WIS DEC 2013

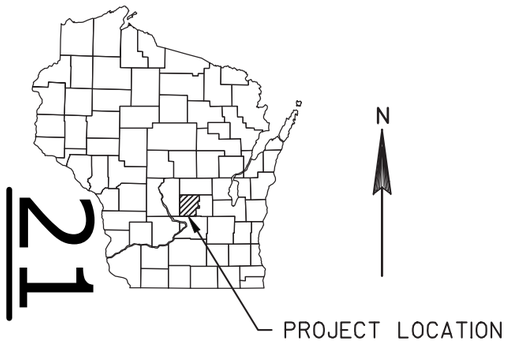
PROJECT ID: 1166-06-63

WITH: N/A

COUNTY: MARQUETTE

ORDER OF SHEETS

TOTAL SHEETS = 154



DESIGN DESIGNATION

A.A.D.T.	2014	=	16,100
A.A.D.T.	2034	=	19,900
D.H.V.		=	2129
D.D.		=	58/42
T.		=	9.7%
DESIGN SPEED		=	70 MPH
ESALS		=	13,891,900

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

PORTAGE-PACKWAUKEE

B-39-15,16,17,19,21

IH-39

MARQUETTE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1166-06-63	———	———

STATE PROJECT NUMBER
1166-06-63

END PROJECT
STA 392+68
Y=228,371.23
X=432,416.25

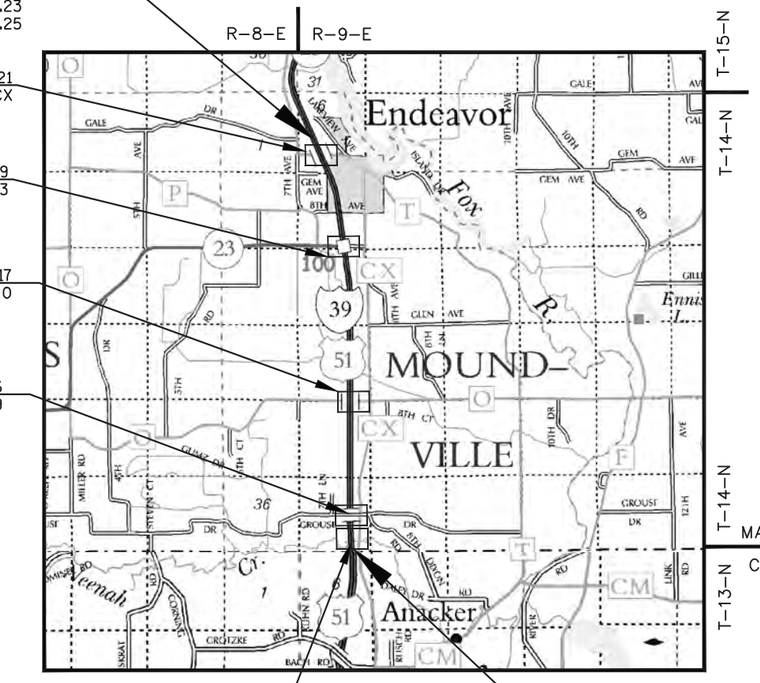
STRUCTURE B-39-21
IH 39NB OVER CTH CX

STRUCTURE B-39-19
IH 39NB OVER STH 23

STRUCTURE B-39-17
IH 39NB OVER CTH O

STRUCTURE B-39-16
GROUSE DR. OVER IH 39

STRUCTURE B-39-15
IH 39NB OVER NEENAH CREEK



BEGIN PROJECT 1166-06-63
STA 93+39
Y=198,769.37
X=434,724.93

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.00 MI.
(NORTH BOUND LANES ONLY)

-COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MARQUETTE COUNTY, NAD 1983 (2007).

ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 88 (2007).

ORIGINAL PLAN PREPARED BY

BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

WISCONSIN
SEAN M. SPROMBERG
E-37771-005
SCHOFIELD, WI
PROFESSIONAL ENGINEER

July 16, 2013
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	BECHER-HOPPE ASSOCIATES, INC.
Designer	BECHER-HOPPE ASSOCIATES, INC.
Project Manager	DAN HOLLOWAY, PE
Regional Examiner	CHERYL SIMON, PE
Regional Supervisor	MIKE KRETSCHMER, PE

APPROVED FOR THE DEPARTMENT

DATE: 7/16/2013 (Signature)

E

GENERAL NOTES

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES. THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

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

CURVE DATA SHOWN ON PLANS IS BASED ON AS-BUILTS.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE FERTILIZED, SEEDED OR TEMPORARY SEEDED AS
DIRECTED BY THE ENGINEER.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

PAVING OPERATION SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING LANE.

PLACE THE 3½ INCH HMA PAVEMENT IN TWO LAYERS, THE LOWER LAYER SHALL BE 1.75 INCHES THICK AND THE UPPER LAYER SHALL BE 1.75 INCHES THICK. WHERE TRANSITIONS OCCUR MAINTAIN A 1.75 INCH UPPER LAYER WITH VARIABLE LOWER LAYER. USE A 12.5 mm NOMINAL AGGREGATE SIZE.

PLACE THE 4 INCH GROUSE DRIVE HMA PAVEMENT IN TWO LAYERS, THE LOWER LAYER SHALL BE 2.25 INCHES THICK AND THE UPPER LAYER SHALL BE 1.75 INCHES THICK.

AS-BUILT REFERENCE (YEAR)*

PROJECT: 1660-01-61 (1999)
PROJECT: 1166-03-72 (1993)
PROJECT: 1161-03-75 (1983)
PROJECT: 1161-03-78 (1983)
PROJECT: 1166-04-80 (2007)

*APPROVAL YEAR (NOT CONSTRUCTION)

SECTION 2 ORDER

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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .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 = 5.38 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.53 ACRES

UTILITIES

ADAMS-COLUMBIA ELECTRIC COOPERATIVE
ELECTRICITY
JON CONGDON
W6290 HWY 33
PO BOX 216
PARDEEVILLE, WI 53954
PHONE: 800-831-8629 EXT 332
MOBILE: 608-547-0429

ENBRIDGE ENERGY
GAS/PETROLEUM
DAN KLEINHANS
4898 YOUNG ROAD
VESPER, WI 54489
PHONE: 219-922-7016
MOBILE: 920-988-7931

SEND ALL ALLIANT CORRESPONDENCE TO:
ALLIANT ENERGY
ELECTRICITY
ATTN: JASON HOGAN
SUITE 1000
4902 N. BILTMORE LANE
MADISON, WI 53718
PHONE: 608-458-4871 DESK
MOBILE: 608-395-7395 CELL
jasonhogan@alliantenergy.com

ALLIANT CONSTRUCTION FIELD CONTACT:
ALLIANT ENERGY
ELECTRICITY
MATTHEW JOHNSON
2777 COLUMBIA DRIVE
PORTAGE, WI 53901
PHONE: 608-742-0801
MOBILE: 608-751-7674

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
BOBBI JO FISCHER
1427 EAST TOWER DRIVE
WAUTOMA, WI 54982
PHONE: (920) 787-4686
bobbi.fischer@wisconsin.gov

DIGGERS HOTLINE

Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

2

2

B-39-15 (IH 39 NB OVER NEENAH CREEK)
CONCRETE OVERLAY,CONCRETE SURFACE
REPAIR, & PROTECTIVE SURFACE TREATMENT.

7TH LN

B-39-16 (GROUSE DRIVE OVER IH 39)
BRIDGE JACKING, STRUCTURE REPAINTING, EXPANSION
JOINTS REPLACEMENT, SLOPE PAVING, CONCRETE SURFACE
REPAIR, CONSTRUCT NEW APPROACHES & MGS GUARDRAIL.

B-39-17 (IH 39 NB OVER CTH O)
CONCRETE MASONRY OVERLAY DECKS,
PROTECTIVE SURFACE TREATMENT,
CONCRETE SURFACE REPAIR.

N

IH 39 NB

93 100 120 140 160 180 200 220 240

15 13 20 26 25

NEENAH CREEK

GROUSE DRIVE

CTH O

CTH CX

IH 39 NB UNDER GROUSE DRIVE,
HMA PAVEMENT OVERLAY.

B-39-21 (IH 39 NB OVER CTH CX)
CONCRETE OVERLAY, CONCRETE SURFACE REPAIR,
PROTECTIVE SURFACE TREATMENT,
JOINTS RESEALED, & RESEAL SLOPE PAVING.

400 380 360 340 320 300 280 260

IH 39 NB

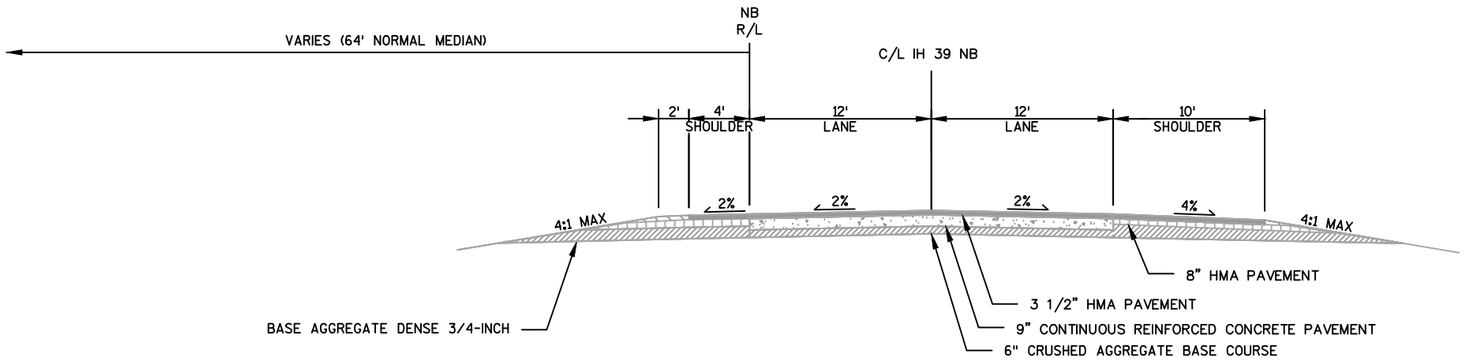
CTH P

STH 23/CTH P

CTH CX

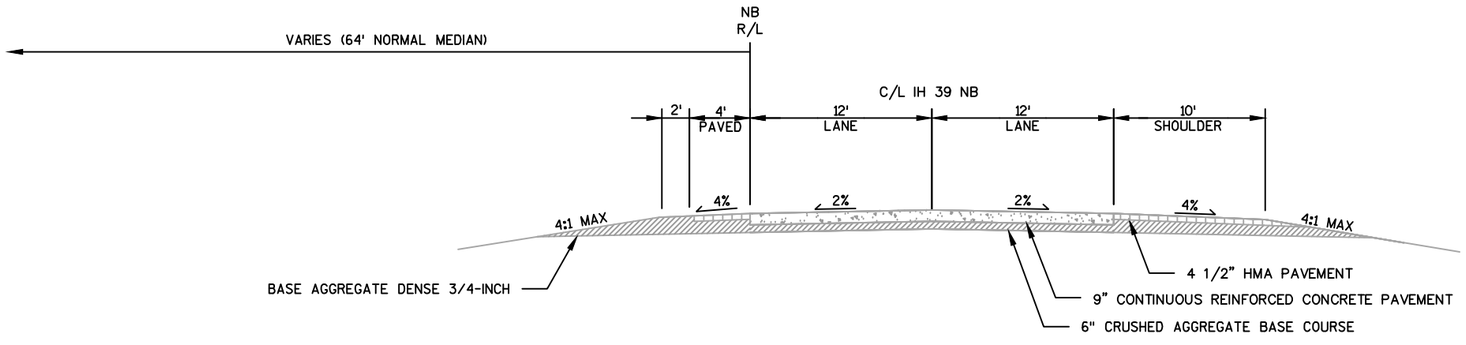
B-39-19 (IH 39 NB OVER STH 23/CTH P)
CONCRETE OVERLAY, PROTECTIVE
SURFACE TREATMENT, JOINTS RESEALED,
CONCRETE SURFACE REPAIR, POLYMER OVERLAY.

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	PROJECT OVERVIEW	SHEET 3	E



EXISTING TYPICAL SECTION
IH 39 NB

B–39–15: STA 110'NB'+73 – STA 113'NB'+47
B–39–17: STA 208'NB'+54 – STA 211'NB'+70
B–39–19: STA 316'NB'+67 – STA 320'NB'+45
B–39–21: STA 382'NB'+95 – STA 386'NB'+23

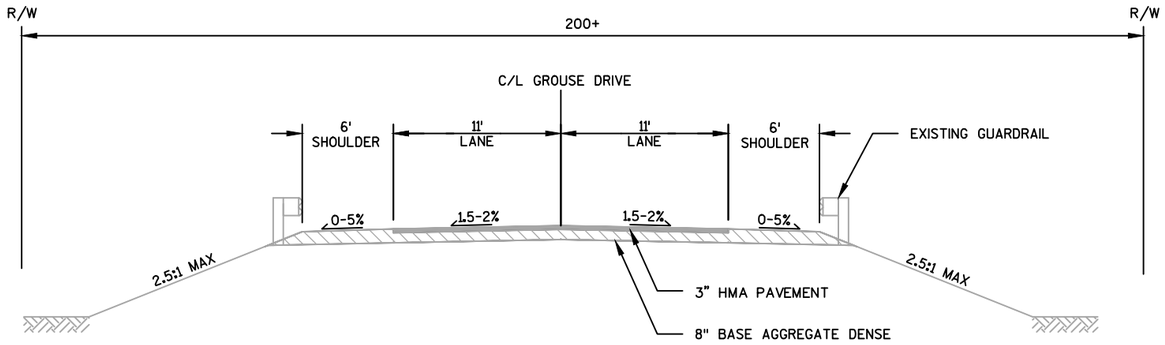


EXISTING TYPICAL SECTION
IH 39 NB

B–39–16: STA 129'NB'+94 – STA 131'NB'+93

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TYPICAL SECTIONS	SHEET 4	E

2



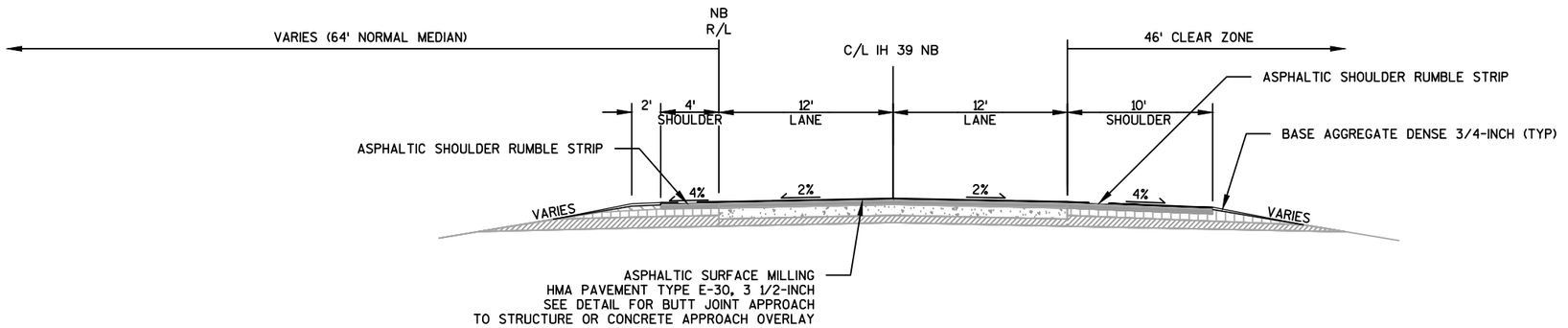
EXISTING TYPICAL SECTION

GROUSE DRIVE

STA 20"G"+83 – STA 26"G"+58

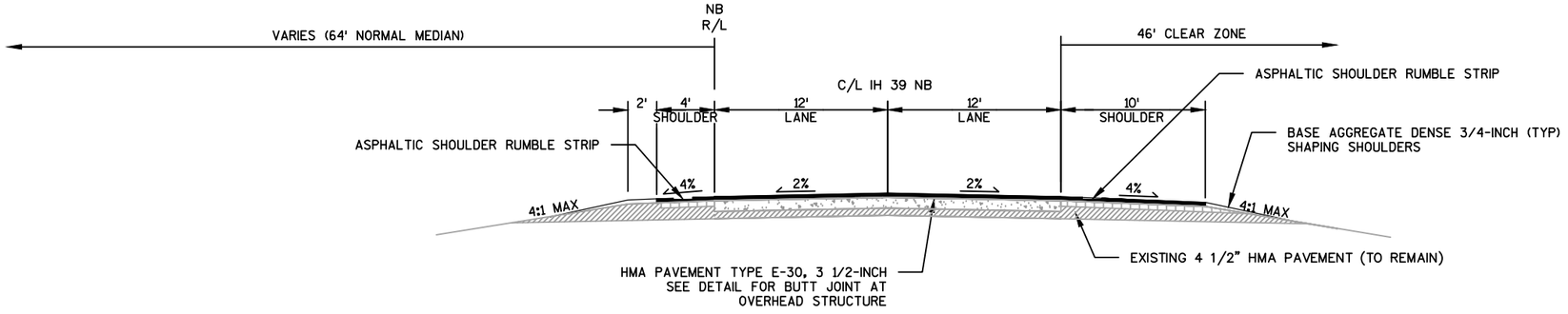
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TYPICAL SECTIONS	SHEET 5	E

2



FINISHED TYPICAL SECTION
IH 39 NB

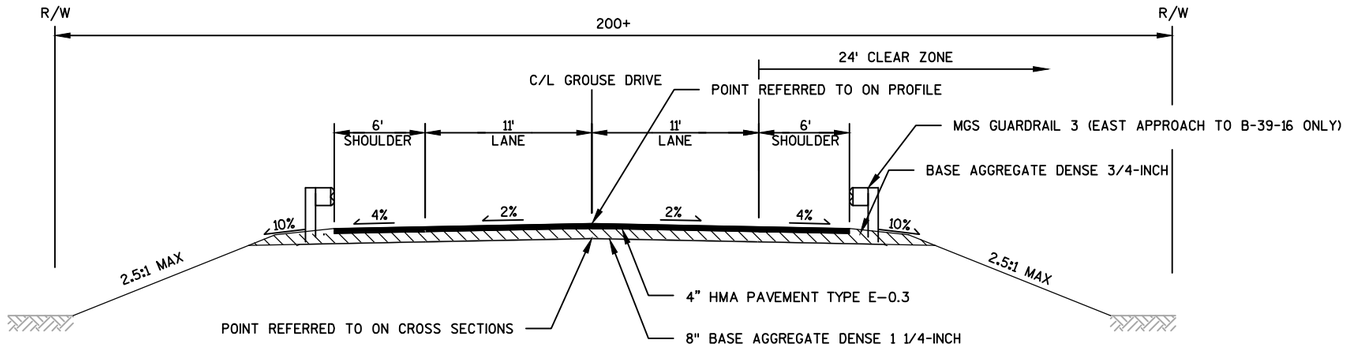
B-39-15: STA 110'NB'+73 – STA 113'NB'+47
B-39-17: STA 208'NB'+54 – STA 211'NB'+70
B-39-19: STA 316'NB'+67 – STA 320'NB'+45
B-39-21: STA 382'NB'+95 – STA 386'NB'+23



FINISHED TYPICAL SECTION
IH 39 NB

B-39-16: STA 129'NB'+94 – STA 131'NB'+93

2

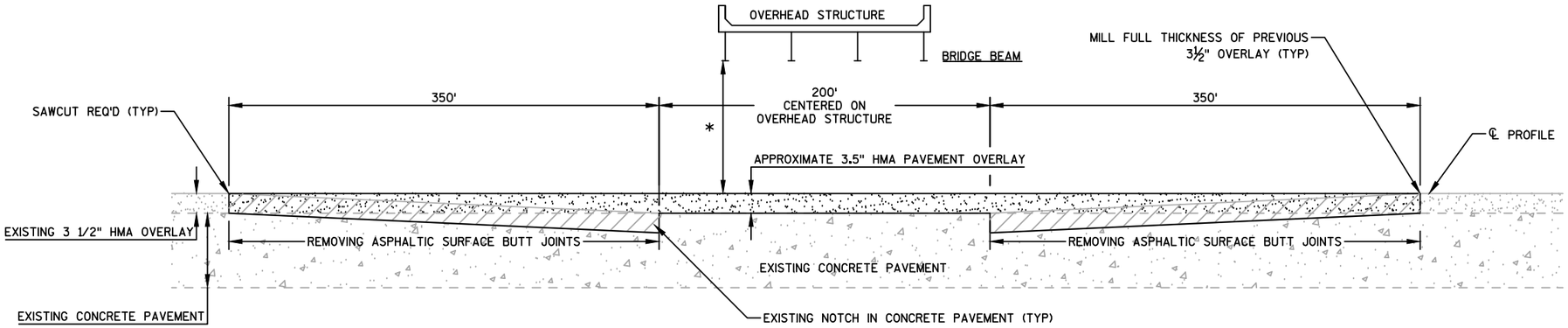


FINISHED TYPICAL SECTION

GROUSE DRIVE

STA 20"G"+83 – STA 26"G"+58

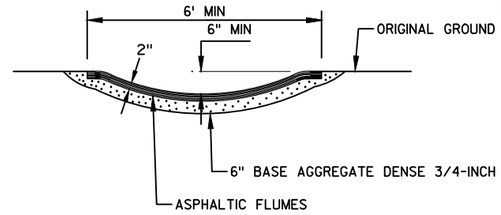
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TYPICAL SECTIONS	SHEET 7	E



DETAIL FOR BUTT JOINTS AT OVERHEAD STRUCTURE

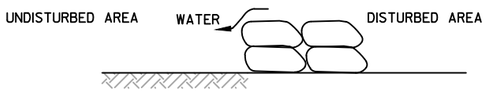
STRUCTURE B-39-16

*ADJUST PAVEMENT OVERLAY DEPTH BELOW THE POINT OF CRITICAL VERTICAL CLEARANCE TO MAINTAIN A MINIMUM 16'-9" CLEARANCE AFTER THE BRIDGE IS RAISED.

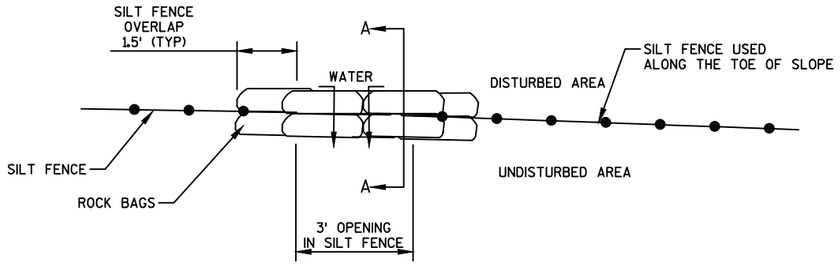


ASPHALTIC FLUME DETAIL

STA 112+50 LT
STA 385+50 LT

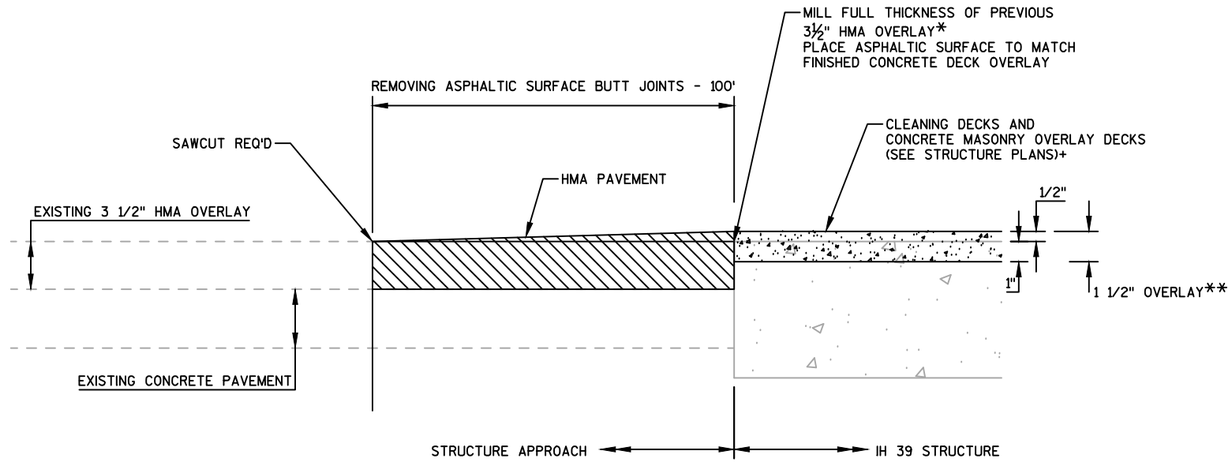


SECTION A–A



TOP VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF



DETAIL FOR BUTT JOINT - APPROACH TO STRUCTURE OR CONCRETE APPROACH OVERLAY

STRUCTURES B-39-15, B-39-17, B-39-19, AND B-39-21

*MILL BOTH ASPHALT & STRUCTURE DECK AND/OR APPROACH CONCRETE AT THE SAME TIME

+REMOVING PAVEMENT BUTT JOINTS AND CONCRETE MASONRY OVERLAY APPROACHES AT B-39-15 STRUCTURE APPROACHES.

**SEE STRUCTURE PLANS FOR AVERAGE OVERLAY THICKNESS

GENERAL NOTES FOR CHANGEABLE MESSAGE BOARDS

PCMS = PORTABLE CHANGEABLE MESSAGE SIGN

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING MESSAGE SIGNS. PLACE THE SIGNS SO THE DRIVER HAS A CLEAR VIEW OF THE MESSAGE FOR A MINIMUM OF 1,000 FEET.

MESSAGE SIGNS SHOULD SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF INTERSTATE CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SELECTED SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY.

FOR INTERMITTENT WORK SUCH AS FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF A PCMS THAT IS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

SITE 1 MESSAGE SIGN IS TO BE IN PLACE AND DISPLAYING THE "PRIOR TO CONSTRUCTION" MESSAGES FOR SEVEN DAYS PRIOR TO THE EXPECTED START OF WORK ON IH 39 NB.

SITE 3 MESSAGE SIGN IS TO BE IN PLACE AND DISPLAYING THE "PRIOR TO CONSTRUCTION" MESSAGES FOR SEVEN DAYS PRIOR TO THE EXPECTED START OF WORK ON IH 39 SB.

MAINTENANCE CROSSOVER LOCATIONS (MILE MARKER)

106.0
104.1
102.6
100.7
99.7
98.5
97.9
96.6
96.1
94.3
92.6
91.3
90.4
89.6
88.8
88.2

DEPARTMENT PCMS SIGN LOCATIONS

MILE MARKER 108.8
1.9 MILES NORTH OF STH 23-82 INTERCHANGE
PCMS 04-0410

MILE MARKER 108.0
1.2 MILES NORTH OF STH 23-82 INTERCHANGE
PCMS 04-0411

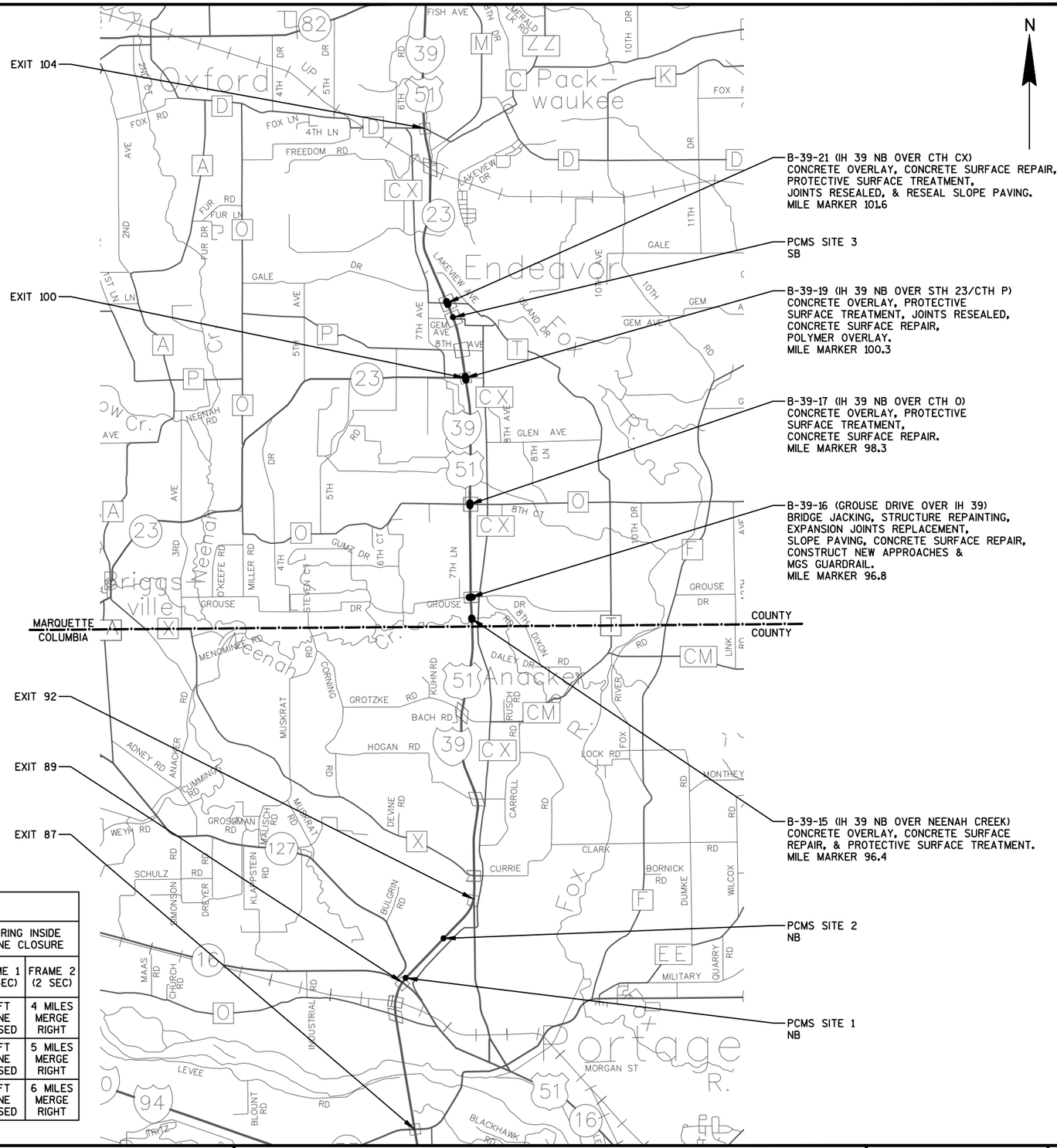
RAMP GATE INFORMATION

RAMP GATES EXIT 104 (CTH D)
G-39-09 (SB RAMP, SW QUAD)

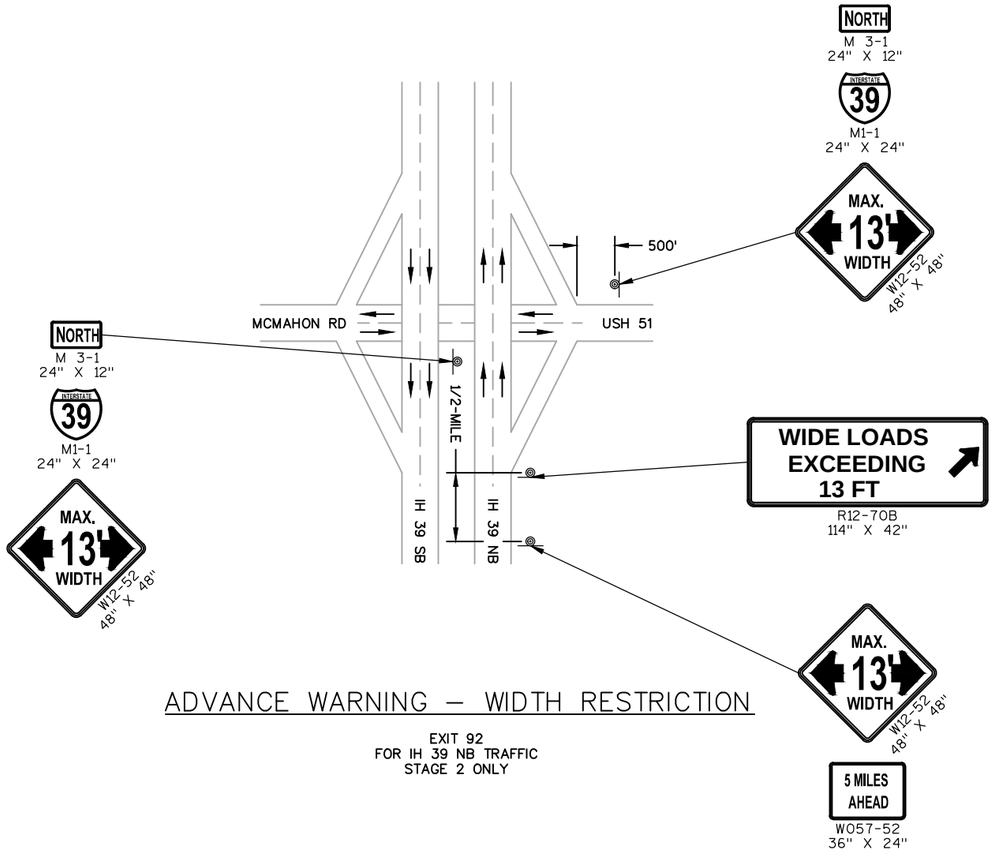
RAMP GATES EXIT 100 (STH 23-82)
G-39-05 (NB RAMP, NE QUAD)
G-39-06 (NB RAMP, NW QUAD)
G-39-07 (SB RAMP, SE QUAD)
G-39-08 (SB RAMP, WE QUAD)

MESSAGE OVERVIEW

SIGN OWNER	PCMS SITE NO. (DIR.)	MILE MARKER	USER NAME PASSWORD	I.P. ADDRESS	7 DAYS PRIOR TO CONSTRUCTION		DURING SHOULDER CLOSURE		DURING OUTSIDE LANE CLOSURE		DURING INSIDE LANE CLOSURE	
					FRAME 1 (2 SEC)	FRAME 2 (2 SEC)	FRAME 1 (2 SEC)	FRAME 2 (2 SEC)	FRAME 1 (2 SEC)	FRAME 2 (2 SEC)	FRAME 1 (2 SEC)	FRAME 2 (2 SEC)
CONTRACTOR	3 (SB)	101.3	USER PASSWORD	XXX.XXX.XXX.XXX	SINGLE LANE TRAFFIC	MON. XX TO MON. XX	SHLDRS CLOSED	4 MILES AHEAD	RIGHT LANE CLOSED	4 MILES MERGE LEFT	LEFT LANE CLOSED	4 MILES MERGE RIGHT
CONTRACTOR	2 (NB)	91.0	USER PASSWORD	XXX.XXX.XXX.XXX	SINGLE LANE TRAFFIC	MON. XX TO MON. XX	SHLDRS CLOSED	5 MILES AHEAD	RIGHT LANE CLOSED	5 MILES MERGE LEFT	LEFT LANE CLOSED	5 MILES MERGE RIGHT
CONTRACTOR	1 (NB)	90.0	USER PASSWORD	XXX.XXX.XXX.XXX	SINGLE LANE TRAFFIC	MON. XX TO MON. XX	SHLDRS CLOSED	6 MILES AHEAD	RIGHT LANE CLOSED	6 MILES MERGE LEFT	LEFT LANE CLOSED	6 MILES MERGE RIGHT

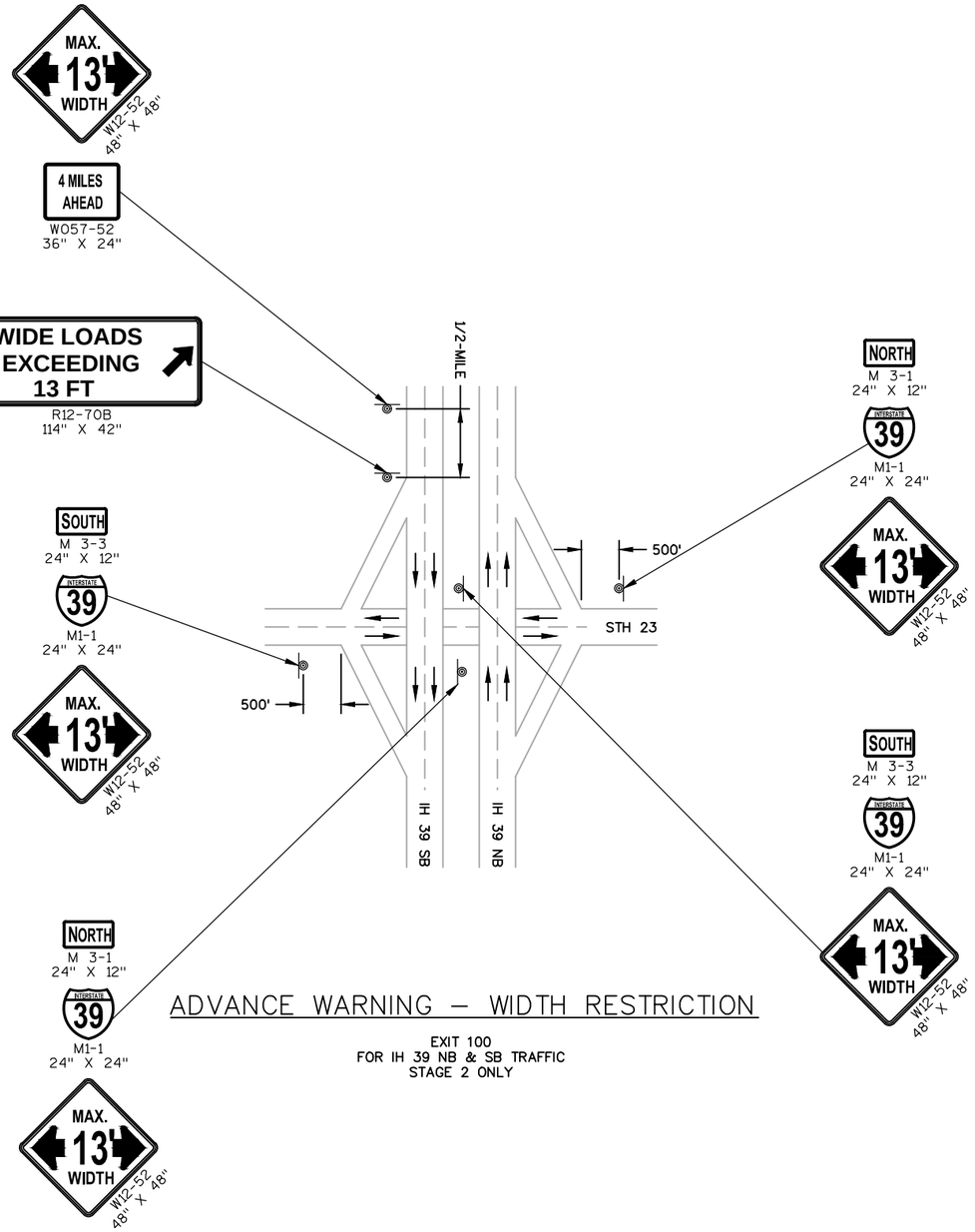


PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - PCMS OVERVIEW	SHEET 9	E



ADVANCE WARNING – WIDTH RESTRICTION

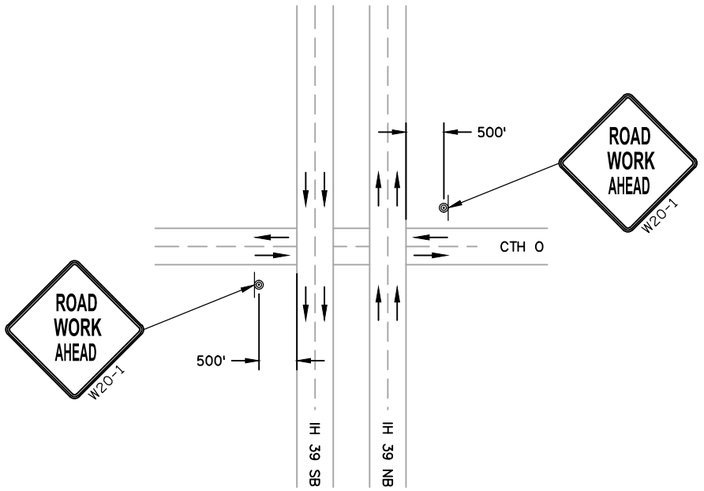
EXIT 92
FOR IH 39 NB TRAFFIC
STAGE 2 ONLY



ADVANCE WARNING – WIDTH RESTRICTION

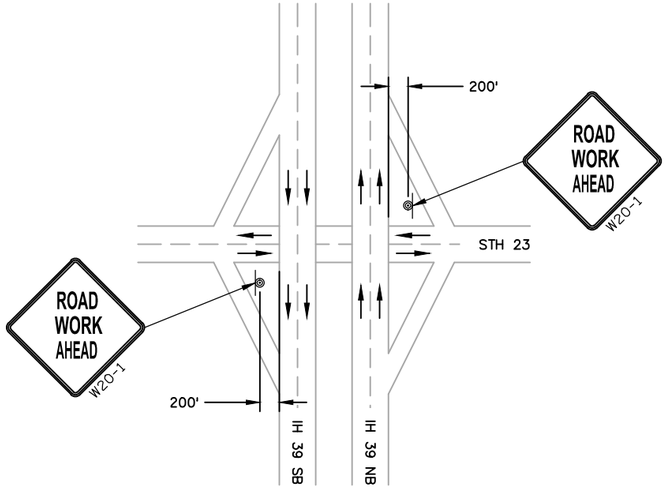
EXIT 100
FOR IH 39 NB & SB TRAFFIC
STAGE 2 ONLY

2



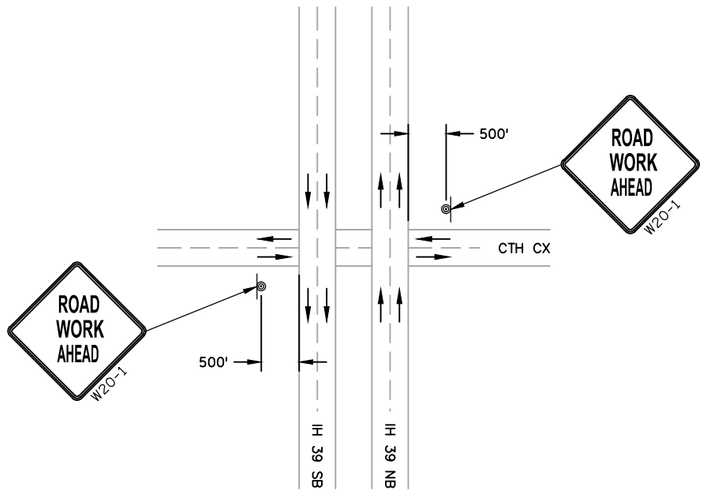
ADVANCE WARNING – MINOR ROAD UNDERPASS

CTH O



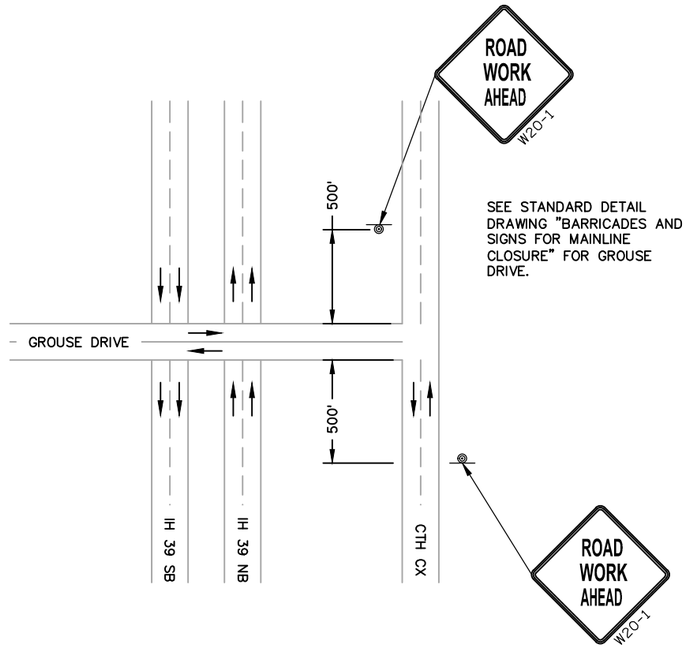
ADVANCE WARNING – MINOR ROAD UNDERPASS

STH 23



ADVANCE WARNING – MINOR ROAD UNDERPASS

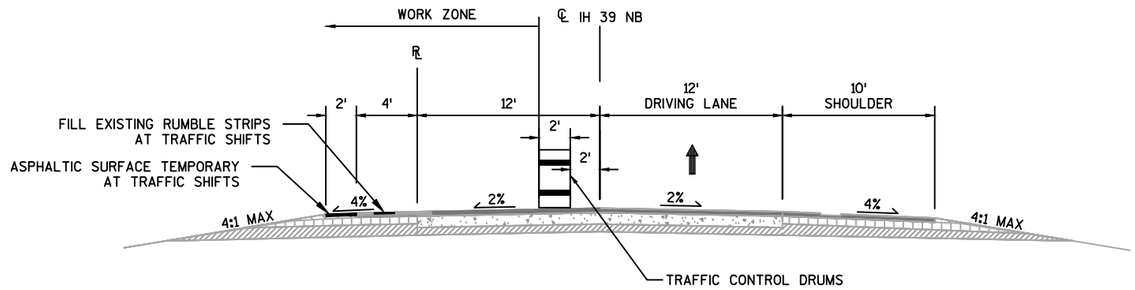
CTH CX



TRAFFIC CONTROL – GROUSE DRIVE

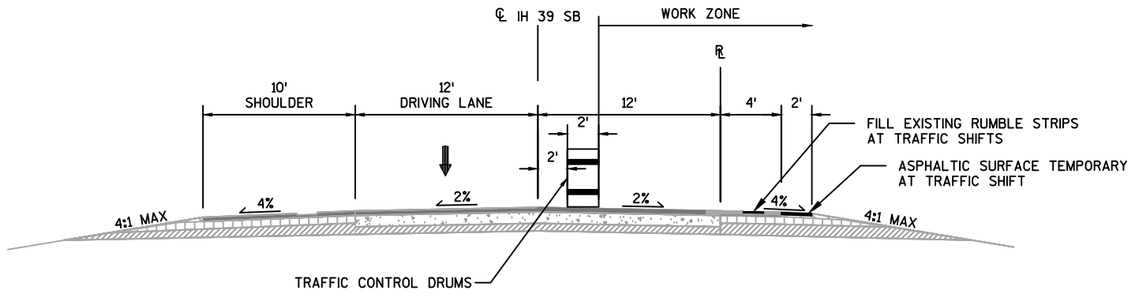
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - ADVANCE SIGNING DETAILS	SHEET 11	E

SEE STANDARD DETAIL "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.



TRAFFIC CONTROL TYPICAL SECTION

STAGE 1
NORTHBOUND – CONTINUOUS LANE CLOSURE (WORK AT STRUCTURES ONLY)
B-39-15/16/17/19/21



TRAFFIC CONTROL TYPICAL SECTION

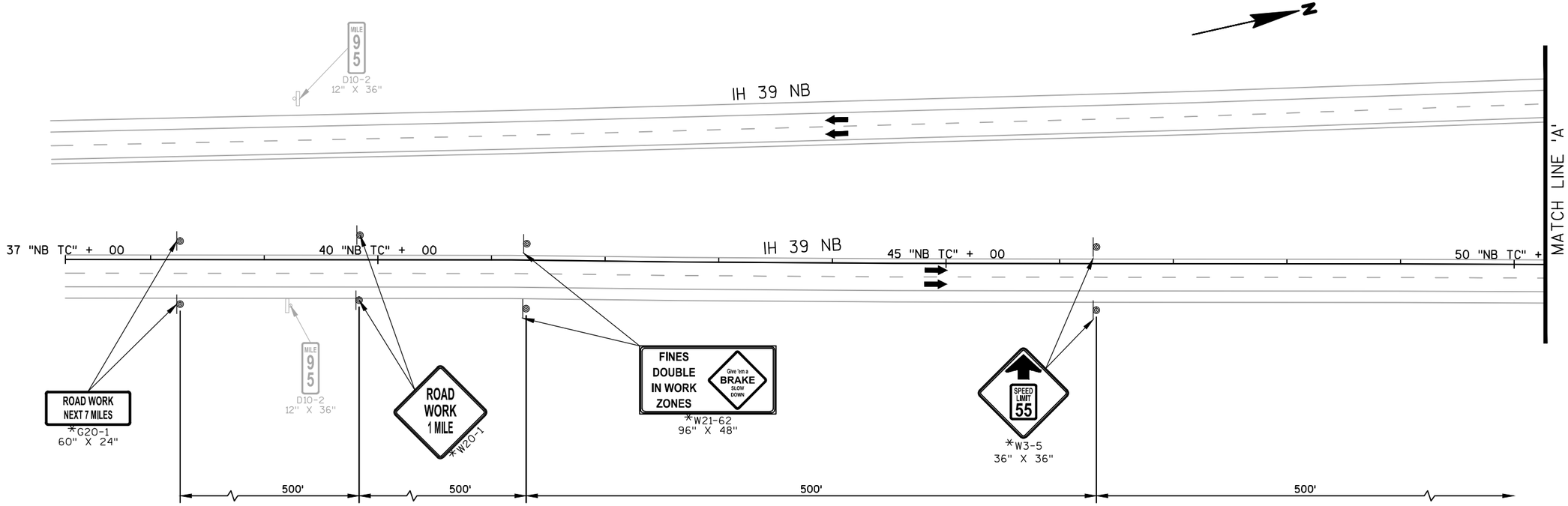
STAGE 1
SOUTHBOUND – WORK AT STRUCTURE ONLY
B-39-16

STAGE 1 NOTES

1. STAGE 1 (TRAFFIC IN OUTSIDE LANES)
   - 1.1. NORTHBOUND (ALL FIVE STRUCTURES - DRUMS ONLY)
     - 1.1.1. FILL IN INSIDE SHOULDER RUMBLE STRIPS
     - 1.1.2. WIDEN INSIDE SHOULDER
     - 1.1.3. REMOVE INSIDE PERMANENT PAVEMENT MARKINGS AT STRUCTURES
     - 1.1.4. INSTALL INSIDE TEMPORARY PAVEMENT MARKINGS
   - 1.2. SOUTHBOUND (GROUSE DRIVE ONLY - DRUMS ONLY)
     - 1.2.1. FILL IN INSIDE SHOULDER RUMBLE STRIPS
     - 1.2.2. REMOVE INSIDE PERMANENT PAVEMENT MARKINGS AT STRUCTURES
     - 1.2.3. INSTALL INSIDE TEMPORARY PAVEMENT MARKINGS

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 12	E

*SIGN TO REMAIN FOR STAGES 1, 2, 3, 4, AND 5.

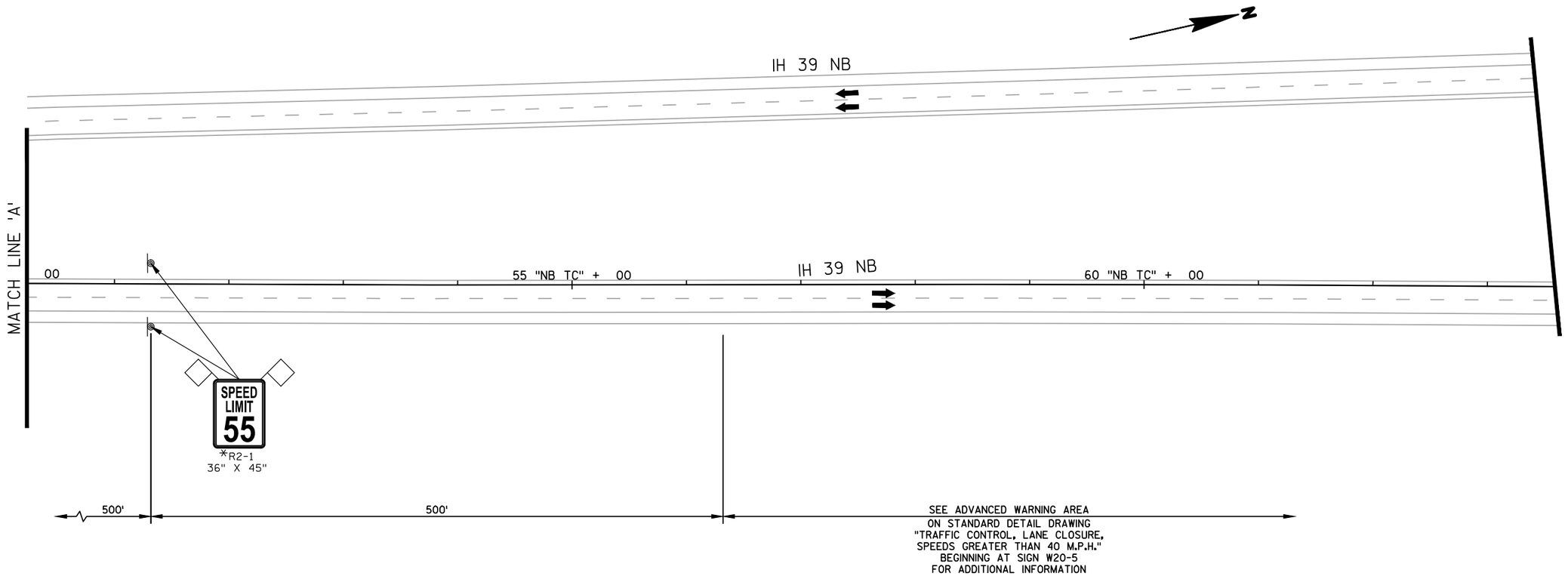


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 13	E

*SIGN TO REMAIN FOR STAGES 1, 2, 3, 4, AND 5.



LEGEND

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- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
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- REMOVING PAVEMENT MARKING
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PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 14	E

2

N

IH 39 SB

IH 39 NB

80 "NB TC" + 00

85 "NB TC" + 00

90 "NB TC" + 00

93 "NB

MATCH LINE 'B'

MILE 96 D10-2 12" X 36"

MILE 96 D10-2 12" X 36"

REMOVING PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (YELLOW SOLID)

50' TYP

350'

100' TYP

SEE ADVANCED WARNING AREA ON STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION

780' TRANSITION AREA

800' BUFFER SPACE

COUNTY RD CX

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
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PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 15	E

2

N

IH 39 SB

96 "SB TC" + 00

100 "SB TC" + 00

105 "SB TC" + 00

MATCH LINE 'B'

TC" + 00

95 "NB TC" + 00

IH 39 NB

100 "NB TC" + 00

105 "NB TC" + 00

100'
TYP

ASPHALTIC SURFACE TEMPORARY

800' BUFFER SPACE

SPACE DRUMS AND BARRICADES
AS SHOWN IN STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H."

COUNTY RD CX

R11-2-L
48" X 30"
LANE
CLOSED

TYPE III BARRICADE

LEGEND

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- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 16	E

*SIGN TO REMAIN FOR STAGES 1, 2, 3, 4, AND 5.

N

500'
500'

SPEED LIMIT 65
*R2-1
36" X 45"

END ROAD WORK
*G20-2A
48" X 24"

100'
TYP

IH 39 SB

125 "SB TC" + 00
130 "SB TC" + 00
135 "SB TC" + 00

IH 39 NB

125 "NB TC" + 00
130 "NB TC" + 00
135 "NB TC" + 00

MATCH LINE 'C'

B-39-16

GROUSE DRIVE

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

R3-4B
36" X 48"

LEGEND

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PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 17	E

2

N

800' BUFFER SPACE

MILE 97 D10-2 12" X 36"

100' TYP

IH 39 SB

140 "SB TC" + 00

145 "SB TC" + 00

150 "SB TC" + 00

MATCH LINE 'C'

MATCH LINE 'D'

IH 39 NB

140 "NB TC" + 00

145 "NB TC" + 00

150 "NB TC" + 00

MILE 97 D10-2 12" X 36"

LEGEND

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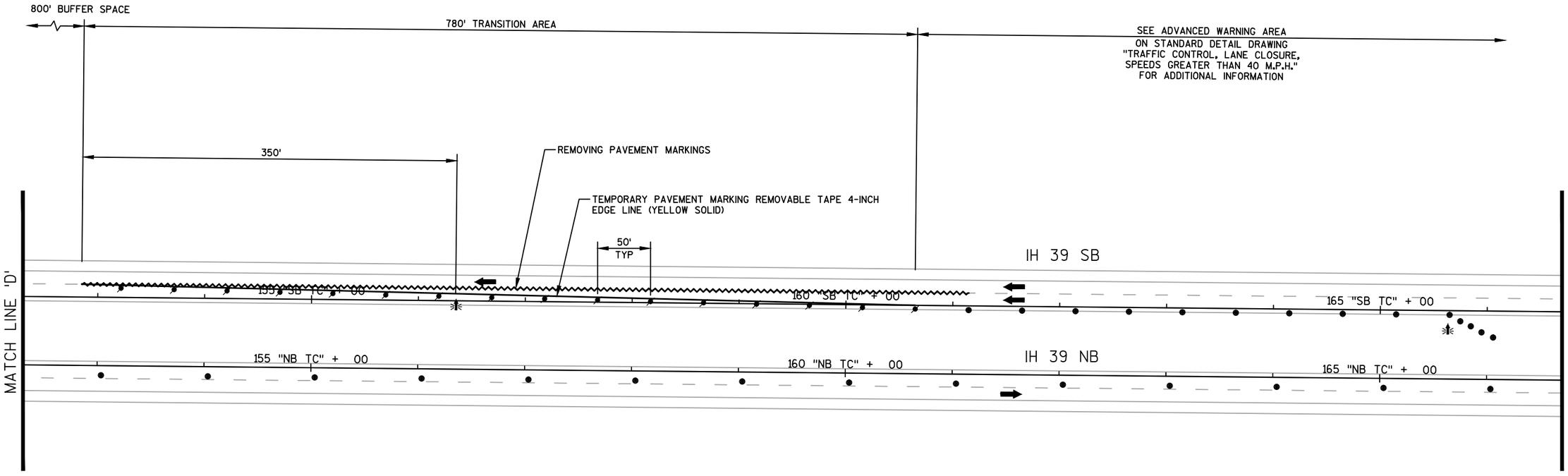
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 18	E

2

N



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PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 19	E

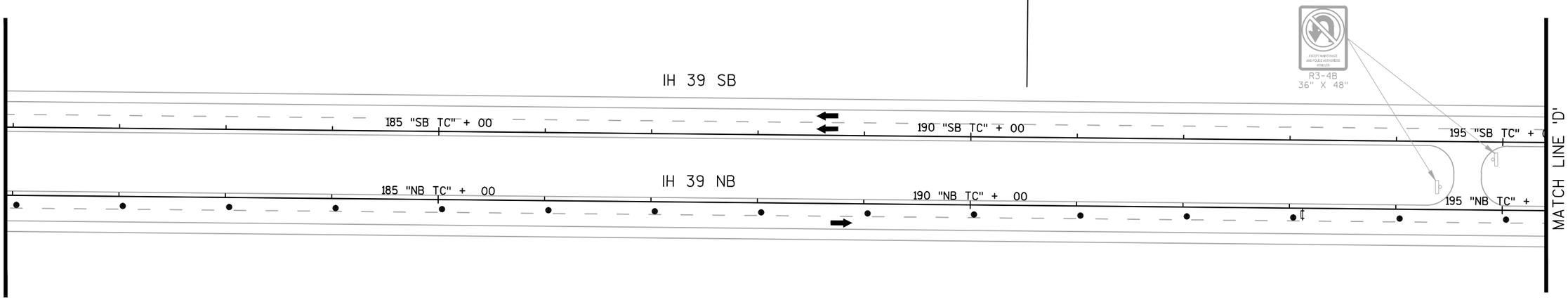
2

2

N

SEE ADVANCED WARNING AREA
ON STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H."
BEGINNING AT SIGN W20-5
FOR ADDITIONAL INFORMATION

500'



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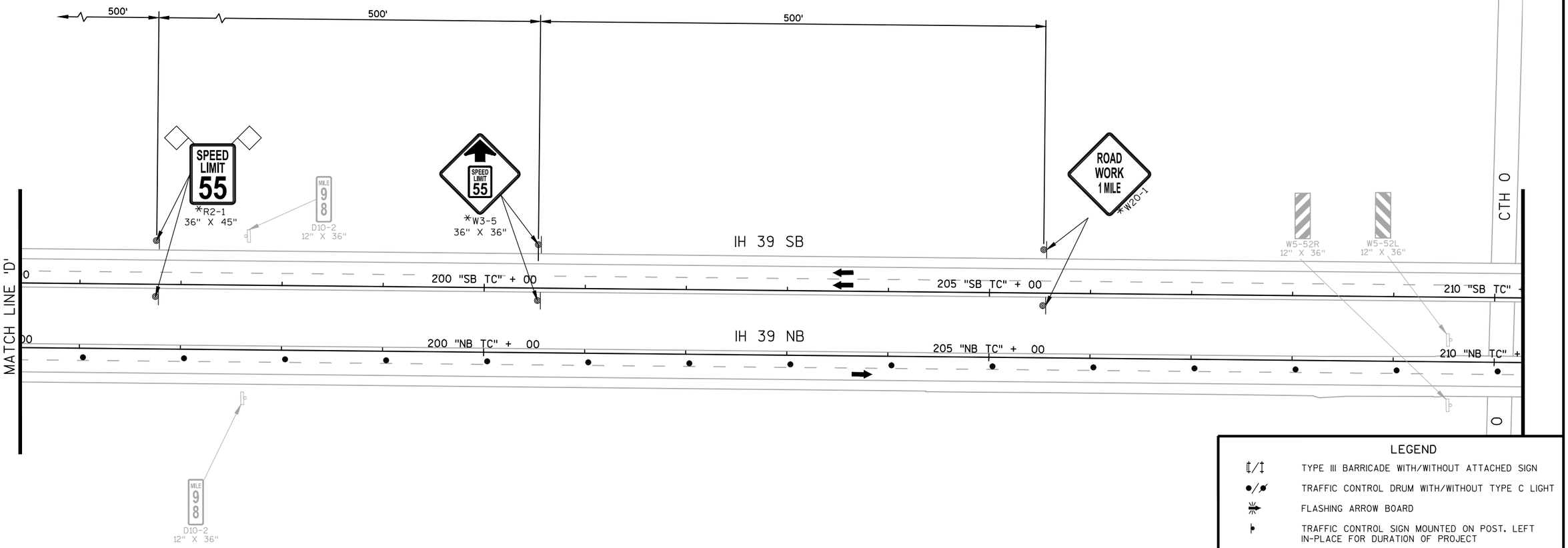
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 20	E

*SIGN TO REMAIN FOR STAGES 1, 2, 3, 4, AND 5.



LEGEND

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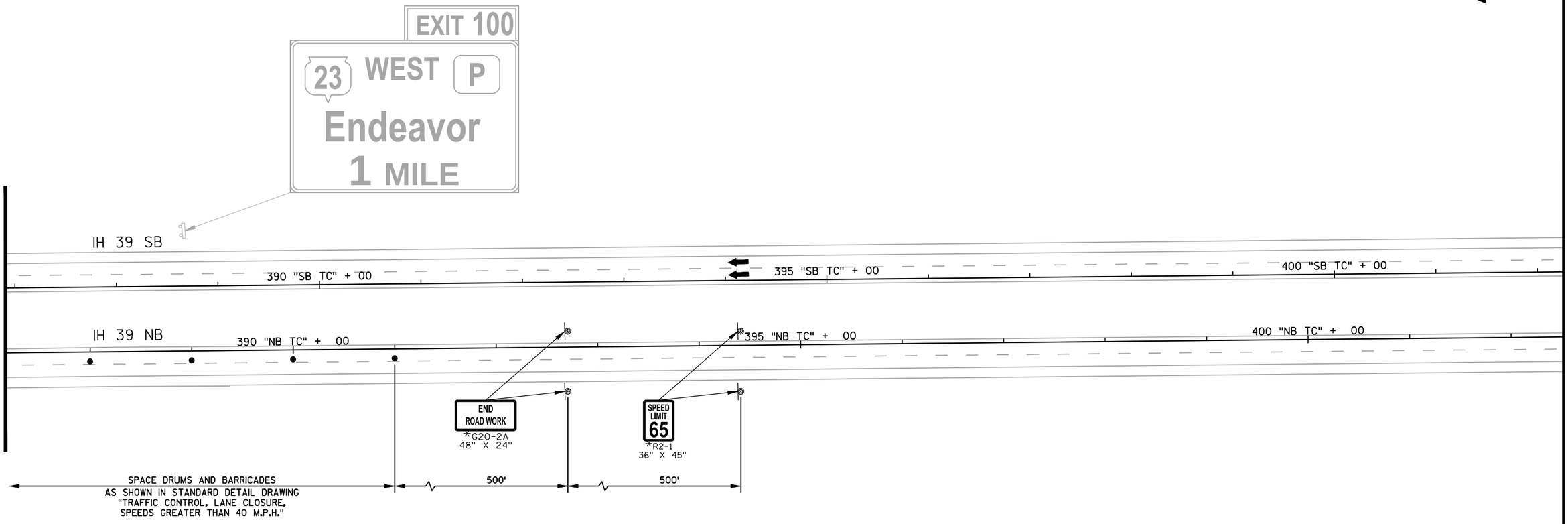
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 21	E

2

*SIGN TO REMAIN FOR STAGES 1, 2, 3, AND 4



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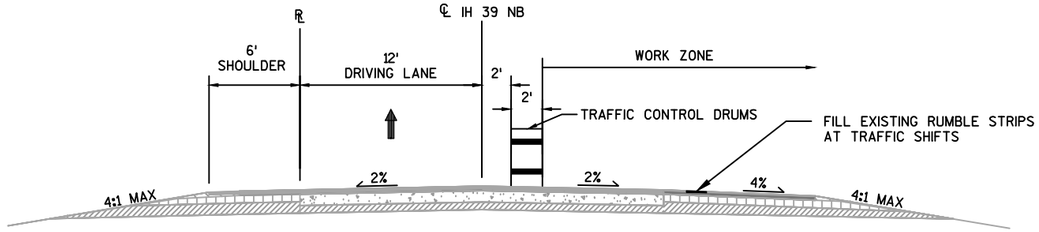
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

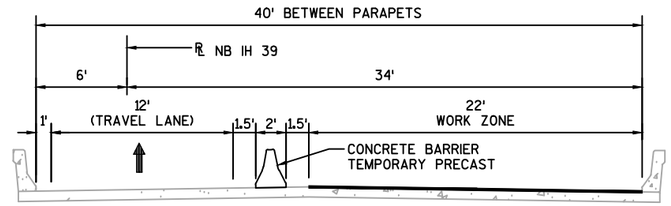
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 1	SHEET 22	E

2



TRAFFIC CONTROL TYPICAL SECTION (IH 39)

STAGE 2
NORTHBOUND – BETWEEN STRUCTURE WORK ZONES
B-39-15/17/19/21

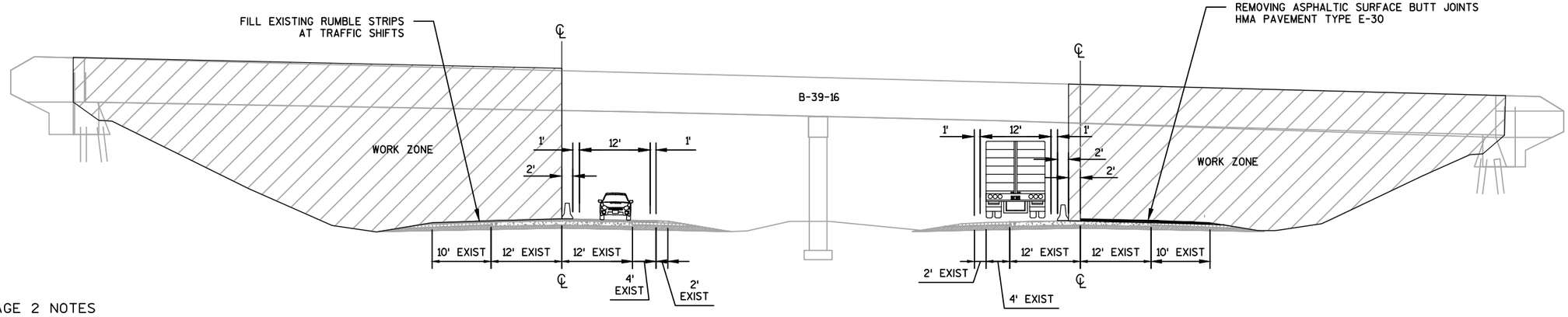


TRAFFIC CONTROL TYPICAL SECTION (IH 39)

STAGE 2
NORTHBOUND – AT STRUCTURE WORK ZONES
B-39-15/17/19/21

SEE STANDARD DETAIL "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER" FOR ADDITIONAL INFORMATION.

2



STAGE 2 NOTES

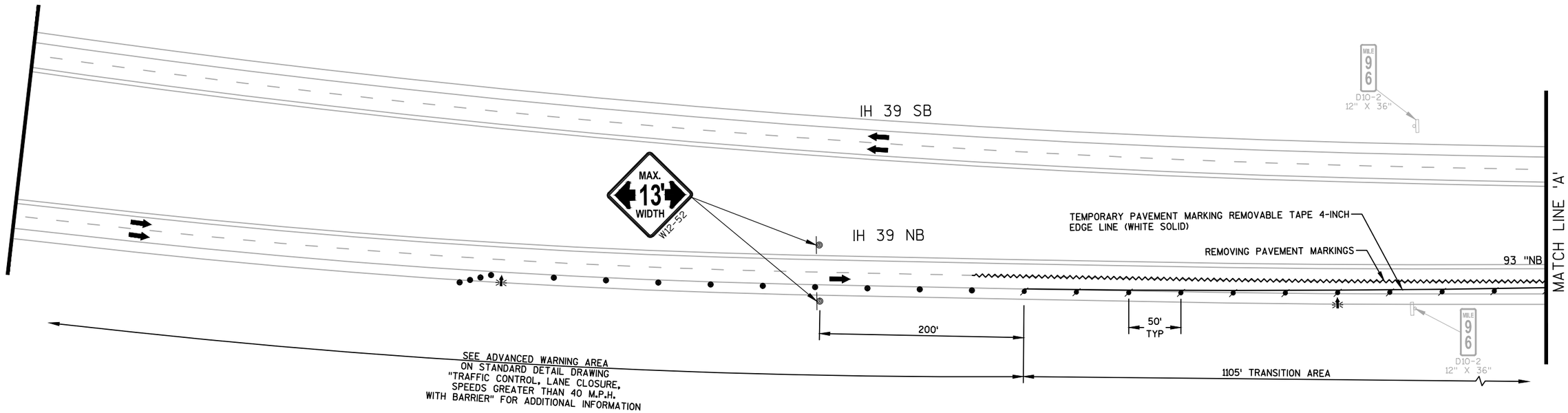
2. STAGE 2 (TRAFFIC IN INSIDE LANES)
 2.1. NORTHBOUND (ALL FIVE STRUCTURES - DRUMS AND BARRIER WALL)
  2.1.1. PAINT GROUSE DRIVE BRIDGE OVER OUTSIDE LANE
  2.1.2. MILL AND OVERLAY OUTSIDE NORTHBOUND LANE BELOW GROUSE DRIVE
  2.1.3. OUTSIDE LANE DECK OVERLAYS
  2.1.4. OUTSIDE LANE BRIDGE APPROACHES
  2.1.5. FILL IN OUTSIDE SHOULDER RUMBLE STRIPS
  2.1.6. REMOVE OUTSIDE PAVEMENT MARKINGS
  2.1.7. INSTALL OUTSIDE TEMPORARY PAVEMENT MARKINGS
 2.2. SOUTHBOUND (GROUSE DRIVE ONLY - DRUMS AND BARRIER WALL)
  2.2.1. PAINT GROUSE DRIVE BRIDGE OVER OUTSIDE LANE
  2.2.1. FILL IN OUTSIDE SHOULDER RUMBLE STRIPS
  2.2.1. REMOVE OUTSIDE PAVEMENT MARKINGS
  2.2.1. INSTALL OUTSIDE TEMPORARY PAVEMENT MARKINGS

TRAFFIC CONTROL TYPICAL SECTION (IH 39)

STAGE 2
NORTHBOUND & SOUTHBOUND – AT GROUSE DRIVE OVERPASS
B-39-16

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 23	E

2



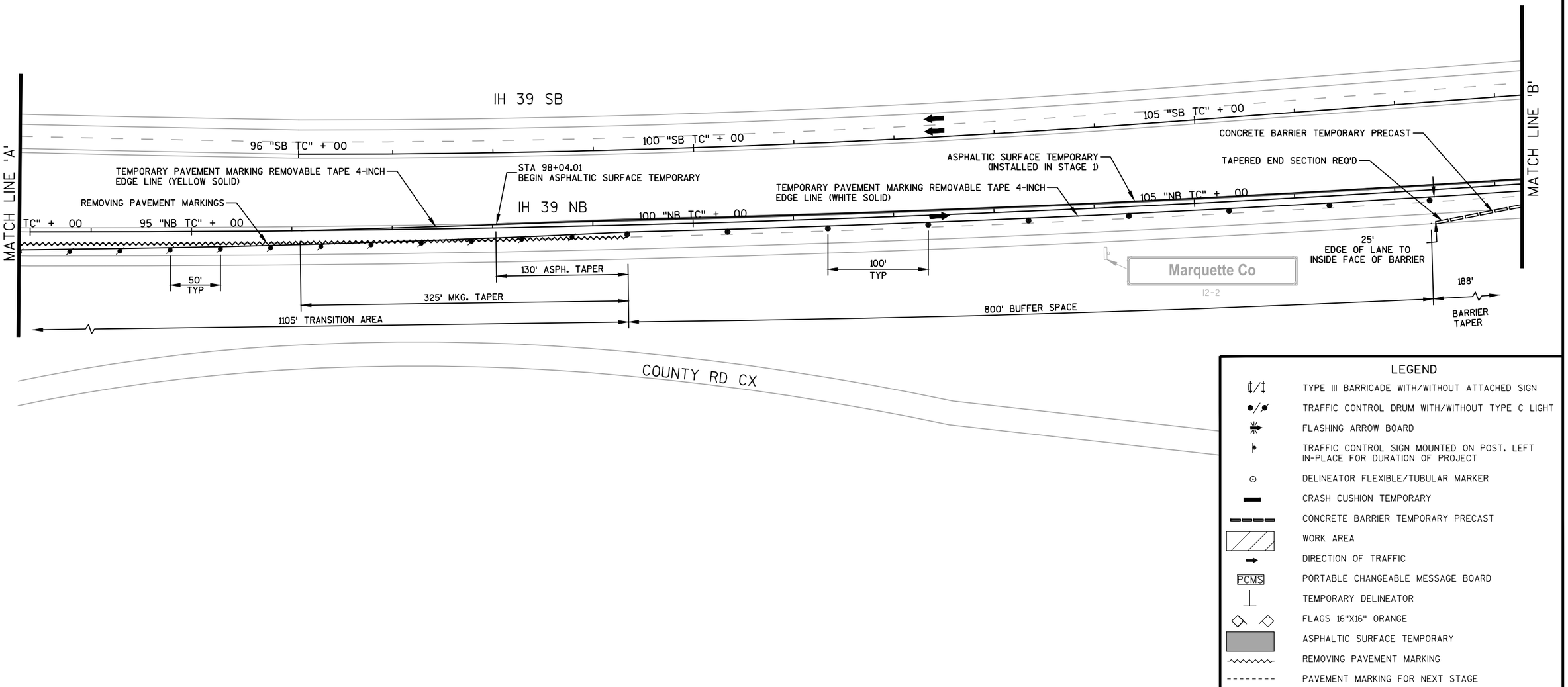
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 24	E

2

N



LEGEND

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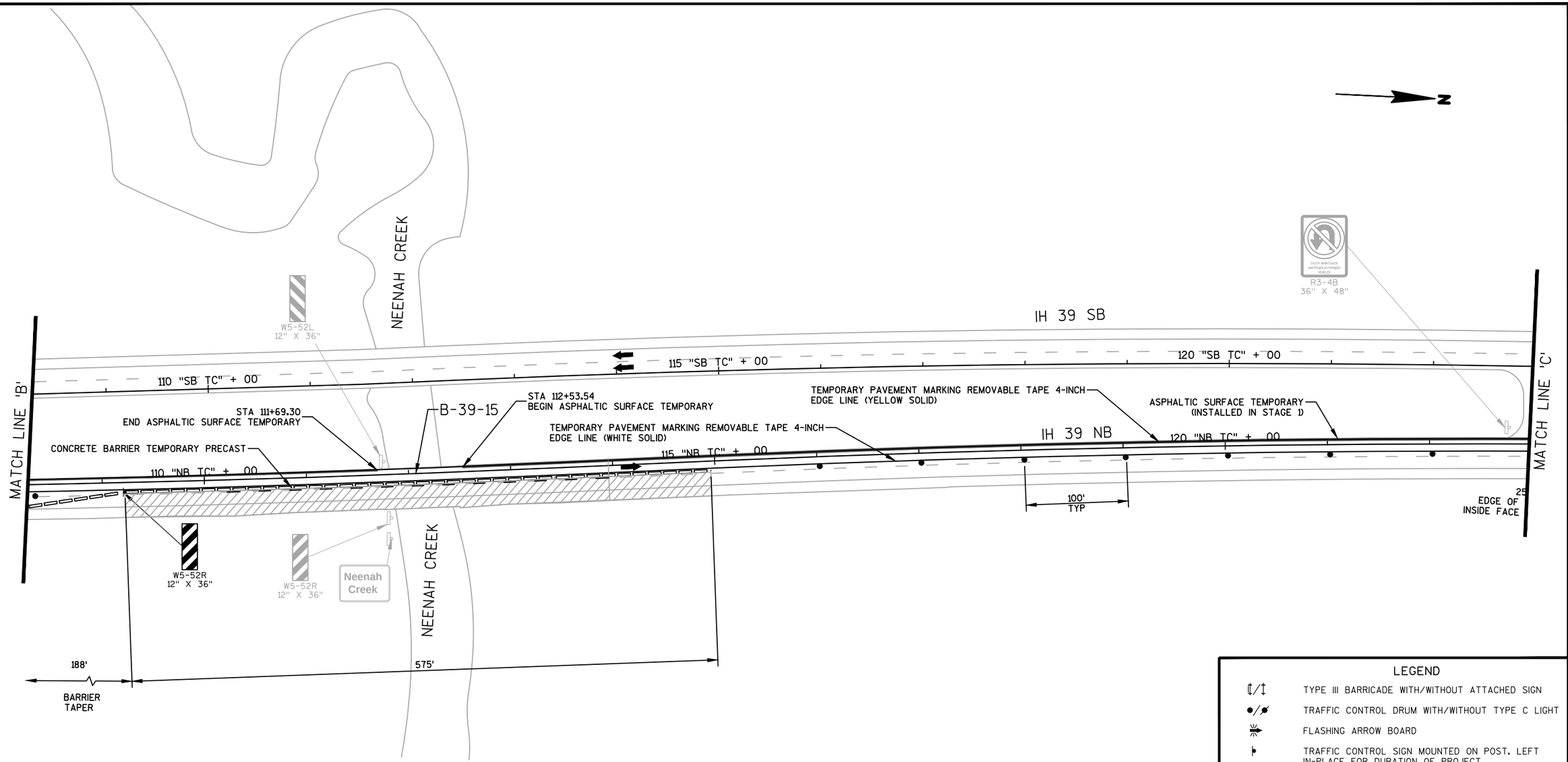
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 25	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_025006_TC_ST2.DWG PLOT DATE : 7/31/2013 4:23 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : ----------
WISDOT/CADDS SHEET 42

2



LEGEND

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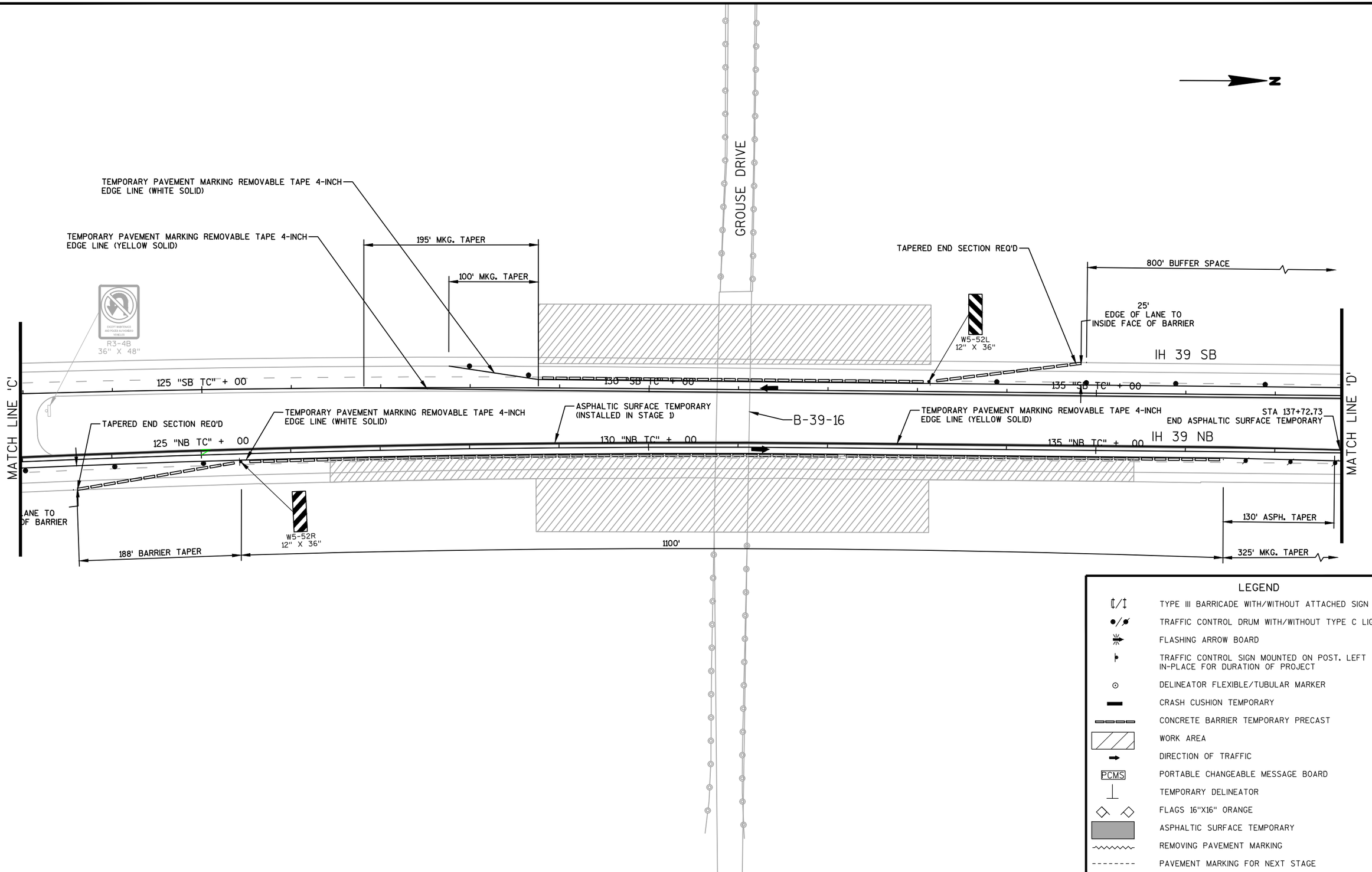
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 26	E

2



LEGEND

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- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
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- PAVEMENT MARKING FOR NEXT STAGE

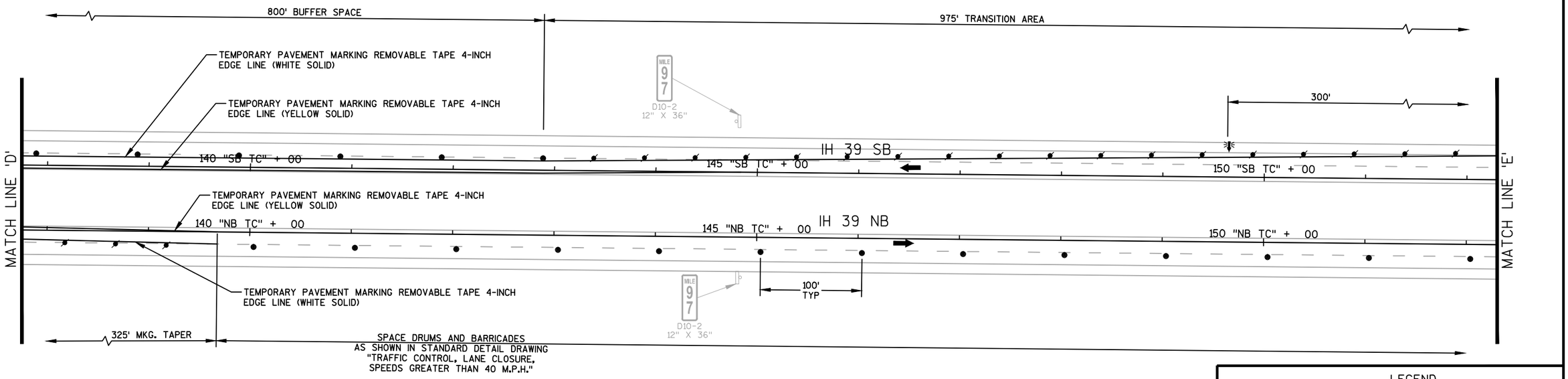
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 27	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_025006_TC_ST2.DWG PLOT DATE : 7/31/2013 4:23 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : ----------

WISDOT/CADDS SHEET 42

2

N



LEGEND

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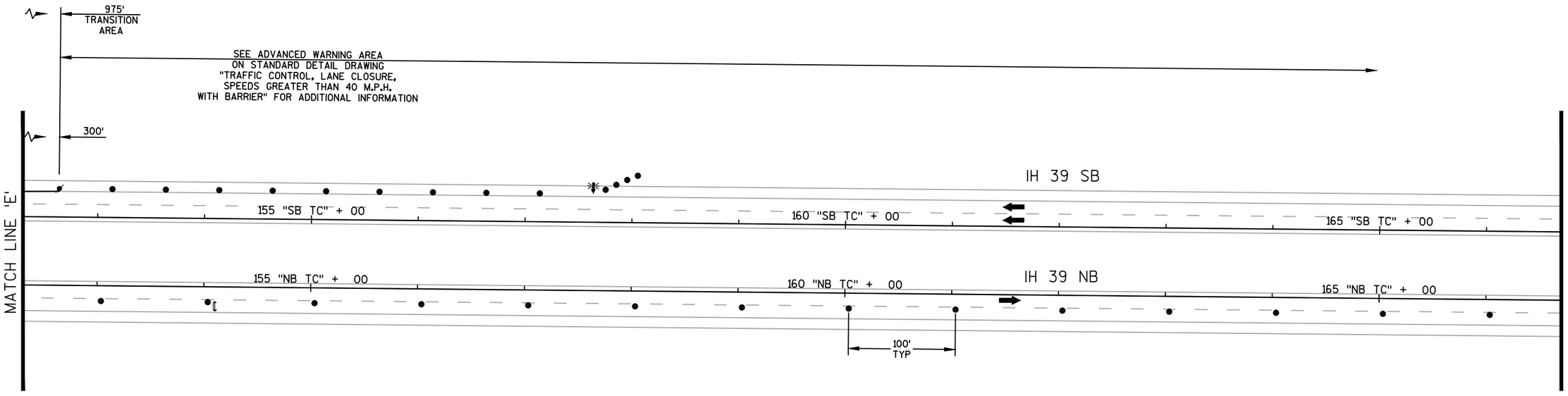
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 28	E

2

N



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- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 29	E

2

N

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (YELLOW SOLID)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (WHITE SOLID)

R3-4B
36" X 48"

IH 39 SB

185 "SB TC" + 00

190 "SB TC" + 00

195 "SB TC" +

IH 39 NB

185 "NB TC" + 00

190 "NB TC" + 00

195 "NB TC" +

MATCH LINE 'F'

100'
TYP

SPACE DRUMS AND BARRICADES
AS SHOWN IN STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H."

500'

325' MKG. TAPER

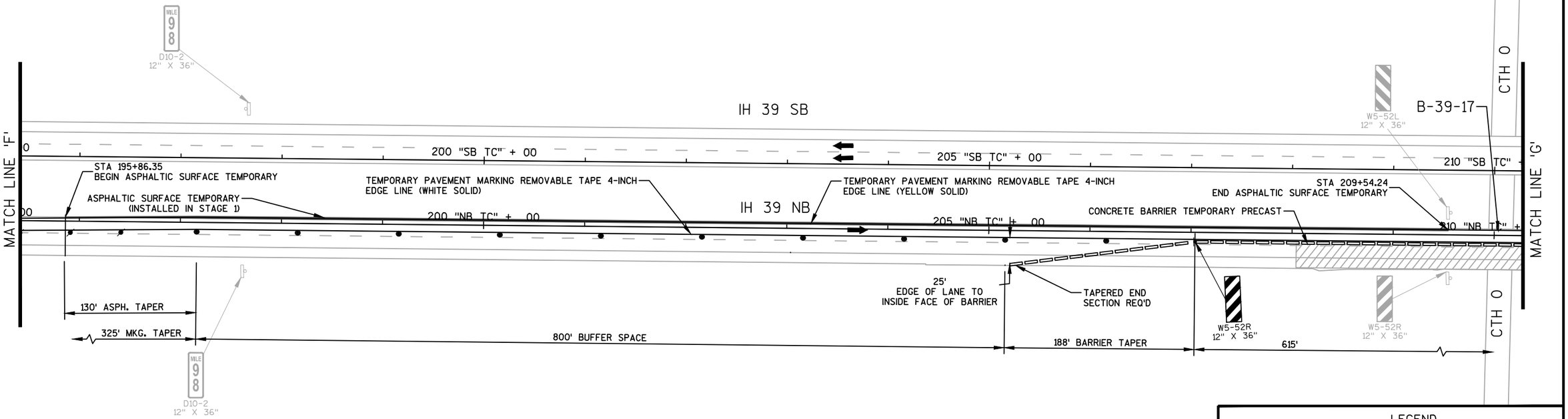
MAX.
13'
WIDTH
W12-52

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 30	E

2



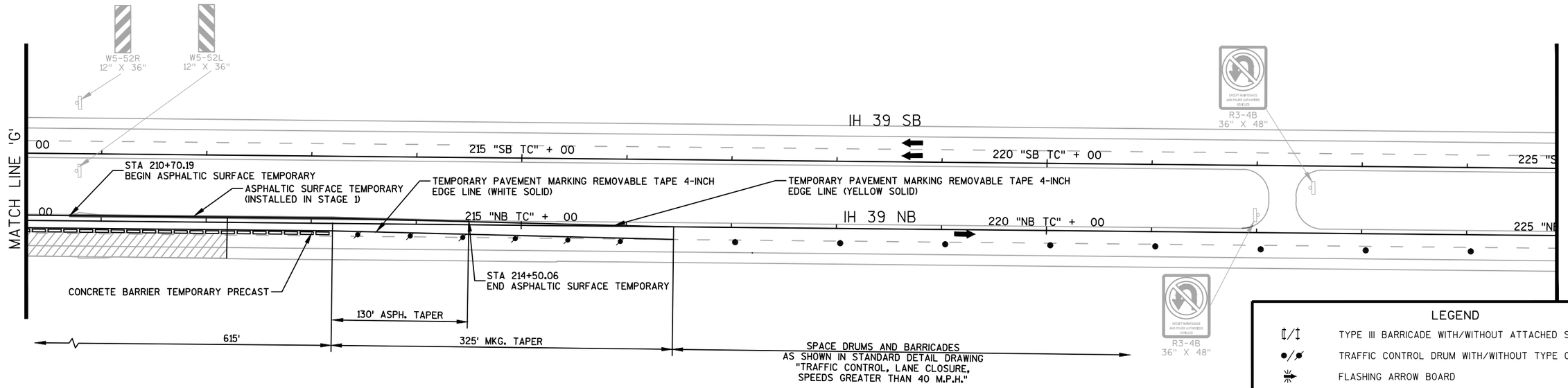
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 31	E

2

N



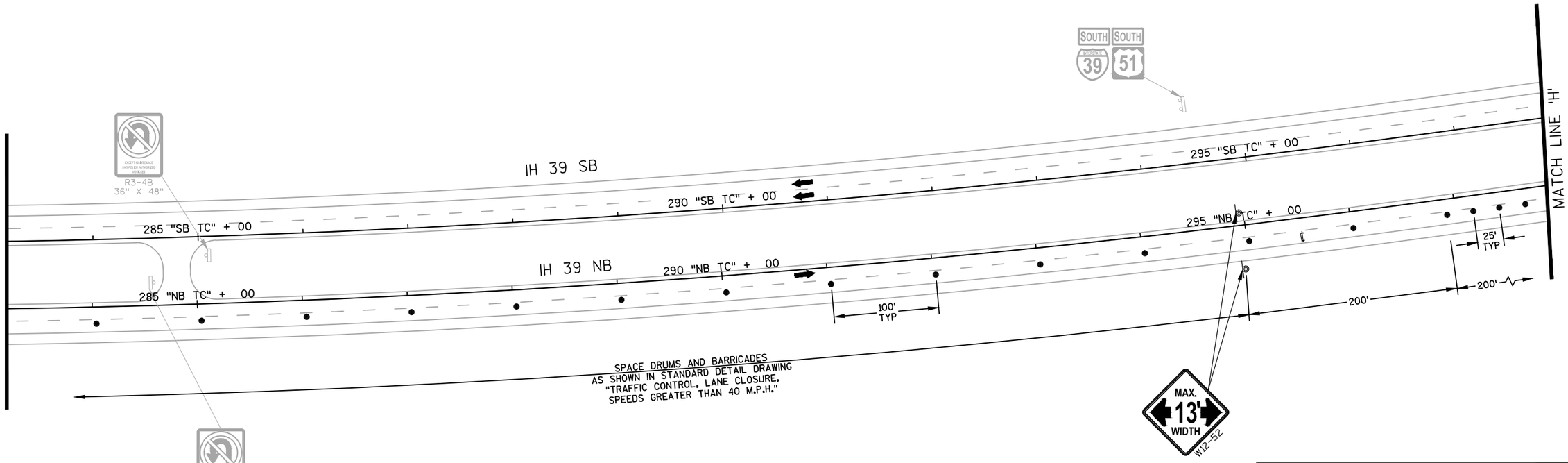
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 32	E

2

N

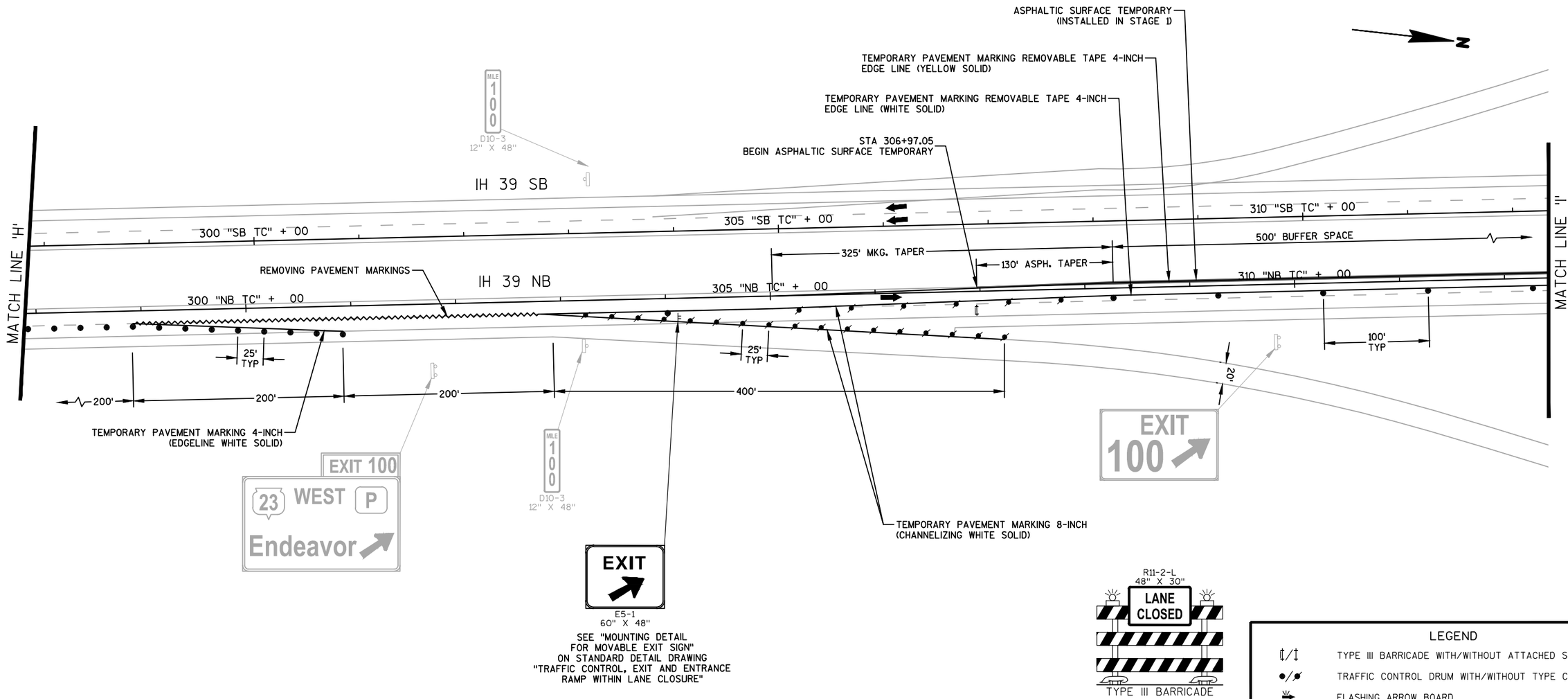


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 33	E

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 34	E

2

2

N

STH 23/CTH P

ASPHALTIC SURFACE TEMPORARY
(INSTALLED IN STAGE 1)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (YELLOW SOLID)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (WHITE SOLID)

IH 39 SB

315 "SB TC" + 00

320 "SB TC" + 00

325 "SB TC" + 00

MATCH LINE "I"

500' BUFFER SPACE

188' BARRIER TAPER

B-39-19

IH 39 NB

315 "NB TC" + 00

320 "NB TC" + 00

325 "NB TC" + 00

325' MKG. TAPER

130' ASPH. TAPER

MATCH LINE "J"

TAPERED END SECTION REQ'D

25'
EDGE OF LANE TO
INSIDE FACE OF BARRIER

W5-52R
12" X 36"

W5-52L
12" X 36"

W5-52R
12" X 36"

CONCRETE BARRIER TEMPORARY PRECAST

CTH P

STA 317+67.59
END ASPHALTIC SURFACE TEMPORARY

STA 319+46.00
BEGIN ASPHALTIC SURFACE TEMPORARY

50'
TYP

STA 323+22.99
END ASPHALTIC SURFACE TEMPORARY

W4-1
36" X 36"

500'

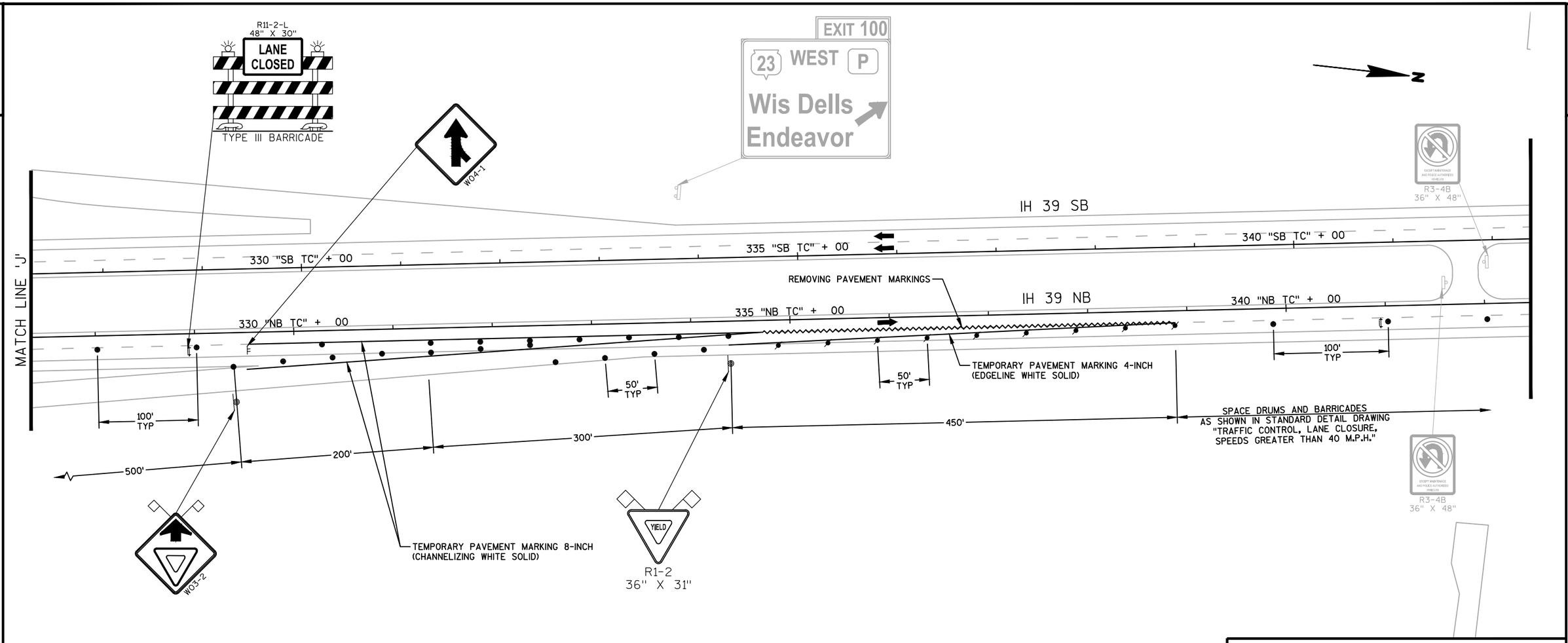
ROAD
WORK
AHEAD
W20-1

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 35	E

2

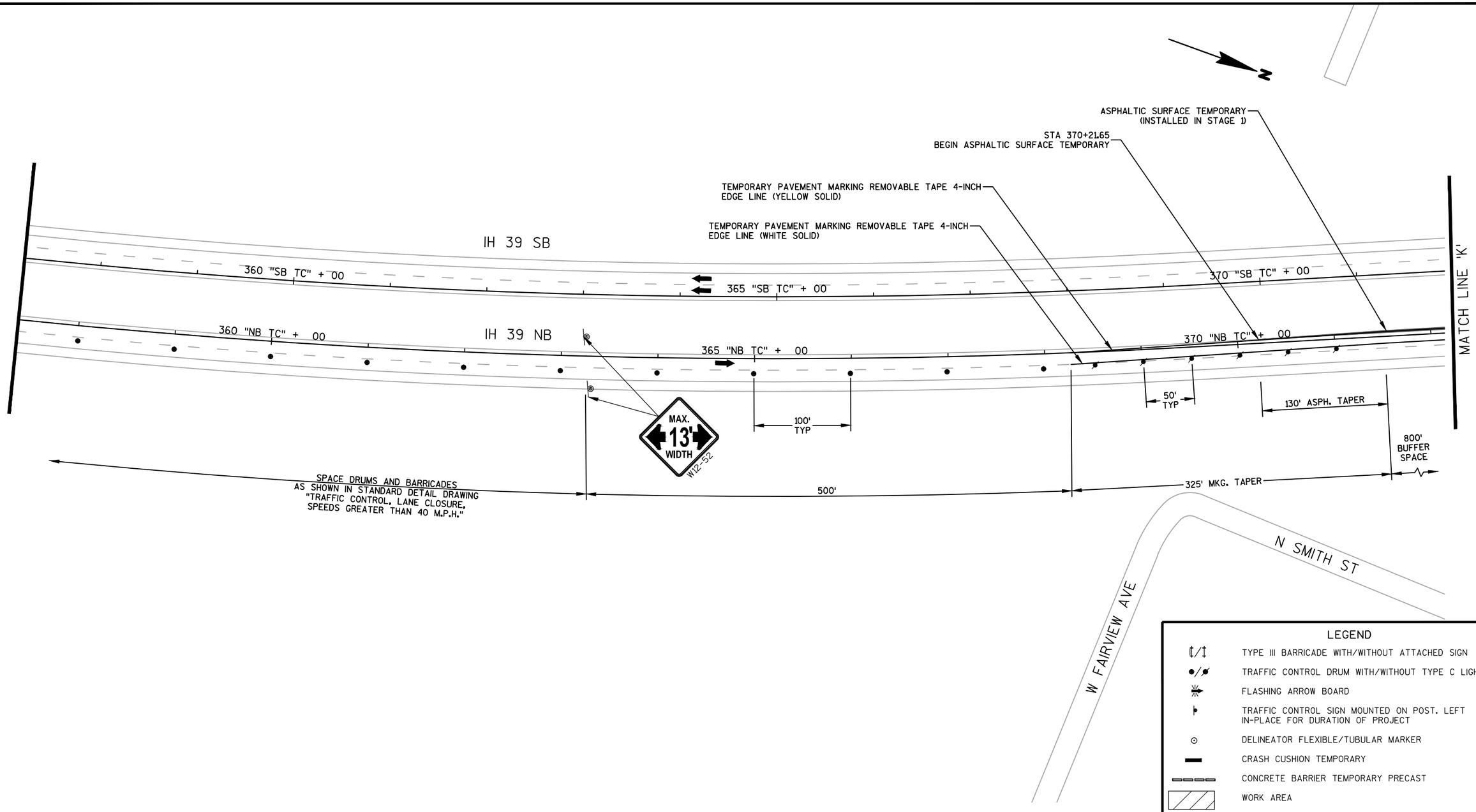


LEGEND

‡/‡	TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
●/●	TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
	FLASHING ARROW BOARD
	TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER
	CRASH CUSHION TEMPORARY
	CONCRETE BARRIER TEMPORARY PRECAST
	WORK AREA
	DIRECTION OF TRAFFIC
PCMS	PORTABLE CHANGEABLE MESSAGE BOARD
	TEMPORARY DELINEATOR
	FLAGS 16"X16" ORANGE
	ASPHALTIC SURFACE TEMPORARY
	REMOVING PAVEMENT MARKING
--------	PAVEMENT MARKING FOR NEXT STAGE

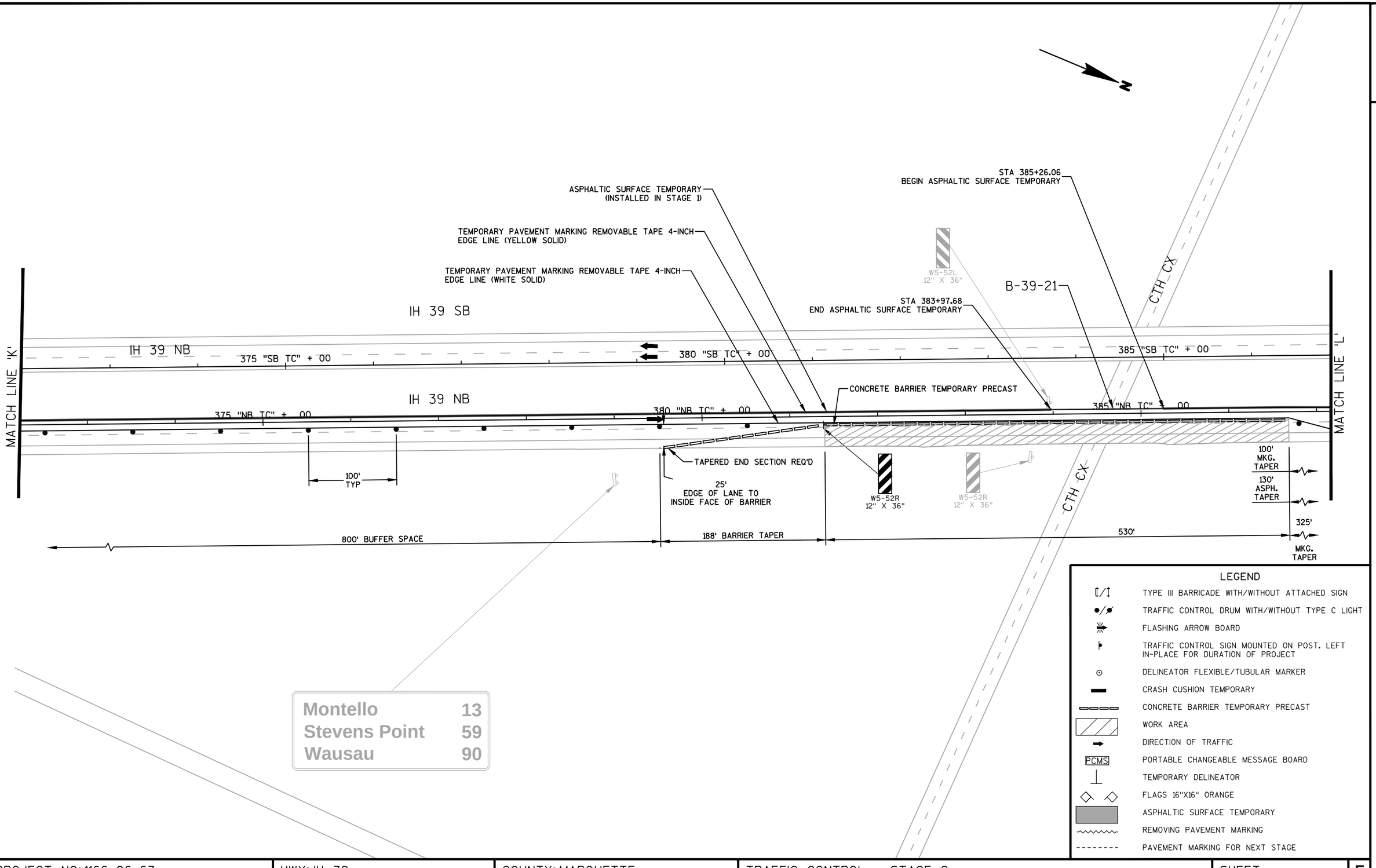
2

2



PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 37	E

2



Montello	13
Stevens Point	59
Wausau	90

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
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- CONCRETE BARRIER TEMPORARY PRECAST
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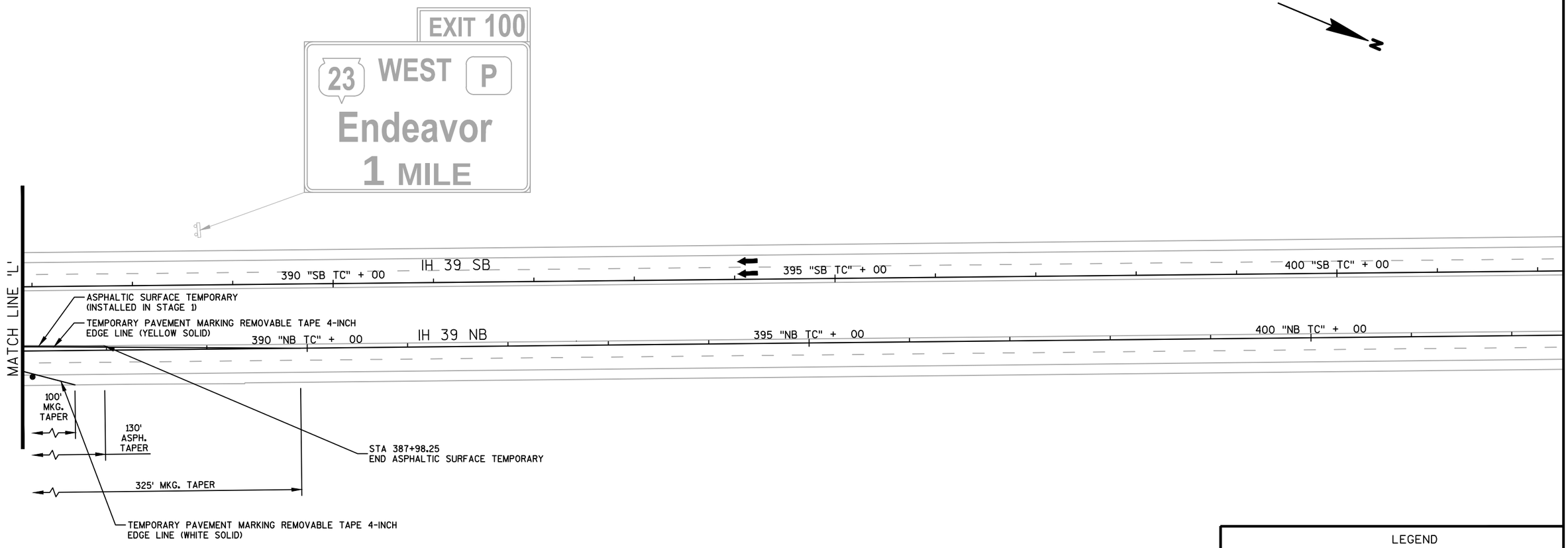
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 38	E

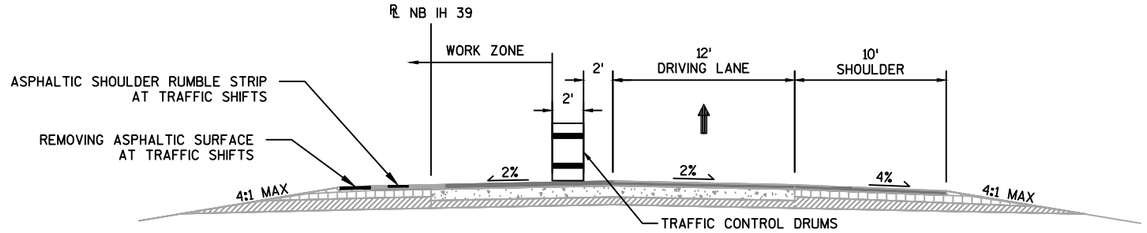
2



LEGEND

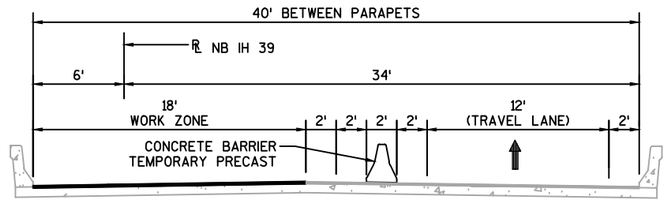
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 2	SHEET 39	E



TRAFFIC CONTROL TYPICAL SECTION (IH 39)

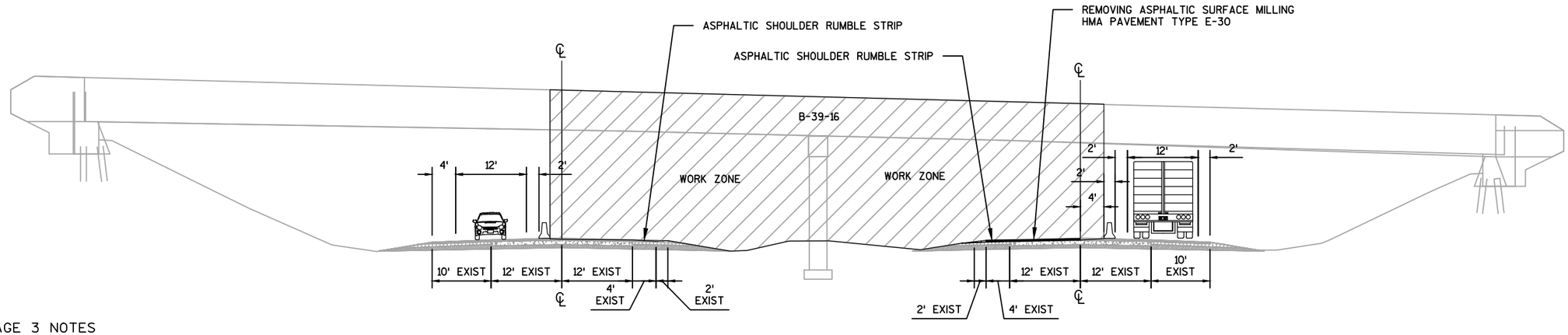
STAGE 3
NORTHBOUND – BETWEEN STRUCTURE WORK ZONES
B-39-15/17/19/21



TRAFFIC CONTROL TYPICAL SECTION (IH 39)

STAGE 3
NORTHBOUND – AT STRUCTURE WORK ZONES
B-39-15/17/19/21

SEE STANDARD DETAIL "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER" FOR ADDITIONAL INFORMATION.



IH 39 SOUTHBOUND

IH 39 NORTHBOUND

TRAFFIC CONTROL TYPICAL SECTION (IH 39)

STAGE 3
NORTHBOUND & SOUTHBOUND – AT GROUSE DRIVE OVERPASS
B-39-16

STAGE 3 NOTES

3. STAGE 3 (TRAFFIC IN OUTSIDE LANES)
 3.1. NORTHBOUND (ALL FIVE STRUCTURES - DRUMS AND BARRIER WALL)
  3.1.1. PAINT GROUSE DRIVE BRIDGE OVER INSIDE LANE
  3.1.2. MILL AND OVERLAY INSIDE NORTHBOUND LANE BELOW GROUSE DRIVE
  3.1.3. INSIDE LANE DECK OVERLAYS
  3.1.4. INSIDE LANE BRIDGE APPROACHES
  3.1.5. REMOVE INSIDE TEMPORARY PAVEMENT MARKINGS
  3.1.6. REMOVE INSIDE TEMPORARY ASPHALT
  3.1.7. INSTALL PERMANENT INSIDE PAVEMENT MARKINGS
  3.1.8. REINSTALL INSIDE RUMBLE STRIPS
 3.2. SOUTHBOUND (GROUSE DRIVE ONLY - DRUMS AND BARRIER WALL)
  3.2.1. PAINT GROUSE DRIVE BRIDGE OVER INSIDE LANE
  3.2.2. REMOVE INSIDE TEMPORARY PAVEMENT MARKINGS
  3.2.3. INSTALL PERMANENT INSIDE PAVEMENT MARKINGS
  3.2.4. REINSTALL INSIDE RUMBLE STRIPS

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 40	E

2

2

N

IH 39 SB

IH 39 NB

MILE 96
D10-2
12" X 36"

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (YELLOW SOLID)

REMOVING PAVEMENT MARKINGS

93 "NB

MATCH LINE 'A'

300'

1300' TRANSITION AREA

SEE ADVANCED WARNING AREA ON STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER" FOR ADDITIONAL INFORMATION

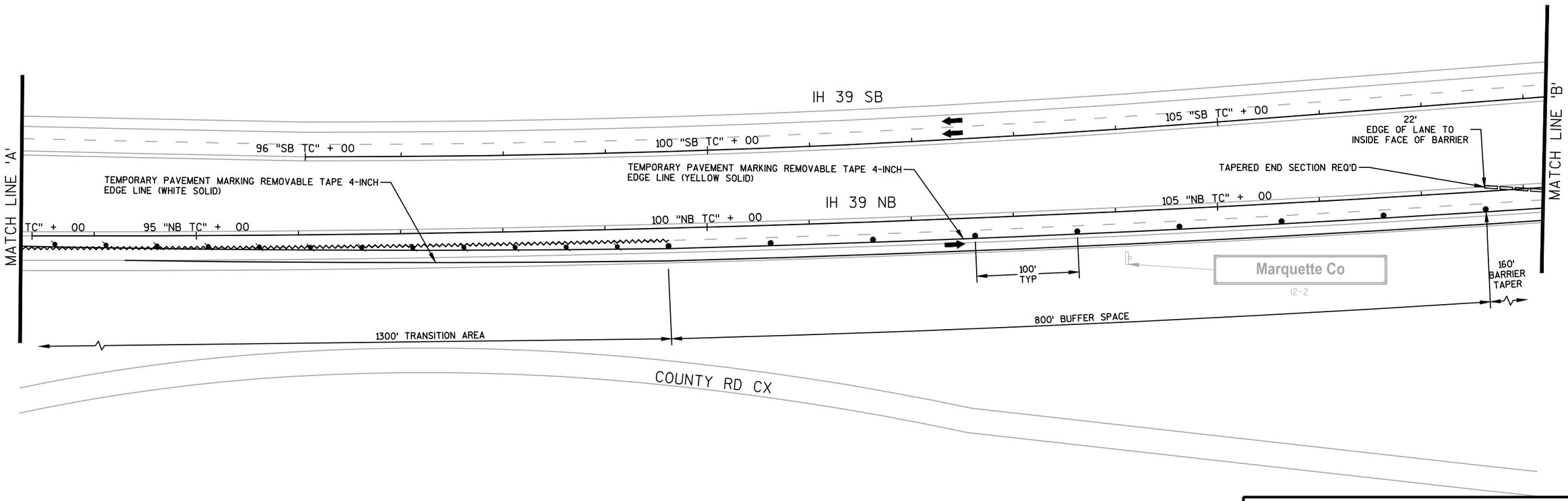
COUNTY RD CX

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 41	E

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 42	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_025008_TC_ST3.DWG PLOT DATE : 7/31/2013 4:23 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : ----------

2

2

N

NEENAH CREEK

W5-52L
12" X 36"

IH 39 SB

110 "SB TC" + 00

115 "SB TC" + 00

120 "SB TC" + 00

MATCH LINE 'B'

B-39-15

IH 39 NB

110 "NB TC" + 00

115 "NB TC" + 00

120 "NB TC" + 00

MATCH LINE 'C'

100'
TYP

CONCRETE BARRIER TEMPORARY PRECAST

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (WHITE SOLID)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (YELLOW SOLID)

R3-4B
36" X 48"

W5-52L
12" X 36"

Neenah
Creek

W5-52R
12" X 36"

160'
BARRIER
TAPER

575'

NEENAH CREEK

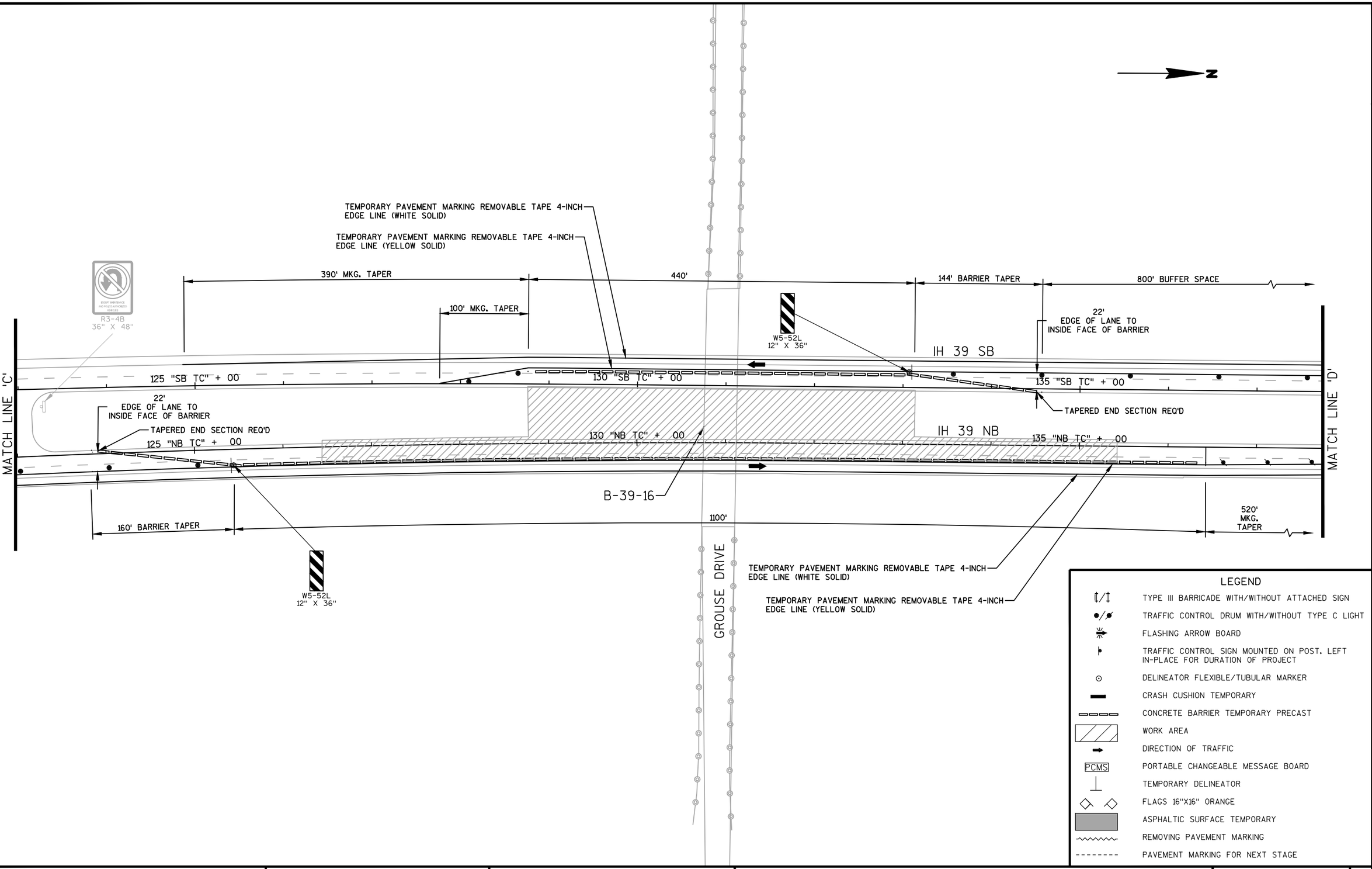
COUNTY RD CX

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 43	E

2



PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 44	E

2

N

800' BUFFER SPACE

1170' TRANSITION AREA

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (WHITE SOLID)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (YELLOW SOLID)

MILE 97 D10-2 12" X 36"

300'

IH 39 SB

140 "SB TC" + 00

145 "SB TC" + 00

150 "SB TC" + 00

MATCH LINE 'D'

MATCH LINE 'E'

IH 39 NB

140 "NB TC" + 00

145 "NB TC" + 00

150 "NB TC" + 00

50' TYP

100' TYP

520' MKG. TAPER

SPACE DRUMS AND BARRICADES AS SHOWN IN STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (WHITE SOLID)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (YELLOW SOLID)

MILE 97 D10-2 12" X 36"

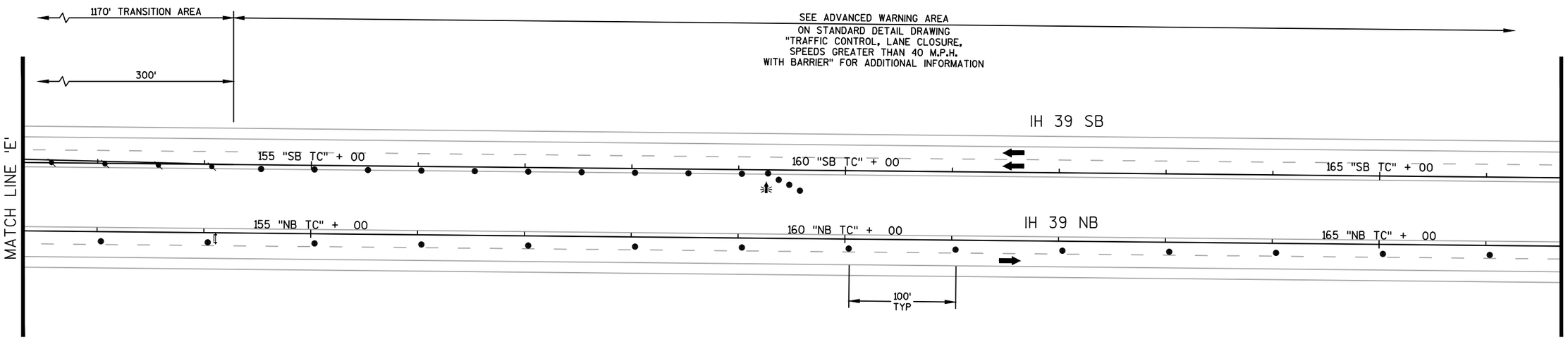
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 45	E

2

N



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
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- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

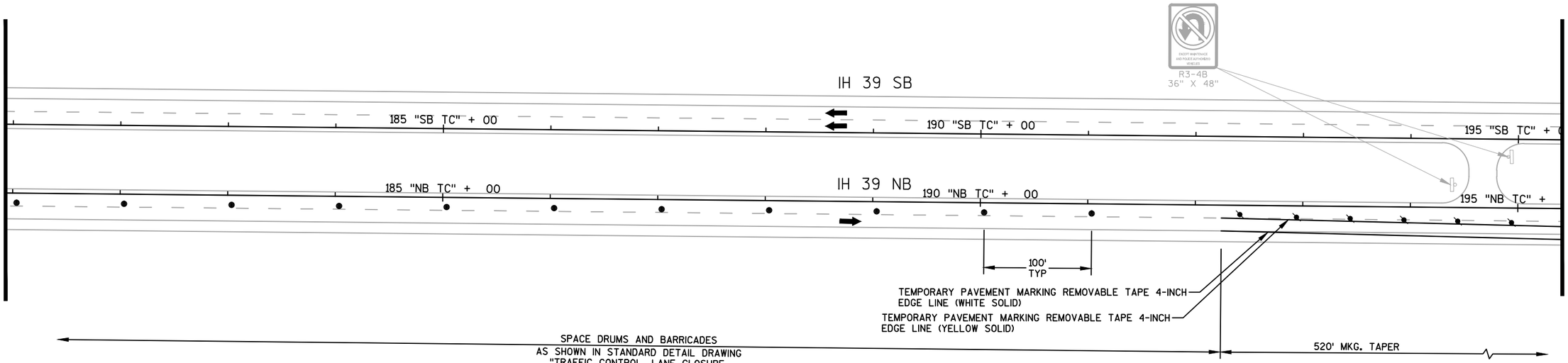
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 46	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_025008_TC_ST3.DWG PLOT DATE : 7/31/2013 4:23 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : ----------

WISDOT/CADDS SHEET 42

2

N



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
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- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 47	E

2

2

N

MILE 98
D10-2
12" X 36"

IH 39 SB

IH 39 NB

CTH O

W5-52R
12" X 36"

W5-52L
12" X 36"

200 "SB TC" + 00

205 "SB TC" + 00

210 "SB TC" +

200 "NB TC" + 00

205 "NB TC" + 00

210 "NB TC" +

22'
EDGE OF LANE TO
INSIDE FACE OF BARRIER

TAPERED END SECTION REQ'D

MATCH LINE 'F'

MATCH LINE 'G'

50'
TYP

100'
TYP

B-39-17

CONCRETE BARRIER TEMPORARY PRECAST

520' MKG. TAPER

800' BUFFER SPACE

160' BARRIER TAPER

620'

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (WHITE SOLID)

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH
EDGE LINE (YELLOW SOLID)

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

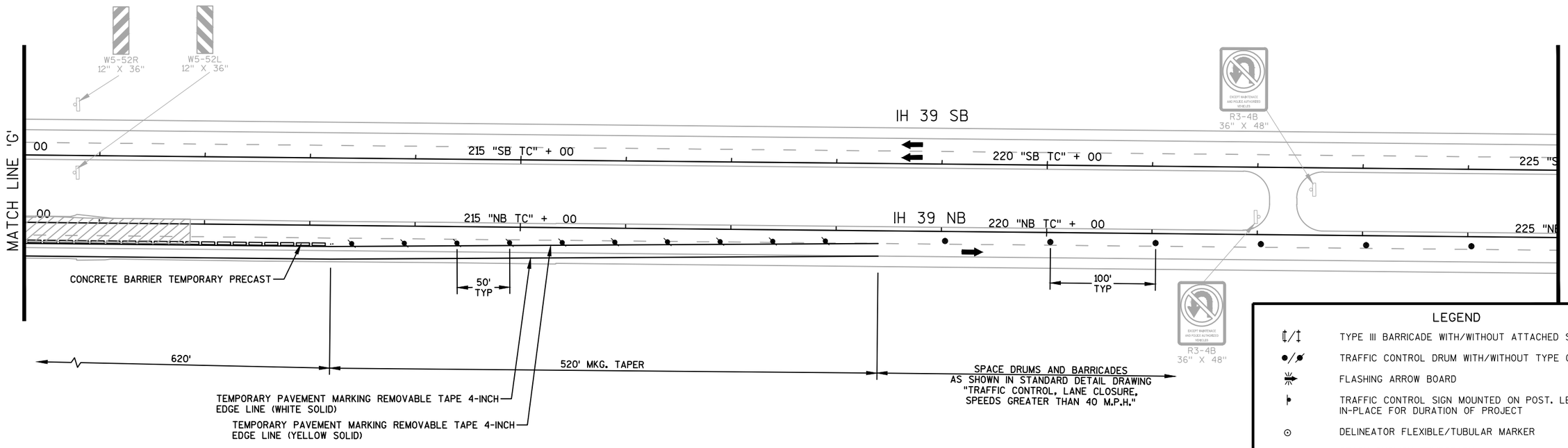
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 48	E

2

2

CTH O

N

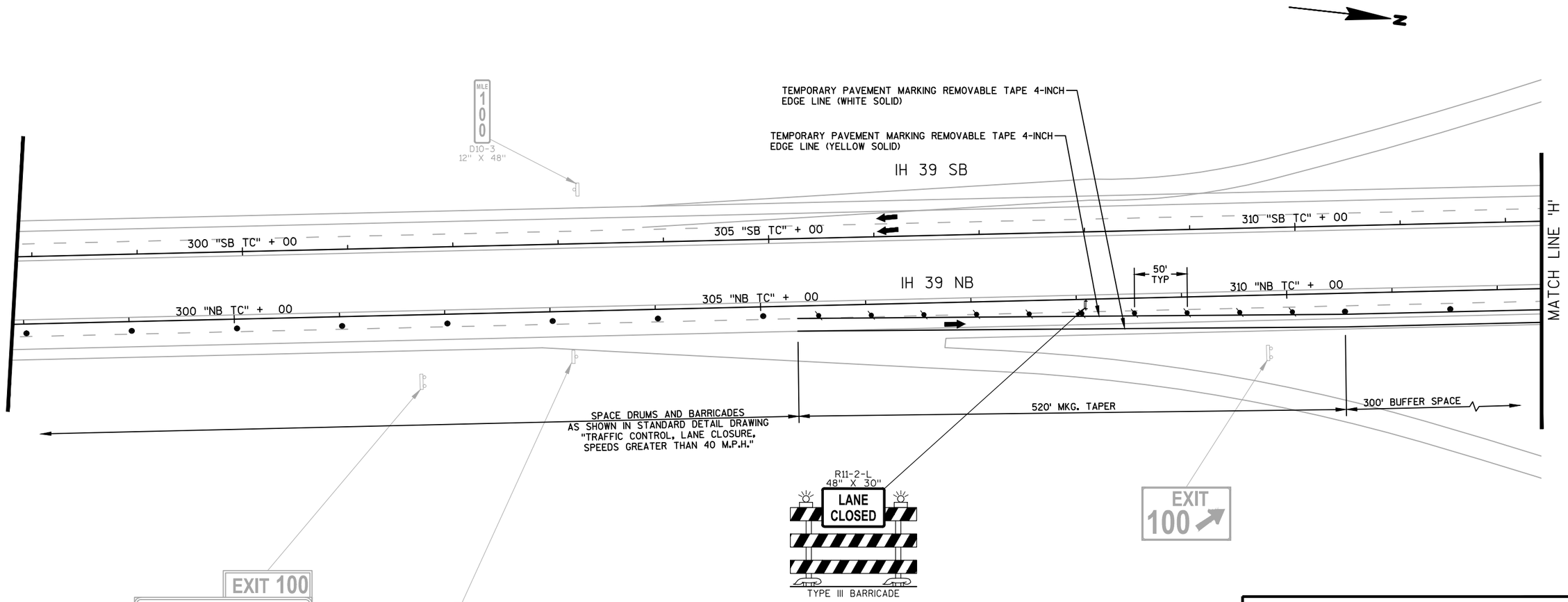


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 49	E

2

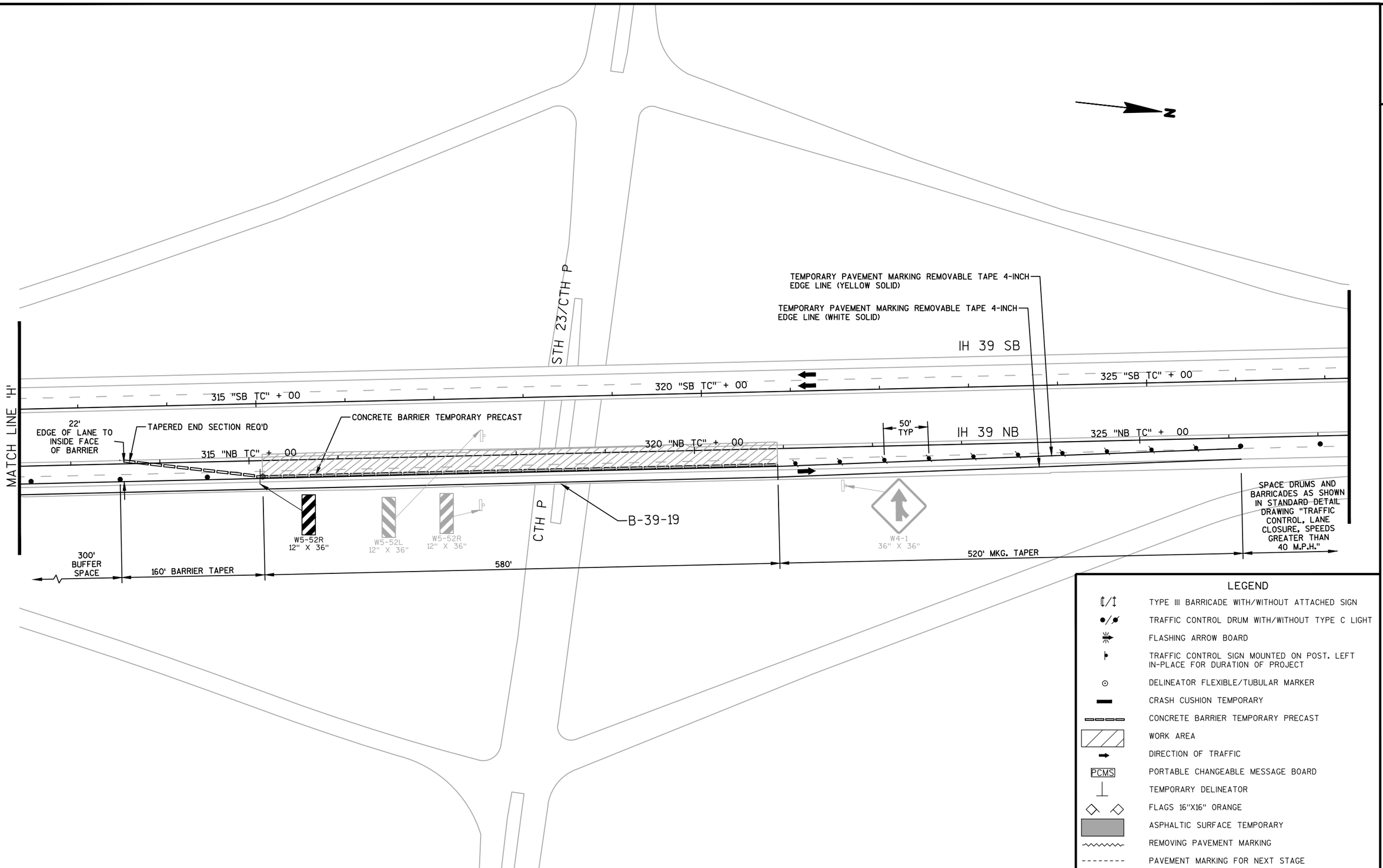


LEGEND

‡/‡	TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
●/●	TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
	FLASHING ARROW BOARD
	TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER
▬	CRASH CUSHION TEMPORARY
▭▭▭	CONCRETE BARRIER TEMPORARY PRECAST
▨	WORK AREA
→	DIRECTION OF TRAFFIC
PCMS	PORTABLE CHANGEABLE MESSAGE BOARD
⊥	TEMPORARY DELINEATOR
◇ ◇	FLAGS 16"X16" ORANGE
▬	ASPHALTIC SURFACE TEMPORARY
∿∿∿	REMOVING PAVEMENT MARKING
- - - - - - - -	PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 50	E

2

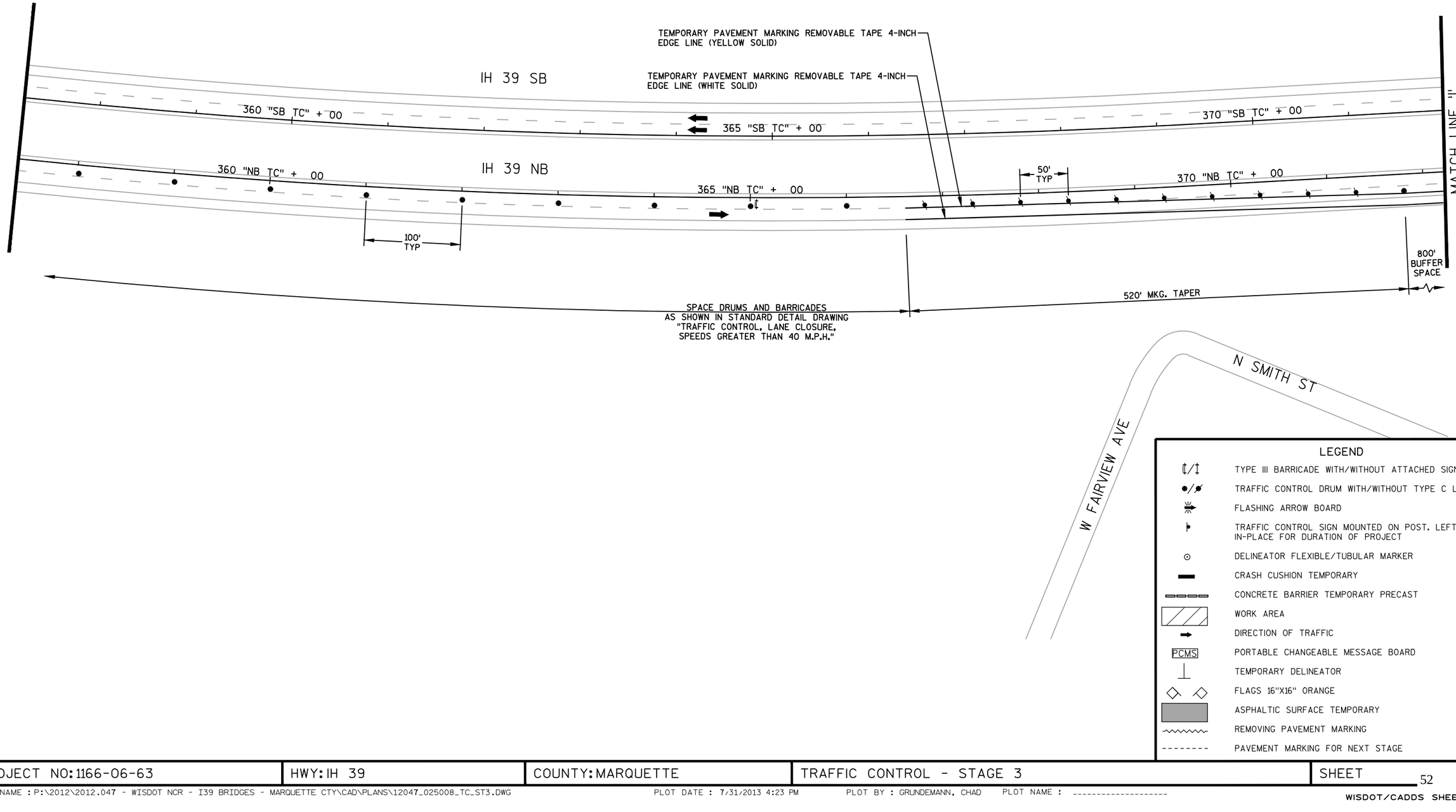


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

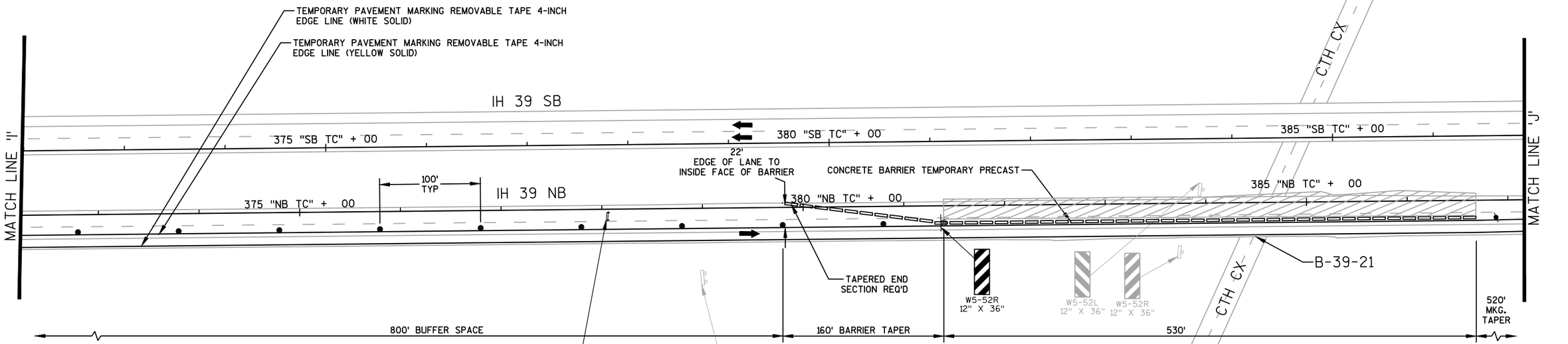
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 51	E

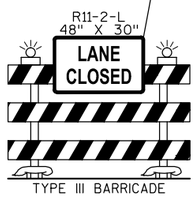
2



PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 52	E

2





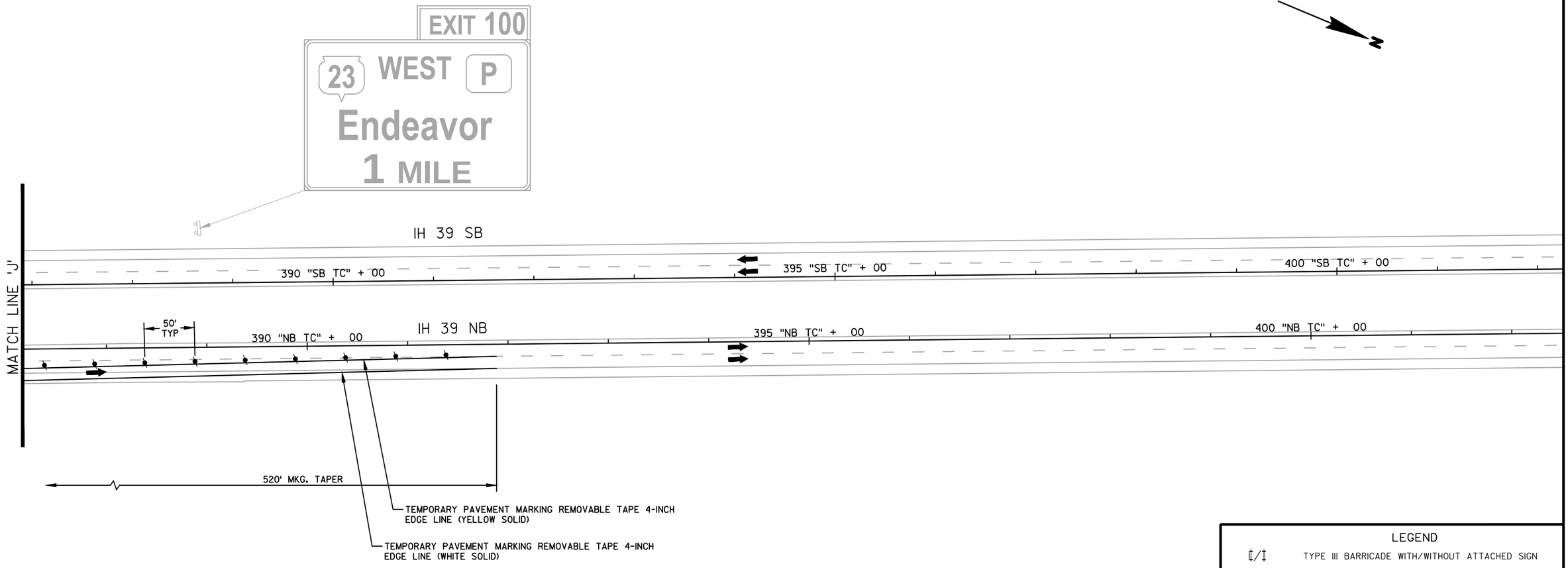
Montello	13
Stevens Point	59
Wausau	90

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 53	E

2



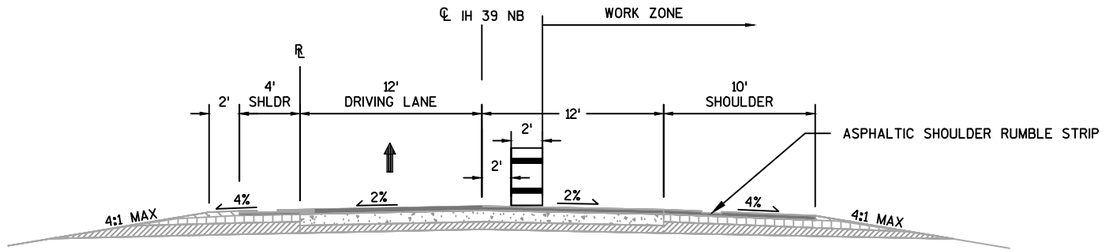
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 3	SHEET 54	E

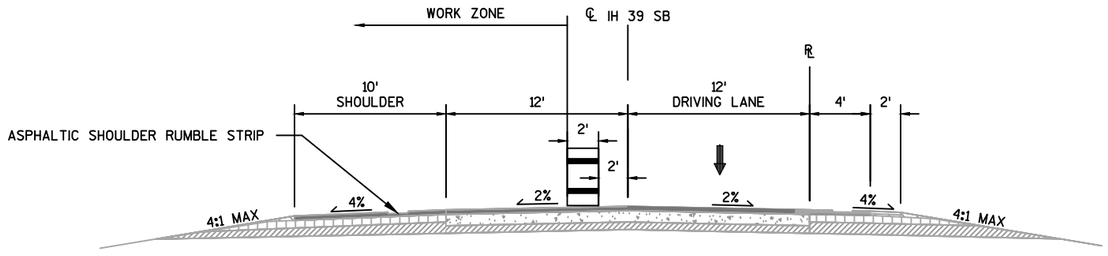
SEE STANDARD DETAIL "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

2



TRAFFIC CONTROL TYPICAL SECTION

STAGE 4
NORTHBOUND – CONTINUOUS LANE CLOSURE (WORK AT STRUCTURES ONLY)
B-39-15/16/17/19/21



TRAFFIC CONTROL TYPICAL SECTION

STAGE 4
SOUTHBOUND – WORK AT STRUCTURE ONLY
B-39-16

STAGE 4 NOTES

4. STAGE 4 (TRAFFIC IN INSIDE LANES)
 4.1. NORTHBOUND (ALL FIVE STRUCTURES - DRUMS ONLY)
  4.1.1. REMOVE OUTSIDE TEMPORARY PAVEMENT MARKINGS
  4.1.2. INSTALL PERMANENT OUTSIDE PAVEMENT MARKINGS
  4.1.3. REINSTALL OUTSIDE RUMBLE STRIPS
 4.2. SOUTHBOUND (GROUSE DRIVE ONLY - DRUMS ONLY)
  4.2.1. REMOVE OUTSIDE TEMPORARY PAVEMENT MARKINGS
  4.2.2. INSTALL PERMANENT OUTSIDE PAVEMENT MARKINGS
  4.2.3. REINSTALL OUTSIDE RUMBLE STRIPS

2

N

IH 39 SB

IH 39 NB

MILE 96 D10-2 12" X 36"

MILE 96 D10-2 12" X 36"

93 "NB

MATCH LINE 'A'

REMOVING PAVEMENT MARKINGS

50' TYP

350'

100' TYP

800' BUFFER SPACE

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH EDGE LINE (WHITE SOLID)

SEE ADVANCED WARNING AREA ON STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION

780' TRANSITION AREA

COUNTY RD CX

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 56	E

2

N

IH 39 SB

96 "SB TC" + 00

100 "SB TC" + 00

105 "SB TC" + 00

MATCH LINE 'A'

TC" + 00

95 "NB TC" + 00

100 "NB TC" + 00

IH 39 NB

105 "NB TC" + 00

800' BUFFER SPACE

SPACE DRUMS AND BARRICADES
AS SHOWN IN STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H."

COUNTY RD CX

R11-2-L
48" X 30"

LANE
CLOSED

TYPE III BARRICADE

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 57	E

2

N

SPACE DRUMS AND BARRICADES
AS SHOWN IN STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H."

800' BUFFER SPACE

MILE 9 7
D10-2
12" X 36"

IH 39 SB

140 "SB TC" + 00

145 "SB TC" + 00

150 "SB TC" + 00

IH 39 NB

140 "NB TC" + 00

145 "NB TC" + 00

150 "NB TC" + 00

MATCH LINE 'B'

MILE 9 7
D10-2
12" X 36"

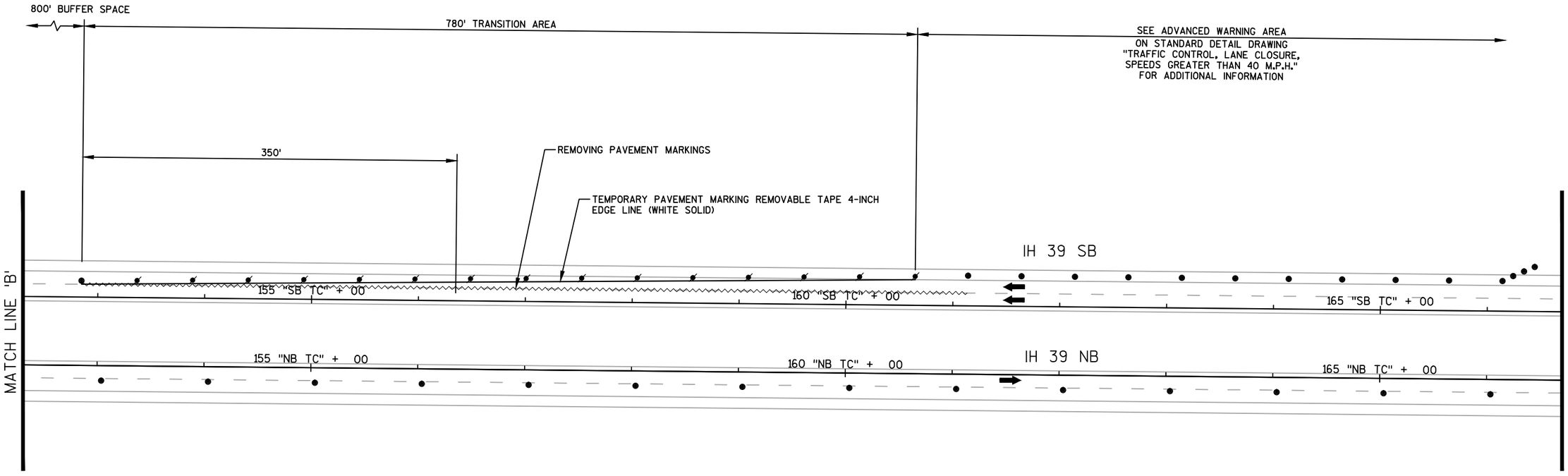
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 58	E

2

N



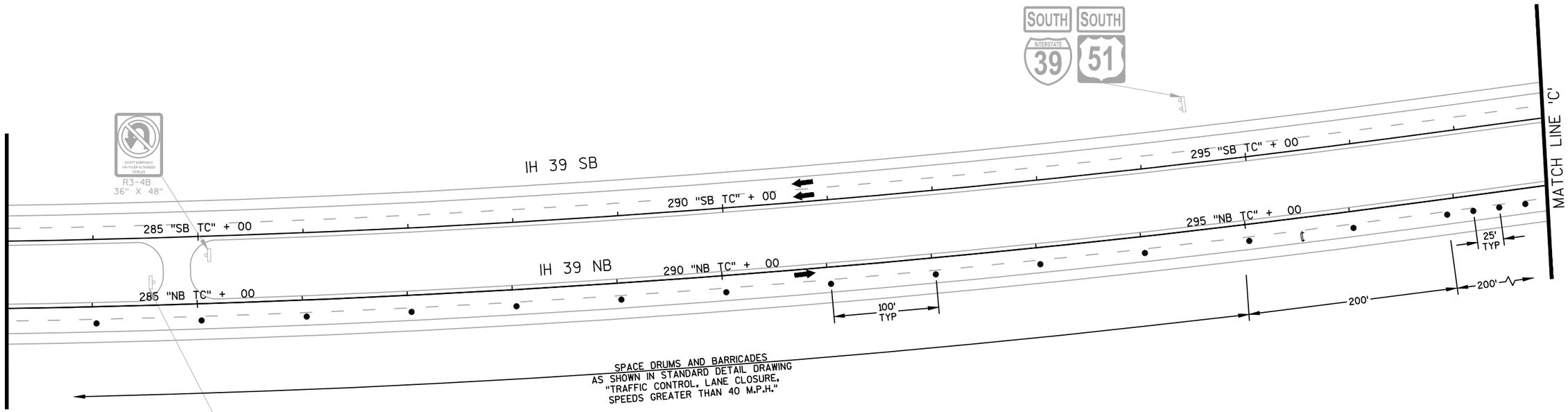
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 59	E

2

N

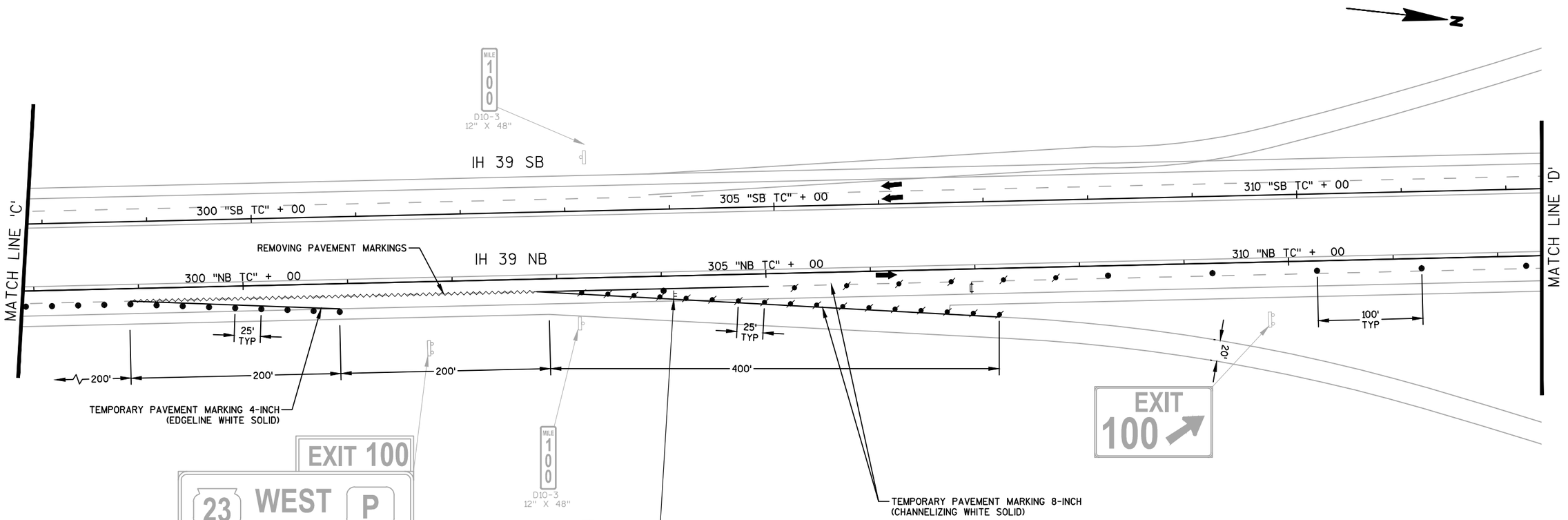


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 60	E

2



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 61	E

2

2

STH 23/CTH P

IH 39 SB

315 "SB TC" + 00

320 "SB TC" + 00

325 "SB TC" + 00

MATCH LINE 'D'

MATCH LINE 'E'

B-39-19

IH 39 NB

315 "NB TC" + 00

320 "NB TC" + 00

325 "NB TC" + 00

CTH P

W5-52L
12" X 36"

W5-52R
12" X 36"

W4-1
36" X 36"

500'

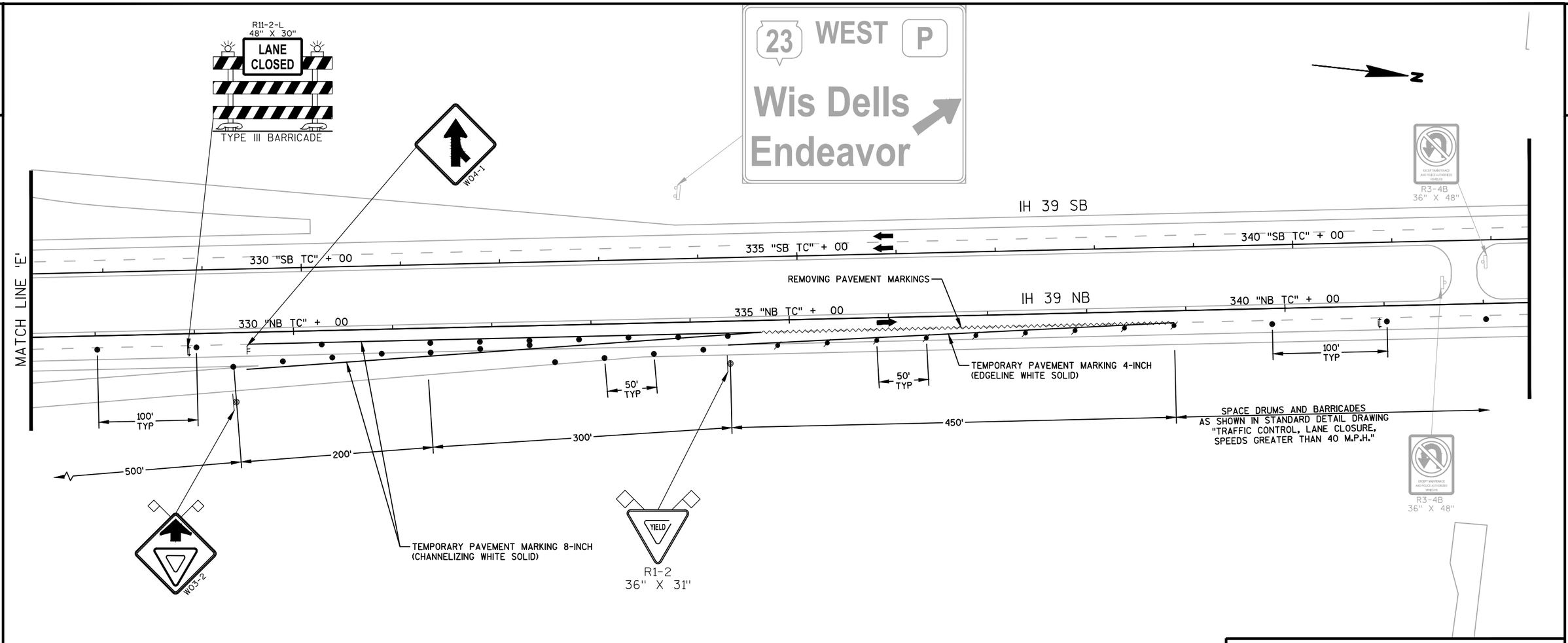
ROAD WORK AHEAD
W20-1

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 62	E

2



LEGEND

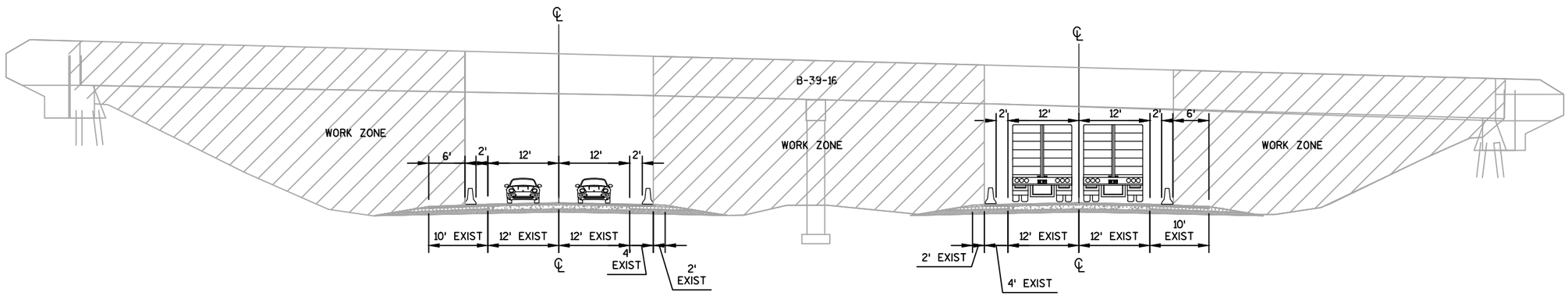
‡/‡	TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
●/●	TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
	FLASHING ARROW BOARD
	TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
⊙	DELINEATOR FLEXIBLE/TUBULAR MARKER
▬	CRASH CUSHION TEMPORARY
▭▭▭	CONCRETE BARRIER TEMPORARY PRECAST
▨	WORK AREA
→	DIRECTION OF TRAFFIC
PCMS	PORTABLE CHANGEABLE MESSAGE BOARD
⊥	TEMPORARY DELINEATOR
◇ ◇	FLAGS 16"X16" ORANGE
▬	ASPHALTIC SURFACE TEMPORARY
~~	REMOVING PAVEMENT MARKING
- - - - - - - -	PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 4	SHEET 63	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_025010_TC_ST4.DWG PLOT DATE : 7/31/2013 4:24 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : ----------

SEE STANDARD DETAIL "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

2



IH 39 SOUTHBOUND

IH 39 NORTHBOUND

TRAFFIC CONTROL TYPICAL SECTION (IH 39)

STAGE 5
NORTHBOUND & SOUTHBOUND – AT GROUSE DRIVE OVERPASS
B-39-16

STAGE 5 NOTES

5. STAGE 5 (BOTH SHOULDERS CLOSED)
 5.1. NORTHBOUND (GROUSE DRIVE ONLY - DRUMS AND BARRIER WALL)
  5.1.1. JACK GROUSE DRIVE BRIDGE
 5.2. SOUTHBOUND (GROUSE DRIVE ONLY - DRUMS AND BARRIER WALL)
  5.2.1. JACK GROUSE DRIVE BRIDGE

2

N

NEENAH CREEK

W5-52L
12" X 36"

IH 39 SB

110 "SB TC" + 00

115 "SB TC" + 00

120 "SB TC" + 00

B-39-15

IH 39 NB

110 "NB TC" + 00

115 "NB TC" + 00

120 "NB TC" + 00

MATCH LINE 'A'

NEENAH CREEK

W5-52R
12" X 36"

Neenah Creek

SEE ADVANCED WARNING AREA
ON STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, SHOULDER CLOSURE
ON DIVIDED ROADWAY,
SPEEDS GREATER THAN 40 M.P.H."
FOR ADDITIONAL INFORMATION

200' TAPER

COUNTY RD CX

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 5	SHEET 65	E

2

N

MINIMUM 8 BARRIERS BETWEEN CRASH CUSHION AND WORK AREA (TYP)

48' BARRIER TAPER

500' BUFFER SPACE

515'

B-39-16

R3-4B
36" X 48"

IH 39 SB

125 "SB TC" + 00

130 "SB TC" + 00

135 "SB TC" + 00

CRASH CUSHION TEMPORARY REQ'D

IH 39 NB

125 "NB TC" + 00

130 "NB TC" + 00

135 "NB TC" + 00

MATCH LINE 'A'

MATCH LINE 'B'

200' TAPER

500' BUFFER SPACE

R3-4B
36" X 48"

48' BARRIER TAPER

515'

500'

MINIMUM 8 BARRIERS BETWEEN CRASH CUSHION AND WORK AREA (TYP)

GROUSE DRIVE

SLOWER TRAFFIC KEEP RIGHT
R4-3
24" X 30"

FINES DOUBLE IN WORK ZONES
Give 'em a BRAKE SLOW DOWN
W21-62
96" X 48"

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
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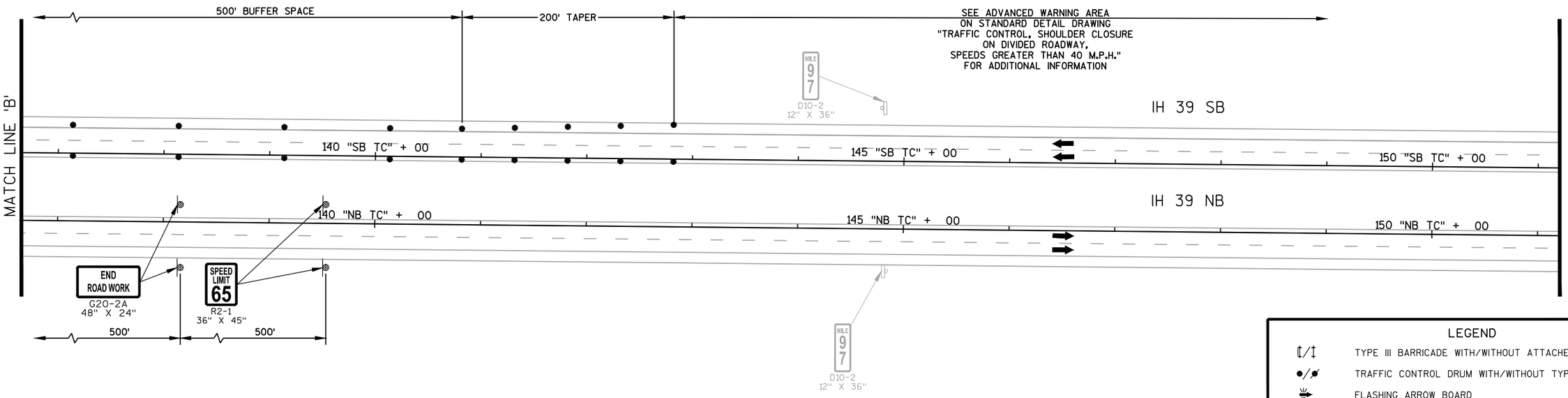
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 5	SHEET 66	E

2

N



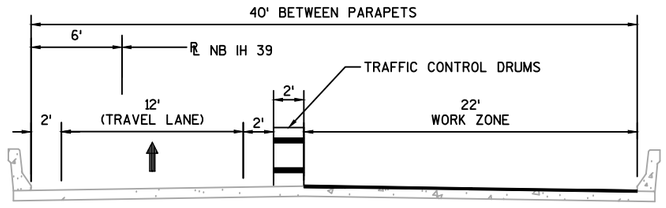
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 5	SHEET 67	E

SEE STANDARD DETAIL "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

2



TRAFFIC CONTROL TYPICAL SECTION (IH 39)

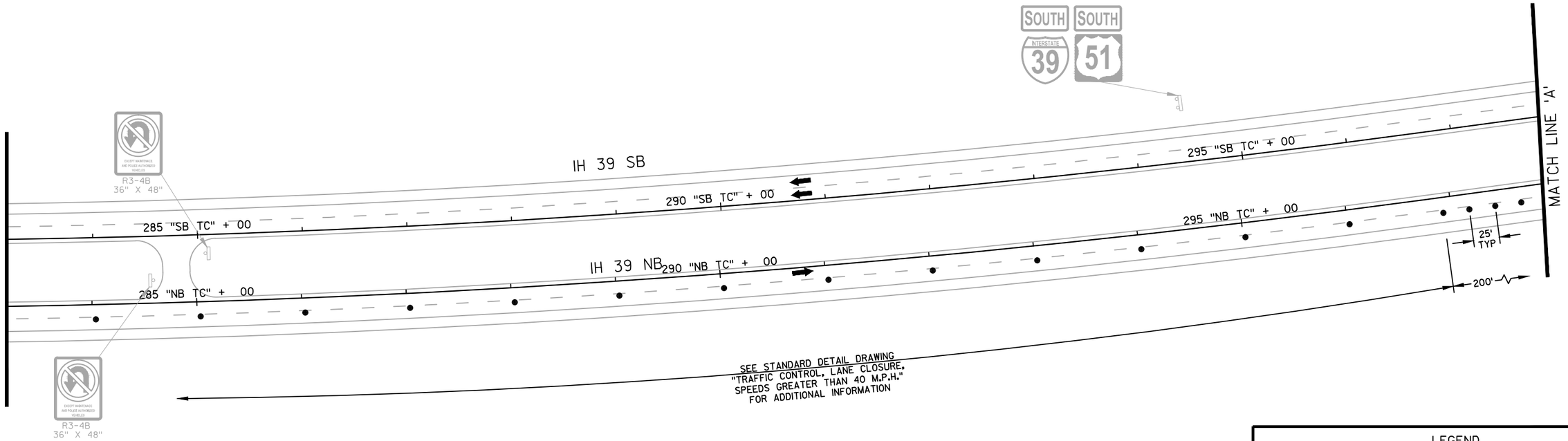
STAGE 6
NORTHBOUND – WORK AT STRUCTURE ONLY
B-39-19

STAGE 6 NOTES

6. STAGE 6 (TRAFFIC IN INSIDE LANES)
 6.1. NORTHBOUND (CTH P ONLY - DRUMS ONLY)
  6.1.1. POLYMER OVERLAY CTH P BRIDGE OUTSIDE LANE

2

N



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
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- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 6	SHEET 69	E

2

N

MILE 100
D10-3
12" X 48"

MATCH LINE 'A'

300 "SB TC" + 00

305 "SB TC" + 00

IH 39 SB

310 "SB TC" + 00

TEMPORARY PAVEMENT MARKING 4-INCH
(EDGELINE WHITE SOLID)

300 "NB TC" + 00

305 "NB TC" + 00

IH 39 NB

310 "NB TC" + 00

MATCH LINE 'B'

25'
TYP

100'
TYP

200'

200'

200'

400'

TEMPORARY PAVEMENT MARKING 4-INCH
(EDGELINE WHITE SOLID)

EXIT 100
23 WEST P
Endeavor

MILE 100
D10-3
12" X 48"

EXIT
E5-1
60" X 48"

SEE "MOUNTING DETAIL
FOR MOVABLE EXIT SIGN"
ON STANDARD DETAIL DRAWING
"TRAFFIC CONTROL, EXIT AND ENTRANCE
RAMP WITHIN LANE CLOSURE"

TEMPORARY PAVEMENT MARKING 8-INCH
(CHANNELIZING WHITE SOLID)

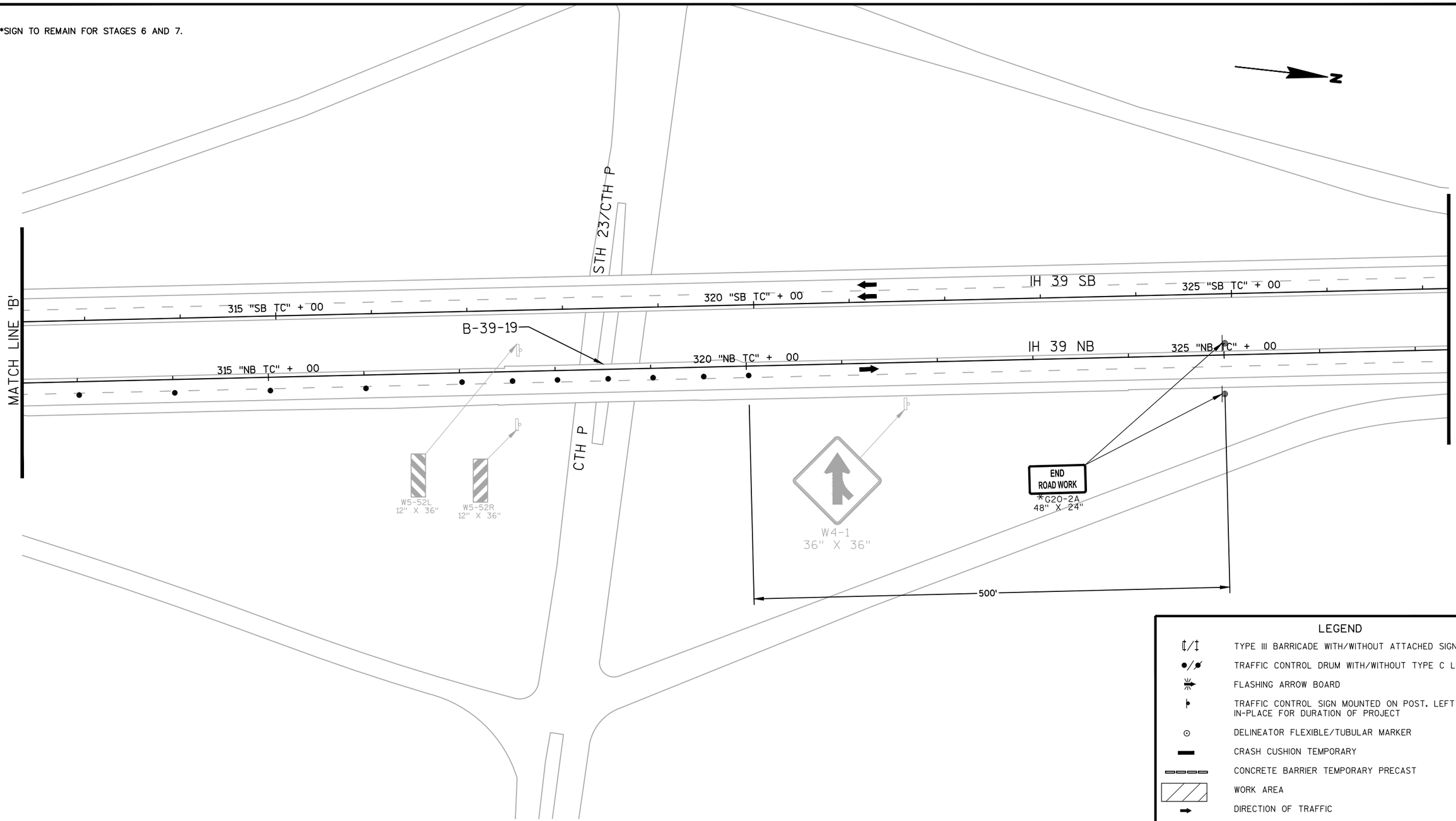
EXIT 100

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 6	SHEET 70 E

*SIGN TO REMAIN FOR STAGES 6 AND 7.



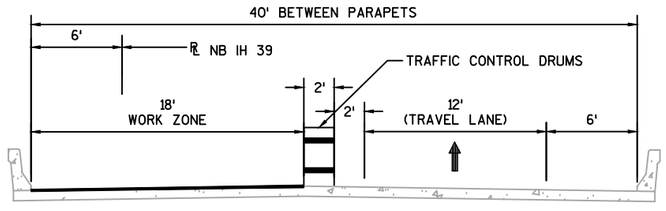
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 6	SHEET 71	E

SEE STANDARD DETAIL "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL INFORMATION.

2



TRAFFIC CONTROL TYPICAL SECTION (IH 39)

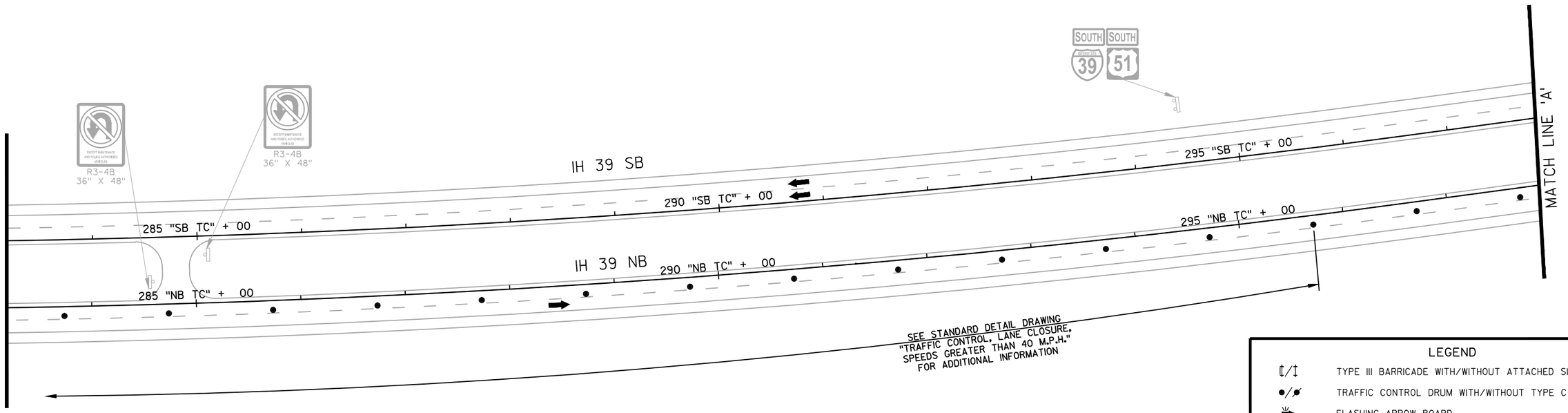
STAGE 6
NORTHBOUND – WORK AT STRUCTURE ONLY
B-39-19

STAGE 7 NOTES

7. STAGE 7 (TRAFFIC IN OUTSIDE LANES)
 7.1. NORTHBOUND (CTH P ONLY - DRUMS ONLY)
  7.1.1. POLYMER OVERLAY CTH P BRIDGE INSIDE LANE

2

N



LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST, LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 7	SHEET 73	E

2

N

MATCH LINE 'A'

MATCH LINE 'B'

IH 39 SB

300 "SB TC" + 00

305 "SB TC" + 00

310 "SB TC" + 00

IH 39 NB

300 "NB TC" + 00

305 "NB TC" + 00

310 "NB TC" + 00

100' TYP

MILE 100
D10-3
12" X 48"

EXIT 100
23 WEST P
Endeavor

MILE 100
D10-3
12" X 48"

EXIT 100

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 7	SHEET 74	E

2

2

N

IH 39 SB

315 "SB TC" + 00

320 "SB TC" + 00

325 "SB TC" + 00

MATCH LINE 'B'

STH 23/CTH P

B-39-19

IH 39 NB

315 "NB TC" + 00

320 "NB TC" + 00

325 "NB TC" + 00

CTH P

W5-52L
12" X 36"

W5-52R
12" X 36"

W4-1
36" X 36"

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
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- WORK AREA
- DIRECTION OF TRAFFIC
- PCMS — PORTABLE CHANGEABLE MESSAGE BOARD
- TEMPORARY DELINEATOR
- FLAGS 16"X16" ORANGE
- ASPHALTIC SURFACE TEMPORARY
- REMOVING PAVEMENT MARKING
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	TRAFFIC CONTROL - STAGE 7	SHEET 75	E

DATE 16OCT13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1166-06-63 QUANTITY
0010	203.0200	REMOVING OLD STRUCTURE (STATION) 01. STA. 14+68	LS	1.000	1.000
0020	204.0100	REMOVING PAVEMENT	SY	72.500	72.500
0030	204.0105	REMOVING PAVEMENT BUTT JOINTS	SY	92.000	92.000
0040	204.0110	REMOVING ASPHALTIC SURFACE	SY	1,690.000	1,690.000
0050	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	6,275.000	6,275.000
0060	204.0165	REMOVING GUARDRAIL	LF	690.000	690.000
0070	204.0170	REMOVING FENCE	LF	110.000	110.000
0080	204.0220	REMOVING INLETS	EACH	2.000	2.000
0090	204.0245	REMOVING STORM SEWER (SIZE) 01. 12-INCH	LF	90.000	90.000
0100	205.0100	EXCAVATION COMMON	CY	1,050.000	1,050.000
0110	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-39-16	LS	1.000	1.000
0120	210.0100	BACKFILL STRUCTURE	CY	160.000	160.000
0130	213.0100	FINISHING ROADWAY (PROJECT) 01. 1166-06-63	EACH	1.000	1.000
0140	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	260.000	260.000
0150	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	840.000	840.000
0160	305.0500	SHAPING SHOULDERS	STA	4.000	4.000
0170	416.1010	CONCRETE SURFACE DRAINS	CY	17.300	17.300
0180	440.4410.S	INCENTIVE IRI RIDE	DOL	650.000	650.000
0190	455.0105	ASPHALTIC MATERIAL PG58-28	TON	27.000	27.000
0200	455.0140	ASPHALTIC MATERIAL PG64-28P	TON	105.000	105.000
0210	455.0605	TACK COAT	GAL	225.000	225.000
0220	460.1100	HMA PAVEMENT TYPE E-0.3	TON	535.000	535.000
0230	460.1130	HMA PAVEMENT TYPE E-30	TON	1,805.000	1,805.000
0240	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	1,500.000	1,500.000
0250	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	380.000	380.000
0260	465.0315	ASPHALTIC FLUMES	SY	18.000	18.000
0270	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	25,760.000	25,760.000
0280	492.2010.S	SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT	GAL	4.000	4.000
0290	502.0100	CONCRETE MASONRY BRIDGES	CY	33.000	33.000
0300	502.3100	EXPANSION DEVICE (STRUCTURE) 01. B-39-16	LS	1.000	1.000
0310	502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,867.000	1,867.000
0320	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	236.000	236.000
0330	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	4,800.000	4,800.000
0340	506.5000	BEARING ASSEMBLIES FIXED (STRUCTURE) 01. B-39-16	EACH	8.000	8.000
0350	506.6000	BEARING ASSEMBLIES EXPANSION (STRUCTURE) 01. B-39-16	EACH	4.000	4.000
0360	506.7050.S	REMOVING BEARINGS (STRUCTURE) 01. B-39-16	EACH	12.000	12.000
0370	506.7060.S	BRIDGE JACKING (STRUCTURE) 01- B-39-16	LS	1.000	1.000
0380	509.0301	PREPARATION DECKS TYPE 1	SY	224.000	224.000
0390	509.0302	PREPARATION DECKS TYPE 2	SY	113.000	113.000
0400	509.0500	CLEANING DECKS	SY	2,224.000	2,224.000
0410	509.1000	JOINT REPAIR	SY	34.000	34.000
0420	509.1500	CONCRETE SURFACE REPAIR	SF	55.000	55.000
0430	509.2000	FULL-DEPTH DECK REPAIR	SY	6.000	6.000
0440	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	154.000	154.000
0450	509.2600	CONCRETE MASONRY OVERLAY APPROACHES	CY	6.000	6.000
0460	509.5100.S	POLYMER OVERLAY	SY	795.000	795.000
0470	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12.000	12.000

3

DATE 16OCT13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1166-06-63 QUANTITY
0480	517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-39-16	LS	1.000	1.000
0490	517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-39-16	LS	1.000	1.000
0500	517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1.000	1.000
0510	521.1012	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	EACH	2.000	2.000
0520	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	12,085.000	12,085.000
0530	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	12,085.000	12,085.000
0540	604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	772.000	772.000
0550	606.0100	RIPRAP LIGHT	CY	3.000	3.000
0560	611.0654	INLET COVERS TYPE V	EACH	2.000	2.000
0570	611.3220	INLETS 2X2-FT	EACH	2.000	2.000
0580	611.8115	ADJUSTING INLET COVERS	EACH	5.000	5.000
0590	612.0212	PIPE UNDERDRAIN UNPERFORATED 12-INCH	LF	100.000	100.000
0600	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2.000	2.000
0610	614.0905	CRASH CUSHIONS TEMPORARY	EACH	4.000	4.000
0620	614.2300	MGS GUARDRAIL 3	LF	500.000	500.000
0630	614.2500	MGS THRIE BEAM TRANSITION	LF	80.000	80.000
0640	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	2.000	2.000
0650	616.0100	FENCE WOVEN WIRE (HEIGHT) 01. 4-FEET	LF	110.000	110.000
0660	619.1000	MOBILIZATION	EACH	1.000	1.000
0670	625.0100	TOPSOIL	SY	3,000.000	3,000.000
0680	628.1504	SILT FENCE	LF	1,600.000	1,600.000
0690	628.1520	SILT FENCE MAINTENANCE	LF	1,600.000	1,600.000
0700	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0710	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0720	628.2004	EROSION MAT CLASS I TYPE B	SY	3,000.000	3,000.000
0730	628.7020	INLET PROTECTION TYPE D	EACH	10.000	10.000
0740	628.7570	ROCK BAGS	EACH	40.000	40.000
0750	629.0210	FERTILIZER TYPE B	CWT	2.000	2.000
0760	630.0140	SEEDING MIXTURE NO. 40	LB	57.000	57.000
0770	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0780	637.2230	SIGNS TYPE II REFLECTIVE F	SF	12.000	12.000
0790	638.2602	REMOVING SIGNS TYPE II	EACH	4.000	4.000
0800	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	4.000	4.000
0810	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0820	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1166-06-63	DAY	110.000	110.000
0830	643.0300	TRAFFIC CONTROL DRUMS	DAY	26,890.000	26,890.000
0840	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,564.000	1,564.000
0850	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	6,530.000	6,530.000
0860	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	416.000	416.000
0870	643.0900	TRAFFIC CONTROL SIGNS	DAY	7,112.000	7,112.000
0880	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	64.000	64.000
0890	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	330.000	330.000
0900	645.0130	GEOTEXTILE FABRIC TYPE R	SY	30.000	30.000
0910	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	31,700.000	31,700.000
0920	646.0600	REMOVING PAVEMENT MARKINGS	LF	29,675.000	29,675.000
0930	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	62,160.000	62,160.000

3

DATE 16OCT13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1166-06-63 QUANTITY
0940	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	1,600.000	1,600.000
0950	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	2.000	2.000
0960	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	575.000	575.000
0970	650.5000	CONSTRUCTION STAKING BASE	LF	575.000	575.000
0980	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-39-16	LS	1.000	1.000
0990	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. B-39-16	LS	1.000	1.000
1000	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	575.000	575.000
1010	690.0150	SAWING ASPHALT	LF	472.000	472.000
1020	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	500.000	500.000
1030	SPV.0045	SPECIAL 01. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS	DAY	330.000	330.000
1040	SPV.0090	SPECIAL 01. FILL EXISTING RUMBLE STRIPS	LF	25,760.000	25,760.000

3

3

204.0100 REMOVING PAVEMENT

STATION	LOCATION	SY	COMMENT
20"G"+97	RT	6.5	B-39-16
20"G"+97	LT	6.5	B-39-16
209-45	RT	5.5	B-39-17
209-45	LT	6.0	B-39-17
317-50	RT	25	B-39-19
317-50	LT	2.5	B-39-19
385-25	RT	21	B-39-21
	TOTAL	**72.5**	

204.0105 REMOVING PAVEMENT BUTT JOINTS

STATION	LOCATION	SY	COMMENT
111+60	S. APPROACH	46	B-39-15
112+55	N. APPROACH	46	B-39-15
	TOTAL	**92**	

204.0110 REMOVING ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	SY	COMMENT
18"G"+25	-	18"G"+41	LT, RT	65	GROUSE DRIVE
20"G"+84	-	26"G"+58	LT, RT	1,625	GROUSE DRIVE
			TOTAL	**1,690**	

204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS

STATION	TO	STATION	LOCATION	SY	COMMENT
110+73	-	1"1+73	LT. RT	385	B-39-15
112+47	-	1"3+47	LT. RT	380	B-39-15
126+45	-	129+95	LT.RT	1,495	UNDER B-39-16
131+95	-	135+45	LT. RT	1,510	UNDER B-39-16
208+54	-	209+54	LT. RT	425	B-39-17
210+70	-	2"1+70	LT. RT	425	B-39-17
316+67	-	3"7+67	LT. RT	400	B-39-19
319+45	-	320+45	LT. RT	425	B-39-19
382+95	-	383+95	LT. RT	420	B-39-21
385+23	-	386+23	LT. RT	410	B-39-21
			TOTAL	**6,275**	

204.0165 REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	LF	COMMENT
20"G"+97	-	24"G"+36	NE QUAD	345	GROUSE DRIVE
20"G"+97	-	24"G"+36	SE QUAD	345	GROUSE DRIVE
			TOTAL	**690**	

204.0170 REMOVING FENCE

STATION	LOCATION	LF	COMMENT
20"G"+85	RT	45	GROUSE DRIVE
20"G"+85	LT	65	GROUSE DRIVE
	TOTAL	**110**	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

204.0220 REMOVING INLETS

STATION	LOCATION	EACH	COMMENT
20"G"+97	RT	1	B-39-16
20"G"+97	LT	1	B-39-16
	TOTAL	**2**	

204.0245.01 REMOVING STORM SEWER 12-INCH

STATION	LOCATION	LF	COMMENT
20"G"+97	RT	45	GROUSE DRIVE
20"G"+97	LT	45	GROUSE DRIVE
	TOTAL	**90**	

BASE AGGREGATE

				305.0110 DENSE 3/4-INCH	305.0120 DENSE 1 1/4-INCH	
STATION	TO	STATION	LOCATION	TON	TON	COMMENT
18"G"+25	-	18"G"+47	LT, RT	-	50	B-39-15 WEST APPROACH
20"G"+84	-	26"G"+58	LT, RT	150	730	B-39-16 EAST APPROACH
110+73	-	113+47	LT, RT	20	-	IH39 APPROACHES
111+49	-	111+73	RT	-	15	B-39-15 CONCRETE APPROACH
112+44	-	112+68	RT	-	15	B-39-15 CONCRETE APPROACH
208+54	-	211+70	LT, RT	20	-	IH39 APPROACHES
316+67	-	323+45	LT, RT	20	-	IH39 APPROACHES
382+95	-	386+23	LT, RT	20	-	IH39 APPROACHES
UNDISTRIBUTED			-	30	50	PROJECT
			TOTAL	**260**	**840**	

EARTHWORK TABLE

			205.0100 EXCAVATION COMMON (1)		SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL			MASS ORDINATE		
			CUT (2)	EBS (3)	(4)	(5)	UNEXPANDED FILL	EXPANDED FILL (6)	±(7)	WASTE	
STATION	TO	STATION	CY	CY	CY	CY	CY	CY	CY	CY	COMMENTS
20"G"+97	-	26"G"+58	1050	0	114	936	456	570	366	480	GROUSE DRIVE
		TOTAL	**1050**	**0**	**114**	**936**	**456**	**570**	**366**	**480**	

1) Excavation Common is the sum of the Cut and EBS Excavation columns. Item No. 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut
3) EBS Excavation to be backfilled with Select Borrow material
4) Salvaged/Unusable Pavement Material Volume = Removing Asphaltic Surface at Grouse Drive
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Expanded Fill. Factor = 1.25
7) 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.

305.0500 SHAPING SHOULDERS

STATION	TO	STATION	LOCATION	STA	COMMENT
129+94	-	131+93	RT	2	UNDER B-39-16
129+94	-	131+93	LT	2	UNDER B-39-16
			TOTAL	**4**	

213.0100.01 FINISHING ROADWAY

LOCATION	EACH
PROJECT 1166-06-63	1
TOTAL	**1**

3

ASPHALTIC SURFACE TEMPORARY

				465.0125 ASPHALTIC SURFACE TEMPORARY
OPERATIONS	STATION	TO	STATION	TON
STAGE 1	98"NB TC"+04	-	111"NB TC"+69	60
	112"NB TC"+54	-	137"NB TC"+73	110
	195"NB TC"+86	-	209"NB TC"+54	60
	210"NB TC"+70	-	214"NB TC"+50	15
	306"NB TC"+97	-	317"NB TC"+68	50
	319"NB TC"+46	-	323"NB TC"+23	15
	370"NB TC"+22	-	383"NB TC"+98	60
	385"NB TC"+26	-	387"NB TC"+98	10
TOTAL				**380**

FILL EXISTING RUMBLE STRIPS

				SPV.0090.01 FILL EXISTING RUMBLE STRIPS
OPERATIONS	STATION	TO	STATION	LF
STAGE 1	96"NB TC"+09	-	111"NB TC"+69	1,570
	112"NB TC"+54	-	139"NB TC"+68	2,720
	193"NB TC"+91	-	209"NB TC"+54	1,570
	210"NB TC"+70	-	216"NB TC"+45	575
	305"NB TC"+02	-	317"NB TC"+68	1,270
	319"NB TC"+46	-	325"NB TC"+18	575
	368"NB TC"+26	-	383"NB TC"+98	1,580
	385"NB TC"+26	-	389"NB TC"+93	470
	126"SB TC"+81	-	144"SB TC"+84	1,810
STAGE 2	94"NB TC"+30	-	111"NB TC"+75	1,750
	112"NB TC"+49	-	141"NB TC"+63	2,920
	192"NB TC"+24	-	209"NB TC"+46	1,730
	210"NB TC"+77	-	218"NB TC"+40	765
	305"NB TC"+35	-	317"NB TC"+61	1,230
	319"NB TC"+40	-	326"NB TC"+13	675
	366"NB TC"+62	-	383"NB TC"+68	1,710
	385"NB TC"+18	-	391"NB TC"+88	670
	124"SB TC"+87	-	146"SB TC"+47	2,170
TOTAL				**25,760**

ASPHALTIC SHOULDER RUMBLE STRIP

				465.0400 ASPHALTIC SHOULDER RUMBLE STRIP
OPERATIONS	STATION	TO	STATION	LF
STAGE 3	96"NB TC"+09	-	111"NB TC"+69	1,570
	112"NB TC"+54	-	139"NB TC"+68	2,720
	193"NB TC"+91	-	209"NB TC"+54	1,570
	210"NB TC"+70	-	216"NB TC"+45	575
	305"NB TC"+02	-	317"NB TC"+68	1,270
	319"NB TC"+46	-	325"NB TC"+18	575
	368"NB TC"+26	-	383"NB TC"+98	1,580
	385"NB TC"+26	-	389"NB TC"+93	470
	126"SB TC"+81	-	144"SB TC"+84	1,810
STAGE 4	94"NB TC"+30	-	111"NB TC"+75	1,750
	112"NB TC"+49	-	141"NB TC"+63	2,920
	192"NB TC"+24	-	209"NB TC"+46	1,730
	210"NB TC"+77	-	218"NB TC"+40	765
	305"NB TC"+35	-	317"NB TC"+61	1,230
	319"NB TC"+40	-	326"NB TC"+13	675
	366"NB TC"+62	-	383"NB TC"+68	1,710
	385"NB TC"+18	-	391"NB TC"+88	670
	124"SB TC"+87	-	146"SB TC"+47	2,170
TOTAL				**25,760**

3

ASPHALTIC PAVEMENT

				455.0105 ASPHALTIC MATERIAL PG58-28	455.0140 ASPHALTIC MATERIAL PG64-28P	455.0605 TACK COAT	460.1100 HMA PAVEMENT TYPE E-0.3	460.1130 HMA PAVEMENT TYPE E-30	465.0315 ASPHALTIC FLUMES	
STATION	TO	STATION	LOCATION	TON	TON	GAL	TON	TON	SY	COMMENT
17"G"+97	-	18"G"+41	LT, RT	1	-	2	15	-	-	GROUSE DRIVE
20"G"+84	-	26"G"+58	LT, RT	26	-	40	520	-	-	GROUSE DRIVE
110+73	-	111+73	LT, RT	-	5	10	-	80	-	B-39-15
112+47	-	113+47	LT, RT	-	5	10	-	80	6	B-39-15
126+43	-	135+43	LT, RT	-	65	100	-	1,130	-	UNDER B-39-16
208+54	-	209+54	LT, RT	-	5	11	-	90	-	B-39-17
210+70	-	211+70	LT, RT	-	5	11	-	90	-	B-39-17
316+67	-	317+67	LT, RT	-	5	10	-	80	-	B-39-19
319+46	-	320+45	LT, RT	-	5	11	-	85	-	B-39-19
382+95	-	383+95	LT, RT	-	5	10	-	85	-	B-39-21
385+23	-	386+26	LT, RT	-	5	10	-	85	12	B-39-21
UNDISTRIBUTED			-	-	-	-	-	-	-	-
			TOTAL	**27**	**105**	**225**	**535**	**1,805**	**18**	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

509.2600 CONCRETE MASONRY OVERLAY APPROACHES

STATION	LOCATION	CY	COMMENT
[illegible]	S APPROACH	3	B-39-16
[illegible]	N APPROACH	3	B-39-16
	TOTAL	6	

SURFACE DRAINS

		416.1010 CONCRETE SURFACE DRAINS	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	606.0100 RIPRAP LIGHT	611.0654 INLET COVERS TYPE V	611.3220 INLETS 2X2-FT	611.8115 ADJUSTING INLET COVERS	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH	645.0130 GEOTEXTILE FABRIC TYPE R	
STATION	LOCATION	CY*	EACH	CY*	EACH	EACH	EACH	LF	SY	COMMENT
20"G"+97	RT	1.3	1	1.5	1	1	-	50	15	B-39-16
20"G"+97	LT	1.3	1	1.5	1	1	-	50	15	B-39-16
209+45	RT	1.3	-	-	-	-	1	-	-	B-39-17
209+45	LT	1.5	-	-	-	-	1	-	-	B-39-17
317+50	RT	6.1	-	-	-	-	1	-	-	B-39-19
317+50	LT	0.6	-	-	-	-	1	-	-	B-39-19
385+25	RT	5.2	-	-	-	-	1	-	-	B-39-21
	TOTAL	17.3	2	3	2	2	5	100	30	

* CONCRETE SURFACE DRAINS ARE ASSUMED AT 9-INCHES THICK. RIPRAP LIGHT IS BASED ON A VOLUME OF 6' X 6' X 1'.

CONCRETE BARRIER TEMPORARY PRECAST

	603.8000 DELIVERED	603.8125 INSTALLED	614.0905 CRASH CUSHION TEMPORARY*
OPERATION	LF	LF	EACH
STAGE 2	5,080	5,080	-
STAGE 3	4,795	4,795	-
STAGE 5	2,210	2,210	4
TOTAL	12,085	12,085	4

* CRASH TEST CONDITION TL-3 REQUIRED
MINIMUM PROTECTION WIDTH OF 2-FEET REQUIRED
2 EACH WITH OBJECT MARKING PATTERN OM-3L REQUIRED
2 EACH WITH OBJECT MARKING PATTERN OM-3R REQUIRED

SEMI-RIGID BARRIER SYSTEMS AND END TREATMENTS

				614.2300 MGS GUARDRAIL 3	614.2500 MGS THRIE BEAM TRANSISTION	614.2610 MGS GUARDRAIL TERMINAL EAT	
STATION	TO	STATION	LOCATION	LF	LF		COMMENT
20"G"+87	-	21"G"+27	RT	-	40	-	GROUSE DRIVE
20"G"+89	-	21"G"+29	LT	-	40	-	GROUSE DRIVE
21"G"+27	-	23"G"+77	RT	250	-	-	GROUSE DRIVE
21"G"+29	-	23"G"+79	LT	250	-	-	GROUSE DRIVE
23"G"+77	-	24"G"+27	RT	-	-	1	GROUSE DRIVE
23"G"+79	-	24"G"+29	LT	-	-	1	GROUSE DRIVE
			TOTAL	500	80	2	

616.0100.01 FENCE WOVEN WIRE 4-FEET

STATION	LOCATION	LF	COMMENT
20"G"+95	LT	45	GROUSE DRIVE
20"G"+95	RT	65	GROUSE DRIVE
	TOTAL	110	

619.1000 MOBILIZATION

LOCATION	EACH
PROJECT 1166-06-63	1
TOTAL	1

642.5001 FIELD OFFICE TYPE B

LOCATION	EACH
PROJECT 1166-06-63	1
TOTAL	1

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

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EROSION CONTROL & RESTORATION ITEMS

				625.0100 TOPSOIL	628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.1905 MOBILIZATIONS	628.1910 MOBILIZATIONS EMERGENCY	628.2004 EROSION MAT CLASS I TYPE B	628.7020 INLET PROTECTION TYPE D	628.7570 ROCK BAGS	629.0210 FERTILIZER TYPE B	630.0140 SEEDING MIXTURE NO. 40
STATION	TO	STATION	LOCATION	SY	LF	LF	EACH	EACH	SY	EACH	EACH	CWT	LB
20"G"+70	-	26"G"+58	RT	1,300	600	600	-	-	1,300	1	-	0.90	25.0
20"G"+70	-	26"G"+58	LT	1,030	650	650	-	-	1,030	1	-	0.70	20.0
22"G"+76	-	-	LT	-	-	-	-	-	-	-	10	-	-
22"G"+77	-	-	RT	-	-	-	-	-	-	-	10	-	-
23"G"+74	-	-	LT	-	-	-	-	-	-	-	10	-	-
24"G"+27	-	-	RT	-	-	-	-	-	-	-	10	-	-
112+50	-	-	LT	15	-	-	-	-	15	-	-	0.01	0.2
209+43	-	-	LT, RT	-	-	-	-	-	-	2	-	-	-
317+53	-	-	LT, RT	-	-	-	-	-	-	2	-	-	-
385+25	-	-	RT	-	-	-	-	-	-	1	-	-	-
385+70	-	-	LT	15	-	-	-	-	-	-	-	0.01	0.2
UNDISTRIBUTED			-	640	350	350	2	2	655	3	-	0.38	11.6
			TOTAL	**3,000**	**1,600**	**1,600**	**2**	**2**	**3,000**	**10**	**40**	**2.00**	**57.0**

PERMANENT SIGNING

					634.0612 POSTS WOOD 4X6-INCH X 12-FT	637.2230 SIGNS TYPE II REFLECTIVE F	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS
STATION	LOCATION	CODE NO.	DESCRIPTION	SIZE IN X IN	EACH	SF	EACH	EACH
18"G"+33	LT	W5-52L	BRIDGE HASH MARKS	12 X 36	1	3.00	1	1
18"G"+33	RT	W5-52R	BRIDGE HASH MARKS	12 X 36	1	3.00	1	1
20"G"+97	RT	W5-52L	BRIDGE HASH MARKS	12 X 36	1	3.00	1	1
20"G"+97	LT	W5-52R	BRIDGE HASH MARKS	12 X 36	1	3.00	1	1
				TOTAL	**4**	**12**	**4**	**4**

TRAFFIC CONTROL

		643.0200.01 SURVEILLANCE AND MAINTENANCE 1166-06-63		643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0715 WARNING LIGHTS TYPE C		643.0800 ARROW BOARDS		643.0900 SIGNS		643.0920 COVERING SIGNS TYPE II*		643.1050 SIGNS PCMS		SPV.0045.01 PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) CELLULAR COMMUNICATIONS	
OPERATION	DURATION (DAYS)	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY
STAGE 1	8	1	8	390	3,120	23	184	35	280	4	32	65	520	1	8	3	24	3	24
STAGE 2	24	1	24	395	9480	22	528	110	2,640	4	96	107	2,568	1	24	3	72	3	72
STAGE 3	24	1	24	370	8,880	22	528	115	2,760	4	96	70	1,680	1	24	3	72	3	72
STAGE 4	8	1	8	390	3,120	23	184	35	280	4	32	70	560	1	8	3	24	3	24
STAGE 5	34	1	34	40	1,360	-	-	-	-	4	136	42	1,428	-	-	3	102	3	102
STAGE 6	6	1	6	90	540	-	-	35	210	2	12	21	126	-	-	3	18	3	18
STAGE 7	6	1	6	65	390	-	-	20	120	2	12	20	120	-	-	3	18	3	18
STAGE 8	10	-	-	-	-	14	140	24	240	-	-	11	110	-	-	-	-	-	-
		TOTAL	**110**		**26,890**		**1,564**		**6,530**		**416**		**7,112**		**64**		**330**		**330**

* STA 354'NB TC'+87 RT

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

PAVEMENT MARKING

	646.0106 PAVEMENT MARKING EPOXY 4-INCH				646.0600 REMOVING PAVEMENT MARKINGS				649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH				649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH*			
	WHITE LANE LINE	YELLOW EDGE LINE	WHITE EDGE LINE	STAGE TOTAL	WHITE LANE LINE	YELLOW EDGE LINE	WHITE EDGE LINE	STAGE TOTAL	WHITE LANE LINE	YELLOW EDGE LINE	WHITE EDGE LINE	STAGE TOTAL	WHITE LANE LINE	YELLOW EDGE LINE	WHITE EDGE LINE	STAGE TOTAL
OPERATION	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
STAGE 1	415	-	-	415	415	-	-	415	-	1,560	-	1,560	-	-	-	-
STAGE 2	745	12,610	-	13,355	745	12,610	-	13,355	-	12,605	14,505	27,110	-	-	600	600
STAGE 3	640	-	14,130	14,770	640	-	14,130	14,770	-	15,390	14,130	29,520	-	-	-	-
STAGE 4	620	-	-	620	620	-	-	620	-	-	2,210	2,210	-	-	600	600
STAGE 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STAGE 6	305	-	-	305	305	-	-	305	-	-	980	980	-	-	400	400
STAGE 7	210	-	-	210	210	-	-	210	-	780	-	780	-	-	-	-
STAGE 8	225	900	900	2,025	-	-	-	-	-	-	-	-	-	-	-	-
PROJECT SUBTOTAL	3,160	13,510	15,030		2,935	12,610	14,130		0	30,335	31,825		0	0	1,600	
PROJECT TOTAL		**31,700**				**29,675**				**62,160**					**1,600**	

* CHANNELIZING WHITE SOLID AT STH 23 / CTH P INTERCHANGE

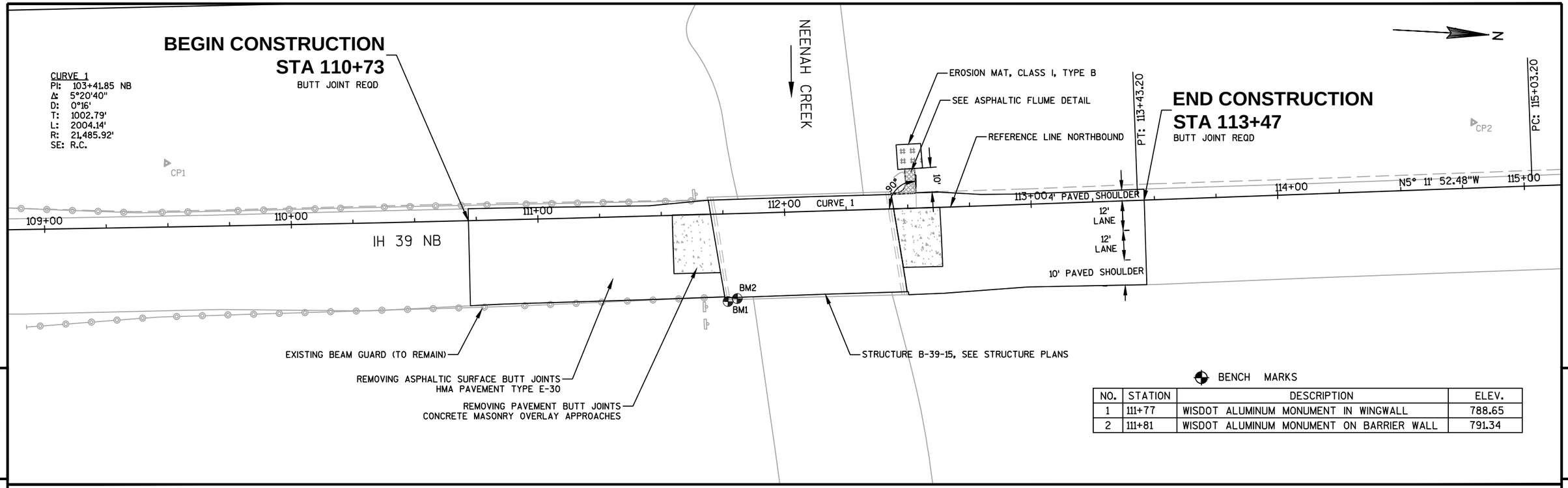
CONSTRUCTION STAKING

				650.4000 STORM SEWER	650.4500 SUBGRADE	650.5000 BASE	650.6500.01 STRUCTURE LAYOUT B-39-16	650.9910.01 SUPPLEMENTAL CONTROL 1166-06-63	650.9920 SLOPE STAKES
STATION	TO	STATION	LOCATION	EACH	LF	LF	LS	LS	LF
20"G"+84	-	26"G"+58	LT & RT	2	575	575	1	1	575
			TOTAL	**2**	**575**	**575**	**1**	**1**	**575**

690.0150 SAWING ASPHALT

STATION	LOCATION	LF	COMMENT
18"G"+25	LT, RT	22	GROUSE DRIVE
26"G"+58	LT, RT	50	GROUSE DRIVE
110+73	S. APPROACH	40	B-39-15
113+47	N. APPROACH	40	B-39-15
126+44	S. APPROACH	40	UNDER B-39-16
135+45	N. APPROACH	40	UNDER B-39-16
208+54	S. APPROACH	40	B-39-17
211+70	N. APPROACH	40	B-39-17
316+67	S. APPROACH	40	B-39-19
320+45	N. APPROACH	40	B-39-19
382+95	S. APPROACH	40	B-39-21
386+23	N. APPROACH	40	B-39-21
	TOTAL	**472**	

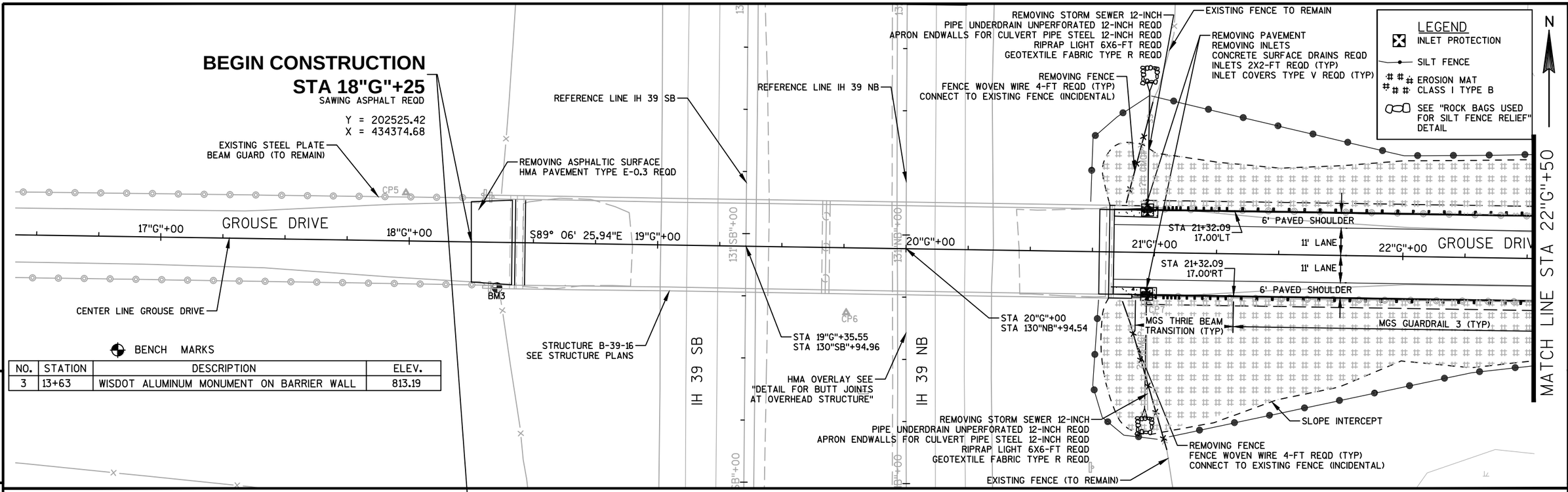
NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED



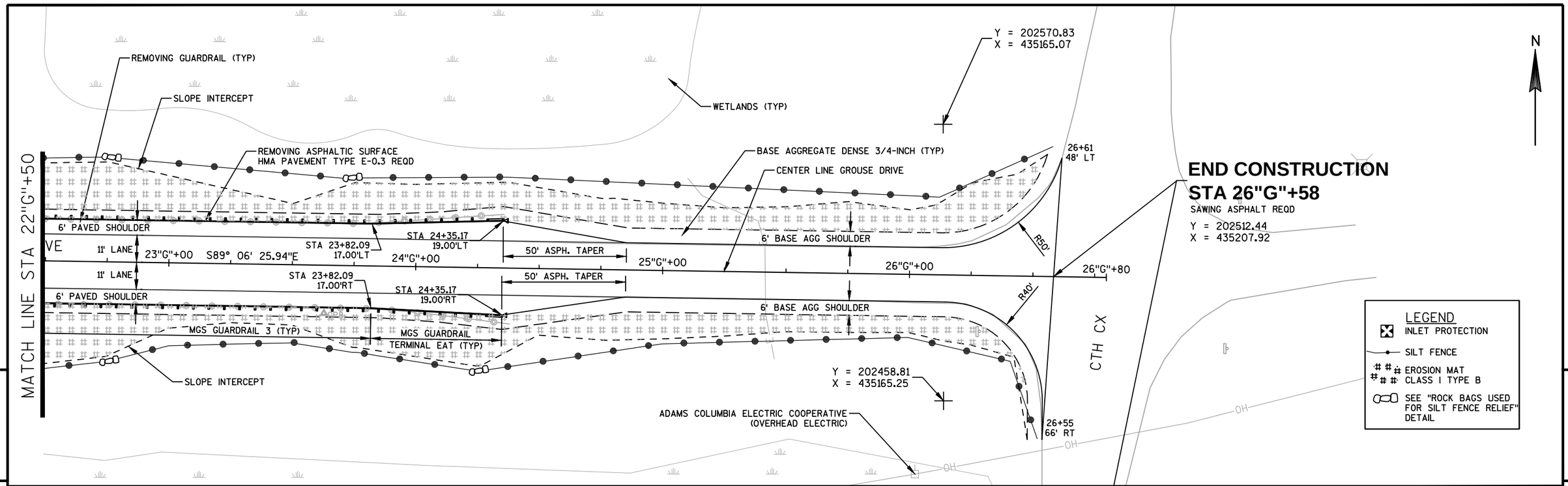
BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
1	111+77	WISDOT ALUMINUM MONUMENT IN WINGWALL	788.65
2	111+81	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	791.34

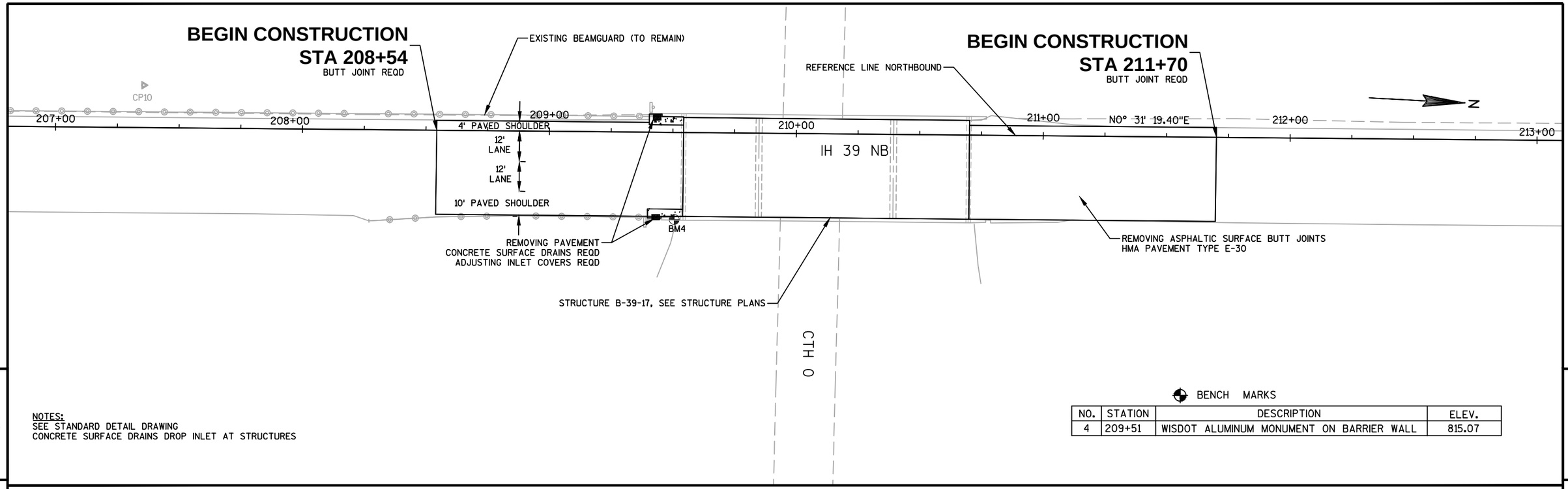
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	PLAN B-39-15	SHEET 84	E



PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	PLAN & PROFILE (B-39-16) GROUSE DRIVE OVER IH 39	SHEET 85	E



PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	PLAN & PROFILE (B-39-16) GROUSE DRIVE OVER IH 39	SHEET 86	E



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NOTES:
SEE STANDARD DETAIL DRAWING
CONCRETE SURFACE DRAINS DROP INLET AT STRUCTURES

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
4	209+51	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	815.07

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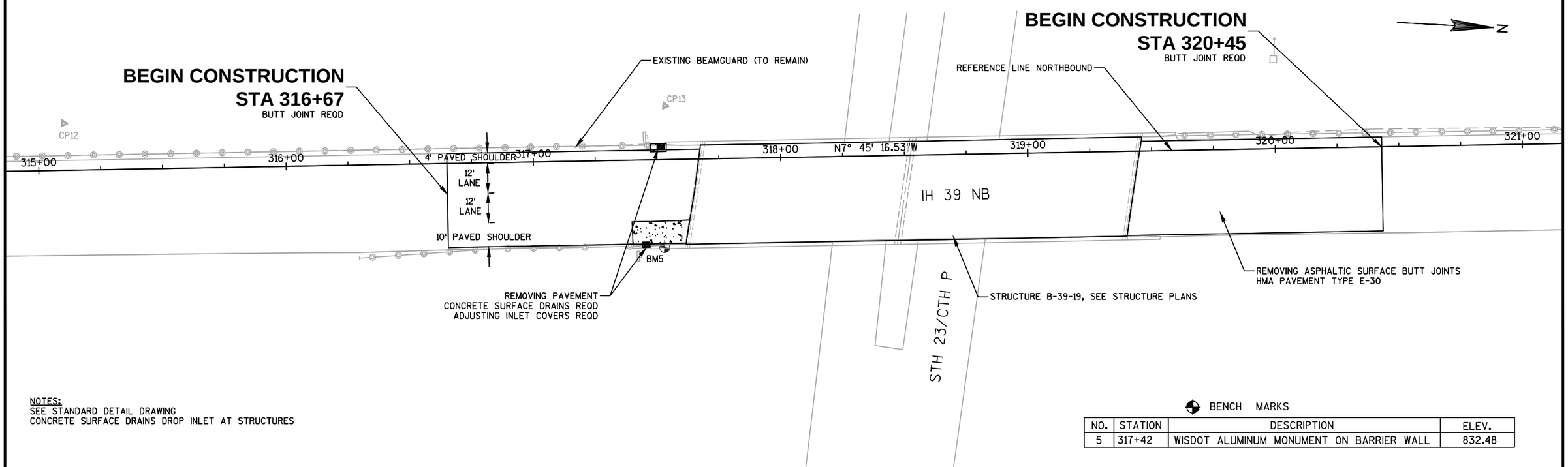
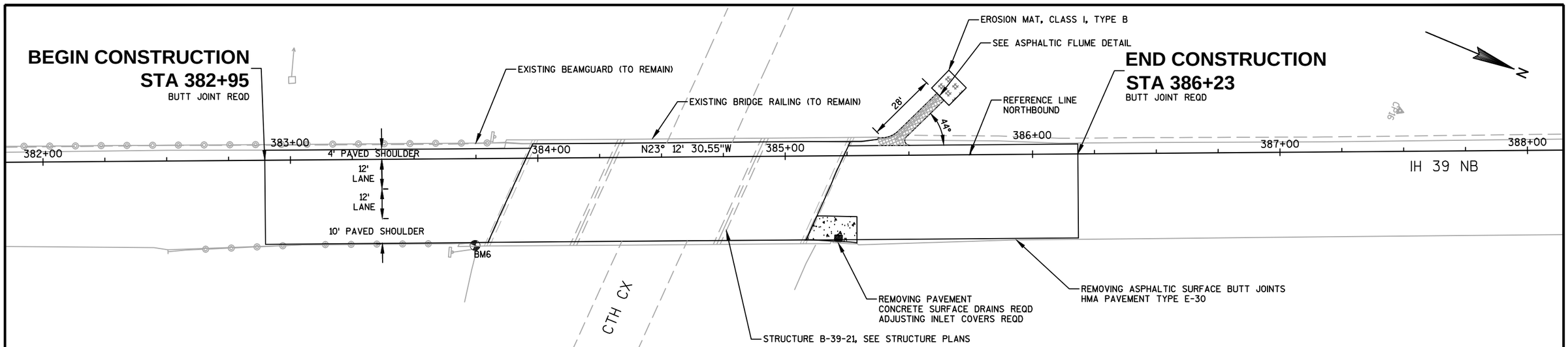


NOTES:
SEE STANDARD DETAIL DRAWING
CONCRETE SURFACE DRAINS DROP INLET AT STRUCTURES

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
5	317+42	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	832.48

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	PLAN B-39-17 & B-39-19	SHEET 87	E



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NOTES:
SEE STANDARD DETAIL DRAWING
CONCRETE SURFACE DRAINS DROP INLET AT STRUCTURES

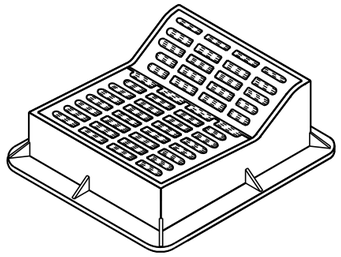
BENCH MARKS

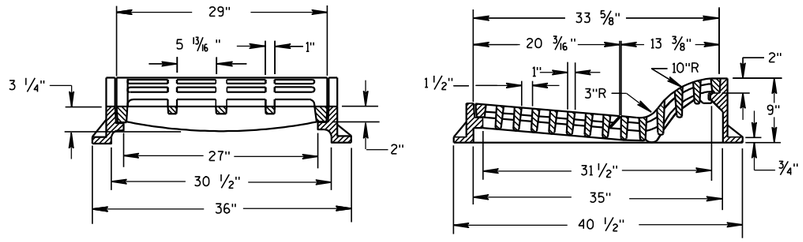
NO.	STATION	DESCRIPTION	ELEV.
6	383+79	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	809.82

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	PLAN B-39-21	SHEET 88	E

Standard Detail Drawing List

08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-13H	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
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-05	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15D03-01	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



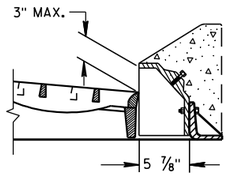


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

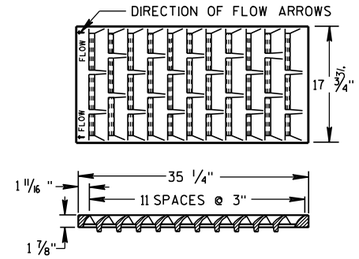
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

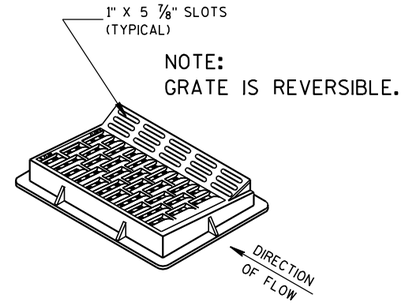
GENERAL NOTES

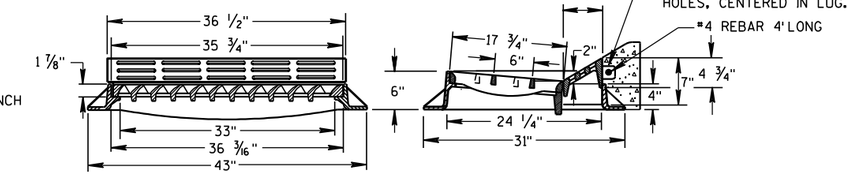
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





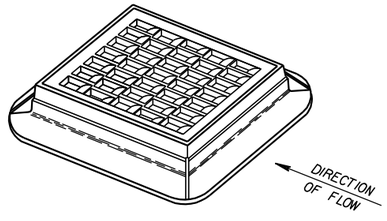


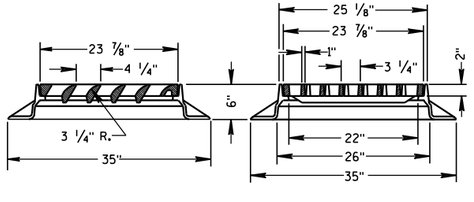
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)
FRAME..... 181 LBS.
GRATE..... 159 LBS.
CURB BOX..... 74 LBS.

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

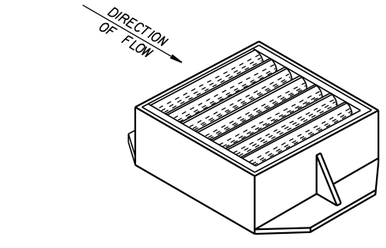


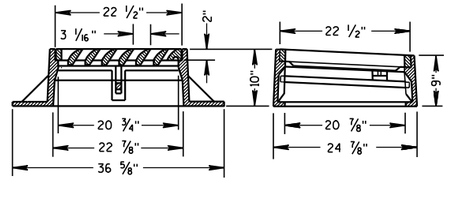


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE..... 169 LBS.

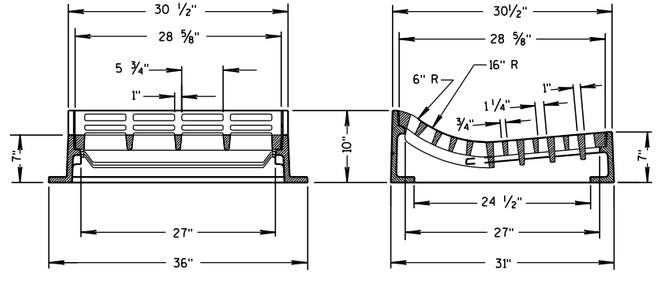




TYPE "V"

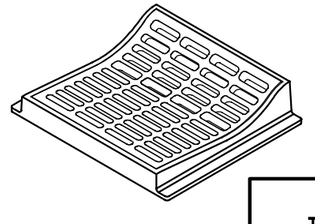
(APPROXIMATE WEIGHT 410 LBS.)

FRAME..... 269 LBS.
GRATE..... 136 LBS.
SAFETY BAR..... 5 LBS.



TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)
FRAME.....270 LBS.
GRATE.....260 LBS.
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 8 A 5-18c

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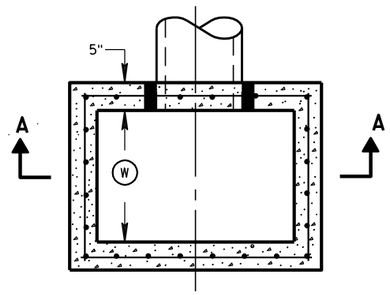
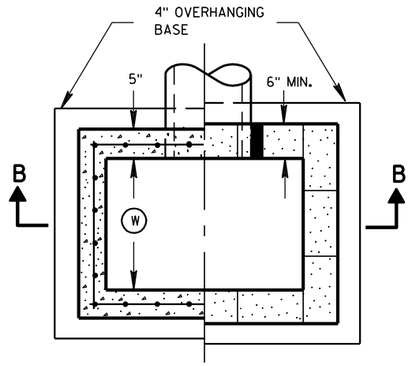
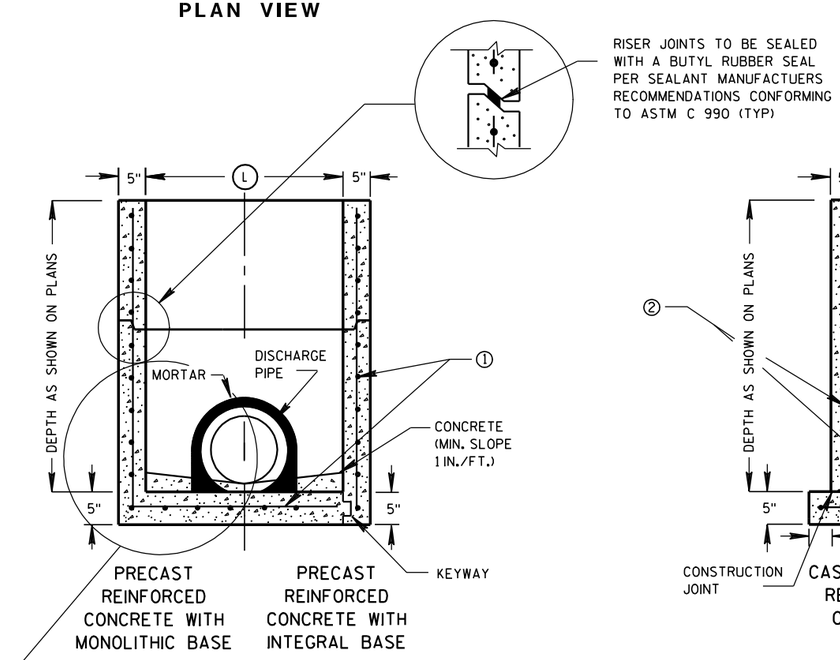
S.D.D. 8 A 5-18c



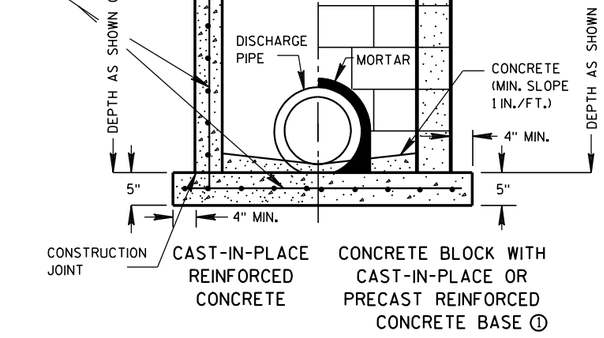
PLAN VIEW



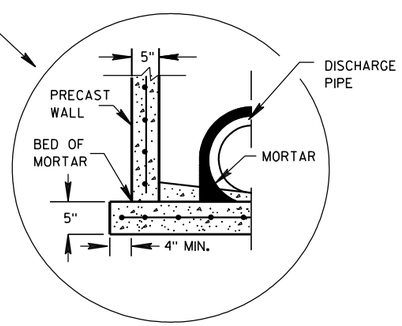
PLAN VIEW



SECTION A-A



SECTION B-B



SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

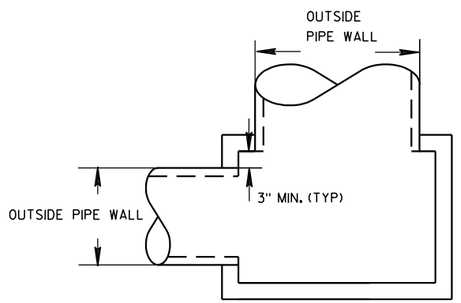
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



DETAIL "A"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS D ENGINEER
FHWA

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S.D.D. 8 C 7-1

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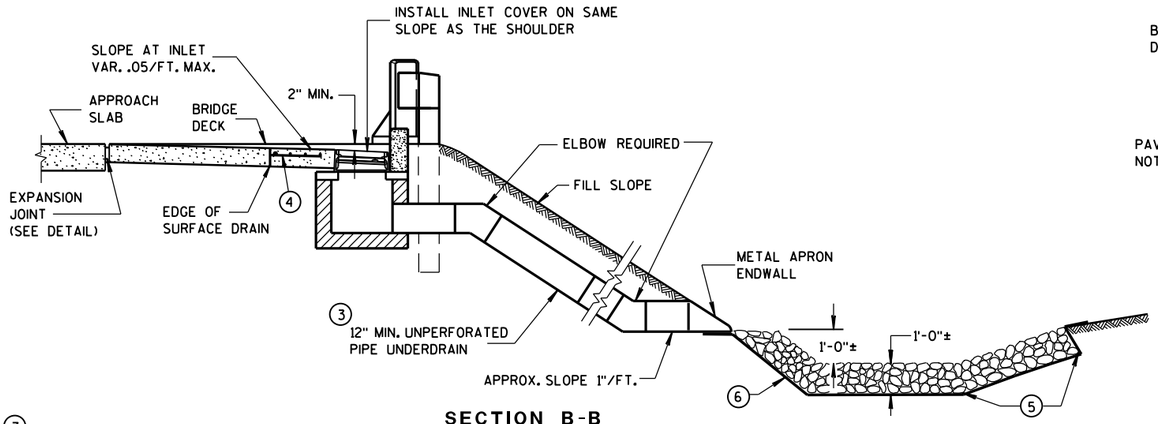
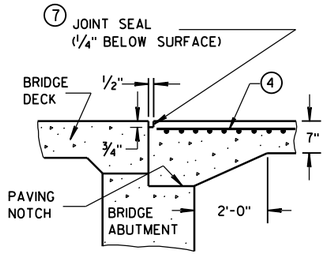
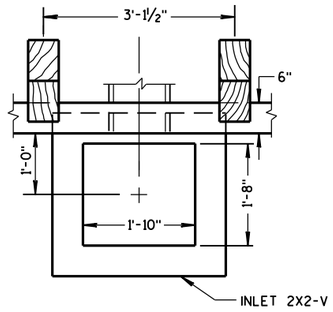
S.D.D. 8 C 7-1



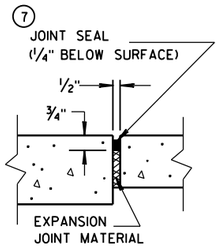
SECTION B-B



SECTION D-D

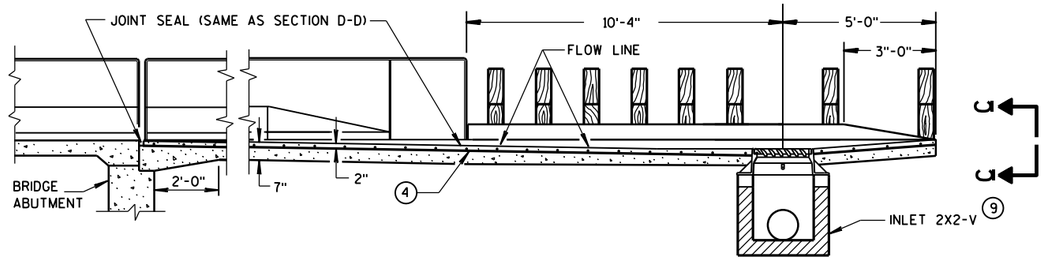


PLAN VIEW

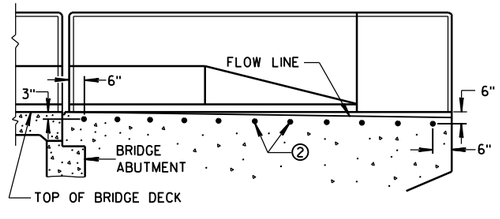


EXPANSION JOINT DETAIL

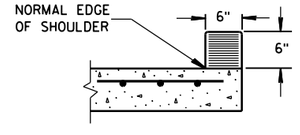
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

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'-1½".

(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

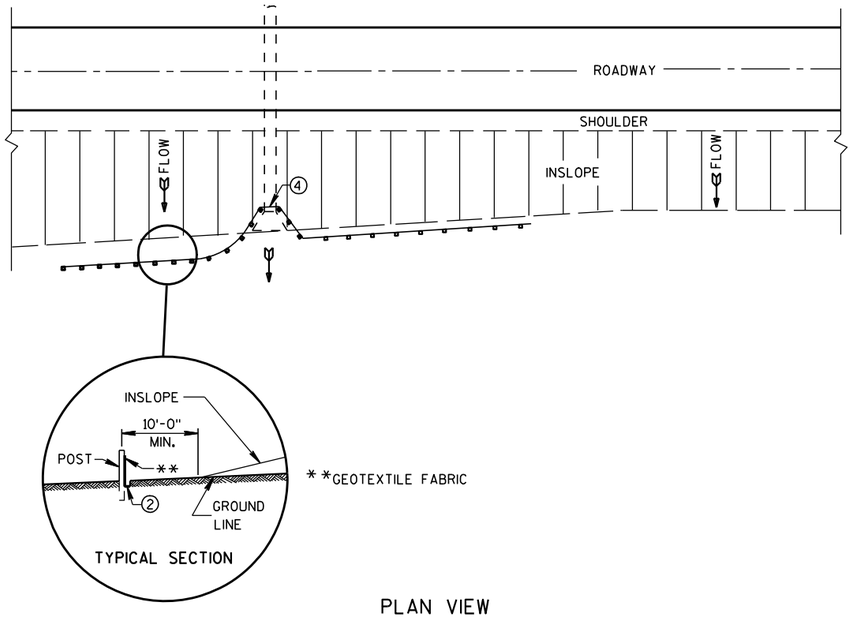
CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

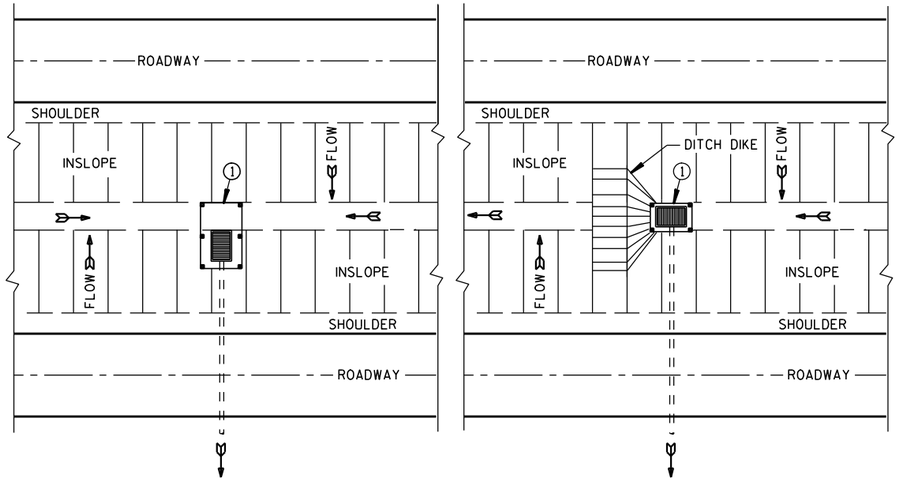
6

S.D.D. 8 D 3-6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

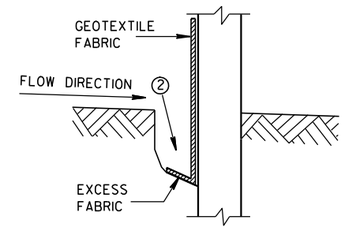
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

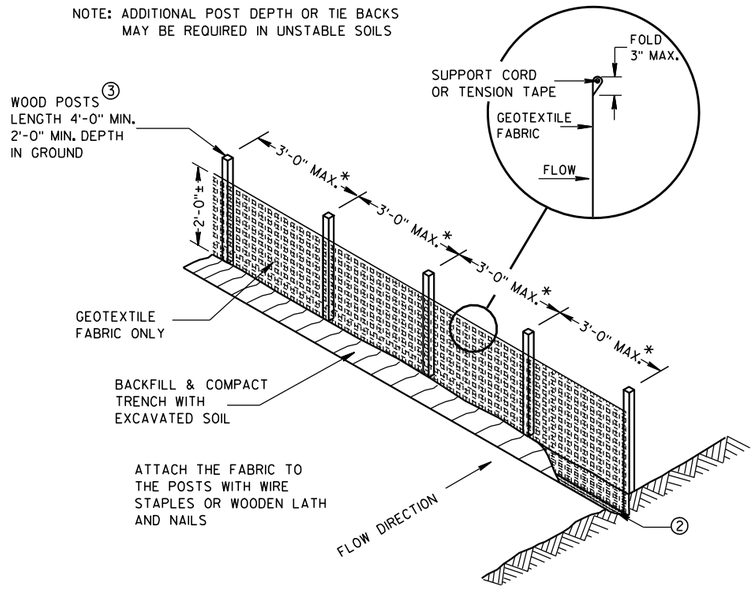
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

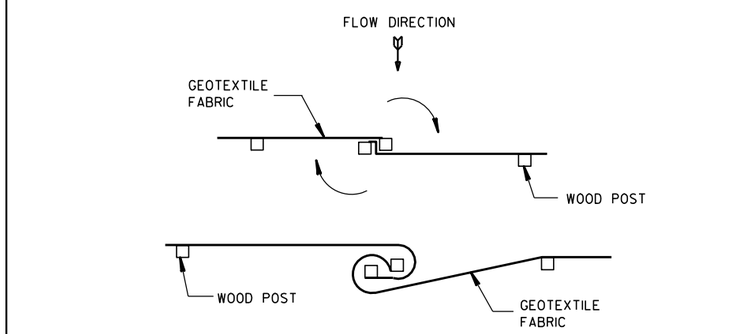
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



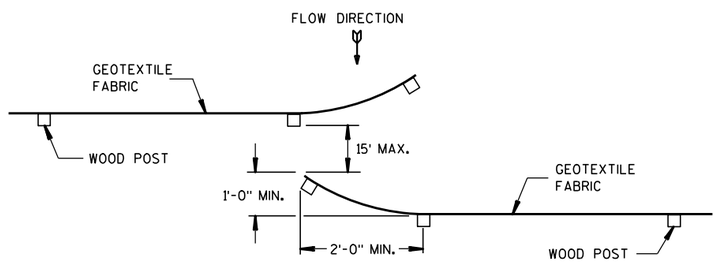
TRENCH DETAIL



SILT FENCE

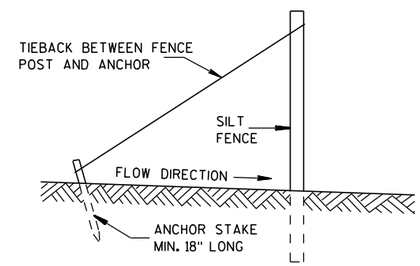


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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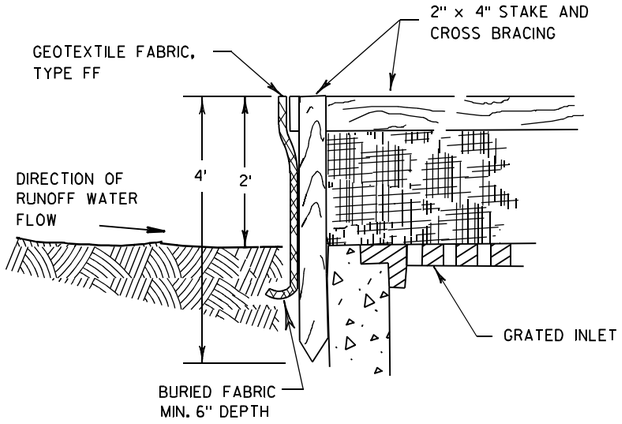
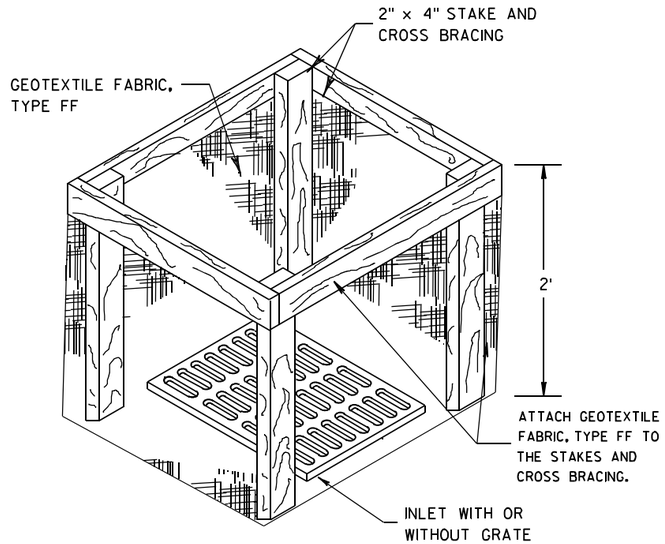
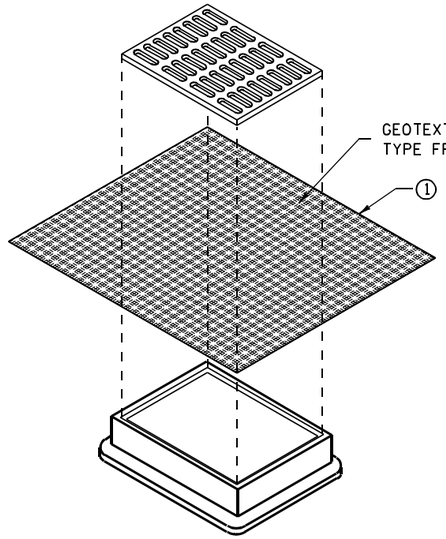
S.D.D. 8 E 9-6



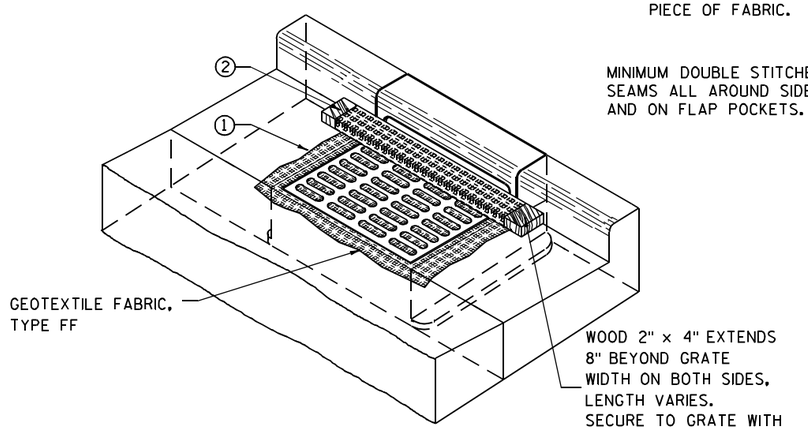


INLET PROTECTION, TYPE A

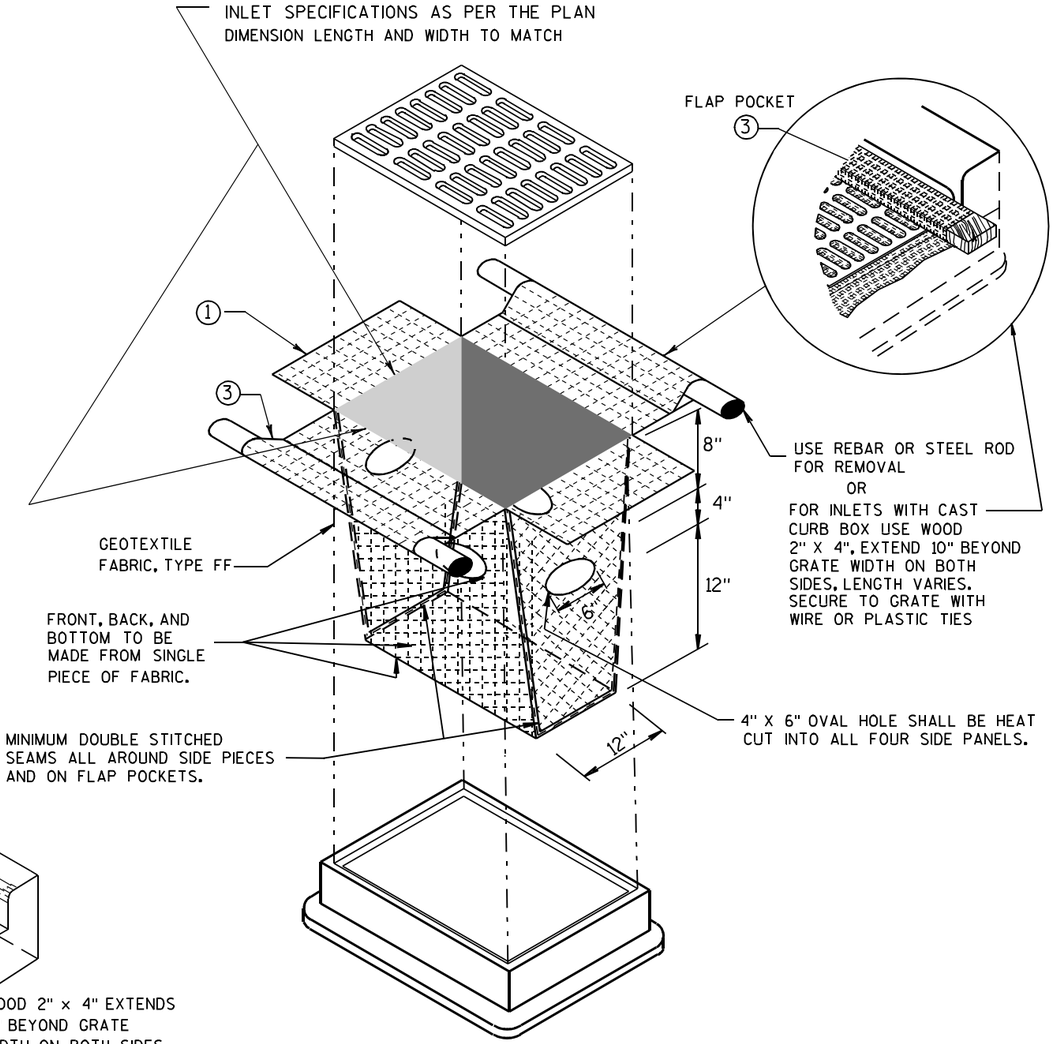


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

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.

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 A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

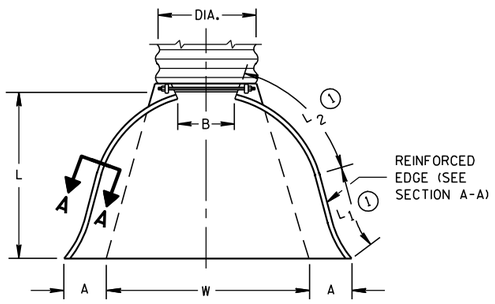
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

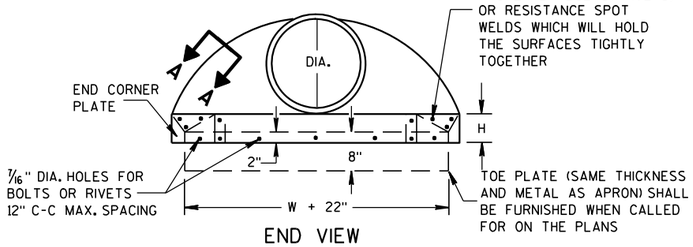
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

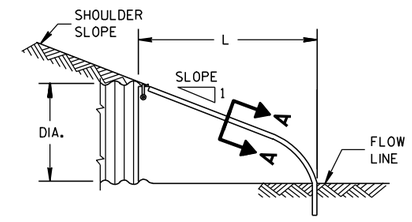
*MINIMUM
**MAXIMUM



PLAN VIEW

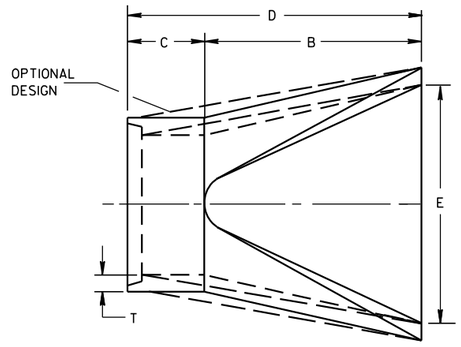


END VIEW

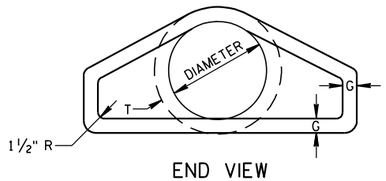


SIDE ELEVATION

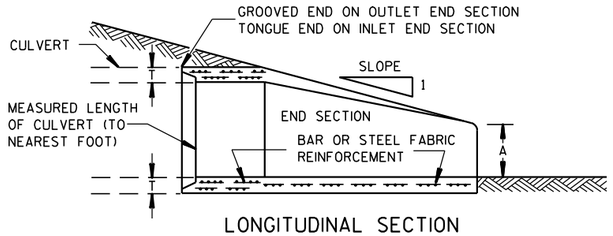
METAL ENDWALLS



PLAN

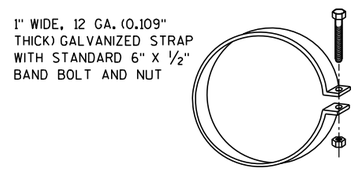


END VIEW



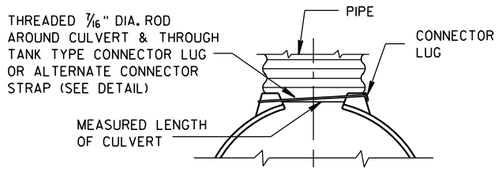
LONGITUDINAL SECTION

CONCRETE ENDWALLS

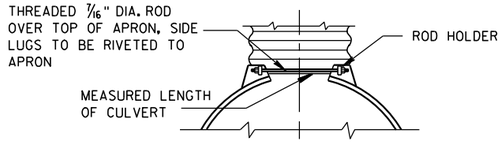


ALTERNATE FOR TYPE 1 CONNECTION

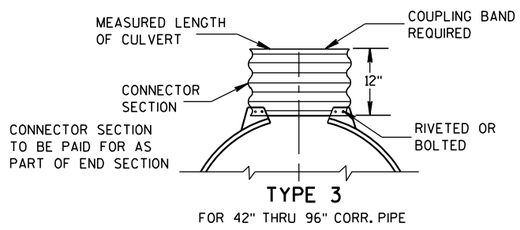
END SECTION CONNECTOR STRAP



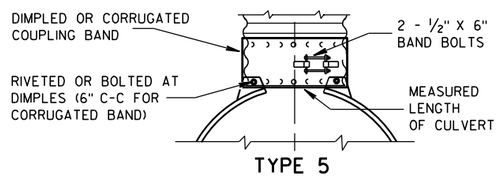
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

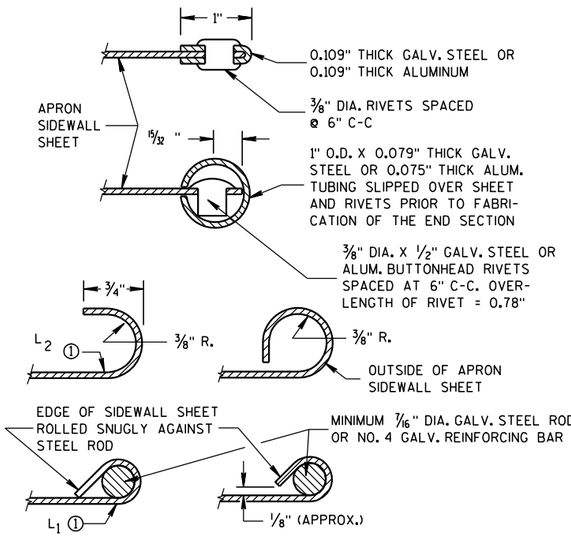
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

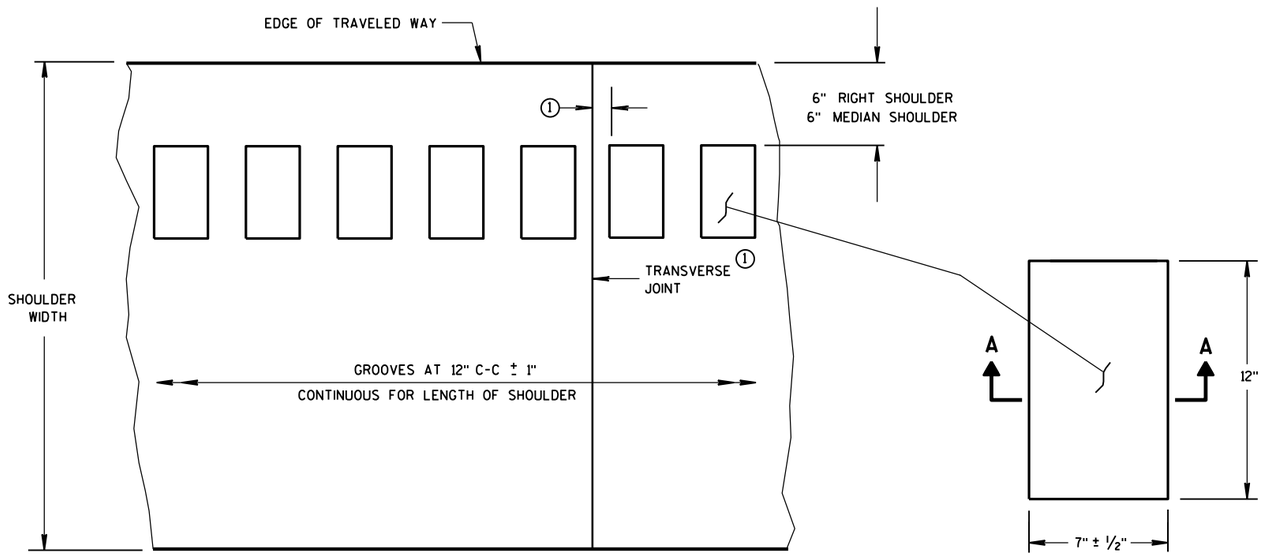
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOP 95 NEER
FHWA

6
S.D.D. 8 F 1-11



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

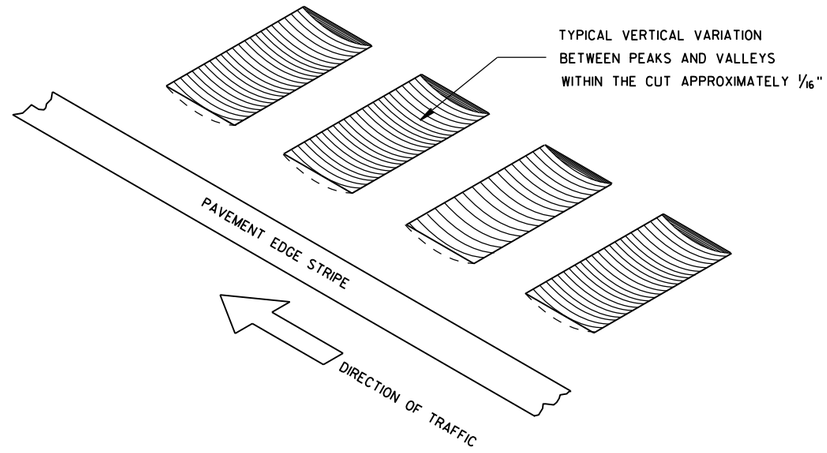
GENERAL NOTES

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

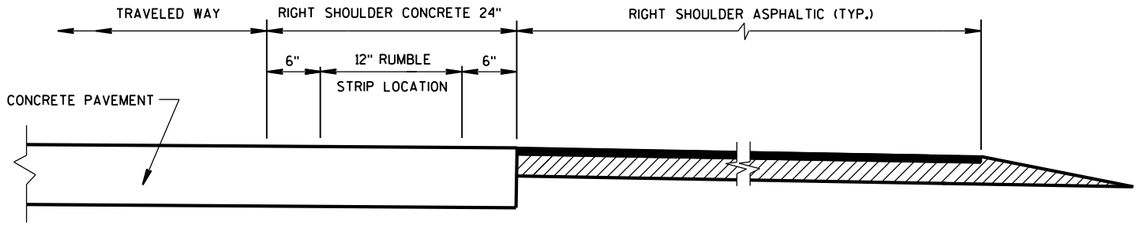
RUMBLE STRIPS ON EXPRESSWAYS

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.

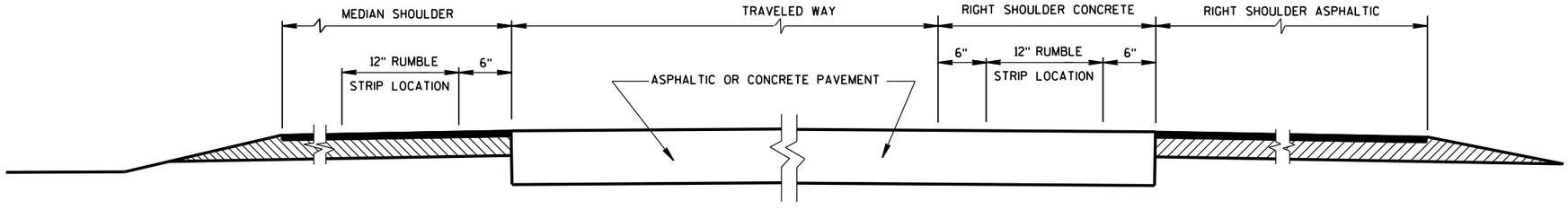
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



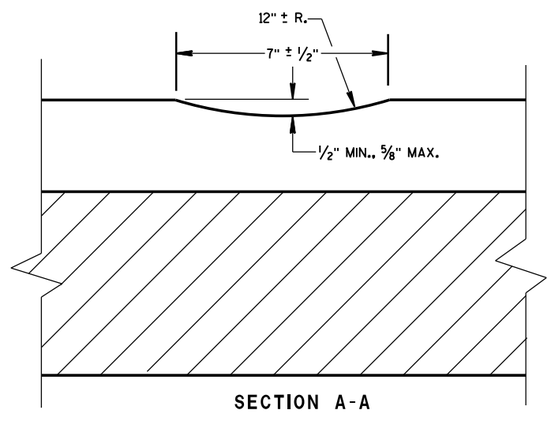
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 13 A 5-5a

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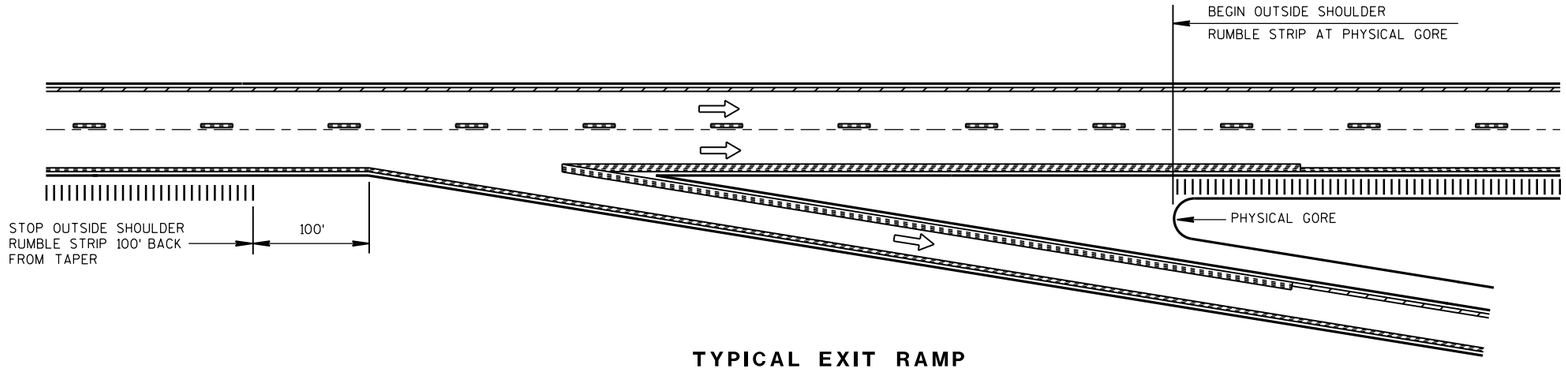
S.D.D. 13 A 5-5a



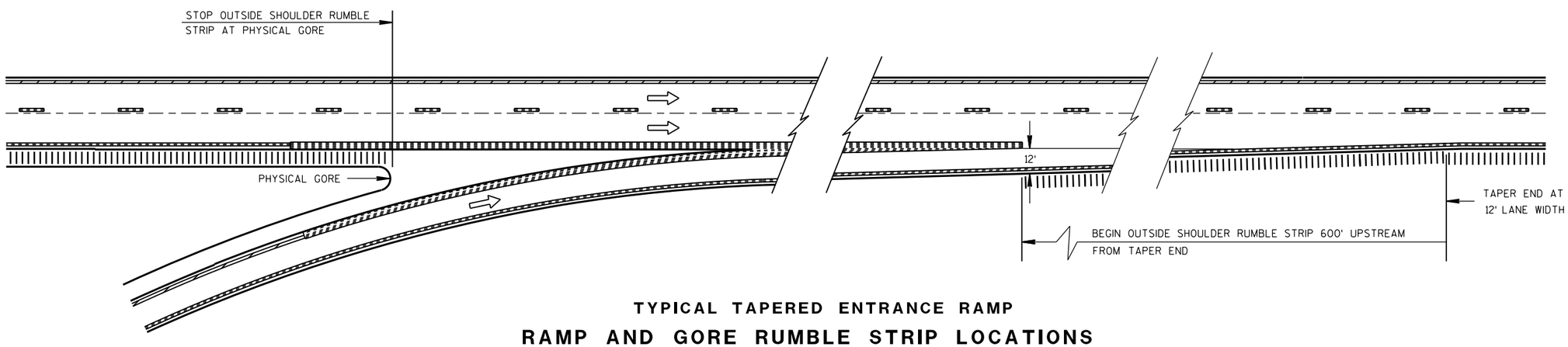
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

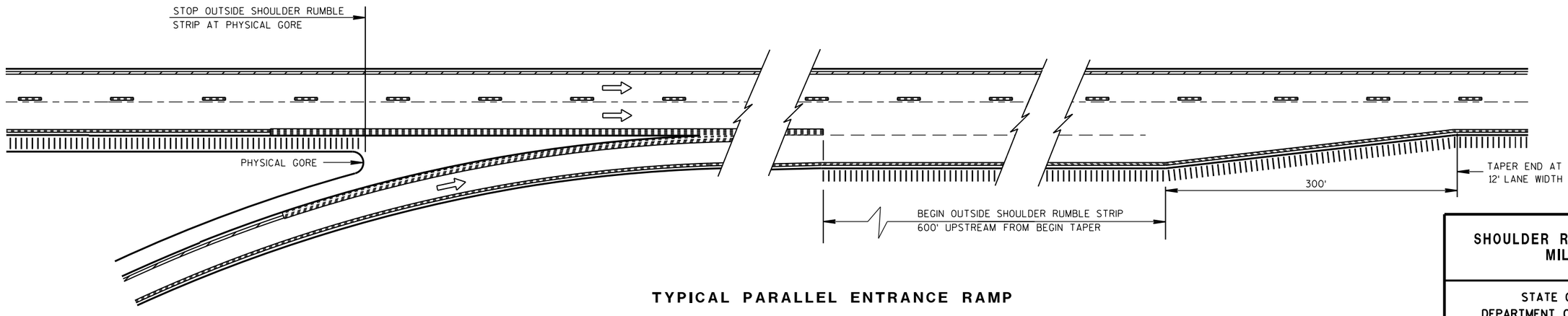
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

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

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

FHWA

97

ENT

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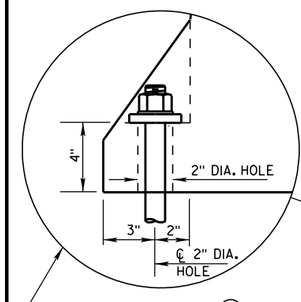
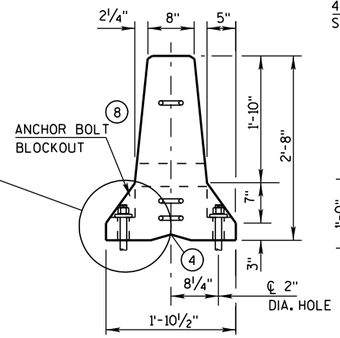
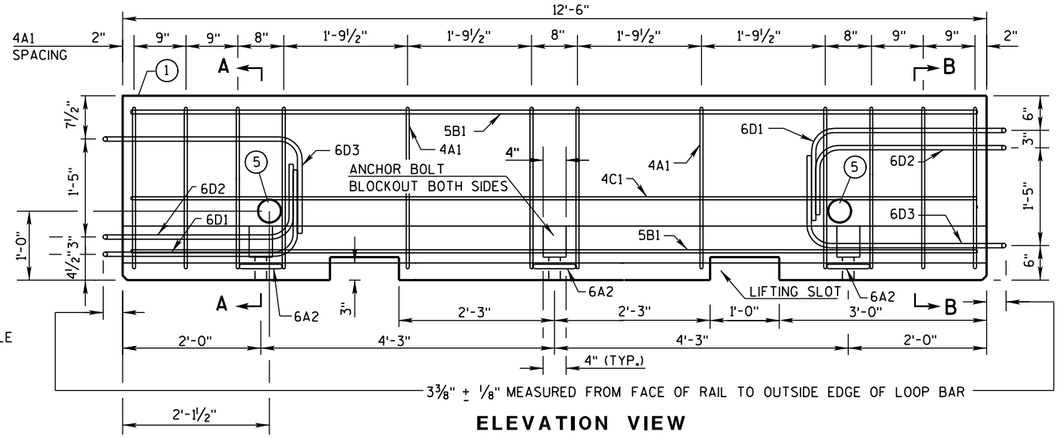
S.D.D. 13 A 5-5b

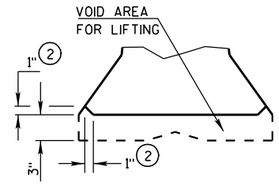




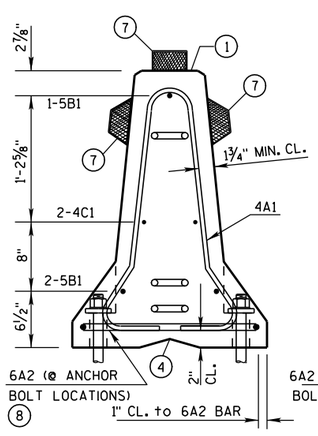
END VIEW



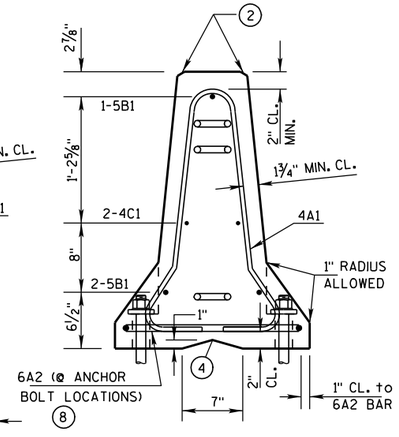
ELEVATION VIEW



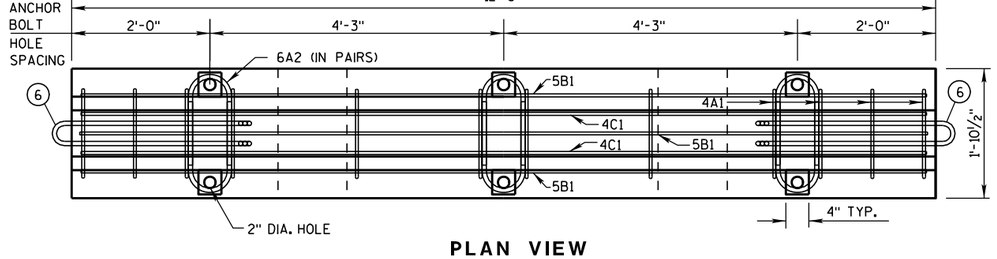
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

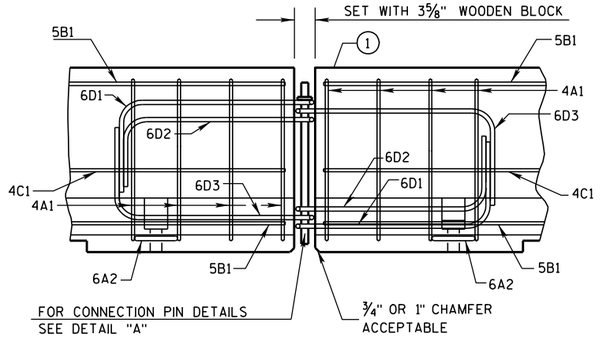


SECTION B-B
(STIRRUP PLACEMENT)

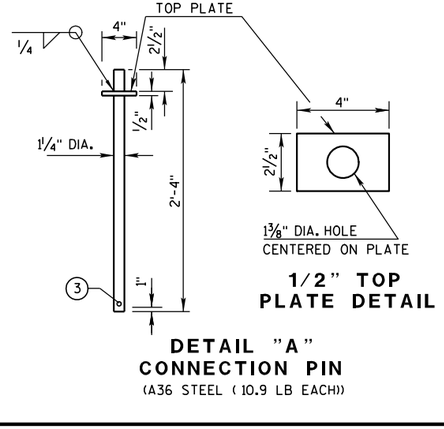


PLAN VIEW

DETAILS OF BARRIER SECTION

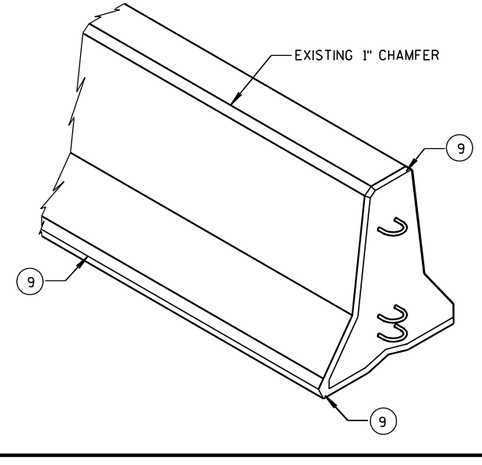


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(a) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 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 ¾" 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 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" 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 ⅜" 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.

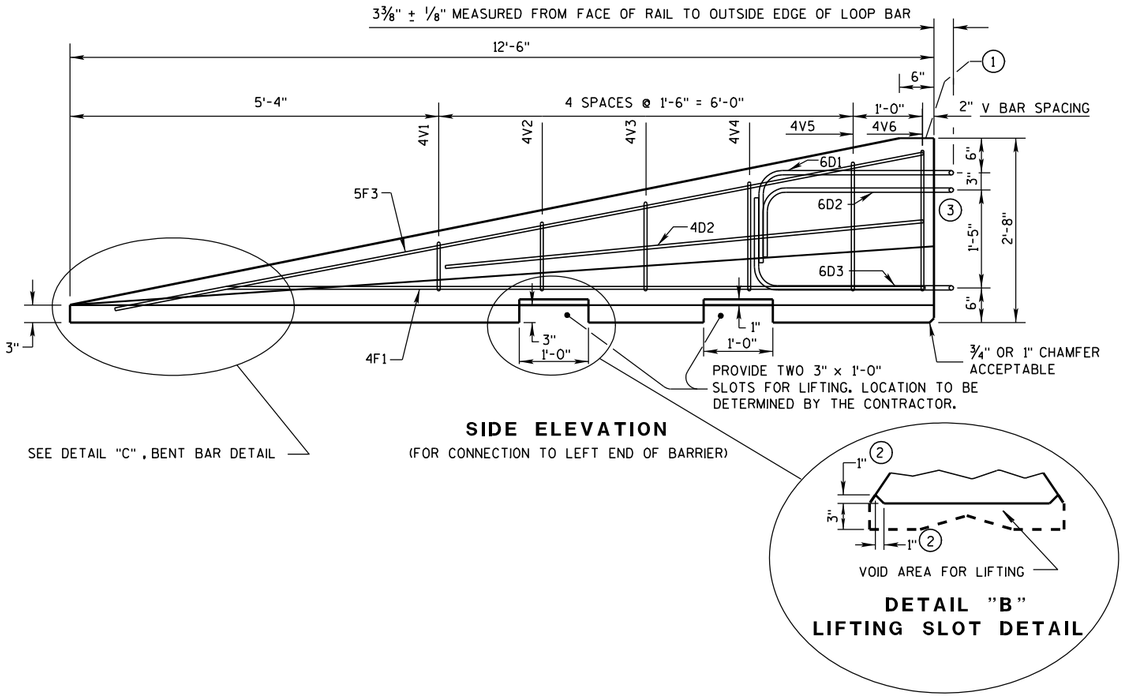
(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED 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"

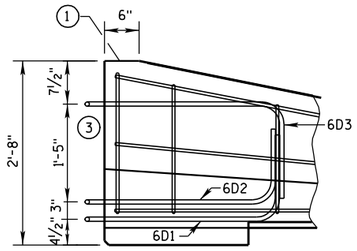
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

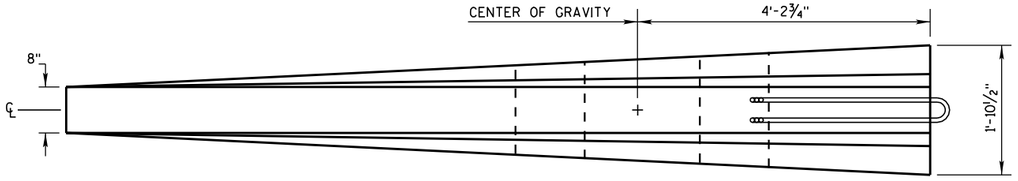


SIDE ELEVATION

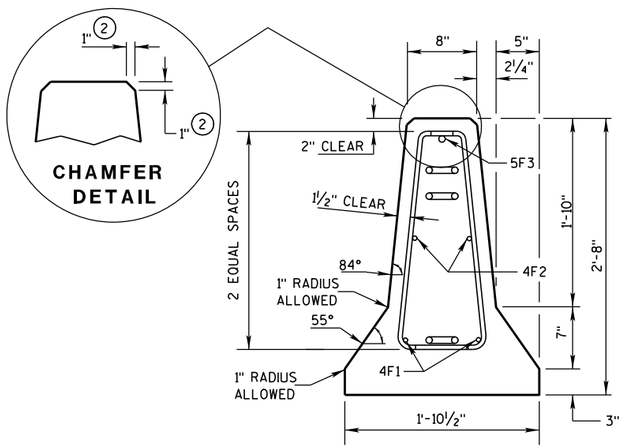
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

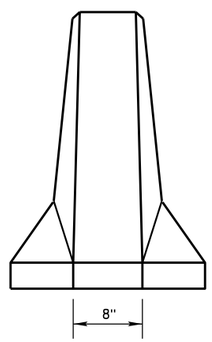
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



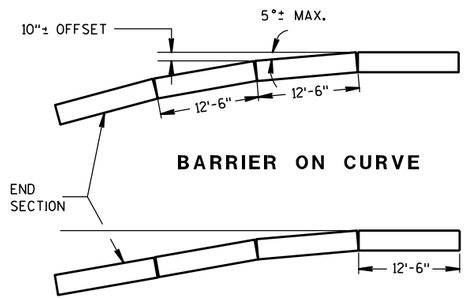
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

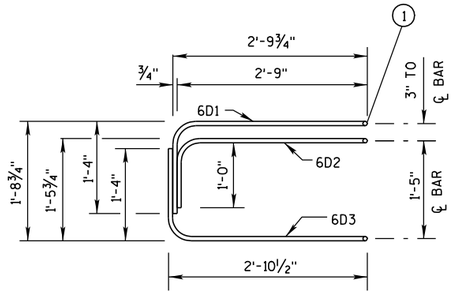
6

S.D.D. 14 B 7-13b

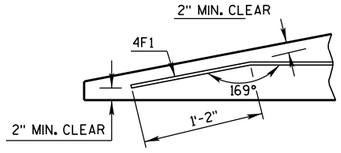
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

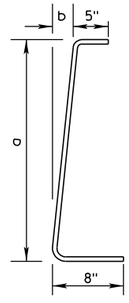
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

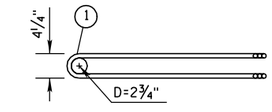
GENERAL NOTES

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

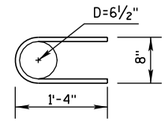
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

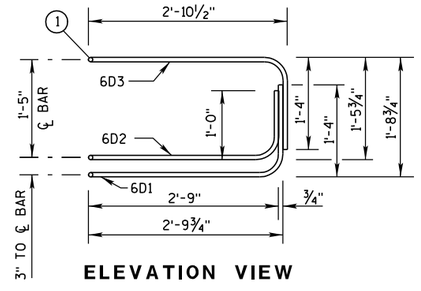
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



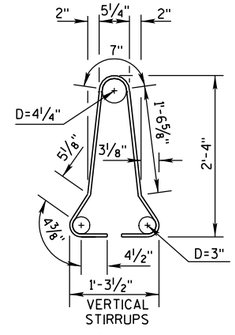
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



4A1

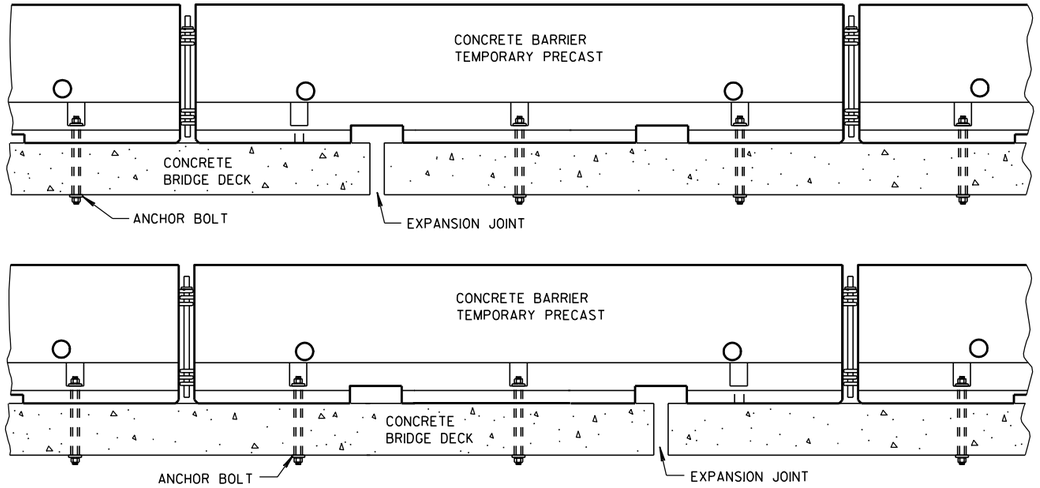
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

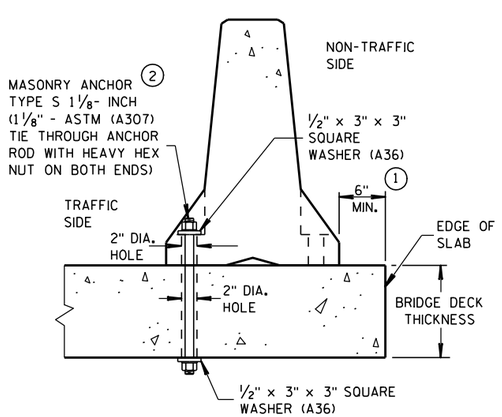
6

S.D.D. 14 B 7-13c



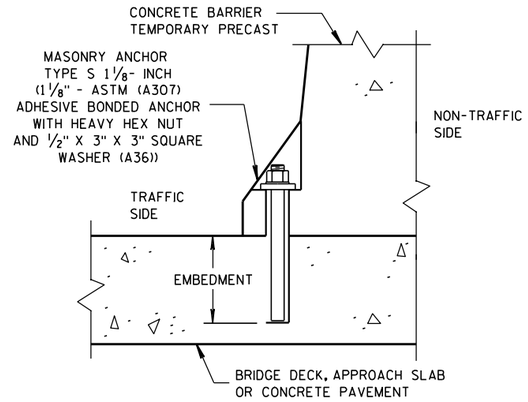
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



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

2

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

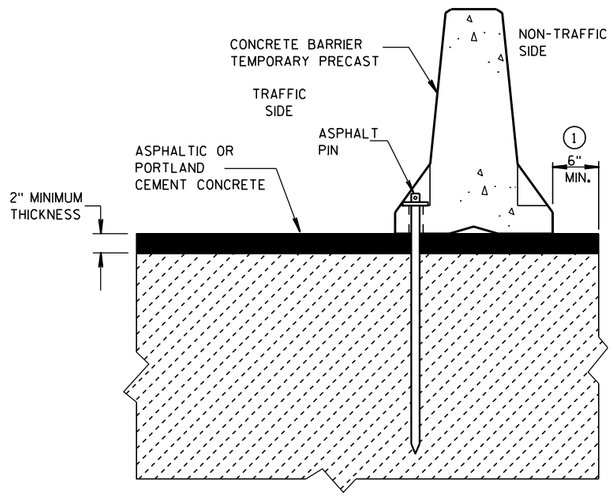
1. CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
   THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE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

2. ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

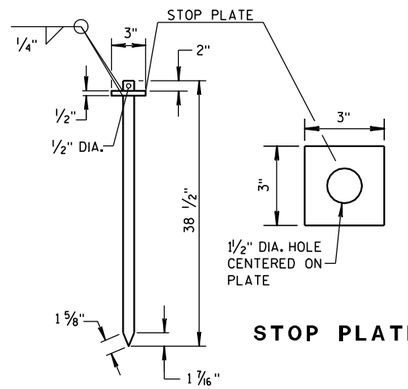
   WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1⅛-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

   UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALLANCHOR 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 COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

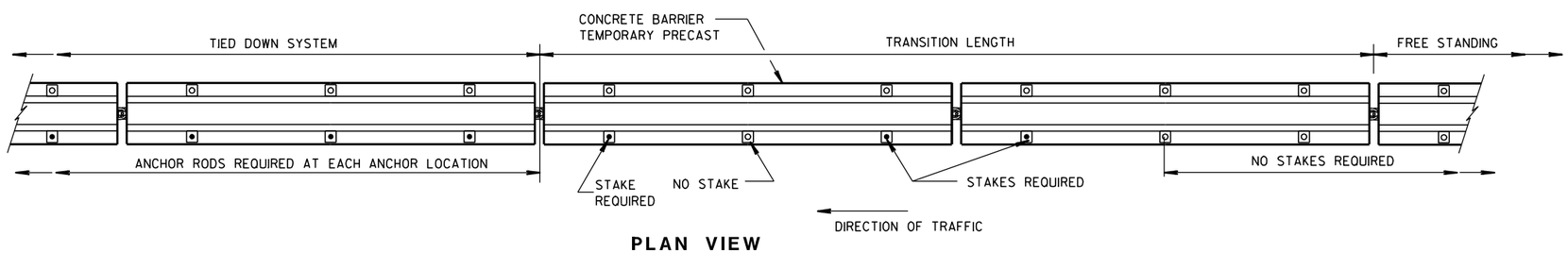
(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



STOP PLATE

ASPHALT PIN

(ASTM A36 STEEL)



PLAN VIEW

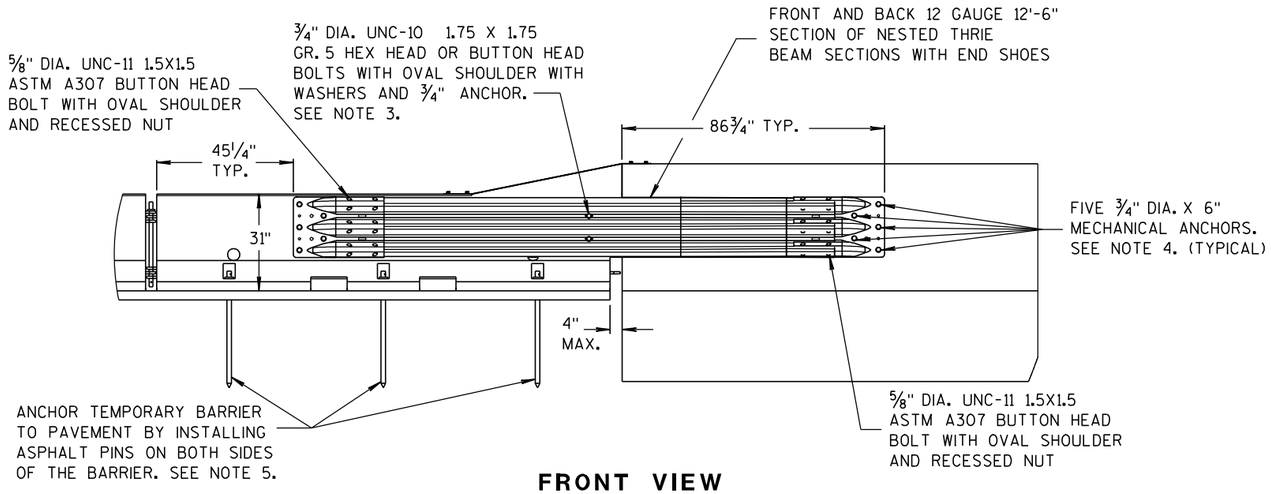
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

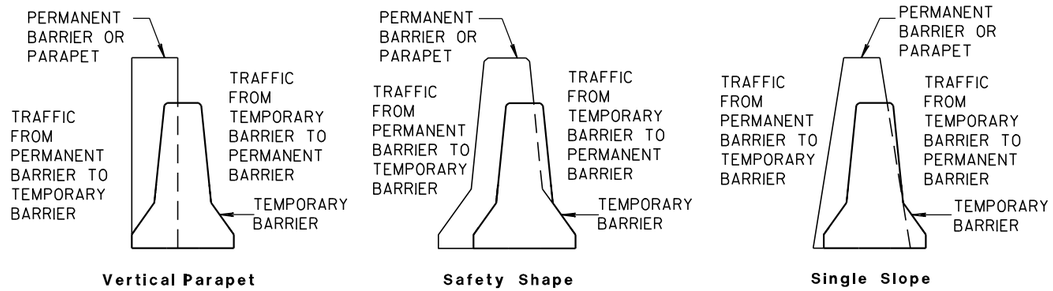
6
S.D.D. 14 B 7-13d



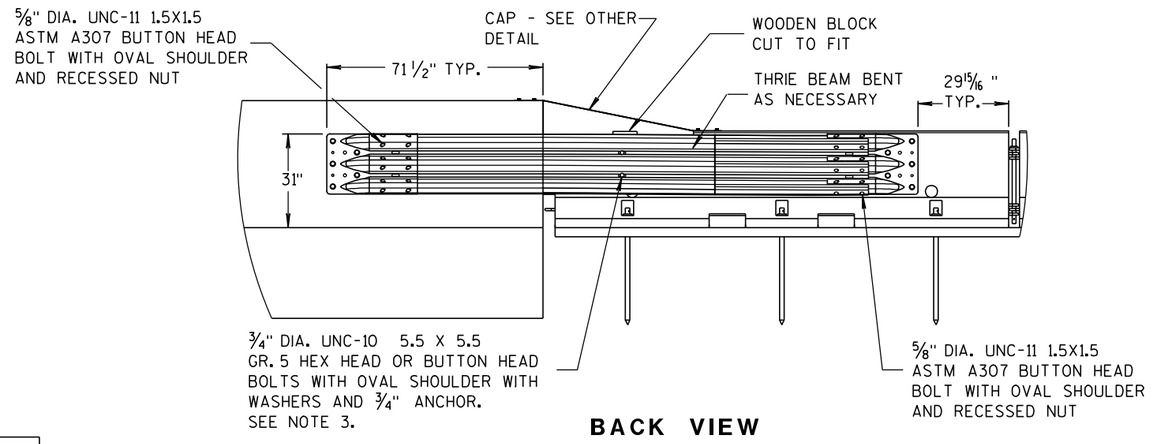
FRONT VIEW

NOTES

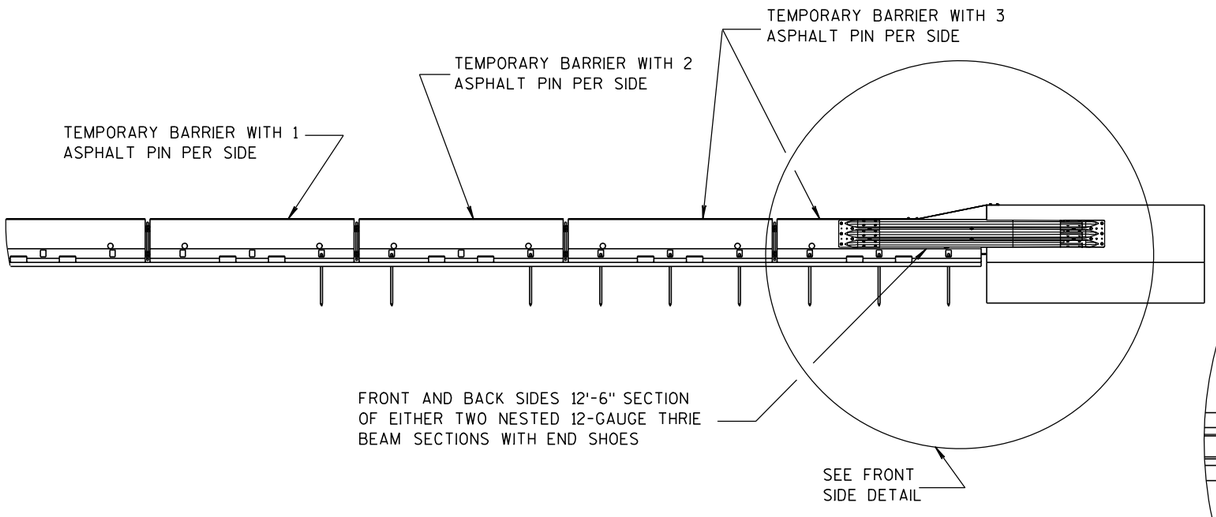
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48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



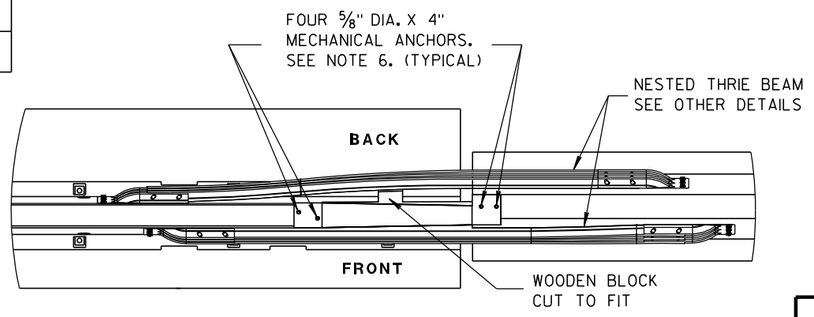
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



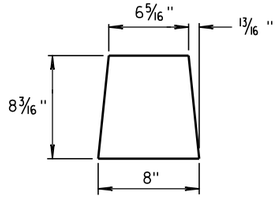
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

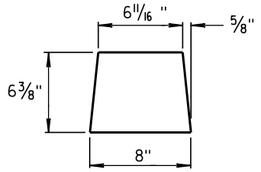
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

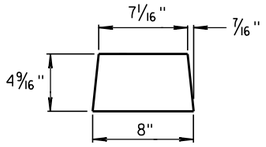
6
S.D.D. 14 B 7-13e



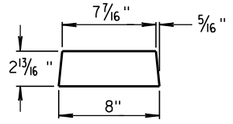
GUSSET 1



GUSSET 2

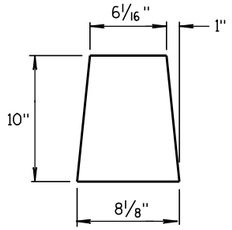


GUSSET 3

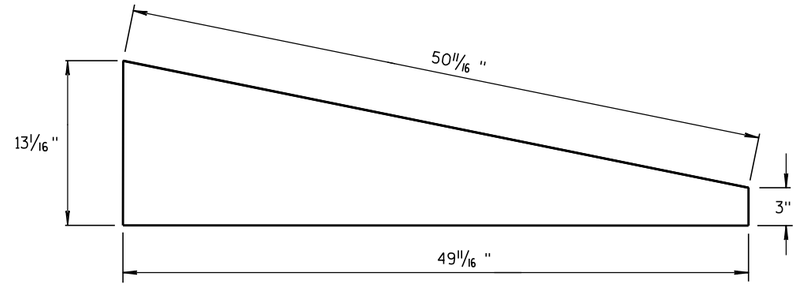


GUSSET 4

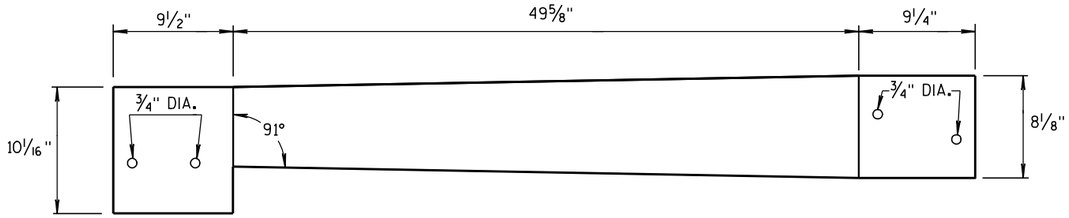
GUSSETS

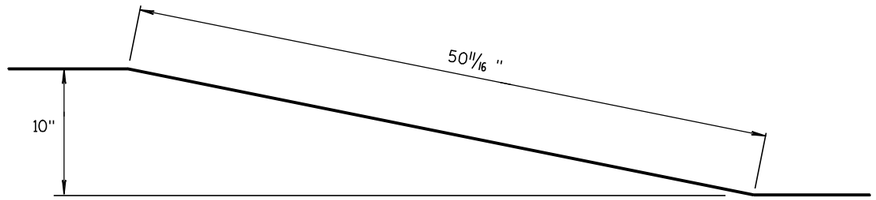


END PLATE

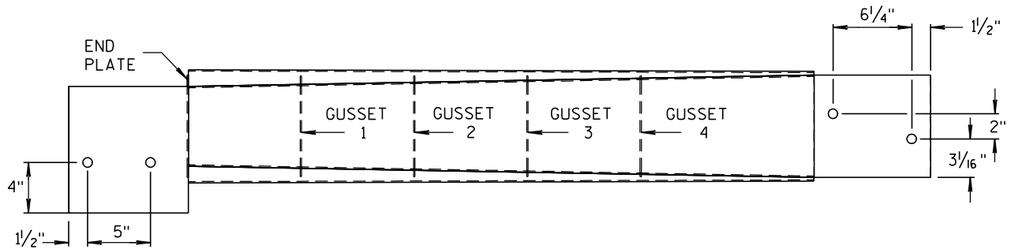


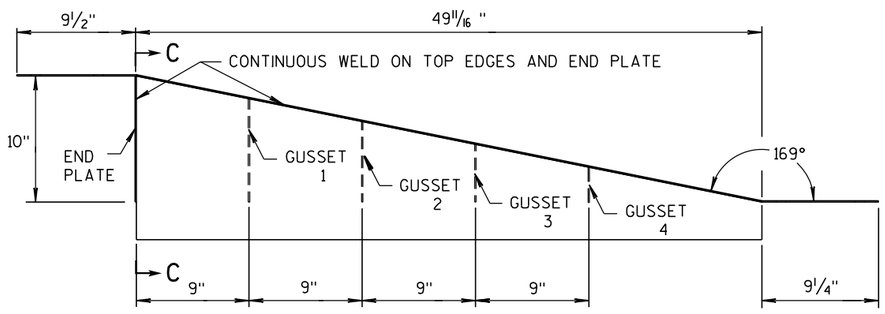
SIDE PLATE

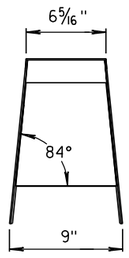




TOP PLATE







SECTION C-C

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.

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.

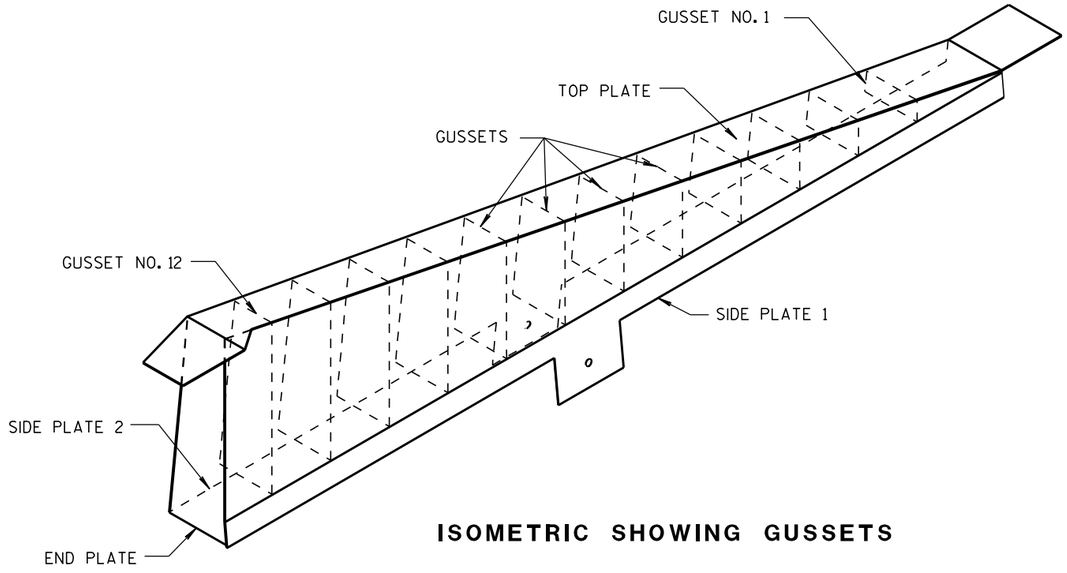
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

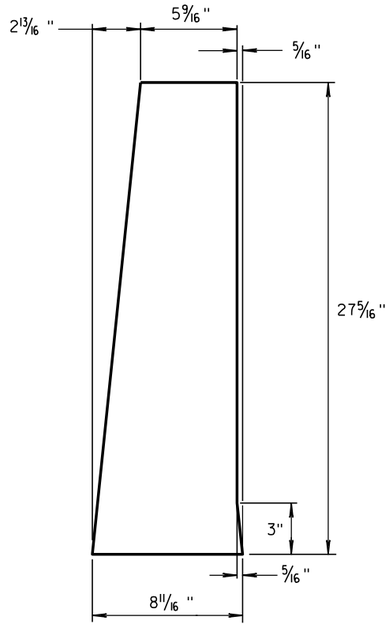
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 7-13f

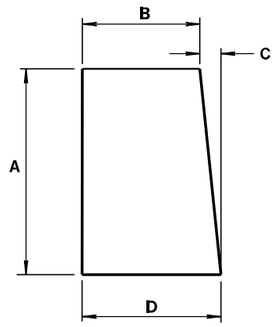


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

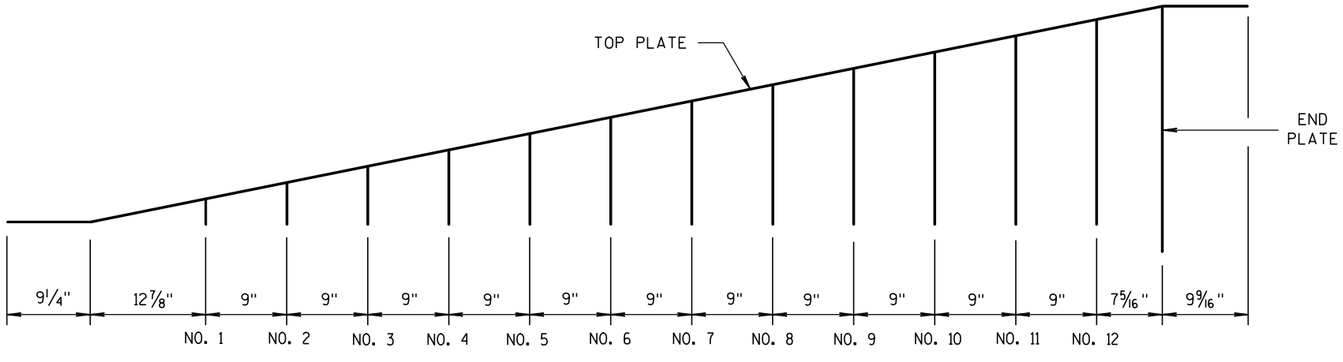
ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS

GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	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 15/16 "	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.



GUSSET LOCATION

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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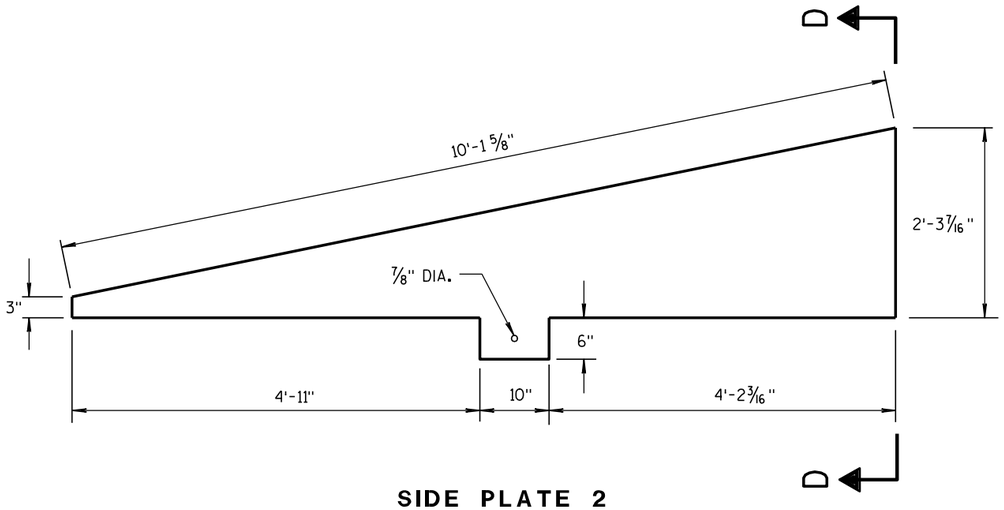
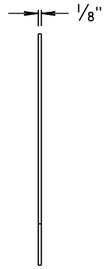
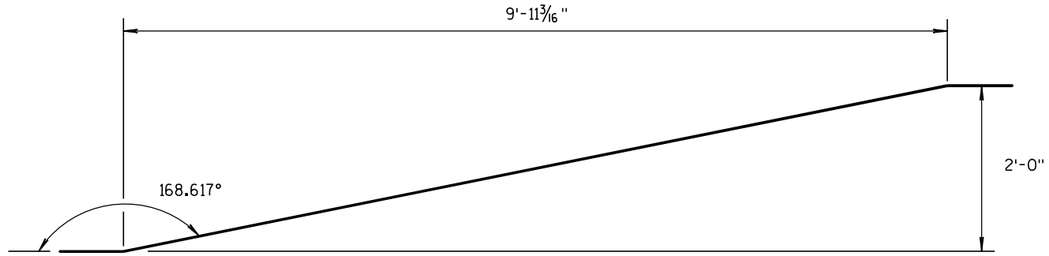
S.D.D. 14 B 7-13g



SIDE PLATE 2

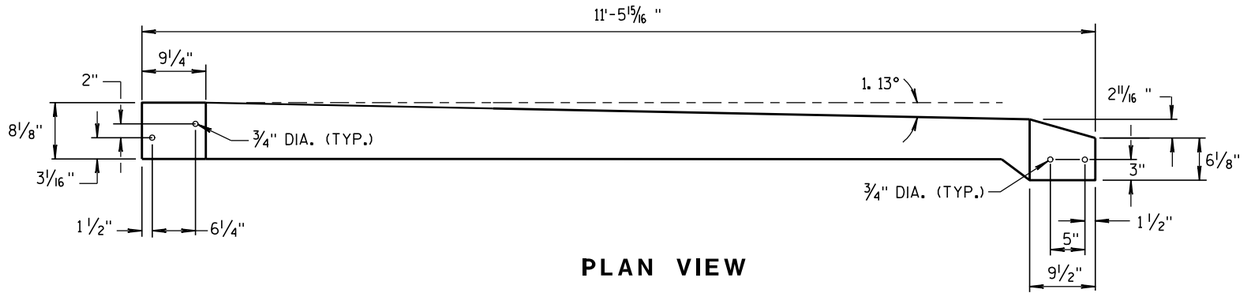


END VIEW



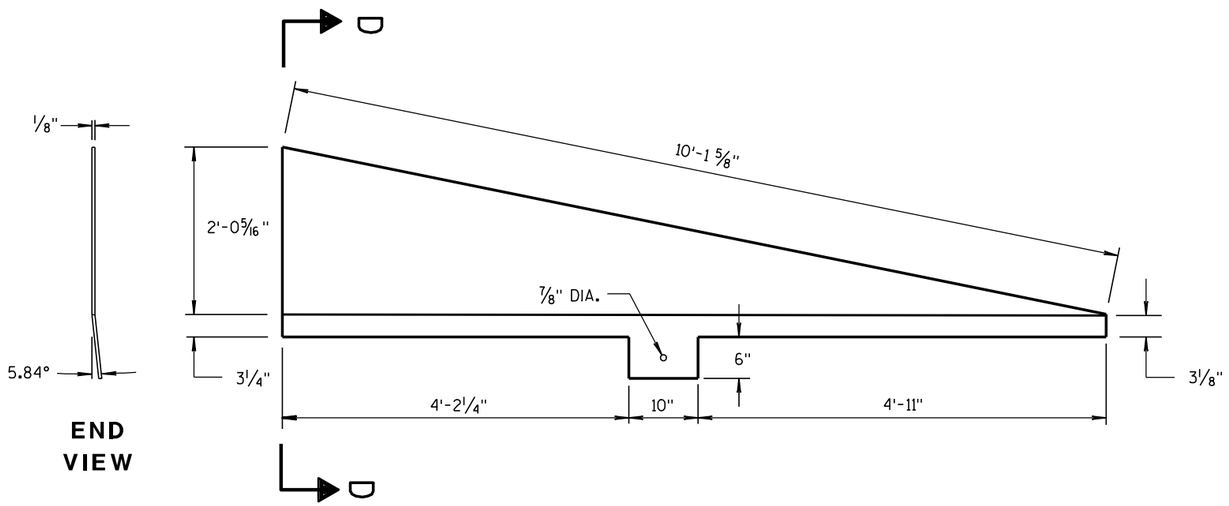
SIDE VIEW

TOP PLATE



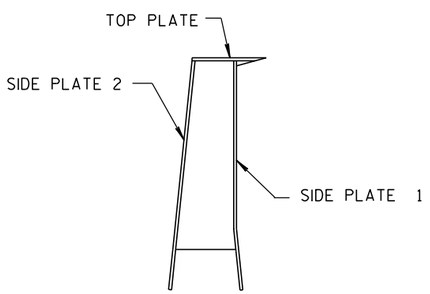
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8/31/2012 DATE	/S/ Jerry H. ---- ROADWAY STANDARDS ENGINEER
FHWA	105 ENT

6

S.D.D. 14 B 7-13h

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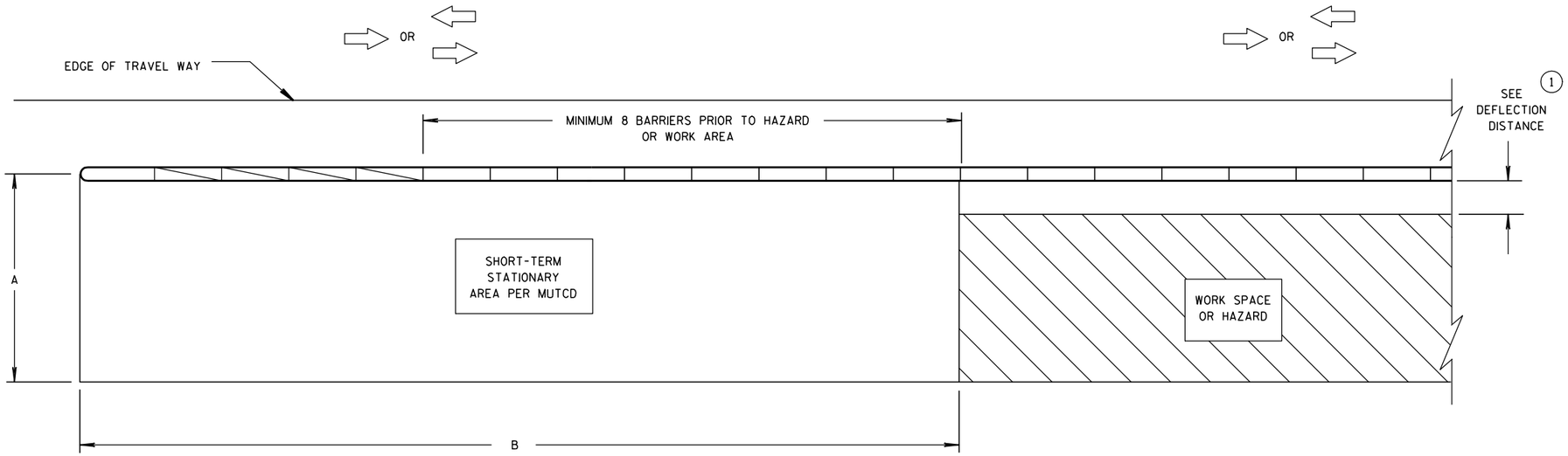
S.D.D. 14 B 7-13h



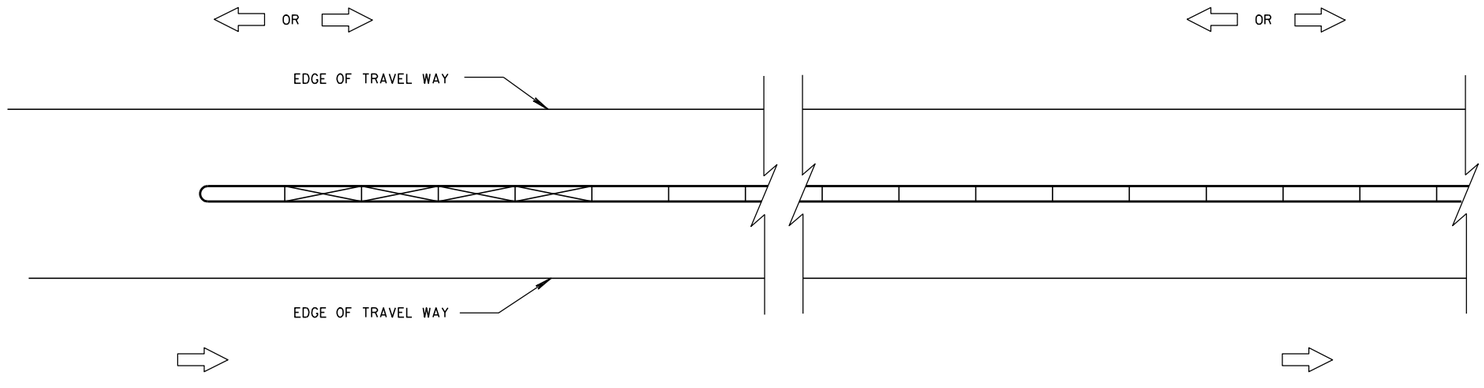
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

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



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

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

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.

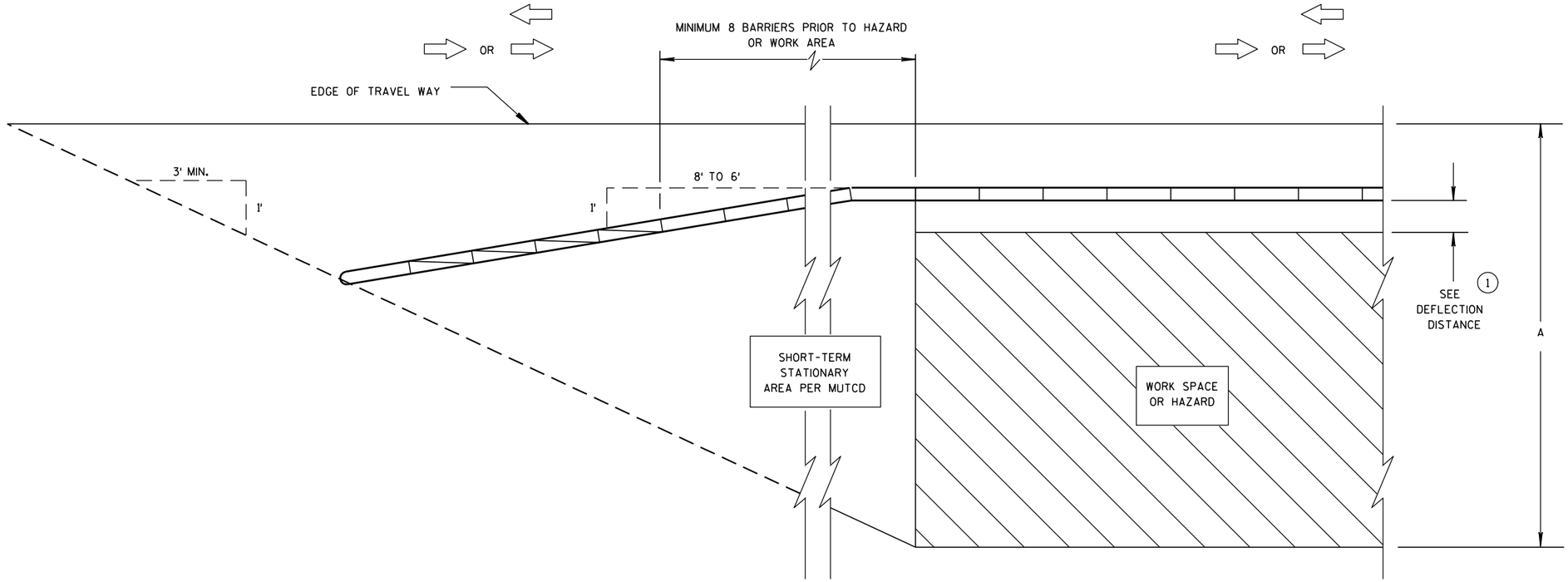
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

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

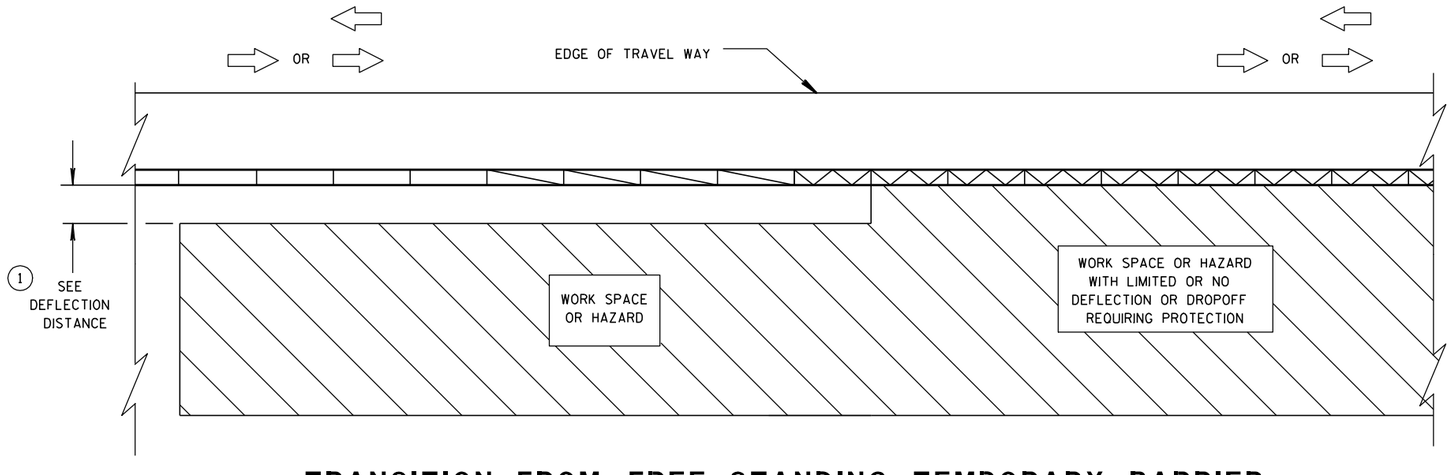
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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



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



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

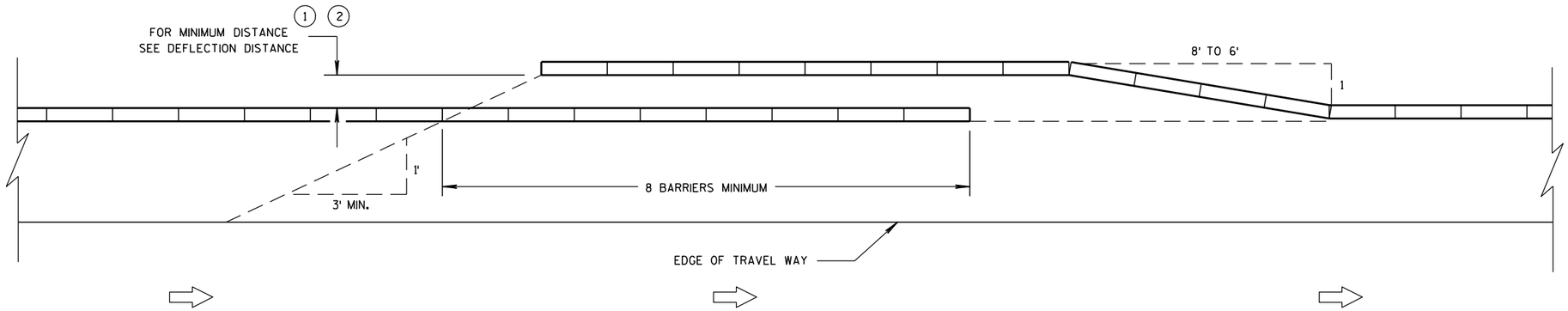
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

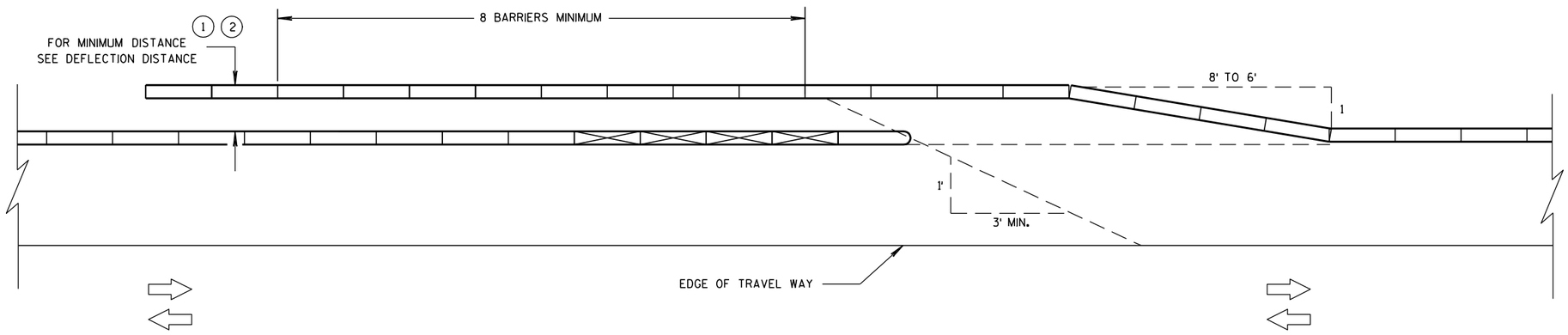
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

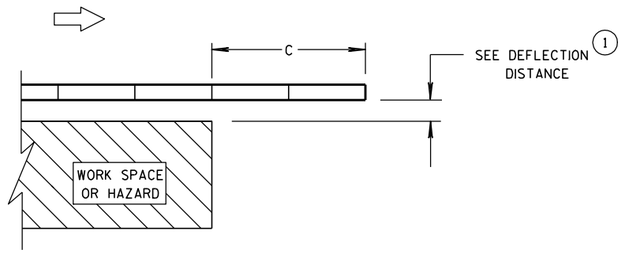
S.D.D. 14 B 8-1b



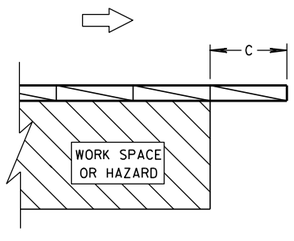
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

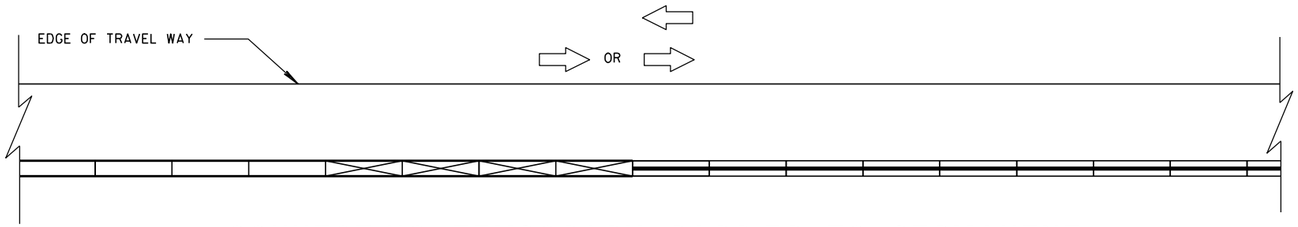
LEGEND

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

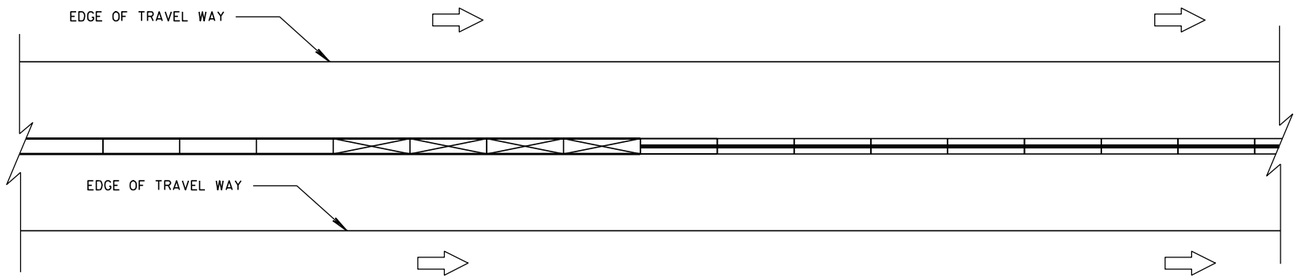
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 8-1c



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

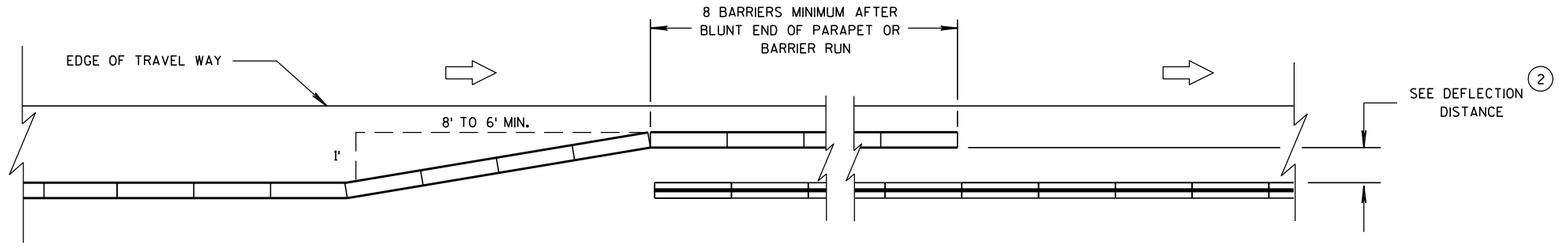
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

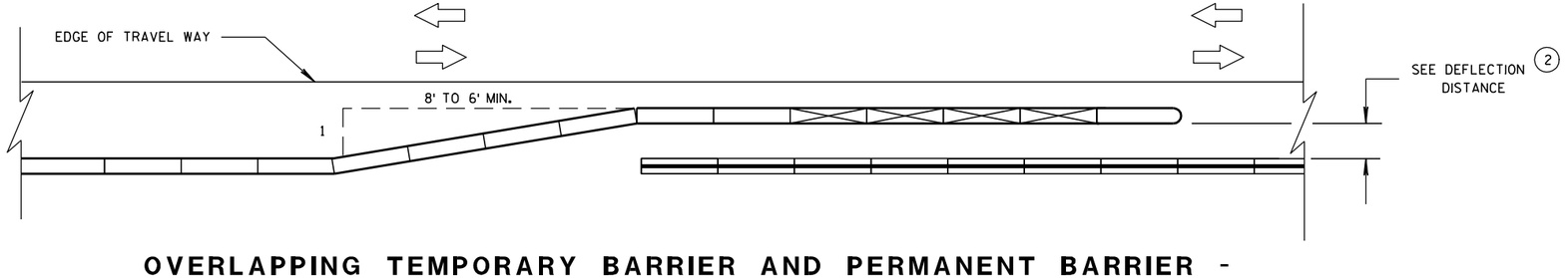
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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 TRANSPO...

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

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

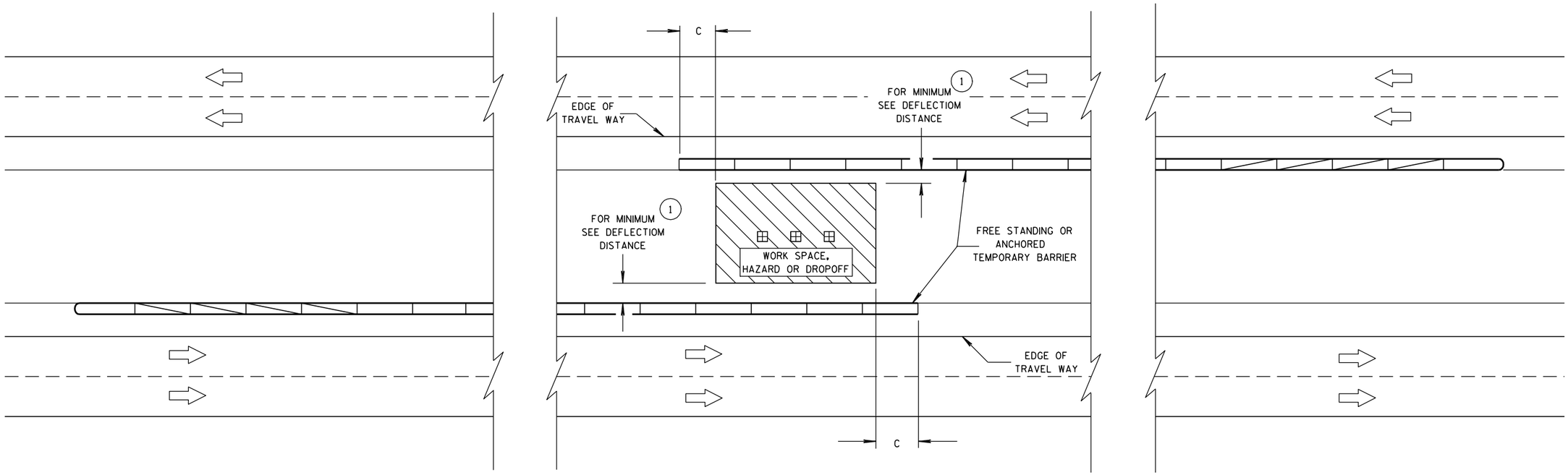
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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



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 ENGINNER

110

FHWA

6

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

6

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

GENERAL NOTES

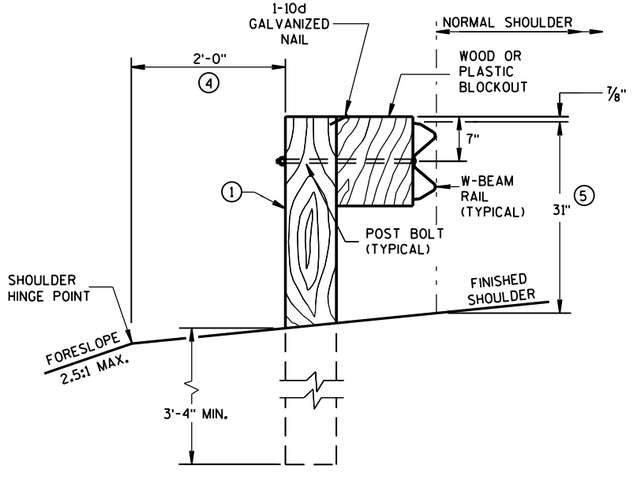
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

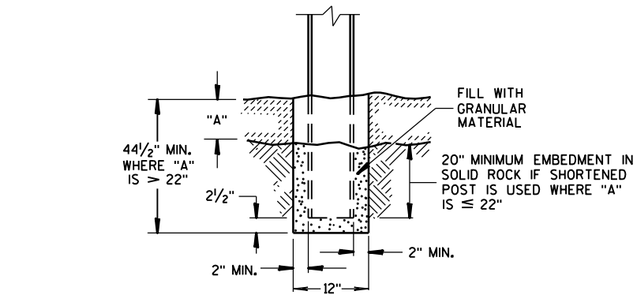
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



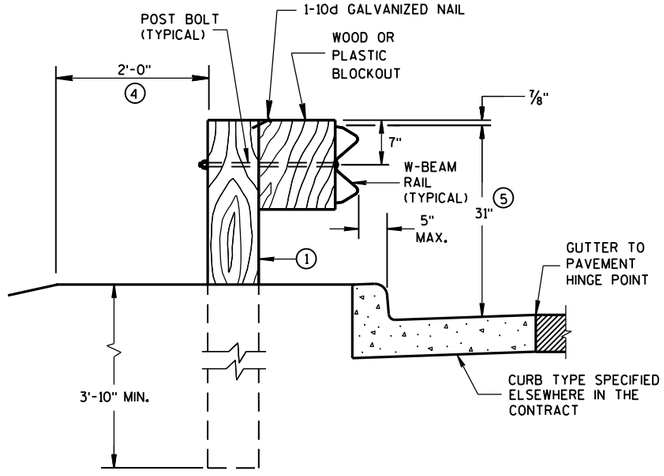
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



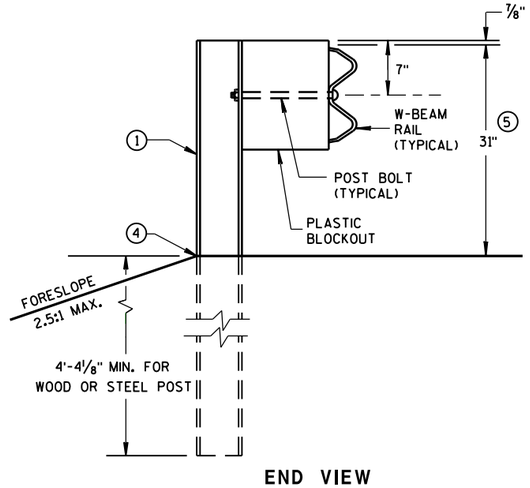
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



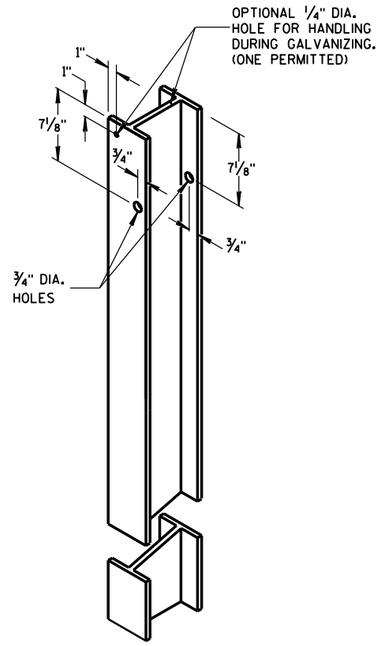
END VIEW

LOCATED ALONG A CURBED ROADWAY

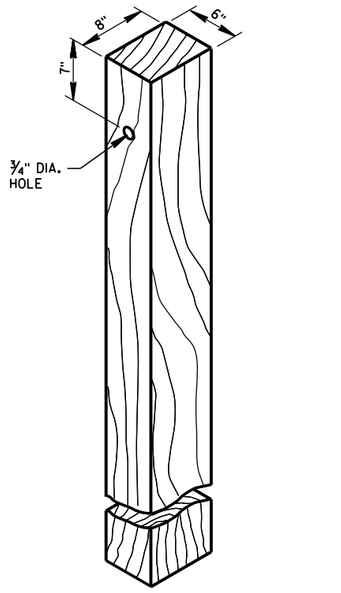


END VIEW

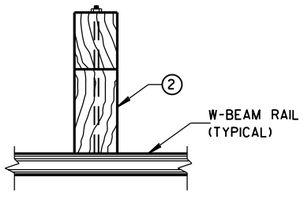
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



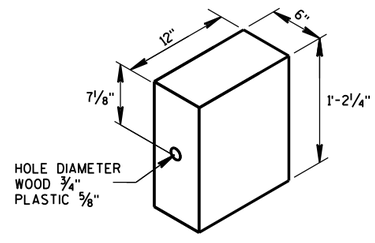
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



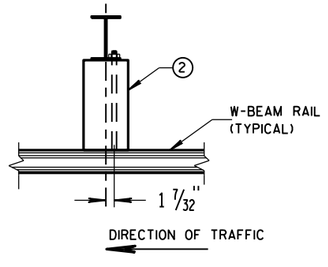
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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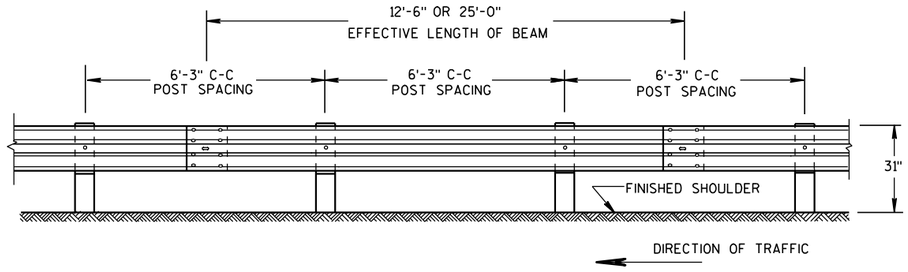
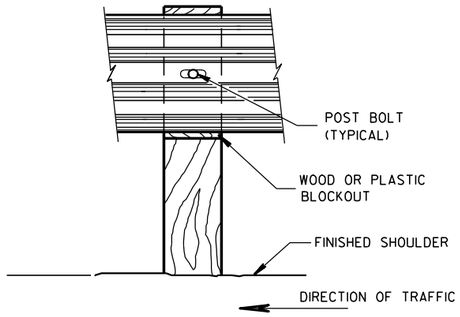
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



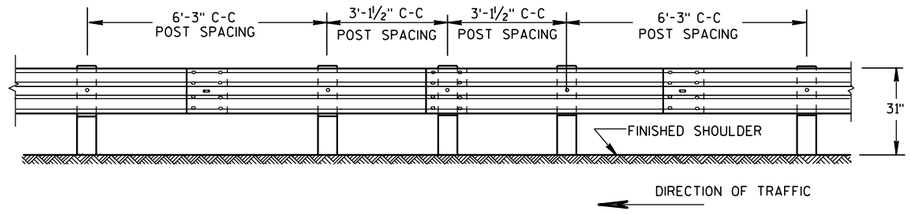
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

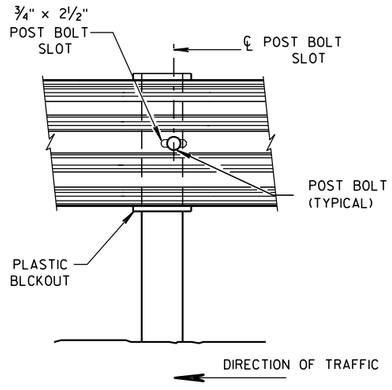
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

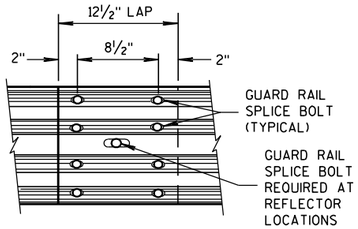


FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

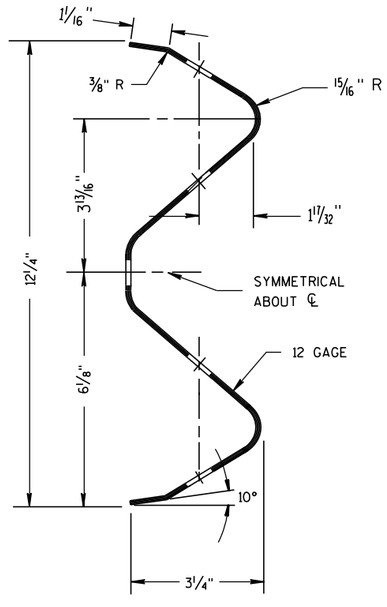


FRONT VIEW AT STEEL POST

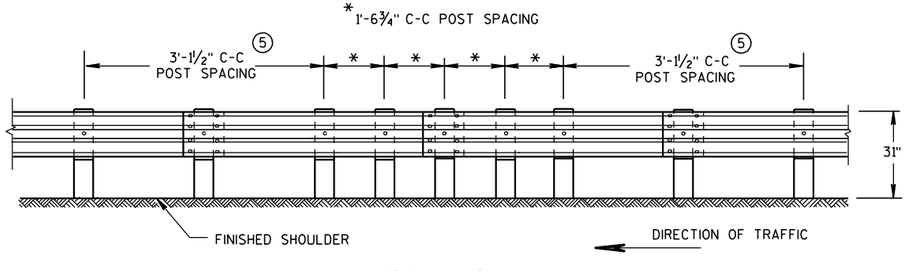


FRONT VIEW

MID-SPAN BEAM SPLICE

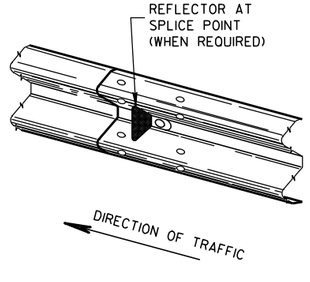


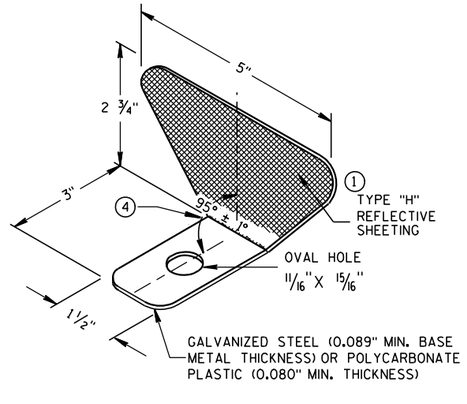
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

REFLECTOR SPACING ②

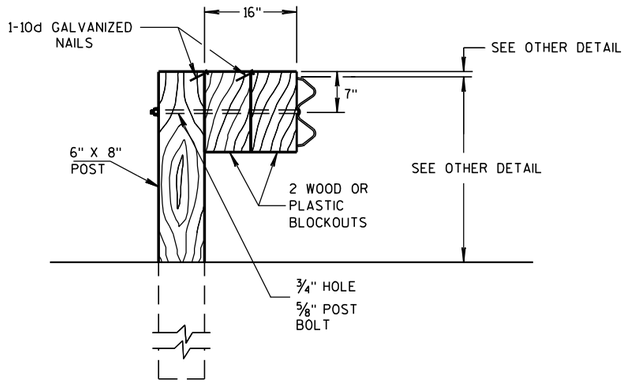
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ④	3
	> 200'	100' C-C	2	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

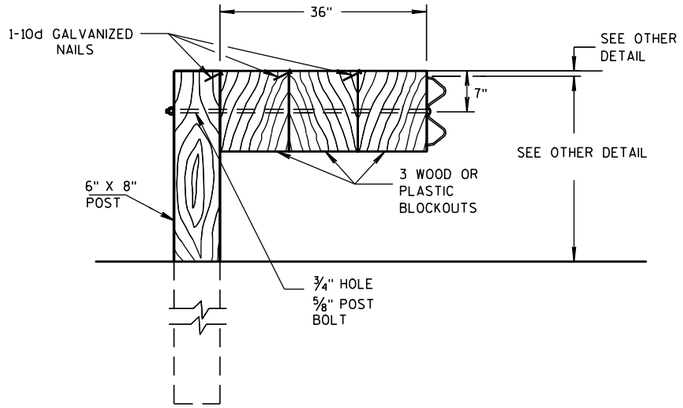
S.D.D. 14 B 42-2b

S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

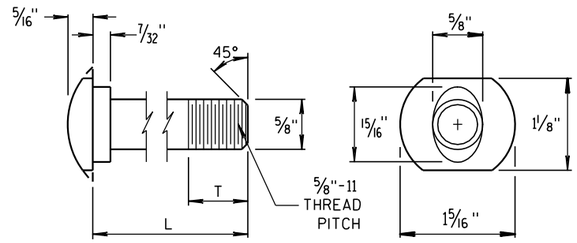


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

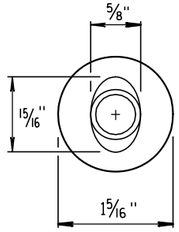
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

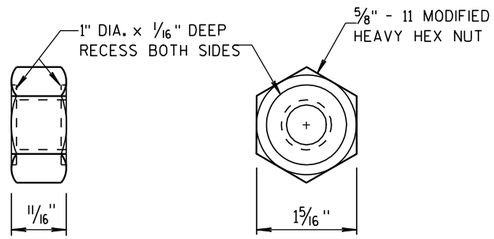


POST BOLT TABLE

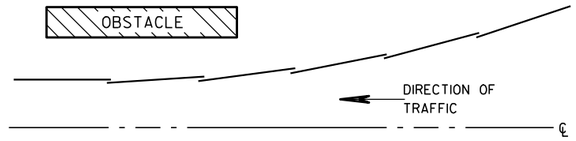
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

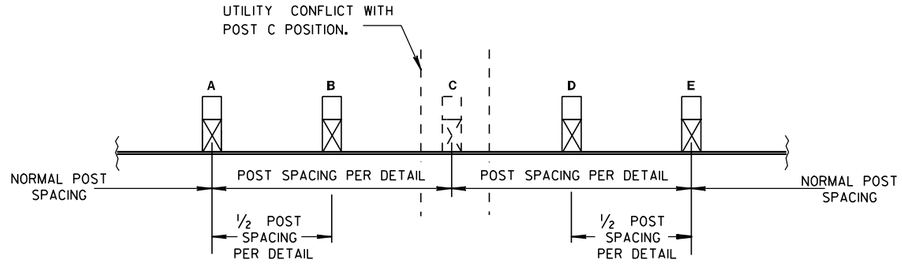


POST BOLT AND RECESS NUT

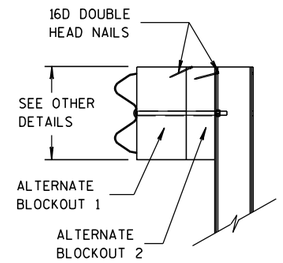


PLAN VIEW

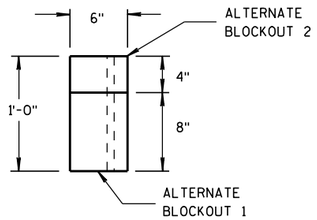
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/15/2011 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6
S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

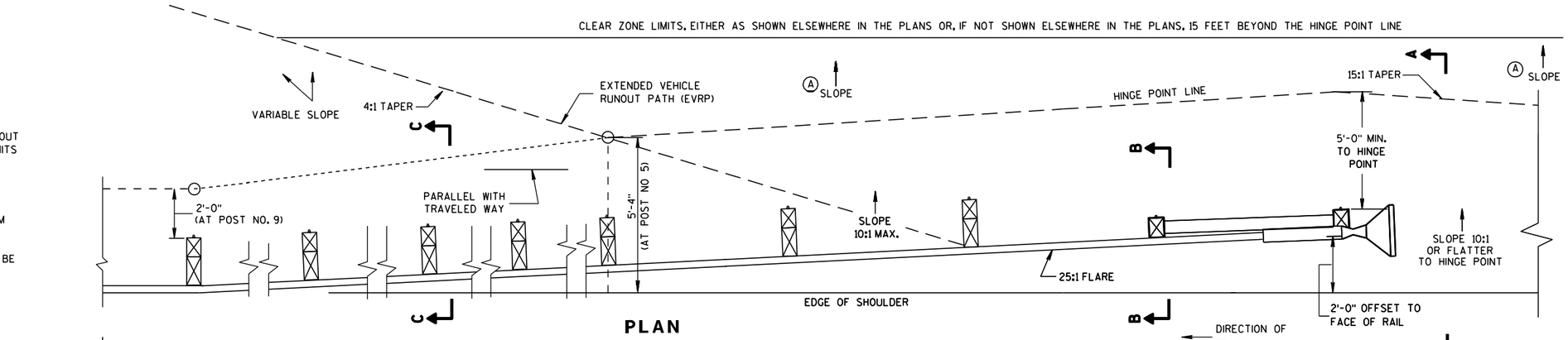
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

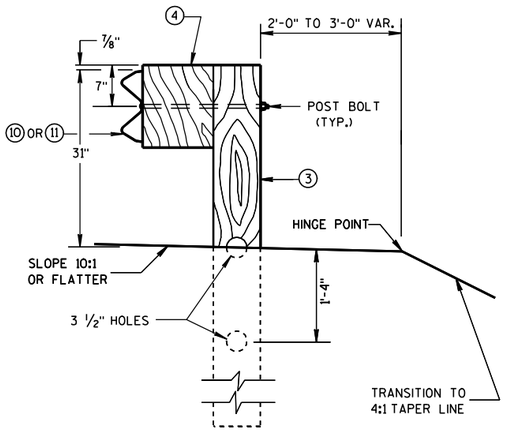
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

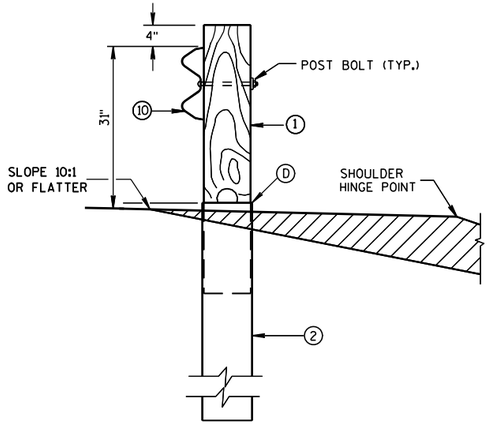
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

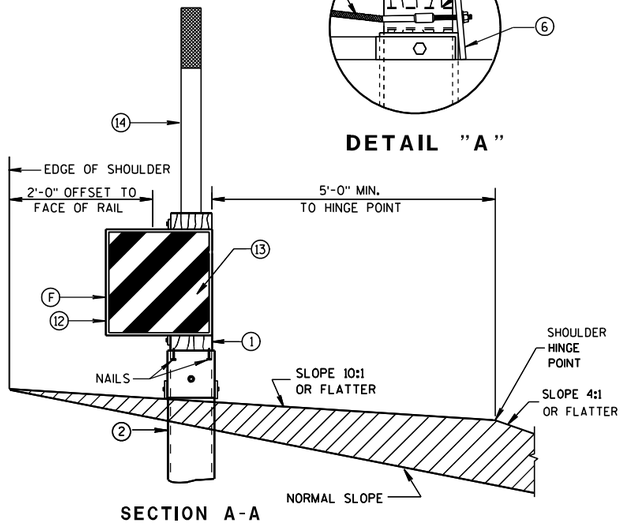




SECTION C-C
TYPICAL AT POST NOS. 3-9

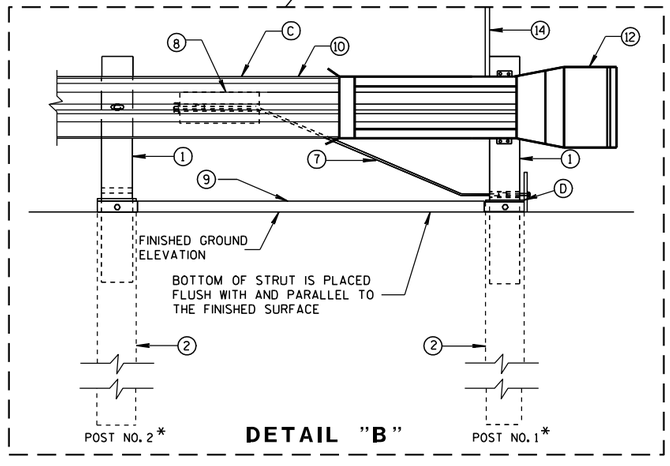


SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 44-1a

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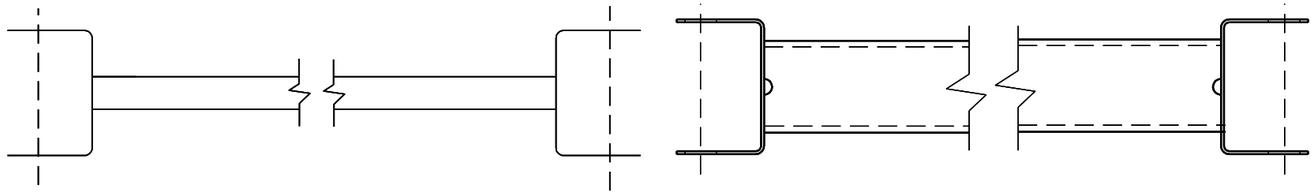
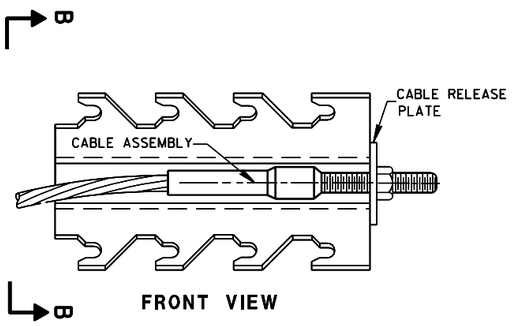


⑨ Ⓗ

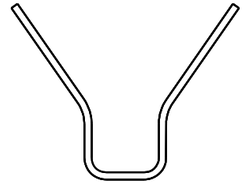
GENERIC GROUND STRUT

BILL OF MATERIALS

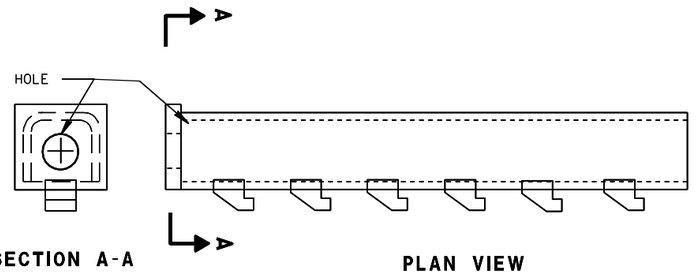
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



SECTION B-B

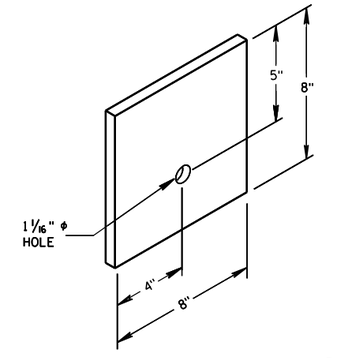


SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX

⑧ Ⓗ



BEARING PLATE

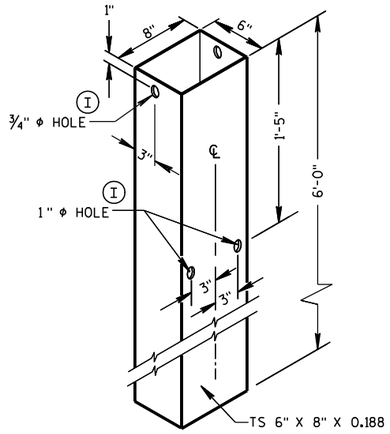
⑥

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

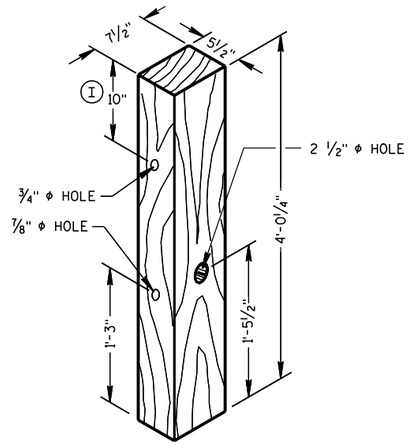
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

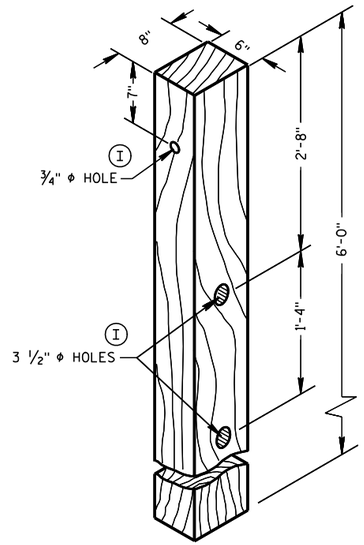


FOUNDATION TUBE (2)



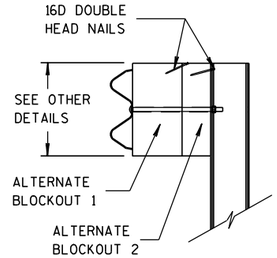
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

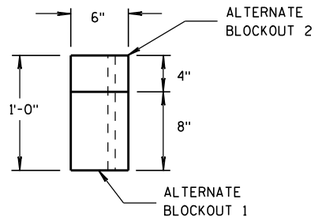


POSTS NUMBER 3-9

WOOD CRT POST (3)

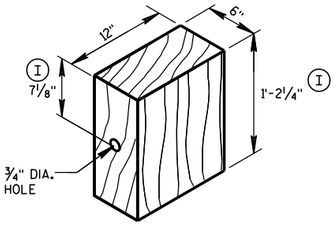


SIDE VIEW



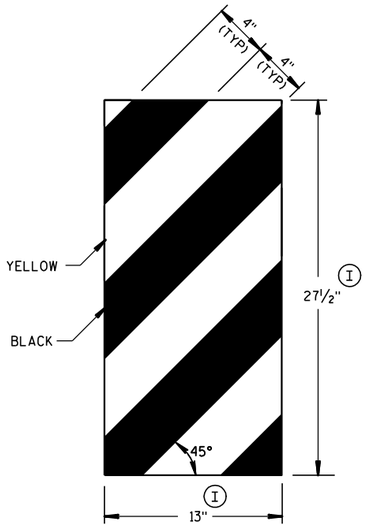
TOP VIEW

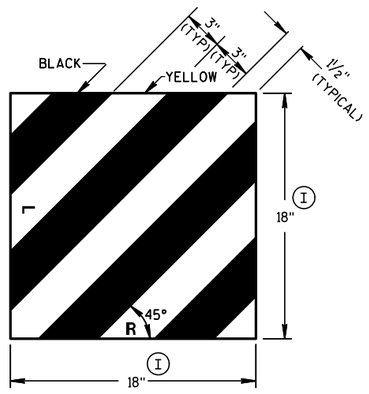
ALTERNATE WOOD BLOCKOUT DETAIL



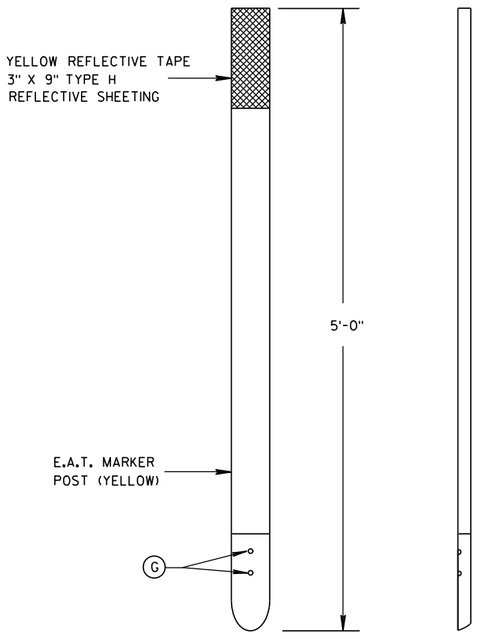
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





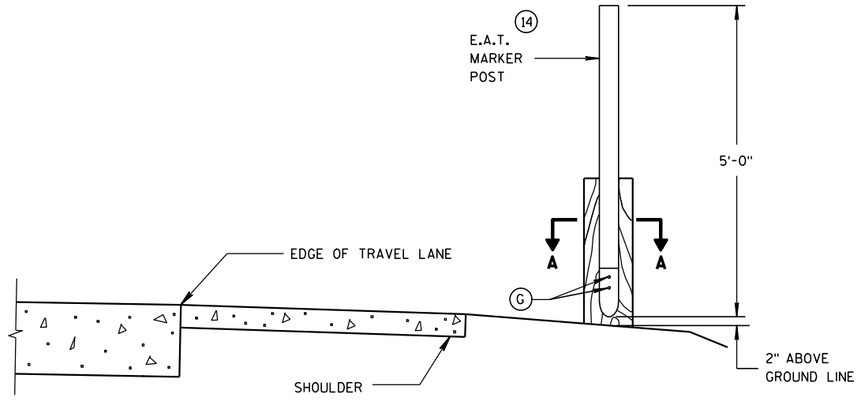
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

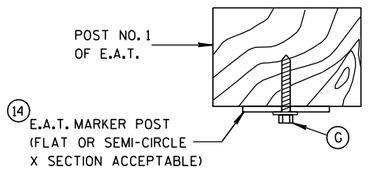
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

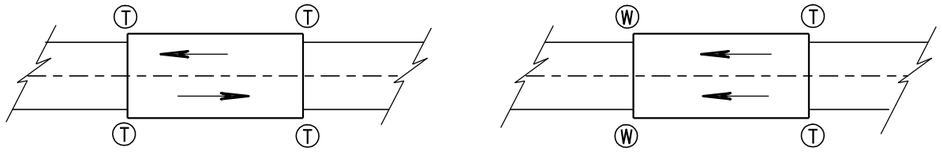
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-1c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

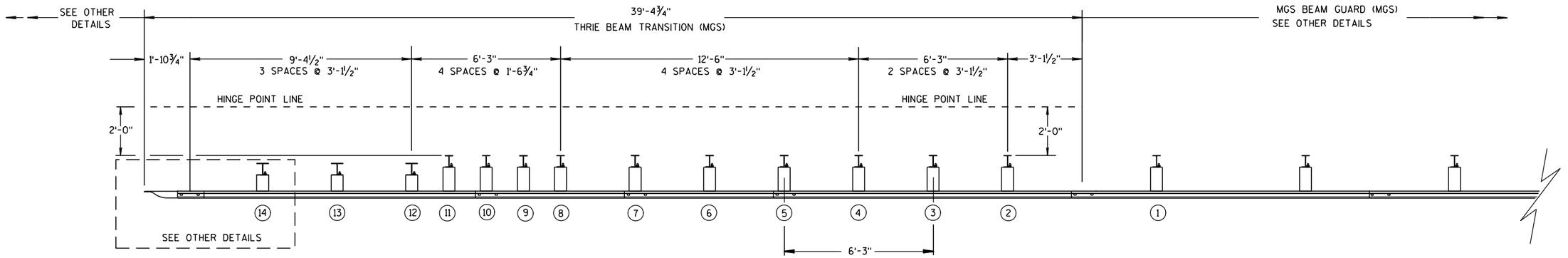
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

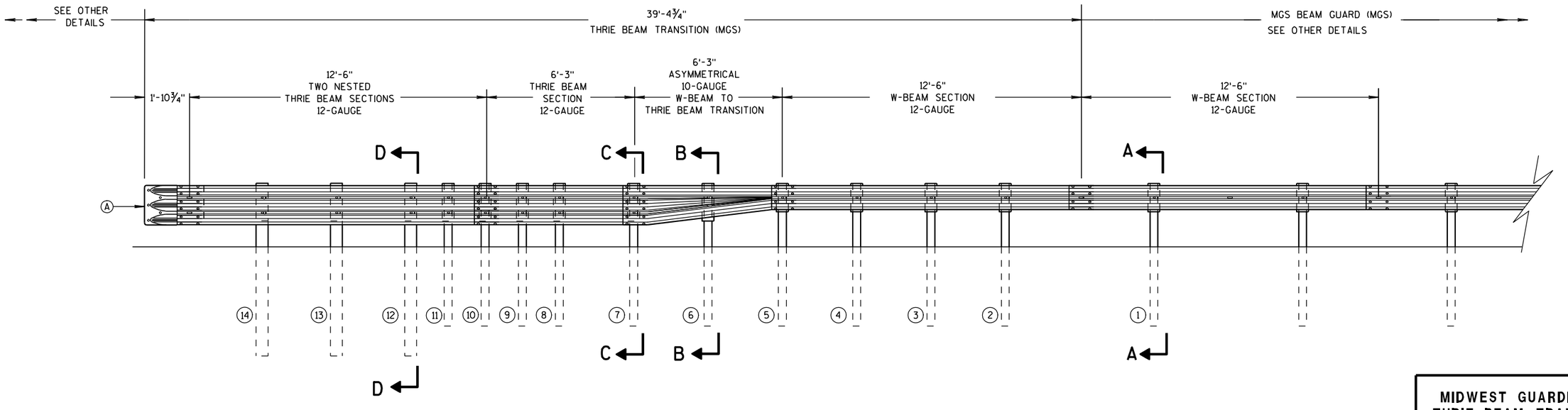
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

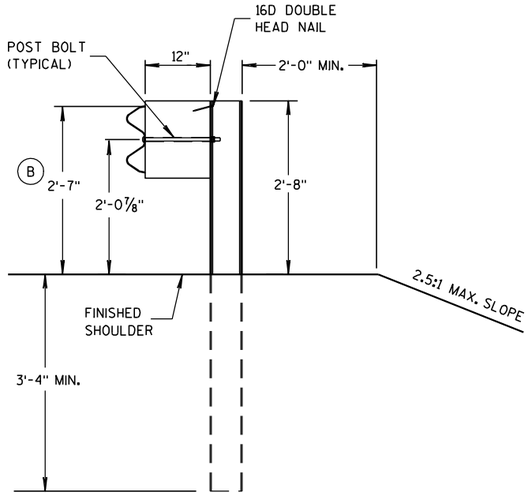
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

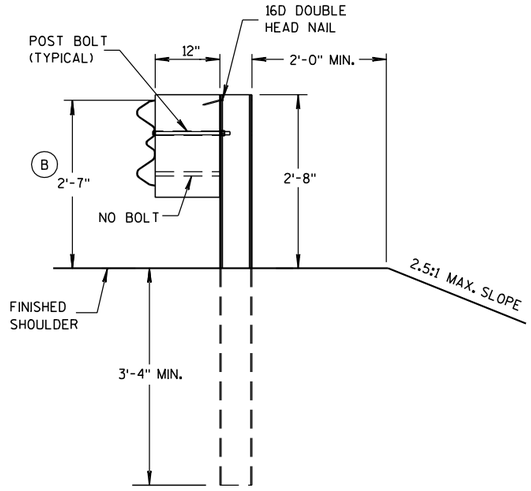
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



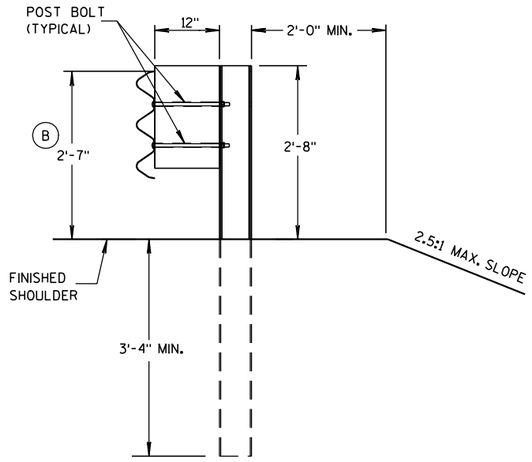
SECTION A-A

POSTS 1-5



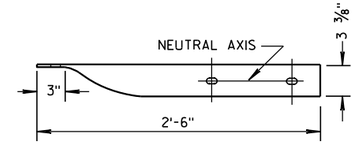
SECTION B-B

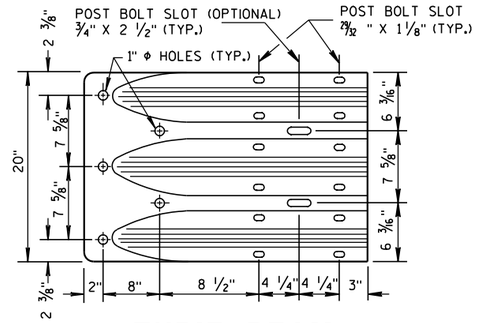
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

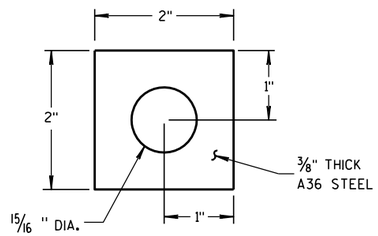
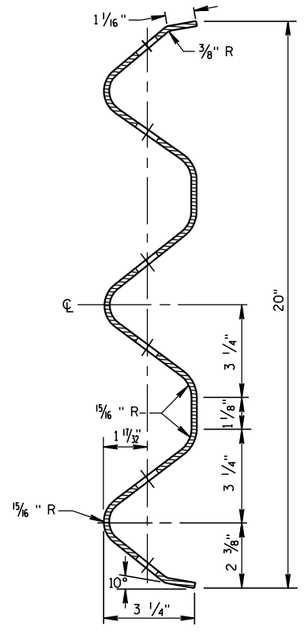
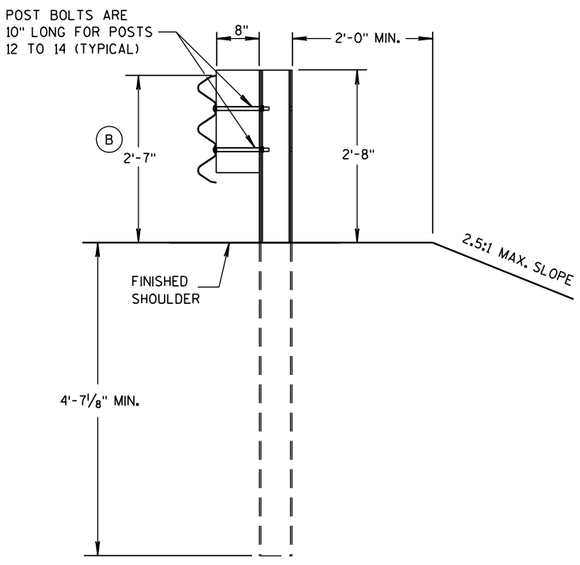


PLATE WASHER DETAIL

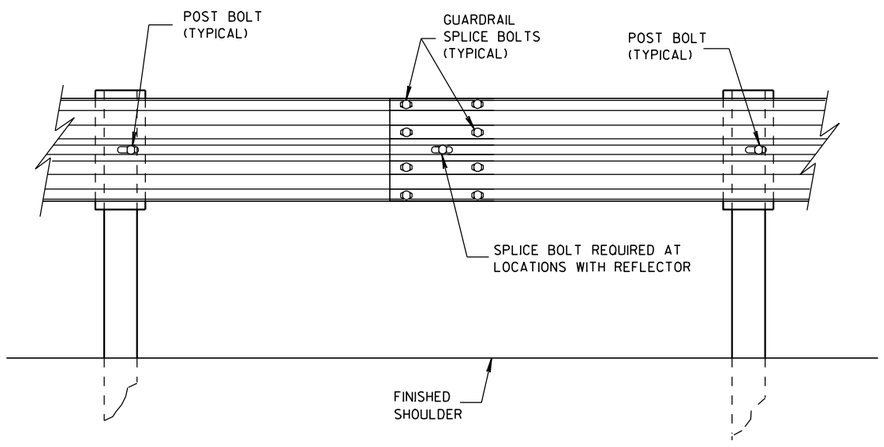


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14

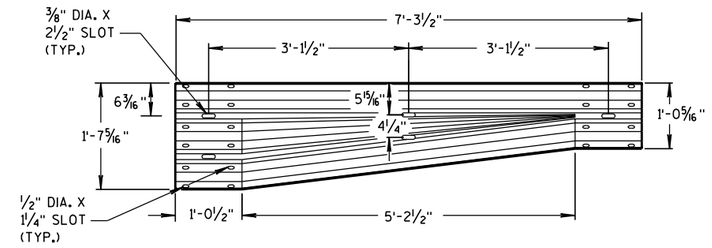


SPLICE DETAIL

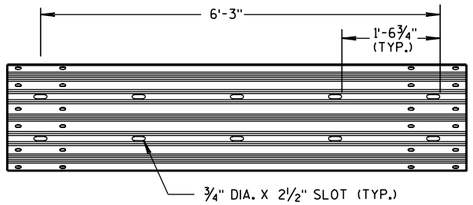
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

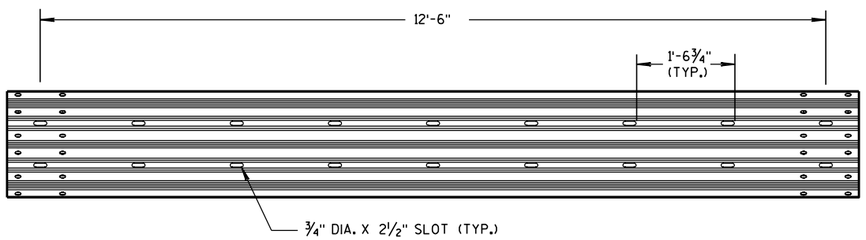
6
S.D.D. 14 B 45-3b



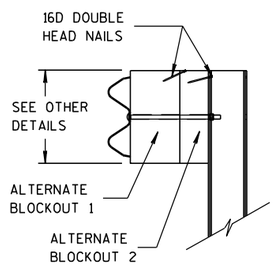
W-BEAM TO THRIE BEAM TRANSITION SECTION



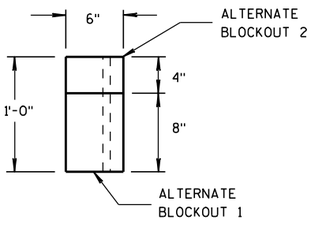
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

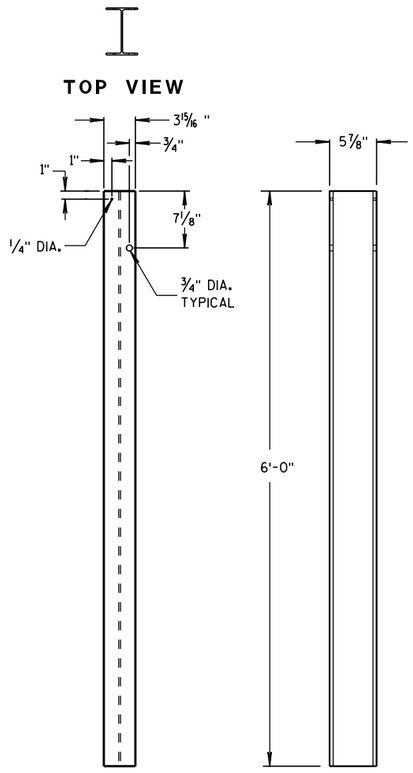


SIDE VIEW



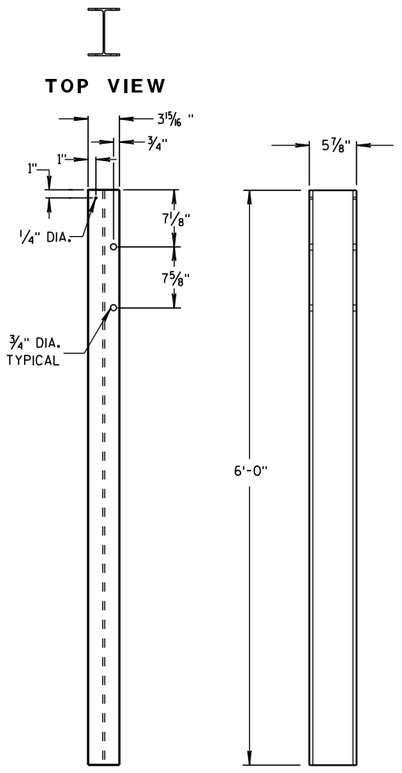
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



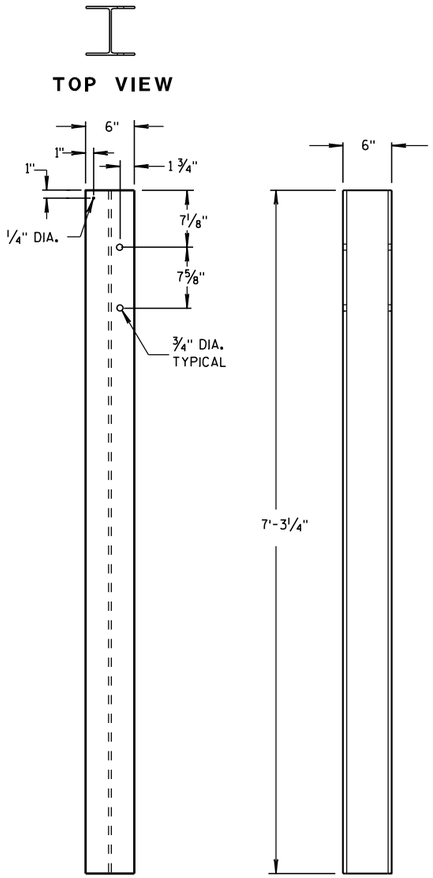
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

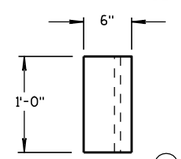
STEEL POSTS 6-11



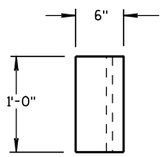
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

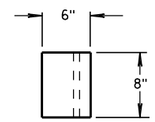
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



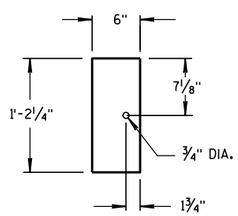
TOP VIEW (1)



TOP VIEW (1)

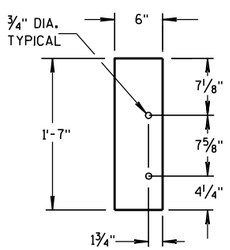


TOP VIEW



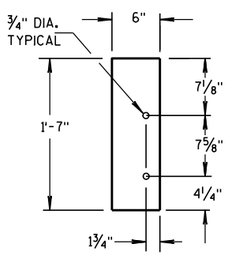
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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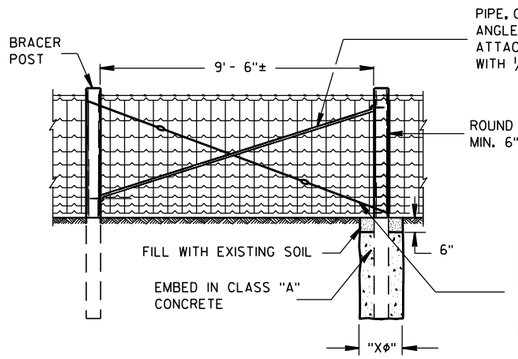
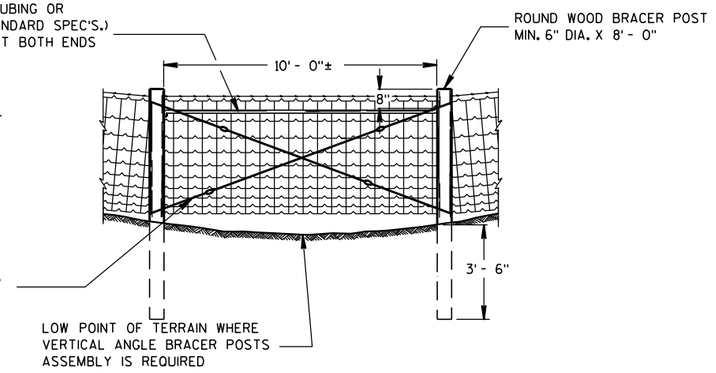
S.D.D. 14 B 45-3c

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

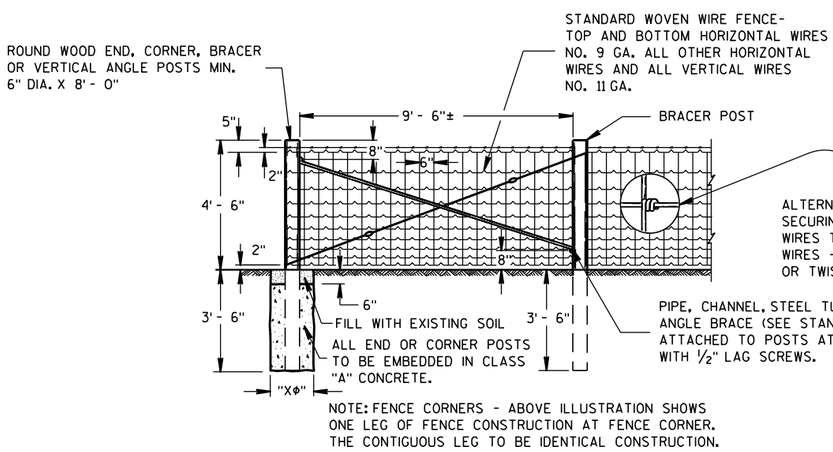
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

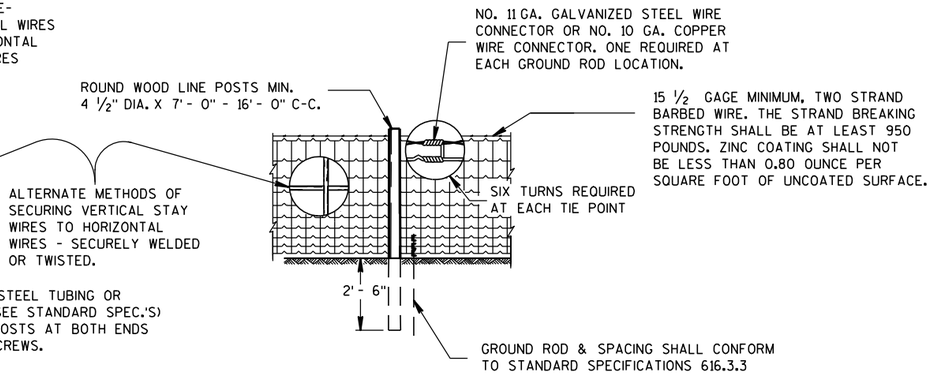
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



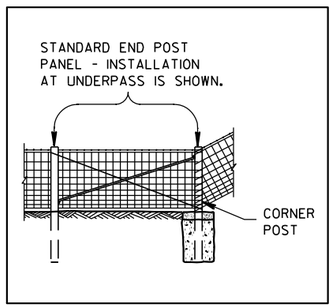
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

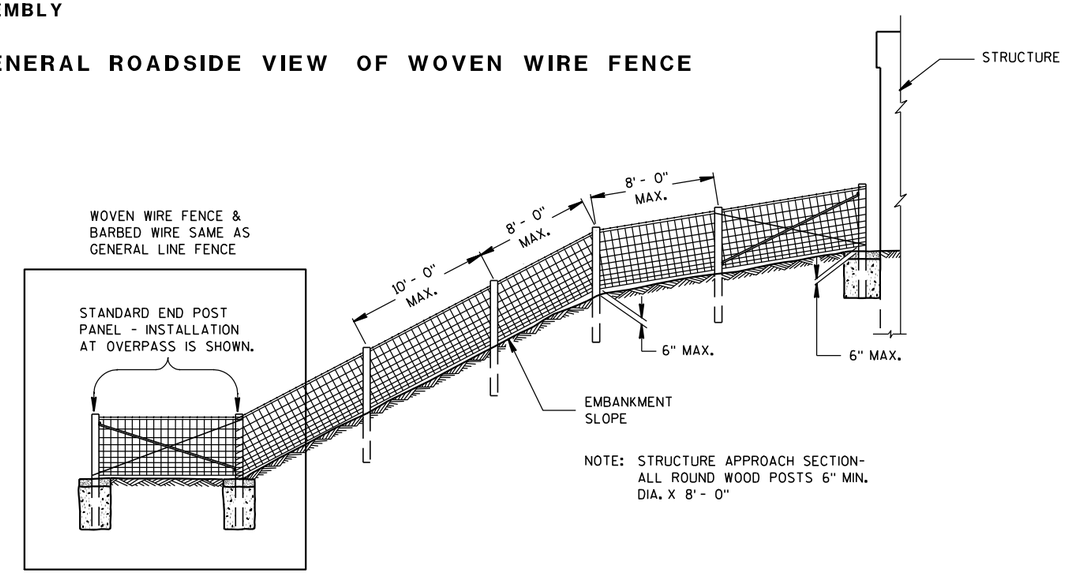


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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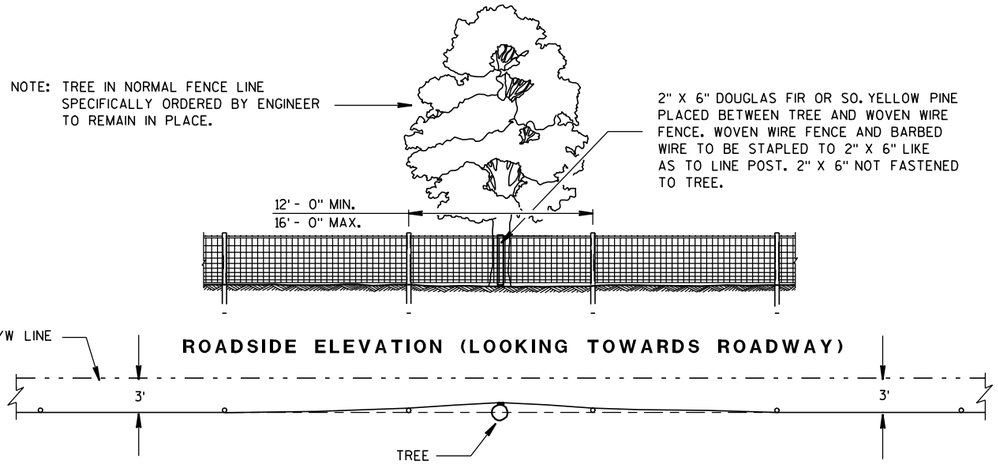
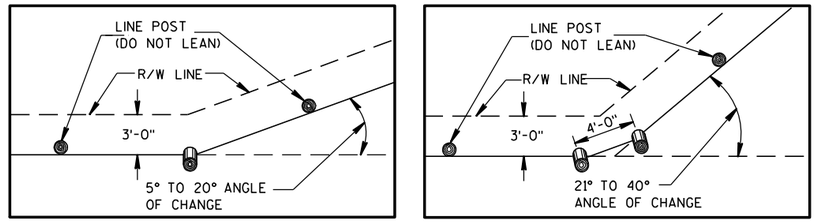
S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



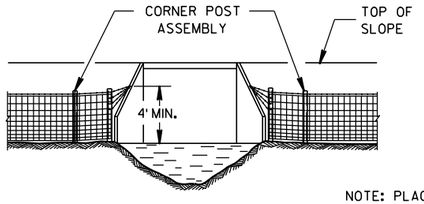
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

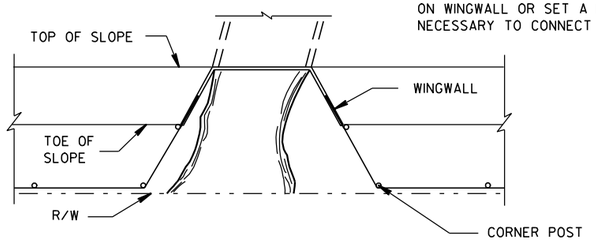
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

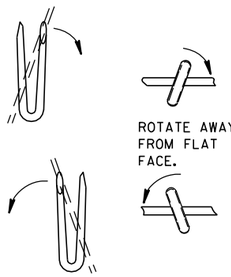
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



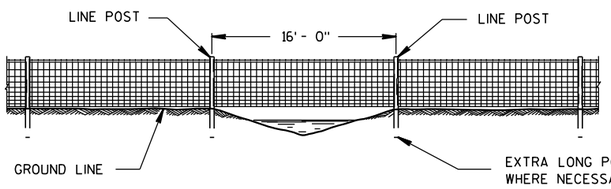
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



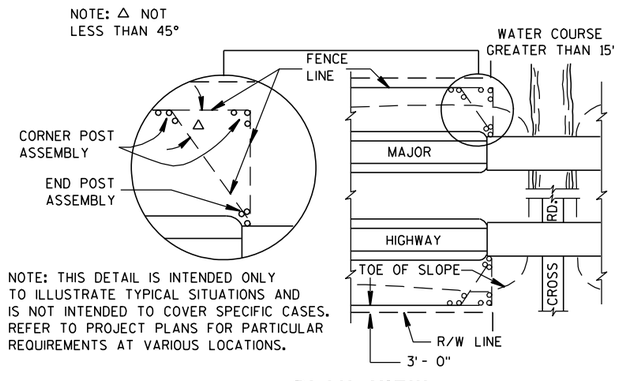
FENCE INSTALLATION TO WINGWALLS



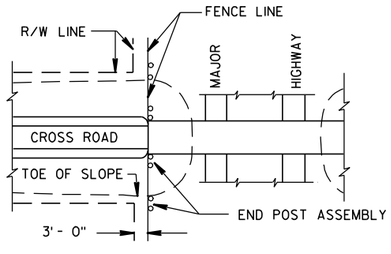
LINE POST



FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

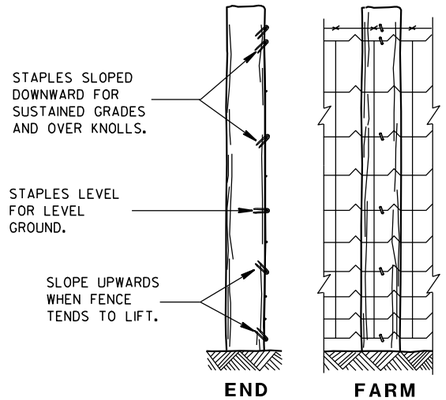


PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL

FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

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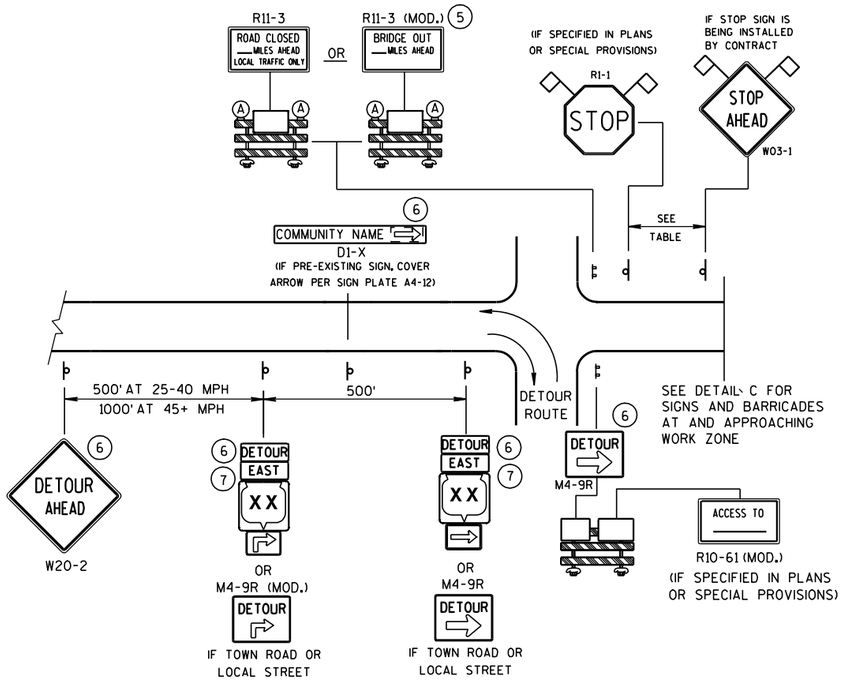
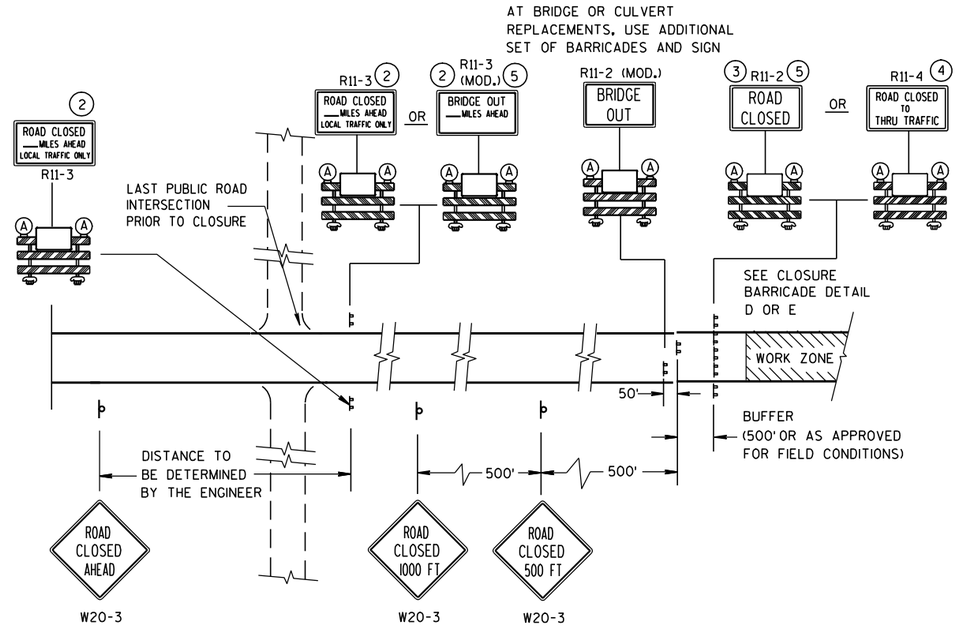
S.D.D. 15 B 1-8b



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

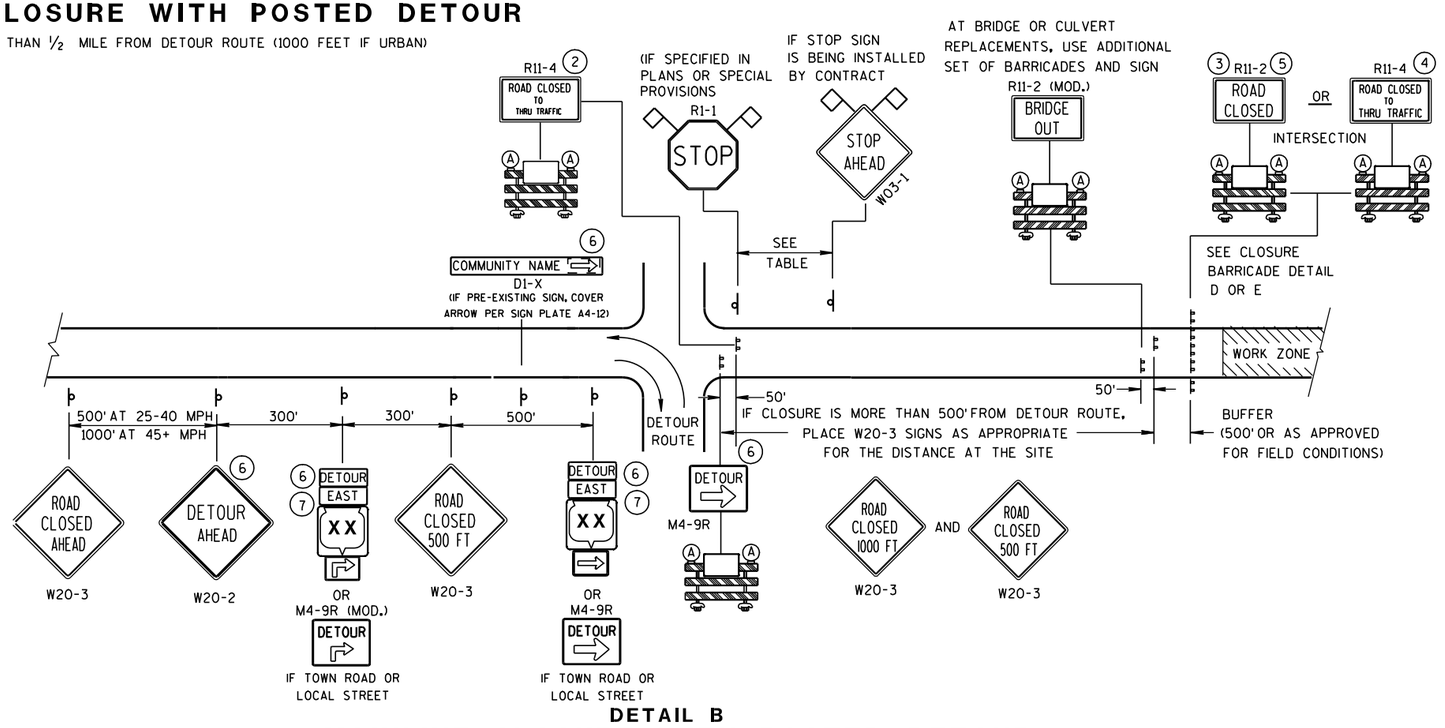


DETAIL C

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 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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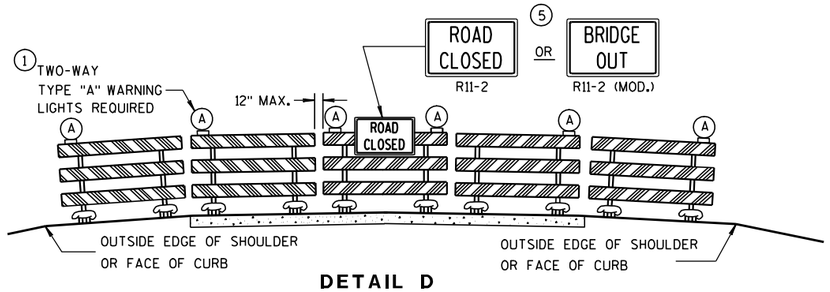
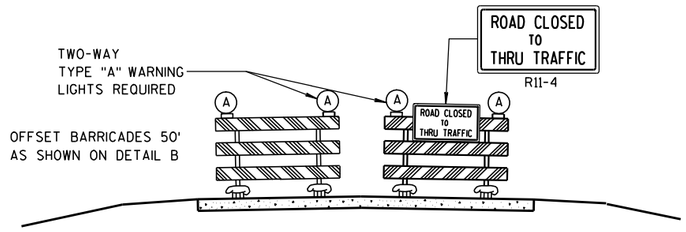
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a 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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

"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 AND 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

APPROVED

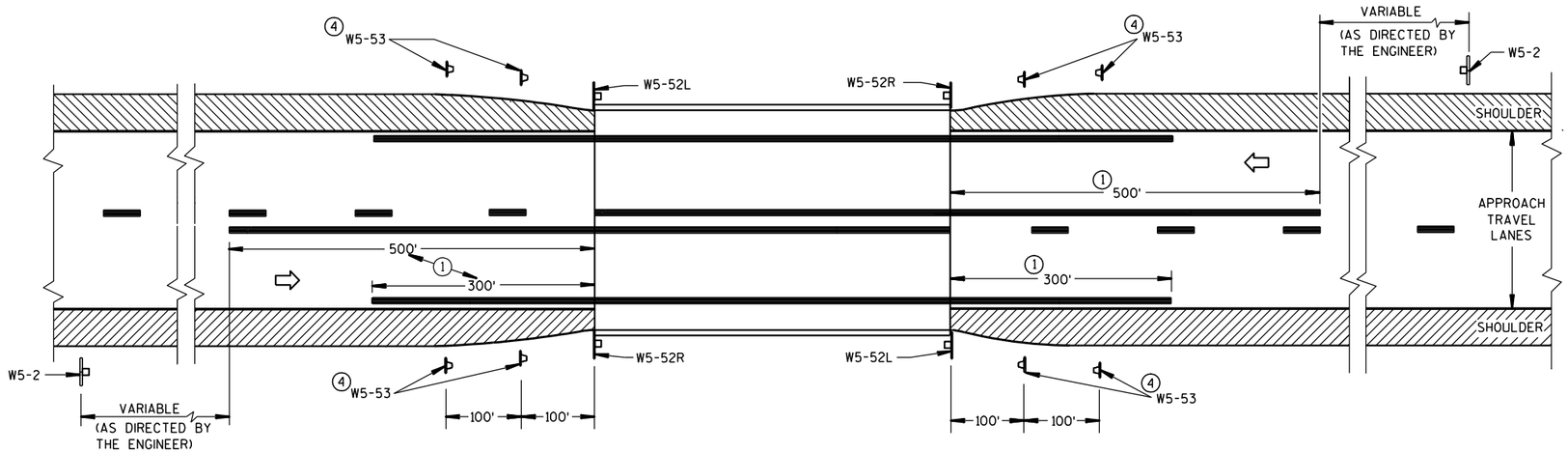
9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MAR[illegible]INEER

FHWA

6

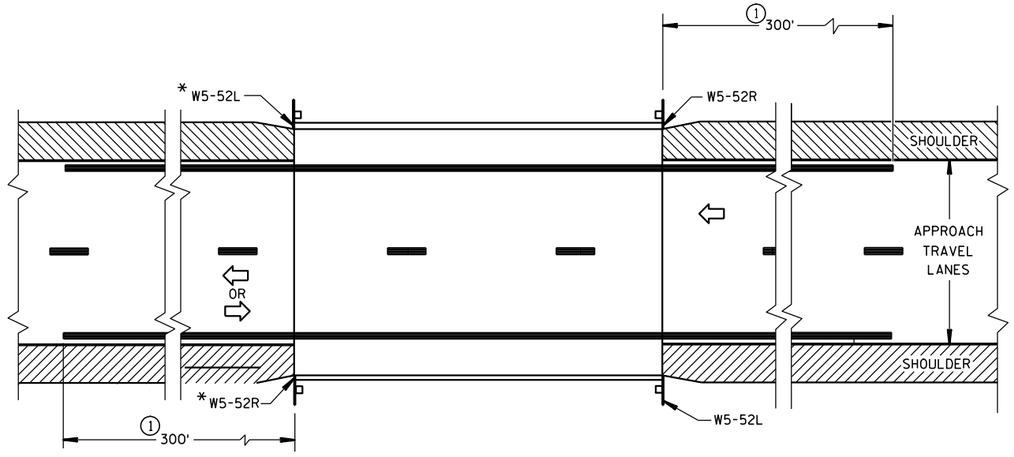
S.D.D. 15 C 2-4b



SITUATION 1

WARRANTING CRITERION:

BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET

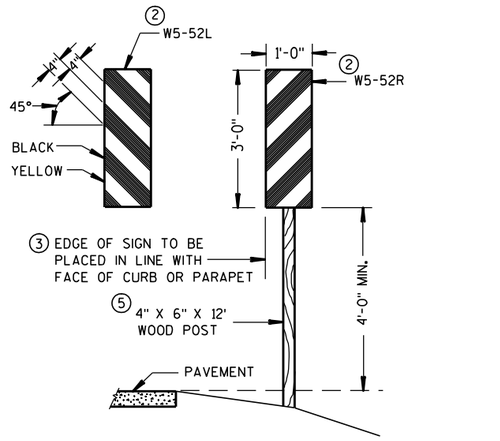


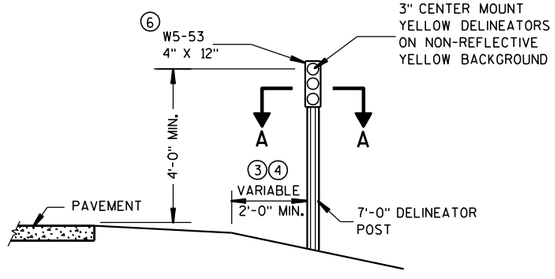
*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.





OBJECT MARKER PLACEMENT

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

① MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

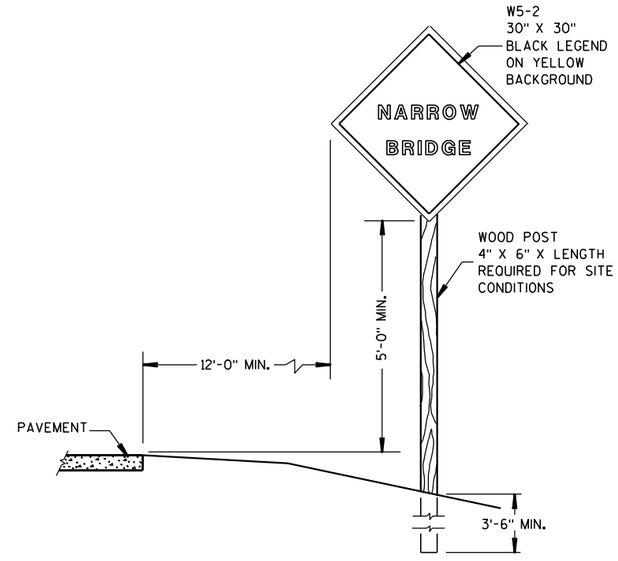
② FACE OF OBJECT MARKERS W5-52R AND W5-52L SHALL BE COVERED WITH TYPE H REFLECTIVE SHEETING.

③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

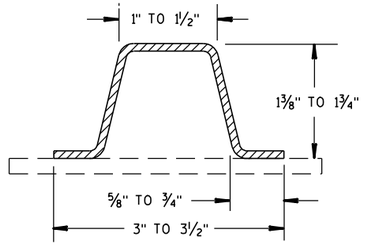
④ OBJECT MARKERS (W5-53) SHALL BE LOCATED ALONG A LINE FLARED AWAY FROM THE BRIDGE CORNER TO DELINEATE THE NARROWING OF THE SHOULDER OR BERM.

⑤ A 12 FOOT DELINEATOR POST MAY BE USED INSTEAD OF A WOOD POST.

⑥ NON-BID ITEM. INCIDENTAL TO OTHER ITEMS.



SIGN PLACEMENT



SECTION A-A

(MINIMUM WEIGHT 1.9 LBS. PER FT. AFTER GALVANIZING)

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/5/06 — DATE

/S/ Thomas N. [illegible] — STATE TRAFFIC ENGINEER

FHWA

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S.D.D. 15 C 6-5

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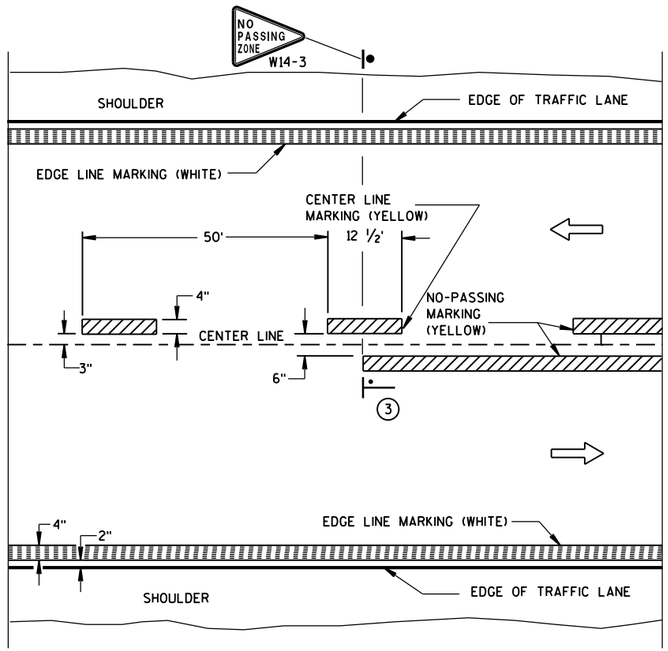
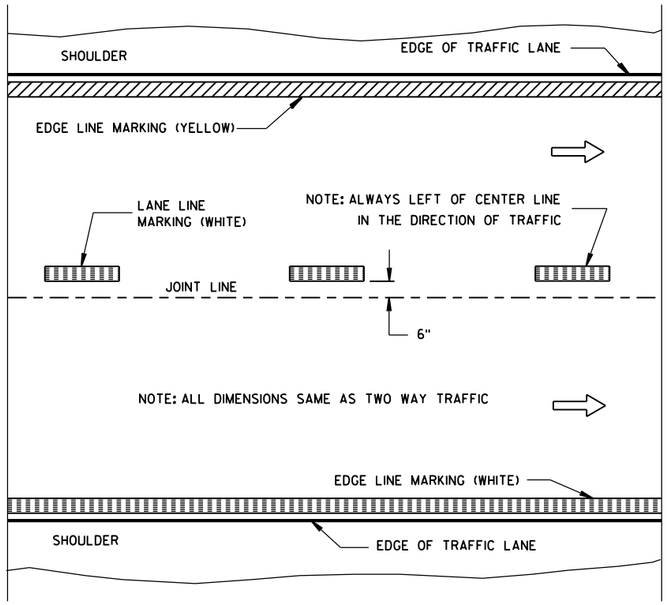
S.D.D. 15 C 6-5

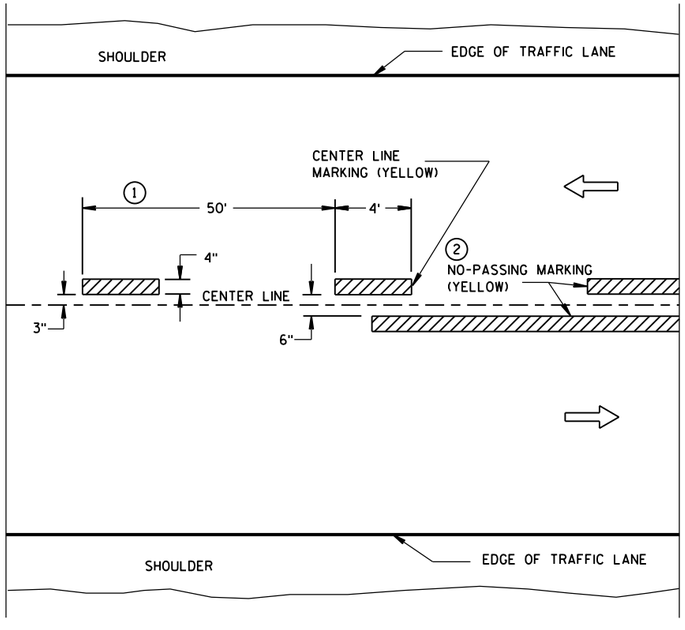


TWO WAY TRAFFIC

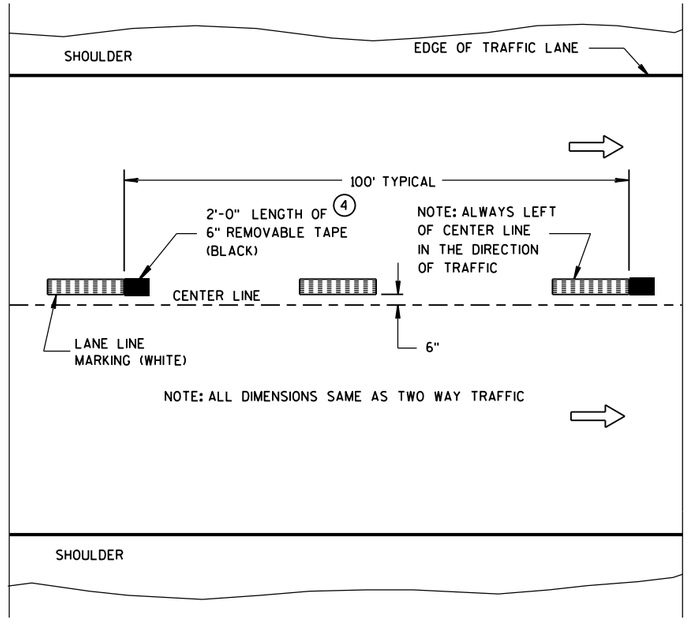


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

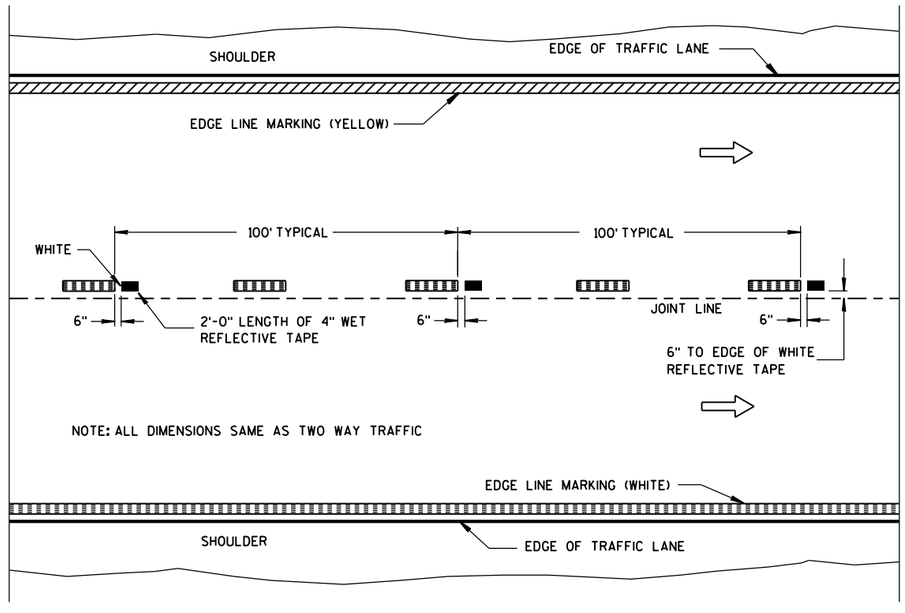
GENERAL NOTES

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

/S/ Travis Feltes — STATE TRAFFIC E

FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE

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 AND 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 DRUMS.

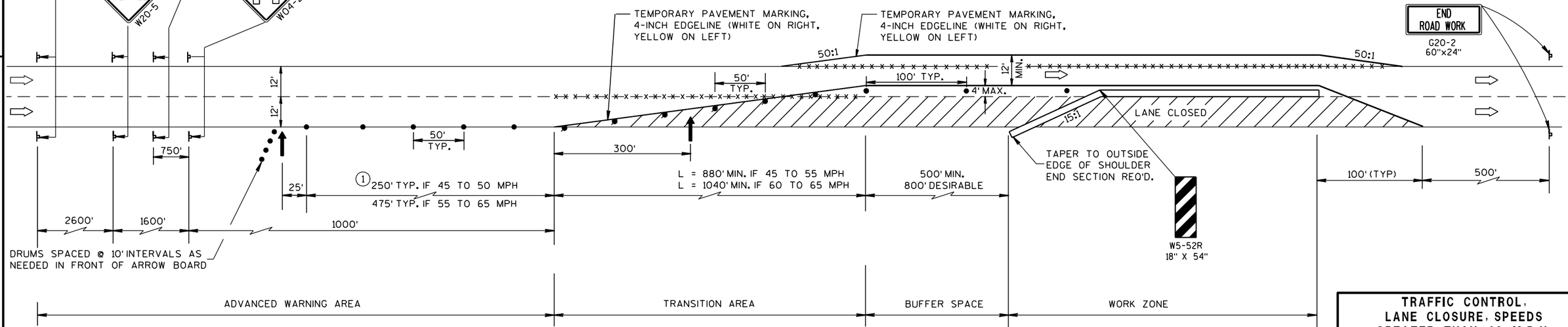
FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 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.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-14-94
DATE

/S/ Chester J. [illegible]
DIRECTOR, OFFICE OF [illegible]

FHWA

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S.D.D. 15 D 3-1

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

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 DESIREABLE) DISTANCE TO EXISTING SIGNS.

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

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 AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

(1) CONSIDER 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 DRUMS.

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.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

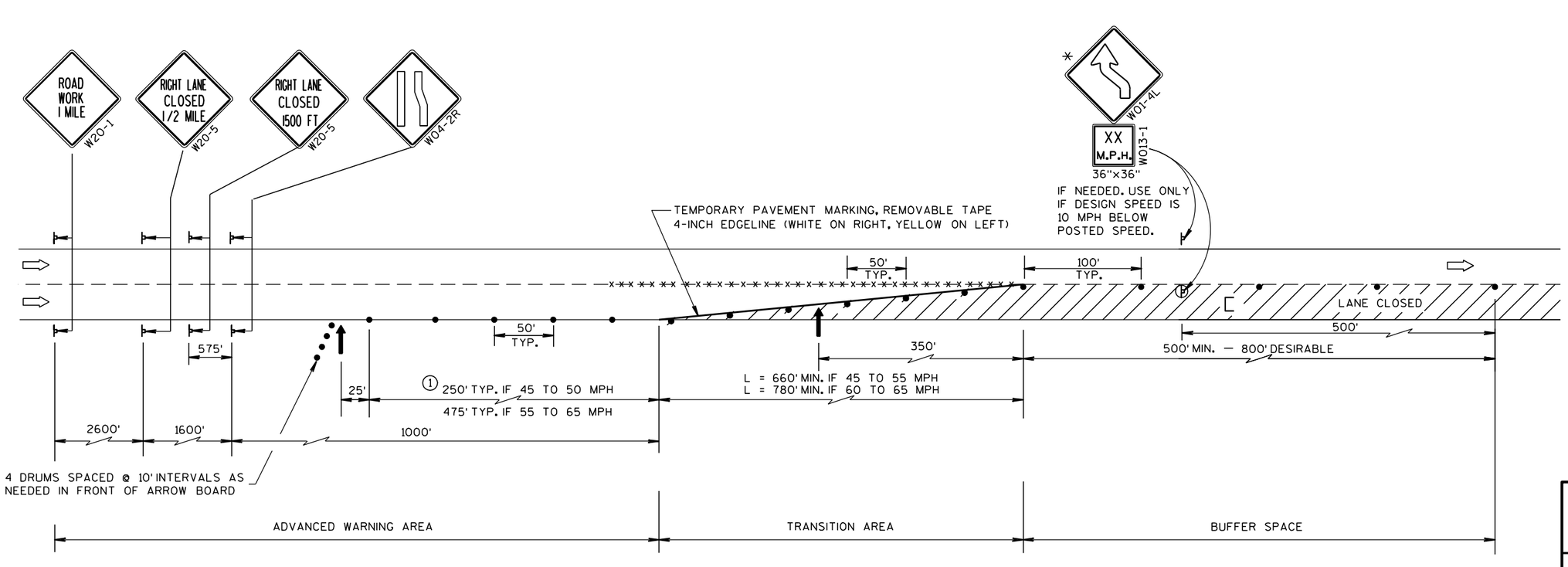
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST 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.

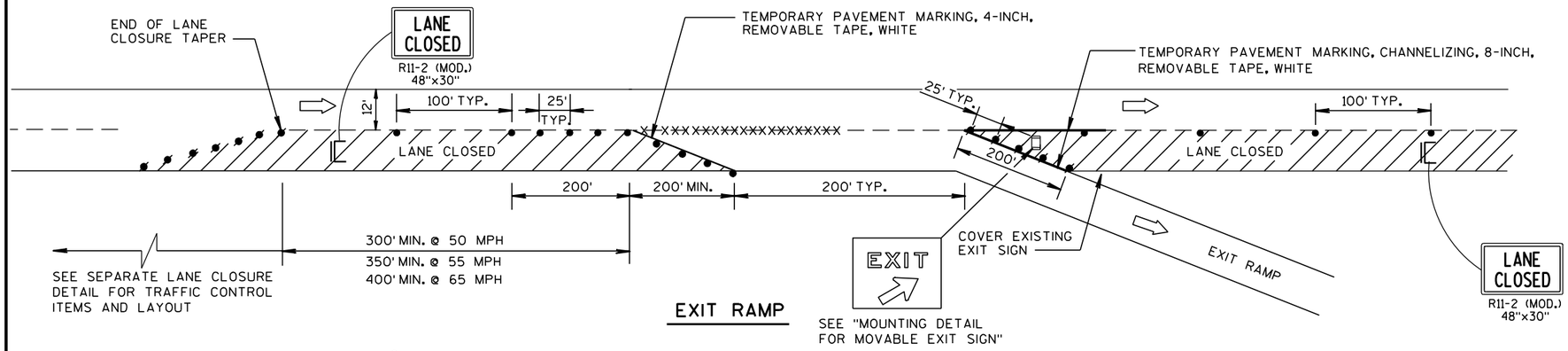
* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



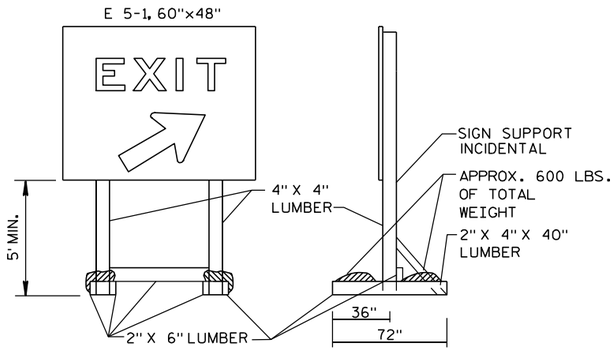
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-7-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O 127 C
FHWA

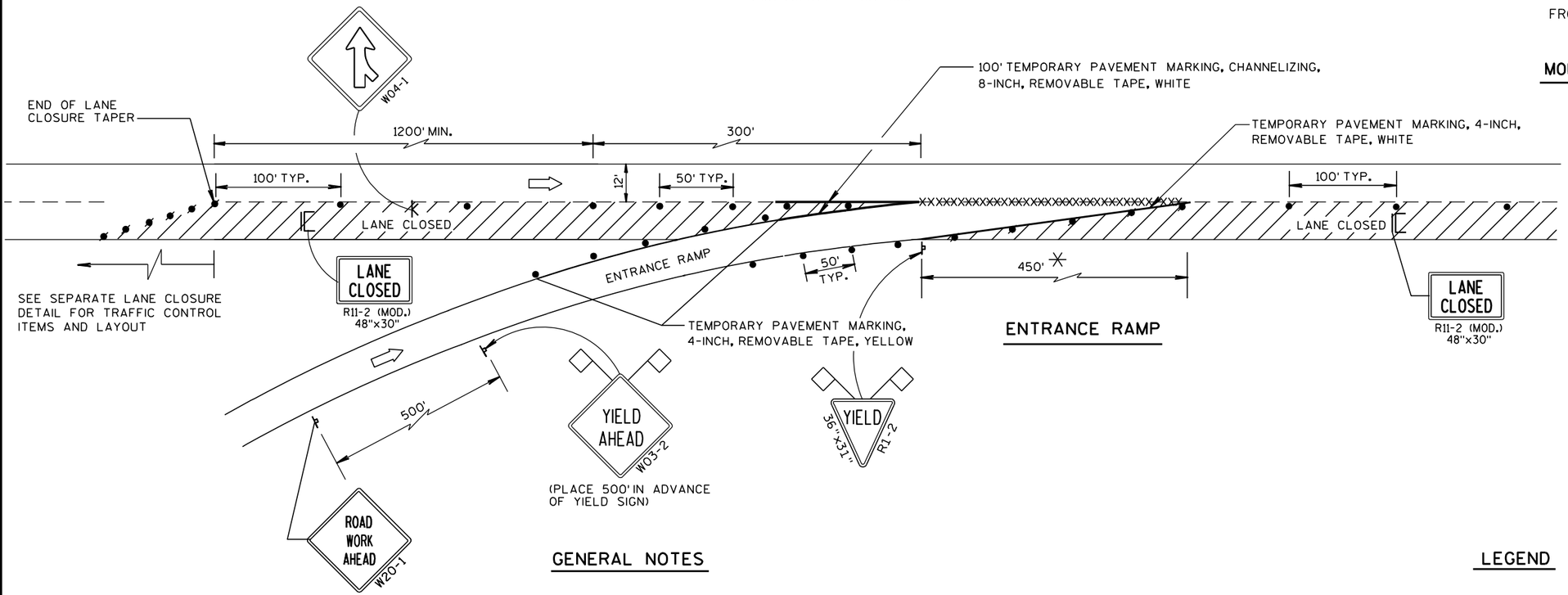


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

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. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

S.D.D. 15 D 15-1

SYMBOLS

- TRAFFIC CONTROL DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW
- ARROW BOARD IN CAUTION MODE

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.

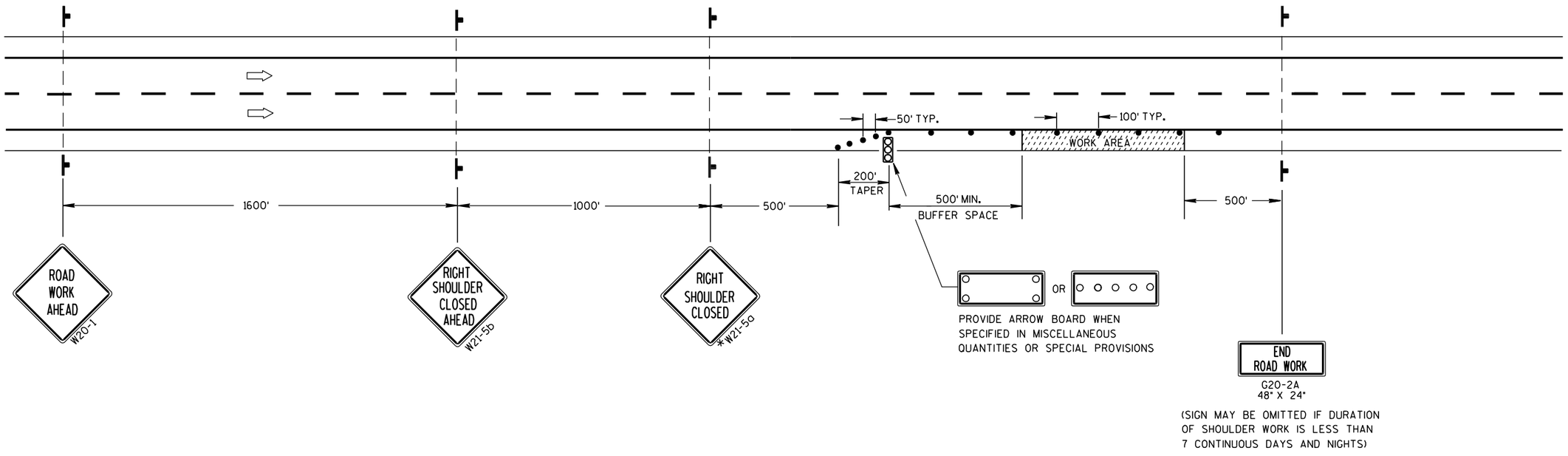
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

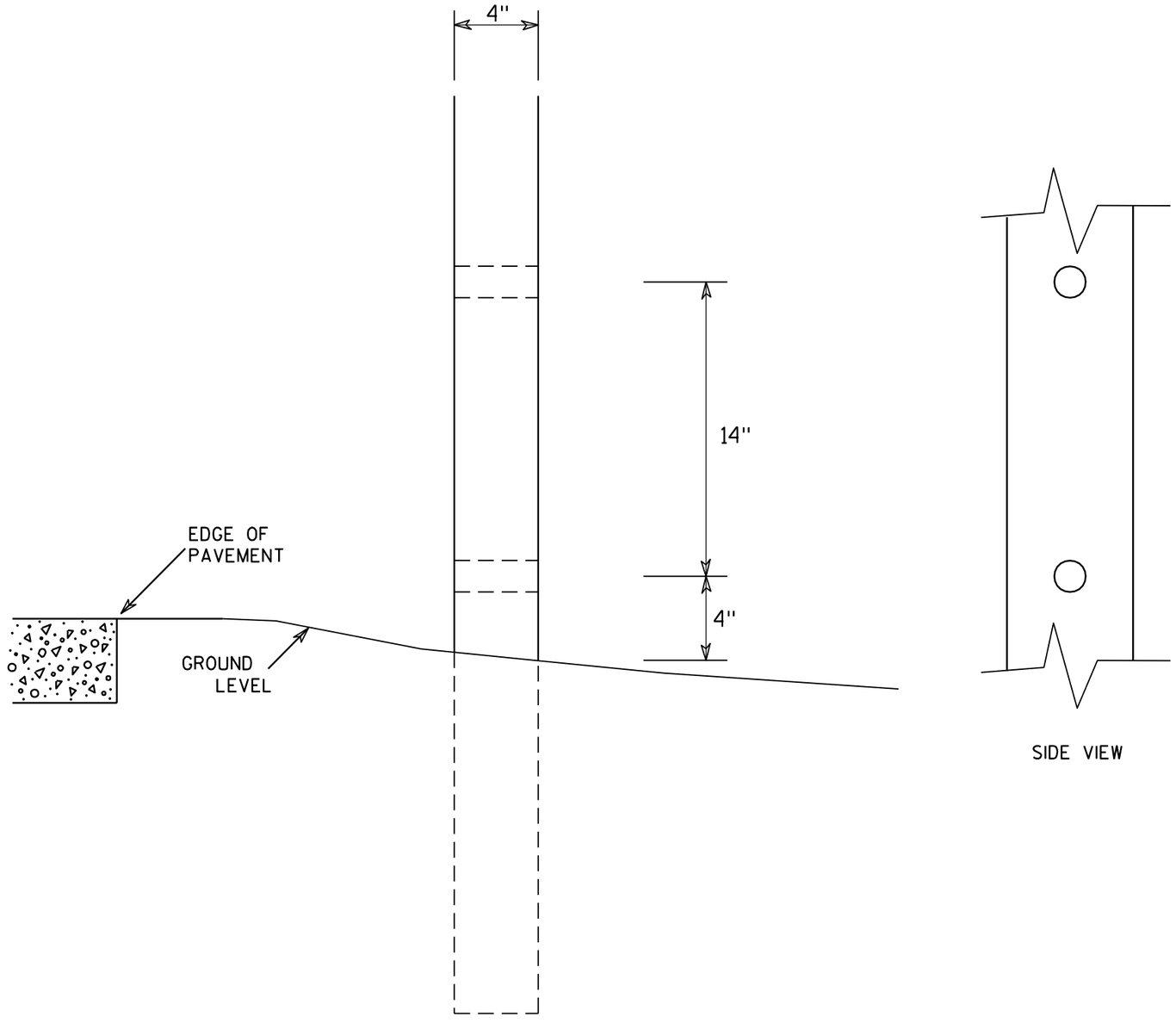
5/23/00
DATE

/S/ Chester J Spong
CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

6

S.D.D. 15 D 27-1



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

4 X 6 WOOD POST MODIFICATIONS

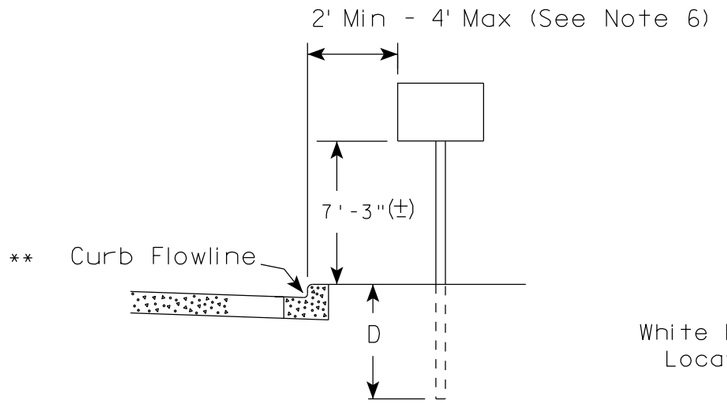
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

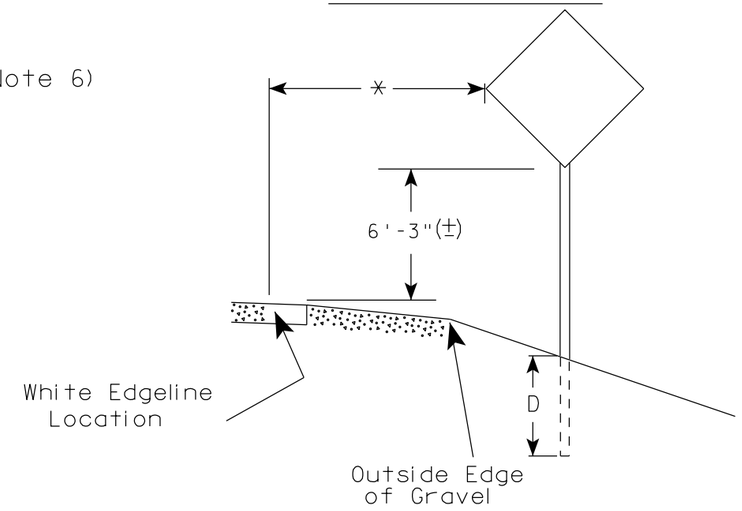
DATE 3/27/97 PLATE NO. A4-11.2

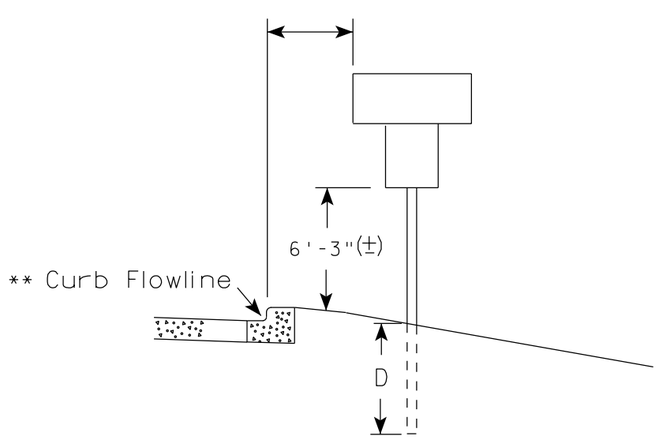
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 130	E

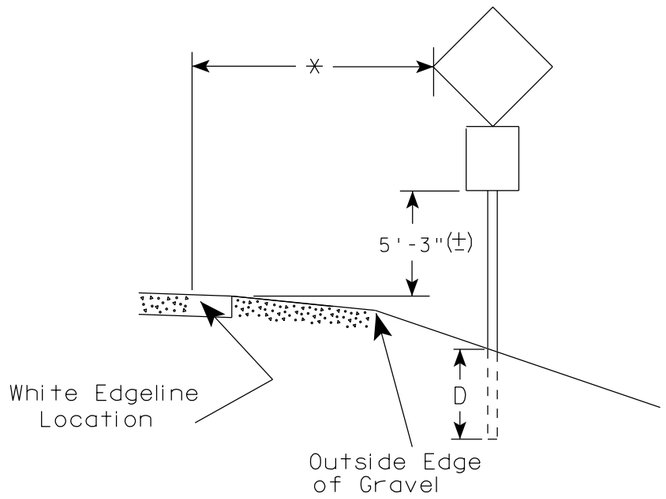
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

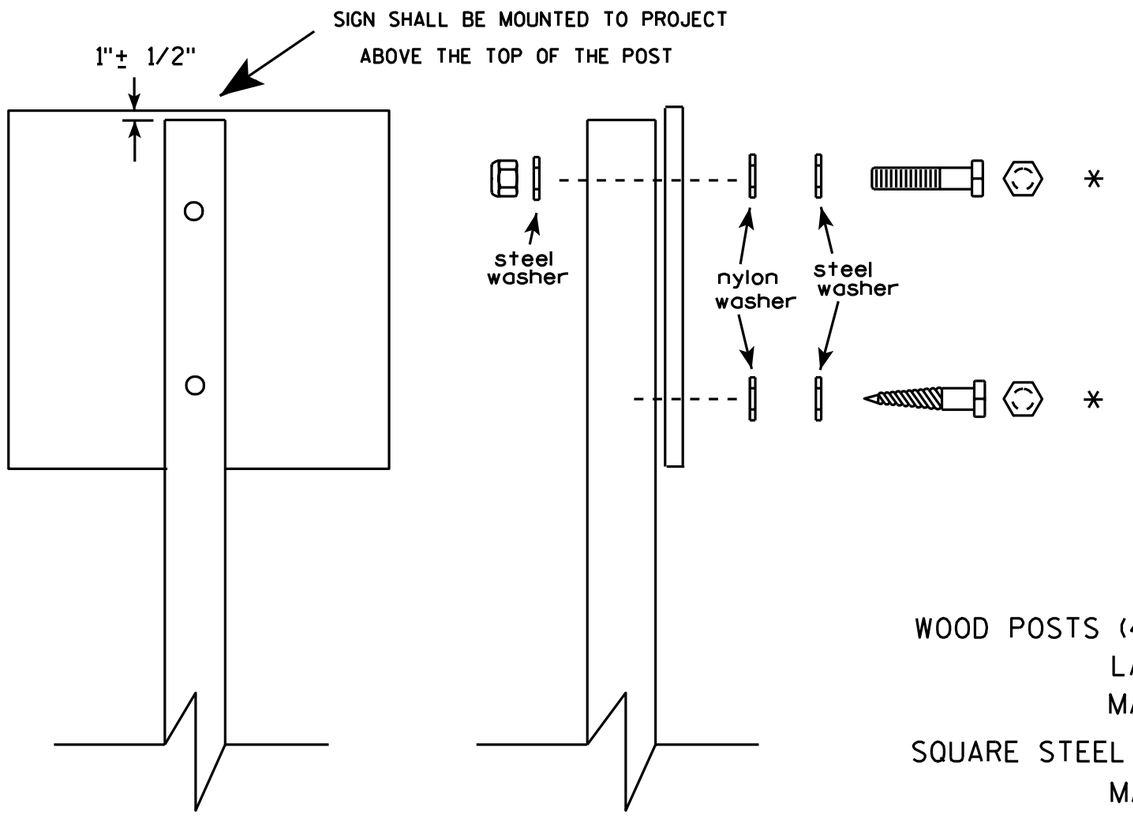
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

7

7



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

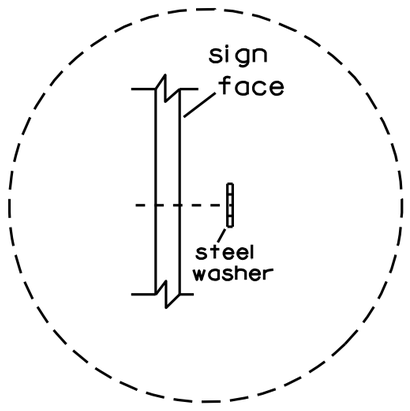
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

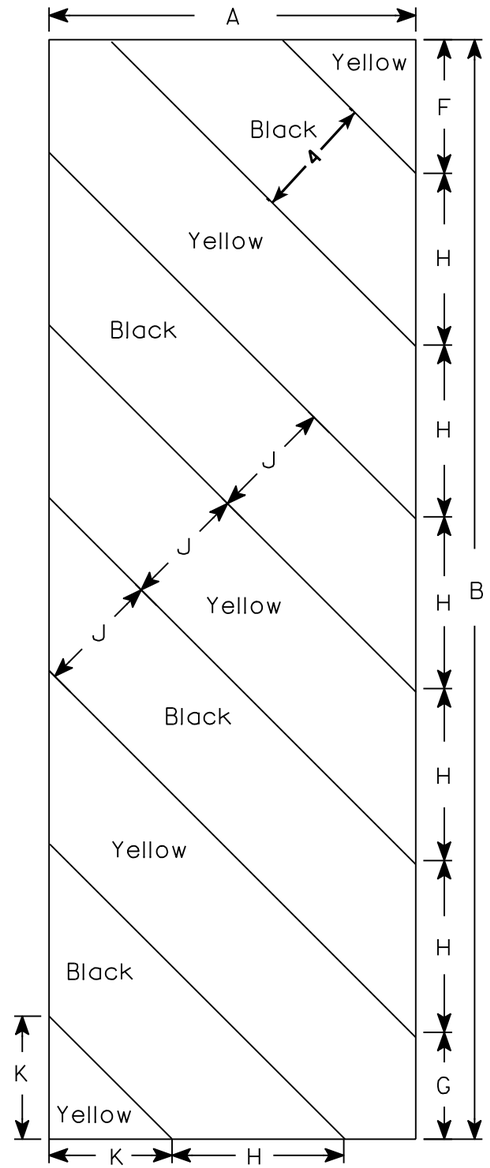
DATE 3/23/10 PLATE NO. A4-8.7

7

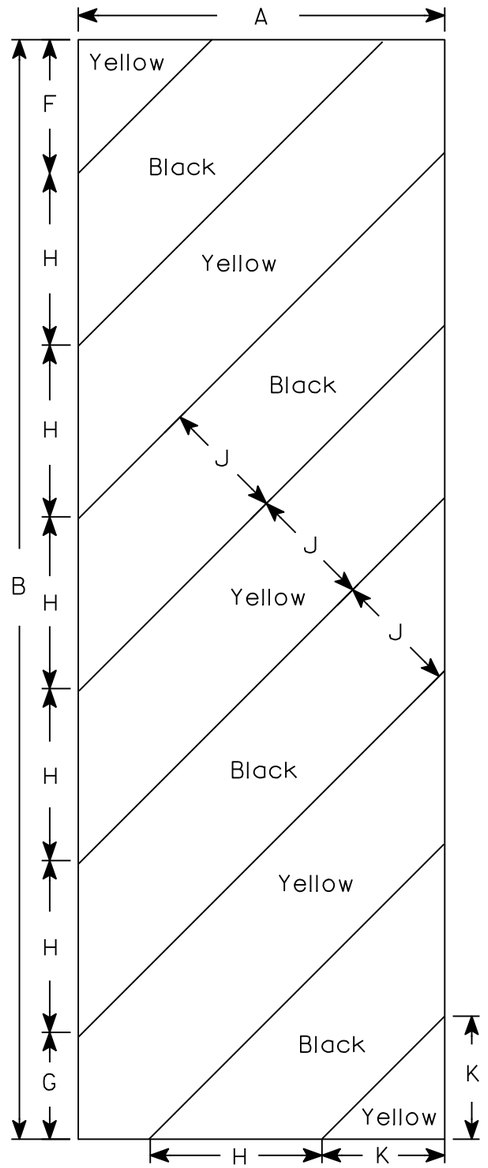
7

PROJECT NO:

SHEET NO: 132 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

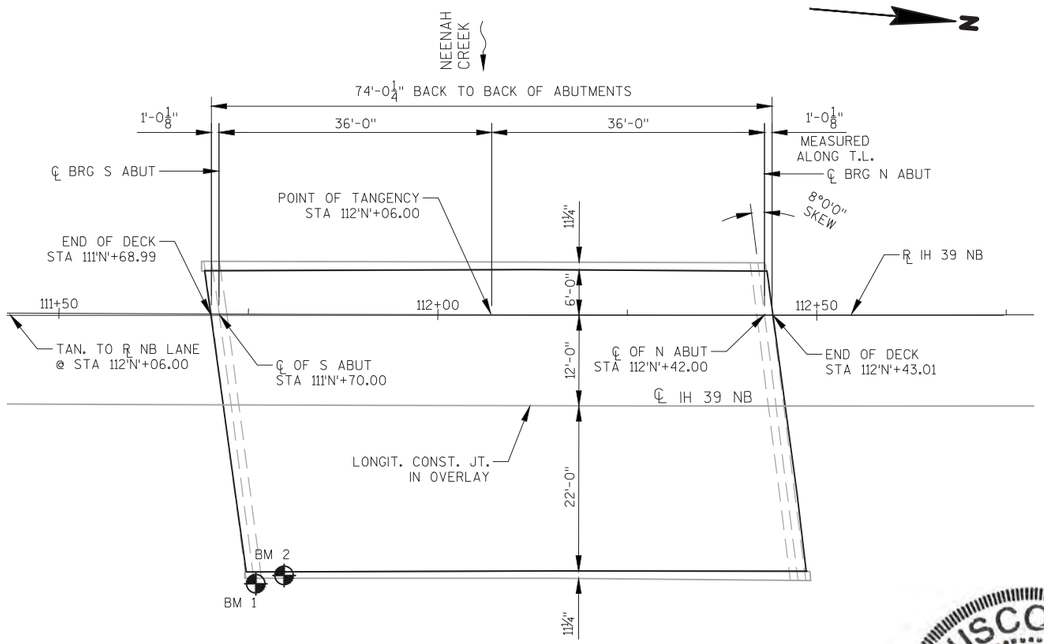
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 133	E

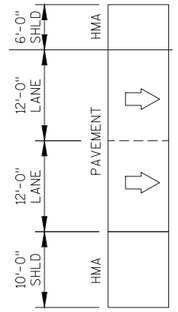


PLAN

(CONCRETE OVERLAY ON EXISTING SINGLE SPAN PRESTRESSED CONCRETE GIRDER BRIDGE)

CURVE DATA IH 39 NB

PI	103+41.85 NB
Δ	5°20'40"
D	0° 16'
T	1002.79'
L	2004.14'
R	21,485.92'
SE	R.L. REVERSE CROWN (1.5%)
PC	93+39.06 NB
PT	113+43.19 NB



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

PROFILE GRADE LINE SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF ½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING, EXPECTED AVERAGE OVERLAY THICKNESS IS ½". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

DIMENSIONS AND STATIONING SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

EXCAVATION NECESSARY TO COMPLETE THE OVERLAY SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

● EXISTING SUPERELEVATION RATE IS 1.5%. MAINTAIN THE EXISTING SUPERELEVATION RATE WITH THE CONCRETE OVERLAY.

✳ QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL DECK REPAIR LOCATIONS WITH THE ENGINEER.

◪ A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

✳✳ CONCRETE SURFACE REPAIR REQ'D ON PARAPETS AND SUBSTRUCTURES AS DESIGNATED BY THE ENGINEER. QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL SURFACE REPAIR LOCATIONS WITH THE ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE OVERLAY AND THE TOP AND INSIDE FACES OF PARAPETS AT THE DECK AND WINGS.

◭ ITEM REQUIRED AT DECK AND PARAPET JOINTS AT BRIDGE ENDS.

DESIGN DATA

ULTIMATE DESIGN STRESSES
CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 PSI
ALL OTHER: f'c = 3,500 PSI

LIVE LOAD
INVENTORY RATING: HS-21
OPERATIONAL RATING: HS-26
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 240 KIPS

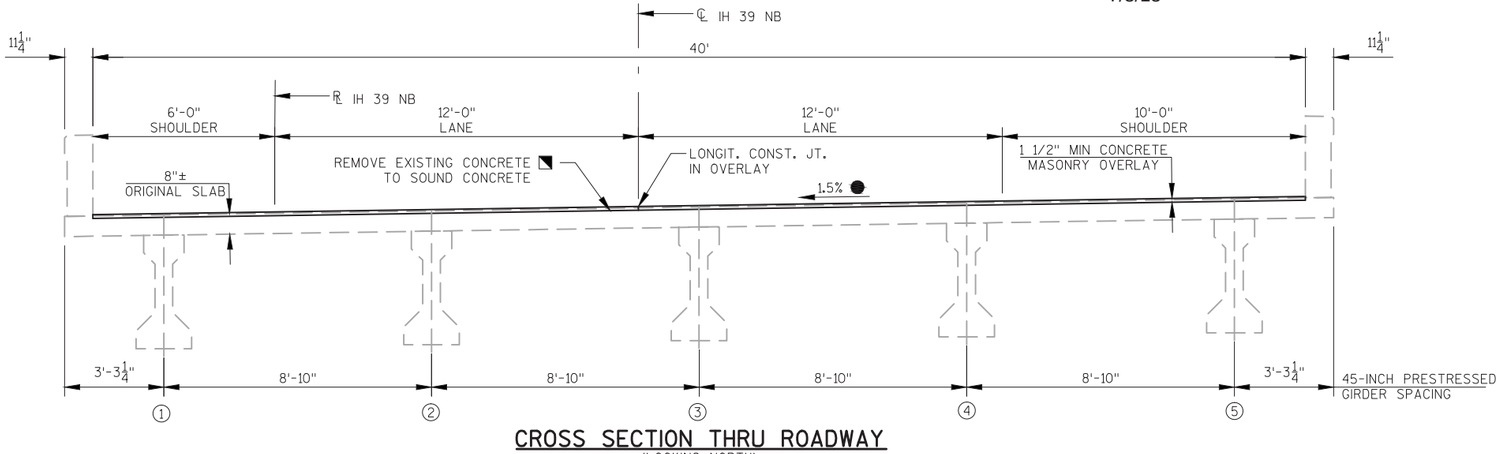
TRAFFIC DATA
AADT (2014) 16,100
AADT (2034) 19,900

TOTAL ESTIMATED QUANTITIES

	BID ITEM #	BID ITEMS	UNIT	TOTAL
◭	492.2010.S	SEALING CRACKS/JOINTS WITH HOT-APPLIED SEALANT	GAL	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	390
✳	509.0301	PREPARATION DECKS TYPE 1	SY	33
✳	509.0302	PREPARATION DECK TYPE 2	SY	17
	509.0500	CLEANING DECKS	SY	329
✳✳	509.1500	CONCRETE SURFACE REPAIR	SF	10
✳	509.2000	FULL-DEPTH DECK REPAIR	SY	1
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	17

ALL ITEMS ARE CATEGORY 0020

7/3/13



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

CONTACTS

BUREAU OF STRUCTURES CONTACT
WILLIAM DREHER: 608-266-8489

CONSULTANT CONTACT
SEAN SPROMBERG: 715-845-8000

DIRECTION OF TRAVEL →

WING WALL NUMBER ①

LIST OF DRAWINGS

1. OVERLAY PLAN

EXISTING BENCH MARK INFO

NO.	DESCRIPTION	ELEV.
1	WISDOT ALUMINUM MONUMENT IN WING WALL	788.65
2	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	791.34

STATE PROJECT NUMBER
1166-06-63

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/13/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-39-15

IH 39 NB OVER NEENAH CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
MARQUETTE	MOUNDVILLE

DESIGN SPEC. REHABILITATION N/A			LOAD
DESIGNED BY RLA	DESIGN CK'D. SMS	DRAWN BY MTG	PLANS CK'D. SMS

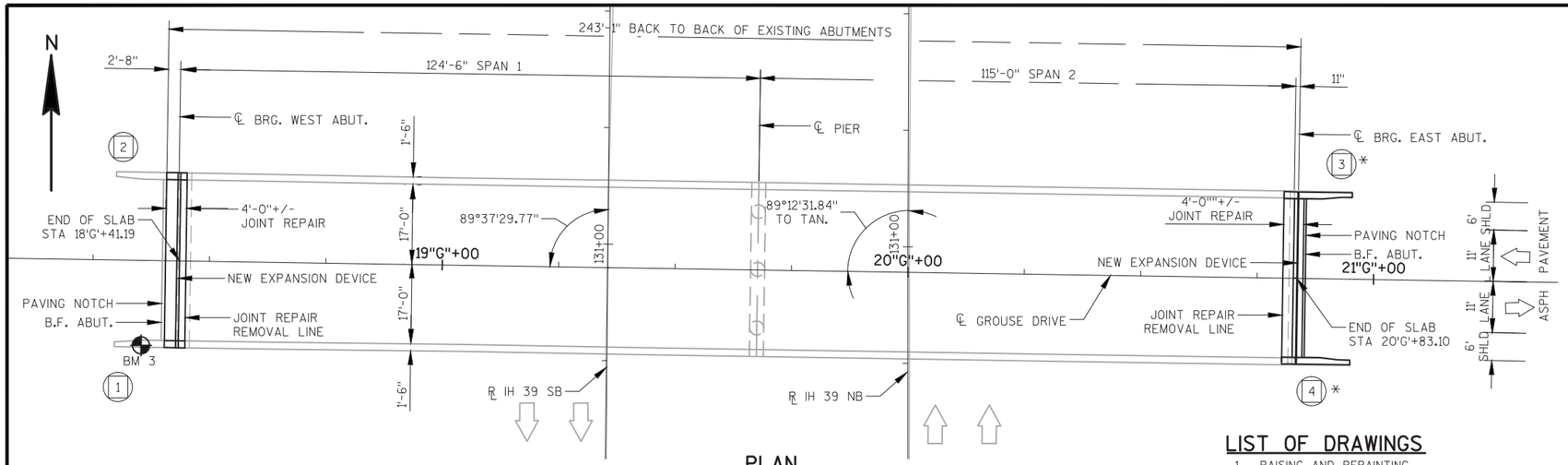
OVERLAY PLAN

SHEET 1 OF 1

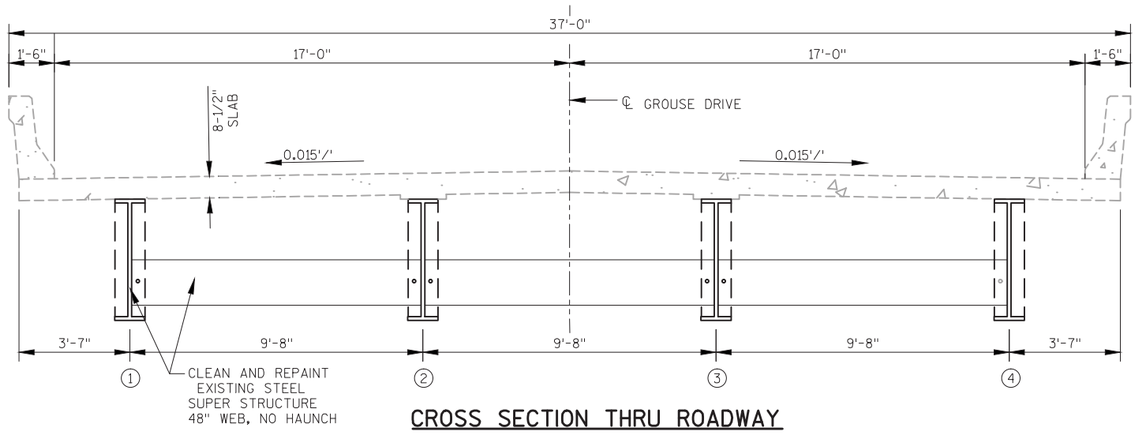
134

8

8



PLAN



CROSS SECTION THRU ROADWAY

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

BID ITEM #	BID ITEMS	UNIT	WEST ABUT	EAST ABUT	PIER	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 19+68	LS	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-39-16	LS	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	-	160	-	160
502.0100	CONCRETE MASONRY BRIDGES	CY	6	26	1	33
502.3100	EXPANSION DEVICE B-39-16	LS	-	-	-	1
502.3200	PROTECTIVE SURFACE TREATMENT	SY	19	28	-	47
502.5005	MASONRY ANCHORS TYPE L NO.5 BARS	EACH	35	177	24	236
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1432	3256	112	4800
506.5000	BEARING ASSEMBLIES FIXED B-39-16	EACH	-	4	4	8
506.6000	BEARING ASSEMBLIES EXPANSION B-39-16	EACH	4	-	-	4
506.7050.S	REMOVING BEARINGS B-39-16	EACH	4	4	4	12
506.7060.S	BRIDGE JACKING B-39-16	LS	-	-	-	1
509.1000	JOINT REPAIR	SY	17	17	-	34
509.1500	CONCRETE SURFACE REPAIRS	SF	-	-	-	10
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	-	12
517.1800.S	STRUCTURE REPAINTING RECYCLED ABRASIVE B-39-16	LS	-	-	-	1
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS STRUCTURE B-39-16	LS	-	-	-	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	-	-	-	1
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	220	180	-	400
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	2	-	2

ALL ITEMS ARE CATEGORY 0030

LIST OF DRAWINGS

1. RAISING AND REPAINTING
2. WEST ABUTMENT
3. EAST ABUTMENT
4. EAST ABUTMENT
5. EXPANSION DEVICE
6. COVER PLATE DETAIL
7. PIER
8. BEARING DETAILS
9. PARAPET DETAILS

DIRECTION OF TRAFFIC

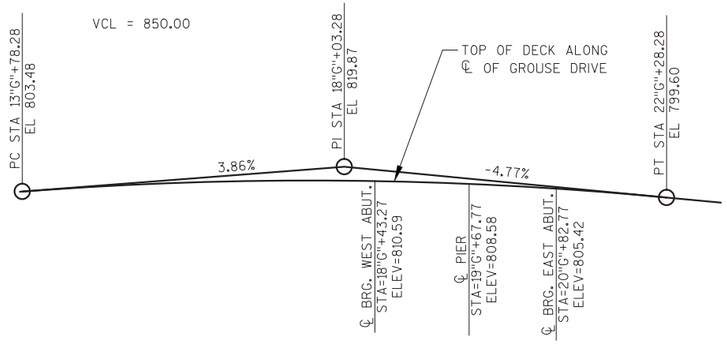
WING WALL NUMBER (1)

* PROVIDE FOR ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD

◯ INDICATES GIRDER NUMBER

WISCONSIN
SEAN M. SPROMBERG
E-37771-008
SCHOFIELD, WI
PROFESSIONAL ENGINEER

6/20/13



PROFILE GRADE LINE

STATE PROJECT NUMBER
1166-06-63

DESIGN DATA

ULTIMATE DESIGN STRESSES
CONCRETE MASONRY DECK: f'c = 4,000 PSI ALL OTHER: f'c = 3,500 PSI
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) fy = 60,000 PSI

LIVE LOAD
INVENTORY RATING: HS-23
OPERATIONAL RATING: HS-38
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 190 KIPS

TRAFFIC DATA	IH 39	GROUSE DRIVE
AADT (2014)	16,100	<100
AADT (2034)	19,900	<100

GENERAL NOTES

IMPROVEMENTS INCLUDE BRIDGE JACKING THE EAST END OF THE BRIDGE, REPAINTING EXISTING STEEL, REPLACING JOINTS, AND REBUILDING THE EAST ABUTMENT BACKWALL.

DRAWINGS SHALL NOT BE SCALED

DIMENSIONS AND STATIONING SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

EXISTING STRUCTURE WAS ORIGINALLY BUILT IN 1983

CONCRETE SURFACE REPAIRS SHALL BE USED FOR NEEDED REPAIRS ON THE EXISTING ABUTMENT LOCATIONS AND LIMITS OF REPAIR SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

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

ALL EXPOSED STEEL SURFACES UNDERNEATH THE BRIDGE ARE TO BE CLEANED AND PAINTED. THE SURFACES INCLUDE GIRDERS, INTERMEDIATE DIAPHRAGMS, AND BEARING CONNECTIONS. THE COLOR FOR FINISH COATING SHALL BE LIGHT GREY, FEDERAL COLOR NO. 26293.

AT ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.

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

CONTRACTOR TO VERIFY THAT RAISED GIRDERS WILL PROVIDE A MINIMUM VERTICAL CLEARANCE OF 16'-9" OVER IH 39 DRIVING LANES AND SHOULDERS PRIOR TO MODIFYING ABUTMENT AND PIER SEATS. PROPOSED OVERLAY ON IH 39 TO BE INCLUDED IN CLEARANCE REQUIREMENT.

EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS AND HARDWARE SHALL BE PAID FOR IN THE LUMP SUM PRICE BID AS "EXPANSION DEVICE B-39-16.

APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF BOTH ABUTMENTS BELOW EXPANSION DEVICES AND OR JOINTS. POWER WASH AND ADEQUATELY DRY SURFACES BEOFRE APPLICATION. WORK TO BE INCIDENTAL TO "JOINT REPAIR".

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF NEW DECK CONCRETE AND THE FRONT FACE AND TOP OF NEW PARAPET CONCRETE. COLOR AT PARAPETS SHALL BE BE LIGHT GREY, FEDERAL COLOR NO. 26293.

BUREAU OF STRUCTURES CONTACT
WILLIAM DREHER: 608-266-8489

CONSULTANT CONTACT
SEAN SPROMBERG: 715-845-8000

EXISTING BENCH MARK INFO

NO.	DESCRIPTION	ELEV.
3	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	813.19

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 07/24/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-39-16

GROUSE DRIVE OVER IH 39

COUNTY	TOWN/CITY/VILLAGE
MARQUETTE	MOUNDVILLE

DESIGN SPEC.	LOAD
REHABILITATION N/A	

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RLA	SMS	MTG	SMS

RAISING AND REPAINTING

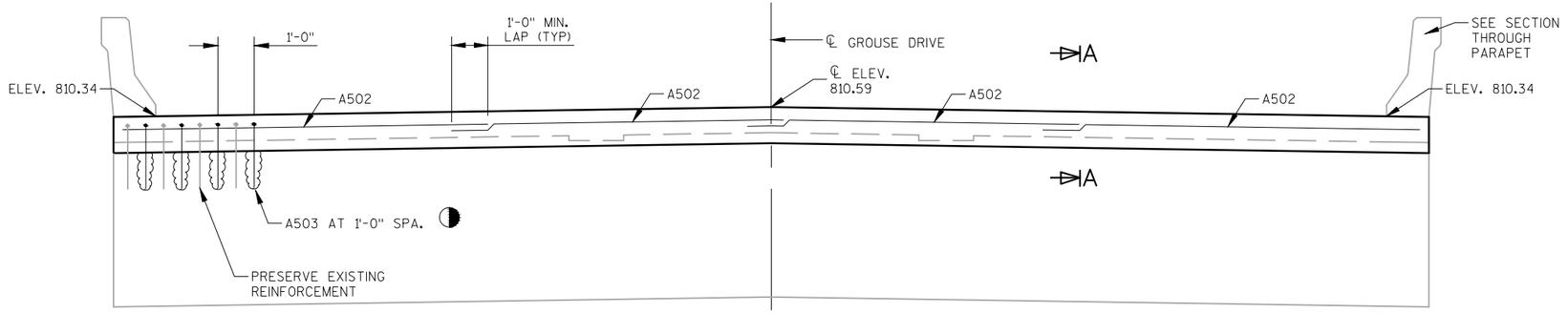
SHEET 1 OF 9

135

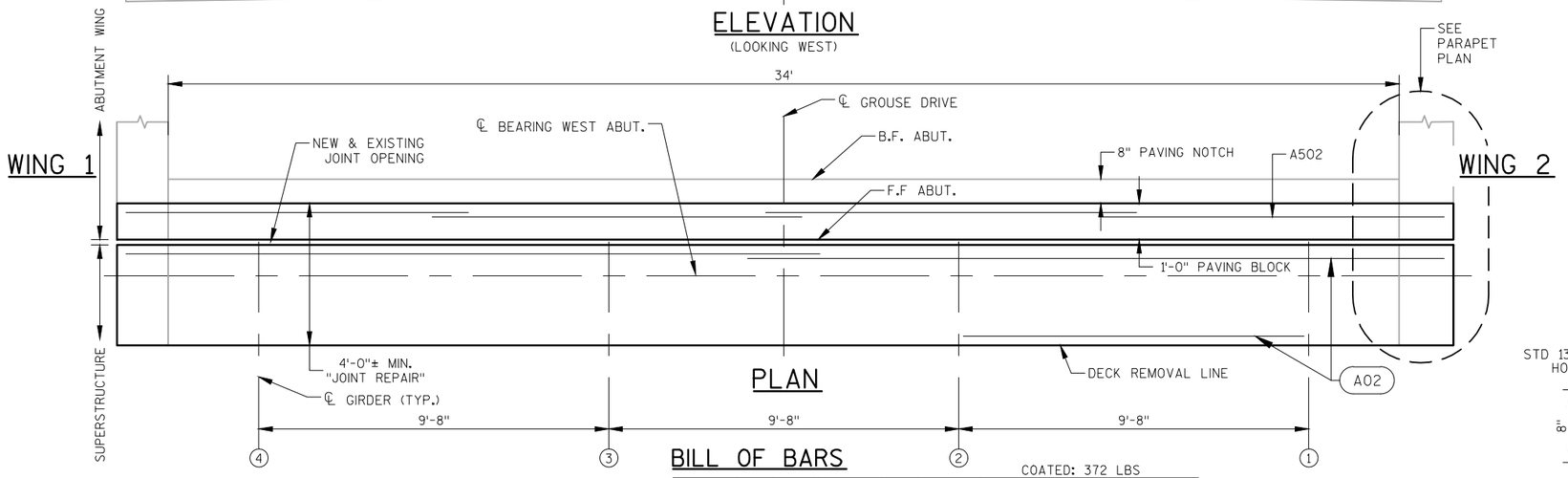
8

8

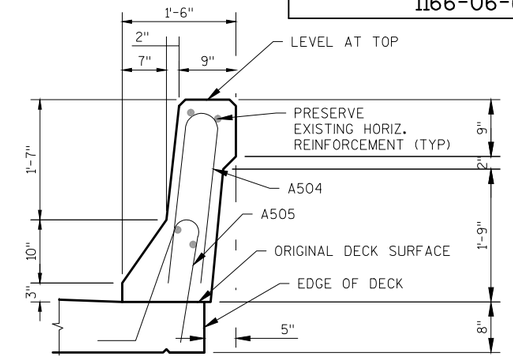
STATE PROJECT NUMBER
1166-06-63



ELEVATION
(LOOKING WEST)



PLAN



SECTION THROUGH PARAPET

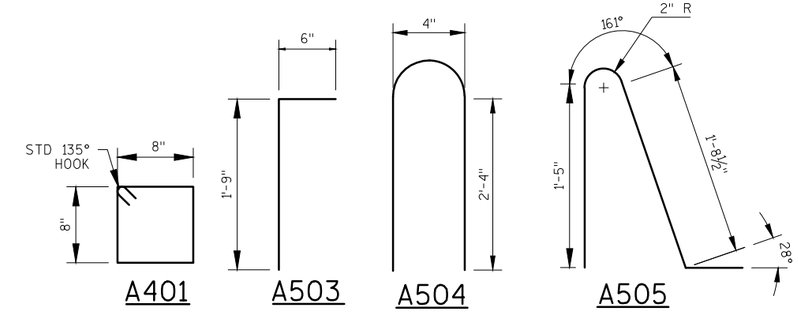
REMOVE AND REPLACE PARAPET IN AREA OF JOINT REPAIR AS NEEDED TO INSTALL ALL EXPANSION DEVICE. WORK TO BE INCLUDED IN BID ITEM "JOINT REPAIR". UTILIZE EXISTING BAR STEEL AS POSSIBLE.

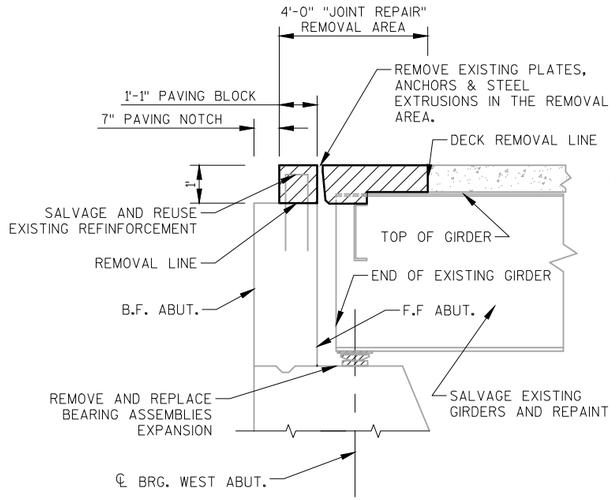
BILL OF BARS

COATED: 372 LBS

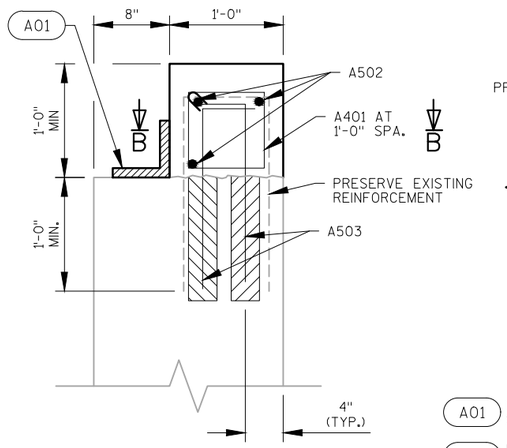
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	35	3'-2"	X		PAVING BLOCK VERT.
A502	X	12	9'-8"			PAVING BLOCK HORZ.
A503	X	35	2'-3"	X		PAVING BLOCK VERT.
A504	X	10	4'-10"	X		PARAPET
A505	X	10	4'-3"	X		PARAPET

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

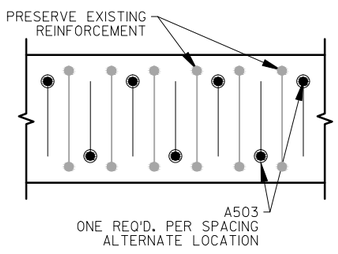




SECTION THRU EXISTING JOINT AT WEST ABUTMENT



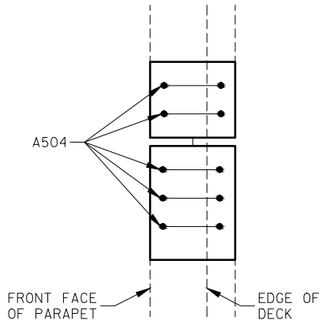
SECTION A-A



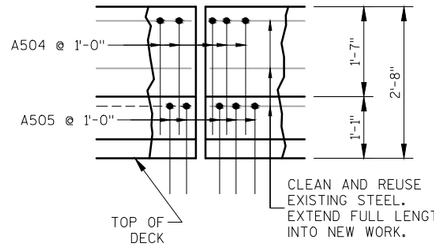
SECTION B-B

A01 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. AND VERT. JOINTS AT BACKFACE.

A02 FOR SLAB BARS AND DIMENSION SEE EXPANSION DEVICE SHEET.



PARAPET PLAN



PARAPET ELEVATION
(WING 2 SHOWN, WING 1 SIMILAR)

MASONRY ANCHORES TYPE L NO. 5 BARS. EMBED 1'-0" MIN. INTO EXISTING CONCRETE. EPOXY ANCHORED, HAVING A MIN. PULLOUT CAPCITY OF 19 KIPS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-39-16

DRAWN BY: OMC | PLANS CK'D.: SMS

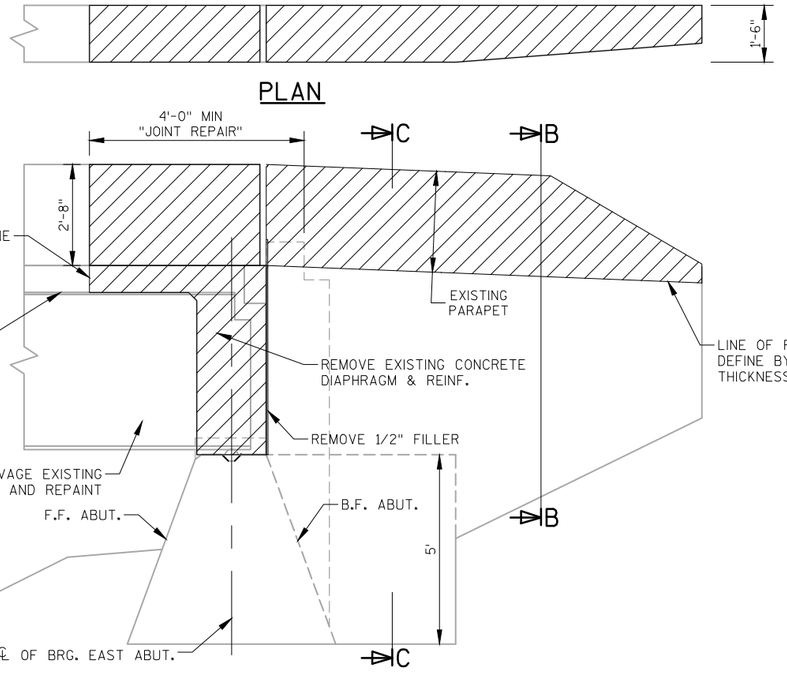
WEST ABUTMENT

SHEET 2 OF 9

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_08 STRUCTURE\12047_080202_WA_B3916.DWG PLOT DATE : 6/20/2013 11:52 AM PLOT BY : GERLING, DAN PLOT NAME : ----------

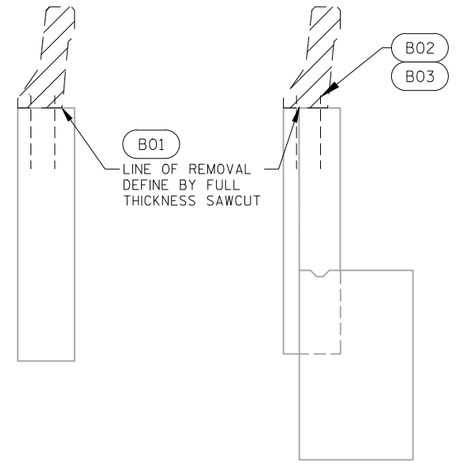
WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER
1166-06-63



WING ELEVATION REMOVALS

(WING 4 SHOWN, WING 3 SIMILAR)



SECTION THRU WING

SECTION B-B

SECTION THRU WING

SECTION C-C

BILL OF BARS

COATED: 1474 LBS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	12	2'-0"	X		PEDESTAL ANCHOR VERT.
B502	X	12	3'-8"	X		PEDESTAL ANCHOR VERT.
B403	X	12	2'-8"			PEDESTAL ANCHOR HORZ.
B504	X	35	4'-2"	X		PAVING BLOCK VERT.
B505	X	12	9'-8"			PAVING BLOCK HORZ.
B406	X	20	17'-9"			BACKWALL HORZ.
B407	X	8	15'-10"			BACKWALL HORZ.
B508	X	35	5'-8"	X		BACKWALL VERT.
B509	X	35	8'-10"	X		BACKWALL VERT.
B510	X	105	1'-10"	X		BACKWALL ANCHOR
B511	X	6	4'-10"	X		PARAPET
B512	X	6	4'-3"	X		PARAPET

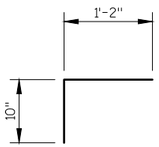
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

◑ MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 7" MIN. INTO EXISTING CONCRETE. EPOXY ANCHORED, HAVING A MIN. PULLOUT CAPACITY OF 19 KIPS.

B01 ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MIN. ALL AREAS OF NEW TO EXISTING CONCRETE CONTACT.

B02 SALVAGE EXISTING REINFORCEMENT & EXTEND FULL LENGTH INTO NEW WORK.

B03 IF EXISTING BARS ARE SEVERELY CORRODED OR DAMAGED DURING CONCRETE REMOVAL, REPLACE WITH EPOXY ANCHORED NO.5 L-SHAPED BARS WITH A 10" HORIZONTAL LEG, EMBED 7" WORK TO BE PAID UNDER ITEMS "REMOVAL OLD STRUCTURE B-39-16"



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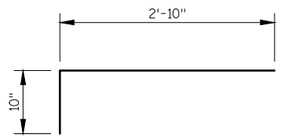

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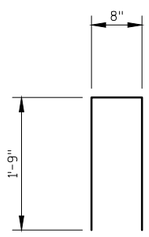

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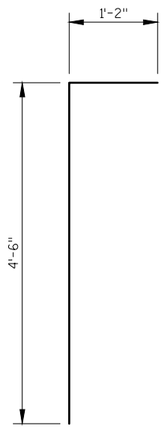

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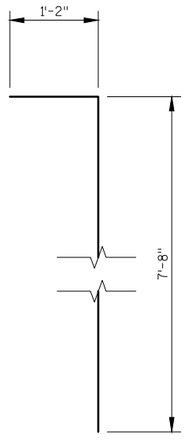

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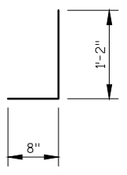

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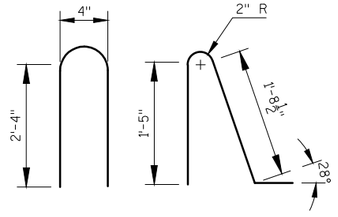


B511 B512

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

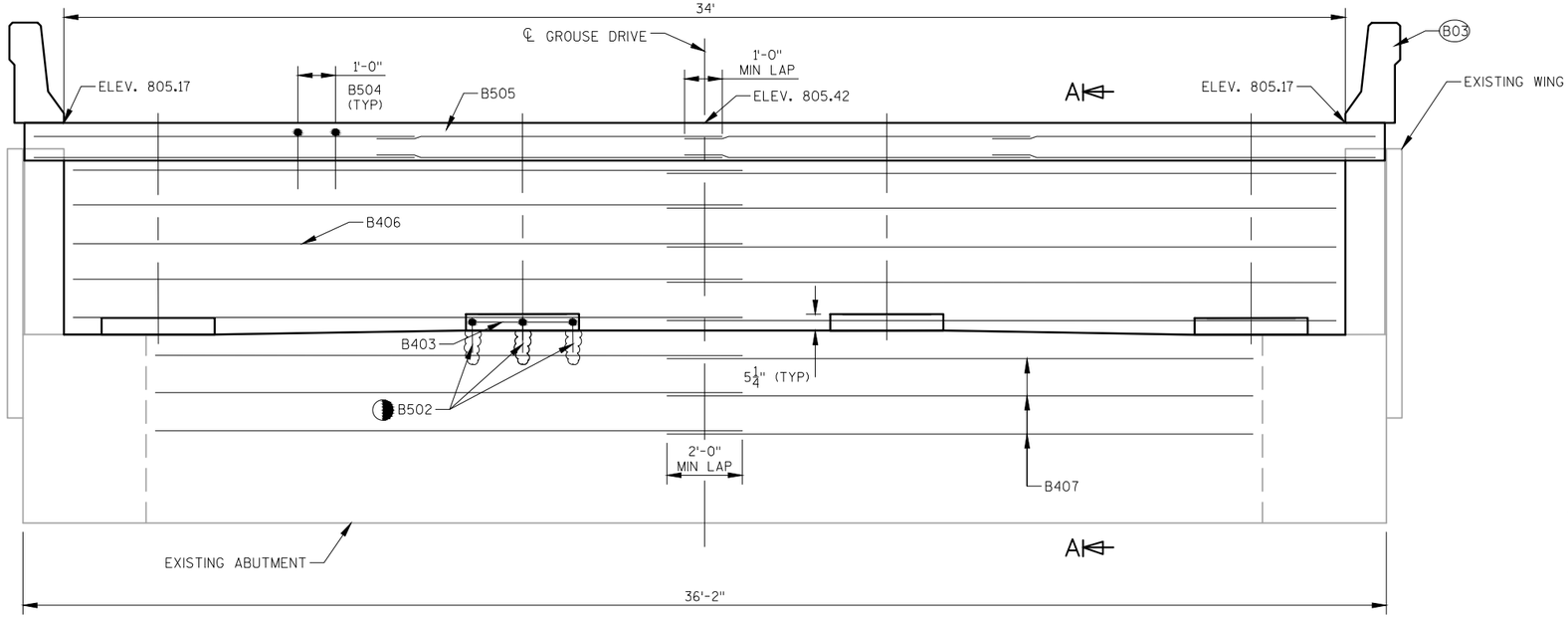
STRUCTURE B-39-16

DRAWN BY	MTG	PLANS CK'D.	SMS

EAST ABUTMENT

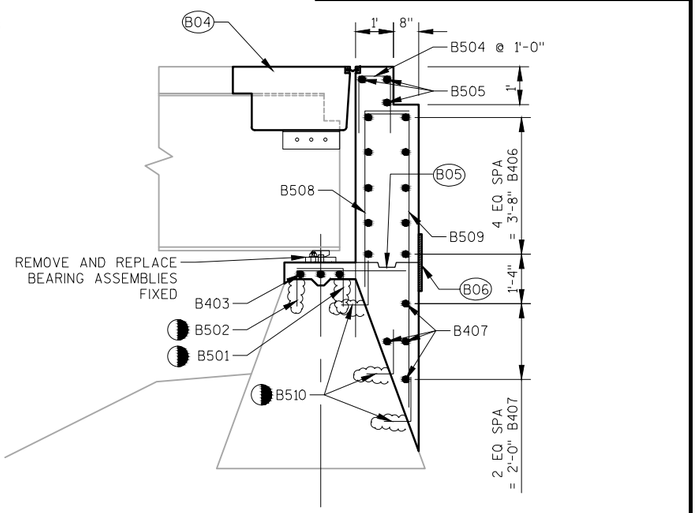
SHEET 3 OF 9

STATE PROJECT NUMBER
1166-06-63



ELEVATION

LOOKING EAST AT BACKWALL REINF.



TYPICAL SECTION THRU BODY & BACKWALL

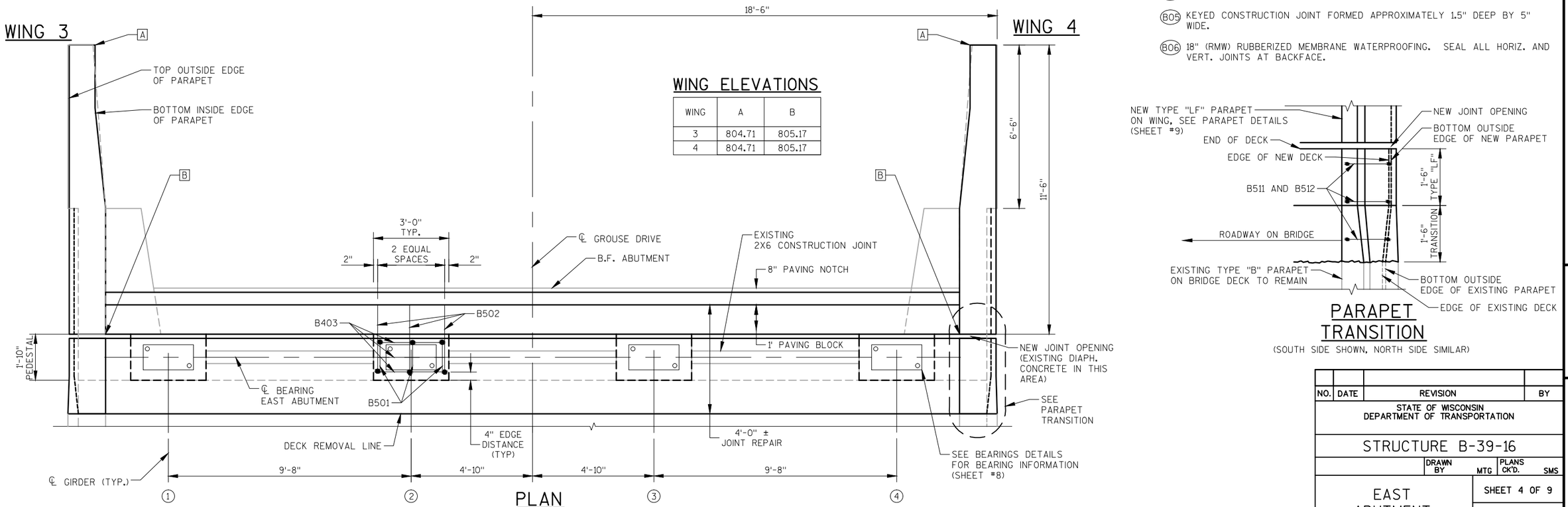
SECTION A-A

B03 FOR PARAPET BARS & DIMENSIONS SEE PARAPET DETAILS.

B04 FOR SLAB BARS & DIMENSIONS SEE EXPANSION DEVICE SHEET.

B05 KEYED CONSTRUCTION JOINT FORMED APPROXIMATELY 1.5" DEEP BY 5" WIDE.

B06 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. AND VERT. JOINTS AT BACKFACE.



WING ELEVATIONS

WING	A	B
3	804.71	805.17
4	804.71	805.17

PLAN

PARAPET TRANSITION

(SOUTH SIDE SHOWN, NORTH SIDE SHOWN SIMILAR)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-39-16

DRAWN BY: MTG | PLANS CK'D.: SMS

EAST ABUTMENT

SHEET 4 OF 9

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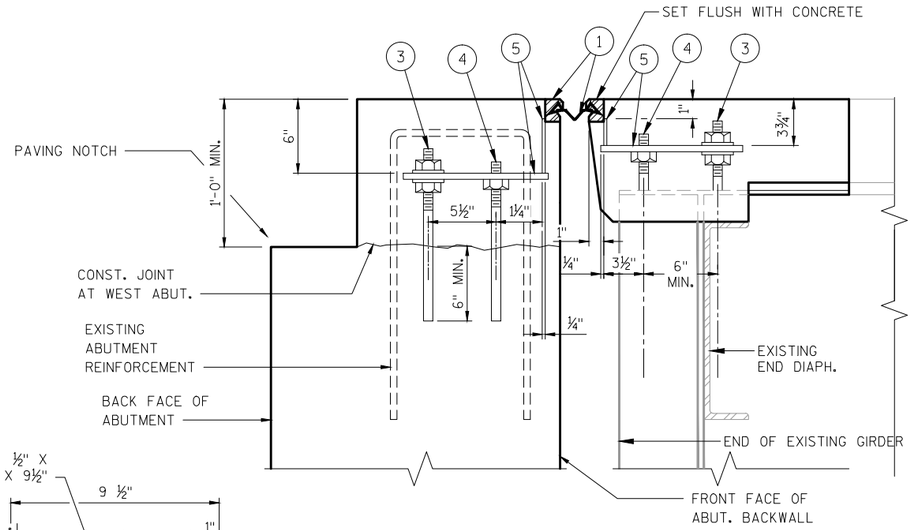
8

8

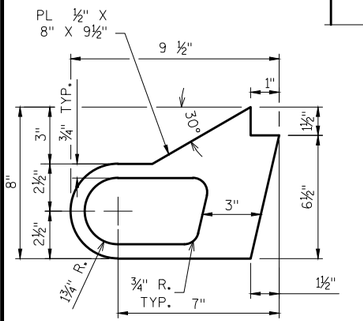
FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_08 STRUCTURE\12047_080203_EA_B3916.DWG PLOT DATE : 6/20/2013 11:53 AM PLOT BY : GERLING, DAN PLOT NAME : ----------

WISDOT/CADDS SHEET 42

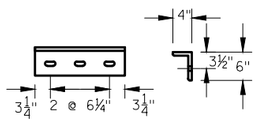
STATE PROJECT NUMBER
1166-06-63



SECTION THRU JOINT AT ABUTMENT–JOINT DETAILS
NORMAL TO ℄ SUBSTRUCTURE



ALTERNATE STRIP SEAL ANCHOR



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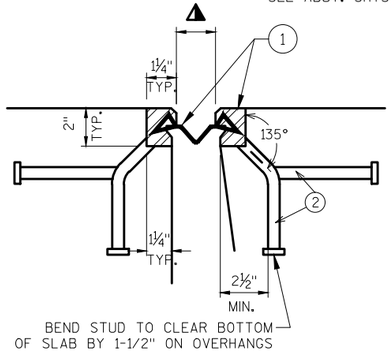
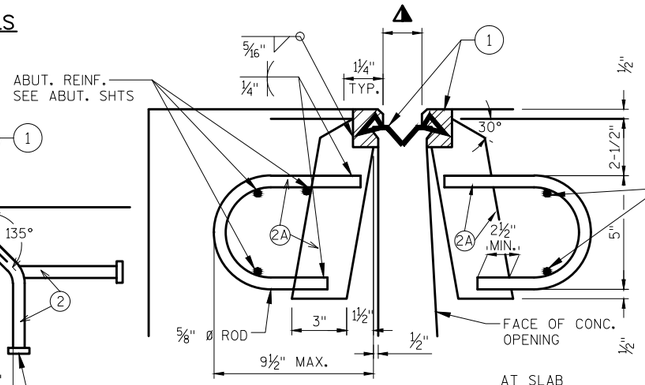
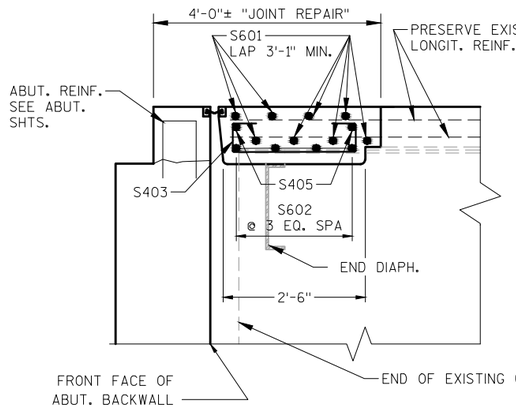


SECTION THRU JOINT
EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS

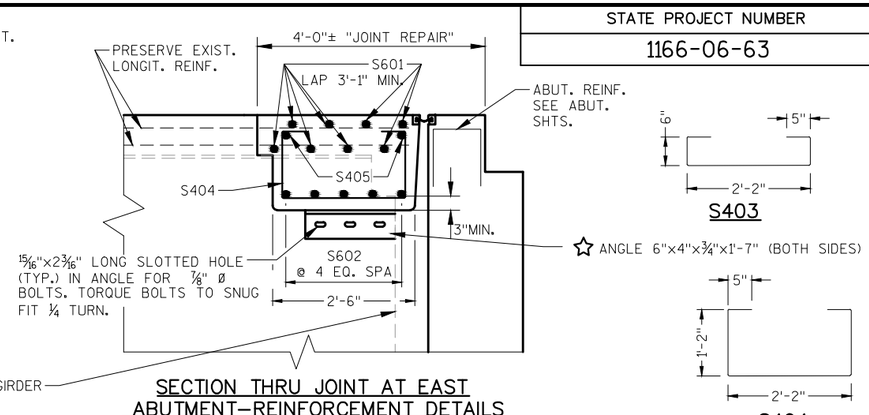


SYM. ABOUT ℄ JOINT UNLESS OTHERWISE SHOWN OR NOTED

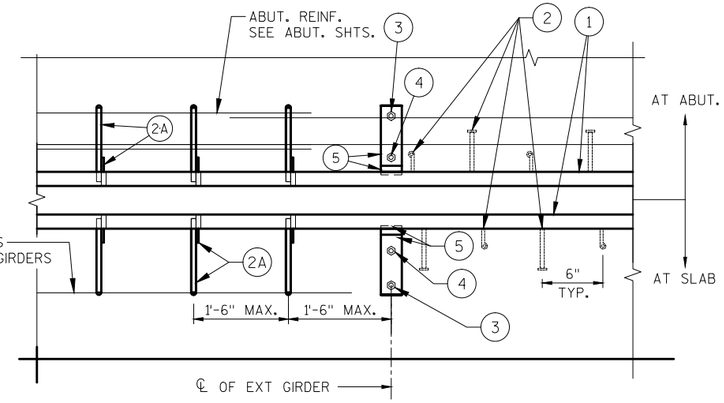
SECTION THRU JOINT
ROADWAY TRAFFIC AREA BETWEEN EXISTING EXTERIOR GIRDERS.



SECTION THRU JOINT AT WEST ABUTMENT–REINFORCEMENT DETAILS
NORMAL TO ℄ SUBSTRUCTURE



SECTION THRU JOINT AT EAST ABUTMENT–REINFORCEMENT DETAILS
NORMAL TO ℄ SUBSTRUCTURE



PART PLAN

LEGEND

1. NEOPRENE STRIP SEAL (4 INCH) & STEEL EXTRUSIONS
2. ▲ SET JOINT OPENING AT 1¾"
3. STUDS ⅝" ø X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
4. 2A 3"X ½" ANCHOR PLATE WITH ⅝" ø ROD (OR ALTERNATE STRIP SEAL ANCHOR. WELD ROD TO ANCHOR PLATE. WELD ANCHOR PL. TO #1 AT 1'-6" CENTERS BETWEEN GIRDERS.
5. ¾" ø THREADED ROD WITH 2 NUTS AND 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.
6. ¾" ø THREADED WITH NUT. TACK WELD NUT TO NO. 5.
7. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT. ONE PER GIRDER PER SIDE. COVER WELDED AREAS WITH EPOXY-COATED MATERIAL. WELD TO NO. 1. PROVIDE 1½" ø HOLE FOR NO. 3 & 1" ø HOLE FOR NO. 4.
8. GALVANIZED PLATE ⅜" X LIMITS SHOWN WITH HOLES FOR NO. 7 BEND AS SHOWN.
9. ¾" ø X 1½" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANITI-SIEZE LUBRICANT. RECESS 1/16" BELOW PLATE SURFACE.
10. ¾ " ø X 4" GALVANIZED HEX BOLT. BEND 45°
11. ¾" ø X 2¼" GALVANIZED THREADED COUPLING.
12. 1" X 5" SLOTTED CSK. HOLE FOR NO. 7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.

BILL OF BARS

COATED: 2120 LBS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S601	X	32	22'–0"			SLAB TOP & BOTTOM TRANS.
S602	X	48	9'–6"			SLAB BOT. TRANS.
S403	X	36	4'–0"			SLAB LONGIT.
S404	X	36	5'–4"			SLAB LONGIT.
S405	X	12	9'–6"			SLAB BOTTOM TRANS.
S406	X	12	9'–6"			TRANS. AT JOINT ASSEMBLY

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. SEE ABUTMENT AND PARAPET SHEETS FOR ADDITIONAL REINFORCEMENT DETAILS.

*PLACE PARALLEL TO GIRDERS

GENERAL NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED. 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 EXTRUSION 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 & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE FOR "EXPANSION DEVICE" (B-39-16).

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

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

◣ JOINT OPENING DIMENSIONS ALONG SKEW PLUS ½".

☆ DIAPHRAGM SUPPORT ANGLES SHALL BE ASTM A 709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE L.

ALL SUPPORT ANGLES SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A 563. LUBRICANT AND TEST FOR COATED NUTS.

ALL DIAPHRAGM SUPPORT HARDWARE AND HOLES PLACED INTO EXISTING GIRDER SHALL BE INCIDENTAL TO "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-39-16

DRAWN BY KJB | PLANS CK'D. SMS

EXPANSION DEVICE

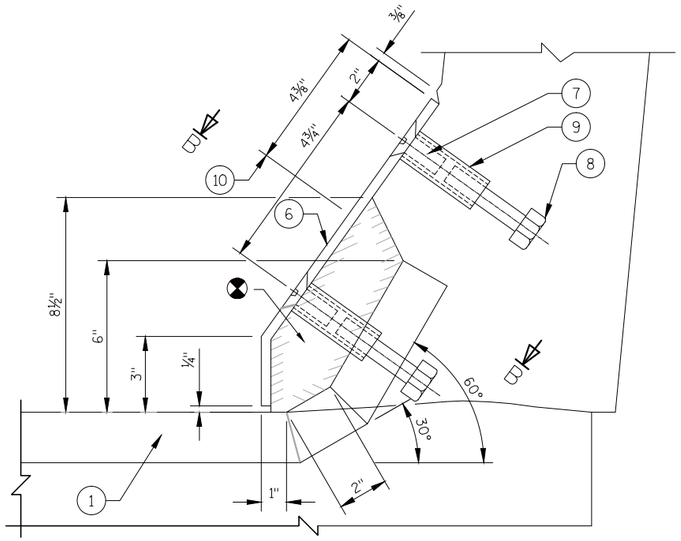
SHEET 5 OF 9

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_08 STRUCTURE\12047_080205_ED_B3916.DWG PLOT DATE : 6/24/2013 10:40 AM PLOT BY : GERLING, DAN PLOT NAME : ----------

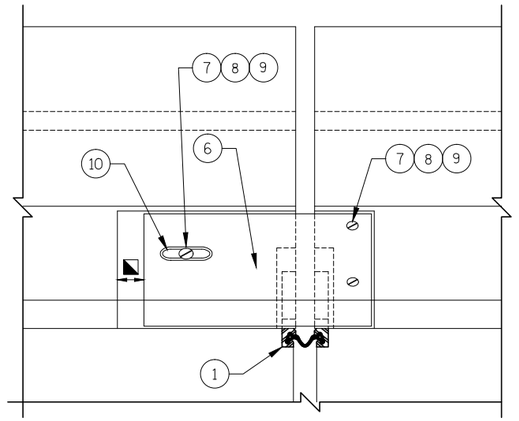
STATE PROJECT NUMBER
1166-06-63

NOTES AND LEGEND

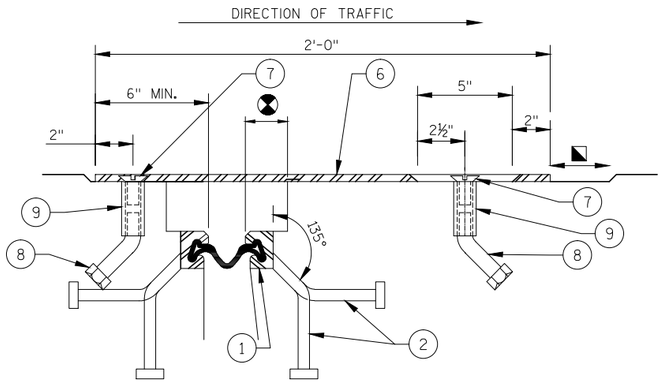
SEE SHEET #5



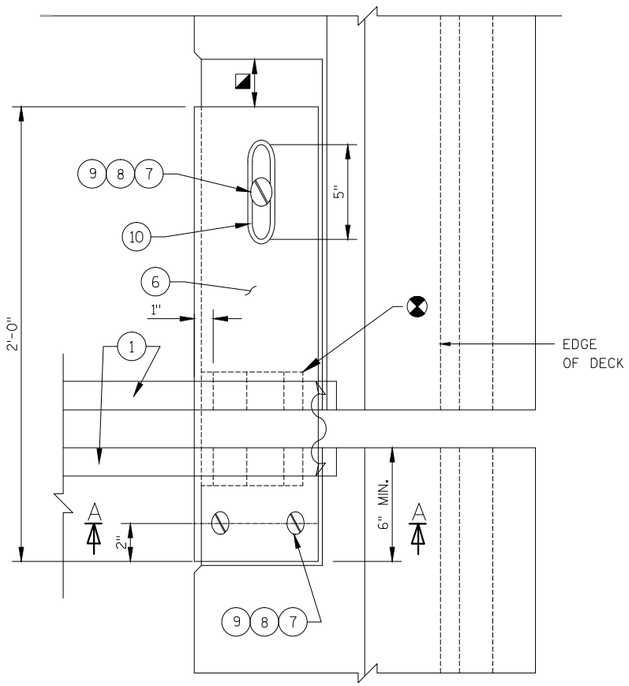
SECTION A-A



VIEW OF PARAPET PLATES FROM ROADWAY



SECTION B-B



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

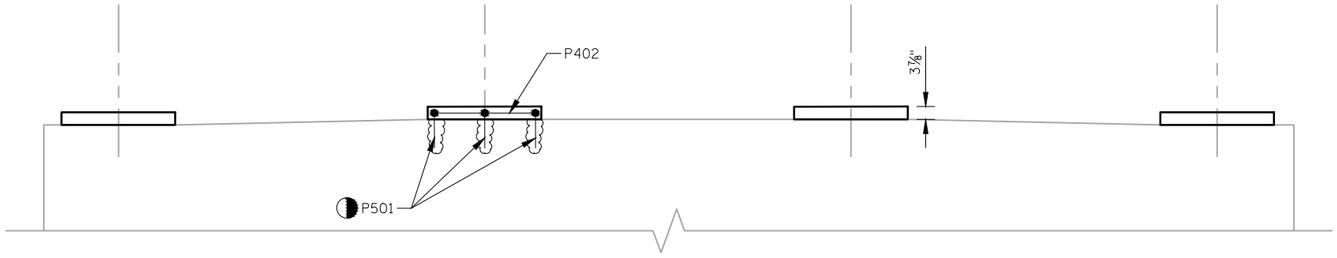
STRUCTURE B-39-16

DRAWN BY: KB | PLANS CK'D.: SMS

COVER PLATE DETAIL

SHEET 6 OF 9

STATE PROJECT NUMBER
1166-06-63



ELEVATION
LOOKING WEST

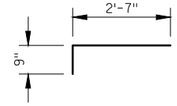
BILL OF BARS

COATED: 112 LBS

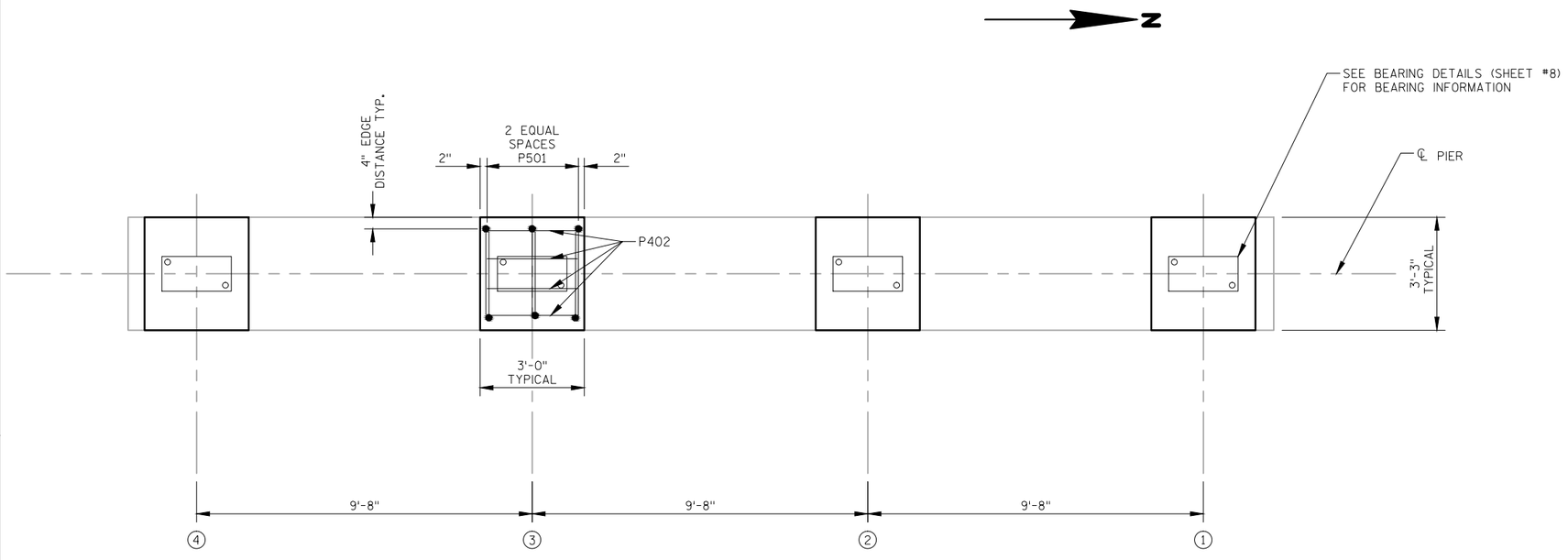
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P501	X	24	3'-4"	X		PEDESTAL ANCHOR VERT.
P402	X	16	2'-8"			PEDESTAL HORIZ.

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

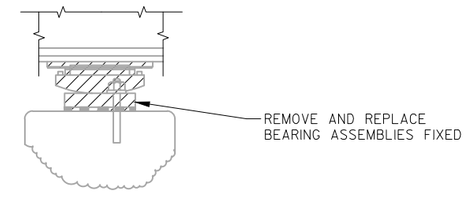
MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 7" MIN. INTO EXISTING CONCRETE. EPOXY ANCHORED, HAVING A MIN. PULLOUT CAPACITY OF 19 KIPS.



P501



PLAN



SECTION THRU CAP PIER

FOR BEARING DETAILS SEE SHEET #8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-39-16

DRAWN BY: OMC | PLANS CK'D.: SMS

PIER

SHEET 7 OF 9

GENERAL BEARING NOTES

ALL MATERIALS ARE SYMMETRICAL ABOUT C/L OF GIRDER AND C/L OF BEARING.

ALL STRUCTURAL STEEL BEARINGS PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATES CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS "D" PLATE THICKNESS + 2-1/4" ABOVE TOP OF CONCRETE.

STEEL PINTLES SHALL CONFORM TO ASTM A449 OR MATERIAL OF EQUIVALENT YIELD
STRENGTH AND ELONGATION.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR PINTLES IN ALL MASONRY PLATES FOR DRIVING FIT.

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS MASONRY PLATE "D" FOR EACH BEARING.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

ALL ANCHOR BLOTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIVALENT YIELD STRENGTH AND ELONGATION.

ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

ALL MATERIAL IN BEARINGS, INCLUDING SHIM PLATES, BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL SHEET, TEFLON SURFACE, PINTLES, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 50W.

PLACE SHIM PLATES BETWEEN BEARING PAD AND MASONRY PLATE "D". PLATES SHALL HAVE 'X' AND 'Z' DIMENSIONS THAT MATCH MASONRY PLATE "D".

ALL MATERIALS IN TYPE "A" BEARINGS, INCLUDING SHIMS AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES FIXED B-39-16".

FABRICATOR MAY INCREASE PLATE "D" THICKNESS AS AN ALTERNATE TO SHIMS

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

‡ DRILLED HOLES FOR ANCHOR BOLTS IN MASONRY PLATE "D" SHALL HAVE A DIAMETER 3/8" LARGER THAN ANCHOR BOLT.

PLATE "C" SHALL BE SHOP PAINTED WITH A WELDABLE PRIMER.

PLATE "D" SHALL BE GALVANIZED.

✱ FINISH THESE SURFACES ANSI 250 IF 'Y' DIMENSION IS GREATER THAN 2"

★ BURN OFF EXISTING SOLE PLATE WELDS AND REMOVE, FOR NEW WELD SIZE, REFER TO TABLE, THIS SHEET.

▽ AT EXISTING ANCHOR BOLT LOCATIONS REMOVE ANCHOR BOLT FLUSH WITH CONCRETE AND GRIND SMOOTH.

EXPANSION BEARING NOTES

ROCKER PLATE "C" AND MASONRY PLATE "D" SHALL BE GALVANIZED. TOP PLATE "A" AND STEEL PLATE "B" SHALL BE SHOP PAINTED. USE A WELDABLE PRIMER ON TOP PLATE "A". DO NOT PAINT STAINLESS STEEL OR TEFLON SURFACES.

IN LIEU OF USING SHIM PLATES, FABRICATOR MAY INCREASE THICKNESS OF TOP PLATE "A" OR MASONRY PLATE "D" BY THE SHIM PLATE THICKNESS.

◪ PROVIDE A METHOD FOR HANDLING ROCKER PLATE "C" DURING GALVANIZING.

◭ BOND STEEL PLATE "B" AND TEFLON WITH ADHESIVE MATERIAL MEETING FEDERAL SPECIFICATION MMM-A-134, FEP FILM OR EQUAL.

AT INSTALLATION, ENSURE STAINLESS STEEL SLIDING FACE OF THE UPPER ELEMENT AND THE TFE SLIDING FACE OF THE LOWER ELEMENT HAVE THE SURFACE FINISH SPECIFIED AND ARE CLEAN AND FREE OF ALL DUST, MOISTURE OR ANY OTHER FOREIGN MATTER.

ALL MATERIALS IN TYPE "A-T" BEARINGS, INCLUDING SHIM PLATES AND BEARING PADS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING ASSEMBLIES EXPANSION B-39-16".

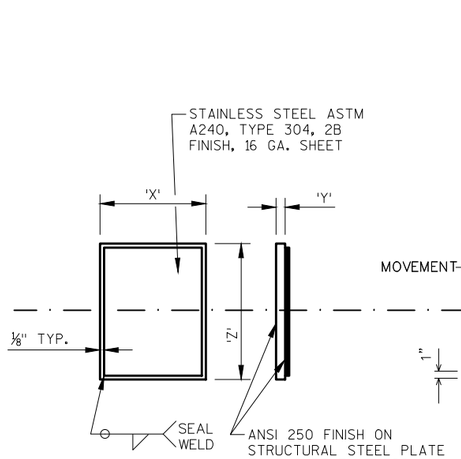


PLATE "A"

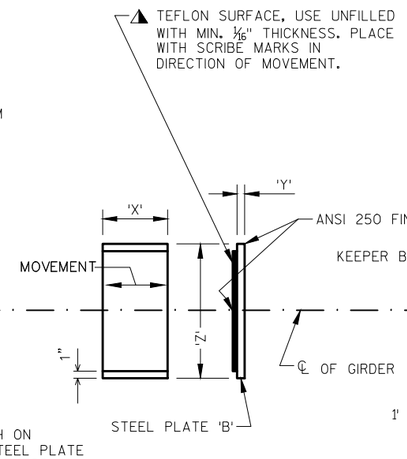


PLATE "B"

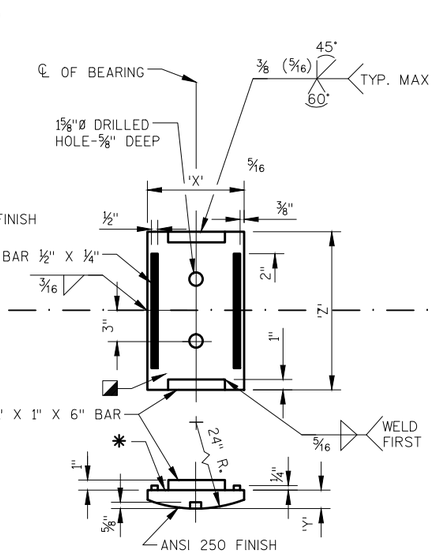


PLATE "C"
EXPANSION BEARING

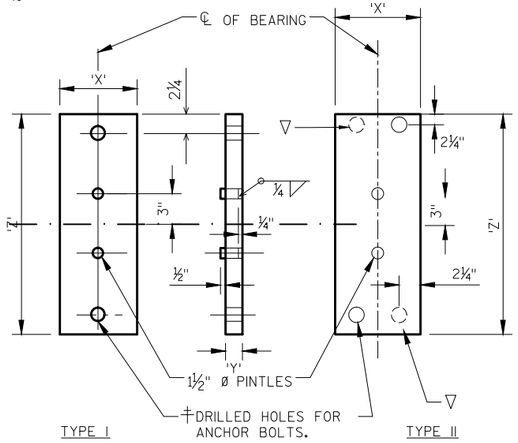


PLATE "D"

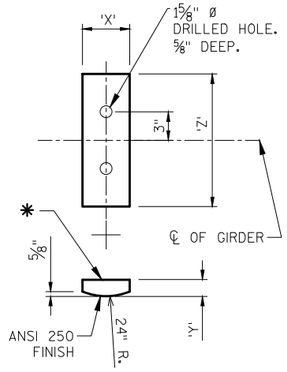
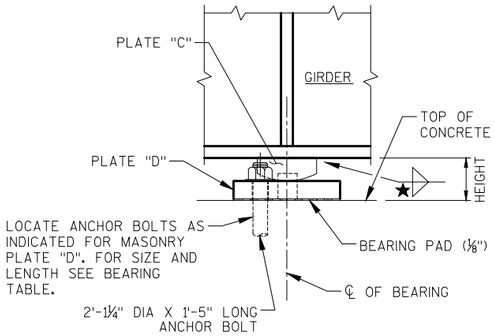
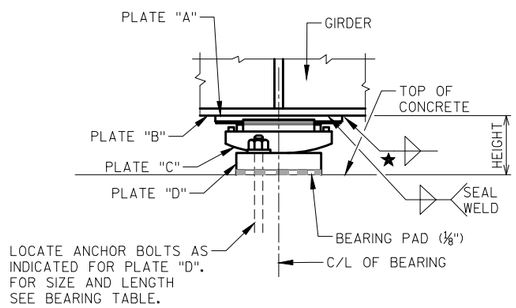


PLATE "C"
FIXED BEARING



FIXED BEARING ASSEMBLY



EXPANSION BEARING ASSEMBLY

BEARING TABLE

	PLATE "A"			PLATE "B"			PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT DIAMETER	ANCHOR BOLT LENGTH	NO. OF BRG'S REQ'D	HEIGHT FEET	LOCATION
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z						
EXPANSION BEARING TYPE "A-T"	11"	5/8"	1'-4"	7"	1/2"	1'-4"	9"	1 15/16"	1'-6 1/4"	8"	1 1/2"	2'-2"	I	1 1/2"	1'-10"	4	0.401*	WEST ABUTMENT
					FIXED BEARING TYPE "A"		5"	1 15/16"	1'-4"	8"	1 3/4"	2'-1"	I	1 1/2"	1'-10"	4	0.318**	EAST ABUTMENT
							5"	2 3/8"	1'-4"	1'-2"	2 7/8"	2'-2"	I	1 1/2"	1'-10"	4	0.448**	PIER

*HEIGHT OF BEARING INCLUDES ⅛" BEARING PAD, 16 GAGE STAINLESS STEEL SHEET AND 1/16" TEFLON SURFACE.
**HEIGHT OF BEARING INCLUDES ⅛" BEARING PAD.

★ TABLE OF FILLET WELD SIZES

MATERIAL THICKNESS OF THICKER PART JOINTED.	◪ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1-1/2"	△ 5/16"
OVER 1-1/2" TO 2-1/4"	△ 3/8"
OVER 2-1/4" TO 6"	△ 1/2"

◪ EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THE THICKNESS OF THE THINNER PART JOINED.

△ MIN. PASS SIZE IS 5/16"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-39-16

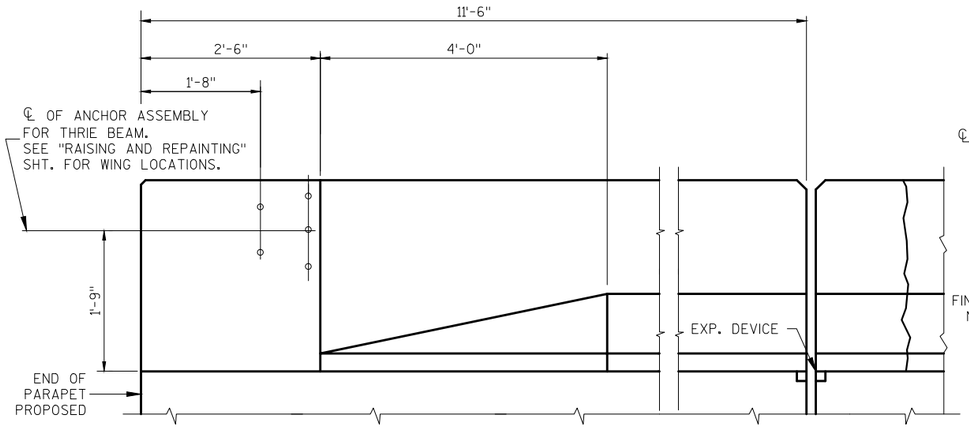
DRAWN BY KJB | PLANS CK'D. SMS

BEARING DETAILS

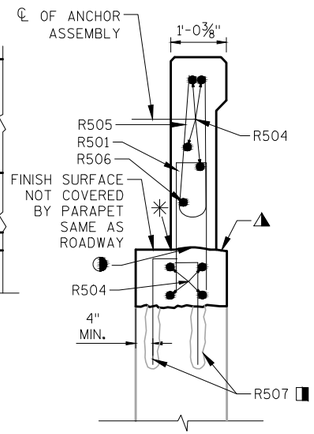
SHEET 8 OF 9

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_08 STRUCTURE\12047_080208_BE_B3916.DWG PLOT DATE : 6/20/2013 11:57 AM PLOT BY : GERLING, DAN PLOT NAME : ----------
WISDOT/CADDS SHEET 42

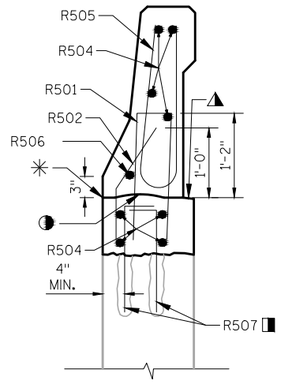
STATE PROJECT NUMBER
1166-06-63



INSIDE ELEVATION



SECTION A
(WING 4 SHOWN, WING 3 SIMILAR)



SECTION B
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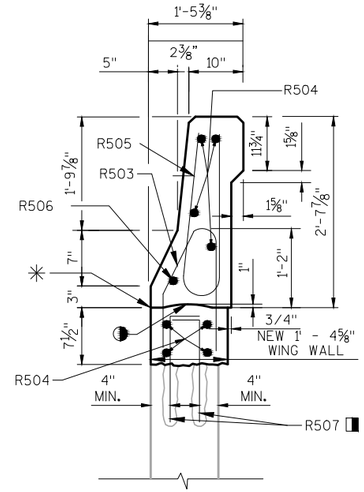

SECTION C
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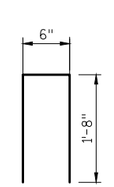
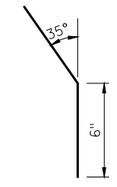


R501



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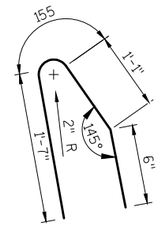

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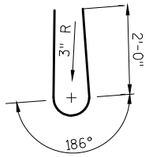

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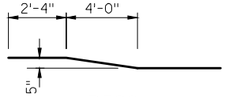

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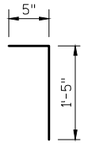

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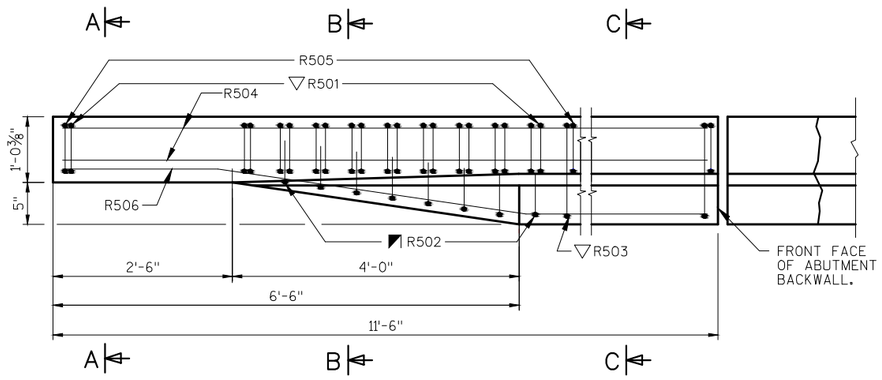
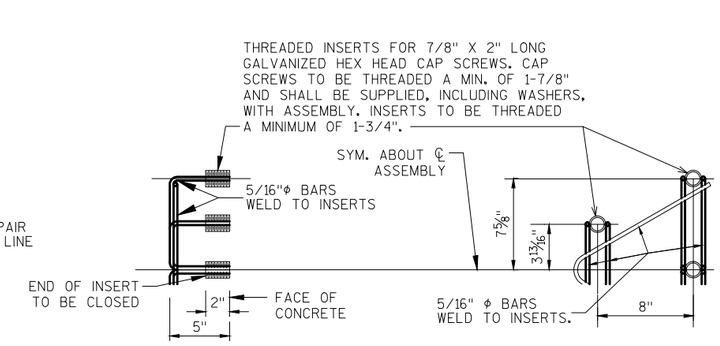
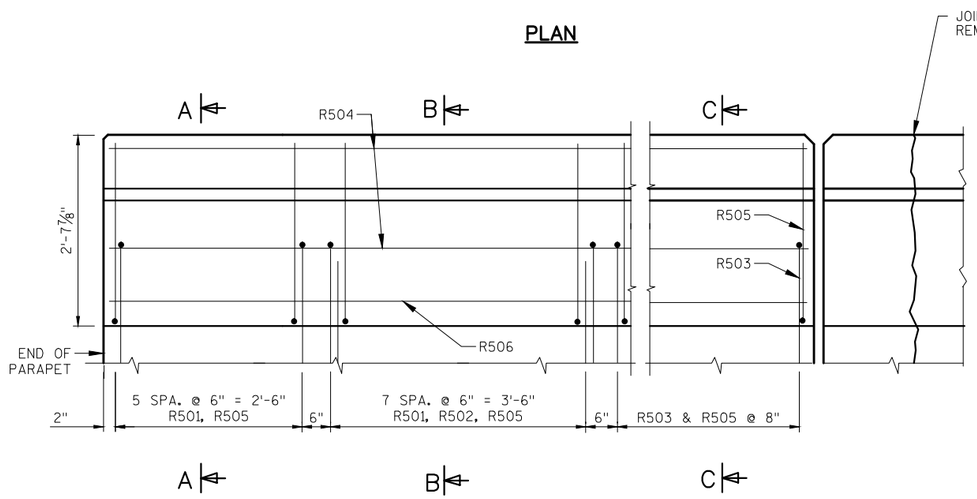


PLAN





OUTSIDE ELEVATION

DETAIL OF GALVANIZED 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.

◩ R502 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R502 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R503 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

◭ FINISH HORIZ. SURFACE NOT COVERED BY THE PARAPET. FINISH AT 2% SLOPE AWAY FROM THE PARAPET.

✳ SEE EAST ABUT. SHEET FOR ELEV.

◨ MASONRY ANCHORS TYPE L NO. 5 BARS. EMBED 1'-3" MIN. INTO EXISTING CONCRETE. EPOXY ANCHORED HAVING A MIN. PULLOUT CAPACITY OF 19 KIPS. SPACE AT 1'-0".

BILL OF BARS

COATED: 722 LBS

BAR MARK	COAT	WING 1	WING 2	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	14	14	3'–10"	X		PARAPET VERT.
R502	X	8	8	1'–6"	X		PARAPET VERT.
R503	X	8	8	3'–8"	X		PARAPET VERT.
R504	X	8	8	11'–2"			PARAPET HORIZ.
R505	X	22	22	4'–10"	X		PARAPET VERT.
R506	X	1	1	11'–2"	X		PARAPET HORIZ.
R507	X	24	24	1'–10"	X		WING ANCHOR

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

NO.	DATE	REVISION	BY

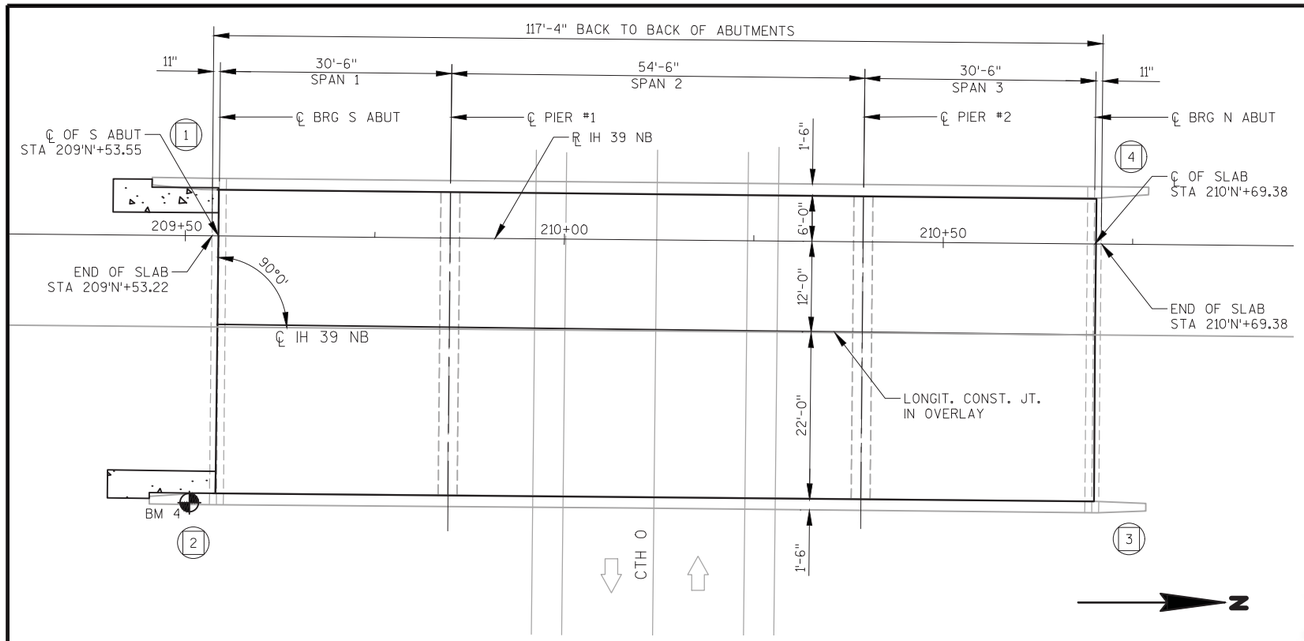
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

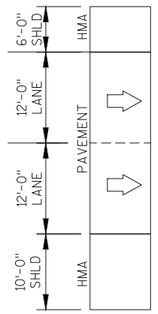
STRUCTURE B-39-16

DRAWN BY: OMC | PLANS CK'D.: SMS

PARAPET DETAILS

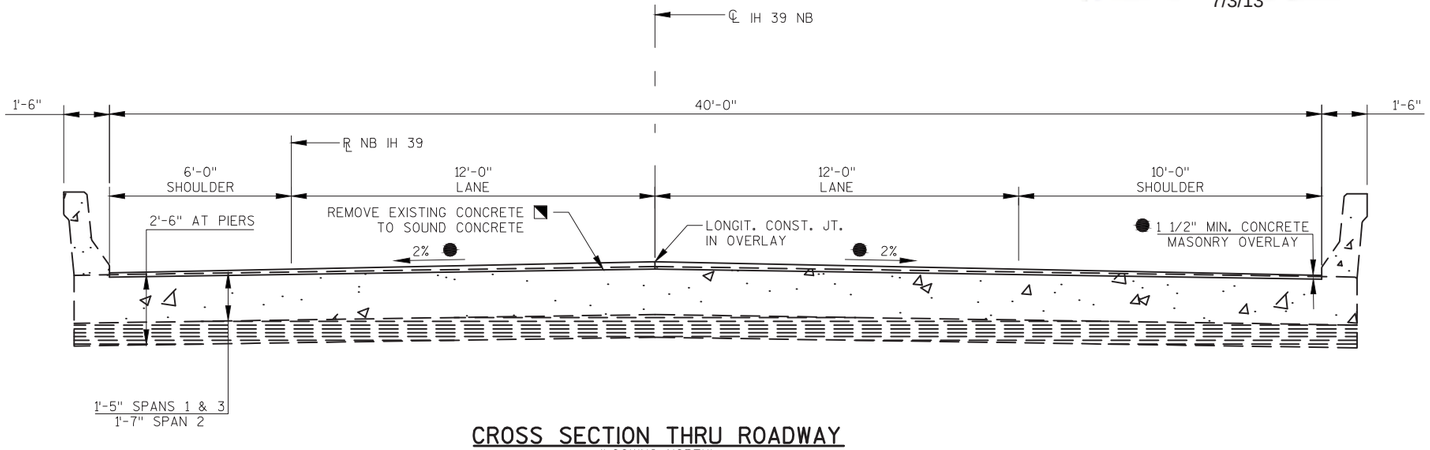
SHEET 9 OF 9





PLAN

(CONCRETE OVERLAY ON EXISTING 3 SPAN HAUNCHED SLAB BRIDGE)



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

EXISTING BENCH MARK INFO

NO.	DESCRIPTION	ELEV.
4	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	815.07

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

PROFILE GRADE LINE SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING, EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

DIMENSIONS AND STATIONING SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

EXCAVATION NECESSARY TO COMPLETE THE OVERLAY SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

● EXISTING CROSS SLOPE IS 1.5%. THE PROPOSED OVERLAY THICKNESS WILL VARY FROM A MINIMUM OF 1½" AT THE EAST PARAPET AND 1¾" AT THE WEST PARAPET TO 2⅞" AT THE CROWN. THE AVEARGE OVERLAY THICKNESS WILL BE APPROXIMATELY 2¼".

✳ QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL DECK REPAIR LOCATIONS WITH THE ENGINEER.

◥ A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

✳✳ CONCRETE SURFACE REPAIR REQ'D ON PARAPETS AND SUBSTRUCTURES AS DESIGNATED BY THE ENGINEER. QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL SURFACE REPAIR LOCATIONS WITH THE ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE OVERLAY AND THE TOP AND INSIDE FACES OF PARAPETS AT THE DECK AND WINGS.

◭ ITEM REQUIRED AT DECK AND PARAPET JOINTS AT BRIDGE ENDS.

DESIGN DATA

ULTIMATE DESIGN STRESSES
CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 PSI
ALL OTHER: f'c = 3,500 PSI

LIVE LOAD
INVENTORY RATING: HS-19
OPERATIONAL RATING: HS-32
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 230 KIPS

TRAFFIC DATA
AADT (2014) 16,100
AADT (2034) 19,900

TOTAL ESTIMATED QUANTITIES

	BID ITEM #	BID ITEMS	UNIT	TOTAL
◭	492.2010.S	SEALING CRACKS/JOINTS WITH HOT-APPLIED SEALANT	GAL	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	625
✳	509.0301	PREPARATION DECKS TYPE 1	SY	53
✳	509.0302	PREPARATION DECK TYPE 2	SY	27
	509.0500	CLEANING DECKS	SY	522
✳✳	509.1500	CONCRETE SURFACE REPAIR	SF	5
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	38

ALL ITEMS ARE CATEGORY 0040

BUREAU OF STRUCTURES CONTACT
WILLIAM DREHER: 608-266-8489

CONSULTANT CONTACT
SEAN SPROMBERG: 715-845-8000

DIRECTION OF TRAFFIC

WING WALL NUMBER (1)

LIST OF DRAWINGS

1. OVERLAY PLAN

WISCONSIN
SEAN M. SPROMBERG
E-37771-008
SCHOFIELD, WI
PROFESSIONAL ENGINEER
7/3/13

STATE PROJECT NUMBER
1166-06-63

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/13/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-39-17

IH 39 NB OVER CTH O

COUNTY	TOWN/CITY/VILLAGE
MARQUETTE	MOUNDVILLE

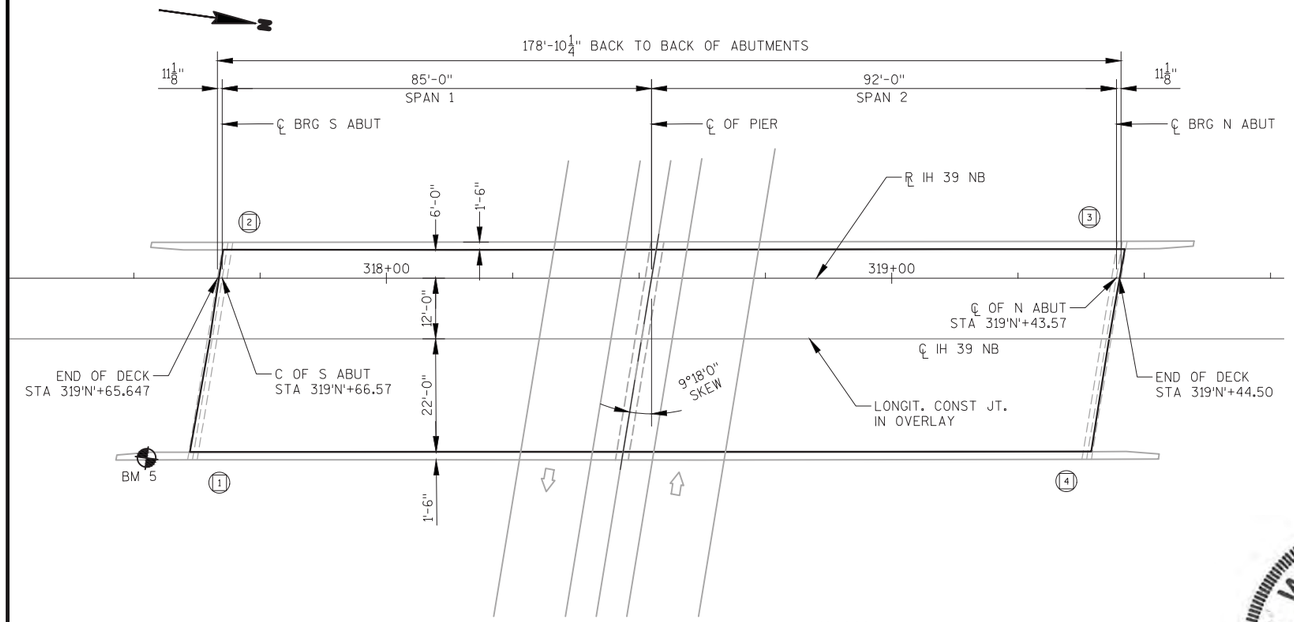
DESIGN SPEC. REHABILITATION N/A | LOAD

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RLA	SMS	MTG	SMS

OVERLAY PLAN

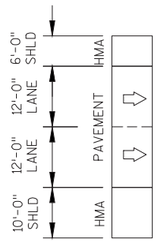
SHEET 1 OF 1

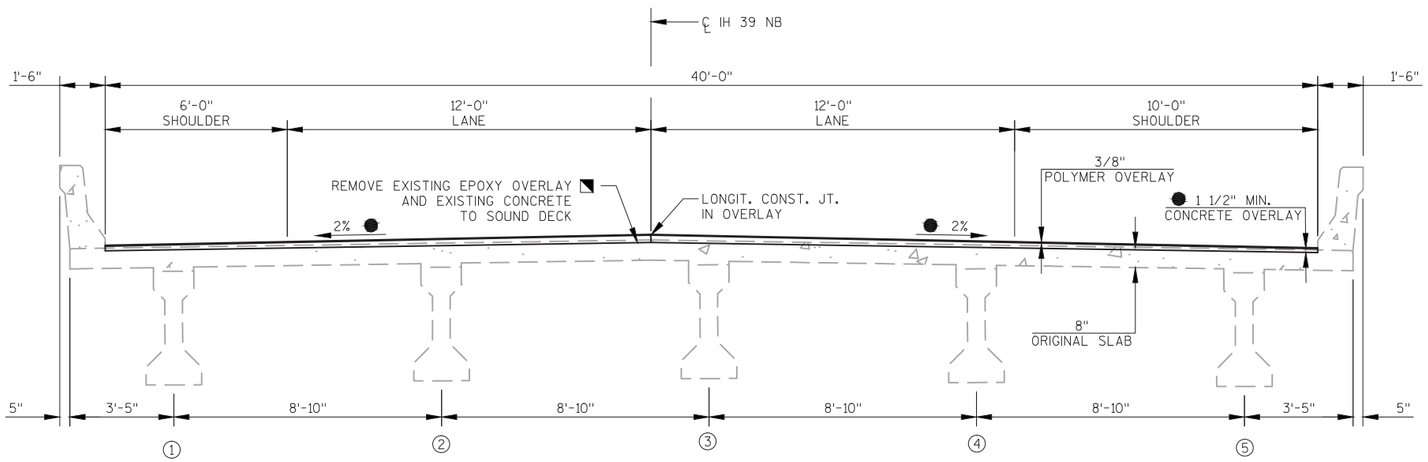
144



PLAN

(CONCRETE OVERLAY ON EXISTING 2 SPAN PRESTRESSED CONCRETE GIRDER BRIDGE)





CROSS SECTION THRU EXISTING ROADWAY

(LOOKING NORTH)

EXISTING BENCH MARK INFO

NO.	DESCRIPTION	ELEV.
5	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	832.48

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

PROFILE GRADE LINE SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING. EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ½", CONTACT THE STRUCTURES DESIGN SECTION.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

DIMENSIONS AND STATIONING SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

EXCAVATION NECESSARY TO COMPLETE THE OVERLAY SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

● EXISTING CROSS SLOPE IS 1.5%. THE PROPOSED OVERLAY THICKNESS WILL VARY FROM A MINIMUM OF 1½" AT THE EAST PARAPET AND 1⅜" AT THE WEST PARAPET TO 2⅞" AT THE CROWN. THE AVEARGE OVERLAY THICKNESS WILL BE APPROXIMATELY 2¼".

✳ QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL DECK REPAIR LOCATIONS WITH THE ENGINEER.

◥ REMOVAL OF EPOXY OVERLAY IS INCIDENTAL TO THE BID ITEM "CLEANING DECKS". A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

✳✳ CONCRETE SURFACE REPAIR REQ'D ON PARAPETS AND SUBSTRUCTURES AS DESIGNATED BY THE ENGINEER. QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL SURFACE REPAIR LOCATIONS WITH THE ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND INSIDE FACES OF PARAPETS AT THE DECK AND WINGS.

◭ ITEM REQUIRED AT DECK AND PARAPET JOINTS AT BRIDGE ENDS.

DESIGN DATA

ULTIMATE DESIGN STRESSES
CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 PSI
ALL OTHER: f'c = 3,500 PSI

LIVE LOAD
INVENTORY RATING: HS-18
OPERATIONAL RATING: HS-35
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 250 KIPS

TRAFFIC DATA
AADT (2014) 16,100
AADT (2034) 19,900

TOTAL ESTIMATED QUANTITIES

	BID ITEM #	BID ITEMS	UNIT	TOTAL
◭	492.2010.S	SEALING CRACKS/JOINTS WITH HOT-APPLIED SEALANT	GAL	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	160
✳	509.0301	PREPARATION DECKS TYPE 1	SY	80
✳	509.0302	PREPARATION DECK TYPE 2	SY	40
	509.0500	CLEANING DECKS	SY	795
✳✳	509.1500	CONCRETE SURFACE REPAIR	SF	10
✳	509.2000	FULL-DEPTH DECK REPAIR	SY	4
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	57
	509.5100.S	POLYMER OVERLAY	SY	795

ALL ITEMS ARE CATEGORY 0050

BUREAU OF STRUCTURES CONTACT
WILLIAM DREHER: 608-266-8489

CONSULTANT CONTACT
SEAN SPROMBERG: 715-845-8000

DIRECTION OF TRAFFIC

WING WALL NUMBER (1)

LIST OF DRAWINGS

1. OVERLAY PLAN

WISCONSIN
SEAN M. SPROMBERG
E-37771-008
SCHOFIELD, WI
PROFESSIONAL ENGINEER
6/20/13

STATE PROJECT NUMBER
1166-06-63

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 07/24/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-39-19

IH 39 NB OVER STH 23/CTH P

COUNTY	TOWN/~~CITY/VILLAGE~~
MARQUETTE	MOUNDVILLE

DESIGN SPEC. REHABILITATION N/A | LOAD

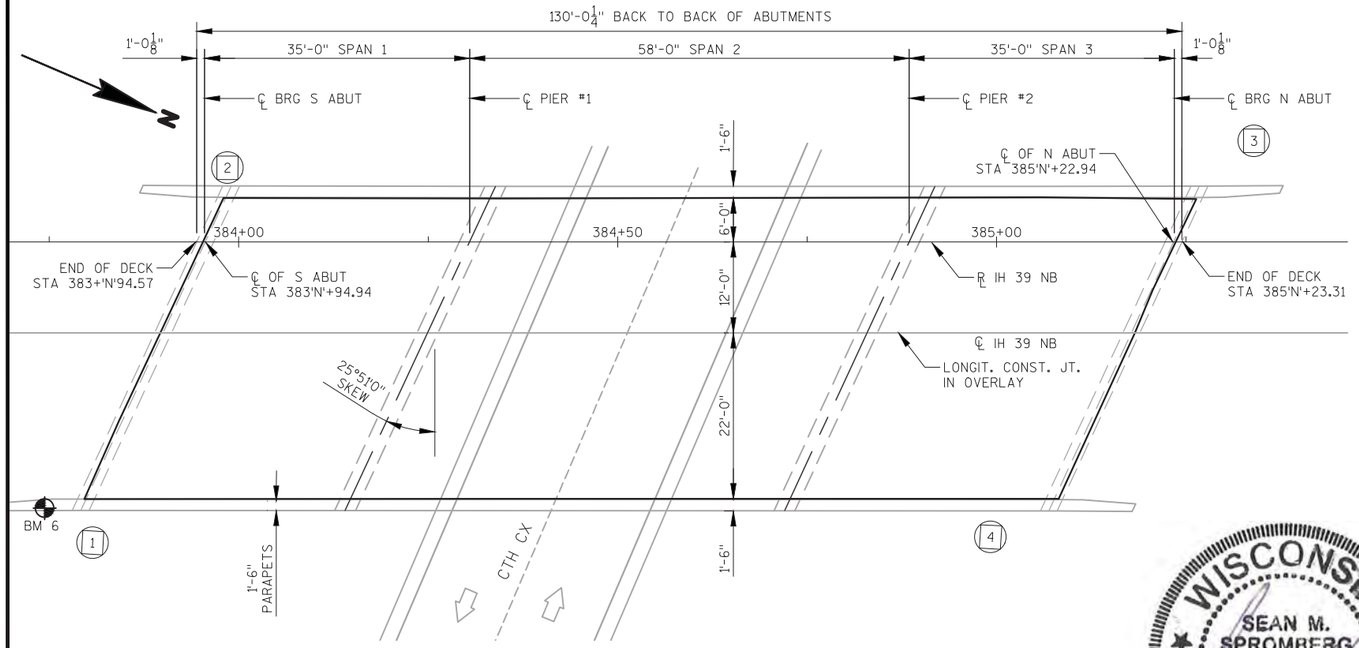
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RLA	SMS	MTG	SMS

OVERLAY PLAN

SHEET 1 OF 1

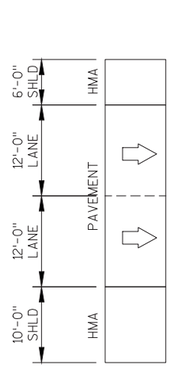
145

STATE PROJECT NUMBER
1166-06-63



PLAN

(REHAB - CONCRETE OVERLAY ON EXISTING 3 SPAN HAUNCHED SLAB BRIDGE)



7/3/13

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

PROFILE GRADE LINE SHALL BE DETERMINED BASED ON A MINIMUM OVERLAY THICKNESS OF 1½" PLACED ABOVE THE DECK SURFACE AFTER CLEANING, EXPECTED AVERAGE OVERLAY THICKNESS IS 2¼". IF EXPECTED AVERAGE OVERLAY THICKNESS IS EXCEEDED BY MORE THAN ¼", CONTACT THE STRUCTURES DESIGN SECTION.

TOP OF EXISTING DECK ELEVATIONS SHALL BE DETERMINED FROM A FROM A FIELD SURVEY AT LOCATIONS DEEMED NECESSARY FOR ESTABLISHING OVERLAY THICKNESS FOR ACCURATE RATINGS AND POINT OF MINIMUM THICKNESS.

DIMENSIONS AND STATIONING SHOWN ARE BASED ON THE EXISTING ORIGINAL STRUCTURE PLANS.

EXCAVATION NECESSARY TO COMPLETE THE OVERLAY SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY OVERLAY DECKS".

● EXISTING CROSS SLOPE IS 1.5%. THE PROPOSED OVERLAY THICKNESS WILL VARY FROM A MINIMUM OF 1½" AT THE EAST PARAPET AND 1⅞" AT THE WEST PARAPET TO 2⅞" AT THE CROWN. THE AVEARGE OVERLAY THICKNESS WILL BE APPROXIMATELY 2¼".

✳ QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL DECK REPAIR LOCATIONS WITH THE ENGINEER.

◥ REMOVAL OF EPOXY OVERLAY IS INCIDENTAL TO THE BID ITEM "CLEANING DECKS". A MINIMUM OF 1-INCH OF CONCRETE SHALL BE REMOVED FROM THE ENTIRE BRIDGE DECK UNDER THE BID ITEM "CLEANING DECKS".

✳✳ CONCRETE SURFACE REPAIR REQ'D ON PARAPETS AND SUBSTRUCTURES AS DESIGNATED BY THE ENGINEER. QUANTITY LISTED IS TENTATIVE. CONTRACTOR SHALL COORDINATE THE FIELD IDENTIFICATION AND DETERMINATION OF ALL SURFACE REPAIR LOCATIONS WITH THE ENGINEER.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE OVERLAY AND THE TOP AND INSIDE FACES OF PARAPETS AT THE DECK AND WINGS.

◭ ITEM REQUIRED AT DECK AND PARAPET JOINTS AT BRIDGE ENDS.

DESIGN DATA

ULTIMATE DESIGN STRESSES
CONCRETE MASONRY OVERLAY DECKS: f'c = 4,000 PSI
ALL OTHER: f'c = 3,500 PSI

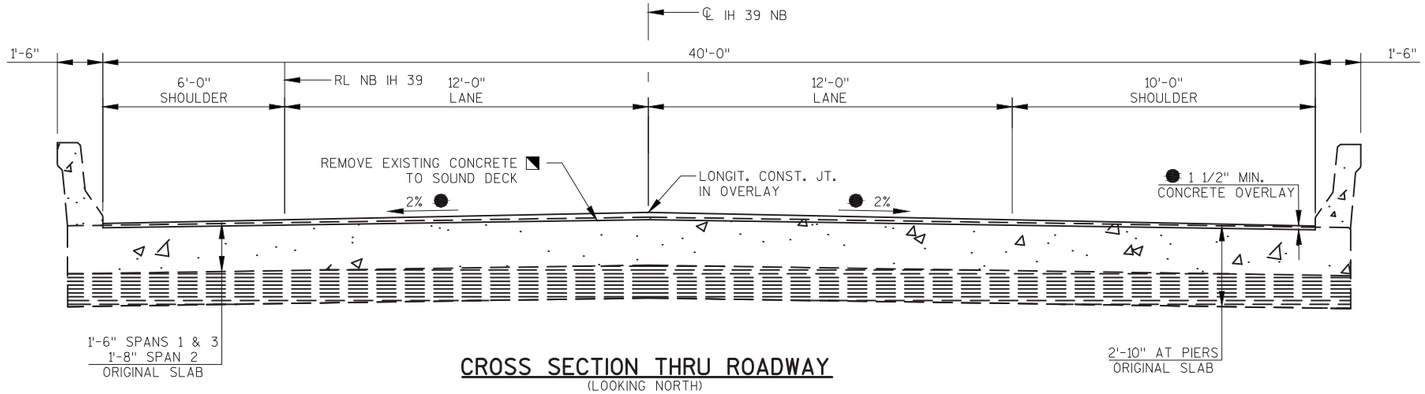
LIVE LOAD
INVENTORY RATING: HS-20
OPERATIONAL RATING: HS-34
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV): 250 KIPS

TRAFFIC DATA
AADT (2014) 16,100
AADT (2034) 19,900

TOTAL ESTIMATED QUANTITIES

	BID ITEM #	BID ITEMS	UNIT	SUPER	SOUTH ABUT	NORTH ABUT	TOTAL
◭	492.2010.S	SEALING CRACKS/JOINTS WITH HOT-APPLIED SEALANT	GAL	1	-	-	1
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	645	-	-	645
✳	509.0301	PREPARATION DECKS TYPE 1	SY	58	-	-	58
✳	509.0302	PREPARATION DECK TYPE 2	SY	29	-	-	29
	509.0500	CLEANING DECKS	SY	578	-	-	578
✳✳	509.1500	CONCRETE SURFACE REPAIR	SF	10	5	5	20
✳	509.2000	FULL-DEPTH DECK REPAIR	SY	1	-	-	1
	509.2500	CONCRETE MASONRY OVERLAY DECKS	CY	42	-	-	42
	604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	-	186	186	372

ALL ITEMS ARE CATEGORY 0060



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

EXISTING BENCH MARK INFO

NO.	DESCRIPTION	ELEV.
6	WISDOT ALUMINUM MONUMENT ON BARRIER WALL	809.82

BUREAU OF STRUCTURES CONTACT
WILLIAM DREHER: 608-266-8489

CONSULTANT CONTACT
SEAN SPROMBERG: 715-845-8000

DIRECTION OF TRAFFIC

WING WALL NUMBER (1)

LIST OF DRAWINGS

1. OVERLAY PLAN

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 08/13/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-39-21

IH 39 NB OVER CTH CX

COUNTY	TOWN/~~CITY~~/~~VILLAGE~~
MARQUETTE	MOUNDVILLE

DESIGN SPEC.	LOAD
REHABILITATION N/A	

DESIGNED BY RLA	DESIGN CK'D. SMS	DRAWN BY MTG	PLANS CK'D. SMS

OVERLAY PLAN

SHEET 1 OF 1

STATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) (UNADJUSTED)				CUMULATIVE VOL (CY)		MASS ORDINATE NOTE 5
		CUT	UNUSABLE PAVEMENT MATERIAL	FILL	EBS	CUT NOTE 1	UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	EBS	CUT 1.00 NOTE 1	EXPANDED FILL 1.25 NOTE 4	
20'G'+97	—	14	6	92	0	—	—	—	—	—	—	—
21'G'+50	53	15	6	33	0	28	11	123	0	28	154	-137
22'G'+00	50	15	6	20	0	28	10	50	0	56	216	-181
22'G'+50	50	21	6	21	0	34	10	38	0	89	263	-205
23'G'+00	50	50	6	1	0	66	10	21	0	155	289	-176
23'G'+50	50	82	6	0	0	104	10	2	0	258	291	-84
23'G'+85	35	72	6	1	0	86	7	1	0	345	293	-7
24'G'+10	25	74	6	0	0	67	5	1	0	412	294	55
24'G'+35	25	72	6	2	0	68	5	1	0	480	295	116
24'G'+85	50	86	6	1	0	128	10	3	0	608	298	231
25'G'+50	65	63	6	43	0	156	13	53	0	764	364	307
26'G'+00	50	50	6	63	0	104	10	98	0	868	487	279
26'G'+58	58	119	6	0	0	182	12	67	0	1050	570	366
				COLUMN TOTALS		1050	114	456	0			

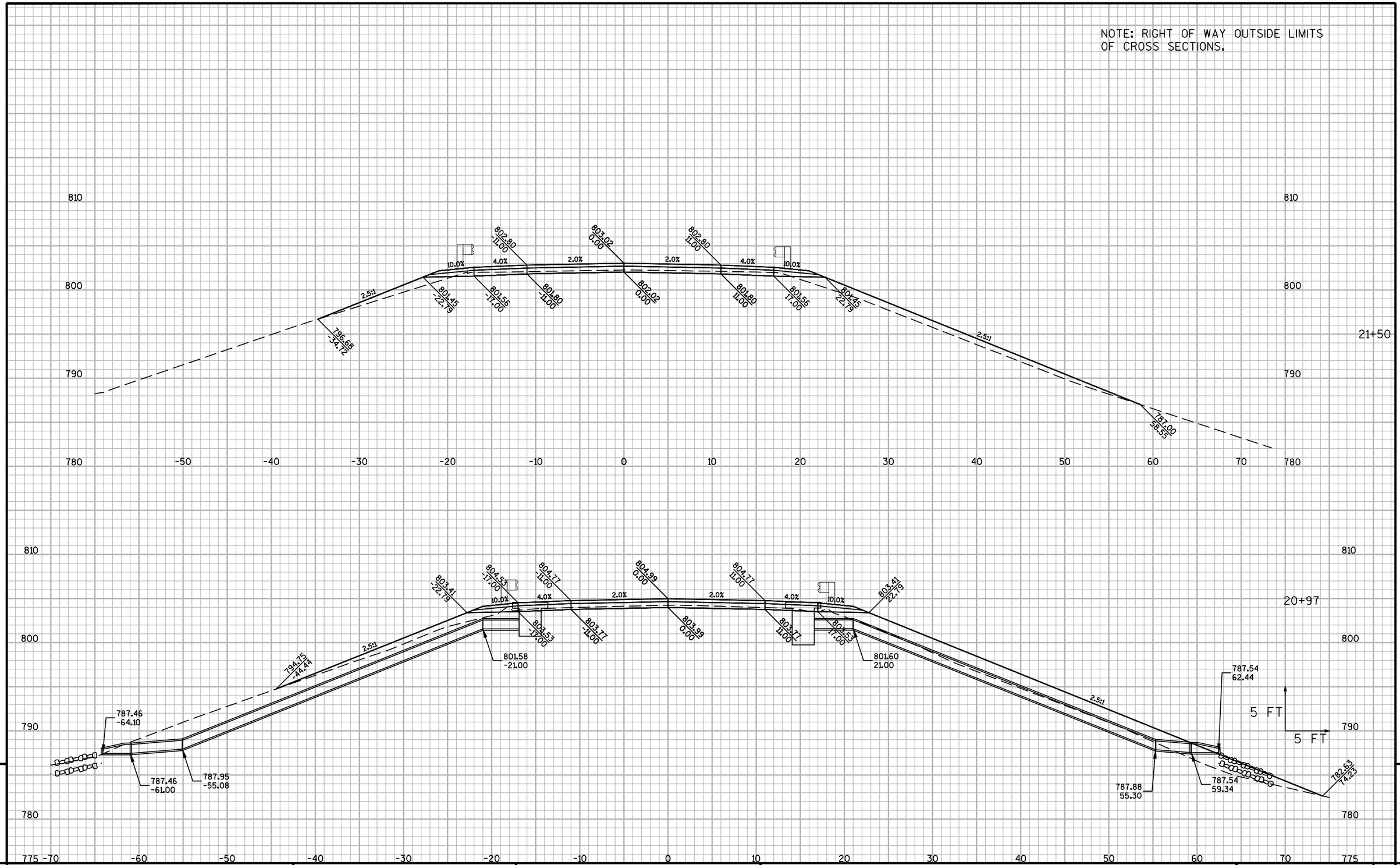
NOTES:

1) CUT INCLUDES UNUSABLE PAVEMENT MATERIAL
2) UNUSABLE PAVEMENT MATERIAL DOES NOT APPEAR IN THE CROSS SECTIONS
3) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT MATERIAL EXCAVATION VOLUME
4) EXPANDED FILL = UNEXPANDED FILL * EXPANDED FILL FACTOR. EXPANDED FILL FACTOR = 1.25
5) MASS ORDINATE = (CUT - UNUSABLE PAVEMENT MATERIAL) - (FILL * FILL FACTOR)

9

9

NOTE: RIGHT OF WAY OUTSIDE LIMITS
OF CROSS SECTIONS.



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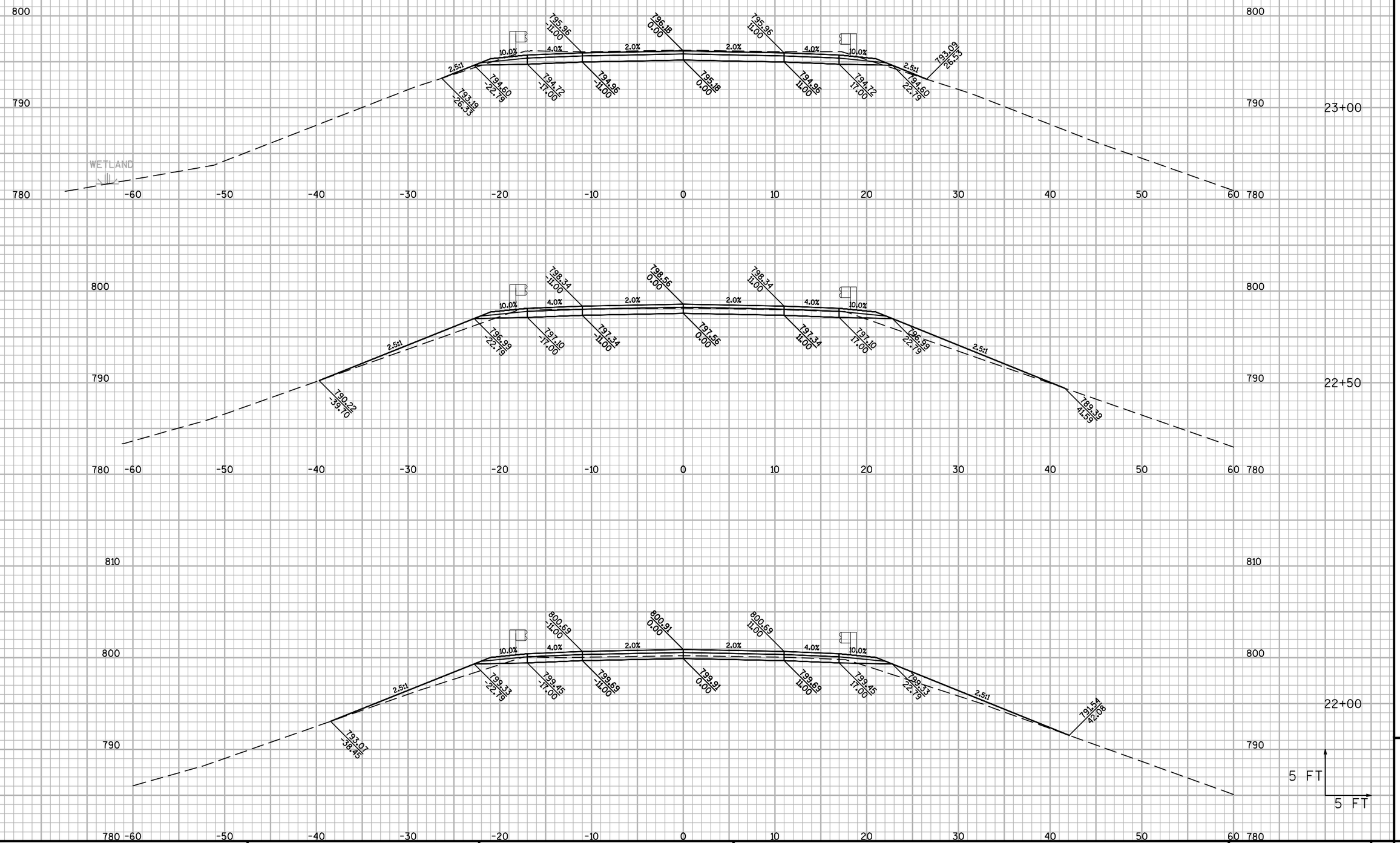
9

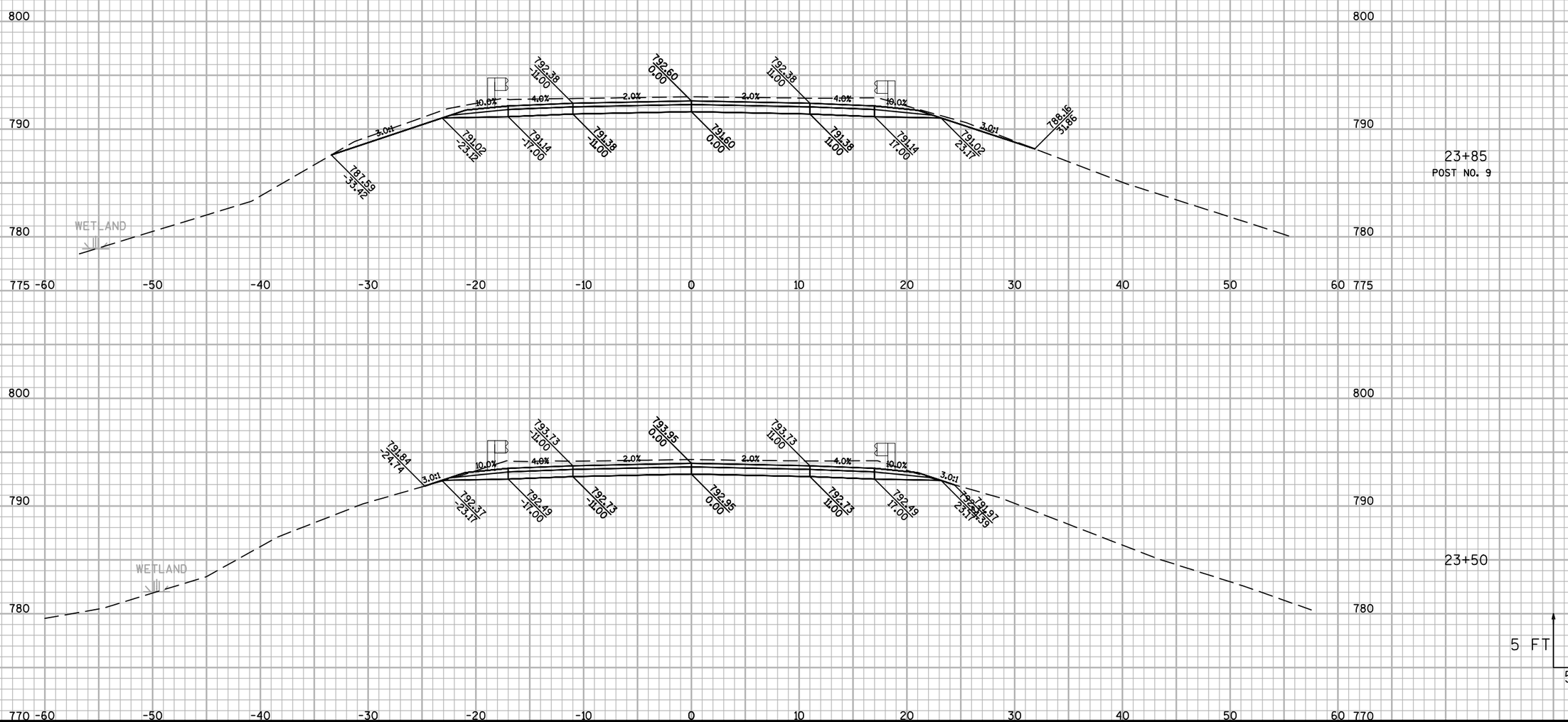
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	CROSS SECTIONS - GROUSE DRIVE	SHEET 148	E

NOTE: RIGHT OF WAY OUTSIDE LIMITS OF CROSS SECTIONS.



9 9

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	CROSS SECTIONS - GROUSE DRIVE	SHEET 149	E

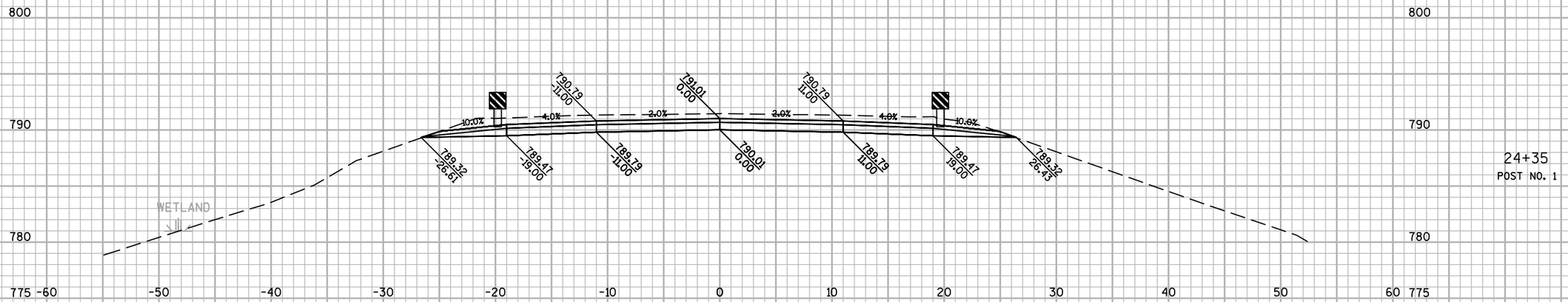


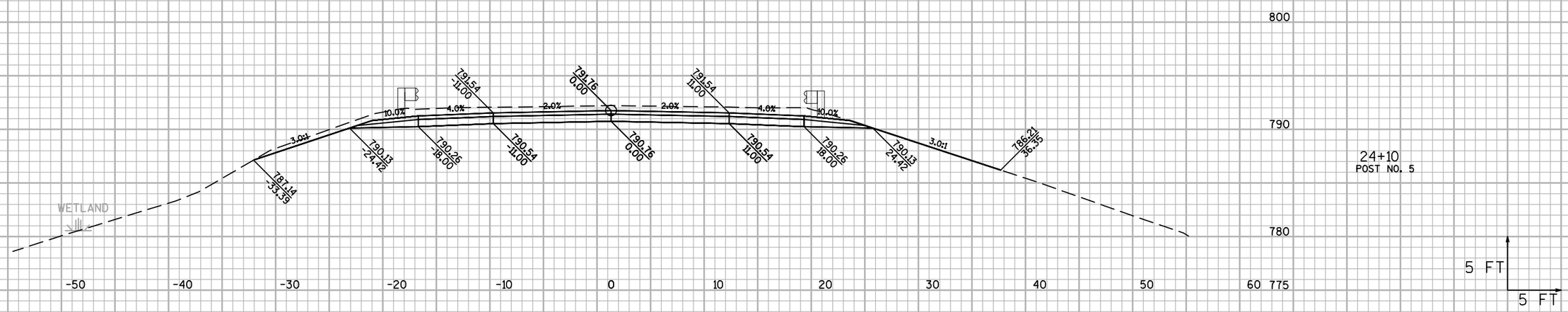
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	CROSS SECTIONS - GROUSE DRIVE	SHEET 150	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_090201_XS.DWG PLOT DATE : 7/31/2013 4:26 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : _____ PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

NOTE: RIGHT OF WAY OUTSIDE LIMITS OF CROSS SECTIONS.





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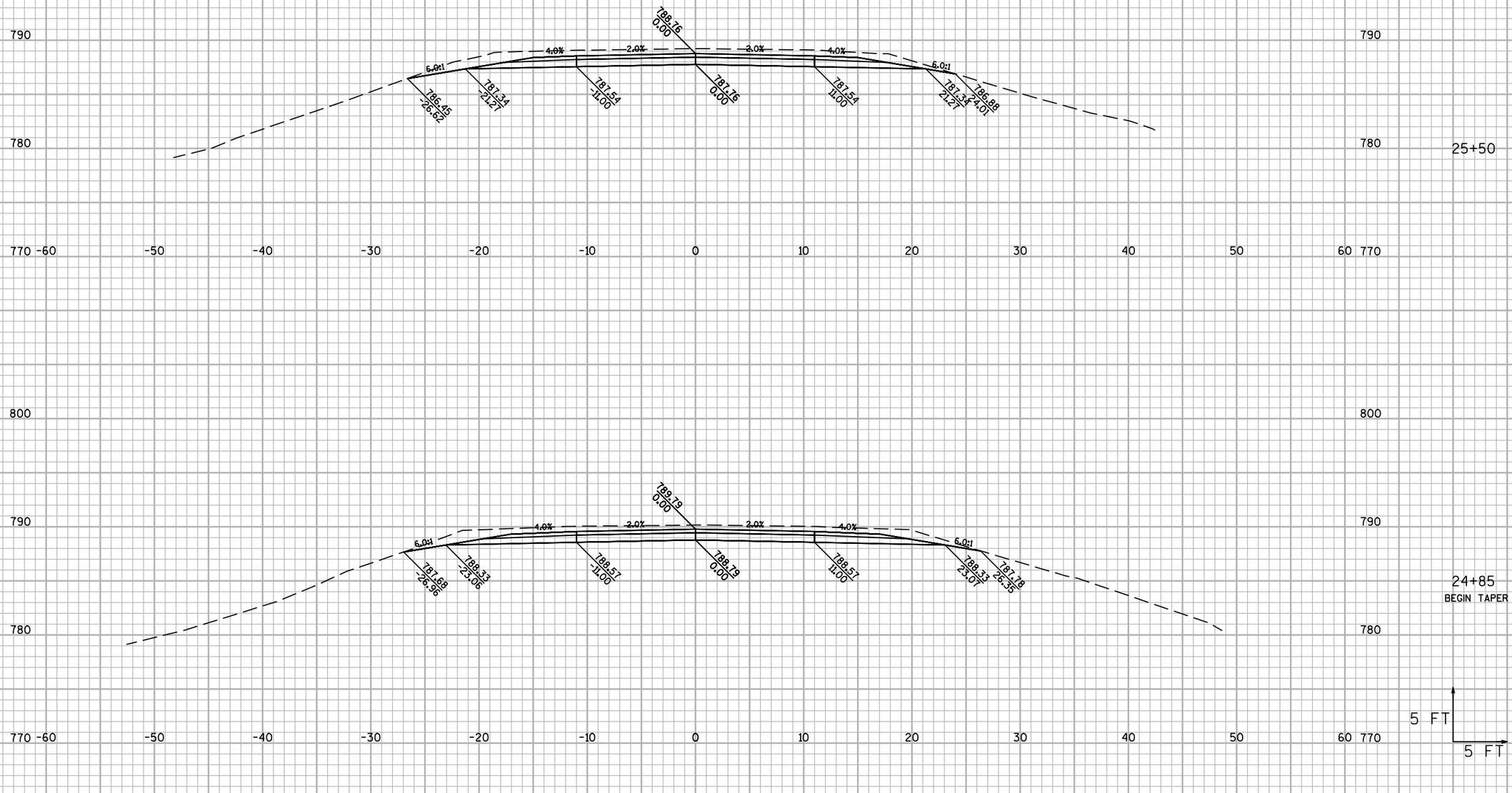
PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	CROSS SECTIONS - GROUSE DRIVE	SHEET 151	E

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_090201_XS.DWG PLOT DATE : 7/31/2013 4:26 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : _____ PLOT SCALE : 1:10_XREF

NOTE: RIGHT OF WAY OUTSIDE LIMITS
OF CROSS SECTIONS.

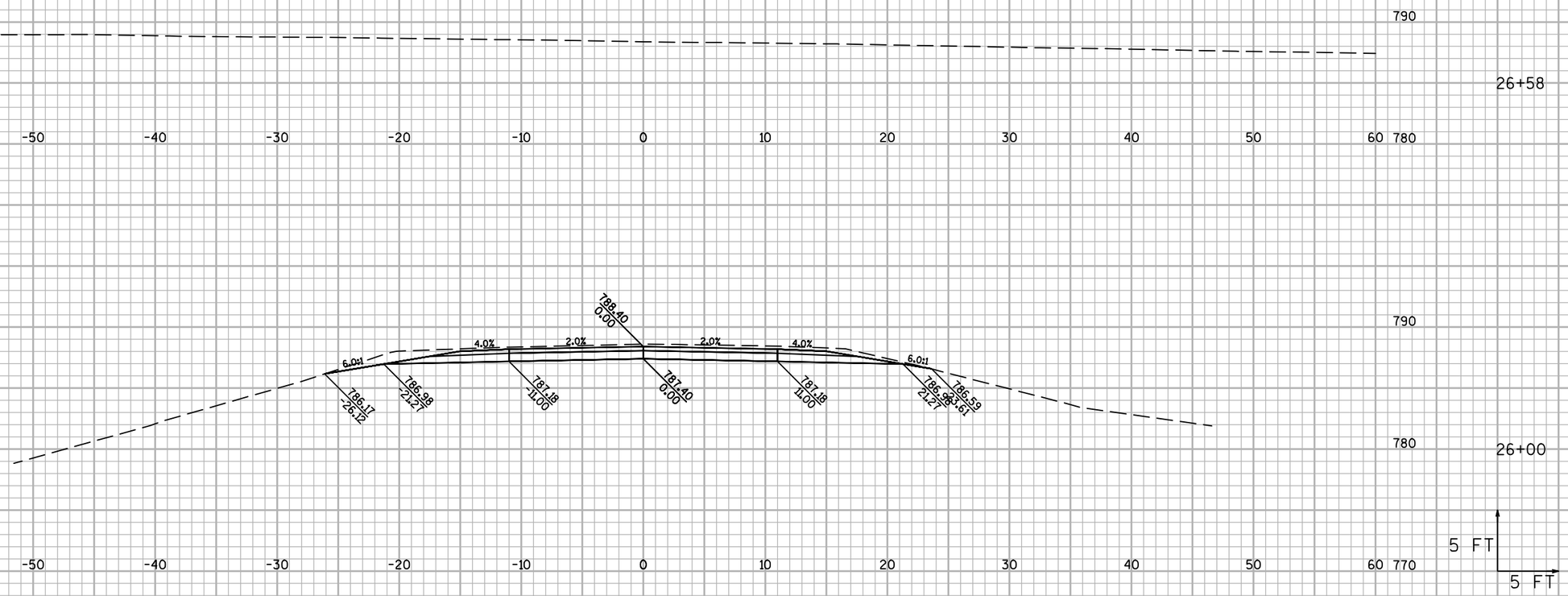


9

9

PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	CROSS SECTIONS - GROUSE DRIVE	SHEET 152	E

NOTE: RIGHT OF WAY OUTSIDE LIMITS OF CROSS SECTIONS.



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PROJECT NO: 1166-06-63	HWY: IH 39	COUNTY: MARQUETTE	CROSS SECTIONS - GROUSE DRIVE	SHEET 153	E

9

FILE NAME : P:\2012\2012.047 - WISDOT NCR - I39 BRIDGES - MARQUETTE CTY\CAD\PLANS\12047_090201_XS.DWG PLOT DATE : 7/31/2013 4:26 PM PLOT BY : GRUNDEMANN, CHAD PLOT NAME : _____ PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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