

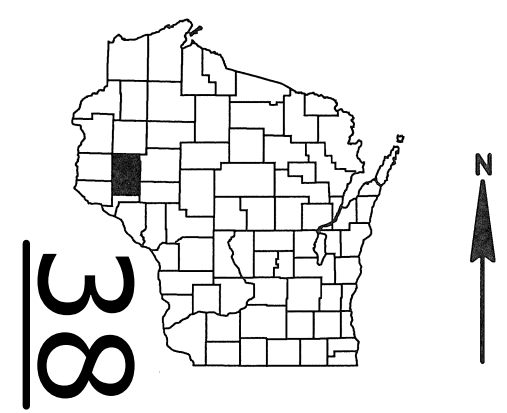
EAU WITH: PROJECT ID: 7600-00-71 COUNTY: DUNN

JUNE 2017

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 = 68

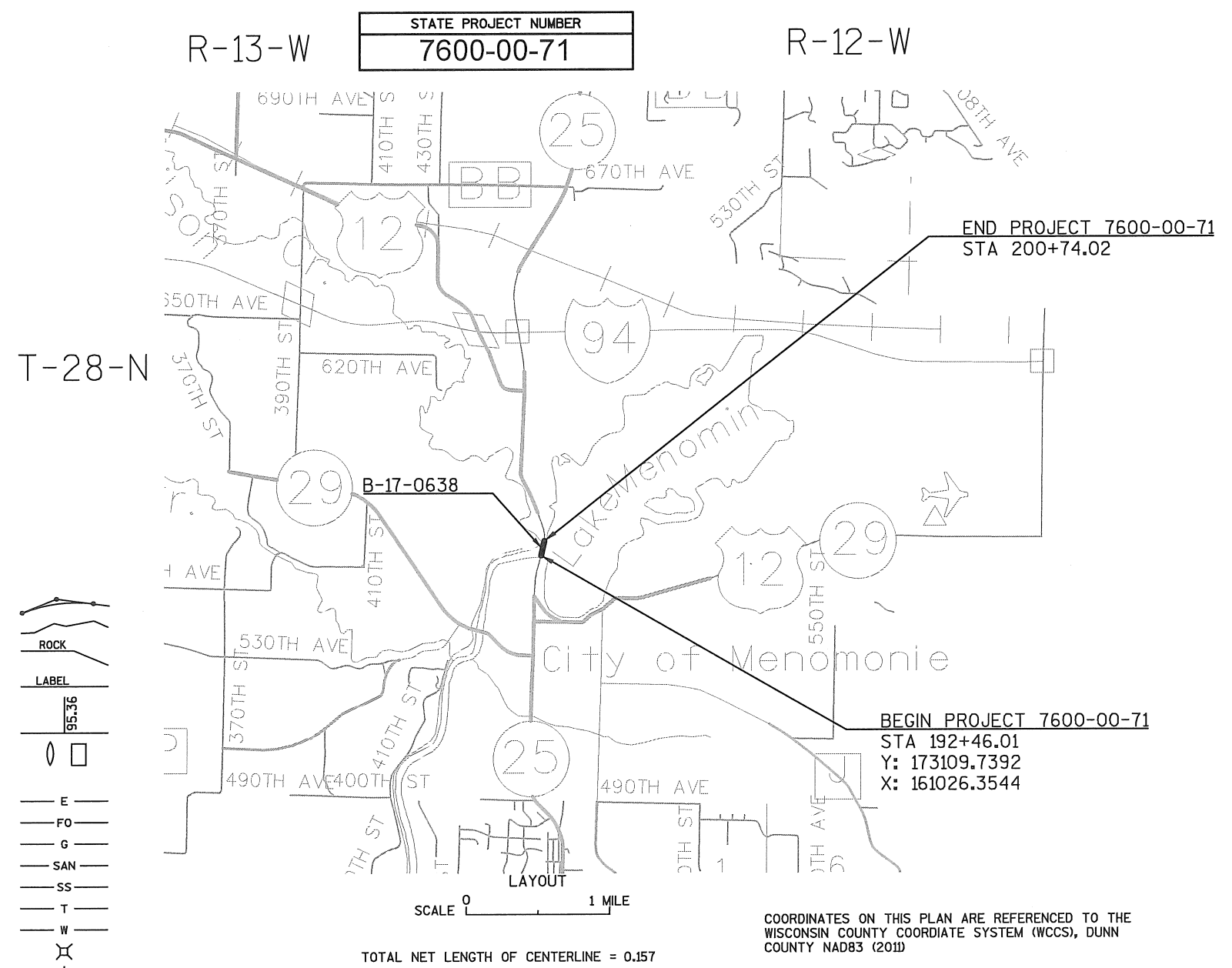


DESIGN DESIGNATION

A.A.D.T.	2018	=	22,200
A.A.D.T.	2038	=	25,600
D.H.V.		=	2,810
D.D.		=	59/41
T.		=	9.2%
DESIGN SPEED		=	40 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS	
PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	----
LOT LINE	----
LIMITED HIGHWAY EASEMENT	----
EXISTING RIGHT OF WAY	----
PROPOSED OR NEW R/W LINE	----
SLOPE INTERCEPT	300' 1"
REFERENCE LINE	----
EXISTING CULVERT	----
PROPOSED CULVERT (Box or Pipe)	----
COMBUSTIBLE FLUIDS	CAUTION
MARSH AREA	----
WOODED OR SHRUB AREA	----
PROFILE	
GRADE LINE	----
ORIGINAL GROUND	----
MARSH OR ROCK PROFILE (To be noted as such)	----
SPECIAL DITCH	----
GRADE ELEVATION	95.36
CULVERT (Profile View)	----
UTILITIES	
ELECTRIC	E
FIBER OPTIC	FO
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
TELEPHONE	T
WATER	W
UTILITY PEDESTAL	----
POWER POLE	----
TELEPHONE POLE	----

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
C MENOMONIE, BROADWAY STREET
RED CEDAR RIVER BRIDGE B-17-0638
USH 12
DUNN COUNTY



STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7600-00-71		

APPROVED FOR CITY OF MENOMONIE

17 JAN 17 [Signature]

ORIGINAL PLANS PREPARED BY

KL Engineering

WISCONSIN PROFESSIONAL ENGINEER

BRADLEY J. CUNNINGHAM
37935-006
MT. HOREB, WI

01-11-2017 [Signature]

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	KL ENGINEERING
Designer	KL ENGINEERING
Project Manager	TYLER RONGSTAD
Regional Examiner	TOU YANG
Regional Supervisor	TIM MASON

APPROVED FOR THE DEPARTMENT

DATE: 01/12/2017 [Signature]

E



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CITY OF MENOMONIE
RANDY EIDE, P.E.
DIRECTOR OF PUBLIC WORKS
800 WILSON AVENUE
MENOMONIE, WI 54751
(715) 232-2207

GENERAL NOTES

CONTACT THE UTILITIES AND DIGGERS HOTLINE TO LOCATE AND FIELD VERIFY UTILITIES PRIOR TO THE START OF WORK. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

PROTECT ALL INLETS WITH PROPER INLET PROTECTION AT LOCATIONS EXHIBITING RISK OF BEING IMPACTED BY CONSTRUCTION OPERATIONS AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY ANY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT THE CONTRACTORS EXPENSE.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WATERWAY.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE I OR TYPE II".

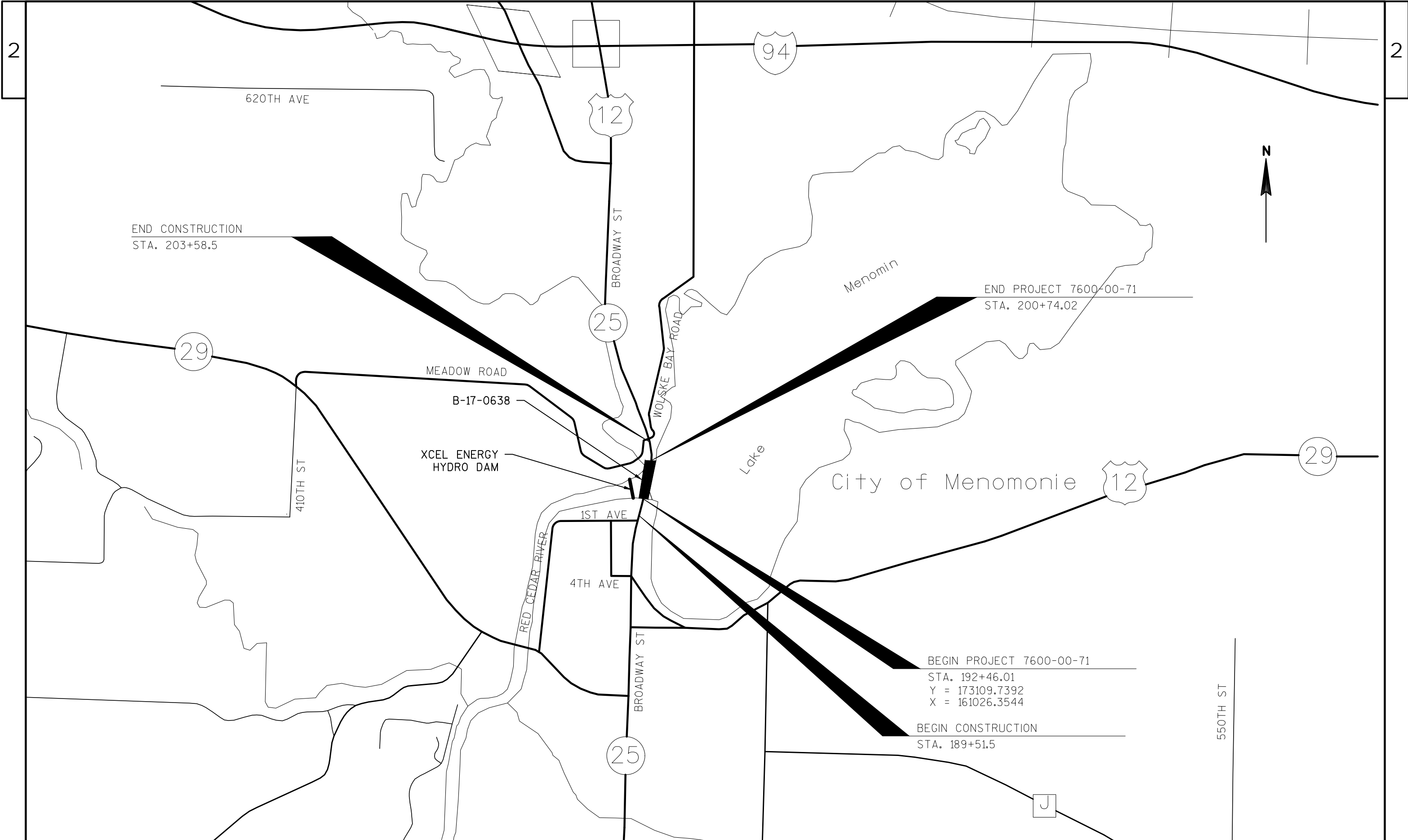
SIDEWALK AND CURB AND GUTTER REPLACEMENT SHOULD BE THE NEAREST JOINT. LIMITS ARE APPROXIMATE AND ARE TO BE VERIFIED IN THE FIELD BY THE ENGINEER. MATCH EXISTING SIDEWALK WIDTH.

DESIGN CONTACTS

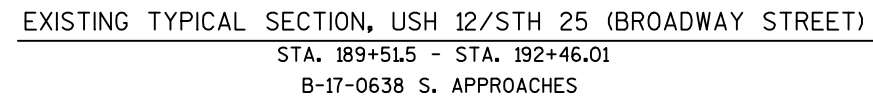
CONSULTANT DESIGNER
BRAD CUNNINGHAM, PE
KL ENGINEERING, INC.
5950 SEMINOLE CENTRE COURT, SUITE 200
MADISON, WI 53711
(608) 663-1218
bcunningham@klengineering.com

DNR AREA LIAISON
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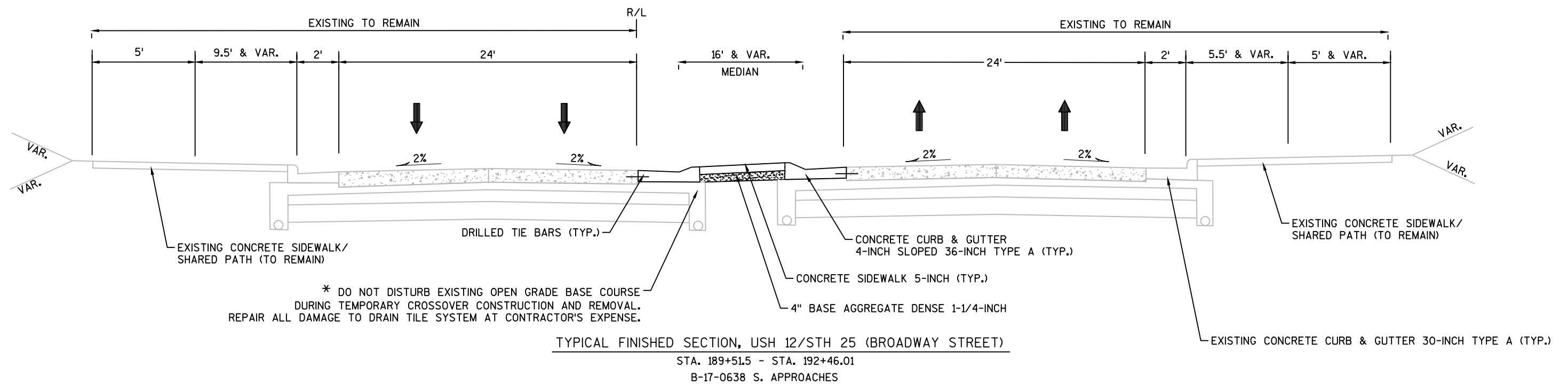
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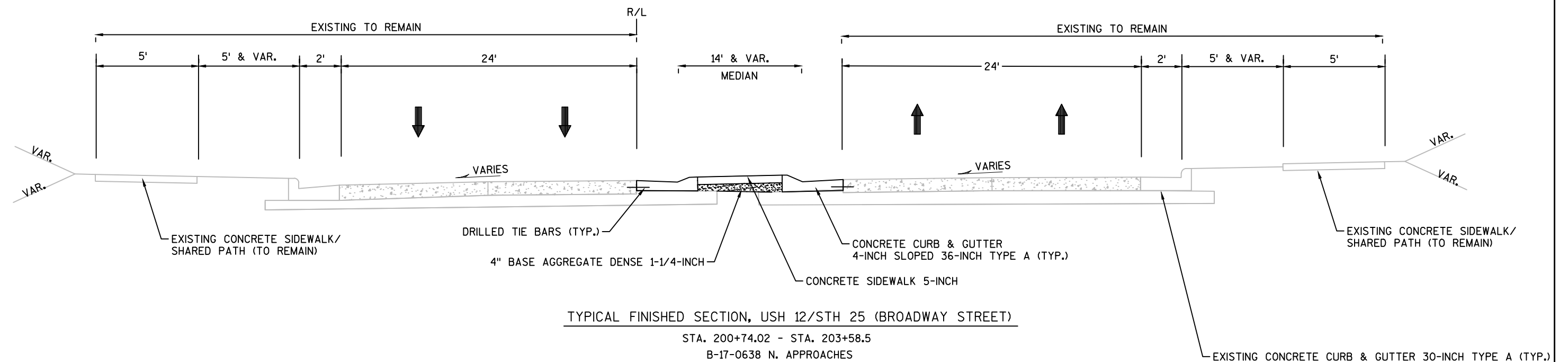
The diagram illustrates the cross-section of the existing roadway. Key dimensions and components include:

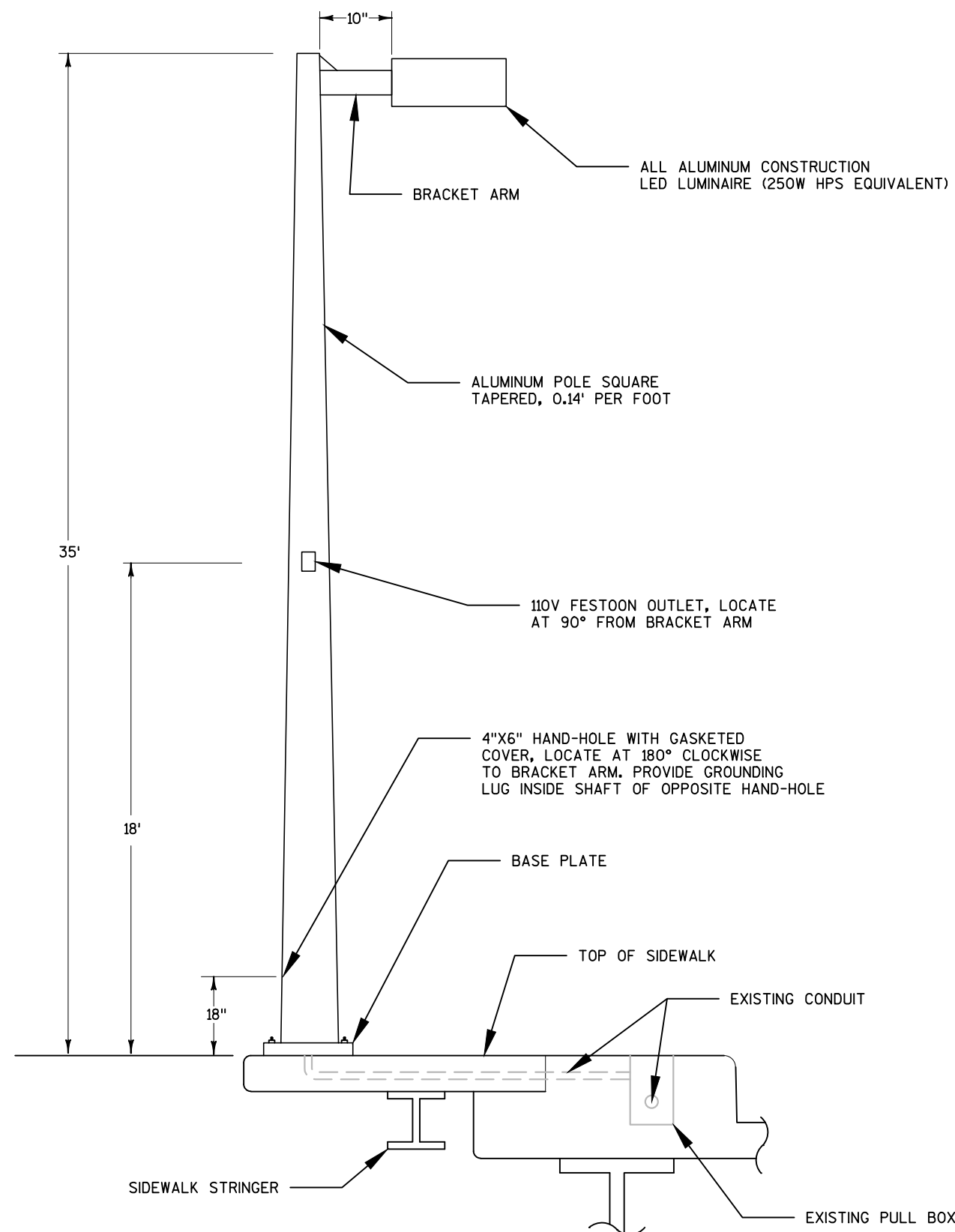
- Dimensions:**
 - Left side: 5' sidewalk, 5' & VAR. lane, 2' shoulder.
 - Travel lane: 24' wide.
 - Median: 6' - 20' wide, labeled "MEDIAN".
 - Travel lane: 24' wide.
 - Right side: 2' shoulder, 5' & VAR. lane, 5' sidewalk.
- Centerline:** Marked "R/L" (Right/Left) with a vertical line.
- Pavement and Structure Details:**
 - Left side: "EXISTING CONCRETE SIDEWALK/ SHARED PATH".
 - Left travel lane: "EXISTING 8" CONCRETE PAVEMENT (TYP.)" and "EXISTING 6" BASE COURSE (TYP.)".
 - Median: "VARIES" with a downward arrow.
 - Right travel lane: "EXISTING CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A (TYP.)".
 - Right side: "EXISTING CONCRETE SIDEWALK/ SHARED PATH".
 - Right side curb: "EXISTING CONCRETE CURB & GUTTER 30-INCH TYPE A (TYP.)".
- Other Labels:**
 - "VARIES" with an upward arrow in the right travel lane.
 - "VAR." at the far left and right edges.

EXISTING TYPICAL SECTION, USH 12/STH 25 (BROADWAY STREET)
 STA. 200+74.02 - STA. 203+58.5
 B-17-0638 N. APPROACHES

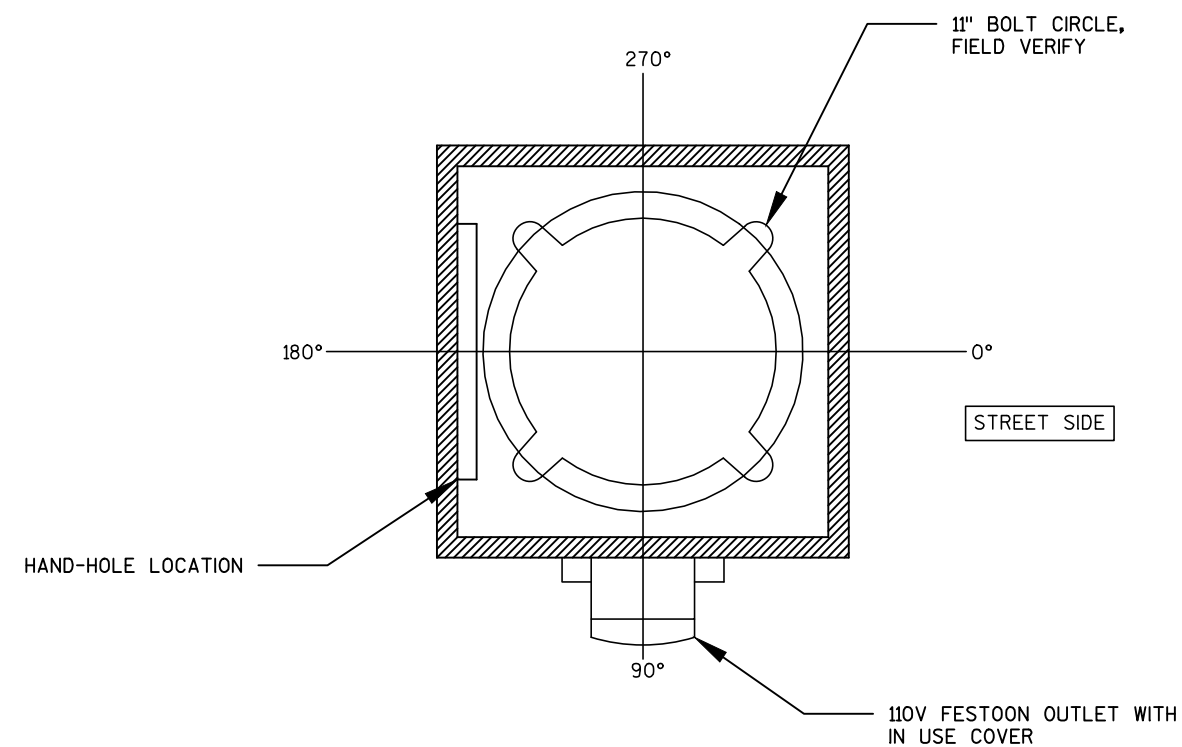


STA 192+46.01 - STA 200+74.02
B-17-0638
(SEE STRUCTURE PLAN)

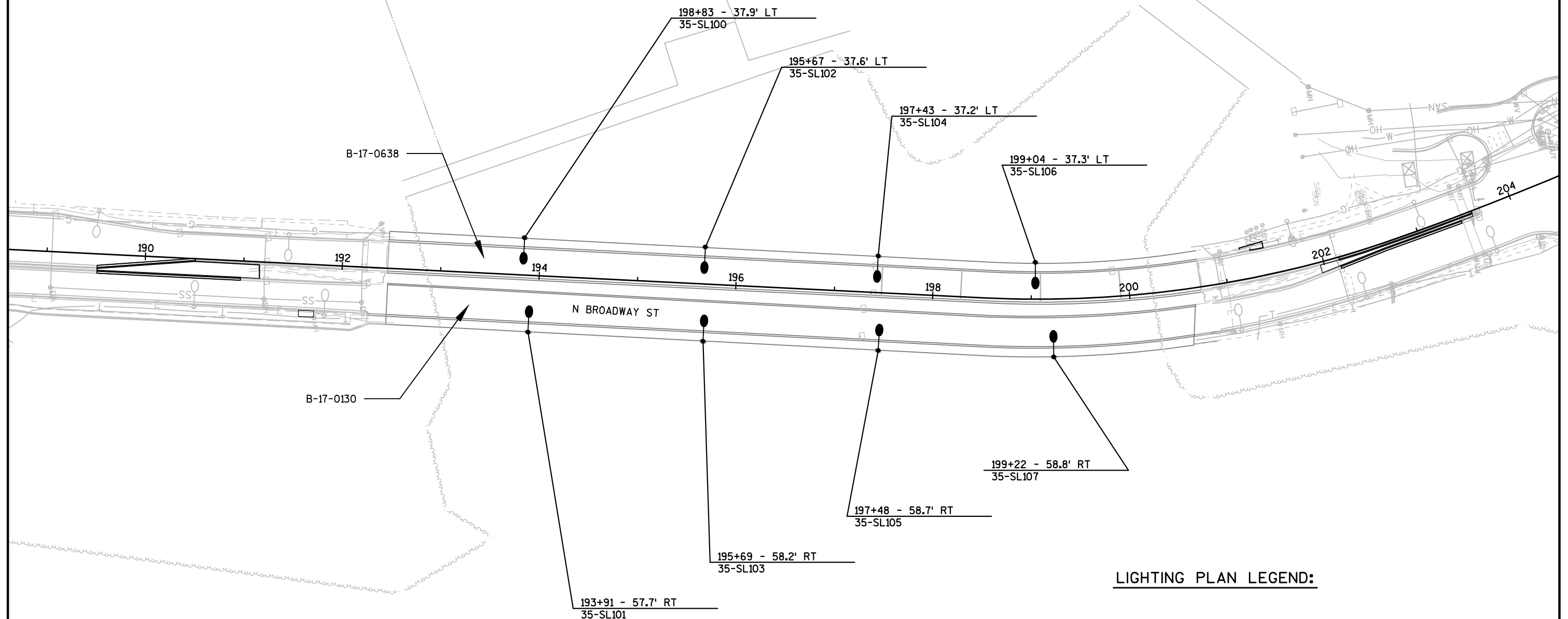




STREET LIGHT DETAIL
NOT TO SCALE

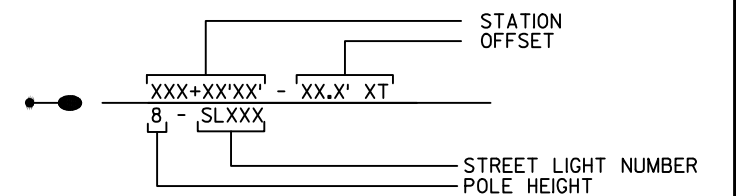


OVERHEAD VIEW
NOT TO SCALE



LIGHTING PLAN LEGEND:

- PROPOSED STREET LIGHT UNIT
- EXISTING STREET LIGHT UNIT



GENERAL STREET LIGHTING NOTES:

- 1) ALL EXISTING STREET LIGHTS ON THE BRIDGE ARE TO REMOVED AND REPLACED WITH NEW POLES, ARMS, LED LUMINAIRES AND ELECTRICAL WIRING.
- 2) DISCONNECT EXISTING WIRING AT THE LIGHT BASE AND CONNECT TO NEW WIRING UPON STREET LIGHT INSTALLATION. REPLACE USING ALL NEW FUSING AND WIRE CONNECTIONS.

PROJECT NO: 7600-00-71

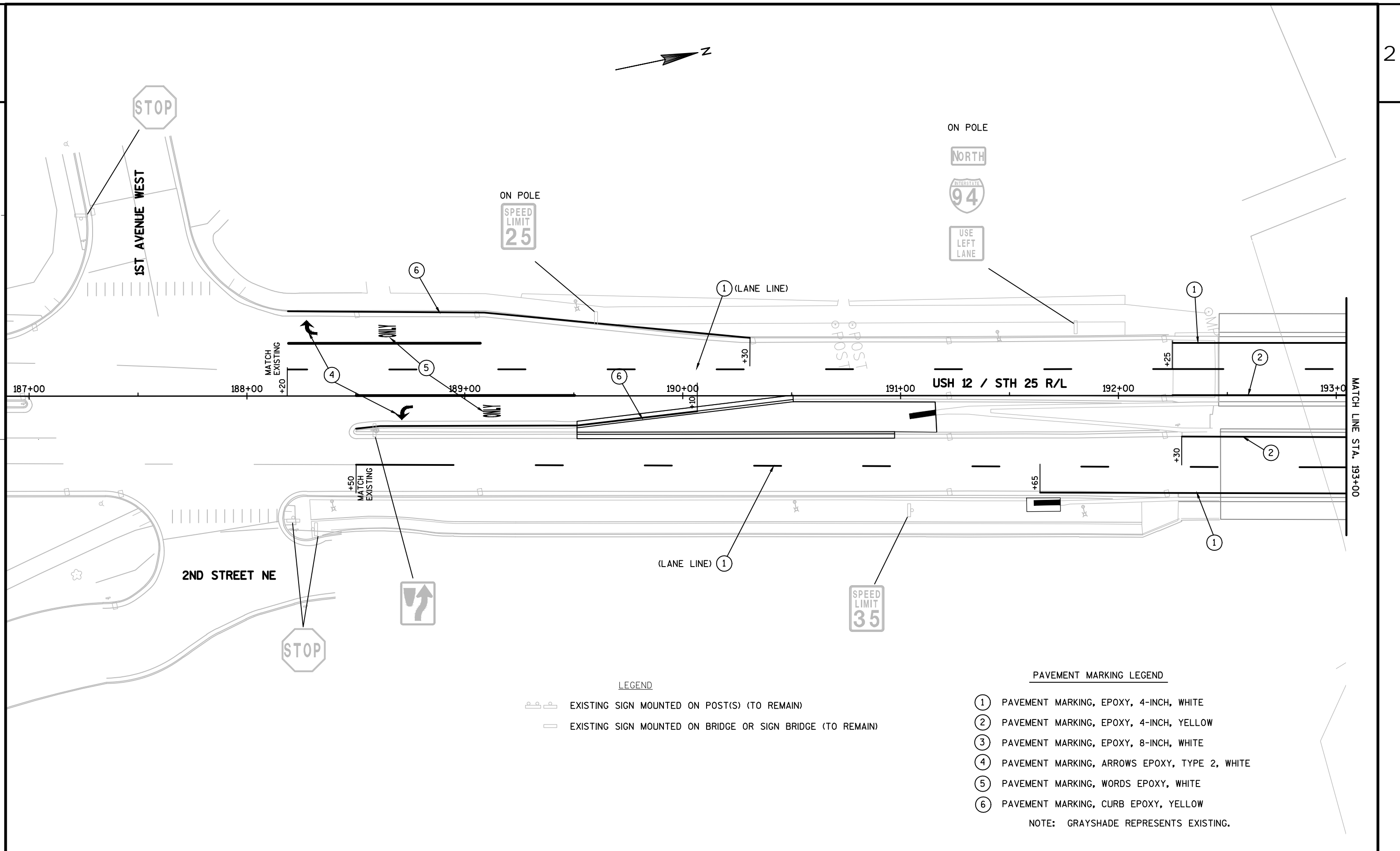
HWY: USH 12

COUNTY: DUNN

LIGHTING PLANS

SHEET

E



LEGEND



EXISTING SIGN MOUNTED ON POST(S) (TO REMAIN)

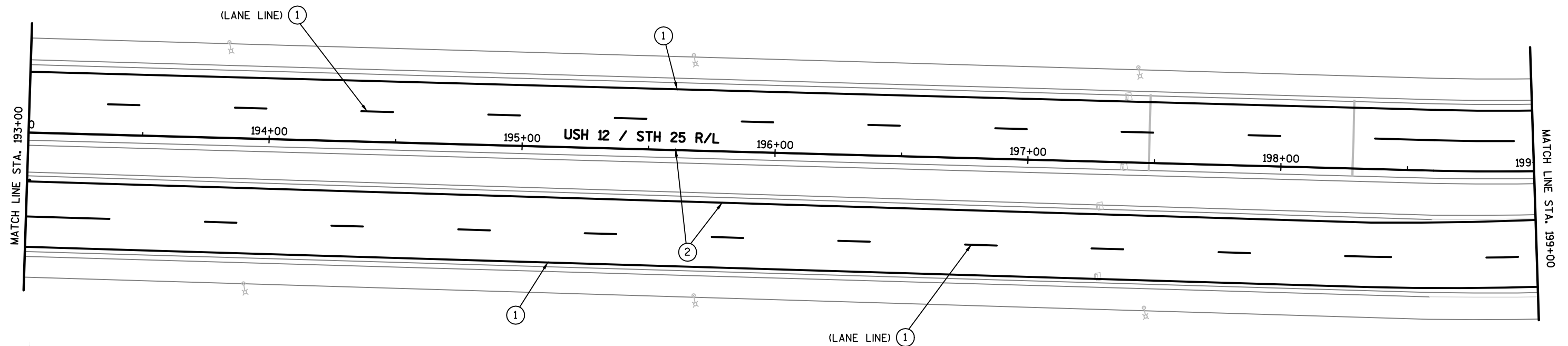


EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE (TO REMAIN)

PAVEMENT MARKING LEGEND

- ① PAVEMENT MARKING, EPOXY, 4-INCH, WHITE
- ② PAVEMENT MARKING, EPOXY, 4-INCH, YELLOW
- ③ PAVEMENT MARKING, EPOXY, 8-INCH, WHITE
- ④ PAVEMENT MARKING, ARROWS EPOXY, TYPE 2, WHITE
- ⑤ PAVEMENT MARKING, WORDS EPOXY, WHITE

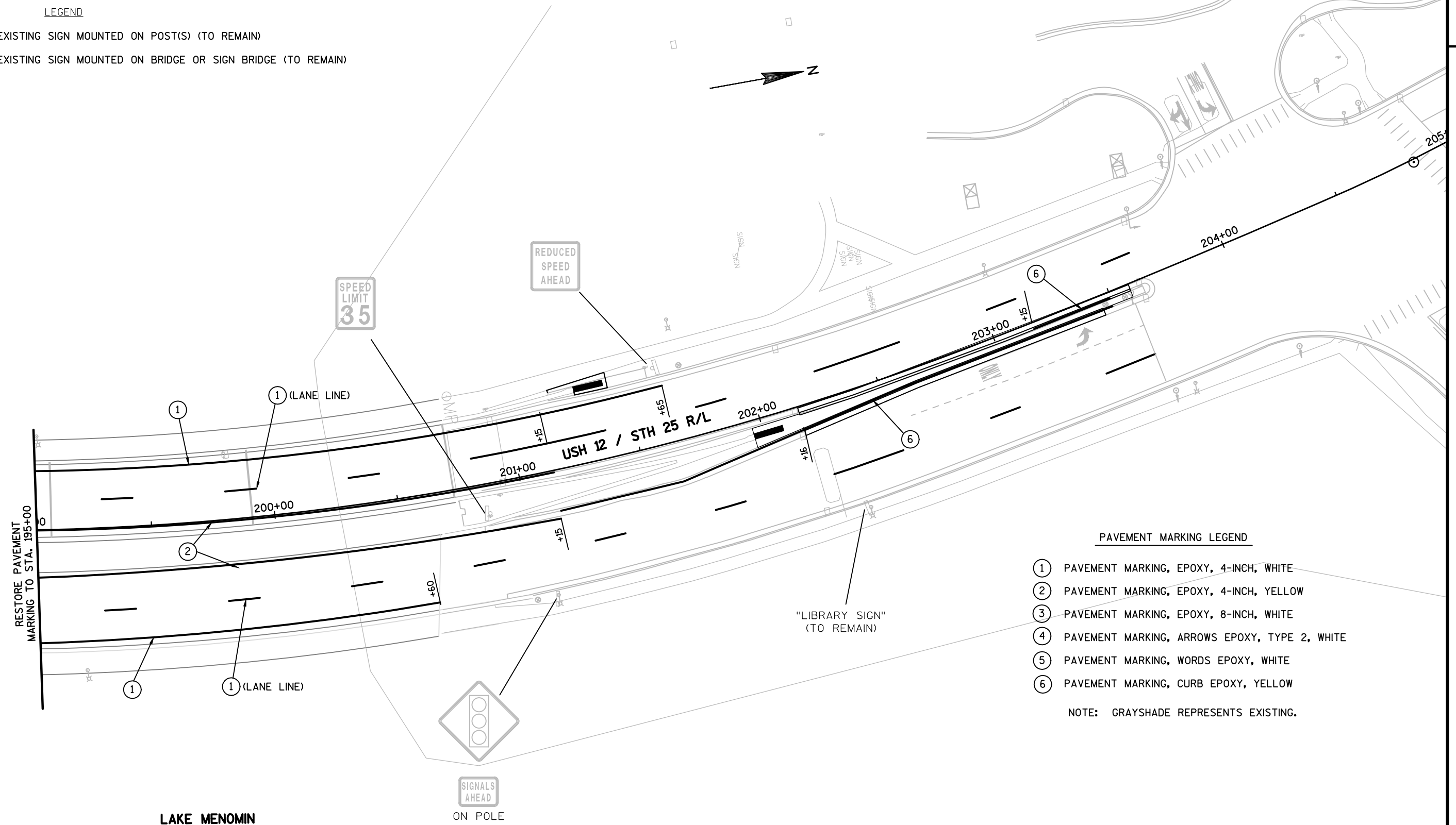
NOTE: GRAYSHADE REPRESENTS EXISTING.



LAKE MENOMIN

LEGEND

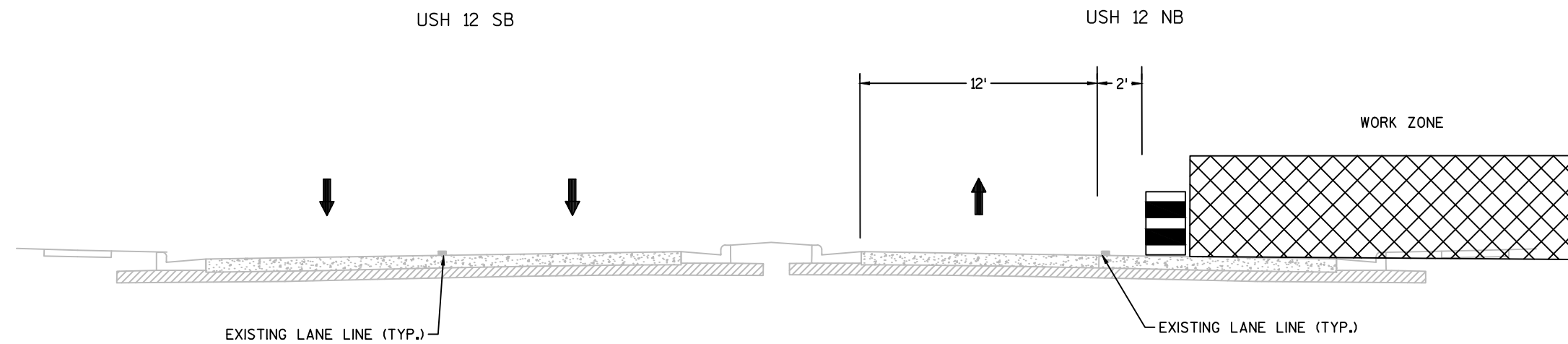
- EXISTING SIGN MOUNTED ON POST(S) (TO REMAIN)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE (TO REMAIN)



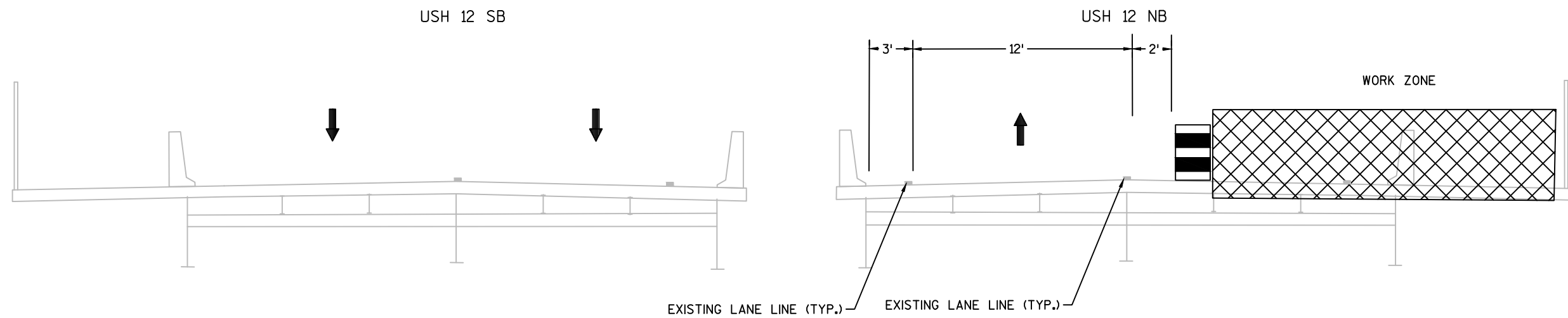
PAVEMENT MARKING LEGEND

- ① PAVEMENT MARKING, EPOXY, 4-INCH, WHITE
- ② PAVEMENT MARKING, EPOXY, 4-INCH, YELLOW
- ③ PAVEMENT MARKING, EPOXY, 8-INCH, WHITE
- ④ PAVEMENT MARKING, ARROWS EPOXY, TYPE 2, WHITE
- ⑤ PAVEMENT MARKING, WORDS EPOXY, WHITE
- ⑥ PAVEMENT MARKING, CURB EPOXY, YELLOW

NOTE: GRAYSHADE REPRESENTS EXISTING.



STAGE 1A TYPICAL SECTION, USH 12/STH 25
(BRIDGE APPROACHES)
STA. 188+50 - 192+50 &
200+75 - STA. 203+65



STAGE 1A TYPICAL SECTION, USH 12/STH 25
(BRIDGE SECTION)
STA. 192+50 - STA. 200+75

GENERAL TRAFFIC CONTROL NOTES:

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

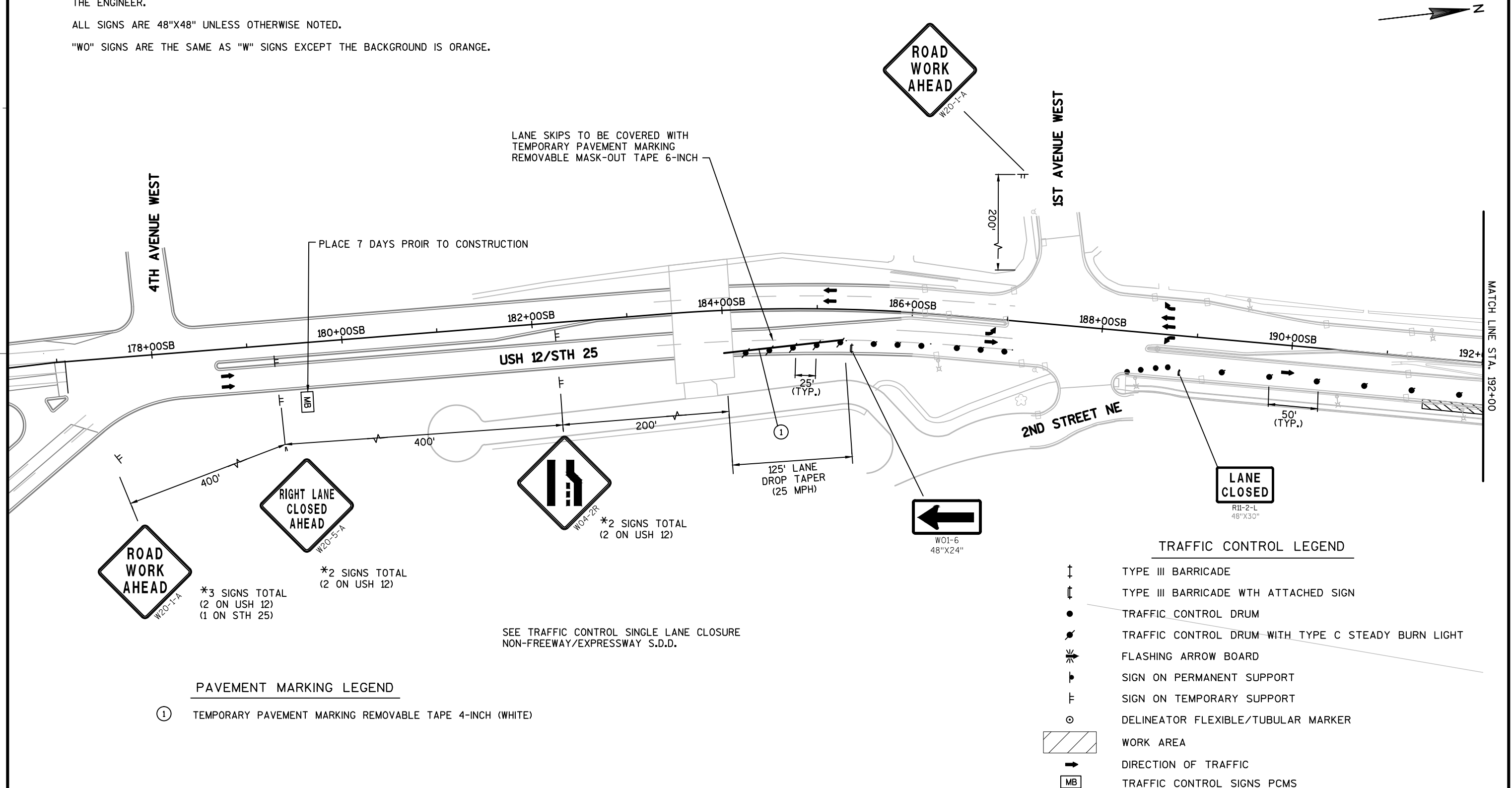
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

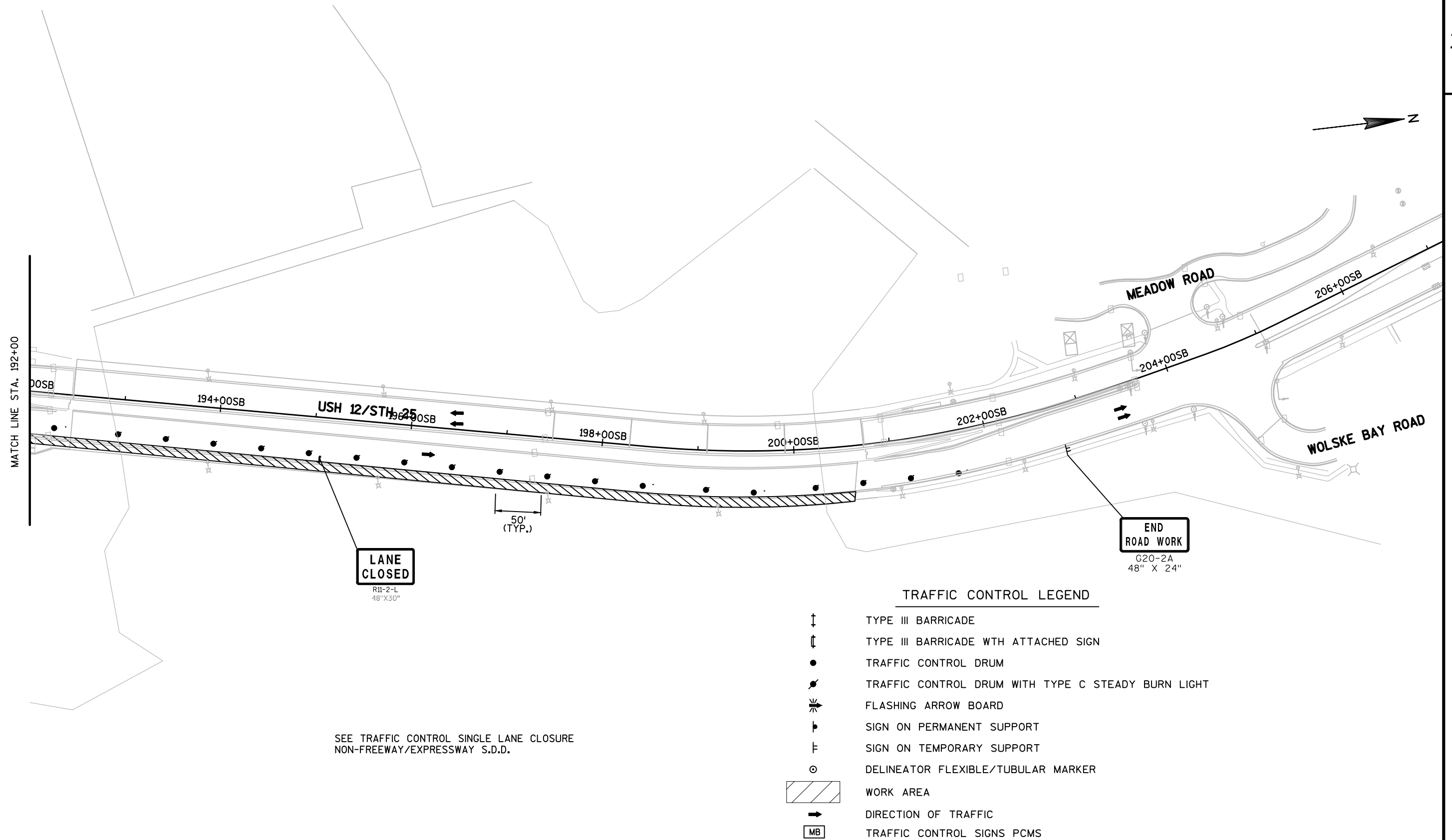
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

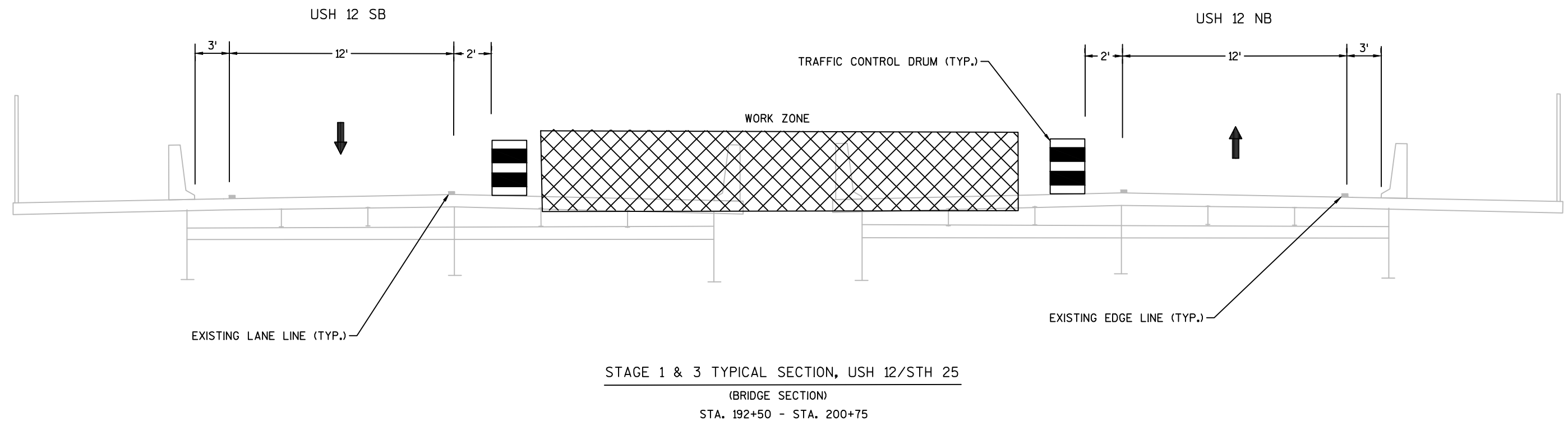
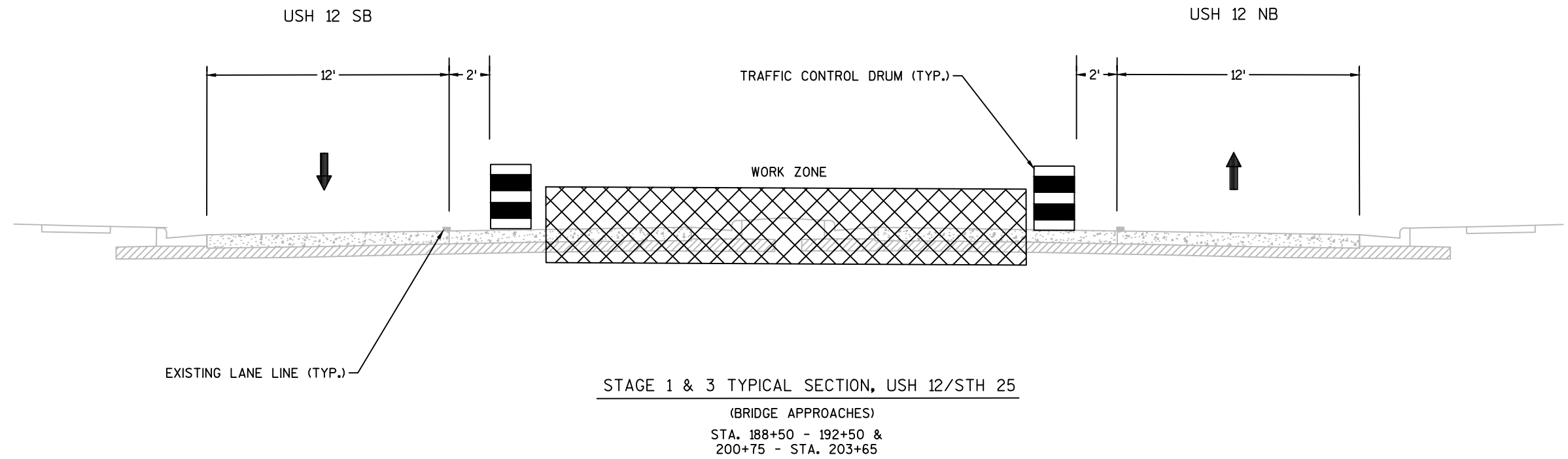
STAGING NOTES:

TRAFFIC: REDUCE USH 12/STH 25 NB TO ONE LANE USING LANE CLOSURE.

CONSTRUCTION ITEMS: CRASH CUSHION AND STREET LIGHTS REPLACEMENT





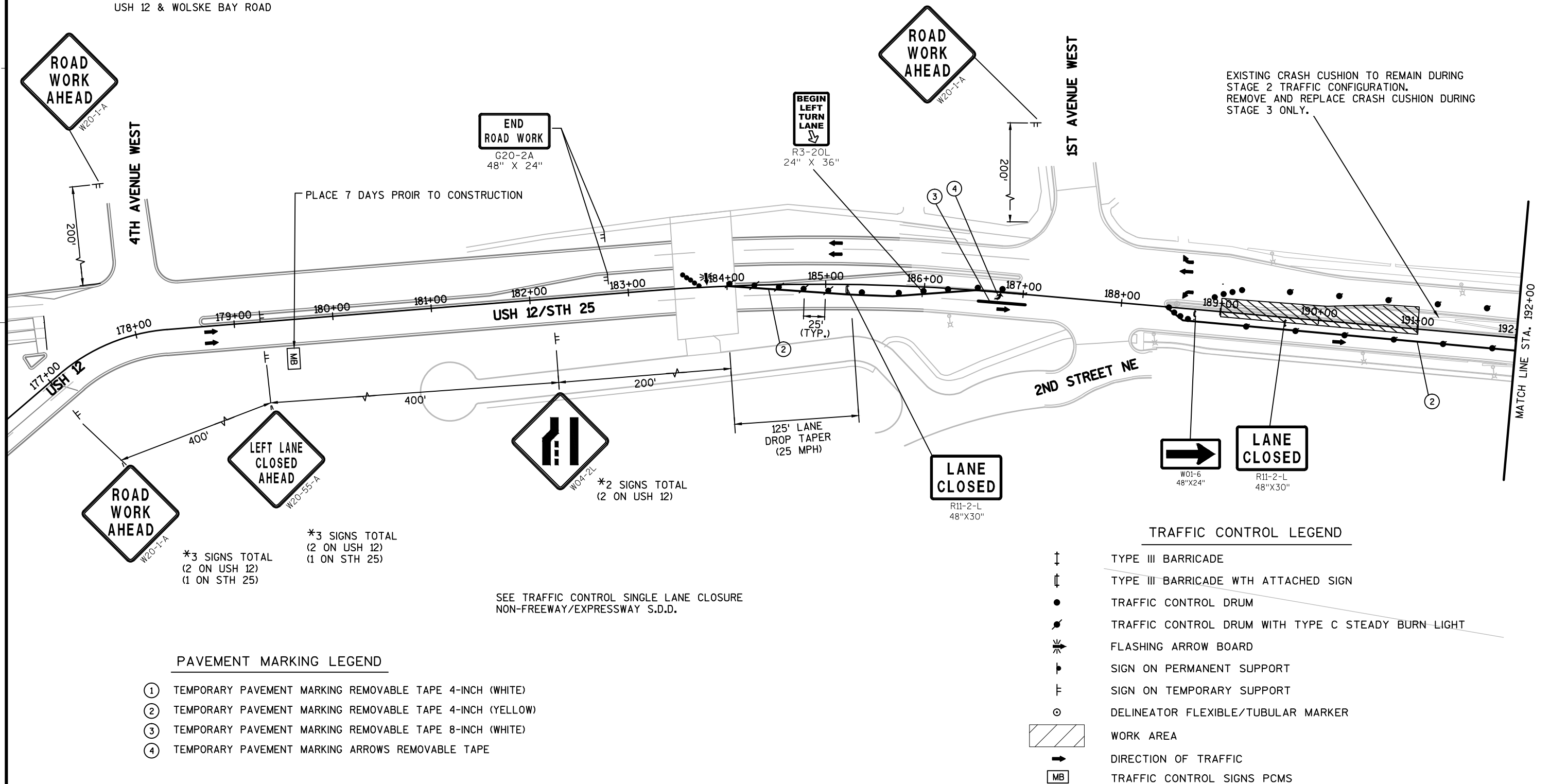


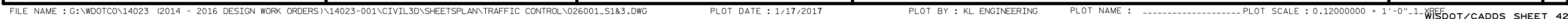
STAGING NOTES:

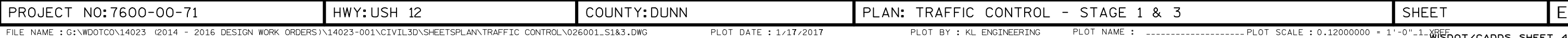
TRAFFIC: REDUCE USH 12/STH 25 SB & NB TO ONE LANE USING LANE CLOSURE.

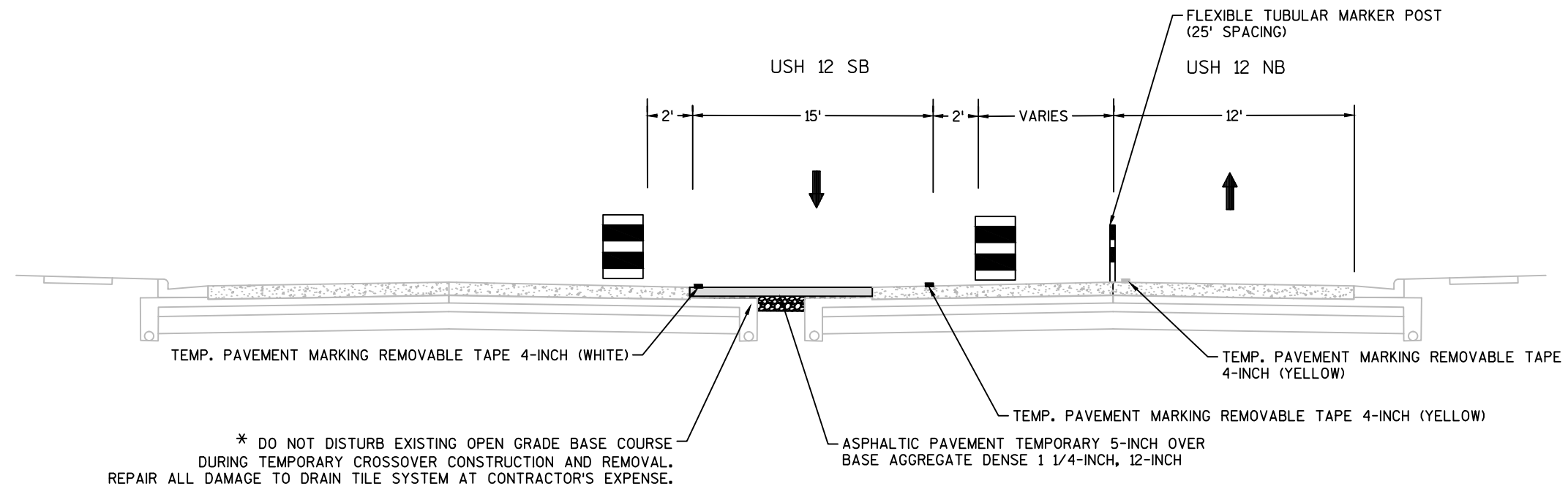
IF STAGE TO REMAIN LONGER THAN 3 DAYS PLACE TEMPORARY
EDGE LING OR INCREASE DRUM SPACING TO 25' FOR SOUTH BOUND
CLOSURE AS DIRECTED BY ENGINEER.

CONSTRUCTION ITEMS: CROSSOVERS, BRIDGE PAINTING, AND PIER REPAIRS.

* SIGNAL TIMING ADJUSTMENT REQUIRED AT THE INTERSECTION OF
USH 12 & WOLSKE BAY ROAD

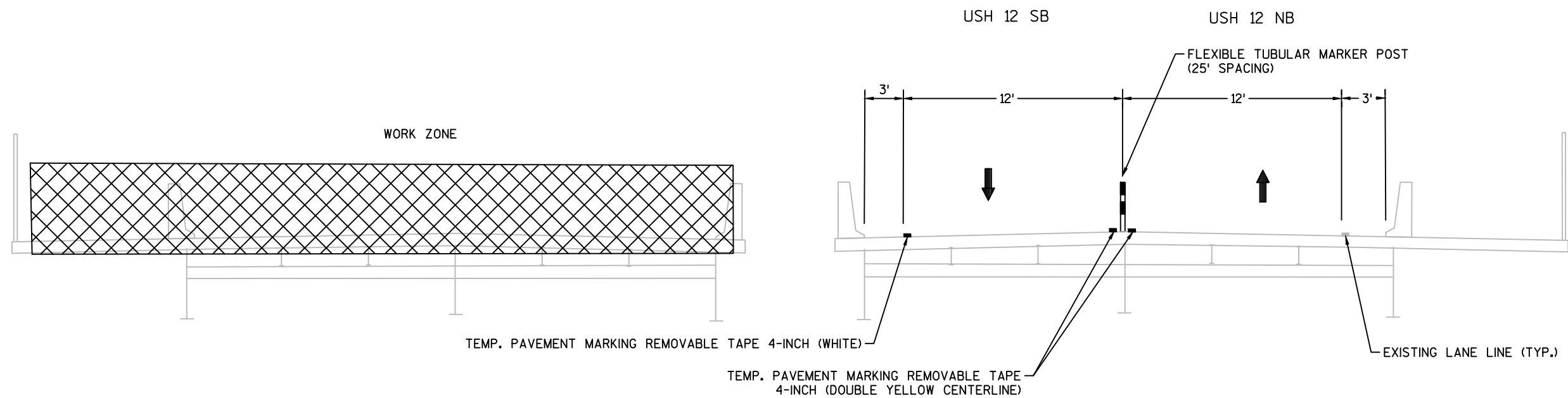






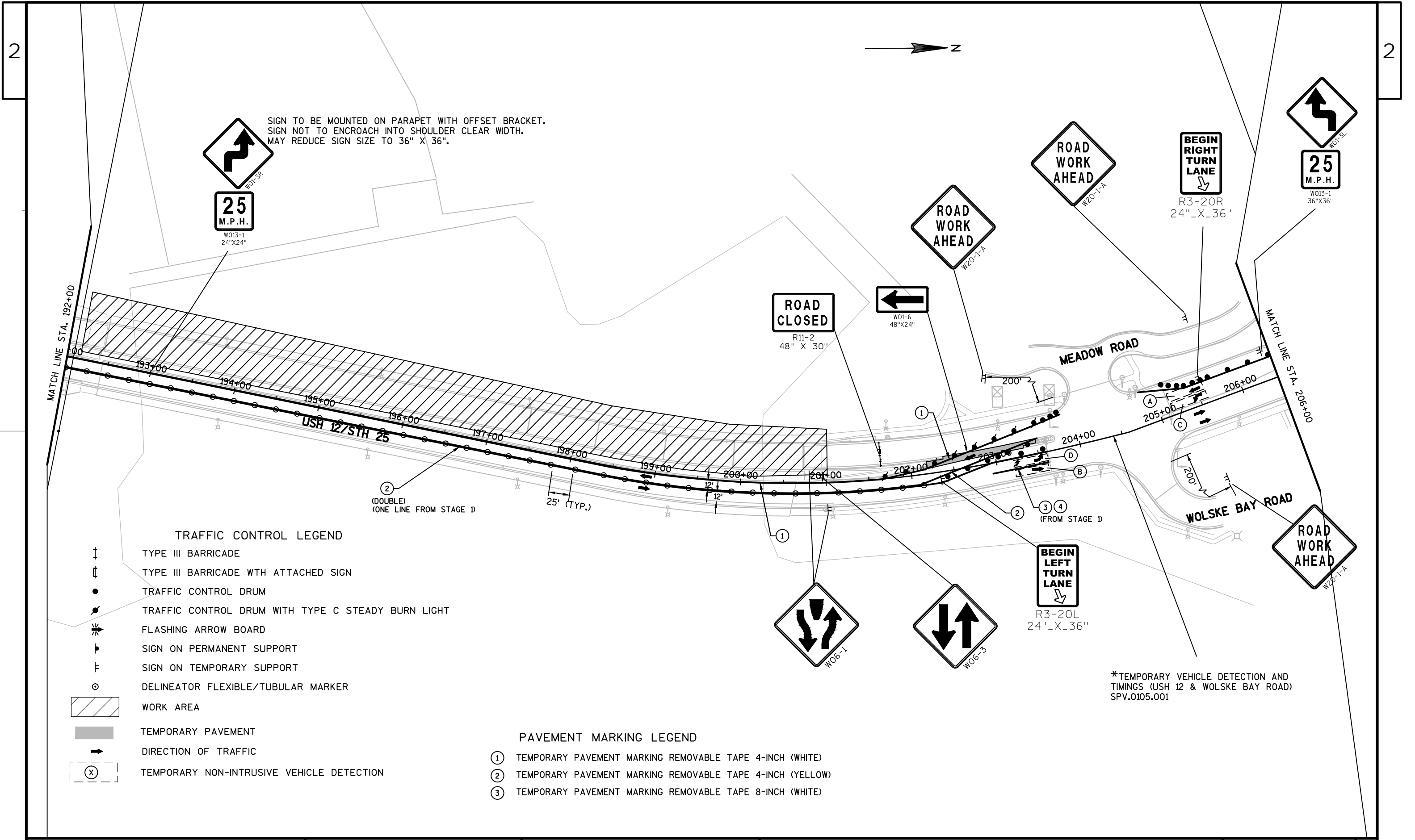
STAGE 2 TYPICAL SECTION, USH 12/STH 25

(BRIDGE APPROACHES)
STA. 188+50 - 192+50 &
200+75 - STA. 203+65



STAGE 2 TYPICAL SECTION, USH 12/STH 25

(BRIDGE SECTION)
STA. 192+50 - STA. 200+75



SIGN TO BE MOUNTED ON PARAPET WITH OFFSET BRACKET.
SIGN NOT TO ENCROACH INTO SHOULDER CLEAR WIDTH.
MAY REDUCE SIGN SIZE TO 36" X 36".

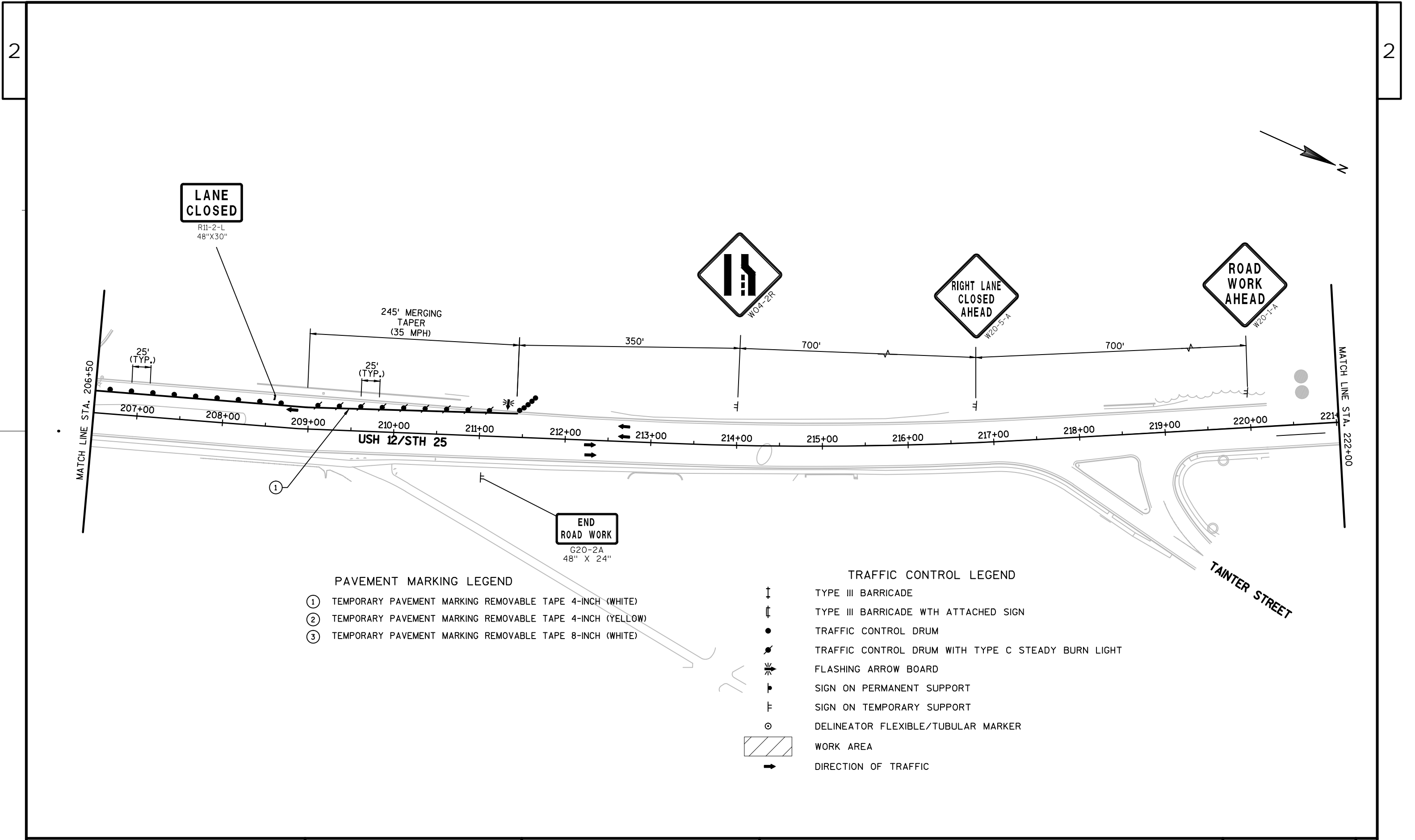
TRAFFIC CONTROL LEGEND

- † TYPE III BARRICADE
- †† TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- / TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- ↔ FLASHING ARROW BOARD
- ▬ SIGN ON PERMANENT SUPPORT
- ▬ SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- ▨ WORK AREA
- ▬ TEMPORARY PAVEMENT
- ➔ DIRECTION OF TRAFFIC
- ⓧ TEMPORARY NON-INTRUSIVE VEHICLE DETECTION

PAVEMENT MARKING LEGEND

- ① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- ② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- ③ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)

*TEMPORARY VEHICLE DETECTION AND
TIMINGS (USH 12 & WOLSKE BAY ROAD)
SPV.0105.001



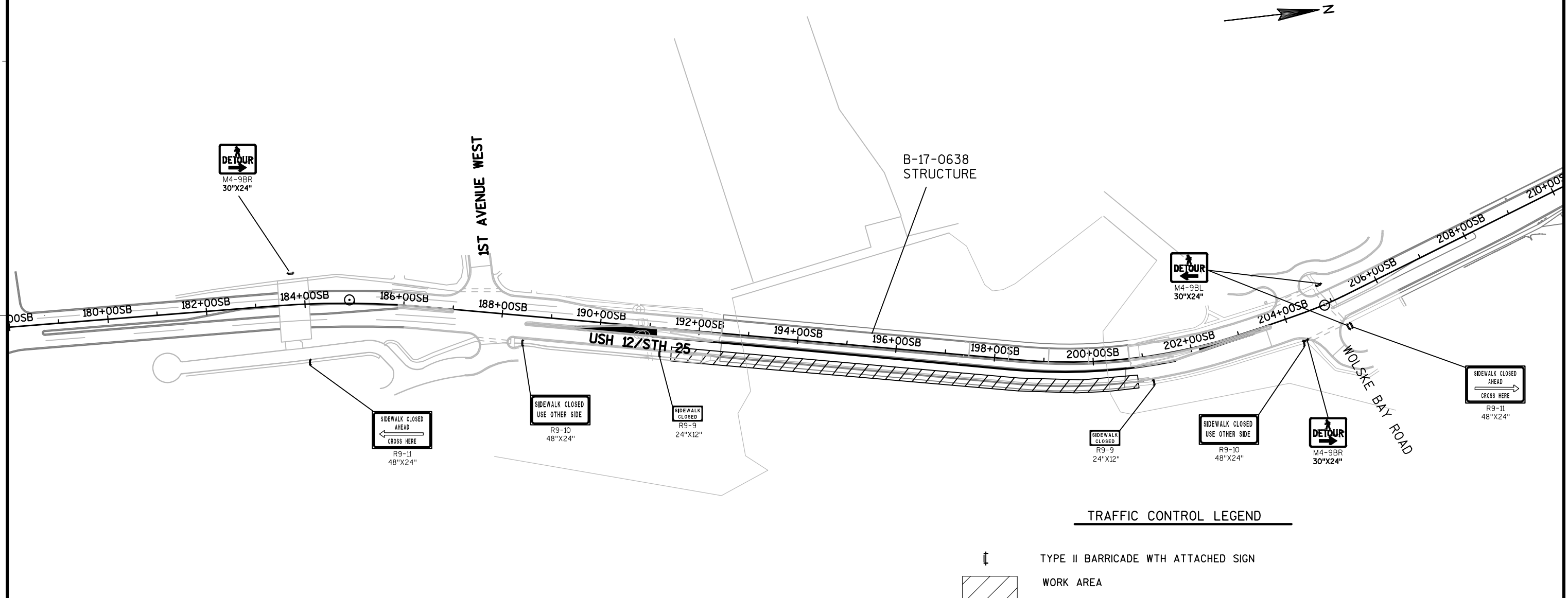
GENERAL TRAFFIC CONTROL NOTES:

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES.

STAGING NOTES:

SIDEWALK DETOUR TO BE IN PLACE WHEN SIDEWALK ACROSS NORTH BOUND STRUCTURE IS CLOSED.



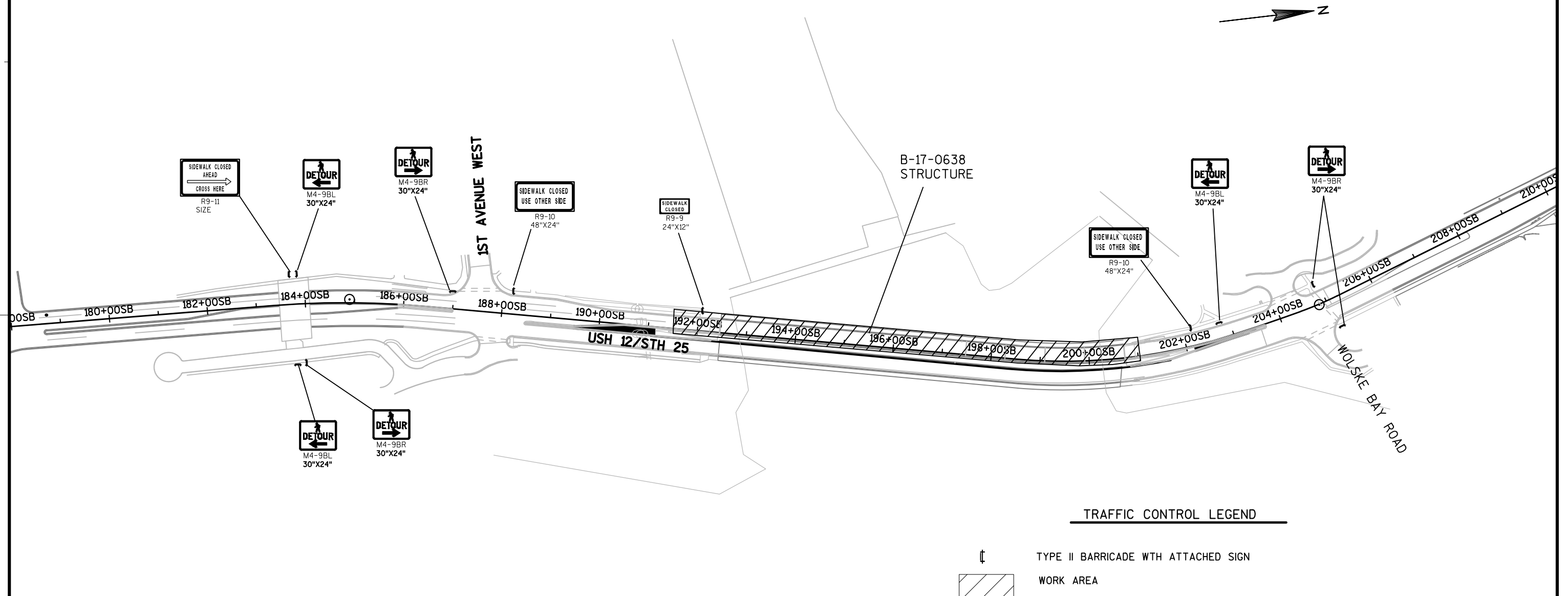
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STAGING NOTES:

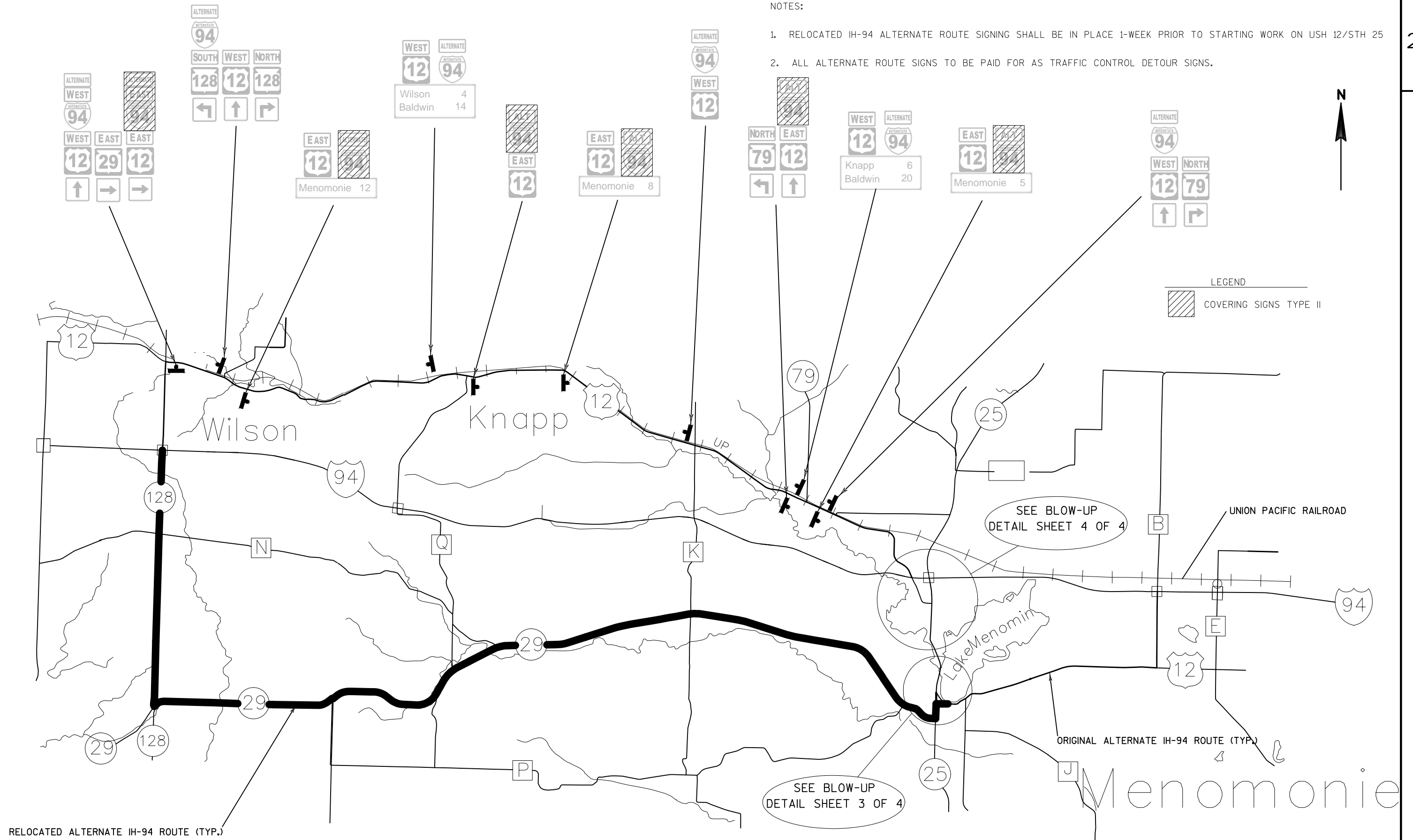
SIDEWALK DETOUR TO BE IN PLACE WHEN SIDEWALK ACROSS SOUTH BOUND STRUCTURE IS CLOSED.

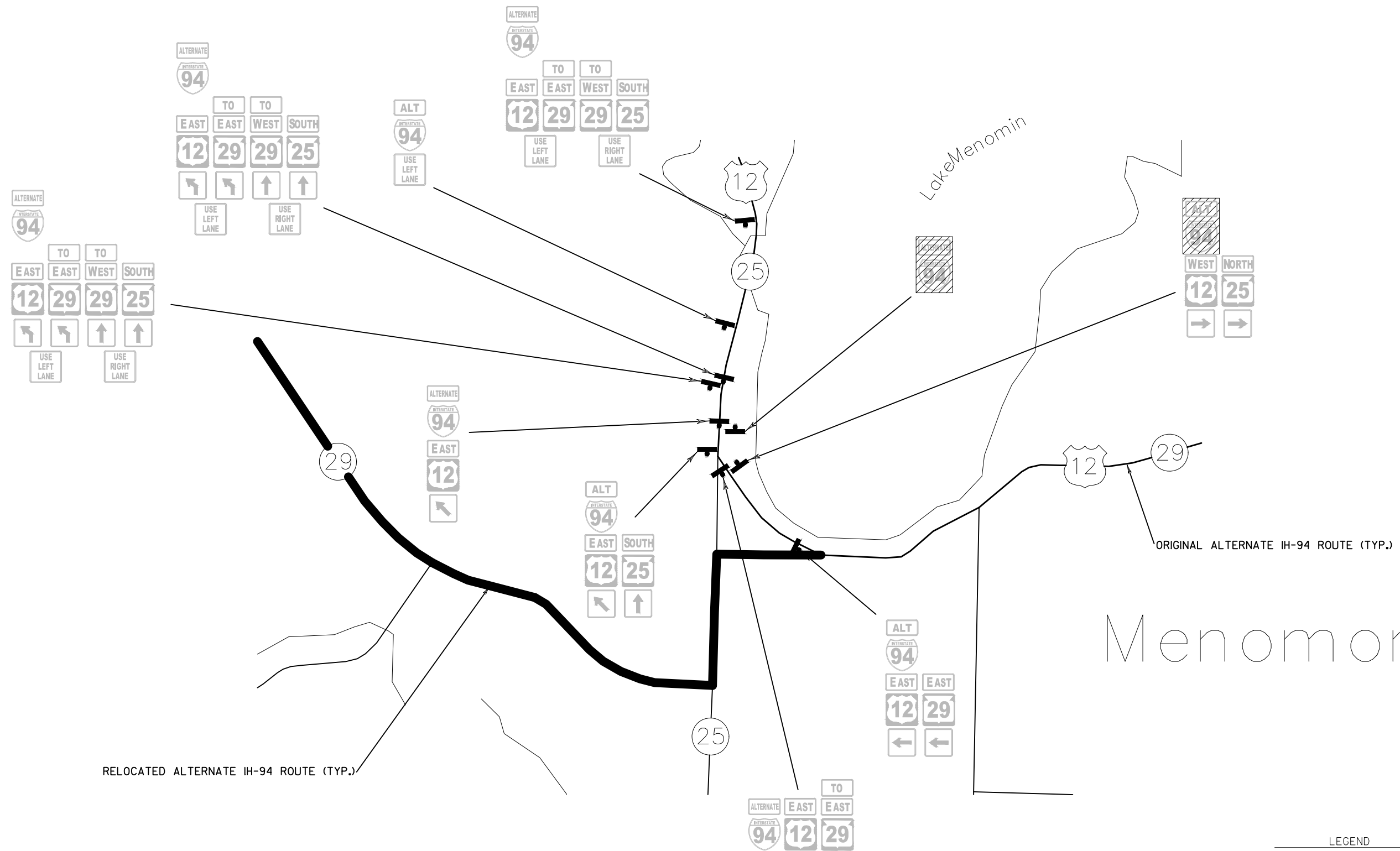




NOTES:

1. RELOCATED IH-94 ALTERNATE ROUTE SIGNING SHALL BE IN PLACE 1-WEEK PRIOR TO STARTING WORK ON USH 12/STH 25
2. ALL ALTERNATE ROUTE SIGNS TO BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.



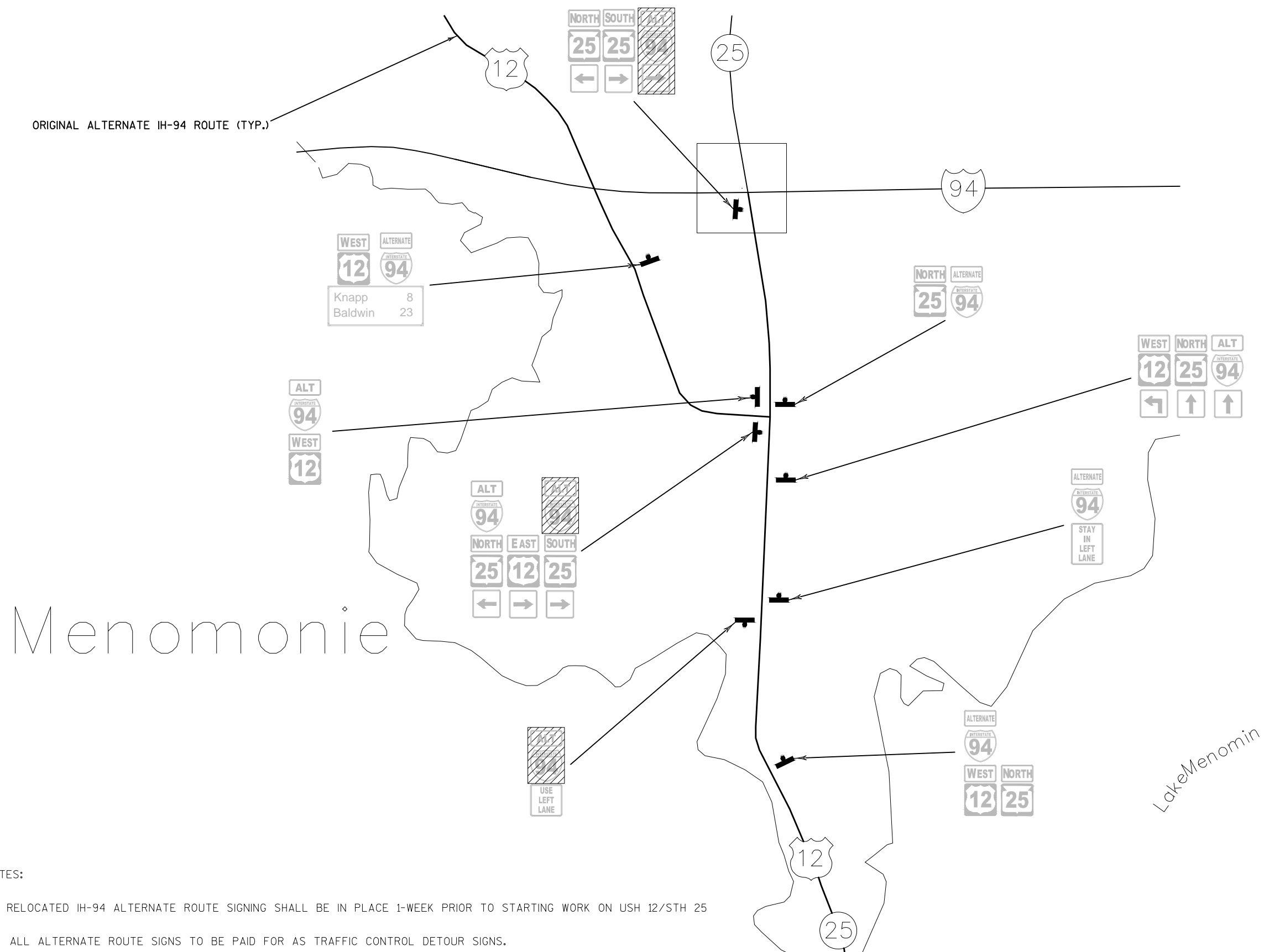


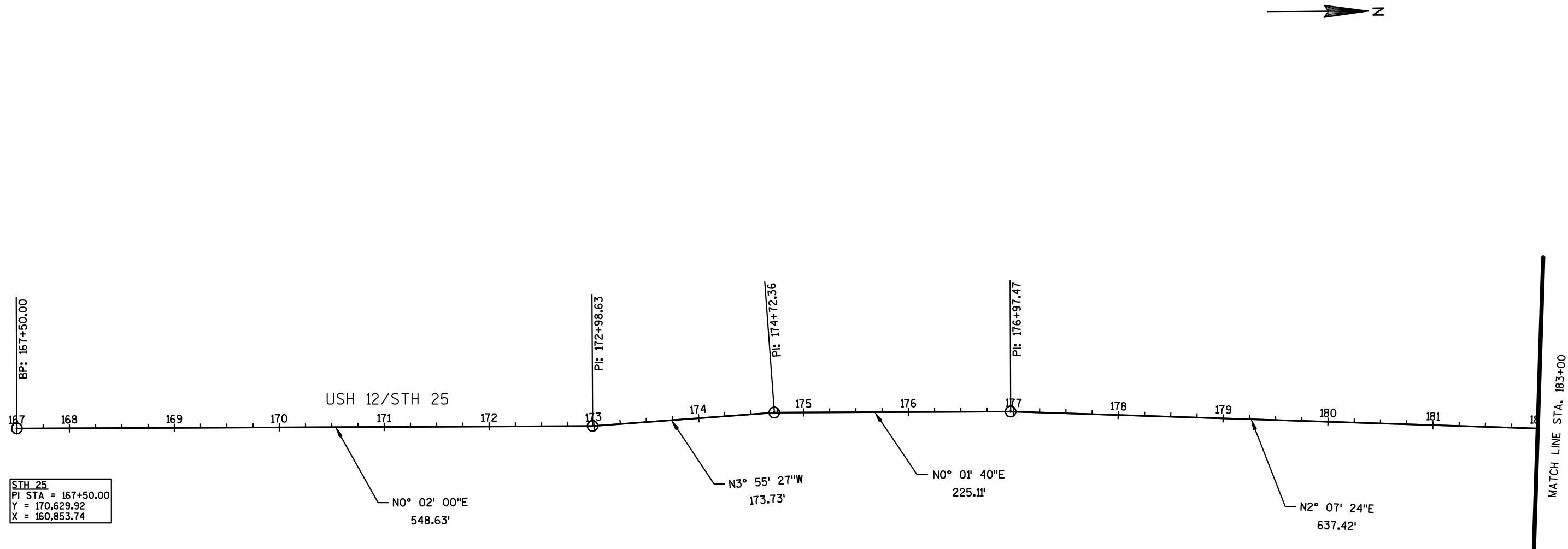
NOTES:

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2. ALL ALTERNATE ROUTE SIGNS TO BE PAID FOR AS TRAFFIC CONTROL DETOUR SIGNS.

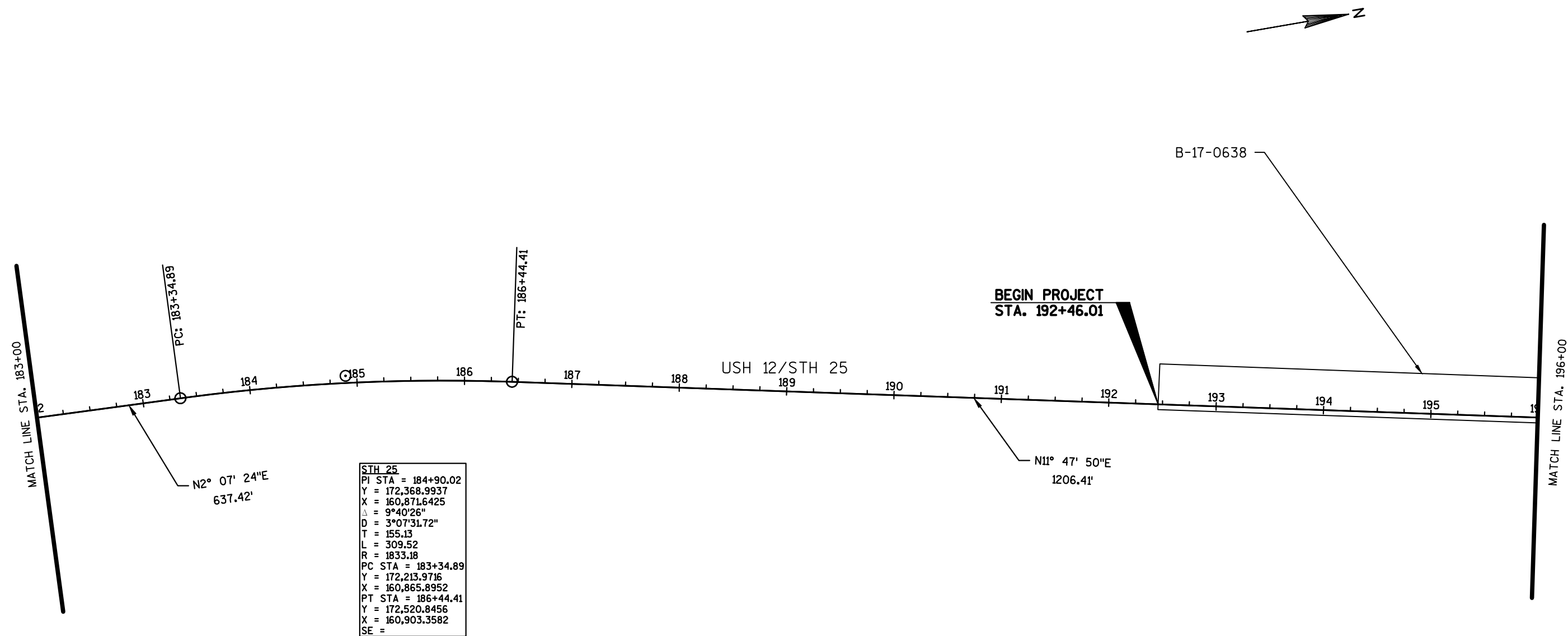
LEGEND

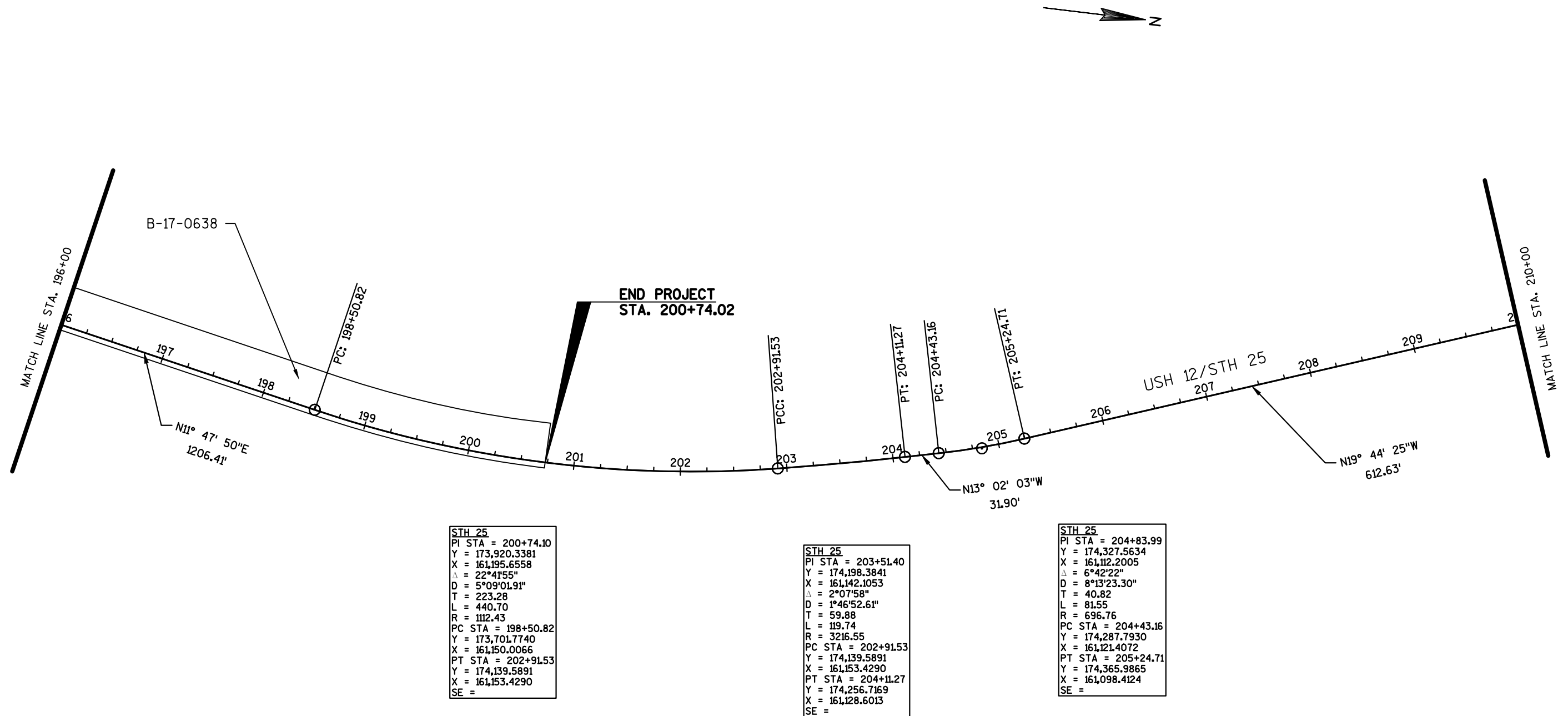
 COVERING SIGNS TYPE II





STH 25
PI STA = 167+50.00
Y = 170,629.92
X = 160,853.74

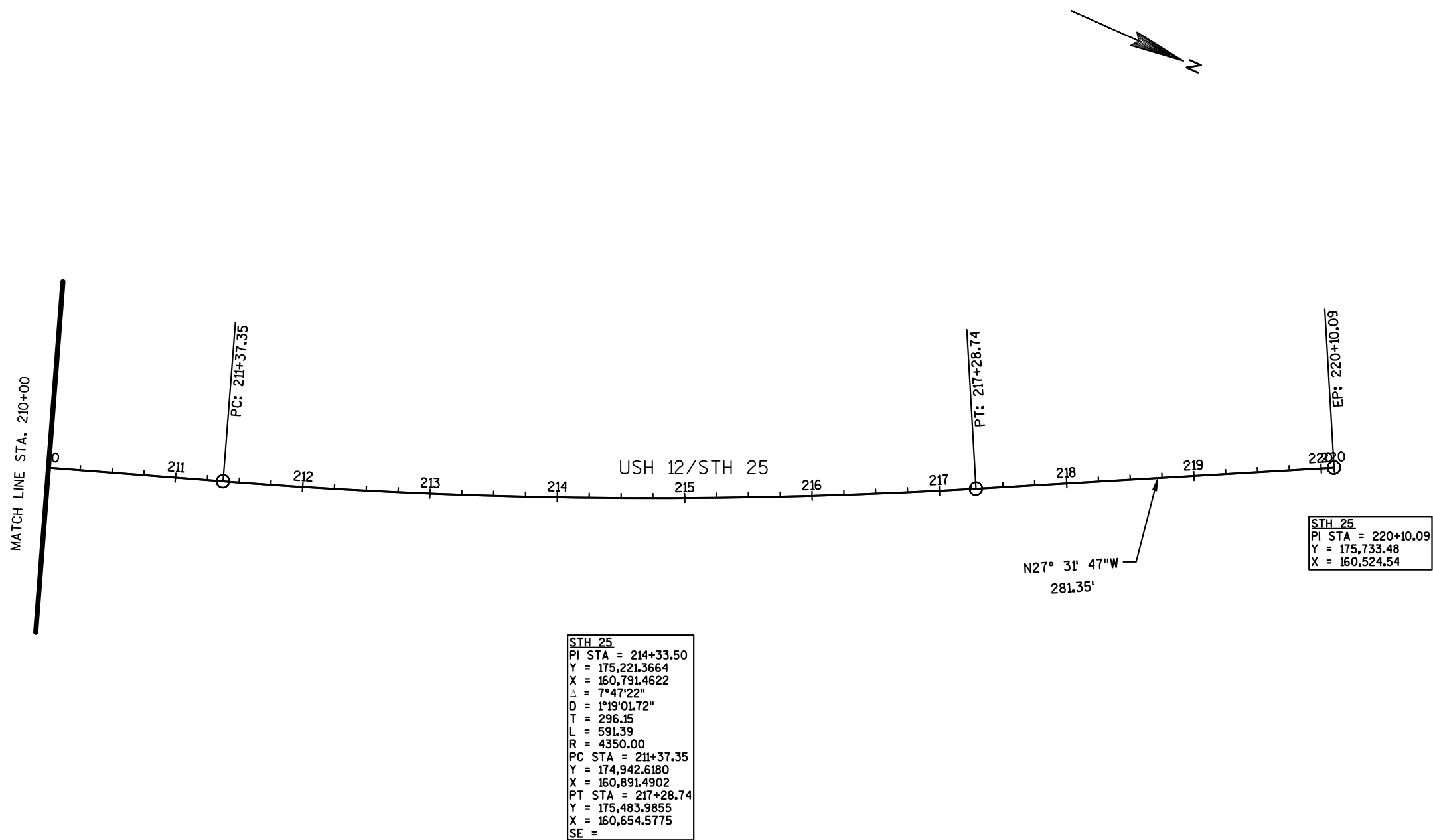




STH 25
PI STA = 200+74.10
Y = 173,920.3381
X = 161,195.6558
Δ = 22°41'55"
D = 5°09'01.91"
T = 223.28
L = 440.70
R = 1112.43
PC STA = 198+50.82
Y = 173,701.7740
X = 161,150.0066
PT STA = 202+91.53
Y = 174,139.5891
X = 161,153.4290
SE =

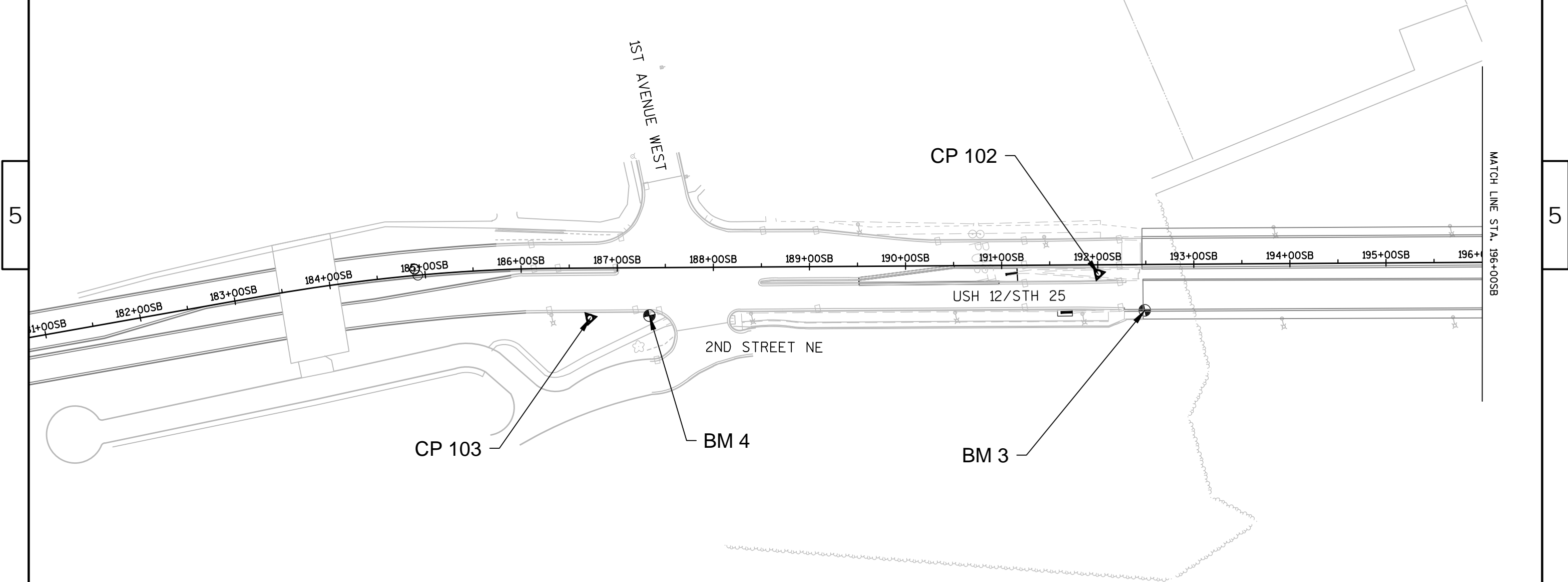
STH 25
PI STA = 203+51.40
Y = 174,198.3841
X = 161,142.1053
Δ = 2°07'58"
D = 1°46'52.61"
T = 59.88
L = 119.74
R = 3216.55
PC STA = 202+91.53
Y = 174,139.5891
X = 161,153.4290
PT STA = 204+11.27
Y = 174,256.7169
X = 161,128.6013
SE =

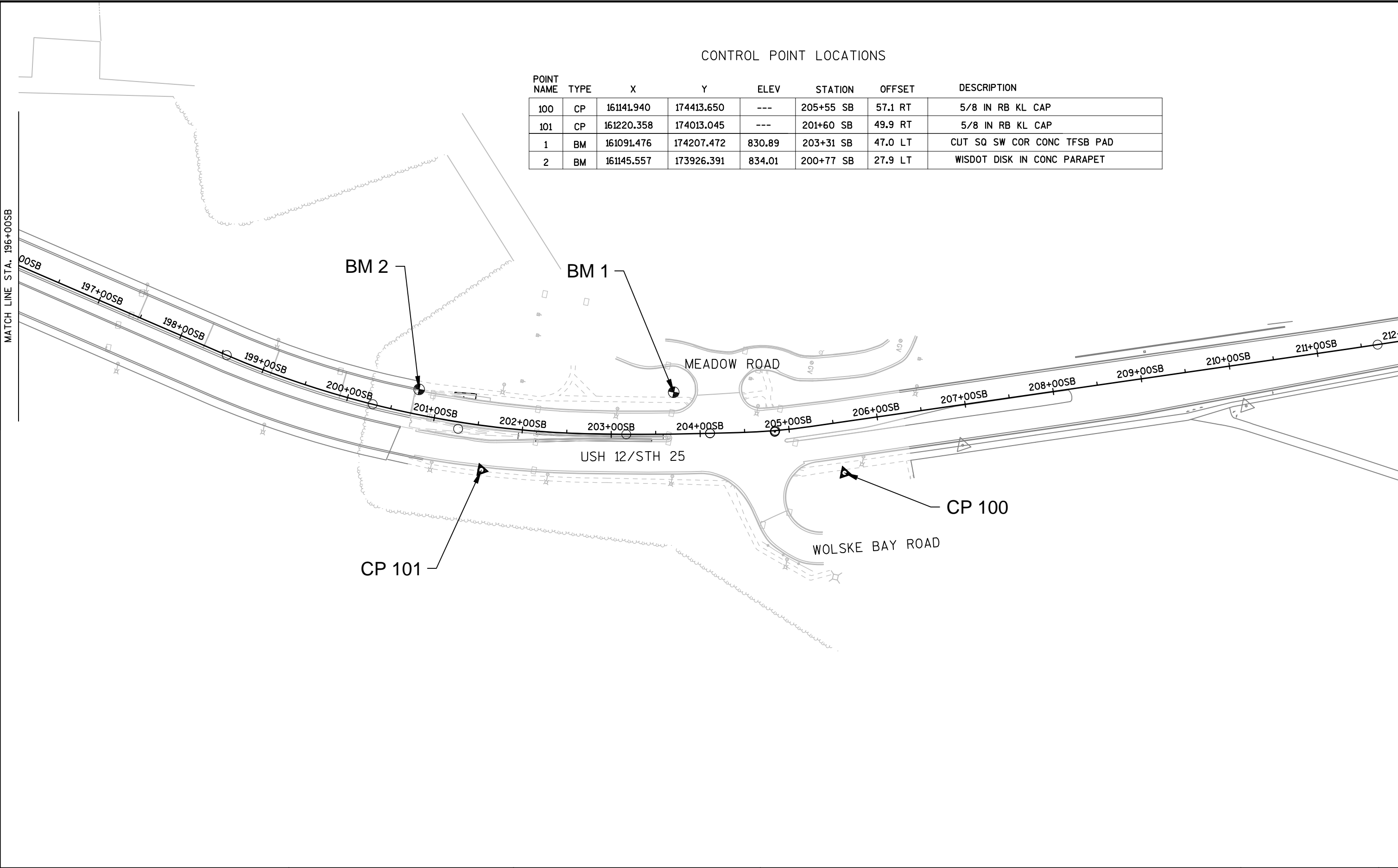
STH 25
PI STA = 204+83.99
Y = 174,327.5634
X = 161,112.2005
Δ = 6°42'22"
D = 8°13'23.30"
T = 40.82
L = 81.55
R = 696.76
PC STA = 204+43.16
Y = 174,287.7930
X = 161,121.4072
PT STA = 205+24.71
Y = 174,365.9865
X = 161,098.4124
SE =



CONTROL POINT LOCATIONS

POINT NAME	TYPE	X	Y	ELEV	STATION	OFFSET	DESCRIPTION
102	CP	161026.078	173063.505	---	192+00 SB	9.1 RT	5/8 IN RB KL CAP
103	CP	160959.804	172536.505	---	186+71 SB	52.1 RT	5/8 IN RB KL CAP
3	BM	161073.716	173102.620	847.86	192+49 SB	47.8 RT	WI DIV OF HWYS DISK IN CONC PARAPET
4	BM	160970.356	172597.487	850.97	187+33 SB	49.9 RT	CUT X NW FLANGE BOLT HYD





Estimate Of Quantities

7600-00-71					
Line	Item	Item Description	Unit	Total	Qty
0010	204.0150	Removing Curb & Gutter	LF	520.000	520.000
0020	204.0155	Removing Concrete Sidewalk	SY	285.000	285.000
0030	204.9060.S	Removing (item description) 001. Crash Cushion	EACH	4.000	4.000
0040	205.0100	Excavation Common	CY	70.000	70.000
0050	213.0100	Finishing Roadway (project) 001. 7600-00-71	EACH	1.000	1.000
0060	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	260.000	260.000
0070	416.0610	Drilled Tie Bars	EACH	205.000	205.000
0080	465.0125	Asphaltic Surface Temporary	TON	110.000	110.000
0090	502.3100	Expansion Device (structure) 001. B-17-0638	LS	1.000	1.000
0100	502.3210	Pigmented Surface Sealer	SY	893.000	893.000
0110	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	2,210.000	2,210.000
0120	509.0301	Preparation Decks Type 1	SY	140.000	140.000
0130	509.0302	Preparation Decks Type 2	SY	60.000	60.000
0140	509.1000	Joint Repair	SY	25.000	25.000
0150	509.1500	Concrete Surface Repair	SF	200.000	200.000
0160	509.2000	Full-Depth Deck Repair	SY	2.000	2.000
0170	509.2500	Concrete Masonry Overlay Decks	CY	14.000	14.000
0180	509.5100.S	Polymer Overlay	SY	3,590.000	3,590.000
0190	509.9050.S	Cleaning Parapets	LF	1,690.000	1,690.000
0200	517.0900.S	Preparation and Coating of Top Flanges (structure) 001. B-17-0638	LS	1.000	1.000
0210	517.1800.S	Structure Repainting Recycled Abrasive (structure) 001. B-17-0638	LS	1.000	1.000
0220	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 001. B-17-0638	LS	1.000	1.000
0230	517.6001.S	Portable Decontamination Facility	EACH	1.000	1.000
0240	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	520.000	520.000
0250	602.0410	Concrete Sidewalk 5-Inch	SF	2,220.000	2,220.000
0260	614.0800	Crash Cushions Permanent	EACH	4.000	4.000
0270	618.0100	Maintenance And Repair of Haul Roads (project) 001. 7600-00-71	EACH	1.000	1.000
0280	619.1000	Mobilization	EACH	1.000	1.000
0290	628.7015	Inlet Protection Type C	EACH	15.000	15.000
0300	642.5001	Field Office Type B	EACH	1.000	1.000
0310	643.0100	Traffic Control (project) 001. 7600-00-71	EACH	1.000	1.000
0320	643.0300	Traffic Control Drums	DAY	10,460.000	10,460.000
0330	643.0410	Traffic Control Barricades Type II	DAY	1,250.000	1,250.000
0340	643.0420	Traffic Control Barricades Type III	DAY	1,000.000	1,000.000
0350	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	75.000	75.000
0360	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	65.000	65.000
0370	643.0705	Traffic Control Warning Lights Type A	DAY	1,700.000	1,700.000

Estimate Of Quantities

7600-00-71					
Line	Item	Item Description	Unit	Total	Qty
0380	643.0715	Traffic Control Warning Lights Type C	DAY	3,280.000	3,280.000
0390	643.0800	Traffic Control Arrow Boards	DAY	230.000	230.000
0400	643.0900	Traffic Control Signs	DAY	6,000.000	6,000.000
0410	643.0920	Traffic Control Covering Signs Type II	EACH	13.000	13.000
0420	643.1051	Traffic Control Signs PCMS with Cellular Communications	DAY	20.000	20.000
0430	643.2000	Traffic Control Detour (project) 001. 7600-00-71	EACH	1.000	1.000
0440	643.3000	Traffic Control Detour Signs	DAY	10,320.000	10,320.000
0450	646.0106	Pavement Marking Epoxy 4-Inch	LF	4,309.000	4,309.000
0460	646.0126	Pavement Marking Epoxy 8-Inch	LF	200.000	200.000
0470	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	2.000	2.000
0480	647.0356	Pavement Marking Words Epoxy	EACH	2.000	2.000
0490	647.0456	Pavement Marking Curb Epoxy	LF	640.000	640.000
0500	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	5,915.000	5,915.000
0510	649.0506	Temporary Pavement Marking Removable Mask-Out Tape 6-Inch	LF	115.000	115.000
0520	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	110.000	110.000
0530	649.1800	Temporary Pavement Marking Arrows Removable Tape	EACH	2.000	2.000
0540	655.0610	Electrical Wire Lighting 12 AWG	LF	1,520.000	1,520.000
0550	690.0250	Sawing Concrete	LF	580.000	580.000
0560	SPV.0035	Special 001. Concrete Masonry Deck Patching	CY	17.000	17.000
0570	SPV.0060	Special 001. Remove Street Light	EACH	8.000	8.000
0580	SPV.0060	Special 002. Furnish and Install Street Light	EACH	8.000	8.000
0590	SPV.0090	Special 001. Sawing Pavement Deck Preparation Areas	LF	1,600.000	1,600.000
0600	SPV.0105	Special 001. Temporary Vehicle Detection and Timings	LS	1.000	1.000

3

EXCAVATION COMMON		
CATEGORY	STATION TO STATION	205.0100 (CY)
0010	USH 12 (CROSSOVERS)	
	189+50 - 191+15	45
	201+95 - 203+50	25
TOTAL		70

CONCRETE SIDEWALK		
CATEGORY	STATION TO STATION	602.0410 CONCRETE SIDEWALK 5-INCH (SF)
0010	USH 12	
	189+51 - 191+15 (MEDIAN)	1680
	201+25 - 201+40 (LT)	40
	201+65 - 203+58 (MEDIAN)	500
TOTAL		2220

REMOVING CONCRETE SIDEWALK		
CATEGORY	STATION TO STATION	204.0155 REMOVING CONCRETE SIDEWALK (SY)
0010	USH 12 (MEDIAN)	
	189+50 - 191+15	200
	191+55 - 191+70	10
	201+30 - 201+45	10
	201+95 - 203+50	65
TOTAL		285

REMOVING CURB AND GUTTER		
CATEGORY	STATION TO STATION	204.0150 REMOVING CURB AND GUTTER (LF)
0010	USH 12 (MEDIAN)	
	189+51 - 190+50 SB	100
	189+51 - 190+97 NB	145
	202+16 - 203+58 SB	145
	202+16 - 203+45 NB	130
TOTAL		520

TEMPORARY ASPHALT AND BASE AGGREGTE ITEMS				
CATEGORY	STATION TO STATION	465.0125 ASPHALTIC SURFACE TEMPORARY (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	
0010	USH 12 (MEDIAN)			
	189+51 - 190+97	TEMPORARY	70	130
	202+16 - 203+58	TEMPORARY	40	80
	USH 12 (MEDIAN)			
	189+51 - 190+97			30
	202+16 - 203+58			20
TOTAL			110	260

REMOVING CRASH CUSHION				
CATEGORY	STATION TO STATION	204.9060.S REMOVING CRASH CUSHION (EACH)	NOTES	
0010	191+03 - 191+15	MEDIAN	1	*STAGE 3 WORK
	191+57 - 191+69	RT	1	STAGE 1A WORK
	201+25 - 201+37	LT	1	STAGE 2 WORK
	201+95 - 202+07	MEDIAN	1	*STAGE 3 WORK
TOTAL			4	
* EXISTING CRASH CUSHION TO REMAIN DURING STAGE 2 TRAFFIC CONFIGURATION.				

CONCRETE CURB & GUTTER ITEMS				
CATEGORY	STATION TO STATION	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A (LF)	416.0610 DRILLED TIE BARS (EACH)	
0010	USH 12 (MEDIAN)			
	189+51 - 190+50 SB	100	40	
	189+51 - 190+97 NB	145	60	
	202+16 - 203+58 SB	145	55	
	202+16 - 203+45 NB	130	50	
TOTAL		520	205	

CRASH CUSHIONS PERMANENT									
CATEGORY	STATION TO STATION	LOCATION	614.0800 CRASH CUSHIONS PERMANENT (EACH)	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHEILDS
0010	191+03 - 191+15	MEDIAN	1	2	OM-3L (W5-58L)	TL-2	BIDIRECTIONAL	LT & RT	PERMANENT CONCRETE BARRIER IN MEDIAN
	191+57 - 191+69	RT	1	2	OM-3R (W5-58R)	TL-2	UNIDIRECTIONAL	LT	PERMANENT CONCRETE BARRIER ON SHOULDER
	201+30 - 201+37	LT	1	2	OM-3R (W5-58R)	TL-2	UNIDIRECTIONAL	LT	PERMANENT CONCRETE BARRIER ON SHOULDER
	201+95 - 202+07	MEDIAN	1	2	OM-3L (W5-58L)	TL-2	BIDIRECTIONAL	LT & RT	PERMANENT CONCRETE BARRIER IN MEDIAN
TOTAL			4						

EROSION CONTROL		
CATEGORY	STATION TO STATION	628.7015 INLET PROTECTION TYPE C (EACH)
0010	USH 12 NB & SB	
	191+25 - 203+50	15
TOTAL		15

3

3

PAVEMENT MARKING EPOXY							
CATEGORY	STATION TO STATION	646.0106	646.0126	647.0166	647.0356	647.0456	
		EPOXY	EPOXY	ARROWS	WORDS	CURB	
		4-INCH	8-INCH	EPOXY	EPOXY	EPOXY	
		YELLOW	WHITE	WHITE	TYPE 2	TYPE 2	
		(LF)	(LF)	(LF)	(EACH)	(EACH)	(LF)
0010							
	USH 12 (SOUTHBOUND)	890	1264	200	2	2	405
	USH 12 (NORTHBOUND)	885	1,270	--	--	--	235
TOTAL		4309		200	2	2	640

TRAFFIC CONTROL												
CATEGORY	LOCATION	(DAY)	643.0300	643.0410	643.0420	643.0500	643.0600	643.0705	643.0715	643.0800	643.0900	643.1051
			DRUMS	BARRICADES	BARRICADES	FLEXIBLE	FLEXIBLE	WARNING	WARNING	ARROW	SIGNS	SIGNS
			(DAY)	TYPE II	TYPE III	TUBULAR	TUBULAR	LIGHTS	LIGHTS	BOARD	(DAY)	PCMS WITH
			(DAY)	(DAY)	(DAY)	MARKER	MARKER	TYPE A	TYPE C	(DAY)	(DAY)	CELLULAR
						POSTS	BASES	(DAY)	(DAY)			COMMUNICATIONS
						(EACH)	(EACH)					(DAY)
0010	STAGE 1A	5	205	50	15	---	---	30	25	---	110	7
	STAGE 1	5	600	---	45	---	---	60	75	5	160	7
	STAGE 2	100	8,100	1,100	800	55	55	1,400	2,800	200	5,000	---
	STAGE 3	5	600	---	45	---	---	60	75	5	160	---
	UNDISTRIBUTED	---	955	100	95	20	10	150	305	20	570	6
TOTAL		115	10,460	1,250	1,000	75	65	1,700	3,280	230	6,000	20

3

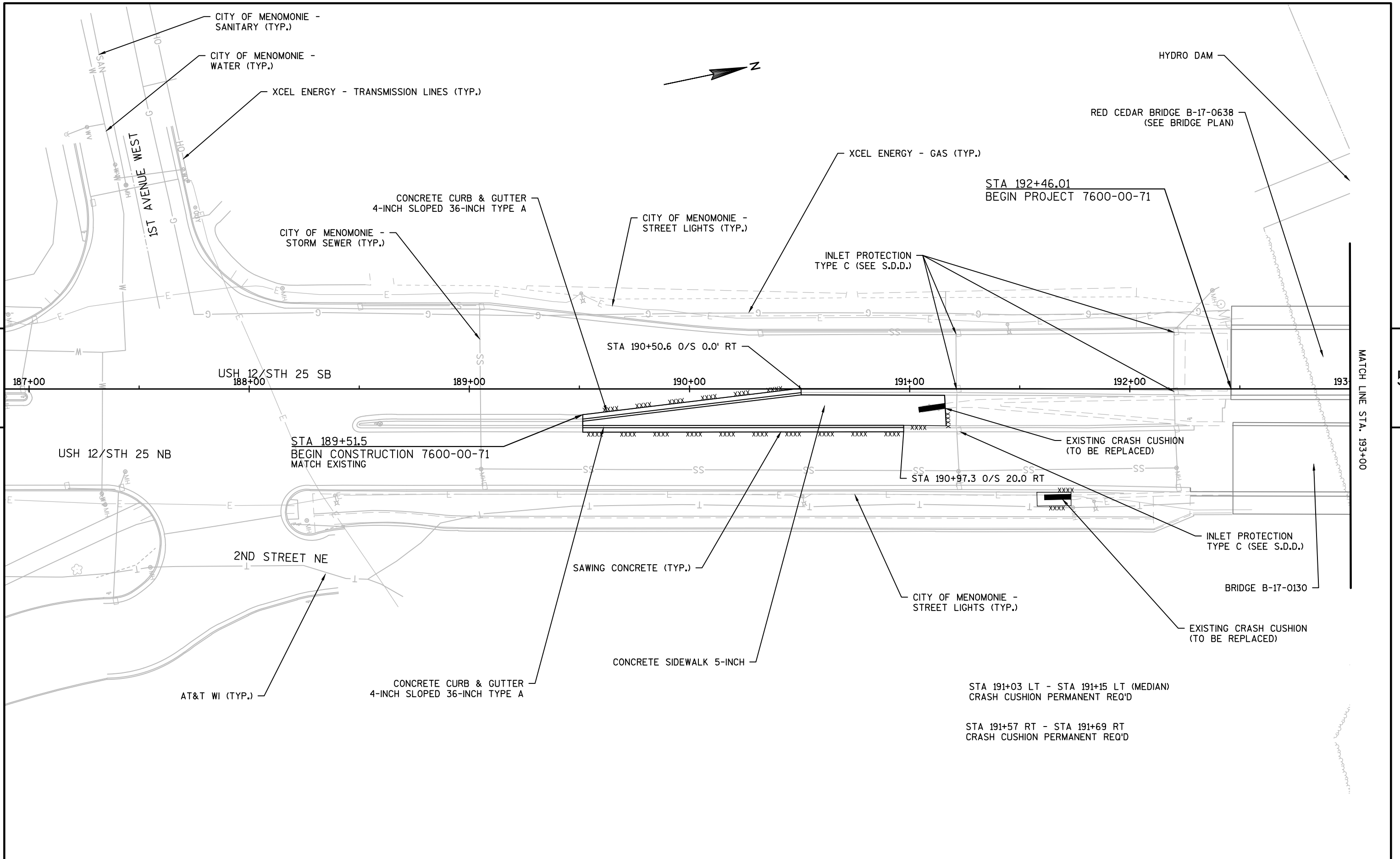
TEMPORARY PAVEMENT MARKING						
CATEGORY	STATION TO STATION	649.0400	649.0801	649.1800	649.0506	
		REMOVABLE	REMOVABLE	ARROWS	REMOVABLE	
		TAPE	TAPE	REMOVABLE	TAPE	
		4-INCH	8-INCH	TAPE	6-INCH	
		YELLOW	WHITE	WHITE	TYPE 2	6-INCH
		(LF)	(LF)	(LF)	(EACH)	(LF)
0010						
	STAGE 1A	--	125	--	--	30
	STAGE 1	2045	--	110	2	60
	STAGE 2	1400	2100	--	--	25
	STAGE 3	245	--	--	--	--
TOTAL		3690	2225	110	2	115

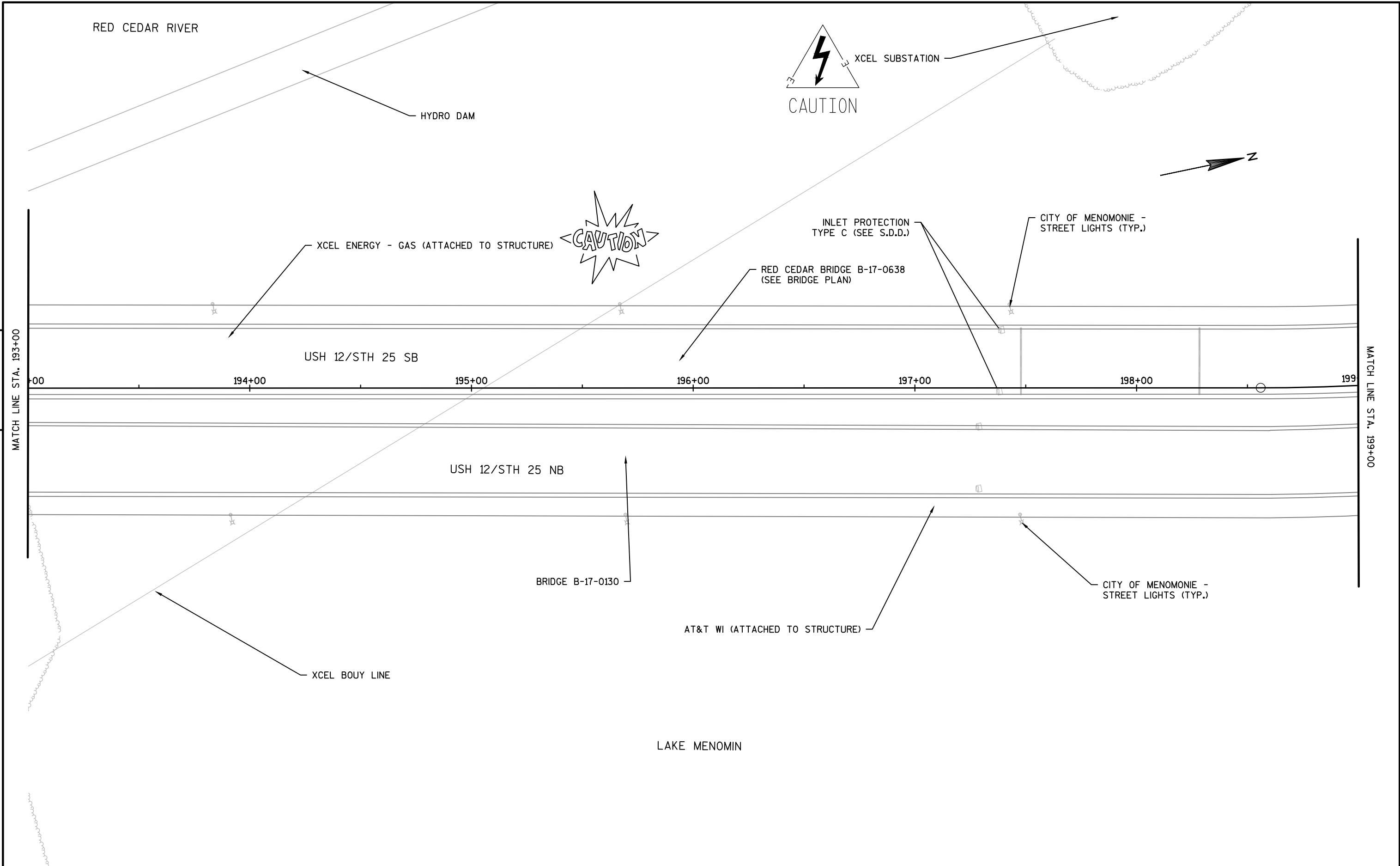
TRAFFIC CONTROL - DETOUR SIGNS							
CATEGORY	LOCATION	643.0920	COVER/UNCOVER	DAYS IN	DETOUR	643.3000	643.2000
		TRAFFIC CONTROL				TRAFFIC CONTROL	TRAFFIC
		COVERING SIGNS				DETOUR	CONTROL
		TYPE II	# OF CYCLES	PHASE	SIGN	(DAY)	(EACH)
		(EACH)					
0010	I-94 ALTERNATE ROUTES	13	1	120	86	10,320	1
PROJECT TOTALS		13				10,320	1

SAWING CONCRETE		
CATEGORY	STATION TO STATION	690.0250
0010		SAWING
		CONCRETE
		(LF)
	USH 12 (MEDIAN)	
	189+51 - 190+50 SB	100
	189+51 - 190+97 NB	150
	191+15	15
	191+57 - 191+69 NB	30
	201+95	10
	202+16 - 203+58 SB	145
	202+16 - 203+45 NB	130
TOTAL		580

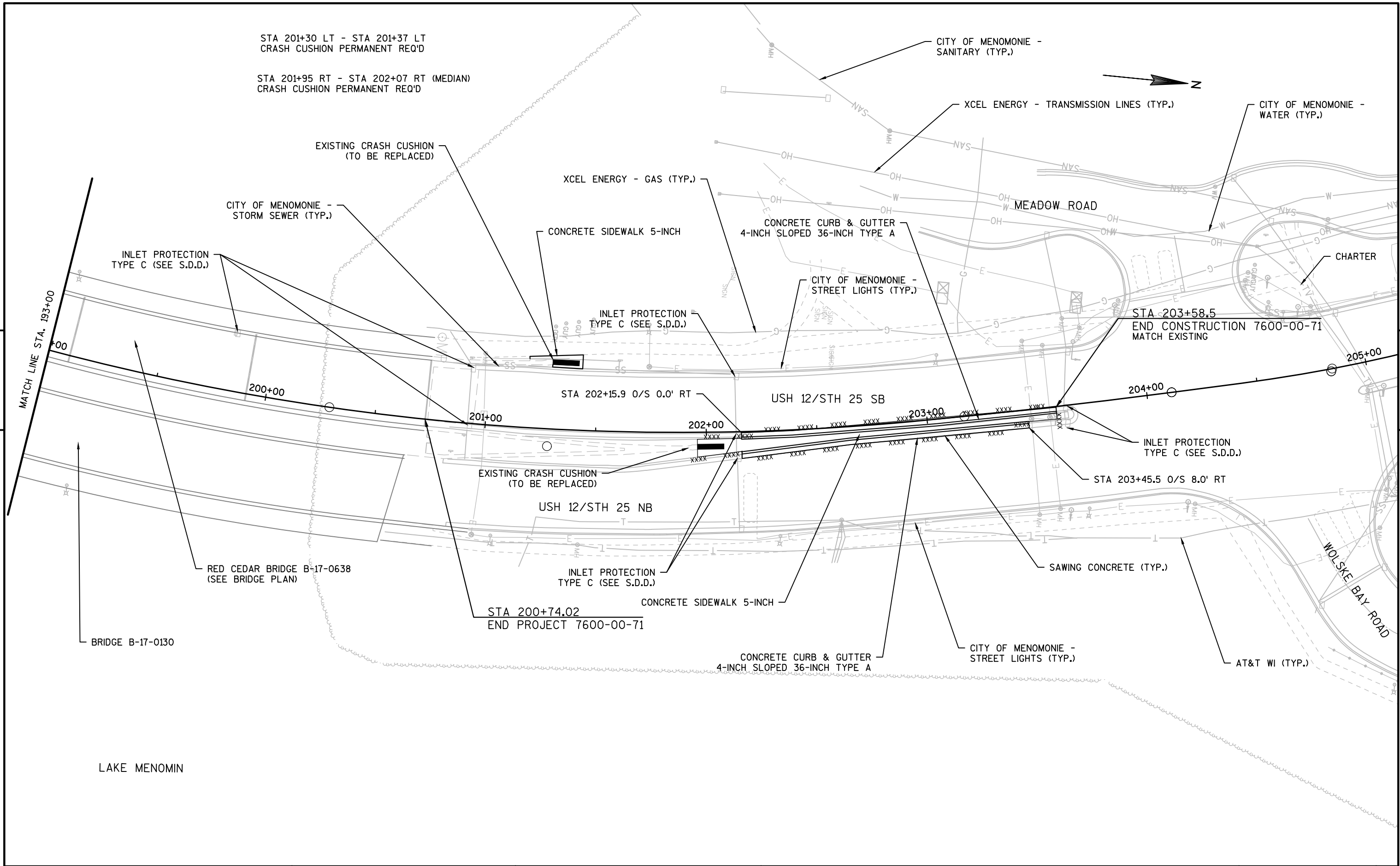
LIGHTING BASES								
NUMBER	STATION	OFFSET	R/L	SPV.0060.001	SPV.0060.002	655.0610		
				REMOVE	FURNISH AND	ELECTRICAL		
				STREET	INSTALL	WIRE LIGHTING		
				LIGHT	STREET LIGHT	12 AWG		
				EACH	EACH	LF		
ALL ITEMS ARE CATEGORY 0030								
SL	100	198+83	37.9'	LT	1	1	190	
SL	101	193+91	57.7'	RT	1	1	190	
SL	102	195+67	37.6'	LT	1	1	190	
SL	103	195+69	58.2'	RT	1	1	190	
SL	104	197+43	37.2'	LT	1	1	190	
SL	105	197+48	58.7'	RT	1	1	190	
SL	106	199+04	37.3'	LT	1	1	190	
SL	107	199+22	58.8'	RT	1	1	190	
PROJECT TOTALS					8	8	1,520	

TEMPORARY VEHICLE DETECTION AND TIMINGS	
	SPV.0105.001
	TEMPORARY VEHICLE
	DETECTION AND TIMINGS
	(USH 12 & WOLSKE BAY
	ROAD)
	LS
LOCATION	
CATEGORY 0010	
USH 12 & WOLSKE BAY ROAD	1
CATEGORY 0010 TOTAL	1





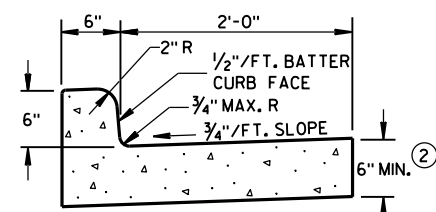
PROJECT NO: 7600-00-71	HWY: USH 12	COUNTY: DUNN	PLAN & EROSION CONTROL: USH 12/STH 25	SHEET	E
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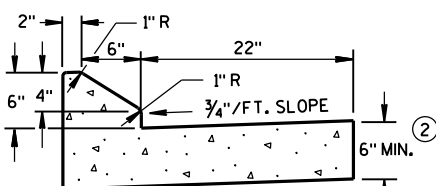
PROJECT NO: 7600-00-71	HWY: USH 12	COUNTY: DUNN	PLAN & EROSION CONTROL: USH 12/STH 25	SHEET	E
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Standard Detail Drawing List

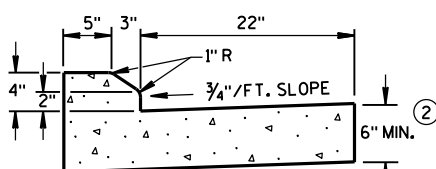
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C08-17B	PAVEMENT MARKING (TURN LANES)
15C11-06	FLEXIBLE TUBULAR MARKER POST
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15D06-03	TRAFFIC CONTROL, TWO LANE TWO WAY OPERATION
15D09-03	TRAFFIC CONTROL, SINGLE LANE CROSSOVER EXIT
15D11-06	TRAFFIC CONTROL, SINGLE LANE CROSSOVER
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE



TYPES A & D ①

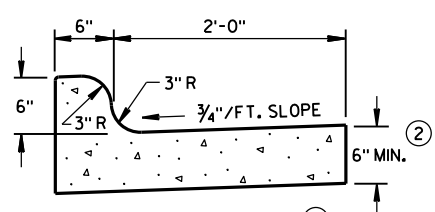


6" SLOPED CURB TYPES G & J ①



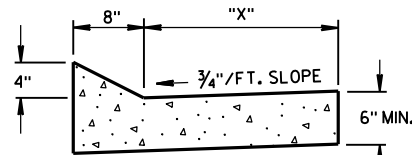
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



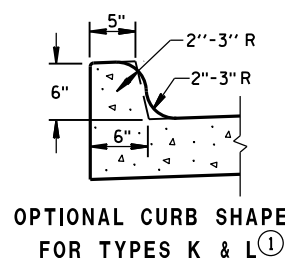
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

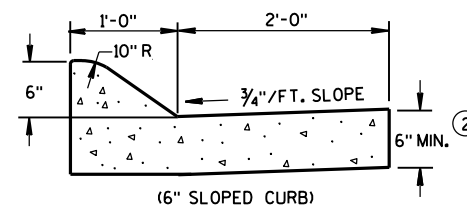


TYPES TBT & TBTT ①
CONCRETE CURB & GUTTER

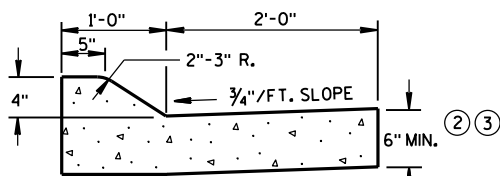
TBT & TBTT	"X"
30"	22"
36"	28"



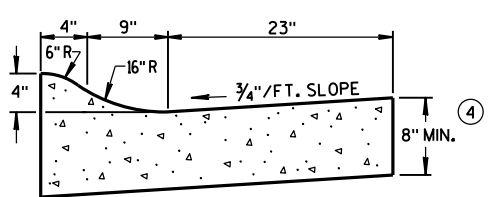
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)



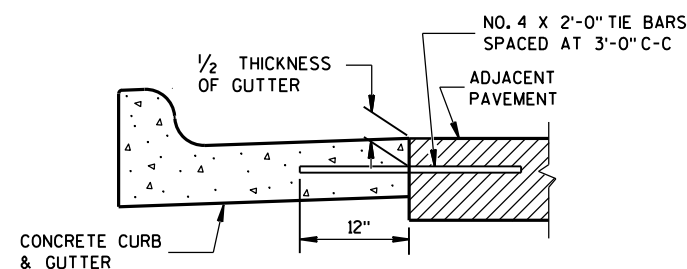
(4" SLOPED CURB)
TYPES A & D ①



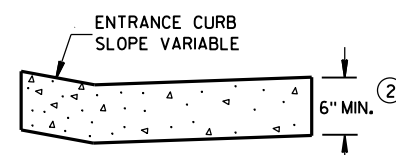
4" SLOPED CURB TYPES R & T ① ⑤
CONCRETE CURB & GUTTER 36"

GENERAL NOTES

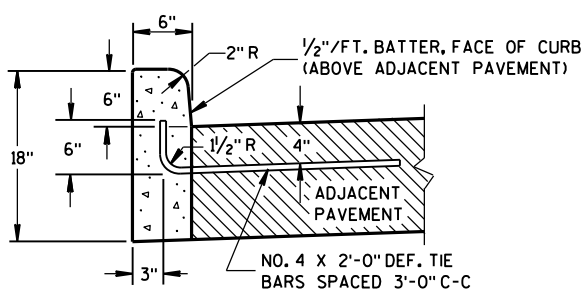
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.
- INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.
- WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.
- UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.
- TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
 - 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.
 - USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
 - 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.
 - THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
 - WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



TYPICAL TIE BAR LOCATION ①

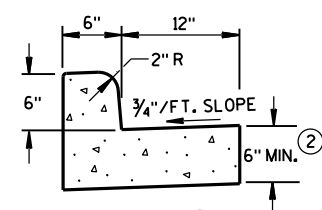


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

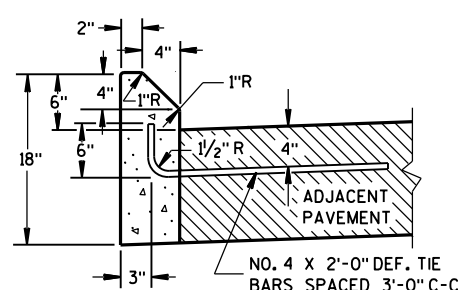


TYPES A & D ①

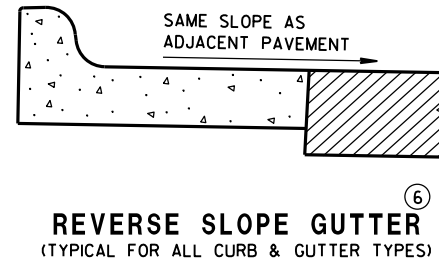
CONCRETE CURB



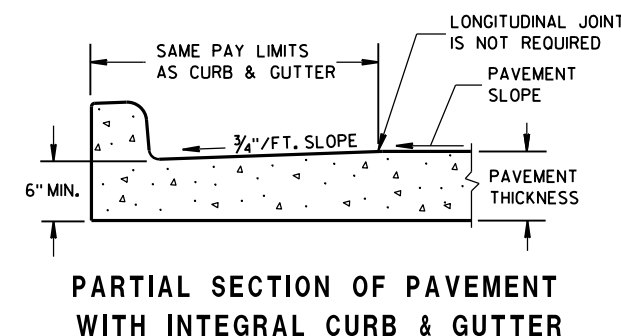
TYPES A & D
CONCRETE CURB & GUTTER 18"



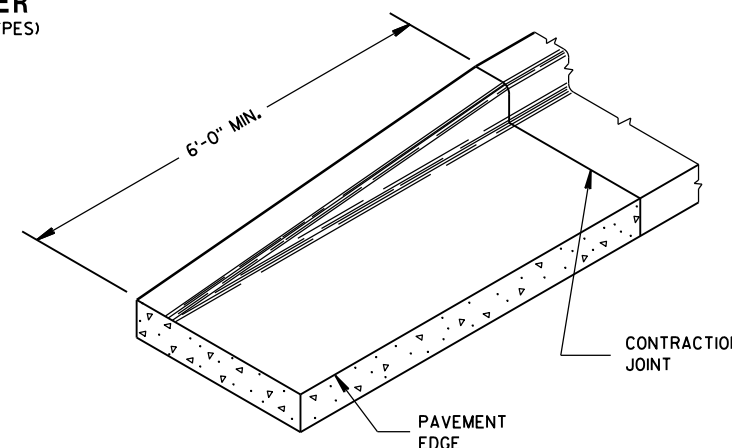
TYPES G & J ①



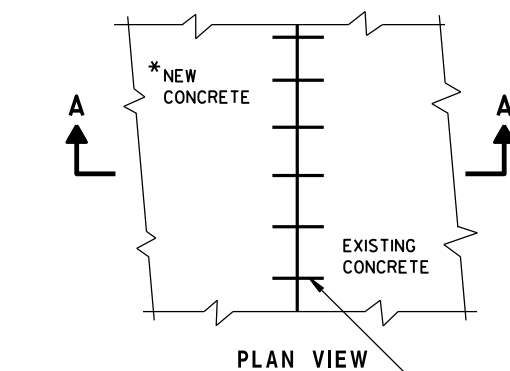
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



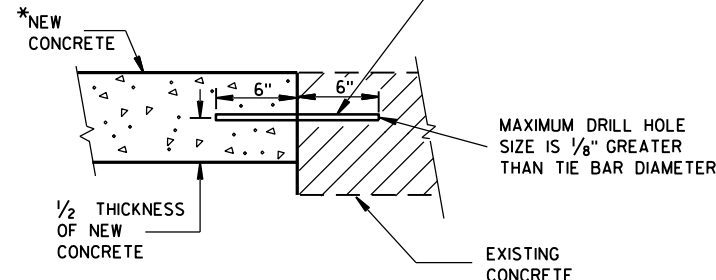
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

* NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

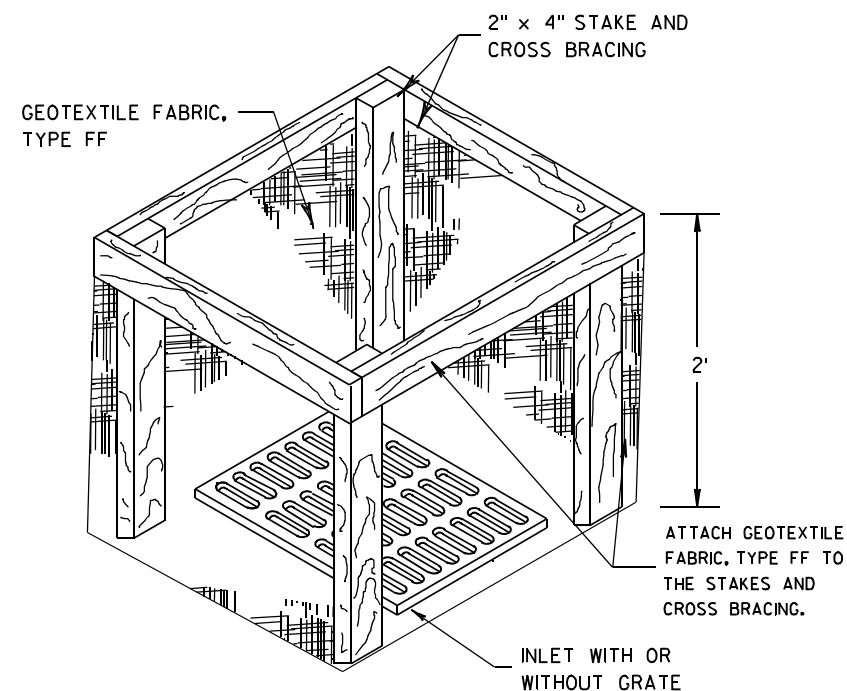
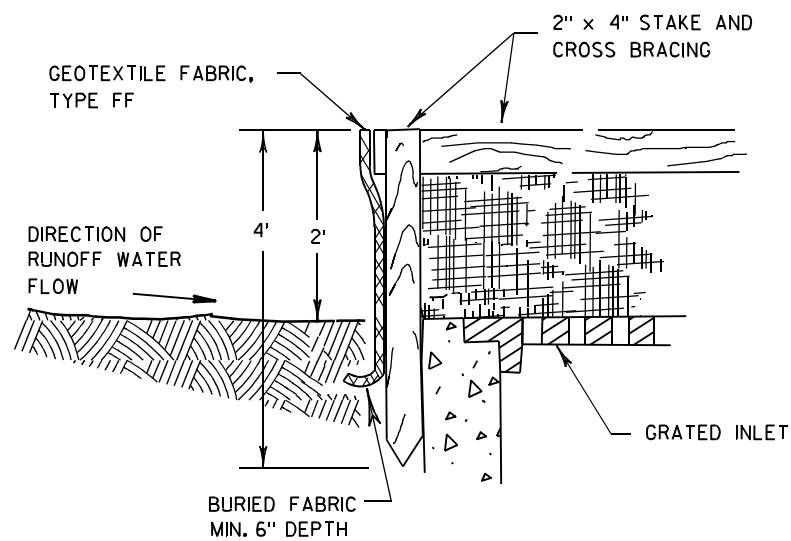
MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING CONCRETE

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



INLET PROTECTION, TYPE A

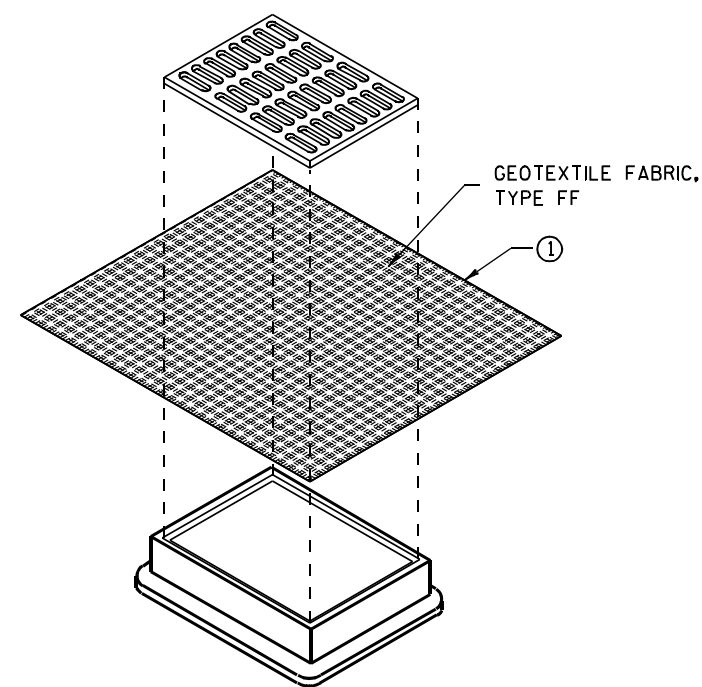
GENERAL NOTES

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.

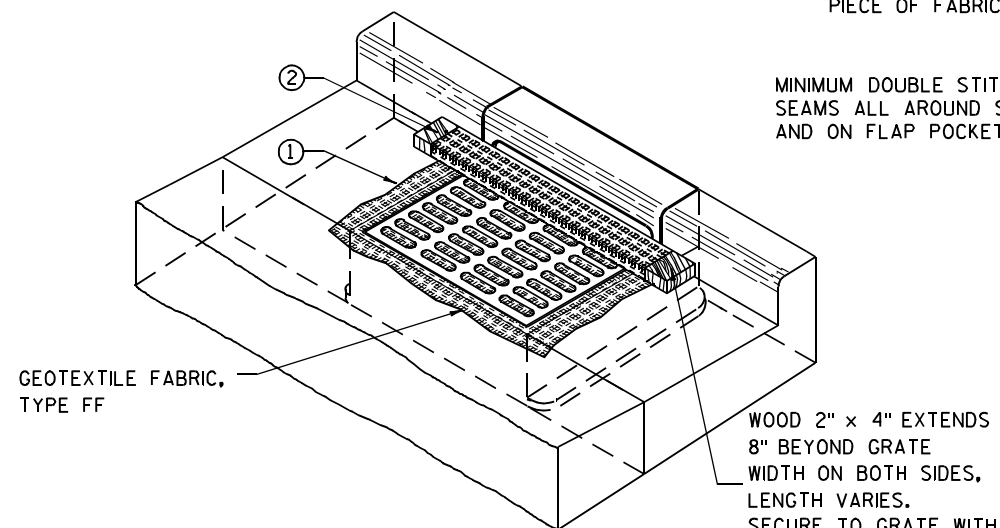
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

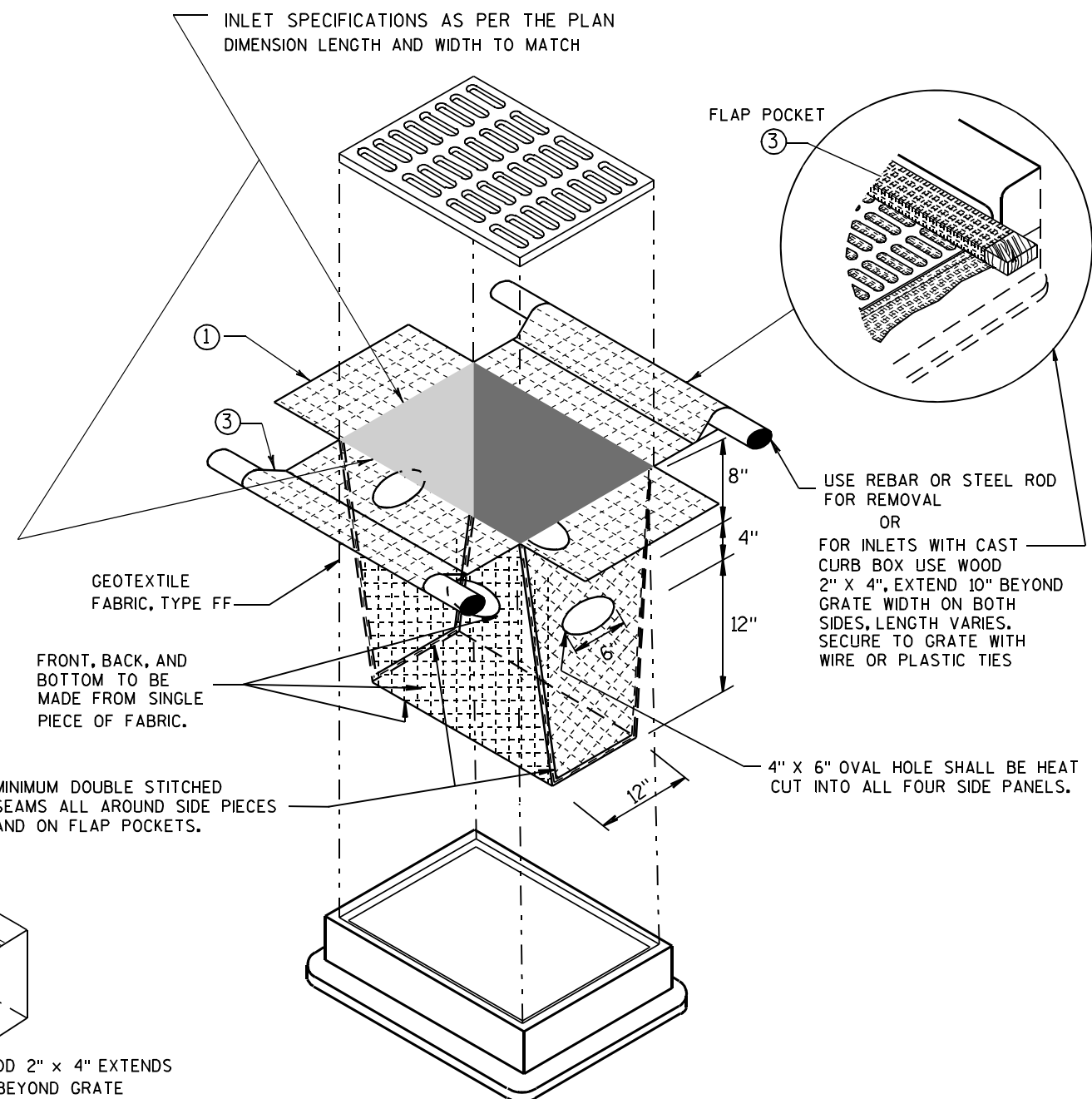
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



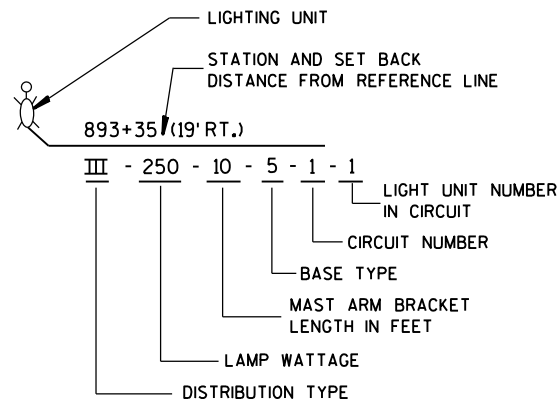
INLET PROTECTION, TYPE D

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

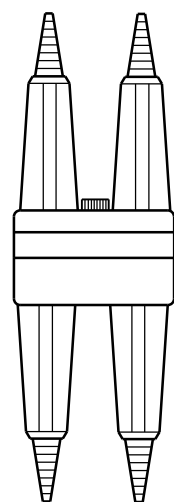
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

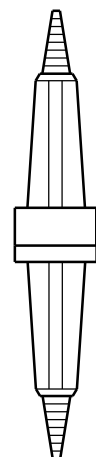
APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



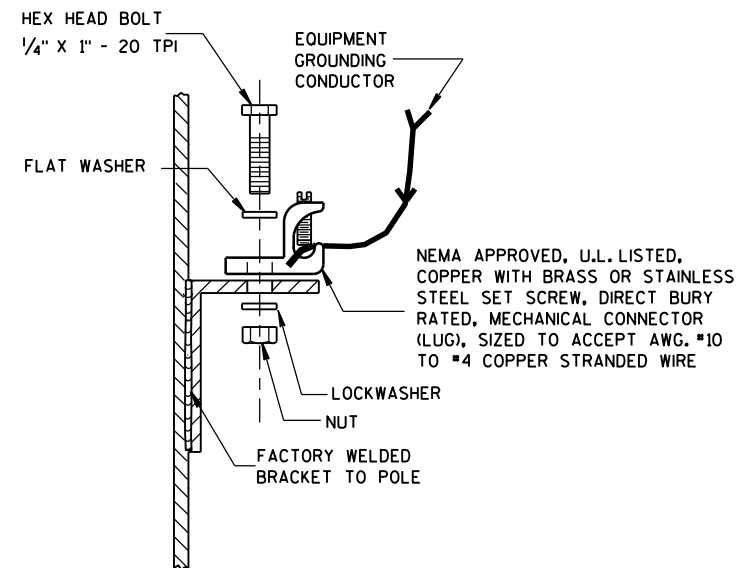
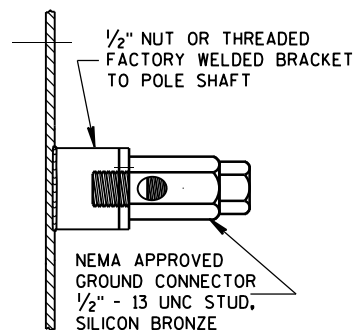
LIGHTING UNIT CODE
(TYPICAL)



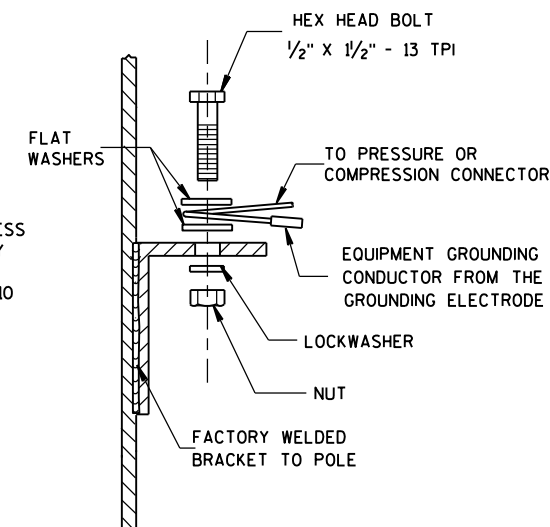
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



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



GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 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.

ADDITIONAL CONDUCTORS
AND FUSE FOR TWIN
LIGHTING UNITS

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPICE CONNECTOR.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

CONDUCTORS TO
LUMINAIRES SHALL BE #12 AWG,
COPPER STRANDED, U.S.E. RATED,
XLP INSULATED. SINGLE
LIGHTING UNIT SHOWN

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE SINGLE POLE FUSE ASSEMBLY.
600 VAC, WITH 5 AMP FAST ACTING
FUSE (SEE DETAIL "B")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTOR AND FUSEHOLDER

APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

ALTERNATE PHASE UNGROUNDED
CIRCUIT CONDUCTOR PASSING
THROUGH THIS POLE

**3 WIRE - 120, 240 OR 480 VAC (UNGROUND CONDUCTOR)
WITH GROUNDED CONDUCTOR AND
WITH EQUIPMENT GROUNDING CONDUCTOR**

TWIN LIGHTING UNITS REQUIRE
INDIVIDUAL SETS OF UNGROUNDED
CONDUCTORS AND FUSE ASSEMBLY.

AWG #4 (MIN.) BARE EQUIPMENT
GROUNDING CONDUCTOR.
NOTE: THIS WIRE SHALL BE
CONTINUOUS WITHOUT SPLICES
FROM THE GROUNDING ELECTRODE
TO THE EQUIPMENT GROUNDING
CONDUCTOR SPICE CONNECTOR.

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

APPROVED MECHANICAL TYPE
CONNECTOR FOR EQUIPMENT
GROUNDING CONDUCTORS.
COMPRESSION, CRIMP OR
WIRE NUT CONNECTORS ARE
NOT ALLOWED.

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

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

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

IN LINE FUSE ASSEMBLY
TWO POLE, 600 VAC,
WITH 5 AMP FAST ACTING
FUSE (SEE DETAIL "A")
TAPE AND VARNISH
CRIMPED END FERRULES

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTORS AND FUSEHOLDERS

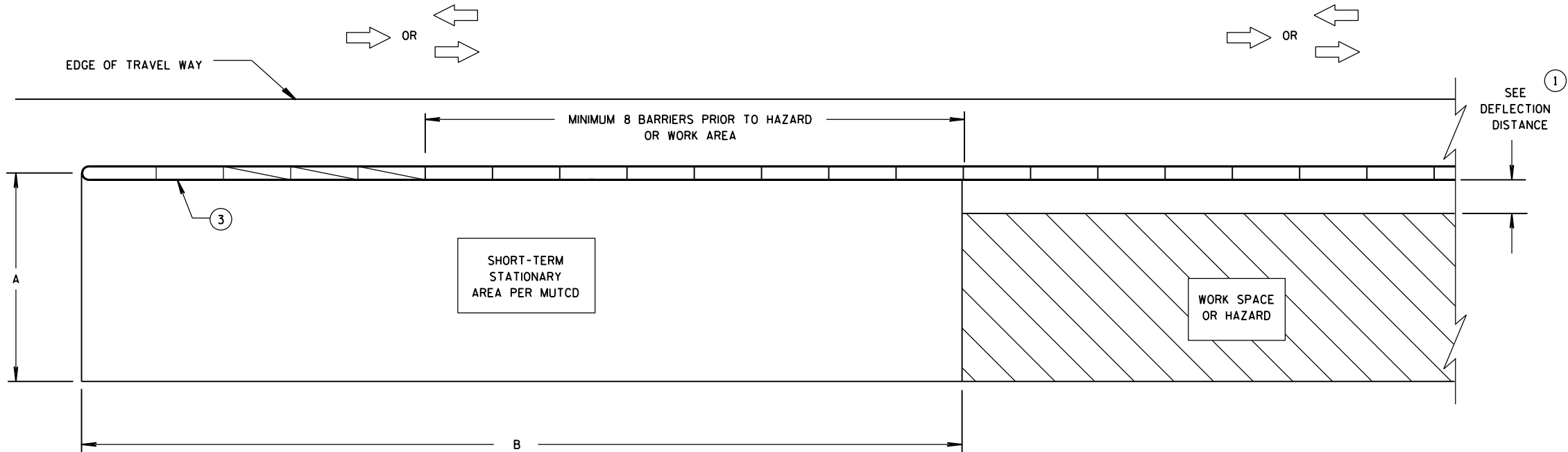
APPROVED INSULATED MULTITAP
TERMINAL BLOCK TYPE CONNECTORS.
COMPRESSION, CRIMP OR WIRE NUT
CONNECTORS ARE NOT ALLOWED.

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

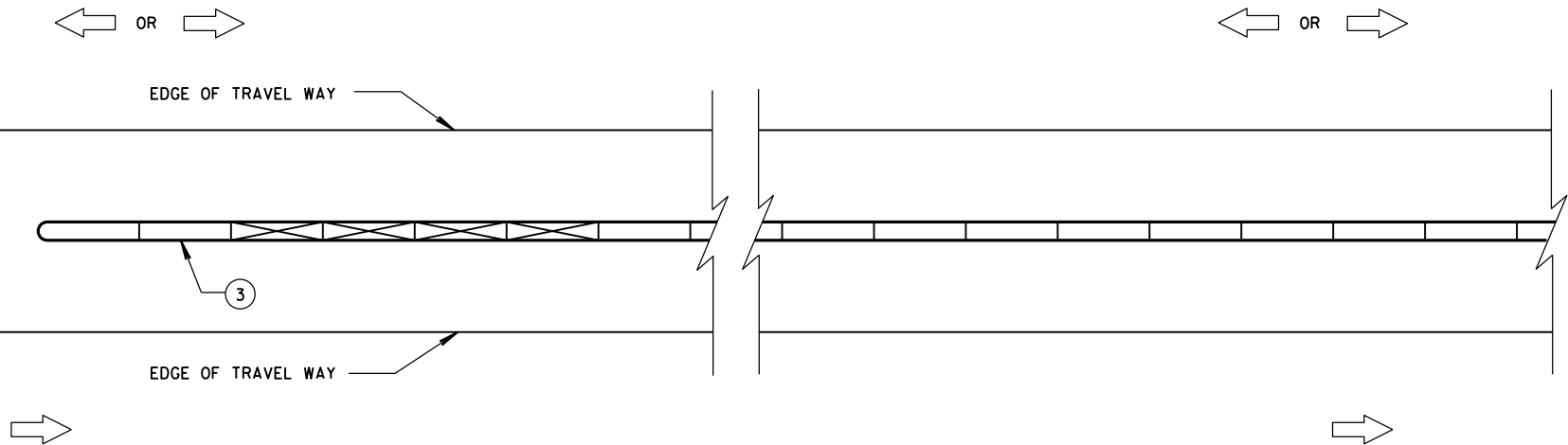
**NON-FREEWAY LIGHTING UNIT
POLE WIRING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER**



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER**

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

- ① FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.
- ② VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.
- ③ ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

DIMENSION A TABLE ②

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE ②

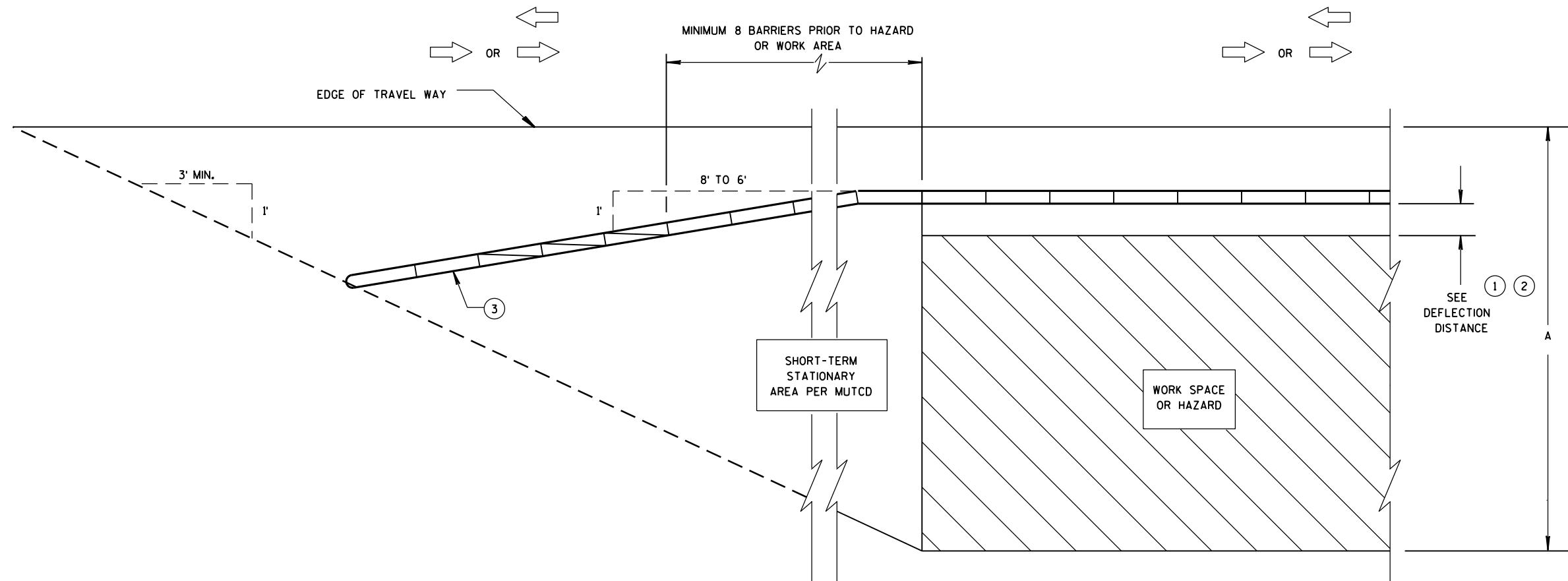
POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

LEGEND

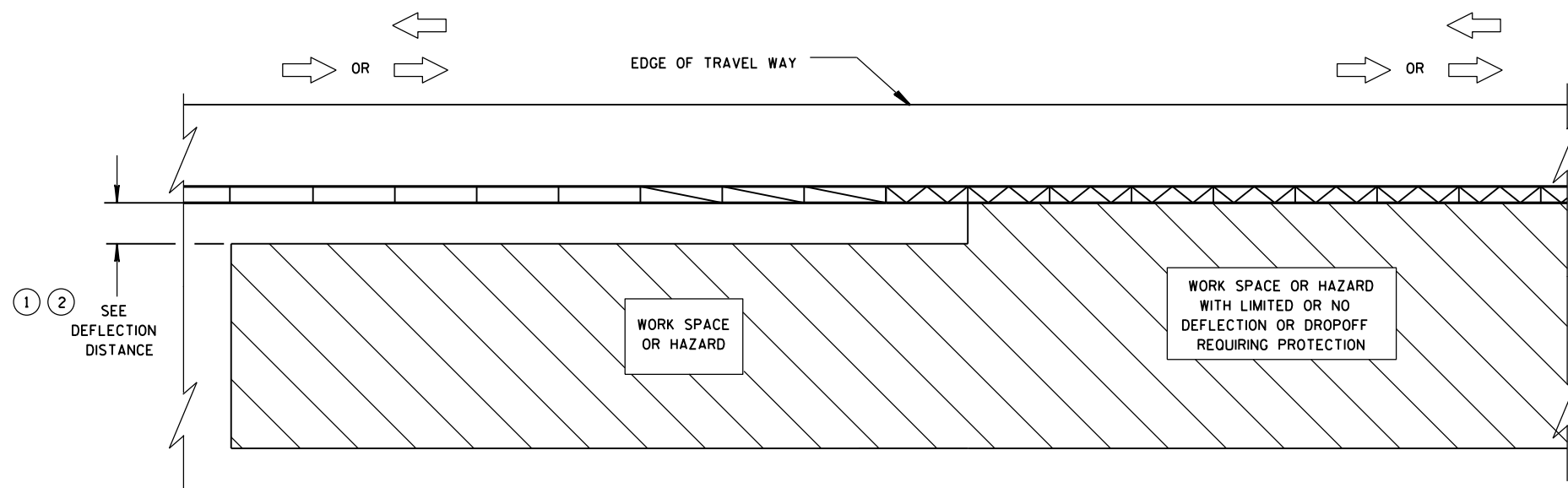
- DIRECTION OF TRAVEL →
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION**



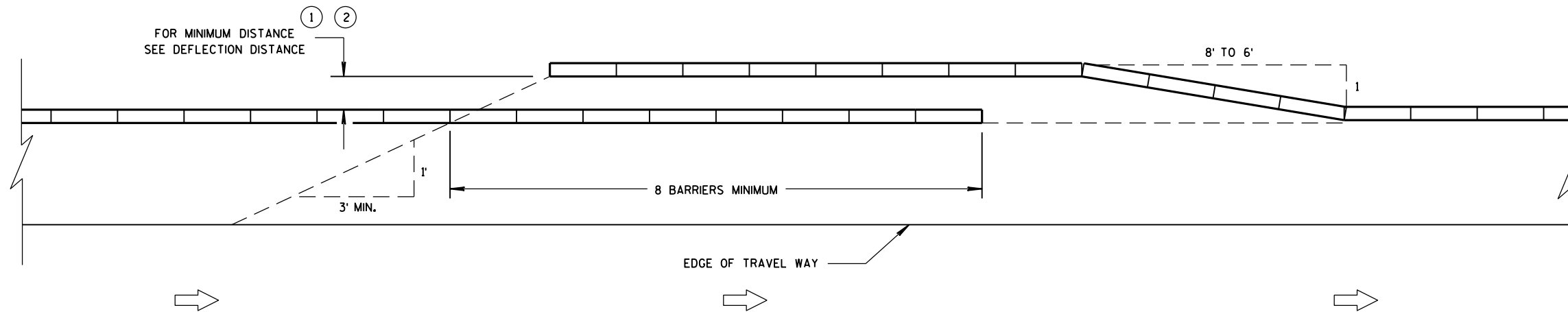
**TRANSITION FROM FREE STANDING TEMPORARY BARRIER
TO ANCHORED BARRIER**

LEGEND

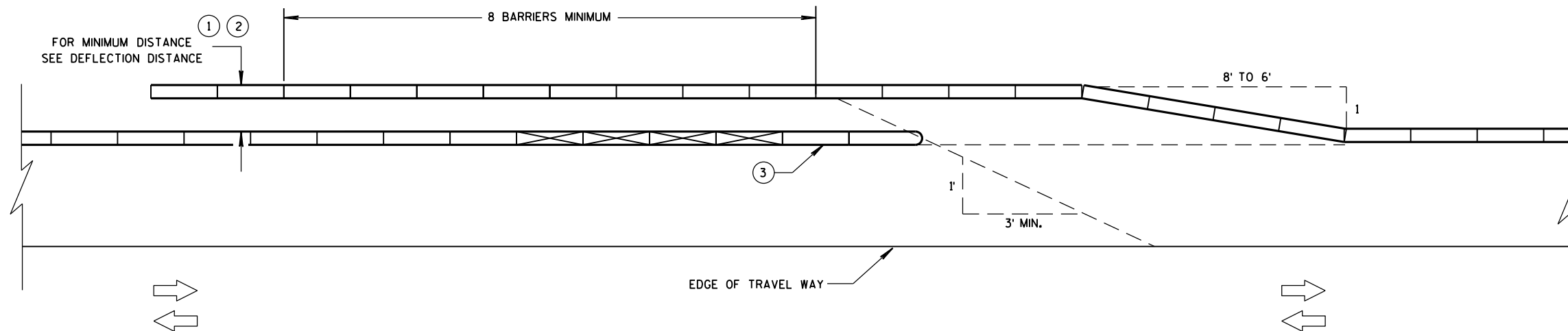
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

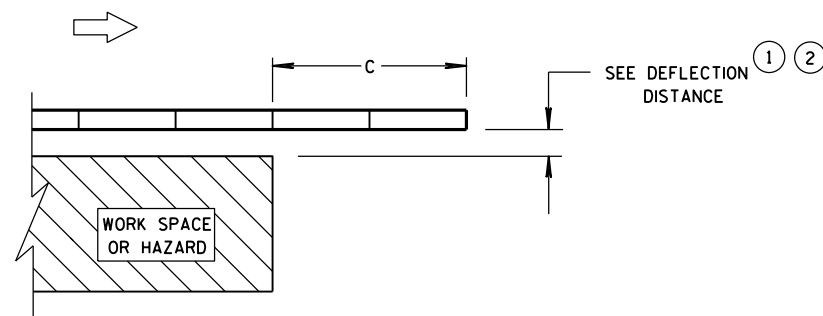
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



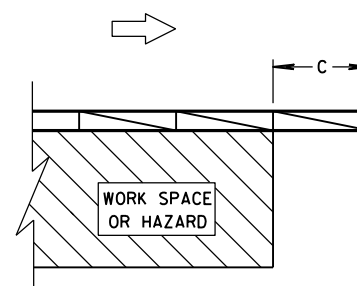
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**



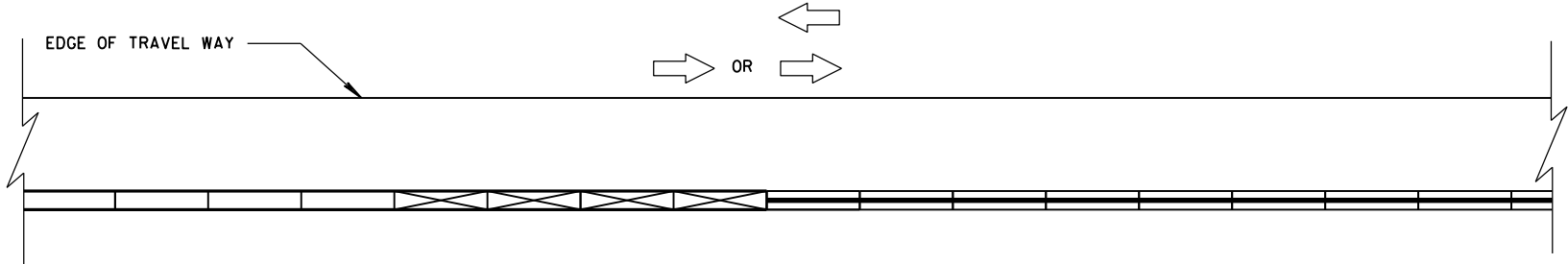
**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

LEGEND

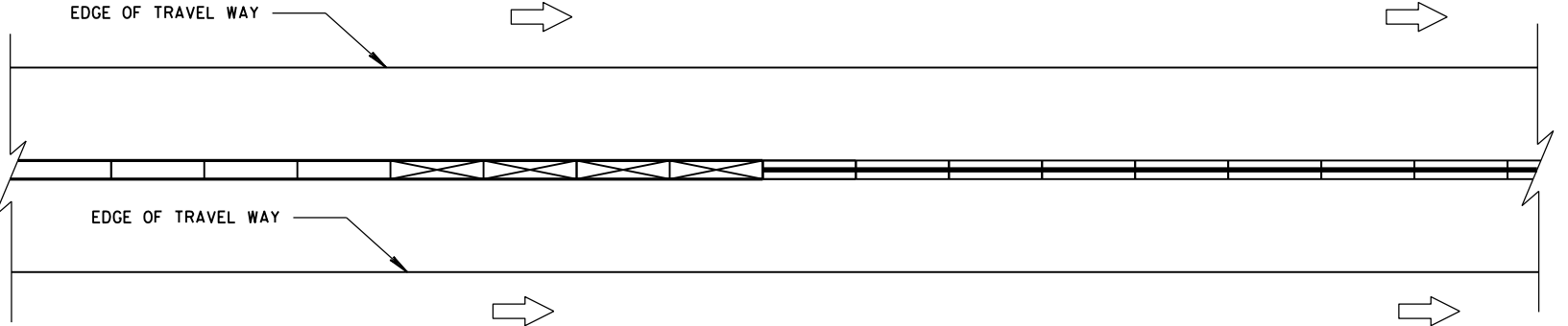
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

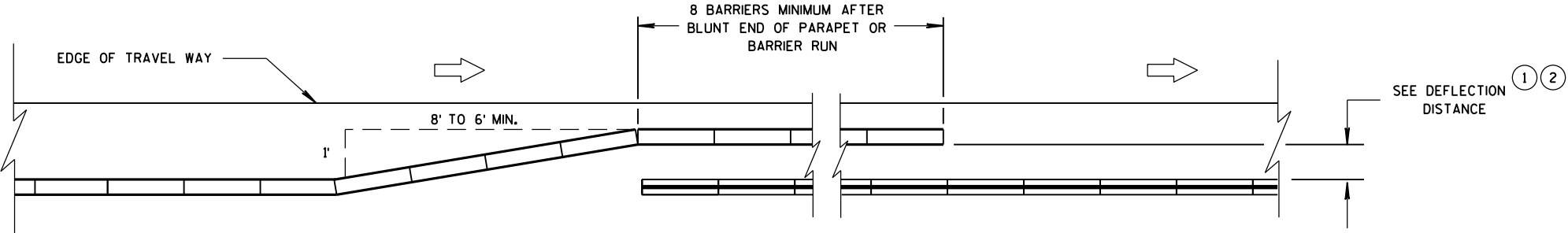


CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE

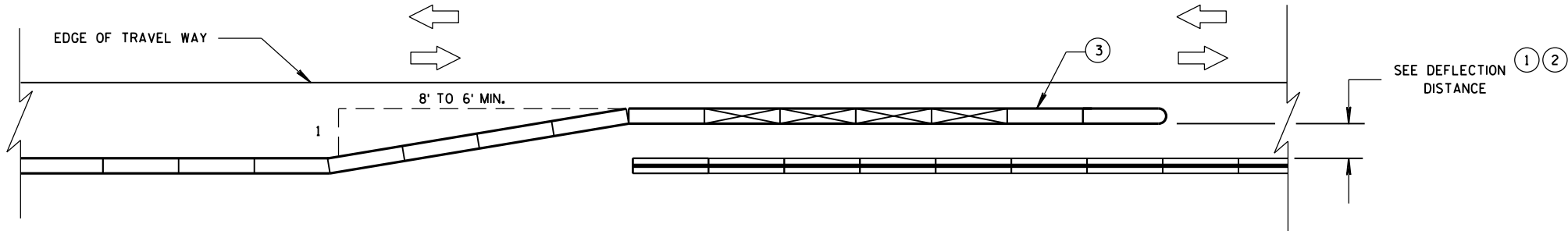


CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND	
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC




OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

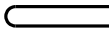
CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

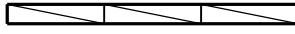
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION


LEGEND


- DIRECTION OF TRAVEL

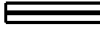

- CRASH CUSHION OR SAND BARREL ARRAY

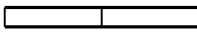

- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS


- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS


- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER


- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET


- FREE STANDING TEMPORARY BARRIER



DIMENSION C TABLE

2

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100

6

6

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015

DATE

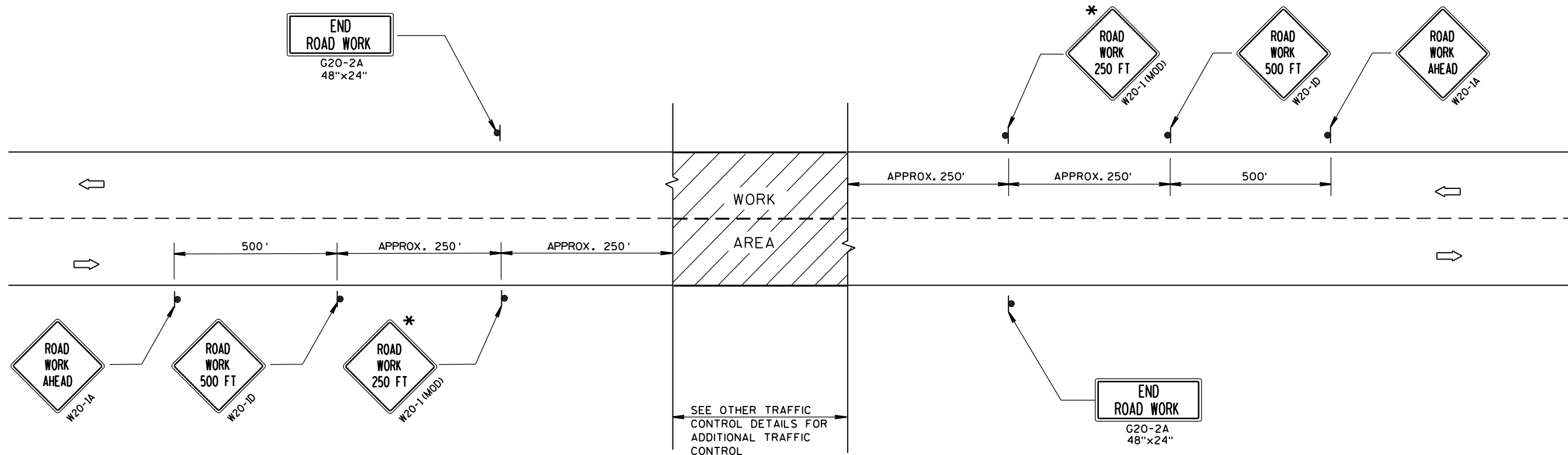
FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER

S.D.D. 14 B 8-2e

S.D.D. 14 B 8-2e



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

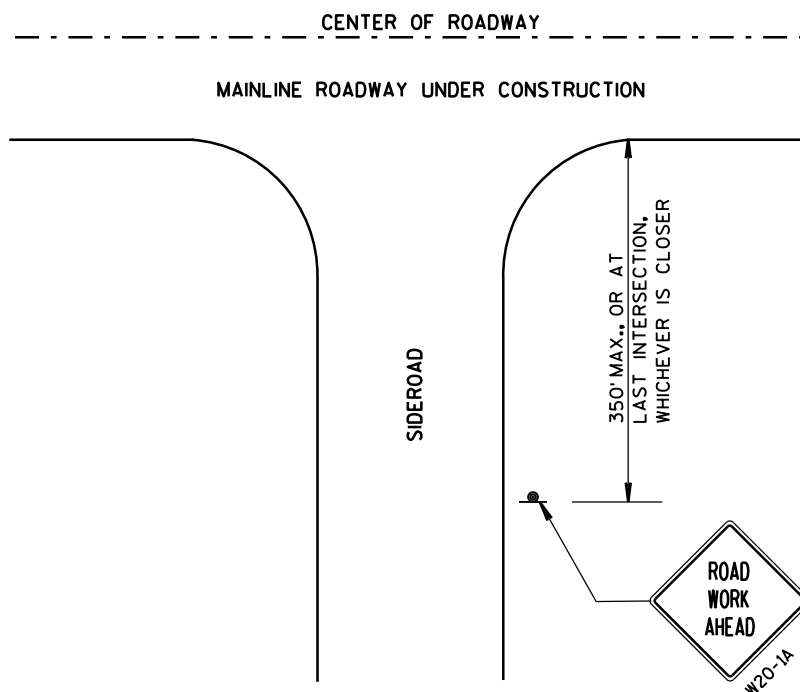
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

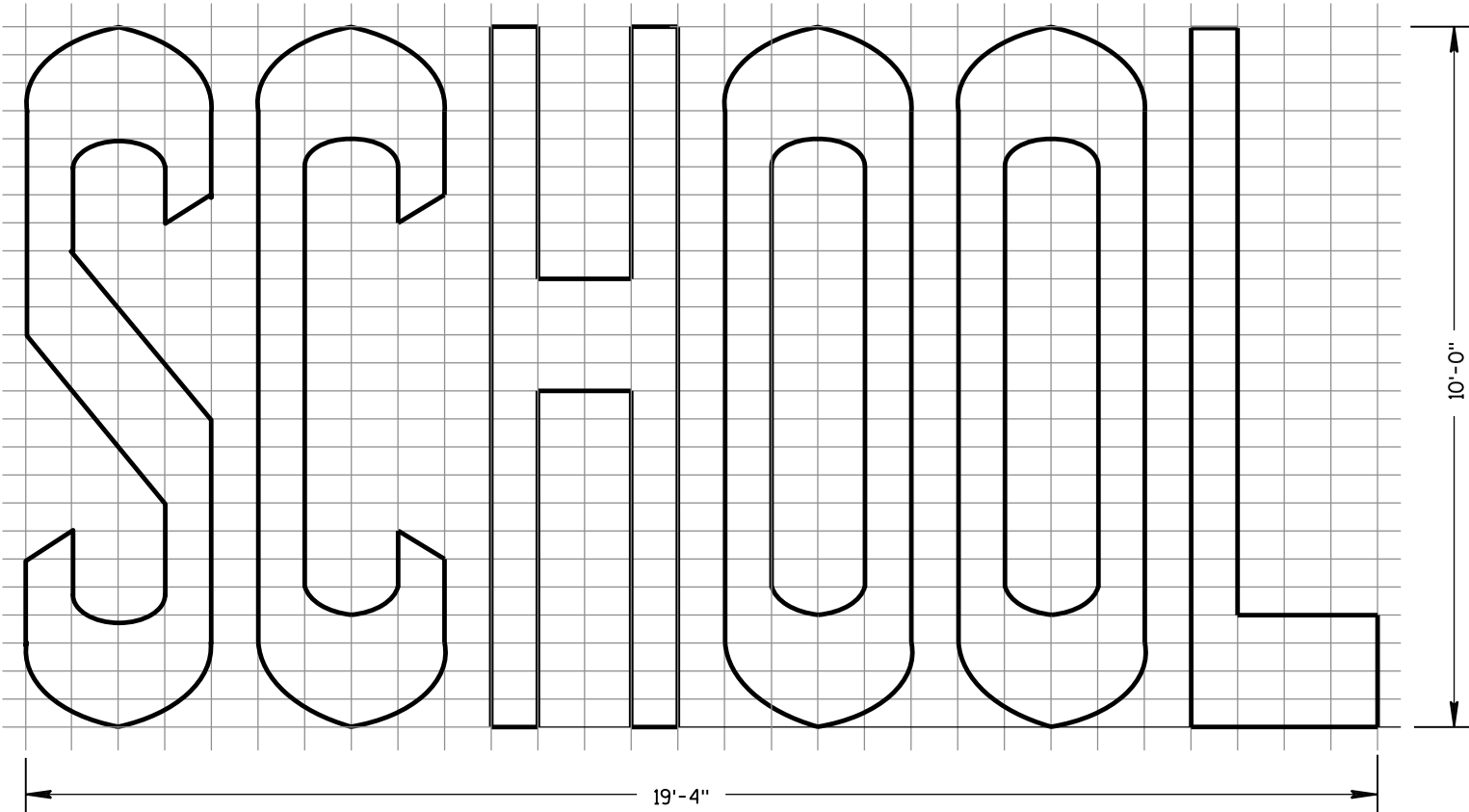
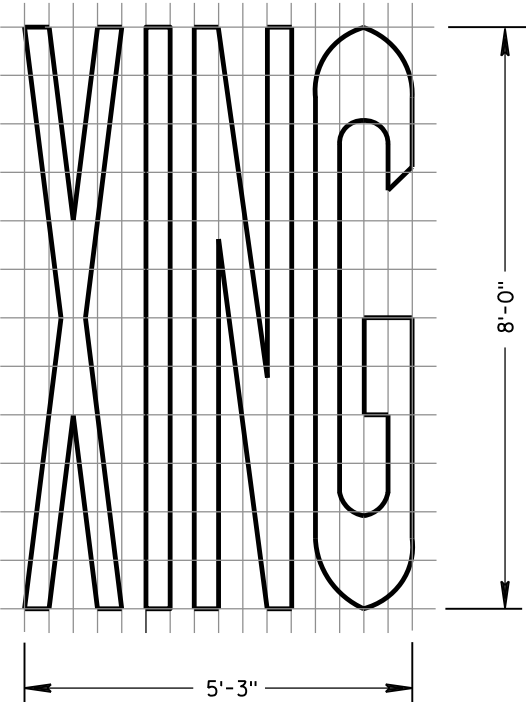
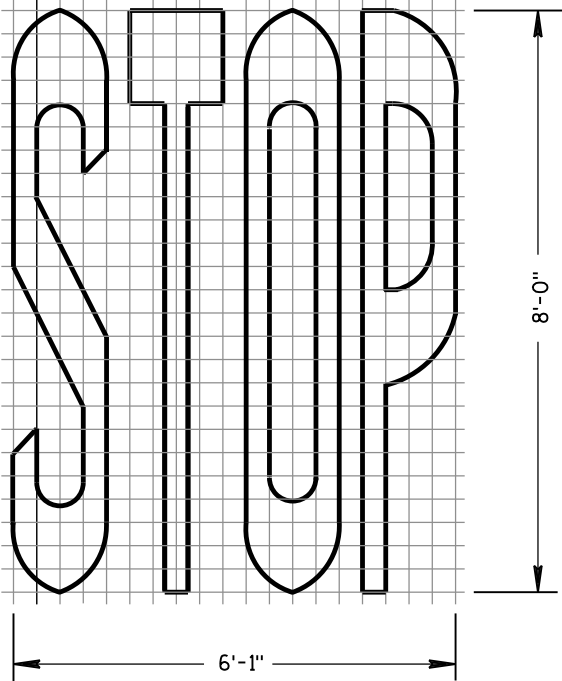
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

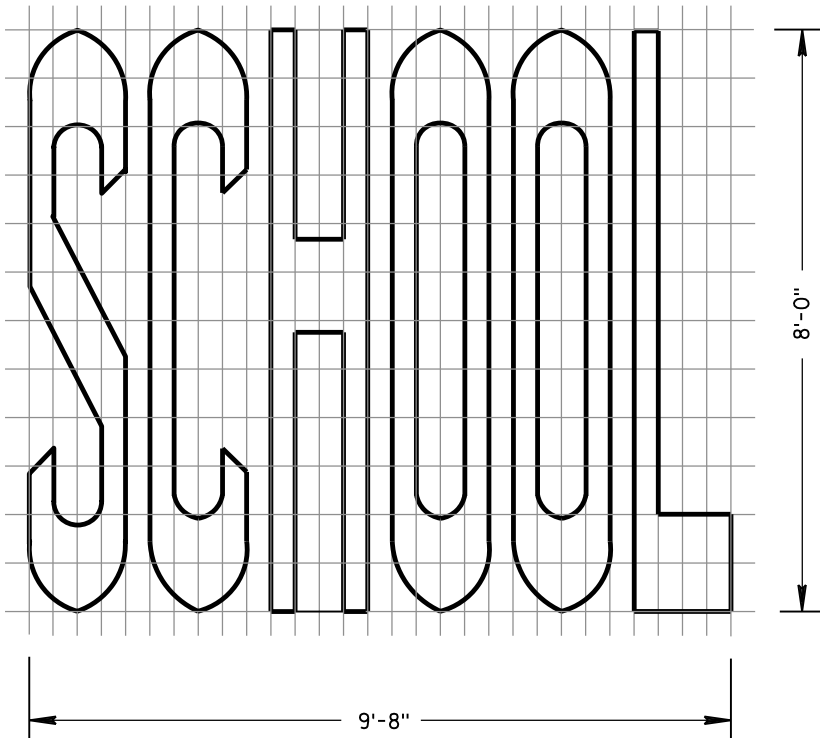
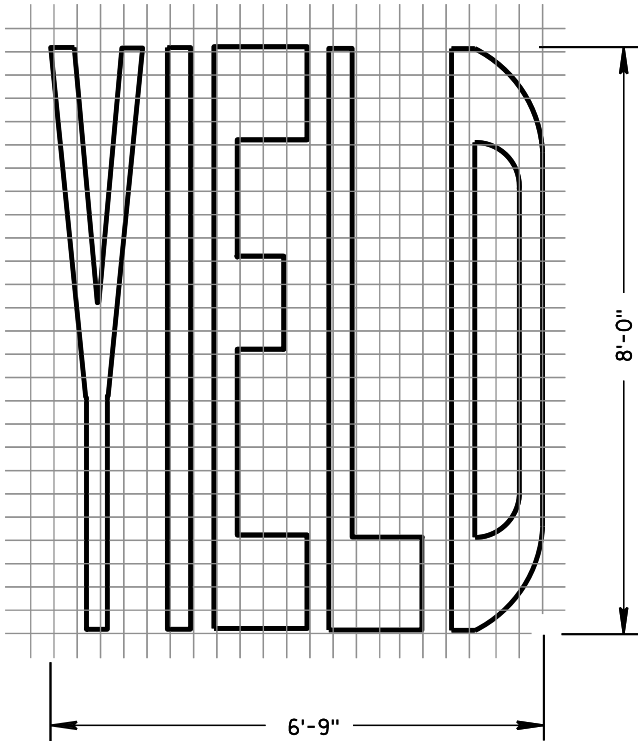
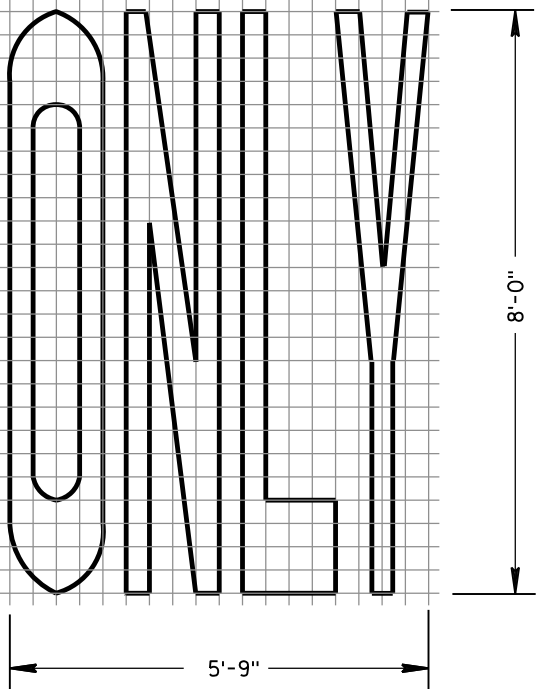
APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

GENERAL NOTES

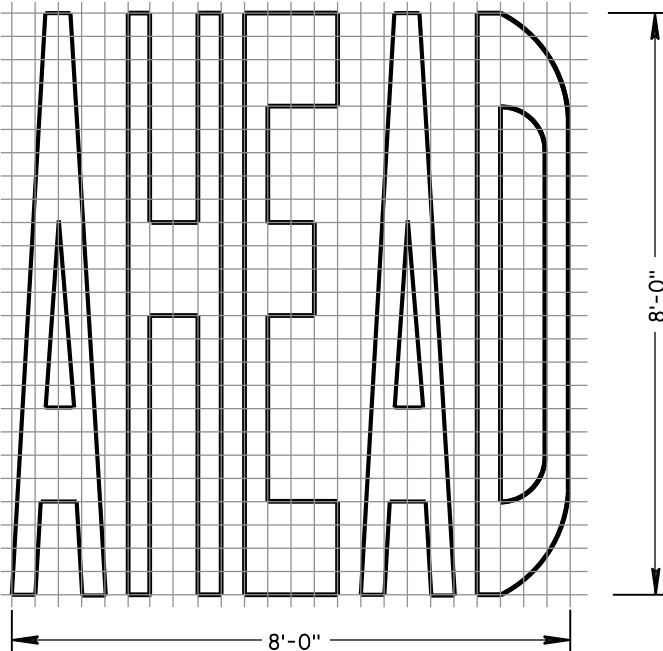
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TWO-LANE



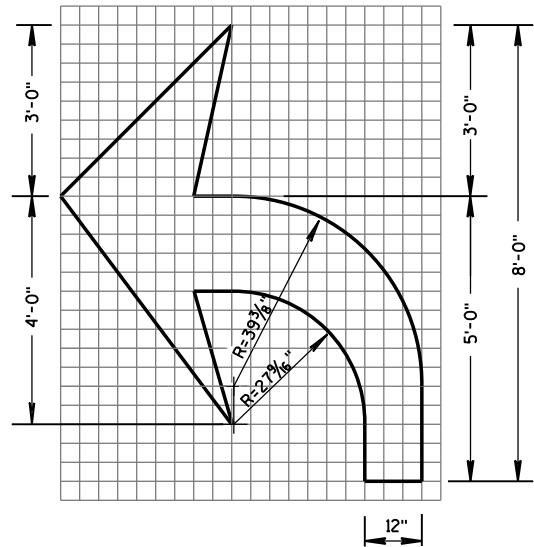
SINGLE-LANE



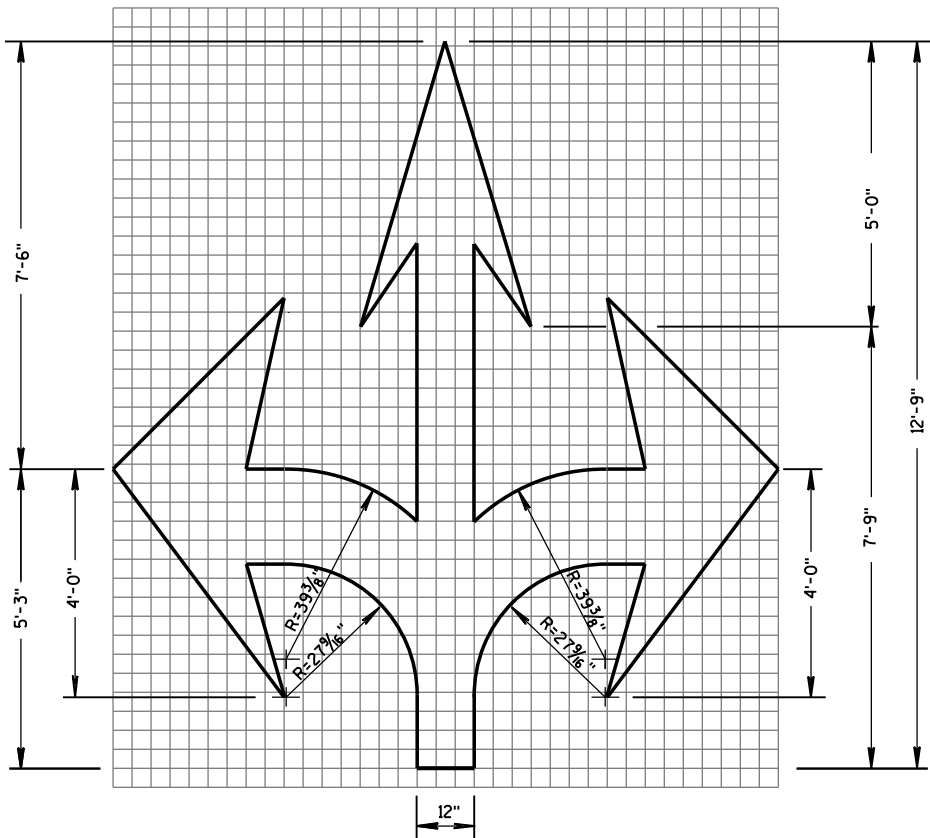
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

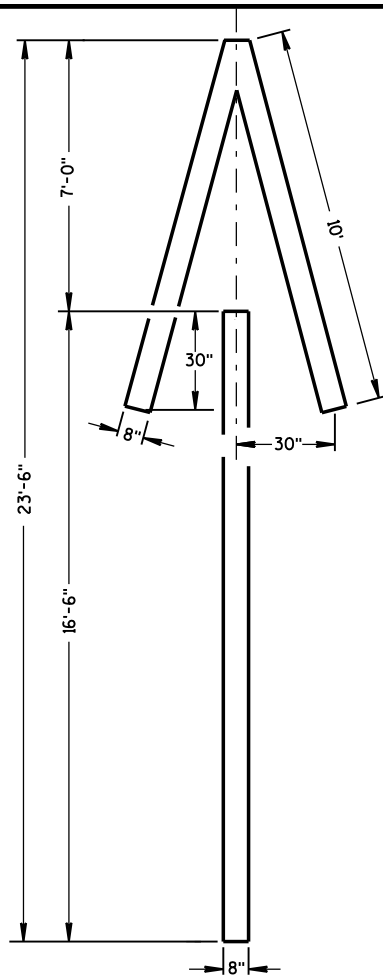
APPROVED
4-18-16 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



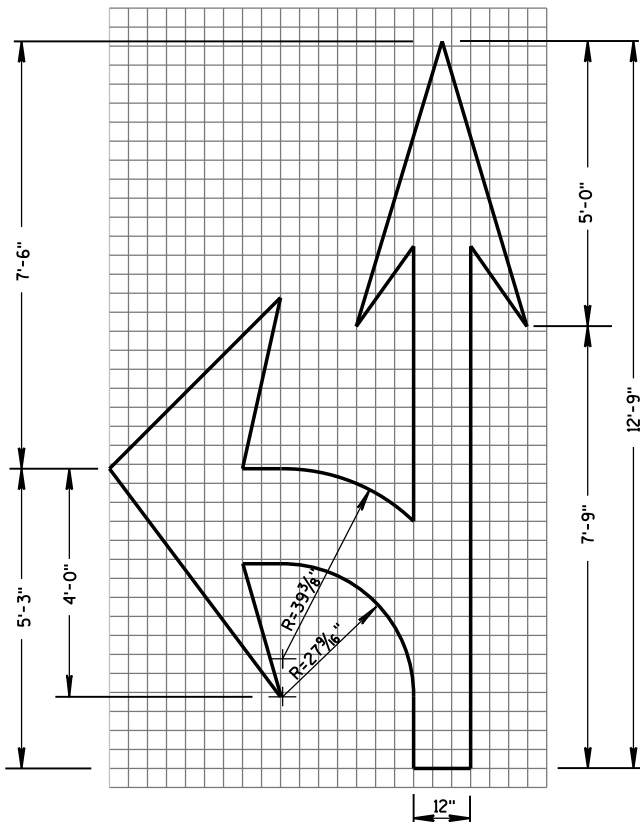
TYPE 2



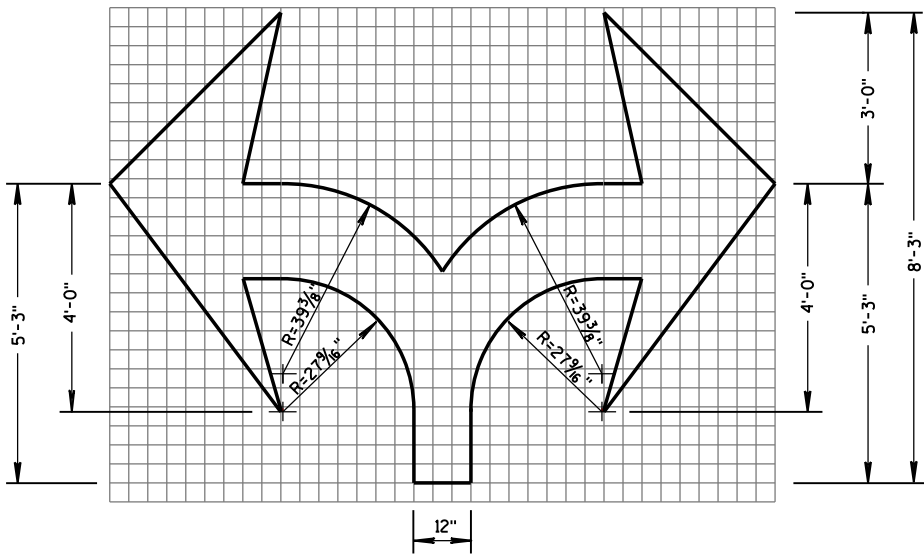
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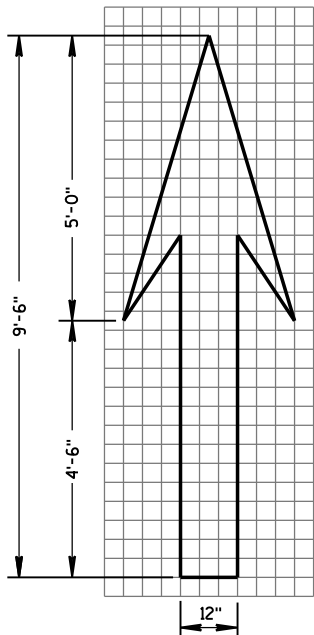
TYPE 4



TYPE 3



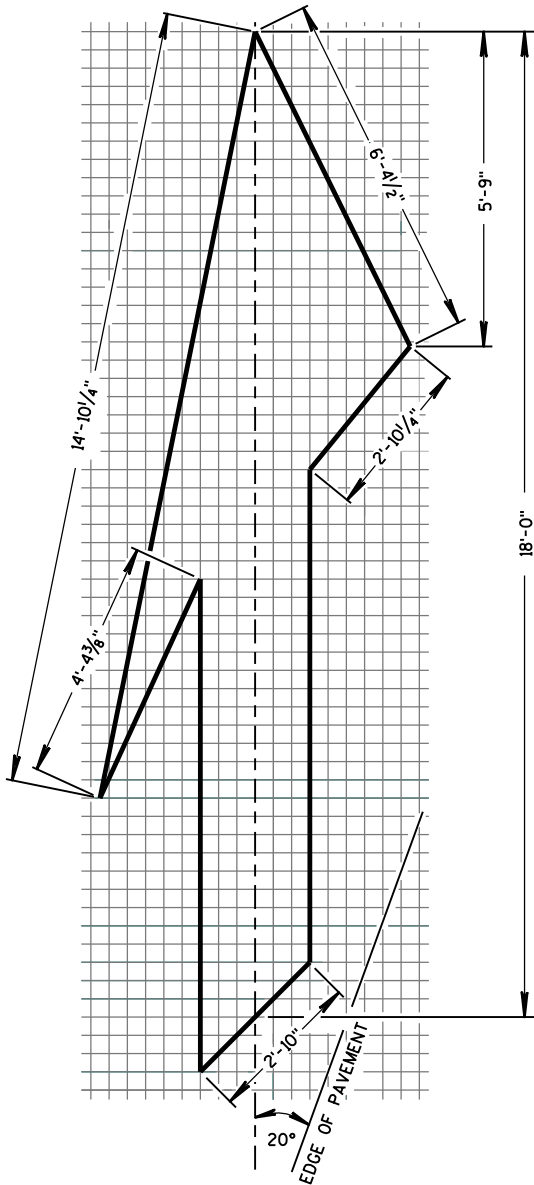
TYPE 7



TYPE 1

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.

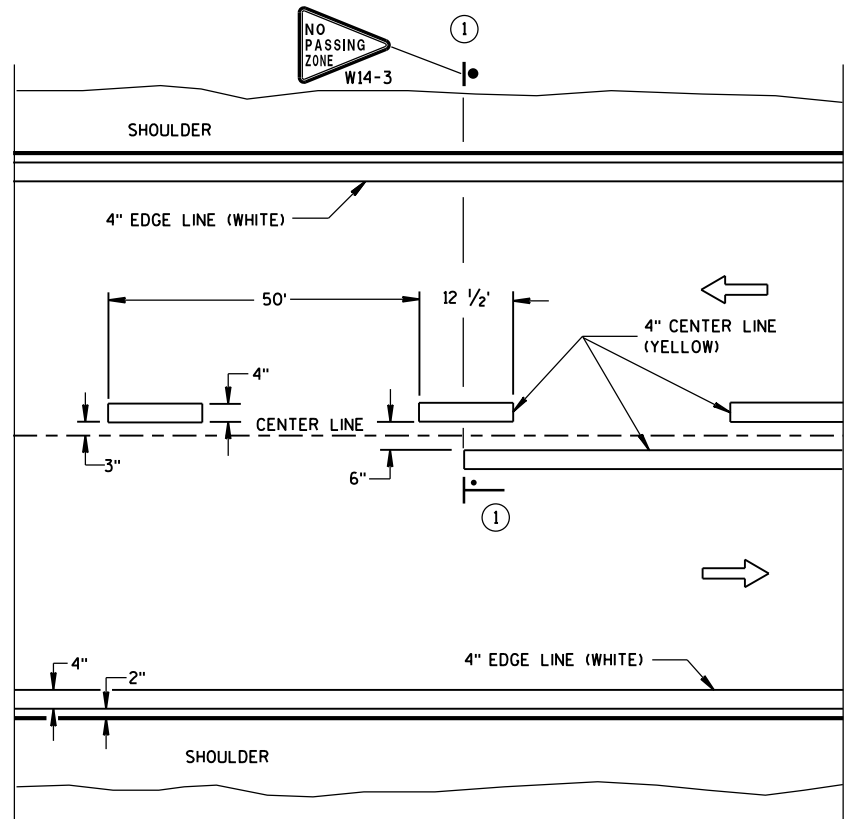


TYPE 5 LANE DROP ARROW

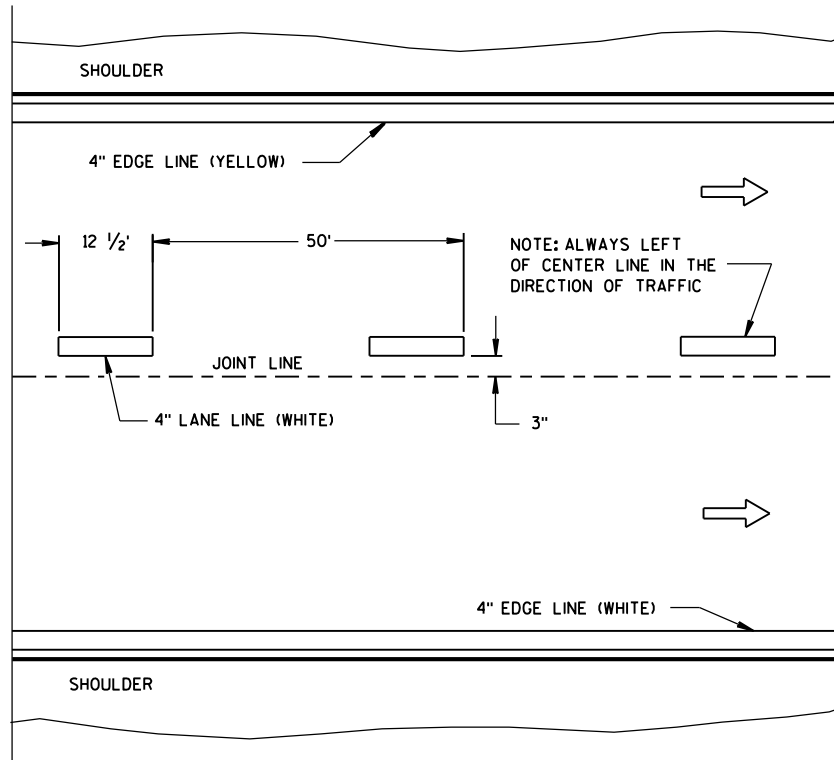
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

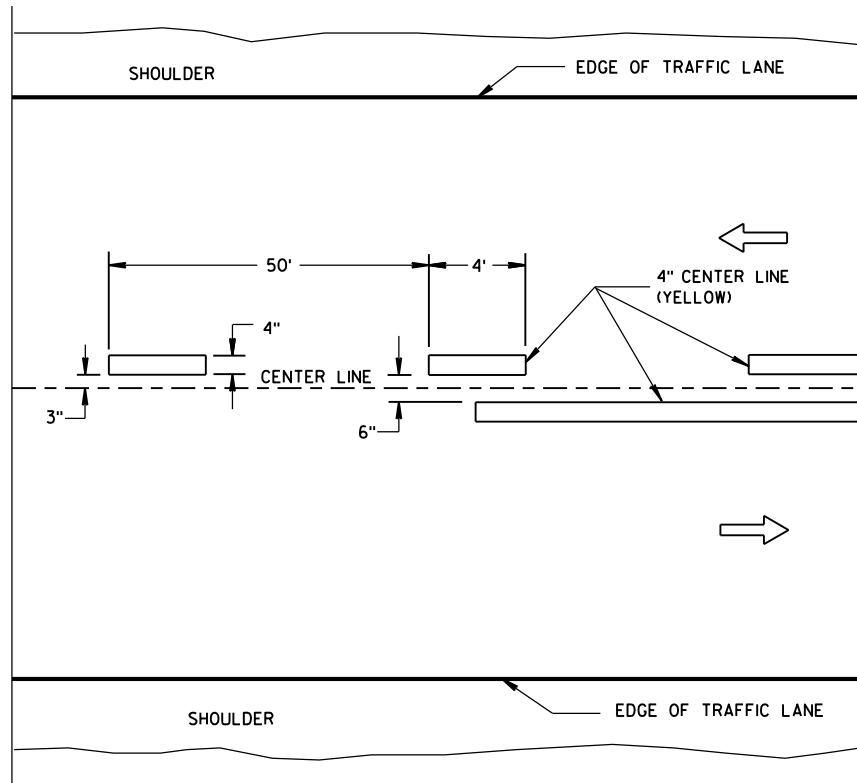


TWO WAY TRAFFIC

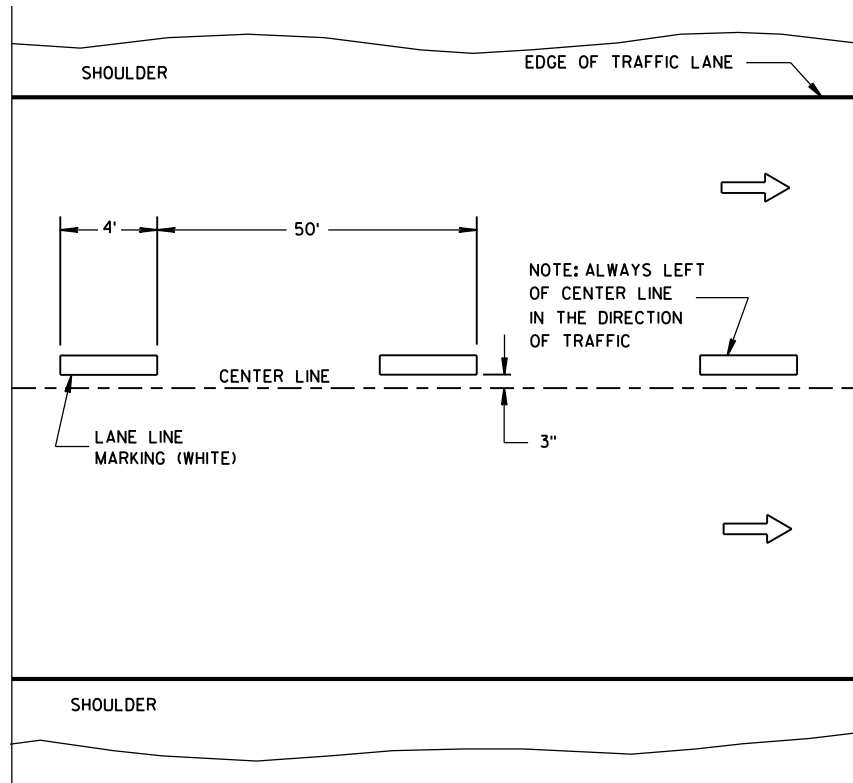


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

—●— "T" MARKING

● POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

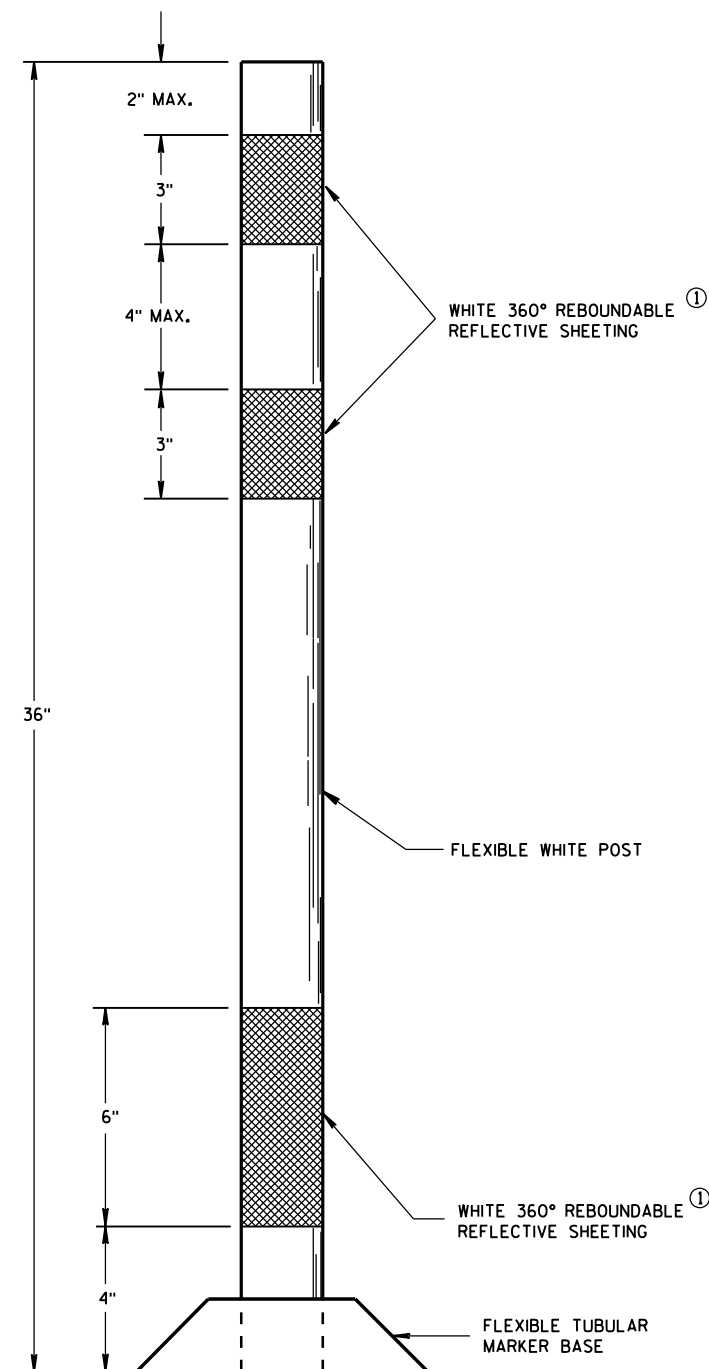
APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



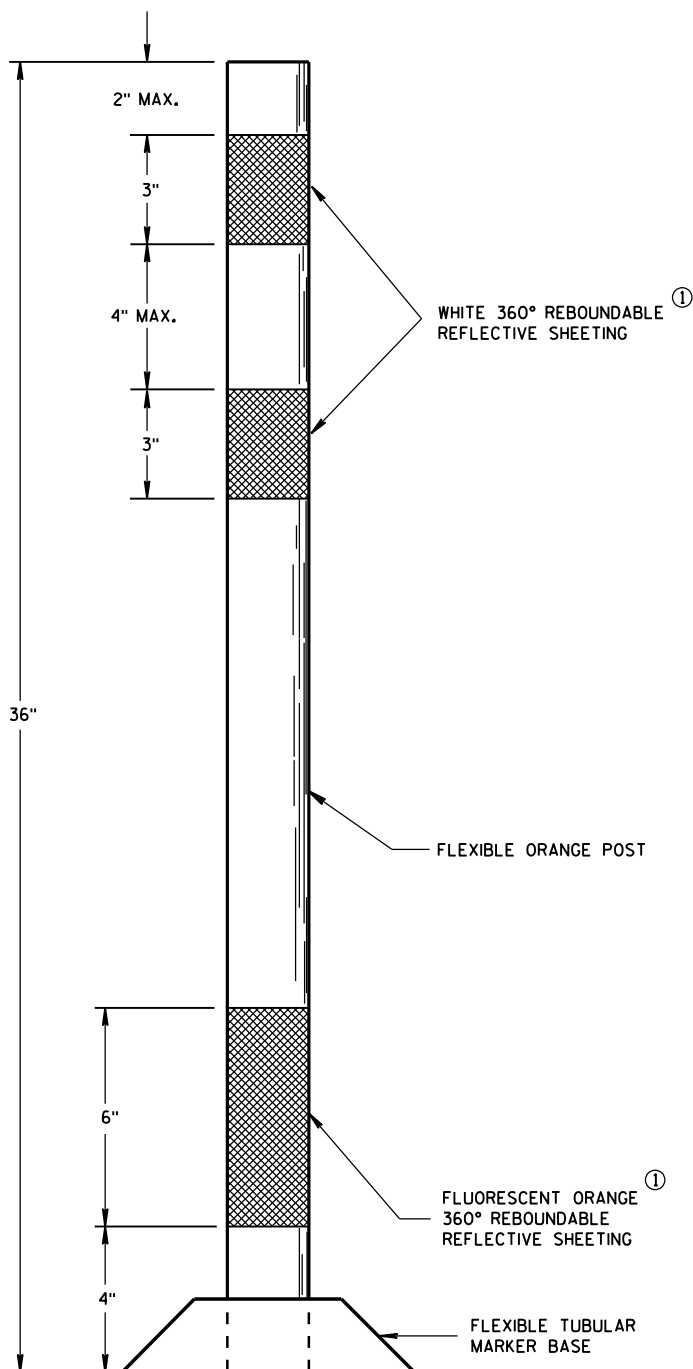
TWO WAY LEFT TURN LANE

- L = LENGTH OF TURN BAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

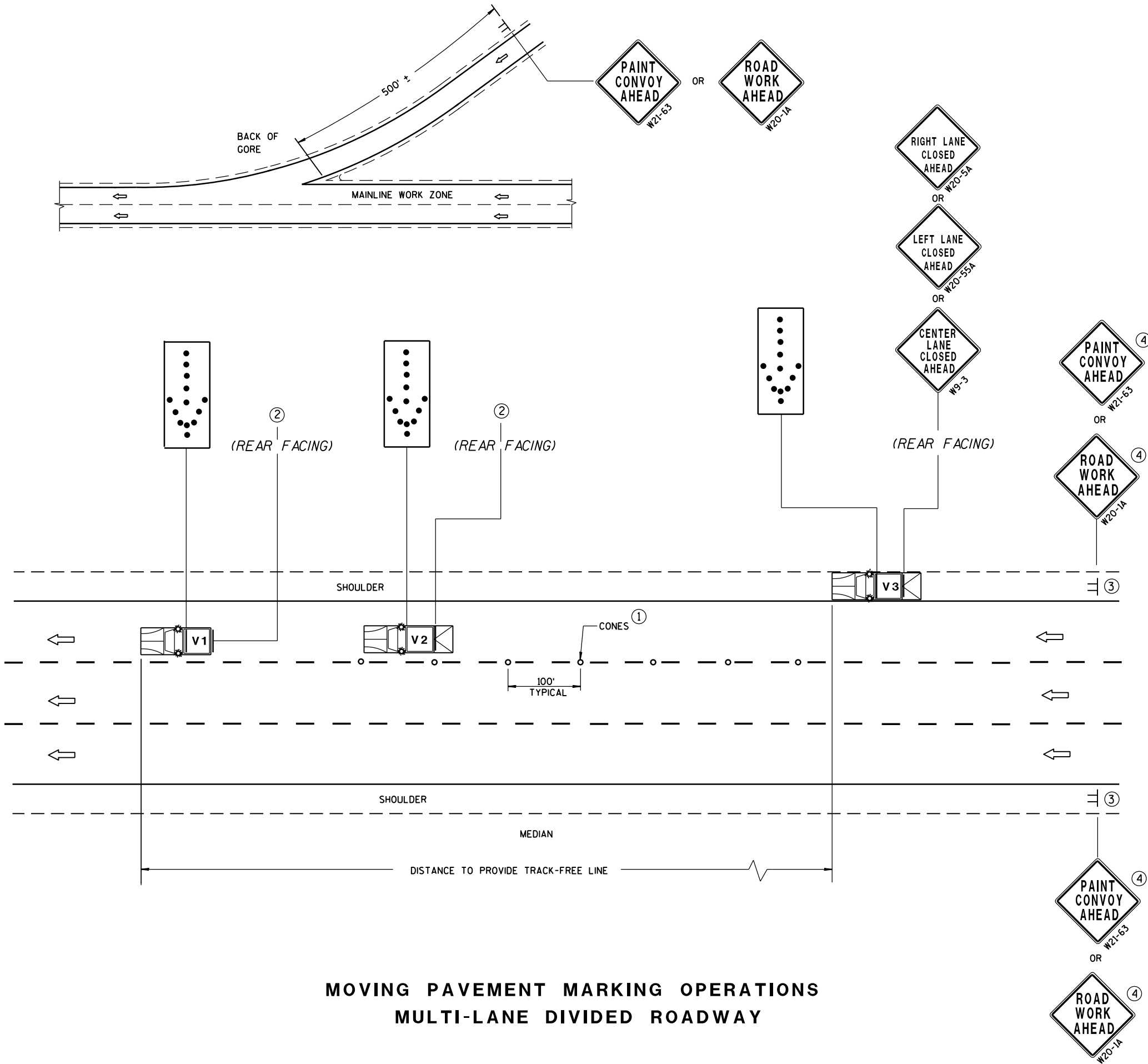
GENERAL NOTES

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

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



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.
- ③ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.
- ④ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

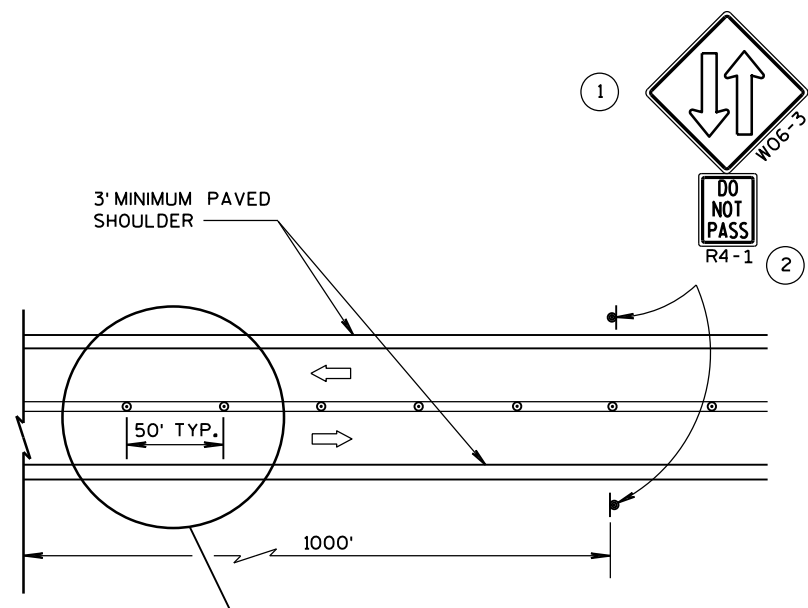
LEGEND

- V1 LEAD VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE WITH TMA
- TMA TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (MERGE)

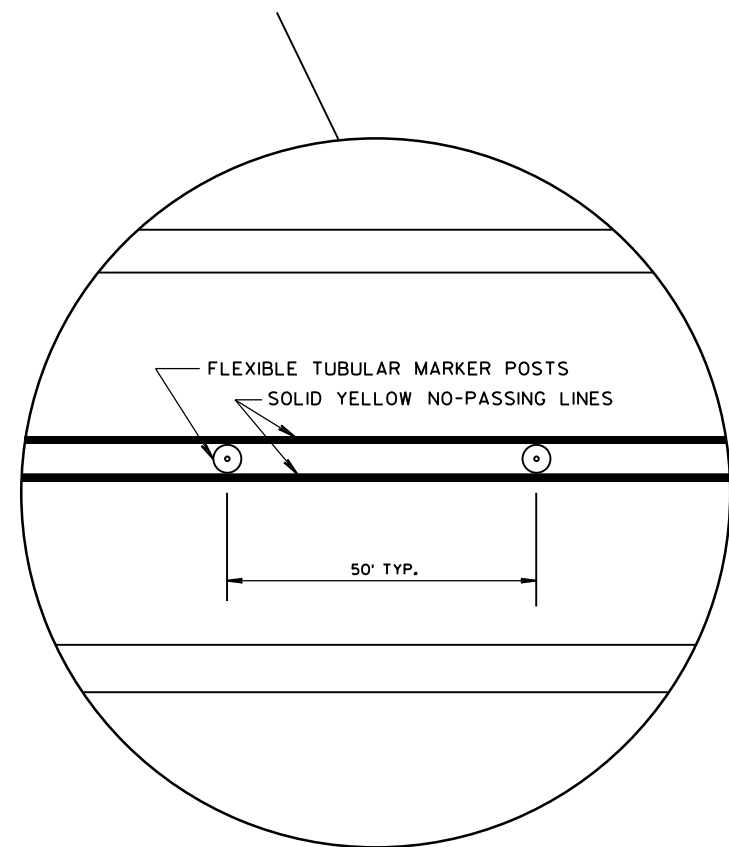
MOVING PAVEMENT MARKING
OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



TWO LANE, TWO WAY OPERATION



LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊙ DELINEATOR FLEXIBLE/TUBULAR MARKER
- ➡ DIRECTION OF TRAFFIC

GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERS NOTED.

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

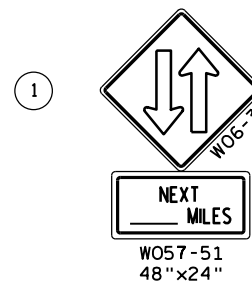
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

A SINGLE ROW OF FLEXIBLE TUBULAR MARKERS ON CENTERLINE EXTEND FOR THE ENTIRE LENGTH OF TWO-WAY TRAFFIC AT 50-FOOT SPACING.

COVER EXISTING CENTERLINE STRIPE WITH TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW.



THE WO6-3 WITH THE WO57-51 SHALL BE LOCATED 200 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND/OR 500 FEET BEYOND ANY SIDEROAD. THE WO6-3 WITH THE R4-1 SHALL BE LOCATED 1000 FEET BEYOND THE WO6-3 AND THE WO57-51 AND THE SIGNS SHALL BE ALTERNATED WITH ONE MILE INTERVALS BETWEEN WO6-3 SIGNS.

CONVENTIONAL: 24"x30"
FREEWAY AND EXPRESSWAY: 36"x48"







TRAFFIC CONTROL,
TWO LANE TWO
WAY OPERATION

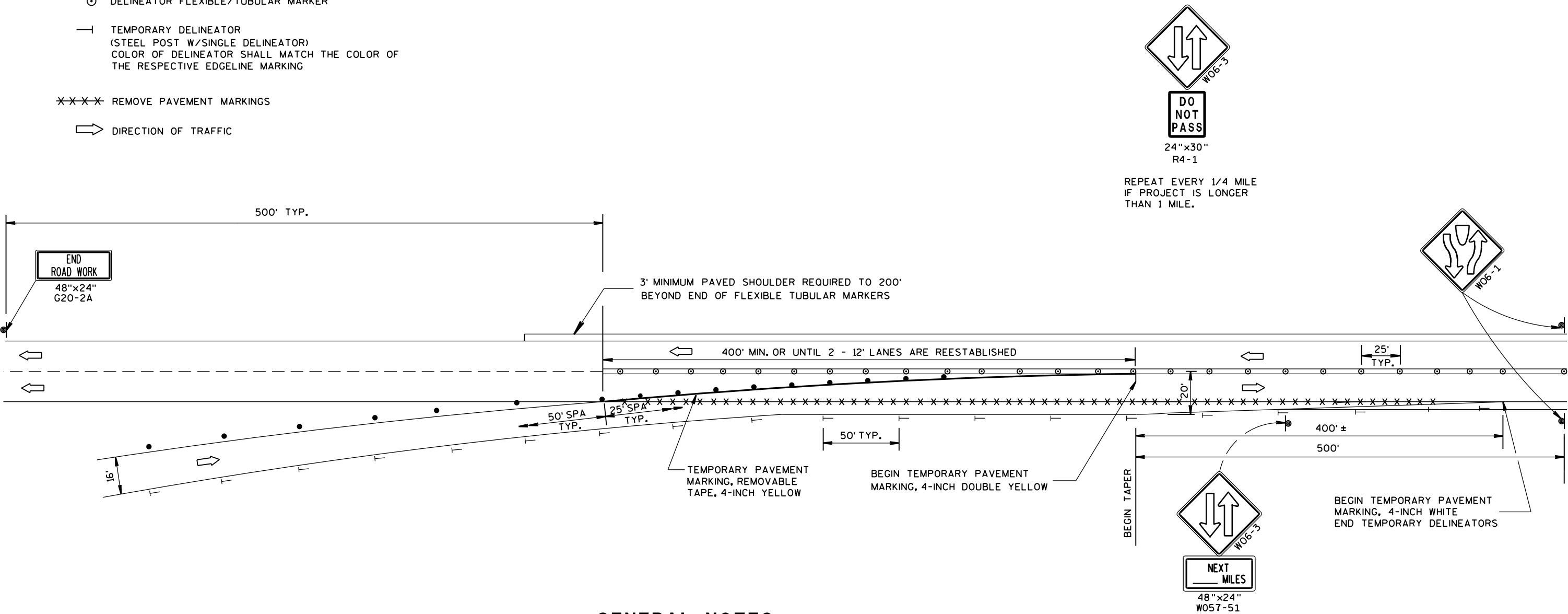
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DELINEATOR FLEXIBLE/TUBULAR MARKER
-  TEMPORARY DELINEATOR
(STEEL POST W/SINGLE DELINEATOR)
COLOR OF DELINEATOR SHALL MATCH THE COLOR OF
THE RESPECTIVE EDGE LINE MARKING
-  REMOVE PAVEMENT MARKINGS
-  DIRECTION OF TRAFFIC



GENERAL NOTES

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" 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.

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

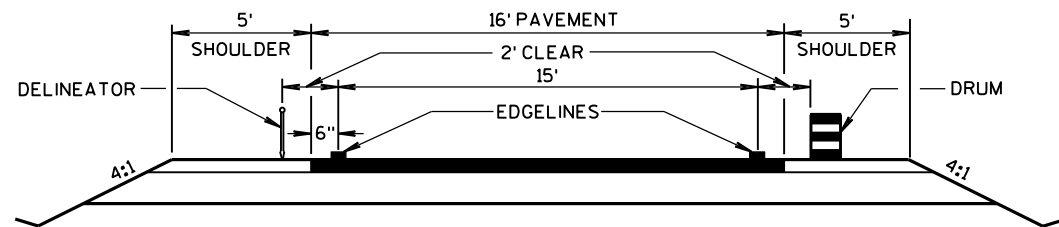
THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER.

TRAFFIC CONTROL,
SINGLE LANE CROSSOVER EXIT

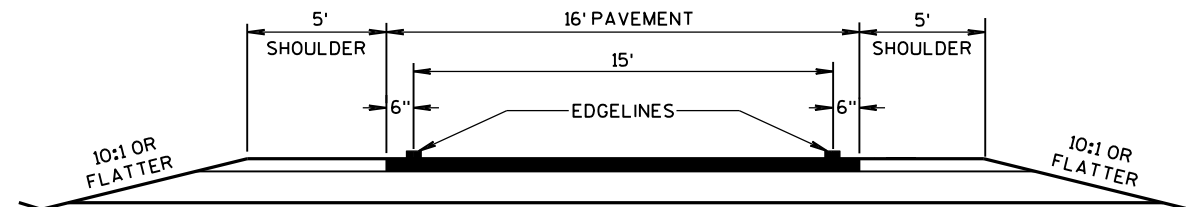
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 DATE /S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN
FHWA



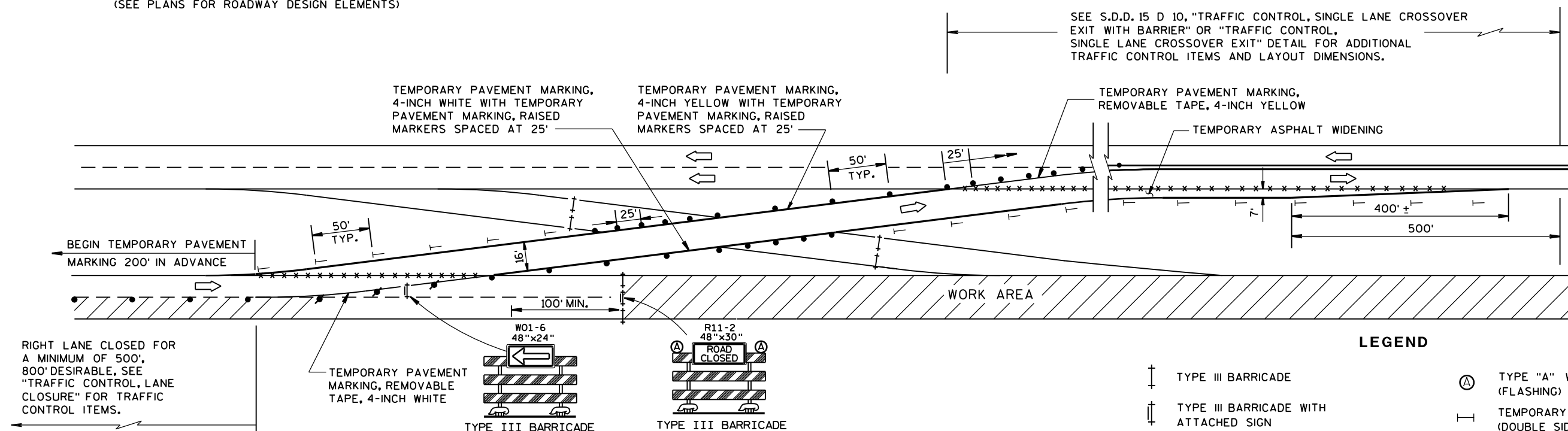
TYPICAL TEMPORARY CROSSOVER ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



TYPICAL CROSSOVER TO REMAIN IN PLACE ROADWAY DIMENSIONS

(SEE PLANS FOR ROADWAY DESIGN ELEMENTS)



RIGHT LANE CLOSED FOR A MINIMUM OF 500', 800' DESIRABLE, SEE "TRAFFIC CONTROL, LANE CLOSURE" FOR TRAFFIC CONTROL ITEMS.

TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE, 4-INCH WHITE

TYPE III BARRICADE

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TEMPORARY DELINEATOR (STEEL POST W/SINGLE DELINEATOR) COLOR OF DELINEATOR SHALL MATCH THE COLOR OF THE RESPECTIVE EDGELINE MARKING
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR (DOUBLE SIDED)
- REMOVING PAVEMENT MARKINGS
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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 PROPOSED SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) DISTANCE TO EXISTING SIGNS.

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE SHALL BE USED WHEN CROSSING PERMANENT ROADWAY SURFACES THAT WILL REMAIN AFTER USE OF CROSSOVER AND TEMPORARY PAVEMENT MARKING WHERE USED.

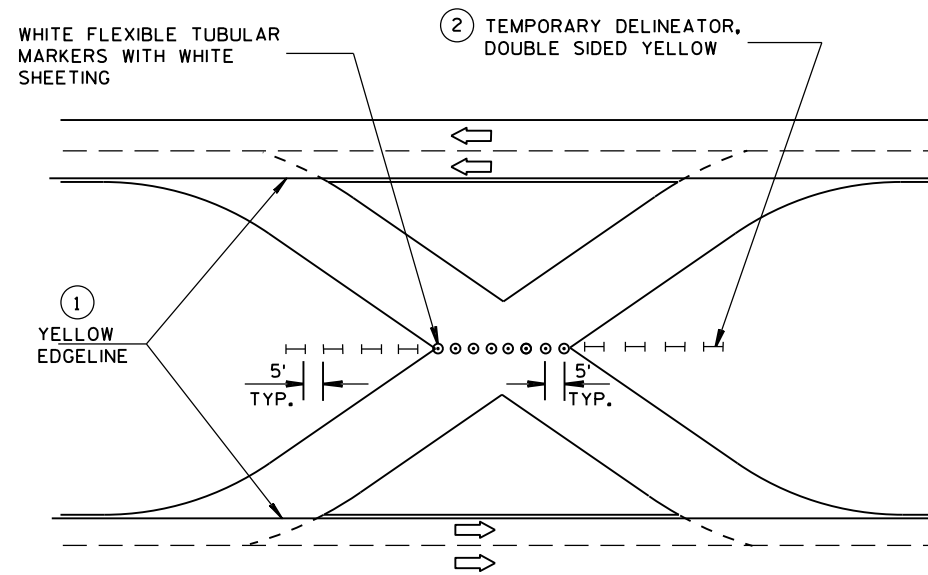
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" 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.

REVERSE DEVICES WHEN OTHER LEG OF CROSSOVER IS IN USE.

- FOR PERMANENT CROSSOVER, PAVEMENT MARKING SHOULD CONFORM TO SECTION 646 OF THE STANDARD SPECIFICATIONS.
- FOR PERMANENT CROSSOVER, INSTALL PERMANENT DELINEATORS ACCORDING TO SECTION 633 OF THE STANDARD SPECIFICATIONS.



TRAFFIC CONTROL FOR CROSSOVER THAT IS NOT IN USE

TRAFFIC CONTROL, SINGLE LANE CROSSOVER

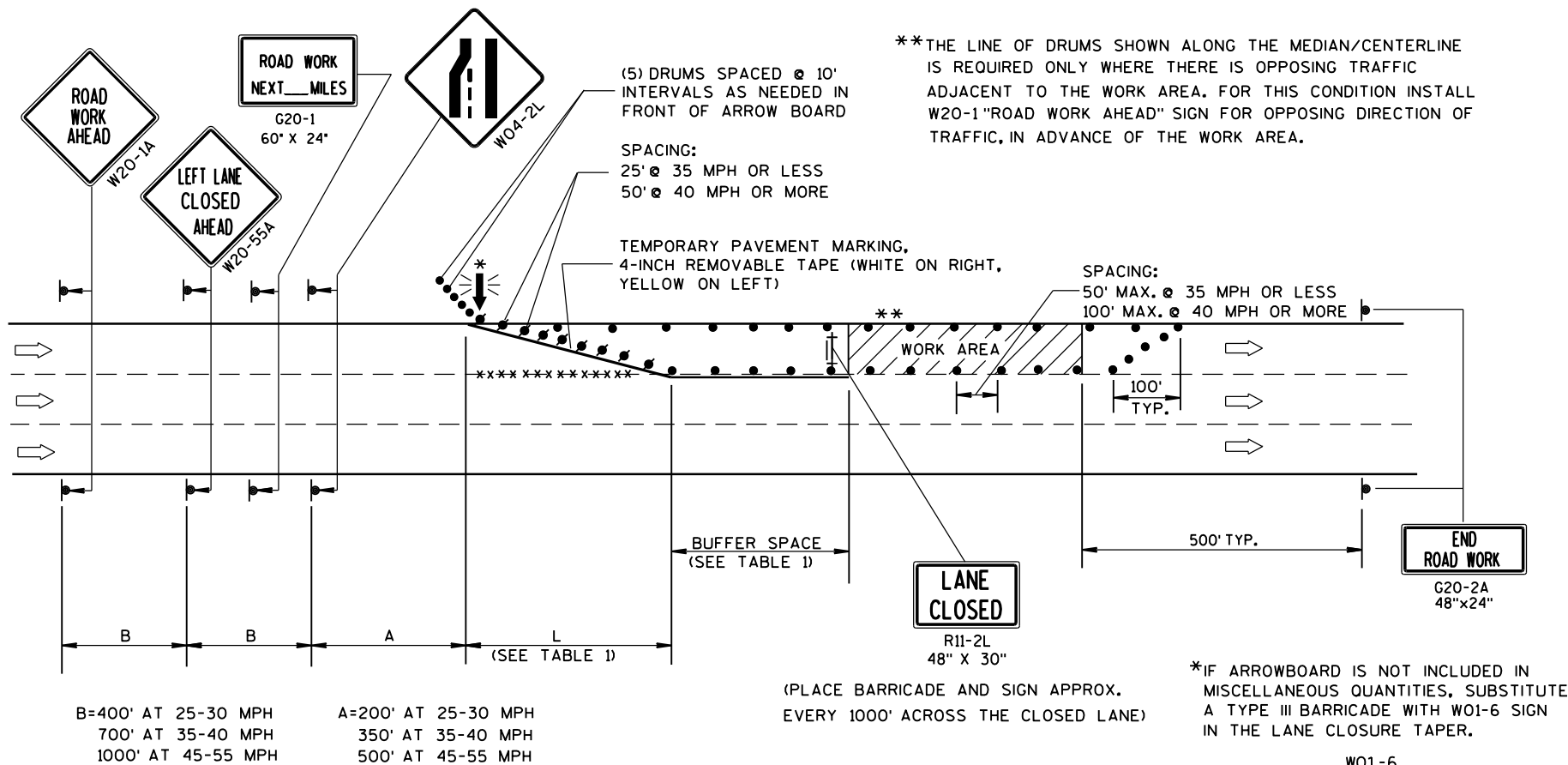
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10-16-2015
DATE

FHWA

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



GENERAL NOTES

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.

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

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.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

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

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

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

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

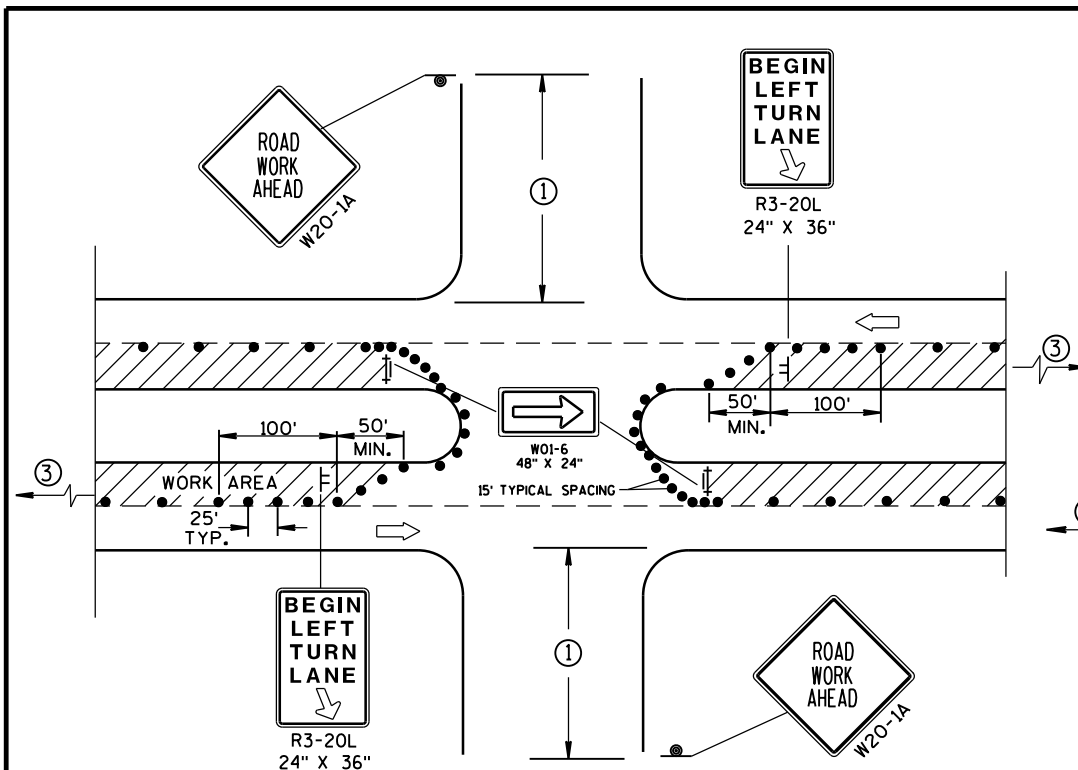
LEGEND

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

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

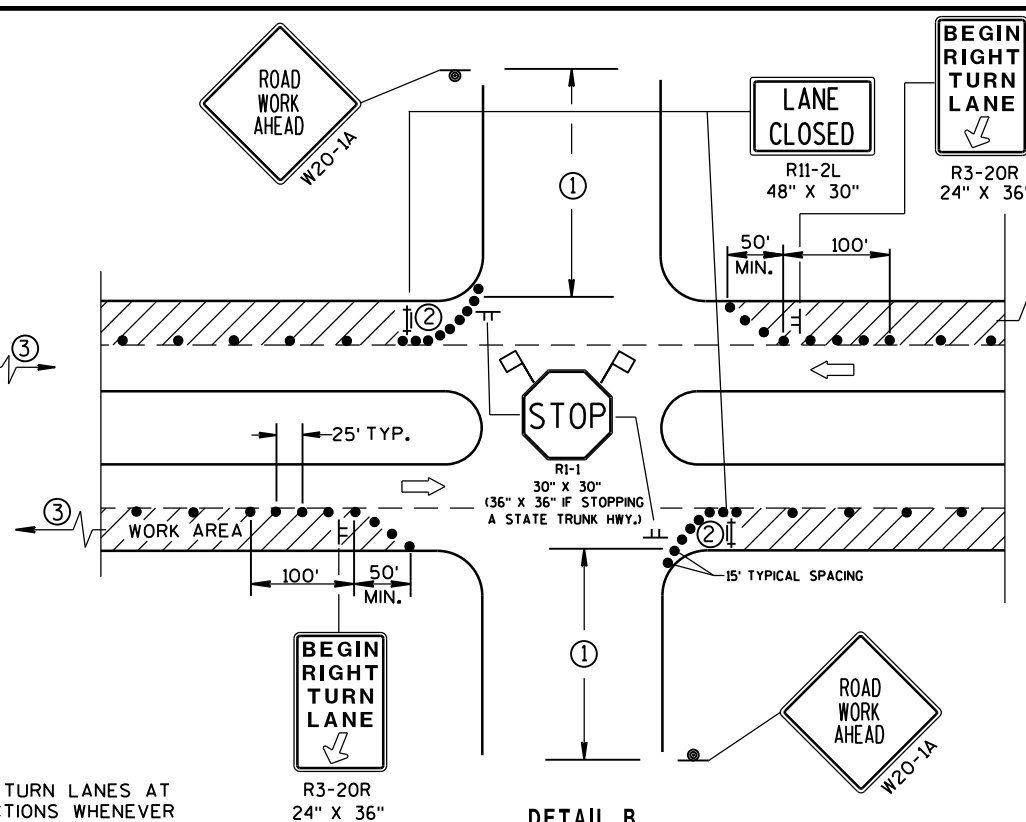
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

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



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

GENERAL NOTES

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 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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 DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

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 PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

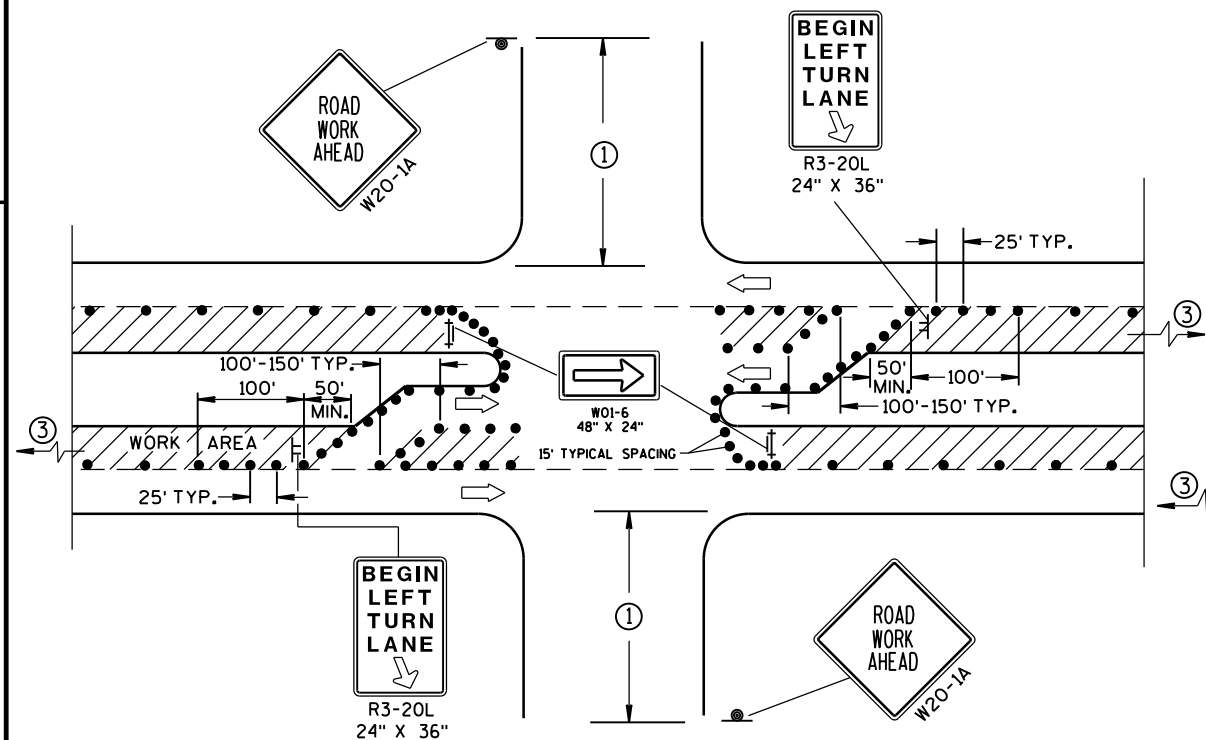
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

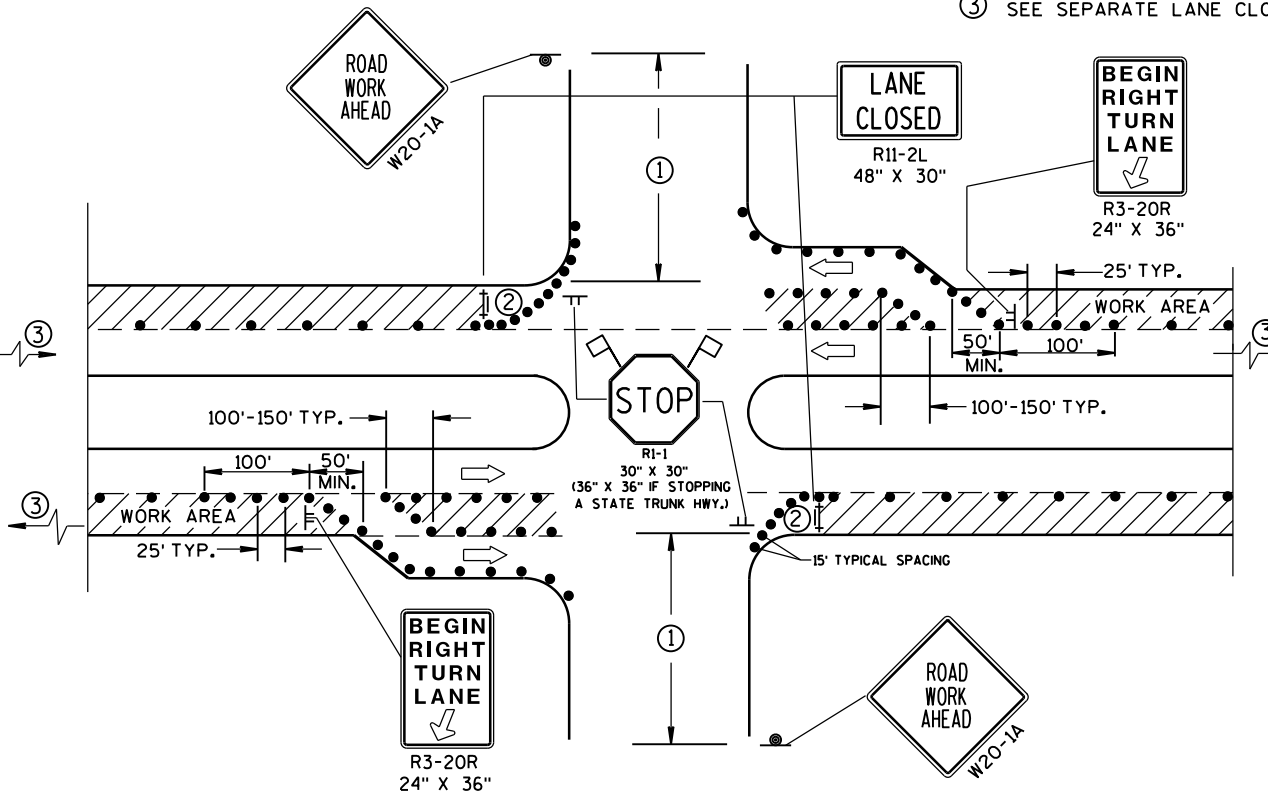
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ⚑ FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA



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



DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

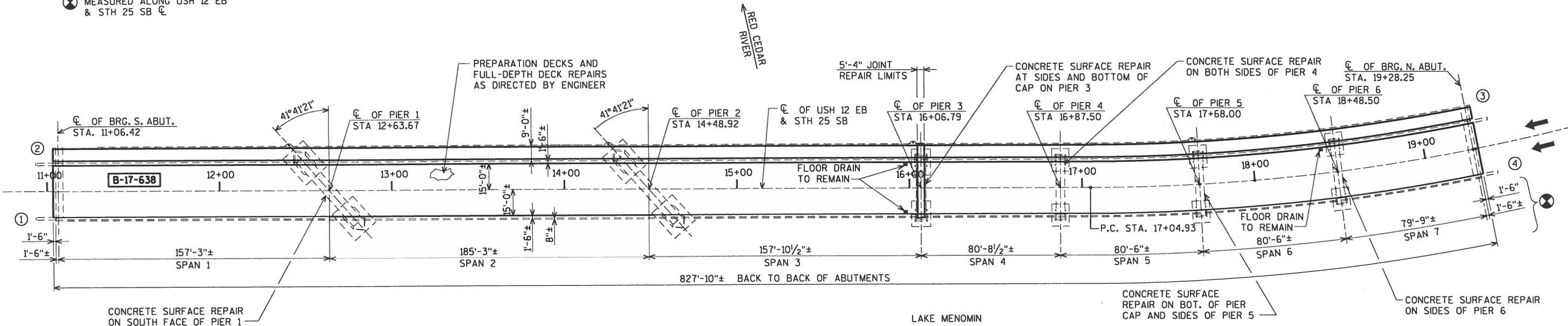
TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

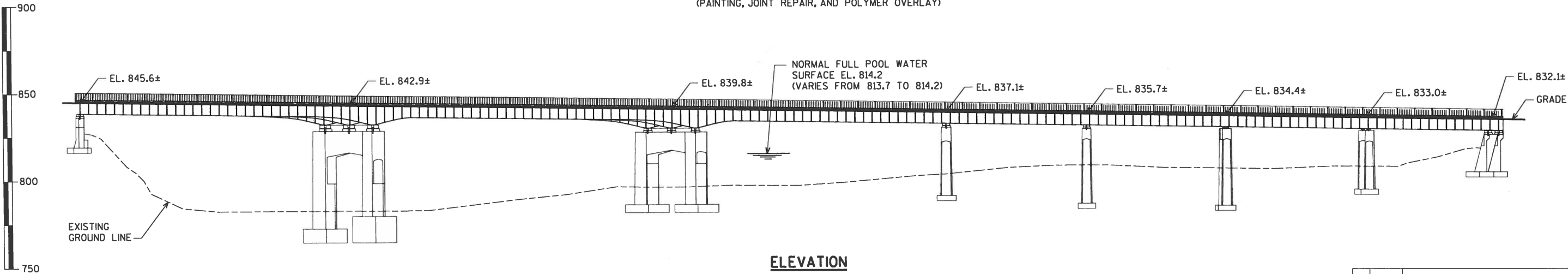
APPROVED
June 2016 /S/ Peter Anakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

○ DENOTES WING NUMBER

⊗ MEASURED ALONG USH 12 EB
& STH 25 SB CL



PLAN
STEEL PLATE GIRDER BRIDGE
(PAINTING, JOINT REPAIR, AND POLYMER OVERLAY)



ELEVATION

CURVE DATA

P.I. STA. 20+18.87
Δ = 30°-38'-00"
D = 4°-59'-54"
T = 313.94'
L = 612.86'
R = 1146.28'
S.E. = 4.2%
P.C. STA. 17+04.93
P.T. STA. 23+17.79

NOTE: ALIGNMENT BASED ON ORIGINAL
STRUCTURE PLANS.

REHABILITATION SCOPE OF WORK

REPAIR EXPANSION JOINT AT PIER 3.

REPAIR DECK AT DELAMINATED AREAS.

REPAIR CONCRETE SURFACES AT ABUTMENTS
AND PIERS.

REPAINT ALL STRUCTURAL STEEL INCLUDING
BEARINGS.

PLACE POLYMER OVERLAY.

CLEAN PARAPETS AND APPLY PIGMENTED
SURFACE SEALER.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HS-20
INVENTORY RATING: HS-20
OPERATING RATING: HS-33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 210 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY DECK PATCHING
& JOINT REPAIR $f'_c = 4,000$ p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT
(GRADE 60) $f_y = 60,000$ p.s.i.

TRAFFIC DATA:

A.D.T. = 22,200 (2018)
A.D.T. = 25,600 (2038)
R.D.S. = 40 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. PIER 3 EXPANSION JOINT DETAILS
4. SIDEWALK PARAPET COVER PLATE JOINT DETAILS
5. OUTSIDE PARAPET JOINT DETAILS



BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY AYRES ASSOCIATES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED <i>William C. Dreher</i> ^{SJR} 02/14/17 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-17-638			
USH 12 EB/STH 25 SB (BROADWAY STREET) OVER RED CEDAR RIVER			
COUNTY	DUNN	TOWN/CITY/VILLAGE	MENOMONIE
DESIGN SPEC.	REHABILITATION	N/A	
DESIGNED BY	CKJ	DESIGN CK'D.	CJM
DRAWN BY	CLS/CKJ	PLANS CK'D.	DNS
GENERAL PLAN			SHEET 1 OF 5

I.D.

DATE:

\$PRJNAME\$ Ut:42-0986.00 - USH 12 Menomone Bridge Rehab-BRIDGE42-0986 gp-f.indl.dgn

CHECKED BY: DATE: BACK CHECKED BY: DATE: CORRECTED BY: DATE:

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTAL
502.3100	EXPANSION DEVICE B-17-638	LS	1
502.3210	PIGMENTED SURFACE SEALER	SY	893
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,210
509.0301	PREPARATION DECKS TYPE 1	SY	140
509.0302	PREPARATION DECKS TYPE 2	SY	60
509.1000	JOINT REPAIR	SY	25
509.1500	CONCRETE SURFACE REPAIR	SF	200
509.2000	FULL DEPTH DECK REPAIR	SY	2
① 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	14
509.5100.S	POLYMER OVERLAY	SY	3,590
509.9050.S	CLEANING PARAPETS	LF	1,690
② 517.0900.S	PREPARATION AND COATING OF TOP FLANGES B-17-638	LS	1
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-17-638	LS	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-17-638	LS	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1
SPV.0035.001	CONCRETE MASONRY DECK PATCHING	CY	17
SPV.0090.001	SAWING PAVEMENT DECK PREPARATION AREAS	LF	1,600

- ① FOR CONCRETE MATERIAL AT JOINT REPAIR AREA
- ② ITEM FOR USE AT TOP FLANGES IN JOINT REPAIR AREA

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

PREPARATION DECKS, CONCRETE SURFACE REPAIR, AND FULL-DEPTH DECK REPAIR SHALL BE AS DETERMINED BY THE ENGINEER IN THE FIELD.

THE COLOR OF THE FINISH EPOXY TOP COAT FOR THE GIRDERS, STRINGERS, FLOOR BEAMS, BEARINGS, AND ALL OTHER MISCELLANEOUS STEEL SHALL BE BROWN (FEDERAL STANDARD COLOR NO. 20059).

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAWCUT.

UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK, UNLESS SPECIFIED OTHERWISE.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE, SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-17-638".

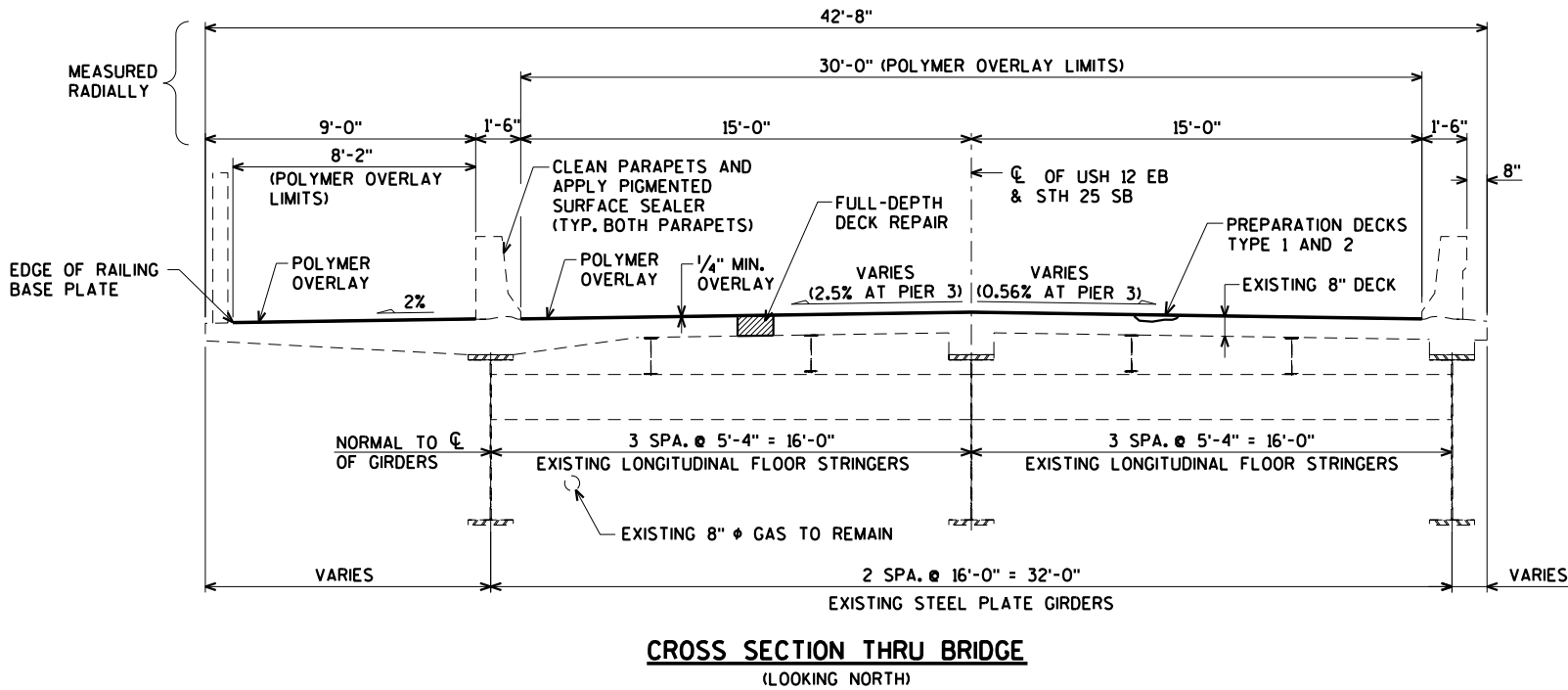
DECK SURFACE PREPARATION IS INCLUDED IN THE BID ITEM "POLYMER OVERLAY".

PREPARATION DECKS TYPE 1 AND TYPE 2 AND FULL DEPTH DECK REPAIRS SHALL BE FILLED WITH "CONCRETE MASONRY DECK PATCHING".

DEFINE LIMITS OF "PREPARATION DECKS TYPE 1", "PREPARATION DECKS TYPE 2", & "FULL DEPTH DECK REPAIR" WITH A 1" DEEP SAWCUT BEFORE REMOVING THE DETERIORATED CONCRETE, THE SAWCUT SHALL BE PAID AS "SAWING PAVEMENT DECK PREPARATION AREAS".

ANY EXCAVATION NECESSARY TO COMPLETE THE OVERLAY AT THE ABUTMENTS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "POLYMER OVERLAY".

CLEAN PARAPETS AND APPLY PIGMENTED SURFACE SEALER TO ALL FACES OF THE WEST PARAPET AND THE TOP AND INSIDE FACES OF THE EAST PARAPET.

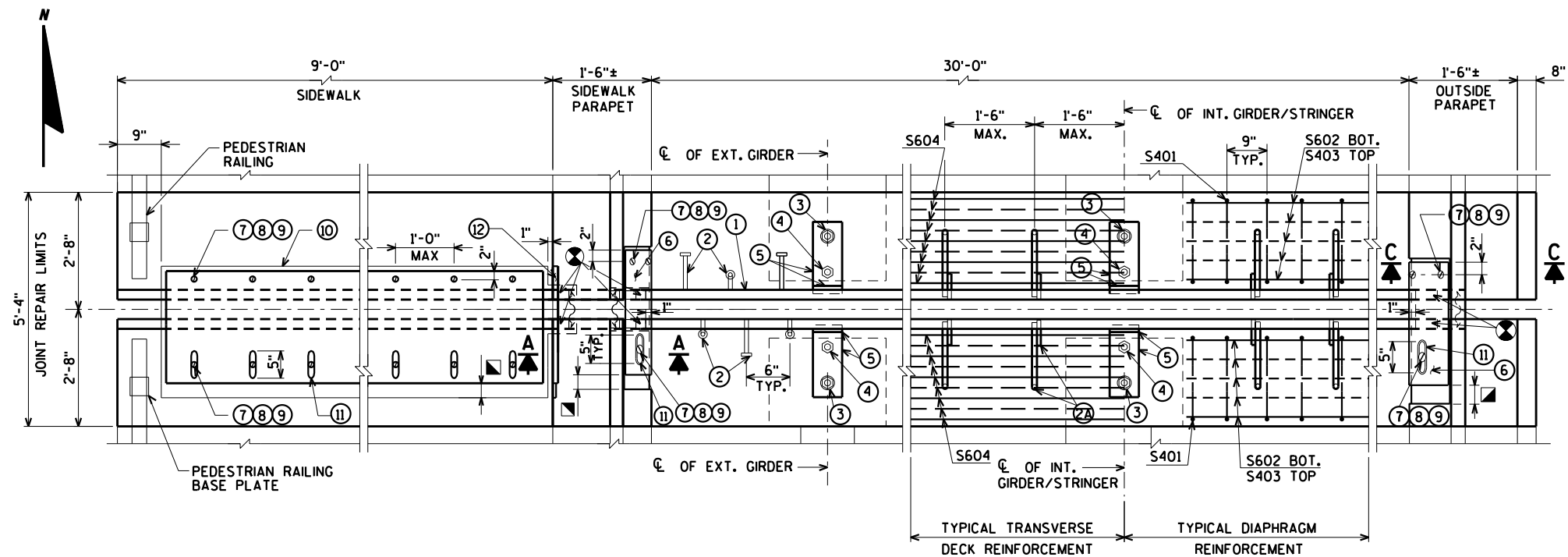


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-17-638			
DRAWN BY CLS/CKJ		PLANS CK'D. DNS	
QUANTITIES AND NOTES			SHEET 2 OF 5

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

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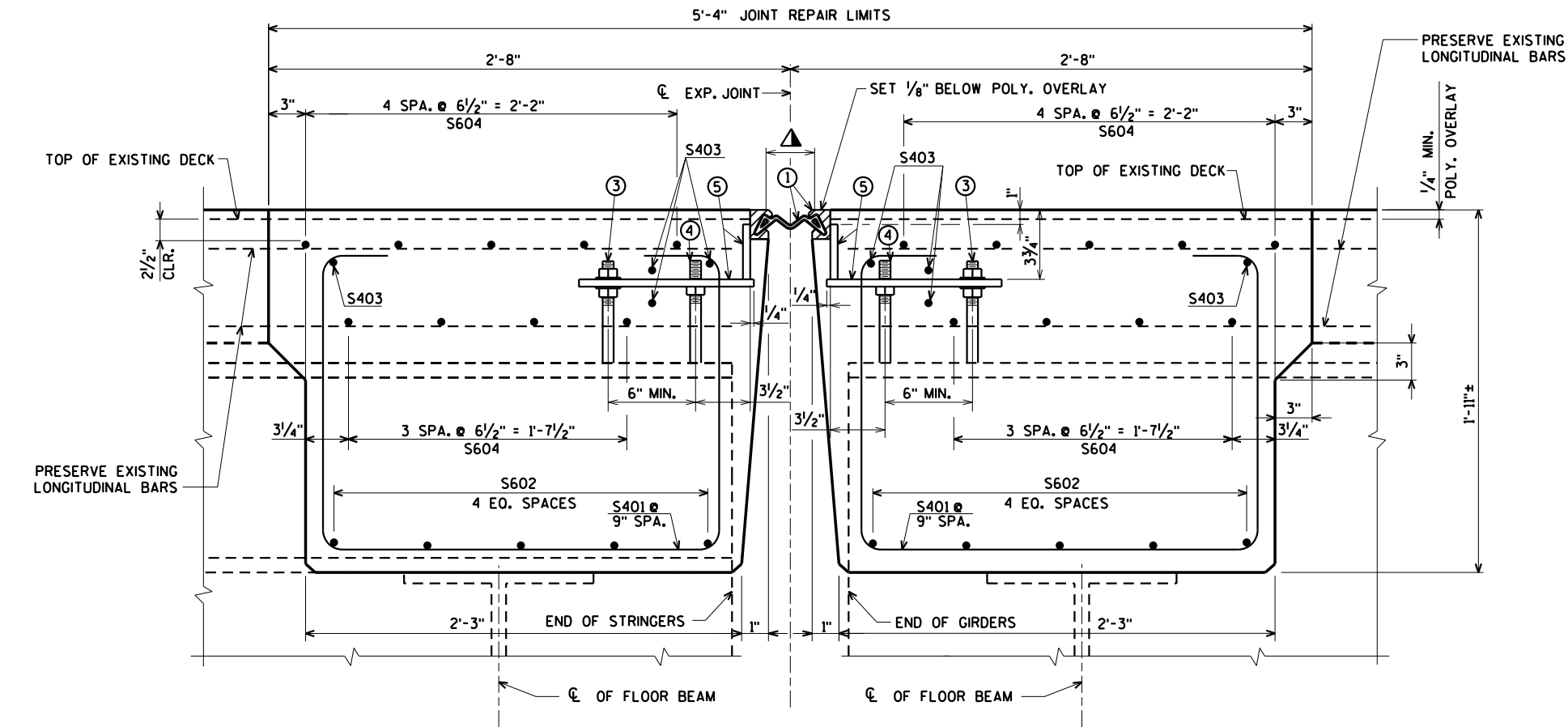
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NOTE: REMOVE AND REINSTALL EXISTING PEDESTRIAN RAILING, INCLUDING ANCHOR BOLTS, AS REQUIRED TO CONSTRUCT NEW JOINT. COST FOR REMOVING AND REINSTALLING PORTIONS OF THE RAILING IS INCIDENTAL TO THE BID ITEM "JOINT REPAIR".

EXT. GIRDER IS SHOWN TO THE RIGHT OF SIDEWALK PARAPET FOR CLARITY.

PART PLAN AT JOINT

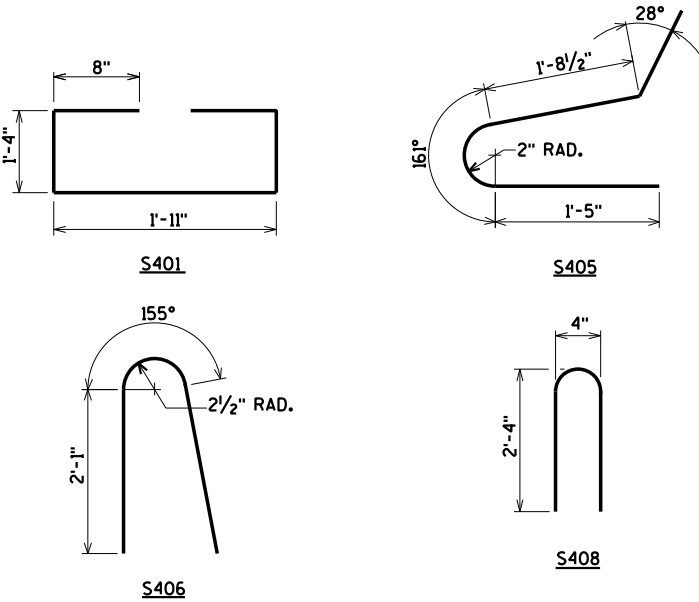


SECTION THRU JOINT
DIMENSIONS ARE NORMAL TO ϕ OF JOINT

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	2,210# COATED
							LOCATION
S401	X	84	5'-7"	X			DIAPH. VERT.
S602	X	60	5'-0"				DIAPH. BOT. HORIZ.
S403	X	48	5'-0"				DIAPH. TOP HORIZ.
S604	X	18	42'-4"				TRANSVERSE TOP AND BOT.
S405	X	16	4'-3"	X			SIDEWALK AND OUTSIDE PARAPET VERT.
S406	X	8	4'-10"	X			SIDEWALK PARAPET VERT.
S507	X	20	2'-3"				SIDEWALK AND OUTSIDE PARAPET HORIZ.
S408	X	8	4'-7"	X			OUTSIDE PARAPET VERT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



TEMPERATURE TABLE

SHADED UNDERSIDE DECK TEMP. (°F)	JOINT OPENING (NORMAL TO JT.)
85°	1 3/4"
75°	1 1/8"
65°	2"
55°	2 1/8"
45°	2 1/4"
35°	2 3/8"
25°	2 1/2"
15°	2 5/8"
5°	2 3/4"

A SMALL JOINT OPENING DUE TO A HIGH TEMPERATURE AT TIME OF CONSTRUCTION MAY REQUIRE NEOPRENE STRIP SEAL INSTALLATION INTO STEEL EXTRUSIONS PRIOR TO SETTING THE EXPANSION JOINT.

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

▣ JOINT OPENING DIMENSION PLUS 1/2".

SEE SHEET 4 FOR SECTION A AND SHEET 5 FOR SECTION C.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-17-638			
DRAWN BY CKJ		PLANS CK'D. DNS	
PIER 3 EXPANSION JOINT DETAILS		SHEET 3 OF 5	

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Eau Claire, WI 54701
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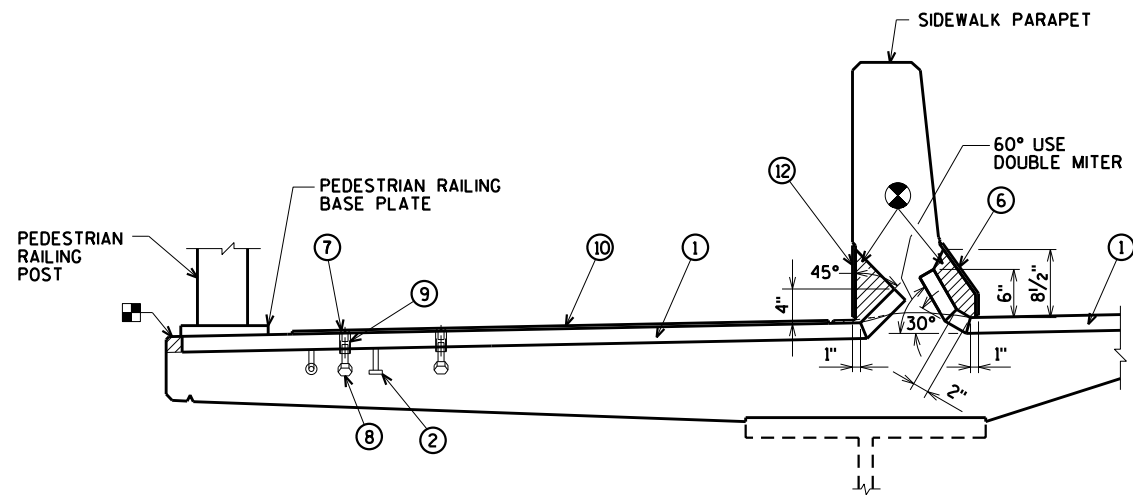
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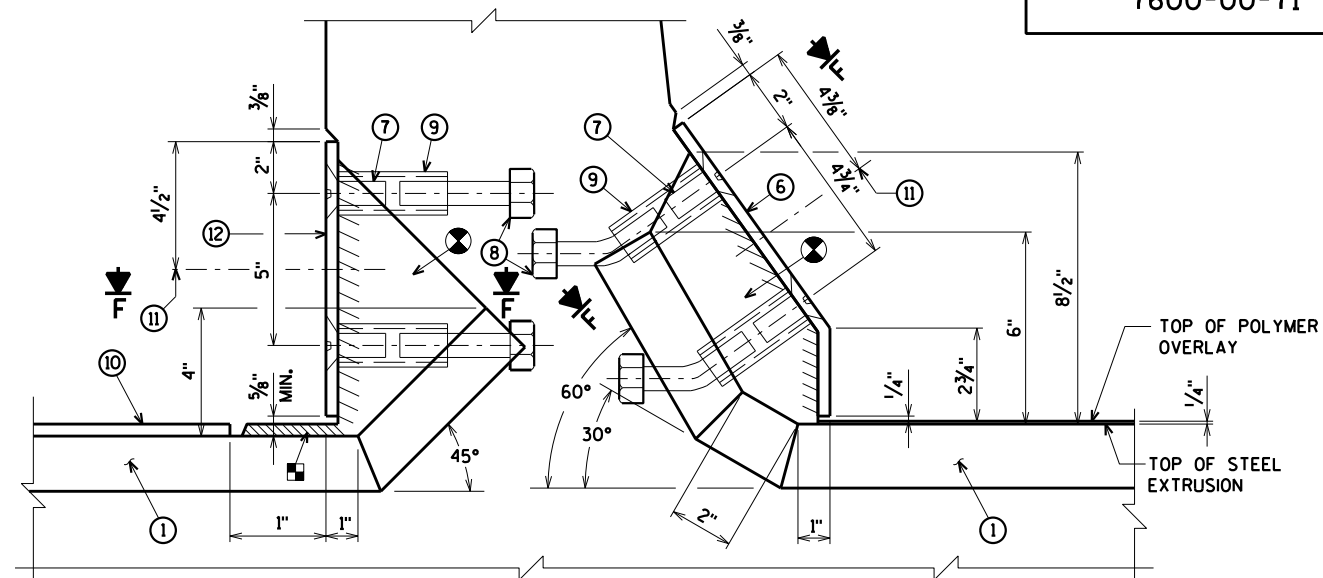
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STATE PROJECT NUMBER

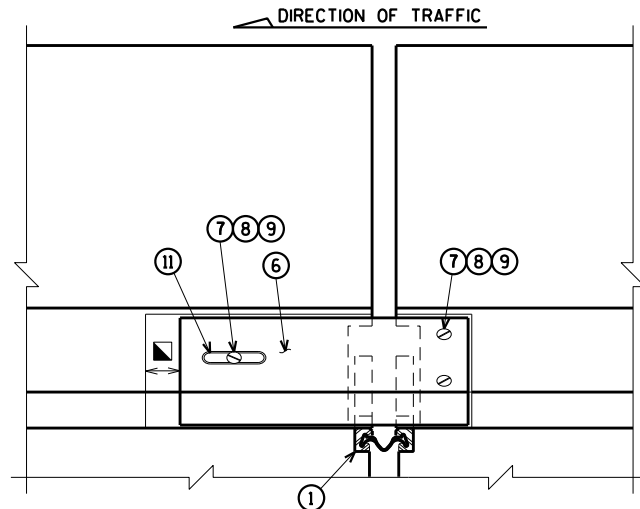
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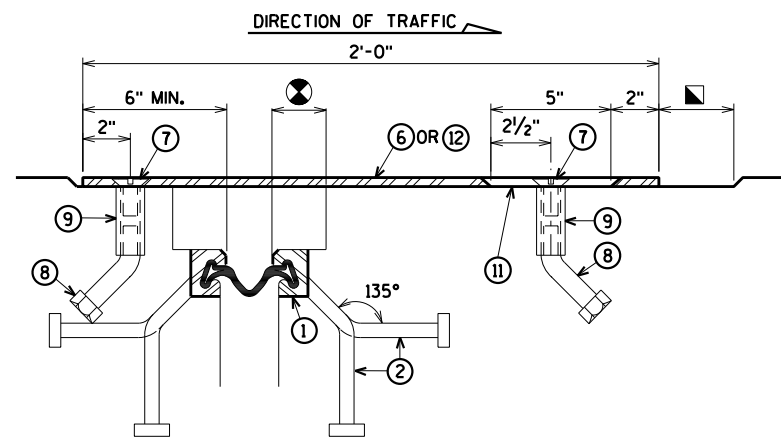
SECTION AT SIDEWALK



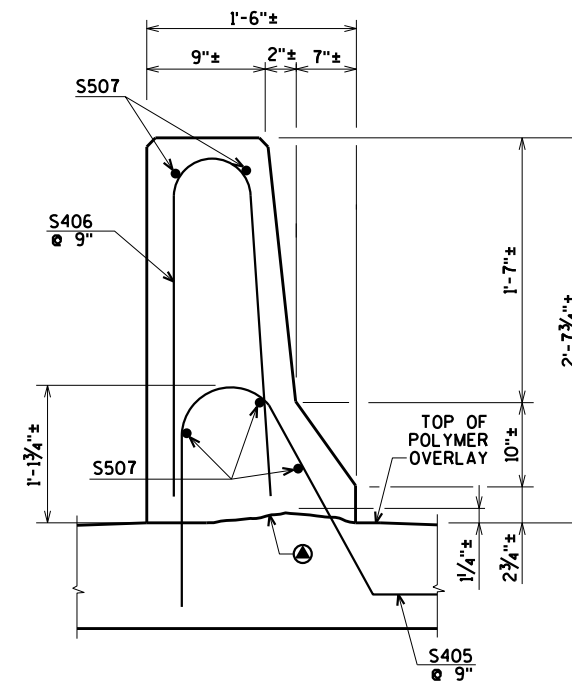
SECTION A
SIDEWALK PARAPET
SEE SHEET 3 FOR LOCATION OF SECTION A.



VIEW OF PARAPET PLATES FROM ROADWAY
SIDEWALK PARAPET

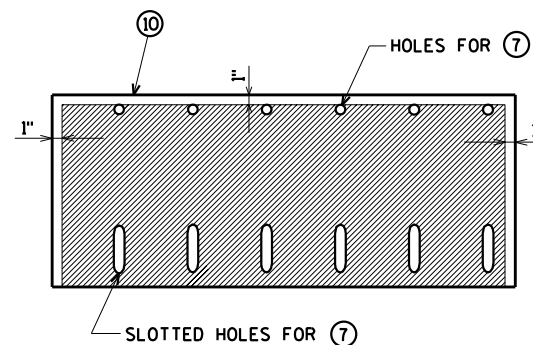


SECTION F



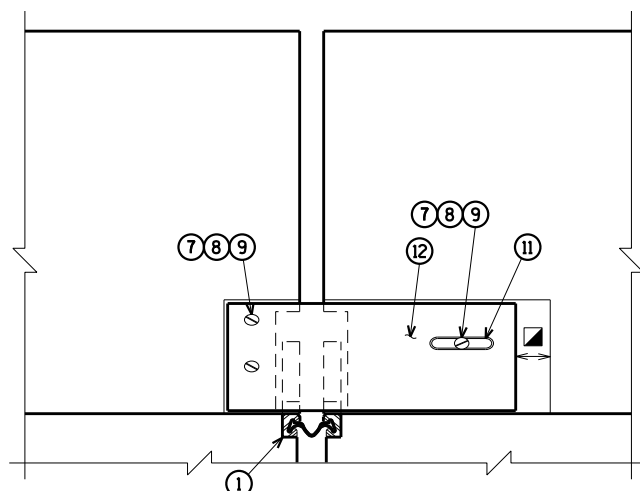
TYPICAL SIDEWALK PARAPET

⊗ CONST. JOINT - STRIKE OFF
AS SHOWN AND LEAVE ROUGH



PLAN OF SIDEWALK COVER PLATE
WITH SLIP-RESISTANT SURFACE
PLACE SLIP-RESISTANT SURFACE ON TOP WALKING SURFACE
IN SHADED AREA ONLY.

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- ⊠ JOINT OPENING DIMENSION PLUS 1/2".
- BLOCK OUT CONCRETE ABOVE AND AT END OF EXTRUSIONS.



VIEW OF PARAPET PLATES FROM SIDEWALK
SIDEWALK PARAPET

8

8

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STRUCTURE B-17-638			
DRAWN BY CKJ		PLANS CK'D. DNS	
SIDEWALK PARAPET COVER PLATE JOINT DETAILS			SHEET 4 OF 5

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LEGEND

- ▲ ① NEOPRENE STRIP SEAL (4 - INCH) AND STEEL EXTRUSIONS.
- ② STUDS $\frac{5}{8}$ " ϕ X $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS AND BEND AS SHOWN AFTER WELDING.
- 2A $\frac{1}{2}$ " THICK ANCHOR PLATE WITH $\frac{5}{8}$ " ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO NO.1 AT 1'-6" CENTERS BETWEEN GIRDERS.
- ③ $\frac{3}{4}$ " ϕ THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE.
- ④ $\frac{3}{4}$ " ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO.5.
- ⑤ FABRICATE SUPPORT FROM 3" X $\frac{1}{2}$ " BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. SHOP OR FIELD WELD TO NO.1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE $1\frac{1}{2}$ " ϕ HOLE FOR NO.3 AND 1" ϕ HOLE FOR NO.4.
- ⑥ GALVANIZED PLATE $\frac{3}{8}$ " X $10\frac{1}{2}$ " X 2'-2" LONG WITH HOLES FOR NO.7. BEND AS SHOWN.
- ⑦ $\frac{3}{4}$ " ϕ X $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS $\frac{1}{16}$ " BELOW PLATE SURFACE.
- ⑧ $\frac{3}{4}$ " ϕ X 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
- ⑨ $\frac{3}{4}$ " ϕ X $2\frac{1}{4}$ " GALVANIZED THREADED COUPLING.
- ⑩ SIDEWALK COVER PLATE $\frac{3}{8}$ " X 2'-0" X LIMITS SHOWN WITH HOLES FOR NO.7. GALVANIZE PLATE AFTER SLIP-RESISTANT SURFACE IS APPLIED.
- ⑪ 1" X 5" SLOTTED COUNTERSUNK HOLE FOR NO.7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.
- ⑫ GALVANIZED PLATE $\frac{3}{8}$ " X $10\frac{1}{2}$ " X 2'-2" LONG WITH HOLES FOR NO.7.

NOTES

ONE FIELD SPlice PERMITTED IN STEEL EXTRUSIONS, UNLESS MORE ARE REQUIRED FOR STAGED CONSTRUCTION, HANDLING, OR GALVANIZING REQUIREMENTS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPlicing PERMITTED IN NEOPRENE STRIP SEAL.

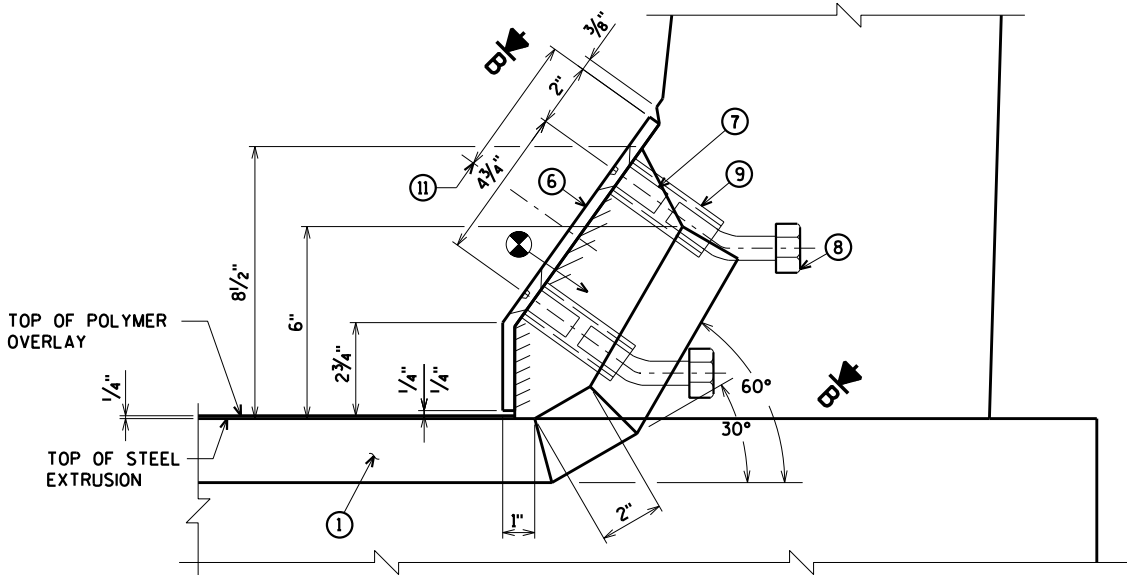
AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST AND SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN AND SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES, SUPPORTS AND EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED. SLIP-RESISTANT SURFACE IS APPLIED TO SIDEWALK COVER PLATES BY THE MANUFACTURER AND THEN HOT DIPPED GALVANIZED TO THEIR RECOMMENDATIONS TO MAINTAIN THE INTEGRITY OF THIS SURFACE.

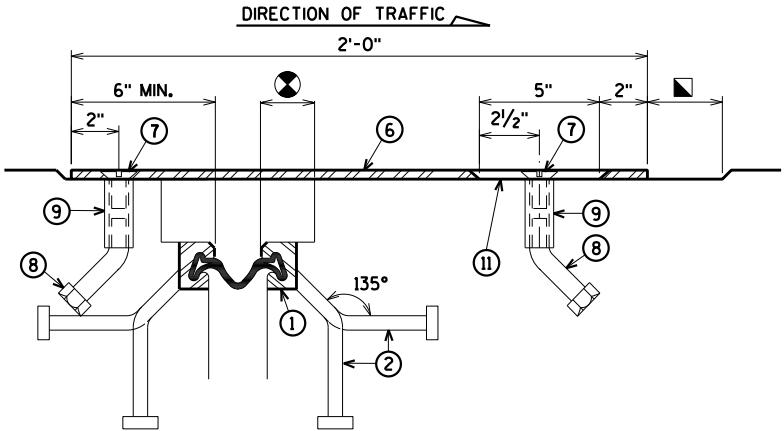
ANCHOR SYSTEM NO.8 AND NO.9 SHALL CONFORM TO ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C AND D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-17-638".

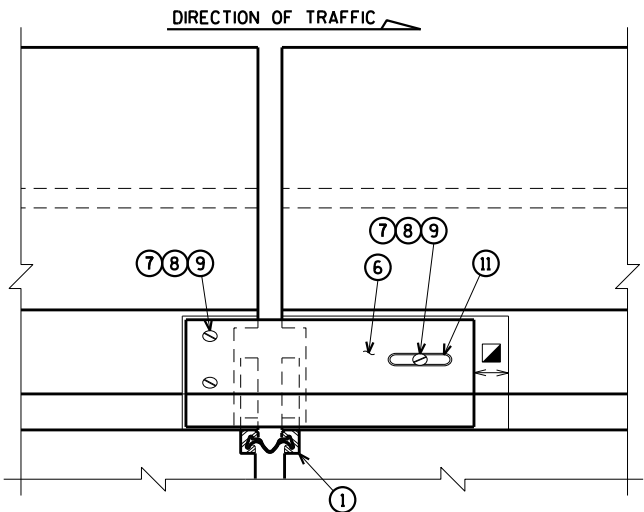


SECTION C

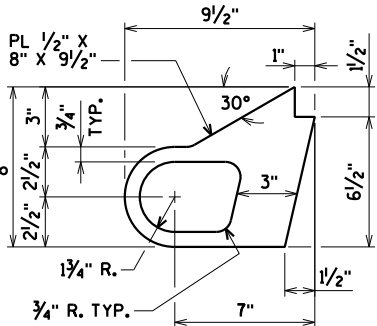
OUTSIDE PARAPET
SEE SHEET 3 FOR LOCATION OF SECTION C.



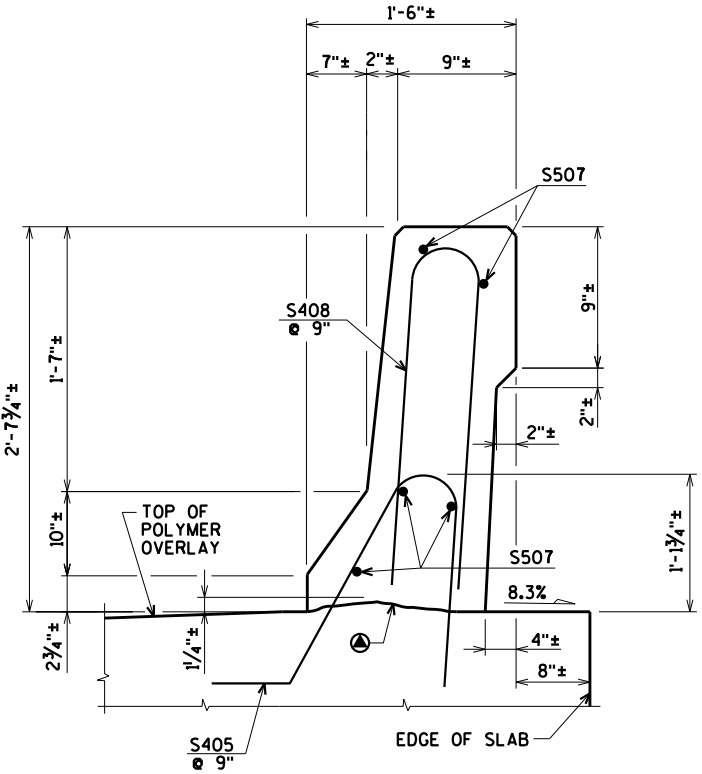
SECTION B



VIEW OF PARAPET PLATES FROM ROADWAY
OUTSIDE PARAPET



ALTERNATE STRIP SEAL ANCHOR



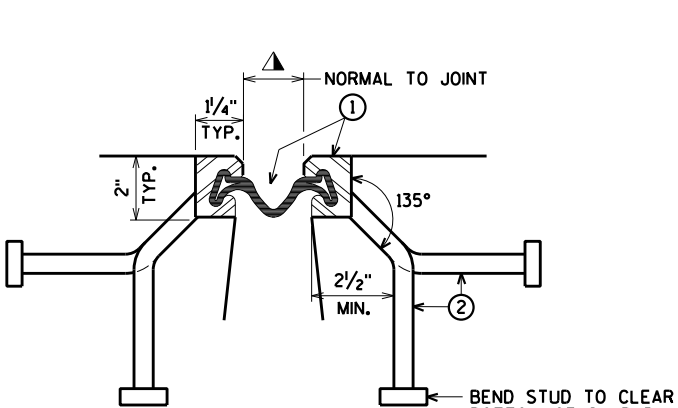
TYPICAL OUTSIDE PARAPET

▲ CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

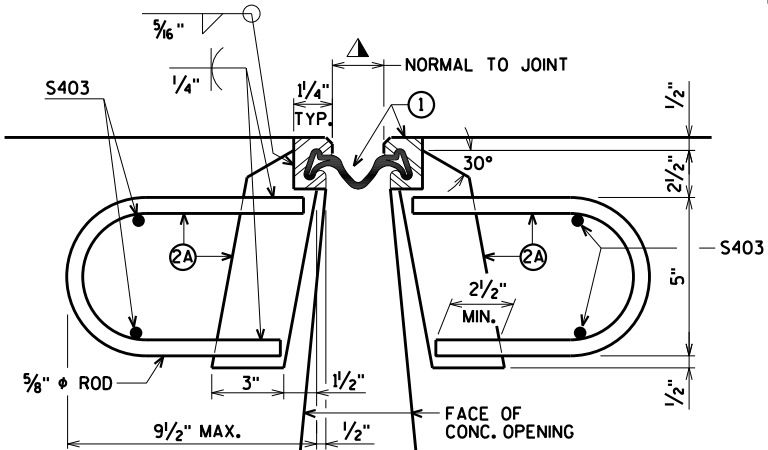
▣ JOINT OPENING DIMENSION PLUS 1/2".

▲ SEE SHEET 3 FOR JOINT OPENING TABLE.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF DECK AND AT PARAPETS



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYM. ABOUT C JOINT UNLESS OTHERWISE SHOWN OR NOTED

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-17-638			
DRAWN BY CKJ		PLANS CK'D. DNS	
OUTSIDE PARAPET JOINT DETAILS			SHEET 5 OF 5

Notes



Wisconsin Department of Transportation

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