

LAX
PROJECT ID:
WITH: N/A

1661-09-72

COUNTY:

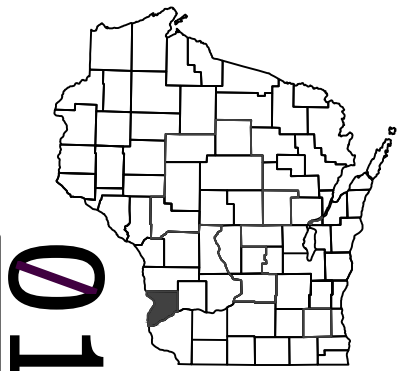
CRAWFORD

SEPTEMBER 2023

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 86



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PRAIRIE DU CHIEN - FENNIMORE

SOUTH TOWN LN/SELCH RD INTERSECTION

USH 18

CRAWFORD COUNTY

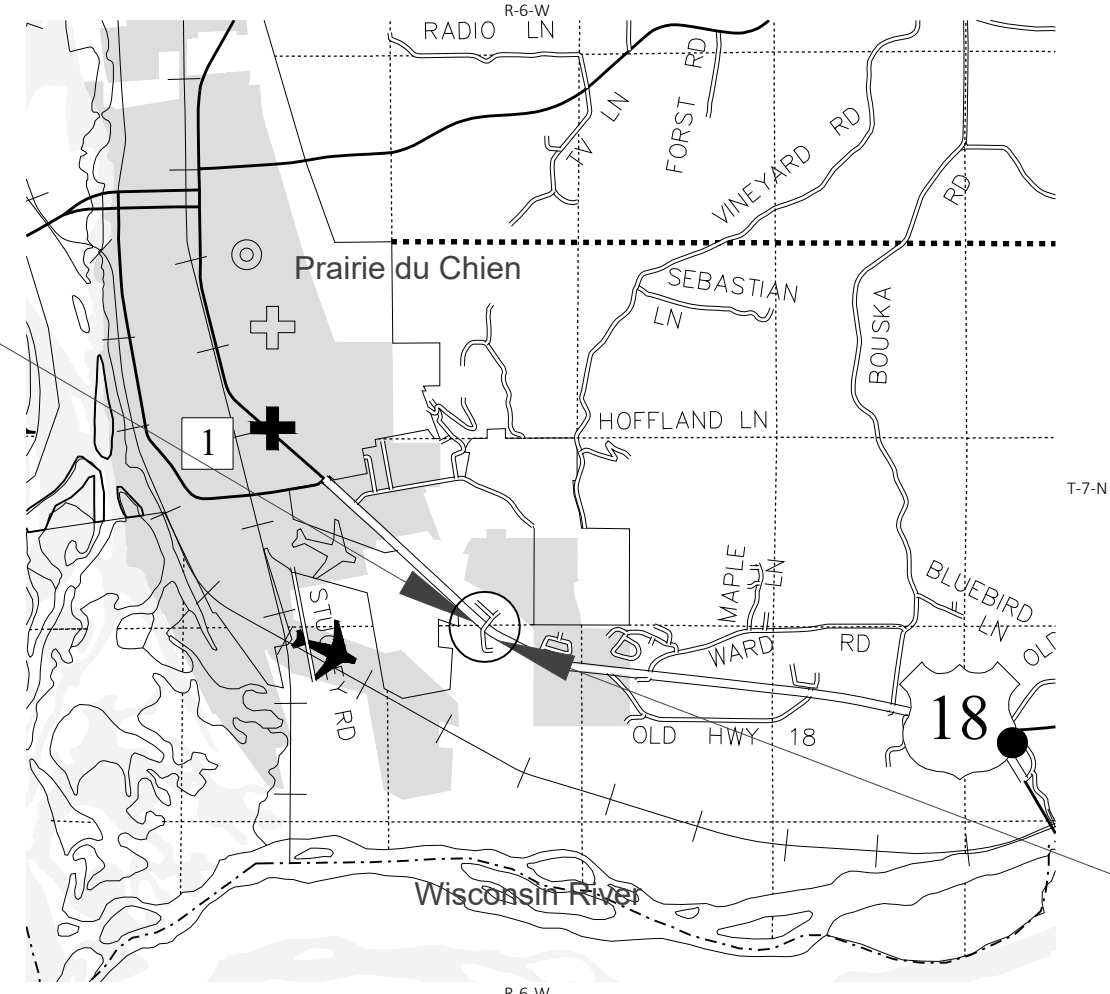
STATE PROJECT NUMBER
1661-09-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1661-09-72	WISC 2023270	1

DESIGN DESIGNATION 1661-09-02

A.A.D.T.	2023	=	18,450
A.A.D.T.	2042	=	22,010
D.H.V.		=	
D.D.		=	
T.		=	22.8%
DESIGN SPEED		=	50 M.P.H.
ESALS		=	7,600,000

BEGIN PROJECT
STA 193+59 'EB'
X: 326693.367
Y: 109808.957



END PROJECT
STA 197+24 'EB'

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.069 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CRAWFORD COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	JAY ADAMS, P.L.S.
Designer	BRYTON MEYER
Project Manager	
Regional Examiner	SW REGION
Regional Supervisor	JOHN BAINTER, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 6/2/2023

(Signature)

GENERAL NOTES

MISCELLANEOUS

THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE, THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROEJCT AREA THAT ARE NOT SHOWN.

WHEN THE QUANTITY OF ITEMS OF BASE AGGREGATE IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

REMOVALS

NO TREES OR SHRUBS TO BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.

GRADING AND EROSION CONTROL

DO NOT STORE EQUIPMENT OR MATERIALS IN, NOR IMPACT ANY WETLANDS OR WATERWAYS OUTSIDE THE SLOPE INTERCEPTS SHOWN.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE FERTILIZED, TOPSOILED, PERMANENT SEEDED, TEMPORARILY SEEDED, AND EMAT PLACED AS DIRECTED BY THE ENGINEER.

PAVING

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT CONCRETE PAVEMENT JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

UTILITIES

ALLIANT ENERGY
ELECTRICITY
200 FIRST STREET
CEDAR RAPIDS, IA 52401
ATTN: MARY MONTGOMERY
PHONE: (319) 786-4768
EMAIL: MaryMontgomery@alliantenergy.com

CENTURYLINK
COMMUNICATION LINE
224 INDUSTRIAL DR
NORTH PRAIRIE, WI 53153
ATTN: KEVIN ZICKERT
PHONE: (608) 716-5959
EMAIL: Kevin.Zickert@brightspeed.com

MEDIACOM COMMUNICATIONS COMPANY
COMMUNICATION LINE
1240 HIGHWAY 52
CHATFIELD, MN 55923
ATTN: CRAIG EGGERT
PHONE: (563) 419-5160
EMAIL: ceggert@mediacomcc.com

BRIDGEPORT SANITARY DISTRICT
SEWER & WATER
38088 DIJON RD
PRAIRIE DU CHIEN, WI 53821
ATTN: JOHN POOTS
PHONE: (608) 412-2990
EMAIL: jpoots@centurylink.net

MADISON GAS AND ELECTRIC COMPANY
GAS/PETROLEUM
PO BOX 1231
MADISON, WI 53701-1231
ATTN: JANE ROSSING
PHONE: (608) 252-7099
EMAIL: workplans@mge.com

MEDIACOM WISCONSIN LLC
COMMUNICATION LINE
1240 HIGHWAY 52
CHATFIELD, MN 55923
ATTN: CRAIG EGGERT
PHONE: (563) 419-5160
EMAIL: ceggert@mediacomcc.com

ORDER OF TYPICAL SECTION

& DETAIL SHEETS

1. GENERAL NOTES
2. PROJECT OVERVIEW
3. TYPICAL SECTIONS
4. CONSTRUCTION DETAILS
5. INTERSECTION DETAILS
6. PAVEMENT MARKING DETAILS
7. EROSION CONTROL
8. TRAFFIC CONTROL

WISDOT DESIGN CONTACT

WISDOT SW REGION
BRYTON MEYER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-789-7866
BRYTON.MEYER@DOT.WI.GOV

DNR LIAISON

DNR SOUTHWEST CENTRAL
KAREN KALVELAGE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
(608) 406-7880
KAREN.KALVELAGE@WISCONSIN.GOV

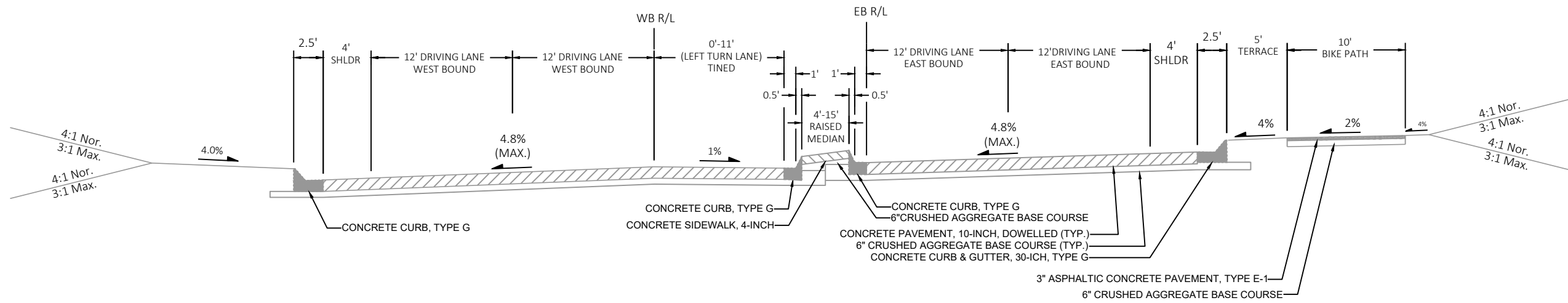
STANDARD ABBREVIATIONS

AC	ACRE	D.D.	DIRECTIONAL DISTRIBUTION	LS	LUMP SUM	S	SOUTH
AGG	AGGREGATE	DISCH.	DISCHARGE	M.P.	MARKER POST	SB	SOUTHBOUND
<	ANGLE	DMS	DYNAMIC MESSAGE SIGN	MGAL	1000 GALLONS	S.F.	SQUARE FOOT (FEET)
AE, AEW	APRON ENDWALL	EA	EACH	N.C.	NORMAL CROWN	SDD	STANDARD DETAIL DRAWINGS
ASPH.	ASPHALTIC	E	EAST	N	NORTH	STH	STATE TRUNK HIGHWAY
A.D.T.	AVERAGE DAILY TRAFFIC	EB	EASTBOUND	NB	NORTHBOUND	STA.	STATION
A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC	ELEC.	ELECTRIC(AL), ELEC. CABLE	NOR	NORMAL	S.E.	SUPERELEVATION
B.F.	BACK FACE	EL., ELEV.	ELEVATION	NO.	NUMBER	S/L	SURVEY LINE
BM	BENCHMARK	ESALS	EQUIVALENT SINGLE AXLE LOADS	PAV'T	PAVEMENT	SYM	SYMMETRICAL
BTWN	BETWEEN	EXC.	EXCAVATION	P.L.E.	PERMANENT LIMITED EASEMENT	T.	PERCENT TRUCKS
CTR.	CENTER	EXIST	EXISTING	P.C.	POINT OF CURVATURE	TEL.	TELEPHONE
C/L	CENTERLINE	F.F.	FACE TO FACE	P.I.	POINT OF INTERSECTION	TEMP.	TEMPORARY
Δ	CENTRAL ANGLE OR DELTA	FERT.	FERTILIZER	P.T.	POINT OF TANGENCY	T.L.A.	TEMPORARY LIMITED EASEMENT
C.E.	COMMERCIAL ENTRANCE	F.E.	FIELD ENTRANCE	PCC	PORTLAND CEMENT CONCRETE	T.O.C.	TOP OF CURB
CONST.	CONSTRUCTION	F/L, F.L.	FLOW LINE	P.E.	PRIVATE ENTRANCE	TYP	TYPICAL
CMCP	CORRUGATED METAL CULVERT PIPE	EXC.	GALVANIZE	PGL	PROFILE GRADE LINE	UNCL.	UNCLASSIFIED
CMP	CORRUGATED METAL PIPE	H.S.	HIGH STRENGTH	P.L.	PROPERTY LINE	U.G.	UNDERGROUND (CABLE)
CO.	COUNTY	CWT	HUNDRED WEIGHT	R	RADIUS OR RANGE	VAR.	VARIABLE
CTH	COUNTY TRUNK HIGHWAY	INL	INLET	R/L	REFERENCE LINE	V.C.	VERTICAL CURVE
CR.	CREEK	INTER.	INTERSECTION	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE	V.P.C.	VERTICAL POINT OF CURVATURE
CABC	CRUSHED AGGREGATE BASE COURSE	IG	INTERSTATE HIGHWAY	REQ'D	REQUIRED	V.P.I.	VERTICAL POINT OF INTERSECTION
CY	CUBIC YARD	JT.	JOINT	RT	RIGHT	V.P.T.	VERTICAL POINT OF TANGENCY
CP	CONTROL POINT OR CULVERT PIPE	LT	LEFT	R.H.D.	RIGHT HAND FORWARD	Wt.	Weight
C&G	CURB AND GUTTER	L.H.F.	LEFT HAND FORWARD	R/W	RIGHT OF WAY	W	West
D	DEGREE OF CURVE	L.	LENGTH OF CURVE	RD.	ROAD	WB	Westbound
D.H.V.	DESIGN HOURLY VOLUME	L.F.	LINEAR FOOT (FEET)	SHLD.	SHOULDER(S)		
DIA.	DIAMETER	LC.	LONG COMPOUND	SHR.	SHRINKAGE		

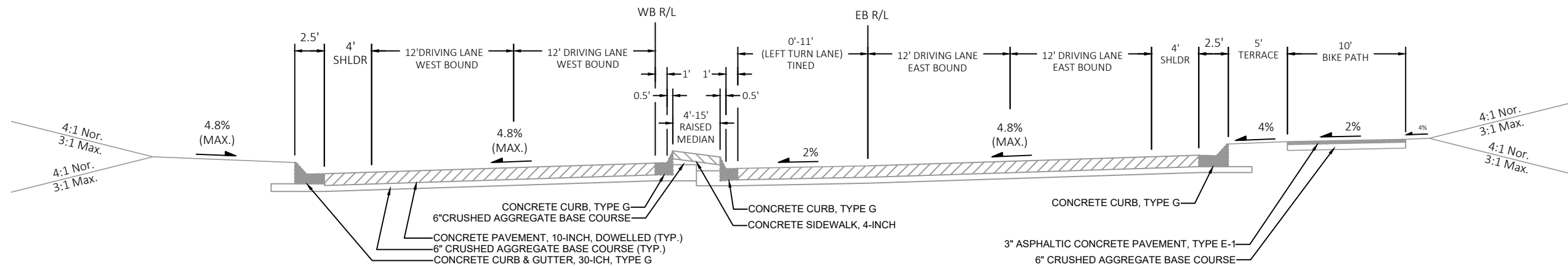




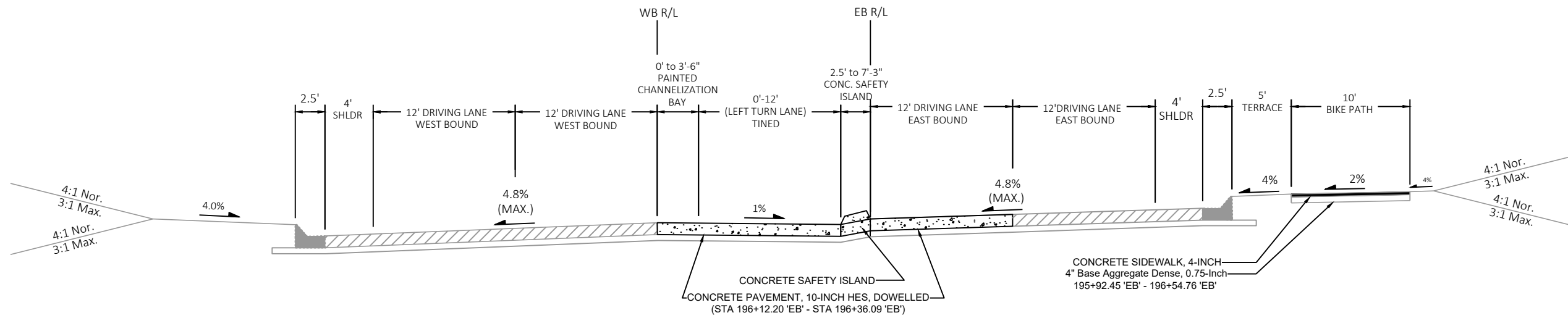
PROJECT NO: 1661-09-72	HWY: USH 18	COUNTY: CRAWFORD	PROJECT OVERVIEW	SHEET	E
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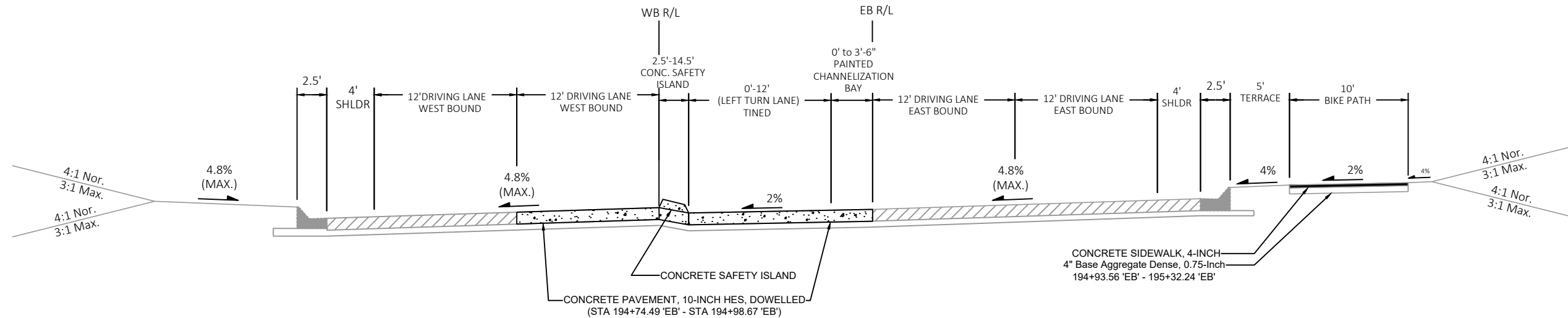
EXISTING SUPER ELEVATED SECTION WITH LEFT TURN LANE FOR WB TRAFFIC TYPICAL SECTION
 STA 196+12.20 'EB' - 197+23.51 'EB'



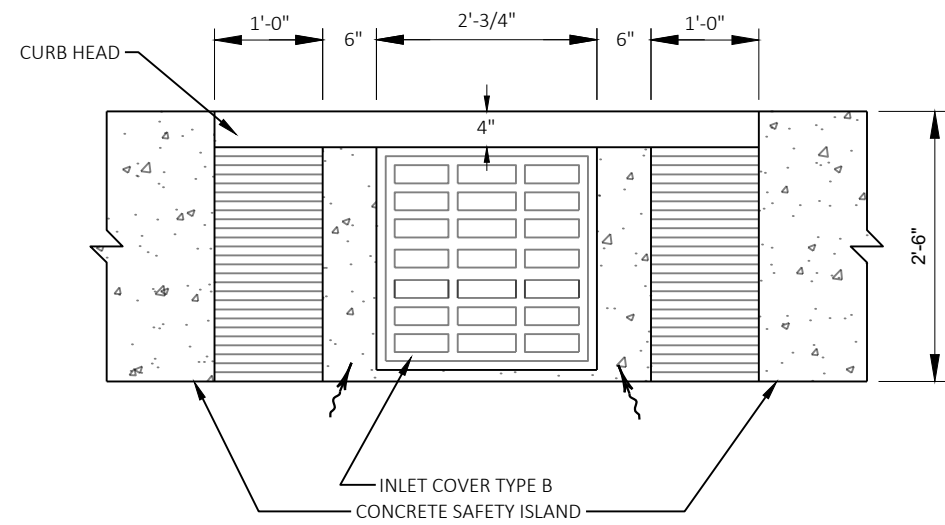
EXISTING SUPER ELEVATED SECTION WITH LEFT TURN LANE FOR EB TRAFFIC TYPICAL SECTION
 STA 193+58.99 'EB' - 195+95.45 'EB'



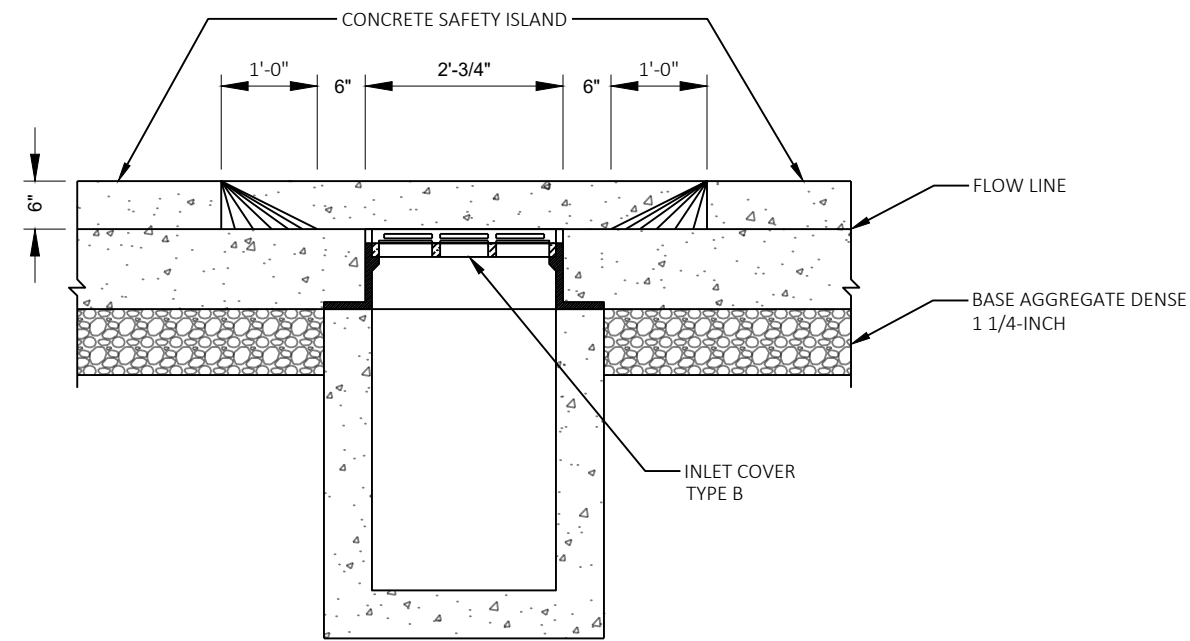
PROPOSED SUPER ELEVATED SECTION WITH LEFT TURN LANE FOR WB TRAFFIC TYPICAL SECTION
STA 196+12.20 'EB' - 197+23.51 'EB'



PROPOSED SUPER ELEVATED SECTION WITH LEFT TURN LANE FOR EB TRAFFIC TYPICAL SECTION
STA 193+58.99 'EB' - 195+95.45 'EB'

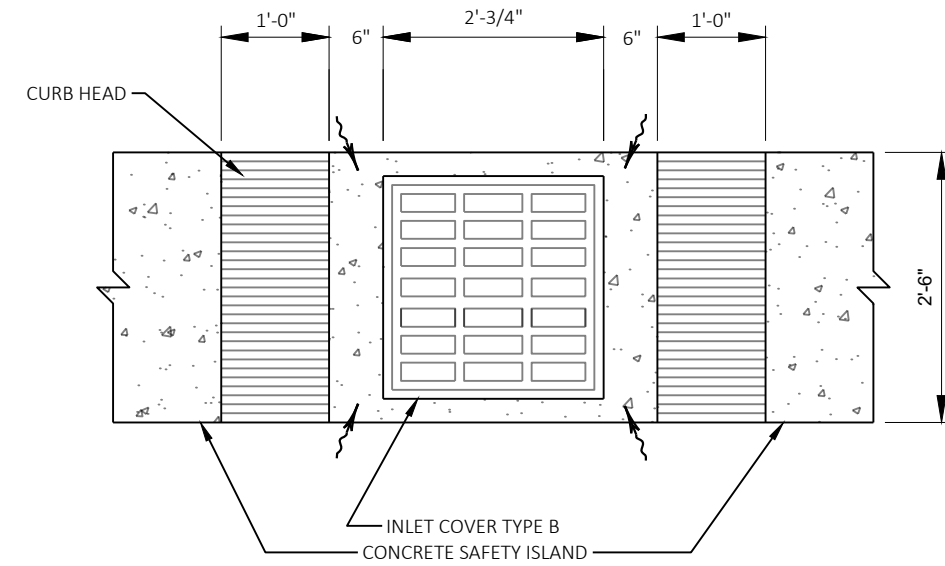


PLAN VIEW

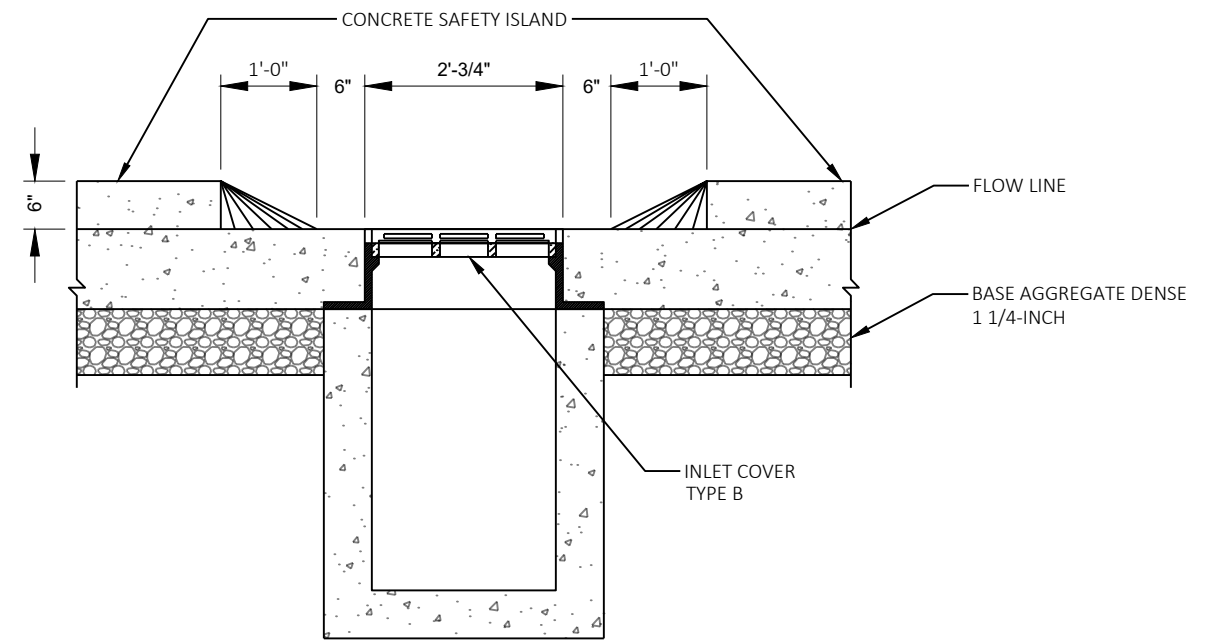


PROFILE VIEW

MEDIAN CUT WITH TYPE "B" COVER
STA 194+92 'EB', LT

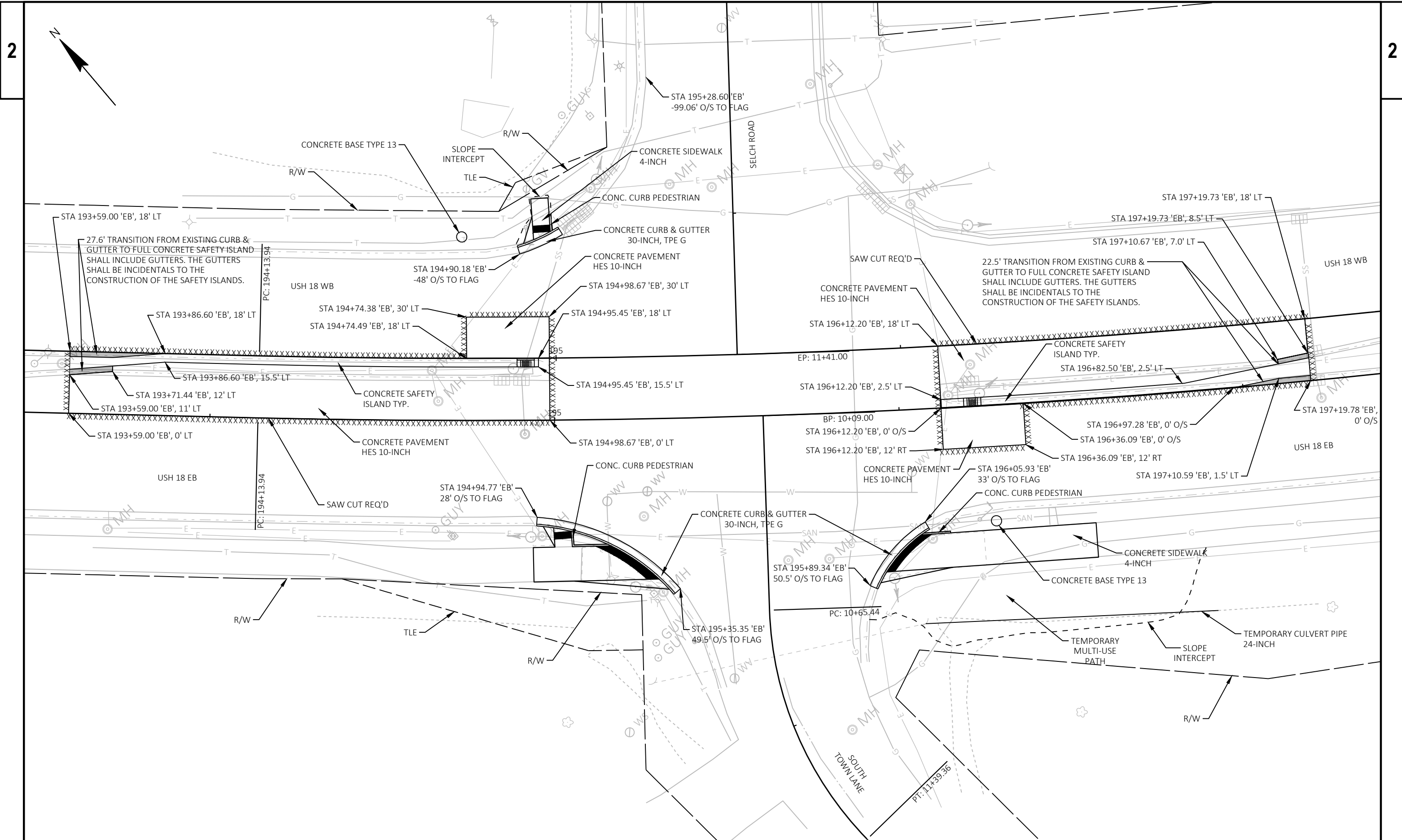


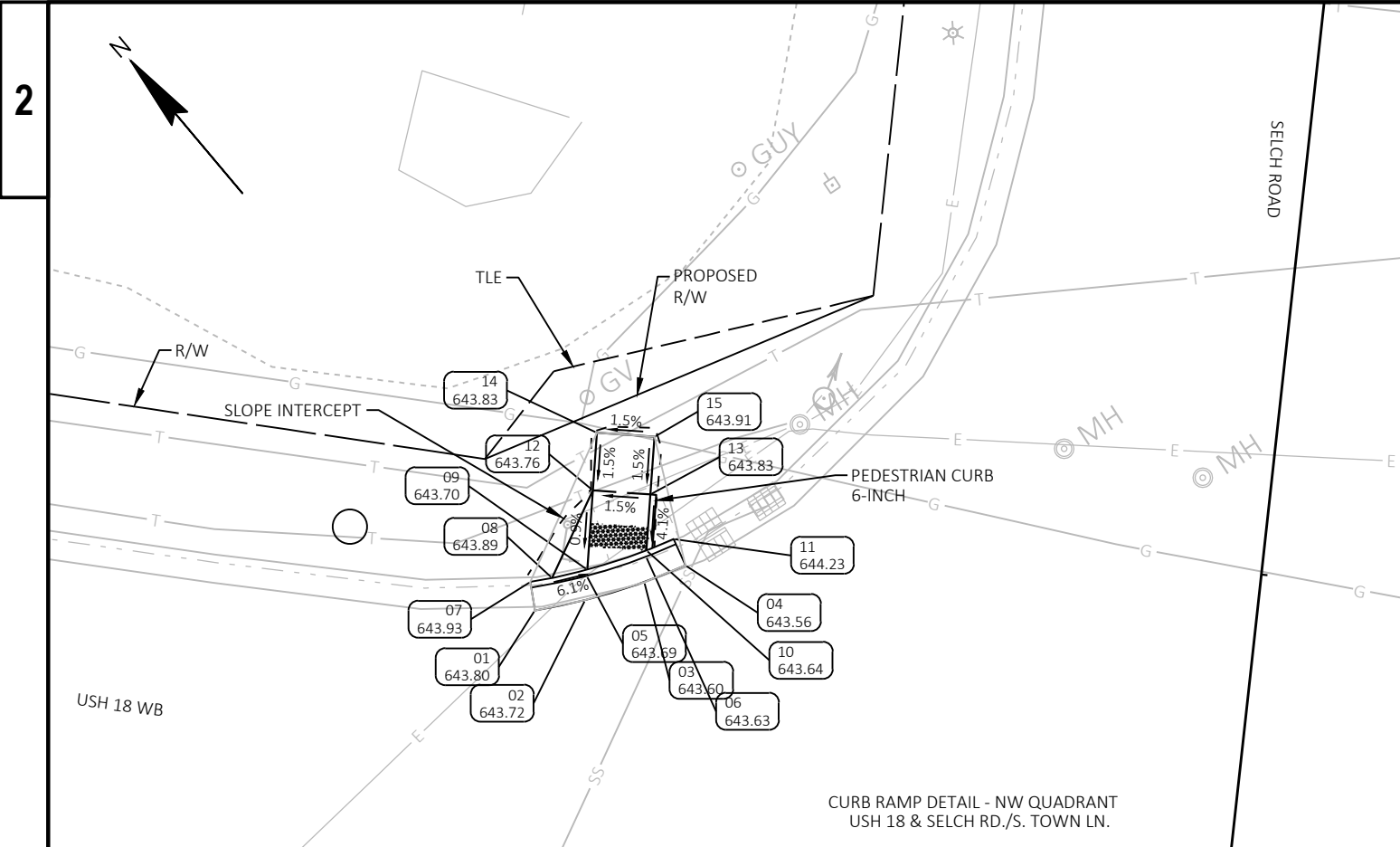
PLAN VIEW



PROFILE VIEW

MEDIAN CUT WITH TYPE "B" COVER
STA 196+21 'EB', LT



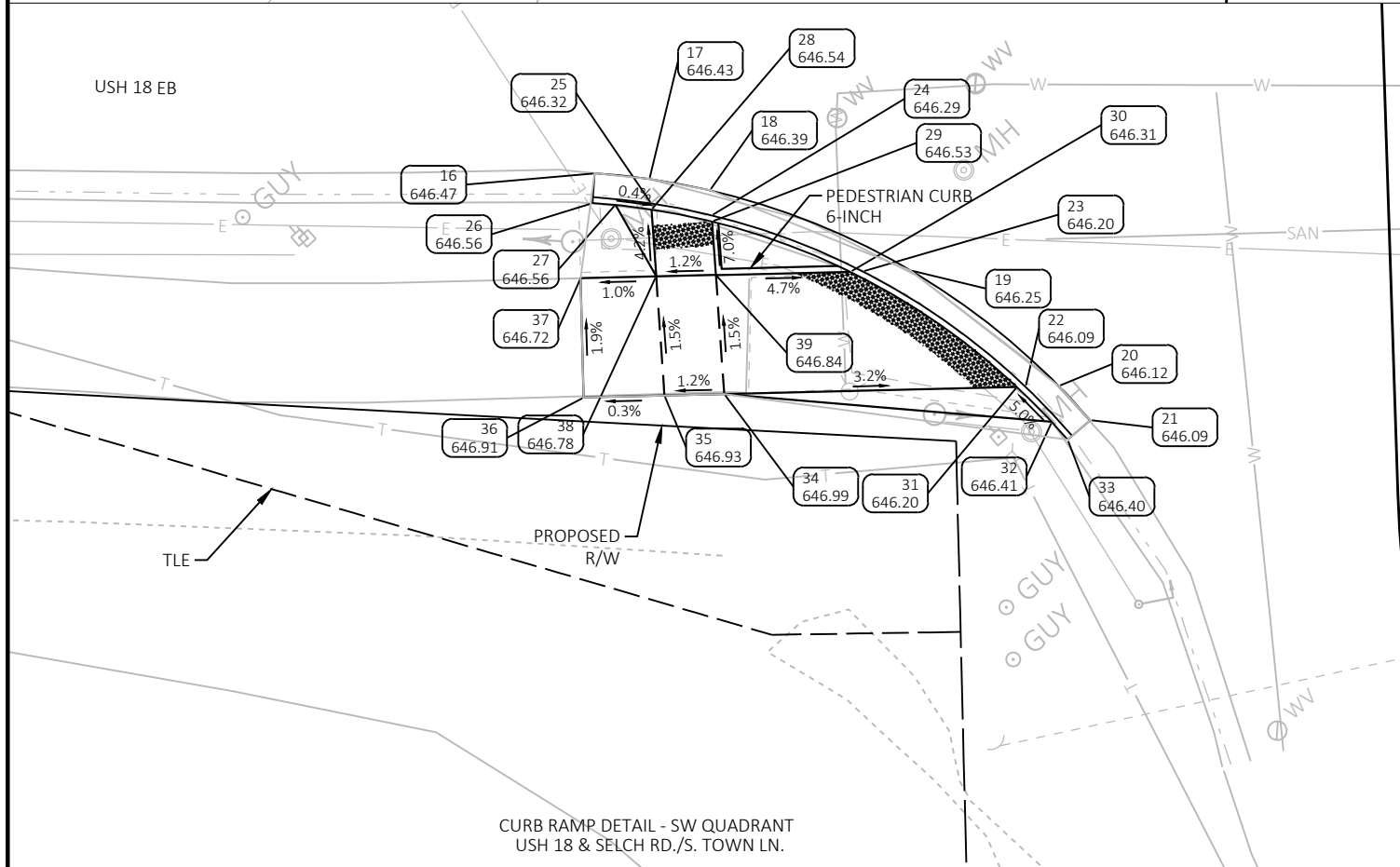


CURB RAMP DETAIL - NW QUADRANT
USH 18 & SELCH RD./S. TOWN LN.

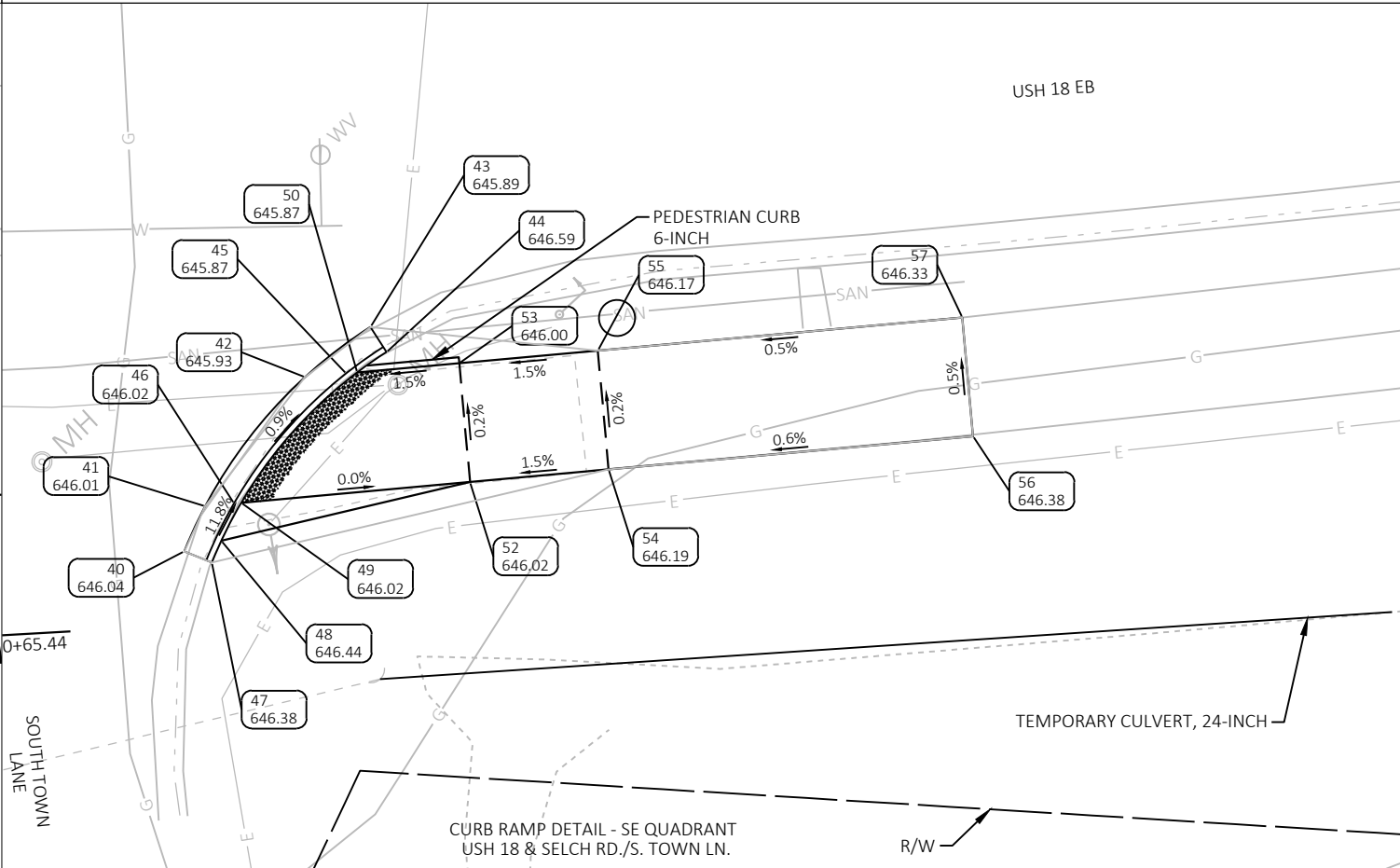
NW Quad Ramp					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
01	194+90.18	48.27' LT	643.80	109757.23	326822.19
02	194+94.45	49.73' LT	643.72	109755.59	326826.31
03	194+99.42	51.96' LT	643.60	109754.08	326831.45
04	195+02.85	53.85' LT	643.56	109753.33	326835.23
05	194+94.32	51.84' LT	643.69	109757.26	326827.59
06	194+99.29	54.15' LT	643.63	109755.83	326832.78
07	194+89.44	50.66' LT	643.93	109759.51	326823.21
08	194+91.29	51.25' LT	643.89	109758.77	326824.96
09	194+94.28	52.36' LT	643.70	109757.68	326827.91
10	194+99.25	54.70' LT	643.64	109756.27	326833.11
11	195+01.51	55.98' LT	644.23	109755.80	326835.62
12	194+93.84	59.23' LT	643.76	109763.15	326832.08
13	194+98.95	59.54' LT	643.83	109760.12	326836.05
14	194+93.52	64.22' LT	643.83	109767.13	326835.11
15	194+98.64	64.53' LT	643.91	109764.10	326839.09

SW Quad Ramp					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
16	194+94.77	28.15' RT	646.47	109696.52	326775.54
17	194+99.32	28.66' RT	646.43	109693.12	326778.69
18	195+04.33	29.66' RT	646.39	109689.06	326781.87
19	195+20.83	36.60' RT	646.25	109672.92	326790.08
20	195+32.88	46.55' RT	646.12	109657.43	326793.01
21	195+35.41	49.48' RT	646.09	109653.52	326793.10
22	195+30.15	46.56' RT	646.09	109659.21	326790.88
23	195+16.90	36.63' RT	646.20	109675.48	326787.02
24	195+04.45	31.76' RT	646.29	109687.39	326780.60
25	194+99.44	30.71' RT	646.32	109691.50	326777.44
26	194+94.59	30.64' RT	646.56	109694.75	326773.77
27	194+96.48	30.81' RT	646.56	109693.38	326775.11
28	194+99.47	31.22' RT	646.54	109691.09	326777.13
29	195+04.48	32.28' RT	646.53	109686.97	326780.28
30	195+15.87	36.65' RT	646.31	109676.15	326786.21
31	195+29.45	46.56' RT	646.20	109659.67	326790.33
32	195+32.24	49.55' RT	646.41	109655.54	326790.59
33	195+33.52	51.07' RT	646.40	109653.55	326790.60
34	195+05.32	46.76' RT	646.99	109675.44	326771.49
35	195+00.40	46.83' RT	646.93	109678.65	326767.65
36	194+93.74	46.94' RT	646.91	109683.01	326762.45
37	194+93.56	36.94' RT	646.72	109690.68	326768.87
38	194+99.81	36.83' RT	646.78	109686.62	326773.72
39	195+04.74	36.76' RT	646.84	109683.40	326777.56

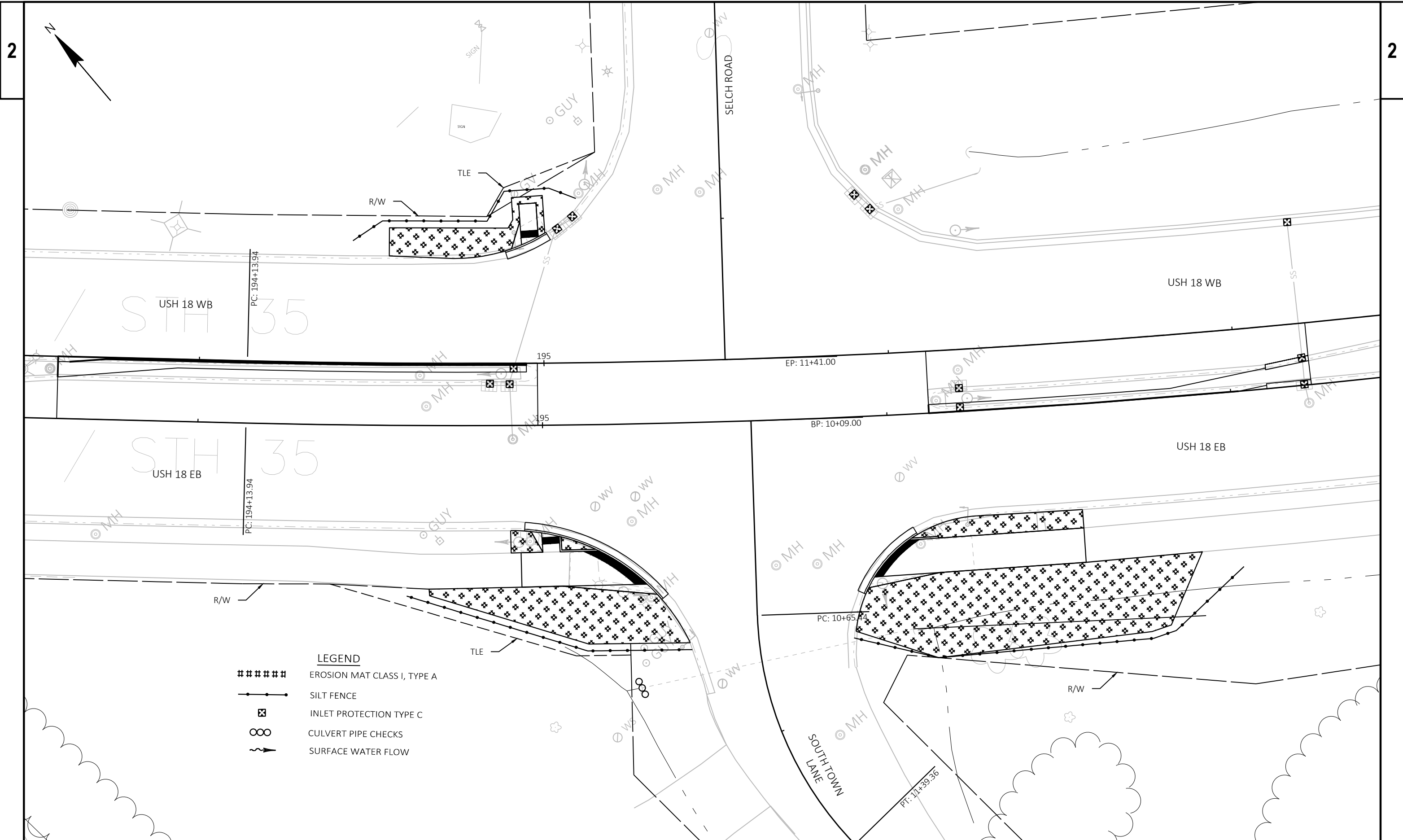
SE Quad Ramp					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
40	195+89.34	50.43' RT	646.04	109617.89	326834.99
41	195+91.31	46.77' RT	646.01	109619.50	326838.85
42	196+00.23	36.56' RT	645.93	109621.81	326852.31
43	196+05.93	32.74' RT	645.89	109621.20	326859.20
44	196+07.10	34.94' RT	646.59	109618.74	326858.77
45	196+03.65	36.49' RT	645.87	109619.70	326855.07
46	195+93.68	46.71' RT	646.02	109618.03	326840.77
47	195+91.55	51.52' RT	646.38	109615.64	326836.07
48	195+92.45	49.74' RT	646.44	109616.45	326837.89
49	195+94.28	46.69' RT	646.02	109617.66	326841.26
50	196+04.57	36.47' RT	645.87	109619.14	326855.81
51	196+07.10	34.94' RT	646.59	109618.74	326858.77
52	196+13.19	46.31' RT	646.02	109605.98	326856.57
53	196+13.03	36.32' RT	646.00	109613.93	326862.63
54	196+24.64	46.15' RT	646.19	109598.91	326865.84
55	196+24.53	36.15' RT	646.17	109606.86	326871.90
56	196+54.75	45.98' RT	646.38	109580.32	326890.21
57	196+54.76	35.98' RT	646.33	109588.27	326896.28



CURB RAMP DETAIL - SW QUADRANT
USH 18 & SELCH RD./S. TOWN LN.



CURB RAMP DETAIL - SE QUADRANT
USH 18 & SELCH RD./S. TOWN LN.



2

2

PROJECT NO: 1661-09-72	HWY: USH 18	COUNTY: CRAWFORD	EROSION CONTROL	SHEET	E
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FILE NAME : N:\PDS\C3D\16610902\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - Plan 1 IN 25 FT

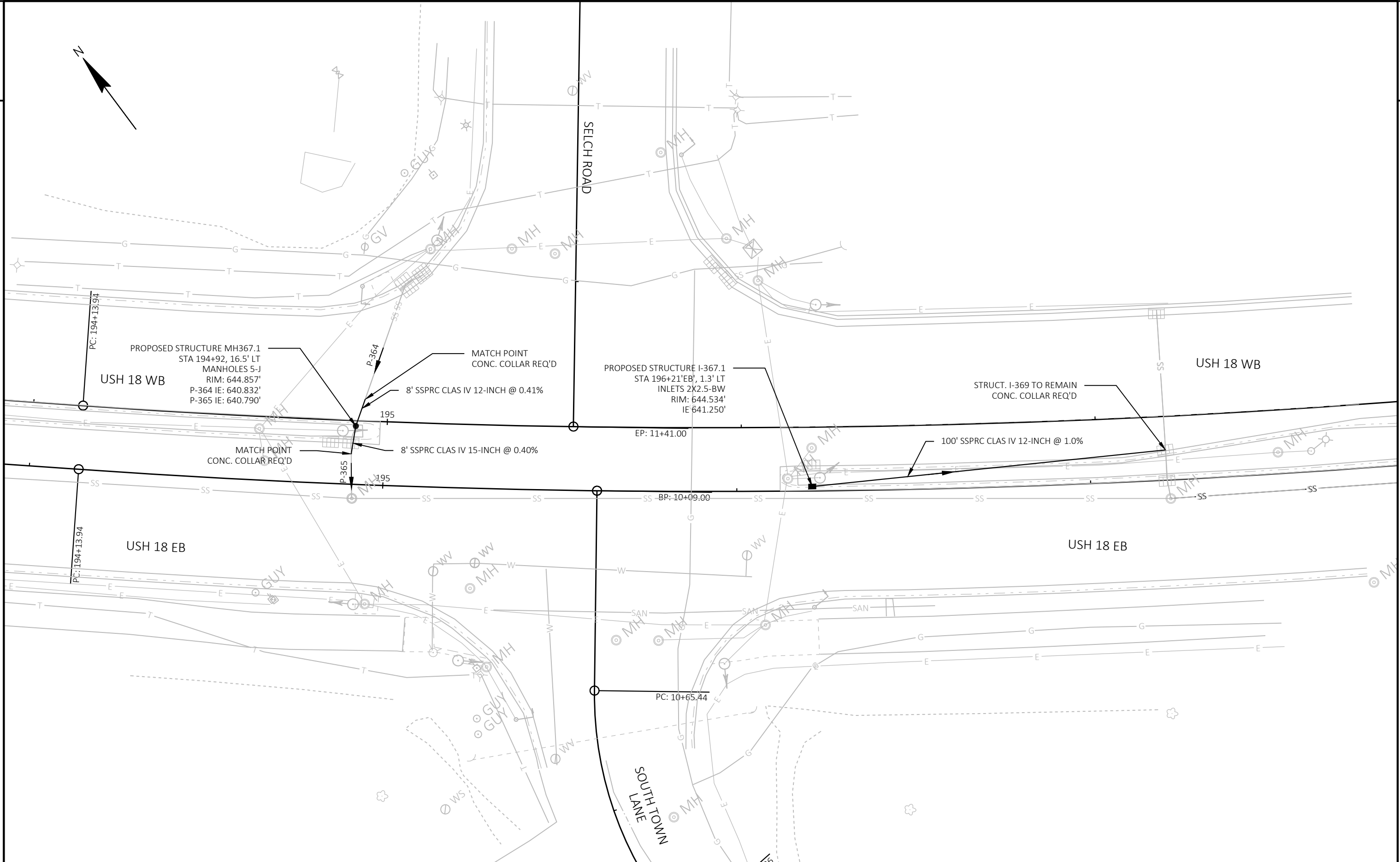
PLOT DATE : 11/1/2022 9:47 AM

PLOT BY : MEYER, BRYTON ROBERT

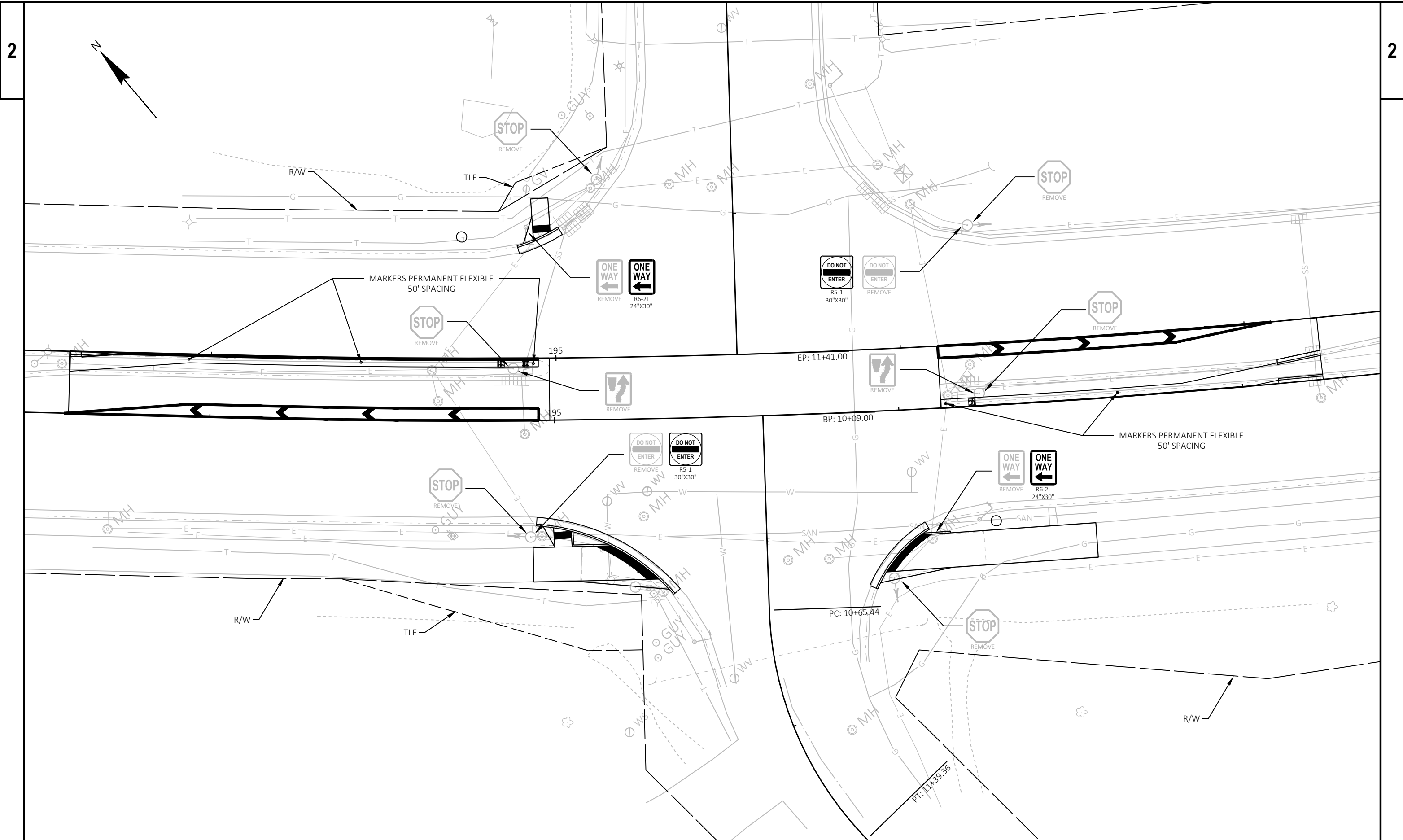
PLOT NAME :

PLOT SCALE : 1 IN:25 FT

WISDOT/CADD SHEET 42



PROJECT NO: 1661-09-72	HWY: USH 18	COUNTY: CRAWFORD	STORM SEWER	SHEET	E
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PROJECT NO: 1661-09-72

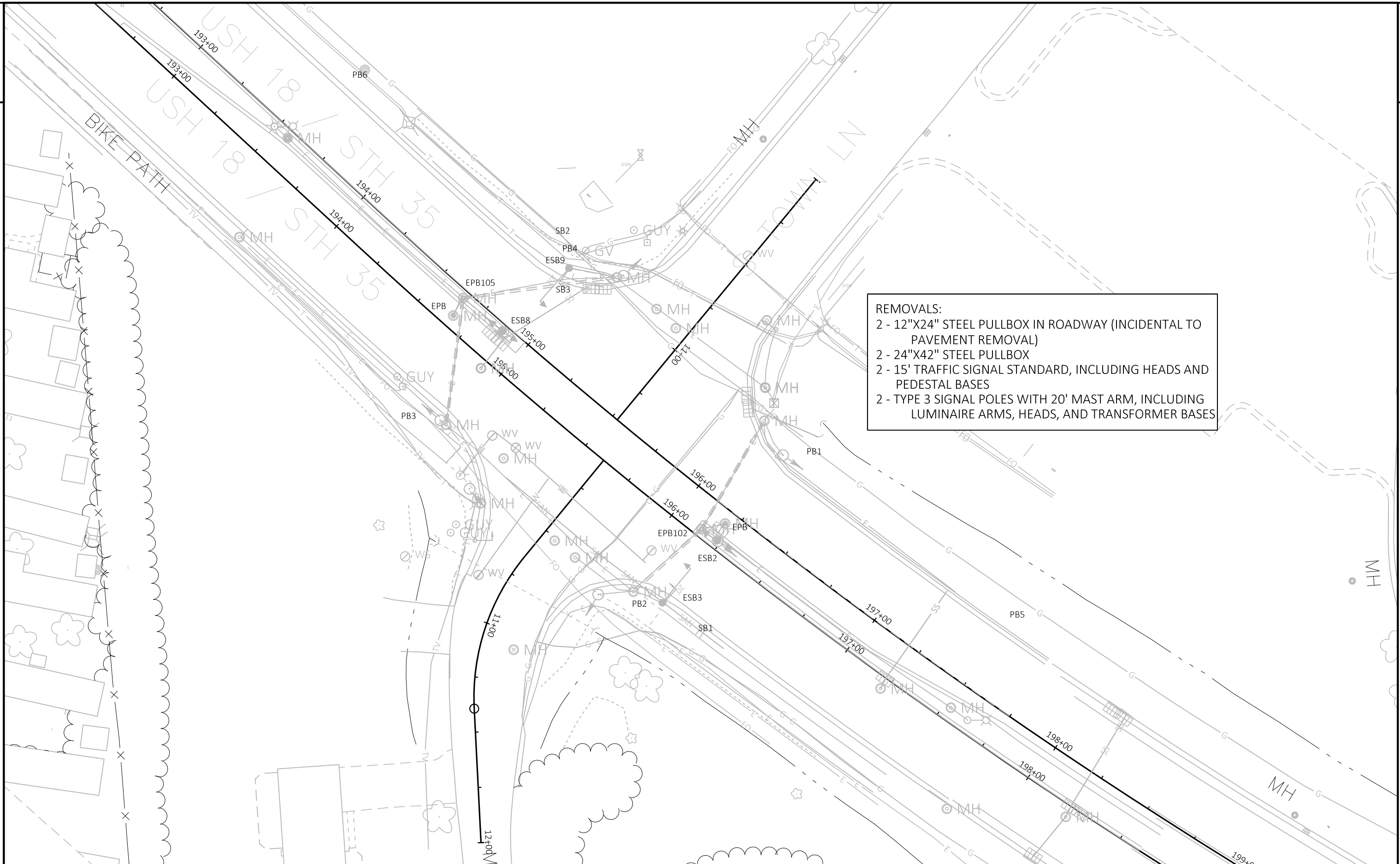
HWY: USH 18

COUNTY: CRAWFORD

PAVEMENT MARKING AND PERMANENT SIGNING

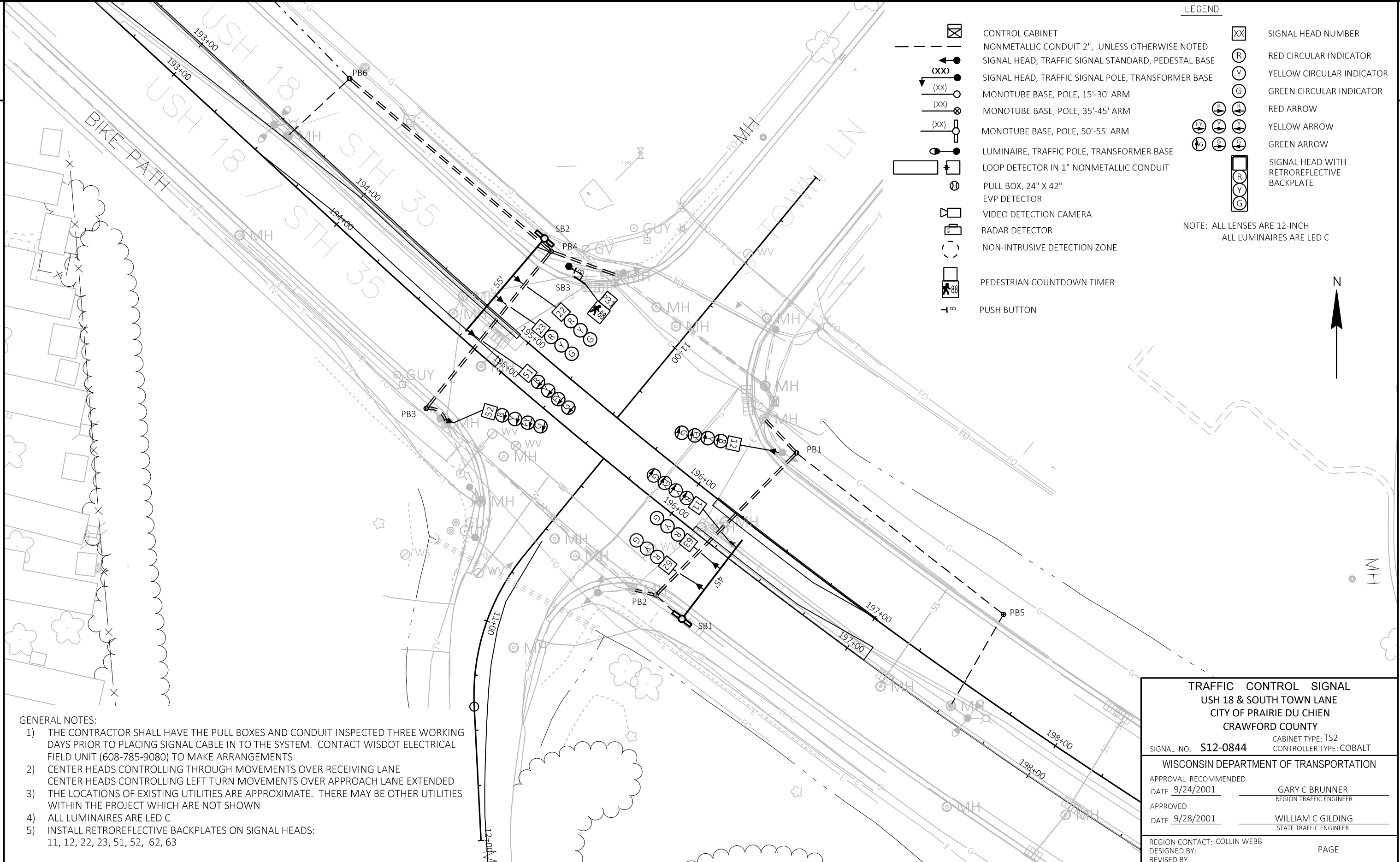
SHEET

E



REMOVALS:
 2 - 12"X24" STEEL PULLBOX IN ROADWAY (INCIDENTAL TO PAVEMENT REMOVAL)
 2 - 24"X42" STEEL PULLBOX
 2 - 15' TRAFFIC SIGNAL STANDARD, INCLUDING HEADS AND PEDESTAL BASES
 2 - TYPE 3 SIGNAL POLES WITH 20' MAST ARM, INCLUDING LUMINAIRE ARMS, HEADS, AND TRANSFORMER BASES

PROJECT NO: 1661-09-72	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC SIGNAL REMOVAL PLAN - USH 18 & SOUTH TOWNE LN	SHEET E
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LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- MONOTUBE BASE, POLE, 15'-30' ARM
- MONOTUBE BASE, POLE, 35'-45' ARM
- MONOTUBE BASE, POLE, 50'-55' ARM
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 42"
- EVP DETECTOR
- VIDEO DETECTION CAMERA
- RADAR DETECTOR
- NON-INTRUSIVE DETECTION ZONE
- PEDESTRIAN COUNTDOWN TIMER
- PUSH BUTTON
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- SIGNAL HEAD WITH RETROREFLECTIVE BACKPLATE

NOTE: ALL LENSES ARE 12-INCH
ALL LUMINAIRES ARE LED C



GENERAL NOTES:

- 1) THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT INSPECTED THREE WORKING DAYS PRIOR TO PLACING SIGNAL CABLE IN TO THE SYSTEM. CONTACT WISDOT ELECTRICAL FIELD UNIT (608-785-9080) TO MAKE ARRANGEMENTS
- 2) CENTER HEADS CONTROLLING THROUGH MOVEMENTS OVER RECEIVING LANE
CENTER HEADS CONTROLLING LEFT TURN MOVEMENTS OVER APPROACH LANE EXTENDED
- 3) THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT WHICH ARE NOT SHOWN
- 4) ALL LUMINAIRES ARE LED C
- 5) INSTALL RETROREFLECTIVE BACKPLATES ON SIGNAL HEADS:
11, 12, 22, 23, 51, 52, 62, 63

TRAFFIC CONTROL SIGNAL
USH 18 & SOUTH TOWNE LANE
CITY OF PRAIRIE DU CHIEN
CRAWFORD COUNTY

SIGNAL NO. **S12-0844** CABINET TYPE: TS2
 CONTROLLER TYPE: COBALT

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED GARY C BRUNNER
 DATE 9/24/2001 REGION TRAFFIC ENGINEER

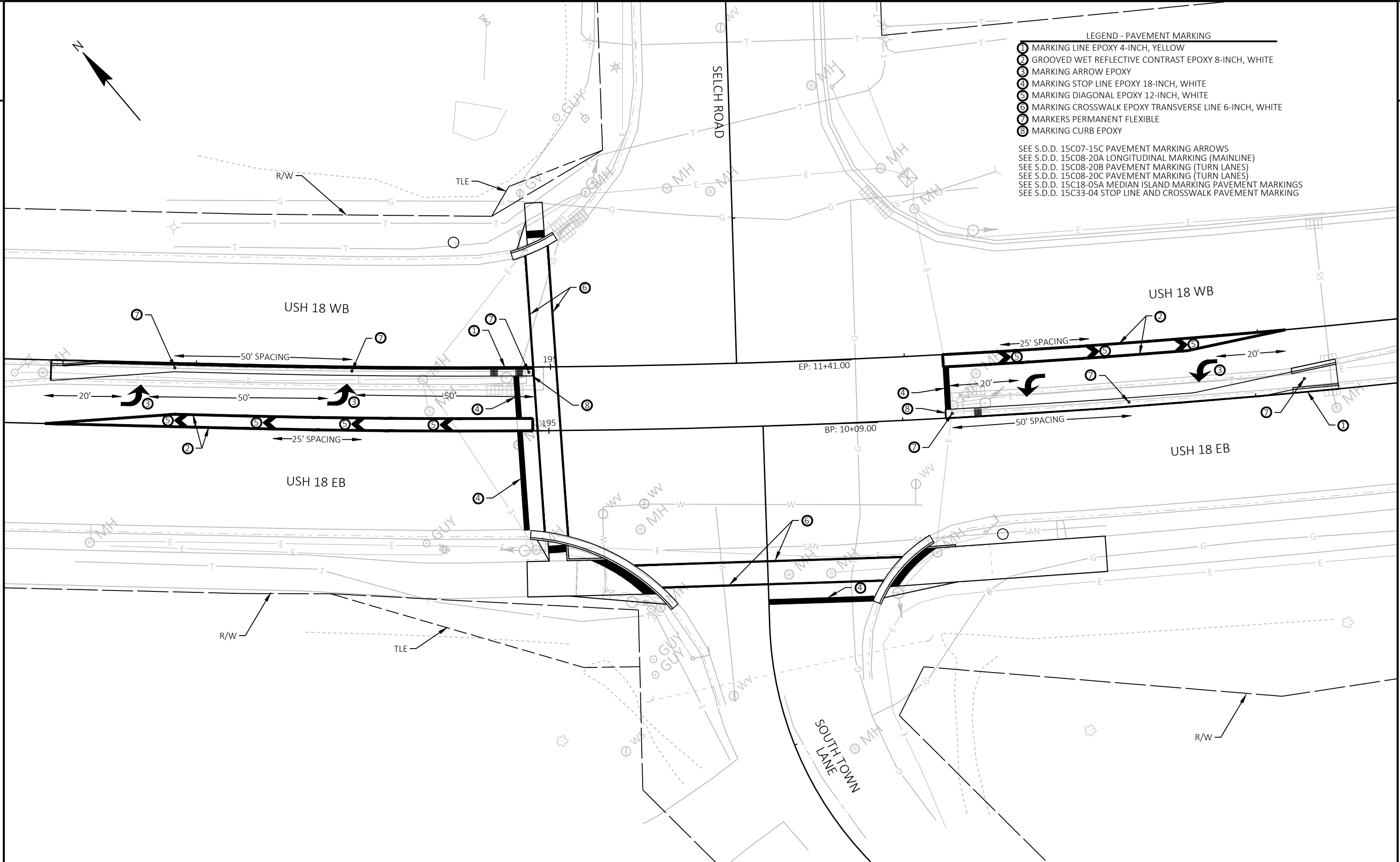
APPROVED WILLIAM C GILDING
 DATE 9/28/2001 STATE TRAFFIC ENGINEER

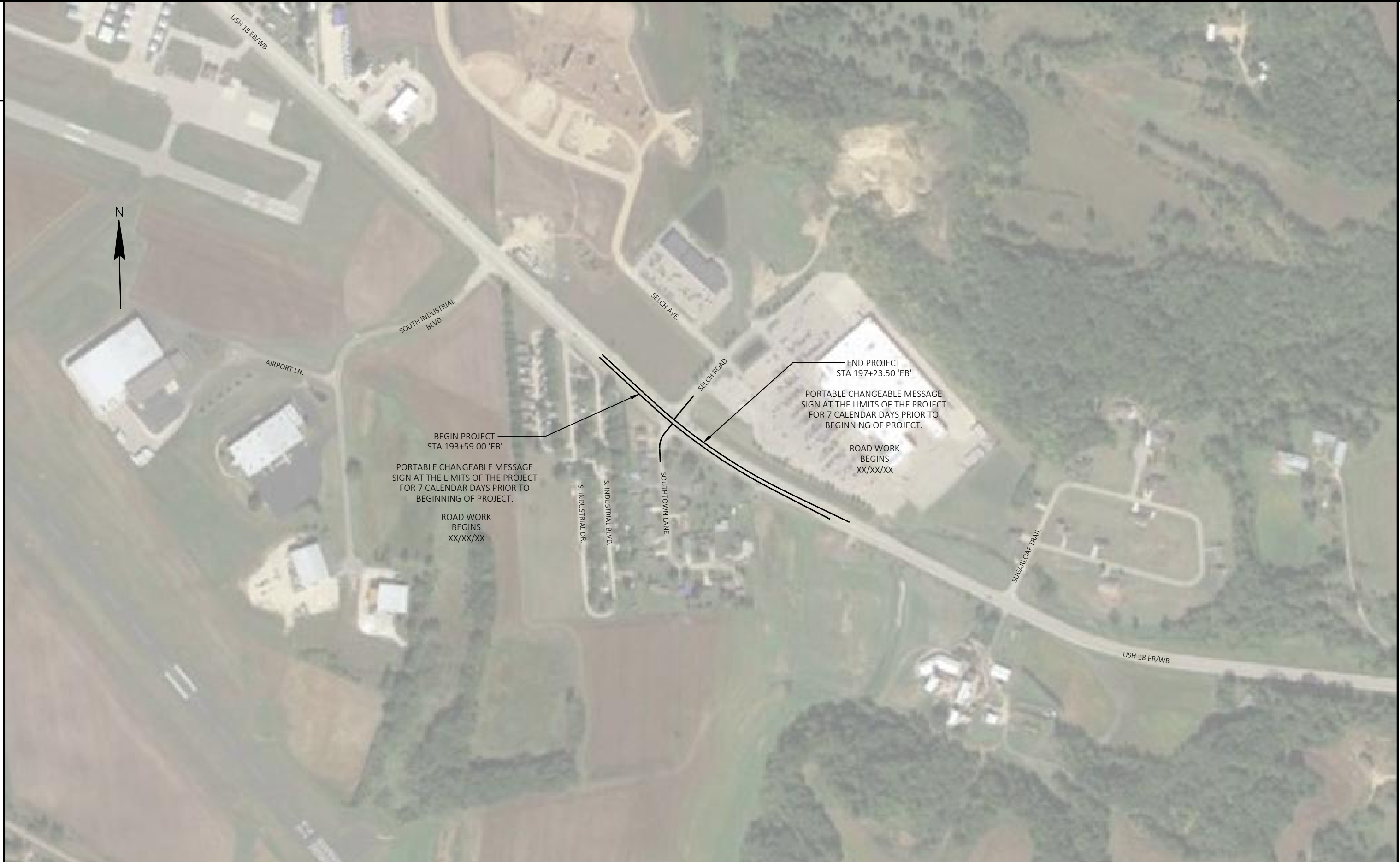
REGION CONTACT: COLLIN WEBB PAGE
 DESIGNED BY: REVISED BY:

LEGEND - PAVEMENT MARKING

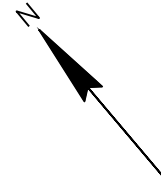
- ① MARKING LINE EPOXY 4-INCH, YELLOW
- ② GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH, WHITE
- ③ MARKING ARROW EPOXY
- ④ MARKING STOP LINE EPOXY 18-INCH, WHITE
- ⑤ MARKING DIAGONAL EPOXY 12-INCH, WHITE
- ⑥ MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE
- ⑦ MARKERS PERMANENT FLEXIBLE
- ⑧ MARKING CURB EPOXY

SEE S.D.D. 15C07-15C PAVEMENT MARKING ARROWS
 SEE S.D.D. 15C08-20A LONGITUDINAL MARKING (MAINLINE)
 SEE S.D.D. 15C08-20B PAVEMENT MARKING (TURN LANES)
 SEE S.D.D. 15C08-20C PAVEMENT MARKING (TURN LANES)
 SEE S.D.D. 15C18-05A MEDIAN ISLAND MARKING PAVEMENT MARKINGS
 SEE S.D.D. 15C33-04 STOP LINE AND CROSSWALK PAVEMENT MARKING





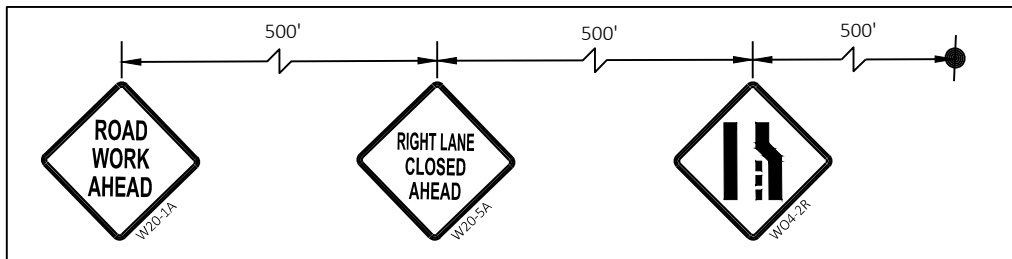
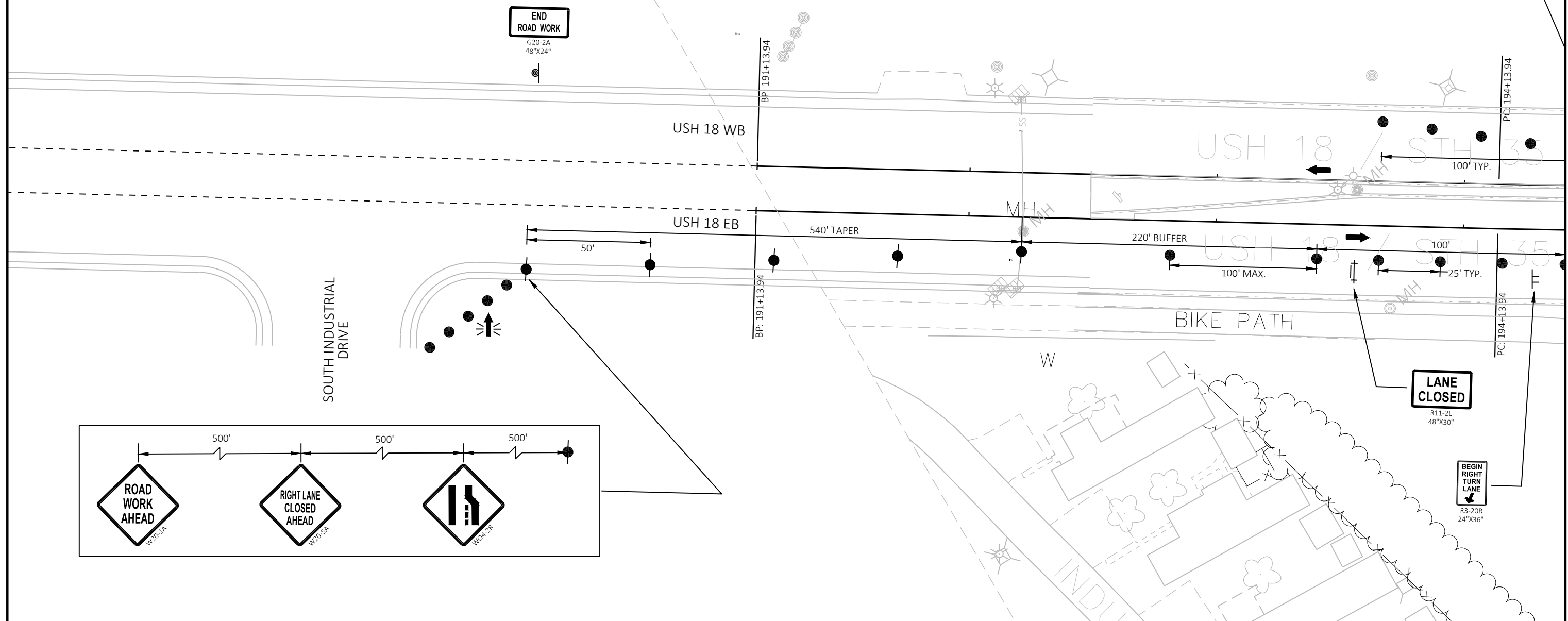
PROJECT NO: 1661-09-72	HWY: USH 18	COUNTY: CRAWFORD	TRAFFIC CONTROL	SHEET	E
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SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D20-06B TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEGEND

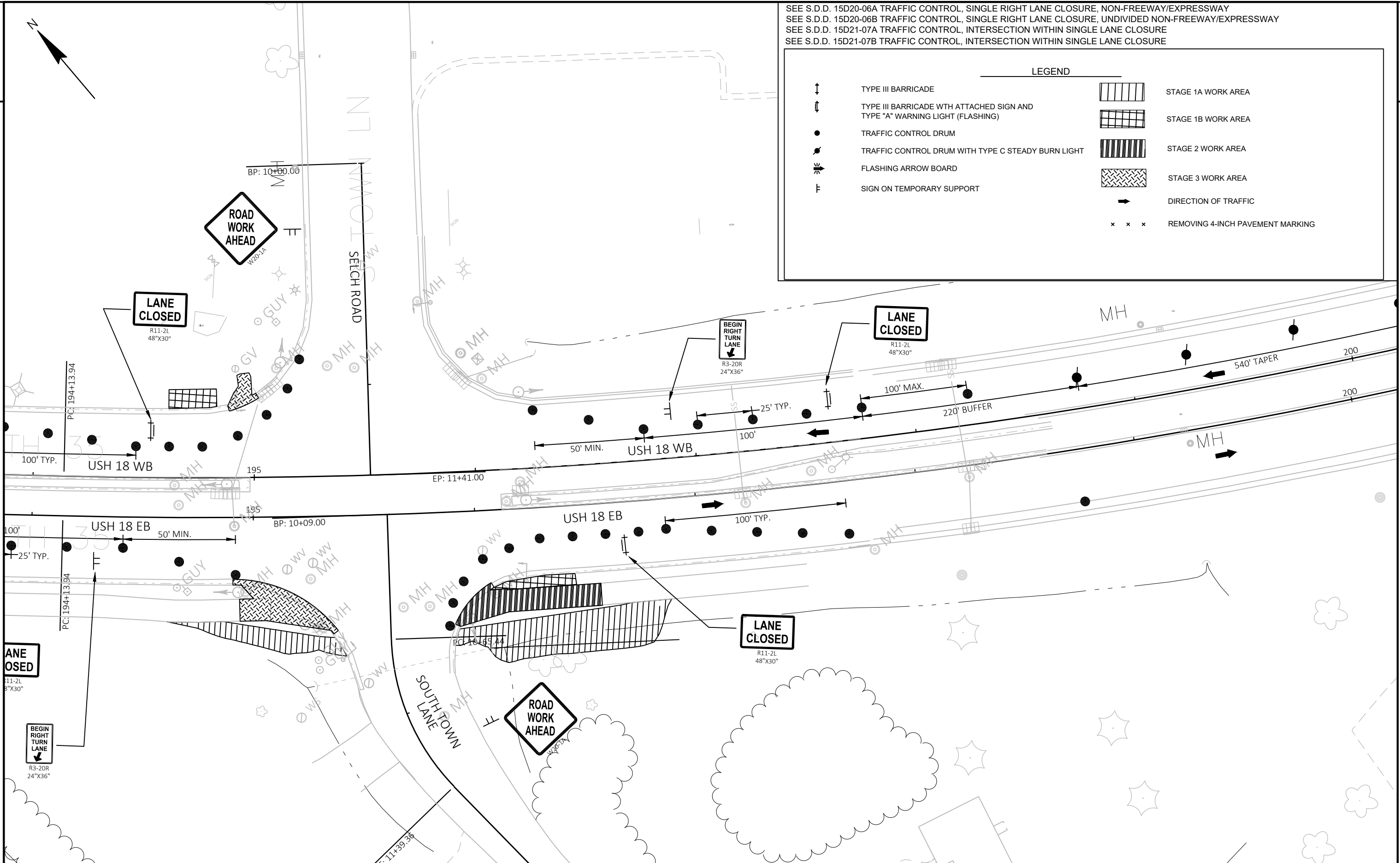
↑	TYPE III BARRICADE		STAGE 1A WORK AREA
↑	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)		STAGE 1B WORK AREA
●	TRAFFIC CONTROL DRUM		STAGE 2 WORK AREA
⦿	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		STAGE 3 WORK AREA
↔	FLASHING ARROW BOARD	→	DIRECTION OF TRAFFIC
⊥	SIGN ON TEMPORARY SUPPORT	x x x	REMOVING 4-INCH PAVEMENT MARKING

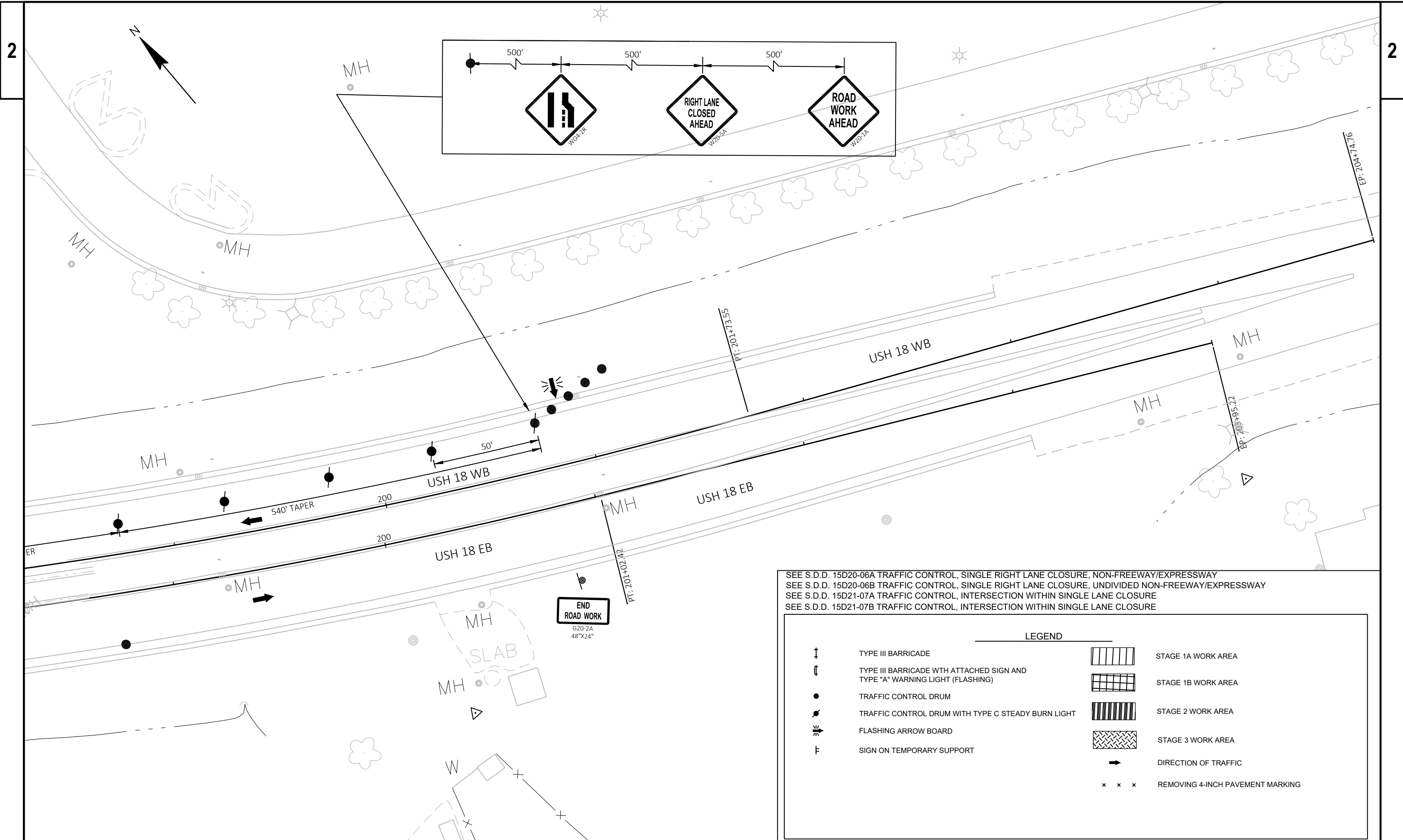


SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D20-06B TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEGEND

↑	TYPE III BARRICADE		STAGE 1A WORK AREA
↑↓	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)		STAGE 1B WORK AREA
●	TRAFFIC CONTROL DRUM		STAGE 2 WORK AREA
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		STAGE 3 WORK AREA
⚡	FLASHING ARROW BOARD	→	DIRECTION OF TRAFFIC
⌄	SIGN ON TEMPORARY SUPPORT	x x x	REMOVING 4-INCH PAVEMENT MARKING





PROJECT NO: 1661-09-72

HWY: USH 18

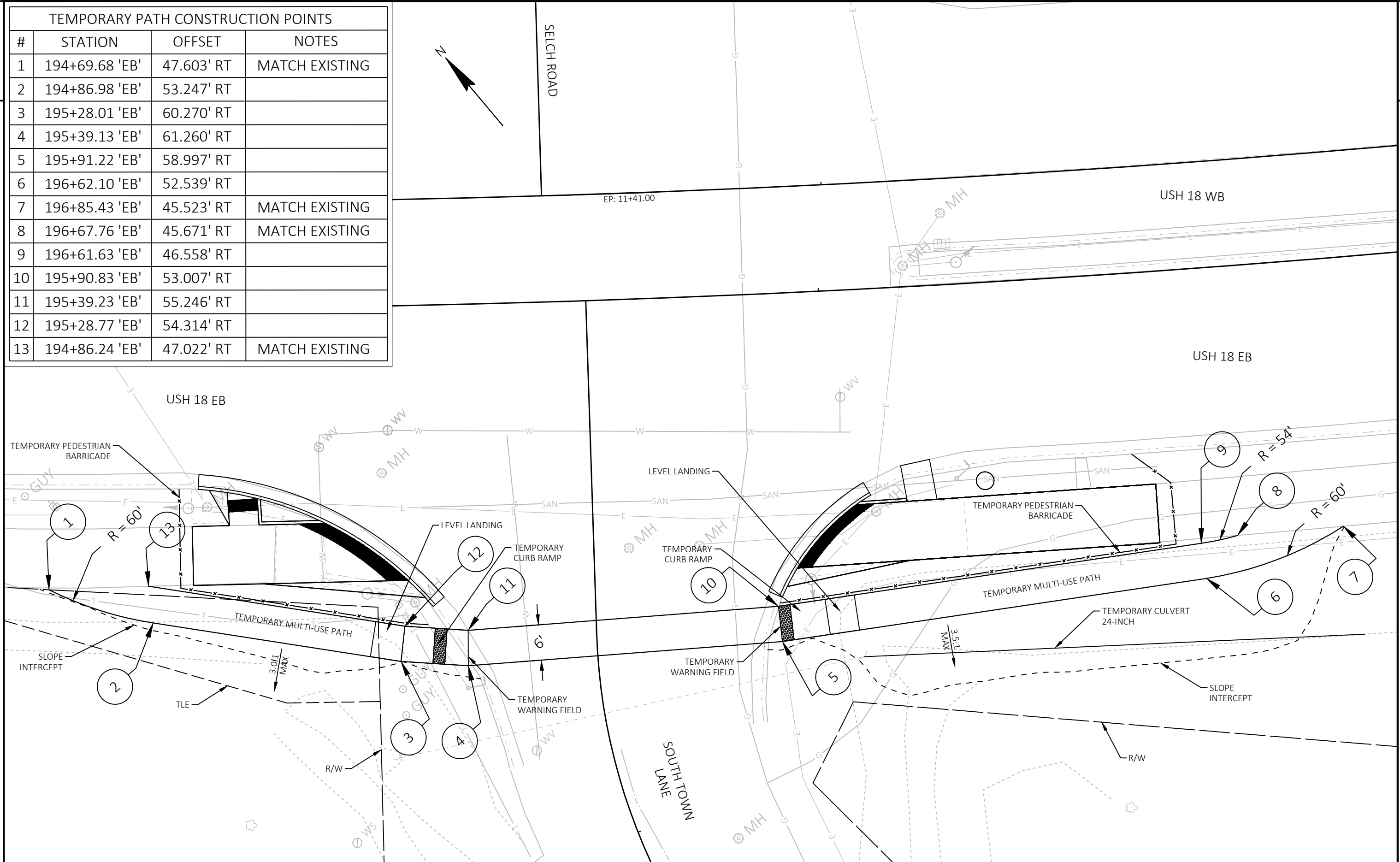
COUNTY: CRAWFORD

TRAFFIC CONTROL - STAGE 1A, 1B, 2, & 3

SHEET

E

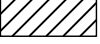
TEMPORARY PATH CONSTRUCTION POINTS			
#	STATION	OFFSET	NOTES
1	194+69.68 'EB'	47.603' RT	MATCH EXISTING
2	194+86.98 'EB'	53.247' RT	
3	195+28.01 'EB'	60.270' RT	
4	195+39.13 'EB'	61.260' RT	
5	195+91.22 'EB'	58.997' RT	
6	196+62.10 'EB'	52.539' RT	
7	196+85.43 'EB'	45.523' RT	MATCH EXISTING
8	196+67.76 'EB'	45.671' RT	MATCH EXISTING
9	196+61.63 'EB'	46.558' RT	
10	195+90.83 'EB'	53.007' RT	
11	195+39.23 'EB'	55.246' RT	
12	195+28.77 'EB'	54.314' RT	
13	194+86.24 'EB'	47.022' RT	MATCH EXISTING

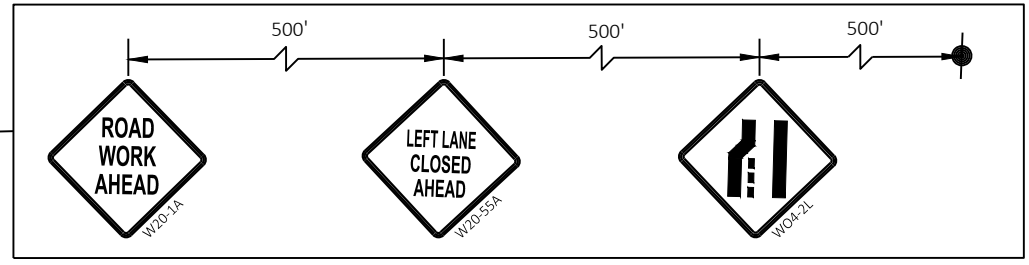
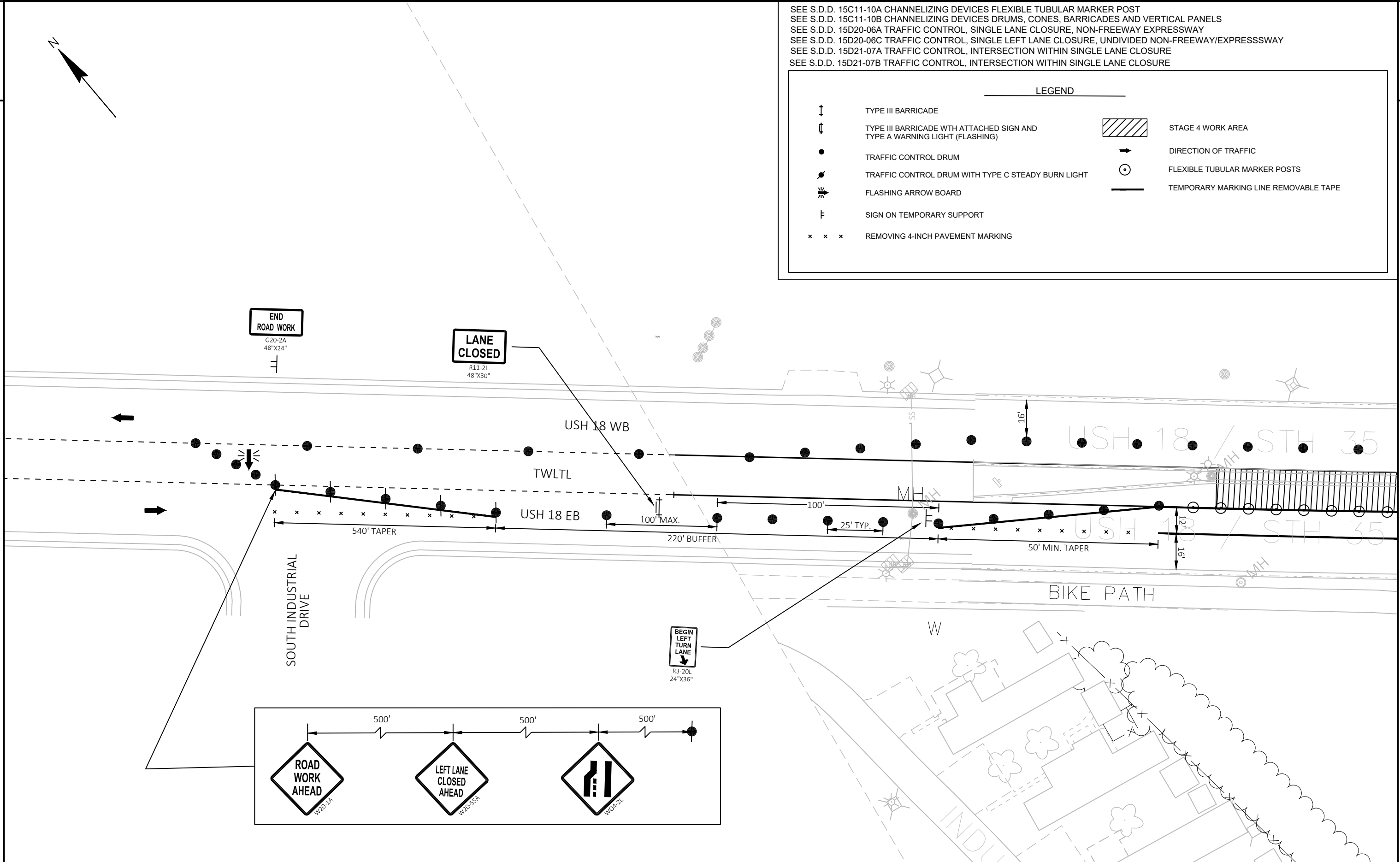


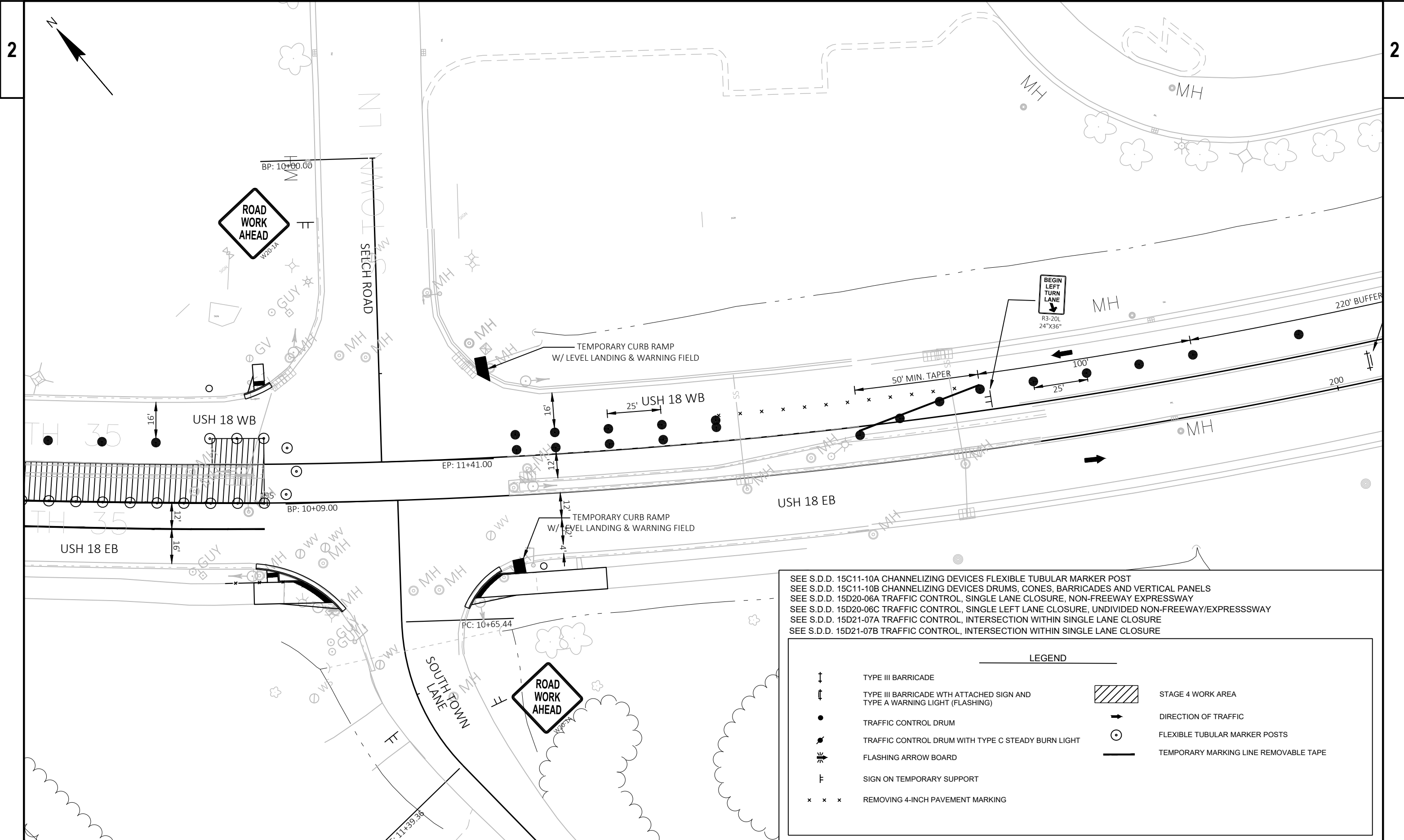
PROJECT NO: 1661-09-72 HWY: USH 18 COUNTY: CRAWFORD PEDESTRIAN ACCOMMODATIONS - STAGE 1A, 1B, 2, & 3 SHEET E

SEE S.D.D. 15C11-10A CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
 SEE S.D.D. 15C11-10B CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
 SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY EXPRESSWAY
 SEE S.D.D. 15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEGEND

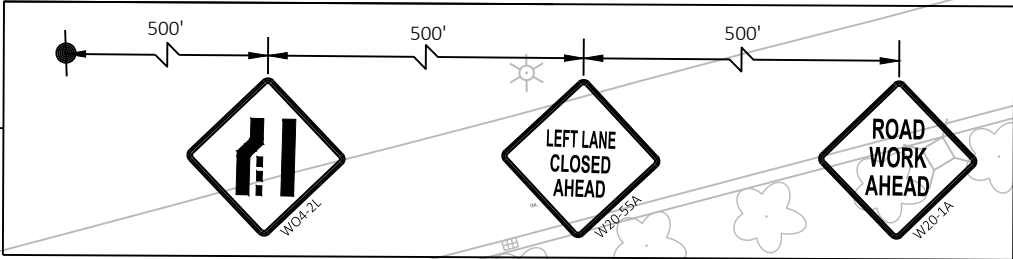
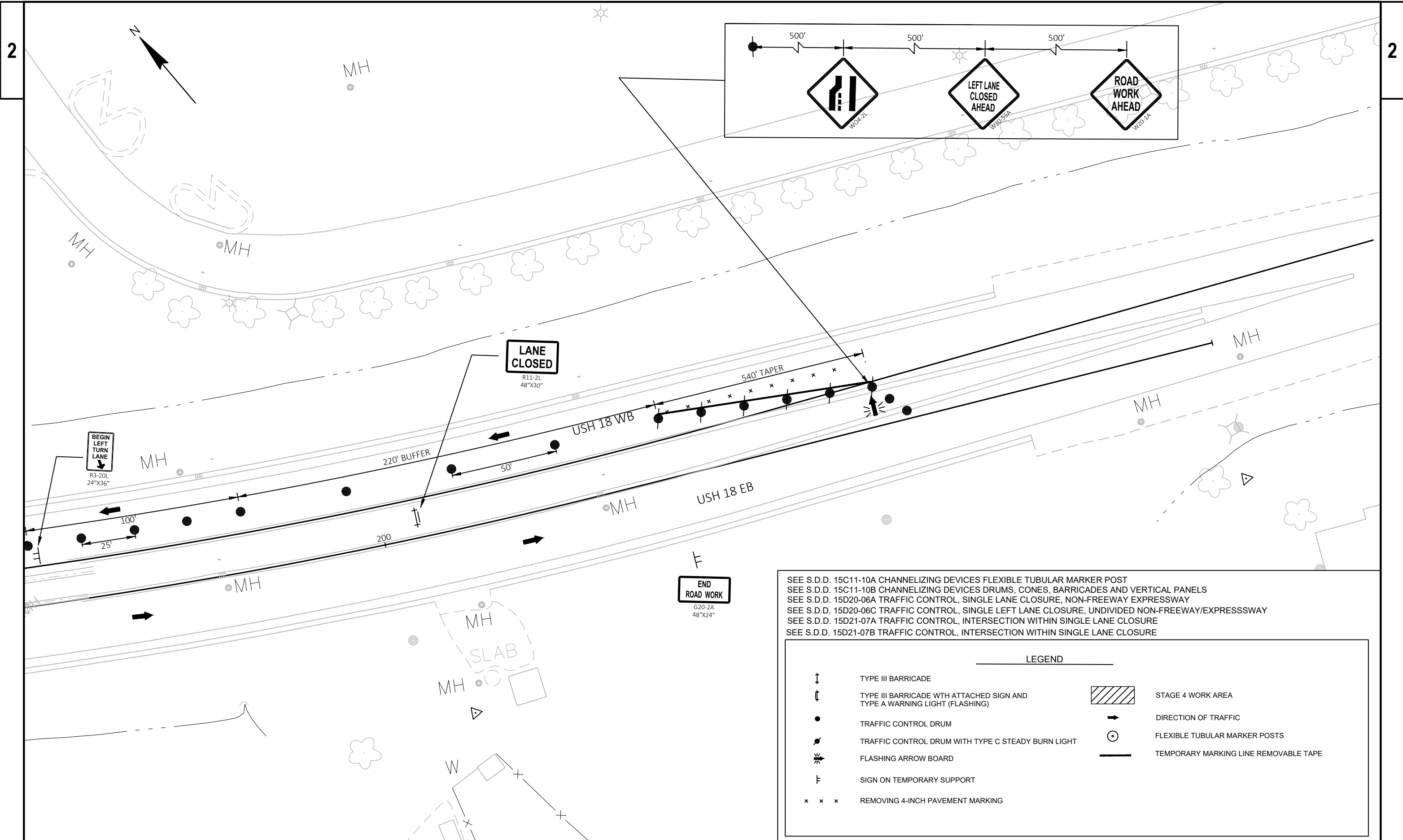
↑	TYPE III BARRICADE		STAGE 4 WORK AREA
↑	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A WARNING LIGHT (FLASHING)	→	DIRECTION OF TRAFFIC
●	TRAFFIC CONTROL DRUM	⊙	FLEXIBLE TUBULAR MARKER POSTS
⊙	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	—	TEMPORARY MARKING LINE REMOVABLE TAPE
↔	FLASHING ARROW BOARD		
⊥	SIGN ON TEMPORARY SUPPORT		
x x x	REMOVING 4-INCH PAVEMENT MARKING		





SEE S.D.D. 15C11-10A CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
 SEE S.D.D. 15C11-10B CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
 SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY EXPRESSWAY
 SEE S.D.D. 15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

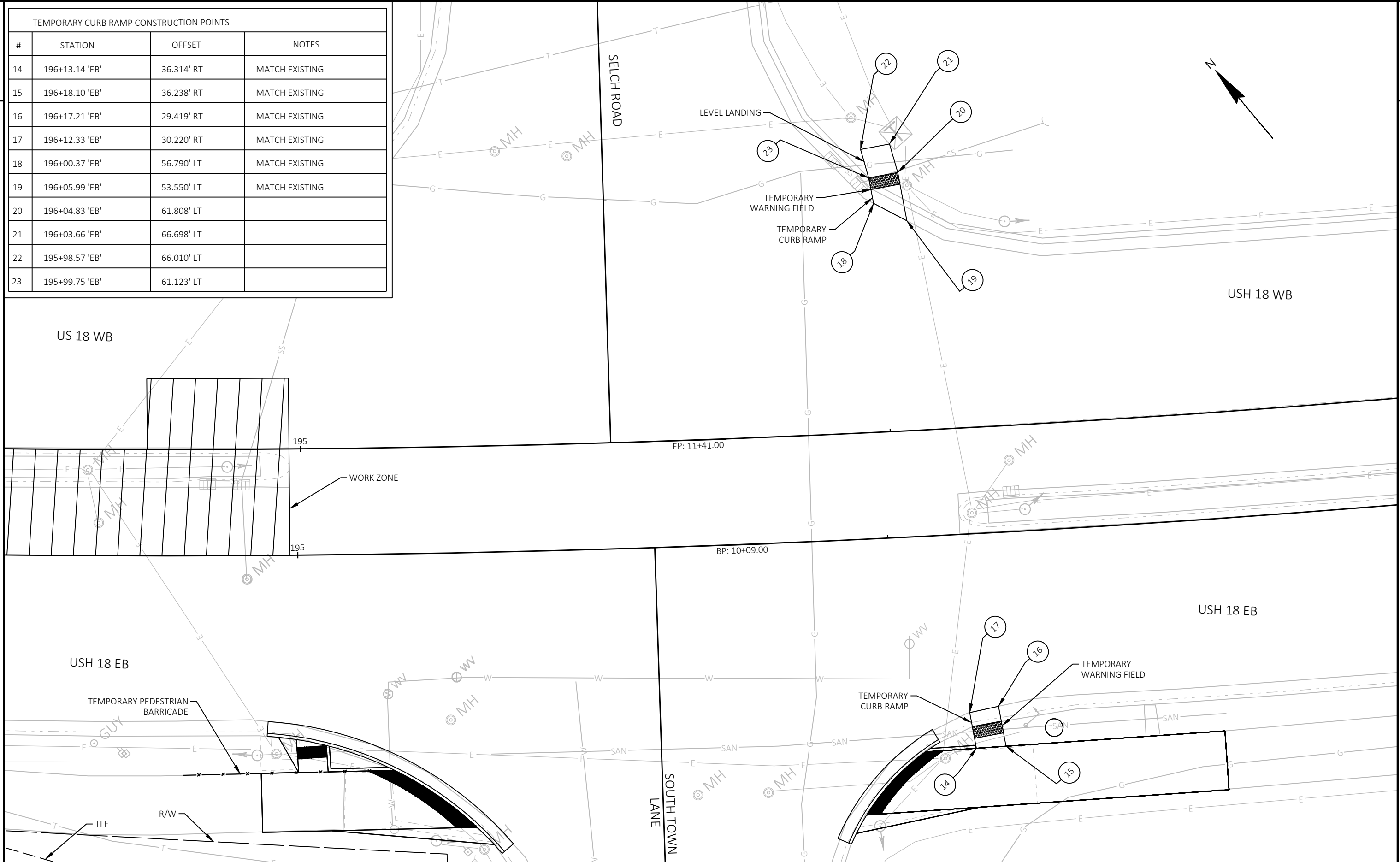
LEGEND			
	TYPE III BARRICADE		STAGE 4 WORK AREA
	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A WARNING LIGHT (FLASHING)		DIRECTION OF TRAFFIC
	TRAFFIC CONTROL DRUM		FLEXIBLE TUBULAR MARKER POSTS
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		TEMPORARY MARKING LINE REMOVABLE TAPE
	FLASHING ARROW BOARD		
	SIGN ON TEMPORARY SUPPORT		
	REMOVING 4-INCH PAVEMENT MARKING		

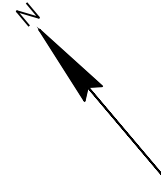


SEE S.D.D. 15C11-10A CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
 SEE S.D.D. 15C11-10B CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
 SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY EXPRESSWAY
 SEE S.D.D. 15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEGEND			
↑	TYPE III BARRICADE		STAGE 4 WORK AREA
↑	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE A WARNING LIGHT (FLASHING)		DIRECTION OF TRAFFIC
●	TRAFFIC CONTROL DRUM		FLEXIBLE TUBULAR MARKER POSTS
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT		TEMPORARY MARKING LINE REMOVABLE TAPE
	FLASHING ARROW BOARD		
F	SIGN ON TEMPORARY SUPPORT		
x x x	REMOVING 4-INCH PAVEMENT MARKING		

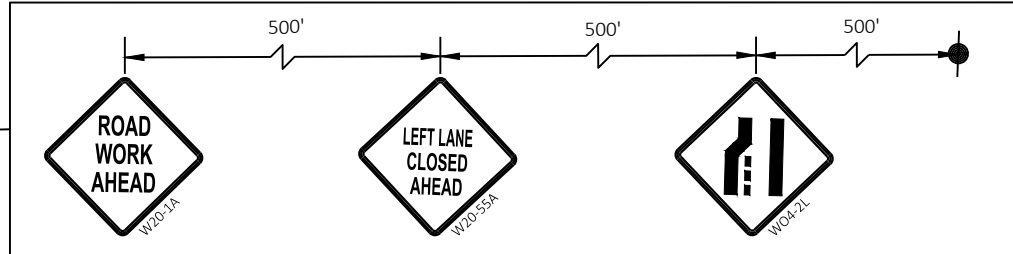
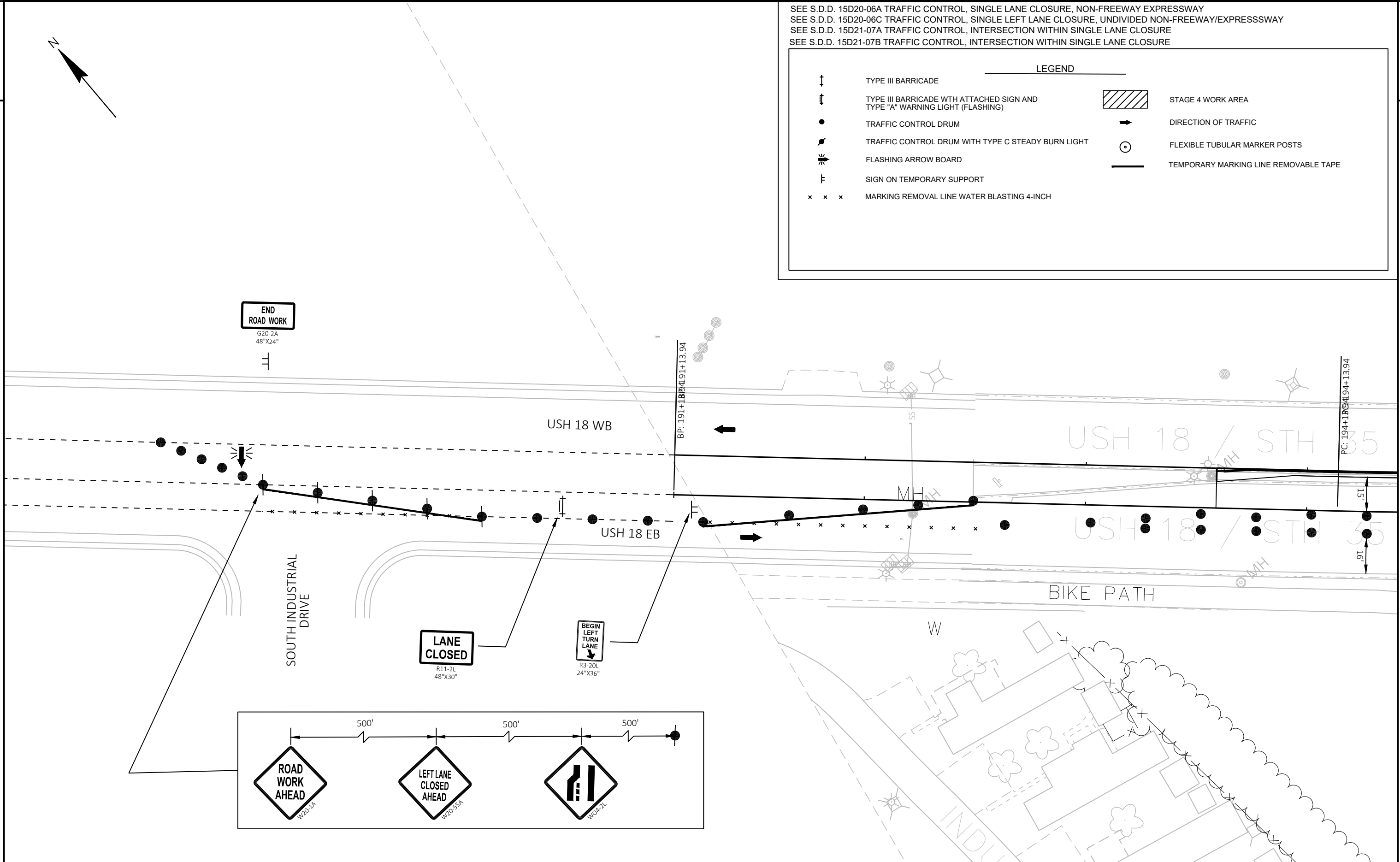
TEMPORARY CURB RAMP CONSTRUCTION POINTS			
#	STATION	OFFSET	NOTES
14	196+13.14 'EB'	36.314' RT	MATCH EXISTING
15	196+18.10 'EB'	36.238' RT	MATCH EXISTING
16	196+17.21 'EB'	29.419' RT	MATCH EXISTING
17	196+12.33 'EB'	30.220' RT	MATCH EXISTING
18	196+00.37 'EB'	56.790' LT	MATCH EXISTING
19	196+05.99 'EB'	53.550' LT	MATCH EXISTING
20	196+04.83 'EB'	61.808' LT	
21	196+03.66 'EB'	66.698' LT	
22	195+98.57 'EB'	66.010' LT	
23	195+99.75 'EB'	61.123' LT	

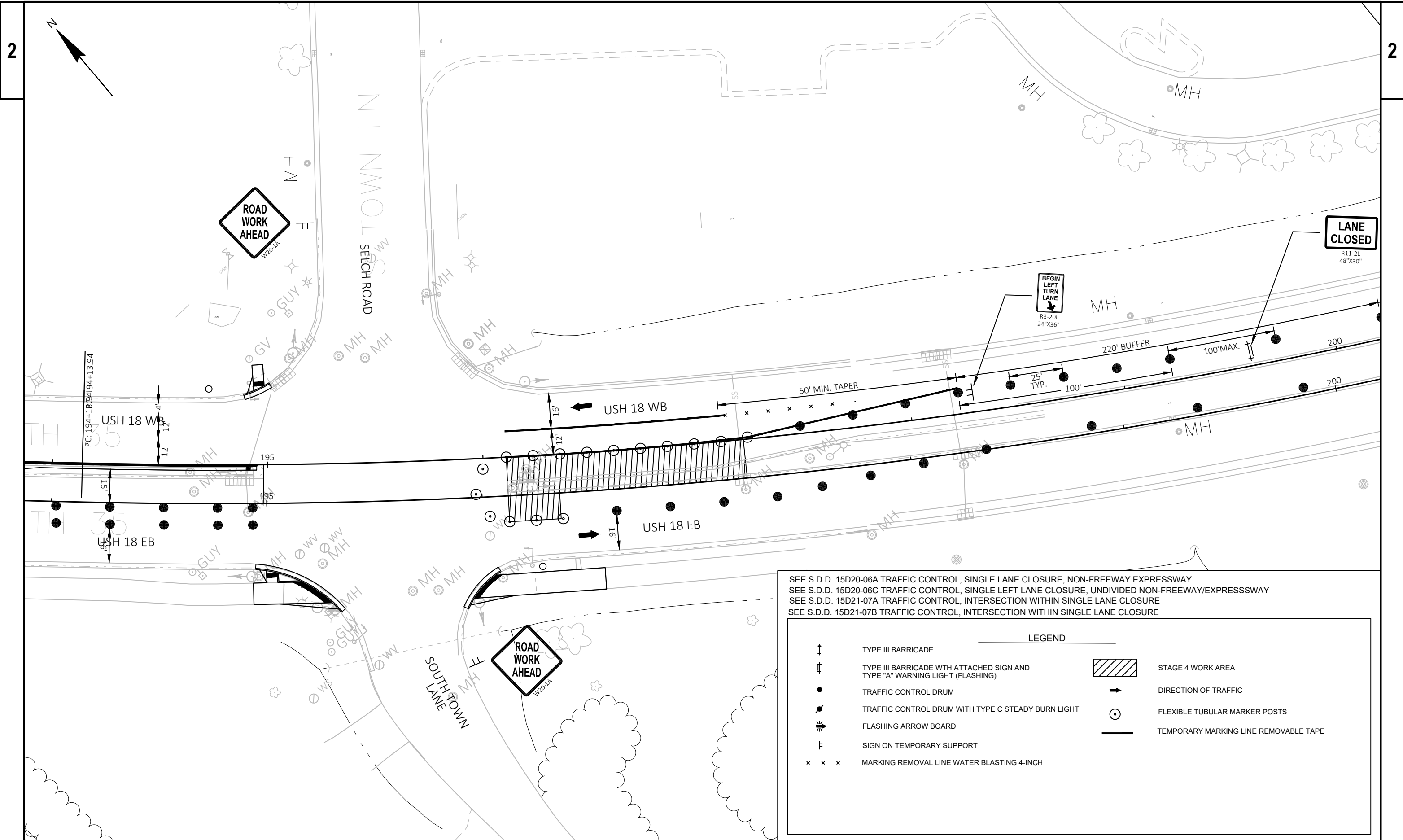




SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY EXPRESSWAY
 SEE S.D.D. 15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

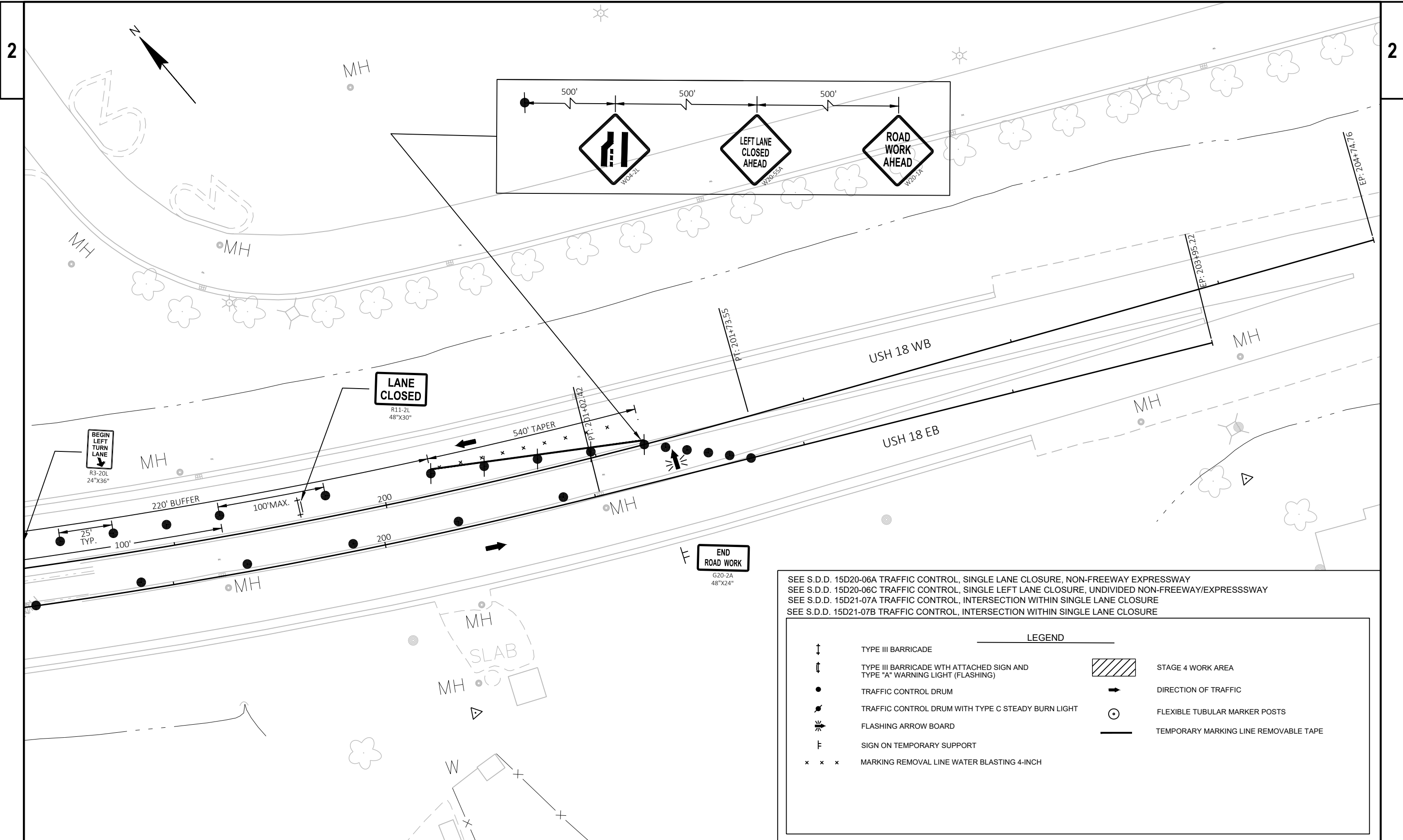
LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON TEMPORARY SUPPORT
	MARKING REMOVAL LINE WATER BLASTING 4-INCH
	STAGE 4 WORK AREA
	DIRECTION OF TRAFFIC
	FLEXIBLE TUBULAR MARKER POSTS
	TEMPORARY MARKING LINE REMOVABLE TAPE





SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY EXPRESSWAY
 SEE S.D.D. 15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON TEMPORARY SUPPORT
	MARKING REMOVAL LINE WATER BLASTING 4-INCH
	STAGE 4 WORK AREA
	DIRECTION OF TRAFFIC
	FLEXIBLE TUBULAR MARKER POSTS
	TEMPORARY MARKING LINE REMOVABLE TAPE



SEE S.D.D. 15D20-06A TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY EXPRESSWAY
 SEE S.D.D. 15D20-06C TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
 SEE S.D.D. 15D21-07A TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
 SEE S.D.D. 15D21-07B TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

LEGEND			
↓	TYPE III BARRICADE		STAGE 4 WORK AREA
↓	TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)	→	DIRECTION OF TRAFFIC
●	TRAFFIC CONTROL DRUM	○	FLEXIBLE TUBULAR MARKER POSTS
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	—	TEMPORARY MARKING LINE REMOVABLE TAPE
↔	FLASHING ARROW BOARD		
F	SIGN ON TEMPORARY SUPPORT		
x x x	MARKING REMOVAL LINE WATER BLASTING 4-INCH		

Estimate Of Quantities

1661-09-72

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	370.000	370.000
0004	204.0110	Removing Asphaltic Surface	SY	15.000	15.000
0006	204.0150	Removing Curb & Gutter	LF	560.000	560.000
0008	204.0155	Removing Concrete Sidewalk	SY	155.000	155.000
0010	204.0195	Removing Concrete Bases	EACH	4.000	4.000
0012	204.0220	Removing Inlets	EACH	3.000	3.000
0014	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	108.000	108.000
0016	204.0245	Removing Storm Sewer (size) 02. 15-Inch	LF	8.000	8.000
0018	204.9060.S	Removing (item description) 01. Traffic Signals (USH 18 & S Town Ln/Selch Rd)	EACH	1.000	1.000
0020	211.0201	Prepare Foundation for Concrete Pavement (project) 01. 1661-09-72	EACH	1.000	1.000
0022	213.0100	Finishing Roadway (project) 01. 1661-09-72	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	180.000	180.000
0028	415.1100	Concrete Pavement HES 10-Inch	SY	470.000	470.000
0030	416.0610	Drilled Tie Bars	EACH	280.000	280.000
0032	416.0620	Drilled Dowel Bars	EACH	85.000	85.000
0034	520.2024	Culvert Pipe Temporary 24-Inch	LF	85.000	85.000
0036	520.8000	Concrete Collars for Pipe	EACH	3.000	3.000
0038	601.0413	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	LF	85.000	85.000
0040	601.0600	Concrete Curb Pedestrian	LF	30.000	30.000
0042	602.0405	Concrete Sidewalk 4-Inch	SF	1,040.000	1,040.000
0044	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	20.000	20.000
0046	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	65.000	65.000
0048	602.2400	Concrete Safety Islands	SF	665.000	665.000
0050	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	108.000	108.000
0052	608.0415	Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	LF	8.000	8.000
0054	611.0606	Inlet Covers Type B	EACH	2.000	2.000
0056	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0058	611.3225	Inlets 2x2.5-FT	EACH	1.000	1.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1991-09-72	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	624.0100	Water	MGAL	10.000	10.000
0066	625.0100	Topsoil	SY	520.000	520.000
0068	628.1504	Silt Fence	LF	285.000	285.000
0070	628.1520	Silt Fence Maintenance	LF	285.000	285.000
0072	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0076	628.2002	Erosion Mat Class I Type A	SY	3,550.000	3,550.000
0078	628.7015	Inlet Protection Type C	EACH	9.000	9.000
0080	628.7555	Culvert Pipe Checks	EACH	6.000	6.000
0082	629.0210	Fertilizer Type B	CWT	9.000	9.000
0084	630.0140	Seeding Mixture No. 40	LB	11.000	11.000
0086	630.0200	Seeding Temporary	LB	16.000	16.000
0088	630.0500	Seed Water	MGAL	2.000	2.000
0090	633.5350	Markers Permanent Flexible	EACH	6.000	6.000
0092	638.2102	Moving Signs Type II	EACH	4.000	4.000
0094	638.2602	Removing Signs Type II	EACH	8.000	8.000
0096	642.5001	Field Office Type B	EACH	1.000	1.000
0098	643.0300	Traffic Control Drums	DAY	2,068.000	2,068.000

Estimate Of Quantities

1661-09-72

Line	Item	Item Description	Unit	Total	Qty
0100	643.0420	Traffic Control Barricades Type III	DAY	114.000	114.000
0102	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	261.000	261.000
0104	643.0705	Traffic Control Warning Lights Type A	DAY	244.000	244.000
0106	643.0715	Traffic Control Warning Lights Type C	DAY	402.000	402.000
0108	643.0800	Traffic Control Arrow Boards	DAY	72.000	72.000
0110	643.0900	Traffic Control Signs	DAY	736.000	736.000
0112	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0114	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	2,998.000	2,998.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	644.1810	Temporary Pedestrian Barricade	LF	181.000	181.000
0120	646.1020	Marking Line Epoxy 4-Inch	LF	865.000	865.000
0122	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	480.000	480.000
0124	646.5020	Marking Arrow Epoxy	EACH	4.000	4.000
0126	646.6120	Marking Stop Line Epoxy 18-Inch	LF	82.000	82.000
0128	646.7120	Marking Diagonal Epoxy 12-Inch	LF	35.000	35.000
0130	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	290.000	290.000
0132	646.8120	Marking Curb Epoxy	LF	30.000	30.000
0134	646.9010	Marking Removal Line Water Blasting 4-Inch	LF	1,230.000	1,230.000
0136	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0138	650.7000	Construction Staking Concrete Pavement	LF	248.000	248.000
0140	650.8501	Construction Staking Electrical Installations (project) 01. 1661-09-72	EACH	1.000	1.000
0142	650.9000	Construction Staking Curb Ramps	EACH	4.000	4.000
0144	650.9500	Construction Staking Sidewalk (project) 01. 1661-09-72	EACH	1.000	1.000
0146	650.9911	Construction Staking Supplemental Control (project) 01. 1661-09-72	EACH	1.000	1.000
0148	650.9920	Construction Staking Slope Stakes	LF	136.000	136.000
0150	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	11.000	11.000
0152	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	532.000	532.000
0154	652.0615	Conduit Special 3-Inch	LF	451.000	451.000
0156	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	6.000	6.000
0158	653.0900	Adjusting Pull Boxes	EACH	8.000	8.000
0160	653.0905	Removing Pull Boxes	EACH	2.000	2.000
0162	654.0101	Concrete Bases Type 1	EACH	1.000	1.000
0164	654.0113	Concrete Bases Type 13	EACH	2.000	2.000
0166	655.0210	Cable Traffic Signal 3-14 AWG	LF	15.000	15.000
0168	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,252.000	1,252.000
0170	655.0260	Cable Traffic Signal 12-14 AWG	LF	882.000	882.000
0172	655.0305	Cable Type UF 2-12 AWG Grounded	LF	1,129.000	1,129.000
0174	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,441.000	1,441.000
0176	655.0610	Electrical Wire Lighting 12 AWG	LF	318.000	318.000
0178	655.0700	Loop Detector Lead In Cable	LF	910.000	910.000
0180	657.0100	Pedestal Bases	EACH	1.000	1.000
0182	657.0361	Poles Type 13-Over Height	EACH	2.000	2.000
0184	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	2.000	2.000
0186	657.0430	Traffic Signal Standards Aluminum 10-FT	EACH	1.000	1.000
0188	657.0545	Monotube Arms 45-FT	EACH	1.000	1.000
0190	657.0555	Monotube Arms 55-FT	EACH	1.000	1.000
0192	657.0815	Luminaire Arms Steel 15-FT	EACH	2.000	2.000
0194	658.0173	Traffic Signal Face 3S 12-Inch	EACH	4.000	4.000
0196	658.0174	Traffic Signal Face 4S 12-Inch	EACH	4.000	4.000

Estimate Of Quantities

1661-09-72

Line	Item	Item Description	Unit	Total	Qty
0198	658.0416	Pedestrian Signal Face 16-Inch	EACH	1.000	1.000
0200	658.0500	Pedestrian Push Buttons	EACH	1.000	1.000
0202	658.5070	Signal Mounting Hardware (location) 01. 1661-09-72	EACH	1.000	1.000
0204	659.1125	Luminaires Utility LED C	EACH	2.000	2.000
0206	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	7.000	7.000
0208	690.0150	Sawing Asphalt	LF	35.000	35.000
0210	690.0250	Sawing Concrete	LF	720.000	720.000
0212	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0214	SPV.0060	Special 01. Retroreflective Backplate 3S	EACH	4.000	4.000
0216	SPV.0060	Special 02. Retroreflective Backplate 4S	EACH	4.000	4.000
0218	SPV.0060	Special 03. Adjusting Concrete Bases	EACH	9.000	9.000
0220	SPV.0060	Special 04. Temporary Multi-Use Path	EACH	1.000	1.000
0222	SPV.0090	Special 01. Install State-Supplied Non-Intrusive Detection Cable	LF	495.000	495.000

PAVEMENT REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT		REMARKS
					SY		
0010	193+59 'EB'	-	194+99 'EB'	LT	180		
0010	194+74 'EB'	-	194+99 'EB'	LT	30		
0010	196+12 'EB'	-	196+36 'EB'	LT	30		
0010	196+12 'EB'	-	197+18 'EB'	LT	130		
TOTAL 0010					<u>370</u>		

ASPHALT REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE		REMARKS
					SY		
0010	194+93 'EB'	-	195+08 'EB'	RT	15		
TOTAL 0010					<u>15</u>		

SIDEWALK REMOVALS

CATEGORY	STA - STA	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK		REMARKS
			SY		
0010	193+58 'EB' - 194+94 'EB'	13' LT	55		
0010	196+17 'EB' - 197+20 'EB'	6' LT	45		
0010	194+96.24 'EB'	61' LT	5		
0010	195+06.04 'EB'	42' RT	20		
0010	196+28.03 'EB'	41' RT	30		
TOTAL 0010			<u>155</u>		

INLET REMOVALS

CATEGORY	STATION	LOCATION	204.0220 REMOVING INLETS		REMARKS
			EACH		
0010	194+85 'EB'	12' LT	1		
0010	194+90 'EB'	12' LT	1		
0010	196+21 'EB'	7' LT	1		
TOTAL 0010			<u>3</u>		

STORM SEWER REMOVALS

CATEGORY	STATION	TO	STATION	LOCATION	204.0245.01 REMOVING STORM SEWER (SIZE) (01. 12-INCH)		204.0245.02 REMOVING STORM SEWER (SIZE) (02. 15-INCH)		REMARKS
					LF		LF		
0010	194+91 'EB'	-	194+94 'EB'	LT	8	-			
0010	196+21 'EB'	-	197+22 'EB'	LT	100	-			
0010	194+92 'EB'	-	194+91 'EB'	LT	-	8			
TOTAL 0010					<u>108</u>	<u>8</u>			

SIGN REMOVALS

CATEGORY	STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II		REMARKS
			EACH		
0010	195+13 'EB'	70' LT	1		STOP
0010	194+88 'EB'	15' LT	1		STOP
0010	194+88 'EB'	15' LT	1		KEEP RIGHT
0010	194+94 'EB'	34' RT	1		STOP
0010	196+23 'EB'	51' LT	1		STOP
0010	196+23 'EB'	4' LT	1		STOP
0010	196+23 'EB'	4' LT	1		KEEP RIGHT
0010	195+97 'EB'	48' RT	1		STOP
TOTAL 0010			<u>8</u>		

PREPARE FOUNDATION FOR CONCRETE PAVEMENT

CATEGORY	LOCATION	211.0201.01 PREPARE FOUNDATION FOR CONCRETE PAVEMENT (PROJECT) (01. 1661-09-72) EACH	REMARKS
0010	PROJECT 1661-09-72	1	
	TOTAL 0010	1	

FINISHING ROADWAY

CATEGORY	LOCATION	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 1661-09-72) EACH	REMARKS
0010	PROJECT 1661-09-72	1	
	TOTAL 0010	1	

AGGREGATE SUMMARY

CATEGORY	STA - STA	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	REMARKS
0010	193+59 'EB' - 194+99 'EB'	LT	-	100	
0010	194+96 'EB'	LT	5	-	NW CURB RAMP
0010	196+06 'EB'	RT	10	-	SW CURB RAMPS
0010	196+10 'EB'	RT	15	-	SE CURB RAMP
0010	196+12 'EB' - 197+20 'EB'	LT & RT	-	80	
	TOTAL 0010		30	180	

CONCRETE PAVEMENT SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	415.1100 CONCRETE PAVEMENT HES 10- INCH SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	REMARKS
0010	193+59 'E'B'	-	194+99 'EB'	LT	235	140	25	
0010	194+74 'EB'	-	194+99 'EB'	LT	30	20	20	
0010	196+12 'EB'	-	197+23 'EB'	LT	175	100	20	
0010	196+12 'EB'	-	196+36 'EB'	RT	30	20	20	
	TOTAL 0010				470	280	85	

TEMPORARY DRAINAGE

CATEGORY	STATION	TO	STATION	LOCATION	520.2024 CULVERT PIPE TEMPORARY 24-INCH LF	REMARKS
0010	196+05 'EB'	-	196+88 'EB'	RT	85	
	TOTAL 0010				85	

STORM SEWER

CATEGORY	STATION	TO	LOCATION	520.8000 CONCRETE COLLARS FOR PIPE EACH	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	611.0606 INLET COVERS TYPE B EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.3225 INLETS 2X2.5-FT EACH	REMARKS
0010	194+91.71 'EB', 16.5' LT	-	194+94.08 'EB', 24' LT	1	8	-	1	1	-	
0010	194+91.71 'EB', 16.5' LT	-	194+91.56 'EB', 8.5' LT	1	-	8	-	-	-	
0010	196+21.33 'EB', 1.25' LT	-	197+21.61 'EB', 8.5' LT	1	100	-	1	-	1	
TOTAL 0010				3	108	8	2	1	1	

CURB AND GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	601.0413 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G LF	REMARKS
0010	193+59 'EB'	-	194+99 'EB'	LT	270	-	MEDIAN
0010	194+90 'EB'	-	195+02 'EB'	LT	15	15	NW CURB RAMP
0010	194+95 'EB'	-	195+34 'EB'	RT	45	45	SW CURB RAMP
0010	195+91 'EB'	-	196+07 'EB'	RT	25	25	SE CURB RAMP
0010	196+17 'EB'	-	197+20 'EB'	LT	205	-	MEDIAN C & G
TOTAL 0010					560	85	

PEDESTRIAN CURB

CATEGORY	STATION	TO	LOCATION	601.0600 CONCRETE CURB PEDESTRIAN LF	REMARKS
0010	194+99.75 'EB'	-	55' LT	5	
0010	195+05.21 'EB'	-	36' RT	15	
0010	196+05.40 'EB'	-	36' RT	10	
TOTAL 0010				30	

CURB RAMP SUMMARY

CATEGORY	STATION	TO	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF	REMARKS
0010	194+98 'EB'	-	56' LT	65	10	-	NW CURB RAMP
0010	194+93 'EB' - 195+32 'EB'	-	42' RT	375	10	35	SW CURB RAMPS
0010	196+03 'EB'	-	42' RT	600	-	30	SE CURB RAMP
TOTAL 0010				1,040	20	65	

SAFETY ISLANDS

CATEGORY	STATION	TO	STATION	LOCATION	602.2400 CONCRETE SAFETY ISLANDS SF	REMARKS
0010	193+58.99 'EB'	-	194+95.45 'EB'	LT	370	
0010	196+12.20 'EB'	-	197+10.67 'EB'	LT	295	
TOTAL 0010					665	

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HAUL ROADS

618.0100.01
MAINTENANCE
AND REPAIR OF
HAUL ROADS
(PROJECT)
(01.1661-09-72)

CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT 1661-09-72	1	
	TOTAL 0010	1	

MOBILIZATION

619.1000
MOBILIZATION
EACH

CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT 1661-09-72	1	
	TOTAL 0010	1	

WATER

624.0100
WATER
MGAL

CATEGORY	LOCATION	MGAL	REMARKS
0010	UNDISTRIBUTED	10	
	TOTAL 0010	10	

EROSION CONTROL AND RESTORATION SUMMARY

625.0100	628.1504	628.1520	628.1905	628.1910	628.2002	628.7015	628.7555	629.0210	630.0140	630.0200	630.0500
TOPSOIL	SILT FENCE	SILT FENCE MAINTENANCE	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL	EROSION MAT CLASS I TYPE A	INLET PROTECTION TYPE C	CULVERT PIPE CHECKS	FERTILIZER TYPE B	SEEDING MIXTURE NO. 40	SEEDING TEMPORARY	SEED WATER
SY	LF	LF	EACH	EACH	SY	EACH	EACH	CWT	LB	LB	MGAL

0010	193+59 'EB' - 197+24 'EB'	PROJECT	-	-	-	3	1	-	-	-	-	-	-	-	1
0010	194+44 'EB' - 195+11 'EB'	LT	-	75	75	-	-	350	-	-	1	-	-	-	-
0010	194+60 'EB' - 195+42 'EB'	RT	85	85	85	-	-	900	-	-	2	2	3	-	-
0010	194+83 'EB' - 194+93 'EB'	LT	15	-	-	-	-	-	3	-	-	-	1	1	-
0010	195+27 'EB'	RT	-	-	-	-	-	-	-	6	-	-	-	-	-
0010	195+87 'EB' - 197+00 'EB'	RT	220	125	125	-	-	2300	-	-	5	4	6	-	-
0010	195+03 'EB' - 195+11 'EB'	LT	-	-	-	-	-	-	2	-	-	-	-	-	-
0010	195+92 'EB' - 196+00 'EB'	LT	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	196+20 'EB'	LT	-	-	-	-	-	-	2	-	-	-	-	-	-
0010	197+21 'EB'	LT	-	-	-	-	-	-	2	-	-	-	-	-	-
0010	UNDISRIBUTED		200	-	-	-	-	-	-	-	1	4	6	-	1
	TOTAL 0010		520	285	285	3	1	3,550	9	6	9	11	16	-	2

FIELD OFFICE

642.5001
FIELD OFFICE
TYPE B
EACH

CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT 1661-09-72	1	
	TOTAL 0010	1	

PAVEMENT MARKING SUMMARY

CATEGORY	STA - STA	LOCATION	EACH	633.5350		646.1020		646.3545		646.5020		646.6120		646.7120		646.7420		646.8120		REMARKS
				MARKERS PERMANENT FLEXIBLE	MARKING LINE EPOXY 4-INCH LF	MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH	MARKING ARROW EPOXY	MARKING STOP LINE EPOXY 18-INCH	MARKING DIAGONAL EPOXY 12-INCH	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	MARKING CURB EPOXY									
0010	184+74 'EB' - 190+14 'EB'	RT	-	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5' DASHES
0010	192+34 'EB' - 193+33 'EB'	RT	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5' DASHES
0010	193+58 'EB' - 194+95 'EB'	LT	-	-	-	280	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	193+59 'EB' - 194+96 'EB'	LT	3	-	135	-	-	-	-	-	20	-	-	-	-	-	-	-	-	
0010	194+18 'EB'	LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
0010	194+45 'EB'	LT	-	-	-	-	-	-	-	-	-	162	-	-	-	-	-	-	-	
0010	194+70 'EB'	LT	-	-	-	-	-	-	-	-	128	-	-	-	-	-	-	-	-	
0010	194+72 'EB'	LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
0010	194+91 'EB' - 194+94 'EB'	LT & RT	-	-	-	-	-	40	-	-	-	-	-	-	-	-	-	-	-	
0010	194+95 'EB'	LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	WEST MEDIAN
0010	194+96 'EB' - 195+02 'EB'	LT & RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	195+28 'EB' - 195+95 'EB'	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	195+61 'EB' - 195+90 'EB'	RT	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	
0010	196+12 'EB' - 197+24 'EB'	R/L	3	-	110	200	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	196+12 'EB' - 197+10 'EB'	LT	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	
0010	196+13 'EB'	LT	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	
0010	196+14 'EB'	LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	EAST MEDIAN
0010	196+30 'EB'	LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	196+56 'EB'	LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0010	196+58 'EB'	LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
0010	196+81 'EB'	LT	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
0010	197+32 'EB' - 198+35 'EB'	LT	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5' DASHES
0010	200+55 'EB' - 205+95 'EB'	LT	-	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.5' DASHES
TOTAL 0010			6	865	480	4	82	35	290	30										

MOVING SIGNS

CATEGORY	STATION	LOCATION	SIGN CODE	SIGN SIZE IN X IN	638.2102 MOVING SIGNS TYPE II		REMARKS
					EACH		
0010	194+92 'EB'	56' LT	R6-2L	24 X 30	1		ONE WAY
0010	194+94 'EB'	34' RT	R5-1	36 X 36	1		DO NOT ENTER
0010	196+23 'EB'	51' LT	R5-1	36 X 36	1		DO NOT ENTER
0010	196+08 'EB'	35' RT	R6-2L	24 X 30	1		ONE WAY
TOTAL 0010					4		

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TRAFFIC CONTROL

CATEGORY	LOCATION	643.0300	643.0420	643.0500	643.0705	643.0715	643.0800	643.0900	643.1050	643.3150		643.5000	644.1810	646.9010	REMARKS
		TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL ARROW BOARDS	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL SIGNS PCMS	TEMPORARY MARKING LINE	REMOVABLE TAPE 4-INCH LF	WHITE	YELLOW	TRAFFIC CONTROL EACH	
0010	1661-09-72	-	-	-	-	-	-	-	14	-	-	1	-	-	
0010	STAGE 1	480	40	-	80	120	20	160	-	-	-	-	145	-	
0010	STAGE 2	192	16	-	48	48	8	64	-	-	-	-	-	-	
0010	STAGE 3	336	28	-	56	84	14	112	-	-	-	-	-	-	
0010	STAGE 4	420	14	133	28	70	14	112	-	-	-	-	36	-	
0010	STAGE 5	640	16	128	32	80	16	288	-	-	-	-	-	-	
0010	184+74 'EB' - 190+14 'EB', RT	-	-	-	-	-	-	-	-	-	540	-	-	540	STAGE 4
0010	192+34 'EB' - 193+33 'EB', RT	-	-	-	-	-	-	-	-	-	100	-	-	97	STAGE 4
0010	193+33 'EB' - 194+99 'EB', RT	-	-	-	-	-	-	-	-	166	165	-	-	-	
0010	196+17 'EB' - 197+82 'EB', LT	-	-	-	-	-	-	-	-	-	329	-	-	-	
0010	197+32 'EB' - 198+35 'EB', LT	-	-	-	-	-	-	-	-	-	60	-	-	53	STAGE 4
0010	200+55 'EB' - 205+95 'EB', LT	-	-	-	-	-	-	-	-	-	540	-	-	540	STAGE 4
0010	194+27 'EB' - 192+50, RT	-	-	-	-	-	-	-	-	-	683	-	-	-	STAGE 5
0010	196+12 'EB' - 197+25 'EB', LT	-	-	-	-	-	-	-	-	102	213	-	-	-	STAGE 5
0010	197+25 'EB' - 198+26 'EB', LT	-	-	-	-	-	-	-	-	-	100	-	-	-	STAGE 5
TOTAL 0010		2,068	114	261	244	402	72	736	14	2,998		1	181	1,230	

STAKING ITEMS

CATEGORY	LOCATION	650.4000	650.7000	650.8501.01	650.9000	650.9500.01	650.9911.01	650.9920	REMARKS
		CONSTRUCTION STAKING STORM SEWER EACH	CONSTRUCTION STAKING CONCRETE PAVEMENT LF	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) (01. 1661-09-72) EACH	CONSTRUCTION STAKING CURB RAMPS EACH	CONSTRUCTION STAKING SIDEWALK (PROJECT) (01. 1661-09-72) EACH	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 1661-09-72) EACH	CONSTRUCTION STAKING SLOPE STAKES LF	
0010	PROJECT 1661-09-72	-	-	1	-	1	1	-	
0010	193+59 'EB' - 194+99 'EB'	-	140	-	-	-	-	-	
0010	194+98 'EB' - 195+39 'EB', RT	-	-	-	-	-	-	41	
0010	194+92 'EB', 16' LT	1	-	-	-	-	-	-	
0010	194+96 'EB', 60' LT	-	-	-	1	-	-	-	
0010	195+02 'EB', 35' RT	-	-	-	1	-	-	-	
0010	195+15 'EB', 43' RT	-	-	-	1	-	-	-	
0010	195+91 'EB' - 196+86 'EB', RT	-	-	-	-	-	-	95	
0010	196+02 'EB', 42' RT	-	-	-	1	-	-	-	
0010	196+12 'EB' - 197+20 'EB'	-	108	-	-	-	-	-	
0010	196+22 'EB', 1.5' LT	1	-	-	-	-	-	-	
TOTAL 0010		2	248	1	4	1	1	136	

ELECTRICAL SUMMARY

CATEGORY	STATION	TO	STATION	652.0225	652.0235	652.0615	REMARKS
				CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	CONDUIT SPECIAL 3-INCH LF	
0010	196+06 'EB'	-	196+28 'EB'	-	45	-	EPB101 - PB1
0010	196+28 'EB'	-	196+17 'EB'	-	-	180	PB1 - PB2
0010	196+17 'EB'	-	196+08 'EB'	-	21	-	PB2 - EPB103
0010	194+96 'EB'	-	194+85 'EB'	-	23	-	EPB104 - PB3
0010	194+85 'EB'	-	194+81 'EB'	-	-	183	PB3 - PB4
0010	194+81 'EB'	-	195+11 'EB'	-	64	-	PB4 - EPB106
0010	196+28 'EB'	-	197+49 'EB'	-	122	-	PB1 - PB5
0010	197+49 'EB'	-	197+53 'EB'	-	-	49	PB5 - EPB110
0010	194+81 'EB'	-	193+60 'EB'	-	243	-	PB4 - PB6
0010	193+60 'EB'	-	193+57 'EB'	-	-	39	PB6 - EPB109
0010	196+17 'EB'	-	196+33 'EB'	-	7	-	PB2 - SB1
0010	194+81 'EB'	-	194+75 'EB'	-	7	-	PB4 - SB2
0010	194+81 'EB'	-	194+92 'EB'	11	-	-	PB4 - SB3
TOTAL 0010				11	532	451	

REMOVING SIGNALS

CATEGORY	LOCATION	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. TRAFFIC SIGNALS (USH 18 & S TOWN LN/SELCH RD)) EACH	REMARKS
0010	PROJECT 1661-09-72	1	
TOTAL 0010		1	

PULL BOXES

CATEGORY	STATION	LOCATION	653.0164 PULL BOXES NON- CONDUCTIVE 24X42-INCH EACH	REMARKS
0010	196+28 'EB'	56' LT	1	PB1
0010	196+17 'EB'	33' RT	1	PB2
0010	194+85 'EB'	35' RT	1	PB3
0010	194+81 'EB'	56' LT	1	PB4
0010	197+49 'EB'	54' LT	1	PB5
0010	193+60 'EB'	52' LT	1	PB6
TOTAL 0010			6	

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3

SIGNAL REMOVALS

CATEGORY	STATION	LOCATION	204.0195	653.0900	653.0905	659.5000.S	SPV.0060.03	REMARKS
			REMOVING CONCRETE BASES	ADJUSTING PULL BOXES	REMOVING PULL BOXES	LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR	SPECIAL (03. ADJUSTING CONCRETE BASES)	
			EACH	EACH	EACH	EACH	EACH	
0010	196+06 'EB'	59' LT	-	1	-	-	-	EPB101
0010	196+14 'EB'	3' LT	-	-	1	-	-	EPB102
0010	196+08 'EB'	38' RT	-	1	-	-	-	EPB103
0010	194+96 'EB'	34' RT	-	1	-	-	-	EPB104
0010	194+64 'EB'	15' LT	-	-	1	-	-	EPB105
0010	195+11 'EB'	67' LT	-	1	-	-	-	EPB106
0010	195+97 'EB'	71' LT	-	1	-	-	-	EPB107
0010	195+31 'EB'	50' RT	-	1	-	-	-	EPB108
0010	193+57 'EB'	14' LT	-	1	-	-	-	EPB109
0010	197+53 'EB'	6' LT	-	1	-	-	-	EPB110
0010	196+22 'EB'	53' LT	-	-	-	-	1	ESB1
0010	196+23 'EB'	4' LT	1	-	-	2	-	ESB2
0010	196+21 'EB'	34' RT	1	-	-	1	-	ESB3
0010	195+96 'EB'	49' RT	-	-	-	-	1	ESB4
0010	195+39 'EB'	64' RT	-	-	-	-	1	ESB5
0010	195+22 'EB'	49' RT	-	-	-	-	1	ESB6
0010	194+93 'EB'	34' RT	1	-	-	-	1	ESB7
0010	194+88 'EB'	15' LT	1	-	-	2	-	ESB8
0010	194+92 'EB'	56' LT	-	-	-	2	-	ESB9
0010	195+13 'EB'	70' LT	-	-	-	-	1	ESB10
0010	195+84 'EB'	94' LT	-	-	-	-	1	ESB11
0010	197+63 'EB'	6' LT	-	-	-	-	1	ESB12
0010	193+49 'EB'	14' LT	-	-	-	-	1	ESB13
TOTAL 0010			4	8	2	7	9	

MONOTUBE BASES

CATEGORY	STATION	LOCATION	654.0101	654.0113	REMARKS
			CONCRETE BASES TYPE 1	CONCRETE BASES TYPE 13	
			EACH	EACH	
0010	196+33 'EB'	35' RT	-	1	SB1
0010	194+75 'EB'	58' LT	-	1	SB2
0010	194+92 'EB'	56' LT	1	-	SB3
TOTAL 0010			1	2	

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SIGNAL WIRE

		655.0210	655.0230	655.0260	655.0305	655.0515	655.0610	655.0700	SPV.0090.01	
		CABLE TRAFFIC SIGNAL 3-14 AWG	CABLE TRAFFIC SIGNAL 5-14 AWG	CABLE TRAFFIC SIGNAL 12-14 AWG	CABLE TYPE UF 2-12 AWG GROUNDED	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	ELECTRICAL WIRE LIGHTING 12 AWG	LOOP DETECTOR LEAD IN CABLE	SPECIAL (01. INSTALL STATE- SUPPLIED NON- INTRUSIVE DETECTION CABLE)	
CATEGORY	STA - STA	LF	LF	LF	LF	LF	LF	LF	LF	REMARKS
0010	196+33 'EB'	-	195	-	-	-	159	-	90	SB1 - UP POLE
0010	194+75 'EB'	15	225	-	-	-	159	-	90	SB2 - UP POLE
0010	194+92 'EB'	-	-	-	-	-	-	-	-	SB3 - UP POLE
0010	196+22 'EB'	-	20	-	-	-	-	-	-	ESB1 - UP POLE
0010	194+93 'EB'	-	20	-	-	-	-	-	-	ESB7 - UP POLE
0010	196+05 'EB' - 196+22 'EB'	-	-	28	-	-	-	-	-	ESC1 - ESB1
0010	196+05 'EB' - 196+33 'EB'	-	-	164	-	-	-	-	165	ESC1 - SB1
0010	196+05 'EB' - 195+96 'EB'	-	-	171	-	-	-	-	-	ESC1 - ESB4
0010	196+05 'EB' - 195+39 'EB'	-	323	-	-	-	-	-	-	ESC1 - ESB5
0010	196+05 'EB' - 195+22 'EB'	-	316	-	-	-	-	-	-	ESC1 - ESB6
0010	196+05 'EB' - 194+93 'EB'	-	-	270	-	-	-	-	-	ESC1 - ESB7
0010	196+05 'EB' - 194+75 'EB'	-	-	149	-	-	-	-	150	ESC1 - SB2
0010	196+05 'EB' - 194+92 'EB'	-	153	-	-	-	-	-	-	ESC1 - SB3
0010	196+05 'EB' - 195+13 'EB'	-	-	100	-	-	-	-	-	ESC1 - ESB10
0010	196+05 'EB' - 196+33 'EB'	-	-	-	164	-	-	-	-	ESC1 - SB1
0010	196+33 'EB' - 195+39 'EB'	-	-	-	211	-	-	-	-	SB1 - ESB5
0010	196+05 'EB' - 195+84 'EB'	-	-	-	36	-	-	-	-	ESC1 - ESB11
0010	195+84 'EB' - 194+75 'EB'	-	-	-	167	-	-	-	-	ESB11 - SB2
0010	196+05 'EB' - 197+63 'EB'	-	-	-	234	-	-	-	-	ESC1 - ESB12
0010	196+05 'EB' - 193+49 'EB'	-	-	-	317	-	-	-	-	ESC1 - ESB13
0010	196+05 'EB' - 195+96 'EB'	-	-	-	-	-	-	171	-	ESC1 - ESB4
0010	196+05 'EB' - 195+22 'EB'	-	-	-	-	-	-	316	-	ESC1 - ESB6
0010	196+05 'EB' - 194+93 'EB'	-	-	-	-	-	-	270	-	ESC1 - ESB7
0010	196+05 'EB' - 195+22 'EB'	-	-	-	-	-	-	153	-	ESC1 - SB3
0010	196+18 'EB' - 196+18 'EB'	-	-	-	-	188	-	-	-	ESC1 - SB1 GROUNDING CONNECTION
0010	196+18 'EB' - 194+18 'EB'	-	-	-	-	257	-	-	-	SB1 - SB2 GROUNDING CONNECTION
0010	194+18 'EB' - 196+18 'EB'	-	-	-	-	996	-	-	-	SB2 - ESC1 GROUNDING CONNECTION
TOTAL 0010		15	1,252	882	1,129	1,441	318	910	495	

SIGNAL POLES, ARMS, & EQUIPMENT

	657.0100	657.0361	657.0425	657.0430	657.0545	657.0555	657.0815	658.0173	658.0174	658.0416	658.0500	659.1125	SPV.0060.01	SPV.0060.02	
	PEDESTAL BASES	POLES TYPE 13-OVER HEIGHT	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	MONOTUBE ARMS 45-FT	MONOTUBE ARMS 55-FT	LUMINAIRE ARMS STEEL 15-FT	TRAFFIC SIGNAL FACE 3S 12-INCH	TRAFFIC SIGNAL FACE 4S 12-INCH	PEDESTRIAN SIGNAL FACE 16-INCH	PEDESTRIAN PUSH BUTTONS	LUMINAIRE UTILITY LED C	SPECIAL (01. RETROREFLECTIV E BACKPLATE 3S)	SPECIAL (02. RETROREFLECTIV E BACKPLATE 4S)	
CATEGORY	STATION	LOCATION	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	REMARKS
0010	196+33 'EB'	35' RT	-	1	-	-	1	2	1	-	-	1	2	1	SB1
0010	194+75 'EB'	58' LT	-	1	-	-	1	1	1	-	-	1	2	1	SB2
0010	194+92 'EB'	56' LT	1	-	1	-	-	-	-	1	1	-	-	-	SB3
0010	196+22 'EB'	53' LT	-	-	1	-	-	-	1	-	-	-	-	1	ESB1
0010	194+93 'EB'	34' RT	-	-	1	-	-	-	1	-	-	-	-	1	ESB7
TOTAL 0010			1	2	2	1	1	4	4	1	1	2	4	4	

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SIGNAL MOUNTING HARDWARE

658.5070.01
SIGNAL
MOUNTING
HARDWARE
(LOCATION)
(01. USH 18 &
S TOWN
LN/SELCH RD)

CATEGORY	LOCATION	EACH	REMARKS
0010	PROJECT 1661-09-72	1	
TOTAL 0010		1	

TEMPORARY MULTI-USE PATH

SPV.0060.04
SPECIAL (04.
TEMPORARY
MULTI-USE PATH)

INFORMATIONAL PURPOSES ONLY

CATEGORY	STATION	TO	STATION	LOCATION	EACH	INFORMATIONAL PURPOSES ONLY	
						BASE AGGREGATE DENSE TON	GEOTEXTILE FABRIC SY
0010	194+67 'EB'	-	196+88 'EB'	RT	1	120.00	320.00
TOTAL 0010					1	120	320

SAWING ITEMS

CATEGORY	STA - STA	LOCATION	690.0150	690.0250	REMARKS
			SAWING ASPHALT LF	SAWING CONCRETE LF	
0010	194+94 'EB'	RT	10	-	SW 1/4
0010	194+94 'EB' - 195+08 'EB'	RT	5	-	SW 1/4
0010	195+08 'EB'	RT	10	-	SW 1/4
0010	196+23 'EB'	RT	10	-	SE /4
0010	193+59 'EB' - 194+99 'EB'	LT	-	340	WEST MEDIAN
0010	196+12 'EB' - 197+20 'EB'	LT & RT	-	275	EAST MEDIAN
0010	194+89 'EB' - 195+03 'EB'	LT	-	20	NW CURB RAMP
0010	194+95 'EB' - 195+35 'EB'	RT	-	55	SW CURB RAMP
0010	195+89 'EB' - 196+07 'EB'	RT	-	30	SE CURB RAMP
TOTAL 0010			35	720	

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TRANSPORTATION PROJECT PLAT NO: 1661-09-22 - 4.01 AMENDMENT NO. 1
 REMOVES UTILITY NUMBER 101 AND ADDS PARCEL 301 TO
 TRANSPORTATION PROJECT PLAT 1661-09-22 - 4.01
 RECORDED AS DOCUMENT NUMBER 345470 FILED IN 3PL PAGE 125.

PART OF LOT 1 OF CSM #1220, CITY OF PRAIRIE DU CHIEN AND PART OF LOT 8 OF SCENIC VIEW ADDITION TWO, TOWN OF BRIDGEPORT
 ALL LOCATED IN FARM LOT 43 OF THE PRIVATE LAND CLAIMS AT PRAIRIE DU CHIEN, CRAWFORD COUNTY, WISCONSIN.
 RELOCATION ORDER USH 18 PRAIRIE DU CHIEN - FENNIMORE (SOUTH TOWN LN/SELCH RD INTERSECTION), CRAWFORD COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE,
 THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND
 INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF
 TRANSPORTATION HEREBY ORDERS THAT:
 1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
 2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE
 ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:
 POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS),
 CRAWFORD COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES,
 GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4"x24" IRON REBARS) UNLESS OTHERWISE
 NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

EXISTING HIGHWAY RIGHT-OF-WAY IS BASED ON PLAT OF RIGHT-OF-WAY REQUIRED 1661-09-21, TRANSPORTATION
 PROJECT PLAT 1661-05-28, SCENIC VIEW ADDITION, SCENIC VIEW ADDITION TWO, CSM #1219, CSM #1220 AND EXISTING
 MONUMENTATION RECOVERED IN THE FIELD.

EXISTING ACCESS CONTROL ALONG USH 18 ESTABLISHED FROM ACCESS RESTRICTIONS IN SCENIC VIEW ADDITION AND
 SCENIC VIEW ADDITION TWO.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT
 OF TRANSPORTATION OFFICE IN LA CROSSE.

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS, IN
 CRAWFORD COUNTY, AS SHEET 2 OF 2 OF DOCUMENT #345470.

ALIGNMENT INFORMATION

PI STA = 197+60.28	CURVE PC 194+13.94 - 194+39.00	CURVE 199+67.62 - PT 201+02.42
Y = 109,536.729	L = 25.06'	L = 134.80'
X = 326,988.188	LCH = 25.06'	LCH = 134.78'
DELTA = 15°26'10" LT	LCB = S47°33'45"E	LCB = S61°12'24"E
D = 02°14'31"	R = 2,555.48'	R = 2,555.48'
T = 346.34'	CURVE 194+39.00 - 199+67.62	BP = 192+00.00
L = 688.48'	L = 528.62'	Y = 109,916.818
R = 2,555.48'	LCH = 527.68'	X = 326,576.554
PC STA = 194+13.94	LCB = S53°46'10"E	EP = 201+60.00
PT STA = 201+02.42	R = 2,555.48'	Y = 109,351.585
STA 194+39.00		X = 327,347.174
Y = 109,754.773		
X = 326,752.229		

EXISTING MONUMENTATION					
POINT NO	STATION	OFFSET	Y COORDINATE	X COORDINATE	DESCRIPTION
IP 10	196+02.49	69.77' RT	109,594.390	326,833.429	3/4" REBAR
IP 11	197+05.64	214.16' RT	109,413.579	326,832.448	3/4" REBAR
IP 12	192+77.46	46.65' RT	109,829.997	326,601.814	3/4" REBAR
IP 13	193+27.31	60.40' LT	109,874.829	326,711.064	3/4" REBAR
IP 14	194+14.04	60.51' LT	109,816.073	326,774.859	3/4" REBAR

UTILITY INTERESTS REQUIRED					
UTILITY NO	PARCEL	OWNER	RECORDING INFORMATION	INTEREST REQUIRED	
100	1	MADISON GAS AND ELECTRIC COMPANY - GAS	DOC 246426 V 566 / P 384 20' EASEMENT	RELEASE OF RIGHTS	
102	2	MEDIACOM - CABLE TV	NO RECORDED EASEMENT	RELEASE OF RIGHTS	

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W REQUIRED S.F.			TLE S.F.
			NEW	EXISTING	TOTAL	
1	PRAIRIE DU CHIEN MEMORIAL HOSPITAL ASSOCIATION, INC.	FEE, TLE	87	--	87	86
2	DESIGN HOMES, INC., A WISCONSIN CORPORATION	FEE, TLE	197	--	197	870
301	TELEPHONE USA OF WISCONSIN, LLC DBA CENTURYLINK	EASEMENT RIGHTS	87	--	87	86

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES
 ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE
 TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

CITY OF PRAIRIE DU CHIEN

TOWN OF BRIDGEPORT

FARM LOT 43 OF THE PRIVATE LAND CLAIMS AT PRAIRIE DU CHIEN

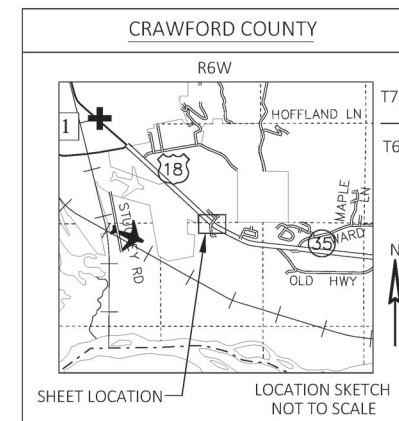
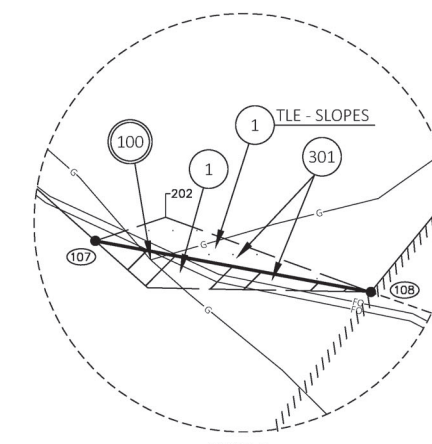
SCENIC VIEW

SCENIC VIEW

BRIDGEPORT

STATION & OFFSET/COORDINATE TABLE				
POINT NO	STATION	OFFSET	Y COORDINATE	X COORDINATE
100	200+24.11	84.99' RT	109,340.627	327,185.714
101	197+99.90	84.99' RT	109,521.346	326,903.906
102	195+95.19	83.19' RT	109,588.577	326,819.186
103	195+24.61	101.81' RT	109,620.668	326,750.873
104	195+24.34	51.00' RT	109,659.633	326,783.490
105	194+39.00	46.22' RT	109,720.509	326,721.205
106	194+39.00	60.78' LT	109,799.827	326,793.022
107	194+84.00	60.66' LT	109,770.540	326,825.766
108	195+16.39	79.04' LT	109,763.882	326,861.624
109	195+99.34	108.92' LT	109,736.125	326,942.284
110	198+51.39	108.94' LT	109,595.261	327,138.085
111	198+87.41	109.71' LT	109,577.384	327,167.580
200	195+24.43	67.00' RT	109,647.364	326,773.220
201	195+09.00	67.00' RT	109,657.625	326,761.171
202	194+89.00	69.00' LT	109,773.624	326,834.925

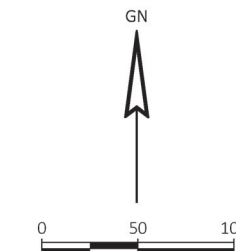
R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
100 - 101	N57°19'43"W	334.78'
101 - IP 10	N43°58'30"W	101.50'
IP 10 - 102	S67°47'55"W	15.38'
103 - 104	N39°55'57"E	50.82'
104 - 105	N45°39'21"W	87.09'
106 - 107	S48°11'23"E	43.93'
107 - 108	S79°28'54"E	36.47'
109 - 110	S54°16'04"E	241.21'
110 - 111	S58°46'46"E	34.49'



FOUND 1" IRON ROD W/ CAP
 Y = 112,241.023
 X = 326,963.567

FOUND 1" IRON ROD
 Y = 108,235.610
 X = 327,270.349

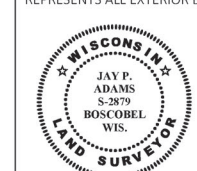
RESERVED FOR REGISTER OF DEEDS
 PROJECT NUMBER 1661-09-22 - 4.01
 AMENDMENT NO. 1



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

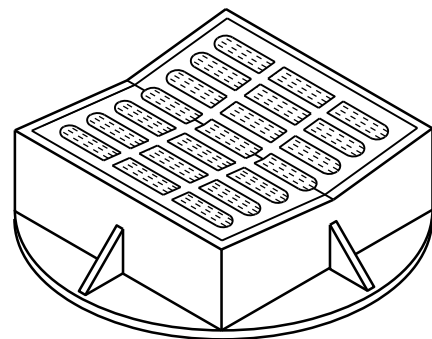
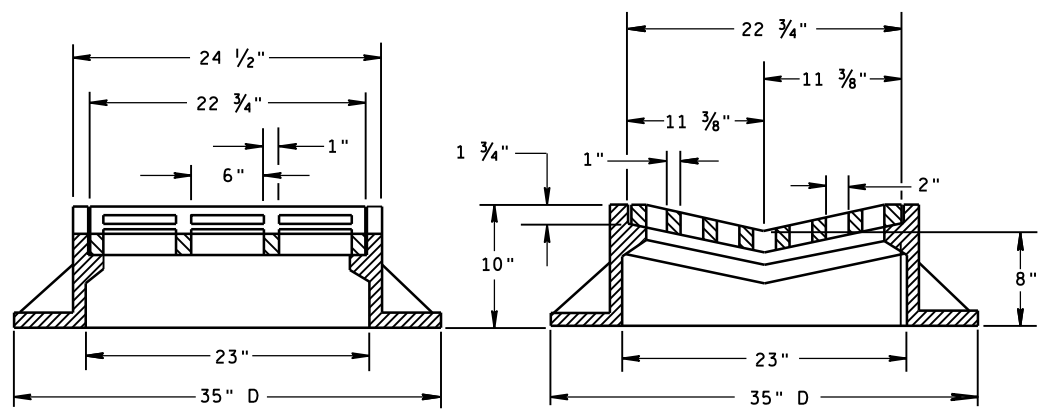
I, JAY P. ADAMS, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN
 FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN
 STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I
 HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY
 REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *J.P. Adams* DATE: 10/5/22
 PRINT NAME: JAY P. ADAMS
 REGISTRATION NUMBER: S-2879
 THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
 THE WISCONSIN DEPARTMENT OF TRANSPORTATION
 SOUTHWEST REGION - LA CROSSE OFFICE
 SIGNATURE: *Corv Schlagel* DATE: 10/5/22
 PRINT NAME: CORV E. SCHLAGEL

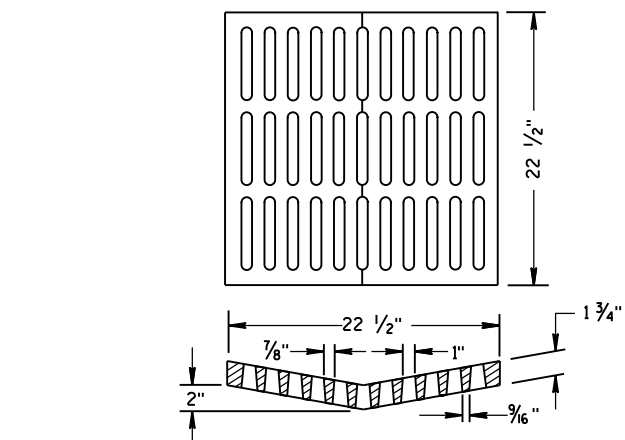


Standard Detail Drawing List

08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
09B02-10	CONDUIT
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E05-06	TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-09I	TYPE 12 POLE 35' -55' MONOTUBE ARM
09E08-09J	TYPE 13 POLE 35' -55' MONOTUBE ARM
09E12-01D	OVER HEIGHT TYPE 13 POLE 35' -55' MONOTUBE ARM
09E12-01E	GENERAL NOTES AND HARDWARE DETAILS FOR OVER HEIGHT TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
15C07-15C	PAVEMENT MARKING ARROWS
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-22C	PAVEMENT MARKING (TURN LANES)
15C08-22D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-07A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D20-06A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D20-06B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-06C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-08A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

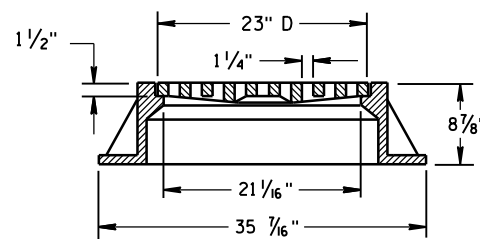
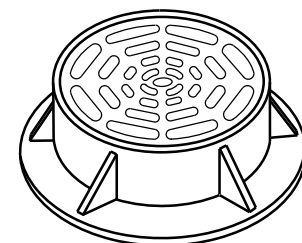
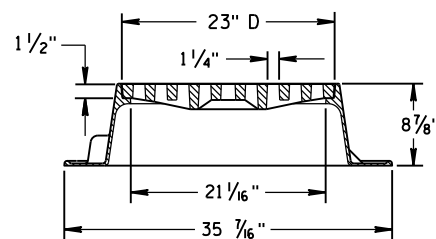
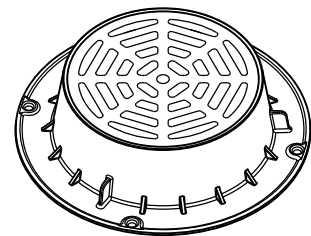


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

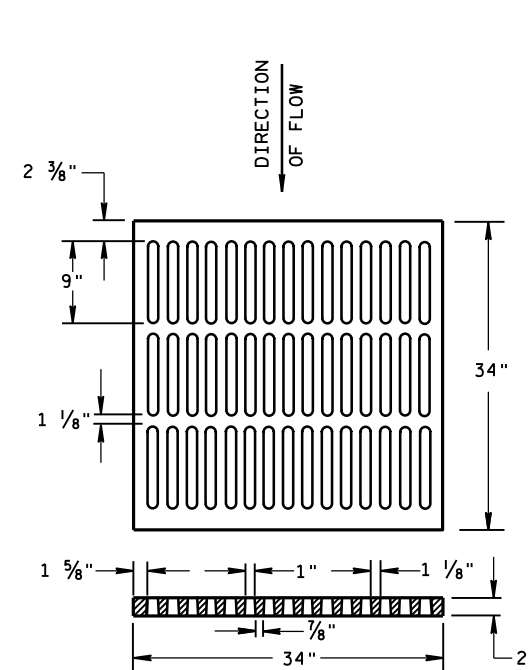
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

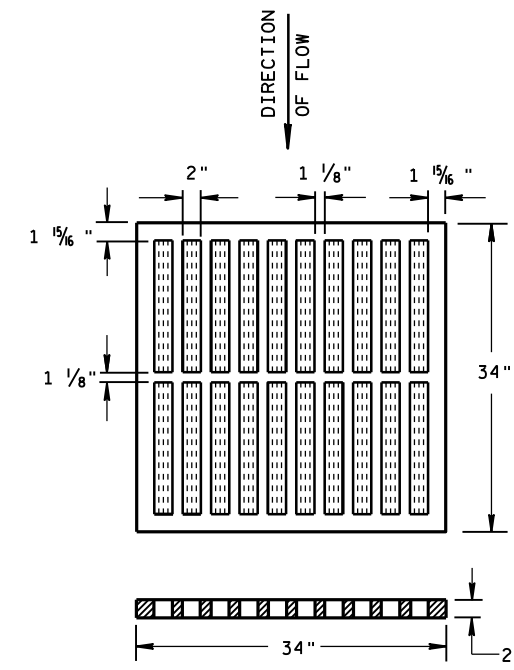
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



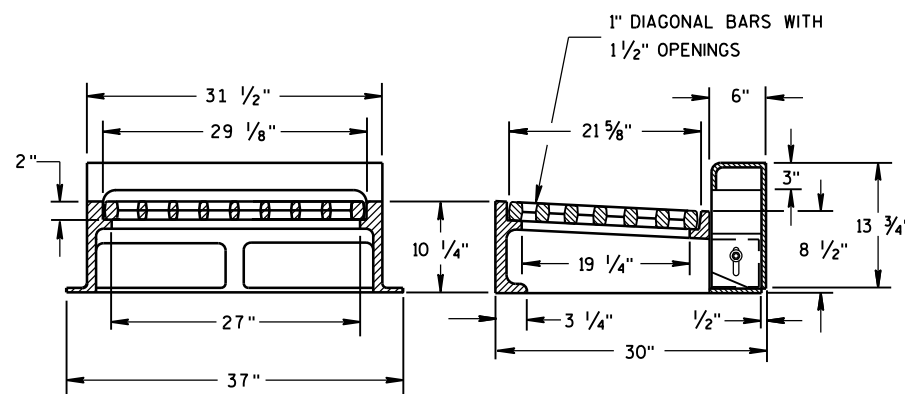
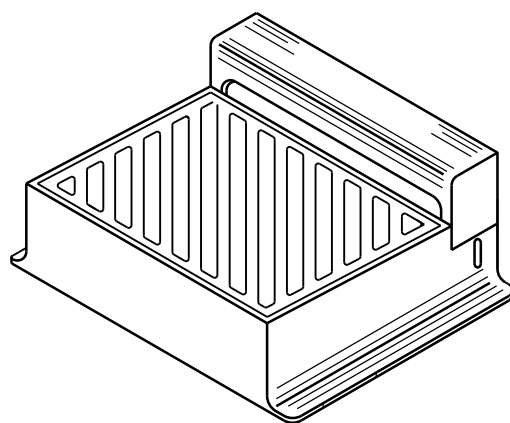
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

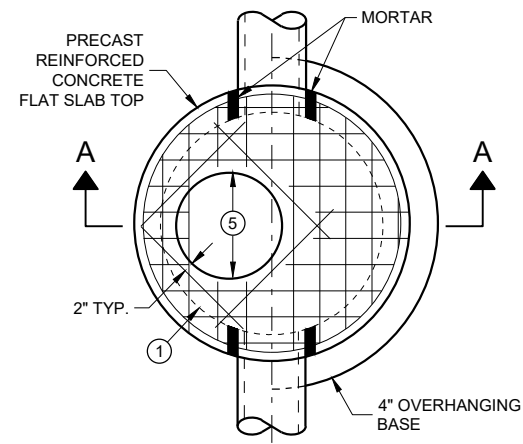
DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

DIRECTION OF FLOW

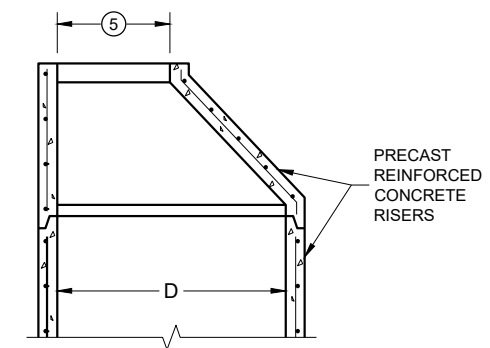
**INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

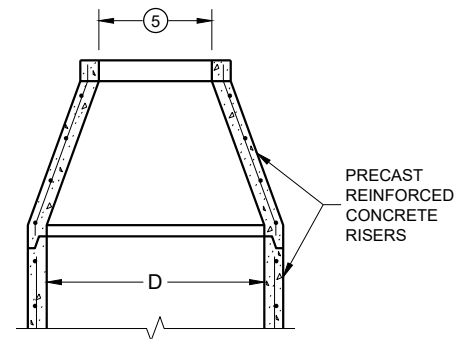
APPROVED
DATE 11/27/2013 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



**PLAN VIEW
CIRCULAR OPENING**



**OPTIONAL PRECAST
REINFORCED CONCRETE
ECCENTRIC TOP**



**OPTIONAL PRECAST
REINFORCED CONCRETE
CONCENTRIC TOP**

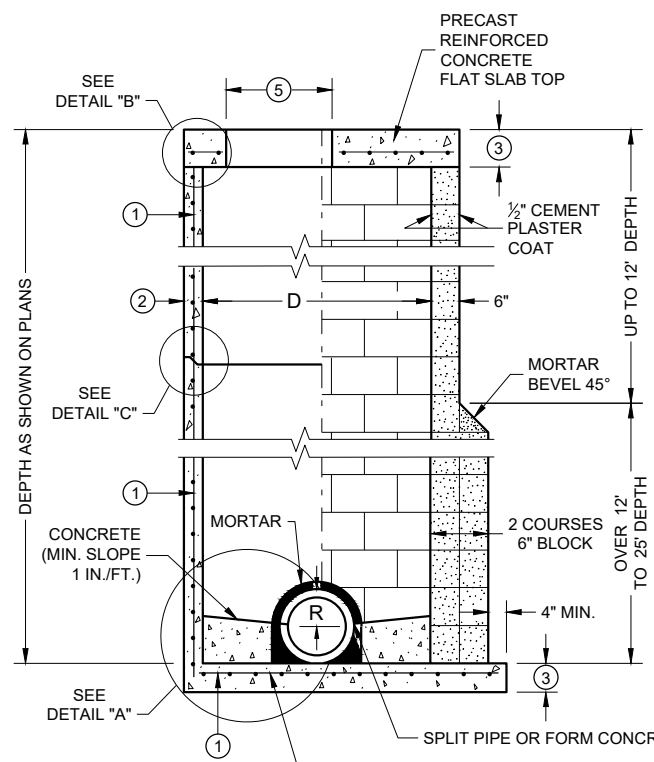
MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE OPENING SIZE (FT.)	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

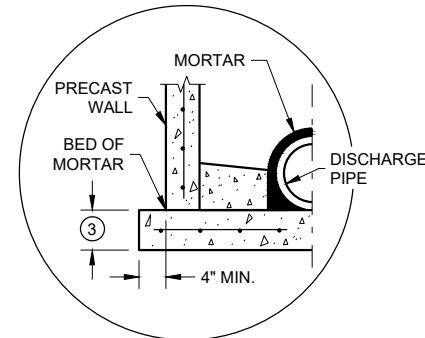
*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.



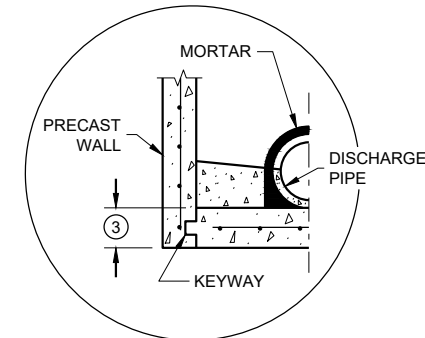
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE ①

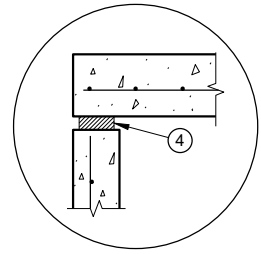


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

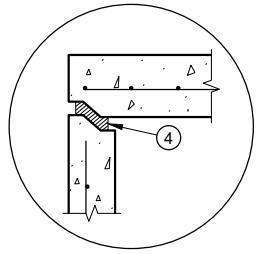


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

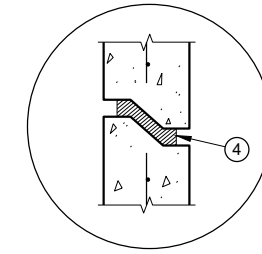
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

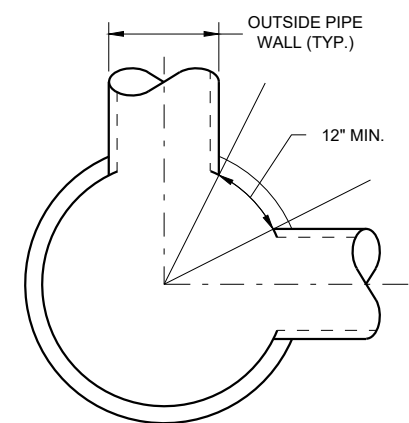
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- ① FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ② SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- ③ SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- ④ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).
- ⑤ SEE MANHOLE COVER OPENING MATRIX.

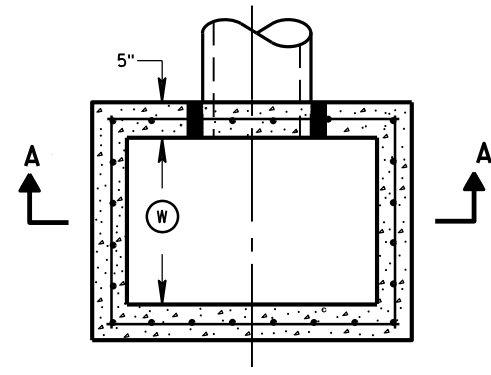


MINIMUM HORIZONTAL PIPE SEPARATION

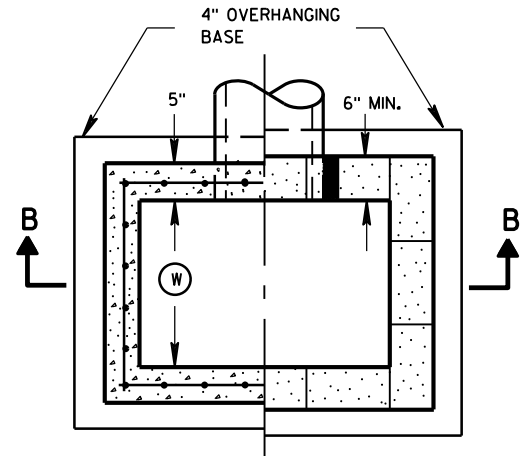
**MANHOLES, 3-FT, 4-FT
5-FT, 6-FT, 7-FT, 8-FT, 9-FT
AND 10-FT DIAMETER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

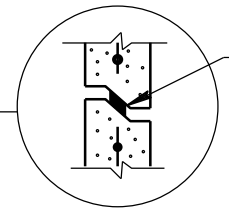
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



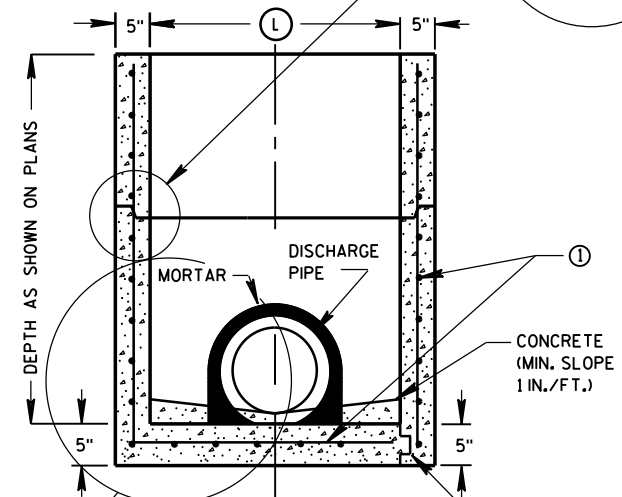
PLAN VIEW



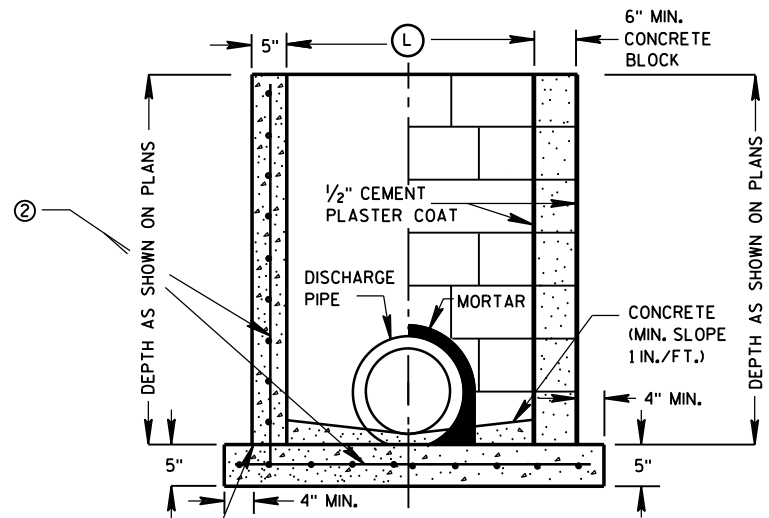
PLAN VIEW



RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



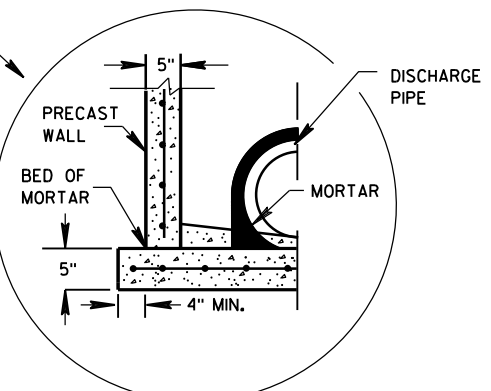
SECTION A-A



SECTION B-B

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE
 PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE
 KEYWAY

CONSTRUCTION JOINT
 CAST-IN-PLACE REINFORCED CONCRETE
 CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ①



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

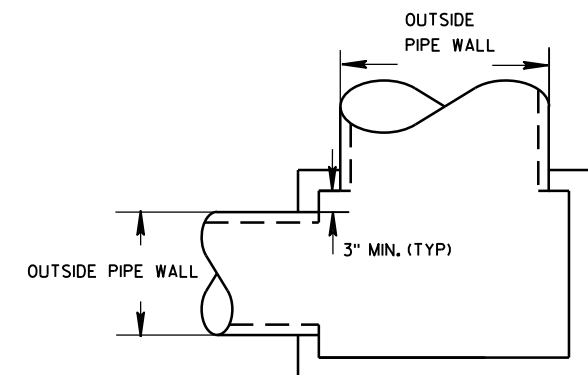
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	INLET COVER TYPE		ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



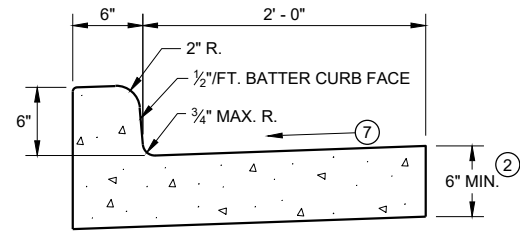
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

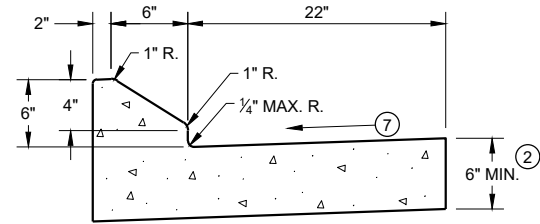
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

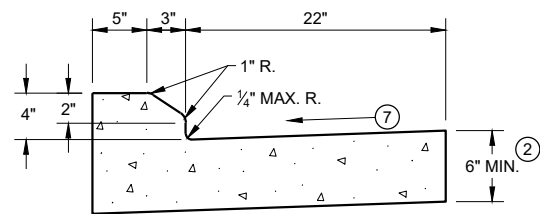
APPROVED
 Sept., 2016 /S/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT
 FHWA UNIT SUPERVISOR



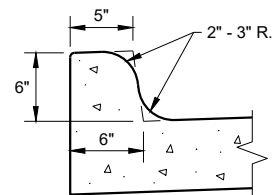
TYPES A^① & D



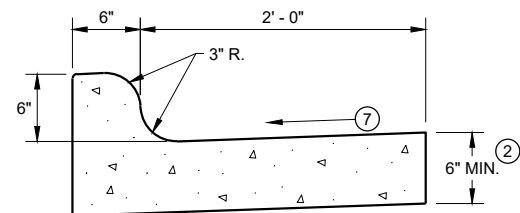
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

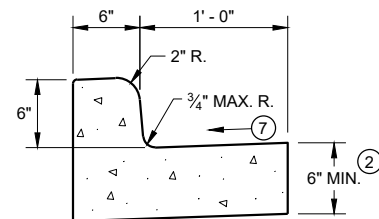


TYPES K^① & L
(OPTIONAL CURB SHAPE)



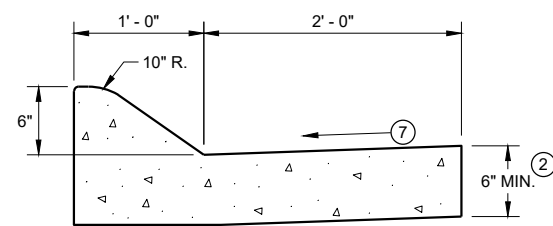
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

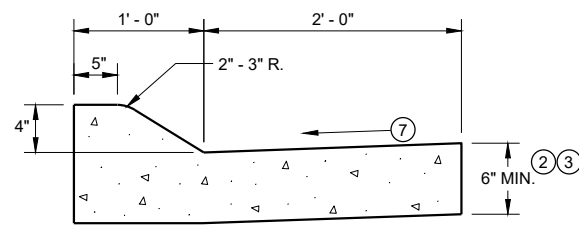


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

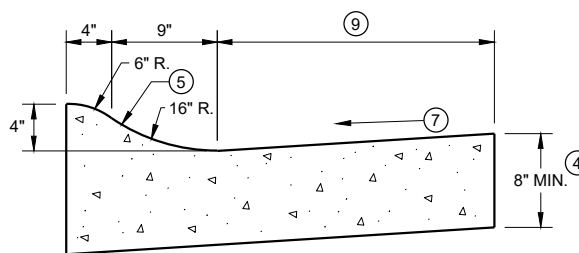


6" SLOPED CURB TYPES A^① & D



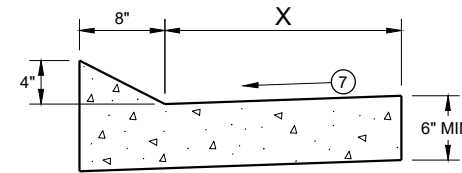
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

TBT & TBTT	X
30"	22"
36"	28"

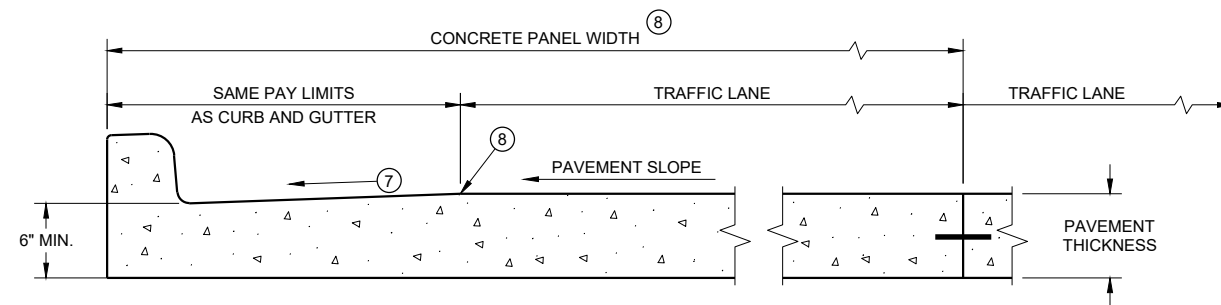


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

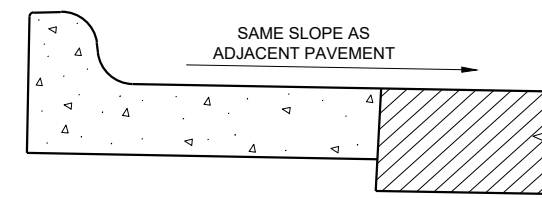
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

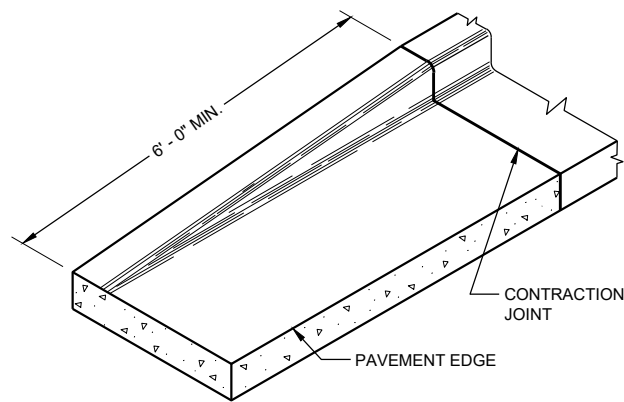
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

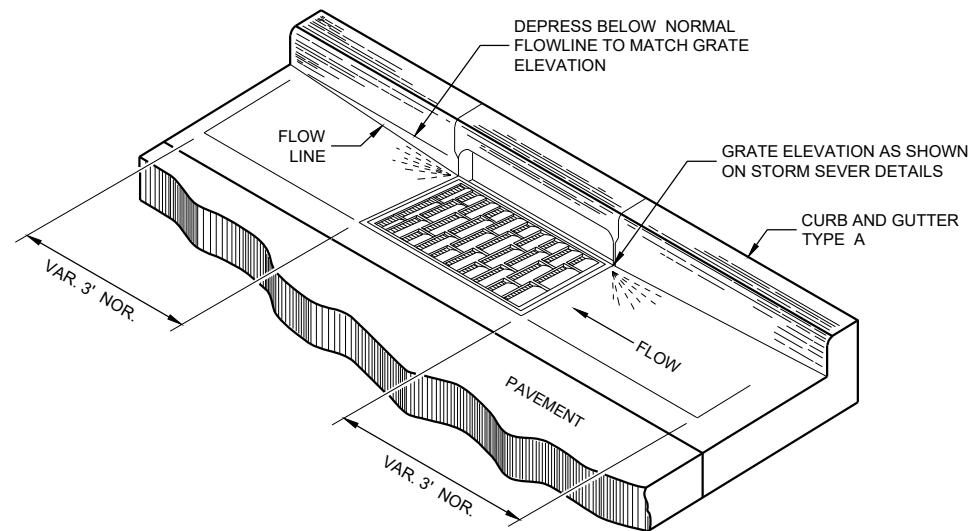
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

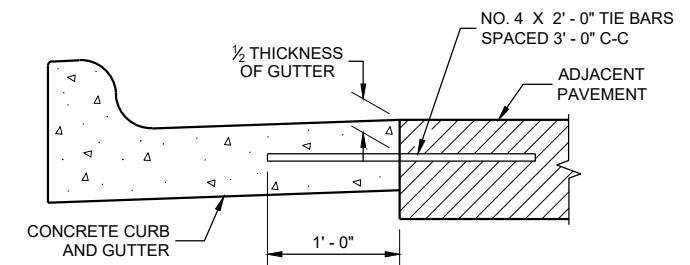
GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

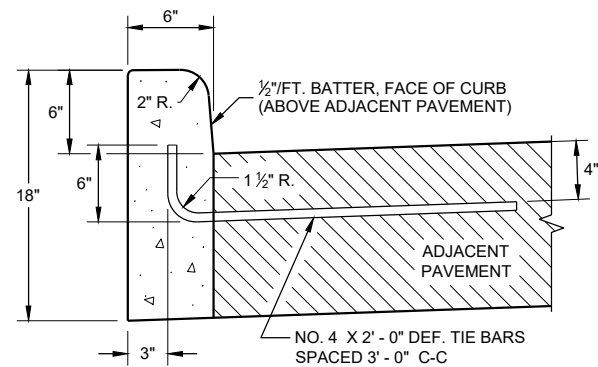
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

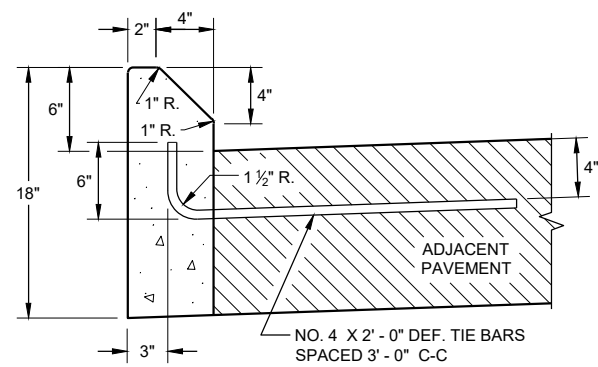
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION ①

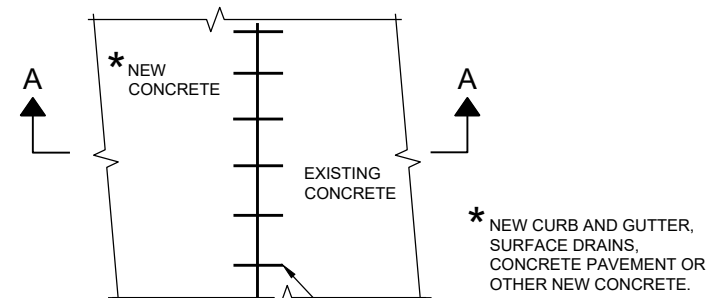


TYPES A ① & D

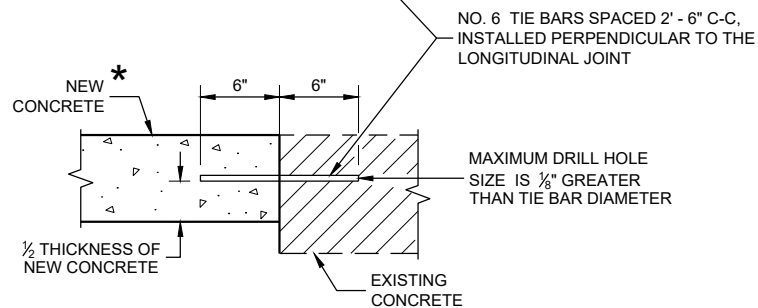


TYPES G ① & J

CONCRETE CURB

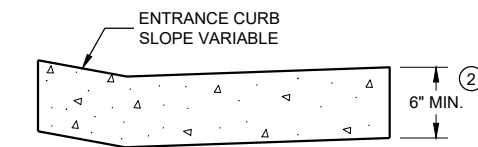


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



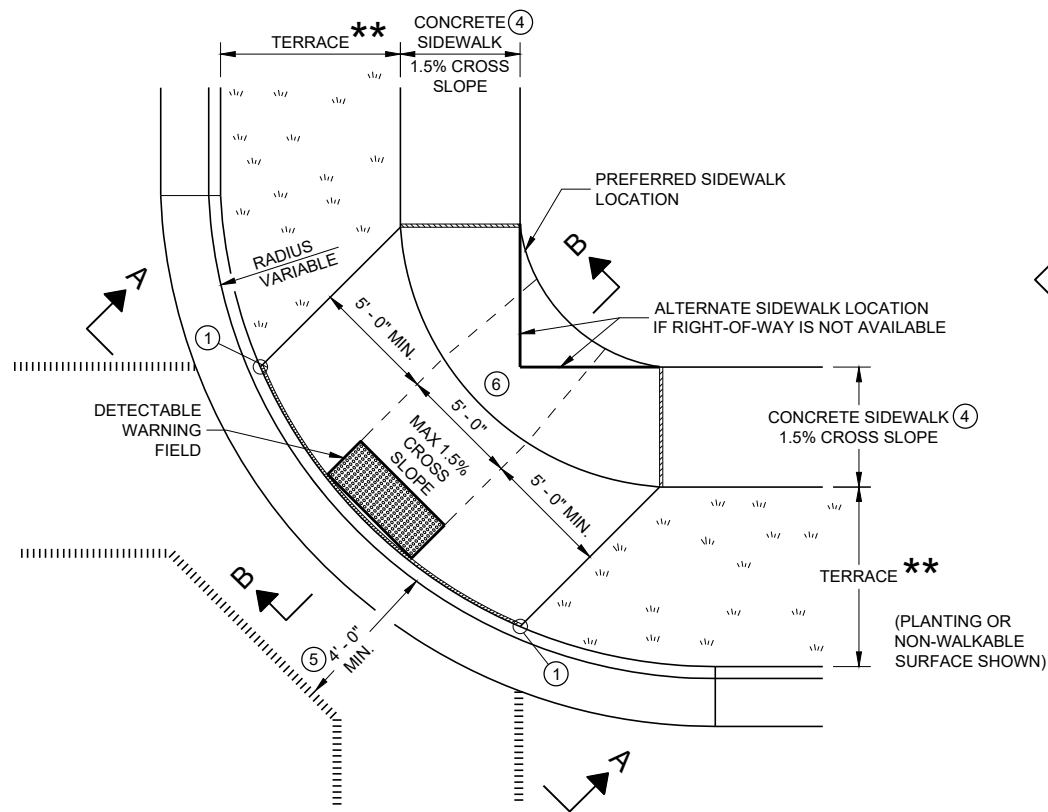
DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

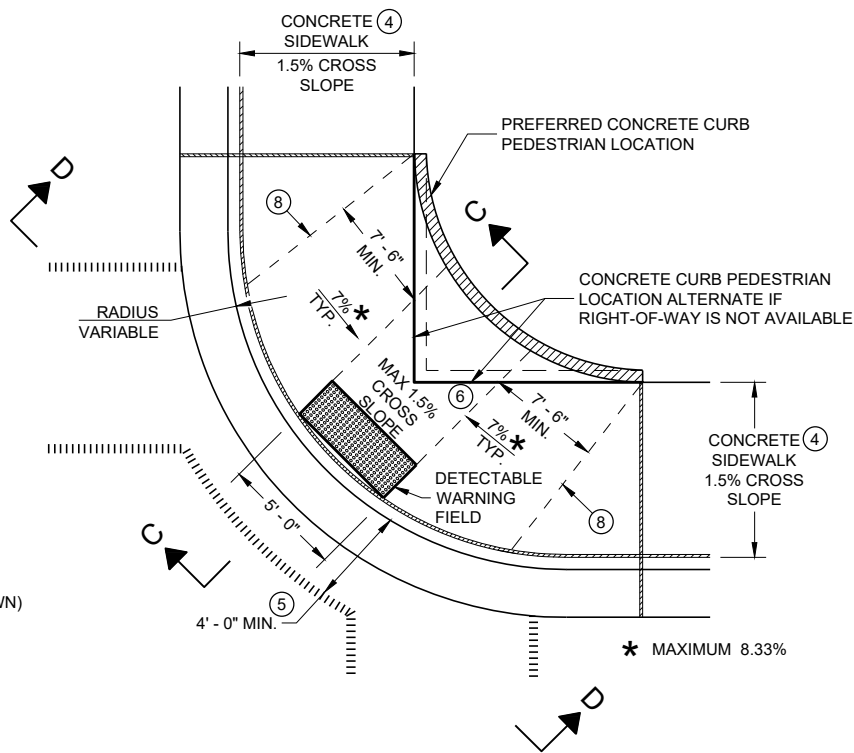
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

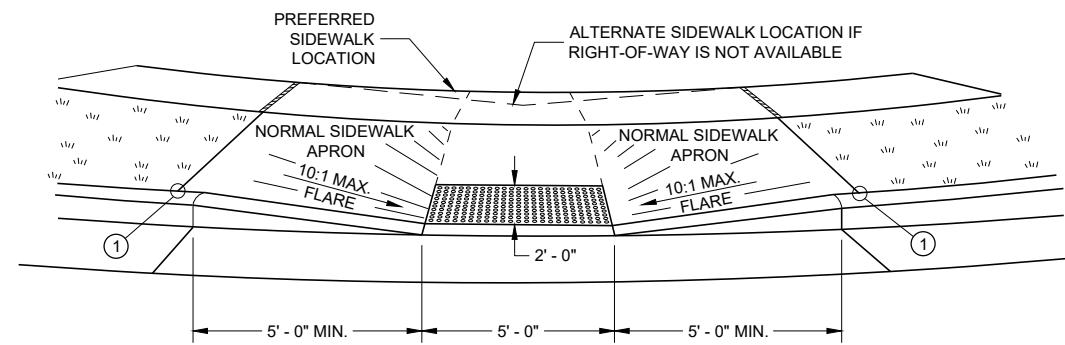
FHWA



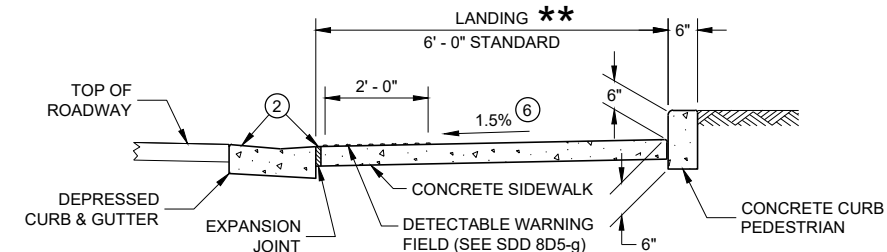
**PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)**



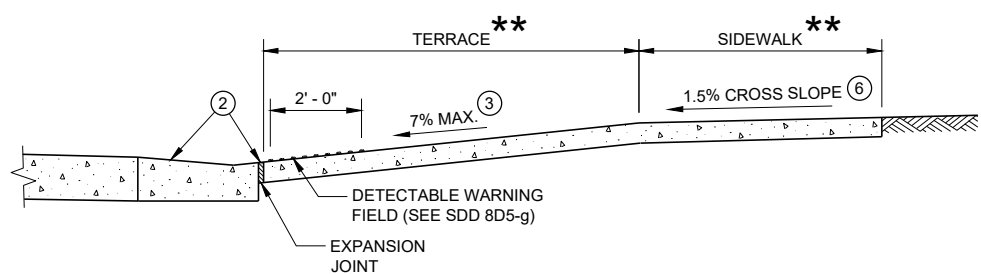
**PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)**



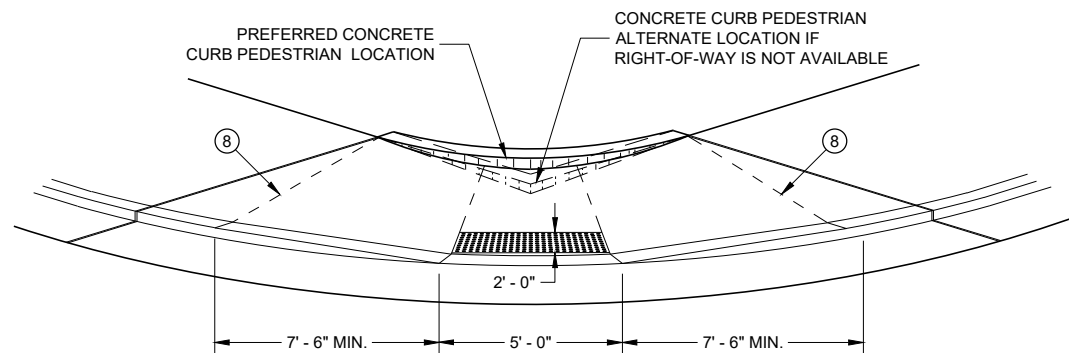
VIEW A - A FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

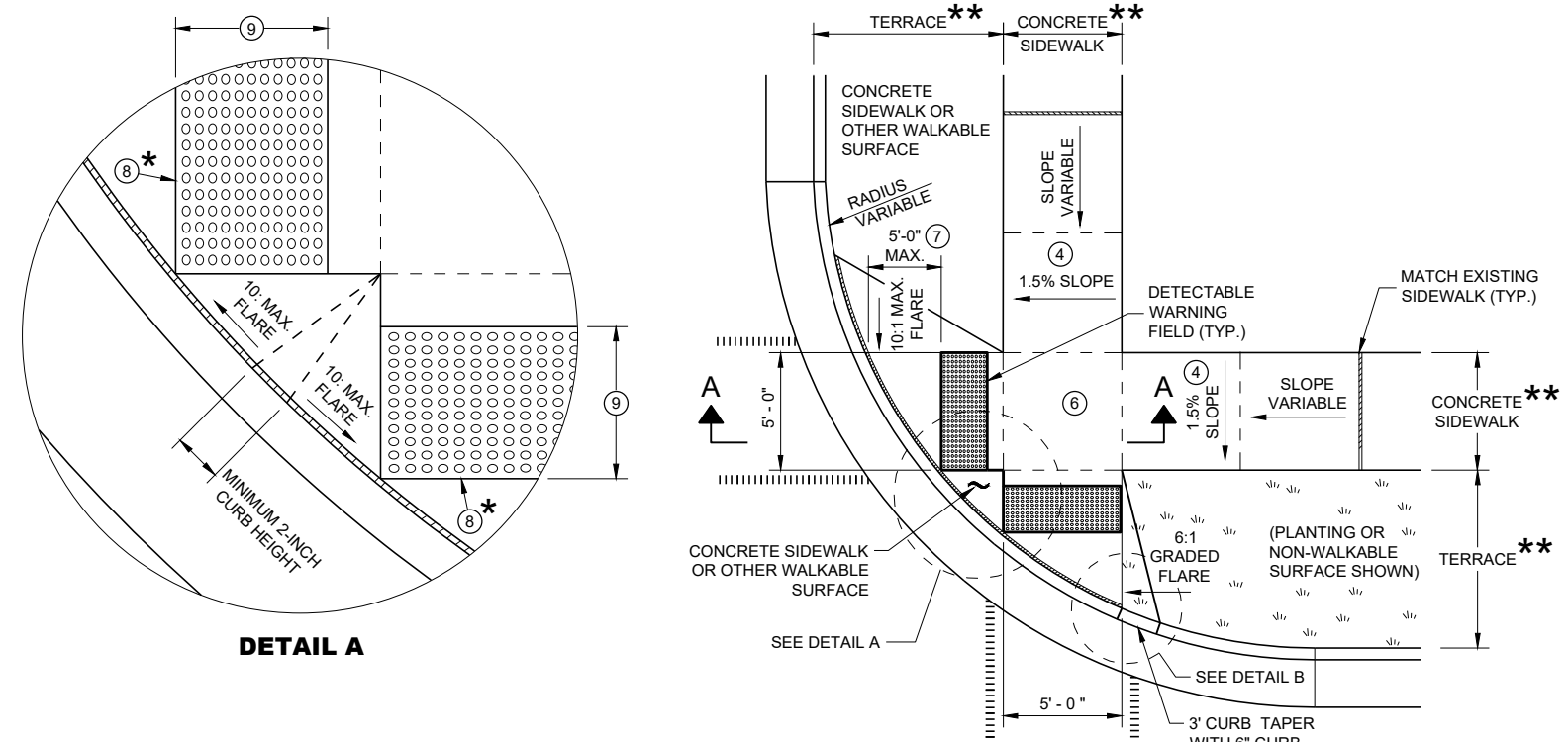
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
- TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.
- DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.
- SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

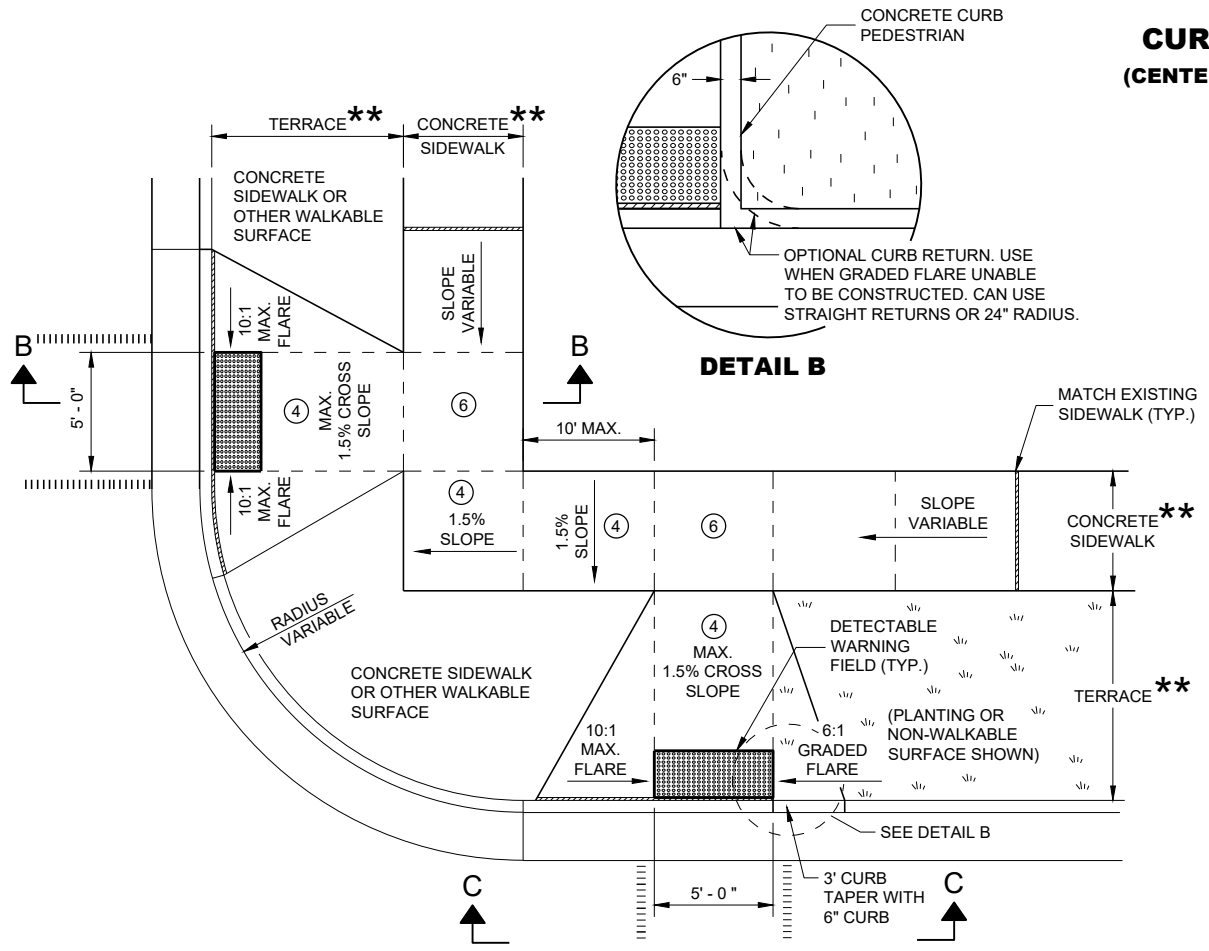
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS
TYPE 1 AND 1-A**

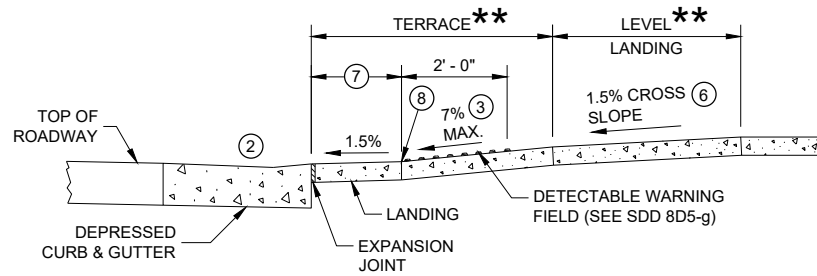
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



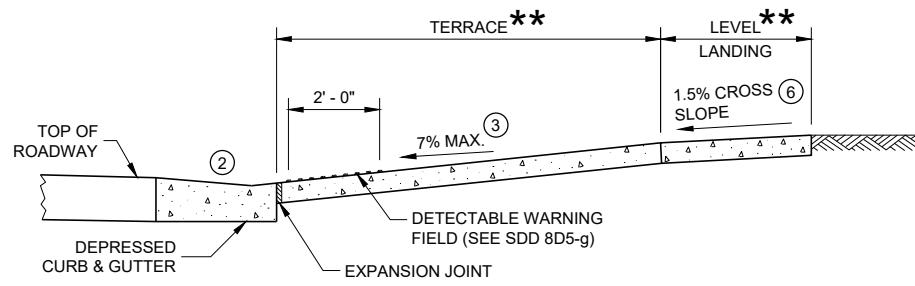
PLAN VIEW CURB RAMP TYPE 2 (CENTER OF CORNER RADIUS)



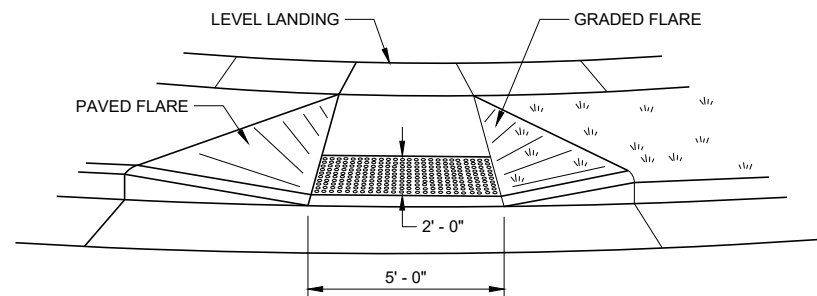
PLAN VIEW CURB RAMP TYPE 3 (OUTSIDE OF CROSSWALK AREA)



SECTION A - A FOR TYPE 2



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

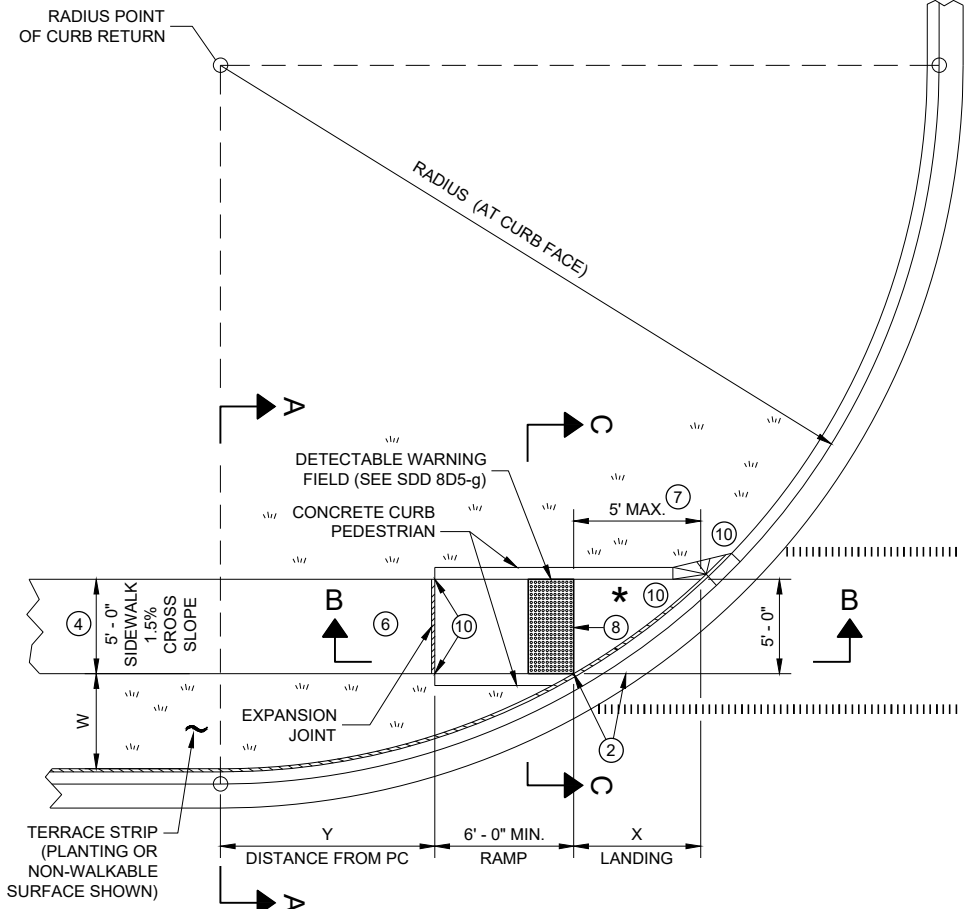
** WIDTH SHOWN ELSEWHERE IN THE PLANS

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS
TYPE 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

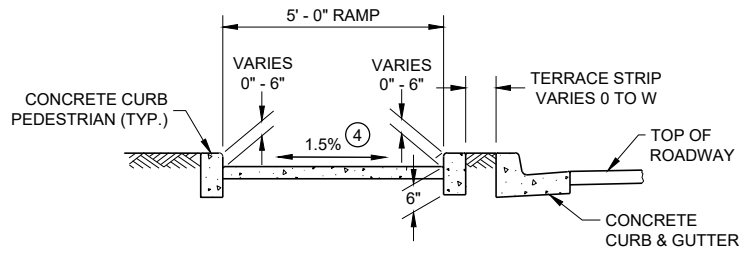
INTERMEDIATE RADII CAN BE INTERPOLATED
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

LEGEND

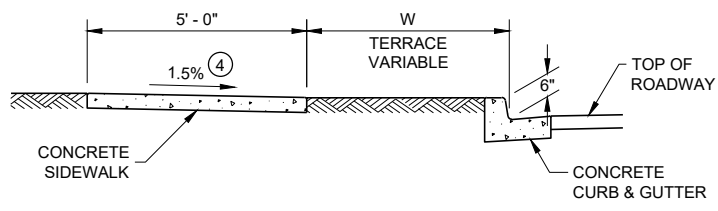
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/8" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

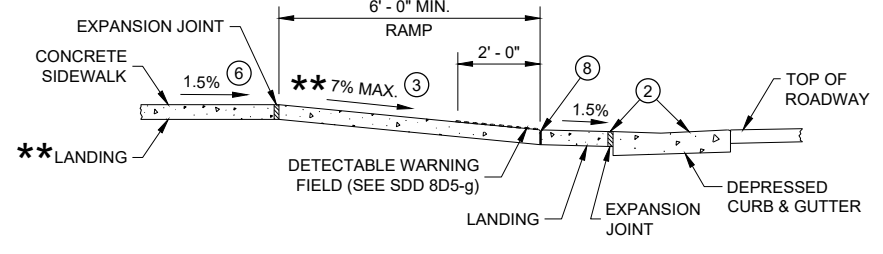


SECTION C - C FOR TYPE 4B



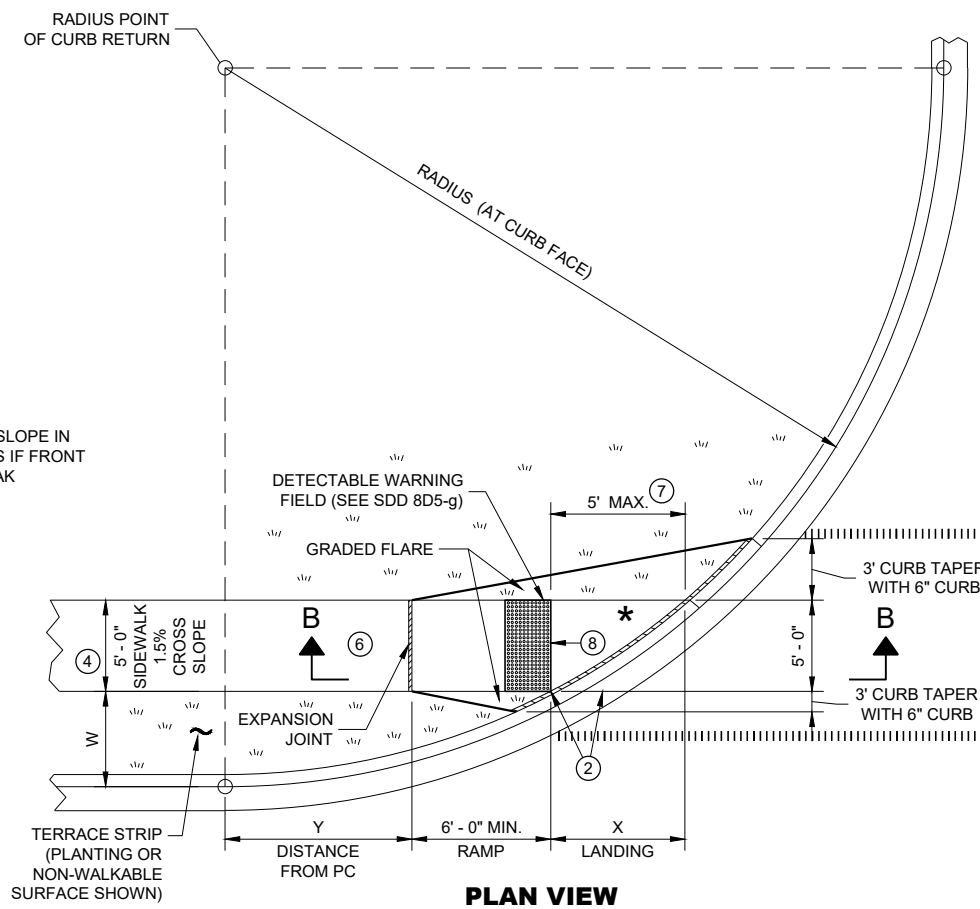
SECTION A - A FOR TYPE 4B

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

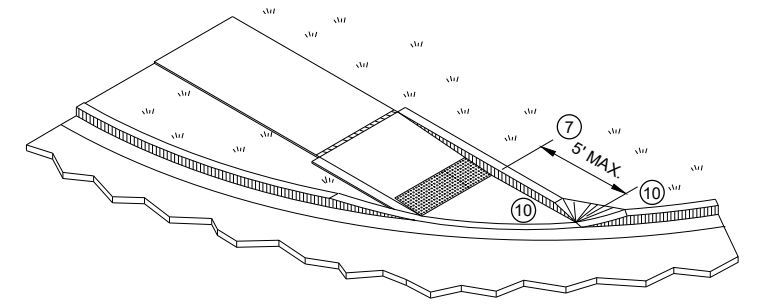


SECTION B - B FOR TYPE 4B AND TYPE 4B1

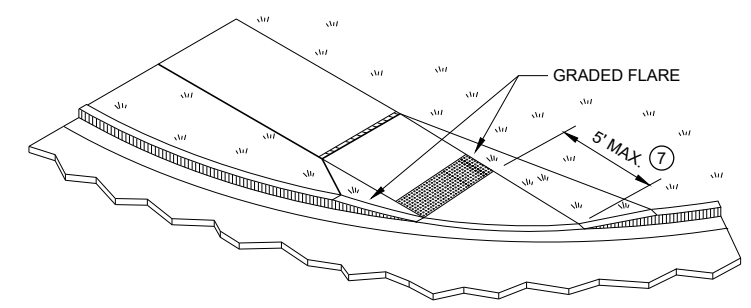
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



PLAN VIEW CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B

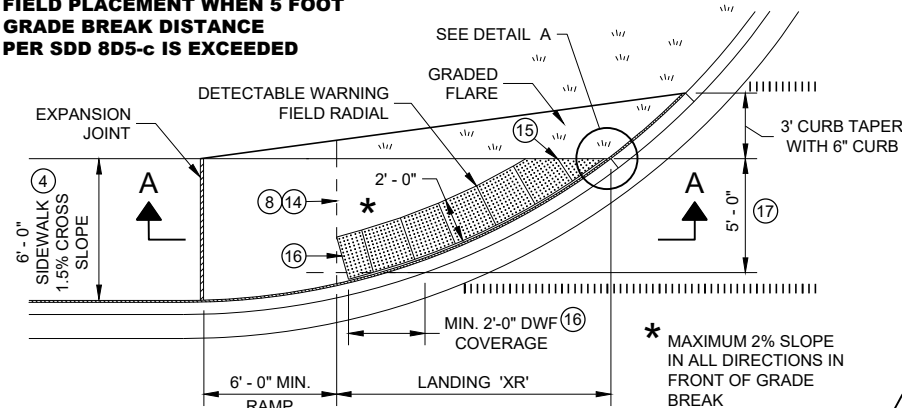


ISOMETRIC VIEW FOR TYPE 4B1

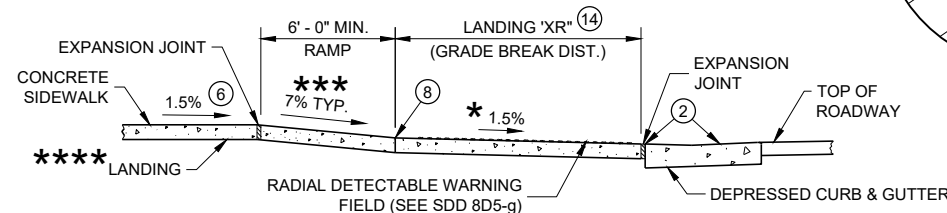
CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW CURB RAMP TYPE 4A1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)

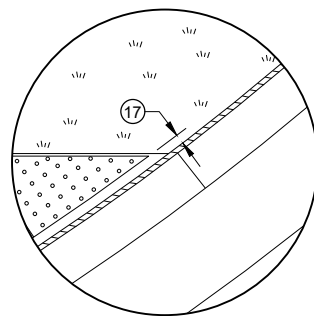


SECTION A - A FOR TYPE 4A1

**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - - - CONTRACTION JOINT SIDEWALK
 - ||||| PAVEMENT MARKING CROSSWALK (WHITE)

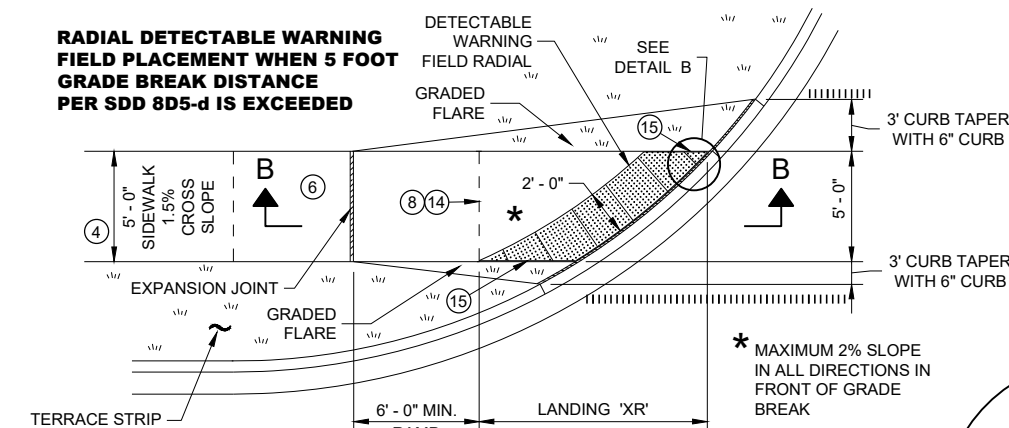


DETAIL A

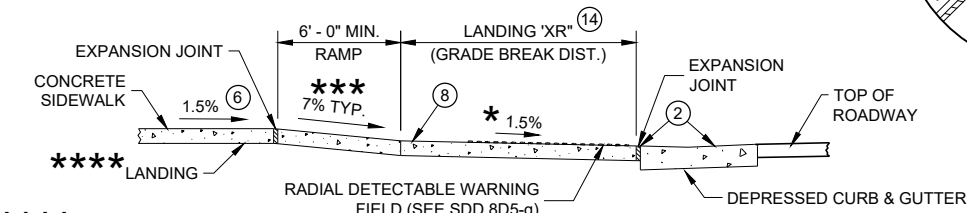
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
 - 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
 - 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
 - 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
 - 17 A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



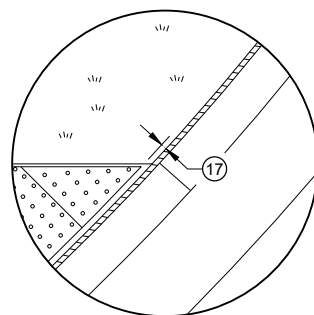
PLAN VIEW CURB RAMP TYPE 4B1 (GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

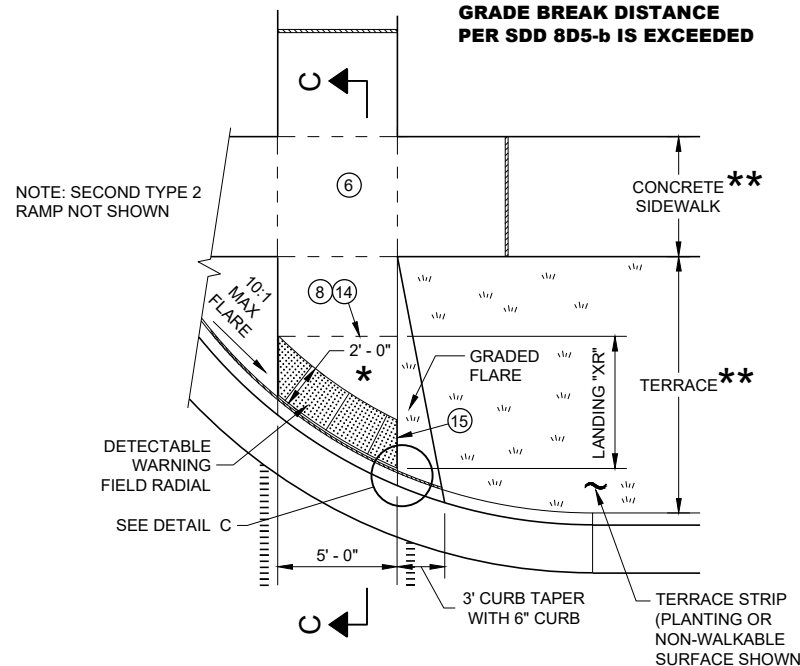
**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%



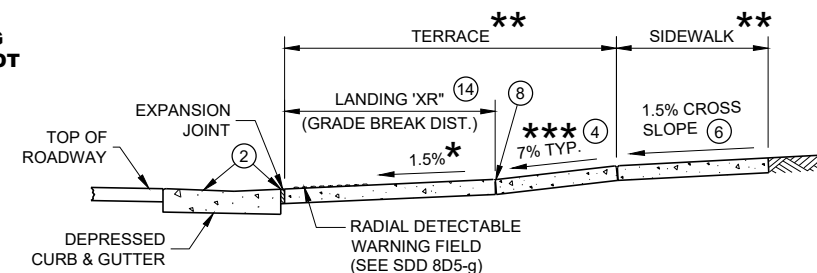
DETAIL B

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED



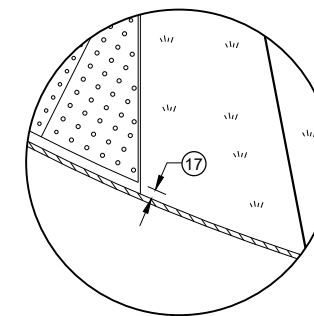
PLAN VIEW CURB RAMP TYPE 2 (GRADE BREAK DISTANCE GREATER THAN 5 FEET) (ON LINE WITH SIDEWALK)

NOTE: SECOND TYPE 2 RAMP NOT SHOWN



SECTION C - C FOR TYPE 2

- * MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- *** MAXIMUM 8.33%



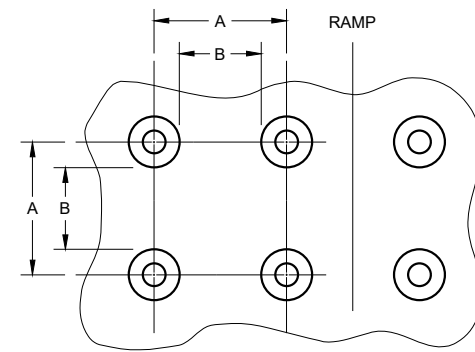
DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

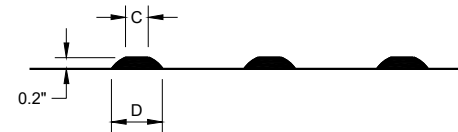
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

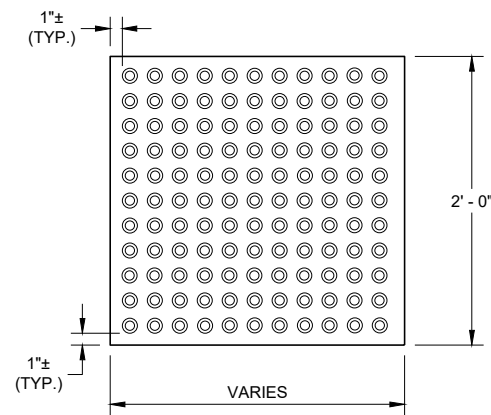


PLAN VIEW

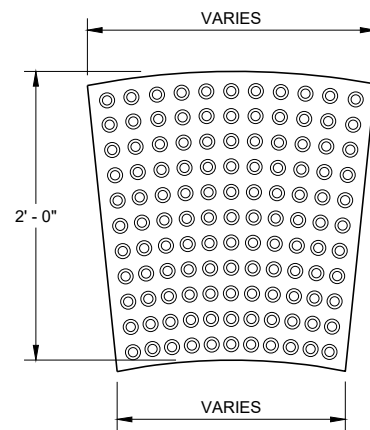


ELEVATION VIEW

**TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL**

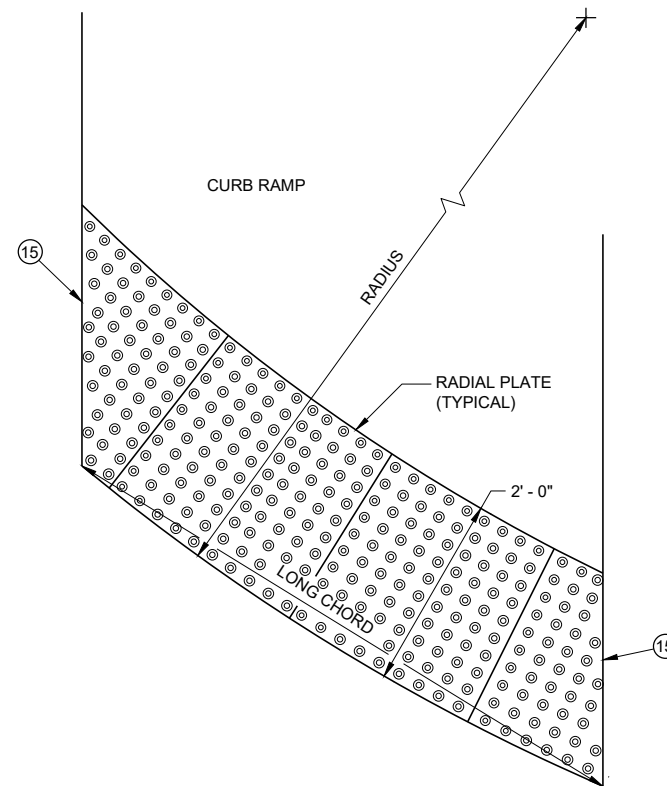


**RECTANGULAR
PLATES**

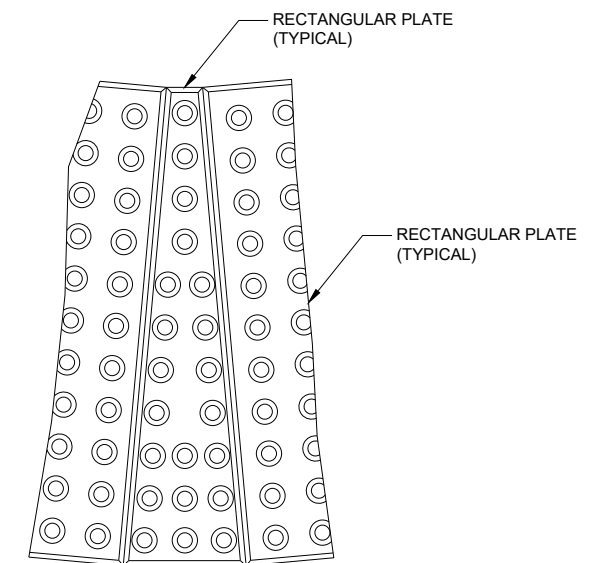


**RADIAL
PLATES**

**PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)**



**PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES**



**PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL**

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

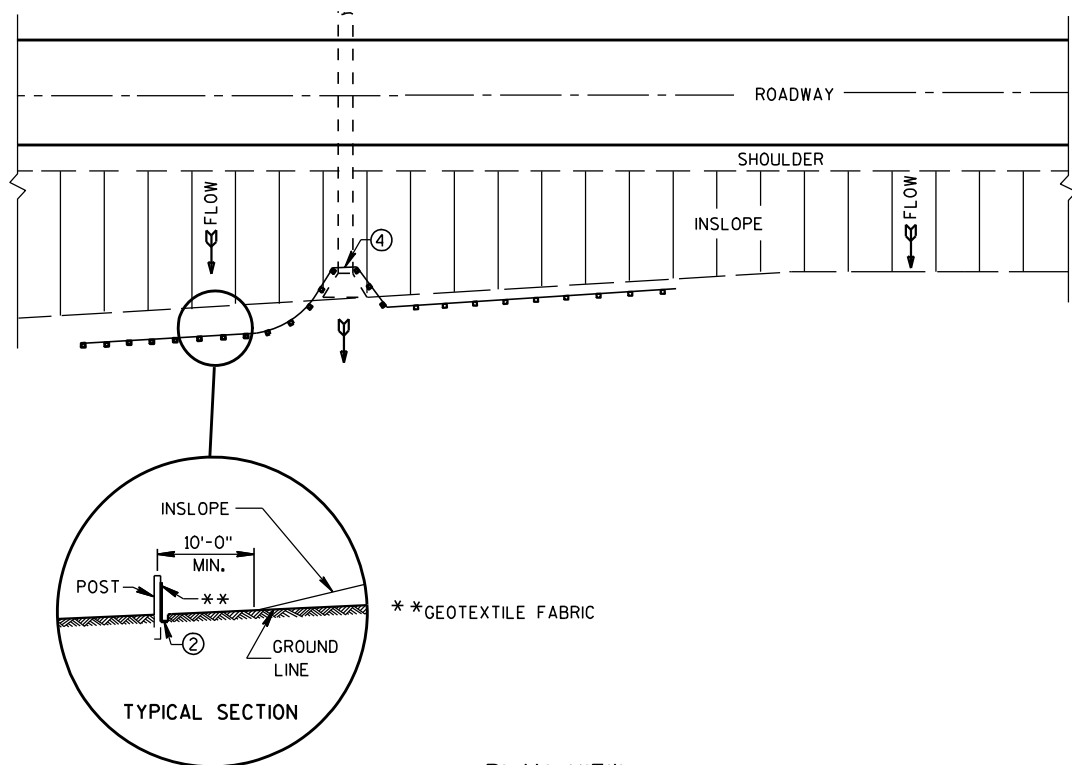
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

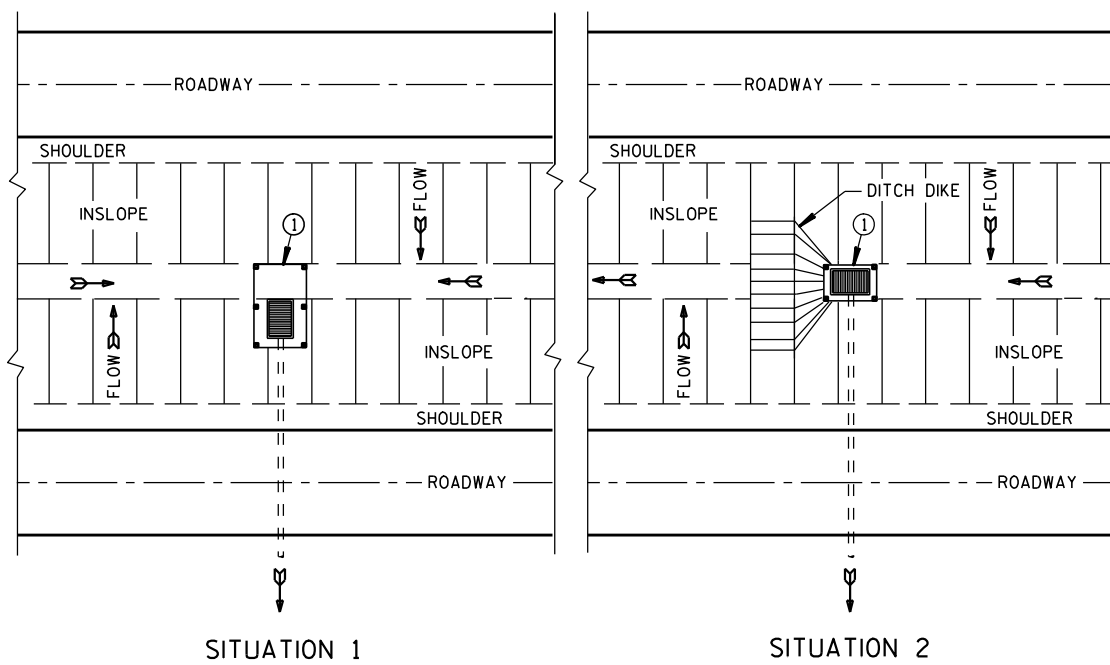
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

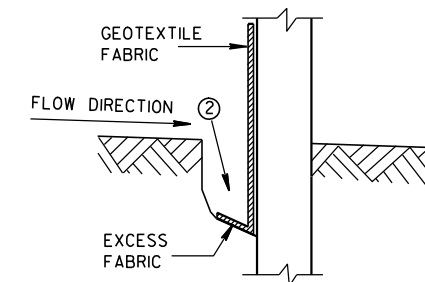


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

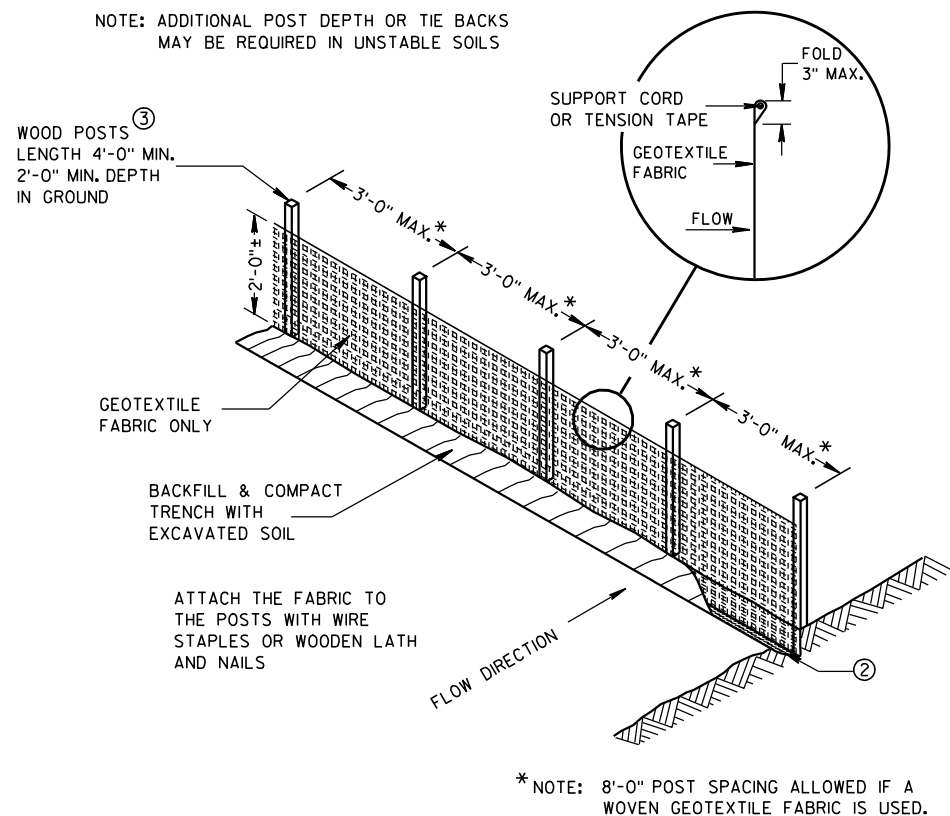
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

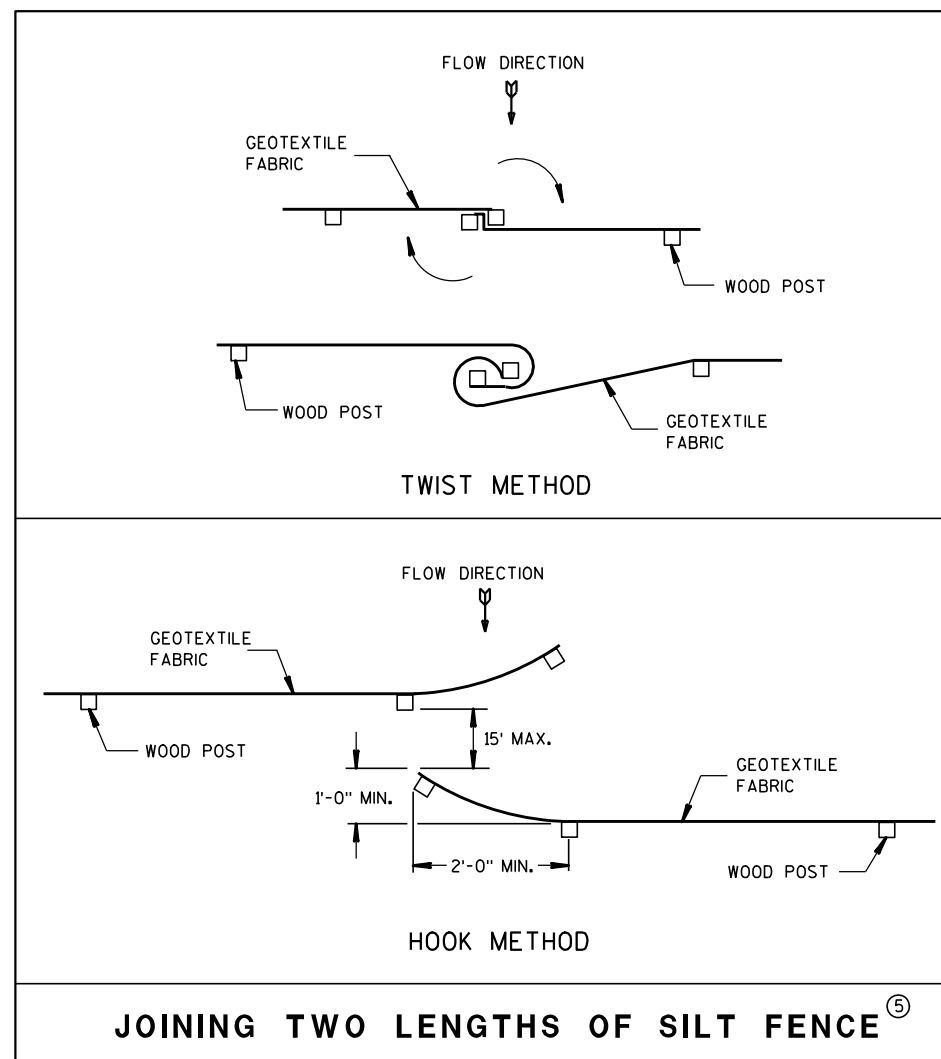
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



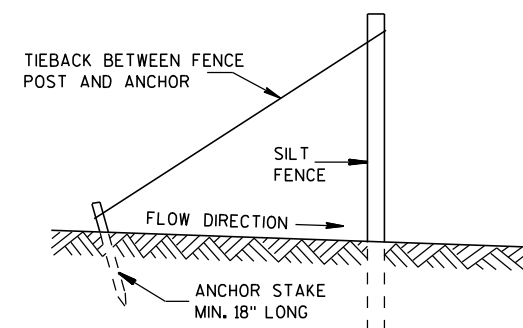
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

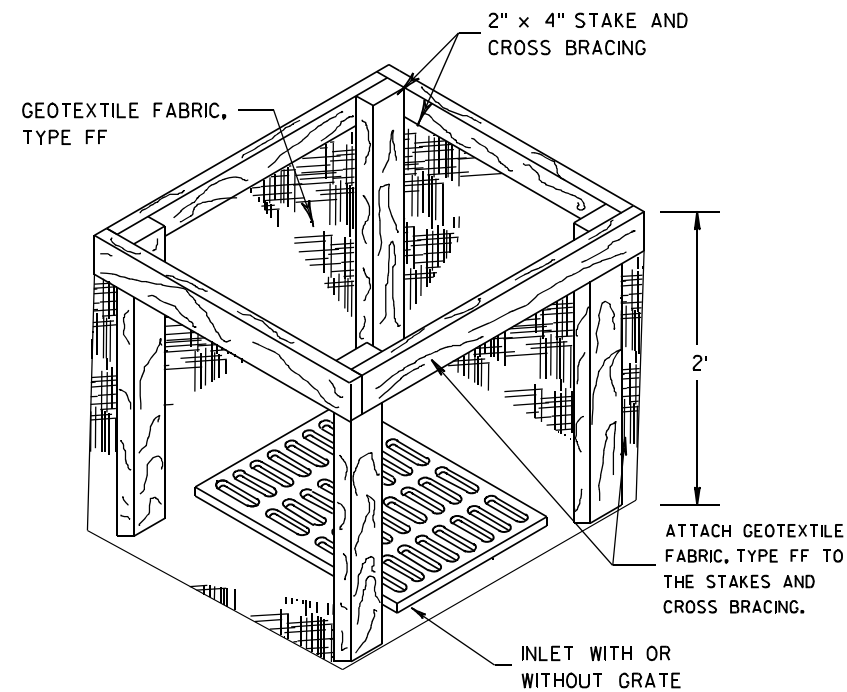
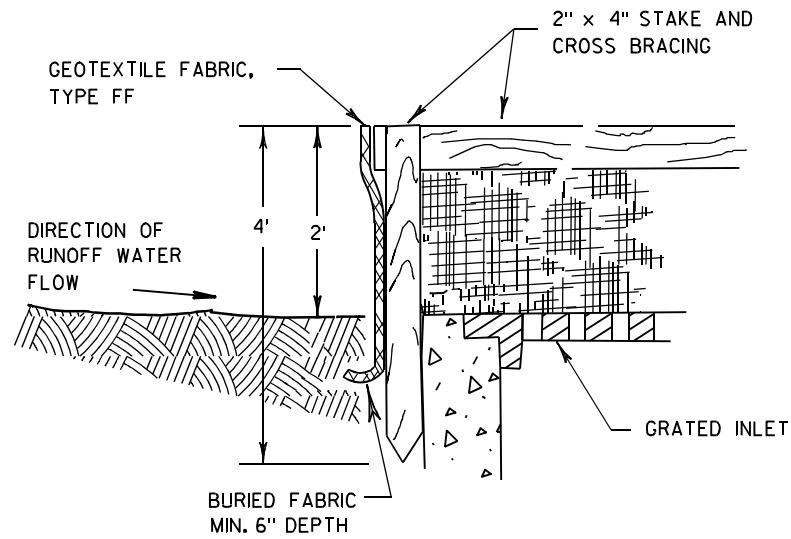


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Cannestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



INLET PROTECTION, TYPE A

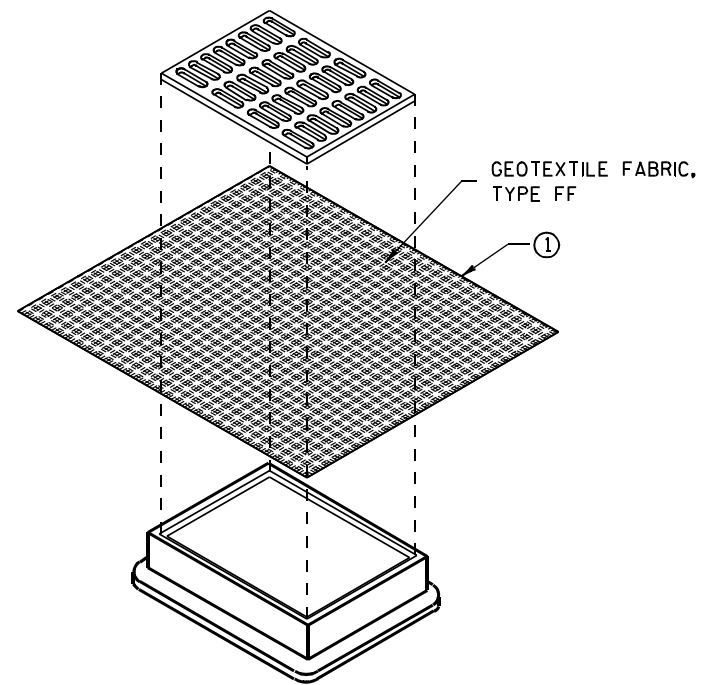
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

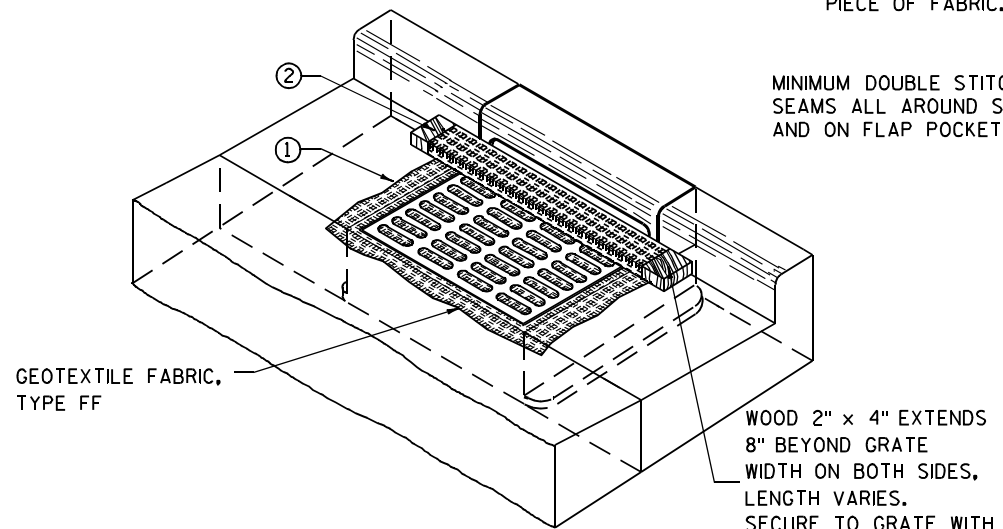
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

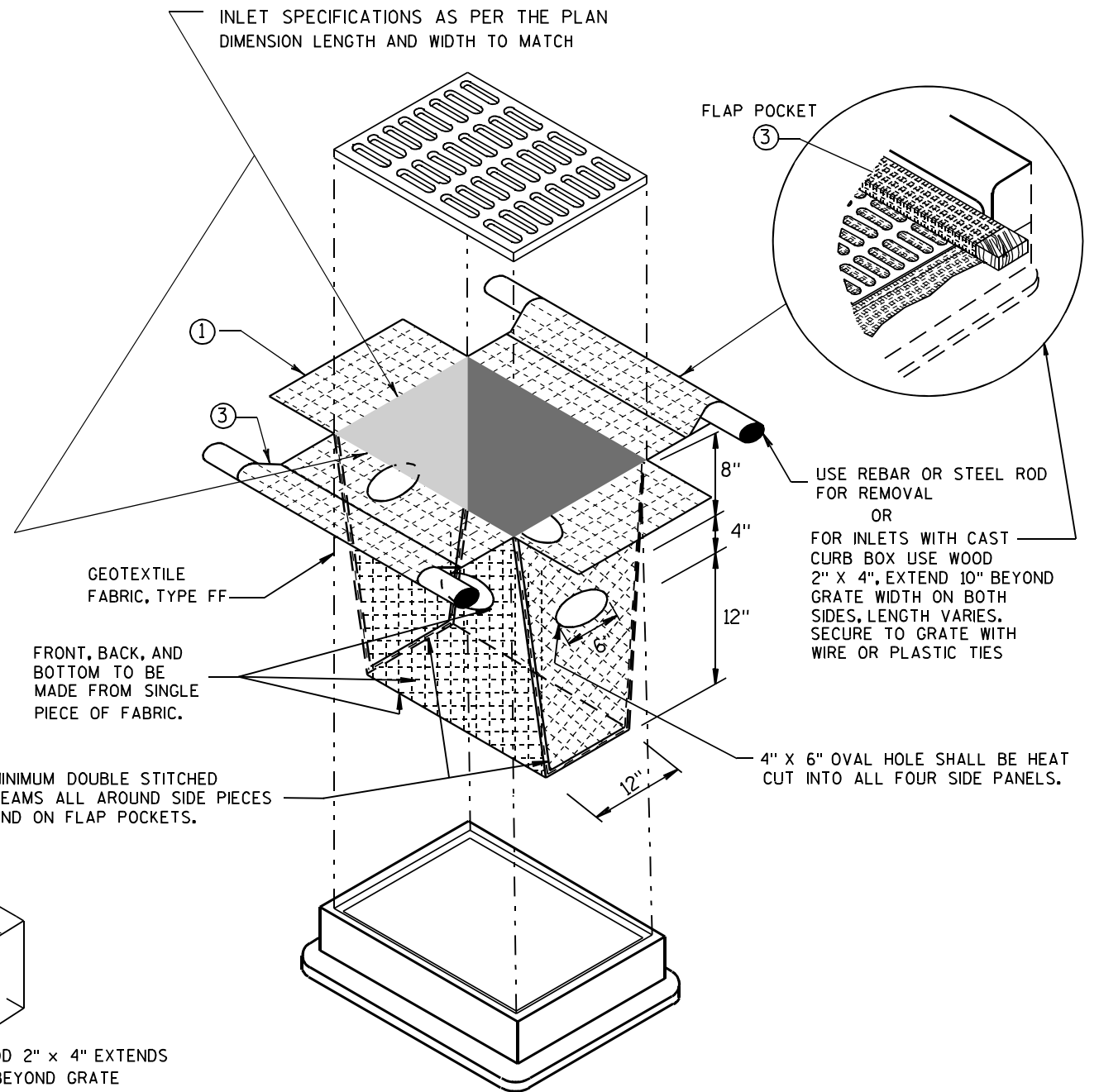
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

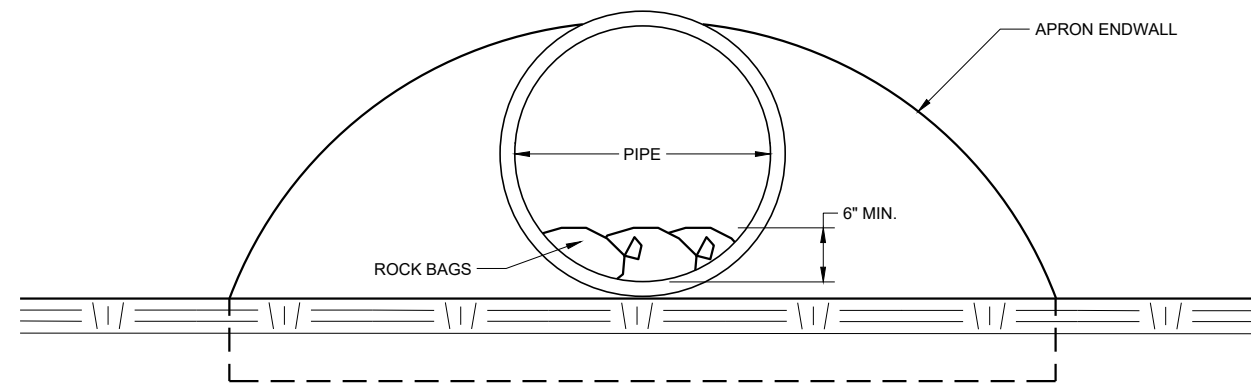
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



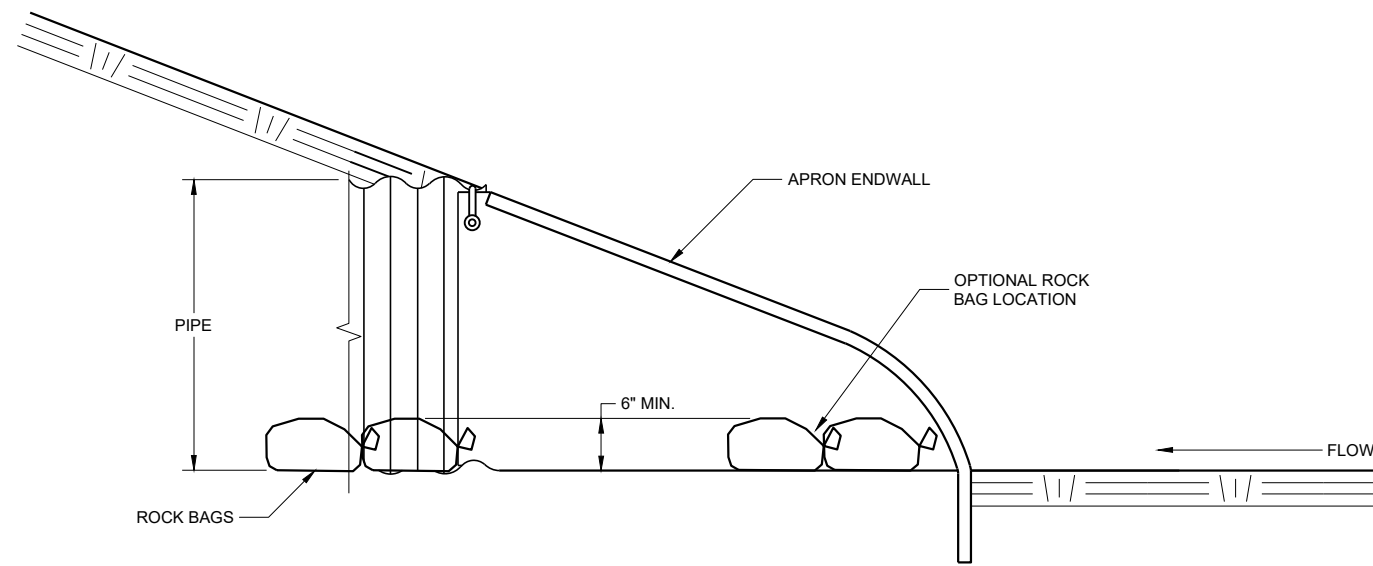
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/16/02 DATE	/s/ Beth Conestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



END VIEW



SIDE VIEW

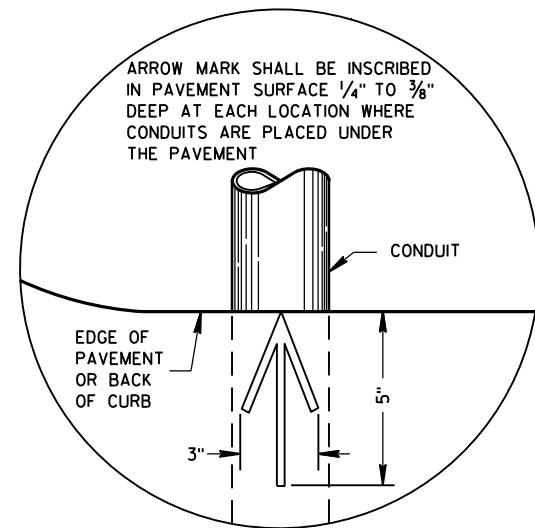
CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

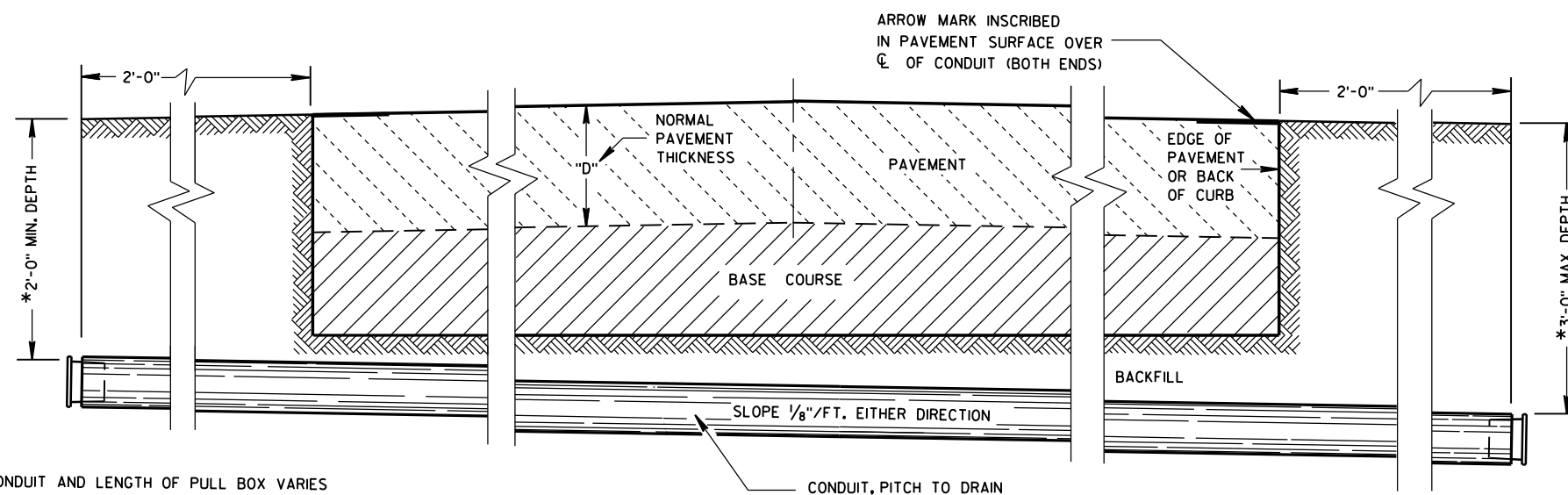
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Daniel Schave
DATE EROSION CONTROL ENGINEER

FHWA



**PLAN VIEW
ARROW MARK**



**SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS**

*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSON TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

6

6

S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

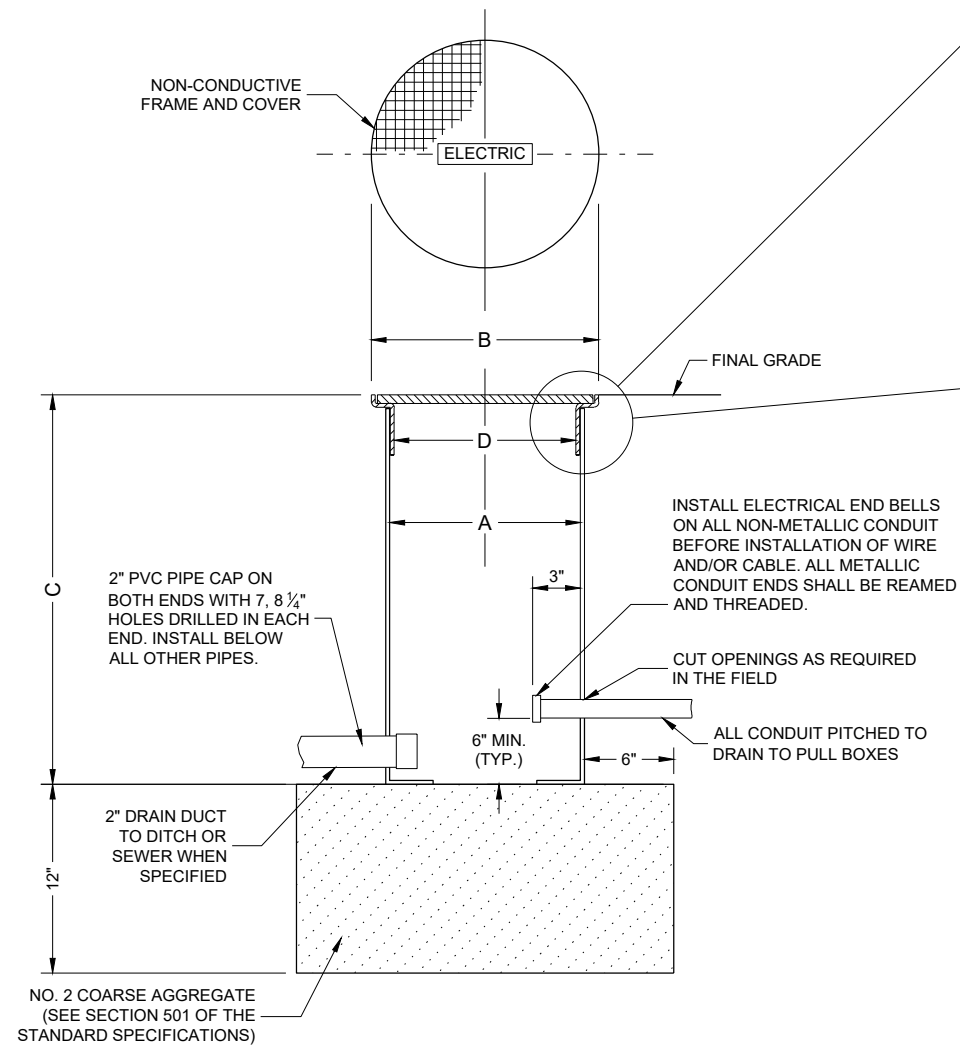
CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

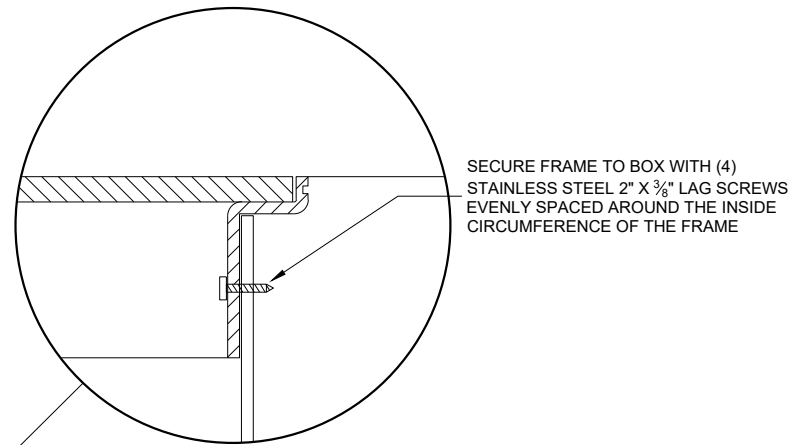
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 1/2	22 1/2
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

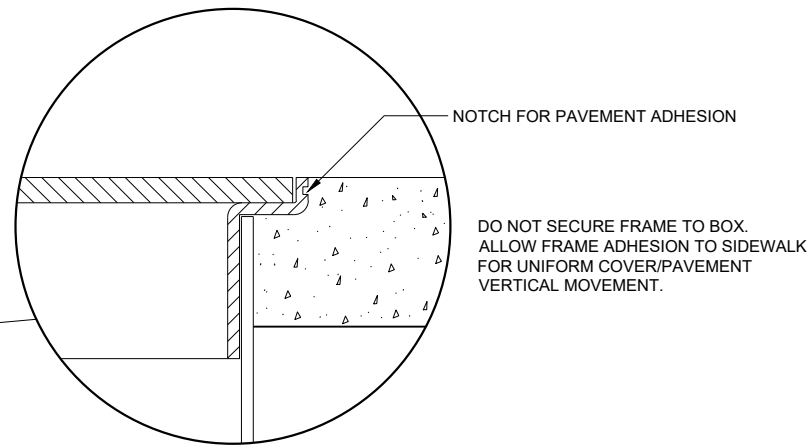
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



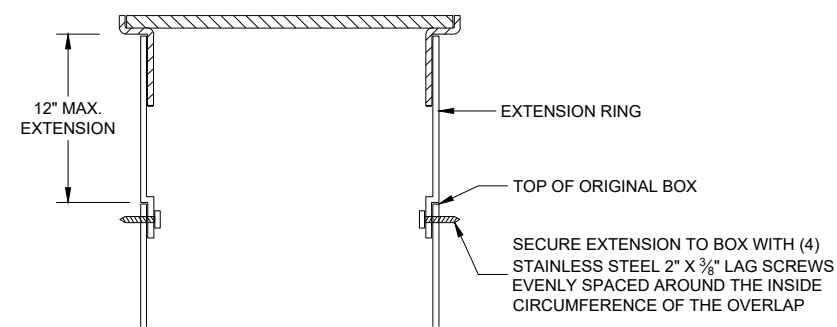
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

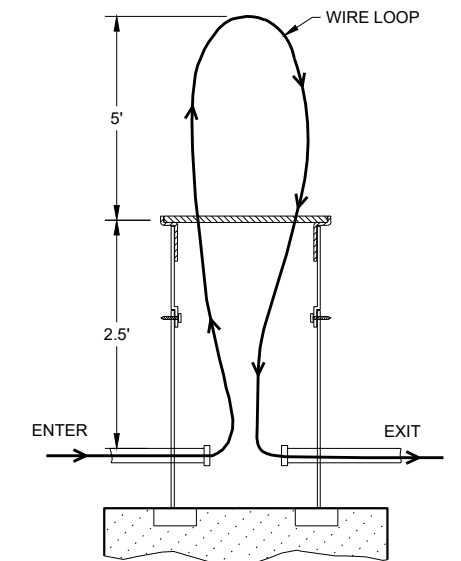
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

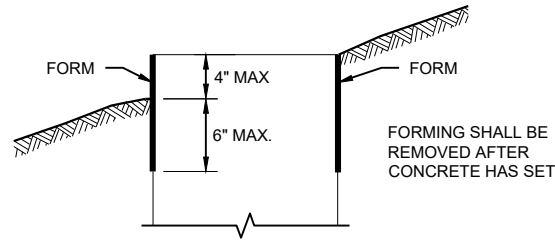
PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2022 /S/ Ahmet Demirelek
 DATE STATE ELECTRICAL ENGINEER

FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

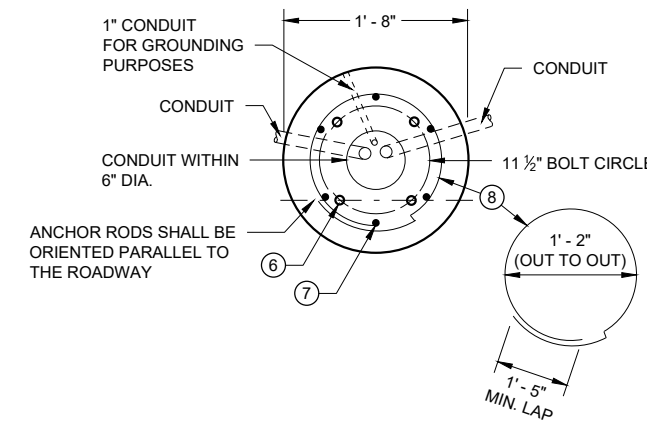
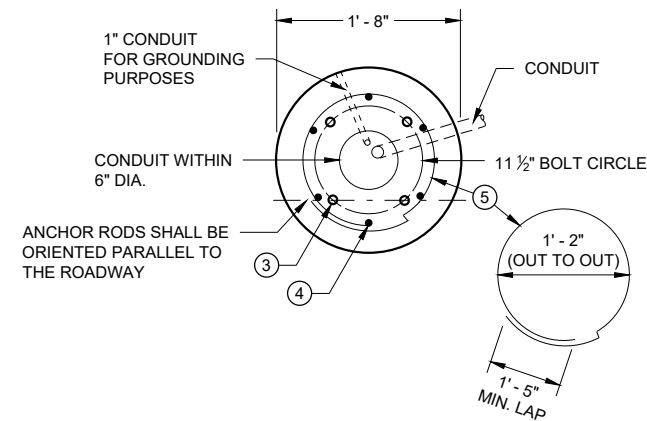
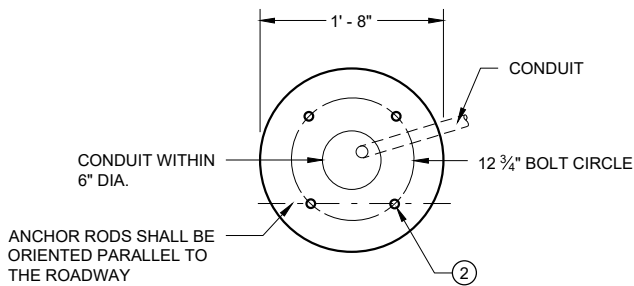
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

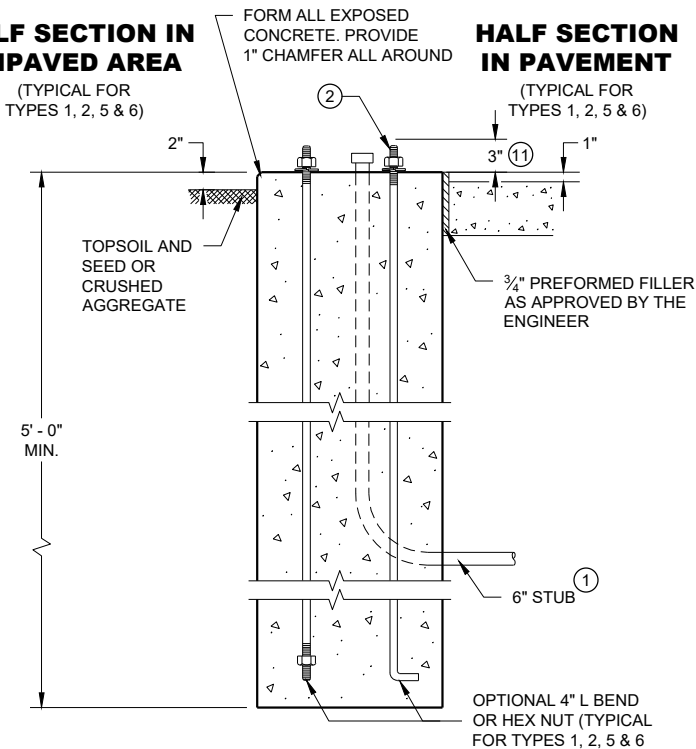
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

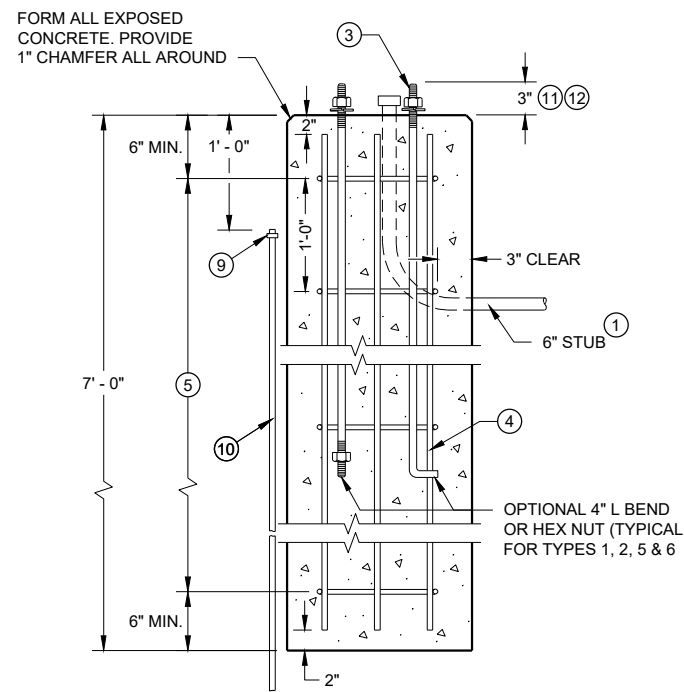


HALF SECTION IN UNPAVED AREA

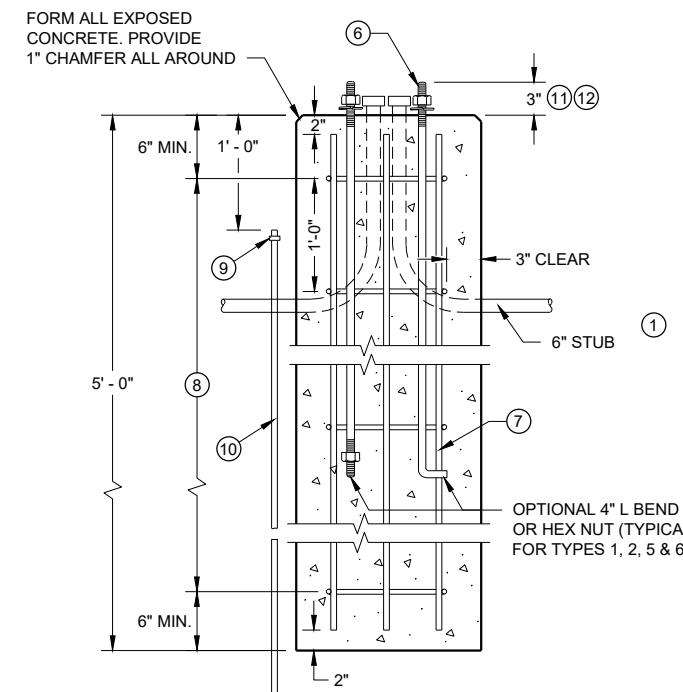


TYPE 1

HALF SECTION IN PAVEMENT



TYPE 2



TYPE 5 & 6

CONCRETE BASES

**CONCRETE BASES
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

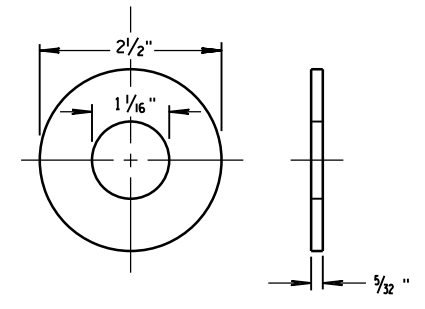
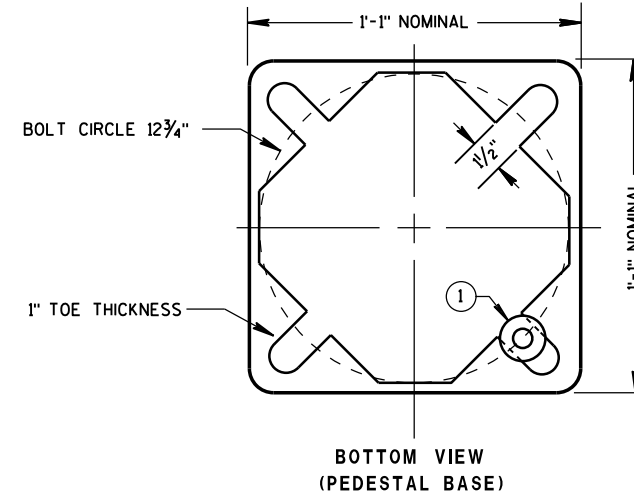
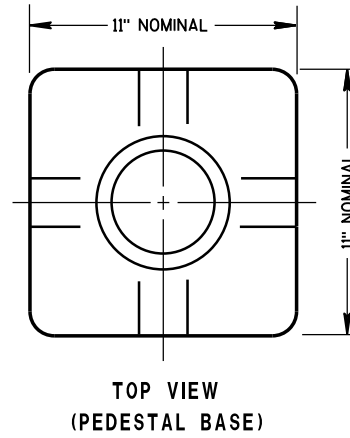
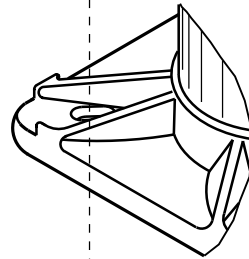
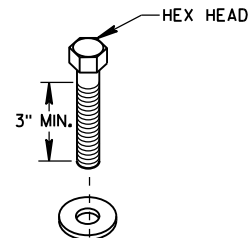
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

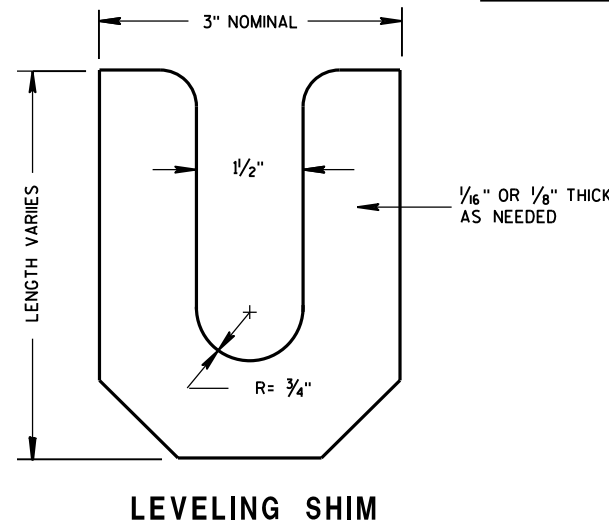
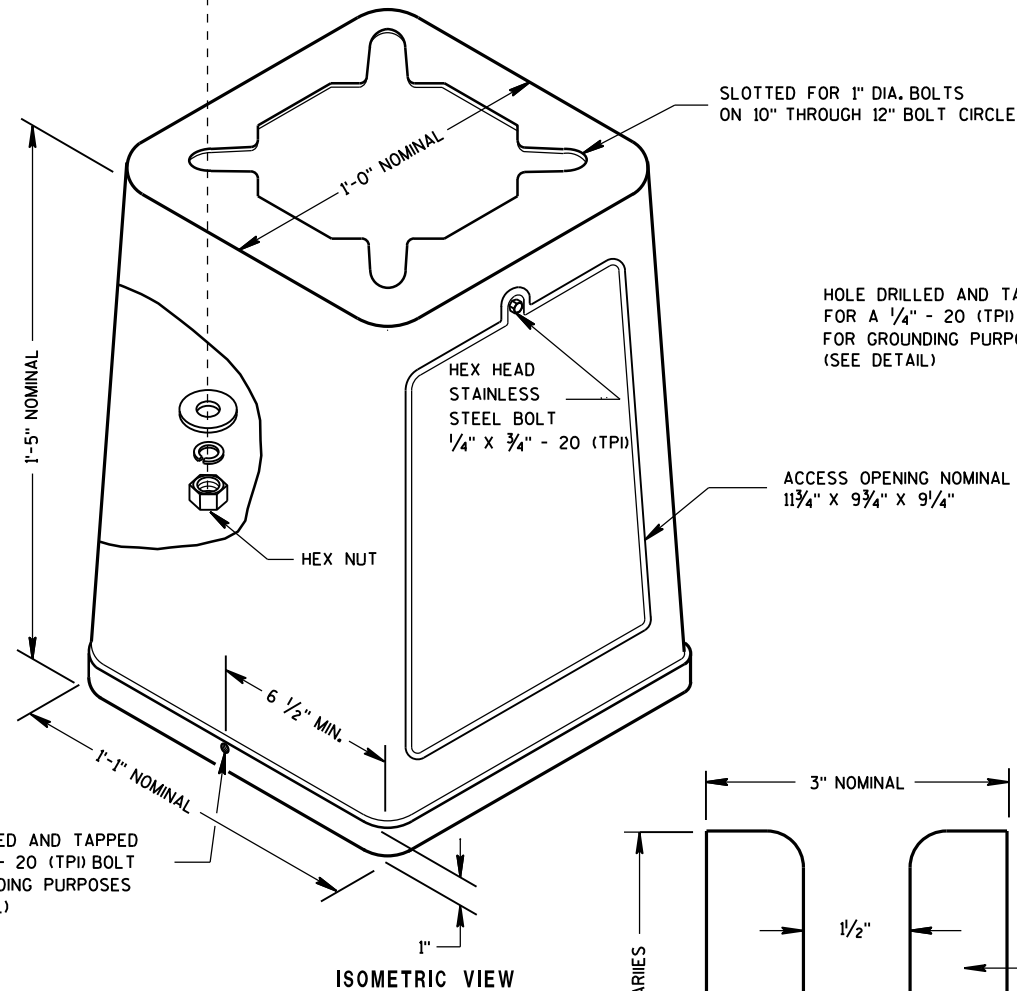
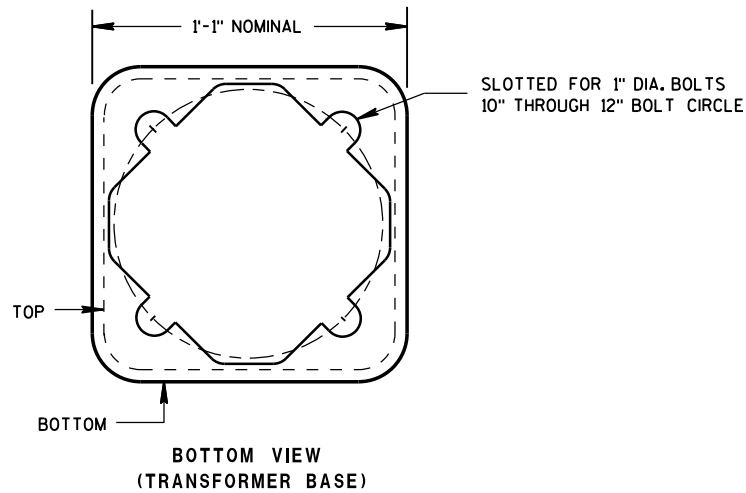
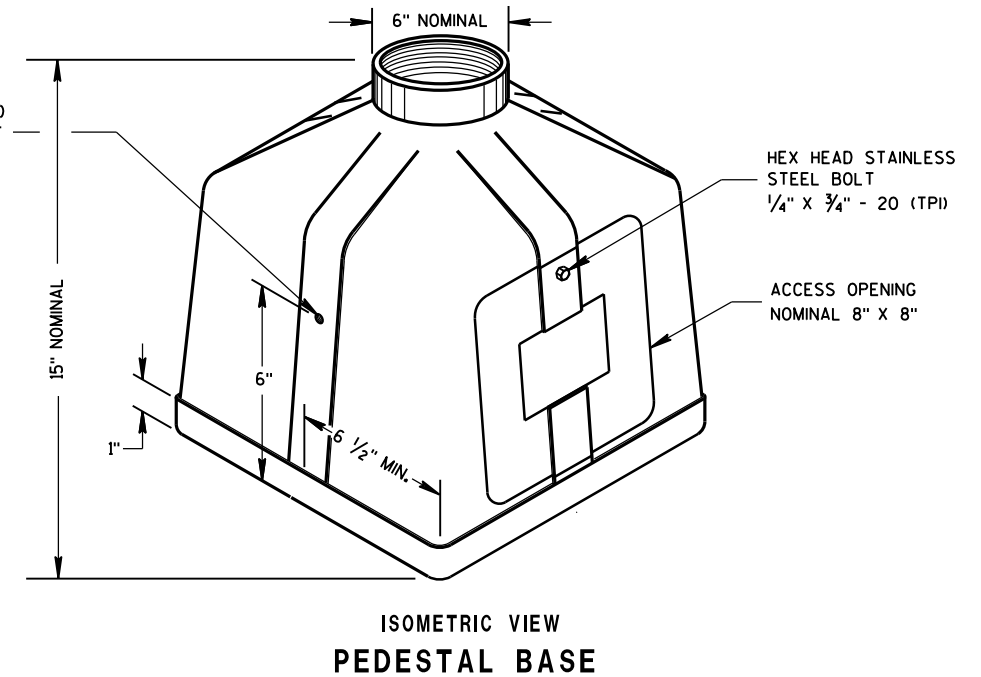
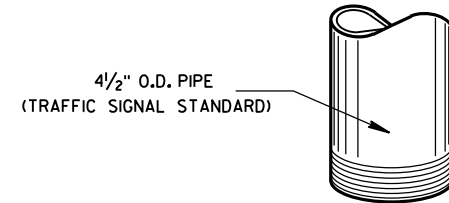
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

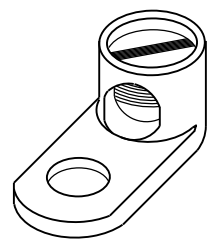


ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER ①



TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

TRANSFORMER/PEDESTAL BASES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

CONDUIT SIZE AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4-FOOT COIL OF WIRE ABOVE THE CONCRETE BASE, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL WAY SHALL BE 24-INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36-INCHES, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

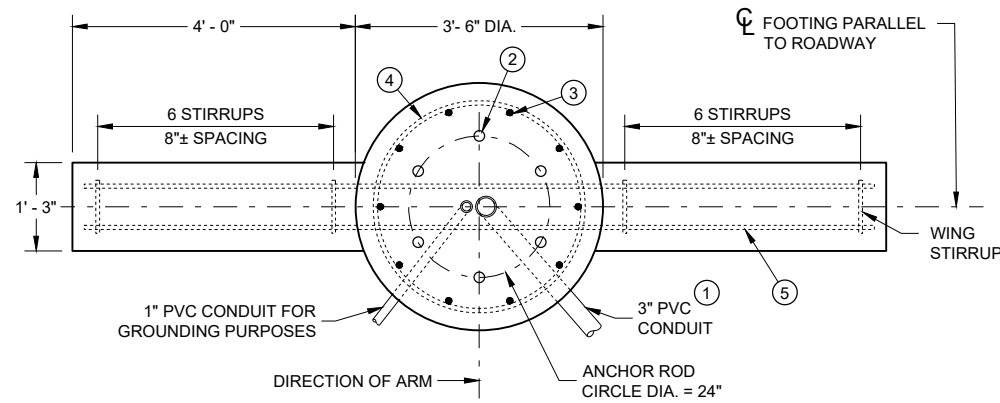
② (6) 1 3/4" DIA. X 7' - 2" ANCHOR RODS

③ (10) NO. 6 X 14' - 1" BAR STEEL VERTICAL REINFORCEMENT.

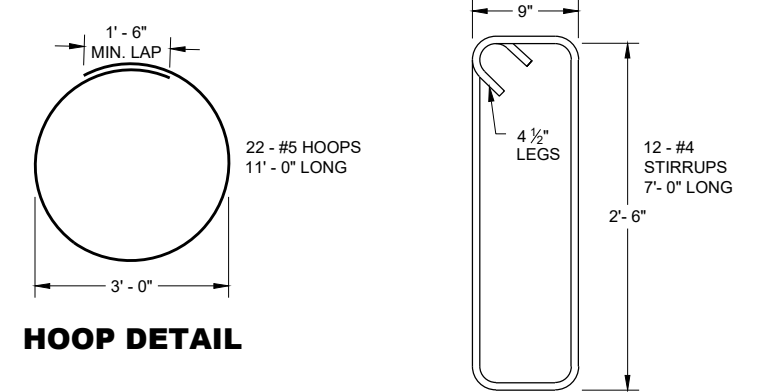
④ (22) NO. 5 X 11' - 0" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

⑤ (10) NO. 5 X 11' - 0" BAR STEEL HORIZONTAL REINFORCEMENT

CONCRETE MASONRY.....fc = 3,500 p.s.i.
 HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
 ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
 TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.

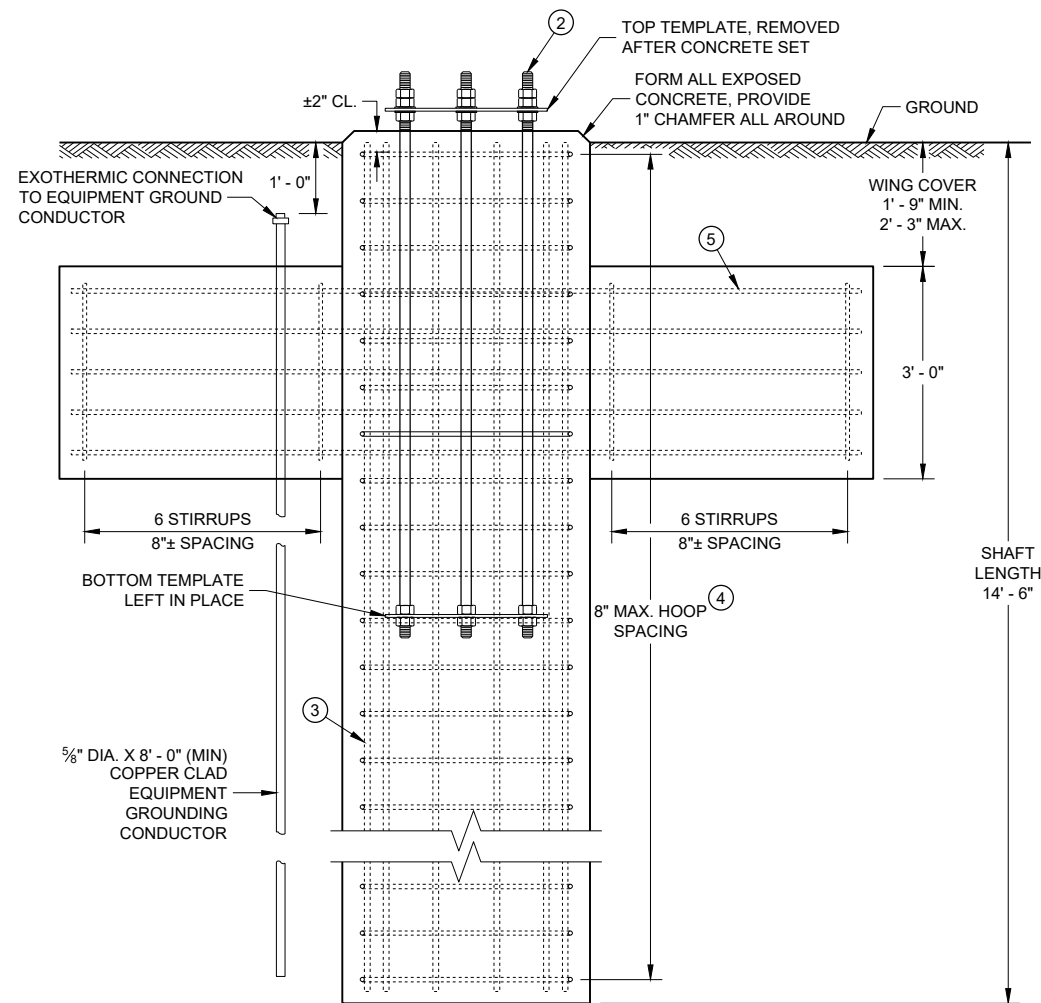


PLAN VIEW

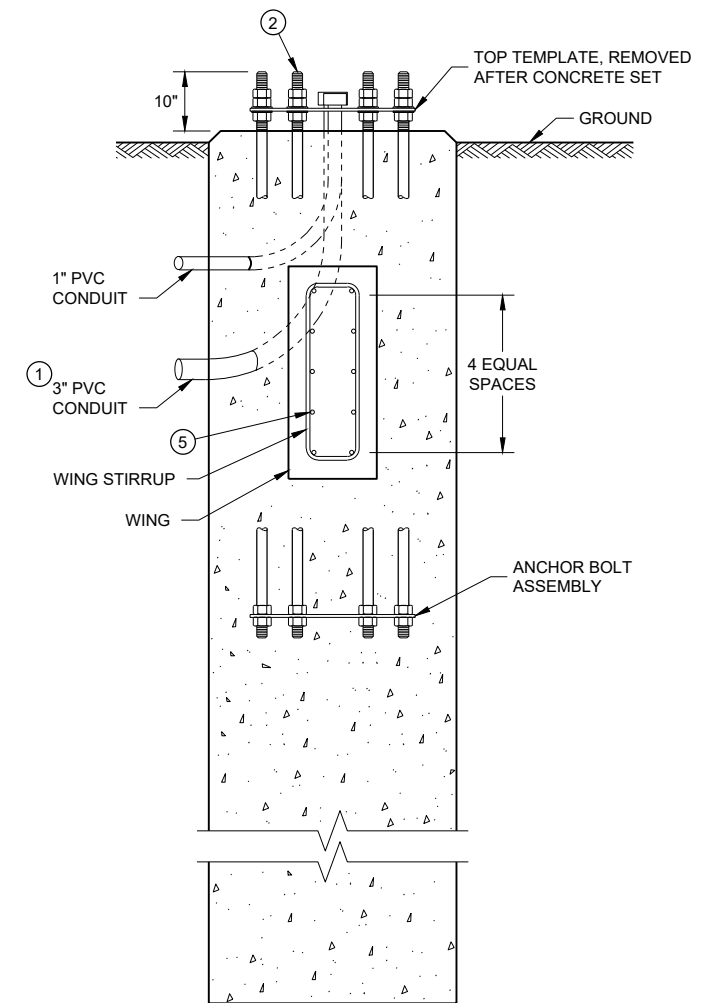


HOOP DETAIL

WING STIRRUP DETAIL



ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



(HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY)

CONCRETE BASE, TYPE 13
(FOR TYPE 12, TYPE 13 AND OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 CUBIC YARD
 H.S. REINFORCEMENT = 635 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION

CONCRETE BASE TYPE 13

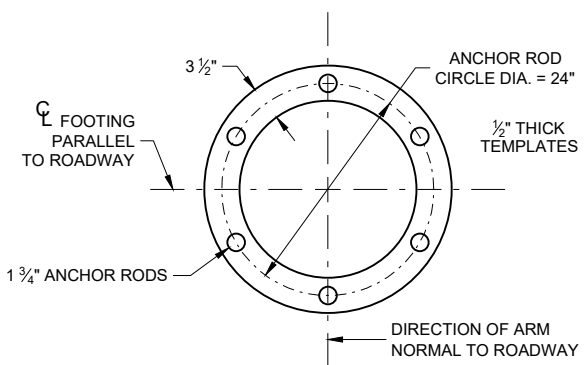
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

6

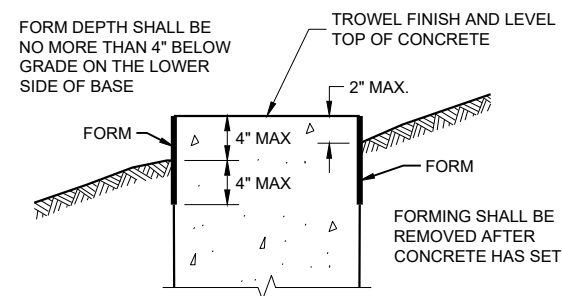
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SDD 09C12 - 09a

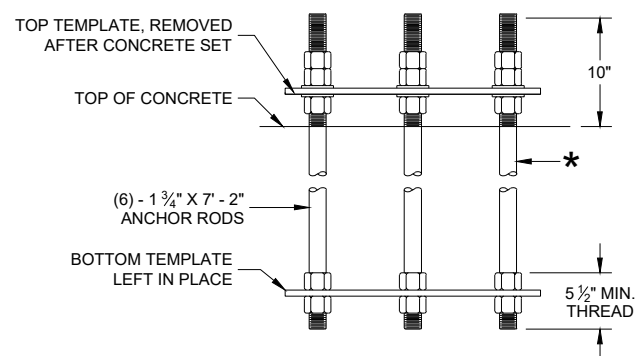
SDD 09C12 - 09a



TOP AND BOTTOM TEMPLATE



FORMING DETAIL



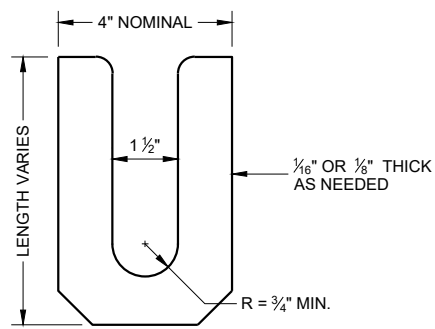
**ANCHOR ROD
ASSEMBLY DETAILS**

* THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

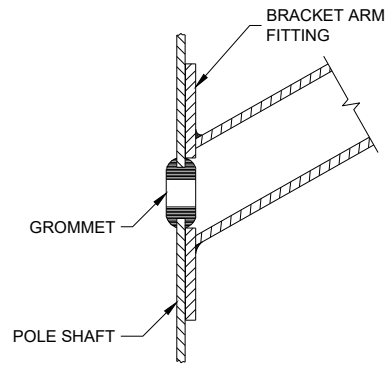
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

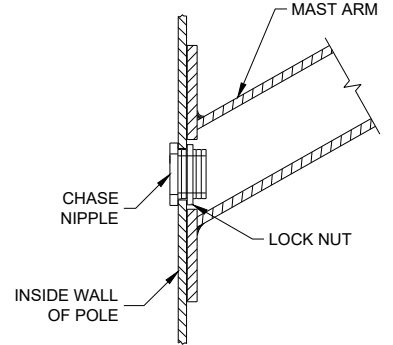
APPROVED
May 2017 DATE /S/ Ahmet Demirelek
WIND LOADED STRUCTURES PROGRAM LEADER



LEVELING SHIM
SHALL BE ALUMINUM



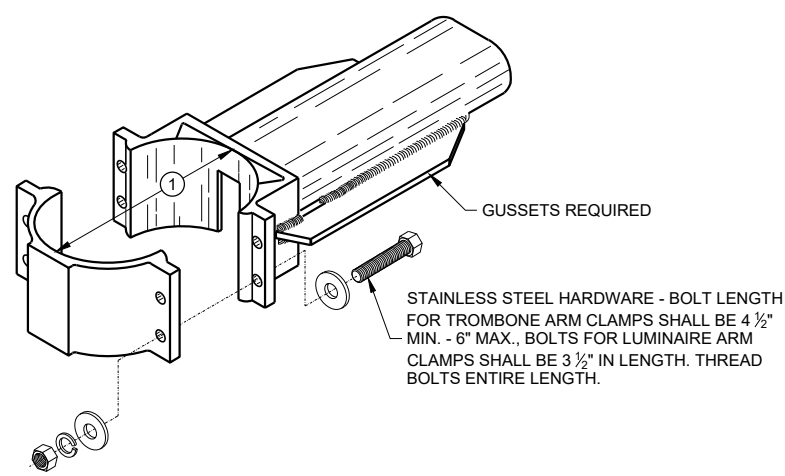
TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



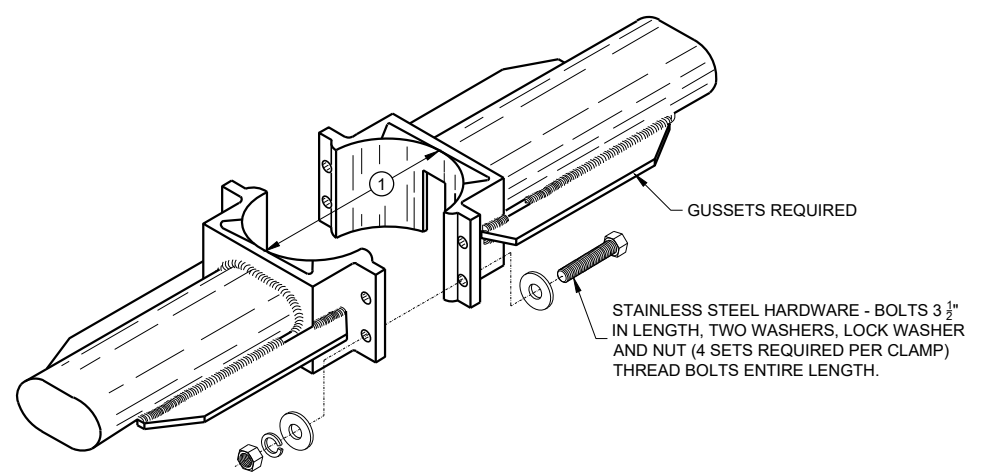
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

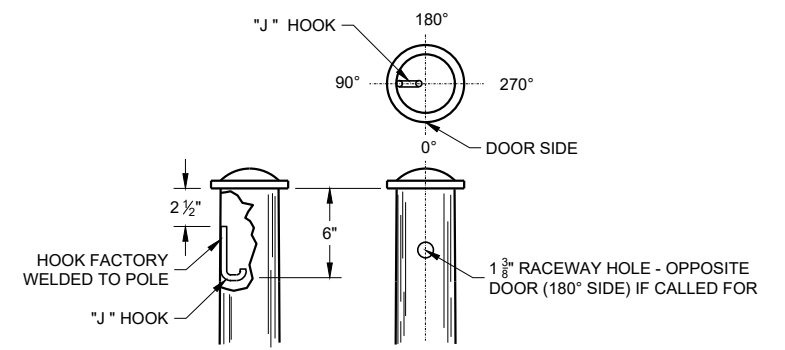
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
 - ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
 - ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
 - ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
- SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



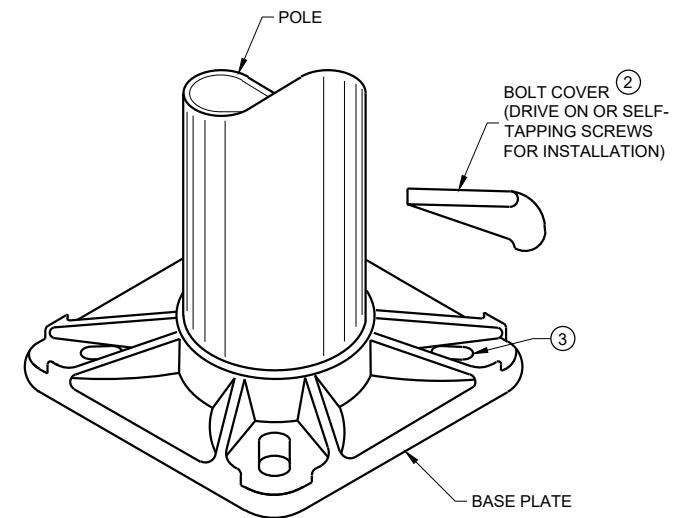
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



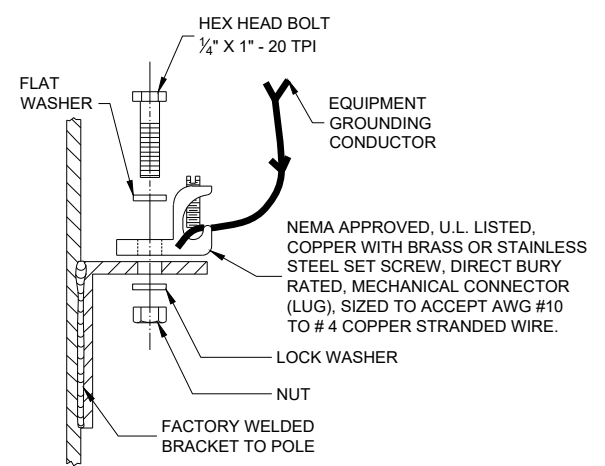
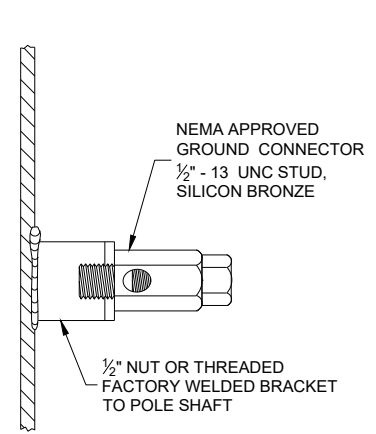
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



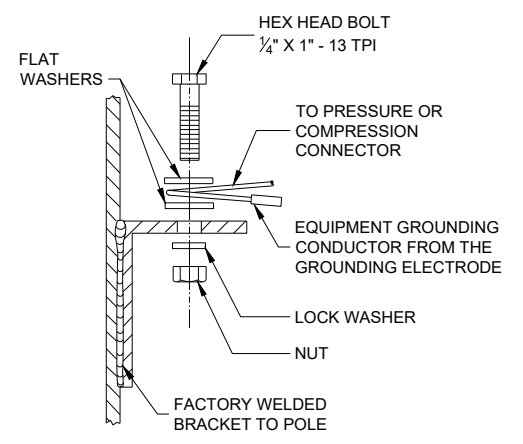
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

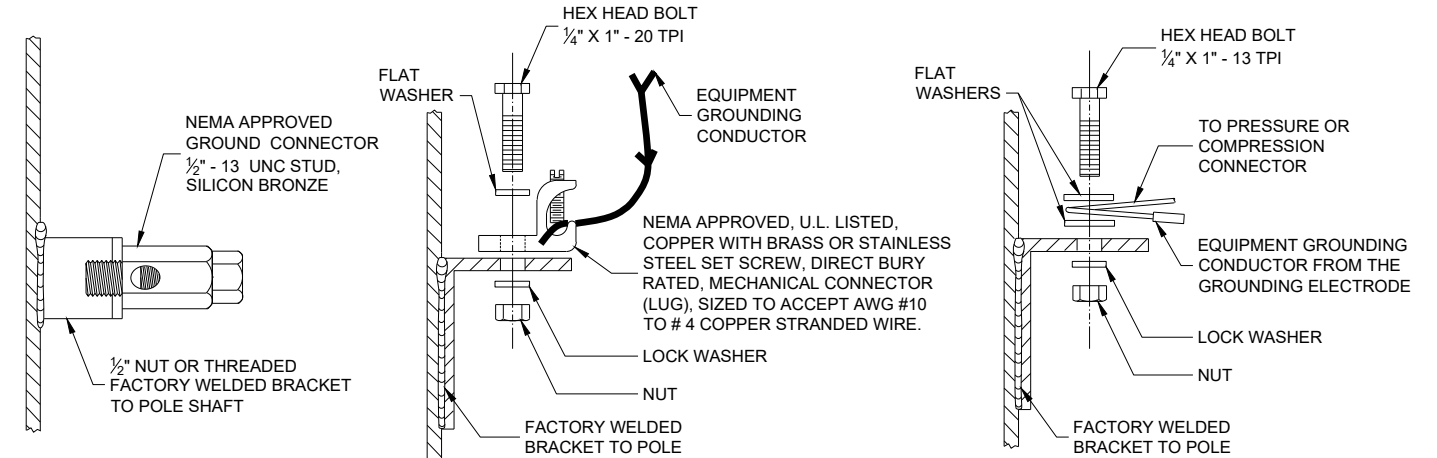
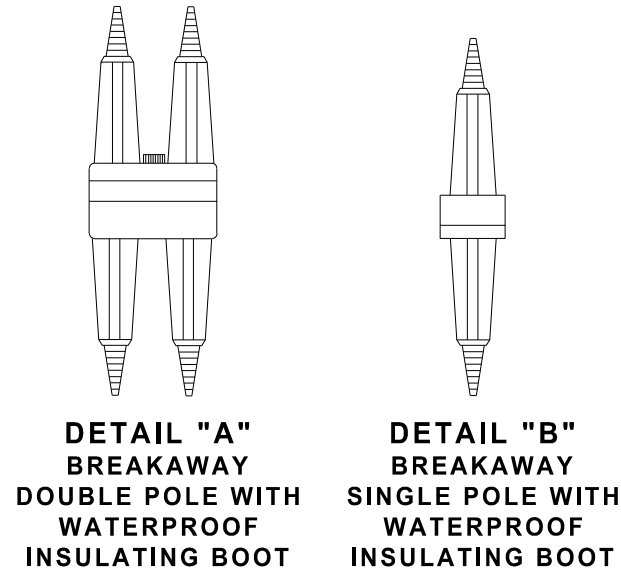
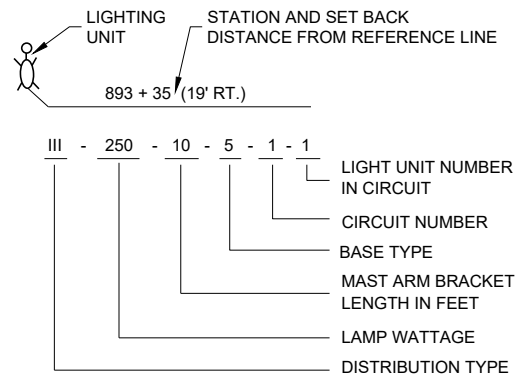
APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

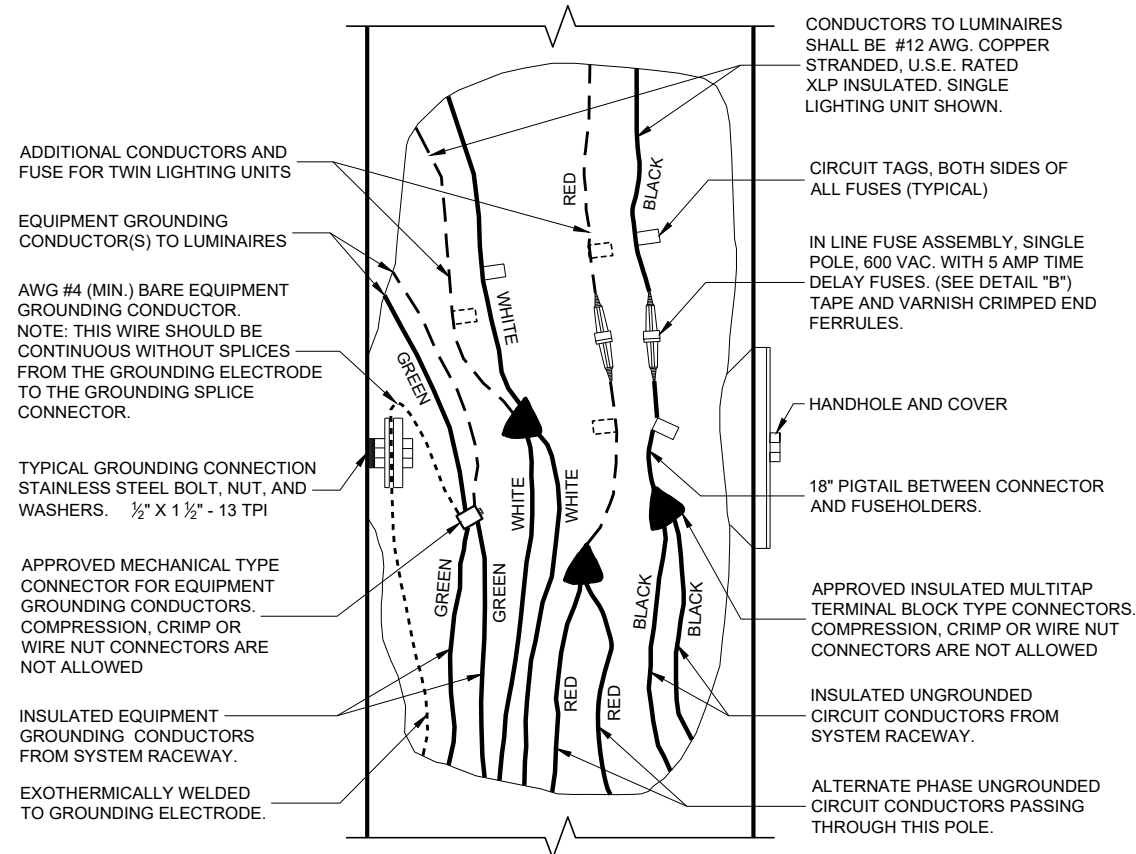
THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

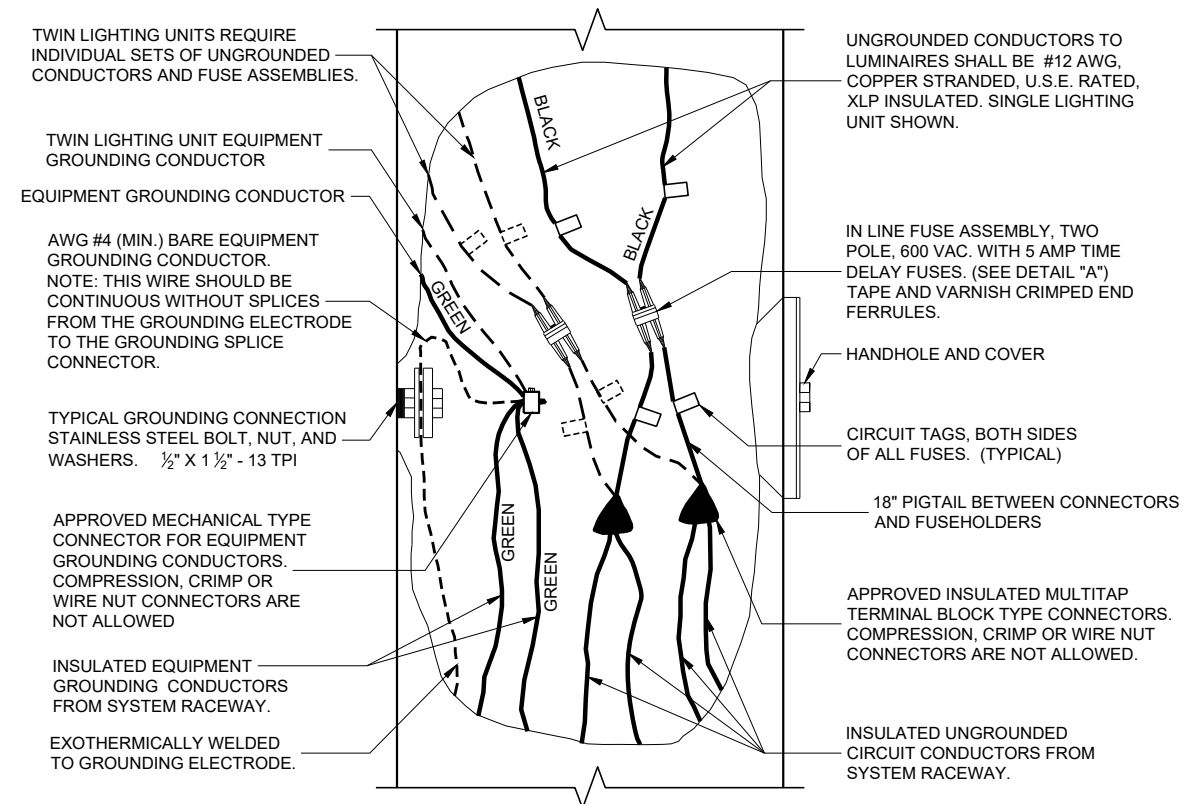


TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

LIGHTING UNIT CODE (TYPICAL)



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



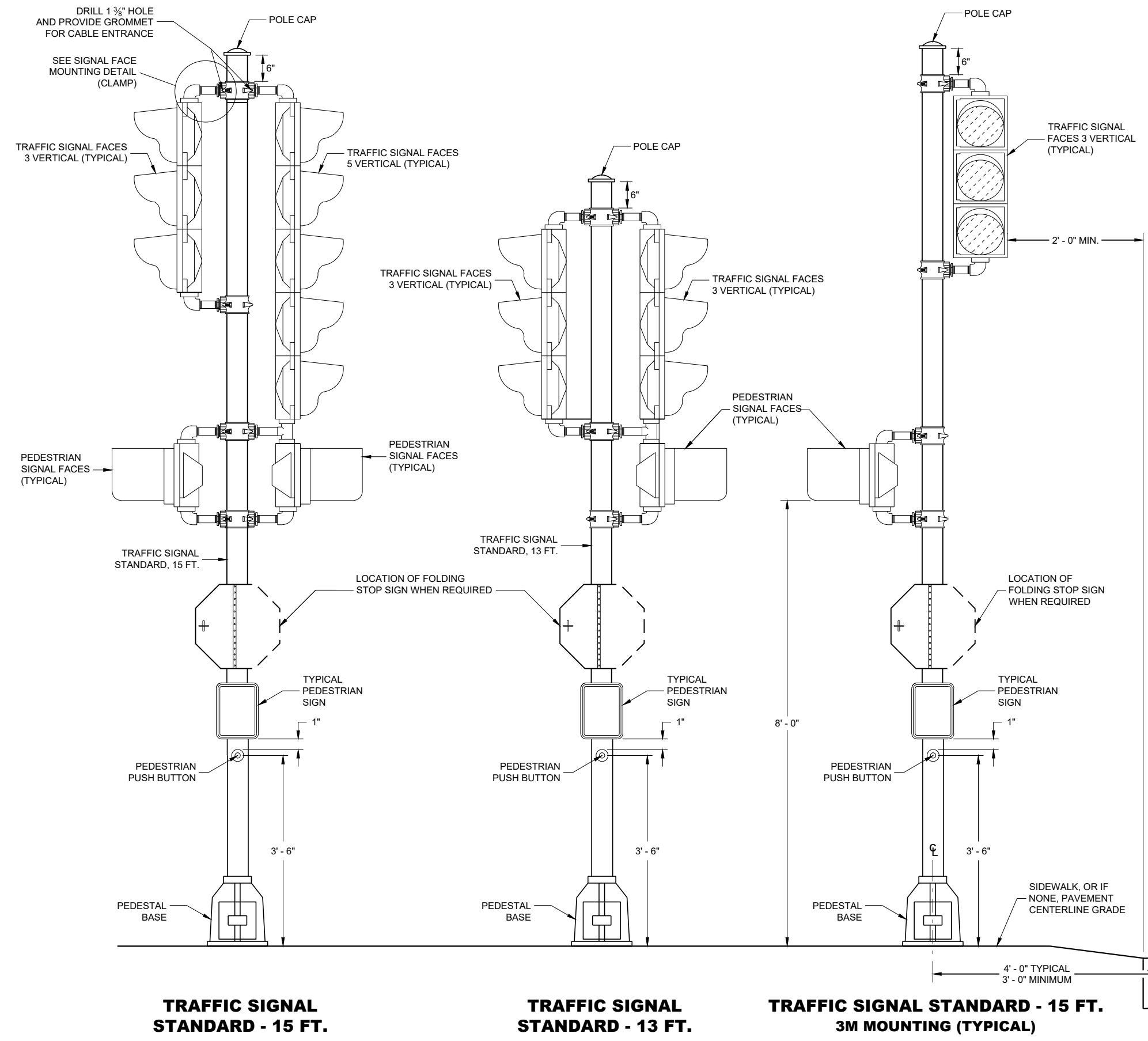
2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA



TRAFFIC SIGNAL STANDARD - 15 FT.

TRAFFIC SIGNAL STANDARD - 13 FT.

TRAFFIC SIGNAL STANDARD - 15 FT. 3M MOUNTING (TYPICAL)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

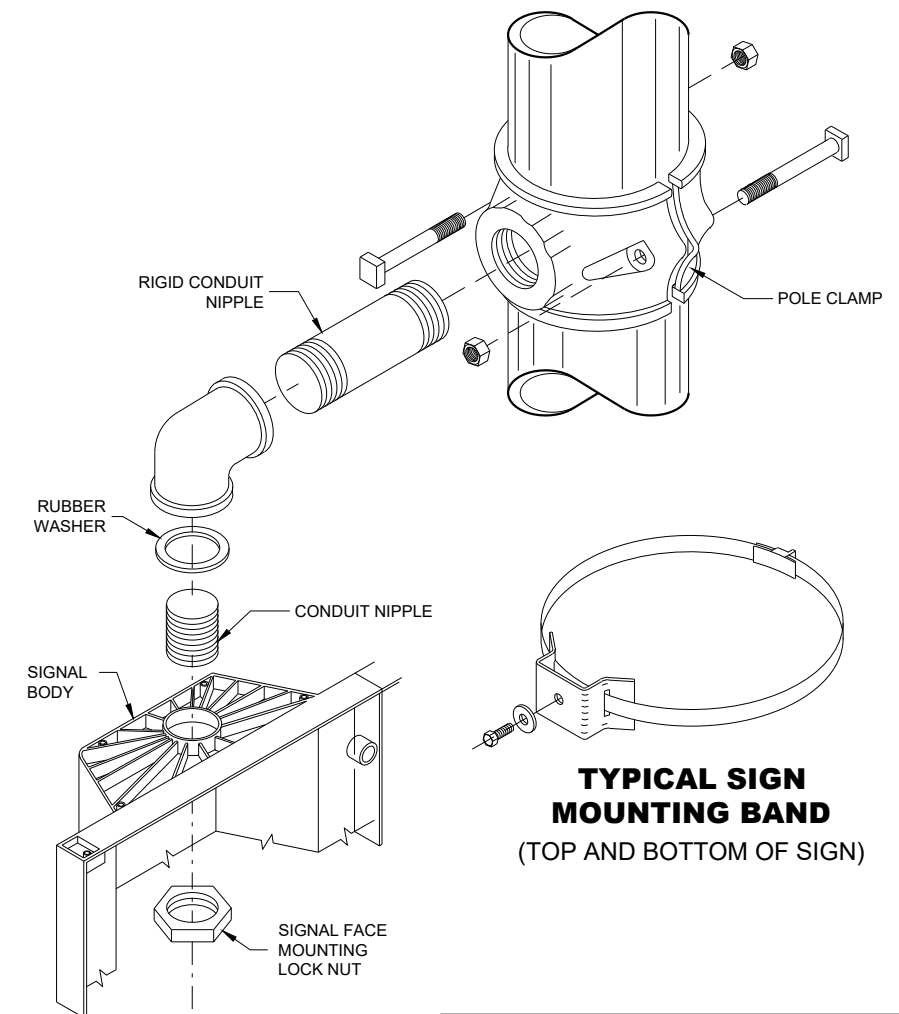
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL (ORNAMENTAL)

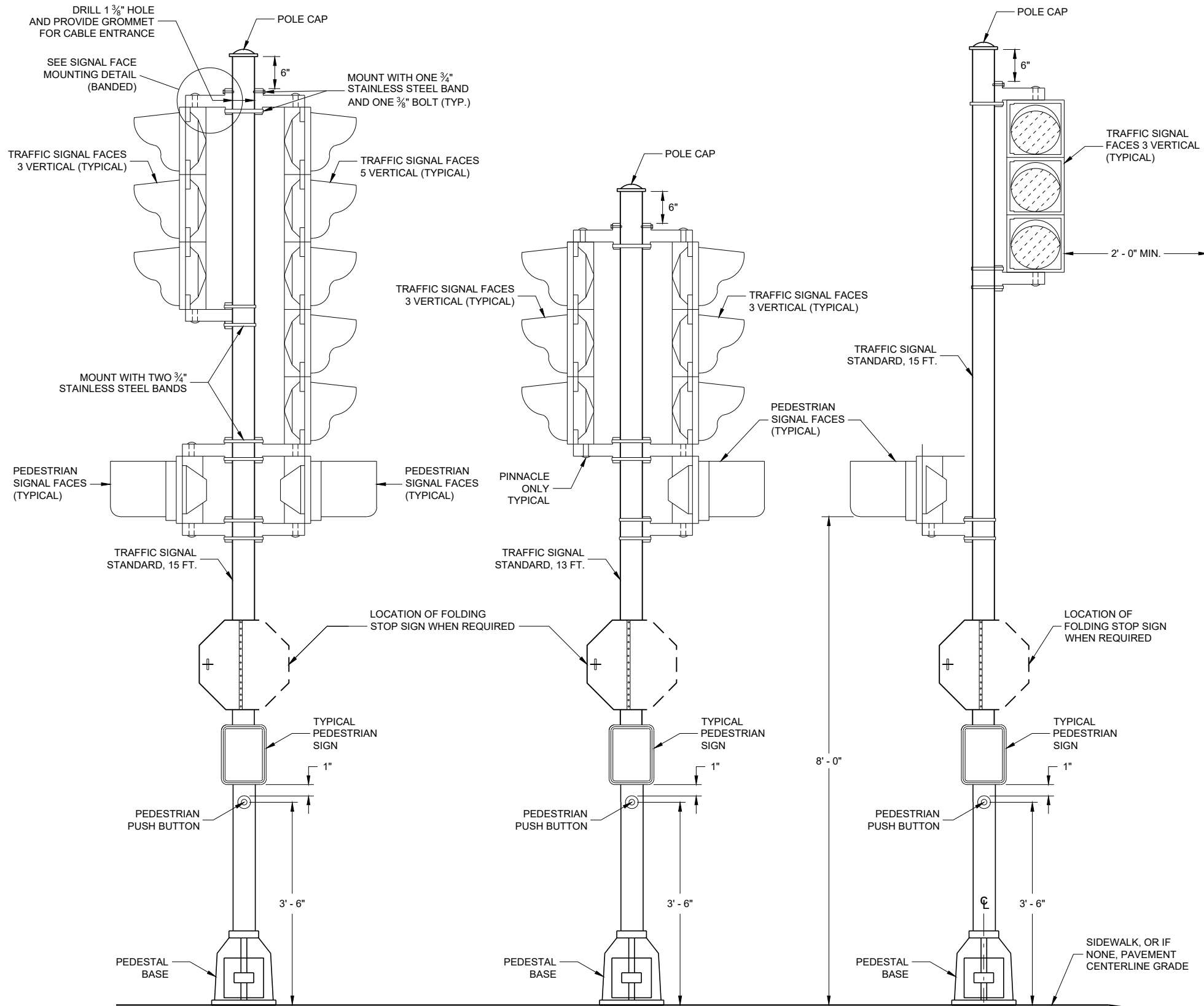
TYPICAL SIGN MOUNTING BAND (TOP AND BOTTOM OF SIGN)

TRAFFIC SIGNAL STANDARD ORNAMENTAL BRACKET MOUNTINGS TYPICAL FOR 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013 DATE /S/ Ahmet Demirelek
STATE ELECTRICAL ENGINEER

FHWA



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

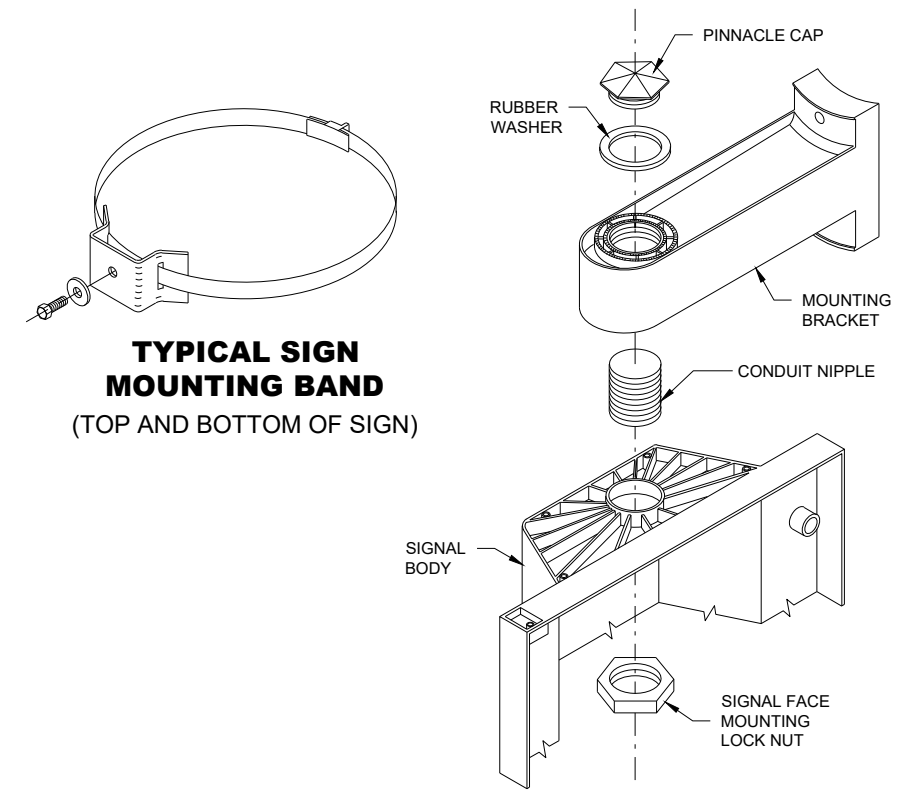
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



TRAFFIC SIGNAL STANDARD - 15 FT.

TRAFFIC SIGNAL STANDARD - 13 FT.

TRAFFIC SIGNAL STANDARD - 15 FT. 3M MOUNTING (TYPICAL)

TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/28/2013 DATE /S/ Ahmet Demirelek
STATE ELECTRICAL ENGINEER

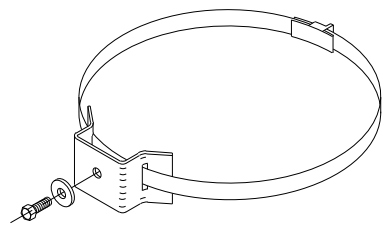
FHWA

6

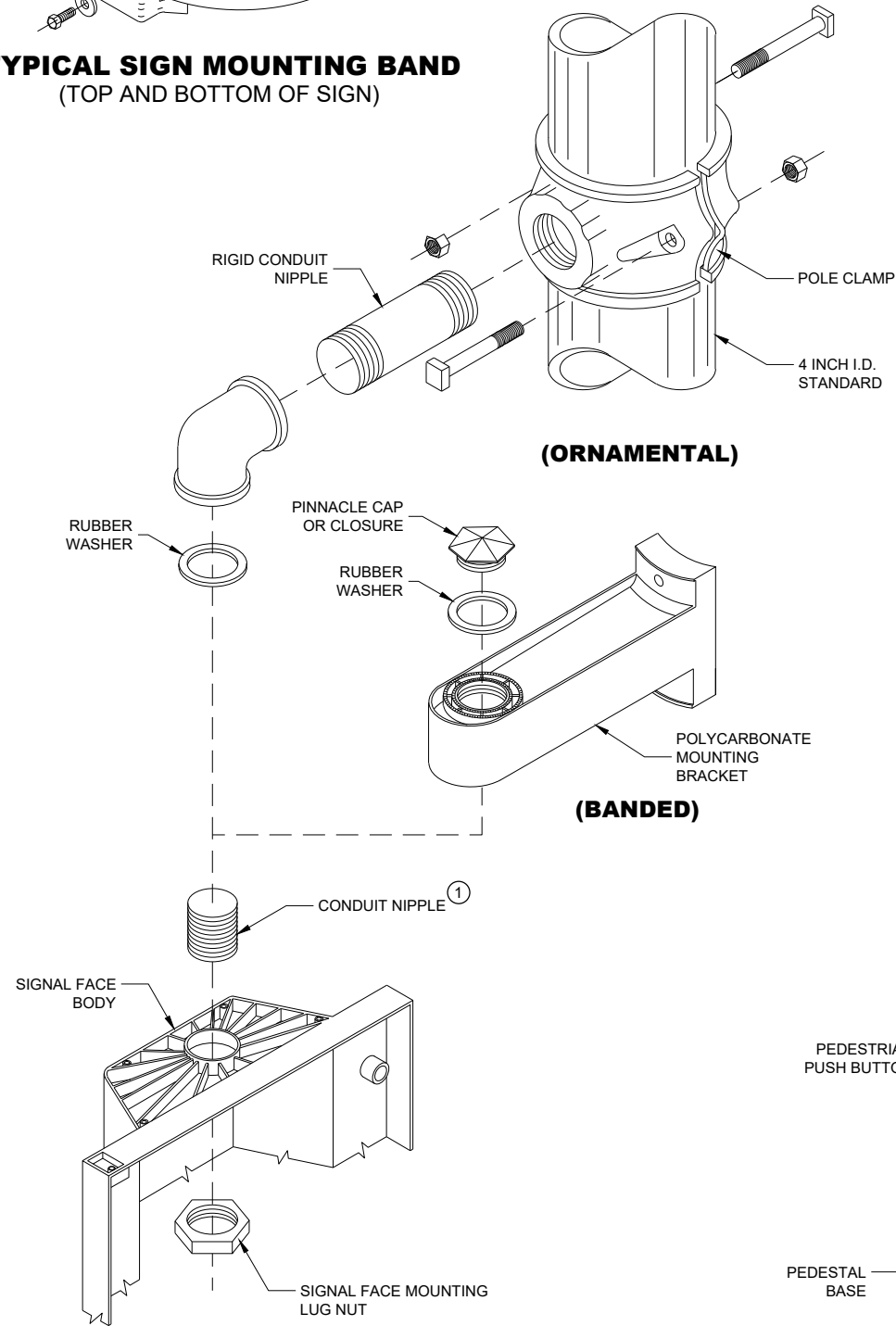
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SDD 09E06 - 05

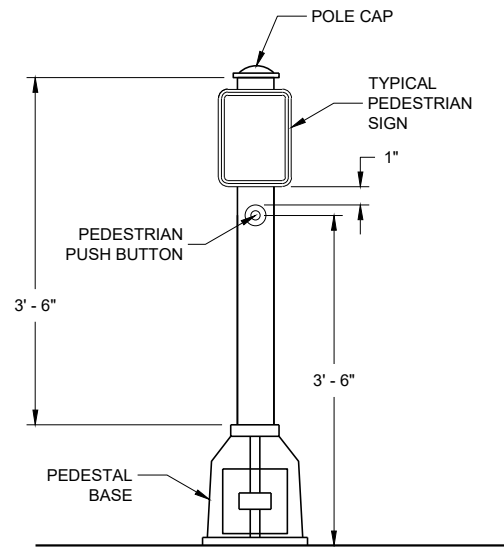
SDD 09E06 - 05



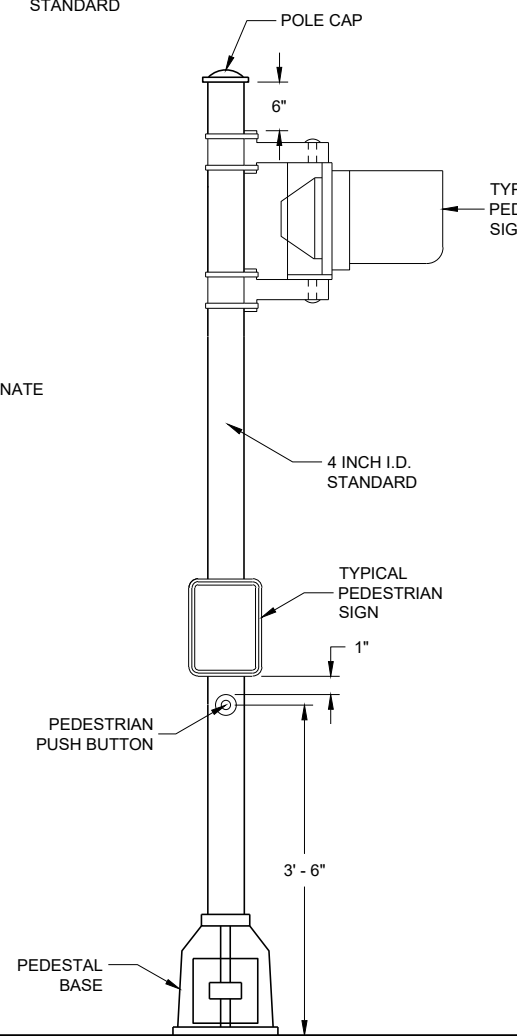
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



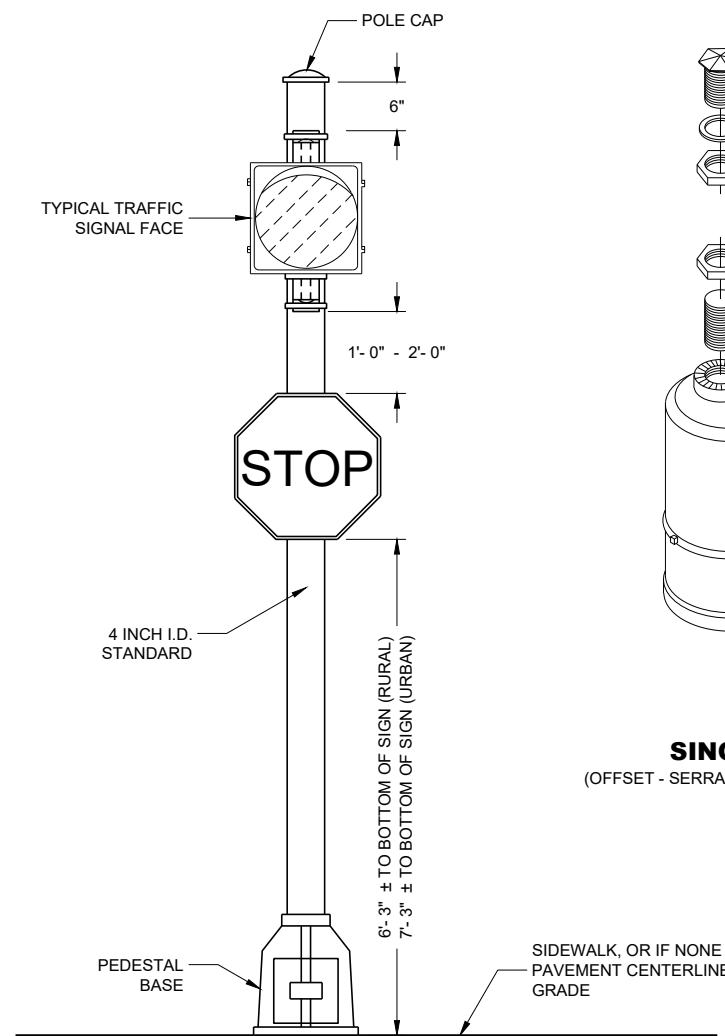
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON
TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

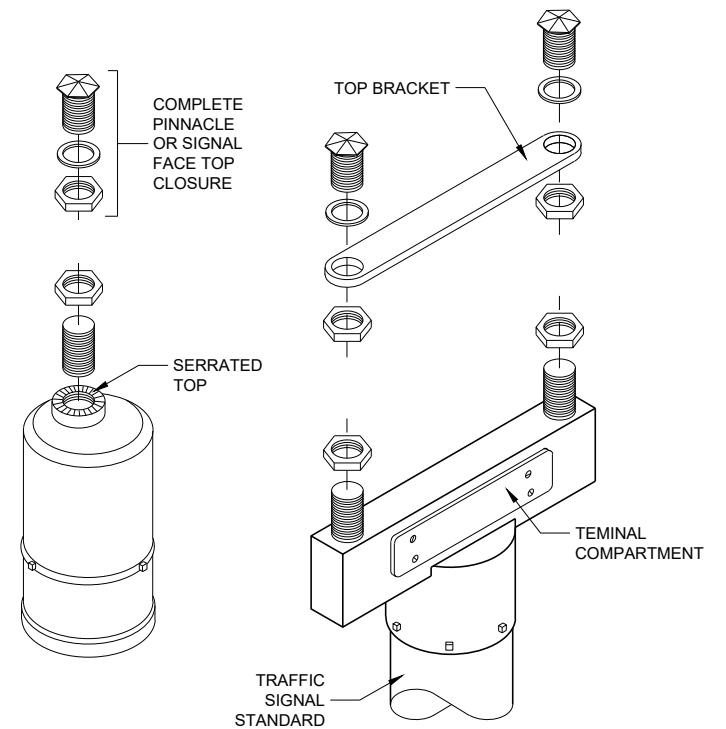
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

① USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

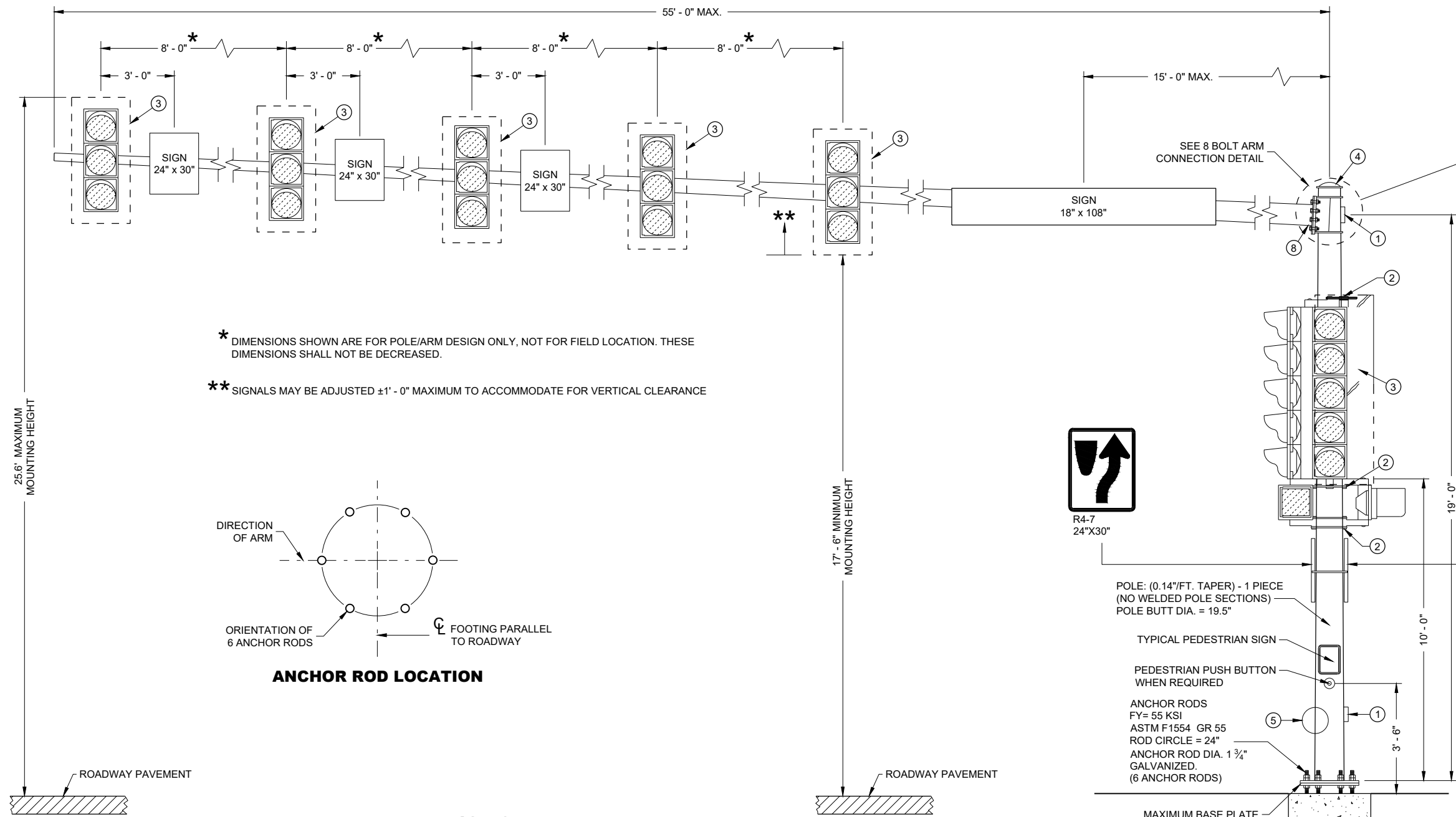
SLIPFITERS

TRAFFIC SIGNAL STANDARD
PEDESTRIAN AND FLASHER
TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

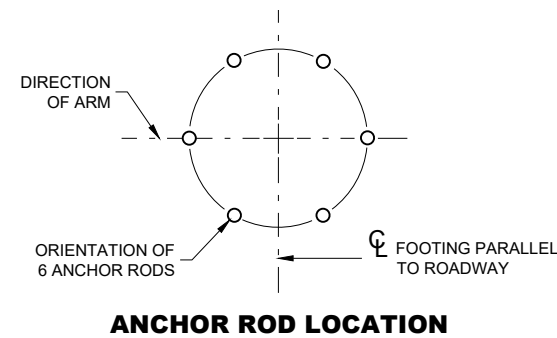
APPROVED
November 2018 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA

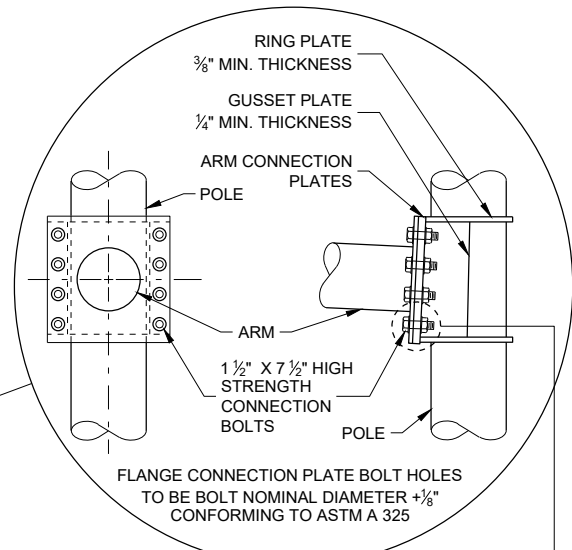


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

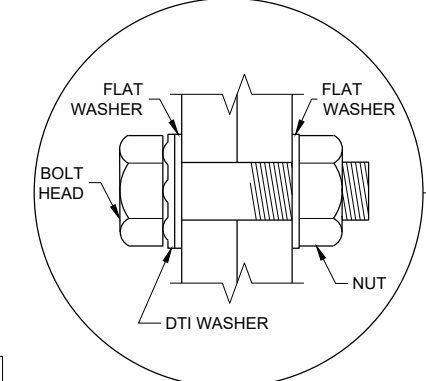
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



**TYPE 12 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)**



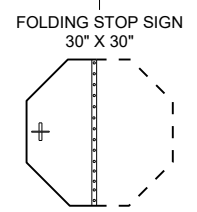
**8 BOLT ARM
CONNECTION DETAIL**



**RECOMMENDED BOLT
ASSEMBLY DETAIL**



- POLE: (0.14\"/>



TYPE 12 POLE 35' - 55' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/s/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

LUMINAIRE, WT. - 50 LBS.
EPA FOR WIND LOADING 1.5 SQ. FT.

STEEL SINGLE MEMBER
LUMINAIRE ARM

SEE FIXED ARM
ATTACHMENT
DETAIL

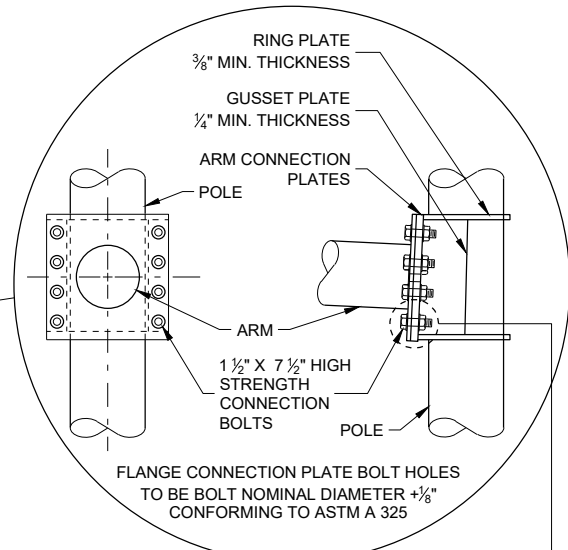
FIXED ARM ATTACHMENT

CLAMP ARM ATTACHMENT
OPTION FOR VIDEO
DETECTION IF NEEDED

LUMINAIRE ARM

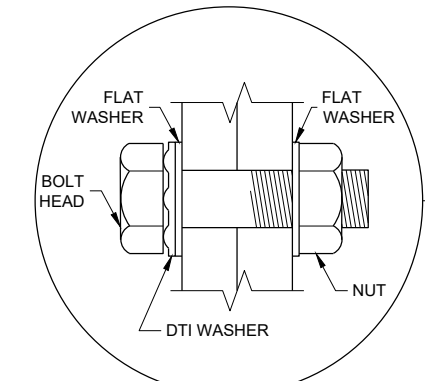
3/4" X 3 1/2" HIGH STRENGTH
CONNECTION BOLTS

FIXED ARM ATTACHMENT DETAIL

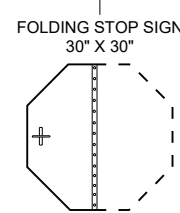


FLANGE CONNECTION PLATE BOLT HOLES
TO BE BOLT NOMINAL DIAMETER +1/8"
CONFORMING TO ASTM A 325

8 BOLT ARM CONNECTION DETAIL



**RECOMMENDED BOLT
ASSEMBLY DETAIL**

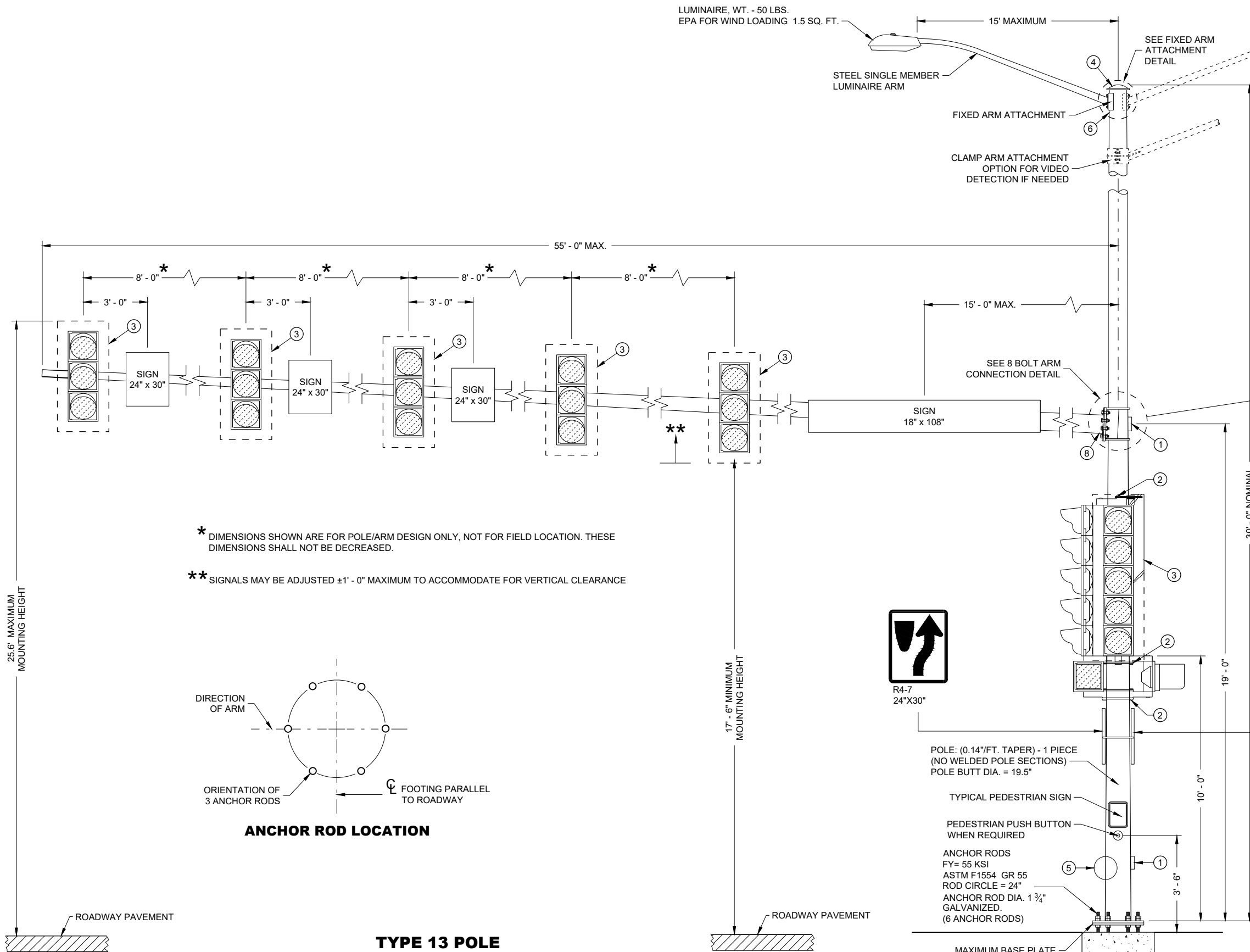


**TYPE 13 POLE
35' - 55' MONOTUBE ARM**

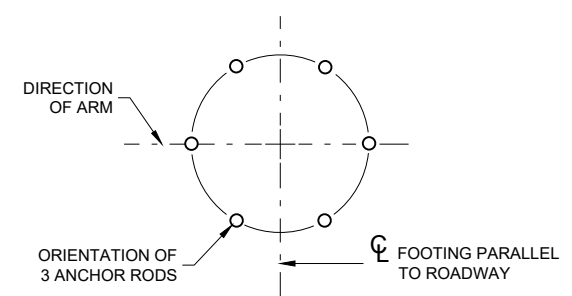
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Ahmet Demirelek
DATE STATE ELECTRICAL ENGINEER

FHWA



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



ANCHOR ROD LOCATION

**TYPE 13 POLE
35' - 55' MONOTUBE ARM
(MAXIMUM LOAD)**

25' - 6" MAXIMUM
MOUNTING HEIGHT

17' - 6" MINIMUM
MOUNTING HEIGHT



R4-7
24" X 30"

POLE: (0.14"/FT. TAPER) - 1 PIECE
(NO WELDED POLE SECTIONS)
POLE BUTT DIA. = 19.5"

TYPICAL PEDESTRIAN SIGN
PEDESTRIAN PUSH BUTTON
WHEN REQUIRED

ANCHOR RODS
FY= 55 KSI
ASTM F1554 GR 55
ROD CIRCLE = 24"
ANCHOR ROD DIA. 1 3/4"
GALVANIZED.
(6 ANCHOR RODS)

MAXIMUM BASE PLATE
THICKNESS = 2 1/2"

30' - 0" NOMINAL

19' - 0"

10' - 0"

3' - 6"

15' - 0" MAX.

SEE 8 BOLT ARM
CONNECTION DETAIL

55' - 0" MAX.

15' MAXIMUM

8' - 0" * 8' - 0" * 8' - 0" * 8' - 0" *

3' - 0"

3' - 0"

3' - 0"

3' - 0"

3' - 0"

SIGN
24" x 30"

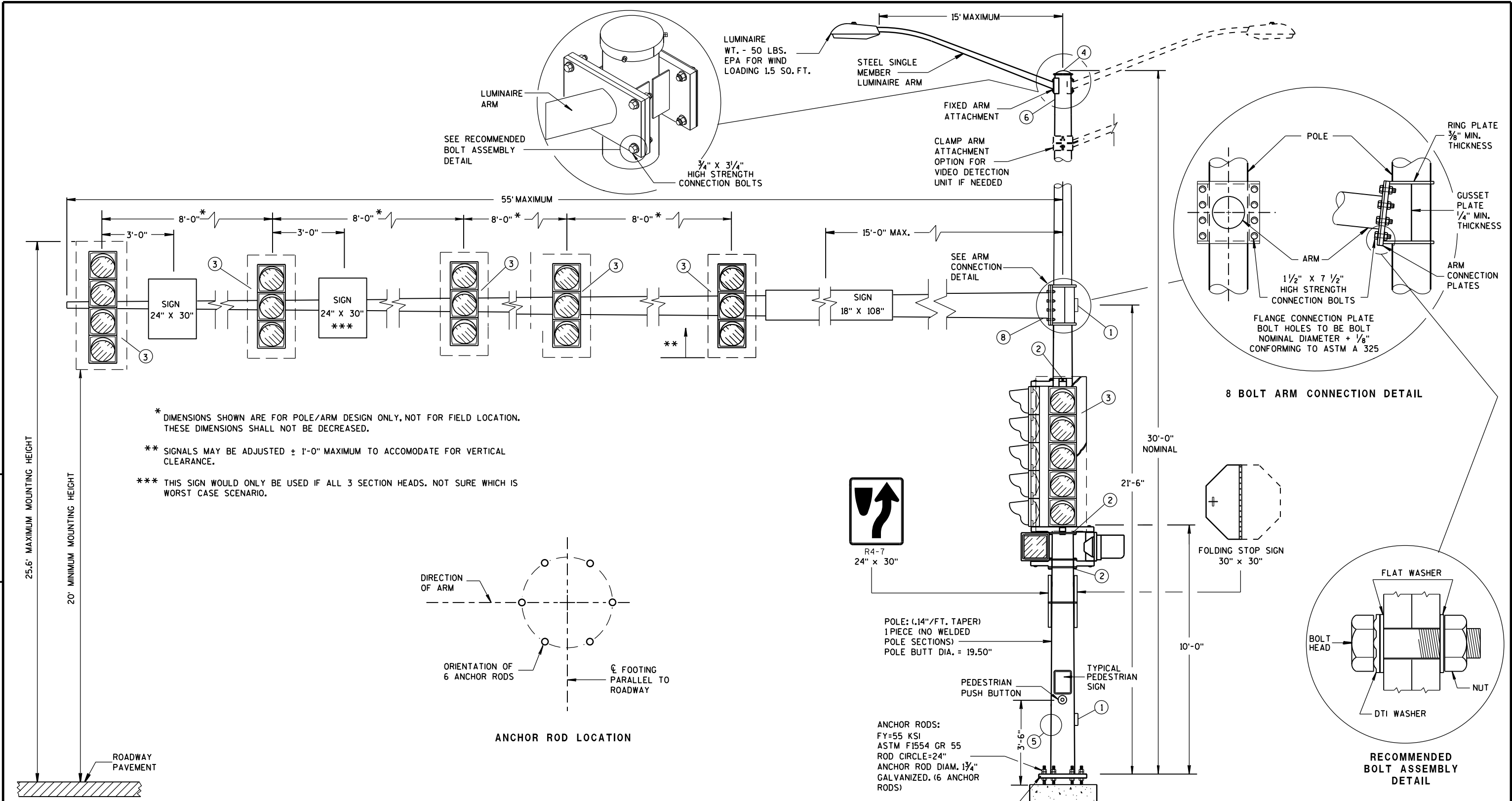
SIGN
24" x 30"

SIGN
24" x 30"

SIGN
24" x 30"

SIGN
24" x 30"

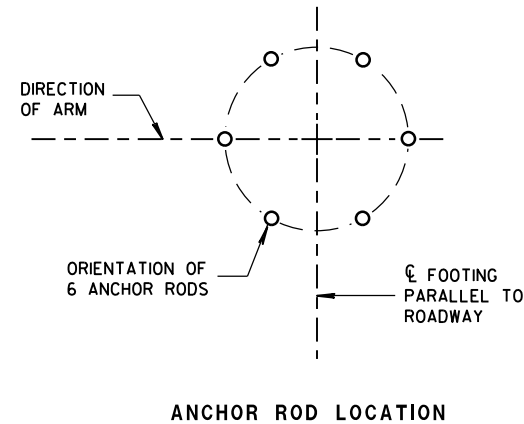
SIGN
18" x 108"



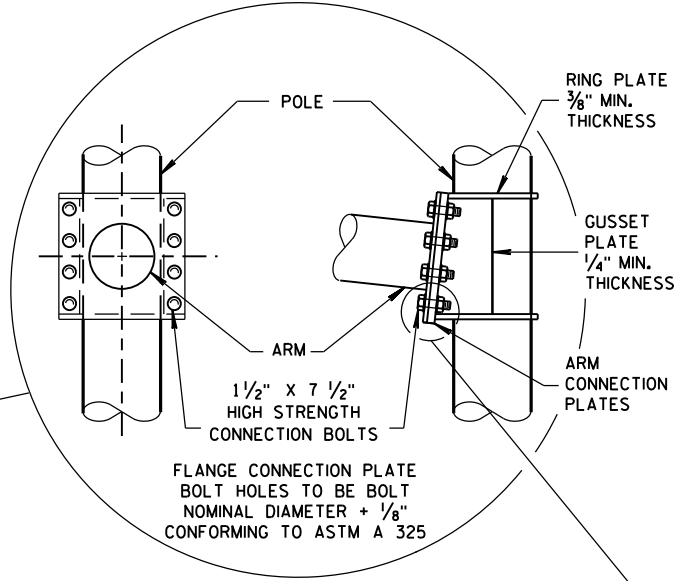
* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE.

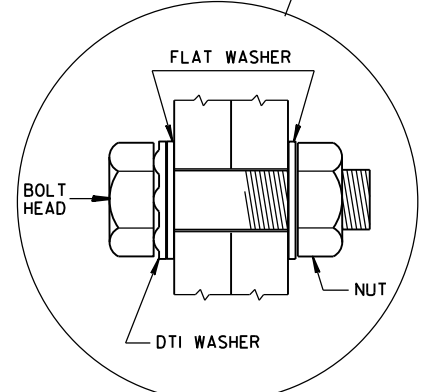
*** THIS SIGN WOULD ONLY BE USED IF ALL 3 SECTION HEADS. NOT SURE WHICH IS WORST CASE SCENARIO.



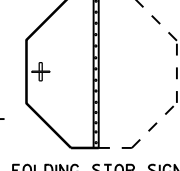
(MAXIMUM LOAD)
OVER HEIGHT TYPE 13 POLE
35' - 55' MONOTUBE ARM



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



POLE: (.14"/FT. TAPER)
 1 PIECE (NO WELDED POLE SECTIONS)
 POLE BUTT DIA. = 19.50"

ANCHOR RODS:
 FY=55 KSI
 ASTM F1554 GR 55
 ROD CIRCLE=24"
 ANCHOR ROD DIAM. 1 3/4"
 GALVANIZED. (6 ANCHOR RODS)

MAXIMUM BASE PLATE THICKNESS = 2 1/2"

6

6

OVER HEIGHT TYPE 13 POLE 35' - 55' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May, 2017 DATE	/s/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

OVER HEIGHT POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

OVER HEIGHT POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 1/2 ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING 2017 INTERIM REVISIONS) AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH 3/4" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL 1/2" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

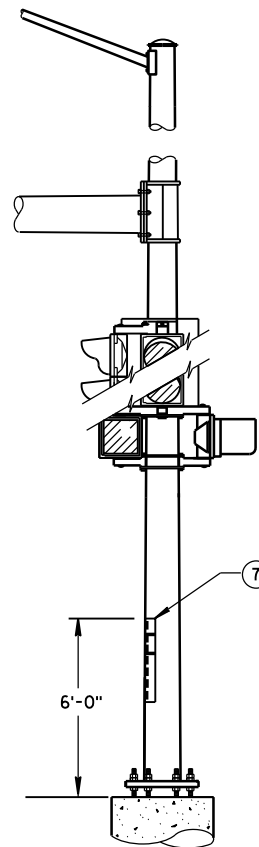
6

- ① DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- ② SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).
- ③ SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- ④ THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- ⑤ FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- ⑥ FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- ⑦ INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

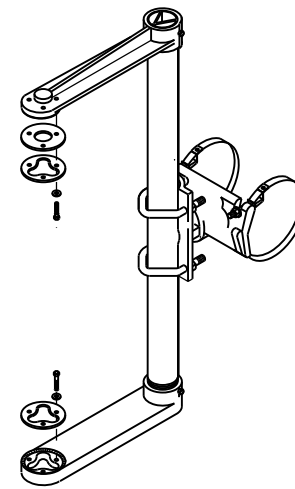
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

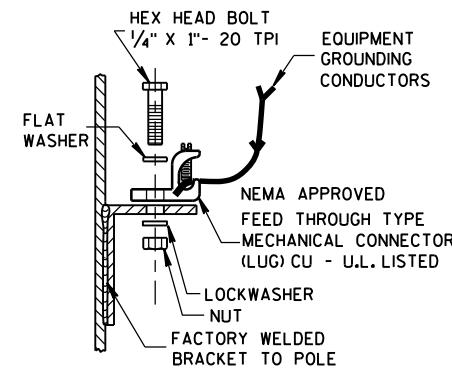
- ⑧ FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.



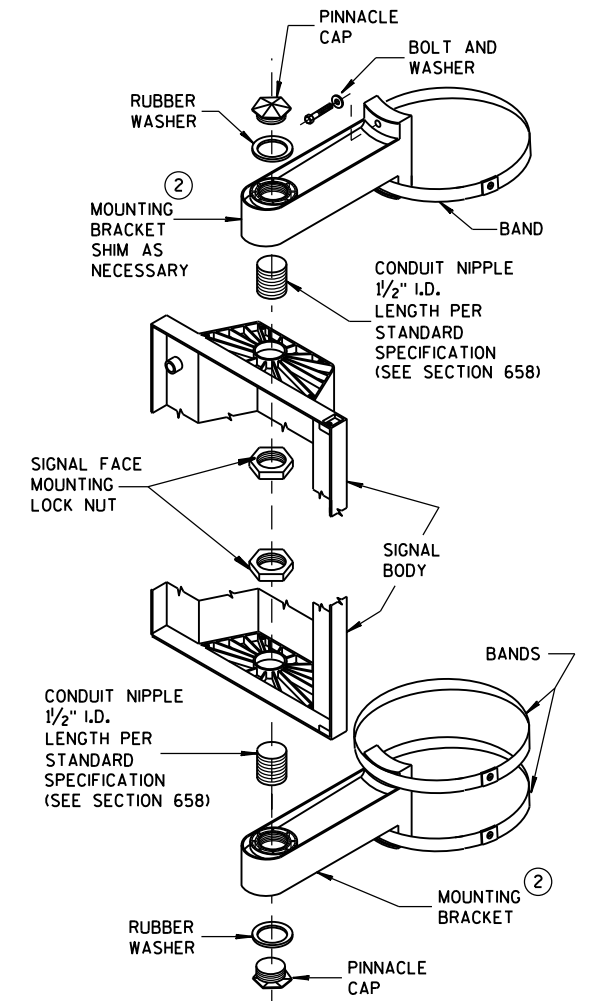
STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



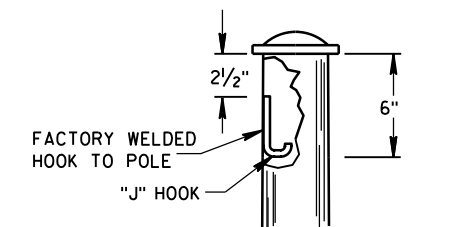
**SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM**
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



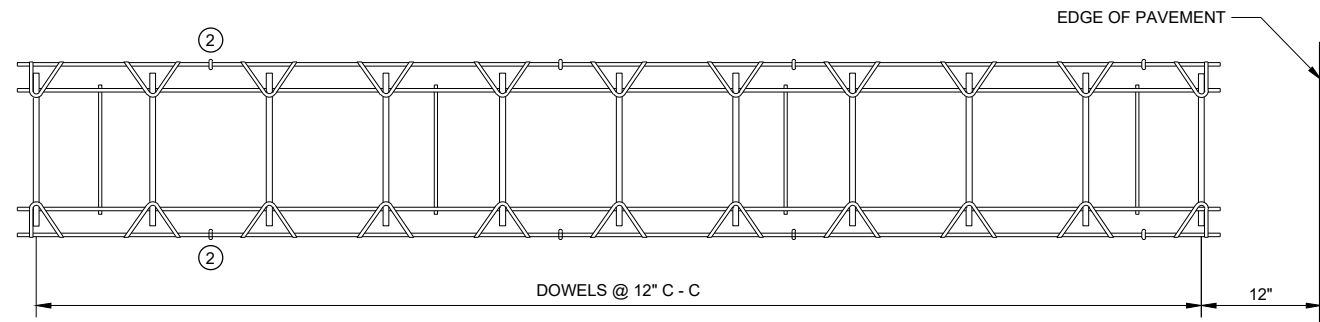
"J" HOOK WIRE SUPPORT

6

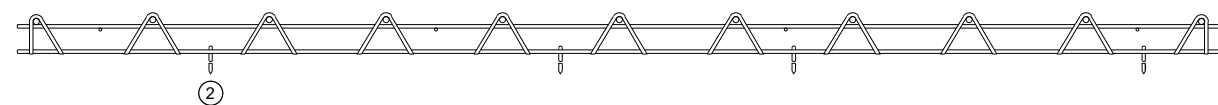
**GENERAL NOTES AND HARDWARE
DETAILS FOR OVER HEIGHT
TYPE 9, 10, 12 & 13 POLES
WITH MONOTUBE ARMS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

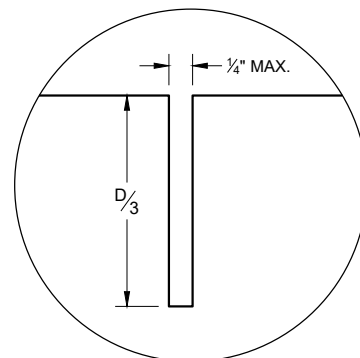


PLAN VIEW



SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

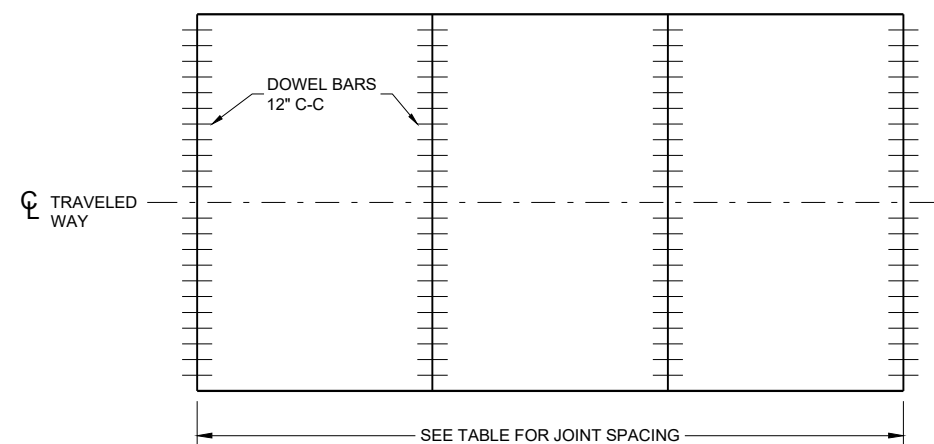
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

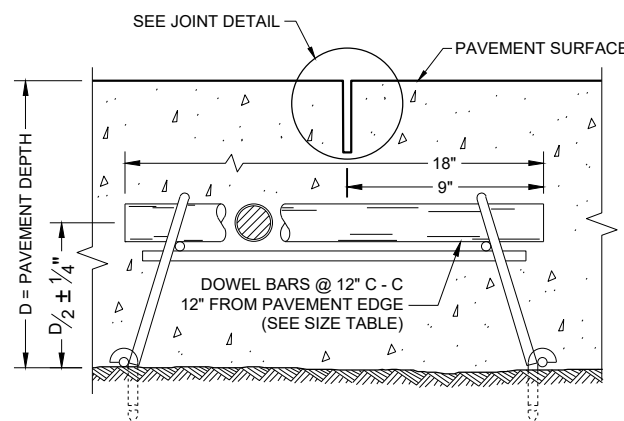
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4" RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



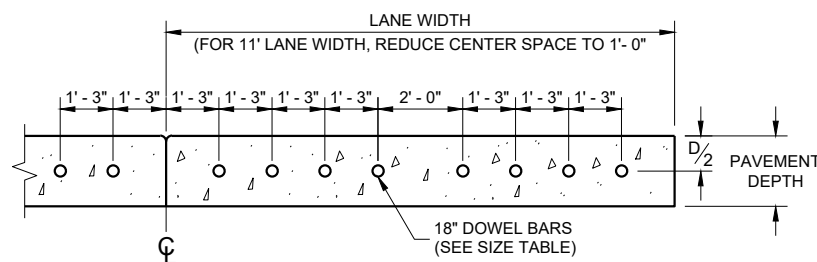
CONTRACTION JOINT LOCATIONS



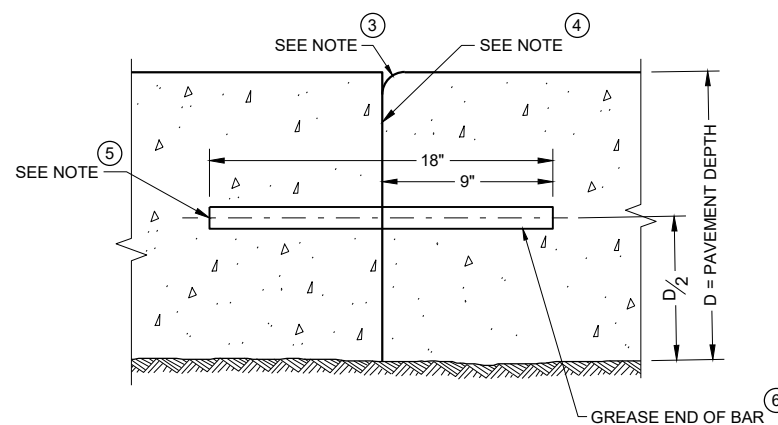
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8" & ABOVE	1 1/4"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



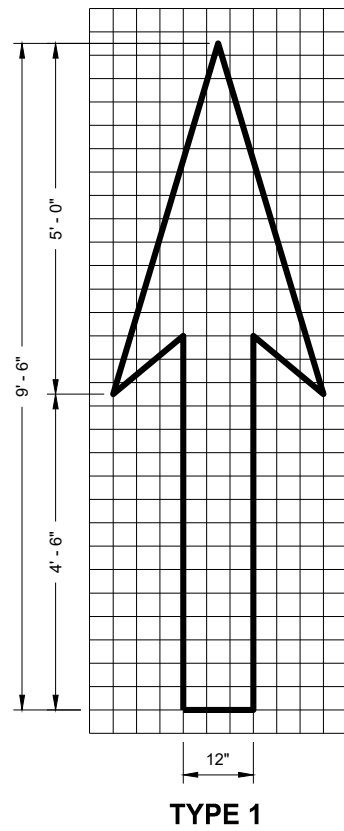
TRANSVERSE CONSTRUCTION JOINT

URBAN DOWELED CONCRETE PAVEMENT

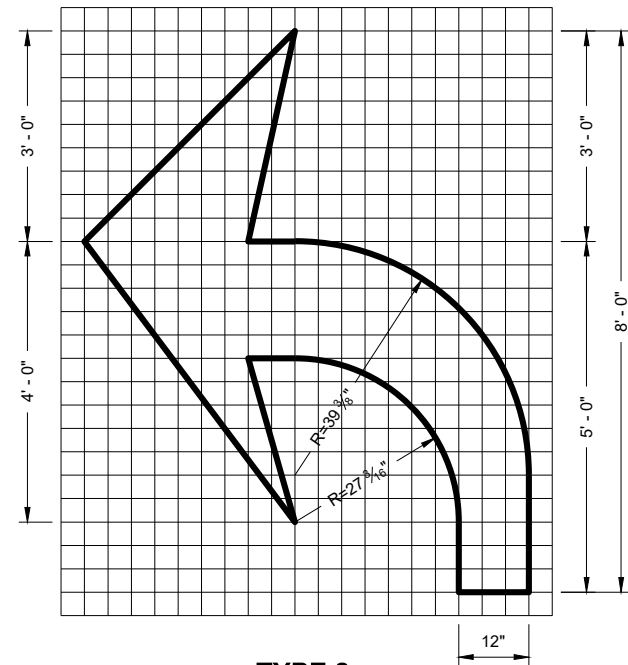
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR

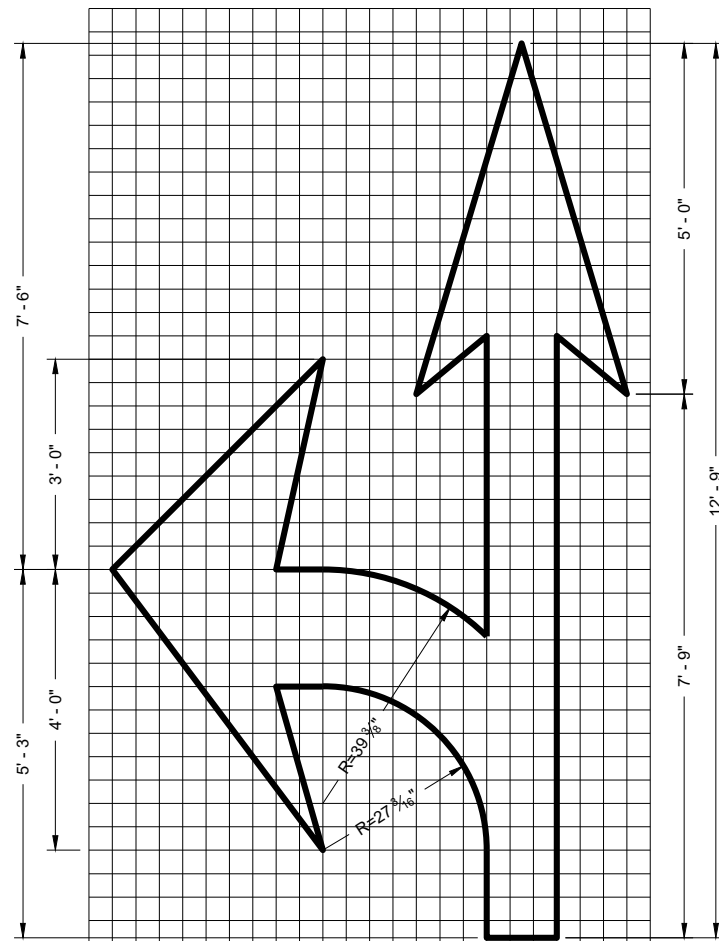
FHWA



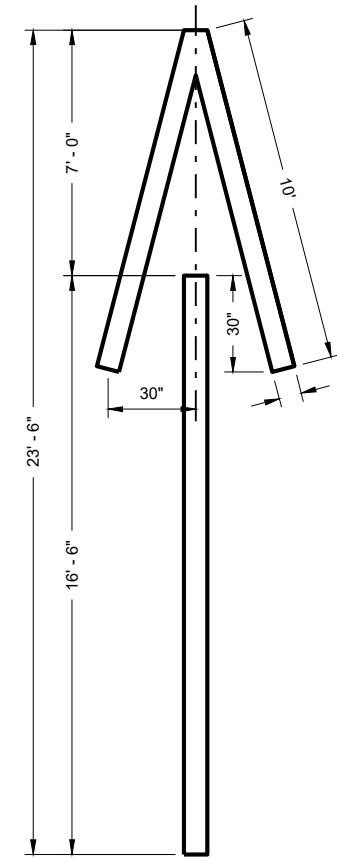
TYPE 1



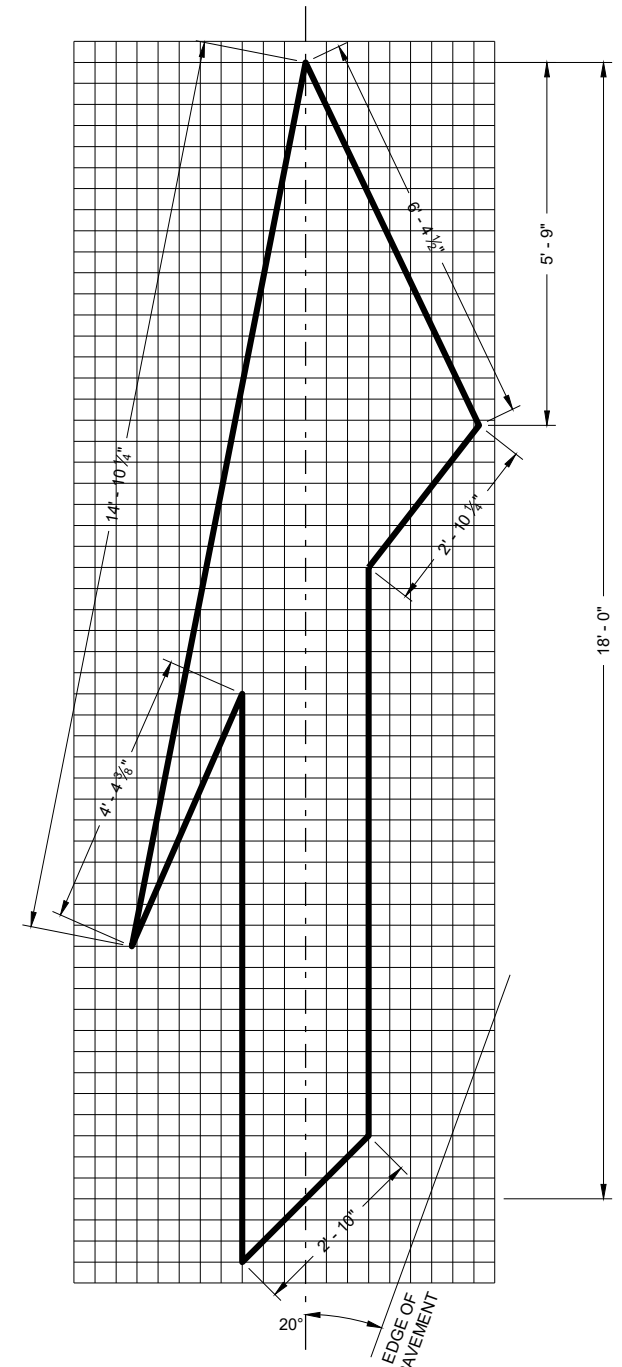
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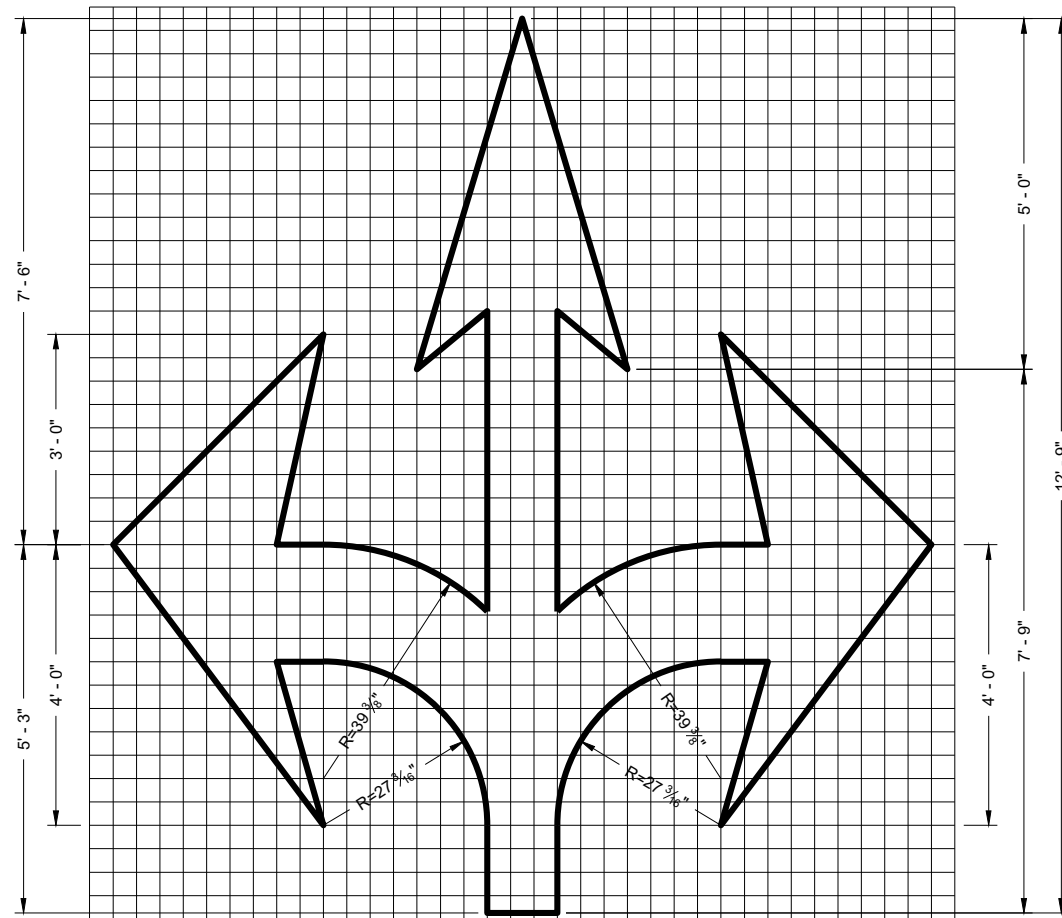
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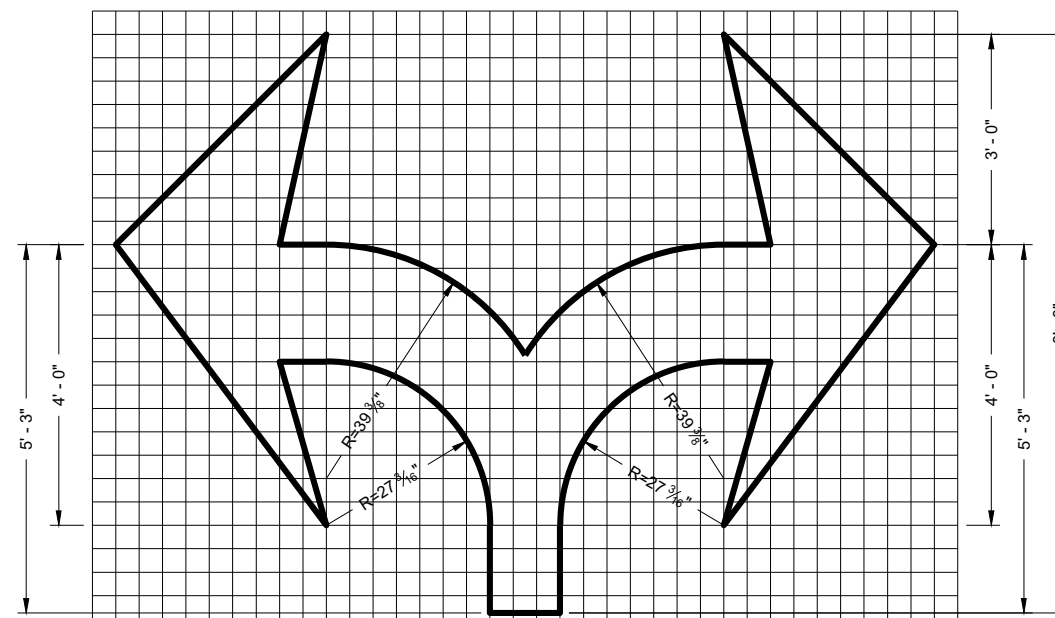
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED November 2019 DATE	/s/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
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
FHWA

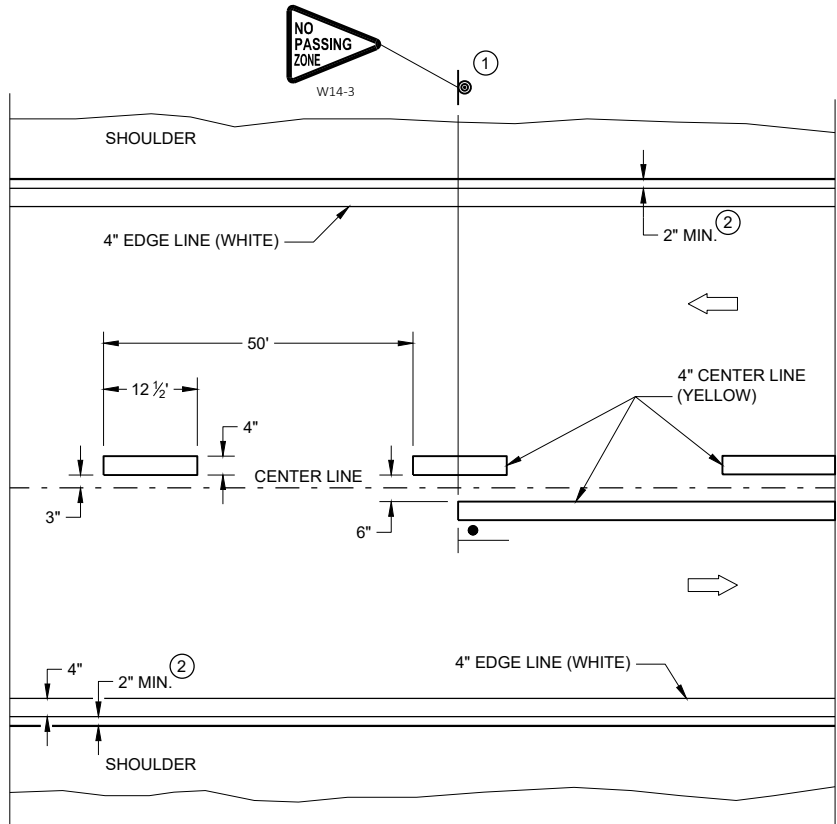
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

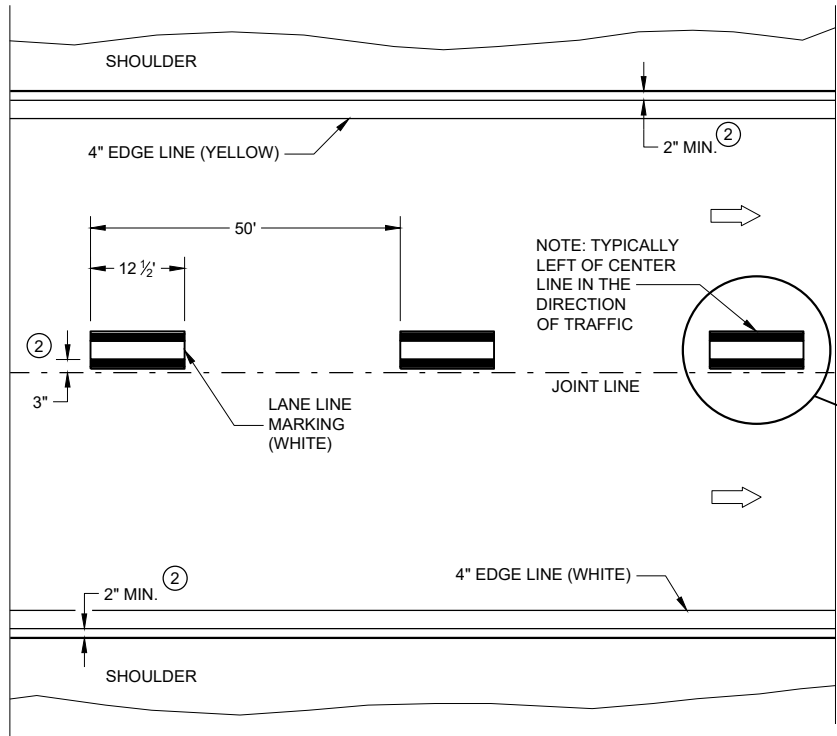
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

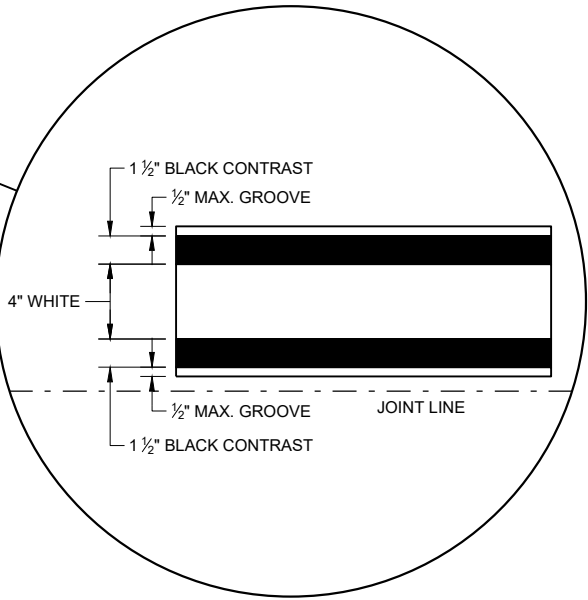


TWO WAY TRAFFIC



ONE WAY TRAFFIC

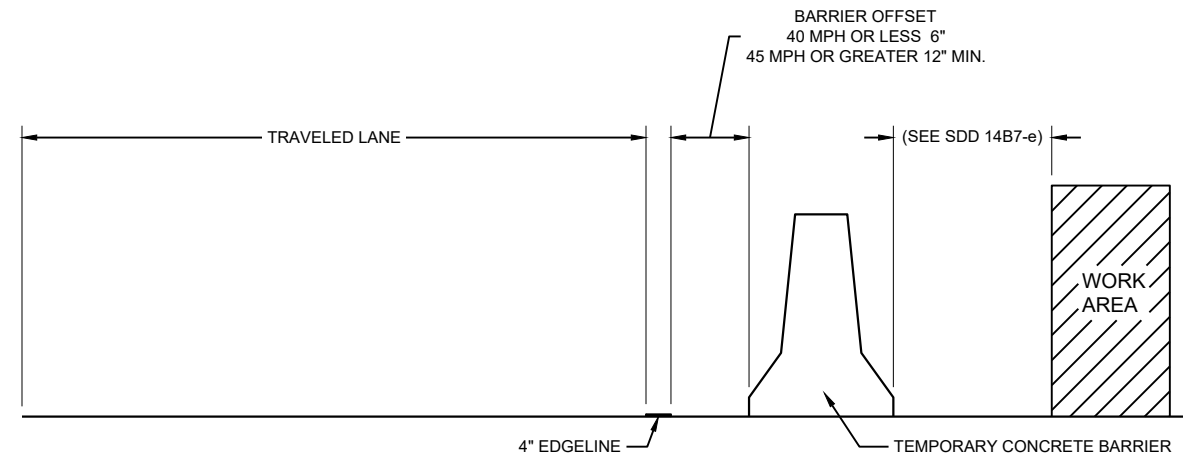
PERMANENT PAVEMENT MARKING



PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER



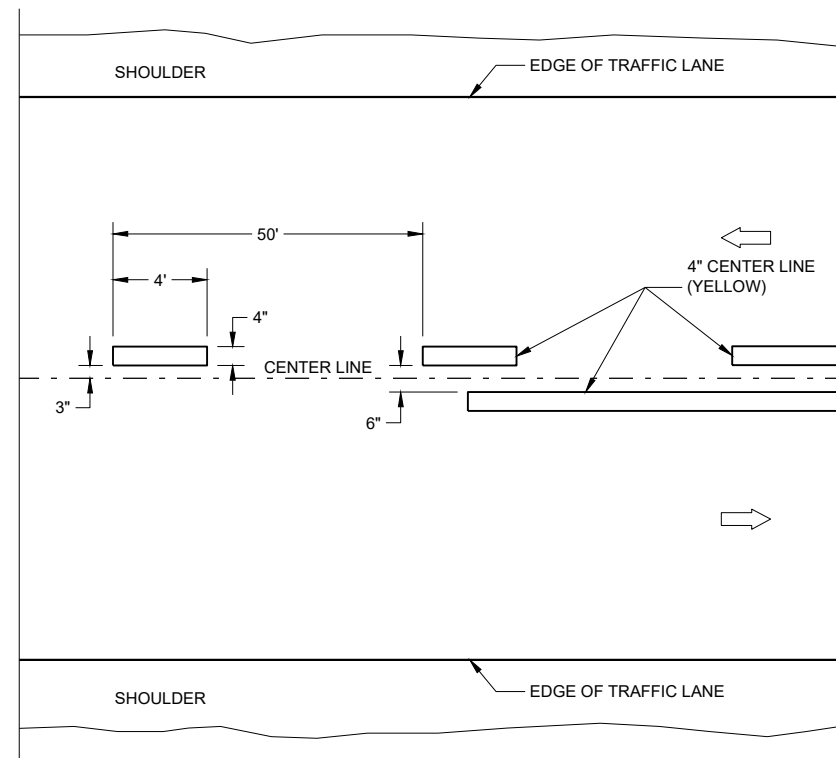
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

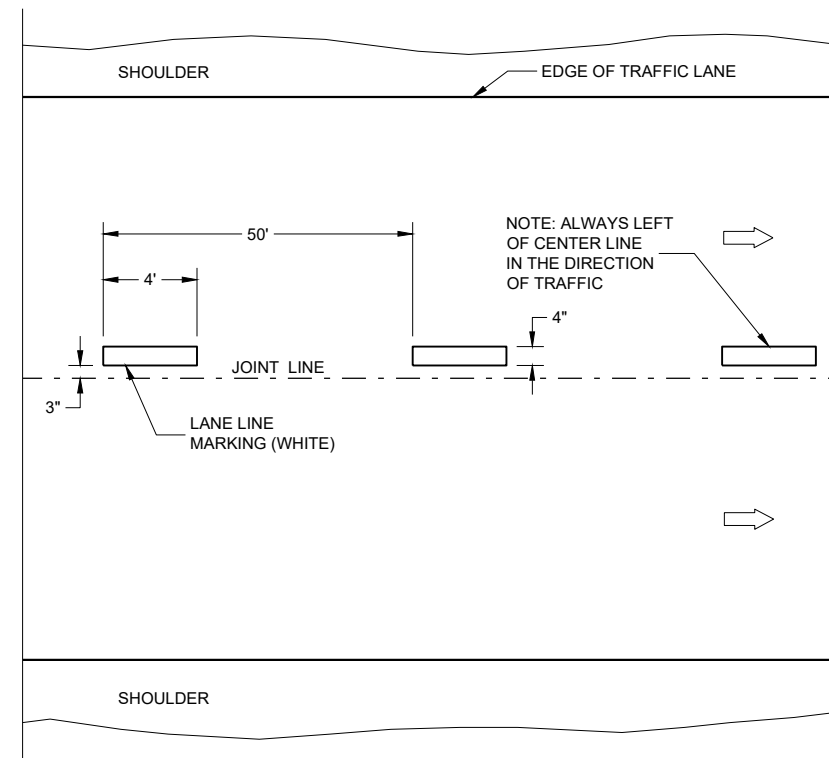
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

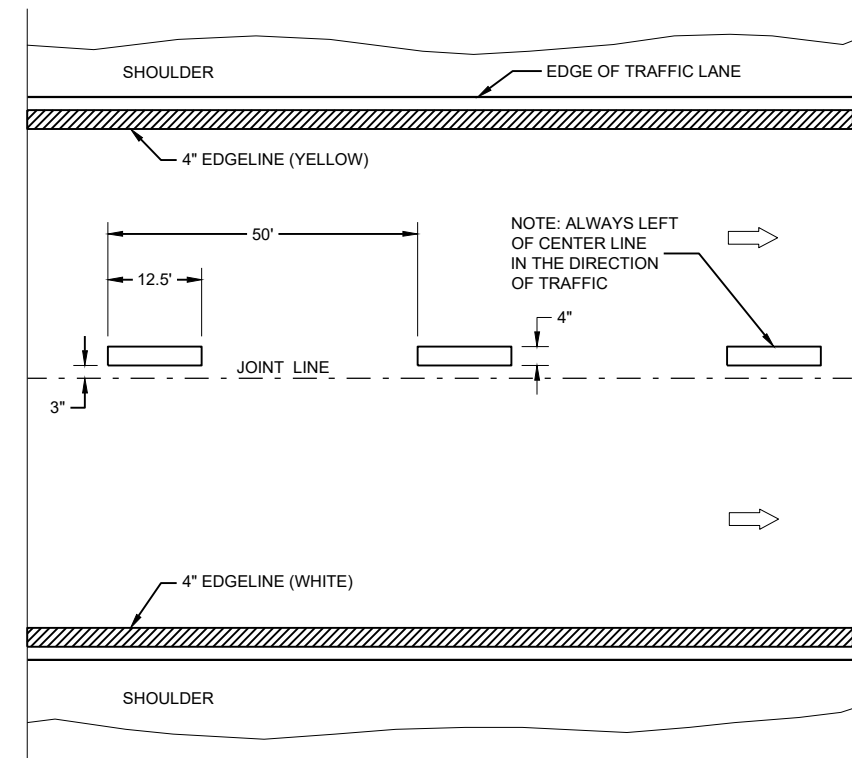
➡ DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

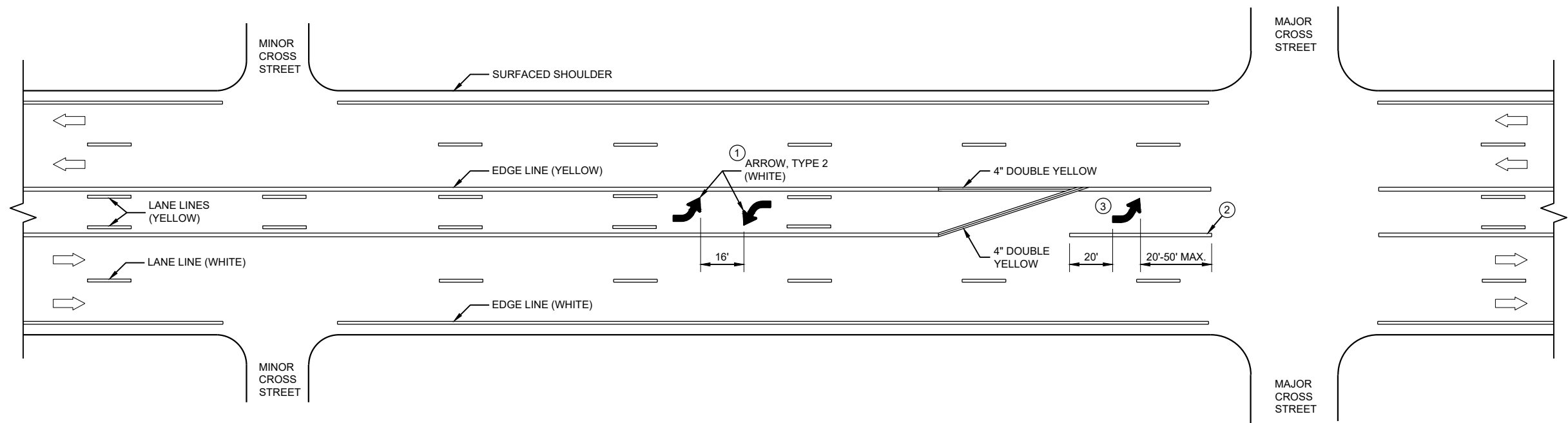
APPROVED
May 2022 DATE /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

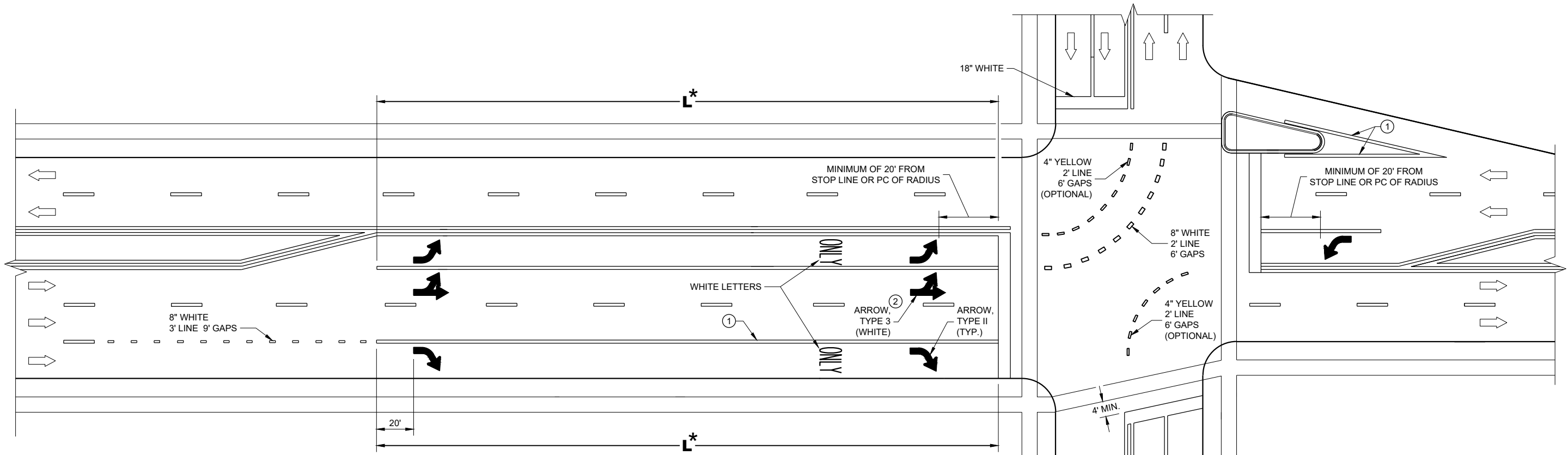
➡ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

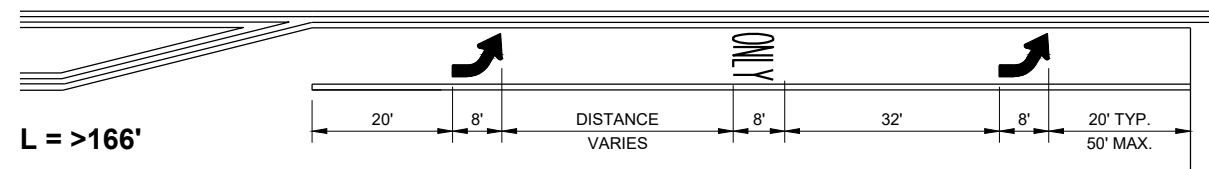
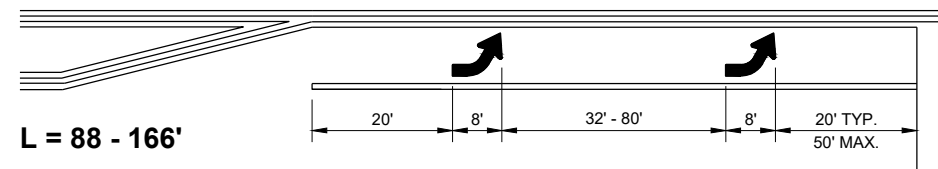
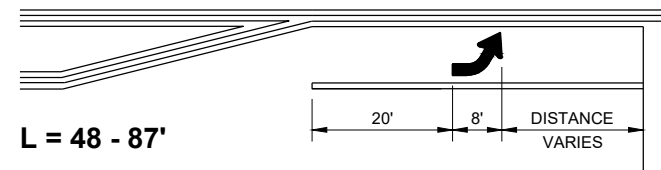
**PAVEMENT MARKING
(TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TURN LANE OPTIONS

LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

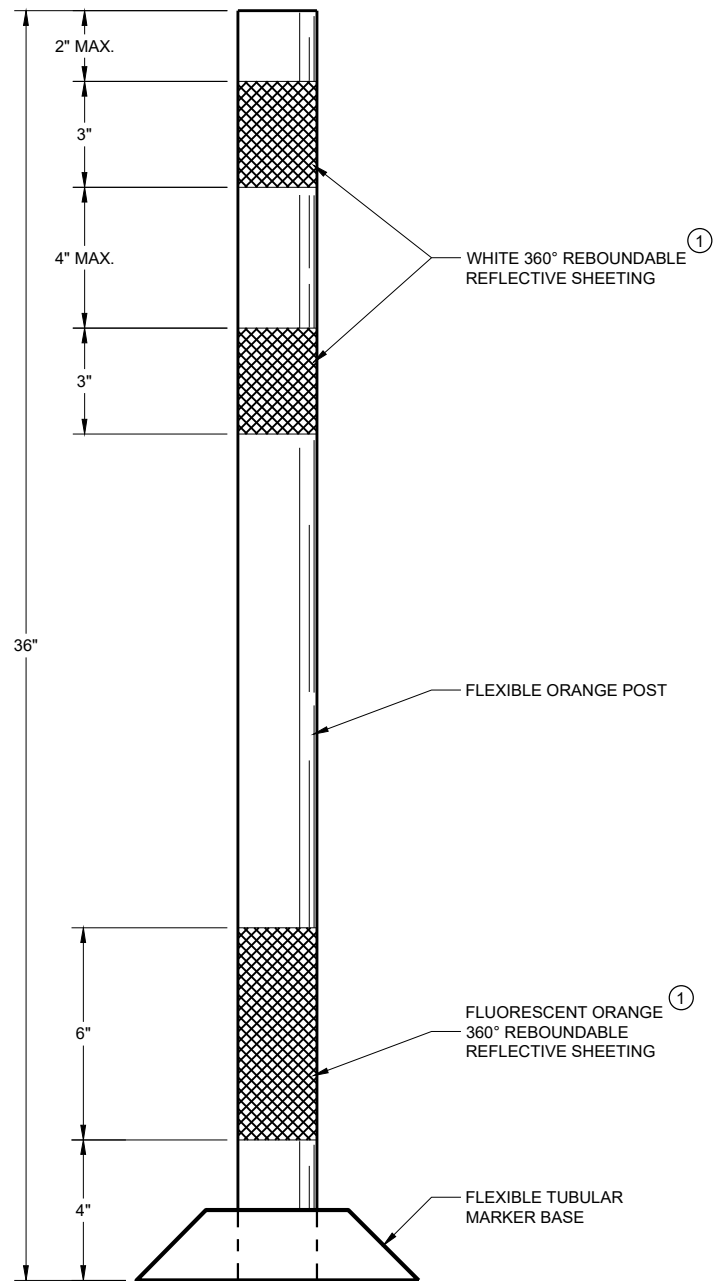
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

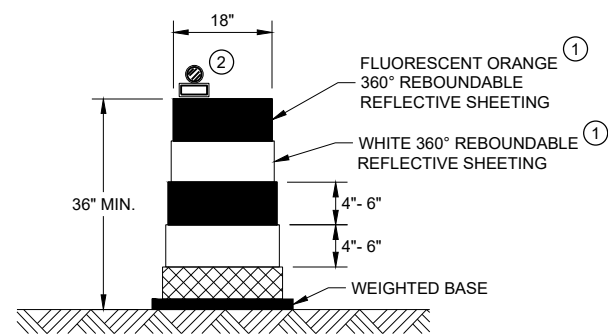
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

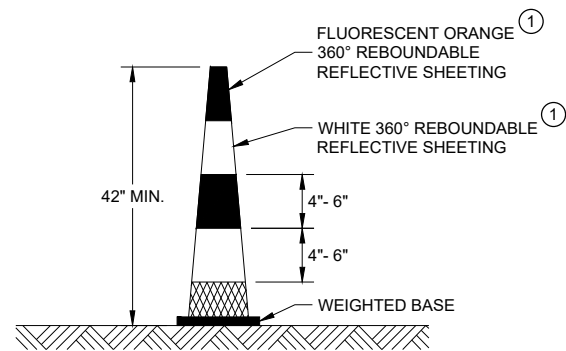
APPROVED November 2022 /S/ Andrew Heidtke DATE WORK ZONE ENGINEER

FHWA



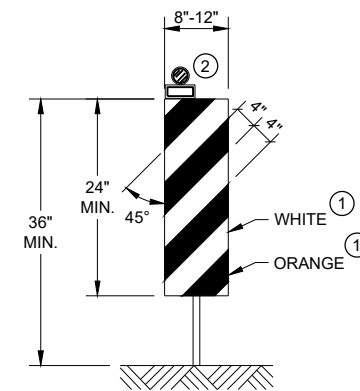
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"

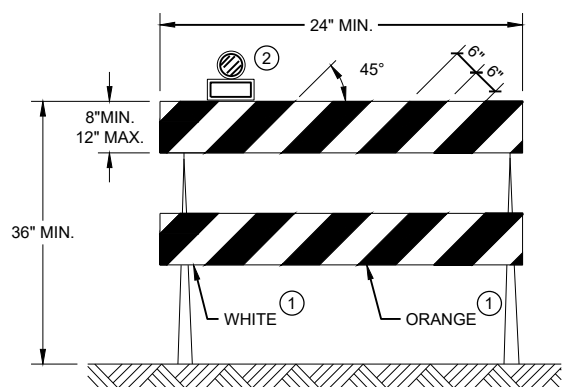


VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.

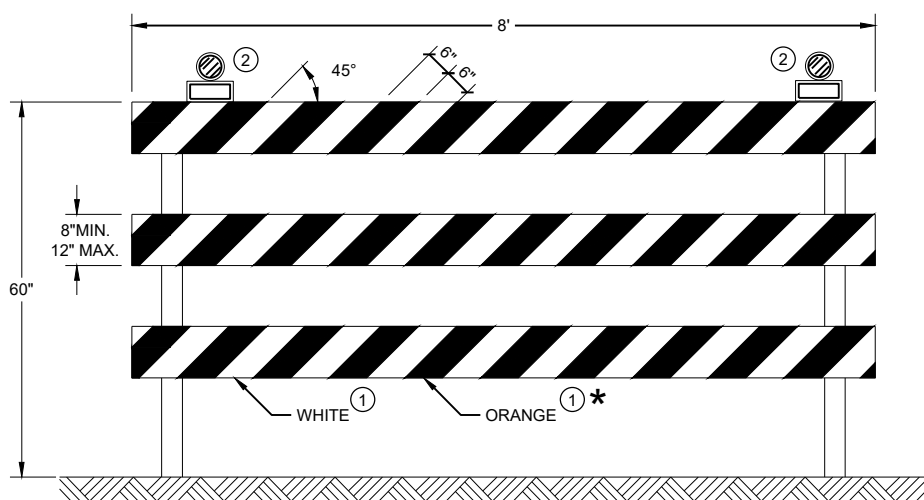
GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

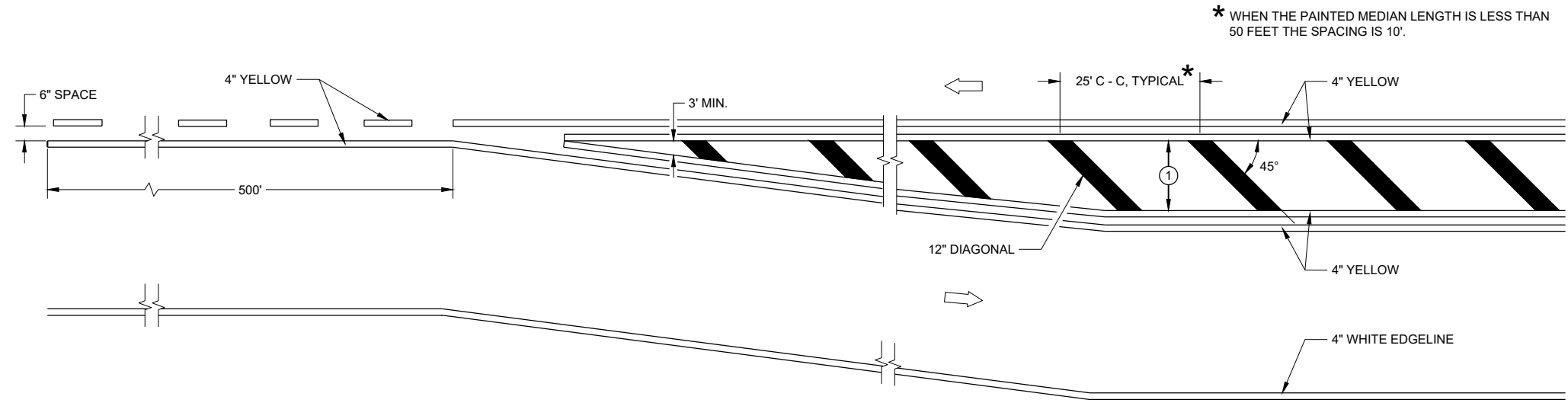
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



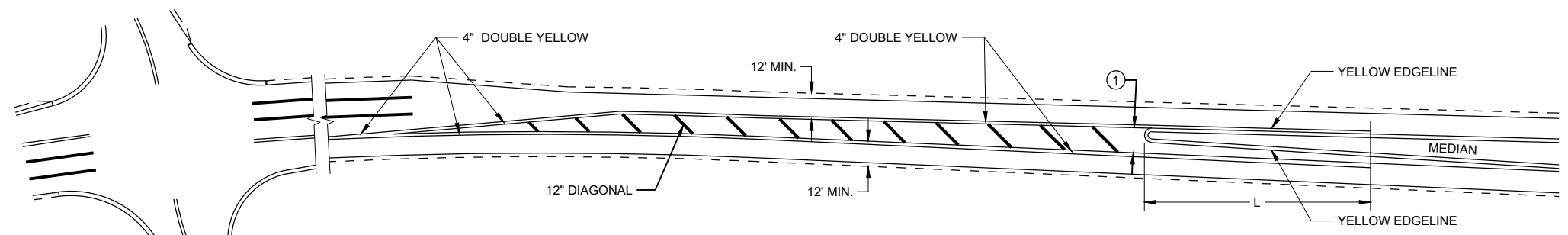
MEDIAN ISLAND DETAIL

GENERAL NOTES

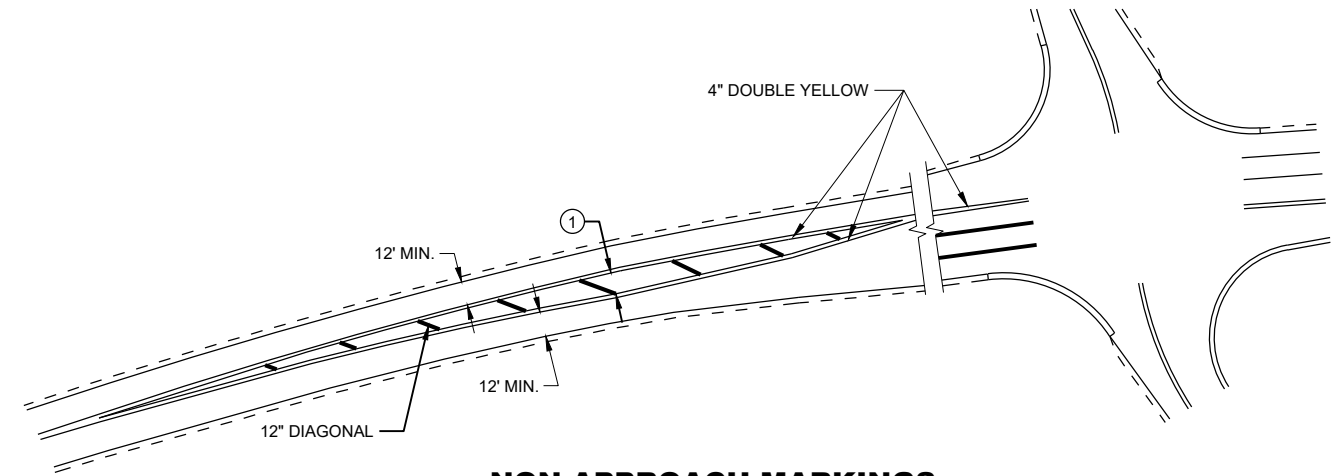
① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➔ DIRECTION OF TRAVEL

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

**MEDIAN ISLAND
PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Jeannie Silver
STATE SIGNING AND MARKING
ENGINEER

FHWA

6

6

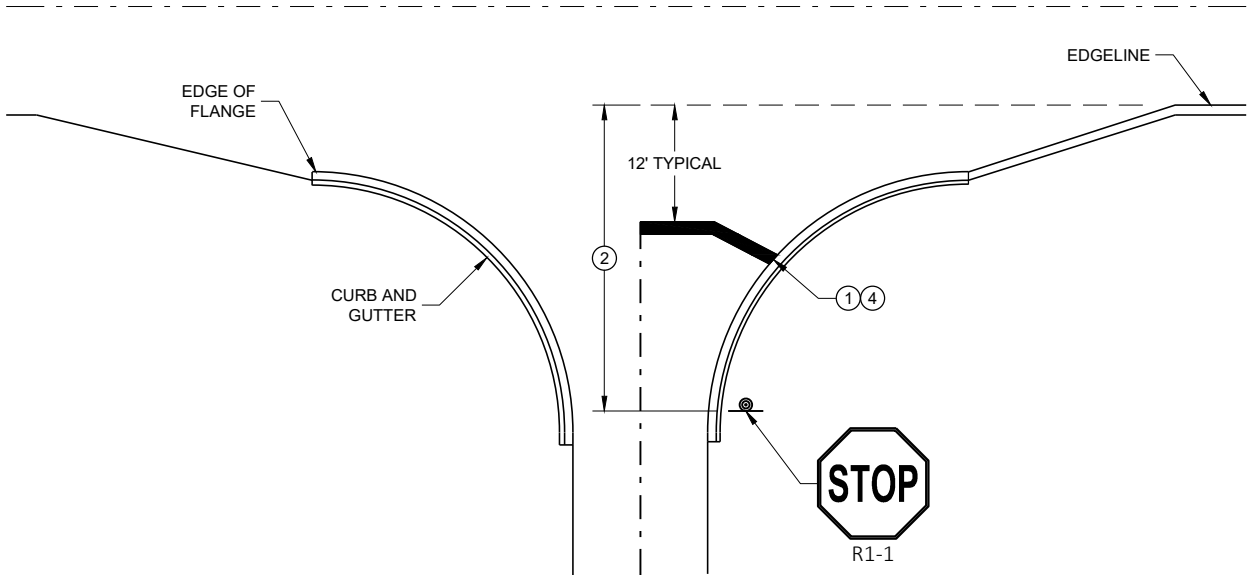
SDD 15C18 - 07a

SDD 15C18 - 07a

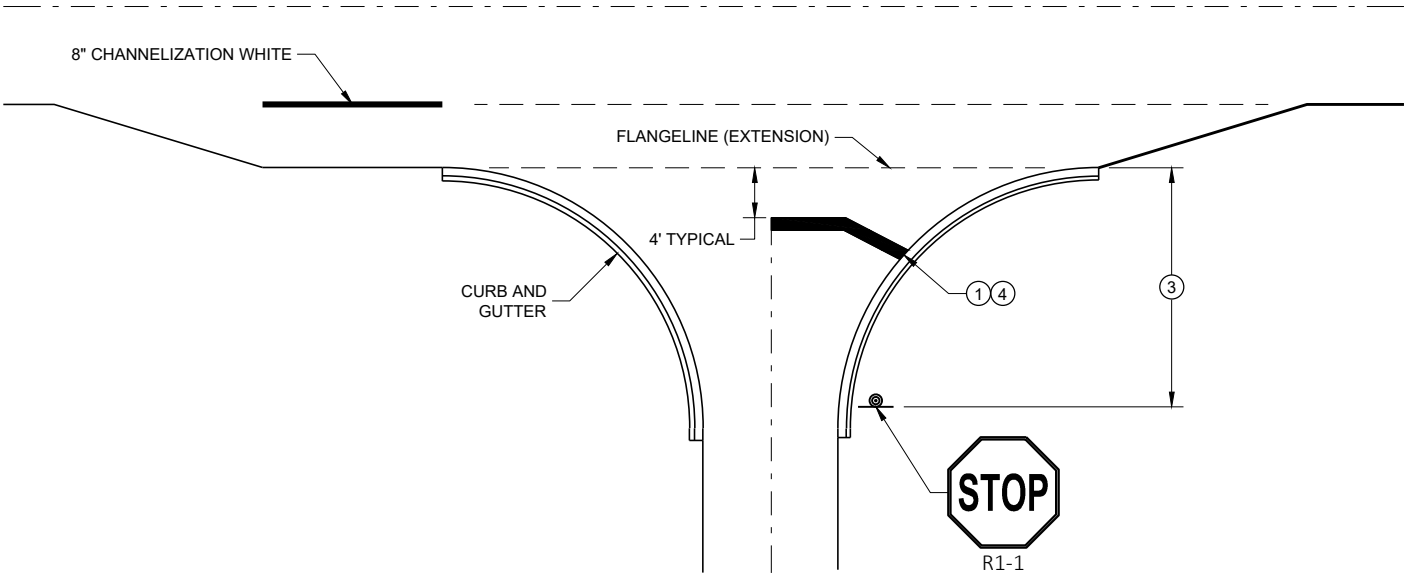
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

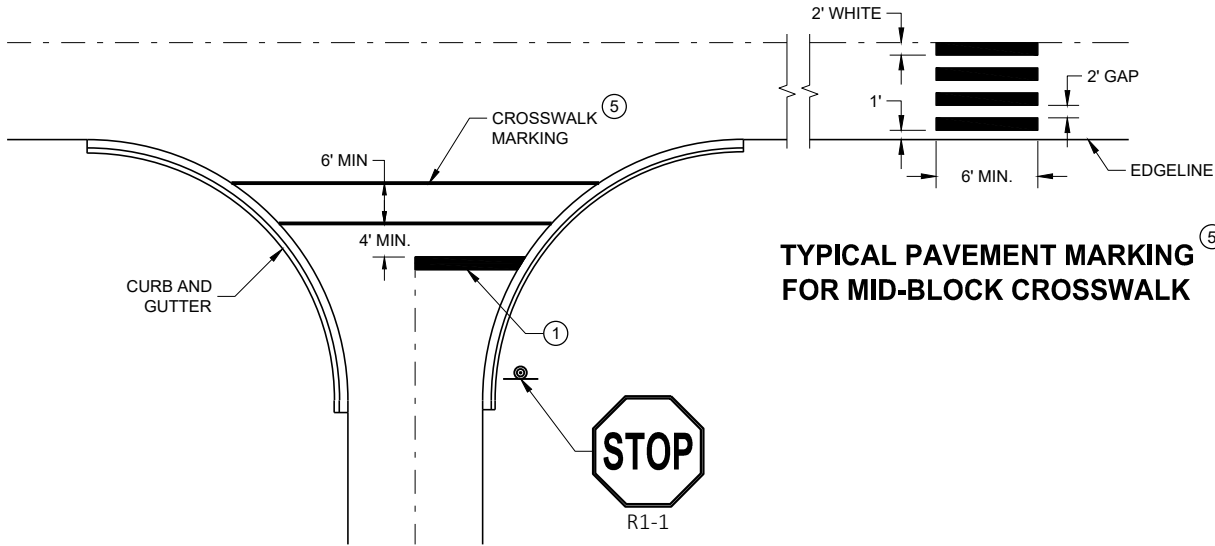
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

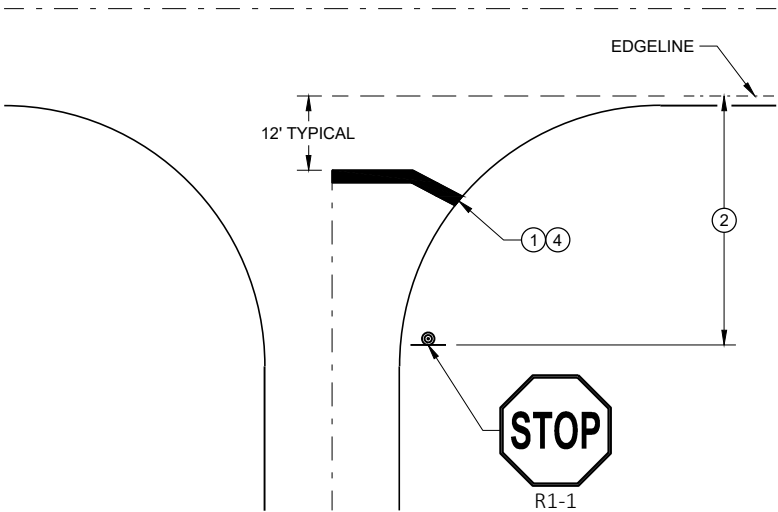


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK












TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

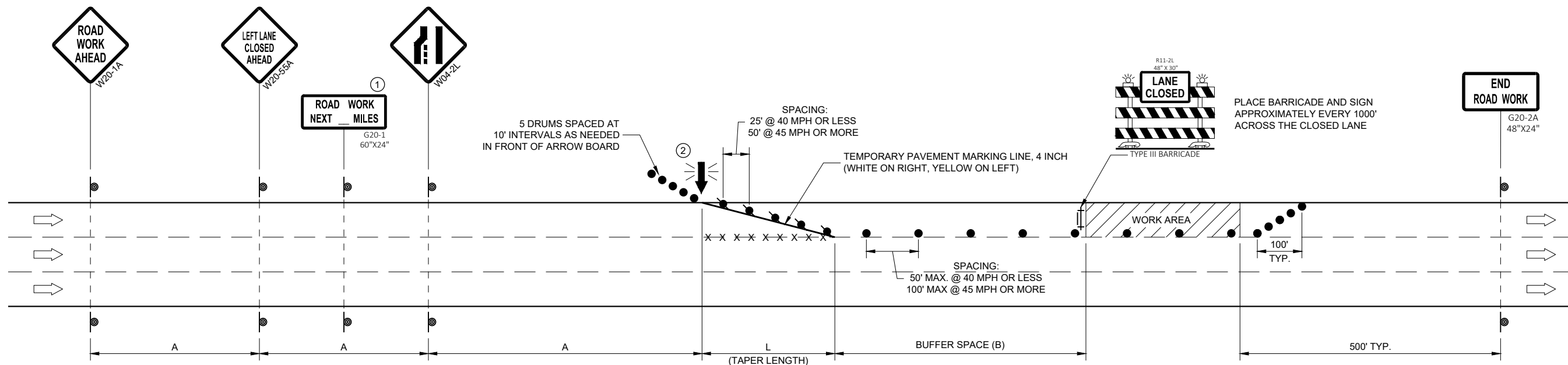
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'










TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

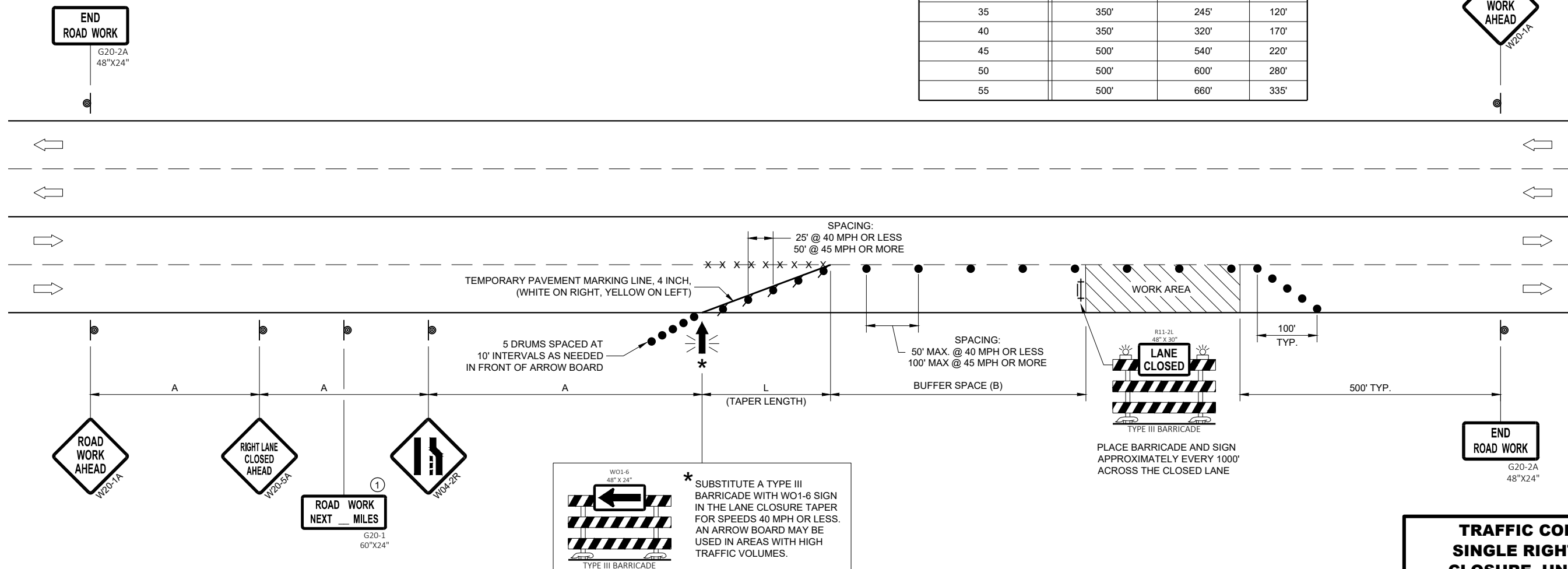
① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



6

6



SDD 15D20 - 06b

SDD 15D20 - 06b










**TRAFFIC CONTROL,
SINGLE RIGHT LANE
CLOSURE, UNDIVIDED
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

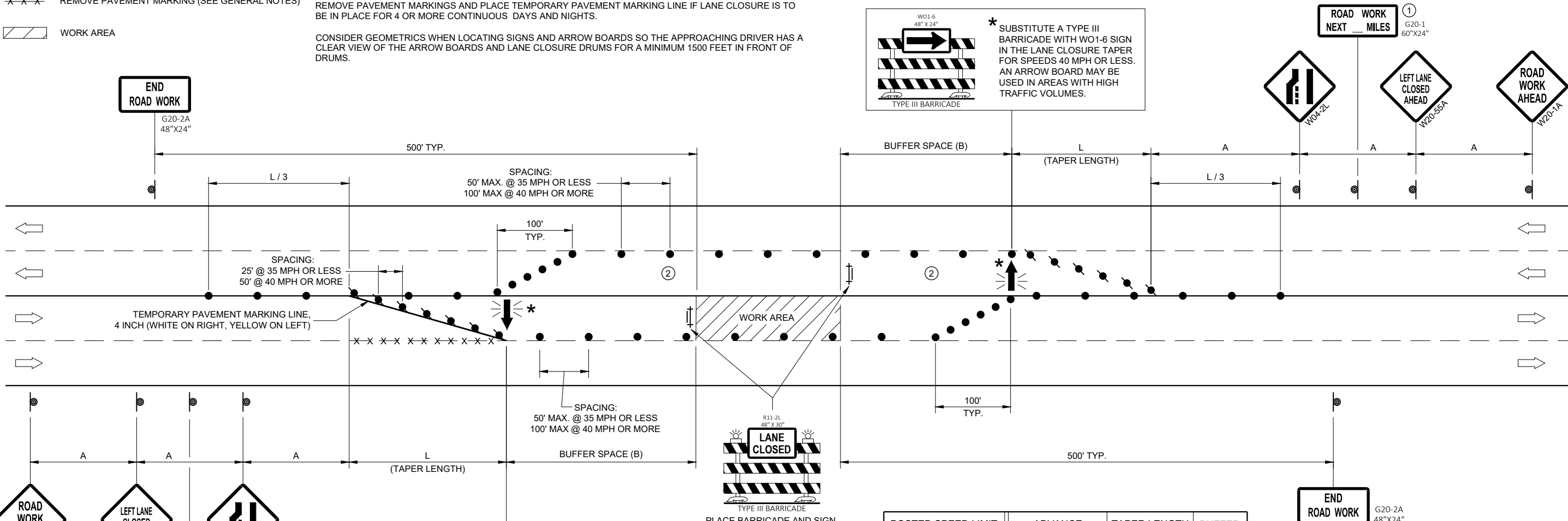
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

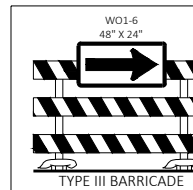
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

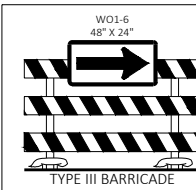
- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



*** SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**



*** SUBSTITUTE A TYPE III BARRICADE WITH WO1-6 SIGN IN THE LANE CLOSURE TAPER FOR SPEEDS 40 MPH OR LESS. AN ARROW BOARD MAY BE USED IN AREAS WITH HIGH TRAFFIC VOLUMES.**



R11-2L 48"X30"



PLACE BARRICADE AND SIGN APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

**TRAFFIC CONTROL,
SINGLE LEFT LANE
CLOSURE, UNDIVIDED
NON-FREEWAY/EXPRESSWAY**

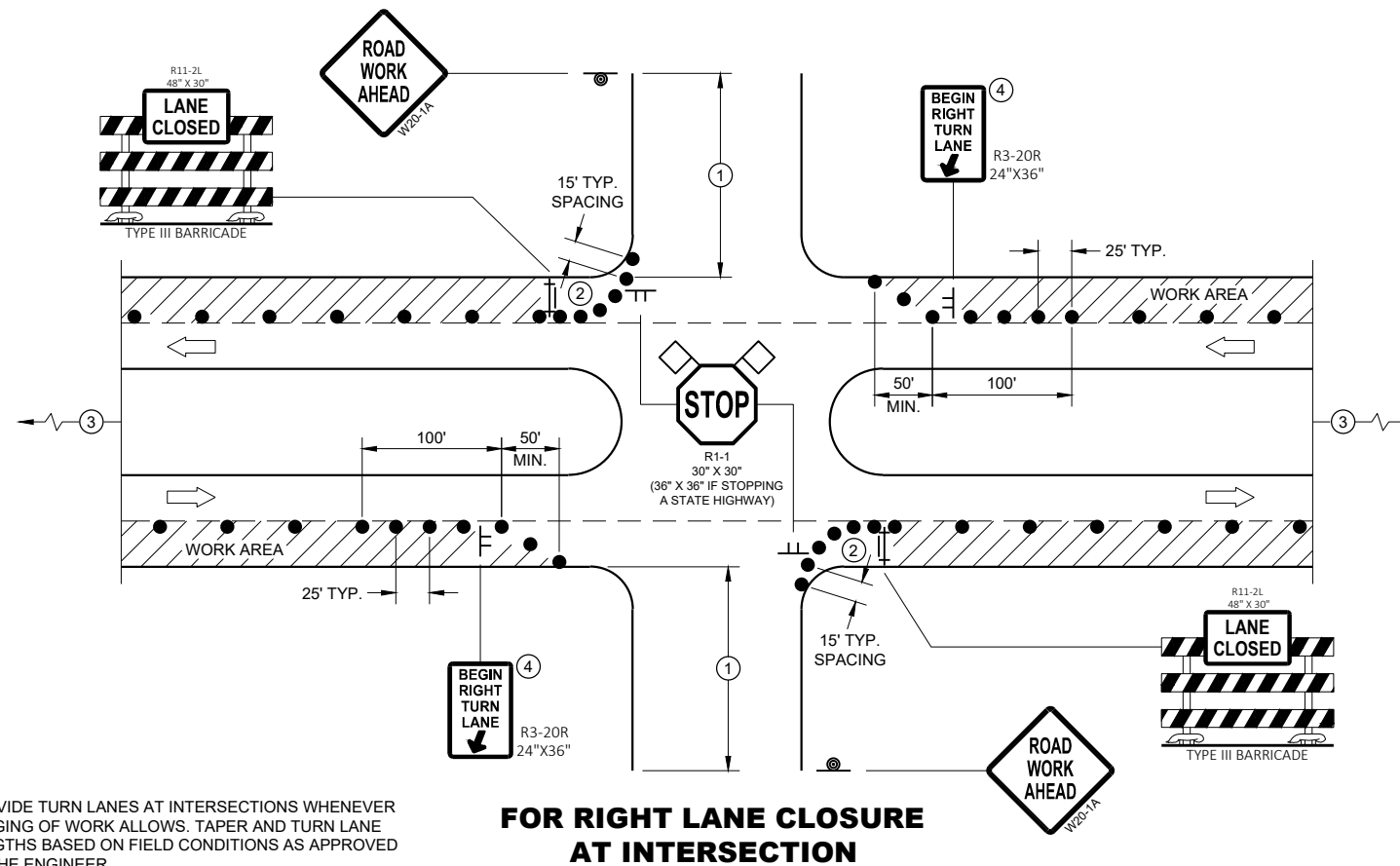
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

SDD 15D20 - 06C

SDD 15D20 - 06C



GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

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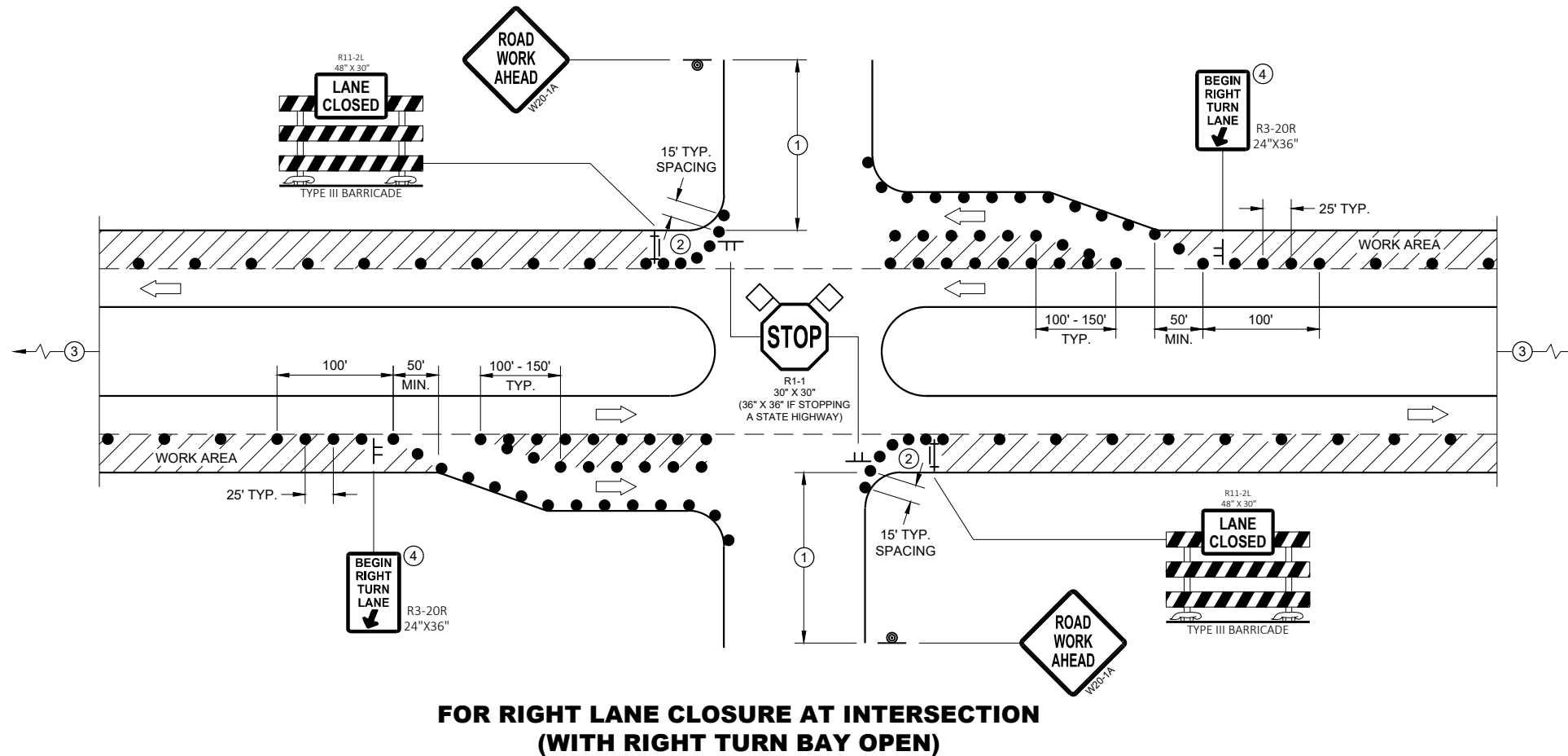
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

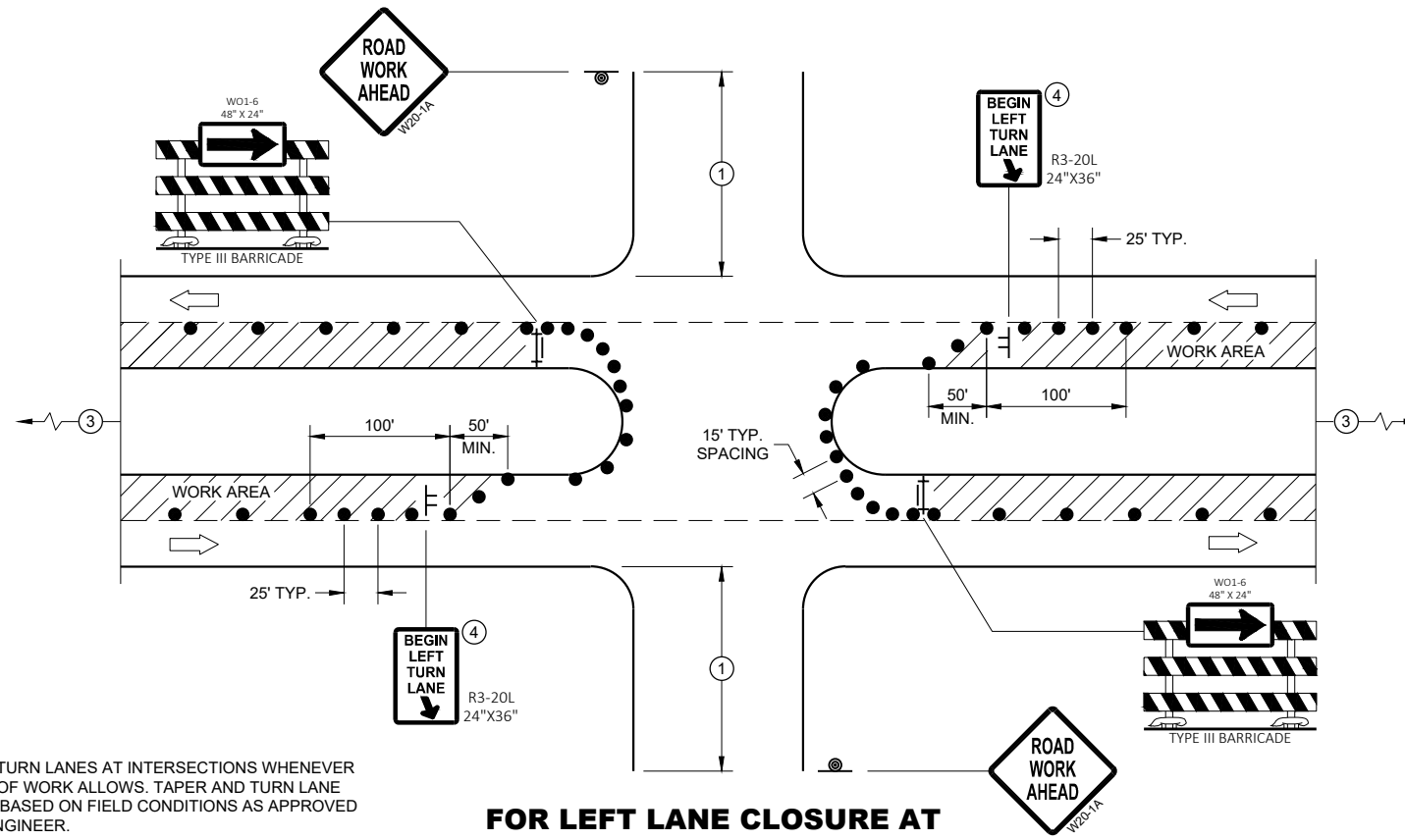


LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ⊙ SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ➔ DIRECTION OF TRAFFIC
- ◇ FLAGS, 16" X 16" MIN., ORANGE
- ▨ WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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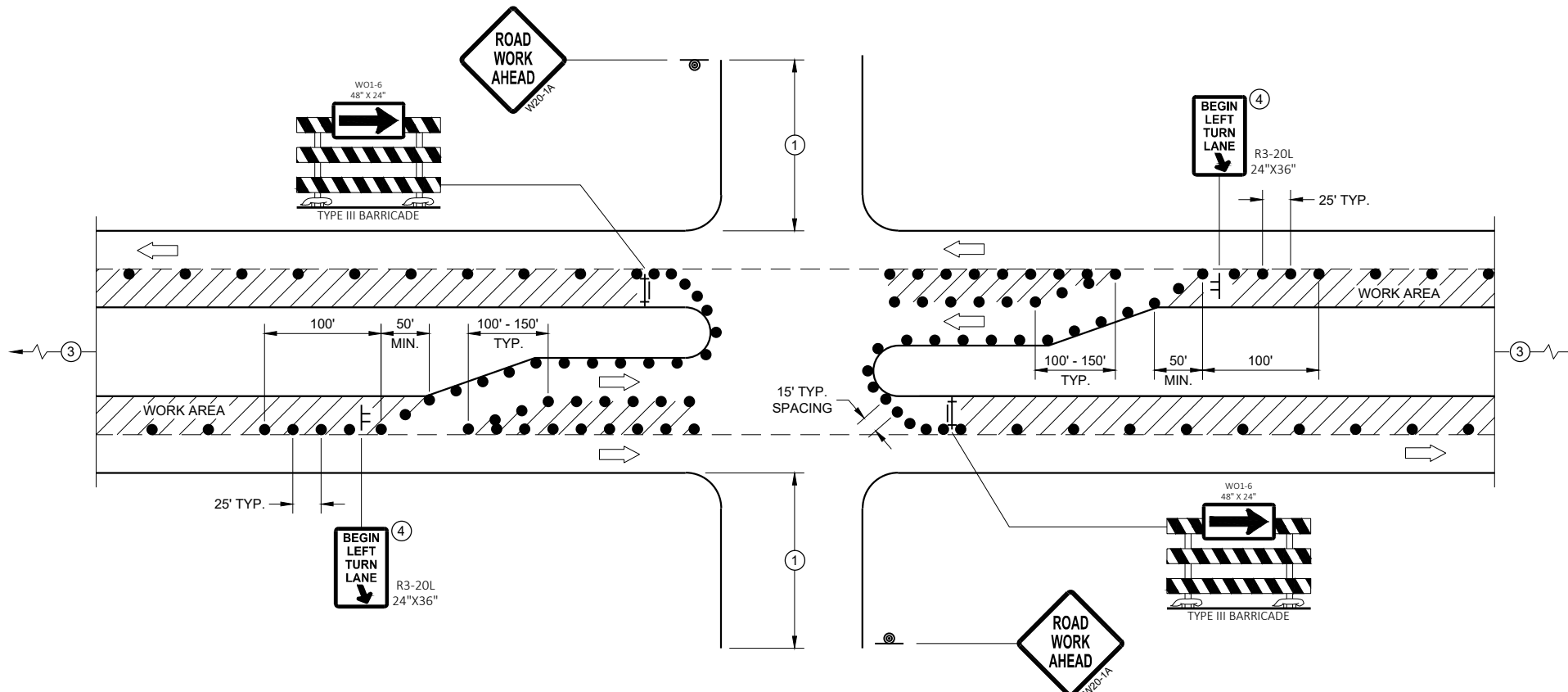
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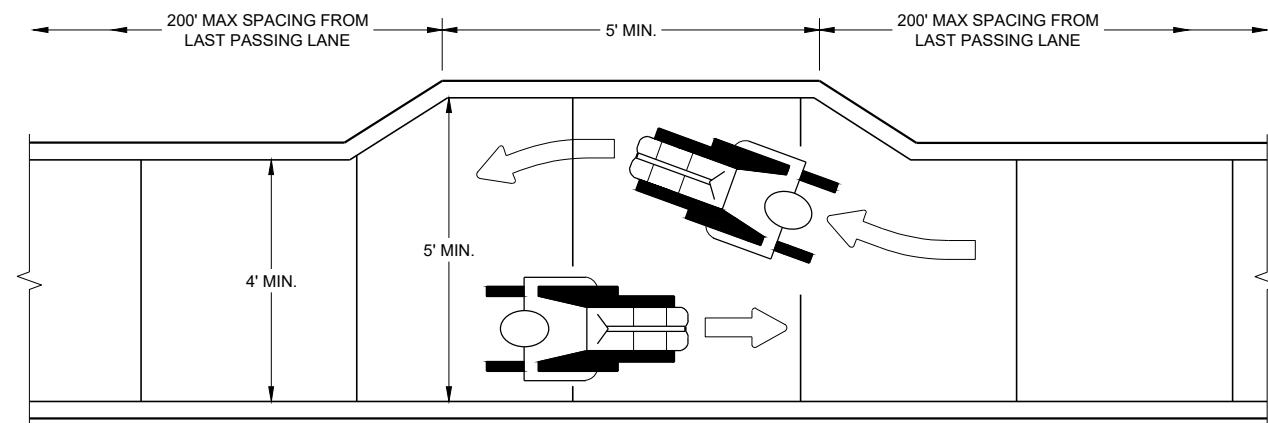


FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

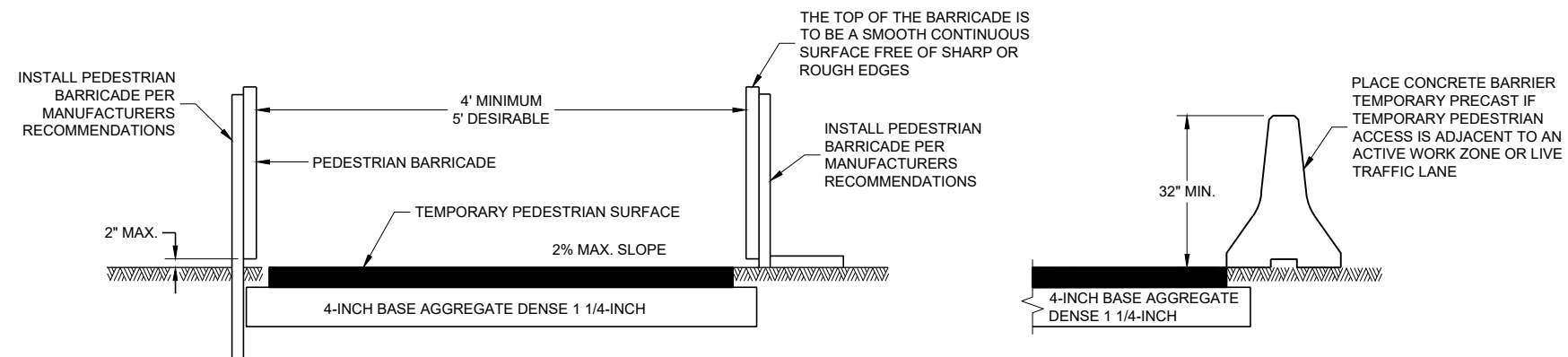
LEGEND

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- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- ➔ DIRECTION OF TRAFFIC
- ◇ FLAGS, 16" X 16" MIN., ORANGE
- ▨ WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



NARROW SIDEWALK PASSING DETAIL



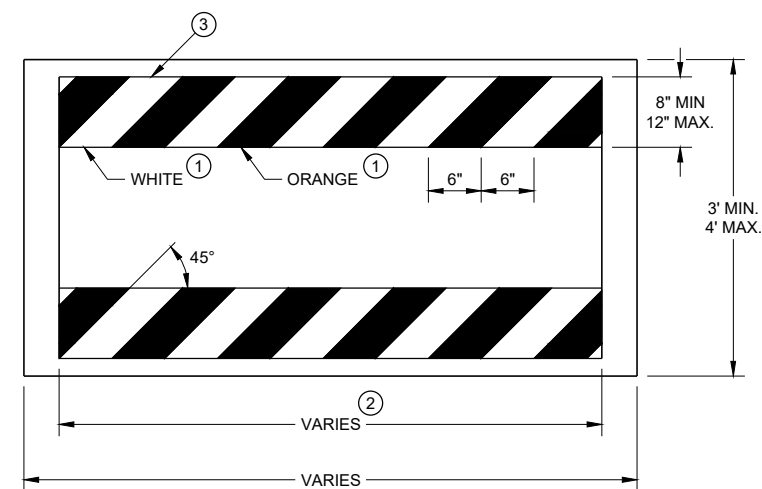
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

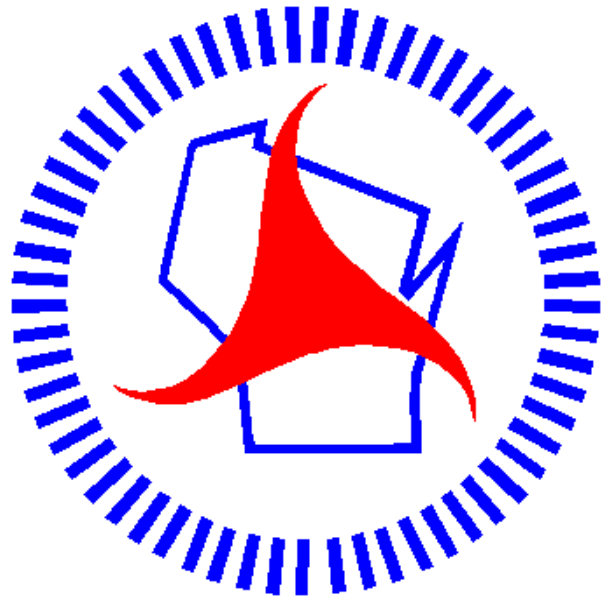
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



TEMPORARY PEDESTRIAN BARRICADE*



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>