

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~~	~~Gross Sections~~

TOTAL SHEETS = 198



DESIGN DESIGNATION

A.A.D.T. (2014)	= 90,100
A.A.D.T. (2034)	= 104,400
D.H.V.	
D.D.	= 60/40
T.	= 12.4%
DESIGN SPEED	= 70 mph
ESALS	

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	---
LOT LINE	- - -
LIMITED HIGHWAY EASEMENT	L---
EXISTING RIGHT OF WAY	---
PROPOSED OR NEW R/W LINE	---
SLOPE INTERCEPT	---
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	---
CULVERT (Profile View)	---
UTILITIES	
ELECTRIC	---
FIBER OPTIC	---
GAS	---
SANITARY SEWER	---
STORM SEWER	---
TELEPHONE	---
WATER	---
UTILITY PEDESTAL	---
POWER POLE	---
TELEPHONE POLE	---

ROCK	---
LABEL	---
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UTILITY CONTACTS

APPLETON AREA SCHOOL DISTRICT

COMMUNICATION
ATTN: DENNIS LAFAVE
C/O MI-TECH SERVICES INC.
1700 INDUSTRIAL DRIVE
GREEN BAY, WI. 54302
CELL: 920-619-9774
EMAIL: dlafave@mi-tech.us

AT&T WISCONSIN

COMMUNICATION
ATTN: GARY LAABS
221 WEST WASHINGTON STREET
APPLETON, WI. 54911
PHONE: 920-735-3063
EMAIL: gl1784@att.com

ATC MANAGEMENT, INC.

ELECTRIC
ATTN: KIM HACKELBERG
801 O'KEEFE ROAD
P.O. BOX 6113
DE PERE, WI. 54115-6113
PHONE: 920-338-6556
EMAIL: khackelberg@atcllc.com

CITY OF NEENAH DEPARTMENT OF PUBLIC WORKS & UTILITIES

SANITARY AND WATER
ATTN: JASON ECKHART
211 WALNUT STREET
NEENAH, WI. 54956
PHONE: 920-209-9454
EMAIL: jeckhart@ci.neenah.wi.us

NSIGHT

COMMUNICATION
ATTN: DENNIS LAFAVE
C/O MI-TECH SERVICES INC.
1700 INDUSTRIAL DRIVE
GREEN BAY, WI. 54302
CELL: 920-619-9774
EMAIL: dlafave@mi-tech.us

NEENAH JOINT SCHOOL DISTRICT

COMMUNICATION
ATTN: ANDREW THORSON
410 SOUTH COMMERCIAL STREET
NEENAH, WI. 54956
PHONE: 920-751-6800 EXT. 200
CELL: 920-209-9629
EMAIL: andrew.thorson@neenah.k12.wi.us

TDS METROCOM

COMMUNICATION
ATTN: STEVE JAKUBIEC
SUITE 218A
10 COLLEGE AVENUE
APPLETON, WI. 54911
PHONE: 920-882-4166
EMAIL: steve.jakubiec@tdstelecom.com

TIME WARNER CABLE

COMMUNICATION
ATTN: VINCE ALBIN
3520 DESTINATION DRIVE
APPLETON, WI. 54915
PHONE: 920-831-9249
CELL: 920-378-0444
EMAIL: vince.albin@twcable.com

TOWN OF MENASHA UTILITY DISTRICT

SEWER & WASTEWATER
ATTN: MARK SCHMITT
2340 AMERICAN DRIVE
NEENAH, WI. 54956
PHONE: 920-720-7100
EMAIL: mschmitt@town-menasha.com

TRANSCANADA

GAS & PETROLEUM
ATTN: MARK BIRSCHBACH
WEST 3925 PIPELINE LANE
EDEN, WI. 53019-1225
PHONE: 920-477-2242
CELL: 920-375-0467
EMAIL: mark.birschbach@transcanada.com

TOWN OF MENASHA UTILITY DISTRICT

WATER
ATTN: JEFF ROTH
2340 AMERICAN DRIVE
NEENAH, WI. 54956
PHONE: 920-720-7175
EMAIL: jroth@town-menasha.com

WE ENERGIES

ELECTRIC
ATTN: STEVE ARMSTRONG
P.O. BOX 1699
APPLETON, WI. 54912
PHONE: 920-380-3563
EMAIL: steven.armstrong@we-energies.com

WE ENERGIES

GAS & PETROLEUM
ATTN: DEBORA ROBINSON
P.O. BOX 1699
APPLETON, WI. 54913
PHONE: 920-380-3493
CELL: 920-450-1056
EMAIL: debora.robinson@we-energies.com

WINDSTREAM KDL, INC.

COMMUNICATION
ATTN: JAMES KOSTUCH
13935 BISHOPS DRIVE
BROOKFIELD, WI. 53005
PHONE: 262-792-7938
EMAIL: james.kostuch@windstream.com

WISCONSIN DEPARTMENT OF TRANSPORTATION RWIS PROGRAM

COMMUNICATION
ATTN: MIKE ADAMS
ROOM 501
P.O. BOX 7986
MADISON, WI. 53707-7986
PHONE: 608-266-5004
EMAIL: michael.adams@dot.wi.gov

WISCONSIN INDEPENDENT NETWORK, LLC

COMMUNICATION
ATTN: JOHN LOUIS
800 WISCONSIN STREET
BUILDING D02, SUITE 219
EAU CLAIRE, WI. 54703
PHONE: 715-838-4012
CELL: 715-864-2918
EMAIL: jlouis@wins.net

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATION, AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- "ARC DEFINITION" CURVE DATA IS SHOWN ON THE PLAN
- NO TREES OR SHRUBS ARE TO REMOVED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

STANDARD ABBREVIATIONS

ASPH.	ASPHALT	N.T.S.	NOT TO SCALE
BM(*)	BENCHMARK	O.C.	ON CENTER
C&G	CURB AND GUTTER	PE	PRIVATE ENTRANCE
CABC	CRUSHED AGGREGATE BASE COURSE	P.L.	PERMANENT LIMITED EASEMENT
CE	COMMERCIAL ENTRANCE	P.L.E.	PROPERTY LINE
CL	CENTERLINE	PROP.	PROPOSED
CL	CLASS	R	RADIUS
CONC.	CONCRETE	R	REFERENCE LINE
CMCP	CORRUGATED METAL CULVERT PIPE	RCCP	REINFORCED CONCRETE CULVERT PIPE
CP(*)	CONTROL POINT	REQ'D	REQUIRED
CP	CULVERT PIPE	RHF	RIGHT HAND FORWARD
C.Y.	CUBIC YARDS	RT	RIGHT
D/W	DRIVEWAY	R/W	RIGHT OF WAY
E.O.R.	END OF RADIUS	SB	SOUTHBOUND
EB	EASTBOUND	SBRL	SOUTHBOUND REFERENCE LINE
EL.	ELEVATION	SE	SUPERELEVATION
EX.	EXISTING	SF	SQUARE FOOT
EXC.	EXCAVATION	SQ. FT.	SQUARE FOOT
FE	FIELD ENTRANCE	SY	SQUARE YARD
F.L.	FLOWLINE	(TYP.)	TYPICAL
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	T.L.E.	TEMPORARY LIMITED EASEMENT
LF	LINEAL FOOT	VAR.	VARIES
LT	LEFT	WB	WESTBOUND
MH	MANHOLE	W/L	WETLAND
MIN.	MINIMUM		
NB	NORTHBOUND		
NBRL	NORTHBOUND REFERENCE LINE		
NOR.	NORMAL		

OUTAGAMIE COUNTY SURVEYOR CONTACT

ATTN: DAVE JOHNSON
LAND INFORMATION
410 S. WALNUT STREET
APPLETON, WI. 54911
PHONE: 920-832-5255
EMAIL: johnsodw@co.outagamie.wi.us

OUTAGAMIE COUNTY SURVEYOR

ATTN: JIM HEBERT
HEBERT ASSOC, INC.
P.O. BOX 1594
1110 W. WISCONSIN AVENUE
APPLETON, WI 54912-1594
PHONE: 920-734-8373
FAX: 920-734-3968
EMAIL: jim@herbertassoc.com

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVE.
GREEN BAY, WI. 54313-6727
ATTN: JAY SCHIEFELBEIN
PHONE: 920-360-3784
EMAIL: Jeremiah.Schiefelbein@wisconsin.gov

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP- TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE- TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 130 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.75 ACRES

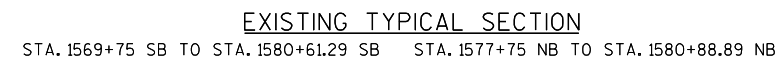
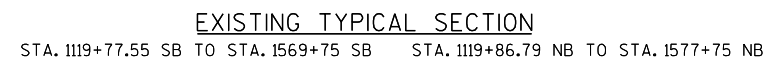


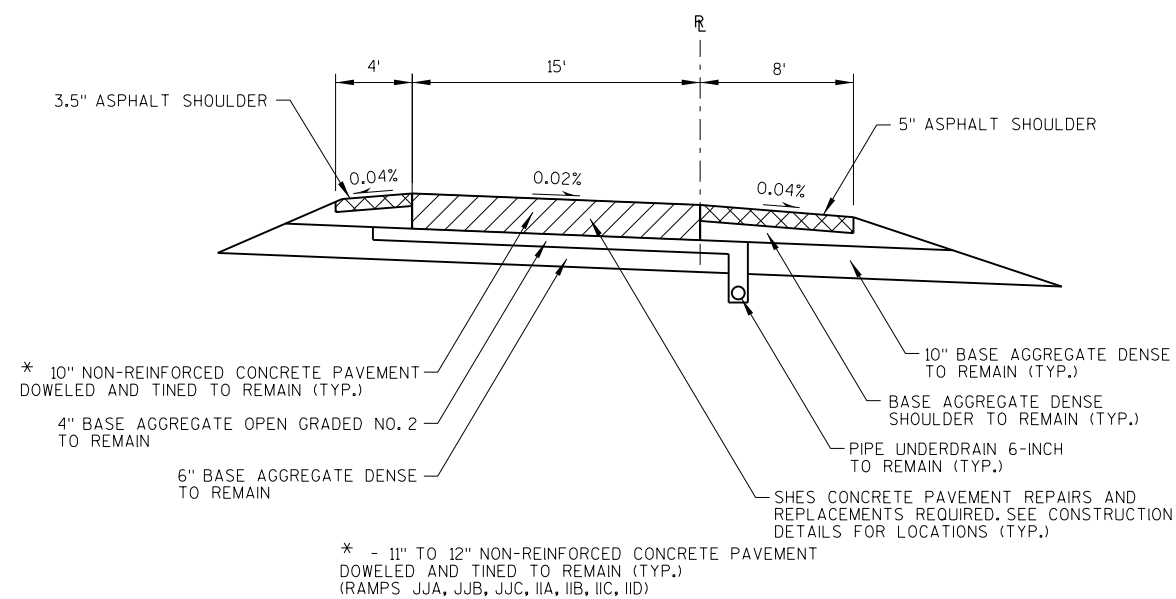
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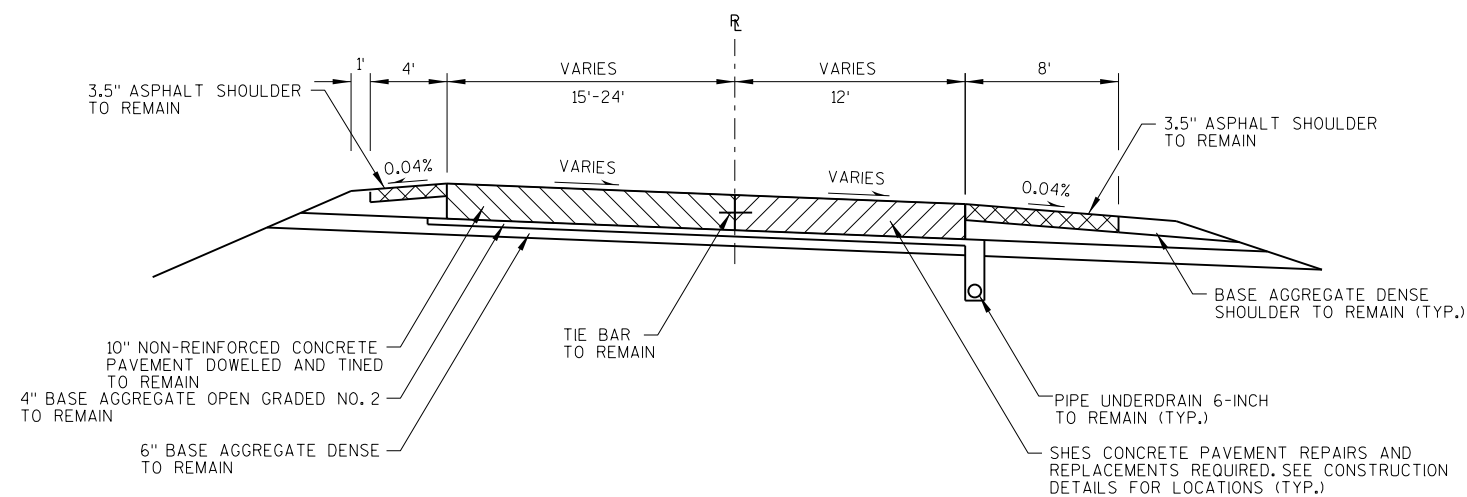
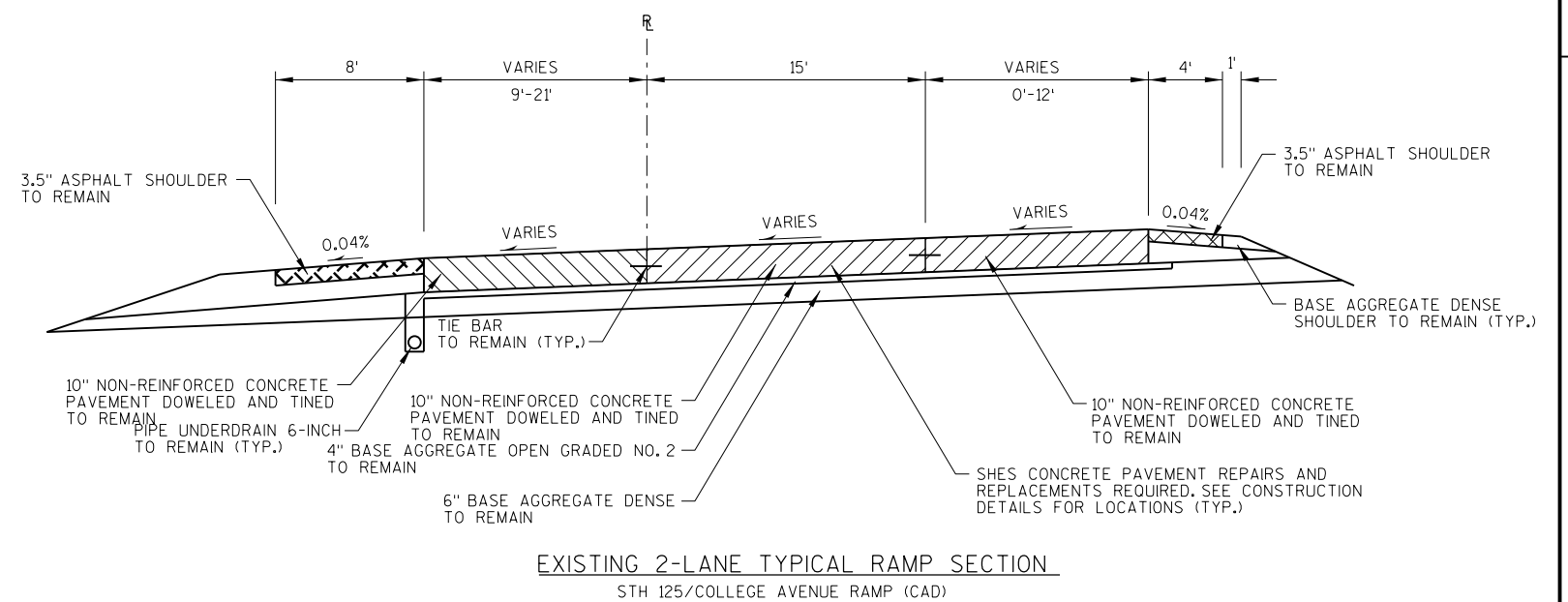
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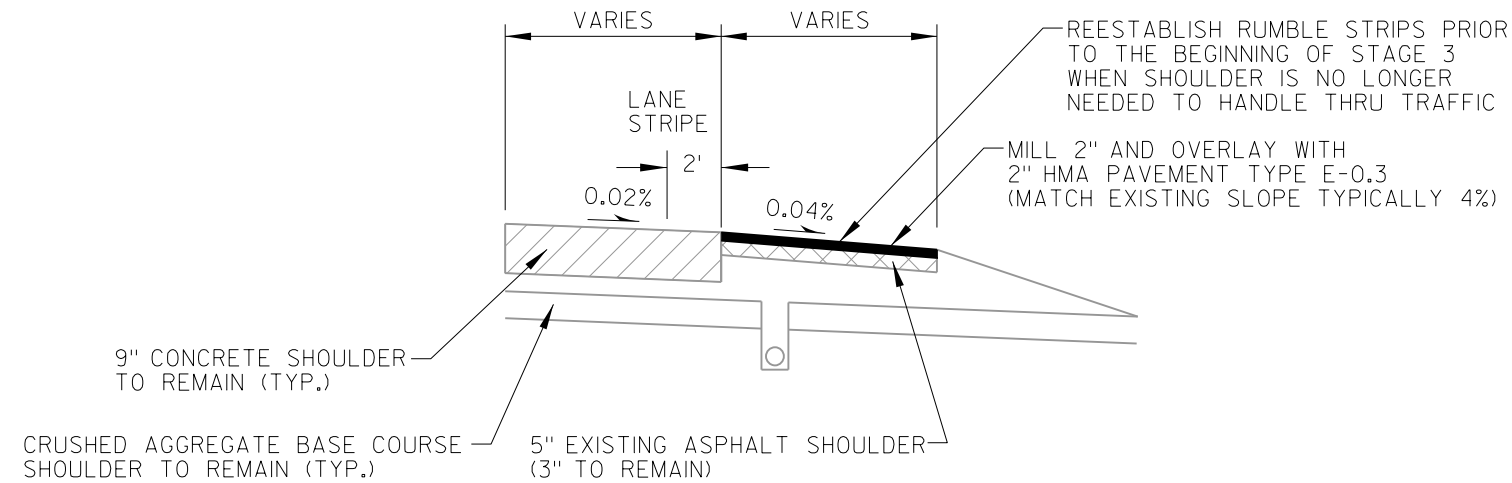
EXISTING 1-LANE TYPICAL RAMP SECTION

STH 114/CTH JJ/WINNECONNE AVENUE RAMPS (JJA, JJB, JJC)
 MAIN STREET RAMPS (MSA, MSB)
 CTH 11/WINCHESTER ROAD RAMPS (11A, 11B, 11C, 11D)
 CTH 88/PROSPECT AVENUE RAMPS (BBA, BBB, BBC, BBD)
 STH 125/COLLEGE AVENUE RAMPS (CAA, CAB, CAC)
 STH 96/WISCONSIN AVENUE RAMPS (WIA, WIC, WID)



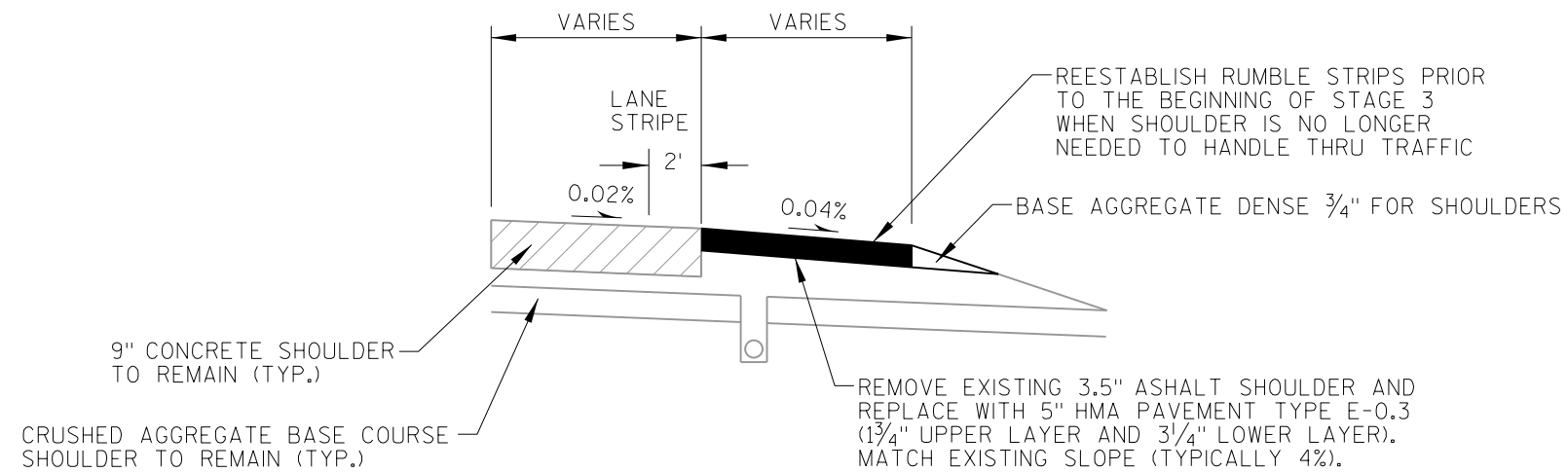
EXISTING 2-LANE TYPICAL RAMP SECTION

STH 96/WISCONSIN AVENUE RAMP (WIB)



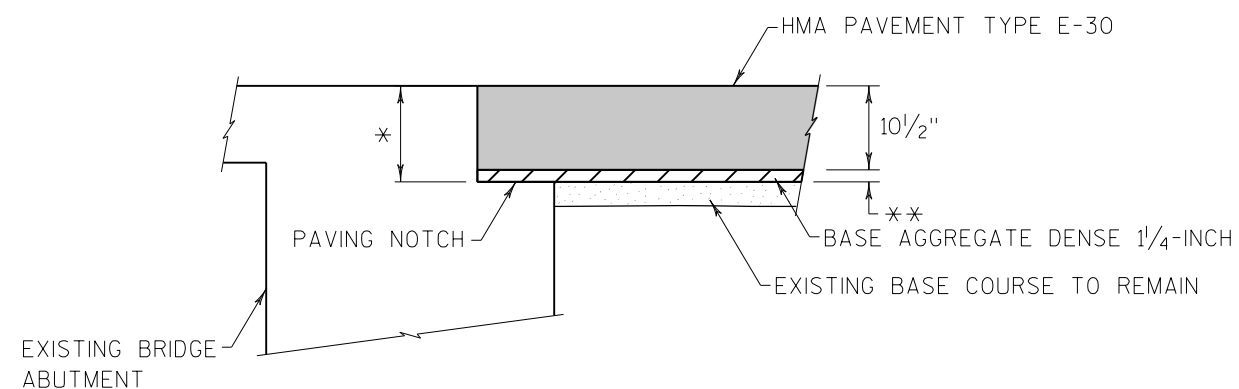
ASPHALT SHOULDER MILL AND OVERLAY

1139+54 NB to 1142+02 NB	1143+71 SB to 1146+02 SB
1154+32 NB to 1165+85 NB	1147+83 SB to 1151+22 SB
1168+21 NB to 1171+65 NB	1219+78 SB to 1226+47 SB
1211+47 NB to 1215+83 NB	1228+29 SB to 1231+67 SB
1217+54 NB to 1226+58 NB	1250+78 SB to 1254+06 SB
1228+47 NB to 1231+32 NB	1256+67 SB to 1263+32 SB
1261+33 NB to 1263+00 NB	1424+23 SB to 1427+42 SB
1270+61 NB to 1272+79 NB	1429+94 SB to 1433+83 SB



ASPHALT SHOULDER REPLACEMENT

1530+67 NB to 1534+50 NB	1484+29 SB to 1493+27 SB
1536+88 NB to 1544+87 NB	1495+73 SB to 1498+66 SB
1551+05 NB to 1553+17 NB	1531+47 SB to 1534+34 SB
1555+72 NB to 1559+71 NB	1536+76 SB to 1543+40 SB
	1547+78 SB to 1554+10 SB
	1556+92 SB to 1561+41 SB

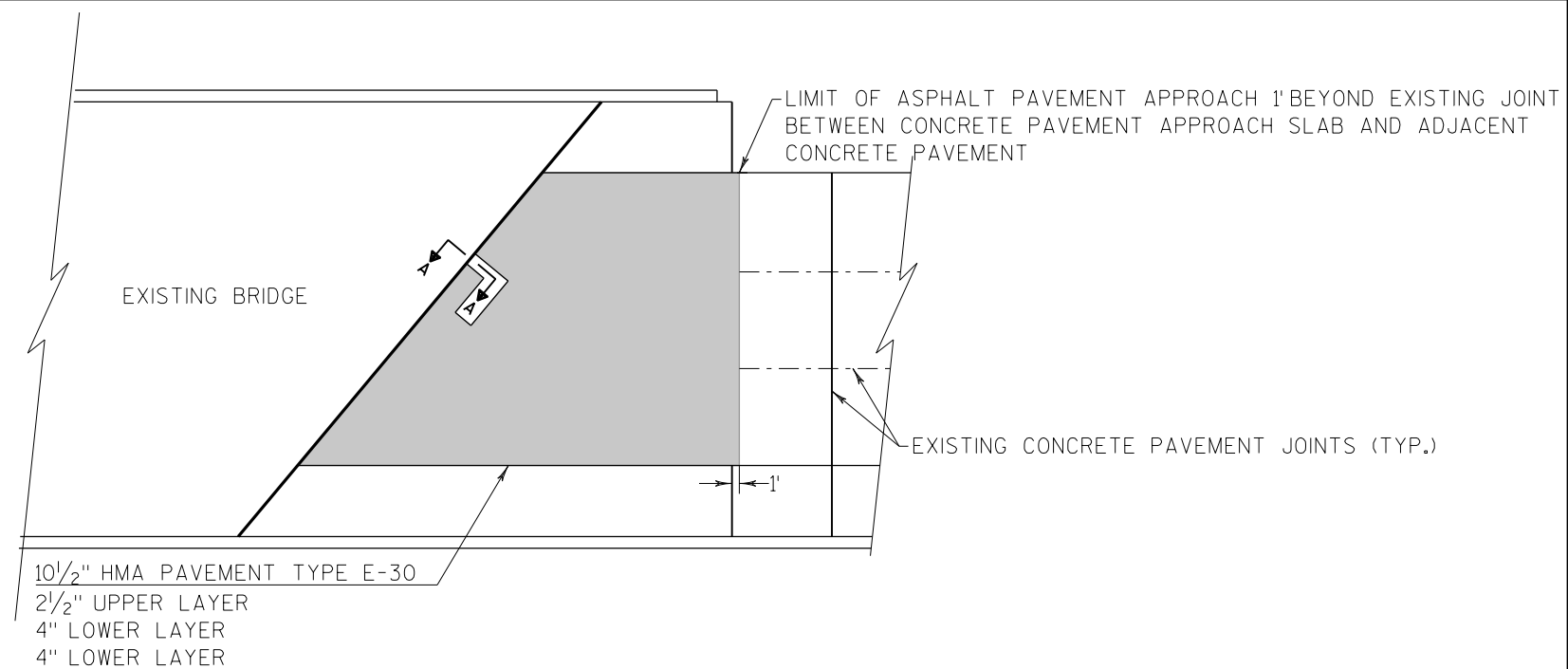


SECTION A-A

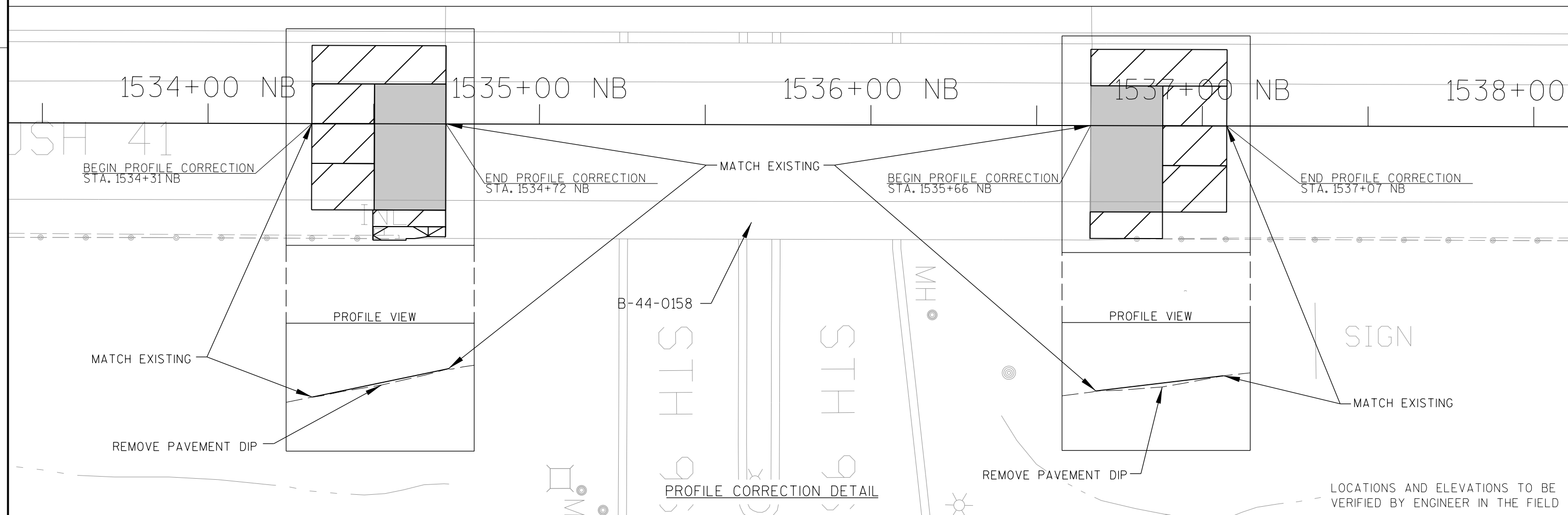
* 12": B-44-157	B-70-125	** 1 1/2": B-44-157	B-70-125
B-44-158	B-70-126	B-44-158	B-70-126
B-44-161	B-70-127	B-44-161	B-70-127
B-44-162	B-70-128	B-44-162	B-70-128
B-44-163	B-70-129	B-44-163	B-70-129
B-44-164	B-70-131	B-44-164	B-70-131
B-70-49	B-70-132	B-70-49	B-70-132
B-70-50	B-70-133	B-70-50	B-70-133
B-70-124	B-70-135	B-70-124	B-70-135

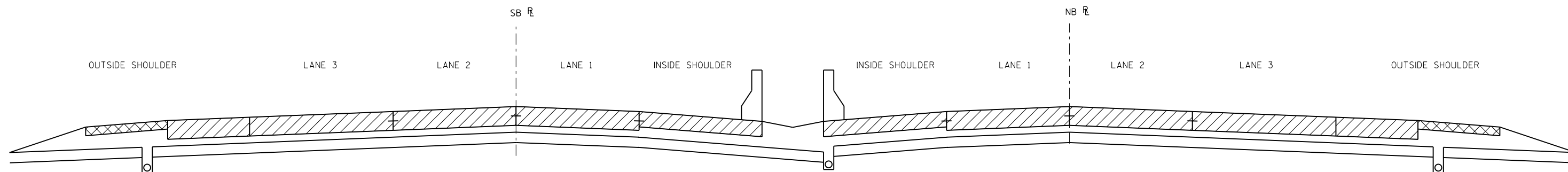
14": B-44-155

3 1/2": B-44-155



ASPHALT APPROACH DETAIL

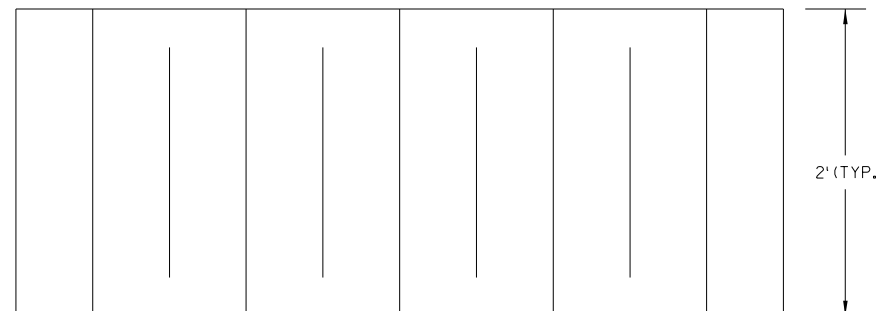




LANE LOCATION DETAIL
LANE REFERENCES FOR REPAIR SUMMARY TABLES

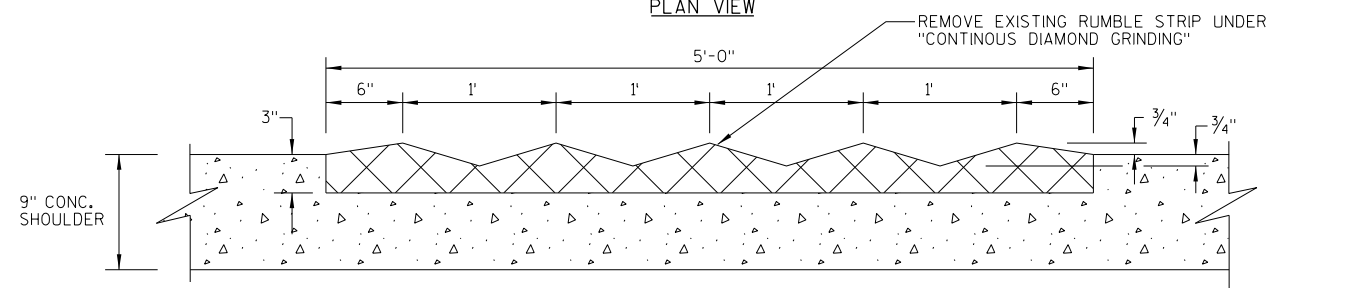
NOTES:

- 1) RUMBLE STRIPS ARE LONGITUDINALLY SPACED 25' CENTER TO CENTER (VERIFY SPACING IN FIELD).

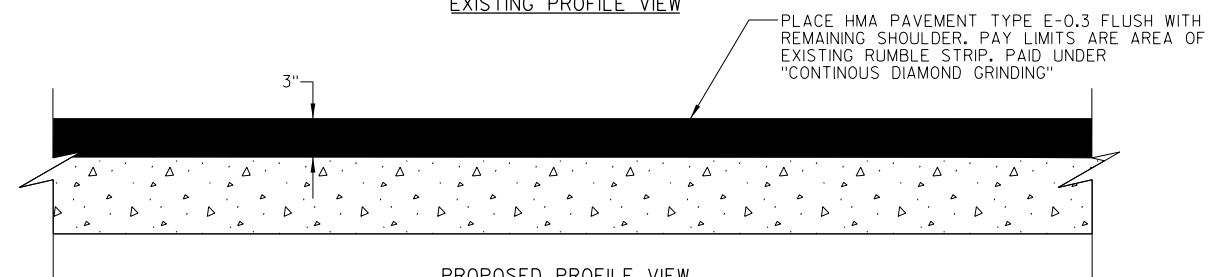


EDGE OF TRAVEL LANE

PLAN VIEW



EXISTING PROFILE VIEW

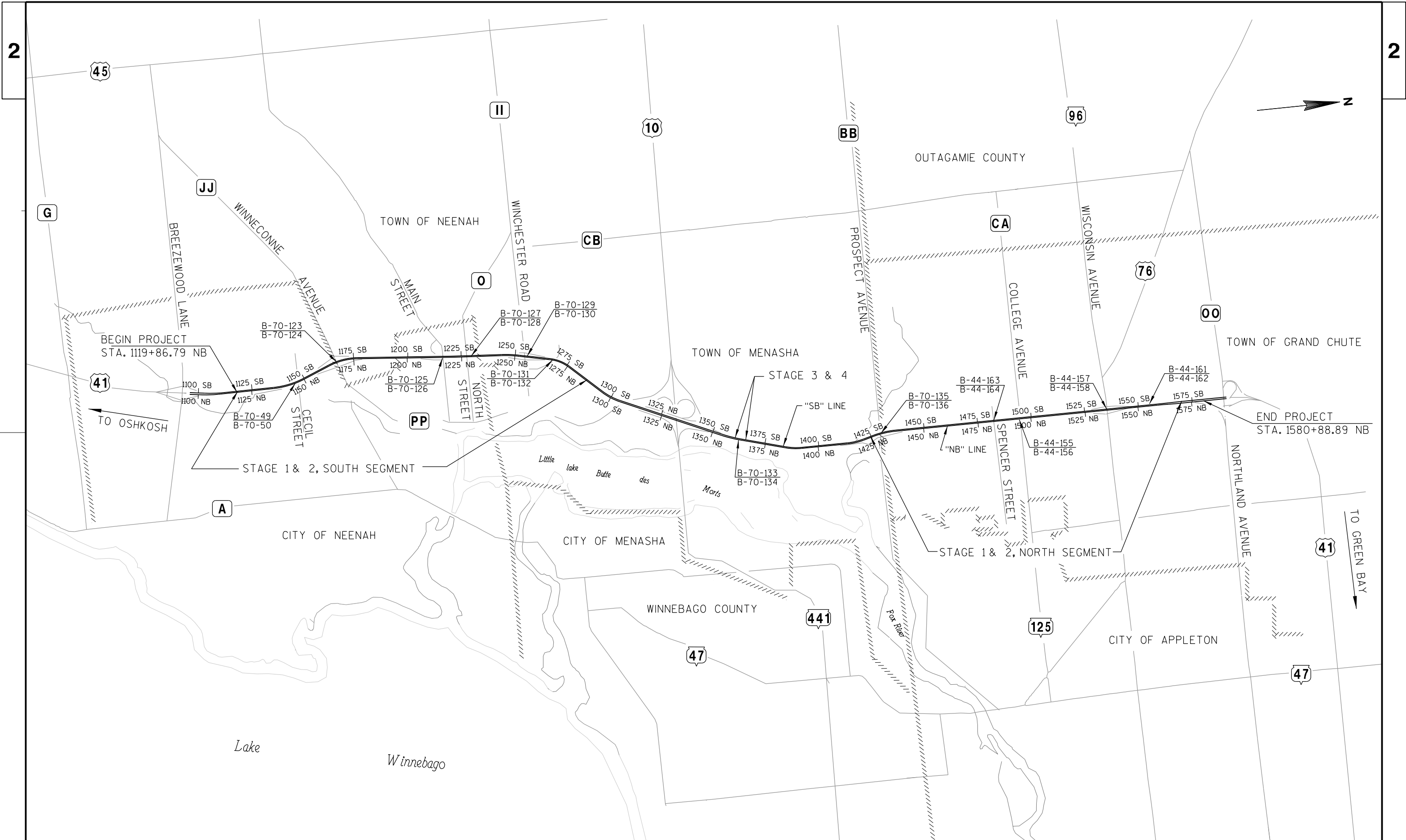


PROPOSED PROFILE VIEW

REMOVING RUMBLE STRIPS
(NOT TO SCALE)

CONCRETE PAVEMENT REPAIRS AND REPLACEMENTS

STATION		TO	STATION		LOCATION		REPAIR SIZE LENGTH X WIDTH (FT x FT)	CONCRETE PAVEMENT REPAIR SHES (SY)	CONCRETE PAVEMENT REPLACEMENT SHES (SY)	DRILLED TIE BARS (EACH)	DRILLED DOWEL BARS (EACH)	SAWING ASPHALT (LF)	SAWING CONCRETE (LF)
1534+31	NB	-	1534+50	NB	NB MAINLINE	LANE 1	19 x 12	---	25.2	---	8	---	50
1536+88	NB	-	1537+07	NB	NB MAINLINE	LANE 1	19 x 12	---	25.8	---	16	---	51
1534+31	NB	-	1534+50	NB	NB MAINLINE	LANE 2	19 x 12	---	25.2	---	8	---	50
1536+88	NB	-	1537+07	NB	NB MAINLINE	LANE 2	19 x 12	---	25.8	---	16	---	51
1534+31	NB	-	1534+50	NB	NB MAINLINE	LANE 3	19 x 14	---	29.4	---	8	19	35
1536+88	NB	-	1537+07	NB	NB MAINLINE	LANE 3	19 x 14	---	30.1	---	16	---	55
1146+25	NB	-	1146+34	NB	NB MAINLINE	INSIDE SHOULDER	7 x 10	8.3	---	---	8	---	24
1147+67	NB	-	1147+88	NB	NB MAINLINE	INSIDE SHOULDER	19 x 10	---	21.5	8	8	---	48
1165+79	NB	-	1166+01	NB	NB MAINLINE	INSIDE SHOULDER	22 x 10	---	25.5	9	8	---	55
1167+98	NB	-	1168+26	NB	NB MAINLINE	INSIDE SHOULDER	27 x 10	---	31.2	11	8	---	65
1217+30	NB	-	1217+47	NB	NB MAINLINE	INSIDE SHOULDER	17 x 10	---	19.1	7	8	---	44
1429+76	NB	-	1430+30	NB	NB MAINLINE	INSIDE SHOULDER	53 x 11	---	64.2	34	8	---	116
1495+57	NB	-	1495+79	NB	NB MAINLINE	INSIDE SHOULDER	22 x 11	---	26.5	9	8	---	54
1534+31	NB	-	1534+72	NB	NB MAINLINE	INSIDE SHOULDER	41 x 12	---	52.1	16	8	---	93
1536+66	NB	-	1537+07	NB	NB MAINLINE	INSIDE SHOULDER	41 x 11	---	50.2	16	8	---	93
1165+79	NB	-	1166+04	NB	NB MAINLINE	OUTSIDE SHOULDER	25 x 5	---	13.7	---	---	9	45
1168+04	NB	-	1168+26	NB	NB MAINLINE	OUTSIDE SHOULDER	21 x 8	---	18.7	---	---	8	42
1217+32	NB	-	1217+54	NB	NB MAINLINE	OUTSIDE SHOULDER	21 x 8	---	19.0	---	---	8	43
1228+19	NB	-	1228+47	NB	NB MAINLINE	OUTSIDE SHOULDER	28 x 6	---	19.4	3	---	10	52
1266+34	NB	-	1266+76	NB	NB MAINLINE	OUTSIDE SHOULDER	37 x 7	---	29.0	16	---	7	72
1269+57	NB	-	1269+90	NB	NB MAINLINE	OUTSIDE SHOULDER	28 x 10	---	30.8	10	---	10	52
1429+63	NB	-	1429+96	NB	NB MAINLINE	OUTSIDE SHOULDER	32 x 8	---	28.5	1	---	8	64
1495+56	NB	-	1495+82	NB	NB MAINLINE	OUTSIDE SHOULDER	27 x 5	---	14.8	1	---	9	49
1534+50	NB	-	1534+72	NB	NB MAINLINE	OUTSIDE SHOULDER	27 x 5	---	14.8	---	---	8	50
1536+66	NB	-	1536+88	NB	NB MAINLINE	OUTSIDE SHOULDER	22 x 8	---	19.4	---	---	8	44
1555+44	NB	-	1555+72	NB	NB MAINLINE	OUTSIDE SHOULDER	23 x 10	---	25.5	7	---	10	42
1145+94	SB	-	1146+15	SB	SB MAINLINE	INSIDE SHOULDER	20 x 10	---	22.2	7	8	---	49
1165+52	SB	-	1165+76	SB	SB MAINLINE	INSIDE SHOULDER	24 x 10	---	27.3	10	8	---	58
1167+76	SB	-	1167+99	SB	SB MAINLINE	INSIDE SHOULDER	22 x 10	---	25.2	9	8	---	55
1226+47	SB	-	1226+72	SB	SB MAINLINE	INSIDE SHOULDER	25 x 10	---	28.2	10	8	---	60
1228+08	SB	-	1228+29	SB	SB MAINLINE	INSIDE SHOULDER	21 x 10	---	23.7	8	8	---	52
1267+33	SB	-	1267+56	SB	SB MAINLINE	INSIDE SHOULDER	18 x 10	---	20.0	14	8	---	42
1270+25	SB	-	1270+45	SB	SB MAINLINE	INSIDE SHOULDER	16 x 10	---	18.0	12	8	---	40
1429+59	SB	-	1429+88	SB	SB MAINLINE	INSIDE SHOULDER	27 x 11	---	33.2	22	8	---	65
1495+45	SB	-	1495+69	SB	SB MAINLINE	INSIDE SHOULDER	23 x 11	---	28.2	9	8	---	57
1536+54	SB	-	1536+76	SB	SB MAINLINE	INSIDE SHOULDER	22 x 11	---	26.9	9	8	---	55
1146+02	SB	-	1146+31	SB	SB MAINLINE	OUTSIDE SHOULDER	27 x 7	---	21.1	---	---	11	50
1165+52	SB	-	1165+74	SB	SB MAINLINE	OUTSIDE SHOULDER	22 x 8	---	19.3	---	---	8	43
1167+70	SB	-	1167+99	SB	SB MAINLINE	OUTSIDE SHOULDER	28 x 8	---	25.1	---	---	8	57
1226+47	SB	-	1226+68	SB	SB MAINLINE	OUTSIDE SHOULDER	20 x 8	---	17.9	---	---	8	40
1270+66	SB	-	1270+94	SB	SB MAINLINE	OUTSIDE SHOULDER	25 x 10	---	27.3	11	---	10	47
1493+27	SB	-	1493+51	SB	SB MAINLINE	OUTSIDE SHOULDER	24 x 8	---	21.2	---	---	8	48
1495+47	SB	-	1495+73	SB	SB MAINLINE	OUTSIDE SHOULDER	26 x 5	---	14.4	---	---	8	49
1534+34	SB	-	1534+60	SB	SB MAINLINE	OUTSIDE SHOULDER	26 x 5	---	14.2	---	---	8	48
1536+54	SB	-	1536+76	SB	SB MAINLINE	OUTSIDE SHOULDER	22 x 8	---	19.5	---	---	8	44
1554+19	SB	-	1554+42	SB	SB MAINLINE	OUTSIDE SHOULDER	20 x 7	---	15.9	---	---	7	38
1556+45	SB	-	1556+63	SB	SB MAINLINE	OUTSIDE SHOULDER	13 x 10	14.5	---	---	---	10	22
PROJECT TOTALS =								22.8	1134.1	269	224	208	2,458



TRAFFIC CONTROL 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 TO PROVIDE A MINIMUM OF 200 FEET, 500 FEET DESIRABLE, DISTANCE TO EXISTING SIGNS.

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

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

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

REDUCED SPEED AHEAD AND SPEED LIMIT 55 SIGNS MUST BE POST MOUNTED.

SPEED LIMIT SIGNS SHALL ALSO BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND AT 0.5 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

THE LOCATION OF THE FIRST SIGN INDICATING THE 55 MPH REGULATORY SPEED LIMIT IS REFERENCED FROM BEGINNING OF LANE CLOSURE TAPER. THE 55 MPH REGULATORY SPEED LIMIT SIGN LOCATION MUST BE ADJUSTED WHEN CONSTRUCTION ACTIVITIES REQUIRE THE LANE CLOSURE START LOCATION TO CHANGE.

TRAFFIC CONTROL DEVICES NOT IN USE SHALL BE LAYED DOWN OR REMOVED, TURNING OF DEVICES TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REMOVE ANY CONFLICTING EXISTING PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 CONTINUOUS DAYS AND NIGHTS.

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

FOR NIGHTTIME OPERATION, ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE A (LOW INTENSITY FLASHING) LIGHTS AND SPACED AT 1500'

WORK AREAS SHOWN ILLUSTRATES GENERAL LOCATIONS OF WORK AND DOES NOT REFLECT ALL WORK REQUIRED

ALL PAVEMENT MARKING STATIONING IN TRAFFIC CONTROL PLANS HAVE THE PREFIX OF THE ALIGNMENT THAT IT IS MEASURED OFF OF IN THE STATION CALLOUT.

FOR ALL CONCRETE BARRIER TEMPORARY PRECAST, REFER TO THE STANDARD DETAIL DRAWING FOR LOCATION OF DELINEATORS AND BRACKETS. CONCRETE BARRIER TEMPORARY PRECAST WHICH IS MOVED BETWEEN STAGES MAY NEED TO HAVE THE DELINEATORS REMOVED OR THE REFLECTOR COLOR CHANGED OR A TOP REFLECTOR ADDED. FURNISHING, MULTIPLE INSTALLATIONS, MAINTAINING AND REMOVAL OF THE DELINEATORS AND BRACKETS ARE INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

ANCHOR CONCRETE BARRIER TEMPORARY PRECAST IN ALL LOCATIONS WHERE A 2 FOOT OR GREATER DROPOFF IS STEEPER THAN 3H:1V AND THE DROPOFF IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

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

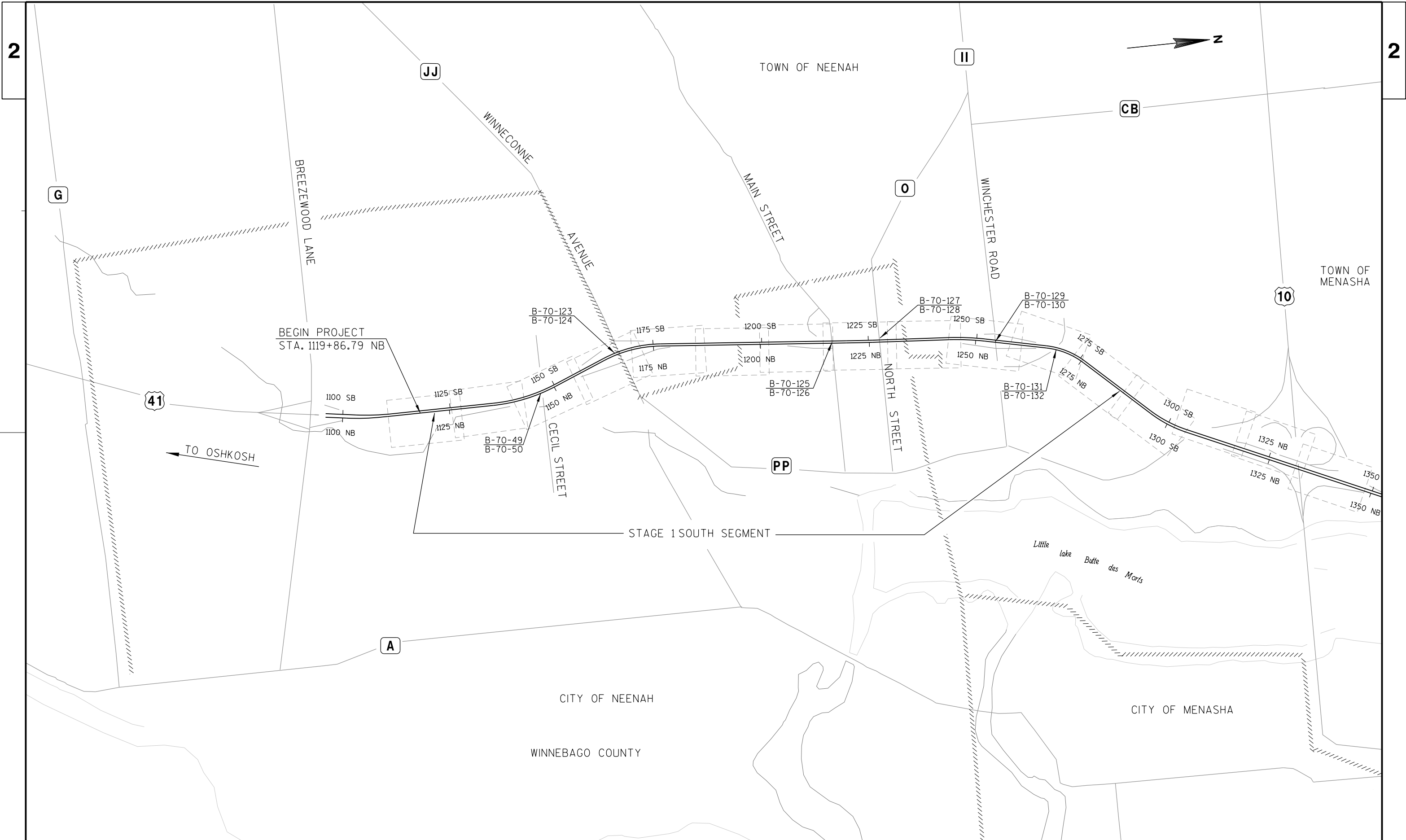
COVERING AND REMOVAL OF MATERIAL COVERING TEMPORARY REGULATORY SPEED LIMIT SIGNS AND EXISTING SPEED LIMIT SIGNS RELATED TO TEMPORARY AND/OR PERIODIC LANE CLOSURES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

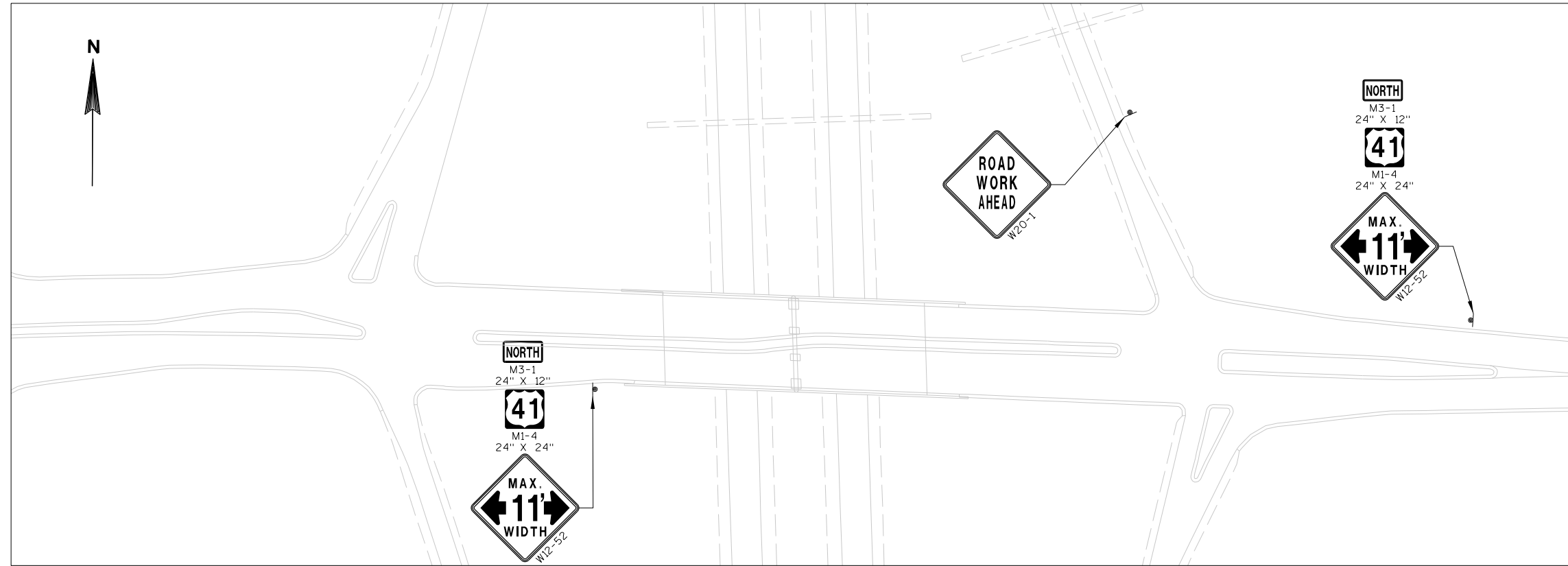
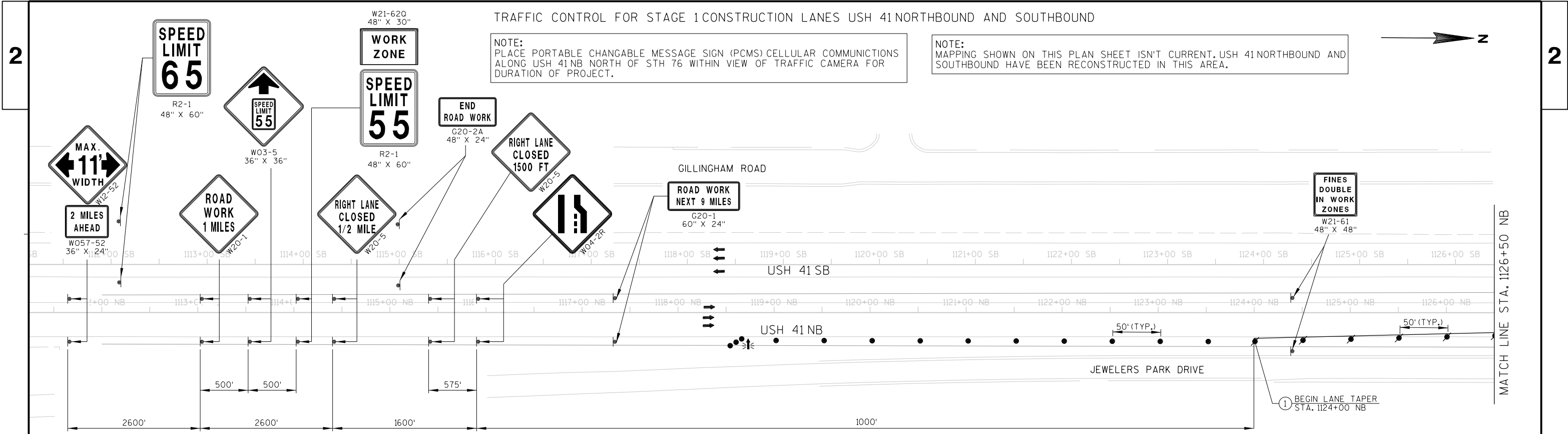
TRAFFIC CONTROL PAVEMENT MARKING LEGEND

- ① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, EDGELINE (WHITE)
- ② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, EDGELINE (YELLOW)
- ③ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH, CHANNELIZING (WHITE)
- ④ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, DASHED 12.5 FT LINE, 37.5 FT SKIP (WHITE)
- ⑤ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, DASHED 3 FT LINE, 9 FT SKIP (WHITE)
- ⑥ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, CHANNELIZING (WHITE)
- Ⓔ EXISTING TEMPORARY PAVEMENT MARKING PLACED DURING A PRIOR STAGE

LEGEND

- ⌚ TYPE III BARRICADE
- ⌚ TYPE III BARRICADE WTH 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
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- ◇◇ TEMPORARY ORANGE FLAGS (18"X18" MIN.)
- ▬▬▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▨ WORK AREA
- ➡ DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION BARRIER
- ▬ 2-INCH SHOULDER ASPHALT MILL AND OVERLAY
- ▨ SHOULDER ASPHALT REPLACEMENT

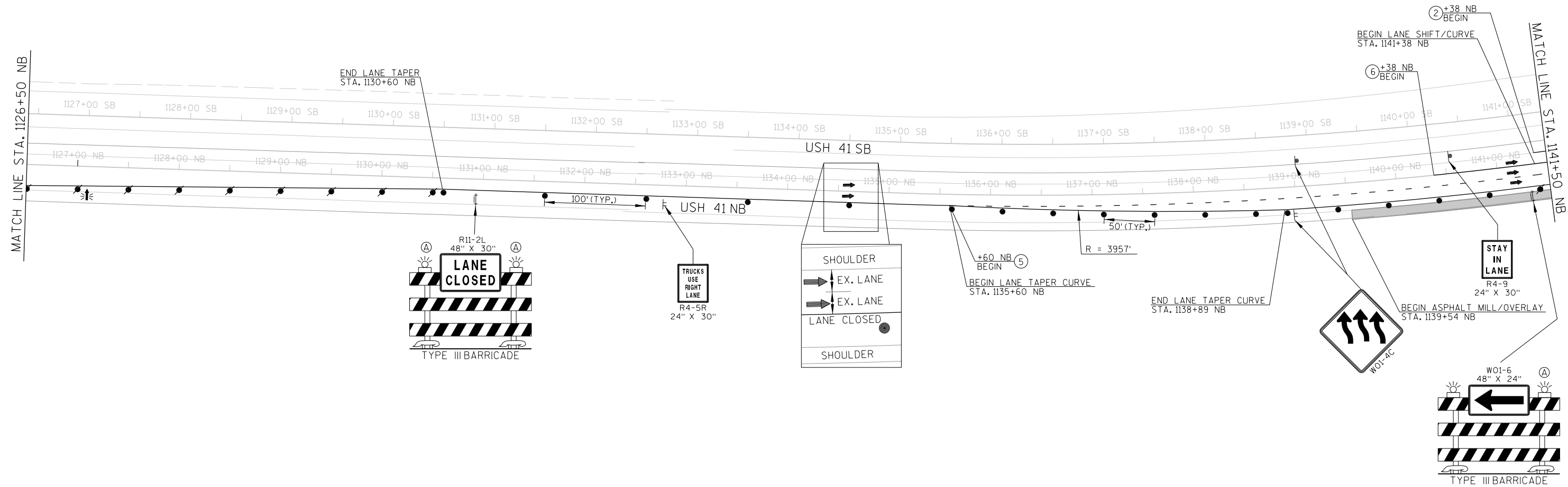


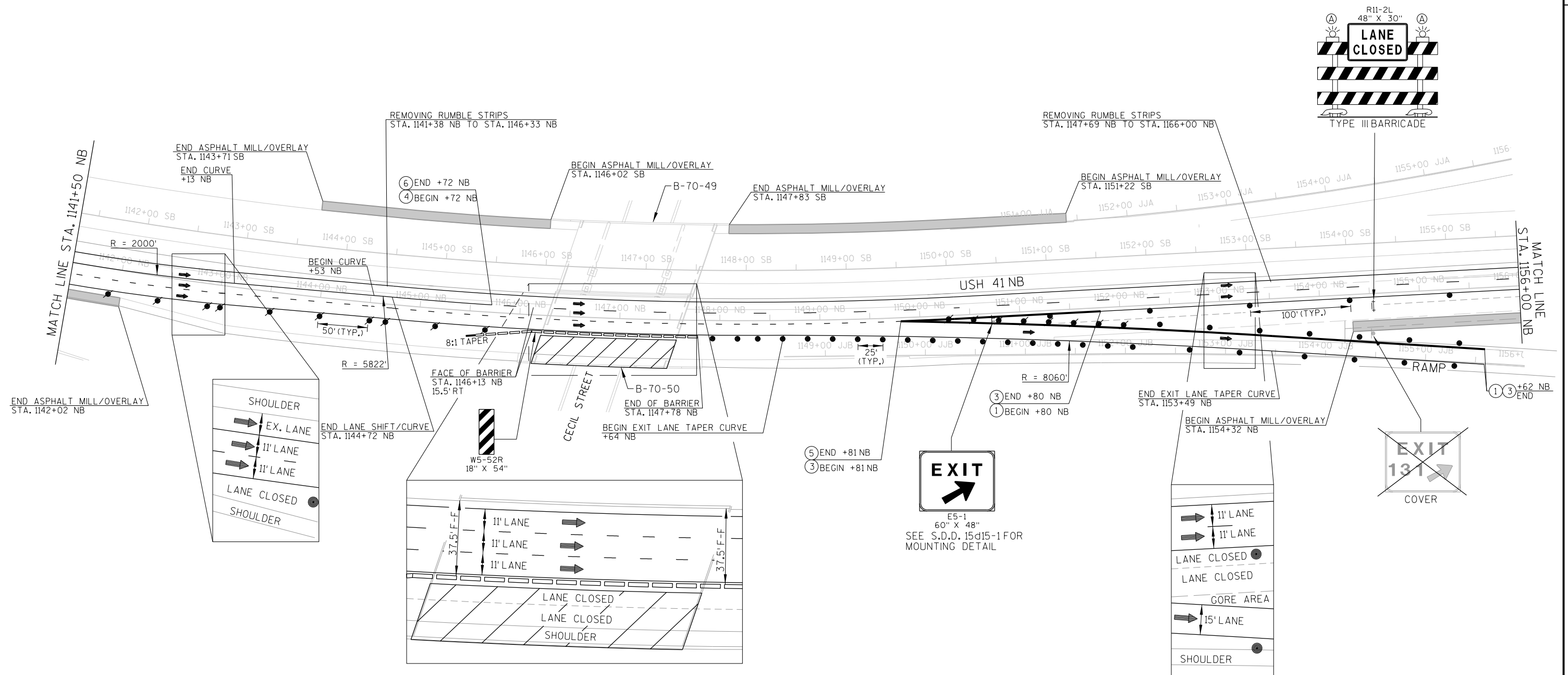


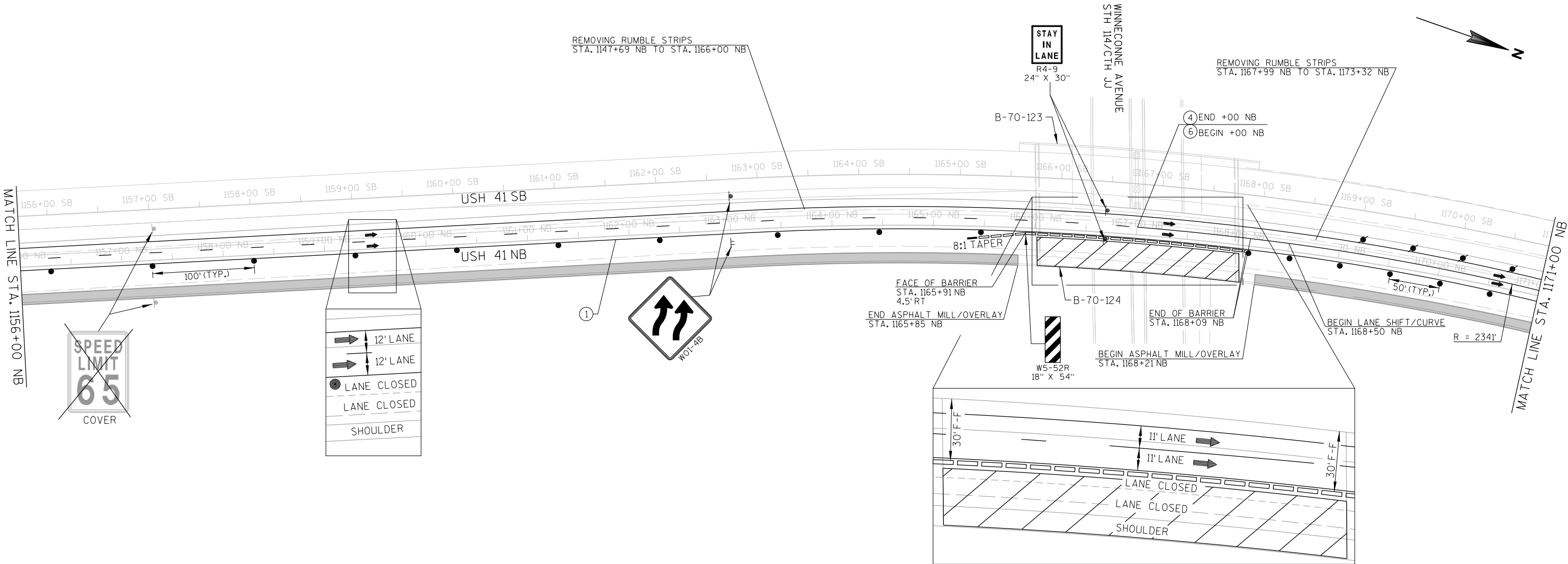


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NOTE:
FOR TRAFFIC CONTROL ALONG WINNECONNE AVENUE/STH 114/CTH 'JJ'DUE TO NIGHT RAMP WORK
SEE THE FOLLOWING TRAFFIC CONTROL DETAILS

"ENTRANCE RAMP TO USH 41 SOUTHBOUND CLOSURE FROM STH 114, CTH 'JJ'AND WINNECONNE AVENUE" AND
"ENTRANCE RAMP TO USH 41 NORTHBOUND CLOSURE FROM STH 114, CTH 'JJ'AND WINNECONNE AVENUE"

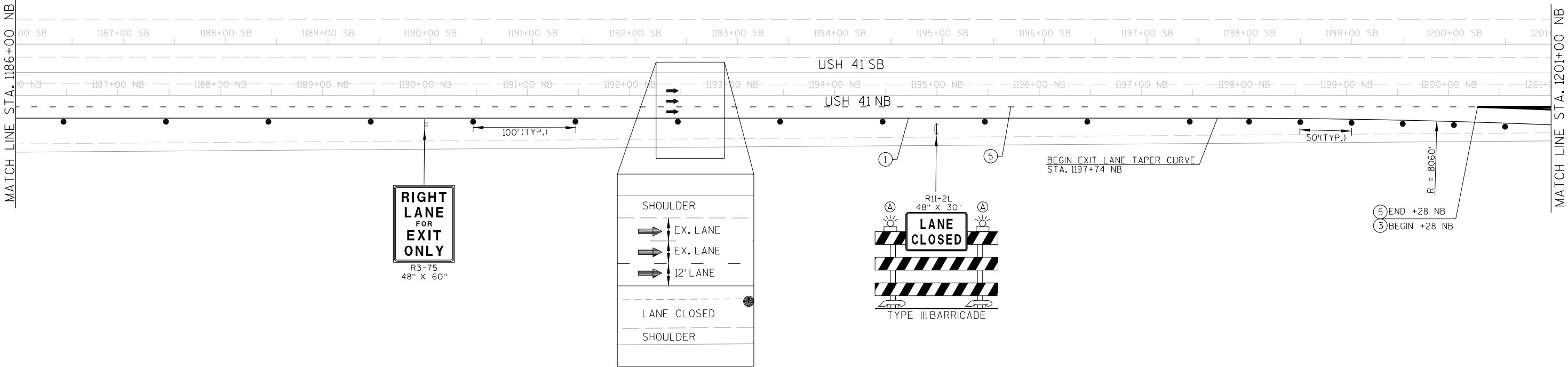
NOTE:
PLACE THESE SIGNS 200' EAST
AND WEST OF RAMP TERMINALS
ALONG STH 114/CTH JJ.

NORTH
M3-1
24" X 12"

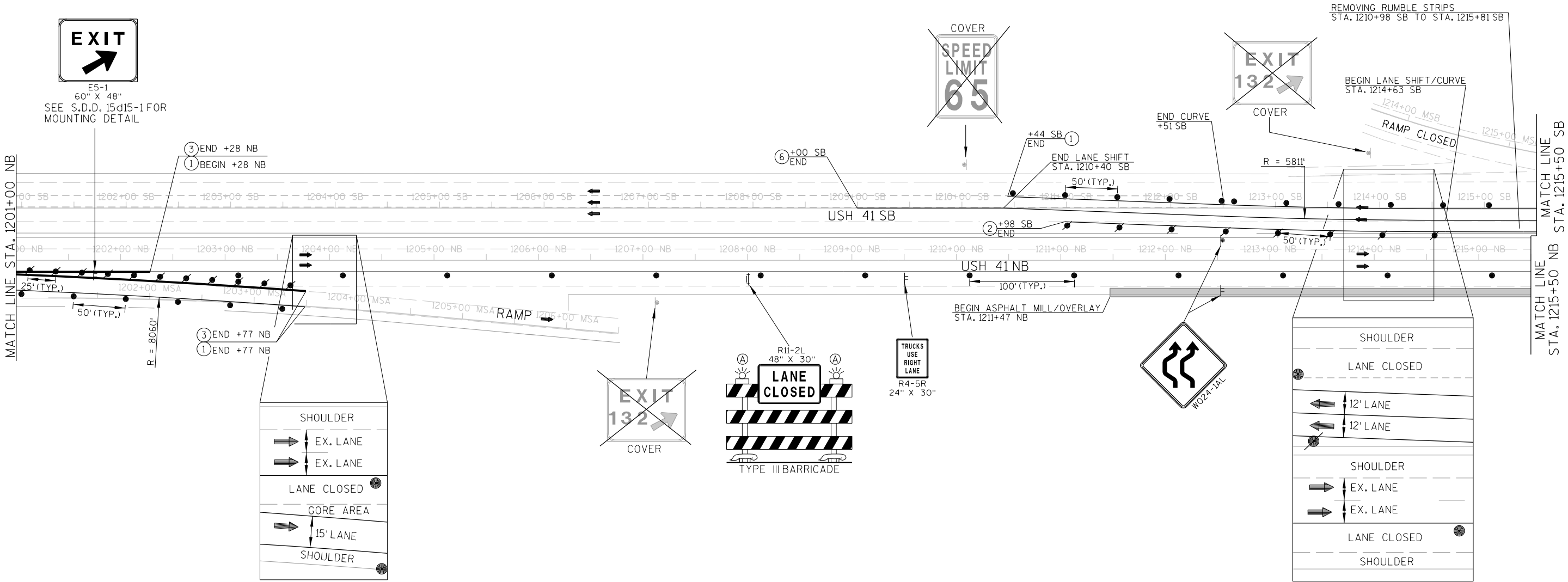
41
M1-4
24" X 24"

MAX.
11'
WIDTH
W12-52



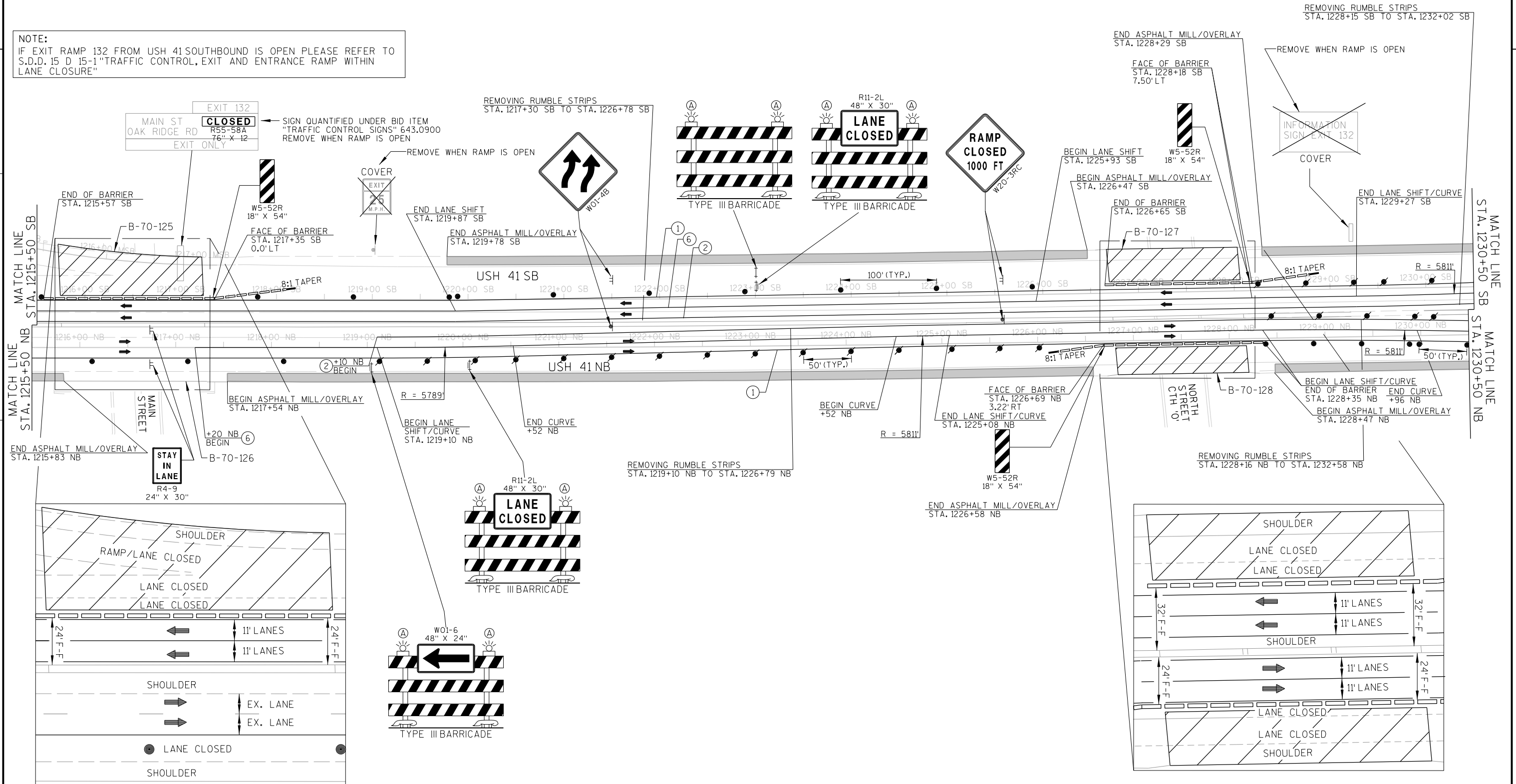


NOTE:
IF EXIT RAMP 132 FROM USH 41 SOUTHBOUND IS OPEN PLEASE REFER TO S.D.D. 15 D 15-1 "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE"



NOTE:

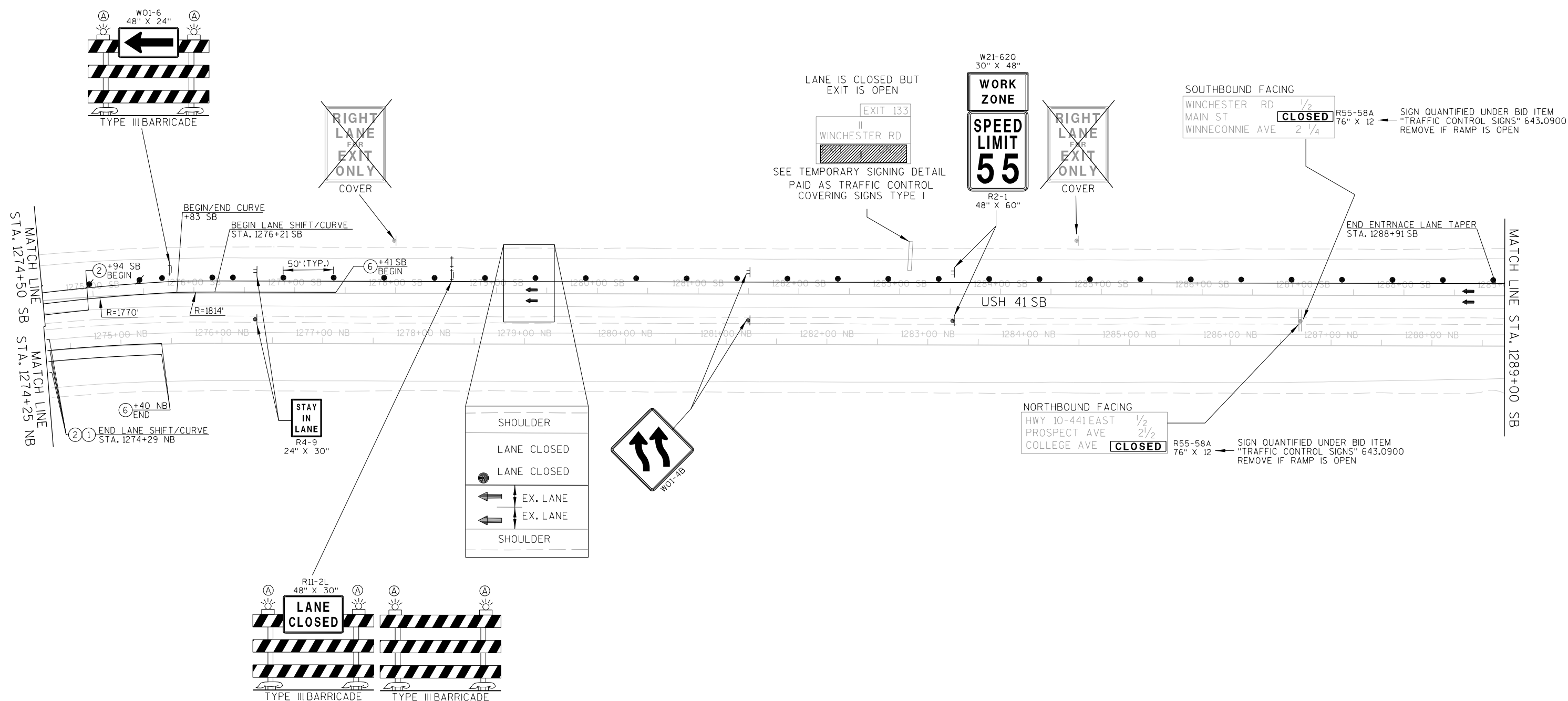
IF EXIT RAMP 132 FROM USH 41 SOUTHBOUND IS OPEN PLEASE REFER TO S.D.D. 15 D 15-1 "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE"

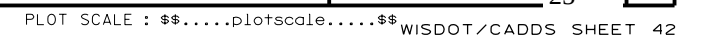


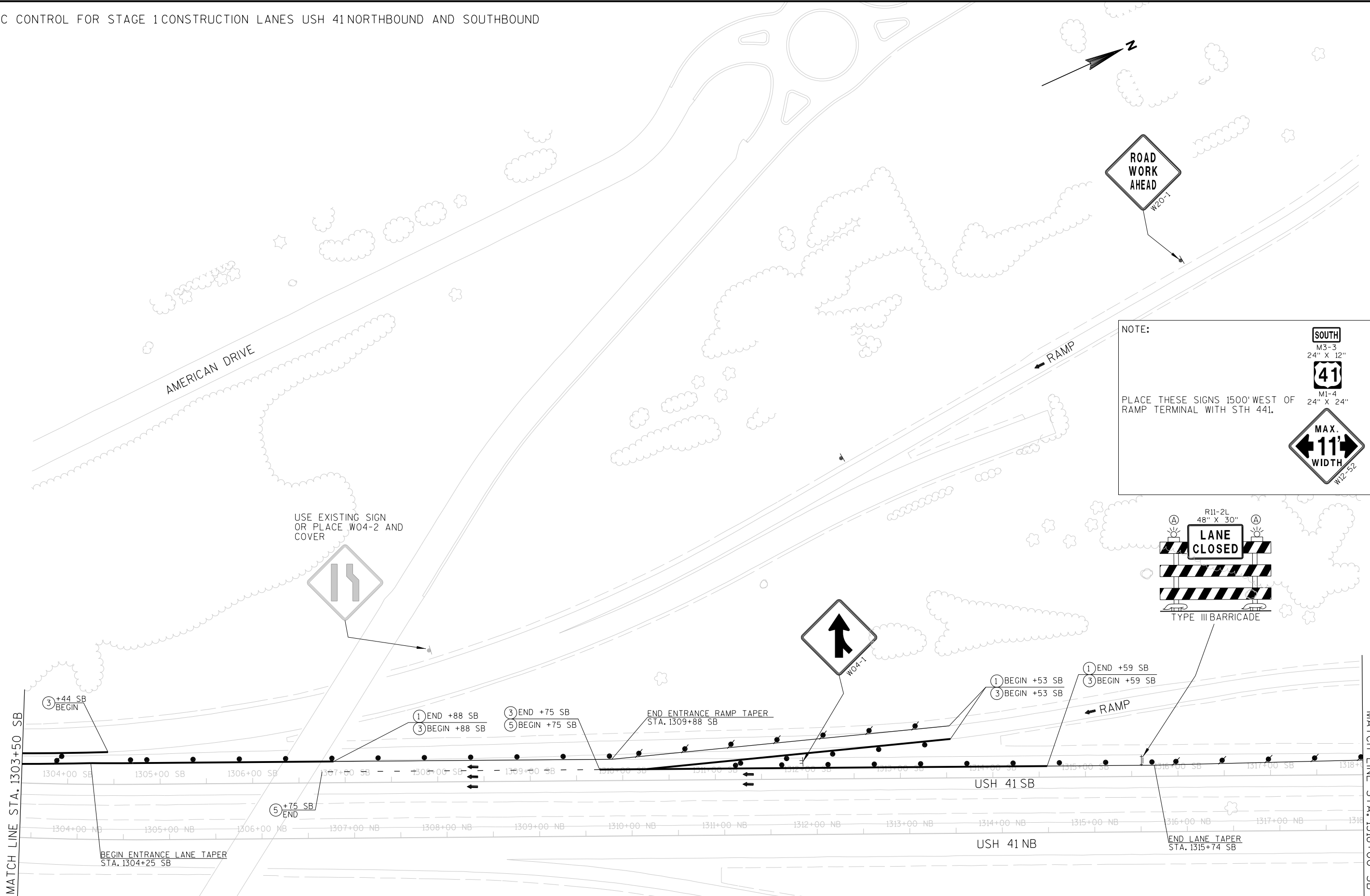
NOTE:
IF EXIT RAMP 132 FROM USH 41 SOUTHBOUND IS OPEN PLEASE REFER TO
S.D.D. 15 D 15-1 "TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN
LANE CLOSURE"





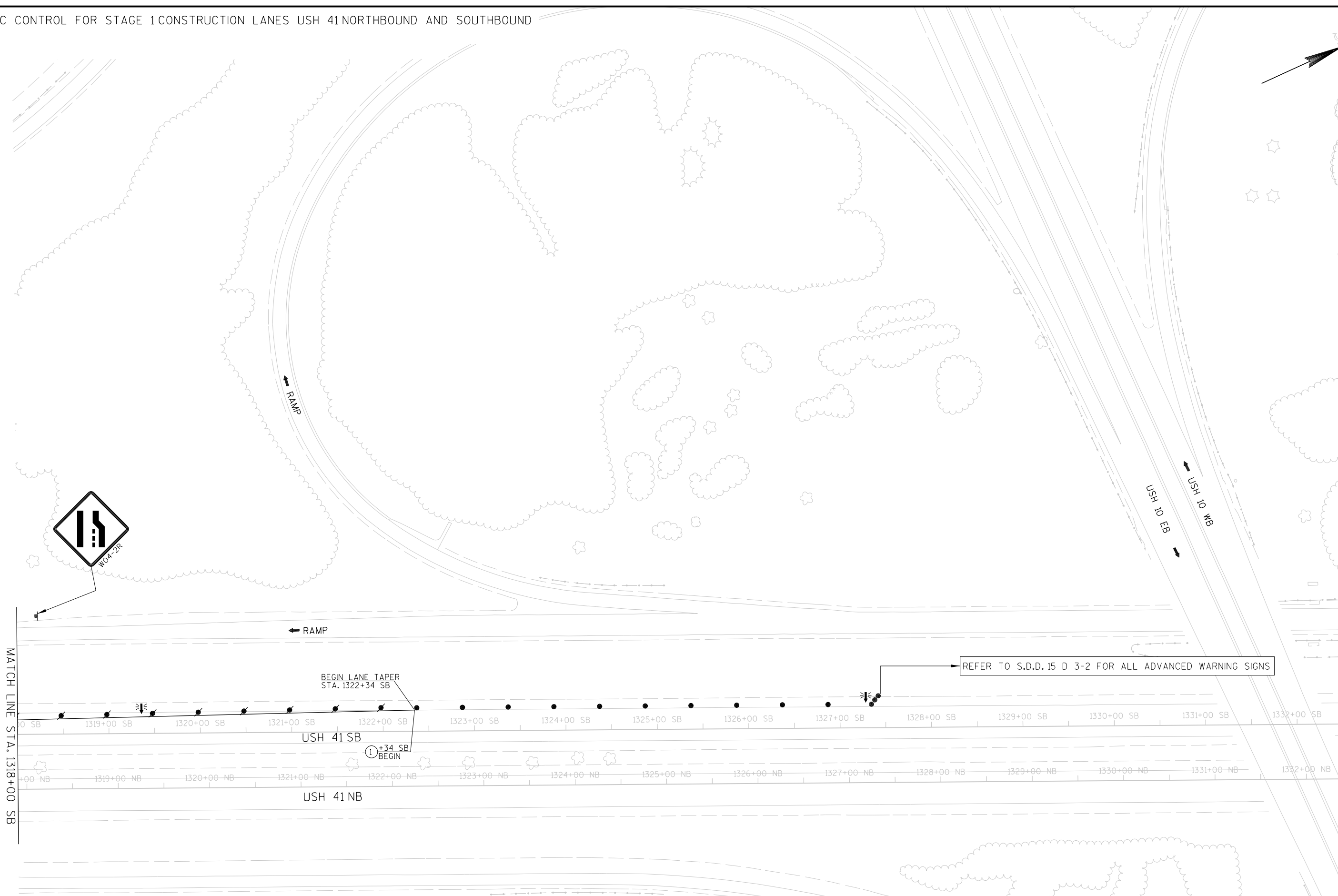






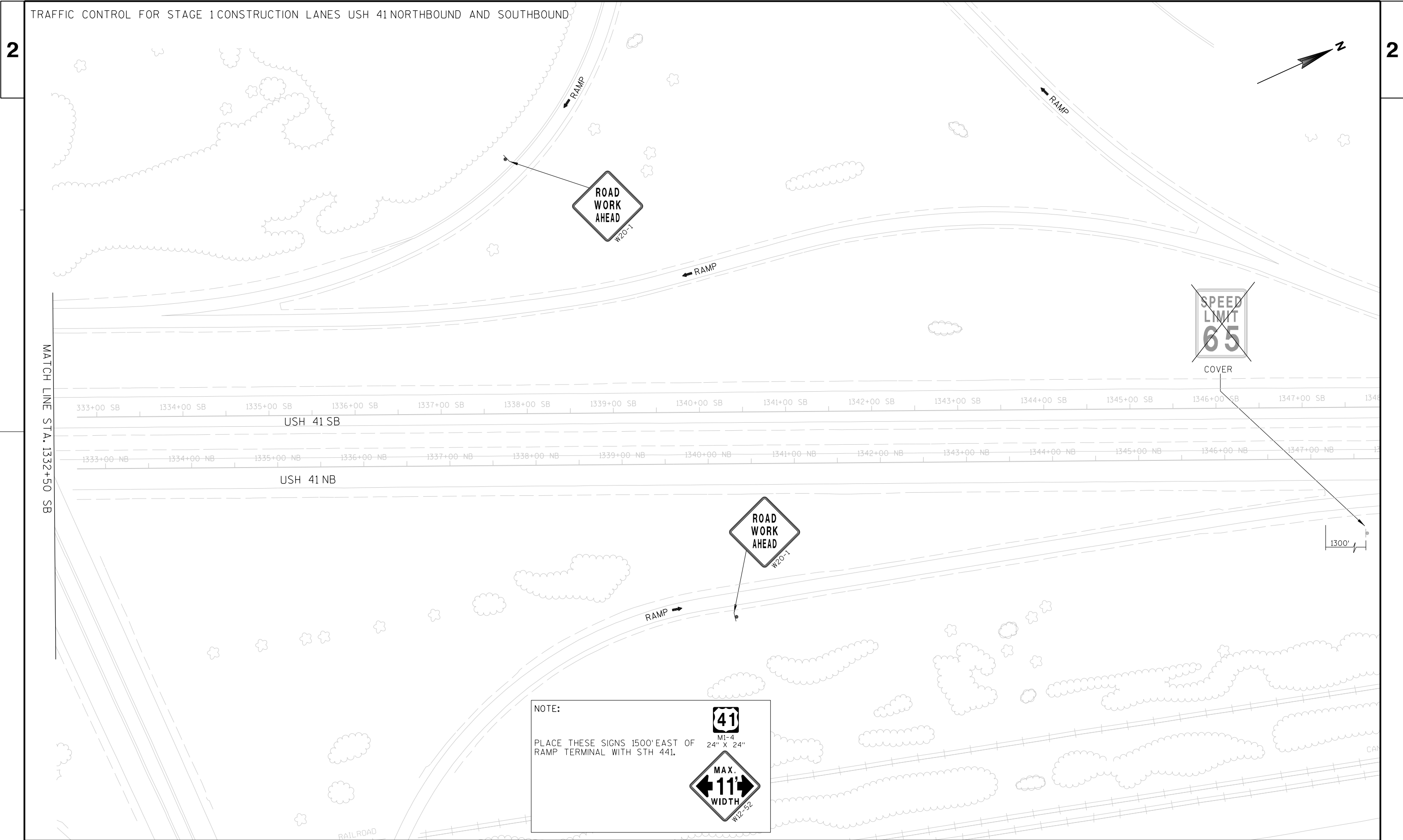
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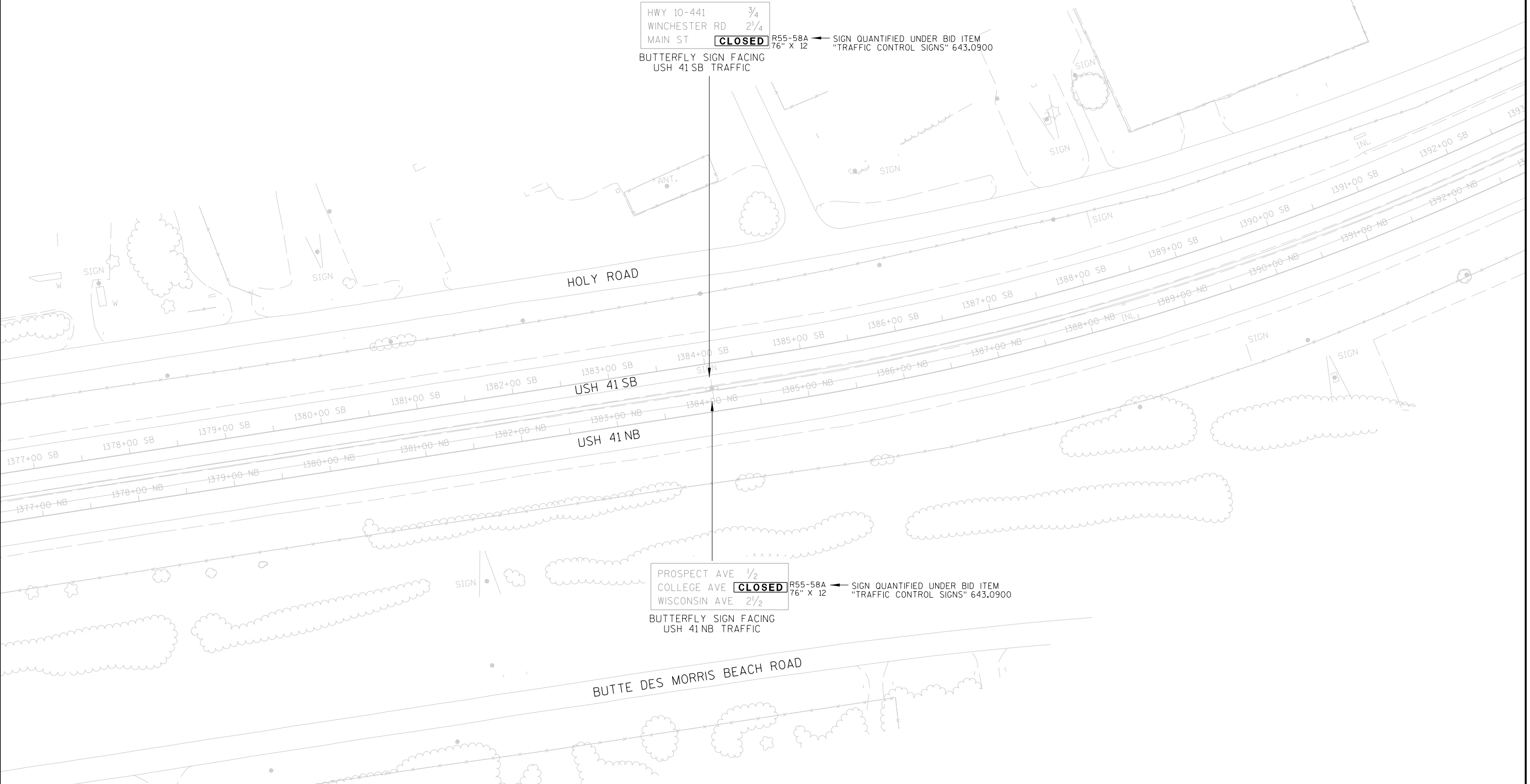


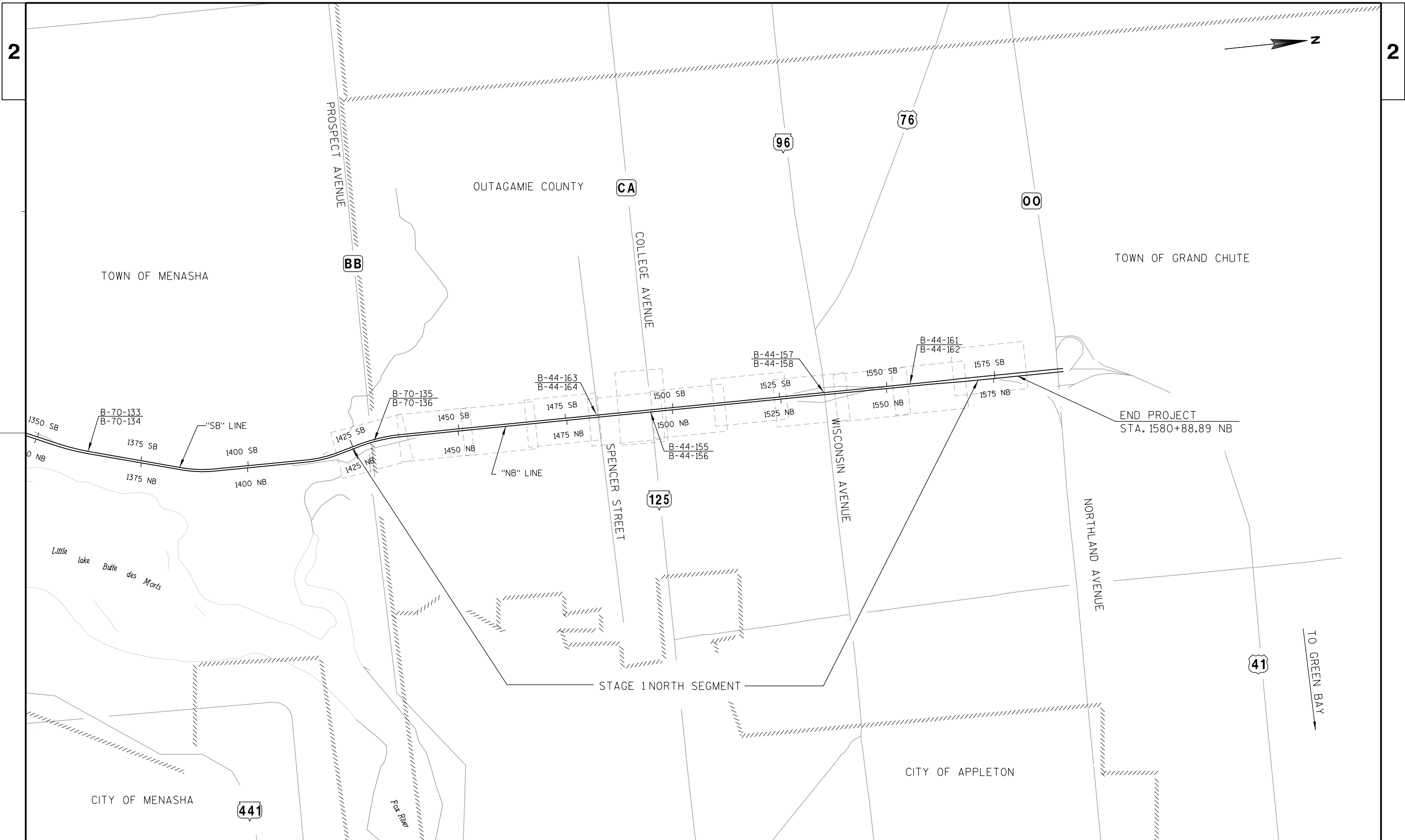
MATCH LINE STA. 1318+00 SB

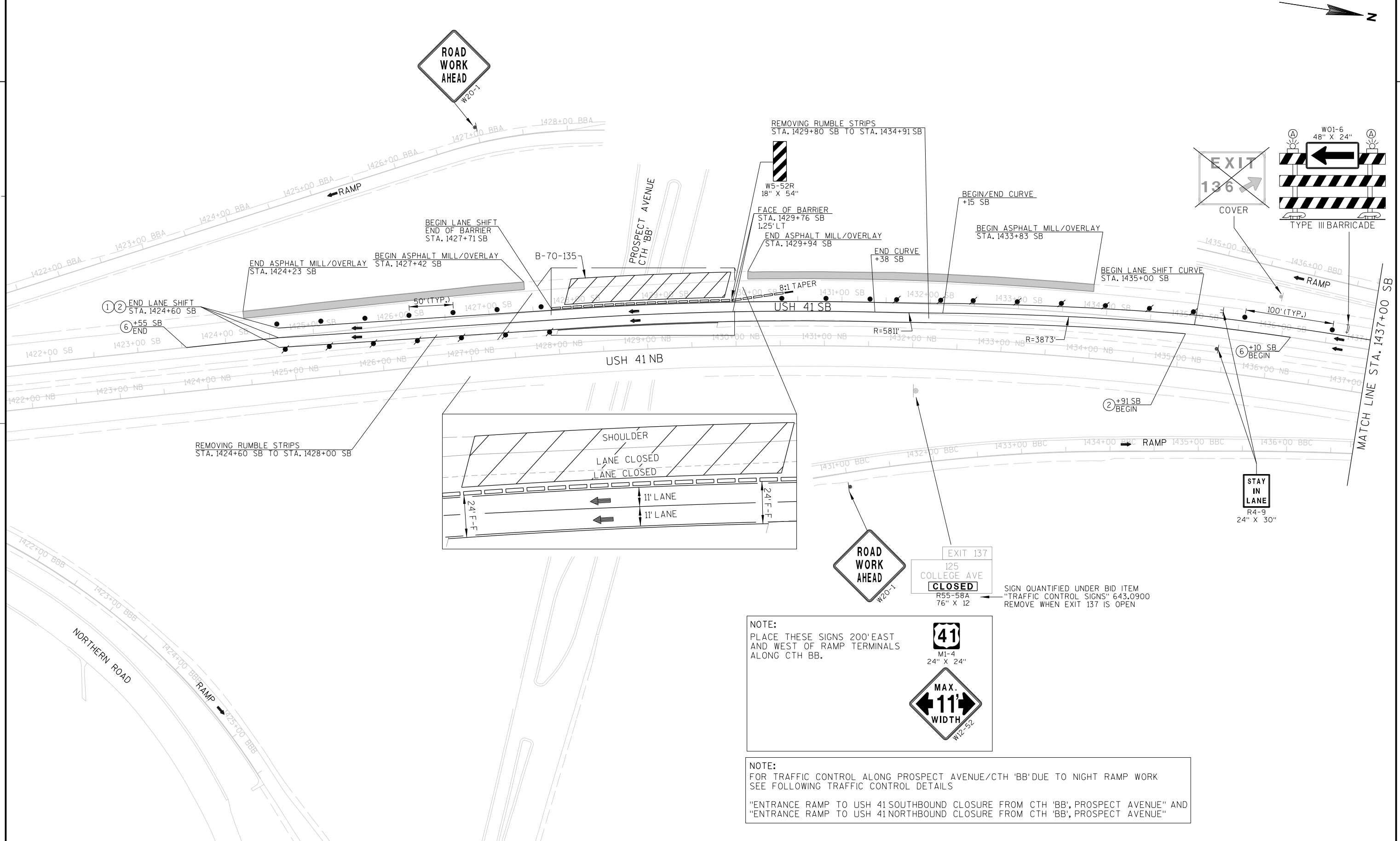
MATCH LINE STA. 1332+50 SB

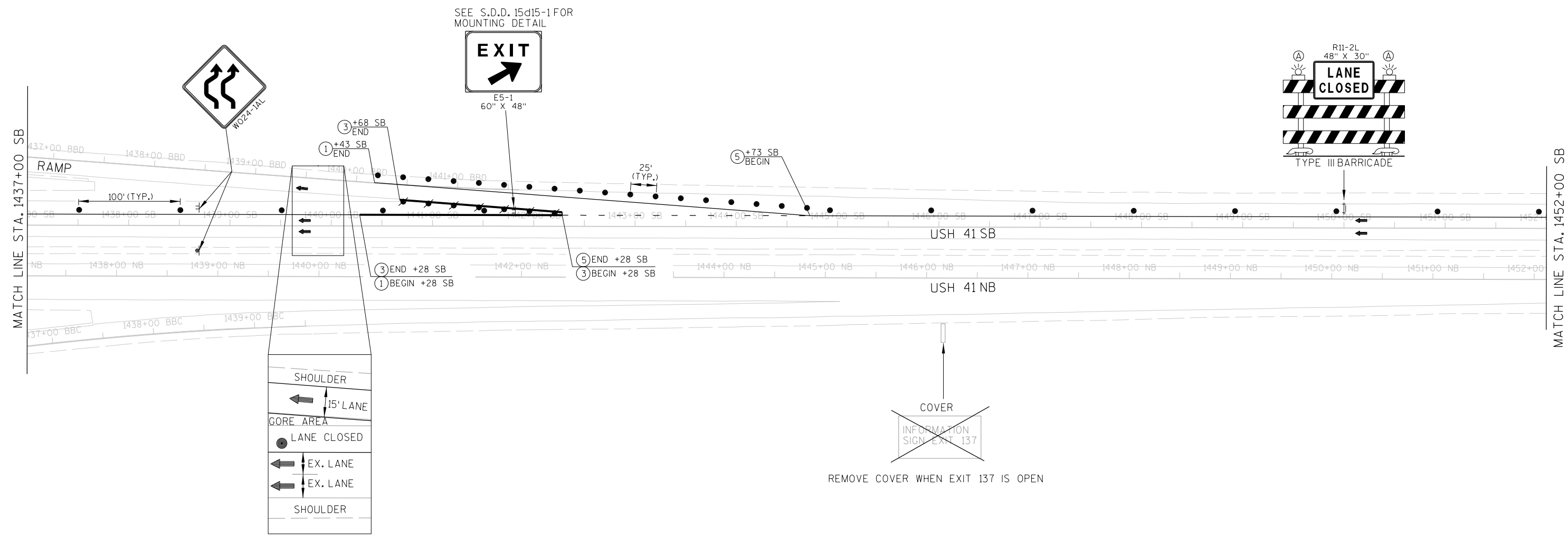


SIGN COVERING WITH "CLOSED" PLAQUE DURING STAGE 1 CONSTRUCTION FOR SOUTH AND NORTH ENDS. USE WHEN EXIT RAMP AT 132 MAIN STREET FROM USH 41 SOUTHBOUND AND 137 COLLEGE AVENUE FROM USH 41 NORTHBOUND ARE CLOSED. REMOVE PLAQUES WHEN RAMP ARE OPEN.





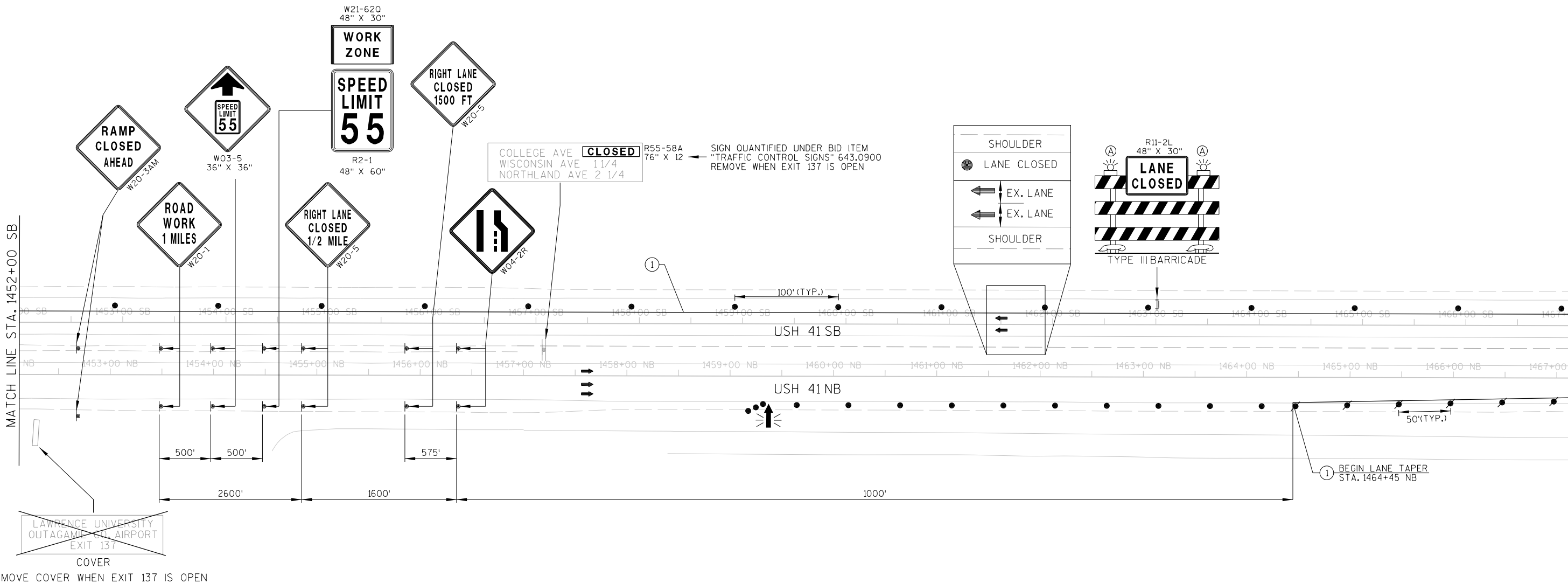


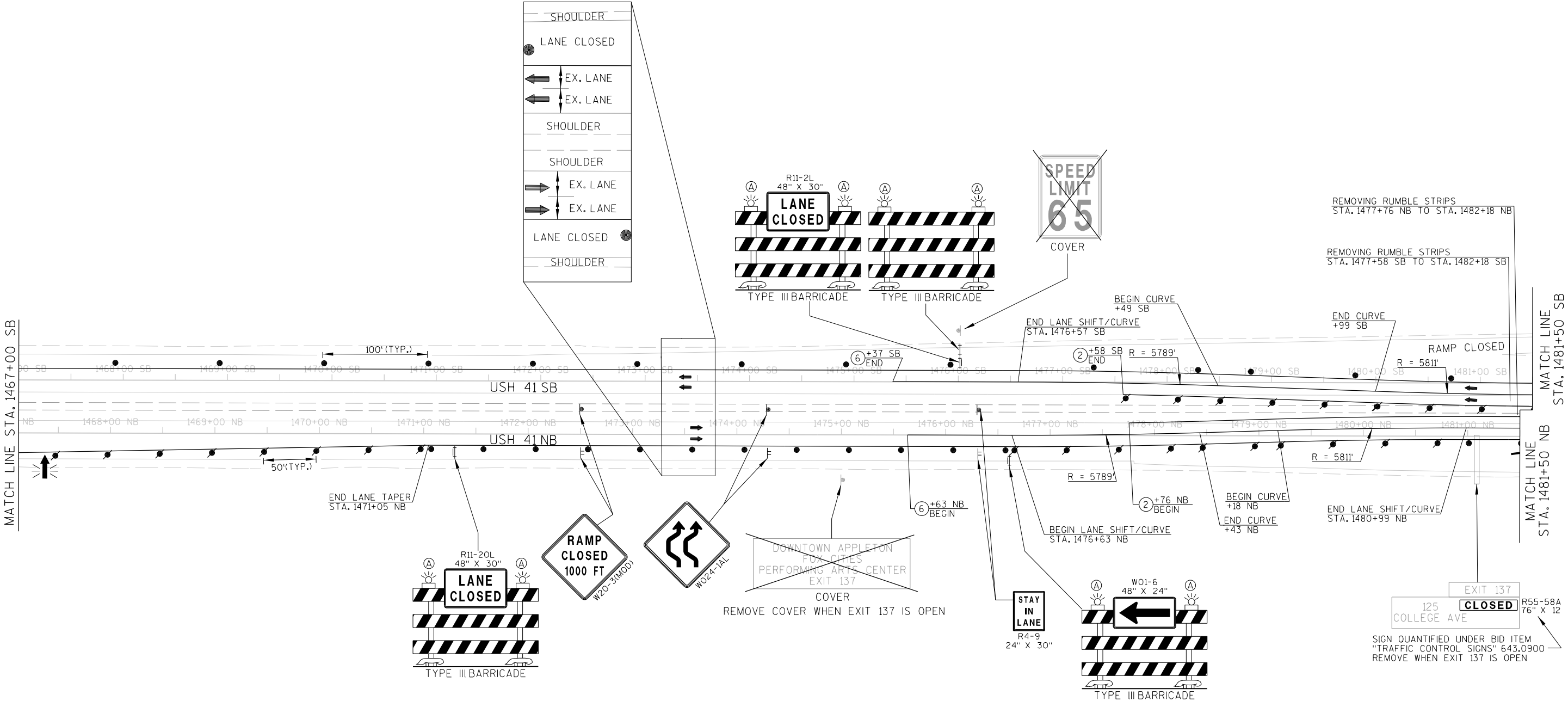




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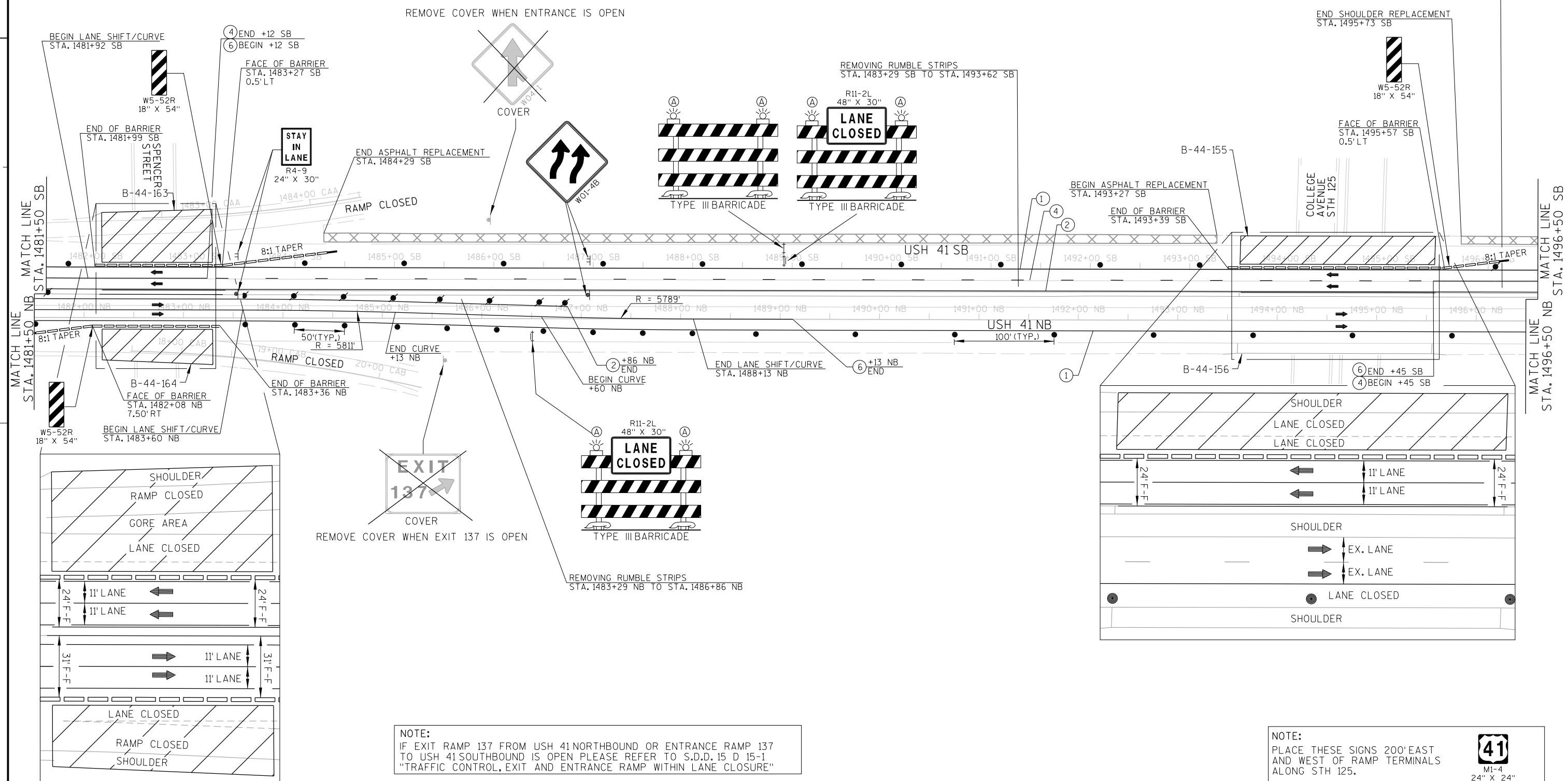




TRAFFIC CONTROL FOR STAGE 1 CONSTRUCTION LANES USH 41 NORTHBOUND AND SOUTHBOUND

2

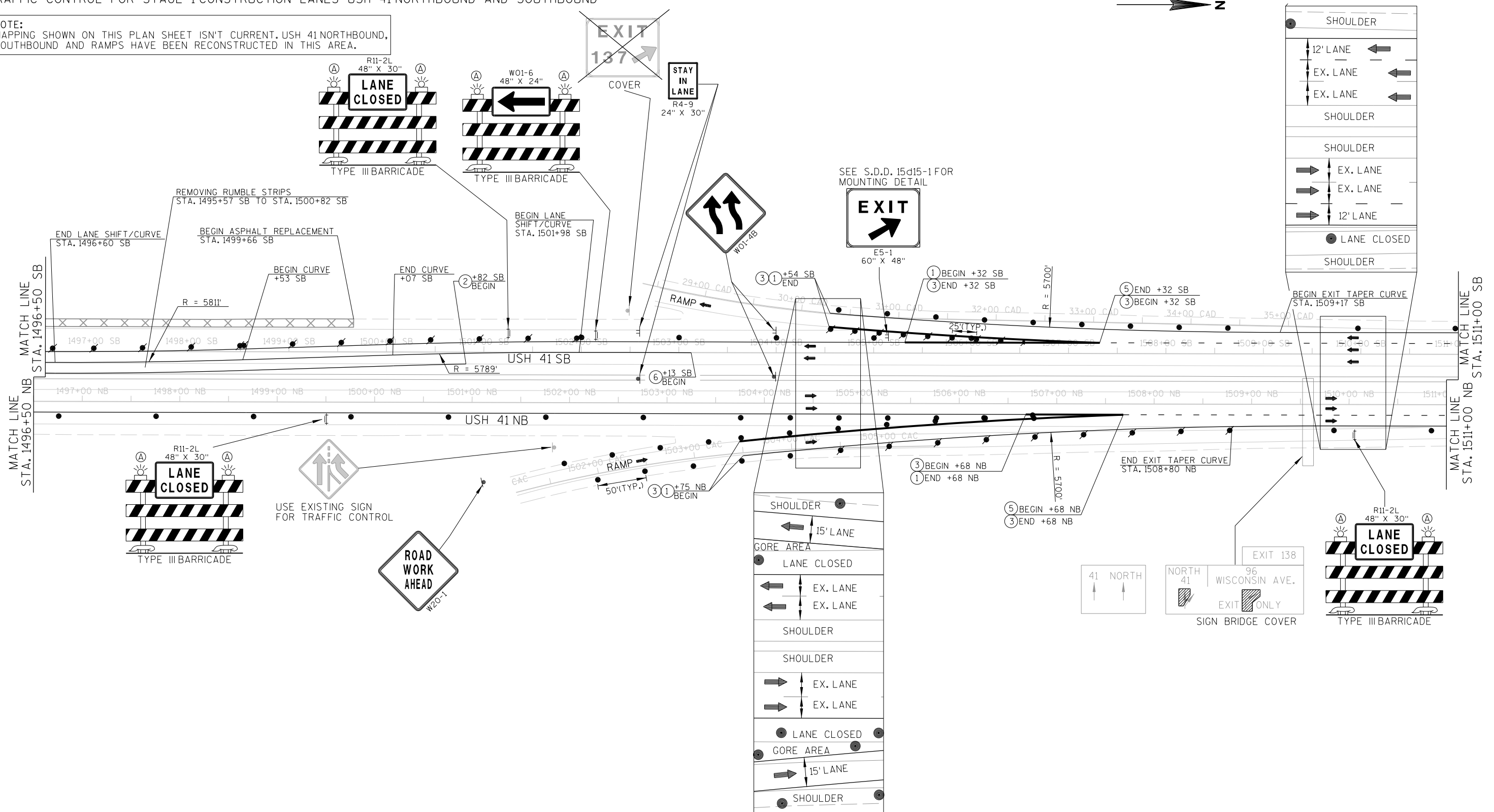
2



NOTE:
PLACE THESE SIGNS 200' EAST AND WEST OF RAMP TERMINALS ALONG STH 125.

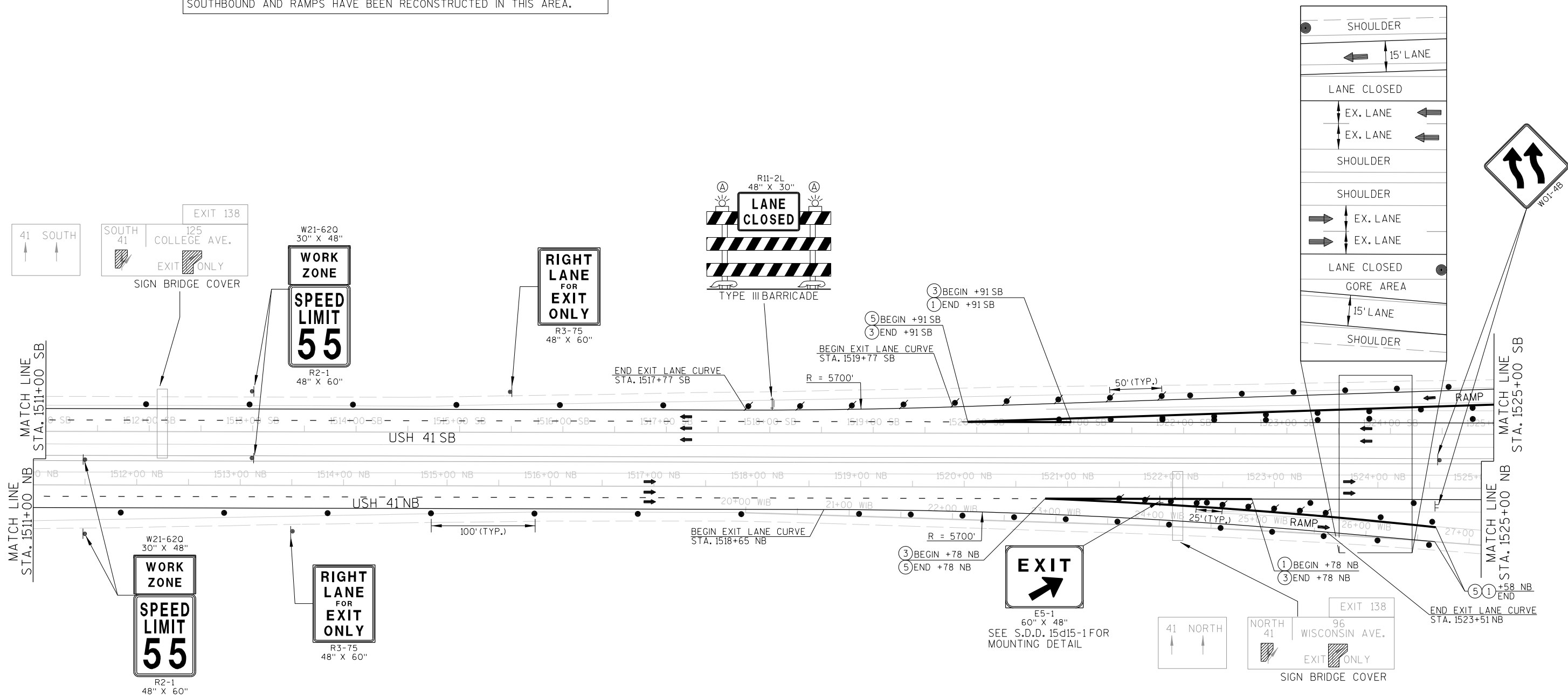
TRAFFIC CONTROL FOR STAGE 1 CONSTRUCTION LANES USH 41 NORTHBOUND AND SOUTHBOUND

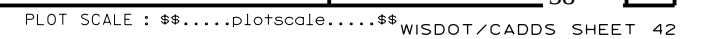
NOTE:
MAPPING SHOWN ON THIS PLAN SHEET ISN'T CURRENT. USH 41 NORTHBOUND,
SOUTHBOUND AND RAMPS HAVE BEEN RECONSTRUCTED IN THIS AREA.

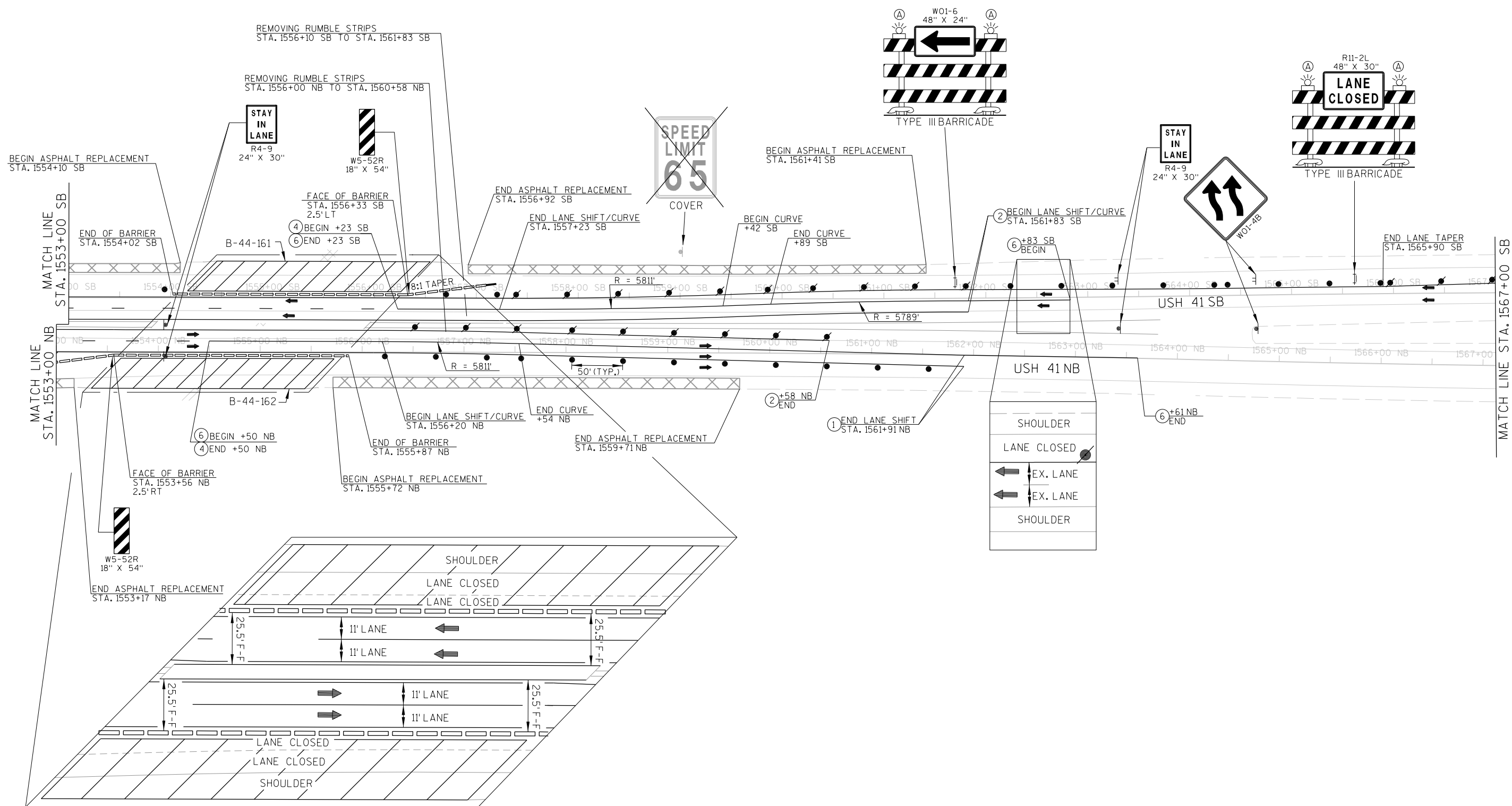


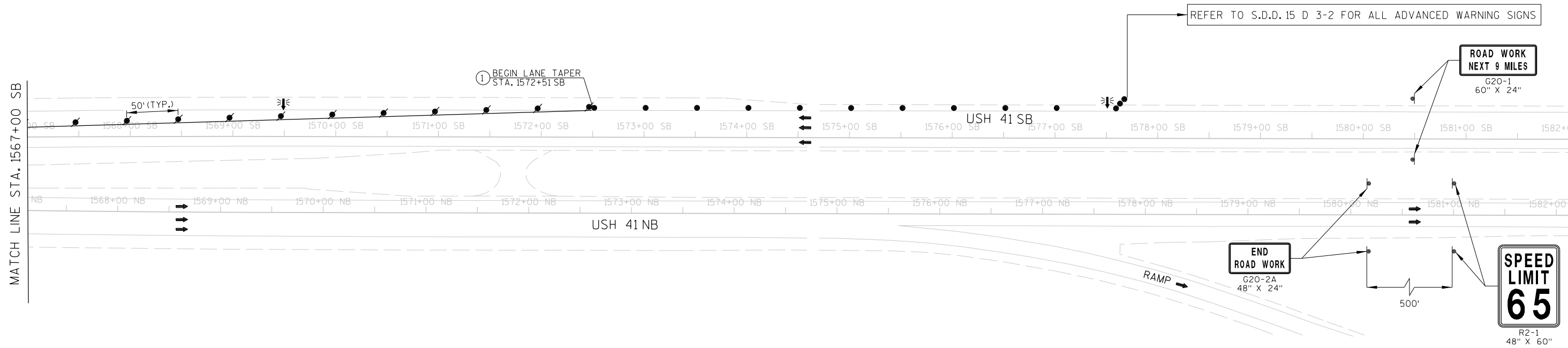
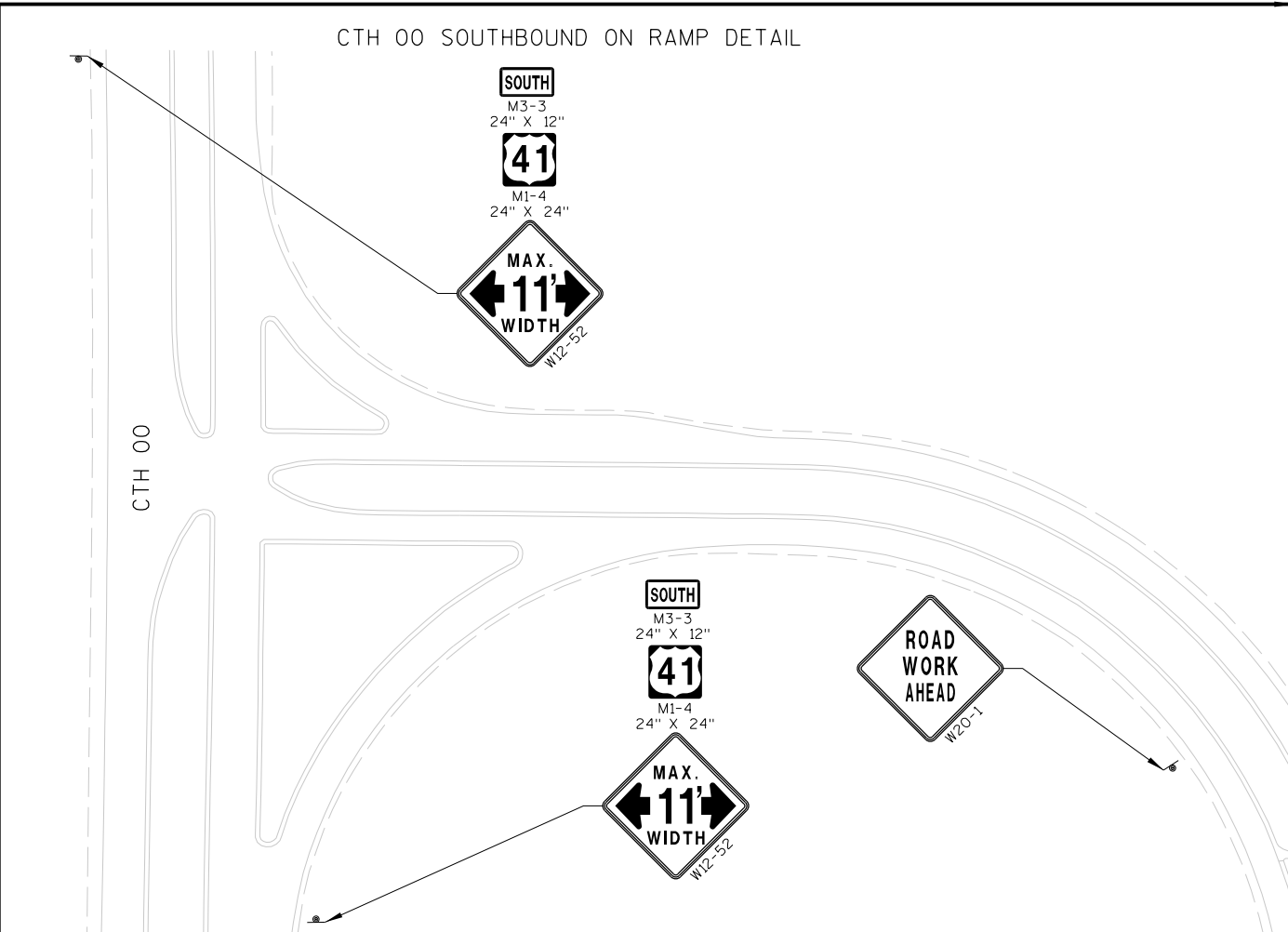


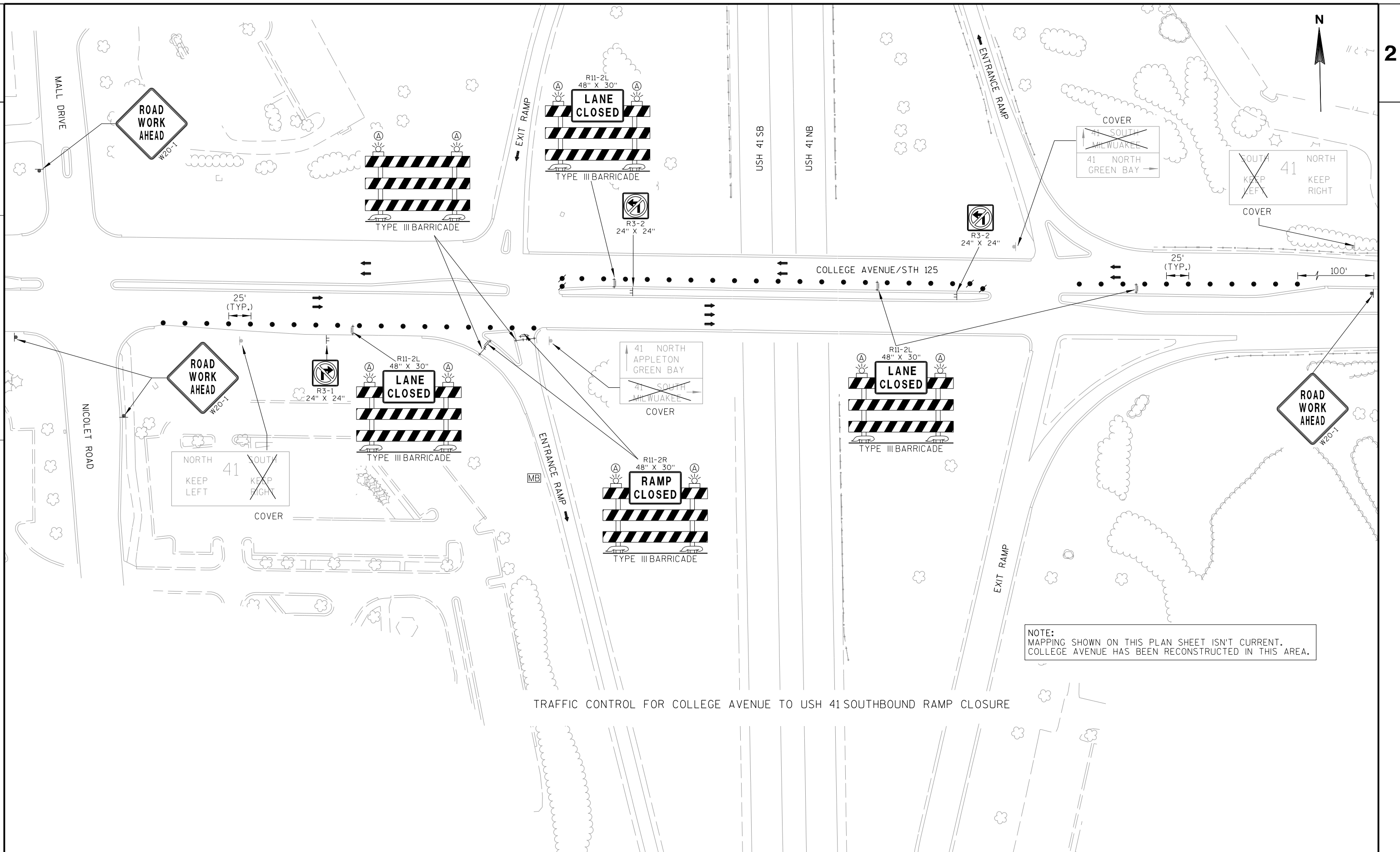
NOTE:
MAPPING SHOWN ON THIS PLAN SHEET ISN'T CURRENT. USH 41 NORTHBOUND,
SOUTHBOUND AND RAMP HAVE BEEN RECONSTRUCTED IN THIS AREA.

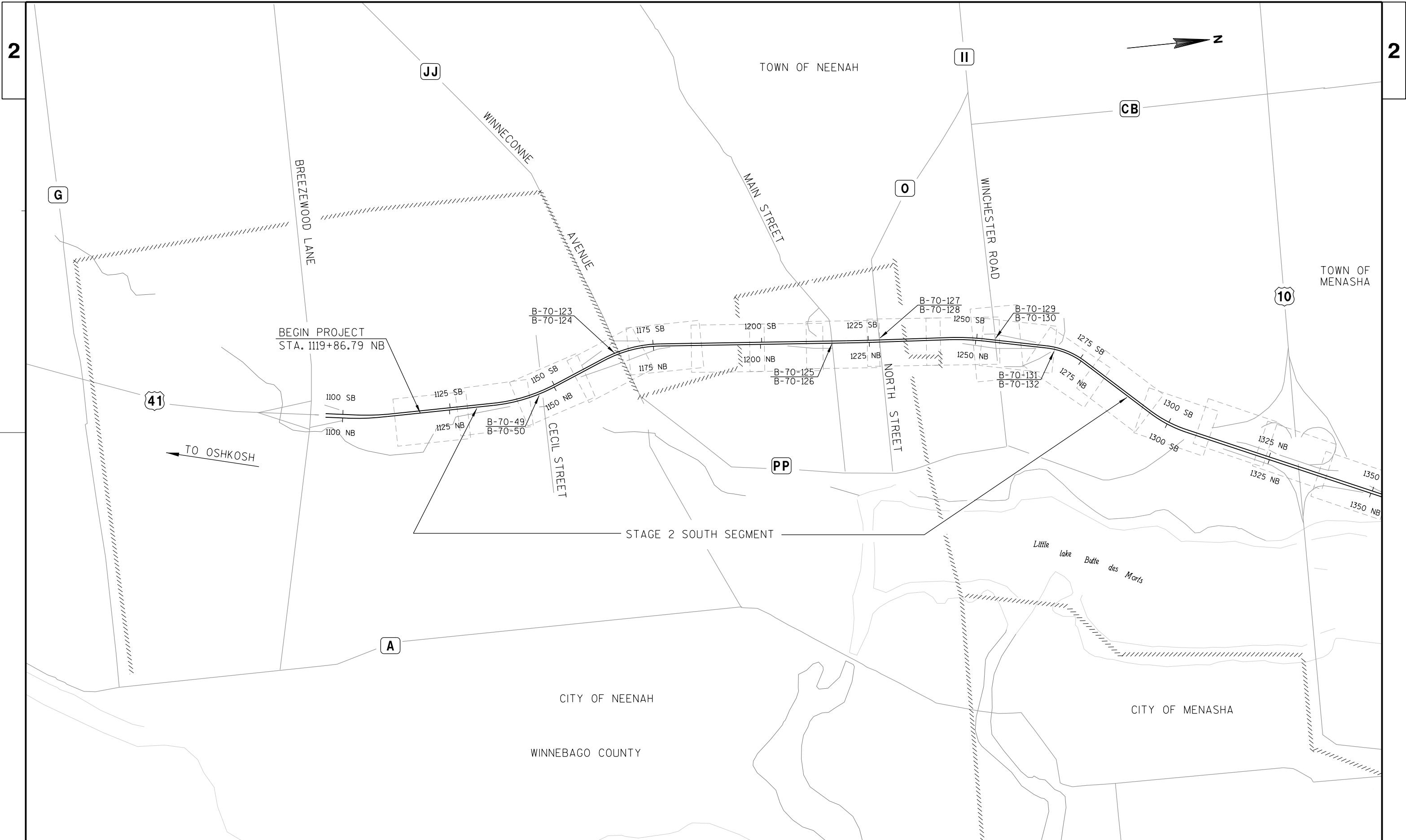






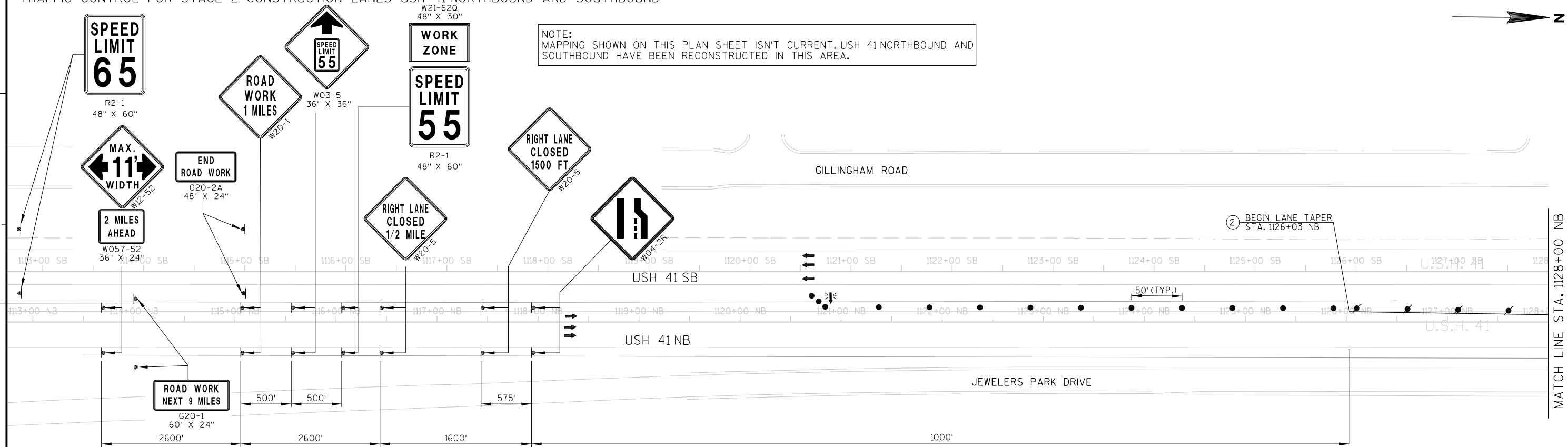




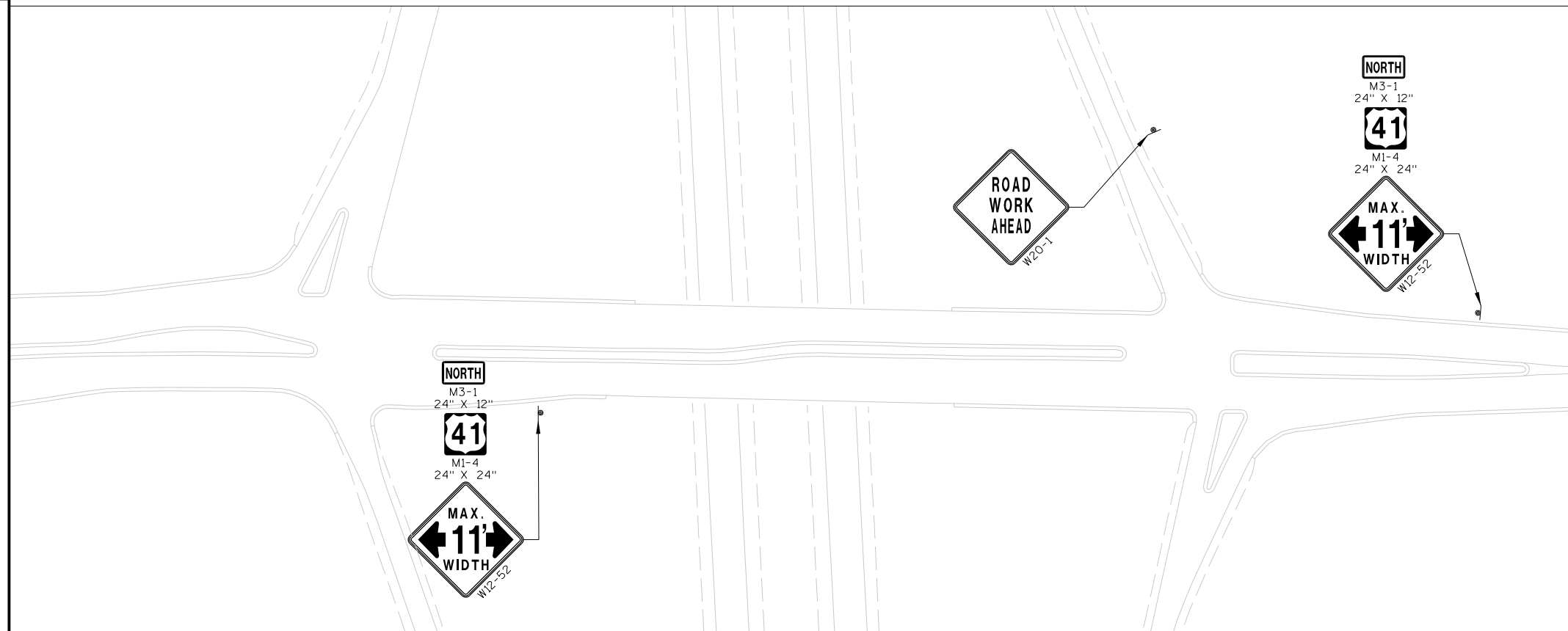


TRAFFIC CONTROL FOR STAGE 2 CONSTRUCTION LANES USH 41 NORTHBOUND AND SOUTHBOUND

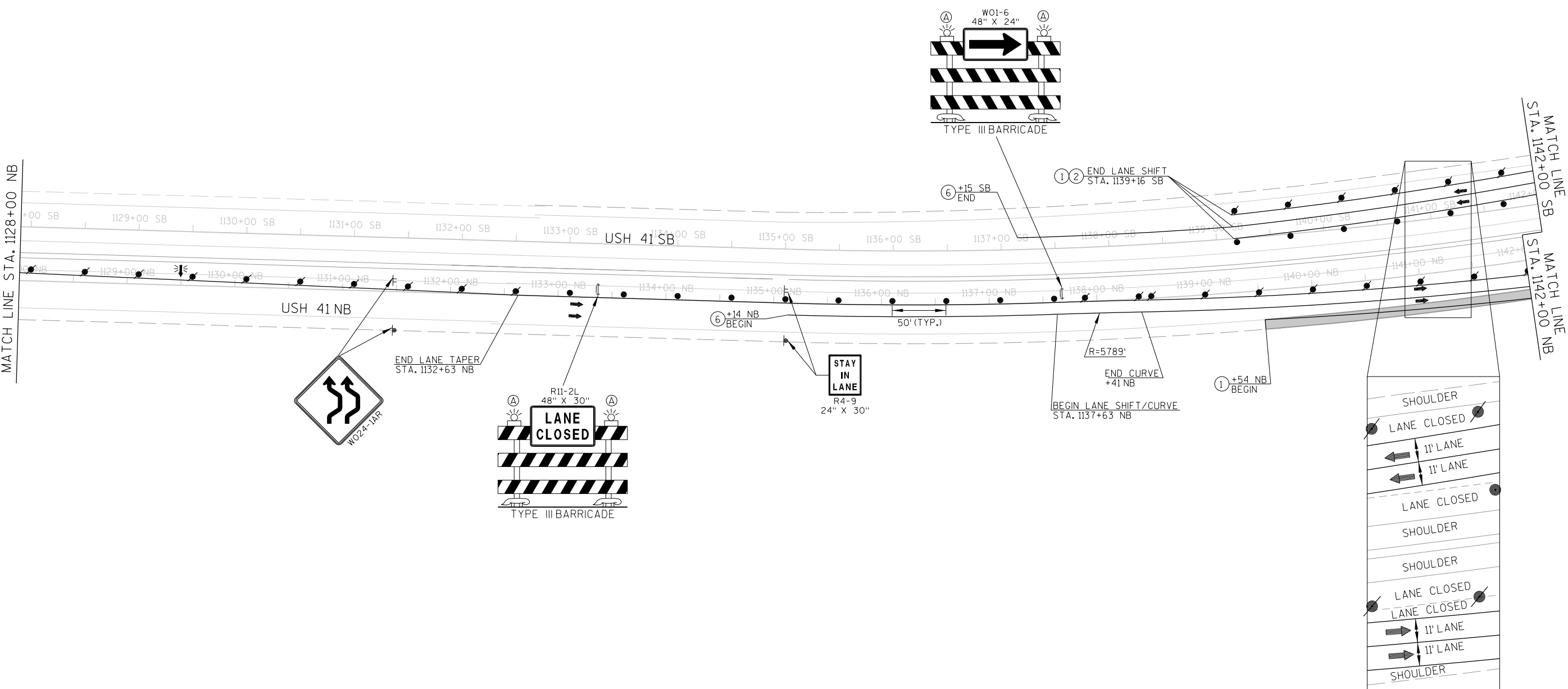
2



2



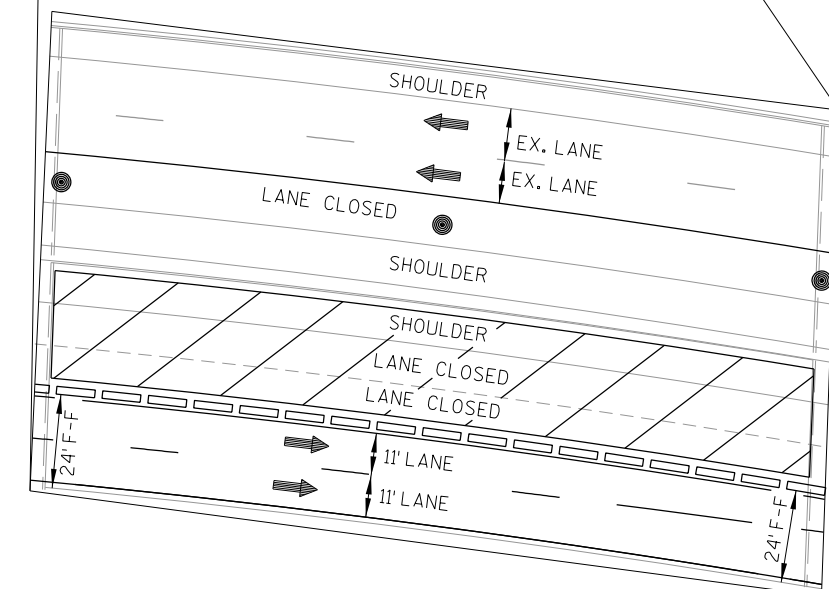
BREEZEWOOD LANE NORTHBOUND ON RAMP DETAIL

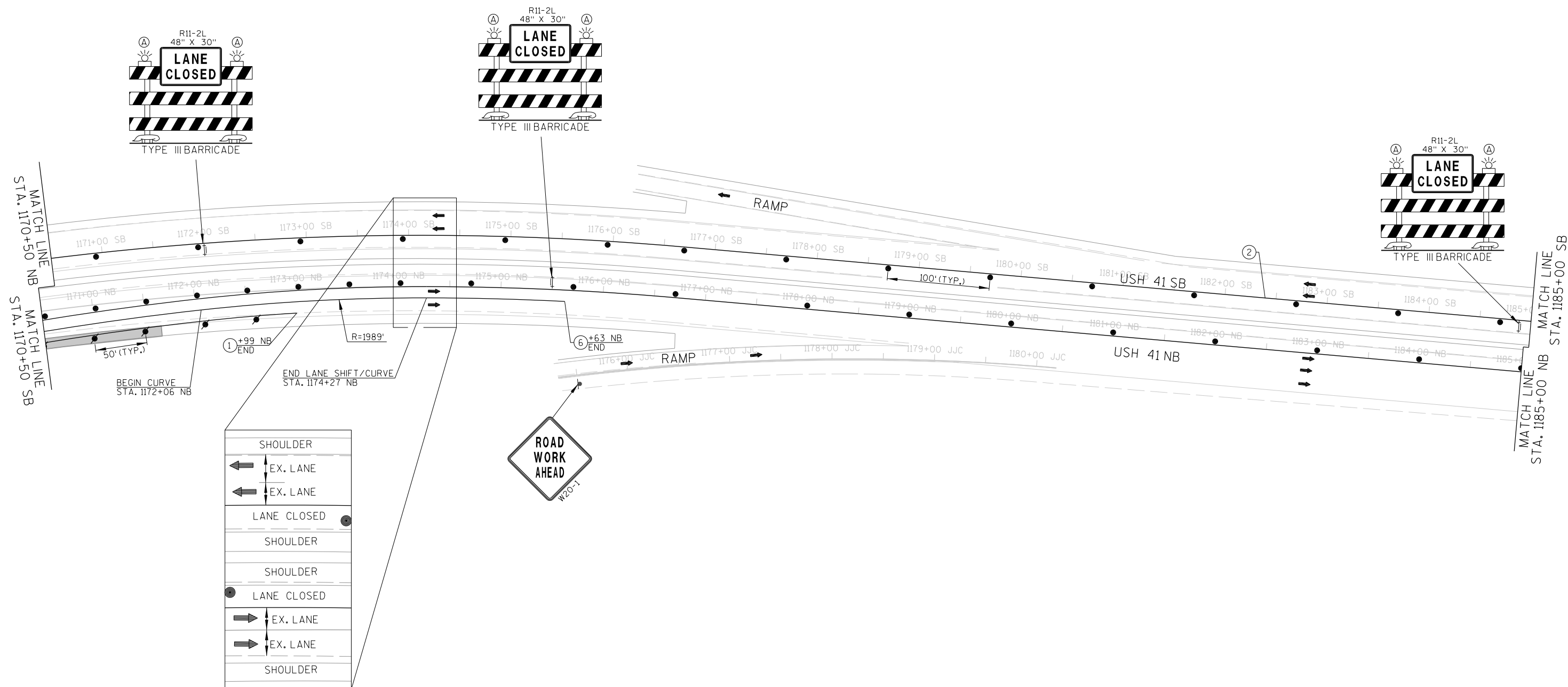


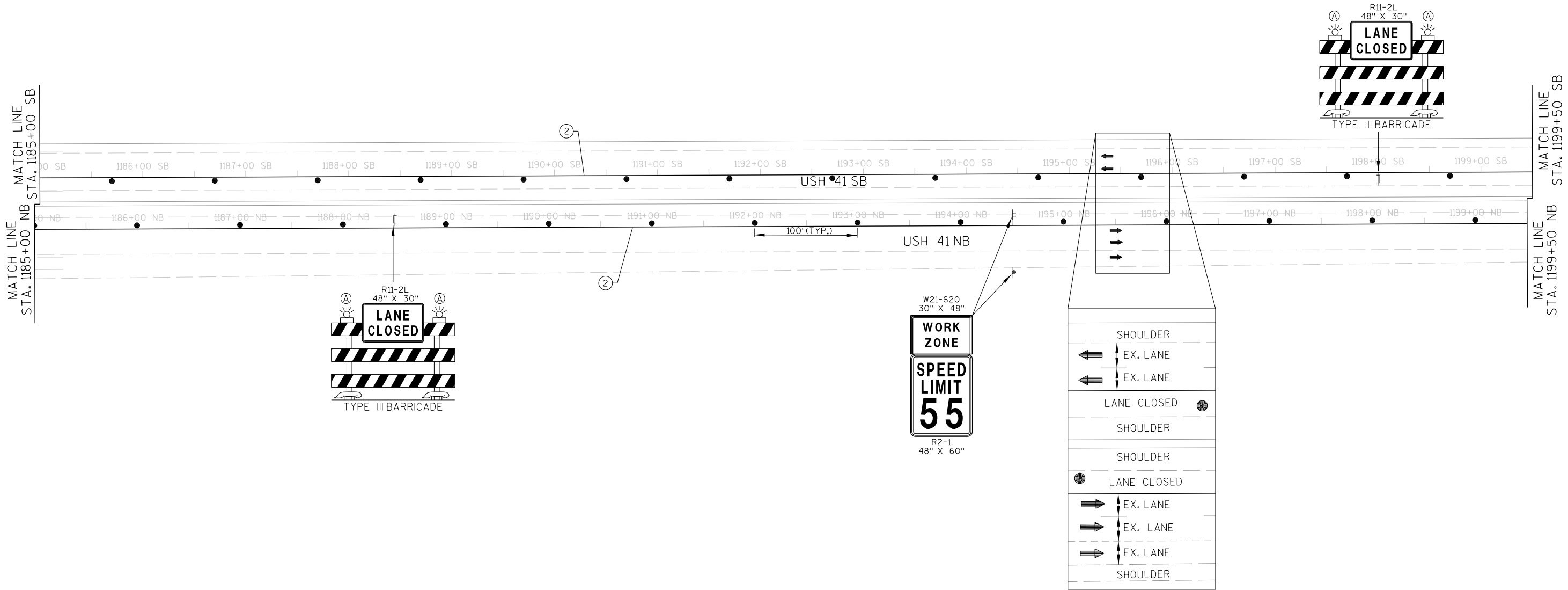


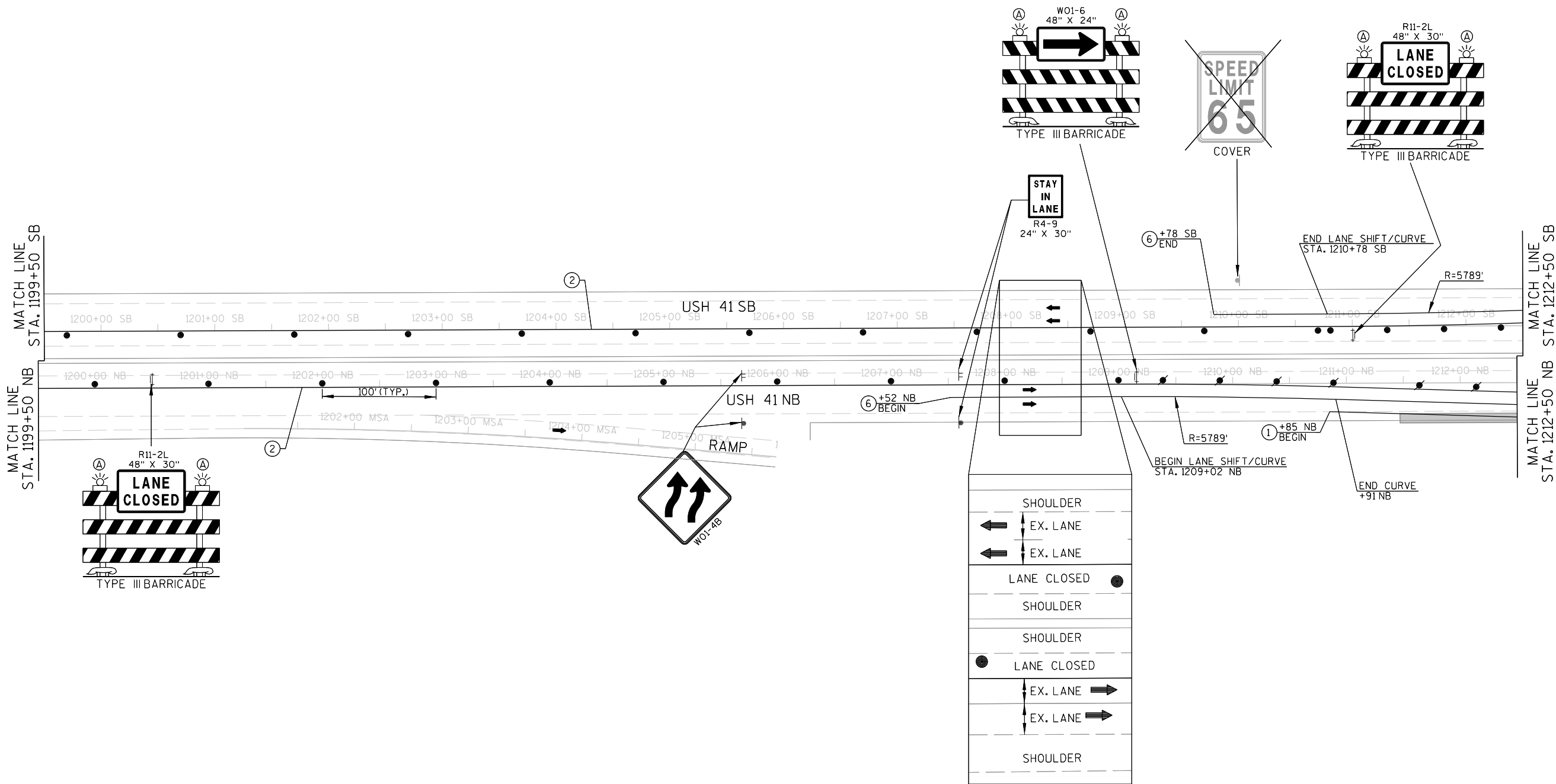


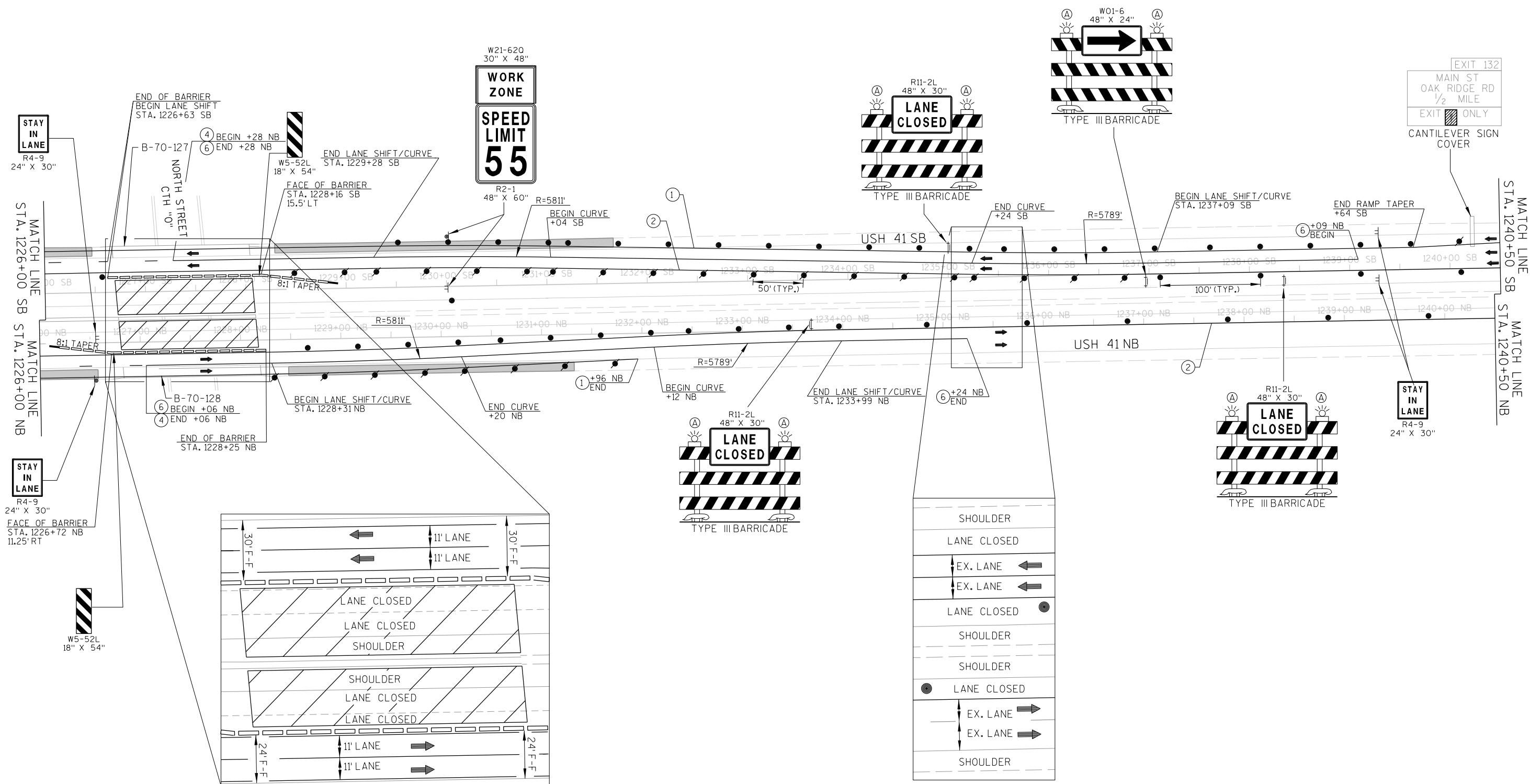
MAX.
11'
WIDTH







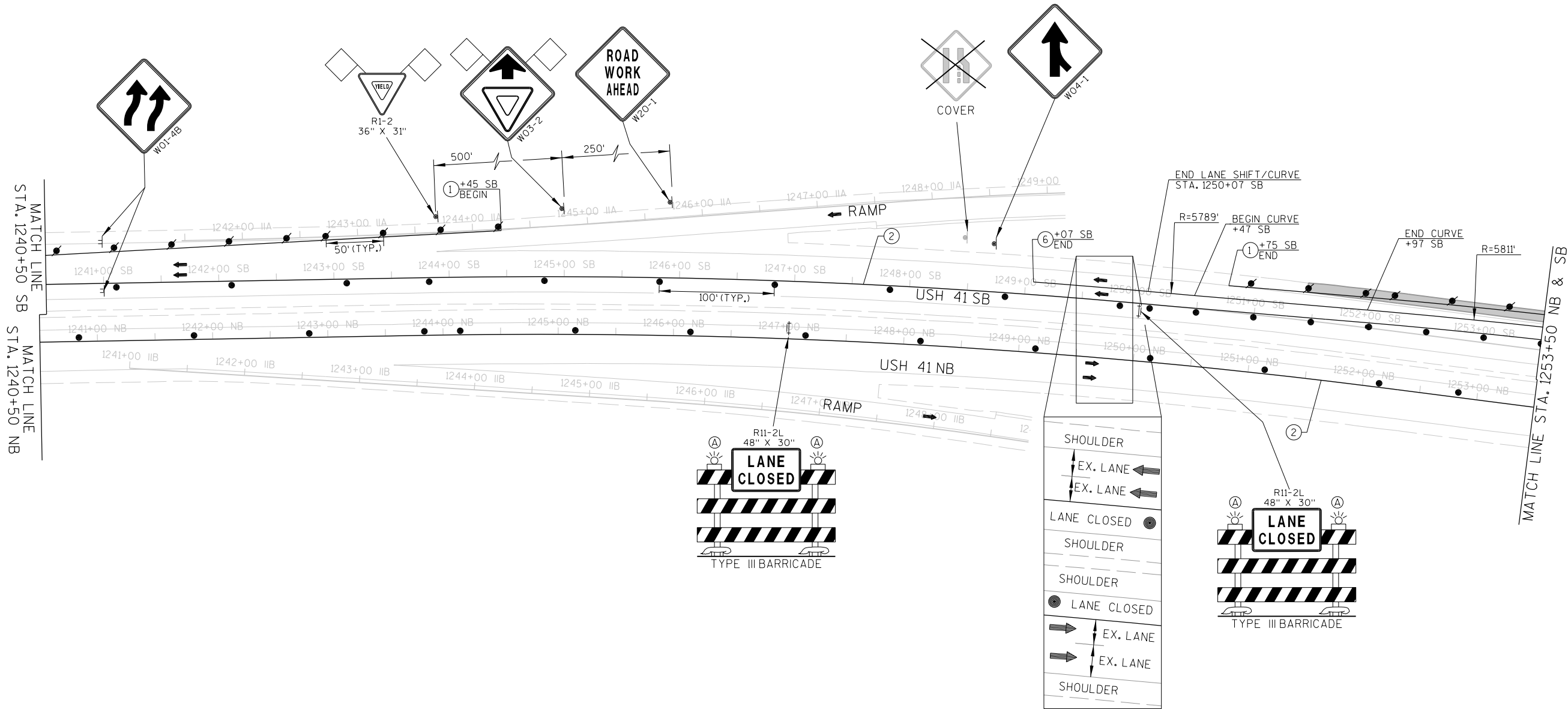




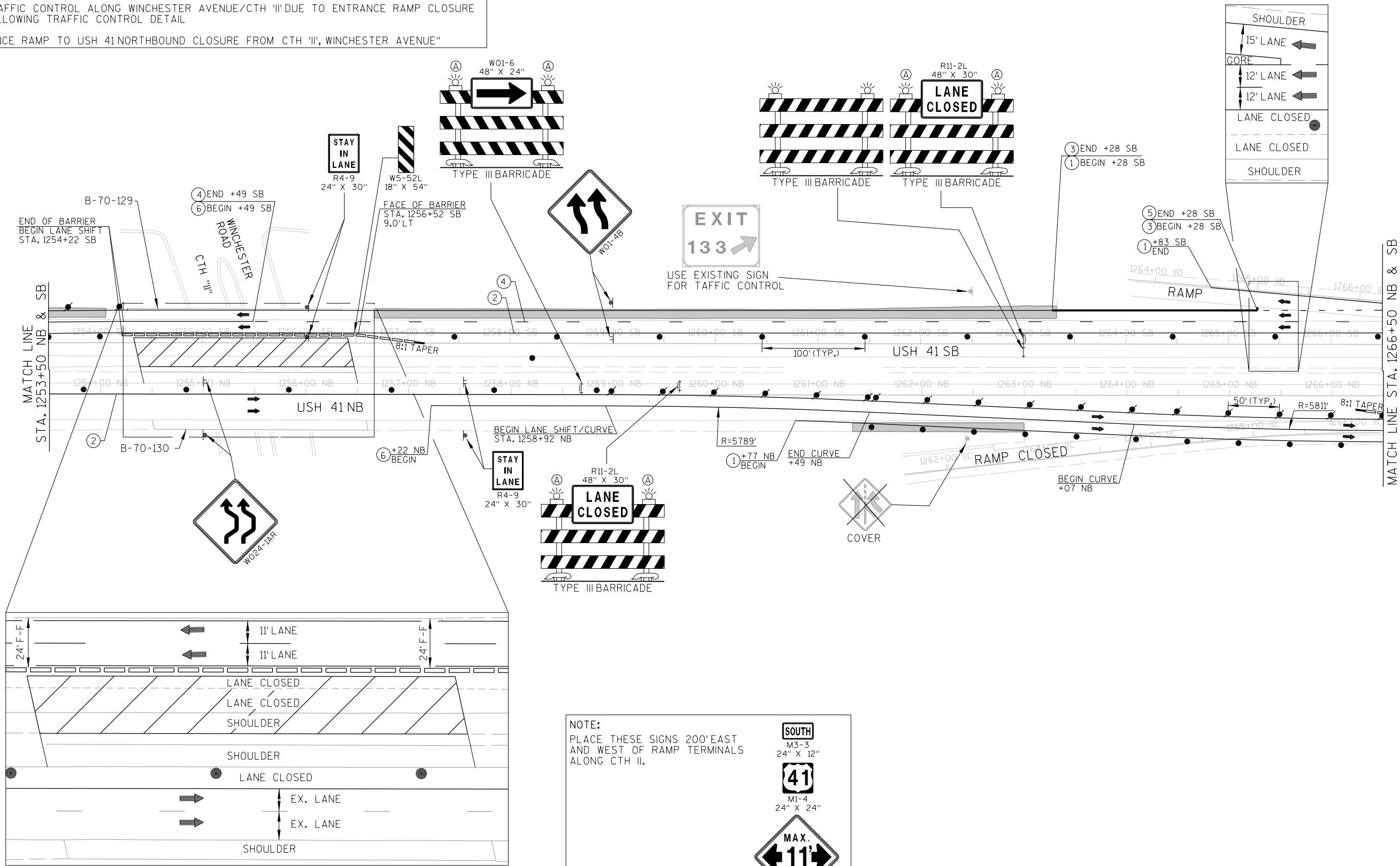


2

2



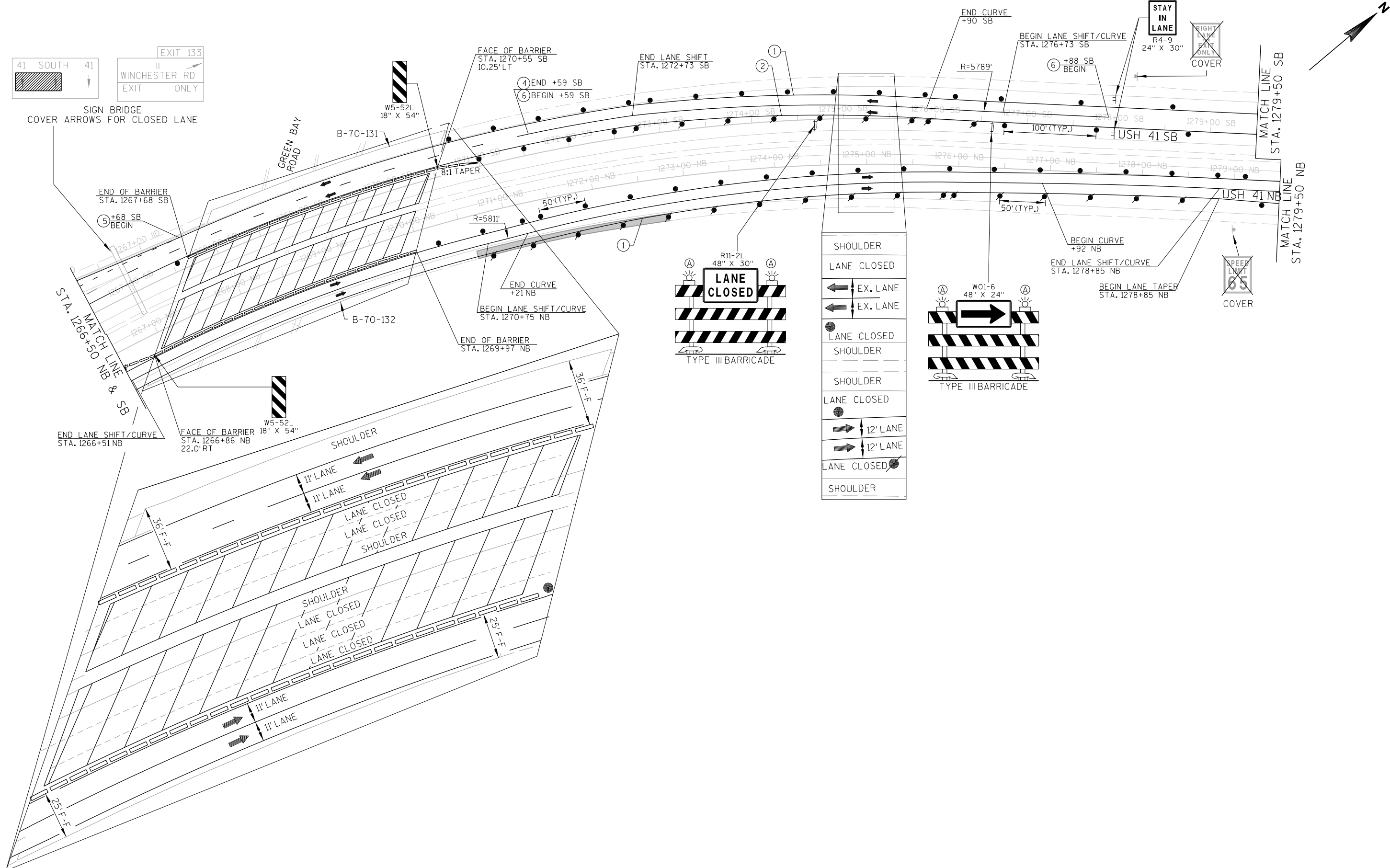
NOTE:
FOR TRAFFIC CONTROL ALONG WINCHESTER AVENUE/CTH "II" DUE TO ENTRANCE RAMP CLOSURE
SEE FOLLOWING TRAFFIC CONTROL DETAIL
"ENTRANCE RAMP TO USH 41 NORTHBOUND CLOSURE FROM CTH "II", WINCHESTER AVENUE"



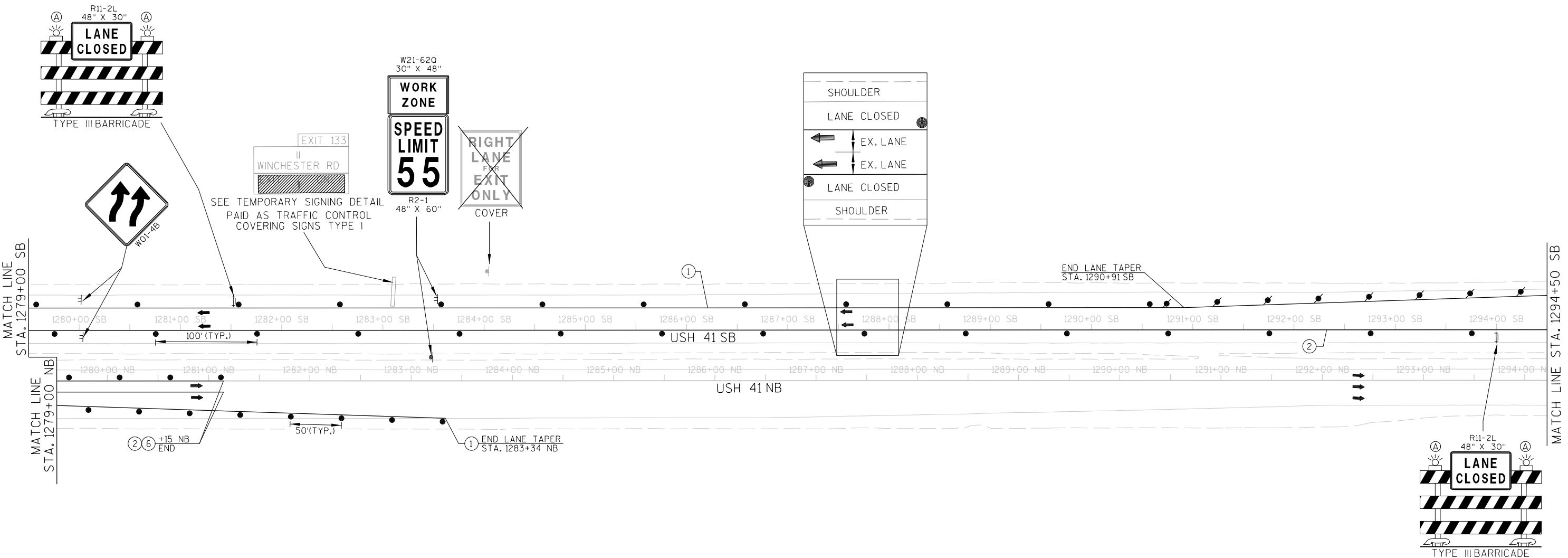
NOTE:
PLACE THESE SIGNS 200' EAST
AND WEST OF RAMP TERMINALS
ALONG CTH II.

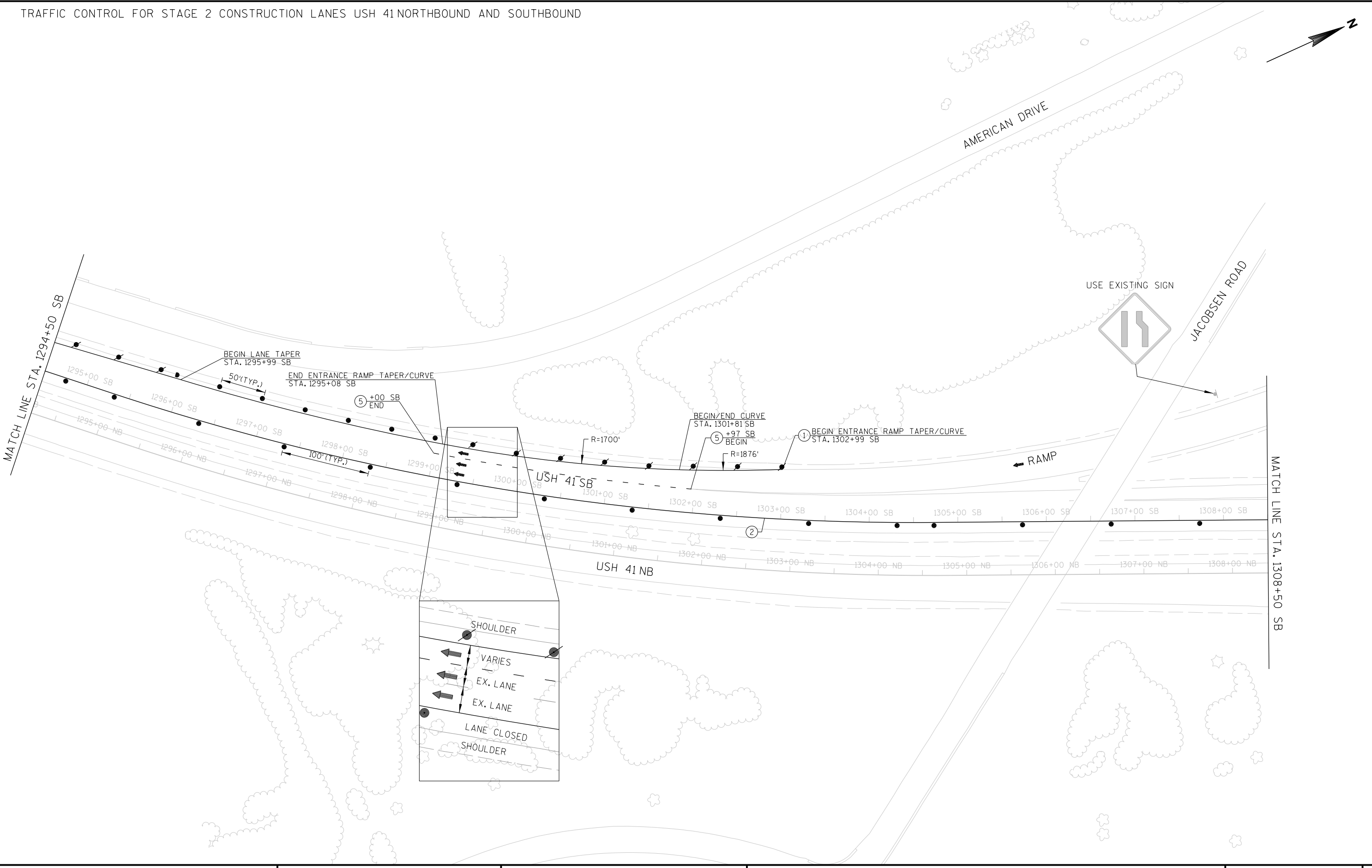
SOUTH
M3-3
24" X 12"
41
M1-4
24" X 24"
MAX. 11' WIDTH
W2-52

2



2





TRAFFIC CONTROL FOR STAGE 2 CONSTRUCTION LANES USH 41 NORTHBOUND AND SOUTHBOUND

NOTE:

SOUTH

M3-3

24" X 12"

41

M1-4

24" X 24"

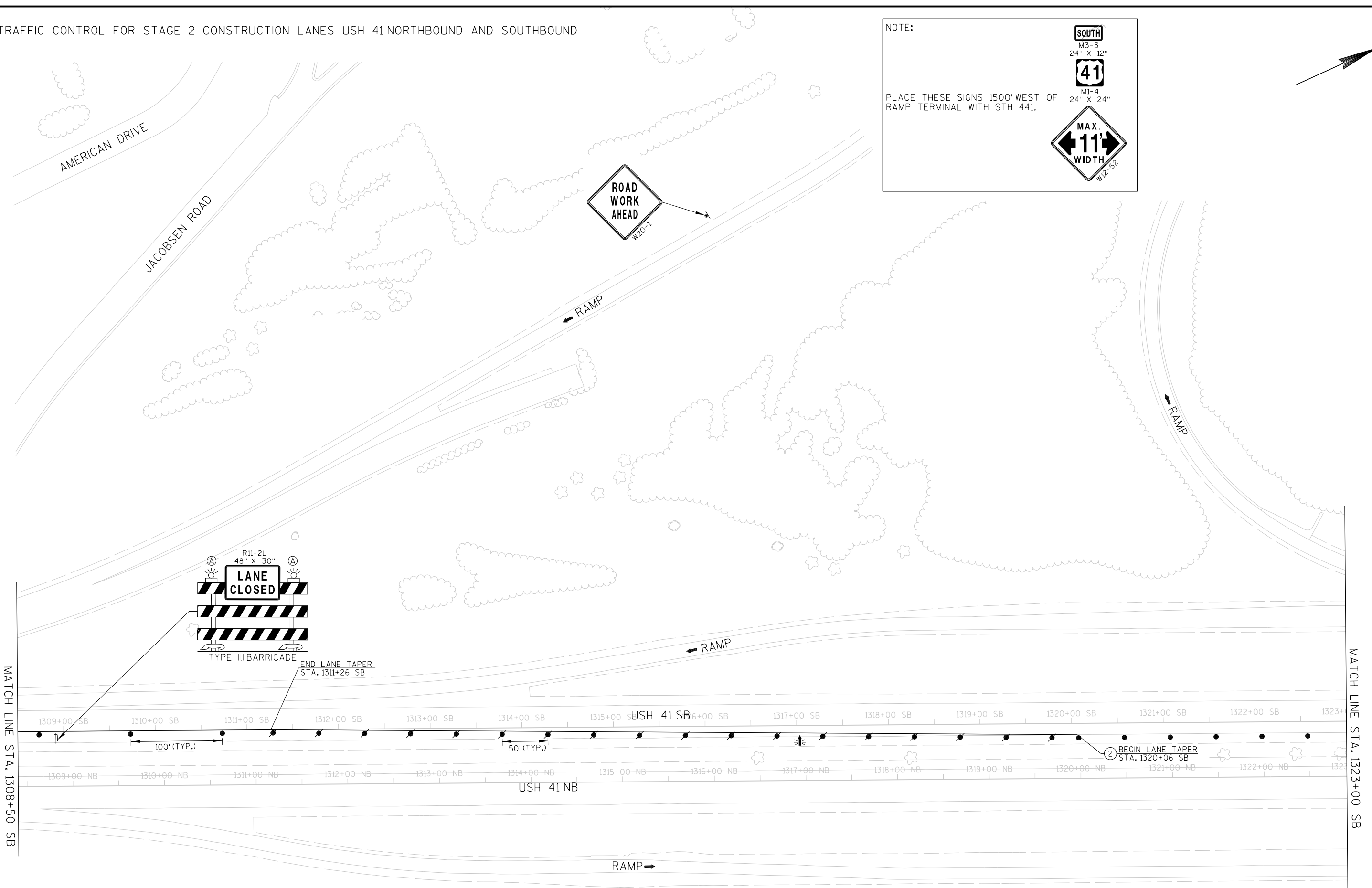
PLACE THESE SIGNS 1500' WEST OF RAMP TERMINAL WITH STH 441.

MAX.

11'

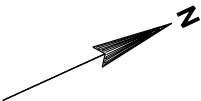
WIDTH

W12-52

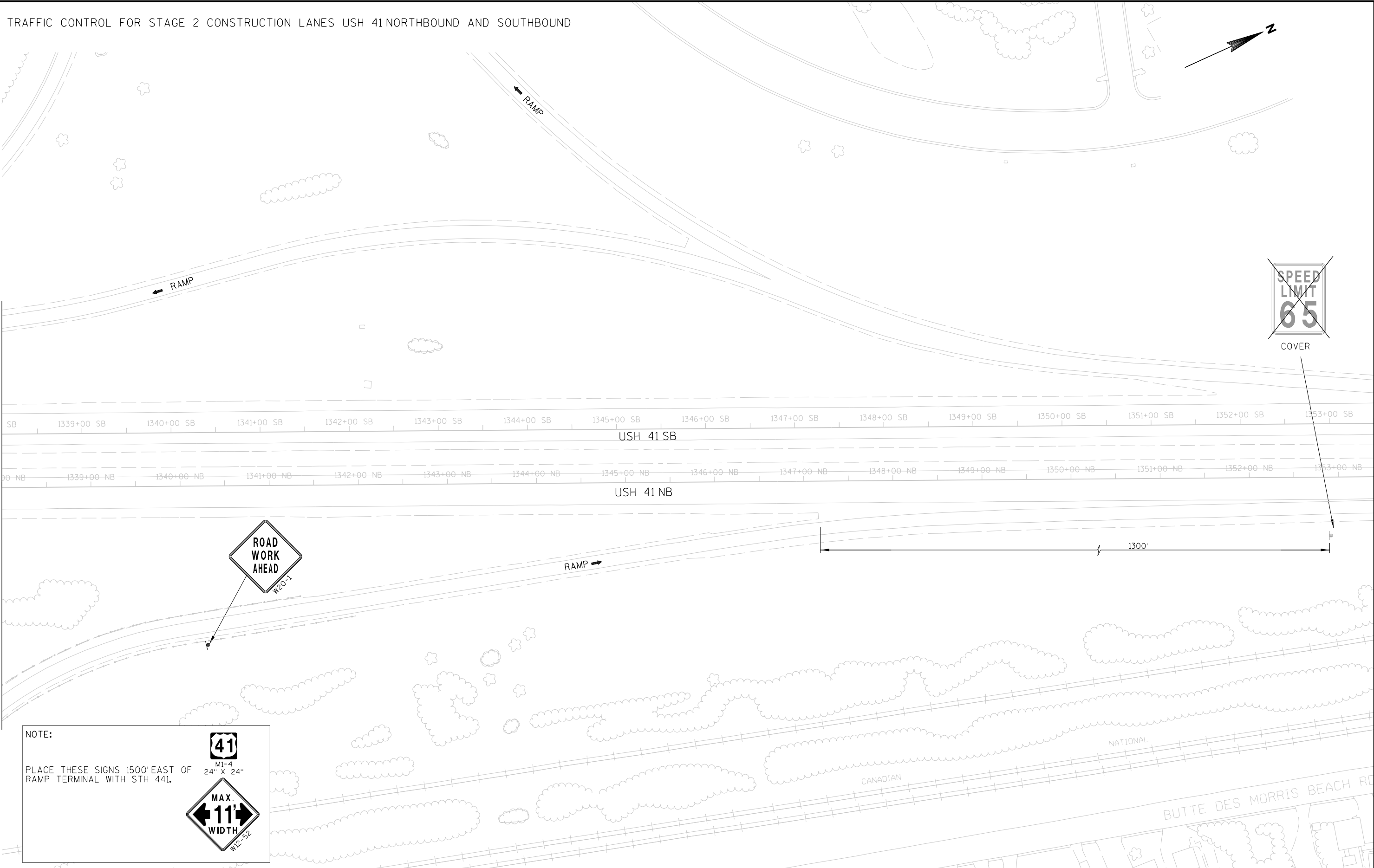




TRAFFIC CONTROL FOR STAGE 2 CONSTRUCTION LANES USH 41 NORTHBOUND AND SOUTHBOUND



MATCH LINE STA. 1338+00 NB



NOTE:

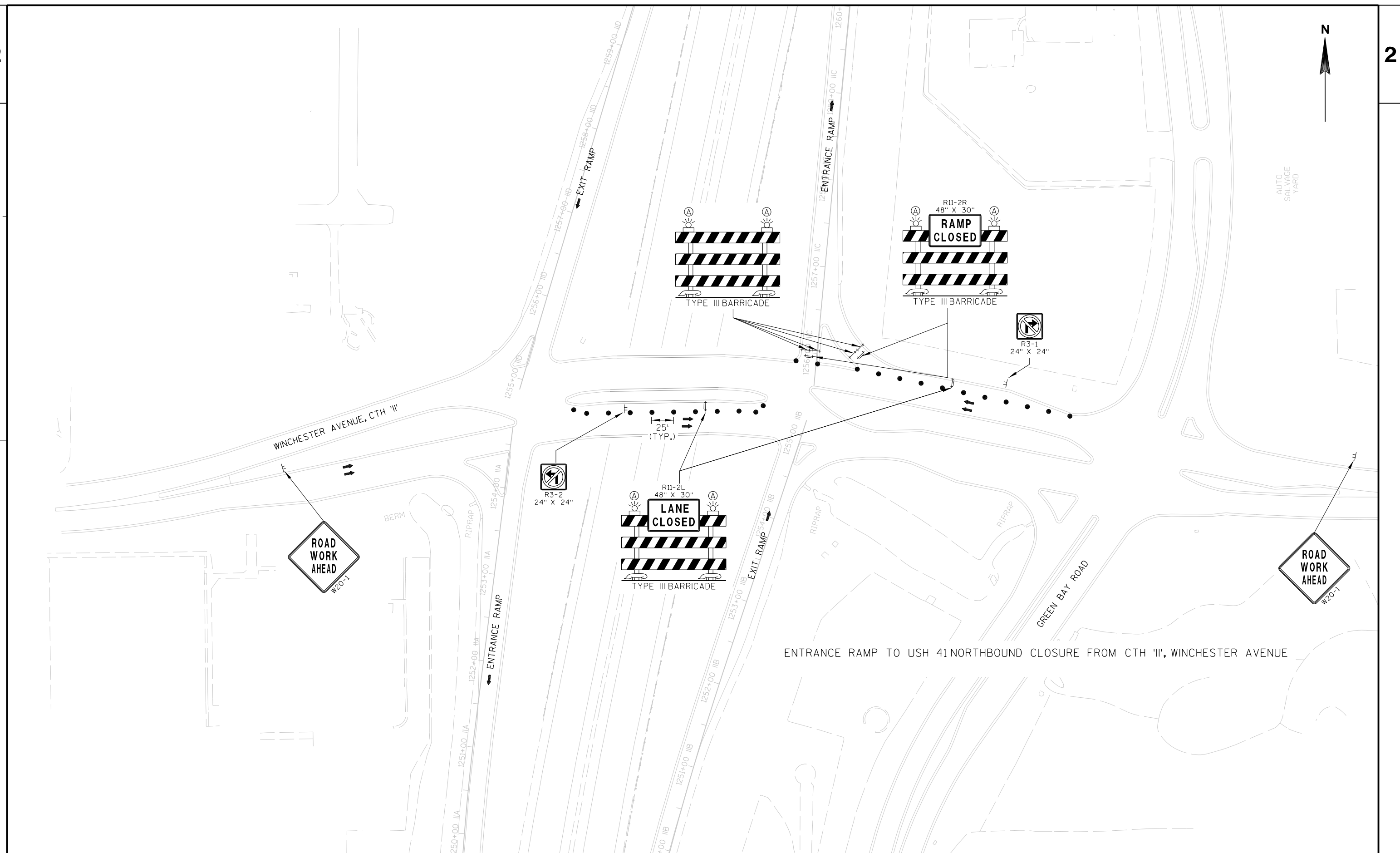
PLACE THESE SIGNS 1500' EAST OF RAMP TERMINAL WITH STH 441.

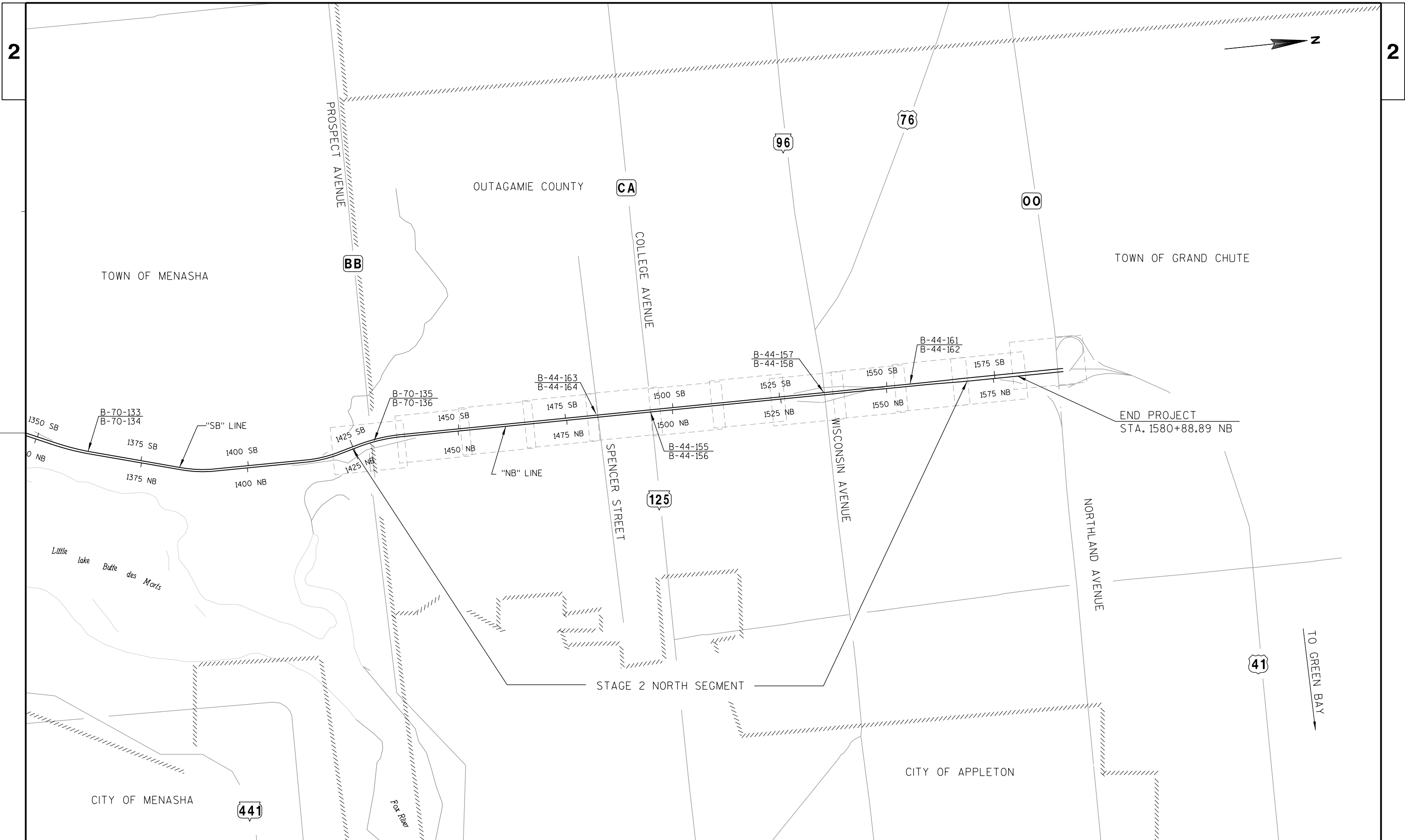
41

M1-4
24" X 24"

MAX.
11'
WIDTH

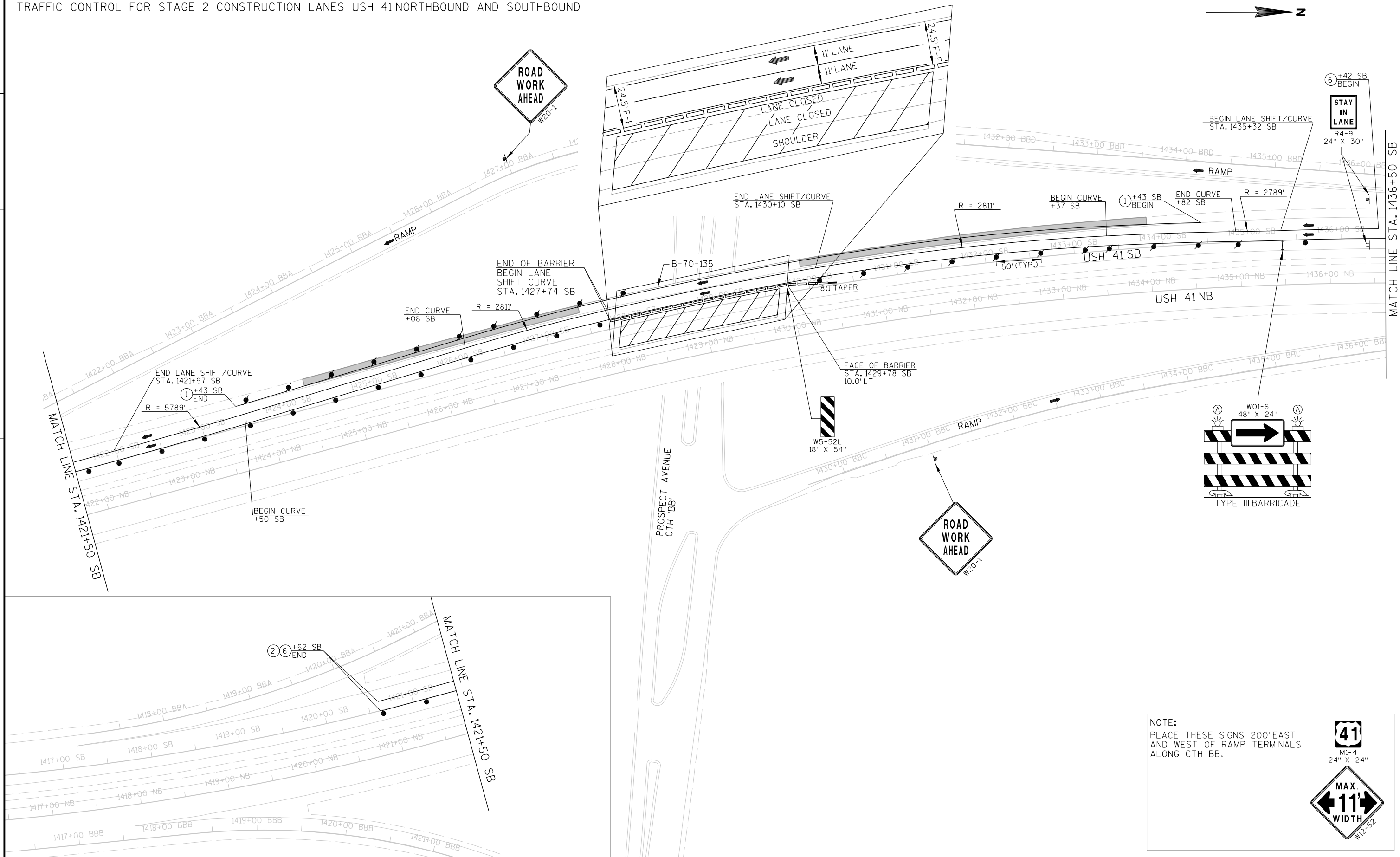
W2-52



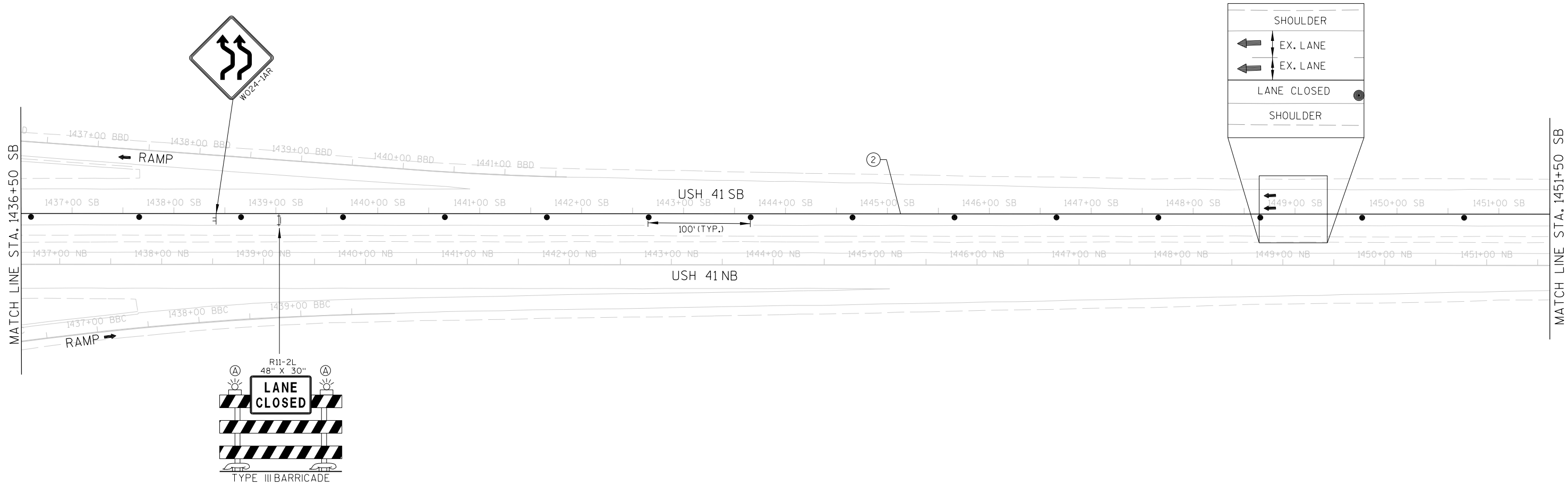


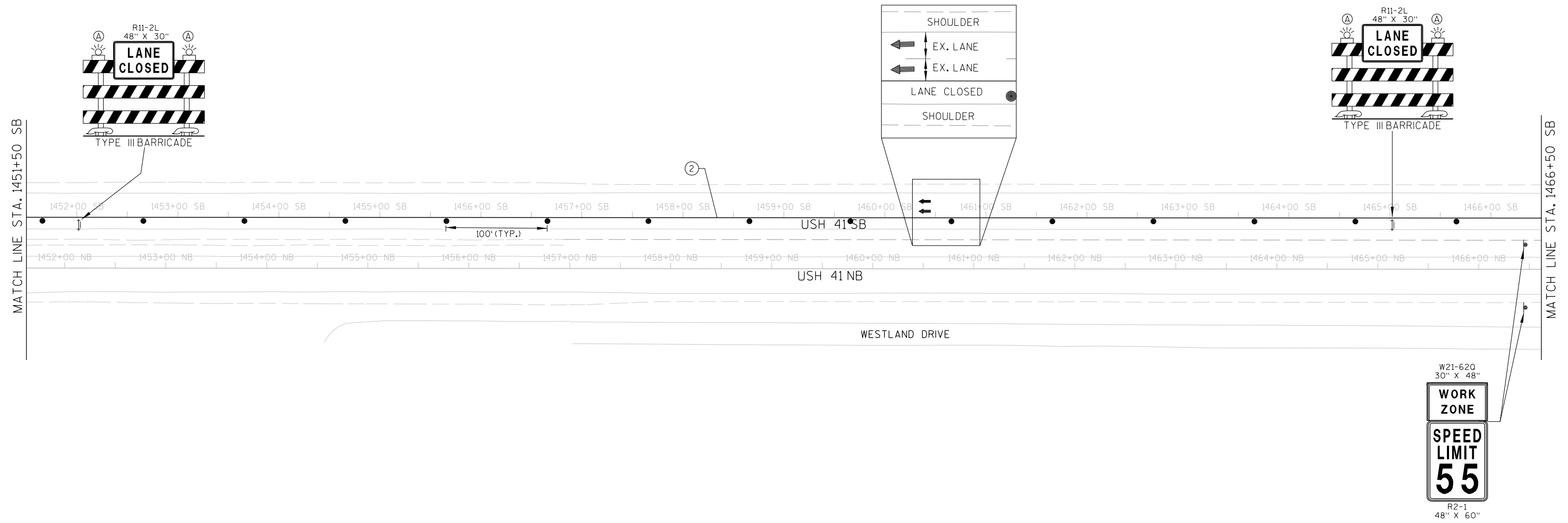
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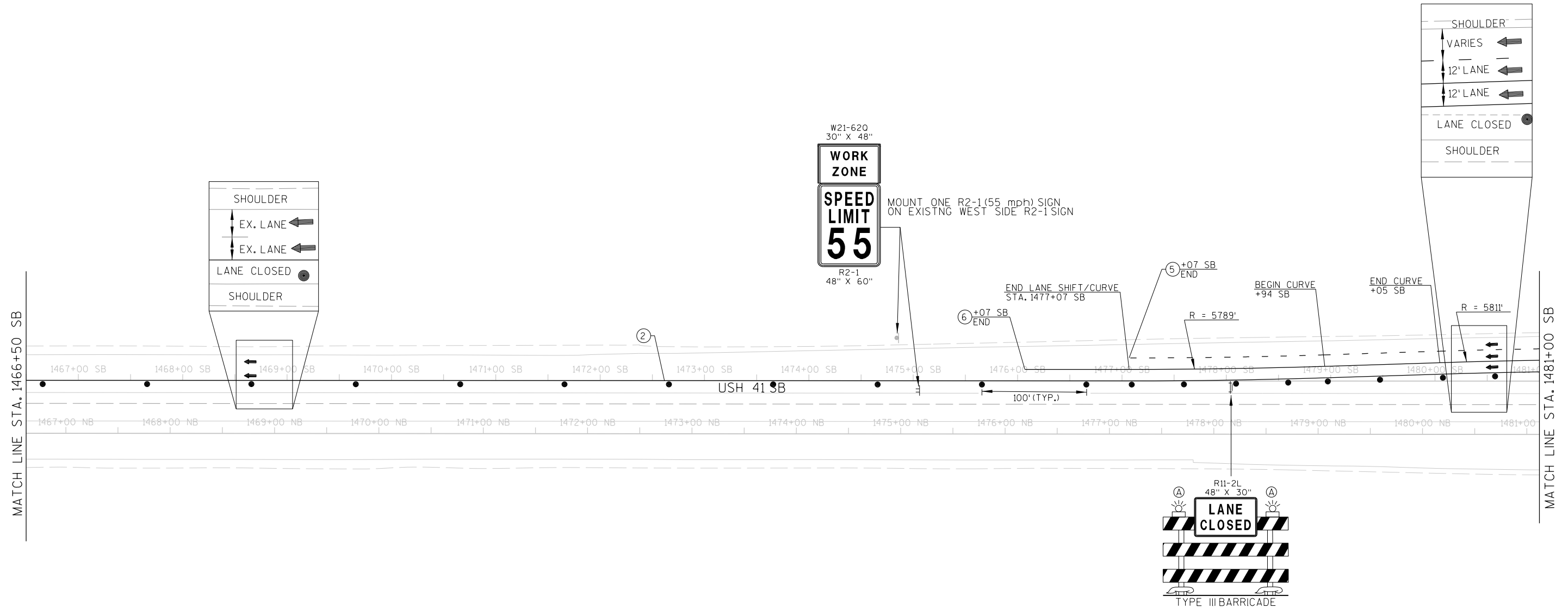
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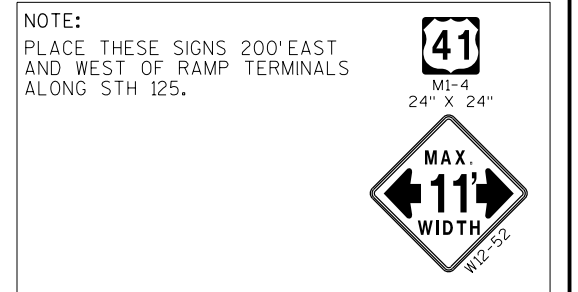


TRAFFIC CONTROL FOR STAGE 2 CONSTRUCTION LANES USH 41 NORTHBOUND AND SOUTHBOUND

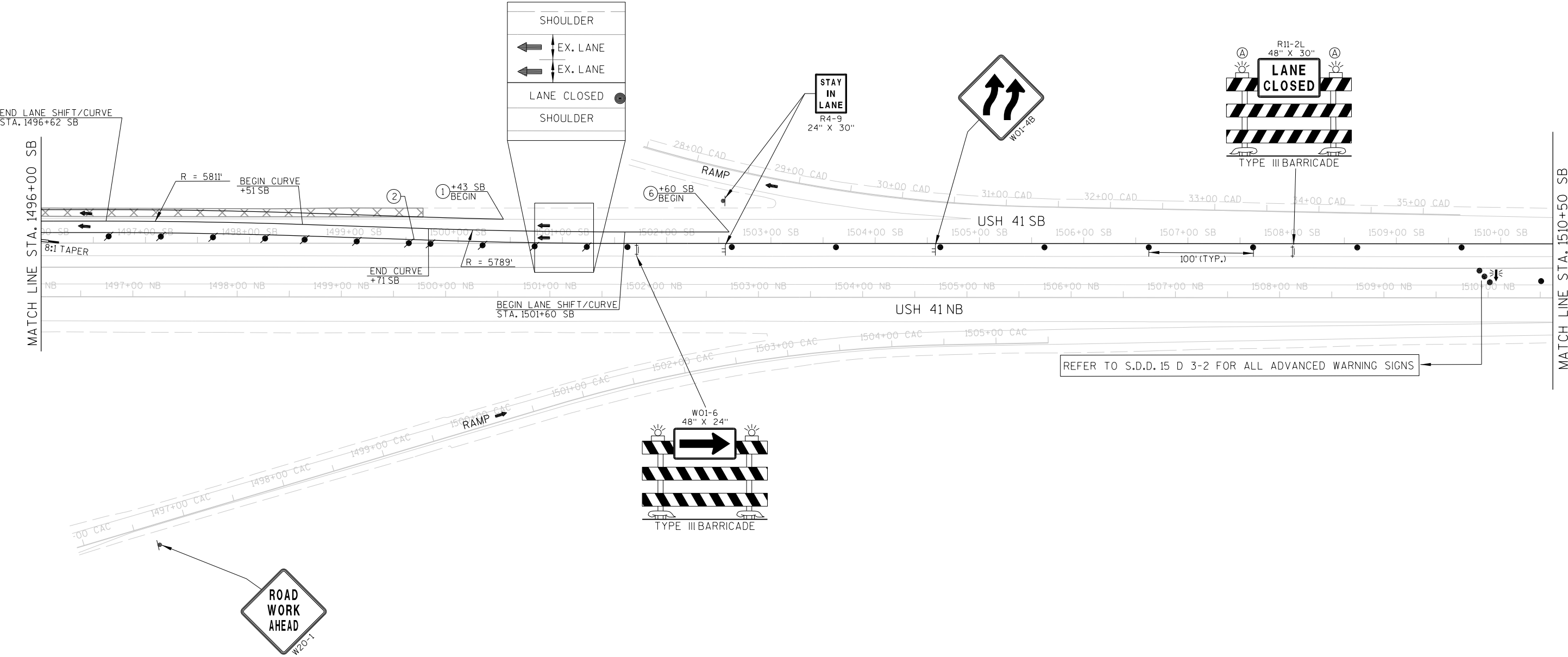




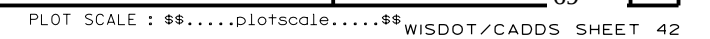




NOTE:
MAPPING SHOWN ON THIS PLAN SHEET ISN'T CURRENT. USH 41 NORTHBOUND,
SOUTHBOUND AND RAMP HAVE BEEN RECONSTRUCTED IN THIS AREA.

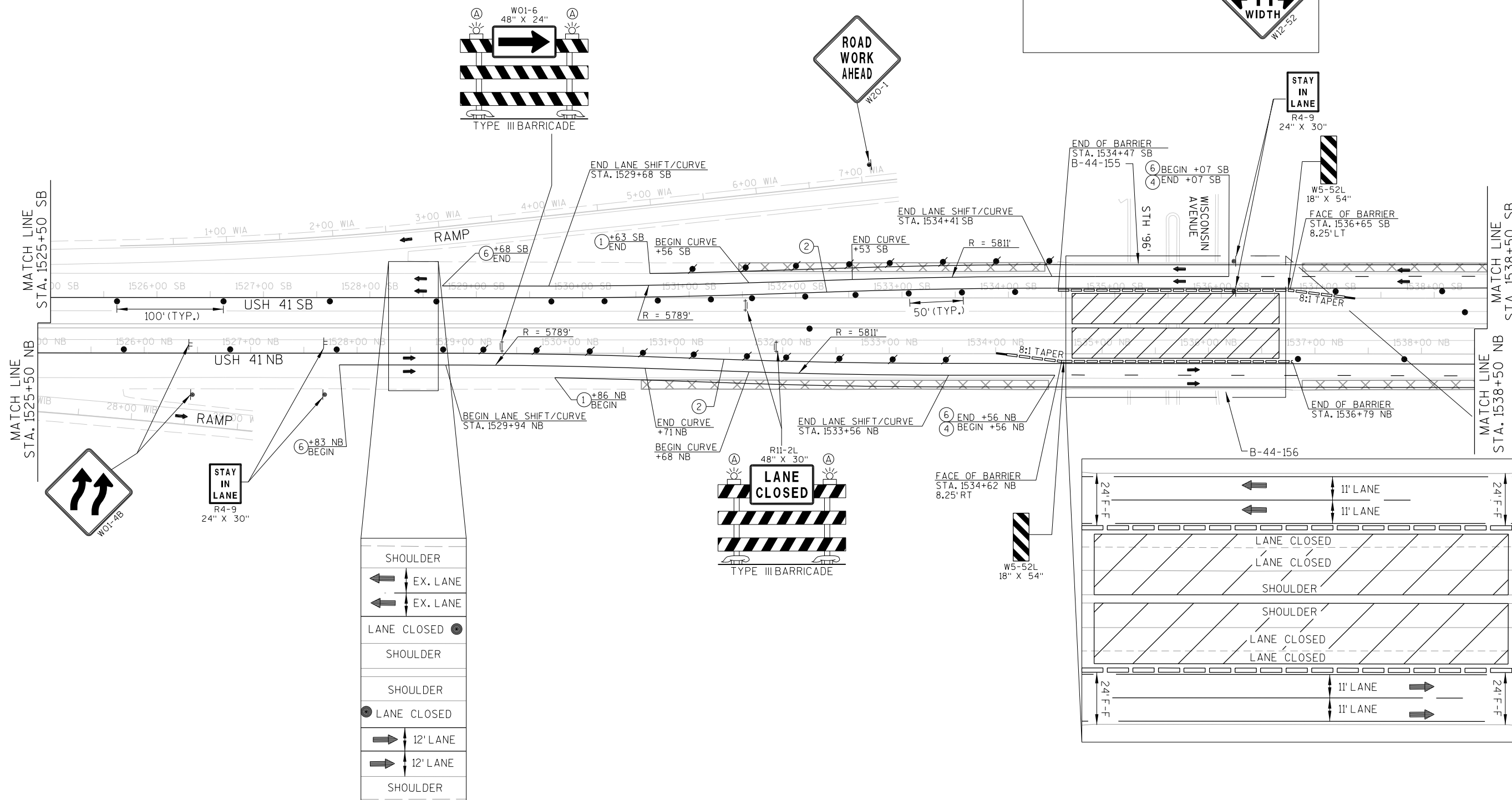
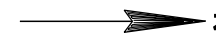


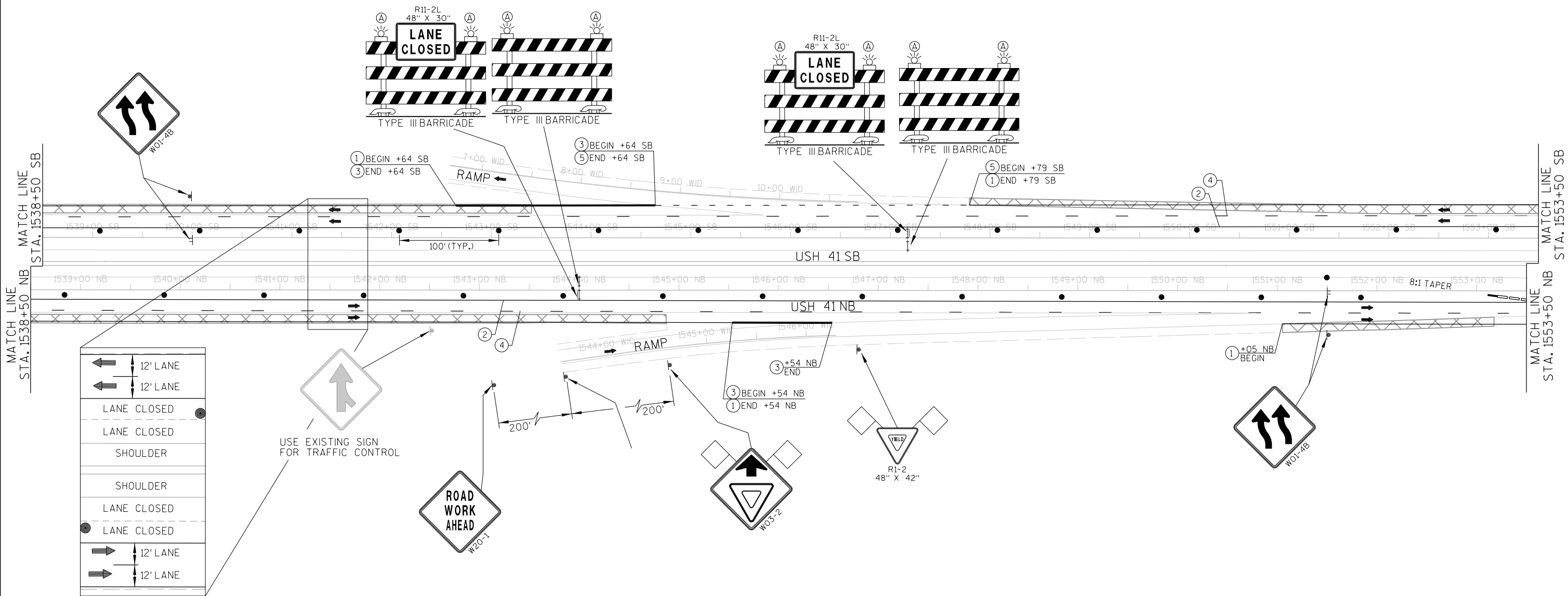
→ **z**

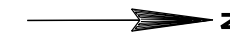


NOTE:
MAPPING SHOWN ON THIS PLAN SHEET ISN'T CURRENT. USH 41 NORTHBOUND, SOUTHBOUND AND RAMPS HAVE BEEN RECONSTRUCTED IN THIS AREA.

NOTE:
PLACE THESE SIGNS 200' EAST AND WEST OF RAMP TERMINALS ALONG STH 96.

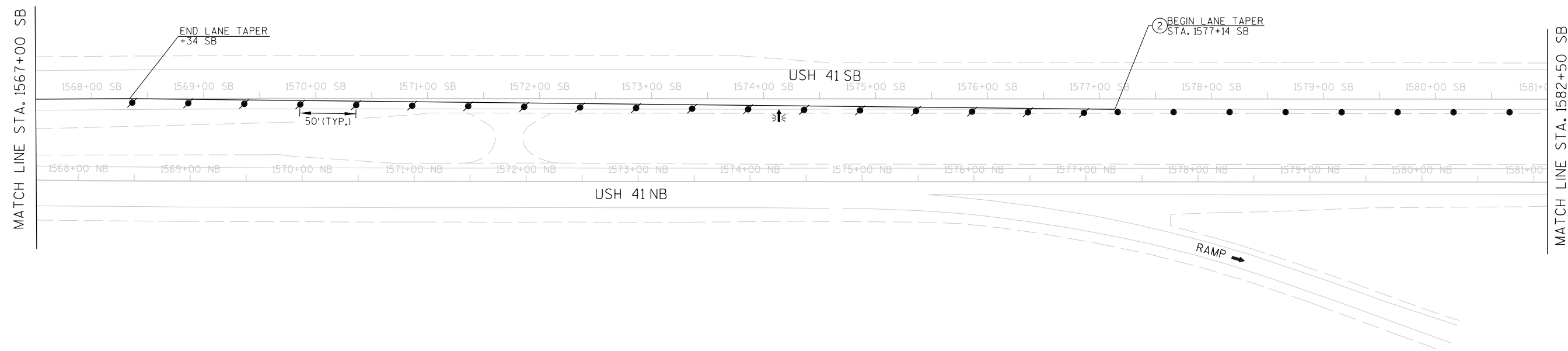


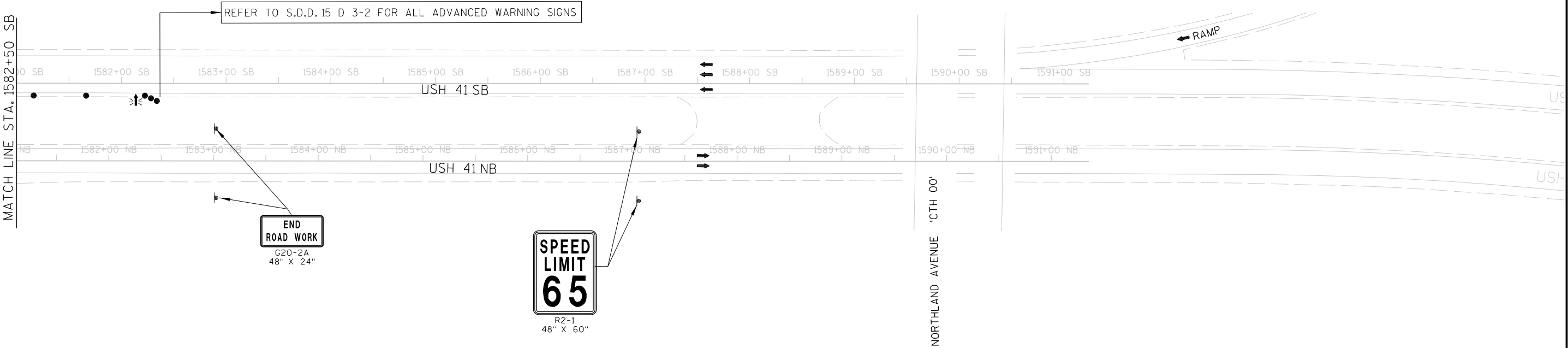
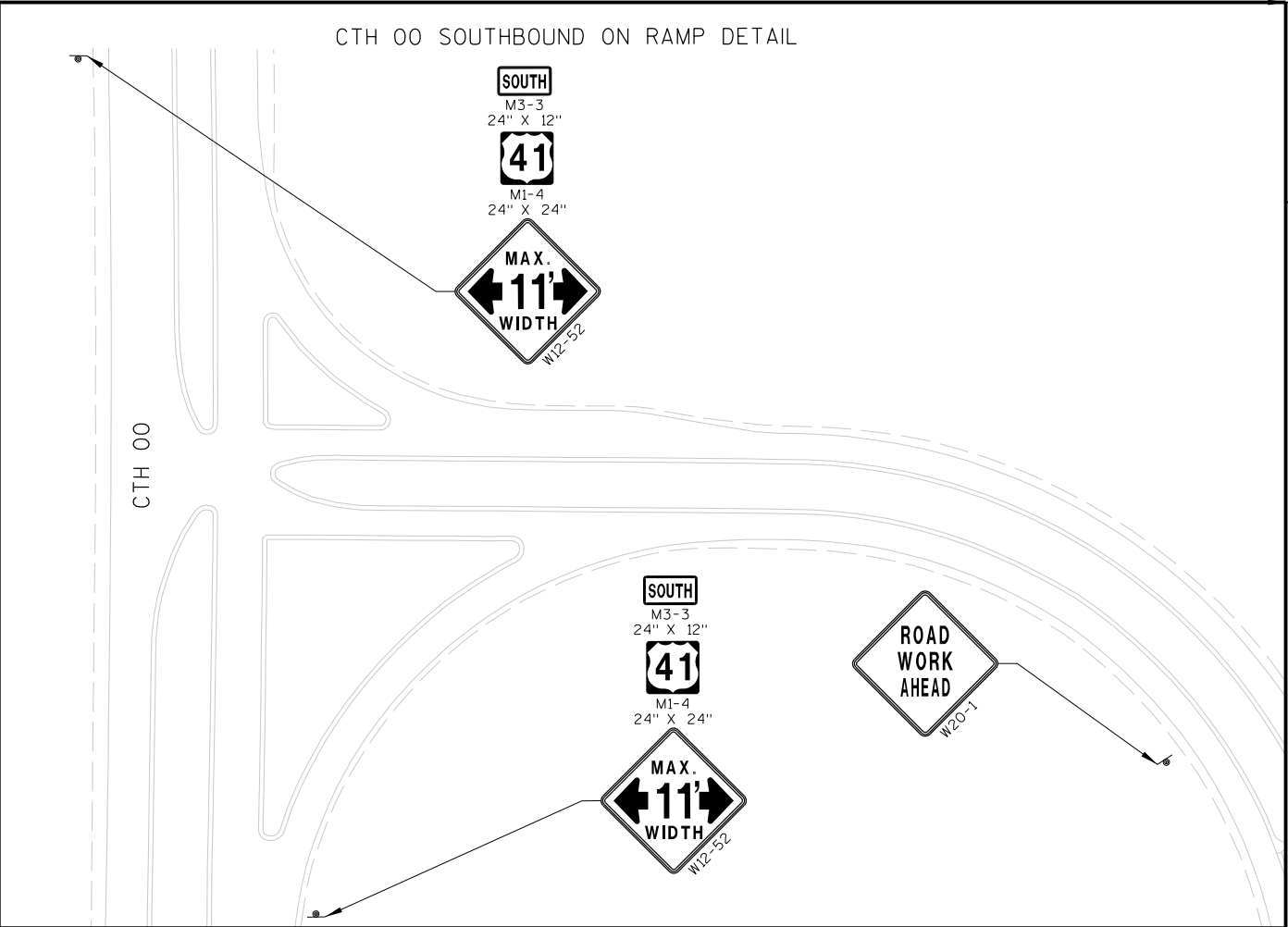


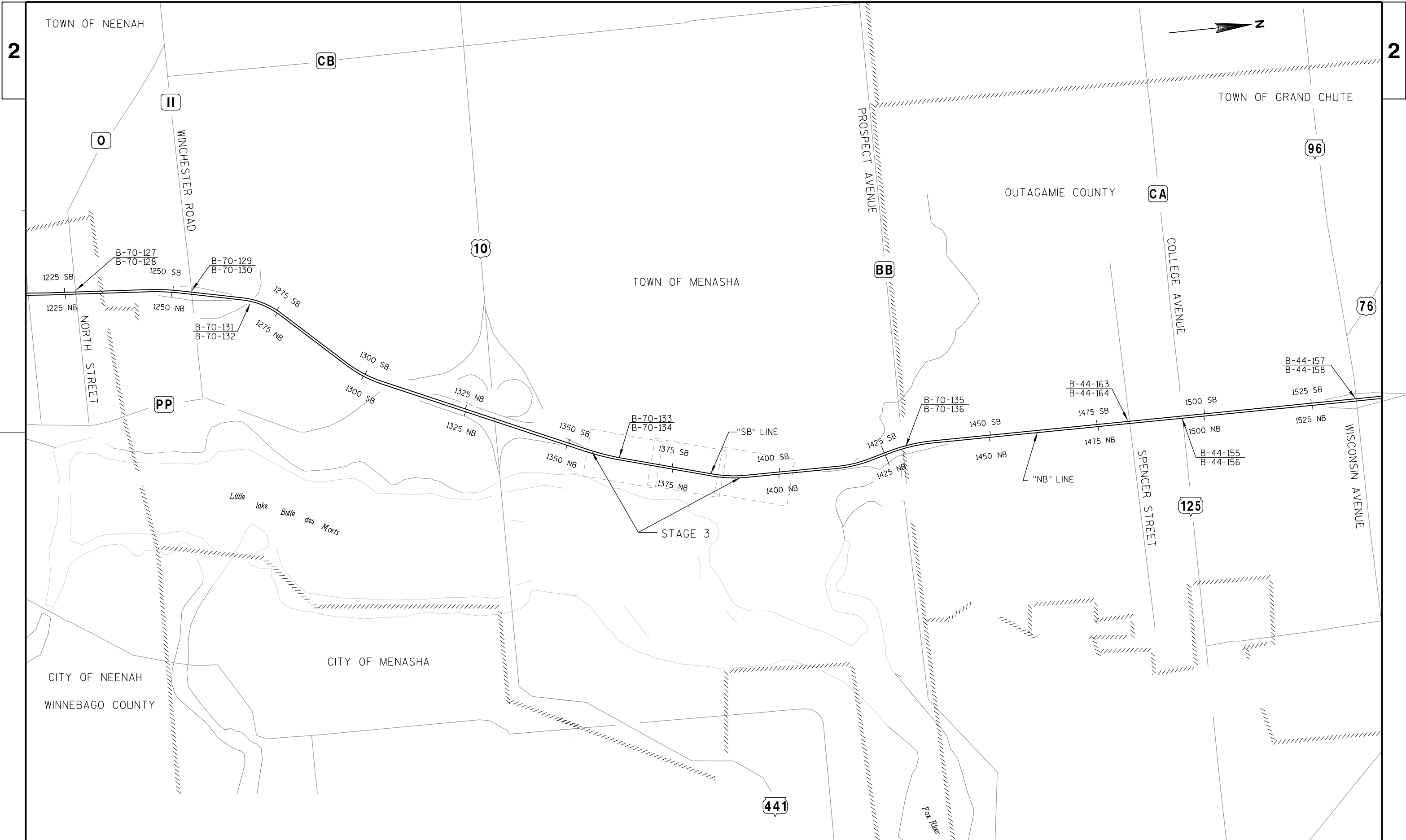


2

2







PROJECT NO: 1120-54-60

HWY: USH 41

COUNTY: WINNEBAGO/OUTAGAMIE

TRAFFIC CONTROL OVERVIEW STAGE 3

SHEET

75

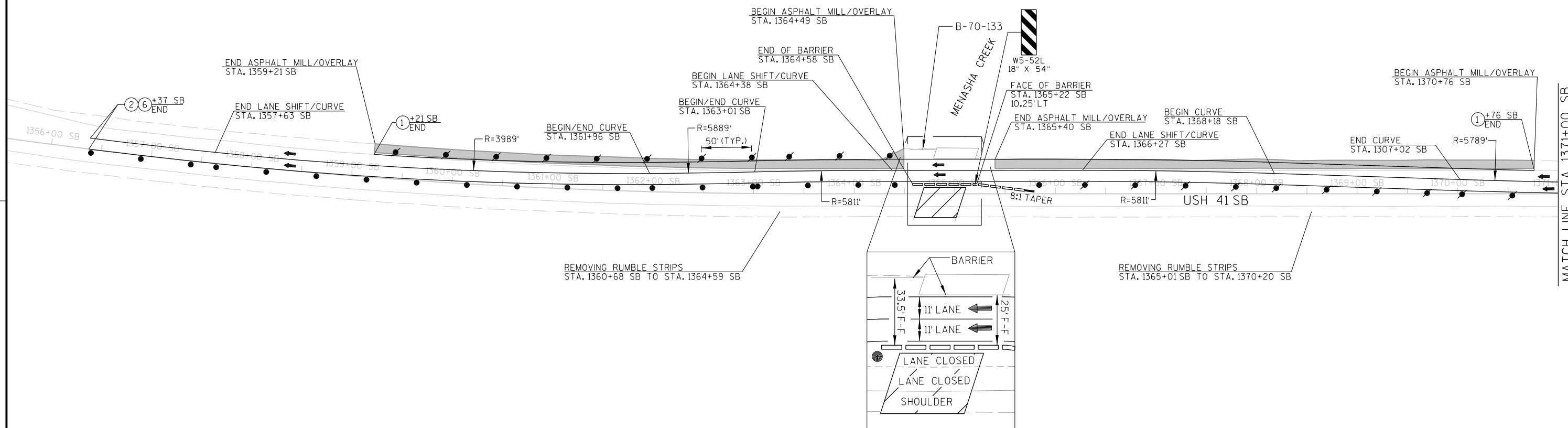
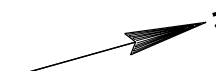
E

FILE NAME : J:\Jobs2012\20122060\CAD\Site\dgn\00\Structures only Project\025075_fc.dgn

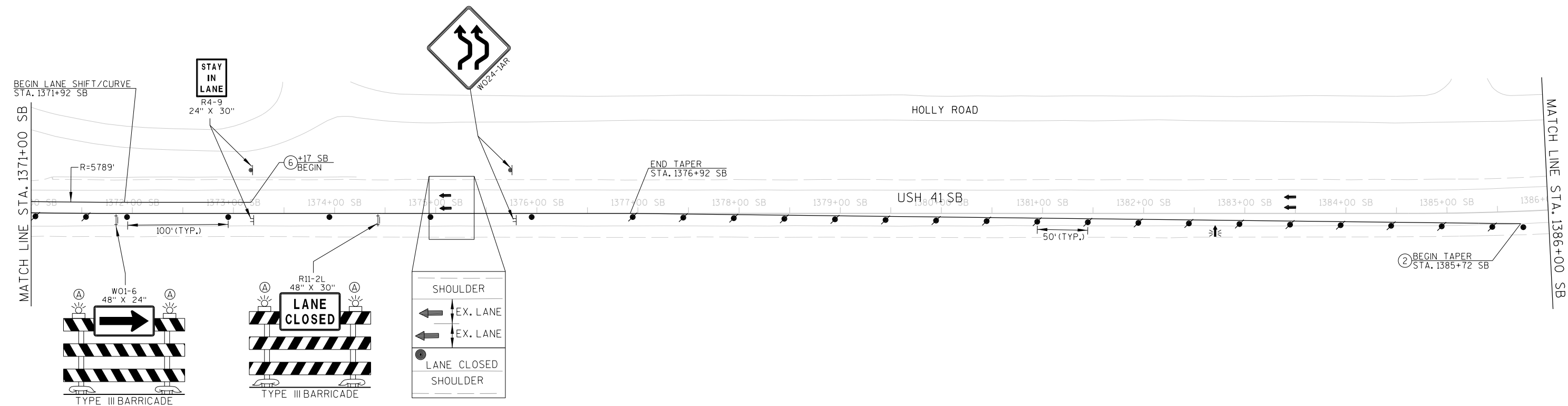
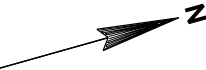
PLOT DATE : 12/8/2014

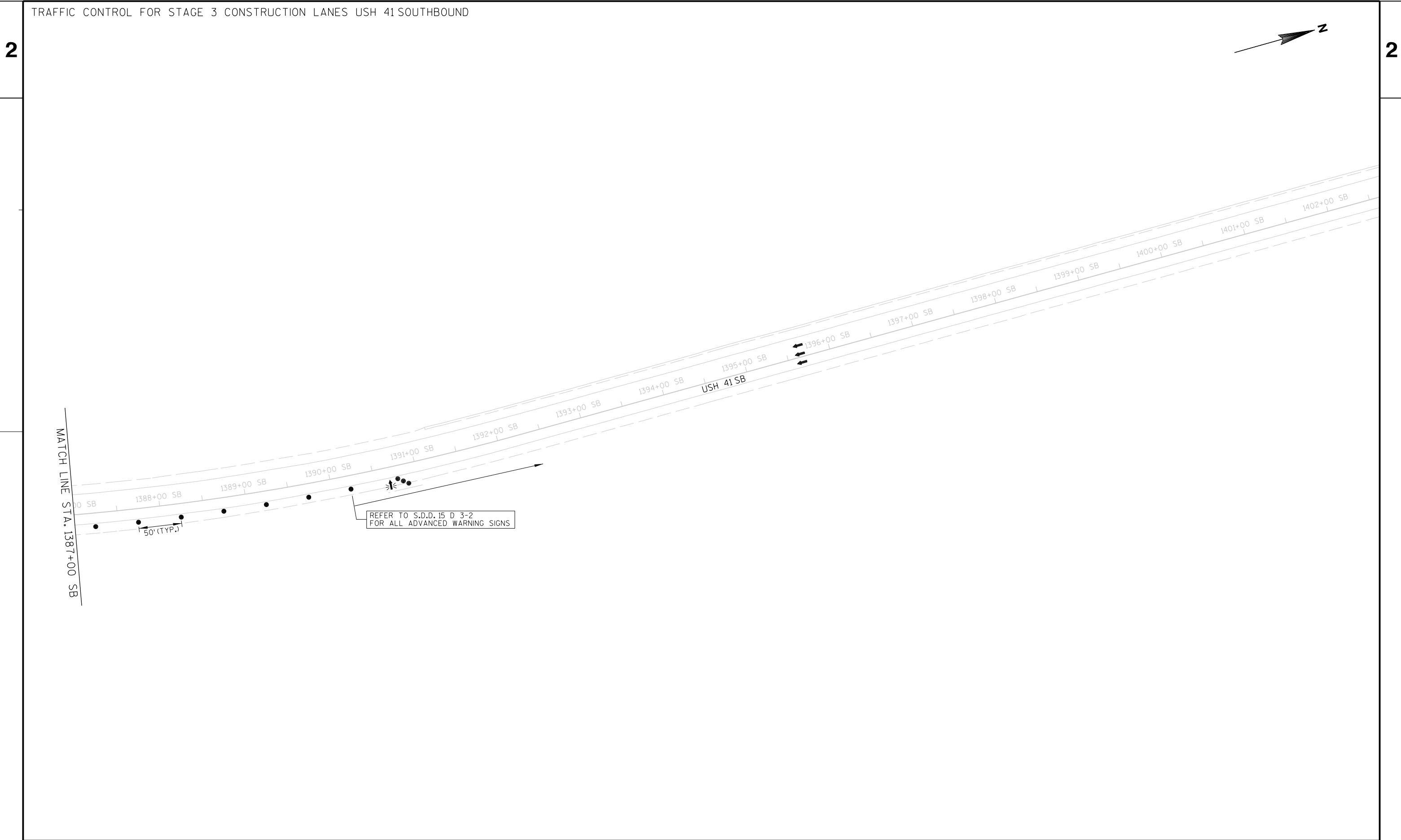
PLOT BY : \$\$\$...plotuser...\$\$ PLOT NAME :

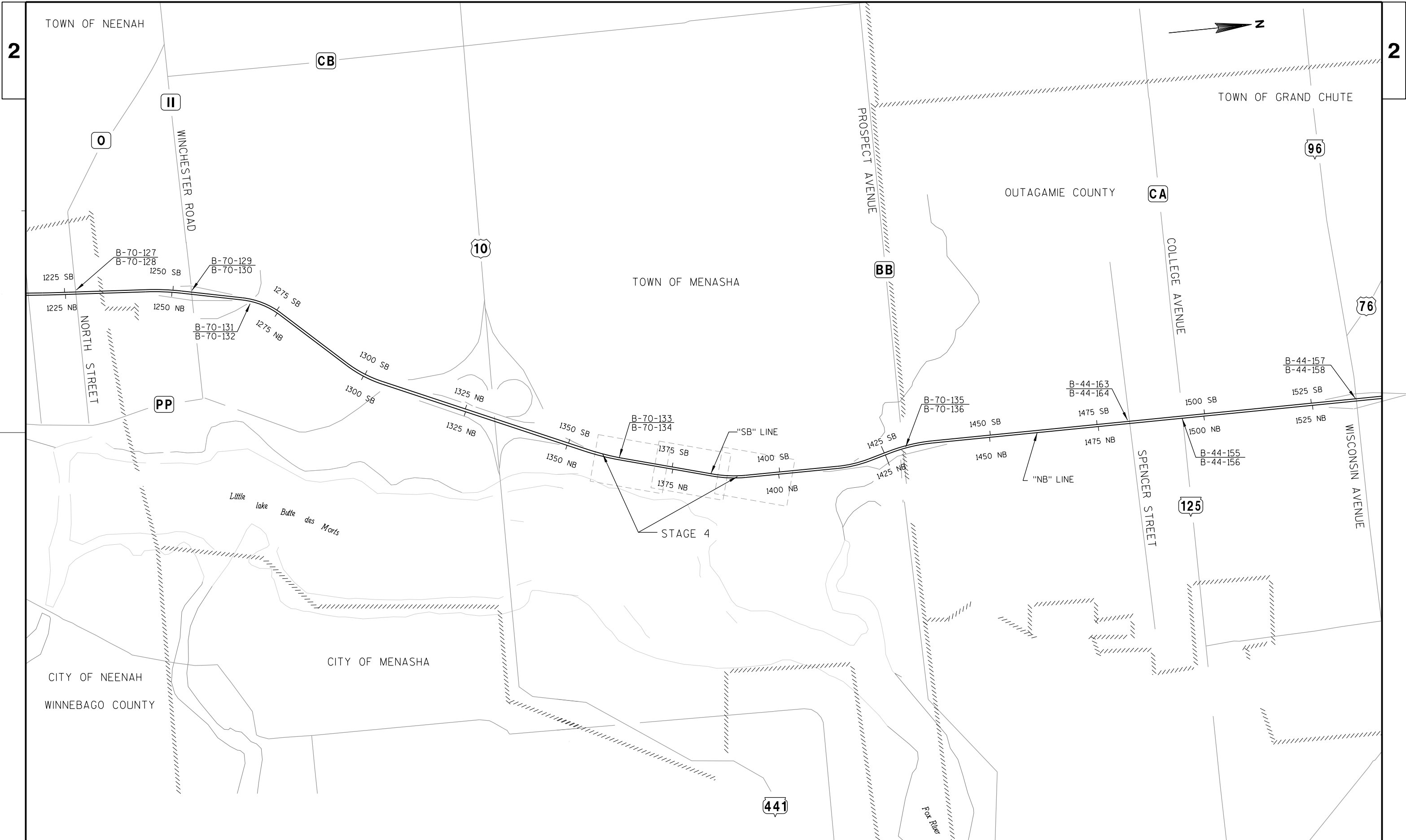
PLOT SCALE : \$\$\$...plotscale...\$\$\$ WISDOT/CADDs SHEET 42



TRAFFIC CONTROL FOR STAGE 3 CONSTRUCTION LANES USH 41 SOUTHBOUND







PROJECT NO: 1120-54-60

HWY: USH 41

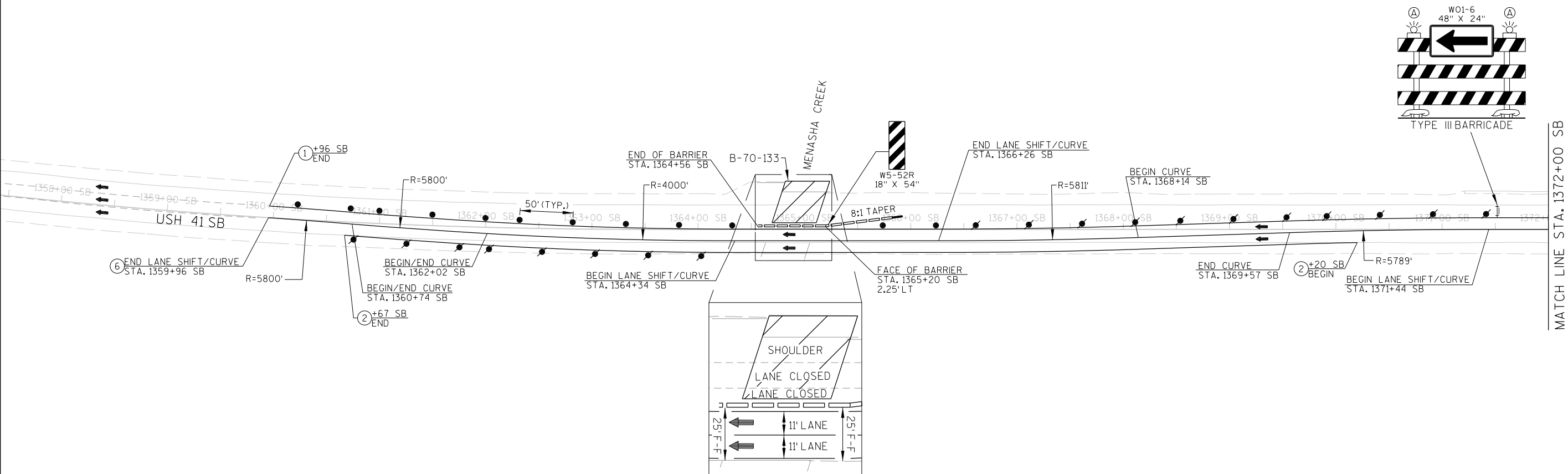
COUNTY: WINNEBAGO/OUTAGAMIE

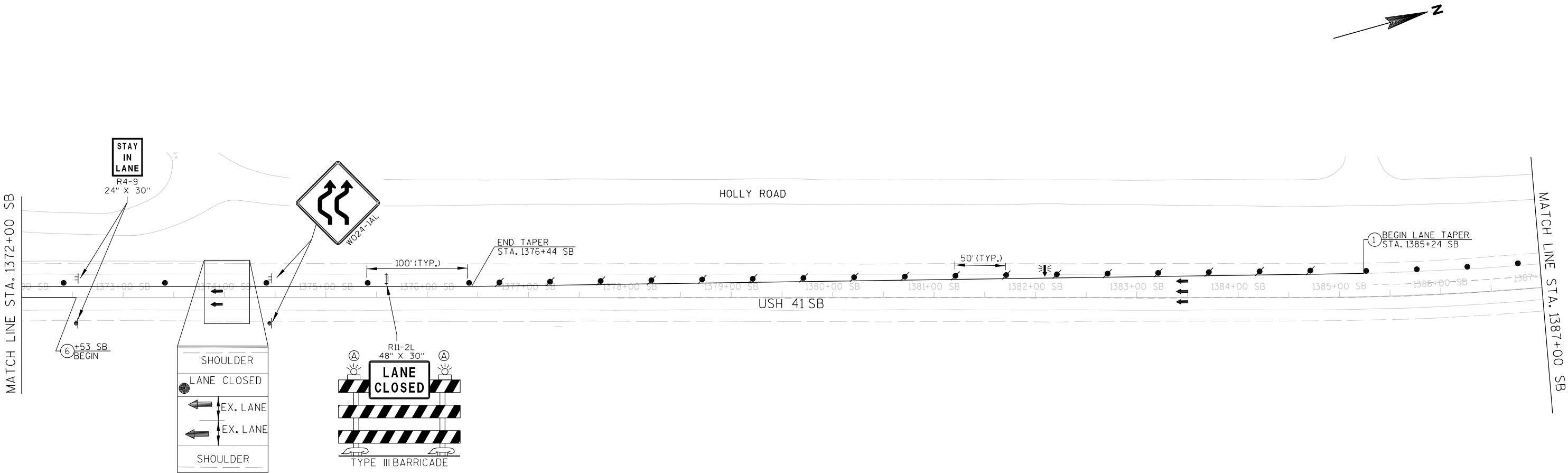
TRAFFIC CONTROL OVERVIEW STAGE 4

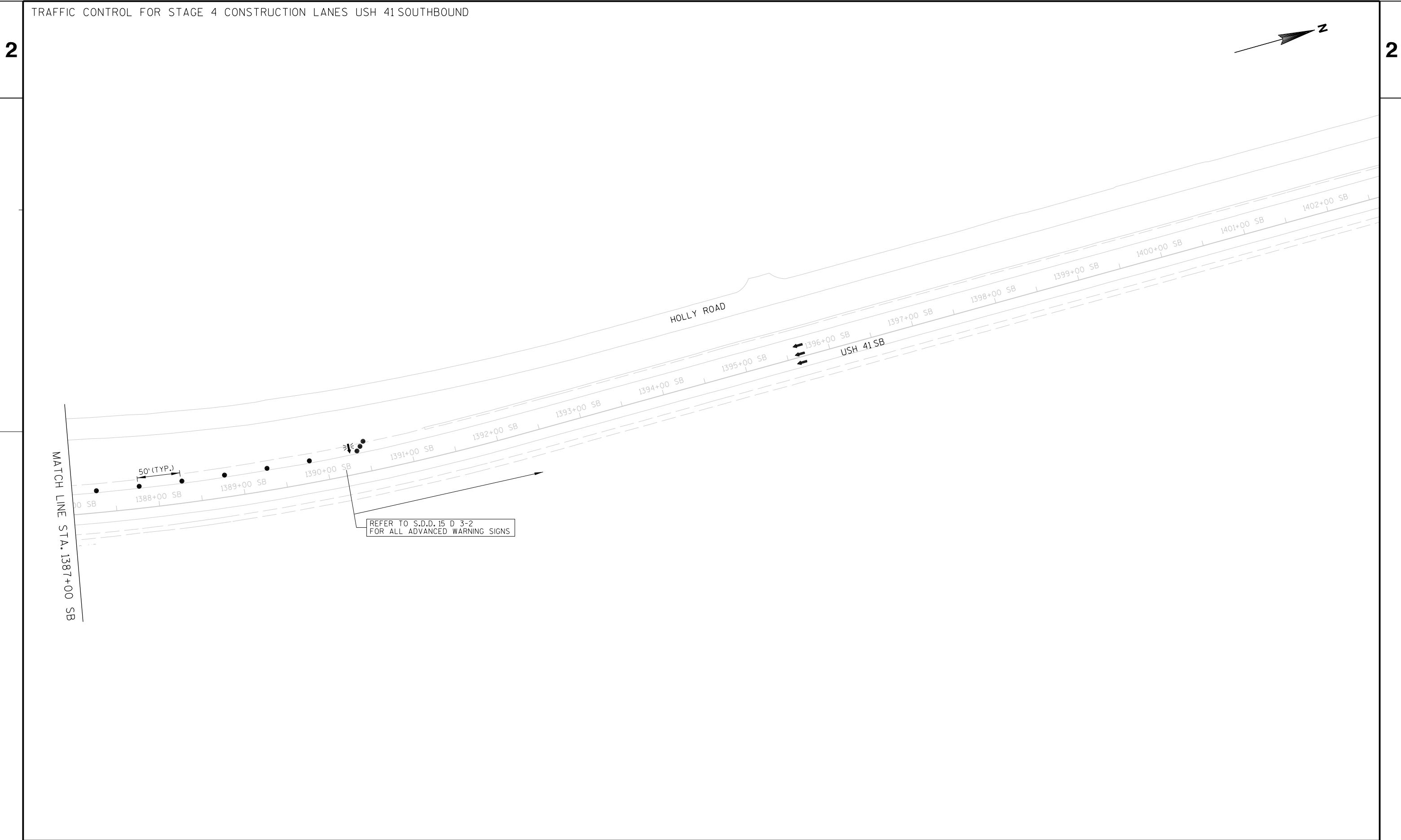
SHEET

79

E







3

DATE 11DEC14		E S T I M A T E O F Q U A N T I T I E S			
LINE					1120-54-60
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	108.4300	RBC PROGRESS SCHEDULE	EACH	17.000	17.000
0020	203.0200	REMOVING OLD STRUCTURE (STATION) 132. STA. 1269+90	LS	1.000	1.000
0030	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 124. B-70-0124	LS	1.000	1.000
0040	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 125. B-70-0125	LS	1.000	1.000
0050	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 126. B-70-0126	LS	1.000	1.000
0060	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 127. B-70-0127	LS	1.000	1.000
0070	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 128. B-70-0128	LS	1.000	1.000
0080	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 129. B-70-0129	LS	1.000	1.000
0090	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 131. B-70-0131	LS	1.000	1.000
0100	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 132. B-70-0132	LS	1.000	1.000
0110	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 133. B-70-0133	LS	1.000	1.000
0120	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 135. B-70-0135	LS	1.000	1.000
0130	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 155. B-44-0155	LS	1.000	1.000
0140	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 157. B-44-0157	LS	1.000	1.000
0150	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 158. B-44-0158	LS	1.000	1.000
0160	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 161. B-44-0161	LS	1.000	1.000
0170	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 162 B-44-0162	LS	1.000	1.000
0180	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 163. B-44-0163	LS	1.000	1.000
0190	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 164. B-44-0164	LS	1.000	1.000
0200	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 49. B-70-0049	LS	1.000	1.000
0210	203.0225.S	DEBRIS CONTAINMENT (STRUCTURE) 50. B-70-0050	LS	1.000	1.000
0220	204.0100	REMOVING PAVEMENT	SY	3,191.000	3,191.000
0230	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	8,038.000	8,038.000
0240	204.0190	REMOVING SURFACE DRAINS	EACH	9.000	9.000
0250	205.0100	EXCAVATION COMMON	CY	1,653.000	1,653.000
0260	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 132. B-70-0132	LS	1.000	1.000
0270	210.0100	BACKFILL STRUCTURE	CY	45.000	45.000
0280	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	132.000	132.000
0290	213.0100	FINISHING ROADWAY (PROJECT) 01. 1120-54-60	EACH	1.000	1.000
0300	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	131.000	131.000
0310	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	298.000	298.000
0320	416.0610	DRILLED TIE BARS	EACH	397.000	397.000
0330	416.0620	DRILLED DOWEL BARS	EACH	244.000	244.000
0340	416.1015	CONCRETE SURFACE DRAINS HES	CY	61.000	61.000
0350	416.1715	CONCRETE PAVEMENT REPAIR SHES	SY	22.800	22.800

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DATE 11DEC14		E S T I M A T E O F Q U A N T I T I E S			
LINE				1120-54-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0360	416.1725	CONCRETE PAVEMENT REPLACEMENT SHES	SY	1,244.100	1,244.100
0370	455.0105	ASPHALTIC MATERIAL PG58-28	TON	294.000	294.000
0380	455.0605	TACK COAT	GAL	1,345.000	1,345.000
0390	460.1100	HMA PAVEMENT TYPE E-0.3	TON	3,415.000	3,415.000
0400	460.1130	HMA PAVEMENT TYPE E-30	TON	1,927.000	1,927.000
0410	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	3,420.000	3,420.000
0420	465.0400	ASPHALTIC SHOULDER RUMBLE STRIPS	LF	31,500.000	31,500.000
0430	502.0100	CONCRETE MASONRY BRIDGES	CY	9.000	9.000
0440	502.3100	EXPANSION DEVICE (STRUCTURE) 131. B-70-0131	LS	1.000	1.000
0450	502.3100	EXPANSION DEVICE (STRUCTURE) 132. B-70-0132	LS	1.000	1.000
0460	502.3100	EXPANSION DEVICE (STRUCTURE) 157. B-44-0157	LS	1.000	1.000
0470	502.3100	EXPANSION DEVICE (STRUCTURE) 158. B-44-0158	LS	1.000	1.000
0480	502.3100	EXPANSION DEVICE (STRUCTURE) 161. B-44-0161	LS	1.000	1.000
0490	502.3100	EXPANSION DEVICE (STRUCTURE) 162. B-44-0162	LS	1.000	1.000
0500	502.3200	PROTECTIVE SURFACE TREATMENT	SY	382.000	382.000
0510	502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EACH	15.000	15.000
0520	502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	37.000	37.000
0530	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	20,260.000	20,260.000
0540	509.0301	PREPARATION DECKS TYPE 1	SY	233.000	233.000
0550	509.0302	PREPARATION DECKS TYPE 2	SY	169.000	169.000
0560	509.1000	JOINT REPAIR	SY	361.000	361.000
0570	509.2000	FULL-DEPTH DECK REPAIR	SY	19.000	19.000
0580	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	167.000	167.000
0590	511.1200	TEMPORARY SHORING (STRUCTURE) 01. B-70-0132	SF	215.000	215.000
0600	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3.000	3.000
0610	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	8,919.000	8,919.000
0620	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	8,919.000	8,919.000
0630	611.8115	ADJUSTING INLET COVERS	EACH	10.000	10.000
0640	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1.000	1.000
0650	614.0905	CRASH CUSHIONS TEMPORARY	EACH	35.000	35.000
0660	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1120-54-60	EACH	1.000	1.000
0670	619.1000	MOBILIZATION	EACH	1.000	1.000
0680	624.0100	WATER	MGAL	4.000	4.000
0690	628.1504	SILT FENCE	LF	125.000	125.000
0700	628.1520	SILT FENCE MAINTENANCE	LF	125.000	125.000
0710	628.2004	EROSION MAT CLASS I TYPE B	SY	25.000	25.000
0720	628.7015	INLET PROTECTION TYPE C	EACH	10.000	10.000
0730	629.0210	FERTILIZER TYPE B	CWT	0.010	0.010
0740	630.0130	SEEDING MIXTURE NO. 30	LB	0.400	0.400
0750	630.0200	SEEDING TEMPORARY	LB	0.500	0.500
0760	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1120-54-60	DAY	115.000	115.000
0770	643.0300	TRAFFIC CONTROL DRUMS	DAY	104,597.000	104,597.000

3

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DATE 11DEC14		E S T I M A T E O F Q U A N T I T I E S			
LINE				1120-54-60	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0780	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	6,041.000	6,041.000
0790	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	12,082.000	12,082.000
0800	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	32,338.000	32,338.000
0810	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	693.000	693.000
0820	643.0900	TRAFFIC CONTROL SIGNS	DAY	30,165.000	30,165.000
0830	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	14.000	14.000
0840	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	42.000	42.000
0850	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	228.000	228.000
0860	646.0103	PAVEMENT MARKING PAINT 4-INCH	LF	56,420.000	56,420.000
0870	646.0123	PAVEMENT MARKING PAINT 8-INCH	LF	8,181.000	8,181.000
0880	646.0600	REMOVING PAVEMENT MARKINGS	LF	118,457.000	118,457.000
0890	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	45,280.000	45,280.000
0900	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	160,630.000	160,630.000
0910	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	11,250.000	11,250.000
0920	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	62,900.000	62,900.000
0930	690.0150	SAWING ASPHALT	LF	228.000	228.000
0940	690.0250	SAWING CONCRETE	LF	3,489.000	3,489.000
0950	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	500.000	500.000
0960	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	HRS	2,300.000	2,300.000
0970	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	2,100.000	2,100.000
0980	SPV.0045	SPECIAL 01. PORTABLE CHANGABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS	DAY	200.000	200.000
0990	SPV.0090	SPECIAL 02. SAWING PAVEMENT DECK PREPARATION AREAS	LF	2,330.000	2,330.000
1000	SPV.0180	SPECIAL 01. REMOVING RUMBLE STRIPS	SY	6,012.000	6,012.000

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NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

REMOVING PAVEMENT													
204.0100													
STAGE	ROADWAY			FROM STATION		TO STATION		(SY)	COMMENT				
1	NB	USH	41	1145+72.09	NB -	1146+07.04	NB	47	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1147+25.81	NB -	1147+62.56	NB	69	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1165+54.17	NB -	1165+79.35	NB	47	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1167+79.18	NB -	1168+06.22	NB	44	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1217+25.49	NB -	1217+48.63	NB	46	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1226+51.41	NB -	1226+76.53	NB	51	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1228+10.25	NB -	1228+34.86	NB	47	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1254+05.62	NB -	1254+51.35	NB	128	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1256+51.25	NB -	1256+85.99	NB	88	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1429+43.81	NB -	1429+73.42	NB	73	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1495+43.69	NB -	1495+66.68	NB	65	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1534+38.22	NB -	1534+59.80	NB	52	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	NB	USH	41	1536+54.32	NB -	1536+76.07	NB	52	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1145+93.63	SB -	1146+28.60	SB	81	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1147+51.82	SB -	1147+89.17	SB	65	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1165+51.82	SB -	1165+75.66	SB	65	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1167+71.33	SB -	1167+98.84	SB	75	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1215+52.00	SB -	1215+74.89	SB	53	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1217+22.44	SB -	1217+45.78	SB	77	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1226+47.29	SB -	1226+71.62	SB	63	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1228+04.43	SB -	1228+29.47	SB	71	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1254+05.78	SB -	1254+36.87	SB	59	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1256+36.93	SB -	1256+67.53	SB	67	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1427+57.32	SB -	1427+92.56	SB	72	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1493+27.22	SB -	1493+50.99	SB	54	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1495+45.44	SB -	1495+68.60	SB	51	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1534+37.53	SB -	1534+59.85	SB	54	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
1	SB	USH	41	1536+54.37	SB -	1536+76.37	SB	53	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1145+72.09	NB -	1146+07.04	NB	110	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1147+25.81	NB -	1147+62.56	NB	94	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1165+54.17	NB -	1165+79.35	NB	53	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1167+79.18	NB -	1168+06.22	NB	58	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1217+25.49	NB -	1217+48.63	NB	49	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1226+51.41	NB -	1226+76.53	NB	49	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1228+10.25	NB -	1228+34.86	NB	51	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1254+05.62	NB -	1254+51.35	NB	47	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1256+51.25	NB -	1256+85.99	NB	41	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1429+43.81	NB -	1429+73.42	NB	27	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1495+43.69	NB -	1495+66.68	NB	29	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1534+38.22	NB -	1534+59.80	NB	39	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	NB	USH	41	1536+54.32	NB -	1536+76.07	NB	39	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1145+93.63	SB -	1146+28.60	SB	67	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1147+51.82	SB -	1147+89.17	SB	91	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1165+51.82	SB -	1165+75.66	SB	31	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1167+71.33	SB -	1167+98.84	SB	31	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1215+52.00	SB -	1215+74.89	SB	41	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1217+22.44	SB -	1217+45.78	SB	39	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1226+47.29	SB -	1226+71.62	SB	62	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1228+04.43	SB -	1228+29.47	SB	58	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1254+05.78	SB -	1254+36.87	SB	54	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1256+36.93	SB -	1256+67.53	SB	45	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1427+57.32	SB -	1427+92.56	SB	51	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1493+27.22	SB -	1493+50.99	SB	44	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1495+45.44	SB -	1495+68.60	SB	43	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1534+37.53	SB -	1534+59.85	SB	40	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB
2	SB	USH	41	1536+54.37	SB -	1536+76.37	SB	40	EXISTING	CONCRETE	PAVEMENT	APPROACH	SLAB

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NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

REMOVING ASPHALTIC SURFACE MILLING

204.0120						
STAGE	ROADWAY	FROM STATION		TO STATION		(SY)
1	NB USH 41	1139+54	NB -	1142+02	NB	250
1	NB USH 41	1154+32	NB -	1165+85	NB	1,277
1	NB USH 41	1168+21	NB -	1171+65	NB	381
1	NB USH 41	1211+47	NB -	1215+83	NB	388
1	NB USH 41	1217+54	NB -	1226+58	NB	887
1	NB USH 41	1228+47	NB -	1231+32	NB	275
1	NB USH 41	1261+33	NB -	1263+00	NB	161
1	NB USH 41	1270+61	NB -	1272+79	NB	184
1	SB USH 41	1143+71	SB -	1146+02	SB	229
1	SB USH 41	1147+83	SB -	1151+22	SB	337
1	SB USH 41	1219+78	SB -	1226+47	SB	666
1	SB USH 41	1228+29	SB -	1231+67	SB	327
1	SB USH 41	1250+78	SB -	1254+06	SB	321
1	SB USH 41	1256+67	SB -	1263+32	SB	694
3	SB USH 41	1359+21	SB -	1364+49	SB	503
3	SB USH 41	1365+40	SB -	1370+76	SB	510
1	SB USH 41	1424+23	SB -	1427+42	SB	294
1	SB USH 41	1429+94	SB -	1433+83	SB	354
PROJECT TOTAL						8,038

REMOVING SURFACE DRAINS

204.0190						
STAGE	ROADWAY	STATION	OFFSET		(EACH)	
1	USH 41 NB	1165+91.10	NB	31.00' RT	1	
1	USH 41 NB	1228+33.63	NB	32.25' RT	1	
1	USH 41 NB	1266+51.21	NB	43.00' RT	1	
1	USH 41 NB	1495+68.85	NB	31.00' RT	1	
1	USH 41 NB	1534+60.78	NB	31.00' RT	1	
1	USH 41 SB	1146+16.49	SB	43.00' LT	1	
1	USH 41 SB	1495+60.00	SB	31.00' LT	1	
1	USH 41 SB	1534+47.05	SB	31.00' LT	1	
1	USH 41 SB	1554+30.52	SB	33.00' LT	1	
PROJECT TOTAL						9

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

211.0400						
STAGE	ROADWAY	FROM STATION		TO STATION		(STA)
1	NB USH 41	1139+54	NB -	1142+02	NB	2
1	NB USH 41	1154+32	NB -	1165+85	NB	12
1	NB USH 41	1168+21	NB -	1171+65	NB	3
1	NB USH 41	1211+47	NB -	1215+83	NB	4
1	NB USH 41	1217+54	NB -	1226+58	NB	9
1	NB USH 41	1228+47	NB -	1231+32	NB	3
1	NB USH 41	1261+33	NB -	1263+00	NB	2
1	NB USH 41	1270+61	NB -	1272+79	NB	2
1	NB USH 41	1530+67	NB -	1534+50	NB	4
1	NB USH 41	1536+88	NB -	1544+87	NB	8
1	NB USH 41	1551+05	NB -	1553+17	NB	2
1	NB USH 41	1555+72	NB -	1559+71	NB	4
1	SB USH 41	1143+71	SB -	1146+02	SB	2
1	SB USH 41	1147+83	SB -	1151+22	SB	3
1	SB USH 41	1219+78	SB -	1226+47	SB	7
1	SB USH 41	1228+29	SB -	1231+67	SB	3
1	SB USH 41	1250+78	SB -	1254+06	SB	3
1	SB USH 41	1256+67	SB -	1263+32	SB	7
3	SB USH 41	1359+21	SB -	1364+49	SB	5
3	SB USH 41	1365+40	SB -	1370+76	SB	5
1	SB USH 41	1424+23	SB -	1427+42	SB	3
1	SB USH 41	1429+94	SB -	1433+83	SB	4
1	SB USH 41	1484+29	SB -	1493+27	SB	9
1	SB USH 41	1495+73	SB -	1499+66	SB	4
1	SB USH 41	1531+47	SB -	1534+34	SB	3
1	SB USH 41	1536+76	SB -	1543+40	SB	7
1	SB USH 41	1547+79	SB -	1554+09	SB	6
1	SB USH 41	1556+92	SB -	1561+41	SB	4
PROJECT TOTAL						132

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

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EARTHWORK

Division	Location	Roadway	Common Excavation (1)	(item # 205.0100)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow (item #208.0100)	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.25				
STAGE 1	PAVEMENT APPROACH SLABS	USH 41 NB	247	0	247	0	0	0	0	0	0	
	PAVEMENT APPROACH SLABS	USH 41 SB	293	0	293	0	0	0	0	0	0	
	SHOULDER REPLACEMENT	USH 41 NB	251	0	251	0	0	0	0	0	0	
	SHOULDER REPLACEMENT	USH 41 SB	427	0	427	0	0	0	0	0	0	
Division 1 Subtotal			1218	0	1218	0	0	0	0	0	0	
STAGE 2	PAVEMENT APPROACH SLABS	USH 41 NB	210	0	210	0	0	0	0	0	0	
	PAVEMENT APPROACH SLABS	USH 41 SB	225	0	225	0	0	0	0	0	0	
Division 2 Subtotal			435	0	435	0	0	0	0	0	0	
Grand Total			1653	0	1653	0	0	0	0	0	0	
Total Common Exc			1653									

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
13) Expanded Fill. Factor = 1.25
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

BASE AGGREGATE DENSE 3/4-INCH

STAGE	ROADWAY	STATION	TO	STATION	LOCATION	WATER	
						305.0110 (TON)	624.0100 (A) (MGAL)
1	NB USH 41	1530+67	NB -	1534+50	NB RIGHT SHOULDER	10	0.1
1	NB USH 41	1536+88	NB -	1544+87	NB RIGHT SHOULDER	21	0.2
1	NB USH 41	1551+05	NB -	1553+17	NB RIGHT SHOULDER	5	0.1
1	NB USH 41	1555+72	NB -	1559+71	NB RIGHT SHOULDER	10	0.1
1	SB USH 41	1484+29	SB -	1493+27	SB RIGHT SHOULDER	23	0.2
1	SB USH 41	1495+73	SB -	1499+66	SB RIGHT SHOULDER	10	0.1
1	SB USH 41	1531+47	SB -	1534+34	SB RIGHT SHOULDER	7	0.1
1	SB USH 41	1536+76	SB -	1543+40	SB RIGHT SHOULDER	17	0.2
1	SB USH 41	1547+79	SB -	1554+09	SB RIGHT SHOULDER	16	0.2
1	SB USH 41	1556+92	SB -	1561+41	SB RIGHT SHOULDER	12	0.1
PROJECT TOTAL						131	1

(A) REFER TO "BASE AGGREGATE DENSE 1 1/4-INCH" TABLE FOR ADDITIONAL QUANTITY

BASE AGGREGATE DENSE 1 1/4-INCH

STAGE	ROADWAY	STATION	TO	STATION	LOCATION	WATER	
						305.0120 (TON)	624.0100 (A) (MGAL)
1	NB USH 41	1145+72	NB -	1146+07	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1147+26	NB -	1147+63	NB PAVEMENT APPROACH SLAB	6	0.06
1	NB USH 41	1165+54	NB -	1165+79	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1167+79	NB -	1168+06	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1217+25	NB -	1217+49	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1226+51	NB -	1226+77	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1228+10	NB -	1228+35	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1254+06	NB -	1254+51	NB PAVEMENT APPROACH SLAB	10	0.10
1	NB USH 41	1256+51	NB -	1256+86	NB PAVEMENT APPROACH SLAB	8	0.08
1	NB USH 41	1429+44	NB -	1429+73	NB PAVEMENT APPROACH SLAB	6	0.06
1	NB USH 41	1495+44	NB -	1495+67	NB PAVEMENT APPROACH SLAB	12	0.12
1	NB USH 41	1534+38	NB -	1534+60	NB PAVEMENT APPROACH SLAB	4	0.04
1	NB USH 41	1536+54	NB -	1536+76	NB PAVEMENT APPROACH SLAB	4	0.04
1	SB USH 41	1145+94	SB -	1146+29	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1147+52	SB -	1147+89	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1165+52	SB -	1165+76	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1167+71	SB -	1167+99	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1215+52	SB -	1215+75	SB PAVEMENT APPROACH SLAB	4	0.04
1	SB USH 41	1217+22	SB -	1217+46	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1226+47	SB -	1226+72	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1228+04	SB -	1228+29	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1254+06	SB -	1254+37	SB PAVEMENT APPROACH SLAB	4	0.04
1	SB USH 41	1256+37	SB -	1256+68	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1427+57	SB -	1427+93	SB PAVEMENT APPROACH SLAB	6	0.06
1	SB USH 41	1493+27	SB -	1493+51	SB PAVEMENT APPROACH SLAB	10	0.10
1	SB USH 41	1495+45	SB -	1495+69	SB PAVEMENT APPROACH SLAB	10	0.10
1	SB USH 41	1534+38	SB -	1534+60	SB PAVEMENT APPROACH SLAB	4	0.04
1	SB USH 41	1536+54	SB -	1536+76	SB PAVEMENT APPROACH SLAB	4	0.04
STAGE SUBTOTALS						164	2

(A) REFER TO "BASE AGGREGATE DENSE 3/4-INCH" TABLE FOR ADDITIONAL QUANTITY

PROJECT NO: 1120-54-60

HWY: USH 41

COUNTY: WINNEBAGO/OUTAGAMIE

MISCELLANEOUS QUANTITIES

SHEET

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NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

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BASE AGGREGATE DENSE 1 1/4-INCH CONT.									
STAGE	ROADWAY	STATION	TO	STATION	LOCATION	WATER		(A)	
						305.0120	624.0100		
						(TON)	(MGAL)		
2	NB USH 41	1145+72	NB -	1146+07	NB PAVEMENT APPROACH SLAB	10	0.10		
2	NB USH 41	1147+26	NB -	1147+63	NB PAVEMENT APPROACH SLAB	8	0.08		
2	NB USH 41	1165+54	NB -	1165+79	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1167+79	NB -	1168+06	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1217+25	NB -	1217+49	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1226+51	NB -	1226+77	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1228+10	NB -	1228+35	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1254+06	NB -	1254+51	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1256+51	NB -	1256+86	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1429+44	NB -	1429+73	NB PAVEMENT APPROACH SLAB	2	0.02		
2	NB USH 41	1495+44	NB -	1495+67	NB PAVEMENT APPROACH SLAB	6	0.06		
2	NB USH 41	1534+38	NB -	1534+60	NB PAVEMENT APPROACH SLAB	4	0.04		
2	NB USH 41	1536+54	NB -	1536+76	NB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1145+94	SB -	1146+29	SB PAVEMENT APPROACH SLAB	6	0.06		
2	SB USH 41	1147+52	SB -	1147+89	SB PAVEMENT APPROACH SLAB	8	0.08		
2	SB USH 41	1165+52	SB -	1165+76	SB PAVEMENT APPROACH SLAB	2	0.02		
2	SB USH 41	1167+71	SB -	1167+99	SB PAVEMENT APPROACH SLAB	2	0.02		
2	SB USH 41	1215+52	SB -	1215+75	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1217+22	SB -	1217+46	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1226+47	SB -	1226+72	SB PAVEMENT APPROACH SLAB	6	0.06		
2	SB USH 41	1228+04	SB -	1228+29	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1254+06	SB -	1254+37	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1256+37	SB -	1256+68	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1427+57	SB -	1427+93	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1493+27	SB -	1493+51	SB PAVEMENT APPROACH SLAB	8	0.08		
2	SB USH 41	1495+45	SB -	1495+69	SB PAVEMENT APPROACH SLAB	8	0.08		
2	SB USH 41	1534+38	SB -	1534+60	SB PAVEMENT APPROACH SLAB	4	0.04		
2	SB USH 41	1536+54	SB -	1536+76	SB PAVEMENT APPROACH SLAB	4	0.04		
STAGE SUBTOTALS						134	1		
PROJECT TOTALS						298	3		

(A) REFER TO "BASE AGGREGATE DENSE 3/4-INCH" TABLE FOR ADDITIONAL QUANTITY

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

3

CONCRETE SURFACE DRAINS HES

								416.1015	416.0610 (B)
								(CY)	DRILLED TIE BARS (EACH)
STAGE	ROADWAY		STATION	TO	STATION	OFFSET			
STAGE 1	NB	USH 41	1165+79	NB -	1166+04	NB RIGHT		6	14
STAGE 1	NB	USH 41	1228+20	NB -	1228+47	NB RIGHT		8	9
STAGE 1	NB	USH 41	1266+34	NB -	1266+68	NB RIGHT		8	11
STAGE 1	NB	USH 41	1495+56	NB -	1495+82	NB RIGHT		6	11
STAGE 1	NB	USH 41	1534+50	NB -	1534+72	NB RIGHT		5	11
STAGE 1	SB	USH 41	1146+02	SB -	1146+32	SB LEFT		8	9
STAGE 1	SB	USH 41	1495+47	SB -	1495+73	SB LEFT		6	11
STAGE 1	SB	USH 41	1534+34	SB -	1534+60	SB LEFT		7	11
STAGE 1	SB	USH 41	1554+19	SB -	1554+45	SB LEFT		7	11
PROJECT TOTAL								61	98

(B) REFER TO "SHES CONCRETE PAVEMENT REPAIR AND REPLACEMENT SUMMARY" TABLE FOR ADDITIONAL QUANTITIES

3

SHES CONCRETE PAVEMENT REPAIR AND REPLACEMENT SUMMARY

						416.1715	416.1725	416.0610 (B)	416.0620	690.0150	690.0250 (D)
						CONCRETE	CONCRETE	DRILLED	DRILLED	SAWING	SAWING
						PAVEMENT	PAVEMENT	TIE BARS	DOWEL BARS	ASPHALT	CONCRETE
						REPAIR	REPLACEMENT				
						SHES	SHES				
STAGE	STATION	TO	STATION	LOCATION		(SY)	(SY)	(EACH)	(EACH)	(LF)	(LF)
STAGES 1 & 2	1119+87	NB -	1580+89	NB	NB MAINLINE LANES	0.0	161.3	0	72	19	292
PRE-STAGE 1	1119+87	NB -	1580+89	NB	NB MAINLINE INSIDE SHOULDERS	8.3	290.3	110	72	0	592
STAGE 2	1119+87	NB -	1580+89	NB	NB MAINLINE OUTSIDE SHOULDERS	0.0	233.5	38	0	95	555
PRE-STAGE 1	1119+78	SB -	1580+61	SB	SB INSIDE MAINLINE SHOULDERS	0.0	252.9	110	80	0	533
STAGE 2	1119+78	SB -	1580+61	SB	SB OUTSIDE MAINLINE SHOULDERS	14.5	196.0	11	0	94	486
UNDISTRIBUTED						0.0	110.0	30	20	20	250
PROJECT TOTALS						22.8	1,244.1	299	244	228	2,708

(B) REFER TO "CONCRETE SURFACE DRAIN HES" TABLE FOR ADDITIONAL QUANTITIES

(D) REFER TO "SAWING CONCRETE" TABLE FOR ADDITIONAL QUANTITIES

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

ASPHALTIC PAVEMENT

						455.0105 ASPHALTIC MATERIAL PG58-28 (TON)	460.1100 HMA PAVEMENT TYPE E-0.3 (TON)	460.1130 HMA PAVEMENT TYPE E-30 (TON)	455.0605 TACK COAT (GAL)
STAGE	STATION	TO	STATION	LOCATION					
1	1139+54	NB -	1142+02	NB	SHOULDER MILL AND RELAY	1.6	29	-	15
1	1141+38	NB -	1146+33	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.6	28	-	10
1	1145+72	NB -	1146+07	NB	PAVEMENT APPROACH SLAB	1.6	-	29	3
1	1147+26	NB -	1147+63	NB	PAVEMENT APPROACH SLAB	2.3	-	42	4
1	1147+69	NB -	1166+00	NB	CONCRETE RUMBLE STRIP REPLACEMENT	5.8	105	-	37
1	1154+32	NB -	1165+85	NB	SHOULDER MILL AND RELAY	8.1	147	-	77
1	1165+54	NB -	1165+79	NB	PAVEMENT APPROACH SLAB	1.6	-	28	3
1	1167+79	NB -	1168+06	NB	PAVEMENT APPROACH SLAB	1.5	-	27	3
1	1167+99	NB -	1173+32	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.7	31	-	11
1	1168+21	NB -	1171+65	NB	SHOULDER MILL AND RELAY	2.4	44	-	23
1	1211+47	NB -	1215+83	NB	SHOULDER MILL AND RELAY	2.5	45	-	23
1	1217+25	NB -	1217+49	NB	PAVEMENT APPROACH SLAB	1.5	-	28	3
1	1217+54	NB -	1226+58	NB	SHOULDER MILL AND RELAY	5.6	102	-	53
1	1219+10	NB -	1226+79	NB	CONCRETE RUMBLE STRIP REPLACEMENT	2.4	44	-	15
1	1226+51	NB -	1226+77	NB	PAVEMENT APPROACH SLAB	1.7	-	31	3
1	1228+10	NB -	1228+35	NB	PAVEMENT APPROACH SLAB	1.5	-	28	3
1	1228+16	NB -	1232+58	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.4	25	-	9
1	1228+47	NB -	1231+32	NB	SHOULDER MILL AND RELAY	1.7	32	-	17
1	1254+06	NB -	1254+51	NB	PAVEMENT APPROACH SLAB	4.3	-	77	8
1	1256+51	NB -	1256+86	NB	PAVEMENT APPROACH SLAB	2.9	-	53	5
1	1260+84	NB -	1267+35	NB	CONCRETE RUMBLE STRIP REPLACEMENT	2.1	37	-	13
1	1261+33	NB -	1263+00	NB	SHOULDER MILL AND RELAY	1.0	18	-	10
1	1270+08	NB -	1274+30	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.3	24	-	8
1	1270+61	NB -	1272+79	NB	SHOULDER MILL AND RELAY	1.2	21	-	11
1	1429+44	NB -	1429+73	NB	PAVEMENT APPROACH SLAB	2.4	-	44	4
1	1477+76	NB -	1482+18	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.4	25	-	9
1	1483+29	NB -	1486+86	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.1	21	-	7
1	1495+44	NB -	1495+67	NB	PAVEMENT APPROACH SLAB	2.2	-	39	4
1	1529+75	NB -	1534+72	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.6	29	-	10
1	1530+67	NB -	1534+50	NB	SHOULDER REPLACEMENT	5.7	104	-	22
1	1534+38	NB -	1534+60	NB	PAVEMENT APPROACH SLAB	1.7	-	31	3
1	1536+54	NB -	1536+76	NB	PAVEMENT APPROACH SLAB	1.7	-	32	3
1	1536+66	NB -	1553+91	NB	CONCRETE RUMBLE STRIP REPLACEMENT	5.5	99	-	34
1	1536+88	NB -	1544+87	NB	SHOULDER REPLACEMENT	12.1	221	-	46
1	1551+05	NB -	1553+17	NB	SHOULDER REPLACEMENT	3.3	59	-	12
1	1555+72	NB -	1559+71	NB	SHOULDER REPLACEMENT	7.4	134	-	28
1	1556+00	NB -	1560+58	NB	CONCRETE RUMBLE STRIP REPLACEMENT	1.4	26	-	9
2	1145+72	NB -	1146+07	NB	PAVEMENT APPROACH SLAB	3.6	-	66	7
SUBTOTALS						110	1,451	555	564

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
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ASPHALTIC PAVEMENT CONT.

						455.0105	460.1100	460.1130	455.0605	
						ASPHALTIC	HMA	HMA	TACK COAT	
						MATERIAL	PAVEMENT	PAVEMENT		
						PG58-28	TYPE E-0.3	TYPE E-30		
STAGE	STATION	TO	STATION	LOCATION		(TON)	(TON)	(TON)	(GAL)	
2	1147+26	NB	-	1147+63	NB	PAVEMENT APPROACH SLAB	3.1	-	57	6
2	1165+54	NB	-	1165+79	NB	PAVEMENT APPROACH SLAB	1.8	-	32	3
2	1167+79	NB	-	1168+06	NB	PAVEMENT APPROACH SLAB	1.9	-	35	3
2	1217+25	NB	-	1217+49	NB	PAVEMENT APPROACH SLAB	1.6	-	29	3
2	1226+51	NB	-	1226+77	NB	PAVEMENT APPROACH SLAB	1.6	-	30	3
2	1228+10	NB	-	1228+35	NB	PAVEMENT APPROACH SLAB	1.7	-	31	3
2	1254+06	NB	-	1254+51	NB	PAVEMENT APPROACH SLAB	1.6	-	28	3
2	1256+51	NB	-	1256+86	NB	PAVEMENT APPROACH SLAB	1.4	-	25	2
2	1429+44	NB	-	1429+73	NB	PAVEMENT APPROACH SLAB	0.9	-	16	2
2	1495+44	NB	-	1495+67	NB	PAVEMENT APPROACH SLAB	1.0	-	18	2
2	1534+38	NB	-	1534+60	NB	PAVEMENT APPROACH SLAB	1.3	-	24	2
2	1536+54	NB	-	1536+76	NB	PAVEMENT APPROACH SLAB	1.3	-	24	2
1	1143+71	SB	-	1146+02	SB	SHOULDER MILL AND RELAY	1.4	26	-	14
1	1145+94	SB	-	1146+29	SB	PAVEMENT APPROACH SLAB	2.7	-	49	5
1	1147+52	SB	-	1147+89	SB	PAVEMENT APPROACH SLAB	2.2	-	39	4
1	1147+83	SB	-	1151+22	SB	SHOULDER MILL AND RELAY	2.1	39	-	20
1	1165+52	SB	-	1165+76	SB	PAVEMENT APPROACH SLAB	2.2	-	39	4
1	1167+71	SB	-	1167+99	SB	PAVEMENT APPROACH SLAB	2.5	-	46	5
1	1210+98	SB	-	1215+81	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.5	28	-	10
1	1215+52	SB	-	1215+75	SB	PAVEMENT APPROACH SLAB	1.7	-	32	3
1	1217+22	SB	-	1217+46	SB	PAVEMENT APPROACH SLAB	2.5	-	46	5
1	1217+30	SB	-	1226+78	SB	CONCRETE RUMBLE STRIP REPLACEMENT	3.0	55	-	19
1	1219+78	SB	-	1226+47	SB	SHOULDER MILL AND RELAY	4.2	77	-	40
1	1226+47	SB	-	1226+72	SB	PAVEMENT APPROACH SLAB	2.1	-	38	4
1	1228+04	SB	-	1228+29	SB	PAVEMENT APPROACH SLAB	2.4	-	43	4
1	1228+15	SB	-	1232+02	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.2	22	-	8
1	1228+29	SB	-	1231+67	SB	SHOULDER MILL AND RELAY	2.1	38	-	20
1	1250+04	SB	-	1254+38	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.4	25	-	9
1	1250+78	SB	-	1254+06	SB	SHOULDER MILL AND RELAY	2.0	37	-	19
1	1254+06	SB	-	1254+37	SB	PAVEMENT APPROACH SLAB	1.9	-	35	4
1	1256+37	SB	-	1256+68	SB	PAVEMENT APPROACH SLAB	2.2	-	40	4
1	1256+47	SB	-	1267+44	SB	CONCRETE RUMBLE STRIP REPLACEMENT	3.5	63	-	22
1	1256+67	SB	-	1263+32	SB	SHOULDER MILL AND RELAY	4.4	80	-	42
1	1270+14	SB	-	1274+94	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.5	28	-	10
1	1424+23	SB	-	1427+42	SB	SHOULDER MILL AND RELAY	1.9	34	-	18
1	1424+60	SB	-	1428+00	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.1	20	-	7
1	1427+57	SB	-	1427+93	SB	PAVEMENT APPROACH SLAB	2.4	-	43	4
1	1429+80	SB	-	1434+91	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.6	29	-	10
SUBTOTALS						77	599	799	345	

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UNLESS OTHERWISE NOTED.

ASPHALTIC PAVEMENT CONT.

						455.0105	460.1100	460.1130	455.0605
						ASPHALTIC	HMA	HMA	TACK COAT
						MATERIAL	PAVEMENT	PAVEMENT	
						PG58-28	TYPE E-0.3	TYPE E-30	
STAGE	STATION	TO	STATION	LOCATION		(TON)	(TON)	(TON)	(GAL)
1	1429+94	SB	- 1433+83	SB	SHOULDER MILL AND RELAY	2.2	41	-	21
1	1477+58	SB	- 1482+18	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.5	26	-	9
1	1483+29	SB	- 1493+62	SB	CONCRETE RUMBLE STRIP REPLACEMENT	3.3	59	-	21
1	1484+29	SB	- 1493+27	SB	SHOULDER REPLACEMENT	13.6	247	-	52
1	1493+27	SB	- 1493+51	SB	PAVEMENT APPROACH SLAB	1.8	-	33	3
1	1495+45	SB	- 1495+69	SB	PAVEMENT APPROACH SLAB	1.7	-	31	3
1	1495+57	SB	- 1500+82	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.7	30	-	10
1	1495+73	SB	- 1499+66	SB	SHOULDER REPLACEMENT	5.5	101	-	21
1	1530+62	SB	- 1534+72	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.3	24	-	8
1	1531+47	SB	- 1534+34	SB	SHOULDER REPLACEMENT	4.2	76	-	16
1	1534+38	SB	- 1534+60	SB	PAVEMENT APPROACH SLAB	1.8	-	33	3
1	1536+54	SB	- 1536+76	SB	PAVEMENT APPROACH SLAB	1.8	-	32	3
1	1536+66	SB	- 1554+01	SB	CONCRETE RUMBLE STRIP REPLACEMENT	5.5	100	-	35
1	1536+76	SB	- 1543+40	SB	SHOULDER REPLACEMENT	9.8	178	-	37
1	1547+79	SB	- 1554+09	SB	SHOULDER REPLACEMENT	8.8	160	-	33
1	1556+10	SB	- 1561+83	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.8	33	-	11
1	1556+92	SB	- 1561+41	SB	SHOULDER REPLACEMENT	6.7	123	-	26
2	1145+94	SB	- 1146+29	SB	PAVEMENT APPROACH SLAB	2.2	-	41	4
2	1147+52	SB	- 1147+89	SB	PAVEMENT APPROACH SLAB	3.0	-	55	5
2	1165+52	SB	- 1165+76	SB	PAVEMENT APPROACH SLAB	1.0	-	19	2
2	1167+71	SB	- 1167+99	SB	PAVEMENT APPROACH SLAB	1.0	-	19	2
2	1215+52	SB	- 1215+75	SB	PAVEMENT APPROACH SLAB	1.3	-	25	2
2	1217+22	SB	- 1217+46	SB	PAVEMENT APPROACH SLAB	1.3	-	24	2
2	1226+47	SB	- 1226+72	SB	PAVEMENT APPROACH SLAB	2.1	-	37	4
2	1228+04	SB	- 1228+29	SB	PAVEMENT APPROACH SLAB	1.9	-	35	3
2	1254+06	SB	- 1254+37	SB	PAVEMENT APPROACH SLAB	1.8	-	33	3
2	1256+37	SB	- 1256+68	SB	PAVEMENT APPROACH SLAB	1.5	-	27	3
2	1427+57	SB	- 1427+93	SB	PAVEMENT APPROACH SLAB	1.7	-	31	3
2	1493+27	SB	- 1493+51	SB	PAVEMENT APPROACH SLAB	1.5	-	26	3
2	1495+45	SB	- 1495+69	SB	PAVEMENT APPROACH SLAB	1.4	-	26	3
2	1534+38	SB	- 1534+60	SB	PAVEMENT APPROACH SLAB	1.3	-	24	2
2	1536+54	SB	- 1536+76	SB	PAVEMENT APPROACH SLAB	1.3	-	24	2
3	1359+21	SB	- 1364+49	SB	SHOULDER MILL AND RELAY	3.2	58	-	30
3	1365+40	SB	- 1370+76	SB	SHOULDER MILL AND RELAY	3.2	59	-	31
4	1360+68	SB	- 1364+59	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.2	22	-	8
4	1365+01	SB	- 1370+20	SB	CONCRETE RUMBLE STRIP REPLACEMENT	1.6	30	-	10
SUBTOTALS						107	1,366	573	436
PROJECT TOTALS						294	3,415	1,927	1,345

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0020 UNLESS OTHERWISE NOTED.

ASPHALTIC SHOULDER RUMBLE STRIP

465.0400						
ROADWAY	STATION	TO	STATION	LOCATION		(LF)
NB USH 41	1139+54	NB	1142+02	NB RT		248
NB USH 41	1141+38	NB	1146+33	NB LT		495
NB USH 41	1147+69	NB	1166+00	NB LT		1,831
NB USH 41	1154+32	NB	1165+85	NB RT		1,153
NB USH 41	1167+99	NB	1173+32	NB LT		533
NB USH 41	1168+21	NB	1171+65	NB RT		344
NB USH 41	1211+47	NB	1215+83	NB RT		436
NB USH 41	1217+54	NB	1226+58	NB RT		904
NB USH 41	1219+10	NB	1226+79	NB LT		769
NB USH 41	1228+16	NB	1232+58	NB LT		443
NB USH 41	1228+47	NB	1231+32	NB RT		285
NB USH 41	1260+84	NB	1267+35	NB LT		651
NB USH 41	1261+33	NB	1263+00	NB RT		167
NB USH 41	1270+08	NB	1274+30	NB LT		422
NB USH 41	1270+61	NB	1272+79	NB RT		218
NB USH 41	1477+76	NB	1482+18	NB LT		442
NB USH 41	1483+29	NB	1486+86	NB LT		357
NB USH 41	1529+75	NB	1534+72	NB LT		497
NB USH 41	1532+42	NB	1534+50	NB RT		208
NB USH 41	1536+66	NB	1553+91	NB LT		1,725
NB USH 41	1536+88	NB	1544+87	NB RT		799
NB USH 41	1551+05	NB	1553+17	NB RT		212
NB USH 41	1555+72	NB	1558+85	NB RT		313
NB USH 41	1556+00	NB	1560+58	NB LT		458
SUBTOTAL						13,910

ASPHALTIC SHOULDER RUMBLE STRIP CONT.

465.0400						
ROADWAY	STATION	TO	STATION	LOCATION		(LF)
SB USH 41	1143+71	SB	1146+02	SB LT		231
SB USH 41	1147+83	SB	1151+22	SB LT		339
SB USH 41	1210+98	SB	1215+81	SB RT		482
SB USH 41	1217+30	SB	1226+78	SB RT		948
SB USH 41	1219+78	SB	1226+47	SB LT		669
SB USH 41	1228+15	SB	1232+02	SB RT		387
SB USH 41	1228+29	SB	1231+67	SB LT		338
SB USH 41	1250+04	SB	1254+38	SB RT		434
SB USH 41	1250+78	SB	1254+06	SB LT		328
SB USH 41	1256+47	SB	1267+44	SB RT		1,097
SB USH 41	1256+67	SB	1263+32	SB LT		665
SB USH 41	1270+14	SB	1274+94	SB RT		480
SB USH 41	1359+21	SB	1364+49	SB LT		528
SB USH 41	1360+68	SB	1364+59	SB RT		391
SB USH 41	1365+01	SB	1370+20	SB RT		519
SB USH 41	1365+40	SB	1370+76	SB LT		536
SB USH 41	1424+23	SB	1427+42	SB LT		319
SB USH 41	1424+60	SB	1428+00	SB RT		340
SB USH 41	1429+80	SB	1434+91	SB RT		511
SB USH 41	1429+94	SB	1433+83	SB LT		389
SB USH 41	1477+58	SB	1482+18	SB RT		460
SB USH 41	1483+29	SB	1493+62	SB RT		1,032
SB USH 41	1484+29	SB	1493+27	SB LT		898
SB USH 41	1495+57	SB	1500+82	SB RT		524
SB USH 41	1495+73	SB	1498+26	SB LT		253
SB USH 41	1530+62	SB	1534+72	SB RT		410
SB USH 41	1532+30	SB	1534+34	SB LT		204
SB USH 41	1536+66	SB	1554+01	SB RT		1,735
SB USH 41	1536+76	SB	1543+40	SB LT		664
SB USH 41	1547+79	SB	1554+09	SB LT		630
SB USH 41	1556+10	SB	1561+83	SB RT		573
SB USH 41	1556+92	SB	1559+67	SB LT		275
SUBTOTAL						17,590
PROJECT TOTALS						31,500

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0020 UNLESS OTHERWISE NOTED.

CONCRETE BARRIER

STAGE	LOCATION	603.8000	603.8125	614.0905
		CONCRETE BARRIER	CONCRETE BARRIER	CRASH
		TEMPORARY DELIVERED (LF)	PRECAST INSTALLED (LF)	CUSHION TEMPORARY (EACH)
STAGE 1	USH 41 NB SOUTH SEGMENT	1,102	1,102	4
	USH 41 NB NORTH SEGMENT	762	762	3
	USH 41 SB SOUTH SEGMENT	1,156	1,156	4
	USH 41 SB NORTH SEGMENT	1,347	1,347	5
	STAGE TOTAL	4,367	4,367	16
STAGE 2	USH 41 NB SOUTH SEGMENT	1,280	1,280	5
	USH 41 NB NORTH SEGMENT	535	535	2
	USH 41 SB SOUTH SEGMENT	1,265	1,265	5
	USH 41 SB NORTH SEGMENT	1,230	1,230	5
	STAGE TOTAL	4,310	4,310	17
STAGE 3	USH 41 SB	112	112	1
	STAGE TOTAL	112	112	1
STAGE 4	USH 41 SB	130	130	1
	STAGE TOTAL	130	130	1
PROJECT TOTALS		8,919	8,919	35

ADJUSTING INLET COVERS

STAGE	ROADWAY	STATION	OFFSET	611.8115 (EACH)
1	USH 41 NB	1165+91.10	NB 31.00' RT	1
1	USH 41 NB	1228+41.14	NB 34.00' RT	1
1	USH 41 NB	1266+51.21	NB 43.00' RT	1
1	USH 41 NB	1495+68.85	NB 31.00' RT	1
1	USH 41 NB	1534+51.74	NB 31.50' RT	1
1	USH 41 SB	1146+09.42	SB 43.00' LT	1
2	USH 41 SB	1270+35.24	SB 21.00' RT	1
1	USH 41 SB	1495+60.00	SB 31.00' LT	1
1	USH 41 SB	1534+40.27	SB 31.00' LT	1
1	USH 41 SB	1554+30.52	SB 33.00' LT	1
PROJECT TOTAL				10

EROSION CONTROL

LOCATION	628.1504	628.1520	628.2004	628.7015
	SILT FENCE	SILT FENCE	EROSION MAT	INLET PROTECTION
	LF	LF	CLASS I TYPE B SY	TYPE C EACH
NE WINGWALL OF B-70-132	100	100	20	---
UNDISTIBUTED	25	25	5	10
PROJECT TOTALS	125	125	25	10

LANDSCAPING

LOCATION	629.0210	630.0130	630.0200
	FERTILIZER	SEEDING	SEEDING
	TYPE B CWT	MIXTURE NO 30 LB	TEMPORARY LB
NE WING WALL OF B-70-132	0.01	0.4	0.5
PROJECT TOTALS	0.01	0.4	0.5

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

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TRAFFIC CONTROL DEVICES														
		643.0300			643.0420		643.0705		643.0715		643.0800		643.0900	
					BARRICADES		WARNING		WARNING		ARROW		TRAFFIC	
					TYPE III		LIGHTS		LIGHTS		BOARDS		CONTROL	
							TYPE A		TYPE C				SIGNS	
STAGE	LOCATION	DAYS IN PHASE	DRUMS (DEVICES)	(DAYS)	(DEVICES)	(DAYS)	(DEVICES)	(DAYS)	(DEVICES)	(DAYS)	(DEVICES)	(DAYS)	(DEVICES)	(DAYS)
STAGE 1	USH 41 NB SOUTH SEGMENT	62	313	19,406	13	806	26	1,612	96	5,952	2	124	90	5,580
	USH 41 NB NORTH SEGMENT	58	193	11,194	11	638	22	1,276	71	4,118	2	116	67	3,886
	USH 41 SB SOUTH SEGMENT	44	289	12,716	12	528	24	1,056	47	2,068	2	88	74	3,256
	USH 41 SB NORTH SEGMENT	43	255	10,965	17	731	34	1,462	74	3,182	2	86	77	3,311
STH 125 SB ENTRANCE RAMP CLOSURE		10	49	490	9	90	18	180	4	40	0	0	13	130
STAGE TOTAL			1,099	54,771	62	2,793	124	5,586	292	15,360	8	414	321	16,163
STAGE 2	USH 41 NB SOUTH SEGMENT	50	275	13,750	16	800	32	1,600	95	4,750	1	50	74	3,700
	USH 41 NB NORTH SEGMENT	50	85	4,250	4	200	8	400	40	2,000	1	50	40	2,000
	USH 41 SB SOUTH SEGMENT	45	335	15,075	19	855	38	1,710	115	5,175	1	45	71	3,195
	USH 41 SB NORTH SEGMENT	45	215	9,675	15	675	30	1,350	65	2,925	2	90	67	3,015
CTH II NB ENTRANCE RAMP CLOSURE		50	24	1,200	8	400	16	800	0	0	0	0	8	400
STAGE TOTAL			934	43,950	62	2,930	124	5,860	315	14,850	5	235	260	12,310
STAGE 3	USH 41 SB	7	63	441	2	14	4	28	49	343	1	7	21	147
STAGE TOTAL			63	441	2	14	4	28	49	343	1	7	21	147
STAGE 4	USH 41 SB	7	65	455	2	14	4	28	35	245	1	7	15	105
STAGE TOTAL			65	455	2	14	4	28	35	245	1	7	15	105
UNDISTRIBUTED			110	4,980	10	290	10	580	30	1,540	0	30	30	1,440
PROJECT TOTALS			2,271	104,597	138	6,041	266	12,082	721	32,338	15	693	647	30,165

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TRAFFIC CONTROL COVERING SIGNS							
		643.0910			643.092		
		TYPE I			TYPE II		
STAGE	LOCATION	NUMBER OF			NUMBER OF		
		SIGNS	CYCLES	(EACH)	SIGNS	CYCLES	(EACH)
STAGE 1	USH 41 NB SOUTH SEGMENT	1	1	1	7	1	7
	USH 41 NB NORTH SEGMENT	4	1	4	6	1	6
	USH 41 SB SOUTH SEGMENT	2	1	2	8	1	8
	USH 41 SB NORTH SEGMENT	2	1	2	7	1	7
STH 125 SB ENTRANCE RAMP CLOSURE			0	0	4	1	4
STAGE TOTAL				9	32		
STAGE 2	USH 41 NB SOUTH SEGMENT	---	---	0	5	1	5
	USH 41 NB NORTH SEGMENT	1	1	1	---	---	0
	USH 41 SB SOUTH SEGMENT	3	1	3	4	1	4
	USH 41 SB NORTH SEGMENT	1	1	1	1	1	1
STAGE TOTAL				5	10		
PROJECT TOTALS				14	42		

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

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TRAFFIC CONTROL SIGNS PCMS

643.1050 SPV.0045.01

PCMS

CELLULAR

COMMUNICATIONS

STAGE	LOCATION	DAYS IN PHASE	(DEVICES)	(DAYS)	(DEVICES)	(DAYS)
STAGE 1	USH 41 NB SOUTH SEGMENT	62	1	62	1	62
	USH 41 NB NORTH SEGMENT	58	-	-	-	-
	USH 41 SB SOUTH SEGMENT	44	-	-	-	-
	USH 41 SB NORTH SEGMENT	43	1	43	1	43
STH 125 SB ENTRANCE RAMP CLOSURE		10	1	7	-	-
STAGE TOTAL			3	112	2	105
STAGE 2	USH 41 NB SOUTH SEGMENT	50	1	50	1	50
	USH 41 NB NORTH SEGMENT	50	-	-	-	-
	USH 41 SB SOUTH SEGMENT	45	-	-	-	-
	USH 41 SB NORTH SEGMENT	45	1	45	1	45
CTH II NB ENTRANCE RAMP CLOSURE		53	1	7	-	-
STAGE TOTAL			3	102	2	95
STAGE 3	USH 41 SB	7	1	7	-	-
STAGE TOTAL			1	7	0	0
STAGE 4	USH 41 SB	7	1	7	-	-
STAGE TOTAL			1	7	0	0
PROJECT TOTALS			8	228	4	200

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PAVEMENT MARKING						
646.0103 PAINT 4-INCH			646.0123 PAINT 8-INCH			
STATION - STATION	YELLOW SOLID (LF)	WHITE SOLID (LF)	WHITE DASHED (LF)	WHITE SOLID (LF)	WHITE DASHED (LF)	
USH 41 NB						
1124+00 - 1130+60	---	---	165	---	---	
1135+60 - 1152+55	---	---	424	---	---	
1141+38 - 1173+32	3,194	---	799	---	---	
1150+64 - 1154+43	---	---	---	572	---	
1177+10 - 1179+05	---	---	---	236	---	
1179+05 - 1181+26	---	---	---	---	55	
1180+55 - 1200+58	---	---	501	---	---	
1199+54 - 1202+88	---	---	---	---	84	
1219+10 - 1232+58	1,348	---	337	---	---	
1234+44 - 1240+92	---	---	162	---	---	
1239+88 - 1241+78	191	---	---	---	---	
1241+78 - 1243+34	---	---	---	---	39	
1260+84 - 1274+30	1,346	---	336	---	---	
1262+71 - 1265+70	---	---	---	389	---	
1265+40 - 1274+29	---	---	222	---	---	
1464+45 - 1471+05	---	---	165	---	---	
1476+63 - 1488+13	---	---	287	---	---	
1477+76 - 1486+86	910	---	---	---	---	
1507+43 - 1521+04	---	---	340	---	---	
1528+38 - 1532+66	---	---	107	---	---	
1529+75 - 1560+58	3,083	---	---	---	---	
1545+44 - 1548+01	---	---	---	320	---	
1547+55 - 1549+25	---	---	43	---	---	
1549+25 - 1561+91	---	---	316	---	---	
1126+03 - 1132+63	---	---	165	---	---	
1139+54 - 1150+64	---	1,109	---	---	---	
1142+02 - 1150+64	---	---	---	---	215	
1152+55 - 1154+44	---	---	---	189	---	
1154+44 - 1172+65	---	1,821	---	---	---	
1169+57 - 1175+63	---	---	152	---	---	
1207+52 - 1214+47	---	---	174	---	---	
1210+85 - 1231+96	---	2,110	---	---	---	
1228+87 - 1234+44	---	---	139	---	---	
1257+22 - 1262+91	---	---	142	---	---	
1260+77 - 1262+71	---	194	---	---	---	
1262+71 - 1264+66	---	---	---	196	---	
1264+98 - 1273+68	---	869	---	---	---	
1265+53 - 1266+89	---	---	---	209	---	
1266+89 - 1277+33	---	---	261	---	---	
1274+30 - 1281+15	---	---	171	---	---	
1279+45 - 1283+34	---	---	97	---	---	
1515+03 - 1523+83	---	---	220	---	---	
1527+83 - 1547+55	---	---	493	---	---	
1529+86 - 1544+35	---	1,450	---	---	---	
SUBTOTALS	10,072	7,553	6,218	2,111	393	

PAVEMENT MARKING CONT.						
646.0103 PAINT 4-INCH			646.0123 PAINT 8-INCH			
STATION - STATION	YELLOW SOLID (LF)	WHITE SOLID (LF)	WHITE DASHED (LF)	WHITE SOLID (LF)	WHITE DASHED (LF)	
USH 41 NB						
1544+35 - 1546+66	---	---	---	231	---	
1545+98 - 1560+70	---	1,472	---	---	---	
1547+29 - 1550+79	---	---	---	628	---	
1549+25 - 1562+95	---	---	343	---	---	
USH 41 SB						
1210+40 - 1213+72	---	---	83	---	---	
1210+40 - 1232+02	2,162	---	---	---	---	
1219+87 - 1233+68	---	---	345.21	---	---	
1236+93 - 1241+00	---	---	102	---	---	
1240+18 - 1243+80	---	---	90	---	---	
1247+78 - 1276+21	---	---	711	---	---	
1250+04 - 1274+94	2,490	---	---	---	---	
1262+73 - 1265+91	---	---	---	490	---	
1265+66 - 1266+57	---	---	23	---	---	
1294+71 - 1297+84	---	---	78	---	---	
1297+54 - 1301+31	---	---	---	---	94	
1300+93 - 1310+25	---	---	233	---	---	
1309+99 - 1313+54	---	---	---	---	443	
1315+74 - 1322+34	---	---	165	---	---	
1424+60 - 1435+00	---	---	260	---	---	
1424+78 - 1434+70	992	---	---	---	---	
1440+90 - 1442+96	---	---	---	---	51	
1442+28 - 1444+59	---	---	58	---	---	
1476+57 - 1481+28	---	---	118	---	---	
1477+65 - 1500+82	2,317	---	---	---	---	
1497+30 - 1501+98	---	---	117	---	---	
1507+03 - 1520+20	---	---	329	---	---	
1519+34 - 1520+22	---	---	---	---	22	
1529+22 - 1533+62	---	---	110	---	---	
1530+62 - 1561+83	3,121	---	---	---	---	
1545+02 - 1564+27	---	---	481	---	---	
1545+73 - 1547+28	---	---	---	---	39	
1546+94 - 1548+62	---	---	42	---	---	
1568+00 - 1572+49	---	---	112	---	---	
1137+15 - 1142+85	---	---	142	---	---	
1140+96 - 1151+84	---	---	272	---	---	
1143+45 - 1151+84	---	839	---	---	---	
1151+84 - 1154+40	---	---	---	371	---	
1152+09 - 1158+68	---	---	165	---	---	
1154+40 - 1154+84	---	45	---	---	---	
1209+78 - 1218+85	---	---	227	---	---	
1212+56 - 1213+82	---	126	---	---	---	
1213+82 - 1219+87	---	---	---	661	---	
1219+87 - 1235+54	---	---	392	---	---	
SUBTOTALS	11,082	2,482	4,997	2,381	649	

NOTE: ALL ITEMS ON THIS SHEET ARE CATEGORY 0020 UNLESS OTHERWISE NOTED.						
PAVEMENT MARKING CONT.						
646.0103 PAINT 4-INCH			646.0123 PAINT 8-INCH			
STATION - STATION	YELLOW SOLID (LF)	WHITE SOLID (LF)	WHITE DASHED (LF)	WHITE SOLID (LF)	WHITE DASHED (LF)	
USH 41 SB						
1219+87 - 1231+78	---	1,191	---	---	---	
1232+40 - 1236+93	---	---	113	---	---	
1249+07 - 1265+66	---	---	415	---	---	
1250+75 - 1262+76	---	1,200	---	---	---	
1262+76 - 1265+08	---	---	---	233	---	
1265+28 - 1269+96	---	---	---	615	---	
1266+57 - 1277+88	---	---	283	---	---	
1269+96 - 1275+54	---	---	---	---	140	
1291+51 - 1297+54	---	---	---	---	151	
1301+31 - 1301+66	---	---	---	---	9	
1311+26 - 1320+06	---	---	220	---	---	
1420+62 - 1436+47	---	---	396	---	---	
1423+42 - 1434+44	---	1,102	---	---	---	
1476+07 - 1502+60	---	---	663	---	---	
1478+97 - 1484+80	---	---	---	976	---	
1484+80 - 1500+43	---	1563	---	---	---	
1528+68 - 1546+94	---	---	456	---	---	
1530+63 - 1542+89	---	1,226	---	---	---	
1542+89 - 1545+73	---	---	---	392	---	
1547+28 - 1552+54	---	---	---	---	131	
1548+33 - 1562+40	---	1,407	---	---	---	
1548+62 - 1564+49	---	---	397	---	---	
1568+34 - 1577+14	---	---	220	---	---	
1356+37 - 1363+70	---	---	183	---	---	
1359+21 - 1370+76	---	1,155	---	---	---	
1366+88 - 1373+17	---	---	157	---	---	
1376+92 - 1385+72	---	---	220	---	---	
1359+77 - 1371+44	---	---	292	---	---	
1360+68 - 1370+20	953	---	---	---	---	
1377+13 - 1385+24	---	---	203	---	---	
SUBTOTALS	953	8,845	4,219	2,216	431	
PROJECT TOTALS		56,420		8,181		

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NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

REMOVING PAVEMENT MARKINGS

							646.0600
STAGE	ROADWAY	STATION	TO	STATION	LOCATION		(LF)
STAGE 1	USH 41 NB	1124+00	NB -	1130+60	NB RT		165
	USH 41 NB	1135+60	NB -	1152+55	NB RT		424
	USH 41 NB	1141+38	NB -	1173+32	NB LT		3,993
	USH 41 NB/JJB	1150+64	NB -	1154+43	JJB RT/LT		1,144
	JJC/USH 41 NB	1177+10	JJC -	1179+05	NB LT/RT		471
	USH 41 NB	1179+05	NB -	1181+26	NB RT		55
	USH 41 NB	1180+55	NB -	1200+58	NB RT		501
	USH 41 NB	1199+54	NB -	1202+88	NB RT		84
	USH 41 NB	1219+10	NB -	1232+58	NB LT		1,685
	USH 41 NB	1234+44	NB -	1240+92	NB RT		162
	USH 41 NB	1239+88	NB -	1241+78	NB RT		191
	USH 41 NB	1241+78	NB -	1243+34	NB RT		39
	USH 41 NB	1260+84	NB -	1274+30	NB LT		1,682
	IIC/USH 41 NB	1262+71	IIC -	1265+70	NB RT/LT		777
	USH 41 NB	1265+40	NB -	1274+29	NB RT		222
	USH 41 NB	1464+45	NB -	1471+05	NB RT		165
	USH 41 NB	1476+63	NB -	1488+13	NB LT		287
	USH 41 NB	1477+76	NB -	1486+86	NB LT		910
	USH 41 NB	1507+43	NB -	1521+04	NB RT		340
	USH 41 NB	1528+38	NB -	1532+66	NB LT		107
	USH 41 NB	1529+75	NB -	1560+58	NB LT		3,083
	WIC/USH 41 NB	1545+44	WIC -	1548+01	NB RT/LT		640
	USH 41 NB	1547+55	NB -	1549+25	NB RT		43
	USH 41 NB	1549+25	NB -	1561+91	NB RT		316
	USH 41 SB	1210+40	SB -	1213+72	SB RT		83
	USH 41 SB	1210+40	SB -	1232+02	SB RT		2,162
	USH 41 SB	1219+87	SB -	1233+68	SB RT		345
	USH 41 SB	1236+93	SB -	1241+00	SB LT		102
	USH 41 SB	1240+18	SB -	1243+80	SB LT		90
	USH 41 SB	1247+78	SB -	1276+21	SB RT		711
	USH 41 SB	1250+04	SB -	1274+94	SB RT		2,490
	IID/USH 41 SB	1262+73	IID -	1265+91	SB RT/LT		980
	USH 41 SB	1265+66	SB -	1266+57	SB RT		23
	USH 41 SB	1294+71	SB -	1297+84	SB LT		78
	USH 41 SB	1297+54	SB -	1301+31	SB LT		94
	USH 41 SB	1300+93	SB -	1310+25	SB LT		233
	USH 41 SB	1309+99	SB -	1313+54	SB LT		885
	USH 41 SB	1315+74	SB -	1322+34	SB LT		165
	USH 41 SB	1424+60	SB -	1435+00	SB RT		260
	USH 41 SB	1424+78	SB -	1434+70	SB RT		992
	USH 41 SB	1440+90	SB -	1442+96	SB LT		51
	USH 41 SB	1442+28	SB -	1444+59	SB LT		58
	USH 41 SB	1476+57	SB -	1481+28	SB RT		118
	USH 41 SB	1477+65	SB -	1500+82	SB RT		2,317
	USH 41 SB	1497+30	SB -	1501+98	SB RT		117
	USH 41 SB	1507+03	SB -	1520+20	SB LT		329
	USH 41 SB	1519+34	SB -	1520+22	SB LT		22
	USH 41 SB	1529+22	SB -	1533+62	SB RT		110
SUBTOTAL							30,303

REMOVING PAVEMENT MARKINGS CONT.

							646.0600
STAGE	ROADWAY	STATION	TO	STATION	LOCATION		(LF)
STAGE 1	USH 41 SB	1530+62	SB -	1561+83	SB RT		3,121
	USH 41 SB	1545+02	SB -	1564+27	SB RT		481
	USH 41 SB	1545+73	SB -	1547+28	SB LT		39
	USH 41 SB	1546+94	SB -	1548+62	SB LT		42
	USH 41 SB	1568+00	SB -	1572+49	SB LT		112
STAGE 1 TEMPORARY	USH 41 NB	1135+60	NB -	1149+81	NB RT		355
	USH 41 NB	1140+38	NB -	1145+72	NB LT		534
	USH 41 NB	1145+72	NB -	1167+00	NB LT		532
	USH 41 NB	1167+00	NB -	1174+82	NB LT		782
	USH 41 NB	1180+75	NB -	1200+28	NB RT		488
	USH 41 NB	1217+20	NB -	1233+58	NB LT		1,638
	USH 41 NB	1234+14	NB -	1240+62	NB RT		162
	USH 41 NB	1259+34	NB -	1275+40	NB LT		1,606
	USH 41 NB	1266+89	NB -	1275+40	NB RT		851
	USH 41 NB	1475+63	NB -	1489+13	NB LT		1,349
	USH 41 NB	1507+68	NB -	1520+78	NB RT		328
	USH 41 NB	1527+33	NB -	1534+76	NB LT		742
	USH 41 NB	1534+76	NB -	1554+50	NB LT		1,974
	USH 41 NB	1554+50	NB -	1563+61	NB LT		911
	USH 41 SB	1209+00	SB -	1234+68	SB RT		2,568
	USH 41 SB	1245+93	SB -	1256+49	SB RT		1,057
	USH 41 SB	1256+49	SB -	1271+09	SB RT		365
	USH 41 SB	1266+14	SB -	1267+62	SB LT		37
	USH 41 SB	1271+09	SB -	1277+41	SB RT		632
	USH 41 SB	1294+71	SB -	1297+72	SB LT		75
	USH 41 SB	1306+75	SB -	1309+75	SB LT		75
	USH 41 SB	1423+55	SB -	1436+10	SB RT		1,255
	USH 41 SB	1442+28	SB -	1444+73	SB LT		61
	USH 41 SB	1475+37	SB -	1483+12	SB RT		775
	USH 41 SB	1483+12	SB -	1495+45	SB RT		308
	USH 41 SB	1495+45	SB -	1503+13	SB RT		768
	USH 41 SB	1507+32	SB -	1519+91	SB LT		315
	USH 41 SB	1528+12	SB -	1535+64	SB RT		753
	USH 41 SB	1535+64	SB -	1556+23	SB RT		515
	USH 41 SB	1547+92	SB -	1549+92	SB LT		50
	USH 41 SB	1556+23	SB -	1562+83	SB RT		660
STAGE 2	USH 41 NB	1126+03	NB -	1132+63	NB LT		165
	USH 41 NB	1139+54	NB -	1150+64	NB RT		1,109
	USH 41 NB	1142+02	NB -	1150+64	NB RT		215
	USH 41 NB	1152+55	NB -	1154+44	NB RT		378
	USH 41 NB	1154+44	NB -	1172+65	NB RT		1,821
	USH 41 NB	1169+57	NB -	1175+63	NB RT		152
	USH 41 NB	1207+52	NB -	1214+47	NB RT		174
	USH 41 NB	1210+85	NB -	1231+96	NB RT		2,110
	USH 41 NB	1228+87	NB -	1234+44	NB RT		139
SUBTOTAL							32,578

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NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020 REMOVING PAVEMENT MARKINGS CONT.
UNLESS OTHERWISE NOTED.

REMOVING PAVEMENT MARKINGS CONT.

646.0600							
STAGE	ROADWAY	STATION	TO	STATION	LOCATION		(LF)
STAGE 2	USH 41 NB	1257+22	NB -	1262+91	NB RT		142
	USH 41 NB	1260+77	NB -	1262+71	NB RT		194
	USH 41 NB	1262+71	NB -	1264+66	NB RT		391
	USH 41 NB	1264+98	NB -	1273+68	NB RT		869
	USH 41 NB	1265+53	NB -	1266+89	NB RT		417
	USH 41 NB	1266+89	NB -	1277+33	NB RT		261
	USH 41 NB	1274+30	NB -	1281+15	NB RT		171
	USH 41 NB	1279+45	NB -	1283+34	NB RT		97
	USH 41 NB	1515+03	NB -	1523+83	NB LT		220
	USH 41 NB	1527+83	NB -	1547+55	NB RT		493
	USH 41 NB	1529+86	NB -	1544+35	NB RT		1,450
	USH 41 NB	1544+35	NB -	1546+66	NB RT		461
	USH 41 NB	1545+98	NB -	1560+70	NB RT		1,472
	USH 41 NB	1547+29	NB -	1550+79	NB RT		1,257
	USH 41 NB	1549+25	NB -	1562+95	NB RT		343
	USH 41 SB	1137+15	SB -	1142+85	SB LT		142
	USH 41 SB	1140+96	SB -	1151+84	SB LT		272
	USH 41 SB	1143+45	SB -	1151+84	SB LT		839
	USH 41 SB	1151+84	SB -	1154+40	SB LT		742
	USH 41 SB	1152+09	SB -	1158+68	SB LT		165
	USH 41 SB	1154+40	SB -	1154+84	SB LT		45
	USH 41 SB	1209+78	SB -	1218+85	SB LT		227
	USH 41 SB	1212+56	SB -	1213+82	SB LT		126
	USH 41 SB	1213+82	SB -	1219+87	SB LT		1,321
	USH 41 SB	1219+87	SB -	1235+54	SB LT		392
	USH 41 SB	1219+87	SB -	1231+78	SB LT		1,191
	USH 41 SB	1232+40	SB -	1236+93	SB LT		113
	USH 41 SB	1249+07	SB -	1265+66	SB LT		415
	USH 41 SB	1250+75	SB -	1262+76	SB LT		1,200
	USH 41 SB	1262+76	SB -	1265+08	SB LT		465
	USH 41 SB	1265+28	SB -	1269+96	SB LT		1,230
	USH 41 SB	1266+57	SB -	1277+88	SB LT		283
	USH 41 SB	1269+96	SB -	1275+54	SB LT		140
	USH 41 SB	1291+51	SB -	1297+54	SB LT		151
	USH 41 SB	1301+31	SB -	1301+66	SB LT		9
	USH 41 SB	1311+26	SB -	1320+06	SB LT		220
	USH 41 SB	1420+62	SB -	1436+47	SB LT		396
	USH 41 SB	1423+42	SB -	1434+44	SB LT		1,102
	USH 41 SB	1476+07	SB -	1502+60	SB LT		663
	USH 41 SB	1478+97	SB -	1484+80	SB LT		1,951
	USH 41 SB	1484+80	SB -	1500+43	SB LT		1,563
	USH 41 SB	1528+68	SB -	1546+94	SB LT		456
	USH 41 SB	1530+63	SB -	1542+89	SB LT		1,226
	USH 41 SB	1542+89	SB -	1545+73	SB LT		785
	USH 41 SB	1547+28	SB -	1552+54	SB LT		131
	USH 41 SB	1548+33	SB -	1562+40	SB LT		1,407
	USH 41 SB	1548+62	SB -	1564+49	SB LT		397
	USH 41 SB	1568+34	SB -	1577+14	SB LT		220
SUBTOTAL							28,223

646.0600							
STAGE	ROADWAY	STATION	TO	STATION	LOCATION		(LF)
STAGE 2 TEMPORARY	USH 41 NB	1135+14	NB -	1154+18	NB RT		1,905
	USH 41 NB	1149+88	NB -	1152+45	NB RT		64
	USH 41 NB	1154+18	NB -	1167+43	NB RT		331
	USH 41 NB	1167+43	NB -	1175+63	NB RT		820
	USH 41 NB	1207+52	NB -	1215+97	NB RT		845
	USH 41 NB	1215+97	NB -	1227+06	NB RT		277
	USH 41 NB	1227+06	NB -	1235+24	NB RT		818
	USH 41 NB	1257+22	NB -	1281+15	NB RT		2,393
	USH 41 NB	1527+83	NB -	1534+56	NB RT		672
	USH 41 NB	1534+56	NB -	1554+63	NB RT		502
	USH 41 NB	1554+63	NB -	1562+95	NB RT		833
	USH 41 SB	1137+15	SB -	1158+68	SB LT		2,153
	USH 41 SB	1209+78	SB -	1216+56	SB LT		678
	USH 41 SB	1215+74	SB -	1217+21	SB LT		37
	USH 41 SB	1216+56	SB -	1227+28	SB LT		268
	USH 41 SB	1227+28	SB -	1239+09	SB LT		1,181
	USH 41 SB	1249+07	SB -	1255+49	SB LT		643
	USH 41 SB	1255+49	SB -	1271+59	SB LT		402
	USH 41 SB	1265+28	SB -	1267+68	SB LT		60
	USH 41 SB	1271+59	SB -	1277+88	SB LT		629
	USH 41 SB	1299+00	SB -	1301+97	SB LT		74
	USH 41 SB	1420+62	SB -	1436+42	SB LT		1,580
	USH 41 SB	1476+07	SB -	1482+93	SB LT		686
	USH 41 SB	1477+07	SB -	1482+90	SB LT		146
	USH 41 SB	1482+93	SB -	1495+62	SB LT		317
	USH 41 SB	1495+62	SB -	1502+60	SB LT		698
	USH 41 SB	1528+68	SB -	1536+07	SB LT		739
	USH 41 SB	1536+07	SB -	1556+69	SB LT		516
	USH 41 SB	1544+64	SB -	1547+79	SB LT		79
	USH 41 SB	1556+69	SB -	1564+49	SB LT		779
STAGE 3	USH 41 SB	1356+37	SB -	1363+70	SB LT		183
	USH 41 SB	1359+21	SB -	1370+76	SB LT		1,155
	USH 41 SB	1366+88	SB -	1373+17	SB RT		157
	USH 41 SB	1376+92	SB -	1385+72	SB RT		220
STAGE 3 TEMPORARY	USH 41 SB	1356+37	SB -	1373+17	SB LT		1,680
	USH 41 SB	1359+77	SB -	1371+44	SB RT		292
	USH 41 SB	1360+68	SB -	1370+20	SB RT		953
	USH 41 SB	1377+13	SB -	1385+24	SB LT		203
STAGE 4 TEMPORARY	USH 41 SB	1358+67	SB -	1372+54	SB RT		1,387
	SUBTOTAL						27,352
	PROJECT TOTAL						118,457

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

TEMPORARY PAVEMENT MARKING

		649.0100	649.0400	649.0801	
		PAINT	REMOVABLE TAPE		REMOVABLE
		4-INCH	4-INCH	4-INCH	TAPE
		WHITE	WHITE	YELLOW	8-INCH
		(LF)	(LF)	(LF)	WHITE
STAGE	LOCATION				(LF)
STAGE 1	USH 41 NB SOUTH SEGMENT	6,955	16,185	5,925	3,150
	USH 41 NB NORTH SEGMENT	3,820	10,475	3,995	1,480
	USH 41 SB SOUTH SEGMENT	4,840	11,190	4,650	3,365
	USH 41 SB NORTH SEGMENT	5,455	15,490	6,475	2,040
STAGE TOTAL		21,070	53,340	21,045	10,035
STAGE 2	USH 41 NB SOUTH SEGMENT	7,445	7,240	15,505	200
	USH 41 NB NORTH SEGMENT	2,010	2,535	4,795	100
	USH 41 SB SOUTH SEGMENT	6,135	9,290	18,095	610
	USH 41 SB NORTH SEGMENT	5,550	5,425	15,655	305
STAGE TOTAL		21,140	24,490	54,050	1,215
STAGE 3	USH 41 SB CENTRAL SEGMENT	1,680	1,155	2,935	-
STAGE TOTAL		1,680	1,155	2,935	0
STAGE 4	USH 41 SB CENTRAL SEGMENT	1,390	2,660	955	-
STAGE TOTAL		1,390	2,660	955	0
PROJECT SUBTOTAL		45,280	81,645	78,985	11,250
PROJECT TOTALS		45,280	160,630		11,250

CONSTRUCTION STAKING

					650.8000
					RESURFACING
					REFERENCE
LOCATION	STATION	TO	STATION		(LF)
USH 41 NB	1124+00	-	1283+34		15,900
USH 41 NB	1464+45	-	1563+61		9,900
USH 41 SB	1137+15	-	1322+34		18,500
USH 41 SB	1356+37	-	1385+72		2,900
USH 41 SB	1420+62	-	1577+14		15,700
PROJECT TOTAL					62,900

NOTE: ALL ITEMS ON THIS
SHEET ARE CATEGORY 0020
UNLESS OTHERWISE NOTED.

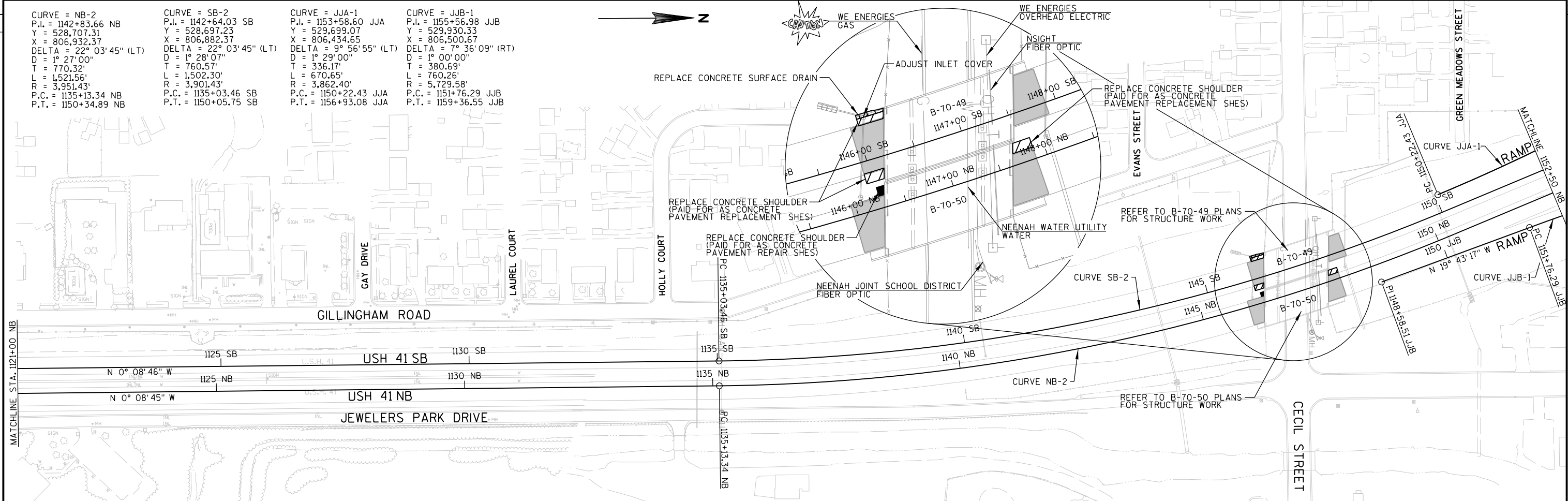
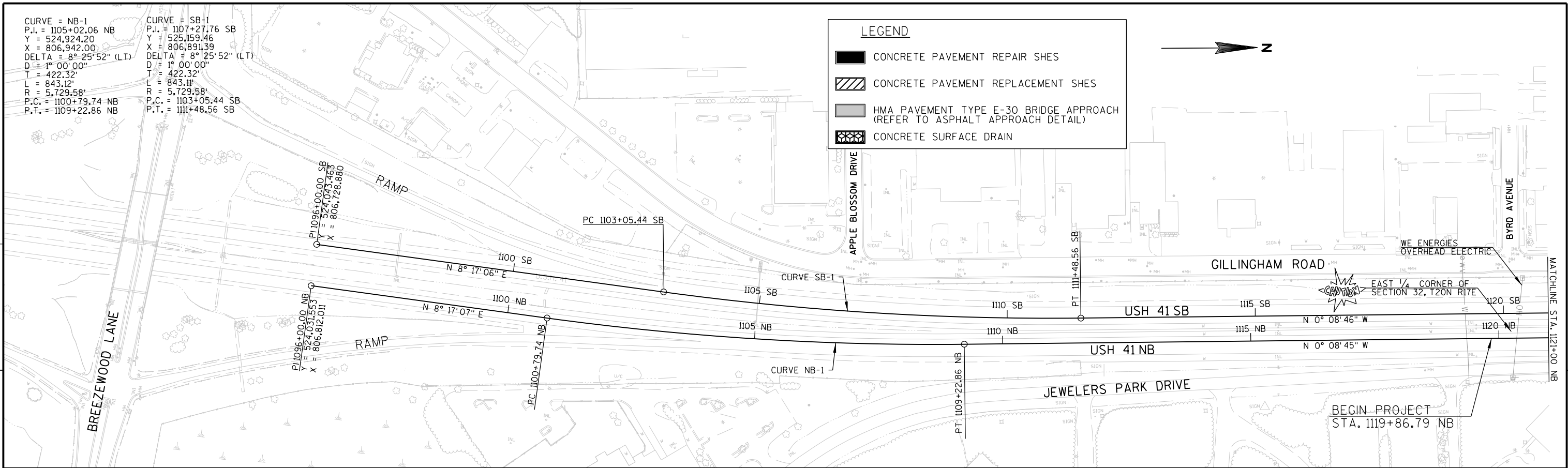
SAWING CONCRETE

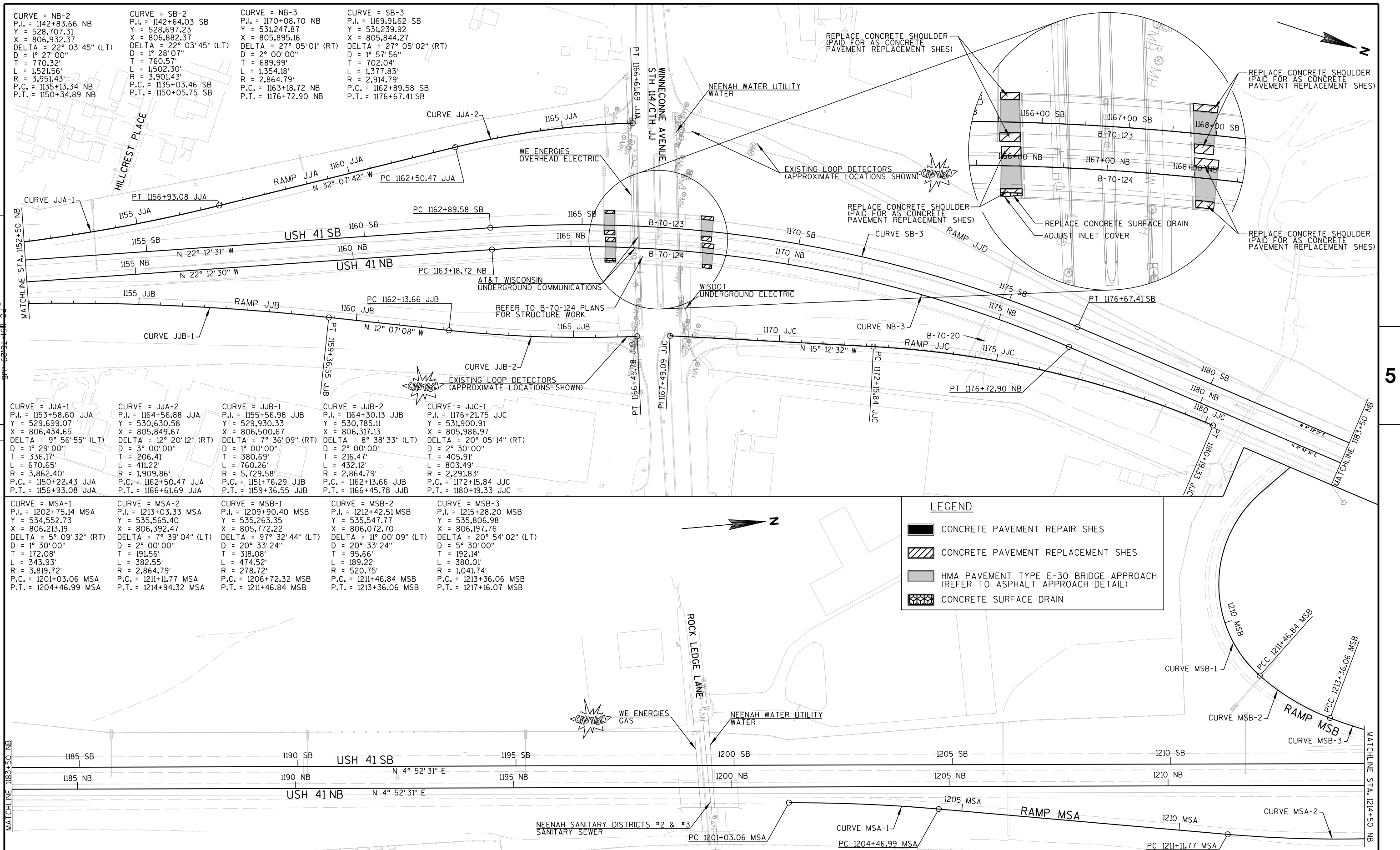
							690.0250 (D)
STAGE	ROADWAY	STATION	TO	STATION	LOCATION		LF
1	NB USH 41	1145+72	NB -	1146+07	NB RT		35
1	NB USH 41	1147+26	NB -	1147+63	NB RT		37
1	NB USH 41	1165+54	NB -	1165+79	NB RT		25
1	NB USH 41	1167+79	NB -	1168+06	NB RT		27
1	NB USH 41	1217+25	NB -	1217+49	NB RT		23
1	NB USH 41	1226+51	NB -	1226+77	NB RT		25
1	NB USH 41	1228+10	NB -	1228+35	NB RT		25
1	NB USH 41	1254+06	NB -	1254+51	NB RT		46
1	NB USH 41	1256+51	NB -	1256+86	NB RT		35
1	NB USH 41	1429+44	NB -	1429+73	NB RT		30
1	NB USH 41	1495+44	NB -	1495+67	NB RT		23
1	NB USH 41	1534+38	NB -	1534+60	NB RT		22
1	NB USH 41	1536+54	NB -	1536+76	NB RT		22
1	SB USH 41	1145+94	SB -	1146+29	SB LT		35
1	SB USH 41	1147+52	SB -	1147+89	SB LT		37
1	SB USH 41	1165+52	SB -	1165+76	SB LT		24
1	SB USH 41	1167+71	SB -	1167+99	SB LT		28
1	SB USH 41	1215+52	SB -	1215+75	SB LT		23
1	SB USH 41	1217+22	SB -	1217+46	SB LT		23
1	SB USH 41	1226+47	SB -	1226+72	SB LT		24
1	SB USH 41	1228+04	SB -	1228+29	SB LT		25
1	SB USH 41	1254+06	SB -	1254+37	SB LT		31
1	SB USH 41	1256+37	SB -	1256+68	SB LT		31
1	SB USH 41	1427+57	SB -	1427+93	SB LT		35
1	SB USH 41	1493+27	SB -	1493+51	SB LT		24
1	SB USH 41	1495+45	SB -	1495+69	SB LT		23
1	SB USH 41	1534+38	SB -	1534+60	SB LT		22
1	SB USH 41	1536+54	SB -	1536+76	SB LT		22
PROJECT TOTAL							781

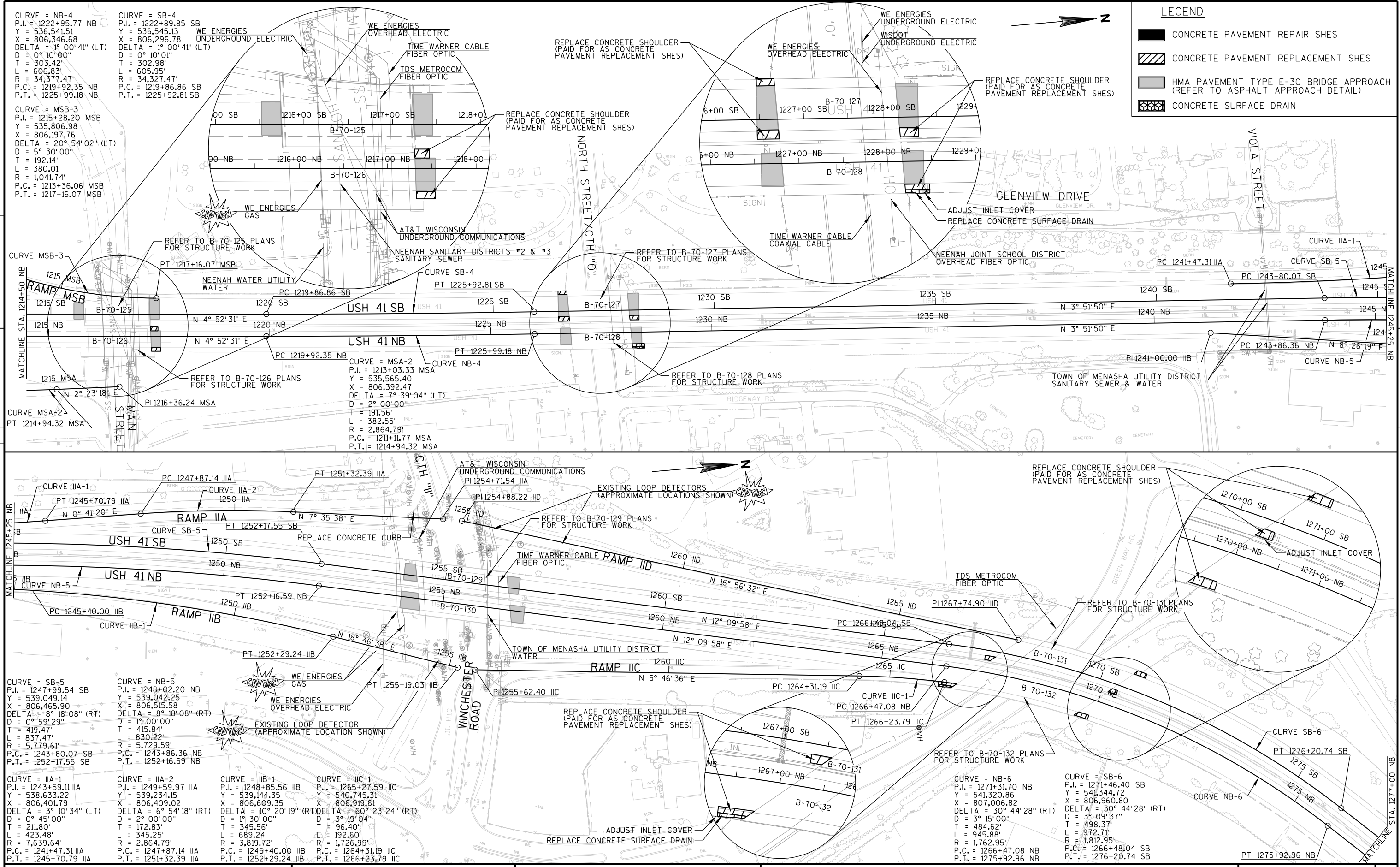
(D) REFER TO "SHES CONCRETE PAVEMENT REPAIR AND REPLACEMENT SUMMARY" TABLE F(

REMOVING RUMBLE STRIPS

							SPV.0180.01
STAGE	ROADWAY	STATION	TO	STATION	OFFSET		(SY)
1	NB USH 41	1141+38	NB -	1146+33	NB LT		165
1	NB USH 41	1147+69	NB -	1166+00	NB LT		610
1	NB USH 41	1167+99	NB -	1173+32	NB LT		178
1	NB USH 41	1219+10	NB -	1226+79	NB LT		256
1	NB USH 41	1228+16	NB -	1232+58	NB LT		148
1	NB USH 41	1260+84	NB -	1267+35	NB LT		217
1	NB USH 41	1270+08	NB -	1274+30	NB LT		141
1	NB USH 41	1477+76	NB -	1482+18	NB LT		147
1	NB USH 41	1483+29	NB -	1486+86	NB LT		119
1	NB USH 41	1529+75	NB -	1534+72	NB LT		166
1	NB USH 41	1536+66	NB -	1553+91	NB LT		575
1	NB USH 41	1556+00	NB -	1560+58	NB LT		153
1	SB USH 41	1210+98	SB -	1215+81	SB RT		161
1	SB USH 41	1217+30	SB -	1226+78	SB RT		316
1	SB USH 41	1228+15	SB -	1232+02	SB RT		129
1	SB USH 41	1250+04	SB -	1254+38	SB RT		145
1	SB USH 41	1256+47	SB -	1267+44	SB RT		366
1	SB USH 41	1270+14	SB -	1274+94	SB RT		160
1	SB USH 41	1424+60	SB -	1428+00	SB RT		113
1	SB USH 41	1429+80	SB -	1434+91	SB RT		170
1	SB USH 41	1477+58	SB -	1482+18	SB RT		153
1	SB USH 41	1483+29	SB -	1493+62	SB RT		344
1	SB USH 41	1495+57	SB -	1500+82	SB RT		175
1	SB USH 41	1530+62	SB -	1534+72	SB RT		137
1	SB USH 41	1536+66	SB -	1554+01	SB RT		578
1	SB USH 41	1556+10	SB -	1561+83	SB RT		191
3	SB USH 41	1360+68	SB -	1364+59	SB RT		130
3	SB USH 41	1365+01	SB -	1370+20	SB RT		173
PROJECT TOTAL							6,012







CURVE = NB-8
P.I. = 1358+57.54 NB
Y = 548,790.09
X = 811,376.50
DELTA = 8° 24' 40" (LT)
D = 1° 00' 00"
T = 421.34'
L = 841.16'
R = 5,729.96'
P.C. = 1354+36.20 NB
P.T. = 1362+77.36 NB

CURVE = SB-8
P.I. = 1359+31.15 SB
Y = 548,872.94
X = 811,347.84
DELTA = 8° 24' 39" (LT)
D = 1° 00' 00"
T = 421.33'
L = 841.14'
R = 5,729.96'
P.C. = 1355+09.82 SB
P.T. = 1363+50.96 SB

WISCONSIN DEPARTMENT OF TRANSPORTATION RWIS PAVEMENT SENSORS
LOCATED WITHIN CENTER AND OUTSIDE LANES



RAMP

PC 1355+09.82 SB

1395 SB

CURVE SB-8

1360 SB

PT 1363+50.96 SB

1365 SB

B-70-133

N 15° 42' 07" E

1370 SB

N 15° 42' 06" E

1370 NB

B-70-134

TOWN OF MENASHA UTILITY DISTRICT
SANITARY SEWER

PT 1362+77.36 NB

PC 1354+36.20 NB

CURVE NB-8

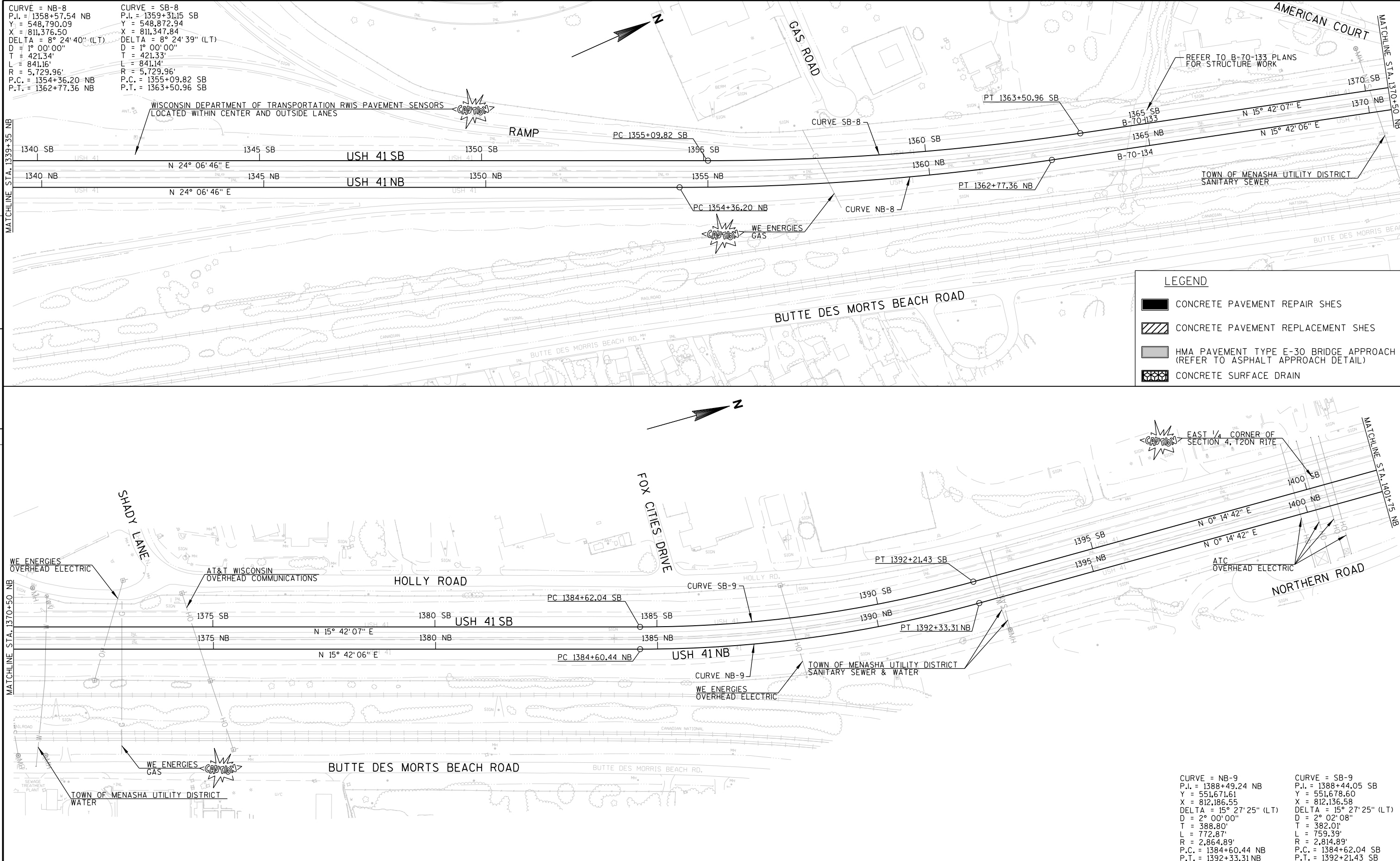
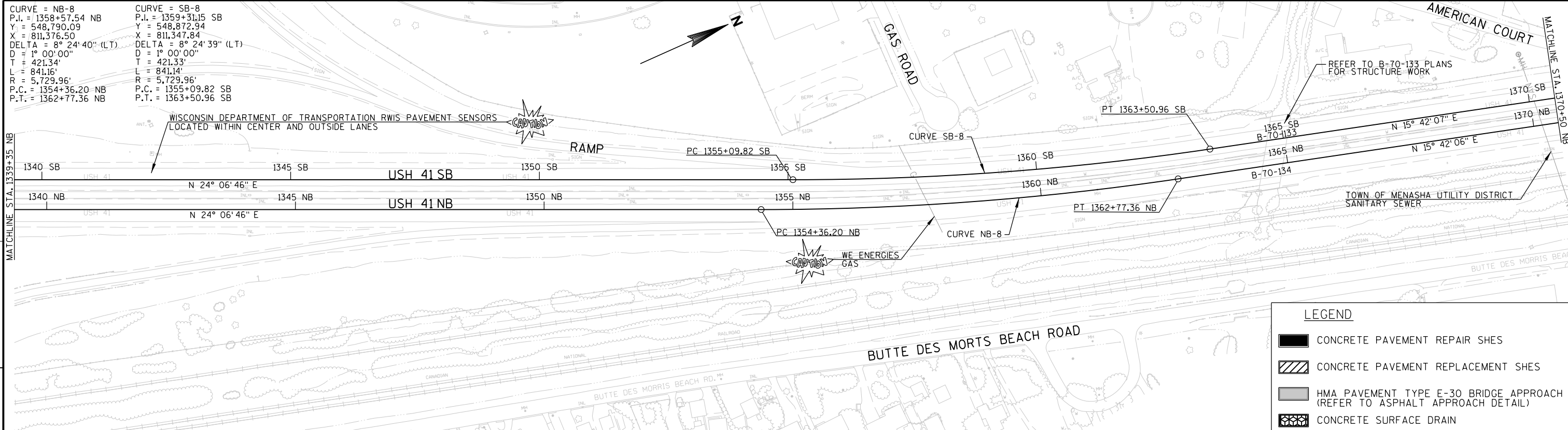
WE ENERGIES
GAS



BUTTE DES MORTS BEACH ROAD

LEGEND

- CONCRETE PAVEMENT REPAIR SHES
- CONCRETE PAVEMENT REPLACEMENT SHES
- HMA PAVEMENT TYPE E-30 BRIDGE APPROACH
(REFER TO ASPHALT APPROACH DETAIL)
- CONCRETE SURFACE DRAIN



CURVE = NB-9
P.I. = 1388+49.24 NB
Y = 551,671.61
X = 812,186.55
DELTA = 15° 27' 25" (LT)
D = 2° 00' 00"
T = 388.80'
L = 772.87'
R = 2,864.89'
P.C. = 1384+60.44 NB
P.T. = 1392+33.31 NB

CURVE = SB-9
P.I. = 1388+44.05 SB
Y = 551,678.60
X = 812,136.58
DELTA = 15° 27' 25" (LT)
D = 2° 02' 08"
T = 382.01'
L = 759.39'
R = 2,814.89'
P.C. = 1384+62.04 SB
P.T. = 1392+21.43 SB

LEGEND

- CONCRETE PAVEMENT REPAIR SHES
- CONCRETE PAVEMENT REPLACEMENT SHES
- HMA PAVEMENT TYPE E-30 BRIDGE APPROACH (REFER TO ASPHALT APPROACH DETAIL)
- CONCRETE SURFACE DRAIN

CURVE = NB-10
P.I. = 1417+57.76 NB
Y = 554,584.83
X = 812,199.01
DELTA = 15° 16' 47" (LT)
D = 2° 00' 00"
T = 384.28'
L = 764.00'
R = 2,864.84'
P.C. = 1413+73.48 NB
P.T. = 1421+37.48 NB

CURVE = SB-10
P.I. = 1417+39.17 SB
Y = 554,578.33
X = 812,148.98
DELTA = 15° 16' 47" (LT)
D = 2° 02' 08"
T = 377.57'
L = 750.66'
R = 2,814.84'
P.C. = 1413+61.59 SB
P.T. = 1421+12.26 SB

CURVE = BBA-1
P.I. = 1419+07.23 BBA
Y = 554,758.00
X = 812,064.64
DELTA = 19° 42' 37" (LT)
D = 5° 02' 15"
T = 197.59'
L = 391.28'
R = 1,137.40'
P.C. = 1417+09.64 BBA
P.T. = 1421+00.92 BBA

CURVE = BBA-2
P.I. = 1427+38.22 BBA
Y = 555,503.35
X = 811,688.48
DELTA = 17° 12' 20" (RT)
D = 11° 00' 00"
T = 78.80'
L = 156.41'
R = 520.87'
P.C. = 1426+59.42 BBA
P.T. = 1428+15.83 BBA

CURVE = SB-11
P.I. = 1431+53.83 SB
Y = 555,948.90
X = 811,780.85
DELTA = 15° 10' 11" (RT)
D = 1° 28' 50"
T = 515.27'
L = 1,024.51'
R = 3,869.54'
P.C. = 1426+38.56 SB
P.T. = 1436+63.07 SB

CURVE = NB-11
P.I. = 1431+72.90 NB
Y = 555,955.93
X = 811,830.73
DELTA = 15° 11' 01" (RT)
D = 1° 30' 00"
T = 509.12'
L = 1,012.27'
R = 3,819.79'
P.C. = 1426+63.78 NB
P.T. = 1436+76.05 NB

CURVE = BBD-1
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-2
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-3
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-4
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-5
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-6
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-7
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-8
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-9
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-10
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-11
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-12
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-13
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-14
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-15
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

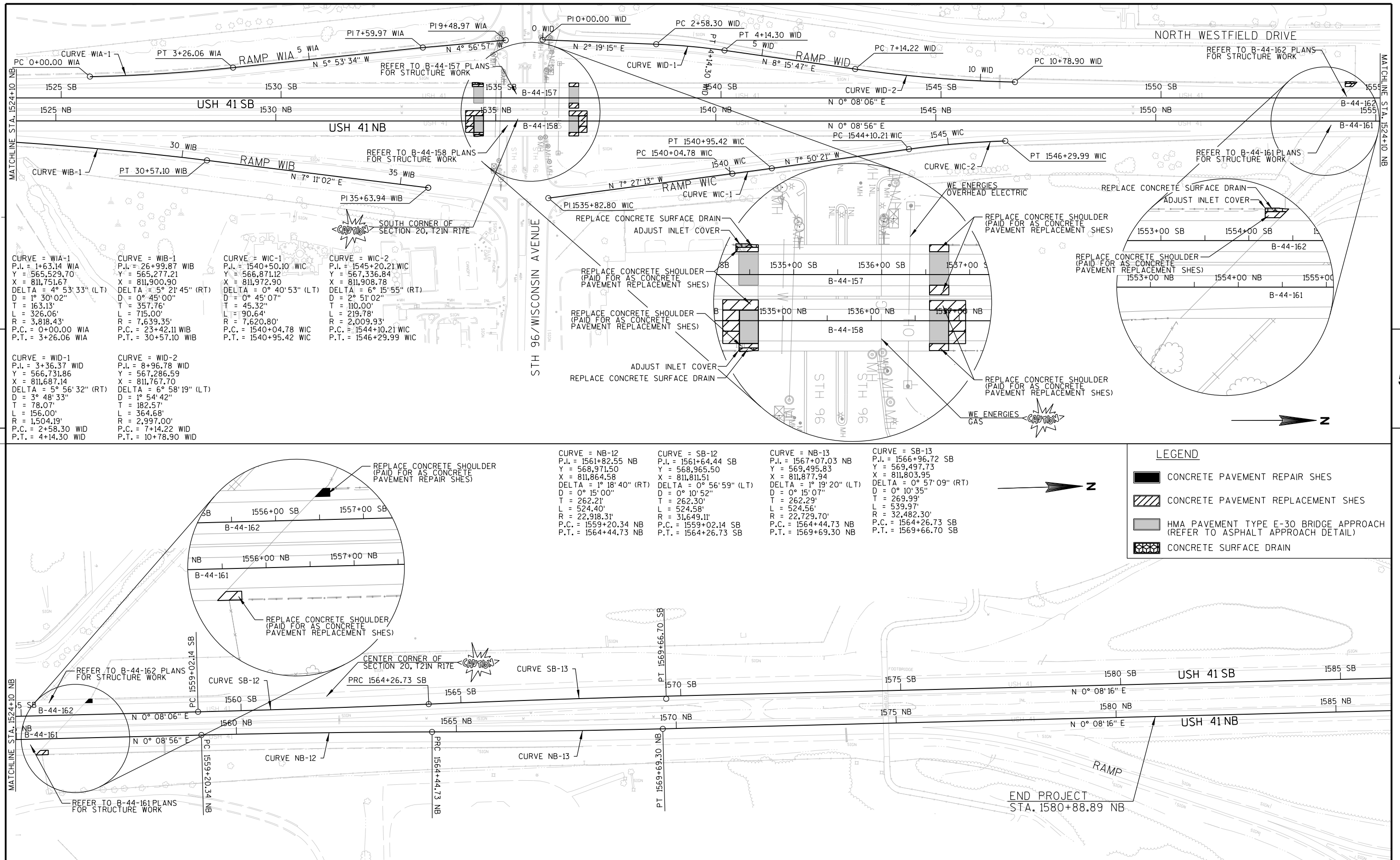
CURVE = BBD-16
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-17
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58' 31" (LT)
D = 2° 00' 00"
T = 74.40'
L = 148.77'
R = 2,864.79'
P.C. = 1440+11.99 BBD
P.T. = 1441+60.76 BBD

CURVE = BBD-18
P.I. = 1440+86.39 BBD
Y = 556,912.16
X = 811,745.60
DELTA = 2° 58'

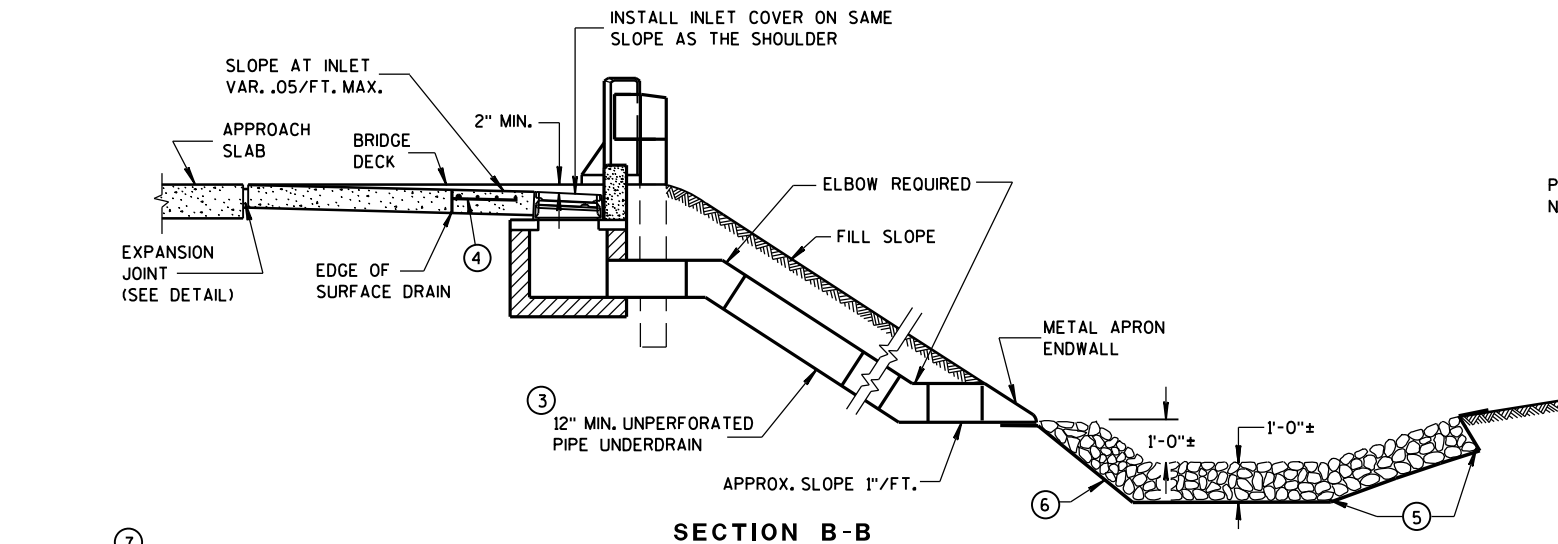
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PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADD SHEET 44

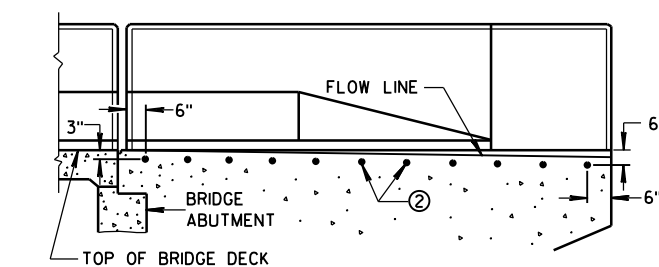
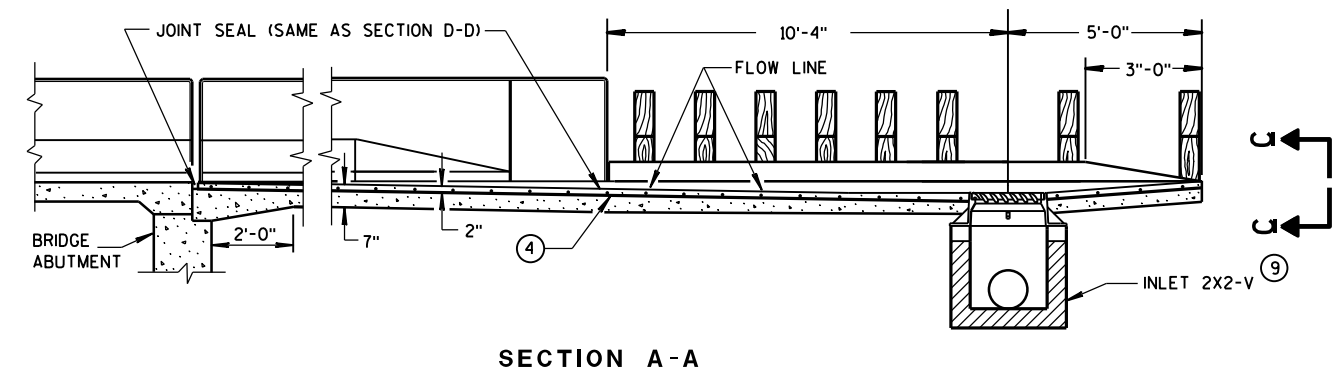
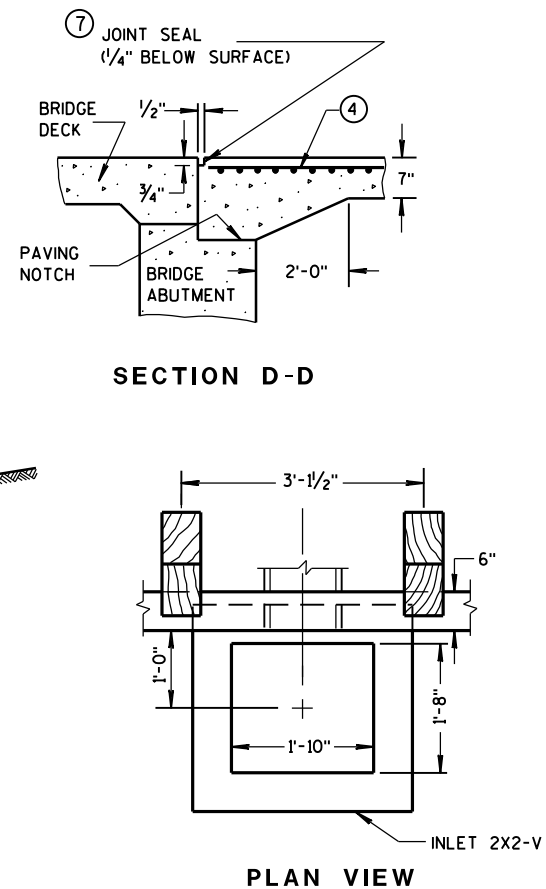
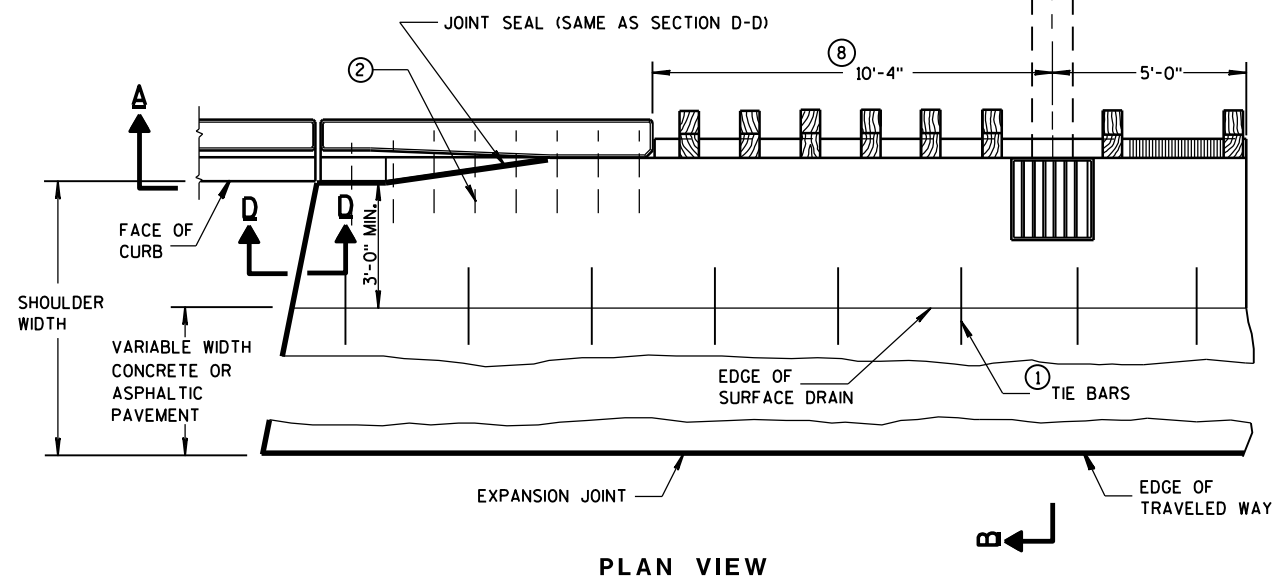
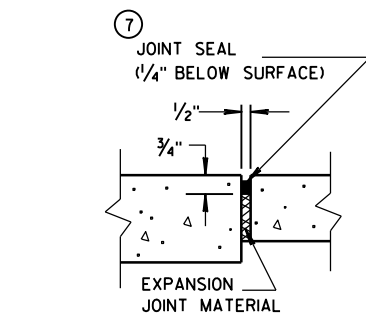


Standard Detail Drawing List

08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
13A03-05	CONCRETE PAVEMENT SHOULDERS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C09-11A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
14B07-14A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-14H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D14-02	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



EXPANSION JOINT DETAIL

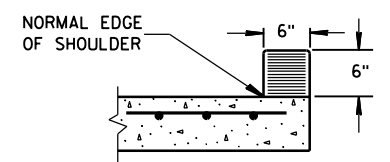
LOCATION OF
TIE BARS IN WINGWALL

GENERAL NOTES

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

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

- ① NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.
- ④ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑤ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑥ GEOTEXTILE FABRIC, TYPE 'R'
- ⑦ HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
- ⑧ THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1 1/2".
- ⑨ SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.



SECTION C-C

CONCRETE SURFACE DRAINS
DROP INLET TYPE
AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/4/08

DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS

ENGINEER

113

VENT



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



SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

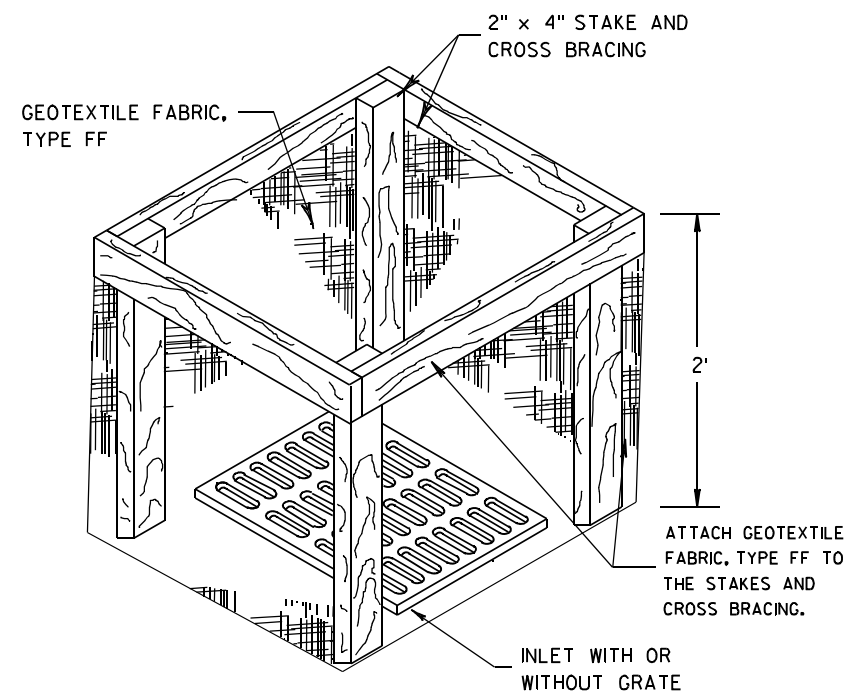
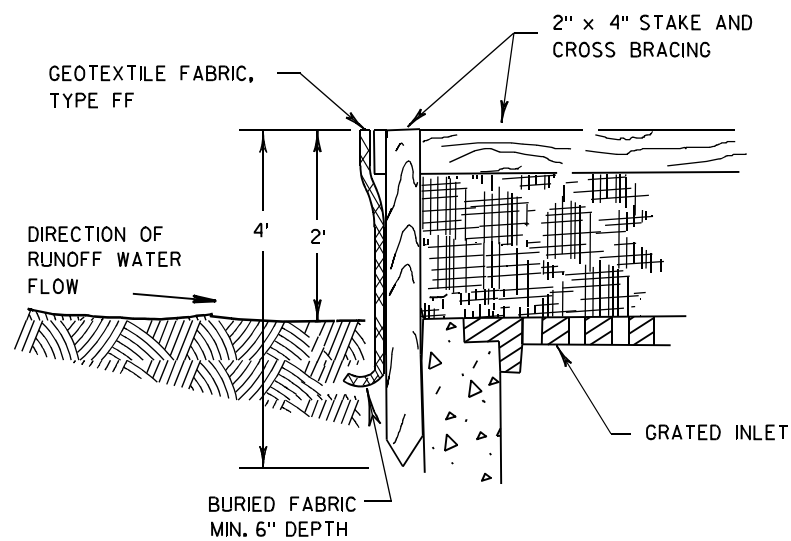
APPROVED
4-29-05
DATE

/S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT

114

ENGINEER

FHWA



INLET PROTECTION, TYPE A

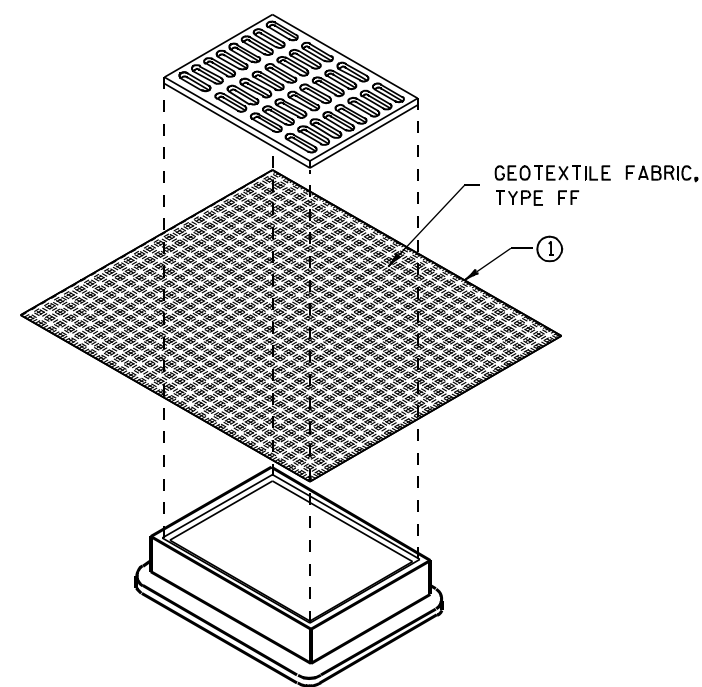
GENERAL NOTES

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.

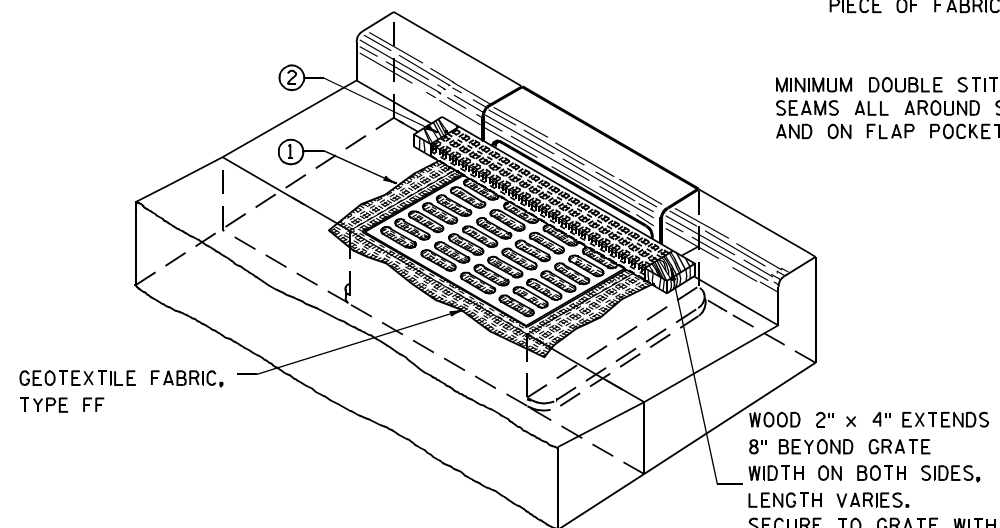
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

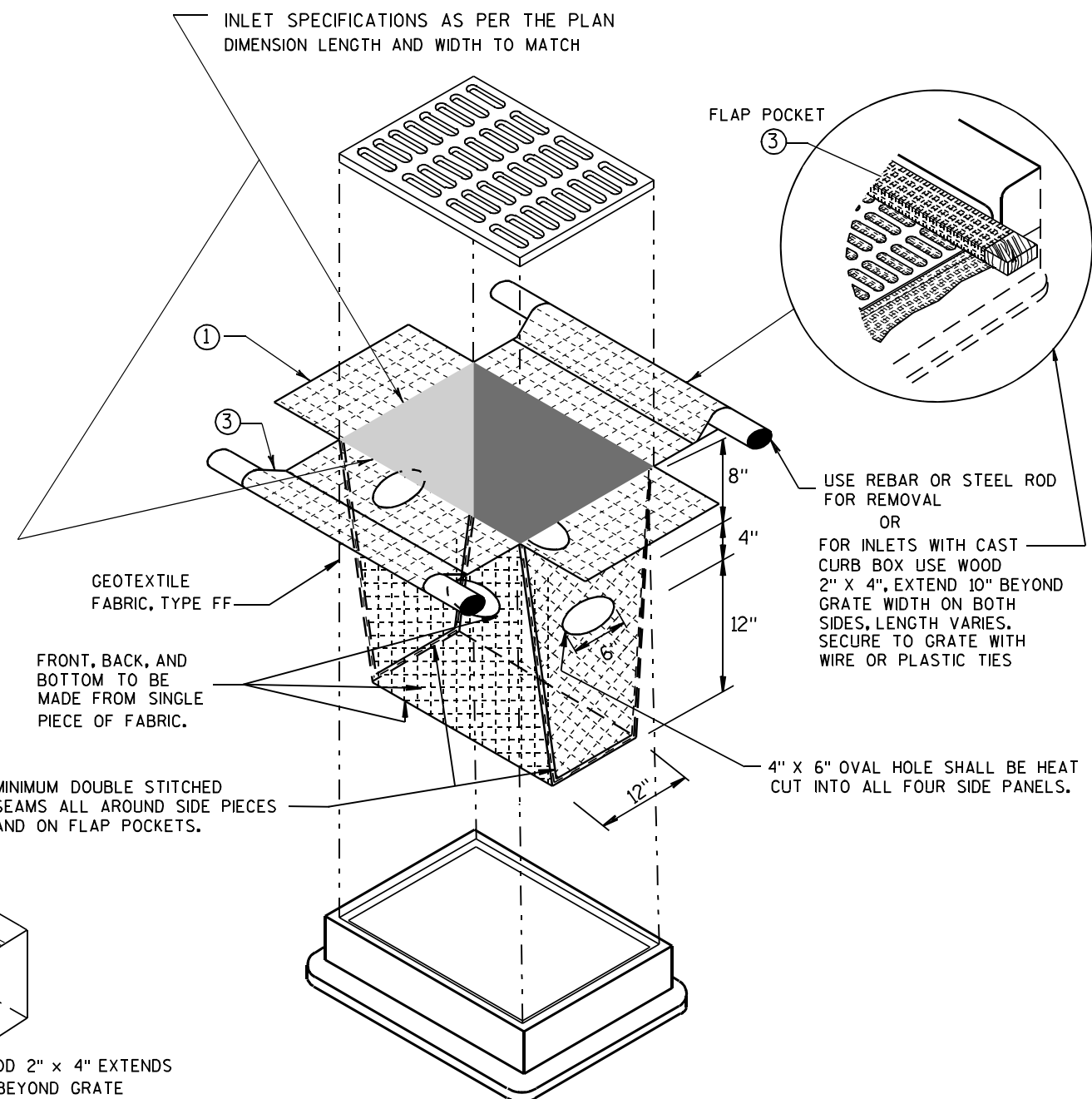
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



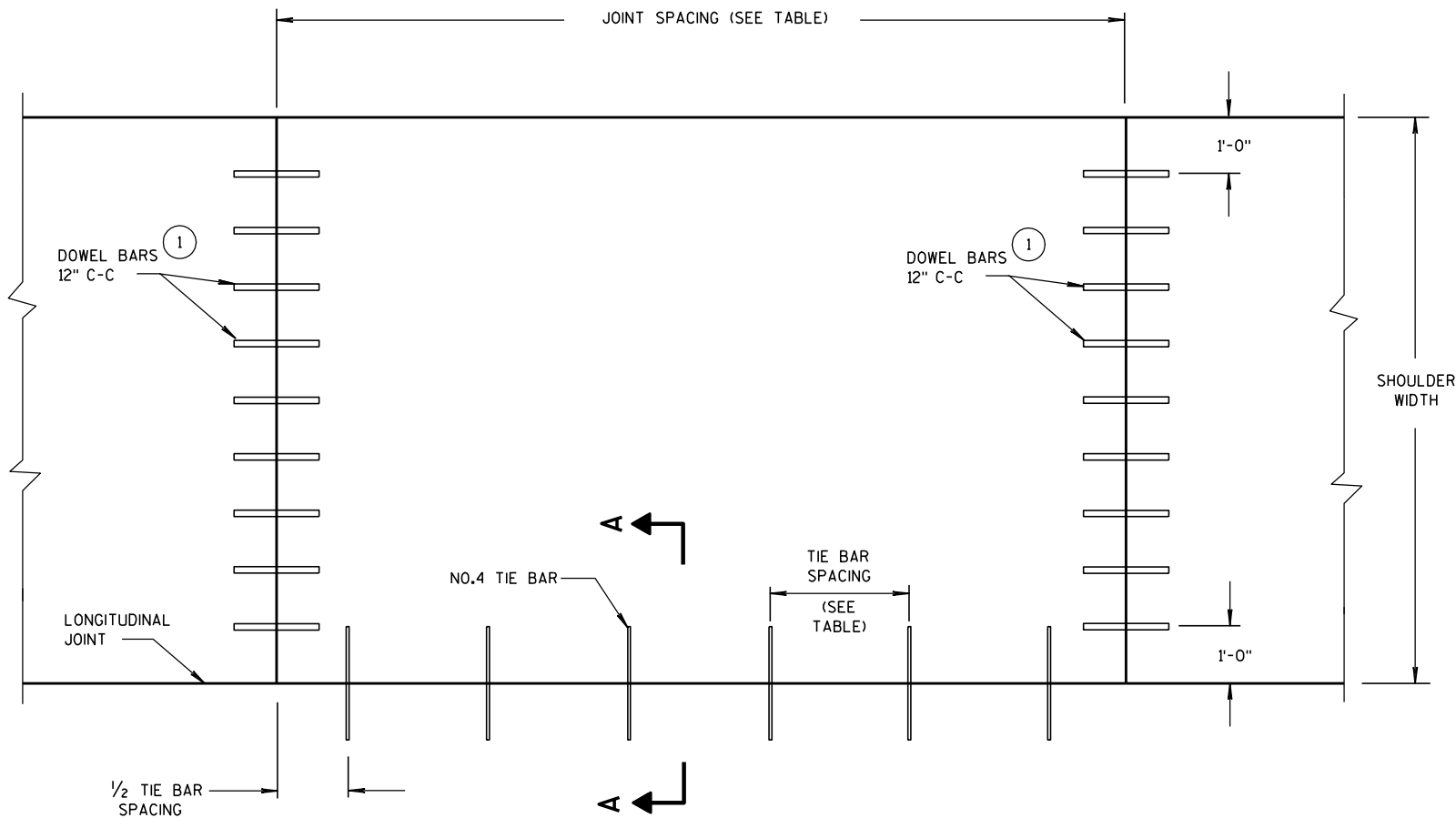
INLET PROTECTION, TYPE D

(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 Connolly
DATE 115
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

PAVEMENT TYPE OF TRAFFIC LANES	TIE BAR SPACING	SHOULDER JOINT SPACING
NON-REINFORCED	30"	MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE
CONTINUOUSLY REINFORCED	30"	15' FOR 6' TO 10' WIDE SHOULDER
CONTINUOUSLY REINFORCED	36"	12' FOR 3' WIDE SHOULDER

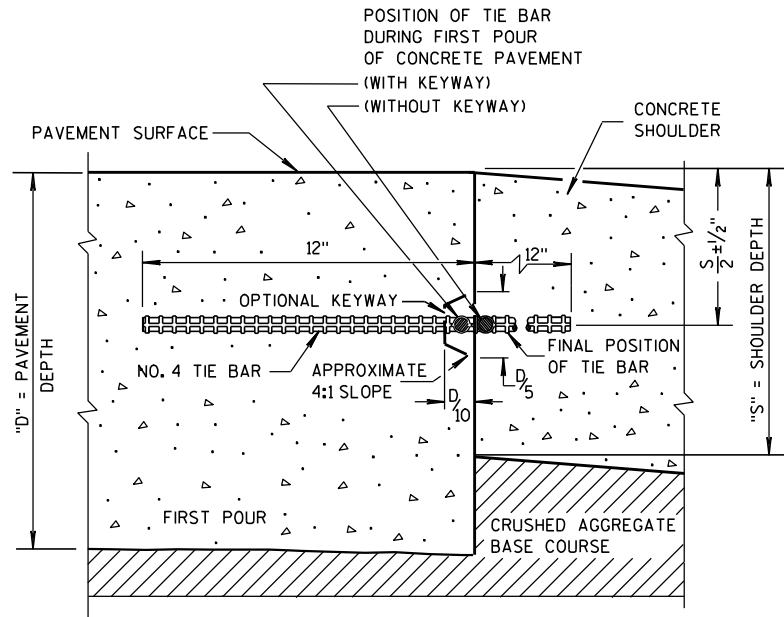
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT

1
PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

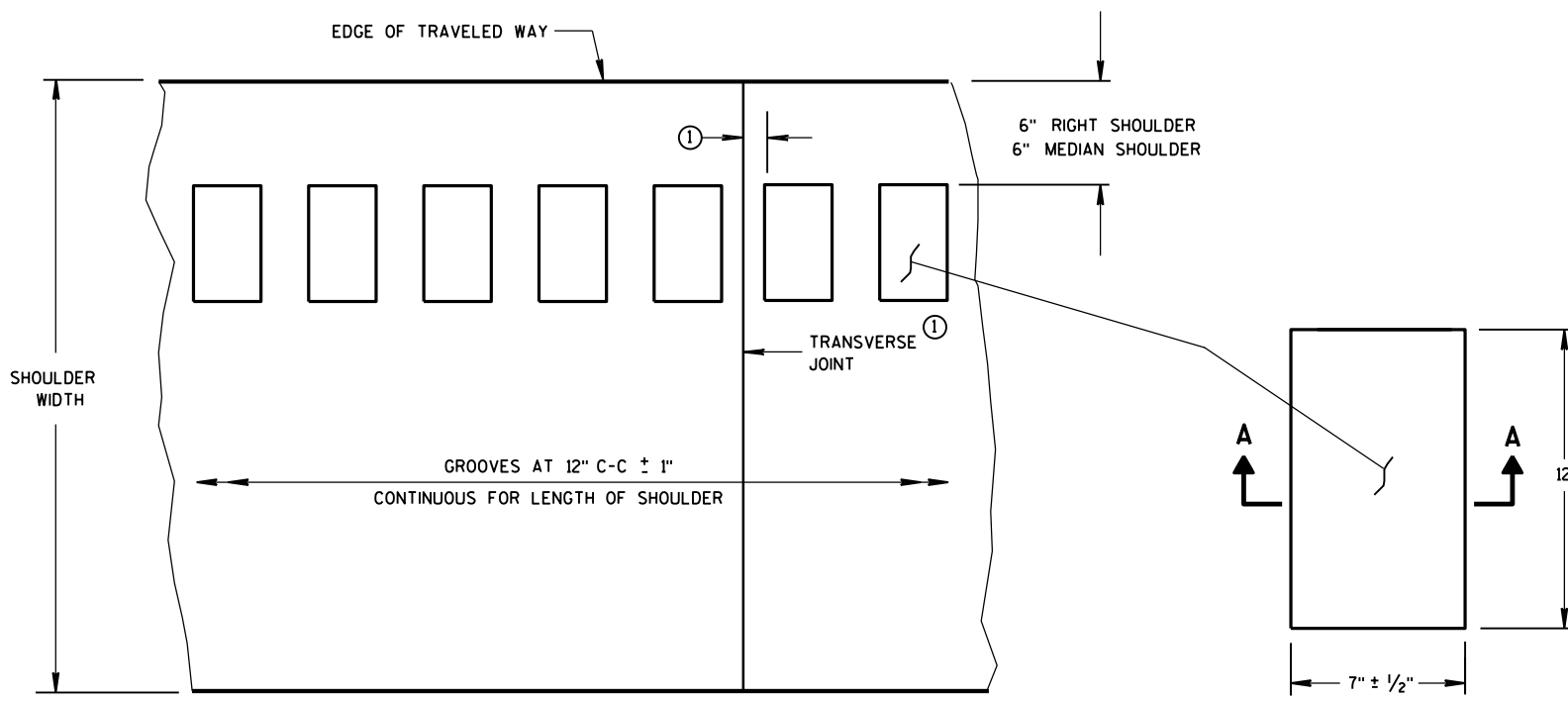
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

FOR DOWELED CONCRETE SHOULDER WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/15/2011 /S/ Deb Bischoff
DATE PAVEMENT POLICY & D 116 INEER
FHWA



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

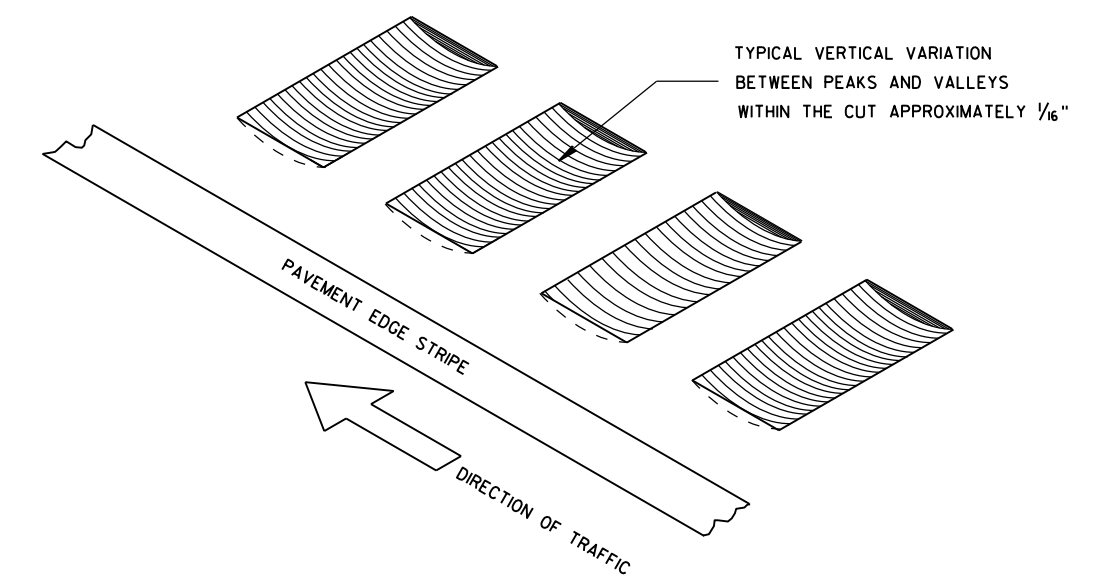
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

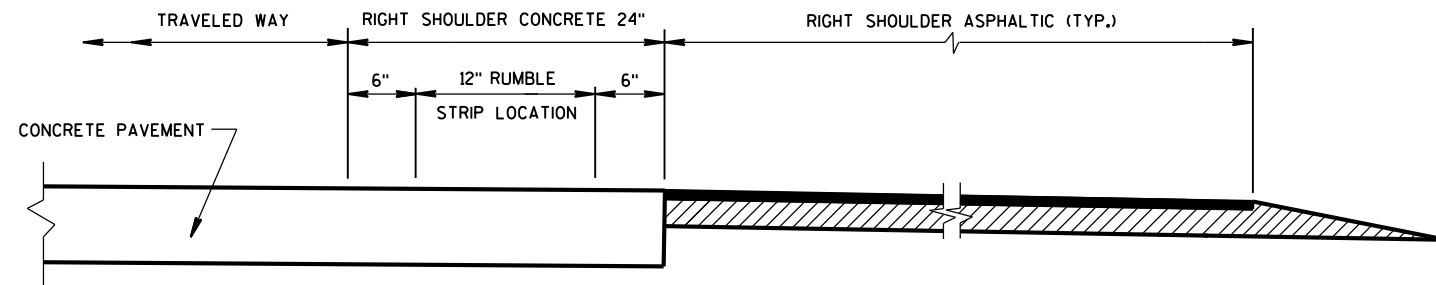
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

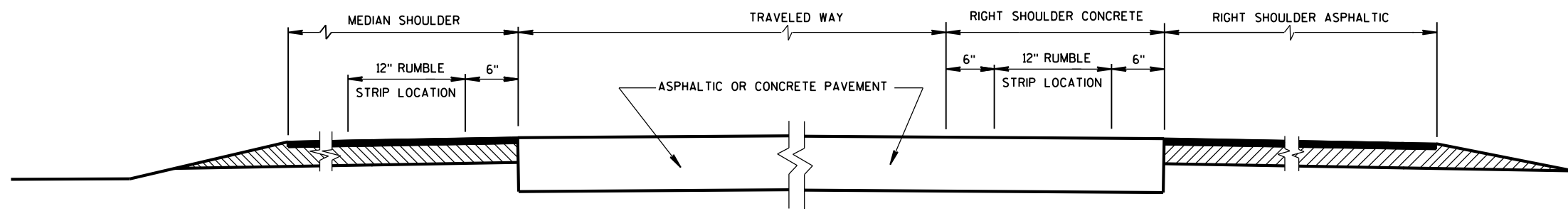
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



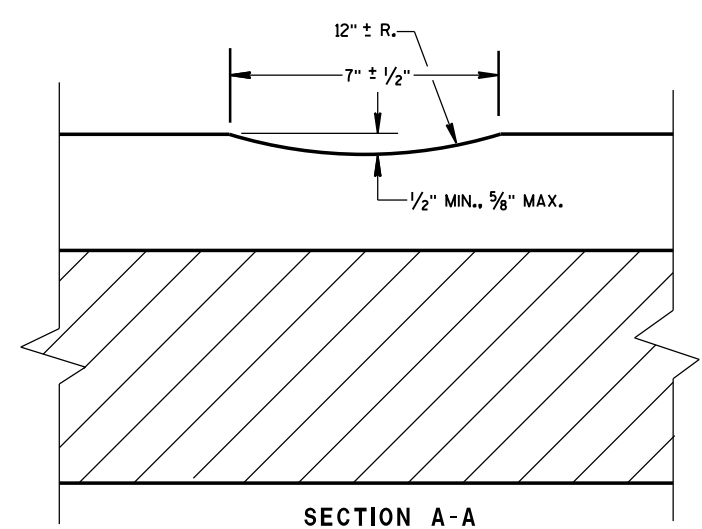
ISOMETRIC



SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)

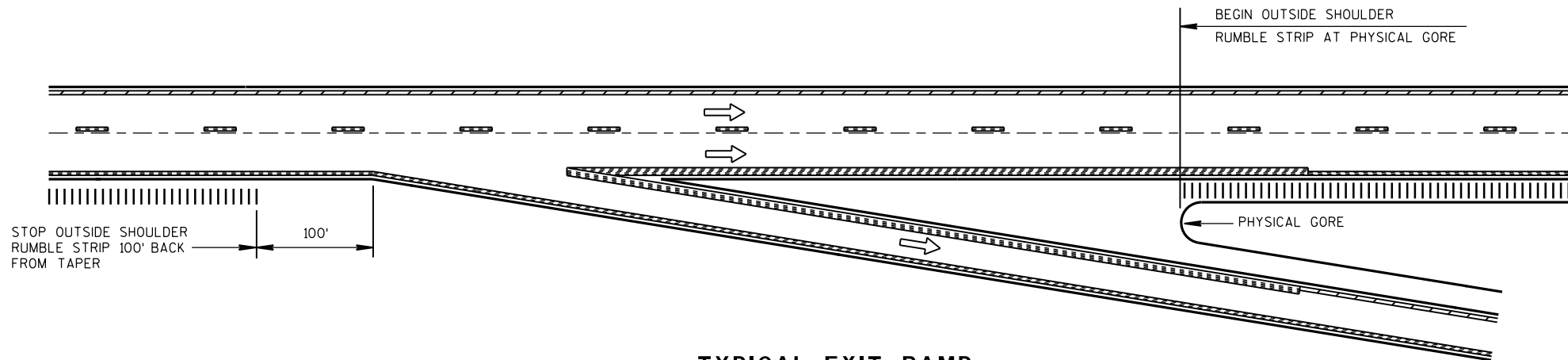


SECTION VIEW
TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS
IN RURAL DIVIDED HIGHWAYS
(ONE ROADWAY IS SHOWN)



SHOULDER RUMBLE STRIP,
MILLING

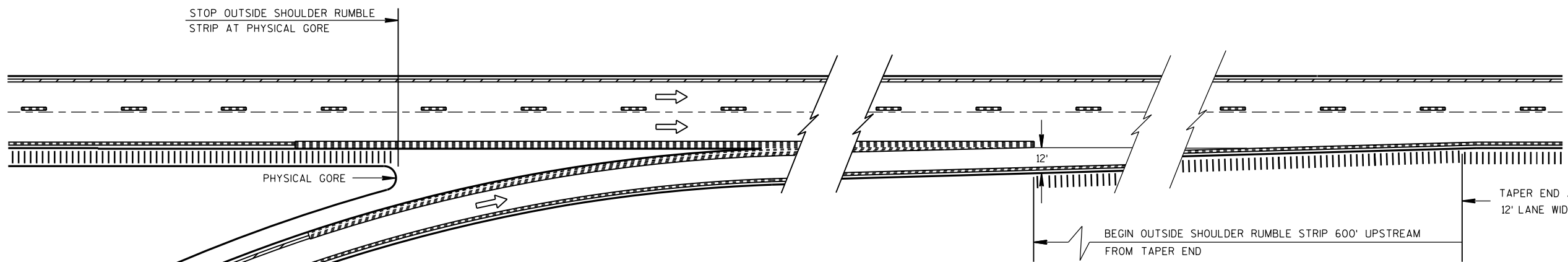
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 117



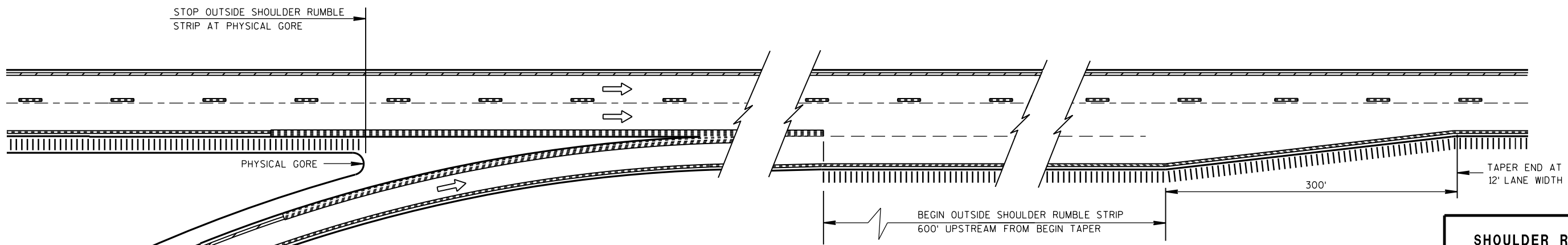
TYPICAL EXIT RAMP

NOTES:
NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

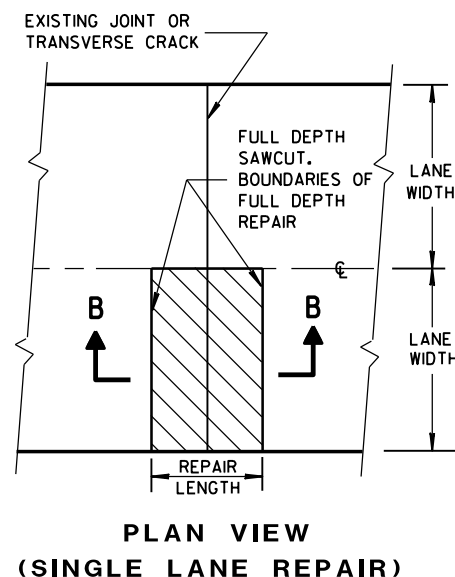
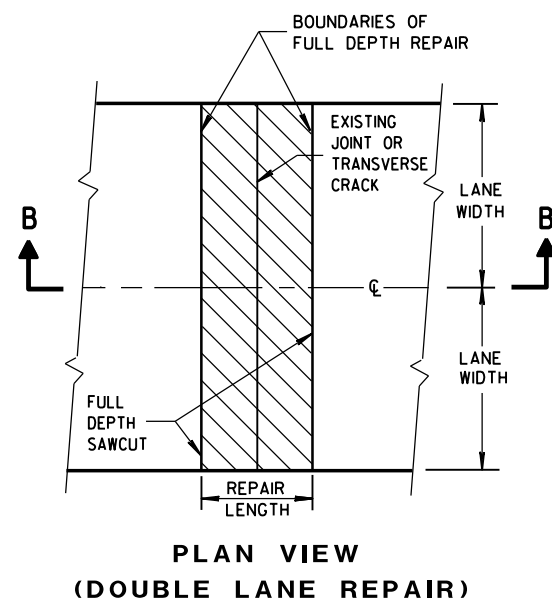
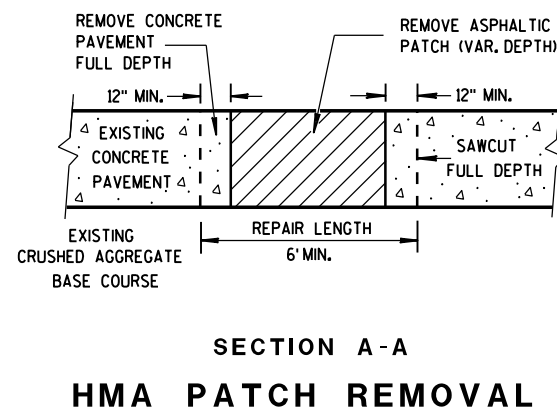
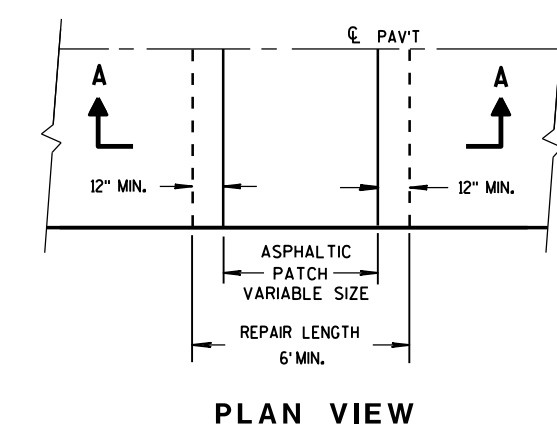


TYPICAL TAPERED ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS

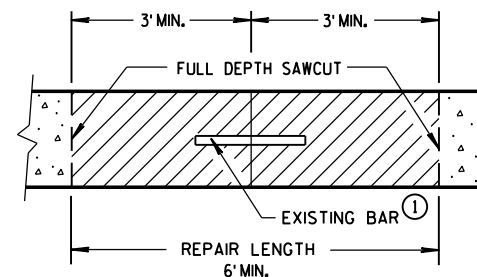


TYPICAL PARALLEL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED DATE 12/17/2012	/S/ Jerry H. Zoagg ROADWAY STANDARDS ENGINEER	118 ENT
FHWA		



FULL DEPTH CONCRETE PAVEMENT REMOVAL
(SEE NOTE)



SECTION B-B
CONCRETE REMOVAL

GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

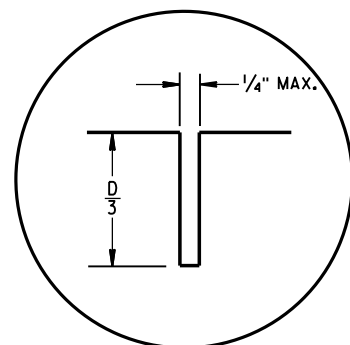
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

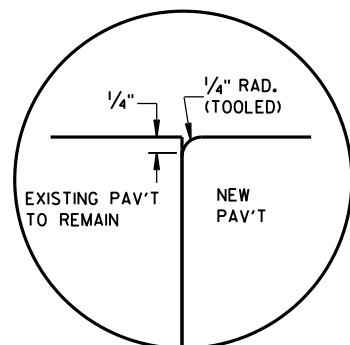
① DOWEL BARS MIGHT NOT EXIST.

TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"

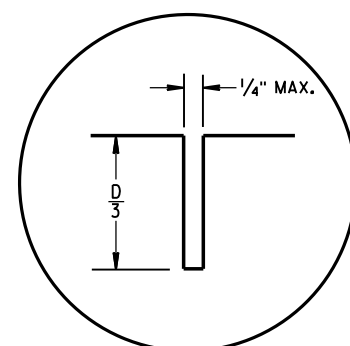


C1

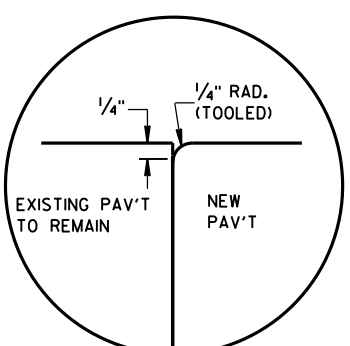


C2

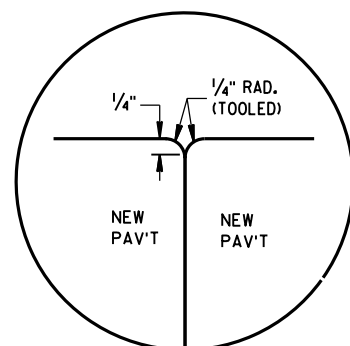
TRANSVERSE JOINTS



L1

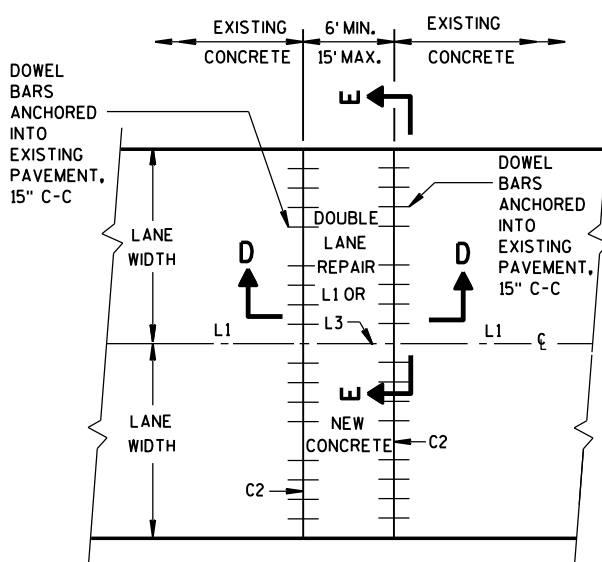


L2



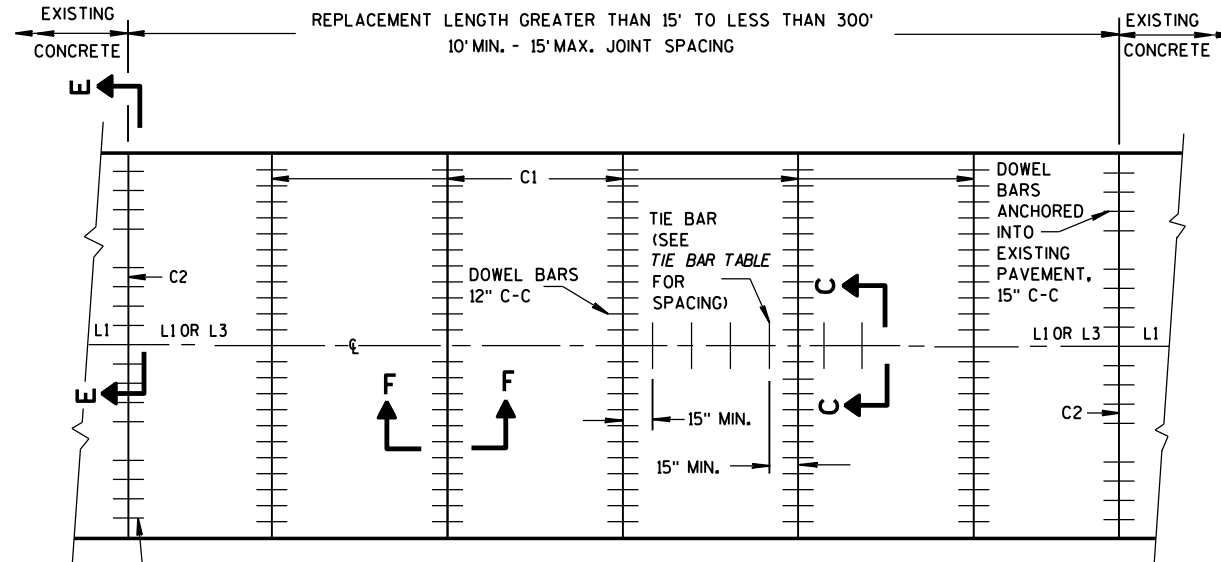
L3

LONGITUDINAL JOINTS



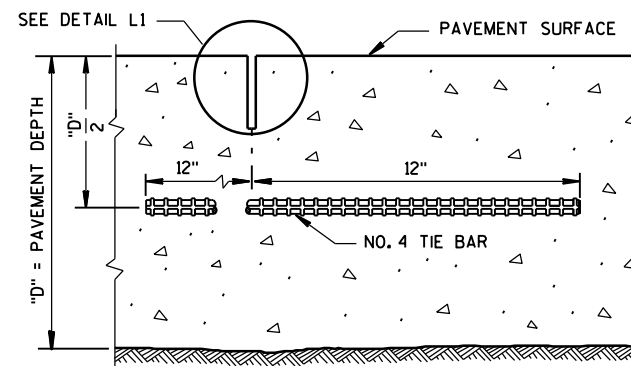
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



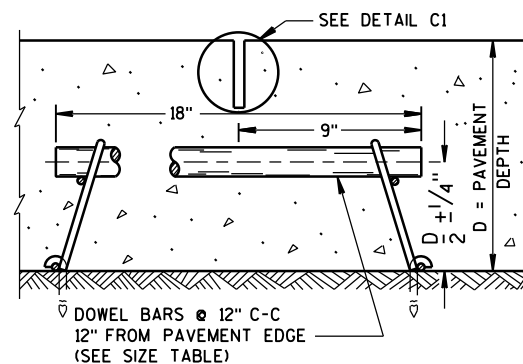
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT



SECTION C-C

SAWED LONGITUDINAL JOINT

SECTION F-F
CONTRACTION JOINT

GENERAL NOTES

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

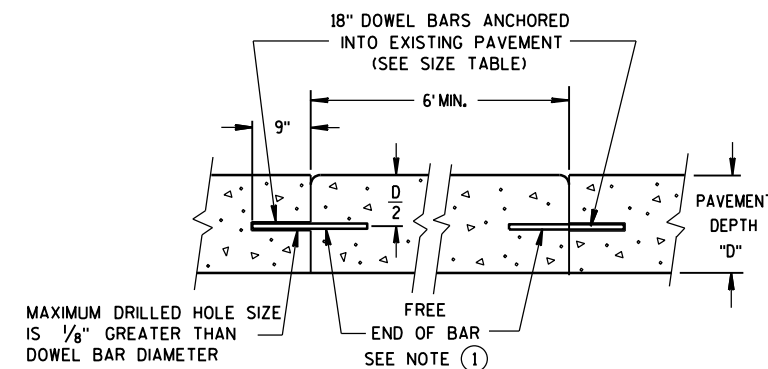
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

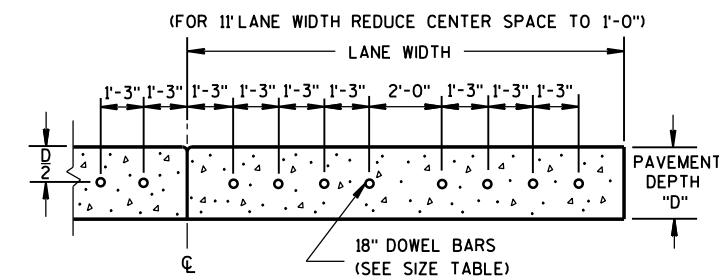
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D-D



SECTION E-E

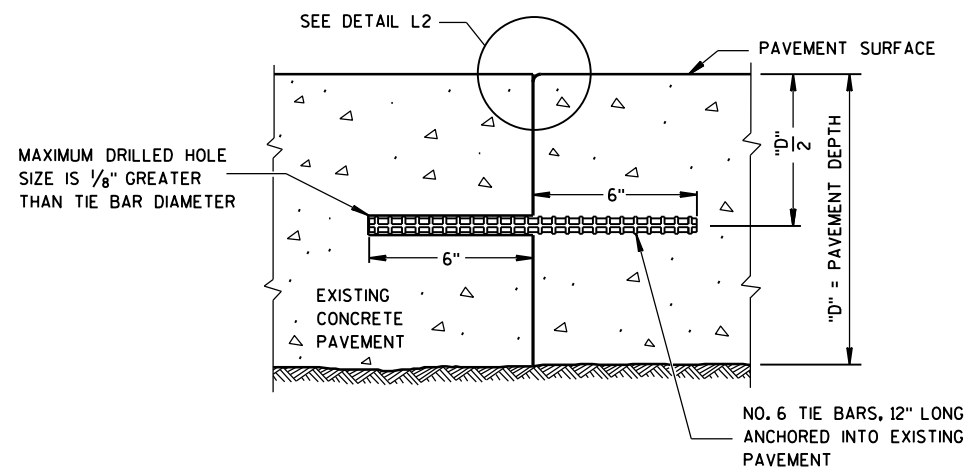
DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6, 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

CONCRETE PAVEMENT
REPAIR AND REPLACEMENT

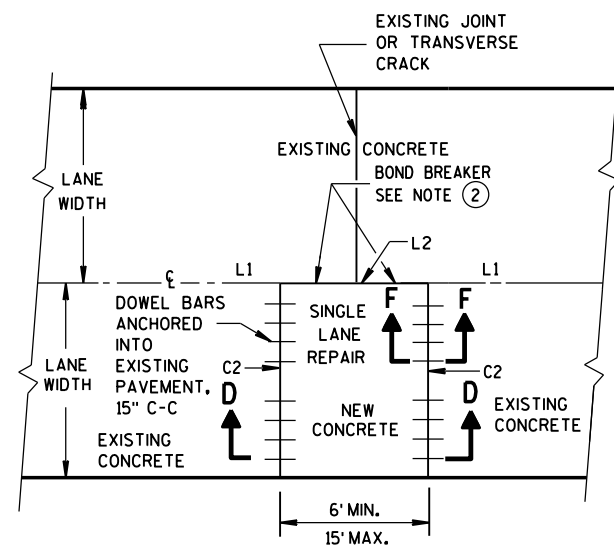
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 120



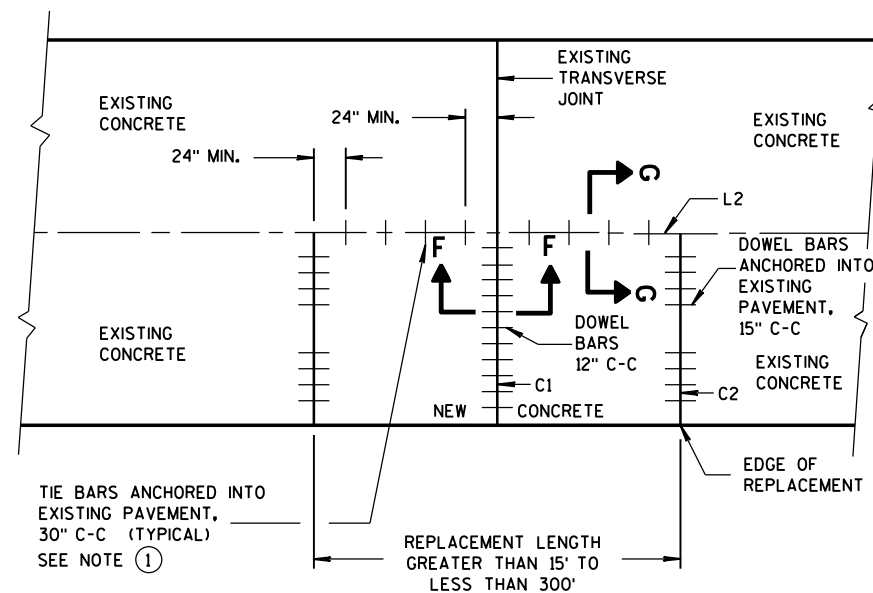
SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT

GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPAIR

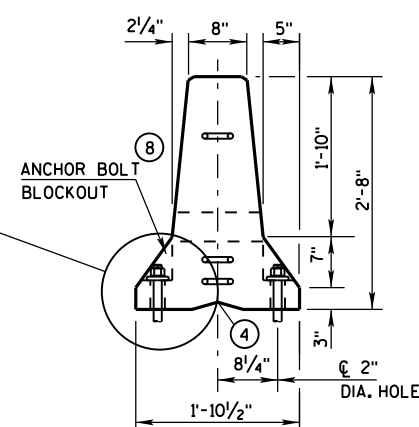
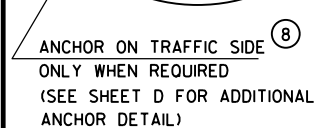


PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPLACEMENT

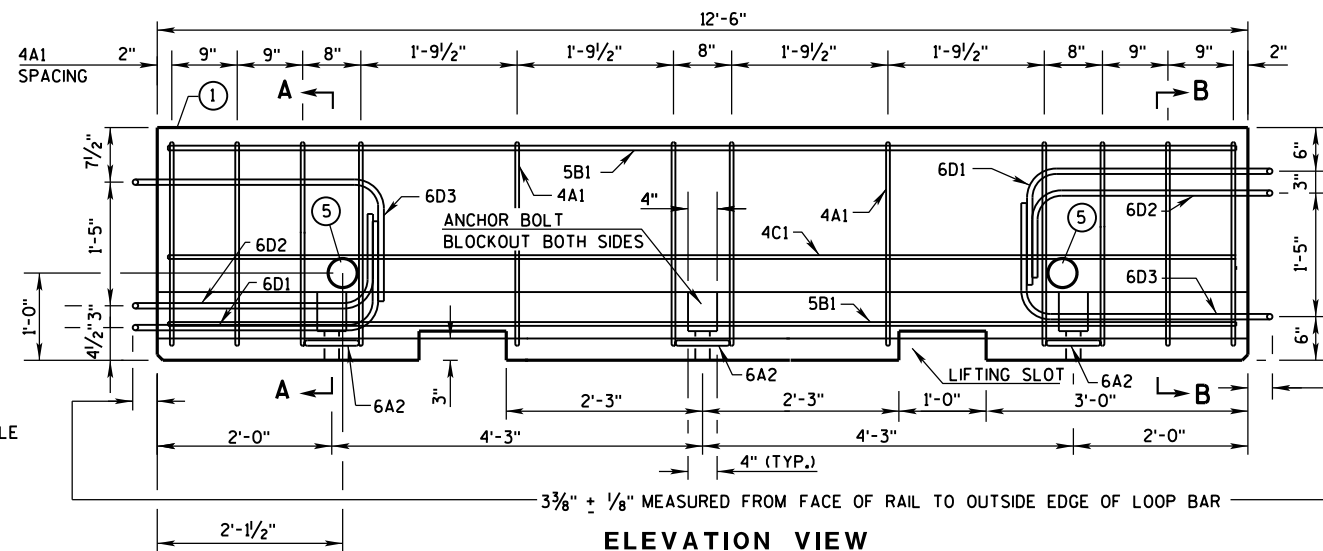
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

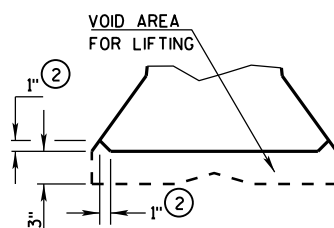
APPROVED
12-2013 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DE 121 IER
FHWA



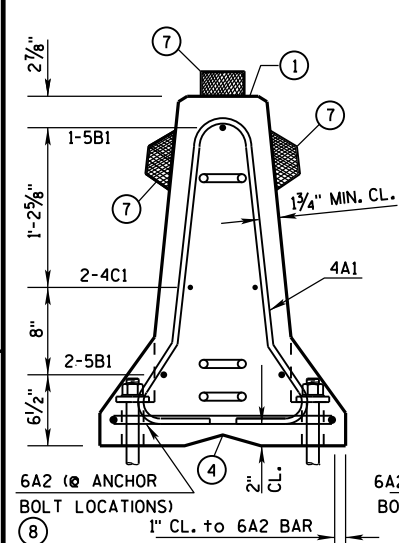
END VIEW



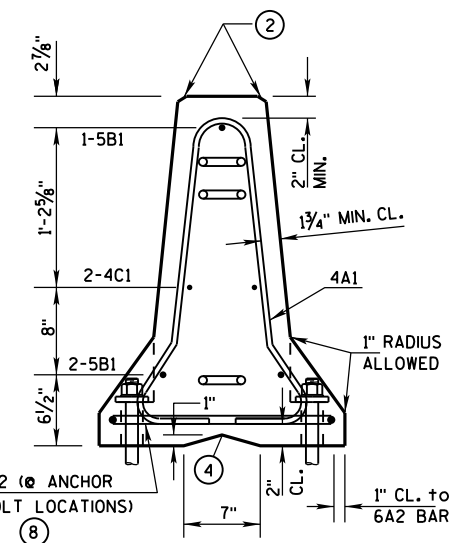
ELEVATION VIEW



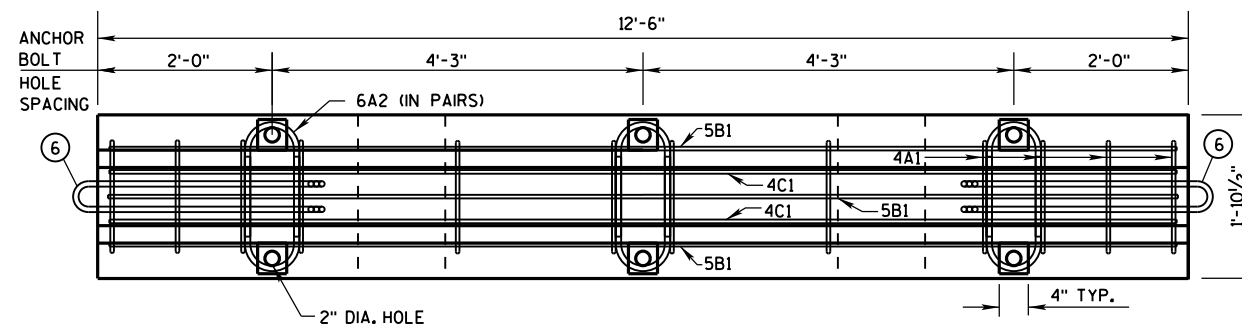
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

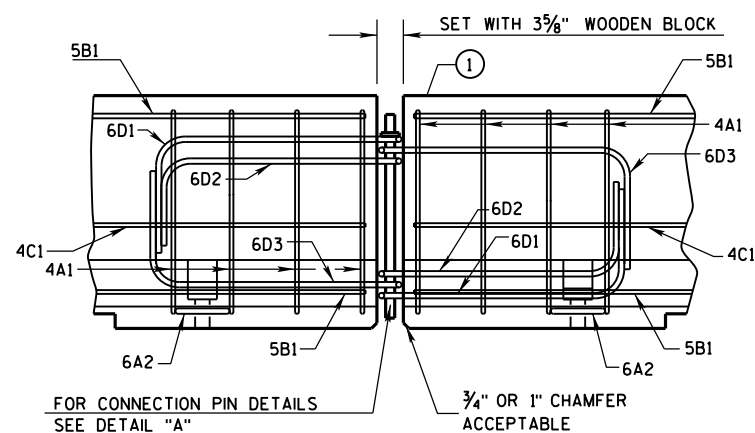


SECTION B-B
(STIRRUP PLACEMENT)

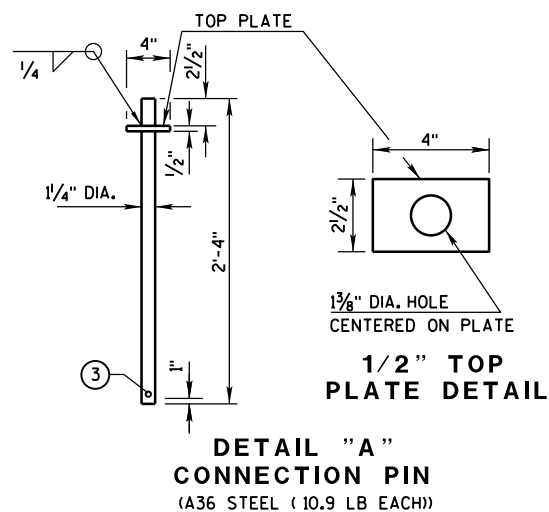


PLAN VIEW

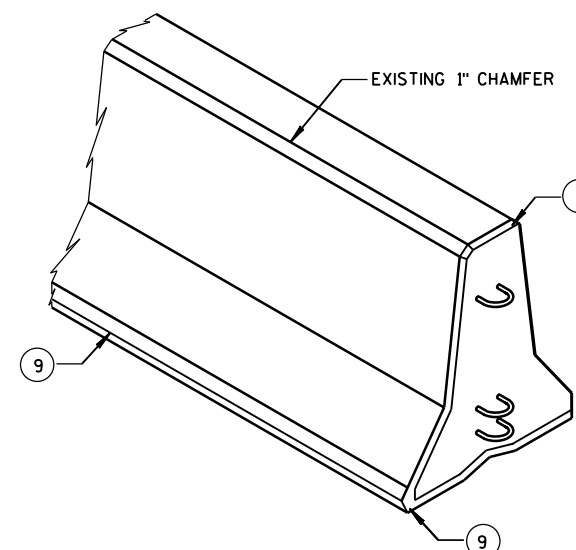
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-14(d) THRU 14B7-14(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE 3/4" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

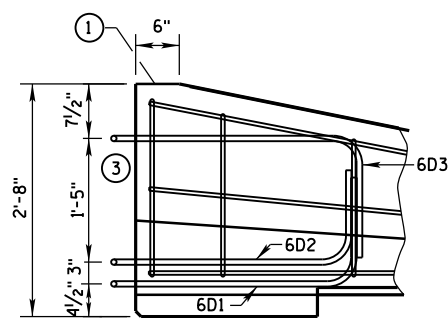
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.
PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE: WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ A $\frac{3}{8}$ " HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- ④ "V" NOTCH IS OPTIONAL.
- ⑤ THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- ⑥ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- ⑦ USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- ⑧ SEE SHEET D FOR ANCHORING CRITERIA.
- ⑨ 1" CHAMFER OPTIONAL.

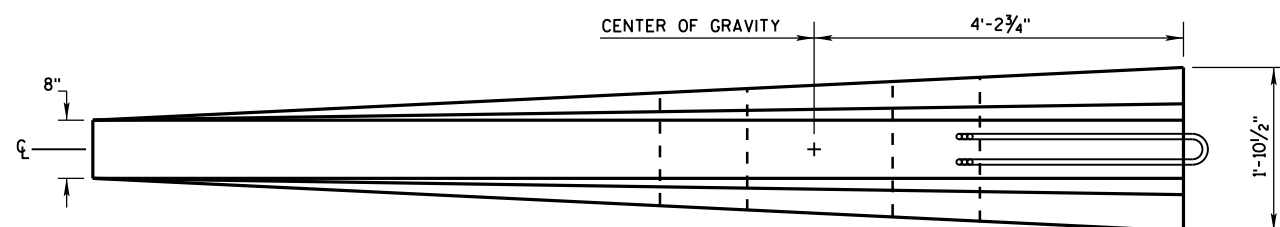
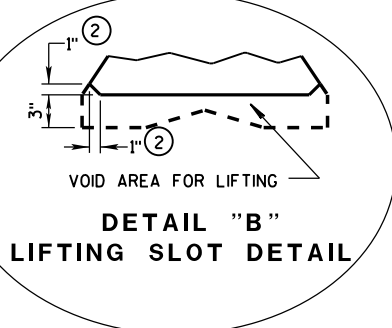
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 122



- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)



**CHAMFER
DETAIL**

The diagram shows a cross-section of a rectangular block with a chamfered top edge. Dimension lines indicate a 1" chamfer width and a 1" chamfer height. The chamfer is labeled with a circled '2'.

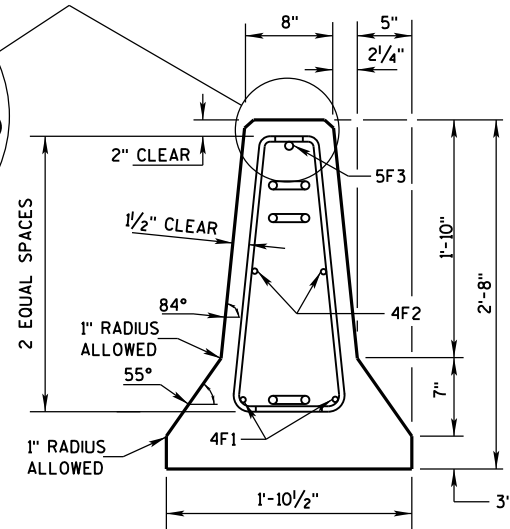


Diagram illustrating the barrier offset and angle specifications for a curve. The diagram shows a barrier segment with a 10"± OFFSET and a 5°± MAX. angle. The barrier is divided into sections with dimensions of 12'-6" and 12'-6". The text "BARRIER ON CURVE" is prominently displayed. The "END SECTION" is also indicated.

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

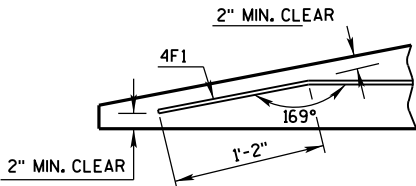
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 123

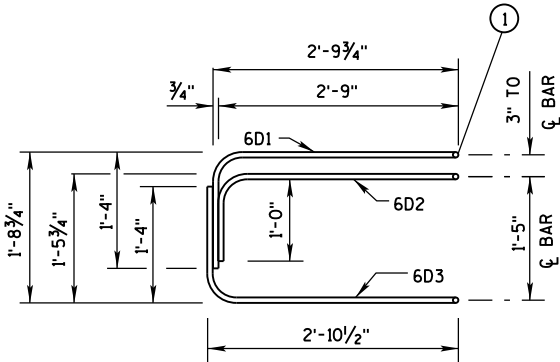
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

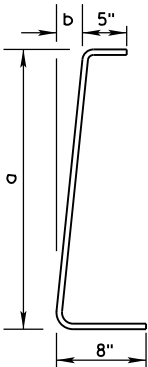
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

TAPER BARRIER SECTION

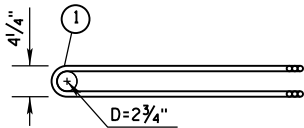
GENERAL NOTES

① NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION
BILL OF MATERIALS

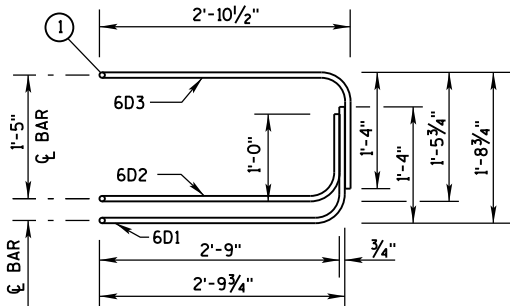
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

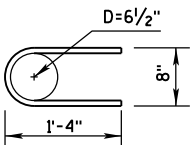


PLAN VIEW
LOOP BAR ASSEMBLY

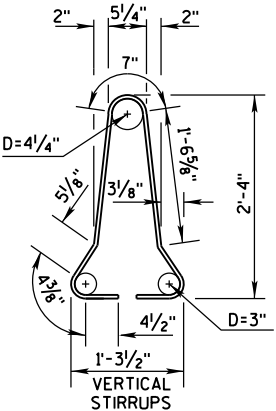
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

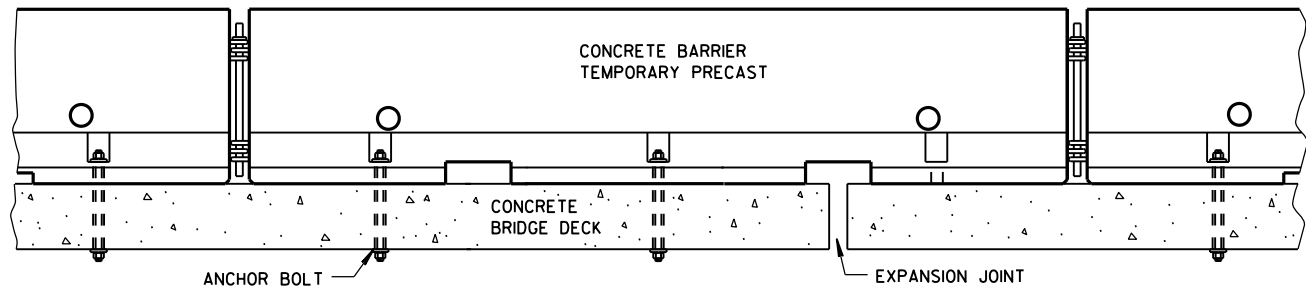
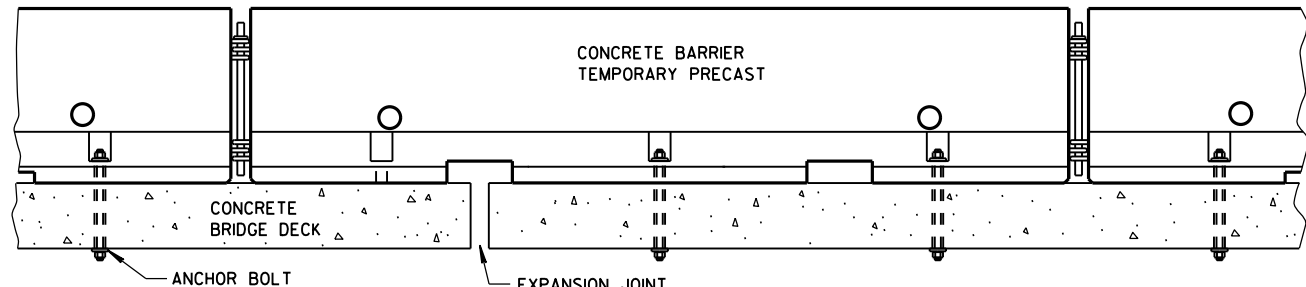


4A1

BARRIER SECTION

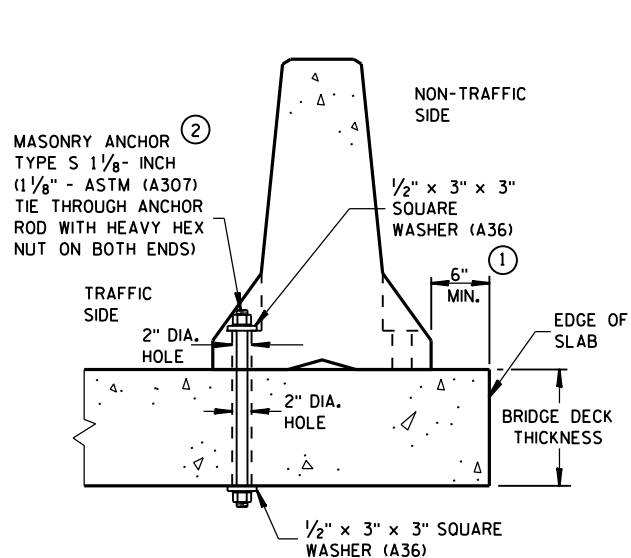
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 124



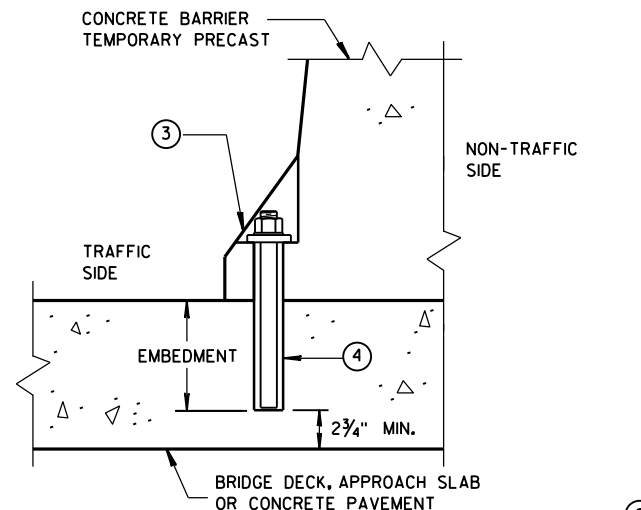
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



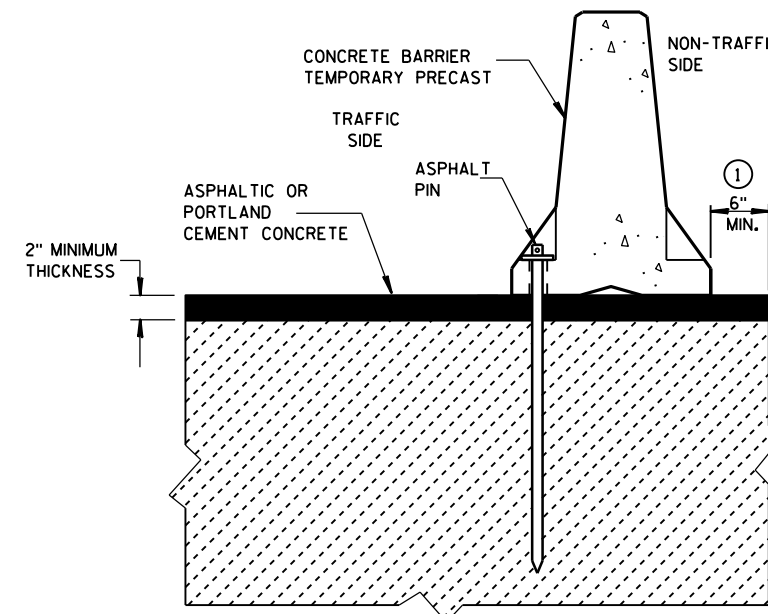
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



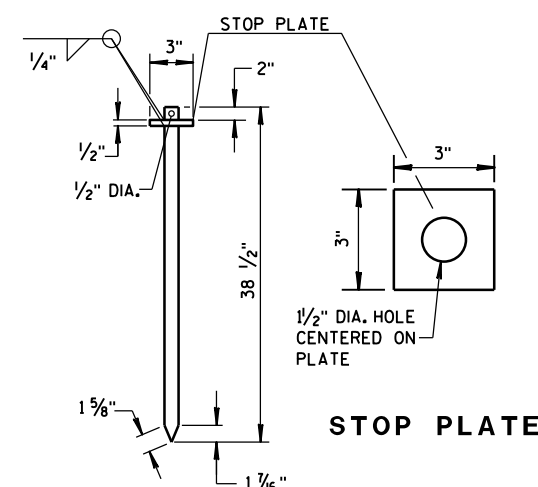
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

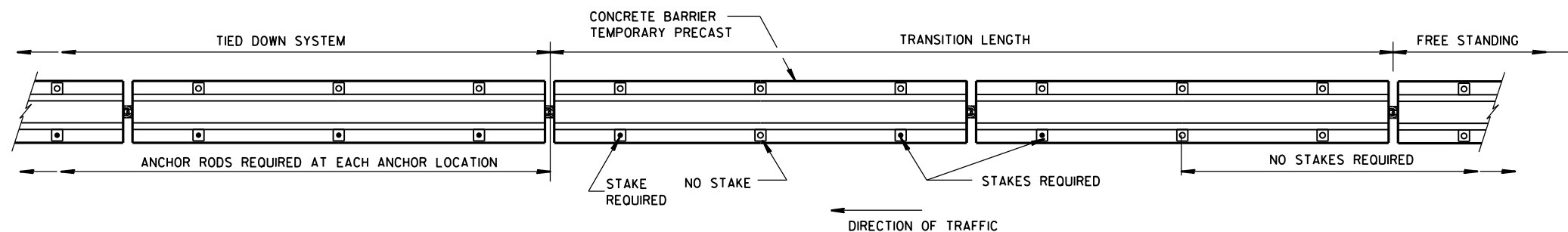


STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



ASPHALT PIN (ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

GENERAL NOTES

- CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

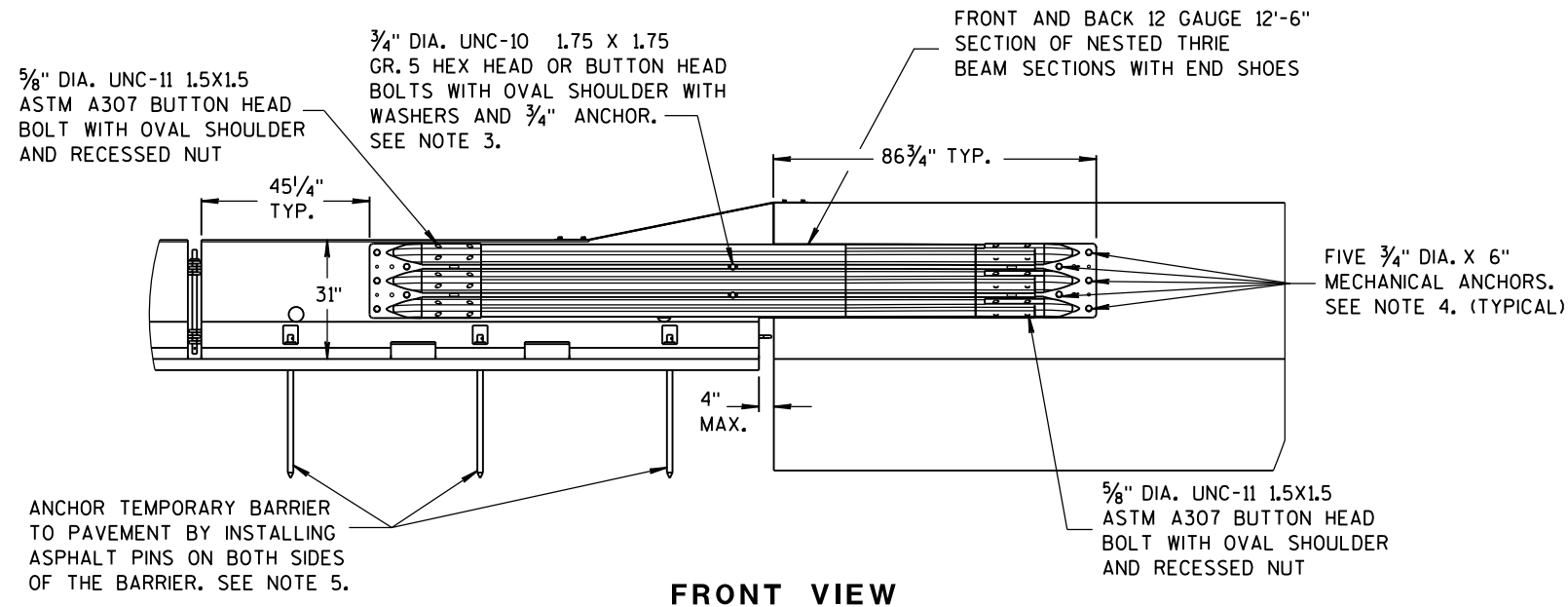
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.
- 1/8" DIAMETER A307 THREADED ROD, 1/2" x 3" x 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 125



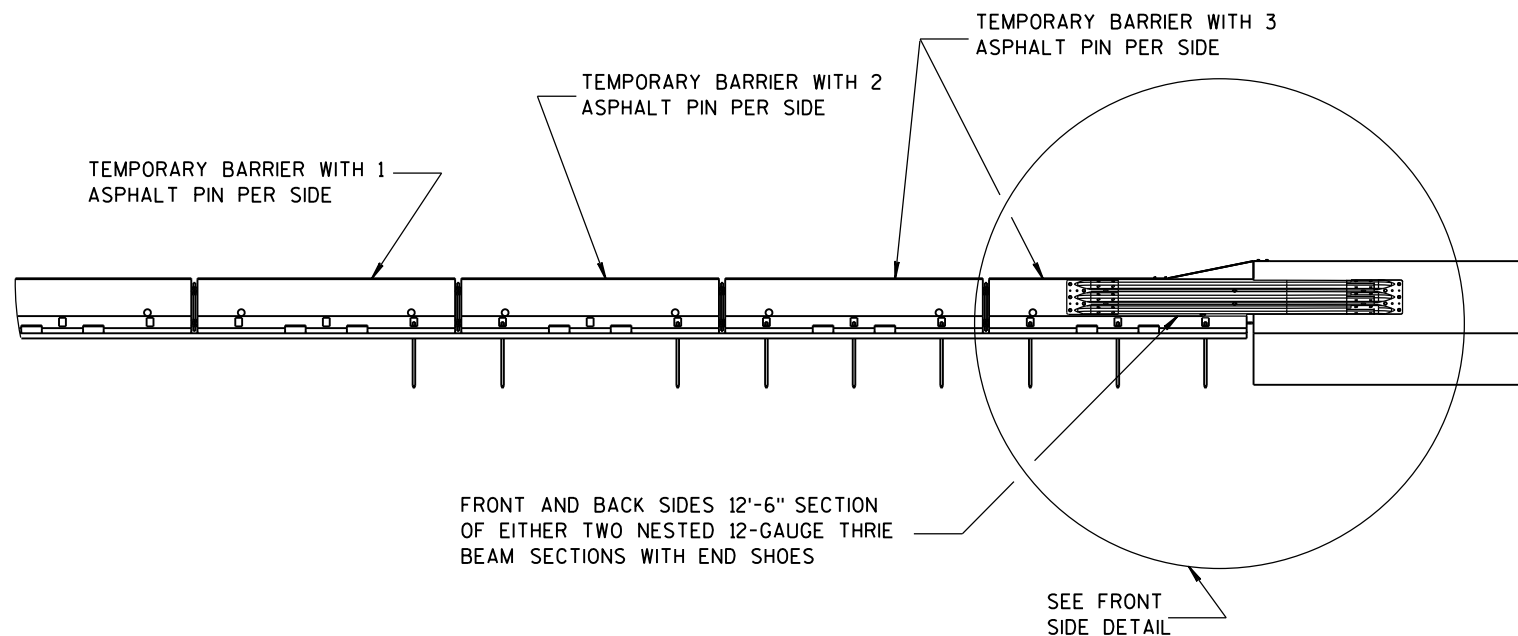
FRONT VIEW

NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

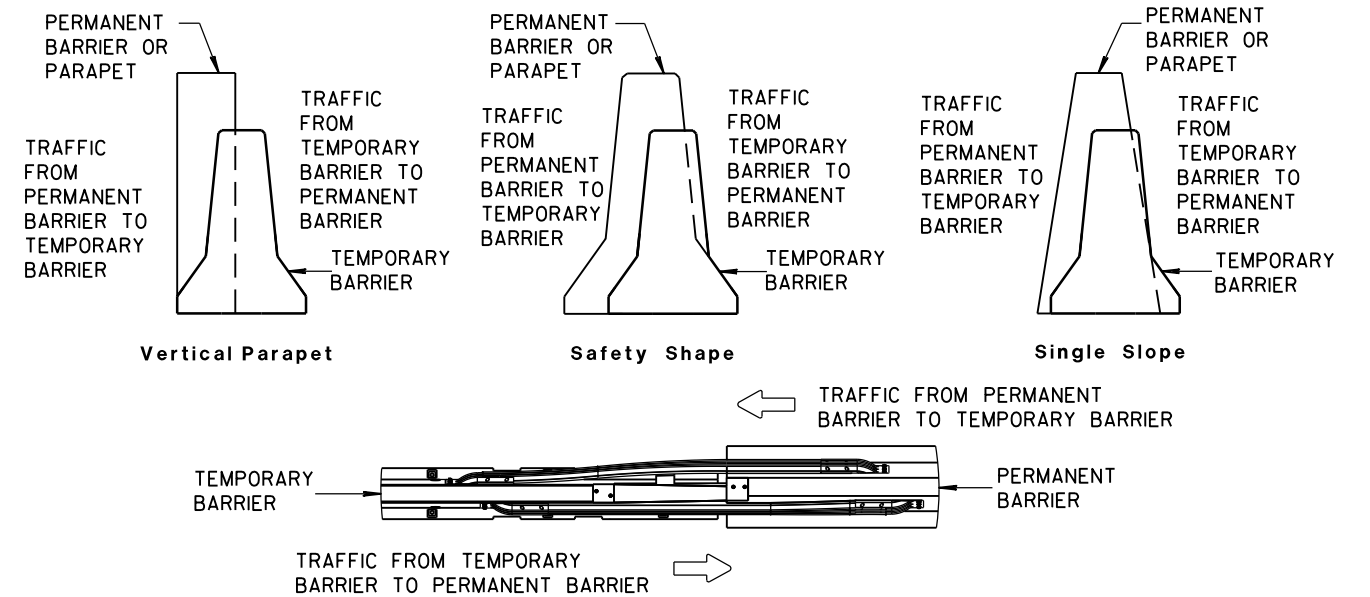
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.

4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

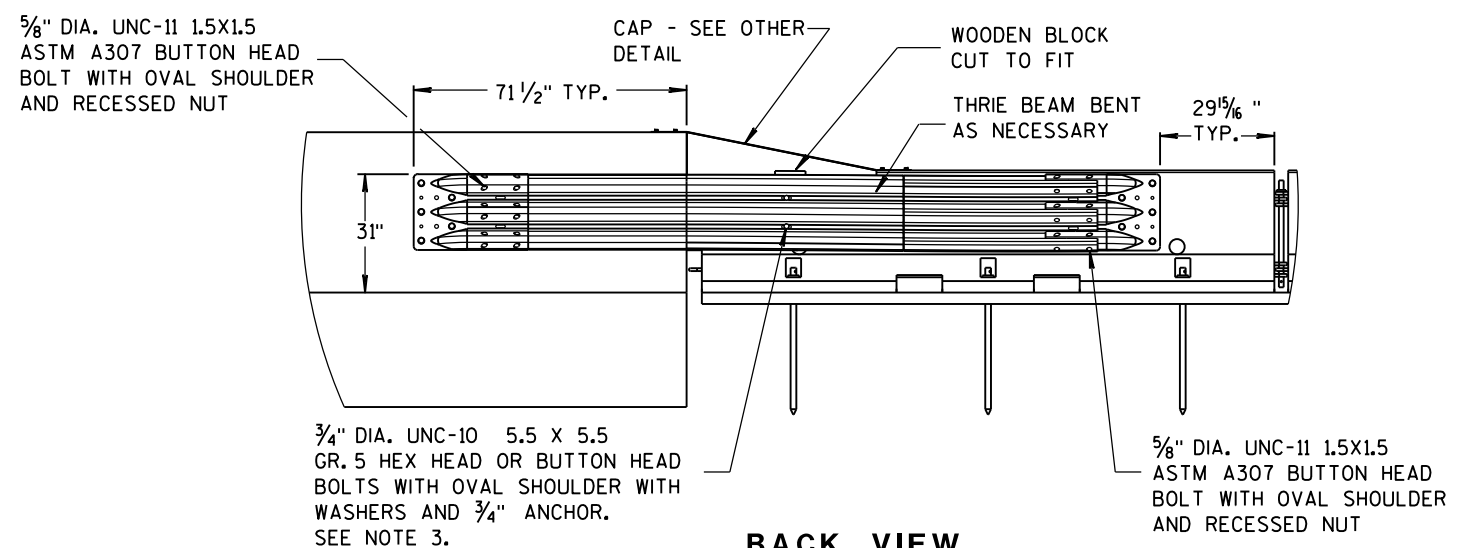


FRONT VIEW

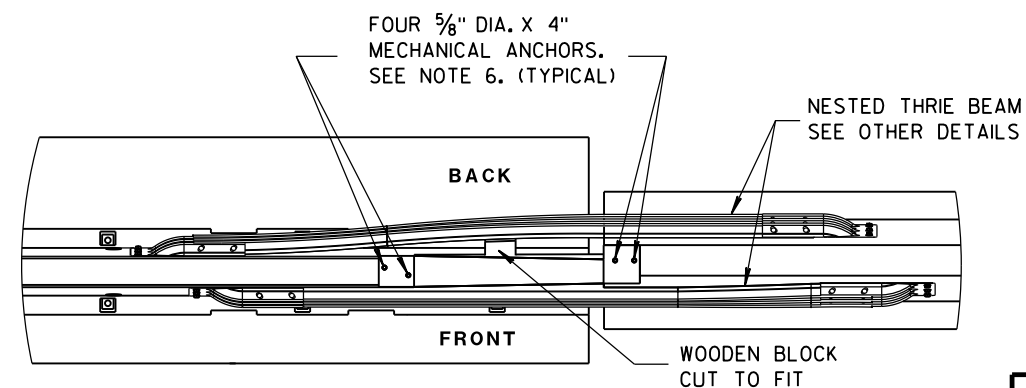
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



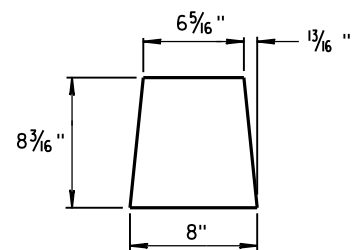
BACK VIEW



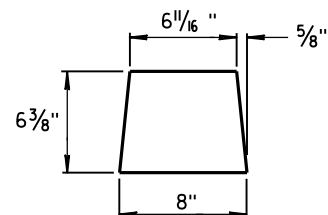
PLAN VIEW

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

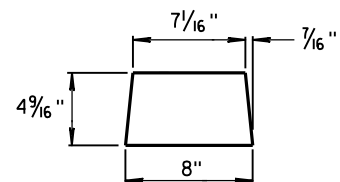
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 126



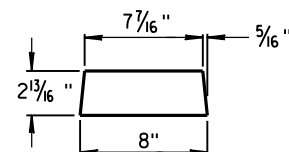
GUSSET 1



GUSSET 2

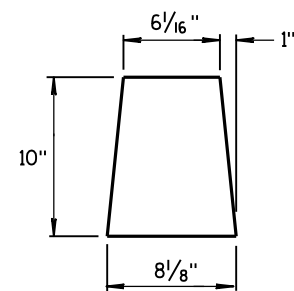


GUSSET 3

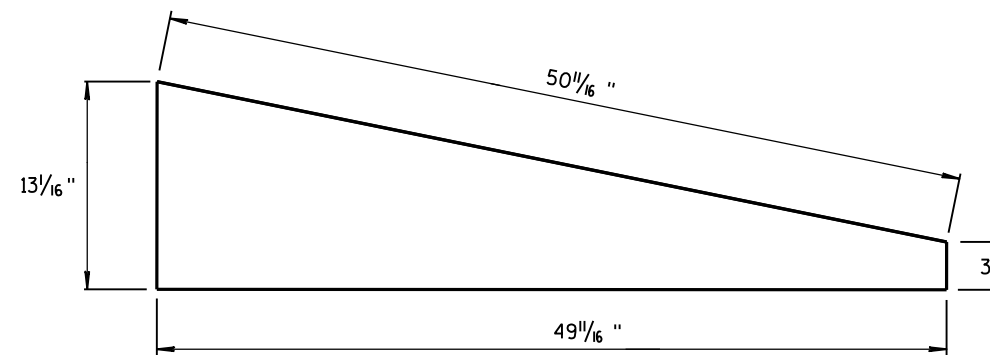


GUSSET 4

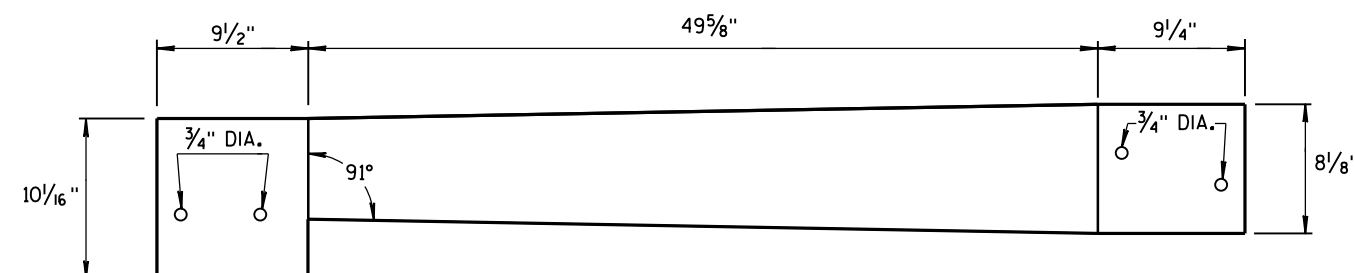
GUSSETS



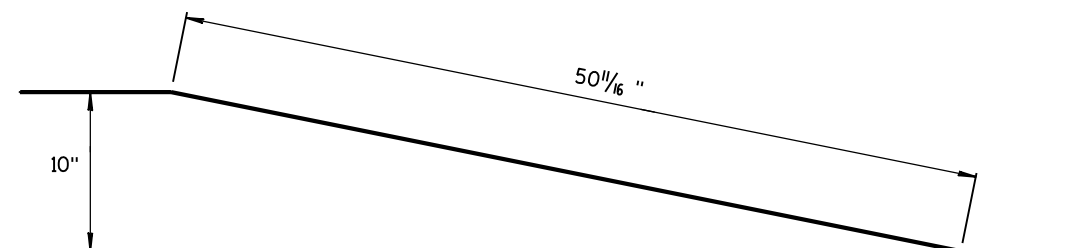
END PLATE



SIDE PLATE

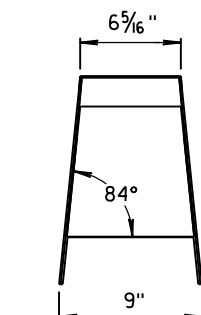
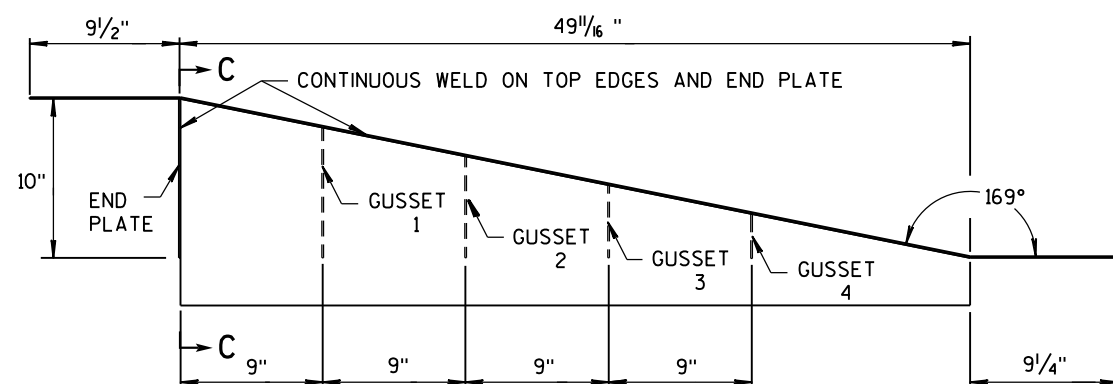
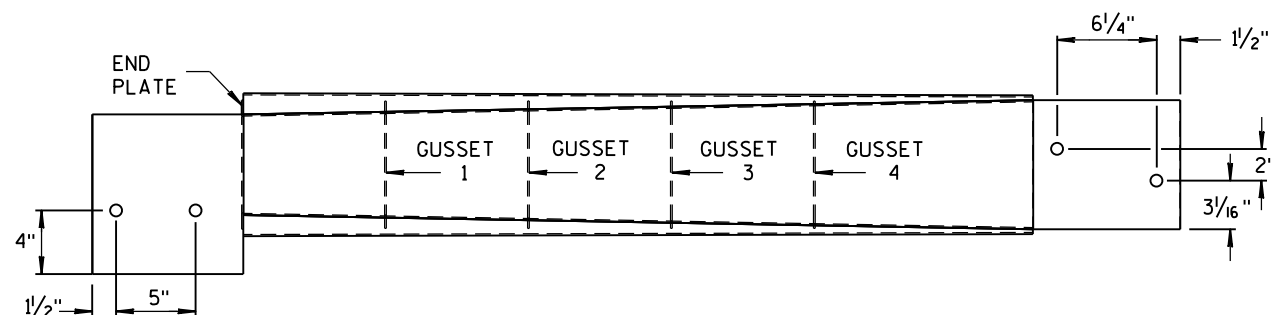


TOP PLATE



**SIDE, TOP AND END PLATES FOR CAP
FROM TEMPORARY CONCRETE BARRIER
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C

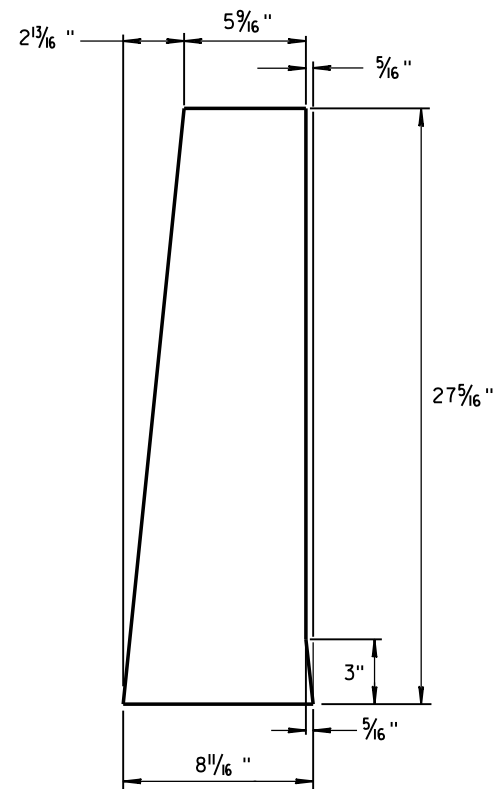
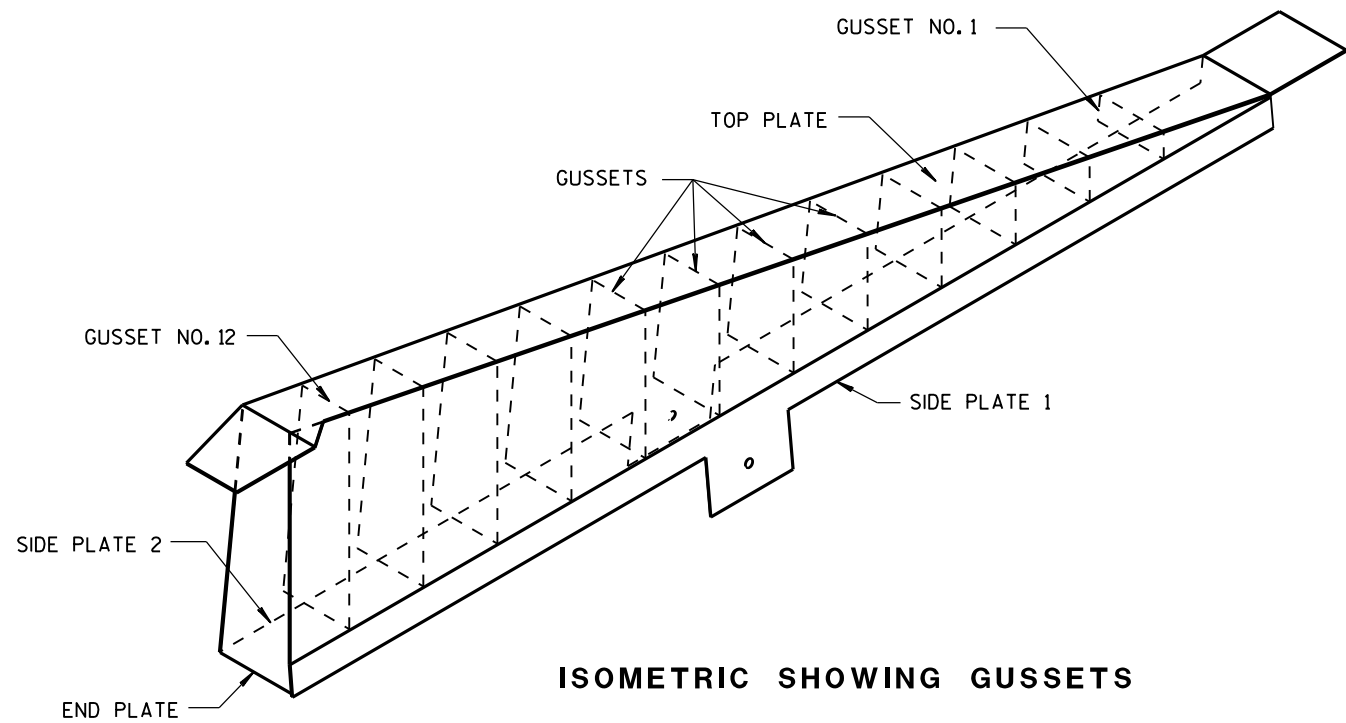
NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

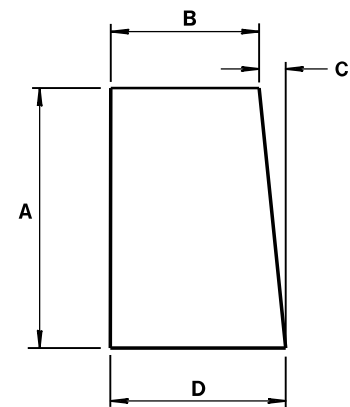
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 127



1/8" STEEL PLATE

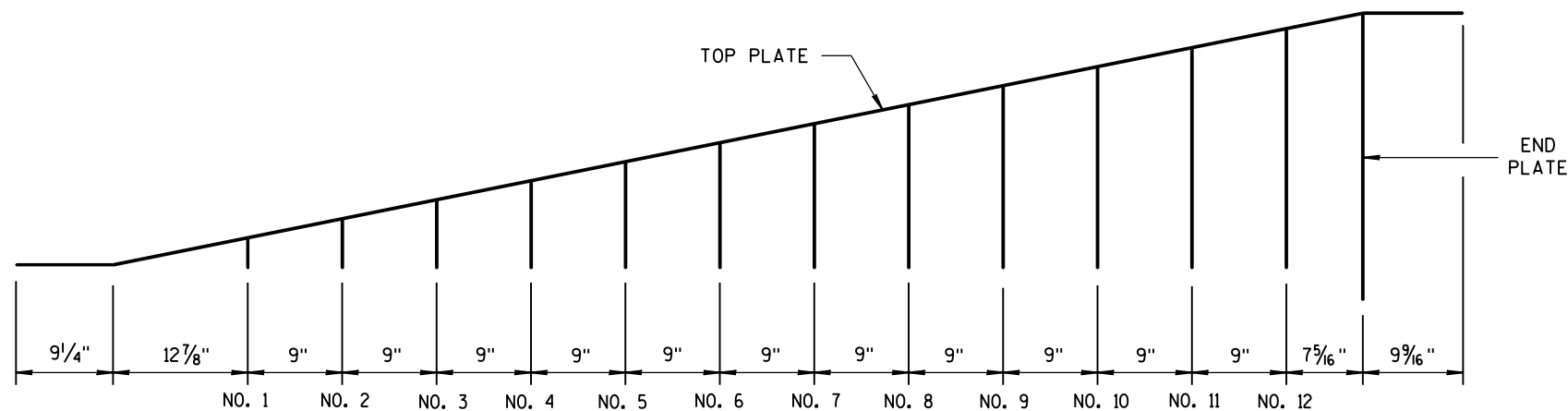


ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8 "	1 1/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8 "	7"	1 1/16 "	8 1/16 "
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8 "	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8 "	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

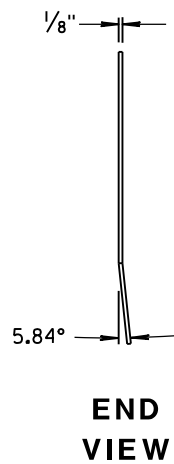
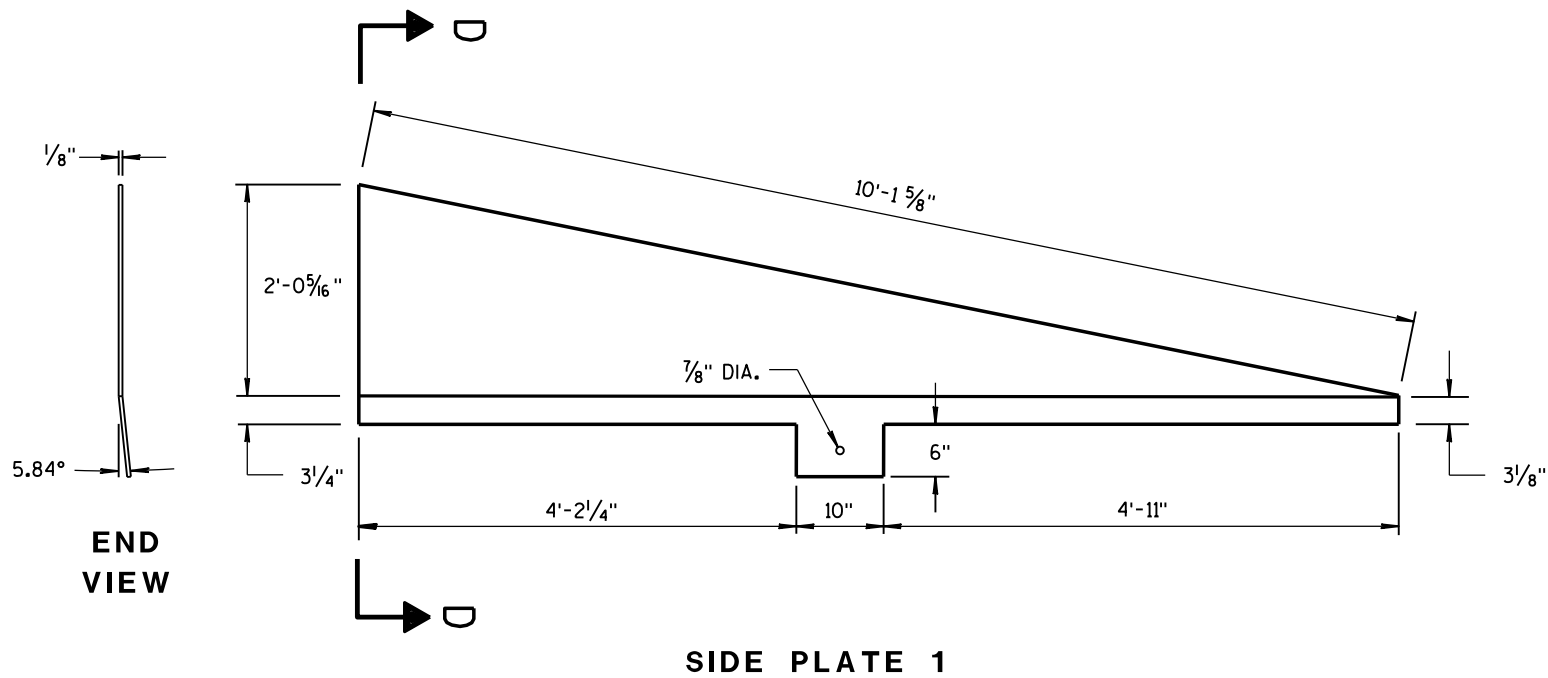
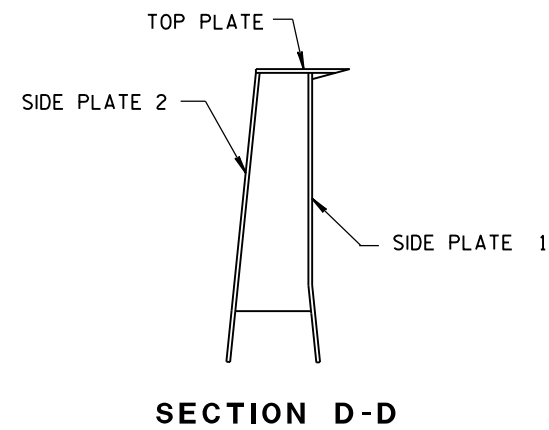
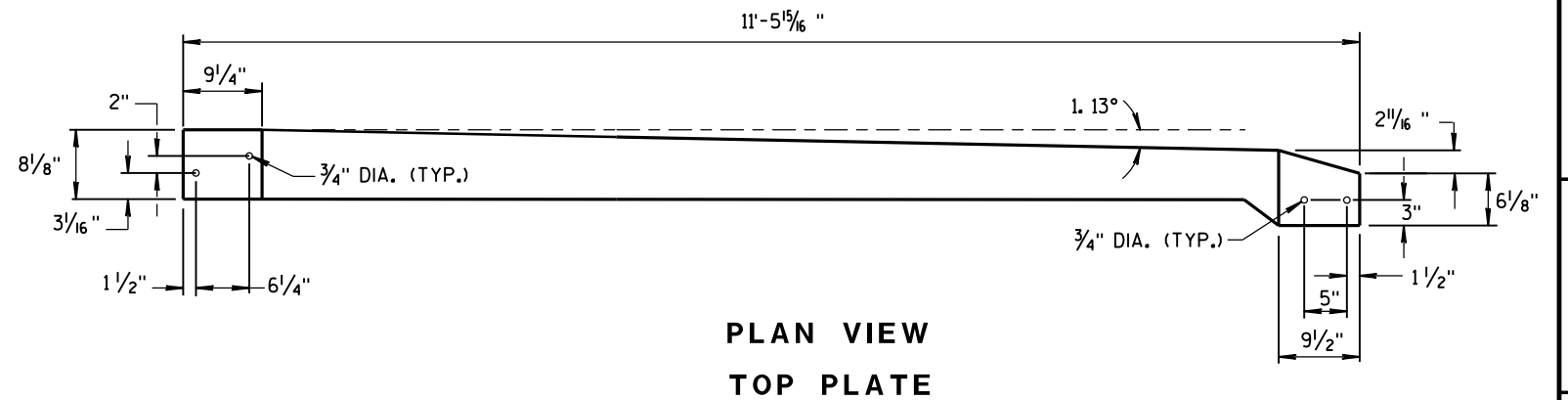
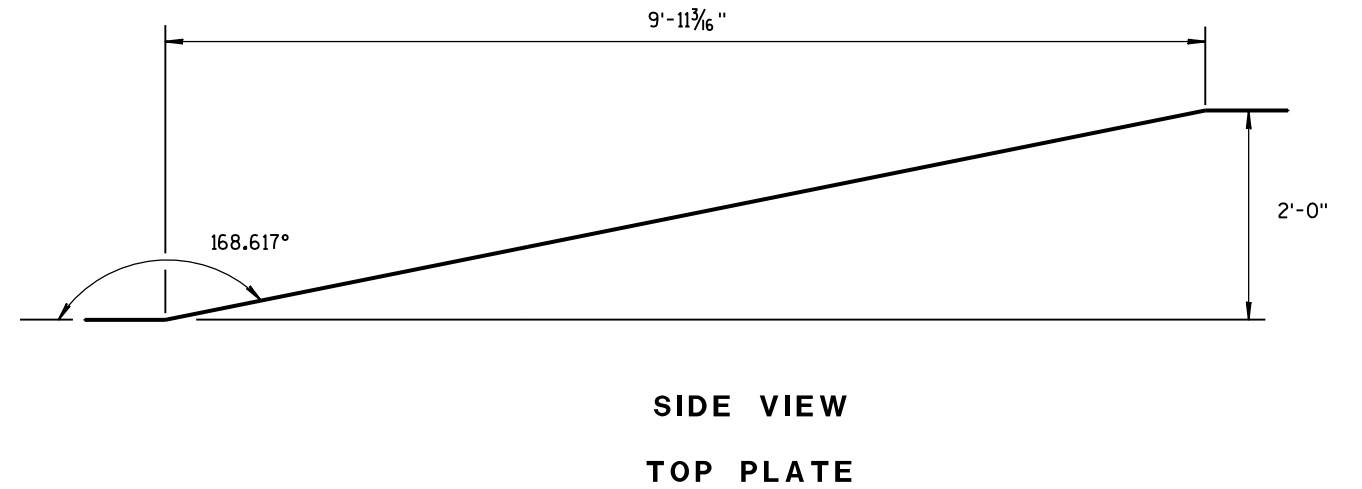
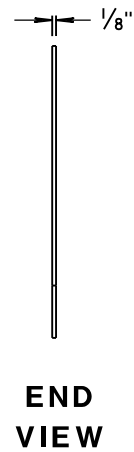
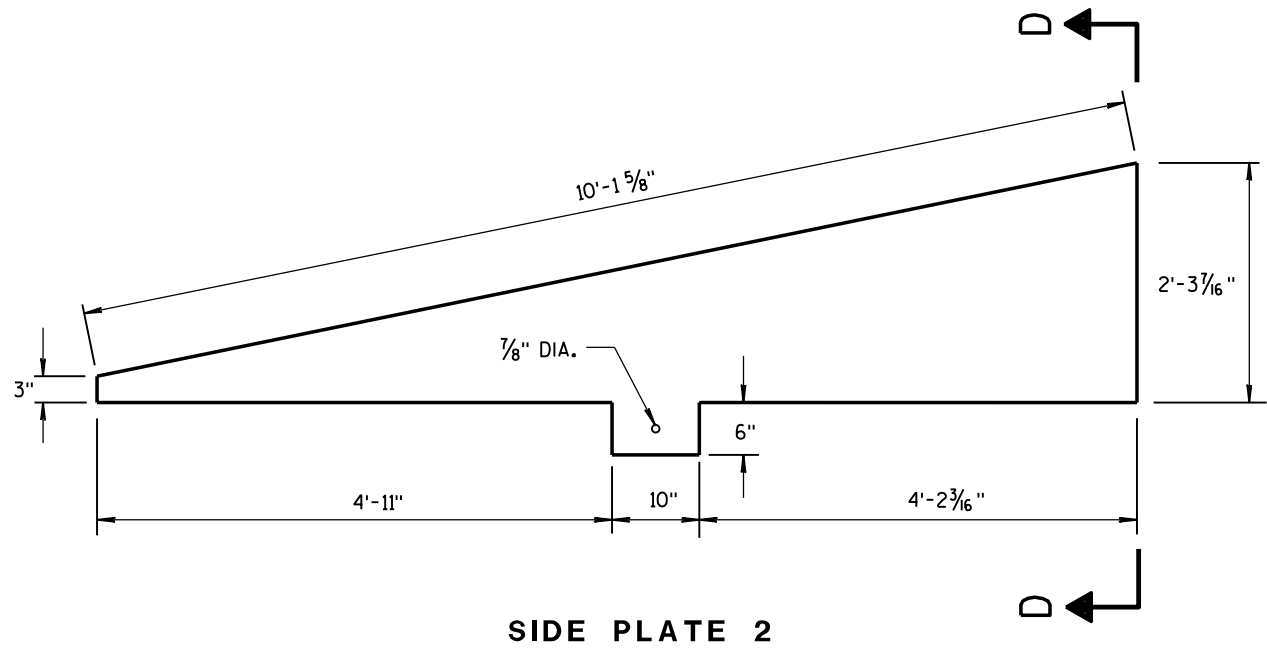
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

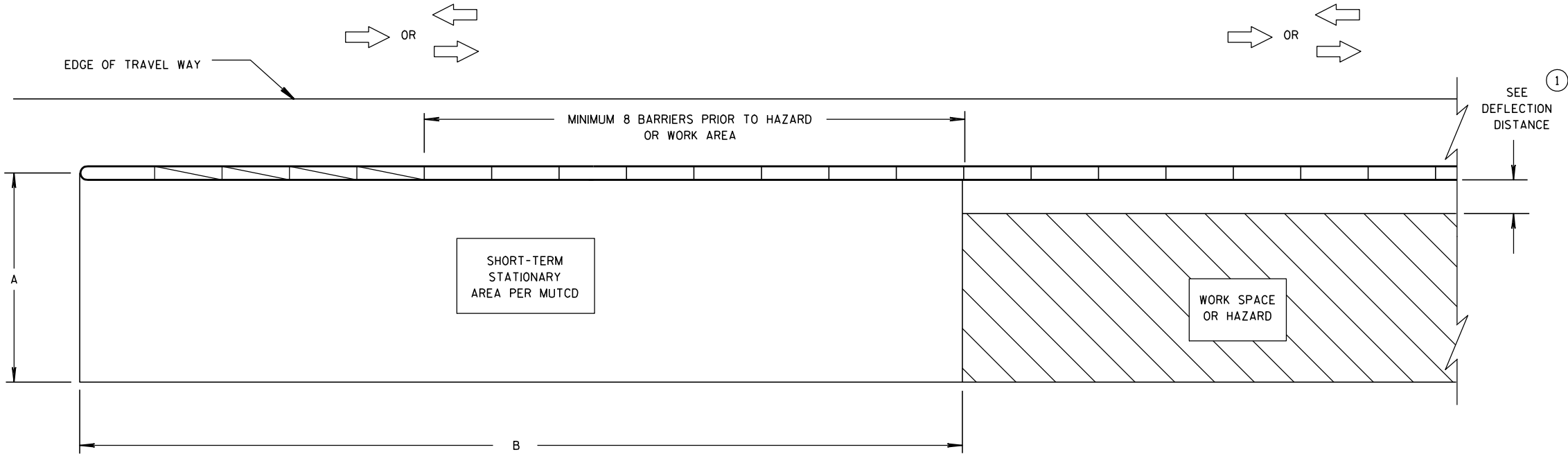
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 128

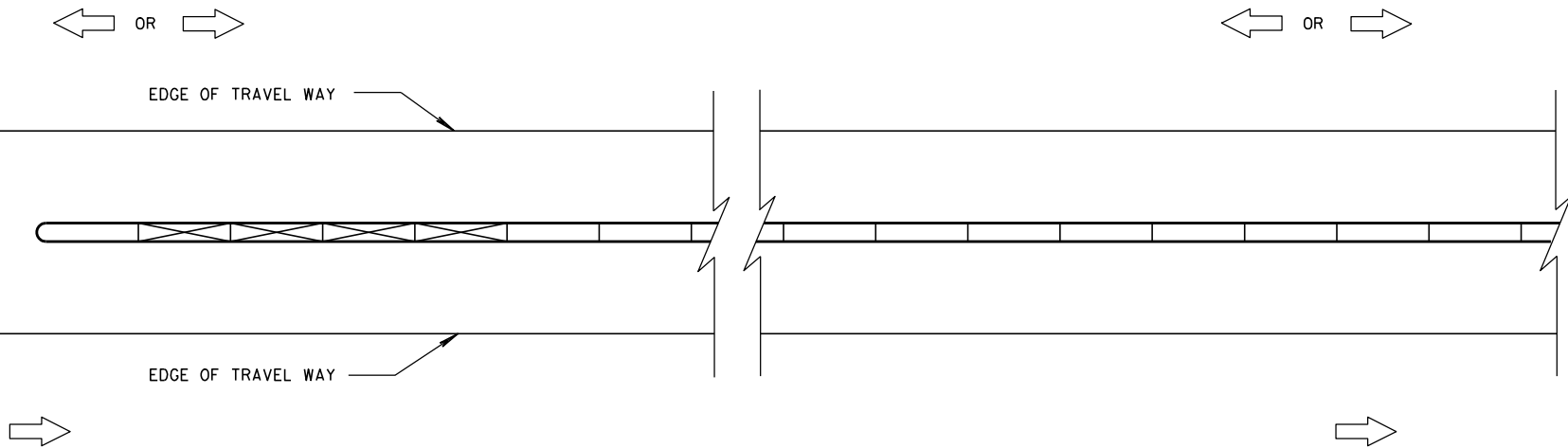


CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
June 2014	/S/ Jerry H. Zoog		
DATE	ROADWAY STANDARD	129	INT
FHWA	ENGINEER		



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.

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

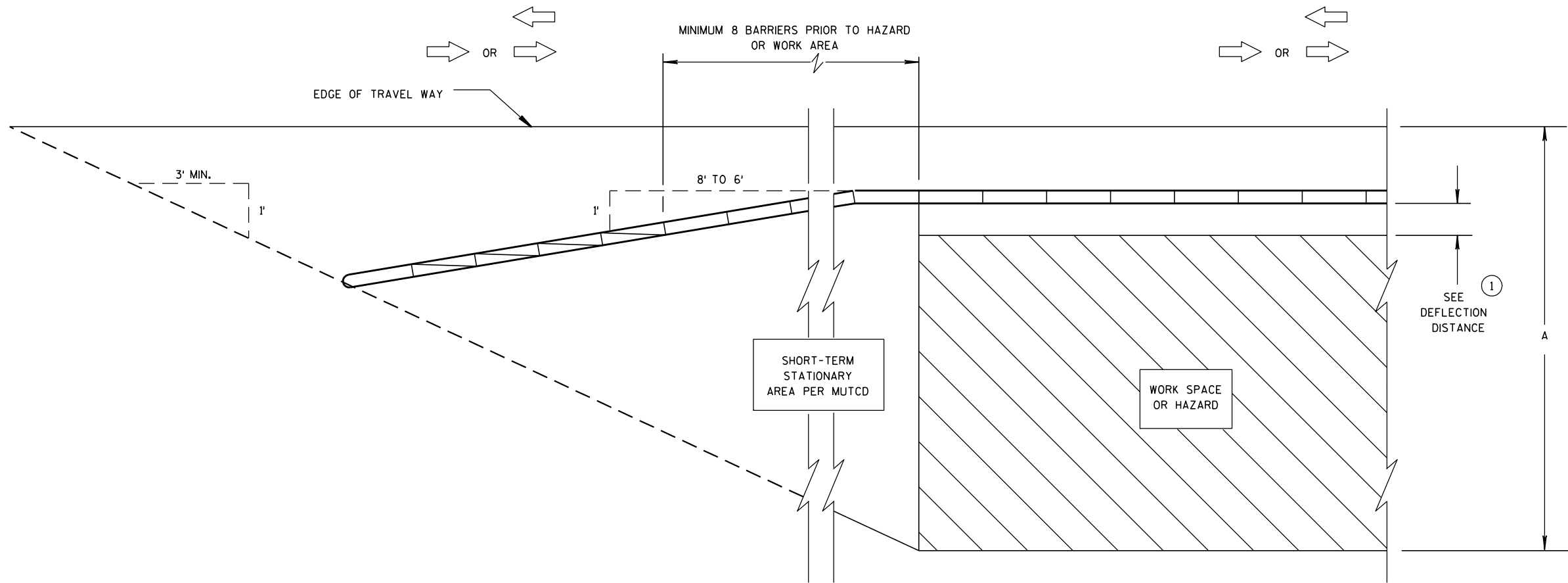
POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

LEGEND

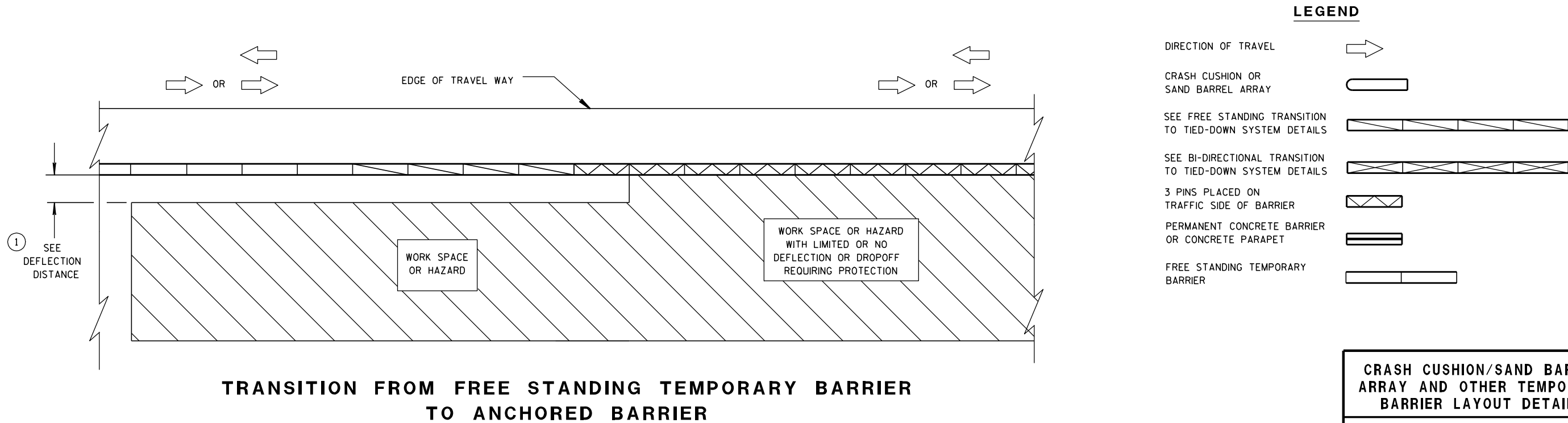
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

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**



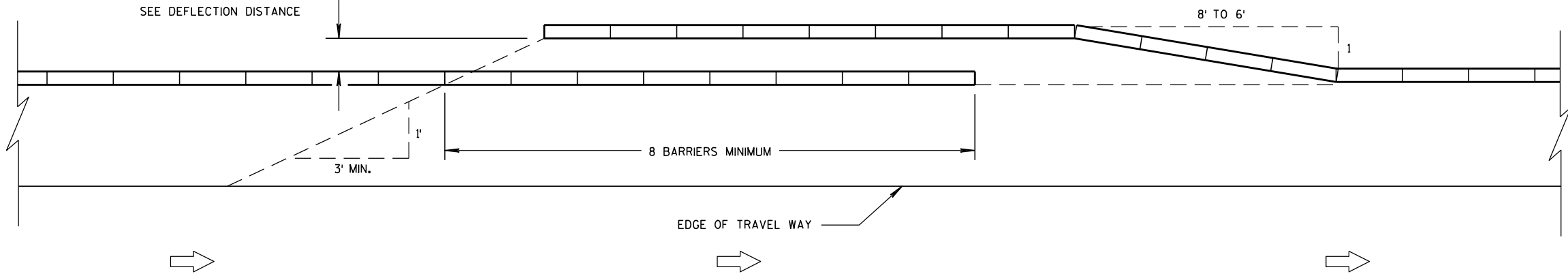
LEGEND

- 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**

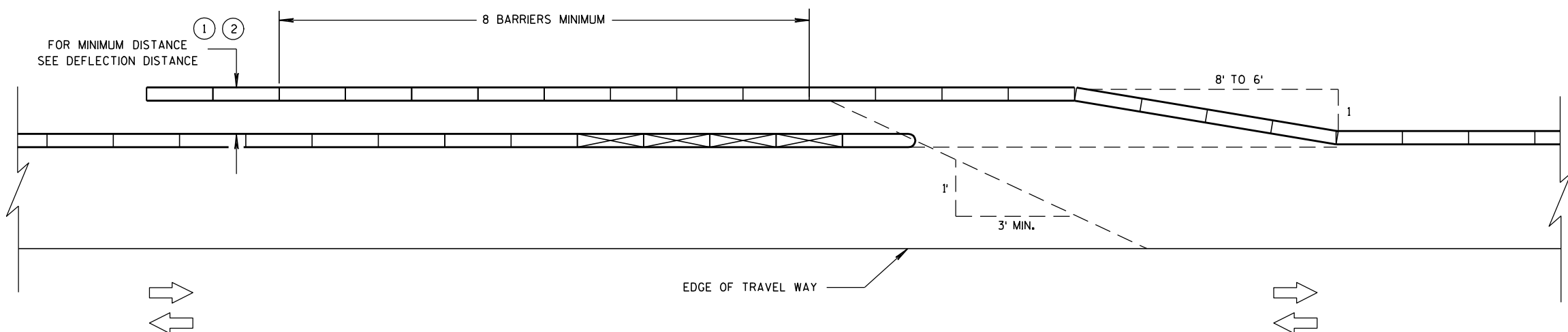
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

FOR MINIMUM DISTANCE
SEE DEFLECTION DISTANCE

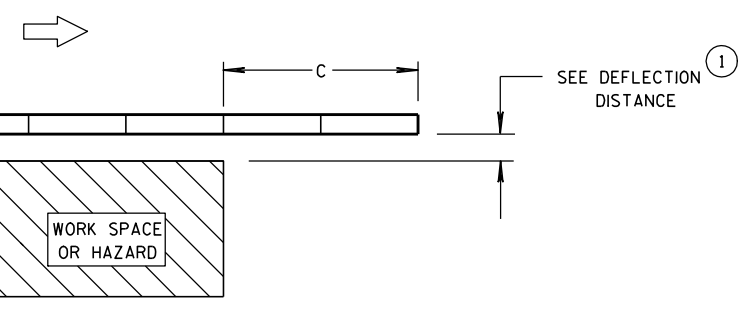


TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC

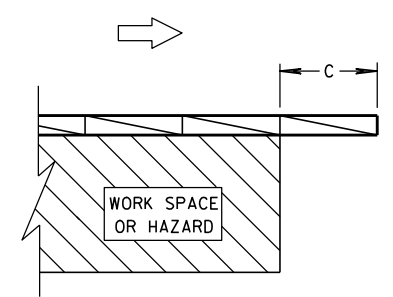
FOR MINIMUM DISTANCE
SEE DEFLECTION DISTANCE



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**

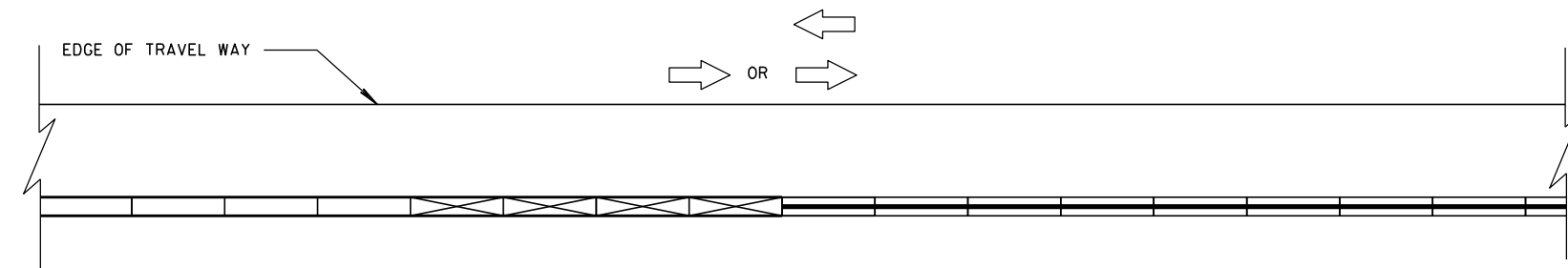


**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

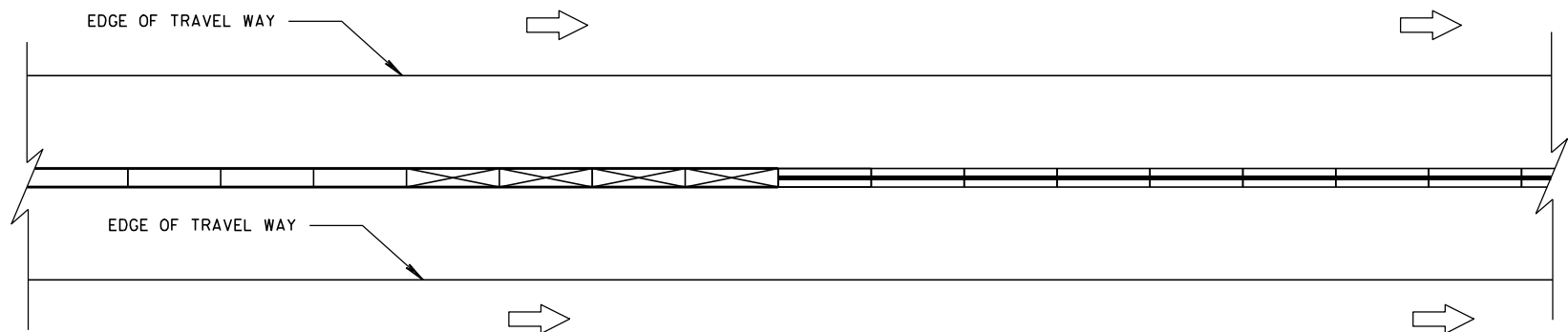
LEGEND

- 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**



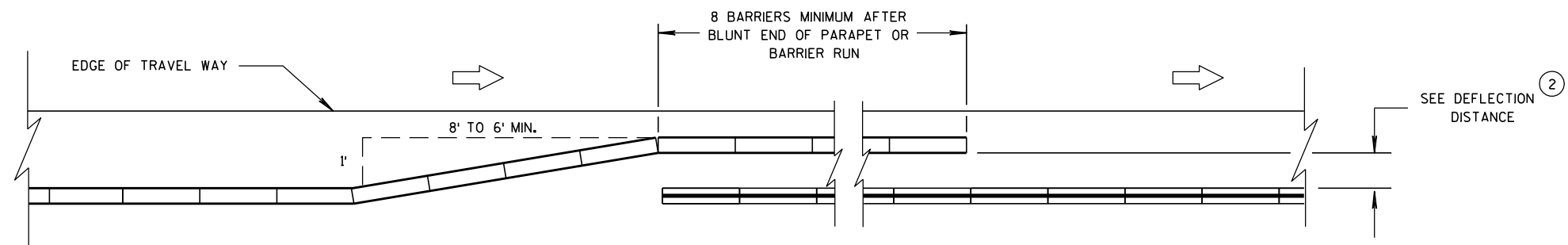
**CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE**



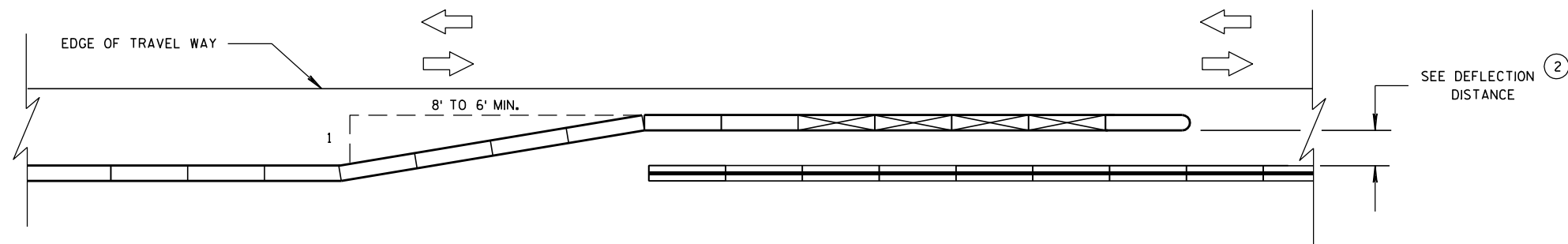
**CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES**

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**



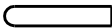
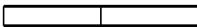
**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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LEGEND

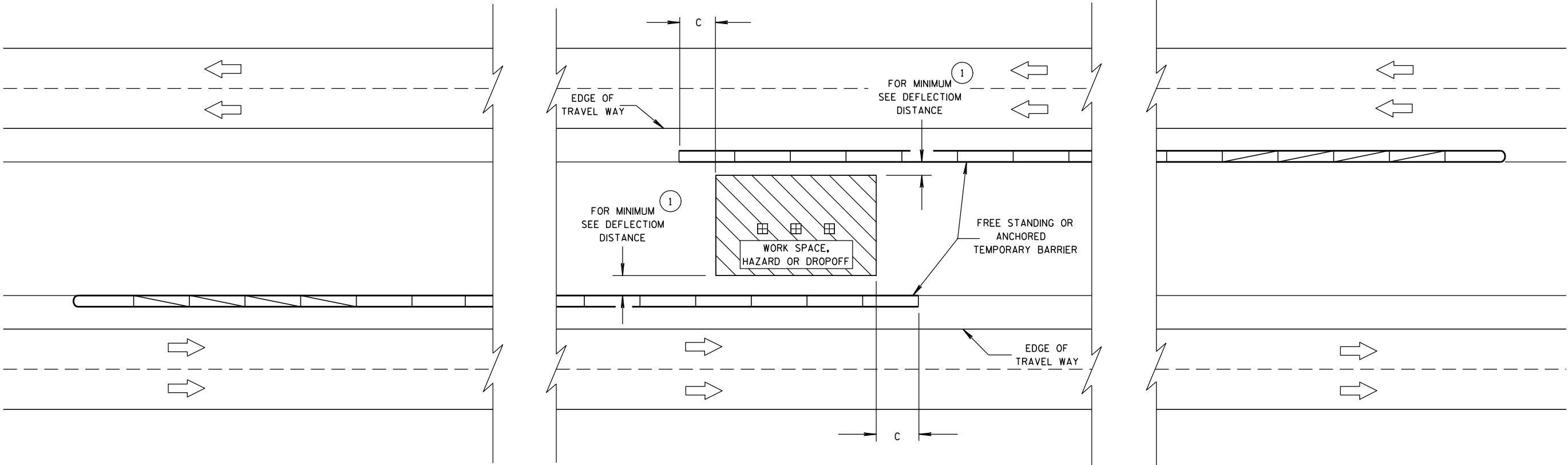
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

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

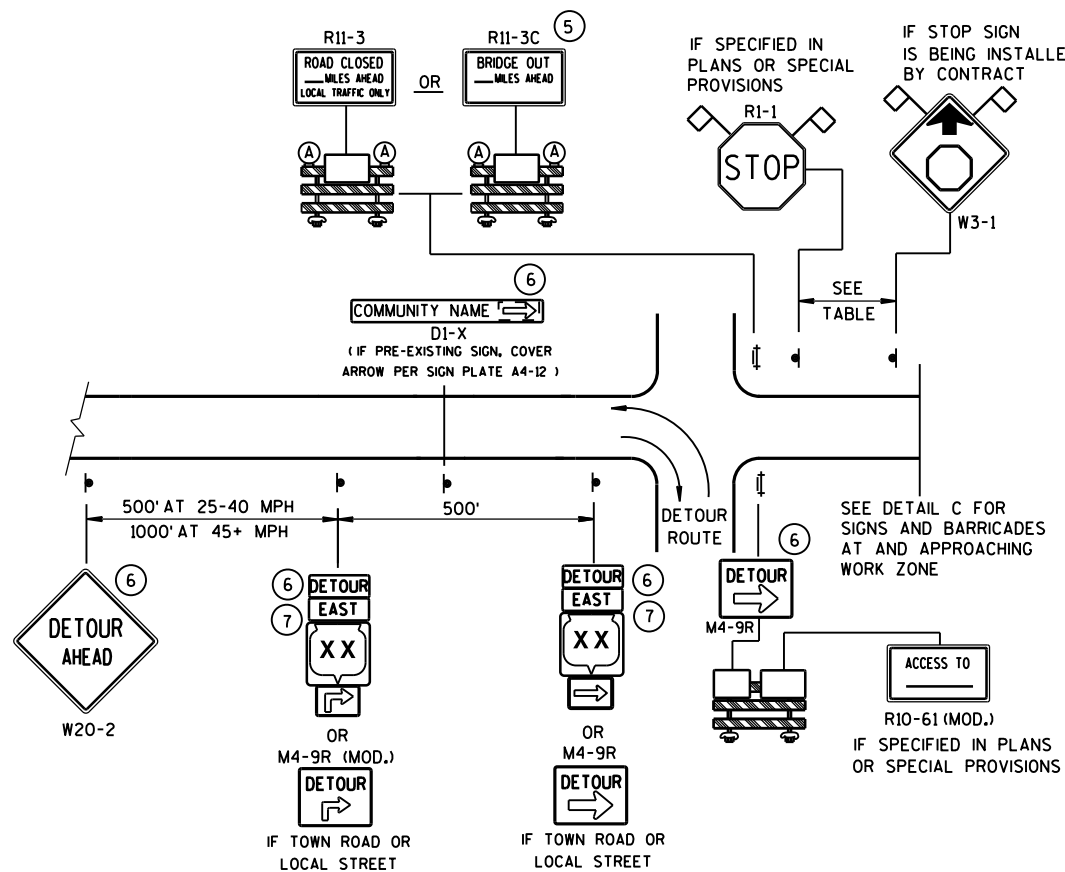
**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

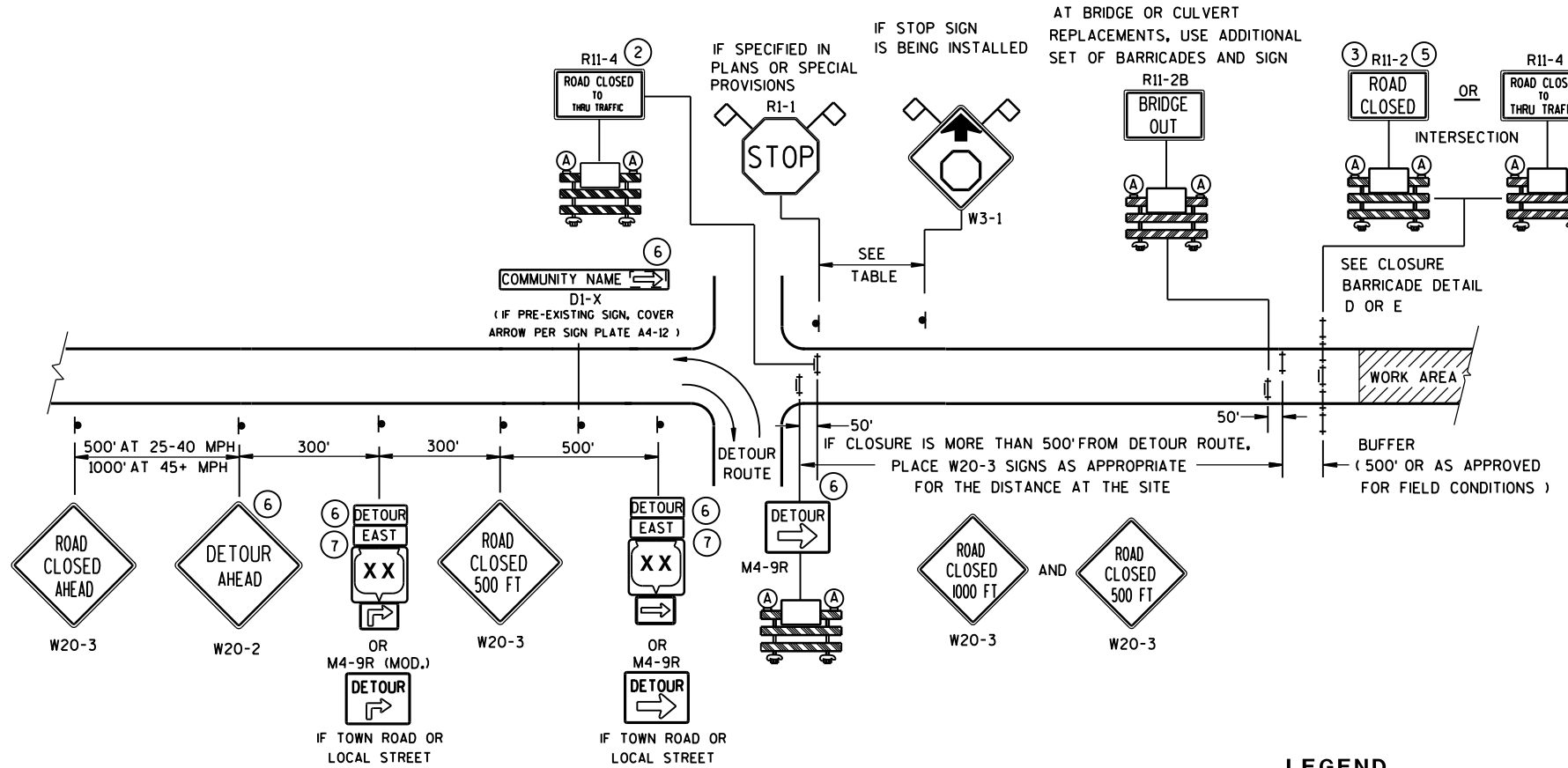
APPROVED
8/31/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS 134
ENGINEER
FHWA

S.D.D. 14 B 8-1e

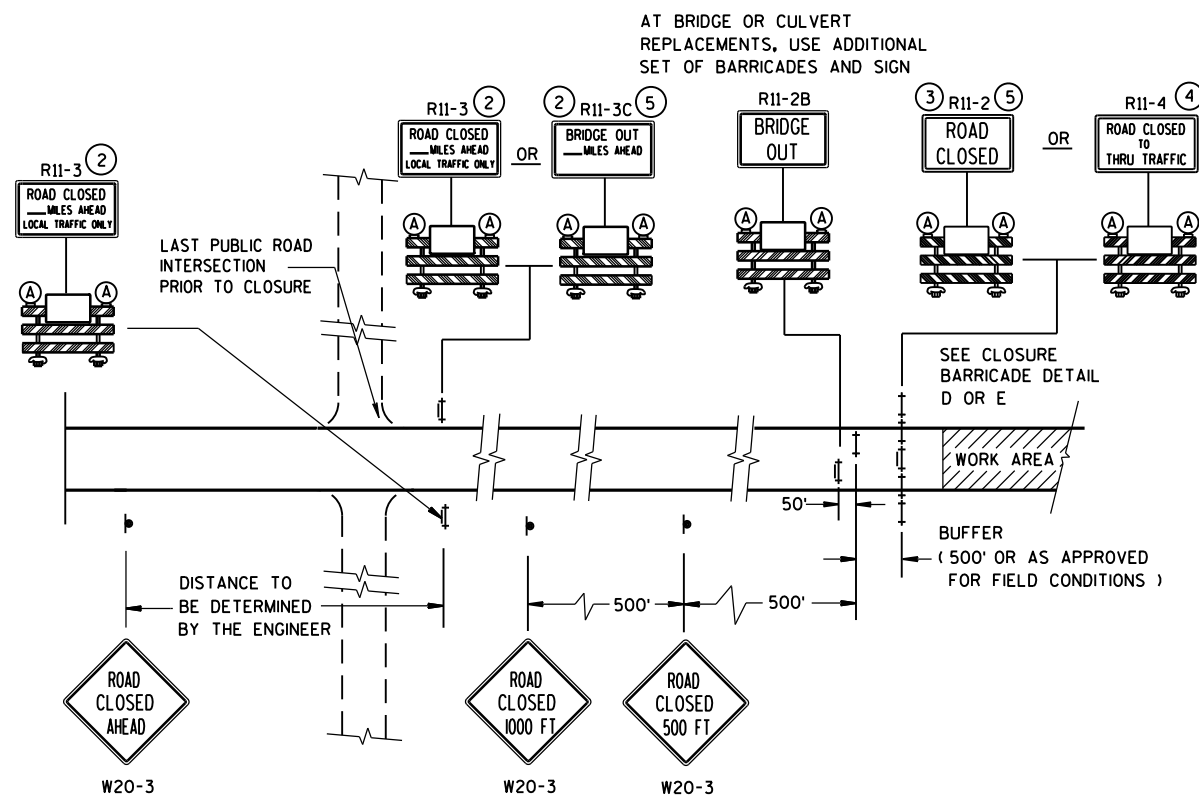
S.D.D. 14 B 8-1e



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

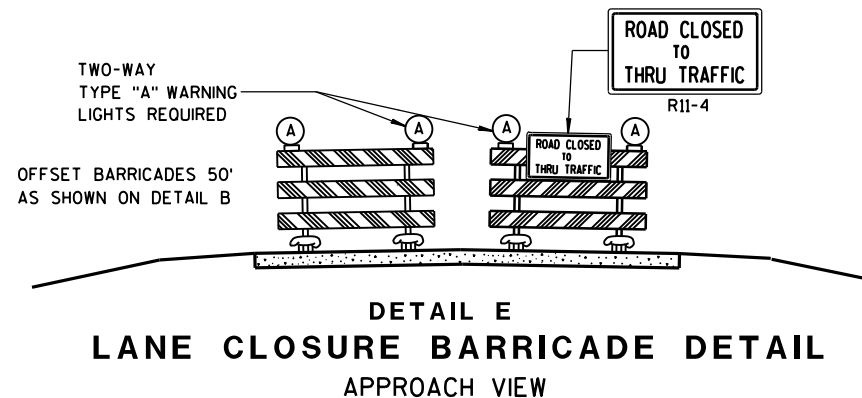
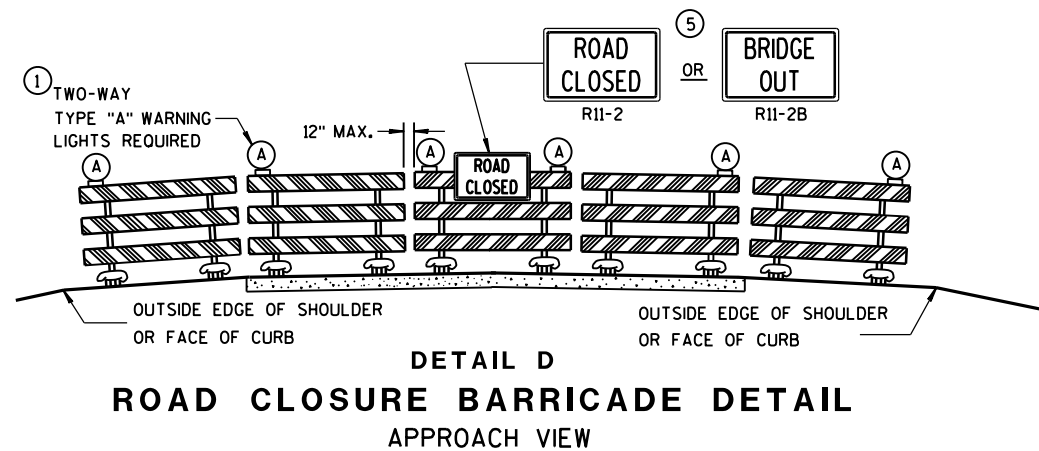


DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINE 135 ESIGN
FHWA	



SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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.

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.

BARRICADES 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.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

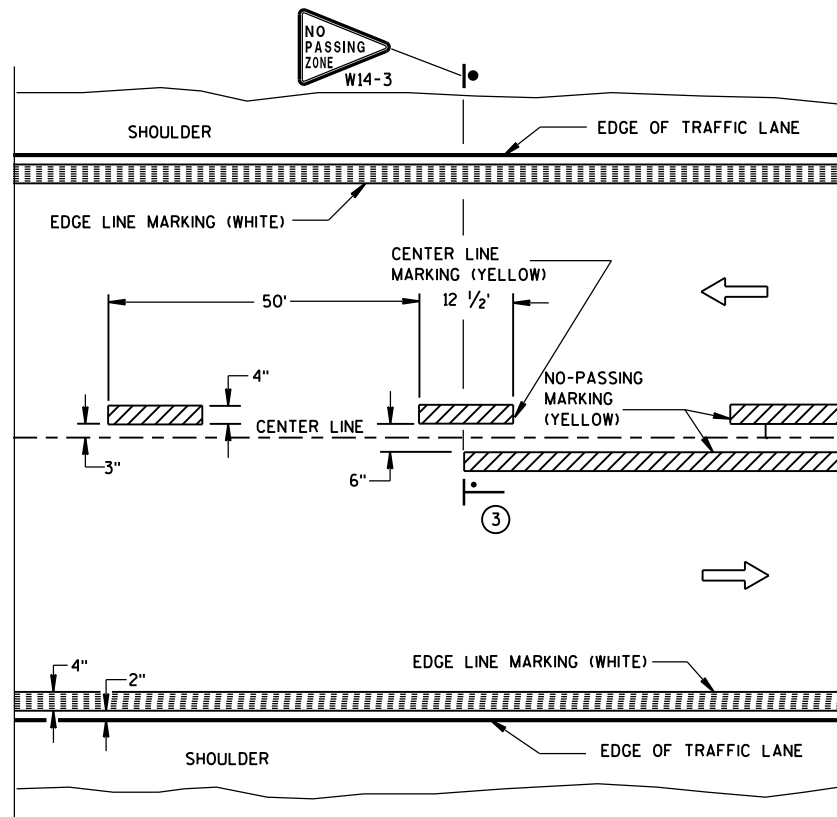
R1-1 SHALL BE 36" X 36".

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

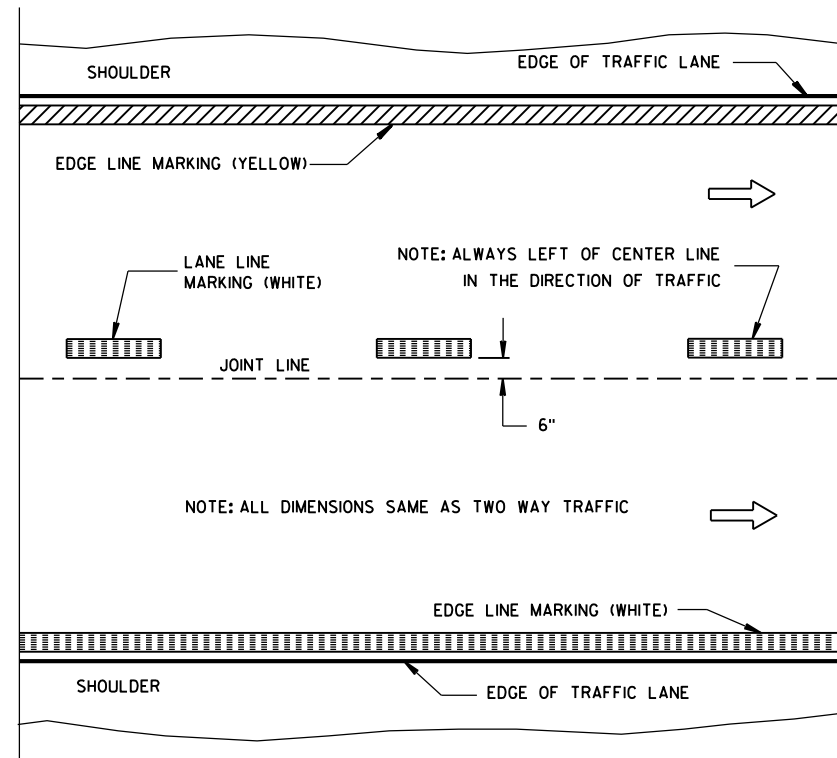
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 136 ESIGN
FHWA

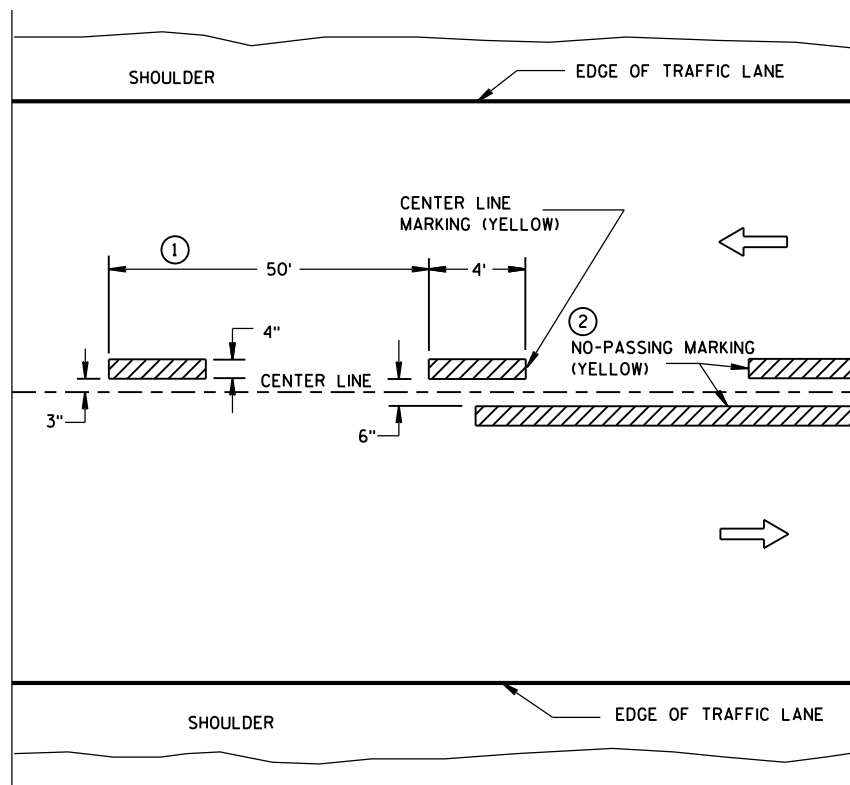


TWO WAY TRAFFIC

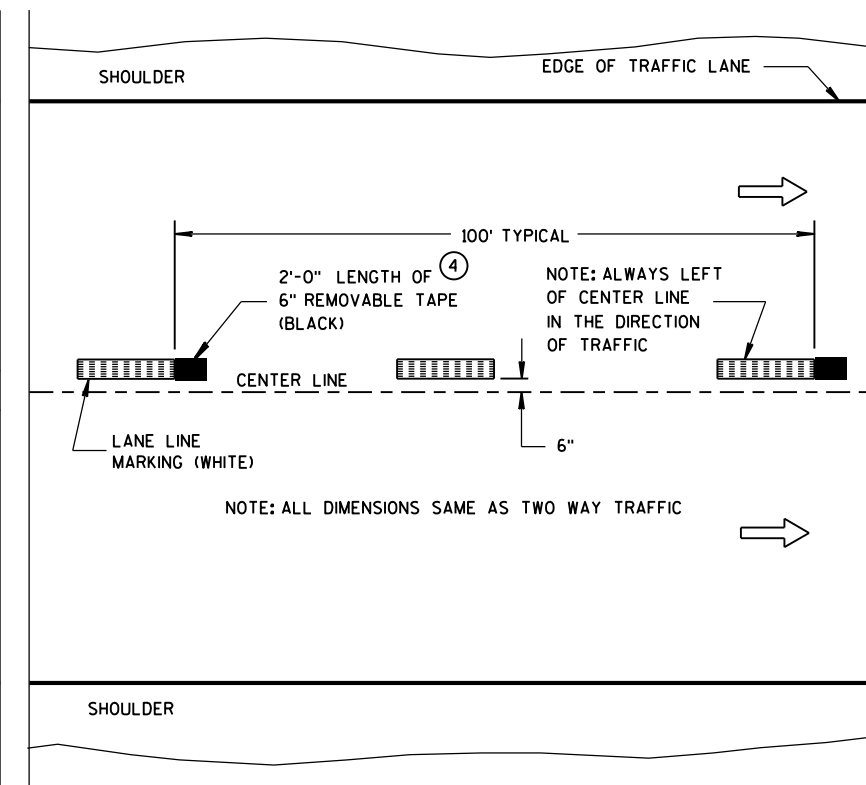


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

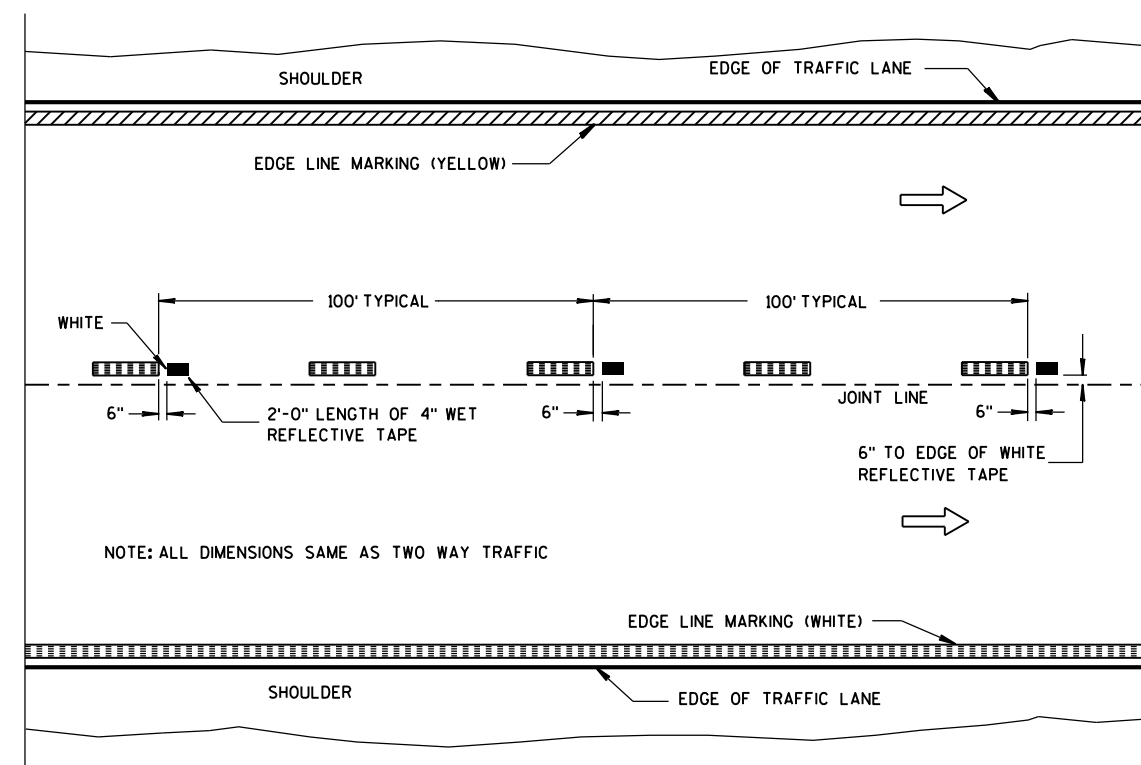
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

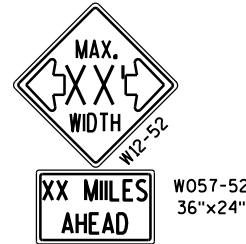
5-13-2013
DATE

FHWA

/S/ Travis Feltes
STATE TRAFFIC E 137

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA



INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).



LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



R2-1
48"x60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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) CLEARANCE TO EXISTING SIGNS.

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 TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

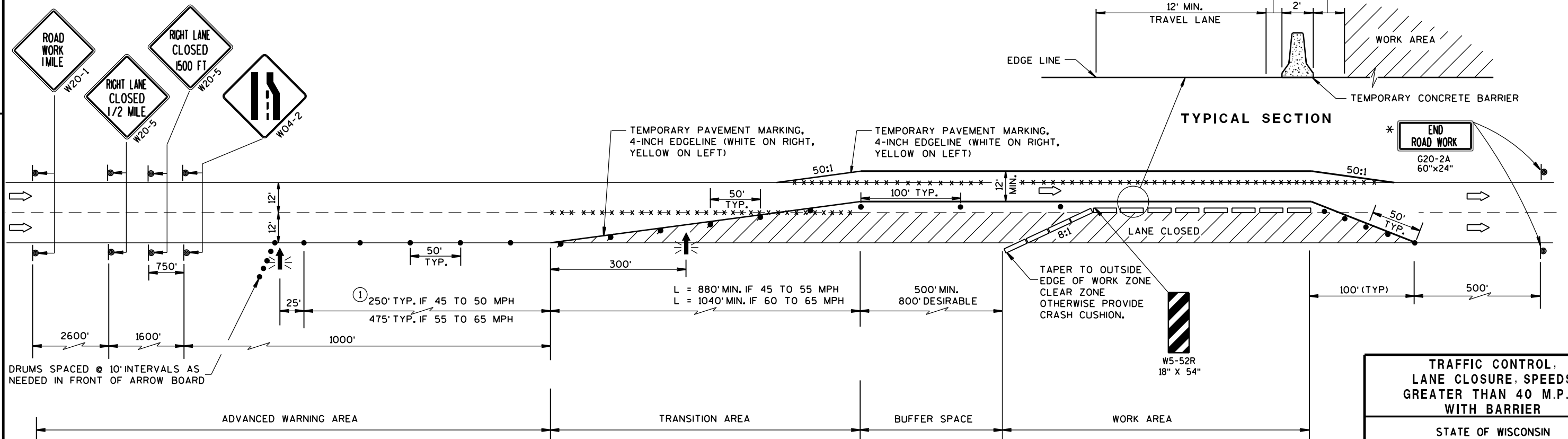
1. CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

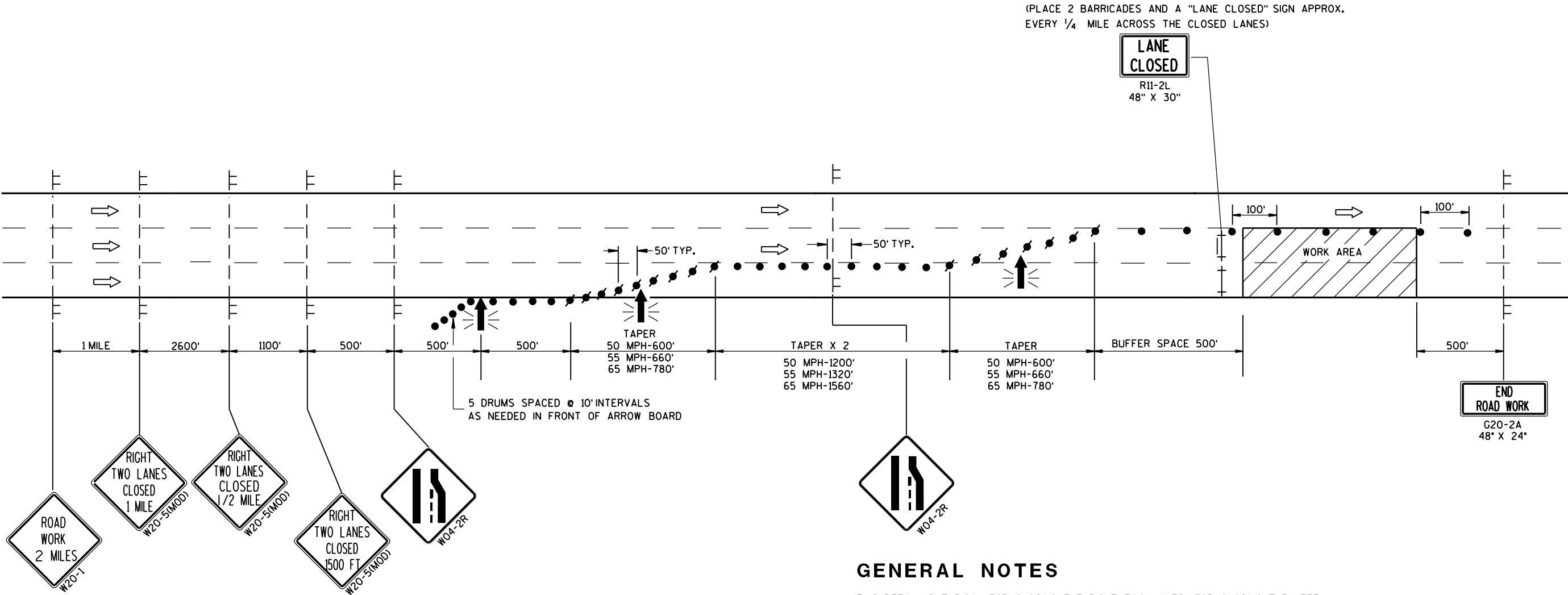
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER	139 SIGN
FHWA		



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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 MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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.

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

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

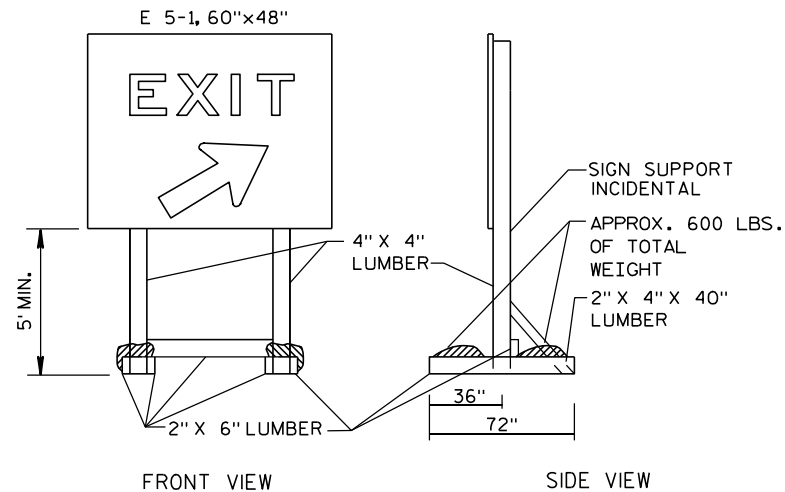
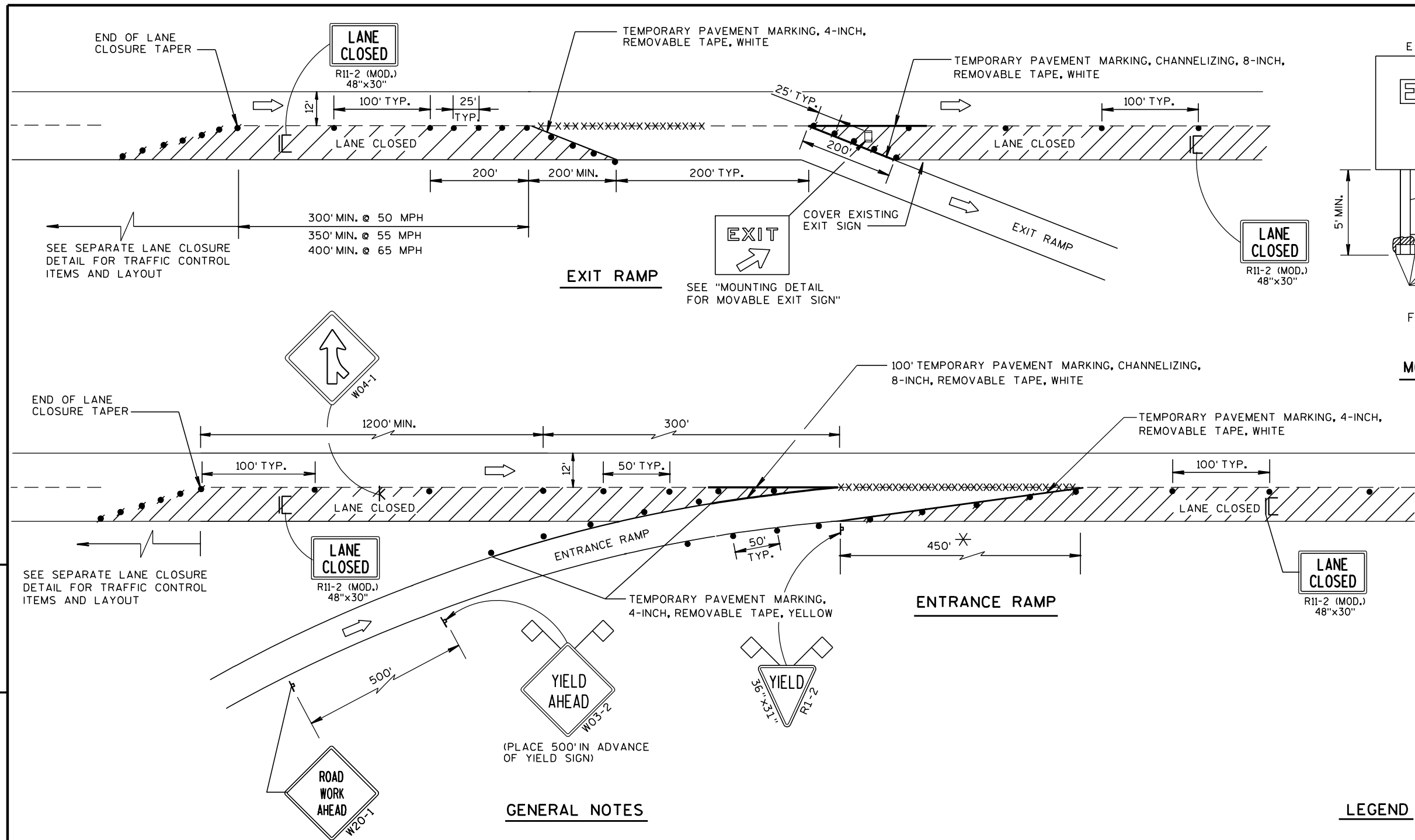
WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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.

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

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

TRAFFIC CONTROL. TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY. SHORT TERM (LESS THAN 24 HOURS)		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINE 140	SIGN
FHWA		



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL
MOUNTING DETAIL FOR MOVABLE EXIT SIGN

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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 MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

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.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000 DATE /S/ Chester J. ---
CHIEF SIGNS AND MAR 141 INEER
FHWA

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

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

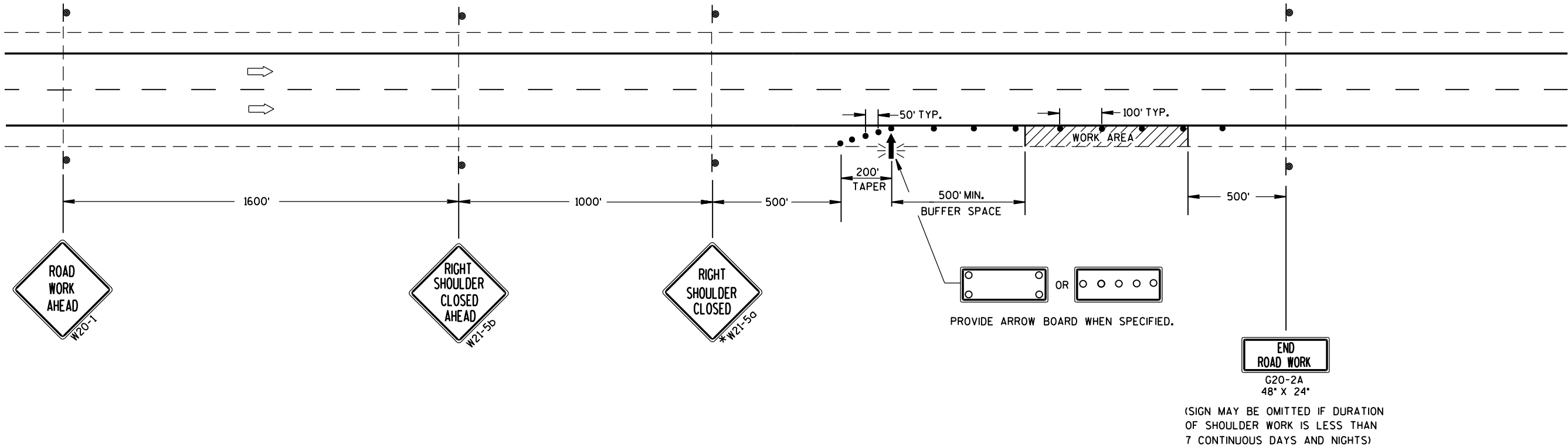
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



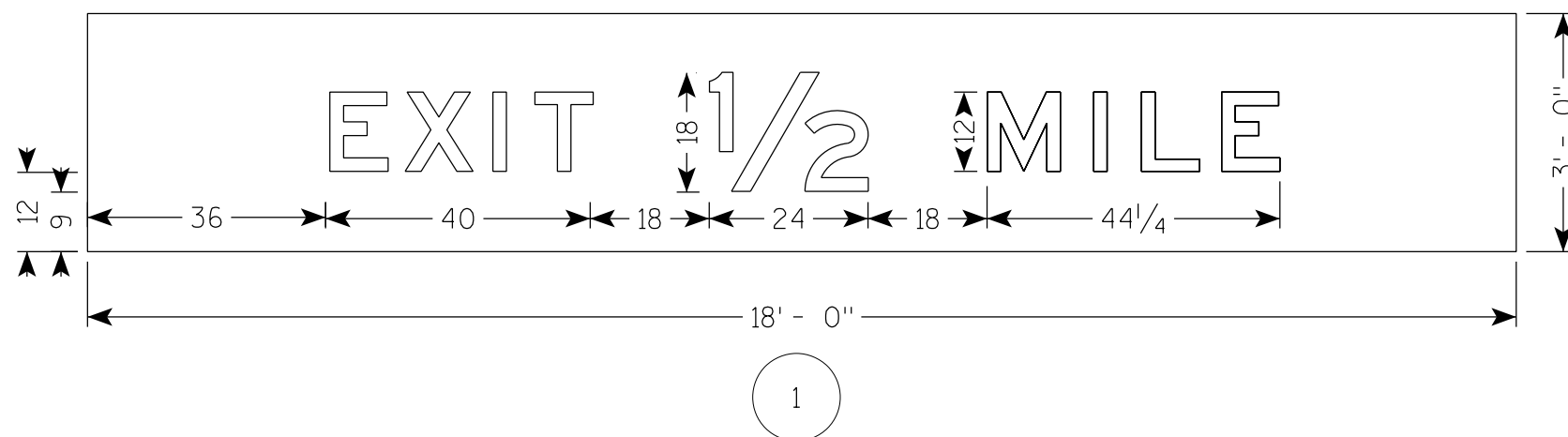
TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltz
DATE STATE TRAFFIC ENGINE 142 SIGN
FHWA

NOTES

1. All Signs Type II Type F Reflective
2. Color:
Background - YELLOW
Message - BLACK
3. Message Series - E
4. Sign Covers are .040 aluminum



GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-44-155, IS A TWO SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 60 FEET AND AN OVERALL LENGTH OF 195.5 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS23 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS39 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

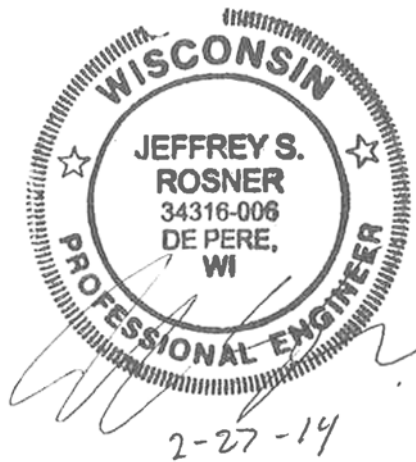
TRAFFIC DATA

USH41
A.D.T. = 30,900 (2014)
= 39,600 (2034)

STH125 / COLLEGE AVE.
A.D.T. = 27,600 (2010)

LIST OF DRAWINGS

1. DECK REPAIR



DECK REPAIR

DECK REPAIR AREAS		S.N. B-44-155		LEGEND	
ITEM	UNIT	QUANT.	%	DECK PREPARATION AREA SHADE/DEBRIS	DELAMINATION
TOTAL AREA	yd ²	1303.3			SPALL
SHADE/DEBRIS	yd ²	0			DEBOND
PREPARATION, DECKS, TYPE 1	yd ²	21.7	1.7		ASPHALT PATCH
PREPARATION, DECKS, TYPE 2	yd ²	16.3	1.3		CONCRETE PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

ESTIMATED QUANTITIES

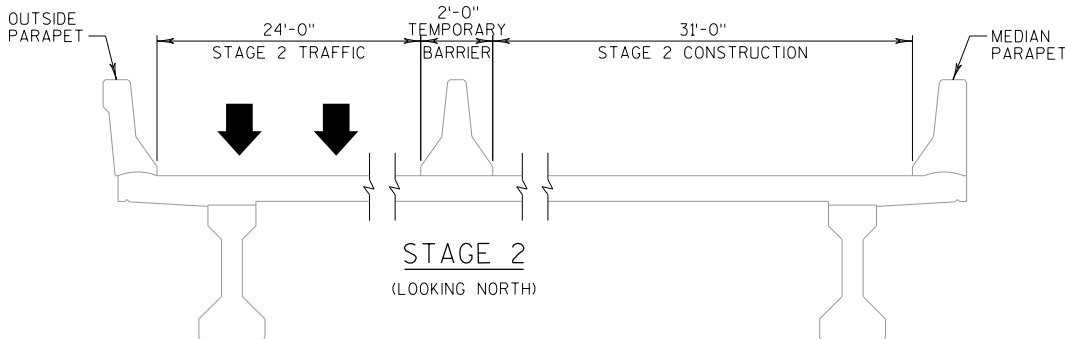
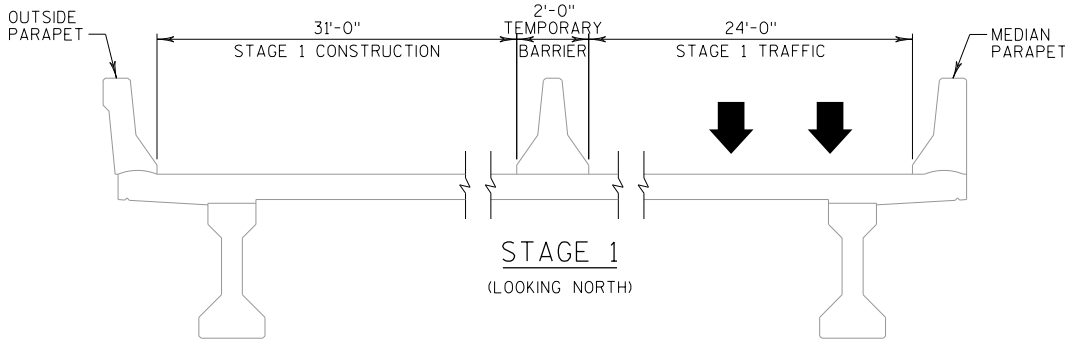
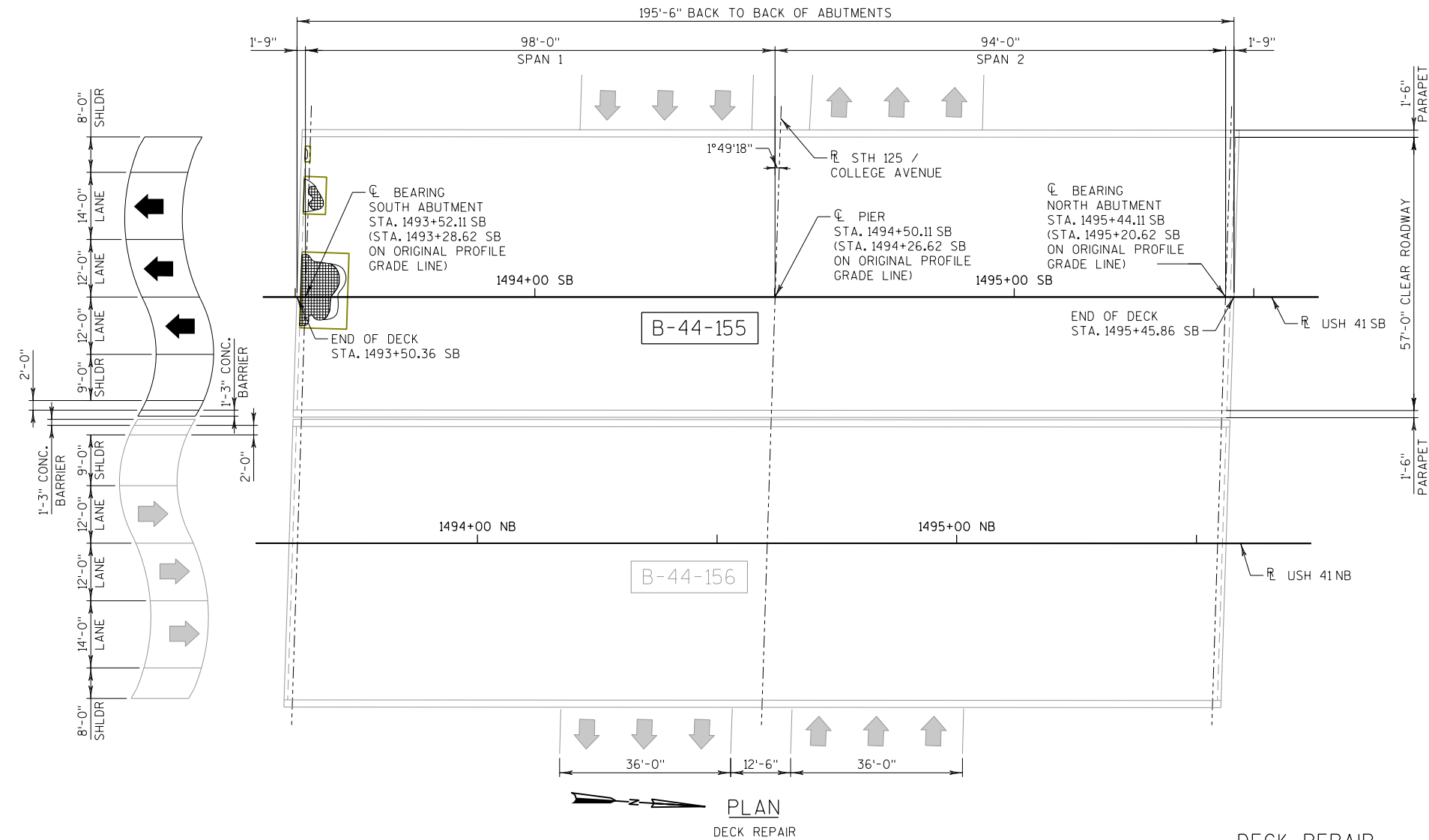
ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-155	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	24
* 509.0302	PREPARATION DECKS TYPE 2	SY	18
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	3
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	240

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).
- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS24 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS51 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

BAR STEEL REINFORCEMENT,
GRADE 60.....fy = 60,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 30,500 (2014)
= 38,200 (2034)

STH 96 / WISCONSIN AVE.
A.D.T. = 24,400 (2010)

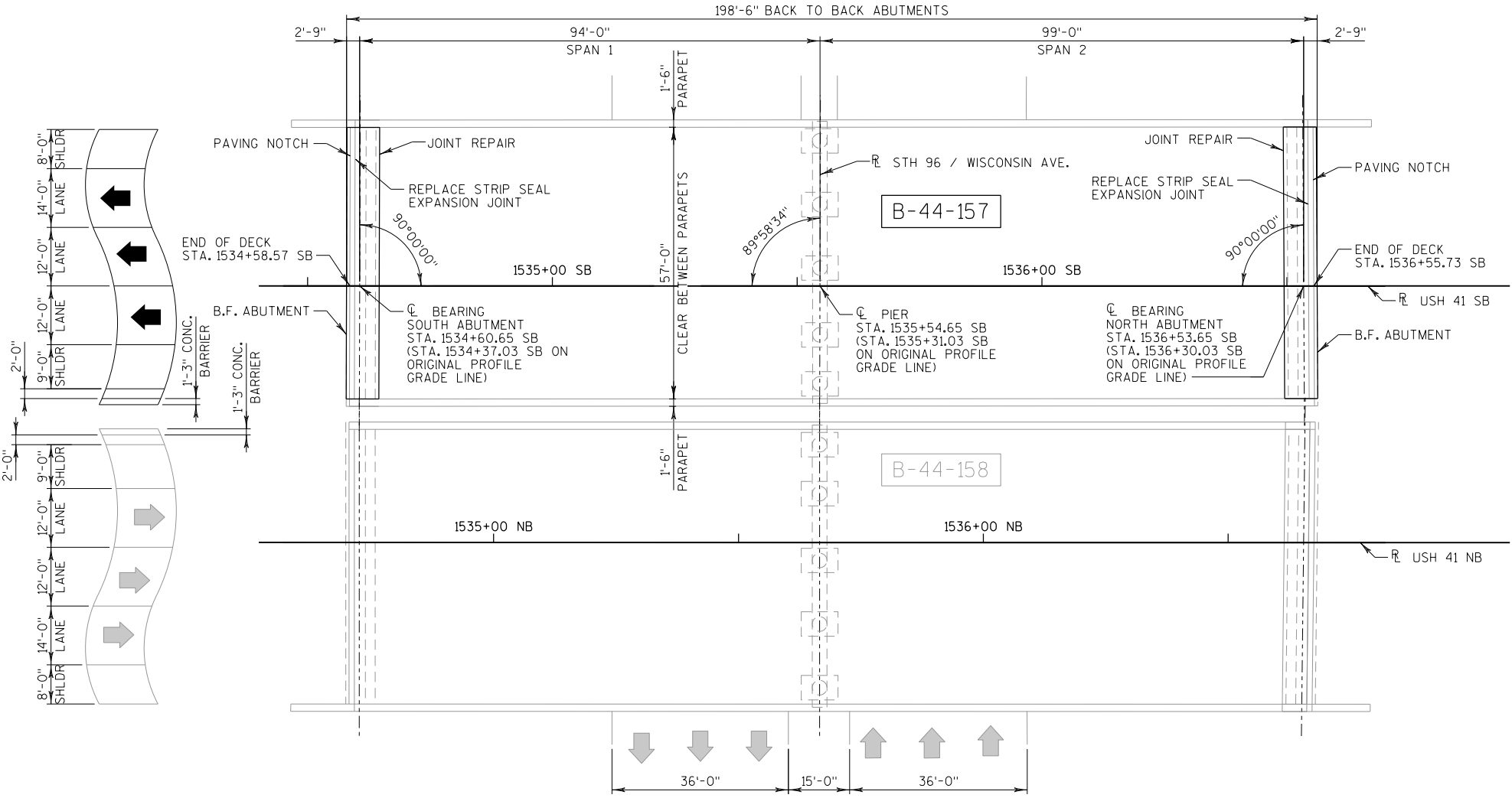
LIST OF DRAWINGS

1. EXPANSION JOINT REPLACEMENT AND DECK REPAIR
2. QUANTITIES AND GENERAL NOTES
3. CONCRETE DETAILS
4. STRIP SEAL EXPANSION JOINT
5. STRIP SEAL EXPANSION JOINT
6. DECK REPAIR

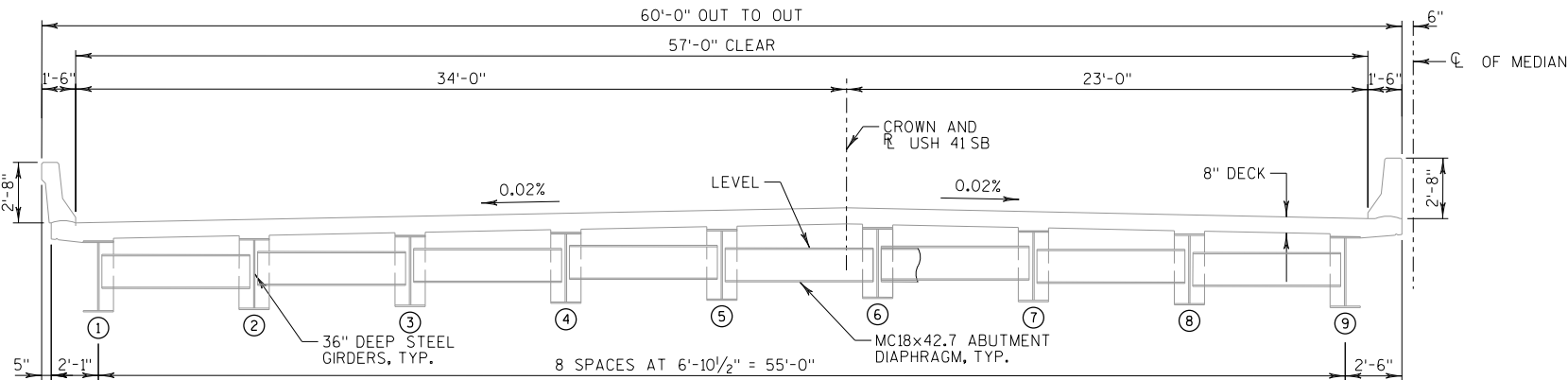


NO.		DATE	REVISION		BY
PLANS PREPARED BY:			GRAEF 1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
ACCEPTED			<i>William C. Dreher</i> DVB CHIEF STRUCTURES DESIGN ENGINEER		6/19/14 DATE
STRUCTURE B-44-157					
USH 41 SB OVER STH 96 / WISCONSIN AVE.					
COUNTY		OUTAGAMIE		TOWN/CITY/VILLAGE GRAND CHUTE	
DESIGN SPEC. REHABILITATION N/A					
DESIGNED BY	KGW	DESIGN CK'D.	AL	DRAWN BY	AMZ
					PLANS CK'D.
					JSR
EXPANSION JOINT REPLACEMENT AND DECK REPAIR				SHEET 1 OF 6 145	

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



PLAN
EXPANSION JOINT REPLACEMENT
AND DECK REPAIR



CROSS SECTION THRU B-44-157
(LOOKING NORTH)

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-157	LS	1
502.3100	EXPANSION DEVICE B-44-157	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	56
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3320
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.1000	JOINT REPAIR	SY	54
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	19
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR JOINT REPAIR, PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

GENERAL NOTES

THE PROPOSED WORK INCLUDES JOINT REPAIR AND DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM, "EXPANSION DEVICE B-44-157".

THE EXISTING STRUCTURE, B-44-157, IS A TWO SPAN STEEL PLATE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 60 FEET AND AN OVERALL LENGTH OF 198.5 FEET. THE NORTH AND SOUTH EXPANSION JOINTS ARE TO BE REPLACED.

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

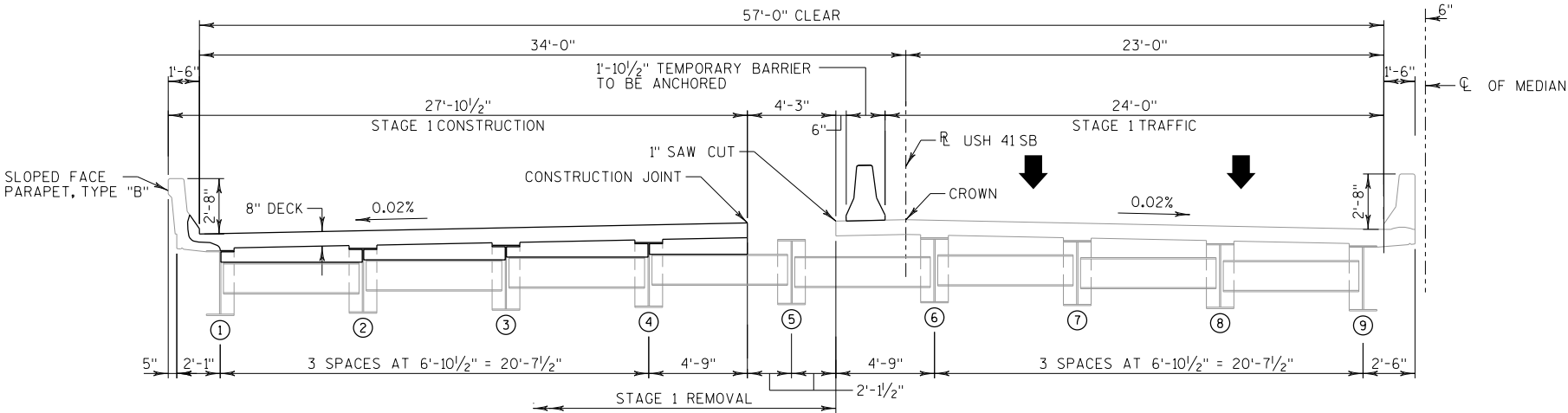
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

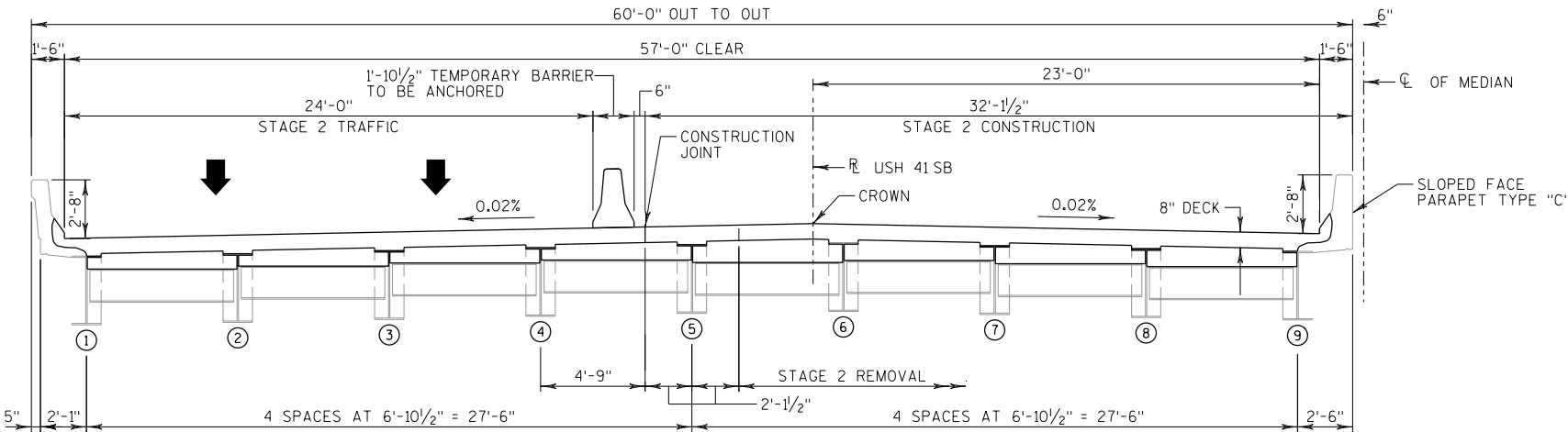
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE NEW DECK CONCRETE ASSOCIATED WITH THE JOINT REPLACEMENT, FRONT FACE OF THE PARAPETS, PAVING BLOCKS, AND DECK REPAIR AREAS.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ON ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



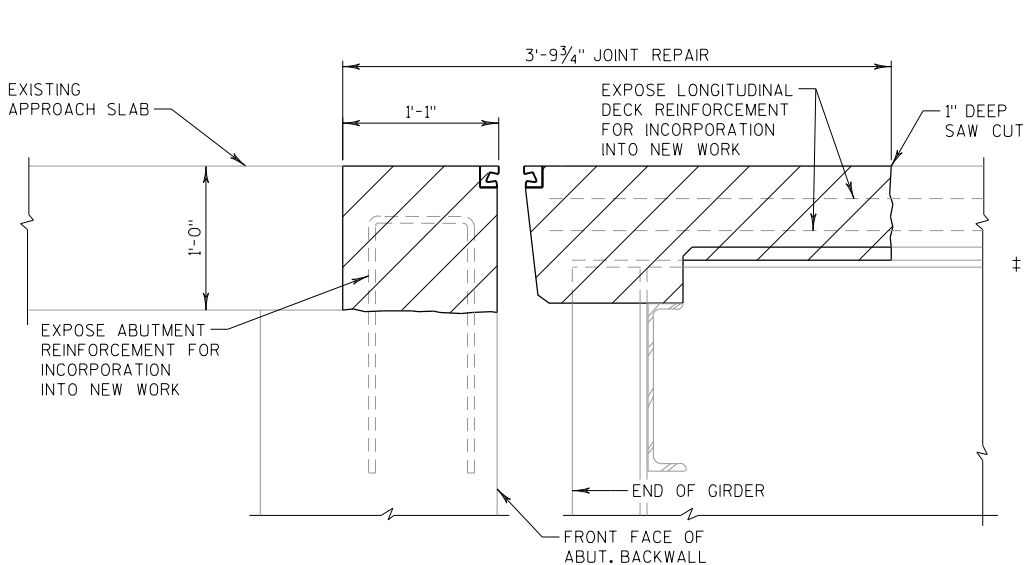
CROSS SECTION STAGE 1 - AT BOTH ABUTMENTS
(LOOKING NORTH)



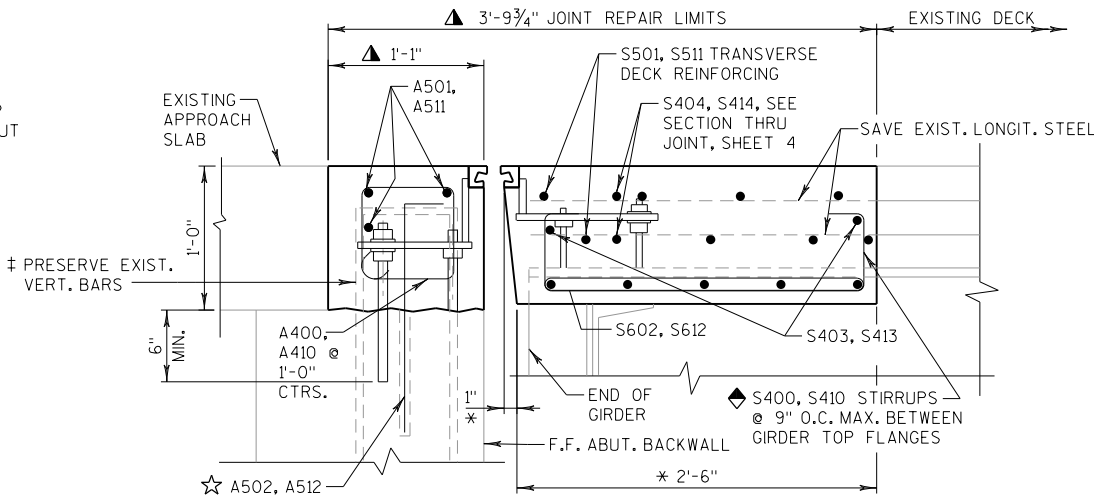
CROSS SECTION STAGE 2 - AT BOTH ABUTMENTS
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-157			
DRAWN BY		AMZ	PLANS CK'D. JSR
QUANTITIES AND GENERAL NOTES		SHEET 2 OF 6 146 USH 41	

FILE =
SCALE =



JOINT REPAIR - REMOVAL
NORMAL TO ϕ SUBSTRUCTURE

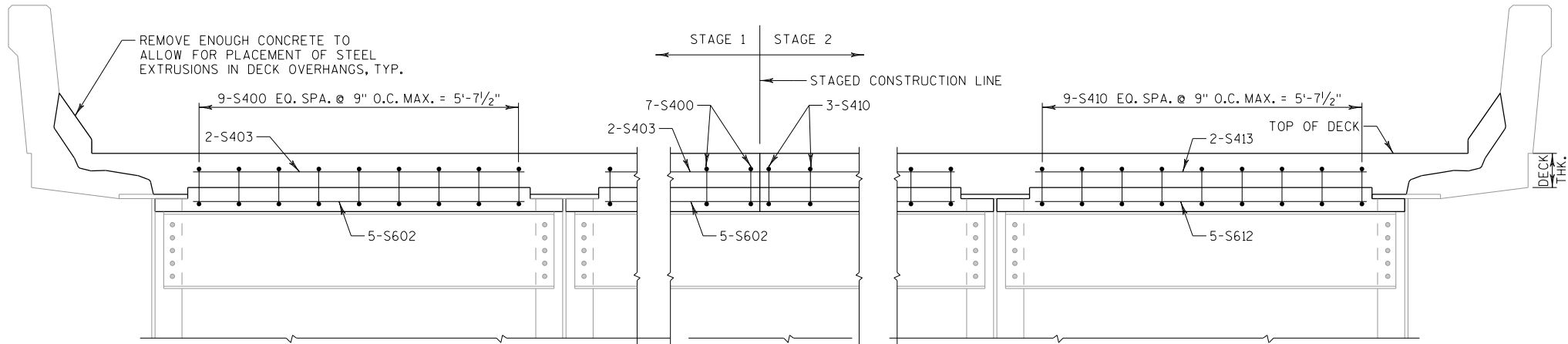


SECTION THRU EXPANSION JOINT
NORMAL TO ϕ SUBSTRUCTURE

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGT H	BAR SERIES	BENT	LOCATION
A400	X	54	3'-4"		X	PAVING NOTCH STIRRUP STAGE 1
A501	X	24	8'-0"			PAVING NOTCH TRANS. STAGE 1
A502	X	54	2'-11"		X	PAVING NOTCH DOWEL STAGE 1
A410	X	62	3'-4"		X	PAVING NOTCH STIRRUP STAGE 2
A511	X	24	8'-0"			PAVING NOTCH TRANS. STAGE 2
A512	X	62	2'-11"		X	PAVING NOTCH DOWEL STAGE 2
S400	X	68	4'-6"		X	DIAPH. STIRRUP STAGE 1
S501	X	16	28'-0"			DECK TRANS. STAGE 1
S602	X	40	5'-7"			DIAPH. TRANS. BOTT. STAGE 1
S403	X	16	5'-7"			DIAPH. TRANS. TOP STAGE 1
S404	X	16	5'-7"			TRANS. BARS AT JOINT STAGE 1
S410	X	78	4'-6"		X	DIAPH. STIRRUP STAGE 2
S511	X	16	29'-5"			DECK TRANS. STAGE 2
S612	X	40	5'-7"			DIAPH. TRANS. BOTT. STAGE 2
S413	X	16	5'-7"			DIAPH. TRANS. TOP STAGE 2
S414	X	16	5'-7"			TRANS. BARS AT JOINT STAGE 2

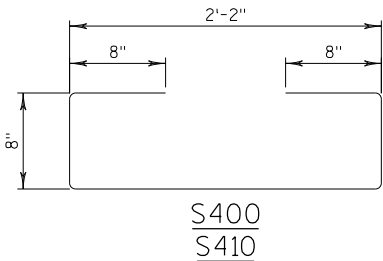
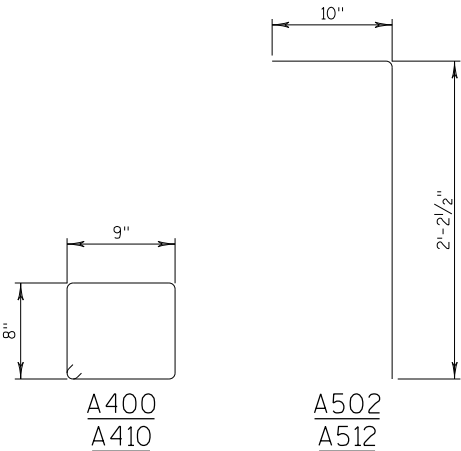
ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.



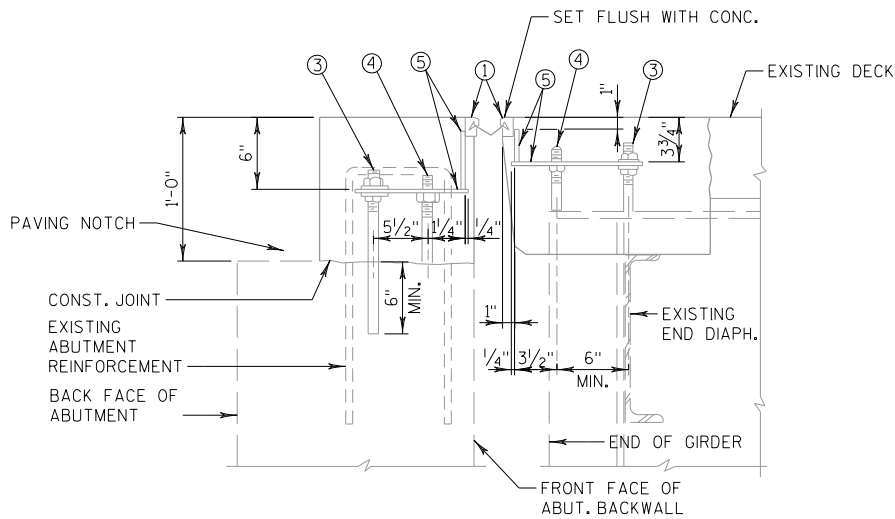
PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END
(LOOKING NORTH)

LEGEND

- ‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.
- ☆ A502, A512 MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.
- ▲ DIMENSIONS GIVEN ARE NORMAL TO ϕ OF SUBSTRUCTURE UNIT. UTILIZE EXISTING REINFORCEMENT.
- ◆ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ϕ GIRDERS.
- ▨ EXISTING CONCRETE TO BE REMOVED.
- * DIMENSION IS TAKEN NORMAL TO ϕ ABUTMENT.

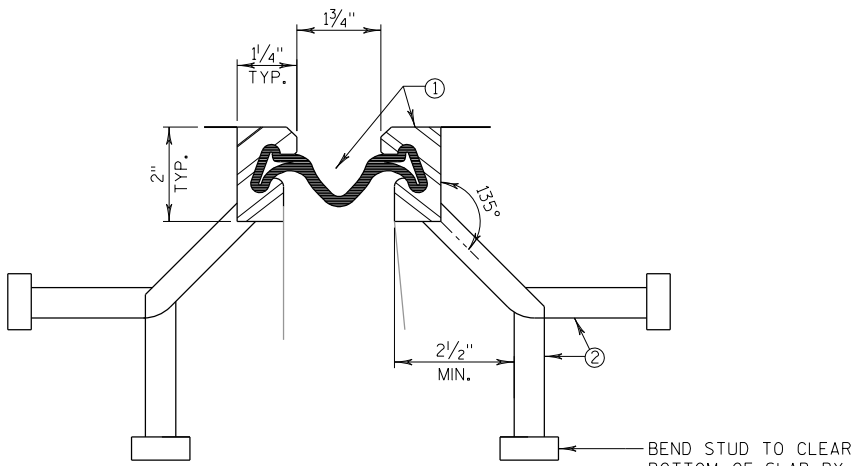


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-157			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE DETAILS		SHEET 3 OF 6 147 USH 41	

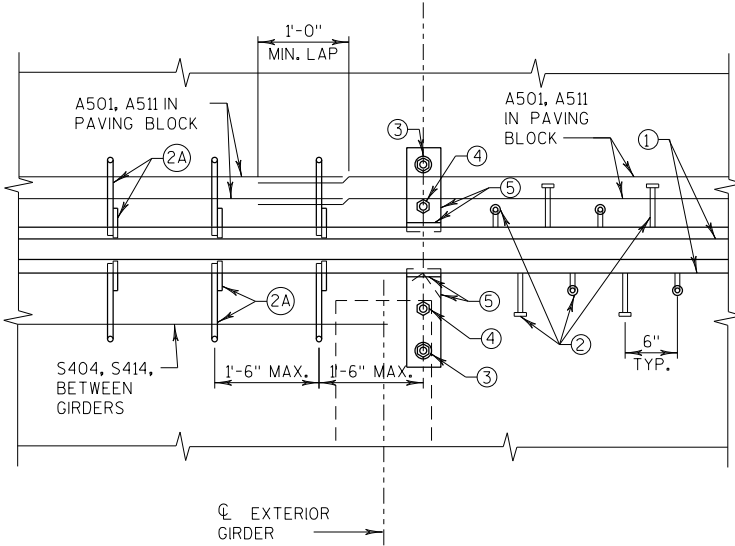


TYPICAL SECTION THRU JOINT AT STEEL GIRDER

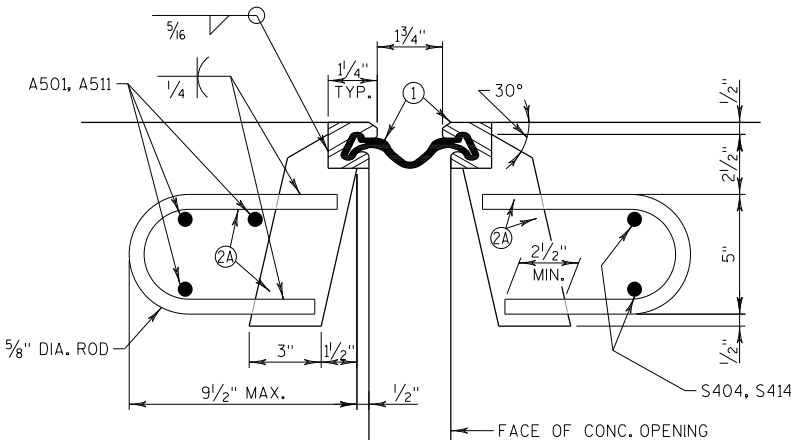
NORMAL TO CL SUBSTRUCTURE



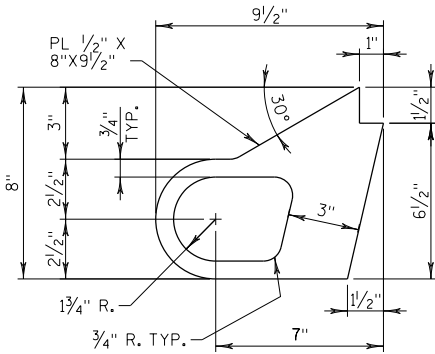
SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB
AND AT PARAPETS, MEDIANS & SIDEWALKS



PART PLAN



SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS
SYM. ABOUT CL JOINT UNLESS OTHERWISE SHOWN OR NOTED



ALTERNATE STRIP SEAL ANCHOR

LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8" ϕ $\times$ 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4" ϕ THREADED ROD WITH 2 NUTS AND 2 PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" $\times$ 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 1/2" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" $\times$ 10 1/2" $\times$ 2'-2" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. 3/4" ϕ $\times$ 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4" ϕ $\times$ 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. 3/4" ϕ $\times$ 2 1/4" GALVANIZED THREADED COUPLING.
10. NOT USED
11. 1" $\times$ 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE IS 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 & SWEEP.

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

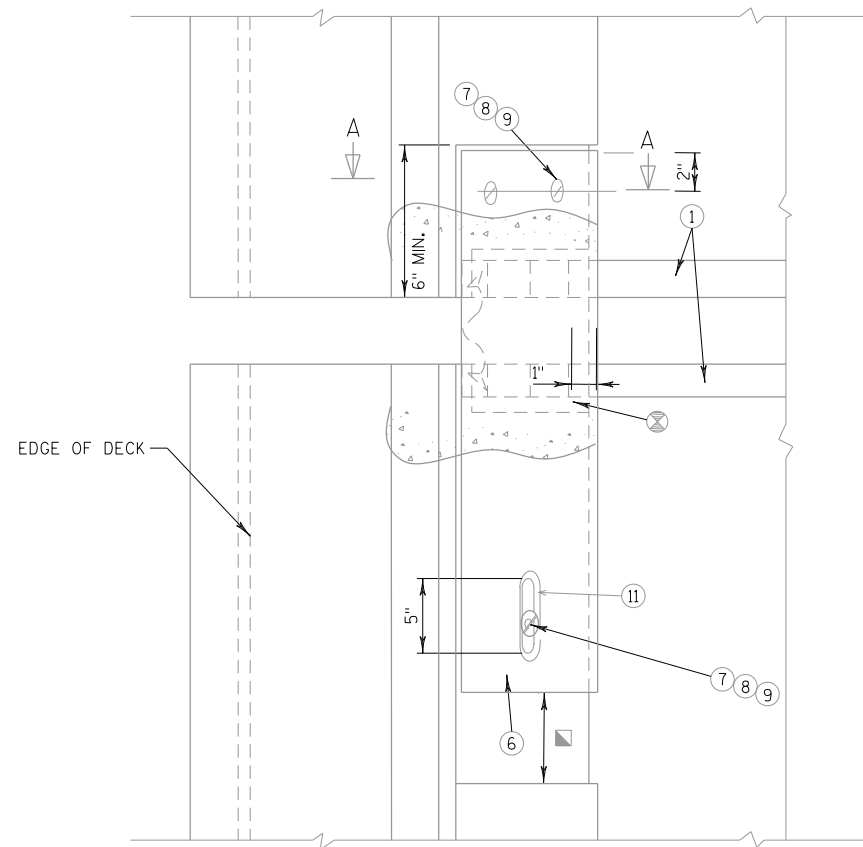
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

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

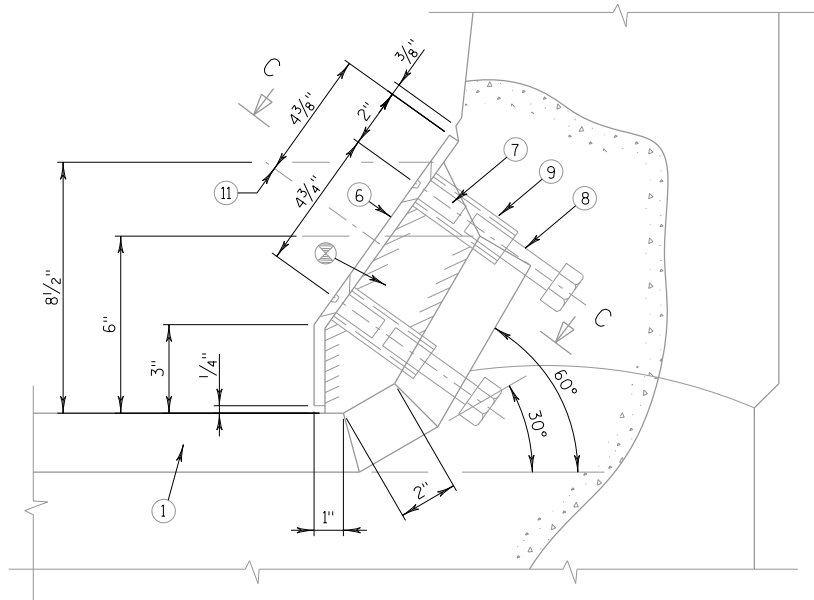
STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-157".

STATE PROJECT NUMBER	
1124-54-60	

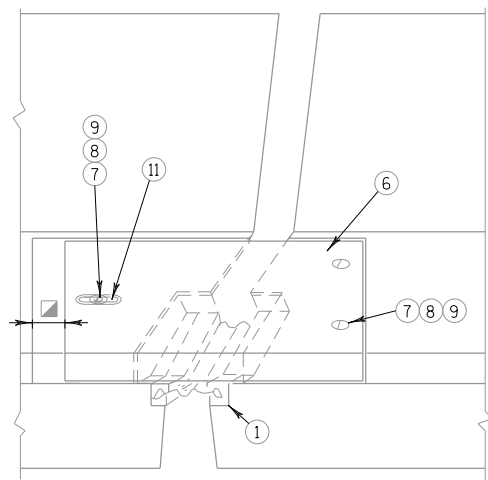
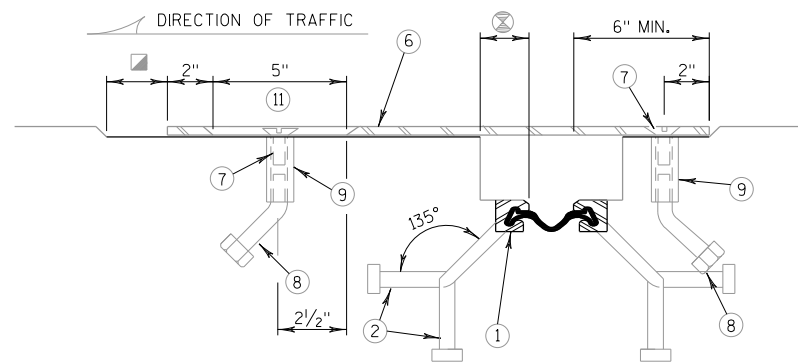
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-157			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 4 OF 6 148 USH 41	



PLAN AT PARAPET



SECTION A-A

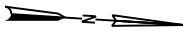
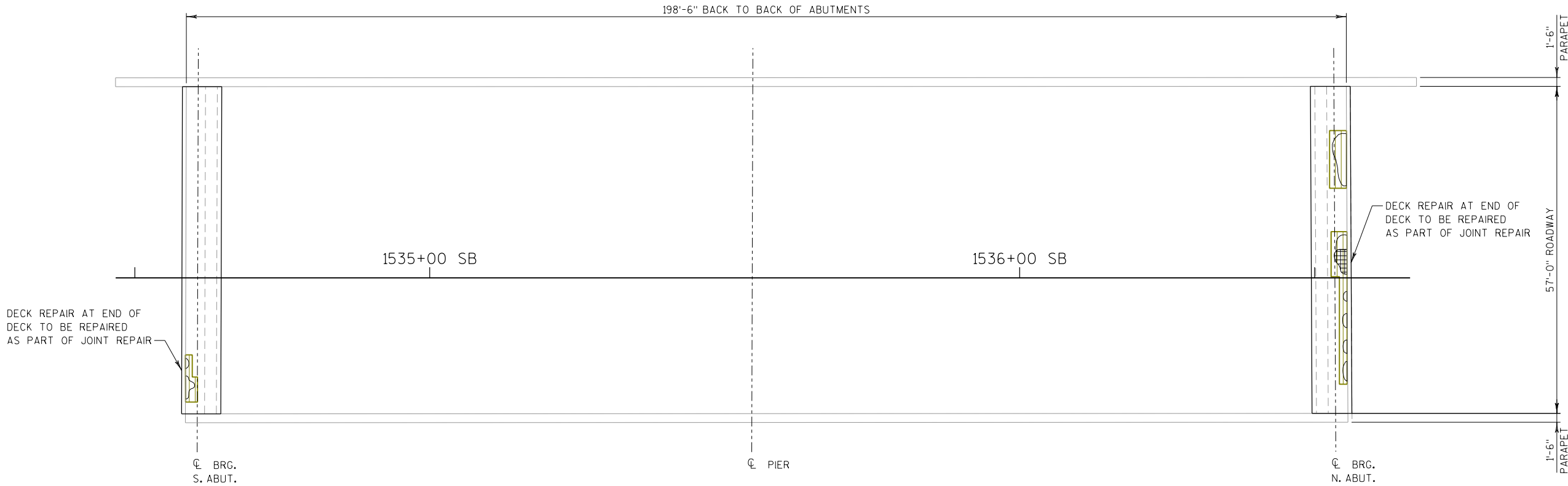
VIEW OF PARAPET PLATES
FROM ROADWAY

SECTION C-C

LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"
- ⑪ SEE SHEET 4 FOR LEGEND

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-157			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 5 OF 6 149 USH 41	



PLAN
DECK REPAIR

DECK REPAIR

DECK REPAIR AREAS		S.N. B-44-157		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1314.7		DECK PREPARATION AREA SHADE/DEBRIS	DELAMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	9.4	0.7		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	2.4	0.2		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

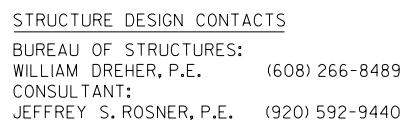
- FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-157			
DRAWN BY		AMZ	PLANS CK'D. JSR
DECK REPAIR		SHEET 6 OF 6 150 USH 41	

FILE =
SCALE =



1. EXPANSION JOINT REPLACEMENT AND DECK REPAIR
2. QUANTITIES AND GENERAL NOTES
3. CONCRETE DETAILS
4. STRIP SEAL EXPANSION JOINT
5. STRIP SEAL EXPANSION JOINT
6. DECK REPAIR



NO.	DATE	REVISION		BY
PLANS PREPARED BY:				1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
ACCEPTED				6/19/14
CHIEF STRUCTURES DESIGN ENGINEER DATE				
STRUCTURE B-44-158				
USH 14 NB OVER STH 96 / WISCONSIN AVE.				
COUNTY		TOWN/CITY/VILLAGE		
OUTAGAMIE		GRADE CHUTE		
DESIGN SPEC.				
REHABILITATION N/A				
DESIGNED BY	KGW	DESIGN C'D.	AL	DRAWN BY
AMZ		PLANS C'D.	JSR	
EXPANSION JOINT REPLACEMENT AND DECK REPAIR			SHEET 1 OF 6 151	

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-158	LS	1
502.3100	EXPANSION DEVICE B-44-158	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	28
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1660
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.1000	JOINT REPAIR	SY	27
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	10
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR JOINT REPAIR, PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

GENERAL NOTES

THE PROPOSED WORK INCLUDES JOINT REPAIR AND DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT THE NORTH ABUTMENT IS INCIDENTAL TO THE BID ITEM, "EXPANSION DEVICE B-44-158".

THE EXISTING STRUCTURE, B-44-158, IS A TWO SPAN STEEL PLATE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 60 FEET AND AN OVERALL LENGTH OF 198.5 FEET. THE NORTH EXPANSION JOINT IS TO BE REPLACED.

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

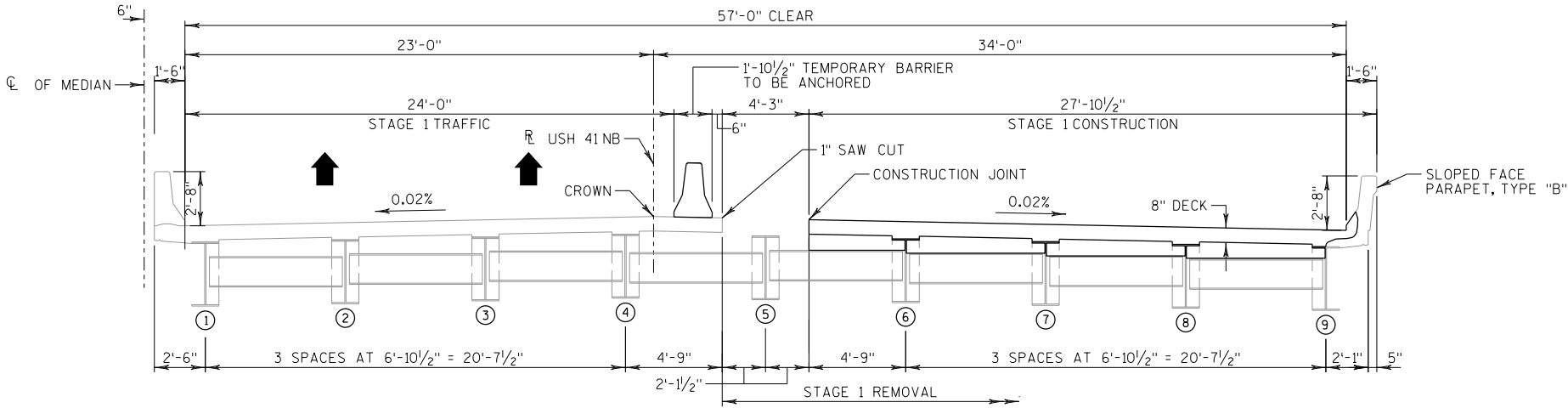
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

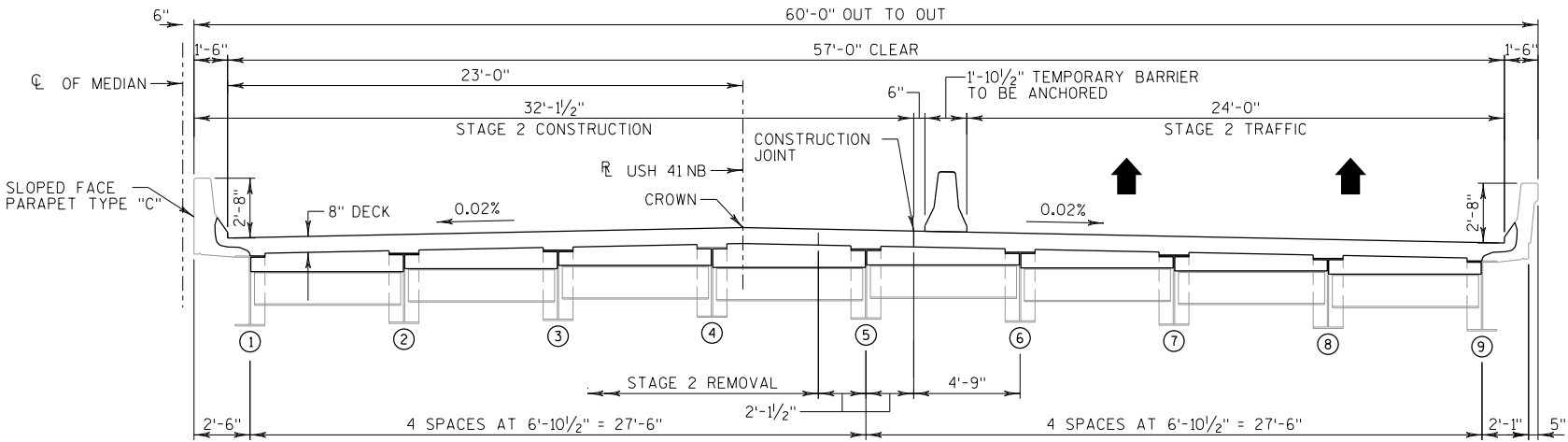
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE NEW DECK CONCRETE ASSOCIATED WITH THE JOINT REPLACEMENT, FRONT FACE OF THE PARAPETS, PAVING BLOCK, AND DECK REPAIR AREAS.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ON ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



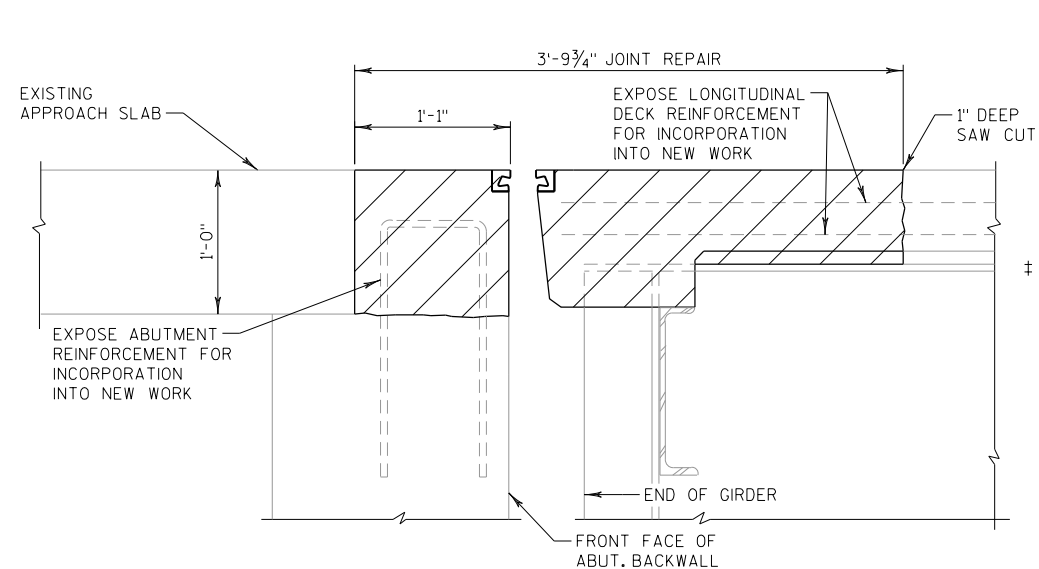
CROSS SECTION STAGE 1 - AT BOTH ABUTMENTS
(LOOKING NORTH)



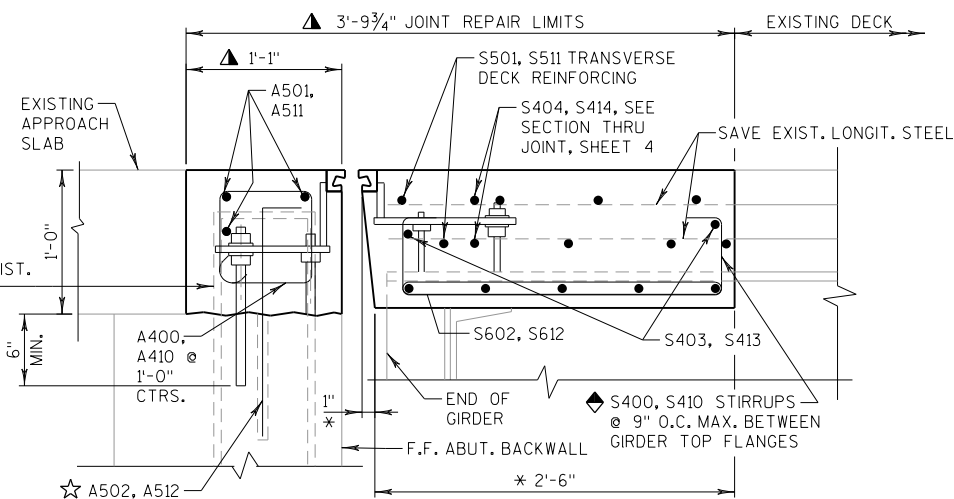
CROSS SECTION STAGE 2 - AT BOTH ABUTMENTS
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-158			
DRAWN BY		AMZ	PLANS CK'D. JSR
QUANTITIES AND GENERAL NOTES		SHEET 2 OF 6 152 USH 41	

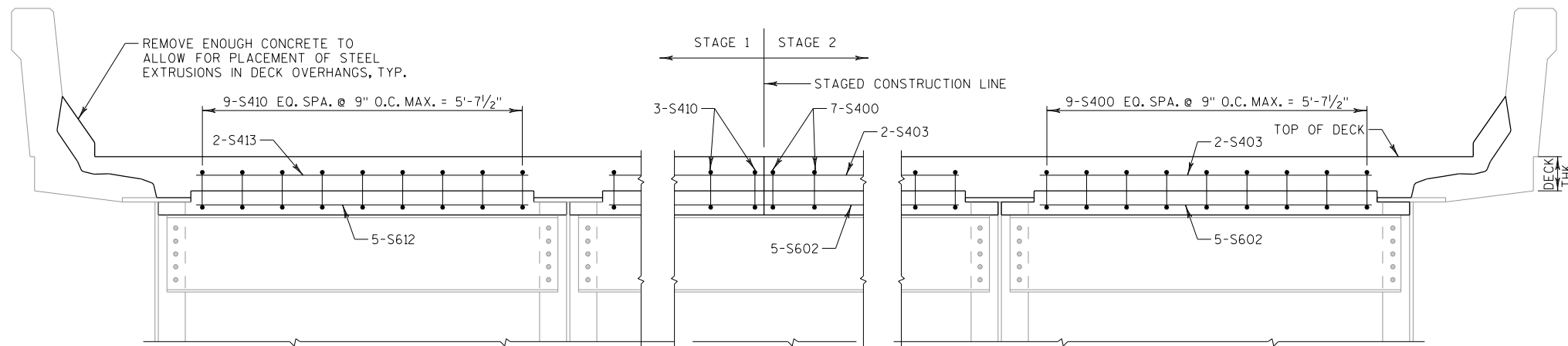
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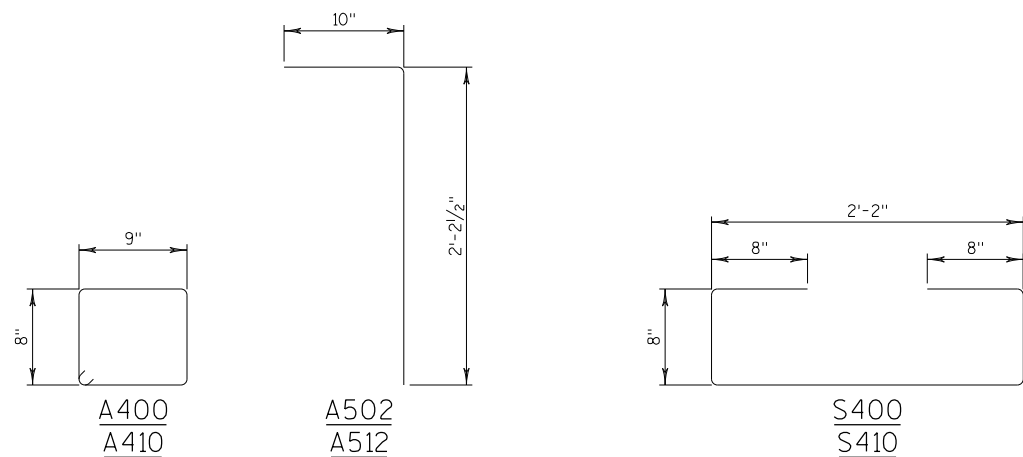
JOINT REPAIR - REMOVAL
NORMAL TO ϕ SUBSTRUCTURE



SECTION THRU EXPANSION JOINT
NORMAL TO ϕ SUBSTRUCTURE



PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END
(LOOKING NORTH)



NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGT H	BAR SERIES	BENT	LOCATION
A400	X	27	3'-4"		X	PAVING NOTCH STIRRUP STAGE 1
A501	X	12	8'-0"			PAVING NOTCH TRANS. STAGE 1
A502	X	27	2'-11"		X	PAVING NOTCH DOWEL STAGE 1
A410	X	31	3'-4"		X	PAVING NOTCH STIRRUP STAGE 2
A511	X	12	8'-0"			PAVING NOTCH TRANS. STAGE 2
A512	X	31	2'-11"		X	PAVING NOTCH DOWEL STAGE 2
S400	X	34	4'-6"		X	DIAPH. STIRRUP STAGE 1
S501	X	8	28'-0"			DECK TRANS. STAGE 1
S602	X	20	5'-7"			DIAPH. TRANS. BOTT. STAGE 1
S403	X	8	5'-7"			DIAPH. TRANS. TOP STAGE 1
S404	X	8	5'-7"			TRANS. BARS AT JOINT STAGE 1
S410	X	39	4'-6"		X	DIAPH. STIRRUP STAGE 2
S511	X	8	29'-5"			DECK TRANS. STAGE 2
S612	X	20	5'-7"			DIAPH. TRANS. BOTT. STAGE 2
S413	X	8	5'-7"			DIAPH. TRANS. TOP STAGE 2
S414	X	8	5'-7"			TRANS. BARS AT JOINT STAGE 2

ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

LEGEND

‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

☆ A502, A512 MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

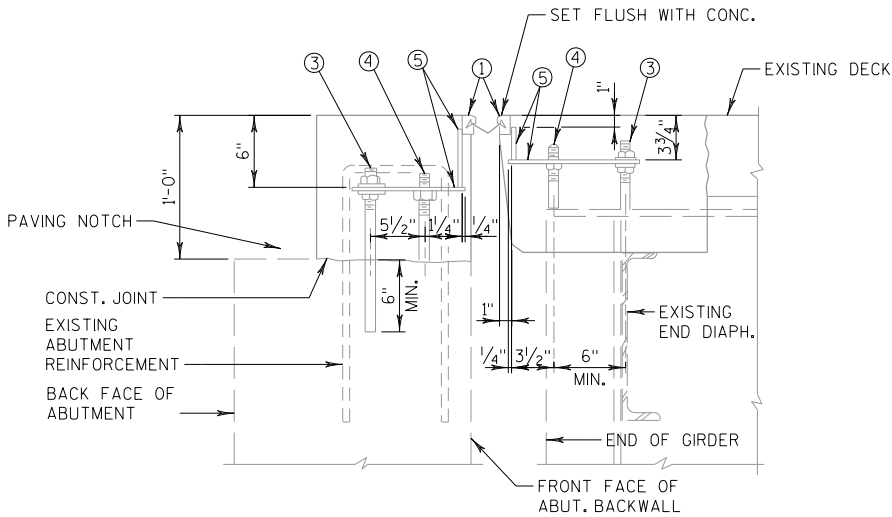
▲ DIMENSIONS GIVEN ARE NORMAL TO ϕ OF SUBSTRUCTURE UNIT. UTILIZE EXISTING REINFORCEMENT.

◆ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ϕ GIRDERS.

▨ EXISTING CONCRETE TO BE REMOVED.

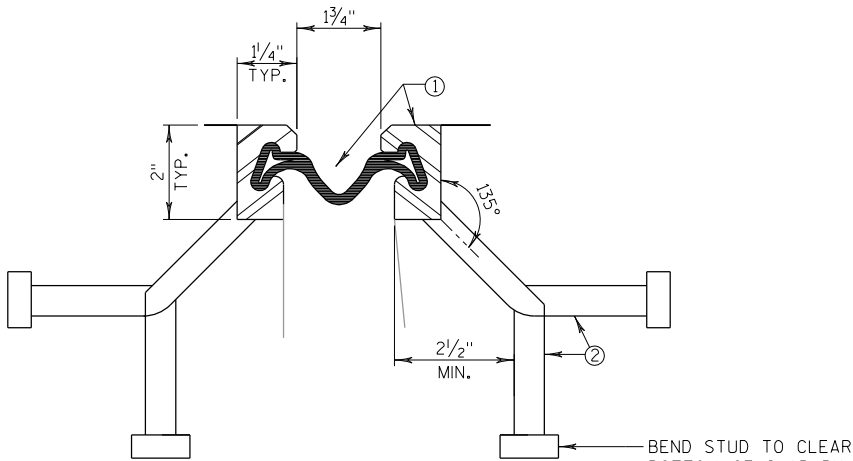
* DIMENSION IS TAKEN NORMAL TO ϕ ABUTMENT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-158			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE DETAILS		SHEET 3 OF 6 153 USH 41	



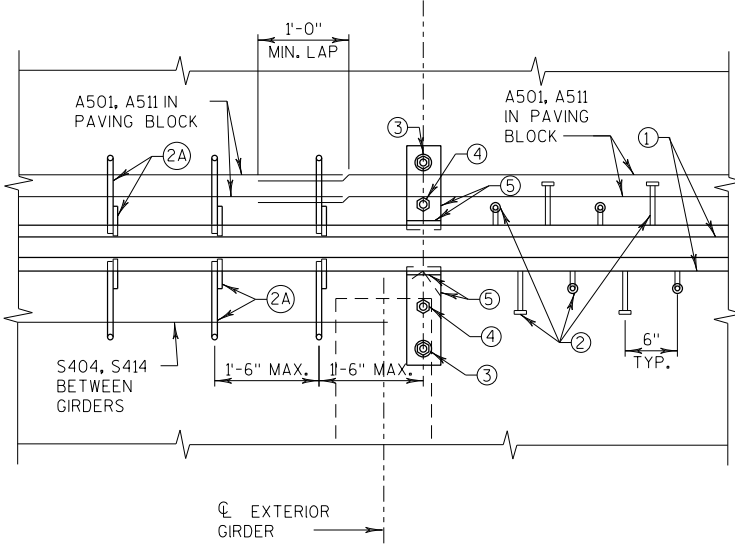
TYPICAL SECTION THRU JOINT AT STEEL GIRDER

NORMAL TO CL SUBSTRUCTURE

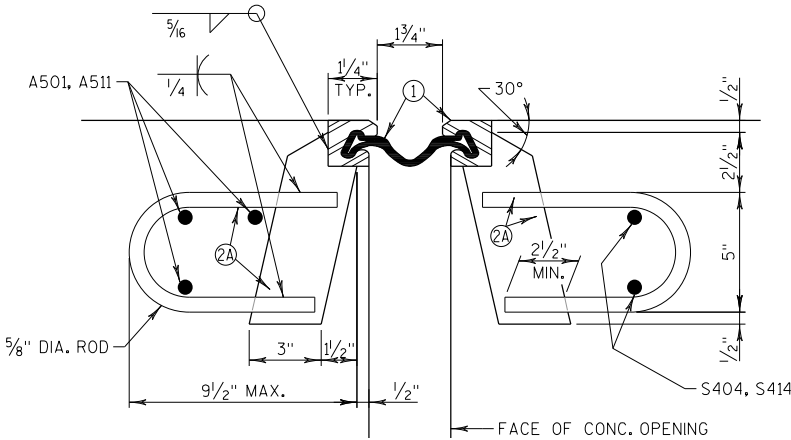


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB AND AT PARAPETS, MEDIANS & SIDEWALKS

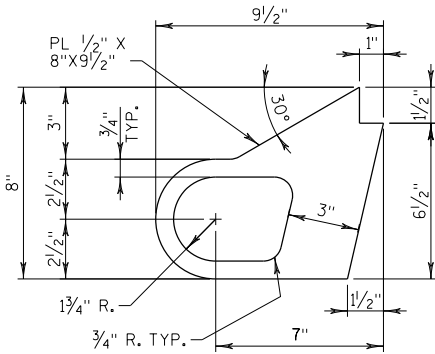


PART PLAN



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS
SYM. ABOUT CL JOINT UNLESS OTHERWISE SHOWN OR NOTED



ALTERNATE STRIP SEAL ANCHOR

LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8" ϕ $\times$ 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4" ϕ THREADED ROD WITH 2 NUTS AND 2 PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" $\times$ 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 1/2" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" $\times$ 10 1/2" $\times$ 2'-2" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. 3/4" ϕ $\times$ 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4" ϕ $\times$ 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. 3/4" ϕ $\times$ 2 1/4" GALVANIZED THREADED COUPLING.
10. NOT USED
11. 1" $\times$ 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE IS 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 & SWEEP.

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

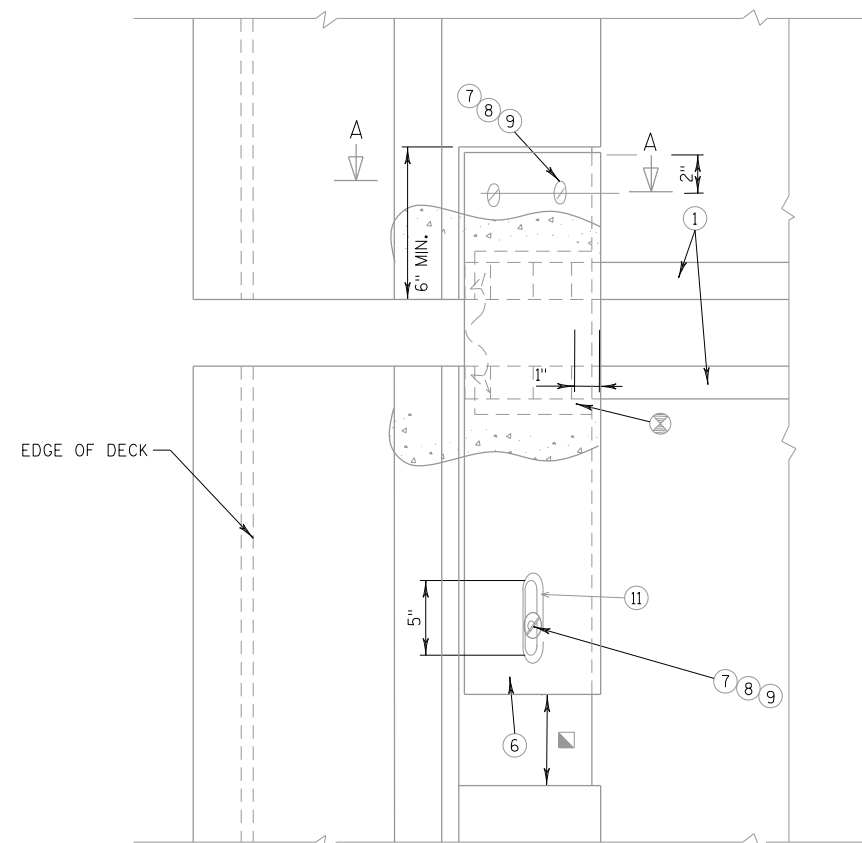
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ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

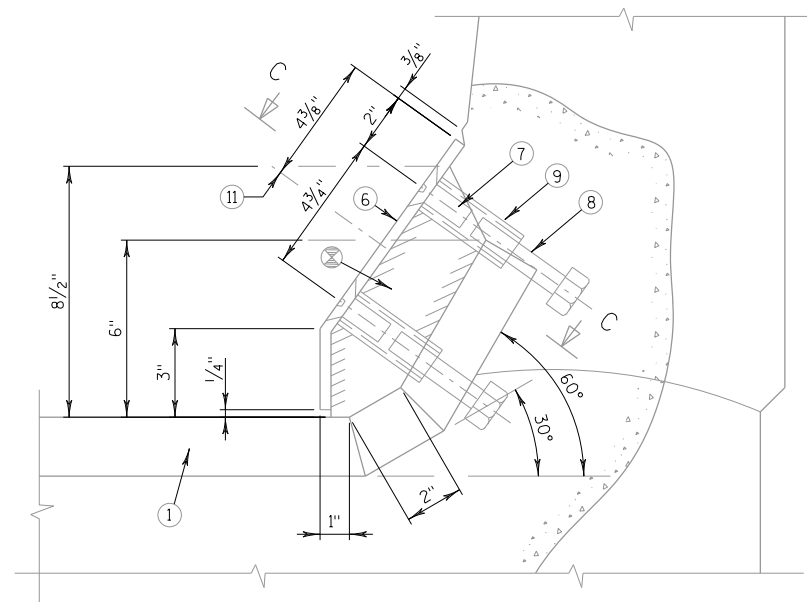
STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-157".

STATE PROJECT NUMBER
1124-54-60

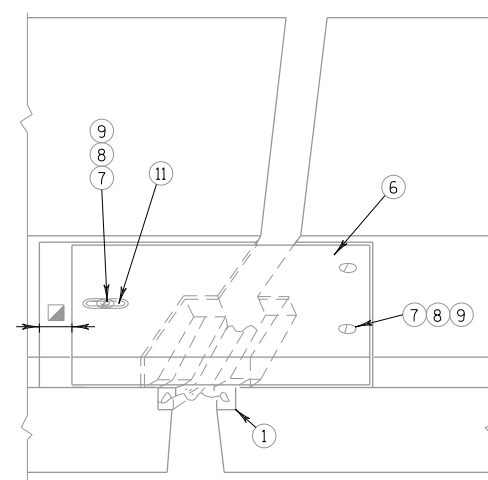
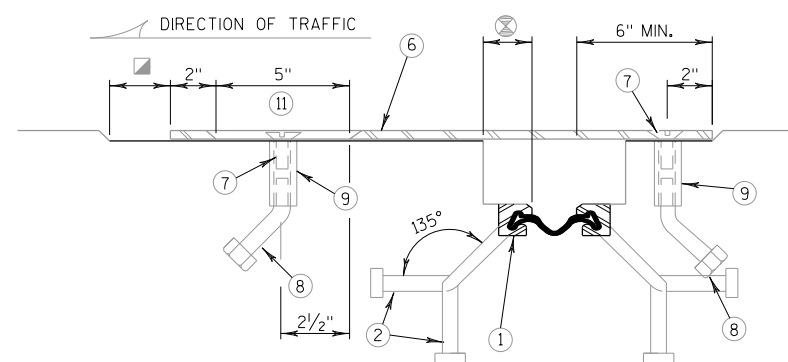
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-158			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 4 OF 6 154 USH 41	



PLAN AT PARAPET



SECTION A-A

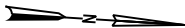
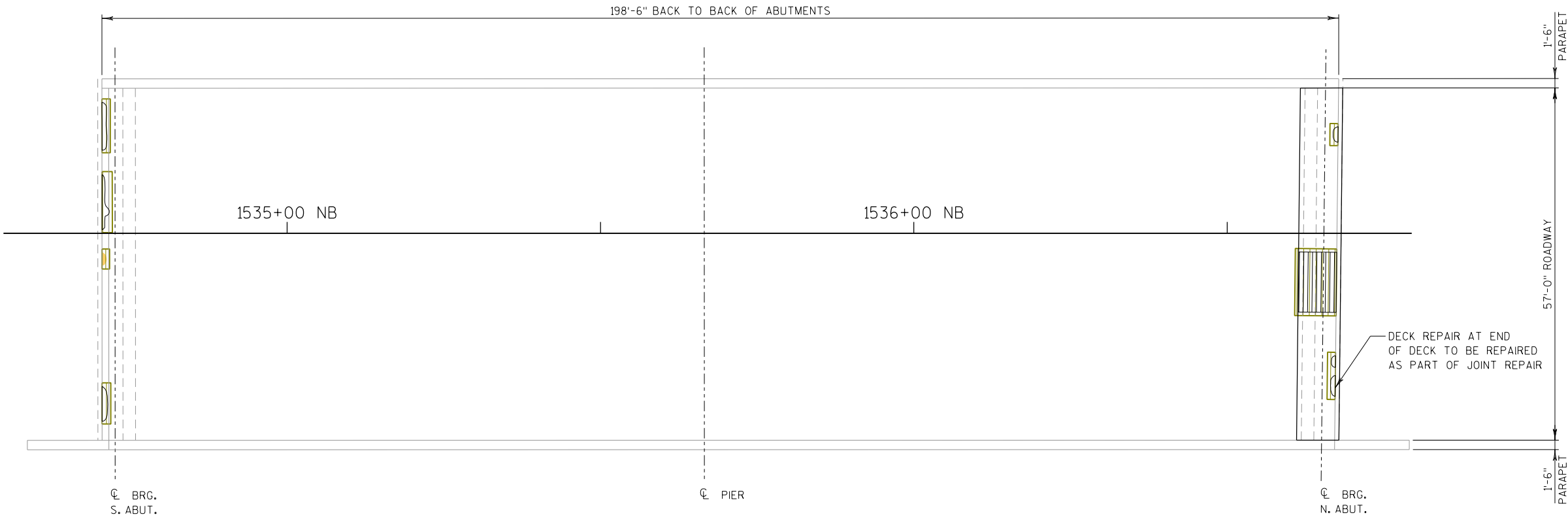
VIEW OF PARAPET PLATES
FROM ROADWAY

SECTION C-C

LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"
- ⑪ SEE SHEET 4 FOR LEGEND

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-158			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 5 OF 6 155 USH 41	



PLAN
DECK REPAIR

DECK REPAIR

DECK REPAIR AREAS		S.N. B-44-157		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1314.7		DECK PREPARATION AREA	
SHADE/DEBRIS	yd ²	0		SHADE/DEBRIS	
PREPARATION, DECKS, TYPE 1	yd ²	13.9	1.1	DELAMINATION	
PREPARATION, DECKS, TYPE 2	yd ²	7.0	0.5	SPALL	
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1	DEBOND	
				ASPHALT PATCH	
				CONCRETE PATCH	

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

- FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-158			
DRAWN BY		AMZ	PLANS CK'D. JSR
DECK REPAIR		SHEET 6 OF 6 156 USH 41	

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS22 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS46 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY
SUPERSTRUCTURE.....f'c = 4,000 PSI

BAR STEEL REINFORCEMENT,
GRADE 60.....f_y = 60,000 PSI

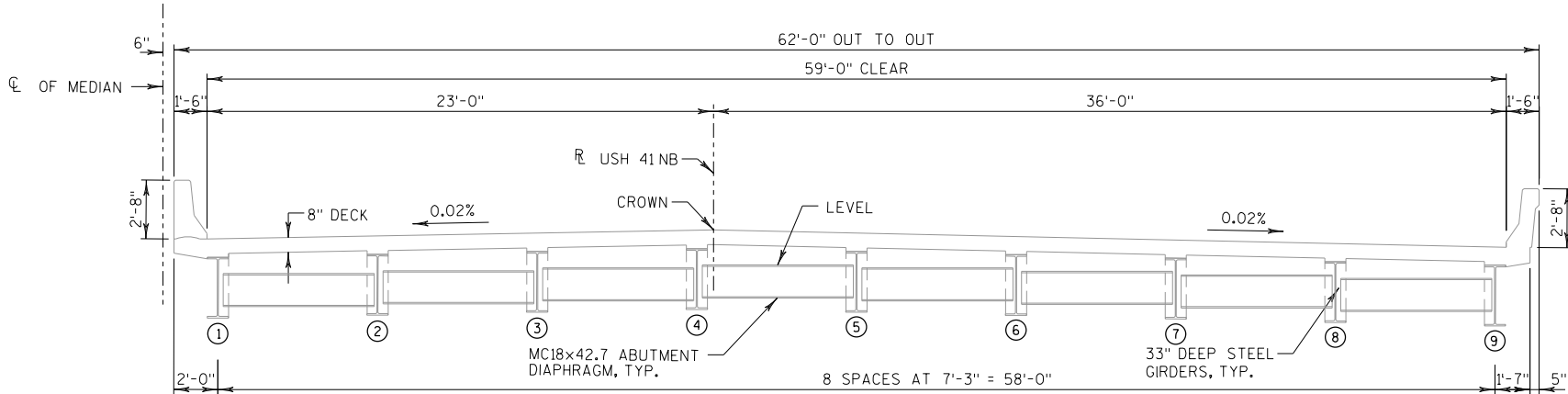
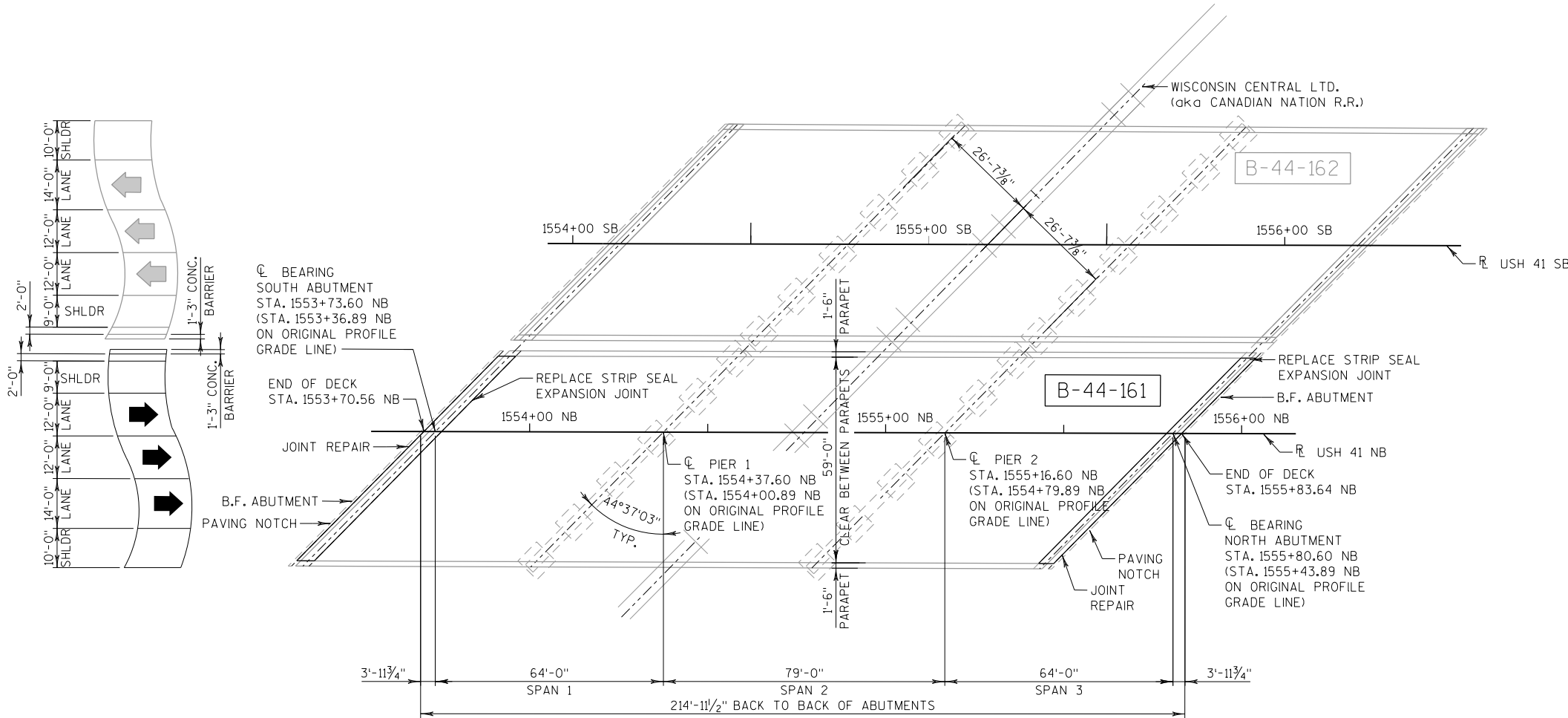
CONCRETE MASONRY.....f'c = 4,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 30,500 (2014)
= 38,200 (2034)

LIST OF DRAWINGS

1. EXPANSION JOINT REPLACEMENT AND DECK REPAIR
2. QUANTITIES AND GENERAL NOTES
3. CONCRETE DETAILS
4. STRIP SEAL EXPANSION JOINT
5. STRIP SEAL EXPANSION JOINT
6. DECK REPAIR



STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.		DATE	REVISION		BY
PLANS PREPARED BY:			1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com GRaEF		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
ACCEPTED <i>William C. Dreher</i> DNB			6/19/14		
CHIEF STRUCTURES DESIGN ENGINEER			DATE		
STRUCTURE B-44-161					
USH 41NB OVER CANADIAN NATIONAL RR					
COUNTY		TOWN/CITY/VILLAGE			
OUTAGAMIE		GRAND CHUTE			
DESIGN SPEC. REHABILITATION N/A					
DESIGNED BY	KGW	DESIGN CK'D.	AL	DRAWN BY	AMZ
					PLANS CK'D. JSR
EXPANSION JOINT REPLACEMENT AND DECK REPAIR				SHEET 1 OF 6 157	

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-161	LS	1
502.3100	EXPANSION DEVICE B-44-161	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	80
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3760
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.1000	JOINT REPAIR	SY	77
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	27
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR JOINT REPAIR, PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

GENERAL NOTES

THE PROPOSED WORK INCLUDES JOINT REPAIR AND DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM, "EXPANSION DEVICE B-44-161".

THE EXISTING STRUCTURE, B-44-161, IS A THREE SPAN STEEL PLATE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 62 FEET AND AN OVERALL LENGTH OF 214.9 FEET. THE NORTH AND SOUTH EXPANSION JOINTS ARE TO BE REPLACED.

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

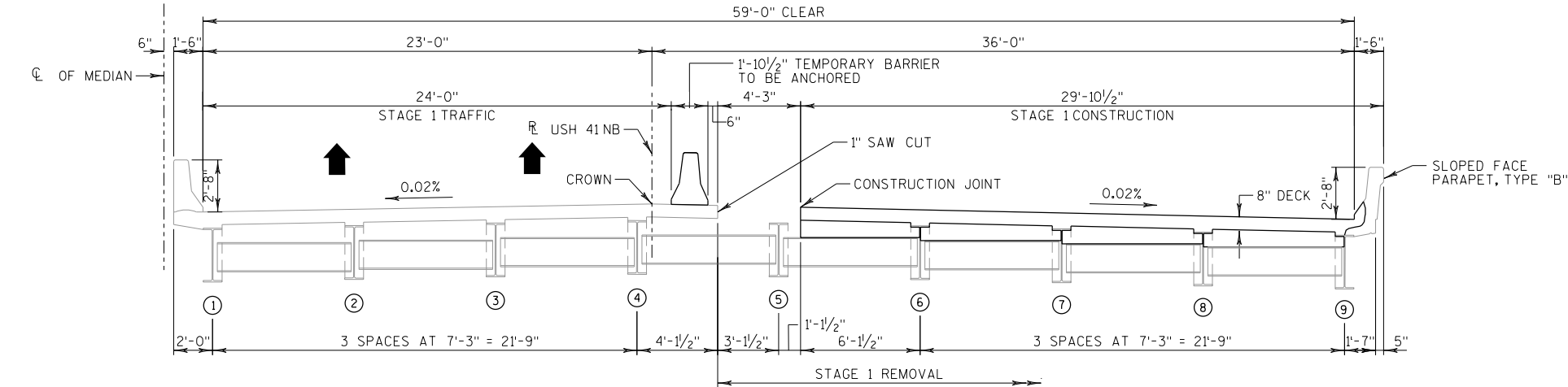
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER, DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

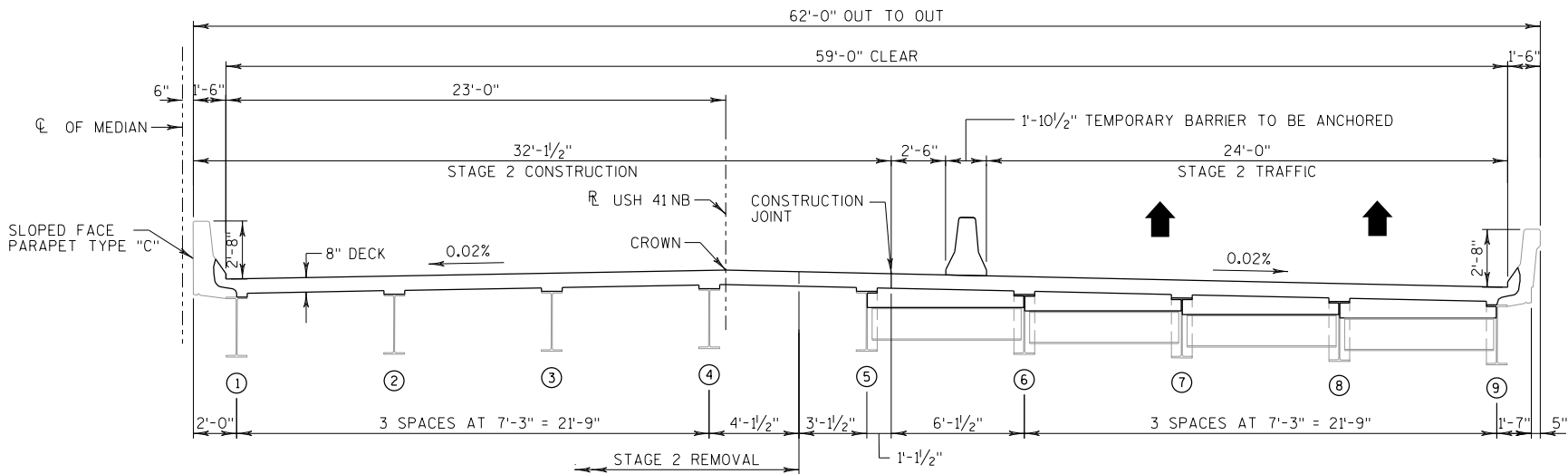
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE NEW DECK CONCRETE ASSOCIATED WITH THE JOINT REPLACEMENT, FRONT FACE OF THE PARAPETS, PAVING BLOCKS, AND DECK REPAIR AREAS.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ON ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



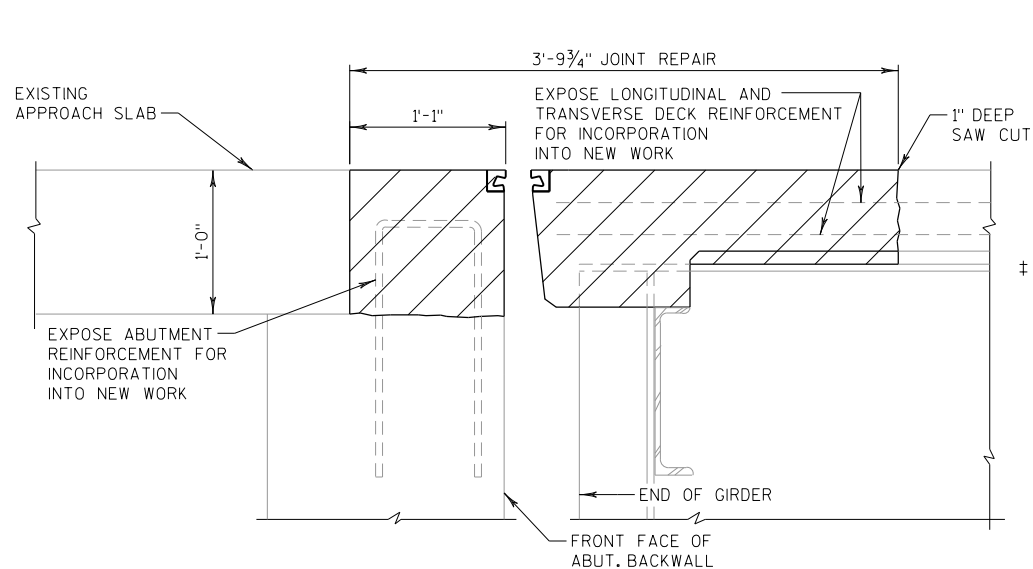
CROSS SECTION STAGE 1 - AT BOTH ABUTMENTS
(LOOKING NORTH)



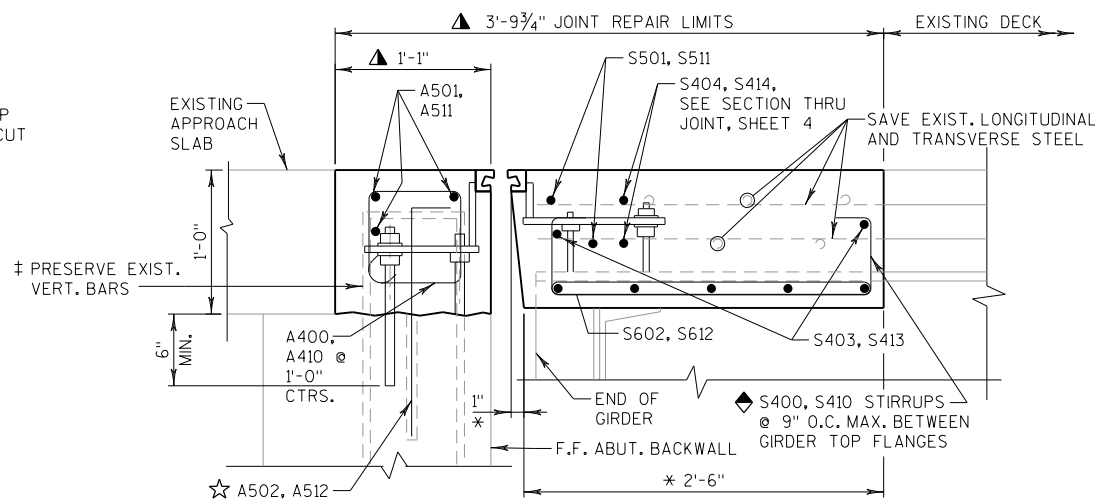
CROSS SECTION STAGE 2 - AT BOTH ABUTMENTS
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-161			
DRAWN BY		AMZ	PLANS CK'D. JSR
QUANTITIES AND GENERAL NOTES		SHEET 2 OF 6 158 USH 41	

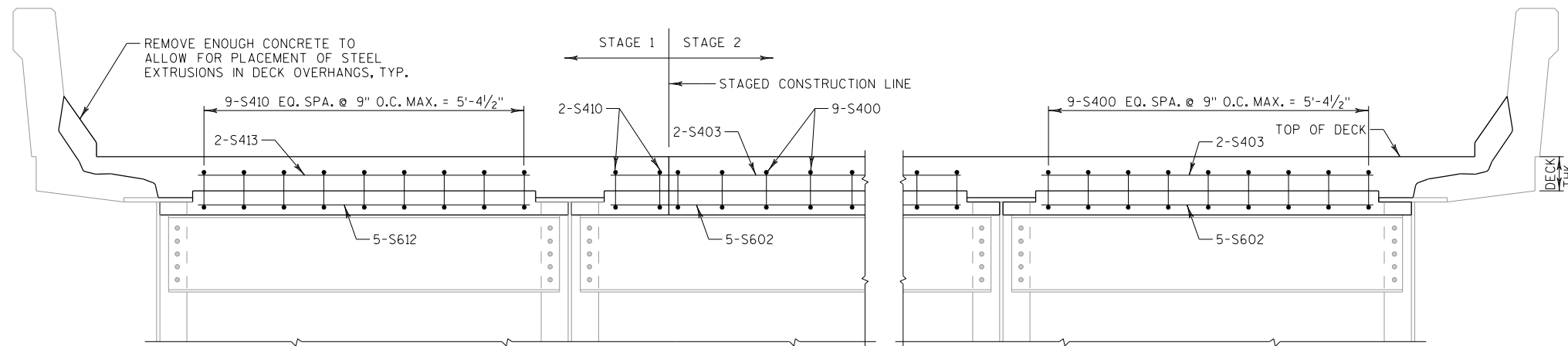
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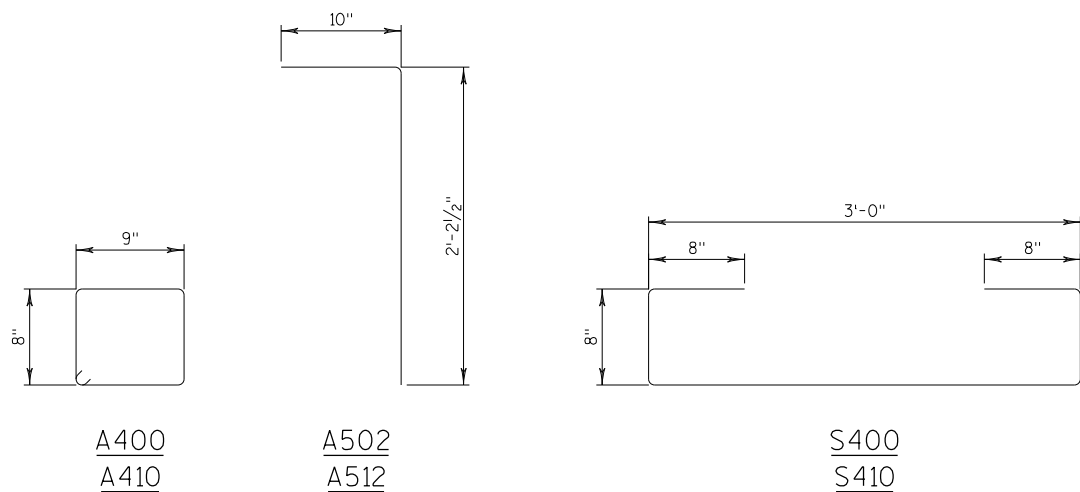
JOINT REPAIR - REMOVAL
NORMAL TO ϕ SUBSTRUCTURE



SECTION THRU EXPANSION JOINT
NORMAL TO ϕ SUBSTRUCTURE



**PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END**
(LOOKING NORTH)



NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS						
MARK	COATE D	NO. REQ'D	LENGT H	BAR SERIES	BENT	LOCATION
A400	X	82	3'-4"		X	PAVING NOTCH STIRRUP STAGE 1
A501	X	36	8'-0"			PAVING NOTCH TRANS. STAGE 1
A502	X	82	2'-11"		X	PAVING NOTCH DOWEL STAGE 1
A410	X	88	3'-4"		X	PAVING NOTCH STIRRUP STAGE 2
A511	X	36	8'-0"			PAVING NOTCH TRANS. STAGE 2
A512	X	88	2'-11"		X	PAVING NOTCH DOWEL STAGE 2
S400	X	72	5'-4"		X	DIAPH. STIRRUP STAGE 1
S501	X	4	41'-9"			DECK TRANS. STAGE 1
S602	X	40	8'-6"			DIAPH. TRANS. BOT. STAGE 1
S403	X	16	8'-6"			DIAPH. TRANS. TOP STAGE 1
S404	X	16	8'-6"			TRANS. BARS AT JOINT STAGE 1
S410	X	76	5'-4"		X	DIAPH. STIRRUP STAGE 2
S511	X	4	42'-1"			DECK TRANS. STAGE 2
S612	X	40	8'-6"			DIAPH. TRANS. BOT. STAGE 2
S413	X	16	8'-6"			DIAPH. TRANS. TOP STAGE 2
S414	X	16	8'-6"			TRANS. BARS AT JOINT STAGE 2

ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

LEGEND

‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

☆ A502, A512 MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

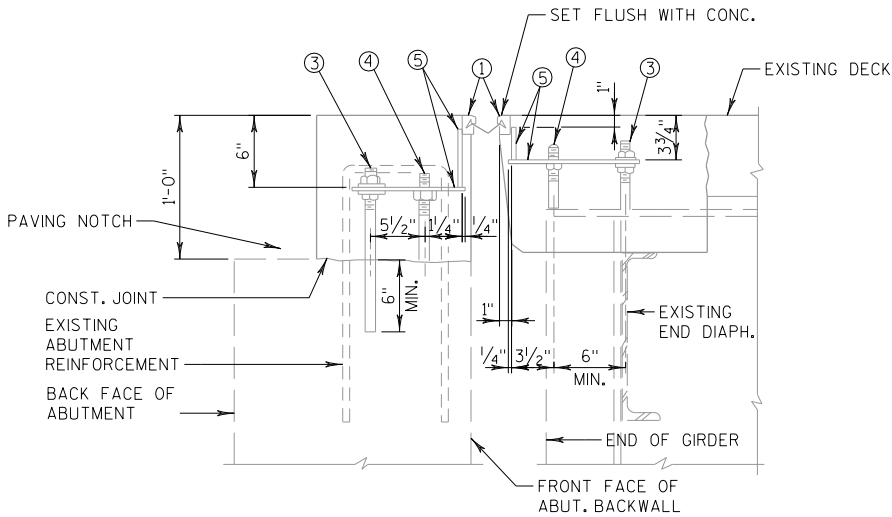
▲ DIMENSIONS GIVEN ARE NORMAL TO ϕ OF SUBSTRUCTURE UNIT. UTILIZE EXISTING REINFORCEMENT.

◆ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ϕ GIRDERS.

▨ EXISTING CONCRETE TO BE REMOVED.

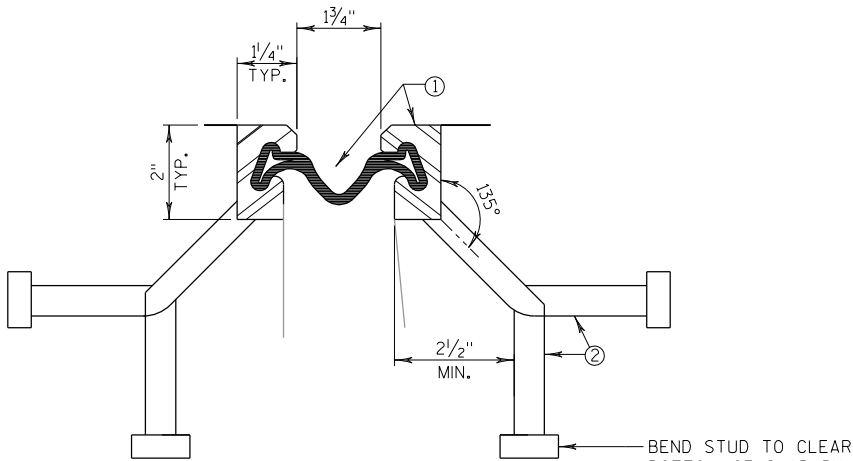
* DIMENSION IS TAKEN NORMAL TO ϕ ABUTMENT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-161			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE DETAILS		SHEET 3 OF 6 159 USH 41	



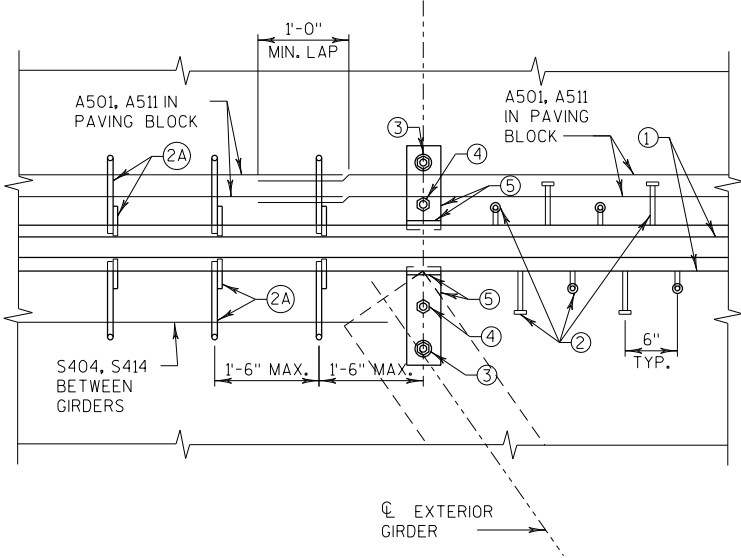
TYPICAL SECTION THRU JOINT AT STEEL GIRDER

NORMAL TO CL SUBSTRUCTURE

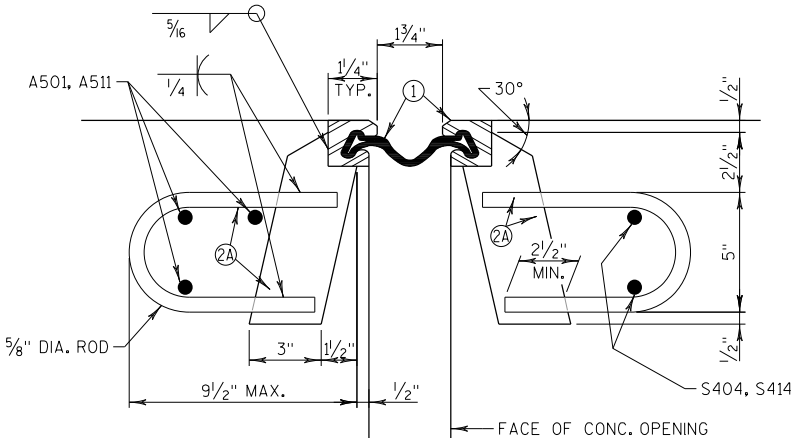


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB AND AT PARAPETS, MEDIANS & SIDEWALKS

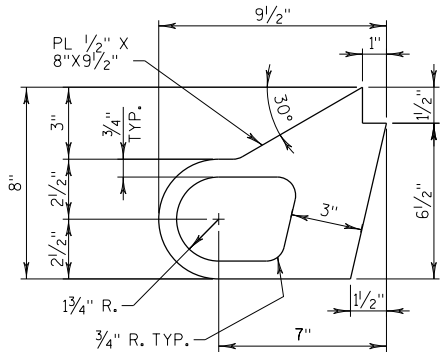


PART PLAN



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS SYM. ABOUT CL JOINT UNLESS OTHERWISE SHOWN OR NOTED



ALTERNATE STRIP SEAL ANCHOR

LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8" ϕ $\times$ 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4" ϕ THREADED ROD WITH 2 NUTS AND 2 PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" $\times$ 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 1/2" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" $\times$ 10 1/2" $\times$ 2'-2" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. 3/4" ϕ $\times$ 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4" ϕ $\times$ 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. 3/4" ϕ $\times$ 2 1/4" GALVANIZED THREADED COUPLING.
10. NOT USED
11. 1" $\times$ 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE IS 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 & SWEEP.

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

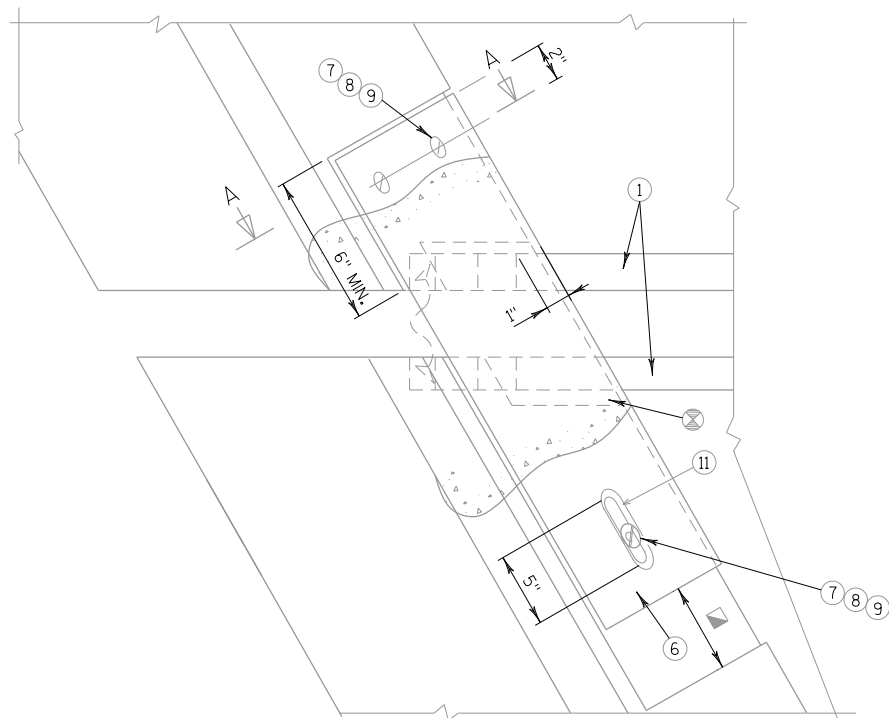
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

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

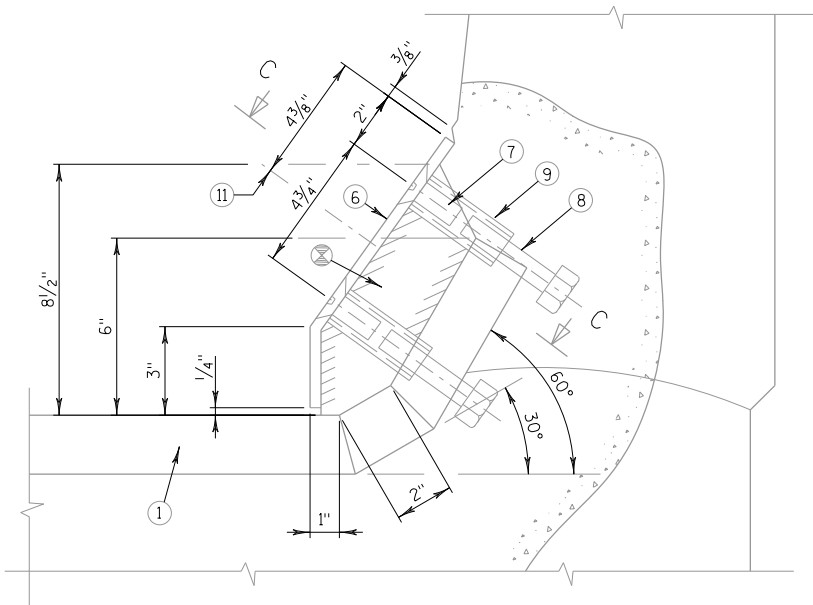
STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-157".

STATE PROJECT NUMBER
1124-54-60

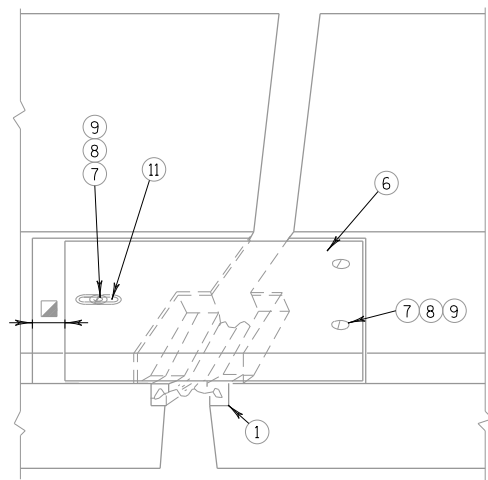
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-161			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 4 OF 6 160 USH 41	



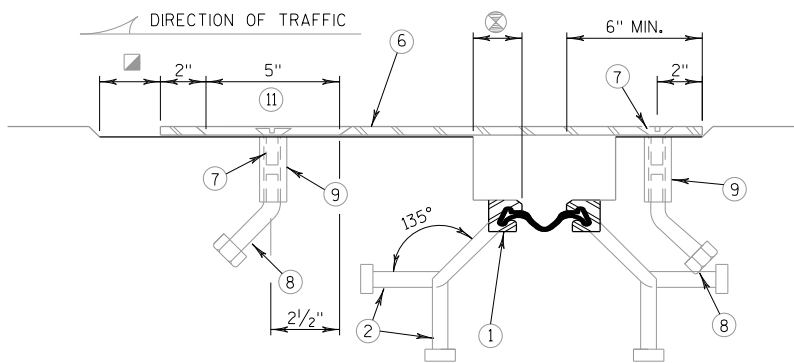
PLAN AT PARAPET



SECTION A-A



VIEW OF PARAPET PLATES
FROM ROADWAY



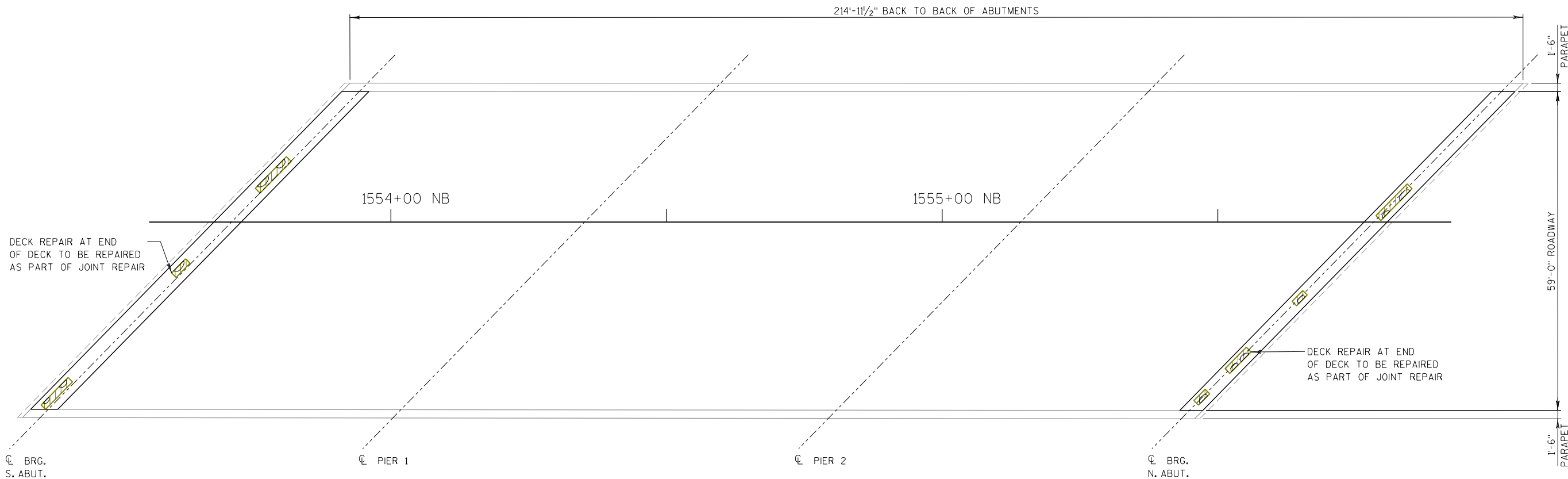
SECTION C-C

LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"
- ⑪ SEE SHEET 4 FOR LEGEND

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-161			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 5 OF 6 161 USH 41	

FILE =
SCALE =



PLAN

EXPANSION JOINT REPLACEMENT
AND DECK REPAIR

DECK REPAIR

DECK REPAIR AREAS		S.N. B-44-161		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1468.0		DECK PREPARATION AREA SHADE/DEBRIS	DELAMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	5.0	0.3		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	1.3	<0.1		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	0.5	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

- FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-161			
DRAWN BY		AMZ	PLANS CK'D. JSR
DECK REPAIR		SHEET 6 OF 6 162 USH 41	

FILE=
SCALE =

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS22 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS46 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY
SUPERSTRUCTURE.....f'c = 4,000 PSI

BAR STEEL REINFORCEMENT,
GRADE 60.....fy = 60,000 PSI

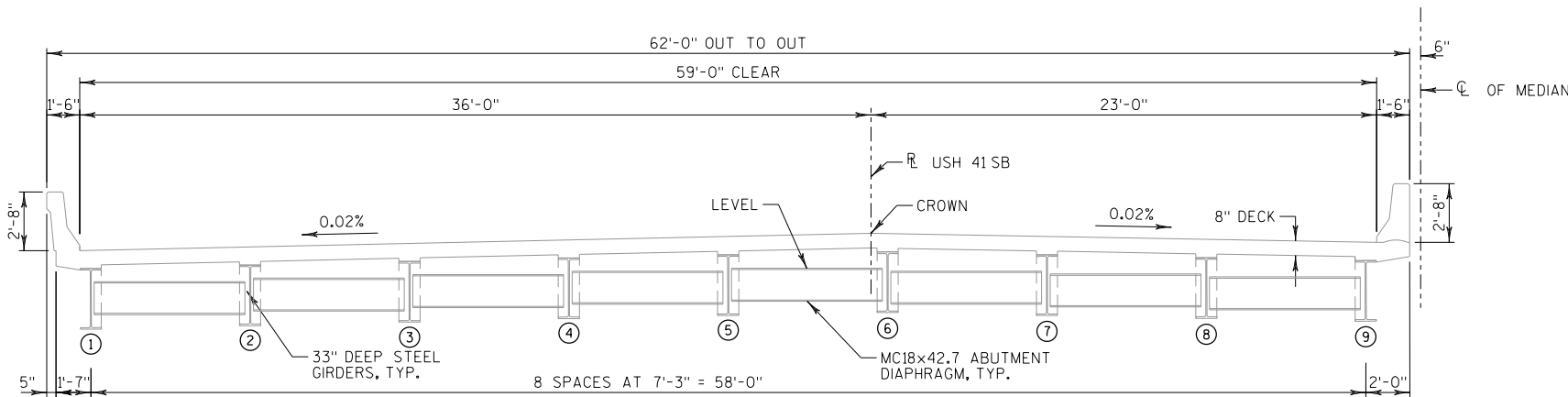
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TRAFFIC DATA

USH41
A.D.T. = 30,500 (2014)
= 38,200 (2034)

LIST OF DRAWINGS

1. EXPANSION JOINT REPLACEMENT AND DECK REPAIR
2. QUANTITIES AND GENERAL NOTES
3. CONCRETE DETAILS
4. STRIP SEAL EXPANSION JOINT
5. STRIP SEAL EXPANSION JOINT
6. DECK REPAIR



CROSS SECTION THRU B-44-162
(LOOKING NORTH)

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY
PLANS PREPARED BY:		GRAEF	1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i> DNB CHIEF STRUCTURES DESIGN ENGINEER		6/19/14 DATE
STRUCTURE B-44-162			
USH 41 SB OVER CANADIAN NATIONAL RR			
COUNTY	OUTAGAMIE	TOWN/CITY/VILLAGE	GRAND CHUTE
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KGW	DESIGN CK'D.	AL
DRAWN BY	AMZ	PLANS CK'D.	JSR
EXPANSION JOINT REPLACEMENT AND DECK REPAIR			SHEET 1 OF 1 163

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-162	LS	1
502.3100	EXPANSION DEVICE B-44-162	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	80
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	3760
509.0301	PREPARATION DECKS TYPE 1	SY	1
509.0302	PREPARATION DECKS TYPE 2	SY	1
509.1000	JOINT REPAIR	SY	77
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	27
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	10

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR JOINT REPAIR, PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

GENERAL NOTES

THE PROPOSED WORK INCLUDES JOINT REPAIR AND DECK REPAIR.

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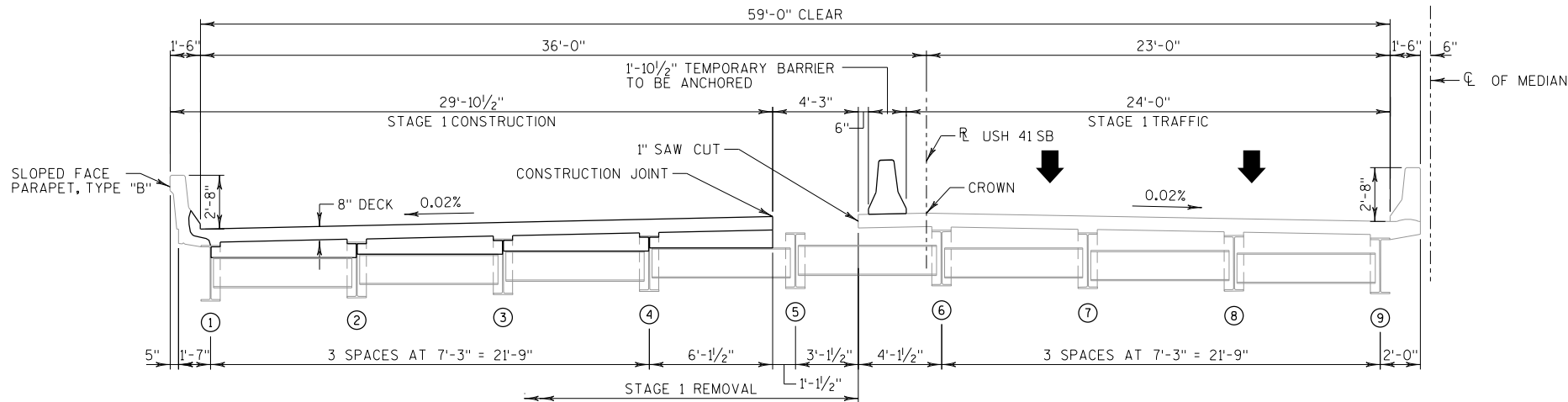
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER, DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

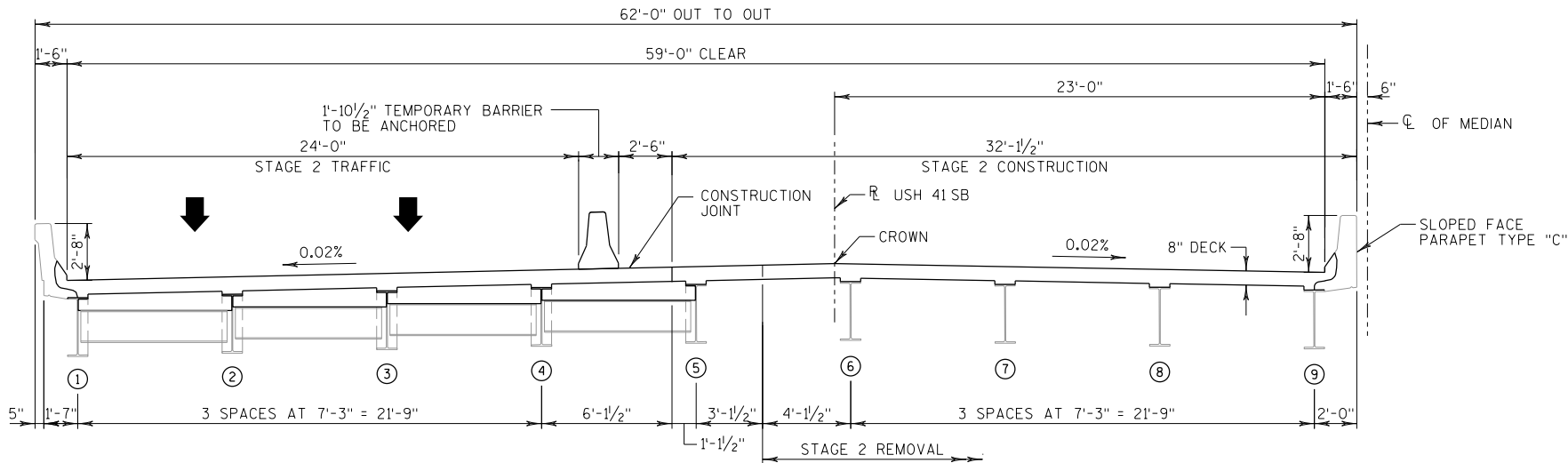
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE NEW DECK CONCRETE ASSOCIATED WITH THE JOINT REPLACEMENT, FRONT FACE OF THE PARAPETS, PAVING BLOCKS, AND DECK REPAIR AREAS.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ON ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



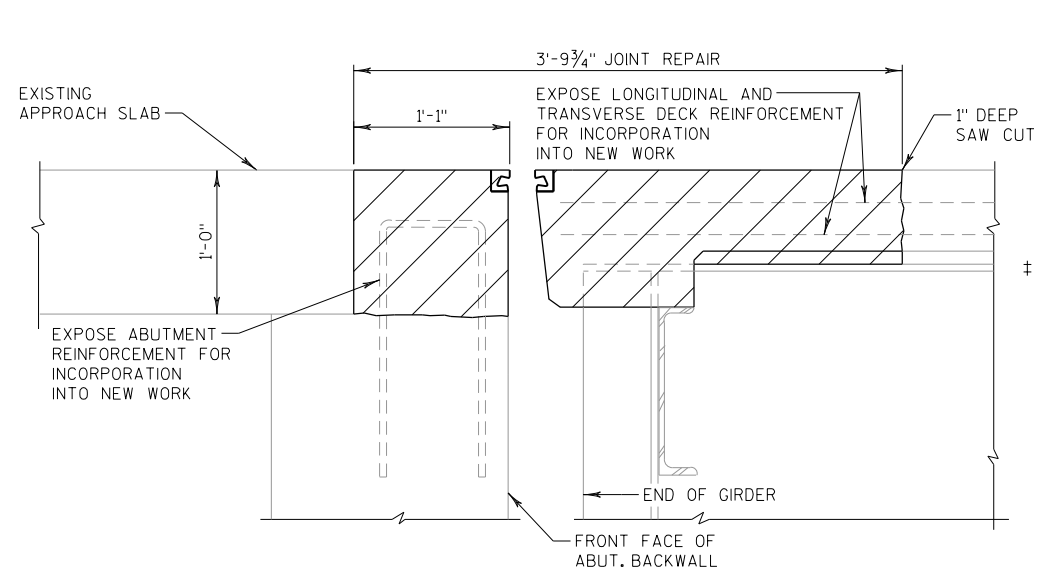
CROSS SECTION STAGE 1 - AT BOTH ABUTMENTS
(LOOKING NORTH)



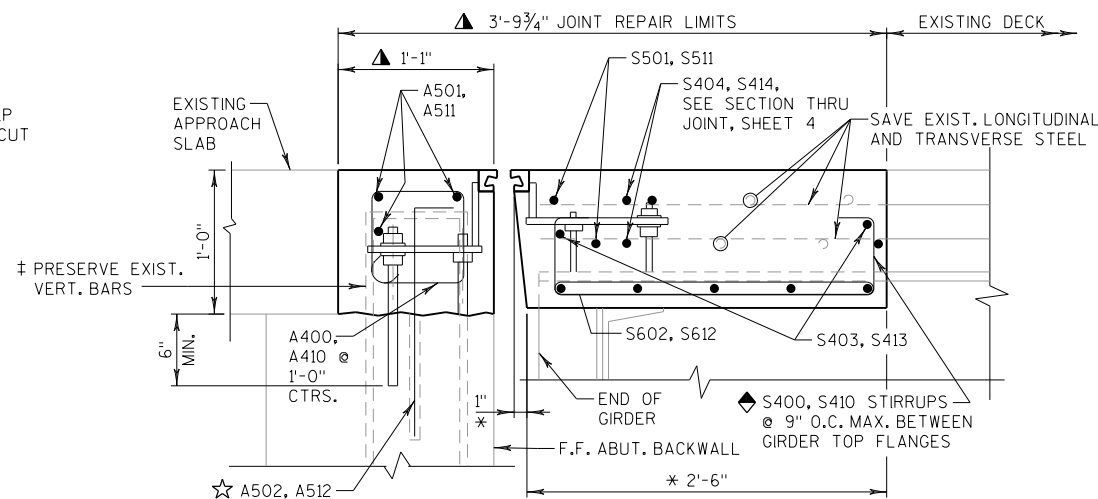
CROSS SECTION STAGE 2 - AT BOTH ABUTMENTS
(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-162			
DRAWN BY		AMZ	PLANS CK'D. JSR
QUANTITIES AND GENERAL NOTES		SHEET 2 OF 6 164 USH 41	

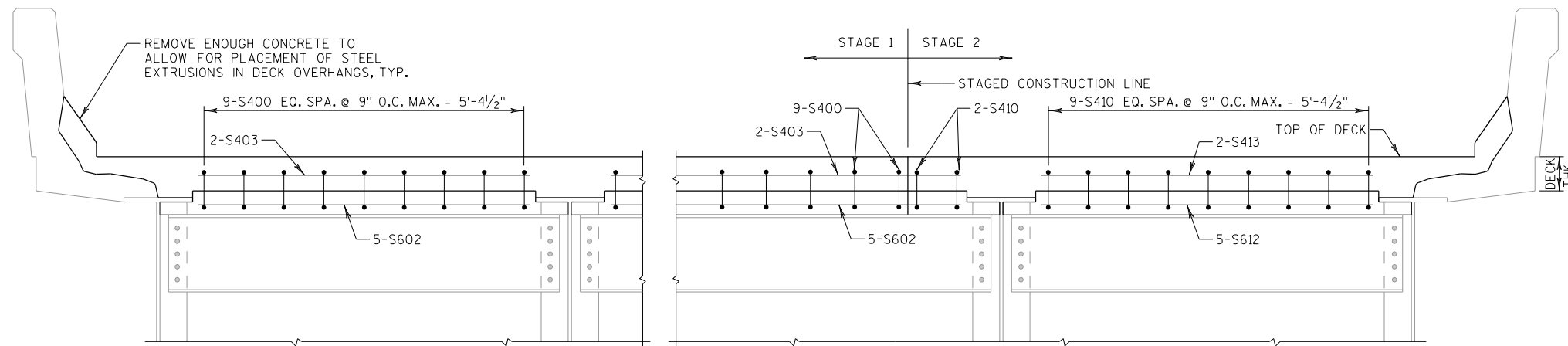
FILE =
SCALE =



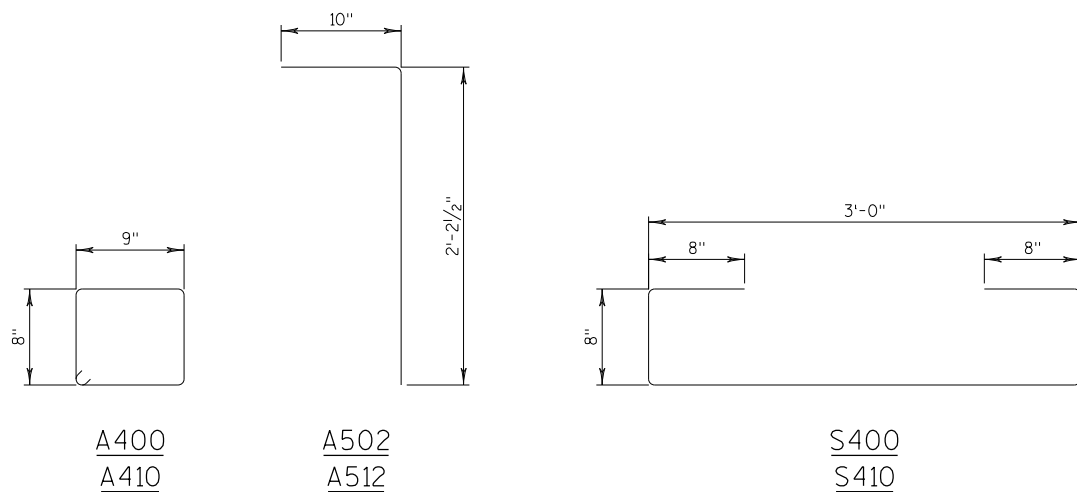
JOINT REPAIR - REMOVAL
NORMAL TO ϕ SUBSTRUCTURE



SECTION THRU EXPANSION JOINT
NORMAL TO ϕ SUBSTRUCTURE



**PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END**
(LOOKING NORTH)

**LEGEND**

‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

☆ A502, A512 MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

▲ DIMENSIONS GIVEN ARE NORMAL TO ϕ OF SUBSTRUCTURE UNIT. UTILIZE EXISTING REINFORCEMENT.

◆ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO ϕ GIRDERS.

▨ EXISTING CONCRETE TO BE REMOVED.

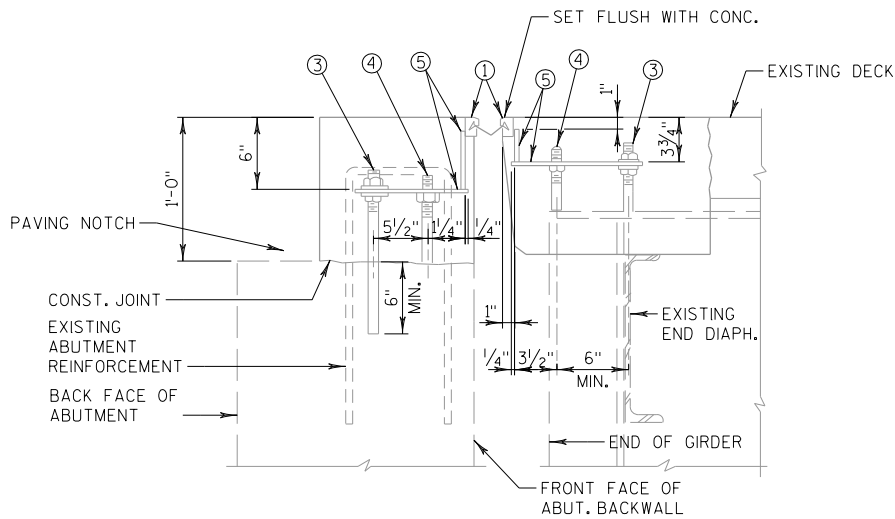
* DIMENSION IS TAKEN NORMAL TO ϕ ABUTMENT.

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

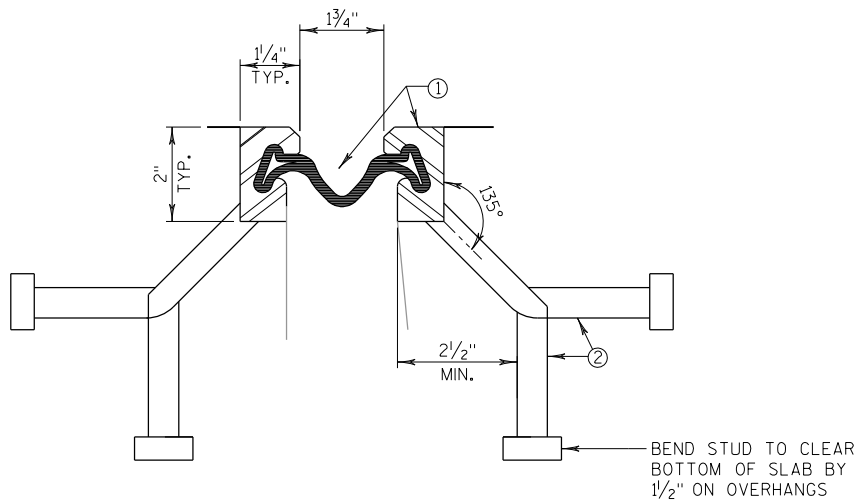
BILL OF BARS					
MARK	COATE D	NO. REQ'D	LENGT H	BAR SERIES	BENT
A400	X	82	3'-4"		X
A501	X	36	8'-0"		
A502	X	82	2'-11"		X
A410	X	88	3'-4"		X
A511	X	36	8'-0"		
A512	X	88	2'-11"		X
S400	X	72	5'-4"		X
S501	X	4	41'-9"		
S602	X	40	8'-6"		
S403	X	16	8'-6"		
S404	X	16	8'-6"		
S410	X	76	5'-4"		X
S511	X	4	42'-1"		
S612	X	40	8'-6"		
S413	X	16	8'-6"		
S414	X	16	8'-6"		

ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

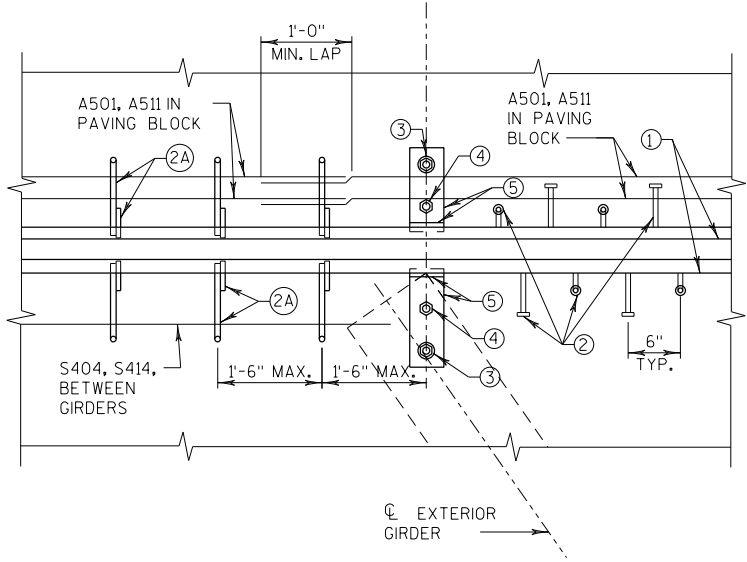
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-162			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE DETAILS		SHEET 3 OF 6 165 USH 41	



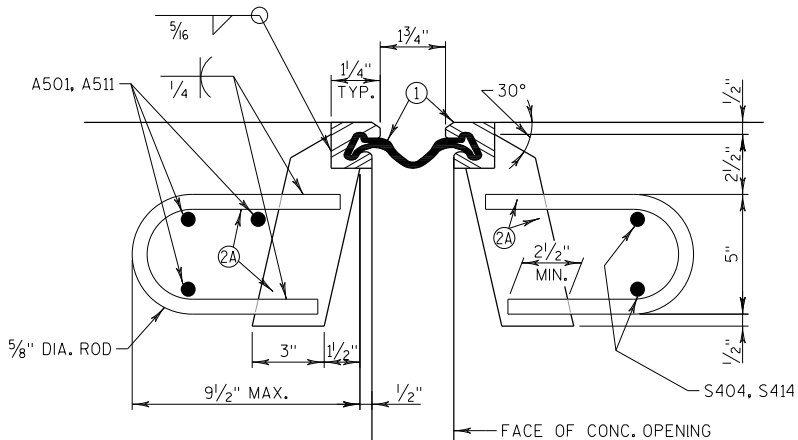
TYPICAL SECTION THRU
JOINT AT STEEL GIRDER
NORMAL TO CL SUBSTRUCTURE



SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB
AND AT PARAPETS, MEDIANS & SIDEWALKS

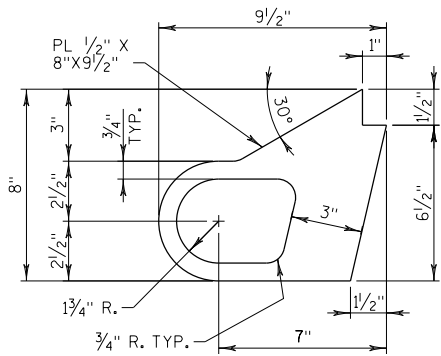


PART PLAN



SECTION THRU JOINT
AT PAVING BLOCK
AT DECK

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS
SYM. ABOUT CL JOINT UNLESS OTHERWISE SHOWN OR NOTED



ALTERNATE STRIP SEAL
ANCHOR

LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8" ϕ $\times$ 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4" ϕ THREADED ROD WITH 2 NUTS AND 2 PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" $\times$ 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 1/2" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" $\times$ 10 1/2" $\times$ 2'-2" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. 3/4" ϕ $\times$ 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4" ϕ $\times$ 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. 3/4" ϕ $\times$ 2 1/4" GALVANIZED THREADED COUPLING.
10. NOT USED
11. 1" $\times$ 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

SEE SHEET 5

NOTES

ONE FIELD SPLICE IS 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 & SWEEP.

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

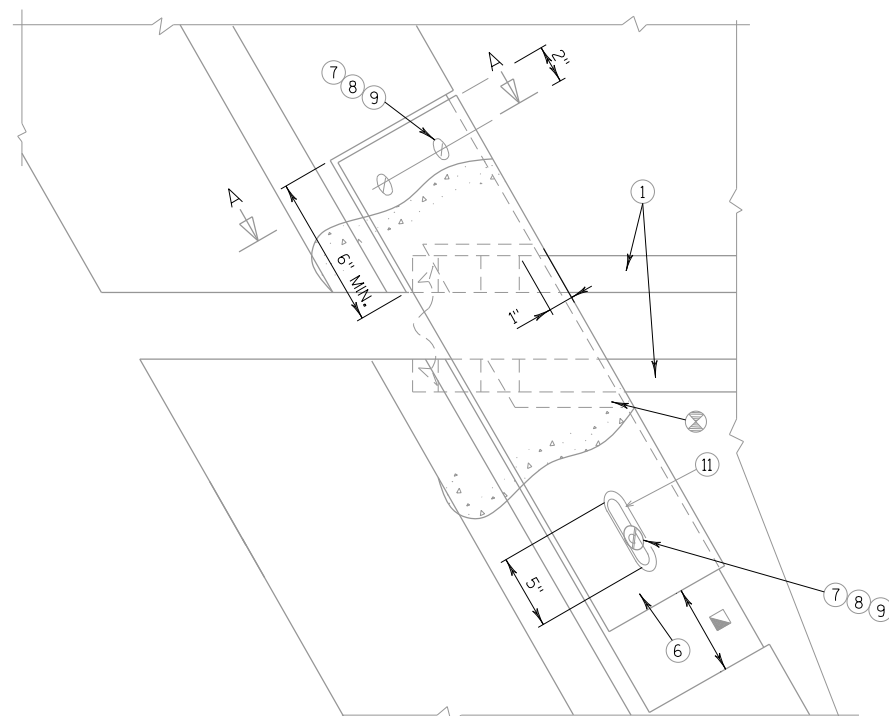
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

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

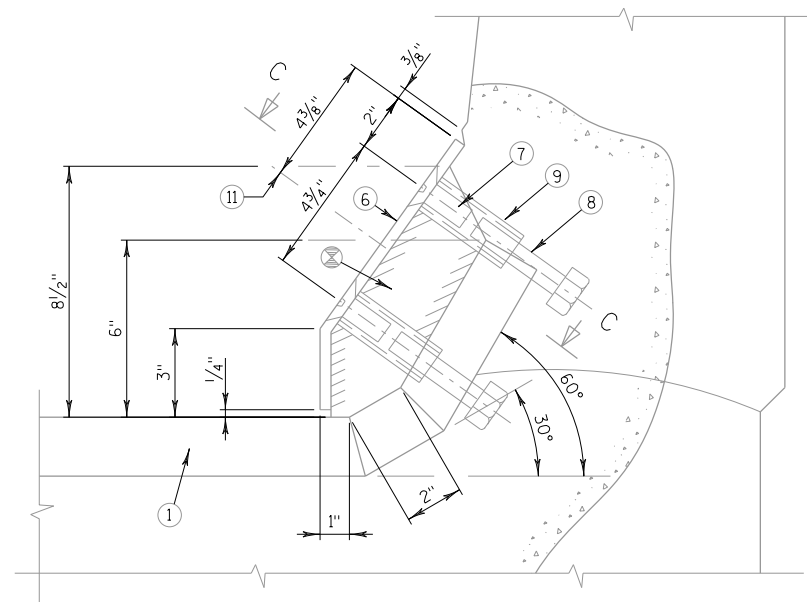
STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-157".

STATE PROJECT NUMBER	
1124-54-60	

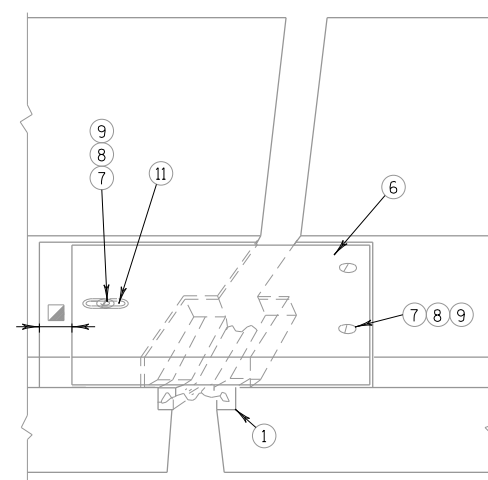
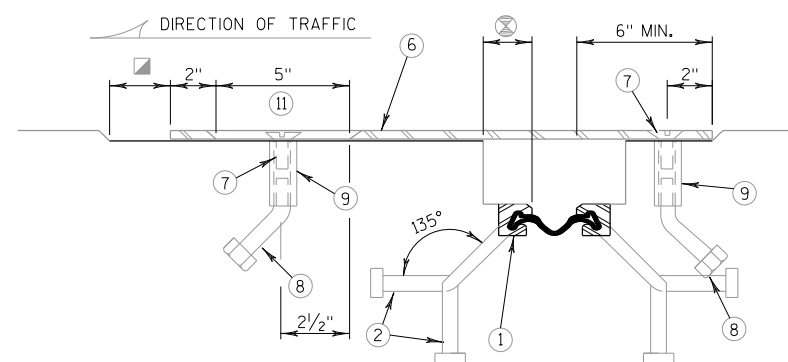
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-162			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 4 OF 6 166 USH 41	



PLAN AT PARAPET



SECTION A-A

VIEW OF PARAPET PLATES
FROM ROADWAY

SECTION C-C

LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"
- ⑪ SEE SHEET 4 FOR LEGEND

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-162			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 5 OF 6 167 USH 41	

214'-11½" BACK TO BACK OF ABUTMENTS

1554+00 SB

1555+00 SB

1556+00 SB

DECK REPAIR AT END
OF DECK TO BE REPAIRED
AS PART OF JOINT REPAIR

DECK REPAIR AT END
OF DECK TO BE REPAIRED
AS PART OF JOINT REPAIR

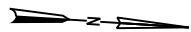
℄ BRG.
S. ABUT.

℄ PIER 1

℄ PIER 2

℄ BRG.
N. ABUT.

1'-6"
PARAPET
59'-0"
CLEAR BETWEEN PARAPETS
1'-6"
PARAPET



PLAN

EXPANSION JOINT REPLACEMENT
AND DECK REPAIR

DECK REPAIR

DECK REPAIR AREAS		S.N. B-44-157		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1468.0		DECK PREPARATION AREA SHADE/DEBRIS	DELAMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	10.7	0.7		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	2.7	0.2		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

- FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-162			
DRAWN BY		AMZ	PLANS CK'D. JSR
DECK REPAIR		SHEET 6 OF 6 168 USH 41	

FILE =
SCALE =

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS27 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS45 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 41,550 (2014)
= 49,350 (2034)

SPENCER ST.
A.D.T. = 7,200 (2010)

LIST OF DRAWINGS

1. SLAB REPAIR



GENERAL NOTES

THE PROPOSED WORK INCLUDES SLAB REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-44-163, IS A THREE SPAN HAUNCHED SLAB STRUCTURE WITH AN OVERALL WIDTH THAT VARIES FROM 81.02 FEET TO 84.58 FEET AND AN OVERALL LENGTH OF 112.67 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

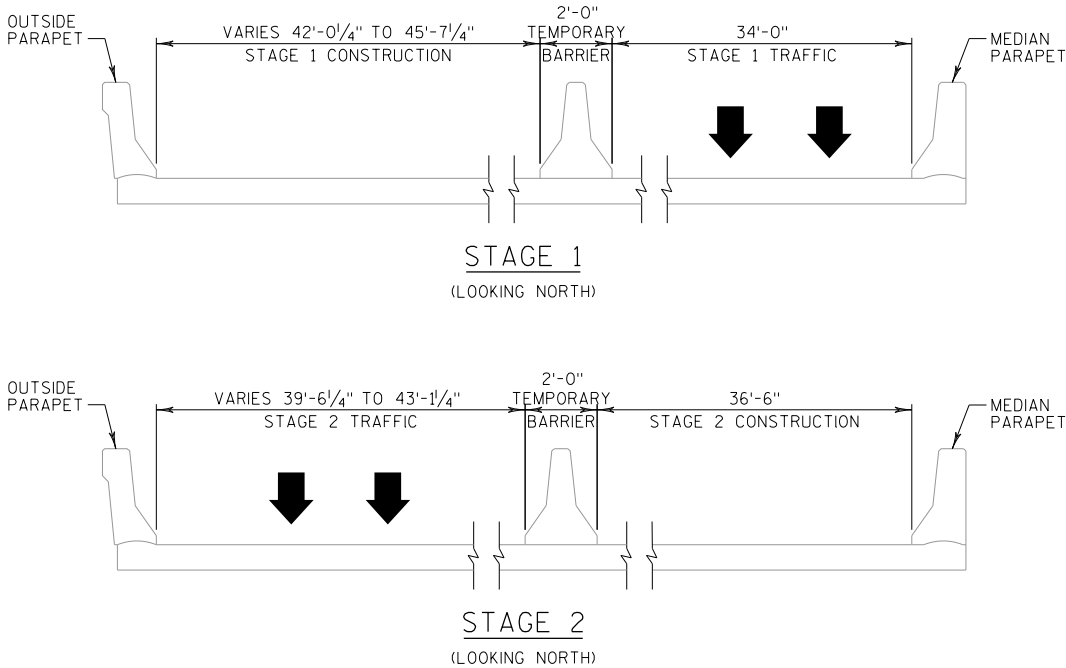
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAWCUT.

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

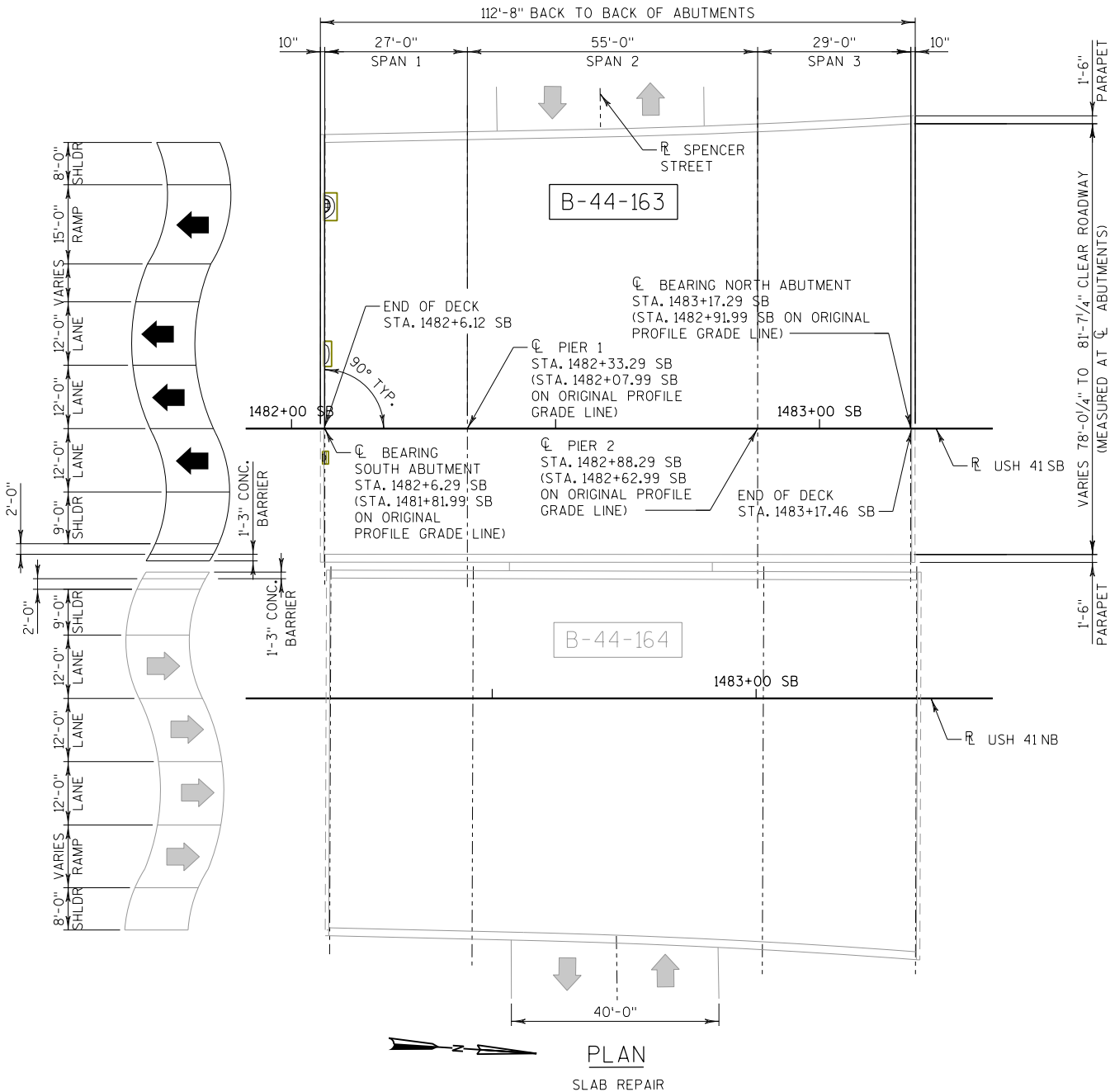
LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

- QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



SLAB REPAIR

SLAB REPAIR AREAS		S.N. B-44-163		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1036.8		DECK PREPARATION AREA SHADE/DEBRIS	DELMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	2.6	0.3		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	0.7	<0.1		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	0.5	<0.1		CONCRETE PATCH

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-163	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	3
* 509.0302	PREPARATION DECKS TYPE 2	SY	1
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	30

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS27 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS45 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 41,550 (2014)
= 49,350 (2034)

SPENCER ST.
A.D.T. = 7,200 (2010)

LIST OF DRAWINGS

1. SLAB REPAIR



GENERAL NOTES

THE PROPOSED WORK INCLUDES SLAB REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-44-164, IS A THREE SPAN HAUNCHED SLAB STRUCTURE WITH AN OVERALL WIDTH THAT VARIES FROM 69.27 FEET TO 73.44 FEET AND AN OVERALL LENGTH OF 112.67 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

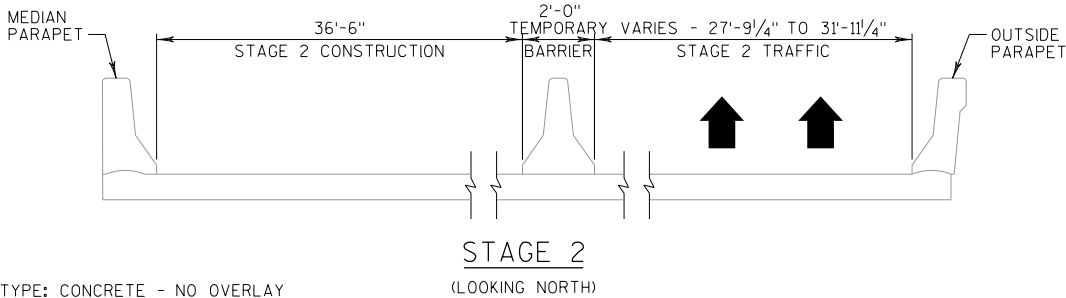
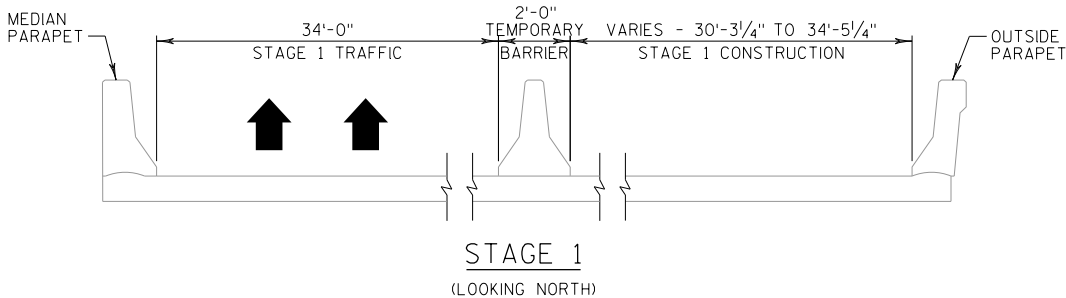
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAWCUT.

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 7/1/13
INFRARED SURVEY TAKEN BY AECOM

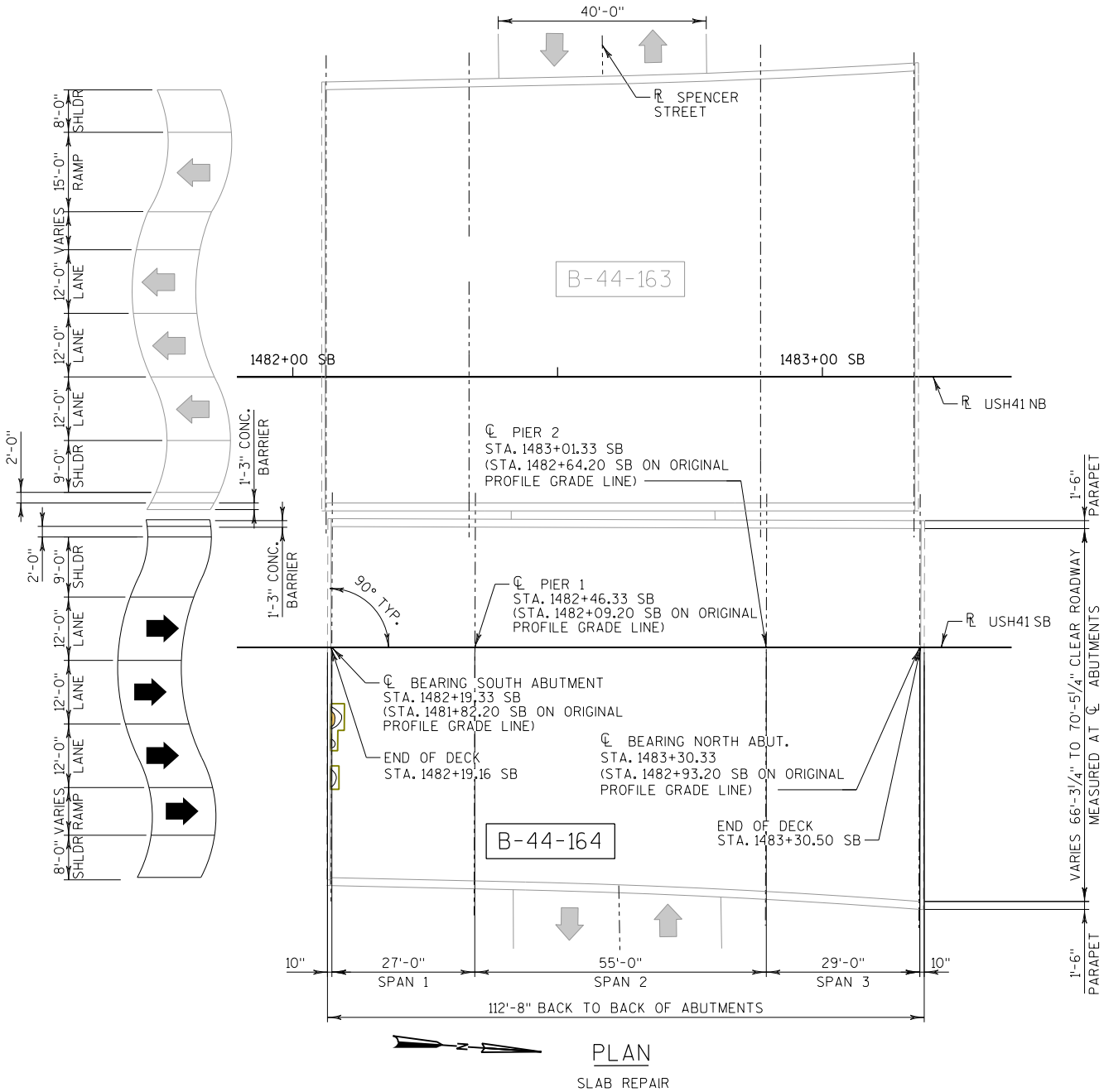
LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



SLAB REPAIR

SLAB REPAIR AREAS		S.N. B-44-164		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	893.4			
SHADE/DEBRIS	yd ²	0			
PREPARATION, DECKS, TYPE 1	yd ²	2.8	0.3		
PREPARATION, DECKS, TYPE 2	yd ²	0.7	<0.1		
FULL DEPTH DECK REPAIR	yd ²	0.5	<0.1		

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-44-164	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	4
* 509.0302	PREPARATION DECKS TYPE 2	SY	1
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	40

NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF 1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> CHIEF STRUCTURES DESIGN ENGINEER		DATE 6/19/14	
STRUCTURE B-44-164			
USH 41 NORTHBOUND OVER SPENCER STREET			
COUNTY	OUTAGAMIE	TOWN/CITY/VILLAGE	GRAND CHUTE
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
SLAB REPAIR			SHEET 1 OF 1 170

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20M (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS28 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS51 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 38,350 (2014)
= 46,550 (2034)

CECIL ST.
A.D.T. = 8,600 (2010)

LIST OF DRAWINGS

1. DECK REPAIR

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-49, IS A THREE SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 71.25 FEET AND AN OVERALL LENGTH OF 137.05 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

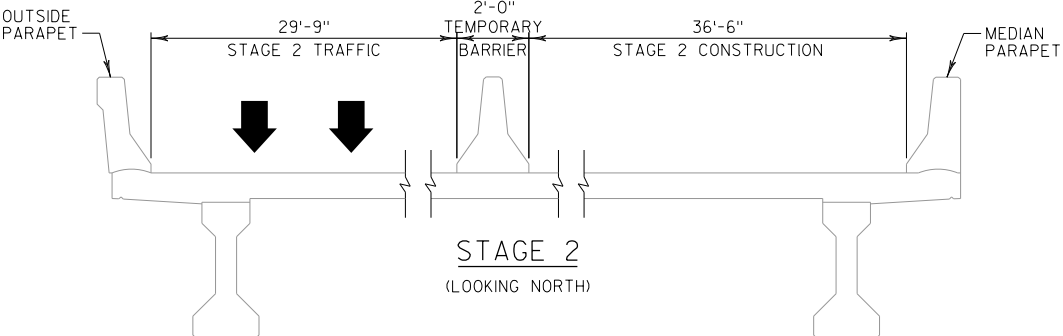
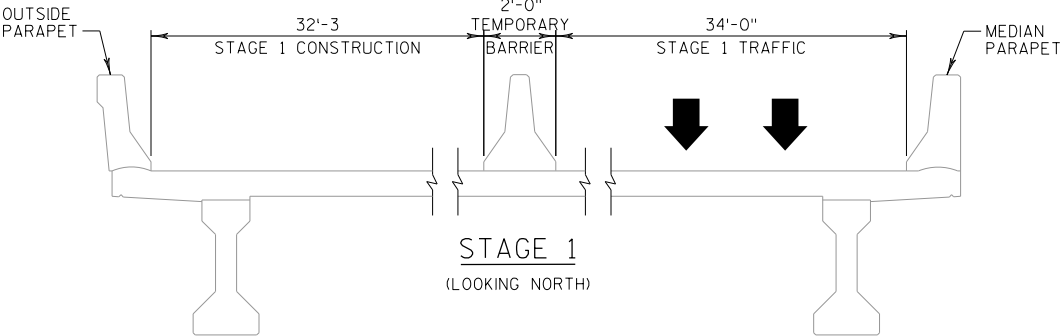
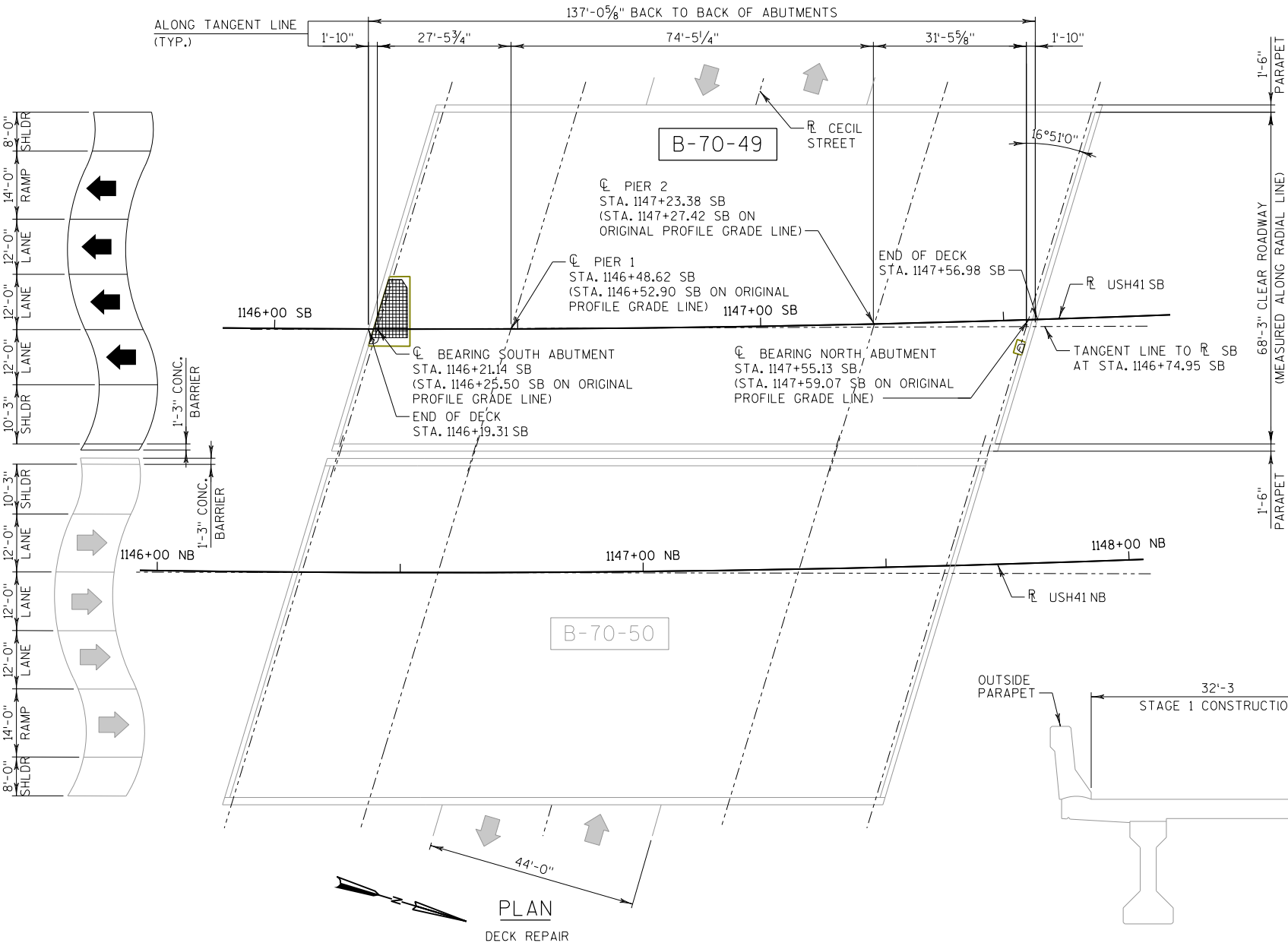
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAWCUT.

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-49		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1074.2		DECK PREPARATION AREA SHADE/DEBRIS	DELMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	10.7	1.0		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	8.0	0.7		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/19/13
INFRARED SURVEY TAKEN BY AECOM

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-49	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	12
* 509.0302	PREPARATION DECKS TYPE 2	SY	9
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	2
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	120

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF 1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> 6/19/14		DATE	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-70-49			
USH 41 SOUTHBOUND OVER CECIL STREET			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	NEENAH
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
DECK REPAIR			SHEET 1 OF 1 171

LIVE LOAD:
DESIGN LOADING: HS20M (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS28 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS51 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY..... $f'_c = 4,000$ PSI

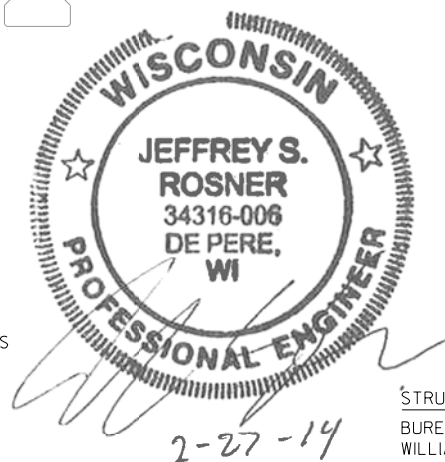
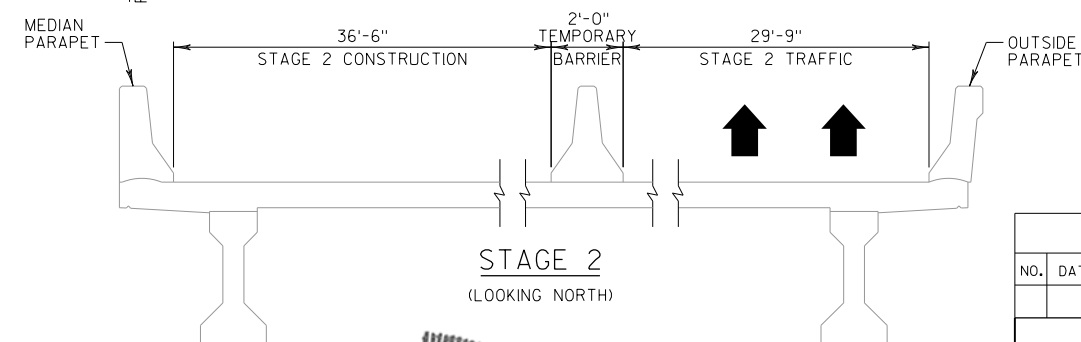
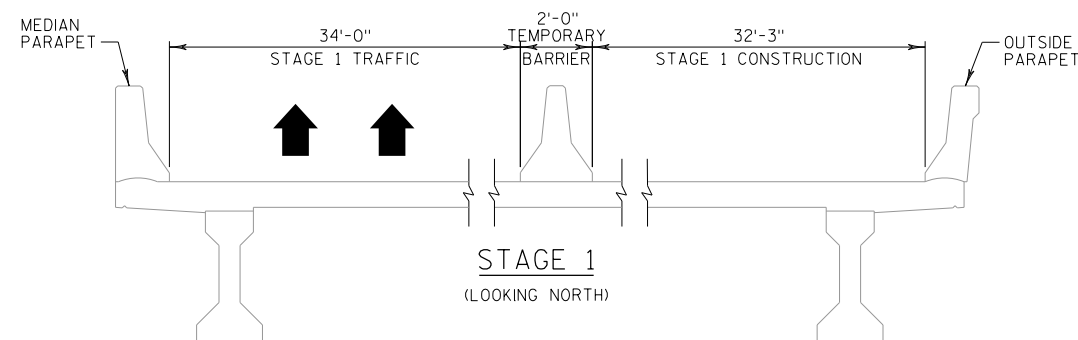
US\$41	
A.D.T.	= 38,350 (2014)
	= 46,550 (2034)

1. DECK REPAIR

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

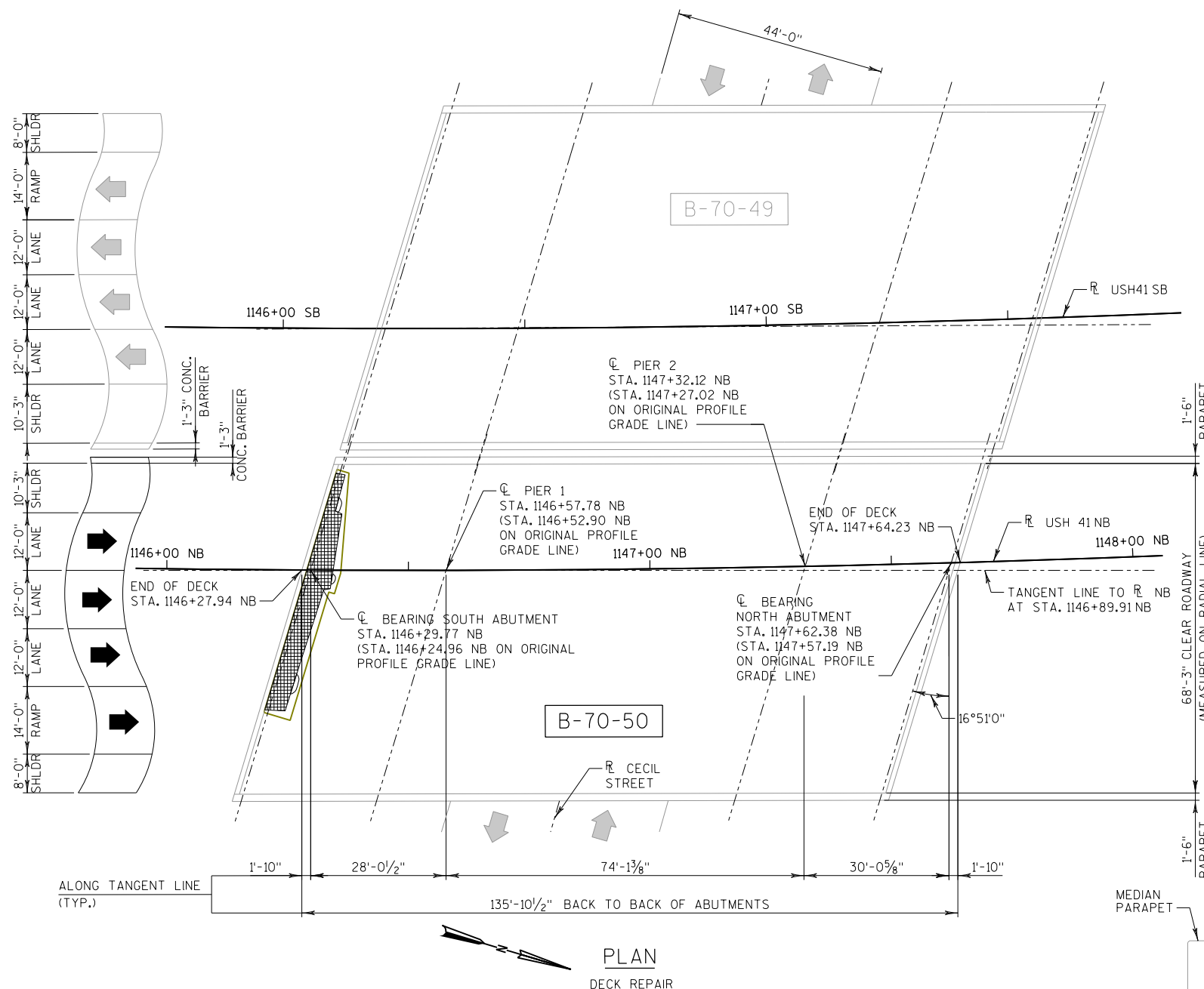
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER, DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND
QUANTITY OF REPAIRS.



STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.		DATE		REVISION		BY	
PLANS PREPARED BY:						1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION							
ACCEPTED						6/19/14	
		CHIEF STRUCTURES DESIGN ENGINEER				DATE	
STRUCTURE B-70-50							
USH 41 NORTHBOUND OVER CECIL STREET							
COUNTY		WINNEBAGO		TOWN/CITY/VILLAGE		NEENAH	
DESIGN SPEC. REHABILITATION N/A							
DESIGNED BY		AMZ		DESIGN CK'D.		JSR	
DRAWN BY		AMZ		PLANS CK'D.		JSR	
DECK REPAIR						SHEET 1 OF 172	



PLAN

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/19/13
INFRARED SURVEY TAKEN BY AECOM

DECK REPAIR AREAS		S.N. B-70-50		LEGEND			
ITEM	UNIT	QUANT.	%				
TOTAL AREA	yd ²	1061.7		DECK PREPARATION AREA		DELAMINATION	
SHADE/DEBRIS	yd ²	0				SPALL	
PREPARATION, DECKS, TYPE 1	yd ²	31.6	3.0	SHADE/DEBRIS		DEBOND	
PREPARATION, DECKS, TYPE 2	yd ²	23.7	2.2			ASPHALT PATCH	
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1			CONCRETE PATCH	

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- *
- *

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-50	LS	1
509.0301	PREPARATION DECKS TYPE 1	SY	35
509.0302	PREPARATION DECKS TYPE 2	SY	27
509.2000	FULL-DEPTH DECK REPAIR	SY	1
509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	4
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	350

● BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

* QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-124, IS A TWO SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 59.25 FEET AND AN OVERALL LENGTH OF 199.52 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS23 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS43 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

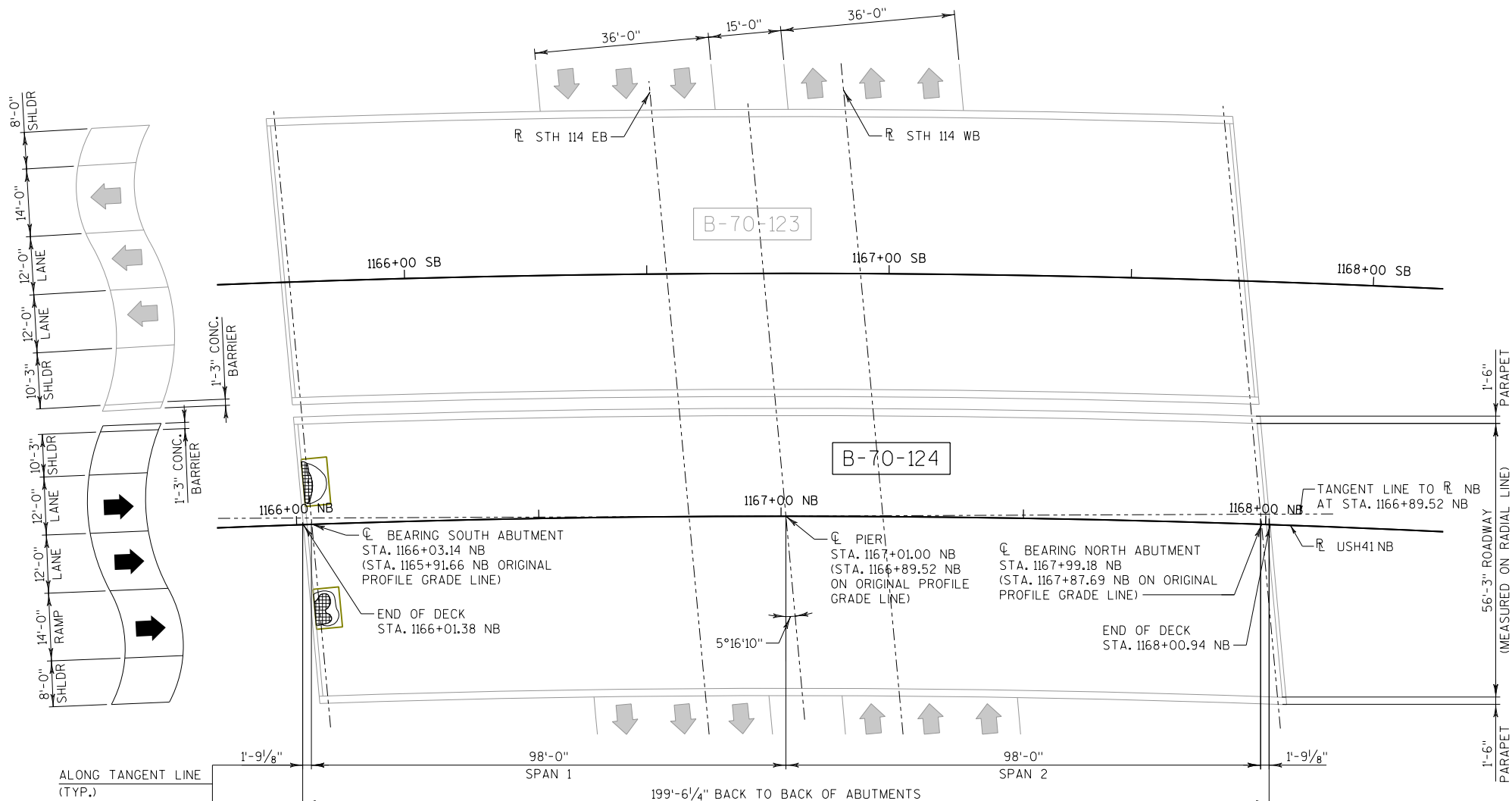
TRAFFIC DATA

USH41
A.D.T. = 38,350 (2014)
= 46,550 (2034)

STH114
A.D.T. = 19,700 (2010)

LIST OF DRAWINGS

1. DECK REPAIR

PLAN
DECK REPAIR

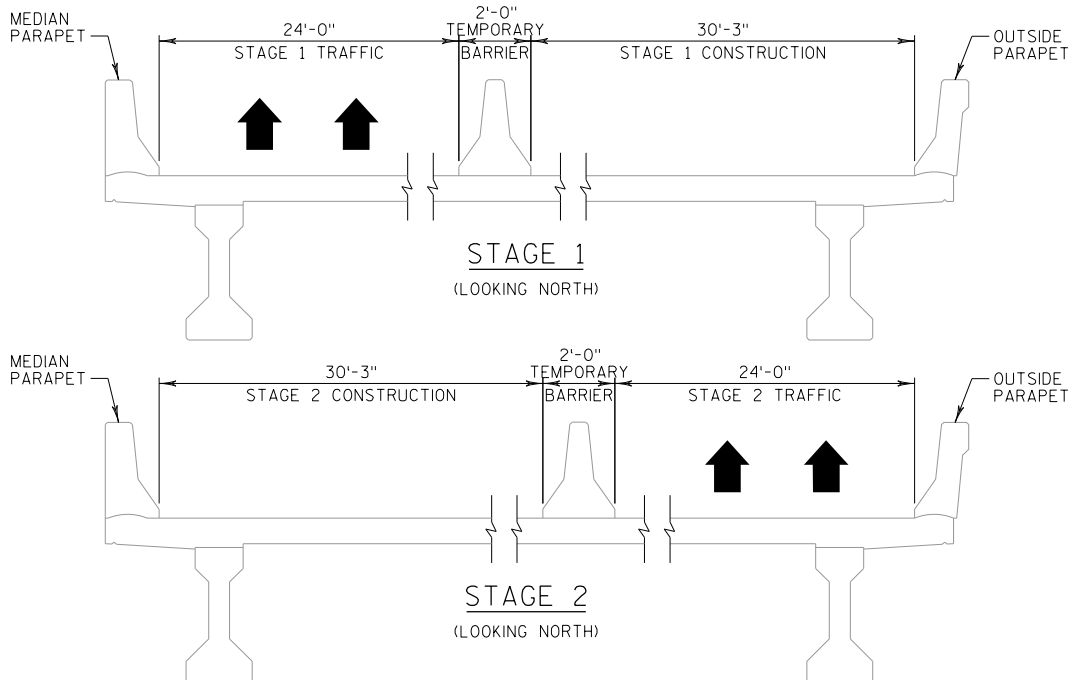
DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-124		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1314.4		DECK PREPARATION AREA	DELAMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	10.7	0.8		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	5.4	0.4	SHADE/DEBRIS	ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/19/13
INFRARED SURVEY TAKEN BY AECOM

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-124	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	12
* 509.0302	PREPARATION DECKS TYPE 2	SY	6
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	2
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	120



LEGEND

● BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

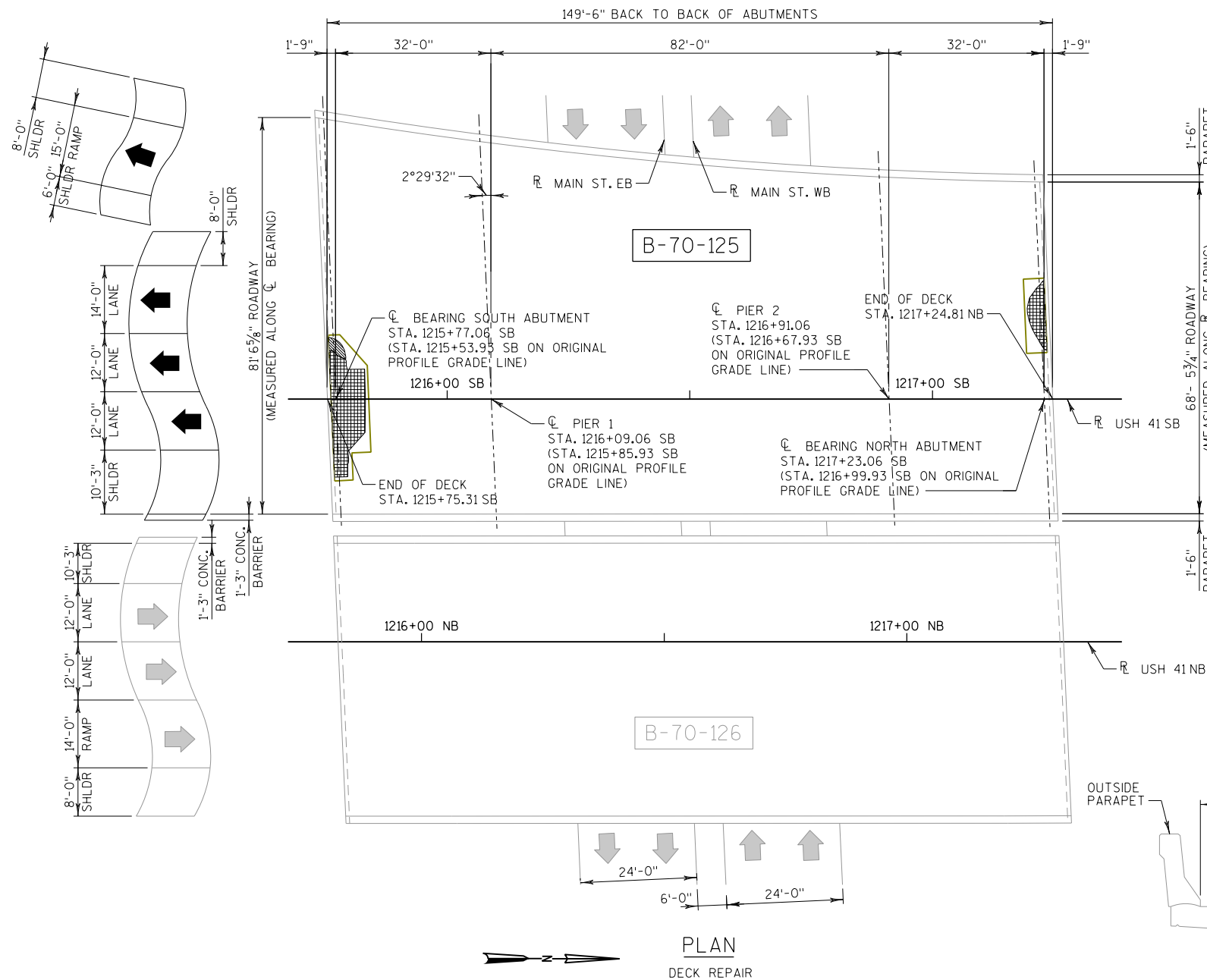
* QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF			
1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i>		DATE 6/19/14	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-70-124			
USH 41 NORTHBOUND OVER STH 114			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	NEENAH
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
DECK REPAIR			SHEET 1 OF 1 173



DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-49		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1273.3			
SHADE/DEBRIS	yd ²	0			
PREPARATION, DECKS, TYPE 1	yd ²	28.7	2.3		
PREPARATION, DECKS, TYPE 2	yd ²	21.5	1.7		
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		

DECK PREPARATION AREA		DEBRIS	
DELAMINATION		SPALL	
DEBOND		ASPHALT PATCH	
CONCRETE PATCH			

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-125	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	32
* 509.0302	PREPARATION DECKS TYPE 2	SY	24
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	4
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	320

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-125, IS A THREE SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH VARYING FROM 71.5 TO 84.6 FEET AND AN OVERALL LENGTH OF 149.50 FEET. THE ENTIRE DECK SURFACE TO BE SOUNDED AND REPAIRED WITH DECK PATCHING.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS23 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS52 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

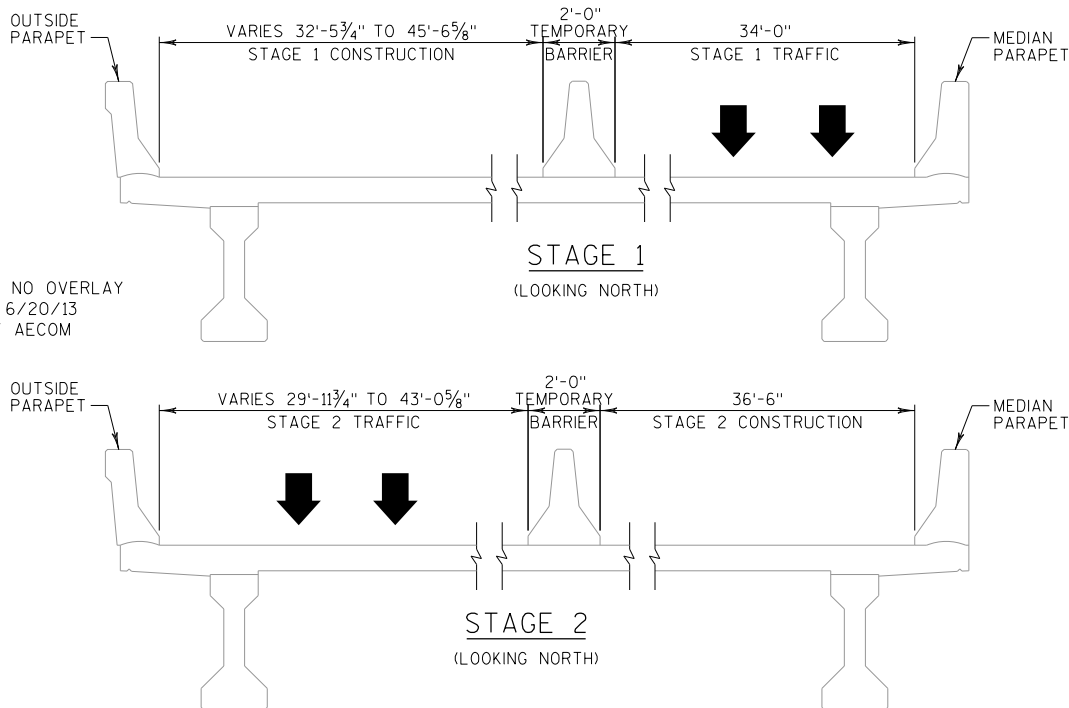
TRAFFIC DATA

USH41
A.D.T. = 43,550 (2014)
= 51,750 (2034)

MAIN STREET
A.D.T. = 9,000 (2010)

LIST OF DRAWINGS

- DECK REPAIR



NO.	DATE	REVISION	BY

PLANS PREPARED BY:	GRAEF 1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
ACCEPTED <i>William C. Dreher</i> CHIEF STRUCTURES DESIGN ENGINEER	DATE 6/19/14
STRUCTURE B-70-125	
USH 41 SB OVER MAIN STREET	
COUNTY WINNEBAGO	TOWN/CITY/VILLAGE NEENAH
DESIGN SPEC. REHABILITATION N/A	
DESIGNED BY AMZ	DESIGN CK'D. JSR
DRAWN BY AMZ	PLANS CK'D. JSR
DECK REPAIR	
SHEET 1 OF 1 174	

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-126, IS A THREE SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 59.25 FEET AND AN OVERALL LENGTH OF 149.50 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS25 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS53 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

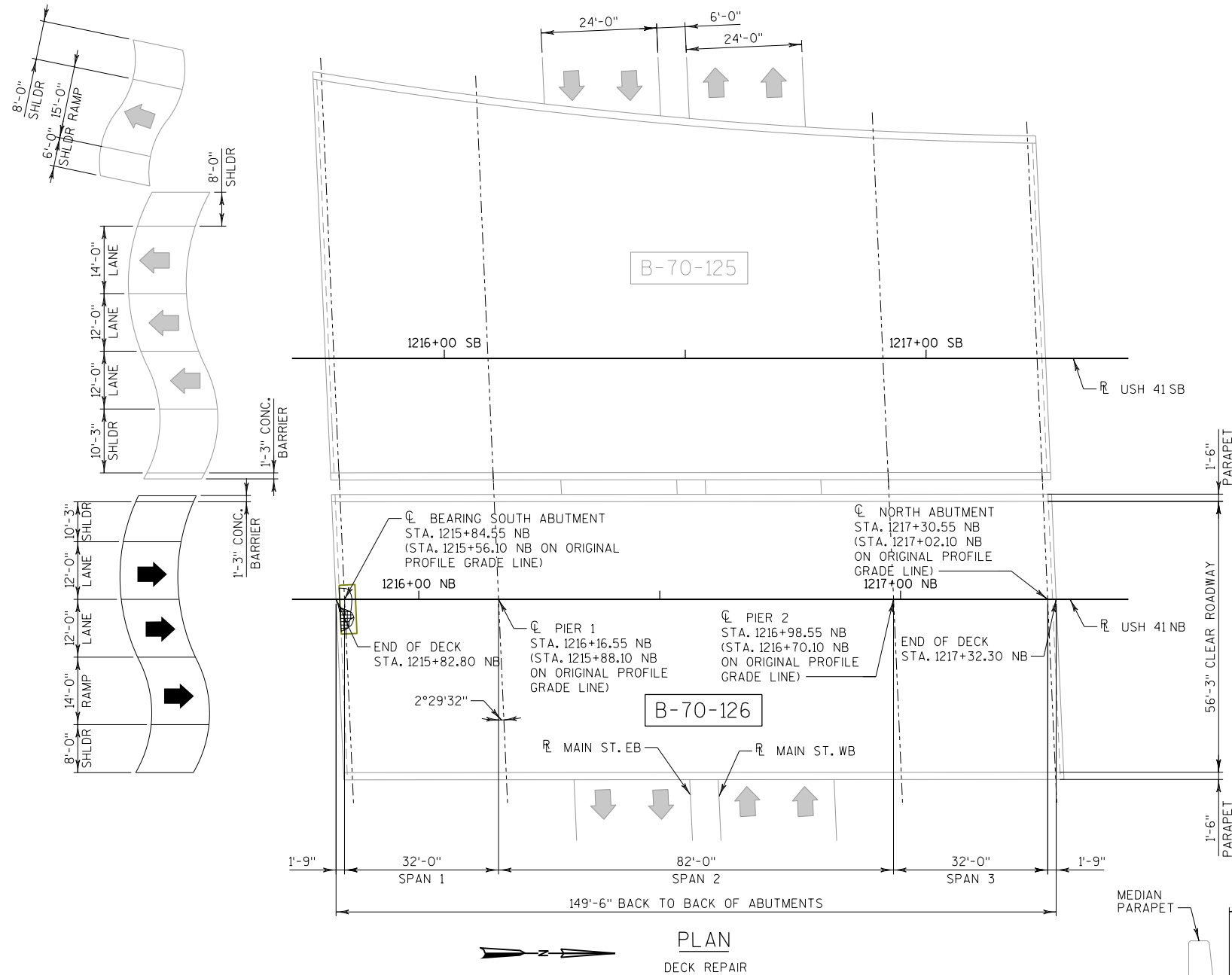
TRAFFIC DATA

USH41
A.D.T. = 41,300 (2014)
= 49,300 (2034)

MAIN STREET
A.D.T. = 9,000 (2010)

LIST OF DRAWINGS

1. DECK REPAIR



PLAN
DECK REPAIR

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/20/13
INFRARED SURVEY TAKEN BY AECOM

DECK REPAIR

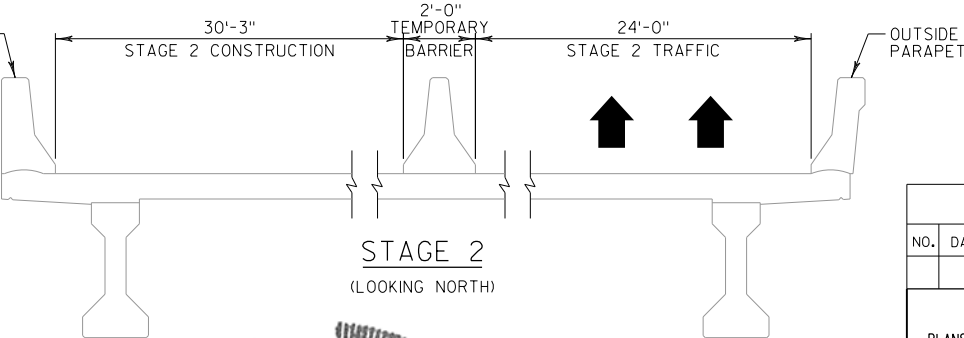
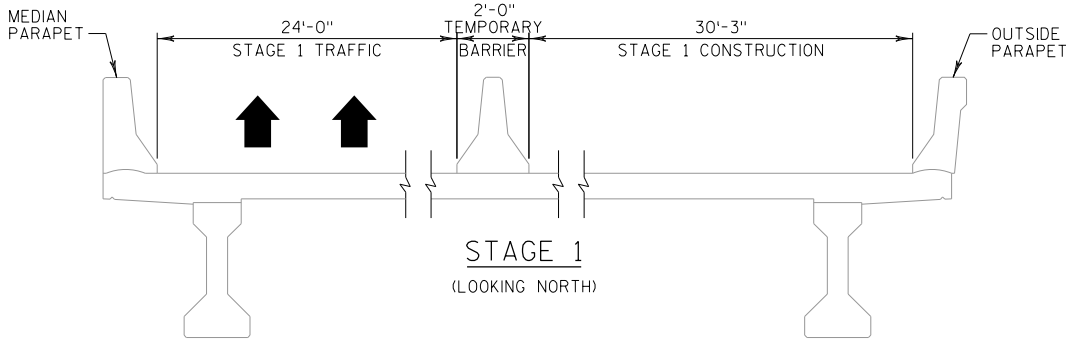
DECK REPAIR AREAS				S.N. B-70-126				LEGEND			
ITEM	UNIT	QUANT.	%	DECK PREPARATION AREA		SHADE/DEBRIS		DECK PREPARATION AREA		DECK PREPARATION AREA	
TOTAL AREA	yd ²	985.0									
SHADE/DEBRIS	yd ²	0									
PREPARATION, DECKS, TYPE 1	yd ²	3.7	0.4								
PREPARATION, DECKS, TYPE 2	yd ²	1.9	0.2								
FULL DEPTH DECK REPAIR	yd ²	1.0	0.1								

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-126	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	5
* 509.0302	PREPARATION DECKS TYPE 2	SY	3
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	50

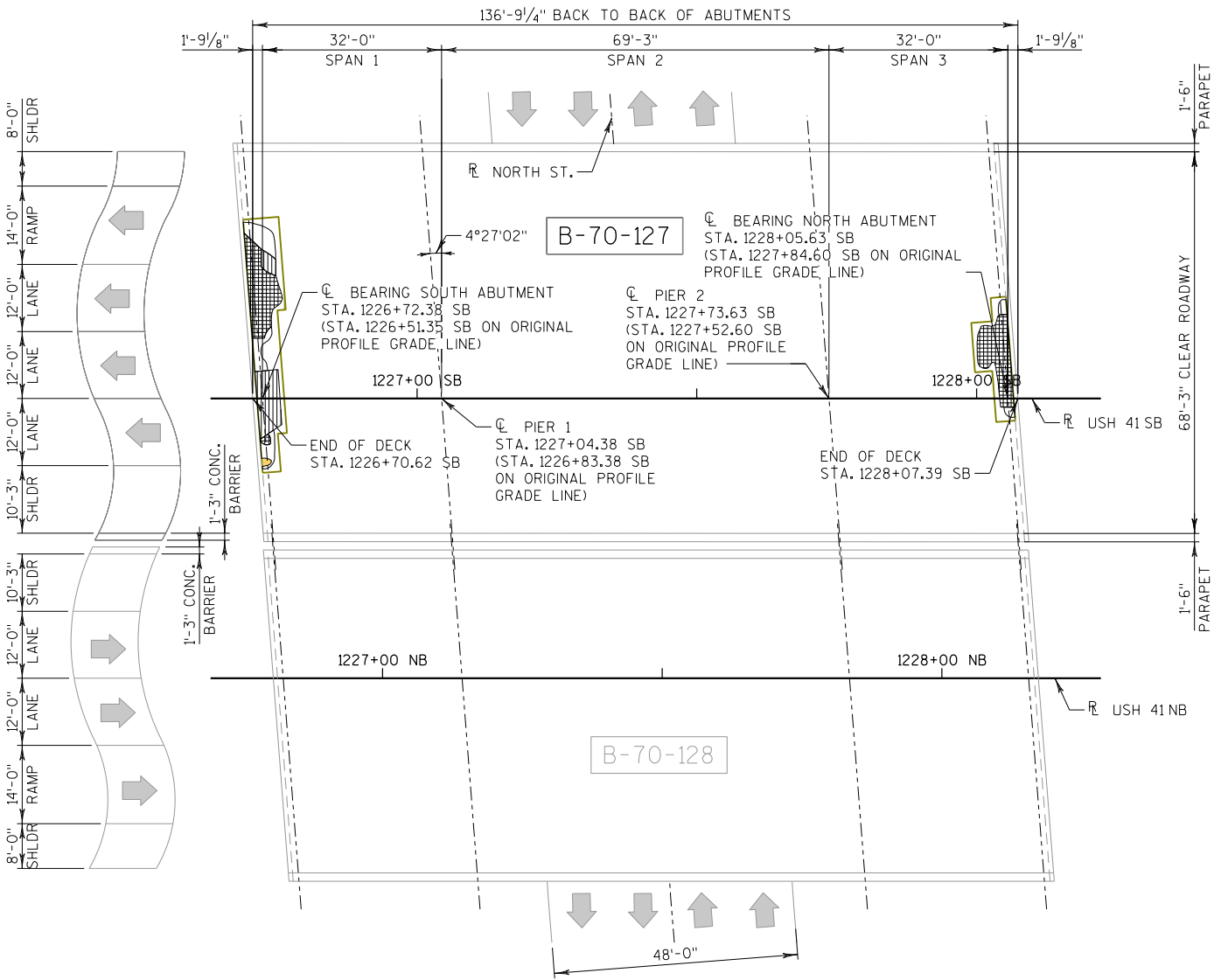
LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).
- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.



STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF			
1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> 6/19/14 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-70-126			
USH 41 NORTHBOUND OVER MAIN STREET			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	NEENAH
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
DECK REPAIR			SHEET 1 OF 1 175



PLAN
DECK REPAIR
DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-127		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1081.4		DECK PREPARATION AREA	
SHADE/DEBRIS	yd ²	0		SHADE/DEBRIS	
PREPARATION, DECKS, TYPE 1	yd ²	37.3	3.4	DELMINATION	
PREPARATION, DECKS, TYPE 2	yd ²	28.0	2.6	SPALL	
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1	DEBOND	
				ASPHALT PATCH	
				CONCRETE PATCH	

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/20/13
INFRARED SURVEY TAKEN BY AECOM

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-127	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	42
* 509.0302	PREPARATION DECKS TYPE 2	SY	31
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASORY OVERLAY DECKS	CY	5
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	420

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).
- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-127, IS A THREE SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 71.25 FEET AND AN OVERALL LENGTH OF 136.77 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS22 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS47 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f_c = 4,000 PSI

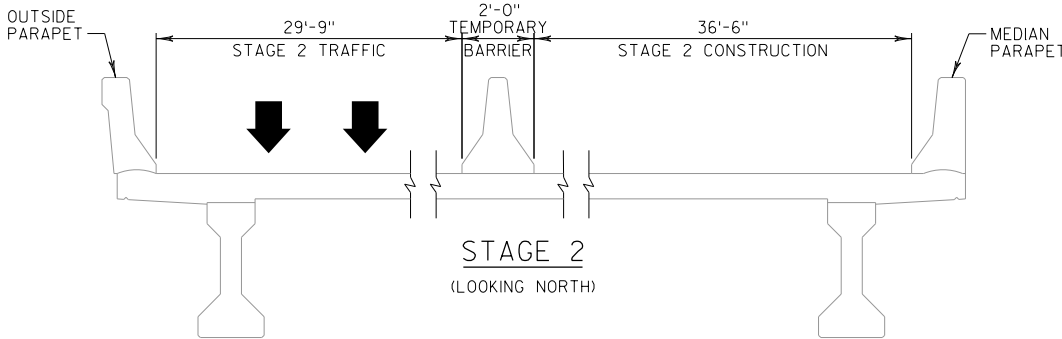
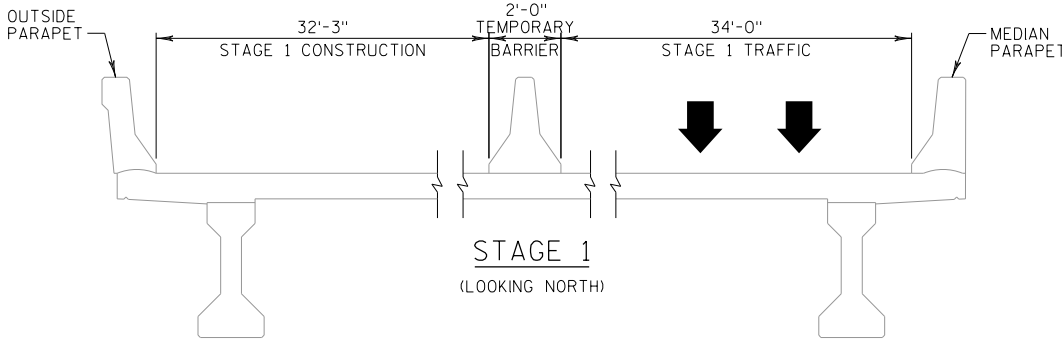
TRAFFIC DATA

USH41
A.D.T. = 43,550 (2014)
= 51,750 (2034)

NORTH STREET
A.D.T. 2,800 (2010)

LIST OF DRAWINGS

- DECK REPAIR



NO.		DATE	REVISION		BY	
PLANS PREPARED BY:			GRÄEF			
			1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION						
ACCEPTED			<i>William C. Dreher</i> DSE		6/19/14	
			CHIEF STRUCTURES DESIGN ENGINEER		DATE	
STRUCTURE B-70-127						
USH 41 SOUTHBOUND OVER NORTH STREET						
COUNTY		WINNEBAGO		TOWN/CITY/VILLAGE		
				NEENAH		
DESIGN SPEC. REHABILITATION N/A						
DESIGNED BY		DESIGN CK'D.		DRAWN BY		
AMZ		JSR		AMZ		
				PLANS CK'D.		
				JSR		
DECK REPAIR				SHEET 1 OF 1 176		

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-128, IS A THREE SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 59.25 FEET AND AN OVERALL LENGTH OF 136.77 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS22 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS47 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

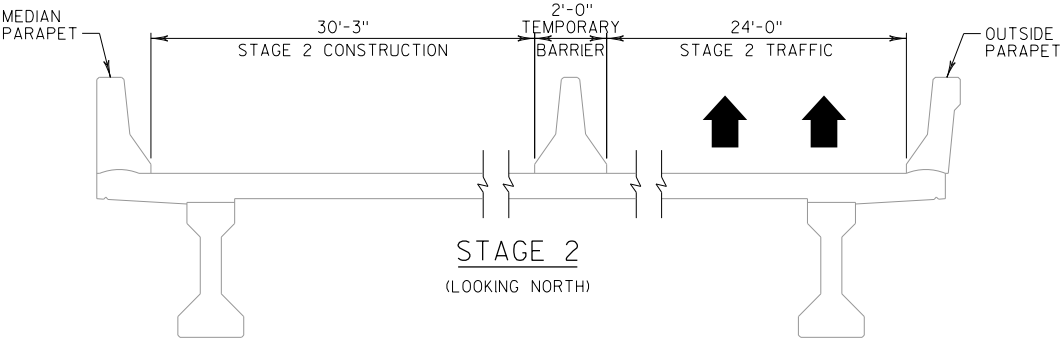
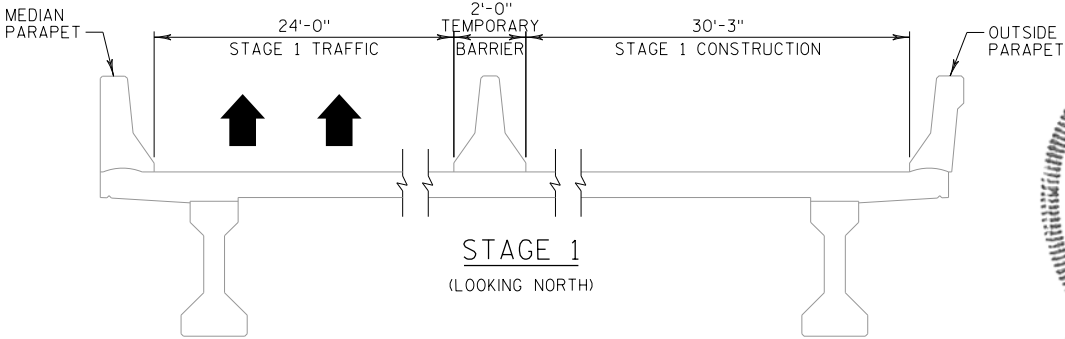
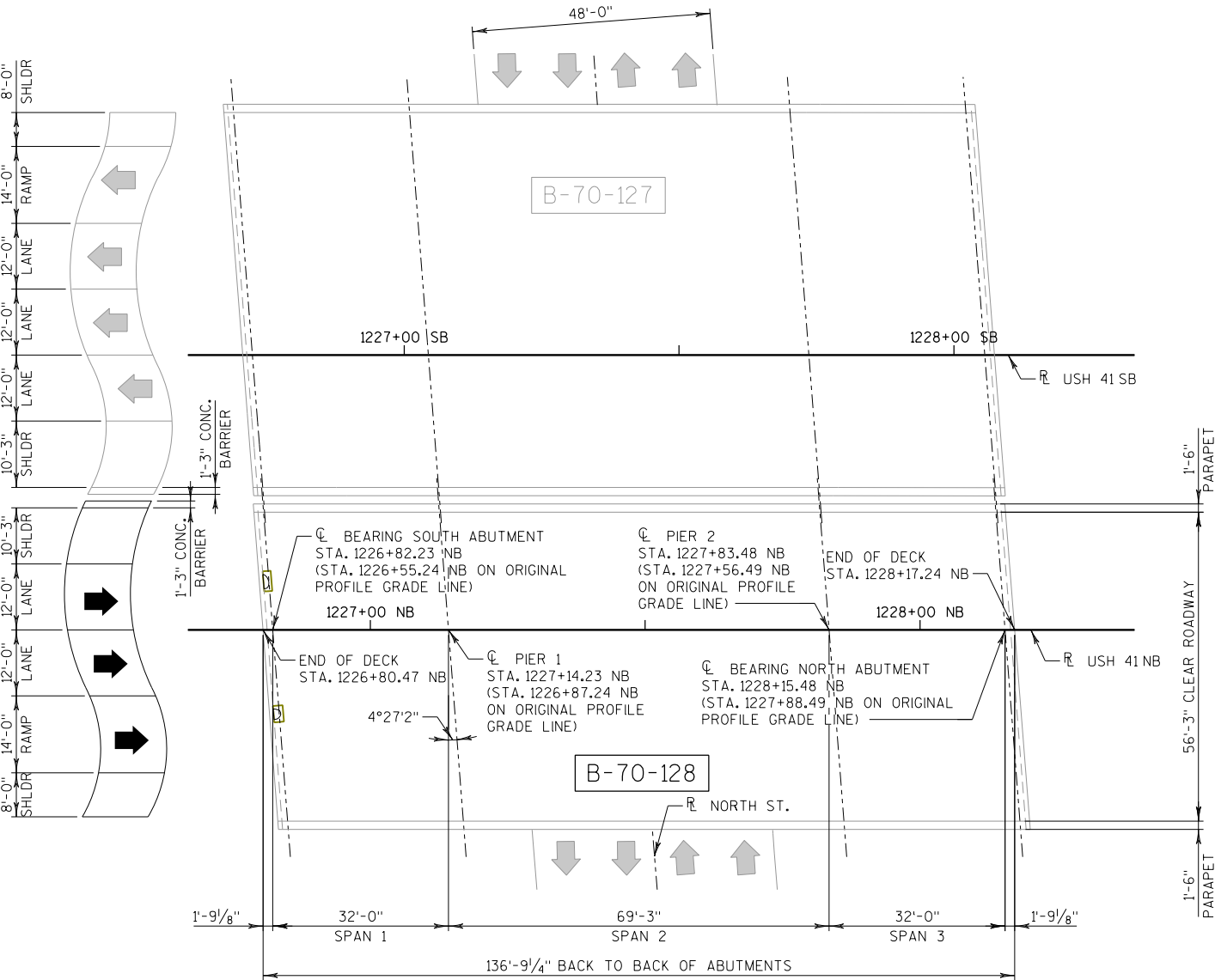
TRAFFIC DATA

USH41
A.D.T. = 43,550 (2014)
= 51,750 (2034)

NORTH STREET
A.D.T. 2,800 (2010)

LIST OF DRAWINGS

1. DECK REPAIR



DECK REPAIR AREAS		S.N. B-70-128		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	901.3		DECK PREPARATION AREA SHADE/DEBRIS	DELMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	1.2	0.1		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	0.3	<0.1		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	0.5	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/20/13
INFRARED SURVEY TAKEN BY AECOM

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-128	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	2
* 509.0302	PREPARATION DECKS TYPE 2	SY	1
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	20

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF 1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED <i>William C. Dreher</i> 6/19/14 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-70-128			
USH 41 NORTHBOUND OVER NORTH STREET			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	NEENAH
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
DECK REPAIR			SHEET 1 OF 1 177

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-129, IS A TWO SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 59 FEET AND AN OVERALL LENGTH OF 208.6 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS22 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS43 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 45,050 (2014)
= 52,200 (2034)

CTH II
A.D.T. 7,500 (2010)

LIST OF DRAWINGS

1. DECK REPAIR



DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-129		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1367.4		DECK PREPARATION AREA SHADE/DEBRIS	DELAMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	2.2	0.2		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	1.1	<0.1		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	0.5	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/20/13
INFRARED SURVEY TAKEN BY AECOM

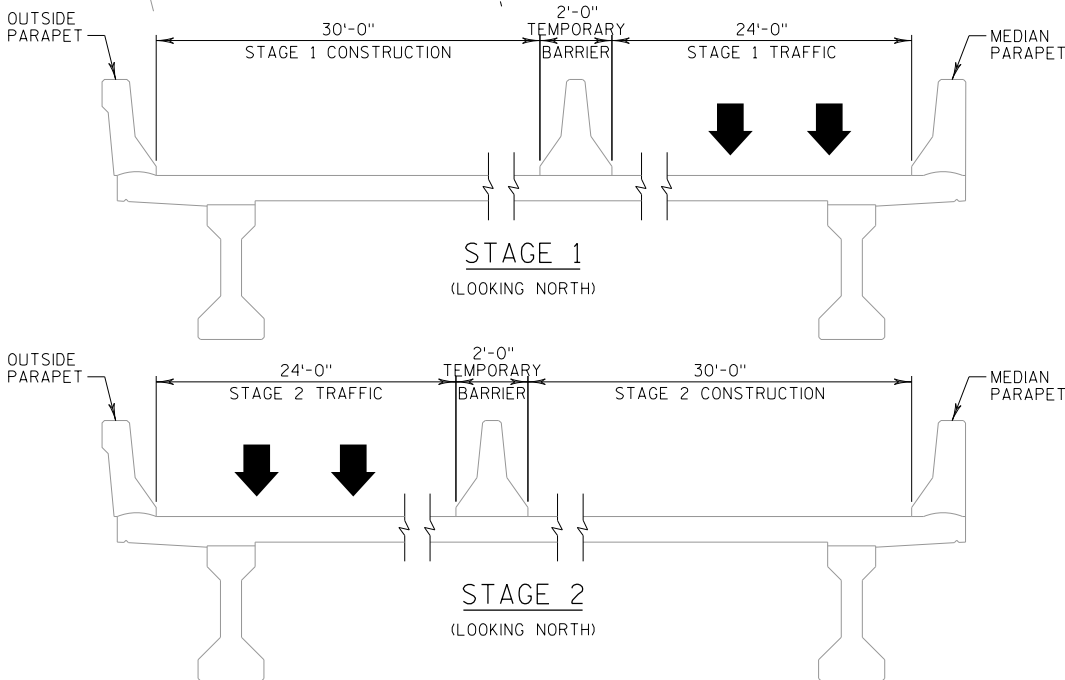
ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-129	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	3
* 509.0302	PREPARATION DECKS TYPE 2	SY	2
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	30

LEGEND

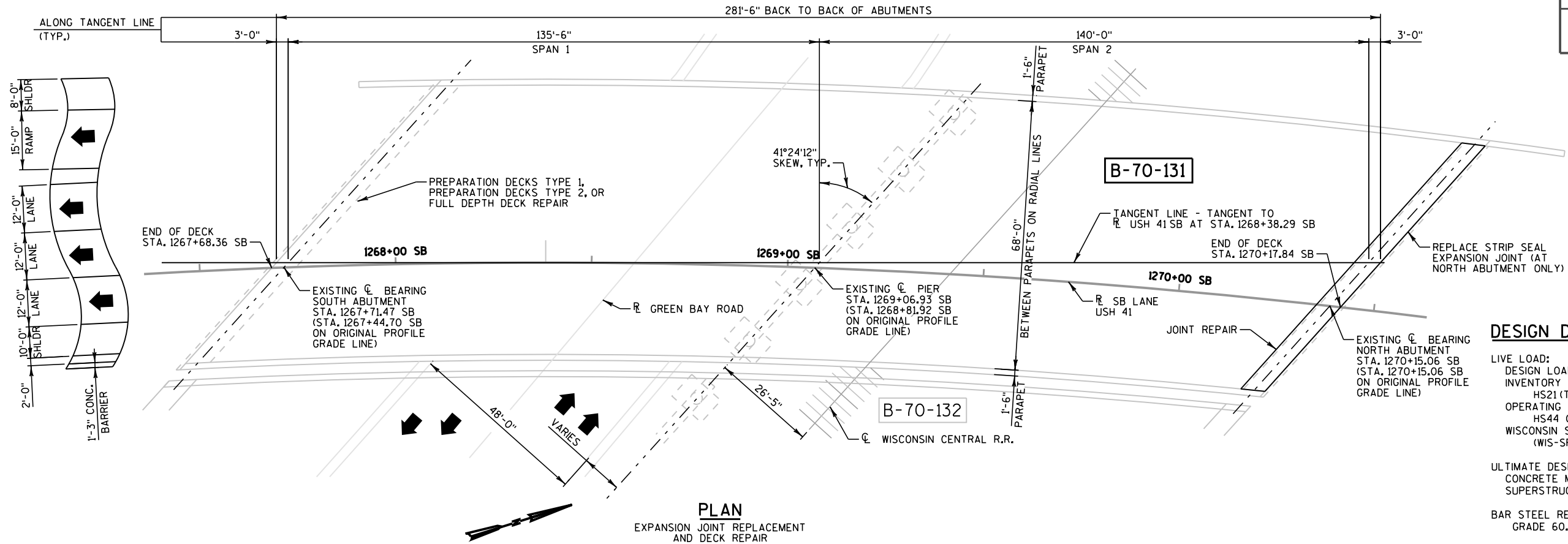
● BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

* QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.



STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI12/8/2014)
INVENTORY RATING:
HS21 (TAKEN FROM HSI12/8/2014)
OPERATING RATING FACTOR:
HS44 (TAKEN FROM HSI12/8/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS (TAKEN FROM HSI12/8/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY
SUPERSTRUCTURE.....f'c = 4,000 PSI

BAR STEEL REINFORCEMENT,
GRADE 60.....fy = 60,000 PSI

CONCRETE MASONRY.....f'c = 4,000 PSI

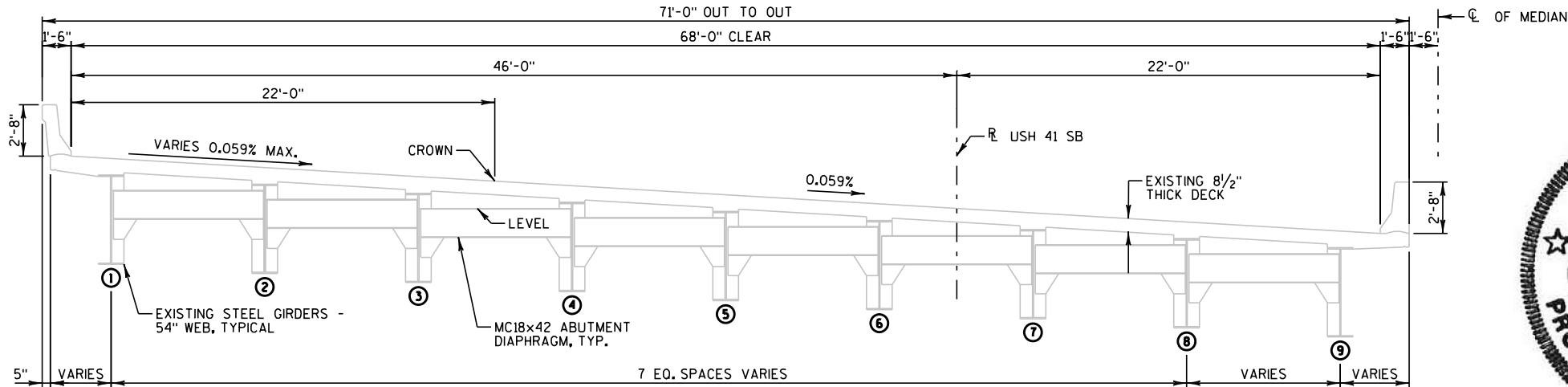
TRAFFIC DATA

USH41
A.D.T. = 45,050 (2014)
= 52,200 (2034)

GREEN BAY ROAD
A.D.T. = 4,700 (2010)

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND GENERAL NOTES
3. CONCRETE DETAILS
4. STRIP SEAL EXPANSION JOINT
5. STRIP SEAL EXPANSION JOINT
6. DECK REPAIR



CROSS SECTION THRU B-70-131
(LOOKING NORTH)



12-8-2014

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY
PLANS PREPARED BY:		GRAEF	1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	<i>William C. Dreher</i> KAR		12/10/14
CHIEF STRUCTURES DESIGN ENGINEER		DATE	
STRUCTURE B-70-131			
USH 41 SB OVER GREEN BAY ROAD			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	MENASHA
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KGW	DESIGN CK'D.	AL
DRAWN BY	AMZ	PLANS CK'D.	JSR
GENERAL PLAN		SHEET 1 OF 6 179	

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-131	LS	1
502.3100	EXPANSION DEVICE B-70-131	LS	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	41
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	2040
* 509.0301	PREPARATION DECKS TYPE 1	SY	4
* 509.0302	PREPARATION DECKS TYPE 2	SY	1
509.1000	JOINT REPAIR	SY	39
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	17
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	40

LEGEND

● BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

* QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

GENERAL NOTES

THE PROPOSED WORK INCLUDES JOINT REPAIR AND DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM, "EXPANSION DEVICE B-70-131".

THE EXISTING STRUCTURE, B-70-131, IS A TWO SPAN STEEL PLATE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 71.0 FEET AND AN OVERALL LENGTH OF 281.5 FEET. THE ENTIRE DECK SURFACE TO BE REPAIRED.

EXPANSION JOINT ASSEMBLIES INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR IN THE LUMP SUM BID PRICE BID AS "EXPANSION DEVICE B-70-131"

INFORMATION ON THESE DRAWINGS RELATED TO THE EXISTING BRIDGE IS BASED UPON AVAILABLE DRAWINGS FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

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

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2 AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER.

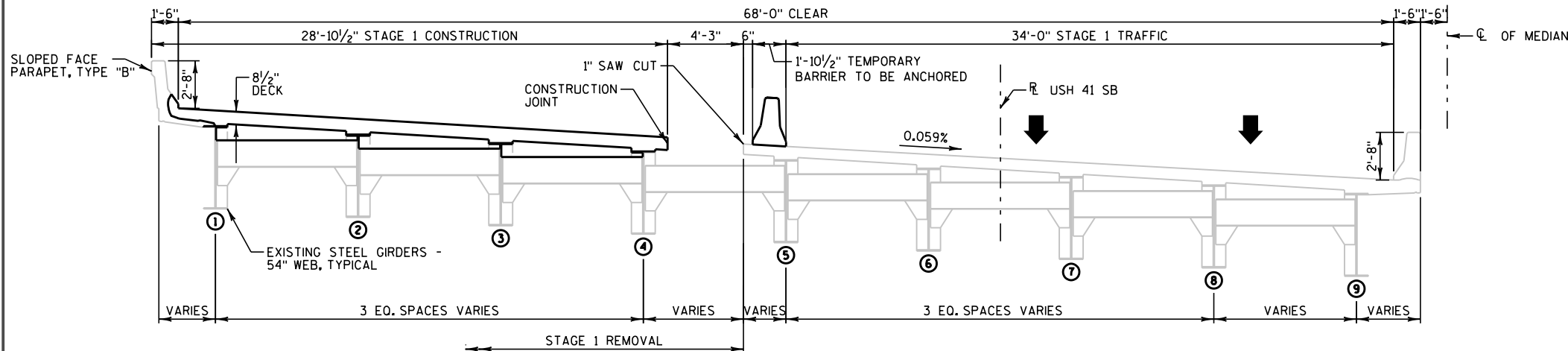
USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE NEW DECK CONCRETE ASSOCIATED WITH THE JOINT REPLACEMENT, FRONT FACE OF THE PARAPETS, PAVING BLOCKS, AND DECK REPAIR AREAS.

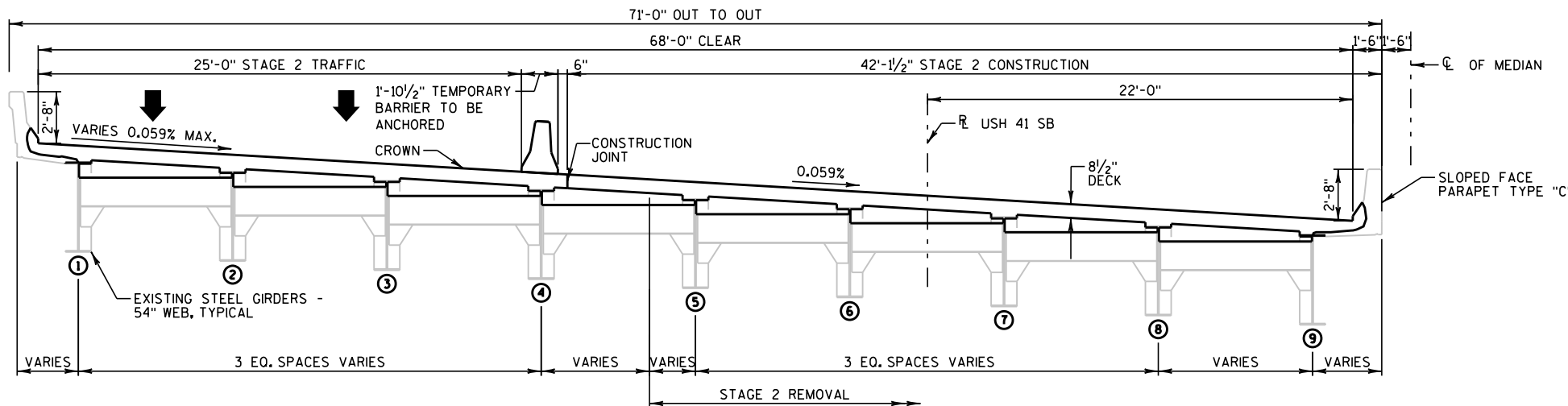
VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE BUREAU OF STRUCTURES SECTION FOR REVIEW.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

**CROSS SECTION STAGE 1 - AT BOTH ABUTMENTS**

(LOOKING NORTH)

**CROSS SECTION STAGE 2 - AT BOTH ABUTMENTS**

(LOOKING NORTH)

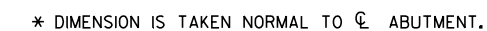
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-131			
DRAWN BY		AMZ	PLANS CK'D. JSR
QUANTITIES AND GENERAL NOTES		SHEET 2 OF 6 180 USH 41	

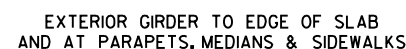
FILE =
SCALE =



BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGT H	BAR SERIES	BENT	LOCATION
A400	X	29	3'-2"		X	PAVING NOTCH STIRRUP STAGE 1
A501	X	15	8'-0"			PAVING NOTCH TRANS. STAGE 1
A502	X	29	2'-11"		X	PAVING NOTCH DOWEL STAGE 1
A410	X	56	3'-2"		X	PAVING NOTCH STIRRUP STAGE 2
A511	X	24	8'-0"			PAVING NOTCH TRANS. STAGE 2
A512	X	56	2'-11"		X	PAVING NOTCH DOWEL STAGE 2
S400	X	15	5'-2"		X	DIAPH. STIRRUP STAGE 1
S401	X	29	5'-8"		X	DIAPH. STIRRUP STAGE 1
S502	X	2	32'-1"			DECK TRANS. STAGE 1
S603	X	20	9'-3"			DIAPH. TRANS. BOTT. STAGE 1
S404	X	8	9'-8"			DIAPH. TRANS. TOP STAGE 1
S405	X	8	9'-8"			TRANS. BARS AT JOINT STAGE 1
S410	X	25	5'-2"		X	DIAPH. STIRRUP STAGE 2
S411	X	37	5'-8"		X	DIAPH. STIRRUP STAGE 2
S512	X	2	56'-5"			DECK TRANS. STAGE 2
S613	X	15	9'-3"			DIAPH. TRANS. BOTT. STAGE 2, GIRDER 5-8
S414	X	6	9'-8"			DIAPH. TRANS. TOP STAGE 2, GIRDER 5-8
S415	X	6	9'-8"			TRANS. BARS AT JOINT STAGE 2, GIRDER 5-8
S616	X	5	3'-11"			DIAPH. TRANS. BOTT. STAGE 2, GIRDER 8-9
S417	X	2	4'-2"			DIAPH. TRANS. TOP STAGE 2, GIRDER 8-9
S418	X	2	4'-2"			TRANS. BARS AT JOINT STAGE 2, GIRDER 8-9

PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END
(LOOKING NORTH)

FILE-
SCALE =



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS
SYM. ABOUT C JOINT UNLESS OTHERWISE SHOWN OR NOTED



1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS, SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8" ϕ x 6 3/4" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4" ϕ THREADED ROD WITH 2 NUTS AND 2 PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" x 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 1/2" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" x 10 1/2" x 2'-2" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. 3/4" ϕ x 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE, RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4" ϕ x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. 3/4" ϕ x 2 1/4" GALVANIZED THREADED COUPLING.
10. NOT USED
11. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

ONE FIELD SPLICE IS 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 & SWEEP.

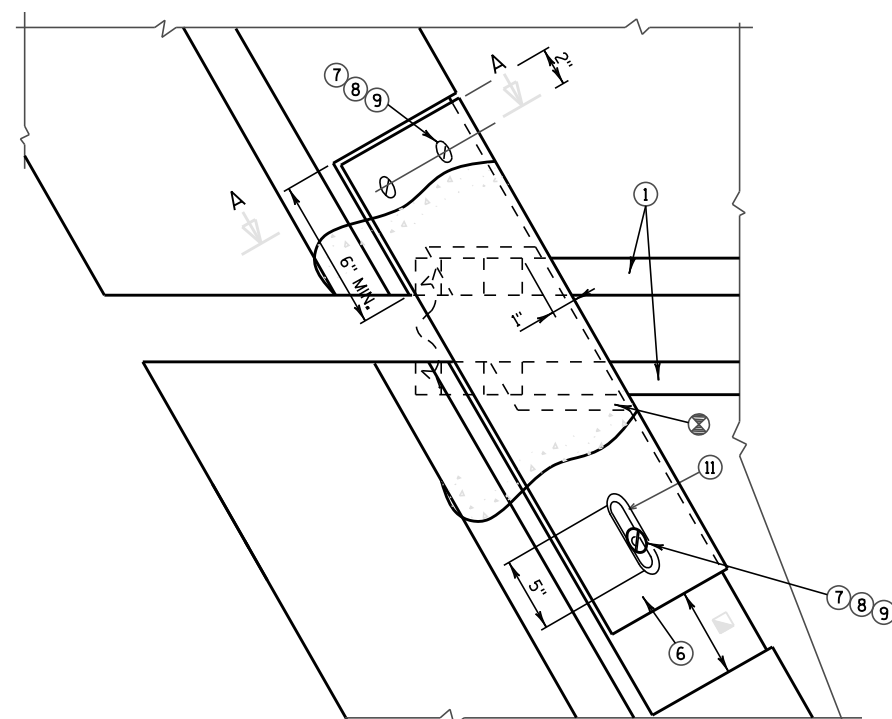
FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

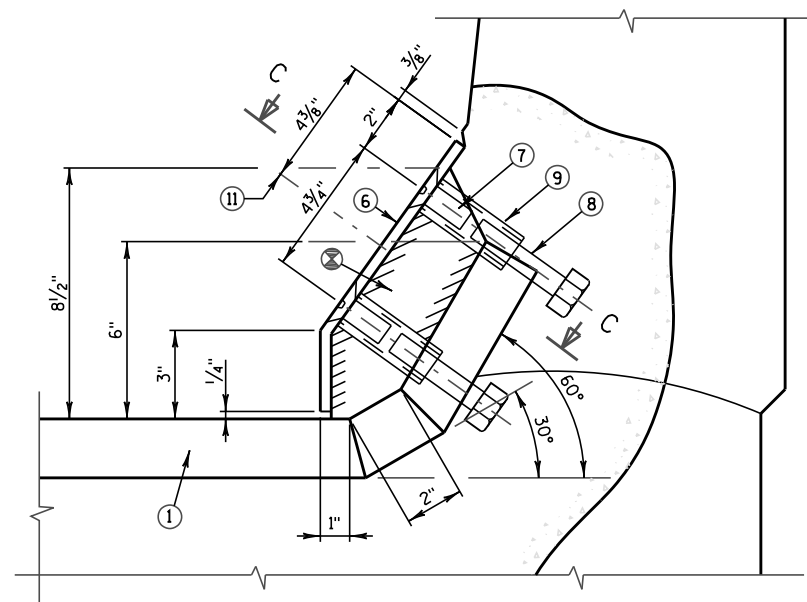
ANCHOR SYSTEM NO. 8 & NO. 9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-157".

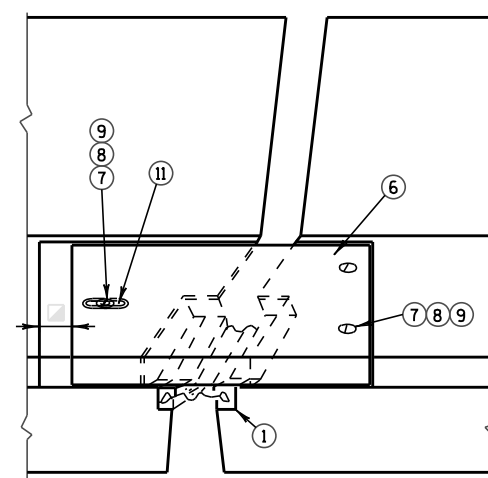
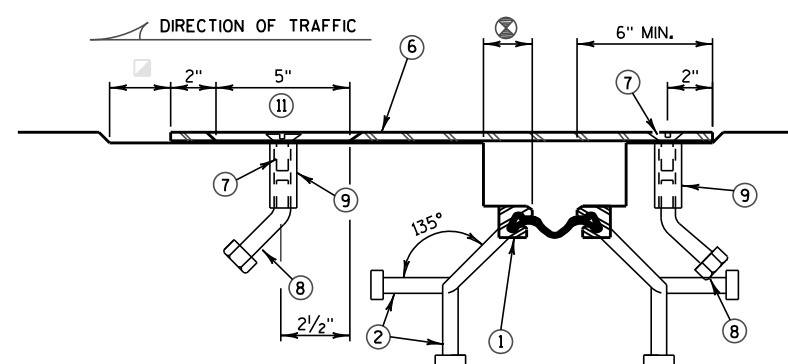
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-131			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 4 OF 6 182 USH 41	



PLAN AT PARAPET



SECTION A-A

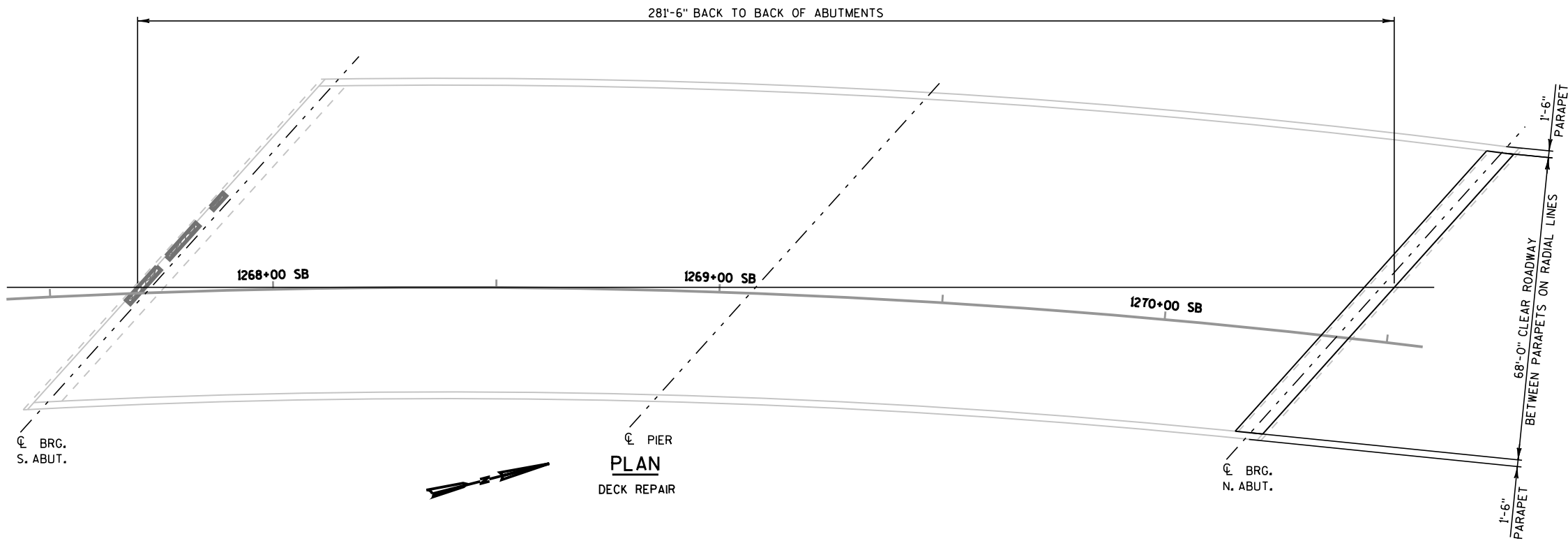
VIEW OF PARAPET PLATES
FROM ROADWAY

SECTION C-C

LEGEND

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"
- ⊙ SEE SHEET 4 FOR LEGEND

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-131			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 5 OF 6 183 USH 41	



PLAN
DECK REPAIR

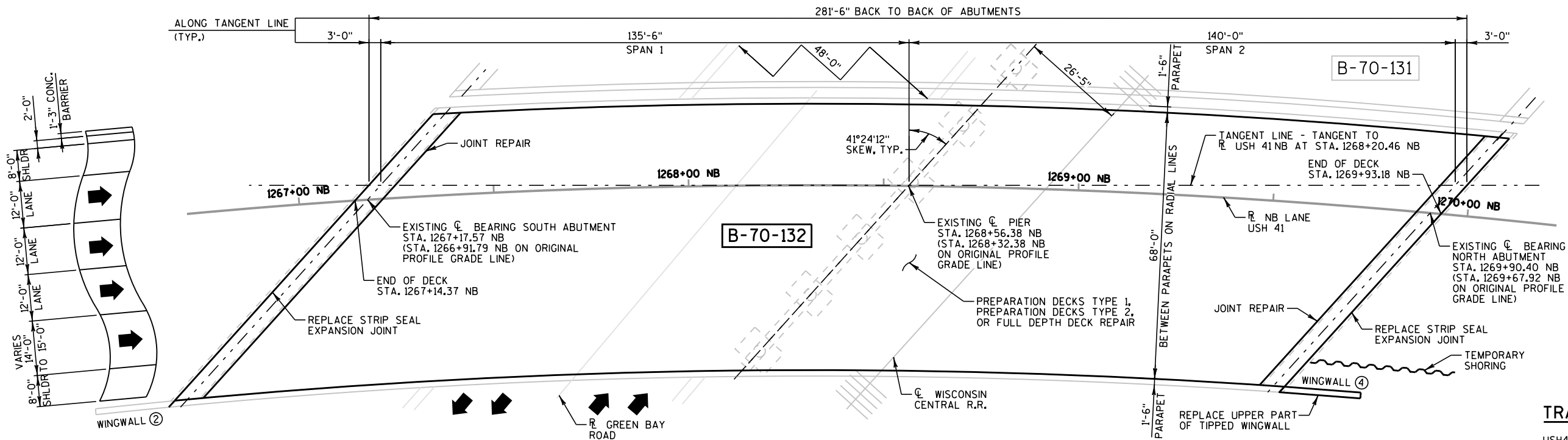
DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-131		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	2179.7		DECK PREPARATION AREA	
SHADE/DEBRIS	yd ²	0		SHADE/DEBRIS	
PREPARATION, DECKS, TYPE 1	yd ²	3.3	0.2	DELAMINATION	
PREPARATION, DECKS, TYPE 2	yd ²	0.8	<0.1	SPALL	
FULL DEPTH DECK REPAIR	yd ²	0.5	<0.1	DEBOND	
				ASPHALT PATCH	
				CONCRETE PATCH	

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/20/13
INFRARED SURVEY TAKEN BY AECOM

- FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-131			
DRAWN BY		AMZ	PLANS CK'D. JSR
DECK REPAIR		SHEET 6 OF 6 184 USH 41	



PLAN
EXPANSION JOINT REPLACEMENT,
DECK REPAIR, AND WINGWALL REPAIR



DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI12/8/2014)
INVENTORY RATING:
HS21 (TAKEN FROM HSI12/8/2014)
OPERATING RATING:
HS44 (TAKEN FROM HSI12/8/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS (TAKEN FROM HSI12/8/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY
SUPERSTRUCTURE.....f'c = 4,000 PSI

CONCRETE MASONRY
SUBSTRUCTURE.....f'c = 3,500 PSI

BAR STEEL REINFORCEMENT,
GRADE 60.....fy = 60,000 PSI

CONCRETE MASONRY.....f'c = 4,000 PSI

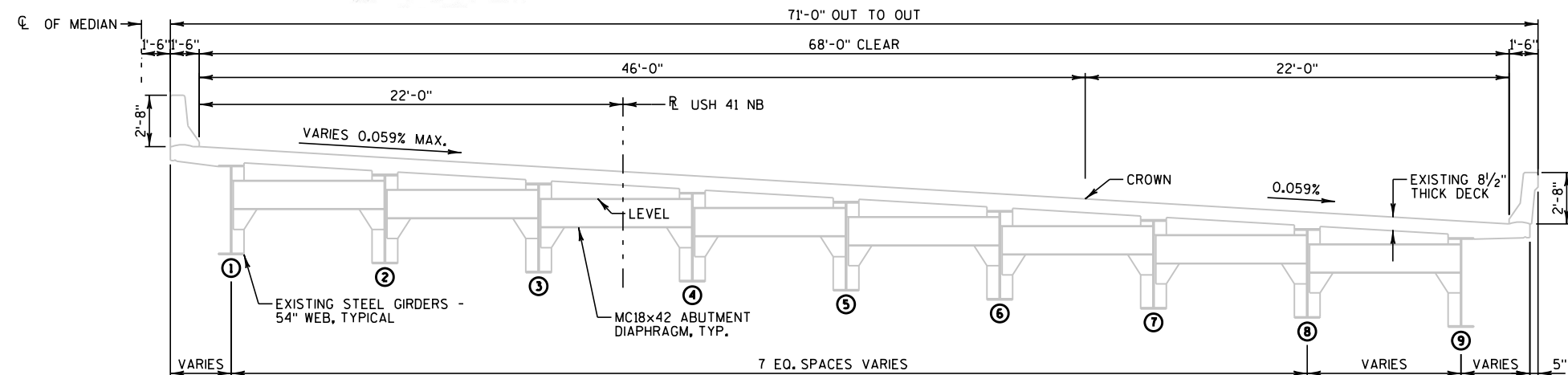
TRAFFIC DATA

USH41
A.D.T. = 45,050 (2014)
= 52,200 (2034)

GREEN BAY ROAD
A.D.T. = 4,700 (2010)

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND GENERAL NOTES
3. CONCRETE DETAILS
4. CONCRETE DETAILS
5. STRIP SEAL EXPANSION JOINT
6. STRIP SEAL EXPANSION JOINT
7. CONCRETE REMOVAL DETAILS
8. EAST WINGWALL
9. SLOPED FACE PARAPET
10. DECK REPAIR



CROSS SECTION THRU B-70-132
(LOOKING NORTH)

STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY

PLANS PREPARED BY: GRAEF		1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i>		KAR 12/10/14 DATE	
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-70-132			
USH 41 NB OVER GREEN BAY ROAD			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	MENASHA
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	KGW	DESIGN CK'D.	AL
DRAWN BY	AMZ	PLANS CK'D.	JSR
GENERAL PLAN			SHEET 1 OF 10 185

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	NORTH ABUT.	SUPER	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-132	LS	-	-	1
203.0200	REMOVING OLD STRUCTURE STA. 1269+90	LS	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-70-132	LS	-	-	1
210.0100	BACKFILL STRUCTURE	CY	45	-	45
502.0100	CONCRETE MASONRY BRIDGES	CY	9	-	9
502.3100	EXPANSION DEVICE B-70-132	LS	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	8	89	97
502.5002	MASONRY ANCHORS TYPE L NO. 4 BARS	EACH	15	-	15
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	37	-	37
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1250	4470	5720
* 509.0301	PREPARATION DECKS TYPE 1	SY	-	31	31
* 509.0302	PREPARATION DECKS TYPE 2	SY	-	23	23
509.1000	JOINT REPAIR	SY	-	87	87
509.2000	FULL-DEPTH DECK REPAIR	SY	-	1	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	-	39	39
511.1200	TEMPORARY SHORING B-70-132	SF	215	-	215
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3	-	3
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	1	-	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	-	310	310

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR JOINT REPAIR, PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).
- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

STATE PROJECT NUMBER

1124-54-60

GENERAL NOTES

THE PROPOSED WORK INCLUDES JOINT REPAIR, DECK REPAIR, AND WINGWALL REPAIR.

DRAWINGS NOT TO BE SCALED.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

THE EXISTING ROADWAY SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES FOR THE ABUTMENT WINGWALL REPLACEMENT.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

ANY EXCAVATION REQUIRED TO COMPLETE THE PAVING BLOCK AT ABUTMENTS IS INCIDENTAL TO THE BID ITEM, "EXPANSION DEVICE B-70-132".

THE EXISTING STRUCTURE, B-70-132, IS A TWO SPAN STEEL PLATE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 71.0 FEET AND AN OVERALL LENGTH OF 281.5 FEET. THE ENTIRE DECK SURFACE TO BE REPAIRED.

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

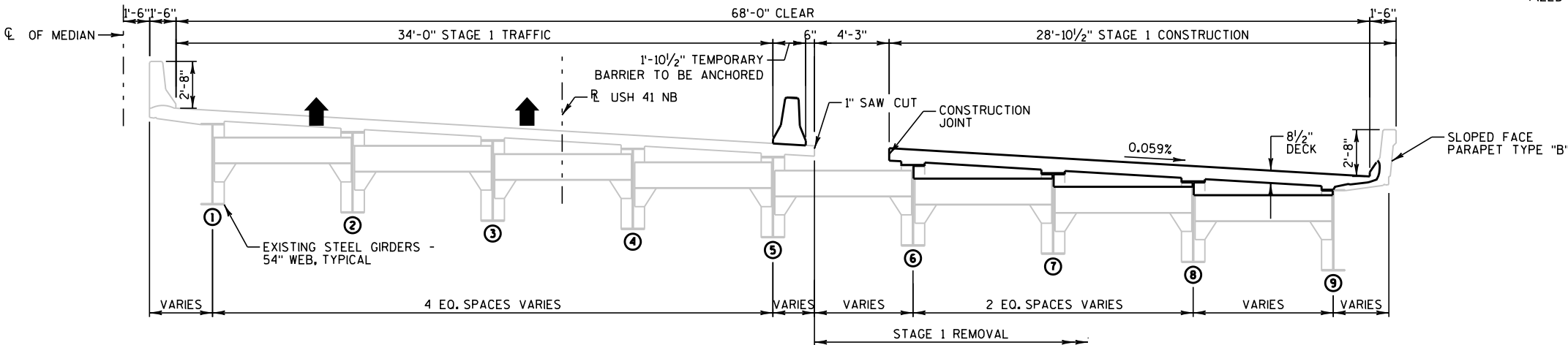
PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER, DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

USE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE NEW DECK CONCRETE ASSOCIATED WITH THE JOINT REPLACEMENT, FRONT FACE OF THE PARAPETS, PAVING BLOCKS, AND DECK REPAIR AREAS.

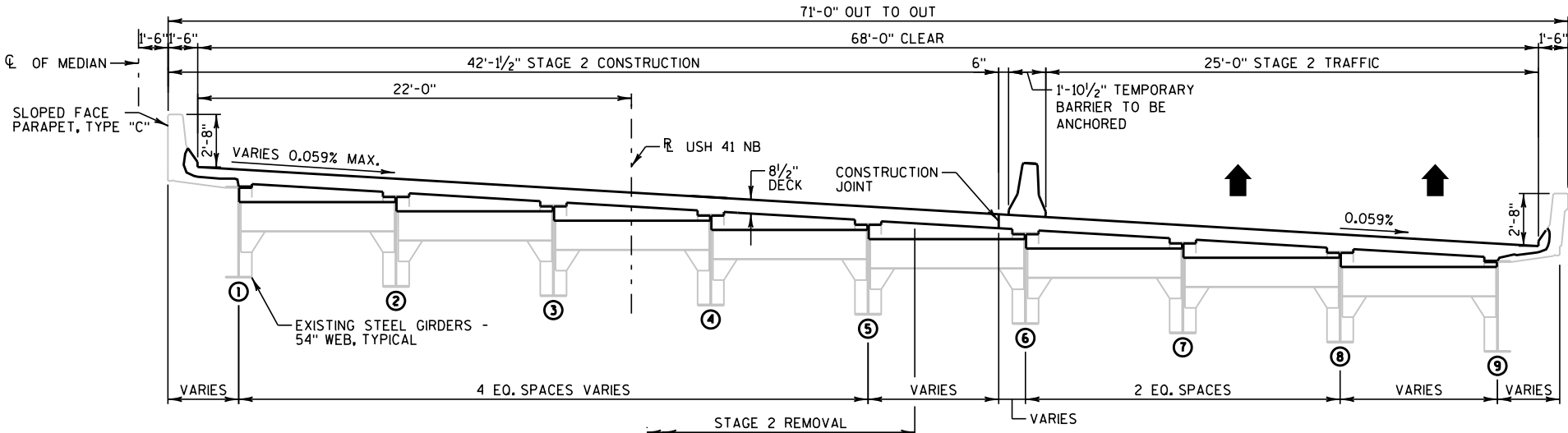
TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ON ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.



CROSS SECTION STAGE 1 - AT BOTH ABUTMENTS

(LOOKING NORTH)

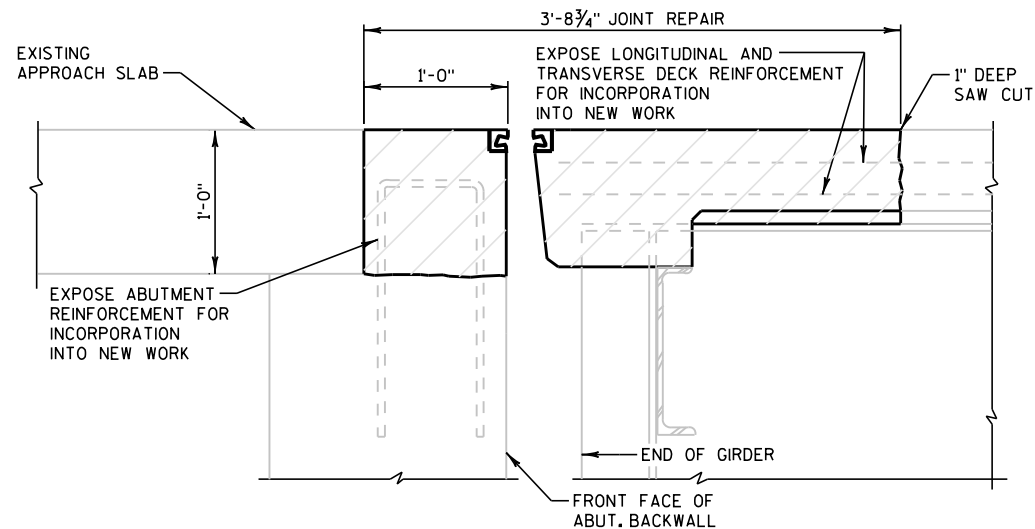
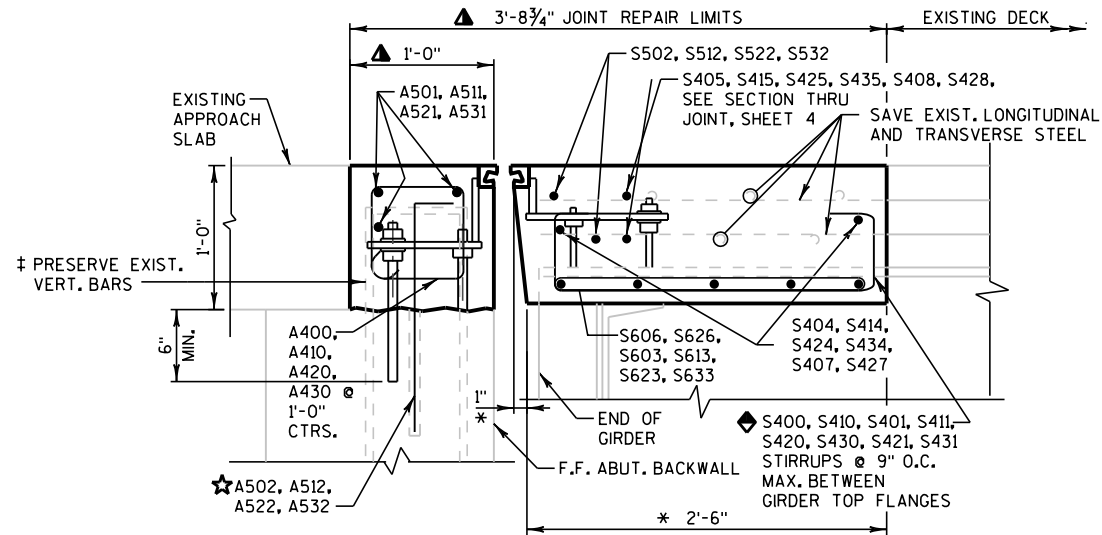
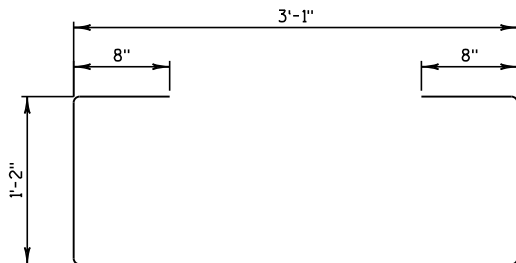
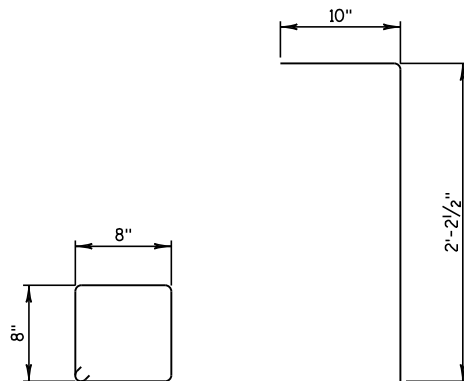
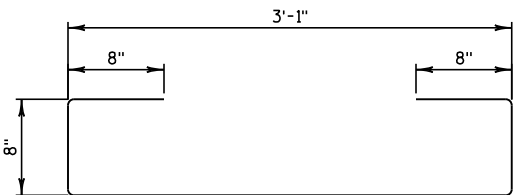
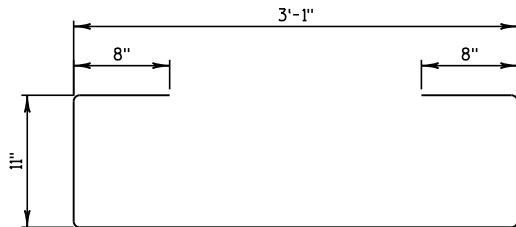


CROSS SECTION STAGE 2 - AT BOTH ABUTMENTS

(LOOKING NORTH)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
QUANTITIES AND GENERAL NOTES		SHEET 2 OF 10 186 USH 41	

FILE =
SCALE =

**JOINT REPAIR - REMOVAL**NORMAL TO $\perp$ SUBSTRUCTURE**SECTION THRU EXPANSION JOINT**NORMAL TO $\perp$ SUBSTRUCTURE**S429****A400, A410,
A420, A430****A502, A512,
A522, A532****S400, S410,
S420, S430****S401, S411,
S421, S431**NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS						
MARK	COATED	NO. REQ'D	LENGTH	BAR SERIES	BENT	LOCATION
A400	X	31	3'-2"		X	PAVING NOTCH STIRRUP STAGE 1, N ABUT.
A501	X	15	8'-0"			PAVING NOTCH TRANS. STAGE 1, N ABUT.
A502	X	31	2'-11"		X	PAVING NOTCH DOWEL STAGE 1, N ABUT.
A410	X	57	3'-2"		X	PAVING NOTCH STIRRUP STAGE 2, N ABUT.
A511	X	24	8'-0"			PAVING NOTCH TRANS. STAGE 2, N ABUT.
A512	X	57	2'-11"		X	PAVING NOTCH DOWEL STAGE 2, N ABUT.
S400	X	17	5'-5"		X	DIAPH. STIRRUP STAGE 1, N ABUT.
S401	X	23	5'-11"		X	DIAPH. STIRRUP STAGE 1, N ABUT.
S502	X	2	33'-11"			DECK TRANS. STAGE 1, N ABUT.
S603	X	15	9'-6"			DIAPH. TRANS. BOTT. STAGE 1, N ABUT.
S404	X	6	10'-0"			DIAPH. TRANS. TOP STAGE 1, N ABUT.
S405	X	6	10'-0"			TRANS. BARS AT JOINT STAGE 1, N ABUT.
S606	X	5	4'-4"			DIAPH. TRANS. BOTT. STAGE 1, GIRDER 8-9, N ABUT.
S407	X	2	4'-7"			DIAPH. TRANS. TOP STAGE 1, GIRDER 8-9, N ABUT.
S408	X	2	4'-7"			TRANS. BARS AT JOINT STAGE 1, GIRDER 8-9, N ABUT.
S410	X	24	5'-5"		X	DIAPH. STIRRUP STAGE 2, N ABUT.
S411	X	45	5'-11"		X	DIAPH. STIRRUP STAGE 2, N ABUT.
S512	X	2	57'-6"			DECK TRANS. STAGE 2, N ABUT.
S613	X	20	9'-6"			DIAPH. TRANS. BOTT. STAGE 2, N ABUT.
S414	X	8	10'-0"			DIAPH. TRANS. TOP STAGE 2, N ABUT.
S415	X	8	10'-0"			TRANS. BARS AT JOINT STAGE 2, N ABUT.
A420	X	45	3'-2"		X	PAVING NOTCH STIRRUP STAGE 1, S ABUT.
A521	X	21	8'-0"			PAVING NOTCH TRANS. STAGE 1, S ABUT.
A522	X	45	2'-11"		X	PAVING NOTCH DOWEL STAGE 1, S ABUT.
A430	X	55	3'-2"		X	PAVING NOTCH STIRRUP STAGE 2, S ABUT.
A531	X	24	8'-0"			PAVING NOTCH TRANS. STAGE 2, S ABUT.
A532	X	55	2'-11"		X	PAVING NOTCH DOWEL STAGE 2, S ABUT.
S420	X	17	5'-5"		X	DIAPH. STIRRUP STAGE 1, S ABUT.
S421	X	27	5'-11"		X	DIAPH. STIRRUP STAGE 1, S ABUT.
S522	X	2	46'-0"			DECK TRANS. STAGE 1, S ABUT.
S623	X	15	9'-4"			DIAPH. TRANS. BOTT. STAGE 1, S ABUT.
S424	X	6	9'-10"			DIAPH. TRANS. TOP STAGE 1, S ABUT.
S425	X	6	9'-10"			TRANS. BARS AT JOINT STAGE 1, S ABUT.
S626	X	5	12'-2"			DIAPH. TRANS. BOTT. STAGE 1, GIRDER 8-9, S ABUT.
S427	X	2	12'-10"			DIAPH. TRANS. TOP STAGE 1, GIRDER 8-9, S ABUT.
S428	X	2	12'-10"			TRANS. BARS AT JOINT STAGE 1, GIRDER 8-9, S ABUT.
S429	X	4	6'-5"		X	DIAPH. STIRRUP STAGE 1, S ABUT.
S430	X	24	5'-5"		X	DIAPH. STIRRUP STAGE 1, S ABUT.
S431	X	45	5'-11"		X	DIAPH. STIRRUP STAGE 2, S ABUT.
S532	X	2	54'-1"			DECK TRANS. STAGE 2, S ABUT.
S633	X	20	9'-4"			DIAPH. TRANS. BOTT. STAGE 2, S ABUT.
S434	X	8	9'-10"			DIAPH. TRANS. TOP STAGE 2, S ABUT.
S435	X	8	9'-10"			TRANS. BARS AT JOINT STAGE 2, S ABUT.

ALL DIMENSIONS IN THE BAR BENDS ARE OUT TO OUT.

LEGEND

‡ EXISTING BARS ARE LIKELY TO BE CORRODED AND/OR DAMAGED DURING CONCRETE REMOVAL. PRESERVE AND INCORPORATE AS MUCH REBAR AS PRACTICAL. SUPPLEMENT WITH THE BARS INDICATED BY ☆.

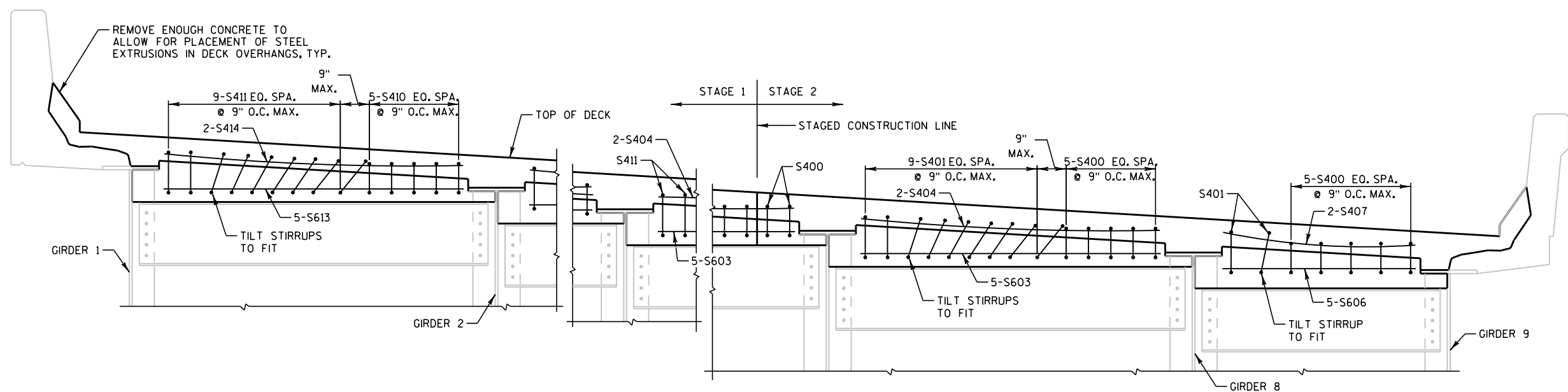
☆ A502, A512 MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 1'-6" INTO CONCRETE. SPACE AT 1'-0". TURN 10" LEG AS NECESSARY TO FIT.

▲ DIMENSIONS GIVEN ARE NORMAL TO $\perp$ OF SUBSTRUCTURE UNIT. UTILIZE EXISTING REINFORCEMENT.◆ BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO $\perp$ GIRDERS.

EXISTING CONCRETE TO BE REMOVED.

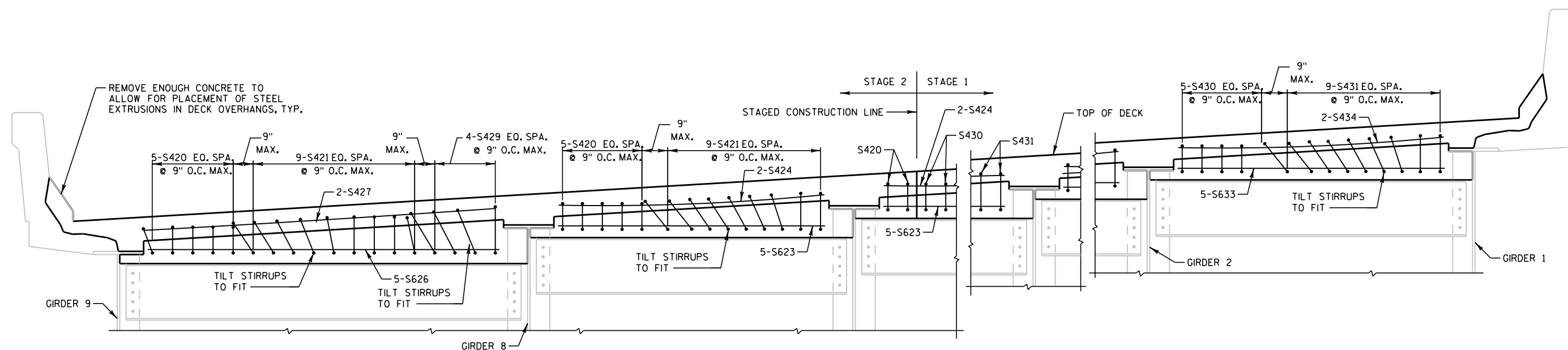
* DIMENSION IS TAKEN NORMAL TO $\perp$ ABUTMENT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE DETAILS		SHEET 3 OF 10 187 USH 41	



**PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END**

(LOOKING NORTH)

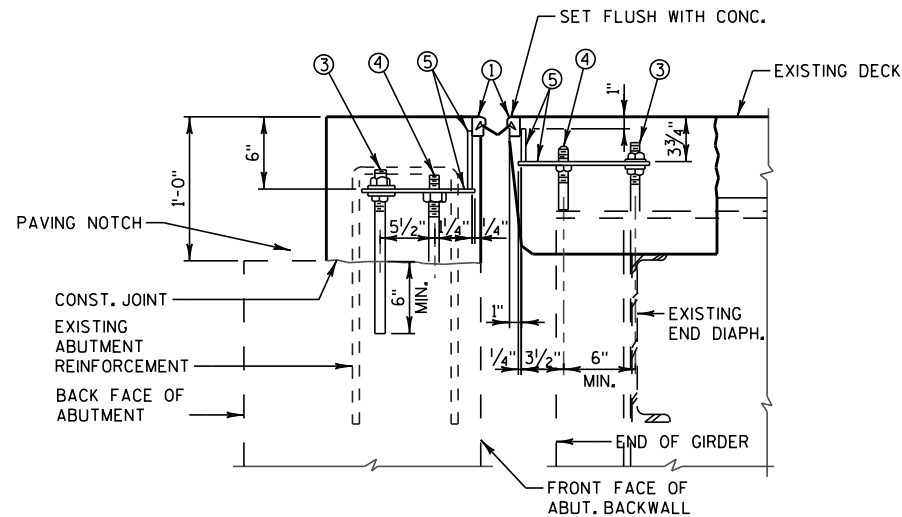


**PART TRANSVERSE SECTION AT DIAPHRAGM
EXPANSION END**

(LOOKING SOUTH)

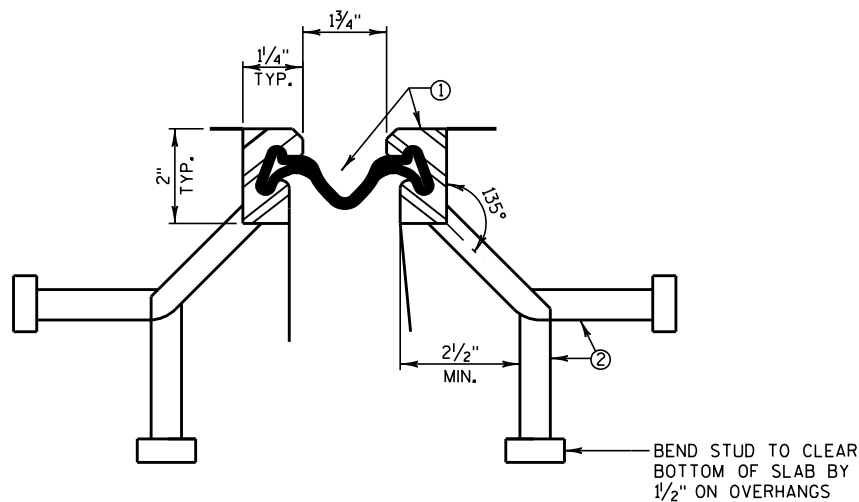
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE DETAILS		SHEET 4 OF 10 188 USH 41	

FILE =
SCALE =



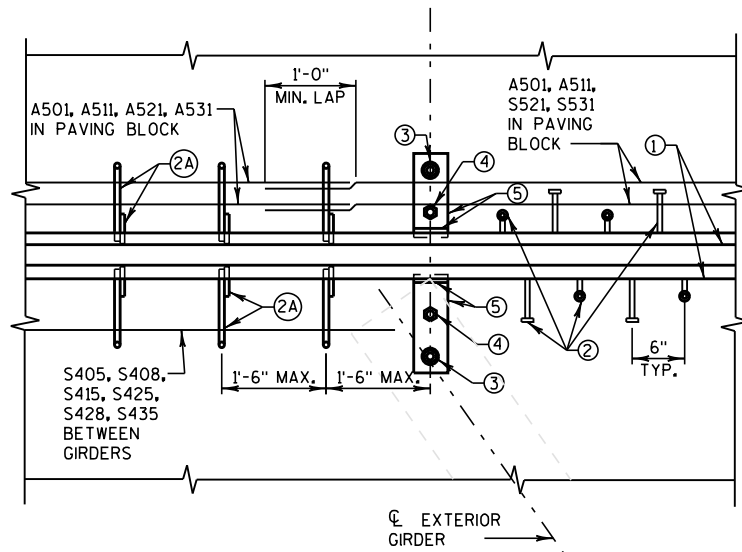
**TYPICAL SECTION THRU
JOINT AT STEEL GIRDER**

NORMAL TO ϕ SUBSTRUCTURE

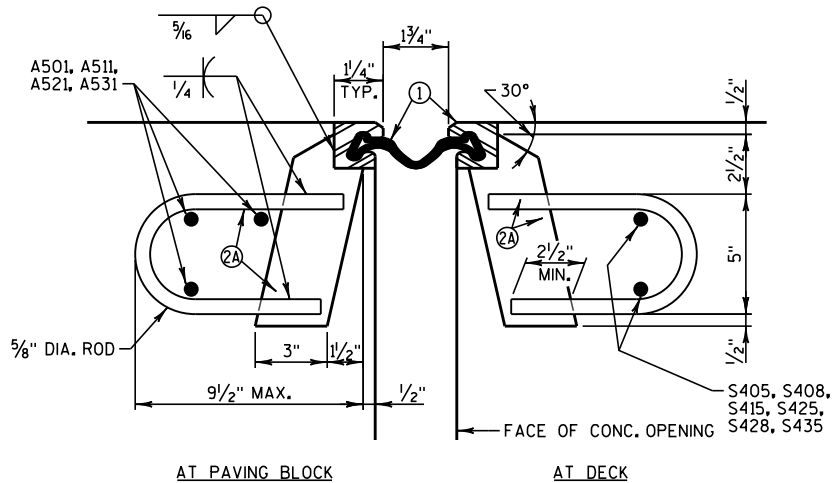


SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB
AND AT PARAPETS, MEDIANS & SIDEWALKS

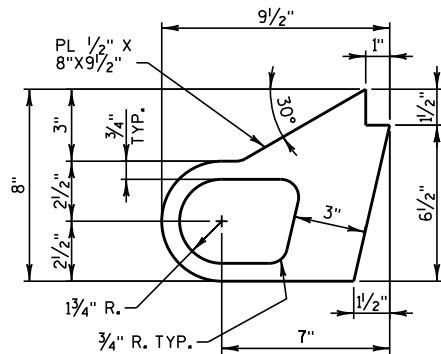


PART PLAN



SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS
SYM. ABOUT ϕ JOINT UNLESS OTHERWISE SHOWN OR NOTED



**ALTERNATE STRIP SEAL
ANCHOR**

LEGEND

1. NEOPRENE STRIP SEAL (4-INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8" ϕ x 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8" ϕ ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PL. TO NO. 1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4" ϕ THREADED ROD WITH 2 NUTS AND 2 PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE, GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4" ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" x 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 1/2" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" x 10 1/2" x 2'-2" WITH HOLES FOR NO. 7. BEND AS SHOWN.
7. 3/4" ϕ x 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLE. RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4" ϕ x 4" GALVANIZED HEX HEAD BOLT. BEND 45°.
9. 3/4" ϕ x 2 1/4" GALVANIZED THREADED COUPLING.
10. NOT USED
11. 1" x 5" SLOTTED COUNTERSUNK HOLE FOR NO. 7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.

SEE SHEET 5

NOTES

ONE FIELD SPLICE IS 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 & SWEEP.

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

SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PLATES, SUPPORTS AND EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

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

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-44-157".

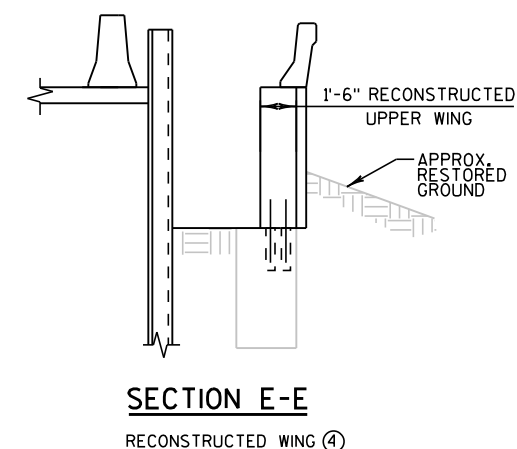
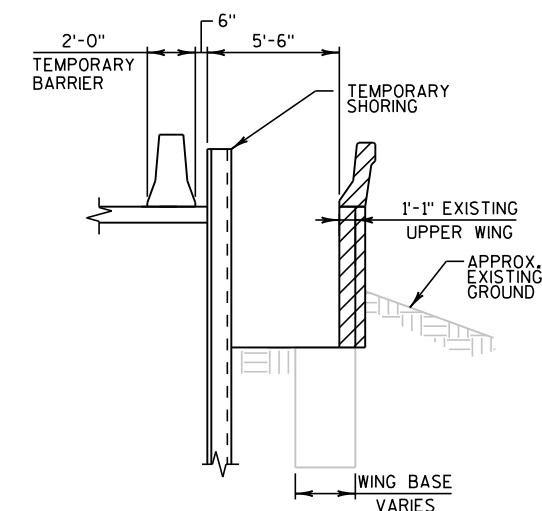
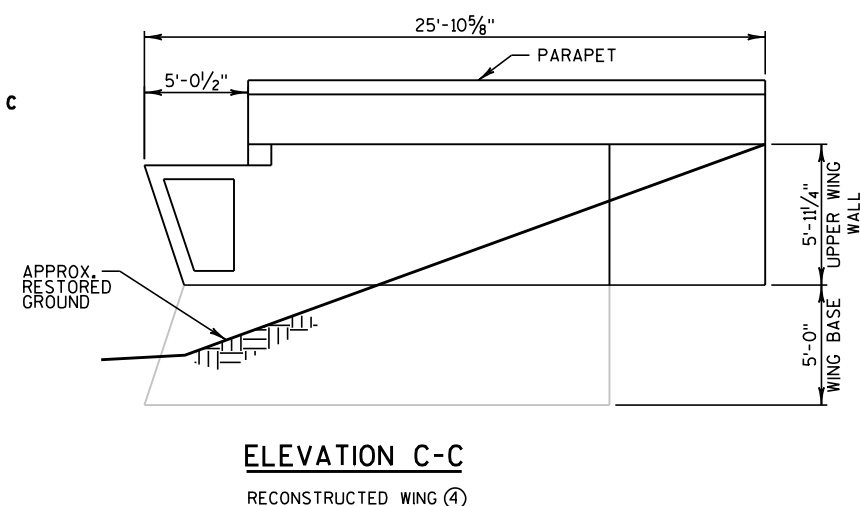
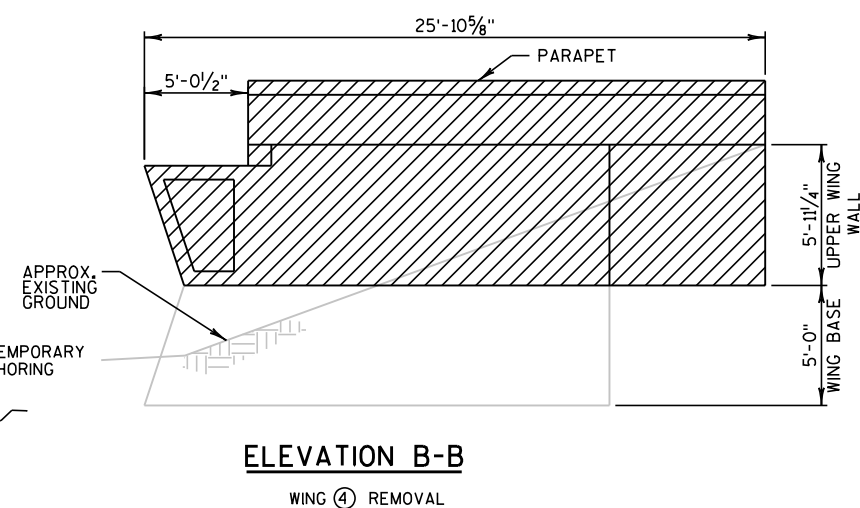
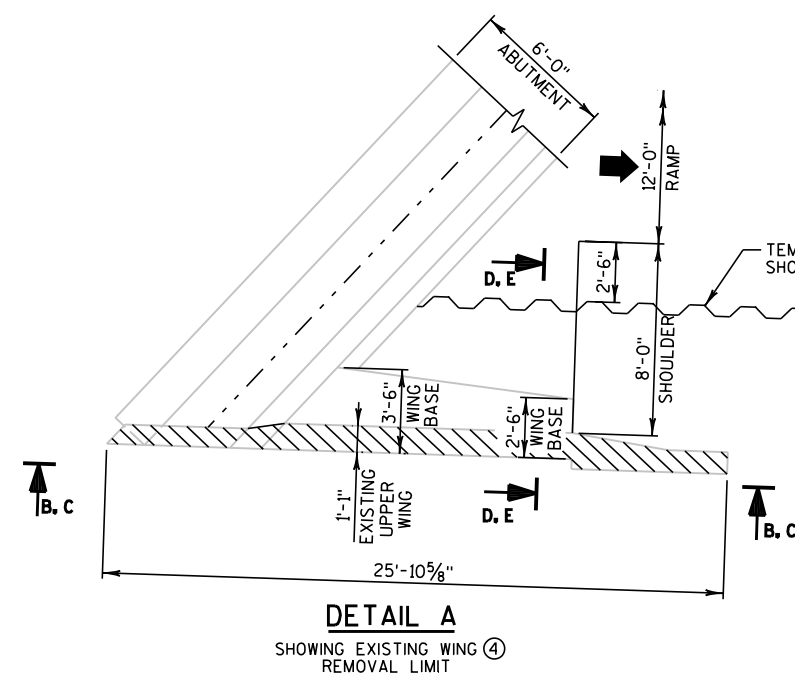
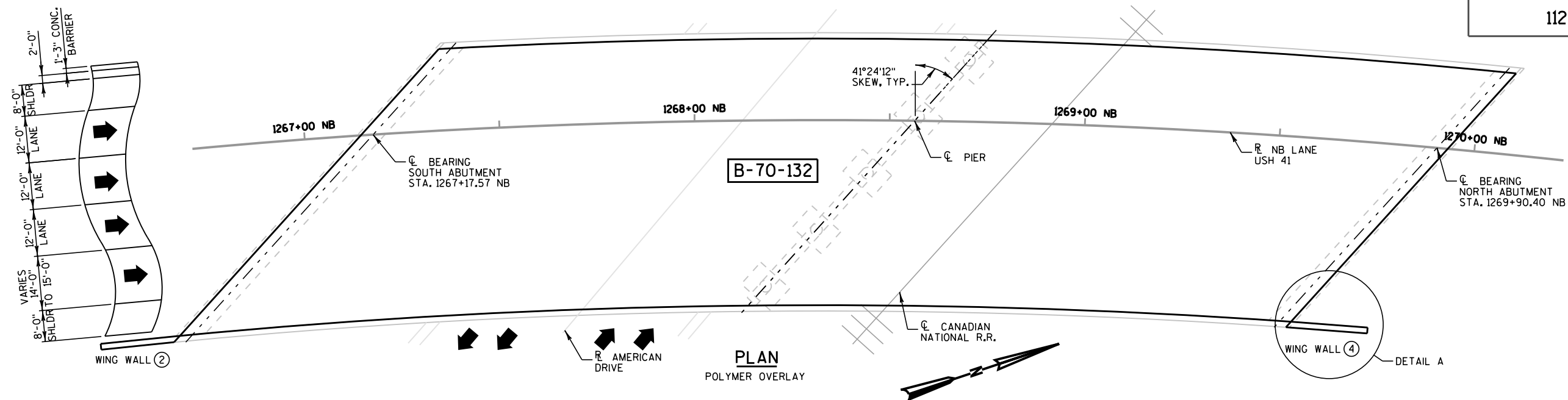
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 5 OF 10 189 USH 41	



Technical drawing of a traffic sign support structure. The top view shows a horizontal sign with a width of 5" and a mounting bracket with a width of 2". The side view shows a vertical sign with a height of 6" MIN. and a mounting bracket with a width of 2". The drawing includes callouts 1 through 9 and a dimension of 2 1/2" for the base width. A 135° angle is indicated for the mounting bracket. The text "DIRECTION OF TRAFFIC" is shown with an arrow pointing right.

-
- Technical drawing of a car seat base showing internal components and labels 1 through 11. The drawing is a cross-sectional view of the seat base, illustrating the internal structure and the location of various parts. The components are labeled as follows:
- 1: A small, rectangular component located at the bottom center of the seat base, likely a sensor or a control unit.
 - 6: A large, rectangular component located on the right side of the seat base, likely a side airbag or a side impact protection system (SIPS) component.
 - 7, 8, 9: A group of three small, oval-shaped components located on the left side of the seat base, likely sensors or control units.
 - 11: A small, rectangular component located on the left side of the seat base, likely a sensor or a control unit.
- The drawing also shows the internal structure of the seat base, including the seat cushion, the seat backrest, and the internal frame. Dashed lines indicate the internal structure and the location of the components. A small square symbol is located on the left side of the seat base, likely indicating a specific feature or a warning symbol.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
STRIP SEAL EXPANSION JOINT		SHEET 6 OF 1 190 USH 41	

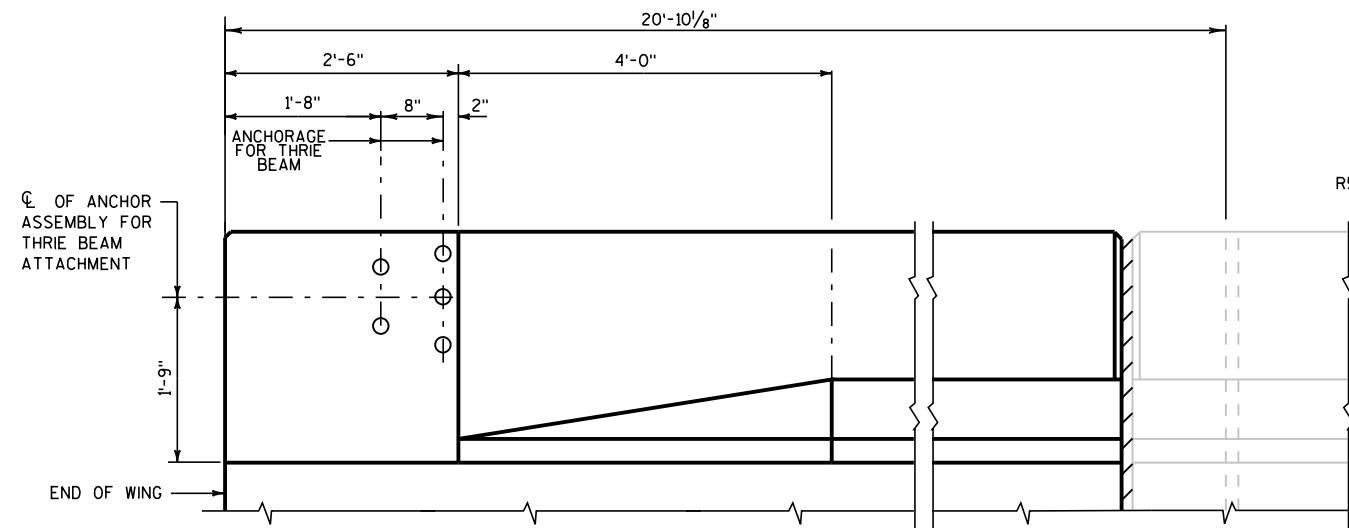
**LEGEND**

= CONCRETE REMOVAL

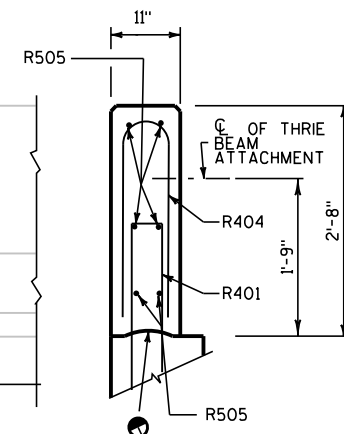
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
CONCRETE REMOVAL DETAILS		SHEET 7 OF 10 191 USH 41	



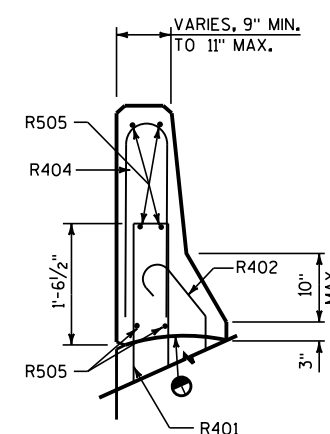
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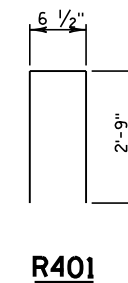
INSIDE ELEVATION



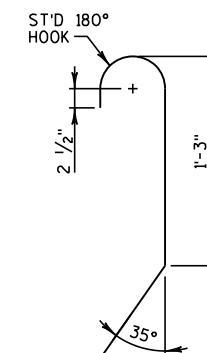
SECTION A



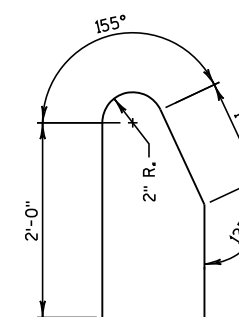
SECTION B



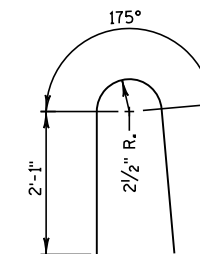
R401



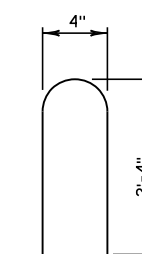
R402



R403



R404

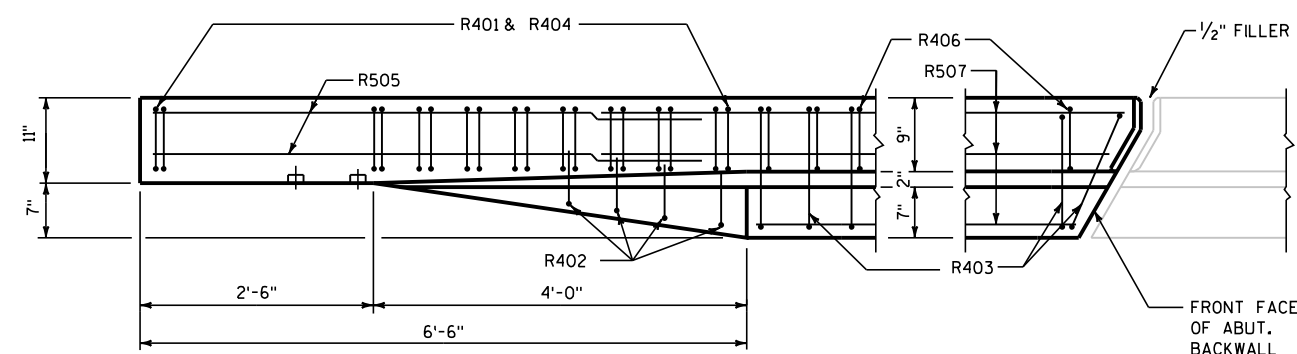


R406

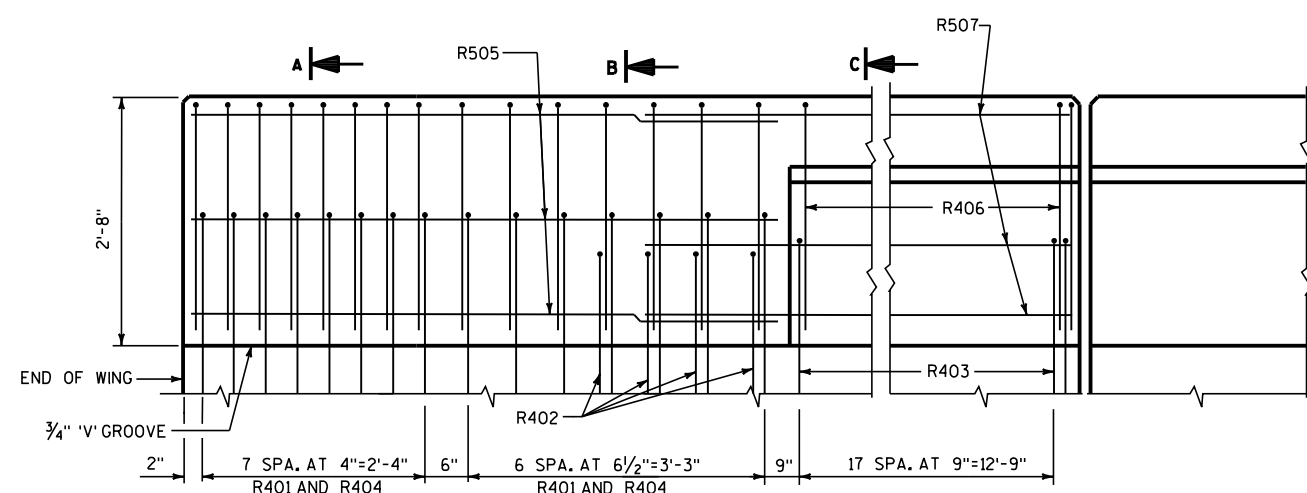
BILL OF BARS

FOR ABUTMENT PARAPETS ON WING 4

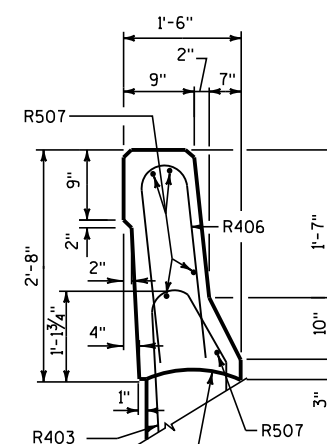
BAR MARK	COAT	NORTH ABUT.	LENGTH	BEVT	LOCATION
R401	X	15	5-11	X	WINGS STIRRUPS
R402	X	4	3-1	X	WINGS
R403	X	19	4-7	X	WINGS STIRRUPS
R404	X	15	4-9	X	WINGS
R505	X	6	6-2		WINGS
R406	X	19	4-10	X	WINGS
R507	X	5	16-3		WING 4



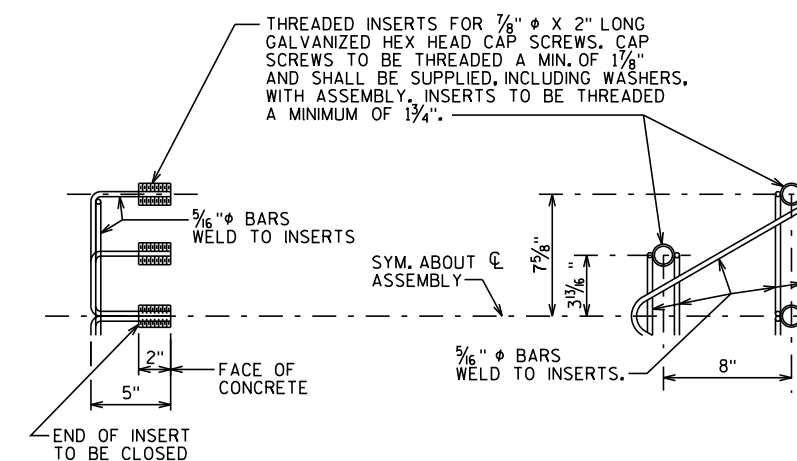
PLAN



OUTSIDE ELEVATION



SECTION C



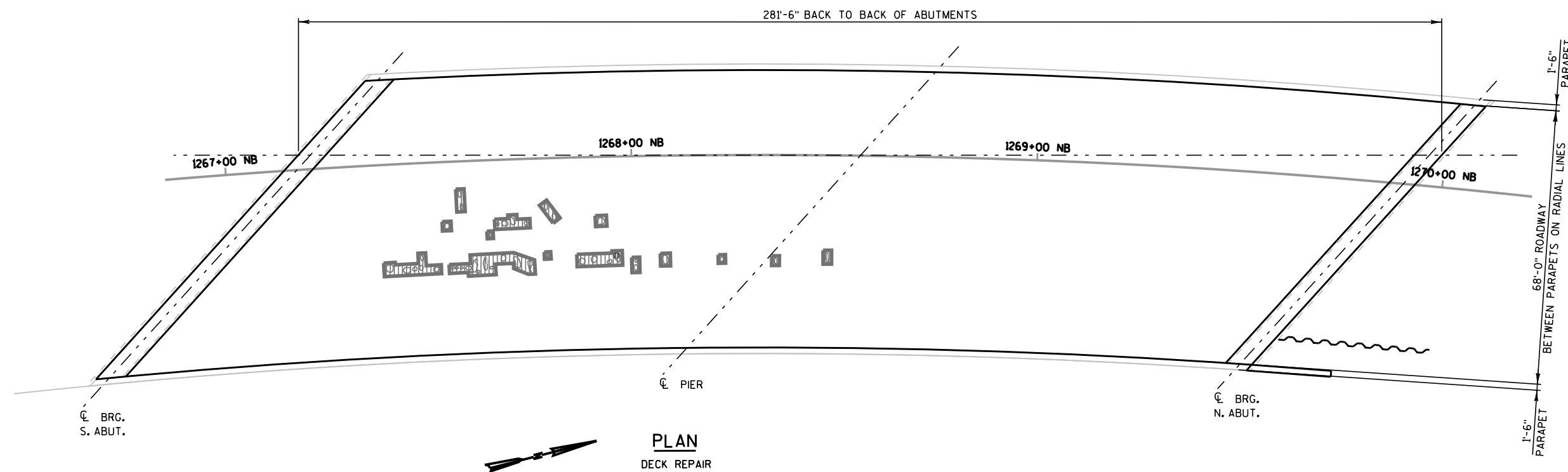
DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C. ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD" - EACH

CONST. JOINT - STRIKE OFF AS SHOWN & FINISH WITH A WOODEN TROWEL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS JSR
SLOPED FACE PARAPET		SHEET 9 OF 10	
		193	
		USH 41	

FILE =
SCALE =



DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-131		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	2226.2		DECK PREPARATION AREA	
SHADE/DEBRIS	yd ²	0		SHADE/DEBRIS	
PREPARATION, DECKS, TYPE 1	yd ²	27.8	1.2		
PREPARATION, DECKS, TYPE 2	yd ²	20.9	0.9		
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		

SURFACE TYPE: CONCRETE - NO OVERLAY
 INFRARED INSPECTION DATE: 6/20/13
 INFRARED SURVEY TAKEN BY AECOM

- FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-70-132			
DRAWN BY		AMZ	PLANS CK'D. JSR
DECK REPAIR		SHEET 10 OF 10 194 USH 41	

FILE =
SCALE =

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-133, IS A SINGLE SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 72 FEET AND AN OVERALL LENGTH OF 41.69 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER. DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS26 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS35 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....f'c = 4,000 PSI

TRAFFIC DATA

USH41
A.D.T. = 39,350 (2014)
= 46,050 (2034)

LIST OF DRAWINGS

1. DECK REPAIR

DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-133		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	320.0		DECK PREPARATION AREA SHADE/DEBRIS	DELAMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	1.0	<0.1		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	3.0	<0.1		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: ESTIMATED PER ROUTINE INSPECTION 3/12/13
INFRARED SURVEY TAKEN BY ESTIMATED PER ROUTINE INSPECTION 3/12/13

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-133	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	2
* 509.0302	PREPARATION DECKS TYPE 2	SY	4
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRTE MASONRY OVERLAY DECKS	CY	1
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	20

LEGEND

- BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

- * QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.



STRUCTURE DESIGN CONTACTS
BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440

NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF 1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> CHIEF STRUCTURES DESIGN ENGINEER		6/19/14 DATE	
STRUCTURE B-70-133			
USH 41 SOUTHBOUND OVER MENASHA CREEK			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	MENASHA
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
DECK REPAIR			SHEET 1 OF 1 195

GENERAL NOTES

THE PROPOSED WORK INCLUDES DECK REPAIR.

DRAWINGS NOT TO BE SCALED.

THE EXISTING STRUCTURE, B-70-135, IS A TWO SPAN PRESTRESSED CONCRETE GIRDER STRUCTURE WITH AN OVERALL WIDTH OF 60 FEET AND AN OVERALL LENGTH OF 181.67 FEET.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

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

EXCAVATION REQUIRED TO COMPLETE THE SURFACE REPAIRS AT THE ABUTMENTS IS INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR AS DIRECTED BY PROJECT ENGINEER, DECK INSPECTION RESULTS AND DECK REPAIR AREAS SHOWN FOR REFERENCE ONLY.

TRAFFIC WILL BE STAGED TO PERFORM REPAIRS ONE HALF AT A TIME.

FIELD ENGINEER TO VERIFY EXACT LOCATION AND QUANTITY OF REPAIRS.

DESIGN DATA

LIVE LOAD:
DESIGN LOADING: HS20 (TAKEN FROM HSI, 01/20/2014)
INVENTORY RATING:
HS21 (TAKEN FROM HSI, 01/20/2014)
OPERATING RATING:
HS38 (TAKEN FROM HSI, 01/20/2014)
WISCONSIN STANDARD PERMIT VEHICLE
(WIS-SPV) = 250 KIPS
(TAKEN FROM HSI, 01/20/2014)

ULTIMATE DESIGN STRESSES (NEW WORK):
CONCRETE MASONRY.....F_c = 4,000 PSI

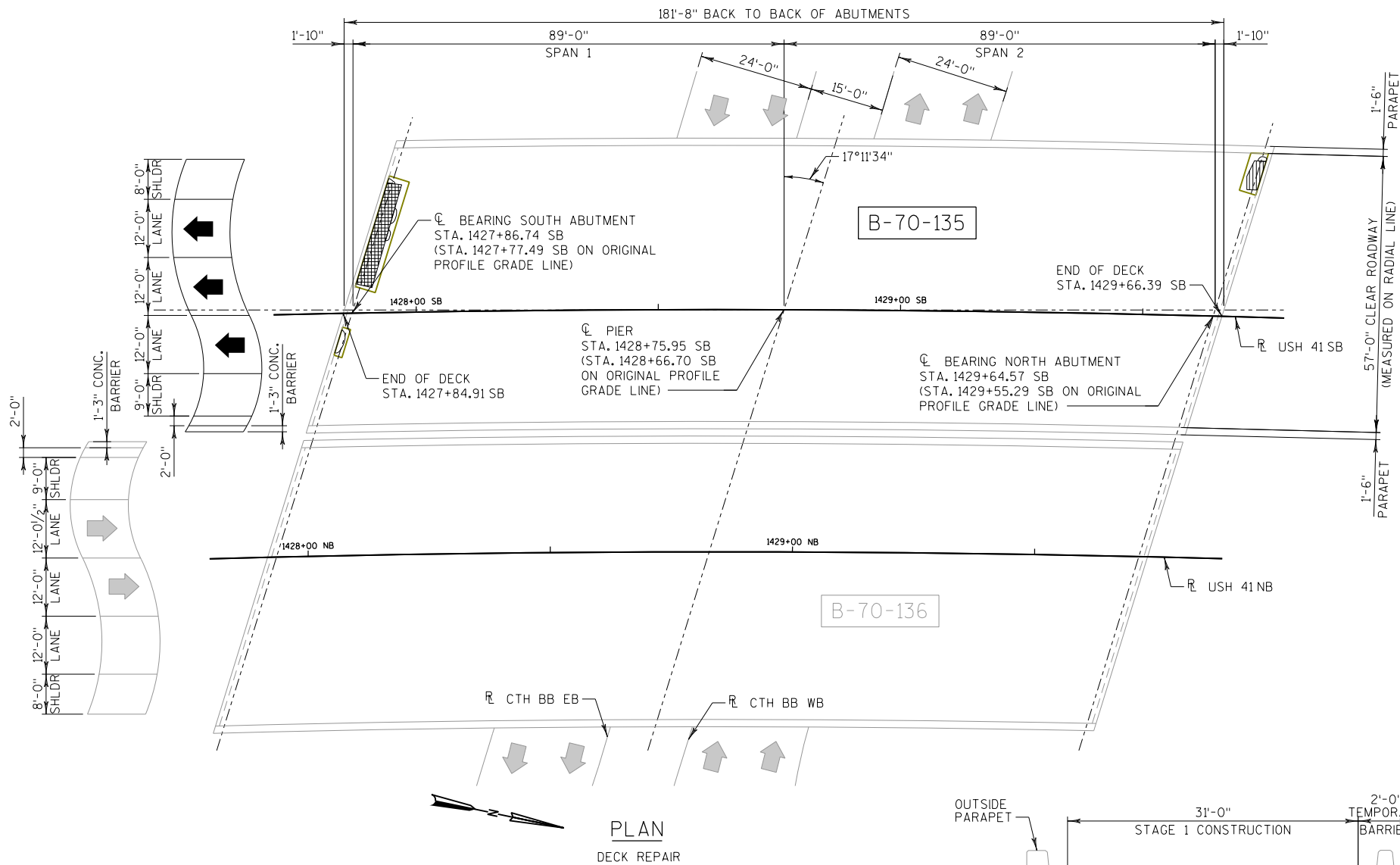
TRAFFIC DATA

USH41
A.D.T. = 41,550 (2014)
= 49,350 (2034)

CTH BB
A.D.T. = 14,500 (2010)

LIST OF DRAWINGS

1. DECK REPAIR



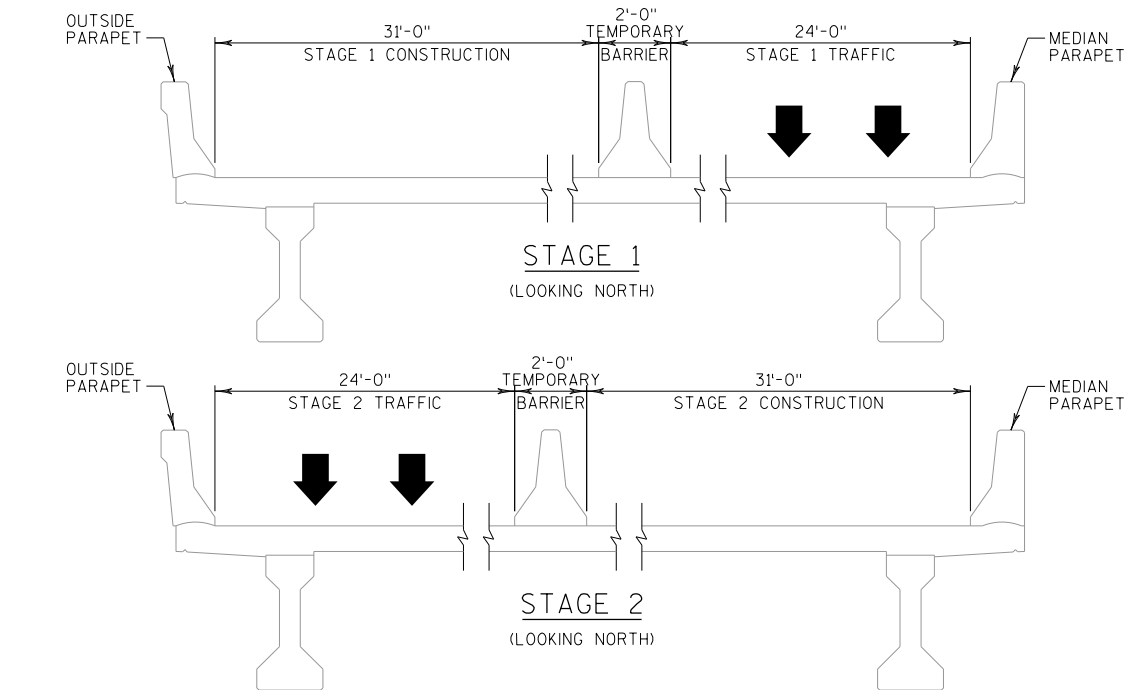
DECK REPAIR

DECK REPAIR AREAS		S.N. B-70-135		LEGEND	
ITEM	UNIT	QUANT.	%		
TOTAL AREA	yd ²	1211.3		DECK PREPARATION AREA	DELMINATION
SHADE/DEBRIS	yd ²	0			SPALL
PREPARATION, DECKS, TYPE 1	yd ²	15.9	1.3		DEBOND
PREPARATION, DECKS, TYPE 2	yd ²	11.9	1.0		ASPHALT PATCH
FULL DEPTH DECK REPAIR	yd ²	1.0	<0.1		CONCRETE PATCH

SURFACE TYPE: CONCRETE - NO OVERLAY
INFRARED INSPECTION DATE: 6/19/13
INFRARED SURVEY TAKEN BY AECOM

ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0225.S	DEBRIS CONTAINMENT B-70-135	LS	1
* 509.0301	PREPARATION DECKS TYPE 1	SY	18
* 509.0302	PREPARATION DECKS TYPE 2	SY	14
509.2000	FULL-DEPTH DECK REPAIR	SY	1
● 509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	2
SPV.0090.02	SAWING PAVEMENT DECK PREPARATION AREAS	LF	180



LEGEND

● BID ITEM INCLUDES CONCRETE QUANTITY FOR PREPARATION DECKS TYPE 1, PREPARATION DECKS TYPE 2, AND FULL-DEPTH DECK REPAIR ITEMS. CONCRETE TO CONFORM TO REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 509.2(4).

* QUANTITIES SHOWN INCLUDE A 10% INCREASE TO ACCOUNT FOR ADDITIONAL DETERIORATION BETWEEN THE TIME OF INSPECTION AND THE TIME OF CONSTRUCTION.

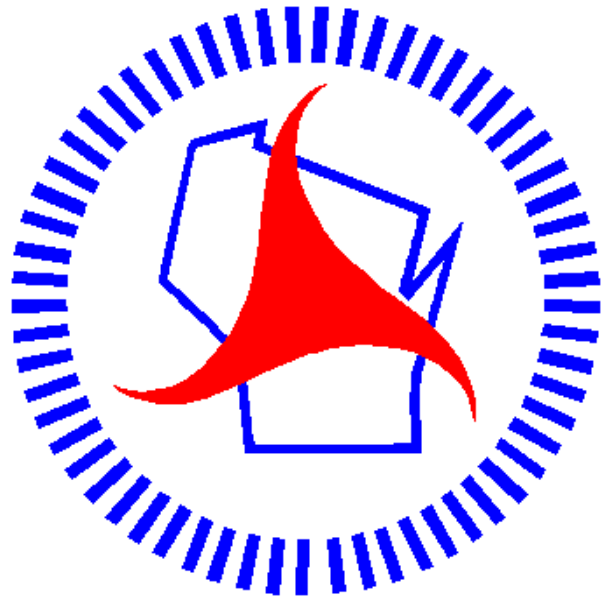
STRUCTURE DESIGN CONTACTS

BUREAU OF STRUCTURES:
WILLIAM DREHER, P.E. (608) 266-8489
CONSULTANT:
JEFFREY S. ROSNER, P.E. (920) 592-9440



NO.	DATE	REVISION	BY
PLANS PREPARED BY: GRAEF			
1150 Springhurst Drive Suite 201 Green Bay, WI 54304 920 / 592-9440 920 / 592-9445 fax www.graef-usa.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> 6/19/14 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-70-135			
USH 41 SOUTHBOUND OVER CTH BB			
COUNTY	WINNEBAGO	TOWN/CITY/VILLAGE	MENASHA
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	AMZ	DESIGN CK'D.	JSR
DRAWN BY	AMZ	PLANS CK'D.	JSR
DECK REPAIR			SHEET 1 OF 1 196

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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