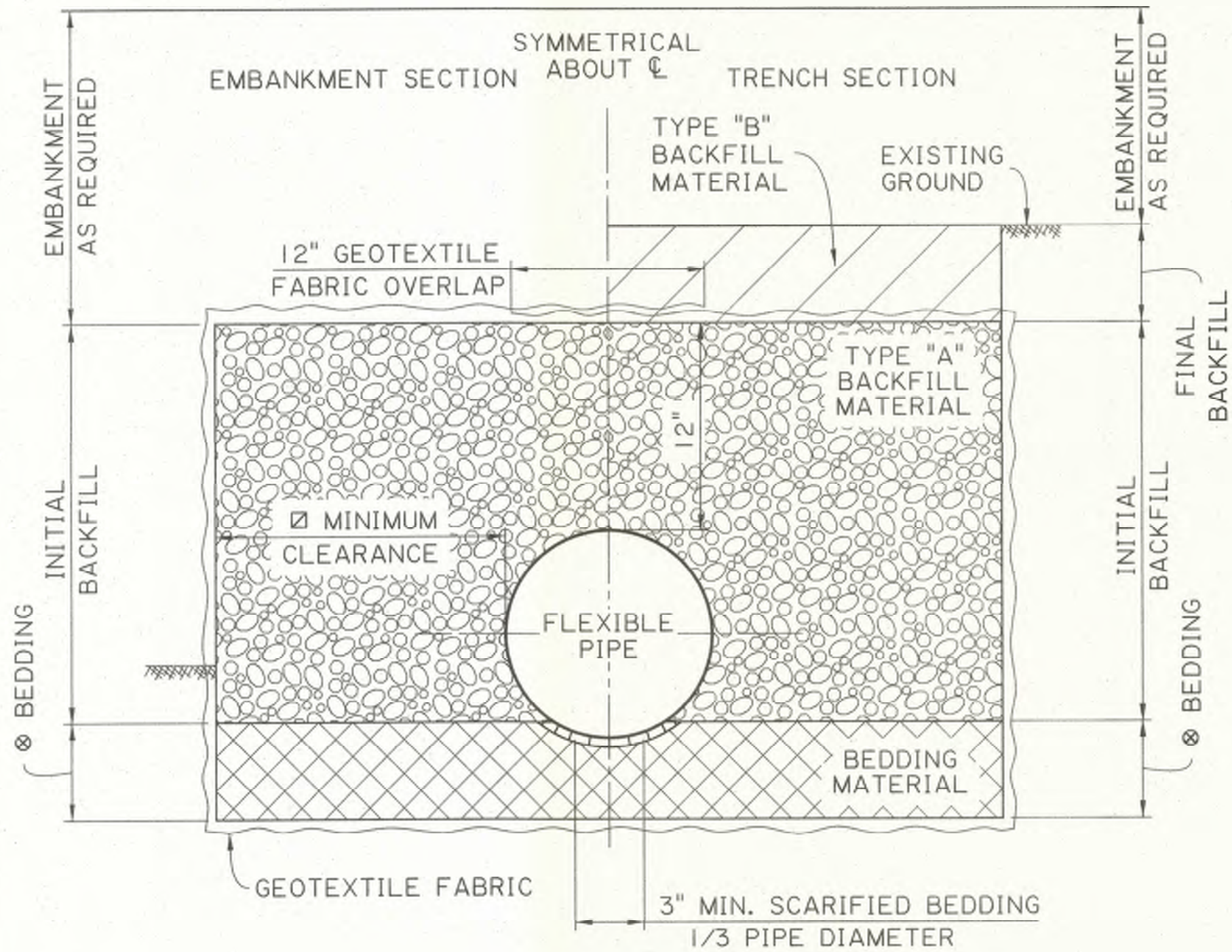
APPROVED BY CHIEF ENGINEER
10/26/2023

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION
PAVEMENT & GEOTECHNICAL SERVICES

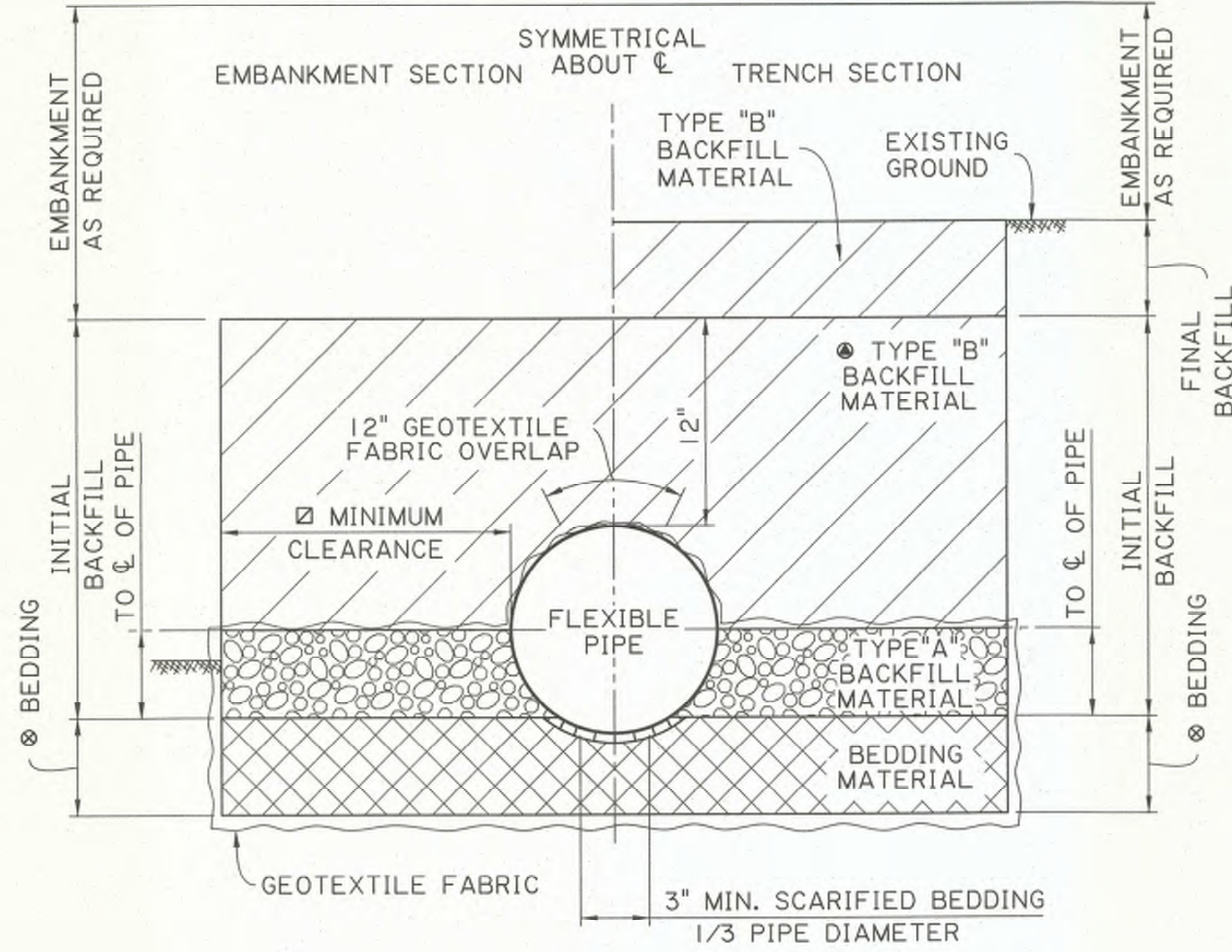
STANDARD PLAN
BM-01



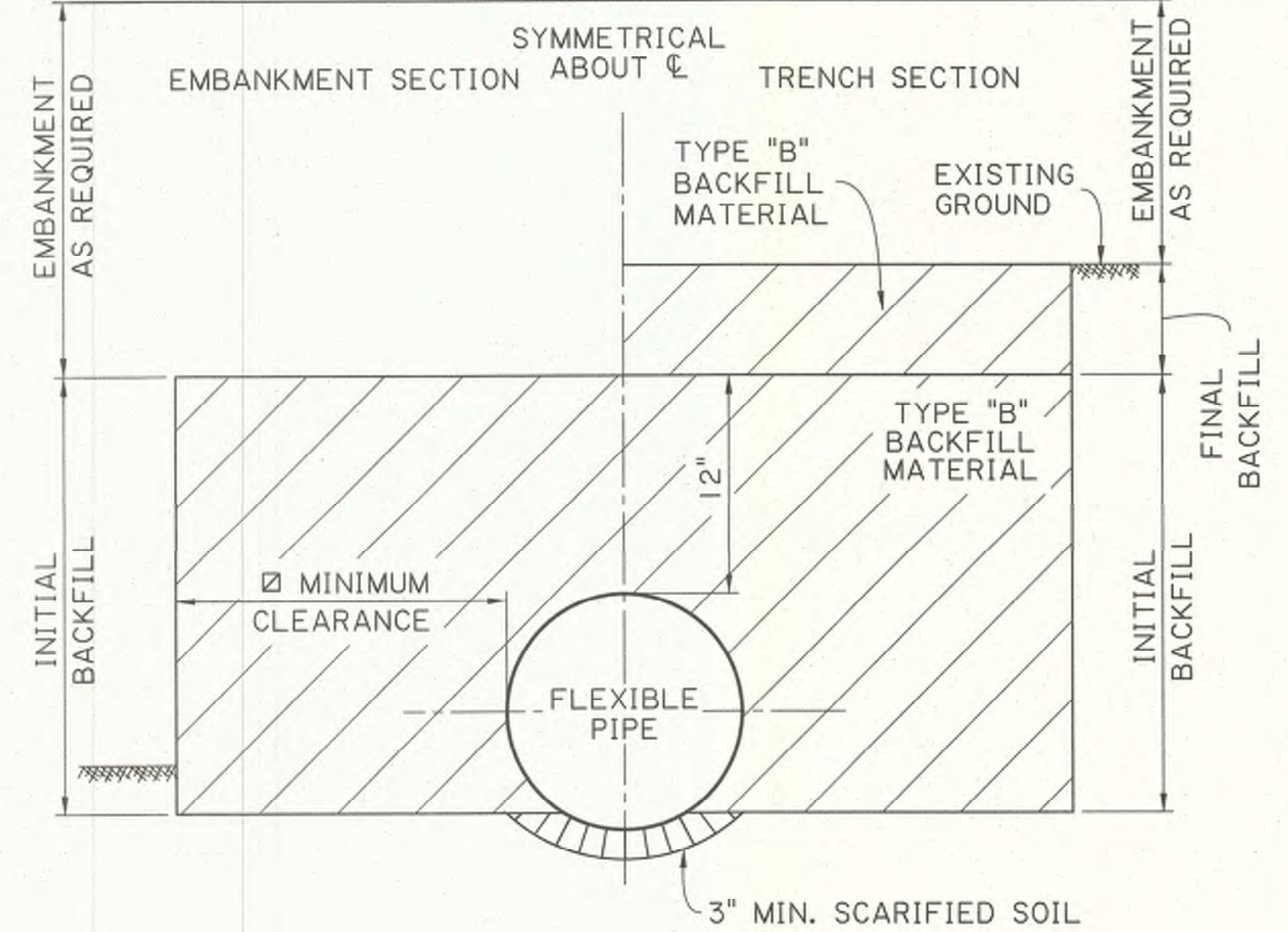
MINIMUM TRENCH CLEARANCE		
TYPE OF STRUCTURE	INSIDE DIAMETER	MIN. CLEARANCE
REINFORCED CONCRETE	ALL	18"
FLEXIBLE PIPE	<48"	18"
FLEXIBLE PIPE	≥48"	24"



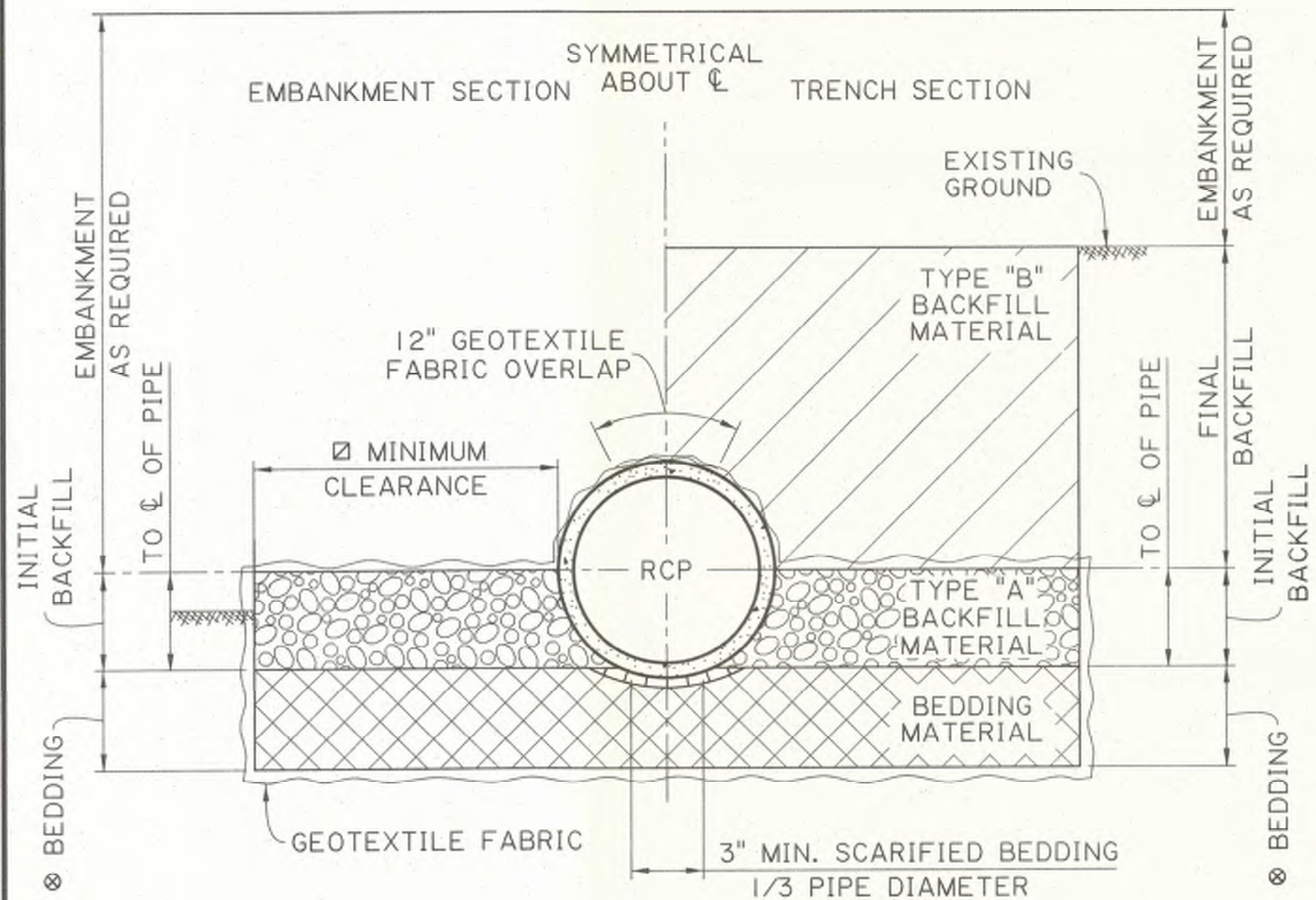
FLEXIBLE PIPE CROSS DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1 1/2"=1'-0"



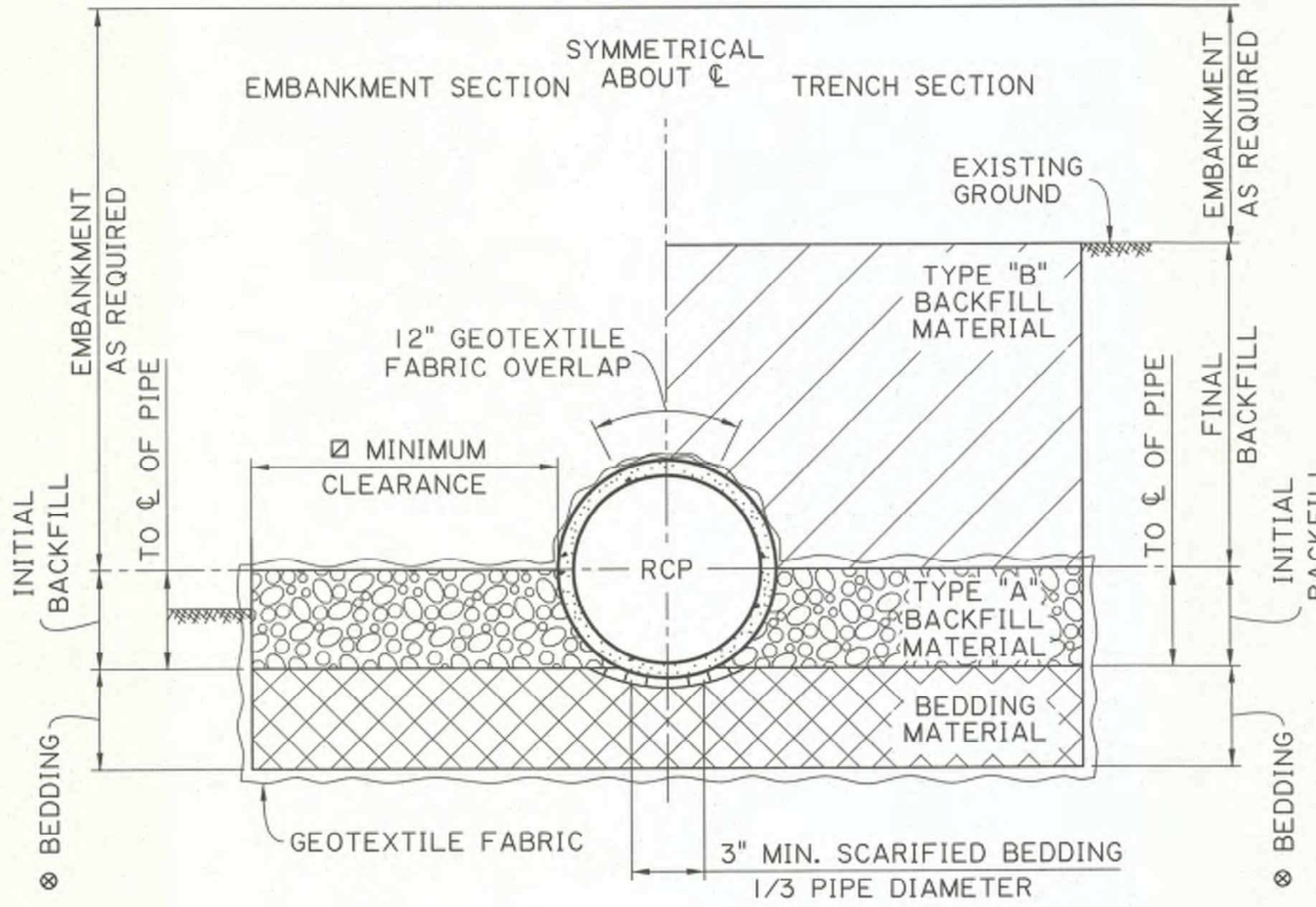
FLEXIBLE PIPE STORM DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1 1/2"=1'-0"



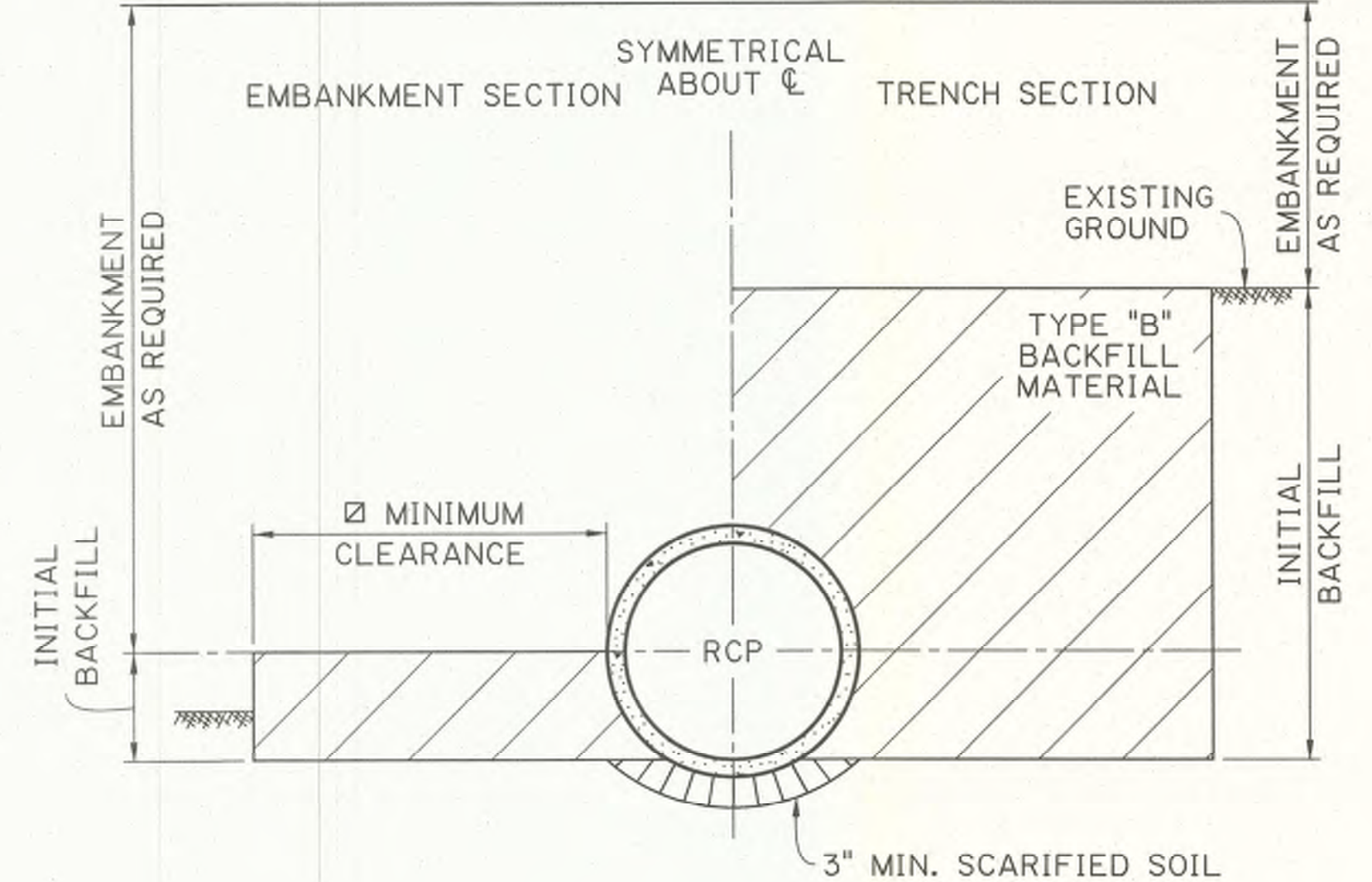
FLEXIBLE PIPE SIDE DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1 1/2"=1'-0"



REINFORCED CONCRETE PIPE CROSS DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1 1/2"=1'-0"



REINFORCED CONCRETE PIPE STORM DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1 1/2"=1'-0"



REINFORCED CONCRETE PIPE SIDE DRAIN
TRENCH AND EMBANKMENT INSTALLATIONS
SCALE: 1 1/2"=1'-0"

- ⊗ MINIMUM BEDDING MATERIAL THICKNESS UNDER STRUCTURE IS 6 INCHES UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE PE.
- △ NO BEDDING MATERIAL REQUIRED UNLESS OTHERWISE SPECIFIED ON THE PLANS OR AS DIRECTED BY THE PE.
- ⊗ REFER TO NOTE 3 ON SHEET 1 OF THIS SERIES.

DESIGN	CHECK	DETAIL	REVIEW	PARISH	CONTROL SECTION	STATE PROJECT
C. NICKEL	J. RAUSER	L. HASTINGS	C. NICKEL			

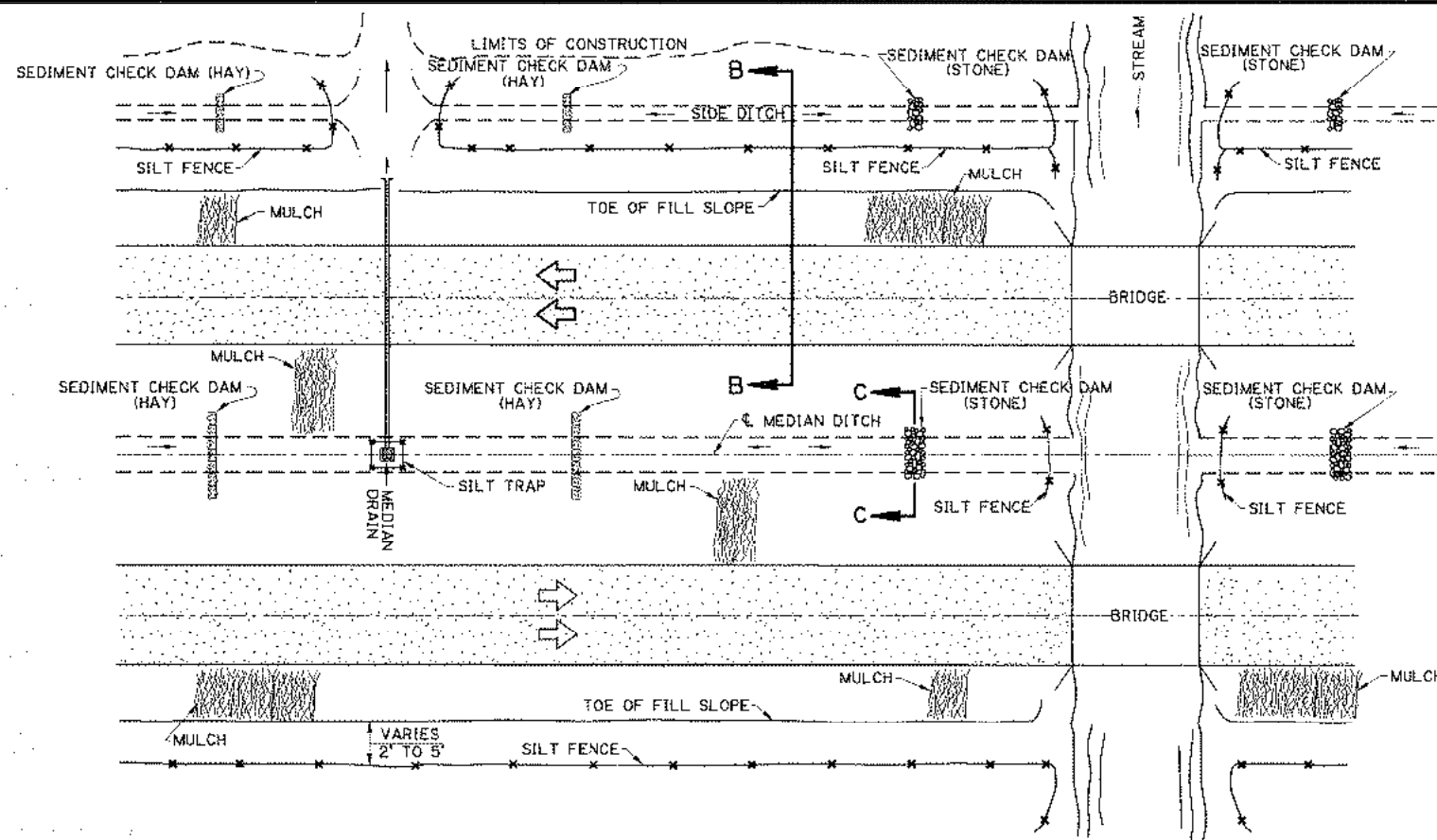


APPROVED BY CHIEF ENGINEER:
[Signature]
DATE: 10/26/2023



DRAINAGE STRUCTURES
TYPICAL SECTIONS FOR CROSS DRAINS & SIDE DRAINS
STANDARD PLAN BM-01



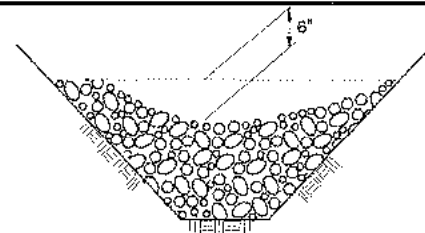


PLAN SHOWING TYPICAL TEMPORARY EROSION CONTROL

MULCHES

MULCHES ARE THE APPLICATION OF MATS OF MATERIAL PLACED ON THE SOIL SURFACE TO PREVENT EROSION BY PROTECTING THE SOIL SURFACE FROM RAINDROP IMPACT AND TO REDUCE THE VELOCITY OF OVERLAND FLOW. MULCHES CAN BE ORGANIC OR SYNTHETIC. MULCHES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW GUIDELINES FOR THE USE OF MULCHES ARE:

1. USE ON CUT AND EMBANKMENT SLOPES WHICH HAVE NOT BEEN COMPLETED TO PLAN GRADE OR WHERE THE WEATHER OR SOIL CONDITIONS WILL NOT PERMIT COMPLETING THEM WITHIN A REASONABLE TIME
2. USE ON CLEARED, GRUBBED, AND SCALPED AREAS WHERE SOIL EROSION IS LIKELY TO OCCUR
3. USE WITH TEMPORARY SEEDING



SECTION C-C

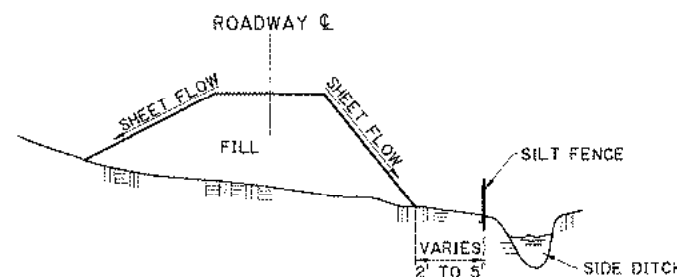
TEMPORARY SEDIMENT CHECK DAM (STONE)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (STONE)

NOTES:

A STONE CHECK DAM IS A SMALL TEMPORARY DAM CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH. THE PURPOSE OF THIS MEASURE IS TO REDUCE THE VELOCITY OF CONCENTRATED STORM WATER FLOWS, THEREBY REDUCING EROSION OF THE SWALE OR DITCH. THE STONE CHECK DAM WILL TRAP SMALL AMOUNTS OF SEDIMENTS GENERATED IN THE DITCH ITSELF. HOWEVER IT SHOULD NOT BE USED AS A SEDIMENT TRAPPING DEVICE. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF STONE CHECK DAMS ARE:

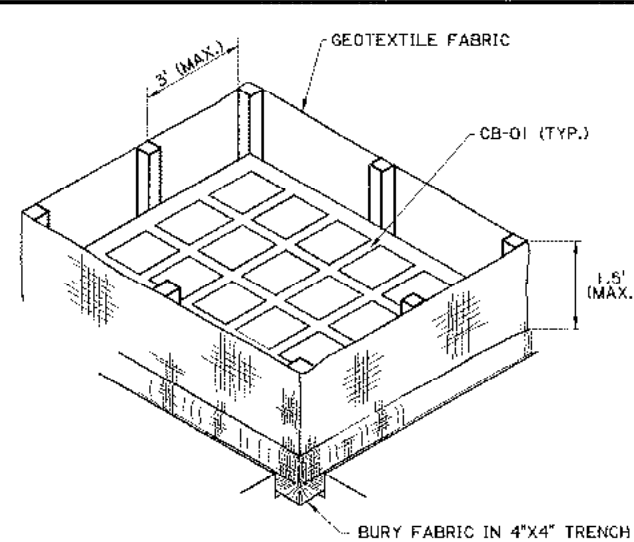
1. USE IN SMALL OPEN CHANNELS WHICH DRAIN 10 ACRES OR LESS
2. DO NOT USE IN A LIVE STREAM
3. USE IN A TEMPORARY DITCH OR SWALE WHICH, BECAUSE OF THEIR SHORT LENGTH OF SERVICE, CANNOT RECEIVE A NON-ERODIBLE LINING
4. USE IN PERMANENT DITCHES OR SWALES WHICH WILL NOT RECEIVE A PERMANENT LINING FOR AN EXTENDED PERIOD OF TIME
5. USE IN TEMPORARY OR PERMANENT DITCHES OR SWALES WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF GRASS LININGS
6. FOR STONE SPECIFICATIONS, SEE PROJECT SPECIFICATIONS FOR RIPRAP, (CLASS 2 LB)



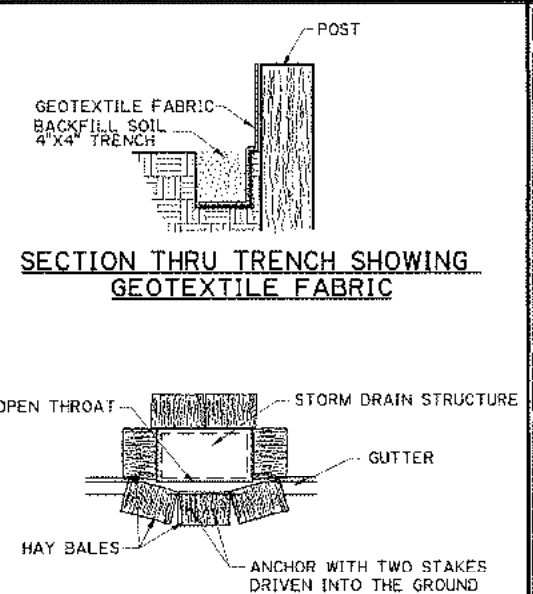
SECTION B-B

TEMPORARY SILT FENCE APPLICATION

(FOR CONSTRUCTION DETAILS AND SPECIFICATIONS SEE SHEET 2 OF 2.)



ISOMETRIC VIEW SHOWING
GEOTEXTILE FABRIC
(BACKFILL SOIL NOT SHOWN)



SECTION THRU TRENCH SHOWING
GEOTEXTILE FABRIC

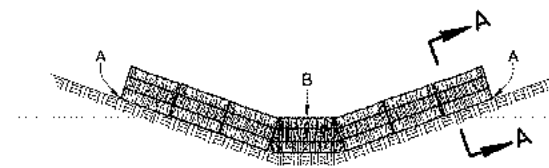
PLAN SHOWING HAY BALES

PAY ITEM: TEMPORARY HAY OR STRAW BALES

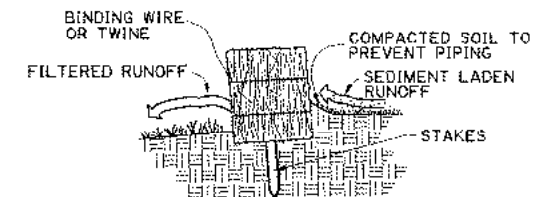
TEMPORARY INLET SILT TRAP

THE TEMPORARY DROP INLET SILT TRAP IS TO BE USED FOR SMALL DRAINAGE AREAS (LESS THAN 1 ACRE) WHERE THE STORM DRAIN IS FUNCTIONAL BEFORE THE AREA IS STABILIZED. THE TRAP CAN BE EITHER GEOTEXTILE FABRIC OR HAY BALES.

1. THE GEOTEXTILE FABRIC SHALL CONFORM TO PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS G).
2. WOODEN STAKES SUPPORTING THE FABRIC SHALL BE 2" X 2" OR 2" X 4" WITH A MINIMUM LENGTH OF 3 FEET. THE STAKES SHALL BE SPACED AROUND THE INLET AT A MAXIMUM SPACING OF 3 FEET.
3. THE HEIGHT OF THE FABRIC ABOVE THE INLET SHALL BE LIMITED TO 1.5' AND THE BOTTOM OF THE FABRIC SHALL BE BURIED IN A TRENCH APPROXIMATELY 4" WIDE BY 4" DEEP. THE FABRIC SHALL BE STAPLED TO THE POST WITH 1/2" STAPLES.
4. THE TRAP SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM. THE SEDIMENT SHOULD BE REMOVED AND EACH STAKE SHOULD BE FIRMLY IN THE GROUND.
5. HAY BALES SHALL BE PLACED SO THAT THE BINDING WIRE OR TWINE IS NOT IN CONTACT WITH THE GROUND.



ELEVATION



SECTION A-A

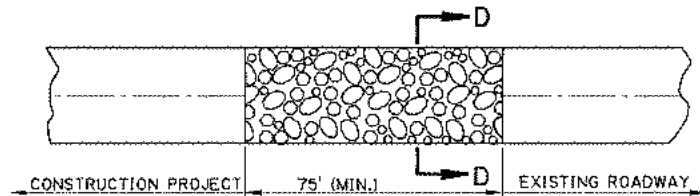
TEMPORARY SEDIMENT CHECK DAM (HAY)

PAY ITEM: TEMPORARY SEDIMENT CHECK DAM (HAY)

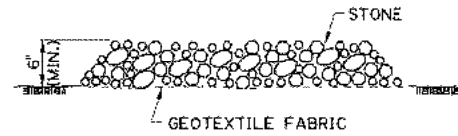
NOTES:

A HAY BALE BARRIER IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED BALES OF STRAW OR HAY. THE HAY BALE BARRIER IS ALSO USED AS A CHECK DAM TO REDUCE THE VELOCITY IN SMALL DITCHES OR SWALES. THE HAY BALES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A HAY BALE BARRIER ARE:

1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
2. USE IN MINOR SWALES OR DITCHES WHERE THE MAXIMUM DRAINAGE AREA IS 2 ACRES
3. ONLY USE WHERE THE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS
4. DO NOT USE IN LIVE STREAMS OR IN SWALES OR DITCHES WHERE THERE IS A POSSIBILITY OF A WASHOUT



PLAN



SECTION D-D

TEMPORARY STONE CONSTRUCTION ENTRANCE

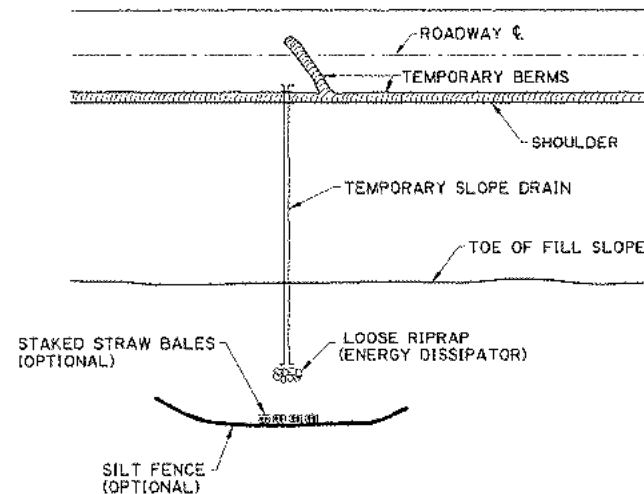
PAY ITEM: TEMPORARY STONE CONSTRUCTION ENTRANCE

NOTES:

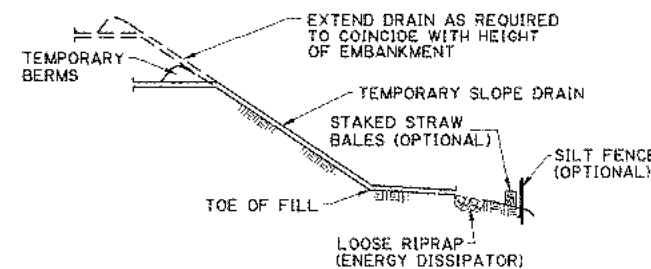
TEMPORARY STONE CONSTRUCTION ENTRANCE AND/OR WASH RACK

A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON THE CONSTRUCTION SITE TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PUBLIC ROADS. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLE ENTERS A PUBLIC ROAD. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A STONE ENTRANCE AND/OR WASH RACKS ARE:

1. THE STONE LAYER MUST BE AT LEAST 6 INCHES THICK.
2. THE STONE SHALL CONFORM TO PROJECT SPECIFICATIONS FOR RIPRAP (CLASS 2 LB).
3. THE LENGTH OF THE PAD MUST BE A LEAST 75 FEET AND IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS.
4. A GEOTEXTILE FABRIC UNDERLINER IS REQUIRED. THE GEOTEXTILE FABRIC SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR GEOTEXTILE FABRIC (CLASS D).
5. IF A WASH RACK IS NECESSARY, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE.



PLAN



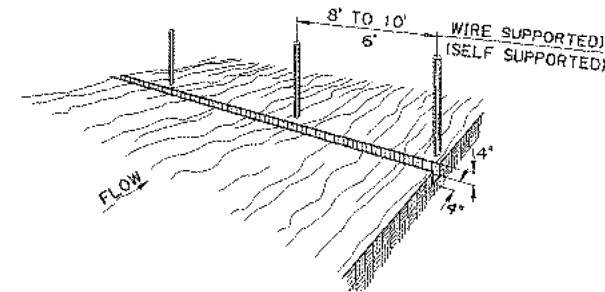
ELEVATION

TEMPORARY SLOPE DRAIN

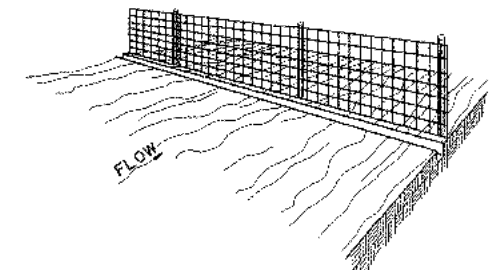
A TEMPORARY SLOPE DRAIN IS A DEVICE USED TO CARRY WATER FROM THE CONSTRUCTION WORK AREA TO A LOWER ELEVATION. SLOPE DRAINS MAY BE PLASTIC SHEET, METAL OR PLASTIC PIPE, STONE GUTTERS, FIBER MATS, OR CONCRETE OR ASPHALT DITCHES. A FEW BASIC DESIGN GUIDELINES FOR THE USE OF A TEMPORARY SLOPE DRAIN ARE:

1. THE SPACING OF THE SLOPE DRAINS VARIES WITH THE ROAD GRADE.
FOR GRADES:
0.0% - 2.0% USE 500' SPACING
2.1% - 5.0% USE 200' SPACING
GREATER THAN 5.0% USE 100' SPACING
2. SLOPE DRAIN MATERIAL: SMOOTH PIPE - 8" MINIMUM - 3 MILS THICK MIN.
CORRUGATED PIPE - 12" MINIMUM
PLASTIC SHEETING - 4' WIDE MINIMUM
PLASTIC SHEETING - 3 MILS THICK MIN.
3. PLASTIC SHEETING CAN BE STAKED DOWN OR WEIGHTED WITH ROCKS OR LOGS. THE AREA UNDER THE SHEETING SHOULD BE SHAPED TO PROVIDE AN ADEQUATE CHANNEL.
4. THE OUTLET END SHOULD BE PROTECTED OR HAVE SOME MEANS OF DISSIPATING ENERGY. THE FLOW SHOULD BE DIRECTED THROUGH A SEDIMENT TRAP SUCH AS A SILT FENCE, HAY BALES, OR OTHER APPROVED SEDIMENT CONTROL DEVICES.
5. TO INSURE PROPER OPERATION, TEMPORARY SLOPE DRAINS SHOULD BE INSPECTED REGULARLY AND AFTER EACH STORM, FOR CLOGGING OR DISPLACEMENT. EROSION AT THE OUTLET SHOULD BE CHECKED AND THE SILT TRAPS CLEANED IF NECESSARY.

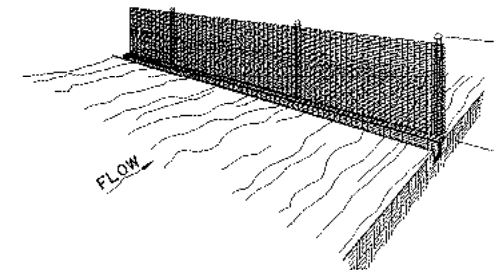
1. SET POSTS AND EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



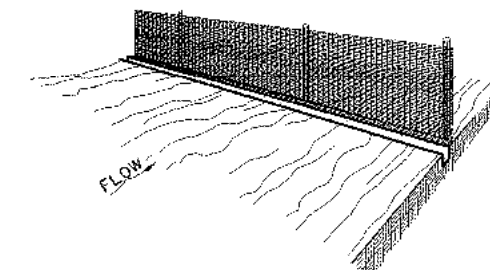
2. STAPLE WIRE FENCING TO THE POSTS.



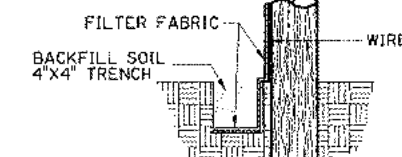
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT EXCAVATED SOIL.



EXTENSION OF FABRIC INTO THE TRENCH.



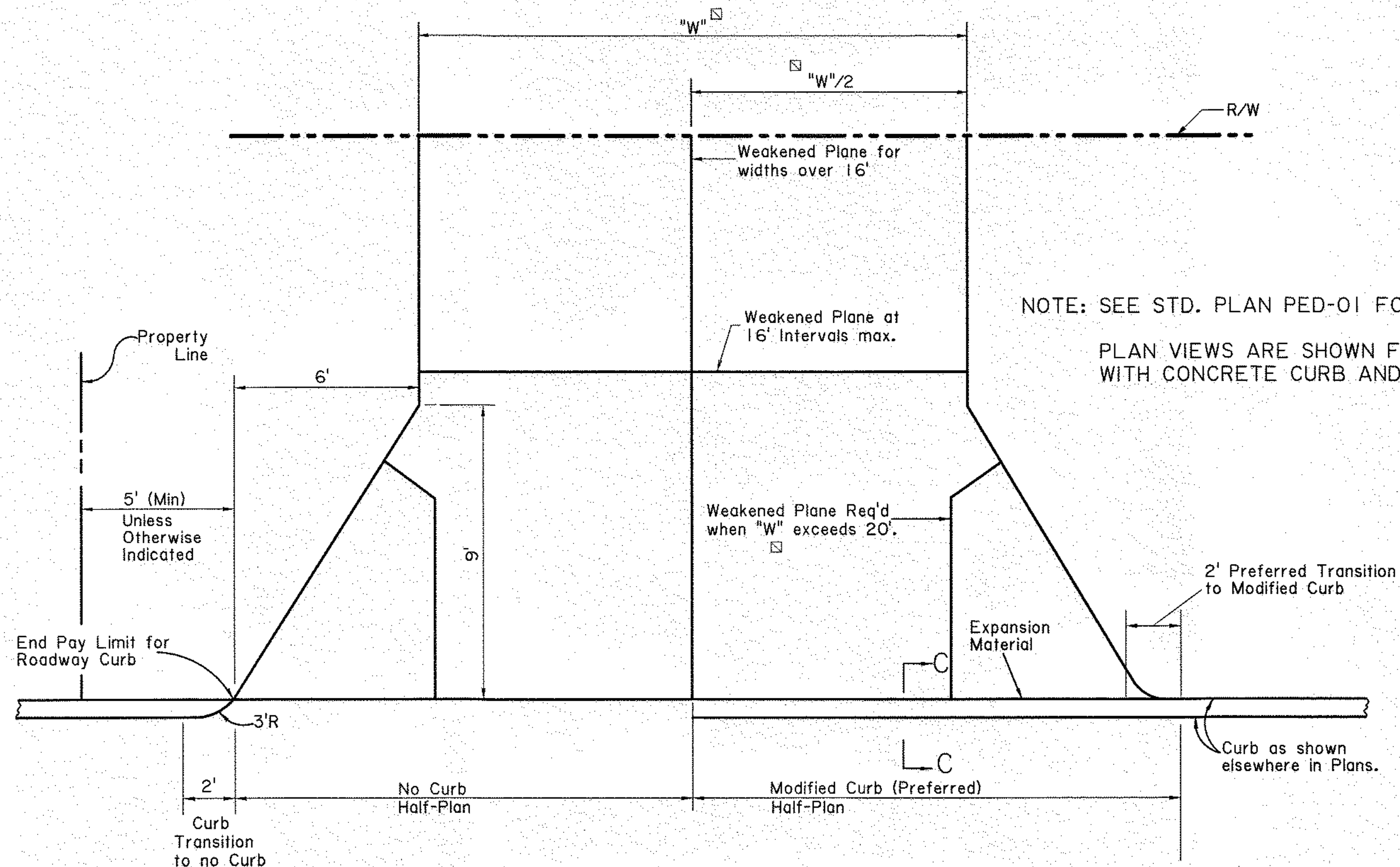
CONSTRUCTION OF TEMPORARY SILT FENCING

(WIRE SUPPORTED SILT FENCE IS SHOWN. SELF SUPPORTED SILT FENCE WILL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS.)

NOTES:

SILT FENCING IS A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC SUPPORTED BY POSTS AND STRETCHED ACROSS AN AREA TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT. THE SILT FENCING SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR TEMPORARY EROSION CONTROL. A FEW BASIC GUIDELINES FOR THE USE OF SILT FENCING ARE:

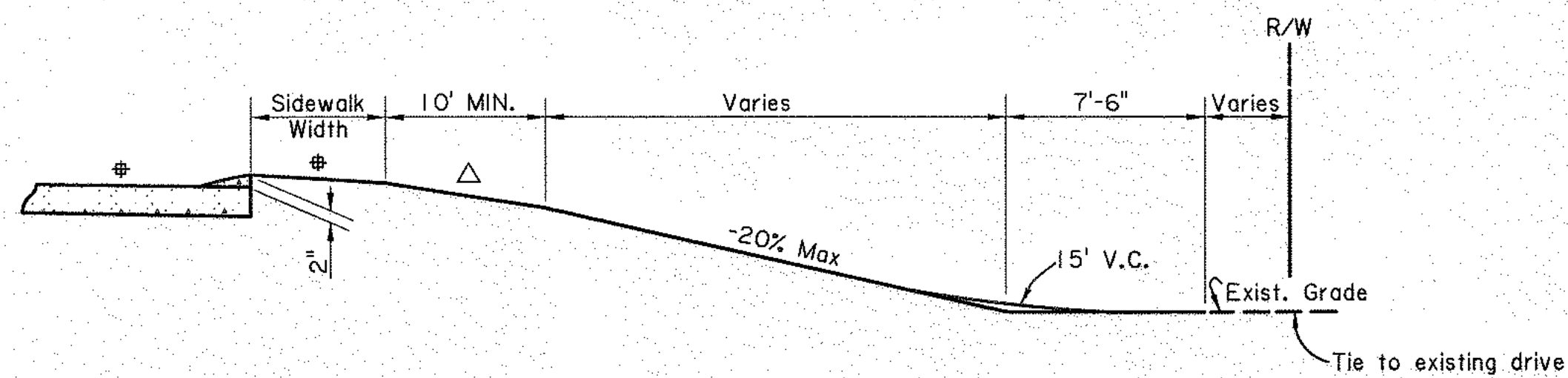
1. USE WHERE EROSION WOULD OCCUR IN THE FORM OF SHEET AND RILL EROSION
2. USE WHERE THE MAXIMUM DRAINAGE AREA BEHIND THE SILT FENCE IS 1/4 ACRE PER 100 FEET OF SILT FENCE LENGTH
3. USE WHERE THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100 FEET
4. USE WHERE THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1
5. DO NOT USE SILT FENCES IN LIVE STREAMS OR IN DITCHES OR SWALES WHERE FLOWS EXCEED ONE CUBIC FOOT PER SECOND



PLAN OF RESIDENTIAL DRIVEWAY

NOTE: MODIFIED CURB TO BE PAID FOR AS CURB AND WILL BE USED AS SHOWN IN THE PLANS OR WHEN DIRECTED BY THE PROJECT ENGINEER.

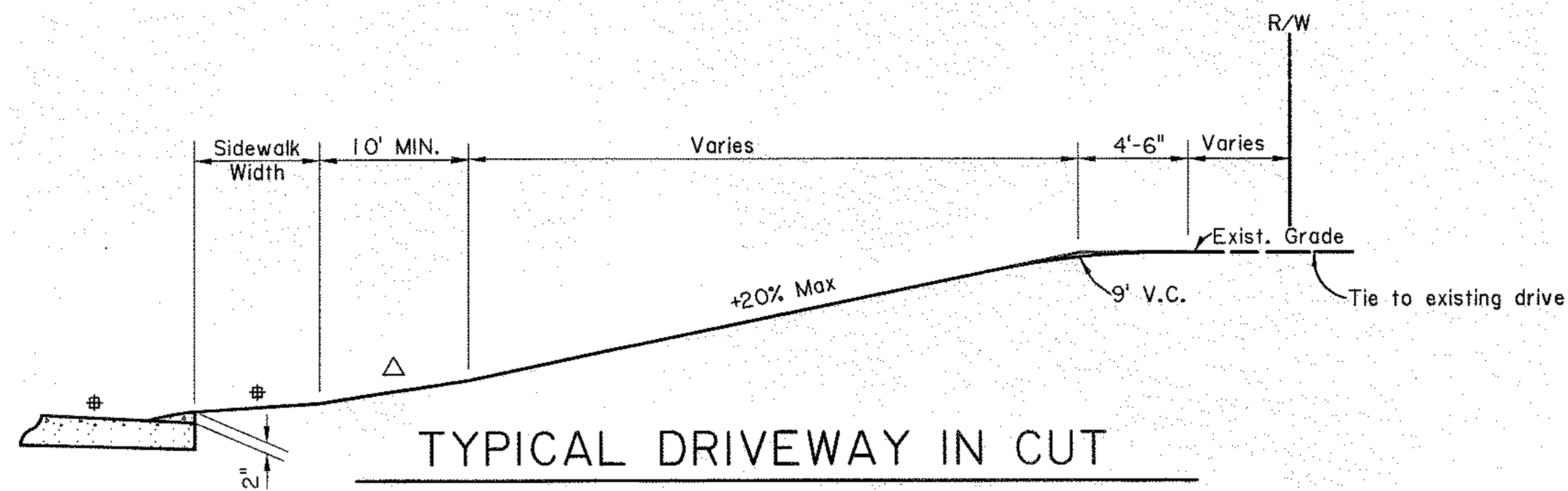
RADI TRANSITION SHAPE MAY BE USED IN LIEU OF A FLARE.



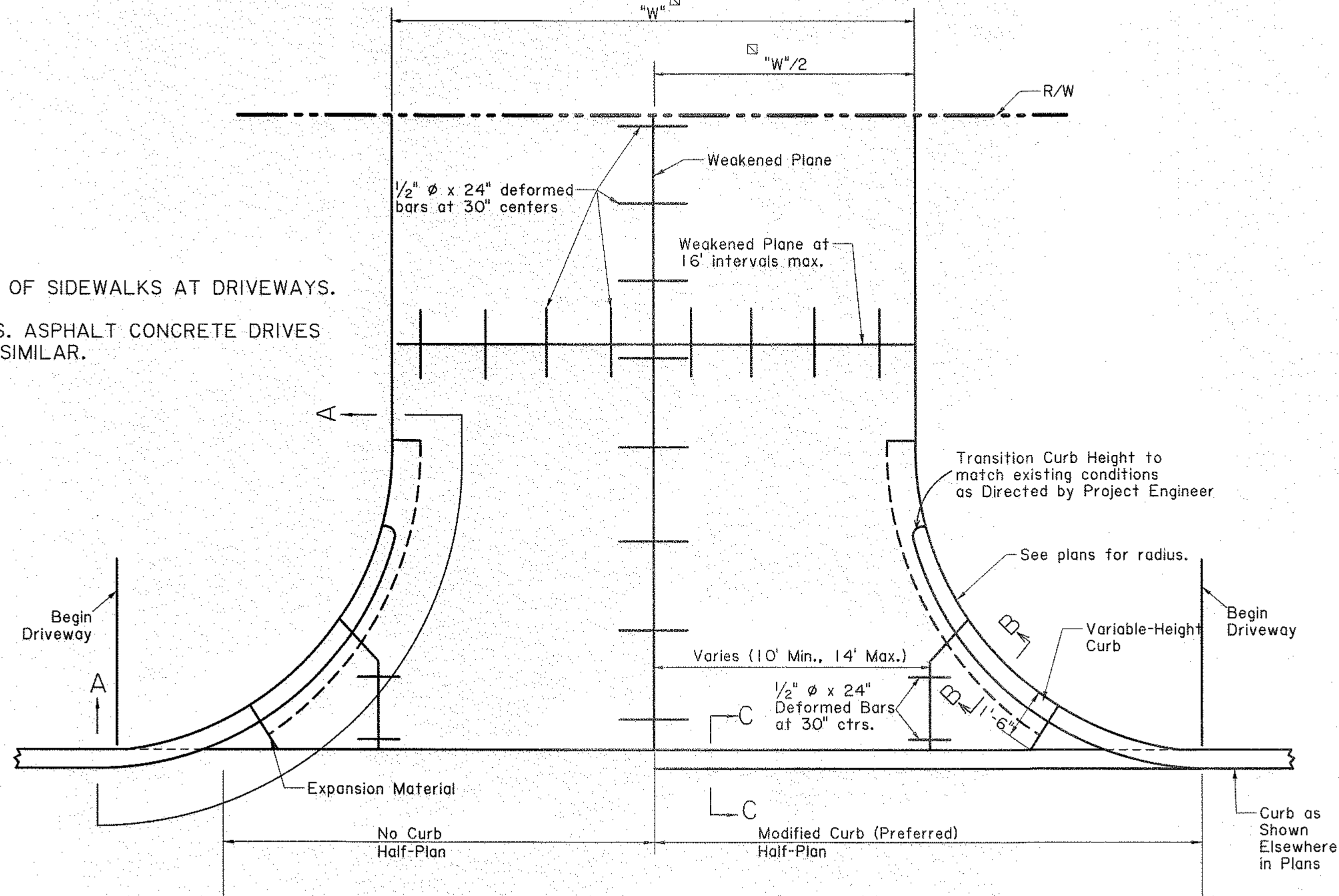
TYPICAL DRIVEWAY IN FILL

NOTES:

1. DRIVEWAY PROFILES SHOWN ASSUME A SIDEWALK ADJACENT TO THE CURB.
- △ 2. MAXIMUM DRIVEWAY GRADE SHALL BE 20% (25% FOR SPECIAL CASES). MAXIMUM BREAK IN GRADE WITHOUT A VERTICAL CURVE SHALL BE 10% FOR CRESTS AND 9% FOR SAGS, AT NOT LESS THAN 10' INTERVALS.
- # 3. ROADWAY AND SIDEWALK SLOPES VARY AS PER PLANS.



TYPICAL DRIVEWAY IN CUT

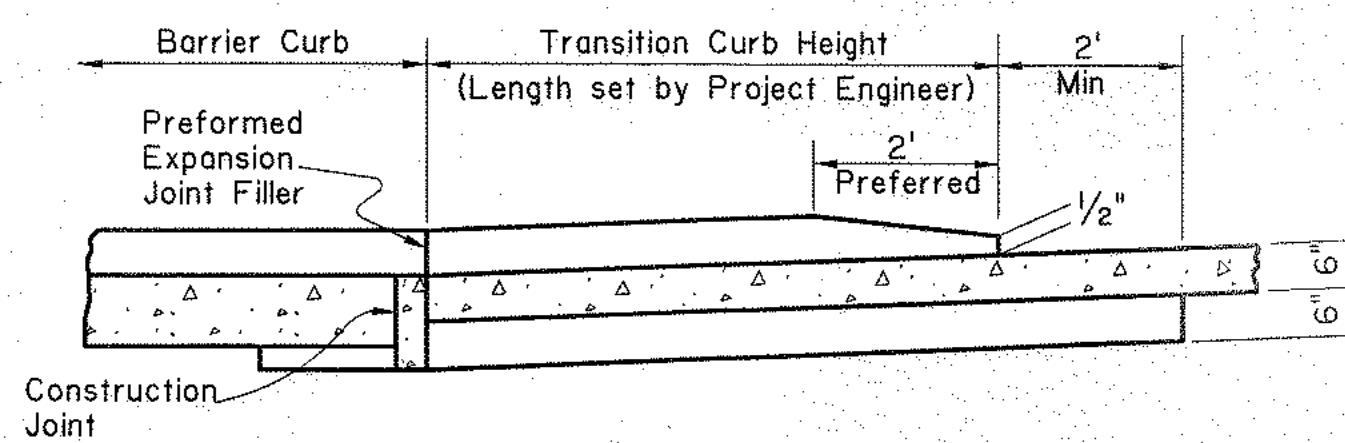


PLAN OF COMMERCIAL DRIVEWAY

NOTE: MODIFIED CURB TO BE PAID FOR AS CURB AND WILL BE USED AS SHOWN IN THE PLANS OR WHEN DIRECTED BY THE PROJECT ENGINEER.

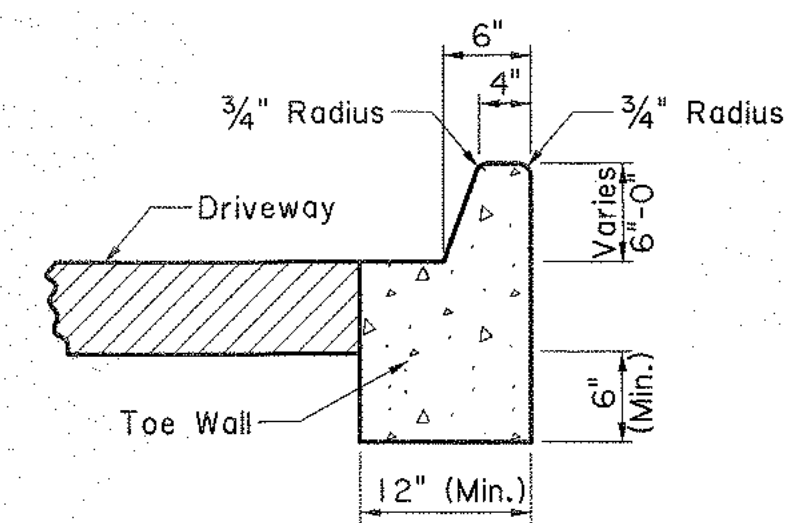
WHEN CURB IS REQUIRED ALONG RADII OF DRIVEWAY, PAYMENT FOR TOE WALL AND CURB WILL BE INCLUDED IN THE PRICE FOR DRIVEWAY ITEMS.

WHEN CURB IS NOT REQUIRED ALONG RADII, TRANSITION CURB AS SHOWN ON RESIDENTIAL DRIVEWAY.



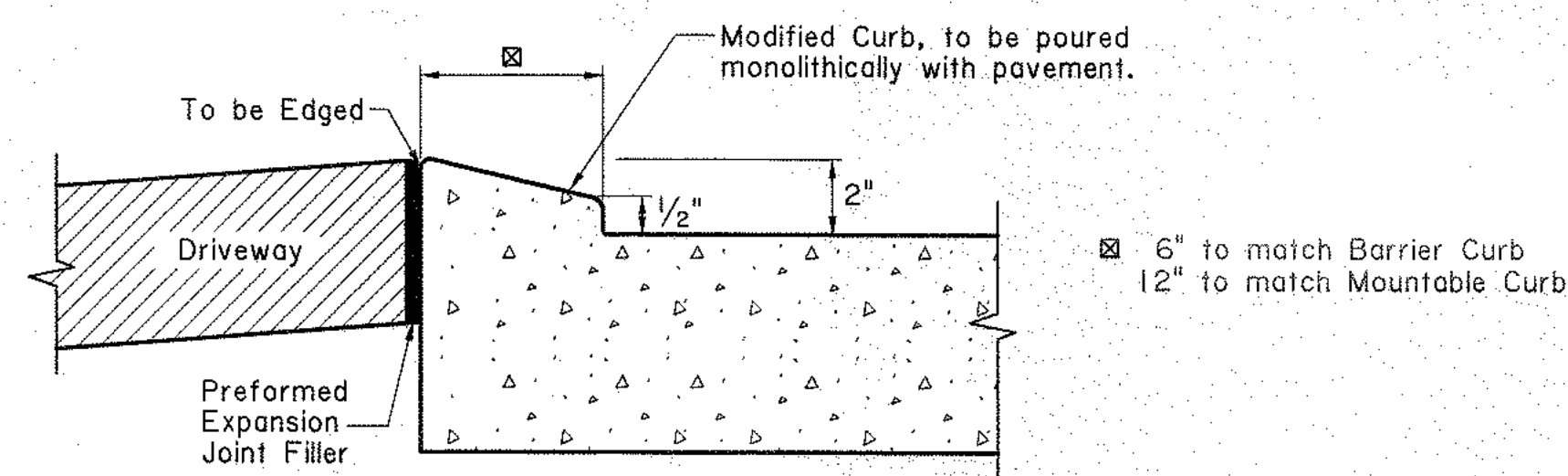
SECTION A-A

(Weakened Plane not shown.)



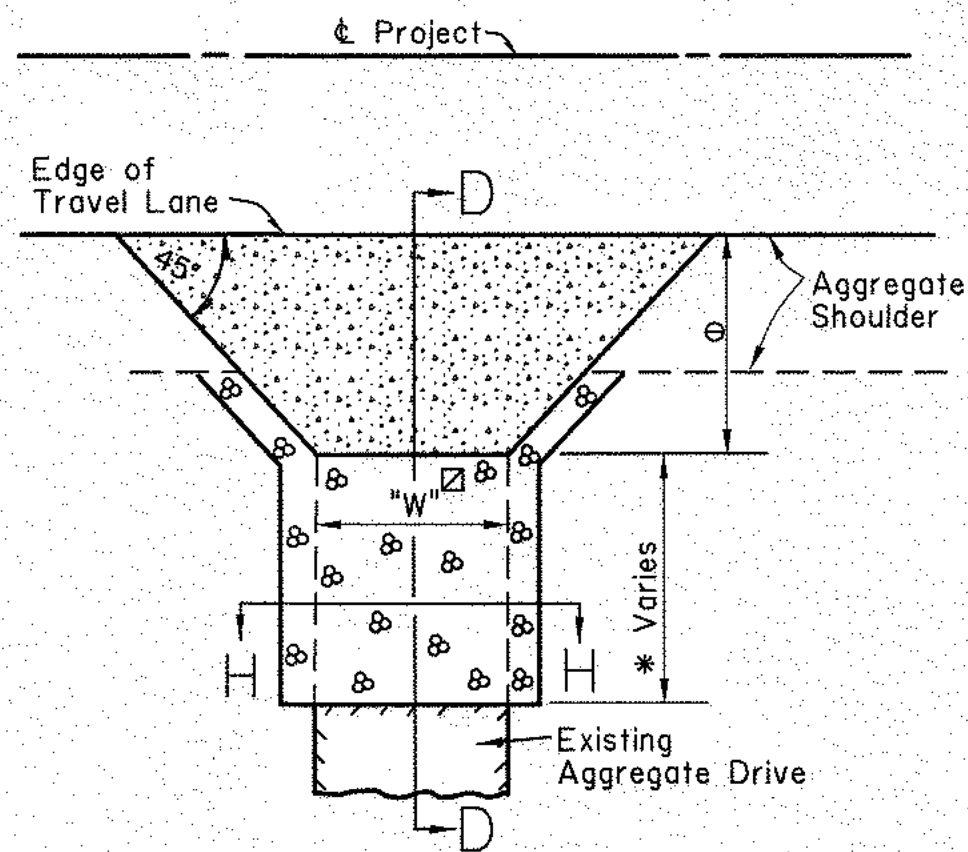
SECTION B-B

NOTE: For PCC Driveway, Curb, Toe Wall & Driveway to be poured monolithically.



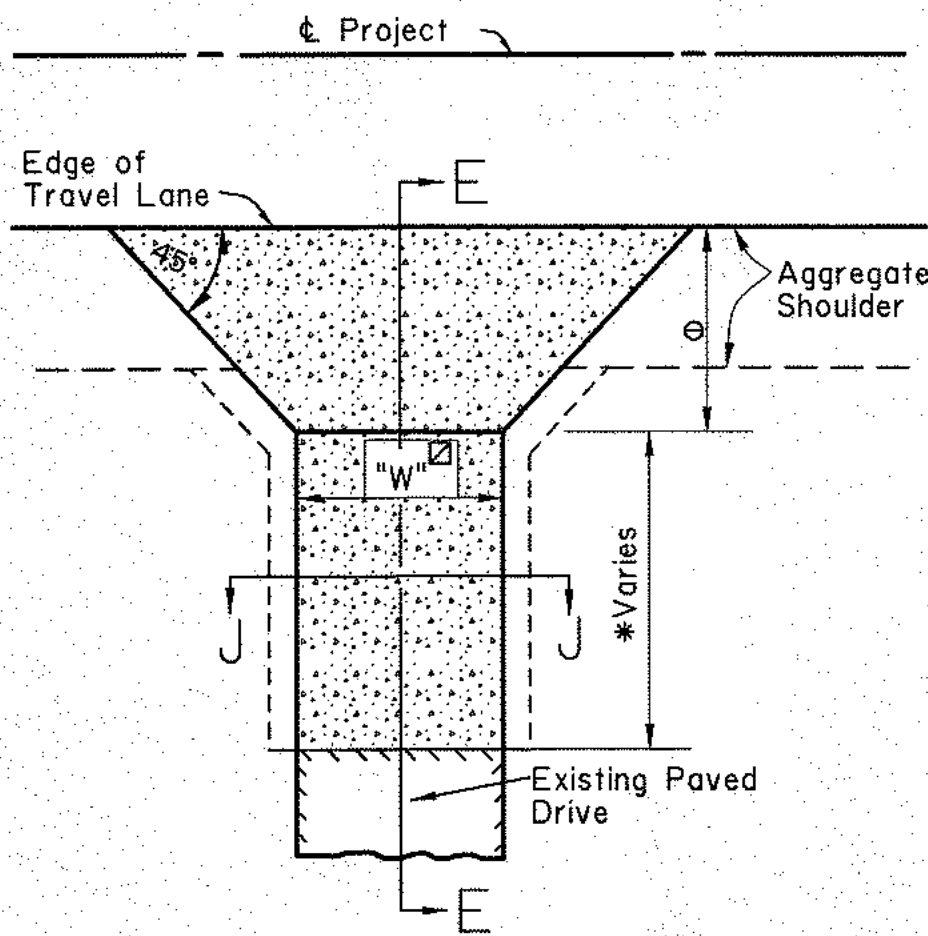
SECTION C-C

NOTE: See Std. Plan CP-01 for Curb construction.



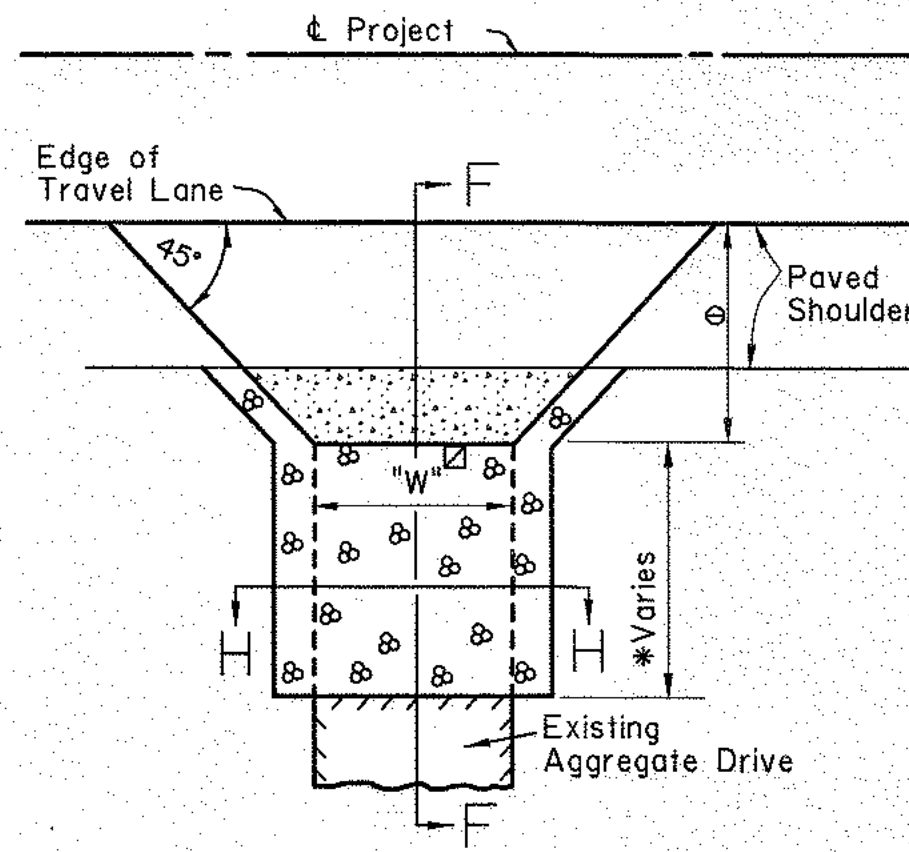
TYPE "A"

Paved Driveway Flare
Along Aggregate Shoulder



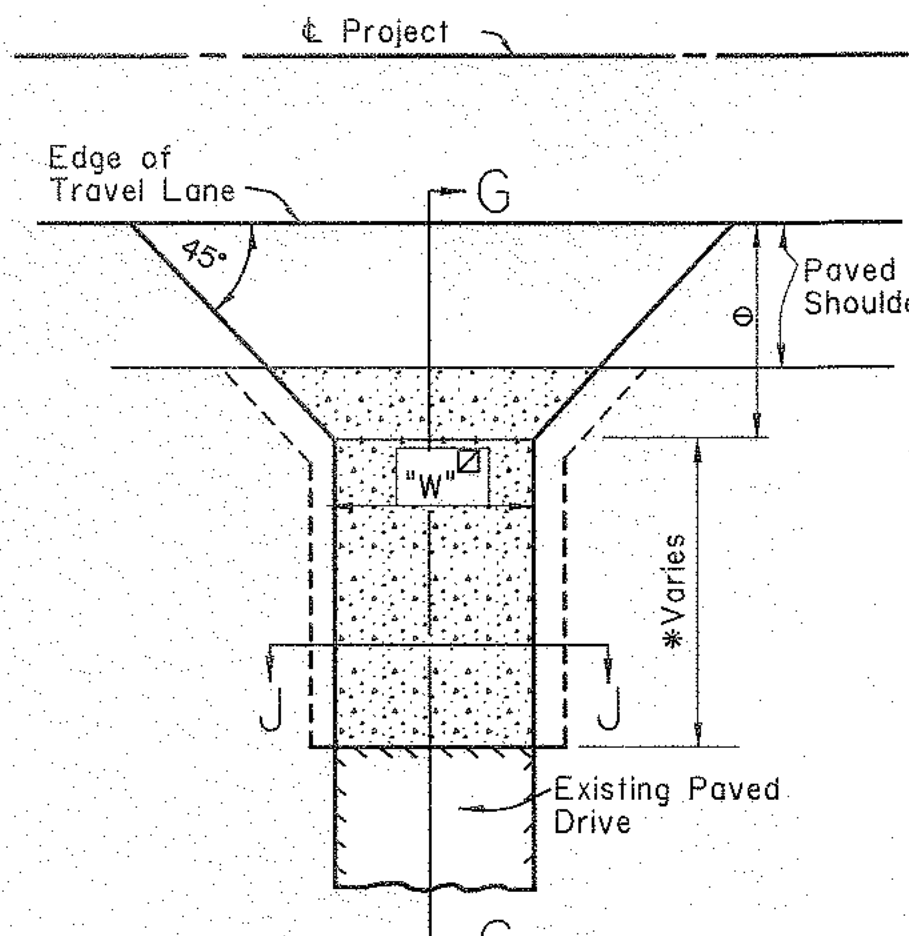
TYPE "B"

Paved Driveway Flare
Along Aggregate Shoulder
Connecting Existing Paved Drive



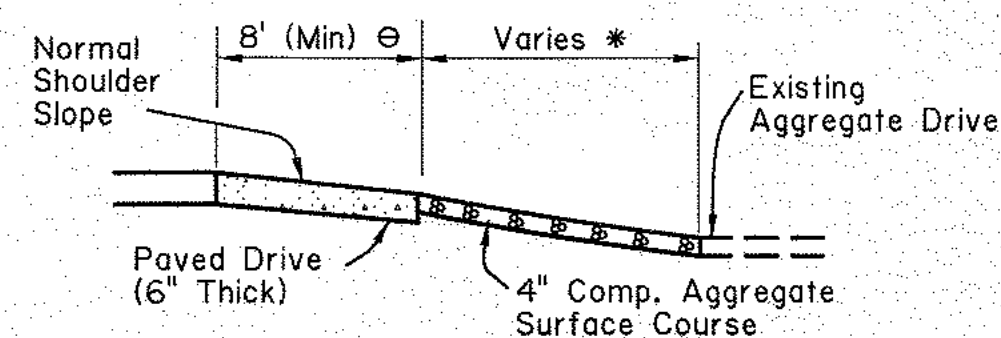
TYPE "C"

Paved Driveway Flare
Along Paved Shoulder

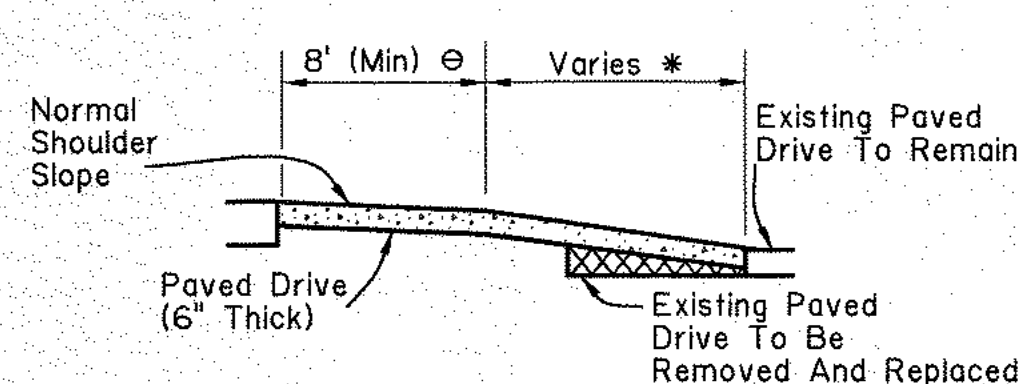


TYPE "D"

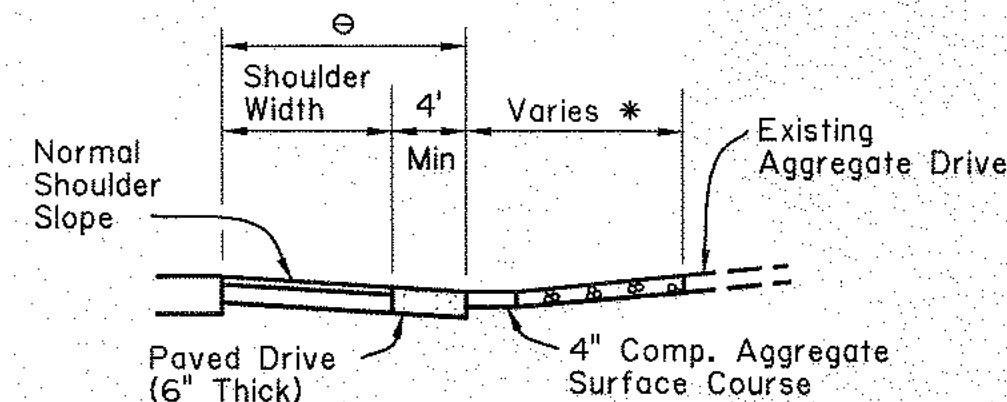
Paved Driveway Flare
Along Paved Shoulder
Connecting Existing Paved Drive



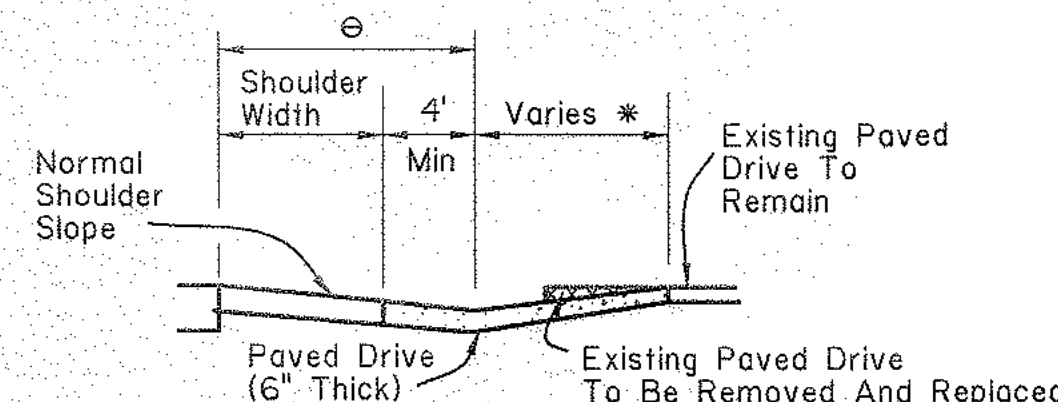
SECTION D-D



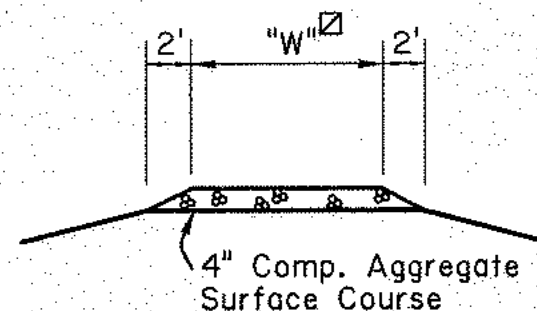
SECTION E-E



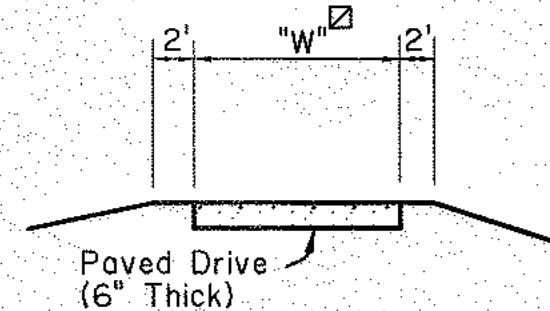
SECTION F-F



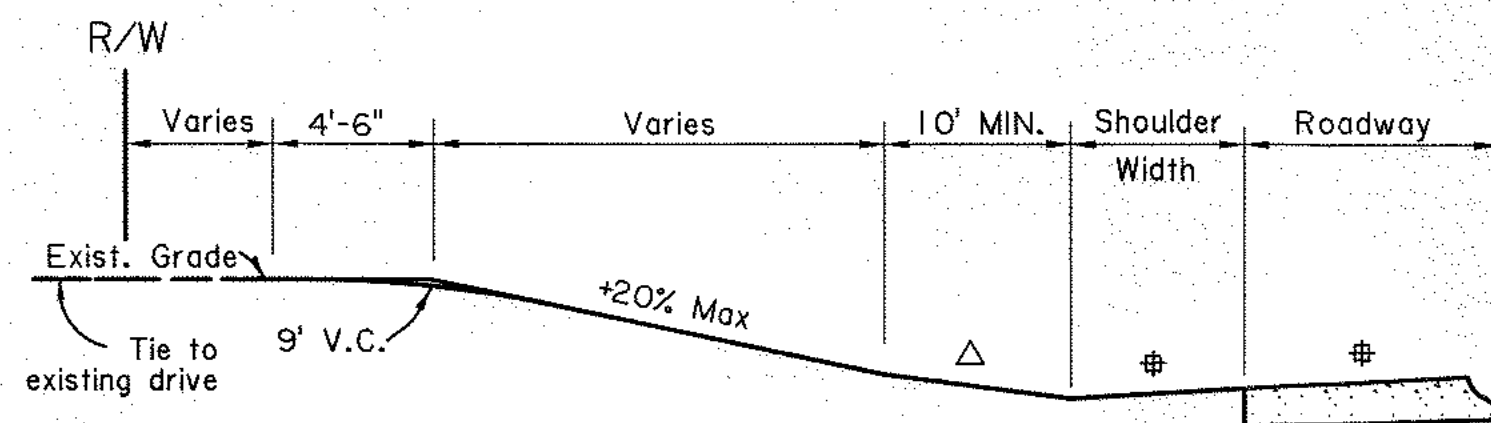
SECTION G-G



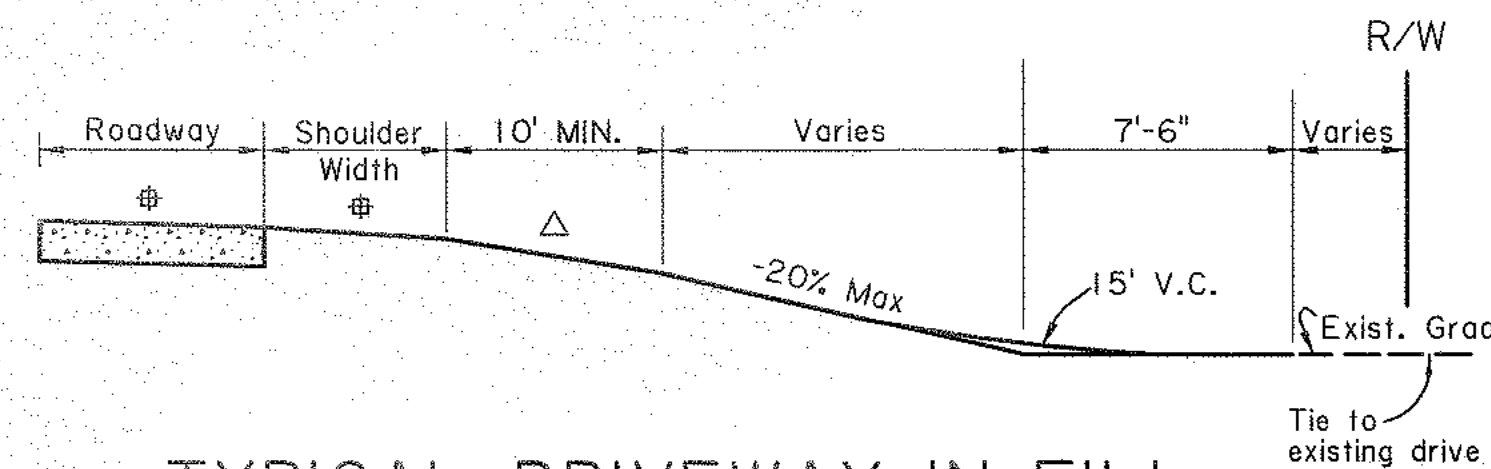
SECTION H-H



SECTION J-J



TYPICAL DRIVEWAY IN CUT



TYPICAL DRIVEWAY IN FILL

Ø "W" = Width as per plans

NOTES:

1. PORTLAND CEMENT CONCRETE DRIVES WILL BE CONSTRUCTED TO REPLACE OR CONNECT TO EXISTING CONCRETE DRIVES.
- *2. SEE PLANS: APPLIES WHERE EXISTING DRIVE IS TO BE REMOVED FOR ROADWAY CONSTRUCTION AND/OR TO ACHIEVE VERTICAL GEOMETRY REQUIREMENTS.
- Ø 3. PAVEMENT SHALL EXTEND 8' MINIMUM FROM EDGE OF PAVED ROADWAY SURFACE (TRAVEL LANE) FOR SINGLE-FAMILY RESIDENTIAL/NON-COMMERCIAL AGRICULTURE TYPE CONNECTIONS, AND 25' FOR TRAFFIC GENERATOR (COMMERCIAL) TYPE CONNECTIONS, OR AS PER THE PLANS. PAVED DRIVEWAY FLARE SHALL EXTEND 4' MINIMUM FROM EDGE OF PAVED SHOULDER. RADII TRANSITION SHAPE MAY BE USED IN LIEU OF FLARE.
4. COMPACTION OF SUBGRADE AND GRADING WORK FOR CONSTRUCTION OF DRIVES SHALL BE SATISFACTORY TO THE ENGINEER AND PAYMENT SHALL BE INCLUDED IN THE DRIVEWAY ITEMS.
- Δ 5. MAXIMUM DRIVEWAY GRADE SHALL BE 20% (25% FOR SPECIAL CASES). MAXIMUM BREAK IN GRADE WITHOUT A VERTICAL CURVE SHALL BE 10% FOR CRESTS AND 9% FOR SAGS, AT NOT LESS THAN 10' INTERVALS.
- # 6. ROADWAY AND SHOULDER SLOPES VARY AS PER PLANS

LEGEND

- ASPHALT
- AGGREGATE
- REMOVAL

SHEET NUMBER	205
DESIGN	P. TONEY
CHECK	R. MC MILLAN
DETAIL	P. TONEY
CHECK	R. MC MILLAN
REVIEW	D. SMITH
SERIES	2 OF 3

APPROVED BY CHIEF ENGINEER: *[Signature]* DATE: 8/4/2022

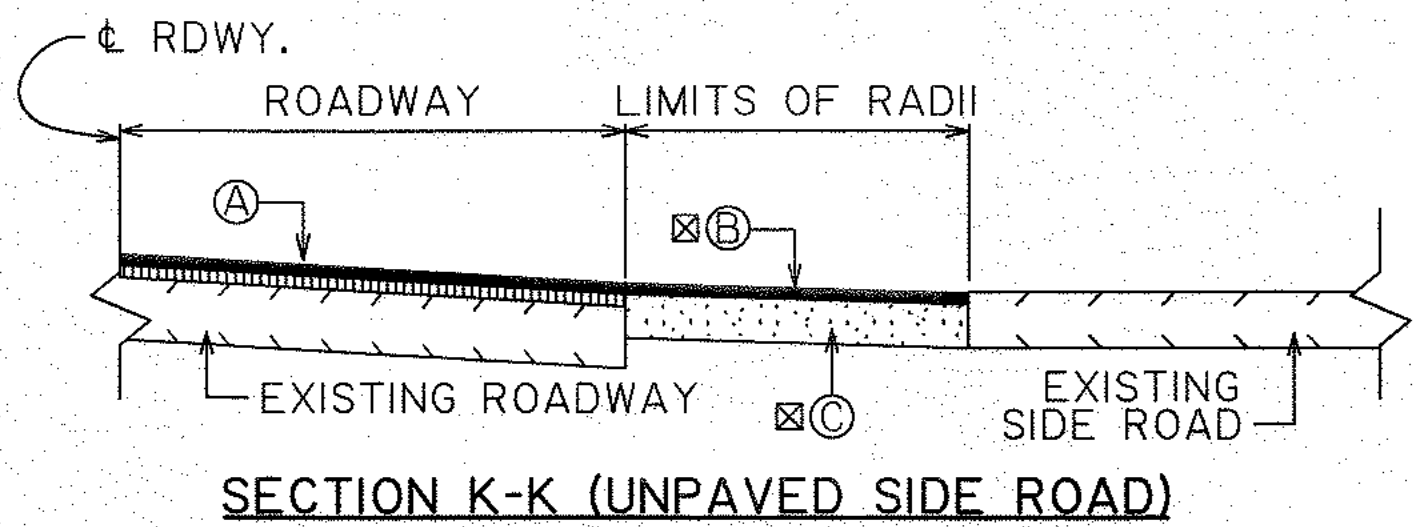
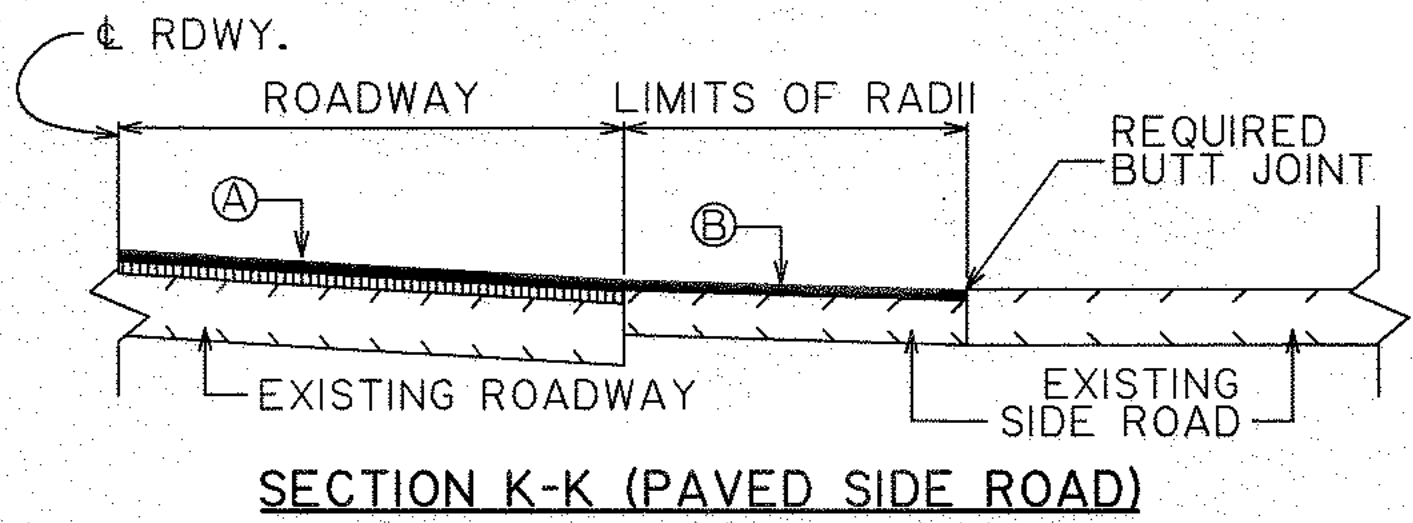
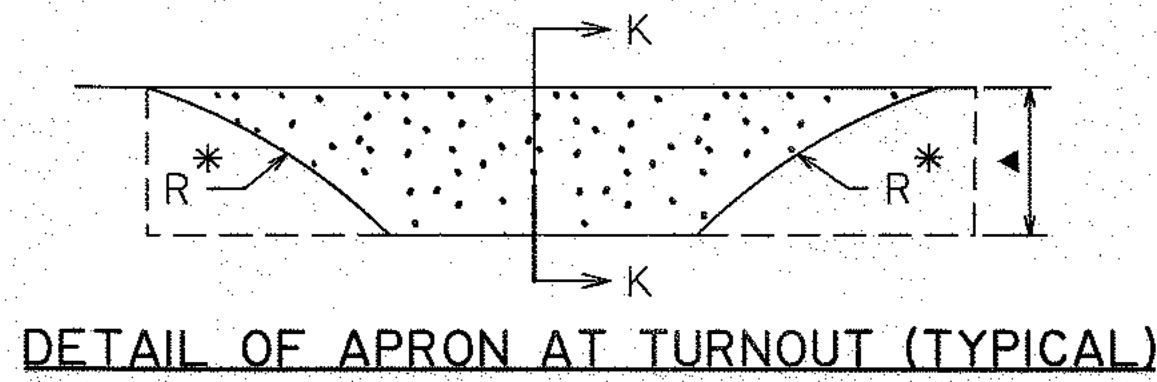
STANDARD PLAN DW-01

DRIVEWAYS ON NON-CURBED ROADWAYS

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

STANDARD PLAN

TURNOUT TIE-IN DETAILS
FOR OVERLAY PROJECTS

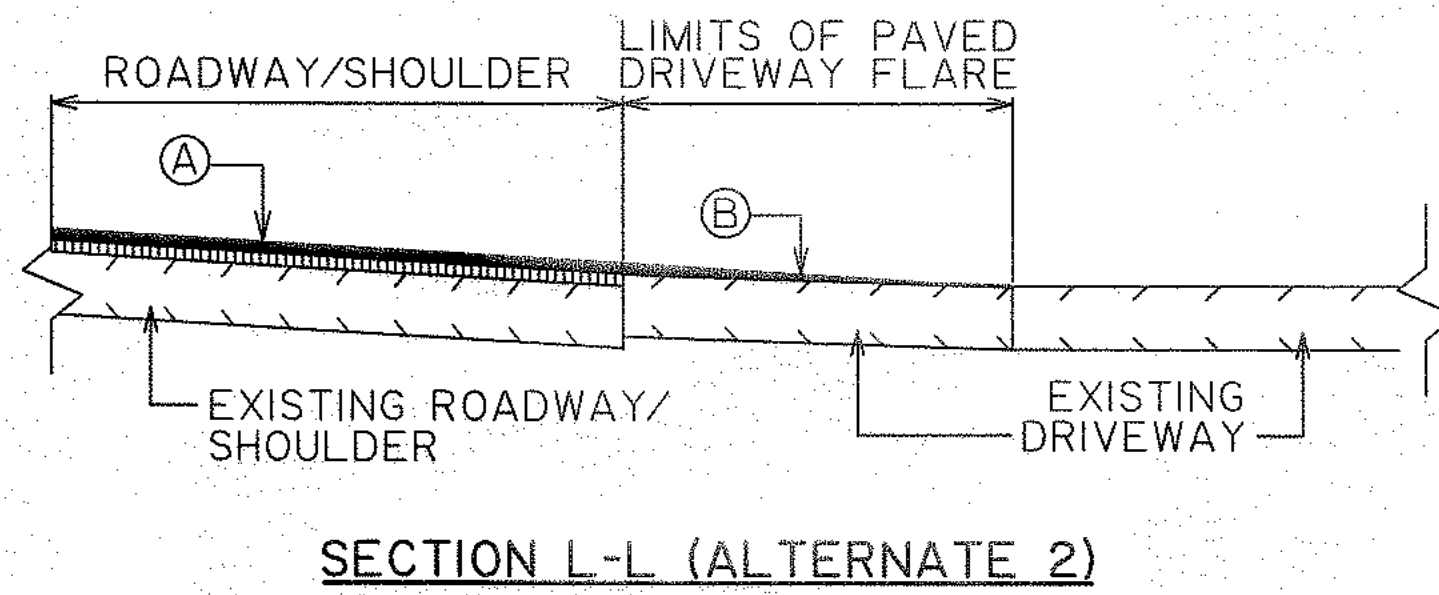
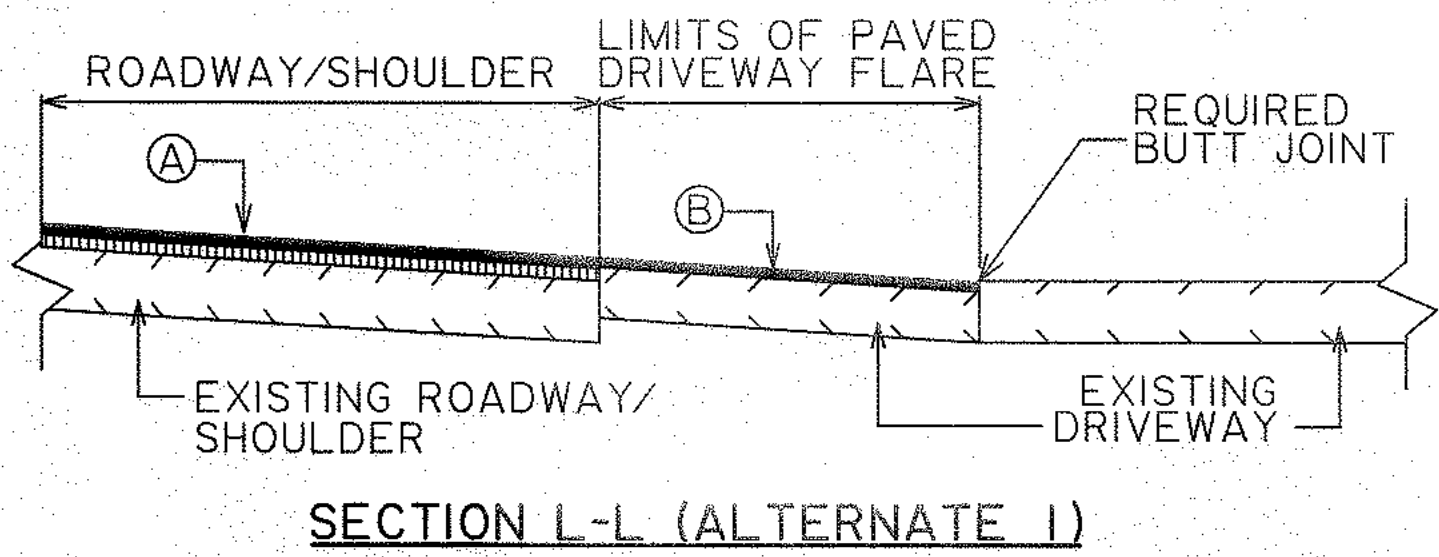
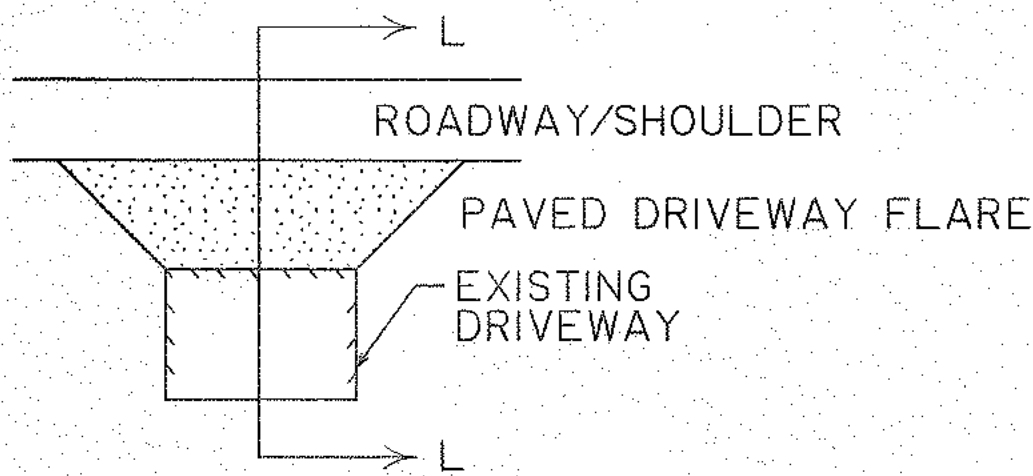


- Ⓐ ASPHALT CONCRETE (COURSES AND TYPES SHOWN ON ROADWAY TYPICAL SECTION)
- Ⓑ ASPHALT CONCRETE (THICKNESS SHALL MATCH ROADWAY WEARING SURFACE)
- ⓈⒸ ASPHALT CONCRETE BASE COURSE
- * MATCH EXISTING RADIUS
- ▲ VERTICAL TRANSITION FROM ROADWAY TO BUTT JOINT TIE-IN WHERE NEEDED
- Ⓢ TOTAL THICKNESS OF WEARING COURSE AND BASE COURSE SHALL BE A MINIMUM OF 6"

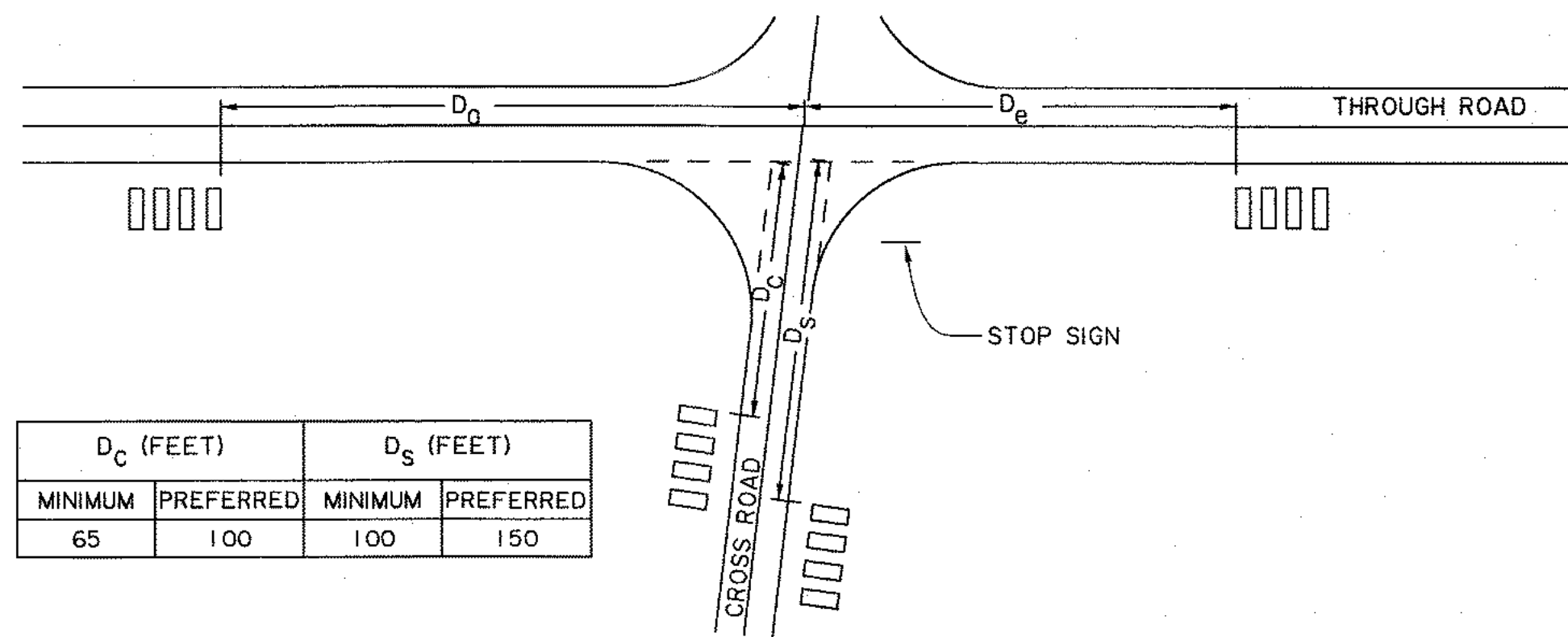
NOTES:

1. DRIVE WIDTHS AND FLARE DIMENSIONS TO BE ADJUSTED TO MATCH EXISTING CONDITIONS AS DIRECTED BY THE PROJECT ENGINEER.
2. TYPE OF TIE-IN AND LENGTH OF OVERLAY TRANSITION TO BE SET BY PROJECT ENGINEER TO ACHIEVE A SUITABLE CONNECTION FOR EXISTING DRIVE.
3. REFER TO SHEET 2 OF DW-01 FOR SUGGESTED TIE-IN CRITERIA OF STEEP GRADES.

DRIVEWAY TIE-IN DETAILS
FOR OVERLAY PROJECTS



- Ⓐ ASPHALT CONCRETE (COURSES AND TYPES SHOWN ON ROADWAY TYPICAL SECTION)
- Ⓑ ASPHALT CONCRETE (THICKNESS SHALL MATCH ROADWAY WEARING COURSE)



D ₀ (FEET)		D ₁ (FEET)	
MINIMUM	PREFERRED	MINIMUM	PREFERRED
65	100	100	150

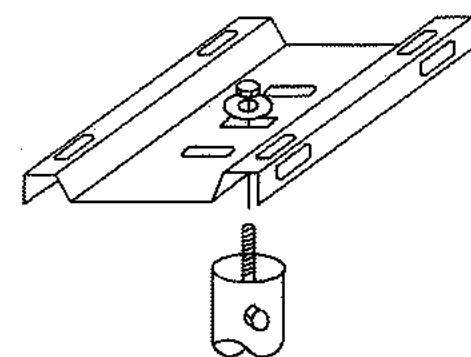
THROUGH ROAD SPEED (M.P.H.)	D ₀ (FEET)		D ₁ (FEET)		
	n	V _c V _m ≤ 4000	n	V _c V _m > 4000	
35		65		200	65
≥ 55		65		295	150

V_c = AVERAGE DAILY TRAFFIC ON CROSS ROAD (VEHICLES PER DAY)

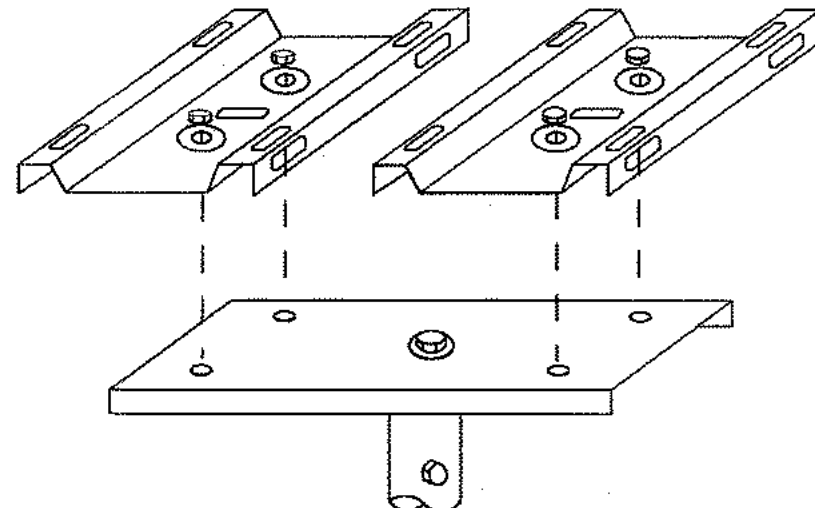
V_m = AVERAGE DAILY TRAFFIC ON THROUGH ROAD (VEHICLES PER DAY)

n = NUMBER OF MAILBOXES AT MAIL STOP

MINIMUM CLEARANCES TO NEAREST MAILBOX IN MAIL STOPS AT INTERSECTIONS

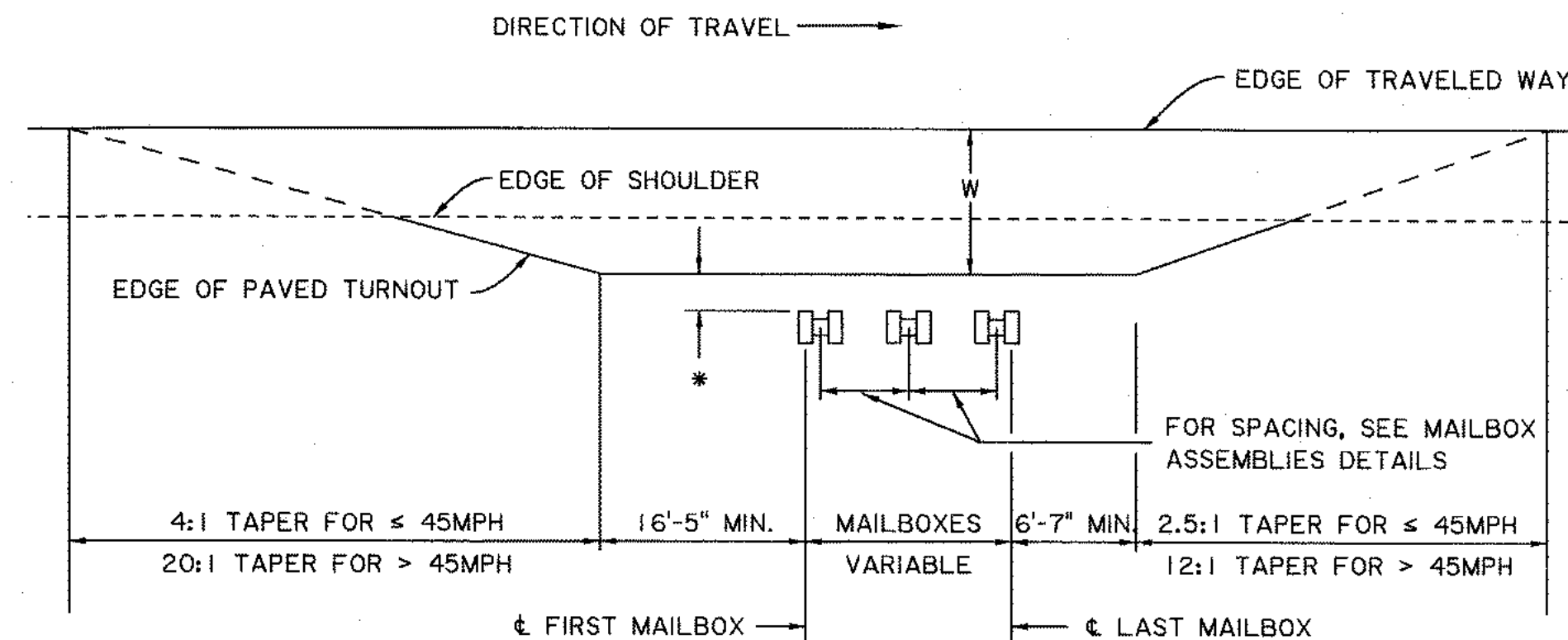


SINGLE MAILBOX MOUNT



DOUBLE MAILBOX MOUNT

SINGLE AND DOUBLE MAILBOX MOUNTS SERIES C



W = FOR SUGGESTED WIDTHS, SEE TABLE BELOW.
MAILBOXES = A MINIMUM DESIGN FOR ROADS CARRYING LOW-SPEED TRAFFIC AND FOR LOCAL AND COLLECTOR ROADS.
* = FOR MAILBOX FACE OFFSET, SEE TABLE BELOW, 0' - 12'.

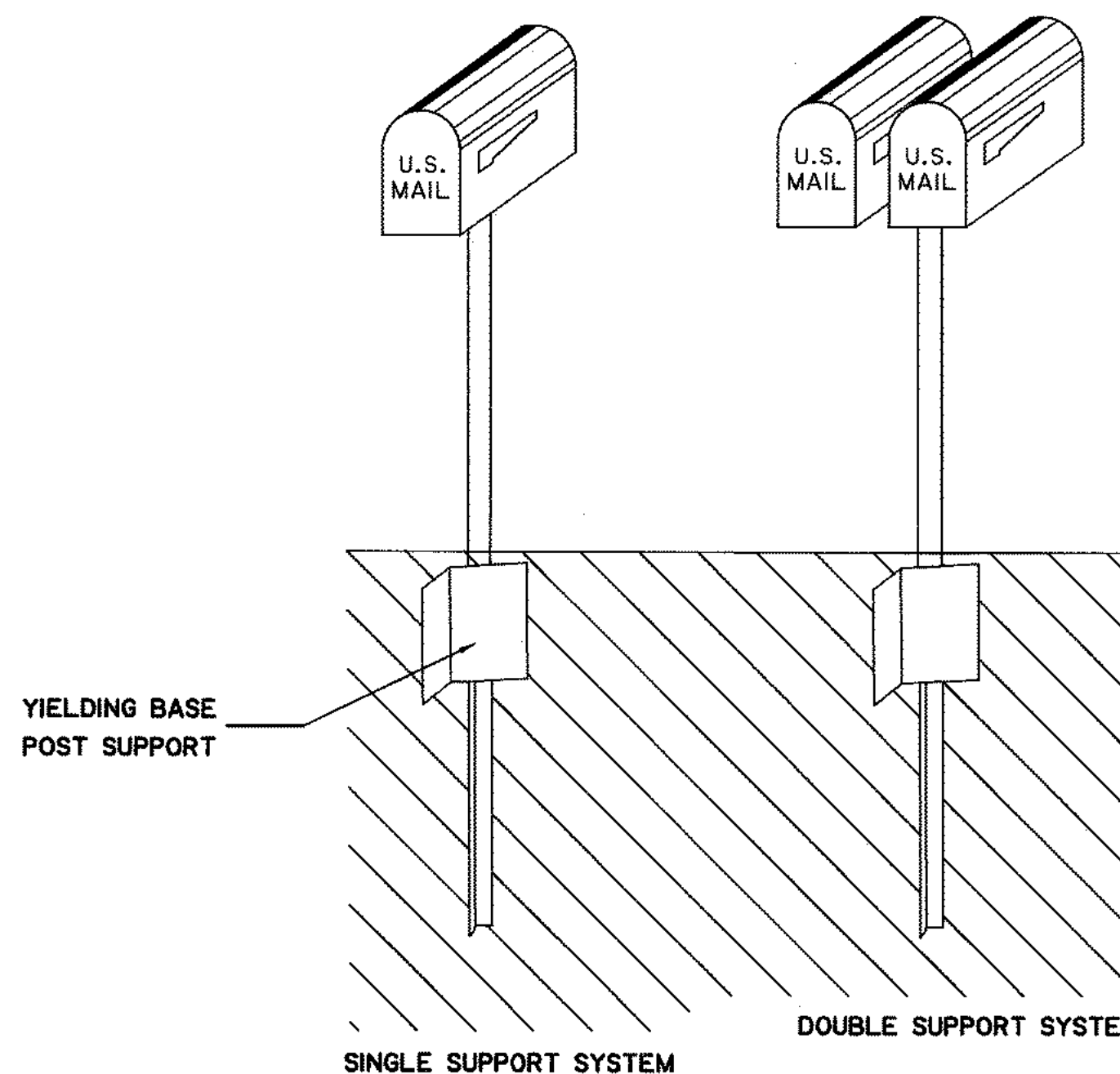
DETAIL OF MAILBOX TURNOUT

* SUGGESTED GUIDELINES FOR LATERAL PLACEMENT OF MAILBOXES

HIGHWAY TYPE AND ADT (VPD)	WIDTH OF ALL-WEATHER SURFACE TURNOUT OR AVAILABLE SHOULDER AT MAILBOX ^a (FT)		DISTANCE ROADSIDE FACE OF MAILBOX IS TO BE OFFSET BEHIND EDGE OF TURNOUT OR USABLE SHOULDER (IN)	
	PREFERRED	MINIMUM	PREFERRED	MINIMUM
RURAL HIGHWAY OVER 10,000	12	8	6 to 8	0
RURAL HIGHWAY 1,500 TO 10,000	12	8		
RURAL HIGHWAY 400 TO 1,500	10	8		
RURAL ROAD UNDER 400	8	6 ^b		6 ^c
RESIDENTIAL STREET WITHOUT CURB OR ALL-WEATHER SHOULDER	6	0		
CURBED RESIDENTIAL STREET OR URBAN AND SUBURBAN AREAS	NOT APPLICABLE		8 to 12 ^d	6 ^d

NOTES: ADT = AVERAGE DAILY TRAFFIC
VPD = VEHICLES PER DAY

- a) IF INCREASE ACCESS IS NEEDED, THE FOLLOWING MAY BE CONSIDERED IN CONJUNCTION WITH THE LOCAL POSTMASTER:
- PROVIDE A LEVEL CLEAR SPACE 30 IN. BY 48 IN. CENTERED ON THE BOX FOR EITHER SIDE OR FORWARD APPROACH.
 - PROVIDE AN ACCESSIBLE PASSAGE TO AND FROM THE MAILBOX AND PROJECT INTO A CIRCULATION ROUTE--NO MORE THAN 4 IN. IF BETWEEN 28 IN. AND 80 IN.-- SO THAT THE MAILBOX DOES NOT BECOME A PROTRUDING OBJECT FOR PEDESTRIANS WITH IMPAIRED VISION.
- b) PROVIDE AN ACCESSIBLE PASSAGE TO AND FROM THE MAILBOX. THE MAILBOX PROJECTION INTO A CIRCULATION ROUTE SHALL NOT BE MORE THAN 4 IN., SO THAT THE MAILBOX DOES NOT BECOME A PROTRUDING OBJECT FOR PEDESTRIANS WITH IMPAIRED VISION.
- c) IF A TURNOUT IS PROVIDED, THIS MAY BE REDUCED TO ZERO.
- d) BEHIND TRAFFIC-FACE OF CURB.



EXAMPLES OF SINGLE AND DOUBLE MAILBOX INSTALLATIONS SERIES C

* NOTE: SUPPORT FRAME AND FOUNDATION SHOWN ARE PROPRIETARY PRODUCTS.

NOTES:

NO MAILBOX WILL BE PERMITTED WHERE ACCESS IS OBTAINED FROM THE LANES OF A FREEWAY OR WHERE ACCESS IS OTHERWISE PROHIBITED BY LAW OR REGULATION.

MAILBOXES SHALL BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY IN THE DIRECTION OF DELIVERY ROUTE EXCEPT ON ONE-WAY STREETS WHERE THEY MAY BE PLACED ON EITHER SIDE. THE BOTTOM OF THE BOX SHALL BE SET AT AN ELEVATION (H) ESTABLISHED BY THE U.S. POSTAL SERVICE, USUALLY BETWEEN 3'4" AND 4'0" ABOVE THE ROADWAY SURFACE. THE ROADSIDE FACE OF THE BOX SHALL BE OFFSET FROM THE EDGE OF THE TRAVELED WAY. SEE THE SUGGESTED GUIDELINES FOR LATERAL PLACEMENT OF MAILBOXES AT LEFT.

ALL MAILBOX INSTALLATIONS MUST CONFORM TO THE REQUIREMENTS OF THE U.S. POSTAL SERVICE.

WHERE FEASIBLE, NEW INSTALLATION SHOULD BE LOCATED ON THE FAR RIGHT SIDE OF AN INTERSECTION WITH A ROAD OR DRIVEWAY ENTRANCE. HOWEVER, CONSIDERATION SHOULD BE GIVEN TO

- MINIMIZING WALKING DISTANCE WITHIN THE ROADWAY FOR THE PATRON.
- AVAILABLE STOPPING SIGHT DISTANCE IN ADVANCE OF THE MAILBOX SITE, AND
- POSSIBLE RESTRICTIONS TO CORNER SIGHT DISTANCES AT INTERSECTIONS AND DRIVEWAY ENTRANCES.

FOR LOCATION OF MAILBOXES AT AN INTERSECTING ROADWAY, SEE DETAIL AT LEFT.

MAILBOXES SHALL BE OF LIGHT SHEET METAL OR PLASTIC CONSTRUCTION MANUFACTURED BY AN APPROVED MANUFACTURERS CONFORMING TO THE REQUIREMENTS OF THE U.S. POSTAL SERVICE. MAILBOXES MUST BE FULL-SCALE CRASH TESTED IN ACCORDANCE WITH THE LATEST EDITION OF MASH. NEWSPAPER DELIVERY BOXES SHALL BE OF LIGHT SHEET METAL OR PLASTIC CONSTRUCTION OF MINIMUM DIMENSIONS SUITABLE FOR HOLDING A NEWSPAPER.

MANUFACTURERS WHOSE MAILBOXES HAVE BEEN APPROVED BY THE POSTMASTER GENERAL WILL BE LISTED IN THE POSTAL OPERATION MANUAL (POM) AND PUBLISHED IN THE POSTAL BULLETIN. NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SUPPORT STRUCTURE UNLESS THE SUPPORT STRUCTURE AND MAILBOX ARRANGEMENT HAVE BEEN SHOWN TO BE SAFE BY CRASH TESTING IN ACCORDANCE WITH THE LATEST EDITION OF MASH. HOWEVER, LIGHTWEIGHT NEWSPAPER BOXES MAY BE MOUNTED BELOW THE MAILBOX ON THE SIDE OF THE MAILBOX SUPPORT.

MAILBOX SUPPORTS SHALL NOT BE SET IN CONCRETE UNLESS THE SUPPORT DESIGN HAS BEEN SHOWN TO BE SAFE BY CRASH TESTING IN ACCORDANCE WITH THE LATEST EDITION OF MASH WHEN SO INSTALLED.

POSTS SHALL BE STRONG ENOUGH TO SUPPORT THE BOX, BUT CAPABLE OF BENDING WHEN STRUCK BY AN AUTOMOBILE OR A LIGHT TRUCK. MAXIMUM STRENGTH POSTS ARE EITHER A METAL POST WITH A STRENGTH NO GREATER THAN A 2" DIAMETER STANDARD STRENGTH STEEL PIPE OR A 2"/FT FLANGED CHANNEL OR A 4"x4" WOODEN POST. POSTS ARE ACCEPTABLE MAILBOX SUPPORTS WHEN EMBEDDED NO MORE THAN 24" INTO THE GROUND. A METAL POST SHALL NOT BE FITTED WITH AN ANCHOR PLATE, BUT MAY HAVE AN ANTI-TWIST DEVICE THAT EXTENDS NO MORE THAN 10" BELOW THE GROUND SURFACE.

THE POST-TO-BOX ATTACHMENT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT THE BOX FROM SEPARATING FROM THE POST TOP IF THE INSTALLATION IS STRUCK BY AN AUTOMOBILE OR LIGHT TRUCK.

THE MINIMUM SPACING BETWEEN THE CENTERS OF SUPPORT POSTS SHALL BE THREE-FOURTHS THE HEIGHT OF THE POSTS ABOVE THE GROUND LINE

MAILBOX SUPPORT DESIGNS NOT DETAILED WILL BE ACCEPTABLE IF FULL-SCALE CRASH TESTED IN ACCORDANCE WITH THE LATEST EDITION OF MASH AND IF APPROVED BY THE ENGINEER.

FOR POST-TO-BOX ATTACHMENT DETAILS, SEE SHEET 2 OF 2.

MASH - MANUAL FOR ASSESSING SAFETY HARDWARE.

SHEET NUMBER207

PARISH

CONTROL SECTION

STATE PROJECT

DESIGN H. VU

CHECK D. SMITH

DETAIL H. VU

CHECK D. SMITH

REVIEW

SERIES #1 OF 2

STATE OF LOUISIANA

HAI D. VU

REG. NO. 34755

REGISTERED PROFESSIONAL ENGINEER

CIVIL ENGINEERING

DATE: 04/04/22

APPROVED BY CHIEF ENGINEER:

DATE: 4/4/2022

STATE OF LOUISIANA

DEPARTMENT OF TRANSPORTATION

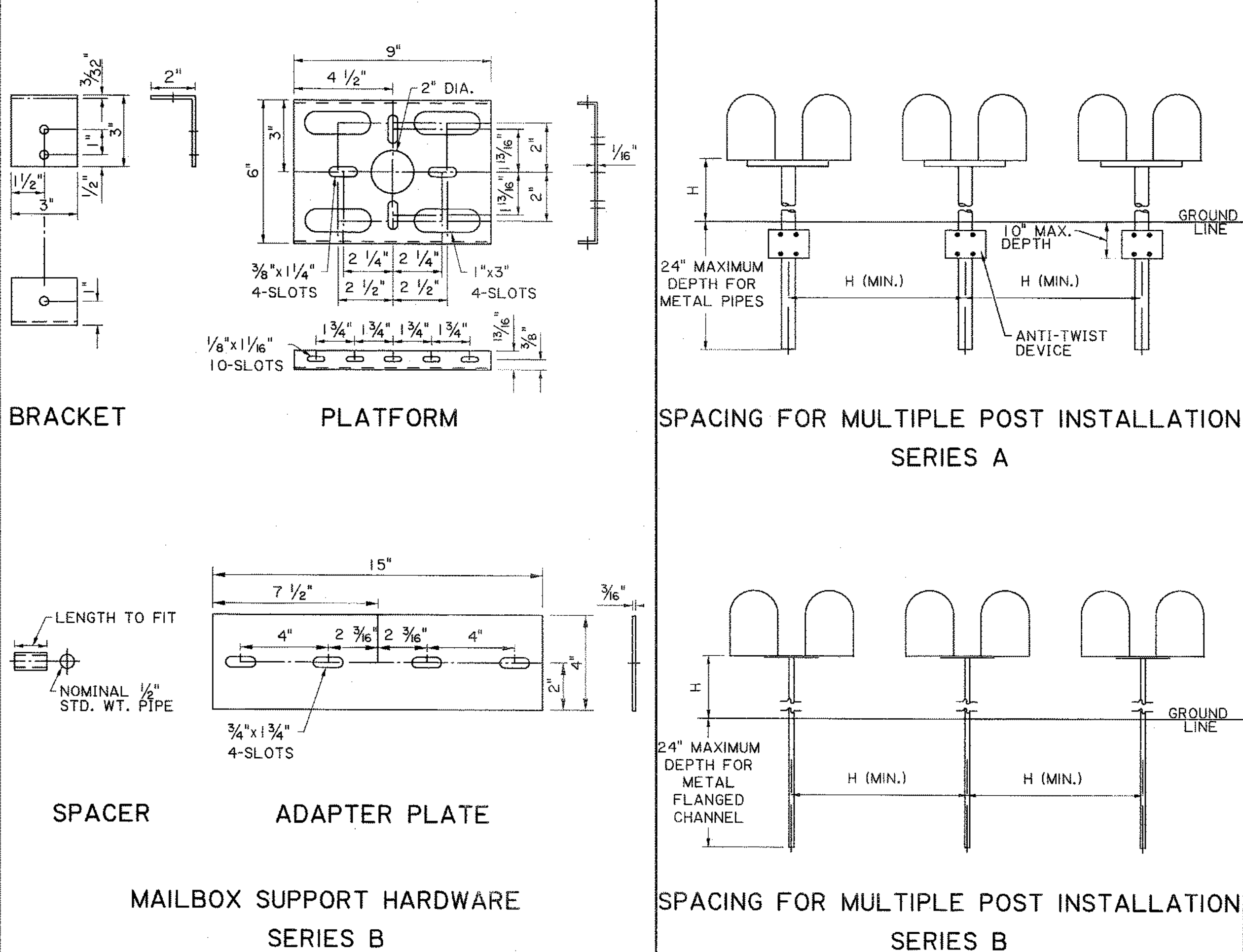
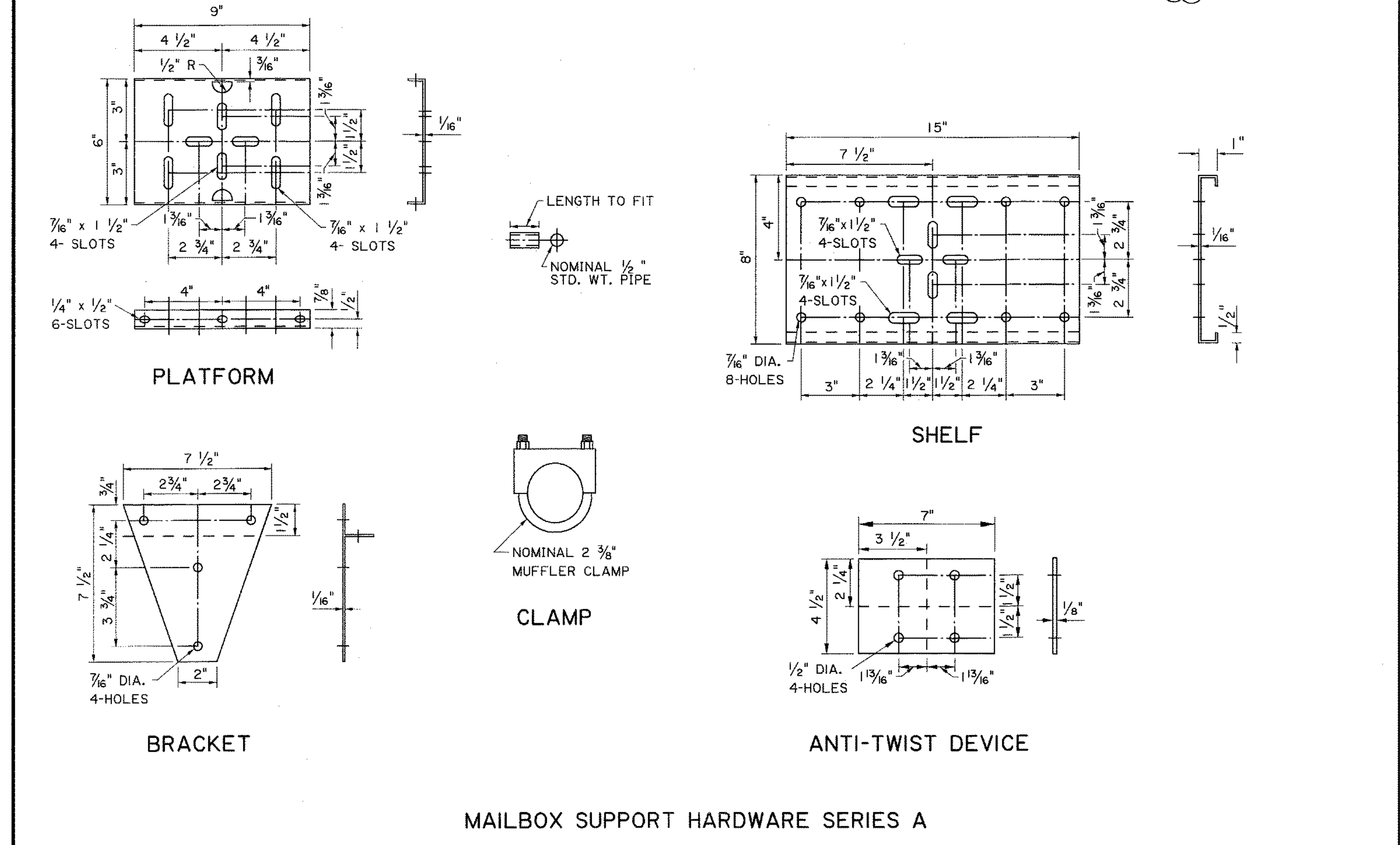
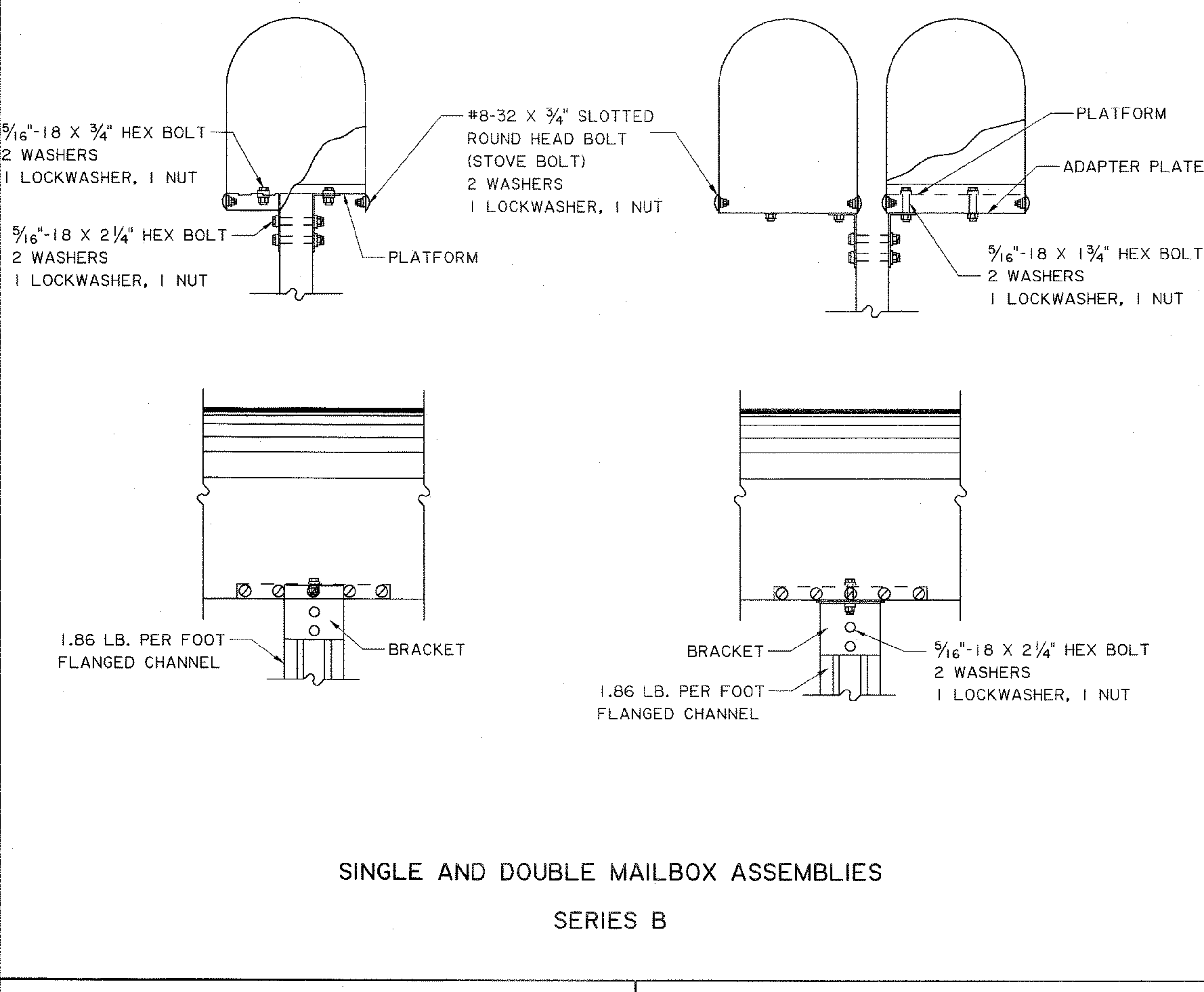
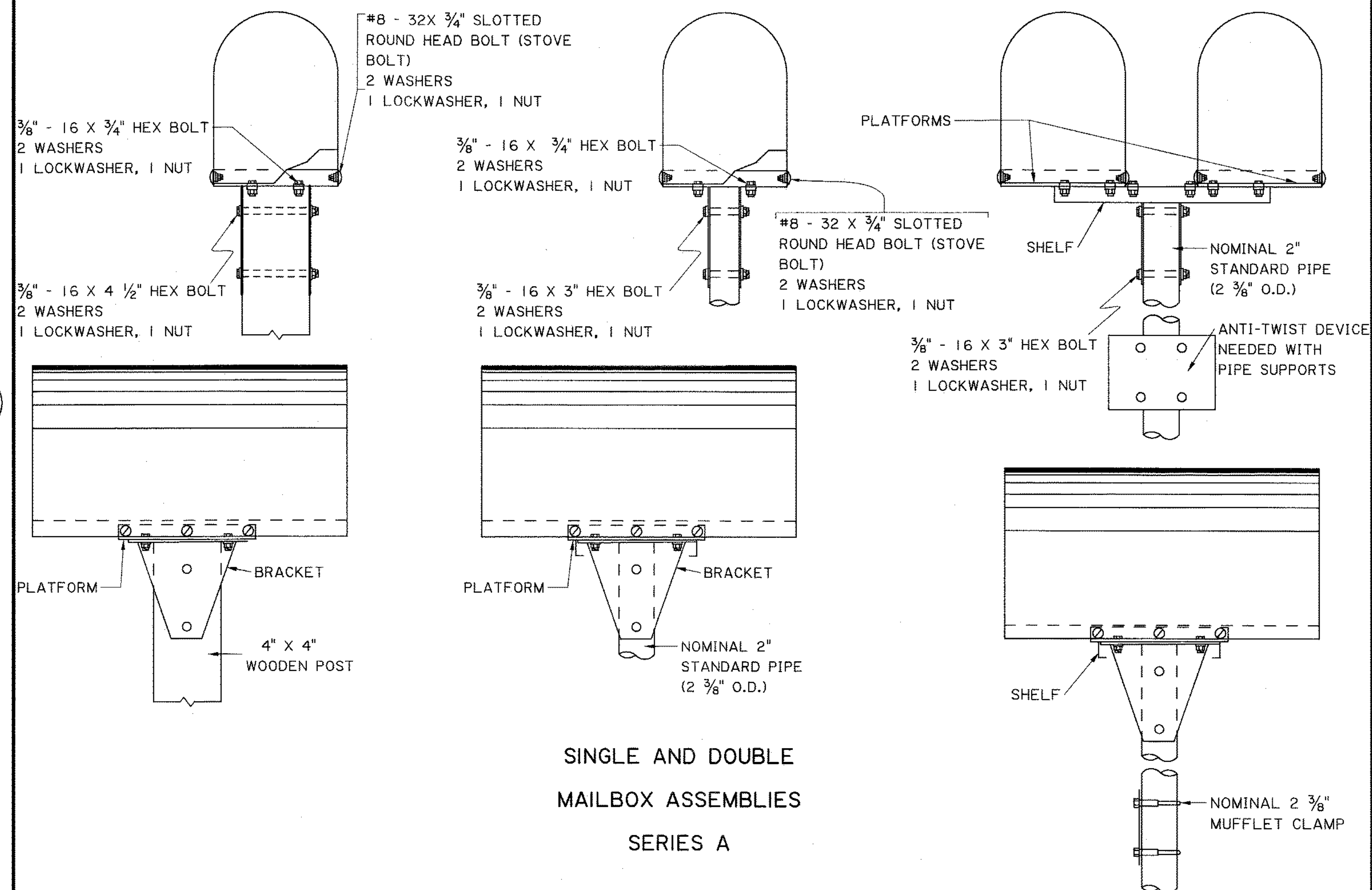
MAILBOX INSTALLATION DETAILS

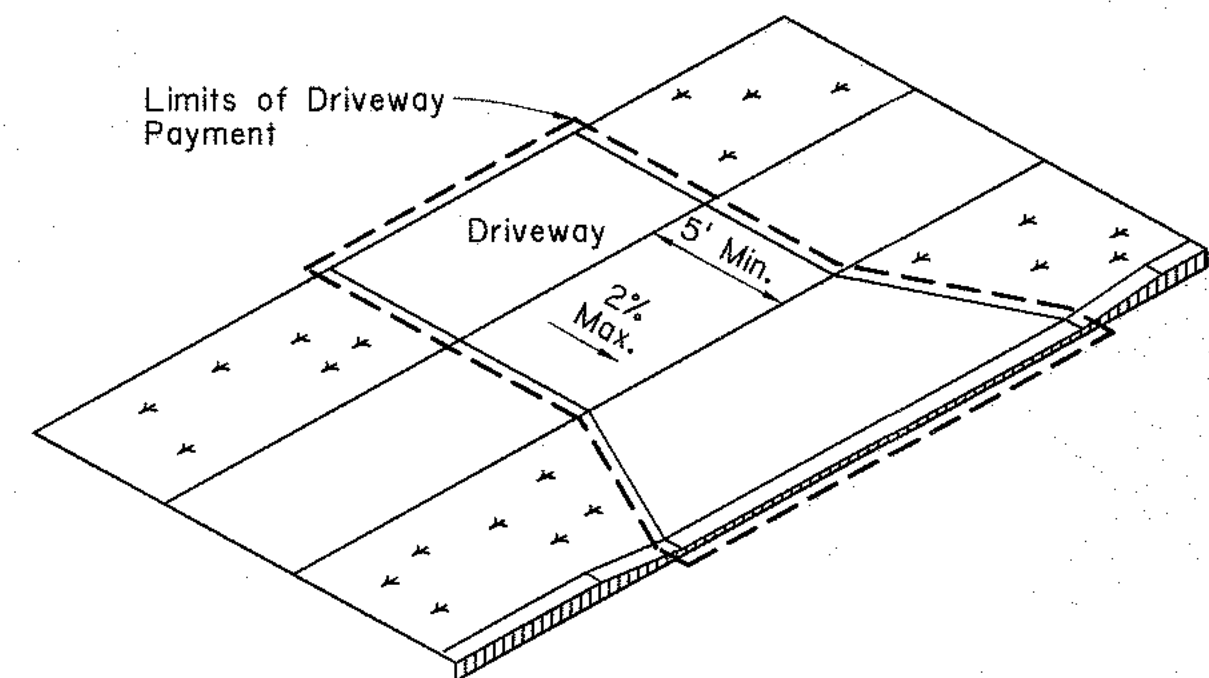
MB-01

DOTD

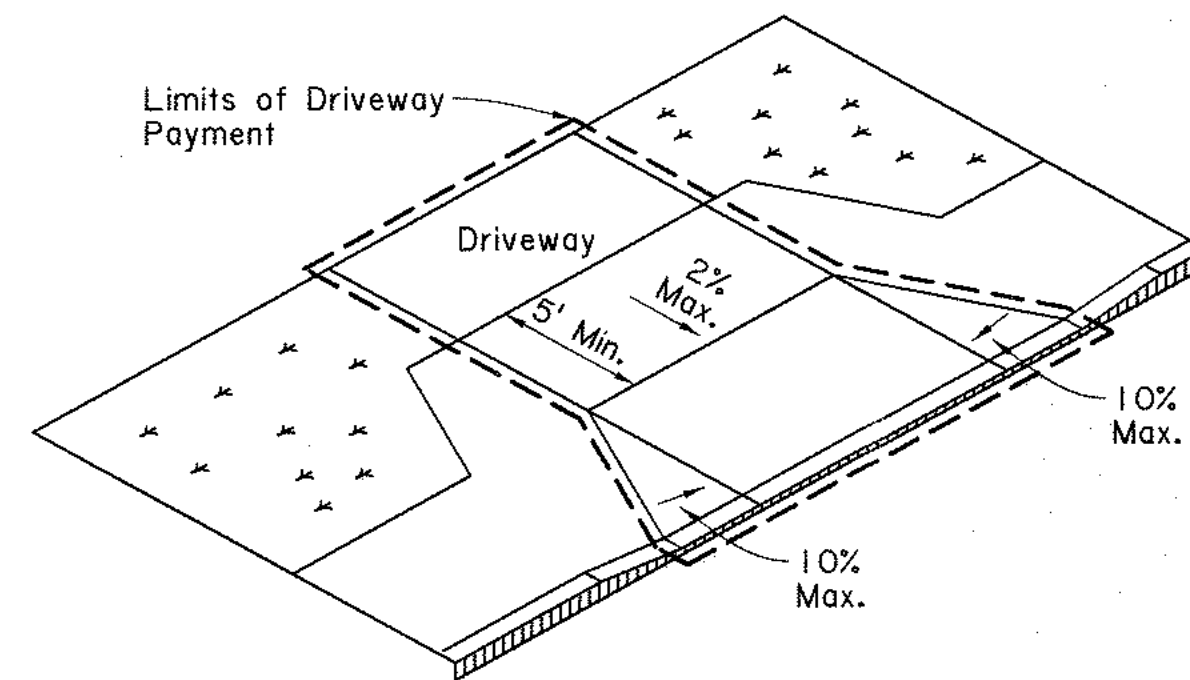
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

ROAD DESIGN

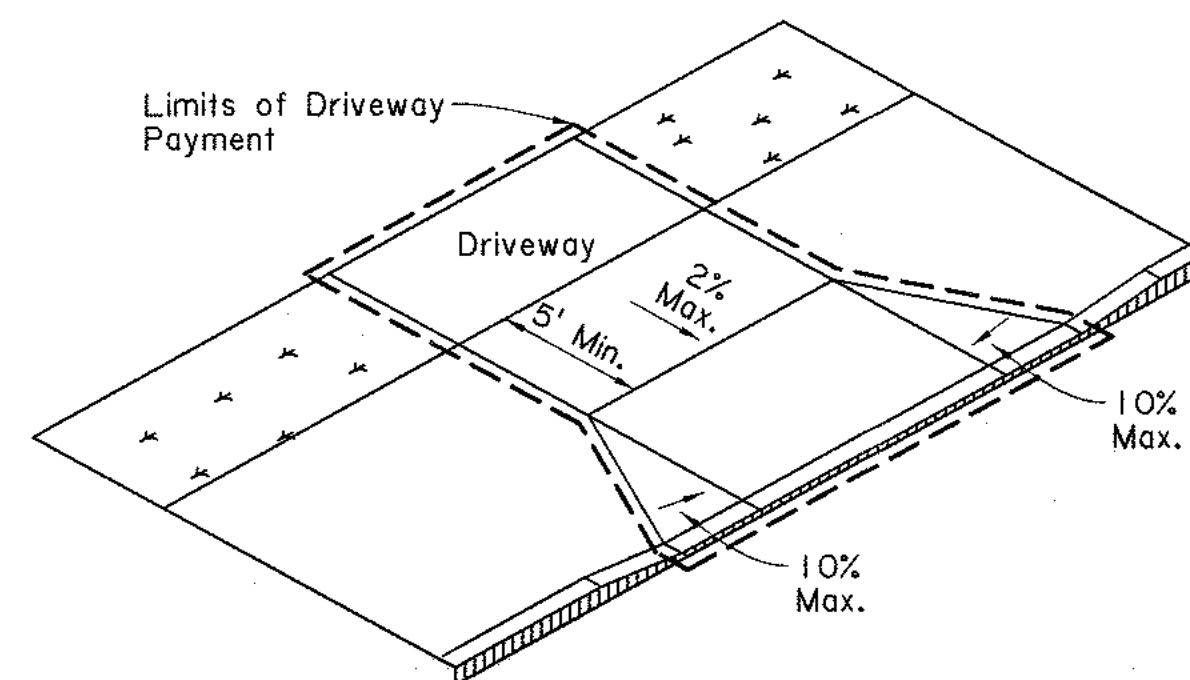




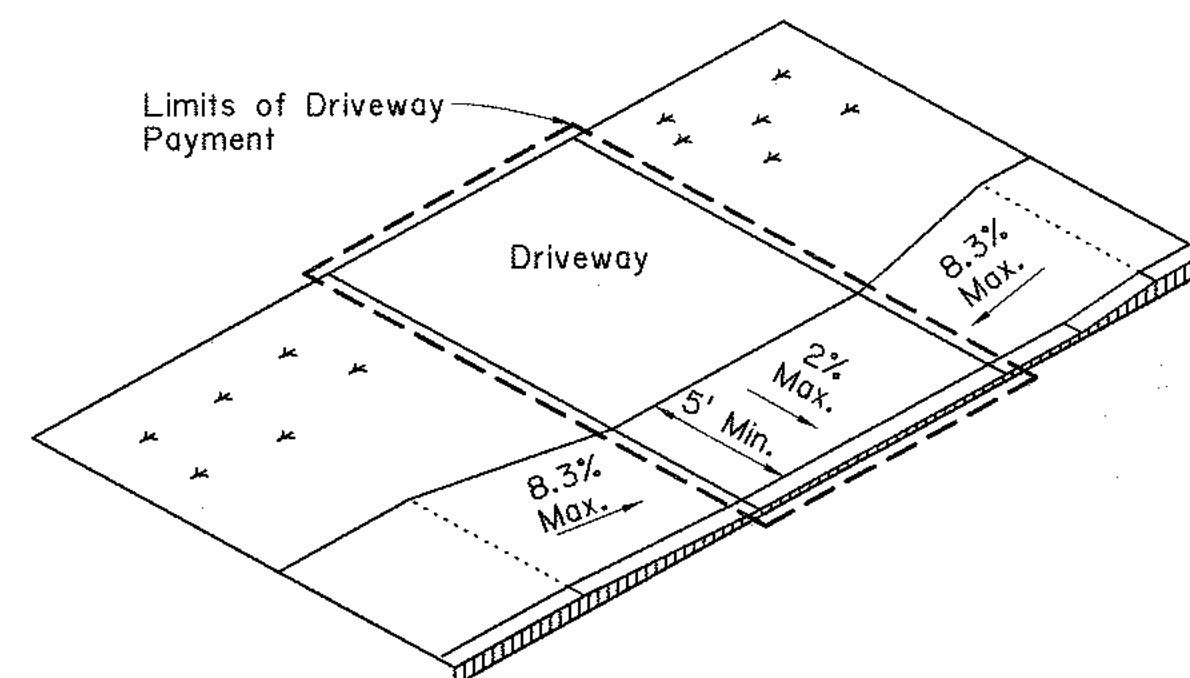
SETBACK SIDEWALK



APRON OFFSET SIDEWALK

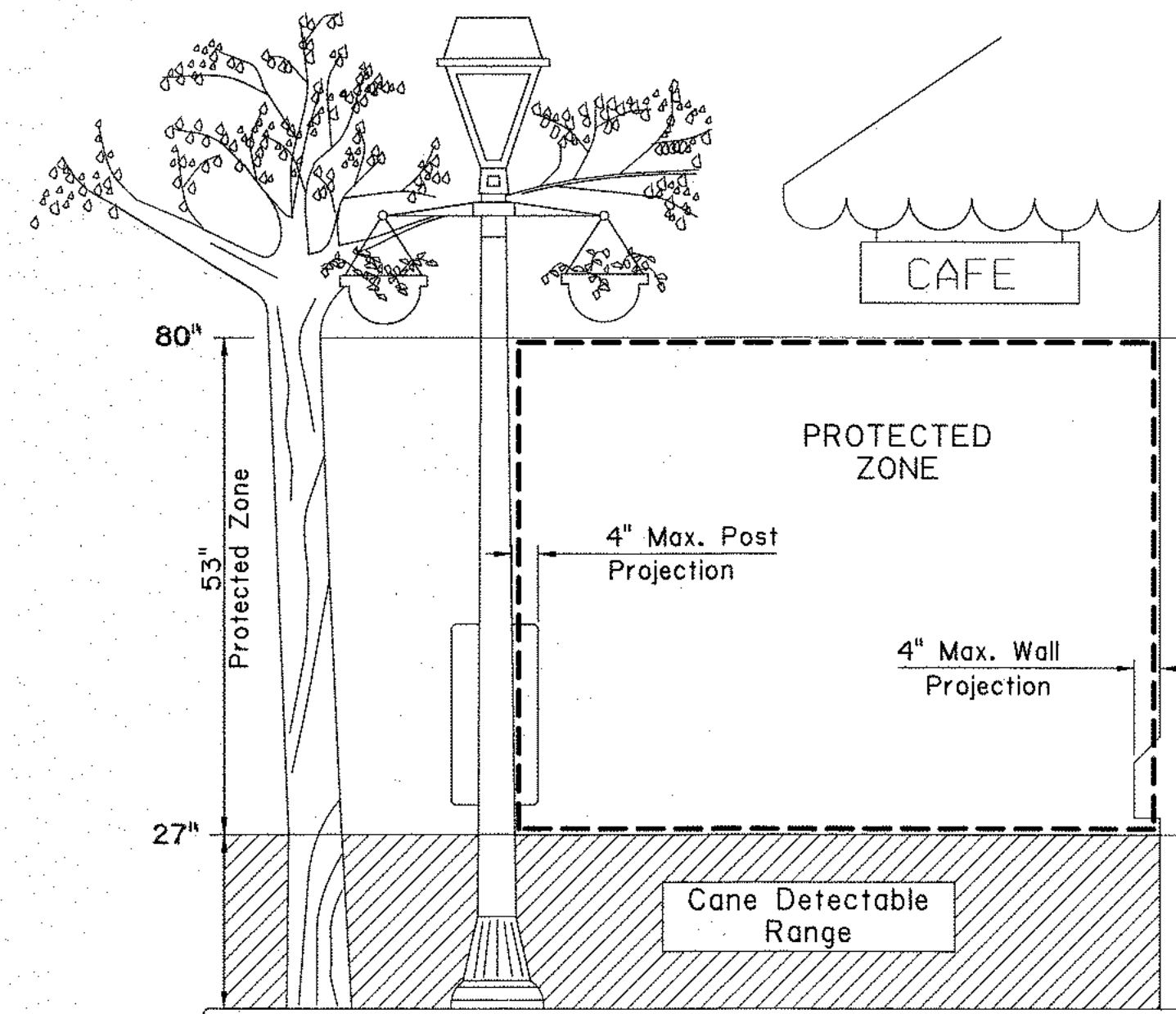


WIDE SIDEWALK



RAMP SIDEWALK

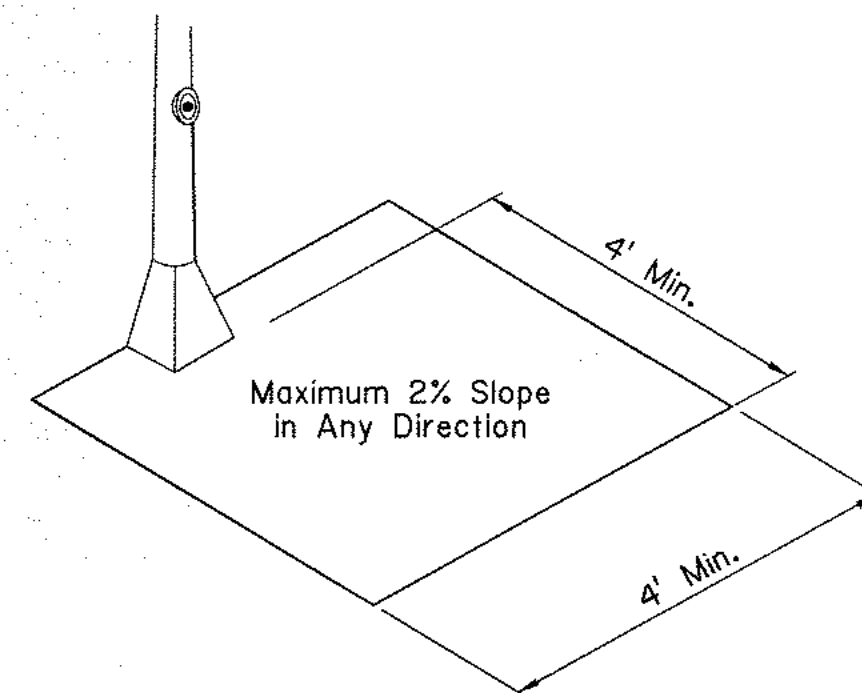
SIDEWALK TREATMENT AT DRIVEWAYS
Refer to Driveway Standard Plans for further details.



PROTECTED ZONE

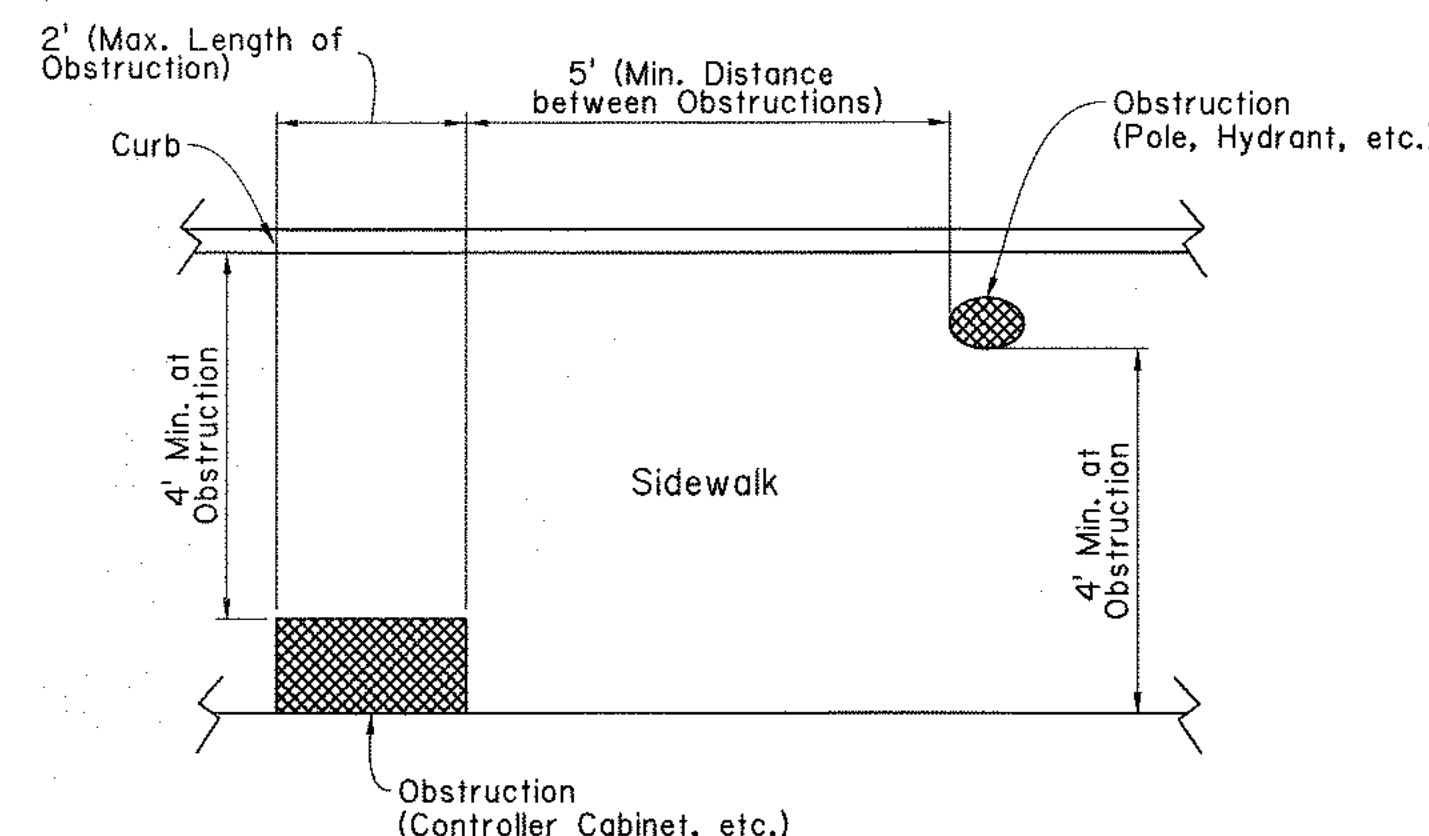
Notes:

1. In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27" and 80" above the surface.
2. When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.
3. Protruding objects of a height less than 27" are detectable by cane and do not require additional treatment.



CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON

Minimum 4' x 4' clear space required at public use fixtures.



**PLAN VIEW
PLACEMENT OF OBSTRUCTIONS**
Items not intended for public use.

PEDESTRIAN FACILITIES GENERAL NOTES

Curb Ramps

1. Maximum allowable cross slope of curb ramp surfaces is 2%; desired cross slope is 1.5%.
2. Theoretical pay areas for curb ramps are as shown on sheet 2, unless otherwise noted in the plans. These areas may be field adjusted as approved by the Project Engineer.
3. Grade breaks at the top and bottom of curb ramps runs shall be perpendicular to the direction of the ramp run.
4. Where curb ramps are located adjacent to a walking surface, a flare must be provided; otherwise a curb may be provided. For an example, refer to curb ramp Type 2 on sheet 2.
5. The landing dimensions are 5'x5' with a maximum 2% slope in any direction. The landing clear width shall be at least as wide as the widest ramp run leading to the landing.
6. Small raised channelization islands, which cannot provide a minimum of 5'x5' landing at the top of ramps, shall be cut through level with the surface of the street.
7. Raised medians should be 6' wide in the direction of pedestrian travel to serve as a pedestrian refuge area. Medians with pedestrian access routes through them shall be designed in accordance with Draft PROWAG.
8. Maneuvering space at the bottom of curb ramps shall be a minimum of 4'x4' completely contained within the crosswalk and completely outside the parallel vehicle travel lane.
9. It is desirable to provide a no-parking zone 50' from crosswalks on each intersection approach or provide a curb extension.
10. Drainage structures should be located on the upstream side of the ramp and located to prevent ponding near the curb ramp. Drainage structures should be placed outside the crosswalk.
11. Slopes of adjoining gutters and roadway surfaces immediately adjacent to the curb ramp shall not exceed 5%. Refer to the Transition from the Curb Ramp to Roadway Detail on sheet 1.
12. Curb ramps should be aligned with the direction of pedestrian travel on the crosswalk or theoretical crosswalk. Refer to sheet 3 for typical crossing layouts and refer to the pavement marking standards for crosswalk markings.
13. Crosswalk markings shall be placed a distance of 24" from the flare on each side of a diagonal curb ramp. Refer to sheet 3 for an example.
14. Curb ramps shall include detectable warning surfaces. Refer to sheet 4 for details of detectable warning surfaces.
15. Where a curb ramp is constructed within existing curb, curb and gutter and/or sidewalk, the existing curb or curb and gutter shall be removed to the nearest joint beyond the curb transition or the extent that no remaining section of curb or curb and gutter is less than 5' long or as directed by the Project Engineer. Existing sidewalks shall be removed to the nearest joint beyond the flare slope or to the extent that no remaining section of sidewalk is less than 5' long or as directed by the Project Engineer.

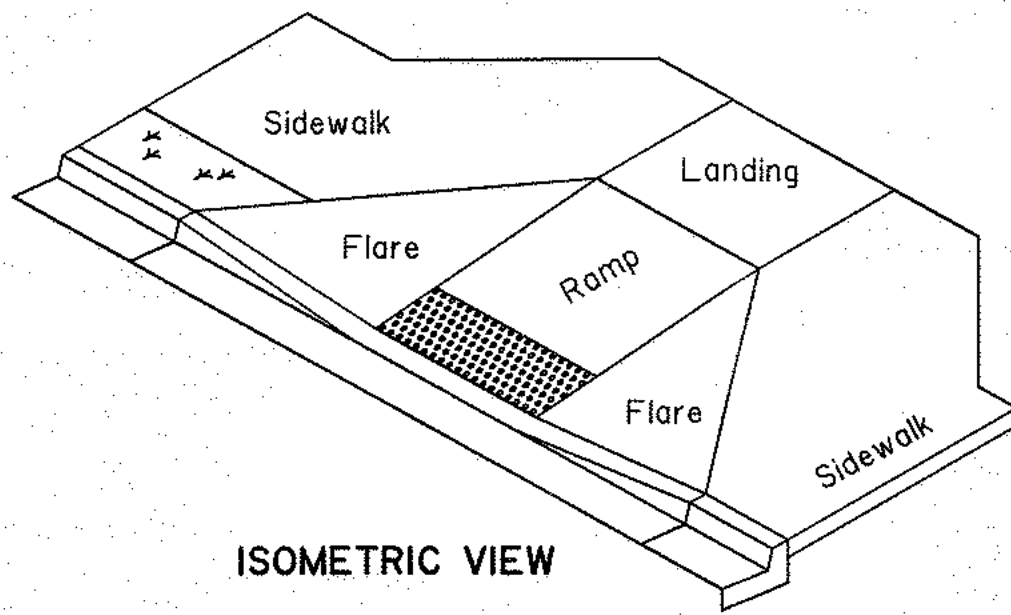
Sidewalks

1. Where a 5' sidewalk cannot be provided due to site constraints, 5'x5' passing areas at intervals not to exceed 200' are required.
2. Where sidewalks and crosswalks are contained within street or highway right-of-way, the grade of the sidewalk or crosswalk shall not exceed the grade of the adjacent street or highway. Where sidewalks are not contained within a street or highway right-of-way, the grade of the sidewalk shall be 5% maximum.
3. Maximum allowable cross slope of sidewalk surfaces is 2%; desired cross slope is 1.5%.
4. Vertical surface discontinuities along a sidewalk shall be 1/2" maximum. Discontinuities between 1/4" and 1/2" shall be beveled at a 1:2 maximum slope.
5. Where sidewalks intersect with streets, detectable warning surfaces are required. Refer to sheet 4 for details of detectable warning surfaces.
6. Traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items shall be placed so as not to obstruct the accessible route.
7. When a sidewalk crosses a driveway and exceeds the 2% maximum cross slope, the driveway or driveway portion shall be reconstructed to meet the 2% maximum cross slope requirement. Refer to driveway standard plans for driveway details.
8. Handrails are not required on sidewalks within highway right-of-way, unless site specific conditions, such as a vertical drop-off, dictate. Where handrails are provided, they must comply with ADAAG 505.
9. To prevent tracking of gravel onto the sidewalk, gravel driveways should be paved from the roadway edge to a point 10' behind the sidewalk or the right-of-way, whichever is less.

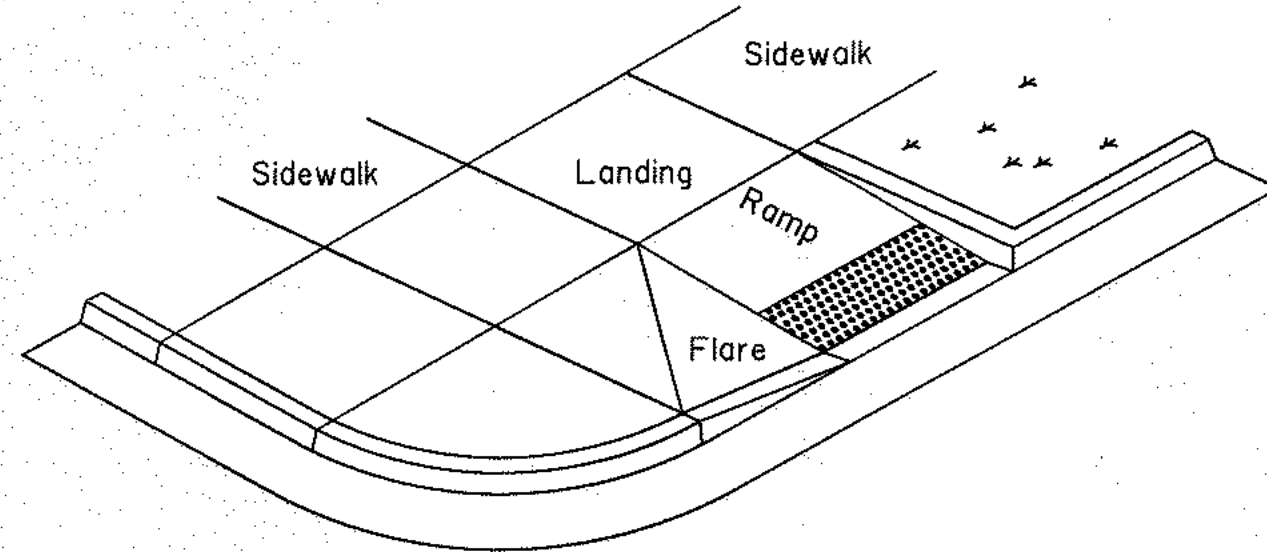
ADA - Americans with Disabilities Act
ADAAG - Americans with Disabilities Act Accessibility Guidelines
Draft PROWAG - Draft Public Rights-of-Way Accessibility Guidelines



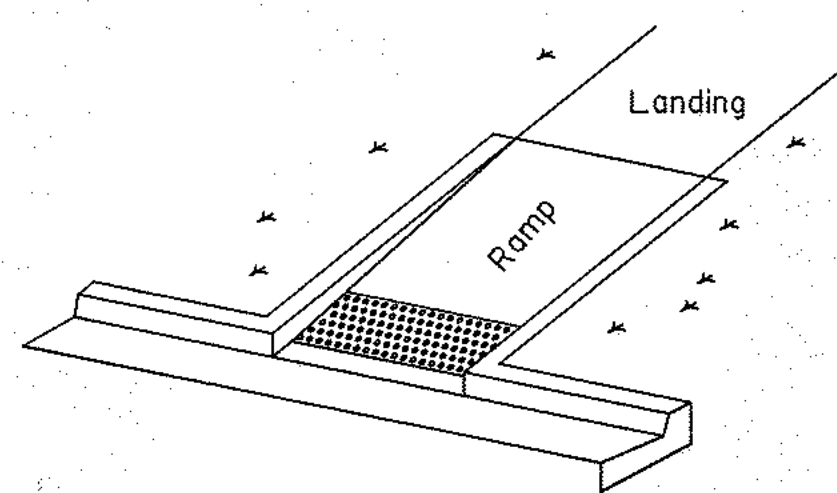
TRANSITION FROM CURB RAMP TO ROADWAY



ISOMETRIC VIEW



ISOMETRIC VIEW



ISOMETRIC VIEW

LEGEND OF PATTERNS

↓ ↓ ↓ ↓ Denotes Non-Walking Surface
Not Part of Pedestrian Path

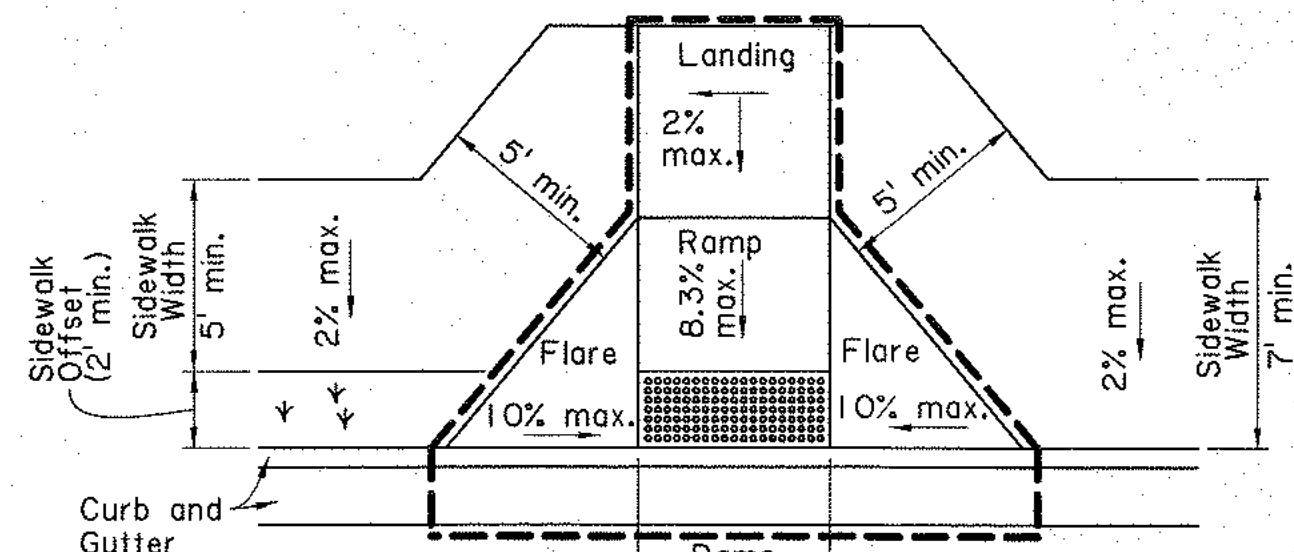
[Pattern] Detectable Warning Surface

--- Limits of Payment

→ Slope

All slopes shown are maximum allowable. The least possible slope that will drain properly should be used.

Curb ramps shall be placed and designed where ponding does not occur at the bottom or on the curb ramp.

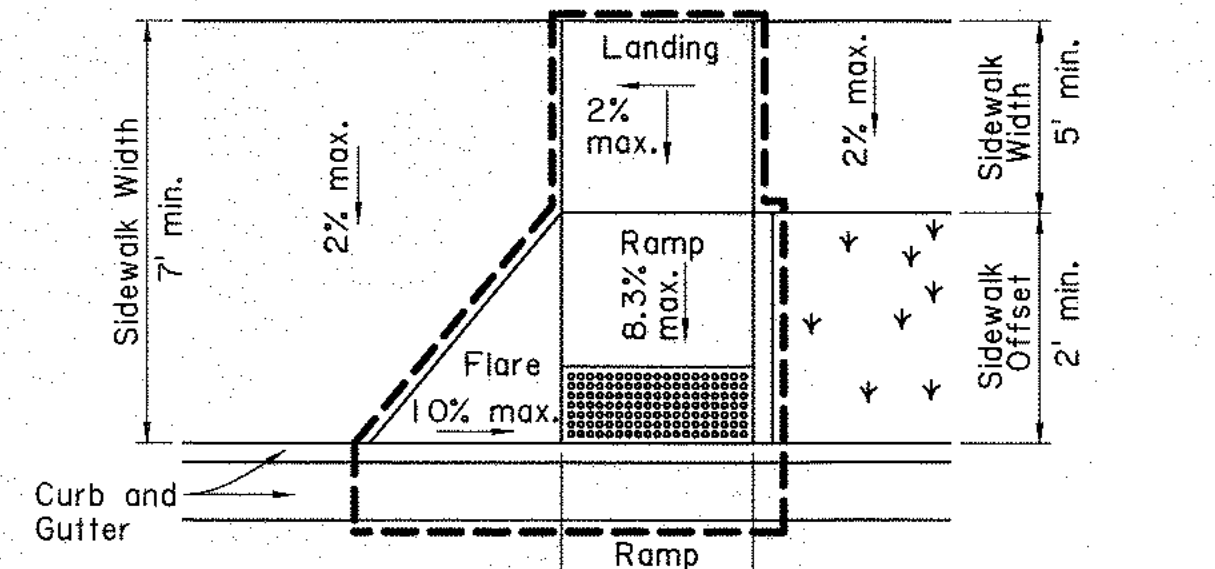


SIDEWALK OFFSET FROM CURB SIDEWALK ADJACENT TO CURB

PLAN VIEW

TYPE 1

THEORETICAL PAY AREA = 12.8 SQ. YDS.

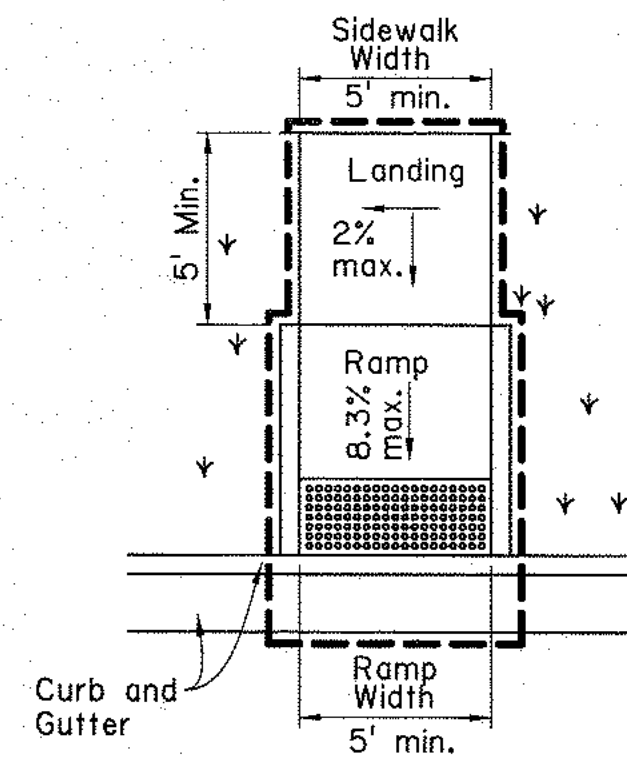


SIDEWALK ADJACENT TO CURB SIDEWALK OFFSET FROM CURB

PLAN VIEW

TYPE 2

THEORETICAL PAY AREA = 10.4 SQ. YDS.

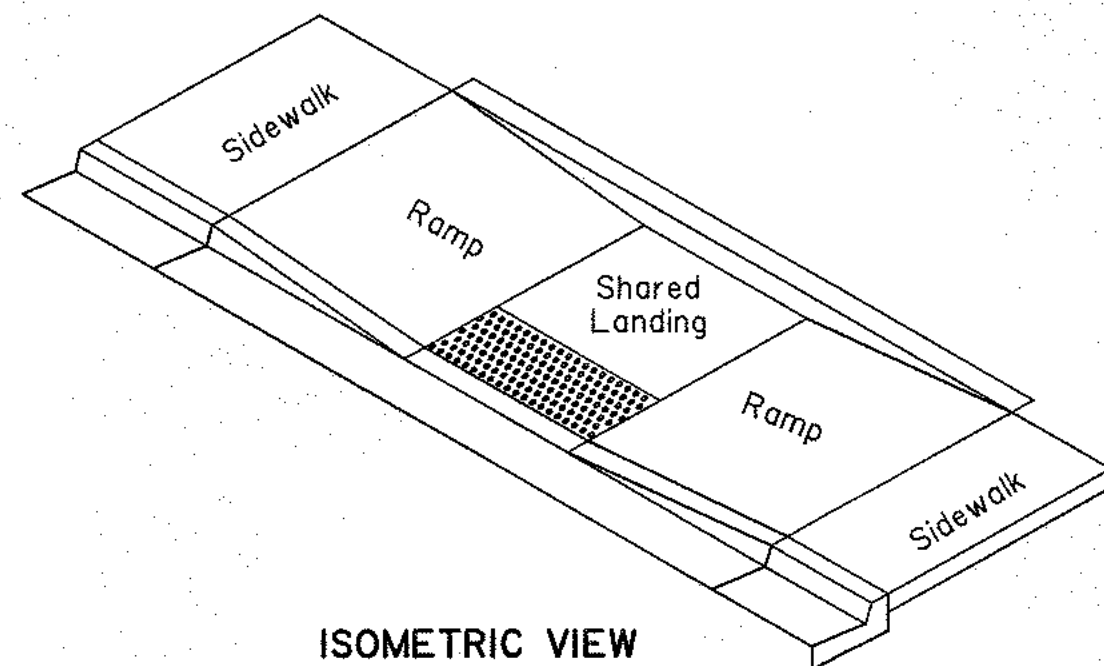


PLAN VIEW

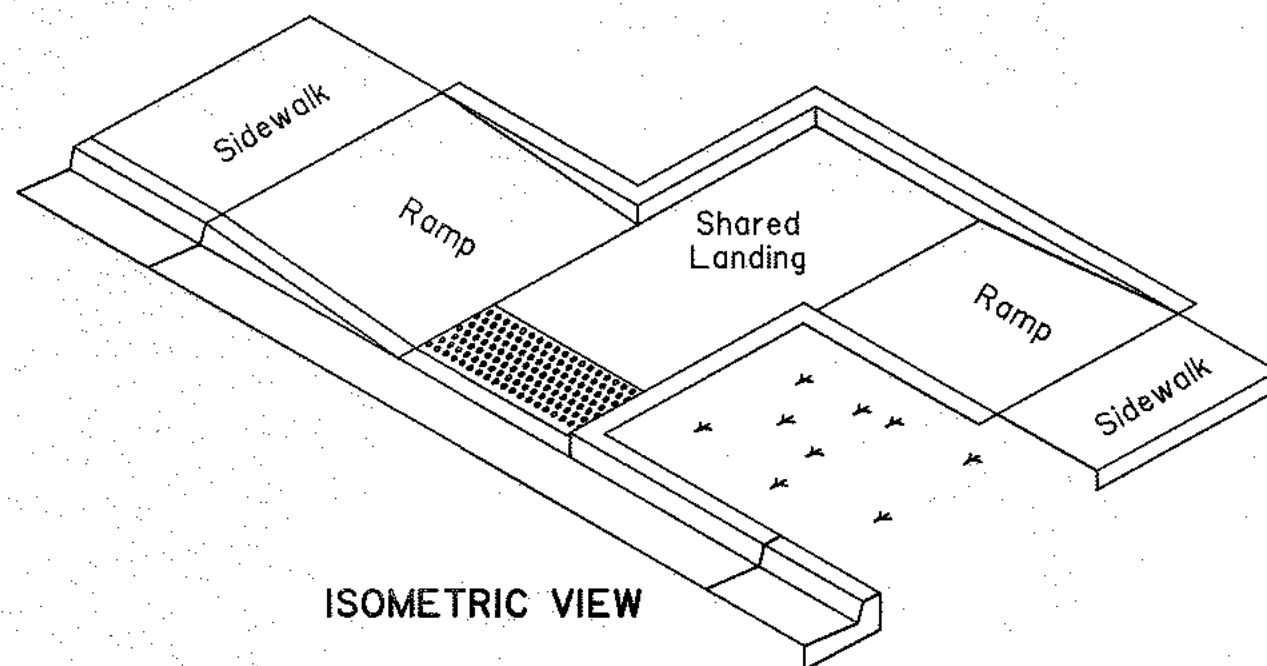
TYPE 3

THEORETICAL PAY AREA = 8.1 SQ. YDS.

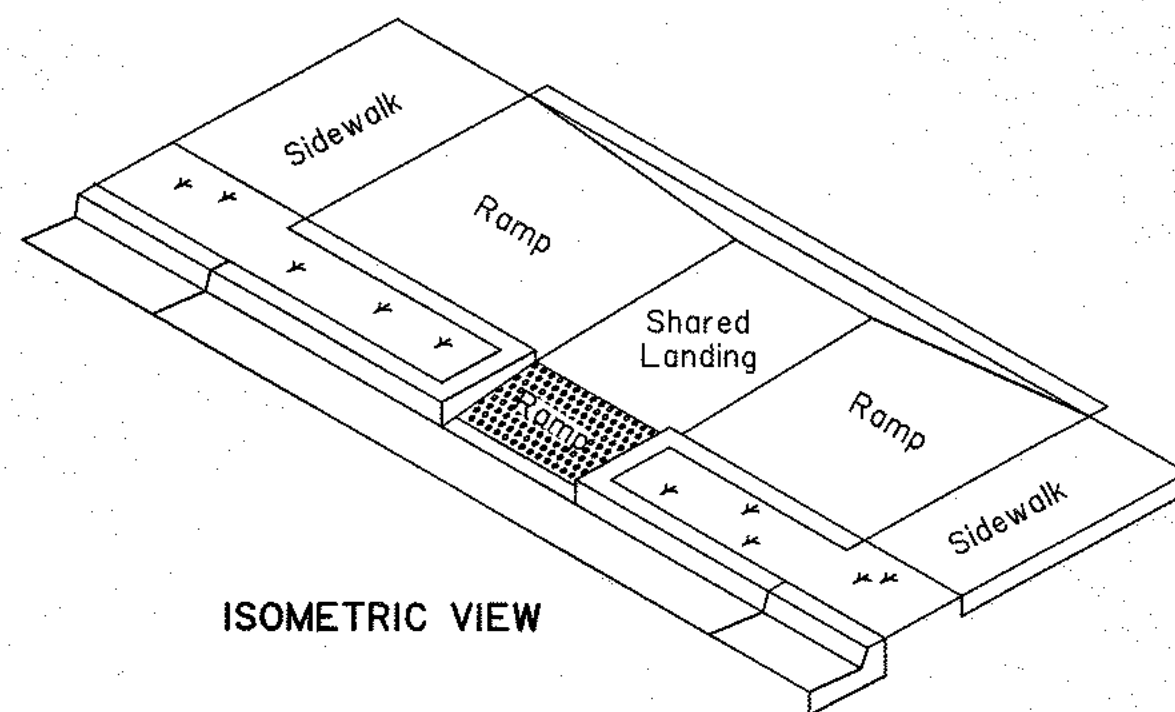
PERPENDICULAR CURB RAMPS
If a level landing of at least 3' cannot be provided, a perpendicular curb ramp should not be used.



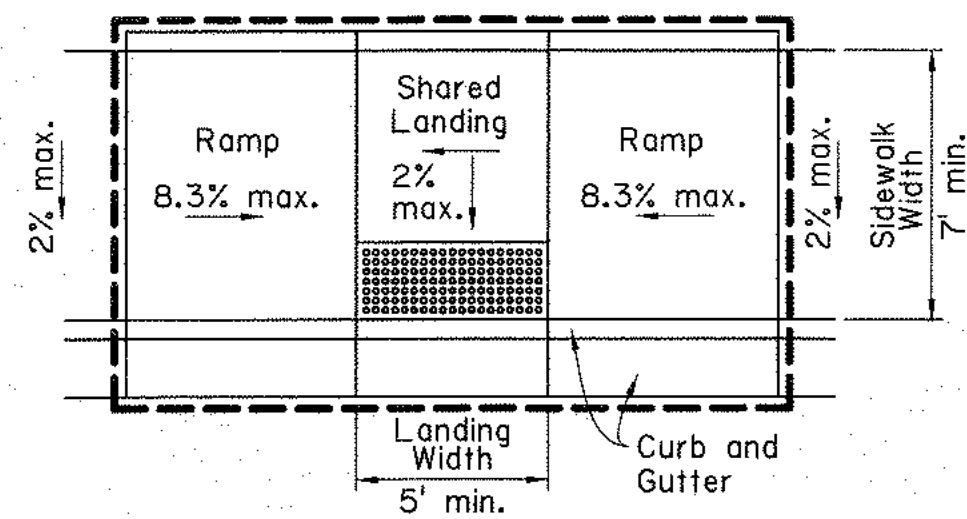
ISOMETRIC VIEW



ISOMETRIC VIEW



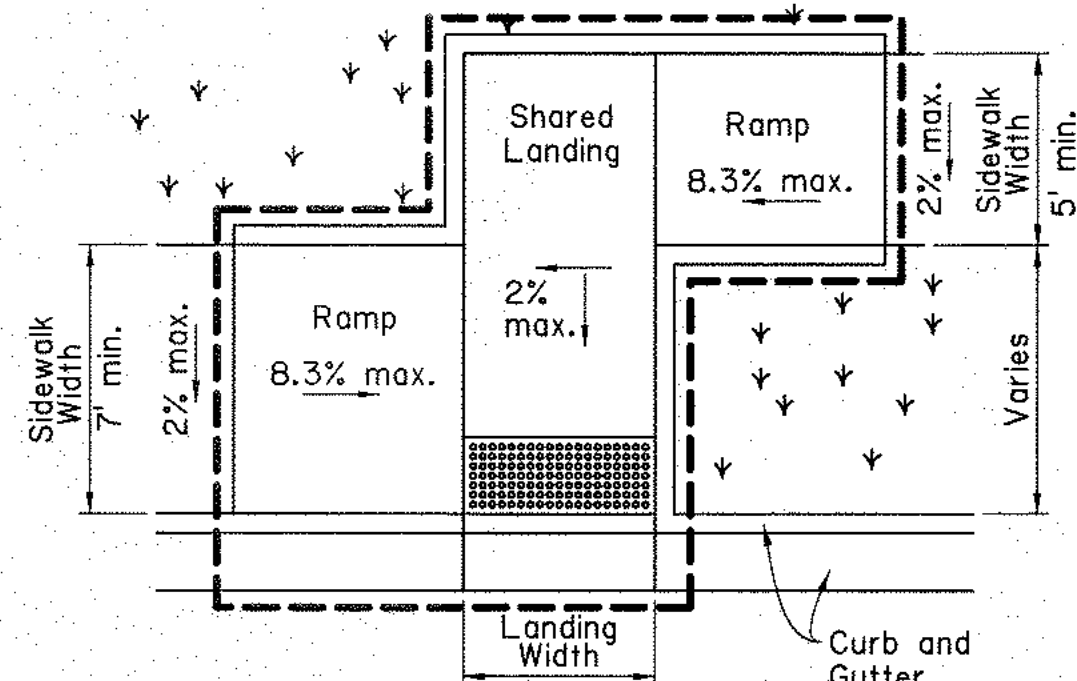
ISOMETRIC VIEW



PLAN VIEW

TYPE 4

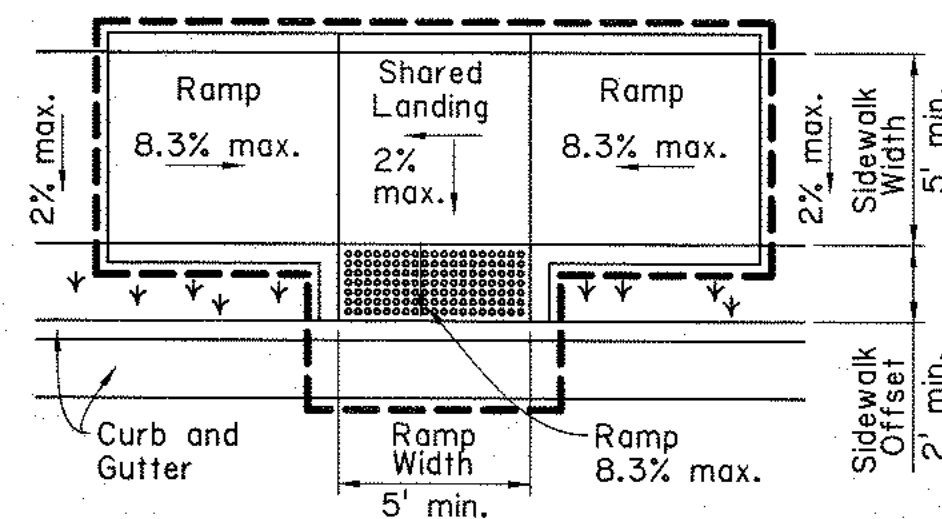
THEORETICAL PAY AREA = 17.9 SQ. YDS.



PLAN VIEW

TYPE 5

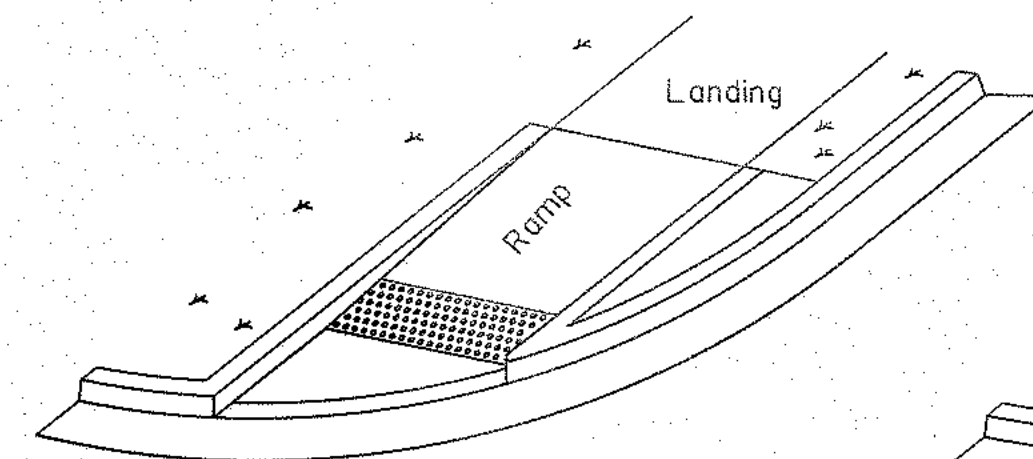
THEORETICAL PAY AREA = 19.1 SQ. YDS.



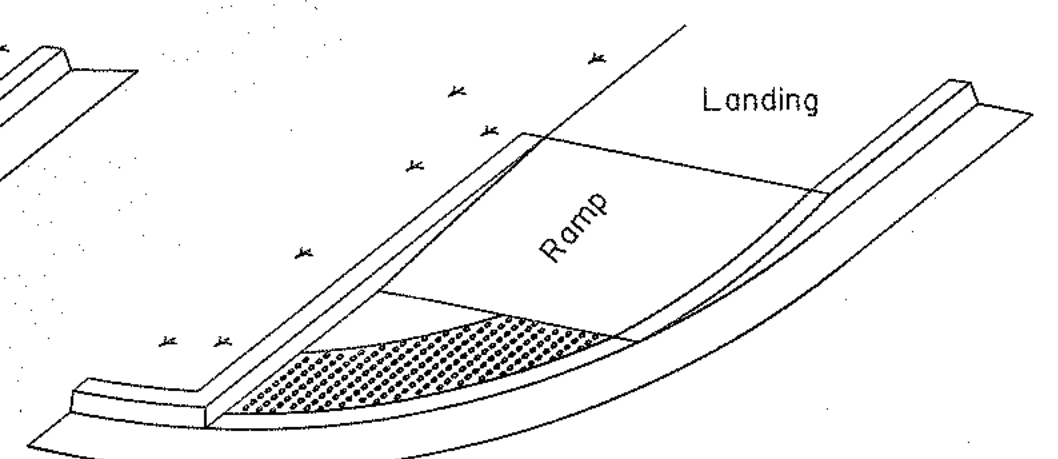
PLAN VIEW

TYPE 6

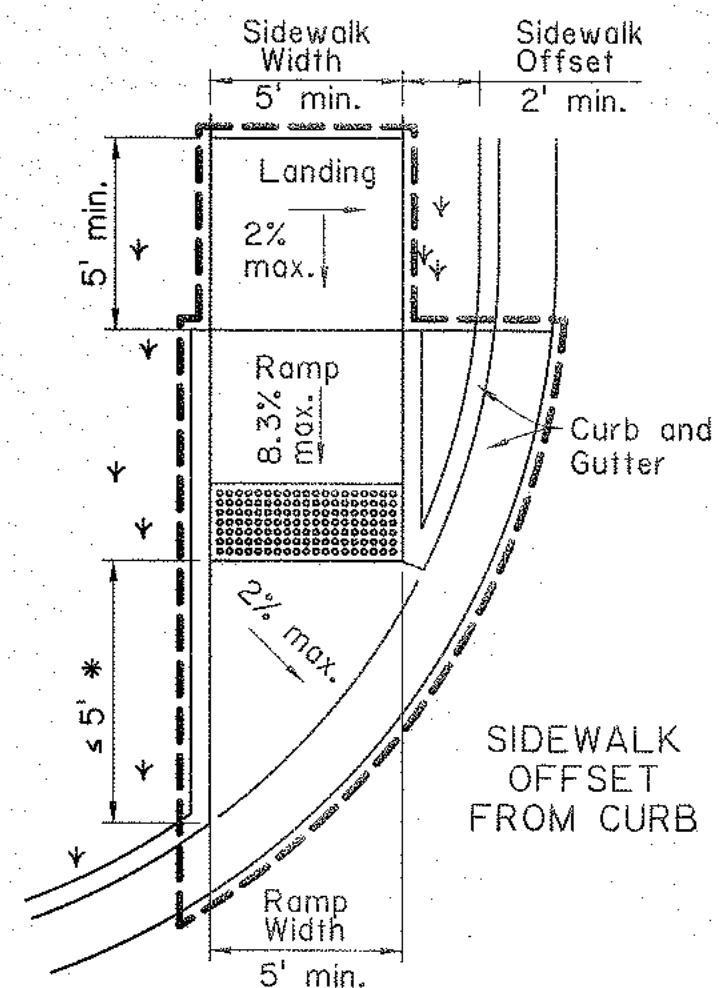
THEORETICAL PAY AREA = 13.7 SQ. YDS.



ISOMETRIC VIEW



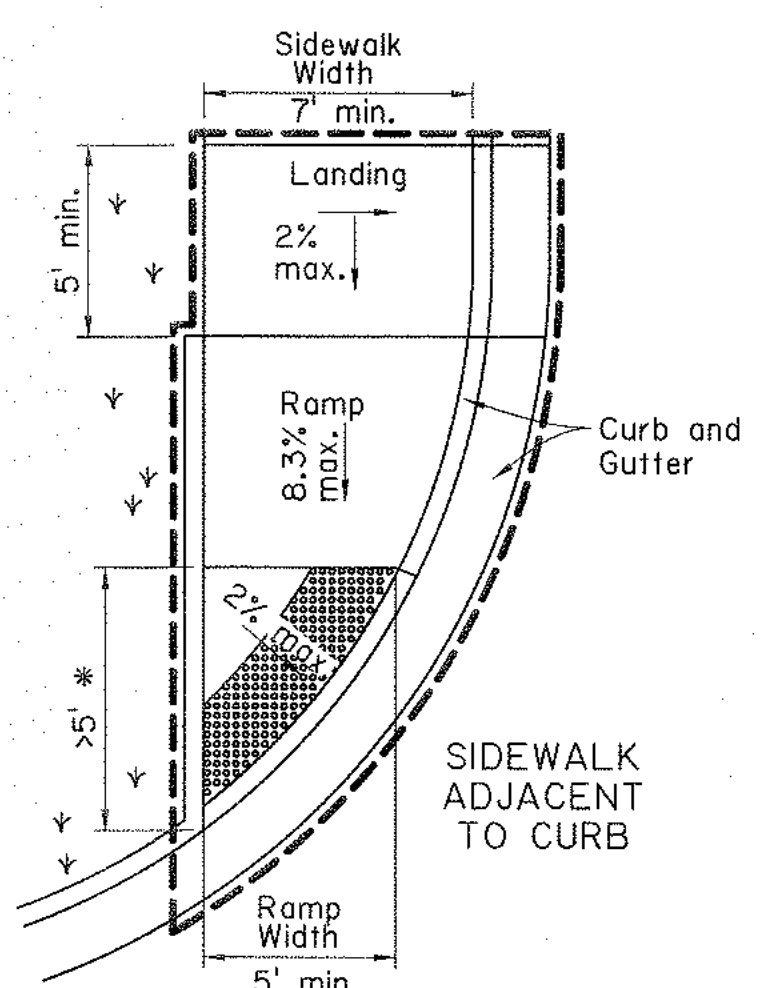
ISOMETRIC VIEW



PLAN VIEW

TYPE 7

THEORETICAL PAY AREA = 13.3 SQ. YDS.



PLAN VIEW

TYPE 8

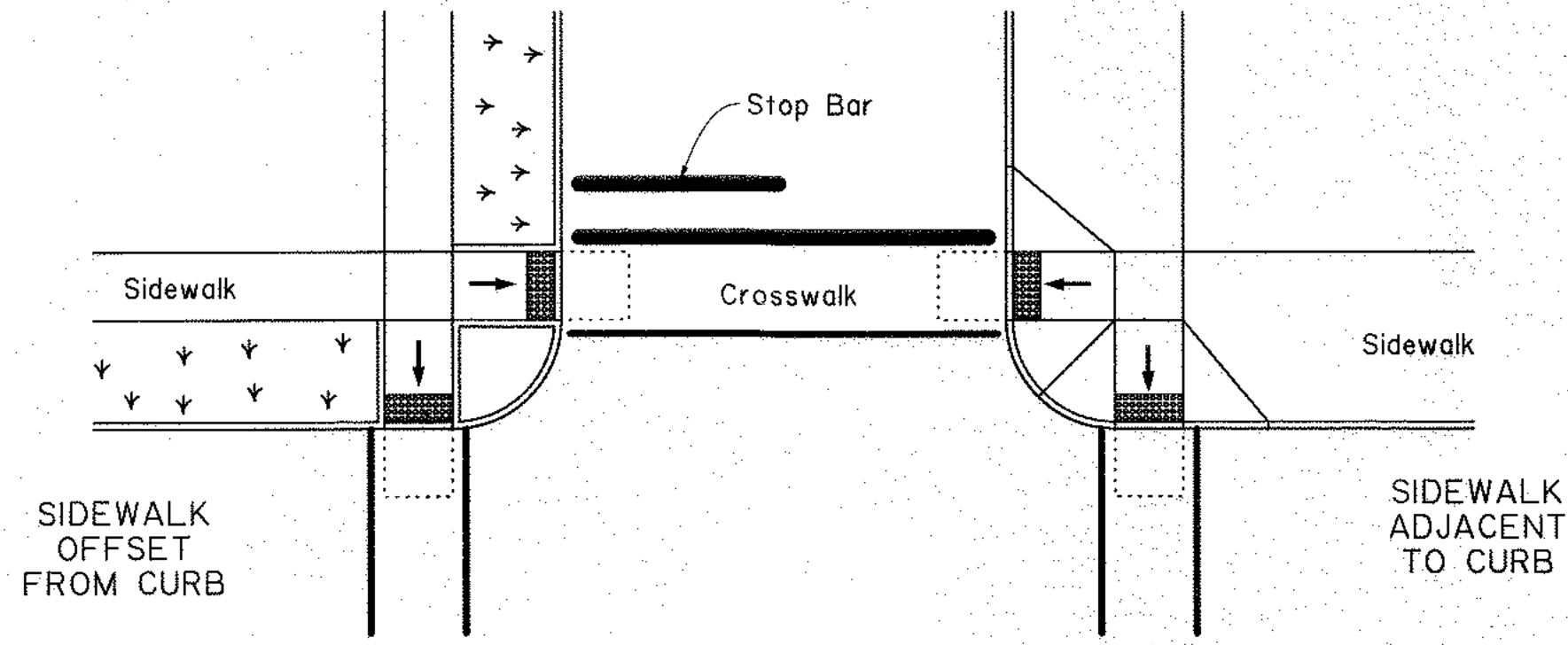
THEORETICAL PAY AREA = 15.5 SQ. YDS.

DIRECTIONAL CURB RAMPS

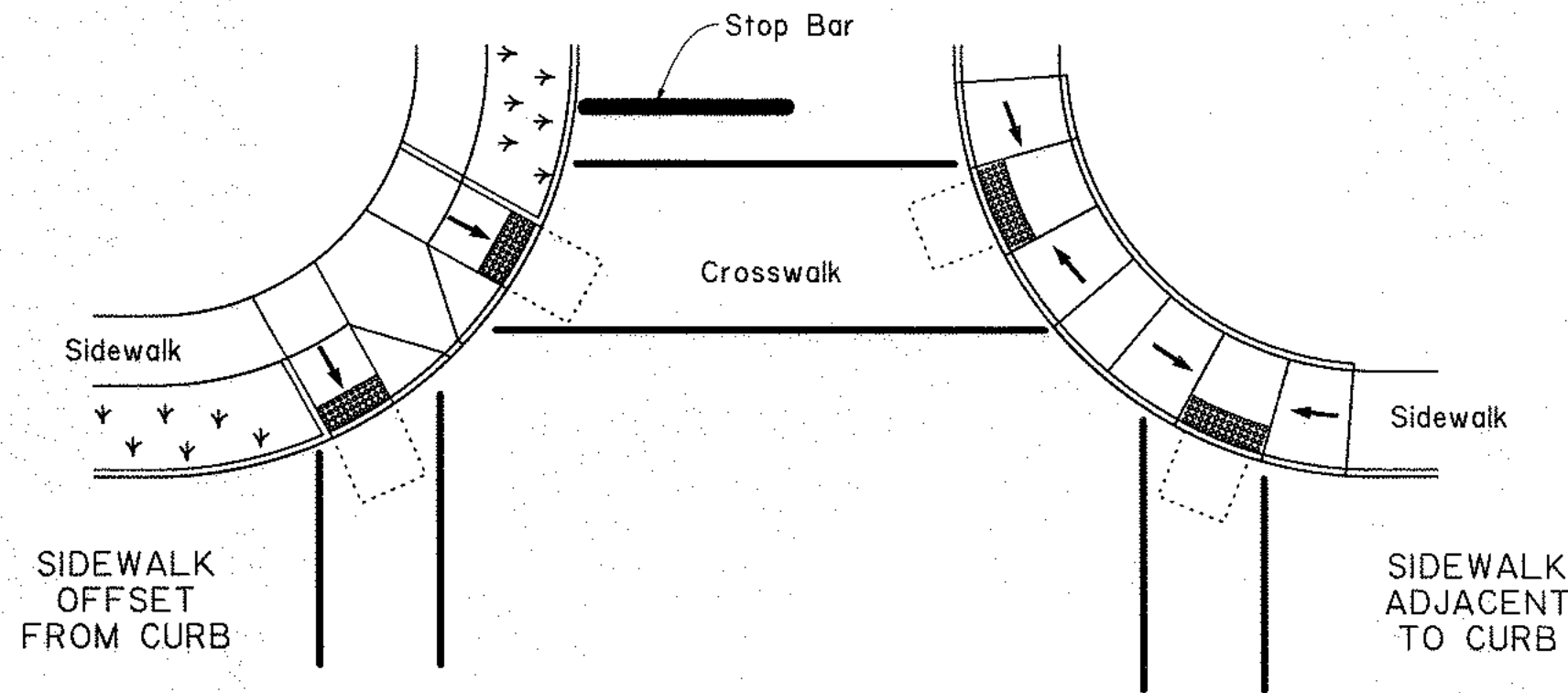
* Where the grade break is less than or equal to 5' from the back of curb, place detectable warning surface as shown in Type 7. Where grade break is greater than 5' from the back of the curb, place detectable warning surface as shown in Type 8.

PARALLEL CURB RAMPS

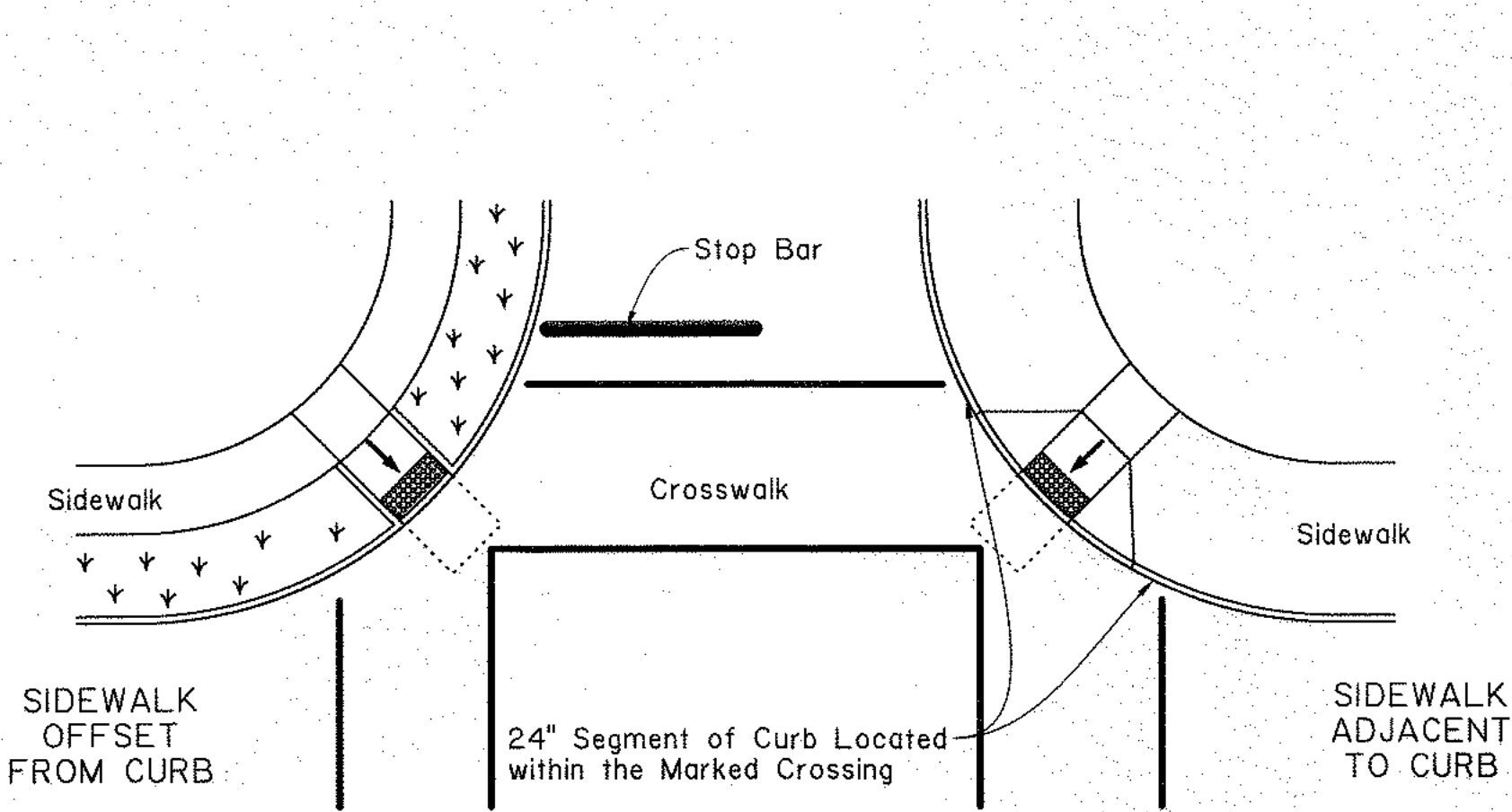
COMBINATION CURB RAMP



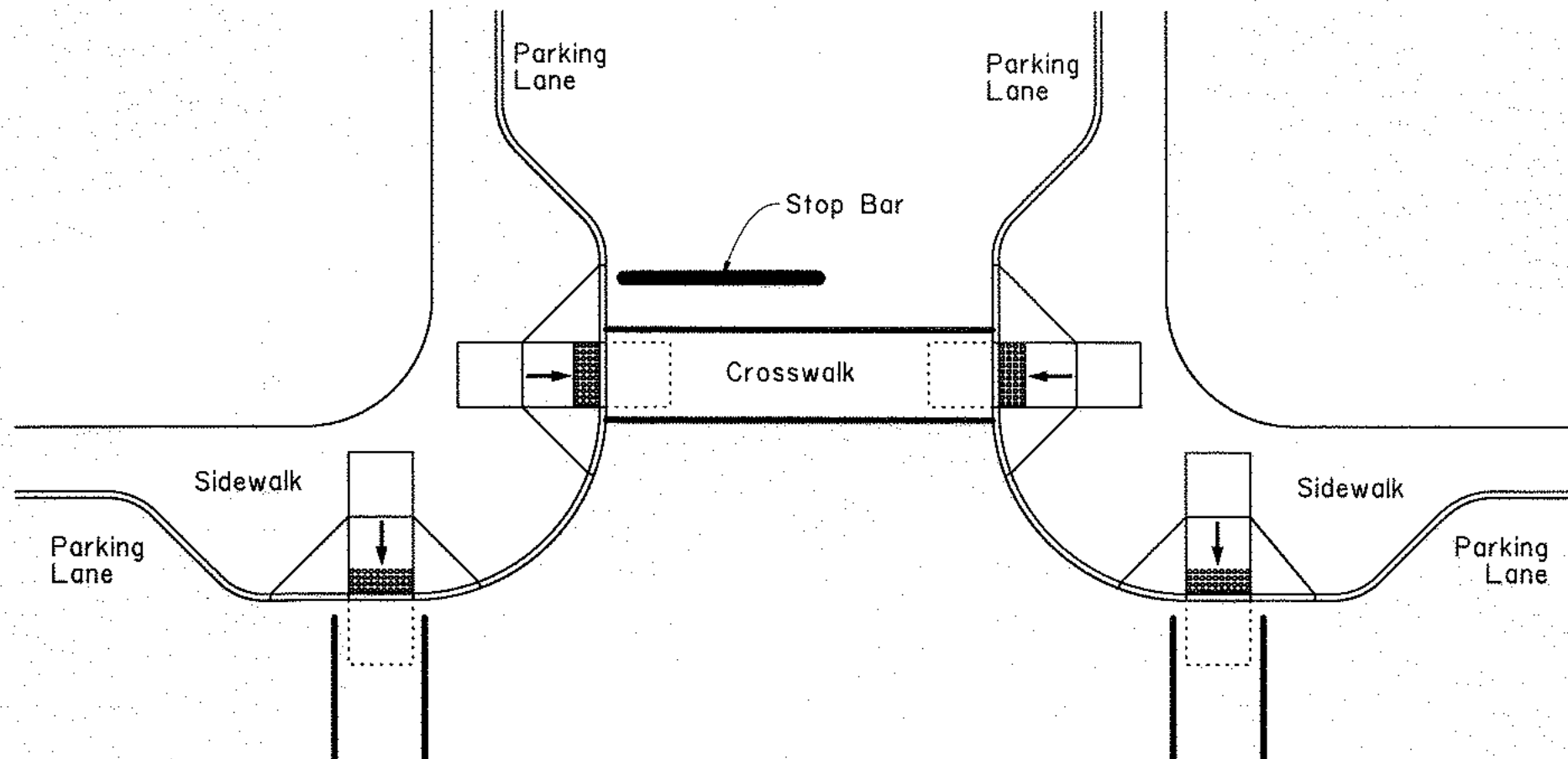
DETAIL A: CURB RAMPS PLACED OUTSIDE THE RADIUS OF A CURVE



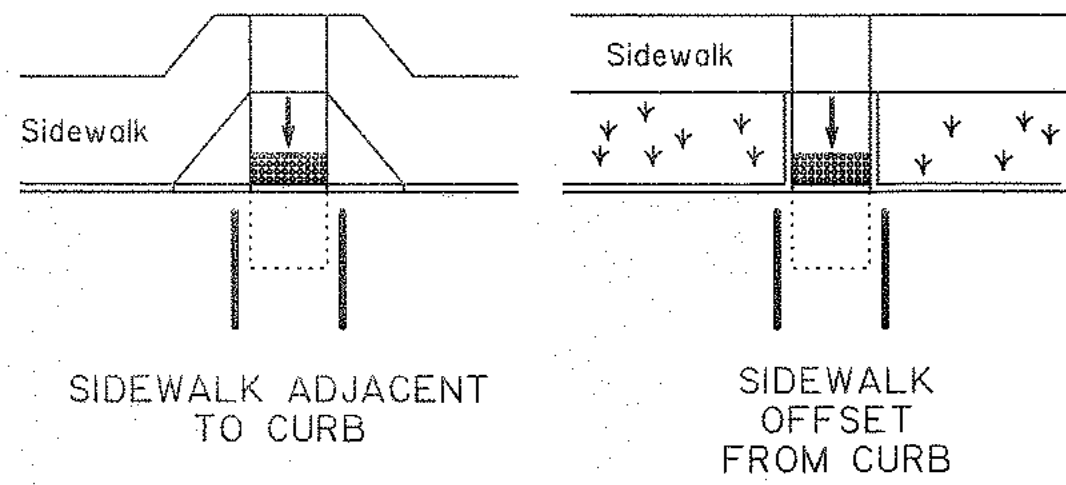
DETAIL B: PAIRED CURB RAMPS PLACED WITHIN THE RADIUS OF A CURVE



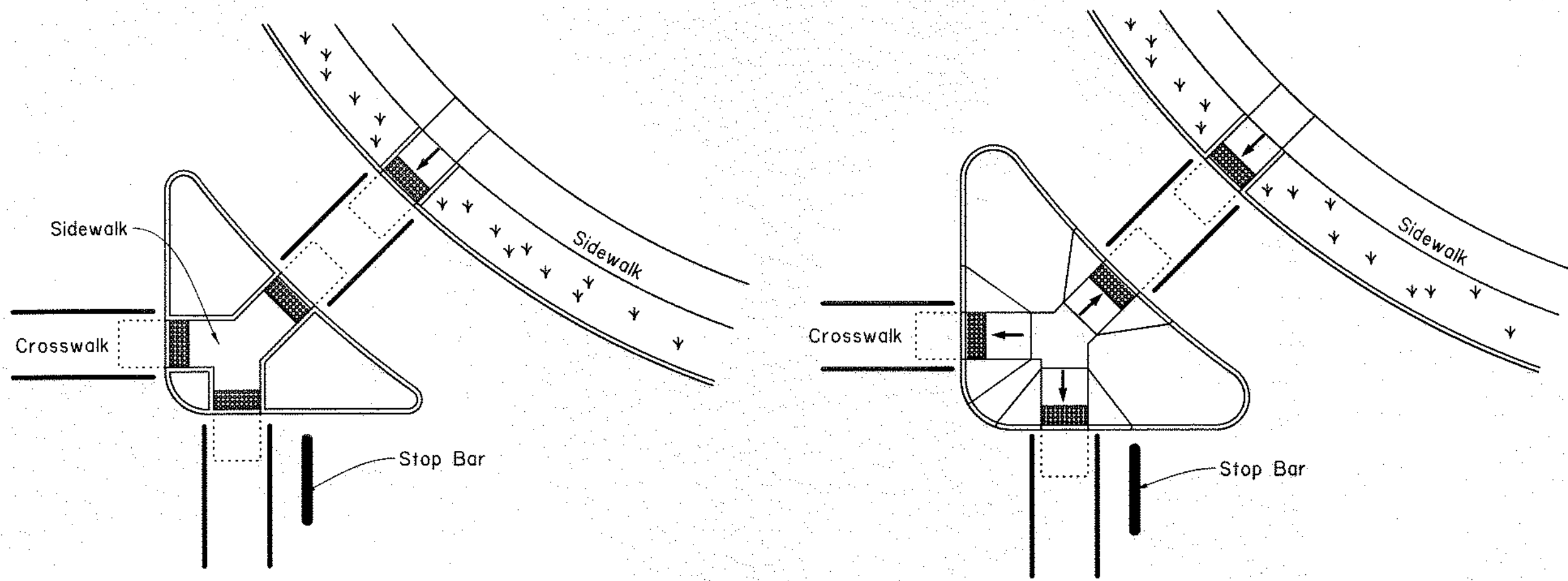
DETAIL C: SINGLE CURB RAMP PLACED ON APEX OF A CURVE (DIAGONAL CURB RAMPS)



DETAIL D: CURB RAMPS PLACED ON CURB EXTENSION (BULB-OUTS)



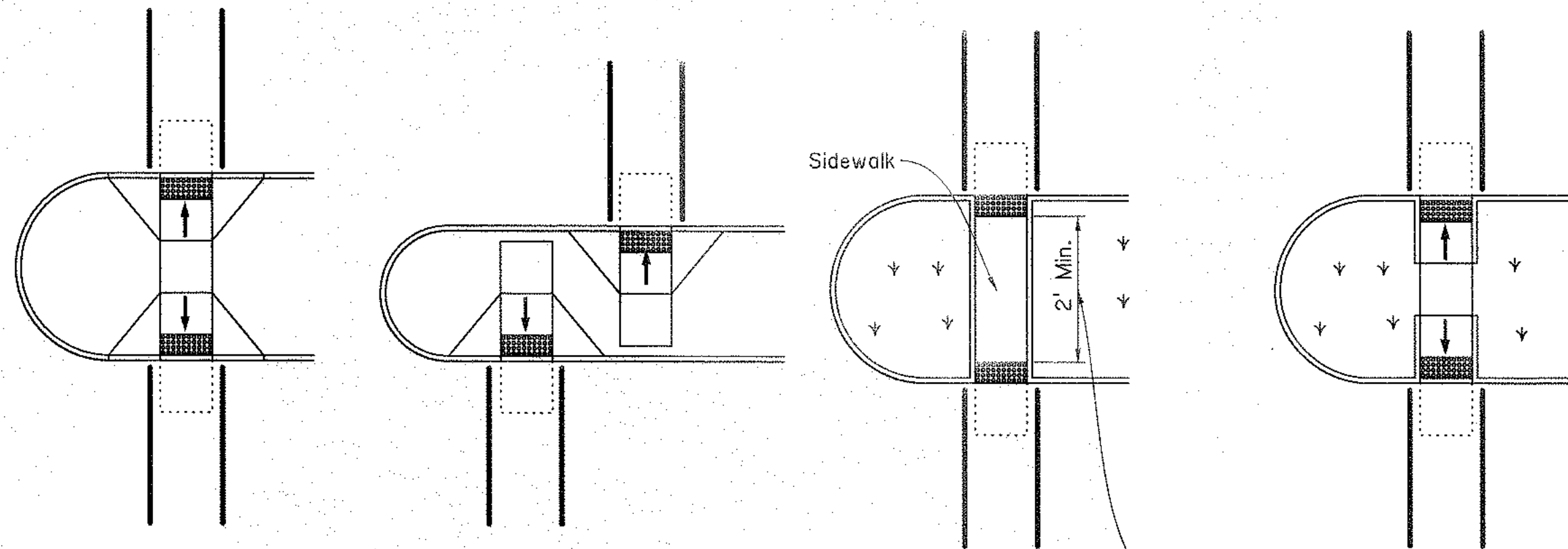
DETAIL E: CURB RAMPS PLACED AT MID-BLOCK CROSSING



CUT-THROUGH ISLAND

RAISED ISLAND

DETAIL F: SIDEWALKS AND CURB RAMPS AT ISLANDS



if 2' cannot be provided between detectable warning surfaces, detectable warning surfaces shall not be installed.

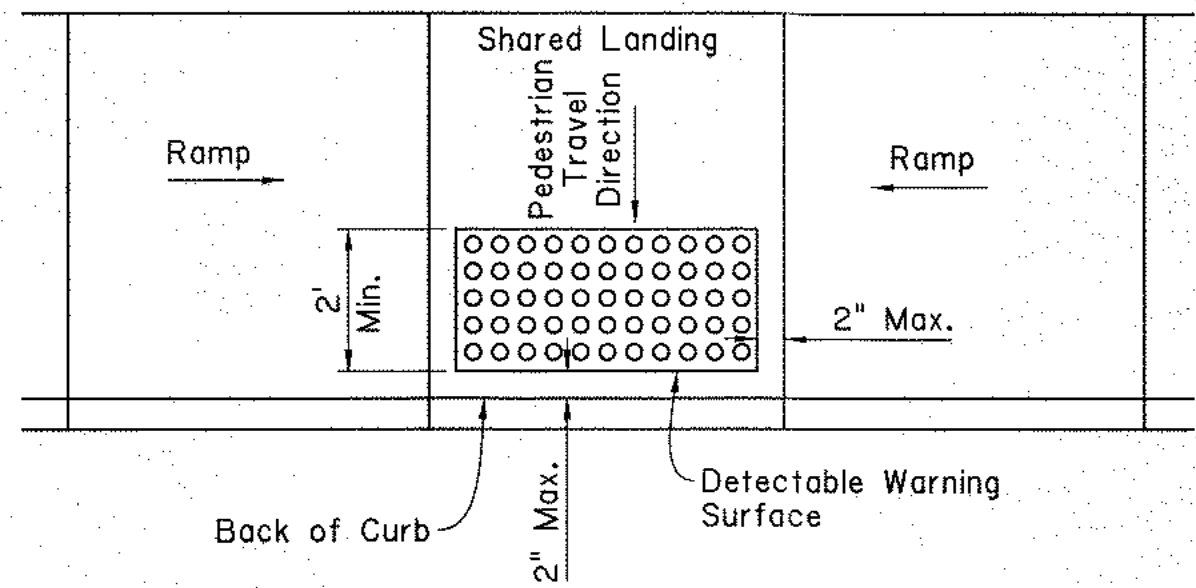
DETAIL G: SIDEWALKS AND CURB RAMPS AT MEDIANS

GENERAL NOTES:

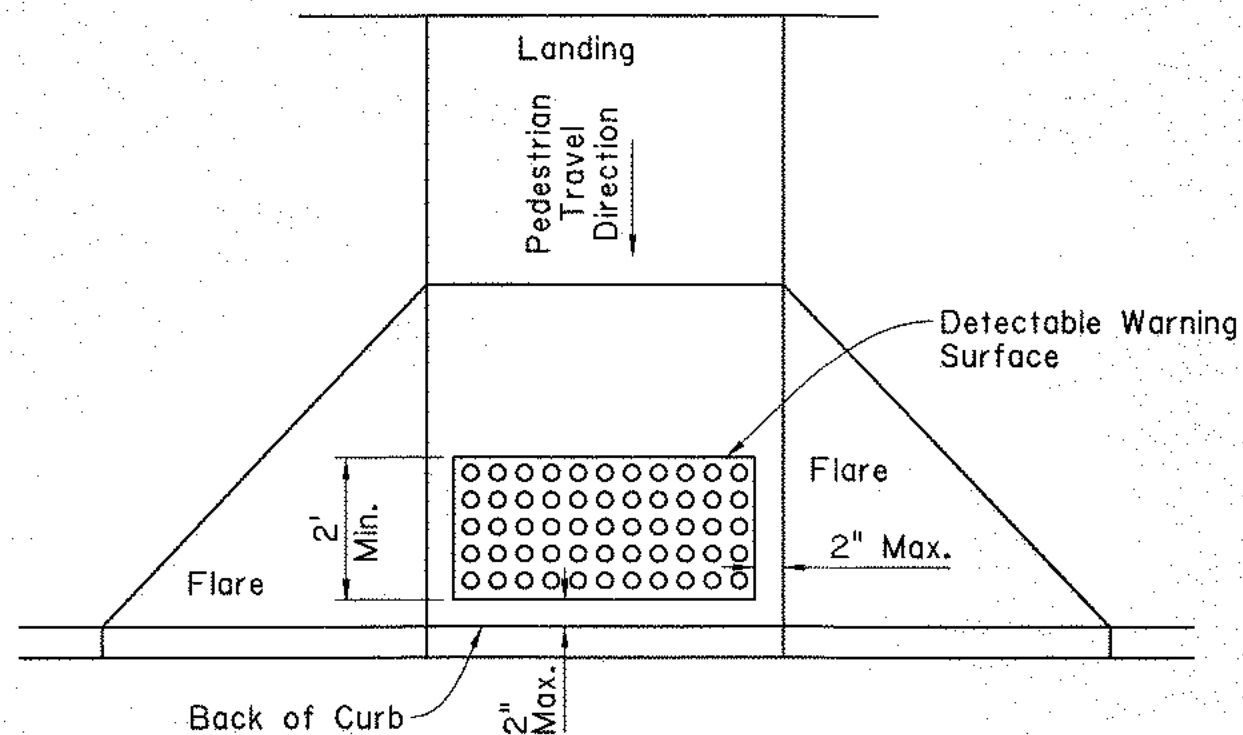
1. Curb ramps placed outside the radius of the curve are preferred. Paired curb ramps placed within the radius of a curve are acceptable. Single curb ramps placed on the apex of a curb should not be used unless site constraints, such as the location of drainage structures, require it.
2. Details and dimensions of curb ramps, sidewalks, and detectable warning surfaces are shown elsewhere.
3. Striping (crosswalks and stop bars) are shown for reference only. Refer to the pavement marking standard plans for striping details.

LEGEND

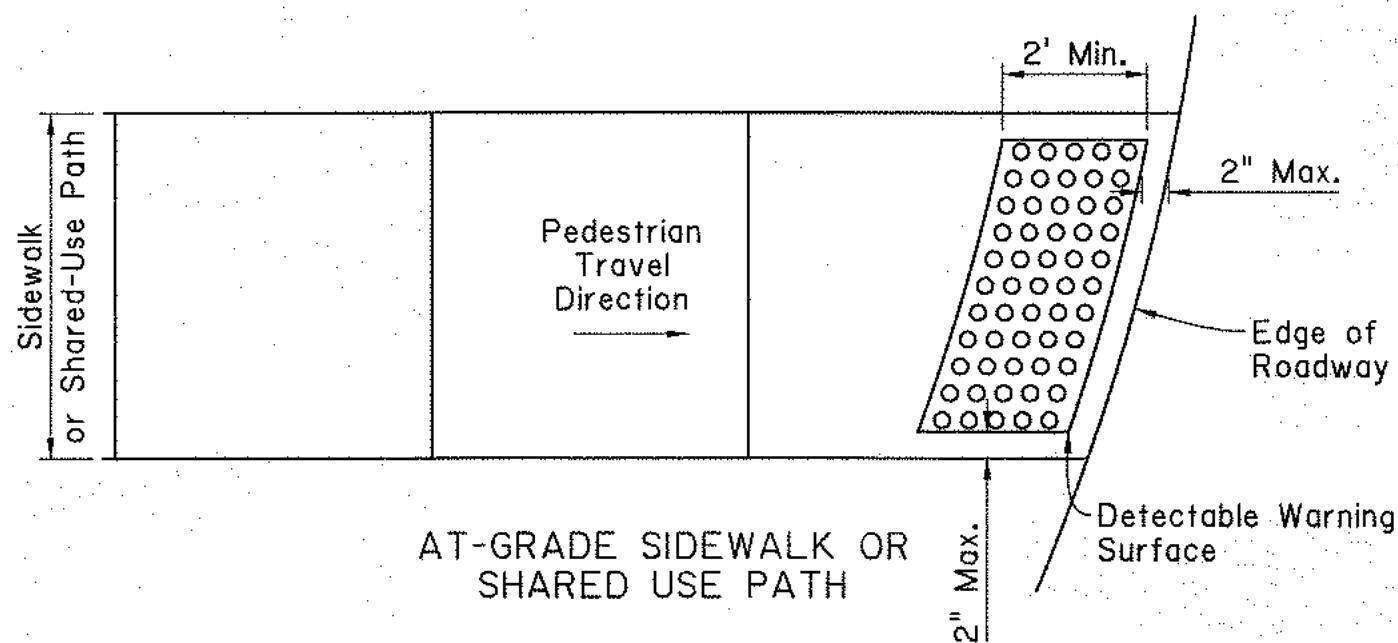
- Denotes non-walking surface not part of pedestrian path
- Detectable Warning Surface
- Maneuvering Space (4'x4' Min.)
- Ramp Surface



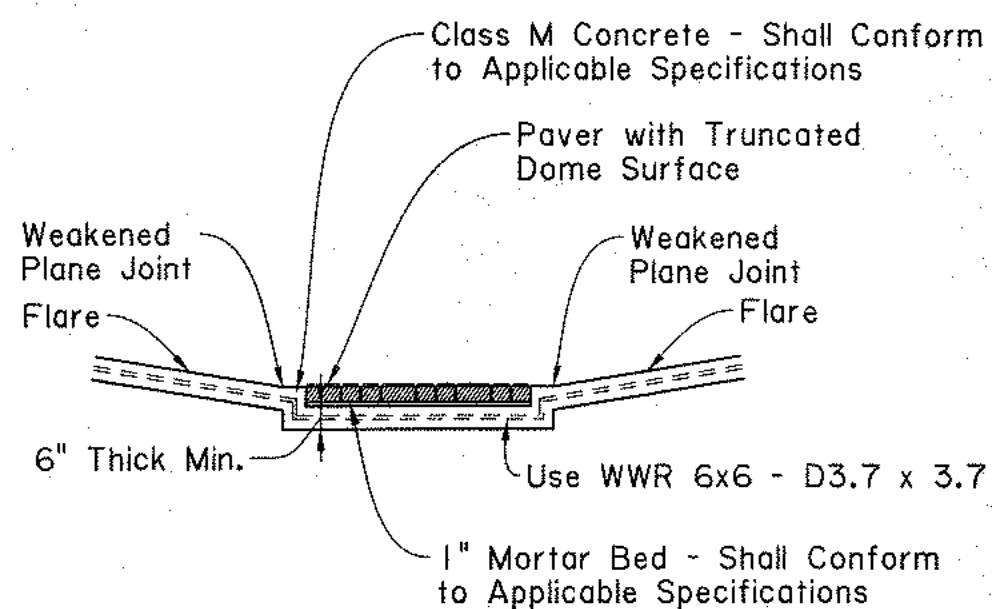
PARALLEL CURB RAMP



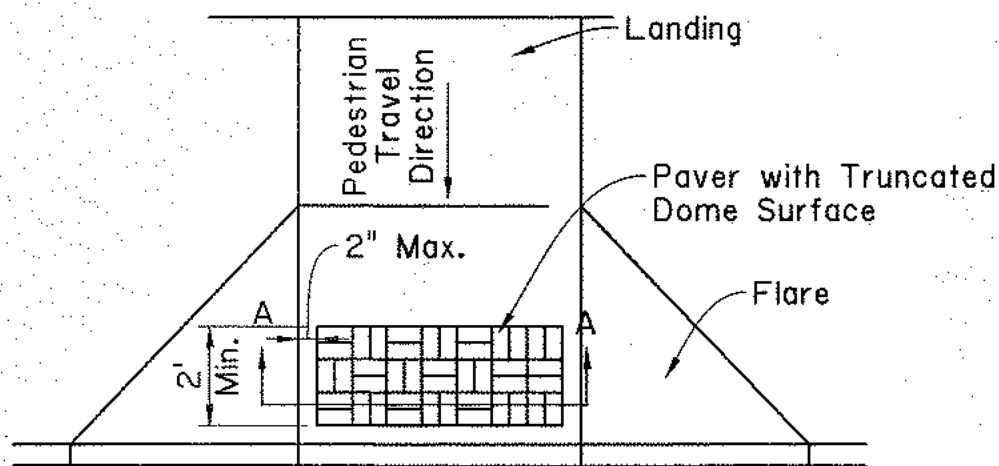
PERPENDICULAR CURB RAMP



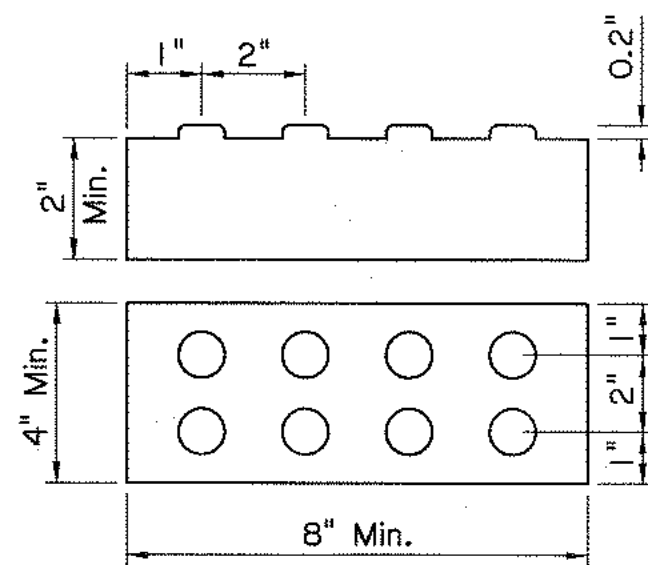
TYPICAL PLACEMENT OF
DETECTABLE WARNING SURFACE



SECTION A-A



TRUNCATED DOME PATTERN CURB RAMP



PAVER WITH TRUNCATED
DOME SURFACE

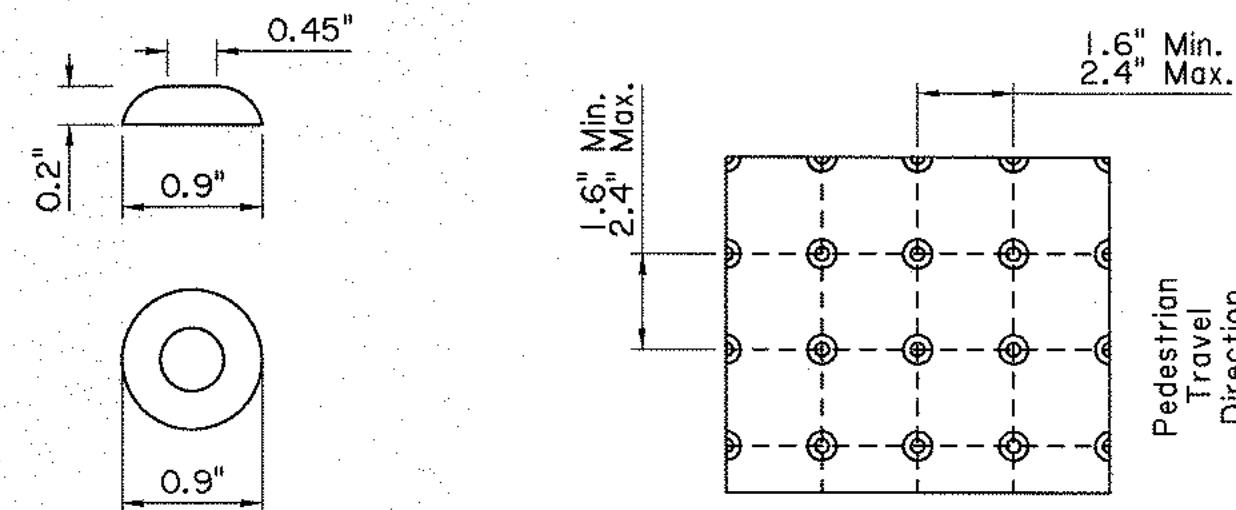
Notes:

Paver units shall meet all requirements of the applicable ASTM Standards. Layout pattern shall be appropriate for size of paver used. 4"x6" pavers shall be laid out in a 2x2 basket weave pattern. 12"x12" pavers shall be laid out in a block pattern.

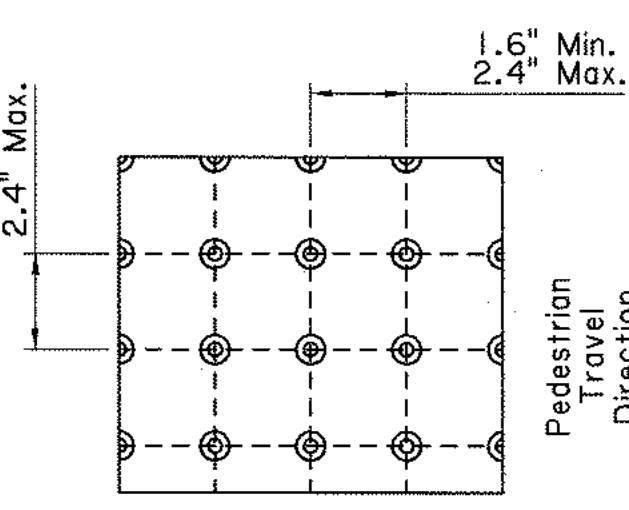
Paver units shall be saw cut only and any cut unit shall not be less than 25% of a full unit.

Installation should meet compliance with Draft PROWAG R302.7.2 (Vertical Surface Discontinuities). Vertical surface discontinuities shall be 1/2" maximum. Discontinuities between 1/4" and 1/2" shall be beveled at a 1:2 maximum slope.

DETECTABLE WARNING SURFACE
PAVER OPTION



TRUNCATED DOME



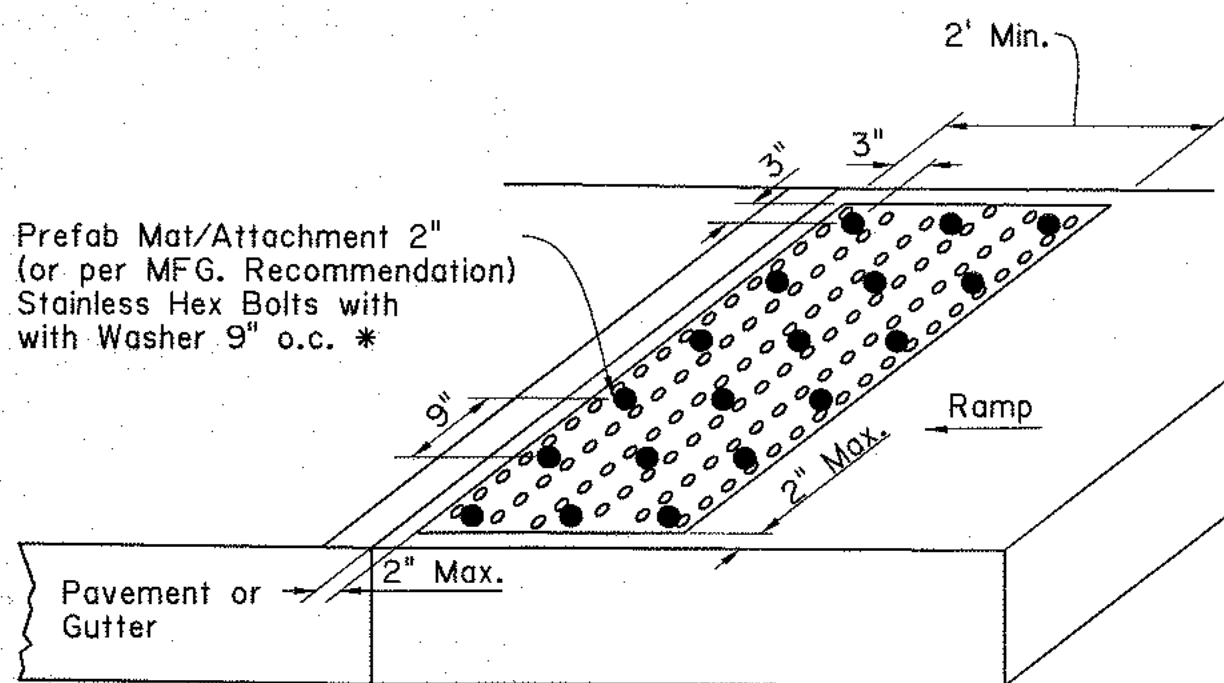
TRUNCATED DOME SPACING

Notes:

Domes shall be arranged in a square in-line pattern or radial pattern

Color Fastness: Paver's composite coloring and ultra-violet stabilization must be homogeneous through the product.

TRUNCATED DOME DETAILS

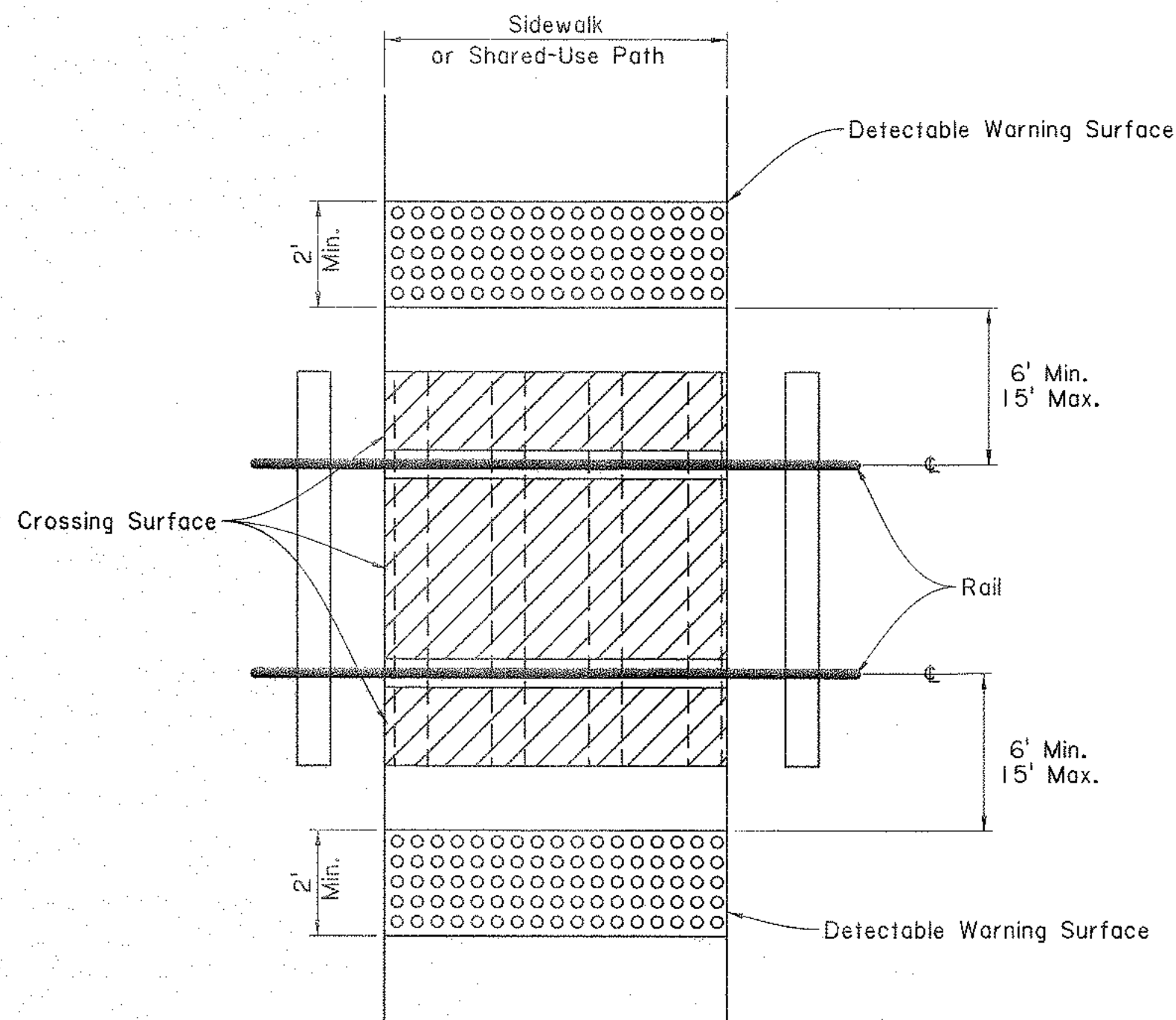


*Note: Retrofit application placed on top of existing ramp with drilled and epoxied bolts. Epoxy full surface area per manufacturer's recommendation.

PREFABRICATED MAT OPTION
(INLAID)

GENERAL NOTES:

- For ADA compliance, detectable warning surfaces must be provided on all pedestrian curb ramps, medians and pedestrian refuge islands (width 6' or greater), railroad crossings and at-grade sidewalk and shared-use paths intersecting with roadways.
- Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with ADA guidelines. The surface must contrast visually with adjoining surfaces, including side flares, in accordance with Section 706 of the Standard Specifications. Color for detectable warning surface shall contrast visually with adjoining surfaces, either light-on-dark or dark-on-light.
- Detectable warning surfaces must be slip resistant and not allow water to accumulate.
- Truncated domes should be aligned perpendicular or radial to the grade break between the curb ramp or at-grade sidewalk and the street.
- Detectable warning surfaces shall be a minimum of 24" in depth in direction of pedestrian travel and extend the full width of the ramp run or landing where the pedestrian access route enters the street. Some detectable warning products may require a concrete border. The concrete border should not exceed 2".
- Detectable warning surfaces shall be placed at the back of curb or no greater than 5' from the back of curb. Detectable warning surfaces may be curved along the corner radius. Refer to sheet 2 for typical placement of detectable warning surfaces on curb ramp types.
- Detectable warning surfaces may be stamped, constructed of brick pavers or inlaid prefabricated mats attached by epoxy adhesive and mechanical attachment. Other detectable warning installations may be installed with approval from the Project Engineer, provided that the detectable warning surface meets ADA guidelines. No painted surfaces will be allowed.
- Any retrofit application of detectable warning surfaces must have beveled edges. The beveled edge shall not exceed a slope greater than 1:2.



PLAN VIEW

LOCATION OF DETECTABLE WARNING SURFACES
AT RAILROAD CROSSINGS

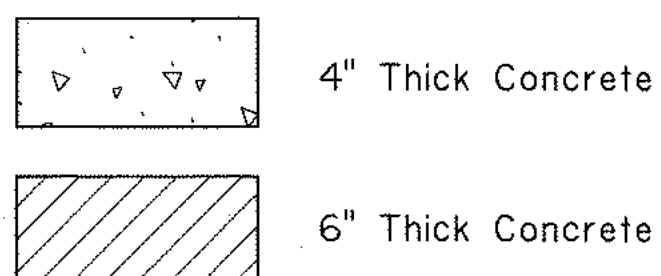
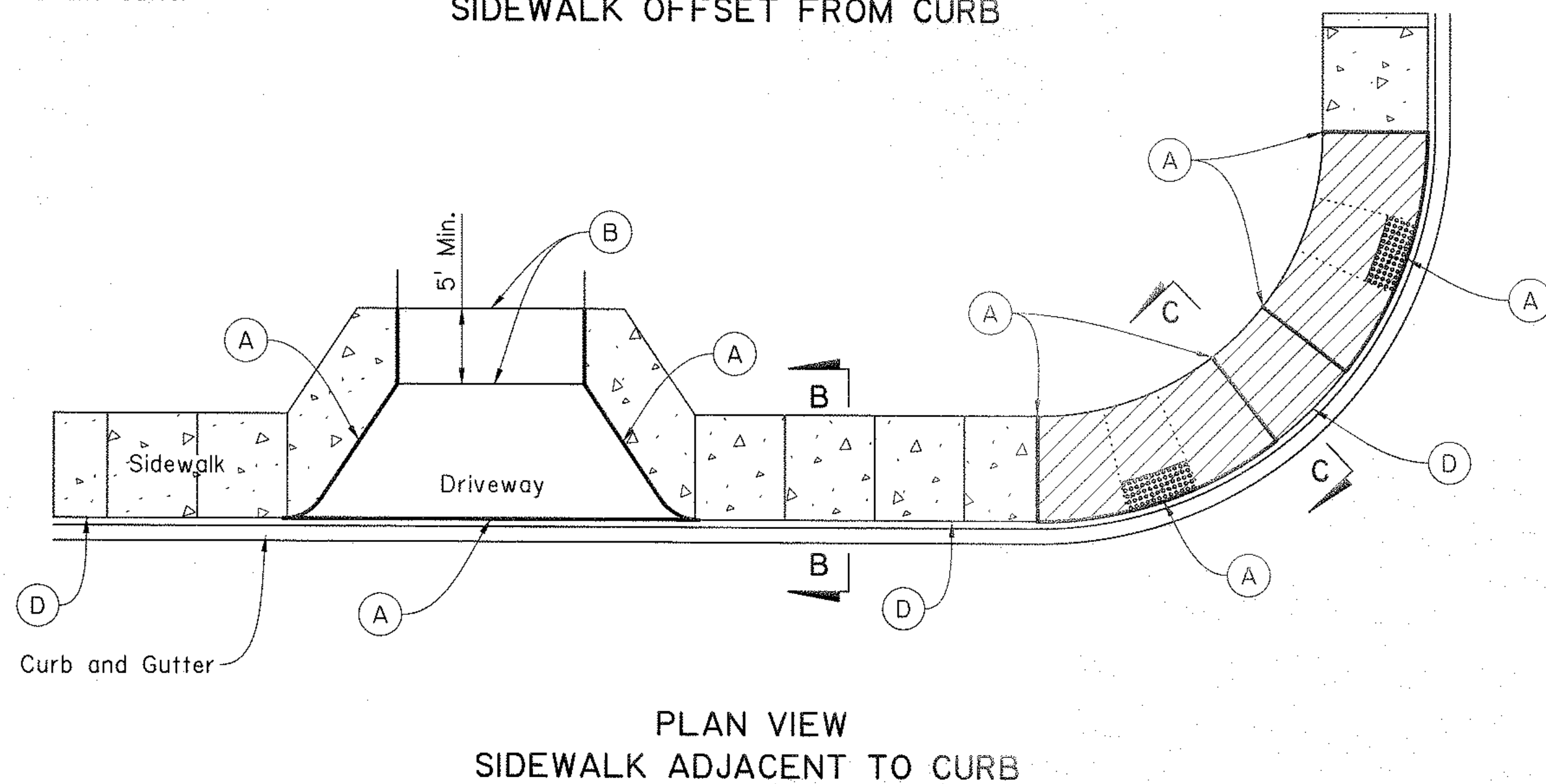
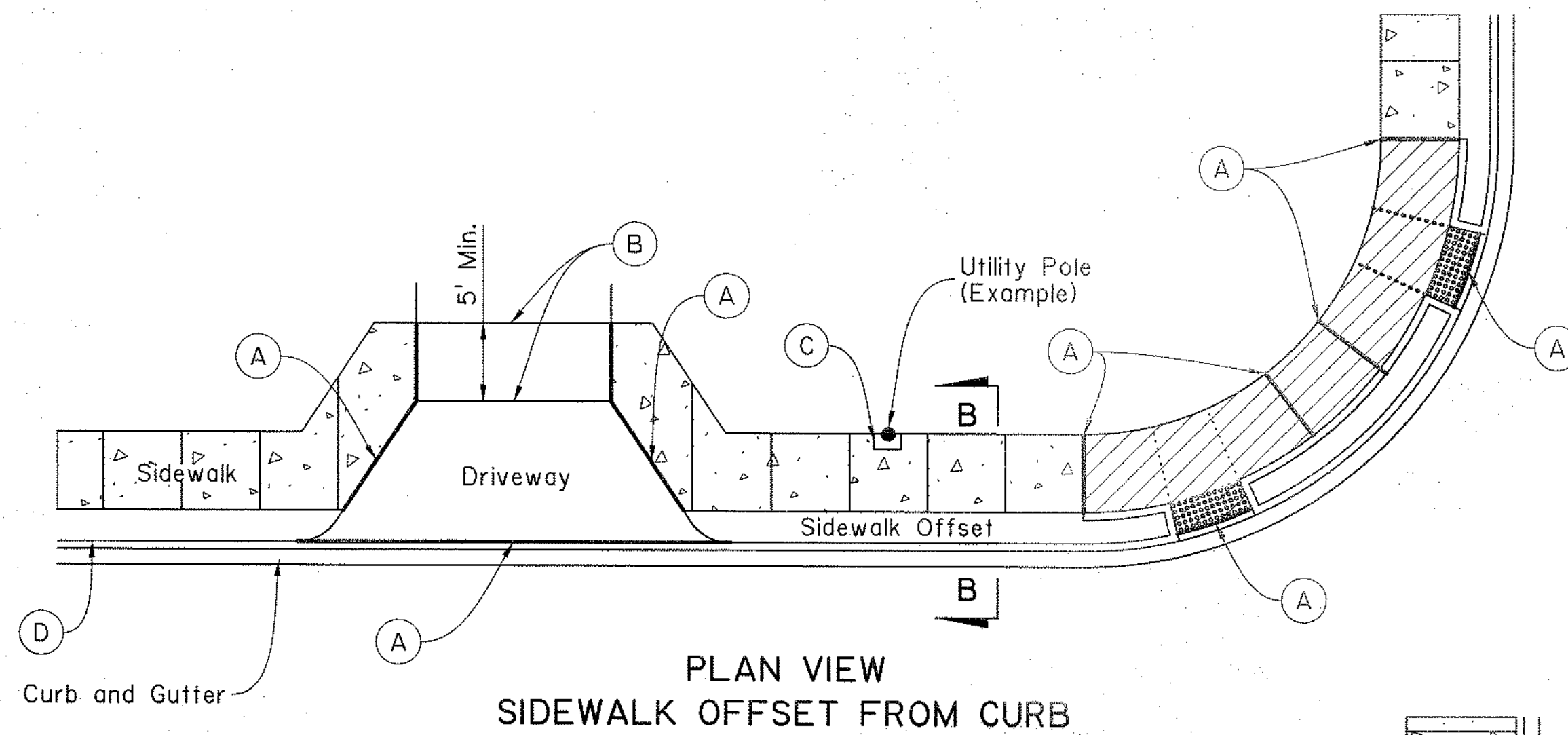
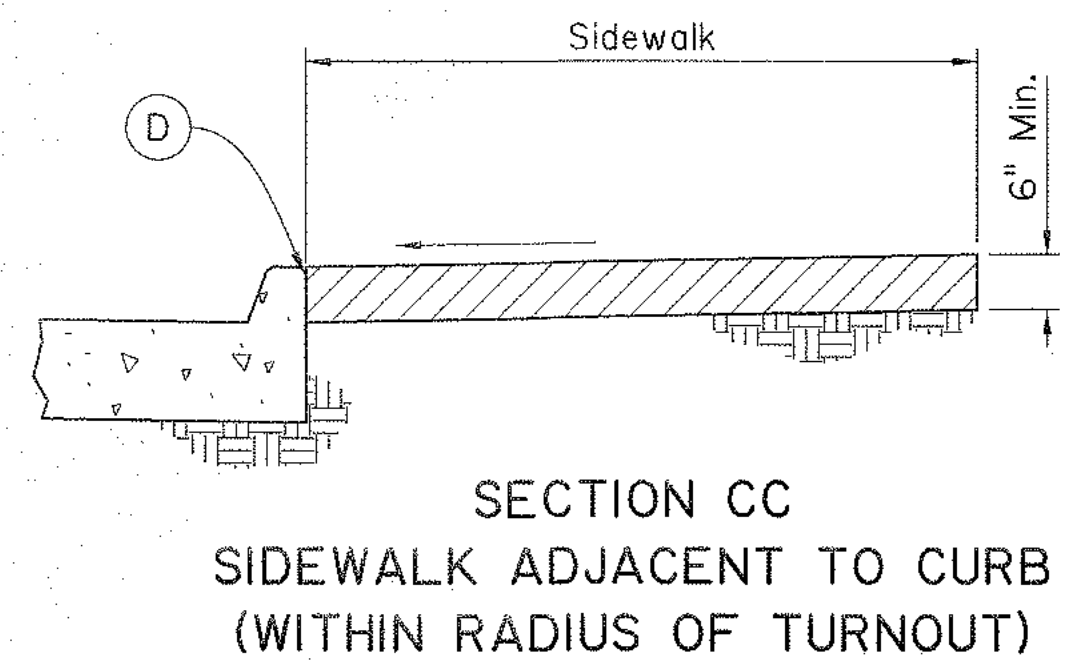
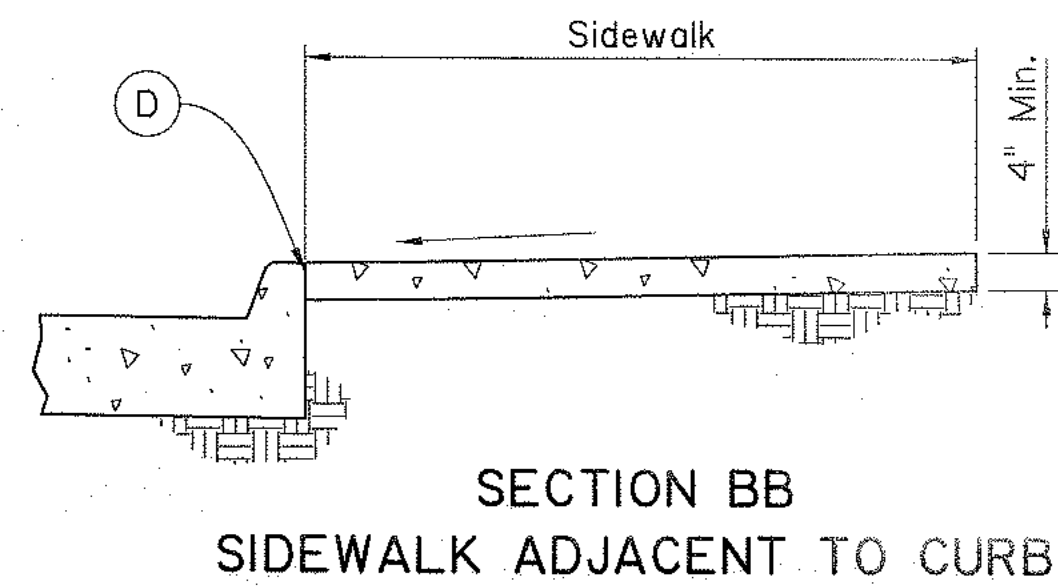
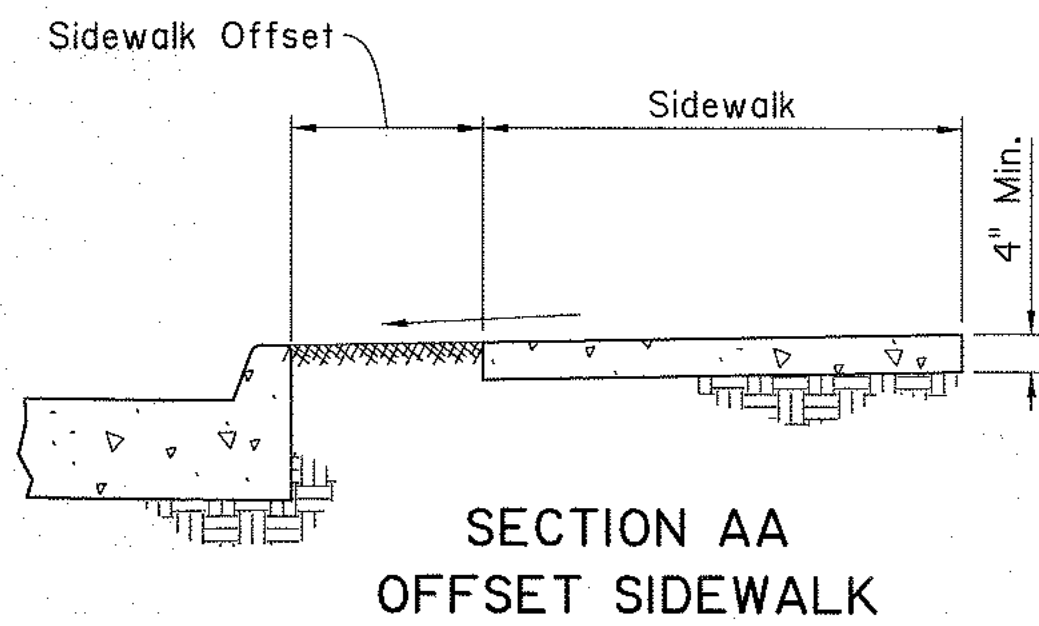
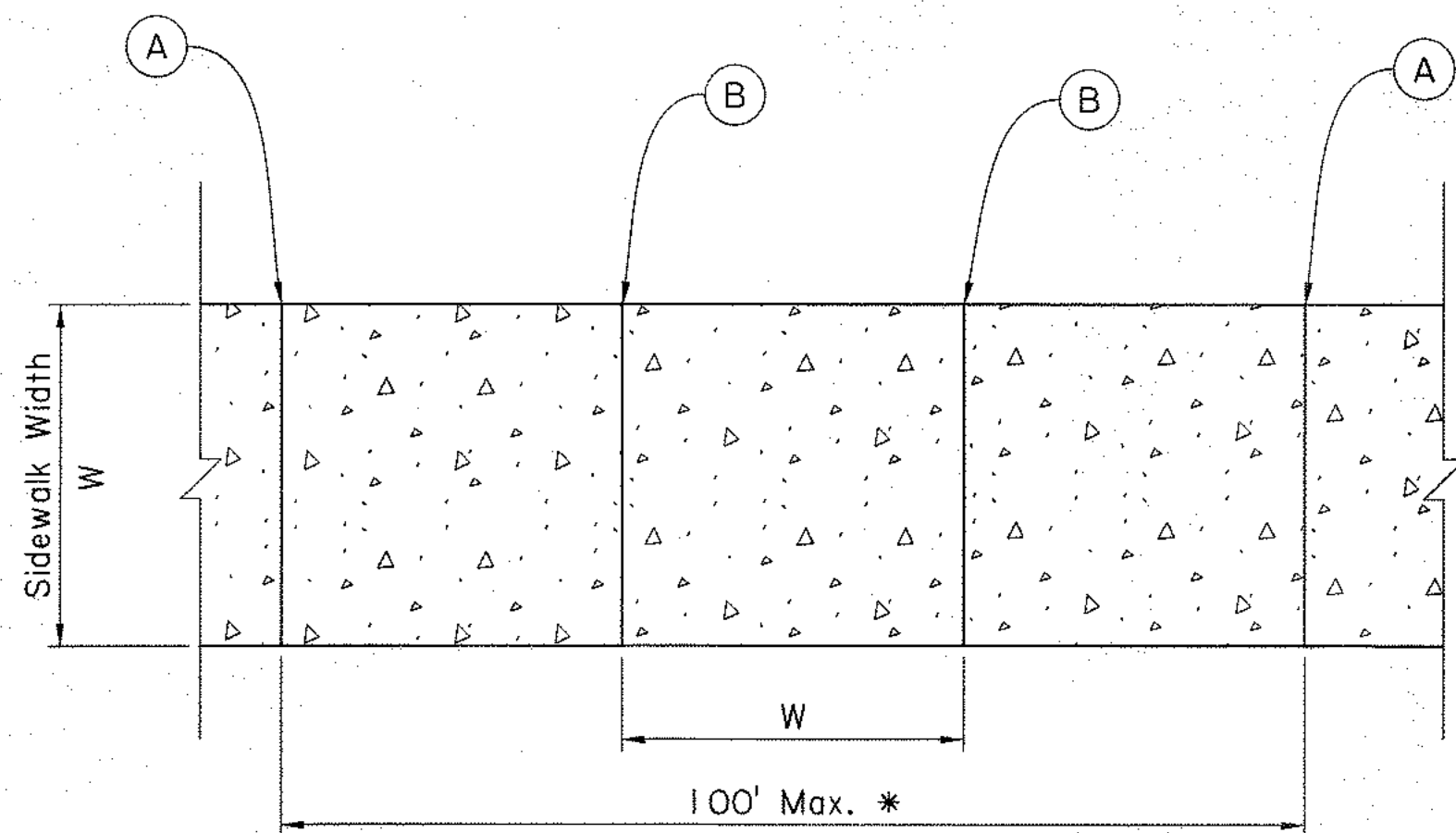
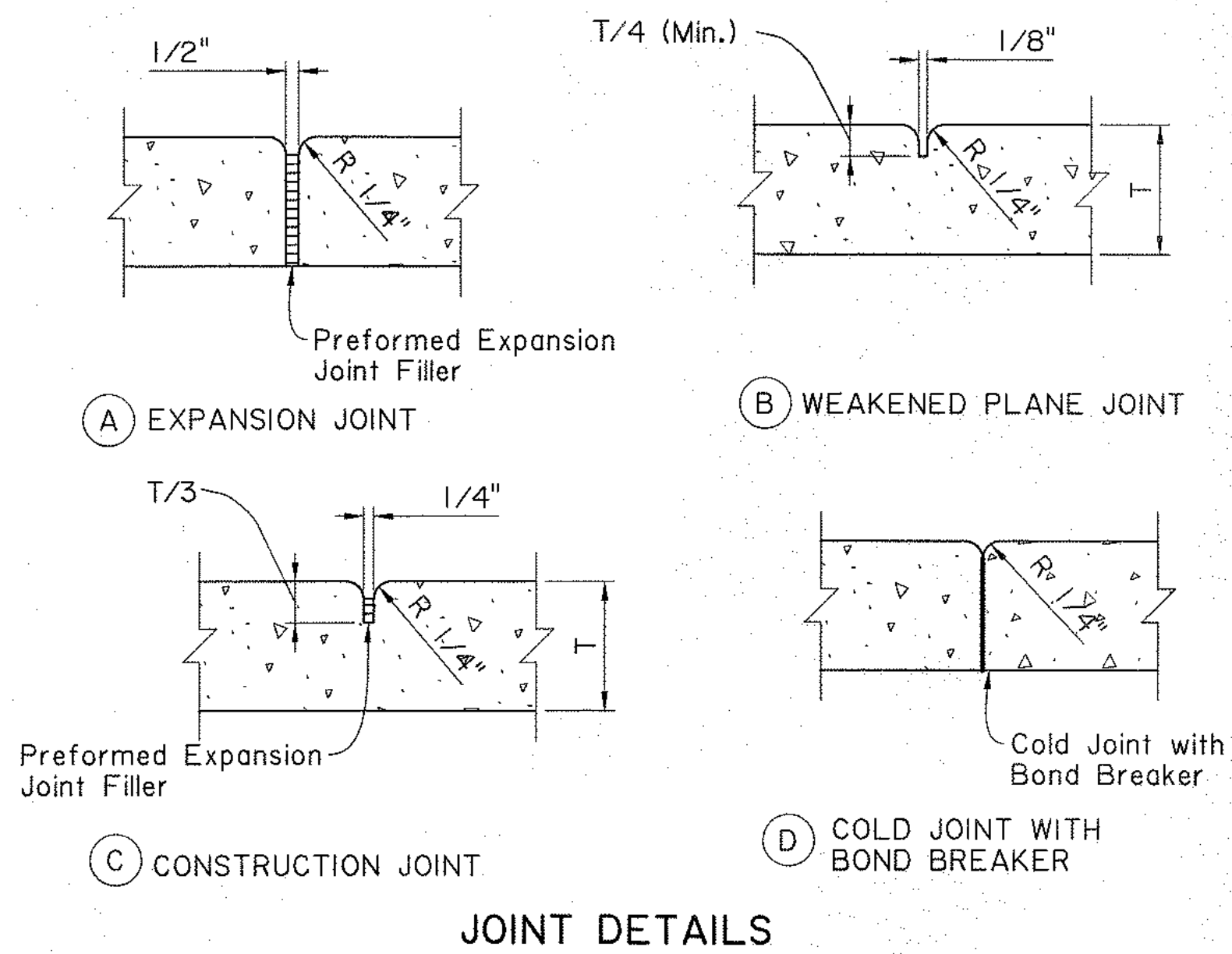
Note: Rows of truncated domes should be aligned parallel with the direction of wheelchair travel.

GENERAL NOTES:

1. Weakened plane joints are required at all sidewalk ramps or driveways slope break lines.
2. Separate curb ramps and landing from adjacent sidewalk with preformed joint filler of 1/2".

JOINT LEGEND

- (A) 1/2" Expansion Joints (Preformed Joint Filler)
- (B) 1/8" Weakened Plane Joint
- (C) Construction Joint
- (D) Cold Joint with Bond Breaker



Note: Driveways and curb ramps are shown for reference only. Refer to the driveway standard plans and curb ramp sheet for details.

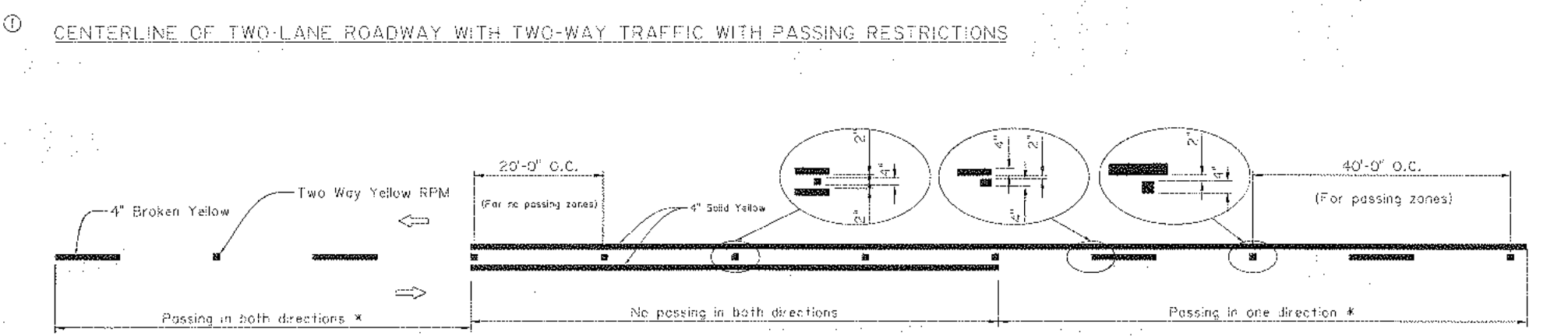
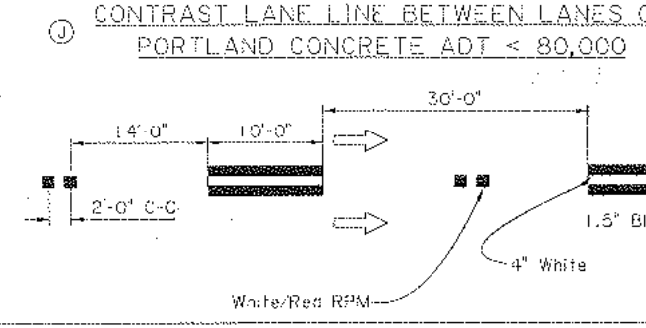
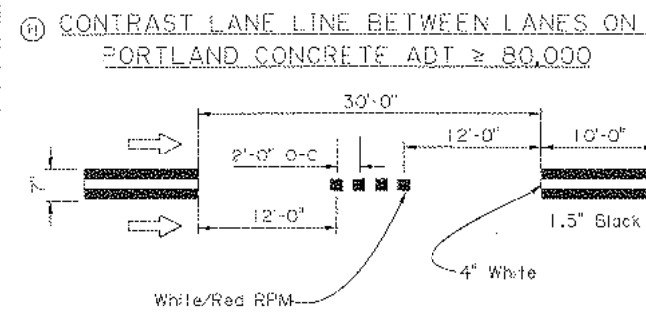
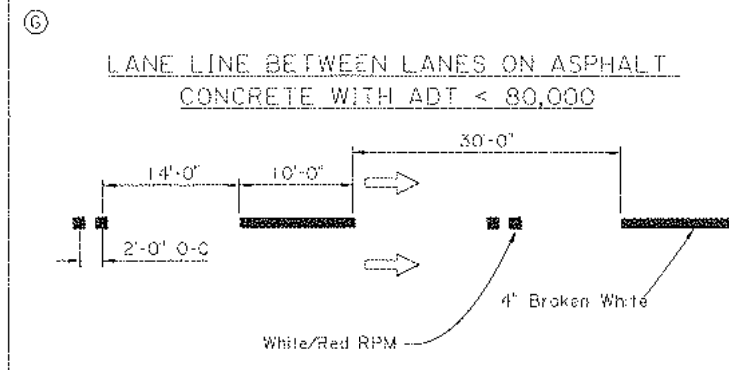
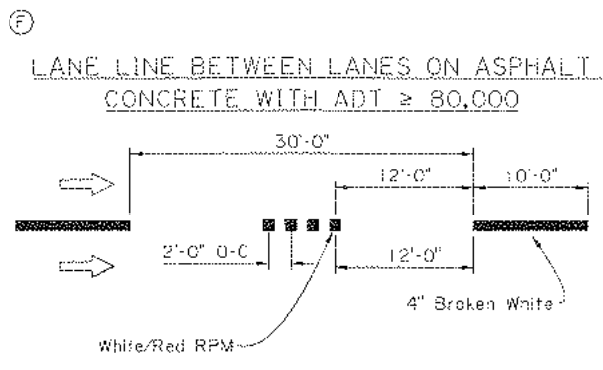
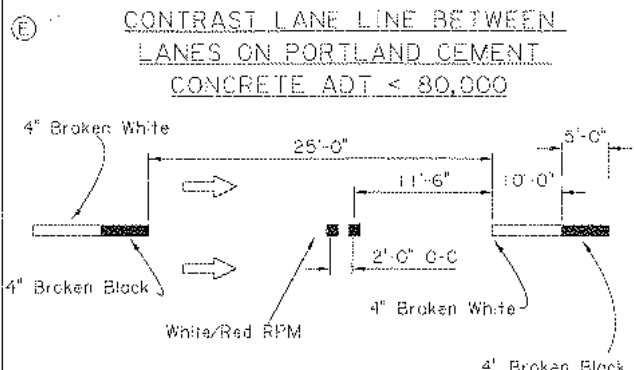
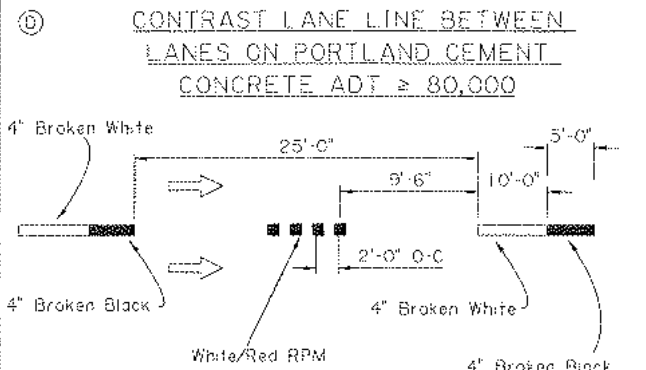
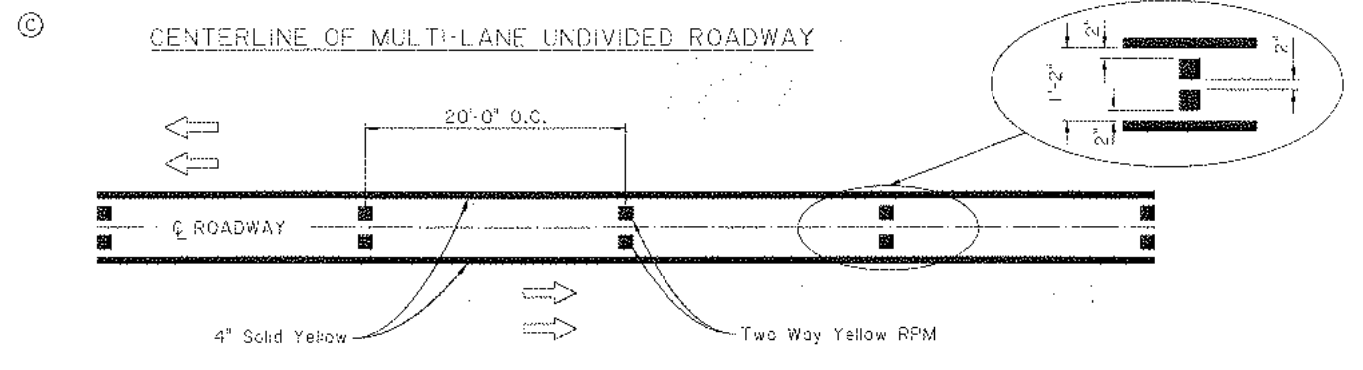
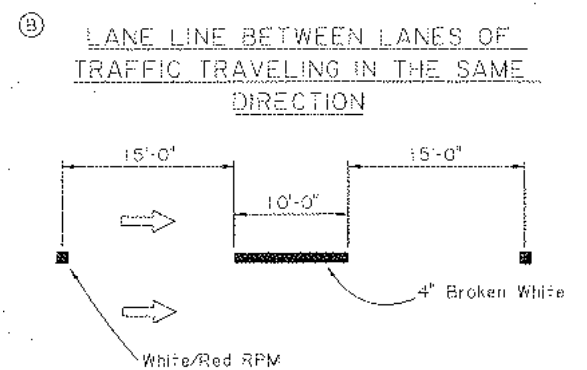
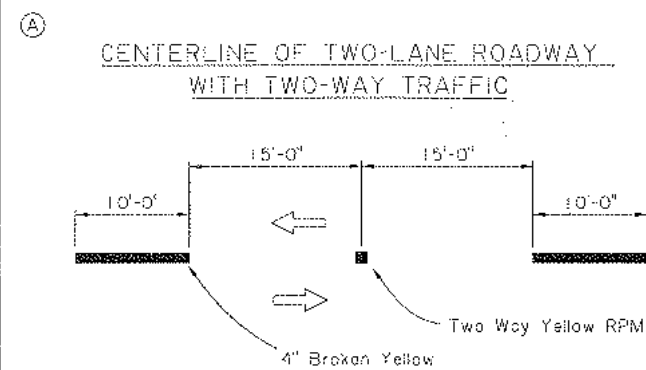
SHEET NUMBER		213	
DESIGN	CHECK	DESIGN	CHECK
MAL	BPW	MAL	BPW
PARISH	CONTROL SECTION	STATE	PROJECT
REVIEW		SERIES # 5 OF 5	

STATE OF LOUISIANA
MELISSA LEBAS
License No. 39111
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
Melissa Lebas
7/14/2022

APPROVED BY CHIEF ENGINEER:
[Signature]
DATE: 7/21/2022

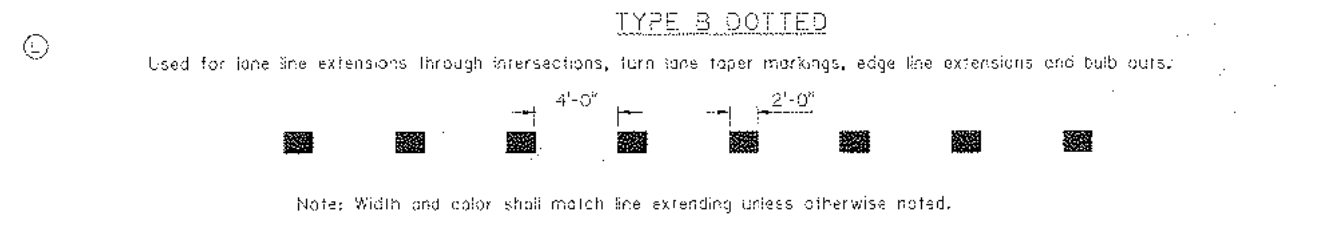
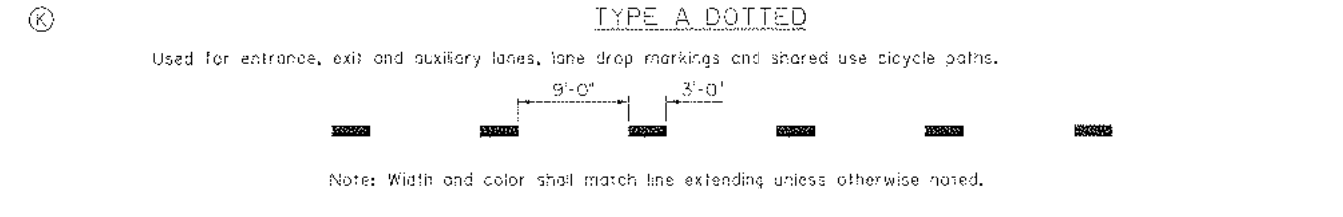
STATE OF LOUISIANA
PEDESTRIAN FACILITIES
JOINT DETAILS
PED-01

DOTD
LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT
STANDARD
PLAN



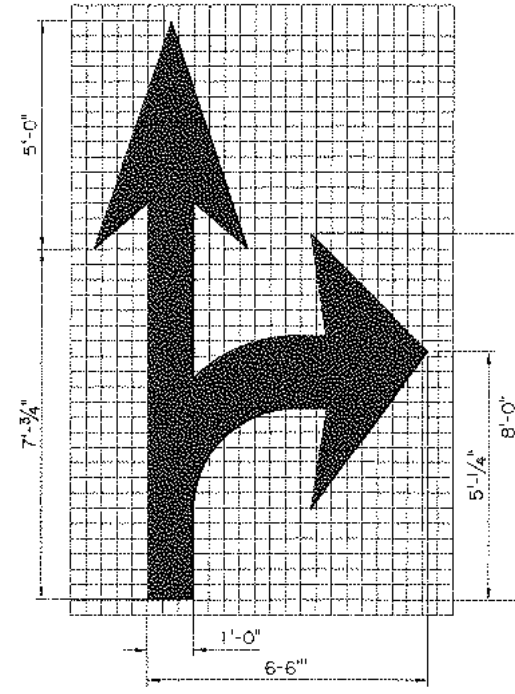
* See (A) for broken line dimensions.

2-27-19

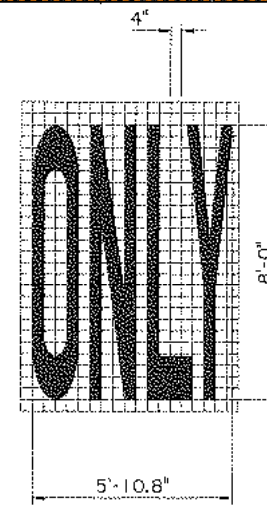
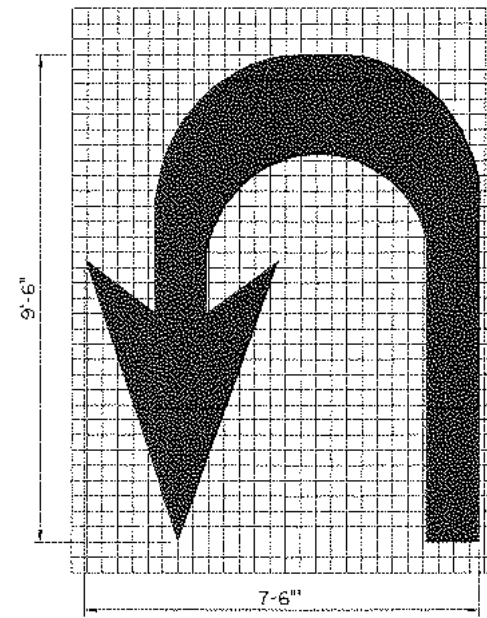


- GENERAL NOTES:**
- 4" Edge lines shall be placed on all roadways.
 - Place edge lines, centerlines and lane lines to avoid longitudinal joints as directed by the project engineer.
 - Edge lines in a curb and gutter section should be kept out of the gutter and clear from debris.
 - If rumble strips are used, striping details remain unchanged.
 - Centerlines shall be placed on roadways with a traveled way width of 16 feet or greater.
 - Where the clear width of a bridge is less than the clear width of the roadway, reflectorized pavement markers shall be placed adjacent to the edge line at 20' centers.
 - ➡ indicates the direction of travel (not a pavement marker).
 - For non-interstate striping, use one Raised Reflectorized Pavement Marker.
 - White Reflectorized Pavement Marker faces same direction traffic and red faces opposing traffic.

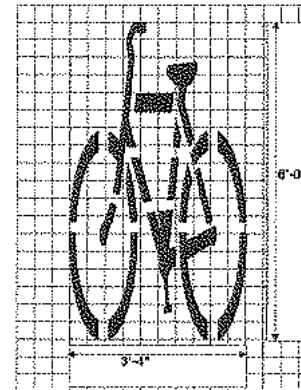
TURN ARROW AND ONLY WORD MARKING



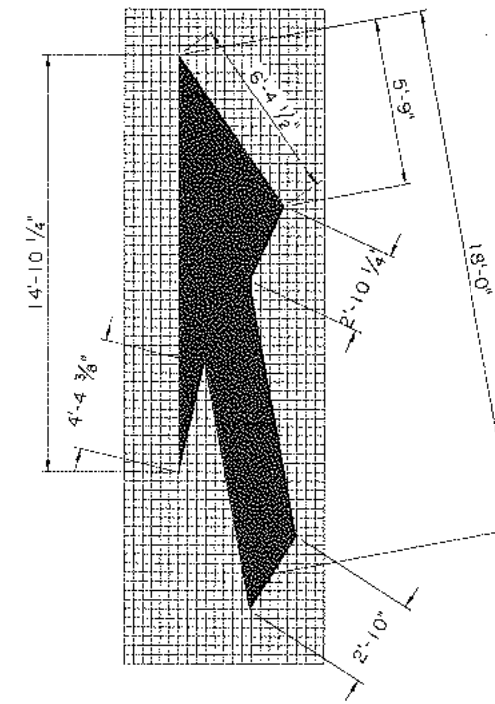
*For left turn arrow, use mirror image.



BIKE SYMBOL
www.bike-symbol.com

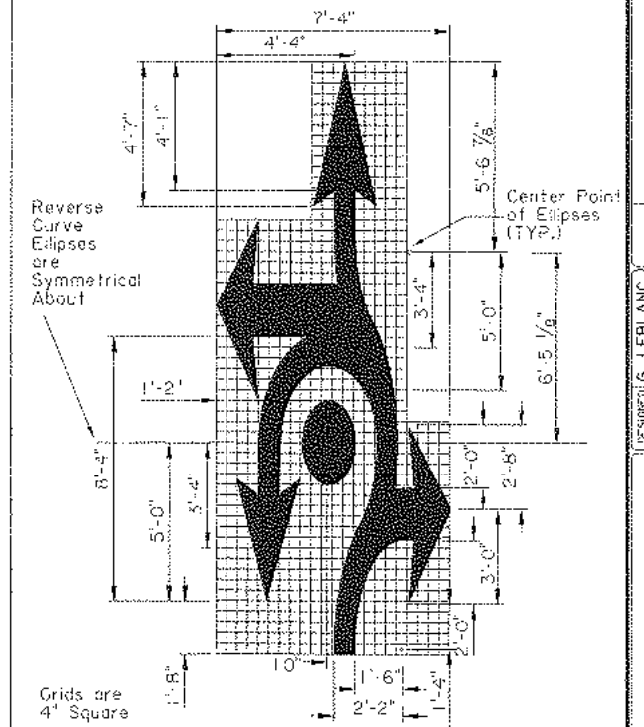


LANE REDUCTION ARROW



*For left tone reduction, use mirror image.

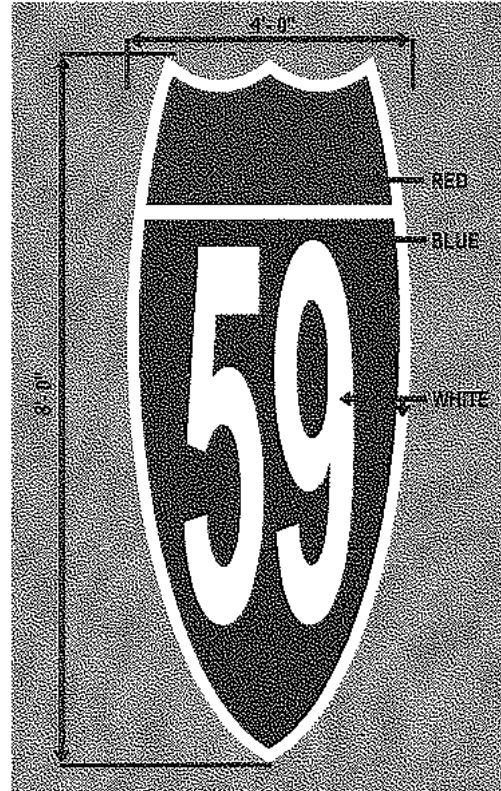
DIRECTIONAL ARROWS FOR ROUNDBABOUTS (FISHHOOK)



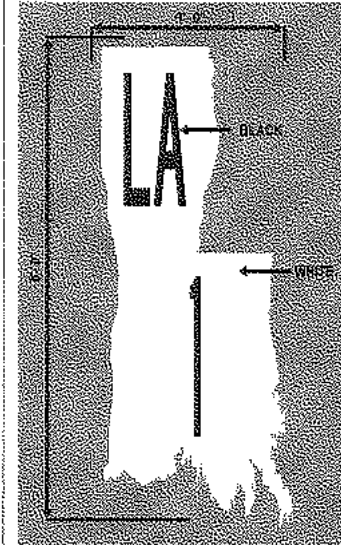
Grids are
4' Square

Only Fishhook Combinations
That Have Pay Items May
Be Used.

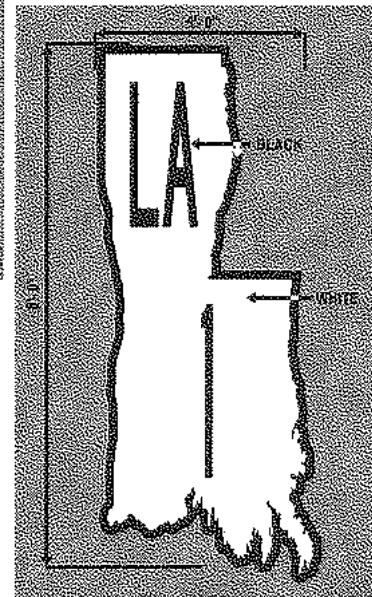
INTERSTATE SHIELD
for Non-Interstate Use



STATE HIGHWAY SHIELDS
for Non-Interstate Use

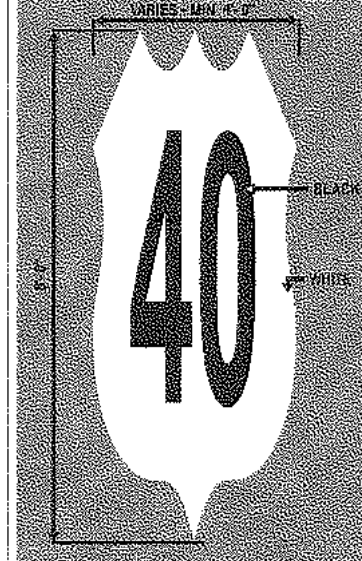


FOR USE ON DARK PAVEMENT.

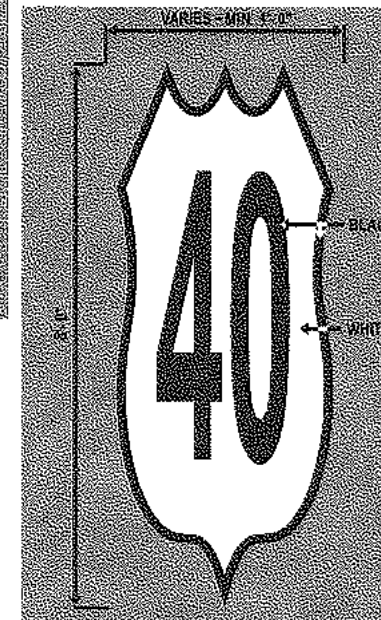


FOR USE ON LIGHT PAVEMENT.

STATE HIGHWAY SHIELDS for Non-Interstate Use



FOR USE ON DARK PAVEMENT.

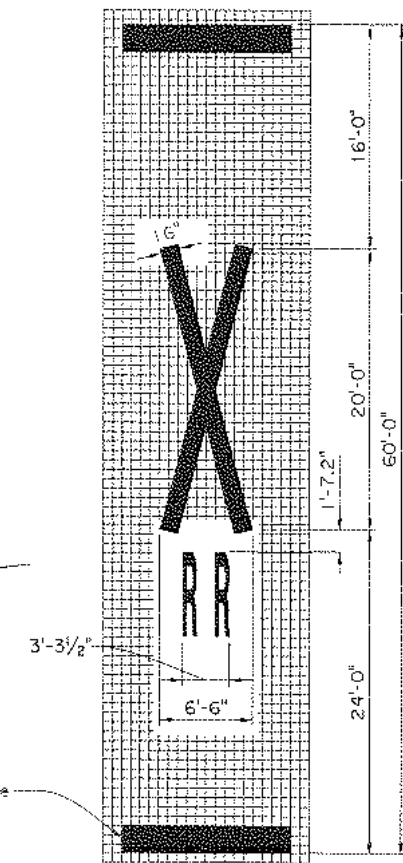


FOR USE ON LIGHT PAVEMENT.

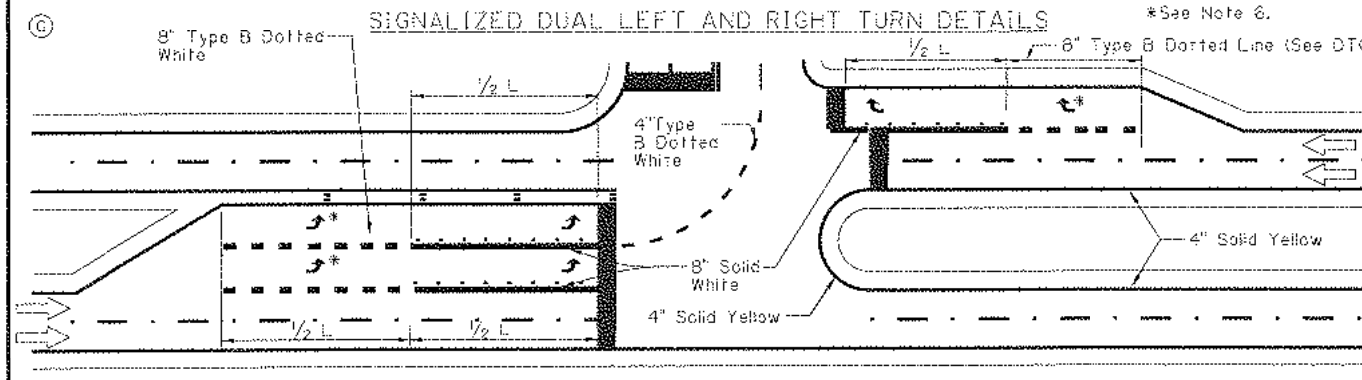
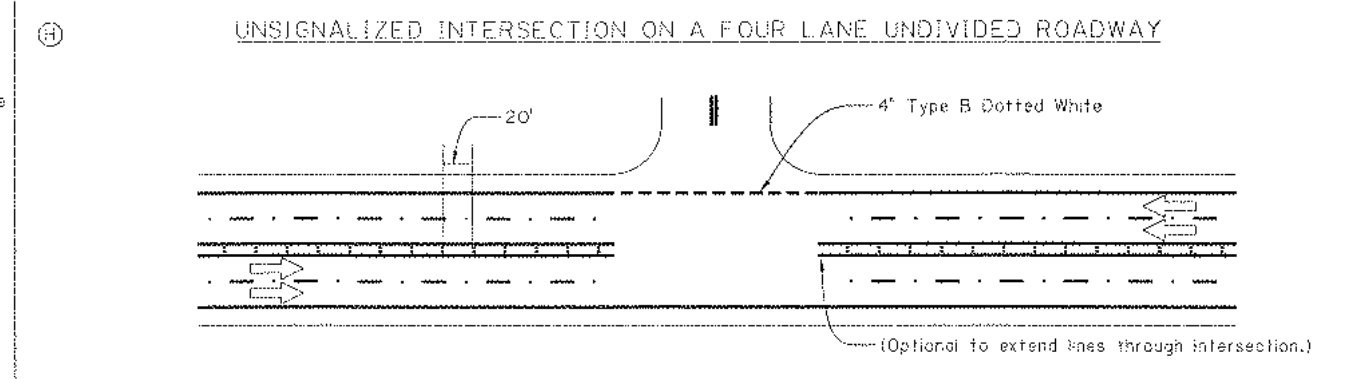
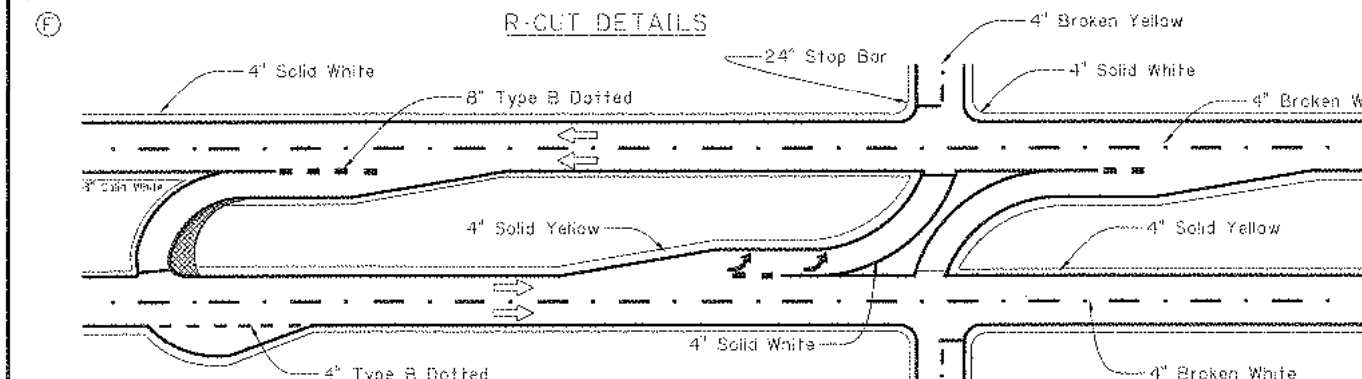
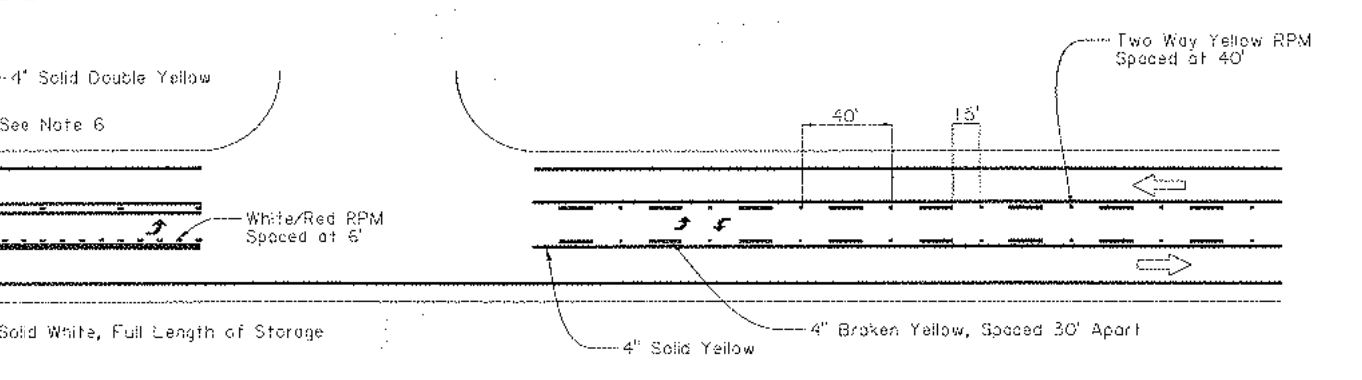
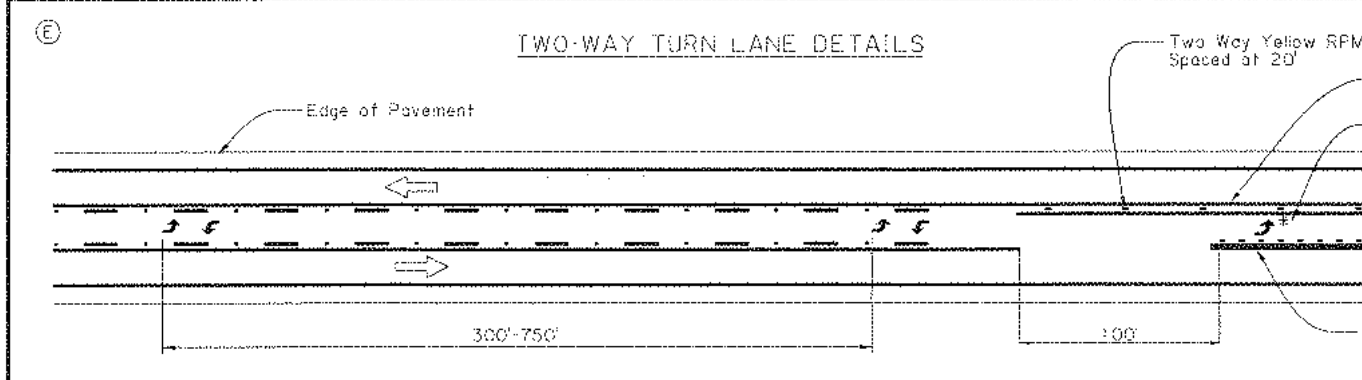
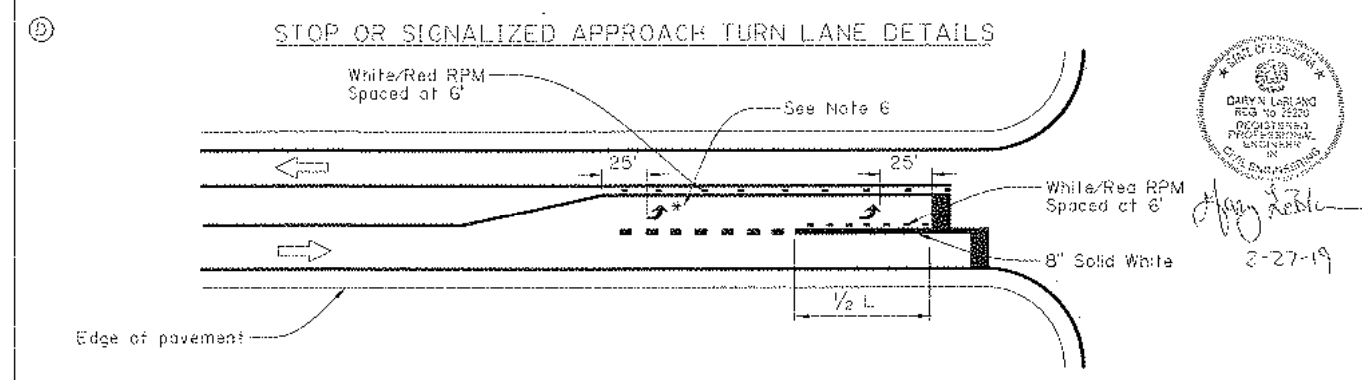
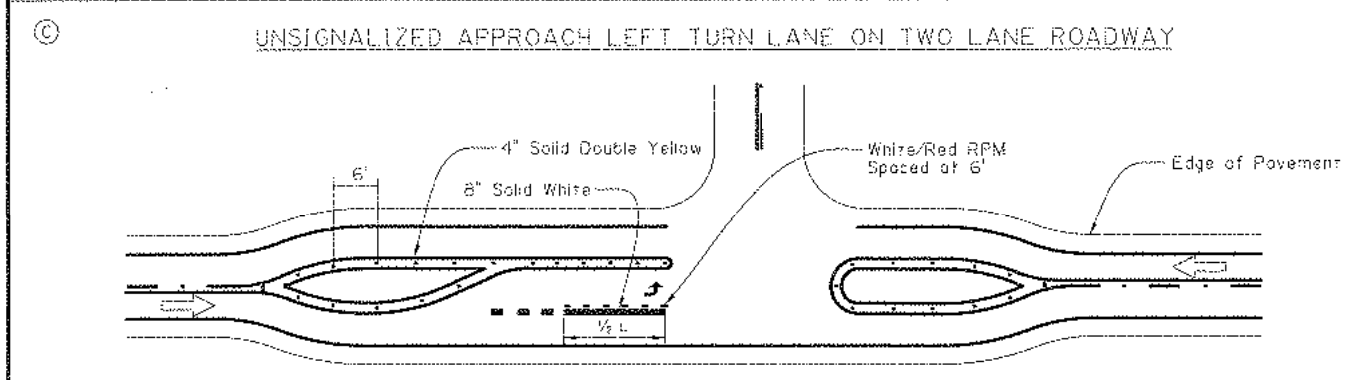
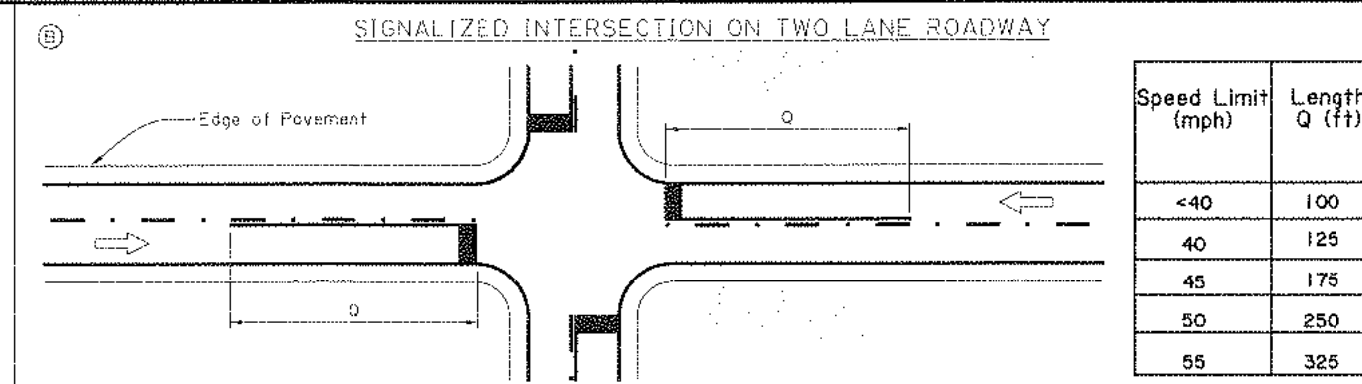
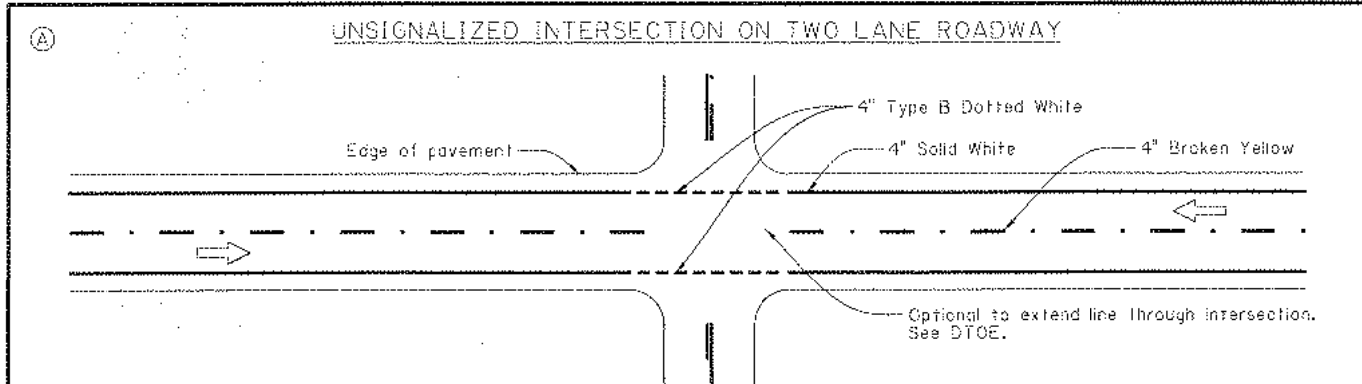
RAILROAD CROSSING PAVEMENT MARKINGS



2-27-19

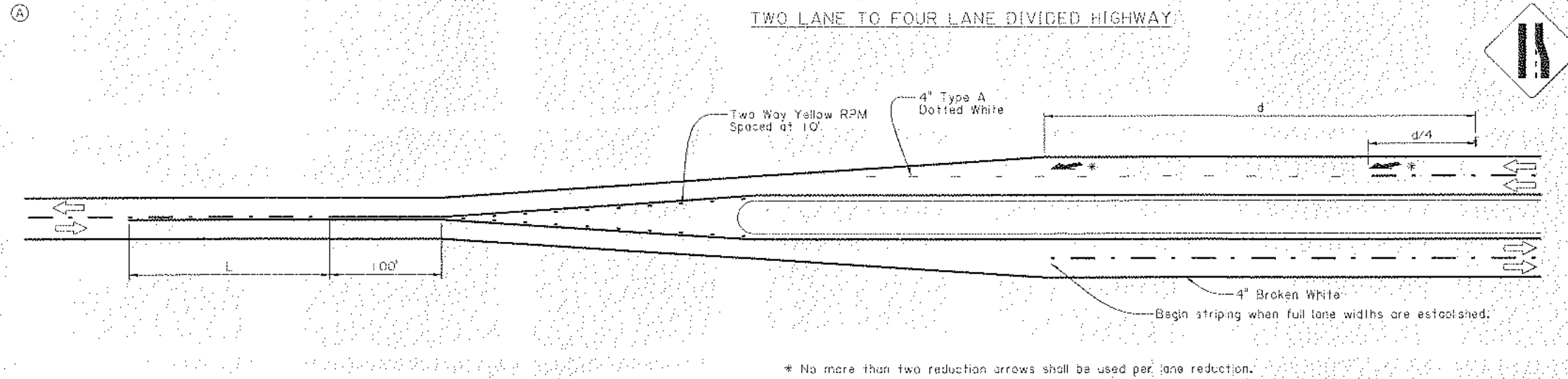


24" Solid White

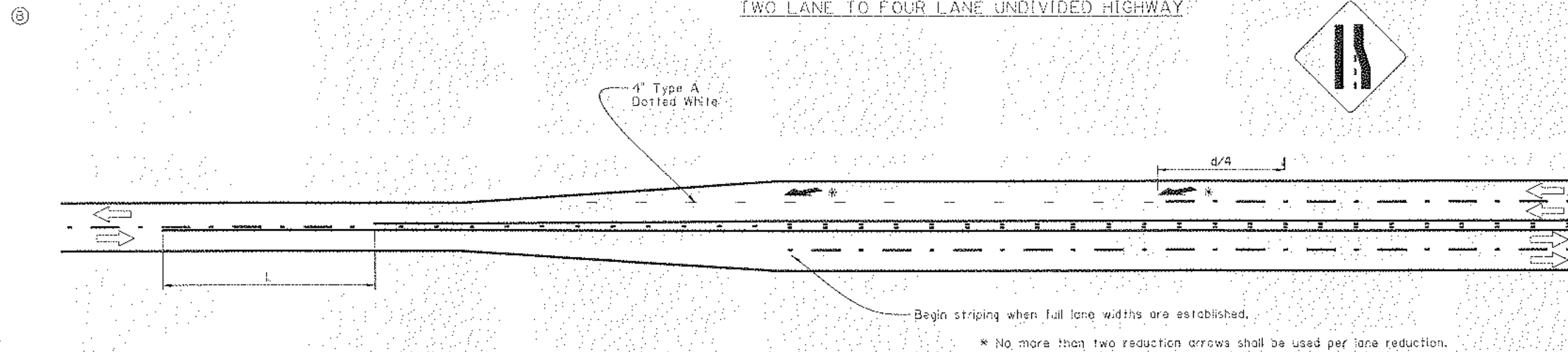


GENERAL NOTES:

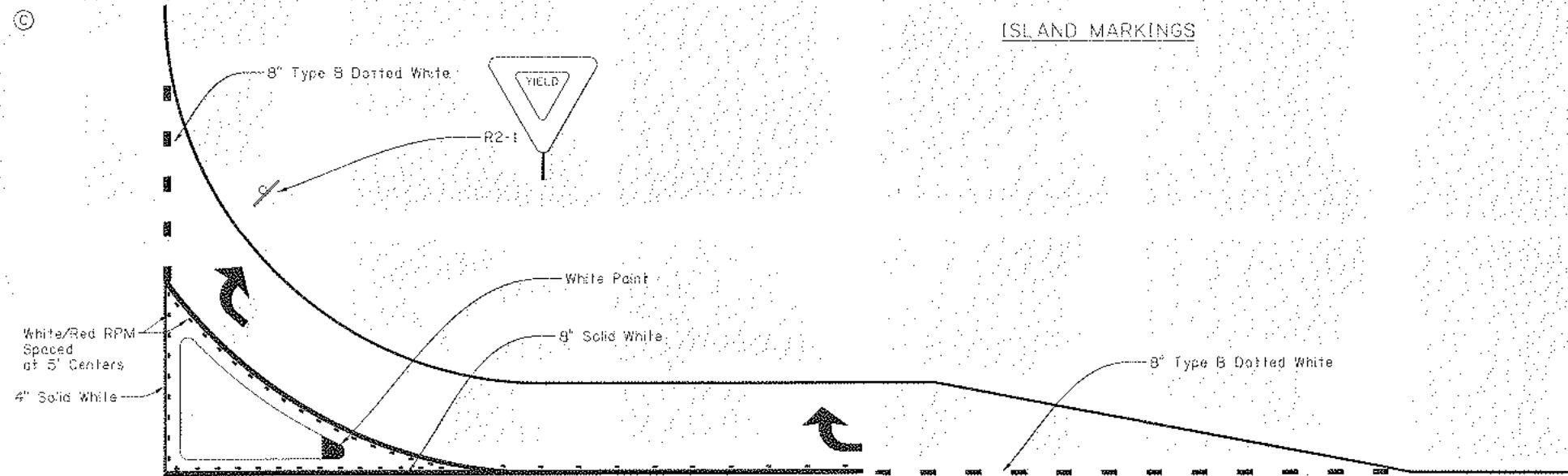
1. If the minor street has edge lines, the edge lines on the major street shall wrap to meet the edge lines on the minor street.
2. Stop bars shall be 24". Stop bars shall not be placed at a distance greater than 30 feet or less than 4 feet from the nearest edge line. Stop bars at right turn lanes should be placed to provide adequate sight distance for right turning traffic.
3. The location of stop bars at left turn lanes should be determined by the turning radius needed by the side street vehicles.
4. See PM-01 for centerline and lane line details.
5. The ONLY word marking shall be used when a through lane terminates as a turn lane.
6. The asterisk (*) indicates that 2nd arrow is optional. If more than two arrows are used, minimum spacing should be 150'.
7. Edge lines should not be broken for driveways.
8. indicates the direction of travel (not a pavement marker).
9. L equals the full length of turn lane.
10. Use of dotted lines require DTOE approval.



85th Percentile or Speed Limit (mph)	Length of No Passing Minimum (L in feet)
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550



85th Percentile or Speed Limit (mph)	Distance, d (ft)
20	225
25	325
30	460
35	565
40	670
45	775
50	885
55	990
60	1100
65	1200
70	1250



Hayden
2-27-19

09:09
6/24/2022
IP PWP:d0964073\Roadside Traffic Signs 01.dgn

GENERAL NOTES - ROADSIDE TRAFFIC SIGNS

CONSTRUCTION SPECIFICATIONS: CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST EDITION EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, 1994 AND INTERM SPECIFICATIONS.

STEEL: STEEL SHALL CONFORM TO A.S.T.M. A-709, GRADE 36. STEEL TUBING SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF A.S.T.M. DESIGNATION A-36 OR HOT-FORMED TUBING (A-501) OR PIPE (A-53) TYPE "E" OR "S", GRADE "B" OR COLD-FORMED TUBING (A-500) GRADE "B" OR "C", UNLESS OTHERWISE NOTED.

ALUMINUM: ALL ALUMINUM EXCEPT SIGN PANELS SHALL CONFORM TO ASTM B-221, B-308, OR B-429 ALLOY 6061-T6 UNLESS OTHERWISE NOTED. SIGN PANELS SHALL BE .080" THICK ALUMINUM CONFORMING TO ASTM B-209 ALLOY 5052-H38 OR 6061-T6.

CONCRETE AND REINFORCING STEEL: CONCRETE SHALL BE CLASS "M", UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR OR FACE OF CONCRETE TO CENTERLINE OF BAR. REINFORCING STEEL SHALL HAVE A MINIMUM COVERING OF 2" EXCEPT WHEN CONCRETE IS CAST AGAINST THE EARTH THEN THE COVERING WILL BE 3". ALL REINFORCING STEEL SHALL BE GRADE 60. THE FIRST DIGIT OF REINFORCING BAR NUMBER INDICATES THE BAR SIZE. THE TOP EDGES OF THE FOOTING SHALL BE CHAMFERED 3/4".

CONCRETE FINISH: ALL PORTIONS OF THE FOOTINGS FOR CANTILEVERS AND TRUSSES ABOVE GROUNDLINE SHALL HAVE A FINISH IN ACCORDANCE WITH LOUISIANA SPECIFICATION, 805.08.3.

WELDING: ALL WELDING SHALL CONFORM TO THE L.A. STANDARD SPECIFICATIONS, SECTION 809 AND SUPPLEMENTAL SPECIFICATIONS.

GALVANIZING: ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123. DAMAGE TO GALVANIZED SURFACES THAT ARE NOT TO BE ENCASED IN CONCRETE SHALL BE REPAIRED IN ACCORDANCE WITH L.A. STANDARD SPECIFICATIONS, SECTION 811.08. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-153. ALL FIELD HOLES IN GALVANIZED MATERIAL SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND FROM THE A.M.L.

BOLTS: UNLESS NOTED, ALL THREADED CONNECTIONS SHALL INCORPORATE A LOCKING DEVICE AND HAVE A MINIMUM OF 3 THREADS BEYOND THE NUTS. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS, A.S.T.M. A-325, UNLESS OTHERWISE NOTED. ANCHOR BOLTS SHALL CONFORM TO AASHTO M314, GRADE 55 (OR APPROVED EQUAL) AND BE HOT DIP GALVANIZED TO A.S.T.M. A-153. STAINLESS STEEL FOR BOLTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-320 B8, CLASS 2 TYPE 304, OR A-193 B8, CLASS 2 TYPE 304, UNLESS OTHERWISE NOTED. STAINLESS STEEL NUTS SHALL CONFORM TO A.S.T.M. DESIGNATION A-194, GRADE 8, TYPE 304. ALUMINUM BOLTS SHALL CONFORM TO A.S.T.M. F-468 ALLOY 2024-T4 AND NUTS ARE A.S.T.M. F-467 ALLOY 6061-T6 OR 6262-T9. WHERE BOLTS ARE USED ON BEVELED SURFACES, BEVELED WASHERS SHALL BE PROVIDED TO GIVE FULL BEARING TO THE HEAD AND/OR THE NUT.

RIVETS: ALL RIVETS SHALL BE 1/4" DIAMETER BLIND RIVETS WITH POSITIVE MANDREL RETENTION. THE RIVET BODY AND MANDREL SHALL BE ALUMINUM WITH A 1/2" MAXIMUM DIAMETER DOME HEAD. THE RIVETS SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH = 875 LBS., AND CONFORM TO ASTM B-316 5056-H32.

BREAK-AWAY BASE: BASES FOR SIGNS LOCATED ADJACENT TO MORE THAN ONE ROADWAY (RAMP TERMINALS, INTERSECTIONS, ETC.) SHALL BE ORIENTED IN THE DIRECTION OF THE HIGHEST SPEED TRAFFIC. ALL MULTI-POST SIGNS WITH A DISTANCE BETWEEN POSTS OF 7'-0" CENTERS OR LESS SHALL HAVE BEVELED BASE CONNECTION. BASE CONNECTIONS SHALL BE WRAPPED PRIOR TO POURING THE FOOTING, WITH MATERIAL SUFFICIENT TO PREVENT CONCRETE SPLATTER ON THE BREAK-AWAY BASE ASSEMBLY.

ANCHOR BOLTS: ANCHOR BOLT NUTS TO BE TIGHTENED A MINIMUM ROTATION OF 240° (2/3 TURNS) FROM THE SNUG TIGHT CONDITION.

SIGN SHEETING: UNLESS OTHERWISE NOTED, ALL SIGN MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 1015 IN THE STANDARD SPECIFICATIONS. IN ORDER TO OBTAIN AN ACCEPTABLE COLOR MATCH BETWEEN MULTIPLE PANELS ON A GUIDE SIGN, ALL OF THE BACKGROUND SHEETING FOR ANY GUIDE SIGN SHALL BE THE MINIMUM WIDTH OF THE LARGEST PANEL AND SHALL COME FROM THE SAME LOT OR RUN NUMBER FROM THE SHEETING MANUFACTURER UNLESS OTHERWISE APPROVED IN WRITING. RETRO-REFLECTIVE SHEETING SHALL BE APPLIED TO ALL PANELS IN SUCH A MANNER THAT THERE ARE NO HORIZONTAL SPLICES.

OVERLAY PANELS FULL SIGN OVERLAY PANELS SHALL BE IN ACCORDANCE WITH SECTION 729.05.3. PARTIAL SIGN OVERLAYS AND ALL SHIELDS SHALL HAVE SHIMS AT ALL RIVETS. SHIMS SHALL BE AT LEAST .080" THICK AND SIZED SO THEY WILL NOT EXTEND BEYOND EDGE OF OVERLAY. RIVETS SHALL BE AS SPECIFIED ON THIS STANDARD DETAIL SHEET.

SIGN LOCATIONS: FOR GROUND MOUNTED SIGN INSTALLATIONS, THE ENGINEER MAY ADJUST THE TYPE D AND E SIGN LOCATIONS INDICATED ON THE PLANS. THIS WILL BE ALLOWED TO AVOID PLACEMENT IN DEEP DITCHES, STEEP BACKSLOPES, TREE LINES, AND ANY OTHER UNACCOUNTED FOR FIELD CONDITIONS AND TO PROVIDE BETTER MESSAGE PRESENTATION. ANY ADJUSTMENTS MUST BE WITH THE CONCURRENCE OF THE GEOMETRIC DESIGN ENGINEER.

SIGN TYPES: TYPE A = SMALL SIGN WITH ONE POST; TYPE B = CLUSTER ASSEMBLY OF TYPE A SIGNS; TYPE D = LARGE RECTANGULAR SIGN ADJACENT TO TRAFFIC MOUNTED WITH MULTIPLE POSTS; TYPE E = SECONDARY SIGN (SUCH AS AN EXIT NUMBER PANEL) ATTACHED TO A LARGE RECTANGULAR PRIMARY SIGN; DELINEATOR, MILEPOST AND OBJECT MARKER SIGNS ARE NOT COVERED UNDER TRAFFIC SIGNS. SEE STANDARD PLAN HS-03.

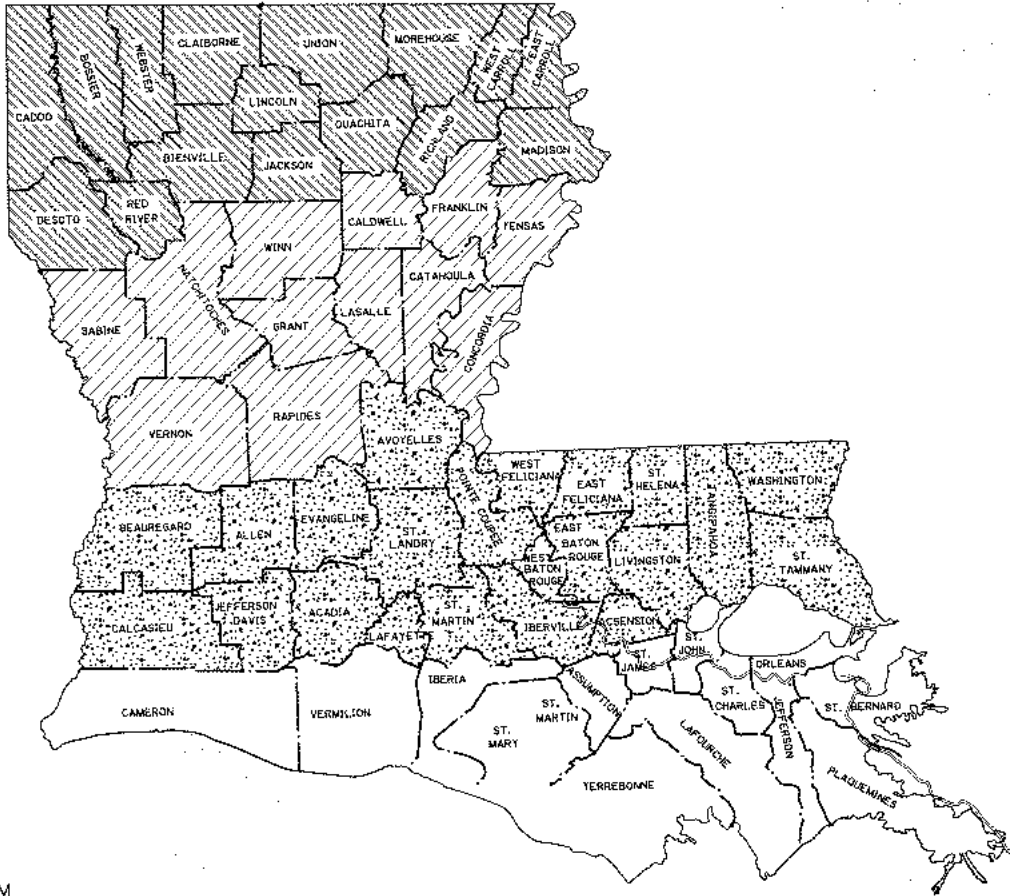
MISCELLANEOUS: THE CONTRACTOR SHALL MARK THE DATE OF FABRICATION, SHEETING MANUFACTURER CODE, AND SIZE OF SIGN ON THE BACK OF EACH SIGN. FOR EXTRUDED PANEL SIGNS THE LETTER HEIGHT SHALL BE 2". FOR ALL OTHER FLAT SHEETING SIGNS, THE LETTER HEIGHT SHALL BE 3/4". THE SIGN ID NUMBERS SHALL FOLLOW THE ABOVE REQUIREMENTS BUT SHALL HAVE A BLUE BACKGROUND WITH WHITE NUMBERS. ALL MARKINGS SHALL HAVE A CLEAR UV PROTECTIVE FILM INSTALLED OVER THEM. SEE DETAIL "A" SHEET 5 OF 17.

POST HINGE SPLICE ON MULTI-POST SIGNS WITH ALL POSTS CONNECTED BY A SECONDARY SIGN SHALL BE LOCATED BELOW THE SECONDARY SIGN. STUB POST SHALL BE ASSEMBLED TO SIGN POST WITH REQUIRED BOLTS AND ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES PRIOR TO SHIPMENT. POST SPLICE SLIP PLATE SHALL BE ASSEMBLED TO MINIMUM BOLT TENSION IN SHOP PRIOR TO SHIPMENT. SIGN POST SHALL BE SHIPPED TO JOB SITE ASSEMBLED WITH ALL HARDWARE REQUIRED IN PLACE AND SECURED. EXPOSED ENDS OF ALL PIPE SHALL BE CAPPED. USE OF SECTIONS PROVIDING EQUAL OR GREATER STRENGTH FOR ANY MEMBER DESIGNATED ON THE PLANS SHALL BE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL.

ALL DIMENSIONS REQUIRED FOR SATISFACTORY INSTALLATION SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE FABRICATION. ADJUSTMENTS SHALL BE MADE AS DIRECTED BY THE ENGINEER.

ALL ALUMINUM SURFACES PLACED IN CONTACT WITH, OR FASTENED TO, UNGALVANIZED STEEL MEMBERS SHALL BE THOROUGHLY COATED WITH AN APPROVED ALUMINUM IMPREGNATED CAULKING COMPOUND. PAINT ALUMINUM SECTIONS IN CONTACT WITH CONCRETE WITH A HEAVY COAT OF AN ALKALI RESISTANT BITUMINOUS PAINT OR A COAT OF ZINC CHROMATE PAINT AND ALLOW TO DRY BEFORE PLACING. ALUMINUM ALLOYS SHALL NOT BE PLACED IN CONTACT WITH COPPER, COPPER BASED ALLOYS, LEAD, OR NICKEL.

SHOP DRAWINGS: NOT REQUIRED FOR SIGN BACKING AND SMALL GROUND MOUNTED SIGN SUPPORTS, UNLESS FABRICATOR INTENDS TO DEVIATE FROM THE DETAILS HEREIN. SHOP DRAWING ARE REQUIRED FOR ALL STRUCTURE MOUNTED SIGNS.



WIND LOAD MAP

WIND LOAD MAP LEGEND			
SYMBOL	ROADSIDE MOUNTED		
	ZONE	WIND VELOCITY (MPH) Ⓢ	WIND LOAD (PSF) Δ
	1	70	20
	2	80	27

Ⓢ 25 YEAR MEAN RECURRENCE INTERVAL
Δ INCLUDES C_e = 1.2

SHEET	BRIDGE STANDARD INDEX NO.	DESCRIPTION
1 OF 17	BD.2.7.2.0.1	WIND LOAD MAP & GENERAL NOTES
2 OF 17	BD.2.7.2.0.2	PANEL DETAILS (TYPE A & B SIGNS)
3 OF 17	BD.2.7.2.0.3	MOUNTING DETAILS (TYPE A & B SIGNS)
4 OF 17	BD.2.7.2.0.4	SPACING OF POSTS FOR GROUND MOUNTED SIGNS
5 OF 17	BD.2.7.2.0.5	EXTRUDED ALUMINUM SIGNS (TYPE D & E SIGNS)
6 OF 17	BD.2.7.2.0.6	EXTRUDED ALUMINUM PANELS (TYPE D & E SIGNS)
7 OF 17	BD.2.7.2.0.7	ROADSIDE MOUNTED SIGNS (TYPE A, B, & D SIGNS)
8 OF 17	BD.2.7.2.0.8	ROADSIDE MOUNTED SIGN DETAILS (TYPE A & B SIGNS)
9 OF 17	BD.2.7.2.0.9	ROADSIDE MOUNTED SIGN DETAILS (TYPE D SIGNS)
10 OF 17	BD.2.7.2.0.10	SQUARE TUBE SIGN DETAILS
11 OF 17	BD.2.7.2.0.11	Z - BRACKET SIGN SUPPORT (F - SHAPE BARRIER)
12 OF 17	BD.2.7.2.0.12	Z - BRACKET SIGN SUPPORT (F - SHAPE BARRIER)
13 OF 17	BD.2.7.2.0.13	Z - BRACKET SIGN SUPPORT (POST AND RAIL BARRIER)
14 OF 17	BD.2.7.2.0.14	Z - BRACKET SIGN SUPPORT (POST AND RAIL BARRIER)
15 OF 17	BD.2.7.2.0.15	CONTRAFLOW SIGNS (GROUND MOUNTED)
16 OF 17	BD.2.7.2.0.16	CONTRAFLOW SIGNS (F - SHAPE BARRIER)
17 OF 17	BD.2.7.2.0.17	CONTRAFLOW SIGNS (POST AND RAIL BARRIER)

SHEET NUMBER218

DESIGNK. BRAUNERCHECKK. BRAUNERREVIEWC. GUIDRYC. GUIDRYC. BOURGEOIS

DATE6/24/22

APPROVED BY CHIEF ENGINEER

STATE OF LOUISIANA

WIND LOAD MAP & GENERAL NOTES

ROADSIDE SIGNING STANDARDS

DOTDLOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENTBRIDGE AND STRUCTURAL DESIGN



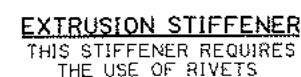
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTES SHEET.

△ LOCATION OF BORDER ANGLE FROM EDGE

TYPE A SIGNS

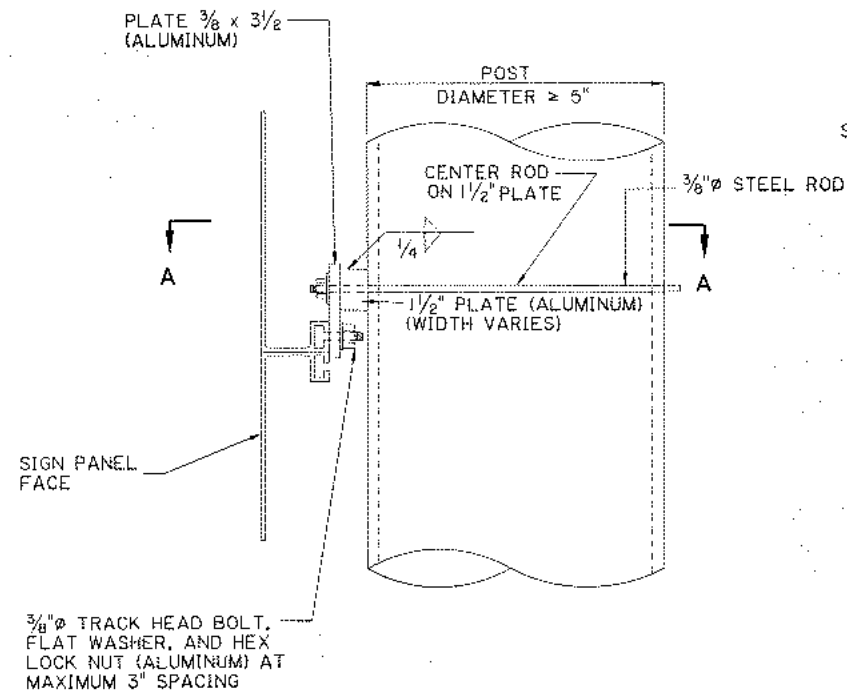
Technical drawing of a mechanical part, likely a bracket or flange, showing dimensions in inches. The part has a top flange with a width of 1.25 inches and a thickness of 0.066 inches. The top flange has a fillet with a radius of R .03 TYP. The main body has a width of 0.275 inches and a height of 0.189 inches. The bottom flange has a width of 0.275 inches and a height of 0.073 inches. The part is made of a material with a tensile strength of 100,000 PSI and a yield strength of 60,000 PSI. The drawing includes a note: "R .03 TYP" and a note: "R .1881".

EXTRUDED CHANNEL DETAIL

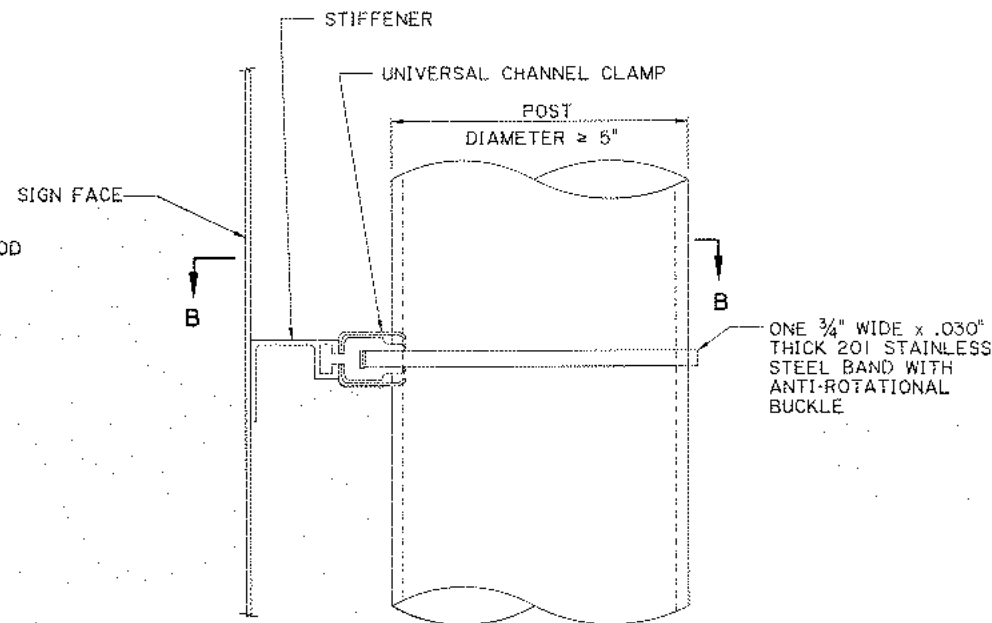


*SEE SIGN SUMMARY SHEET
IN THE PLAN SET AND THE
APPLICABLE SIGN SHAPE
TABLE ON THIS SHEET FOR
DIMENSIONS

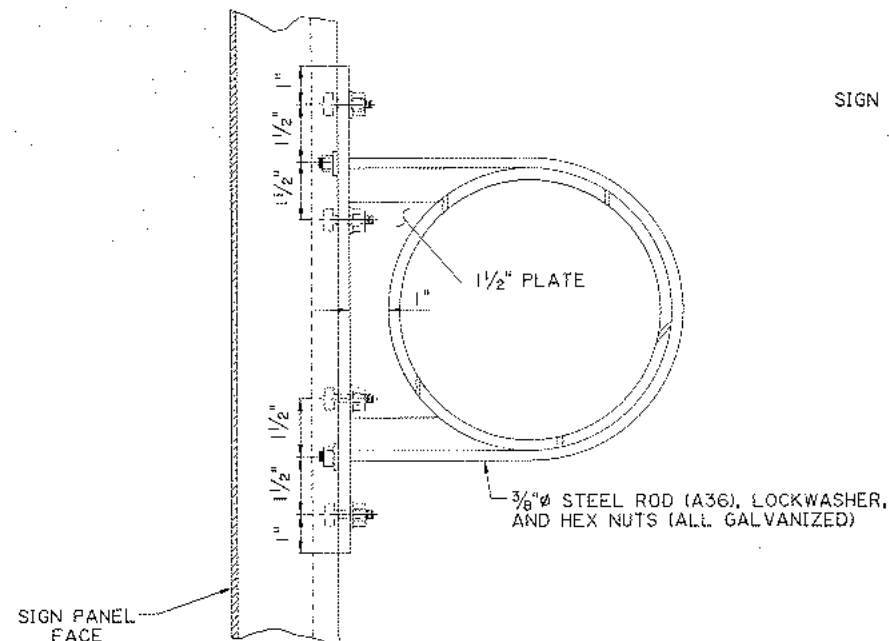
..... ONE $\frac{3}{8}$ " ϕ TRACK HEAD BOLT, FLAT
WASHER, AND HEX LOCK NUT (ALUMINUM)
OR TWO POST CLIP ASSEMBLIES



ELEVATION
(TYPICAL AT EACH STIFFENER)

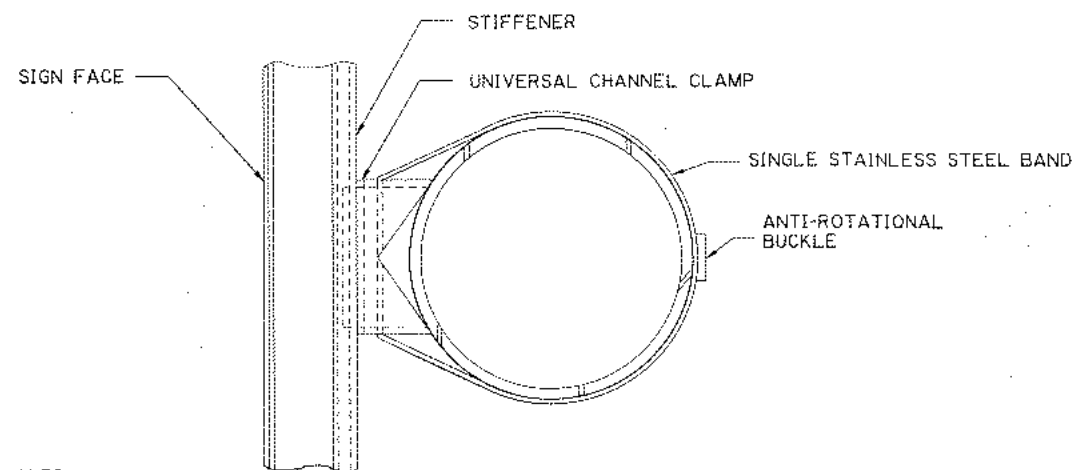


ELEVATION
TYPICAL AT EACH STIFFENER



SECTION A-A

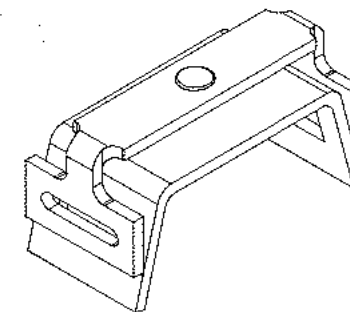
MOUNTING DETAIL (TYPE 1)
FOR NON-TAPERED ROUND METAL POST
SIZES $\geq 5"$ DIAMETER AND SIGNS > 20 SQ. FT.



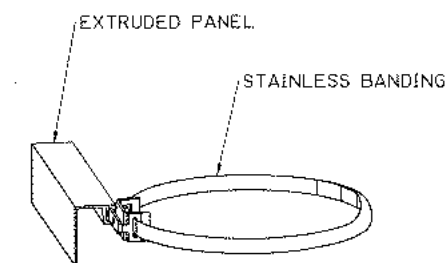
SECTION B-B

MOUNTING DETAIL (BAND TYPE)
FOR ALL POSTS $\geq 5"$ AND WITH SIGN AREAS
 ≤ 20 SQ. FT. OR LESS THAN 4 FEET WIDE

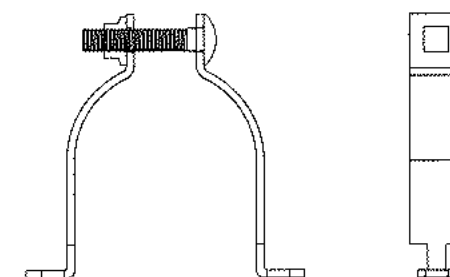
NOTES:
NO BOLTS SHALL BE PLACED THROUGH FACE OF SIGN.
ALL TRACK HEAD BOLTS SHALL HAVE HEADS DESIGNED TO FIT AND TRANSMIT LOAD TO BOLT SLOTS IN THE STIFFENER.
MOUNTING CLAMP REQUIRED AT EACH HORIZONTAL STIFFENER.



STAINLESS STEEL BANDING

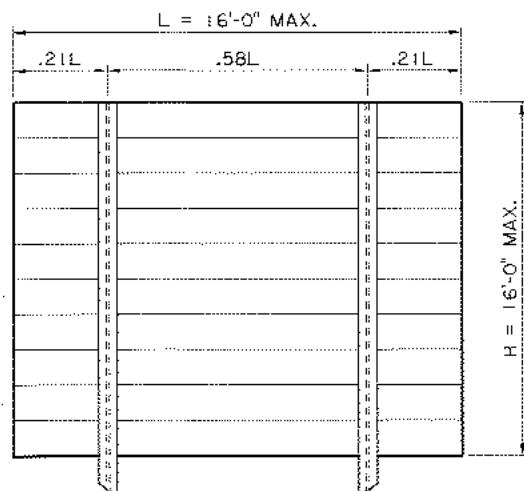


EXTRUDED PANEL BANDING CLIP

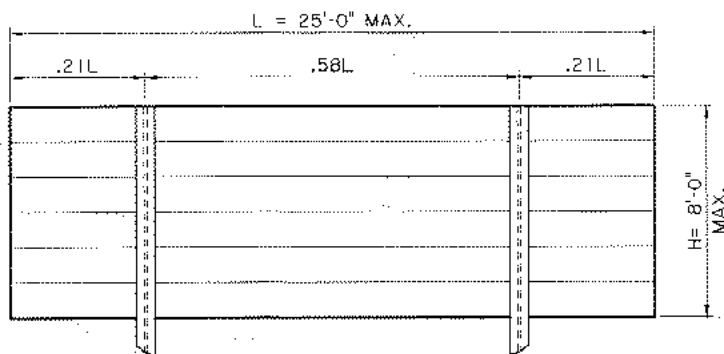


ROUND POST CLAMPS

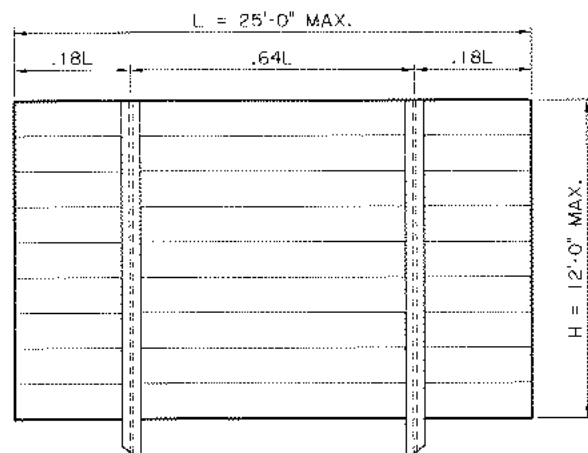
SHEET NUMBER		220	
DESIGN	K. BRAUNER	CHECK	C. GUIDRY
DETAIL	K. BRAUNER	CHECK	C. GUIDRY
REVIEW	C. GUIDRY	DATE	6/24/22
APPROVED BY CHIEF ENGINEER		DATE	
KURT M. BRAUNER		6/24/22	
LICENSE NO. 5061		6/24/22	
PROFESSIONAL ENGINEER		6/24/22	
IN		6/24/22	
CIVIL ENGINEERING		6/24/22	
STATE OF LOUISIANA		6/24/22	
MOUNTING DETAILS (TYPE A & B SIGNS)		ROADSIDE SIGNING STANDARDS	
DOTD		LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT	
BRIDGE AND STRUCTURAL DESIGN		BRIDGE AND STRUCTURAL DESIGN	



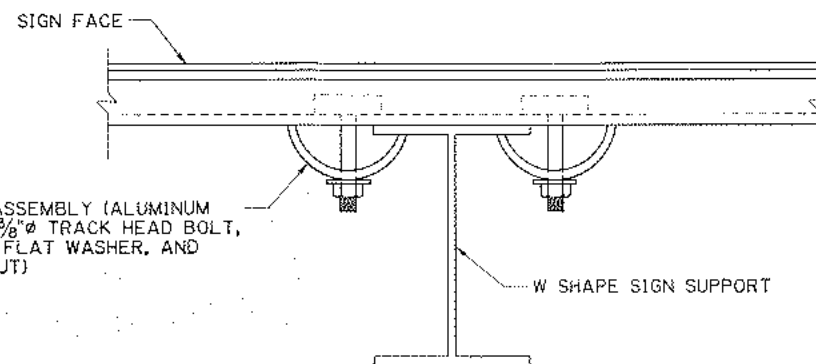
2 POSTS



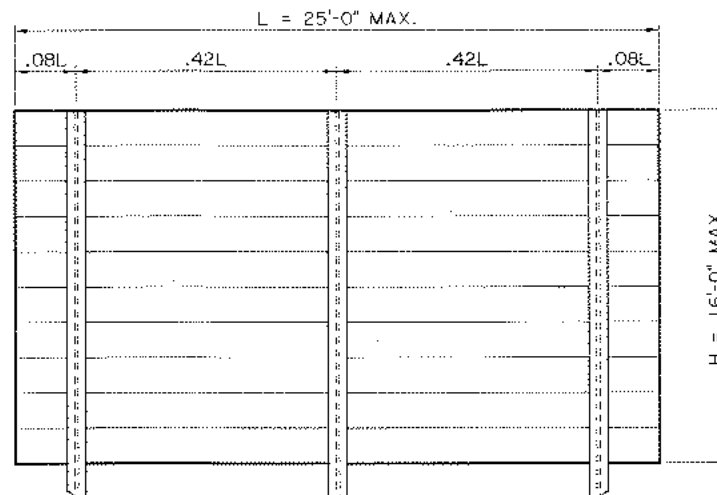
2 POSTS



2 POSTS



MOUNTING DETAIL (TYPE II)



3 POSTS

SHEET NUMBER		221	
DESIGN		K. BRAUNER	
CHECK		C. GUIDRY	
DETAIL		K. BRAUNER	
CHECK		C. GUIDRY	
REVIEW		C. BOURGEOIS	
SHEET #		4 OF 17	

KURT M. BRAUNER
License No. 32267
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
7/1/2022

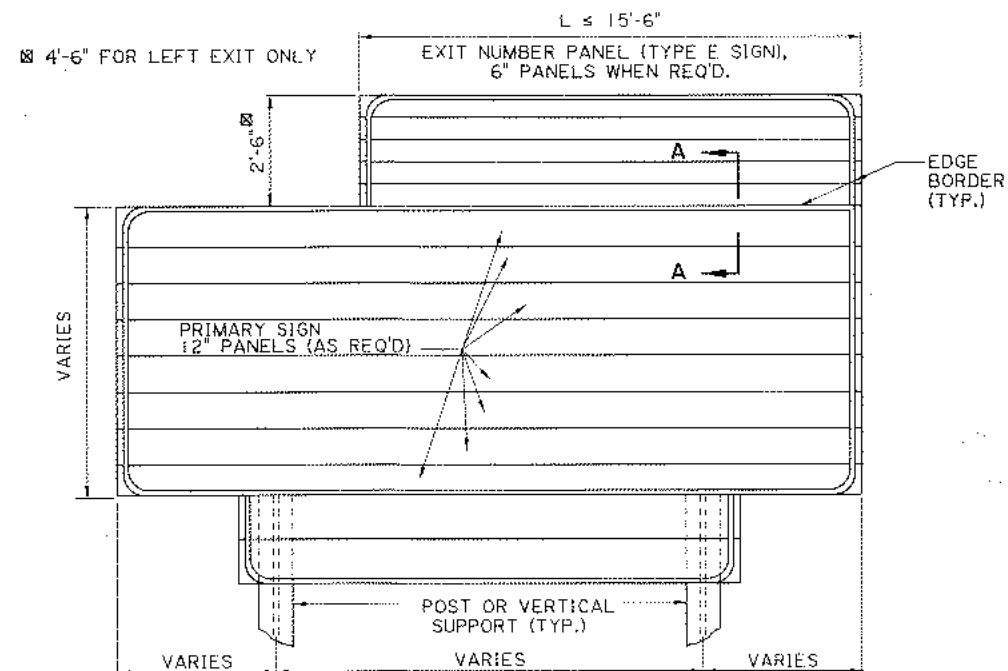
APPROVED BY CHIEF ENGINEER:

7/1/2022

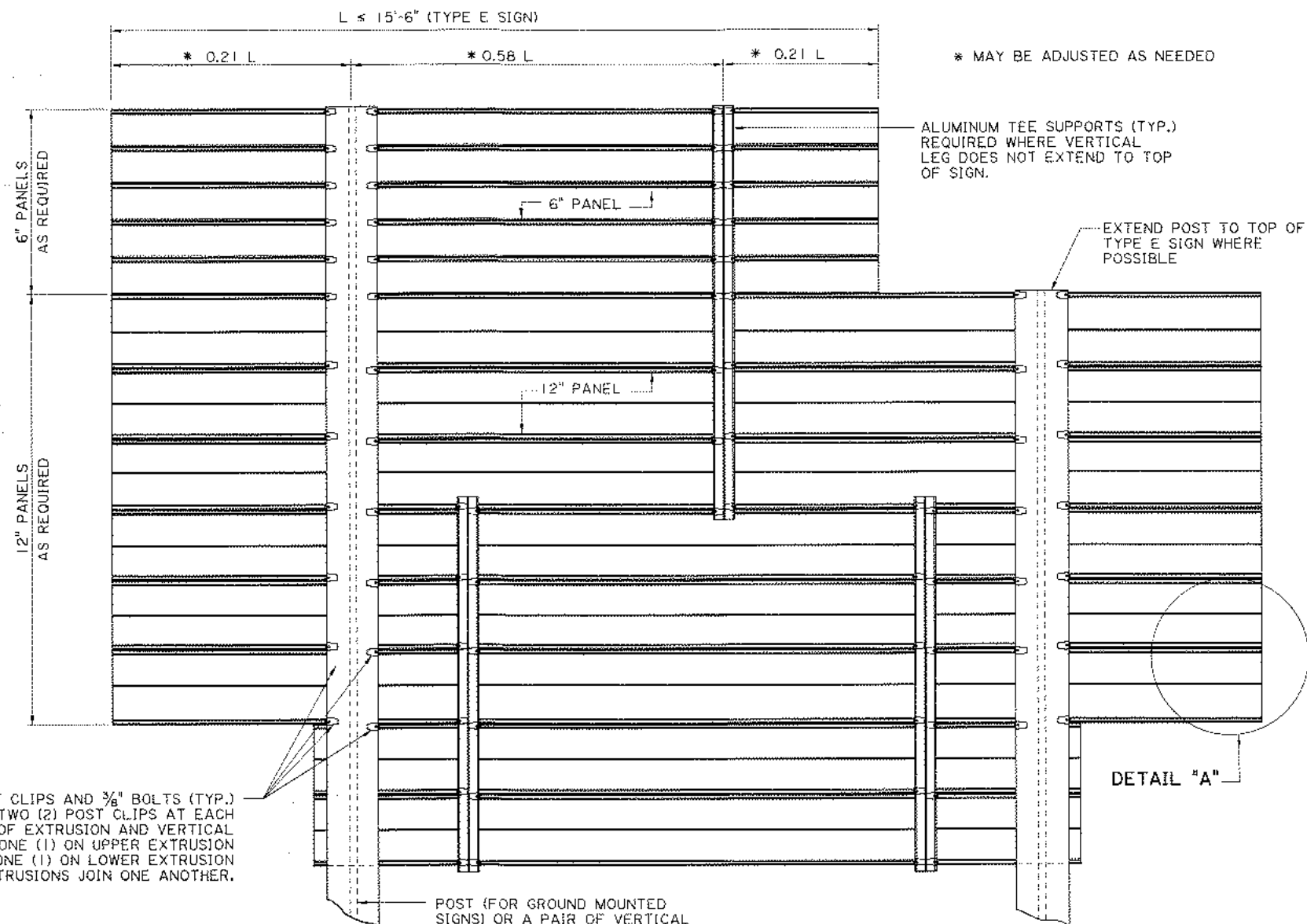
STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION & DEVELOPMENT
BRIDGE AND STRUCTURAL DESIGN

SPACING OF POSTS FOR
GROUND MOUNTED SIGNS

ROADSIDE SIGNING STANDARDS



FRONT ELEVATION



BACK ELEVATION

NOTES:

EXTRUDED ALUMINUM PANELS WILL BE ALLOWED AS AN ALTERNATE TO SIGN PANEL DETAILS FOR TYPE "D" AND "E" GROUND MOUNTED SIGNS ONLY. NUMBER AND SPACING OF POST SHALL MATCH THOSE SHOWN FOR PANEL DETAILS.

ALL 12" EXTRUDED ALUMINUM PANELS SHALL BE ALUMINUM ALLOY 6063-T6.
ALL POST CLIPS SHALL BE ALUMINUM ALLOY 356-T6.
ALL EXTRUDED PANEL BOLTS AND POST CLIP BOLTS SHALL BE ALUMINUM.
ALL HEX LOCK NUTS SHALL BE ALUMINUM ALLOY 2017-T4.
ALL POST CLIP BOLTS SHALL BE TORQUED TO A MINIMUM OF 175 IN-LBS.
ALL POST CLIP BOLTS SHALL HAVE HEADS DESIGNED TO FIT THE BOLT SLOTS IN THE PANELS.

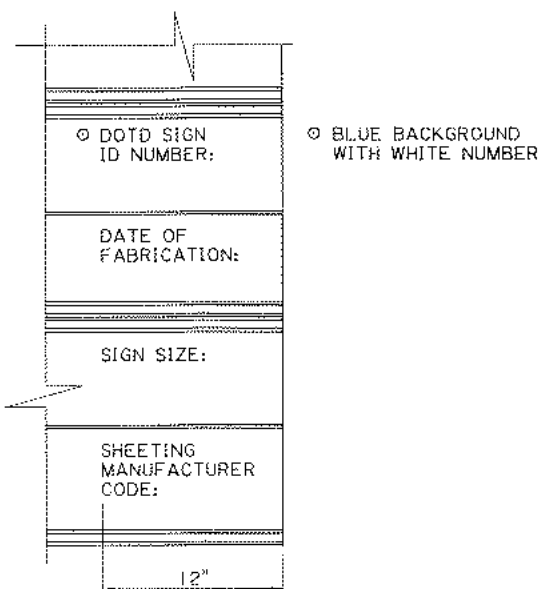
TYPE E SIGNS SHALL BE ATTACHED TO PRIMARY SIGNS WITH ALUMINUM TEE SUPPORTS, (5'-1" LENGTH), POST CLIPS, POST CLIP BOLTS, AND HEX LOCK NUTS.

FOR NEW OVERHEAD SIGNS (INCLUDING FASCIA MOUNTED) INCORPORATING EXISTING MOUNTS, THE CONTRACTOR WILL PLACE VERTICAL SUPPORT ANGLES WITHOUT SPLICES THAT EXTEND THE FULL HEIGHT OF THE EXTRUDED PRIMARY SIGN PANEL.

FOR NEW TYPE D SIGNS INCORPORATING EXISTING MOUNTS, THE EXISTING POST MAY BE REUSED IF THE NEW SIGN PANEL DOES NOT EXTEND OVER 2'-0" ABOVE THE EXISTING POST. SUCH NEW SIGNS WILL BE MOUNTED TO ALUMINUM TEE SUPPORTS BEGINNING AT THE TOP OF THE SIGN AND EXTENDING DOWNWARD FROM THE TOP OF THE POST THE DISTANCE THE NEW SIGN IS ABOVE THE EXISTING POST PLUS 1'-0". ONE TEE IS REQUIRED ADJACENT TO EACH EXISTING POST AND ATTACHED WITH POST CLIPS AS SHOWN FOR NEW TYPE E SIGNS. IF THE NEW SIGN EXTENDS OVER 2'-0" ABOVE THE EXISTING POST, THE CONTRACTOR IS TO REPLACE THE EXISTING POST AND MEET DETAILS FOR NEW CONSTRUCTION.

REFLECTIVE SHEETING FOR EXTRUDED PANELS: ONLY SPLICES THAT OCCUR AS PART OF THE MANUFACTURING PROCESS SHALL BE PERMITTED. A MAXIMUM OF TWO VERTICAL SPLICES ON ANY ONE SIGN FABRICATED USING EXTRUDED PANELS, WITH ONE SPLICE PER EXTRUDED PANELS SHALL BE ALLOWED. ALL "EXIT ONLY" PANELS THAT ARE DETAILED WITH THE TOP AND/OR BOTTOM EDGE NOT AT AN EXTRUDED PANEL EDGE SHALL BE FABRICATED FROM .080" ALUMINUM AND ATTACHED AS AN OVERLAY. ALL OTHER "EXIT ONLY" PANELS SHALL BE FABRICATED BY APPLYING THE YELLOW REFLECTIVE SHEETING ON THE EXTRUDED PANELS. THE REFLECTIVE SHEETING APPLIED TO EXTRUDED PANELS SHALL EXTEND APPROXIMATELY 1/4" OVER EACH SIDE AND SHALL BE ADHERED TO THE SIDE OF THE PANEL.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.



DETAIL "A"

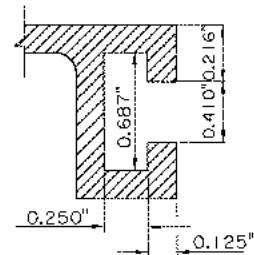
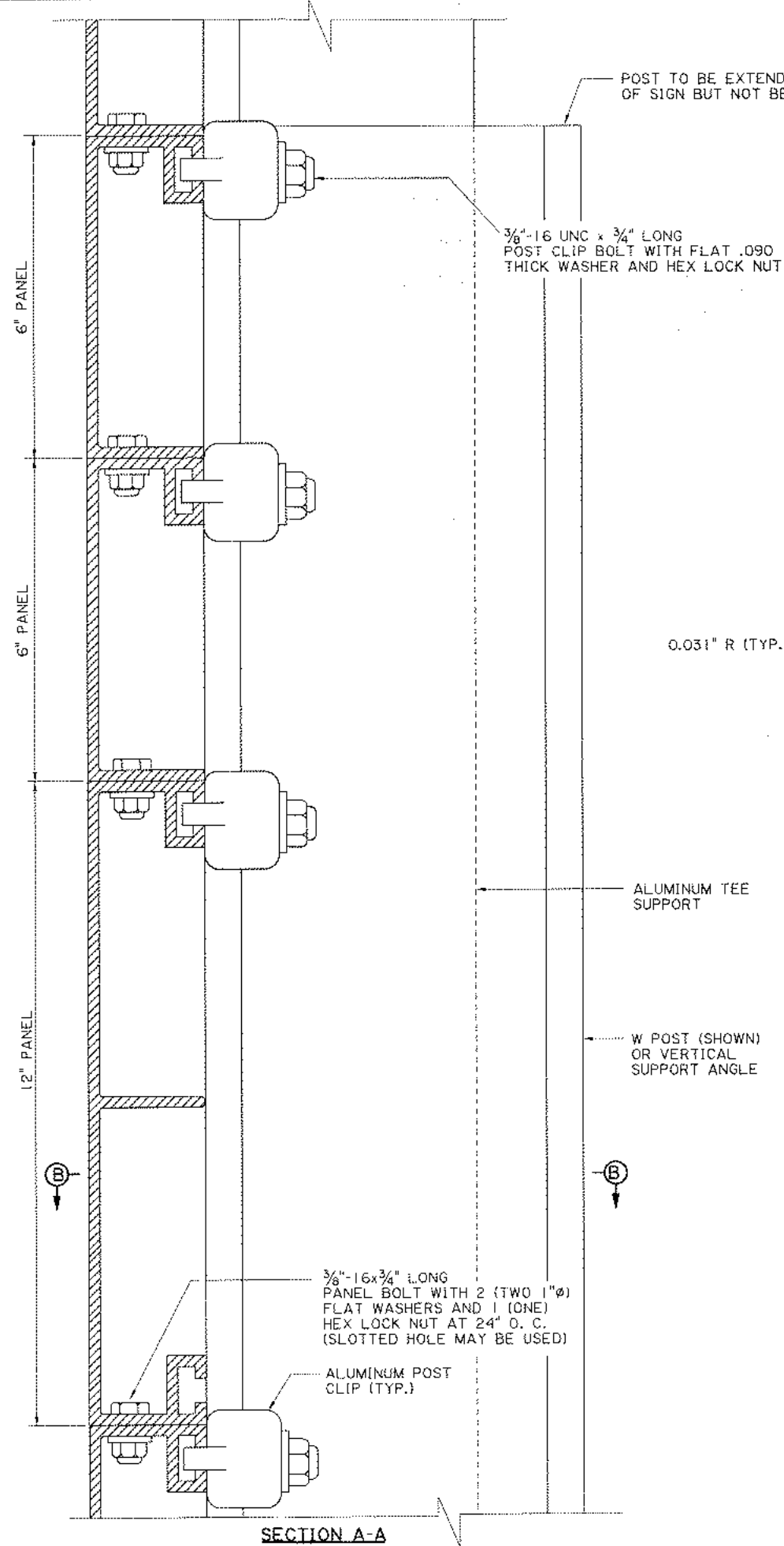
2" LETTERING IN LAST 12" OF SIGN, SEE MISCELLANEOUS NOTE ON GENERAL NOTE SHEET OF TRAFFIC SIGN DETAILS.

SHEET NUMBER 222	
DESIGN K. BRAUNER	CHECK C. GUIDRY
DRAWN K. BRAUNER	CHECK C. GUIDRY
REVIEW C. BOURGEOIS	DATE 5 OF 17

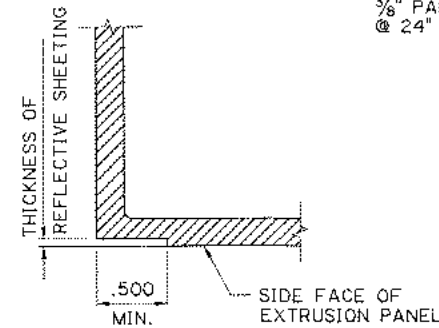
7/1/2022

EXTRUDED ALUMINUM SIGNS
(TYPE D & E SIGNS)

BRIDGE AND STRUCTURAL DESIGN

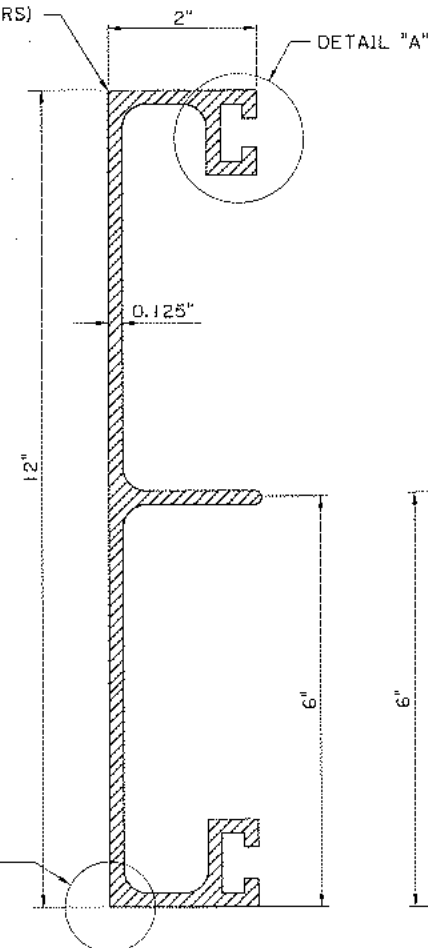


DETAIL "A"

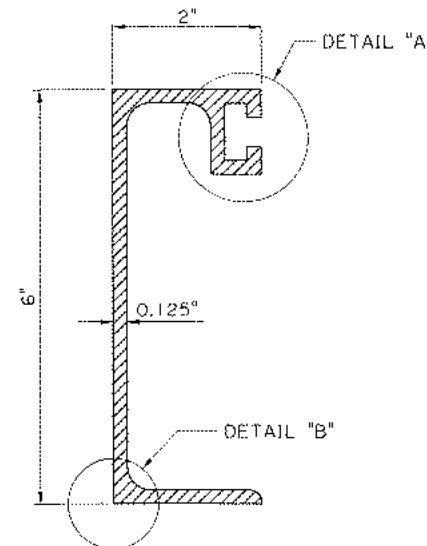


DETAIL "B"

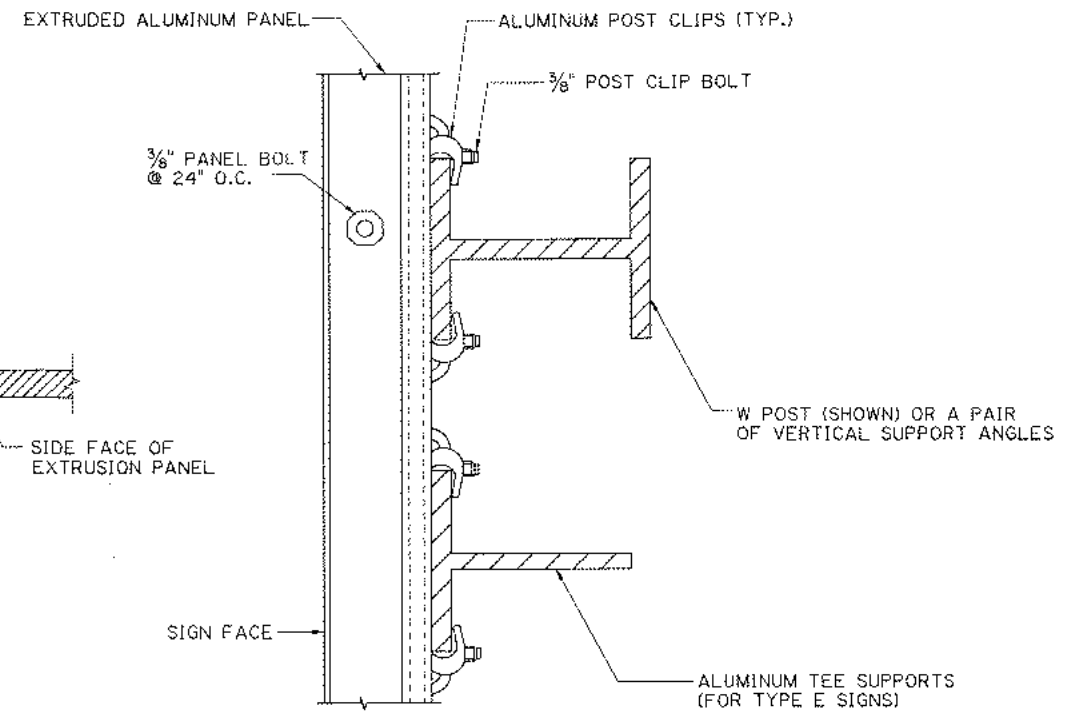
0.031" R (TYP. FACE CORNERS)



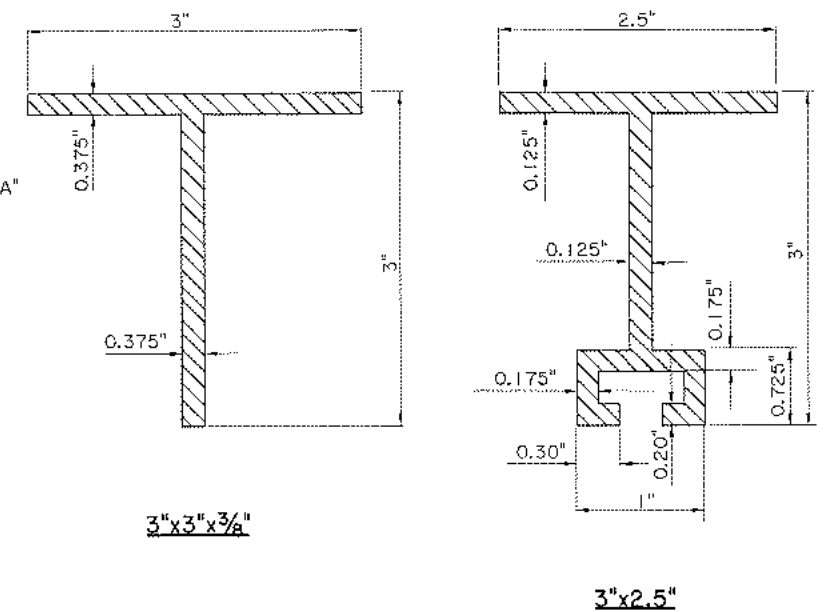
12" PANEL
MINIMUM WALL THICKNESS IS 0.080"
UNLESS OTHERWISE SPECIFIED



6" PANEL
MINIMUM WALL THICKNESS IS 0.080"
UNLESS OTHERWISE SPECIFIED



SECTION B-B



ALUMINUM TEE SUPPORTS
FOR TYPE E SIGNS

SHEET NUMBER		223	
DESIGN	CHECK	DESIGN	CHECK
K. BRAUNER	C. GUIDRY	K. BRAUNER	C. GUIDRY
REVIEW		REVIEW	
C. BOURGEOIS		C. BOURGEOIS	
DATE		DATE	
6/24/22		7/1/2022	

APPROVED BY CHIEF ENGINEER

Chief of Party

DATE

7/1/2022

STATE OF LOUISIANA

KURT M. BRAUNER

License No. 5747

PROFESSIONAL ENGINEER

CIVIL ENGINEERING

6/24/22

STATE OF LOUISIANA

EXTRUDED ALUMINUM PANELS (TYPE D & E SIGNS)

ROADSIDE SIGNING STANDARDS

BRIDGE AND STRUCTURAL DESIGN

DOTD

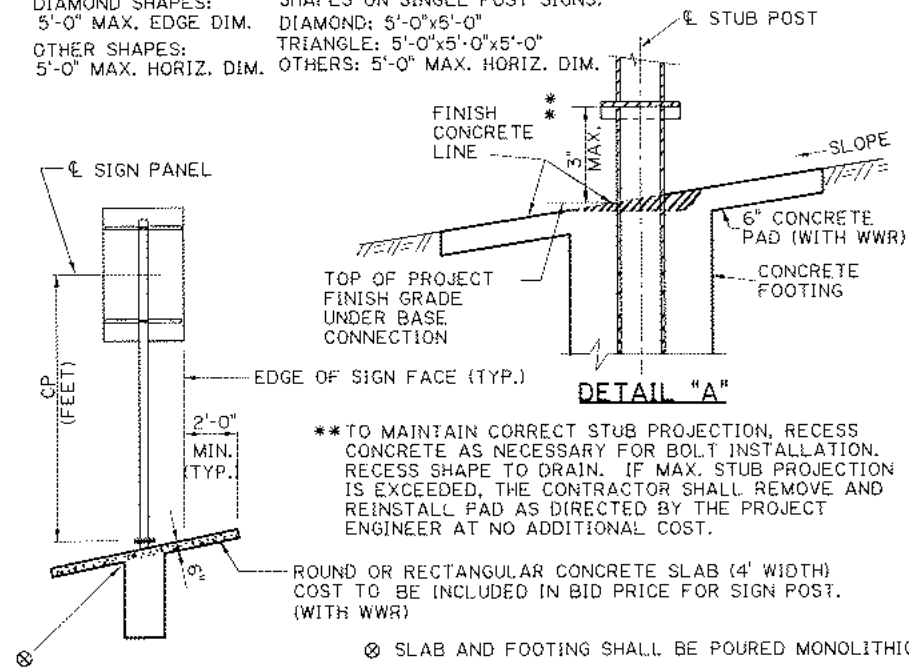
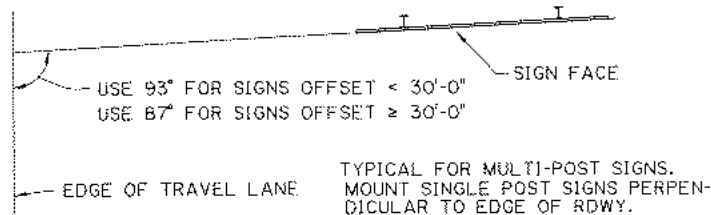
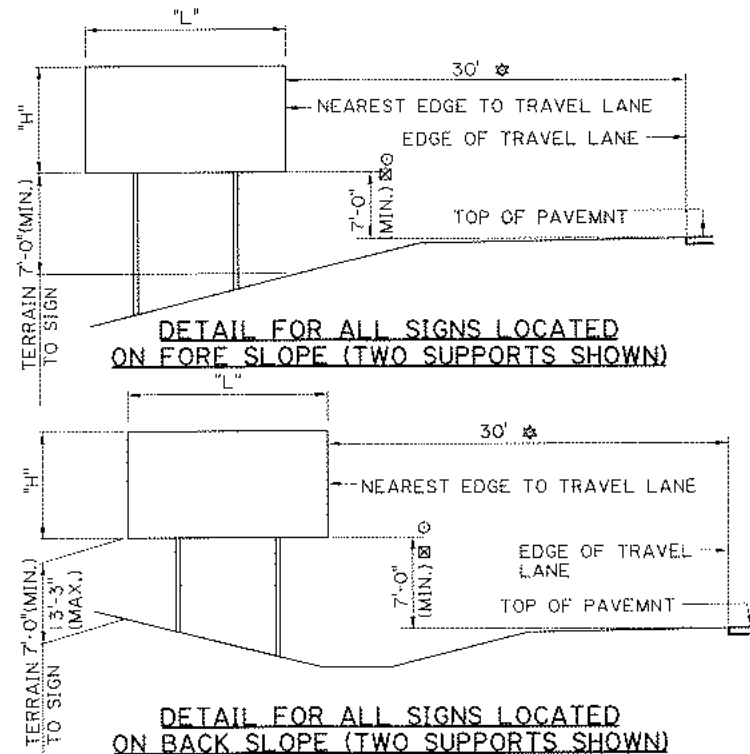
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

TYPE A SIGN

RECTANGULAR SHAPES:
4'-0" MAX. HORIZ. DIM.
DIAMOND SHAPES:
5'-0" MAX. EDGE DIM.
OTHER SHAPES:
5'-0" MAX. HORIZ. DIM.

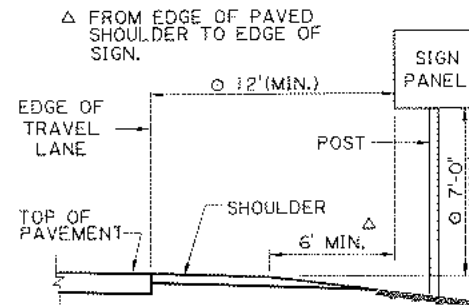
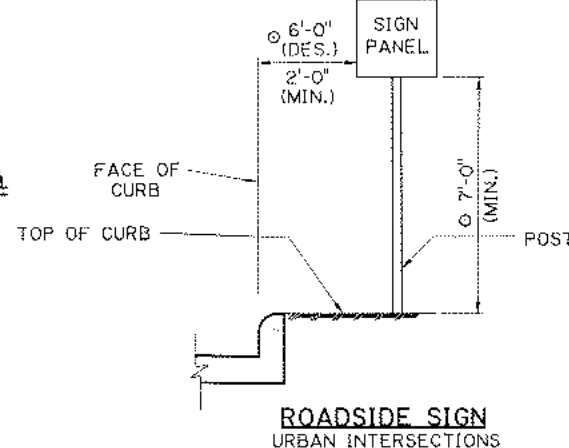
TYPE B SIGN

CLUSTER ASSEMBLY
MAX. DIM. FOR DIFFERENT SIGN BLANK
SHAPES ON SINGLE POST SIGNS.
DIAMOND: 5'-0"x5'-0"
TRIANGLE: 5'-0"x5'-0"x5'-0"
OTHERS: 5'-0" MAX. HORIZ. DIM.

**REAR ELEVATION OF SINGLE POST MOUNTING****LOCATION OF ALL GROUND MOUNTED SIGN STRUCTURES (TWO SUPPORTS SHOWN)**

SINGLE POST MOUNTS	
TOTAL SQ. FT. SIGN AREA	
STEEL ALTERNATE	
ZONE I	ZONE II
5 10 15 20 25 30 35	5 10 15 20 25 30 35
7 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
8 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
9 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
10 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
11 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
12 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
13 2 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
14 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
15 1 1 1 2 2 2 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3
16 2 2 2 3 3 3 3 3 3 3 3	5 1 1 1 2 2 2 3 3 3 3

SINGLE POST PIPE & TUBE SECTIONS	
NO.	STEEL
1	2 1/2" Ø SCH. 40
2	3 1/2" Ø SCH. 40
3	5" Ø SCH. 40
4	6" Ø SCH. 40

**ROADSIDE SIGN RURAL INTERSECTIONS****ROADSIDE SIGN URBAN INTERSECTIONS****NOTES:**

W POST SECTIONS AND TABLE:
COLUMNS HEADED BY THE NUMBERS 27 AND 20 REPRESENT THE DESIGN WIND PRESSURE IN POUNDS PER SQUARE FOOT.
SEE ACCOMPANYING LOUISIANA WIND MAP TO DETERMINE THE DESIGN WIND PRESURE.
L - LENGTH OF SIGN PANEL DESIGNED.
H - HEIGHT OF SIGN PANEL DESIGNED.
ALL DIMENSIONS ARE IN INCREMENTS OF EVEN FEET.

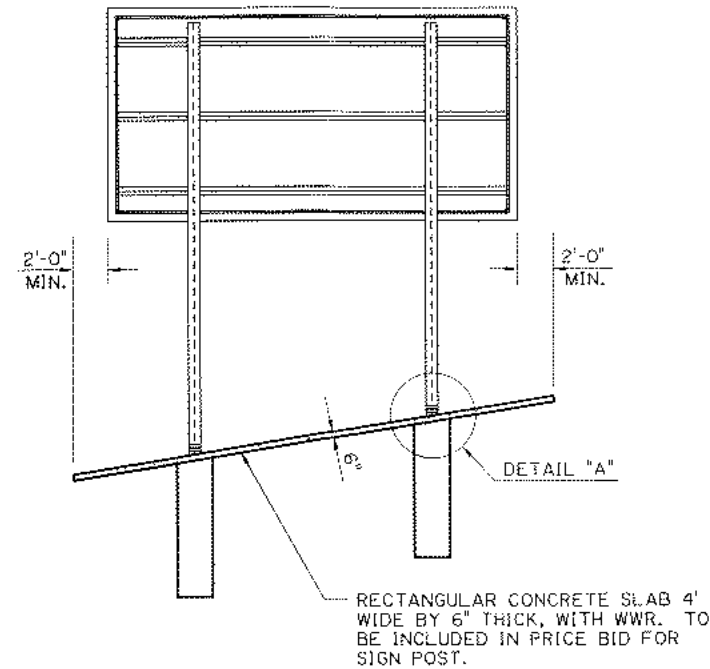
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.

CONCRETE SLAB TO BE REINFORCED WITH A.S.T.M. A1064 WWR 4x4-W4.0 x W4.0 AND FINISHED IN ACCORDANCE WITH LA. STD. SPECS. 805.08.5.

★ 30' MAX. (15' MIN.) FOR FREEWAYS AND EXPRESSWAYS. 15' FOR FRONTAGE ROADS, "BRIDGE ICES BEFORE ROAD" SIGNS, AND TYPE D RAMP SIGNS. SEE SIGN SUMMARY SHEETS. PROJECT ENGINEER MAY ADJUST ON A CASE-BY-CASE BASIS.

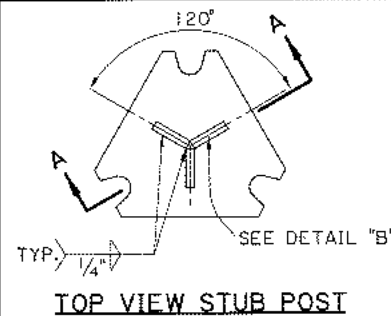
⊗ 7' MINIMUM FOR ROUTE MARKERS, WARNING AND REGULATORY SIGNS. 8' MINIMUM FOR GUIDE SIGNS WHEN SECONDARY SIGN MOUNTED BELOW.

○ MOUNTING HEIGHT SHALL BE 7'-0" MIN. UNLESS OTHERWISE NOTED ON THE SIGN SUMMARY SHEET. CHEVRON SIGNS (W1-8) MAY BE INSTALLED AT 4'-0" OR HIGHER.

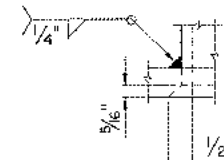
**REAR ELEVATION OF MULTI-POST MOUNTING**

W POST SECTIONS FOR DOUBLE & TRIPLE POST MOUNTINGS											
PL	STEEL	PL	STEEL	PL	STEEL	PL	STEEL	PL	STEEL	PL	STEEL
LH	27	20	LH	27	20	LH	27	20	LH	27	20
5 1	1	1	12 5	2	1	16 5	4	4	21 6	3	3
5 2	1	1	12 6	2	2	16 6	4	4	21 9	4	3
5 3	1	1	12 7	2	2	17 4	2	2	21 10	4	3
5 4	1	1	12 8	2	2	17 5	2	2	21 11	4	4
5 5	1	1	12 9	2	2	17 6	2	2	21 12	4	4
5 6	1	1	12 10	2	2	17 7	3	2	21 13	4	3
6 1	1	1	12 11	3	2	17 8	3	2	21 14	4	3
6 2	1	1	12 12	3	2	17 9	3	3	21 15	4	4
6 3	1	1	12 13	3	3	17 10	3	3	21 16	4	4
6 4	1	1	13 3	1	1	17 11	4	3	22 4	2	2
6 5	1	1	13 4	1	1	17 12	4	3	22 5	2	2
6 6	1	1	13 5	2	1	17 13	3	3	22 6	3	2
6 7	1	1	13 6	2	2	17 14	3	3	22 7	3	3
7 2	1	1	13 7	2	2	17 15	4	3	22 8	3	3
7 3	1	1	13 8	2	2	17 16	4	3	22 9	4	3
7 4	1	1	13 9	2	2	18 3	2	1	22 10	4	3
7 5	1	1	13 10	3	2	18 4	2	2	22 11	4	4
7 6	1	1	13 11	3	2	18 5	2	2	22 12	4	4
7 7	1	1	13 12	3	3	18 6	2	2	22 13	4	3
7 8	1	1	13 13	3	3	18 7	3	2	22 14	4	4
8 2	1	1	13 14	4	3	18 8	3	2	22 15	4	4
8 3	1	1	14 3	1	1	18 9	3	3	22 16	4	4
8 4	1	1	14 4	2	1	18 10	3	3	23 4	2	2
8 5	1	1	14 5	2	2	18 11	4	3	23 5	3	2
8 6	1	1	14 6	2	2	18 12	4	3	23 6	3	3
8 7	1	1	14 7	2	2	18 13	3	3	23 7	3	3
8 8	2	1	14 8	2	2	18 14	4	3	23 8	4	3
8 9	2	1	14 9	3	2	18 15	4	3	23 9	4	3
9 2	1	1	14 10	3	2	18 16	4	3	23 10	4	4
9 3	1	1	14 11	3	3	19 3	2	1	23 11	4	4
9 4	1	1	14 12	3	3	19 4	2	2	23 12	4	4
9 5	1	1	14 13	4	3	19 5	2	2	23 13	4	4
9 6	1	1	14 14	4	3	19 6	2	2	23 14	4	4
9 7	2	1	14 15	4	3	19 7	3	2	23 15	4	4
9 8	2	1	15 3	1	1	19 8	3	3	23 16	4	4
9 9	2	2	15 4	2	1	19 9	3	3	24 4	2	2
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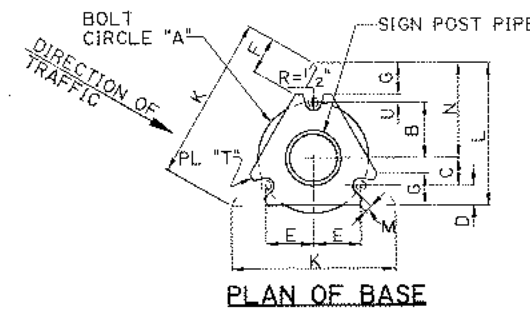
W SECTIONS	
NO.	STEEL
1	W6x12
2	W8x18
3	W8x24
4	W10x33
5	W12x40
6	W12x45



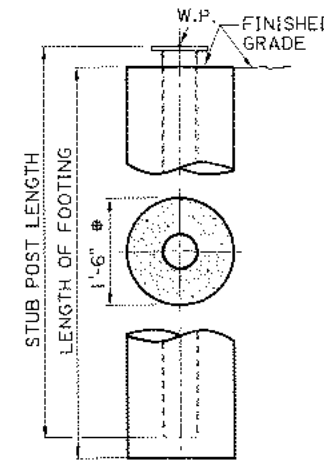
TOP VIEW STUB POST



DETAIL "A"



PLAN OF BASE



* FOR 2 1/2" (STEEL) POST SECTIONS, FOOTING DIAMETER SHALL BE 1'-0"

FOOTING DETAIL
PIPE SECTIONS

PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

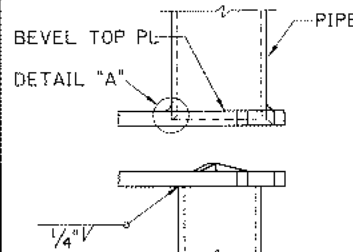
SPECIAL CARE SHALL BE TAKEN TO SET THE BASE PLUM TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED.

1. BASE SHALL BE ALIGNED AND SET PLUM BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.

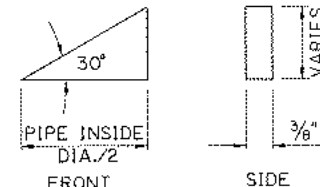
FRICITION CAPS:

CAPS MAY BE MANUFACTURED FROM EITHER HOT ROLLED OR COLD ROLLED STEEL SHEETS. FOR PIPE SIZES 3 1/2" AND SMALLER THE MINIMUM SHEET METAL THICKNESS SHALL BE 24 GAUGE. THE RIM EDGES SHALL BE REASONABLY STRAIGHT AND SMOOTH. CAPS SHALL BE SIZED AND FORMED IN SUCH A MANNER AS TO PRODUCE A DRIVE-ON FRICITION FIT AND HAVE NO TENDENCY TO ROCK WHEN SEATED ON THE PIPE. THE DEPTH SHALL BE SUFFICIENT TO GIVE POSITIVE PROTECTION AGAINST ENTRANCE OF RAINWATER. THEY SHALL BE FREE OF SHARP CREASES OR INDENTATIONS AND SHOW NO EVIDENCE OF METAL FRACTURE. CAPS SHALL HAVE A ELECTRODEPOSITED COATING OF ZINC IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION B633 SC4, TYPE 1.

THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.



SECTION A-A



DETAIL "B"
3 REQ'D.

MULTI-DIRECTIONAL BASE
SINGLE STEEL POST ONLY

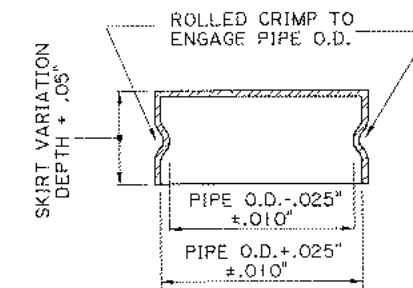
** IF MAX. STUB PROJECTION IS EXCEEDED, CONTRACTOR SHALL REMOVE AND REINSTALL PAD AS DIRECTED BY THE PROJECT ENGINEER AT NO COST TO THE DEPARTMENT.

ELEVATION OF BASE CONNECTION
STEEL

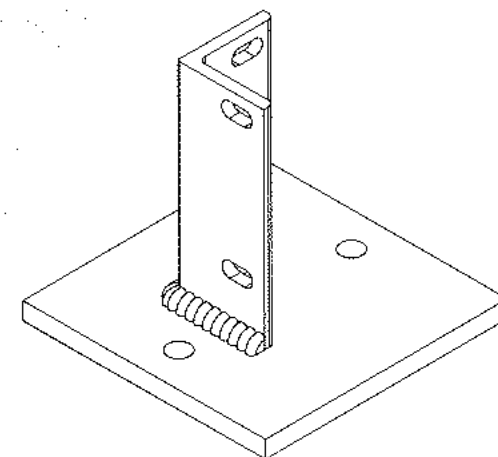
STEEL MULTI-DIRECTIONAL BASE CONNECTION DATA																
NOMINAL PIPE SIZE	BOLT SIZE & TORQUE	WELD SIZE	T	Y	A	B	C	D	E	F	G	K	L	M	N	U
2 1/2" OR 3 1/2" DIA.	5/8" T=225	3/8"	5/8"	7"	7"	3 1/2"	1 3/4"	1 1/4"	3"	2 5/8"	2"	10 3/8"	9"	1/2"	6"	1/2"

FOR STUB POST LENGTH & FOOTING DIMENSION SEE TABLE BELOW AND FOOTING DETAIL.
O TORQUE IN INCH-LBS., BOLTS ARE HIGH STRENGTH

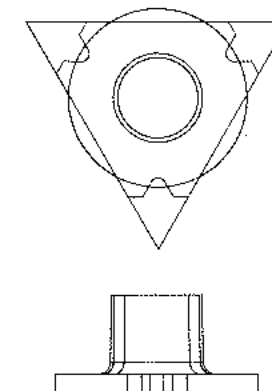
FOOTING DATA			
POST DIA.	STUB L	FOOTING L	CU.YD. CONC.
2 1/2"	36"	36"	0.09
3 1/2"	36"	36"	0.20
5"	48"	48"	0.26



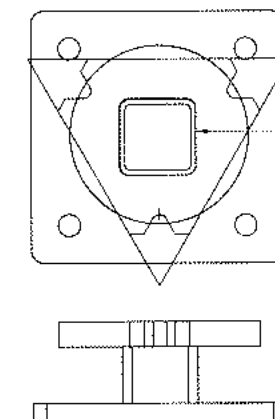
FRICITION CAP DETAIL
USED AT TOP OF ALL POSTS



SURFACE MOUNT FOR MILE MARKERS
(SQUARE TUBE ONLY)



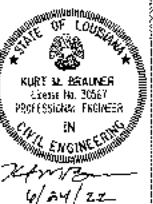
TYPICAL TOP ASSEMBLY



TYPICAL BOTTOM ASSEMBLY

CONCRETE SURFACE MOUNT

ANY SHAPE AND SIZE ALLOWED FOR CENTER CONNECTION

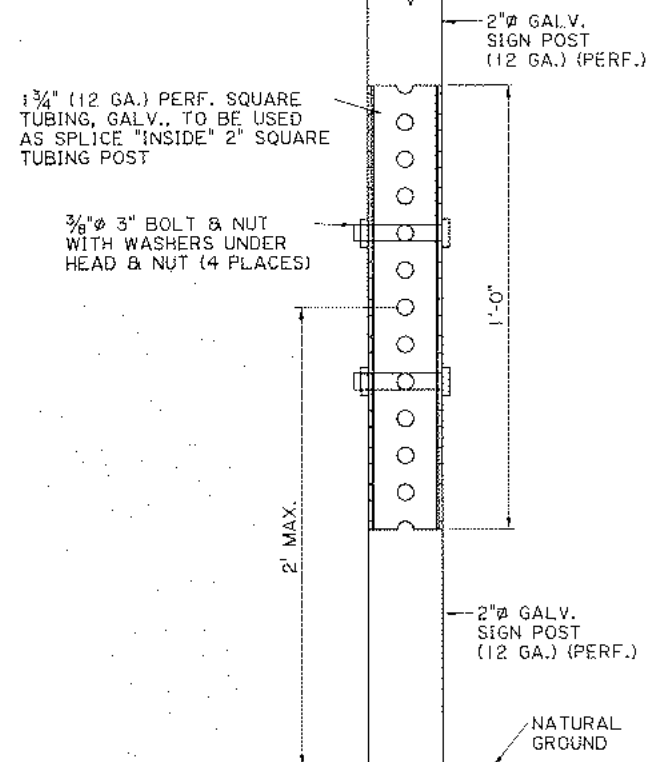


APPROVED BY: CIVIL ENGINEER
Kurt M. Brauner
7/1/2022

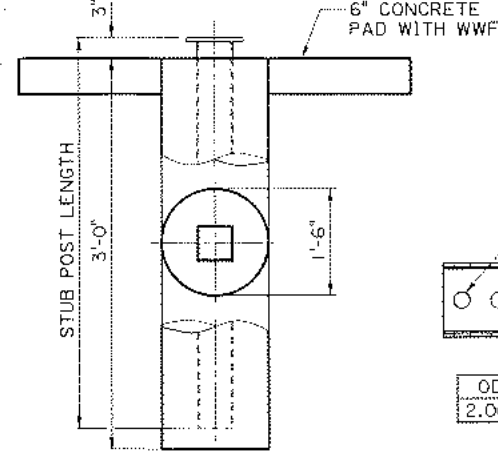


ROADSIDE MOUNTED SIGN DETAILS
(TYPE A & B SIGNS)

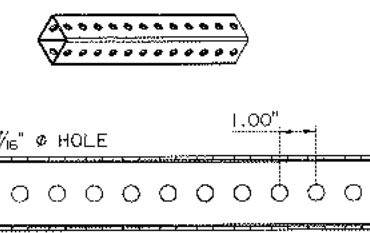
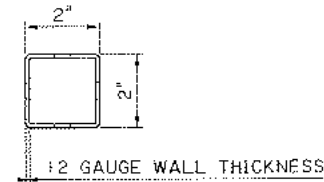




SPLICE JOINT
FOR SIGN 2" POST

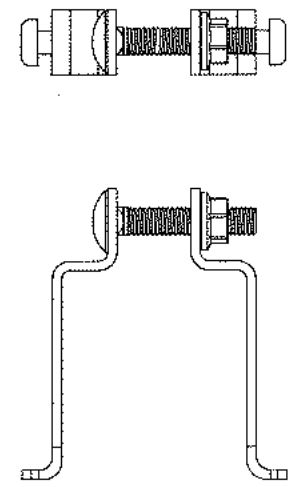


FOOTING DETAIL
SQ. TUBE SECTIONS



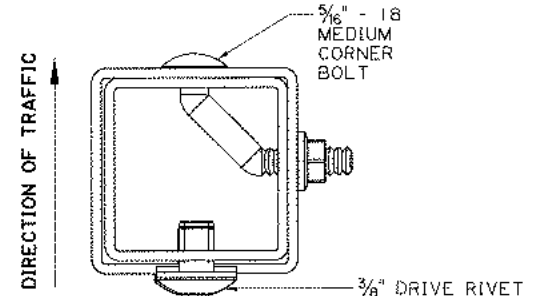
OD	GAUGE	WALL	WEIGHT PER FOOT
2.00"	12GA	0.105"	2.459#

2" SQUARE TUBING



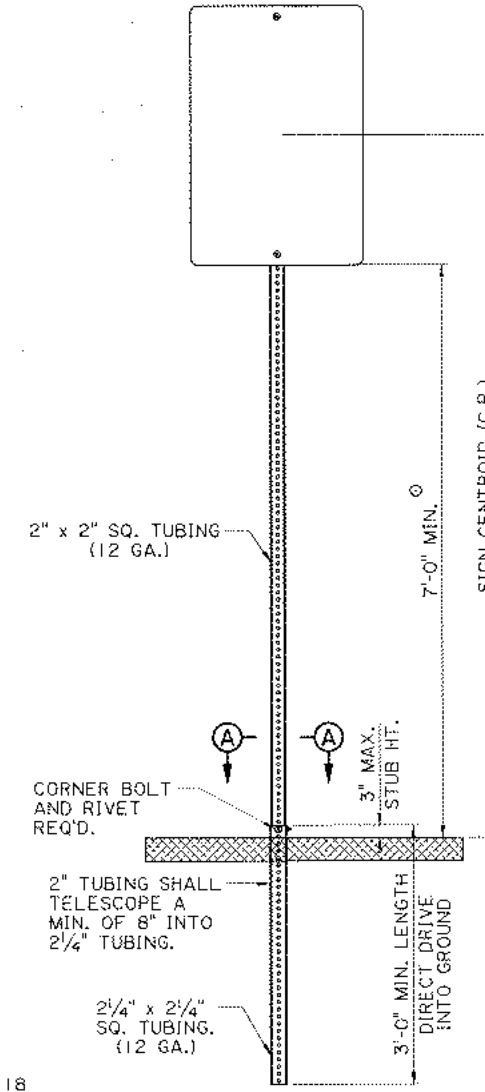
SIGN CLAMP FOR SQUARE POSTS

7/8" WIDE X 11GA. TYPE 304, #2B FINISHED STAINLESS STEEL INCLUDES 3/8" - 16 X 2" CARRIAGE BOLT AND CASE HARDENED FLANGE NUT.

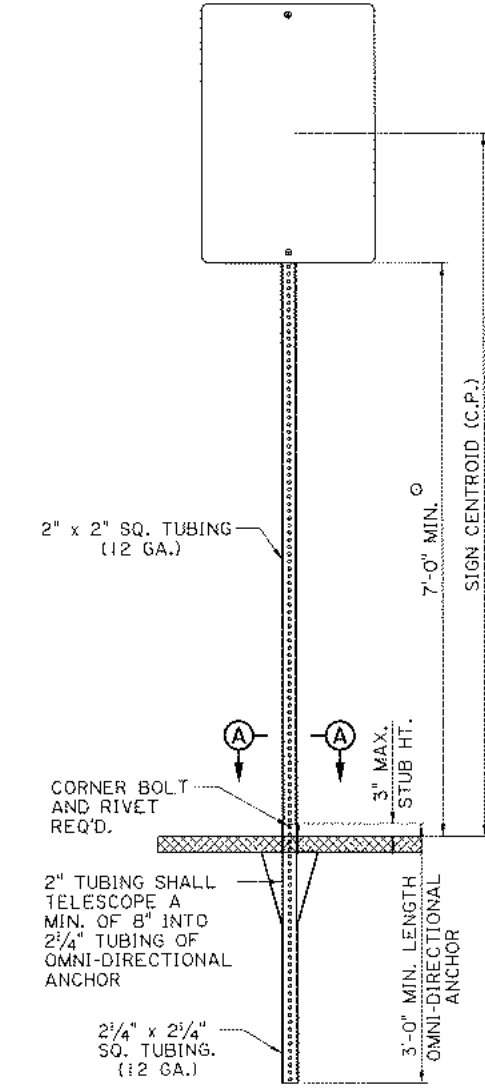


SECTION A-A

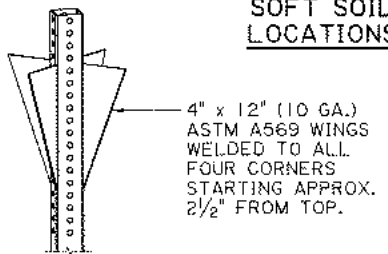
SIGN CENTROID (CP)	ALLOWABLE SIGN AREA (FT ²)			
	70 MPH + 30% GUST		80 MPH + 30% GUST	
	SINGLE POST (2" x 12GA PERF.)	DOUBLE POST (2" x 12GA PERF.)	SINGLE POST (2" x 12GA PERF.)	DOUBLE POST (2" x 12GA PERF.)
14'	3.99	7.98	2.99	5.97
13.5'	4.14	8.28	3.10	6.19
13'	4.30	8.59	3.21	6.43
12.5'	4.47	8.93	3.34	6.68
12'	4.65	9.30	3.48	6.96
11.5'	4.85	9.70	3.63	7.26
11'	5.07	10.14	3.79	7.59
10.5'	5.31	10.62	3.97	7.95
10'	5.57	11.15	4.17	8.34
9.5'	5.86	11.73	4.39	8.77
9'	6.19	12.37	4.63	9.26
8.5'	6.55	13.09	4.90	9.79
8'	6.95	13.90	5.20	10.40
7.5'	7.41	14.81	5.54	11.08
7'	7.93	15.86	5.93	11.86



HARD SOIL
LOCATIONS



SOFT SOIL
LOCATIONS



OMNI-DIRECTIONAL ANCHOR

NOTES:

SEE SECTION 1015.02 IN THE STANDARD SPECIFICATIONS FOR INFORMATION RELATED TO THE ALLOWABLE MATERIALS.

SIGNS MOUNTED TO SINGLE SQUARE TUBE POSTS DO NOT REQUIRE STIFFENERS UNLESS THE SIGN HAS AT LEAST ONE SIDE GREATER THAN 36" LONG.

FOR DUAL POSTS, LOCATE POSTS AT 58% SPACING FROM CENTER OF SIGN, OR 21% FROM EACH EDGE OF SIGN. USE STIFFENERS ON BACK OF SIGNS MOUNTED ON DUAL POSTS.

SIGNS MAY BE MOUNTED BACK TO BACK ON THE POST.

○ MOUNTING HEIGHT SHALL BE 7'-0" MIN. UNLESS OTHERWISE NOTED ON THE SIGN SUMMARY SHEET. CHEVRON SIGNS (W-8) MAY BE INSTALLED AT 4'-0" OR HIGHER.

SHEET NUMBER227

DESIGN

CHECK

DETAIL

QC/CALC

REVIEW

ISSUES

PARISH

K. BRAUNER

C. GUIDRY

K. BRAUNER

C. GUIDRY

C. BOURGEOIS

CONTROL SECTION

STATE PROJECT

10 OF 17

STATE OF LOUISIANA

KURT M. BRAUNER

License No. 30567

PROFESSIONAL ENGINEER

IN

CIVIL ENGINEERING

6/24/22

APPROVED BY CLIENT ENGINEER

[Signature]

7/1/2022

STATE OF LOUISIANA

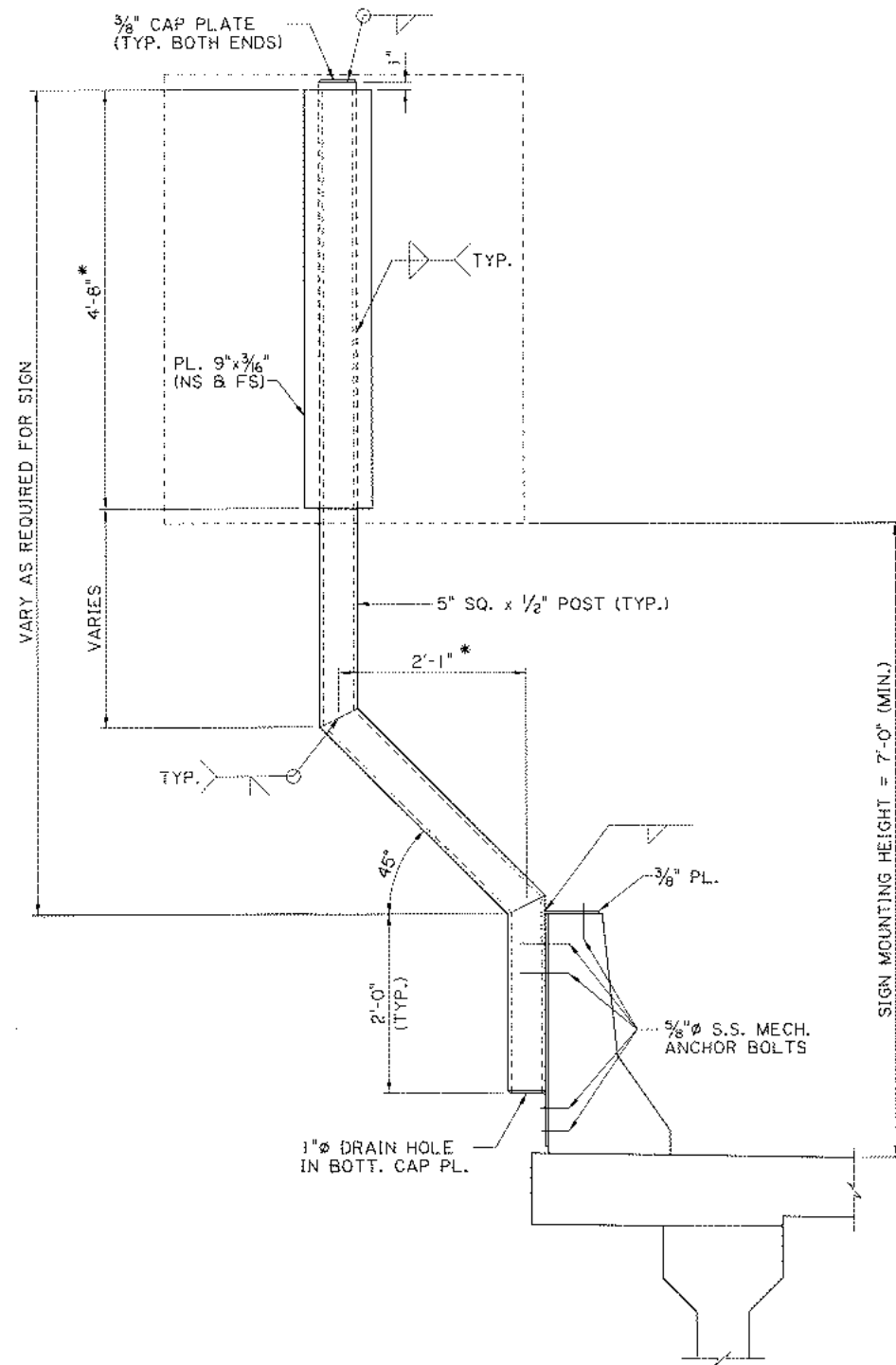
SQUARE TUBE SIGN DETAILS

ROADSIDE SIGNING STANDARDS

DOTD

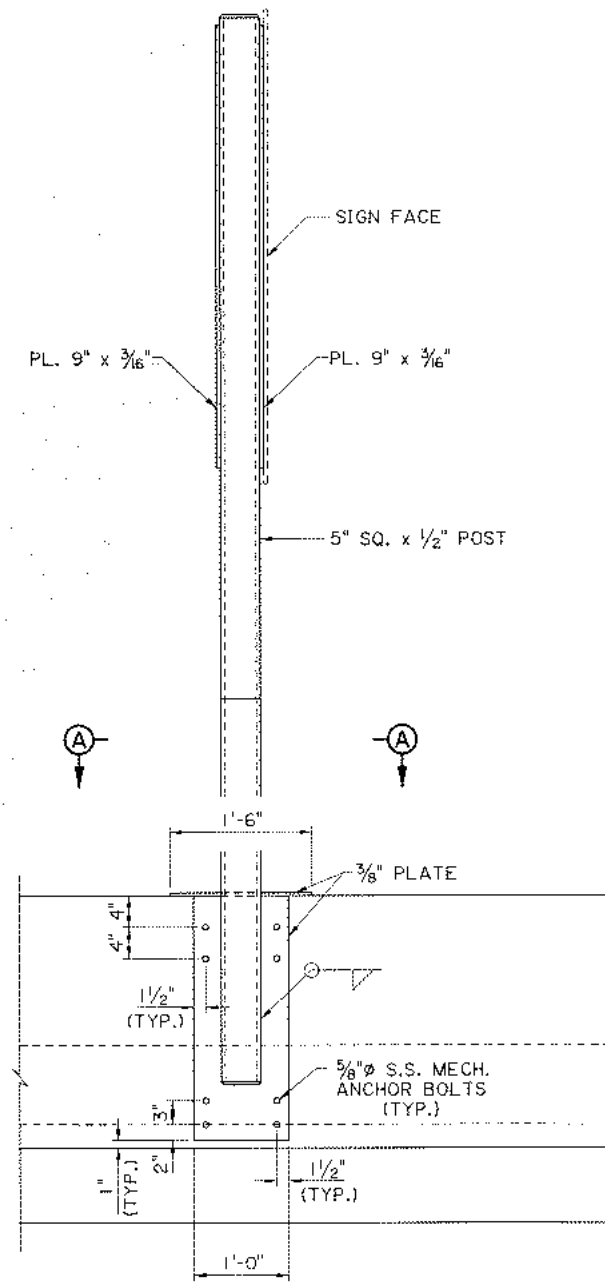
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

BRIDGE AND STRUCTURAL DESIGN

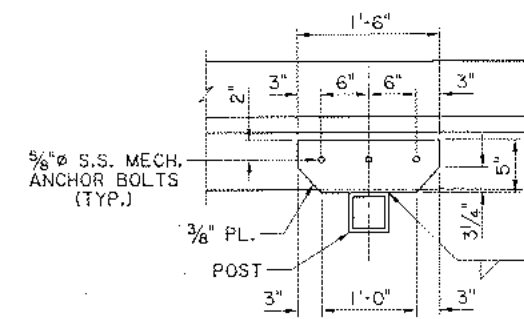


OFFSET SIGN SUPPORT

* DIMENSIONS ARE BASED ON A 5 FT. x 4 FT. SIGN.
ADJUST AS NEEDED FOR DIFFERENT SIGN SIZES.



OUTSIDE ELEVATION SHOWING BARRIER
(TYPICAL INSTALLATION)



SECTION A-A

NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123.

MECHANICAL ANCHOR BOLTS SHALL BE 5/8" STAINLESS STEEL (MIN. FY = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.L. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.

WELDING SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.5-10), AND SECTION 809 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2016 EDITION.

NO PART OF ANY SIGN SHALL PROTRUDE INTO THE SHOULDER AREA. DIMENSIONS OF SUPPORT POST AND BRACKET SHALL BE ADJUSTED AS NEEDED PRIOR TO FABRICATION.

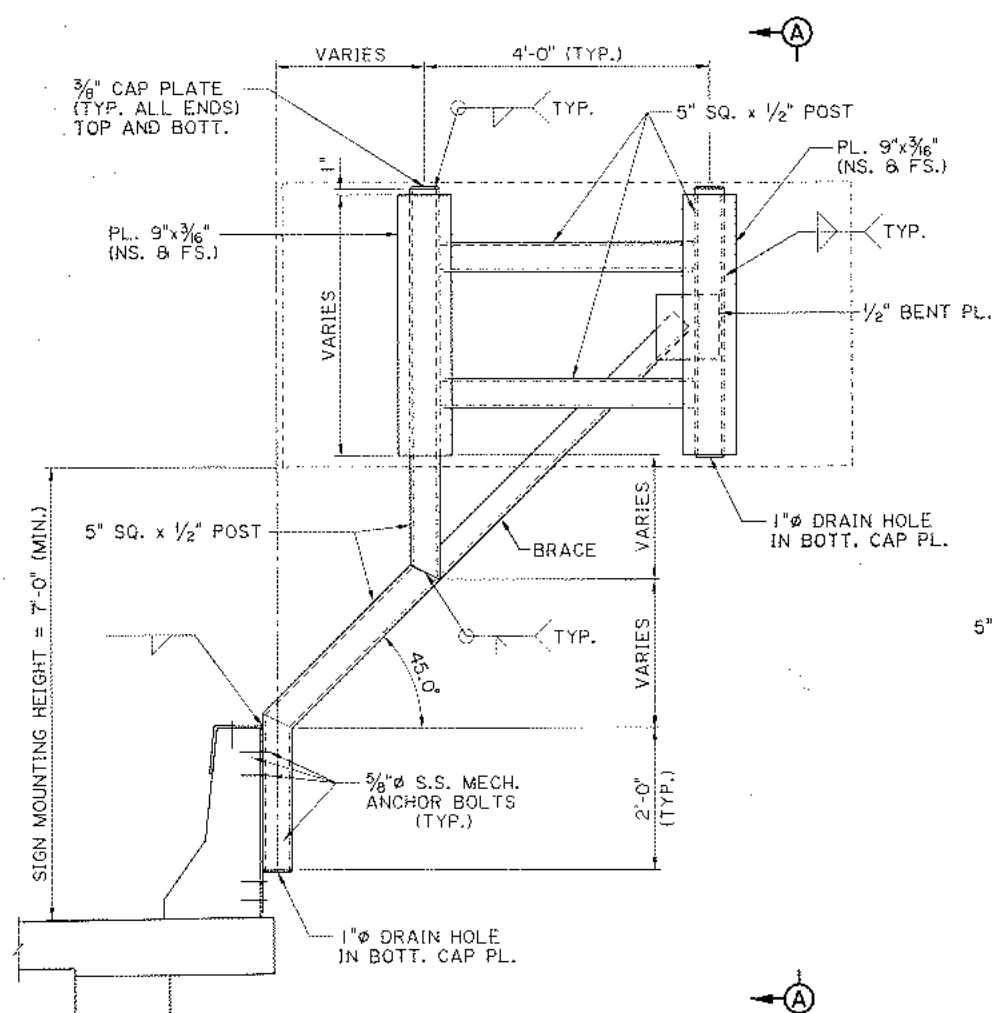
ANY PORTIONS OF THE EXISTING BARRIER THAT ARE DAMAGED SHALL BE REPAIRED TO THE SATISFACTION OF THE PROJECT ENGINEER.

DIMENSIONS RELATED TO THE BARRIER CONNECTION ARE BASED ON AS-BUILT DRAWINGS AND PREVIOUS STANDARDS. DIMENSIONS SHALL BE ADJUSTED AS NEEDED BASED ON FIELD MEASUREMENTS.

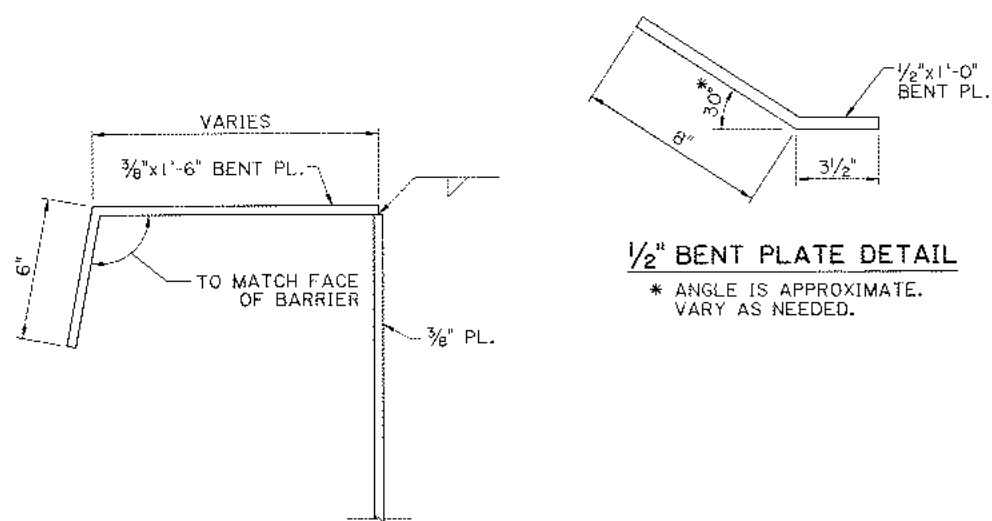
A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.

MAX SIGN AREA = 20 SQFT.

SHEET NUMBER		228	
DESIGN	K. BRAUNER	CHECK	V. TOURRES
DETAIL	K. BRAUNER	CHECK	V. TOURRES
REVIEW	C. GUIDRY	DATE	7/1/2022
APPROVED BY CHIEF ENGINEER			
Z - BRACKET SIGN SUPPORT (F - SHAPE BARRIER)			
ROADSIDE SIGNING STANDARDS			
BRIDGE AND STRUCTURAL DESIGN			

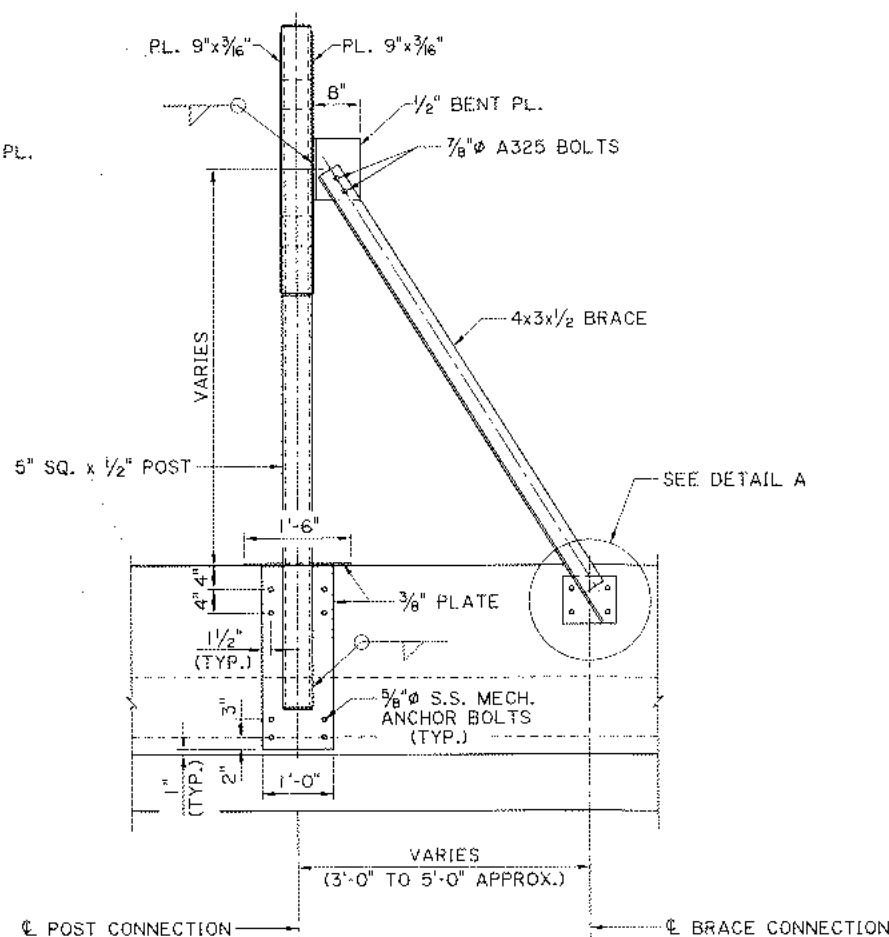


BARRIER MOUNT

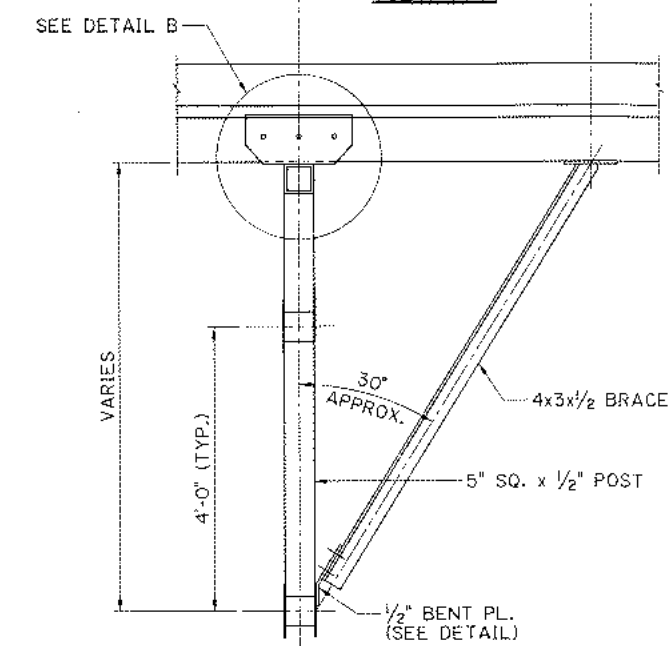


BARRIER CONNECTION DETAIL

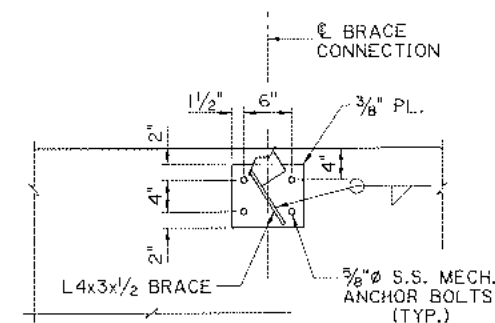
1/2" BENT PLATE DETAIL
* ANGLE IS APPROXIMATE. VARY AS NEEDED.



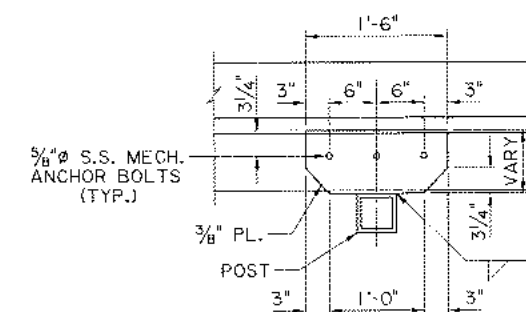
VIEW A-A



TOP VIEW



DETAIL A



DETAIL B

NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. A325 BOLTS TO BE GALVANIZED PER ASTM A-153.

MECHANICAL ANCHOR BOLTS SHALL BE 5/8" STAINLESS STEEL (MIN. FY = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.I. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.

WELDING SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.5-10), AND SECTION 809 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2016 EDITION.

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DIMENSIONS RELATED TO THE BARRIER CONNECTION ARE BASED ON AS-BUILT DRAWINGS AND PREVIOUS STANDARDS. DIMENSIONS SHALL BE ADJUSTED AS NEEDED BASED ON FIELD MEASUREMENTS.

A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.

MAX SIGN AREA = 40 SQFT.

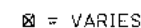
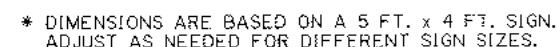
SHEET NUMBER		229	
DESIGN	K. BRAUNER	CHECK	V. TOURRES
DRAWN	V. TOURRES	REVIEW	C. GUIDRY
DATE		6/24/22	
PROJECT		12 OF 17	

KURT M. BRAUNER
License No. 32567
PROFESSIONAL ENGINEER
IN
LOUISIANA
6/24/22

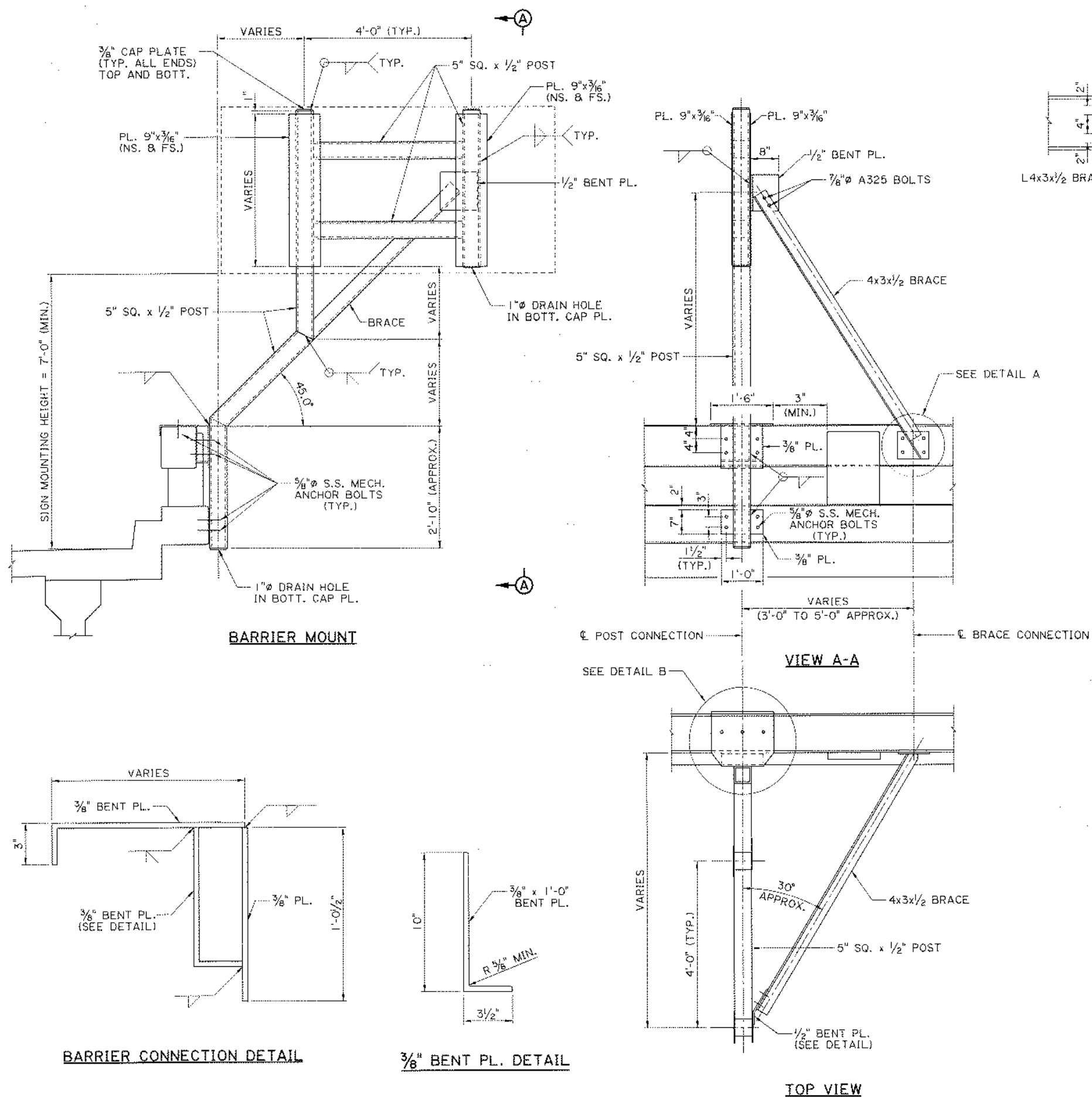
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Z - BRACKET SIGN SUPPORTS (F - SHAPE BARRIER)

BRIDGE AND STRUCTURAL DESIGN



MAX SIGN AREA = 20 SQFT.



NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. A325 BOLTS TO BE GALVANIZED PER ASTM A-153.

MECHANICAL ANCHOR BOLTS SHALL BE 5/8" STAINLESS STEEL (MIN. F_y = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.L. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.

WELDING SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE OF THE AMERICAN WELDING SOCIETY (AWS D1.5-10), AND SECTION 809 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2016 EDITION.

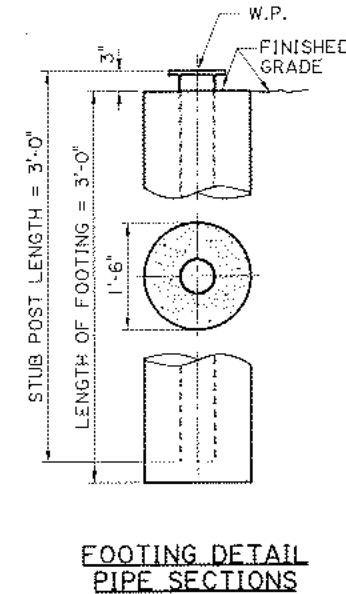
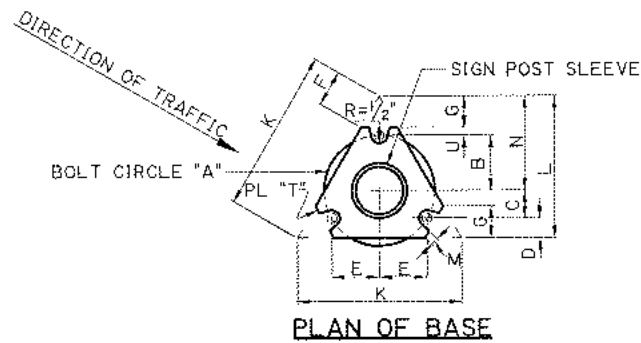
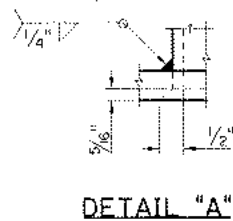
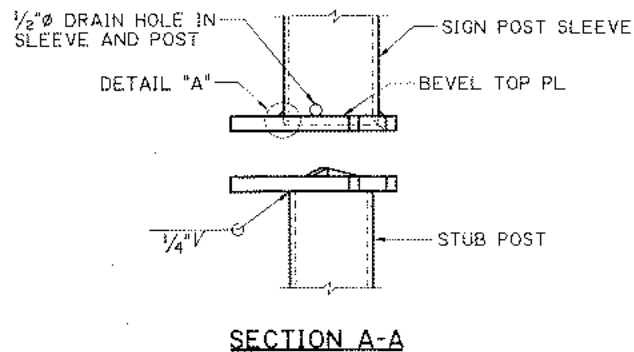
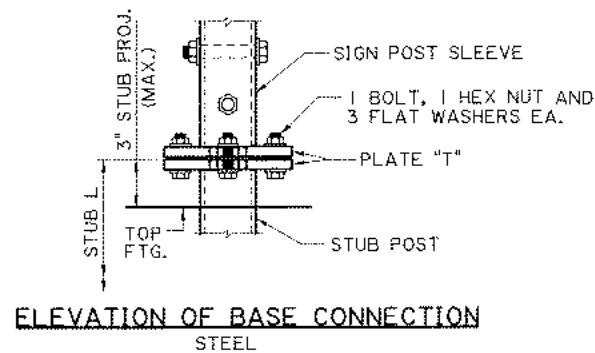
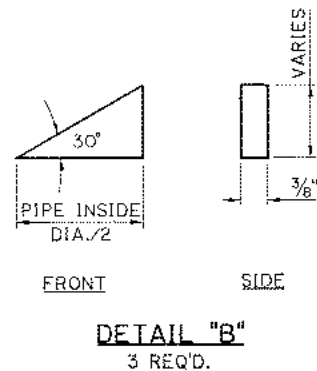
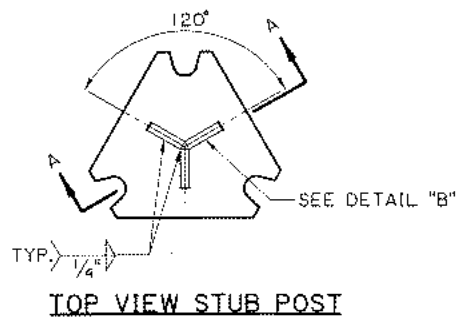
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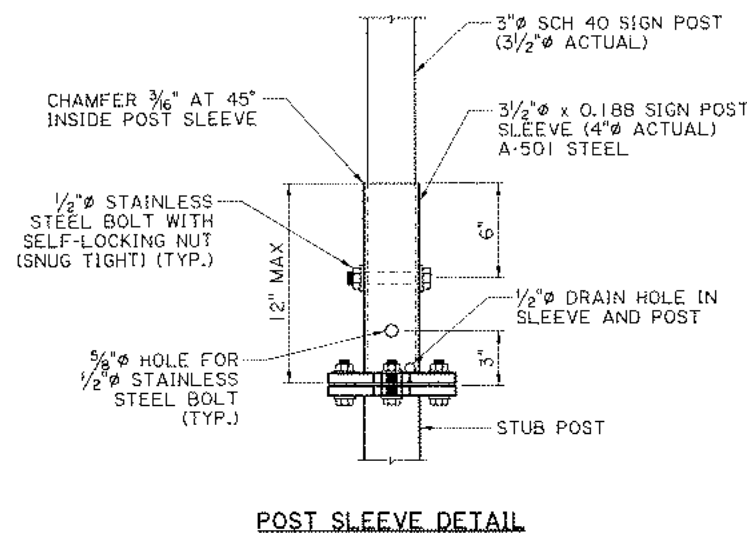
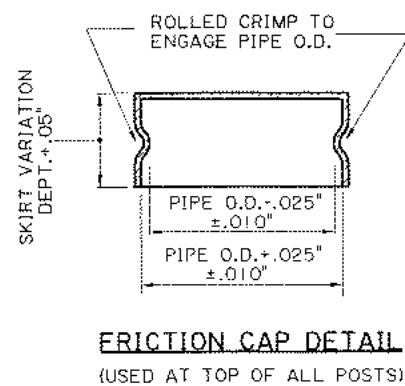
A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.

MAX SIGN AREA = 40 SQFT.



STEEL MULTI-DIRECTIONAL BASE CONNECTION DATA																
NOMINAL PIPE SIZE FOR POST SLEEVE	BOLT SIZE & TORQUE	WELD SIZE	T	A	B	C	D	E	F	G	K	L	M	N	U	
3/2" SCH 40	5/8" T=226	3/8"	5/8"	7"	3 1/2"	1 3/4"	1 1/4"	3"	2 5/16"	2"	10 5/8"	9"	1/2"	6"	1/2"	

FOR STUB POST LENGTH & FOOTING DIMENSION SEE FOOTING DETAIL.
TORQUE IN INCH-LBS., BOLTS ARE HIGH STRENGTH



PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

SPECIAL CARE SHALL BE TAKEN TO SET THE BASE PLUMB TO AVOID EXCESSIVE SHIMMING AT THE BREAK-AWAY FEATURE AFTER FINAL INSTALLATION. EXCESSIVE SHIMMING COULD IMPAIR THE BREAK-AWAY FEATURE FOR WHICH THIS INSTALLATION WAS DESIGNED. SHIM PACKS SHOWN ON THIS DRAWING SHOULD BE SUFFICIENT TO ALLOW FOR NORMAL MISALIGNMENT.

1. BASE SHALL BE ALIGNED AND SET PLUMB BEFORE OR IMMEDIATELY AFTER POURING CONCRETE FOOTING.
2. H.S. BOLTS IN BASE PLATE SHALL BE TIGHTENED TO THE PRESCRIBED TORQUE. CARE SHALL BE TAKEN TO AVOID OVERTIGHTING.

FRICTION CAPS:

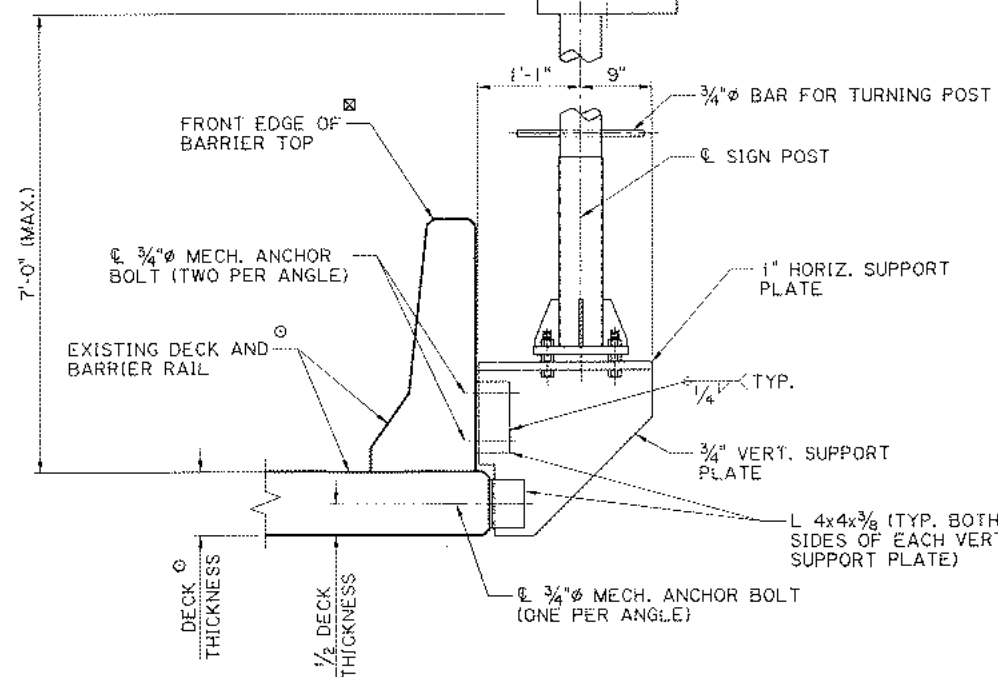
CAPS MAY BE MANUFACTURED FROM EITHER HOT ROLLED OR COLD ROLLED STEEL SHEETS. THE MINIMUM SHEET METAL THICKNESS SHALL BE 24 GAUGE. THE RIM EDGES SHALL BE REASONABLY STRAIGHT AND SMOOTH. CAPS SHALL BE SIZED AND FORMED IN SUCH A MANNER AS TO PRODUCE A DRIVE-ON FRICTION FIT AND HAVE NO TENDENCY TO ROCK WHEN SEATED ON THE PIPE. THE DEPTH SHALL BE SUFFICIENT TO GIVE POSITIVE PROTECTION AGAINST ENTRANCE OF RAINWATER. THEY SHALL BE FREE OF SHARP CREASES OR INDENTATIONS AND SHOW NO EVIDENCE OF METAL FRACTURE. CAPS SHALL HAVE A ELECTRODEPOSITED COATING OF ZINC IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. SPECIFICATION B633 SC4, TYPE 1.

GALVANIZING:

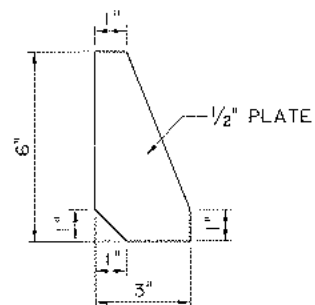
ALL STEEL POST, PLATE, AND SLEEVE MEMBERS SHALL BE GALVANIZED PER ASTM A-123.

ALL MISC. HARDWARE (EXCEPT FOR STAINLESS STEEL BOLTS) SHALL BE GALVANIZED PER ASTM A-153.

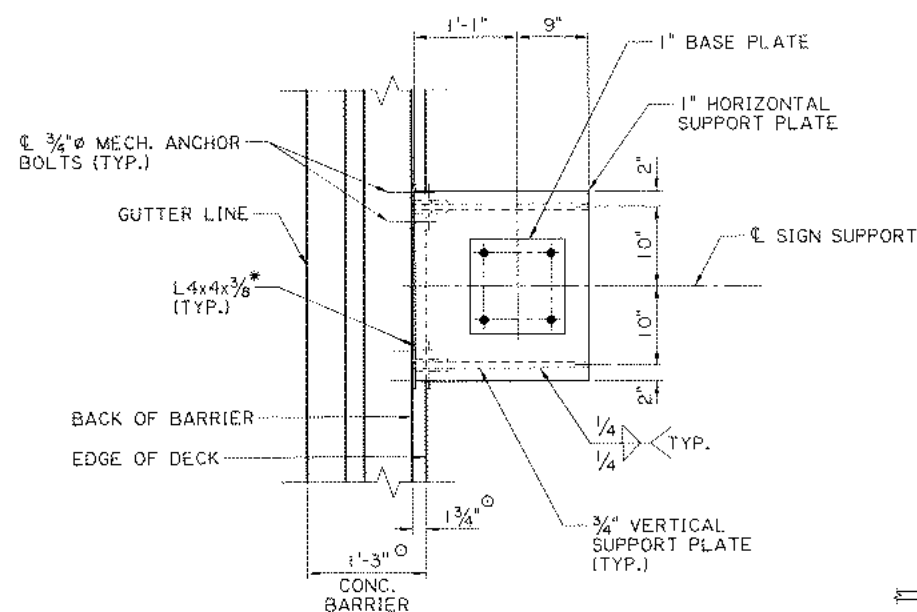
☒ SIGN MAY BE OFFSET FROM THE CENTERLINE OF POST. REGARDLESS OF ITS ORIENTATION, NO PART OF THE SIGN SHALL EXTEND BEYOND THE FRONT EDGE OF THE TOP OF BARRIER RAIL. COST OF OFFSET SIGN ATTACHMENT SHALL BE PAID FOR UNDER 729-08-00210 "MOUNTING (3 1/2" SIZE POST) (STRUCTURE MOUNT)".



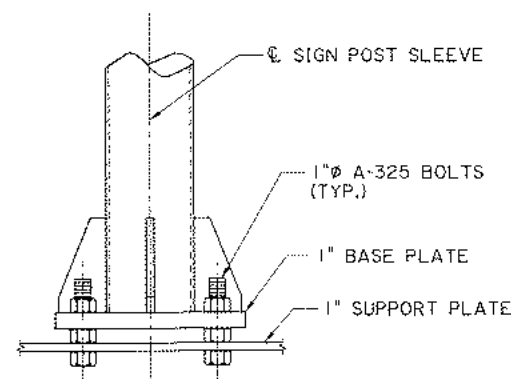
ELEVATION



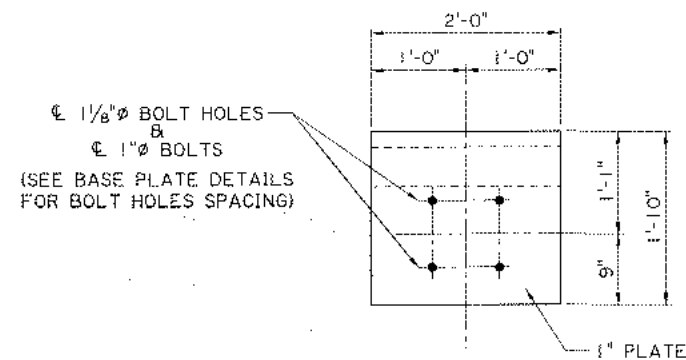
1/2" STIFFENER



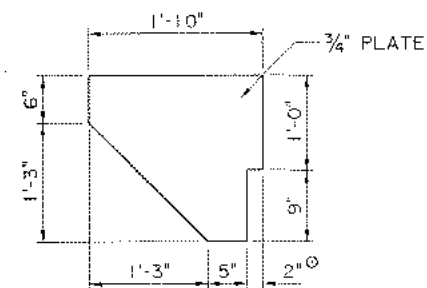
PLAN



1" BOLT DETAIL

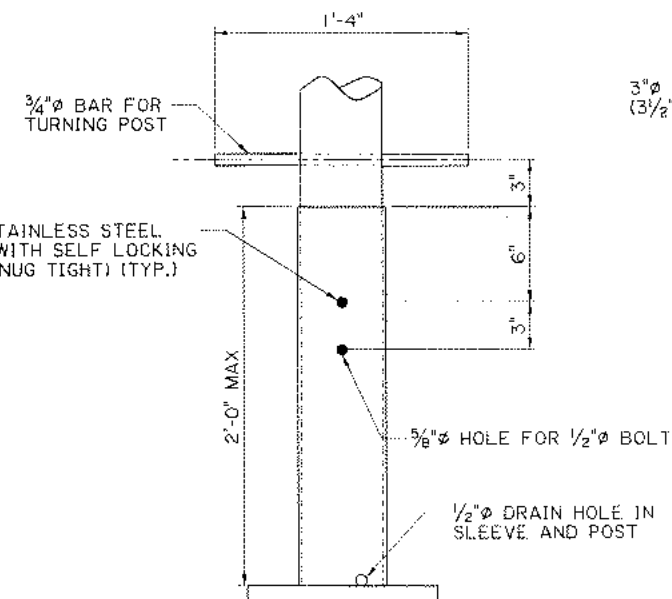


1" HORIZ. SUPPORT PLATE



3/4" VERT. SUPPORT PLATE

SIGN SUPPORT BRACKET DETAILS



5/8" BOLT DETAIL

(STIFFENERS NOT SHOWN FOR CLARITY)

NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL MISC. HARDWARE (EXCEPT STAINLESS STEEL BOLTS) SHALL BE GALVANIZED AS PER ASTM A-153.

○ ALL EXISTING DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION. ANY ADJUSTMENTS TO SUPPORT BRACKET DIMENSIONS SHALL BE APPROVED BY THE ENGINEER.

* EQUIVALENT BENT PLATES MAY BE USED. ADJUST ANGLE OF BEND AS NEEDED TO ATTACH TO BARRIER RAIL.

PAYMENT FOR THE TYPE "A" SIGN POST AND SUPPORT BRACKET SHALL BE UNDER ITEM NO. 729-08-00210, "MOUNTING (3 1/2" SIZE POST) (STRUCTURE MOUNT)".

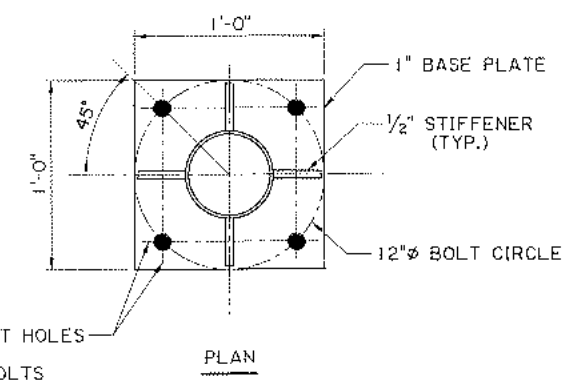
MECHANICAL ANCHOR BOLTS SHALL BE 3/4" STAINLESS STEEL (MIN. F_y = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.L. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.

A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.

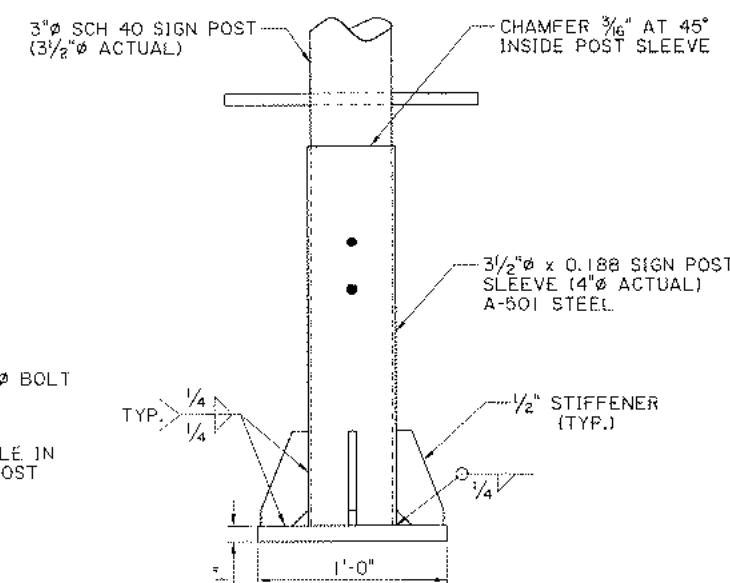
ANY PORTIONS OF THE EXISTING BARRIER THAT ARE DAMAGED SHALL BE REPAIRED TO THE SATISFACTION OF THE PROJECT ENGINEER.

REGARDLESS OF ITS ORIENTATION, NO PART OF ANY SIGN SHALL EXTEND BEYOND THE FRONT EDGE OF THE TOP OF BARRIER RAIL. DIMENSIONS OF SUPPORT POST AND BRACKET SHALL BE ADJUSTED AS NEEDED PRIOR TO FABRICATION.

MAXIMUM ALLOWABLE SIGN AREA = 20 SQ. FT.



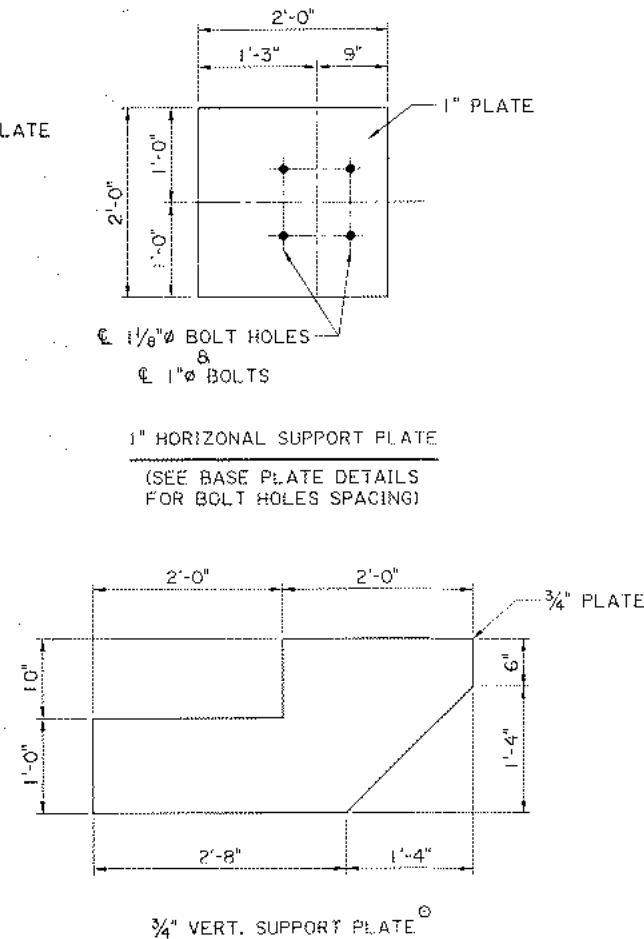
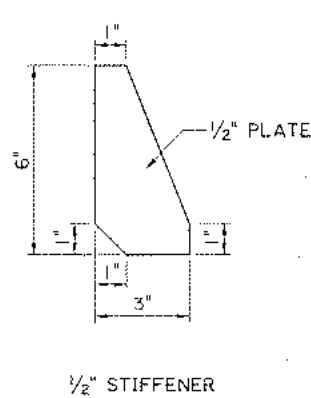
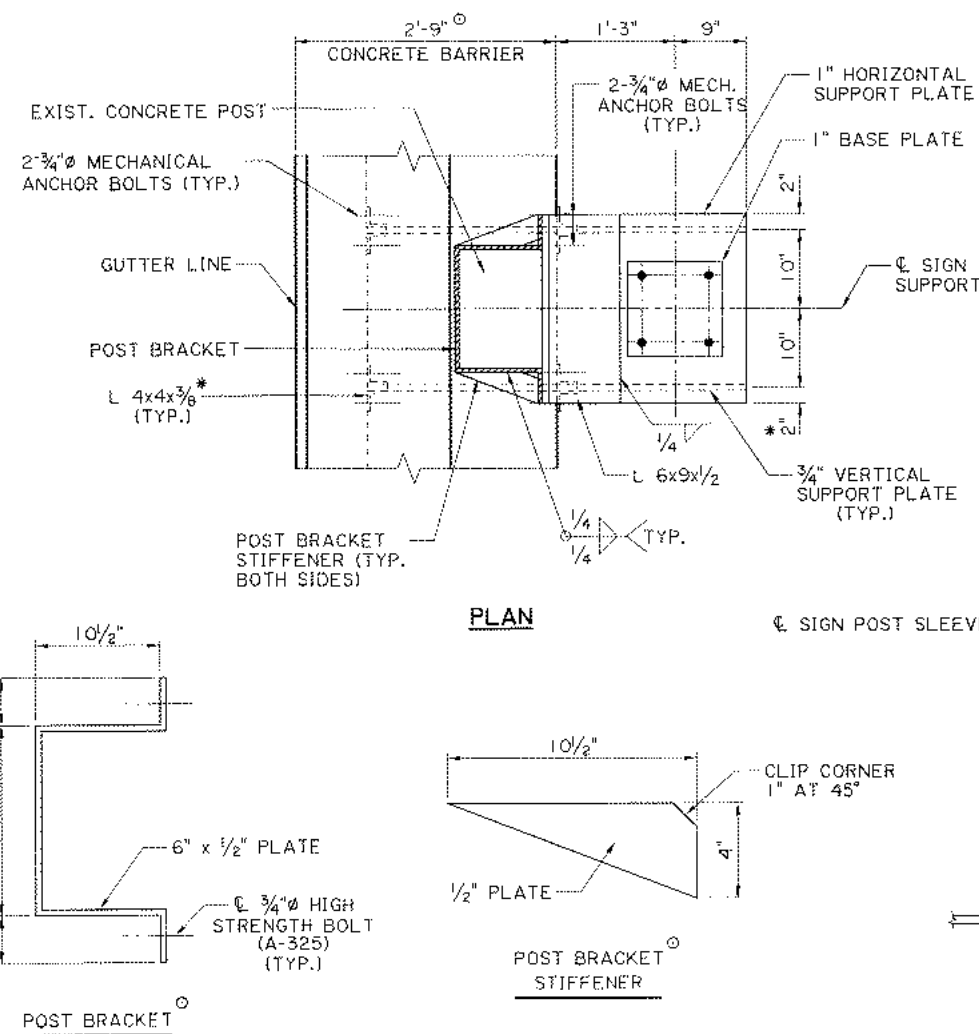
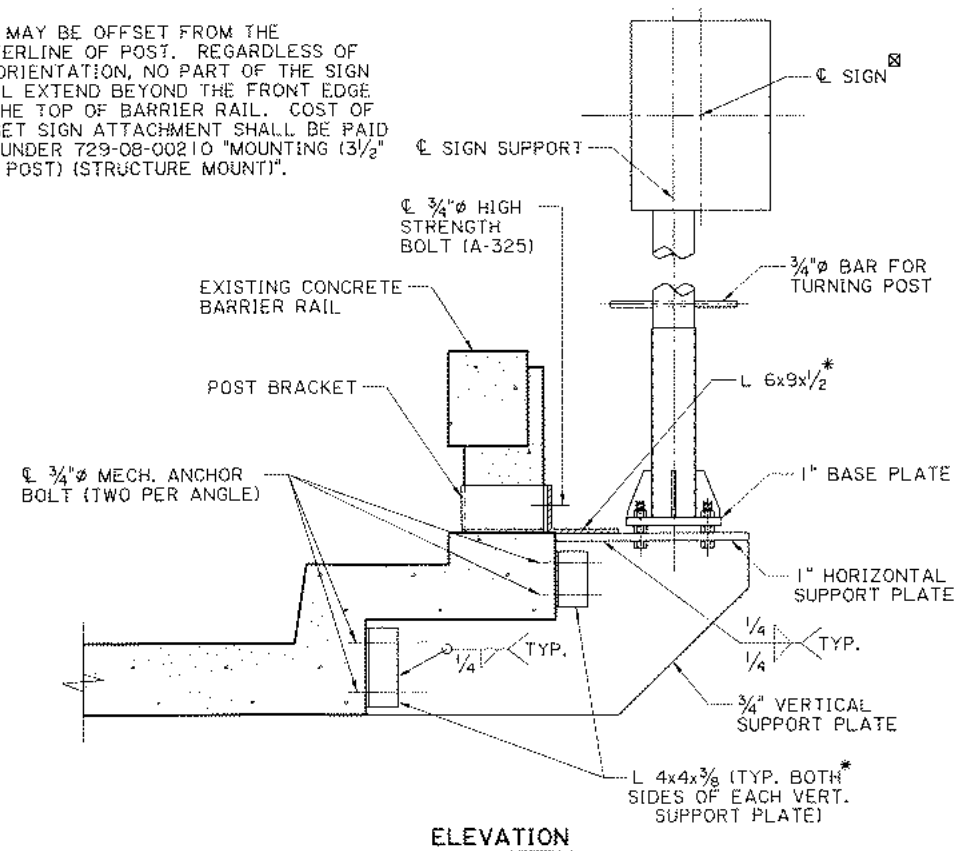
PLAN



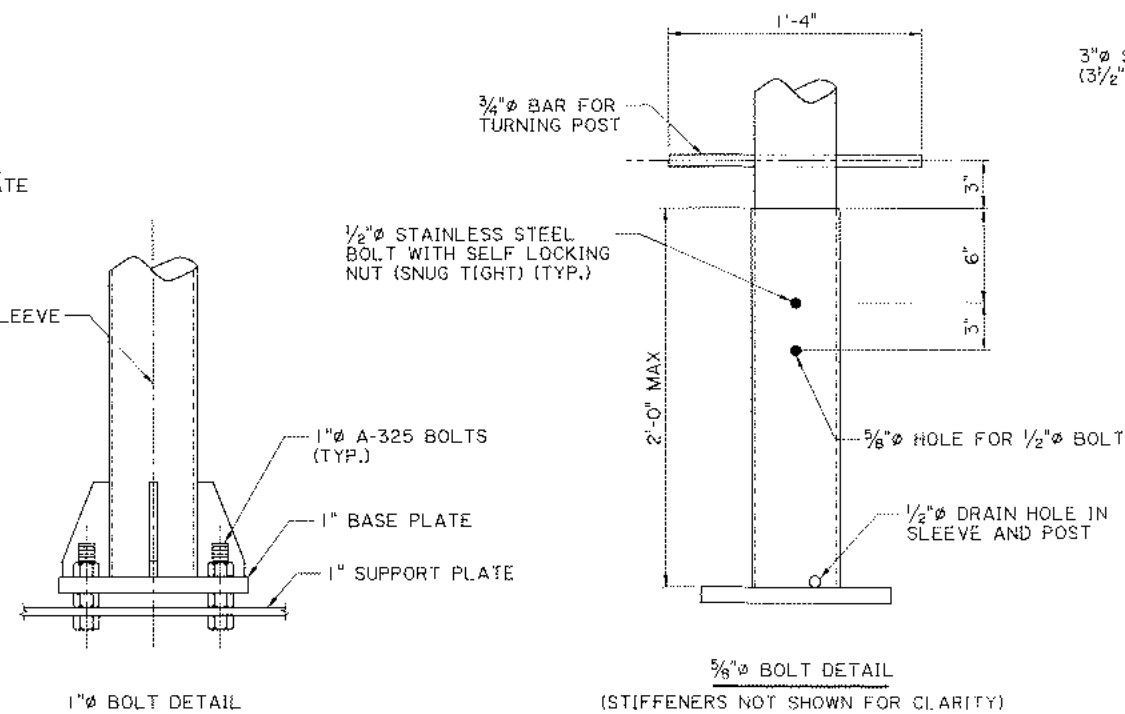
ELEVATION

1" BASE PLATE & SIGN POST SLEEVE DETAILS

☒ SIGN MAY BE OFFSET FROM THE CENTERLINE OF POST. REGARDLESS OF ITS ORIENTATION, NO PART OF THE SIGN SHALL EXTEND BEYOND THE FRONT EDGE OF THE TOP OF BARRIER RAIL. COST OF OFFSET SIGN ATTACHMENT SHALL BE PAID FOR UNDER 729-08-00210 "MOUNTING (3/2" SIZE POST) (STRUCTURE MOUNT)".



SIGN SUPPORT BRACKET DETAILS



NOTES:

STRUCTURAL MEMBERS SHALL BE AASHTO M270 GRADE 50 STEEL AND SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL MISC. HARDWARE (EXCEPT STAINLESS STEEL BOLTS) SHALL BE GALVANIZED AS PER ASTM A-153.

© ALL EXISTING DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION. ANY ADJUSTMENTS TO SUPPORT BRACKET DIMENSIONS SHALL BE APPROVED BY THE ENGINEER.

* EQUIVALENT BENT PLATES MAY BE USED. ADJUST ANGLE OF BEND AS NEEDED TO ATTACH TO BARRIER RAIL.

PAYMENT FOR THE TYPE "A" SIGN POST AND SUPPORT BRACKET SHALL BE UNDER ITEM NO. 729-08-00210, "MOUNTING (3 1/2" SIZE POST) (STRUCTURE MOUNT)".

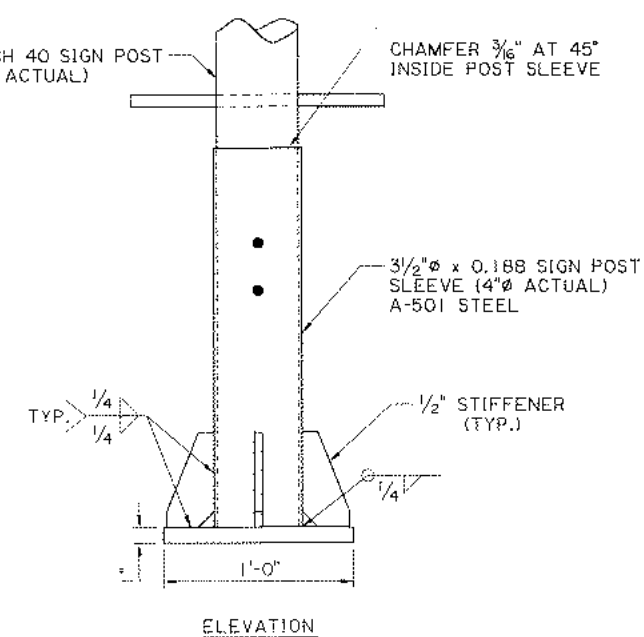
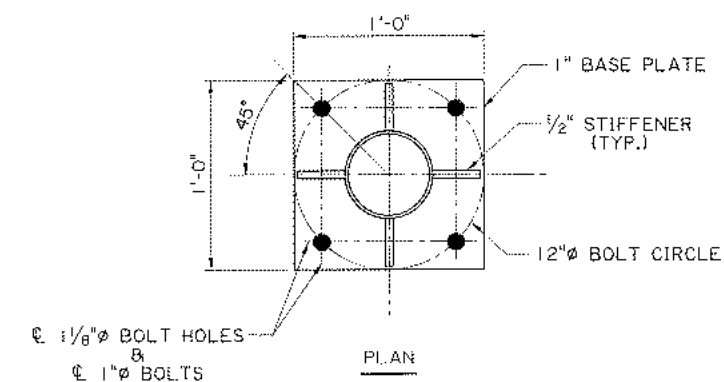
MECHANICAL ANCHOR BOLTS SHALL BE $\frac{3}{4}" \phi$ STAINLESS STEEL (MIN. F_y = 55 ksi) AND SHALL BE SELECTED FROM THE A.M.I. AND INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS. EACH ANCHOR SHALL HAVE AN ALLOWABLE CAPACITY OF 3 KIPS PULLOUT AND 3 KIPS SHEAR AFTER APPLICATION OF ANY REDUCTION FACTORS FOR ANCHOR SPACING AND EDGE DISTANCE.

A 1/8" NEOPRENE PAD SHALL BE USED BETWEEN ALL STEEL AND CONCRETE CONTACT SURFACES.

ANY PORTIONS OF THE EXISTING BARRIER THAT ARE DAMAGED SHALL BE REPAIRED TO THE SATISFACTION OF THE PROJECT ENGINEER.

REGARDLESS OF ITS ORIENTATION, NO PART OF ANY SIGN SHALL
EXTEND BEYOND THE FRONT EDGE OF THE TOP OF BARRIER RAIL.
DIMENSIONS OF SUPPORT POST AND BRACKET SHALL BE ADJUSTED
AS NEEDED PRIOR TO FABRICATION.

MAXIMUM ALLOWABLE SIGN AREA = 20 SQ. FT.



1" BASE PLATE & SIGN
POST SLEEVE DETAILS

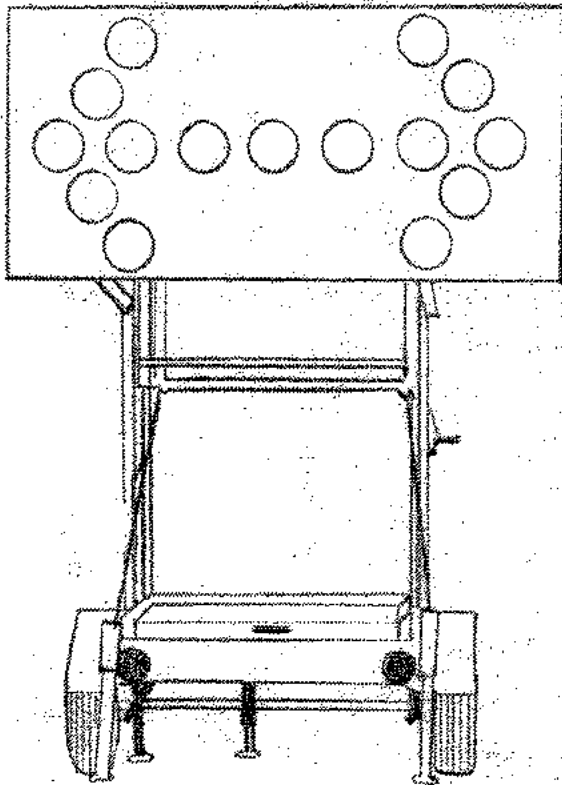
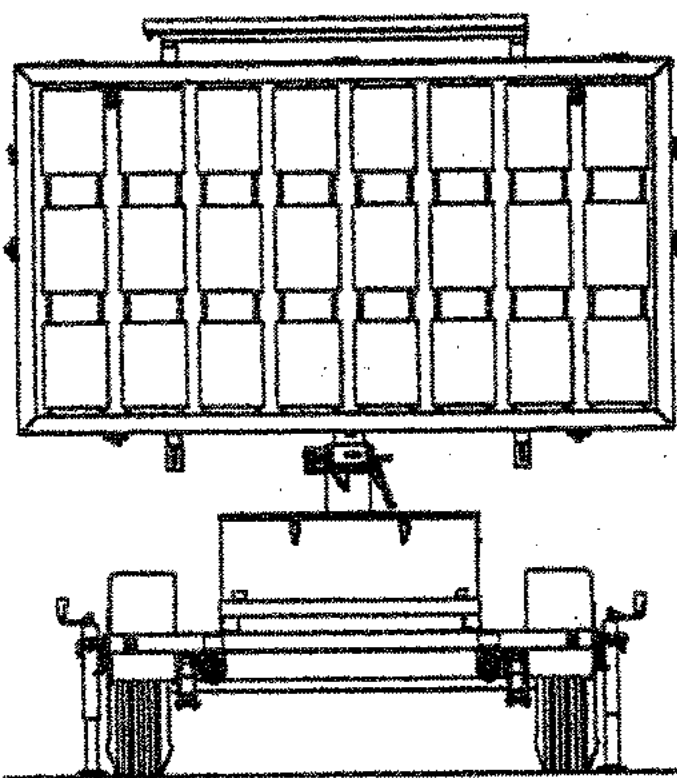
GENERAL PROVISIONS

- All temporary traffic control (TTC) devices used shall be in accordance with the Louisiana Standard Specifications for Roads and Bridges, the MUTCD, and shall meet the NCHRP Report 350 or MASH requirements for Test Level 3 devices where applicable.
- Materials used for TTC shall be in accordance with the Louisiana Standard Specifications for Roads and Bridges and, when applicable, the LADOTD QPL.
- No TTC shall be erected without the approval of the Engineer and until work is about to begin, unless they are covered.
- No lane closures, lane shifts, diversions, or detours shall occur without the approval of the Engineer.
- Responsibility is hereby placed upon the contractor for the installation, maintenance, and operation of all TTC devices called for in these plans or required by the Engineer for the protection of the traveling public as well as all LADOTD and construction personnel.
- The contractor shall also be responsible for the maintenance of all permanent signs, pavement markings, and traffic signals left in place as essential to the safe movement and guidance of traffic within the project limits unless noted in the plans.
- The DTOE shall serve as a technical advisor to the Engineer for all traffic control matters.
- The Chief Construction Engineer or his appointed designee shall approve all signs and situations not addressed in the plans based on the recommendations of the Project Engineer and the DTOE. All changes shall be noted in all project traffic control diaries.
- The Chief Construction Engineer or his appointed designee shall approve all design speeds of diversions or shifts if it differs from design plans, based on the recommendations of the Project Engineer and the DTOE.
- All temporary traffic control plans shall comply with the Transportation Management Plan.
- Any additional signs shown in the MUTCD and required by the Engineer shall be installed under Item 713-01-00100.
- Neither work activity nor storage of equipment, vehicles, TMAs, or materials shall occur within the buffer space.
- When a work area has been established on one side of the roadway only, there shall be no conflicting operations or parking on the opposite shoulder within 500 feet of the work area.
- A lighting plan shall be submitted to the Engineer 30 days prior to night work for approval. (See section 105.20 of the Louisiana Standard Specifications for Roads and Bridges.)
- Parking of vehicles or unattended equipment, or storage of materials, within the clear zone shall not be permitted unless protected by guard rail or barriers. If the clear zone is not defined on the plan sheets, the Engineer shall verify.
- Immediately upon removal of existing guard rail, the contractor shall install and maintain an NCHRP Report 350 or MASH approved device to protect the blunt end of the bridge or column until new guard rail is installed. After removal of the existing guard rail, new guard rail should be installed within seven (7) days. On non-NHS routes with shoulders less than 8 feet wide: If an NCHRP 350 Report Test Level 3 or MASH device is required but the field conditions of the roadway cannot support a Test Level 3 device, then a Test Level 2 device can be substituted in its place upon approval by the Engineer.
- All costs associated with crash devices are to be included in Item 713-01-00100.
- Sight distance should be considered when placing traffic control devices.
- On all mainline Interstate, a minimum of 1.5 feet of paved shoulder on the left and right side shall be maintained at all times.
- On Interstates, a minimum of 11 foot lanes shall be maintained. On all other roadways, a 10 foot minimum travel lane should be maintained where practical.

- TTC Standards are not drawn to scale.
 - The contractor shall develop an internal traffic control plan approved by the Engineer prior to each phase.
 - Truck restrictions such as (but not limited to) restricting lanes, oversize loads or times of travel, may be required for narrow lanes or other field conditions.
- PAVEMENT MARKINGS (see QPL)
- All pavement markings within the limits of the project that are in conflict with the project signing or the required traffic movements shall be removed from the pavement by blast cleaning or grinding. (Existing striping shall not be painted over with black paint or covered with tape.)
 - If special pavement markings are needed, they shall be reflectorized, removable, and accompanied by the proper signage.
 - Temporary Raised Pavement Markers may be added to supplement temporary striping in areas of transition, in tapers, in diversions, and in other areas of need as shown in the plans or as directed by the Engineer.
 - Materials and placement of temporary pavement markings shall conform to Section 713 of the Louisiana Standard Specifications for Roads and Bridges. If no pay item exists for temporary markings they shall be installed under item 713-01-00100.
 - Temporary markings installed in the permanent configuration shall comply with LADOTD pavement marking standard plans, MUTCD, and/or the permanent striping plans.
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)
- PCMS shall be used on all Interstate Highways and on all other roadways (where space is available) with an ADT greater than 20,000.
 - When used in advance of a lane closure or a lane shift, the PCMS should be placed on the right hand side of the road a minimum distance of 2 miles in advance of the taper for interstates and to be determined by the Engineer on other highways.
 - For interstates and multi-lane highways, if vehicles are queuing beyond the 2 mile PCMS, an additional PCMS should be placed on the right hand side of the road approximately 5 miles in advance of the taper or at the end of the queue, whichever is greater.
 - PCMS messages shall conform to EDSM VI.2.1.10 or shall be approved by the DTOE. Messages shall be no more than 3 lines and 2 screens.
 - PCMS should be placed as far from the traveled lane as possible. They shall be shielded by guard rail or barriers. If this is not possible they shall be delineated with one drum at each corner.
 - If the PCMS has to be placed on the shoulder then the contractor shall install a shoulder closure.
 - When the PCMS is not displaying a work zone appropriate message pertaining to the ongoing construction project it shall be shielded by guard rail or barriers, or removed from the clear zone.
- ABBREVIATIONS
- AASHTO American Association of State Highway and Transportation Officials
- ADT Average Daily Traffic
- AGCI Associated General Contractors of America
- ANSI American National Standards Institute
- ATSSA American Traffic Safety Services Association
- B.O.P. Beginning of Project
- DTOE District Traffic Operations Engineer
- E.O.P. End of Project
- LADOTD Louisiana Department of Transportation and Development
- MASH AASHTO Manual for Assessing Safety Hardware
- MUTCD Manual on Uniform Traffic Control Devices
- NCHRP National Cooperative Highway Research Program
- NHS National Highway System
- PCMS Portable Changeable Message Sign
- QPL Qualified Products List
- TMA Truck Mounted Attenuator
- TMC Traffic Management Center
- TTC Temporary Traffic Control
- TTC Standards .. Temporary Traffic Control Standard Plans

SPEED LIMITS

- The Engineer may approve a 10 mph drop in the speed limit for posted speeds of 45 mph or greater and for any construction, maintenance, or utility operation that requires one or more of the following:
 - (A) The condition of the traveled way is degraded due to milled surfaces or uneven travel lane lines greater than 1.5 inches.
 - (B) Work is in progress in the immediate vicinity of the travel way requiring lane closures or lane width reductions less than 11 feet.
 - (C) Workers present on the shoulder within 2 feet of the edge of the traveled way without barrier protection.
 - The reduced speed zone shall only apply to those portions of the project limits affected. The Engineer may allow SPEED LIMIT WHEN FLASHING signs to supplement reduced speed zones.
 - If the speed limit is reduced, speed limit signs shall be placed:
 - (A) beyond major intersections;
 - (B) at one mile intervals in rural areas;
 - (C) at half mile intervals in urban areas.
 - At the end of the reduced speed zone, a speed limit sign displaying the original speed limit prior to construction shall be installed.
 - For all other speed limit reductions not listed above the Project Engineer and the DTOE shall recommend the speed reduction to the Chief Construction Engineer or his appointed designee for approval.
 - If the speed limit is reduced more than 10 mph, placement of the signs shall be re-evaluated according to the MUTCD.
- FLASHING ARROW BOARDS
- All Flashing Arrow Boards shall be 4 feet by 8 feet and Type C.
 - Flashing Arrow Boards should be placed on the shoulder. When there is no shoulder or median area, the arrow board shall be placed within the closed lane behind the channelizing devices and as close to the beginning of the taper as practical.
 - Flashing arrow boards shall be delineated with retroreflective TTC devices.
 - At no time shall the arrow board encroach in the traveled way. When Flashing Arrow Board signs are not being used, they shall be shielded by guard rail or barriers, or removed.
 - Arrow boards shall only be used for lane reduction tapers and shall not be used for lane shifts.

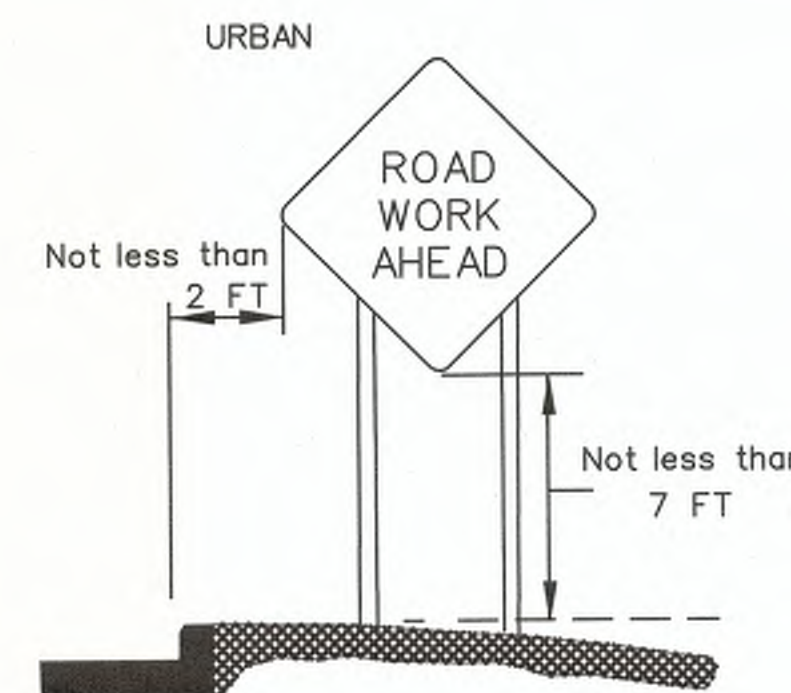
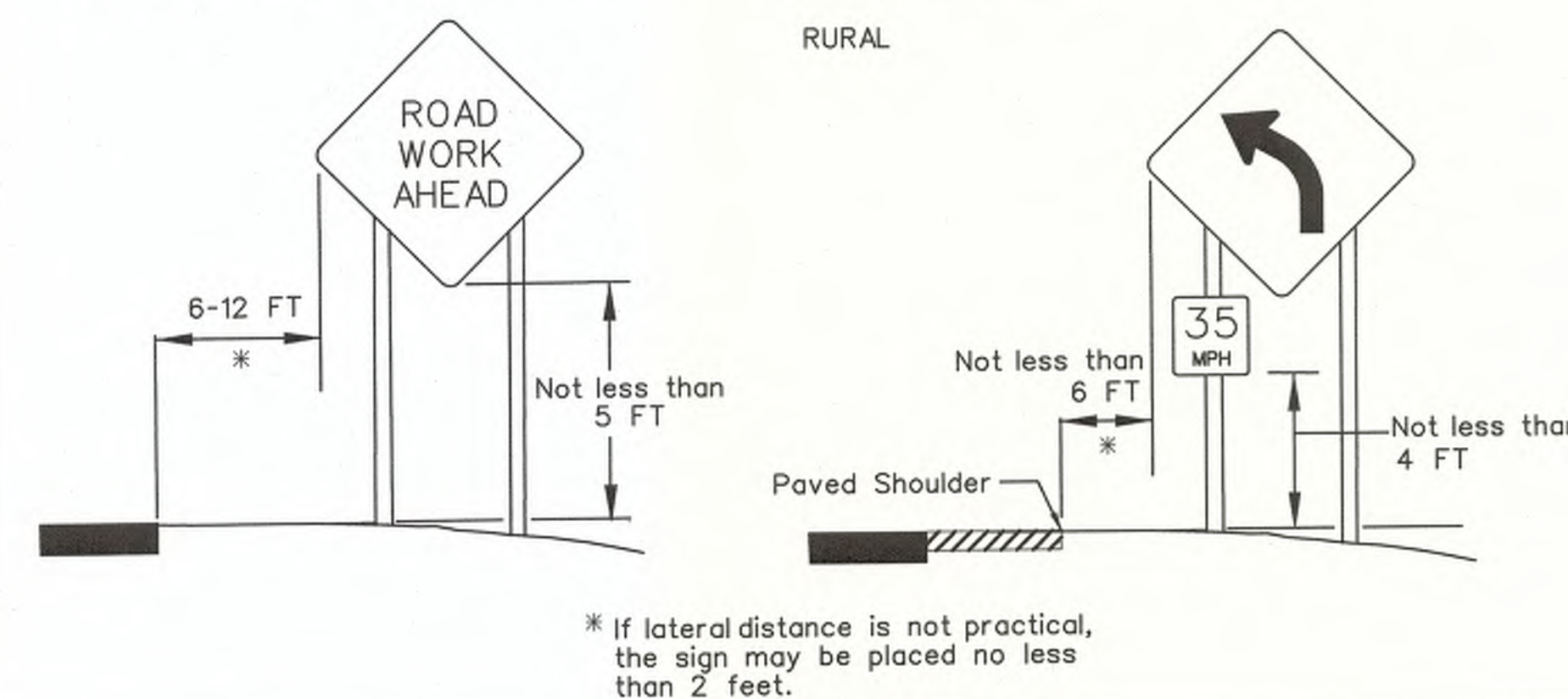


ALL TTC STANDARDS SHOW MINIMUM CONSTRUCTION SIGNING.
ALL SITUATIONS SHALL BE REVIEWED AND/OR DESIGNED BY THE ENGINEER.
CONTRACTORS ARE RESPONSIBLE FOR COMPLYING WITH ALL TTC STANDARDS.

SHEET NUMBER	235
DESIGNED	J. COLVIN
CHECKED	P. ALLAIN
DATE	02/13/2013
REVISION DESCRIPTION	
DATE	3-12-13
APPROVED BY	
CHIEF ENGINEER	
TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET	TTC-00 (A)
TRAFFIC ENGINEERING	

SIGNS

- All signs used for temporary traffic control shall follow the plans, the LADOTD TTC Standards and the MUTCD.
- Signs shown in the TTC illustrations are typical and may vary with each specific condition.
- One Type B High Intensity light shall be used to supplement the first sign (or pair of signs) that gives warning about a lane closure during nighttime operations (See AML).
- Mesh rollup signs shall not be allowed on any project.
- Contractor shall use caution not to damage existing signs which remain in place. Any LADOTD signs damaged by work operations shall be replaced by the contractor under item 713-01-00100.
- All signs (permanent and temporary) shall be removed or completely covered with a strong, lightweight, opaque material when no longer applicable. (Burlap is not an acceptable material to cover signs).
- At no time shall signs warning against a particular operation be left in place once the operation has been completed or where the condition has been removed.
- Warning signs used for temporary traffic controls shall meet the following guidelines unless otherwise noted in the plans:
 - (A) size shall be 48 inches by 48 inches.
 - (B) see the Louisiana Standard Specifications for Roads and Bridges and the AML for sheeting information.
 - (C) lateral distance of signs shall be a minimum of 6 feet from the edge of shoulder or edge of pavement if no shoulder exists and 2 feet from the back of curb in urban areas (see diagram).
- When portable sign frames are not in use, they shall be moved to an area inaccessible to traffic and not visible to the driver.
- Left side mounted signs will not be required for roadways with a center left turn lane and for undivided roadways.
- Vinyl rollup signs may be used if work zone is in place for 12 hours or less, there are no more than 2 lanes in each direction and if signs meet all size, color, retroreflectivity and NCHRP 350 Report or MASH requirements.
- All signs shall be visible to the drivers (i.e. no obstructions such as on street parking or other traffic control devices shall block the sign).
- On divided highways, signs shall be placed on the right and the left as shown on the TTC standards.
- 1 foot portable sign stands may be used if the work zone is in place for 14 hours or less and there are no more than 2 lanes in each direction.
- Sign posts:
 - Signs measuring 10 square feet or less shall be mounted on 1 rigid post
 - Signs over 10 square feet shall be mounted on 2 rigid posts
 - Signs over 20 square feet shall be mounted on at least 3 rigid posts
- Rigid sign supports shall be driven to a minimum depth of 3 feet. (If splicing is required, see Allowable Lap Splice U-channel Post.)
- For sign height, see the Rural and Urban diagrams:

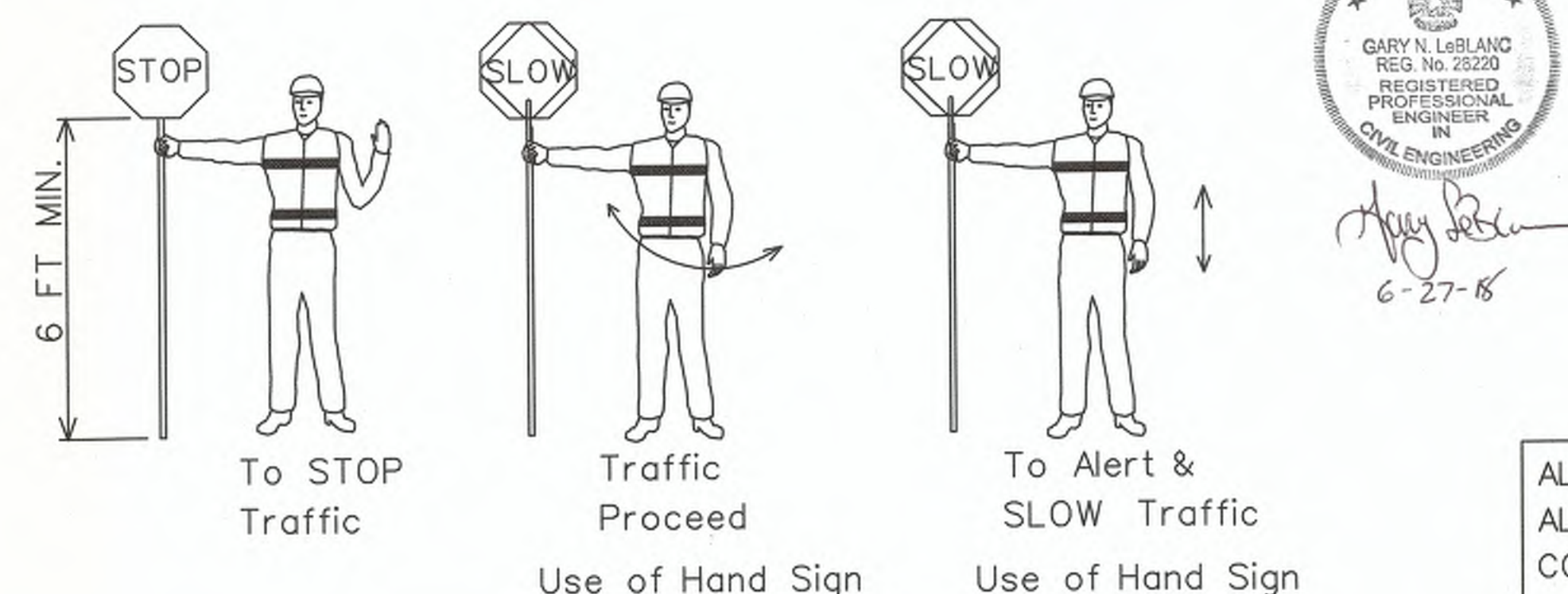


LANE CLOSURES

- All proposed lane, road or shoulder closures shall be reviewed by the DTOE and approved by the Engineer.
- Two lane, two-way highways shall have a maximum work area of two miles; all other roadways shall have a four mile maximum work area.
- A queue analysis shall be performed prior to approval of lane closures on all Interstates according to Section 6A.1 of the Traffic Engineering Manual.
- Closure plans and times shall be turned in to the Engineer for review according to the following:
 - (A) 5 working days minimum if traffic control plan has been approved or is contained in the plans.
 - (B) 10 working days minimum and a traffic control plan must be submitted for lane closures not addressed in the plans.
- Weekly updates to the DTOE, Project Engineer, the LADOTD TMC operator and the regional TMC operator (if applicable) will be required for all ongoing lane closures to update the closure status.
- Daily updates to the DTOE, Project Engineer and TMC operator (if applicable) will be required for all projects where active closures are in place.

FLAGGERS

- All flaggers shall be qualified.
- The contractor shall be responsible for training or assuring that all flaggers are qualified to perform flagging duties.
- A Qualified Flagger is one that has completed courses such as those offered by ATSSA or other courses approved by the LADOTD Work Zone Task Force. The contractor shall be responsible for getting the flagger course approved.
- When utilized, a flagger shall use a minimum 18 inch octagonal shape sign on a minimum 6 foot stop/slow paddle and wear ANSI Class 2 Lime Green vest during day time operations and ANSI Class 3 Lime Green ensemble during night operations.
- In all flagging operations, the flagger must be visible from the flagger advance warning sign.
- Flaggers shall not be used on the Interstate.



PEDESTRIAN CONSIDERATIONS

- If the TTC zone affects the movement of pedestrians, adequate pedestrian access and walkways shall be provided either through the TTC zone or a designated alternate route.
- Pedestrians should be provided with a convenient and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalk(s) or footpath(s).
- Advance notification of sidewalk closures shall be provided by the maintaining agency.

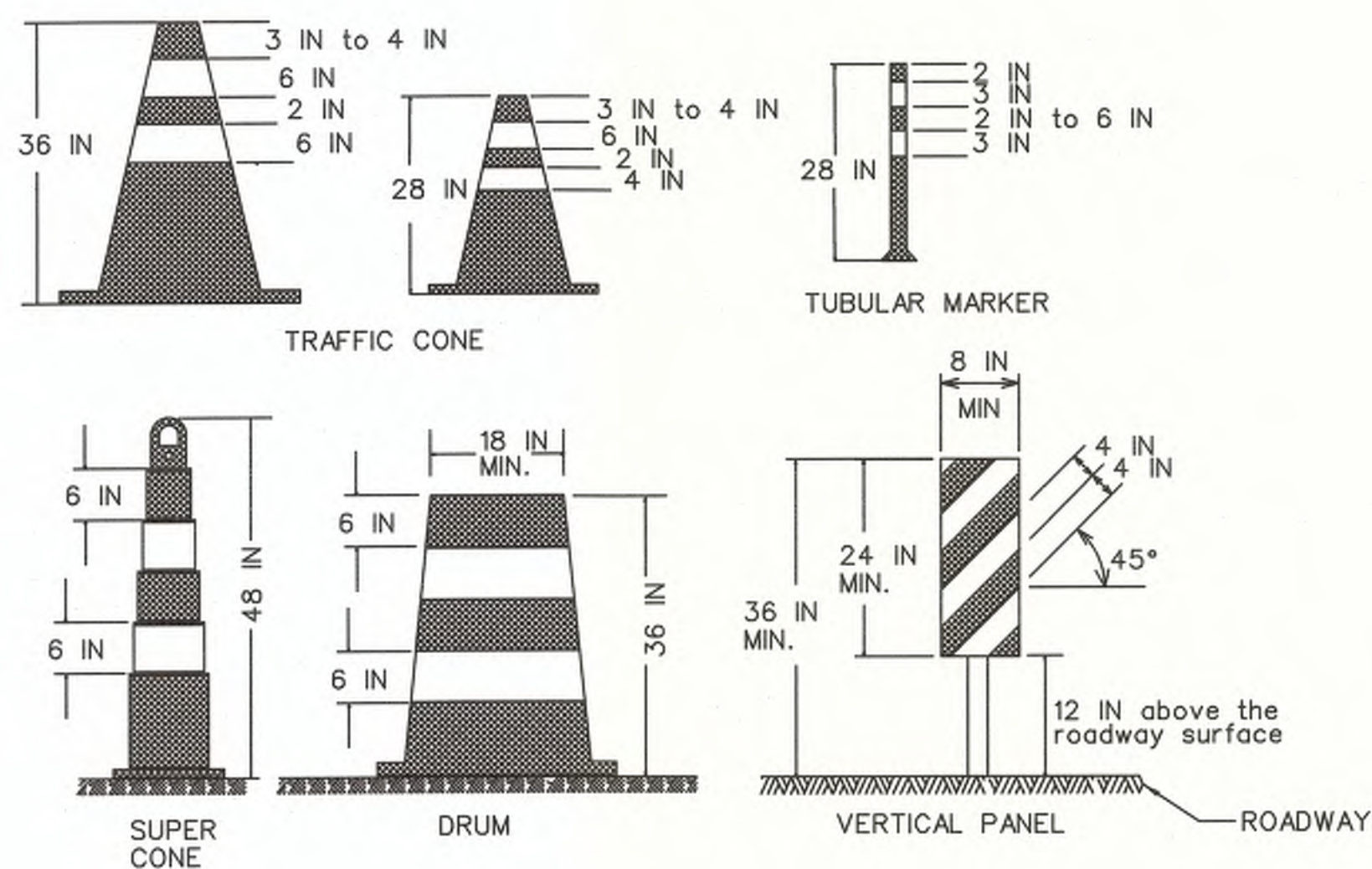
REFERENCES

- The contractor shall be responsible for understanding all rules and requirements in the current edition of the following documents:
 - 1) Louisiana Standard Specifications for Roads and Bridges. <http://www.dotd.la.gov/highways/specifications/>
 - 2) Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). <http://mutcd.fhwa.dot.gov/>
 - 3) LADOTD Approved Materials List (AML) Manual. http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Materials_Lab/Pages/Menu_QPL.aspx
 - 4) LADOTD Traffic Engineering Manual http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Misc/20Documents/Traffic/20Engineering/20Manual.pdf
 - 5) National Cooperative Highway Research Program (NCHRP) Report 350: "Guidelines for Work Zones Traffic Control Devices". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_350-a.pdf
 - 6) NCHRP Report 475: "A Procedure for Assessing and Planning Nighttime Highway Construction and Maintenance". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_475.pdf
 - 7) NCHRP Report 476: "Guidelines for Design and Operation of Nighttime Traffic Control for Highway Maintenance". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_476.pdf
 - 8) NCHRP Report 498: "Illumination Guidelines for Nighttime Highway Work". http://onlinepubs.trb.org/Onlinepubs/nchrp/nchrp_rpt_498.pdf
 - 9) American Association of State Highway and Transportation Officials (AASHTO) Roadside Design Guide.
 - 10) American Traffic Safety Services Association (ATSSA) Quality Guidelines for Work Zone Traffic Control Devices and Features.
 - 11) U.S. Department of Transportation Federal Highway Administration Traffic Control Handbook for Mobile Operations at Night. <http://www.dot.state.il.us/blr/1023.pdf>

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CHANNELIZING DEVICES

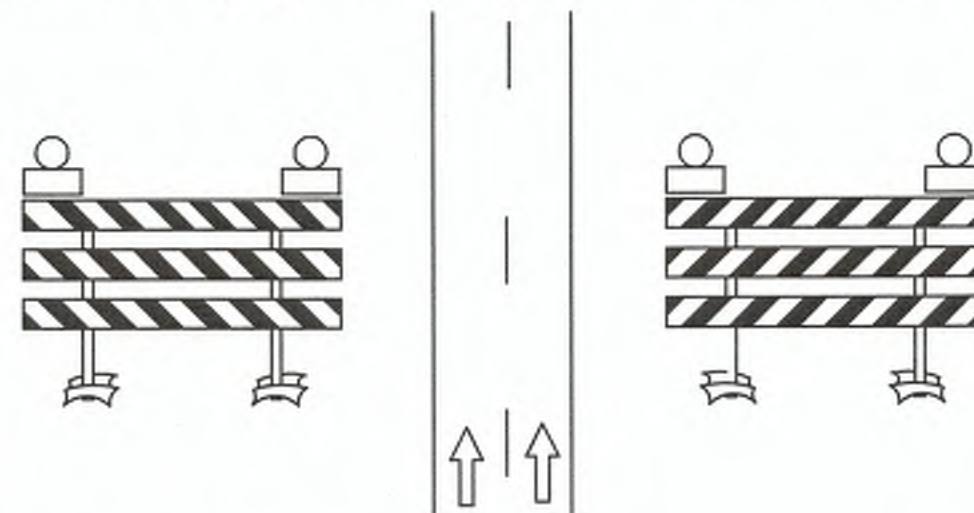
- The following devices may be used as channelizing devices:
Tubular Markers, Vertical Panels, Cones, Drums and Super Cones.
- 28 inch traffic cones are not allowed on:
 - Interstates
 - Highways with speeds greater than 40 mph.
- During nighttime operations, 28 inch and 36 inch cones are not allowed.
- Retroreflective material pattern used on super cones shall match that used on drums.
- Tangent Areas:**
 - Standard Spacing:** See Standard Device Spacing and Buffer Space table.
 - Daylight Operations:** Drums and super cones are spaced at standard spacing. All other devices are at 1/2 standard spacing.
 - Nighttime Operations:** Drums and supercones at standard spacing are the only devices allowed.
- Taper Areas:**
 - Standard Spacing:** See Standard Device Spacing and Buffer Space table.
 - Daylight Operations:** Drums are spaced at standard spacing. All other devices are 1/2 standard spacing.
 - Nighttime Operations:** Drums (at standard spacing) are the only devices allowed.
- Type C steady burn lights shall be used on all channelizing devices in the taper as well as the first two devices in the tangent at night, (see the AML).
- Typical channelizing device lateral placement (do not include when it is used as a divider for opposing directions of traffic) shall be 2 feet off the lane line in the closed lane or shoulder.
- Devices may be adjusted laterally to accommodate ongoing work in the immediate vicinity but must be returned to the closed lane after the work activity has moved.
- Channelizing devices on the lane line shall be of the same type.
- Channelizing devices in each taper shall be of the same type.



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TYPE III BARRICADES

- Only Type III Barricades shall be used.
- All barricades shall use Type 3 High Intensity Sheeting on both sides of the barricade.
- All barricades shall be a minimum of 8 feet in length and must meet NCHRP Report 350 or MASH requirements.
- When used for overnight closures, two Type B High Intensity Lights shall supplement all barricades that are placed in a closed lane or that extend across a highway. Two Type A Low Intensity Lights may be used in urban areas if approved by the Engineer (See AML).
- When signs and lights are to be mounted to a barricade, they must meet NCHRP Report 350 or MASH requirements.
- A truck with a TMA may be substituted for a barricade when workers are present.
- Barricades shall be placed:
 - at the beginning of a closed lane or shoulder and at 1,000 foot intervals where no active work is ongoing and the lane must remain closed. A minimum of 2 barricades shall be placed if the lane or shoulder closure is less than 2,000 feet. (One barricade shall be placed at the beginning of the lane closure after the buffer space and one shall be placed in the middle of the lane closure.)
 - before each or group of unfilled holes or holes filled with temporary material.
 - before uncured concrete.
 - in the closed lane on each side of every intersection and crossover. (Do not block sight distance.)
 - in front of piles of material (dirt, aggregate, broken concrete), culverts and equipment which is near the work zone.



TTC for DROP-OFFS

NON-INTERSTATE

Average Drop-off	Current Posted Speed (Prior to Construction)	
	> 45 MPH	≤ 45 MPH
≤ 3 IN	Low Shoulder Sign (Optional)	Low Shoulder Sign (Optional)
> 3 IN	Shoulder Drop Off Sign & Edge Lines or Shoulder Drop Off Sign & Channelizing Device	Shoulder Drop Off Sign
> 6 IN	No Shoulder Sign, Edge Lines & Vertical Panel	No Shoulder Sign & Channelizing Device
≤ 10 IN		
> 10 IN	Concrete Barrier (if drop off is < 12 FT from edge of travel lane) & Edge Lines	No Shoulder Sign & Vertical Panel

INTERSTATE

Average Drop-off	Current Posted Speed (Prior to Construction)	
	> 45 MPH	≤ 45 MPH
≤ 2 IN	Low Shoulder Sign (Optional)	Low Shoulder Sign (Optional)
> 2 IN	Shoulder Drop Off Sign & Edge Lines or Shoulder Drop Off Sign & Channelizing Device	Shoulder Drop Off Sign
≤ 6 IN		
> 6 IN	Concrete Barrier (if drop off is < 12 FT from edge of travel lane), Shoulder Drop Off Sign, & Edge Lines	No Shoulder Sign & Vertical Panel

- If a portable concrete barrier will be required then the deflection shall be considered in the design.
- For Interstate ramps, refer to non-Interstate drop offs.

STANDARD DEVICE SPACING AND BUFFER SPACE

SPEED LIMIT (prior to construction)	MERGING TAPER LENGTH (L)				STANDARD DEVICE SPACING IN FEET		BUFFER SPACE
	Lane Width (FT)				Along Taper	Along Tangent	
MPH	9	10	11	12	Along Taper	Along Tangent	FT
25	94	105	115	125	20	40	155
30	135	150	165	180	30	60	200
35	184	205	225	245	35	70	250
40	240	267	294	320	40	80	305
45	405	450	495	540	40	80	360
50	450	500	550	600	40	80	425
55	495	550	605	660	40	80	495
60	540	600	660	720	40	80	570
65	585	650	715	780	40	80	645
70	630	700	770	840	40	80	730
75	675	750	825	900	40	80	820

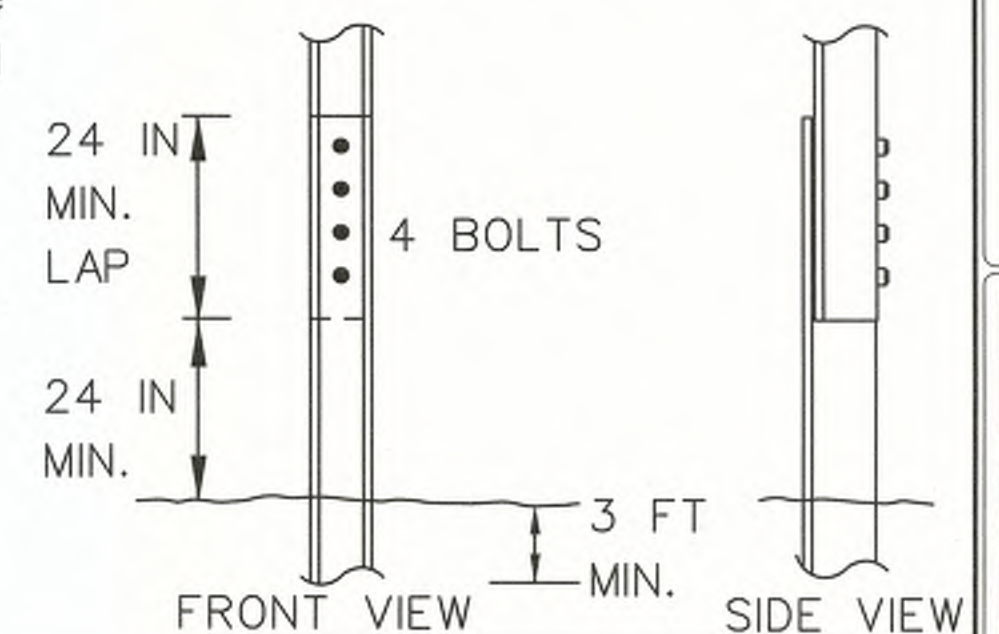
SPEED LIMIT (prior to construction)	SHIFTING TAPER LENGTH (1/2)L						STANDARD DEVICE SPACING IN FEET		BUFFER SPACE
	Lane Shift (FT)						Along Taper	Along Tangent	
MPH	2	4	6	8	10	12	Along Taper	Along Tangent	FT
25	11	21	32	42	52	63	20	40	155
30	15	30	45	60	75	90	30	60	200
35	21	41	62	82	102	123	35	70	250
40	27	54	80	107	134	160	40	80	305
45	45	90	135	180	225	270	40	80	360
50	50	100	150	200	250	300	40	80	425
55	55	110	165	220	275	330	40	80	495
60	60	120	180	240	300	360	40	80	570
65	65	130	195	260	325	390	40	80	645
70	70	140	210	280	350	420	40	80	730
75	75	150	225	300	375	450	40	80	820

SPEED LIMIT (prior to construction)	SHOULDER TAPER LENGTH (1/3)L						STANDARD DEVICE SPACING IN FEET		BUFFER SPACE
	Shoulder Width (FT)						Along Taper	Along Tangent	
MPH	2	4	6	8	10	12	Along Taper	Along Tangent	FT
25	7	14	21	28	35	42	20	40	155
30	10	20	30	40	50	60	30	60	200
35	14	28	41	55	68	82	35	70	250
40	18	36	54	72	89	107	40	80	305
45	30	60	90	120	150	180	40	80	360
50	34	67	100	134	167	200	40	80	425
55	37	74	110	147	184	220	40	80	495
60	40	80	120	160	200	240	40	80	570
65	44	87	130	174	217	260	40	80	645
70	47	94	140	187	234	280	40	80	730
75	50	100	150	200	250	300	40	80	820

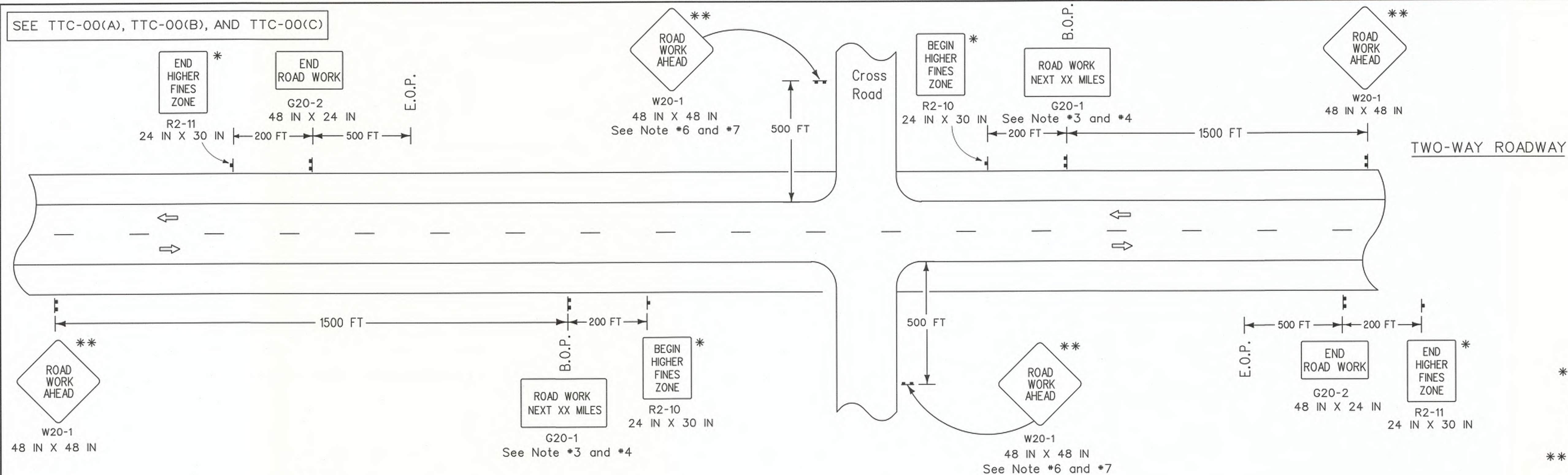
- All termination and flagger tapers are 100 feet. (MIN. 6 channelizing devices per lane equally spaced 20 feet apart.)
- See TTC Standards for flagger taper.
- See MUTCD for taper formulas.

ALLOWABLE LAP SPLICE FOR U-CHANNEL POST

U-Channel posts may be spliced where long lengths are required. The upper section shall overlap the lower section by at least 24 inches. The bottom edge of the upper section of the splice shall be a minimum of 24 inches above the ground. The spliced sections shall be secured with at least four 5/16 inch diameter hex bolts spaced equally along the splice.



SEE TTC-00(A), TTC-00(B), AND TTC-00(C)



* For divided roadways with speeds ≥ 50 mph use larger sign, 36 IN X 48 IN.

** Any sign of the W20-1 series may be used.

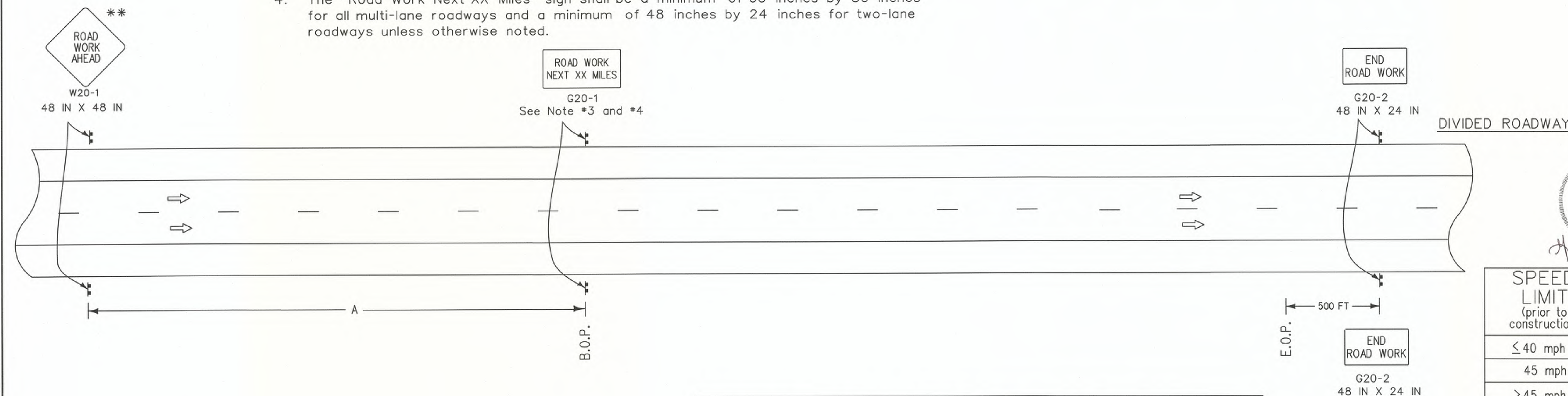
NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), TTC-00(C), and other Temporary Traffic Control Sheets as appropriate.

LEGEND

- ⏏ Traffic Sign
⇒ Direction of Travel

1. This layout represents the minimum traffic controls required for placement of "Road Work Next XX Miles" and "End Road Work" signs.
2. This layout does not replace other TTC Standard Sheets, but is intended as a supplement to the required signing.
3. The distance on the "Road Work Next XX Miles" sign shall be stated to the nearest whole mile. This sign shall be placed at the Beginning of Project (B.O.P.) limits. This sign may be omitted if work zone is less than 0.5 miles.
4. The "Road Work Next XX Miles" sign shall be a minimum of 60 inches by 36 inches for all multi-lane roadways and a minimum of 48 inches by 24 inches for two-lane roadways unless otherwise noted.
5. The "End Road Work" sign shall be placed 500 feet past the End of Project (E.O.P.) limits.
6. If "Road Work Ahead" sign is used on a cross road to warn of road work on another route, then "End Road Work" sign is not required.
7. When projects are separated by less than 1 mile, they shall be signed as one project; this may require coordination.



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SPEED LIMIT (prior to construction)	SPACING
≤ 40 mph	1500 FT
45 mph	2640 FT
> 45 mph	5280 FT

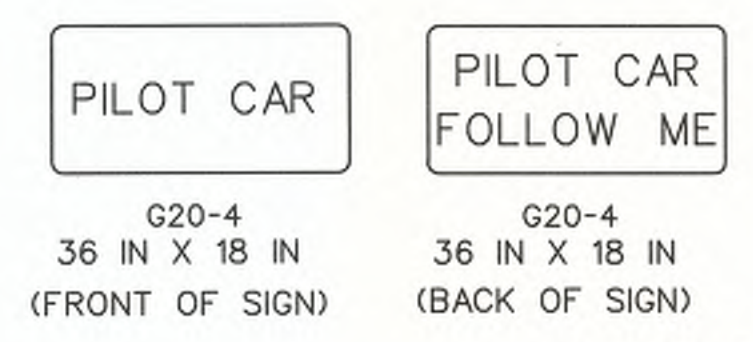
- Sign spacing to be adjusted for Horizontal and Vertical curves.
- For work outside of the traveled way, see TTC-01 and TTC-02.

SHEET NUMBER		238	
DESIGNED BY	G. LEBLANC	CONTROL SECTION	STATE PROJECT
CHECKED BY	J. COLVIN	CHECKED BY	G. LEBLANC
APPROVED BY	DATE: 7/2/18		
REVISION OR CHANGE ORDER DESCRIPTION	BY: 7/2/18		
NO.	DATE	APPROVED BY	CHIEF ENGINEER
TTC-00 (D)			

TEMPORARY TRAFFIC CONTROL LAYOUT FOR PLACEMENT OF ROAD WORK NEXT XX MILES AND END ROAD WORK SIGNS

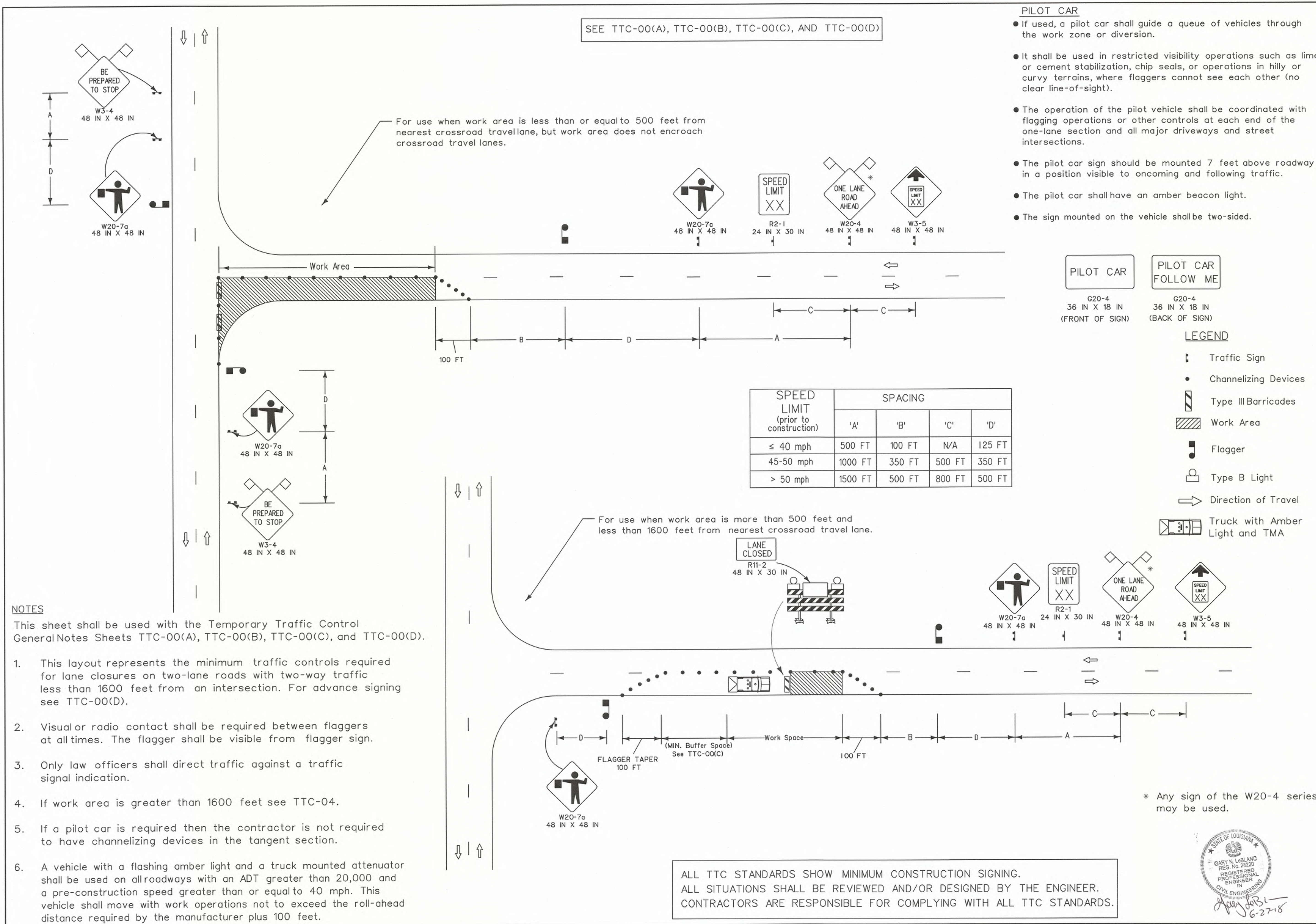
DOTD TRAFFIC ENGINEERING

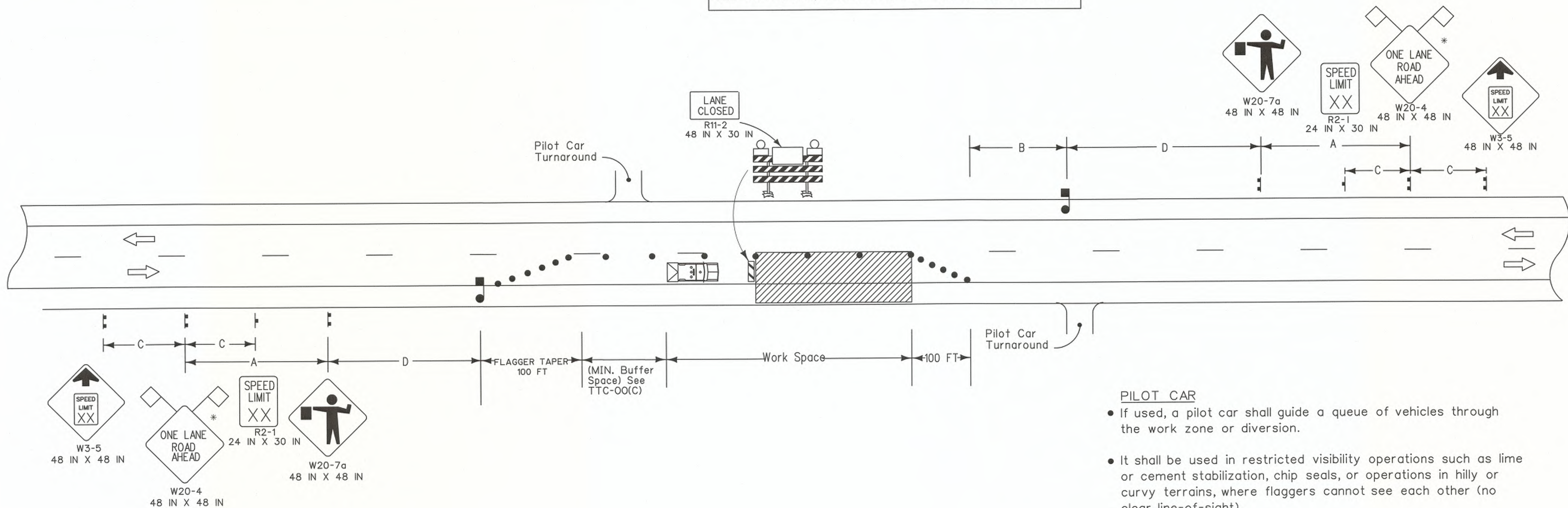
- PILOT CAR**
- If used, a pilot car shall guide a queue of vehicles through the work zone or diversion.
 - It shall be used in restricted visibility operations such as lime or cement stabilization, chip seals, or operations in hilly or curvy terrains, where flaggers cannot see each other (no clear line-of-sight).
 - The operation of the pilot vehicle shall be coordinated with flagging operations or other controls at each end of the one-lane section and all major driveways and street intersections.
 - The pilot car sign should be mounted 7 feet above roadway in a position visible to oncoming and following traffic.
 - The pilot car shall have an amber beacon light.
 - The sign mounted on the vehicle shall be two-sided.



- LEGEND**
- Traffic Sign
 - Channelizing Devices
 - Type III Barricades
 - Work Area
 - Flagger
 - Type B Light
 - Direction of Travel
 - Truck with Amber Light and TMA

SPEED LIMIT (prior to construction)	SPACING			
	'A'	'B'	'C'	'D'
≤ 40 mph	500 FT	100 FT	N/A	125 FT
45-50 mph	1000 FT	350 FT	500 FT	350 FT
> 50 mph	1500 FT	500 FT	800 FT	500 FT





NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), TTC-00(C) and TTC-00(D).

1. This layout represents the minimum traffic controls required for lane closures on two-lane roads with two-way traffic greater than 1600 feet from an intersection. For this type of closure either a flagger or a pilot car will be required. For advance signing see TTC-00(D).
2. To prevent vehicles from entering the work area against the flow of traffic, an additional flagger shall be stationed at each intersection, major driveway, railroad crossing, or crossing within the work area.
3. For projects in rural areas the distance between flaggers shall not exceed:
(A) 2.5 miles for ADT<2,500
(B) 2.0 miles for 2,500<ADT<5,000
(C) 1.5 miles for ADT>5,000
4. The flagger station shall be near the beginning of the taper and shall have adequate sight distance to be visible to oncoming traffic. If sight distance cannot be achieved, the distance between flaggers may be extended for a short duration.
5. Visual or radio contact shall be required between flaggers at all times. The flagger shall be visible from the flagger sign.
6. A vehicle with a flashing amber light and a truck mounted attenuator shall be used on all roadways with an ADT greater than 20,000 and a pre-construction speed greater than or equal to 40 mph. This vehicle shall move with work operations not to exceed the roll-ahead distance required by the manufacturer plus 100 feet.

7. If a pilot car is required then the contractor is not required to have channelizing devices in the tangent section.
8. If work zone is less than 1600 feet from an intersection see TTC-03.

SPEED LIMIT (prior to construction)	SPACING			
	'A'	'B'	'C'	'D'
≤ 40 mph	500 FT	100 FT	N/A	125 FT
45-50 mph	1000 FT	350 FT	500 FT	350 FT
≥ 55 mph	1500 FT	500 FT	800 FT	500 FT

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PILOT CAR

- If used, a pilot car shall guide a queue of vehicles through the work zone or diversion.
- It shall be used in restricted visibility operations such as lime or cement stabilization, chip seals, or operations in hilly or curvy terrains, where flaggers cannot see each other (no clear line-of-sight).
- The operation of the pilot vehicle shall be coordinated with flagging operations or other controls at each end of the one-lane section and all major driveways and street intersections.
- The pilot car sign should be mounted 7 feet above roadway in a position visible to oncoming and following traffic.
- The pilot car shall have an amber beacon light.
- The sign mounted on the vehicle shall be two-sided.

PILOT CAR

G20-4
36 IN X 18 IN
(FRONT OF SIGN)

PILOT CAR FOLLOW ME

G20-4
36 IN X 18 IN
(BACK OF SIGN)

LEGEND

* Any sign of the W20-4 series may be used.

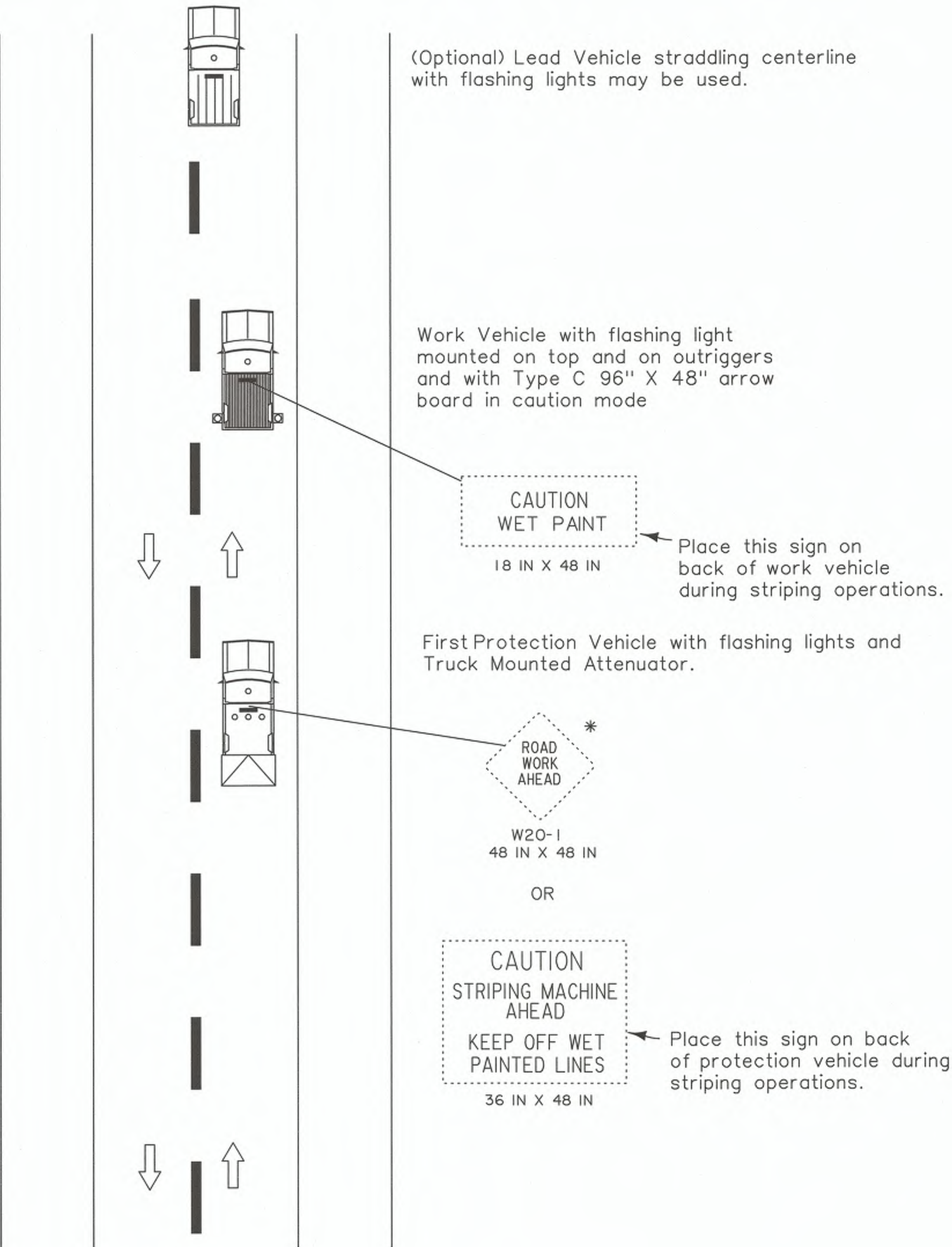


- Traffic Sign
- Flagger
- Channelizing Devices
- Type III Barricades
- Work Area
- Type B Light
- Direction of Travel
- Truck with Amber Light and TMA

NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), and TTC-00(C).

1. This layout represents the minimum traffic controls required for moving operations on two-lane roads with two-way traffic, such as striping, street sweeping, and placement of raised pavement markers.
2. Distances between vehicles may vary and should be adjusted due to drying time and sight obstructions such as overpasses and hills. Vehicles with attenuators shall move with work operations. Buffer space shall not exceed rollahead distance required by the manufacturer plus 100 feet.
3. If a queue greater than 5 minutes (about 1000 feet) exists, the contractor shall cease operations and pull over to the shoulder until the queue dissipates.
4. Flaggers may be used with this layout, if needed. See TTC-00(B).



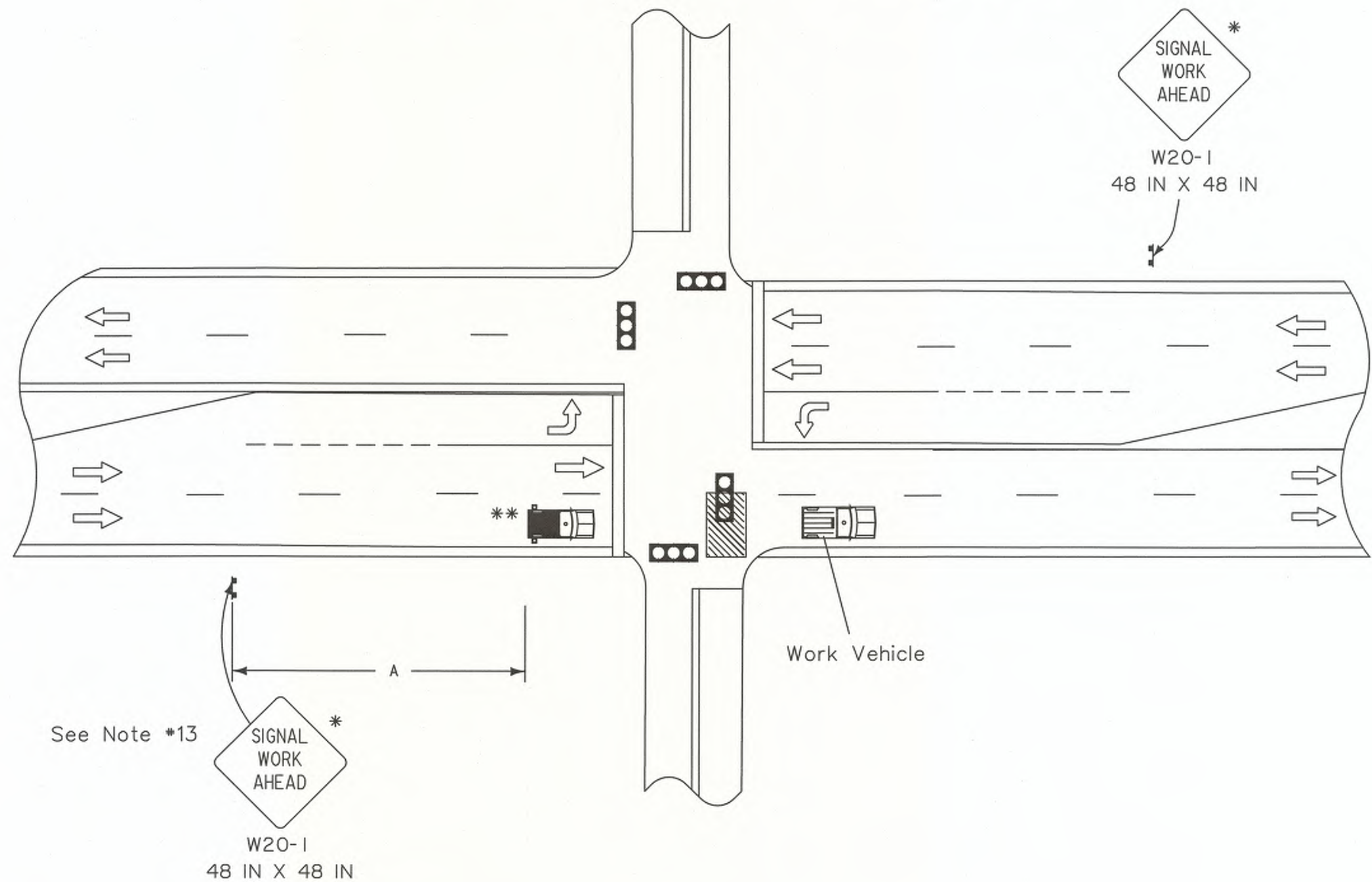
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* Any sign of the W20-1 series may be used.

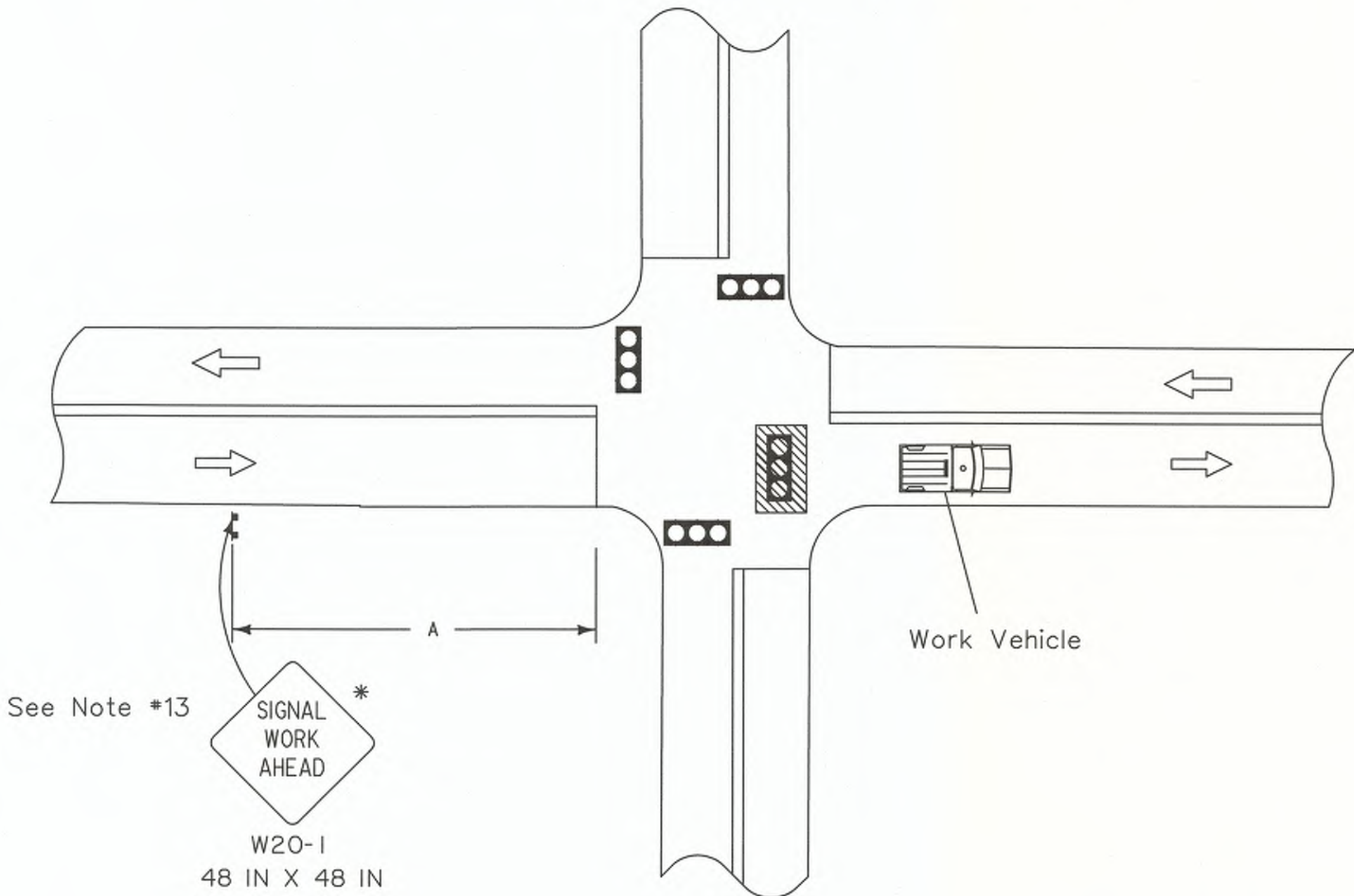
- LEGEND
- ⇒ Direction of Travel
 - Work Vehicle
 - Lead Vehicle
 - Protection Vehicle



SIGNAL WORK ON A MULTI-LANE ROADWAY FOR UP TO ONE HOUR



SIGNAL WORK ON A TWO-LANE TWO-WAY ROADWAY



NOTES

This sheet shall be used with the Temporary Traffic Control General Notes Sheets TTC-00(A), TTC-00(B), and TTC-00(C).

1. This layout represents the minimum traffic controls required during signal construction and maintenance.
2. For projects with multiple signals, the contractor shall construct only one signal at a time.
3. If the signal at an intersection is turned off, the intersection may operate as a 4-way stop with approval by the Engineer and the DTOE. The contractor shall be responsible for installing and removing all stop signs at the intersection.
4. A detour plan is required if the road will be closed to through traffic at all approaches.
5. A uniformed police officer shall direct traffic for short duration lane closures and signal turn-ons.
6. The turn lane may be used as a through lane if a minimum 10-foot lateral clearance can be maintained and opposing traffic is not impeded.
7. A signal timing and phasing plan shall be developed for each phase of construction.
8. Place "Road Work Ahead" sign prior to an intersecting alternate route, no more than 1500 feet from the work area.
9. The sign height shall be at least 7 feet in business, commercial, and residential areas and also near parking, pedestrians, bicyclists, or other obstructions.
10. All work must be done during off-peak hours.
11. The contractor shall not work on both through lanes at the same time.
12. For signal work on a multi-lane roadway greater than 1 hour, see TTC-09 or TTC-10.
13. If the expected or actual queue length exceeds the distance in Table 2C-4 in the MUTCD, place an additional "Signal Work Ahead" sign (W20-1) at the end of the queue.
14. For two-lane two-way roadways, a police car with flashing lights and 2 police officers will be required for intersection traffic control.
15. Left turn lanes shall be closed whenever work is being performed in path of left hand turner.
16. Position of work vehicle may vary according to work required.

- * Any sign of the W20-1 series may be used.
- ** For posted speed over 45 mph, use TMA.

SPEED LIMIT (prior to construction)	SPACING
	'A'
≤ 40 mph	125 FT
45-50 mph	350 FT
> 50 mph	500 FT

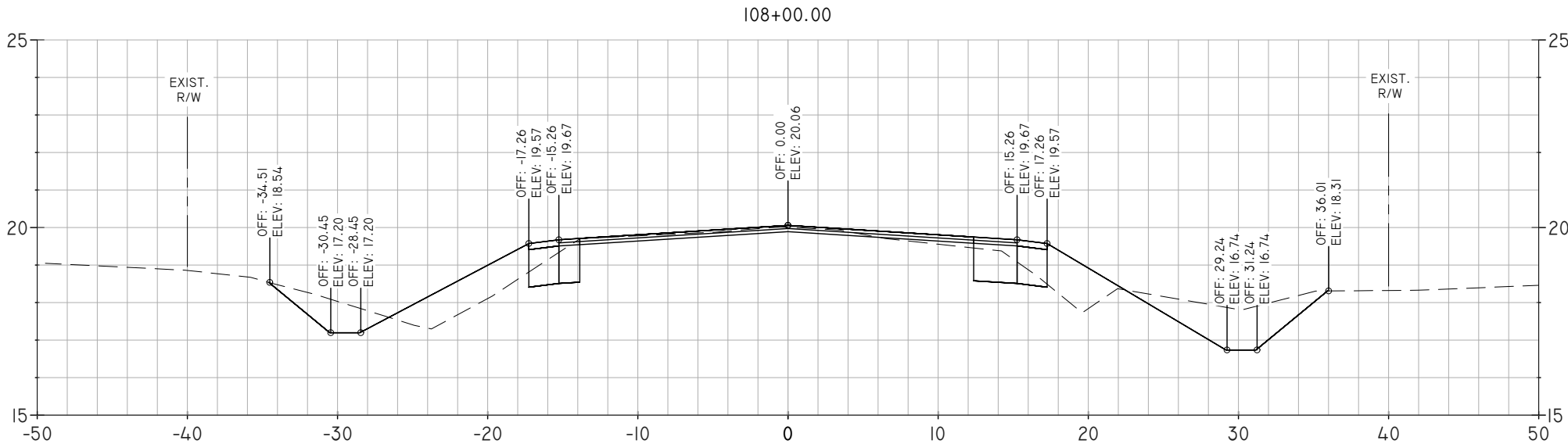
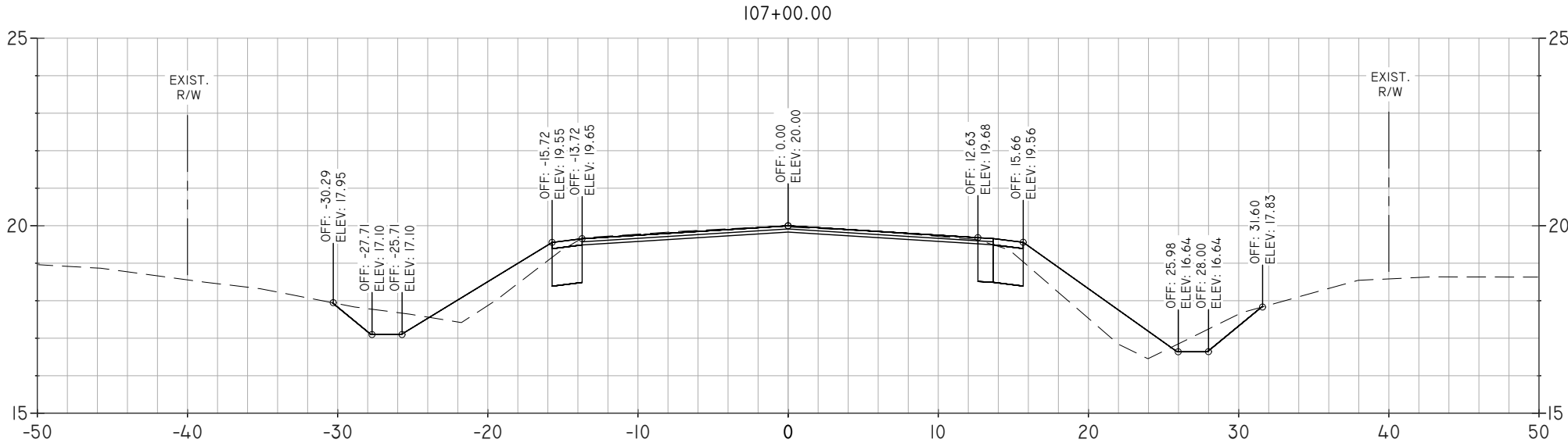
LEGEND

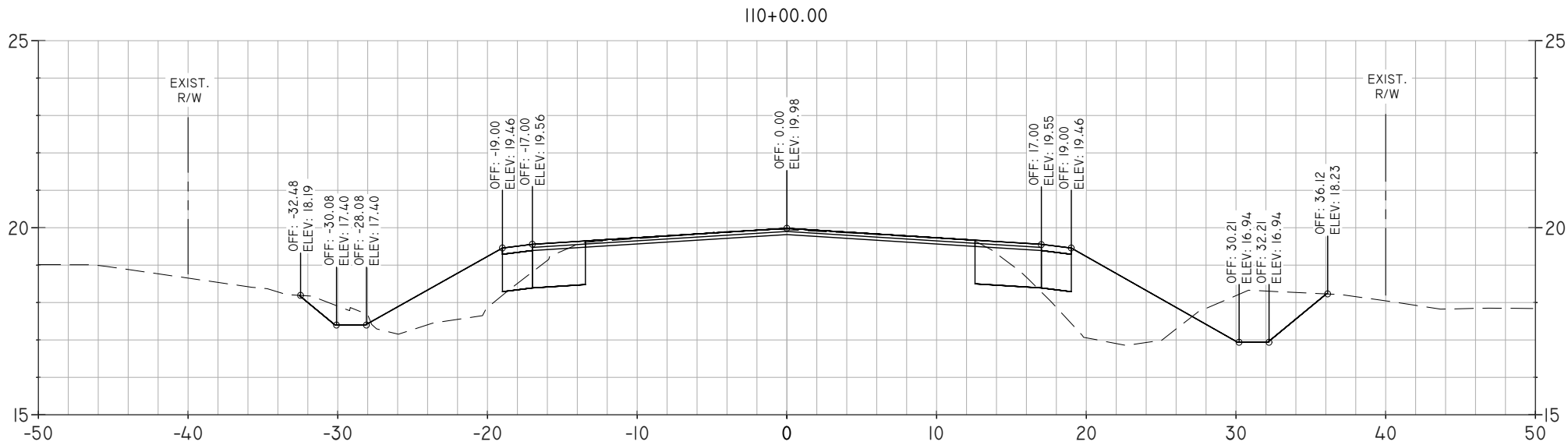
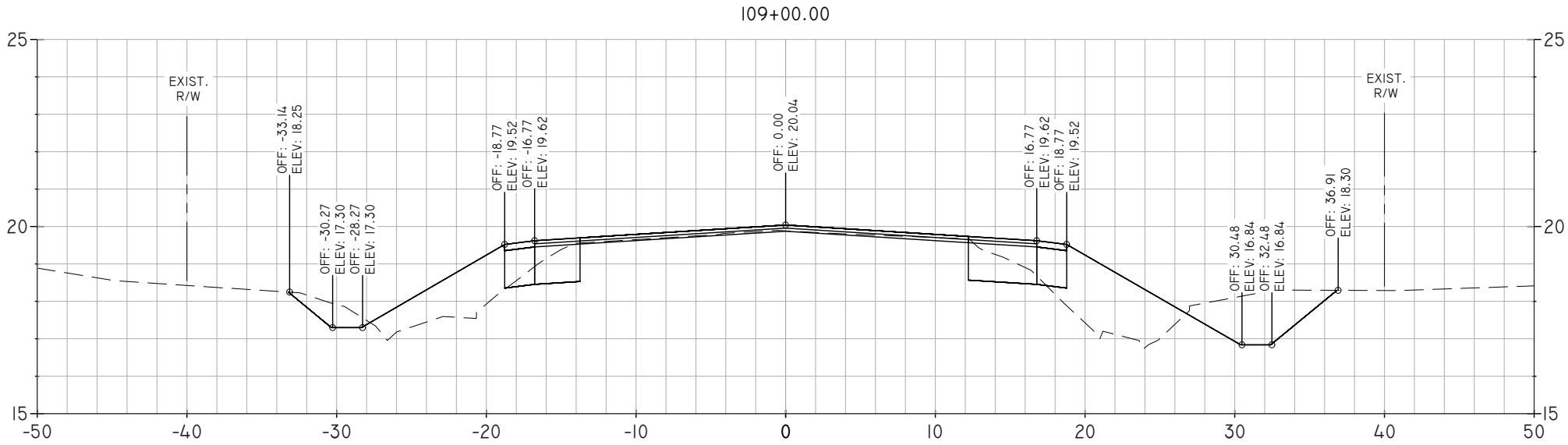
- Traffic Sign
- Work Vehicle
- Truck with Flashing Arrow Panel
- Work Area
- Direction of Travel
- Traffic Signal

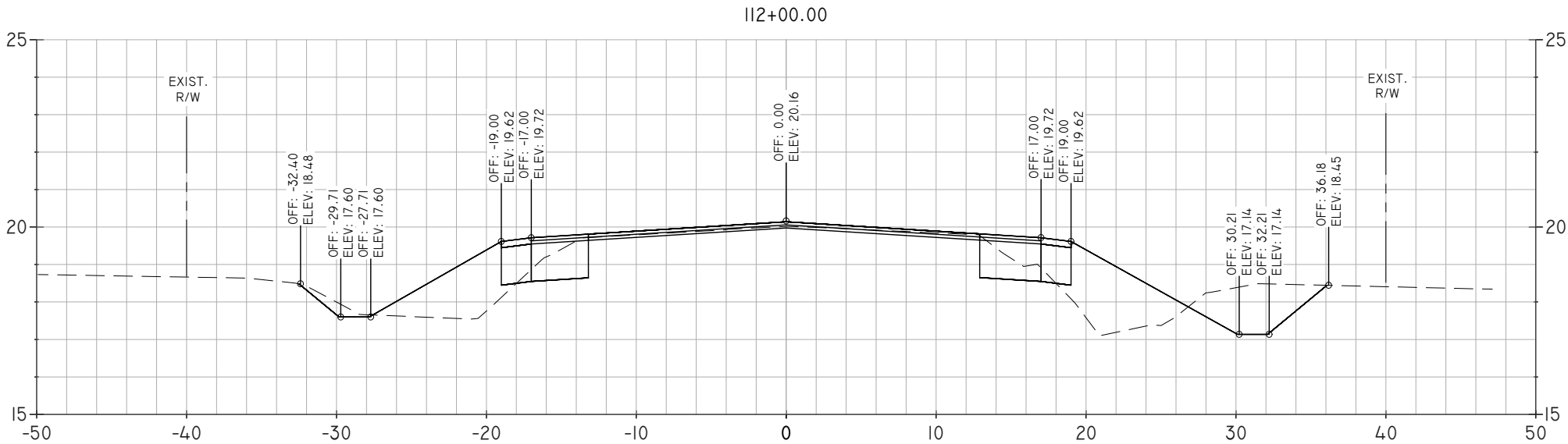
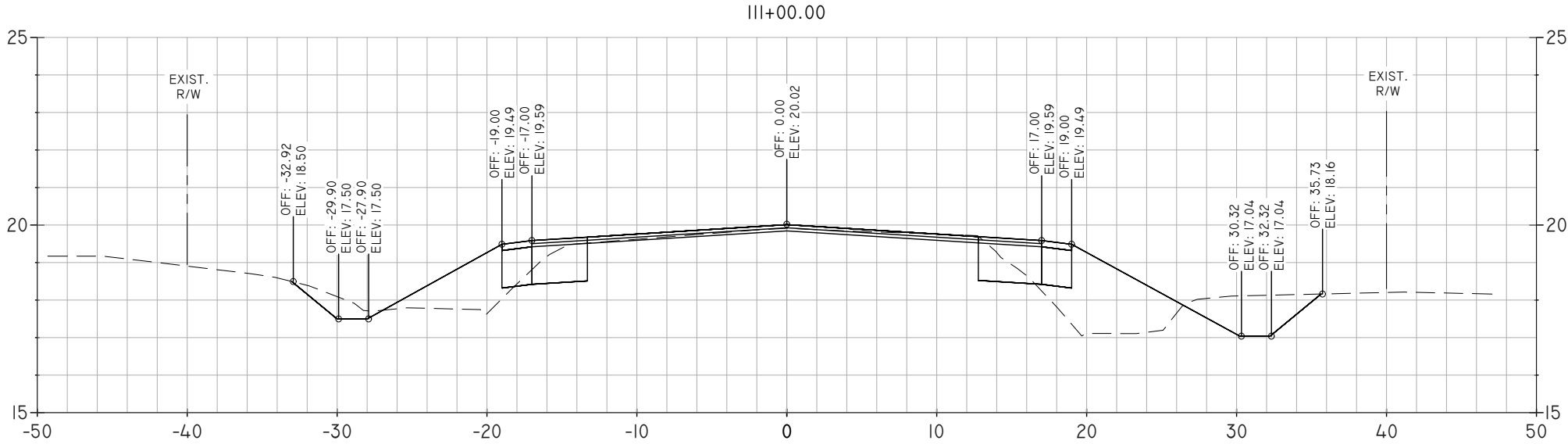


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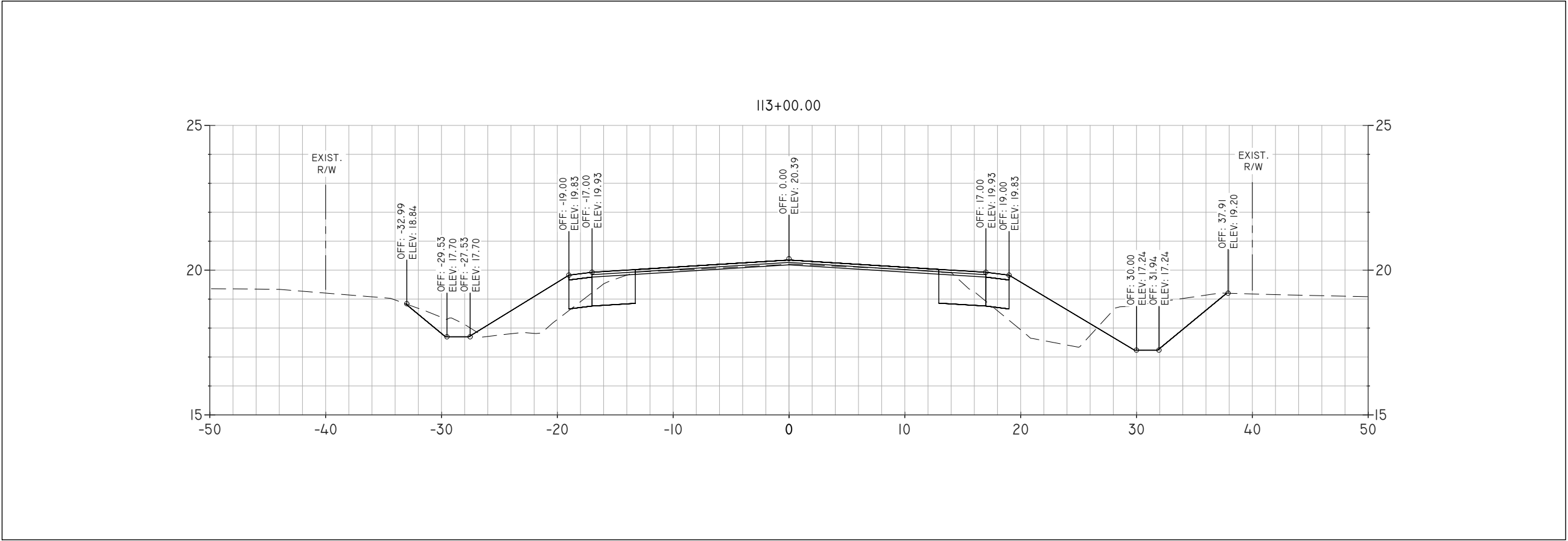
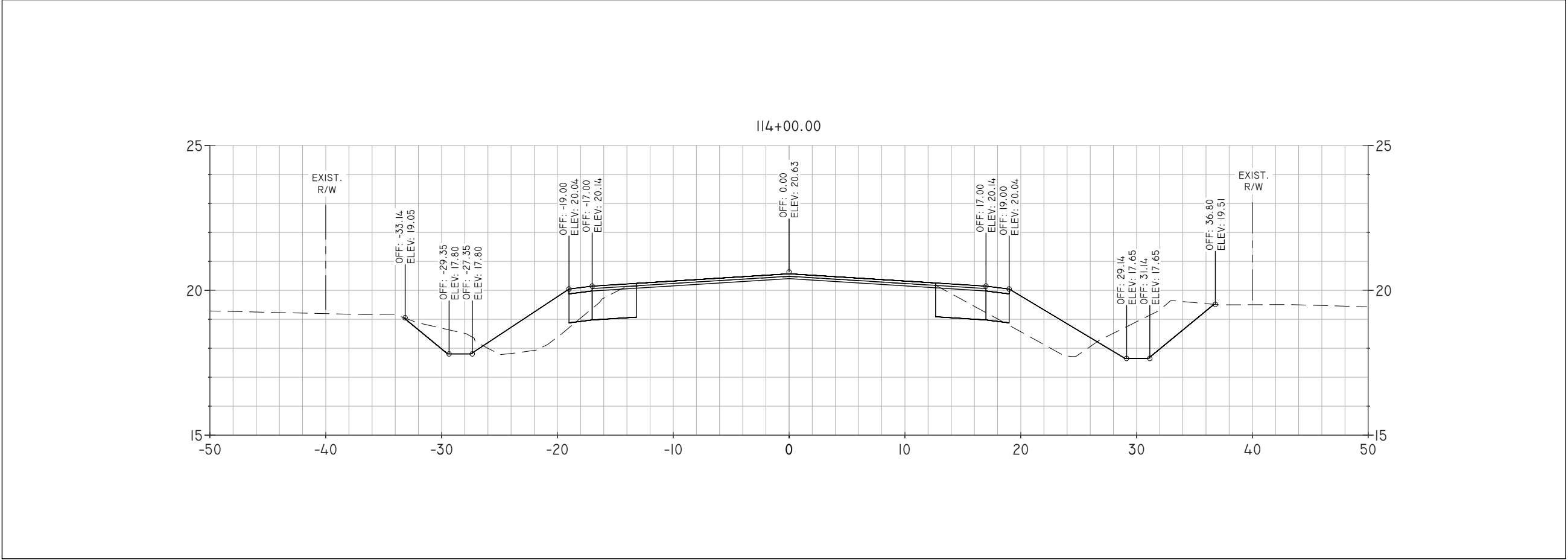
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DESIGNED	CHECKED	SJT	DJM	PARISH	ASCENSION PARISH	SHEET NUMBER	403
DATE	CHECKED	SJT	DJM	CONTROL SECTION			
DATE	CHECKED	SJT	DJM	STATE PROJECT			
NO.	DATE	BY					

