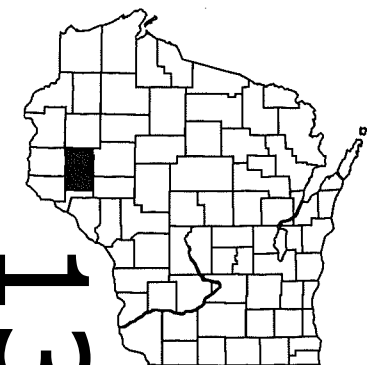


ORDER OF SHEETS

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

TOTAL SHEETS = 178



DESIGN DESIGNATION

A.A.D.T. (2015)	= 34,300
A.A.D.T. (2035)	= 44,500
D.H.V.	= 4,673
D.D.	= 58/42
T.	= 25.0% OF AADT
DESIGN SPEED	= 70 MPH
ESALS	= 30,100,000

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
SWAMP AREA	----
WOODED OR SHRUB AREA	----

PROFILE	
GRADE LINE	----
ORIGINAL GROUND	----
MARSH OR ROCK PROFILE (To be noted as such)	----
SPECIAL DITCH	----
GRADE ELEVATION	95.36
CULVERT (Profile View)	----
UTILITIES	
ELECTRIC	----
FIBER OPTIC	----
GAS	----
SANITARY SEWER	----
STORM SEWER	----
TELEPHONE	----
WATER	----
UTILITY PEDESTAL	----
POWER POLE	----
TELEPHONE POLE	----

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MENOMONIE - EAU CLAIRE MENOMONIE - EAU CLAIRE

(RED CEDAR RIVER TO USH 12/STH 29 (EB))

(RED CEDAR RIVER TO USH 12/STH 29 (WB))

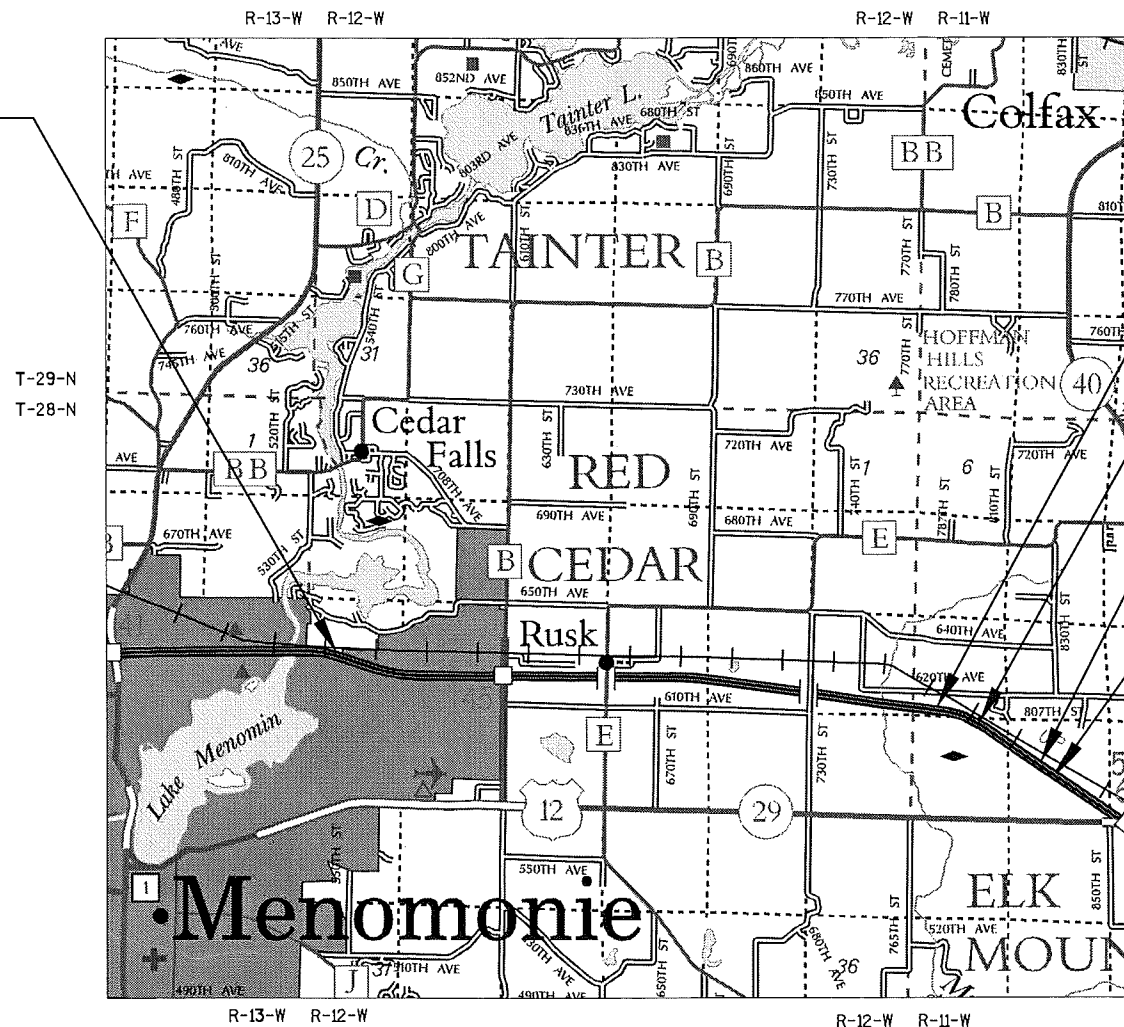
IH 94
DUNN COUNTY

IH 94
DUNN COUNTY

STATE PROJECT NUMBER
1022-03-74

STATE PROJECT NUMBER
1022-06-72

BEGIN PROJECT
1022-03-74
STA. 182+60'E'
X=171408.7990
Y=181966.7563
1022-06-72
STA. 187+75'W'
X=171903.4011
Y=181878.0128



LAYOUT
SCALE 0 1 MI.
TOTAL NET LENGTH OF CENTERLINE = 7.450 MI. (1022-03-74)
TOTAL NET LENGTH OF CENTERLINE = 7.335 MI. (1022-06-72)

EXCEPTION TO NET CENTERLINE LENGTH
STA. 494+65'E' - 495+30'E'
(STRUCTURES B-17-34 & 35)

EXCEPTION TO NET CENTERLINE LENGTH
STA. 516+95'E' - 517+28'E'
(STRUCTURES B-17-36 & 37)

EXCEPTION TO NET CENTERLINE LENGTH
STA. 564+65'E' - 565+00'E'
(STRUCTURES B-17-38 & 39)

END PROJECT
1022-03-74
STA. 576+00'E'
1022-06-72
STA. 576+30'W'

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	NW REGION, EAU CLAIRE
Designer	K. KOPACZ
Project Manager	S. LAMBELE
Regional Examiner	D. OJIBWAY
Regional Supervisor	R. SHERMO

APPROVED FOR THE DEPARTMENT
DATE: 4/24/14
(Signature)

UTILITIES CONTACTS

GENERAL NOTES

24-7 TELCOM INC.
MR. GARY WAYNE
P.O. BOX 115
DOWNSVILLE, WI 54735
PHONE: 715-664-8311 (CELL 715-308-1915)
EMAIL: GARYW@WWT.NET

AT&T LEGACY
MR. BILL KOENIG
P.O. BOX 244
LAKE MILLS, WI 53551
PHONE: 608-628-0575
EMAIL: JMC140@FRONTIER.COM

DAIRYLAND POWER COOPERATIVE
MR. KURT CHILDS
3200 EAST AVE. SOUTH
P.O. BOX 817
LACROSSE, WI 54602-0817
PHONE: 608-788-4000
EMAIL: KDC@DAIRYNET.COM

DUNN ENERGY COOPERATIVE
MR. MIKE ANDRASCHKO
P.O. BOX 220
MENOMONIE, WI 54751
PHONE: 715-232-6240
EMAIL: MANDRA@DUNNENERGY.COM

LEVEL 3 COMMUNICATIONS
MS. NICKEY WORTHINGTON
1025 ELDORADO BLVD.
BROOMFIELD, CO 80021
PHONE: 720-888-0336
EMAIL: NICKEY.WORTHINGTON@LEVEL3.COM

CITY OF MENOMONIE - SEWER & WATER DEPT.
MR. RANDY EIDE
800 WILSON AVE.
MENOMONIE, WI 54751-2734
PHONE: 715-232-2207
EMAIL: REIDE@MENOMONIE-WI.GOV

XCEL ENERGY (TRANS.)
MS. PAM TAYLOR
1414 W. HAMILTON AVE.
P.O. BOX 8
EAU CLAIRE, WI 54702-0008
PHONE: 715-737-1306
EMAIL: PAMELA.L.TAYLOR@XCELENERGY.COM

XCEL ENERGY (DISTR.)
MR. MIKE JOHNSON
320 HELLER ROAD
MENOMONIE, WI 54751
PHONE: 715-232-7415 (CELL 715-577-7428)
EMAIL: MICHAEL.A.JOHNSEN@XCELENERGY.COM

XCEL ENERGY (GAS)
MR. MIKE JOHNSON
320 HELLER ROAD
MENOMONIE, WI 54751
PHONE: 715-232-7415 (CELL 715-577-7428)
EMAIL: MICHAEL.A.JOHNSEN@XCELENERGY.COM

CENTURYLINK COMMUNICATIONS
F/K/A QWEST COMMUNICATIONS
MR. BOB SAMPSON
1310 EAST MARY ST.
OTTUMWA, IA 52501
PHONE: 636-887-5367
EMAIL: ROBERT.SAMPSON@CENTURYLINK.COM

AT&T WISCONSIN
MR. RICK PODOLAK
304 SOUTH DEWEY ST.
EAU CLAIRE, WI 54701
PHONE: 715-839-5565
EMAIL: RP4514@ATT.COM

WISDOT COMMUNICATION LINE
MR. JEFF MADSON
433 W. ST. PAUL AVE., SUITE 300
MILWAUKEE, WI 53203-3007
PHONE: 414-225-3723
EMAIL: JEFFREY.MADSON@DOT.WI.GOV

THE EXACT LOCATIONS OF BUTT JOINTS AND CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL ARE TO BE DETERMINED BY THE ENGINEER.

BEAM GUARD RAIL HEIGHT AT LEAST 27³/₄INCHES AND LESS THAN 29 INCHES IN THE FINAL CONDITION DOES NOT REQUIRE ADJUSTMENT.

THE EXACT LOCATIONS OF BEAM GUARD ADJUSTMENTS AND REPLACEMENTS ARE TO BE DETERMINED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

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

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE COUNTY SURVEYOR CONCERNING MONUMENT AND PROPERTY CORNER PRESERVATION.

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

WHEN THE QUANTITY OF THE ITEM OF HMA PAVEMENT IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

LOCATIONS FOR PERMANENT SIGNS SHOWN ON THE PLAN ARE APPROXIMATE. ACTUAL LOCATIONS OF PERMANENT SIGNS ARE TO BE COORDINATED IN THE FIELD BY THE ENGINEER.

PAVEMENT MARKING PAINT FOR LANE LINES ARE INTENDED TO BE INTERIM LANE LINE MARKINGS UNTIL GROOVES CAN BE CUT IN THE NEW ASPHALT SURFACE FOR WET REFLECTIVE TAPE APPLICATION. CUT THE GROOVES FOR WET REFLECTIVE TAPE APPLICATION AT THE SAME LOCATION WHERE THE PAVEMENT MARKING PAINT WAS APPLIED AS LANE LINES.

THE 4¹/₂" HMA PAVEMENT SHALL BE PLACED WITH A 2¹/₂" 19.0 mm TYPE E-10 LOWER LAYER AND A 2" TYPE SMA-SPECIAL UPPER LAYER.
THE 3" HMA PAVEMENT SHALL BE PLACED WITH A 1" 9.5 mm TYPE E-10 LEVELING LAYER AND A 2" 12.5 mm TYPE E-10 UPPER LAYER.
THE 2" HMA PAVEMENT SHALL BE PLACED IN ONE LAYER WITH A 2" 12.5 mm TYPE E-10.

MAINTENACE AND REPAIR OF TEMPORAY WEDGE JOINT WILL BE INCIDENTAL TO THE APPROPRIATE HMA PAVEMENT BID ITEM.

TRAFFIC CONTROL NEEDED DURING MAINTENACE AND REPAIRS TEMPORAY WEDGE JOINT WILL BE INCIDENTAL TO THE TRAFFIC CONTROL PROJECT BID ITEM.

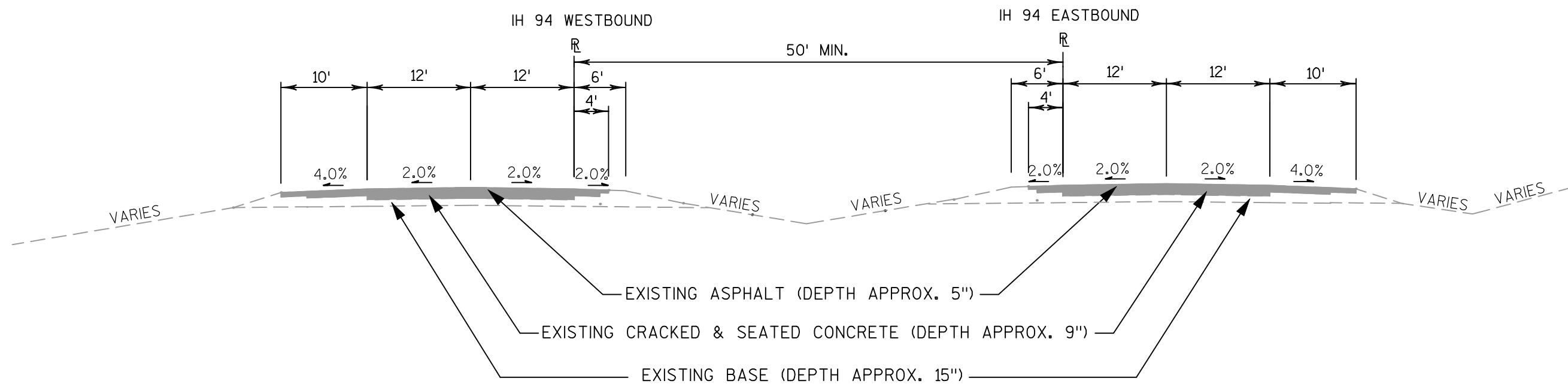


Dial **811** or (800)242-8511
www.DiggersHotline.com

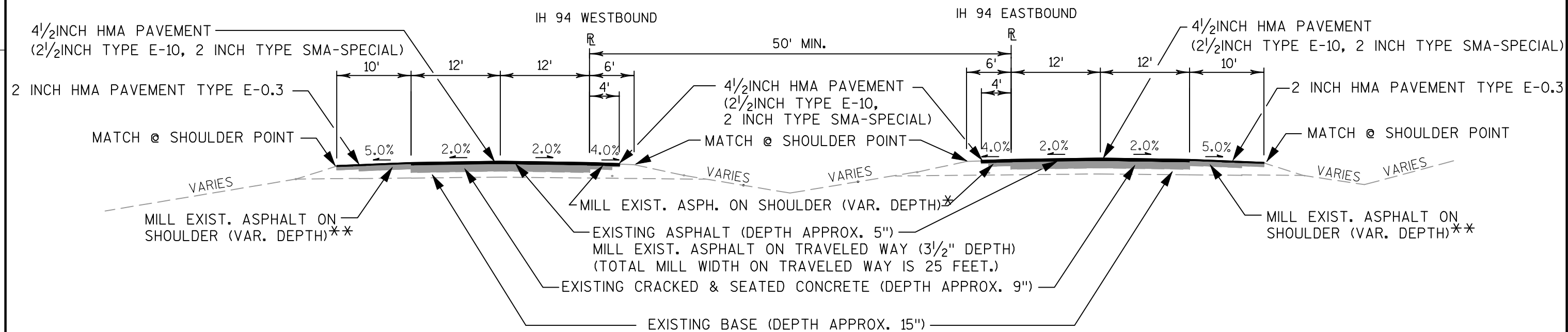
OTHER CONTACTS

UNION PACIFIC RAILROAD
ATTN: JOHN VENICE, MANAGER SPECIAL PROJECTS
101 NORTH WACKER DRIVE-SUITE 1920; CHICAGO, IL 60606
TELEPHONE (312) 777-2043
FAX (402) 233-2769
EMAIL JNVENICE@UP.COM

U.P. CALL BEFORE YOU DIG
1-800-336-9193



TYPICAL EXISTING SECTION
IH 94
(RED CEDAR R. - USH 12/STH 29)

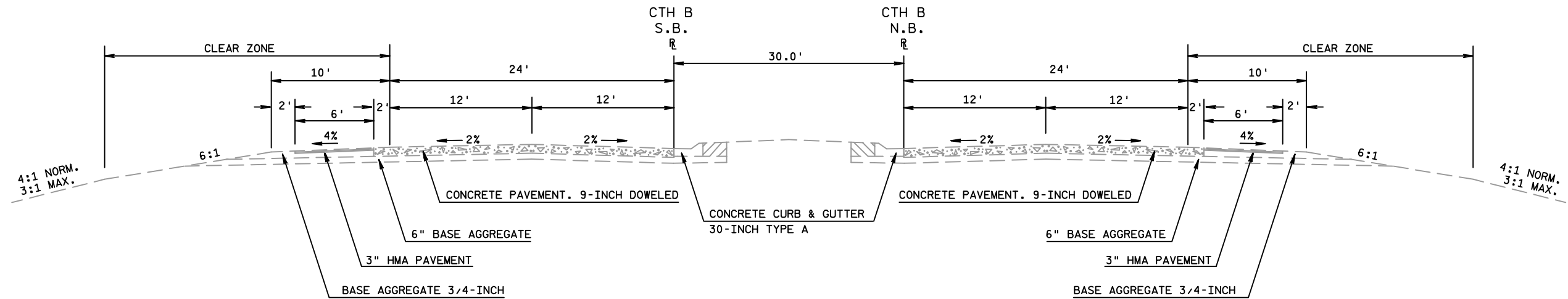


TYPICAL FINISHED SECTION
IH 94
(RED CEDAR R. - USH 12/STH 29)

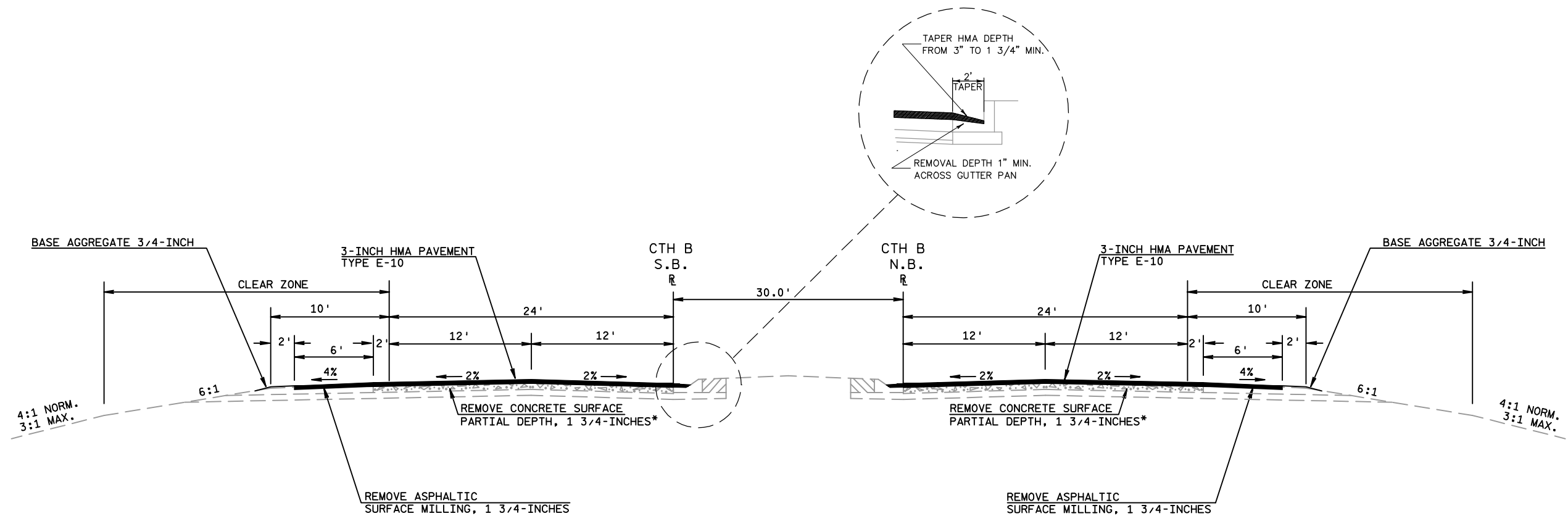
STA. 187'W'+75 TO 460'W'+20	STA. 182'E'+60 TO 494'E'+65
STA. 463'W'+20 TO 494'W'+75	STA. 495'E'+30 TO 516'E'+95
STA. 495'W'+35 TO 517'W'+15	STA. 517'E'+25 TO 564'E'+65
STA. 517'W'+45 TO 564'W'+95	STA. 565'E'+00 TO 576'E'+00
STA. 565'W'+25 TO 576'W'+30	

*MILL EXIST. ASPHALT ON INSIDE SHOULDERS 3 1/2" DEPTH
AT LANE EDGE TO 4 1/2" DEPTH AT PAVED SHOULDER EDGE.

**MILL EXIST. ASPHALT ON OUTSIDE SHOULDERS 1" DEPTH
AT LANE EDGE TO 2 1/4" DEPTH AT PAVED SHOULDER EDGE.



TYPICAL EXISTING SECTION
CTH B

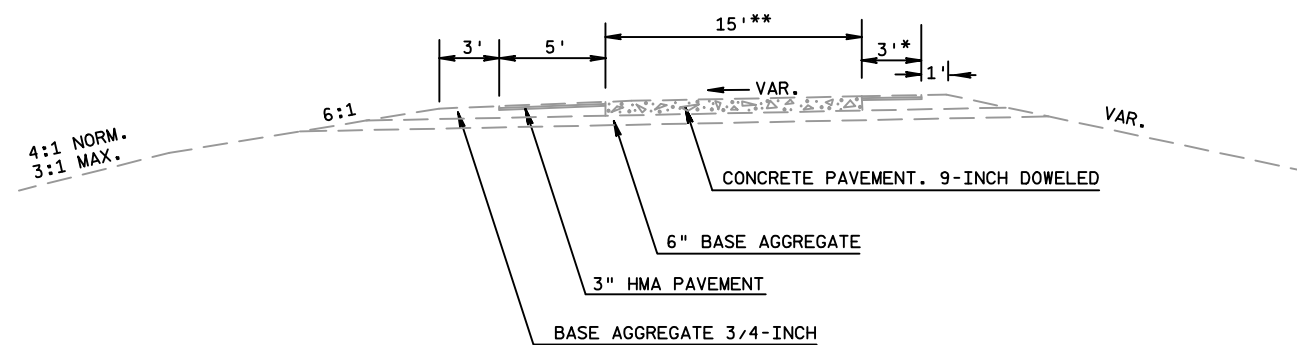


TYPICAL FINISHED SECTION
CTH B

* INCLUDES GUTTER PAN. SEE DETAIL FOR WORK AROUND EXISTING INLETS.

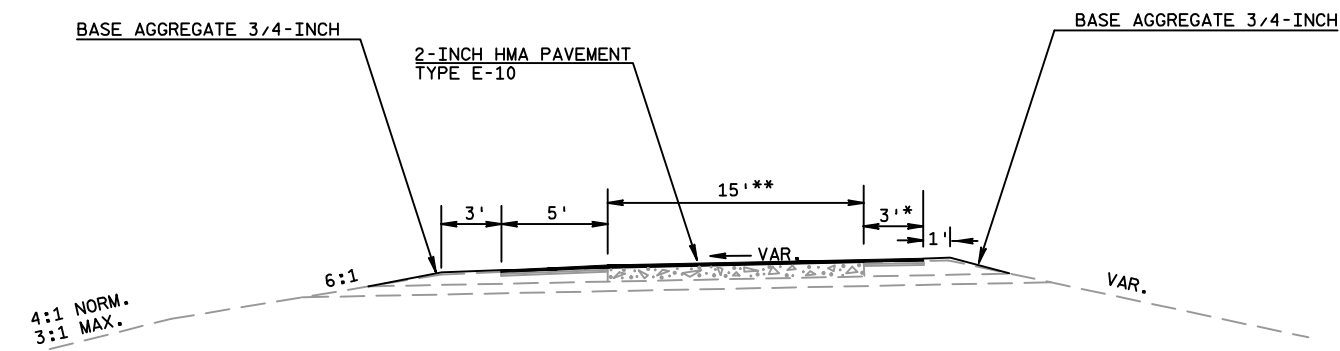
STA. 408'SB'+10 - 413'SB'+70
STA. 415'SB'+75 - 419'SB'+80

STA. 409'NB'+50 - 413'NB'+70
STA. 415'NB'+75 - 421'NB'+30



* WIDENS TO 4' AT OFF RAMP NEAR CTH B
 ** WIDENS UP TO 27' AT OFF RAMP NEAR CTH B

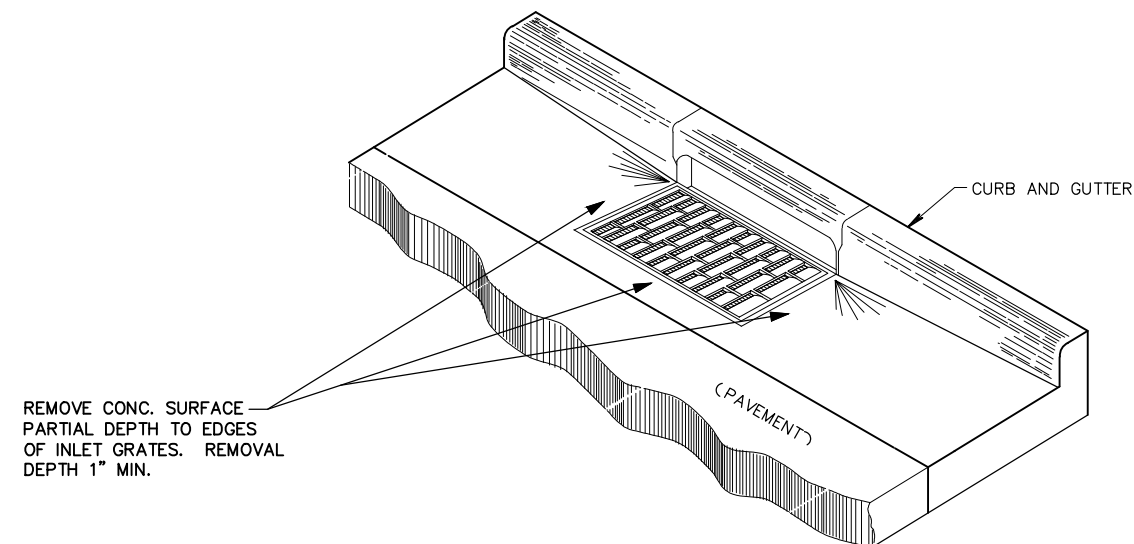
TYPICAL EXISTING SECTION
 CTH B RAMP



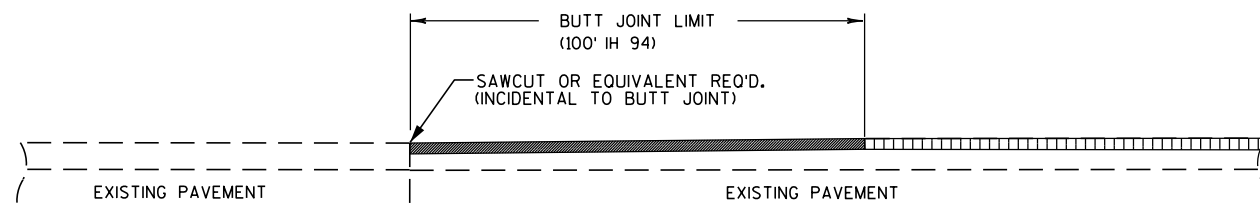
* WIDENS TO 4' AT OFF RAMP NEAR CTH B
 ** WIDENS UP TO 27' AT OFF RAMP NEAR CTH B

TYPICAL FINISHED SECTION
 CTH B RAMP

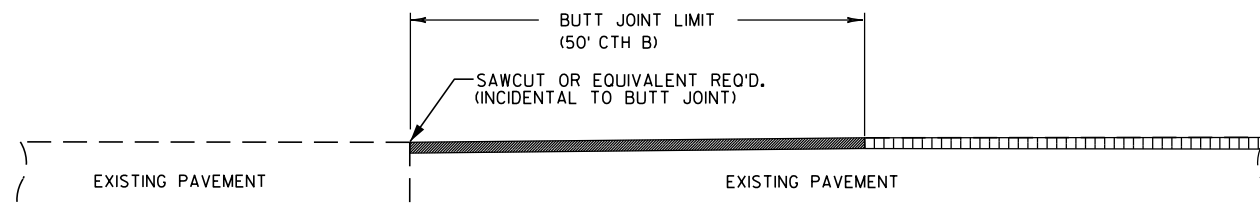
STA. 262'NW'+30 - 272'NW'+80
 STA. 260'SW'+30 - 272'SW'+75
 STA. 272'NE'+65 - 285'NE'+60
 STA. 272'SE'+60 - 283'SE'+80



SURFACE REMOVAL AT EXISTING INLETS DETAIL

**BUTT JOINT DETAIL (ASPHALT)**

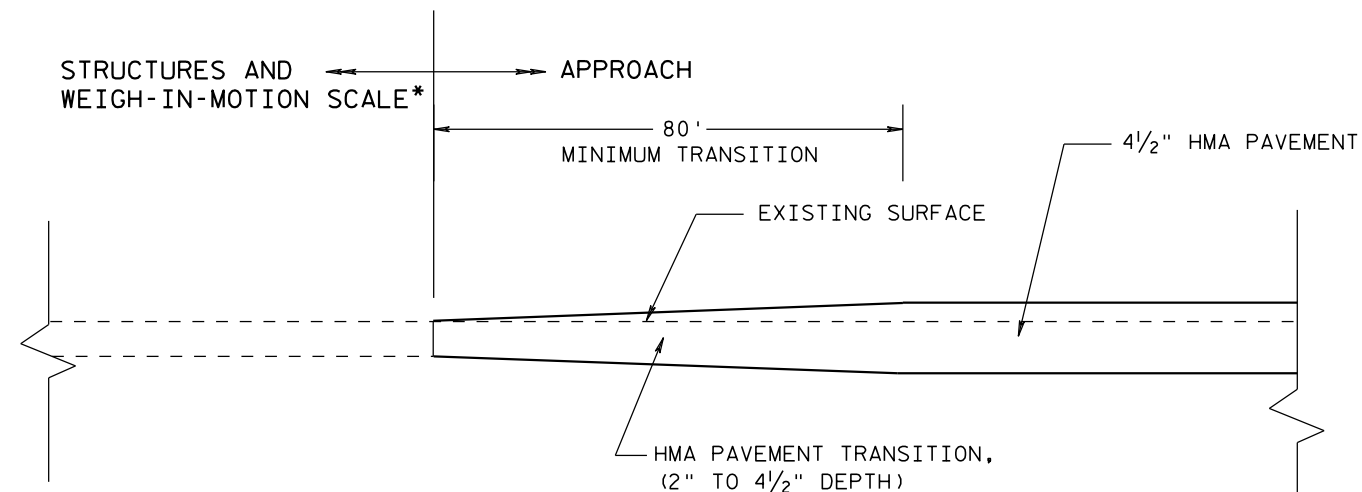
EXACT LOCATIONS AND LENGTHS DETERMINED BY THE ENGINEER.

**BUTT JOINT DETAIL (CONCRETE)**

EXACT LOCATIONS AND LENGTHS DETERMINED BY THE ENGINEER.

STRUCTURES AND
WEIGH-IN-MOTION SCALE*

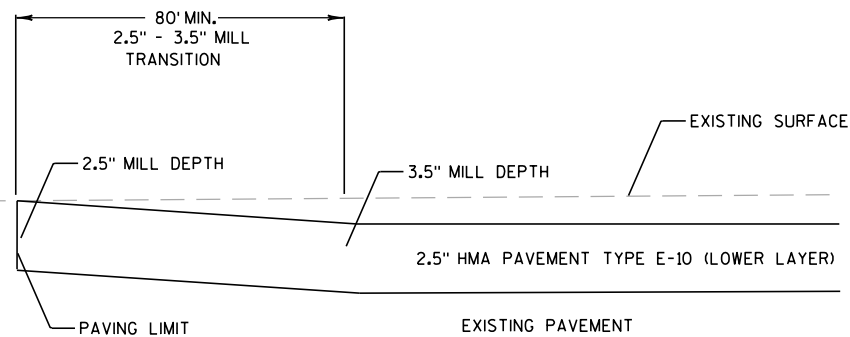
APPROACH

**PAVEMENT TRANSITION NEAR STRUCTURES AND WEIGH-IN-MOTION SCALE* ON IH 94 DETAIL**

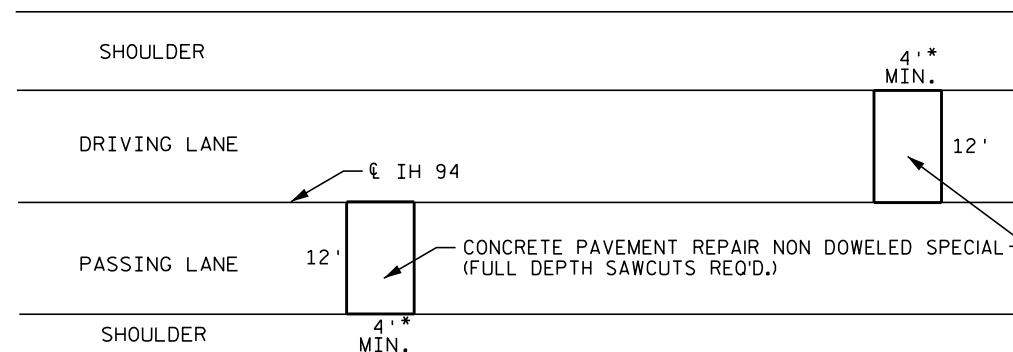
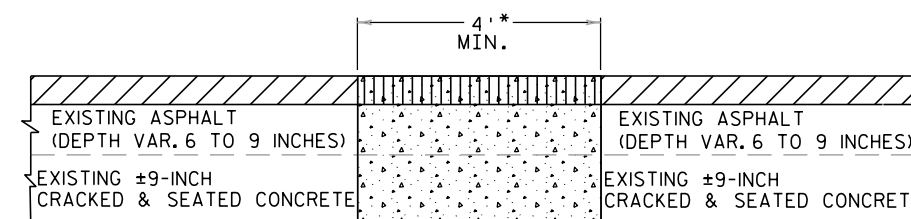
STRUCTURES B-17-34&35, 36&37, 38&39

WEIGH-IN-MOTION SCALE*

*WEIGH-IN-MOTION SCALE LOCATED ON WB IH 94, OUTSIDE LANE; STA. 460+20 - 463+20 (MILL & FILL ADJACENT ASPHALT).

**JOINT TRANSITION DETAIL: LOWER LAYER**

REQUIRED AT BEGIN AND END PRIOR TO OPENING TO TRAFFIC

**PLAN VIEW****SIDE VIEW**

* 4'-8' TYPICAL OR AS DIRECTED BY THE ENGINEER.

NOTES

CONSTRUCT CONCRETE PAVEMENT REPAIR PRIOR TO HMA MILL & OVERLAY.

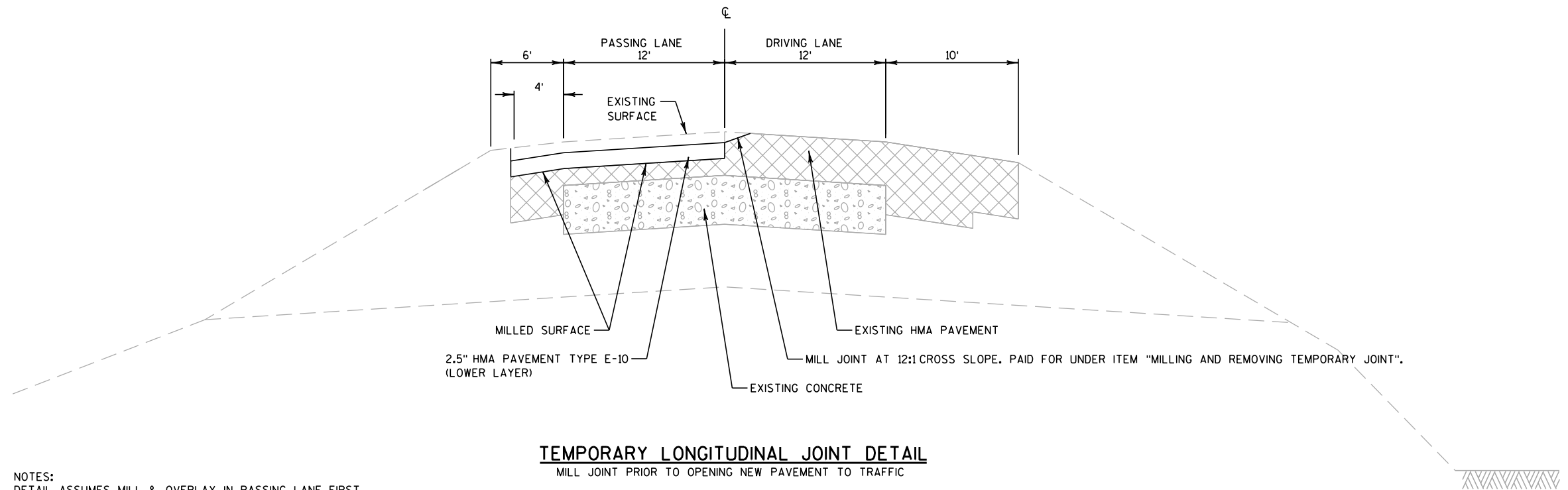
SAWING EXISTING ASPHALT OVERLAYED ON CONCRETE IS CONSIDERED INCIDENTAL TO SAWING CONCRETE.

THICKNESS OF CONCRETE REPAIR MAY VARY. 15" TO 18" THICKNESS IS EXPECTED.

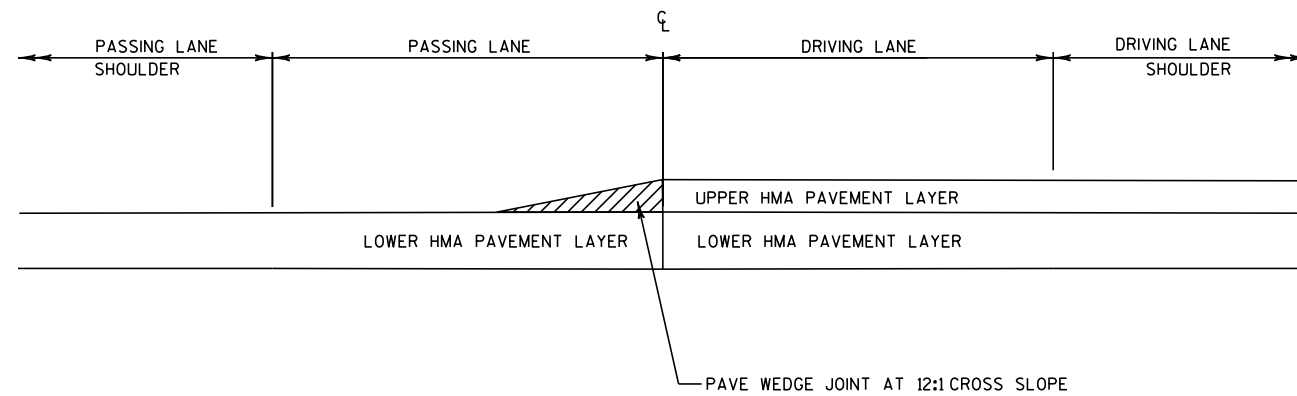
DAMAGE TO EITHER EXISTING PAVEMENTS OR EXISTING SHOULDERS DURING CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL SHALL BE REPAIRED AND CONSIDERED INCIDENTAL TO THE ITEM OF CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL.

CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL DETAIL

EXACT LOCATIONS DETERMINED BY THE ENGINEER.



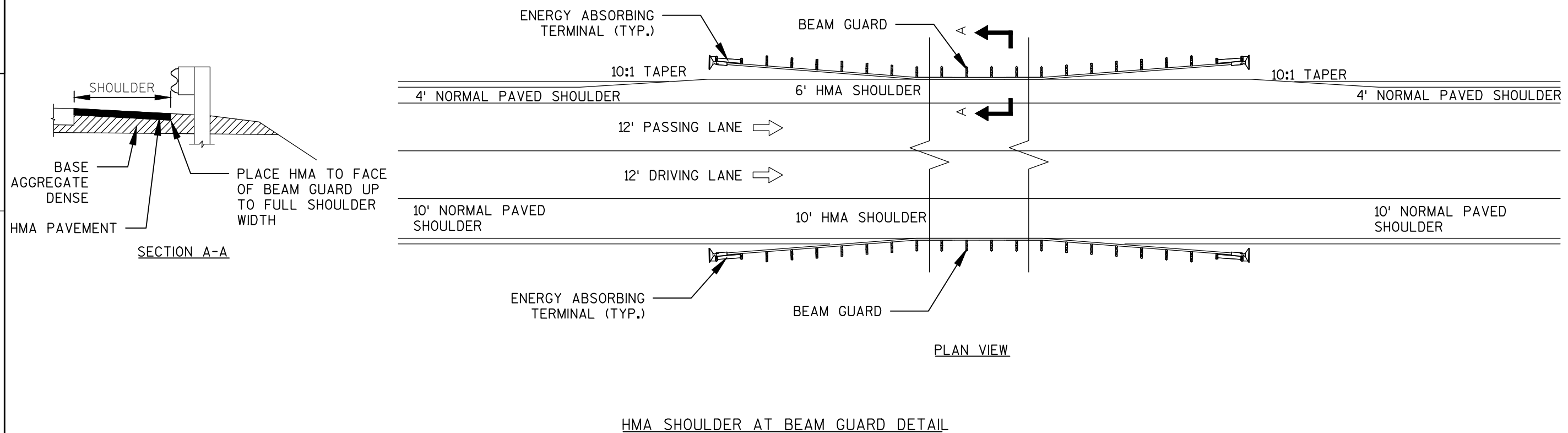
NOTES:
DETAIL ASSUMES MILL & OVERLAY IN PASSING LANE FIRST.
MILL AND REMOVE TEMPORARY JOINT PRIOR TO OPENING LANE TO TRAFFIC.

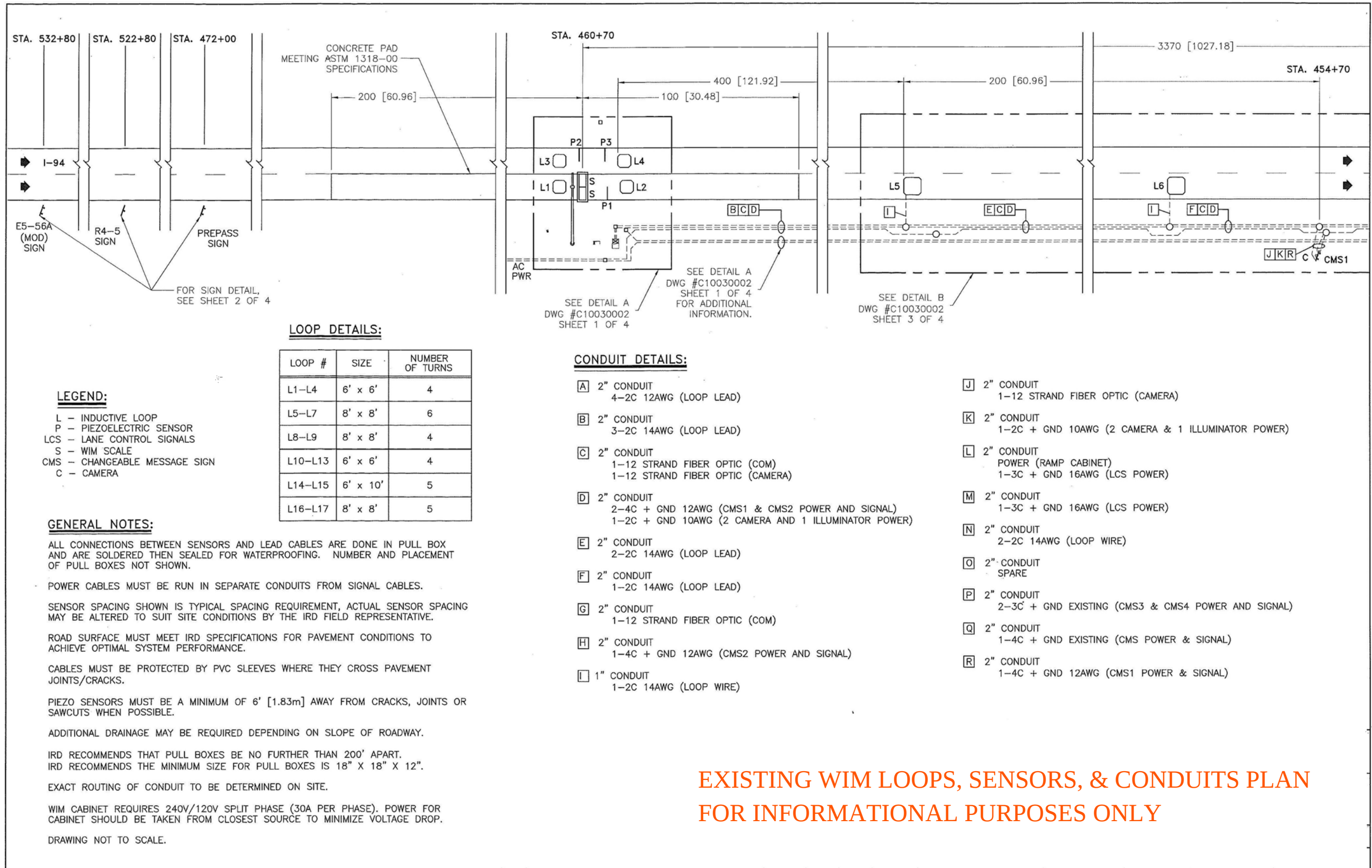


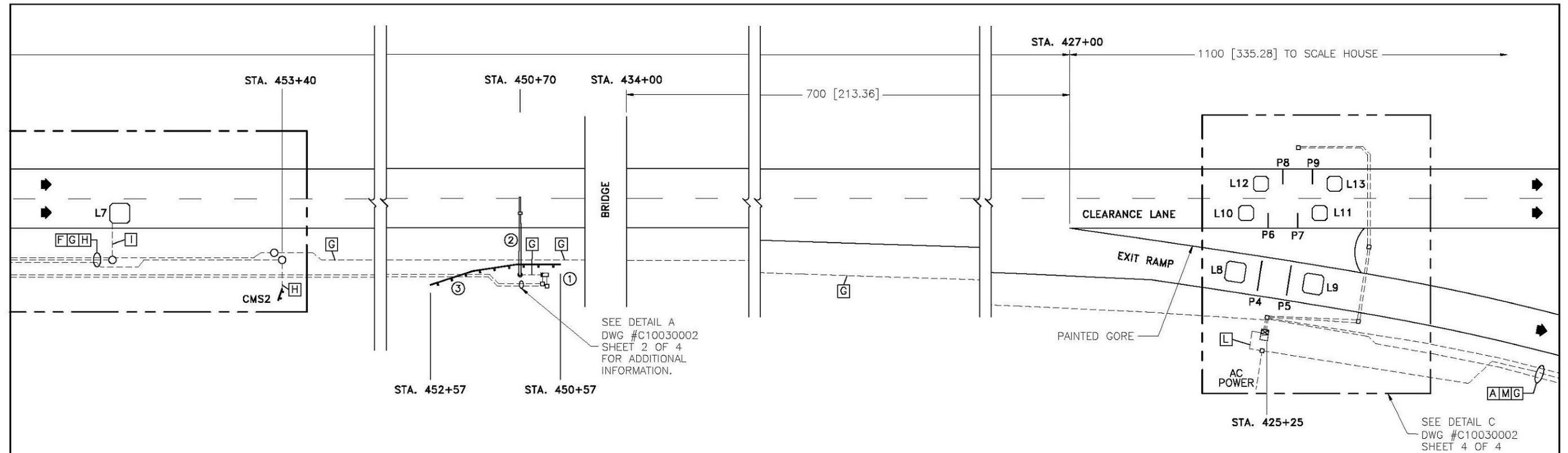
TEMPORARY WEDGE JOINT DETAIL

REQUIRED AT LONGITUDINAL JOINT PRIOR TO OPENING TO TRAFFIC
NOTE: TEMPORARY WEDGE JOINT REMOVAL TO BE PAID UNDER ITEM
"MILLING AND REMOVING TEMPORARY JOINT"

NOTES:
DETAIL ASSUMES PAVING WEDGE JOINT FROM DRIVING LANE.
PLACE TEMPORARY WEDGE JOINT PRIOR TO OPENING LANE TO TRAFFIC.

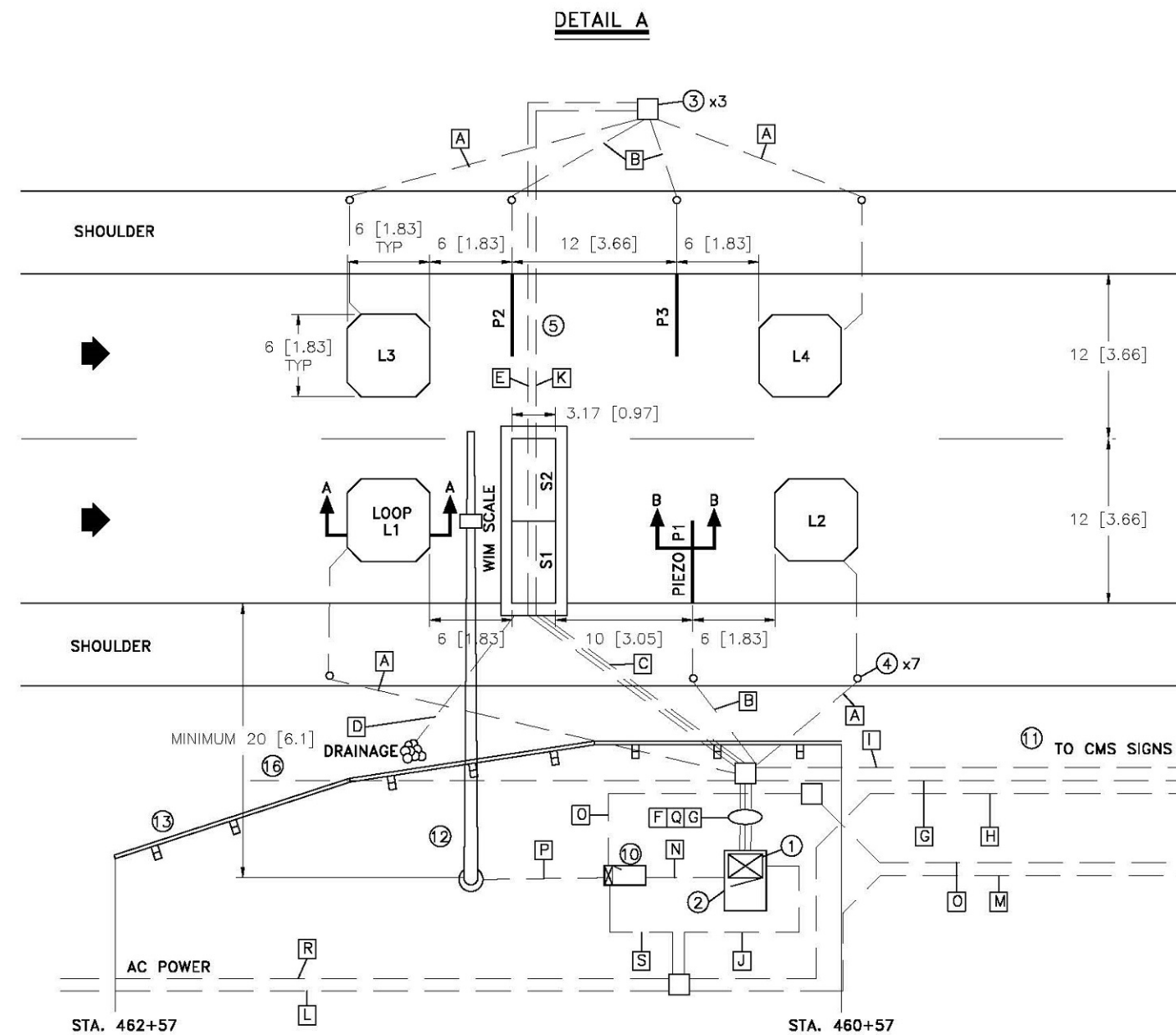




**NOTES:** (THIS SHEET ONLY)

- ① PREPASS CABINET BY ACS.
- ② POLE WITH SCALA ANTENNA. SEE PREPASS DWG WI-5.1 AND WI-7.3 FOR DETAILS (BY ACS).
- ③ GUARDRAIL PROVIDED BY OTHERS.

**EXISTING WIM LOOPS, SENSORS, & CONDUITS PLAN
FOR INFORMATIONAL PURPOSES ONLY**



NOTES: (THIS SHEET ONLY)
SEE SHEET 2 OF 4 FOR NOTES.

**EXISTING WIM LOOPS, SENSORS, & CONDUITS PLAN
FOR INFORMATIONAL PURPOSES ONLY**

CONDUIT DETAILS: (THIS DRAWING ONLY)

- [A] 1" CONDUIT
1-2C 14AWG (LOOP WIRE)
- [B] 1" CONDUIT
1-RG58 COAXIAL CABLE (PIEZO LEAD)
- [C] 3" CONDUIT
2-3PR 20AWG (SLC LEAD)
4-2C 18AWG (OFF-SCALE LEAD)
- [D] 1 1/2" ABS CONDUIT (DRAINAGE)
- [E] 2" CONDUIT
2- RG58 COAXIAL CABLE (PIEZO LEAD)
- [F] 2" CONDUIT
7-2C 18AWG (LOOP LEAD)
- [G] 2" CONDUIT
1-12 STRAND FIBER OPTIC (COM)
1-12 STRAND FIBER OPTIC (CAMERA)
- [H] 2" CONDUIT
2-4C + GND 12AWG (CMS1 & CMS2 POWER & SIGNAL)
1-2C + GND 10AWG (2 CAMERA & 1 ILLUMINATOR POWER)
- [I] 2" CONDUIT
3-2C 14AWG (LOOP LEAD)
- [J] 3" CONDUIT
WIM CABINET POWER
2-4C + GND 12AWG (CMS1 & CMS2 POWER AND SIGNAL)
1-2C + GND 10AWG (2 CAMERA & 1 ILLUMINATOR POWER)
- [K] 2" CONDUIT
2-2C 14AWG (LOOP LEAD)
- [Q] 3" CONDUIT
2-3PR 10AWG (SLC LEAD)
4-2C 18AWG (OFF-SCALE LEAD)
3-RG58 COAXIAL CABLE (PIEZO LEAD)
1-TELEPHONE
- [R] 3" CONDUIT
WIM CABINET POWER

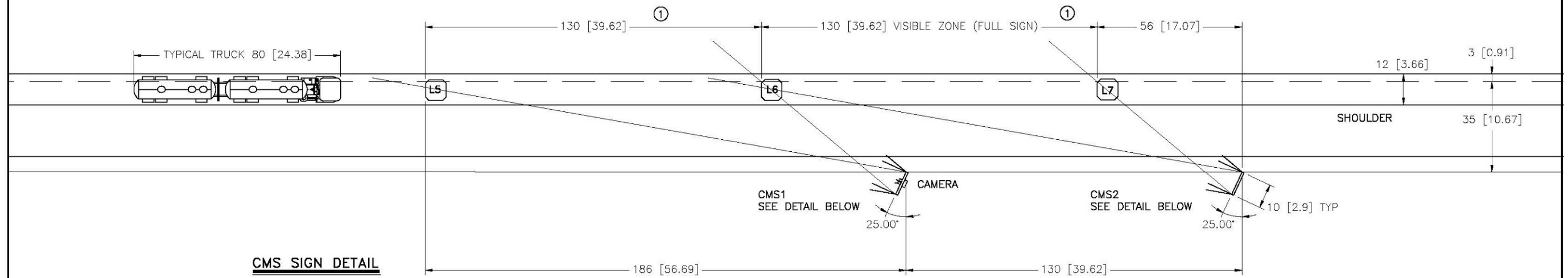
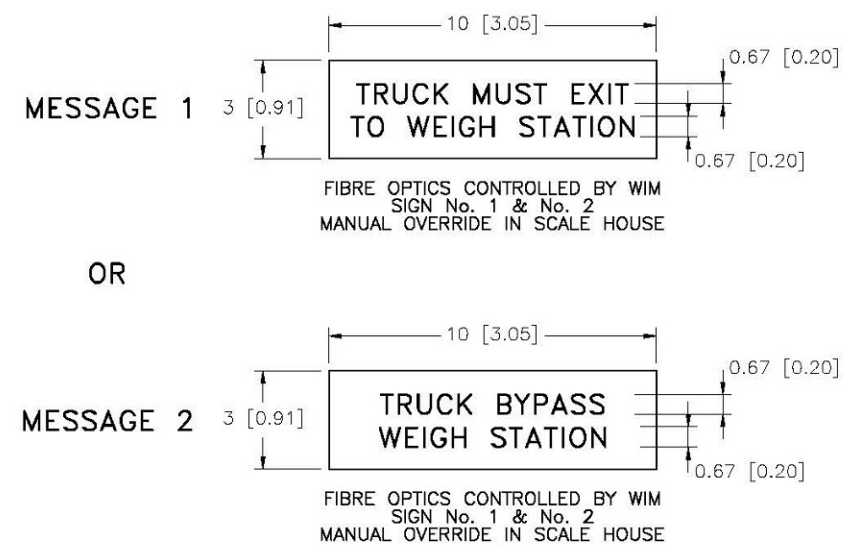
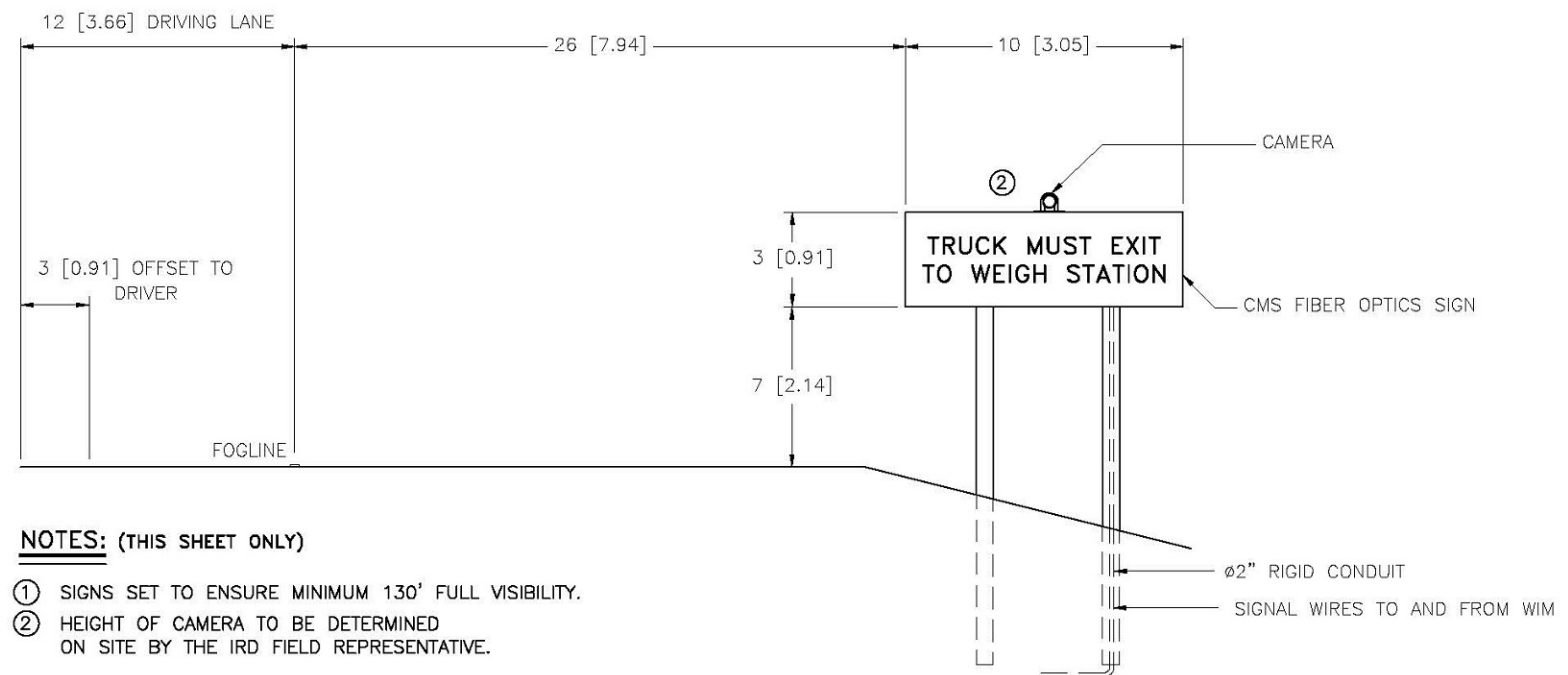
PREPASS CONDUIT DETAILS: (THIS DRAWING ONLY) (BY OTHERS)

- [L] 2" CONDUIT
ADV AVI POWER (BY ACS)
- [M] 2" CONDUIT
ICN AVI POWER (BY ACS)
- [N] 2" CONDUIT
AVI WIM COMM (BY ACS)
- [O] 2" CONDUIT
FIBER OPTIC CABLE
(CABLE PROVIDED BY ACS)
- [P] 2" CONDUIT
ANTENNA CABLE (BY ACS)
- [S] 2" CONDUIT
ADV AVI POWER (BY ACS)
ICN AVI POWER (BY ACS)

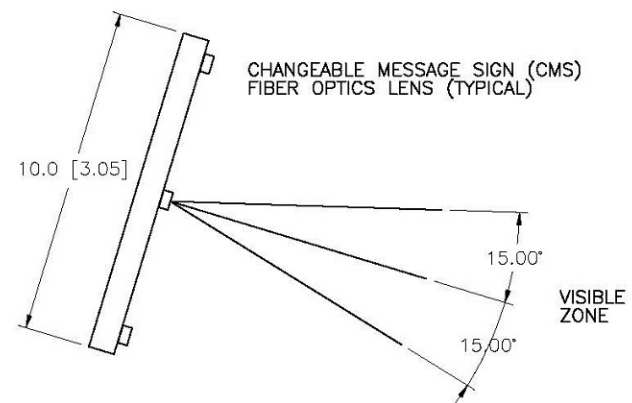
NOTES: (THIS DRAWING ONLY)

- ① CABINET WITH WIM ELECTRONICS.
- ② CABINET BASE.
- ③ PULL BOX.
- ④ DRILL THROUGH SHOULDER FOR CONDUIT.
- ⑤ BORE UNDER ROADWAY.
- ⑥ FOR LOOP AND PIEZO DETAILS, SEE DWG #C10030004.
- ⑦ FOR SLC SCALE DETAILS, SEE DWG #10014701.
- ⑧ CABINET IS PLACED SO THAT THE BACK OF THE CABINET IS FACING THE ROAD.
- ⑨ POWER CONDUITS EXIT THE CABINET ON THE SIDE CONSIDERED LEFT WHEN FACING THE CABINET DOOR.
- ⑩ PREPASS CABINET.
- ⑪ TRENCH UTILITIES 6' FROM SHOULDER.
- ⑫ POLE WITH SCALA ANTENNA. SEE PREPASS DWG WI-5.2 AND 7.3 FOR ADDITIONAL DETAILS.
- ⑬ GAURDRAIL FOR ILLUSTRATIVE PURPOSES ONLY. (PROVIDED BY OTHERS).
- ⑭ ALL PREPASS DETAILS SHOWN FOR ILLUSTRATION ONLY. REFER TO PREPASS WEIGH STATION BYPASS INSTALLATION PLANS PROJECT NUMBER 0150015 FOR DETAILS.
- ⑮ IN CASE OF A DISCREPANCY BETWEEN THESE PLANS AND THE PREPASS AVI PLANS. THE PREPASS PLANS SHALL TAKE PRECEDENCE.
- ⑯ TELEPHONE SERVICE REQUIRED CABINET.

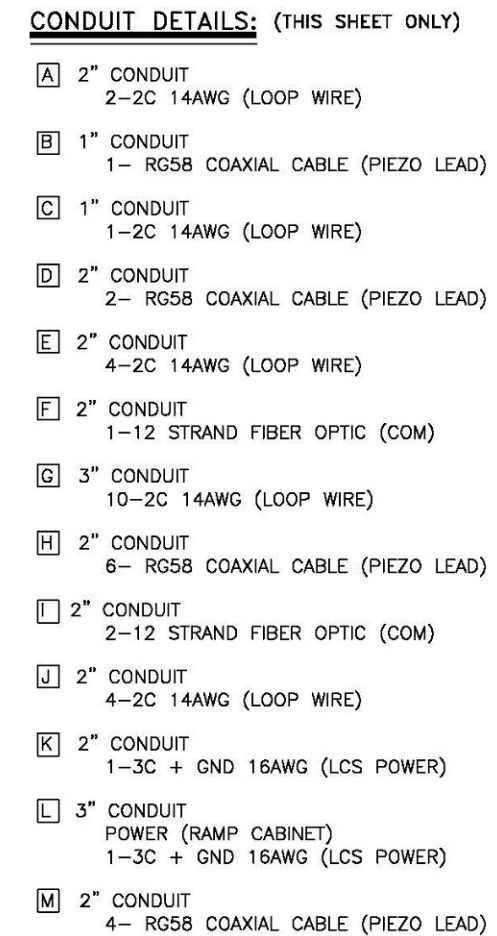
**EXISTING WIM LOOPS, SENSORS, & CONDUITS PLAN
FOR INFORMATIONAL PURPOSES ONLY**

DETAIL B**CMS SIGN DETAIL****SIGN GEOMETRY****NOTES: (THIS SHEET ONLY)**

- ① SIGNS SET TO ENSURE MINIMUM 130' FULL VISIBILITY.
- ② HEIGHT OF CAMERA TO BE DETERMINED ON SITE BY THE IRD FIELD REPRESENTATIVE.



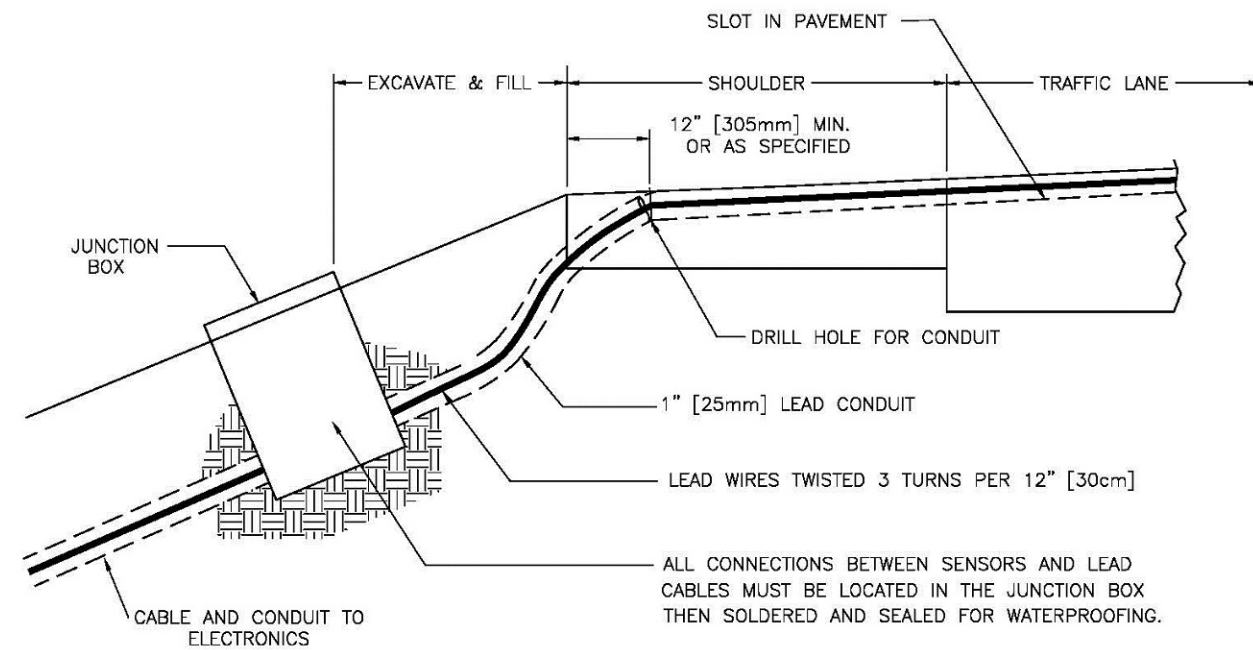
**EXISTING WIM LOOPS, SENSORS, & CONDUITS PLAN
FOR INFORMATIONAL PURPOSES ONLY**



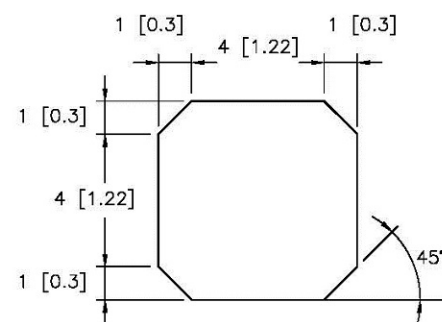
- ① CABINET WITH WIM ELECTRONICS.
- ② CABINET BASE.
- ③ PULL BOX.
- ④ DRILL THROUGH SHOULDER FOR CONDUIT.
- ⑤ BORE UNDER ROADWAY.
- ⑥ FOR LOOP AND PIEZO DETAILS, SEE DWG #C10030004.
- ⑦ FOR SLC SCALE DETAILS, SEE DWG #10014701.
- ⑧ TELEPHONE SERVICE REQUIRED AT CABINET.
- ⑨ CABINET IS PLACED SO THAT THE BACK OF THE CABINET IS FACING THE ROAD.
- ⑩ POWER CONDUITS EXIT THE CABINET ON THE SIDE CONSIDERED LEFT WHEN FACING THE CABINET DOOR.

EXISTING WIM LOOPS, SENSORS, & CONDUITS PLAN
FOR INFORMATIONAL PURPOSES ONLY

LOOP CABLE ROUTING DETAILS



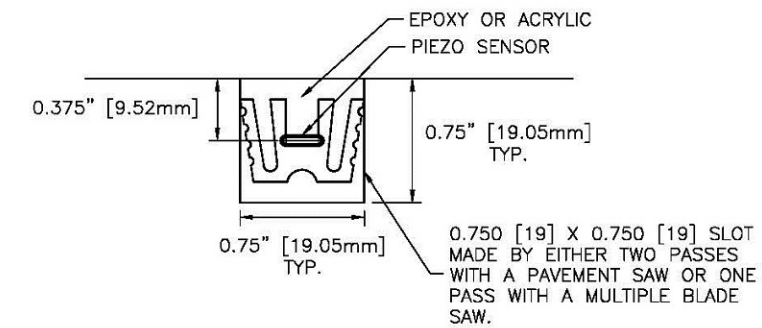
LOOP DIMENSION DETAIL ①



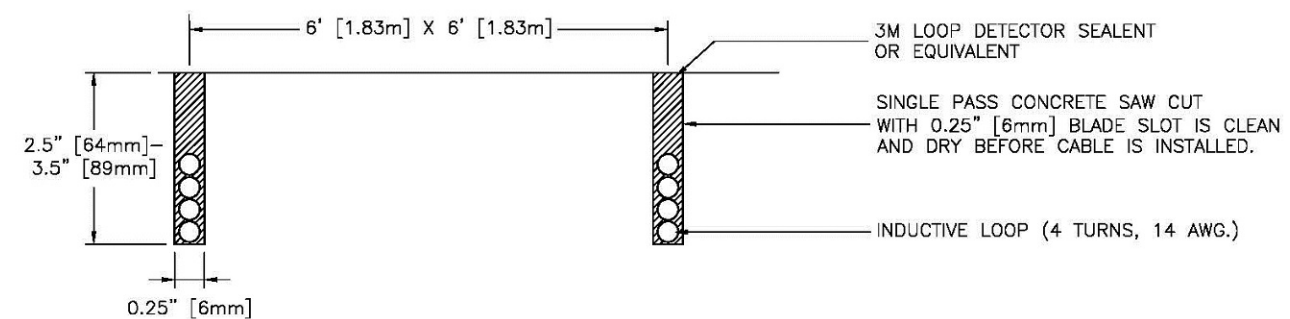
NOTES:

- ① 6' x 6' LOOP SHOWN. FOR SIZE, REFER TO LOOP DETAILS ON SITE LAYOUT DRAWING.
- ② 4 TURN LOOP SHOWN. FOR NUMBER OF TURNS, REFER TO LOOP DETAILS ON SITE LAYOUT DRAWING.

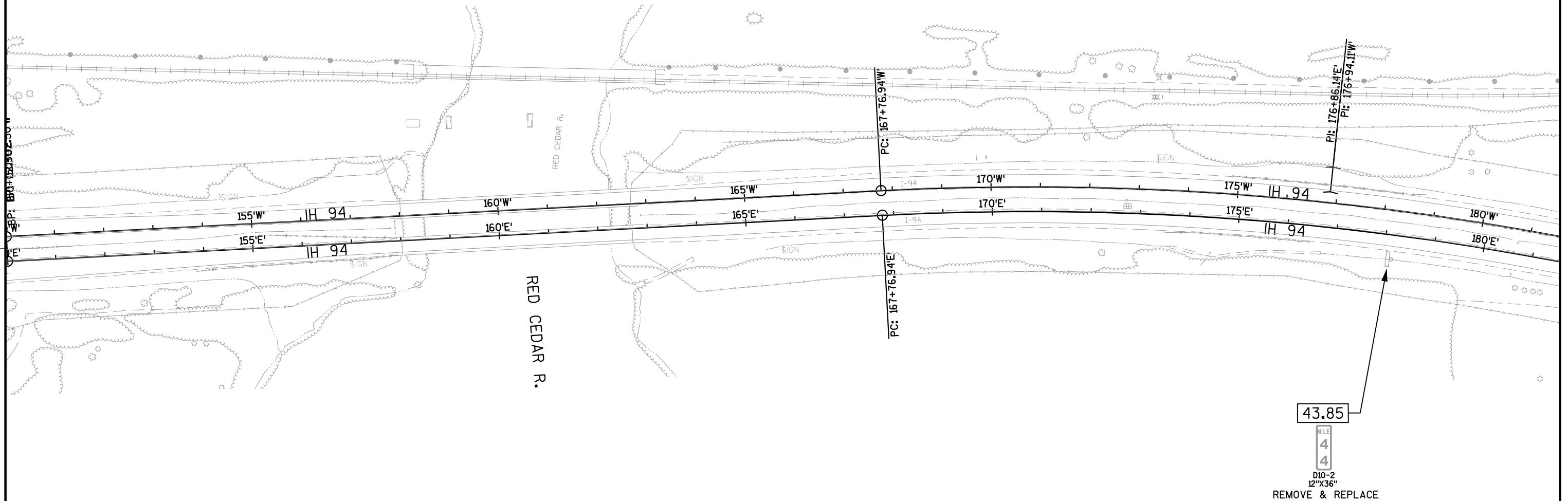
SECTION B-B – PIEZO SENSOR DETAIL



SECTION A-A – LOOP DETAIL ②



**EXISTING WIM LOOPS, SENSORS, & CONDUITS PLAN
FOR INFORMATIONAL PURPOSES ONLY**





REST AREA
1 MILE

E5-51
144"X60"

WEATHER INFORMATION

E10-54
120"X12"

REMOVE & REPLACE

87.94



SIGN TO REMAIN

88.06

PT: 185+95.98W'
PT: 185+80.17E'

185'W'
185'E'

IH 94

190'W'

IH 94

190'E'

195'W'

195'E'

200'W'

200'E'

PC: 204+49.78W'
PC: 204+33.98E'

205'W'

205'E'

IH 94

IH 94

210'W'

210'E'

STOKKE PARKWAY

EXIT 45
B
Menomonie
1 MILE

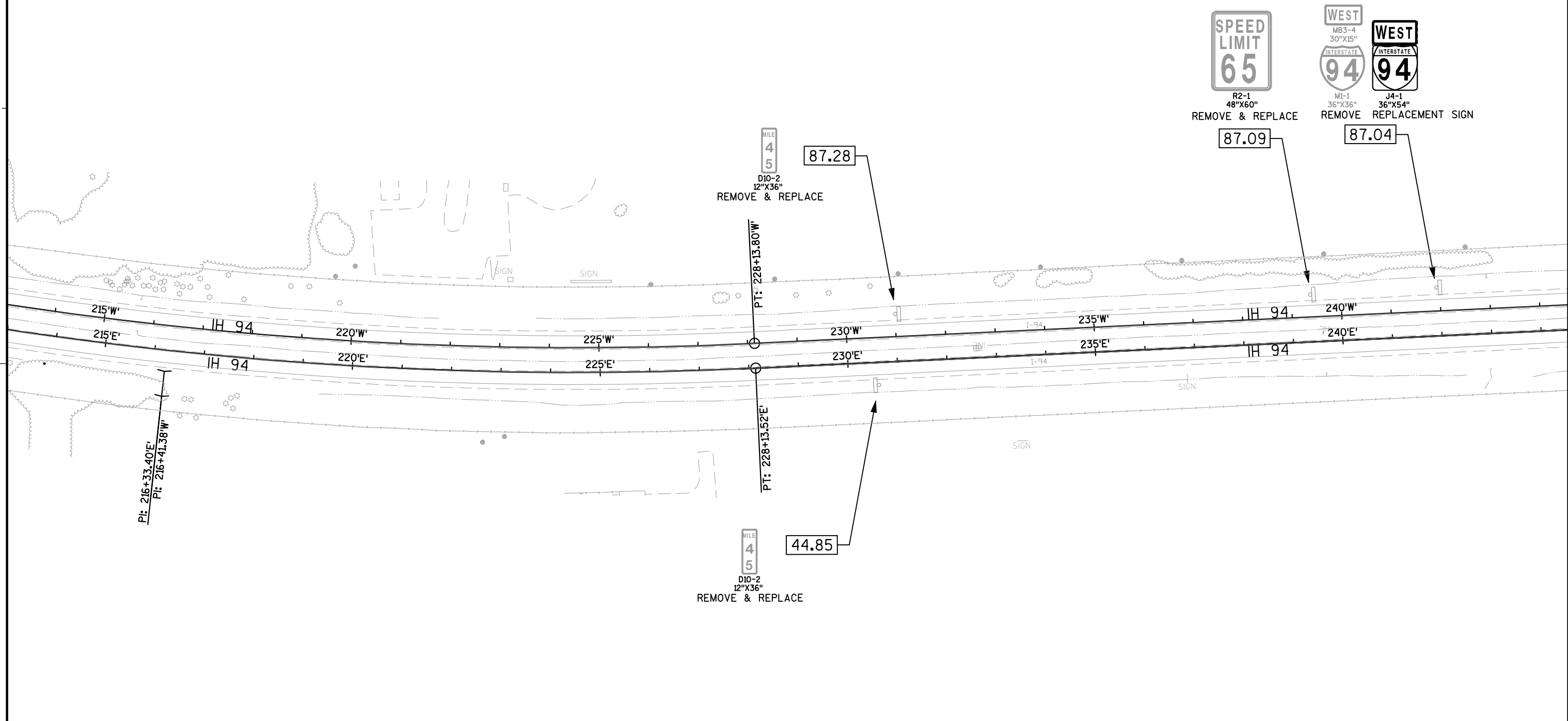
NEXT EXIT 6 MILES

E2-1
156"X24"
REMOVE & REPLACE

E1-5P
108"X30"

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)



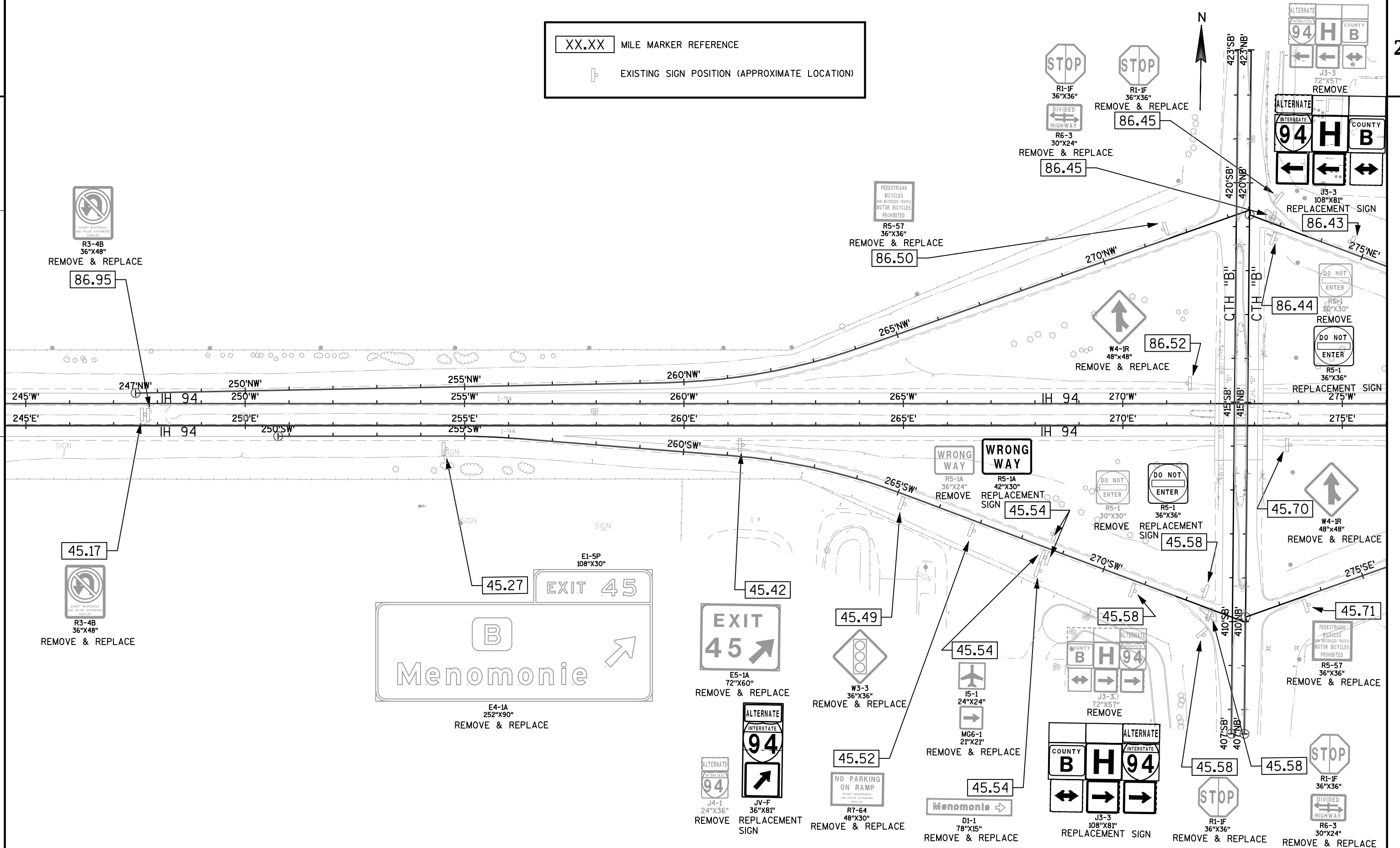
XX.XX

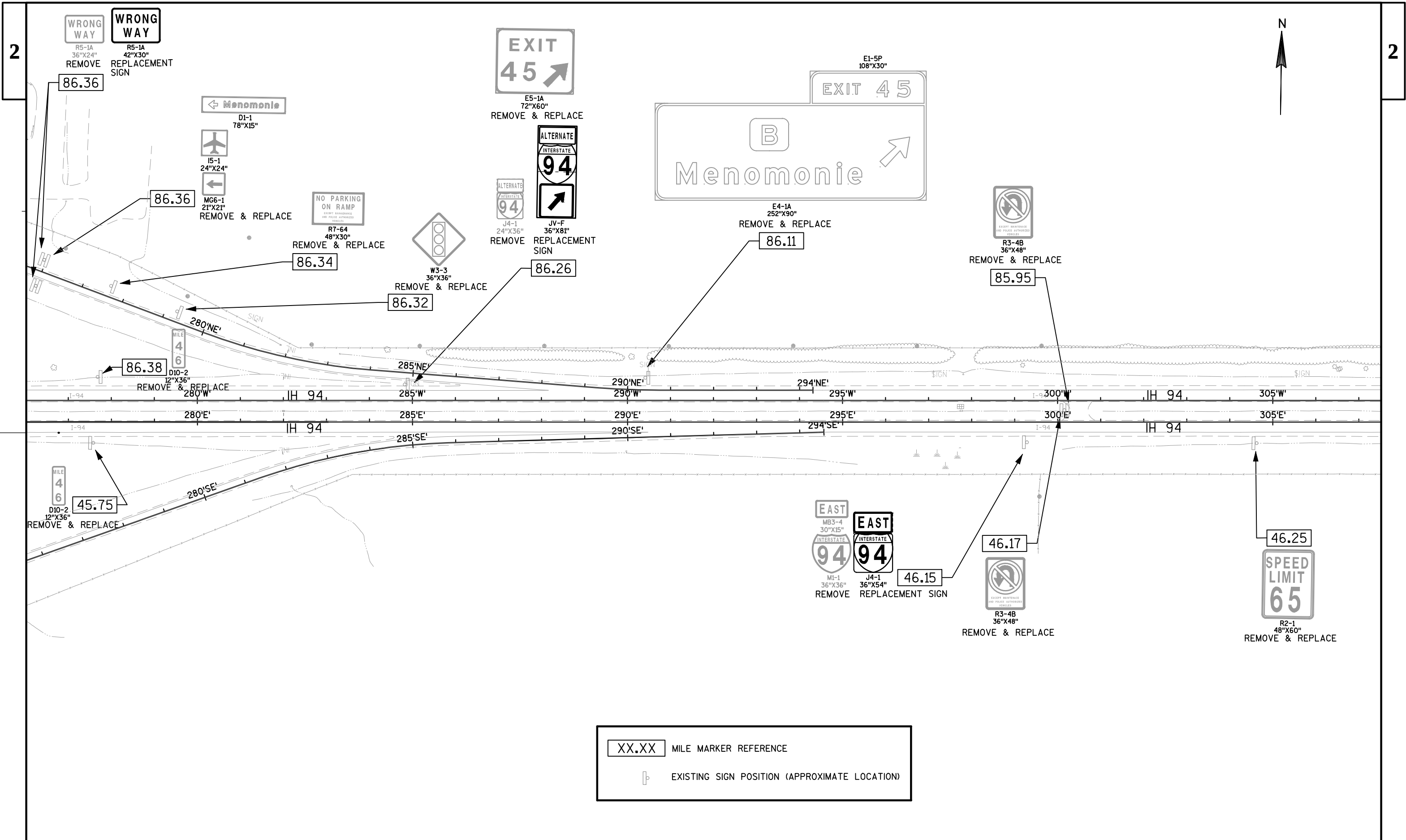
MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)





XX.XX MILE MARKER REFERENCE

 EXISTING SIGN POSITION (APPROXIMATE LOCATION)

E1-5P
108"X30"

EXIT 45



HOSPITAL
EXIT 45

E10-61
144"X54"
REMOVE & REPLACE

85.71

B
Menomonie
1 MILE

E1-1A
216"X120"
REMOVE & REPLACE

85.26

MILE
4
7
D10-2
12"X36"
REMOVE & REPLACE

85.26

Hwy E

M1-94
54"X21"
REMOVE & REPLACE

85.46

46.65

Hwy E

M1-94
54"X21"
REMOVE & REPLACE

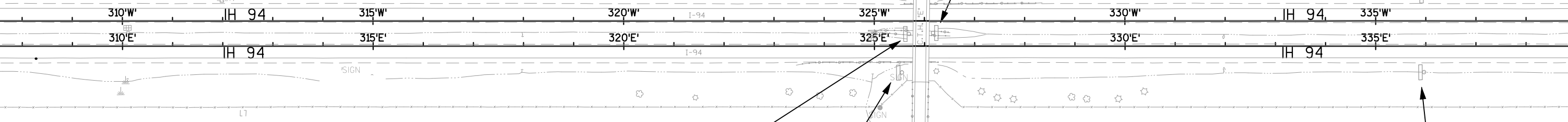
46.64

Elk Mound 5
Eau Claire 19
Tomah 102

D2-3
204"X84"
REMOVE & REPLACE

46.85

MILE
4
7
D10-2
12"X36"
REMOVE & REPLACE





Menomonie Exits

B

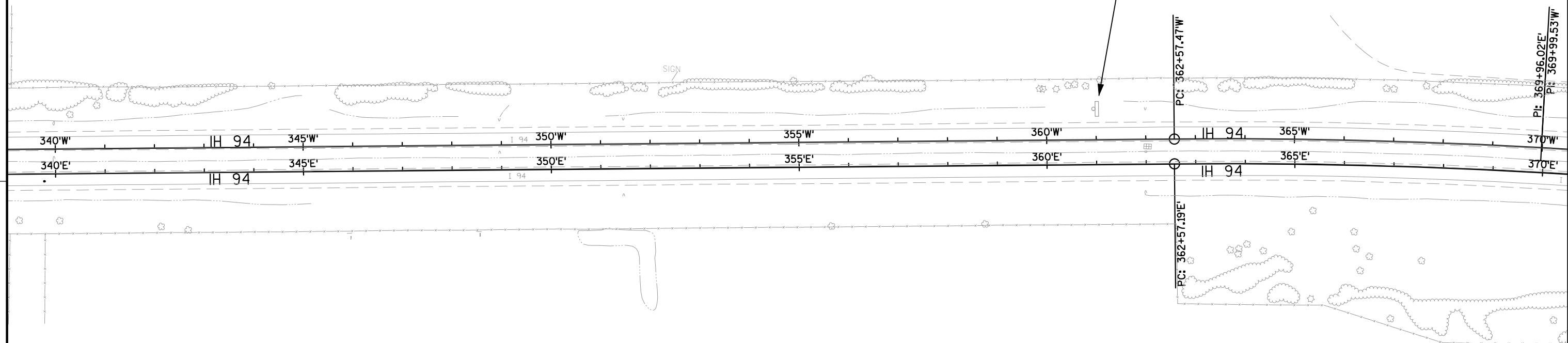
25

1 1/2

5

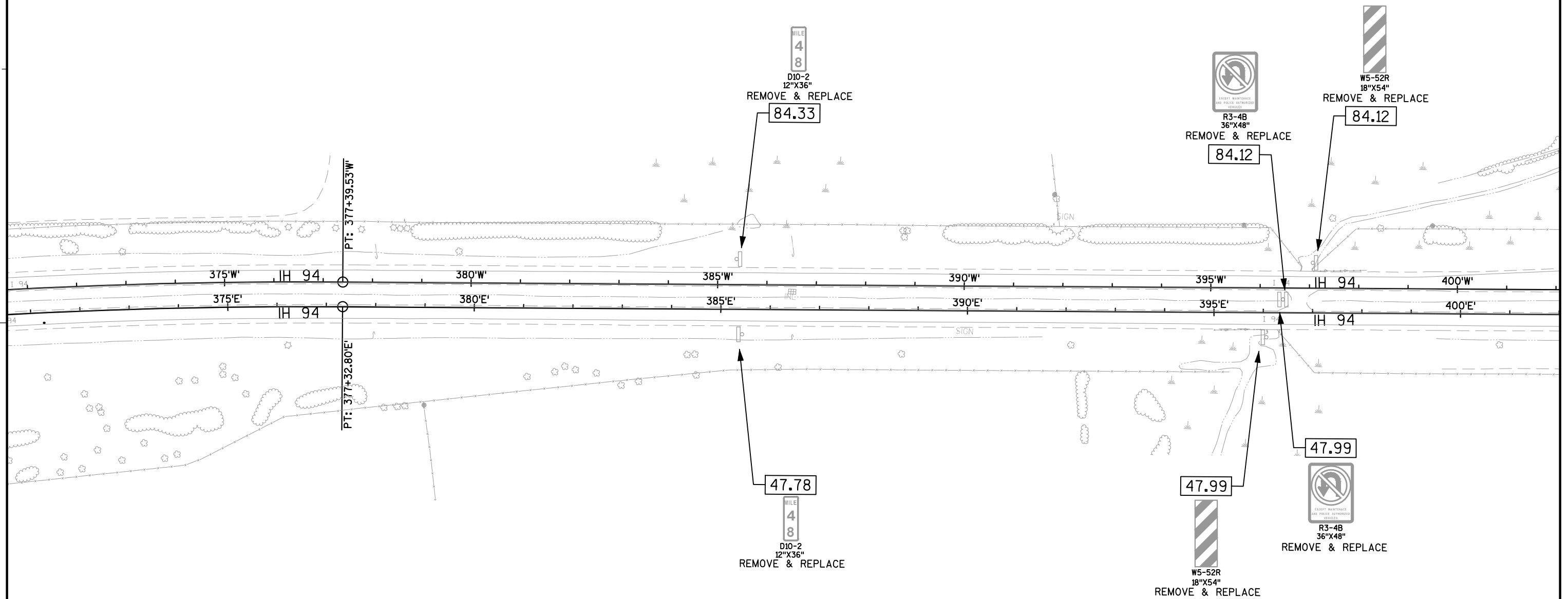
E8-1
204"x102"
REMOVE & REPLACE

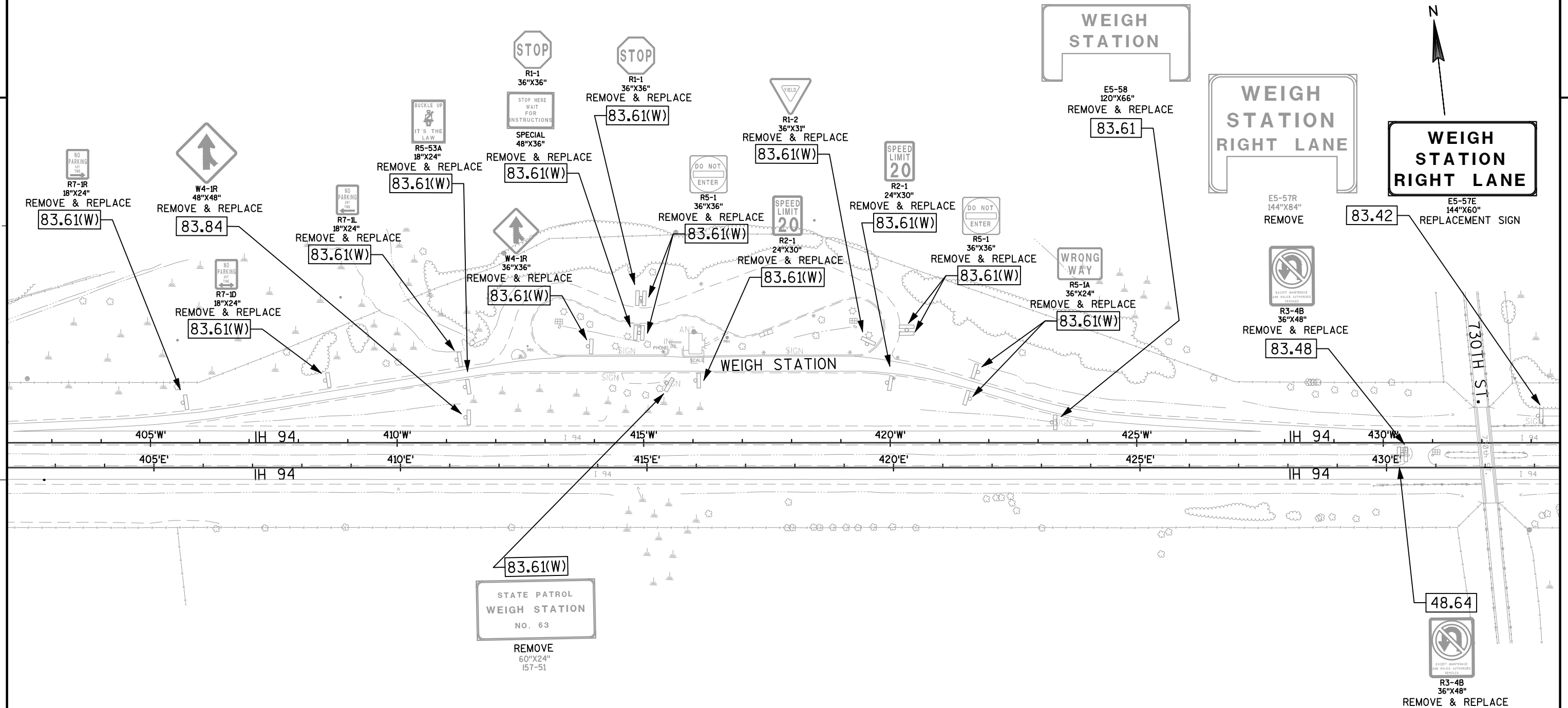
84.77



XX.XX MILE MARKER REFERENCE

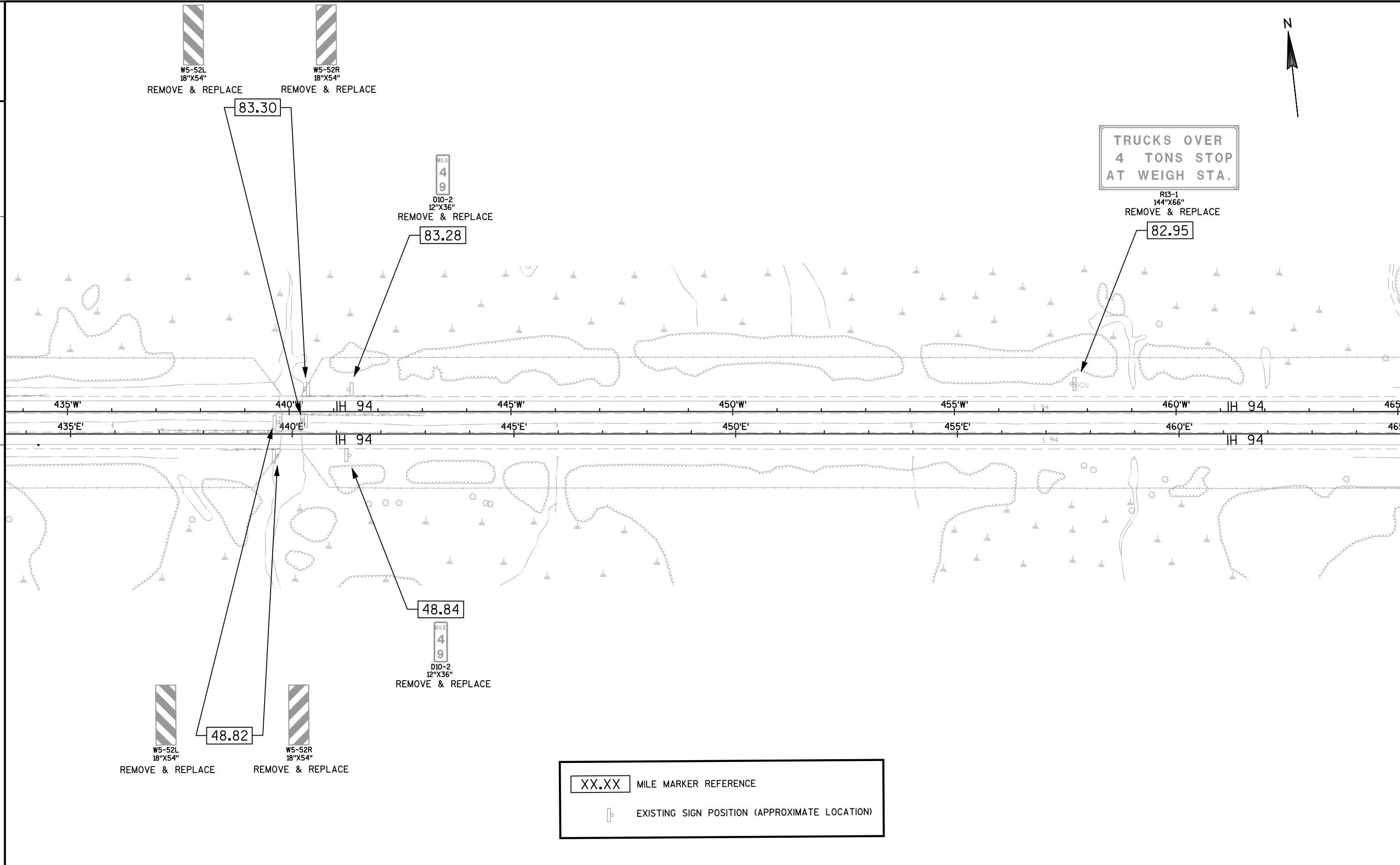
EXISTING SIGN POSITION (APPROXIMATE LOCATION)

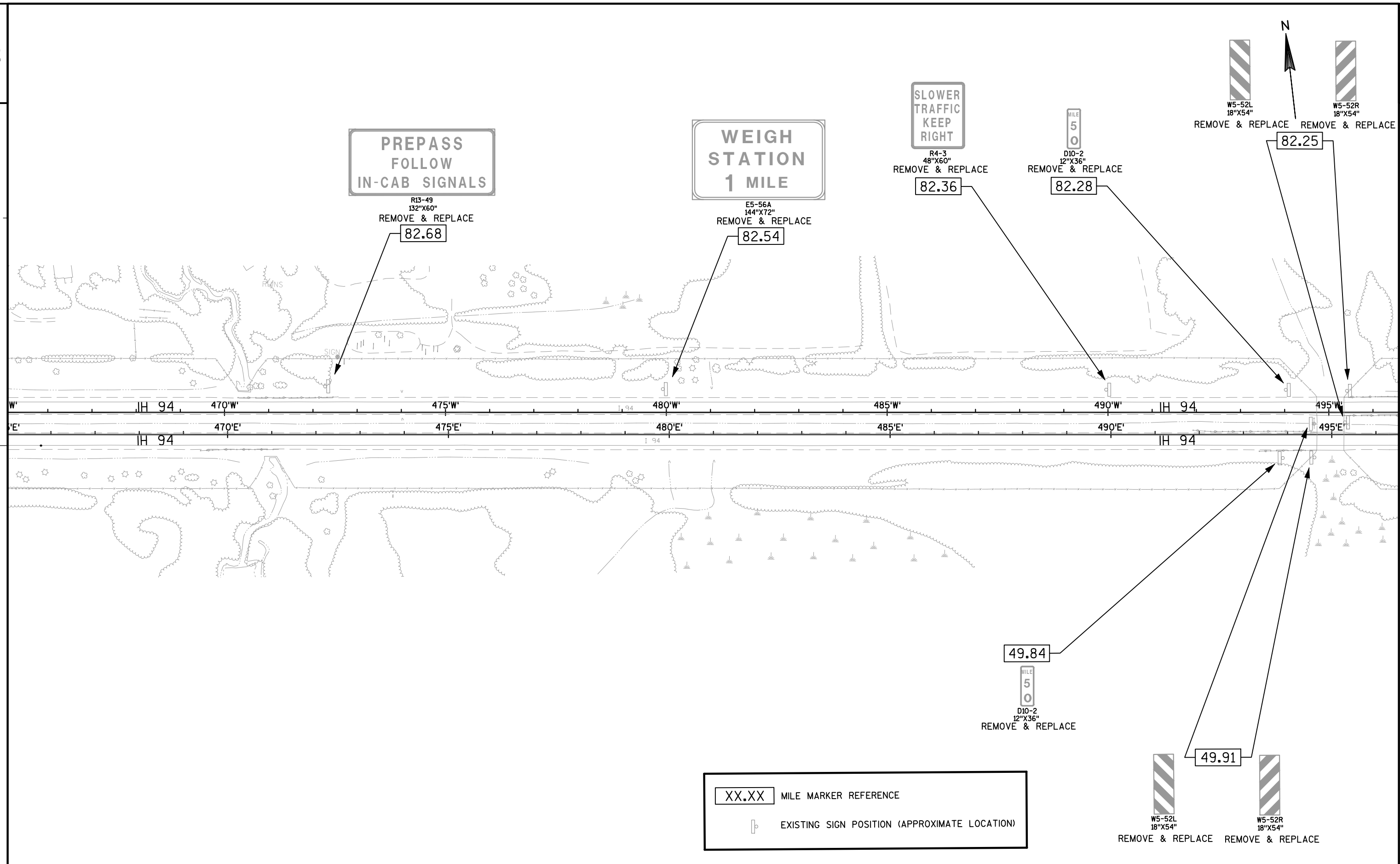




XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)





Menomonie 10
Hudson 52
Minneapolis 75

D2-3
204"X84"
REMOVE & REPLACE

82.15

W5-52L
18"X54"
REMOVE & REPLACE

W5-52R
18"X54"
REMOVE & REPLACE

TRUCKS
USE
RIGHT
LANE
R4-5
48"X60"
REMOVE & REPLACE

81.72

81.83

PI: 514+32.31E'
PI: 514+51.01W'

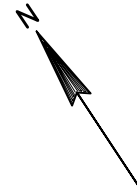
50.27

W5-52L
18"X54"
REMOVE & REPLACE

W5-52R
18"X54"
REMOVE & REPLACE

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)



**WEIGH
STATION
2 MILES**

E5-56A (MOD.)
144"X72"
REMOVE & REPLACE

81.51

MILE
5
1

D10-2
12"X36"

REMOVE & REPLACE

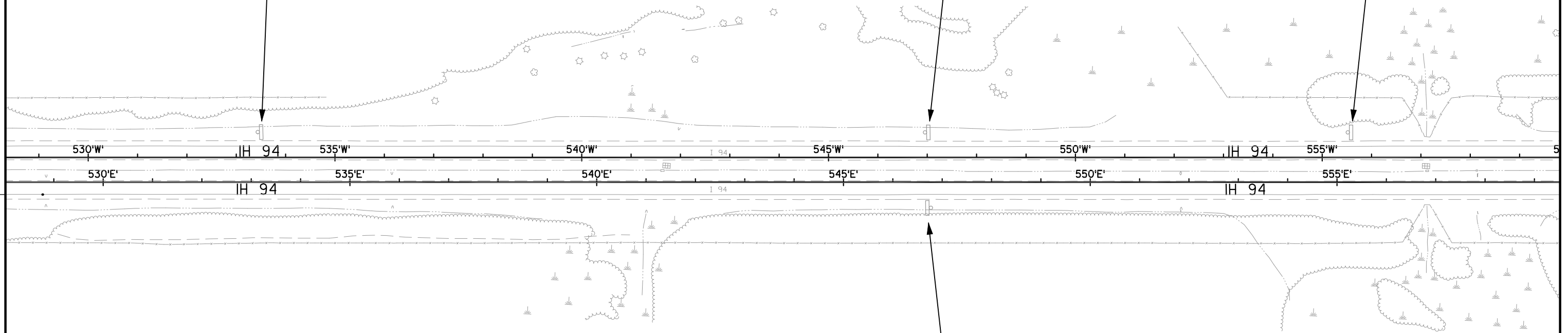
81.27

EMERGENCY
STOPPING
ONLY

R8-7
48"X36"

REMOVE & REPLACE

81.11



50.83

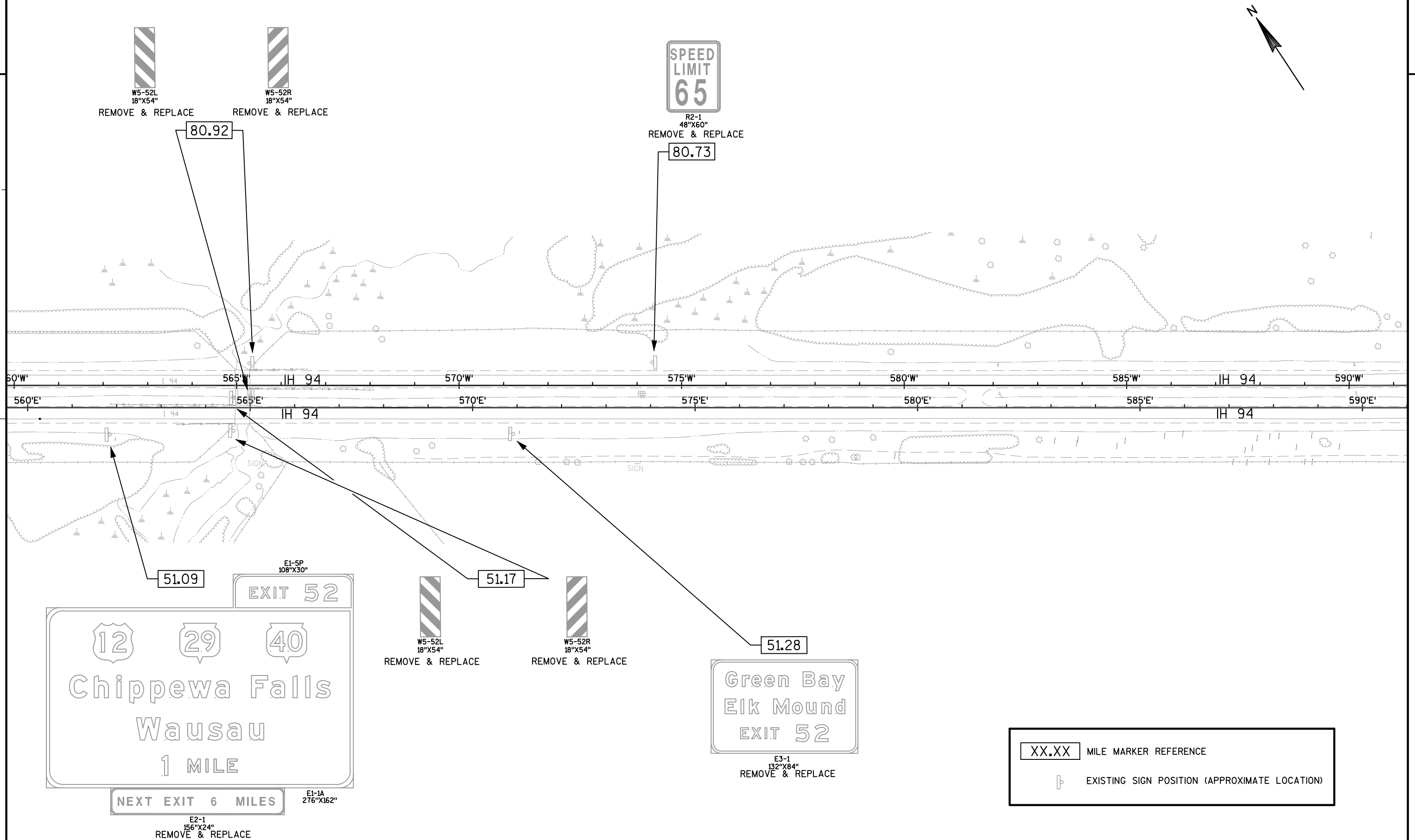
MILE
5
1

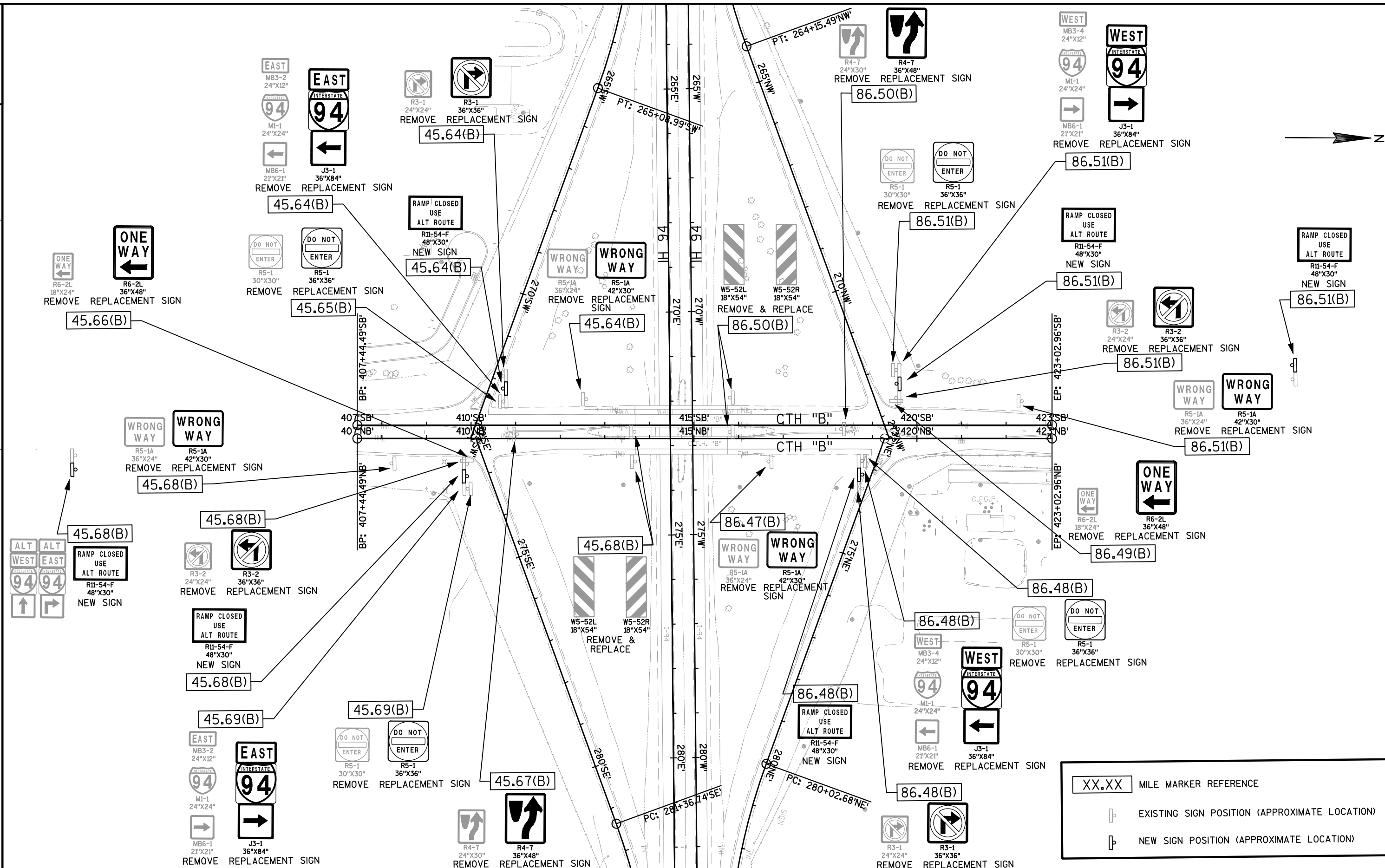
D10-2
12"X36"

REMOVE & REPLACE

XX.XX MILE MARKER REFERENCE

EXISTING SIGN POSITION (APPROXIMATE LOCATION)





LEGEND

- ▬ POST WITH ATTACHED SIGN
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK ZONE
- MB PORTABLE CHANGEABLE MESSAGE SIGN REMOTE CONTROL
SEE ALT. ROUTE DETAIL FOR LOCATION
- * A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHALL BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 TO 3 MILES WITHIN THE LANE CLOSURE.
- ** SEE SDD 15D12-4 FOR TRAFFIC CONTROL LOCATED WITHIN THE TRANSITION AREA, BUFFER SPACE, AND WORK SPACE (WORK AREA).

GENERAL NOTES:

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

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

TRAFFIC CONTROL SHOWN IS FOR LANE CLOSURES IN ONE DIRECTION AT ANY GIVEN TIME. IMPLEMENT TRAFFIC CONTROL IN BOTH DIRECTIONS IF LANE CLOSURES ARE IMPLEMENTED FOR BOTH DIRECTIONS.

COORDINATE LOCATIONS OF LANE CLOSURES/SPEED REDUCTION ADVANCED SIGNING WITH DETAILS SHOWN ON ALTERNATE ROUTE DETAIL.

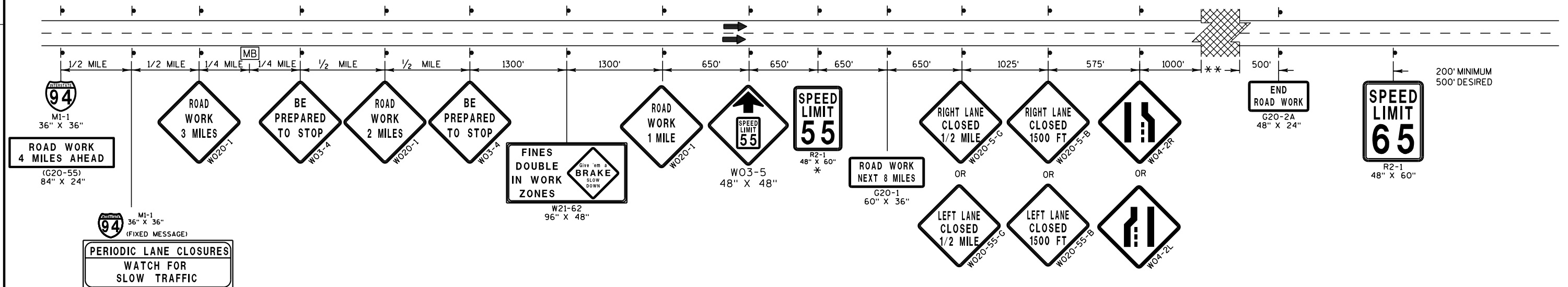
RETURN SPEED LIMIT TO 65 MPH AND COVER SIGNS DURING NON-WORKING HOURS.

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.

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.



LEGEND

FTMS CONVENTIONAL SYMBOLS

CCTV CAMERA AND POLE - - - - -	EXISTING	PROPOSED
POLE MOUNTED CABINET- - - - -		
METER BREAKER PEDESTAL- - - - -		
24X42-INCH STEEL PULL BOX- - - - -		
FTMS (ITS) CONDUIT- - - - -		
BREAKER DISCONNECT BOX- - - - -		
COMMUNICATIONS VAULT, TYPE 1- - - - -		
SIDE MOUNT DMS AND STRUCTURAL STEEL- - -		
RAMP GATE SOLAR POWER ASSEMBLY - - - - -		
ON-RAMP CLOSURE GATE - - - - -		

EXISTING

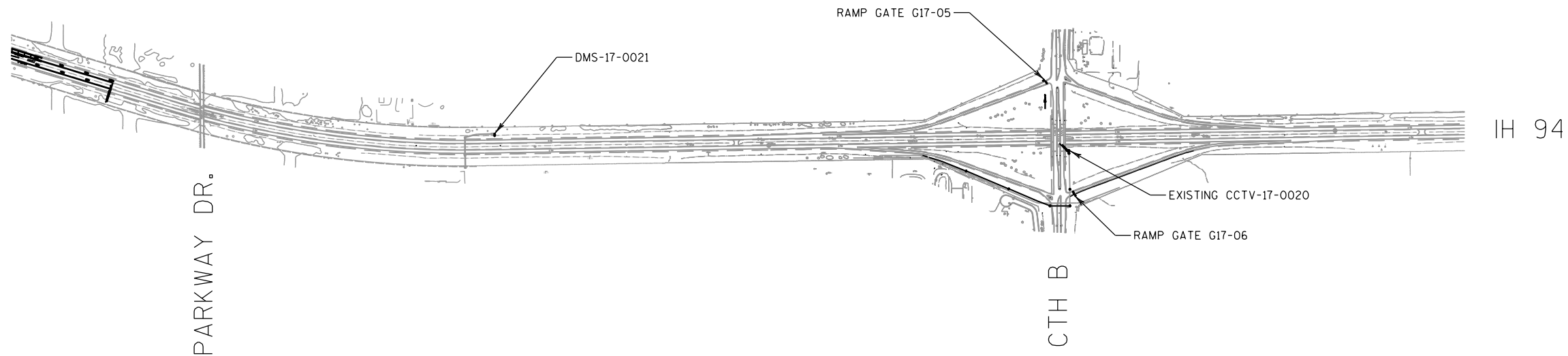
PROPOSED

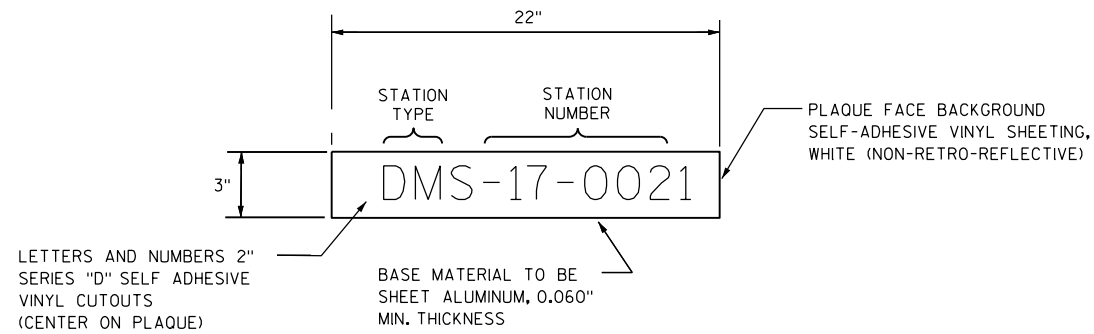
FTMS STANDARD ABBREVIATIONS

CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
DMS	DYNAMIC MESSAGE SIGN
PB	PULL BOX
RG	RAMP GATE
S-F	STATE-FURNISHED

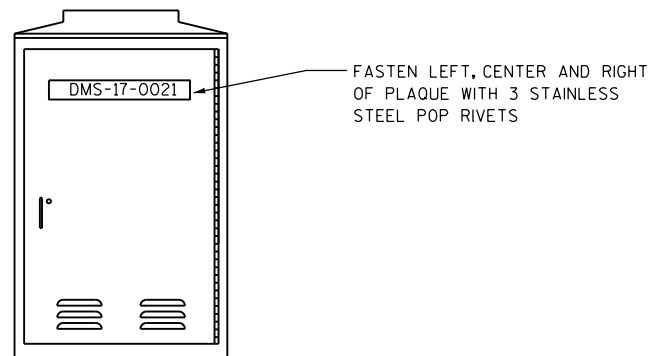
FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEMS. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.





ITS FIELD CABINET IDENTIFICATION PLAQUE DETAIL



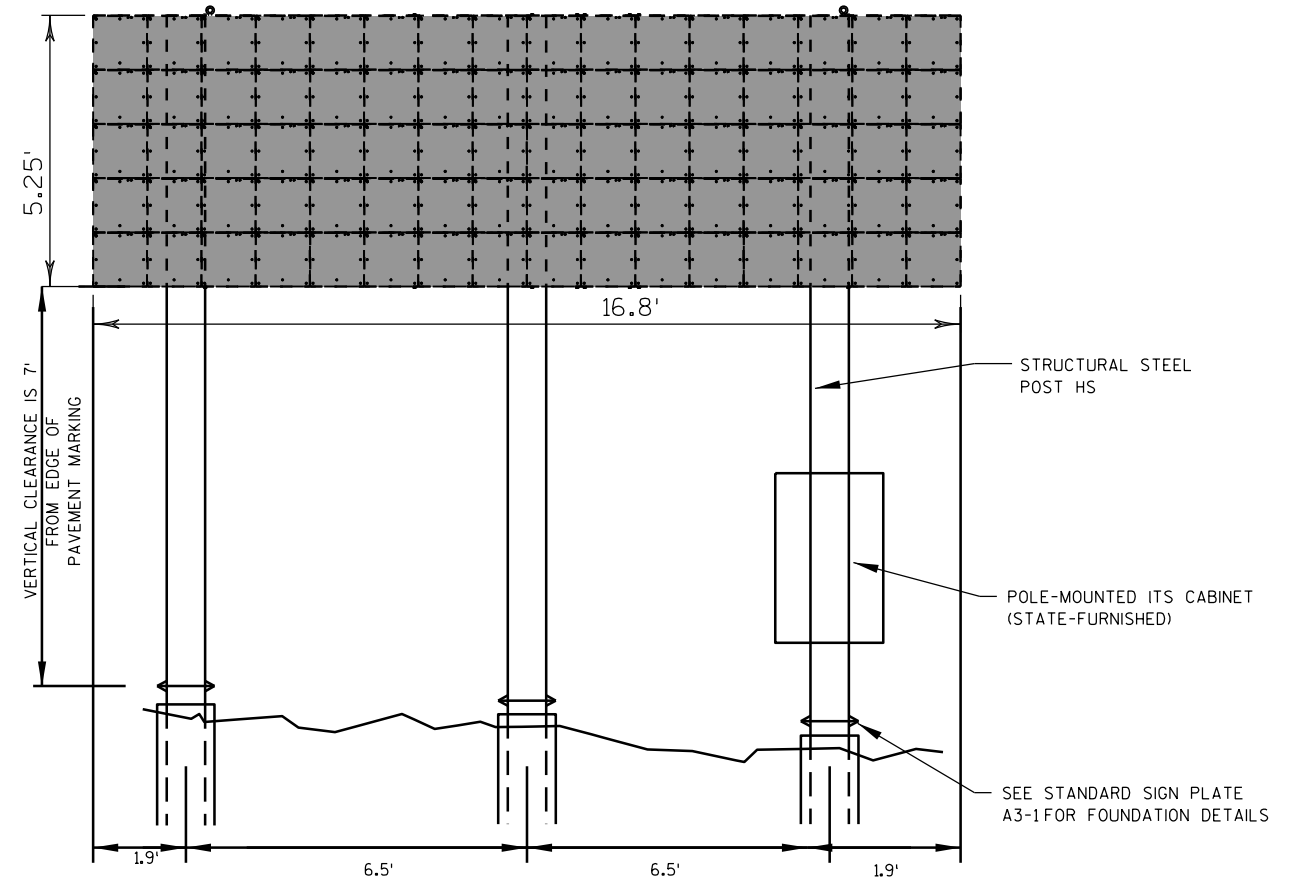
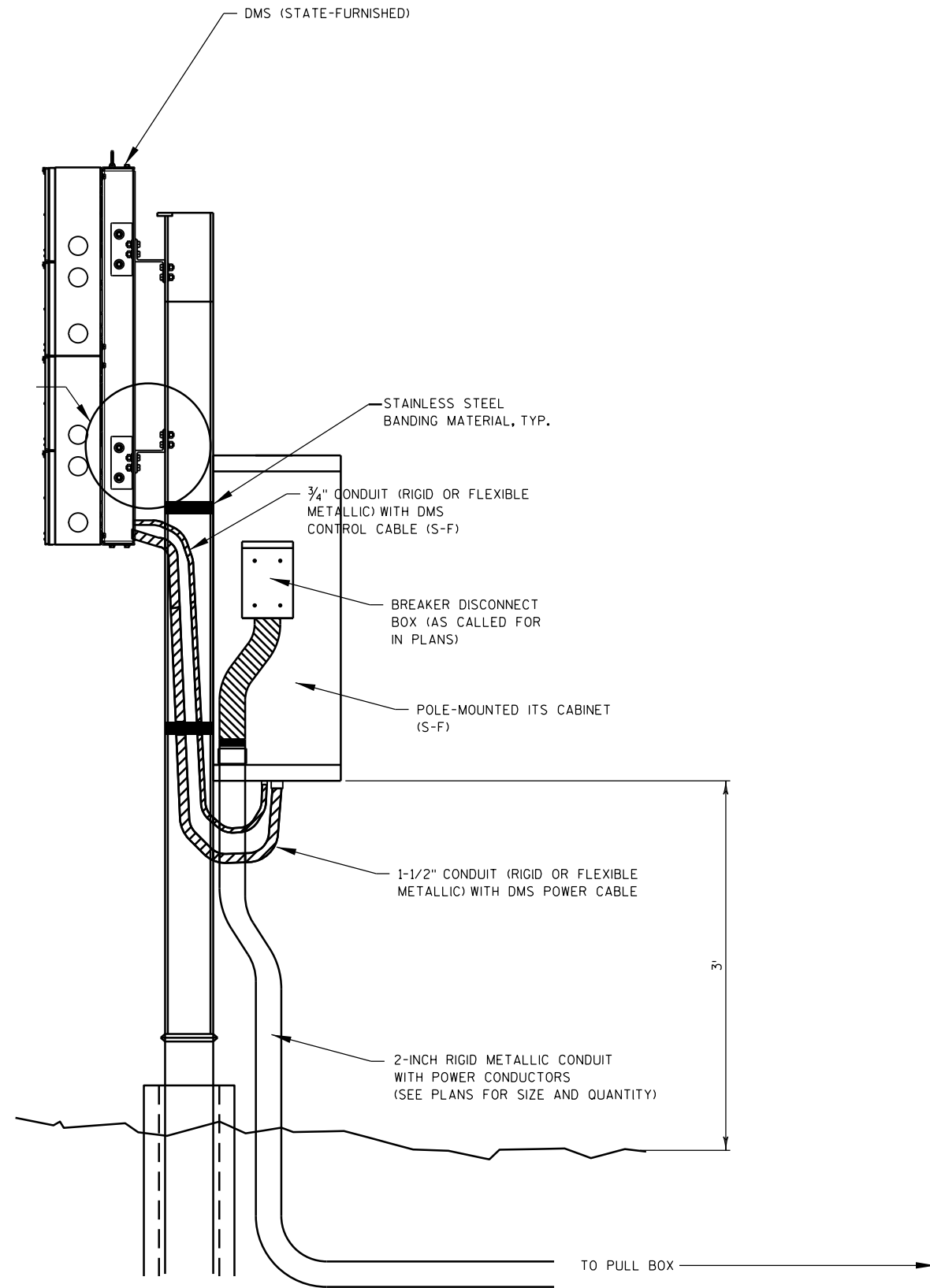
ITS FIELD CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
(TYPICAL ALL CONTROL CABINETS)

LEGEND STATION TYPE

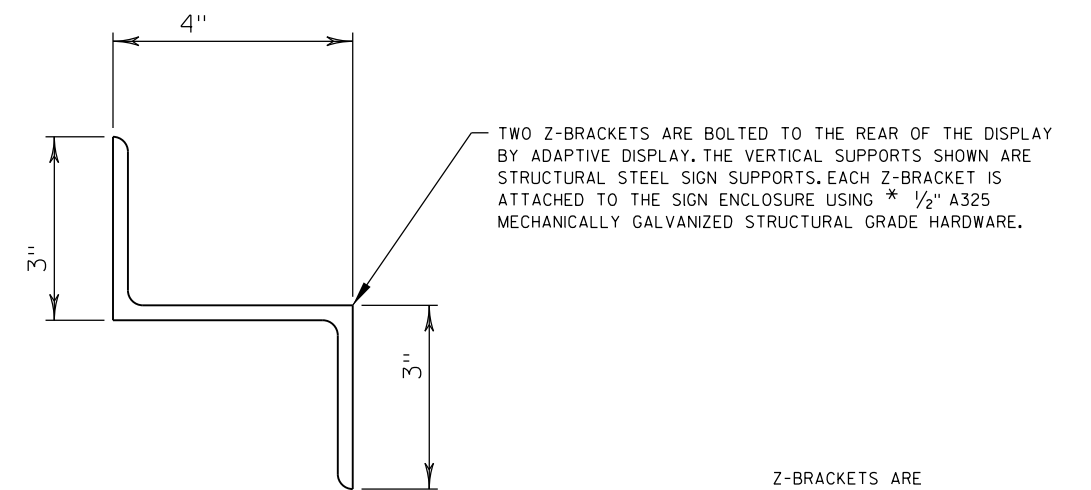
RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

NOTES

- 1) TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
- 2) FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
- 3) FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
- 4) COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

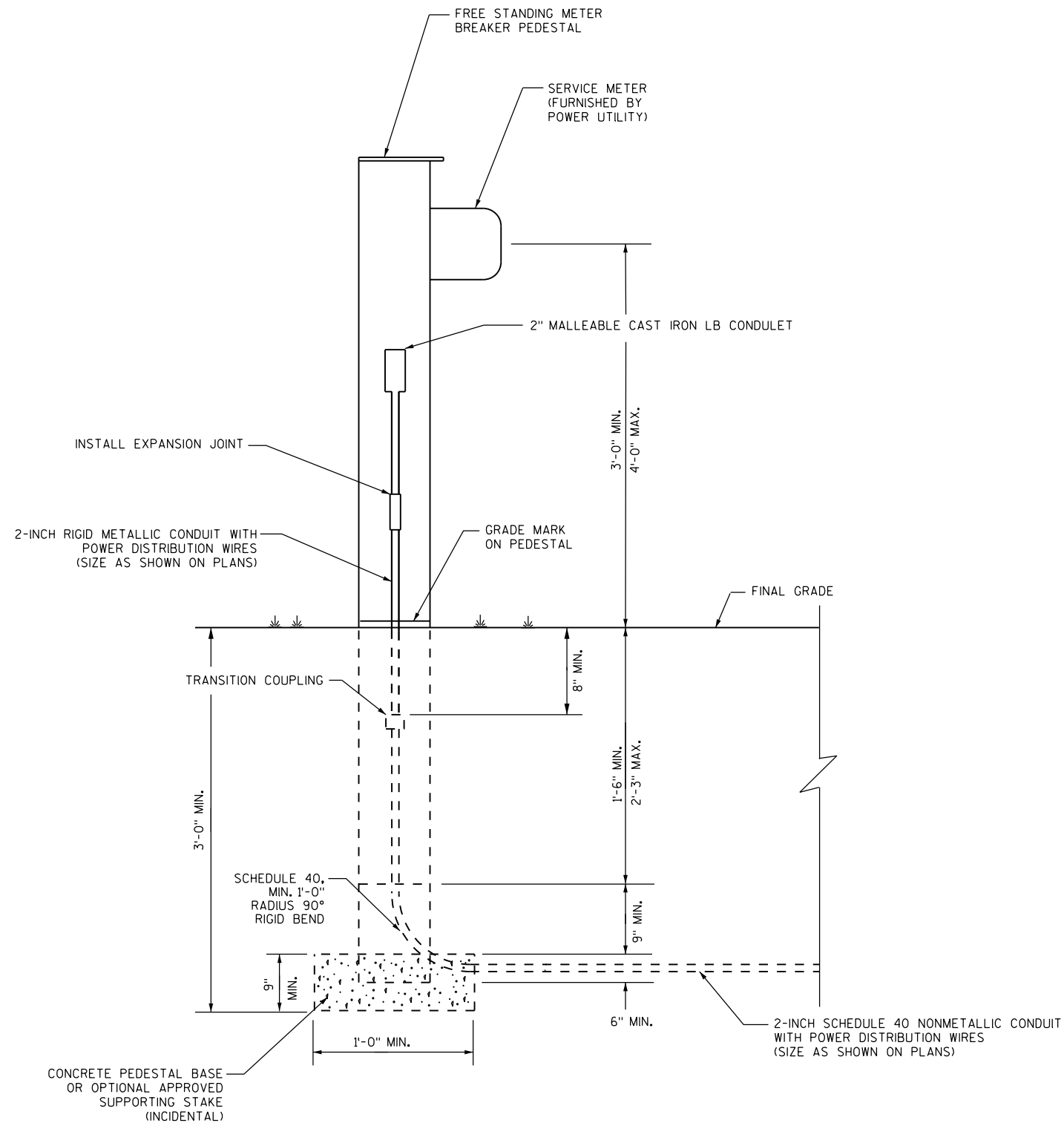


DMS-17-0021: WB IH 94 WEST OF CTH B



DETAIL A

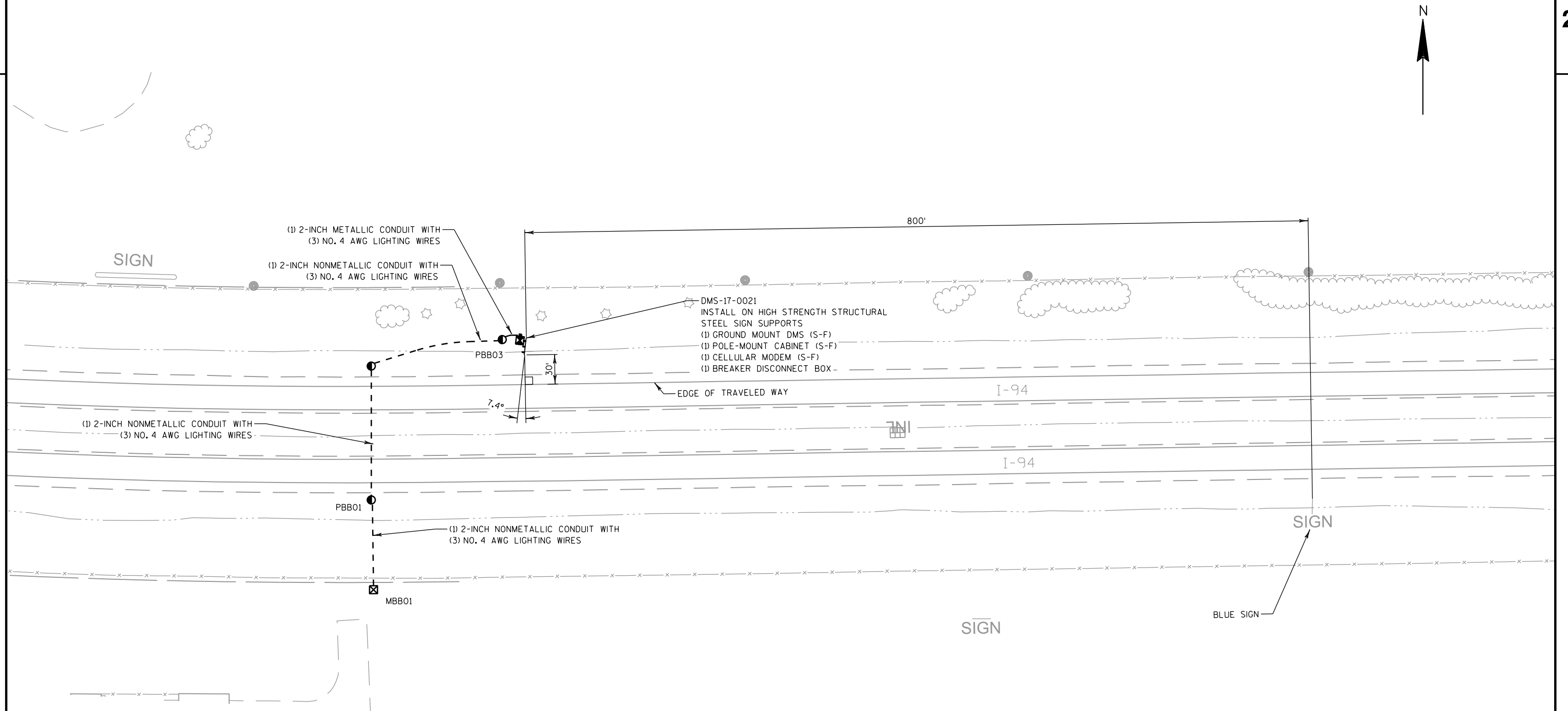
Z-BRACKETS ARE
3" X 2 1/16" X 1/4"
WEB X FLANGE X THICKNESS
ALUMINUM 6061-T6-ALLOY



ELECTRICAL SERVICE METER BREAKER PEDESTAL

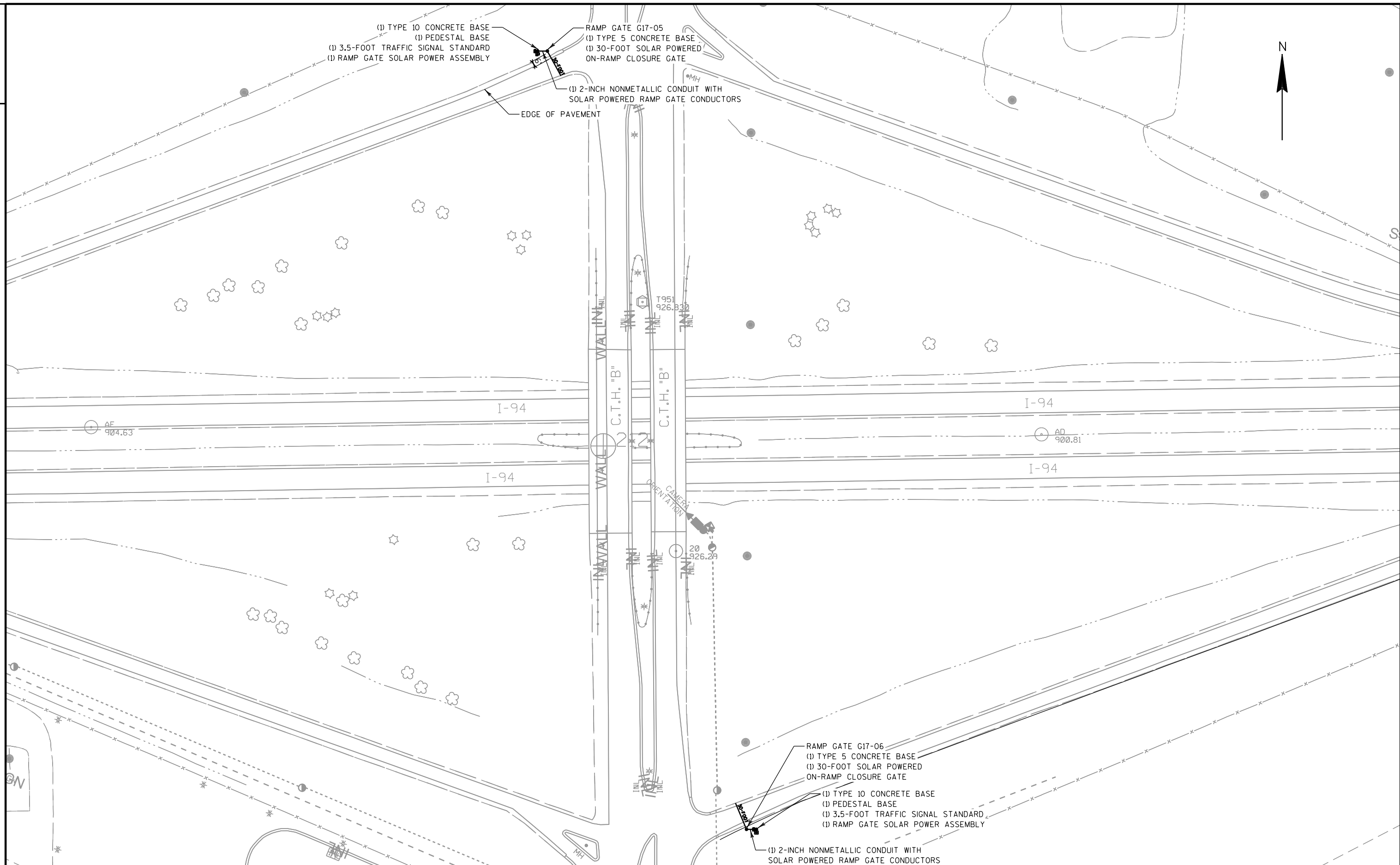
NOTES

- 1) MINIMUM REQUIREMENT SHOWN. ADDITIONAL BREAKERS MAY BE REQUIRED.



2

2



PROJECT NO:1022-03-74 & 1022-06-72	HWY:IH 94
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COUNTY: DUNN

FTMS PLAN SHEETS

SHEET

E

FILE NAME : \\mlww400\ingrproj\60816\eau_claire\10220374\10220374_FM_15.dgn

PLOT DATE : 4/30/2014

PLOT BY : PKutz

PLOT NAME :

PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

DATE 30JUL14		E S T I M A T E O F Q U A N T I T I E S				
LINE					1022-03-74	1022-06-72
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0010	204.0105	REMOVING PAVEMENT BUTT JOINTS	SY	1,248.000	624.000	624.000
0020	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	SF	121,629.000	62,940.000	58,689.000
0030	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	8,596.000	4,020.000	4,576.000
0040	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	330,839.000	166,971.000	163,868.000
0050	204.0165	REMOVING GUARDRAIL	LF	475.000	225.000	250.000
0060	204.9060.S	REMOVING (ITEM DESCRIPTION) 01.	EACH	174.000	78.000	96.000
0070	213.0100	REFLECTORS FROM DELINEATOR POSTS				
		FINISHING ROADWAY (PROJECT) 01.	EACH	1.000	1.000	
		1022-03-74				
0080	213.0100	FINISHING ROADWAY (PROJECT) 02.	EACH	1.000		1.000
		1022-06-72				
0090	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	2,661.000	1,335.000	1,326.000
0100	305.0500	SHAPING SHOULDERS	STA	792.000	399.000	393.000
0110	440.4410.S	INCENTIVE IRI RIDE	DOL	59,230.000	29,800.000	29,430.000
0120	455.0105	ASPHALTIC MATERIAL PG58-28	TON	605.000	308.000	297.000
0130	455.0125	ASPHALTIC MATERIAL PG70-28	TON	2,368.000	1,187.000	1,181.000
0140	455.0605	TACK COAT	GAL	15,520.000	7,858.000	7,662.000
0150	460.1100	HMA PAVEMENT TYPE E-0.3	TON	10,075.000	5,126.000	4,949.000
0160	460.1110	HMA PAVEMENT TYPE E-10	TON	39,481.000	19,791.000	19,690.000
0170	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	31,720.000	15,950.000	15,770.000
0180	465.0110	ASPHALTIC SURFACE PATCHING	TON	495.000	250.000	245.000
0190	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	119.000	60.000	59.000
0200	465.0400	ASPHALTIC SHOULDER RUMBLE STRIPS	LF	153,120.000	77,438.000	75,682.000
0210	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	475.000	225.000	250.000
0220	614.0400	ADJUSTING STEEL PLATE BEAM GUARD	LF	781.250	525.000	256.250
0230	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS	EACH	1.000	1.000	
		(PROJECT) 01.1022-03-74				
0240	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS	EACH	1.000		1.000
		(PROJECT) 02.1022-06-72				
0250	619.1000	MOBILIZATION	EACH	1.000	0.500	0.500
0260	633.0100	DELINEATOR POSTS STEEL	EACH	154.000	69.000	85.000
0270	633.0500	DELINEATOR REFLECTORS	EACH	352.000	159.000	193.000
0280	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	105.000	45.000	60.000
0290	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	10.000	4.000	6.000
0300	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	1,470.000		1,470.000
0310	635.0300	SIGN SUPPORTS REPLACING BASE CONNECTION	EACH	136.000	40.000	96.000
		BOLTS				
0320	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	2.700		2.700
0330	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	150.000		150.000
0340	637.1220	SIGNS TYPE I REFLECTIVE SH	SF	2,101.170	963.500	1,137.670
0350	637.2210	SIGNS TYPE II REFLECTIVE H	SF	961.420	382.310	579.110
0360	637.2215	SIGNS TYPE II REFLECTIVE H FOLDING	SF	130.340	65.170	65.170
0370	637.2230	SIGNS TYPE II REFLECTIVE F	SF	223.500	99.250	124.250
0380	638.2601	REMOVING SIGNS TYPE I	EACH	17.000	5.000	12.000
0390	638.2602	REMOVING SIGNS TYPE II	EACH	104.000	45.000	59.000
0400	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	109.000	46.000	63.000
0410	642.5201	FIELD OFFICE TYPE C	EACH	1.000	0.500	0.500
0420	643.0200	TRAFFIC CONTROL SURVEILLANCE AND	DAY	100.000	100.000	
		MAINTENANCE (PROJECT) 01. 1022-03-74				
0430	643.0200	TRAFFIC CONTROL SURVEILLANCE AND	DAY	100.000		100.000
		MAINTENANCE (PROJECT) 02.1022-06-72				
0440	643.0300	TRAFFIC CONTROL DRUMS	DAY	93,623.000	47,120.000	46,503.000
0450	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	5,992.000	3,014.000	2,978.000
0460	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	11,984.000	6,028.000	5,956.000
0470	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	4,946.000	2,496.000	2,450.000

DATE 30JUL14		E S T I M A T E O F Q U A N T I T I E S				
LINE					1022-03-74	1022-06-72
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0480	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	456.000	228.000	228.000
0490	643.0900	TRAFFIC CONTROL SIGNS	DAY	9,452.000	4,726.000	4,726.000
0500	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	200.000	100.000	100.000
0510	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	224.000	112.000	112.000
0520	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	228.000	114.000	114.000
0530	646.0103	PAVEMENT MARKING PAINT 4-INCH	LF	19,549.000	9,835.000	9,714.000
0540	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	173,064.000	87,196.000	85,868.000
0550	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	1,045.000	545.000	500.000
0560	646.0600	REMOVING PAVEMENT MARKINGS	LF	1,000.000	500.000	500.000
0570	646.0790.S	REMOVING RAISED PAVEMENT MARKERS	EACH	826.000	417.000	409.000
0580	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	19,549.000	9,835.000	9,714.000
0590	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	4,050.000	1,950.000	2,100.000
0600	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	8.000	4.000	4.000
0610	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	4.000	2.000	2.000
0620	647.0456	PAVEMENT MARKING CURB EPOXY	LF	400.000	200.000	200.000
0630	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	204.000	102.000	102.000
0640	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	4.000	2.000	2.000
0650	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	332,329.000	167,195.000	165,134.000
0660	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	89,360.000	44,830.000	44,530.000
0670	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1022-03-74	LS	1.000	1.000	
0680	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 02.1022-06-72	LS	1.000		1.000
0690	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	10.000		10.000
0700	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	250.000	10.000	240.000
0710	652.0605	CONDUIT SPECIAL 2-INCH	LF	135.000		135.000
0720	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	3.000		3.000
0730	654.0105	CONCRETE BASES TYPE 5	EACH	2.000	1.000	1.000
0740	654.0220	CONCRETE CONTROL CABINET BASES TYPE 10	EACH	2.000	1.000	1.000
0750	655.0630	ELECTRICAL WIRE LIGHTING 4 AWG	LF	1,200.000		1,200.000
0760	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01.DMS-17-0021	LS	1.000		1.000
0770	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 01.DMS-17-0021	LS	1.000		1.000
0780	657.0100	PEDESTAL BASES	EACH	2.000	1.000	1.000
0790	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	2.000	1.000	1.000
0800	657.0405	TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	EACH	2.000	1.000	1.000
0810	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	1.000		1.000
0820	662.2030.S	RAMP CLOSURE GATES SOLAR 30-FT	EACH	2.000	1.000	1.000
0830	670.0100	FIELD SYSTEM INTEGRATOR	LS	1.000		1.000
0840	670.0200	ITS DOCUMENTATION	LS	1.000		1.000
0850	673.0225.S	INSTALL POLE MOUNTED CABINET	EACH	1.000		1.000
0860	690.0250	SAWING CONCRETE	LF	39,981.000	20,115.000	19,866.000
0870	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	HRS	2,500.000	1,250.000	1,250.000
0880	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	1,440.000	720.000	720.000
0890	SPV.0045	SPECIAL 01. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) CELLULAR COMMUNICATIONS	DAY	200.000	100.000	100.000
0900	SPV.0060	SPECIAL 02. ADDING GUARDRAIL POSTS & BLOCKS	EACH	29.000	12.000	17.000

DATE 30JUL14			E S T I M A T E O F Q U A N T I T I E S			
LINE	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1022-03-74	1022-06-72
NUMBER					QUANTITY	QUANTITY
0910	SPV.0060	SPECIAL 03.INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN	EACH	1.000		1.000
0920	SPV.0090	SPECIAL 01. CLEANING CONCRETE JOINTS AND CRACKS	LF	10,600.000	5,600.000	5,000.000
0930	SPV.0105	SPECIAL 01. MATERIAL TRANSFER VEHICLE 1022-03-74	LS	1.000	1.000	
0940	SPV.0105	SPECIAL 02. MATERIAL TRANSFER VEHICLE 1022-06-72	LS	1.000		1.000
0950	SPV.0105	SPECIAL 03. MILLING AND REMOVING TEMPORARY JOINT 1022-03-74	LS	1.000	1.000	
0960	SPV.0105	SPECIAL 04. WEIGH-IN-MOTION SYSTEM REPAIR	LS	1.000		1.000
0970	SPV.0105	SPECIAL 05. PREPARE FOUNDATION FOR ASPHALTIC PAVING SPECIAL 1022-03-74	LS	1.000	1.000	
0980	SPV.0105	SPECIAL 06. PREPARE FOUNDATION FOR ASPHALTIC PAVING SPECIAL 1022-06-72	LS	1.000		1.000
0990	SPV.0105	SPECIAL 07. MILLING AND REMOVING TEMPORARY JOINT 1022-06-72	LS	1.000		1.000
1000	SPV.0170	SPECIAL 01. REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL	STA	813.000	410.000	403.000
1010	SPV.0180	SPECIAL 01. CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL	SY	5,970.000	2,985.000	2,985.000
1020	SPV.0195	SPECIAL 01. HMA PAVEMENT TYPE SMA-SPECIAL	TON	29,011.000	14,509.000	14,502.000
1030	SPV.0195	SPECIAL 02. SMA PAVEMENT COMPACTION ACCEPTANCE	TON	29,011.000	14,509.000	14,502.000

REMOVING PAVEMENT BUTT JOINTS

				204.0105	
CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	406 'NB'+25	- 406 'NB'+75	CTH B NORTHBOUND	156	
0010	413 'NB'+20	- 413 'NB'+70	CTH B NORTHBOUND	156	
0010	406 'SB'+25	- 406 'SB'+75	CTH B SOUTHBOUND	156	
0010	413 'SB'+20	- 413 'SB'+70	CTH B SOUTHBOUND	156	
TOTAL 0010				624	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

				204.0115	
CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	182'E'+60	- 183'E'+60	IH 94 EASTBOUND	422	
0010	259'SW'+30	- 260'SW'+30	OFF-RAMP AT CTH B	256	
0010	406'NB'+25	- 406'NB'+75	CTH B NORTHBOUND	33	SHOULDERS
0010	413'NB'+20	- 413'NB'+70	CTH B NORTHBOUND	33	SHOULDERS
0010	406'SB'+25	- 406'SB'+75	CTH B SOUTHBOUND	33	SHOULDERS
0010	413'SB'+20	- 413'SB'+70	CTH B NORTHBOUND	33	SHOULDERS
0010	283'SE'+80	- 284'SE'+80	ON-RAMP AT CTH B	256	
0010	493'E'+65	- 494'E'+65	IH 94 EASTBOUND	422	
0010	495'E'+30	- 496'E'+30	IH 94 EASTBOUND	422	
0010	515'E'+95	- 516'E'+95	IH 94 EASTBOUND	422	
0010	517'E'+25	- 518'E'+25	IH 94 EASTBOUND	422	
0010	563'E'+65	- 564'E'+65	IH 94 EASTBOUND	422	
0010	565'E'+00	- 566'E'+00	IH 94 EASTBOUND	422	
0010	575'E'+00	- 576'E'+00	IH 94 EASTBOUND	422	
TOTAL 0010				4020	

BASE AGGREGATE DENSE 3/4-INCH

				305.0110		
CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS	
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	1000	MEDIAN SHOULDER	
0010	406'NB'+25	- 413'NB'+70	CTH B NORTHBOUND	18	OUTSIDE SHOULDER	
0010	406'SB'+25	- 413'SB'+70	CTH B SOUTHBOUND	18	OUTSIDE SHOULDER	
0010	260'SW'+30	- 272'SW'+75	OFF-RAMP AT CTH B	154		
0010	272'SE'+60	- 283'SE'+80	ON-RAMP AT CTH B	138		
0010	395'E'+00	- 565'E'+00	IH 94 EASTBOUND	7	OUTSIDE SHOULDER NEAR EXISTING GUARDRAIL	
TOTAL 0010				1335		

REMOVING CONCRETE SURFACE PARTIAL DEPTH

				204.0109.S		
CATEGORY	STATION TO	STATION	LOCATION	SF	REMARKS	
0010	406'NB'+75	- 413'NB'+20	CTH B NORTHBOUND	18060		
0010	406'SB'+75	- 413'SB'+20	CTH B SOUTHBOUND	18060		
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	26820	CONCRETE PAVEMENT REPAIR AREAS	
TOTAL 0010				62940		

REMOVING ASPHALTIC SURFACE MILLING

				204.0120	
CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	183'E'+60	- 493'E'+65	IH 94 EASTBOUND	130910	
0010	254'SW'+74	- 259'SW'+30	OFF-RAMP AT CTH B	845	
0010	284'SE'+80	- 294'SE'+56	ON-RAMP AT CTH B	1975	
0010	496'E'+30	- 515'E'+95	IH 94 EASTBOUND	8297	
0010	518'E'+25	- 563'E'+65	IH 94 EASTBOUND	19169	
0010	566'E'+00	- 575'E'+00	IH 94 EASTBOUND	3800	
0010	406'NB'+75	- 413'NB'+20	CTH B NORTHBOUND	430	SHOULDERS
0010	406'SB'+75	- 413'SB'+20	CTH B SOUTHBOUND	430	SHOULDERS
0010			IH 94 MAINT. CROSSOVERS	1115	
TOTAL 0010				166971	

REMOVING GUARDRAIL

				204.0165		
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS	
0010			UNDISTRIBUTED	225	REPLACE	DAMAGED SECTIONS
TOTAL 0010				225		

SHAPING SHOULDERS

CATEGORY	STATION TO	STATION	LOCATION	305.0500 STA	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	394	MEDIAN SHOULDER
0010	395'E'+00	- 565'E'+00	IH 94 EASTBOUND	5	OUTSIDE SHOULDER NEAR EXISTING GUARDRAIL
TOTAL 0010				399	

ASPHALTIC SURFACE TEMPORARY

CATEGORY	STATION TO	STATION	LOCATION	465.0125 TON	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	60	FILLING RUMBLE STRIPS
TOTAL 0010				60	

STEEL PLATE BEAM GUARD CLASS A

CATEGORY	STATION TO	STATION	LOCATION	614.0305 LF	REMARKS
0010			UNDISTRIBUTED	225	REPLACEMENTS
TOTAL 0010				225	

PAVEMENT MARKING PAINT 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0103 LF	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	9835	INTERIM LANE LINE (WHITE), SEE GENERAL NOTES
TOTAL 0010				9835	

ASPHALTIC SURFACE PATCHING

CATEGORY	STATION TO	STATION	LOCATION	465.0110 TON	REMARKS
0010			IH 94 EASTBOUND	200	
0010			ON & OFF-RAMPS AT CTH B	15	
0010			CTH B	35	
TOTAL 0010				250	

ASPHALTIC SHOULDER RUMBLE STRIP

CATEGORY	STATION TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	182'E'+60	- 494'E'+65	IH 94 EASTBOUND	61428	MEDIAN & OUTSIDE SHOULDERS
0010	495'E'+30	- 516'E'+95	IH 94 EASTBOUND	4330	MEDIAN & OUTSIDE SHOULDERS
0010	517'E'+25	- 564'E'+65	IH 94 EASTBOUND	9480	MEDIAN & OUTSIDE SHOULDERS
0010	565'E'+00	- 576'E'+00	IH 94 EASTBOUND	2200	MEDIAN & OUTSIDE SHOULDERS
TOTAL 0010				77438	

ADJUSTING STEEL PLATE BEAM GUARD

CATEGORY	STATION TO	STATION	LOCATION	614.0400 LF	REMARKS
0010	469'E'+90	- 471'E'+15	IH 94 EASTBOUND, RT.	125	
0010	514'E'+65	- 516'E'+65	IH 94 EASTBOUND, LT.	200	
0010	562'E'+35	- 564'E'+35	IH 94 EASTBOUND, LT.	200	
TOTAL 0010				525	

PAVEMENT MARKING EPOXY 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0106 LF	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND, RT.	39340	EDGE LINE (WHITE)
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND, LT.	39340	EDGE LINE (YELLOW)
0010	406'NB'+25	- 414'NB'+75	CTH B NORTHBOUND	1063	LANE LINE & EDGE LINE (WHITE)
0010	406'NB'+25	- 414'NB'+75	CTH B NORTHBOUND	850	EDGE LINE (YELLOW)
0010	406'SB'+25	- 414'SB'+75	CTH B SOUTHBOUND	1063	LANE LINE & EDGE LINE (WHITE)
0010	406'SB'+25	- 414'SB'+75	CTH B SOUTHBOUND	850	EDGE LINE (YELLOW)
0010	260'SW'+50	- 272'SW'+75	OFF-RAMP AT CTH B	1225	EDGE LINE (WHITE)
0010	260'SW'+50	- 272'SW'+75	OFF-RAMP AT CTH B	1225	EDGE LINE (YELLOW)
0010	272'SE'+60	- 283'SE'+80	ON-RAMP AT CTH B	1120	EDGE LINE (WHITE)
0010	272'SE'+60	- 283'SE'+80	ON-RAMP AT CTH B	1120	EDGE LINE (YELLOW)
TOTAL 0010				87196	

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PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0881.S LF	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	9835	LANE LINE (WHITE), SEE GEN. NOTES
TOTAL 0010				<u>9835</u>	

TEMPORARY PAVEMENT MARKING 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	649.0100 LF	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	167195	
TOTAL 0010				<u>167195</u>	

SAWING CONCRETE

				690.0250	
CATEGORY	STATION TO	STATION	LOCATION	LF	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	20115	CONCRETE PAVEMENT REPAIR AREAS
TOTAL 0010				20115	

DELINEATORS

				REMOVING REFLECTORS FROM DELINEATOR POSTS 204.9060.S	POSTS STEEL 633.0100	REFLECTORS 633.0500	REMARKS
CATEGORY	STATION TO	STATION	LOCATION	EACH	EACH	EACH	
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	-	31	31	MISSING DELINEATOR POSTS & REFLECTORS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	68	-	68	REMOVE AND REPLACE REFLECTORS
0010	254'SW'+75	- 259'SW'+75	OFF-RAMP AT CTH B	-	4	8	MISSING DELINEATOR POSTS & REFLECTORS
0010	254'SW'+75	- 259'SW'+75	OFF-RAMP AT CTH B	4	-	4	REMOVE AND REPLACE REFLECTORS
0010	259'SW'+75	- 272'SW'+75	OFF-RAMP AT CTH B	-	13	13	MISSING DELINEATOR POSTS & REFLECTORS
0010	272'SE'+75	- 284'SE'+75	ON-RAMP AT CTH B	-	13	13	MISSING DELINEATOR POSTS & REFLECTORS
0010	284'SE'+75	- 294'SE'+75	ON-RAMP AT CTH B	-	8	16	MISSING DELINEATOR POSTS & REFLECTORS
0010	284'SE'+75	- 294'SE'+75	ON-RAMP AT CTH B	6	-	6	REMOVE AND REPLACE REFLECTORS
TOTAL 0010				78	69	159	

HMA ITEMS

				ASPHALTIC MATERIAL PG58-28 455.0105	ASPHALTIC MATERIAL PG70-28 455.0125	TACK COAT 455.0605	HMA PAVEMENT TYPE E-0.3 460.1100	HMA PAVEMENT TYPE E-10 460.1110	HMA PAVEMENT TYPE SMA- SPECIAL SPV.0195.01	SMA PAVEMENT COMPACTION ACCEPTANCE SPV.0195.02	REMARKS
CATEGORY	STATION TO	STATION	LOCATION	TON	TON	GAL	TON	TON	TON	TON	
0010	182'E'+60	- 494'E'+65	IH 94 EB LANES & MEDIAN SHOULDER	-	838	2427	-	13956	-	-	LOWER LAYER
0010	254'SW'+74	- 260'SW'+30	OFF-RAMP AT CTH B	-	12	36	-	204	-	-	LOWER LAYER
0010	260'SW'+30	- 272'SW'+75	OFF-RAMP AT CTH B	-	22	80	-	366	-	-	ONE LAYER
0010	272'SE'+75	- 283'SE'+56	ON-RAMP AT CTH B	-	19	69	-	318	-	-	ONE LAYER
0010	283'SE'+56	- 294'SE'+56	ON-RAMP AT CTH B	-	24	69	-	395	-	-	LOWER LAYER
0010	406'SB'+25	- 413'SB'+70	CTH B SB	-	29	141	-	486	-	-	UPPER & LOWER LAYER
0010	406'NB'+25	- 413'NB'+70	CTH B NB	-	29	141	-	486	-	-	UPPER & LOWER LAYER
0010	495'E'+30	- 516'E'+95	IH 94 EB LANES & MEDIAN SHOULDER	-	58	168	-	968	-	-	LOWER LAYER
0010	517'E'+25	- 564'E'+65	IH 94 EB LANES & MEDIAN SHOULDER	-	127	369	-	2120	-	-	LOWER LAYER
0010	565'E'+00	- 576'E'+00	IH 94 EB LANES & MEDIAN SHOULDER	-	29	85	-	492	-	-	LOWER LAYER
0010	182'E'+60	- 494'E'+65	IH 94 EB LANES & MEDIAN SHOULDER	-	-	2427	-	-	11165	11165	UPPER LAYER
0010	254'SW'+74	- 260'SW'+30	OFF-RAMP AT CTH B	-	-	36	-	-	163	163	UPPER LAYER
0010	283'SE'+80	- 294'SE'+56	ON-RAMP AT CTH B	-	-	69	-	-	316	316	UPPER LAYER
0010	495'E'+30	- 516'E'+95	IH 94 EB LANES & MEDIAN SHOULDER	-	-	168	-	-	775	775	UPPER LAYER
0010	517'E'+25	- 564'E'+65	IH 94 EB LANES & MEDIAN SHOULDER	-	-	369	-	-	1696	1696	UPPER LAYER
0010	565'E'+00	- 576'E'+00	IH 94 EB LANES & MEDIAN SHOULDER	-	-	86	-	-	394	394	UPPER LAYER
0010	182'E'+60	- 494'E'+65	IH 94 EB OUTSIDE SHOULDER	239	-	867	3987	-	-	-	ONE LAYER
0010	495'E'+30	- 516'E'+95	IH 94 EB OUTSIDE SHOULDER	17	-	60	277	-	-	-	ONE LAYER
0010	517'E'+25	- 564'E'+65	IH 94 EB OUTSIDE SHOULDER	36	-	132	606	-	-	-	ONE LAYER
0010	565'E'+00	- 576'E'+00	IH 94 EB OUTSIDE SHOULDER	8	-	31	141	-	-	-	ONE LAYER
0010			IH 94 MAINT. CROSSOVERS	7	-	28	115	-	-	-	ONE LAYER
TOTAL 0010				308	1187	7858	5126	19791	14509	14509	

SPECIAL PAVEMENT MARKINGS

CATEGORY	STATION TO	STATION	LOCATION	ARROWS	WORDS	CURB	STOP LINE	ISLAND	REMARKS
				EPOXY TYPE 2 647.0166 EACH	EPOXY 647.0356 EACH	EPOXY 647.0456 LF	EPOXY 18-INCH 647.0566 LF	NOSE EPOXY 647.0606 EACH	
0010	408'NB'+00 -	410'NB'+25	CTH B NORTHBOUND	2	1	140	36	1	
0010	410'SB'+50 -	412'SB'+00	CTH B SOUTHBOUND	2	1	60	36	1	
0010	272'SW'+75		OFF-RAMP AT CTH B	-	-	-	30	-	
TOTAL 0010				4	2	200	102	2	

ADDING GUARDRAIL POSTS & BLOCKS

CATEGORY	STATION TO	STATION	LOCATION	SPV.0060.02 EACH	REMARKS
0010	325'E'+00		IH 94 EASTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SQUARE END PARAPETS
0010	395'E'+90		IH 94 EASTBOUND, RT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	431'E'+15		IH 94 EASTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SQUARE END PARAPETS
0010	439'E'+70		IH 94 EASTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	439'E'+70		IH 94 EASTBOUND, LT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	494'E'+60		IH 94 EASTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	494'E'+60		IH 94 EASTBOUND, LT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	516'E'+90		IH 94 EASTBOUND, LT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	516'E'+90		IH 94 EASTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	564'E'+60		IH 94 EASTBOUND, LT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	564'E'+60		IH 94 EASTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
TOTAL 0010				12	

CLEANING CONCRETE JOINTS AND CRACKS

REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL

CATEGORY	STATION TO	STATION	LOCATION	SPV.0090.01 LF	REMARKS
0010	406'NB'+25 -	413'NB'+70	CTH B NORTHBOUND	2800	
0010	406'SB'+25 -	413'SB'+70	CTH B SOUTHBOUND	2800	
TOTAL 0010				5600	

CATEGORY	STATION TO	STATION	LOCATION	STA	REMARKS
0010	182'E'+60 -	576'E'+00	IH 94 EASTBOUND	394	FINAL CENTERLINE JOINT
0010	406'NB'+25 -	413'NB'+70	CTH B NORTHBOUND	8	FINAL CENTERLINE JOINT
0010	406'SB'+25 -	413'SB'+70	CTH B SOUTHBOUND	8	FINAL CENTERLINE JOINT
TOTAL 0010				410	

CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL

CATEGORY	STATION TO	STATION	LOCATION	SPV.0180.01 SY	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	2985	ESTIMATED 75 - 4'X12' PATCHES PER MILE
TOTAL 0010				2985	

TRAFFIC CONTROL

CATEGORY	STATION TO	STATION	LOCATION	DRUMS 643.0300 DAY	BARRICADES TYPE III 643.0420 DAY	WARNING LIGHTS TYPE A 643.0705 DAY	WARNING LIGHTS TYPE C 643.0715 DAY	ARROW BOARDS 643.0800 DAY	SIGNS 643.0900 DAY	SIGNS FIXED MESSAGE 643.1000 SF	SIGNS PCMS 643.1050 DAY	PORTABLE CHANGEABLE MESSAGE SIGN CELLULAR COMMUNICATIONS SPV.0045.01 DAY	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	46700	3000	6000	2300	200	4600	112	100	100	
0010	406+25	- 413+70	CTH B NB & SB	420	14	28	196	28	126	-	14	-	
TOTAL 0010				47120	3014	6028	2496	228	4726	112	114	100	

TRAFFIC CONTROL COVERING SIGNS TYPE II

CATEGORY	STATION TO	STATION	LOCATION	643.0920 EACH	REMARKS
0010	182'E'+60	- 576'E'+00	IH 94 EASTBOUND	100	SPEED LIMIT 65 SIGNS; 50 CYCLES; 2 SIGNS
TOTAL 0010				100	

3

REMOVING PAVEMENT BUTT JOINTS

CATEGORY	STATION TO	STATION	LOCATION	204.0105 SY	REMARKS
0010	415'NB'+75 -	416'NB'+25	CTH B NORTHBOUND	156	
0010	422'NB'+00 -	422'NB'+50	CTH B NORTHBOUND	156	
0010	415'SB'+75 -	416'SB'+25	CTH B SOUTHBOUND	156	
0010	422'SB'+00 -	422'SB'+50	CTH B SOUTHBOUND	156	
TOTAL 0010				624	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

CATEGORY	STATION TO	STATION	LOCATION	204.0115 SY	REMARKS
0010	187'W'+75 -	188'W'+75	IH 94 WESTBOUND	422	
0010	261'NW'+35 -	262'NW'+35	ON-RAMP AT CTH B	256	
0010	415'NB'+75 -	416'NB'+25	CTH B NORTHBOUND	33	SHOULDERS
0010	422'NB'+00 -	422'NB'+50	CTH B NORTHBOUND	33	SHOULDERS
0010	415'SB'+75 -	416'SB'+25	CTH B SOUTHBOUND	33	SHOULDERS
0010	422'SB'+00 -	422'SB'+50	CTH B NORTHBOUND	33	SHOULDERS
0010	285'NE'+55 -	286'NE'+55	OFF-RAMP AT CTH B	256	
0010	405'W'+75		IH 94 WESTBOUND	145	ON-RAMP AT WEIGH STATION
0010	423'W'+90		IH 94 WESTBOUND	145	OFF-RAMP AT WEIGH STATION
0010	459'W'+20 -	460'W'+20	IH 94 WESTBOUND	133	OUTSIDE LANE; WEIGH-IN-MOTION CONCRETE
0010	463'W'+20 -	464'W'+20	IH 94 WESTBOUND	133	OUTSIDE LANE; WEIGH-IN-MOTION CONCRETE
0010	493'W'+70 -	494'W'+70	IH 94 WESTBOUND	422	
0010	495'W'+35 -	496'W'+35	IH 94 WESTBOUND	422	
0010	516'W'+15 -	517'W'+15	IH 94 WESTBOUND	422	
0010	517'W'+45 -	518'W'+45	IH 94 WESTBOUND	422	
0010	563'W'+95 -	564'W'+95	IH 94 WESTBOUND	422	
0010	565'W'+30 -	566'W'+30	IH 94 WESTBOUND	422	
0010	575'W'+30 -	576'W'+30	IH 94 WESTBOUND	422	
TOTAL 0010				4576	

REMOVING GUARDRAIL

CATEGORY	STATION TO	STATION	LOCATION	204.0165 LF	REMARKS
0010			UNDISTRIBUTED	250	REPLACE DAMAGED SECTIONS
TOTAL 0010				250	

REMOVING CONCRETE SURFACE PARTIAL DEPTH

CATEGORY	STATION TO	STATION	LOCATION	204.0109.S SF	REMARKS
0010	416'NB'+25 -	422'NB'+00	CTH B NORTHBOUND	16100	
0010	416'SB'+25 -	422'SB'+00	CTH B SOUTHBOUND	16100	
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	26489	CONCRETE PAVEMENT REPAIR AREAS
TOTAL 0010				58689	

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION TO	STATION	LOCATION	204.0120 SY	REMARKS
0010	188'W'+75 -	493'W'+70	IH 94 WESTBOUND	128357	
0010	247'NW'+50 -	261'NW'+35	ON-RAMP AT CTH B	2626	
0010	286'NE'+55 -	290'NE'+75	OFF-RAMP AT CTH B	748	
0010	496'W'+35 -	516'W'+15	IH 94 WESTBOUND	8360	
0010	518'W'+45 -	563'W'+95	IH 94 WESTBOUND	19211	
0010	566'W'+30 -	575'W'+30	IH 94 WESTBOUND	3800	
0010	416'NB'+25 -	422'NB'+00	CTH B NORTHBOUND	383	SHOULDERS
0010	416'SB'+25 -	422'SB'+00	CTH B SOUTHBOUND	383	SHOULDERS
TOTAL 0010				163868	

BASE AGGREGATE DENSE 3/4-INCH

CATEGORY	STATION TO	STATION	LOCATION	305.0110 TON	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	1000	MEDIAN SHOULDER
0010	415'NB'+75 -	422'NB'+50	CTH B NORTHBOUND	17	OUTSIDE SHOULDER
0010	415'SB'+75 -	422'SB'+50	CTH B SOUTHBOUND	17	OUTSIDE SHOULDER
0010	262'NW'+35 -	272'NW'+60???	ON-RAMP AT CTH B	127	
0010	272'NE'+60???	285'NE'+55	OFF-RAMP AT CTH B	160	
0010	396'W'+50 -	566'W'+00	IH 94 WESTBOUND	5	OUTSIDE SHOULDER NEAR EXISTING GUARDRAIL
TOTAL 0010				1326	

3

SHAPING SHOULDERS

CATEGORY	STATION TO	STATION	LOCATION	305.0500 STA	REMARKS
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	389	MEDIAN SHOULDER
0010	396'W'+50	- 566'W'+00	IH 94 WESTBOUND	4	OUTSIDE SHOULDER NEAR EXISTING GUARDRAIL
TOTAL 0010				393	

ASPHALTIC SURFACE TEMPORARY

CATEGORY	STATION TO	STATION	LOCATION	465.0125 TON	REMARKS
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	59	FILLING RUMBLE STRIPS
TOTAL 0010				59	

STEEL PLATE BEAM GUARD CLASS A

CATEGORY	STATION TO	STATION	LOCATION	614.0305 LF	REMARKS
0010			UNDISTRIBUTED	250	REPLACEMENTS
TOTAL 0010				250	

PAVEMENT MARKING PAINT 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0103 LF	REMARKS
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	9714	INTERIM LANE LINE (WHITE), SEE GEN. NOTES
TOTAL 0010				9714	

ASPHALTIC SURFACE PATCHING

CATEGORY	STATION TO	STATION	LOCATION	465.0110 TON	REMARKS
0010			IH 94 WESTBOUND	200	
0010			ON & OFF-RAMPS AT CTH B	15	
0010			CTH B	30	
TOTAL 0010				245	

ASPHALTIC SHOULDER RUMBLE STRIP

CATEGORY	STATION TO	STATION	LOCATION	465.0400 LF	REMARKS
0010	187'W'+75	- 494'W'+70	IH 94 WESTBOUND	59622	MEDIAN & OUTSIDE SHOULDERS
0010	495'W'+35	- 517'W'+15	IH 94 WESTBOUND	4360	MEDIAN & OUTSIDE SHOULDERS
0010	517'W'+45	- 564'W'+95	IH 94 WESTBOUND	9500	MEDIAN & OUTSIDE SHOULDERS
0010	565'W'+30	- 576'W'+30	IH 94 WESTBOUND	2200	MEDIAN & OUTSIDE SHOULDERS
TOTAL 0010				75682	

ADJUSTING STEEL PLATE BEAM GUARD

CATEGORY	STATION TO	STATION	LOCATION	614.0400 LF	REMARKS
0010	452'W'+00	- 453'W'+50	IH 94 WESTBOUND, LT.	150	
0010	510'W'+25	- 511'W'+31.25	IH 94 WESTBOUND, LT.	106.25	
TOTAL 0010				256.25	

PAVEMENT MARKING EPOXY 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0106 LF	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND, RT.	38855	EDGE LINE (WHITE)
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND, LT.	38855	EDGE LINE (YELLOW)
0010	414'NB'+75 -	422'NB'+50	CTH B NORTHBOUND	969	LANE LINE & EDGE LINE (WHITE)
0010	414'NB'+75 -	422'NB'+50	CTH B NORTHBOUND	775	EDGE LINE (YELLOW)
0010	414'SB'+75 -	422'SB'+50	CTH B SOUTHBOUND	969	LANE LINE & EDGE LINE (WHITE)
0010	414'SB'+75 -	422'SB'+50	CTH B SOUTHBOUND	775	EDGE LINE (YELLOW)
0010	262'NW'+35 -	272'NW'+75	ON-RAMP AT CTH B	1040	EDGE LINE (WHITE)
0010	262'NW'+35 -	272'NW'+75	ON-RAMP AT CTH B	1040	EDGE LINE (YELLOW)
0010	272'NE'+60 -	285'NE'+55	OFF-RAMP AT CTH B	1295	EDGE LINE (WHITE)
0010	272'NE'+60 -	285'NE'+55	OFF-RAMP AT CTH B	1295	EDGE LINE (YELLOW)
TOTAL 0010				85868	

REMOVING PAVEMENT MARKINGS

CATEGORY	STATION TO	STATION	LOCATION	646.0600 LF	REMARKS
0010			UNDISTRIBUTED	500	
TOTAL 0010				500	

PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0881.S LF	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	9714	LANE LINE (WHITE), SEE GEN. NOTES
TOTAL 0010				9714	

TEMPORARY PAVEMENT MARKING 4-INCH

CATEGORY	STATION TO	STATION	LOCATION	649.0100 LF	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	165134	
TOTAL 0010				165134	

PAVEMENT MARKING EPOXY 8-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0126 LF	REMARKS
0010	417'NB'+35 -	418'NB'+60	CTH B NORTHBOUND	125	TURN LANE
0010	419'SB'+60 -	420'SB'+60	CTH B SOUTHBOUND	100	TURN LANE
0010	273'NE'+00 -	275'NE'+20	OFF-RAMP AT CTH B	275	TURN LANE & ISLAND
TOTAL 0010				500	

REMOVING RAISED PAVEMENT MARKERS

CATEGORY	STATION TO	STATION	LOCATION	646.0790.S EACH	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	389	
0010	285'NE'+55 -	288'NE'+20	OFF-RAMP AT CTH B	20	
TOTAL 0010				409	

PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH

CATEGORY	STATION TO	STATION	LOCATION	646.0883.S LF	REMARKS
0010	254'W'+60 -	262'W'+00	IH 94 WESTBOUND, LT.	1480	GORE AT ON-RAMP
0010	285'W'+10 -	288'W'+20	IH 94 WESTBOUND, LT.	620	GORE AT OFF-RAMP
TOTAL 0010				2100	

CONSTRUCTION STAKING RESURFACING REFERENCE

CATEGORY	STATION TO	STATION	LOCATION	650.8000 LF	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	38855	
0010	247'NW'+50 -	272'NW'+75	ON-RAMP AT CTH B	2525	
0010	272'NE'+75 -	290'NE'+75	OFF-RAMP AT CTH B	1800	
0010	415'NB'+75 -	422'NB'+50	CTH B NORTHBOUND	675	
0010	415'SB'+75 -	422'SB'+50	CTH B SOUTHBOUND	675	
TOTAL 0010				44530	

SAWING CONCRETE

CATEGORY	STATION TO	STATION	LOCATION	690.0250 LF	REMARKS
0010	187'W'+75 -	576'W'+30	IH 94 WESTBOUND	19866	CONCRETE PAVEMENT REPAIR AREAS
TOTAL 0010				19866	

DELINEATORS

CATEGORY	STATION TO	STATION	LOCATION	REMOVING REFLECTORS FROM DELINEATOR POSTS 204.9060.S	POSTS STEEL 633.0100 EACH	REFLECTORS 633.0500 EACH	REMARKS
				EACH	EACH	EACH	
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	-	46	46	MISSING DELINEATOR POSTS & REFLECTORS
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	66	-	66	REMOVE AND REPLACE REFLECTORS
0010	247'NW'+50	- 261'NW'+60	ON-RAMP AT CTH B	-	4	8	MISSING DELINEATOR POSTS & REFLECTORS
0010	247'NW'+50	- 261'NW'+60	ON-RAMP AT CTH B	6	-	6	REMOVE AND REPLACE REFLECTORS
0010	261'NW'+60	- 272'NW'+75	ON-RAMP AT CTH B	-	10	10	MISSING DELINEATOR POSTS & REFLECTORS
0010	272'NE'+75	- 286'NE'+10	OFF-RAMP AT CTH B	-	11	11	MISSING DELINEATOR POSTS & REFLECTORS
0010	286'NE'+10	- 290'NE'+75	OFF-RAMP AT CTH B	-	8	16	MISSING DELINEATOR POSTS & REFLECTORS
0010	286'NE'+10	- 290'NE'+75	OFF-RAMP AT CTH B	8	-	8	REMOVE AND REPLACE REFLECTORS
0010			RAMPS TO WEIGH STATION	-	6	6	MISSING DELINEATOR POSTS & REFLECTORS
0010			RAMPS TO WEIGH STATION	16	-	16	REMOVE AND REPLACE REFLECTORS
TOTAL 0010				96	85	193	

HMA ITEMS

CATEGORY	STATION TO	STATION	LOCATION	ASPHALTIC MATERIAL PG58-28 455.0105	ASPHALTIC MATERIAL PG70-28 455.0125	TACK COAT 455.0605	HMA PAVEMENT TYPE E-0.3 460.1100	HMA PAVEMENT TYPE E-10 460.1110	HMA PAVEMENT TYPE SMA- SPECIAL SPV.0195.01	SMA PAVEMENT COMPACTION ACCEPTANCE SPV.0195.02	REMARKS
				TON	TON	GAL	TON	TON	TON	TON	
0010	187'W'+75	- 494'W'+70	IH 94 WB LANES & MEDIAN SHOULDER	-	824	2387	-	13727	-	-	LOWER LAYER
0010	247'NW'+50	- 262'NW'+35	ON-RAMP AT CTH B	-	33	99	-	546	-	-	LOWER LAYER
0010	262'NW'+35	- 272'NW'+60	ON-RAMP AT CTH B	-	18	65	-	301	-	-	ONE LAYER
0010	272'NE'+60	- 285'NE'+55	OFF-RAMP AT CTH B	-	23	83	-	381	-	-	ONE LAYER
0010	283'NE'+55	- 290'NE'+74	OFF-RAMP AT CTH B	-	16	46	-	264	-	-	LOWER LAYER
0010	415'SB'+75	- 422'SB'+50	CTH B SB	-	26	64	-	440	-	-	UPPER & LOWER LAYER
0010	415'NB'+75	- 422'NB'+50	CTH B NB	-	26	64	-	440	-	-	UPPER & LOWER LAYER
0010	495'W'+35	- 517'W'+15	IH 94 WB LANES & MEDIAN SHOULDER	-	58	169	-	975	-	-	LOWER LAYER
0010	517'W'+45	- 564'W'+95	IH 94 WB LANES & MEDIAN SHOULDER	-	127	370	-	2124	-	-	LOWER LAYER
0010	565'W'+30	- 576'W'+30	IH 94 WB LANES & MEDIAN SHOULDER	-	29	85	-	492	-	-	LOWER LAYER
0010	187'W'+75	- 494'W'+70	IH 94 WB LANES & MEDIAN SHOULDER	-	-	2387	-	-	10982	10982	UPPER LAYER
0010	247'NW'+50	- 262'NW'+35	ON-RAMP AT CTH B	-	-	95	-	-	436	436	UPPER LAYER
0010	283'NE'+55	- 290'NE'+74	OFF-RAMP AT CTH B	-	-	46	-	-	211	211	UPPER LAYER
0010	495'W'+35	- 517'W'+15	IH 94 WB LANES & MEDIAN SHOULDER	-	-	170	-	-	780	780	UPPER LAYER
0010	517'W'+45	- 564'W'+95	IH 94 WB LANES & MEDIAN SHOULDER	-	-	369	-	-	1699	1699	UPPER LAYER
0010	565'W'+30	- 576'W'+30	IH 94 WB LANES & MEDIAN SHOULDER	-	-	86	-	-	394	394	UPPER LAYER
0010	187'W'+75	- 494'W'+70	IH 94 WB OUTSIDE SHOULDER	235	-	853	3922	-	-	-	ONE LAYER
0010	495'W'+35	- 517'W'+15	IH 94 WB OUTSIDE SHOULDER	17	-	61	279	-	-	-	ONE LAYER
0010	517'W'+45	- 564'W'+95	IH 94 WB OUTSIDE SHOULDER	36	-	132	607	-	-	-	ONE LAYER
0010	565'W'+30	- 576'W'+30	IH 94 WB OUTSIDE SHOULDER	8	-	31	141	-	-	-	ONE LAYER
TOTAL 0010				297	1181	7662	4949	19690	14502	14502	

SPECIAL PAVEMENT MARKINGS

CATEGORY	STATION TO	STATION	LOCATION	ARROWS	WORDS	CURB	STOP LINE	ISLAND	REMARKS
				EPOXY	EPOXY	EPOXY	EPOXY	NOSE	
				TYPE 2	TYPE 2	TYPE 2	18-INCH	EPOXY	
				647.0166	647.0356	647.0456	647.0566	647.0606	
				EACH	EACH	LF	LF	EACH	
0010	417'NB'+30 -	418'NB'+60	CTH B NORTHBOUND	2	1	60	36	1	
0010	419'SB'+10 -	420'SB'+60	CTH B SOUTHBOUND	2	1	140	36	1	
0010	272'NE'+75		OFF-RAMP AT CTH B	-	-	-	30	-	
TOTAL 0010				4	2	200	102	2	

ADDING GUARDRAIL POSTS & BLOCKS

CATEGORY	STATION TO	STATION	LOCATION	SPV.0060.02	REMARKS
				EACH	
0010	326'W'+90		IH 94 WESTBOUND, LT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SQUARE END PARAPETS
0010	397'W'+20		IH 94 WESTBOUND, LT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	433'W'+00		IH 94 WESTBOUND, LT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SQUARE END PARAPETS
0010	440'W'+30		IH 94 WESTBOUND, LT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	440'W'+30		IH 94 WESTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	495'W'+40		IH 94 WESTBOUND, LT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	495'W'+40		IH 94 WESTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	517'W'+50		IH 94 WESTBOUND, LT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	517'W'+50		IH 94 WESTBOUND, RT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	565'W'+40		IH 94 WESTBOUND, LT.	2	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
0010	565'W'+40		IH 94 WESTBOUND, RT.	1	EXISTING THRIE BEAM GUARDRAIL; SEE S.D.D. FOR SLOPED END PARAPETS
TOTAL 0010				17	

CLEANING CONCRETE JOINTS AND CRACKS

CATEGORY	STATION TO	STATION	LOCATION	SPV.0090.01	REMARKS
				LF	
0010	415'NB'+75 -	422'NB'+50	CTH B NORTHBOUND	2500	
0010	415'SB'+75 -	422'SB'+50	CTH B SOUTHBOUND	2500	
TOTAL 0010				5000	

WEIGH-IN-MOTION SYSTEM REPAIR

CATEGORY	STATION TO	STATION	LOCATION	SPV.0105.04	REMARKS
				LS	
0010	420'W'+00 -	465'W'+00	LOOPS (L3,L4,L5,L6,L7,L8,L9,L10,L11,L12,L13) SENSORS (P2,P3,P4,P5,P6,P7,P8,P9) CONDUITS (ANY ASSOCIATED WITH ABOVE LOOPS & SENSORS)	1	SEE EXIST. WIM LOOPS, SENSORS, & CONDUITS PLAN
TOTAL 0010				1	

REHEATING HMA PAVEMENT LONGITUDINAL JOINTS SPECIAL

SPV.0170.01					
CATEGORY	STATION TO	STATION	LOCATION	STA	REMARKS
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	389	FINAL CENTERLINE JOINT
0010	415'NB'+75	- 422'NB'+50	CTH B NORTHBOUND	7	
0010	415'SB'+75	- 422'SB'+50	CTH B SOUTHBOUND	7	
TOTAL 0010				403	

CONCRETE PAVEMENT REPAIR NON DOWELED SPECIAL

SPV.0180.01					
CATEGORY	STATION TO	STATION	LOCATION	SY	REMARKS
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	2985	ESTIMATED 75 - 4'X12' PATCHES PER MILE
TOTAL 0010				2985	

TRAFFIC CONTROL

PORTABLE CHANGEABLE MESSAGE SIGN CELLULAR COMMUNICATIONS SPV.0045.01												REMARKS
CATEGORY	STATION TO	STATION	LOCATION	DRUMS 643.0300 DAY	BARRICADES TYPE III 643.0420 DAY	WARNING LIGHTS TYPE A 643.0705 DAY	WARNING LIGHTS TYPE C 643.0715 DAY	ARROW BOARDS 643.0800 DAY	SIGNS 643.0900 DAY	SIGNS FIXED MESSAGE 643.1000 SF	SIGNS PCMS 643.1050 DAY	
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	46123	2964	5928	2272	200	4600	112	100	100
0010	415+75	- 422+50	CTH B NB & SB	380	14	28	178	28	126	-	14	-
TOTAL 0010				46503	2978	5956	2450	228	4726	112	114	100

TRAFFIC CONTROL COVERING SIGNS TYPE II

643.0920 EACH					REMARKS
CATEGORY	STATION TO	STATION	LOCATION		
0010	187'W'+75	- 576'W'+30	IH 94 WESTBOUND	100	SPEED LIMIT 65 SIGNS; 50 CYCLES; 2 SIGNS
TOTAL 0010				100	

TYPE I PERMANENT SIGNS

				635.0300													
				Sign													
				Supports	***												
				Replacing	638.2601							637.1220					
Eastbound				Base	Removing				New	New	New	Signs					
IH 94	Existing		Existing	Connection	Signs	New			New	Sign	Sign	Type I					
Mile	Sign		Sign	Bolts	Type I	Sign			Sign	Size	Size	Reflective SH					
Marker	Code	Existing Sign Description	Position	(Each)	(Each)	Code	New Sign Description	Position	Width	Height	(SF)		Order -Line 1	Order -Line 2	Order -Line 3	Order -Line 4	Notes
EB 44.38 mi	E1-5P	Exit number panel for guide signs	Right	8	1	E1-5P	Exit number panel for guide signs	Right	108.00	30.00	22.50		45				See Sign Detail; Exist. Sign Size 108" x 24"
EB 44.38 mi	E1-1A	Advance exit guide sign, __ mile	Right	-	-	E1-1A	Advance exit guide sign, _ mile	Right	216.00	120.00	180.00		B	Menomonie	1		See Sign Detail; Exist. Sign Size 216" x 120"
EB 44.38 mi	E2-1	Next exit __ miles	Right	-	-	E2-1	Next exit __ miles	Right	156.00	24.00	26.00		6				Exist. Sign Size 156" x 24"
EB 45.27 mi	E1-5P	Exit number panel for guide signs	Right	8	1	E1-5P	Exit number panel for guide signs	Right	108.00	30.00	22.50		45				See Sign Detail; Exist. Sign Size 108" x 24"
EB 45.27 mi	E4-1A	Exit direction sign with arrow	Right	-	-	E4-1A	Exit direction sign with arrow	Right	252.00	90.00	157.50		B	Menomonie			See Sign Detail; Exist. Sign Size 252" x 84"
EB 46.64 mi	D2-3	Destination/distance (three)	Right	8	1	D2-3	Destination/distance (three)	Right	204.00	84.00	119.00		Elk Mound 5	Eau Claire 19	Tomah 102		See Sign Detail; Exist. Sign Size 180" x 84"
EB 51.09 mi	E1-5P	Exit number panel for guide signs	Right	8	1	E1-5P	Exit number panel for guide signs	Right	108.00	30.00	22.50		45				See Sign Detail; Exist. Sign Size 108" x 24"
EB 51.09 mi	E1-1A	Advance exit guide sign, __ mile	Right	-	-	E1-1A	Advance exit guide sign, _ mile	Right	276.00	162.00	310.50		12 29 40	Chippewa Falls	Wausau	1	See Sign Detail; Exist. Sign Size 288" x 162"
EB 51.09 mi	E2-1	Next exit __ miles	Right	-	-	E2-1	Next exit __ miles	Right	156.00	24.00	26.00		6				Exist. Sign Size 156" x 24"
EB 51.28 mi	E3-1	Destination-next right-exit number	Right	8	1	E3-1	Destination-next right-exit number	Right	132.00	84.00	77.00		Green Bay	Elk Mound			See Sign Detail; Exist. Sign Size 132" x 84"
		Project 1022-03-74	Totals	40	5							963.50					

				635.0300													
				Sign													
				Supports	***												
				Replacing	638.2601							637.1220					
Westbound				Base	Removing				New	New	New	Signs					
IH 94	Existing		Existing	Connection	Signs	New			New	Sign	Sign	Type I					
Mile	Sign		Sign	Bolts	Type I	Sign			Sign	Size	Size	Reflective SH					
Marker	Code	Existing Sign Description	Position	(Each)	(Each)	Code	New Sign Description	Position	Width	Height	(SF)		Order -Line 1	Order -Line 2	Order -Line 3		Notes
WB 81.51 mi	E5-56A(MOD.)	Weigh station 2 miles	Right	8	1	E5-56A(MOD.)	Weigh station 2 miles	Right	144.00	72.00	72.00		2				Note Sign Text is "2 Miles"; Exist. Sign Size 108" x 72"
WB 82.15 mi	D2-3	Destination/distance (three)	Right	8	1	D2-3	Destination/distance (three)	Right	204.00	84.00	119.00		Menomonie 10	Hudson 52	Minneapolis 75		See Sign Detail; Exist. Sign Size 204" x 84"
WB 82.54 mi	E5-56A	Weigh station 1 mile	Right	8	1	E5-56A	Weigh station 1 mile	Right	144.00	72.00	72.00		1				Exist. Sign Size 108" x 72"
WB 82.68 mi	R13-49	PrePass Follow In-Cab Signals	Right	8	1	R13-49	PrePass Follow In-Cab Signals	Right	132.00	60.00	55.00						Exist. Sign Size 144" x 78"
WB 82.95 mi	R13-1	Trucks Over 4 T. Stop At Weigh Sta	Right	8	1	R13-1	Trucks Over 4 T. Stop At Weigh Sta.	Right	144.00	66.00	66.00						Exist. Sign Size 144" x 66"
WB 83.42 mi	E5-57R	Weigh station right lane	Right	8	1	E5-57E	Weigh station lt/rt lane	Right	144.00	60.00	60.00						Exist. Sign Size 120" x 84"
WB 83.61 mi	E5-58	Weigh station w/ cut-out for panel	Right	8	1	E5-58	Weigh station w/ cut-out for panel	Right	120.00	66.00	42.67						Exist. Sign Size 120" x 66"
WB 84.77 mi	E8-1A	Seq. sign-city name-hwys __ miles	Right	8	1	E8-1	Seq. sign-city name-hwys __ miles	Right	204.00	102.00	144.50		Menomonie Exits	B 1 1/2	25 5		See Sign Detail; Exist. Sign Size 216" x 96"
WB 85.26 mi	E1-5P	Exit number panel for guide signs	Right	8	1	E1-5P	Exit number panel for guide signs	Right	108.00	30.00	22.50		45				See Sign Detail; Exist. Sign Size 108" x 24"
WB 85.26 mi	E1-1A	Advance exit guide sign, __ mile	Right	-	-	E1-1A	Advance exit guide sign, _ mile	Right	216.00	120.00	180.00		B	Menomonie	1		See Sign Detail; Exist. Sign Size 216" x 120"
WB 85.71 mi	E10-61	Hospital exit	Right	8	1	E10-61	Hospital exit	Right	144.00	54.00	54.00		45				Exist. Sign Size 132" x 48"
WB 86.11 mi	E1-5P	Exit number panel for guide signs	Right	8	1	E1-5P	Exit number panel for guide signs	Right	108.00	30.00	22.50		45				See Sign Detail; Exist. Sign Size 108" x 24"
WB 86.11 mi	E4-1A	Exit direction sign with arrow	Right	-	-	E4-1A	Exit direction sign with arrow	Right	252.00	90.00	157.50		B	Menomonie			See Sign Detail; Exist. Sign Size 252" x 84"
WB 87.94 mi	E5-51	Rest area __ miles	Right	8	1	E5-51	Rest area __ miles	Right	144.00	60.00	60.00		1				Exist. Sign Size 144" x 60"
WB 87.94 mi	E10-54	Weather information	Right	-	-	E10-54	Weather information	Right	120.00	12.00	10.00						Exist. Sign Size 120" x 12"
		Project 1022-06-72	Totals	96	12							1137.67					

*** Note: Existing signs that are mounted on the same sign support(s) are all counted as one removal; Not as multiple removals for each individual sign.

3

TYPE II PERMANENT SIGNS

3

				***									637.2215					
IH 94				638.2602	638.3000							637.2210	Signs	637.2230	634.0616	634.0618		
Eastbound		Existing		Signs	Small Sign	New			New	New		Signs	Type II	Signs	Posts Wood	Posts Wood		
Mile		Sign		Type II	Supports	Sign			Sign	Sign	Sign	Type II	Reflective H	Type II	4x6 - Inch	4x6 - Inch		
Marker		Code	Existing Sign Description	Position	(Each)	(Each)	Code	New Sign Description	Position	Width	Height	(SF)	Folding	Reflective F	x 16 - Ft.	x 18 - Ft.	Order -Line 1	Notes
EB 43.85 mi	D10-2		Milepost Marker (2 Digit)	Right	1		D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	44	
EB 44.04 mi	R3-4B		No U-Turn Symbol (w/R3-4A message)	Median	-	-	-	-	-	-	-	-	-	-	-	-		Existing Sign To Remain
EB 44.85 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	45	
EB 45.17 mi	R3-4B		No U-Turn Symbol (w/R3-4A message)	Median	1	1	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	1		
EB 45.42 mi	E5-1A		Exit Number 1-4 digits (w/ arrow)	Right/Gore	1	2	E5-1A	Exit Number 1-4 digits (w/ arrow)	Right	72.00	60.00	30.00	-	-	2	-	45	
EB 45.42 mi	J4-1		Reassurance Assembly (1 Headed Route)	Right/Gore	-	-	JV-F	Route Assembly (Folding Sign)	Right	36.00	81.00	-	20.25	-	-	-	Alternate 94 [TR]	Mount w/ Exit Sign (E5-1A)
EB 45.49 mi	W3-3		Traffic Signals Ahead Symbol	Right/Ramp	1	1	W3-3	Traffic Signals Ahead Symbol	Right/Ramp	36.00	36.00	-	-	9.00	1	-		
EB 45.52 mi	R7-64		No Parking On Ramp	Right/Ramp	1	1	R7-64	No Parking On Ramp	Right/Ramp	48.00	30.00	10.00	-	-	1	-		
EB 45.54 mi	I5-1		Airport Symbol	Right/Ramp	1	1	I5-1	Airport Symbol	Right/Ramp	24.00	24.00	4.00	-	-	1	-		Mount on Dest. Sign (D1-1)
EB 45.54 mi	MG6-1		Arrow-Right-Green	Right/Ramp	-	-	MG6-1	Arrow-Right-Green	Right/Ramp	21.00	21.00	3.06	-	-	-	-		Mount w/ Airport Sign (I5-1)
EB 45.54 mi	D1-1		One Destination (Arrow)	Right/Ramp	1	2	D1-1	One Destination (Arrow)	Right/Ramp	78.00	15.00	8.13	-	-	2	-	Menomonie [RA]	See Sign Detail
EB 45.54 mi	R5-1A		Wrong Way	Right/Ramp	1	1	R5-1A	Wrong Way	Right/Ramp	42.00	30.00	8.75	-	-	1	-		Note Size Increase
EB 45.54 mi	R5-1A		Wrong Way	Right/Ramp	-	-	R5-1A	Wrong Way	Right/Ramp	42.00	30.00	8.75	-	-	-	-		Mount on Back of Airport Sign (I5-1); Note Size Increase
EB 45.58 mi	J3-3		Directional Assembly	Right/Ramp	1	2	J3-3	Directional Assembly	Right/Ramp	108.00	81.00	60.75	-	-	2	-	B [DA] Hospital [RA] Alt. 94 [RA]	Note Size Increase
EB 45.58 mi	R5-1		Do Not Enter	Right/Ramp	1	1	R5-1	Do Not Enter	Right/Ramp	36.00	36.00	9.00	-	-	1	-		Note Size Increase
EB 45.58 mi	R1-1F		Stop (Folding Sign)	Right/Ramp	1	-	R1-1F	Stop (Folding Sign)	Right/Ramp	36.00	36.00	-	7.46	-	-	-		Mount on Signal Pole; Note Size Increase
EB 45.58 mi	R6-3		Divided Highway Crossing	Right/Ramp	-	-	R6-3	Divided Highway Crossing	Right/Ramp	30.00	24.00	5.00	-	-	-	-		Mount on Signal Pole
EB 45.58 mi	R1-1F		Stop (Folding Sign)	Right/Ramp	1	-	R1-1F	Stop (Folding Sign)	Right/Ramp	36.00	36.00	-	7.46	-	-	-		Mount on Signal Pole; Note Size Increase
EB 45.68(B) mi	-		-	-	-	-	R11-54-F	Ramp Closed Use Alt Route (Folding Sign)	Right (NB B)	48.00	30.00	-	10.00	-	1	-		New Sign
EB 45.68(B) mi	R5-1A		Wrong Way	Right (NB B)	1	1	R5-1A	Wrong Way	Right (NB B)	42.00	30.00	8.75	-	-	1	-		Note Size Increase
EB 45.68(B) mi	R3-2		No Left Turn Symbol	Right (NB B)	1	-	R3-2	No Left Turn Symbol	Right (NB B)	36.00	36.00	9.00	-	-	-	-		Mount on Signal Pole; Note Size Increase
EB 45.68(B) mi	-		-	-	-	-	R11-54-F	Ramp Closed Use Alt Route (Folding Sign)	Right (NB B)	48.00	30.00	-	10.00	-	1	-		New Sign
EB 45.69(B) mi	MB3-2		Cardinal Direction Marker	Right (NB B)	1	1	J3-1	Directional Assembly	Right (NB B)	36.00	84.00	21.00	-	-	1	-	East 94 [RA]	
EB 45.69(B) mi	M1-1		IH Route Marker	Right (NB B)	-	-	-	-	-	-	-	-	-	-	-	-		
EB 45.69(B) mi	MB6-1		Directional Arrows	Right (NB B)	-	-	-	-	-	-	-	-	-	-	-	-		
EB 45.69(B) mi	R5-1		Do Not Enter	Right (NB B)	-	-	R5-1	Do Not Enter	Right (NB B)	36.00	36.00	9.00	-	-	-	-		Mount on Back of Dir. Assemb. (J3-1); Note Size Increase
EB 45.66(B) mi	R6-2L		One Way (Left Arrow)	Right (NB B)	-	-	R6-2L	One Way (Left Arrow)	Right (NB B)	24.00	30.00	5.00	-	-	-	-		Mount on Signal Pole; Note Size Increase
EB 45.67(B) mi	R4-7		Keep Right symbol	Median (NB B)	1	-	R4-7	Keep Right symbol	Median (NB B)	36.00	48.00	12.00	-	-	-	-		Mount on Signal Pole; Note Size Increase
EB 45.68(B) mi	W5-52L		Bridge Hash Marks	Median (NB B)	1	1	W5-52L	Bridge Hash Marks	Median (NB B)	18.00	54.00	-	-	6.75	1	-		
EB 45.68(B) mi	W5-52R		Bridge Hash Marks	Right (NB B)	1	1	W5-52R	Bridge Hash Marks	Right (NB B)	18.00	54.00	-	-	6.75	1	-		
EB 45.64(B) mi	R5-1A		Wrong Way	Right (SB B)	1	1	R5-1A	Wrong Way	Right (SB B)	42.00	30.00	8.75	-	-	1	-	Note Size Increase	
EB 45.64(B) mi	MB3-2		Cardinal Direction Marker	Right (SB B)	1	1	J3-1	Directional Assembly	Right (SB B)	36.00	84.00	21.00	-	-	1	-	East 94 [LA]	
EB 45.64(B) mi	M1-1		IH Route Marker	Right (SB B)	-	-	-	-	-	-	-	-	-	-	-	-		
EB 45.64(B) mi	MB6-1		Directional Arrows	Right (SB B)	-	-	-	-	-	-	-	-	-	-	-	-		
EB 45.64(B) mi	-		-	-	-	-	R11-54-F	Ramp Closed Use Alt Route (Folding Sign)	Right (SB B)	48.00	30.00	-	10.00	-	1	-		New Sign
EB 45.64(B) mi	R3-1		No Right Turn Symbol	Right (SB B)	1	1	R3-1	No Right Turn Symbol	Right (SB B)	36.00	36.00	9.00	-	-	1	-	Note Size Increase	
EB 45.65(B) mi	R5-1		Do Not Enter	Right (SB B)	-	-	R5-1	Do Not Enter	Right (SB B)	36.00	36.00	9.00	-	-	-	-	Mount on Back of Dir. Assemb. (J3-1); Note Size Increase	
EB 45.70 mi	W4-1R		Thru Traffic Merge Left Symbol	Right	1	2	W4-1R	Thru Traffic Merge Left Symbol	Right	48.00	48.00	-	-	16.00	2	-		
EB 45.71 mi	R5-57		Ped. Bikes Non Motor Prohibited	Right/Ramp	1	1	R5-57	Ped. Bikes Non Motor Prohibited	Right/Ramp	36.00	36.00	9.00	-	-	1	-		
EB 45.75 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	46	
EB 46.15 mi	MB3-2		Cardinal Direction Marker	Right	1	1	J4-1	Reassurance Assembly (1 Headed Route)	Right	36.00	54.00	13.50	-	-	1	-	East 94	
EB 46.15 mi	M1-1		IH Route Marker	Right	-	-	-	-	-	-	-	-	-	-	-	-		
EB 46.17 mi	R3-4B		No U-Turn Symbol (w/R3-4A message)	Median	1	1	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	1		
EB 46.25 mi	R2-1		Speed Limit	Right	1	2	R2-1	Speed Limit	Right	48.00	60.00	20.00	-	-	2	-	65	
EB 46.65 mi	M1-94		Crossroad Name	Median	1	1	M1-94	Crossroad Name	Median	54.00	21.00	7.88	-	-	1	-	Hwy E	See Sign Detail
EB 46.85 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	47	
EB 47.78 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	48	
EB 47.99 mi	W5-52R		Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
EB 47.99 mi	R3-4B		No U-Turn Symbol (w/R3-4A message)	Median	1	1	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	1		
EB 48.64 mi	R3-4B		No U-Turn Symbol (w/R3-4A message)	Median	1	1	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	1		
EB 48.82 mi	W5-52L		Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
EB 48.82 mi	W5-52R		Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
EB 48.84 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	49	
EB 49.84 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	50	
EB 49.91 mi	W5-52L		Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
EB 49.91 mi	W5-52R		Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
EB 50.27 mi	W5-52L		Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
EB 50.27 mi	W5-52R		Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
EB 50.83 mi	D10-2		Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	51	
EB 51.17 mi	W5-52L		Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
EB 51.17 mi	W5-52R		Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
PROJECT 1022-03-74				TOTALS	45	46							382.31	65.17	99.25	45	4	Note: [RA] = Right Arrow, [DA] = Double Arrow, [TR] = Right Tilt Arrow.

*** Note: Existing signs that are mounted on the same sign support(s) are all counted as one removal; Not as multiple removals for each individual sign.

PROJECT NO: 1022-03-74				HWY: IH 94				COUNTY: DUNN				MISCELLANEOUS QUANTITIES				SHEET:		E
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TYPE II PERMANENT SIGNS

				***								637.2215					
				638.2602	638.3000							637.2210	Signs	637.2230	634.0616	634.0618	
IH 94	Existing		Existing	Removing	Removing	New		New	New	Signs	Type II	Type II	Signs	Posts Wood	Posts Wood		
Mile	Sign		Sign	Signs	Small Sign	Sign		Sign	Sign	Type II	Reflective H	Reflective H	Type II	4x6 - Inch	4x6 - Inch		
Marker	Code	Existing Sign Description	Position	(Each)	(Each)	Code	New Sign Description	Position	Width	Height	(SF)	(SF)	(SF)	x 16 - Ft.	x 18 - Ft.	Order -Line 1	Notes
WB 80.73 mi	R2-1	Speed Limit	Right	1	2	R2-1	Speed Limit	Right	48.00	60.00	20.00	-	-	2	-	65	
WB 80.92 mi	W5-52L	Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
WB 80.92 mi	W5-52R	Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
WB 81.11 mi	R8-7	Emergency Stopping Only	Right	1	1	R8-7	Emergency Stopping Only	Right	48.00	36.00	12.00	-	-	1	-		
WB 81.27 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	51	
WB 81.72 mi	R4-5	Trucks Use Right Lane	Right	1	2	R4-5	Trucks Use Right Lane	Right	48.00	60.00	20.00	-	-	-	2		
WB 81.72 mi	R4-5	Trucks Use Right Lane	Median	1	2	R4-5	Trucks Use Right Lane	Median	48.00	60.00	20.00	-	-	-	2		
WB 81.83 mi	W5-52L	Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
WB 81.83 mi	W5-52R	Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
WB 82.25 mi	W5-52L	Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
WB 82.25 mi	W5-52R	Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
WB 82.28 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	50	
WB 82.36 mi	R4-3	Slower Traffic Keep Right	Right	1	1	R4-3	Slower Traffic Keep Right	Right	48.00	60.00	20.00	-	-	2	-		
WB 83.28 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	49	
WB 83.30 mi	W5-52L	Bridge Hash Marks	Median	1	1	W5-52L	Bridge Hash Marks	Median	18.00	54.00	-	-	6.75	1	-		
WB 83.30 mi	W5-52R	Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
WB 83.48 mi	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	-	-	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	-	Mount on Back of EB R3-4B; Removal Counted Under EB R3-4B	
WB 83.61(W) mi	R5-1A	Wrong Way	Right/W. Sta.	1	1	R5-1A	Wrong Way	Right/W. Sta.	36.00	24.00	6.00	-	-	1	-		
WB 83.61(W) mi	R5-1A	Wrong Way	Right/W. Sta.	1	1	R5-1A	Wrong Way	Right/W. Sta.	36.00	24.00	6.00	-	-	1	-		
WB 83.61(W) mi	R5-1	Do Not Enter	Right/W. Sta.	1	1	R5-1	Do Not Enter	Right/W. Sta.	36.00	36.00	9.00	-	-	1	-		
WB 83.61(W) mi	R5-1	Do Not Enter	Right/W. Sta.	-	-	R5-1	Do Not Enter	Right/W. Sta.	36.00	36.00	9.00	-	-	-	-	Mount on Back of Other R5-1	
WB 83.61(W) mi	R2-1	Speed Limit	Right/W. Sta.	1	1	R2-1	Speed Limit	Right/W. Sta.	24.00	30.00	5.00	-	-	1	-	20	
WB 83.61(W) mi	R1-2	Yield	Right/W. Sta.	1	1	R1-2	Yield	Right/W. Sta.	36.00	31.00	3.88	-	-	1	-		
WB 83.61(W) mi	R2-1	Speed Limit	Right/W. Sta.	1	1	R2-1	Speed Limit	Right/W. Sta.	24.00	30.00	5.00	-	-	1	-	20	
WB 83.61(W) mi	I57-51	State Patrol Weigh Station No. 63	Right/W. Sta.	1	2	-	-	-	-	-	-	-	-	-	-	Do Not Replace	
WB 83.61(W) mi	R5-1	Do Not Enter	Right/W. Sta.	1	1	R5-1	Do Not Enter	Right/W. Sta.	36.00	36.00	9.00	-	-	1	-		
WB 83.61(W) mi	R5-1	Do Not Enter	Right/W. Sta.	1	1	R5-1	Do Not Enter	Right/W. Sta.	36.00	36.00	9.00	-	-	1	-		
WB 83.61(W) mi	R1-1	Stop	Right/W. Sta.	-	-	R1-1	Stop	Right/W. Sta.	36.00	36.00	7.46	-	-	-	-	Mount on Back of R5-1	
WB 83.61(W) mi	R1-1	Stop	Right/W. Sta.	-	-	R1-1	Stop	Right/W. Sta.	36.00	36.00	7.46	-	-	-	-	Mount on Back of R5-1	
WB 83.61(W) mi	SPECIAL	Stop Here Wait For Instructions	Right/W. Sta.	-	-	SPECIAL	Stop Here Wait For Instructions	Right/W. Sta.	48.00	36.00	12.00	-	-	-	-	See Sign Detail; Mount on Back of R5-1	
WB 83.61(W) mi	W4-1R	Thru Traffic Merge Left Symbol	Right/W. Sta.	1	1	W4-1R	Thru Traffic Merge Left Symbol	Right/W. Sta.	36.00	36.00	-	-	9.00	1	-		
WB 83.61(W) mi	R5-53A	Buckle Up It's The Law	Right/W. Sta.	1	1	R5-53A	Buckle Up It's The Law	Right/W. Sta.	18.00	24.00	3.00	-	-	1	-		
WB 83.61(W) mi	R7-1L	No Parking Any Time (arrows)	Right/W. Sta.	1	1	R7-1L	No Parking Any Time (arrows)	Right/W. Sta.	18.00	24.00	3.00	-	-	1	-		
WB 83.61(W) mi	R7-1D	No Parking Any Time (arrows)	Right/W. Sta.	1	1	R7-1D	No Parking Any Time (arrows)	Right/W. Sta.	18.00	24.00	3.00	-	-	1	-		
WB 83.61(W) mi	R7-1R	No Parking Any Time (arrows)	Right/W. Sta.	1	1	R7-1R	No Parking Any Time (arrows)	Right/W. Sta.	18.00	24.00	3.00	-	-	1	-		
WB 83.84 mi	W4-1R	Thru Traffic Merge Left Symbol	Right	1	2	W4-1R	Thru Traffic Merge Left Symbol	Right	48.00	48.00	-	-	16.00	2	-		
WB 84.12 mi	W5-52R	Bridge Hash Marks	Right	1	1	W5-52R	Bridge Hash Marks	Right	18.00	54.00	-	-	6.75	1	-		
WB 84.12 mi	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	-	-	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	-	Mount on Back of EB R3-4B; Removal Counted Under EB R3-4B	
WB 84.33 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	48	
WB 85.26 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	47	
WB 85.46 mi	M1-94	Crossroad Name	Median	1	1	M1-94	Crossroad Name	Median	54.00	21.00	7.88	-	-	1	-	Hwy E	See Sign Detail
WB 85.95 mi	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	-	-	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	-	Mount on Back of EB R3-4B; Removal Counted Under EB R3-4B	
WB 86.26 mi	E5-1A	Exit Number 1-4 digits (w/ arrow)	Right/Gore	1	2	E5-1A	Exit Number 1-4 digits (w/ arrow)	Right	72.00	60.00	30.00	-	-	2	-	45	
WB 86.26 mi	J4-1	Reassurance Assembly (1 Headed Route	Right/Gore	-	-	JV-F	Route Assembly (Folding Sign)	Right	36.00	81.00	-	20.25	-	-	-	Alternate 94 [TR]	Mount w/ Exit Sign (E5-1A)
WB 86.38 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	1	-	46	
WB 86.32 mi	W3-3	Traffic Signals Ahead Symbol	Right/Ramp	1	1	W3-3	Traffic Signals Ahead Symbol	Right/Ramp	36.00	36.00	-	-	9.00	1	-		
WB 86.34 mi	R7-64	No Parking On Ramp	Right/Ramp	1	1	R7-64	No Parking On Ramp	Right/Ramp	48.00	30.00	10.00	-	-	1	-		
WB 86.36 mi	I5-1	Airport Symbol	Right/Ramp	-	-	I5-1	Airport Symbol	Right/Ramp	24.00	24.00	4.00	-	-	-	-	Mount on Dest. Sign (D1-1)	
WB 86.36 mi	MG6-1	Arrow-Right-Green	Right/Ramp	-	-	MG6-1	Arrow-Right-Green	Right/Ramp	21.00	21.00	3.06	-	-	-	-	Mount w/ Airport Sign (I5-1)	
WB 86.36 mi	D1-1	One Destination (Arrow)	Right/Ramp	1	2	D1-1	One Destination (Arrow)	Right/Ramp	78.00	15.00	8.13	-	-	2	-	Menomonie [LA]	See Sign Detail

(CONTINUED ON NEXT SHEET)

*** Note: Existing signs that are mounted on the same sign support(s) are all counted as one removal; Not as multiple removals for each individual sign.

TYPE II PERMANENT SIGNS

				***									637.2215					
				638.2602	638.3000								637.2210	Signs	637.2230	634.0616	634.0618	
IH 94				Removing	Removing				New	New	New	Signs	Type II	Signs	Posts Wood	Posts Wood		
Westbound	Existing		Existing	Signs	Small Sign	New			New	Sign	Sign	Type II	Reflective H	Type II	4x6 - Inch	4x6 - Inch		
Mile	Sign		Sign	Type II	Supports	Sign			Sign	Size	Size	Reflective H	Folding	Reflective F	x 16 - Ft.	x 18 - Ft.		
Marker	Code	Existing Sign Description	Position	(Each)	(Each)	Code	New Sign Description	Position	Width	Height	(SF)	(SF)	(SF)	(SF)	Each	Each	Order -Line 1	Notes
WB 86.36 mi	R5-1A	Wrong Way	Right/Ramp	1	-	R5-1A	Wrong Way	Right/Ramp	42.00	30.00	8.75	-	-	-	-	-		Mount on Back of SIS Sign; Note Size Increase
WB 86.36 mi	R5-1A	Wrong Way	Right/Ramp	-	-	R5-1A	Wrong Way	Right/Ramp	42.00	30.00	8.75	-	-	-	-	-		Mount on Back of Airport Sign (I5-1); Note Size Increase
WB 86.43 mi	J3-3	Directional Assembly	Right/Ramp	1	2	J3-3	Directional Assembly	Right/Ramp	108.00	81.00	60.75	-	-	-	-	2	Alt. 94 [LA] Hospital [LA] B [DA]	Note Size Increase
WB 86.44 mi	R5-1	Do Not Enter	Right/Ramp	1	1	R5-1	Do Not Enter	Right/Ramp	36.00	36.00	9.00	-	-	-	1	-		Note Size Increase
WB 86.45 mi	R1-1F	Stop (Folding Sign)	Right/Ramp	1	-	R1-1F	Stop (Folding Sign)	Right/Ramp	36.00	36.00	-	7.46	-	-	-	-		Mount on Signal Pole; Note Size Increase
WB 86.45 mi	R6-3	Divided Highway Crossing	Right/Ramp	-	-	R6-3	Divided Highway Crossing	Right/Ramp	30.00	24.00	5.00	-	-	-	-	-		Mount on Signal Pole
WB 86.45 mi	R1-1F	Stop (Folding Sign)	Right/Ramp	1	-	R1-1F	Stop (Folding Sign)	Right/Ramp	36.00	36.00	-	7.46	-	-	-	-		Mount on Signal Pole; Note Size Increase
WB 86.51(B) mi	-	-	-	-	-	R11-54-F	Ramp Closed Use Alt Route (Folding Sign)	Right (SB B)	48.00	30.00	-	10.00	-	-	1	-		New Sign
WB 86.51(B) mi	R5-1A	Wrong Way	Right (SB B)	1	1	R5-1A	Wrong Way	Right (SB B)	42.00	30.00	8.75	-	-	-	1	-		Note Size Increase
WB 86.51(B) mi	R3-2	No Left Turn Symbol	Right (SB B)	1	-	R3-2	No Left Turn Symbol	Right (SB B)	36.00	36.00	9.00	-	-	-	-	-		Mount on Signal Pole; Note Size Increase
WB 86.51(B) mi	-	-	-	-	-	R11-54-F	Ramp Closed Use Alt Route (Folding Sign)	Right (SB B)	48.00	30.00	-	10.00	-	-	1	-		New Sign
WB 86.51(B) mi	MB3-2	Cardinal Direction Marker	Right (SB B)	1	1	J3-1	Directional Assembly	Right (SB B)	36.00	84.00	21.00	-	-	-	1	-	West 94 [RA]	
WB 86.51(B) mi	M1-1	IH Route Marker	Right (SB B)	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 86.51(B) mi	MB6-1	Directional Arrows	Right (SB B)	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 86.51(B) mi	R5-1	Do Not Enter	Right (SB B)	-	-	R5-1	Do Not Enter	Right (SB B)	36.00	36.00	9.00	-	-	-	-	-		Mount on Back of Dir. Assemb. (J3-1); Note Size Increase
WB 86.49(B) mi	R6-2L	One Way (Left Arrow)	Right (SB B)	-	-	R6-2L	One Way (Left Arrow)	Right (SB B)	36.00	48.00	12.00	-	-	-	-	-		Mount on Signal Pole; Note Size Increase
WB 86.50(B) mi	R4-7	Keep Right symbol	Median (SB B)	1	-	R4-7	Keep Right symbol	Median (SB B)	36.00	48.00	12.00	-	-	-	-	-		Mount on Signal Pole; Note Size Increase
WB 86.50(B) mi	W5-52L	Bridge Hash Marks	Median (SB B)	1	1	W5-52L	Bridge Hash Marks	Median (SB B)	18.00	54.00	-	-	-	6.75	1	-		
WB 86.50(B) mi	W5-52R	Bridge Hash Marks	Right (SB B)	1	1	W5-52R	Bridge Hash Marks	Right (SB B)	18.00	54.00	-	-	-	6.75	1	-		
WB 86.47(B) mi	R5-1A	Wrong Way	Right (NB B)	1	1	R5-1A	Wrong Way	Right (NB B)	42.00	30.00	8.75	-	-	-	1	-		Note Size Increase
WB 86.48(B) mi	MB3-2	Cardinal Direction Marker	Right (NB B)	1	1	J3-1	Directional Assembly	Right (NB B)	36.00	84.00	21.00	-	-	-	1	-	West 94 [LA]	
WB 86.48(B) mi	M1-1	IH Route Marker	Right (NB B)	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 86.48(B) mi	MB6-1	Directional Arrows	Right (NB B)	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 86.48(B) mi	-	-	-	-	-	R11-54-F	Ramp Closed Use Alt Route (Folding Sign)	Right (NB B)	48.00	30.00	-	10.00	-	-	1	-		New Sign
WB 86.48(B) mi	R3-1	No Right Turn Symbol	Right (NB B)	1	1	R3-1	No Right Turn Symbol	Right (NB B)	36.00	36.00	9.00	-	-	-	1	-		Note Size Increase
WB 86.48(B) mi	R5-1	Do Not Enter	Right (NB B)	-	-	R5-1	Do Not Enter	Right (NB B)	36.00	36.00	9.00	-	-	-	-	-		Mount on Back of Dir. Assemb. (J3-1); Note Size Increase
WB 86.52 mi	W4-1R	Thru Traffic Merge Left Symbol	Right	1	1	W4-1R	Thru Traffic Merge Left Symbol	Right	48.00	48.00	-	-	-	16.00	2	-		
WB 86.50 mi	R5-57	Ped. Bikes Non Motor Prohibited	Right/Ramp	1	1	R5-57	Ped. Bikes Non Motor Prohibited	Right/Ramp	36.00	36.00	9.00	-	-	-	1	-		
WB 86.95 mi	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	-	-	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	36.00	48.00	12.00	-	-	-	-	-		Mount on Back of EB R3-4B; Removal Counted Under EB R3-4B
WB 87.04 mi	MB3-4	Cardinal Direction Marker	Right	1	1	J4-1	Reassurance Assembly (1 Headed Route)	Right	36.00	54.00	13.50	-	-	-	1	-	West 94	
WB 87.04 mi	M1-1	IH Route Marker	Right	-	-	-	-	-	-	-	-	-	-	-	-	-		
WB 87.09 mi	R2-1	Speed Limit	Right	1	2	R2-1	Speed Limit	Right	48.00	60.00	20.00	-	-	-	2	-	65	
WB 87.28 mi	D10-2	Milepost Marker (2 Digit)	Right	1	1	D10-2	Milepost Marker (2 Digit)	Right	12.00	36.00	3.00	-	-	-	1	-	45	
WB 88.06 mi	R3-4B	No U-Turn Symbol (w/R3-4A message)	Median	-	-	-	-	-	-	-	-	-	-	-	-	-		Existing Sign To Remain
		PROJECT 1022-06-72	TOTALS	59	63							579.11	65.17	124.25	60	6	Note: [RA] = Right Arrow, [LA] = Left Arrow, [DA] = Double Arrow, SIS = Service Information Sign [TR] = Right Tilt Arrow	

*** Note: Existing signs that are mounted on the same sign support(s) are all counted as one removal; Not as multiple removals for each individual sign.

FTMS PULL BOXES

653.0140 PULL BOXES STEEL 24 x 42-INCH			
CATEGORY 0020	ITEM ID	LOCATION	EACH
	PBB01	IH 94 WB WEST OF CR B	1
	PBB02		1
	PBB03		1
PROJECT 1022-06-72 SUBTOTAL			3

FTMS CABINETS

659.0802 PLAQUES SEQUENCE IDENTIFICATION				673.0225.S INSTALL POLE MOUNTED CABINET	
CATEGORY 0020	ITEM I.D.	LOCATION	EACH	EACH	
	DMS-17-0021	IH 94 WB WEST OF CTH B	1	1	
PROJECT 1022-06-72 SUBTOTAL			1	1	

FTMS POWER

				655.0630 ELECTRICAL WIRE LIGHTING 4 AWG		656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-17-0021		656.0500.01 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-17-0021	
CATEGORY 0020	ITEM I.D.	LOCATION	MB I.D.	NUMBER OF WIRES	WIRE LINEAR DISTANCE FROM CABINET TO METER BREAKER PEDESTAL	LF	LS	LS	LS
	DMS-17-0021	IH 94 WB WEST OF CTH B	MBB01	3	400	1200	1	1	
PROJECT 1022-06-72 SUBTOTAL						1200	1	1	

FTMS CONDUIT					
CATEGORY 0020	FROM	TO	LOCATION	LINEAR DISTANCE	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
					LF
		G17-06	IH 94 @ CR B	10	10
PROJECT 1022-03-74 SUBTOTAL					10

FTMS CONDUIT							
CATEGORY 0020	FROM	TO	LOCATION	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	652.0605 CONDUIT SPECIAL 2-INCH
					LF	LF	LF
	MBB01	PBB01	IH 94 WB WEST OF CTH B	90	--	90	--
	PBB01	PBB02		135	--	--	135
	PBB02	PBB03		140	--	140	--
	PBB03	DMS-17-0021		10	10	--	--
		G17-05	IH 94 @ CR B	10	--	10	--
PROJECT 1022-06-72 SUBTOTAL					10	240	135

FTMS LUMP SUM MISCELLANEOUS QUANTITIES				
CATEGORY 0020	ROAD	LOCATION	670.0100 FIELD SYSTEM INTEGRATOR	670.0200 ITS DOCUMENTATION
			LS	LS
	IH 94			
		PROJECT	1	1
PROJECT 1022-06-72 SUBTOTAL			1	1

FTMS DYNAMIC MESSAGE SIGNS											
CATEGORY 0020	ITEM I.D.	LOCATION	STEEL POST TYPE	635.0200 SIGN SUPPORTS STRUCTURAL	636.0100 SIGN SUPPORTS CONCRETE MASONRY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT	SPV.0060.03 INSTALL GROUND MOUNT	INFO ONLY - POST LENGTHS TO BE VERIFIED BY CONTRACTOR			
				STEEL HS LB	CY	LB	DMS EACH	POST NO. 1 LENGTH FT	POST NO. 2 LENGTH FT	POST NO. 3 LENGTH FT	SIGN OFFSET DISTANCE FT
	DMS-17-0021	IH 94 WB WEST OF CTH B	C	1470	2.7	150	1	16.65	16.30	15.65	30
PROJECT 1022-06-72 SUBTOTAL				1470	2.7	150	1				

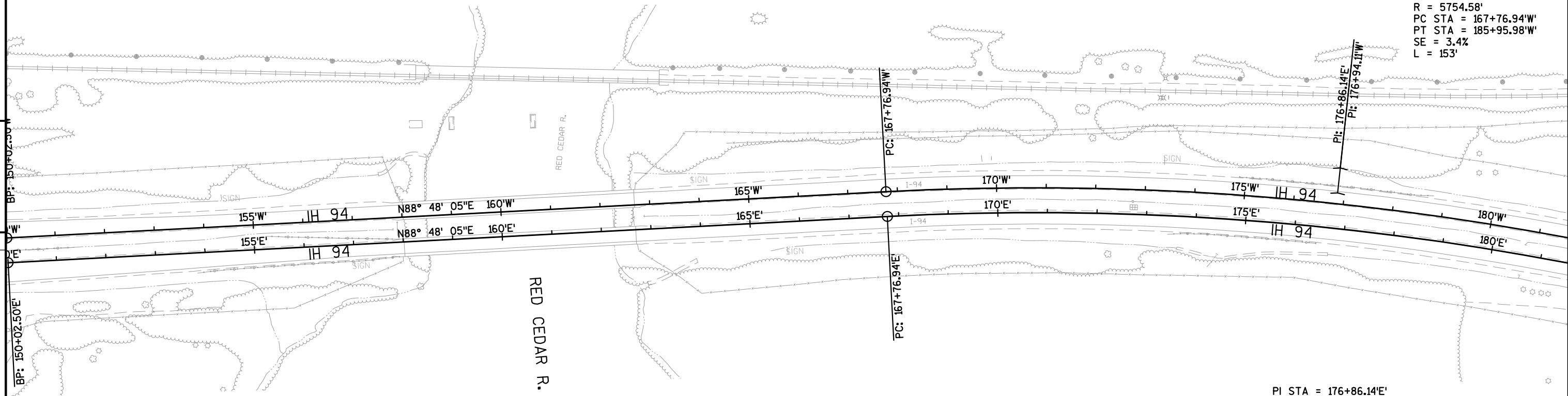
			ON-RAMP CLOSURE GATES					
CATEGORY 0020	ITEM ID.	LOCATION	654.0105	654.0220	657.0100	657.0255	657.0405	662.2030.S
			CONCRETE	CONCRETE		TRANSFORMER	TRAFFIC	RAMP
			BASES	CONTROL CABINET	PEDESTAL	BASE BREAKAWAY	SIGNAL	CLOSURE
			TYPE 5	BASE TYPE 10	BASES	11 1/2-INCH	STANDARDS	GATE SOLAR
			EACH	EACH	EACH	EACH	EACH	EACH
	G17-06	IH 94 @ CR B (EB ON-RAMP)	1	1	1	1	1	1
PROJECT 1022-03-74 SUBTOTAL			1	1	1	1	1	1

ON-RAMP CLOSURE GATES								
			654.0105	654.0220	657.0100	657.0255	657.0405	662.2030.S
			CONCRETE	CONCRETE		TRANSFORMER	TRAFFIC	RAMP
			BASES	CONTROL CABINET	PEDESTAL	BASE BREAKAWAY	SIGNAL	CLOSURE
			TYPE 5	BASE TYPE 10	BASES	11 1/2-INCH	STANDARDS	GATE SOLAR
CATEGORY 0020	ITEM ID.	LOCATION	EACH	EACH	EACH	EACH	EACH	EACH
	G17-05	IH 94 @ CR B (WB ON-RAMP)	1	1	1	1	1	1
PROJECT 1022-06-72 SUBTOTAL			1	1	1	1	1	1



PI STA = 176+94.11'W'
Y = 182196.913
X = 170854.621
DELTA = 18°06'41"
D = 0°59'44"
T = 917.17'
L = 1819.04'
R = 5754.58'
PC STA = 167+76.94'W'
PT STA = 185+95.98'W'
SE = 3.4%
L = 153'

PI STA = 176+86.14'E'
Y = 182146.757
X = 170847.699
DELTA = 18°06'41"
D = 1°00'16"
T = 909.20'
L = 1803.23'
R = 5704.58'
PC STA = 167+76.94'E'
PT STA = 185+80.17'E'
SE = 3.4%
L = 153'





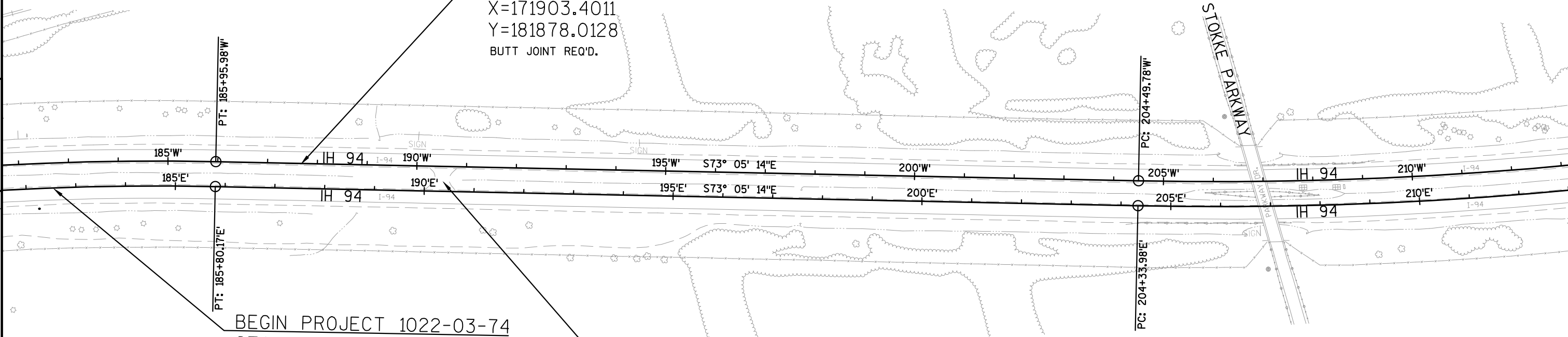
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BEGIN PROJECT 1022-06-72
STA. 187+75'W'
X=171903.4011
Y=181878.0128
BUTT JOINT REQ'D.

BEGIN PROJECT 1022-03-74
STA. 182+60'E'
X=171408.7990
Y=181966.7563
BUTT JOINT REQ'D.

RE-PAVE MAINTENANCE CROSSOVER
MILL 1 3/4" & PAVE 1 3/4"
W/HMA PAVEMENT TYPE E-0.3





PI STA = 216+41.38'W'
Y = 181044.137
X = 174645.805
DELTA = 17°47'18"
D = 0°45'09"
T = 1191.59'
L = 2364.02'
R = 7614.44'
PC STA = 204+49.78'W'
PT STA = 228+13.80'W'
SE = 2.7%
L = 122'

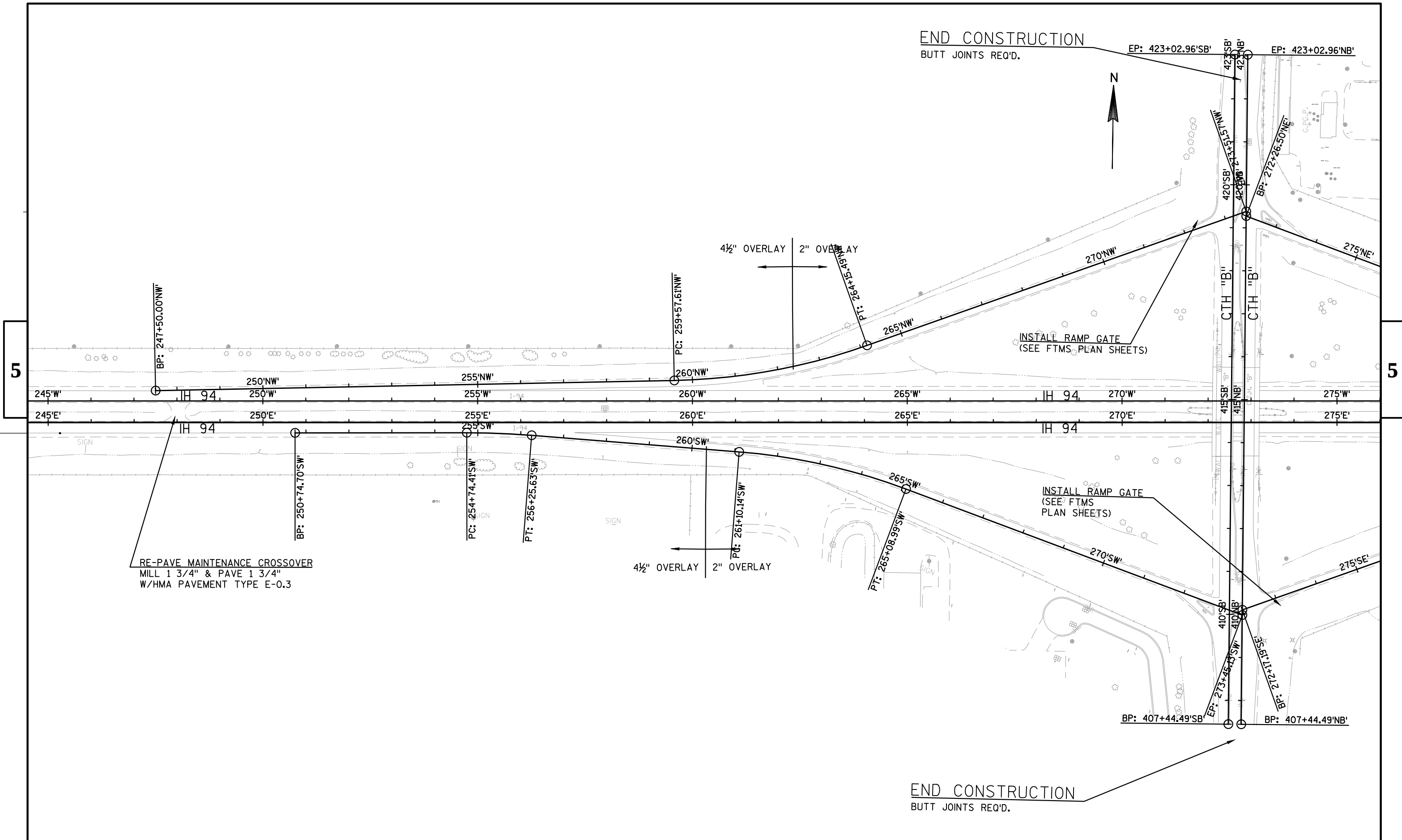
INSTALL DYNAMIC MESSAGE SIGN (DMS); WB IH 94
(SEE FTMS PLAN SHEETS)

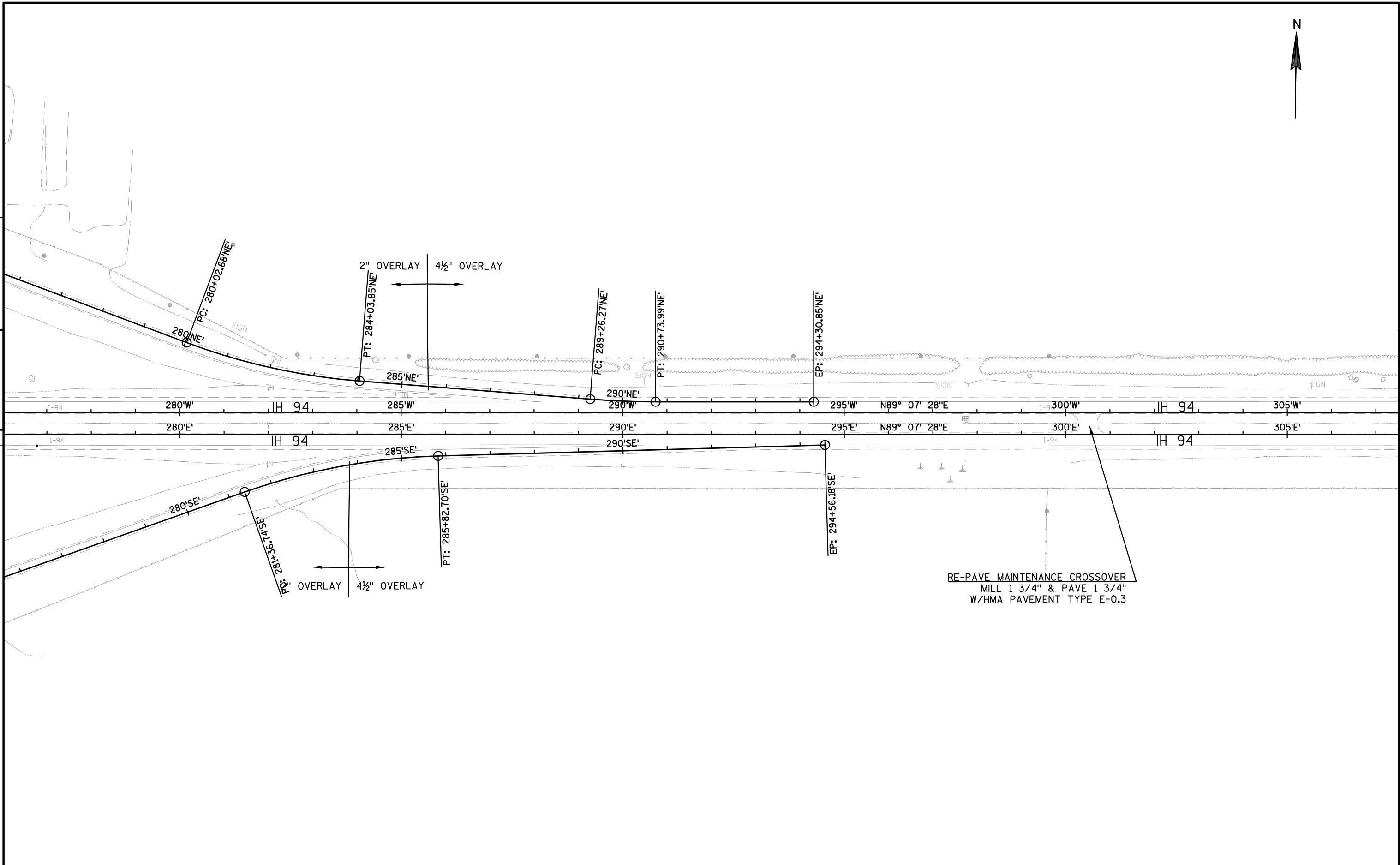
Pl: 216+33.40'E'
Pl: 216+41.38'W'

PI STA = 216+33.40'E'
Y = 180994.023
X = 174638.746
DELTA = 17°47'18"
D = 0°44'51"
T = 1199.42'
L = 2379.54'
R = 7664.44'
PC STA = 204+33.98'E'
PT STA = 228+13.52'E'
SE = 2.6%
L = 117'

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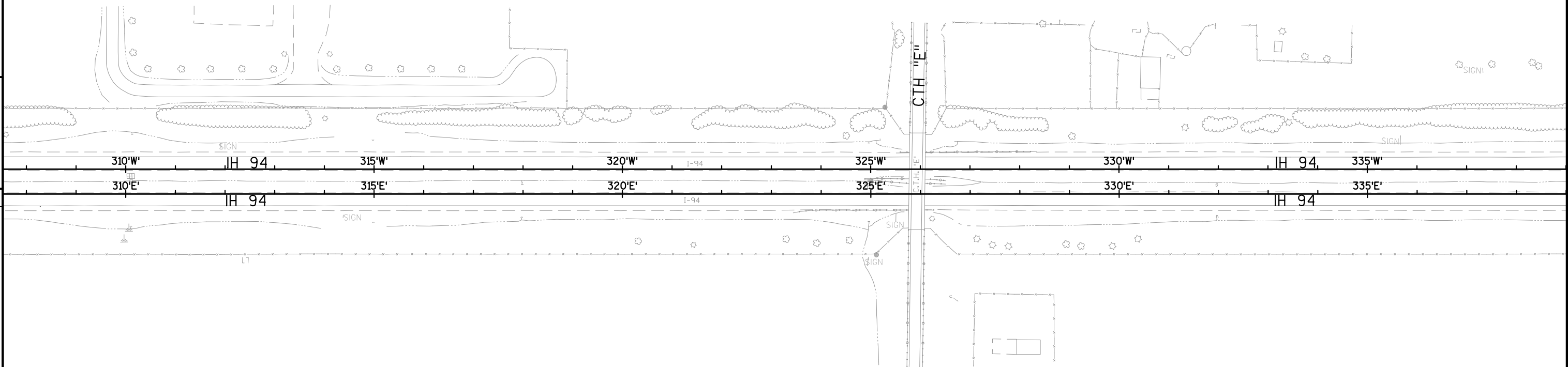
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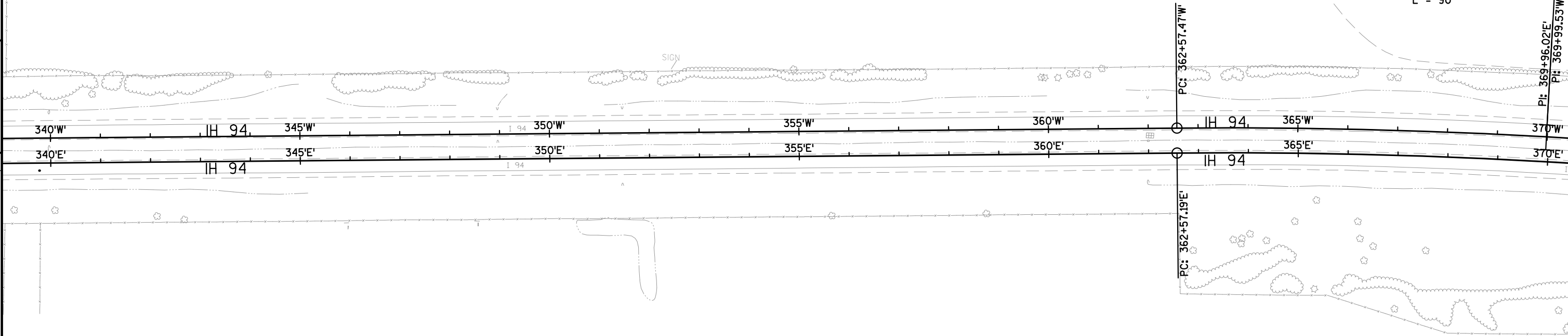


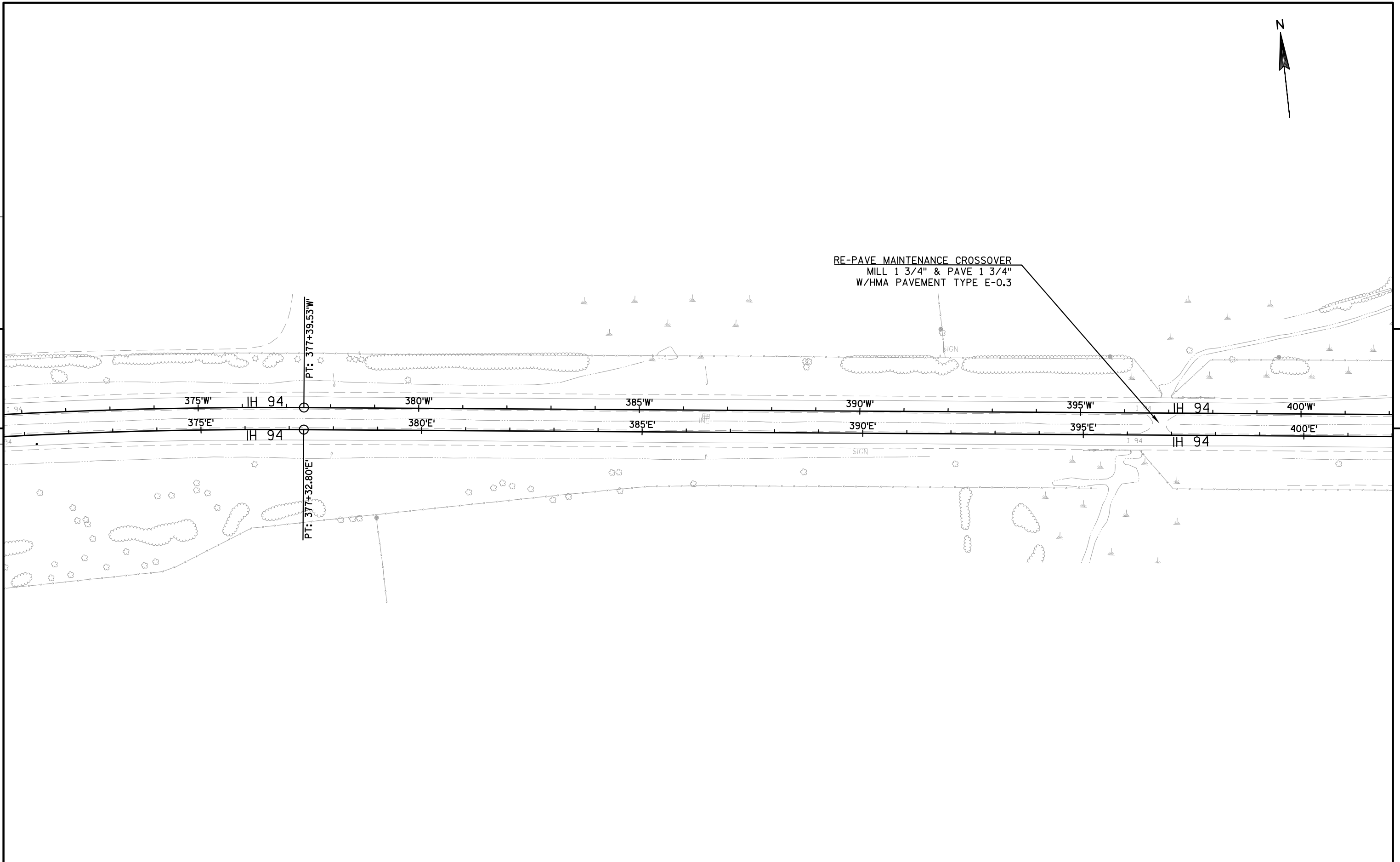
PI STA = 369+99.53'W'
Y = 181279.103
X = 190021.336
DELTA = 7°23'39"
D = 0°29'56"
T = 742.06'
L = 1482.06'
R = 11484.16'
PC STA = 362+57.47'W'
PT STA = 377+39.53'W'
SE = R.C. (2.0%)
L = 90'

PI STA = 369+96.02'E'
Y = 181229.059
X = 190018.870
DELTA = 7°23'39"
D = 0°30'04"
T = 738.83'
L = 1475.61'
R = 11434.16'
PC STA = 362+57.19'E'
PT STA = 377+32.80'E'
SE = R.C. (2.0%)
L = 90'

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PROJECT NO:1022-03-74 & 1022-06-72	HWY: IH 94	COUNTY: DUNN	PLAN	SHEET	E
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END CONSTRUCTION
BUTT JOINT REQ'D.

END CONSTRUCTION
BUTT JOINT REQ'D.

WEIGH-IN-MOTION SYSTEM REPAIR
STA. 420'W'+00 - 465'W'+00

WEIGH STATION

730TH ST.

RE-PAVE MAINTENANCE CROSSOVER
MILL 1 3/4" & PAVE 1 3/4"
W/HMA PAVEMENT TYPE E-0.3

405'W' IH 94 410'W' I 94 415'W' 420'W' 425'W' IH 94 430'W' I 94
405'E' IH 94 410'E' I 94 415'E' 420'E' 425'E' IH 94 430'E' I 94

WEIGH-IN-MOTION SYSTEM REPAIR
STA. 420'W'+00 - 465'W'+00

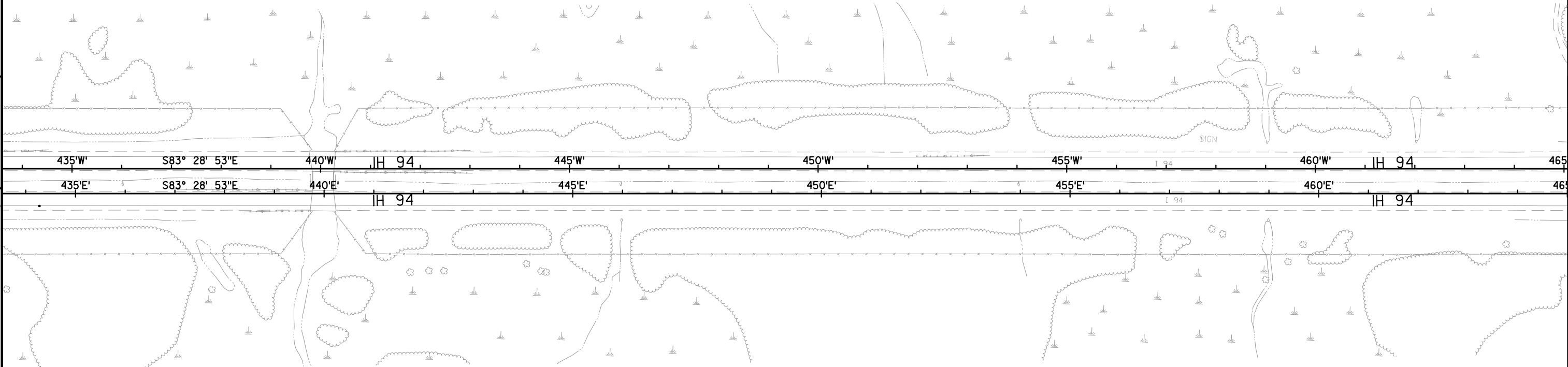
ADJUSTING BEAM GUARD REQ'D.
STA. 452'W'+00 - 453'W'+50, LT.

WEIGH-IN-MOTION CONCRETE TO REMAIN
STA. 460'W'+20 - 463'W'+20, LT. OUTSIDE LANE
BUTT JOINTS REQ'D.
(MILL & FILL ADJACENT ASPHALT)



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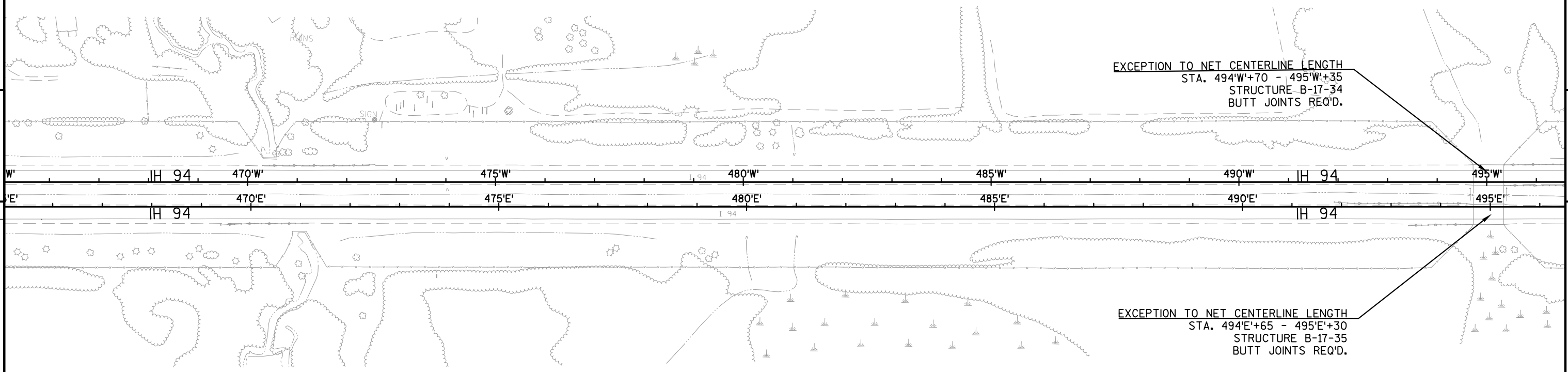
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ADJUSTING BEAM GUARD REQ'D.
STA. 469'E'+90 - 471'E'+15, RT.



ADJUSTING BEAM GUARD REQ'D.
STA. 510'W'+25 - 511'W'+31.25, LT.

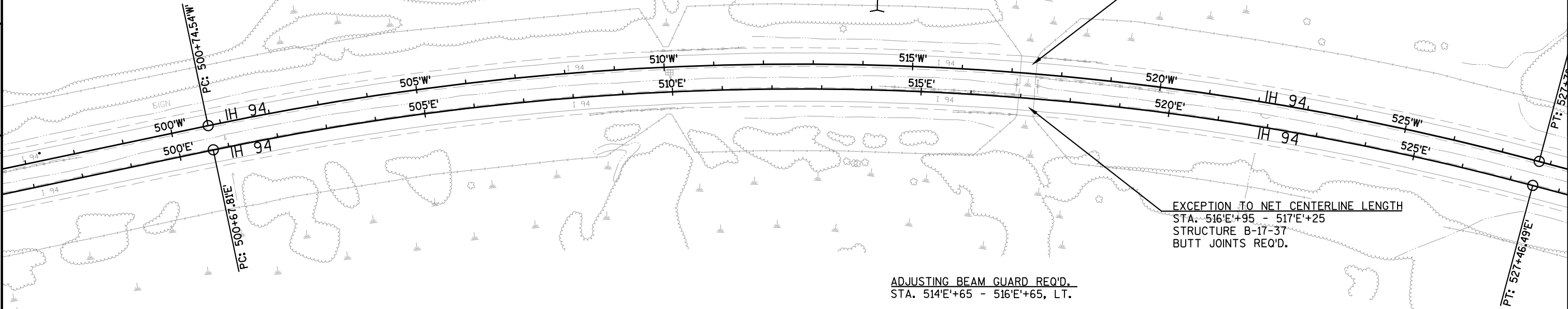
PI STA = 514+51.01'W'
Y = 179638.242
X = 204381.431
DELTA = 26°54'15"
D = 0°59'44"
T = 1376.47'
L = 2702.17'
R = 5754.58'
PC STA = 500+74.54'W'
PT STA = 527+76.71'W'
SE = 3.4%
L = 153'

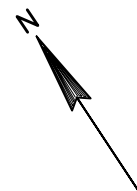
EXCEPTION TO NET CENTERLINE LENGTH
STA. 517'W'+15 - 517'W'+45
STRUCTURE B-17-36
BUTT JOINTS REQ'D.

EXCEPTION TO NET CENTERLINE LENGTH
STA. 516'E'+95 - 517'E'+25
STRUCTURE B-17-37
BUTT JOINTS REQ'D.

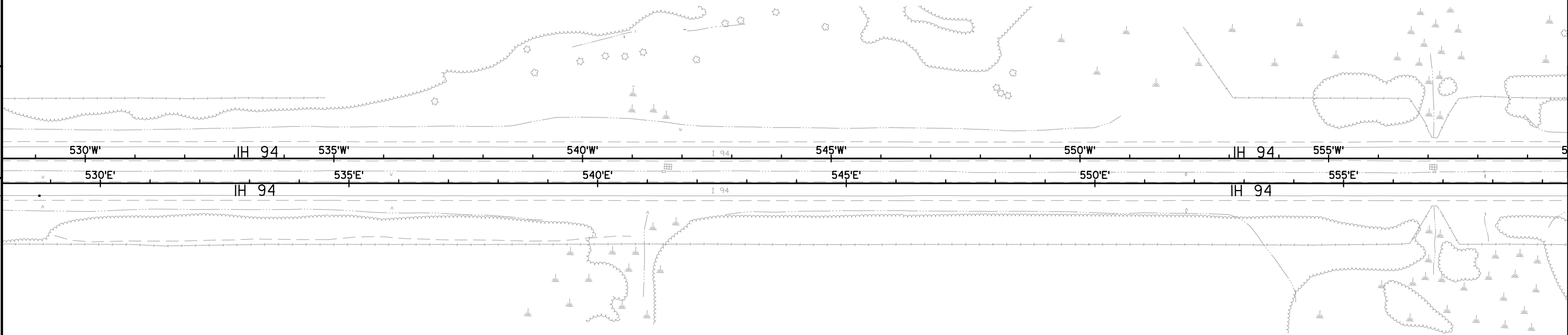
ADJUSTING BEAM GUARD REQ'D.
STA. 514'E'+65 - 516'E'+65, LT.

PI STA = 514+32.31'E'
Y = 179589.923
X = 204363.872
DELTA = 26°54'15"
D = 1°00'16"
T = 1364.51'
L = 2678.69'
R = 5704.58'
PC STA = 500+67.81'E'
PT STA = 527+46.49'E'
SE = 3.4%
L = 153'



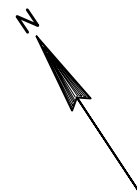


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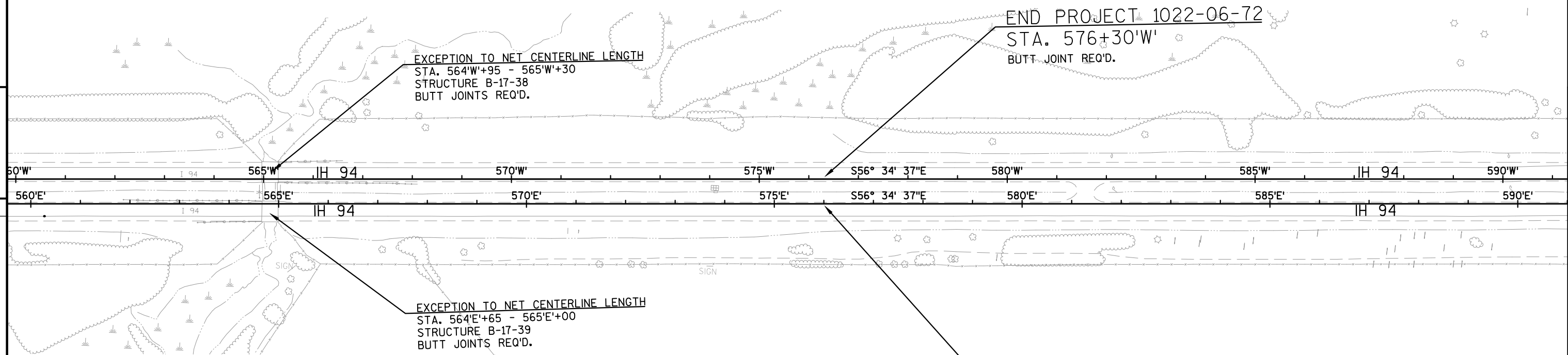
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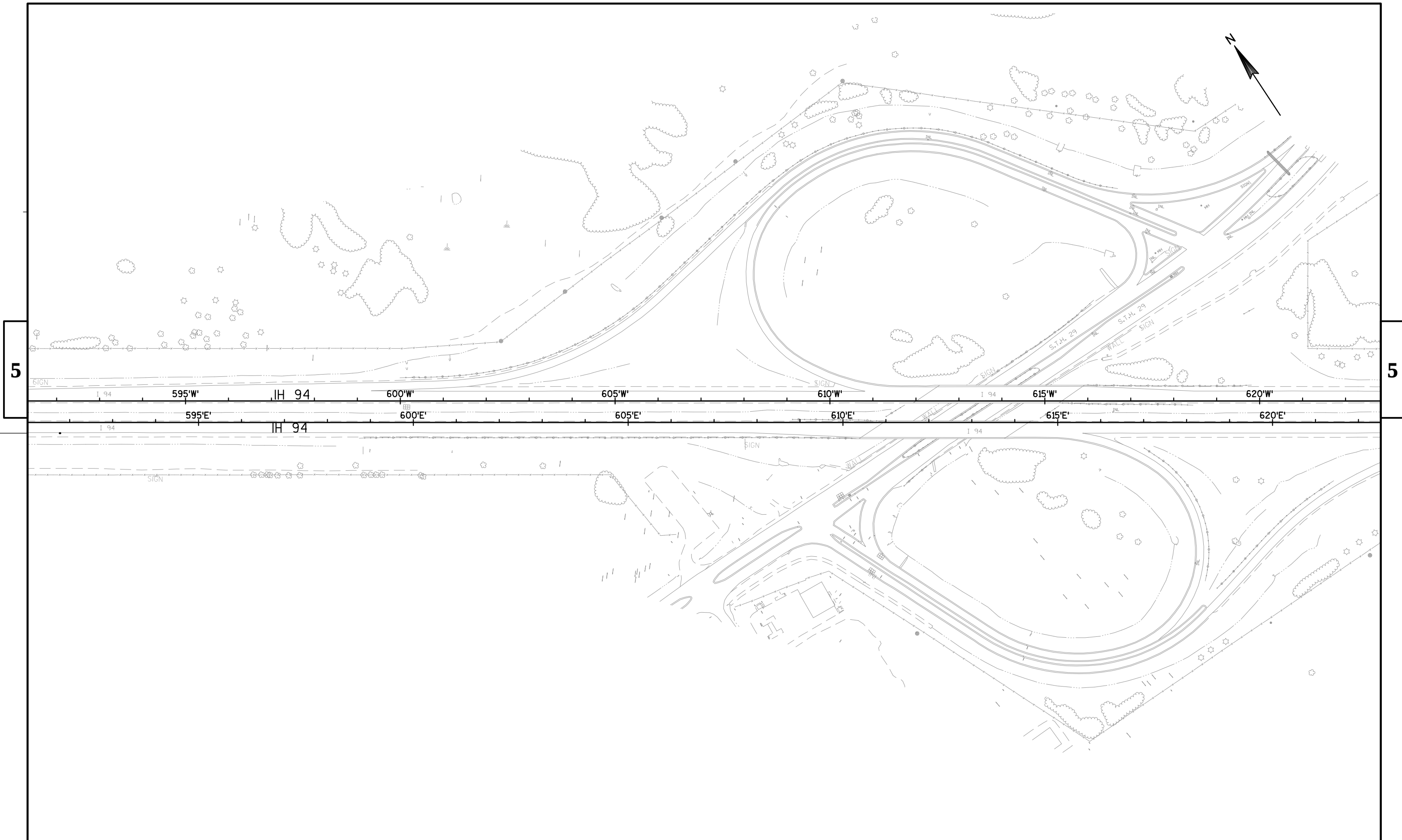
PROJECT NO:1022-03-74 & 1022-06-72	HWY: IH 94	COUNTY: DUNN	PLAN	SHEET	E
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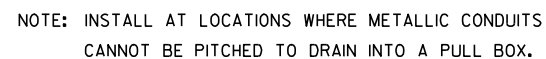
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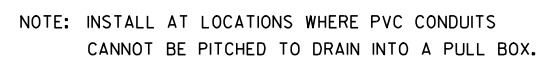


Standard Detail Drawing List

09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C05-08	CONCRETE CONTROL CABINET BASES
09F01-03	DETAILS FOR THE INSTALLATION OF TEMPORARY TRAFFIC SIGNAL LOOP DETECTOR WIRES IN ANY EXISTING PAVEMENT
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A06-02	DELINEATOR LAYOUT
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-04	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D34-01A	RAMP GATE SOLAR POWER
15D34-01B	RAMP GATE SOLAR POWER
15D34-01C	RAMP GATE SOLAR POWER
15D34-01D	RAMP GATE SOLAR POWER



DRAIN SUMP FOR METALLIC CONDUIT



DRAIN SUMP FOR PVC CONDUIT

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

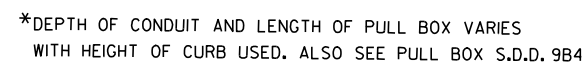
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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

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

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>10/23/03</u> DATE	<u>/S/ Balu Ananthanarayanan</u> STATE ELECTRICAL ENGINEER FOR HWYS
FHWA	

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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

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

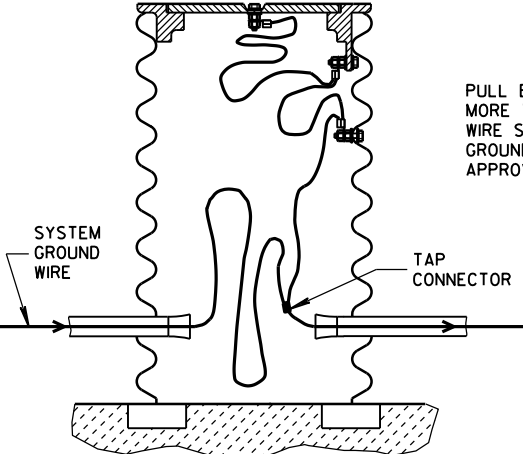
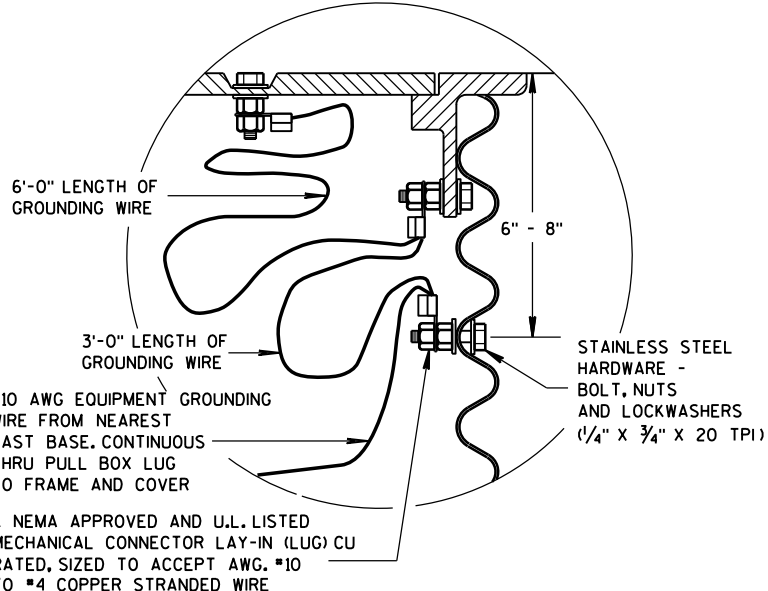
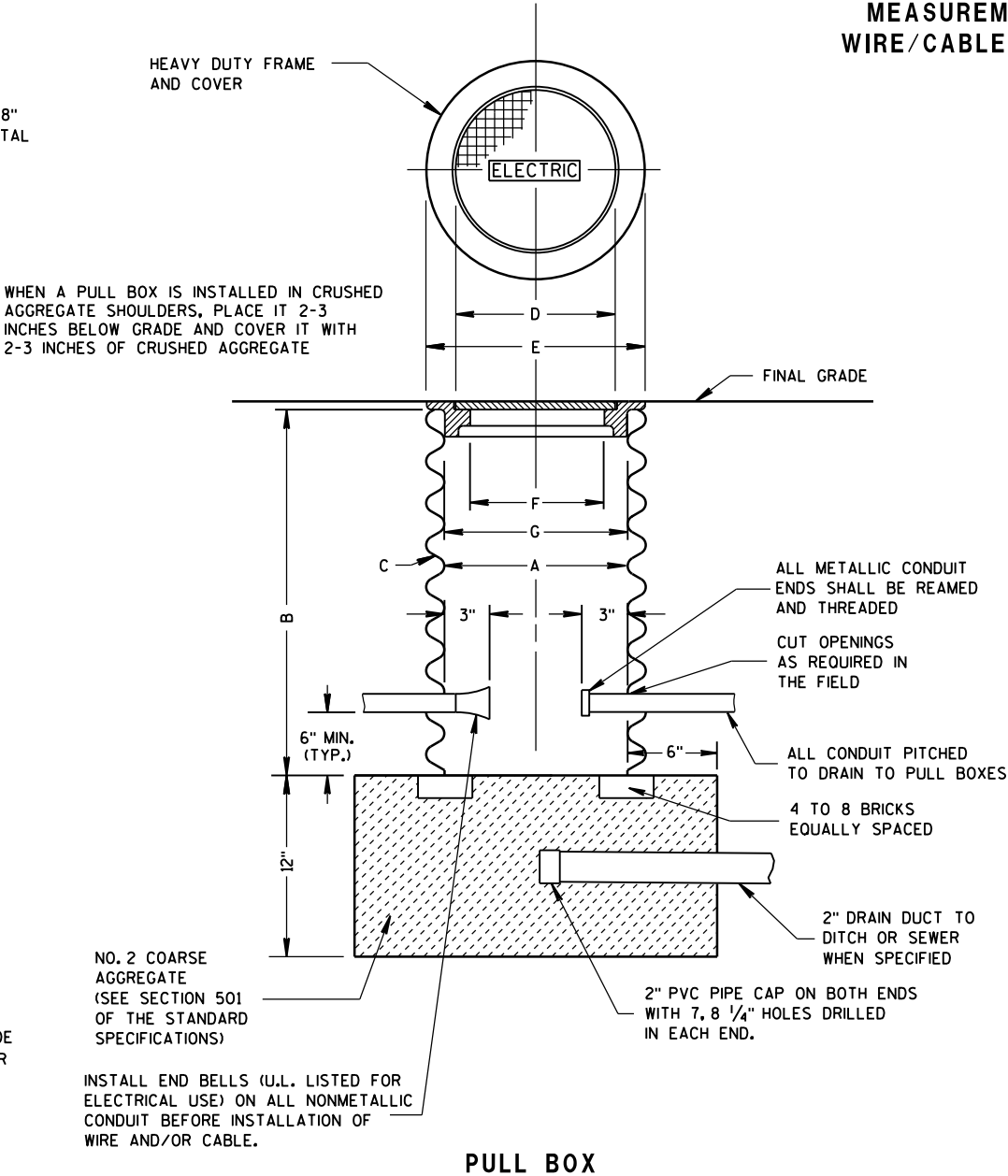
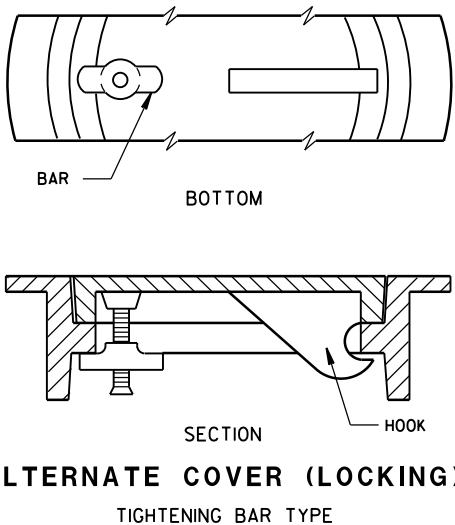
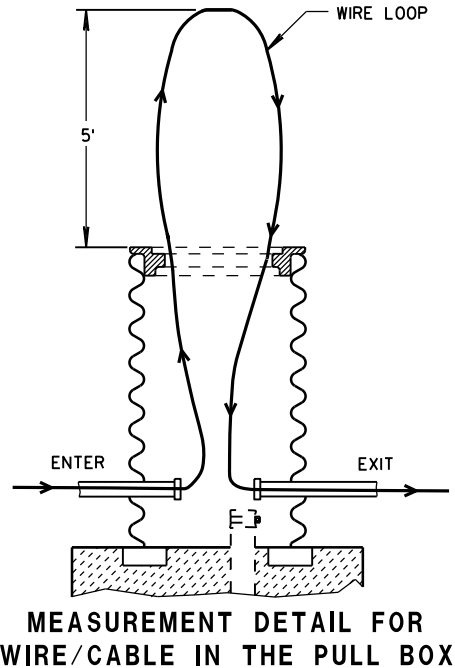
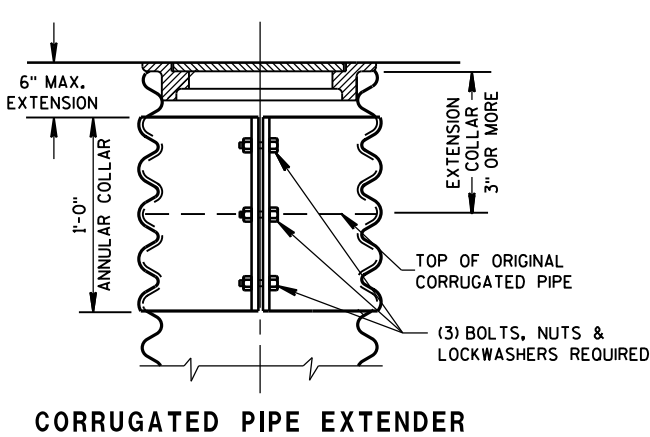
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

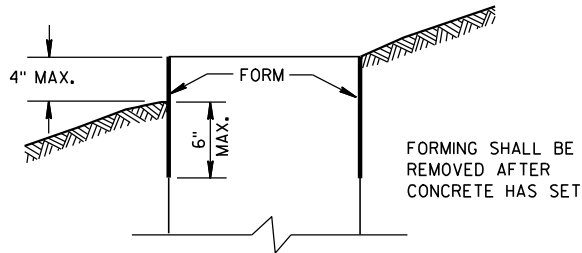
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-7-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

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



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

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

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

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD, ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

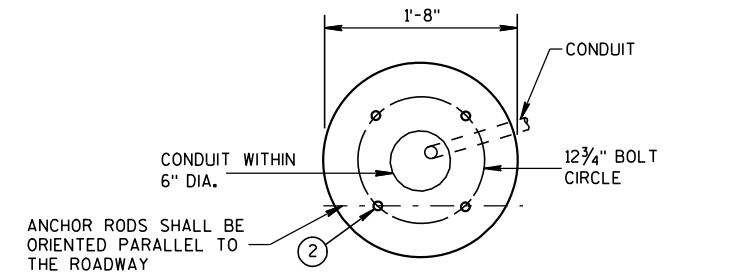
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

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

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

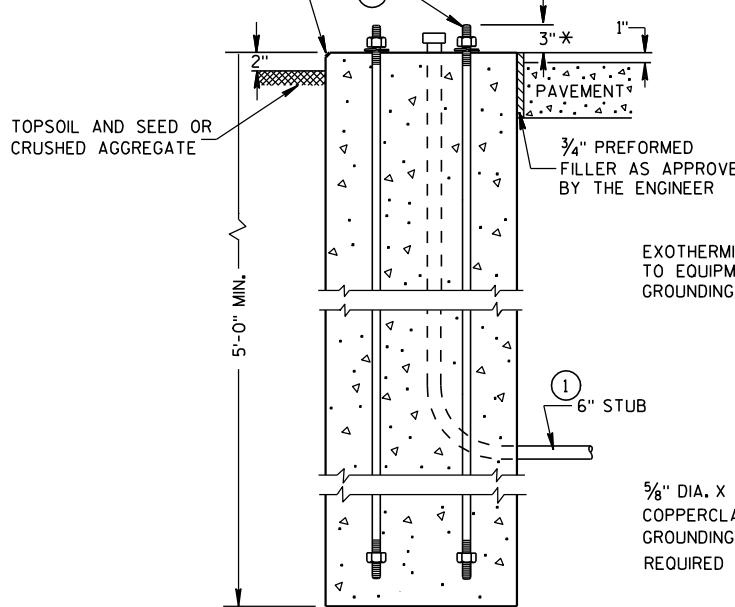
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.
- 2 (4) 1" DIA. X 3'-6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5'-0" ANCHOR RODS.
- 4 (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.
- 6 (4) 1" DIA. X 3'-6" ANCHOR RODS.
- 7 (6) NO. 4 X 4'-8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

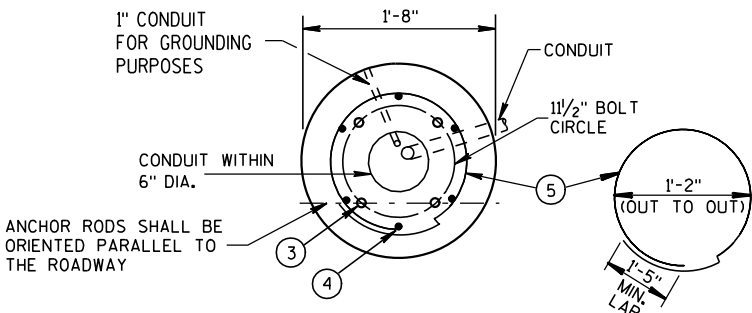


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

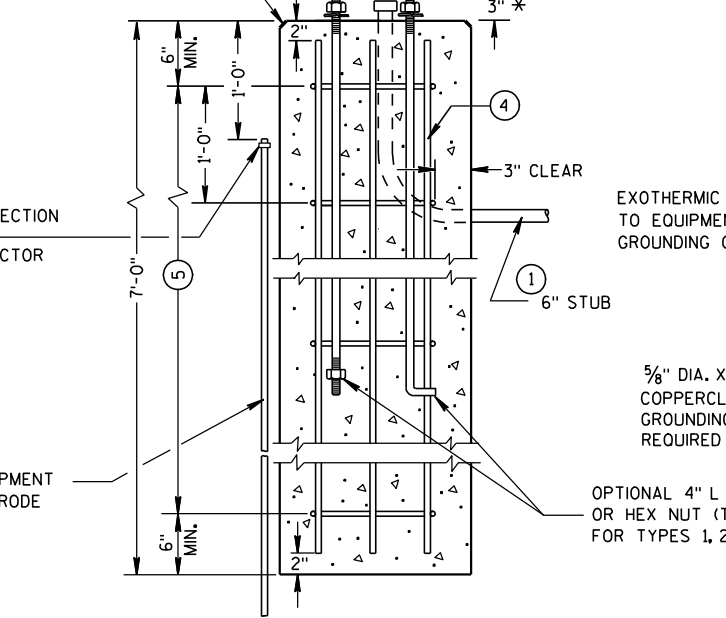
HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2 & 5)



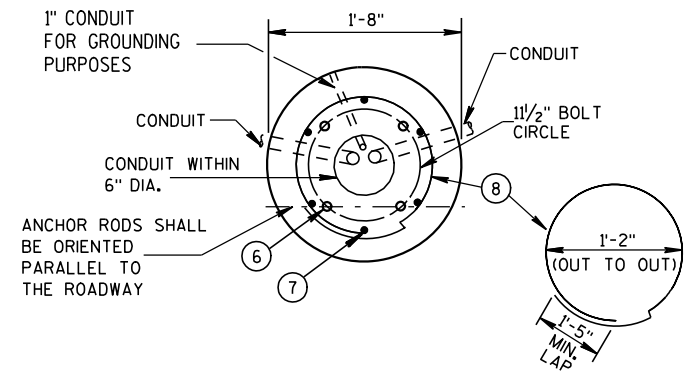
TYPE 1



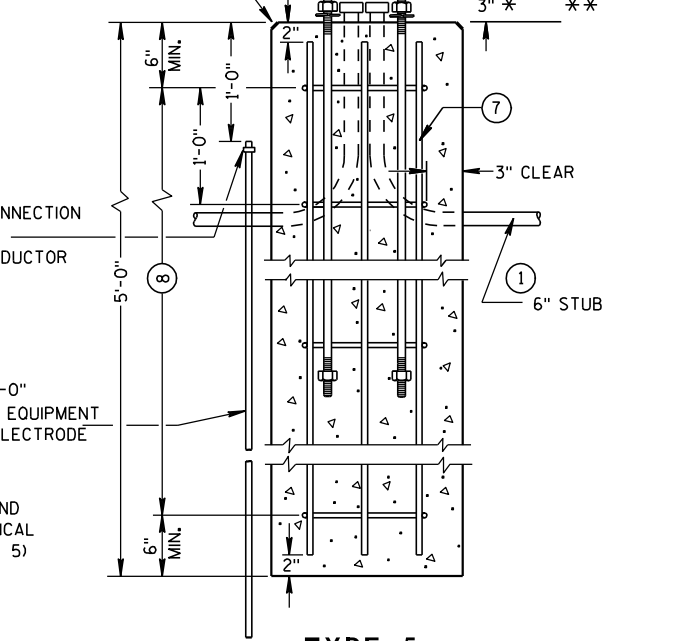
FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10

DATE

FHWA

/S/ Joanna L. Bush
STATE ELECTRICAL ENGINEER FOR HWYS

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

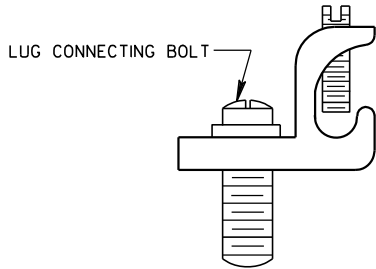
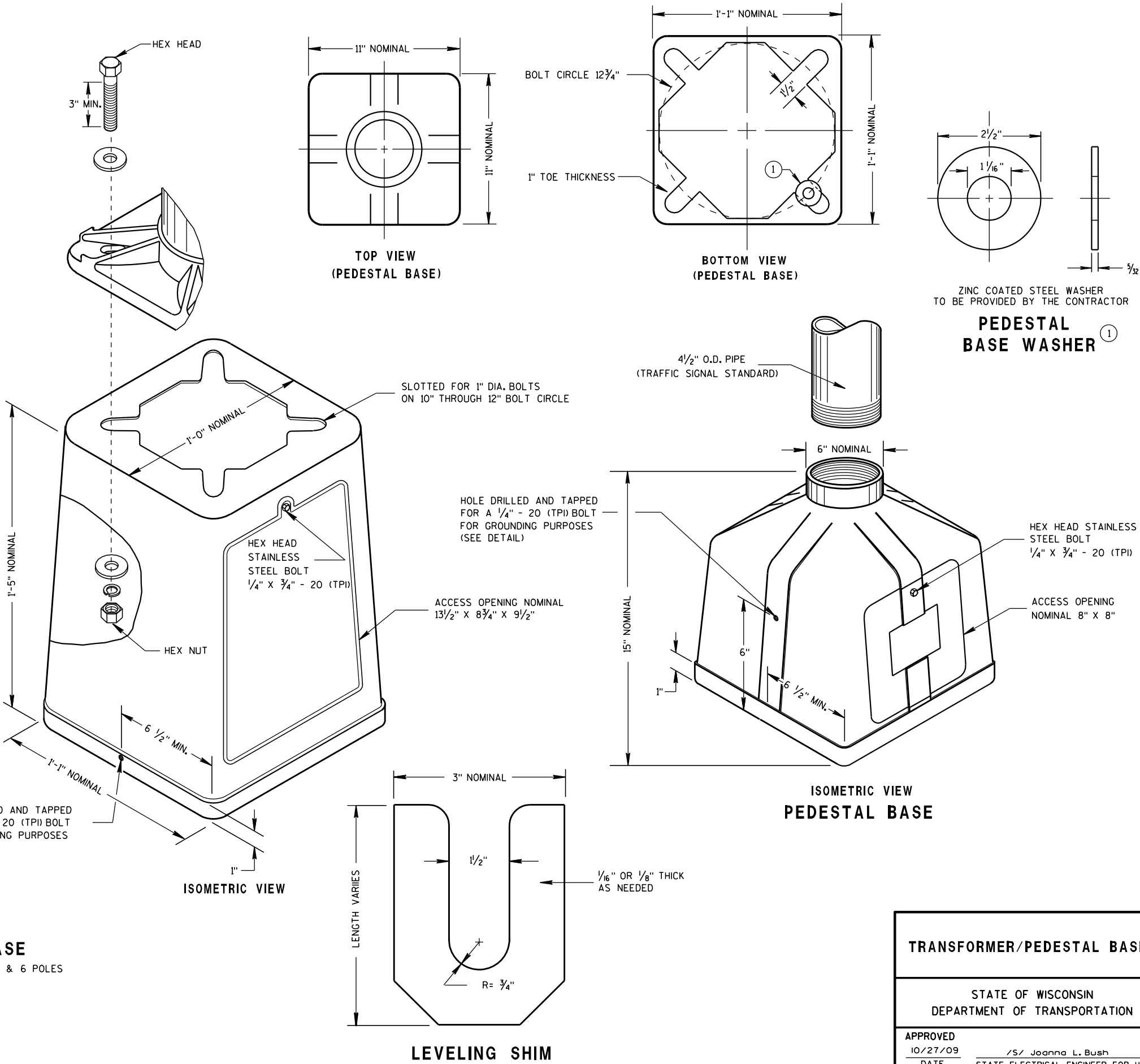
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

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

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

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



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

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

TRANSFORMER/PEDESTAL BASES

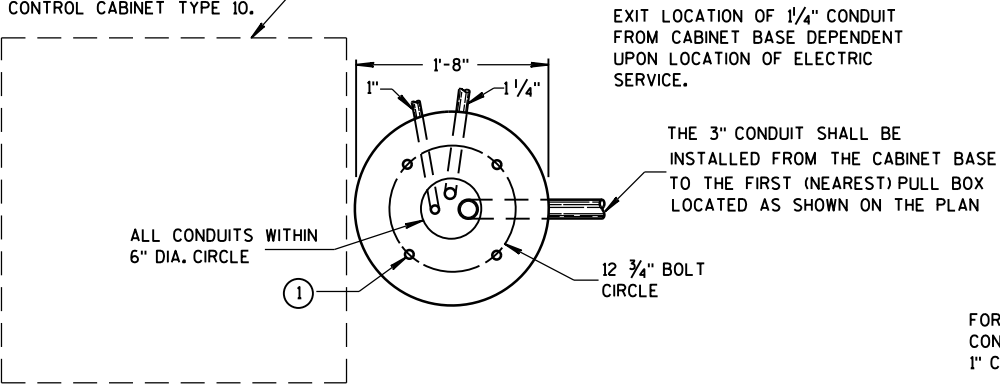
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09
DATE /S/ Joanna L. Bush
STATE ELECTRICAL ENGINEER FOR HWYS
FHWA

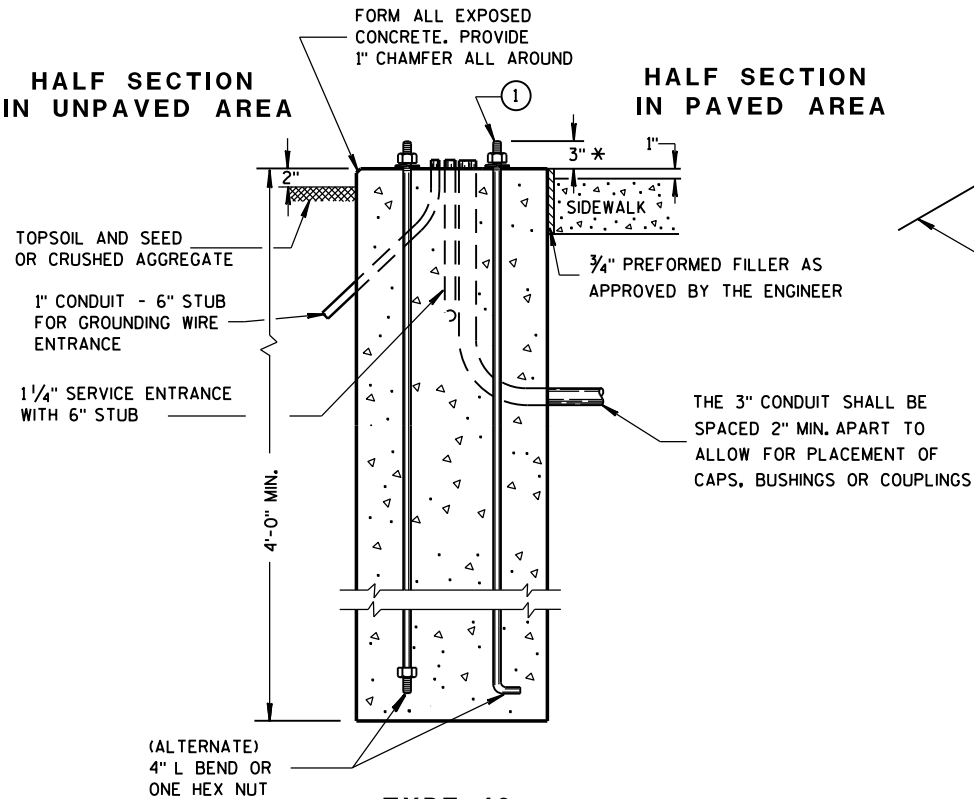
CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

* INCLUDES MAINTENANCE PLATFORM.

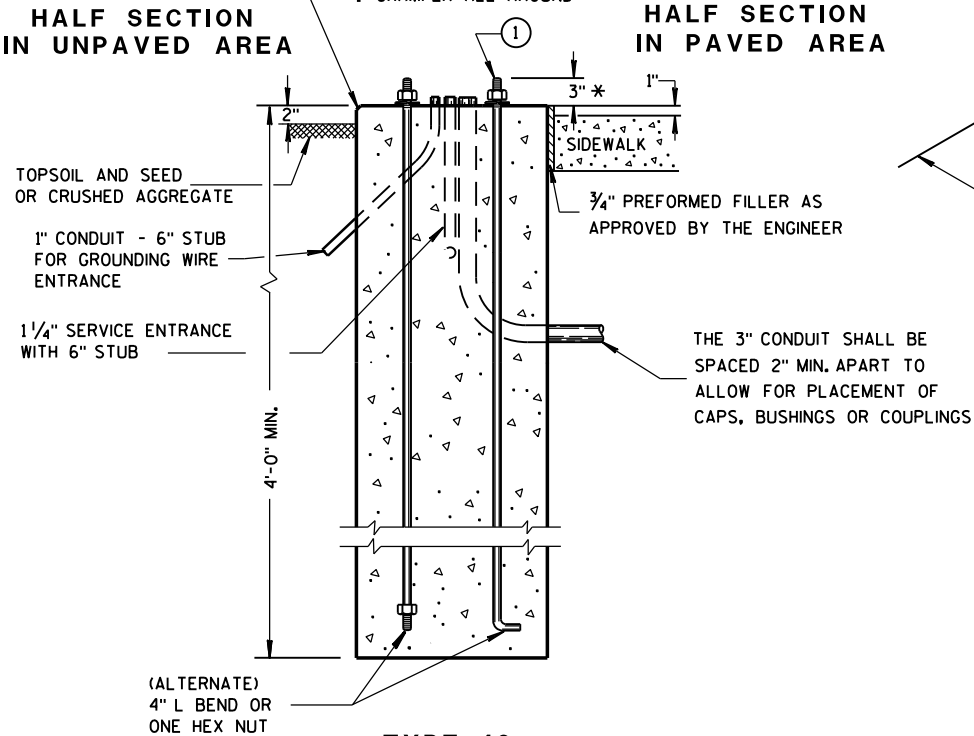
TYPICAL 3'-0" X 3'-0" X 4" THICK
MAINTENANCE PLATFORM.
LOCATION TO BE DETERMINED
IN THE FIELD. COST TO BE
INCLUDED UNDER CONCRETE
CONTROL CABINET TYPE 10.



HALF SECTION IN UNPAVED AREA



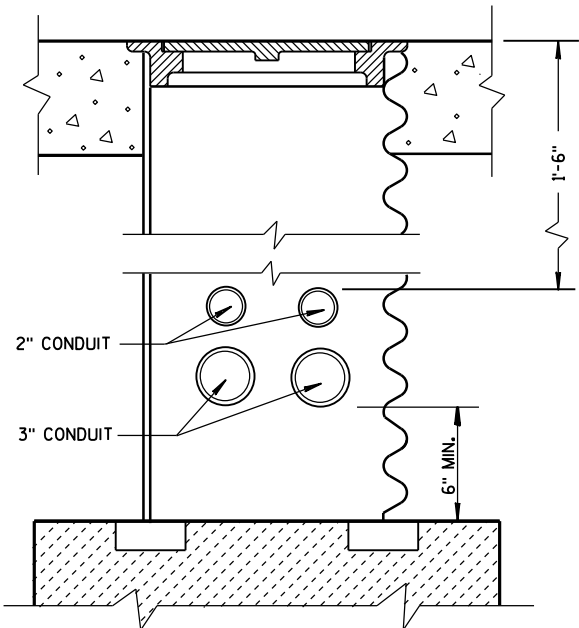
HALF SECTION IN PAVED AREA



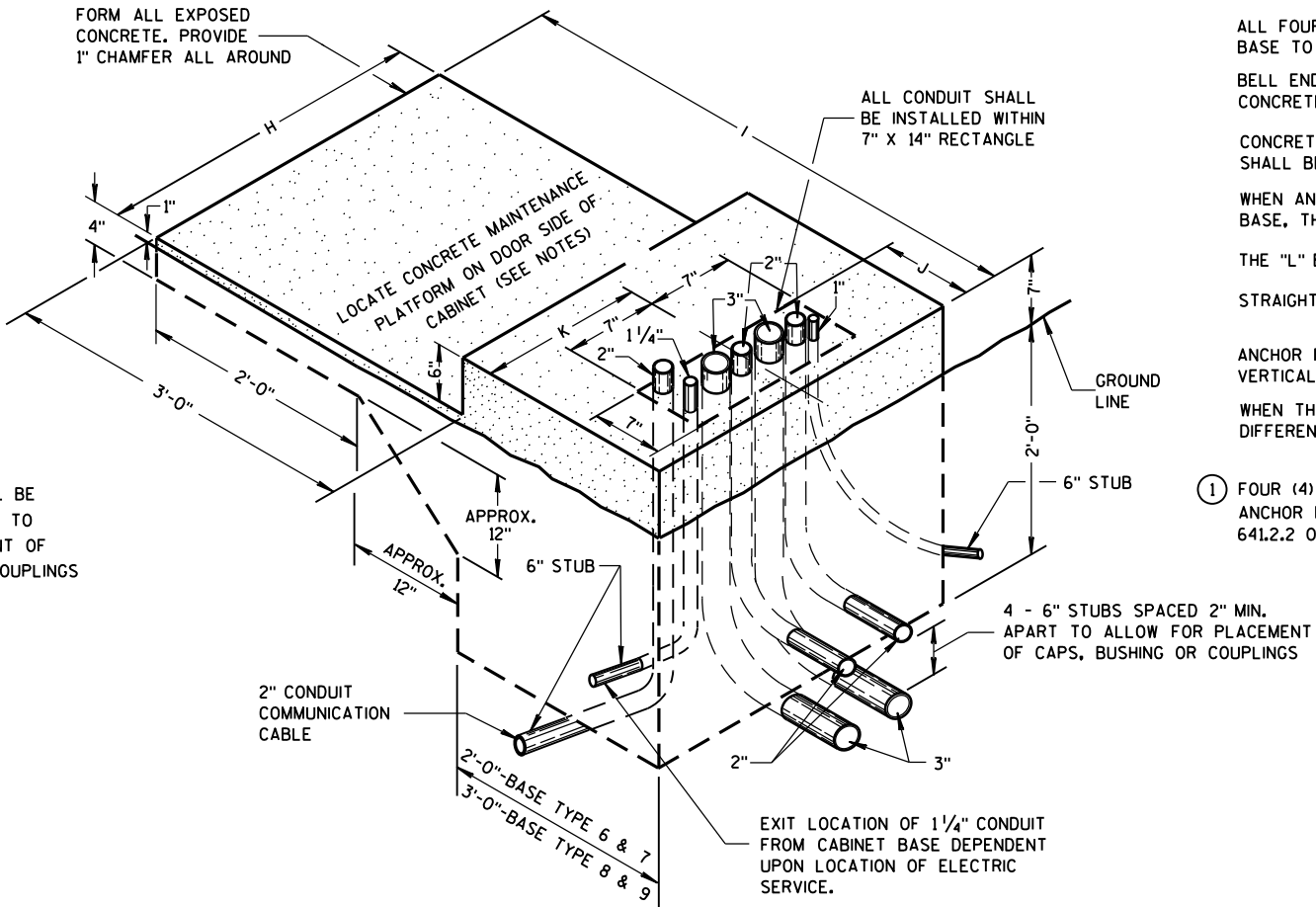
TYPE 10

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 3/4" SHALL REQUIRE
THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

CONCRETE CONTROL CABINET BASES



CONDUIT LOCATIONS IN 24" X 36" PULL BOX (LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 6, 7, 8 AND 9
(ISOMETRIC VIEW)

GENERAL NOTES

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

INSTALL FOUR 1/2 INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE
MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR
STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE
CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A
36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR
SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM
FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

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

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET
BASE TO THE FIRST (NEAREST) PULL BOX LOCATED AS SHOWN ON THE PLANS.

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

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS
SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10
BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

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

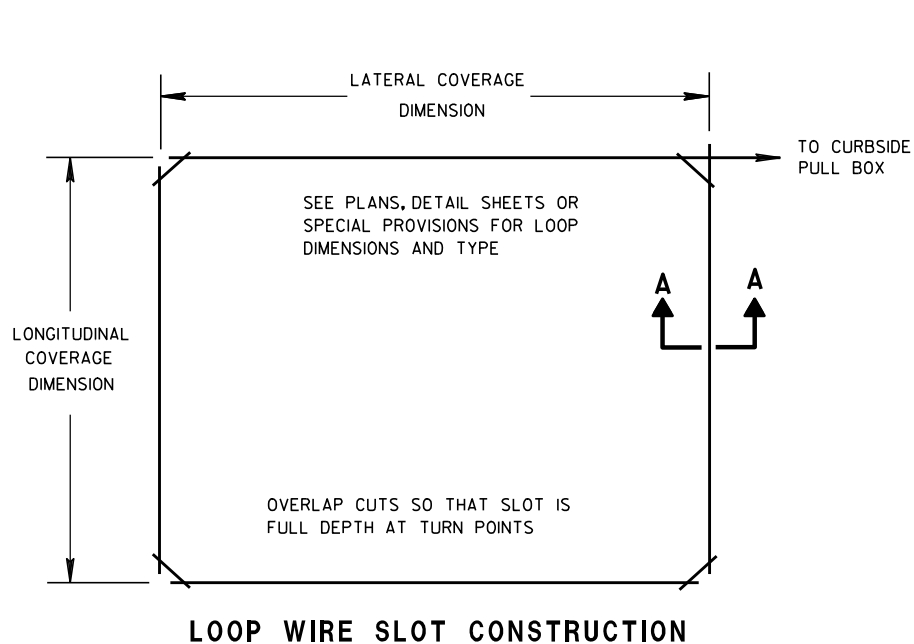
WHEN THIS DRAWING IS USED FOR STREET LIGHTING CABINET BASES, CONDUIT MAY BE
DIFFERENT AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

- ① FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6"
ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND
641.2.2 OF THE STANDARD SPECIFICATIONS.

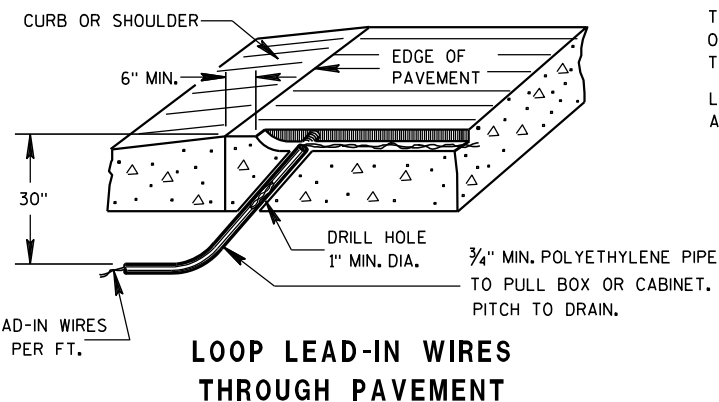
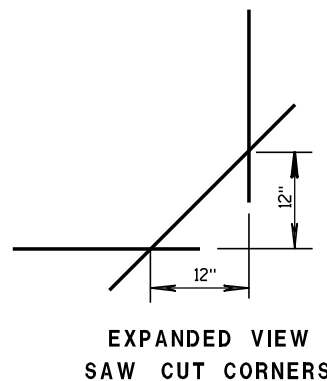
CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/26/2013
DATE /S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA



LOOP WIRE SLOT CONSTRUCTION



GENERAL NOTES

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

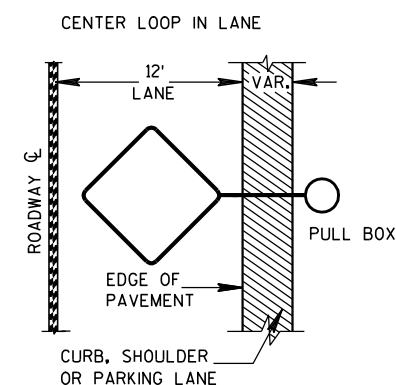
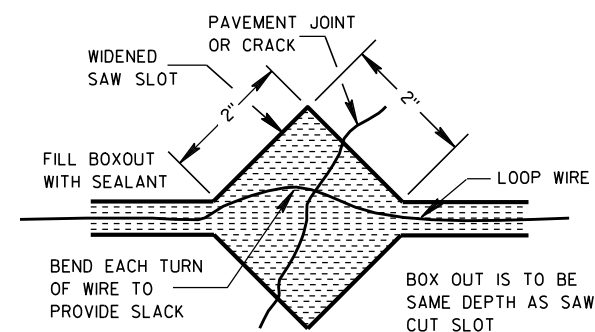
THE SLOTS IN THE PAVEMENT SHALL BE CUT TO DIMENSION WITH A SAW. THE SLOTS SHALL BE CLEANED FREE OF DIRT, DUST, MOISTURE AND DEBRIS PRIOR TO INSTALLATION OF THE WIRE.

AFTER PLACING THE WIRE IN THE SLOT, FILL THE SLOT WITH AN ASPHALTIC MATERIAL IN ACCORDANCE WITH THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

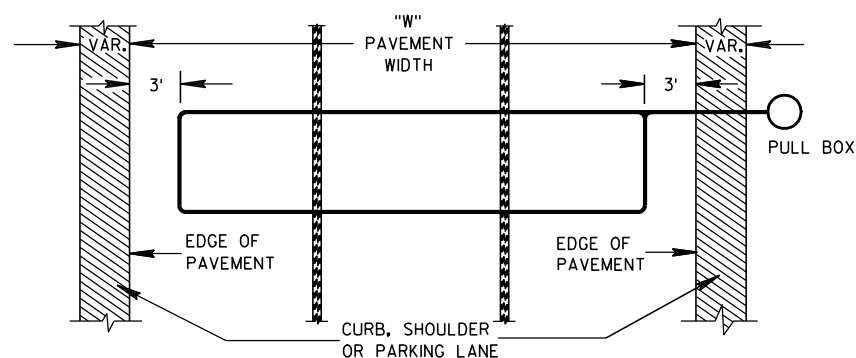
IN THE EVENT ASPHALTIC MATERIAL IS UNAVAILABLE, A FLEXIBLE TYPE EPOXY MAY BE USED AS A LOOP SLOT FILLER. THE LOOP SLOT SHALL BE CLEAN AND DRY BEFORE EPOXY IS INSTALLED. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED ONLY AFTER WRITTEN APPROVAL BY THE BY THE PROJECT ENGINEER.

THE TWO SINGLE CONDUCTOR LOOP WIRES SHALL BE TWISTED TOGETHER AT A RATE OF THREE TWISTS PER FOOT FROM THE PAVEMENT EDGE TO THE SPLICE CONNECTION WITH THE LOOP LEAD-IN CABLE.

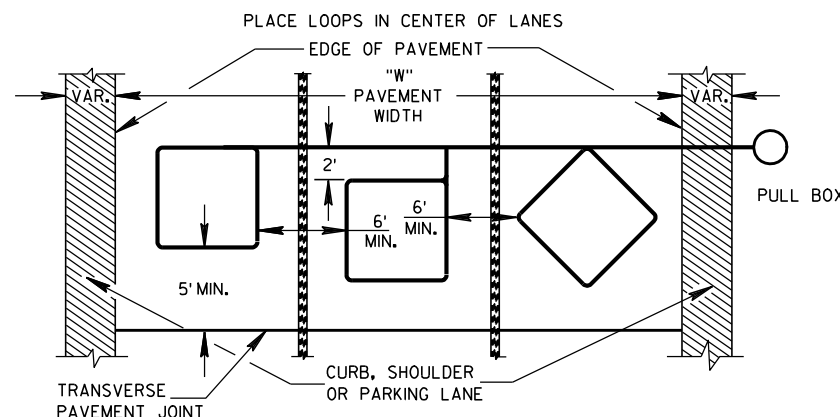
LEAD-IN CABLES AND LOOP LEAD-IN WIRES SHALL BOTH BE CUT TO 6 FEET IN LENGTH AT THE SPLICING PULL BOX.



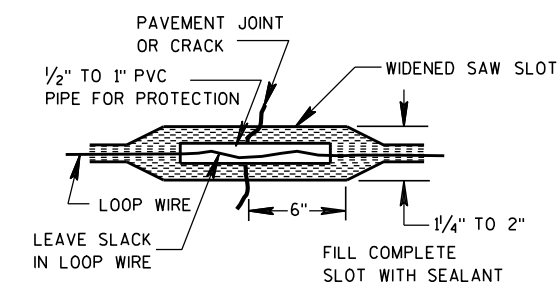
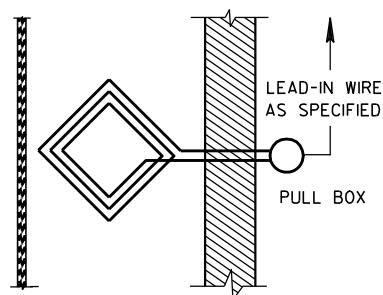
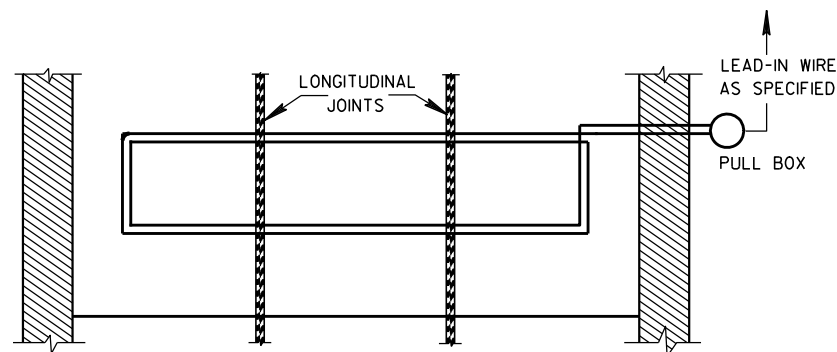
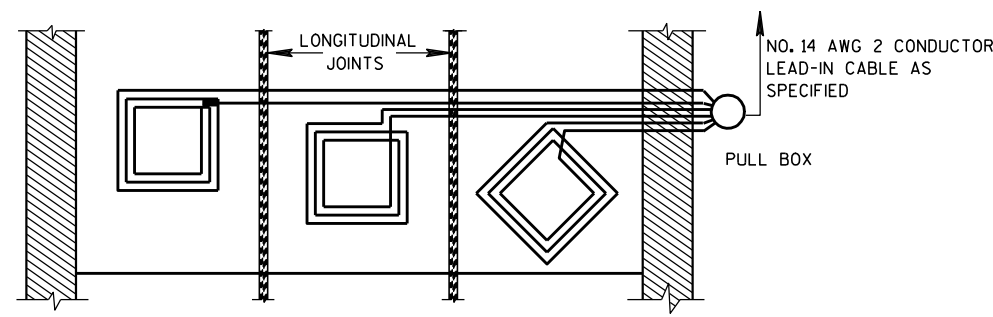
LOOP WIRE SLOT PLAN



LOOP WIRE SLOT PLAN



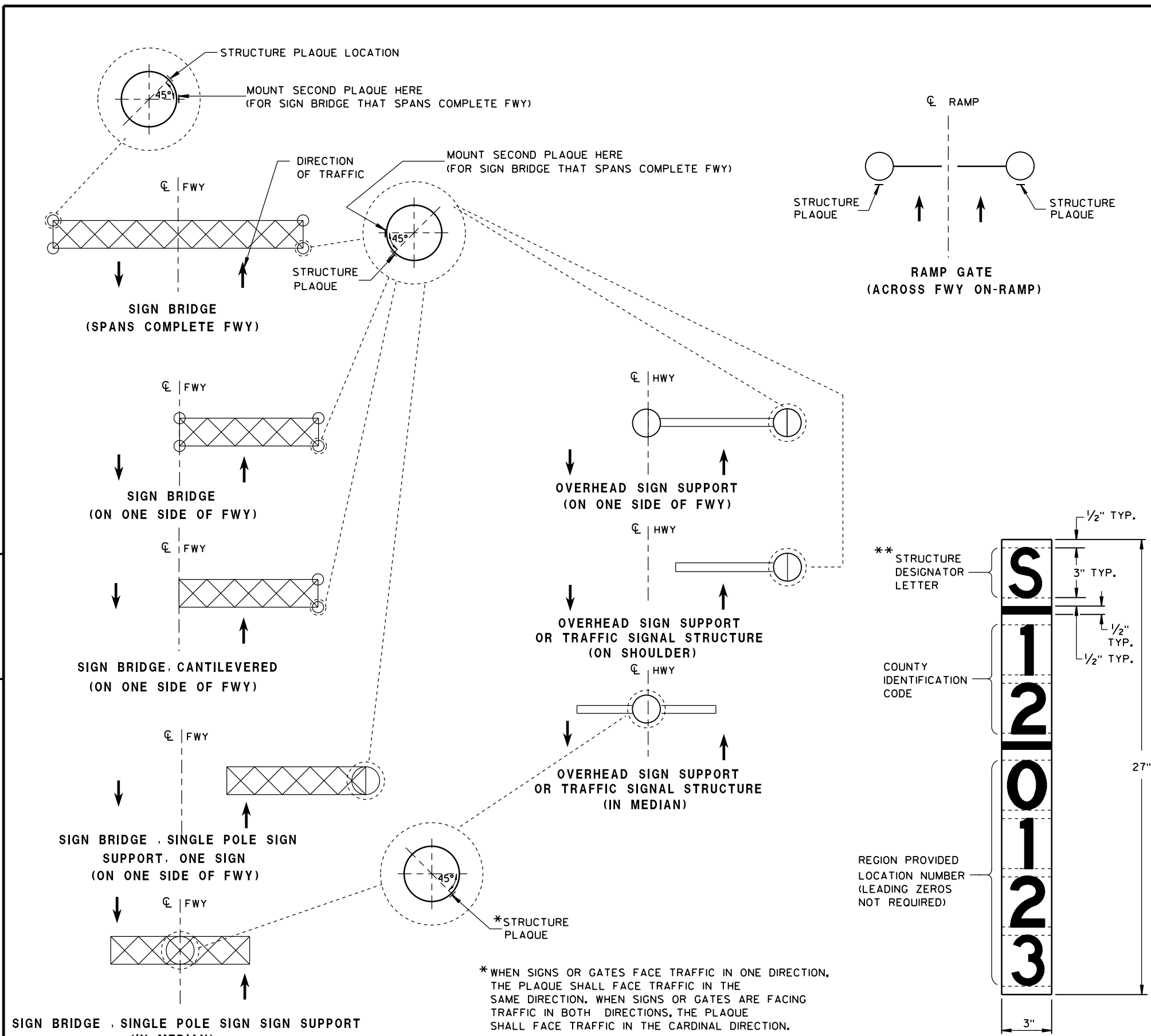
LOOP WIRE SLOT PLAN

LOOP WIRE INSTALLATION ACROSS
PAVEMENT JOINT OR CRACKLOOP WIRE LAY
CONSTRUCTION DETAILS
SINGLE LANE LOOP DETECTIONLOOP WIRE LAY
CONSTRUCTION DETAILS
MULTIPLE LANE MASS LOOP DETECTIONLOOP WIRE LAY
CONSTRUCTION DETAILS
MULTIPLE LANE DETECTION BY
INDIVIDUAL LANES, TYPICAL TYPE LOOPS

DETAILS FOR THE INSTALLATION OF
TEMPORARY TRAFFIC SIGNAL LOOP
DETECTOR WIRES IN ANY
EXISTING PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/12/00 /S/ Balu Ananthanarayanan
DATE STATE ELECTRICAL ENGINEER FOR HWYS
FHWA



LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

- GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS
- A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS
- ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

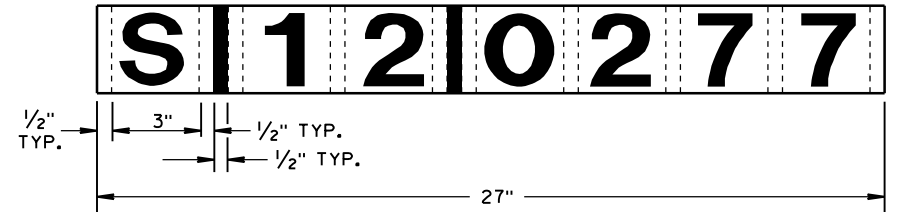
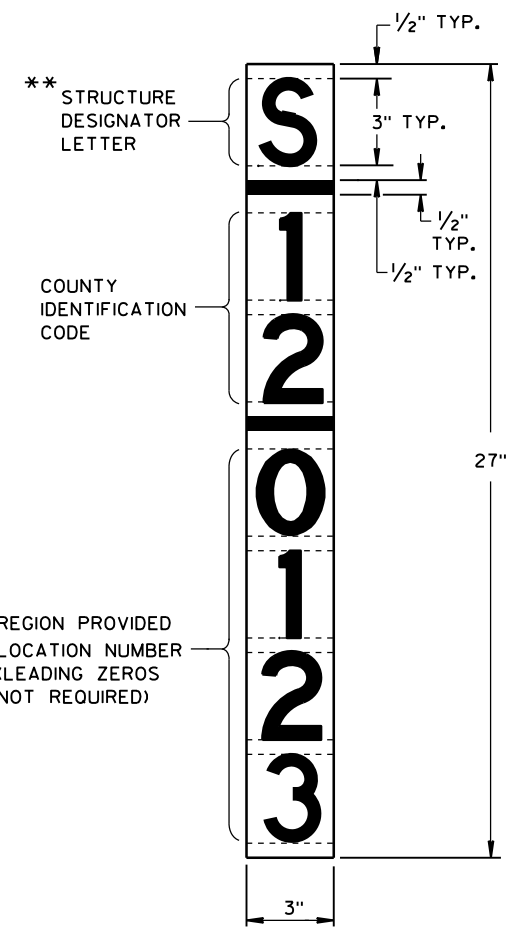
MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

- BASE - SHEET ALUMINUM, 0.060" THICK.
- FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE
- LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE
- CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

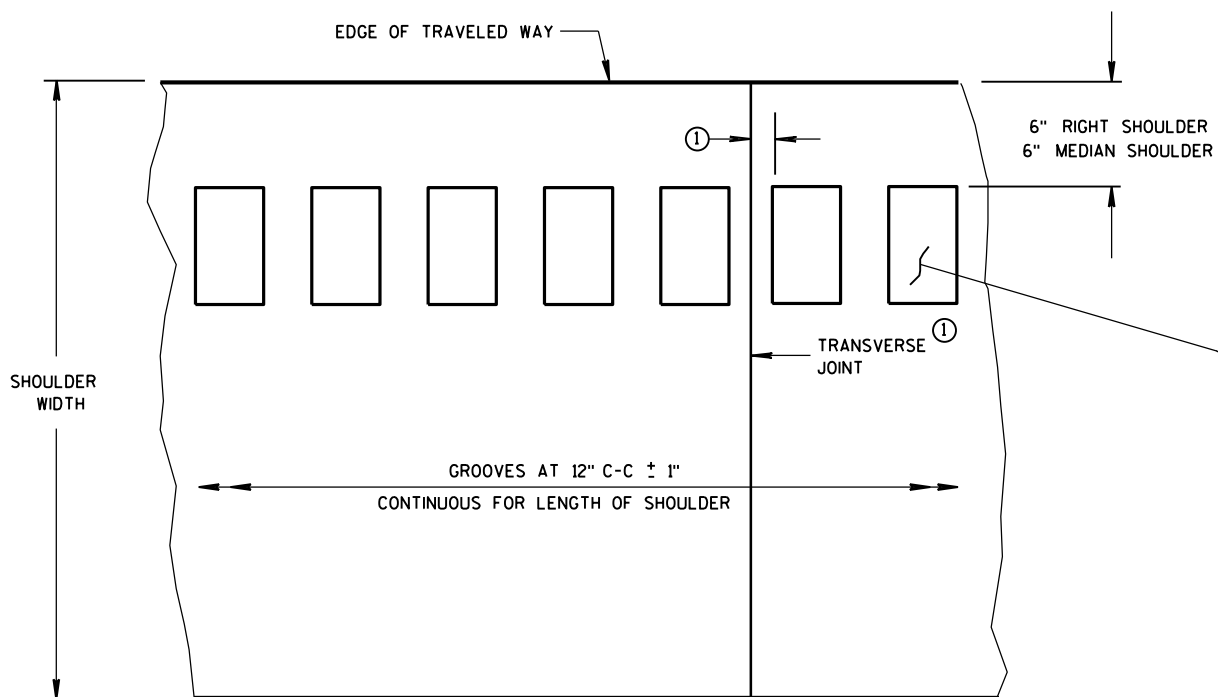
WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



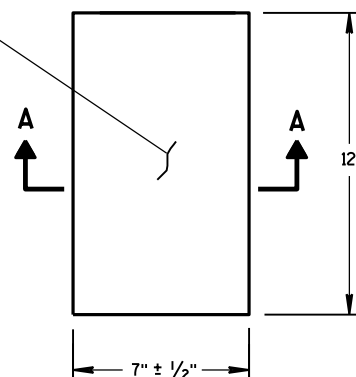
IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/4/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



PLAN VIEW
SHOULDER WITH GROOVES



PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

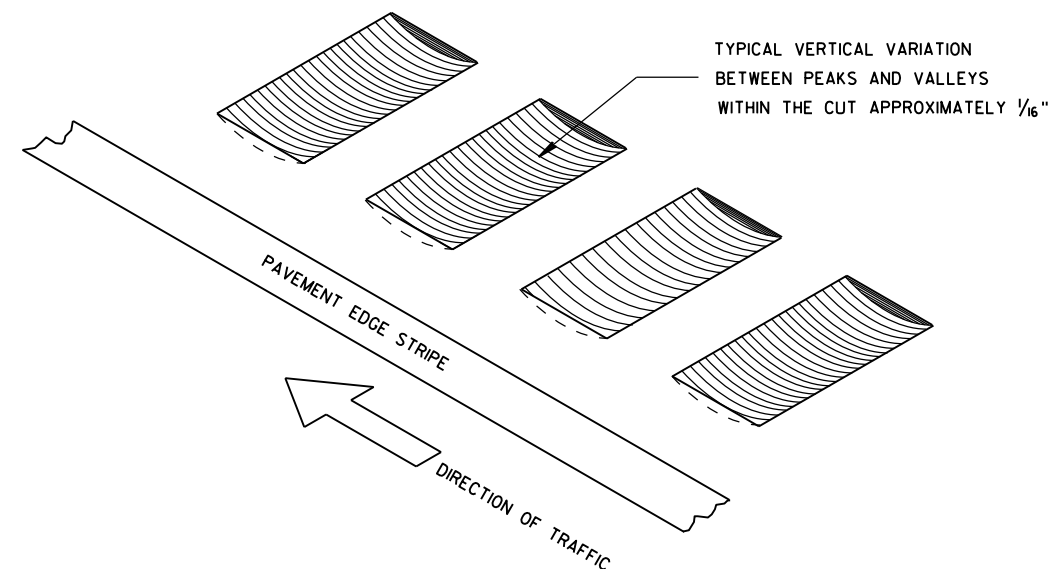
GENERAL NOTES

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

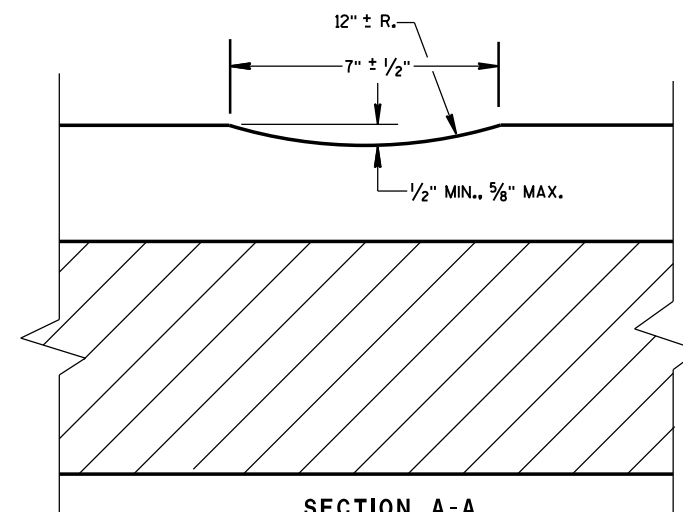
RUMBLE STRIPS ON EXPRESSWAYS

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

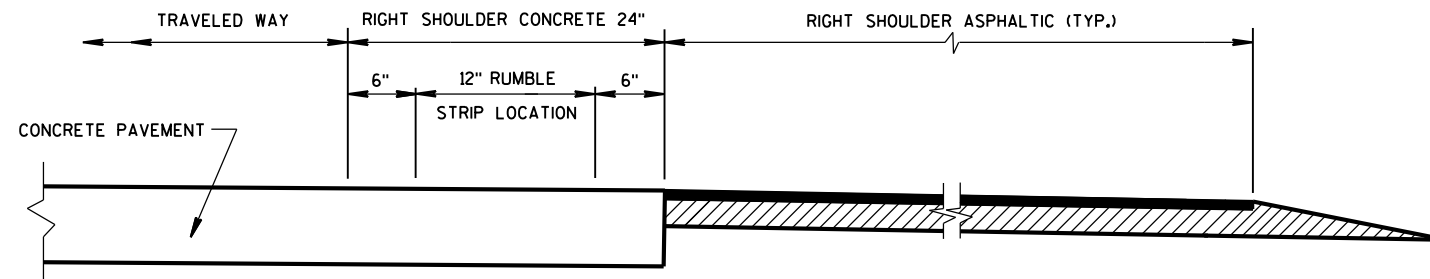
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



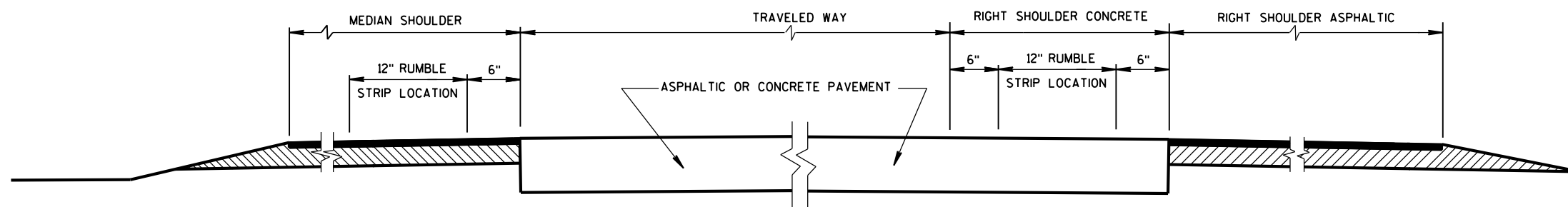
ISOMETRIC



SECTION A-A



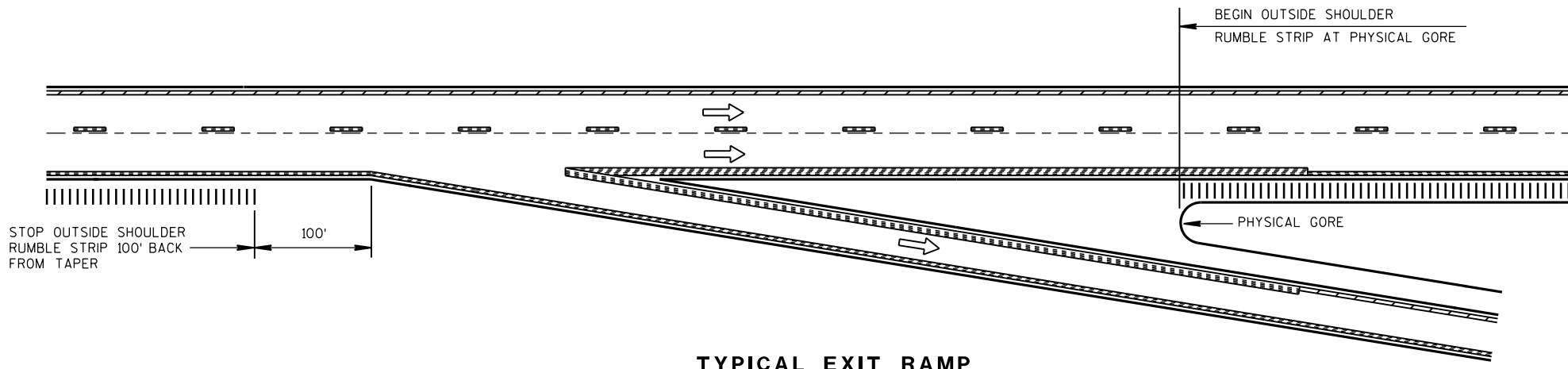
SECTION VIEW
(CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



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

SHOULDER RUMBLE STRIP,
MILLING

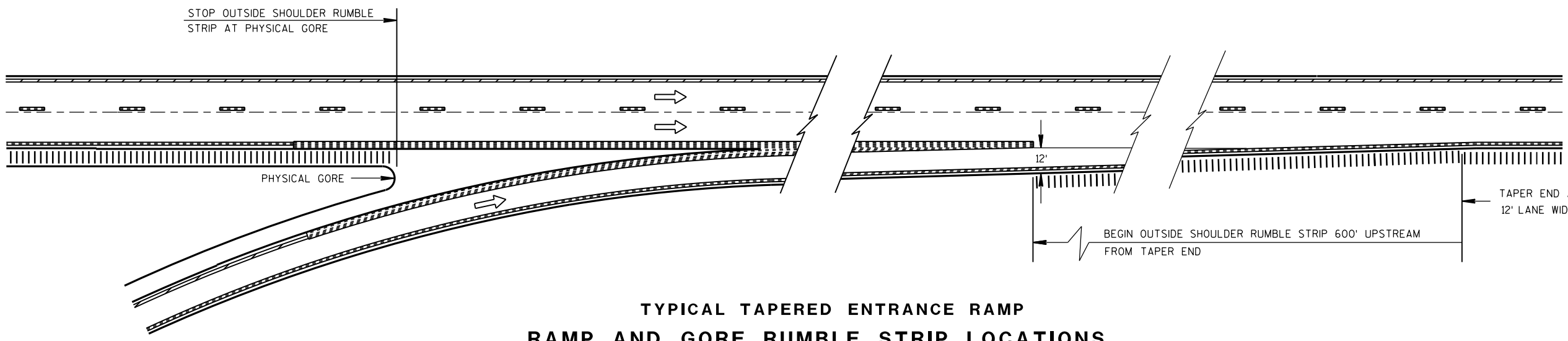
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



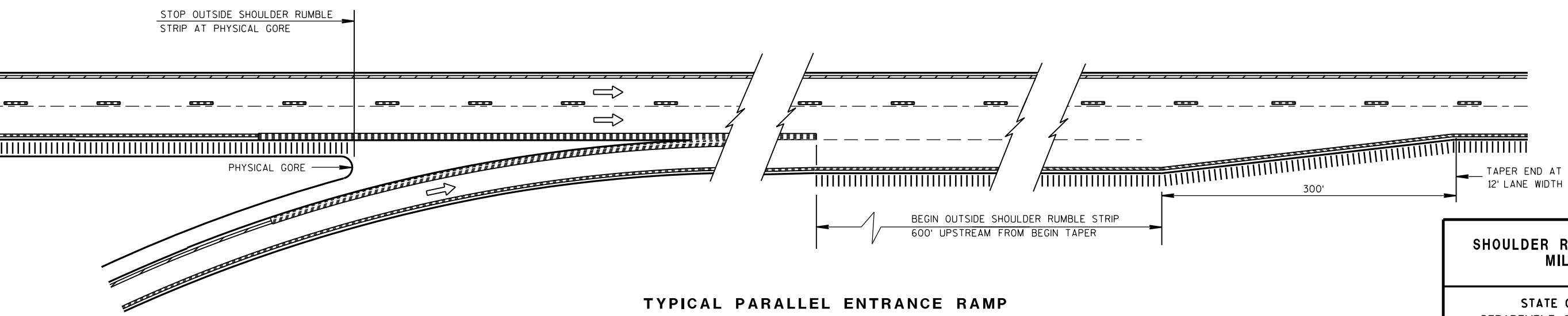
TYPICAL EXIT RAMP

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

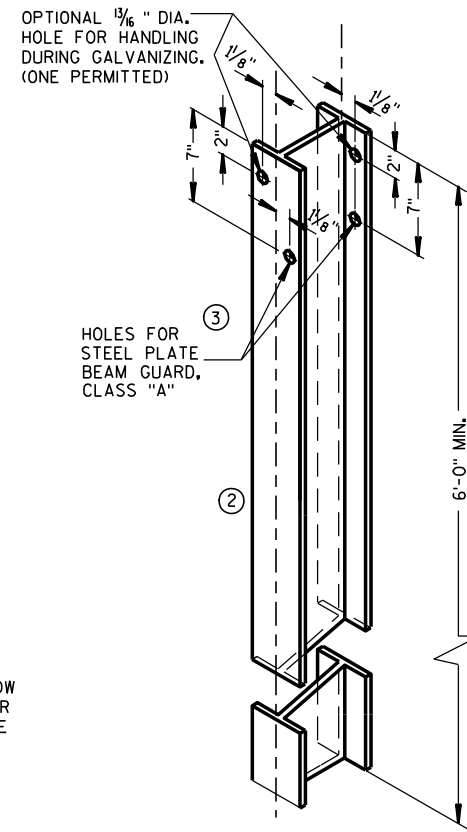
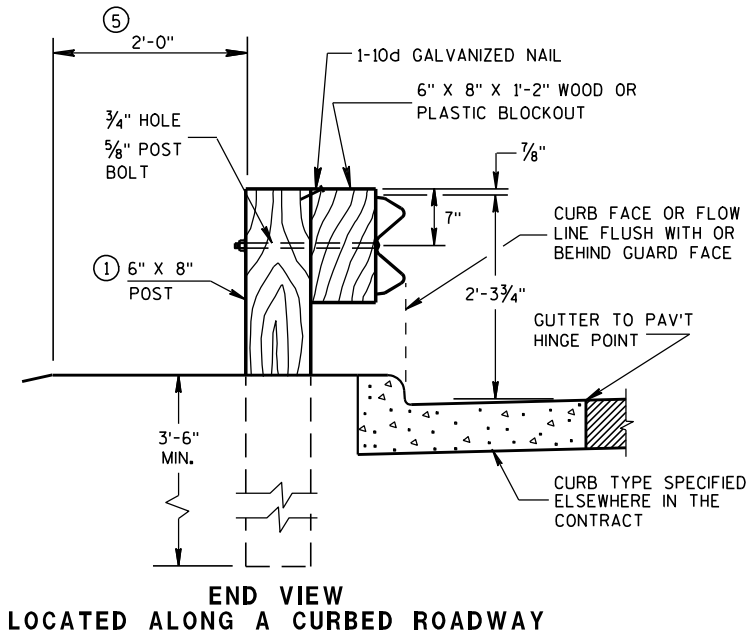
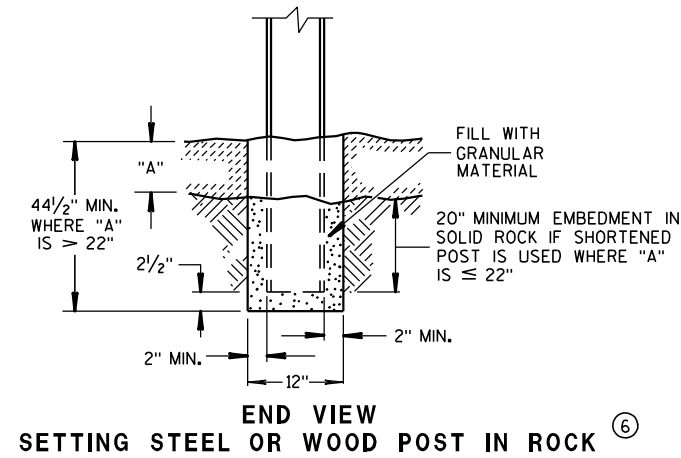
SHOULDER RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/17/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

GENERAL NOTES

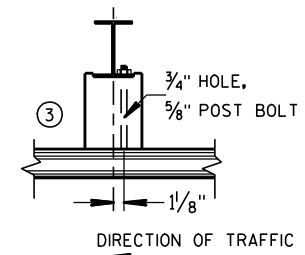
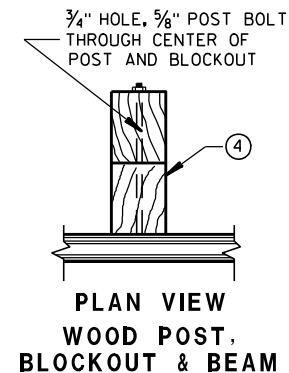
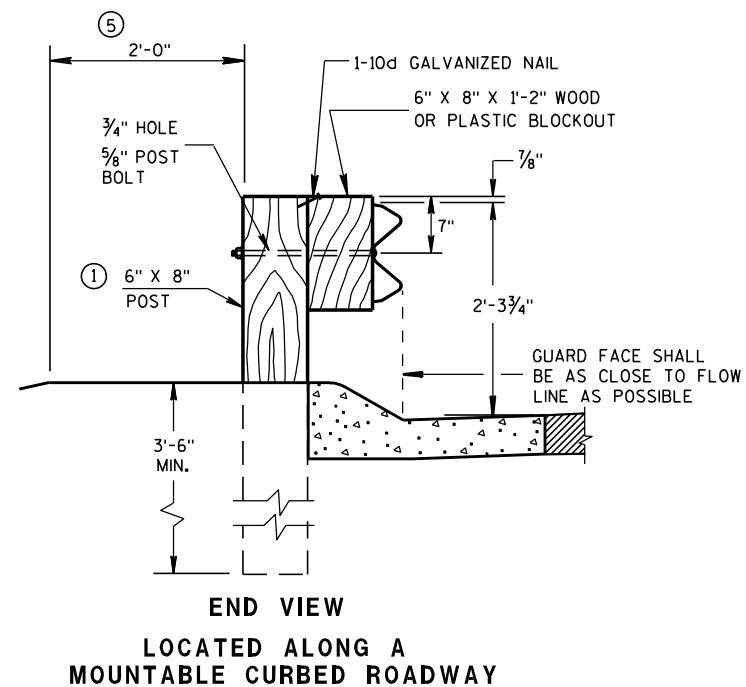
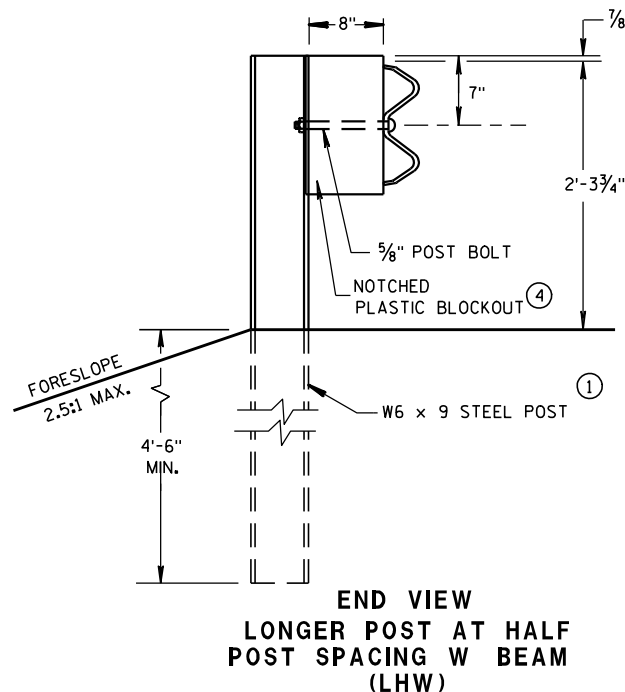
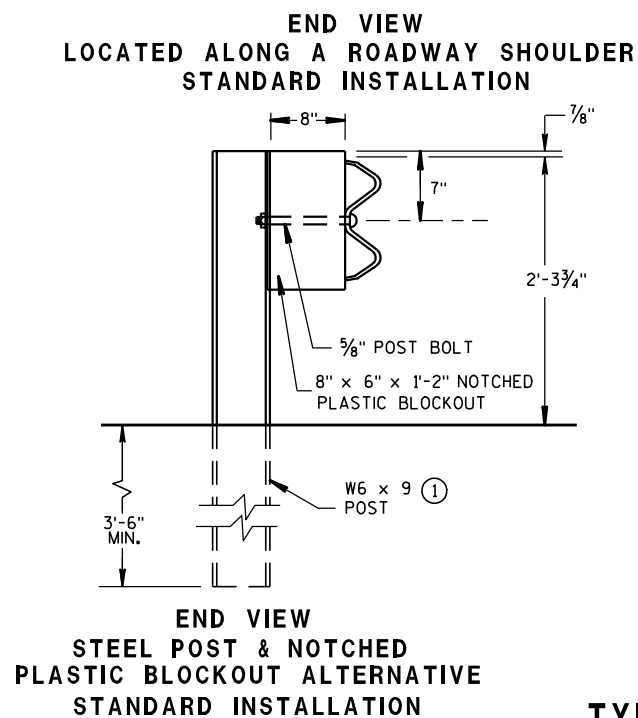
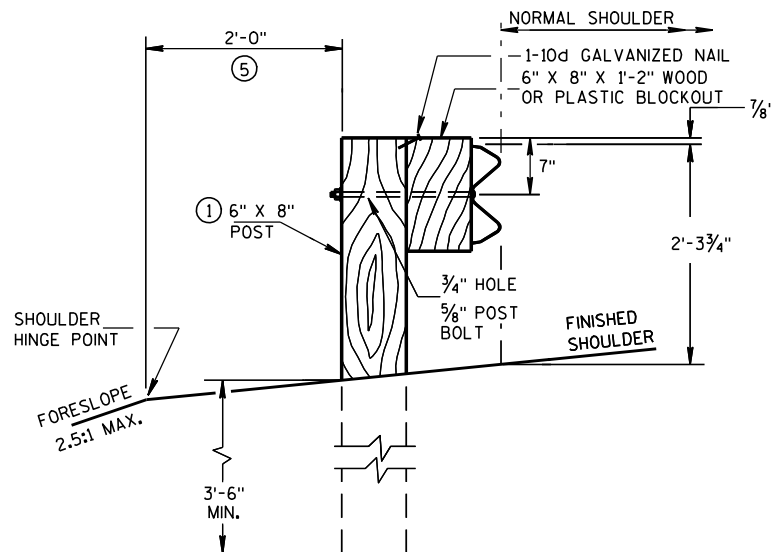
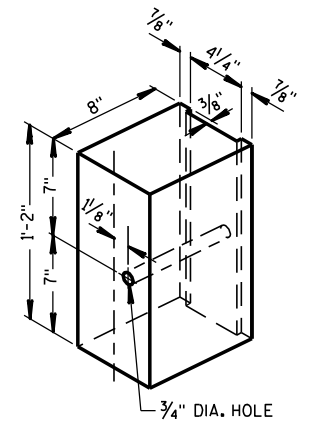
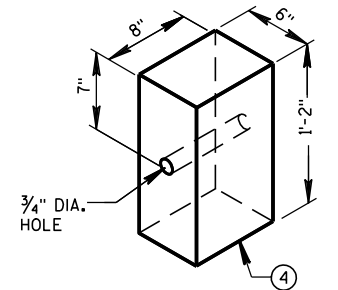
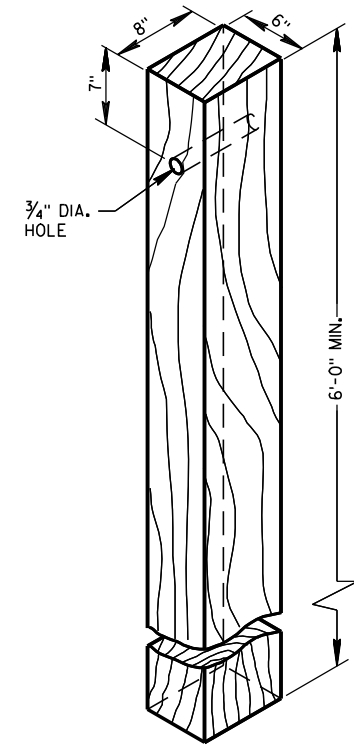
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
- DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111 EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPALTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.

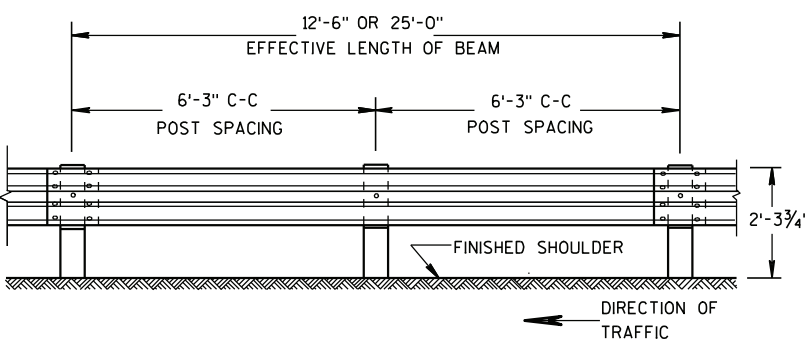


ALL HOLES 1 3/8" DIAMETER EXCEPT AS NOTED



STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

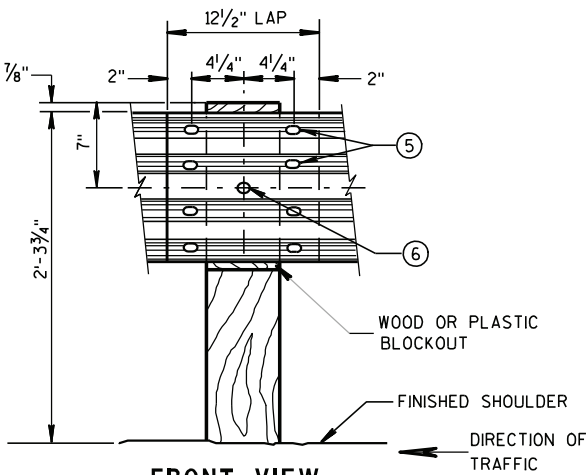
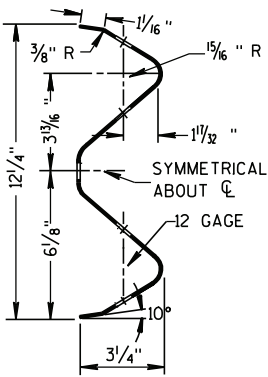
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



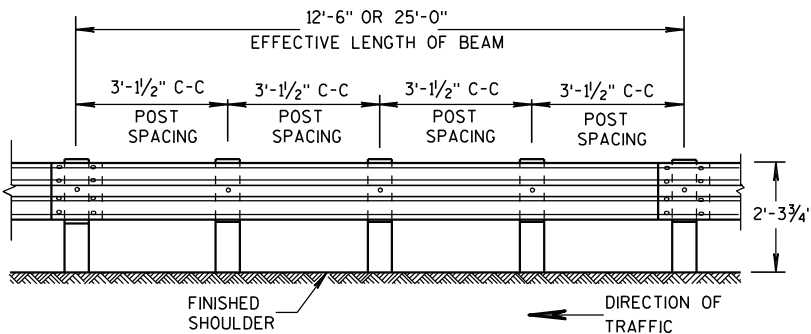
FRONT VIEW

POST SPACING STANDARD INSTALLATION

SECTION THRU W BEAM

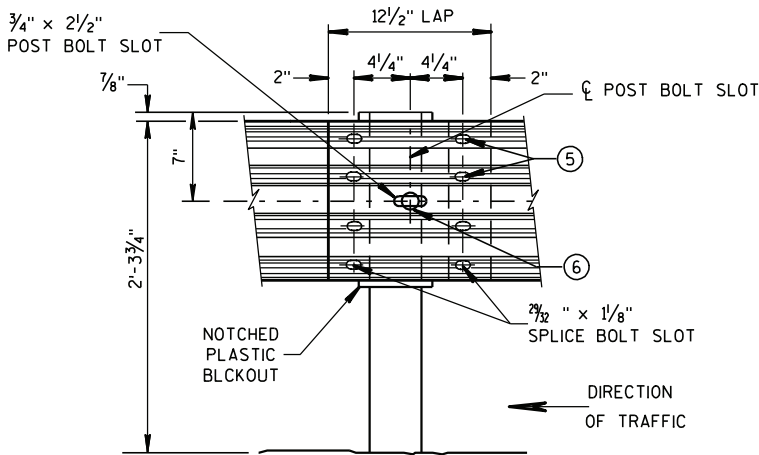


FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL



FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)

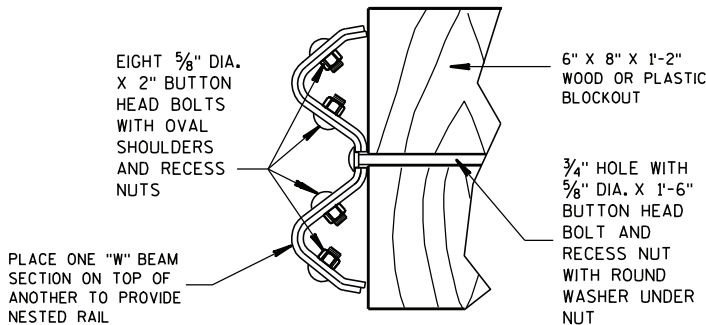


FRONT VIEW
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

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.
- 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 $90^\circ \pm 1^\circ$ FOR TWO-SIDED REFLECTORS.
- 5 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- 6 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.

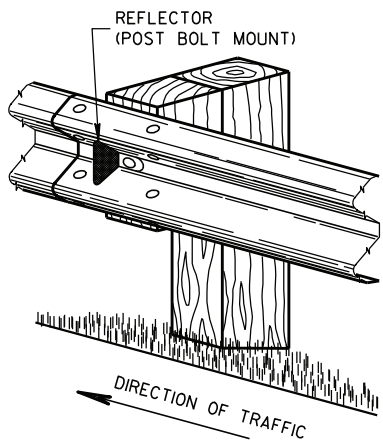


NESTED W BEAM (NW)

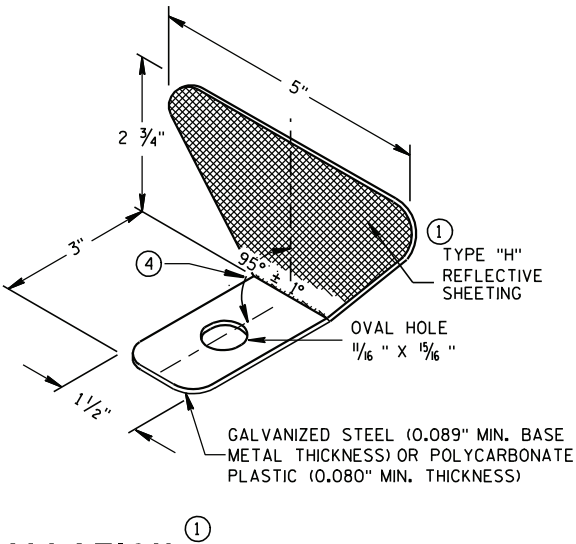
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING²

	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	

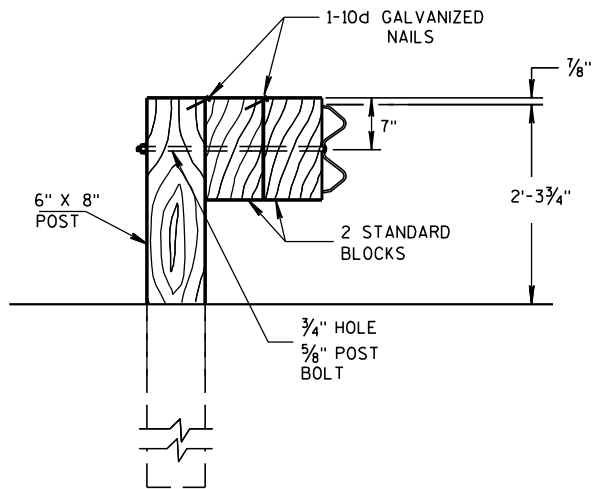


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION



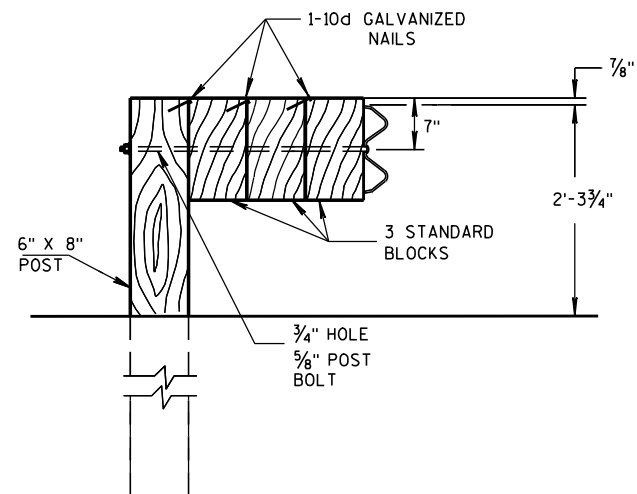
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS
WITHIN A BARRIER RUN IS UNLIMITED

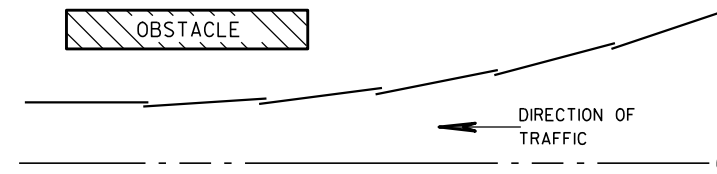


DETAIL FOR TRIPLE BLOCKS

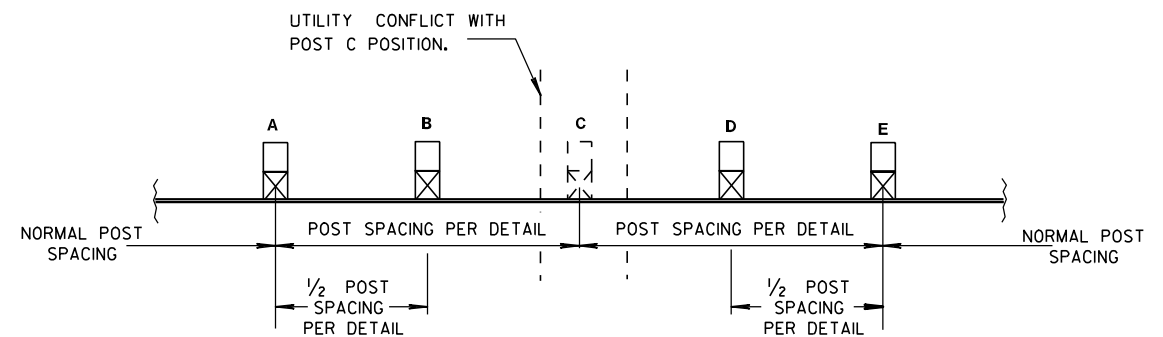
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.



PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

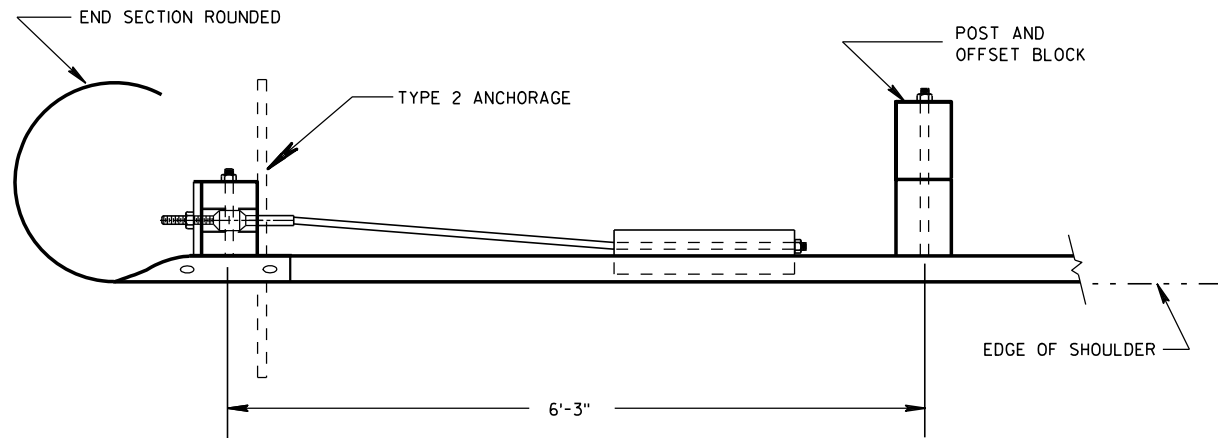
APPROVED

5/23/11

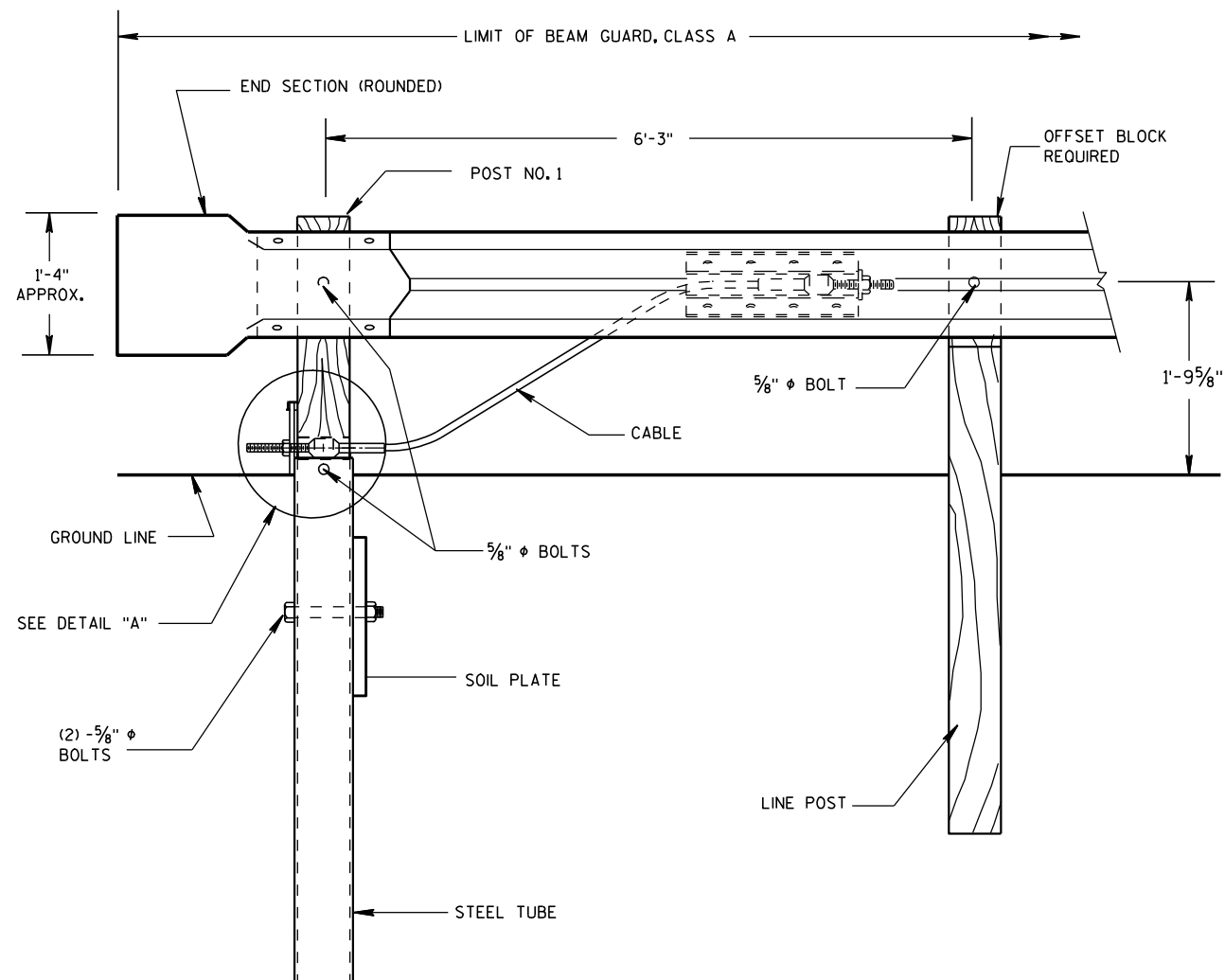
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



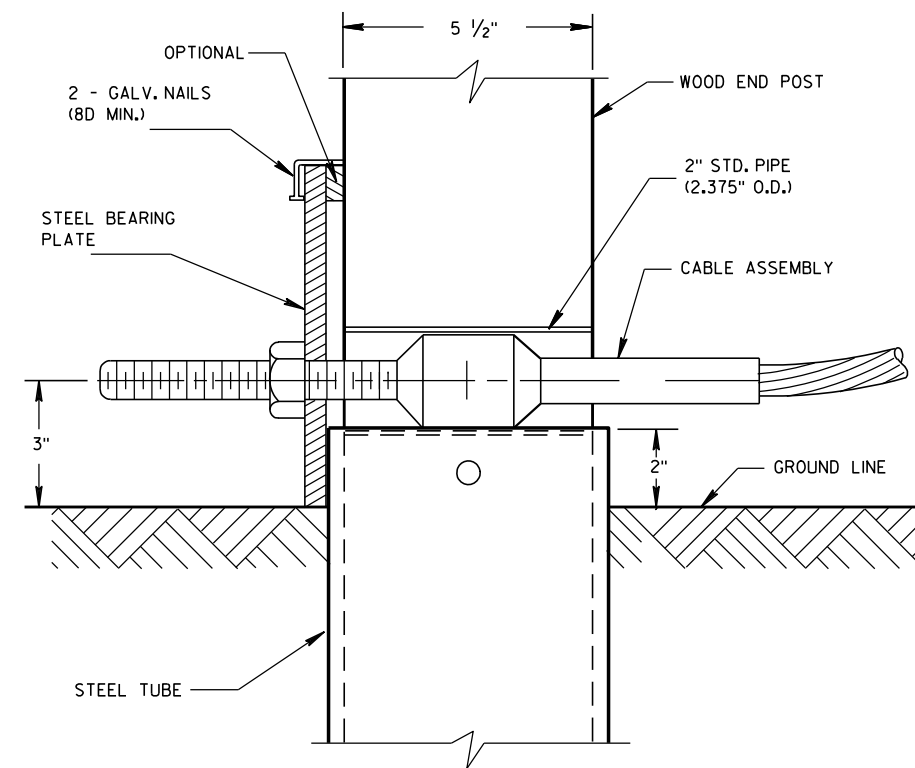
PLAN VIEW



FRONT VIEW

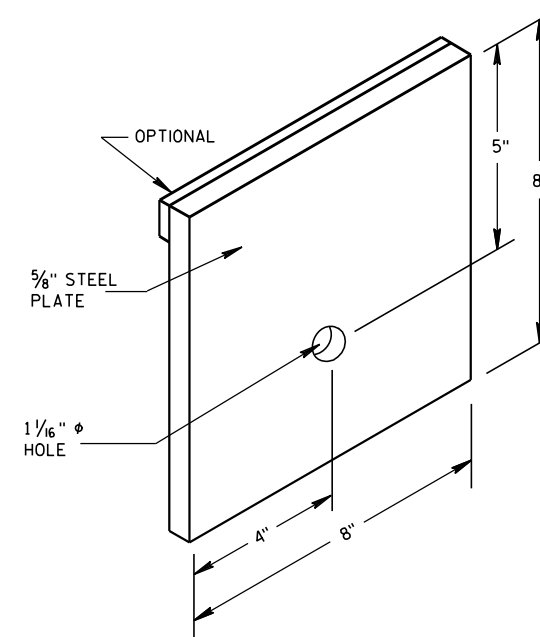
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

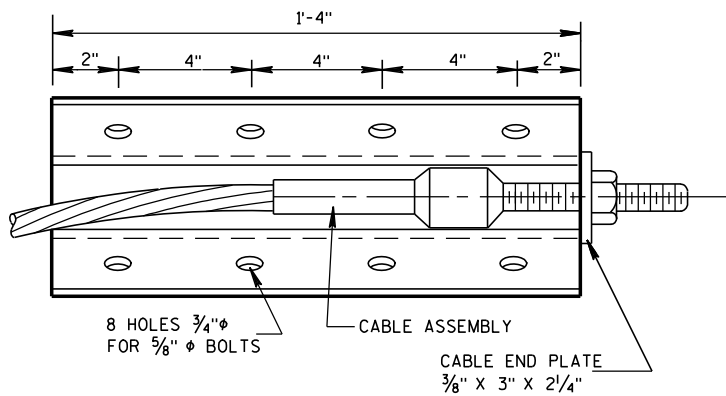
POST NO. 1



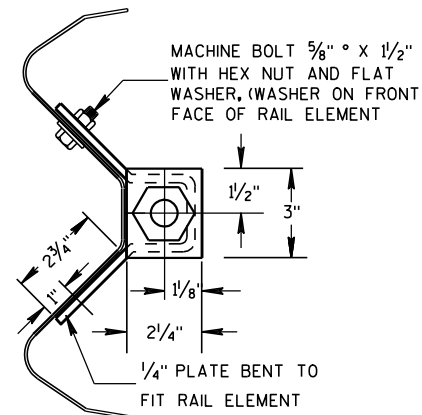
STEEL BEARING PLATE

**ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

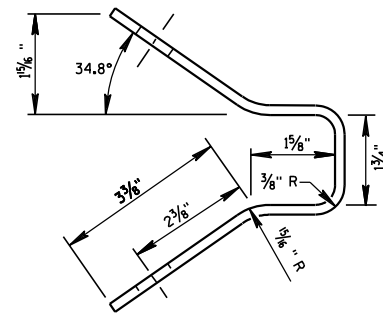


FRONT VIEW

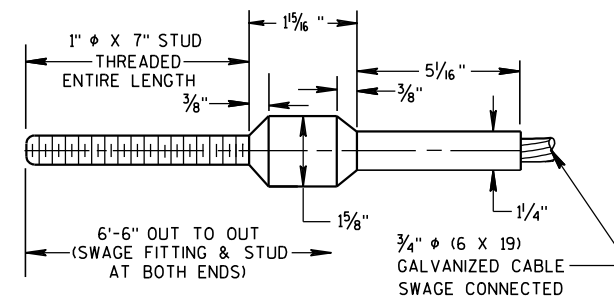


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP A MINIMUM BREAKING STRENGTH OF 40,000 LB (TIGHTEN UNTIL TAUT)

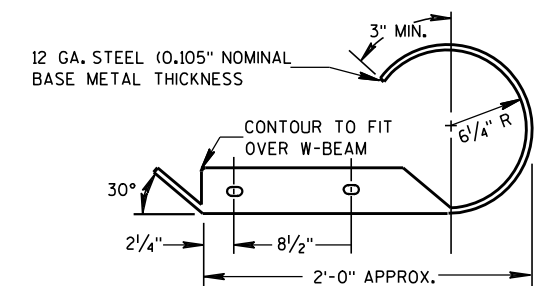
GENERAL NOTES

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

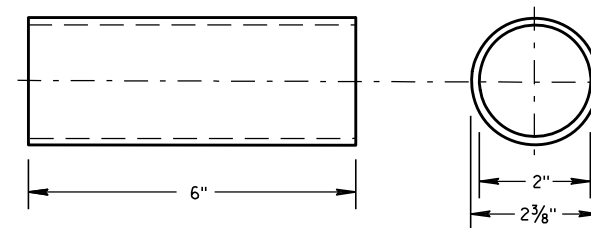
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE, WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.

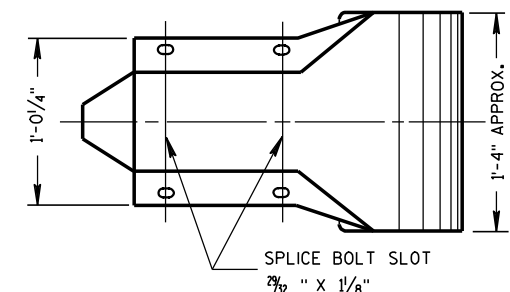


PLAN VIEW

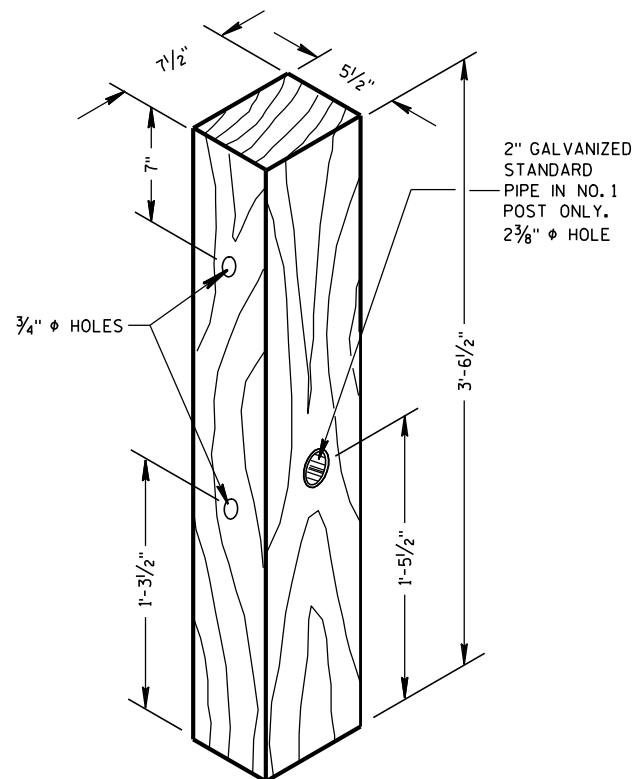


BREAKAWAY TERMINAL POST SLEEVE

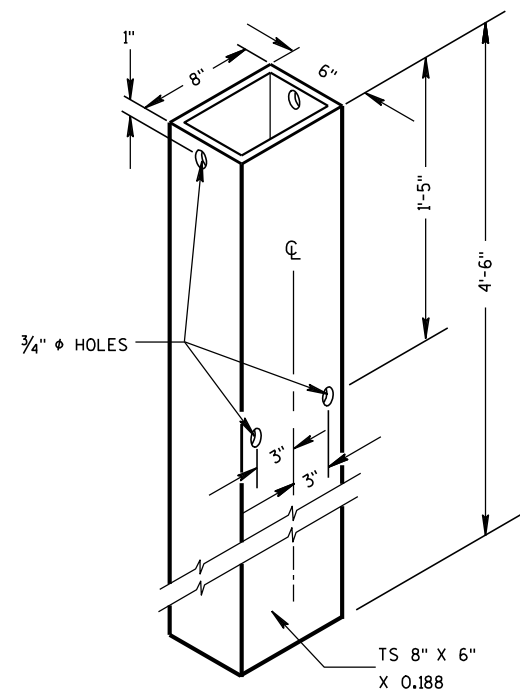
GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED

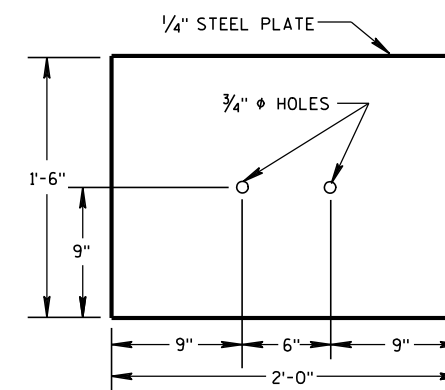


WOOD BREAKAWAY POST



STEEL TUBE

STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A500



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

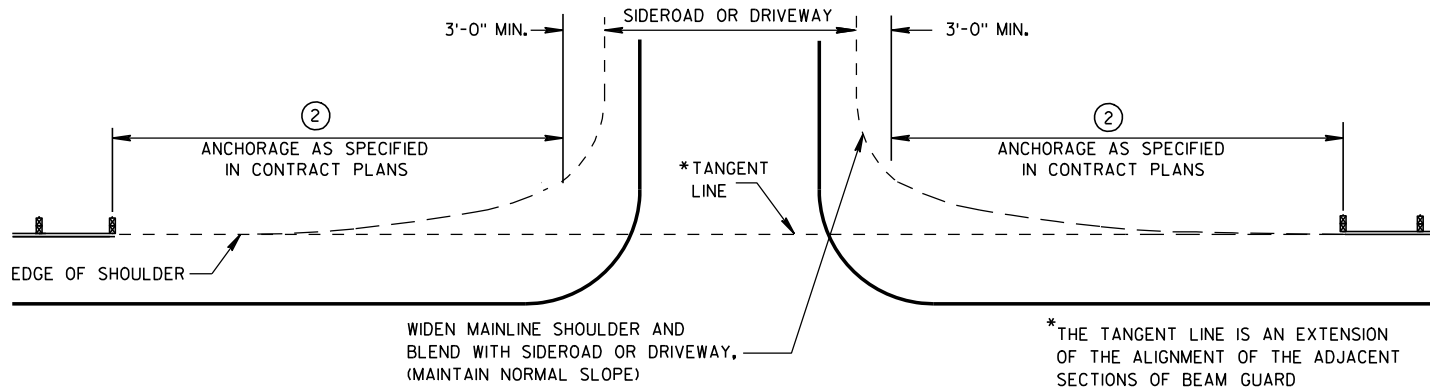
APPROVED

8/21/2007

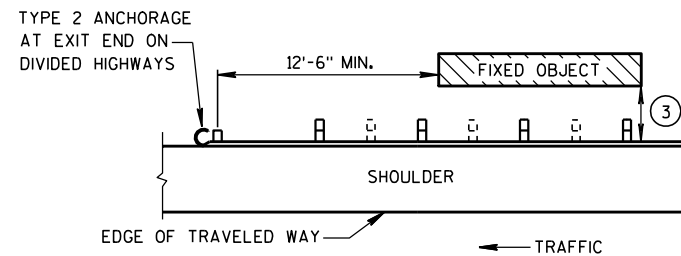
DATE

FHWA

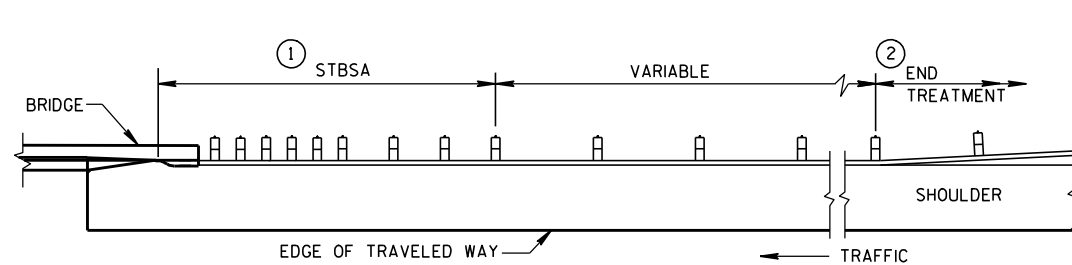
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



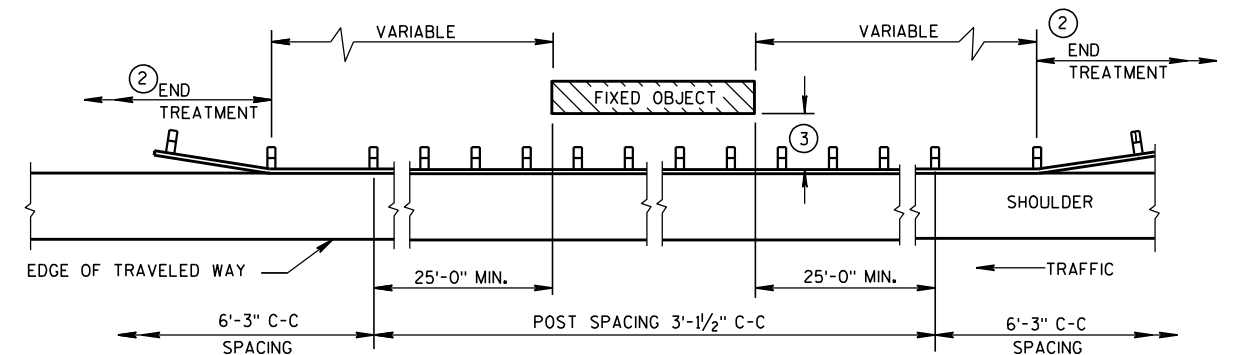
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC



BEAM GUARD AT FULL WIDTH BRIDGES

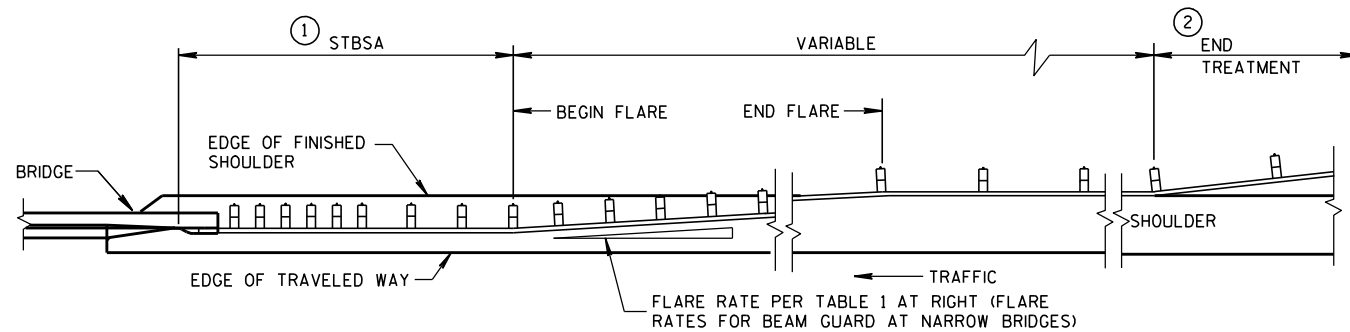


BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

TABLE 1
FLARE RATES FOR BEAM
GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1



BEAM GUARD AT NARROW BRIDGES (FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

- STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1 1/2"
4'-6"	6' - 3"

STEEL PLATE BEAM GUARD
CLASS "A"
AT BRIDGES, OBSTACLES
AND SIDEROADS/DRIVEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-21-07 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

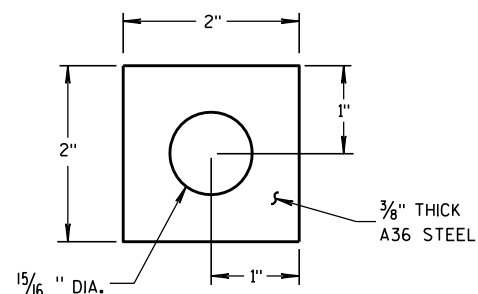
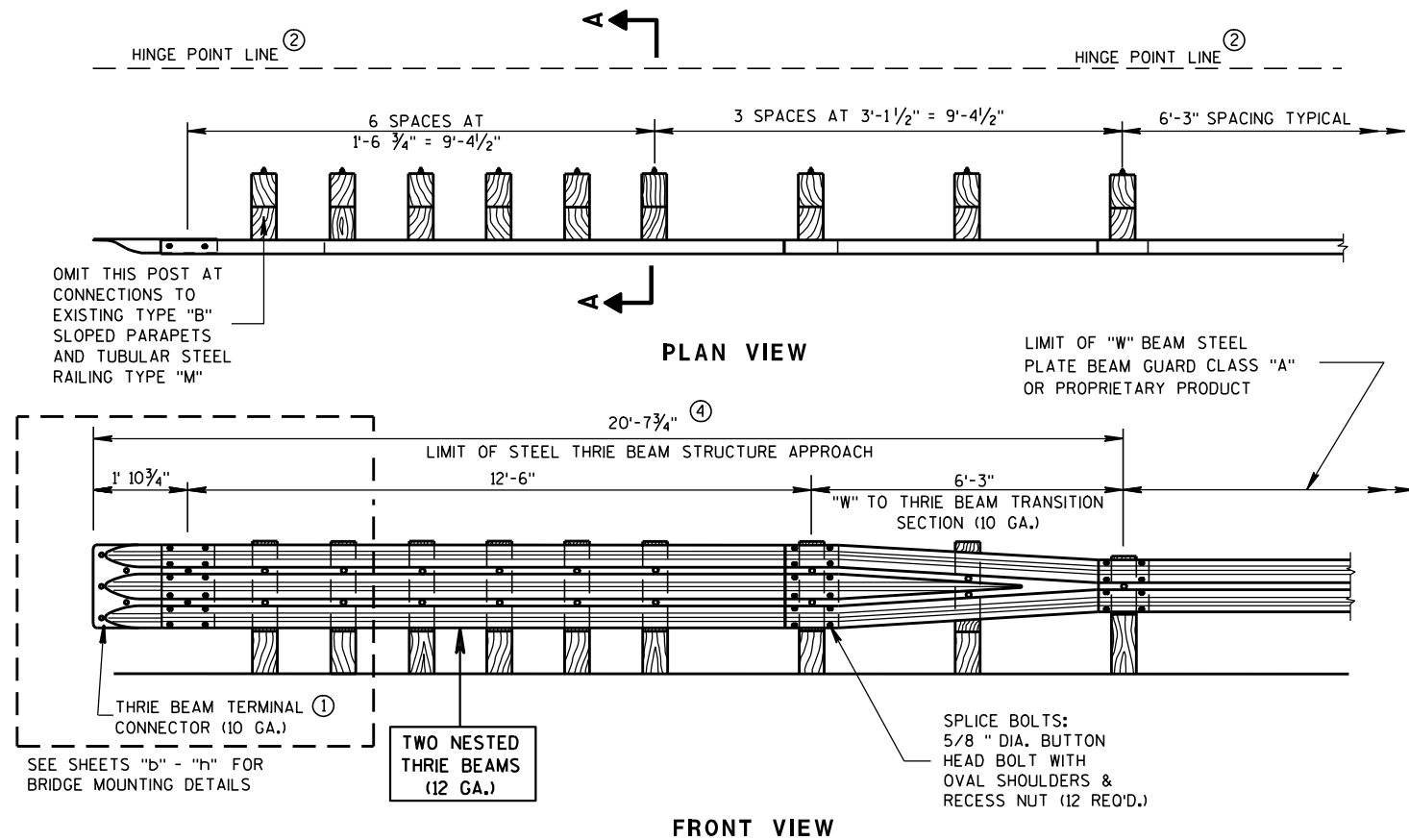


PLATE WASHER DETAIL

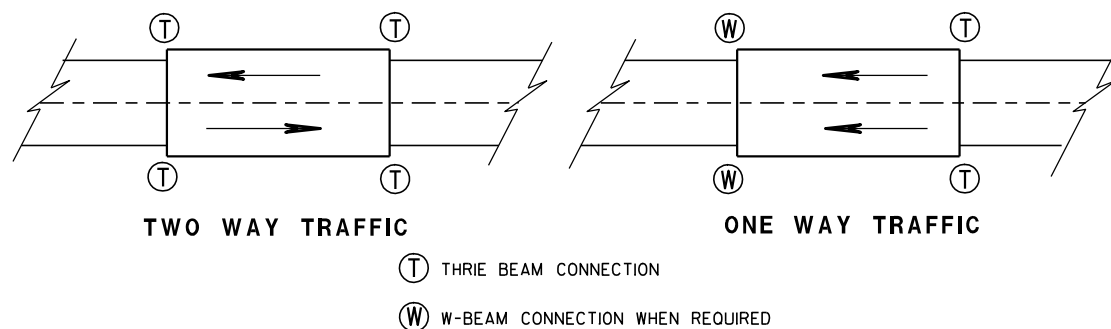
GENERAL NOTES

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".

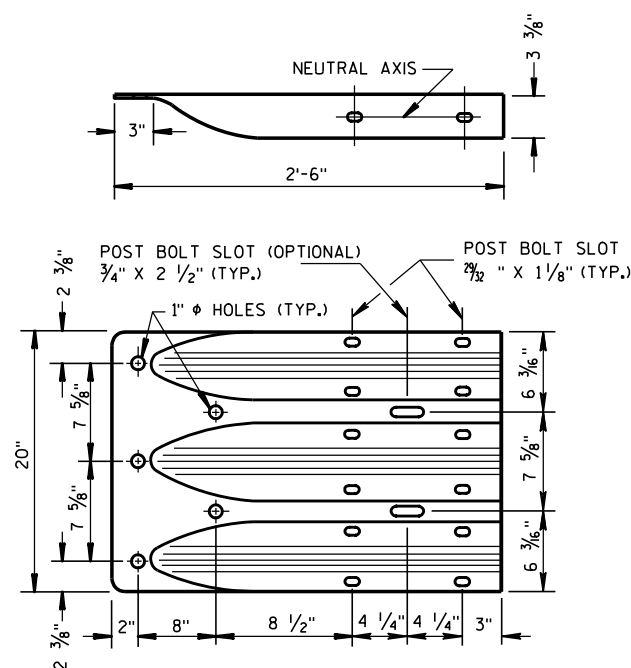
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

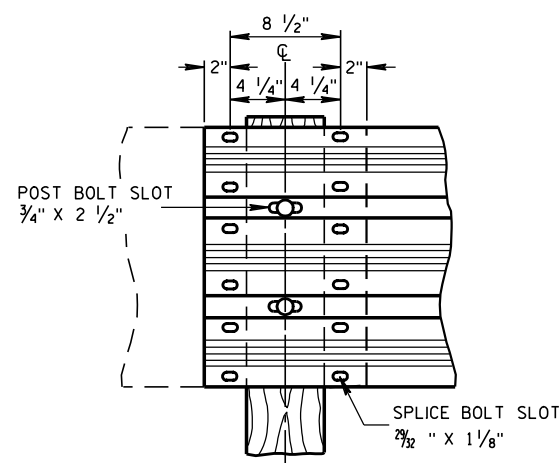
- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.
- ③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



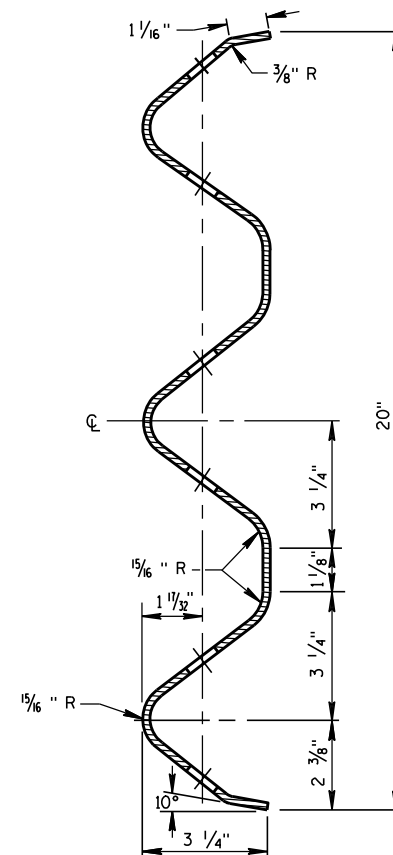
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



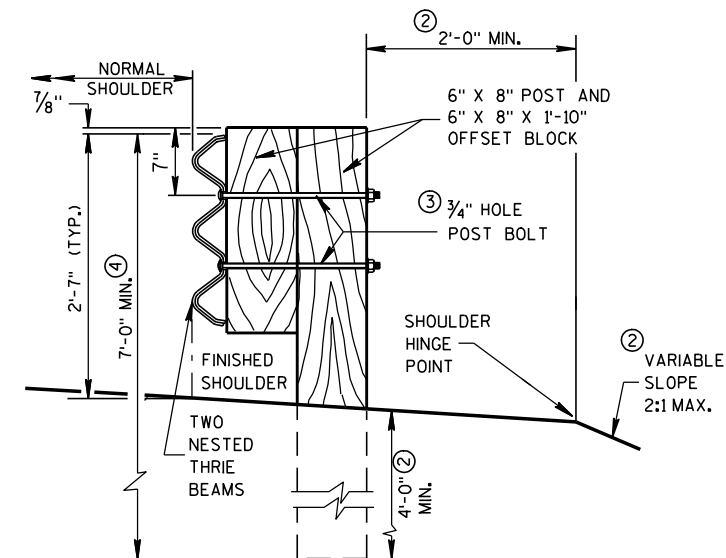
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012

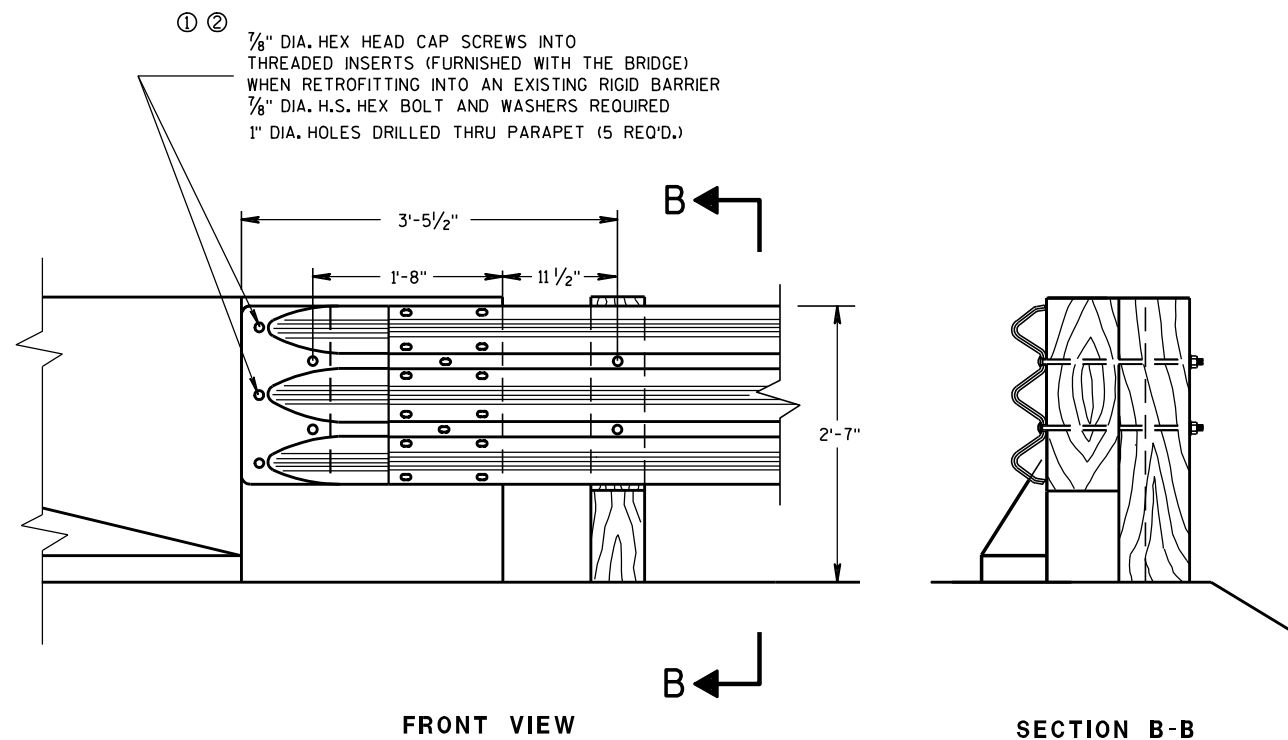
DATE

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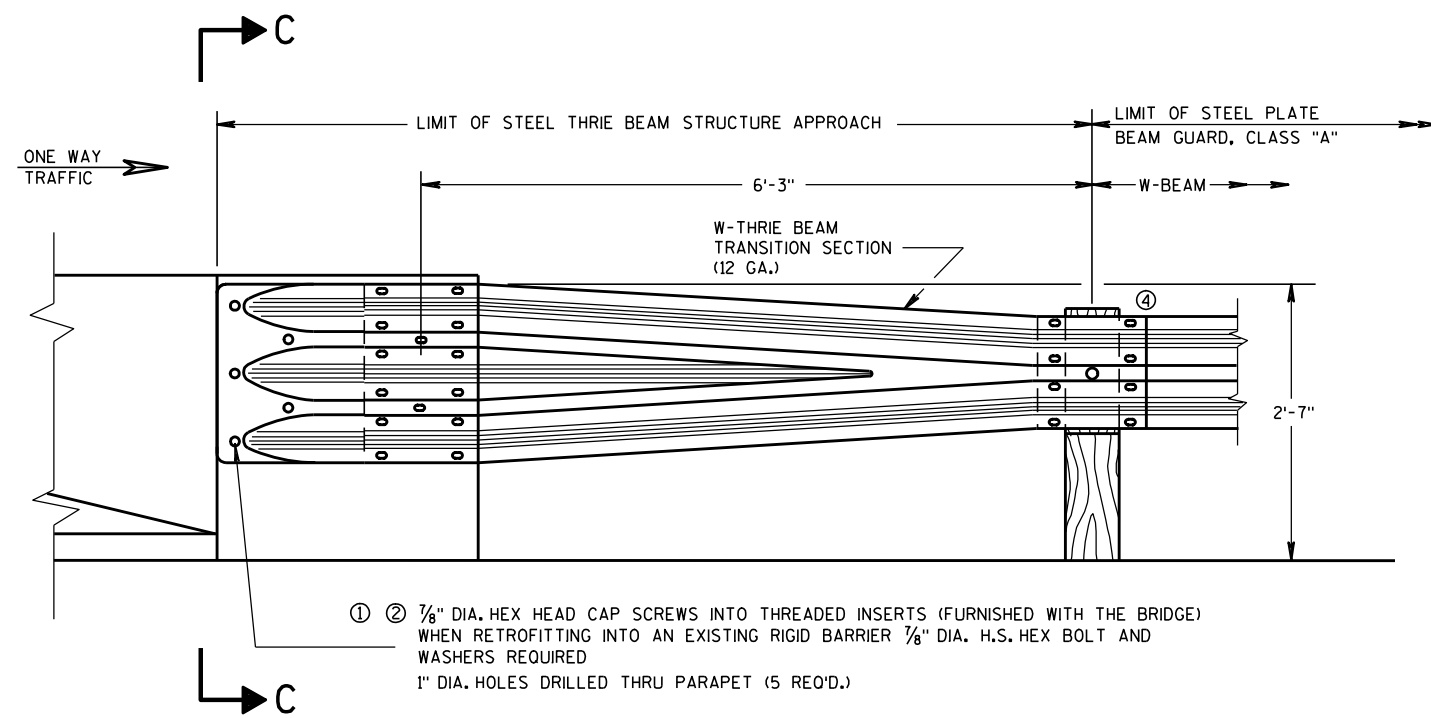
/s/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS



W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

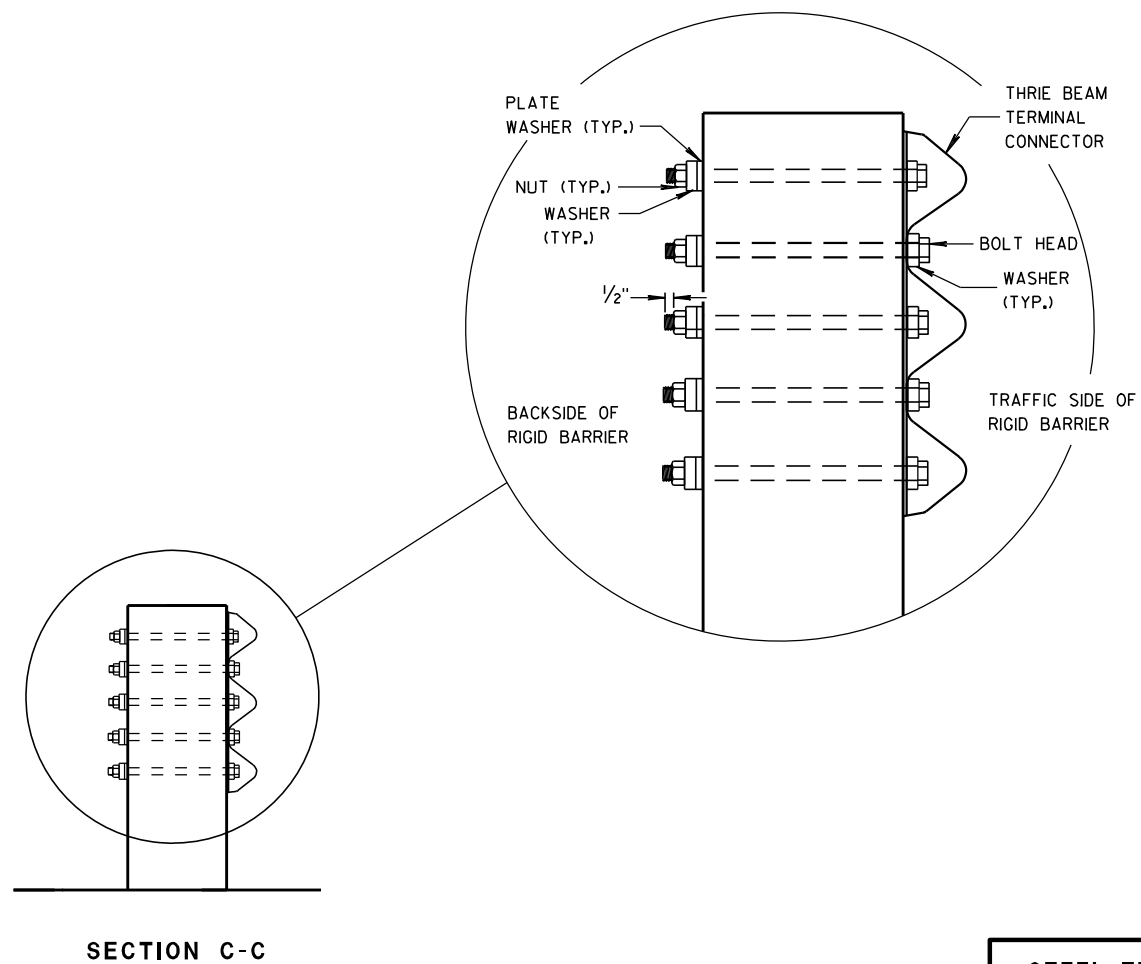
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

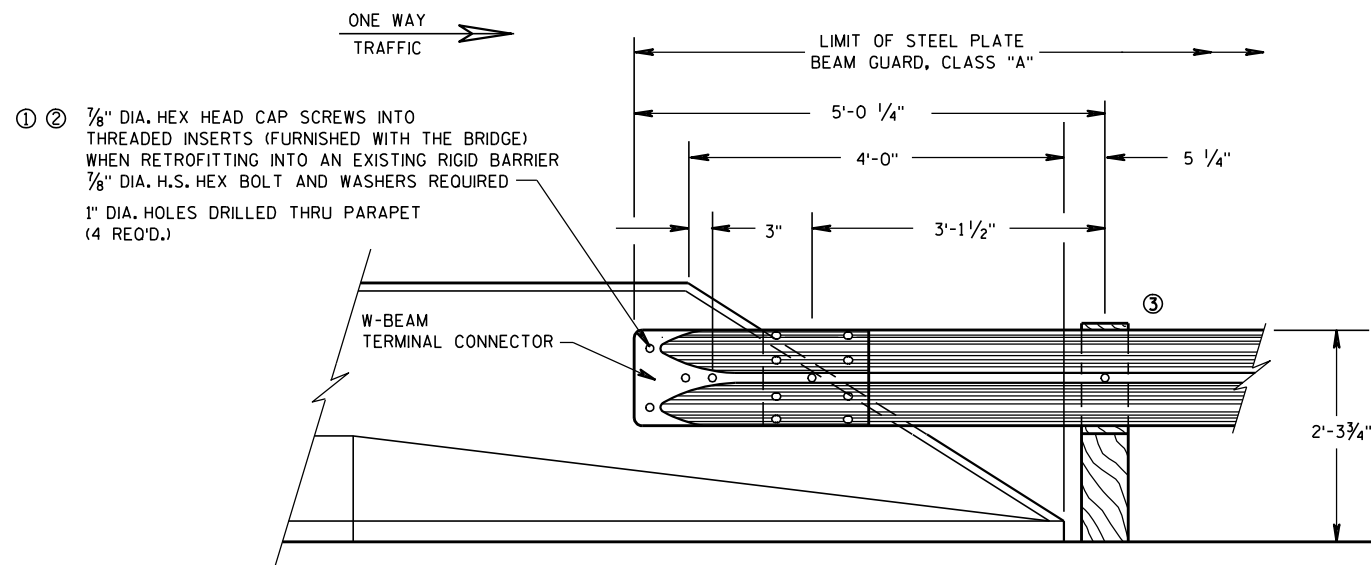
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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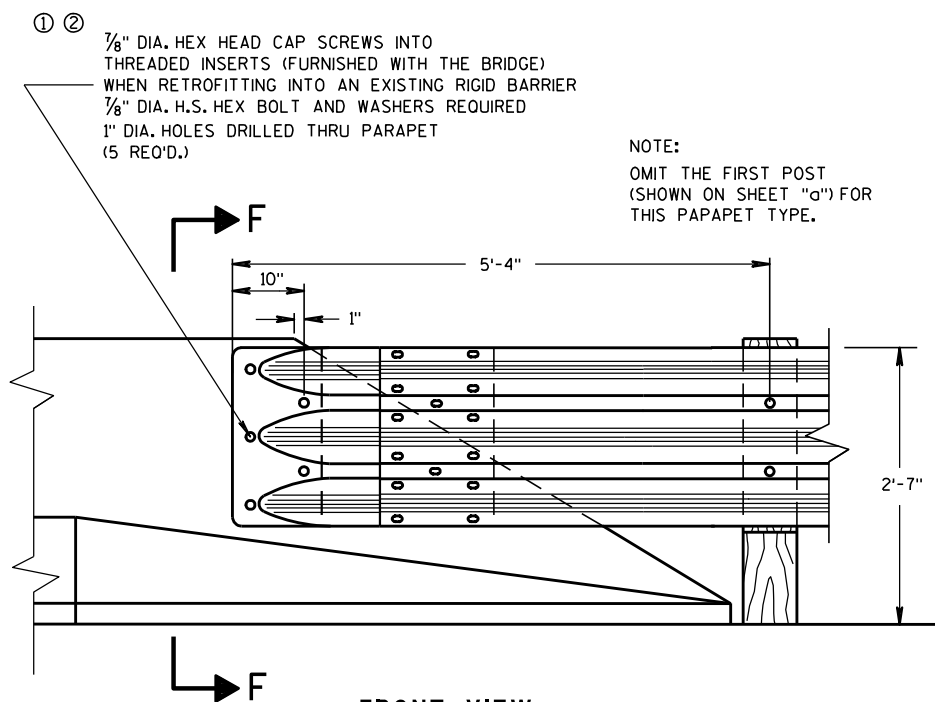
8/31/2012
DATE

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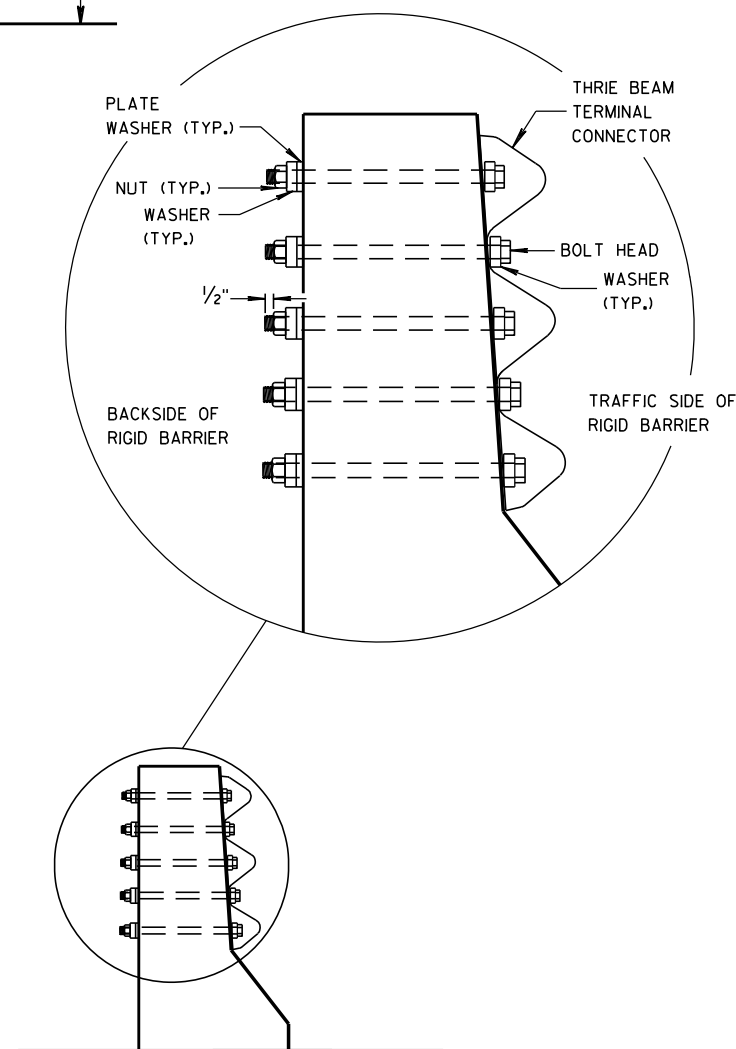
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



FRONT VIEW
W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS
 (USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)



THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS



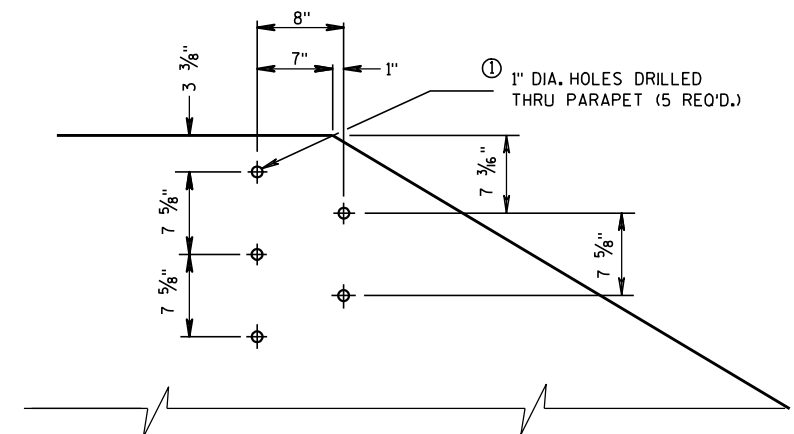
SECTION F-F

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

STEEL THRIE BEAM STRUCTURE
APPROACH CONNECTION TO
SLOPED END PARAPETS

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

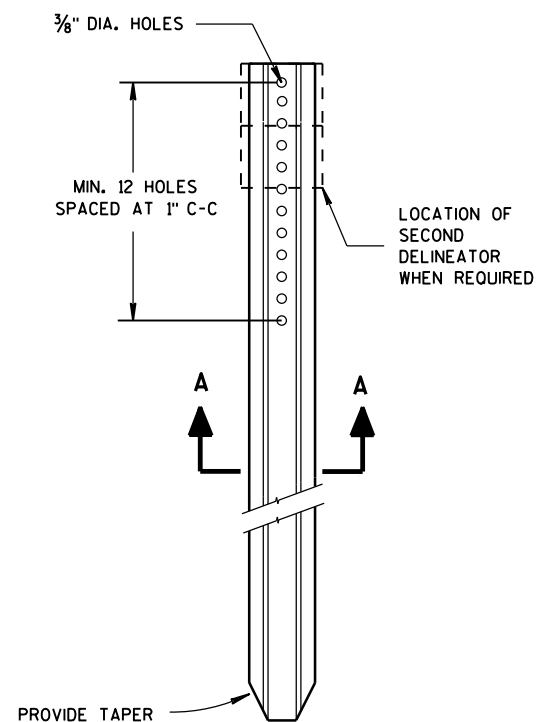
APPROVED

8/31/2012

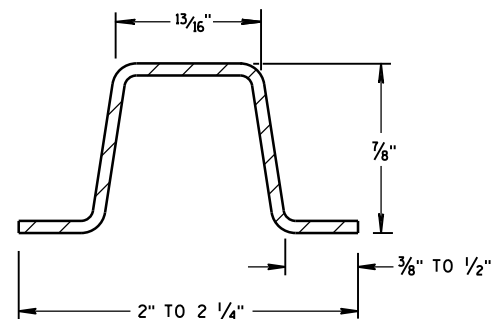
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FHWA

/S/ Jerry H. Zogg
 ROADWAY STANDARDS DEVELOPMENT
 ENGINEER

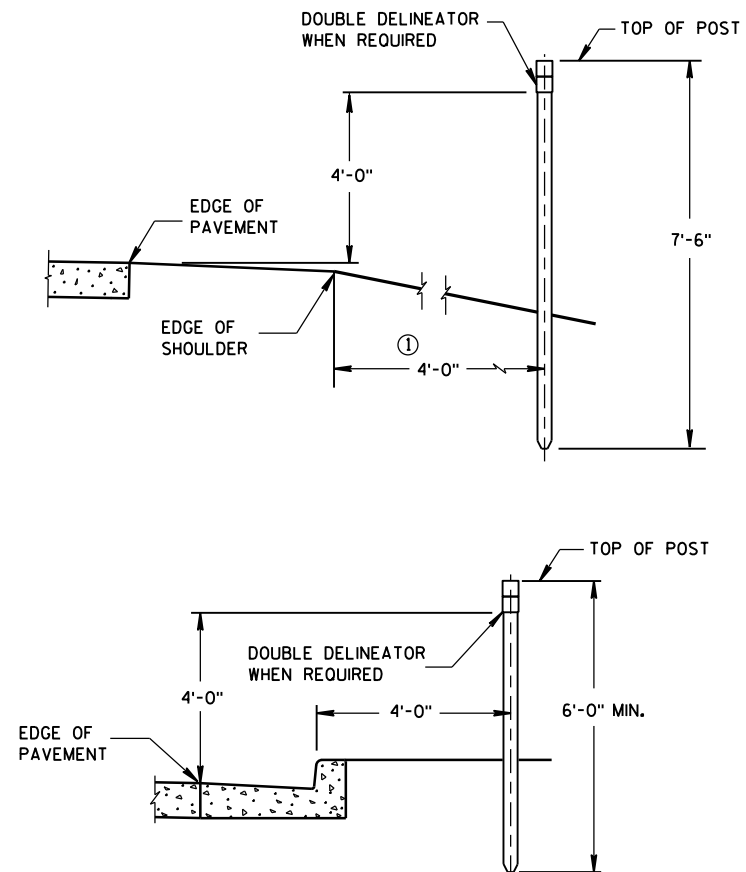


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

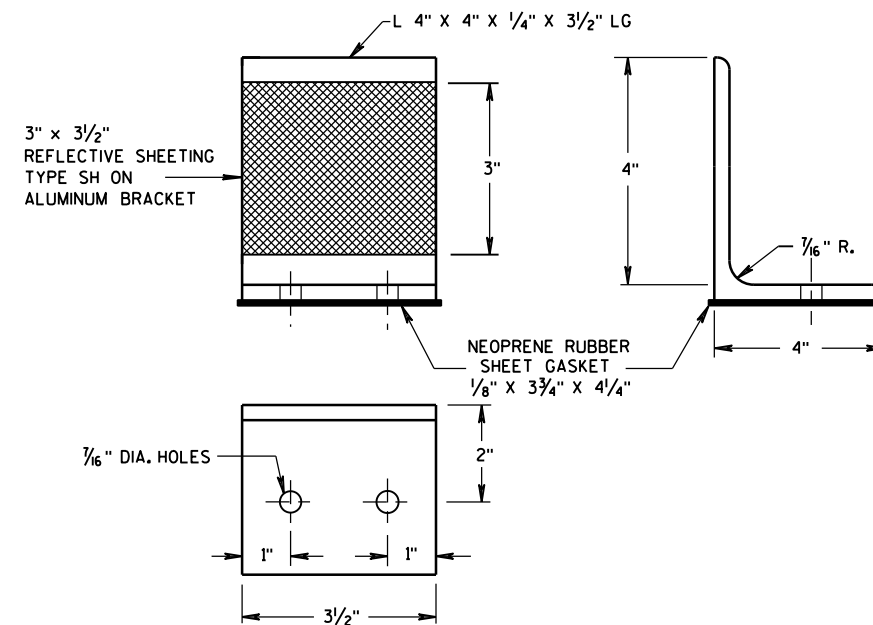


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

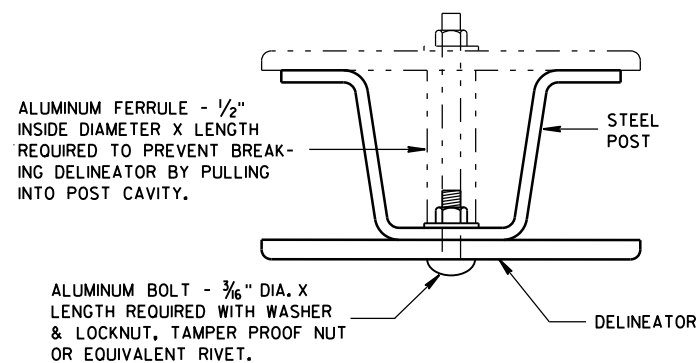
GENERAL NOTES

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

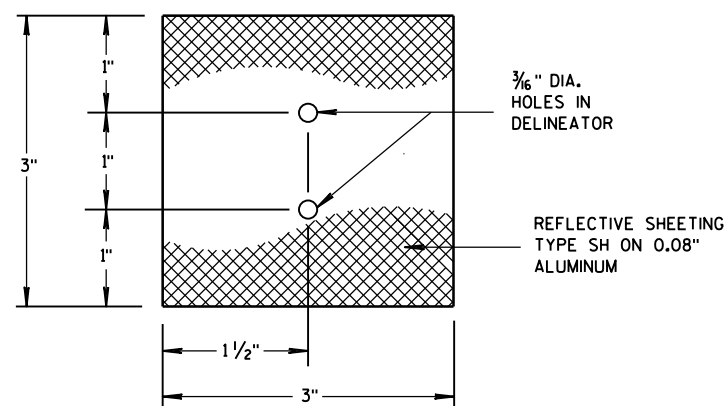
- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



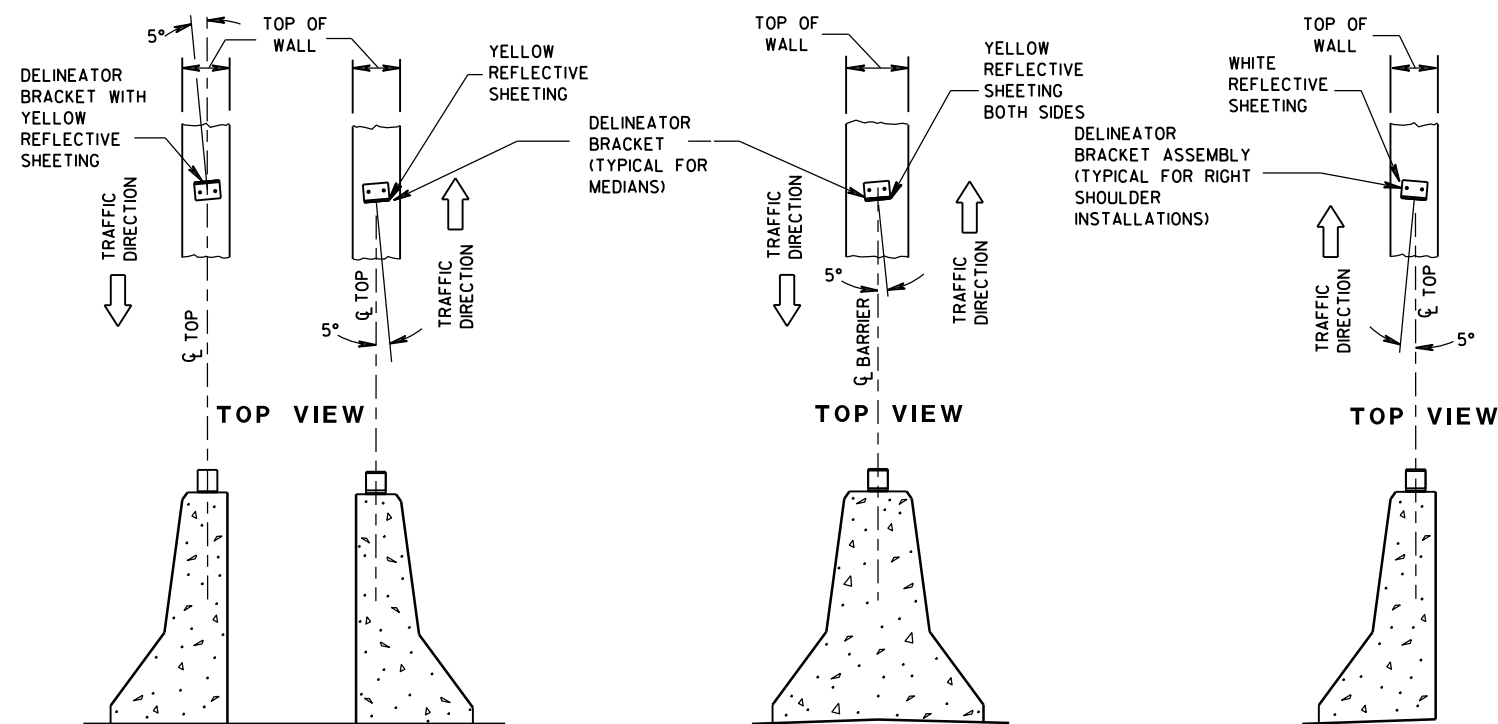
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR



3" x 3" DELINEATOR

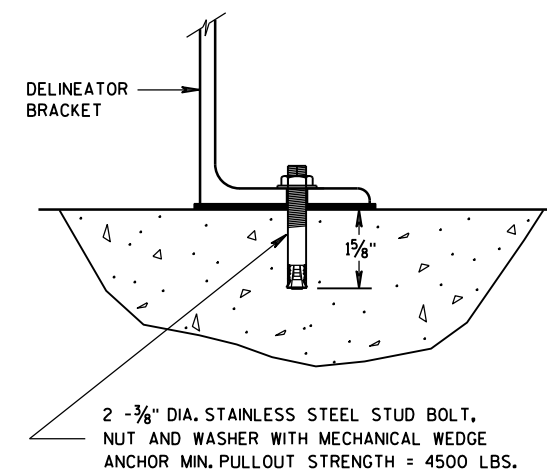


DOUBLE BARRIERS IN MEDIAN

MEDIAN BARRIER

BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

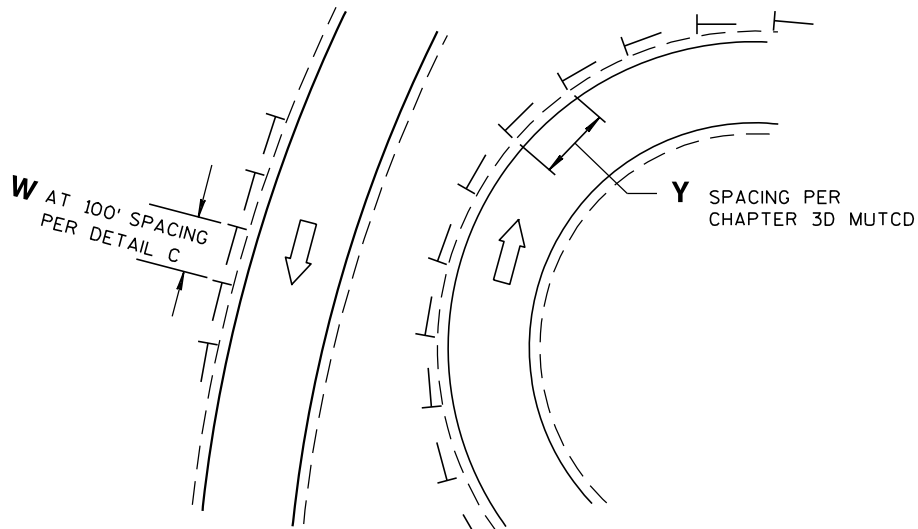
APPROVED

7/2013

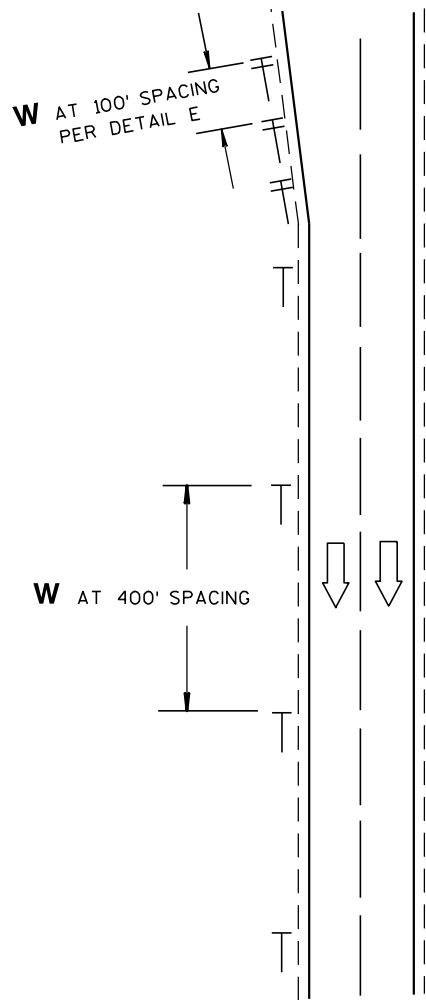
DATE

FHWA

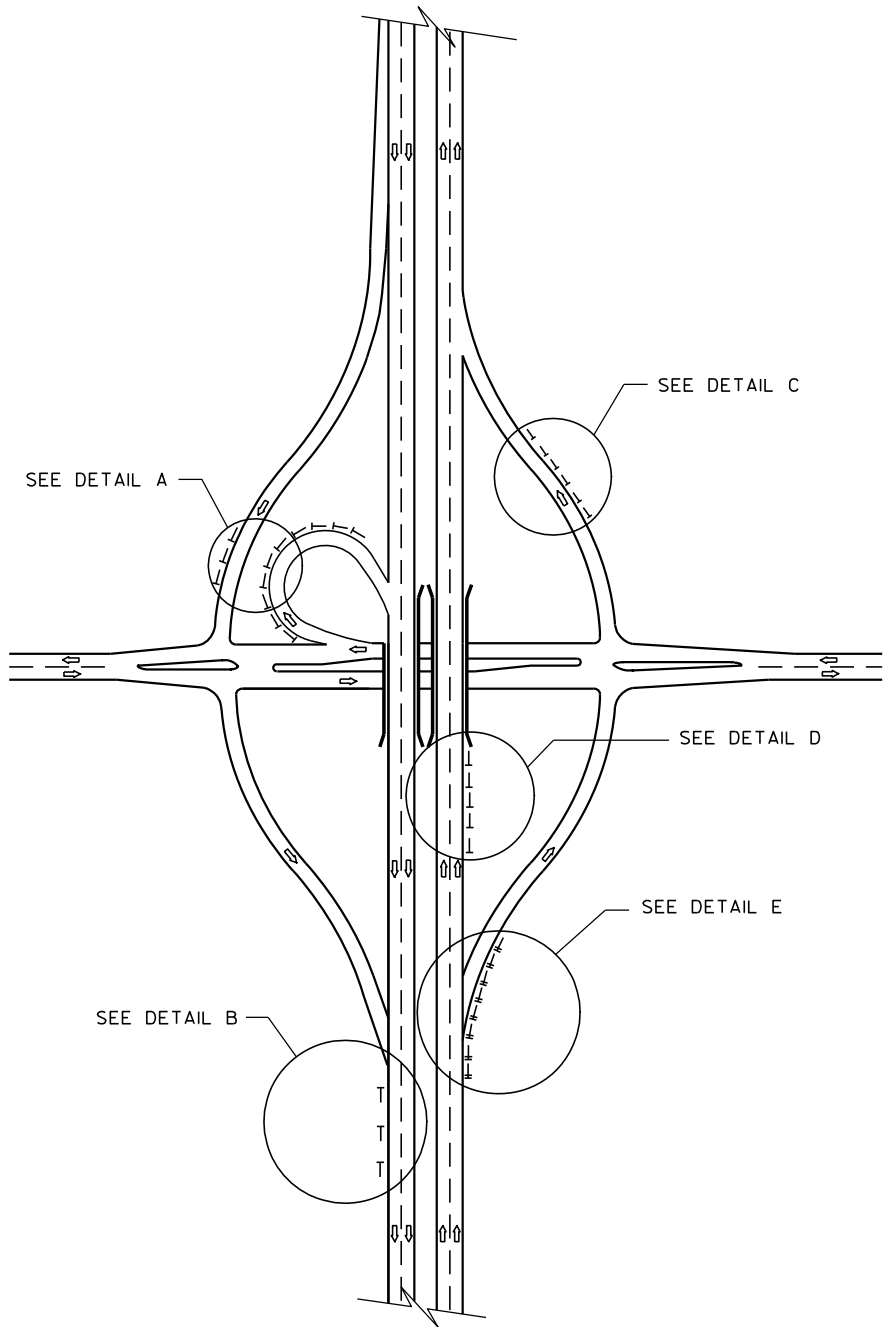
/S/ Travis Feltes
STATE TRAFFIC ENGINEER



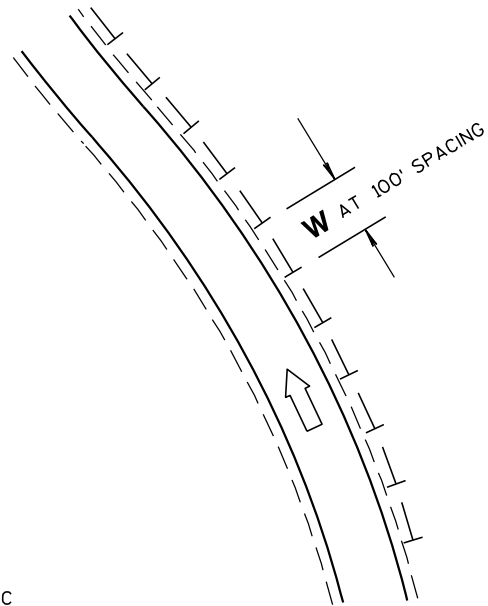
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



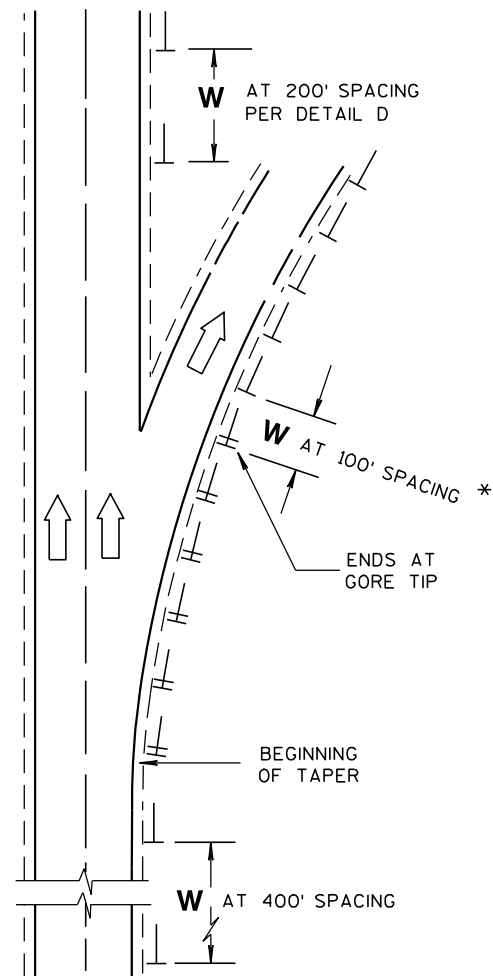
DETAIL B
DELINEATOR LAYOUT
ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL C
DELINEATOR LAYOUT ALONG RAMP



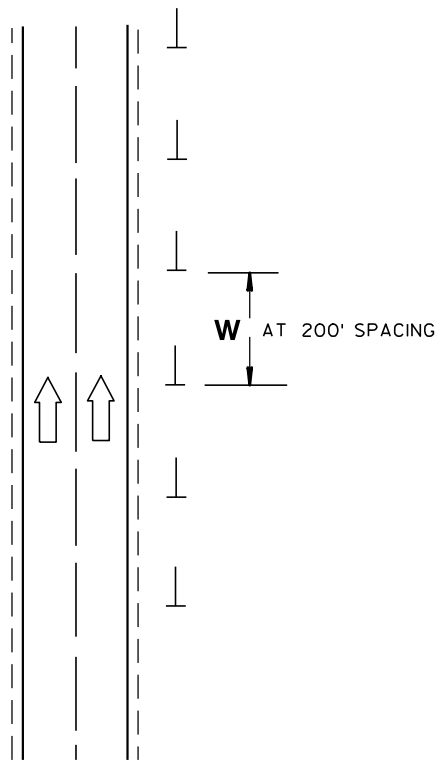
DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION
- DECELERATION LANES AND TAPERS AT RAMPS

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS.
USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.

LEGEND

- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W** WHITE
- Y** YELLOW



DETAIL D
DELINEATOR LAYOUT
BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

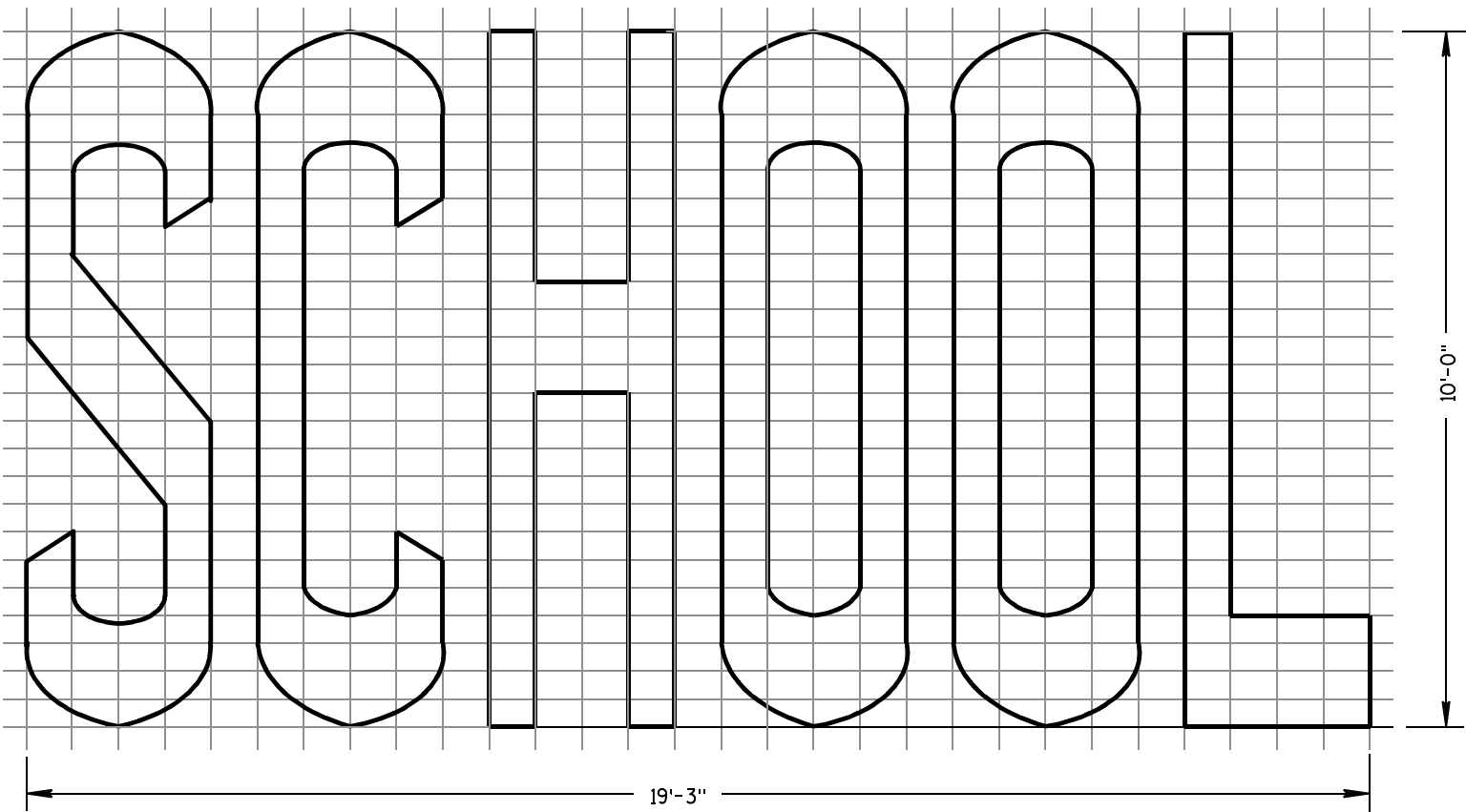
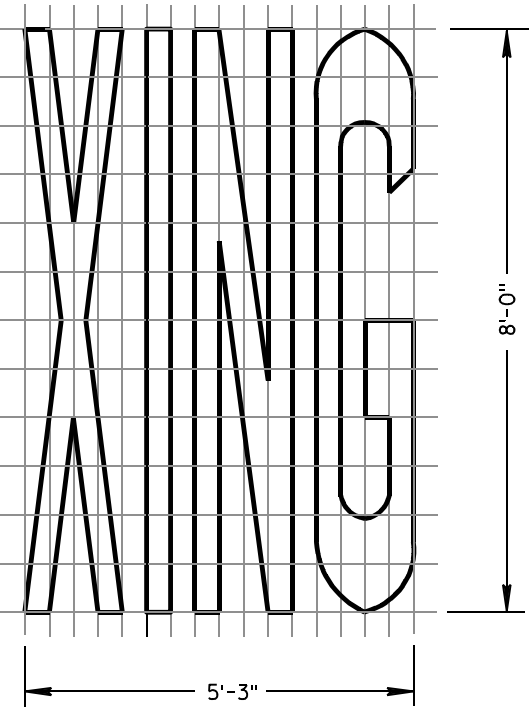
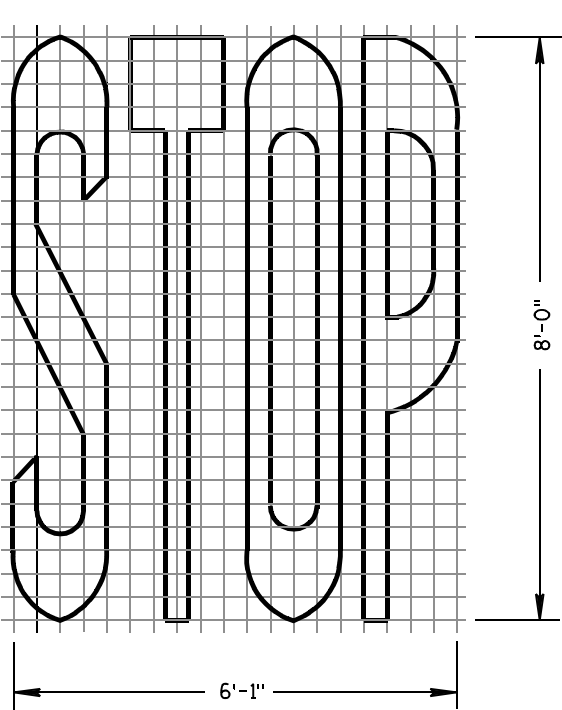
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

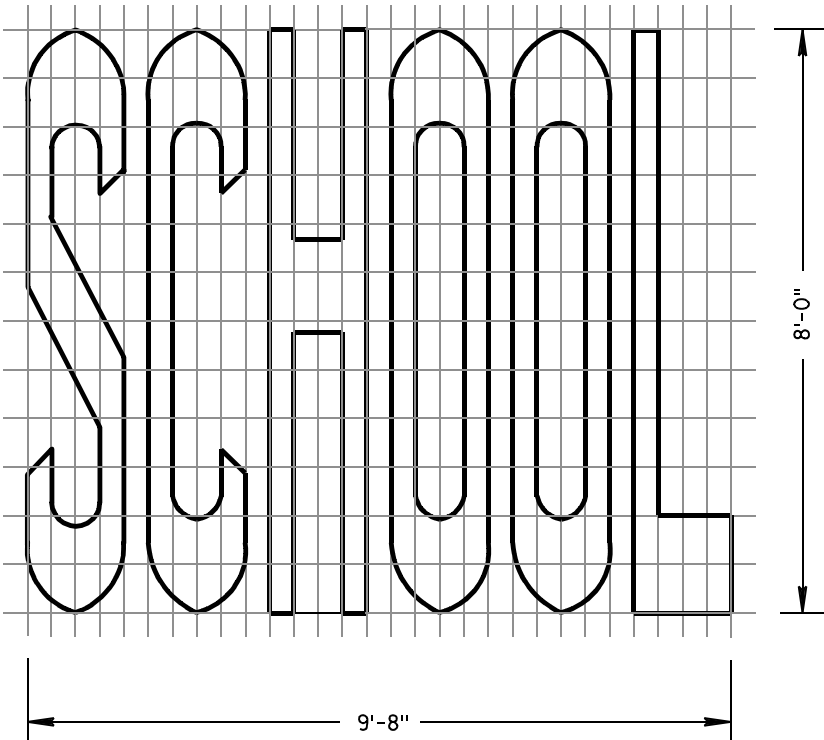
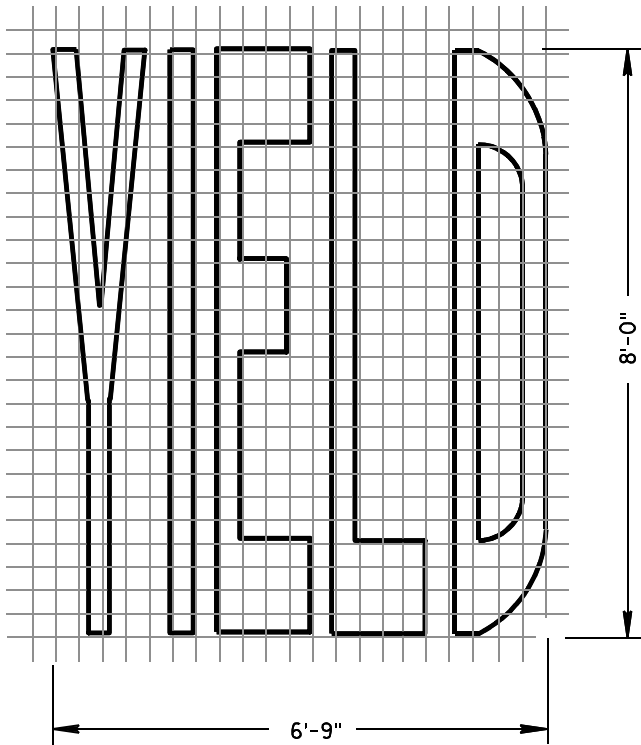
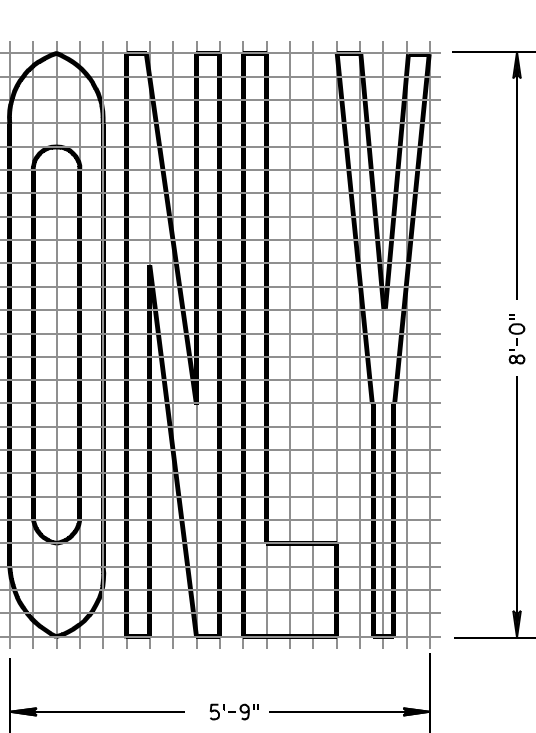
GENERAL NOTES

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

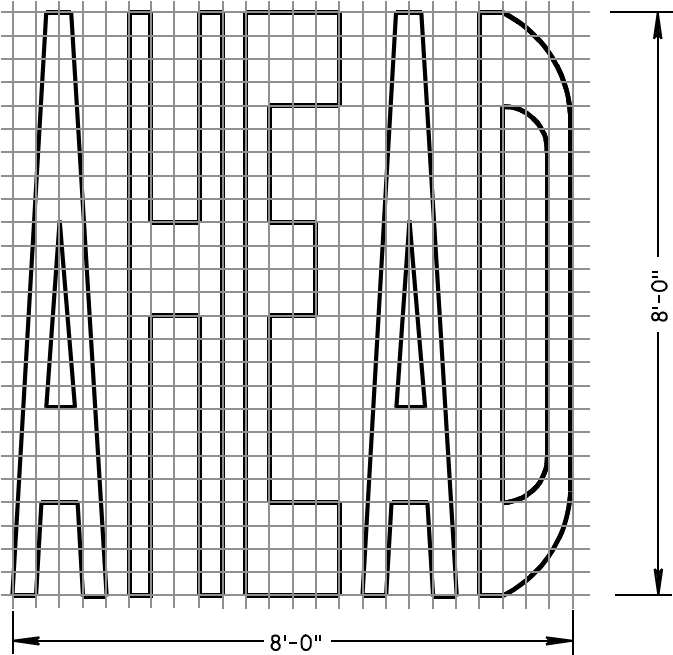
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TWO-LANE



SINGLE-LANE



PAVEMENT MARKING WORDS

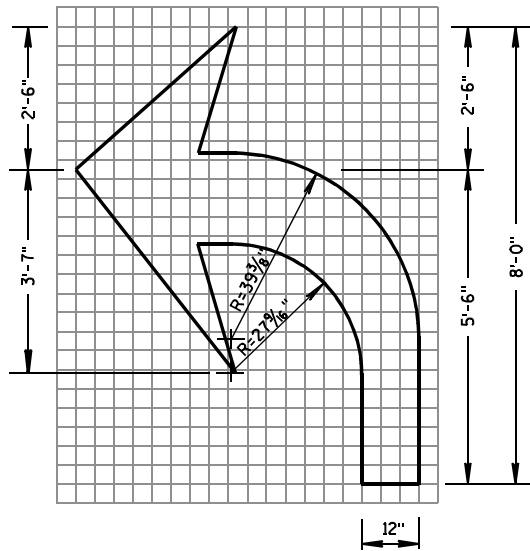
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

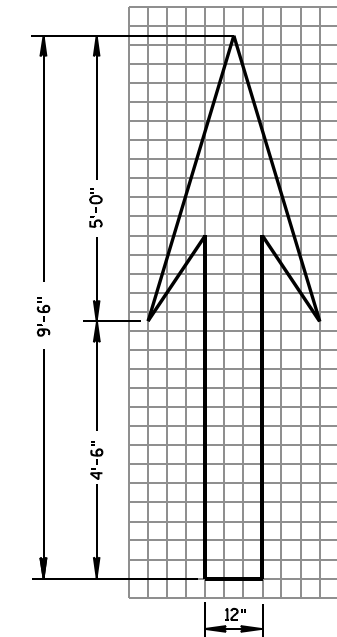
7-1-11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

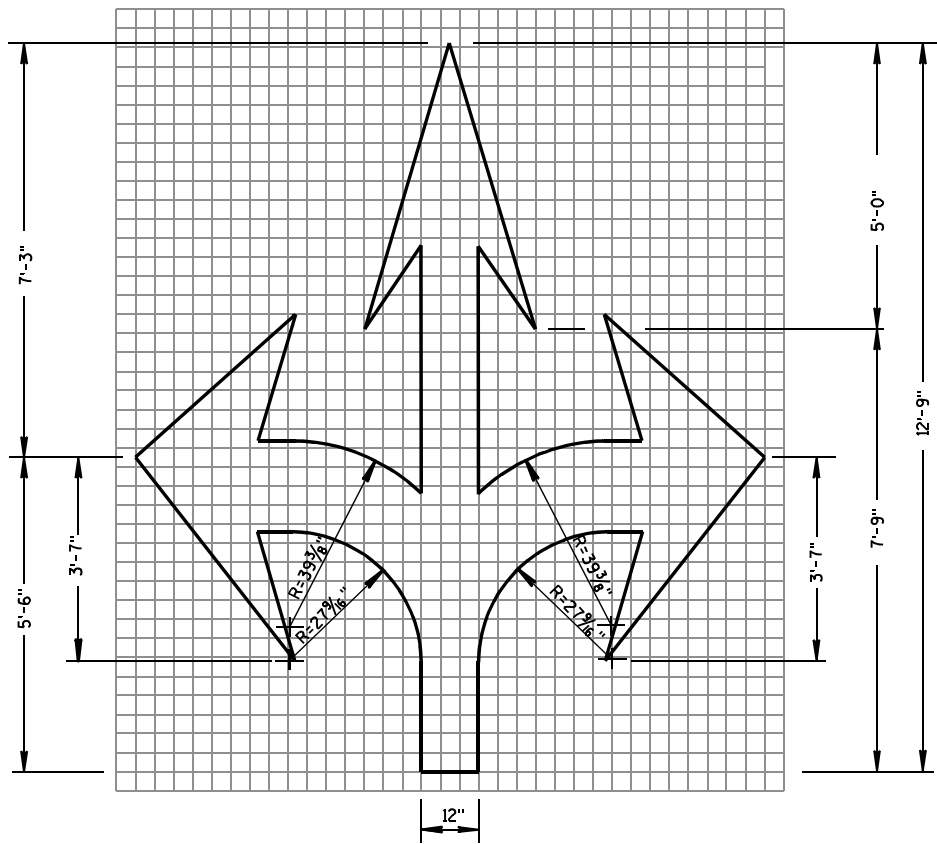
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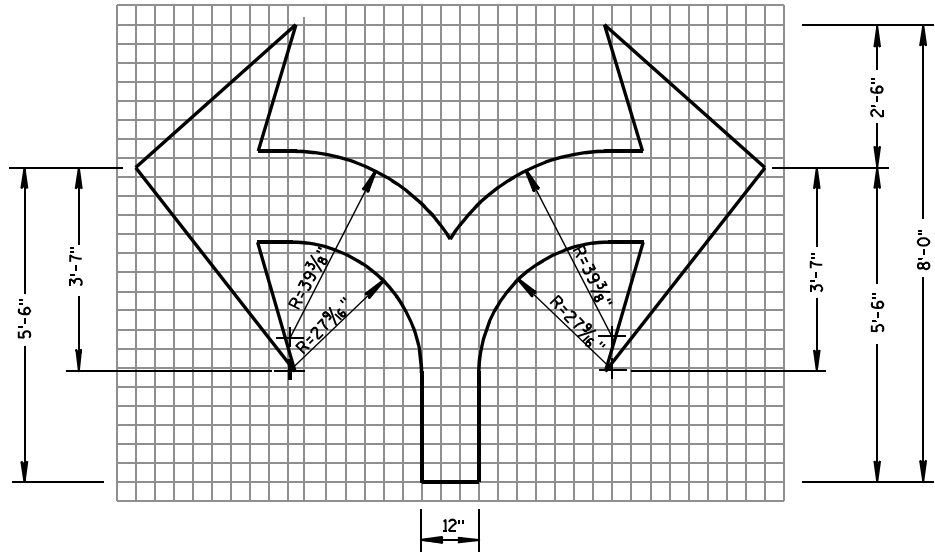
TYPE 2



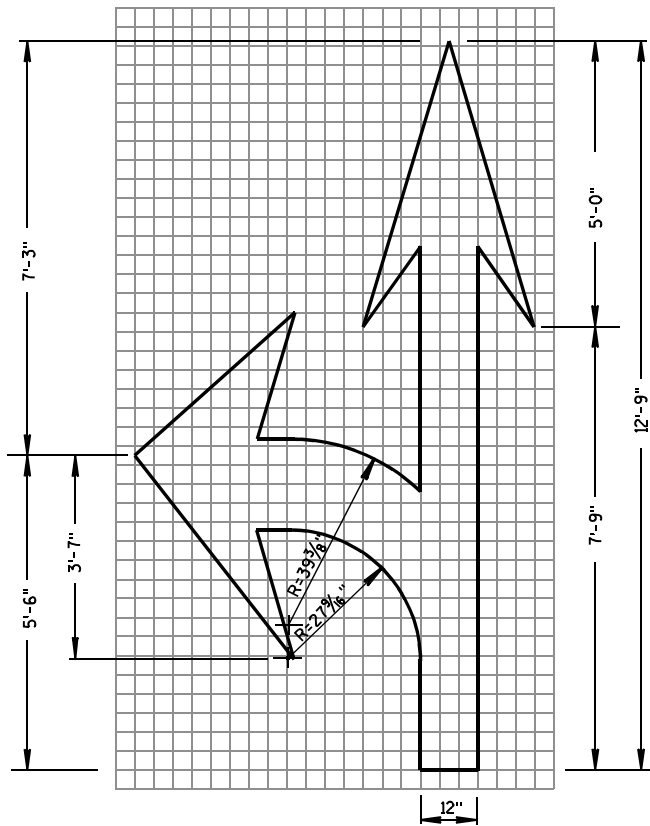
TYPE 1



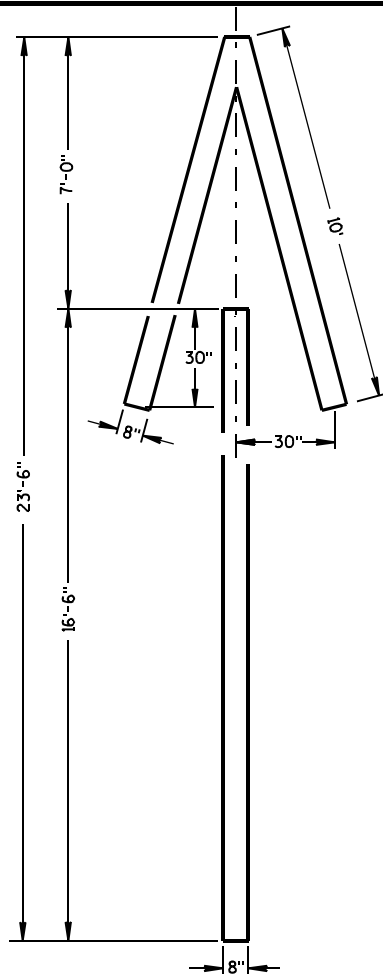
TYPE 6



TYPE 7



TYPE 3

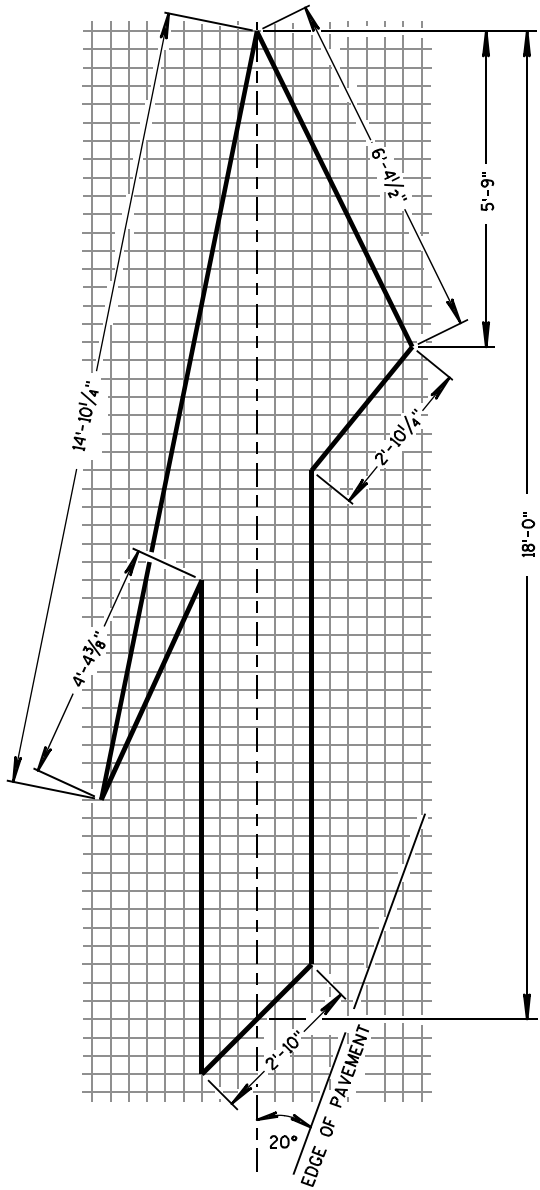


TYPE 4

GENERAL NOTES

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

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



TYPE 5 LANE DROP ARROW

PAVEMENT MARKING ARROWS

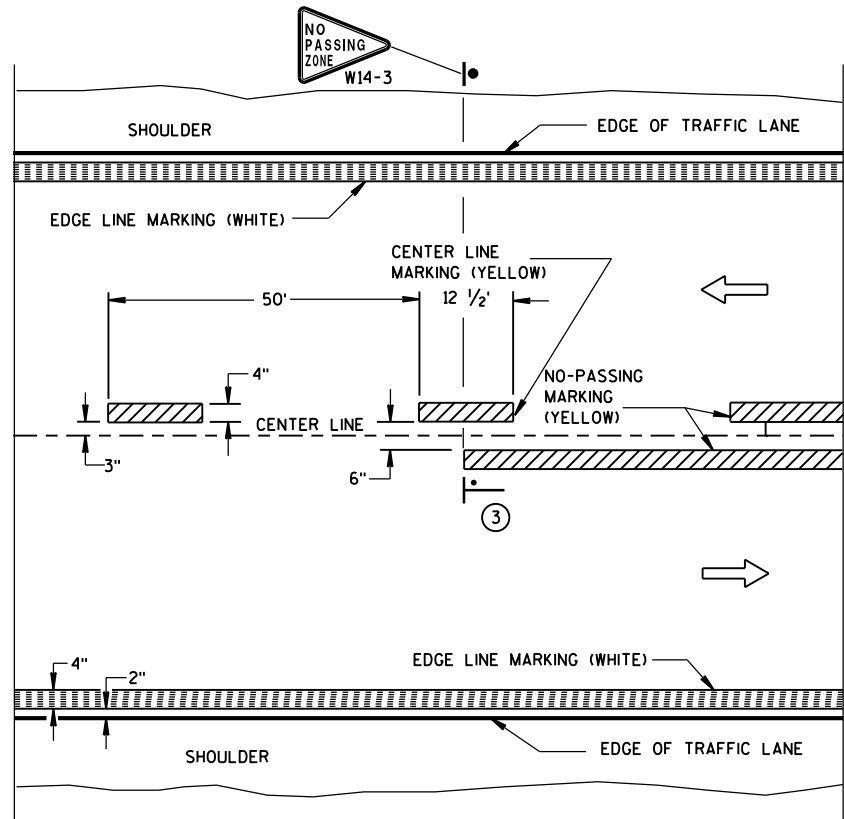
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

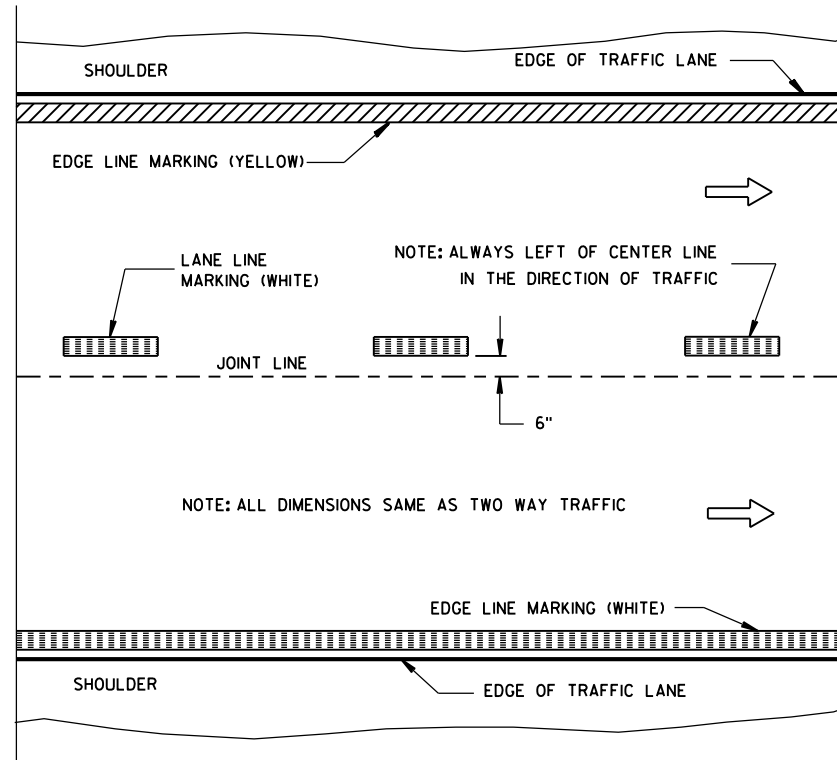
7/1/11
DATE

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

FHWA

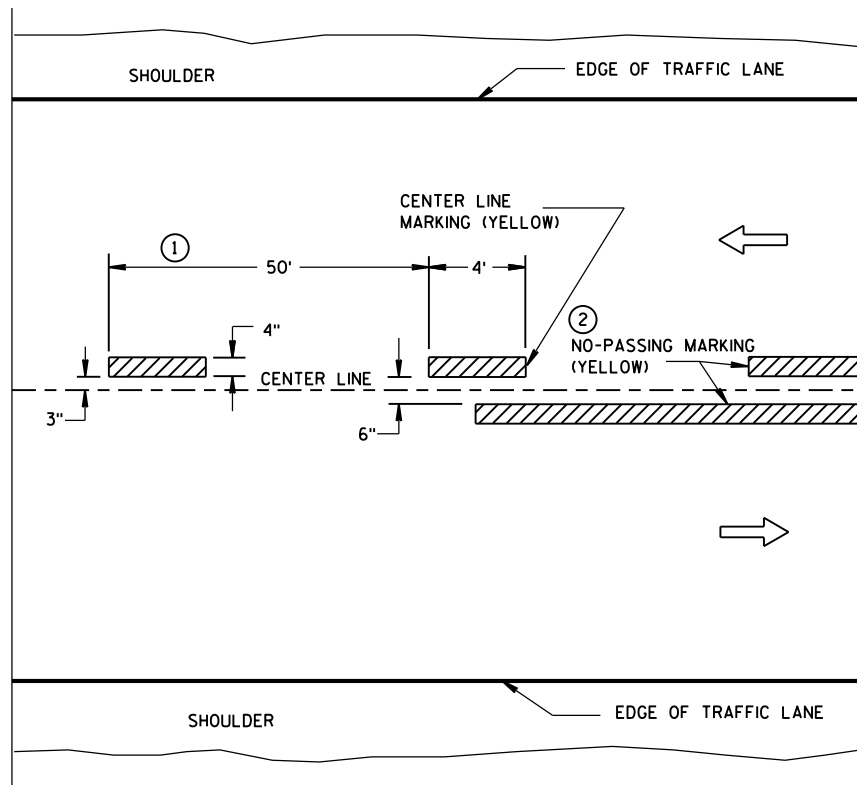


TWO WAY TRAFFIC

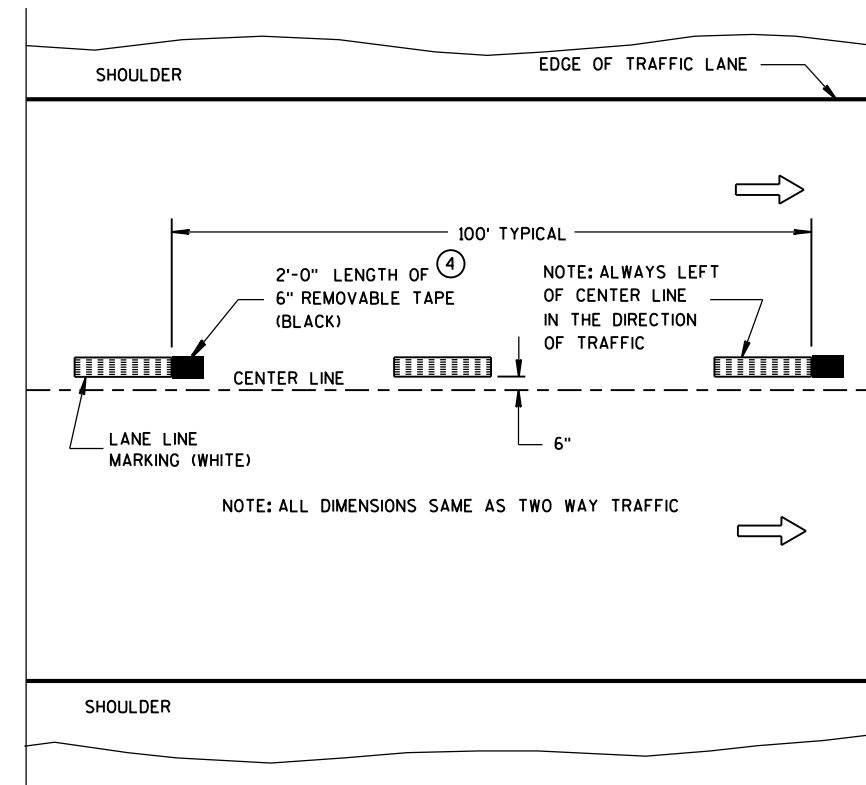


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

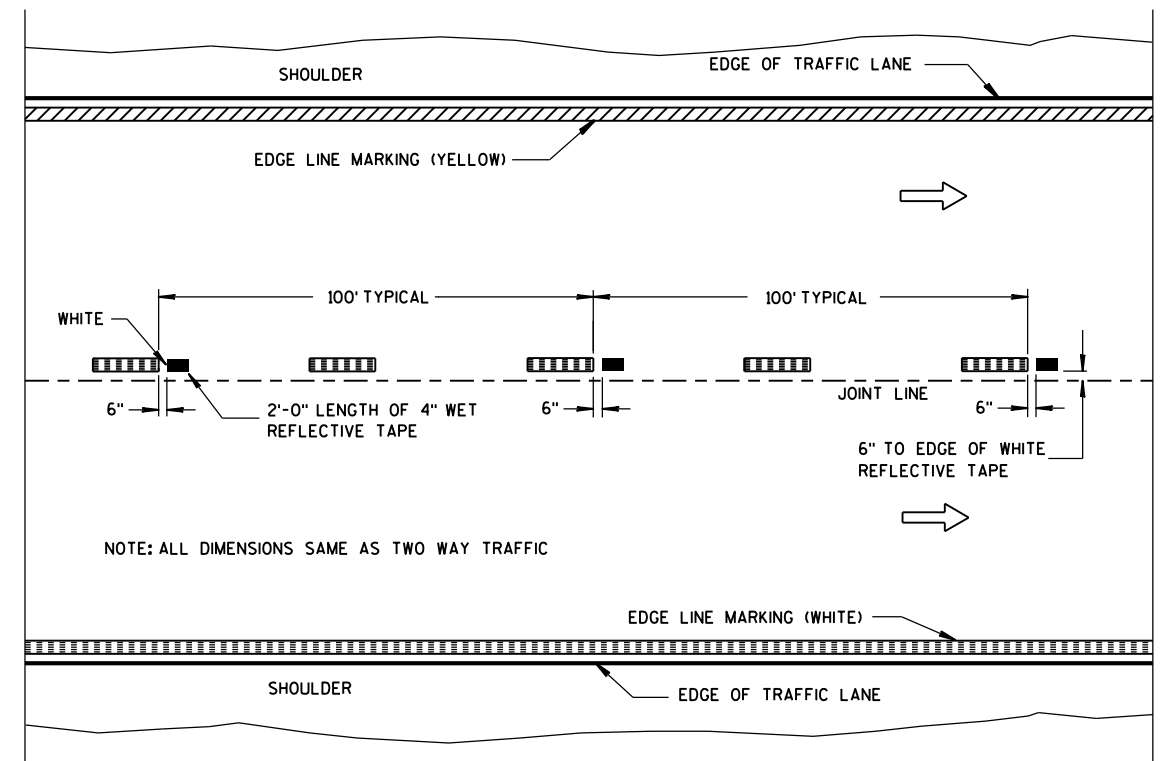
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

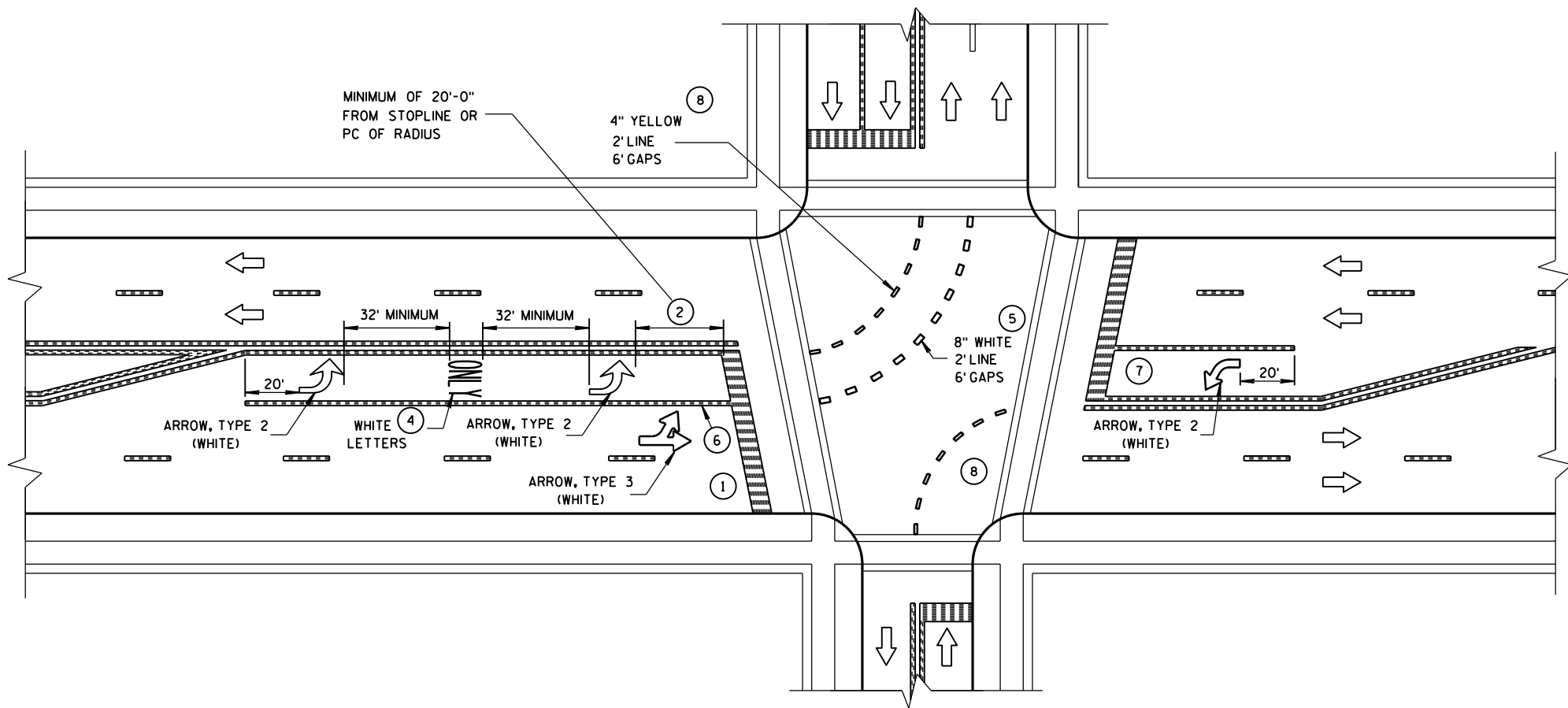
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

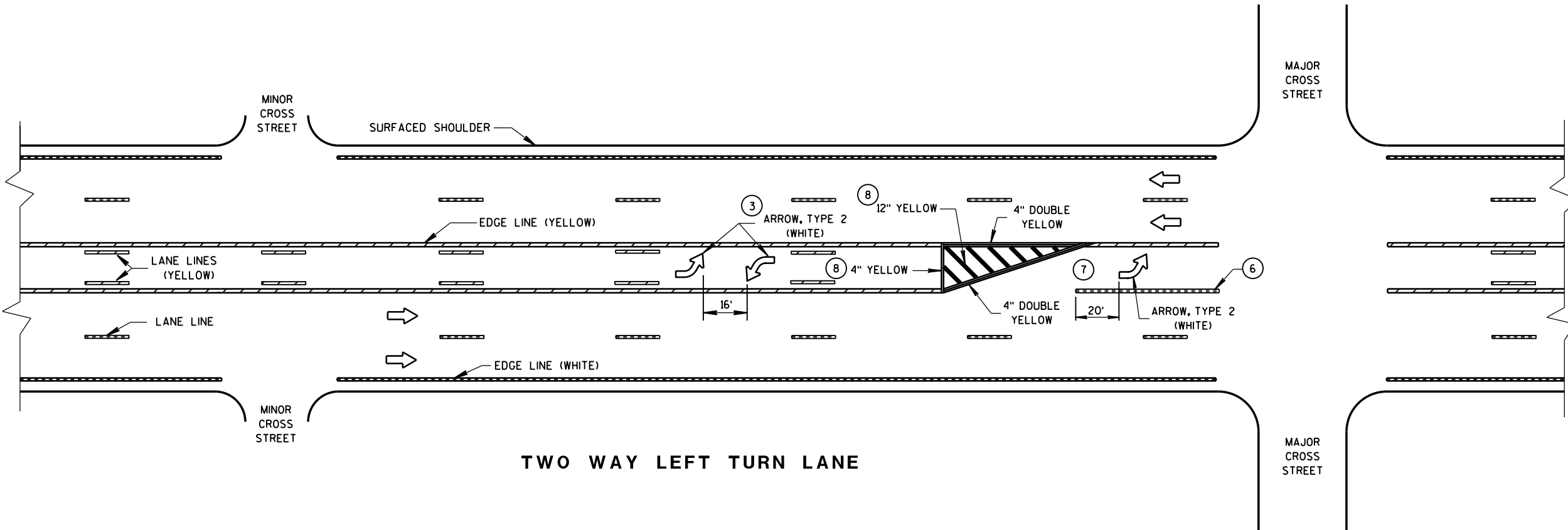
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



GENERAL NOTES

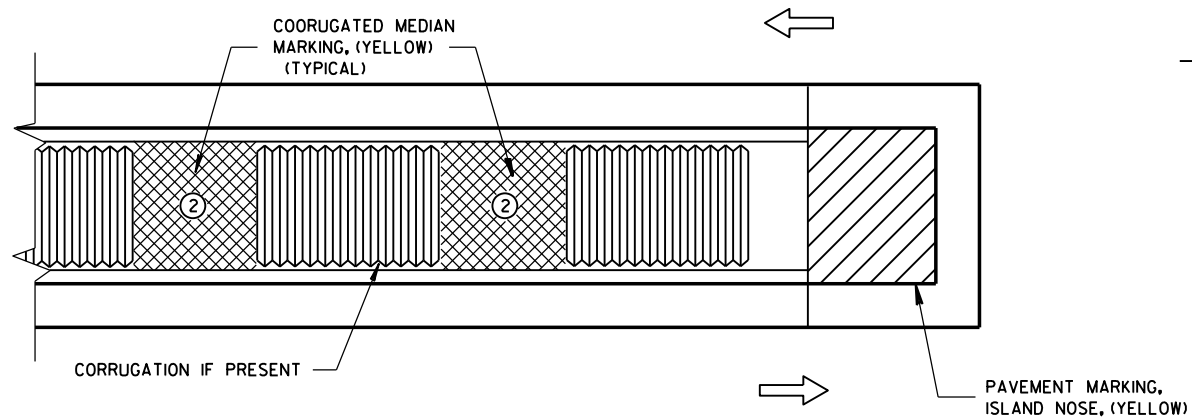
- 1 STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- 2 DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
- 3 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 4 ADD EXTRA SETS OF ONE ARROW AND ONE ONLY PER 160 FEET OR WHEN ON A CURVE.
- 5 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- 6 8" WHITE
- 7 ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108 FEET.
- 8 REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL

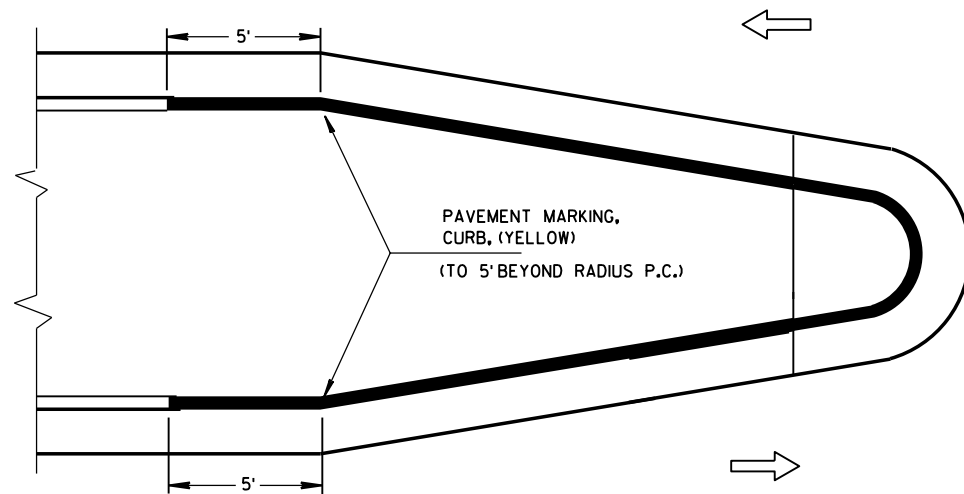


PAVEMENT MARKING
(LEFT TURN LANE)

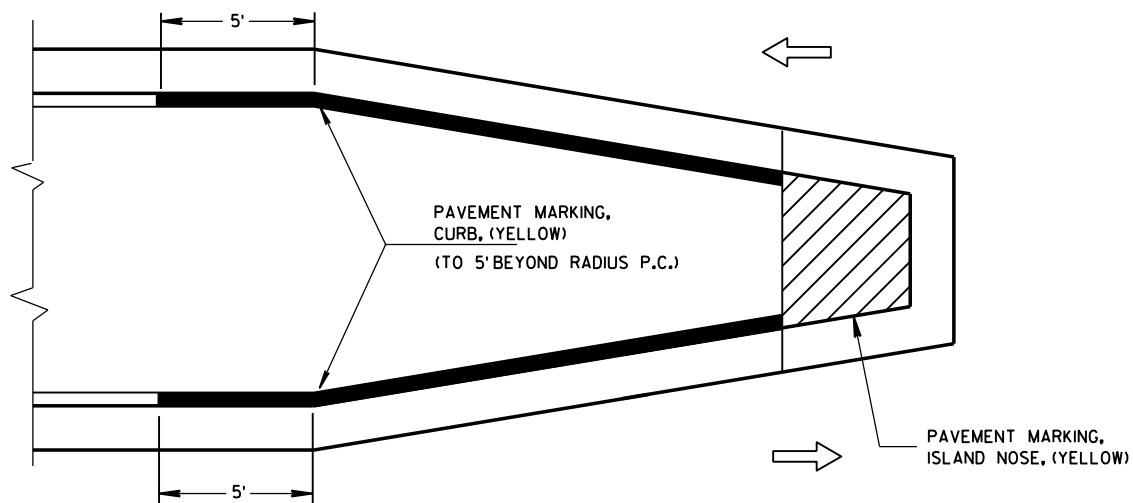
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

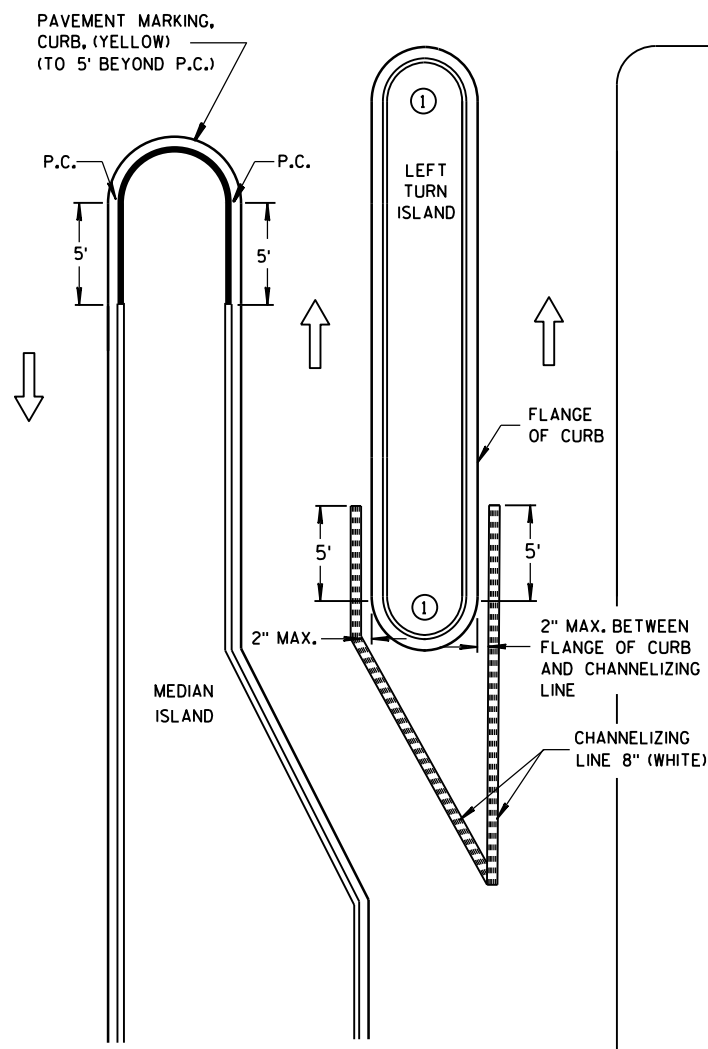


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

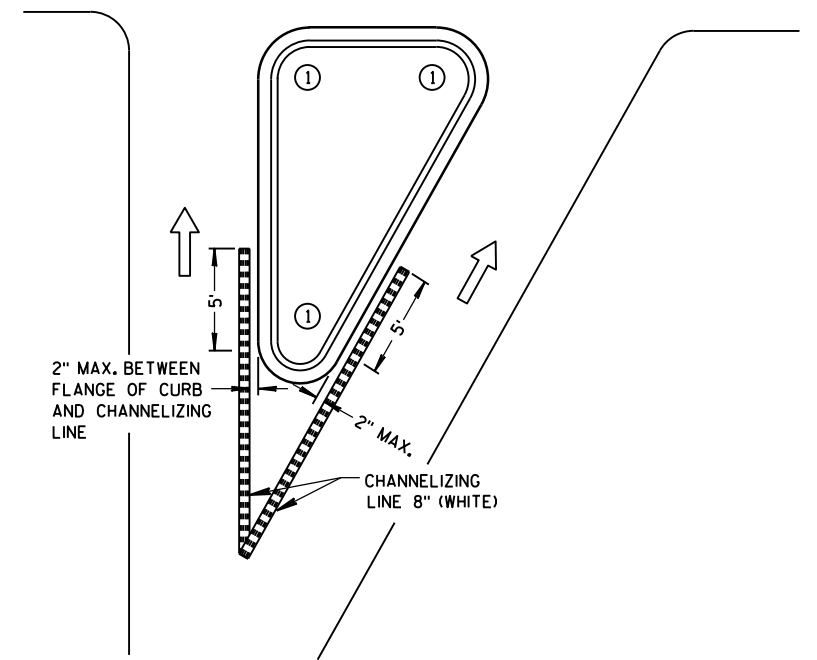
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

- 1 DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- 2 WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



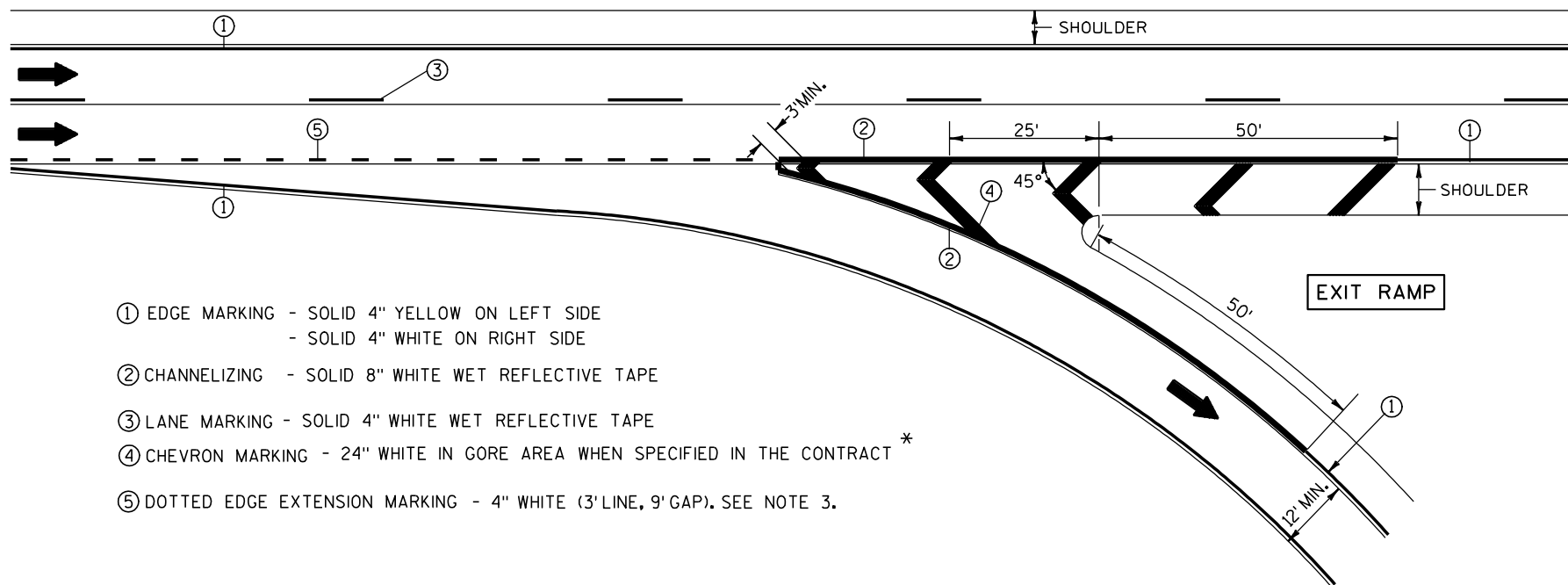
RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

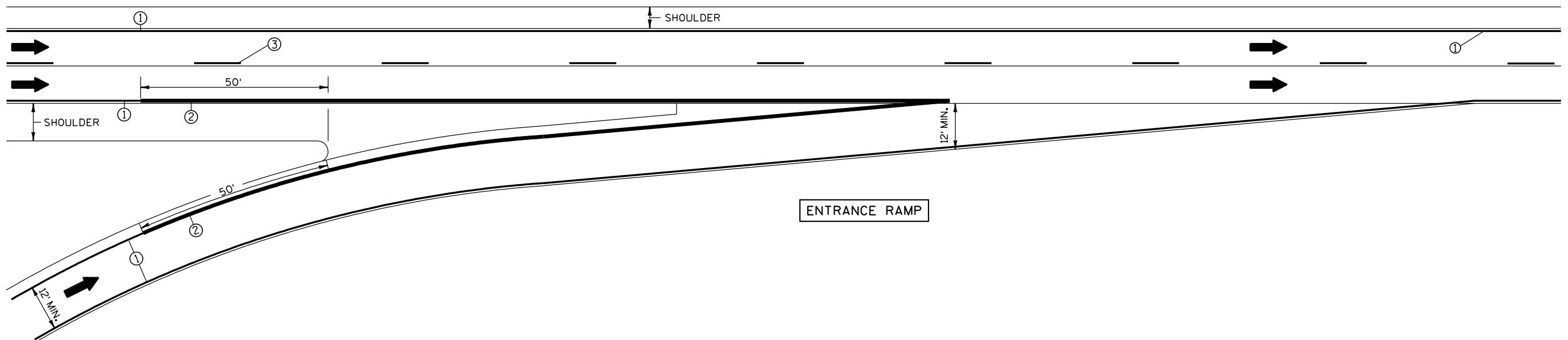


- ① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE
- ② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE
- ③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE
- ④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *
- ⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

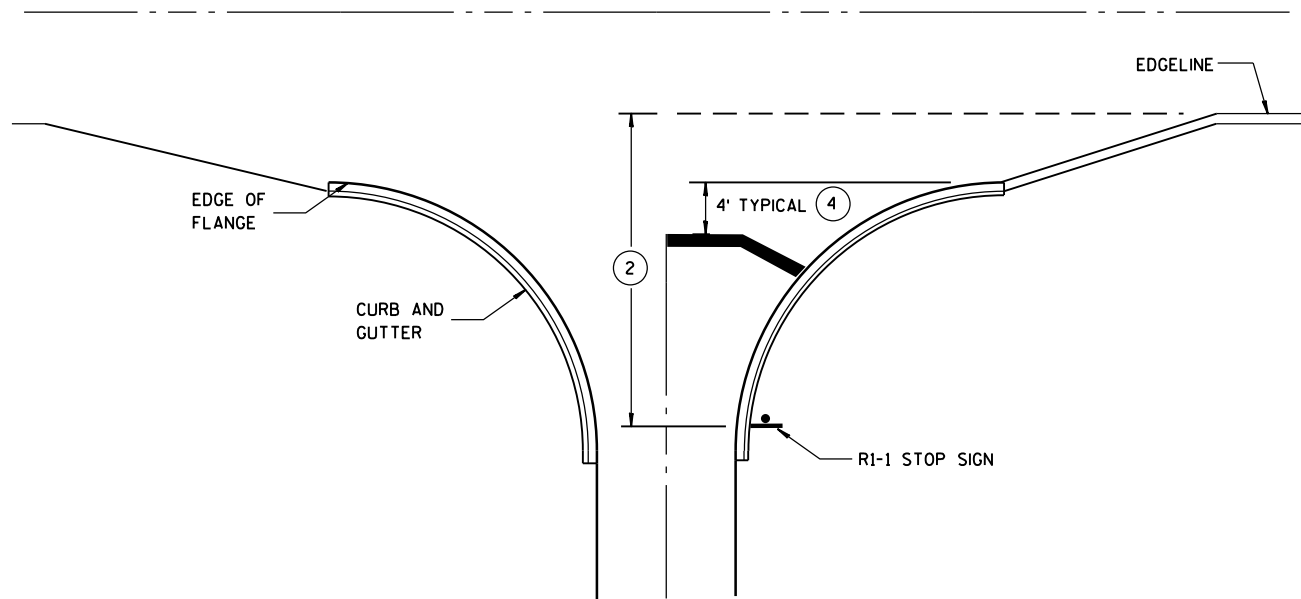
- 1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
- 2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
- 3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.

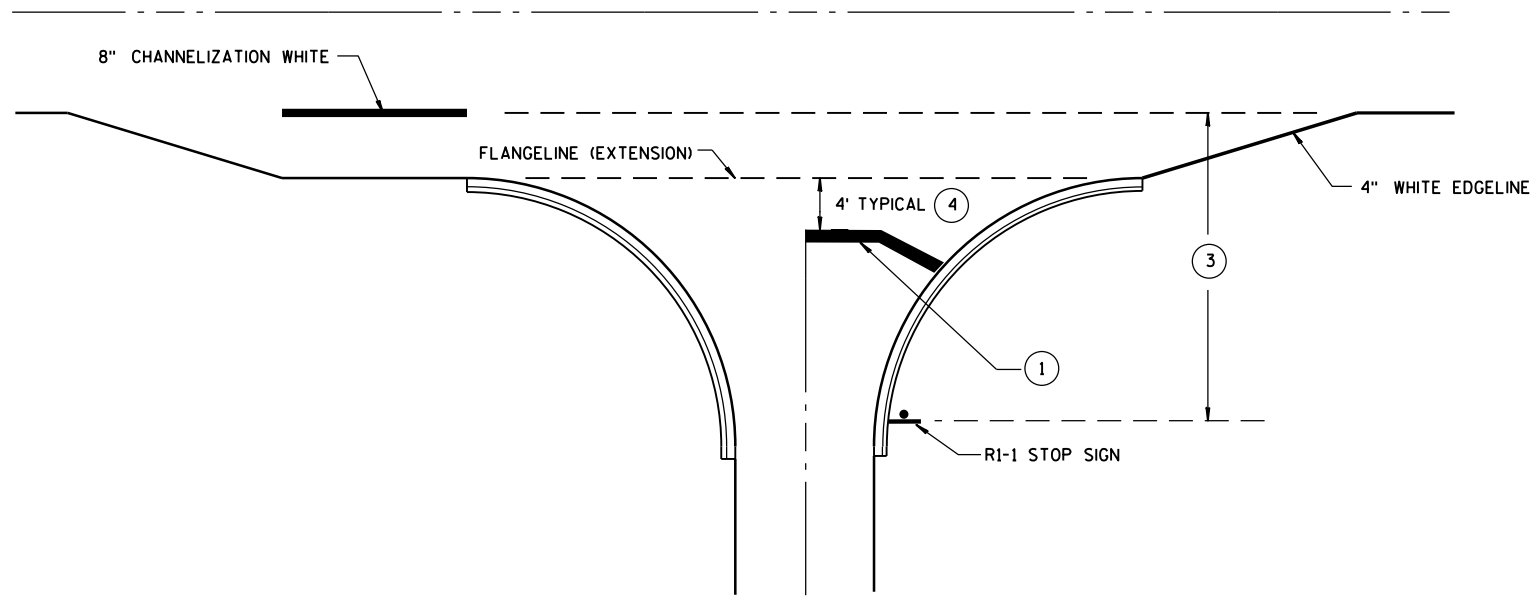


PAVEMENT MARKING
(RAMPS AND GORES)

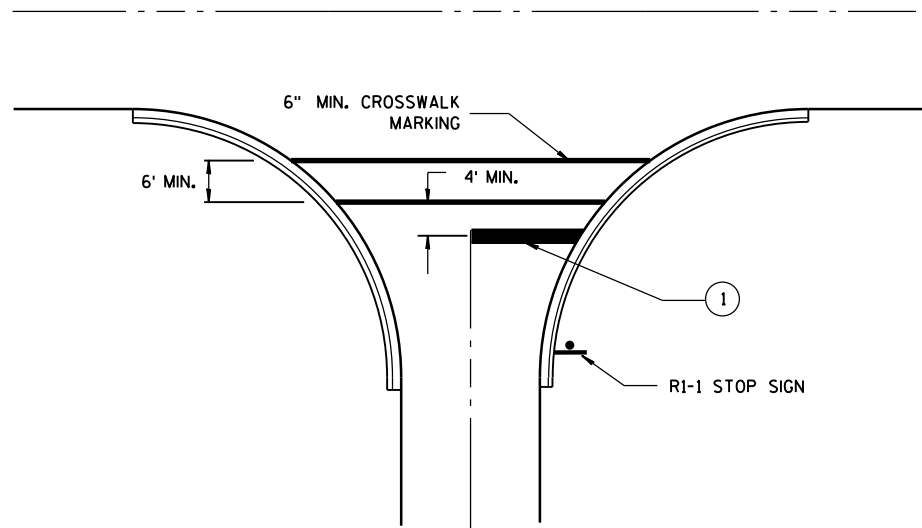
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



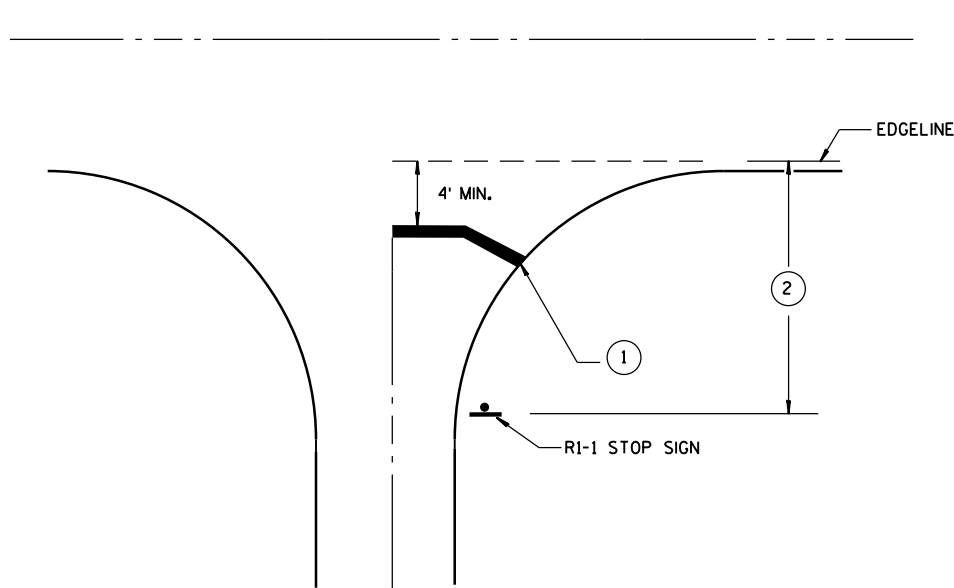
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE /S/ Travis Feltz
STATE TRAFFIC ENGINEER
FHWA

LEGEND

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

GENERAL NOTES

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

THE SPACING BETWEEN 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.

"W0" 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.

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.

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

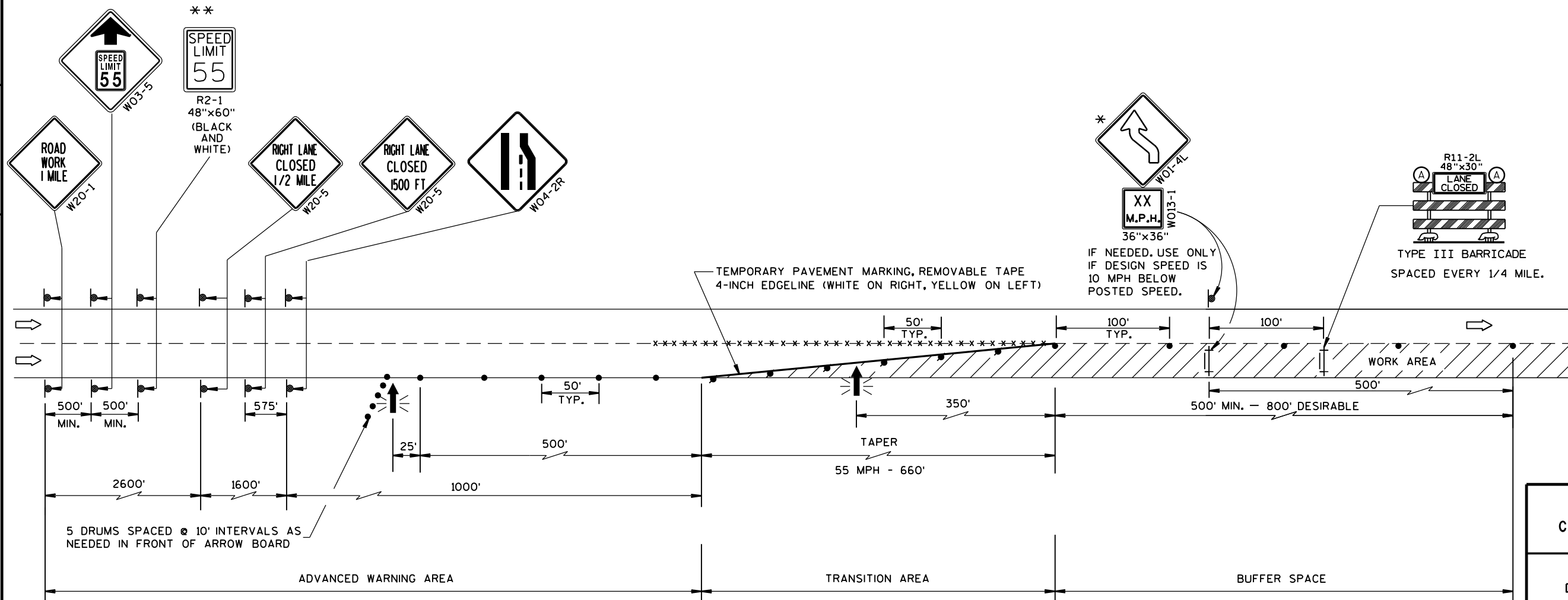
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

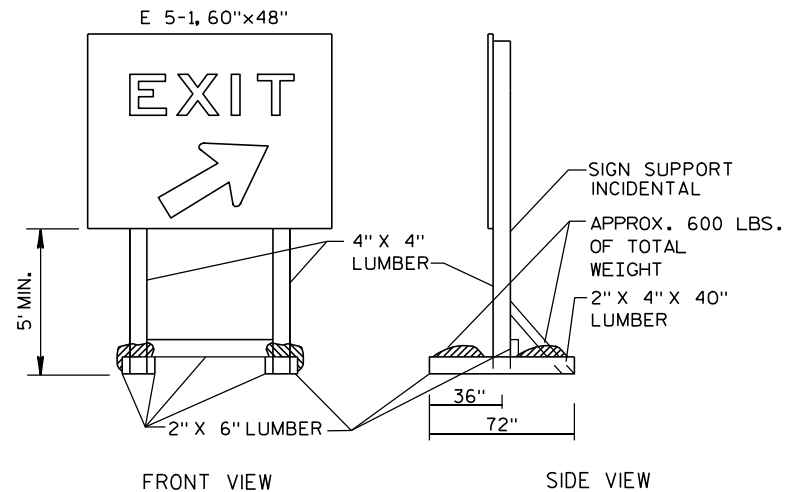
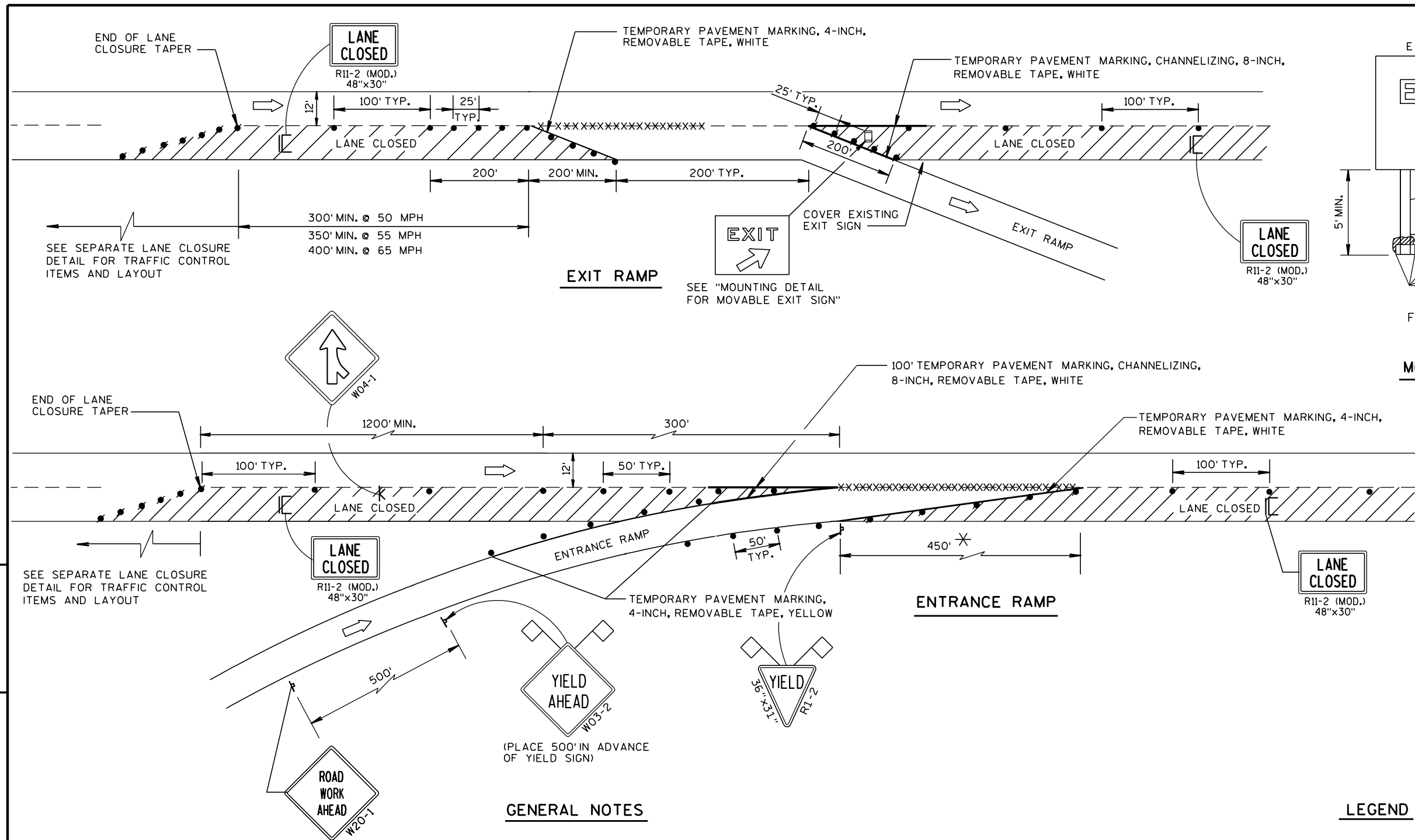
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN 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 (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3-2014 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	



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

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

LEGEND

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

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000 DATE /S/ Chester J. Spang
CHIEF SIGNS AND MARKING ENGINEER
FHWA

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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.

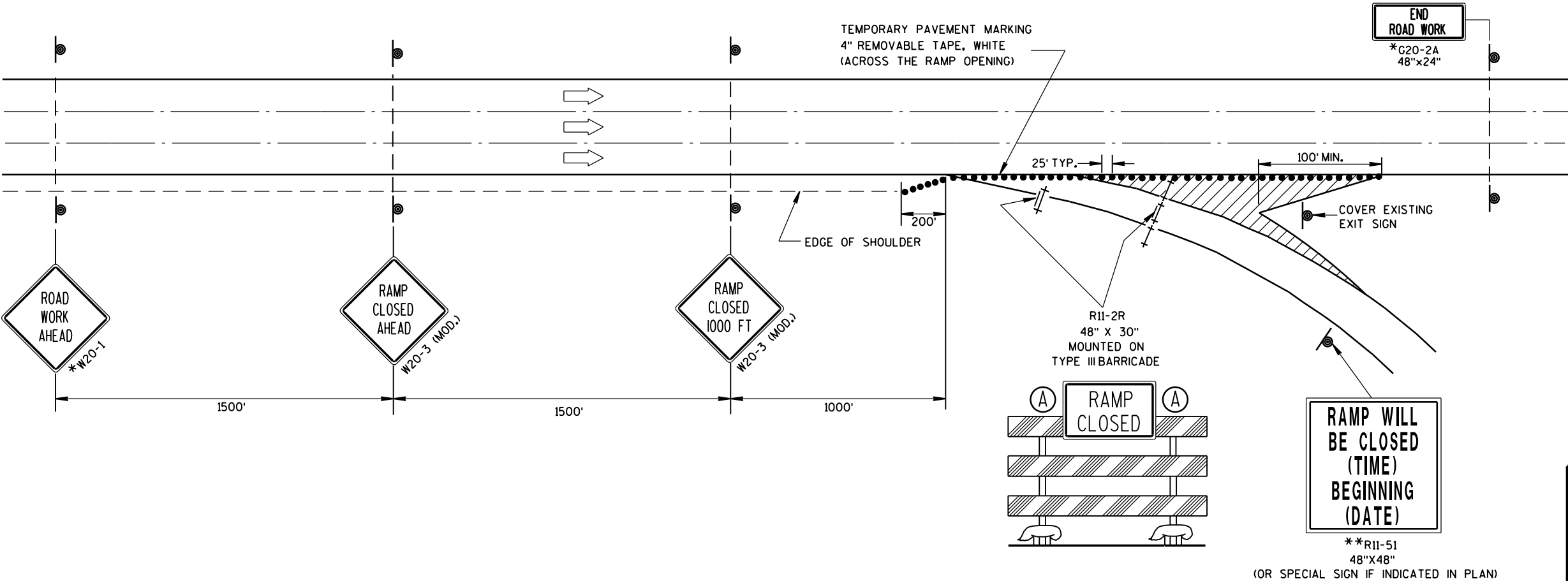
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

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

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL, EXIT RAMP CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

LEGEND

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

GENERAL NOTES

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

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

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

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

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

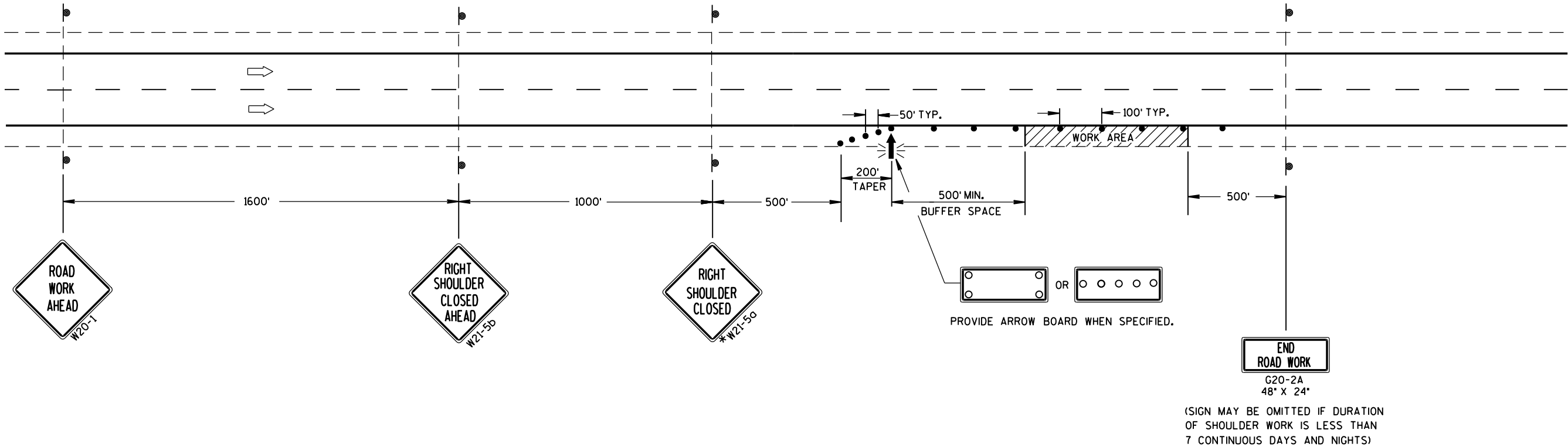
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

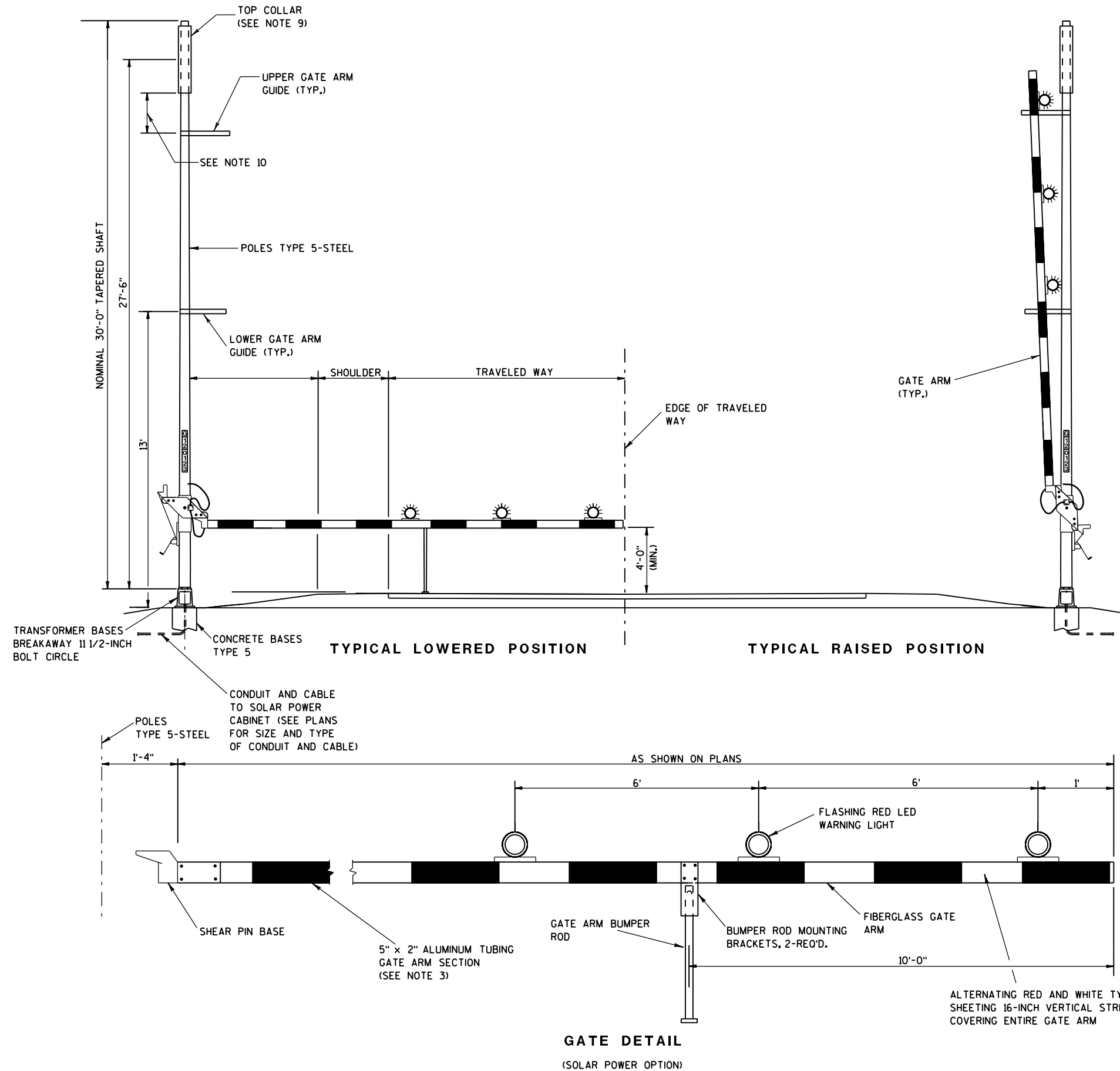
*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



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

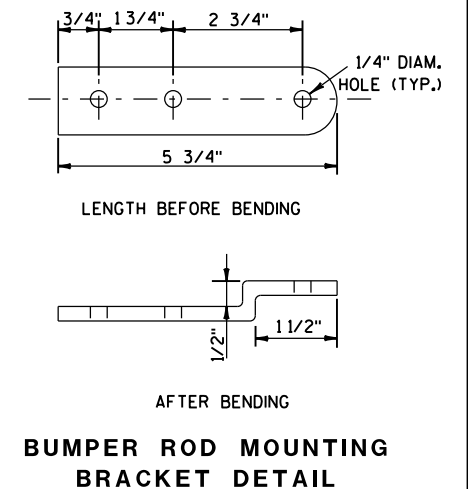
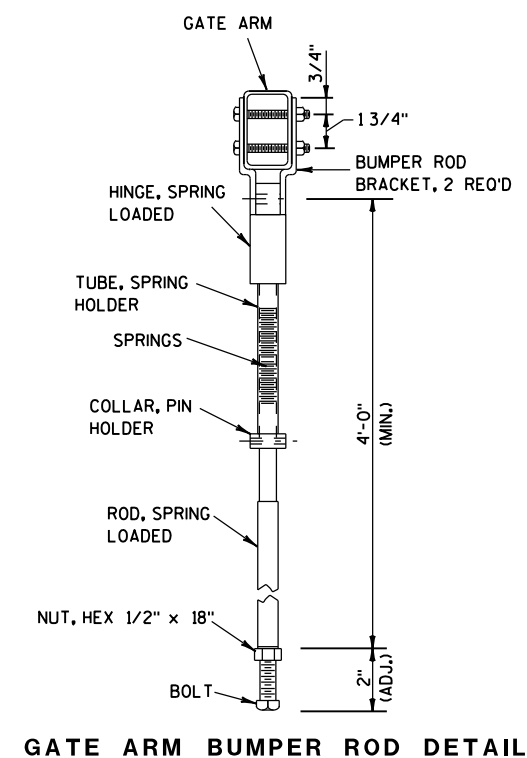
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.

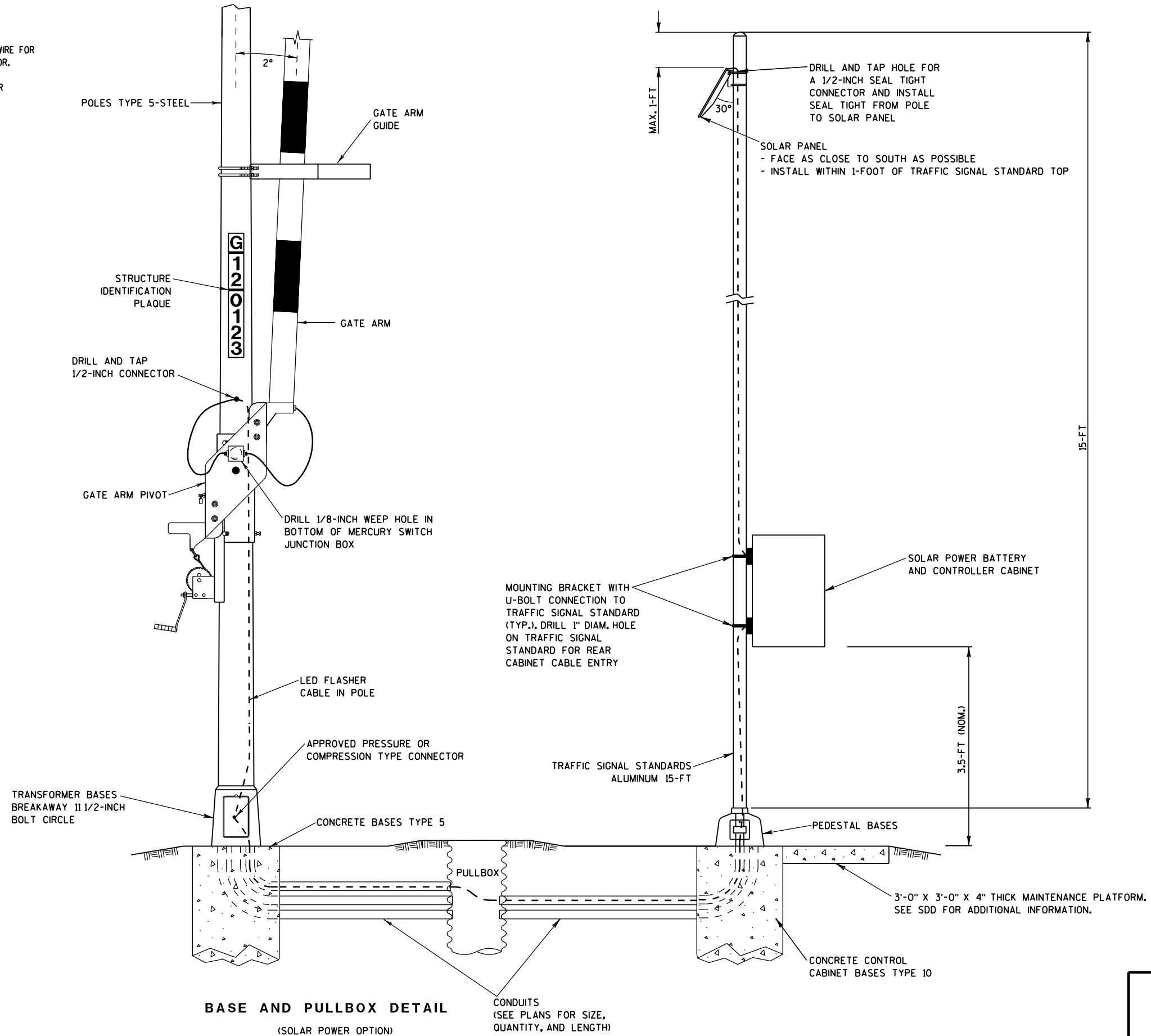


**RAMP GATE
SOLAR POWER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

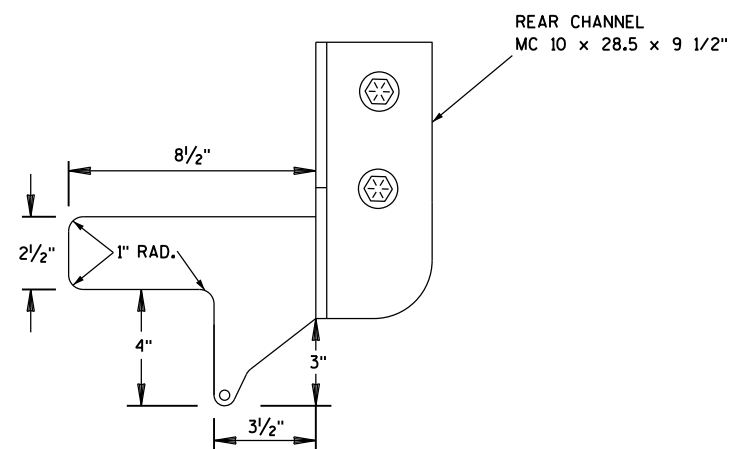
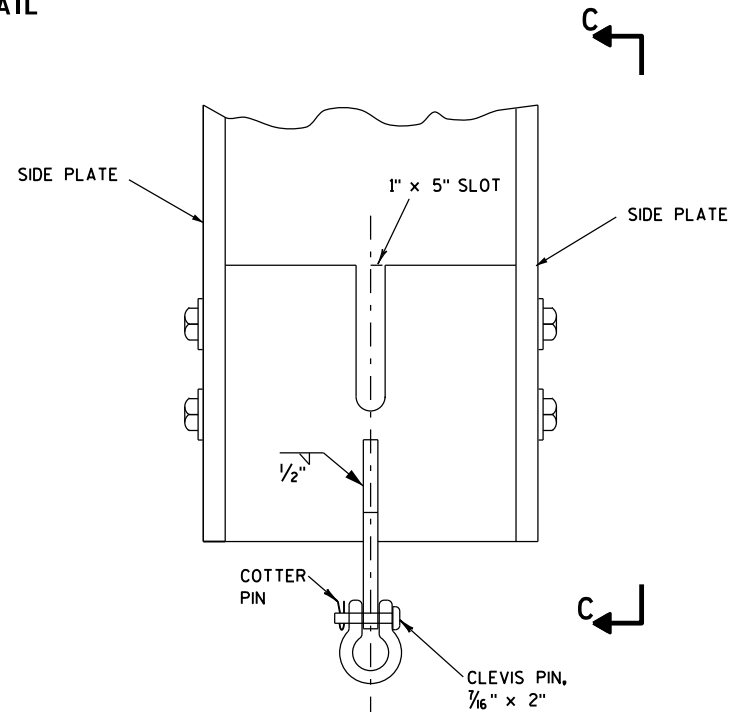
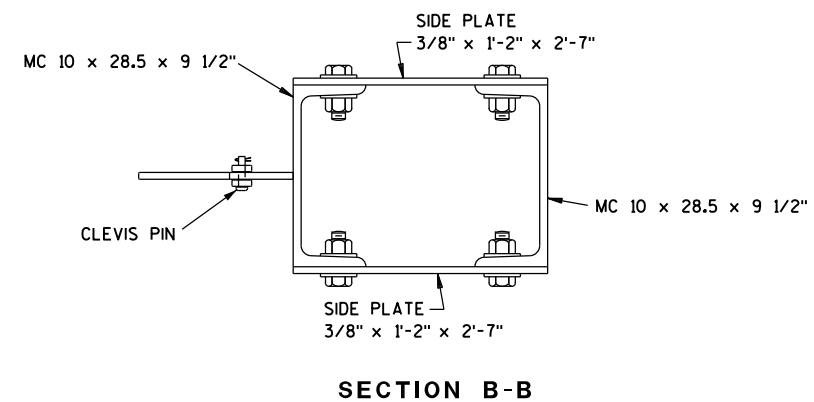
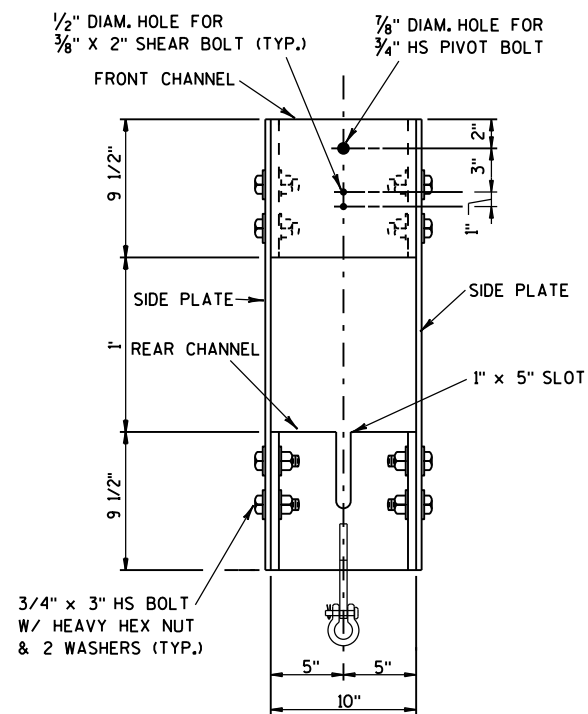
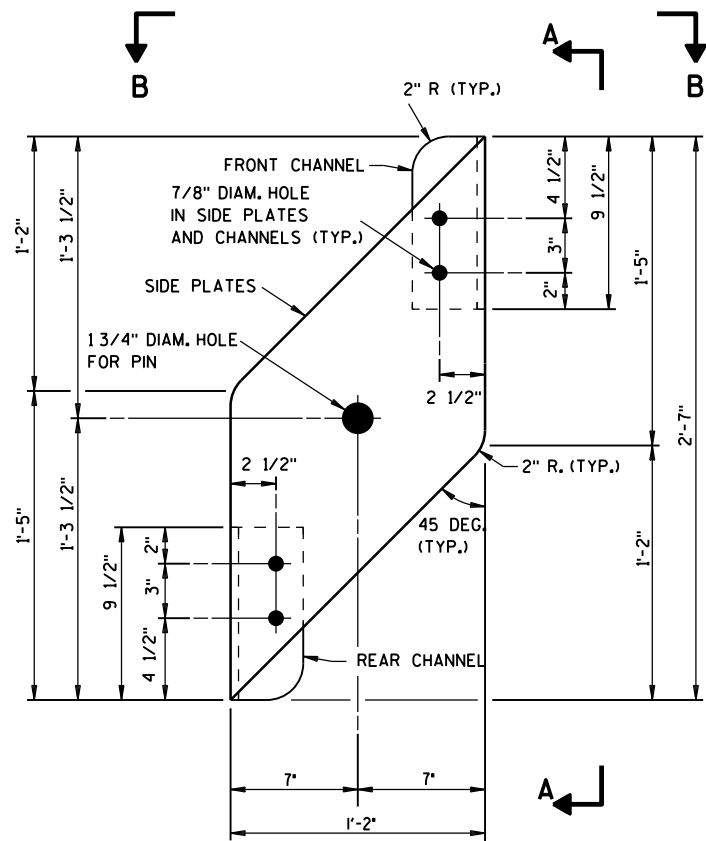
WIRING NOTES

1. WIRING FROM SOLAR PANEL TO CABINET SHALL BE BLUE #10 XLP WIRE FOR POSITIVE CONDUCTOR AND WHITE #10 XLP FOR NEGATIVE CONDUCTOR.
2. WIRING FROM CABINET TO GATE ARM SHALL BE WHITE #10 XLP FOR COMMON, RED #10 XLP FOR FLASHER CIRCUIT 1, AND BLUE #10 XLP FOR FLASHER CIRCUIT 2.



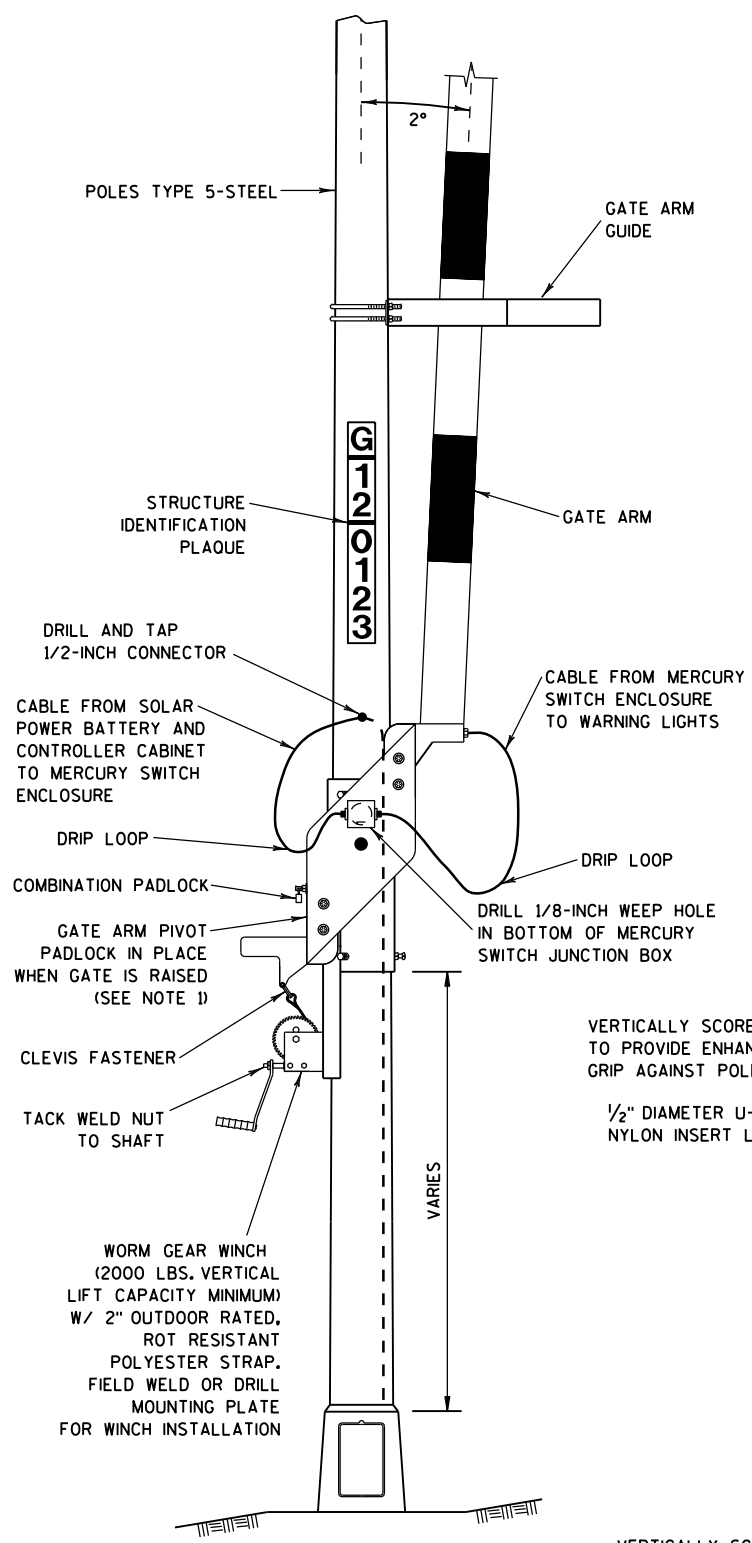
RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



RAMP GATE
SOLAR POWER

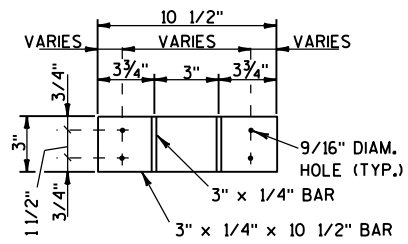
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



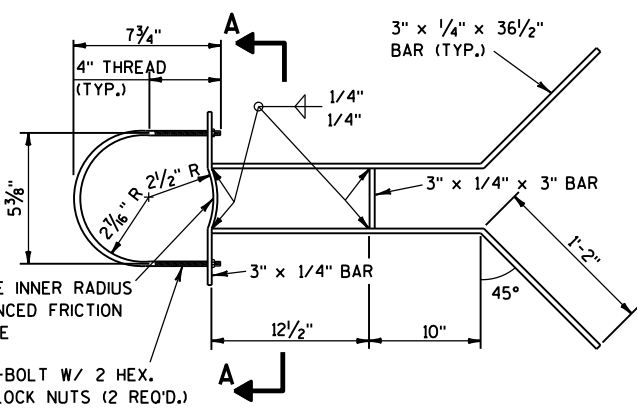
GATE PIVOT ASSEMBLY

GENERAL NOTES

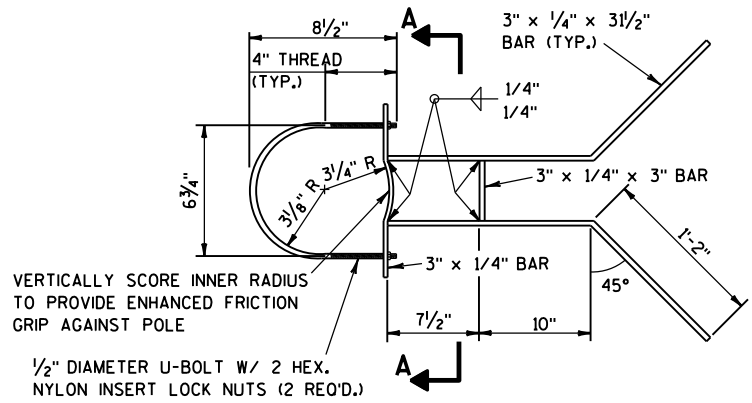
1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL AND PADLOCKED IN PLACE.
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL AND PADLOCKED INTO PLACE.
3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF 1/2" NOMINAL DIAMETER OR LESS MAY BE STAINLESS STEEL.



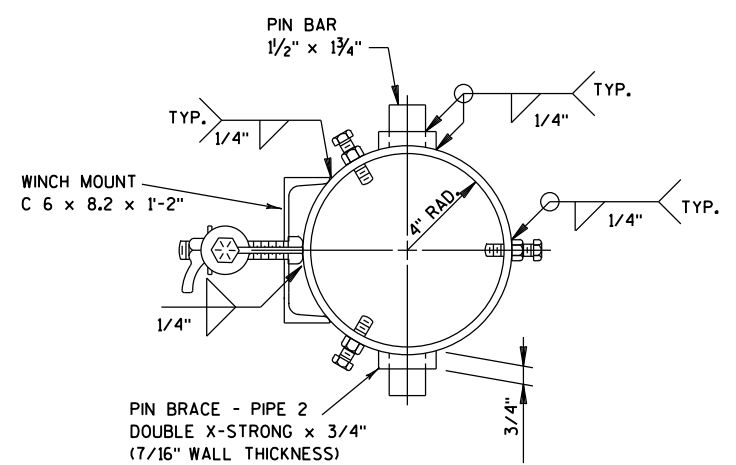
SECTION A-A
U-BOLTS NOT SHOWN



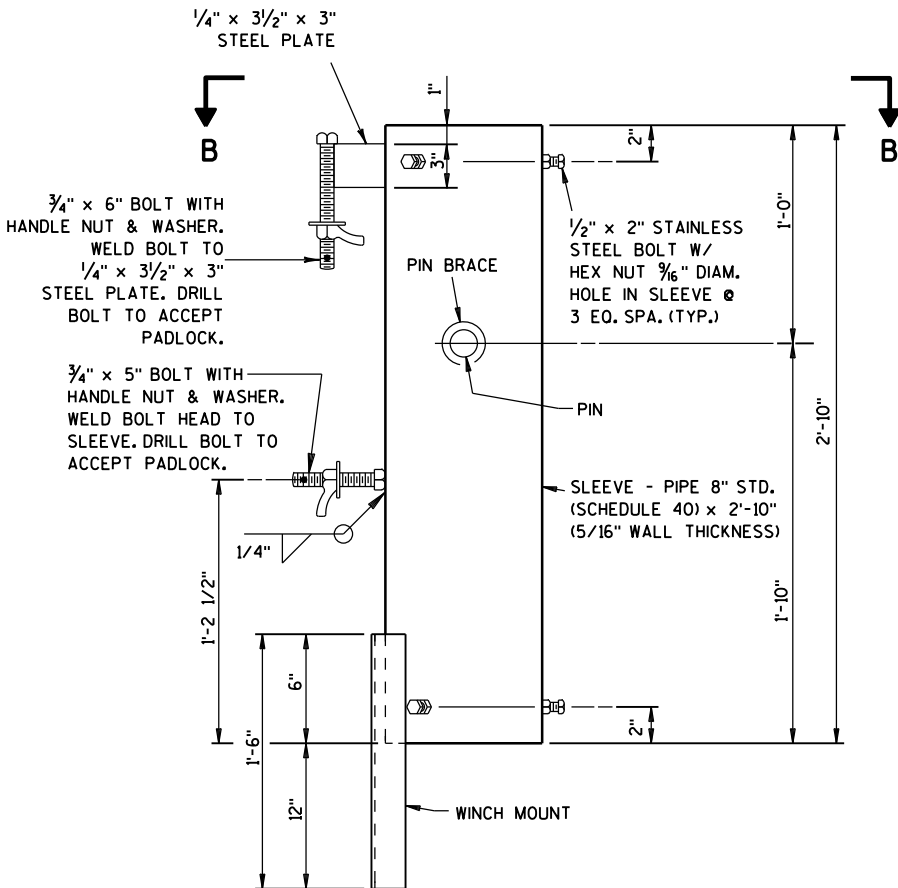
UPPER GATE ARM GUIDE DETAIL



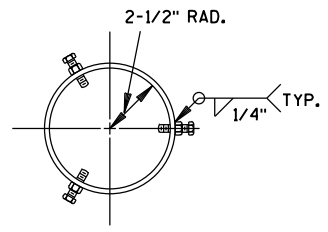
LOWER GATE ARM GUIDE DETAIL



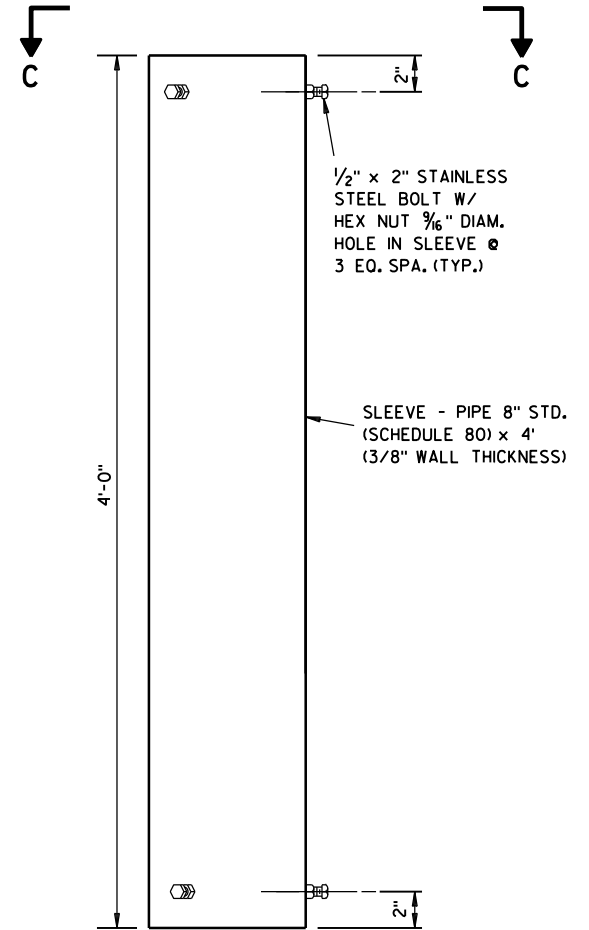
SECTION B-B



PIVOT SLEEVE DETAIL

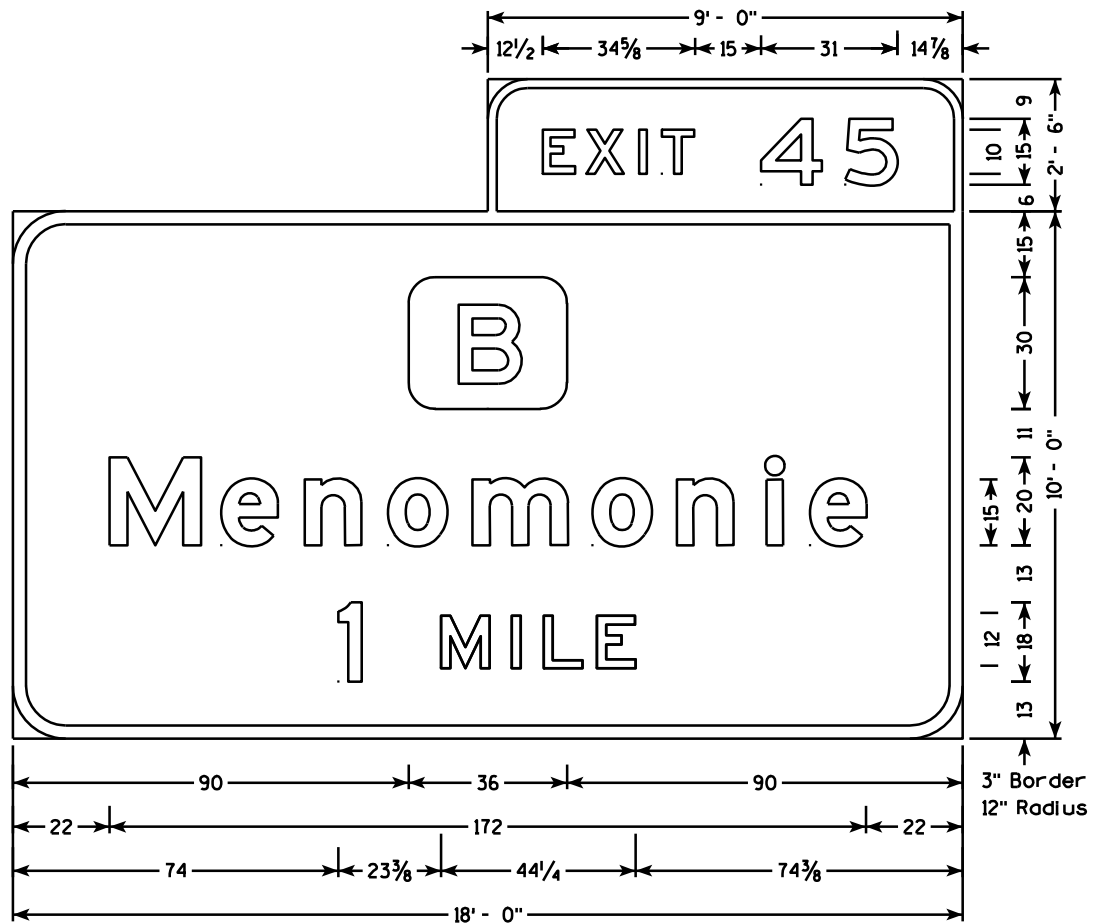


SECTION C-C

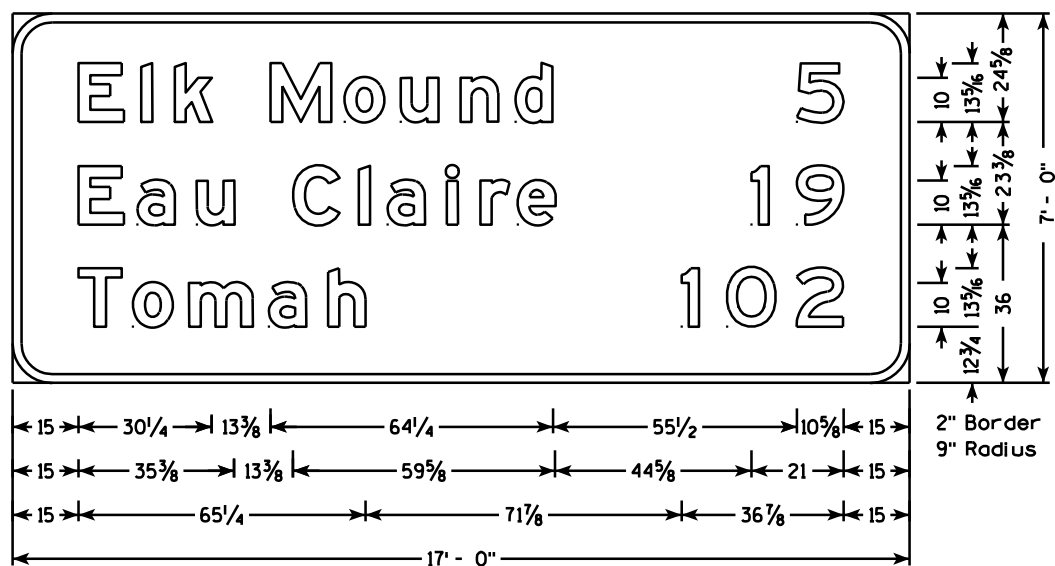


TOP COLLAR

RAMP GATE SOLAR POWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-30-2013 DATE	/S/ Bill Wondrachek STATE TRAFFIC INCIDENT MANAGEMENT ENGINEER
FHWA	



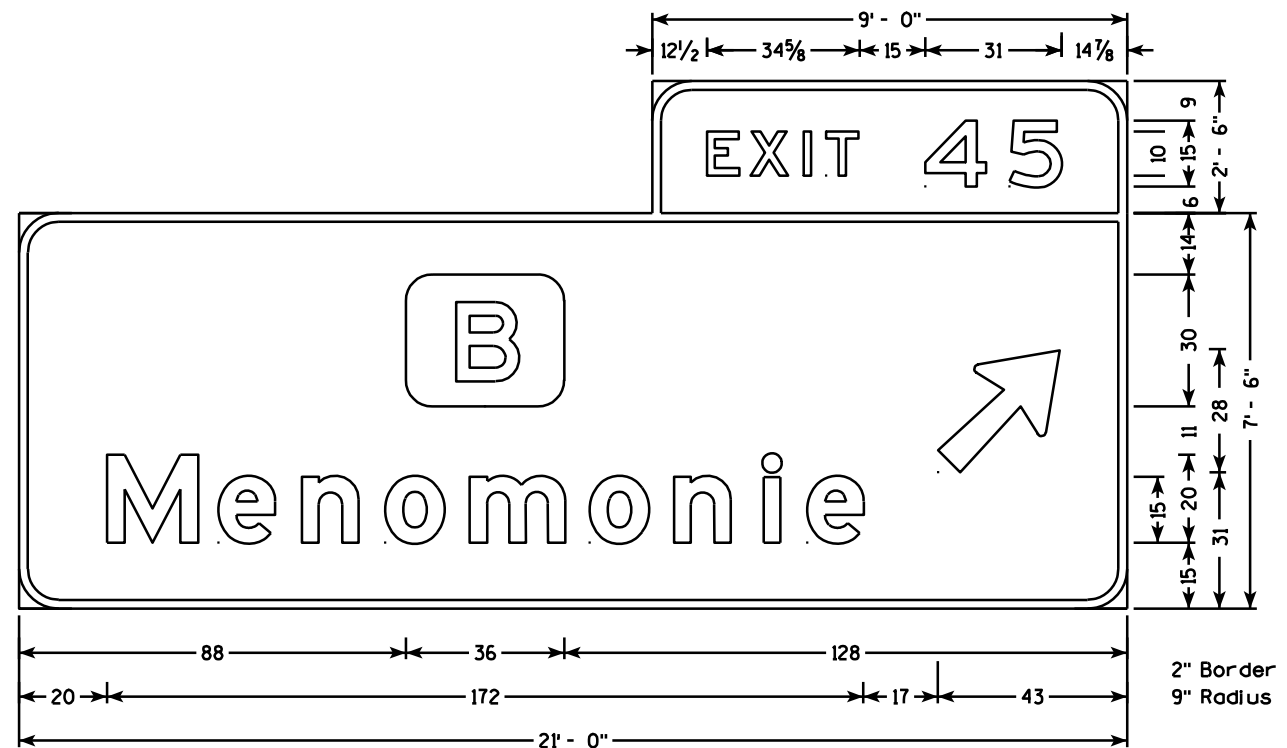
E1-1A



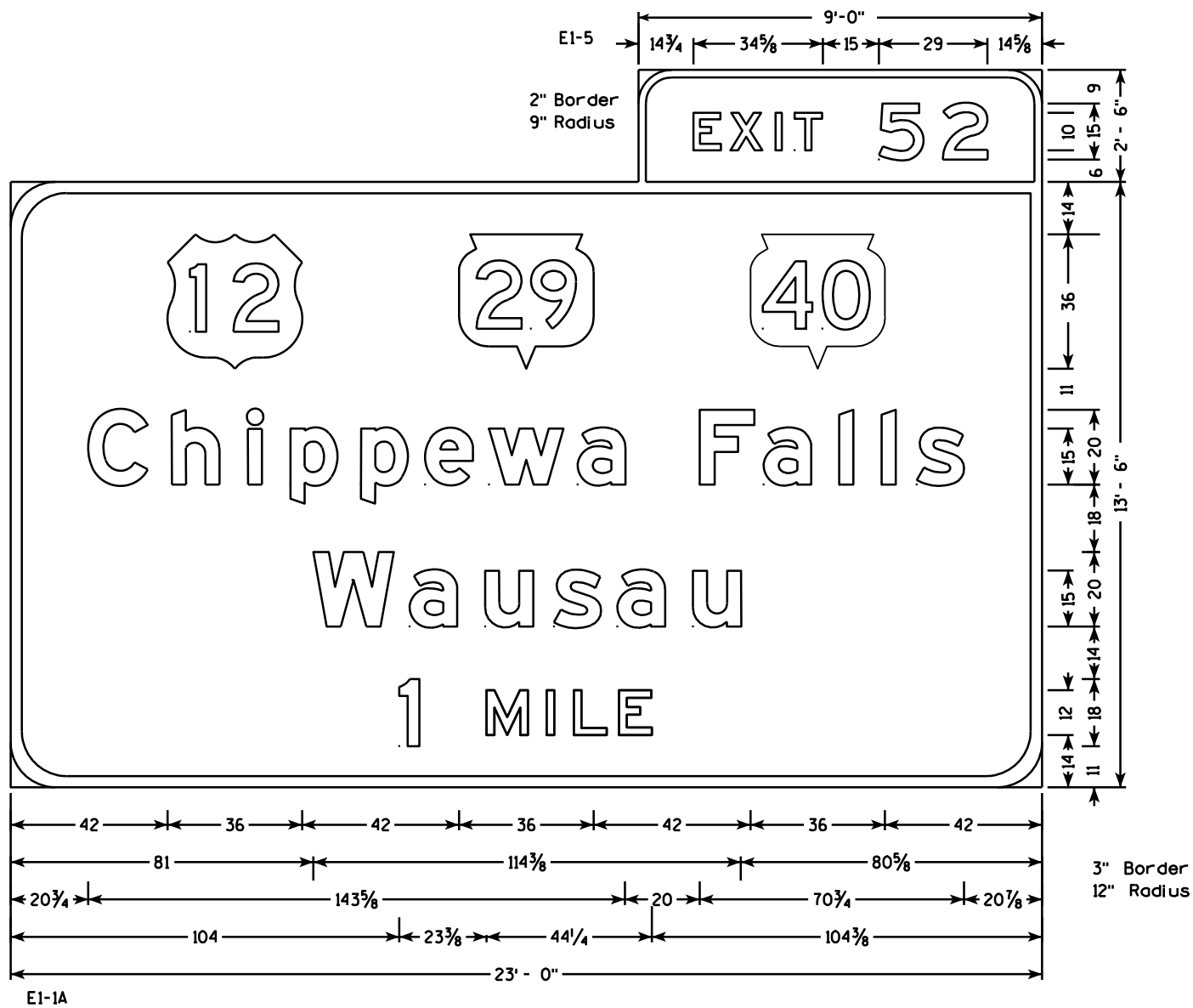
D2-3

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E Modified except all cap WORDS are Series E

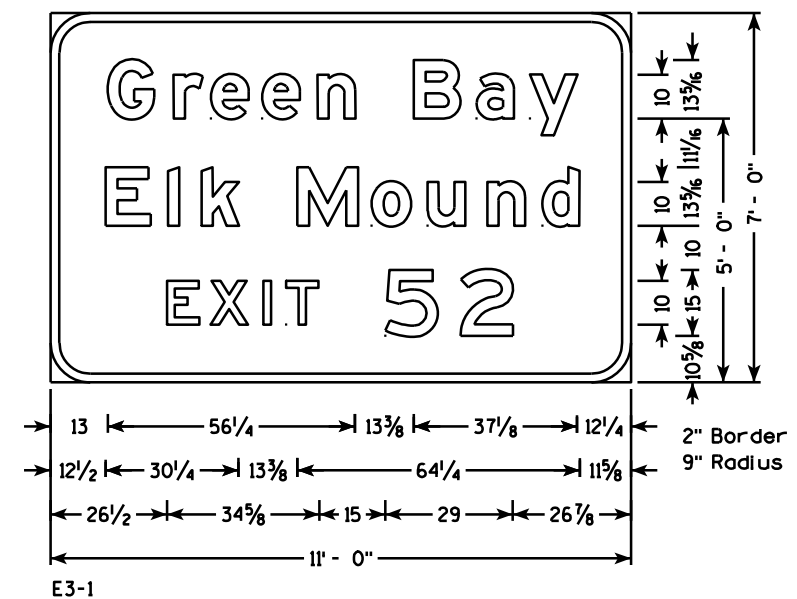


E4-1A



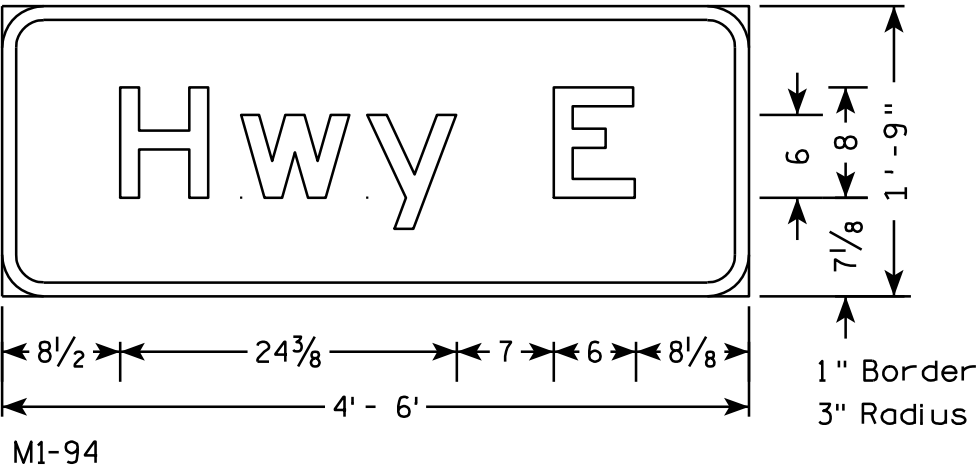
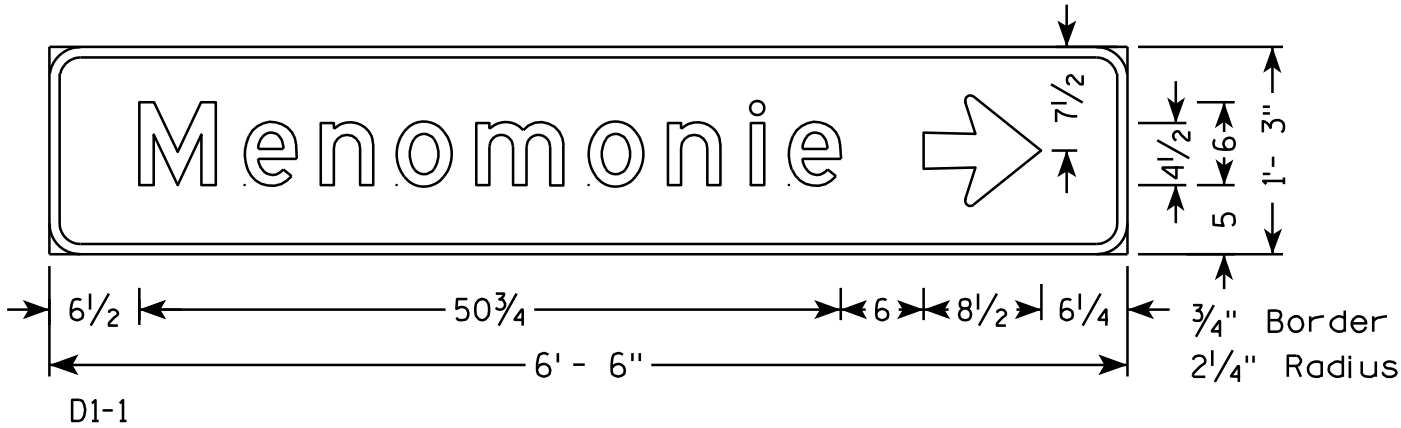
NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E Modified except all cap WORDS are Series E



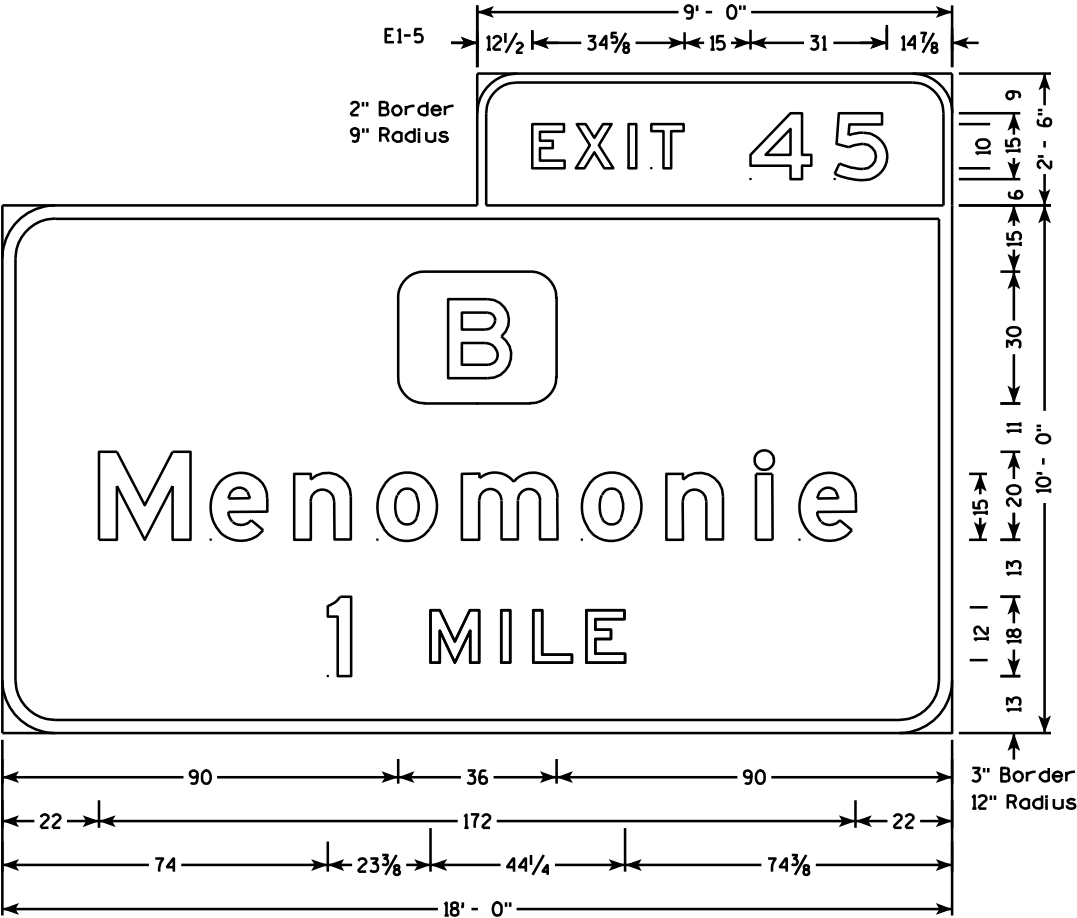
NOTES

- 1. All Signs Type II - Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - GREEN
Message - WHITE
- 3. Message Series - E

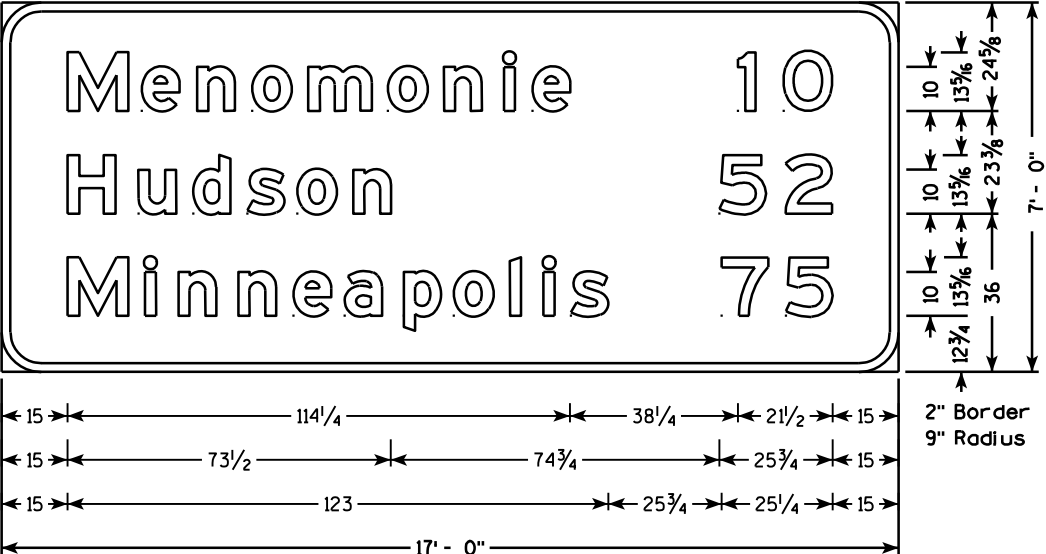


NOTES

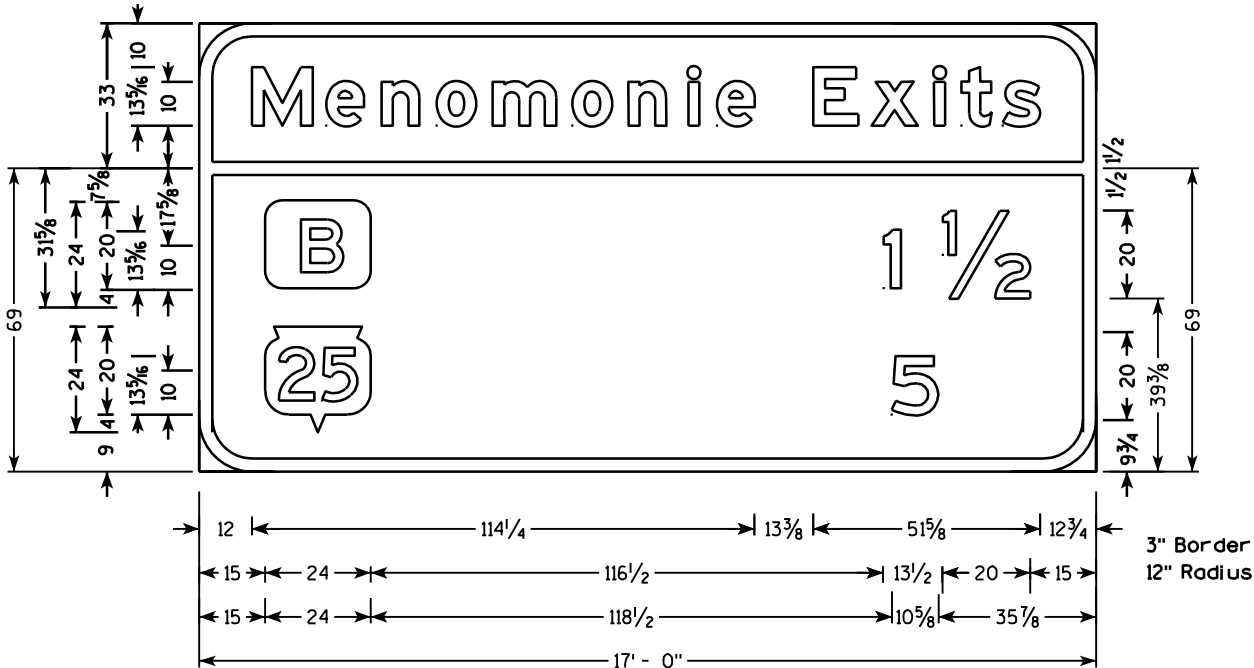
- 1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Green
Message - White
- 3. Message Series - E Modified except all cap WORDS are Series E



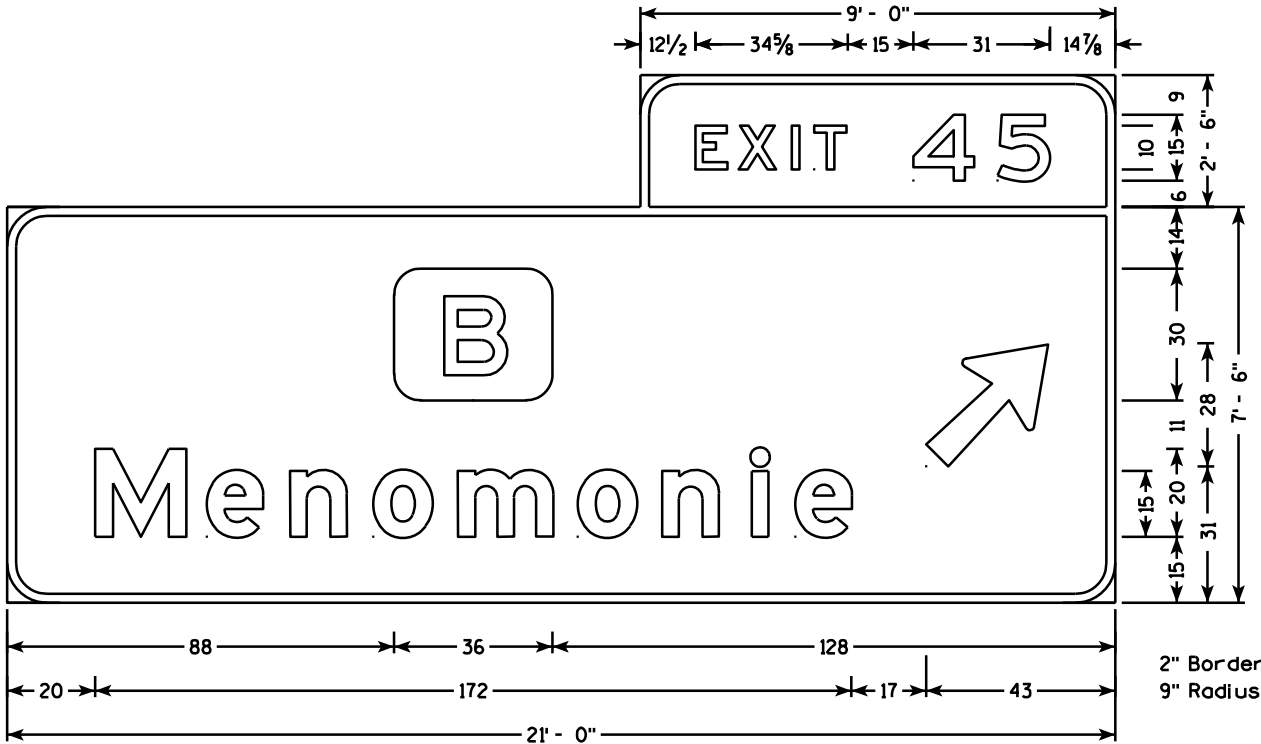
E1-1A



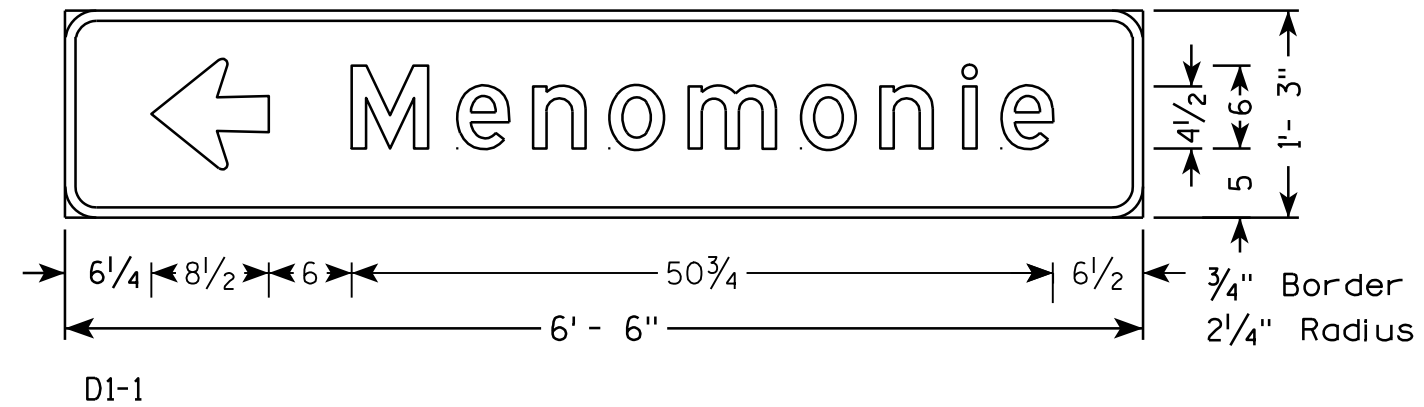
D2-3



E8-1

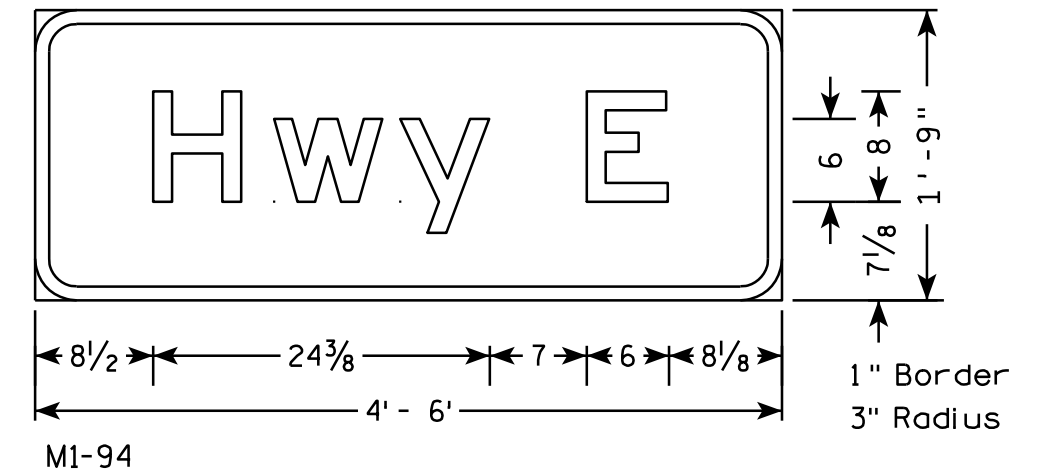


E4-1A



NOTES

1. All Signs Type II - Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E

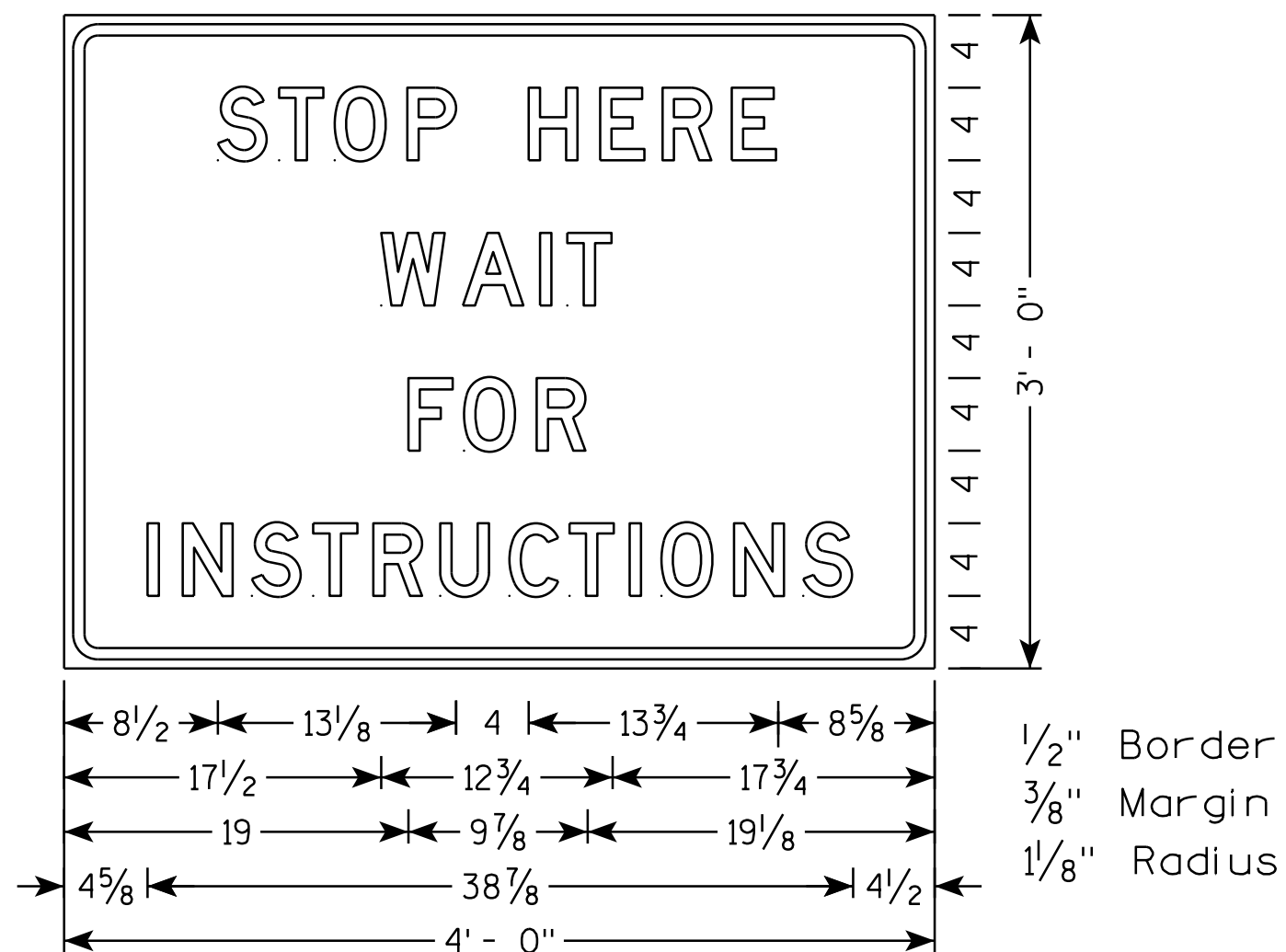


7

7

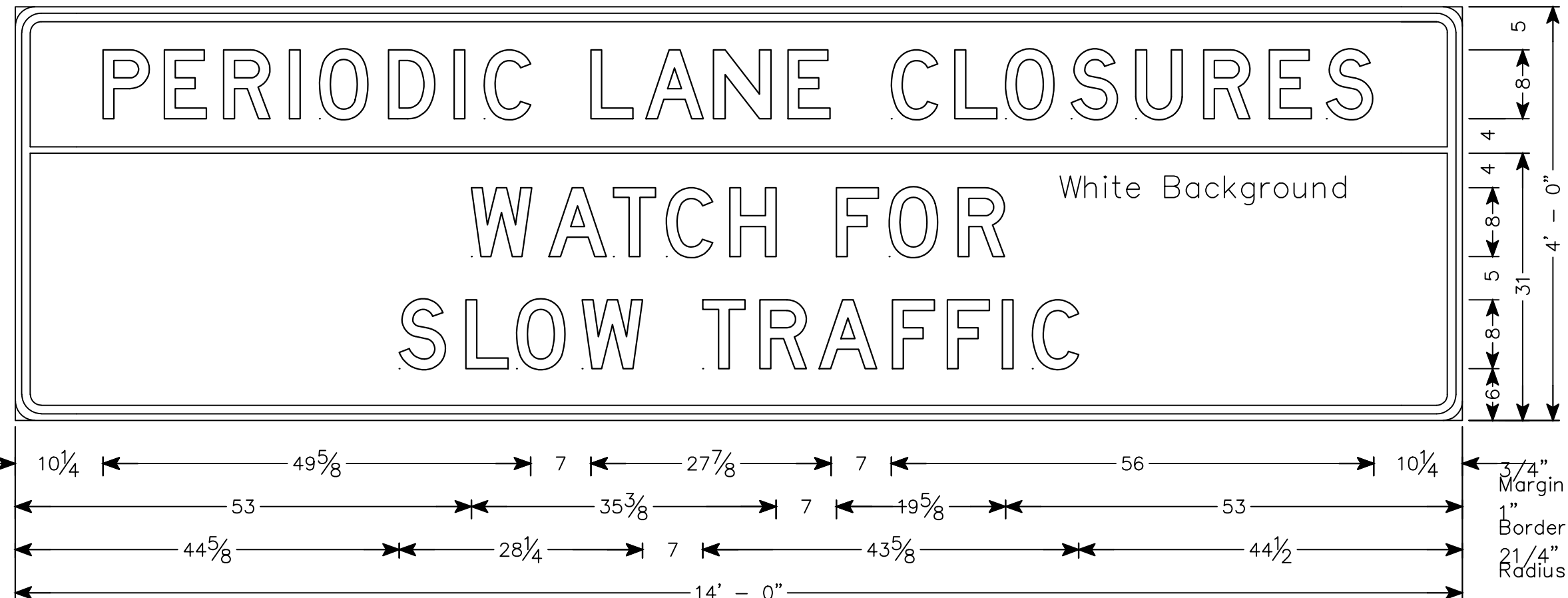
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - WHITE
Message - BLACK
3. Message Series - D

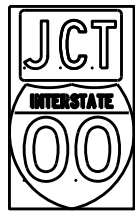


NOTES

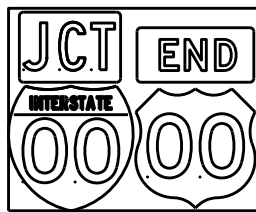
1. All SignsType II – Reflective – reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background – Orange except as noted
Message – Black
3. Message Series – D



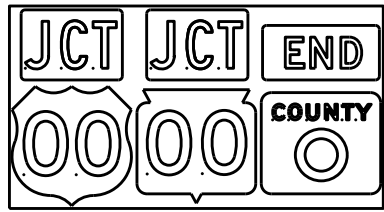
TYPICAL ASSEMBLIES



J1-1



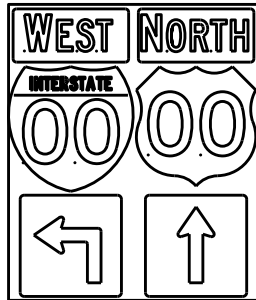
J1-2



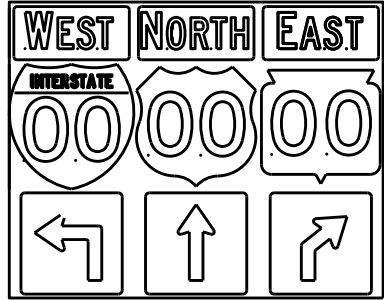
J1-3



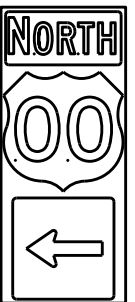
J2-1



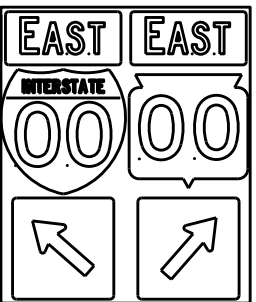
J2-2



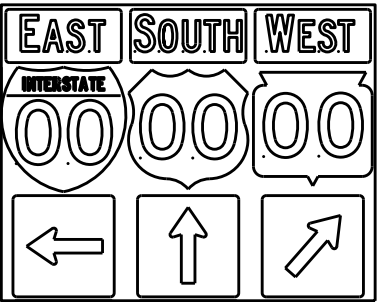
J2-3



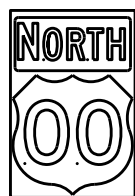
J3-1



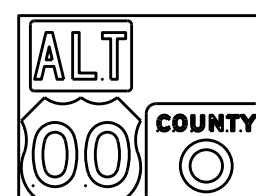
J3-2



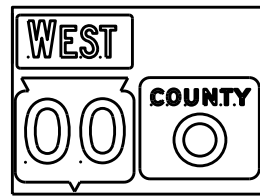
J3-3



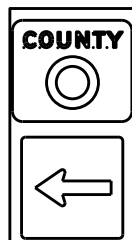
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

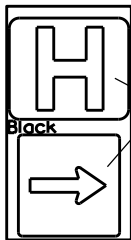


J22-1



JV

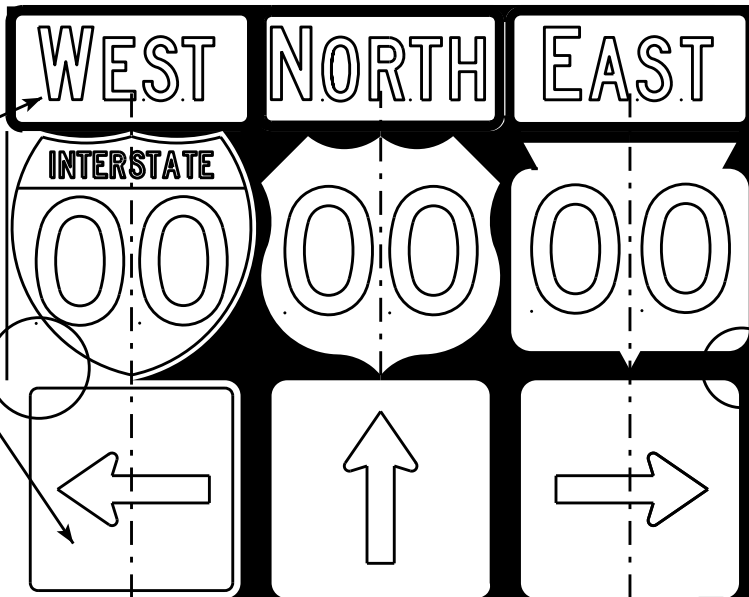
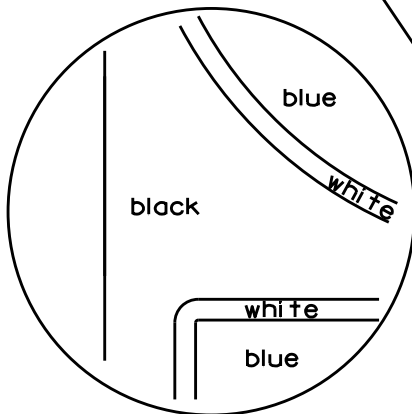
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

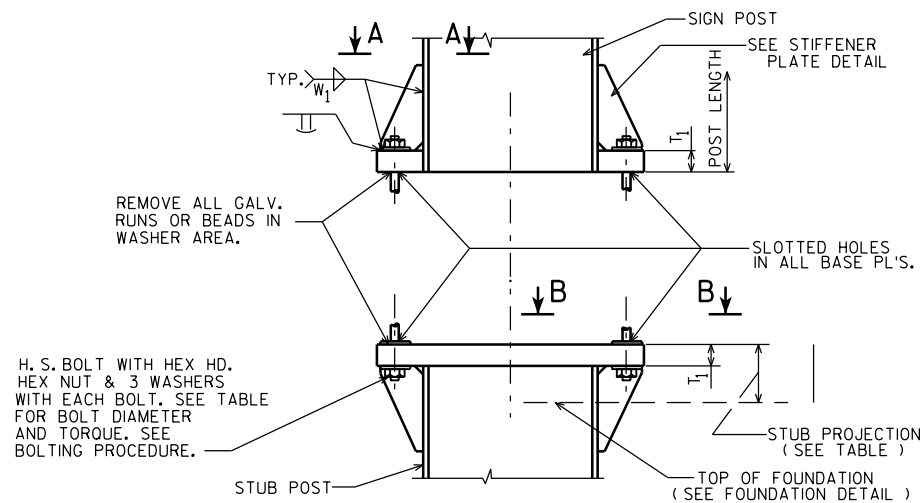
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

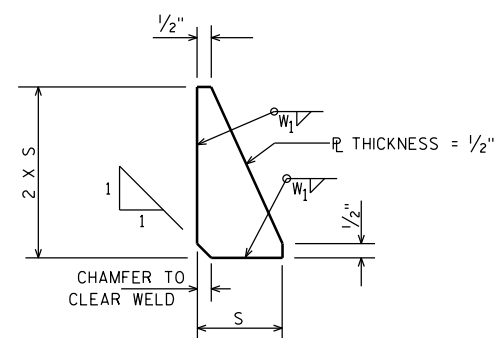
DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

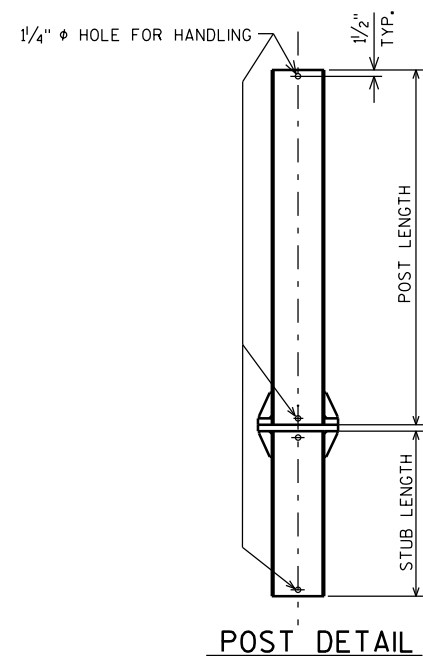


SIGN POST AND STUB POST ELEVATION

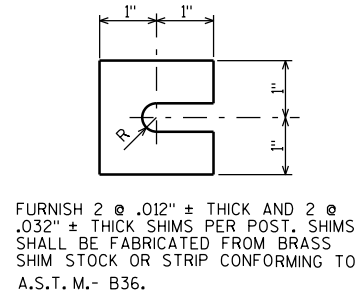


STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



POST DETAIL



SHIM DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REIN. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

⑦

TYPE	#3	#4
A	8 @ 4'-5	5 @ 6'-3
B	8 @ 6'-5	7 @ 6'-3
C	8 @ 6'-11	7 @ 6'-3
D	8 @ 7'-5	8 @ 6'-3
E	8 @ 7'-11	9 @ 6'-3

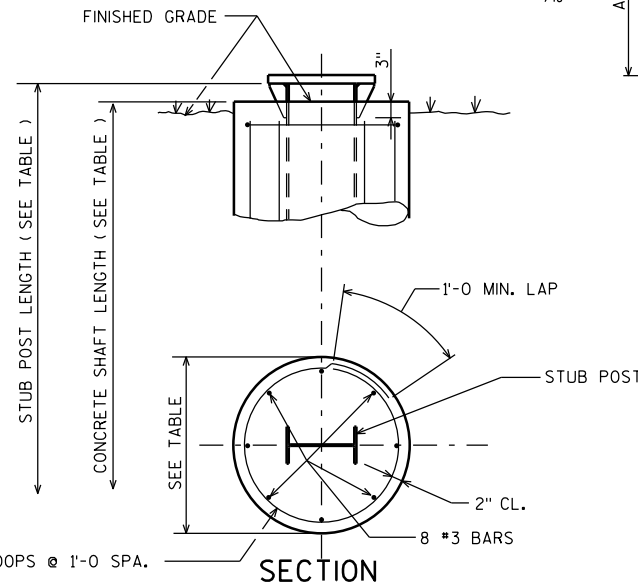
⑦

		BASE CONNECTION DATA TABLE													FOUNDATION DATA		K
TYPE	DIMENSION POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T ₁	T ₄	W ₁	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	
④ A	W10"X12.0 #/FT.	3/4" φ @ 75#-FT.	5/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32"	2 1/8"	3'-6	3"	2'-0 φ	5'-0	④ 76.0*
④ B	W12"X16.0 #/FT.	7/8" φ @ 85#-FT.	5/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32"	3"	5'-6	3"	2'-0 φ	7'-0	④ 146.5*
C	W12"X19.0 #/FT.	7/8" φ @ 85#-FT.	5/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 φ	7'-6	④ 182.1*
D	W12"X22.0 #/FT.	7/8" φ @ 85#-FT.	5/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	15/32"	3"	6'-6	3"	2'-0 φ	8'-0	③ 210.5*
③ E	W12"X26.0 #/FT.	1" φ @ 90#-FT.	7"	1'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32"	3"	7'-0	3"	2'-0 φ	8'-6	③ 293.0*

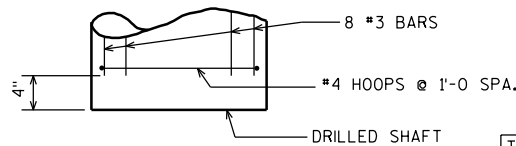
① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1POST) = K + (POST LENGTH X POST WT.)
 "K" INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

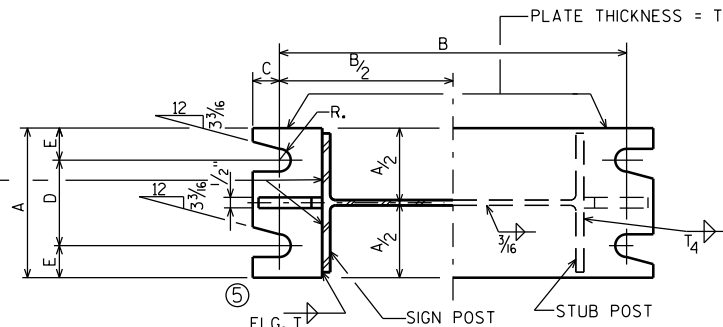
FTG. T + 1/16
 FTG. T + 1/16



SECTION

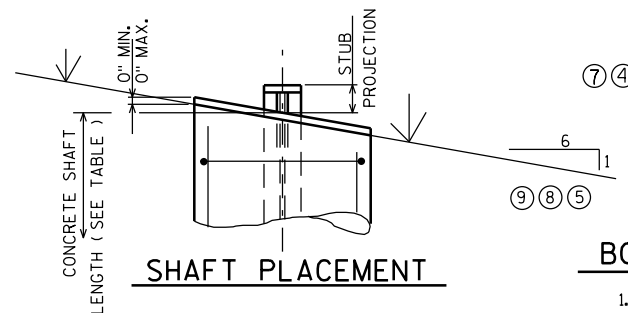


FOUNDATION DETAIL

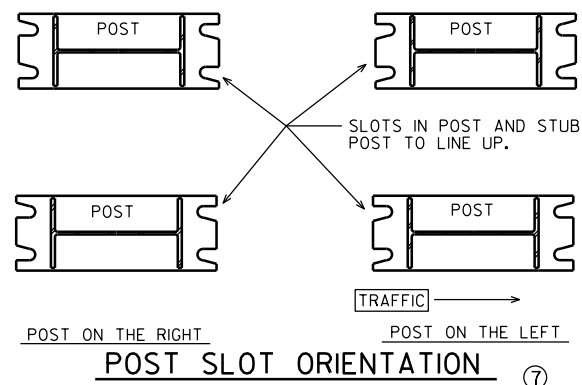


SECTION A-A

SECTION B-B



SHAFT PLACEMENT



POST SLOT ORIENTATION

⑦

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
 WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
 ICE LOAD = 3 P.S.F.
 GROUP LOADS PERCENT OF ALLOWABLE STRESS
 1. DEAD 100
 2. DEAD & WIND 140
 3. DEAD, ICE & 1/2 WIND 140 Δ25 P.S.F. MIN.
 ALLOWABLE SOIL PRESSURE = 1/2 T / SQ. FT.
 WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
 ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
 ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
 THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
 H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS, AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
 TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
 For State Traffic Engineer

DATE 2/06/14 PLATE NO. A3-1.14

⑩	1-21-14	LUBRICATION OF BASE BOLTS
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE R WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T ₁ • T ₂ & W ₁
NO.	DATE	REVISION

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

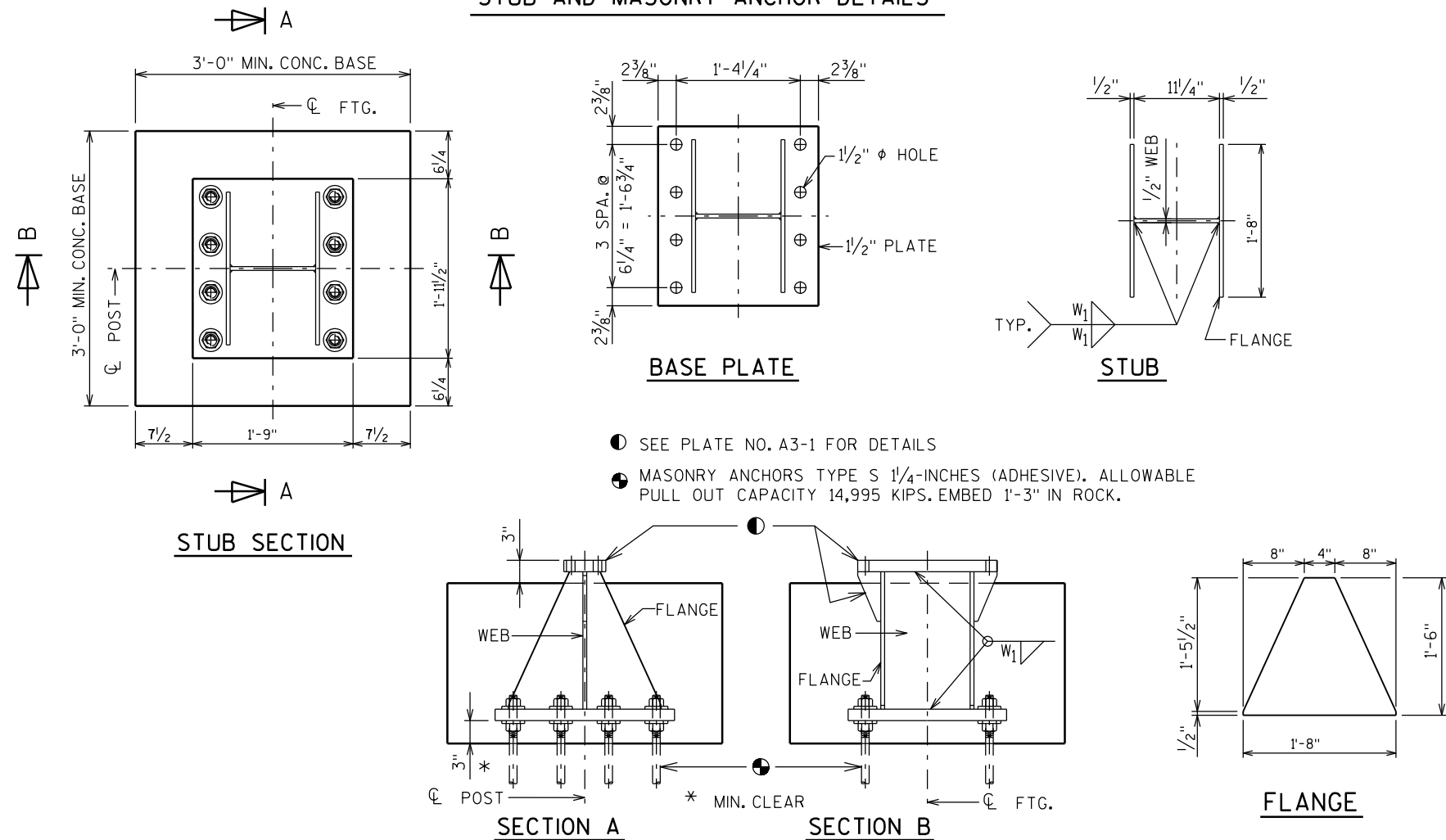
TYPE A, B, C, D, & E

CONST. SPEC. 2011 DRAWN BY JPH PLANS CK'D.

FTG. & SIGN SUPPORT
 DETAILS
 GROUND MOUNT
 BREAK-AWAY SIGNS

SHEET

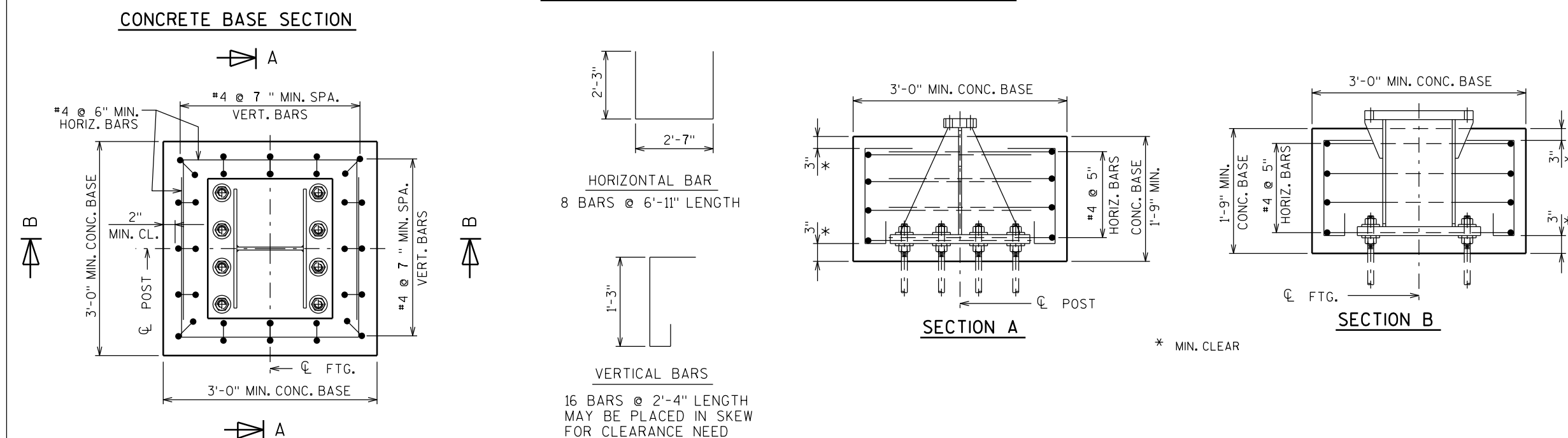
STUB AND MASONRY ANCHOR DETAILS



GENERAL NOTES

- Quantities per Base:
 - REINFORCING BAR STEEL = 62 LBS
 - CONCRETE = 0.6 C.Y.
 - STEEL WEIGHT = 335 LBS
- All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
- If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS



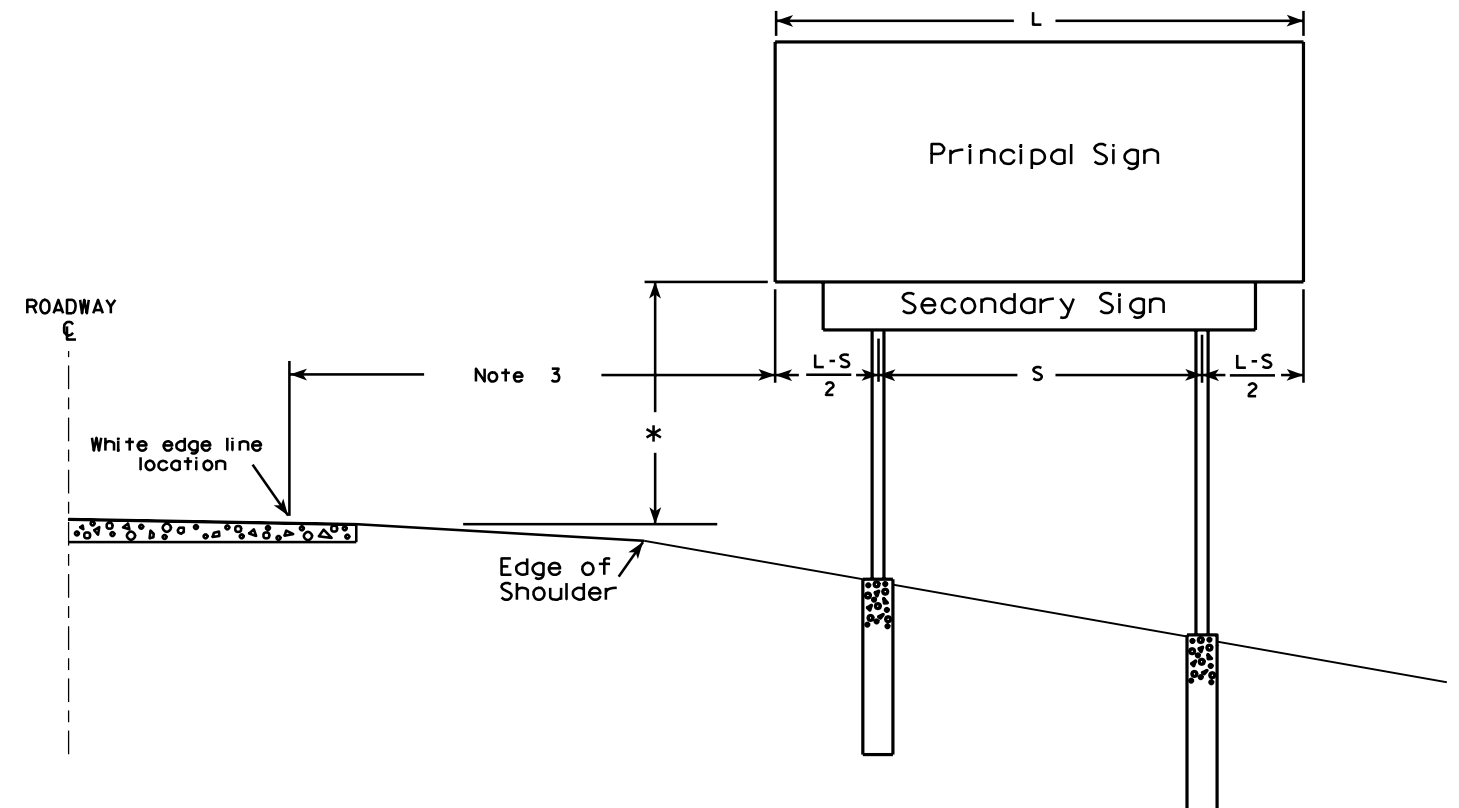
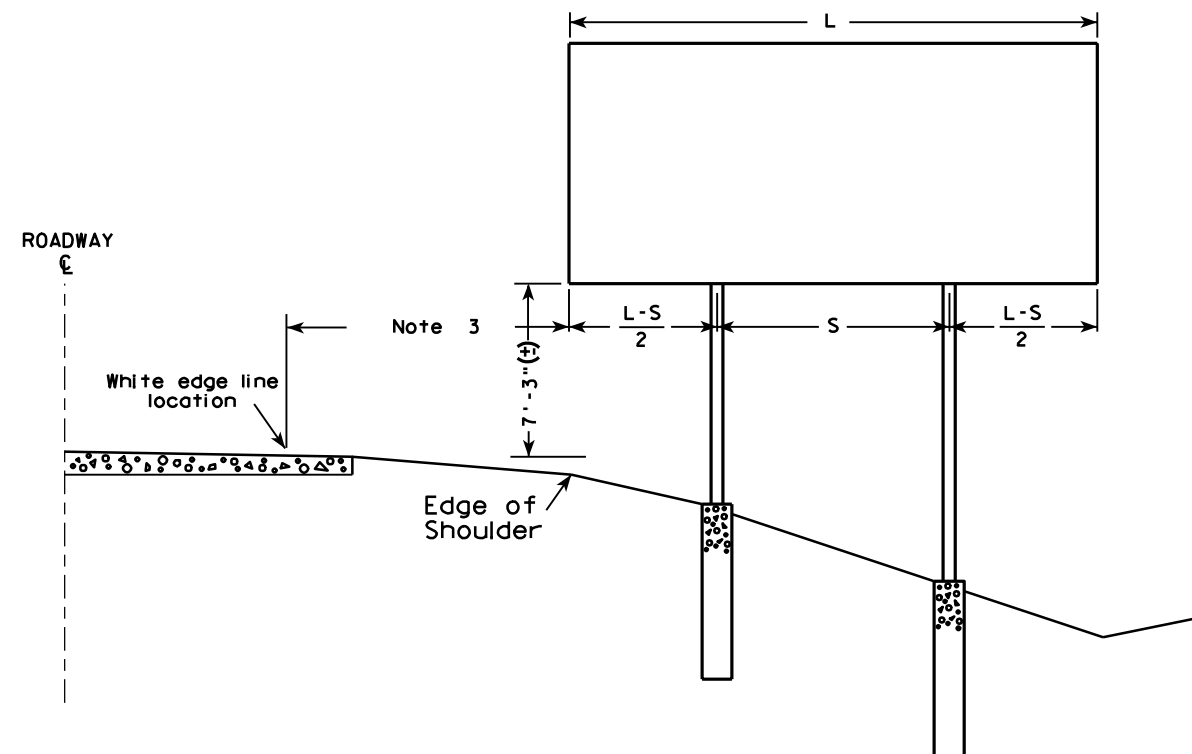
ALTERNATE BREAK-AWAY
BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

For State Traffic Engineer

DATE 2/06/2014 PLATE NO. A3-1M.1



GENERAL NOTES

1. For a 2 post installation, S equals $3L/5$, but shall not be less than 9 ft.
2. For a 3 post installation, S equals $5L/7$, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3" (±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 4/02/08

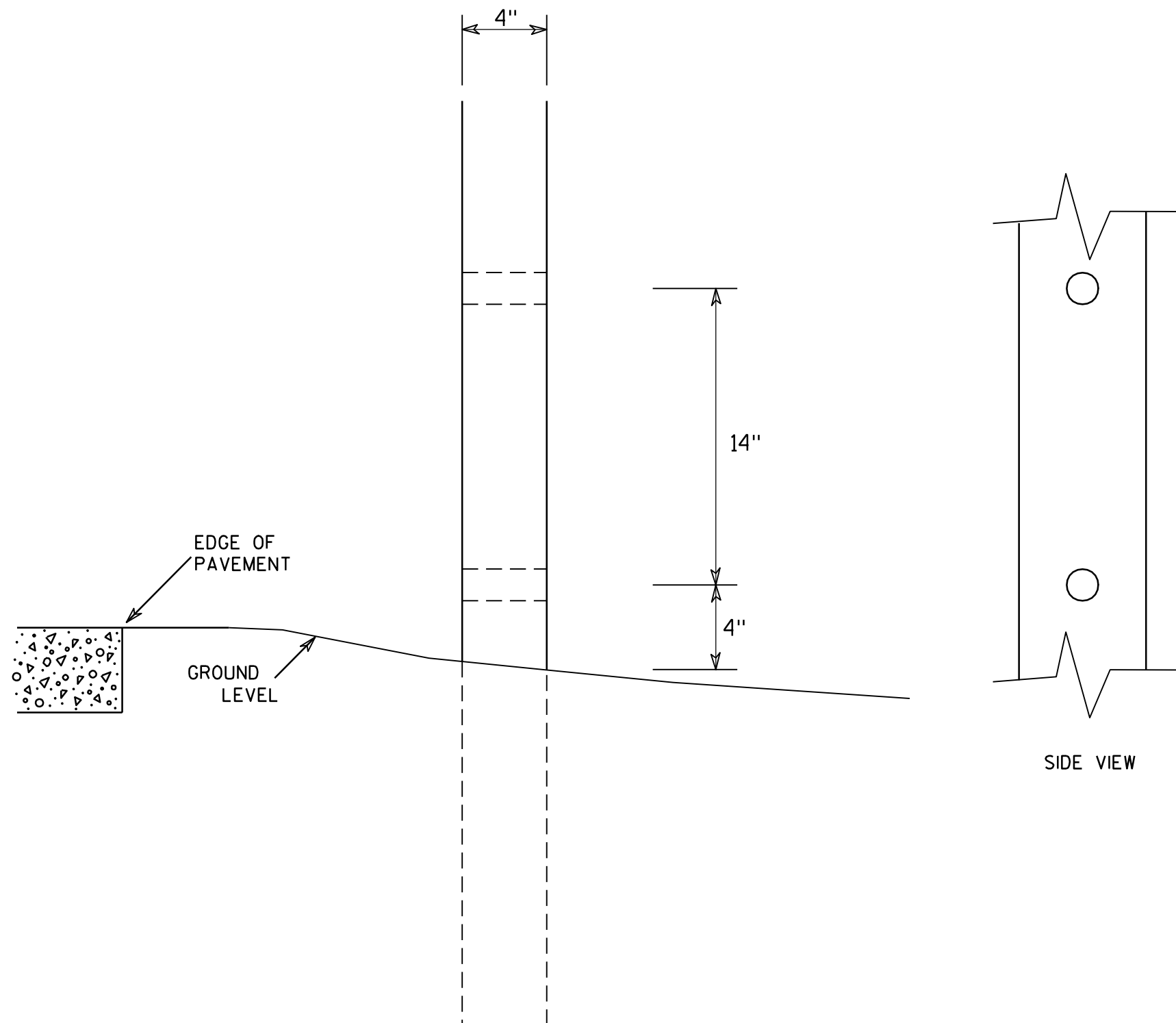
PLATE NO. A4-1.9

PROJECT NO:

SHEET NO:

E

7



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

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

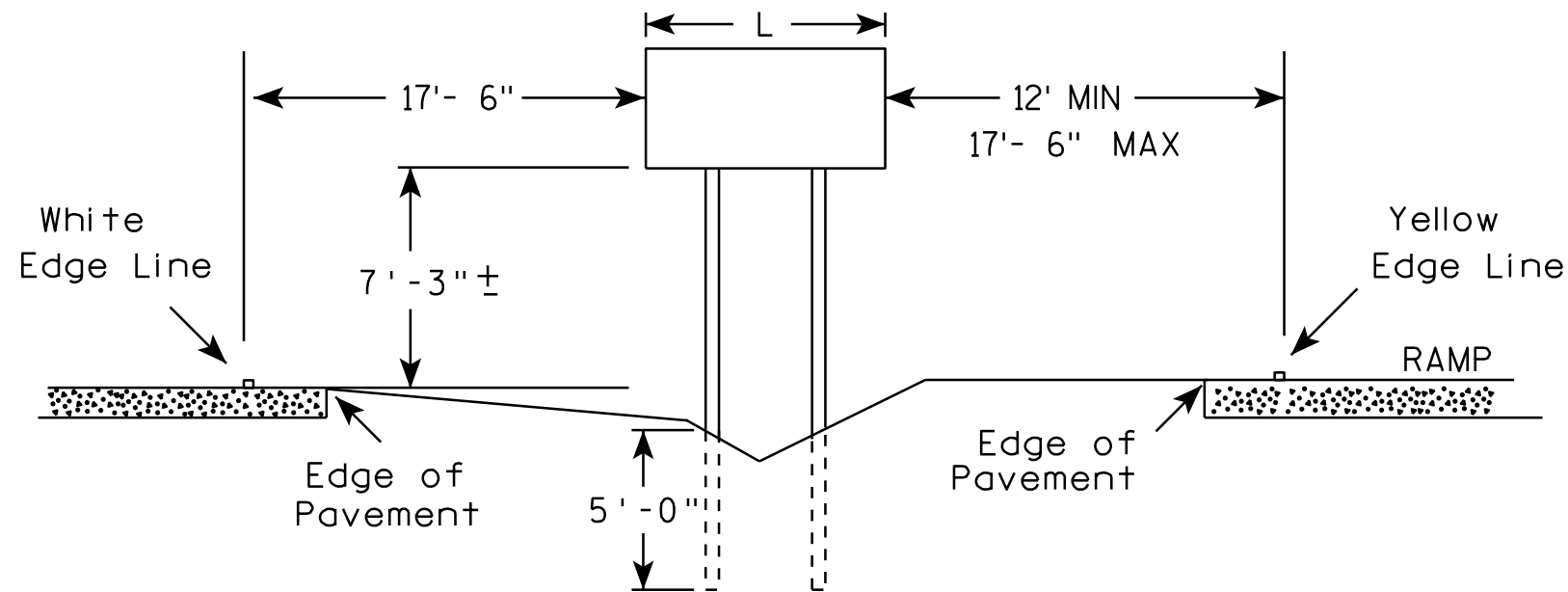
PROJECT NO:

HWY:

COUNTY:

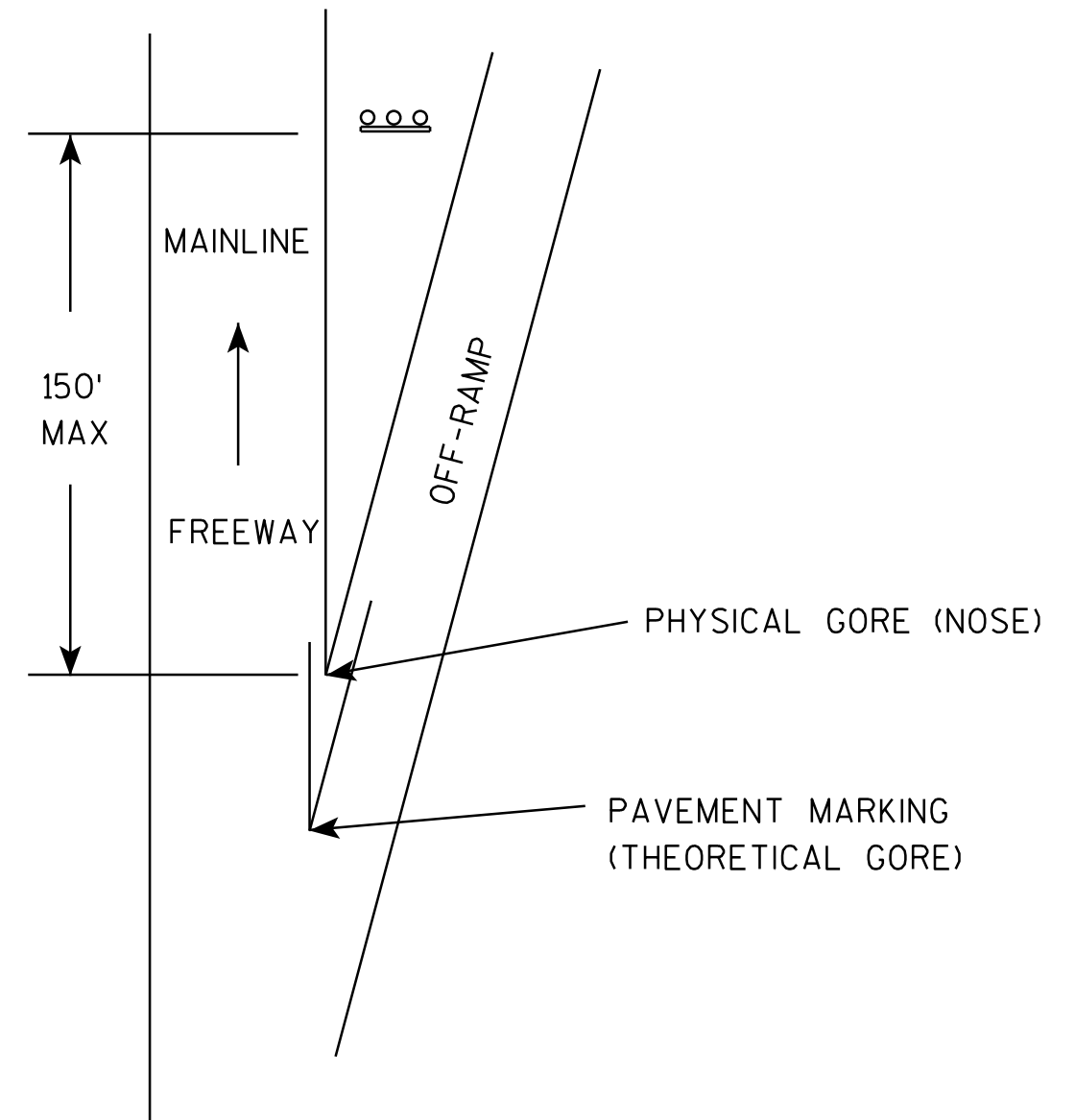
SHEET NO:

E



GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The ($\pm$) tolerance for the mounting height is 3 inches.



TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

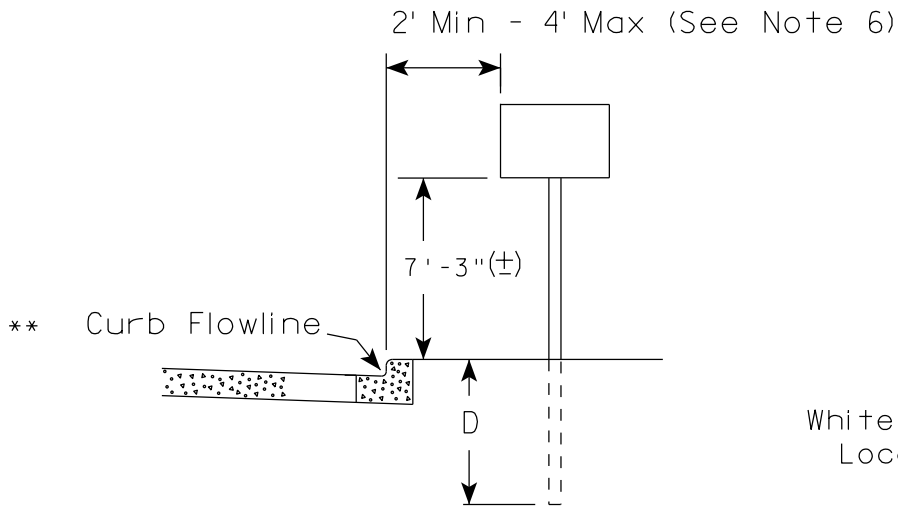
DATE 2/06/14 PLATE NO. A4-2.3

PROJECT NO:

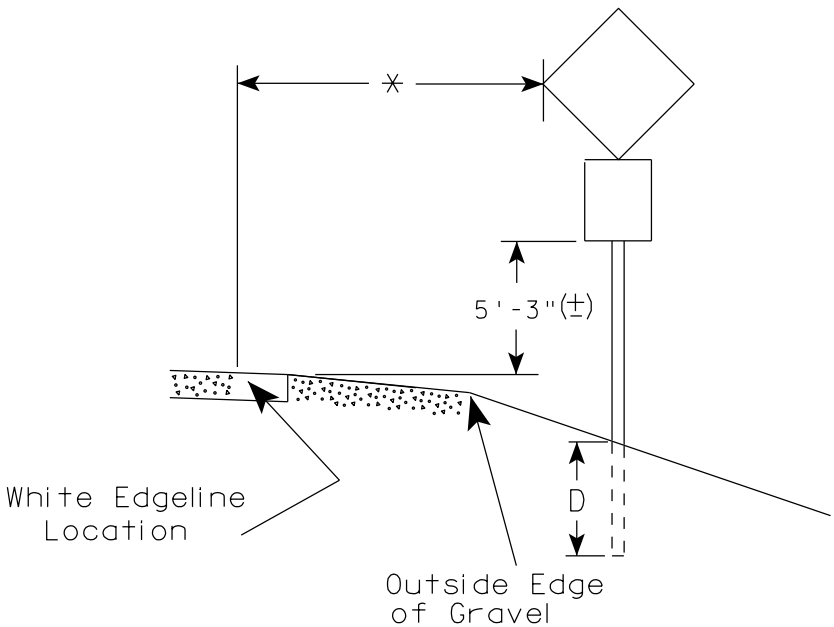
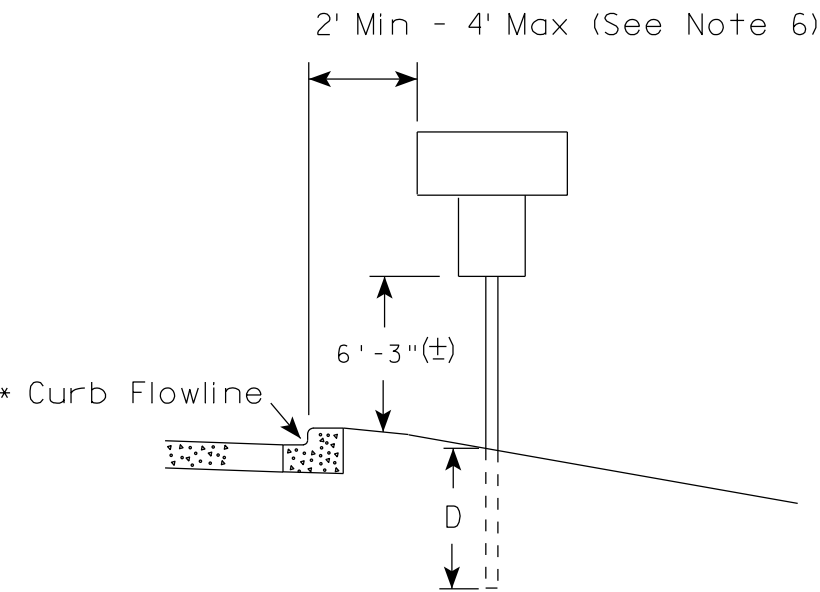
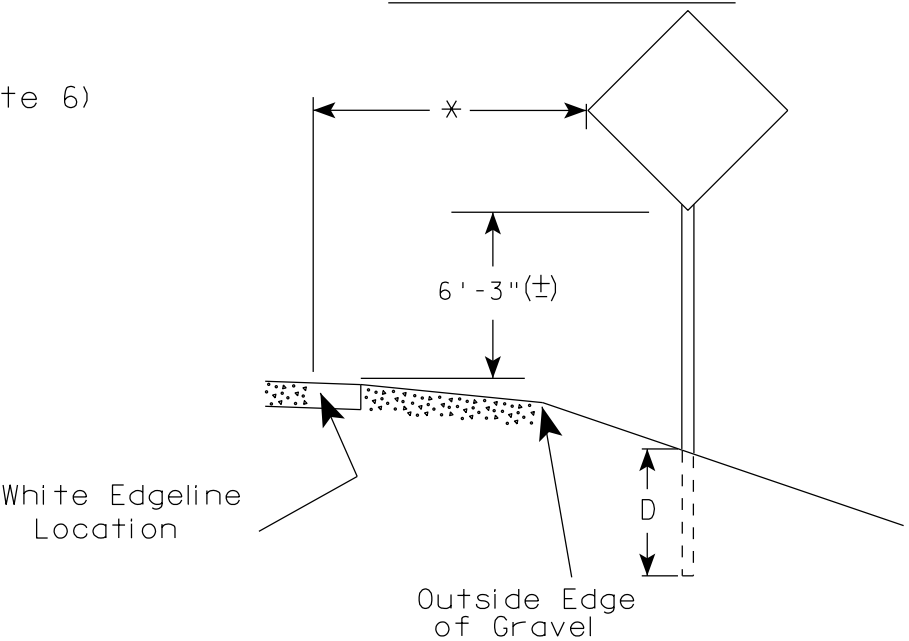
SHEET NO:

E

URBAN AREA



RURAL AREA (See Note 2)



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'

×× 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.

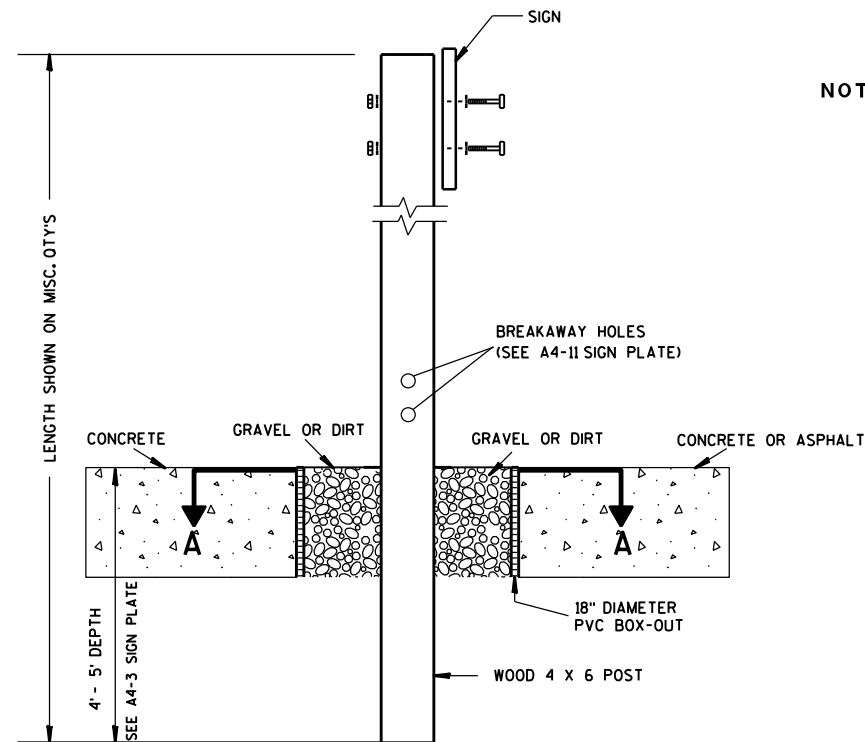
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

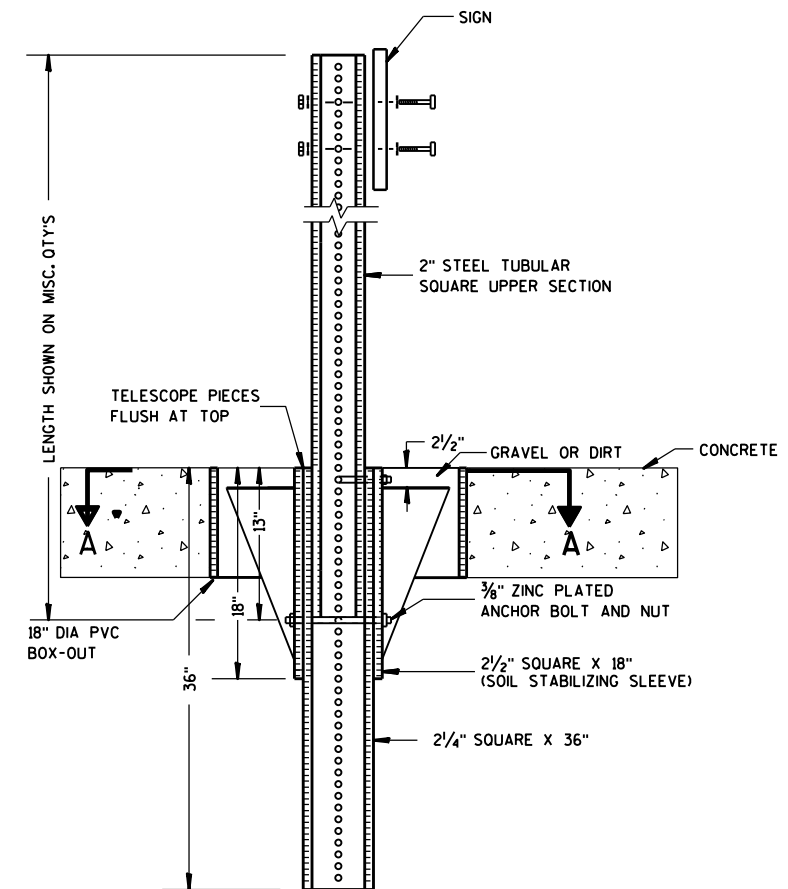
DATE 9/30/13 PLATE NO. A4-3.18



ELEVATION VIEW

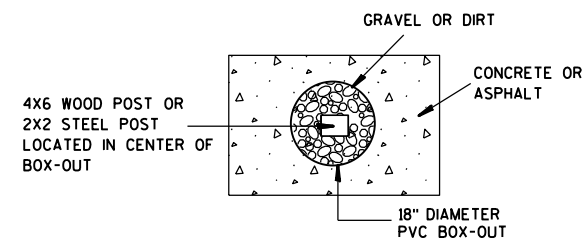
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

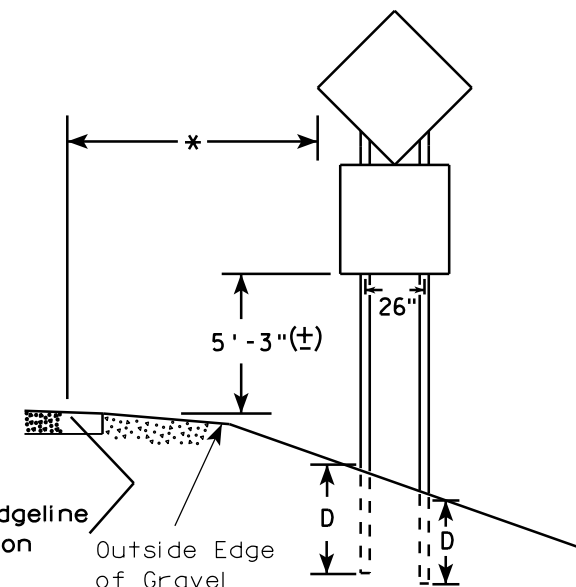
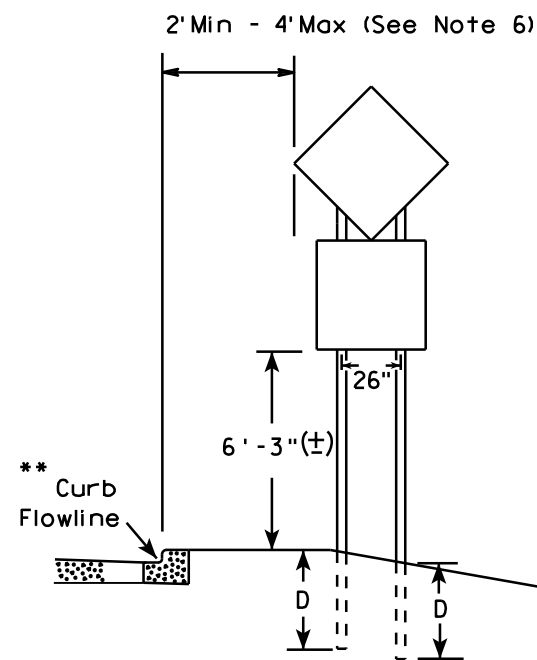
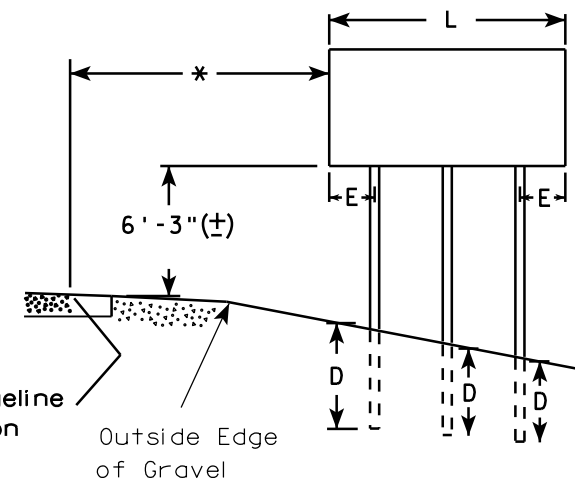
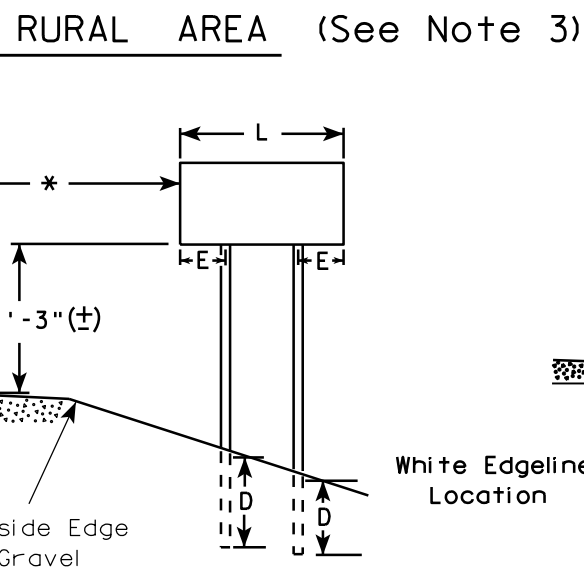
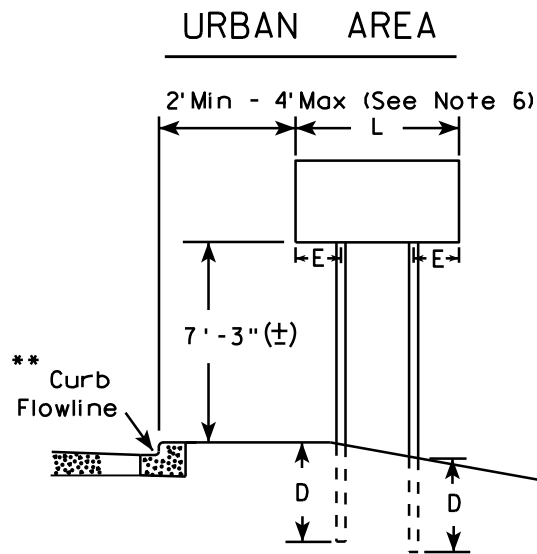
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



48" DIAMOND WARNING SIGN

48" DIAMOND WARNING SIGN

- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. 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), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

* 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.

** 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.

*** See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

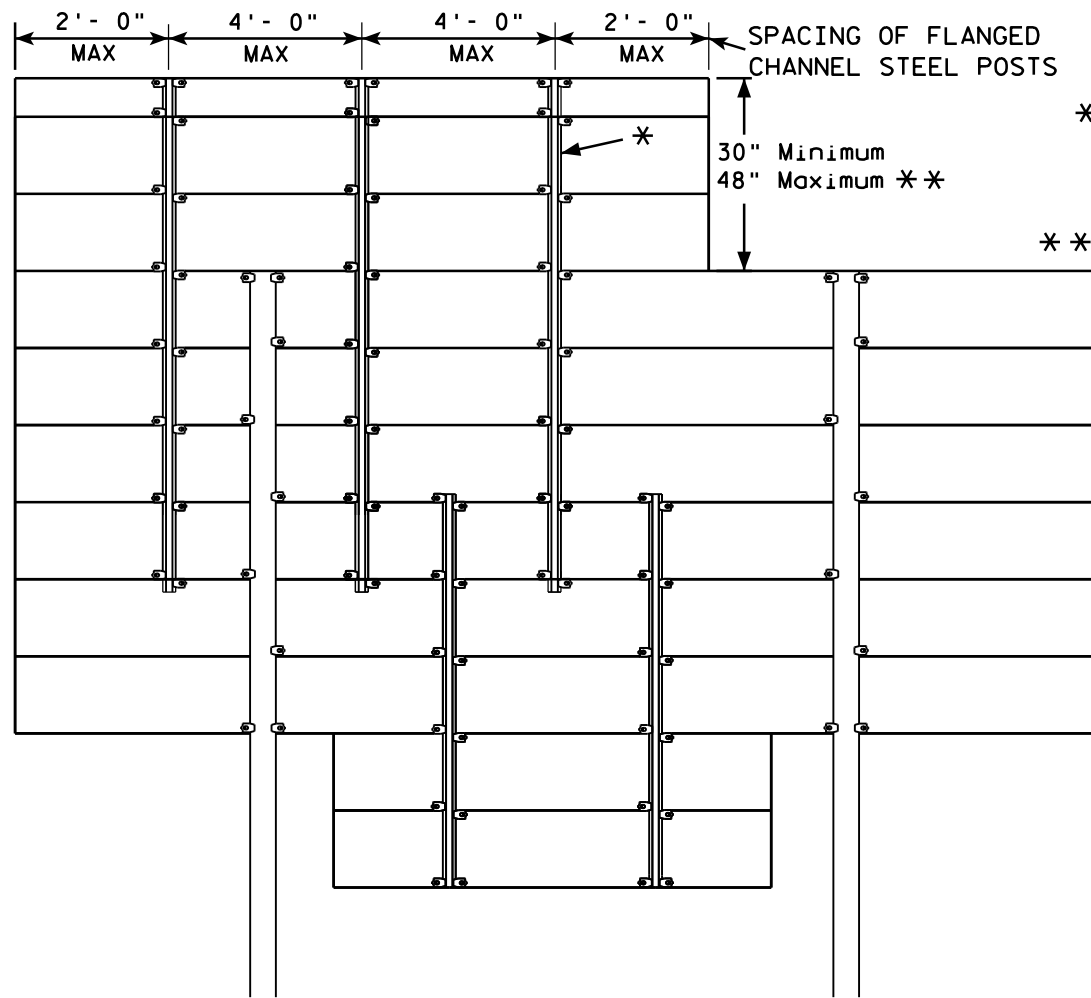
TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/29/14 PLATE NO. A4-4.13

GROUND MOUNTED SIGN

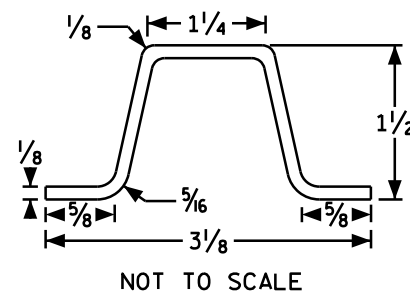


* = 2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

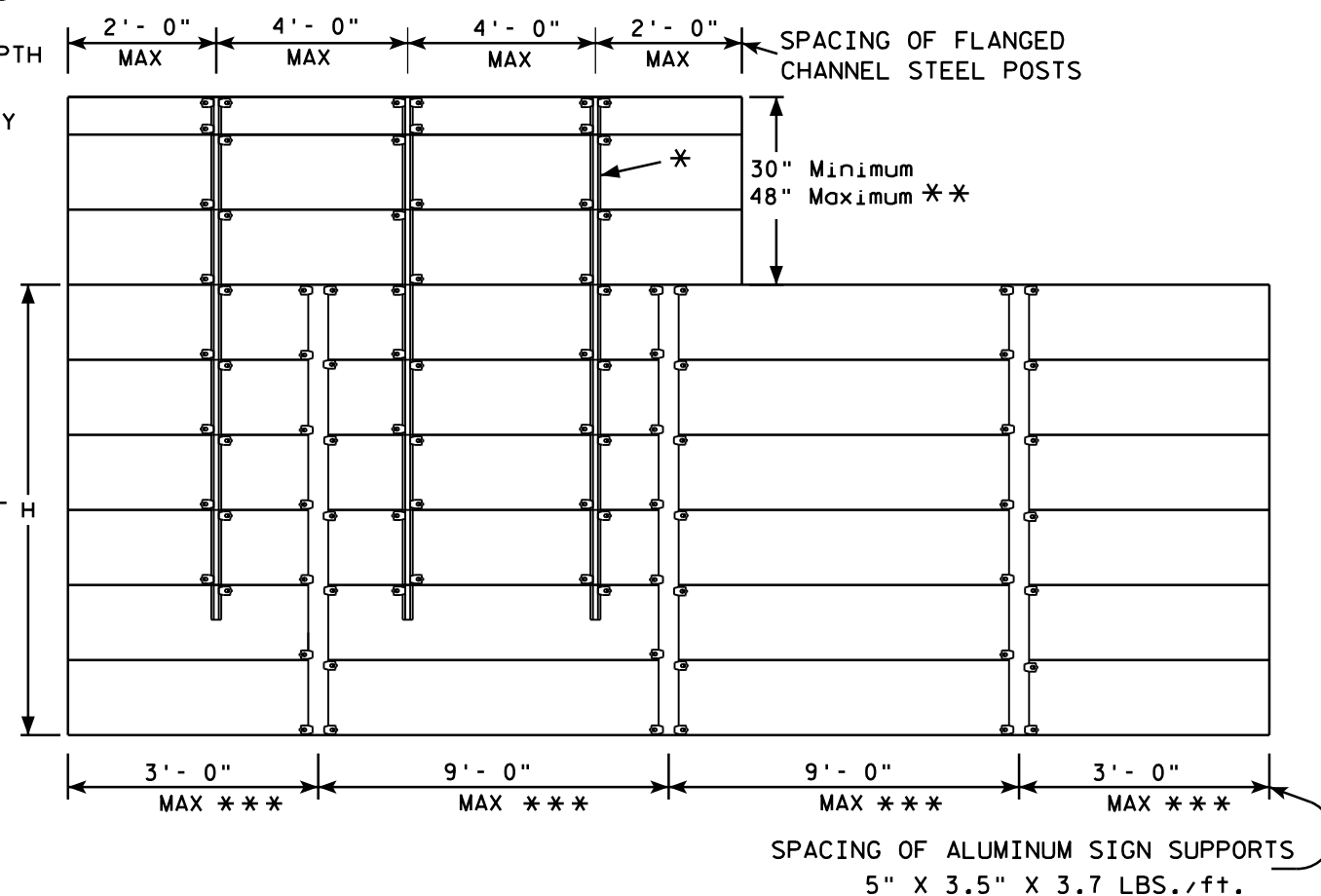
** = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:
PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
PANEL LENGTH 9'-0" - 12'-0" = 3 CHANNELS
PANEL LENGTH 13'-0" OR MORE = 4 CHANNELS
If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

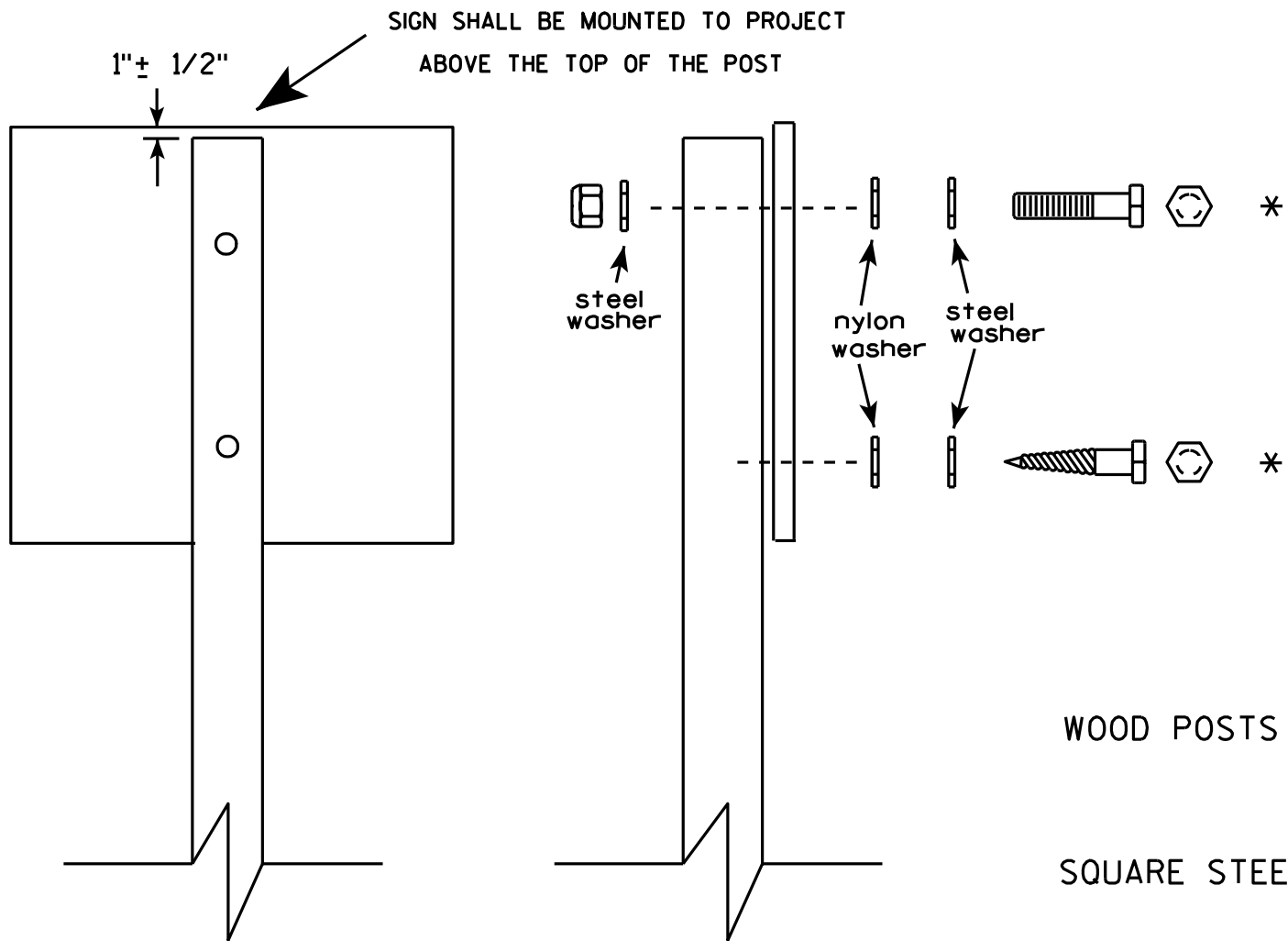
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/05/13 PLATE NO. A4-6.12

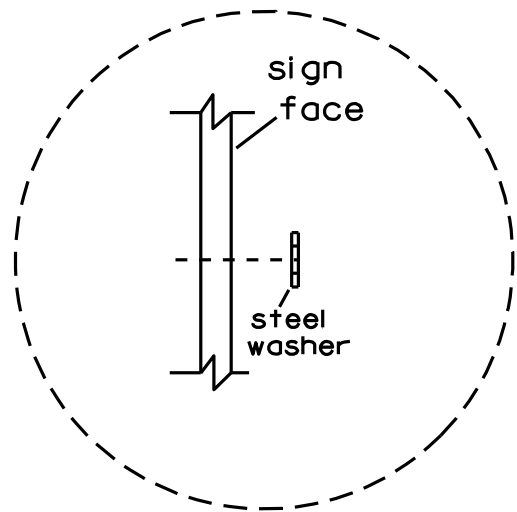


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.



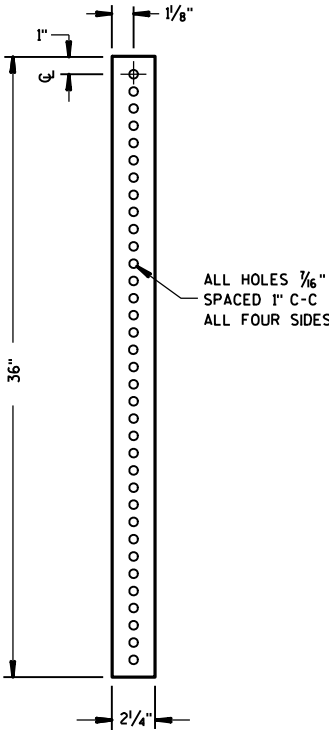
Washer Placement when Sign Has Other Than Type H or Type F Face

* 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.

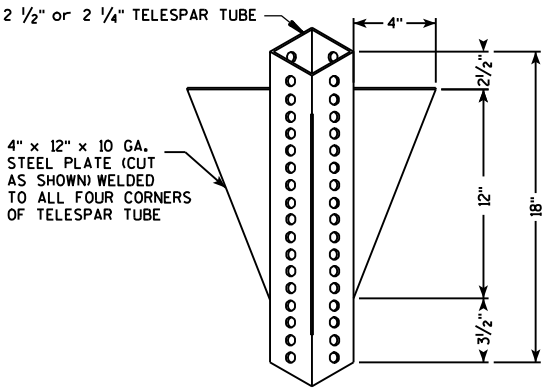
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

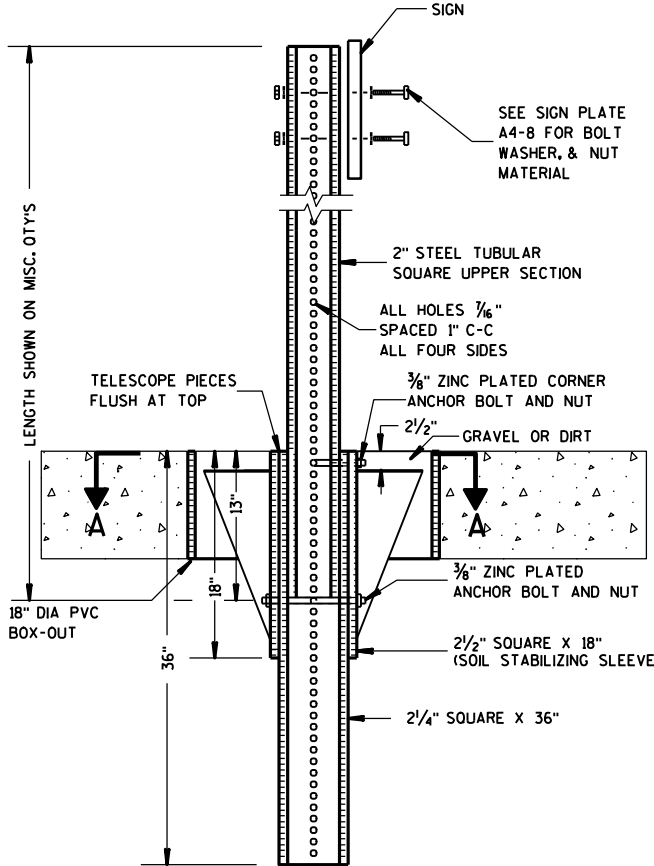
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



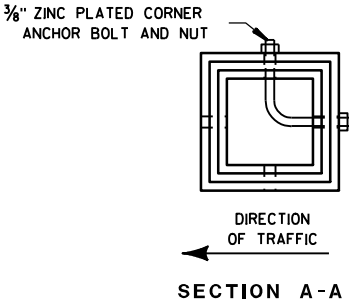
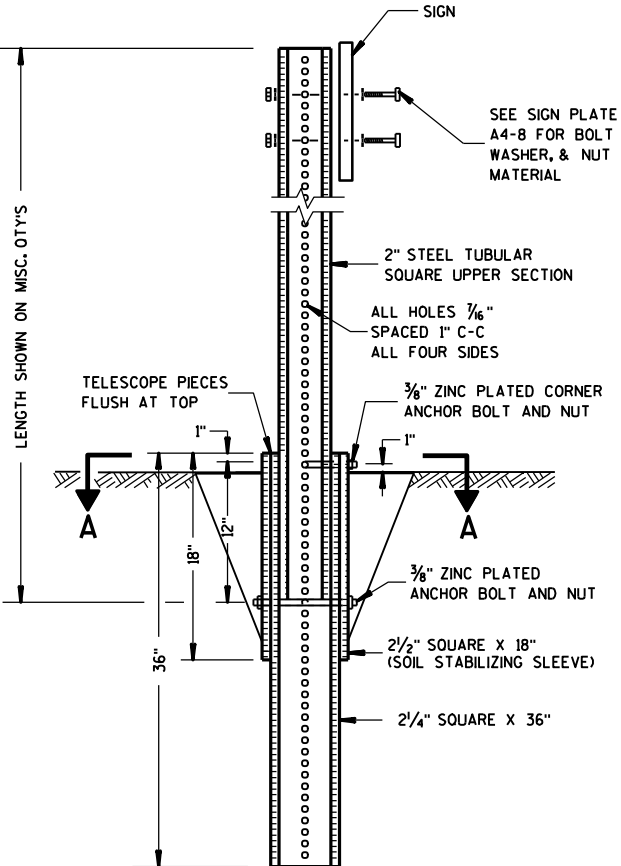
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)



Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

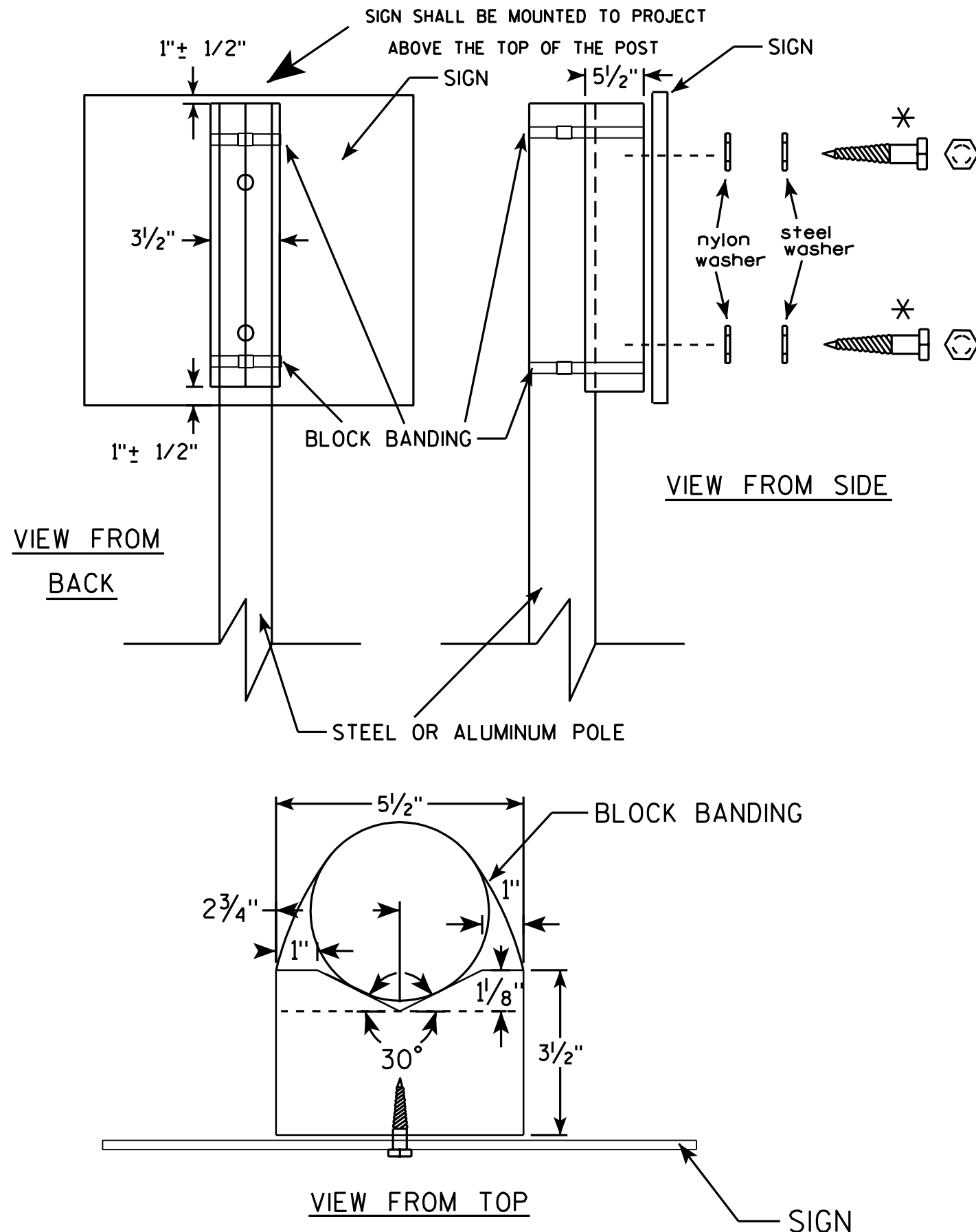
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7



GENERAL NOTES

1. WOOD 4"x6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

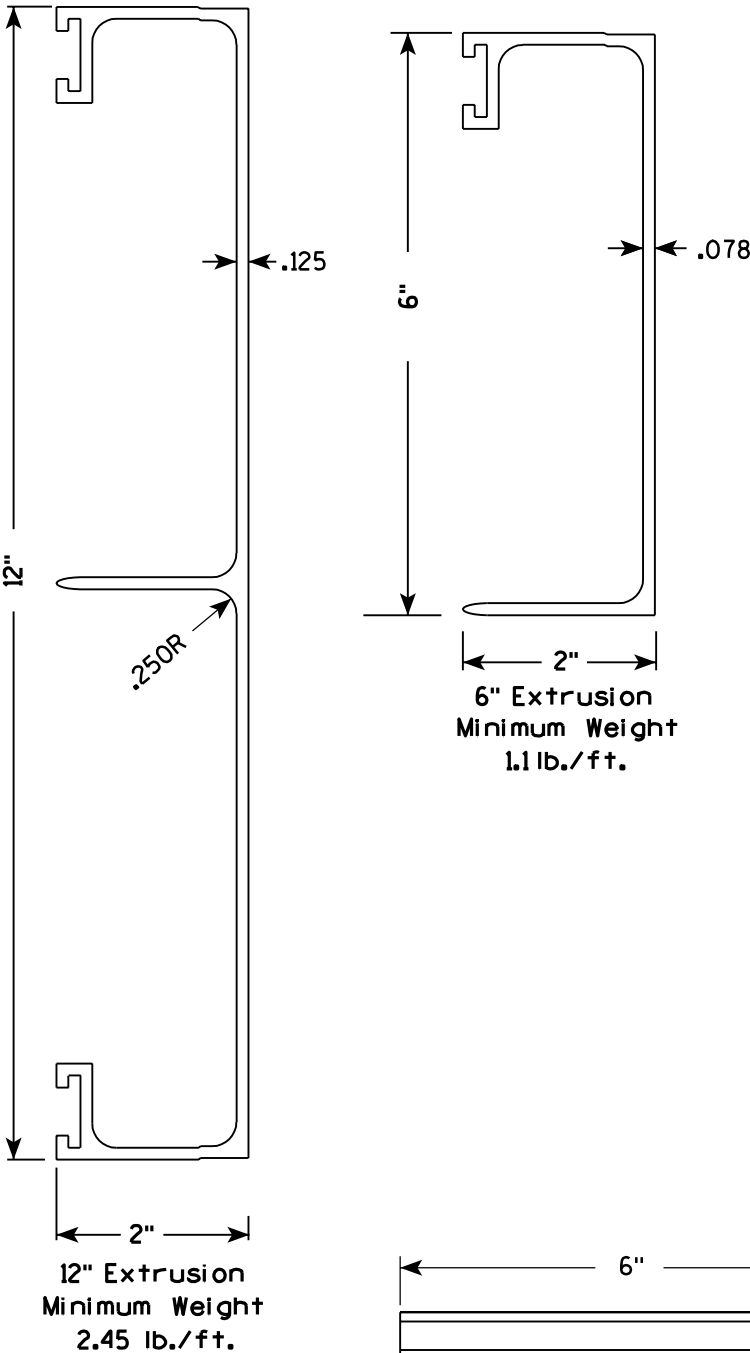
PROJECT NO:

SHEET NO:

E

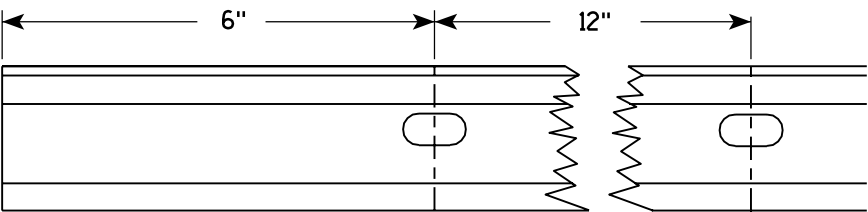
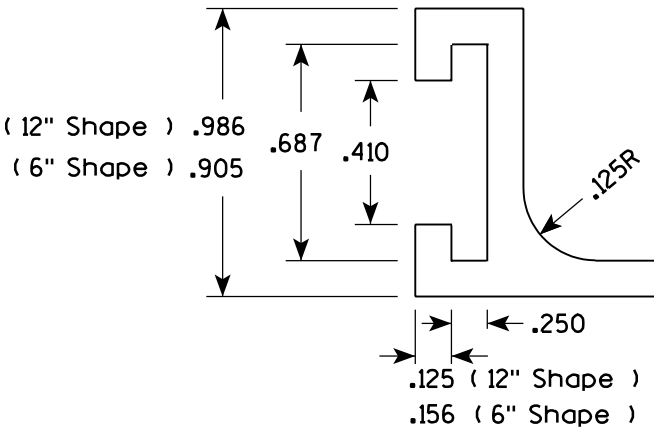
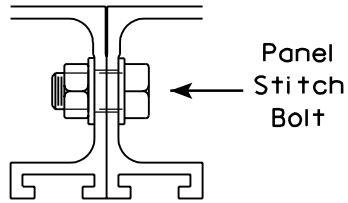
Extruded Shape

Hardware

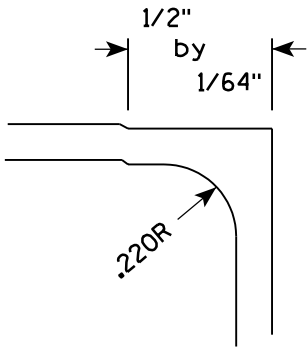


STITCH BOLT, WASHER & NUT

The hardware includes:
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy

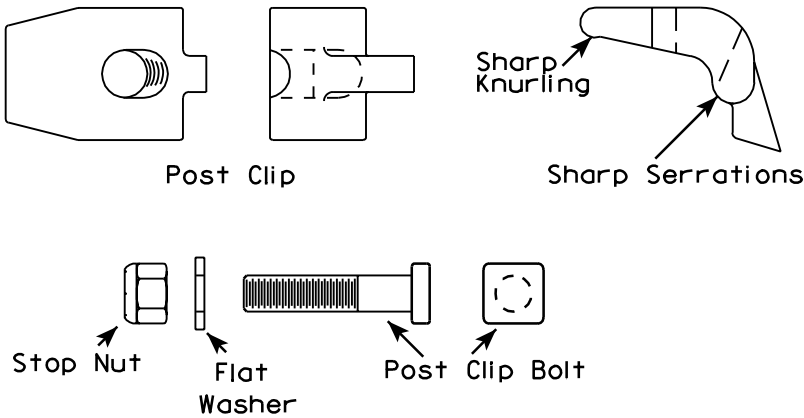


Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.



NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR
TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Chester J. Spang*
for State Traffic Engineer
DATE 11/18/99 PLATE NO. A5-2.9

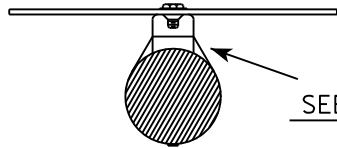
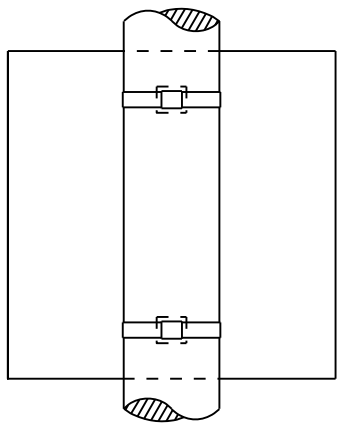
PROJECT NO:

SHEET NO:

E

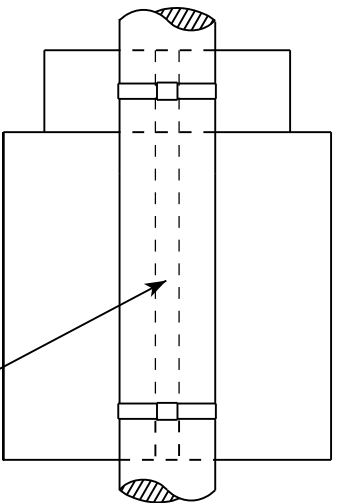
BANDING

SINGLE SIGN

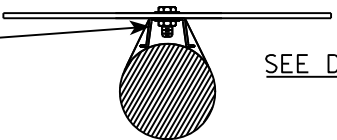


SEE DETAIL A

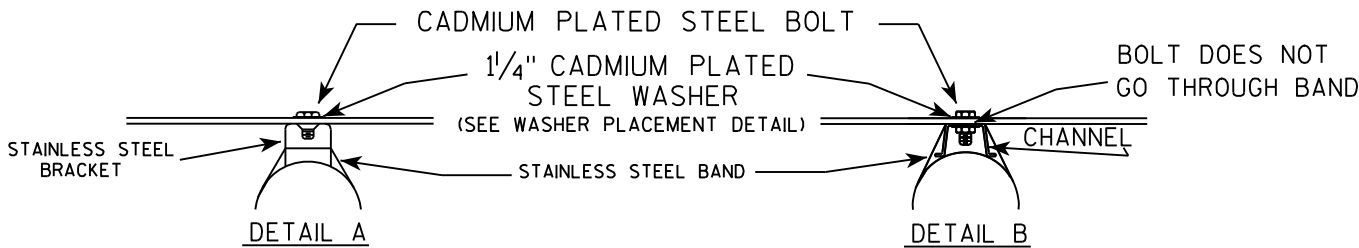
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



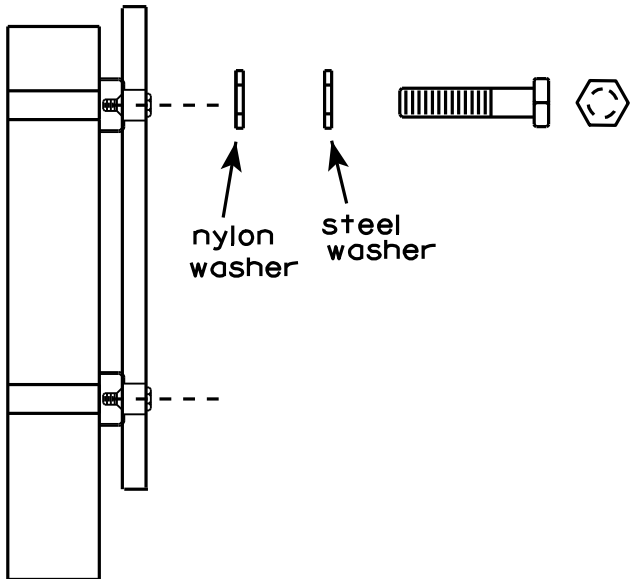
SEE DETAIL B



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



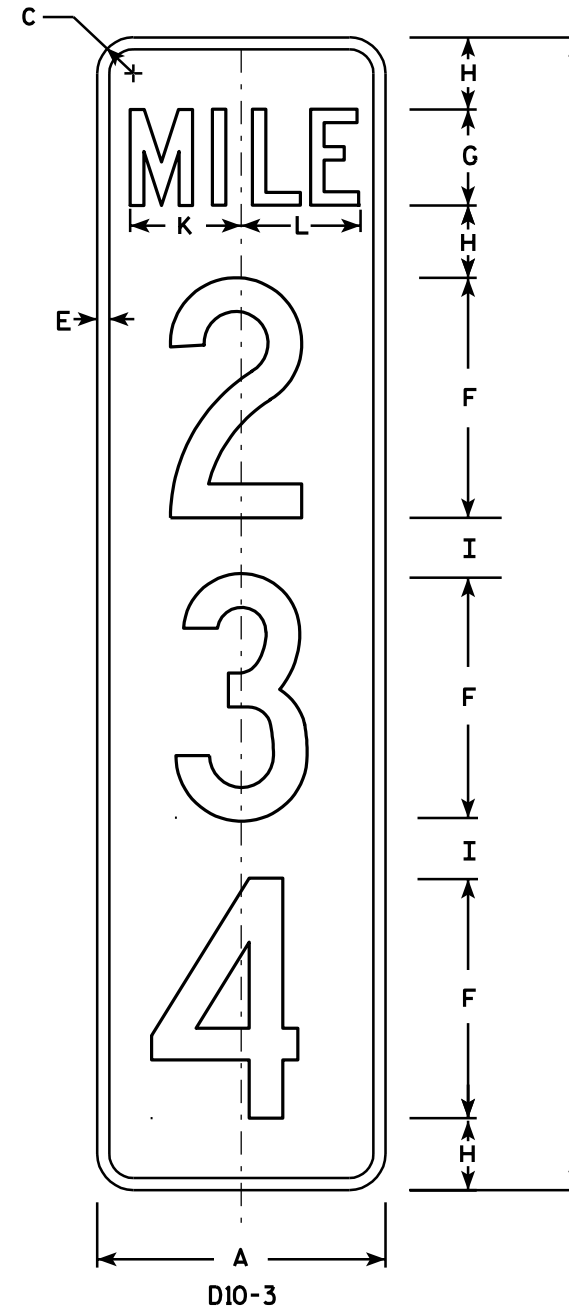
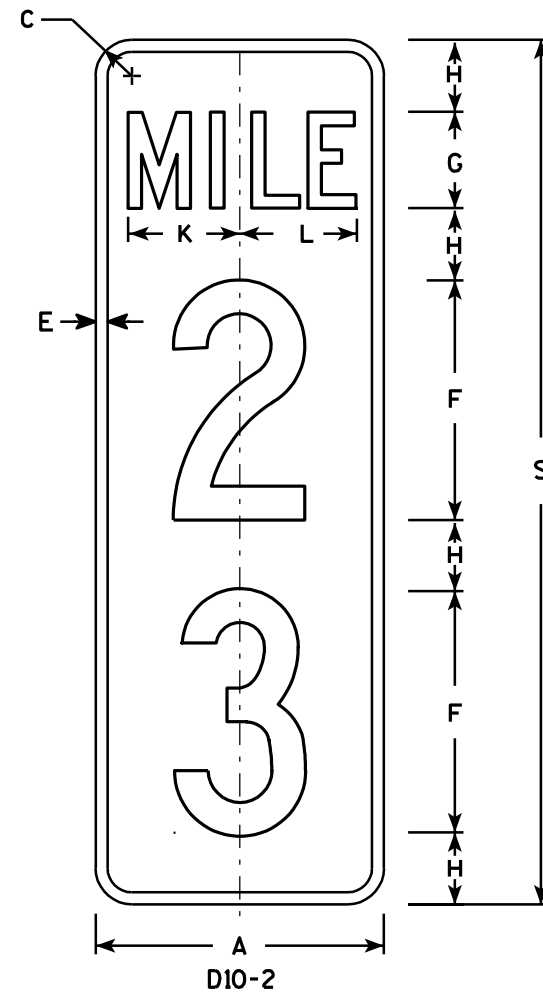
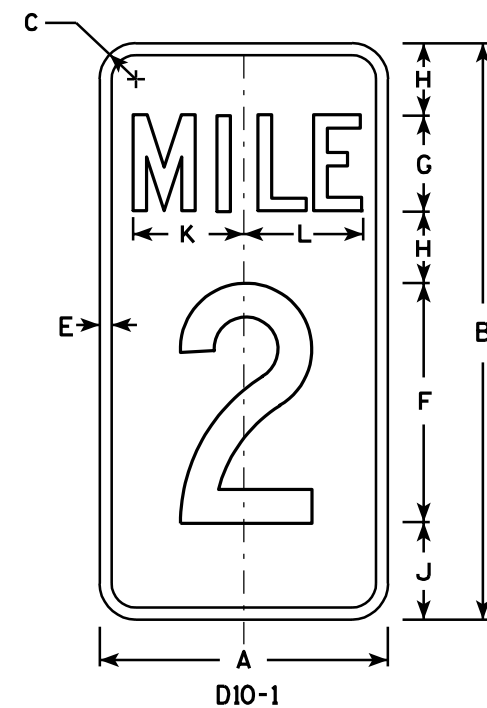
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - Green
 - Message - White - Type H Reflective
3. Message Series - C
4. 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.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

7

Metric equivalent
for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

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
1																										
2																										
3																										
4	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						
5	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m ²	Area m ²	Area m ²
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Charles J. Spang*
for Director, Office of Traffic

DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO:

E

7

Metric equivalent
for this sign is:

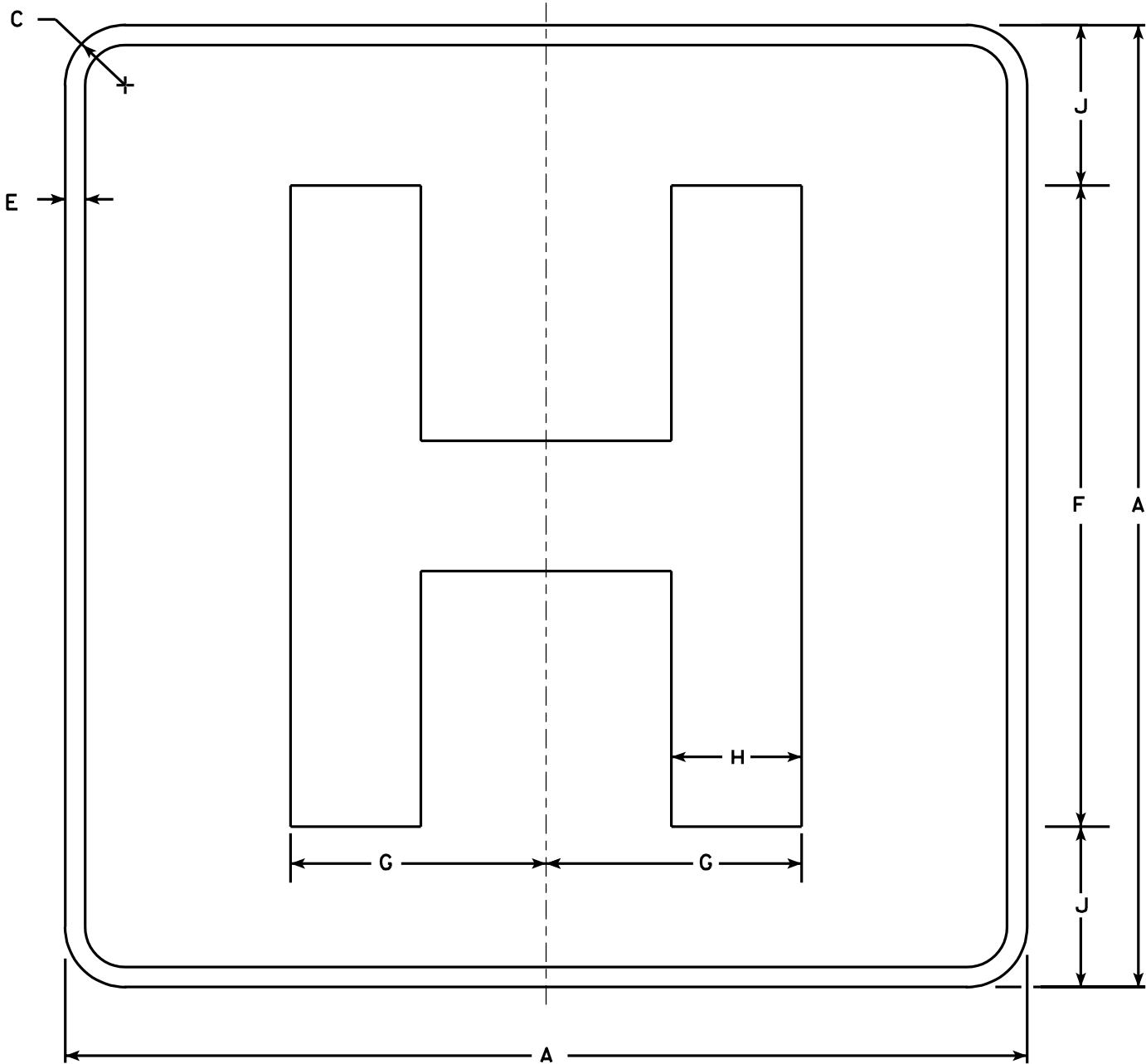
SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

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	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

PROJECT NO:

SHEET NO:

E



D9-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Blue
Message - White - Type H Reflective
3. Message Series - E Modified
4. 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.

STANDARD SIGN
D9-2

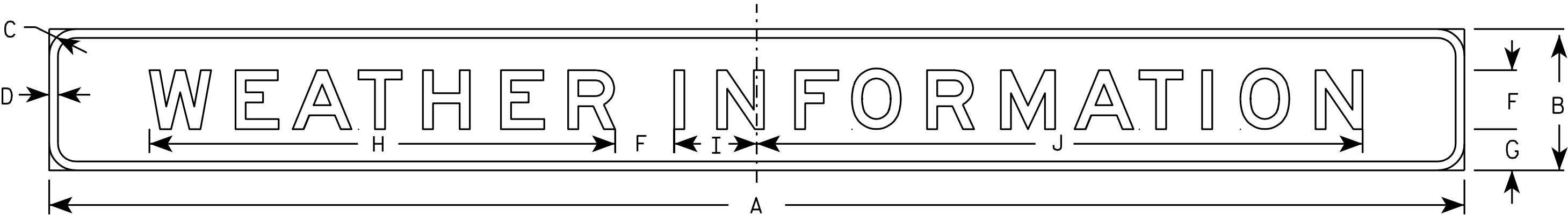
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chester J. Spang
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

NOTES

- 1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Blue
 - Message - White
- 3. Message Series - E



E10-54

7

Metric equivalent
for this sign is:

SIZE	
1	
2	
3	
4	
5	3000 mm X 300 mm

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.	Area sq.
1																												
2																												
3																												
4																												
5	120	12	2 1/4	3/4		5	3 1/2	39 1/2	7	51 3/8																	10.0	0.90

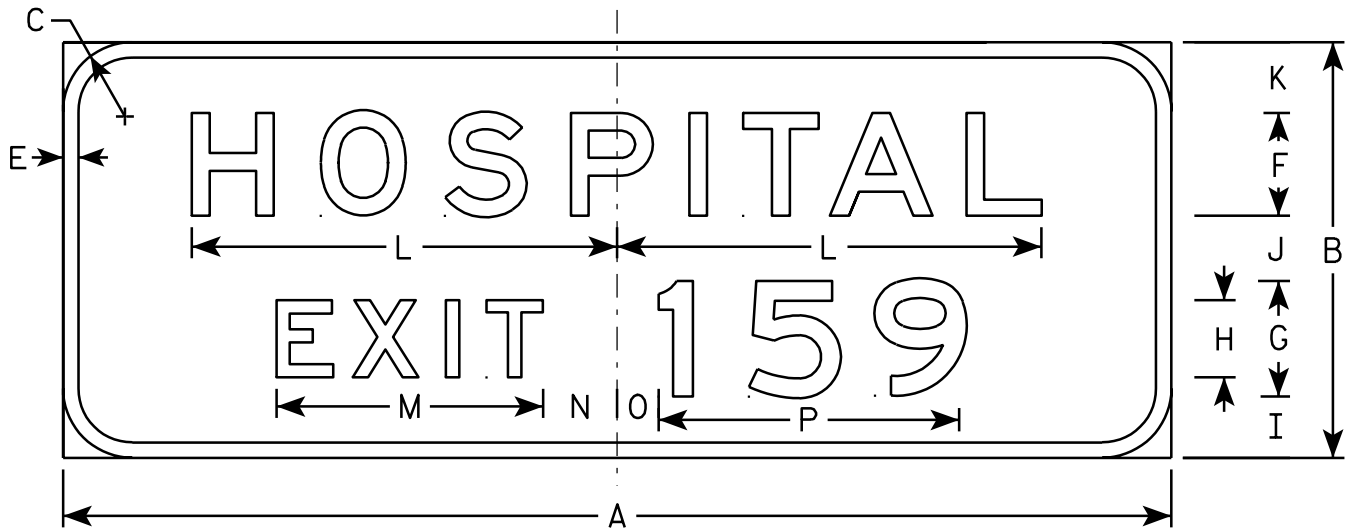
STANDARD SIGN
E10-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer
DATE 12/8/08 PLATE NO. E10-54.2

NOTES

- 1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Blue
Message - White
- 3. Message Series - E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, other than extrusions, the corners and borders shall be rounded.
- 5. Apply proper Exit Numbers and letters, optically adjust spacing to achieve proper balance.



E10-61

7

Metric equivalent
for this sign is:

SIZE	
1	
2	3600 mm X 1350 mm
3	
4	
5	

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.	Area m ²
1																												
2	144	54	9		2	13 3/8	15	10	8	8 1/2	9 1/4	55 1/4	34 5/8	9 5/8	5 3/8	39											54	4.86
3																												
4																												
5																												

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

7

TYPICAL SIGNS
E10-61

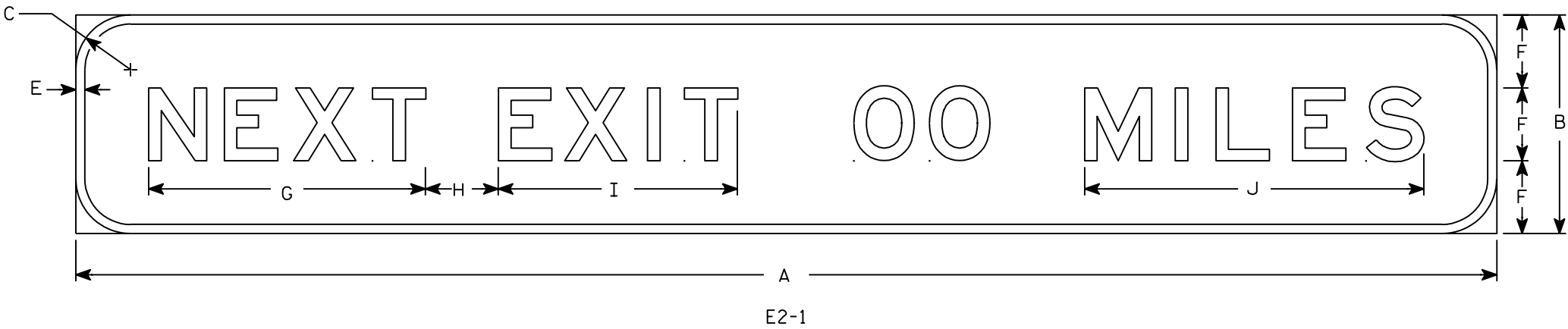
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 12/8/08 PLATE NO. E10-61.2

NOTES

- 1. Sign is Type I - Type SH Reflective
- reference WIS DOT Standard
Specification for ROAD and BRIDGE
CONSTRUCTION latest edition.
- 2. Color:
Background - Green
Message - White
- 3. Message Series - E
- 4. Substitute appropriate numerals
and adjust spacing as required
to achieve proper balance.



7

E2-1
Metric equivalent
for this sign is:

E2-1A
Metric equivalent
for this sign is:

SIZE		SIZE	
1		1	
2		2	
3		3	
4	3900 mmX 600 mm	4	2100 mm X 900 mm
5	3900 mmX 600 mm	5	2100 mm X 900 mm

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	Area sq. ft.	Area sq. ft.	Area sq. m.	Area sq. m.
1																												
2																												
3																												
4	156	24	6		1	8	30 3⁄8	8	26 1⁄4	37 1⁄4	7	6	10	9 3⁄8									84	36	26.0	21.0	2.42	1.95
5	156	24	6		1	8	30 3⁄8	8	26 1⁄4	37 1⁄4	7	6	10	9 3⁄8									84	36	26.0	21.0	2.42	1.95

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

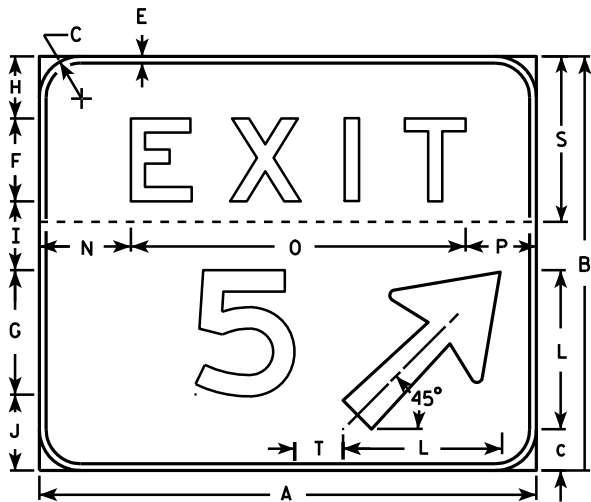
7

STANDARD SIGN
E2-1 & E2-1A

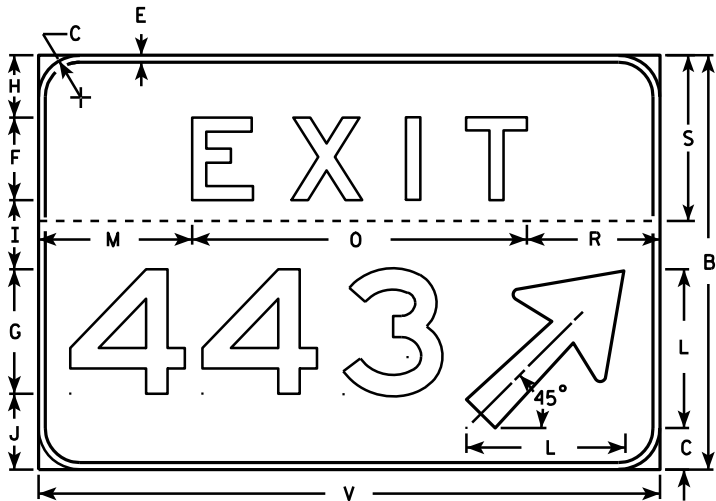
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 12/8/08 PLATE NO. E2-1.5



NOTE: T dimension shall be measured from the back of the number to the front of the arrow



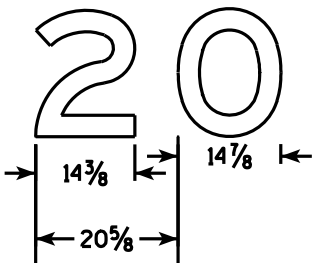
NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two separate pieces as shown on each detail by the dashed line (-----).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

EXAMPLE FOR USING SPACING CHART



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
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 ⁷ / ₈	23	22 ¹ / ₄	13 ¹ / ₄	48 ¹ / ₂	10 ¹ / ₄		19 ¹ / ₄	24	7		90		96	7 ¹ / ₂	

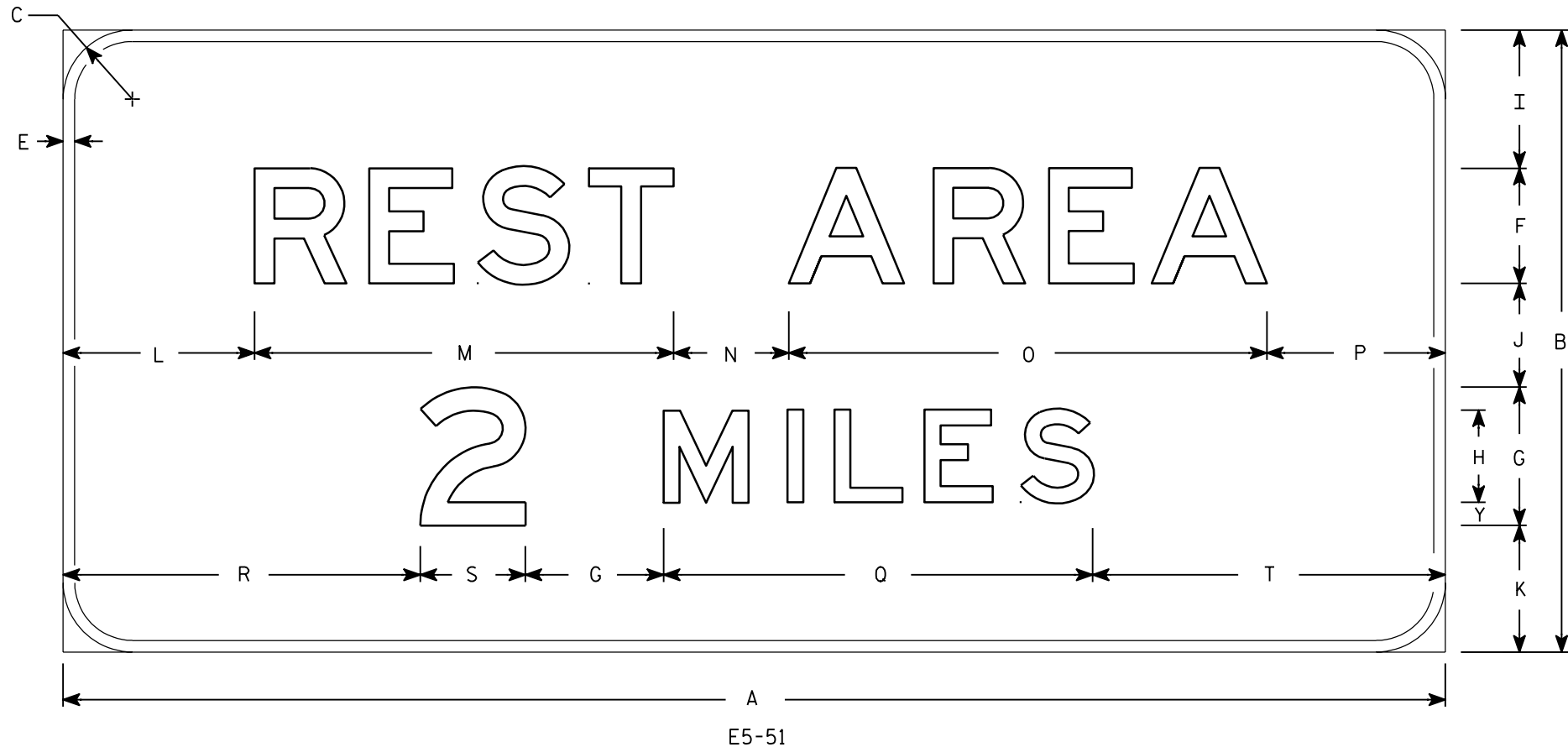
1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

STANDARD SIGN
E5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 5/11/10 PLATE NO. E5-1A.12

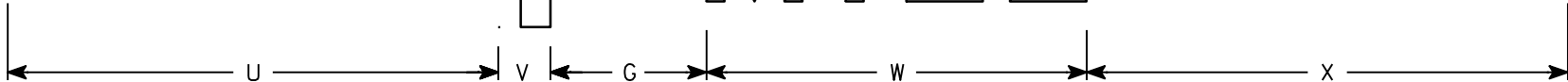
PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

- 1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Blue
 - Message - White
- 3. Message Series - E
- 4. Substitute appropriate numeral and adjust spacing to achieve proper balance.

1 MILE



Metric equivalent
for this sign is:

SIZE	
1	
2	
3	
4	3000 mm X 1350 mm
5	3600 mm X 1500 mm

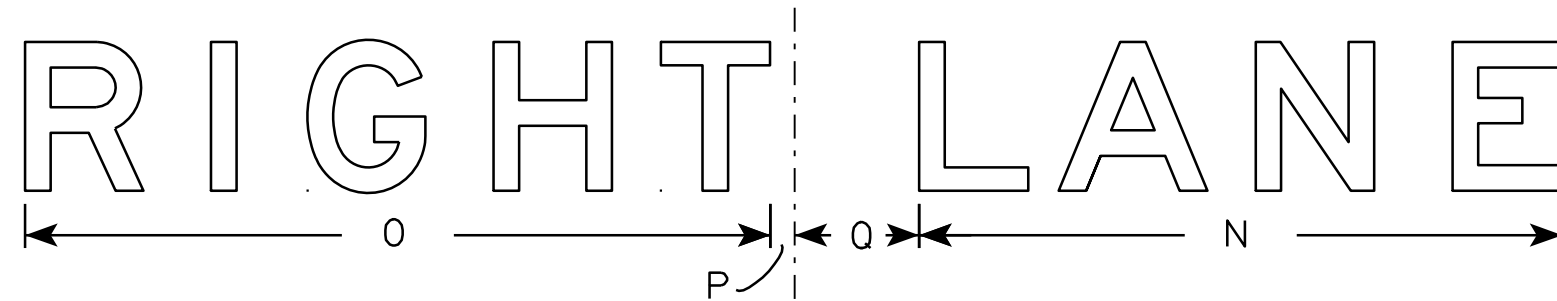
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2																												
3																												
4	120	54	6		1	10	12	8	12	9	11	16 5⁄8	36 3⁄8	10	41 1⁄2	15 1⁄2	37 1⁄4	31	9 1⁄8	30 5⁄8	37 3⁄4	4	29 1⁄4	37	2		45.0	4.05
5	144	60	6		2	12	15	10	12	10	11	19 3⁄4	44 3⁄4	12	49 1⁄2	18	46 1⁄4	36	11	35 3⁄4	44	4 7⁄8	36 1⁄4	43 7⁄8	2 1⁄2		60.0	5.40

STANDARD SIGN
E5-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

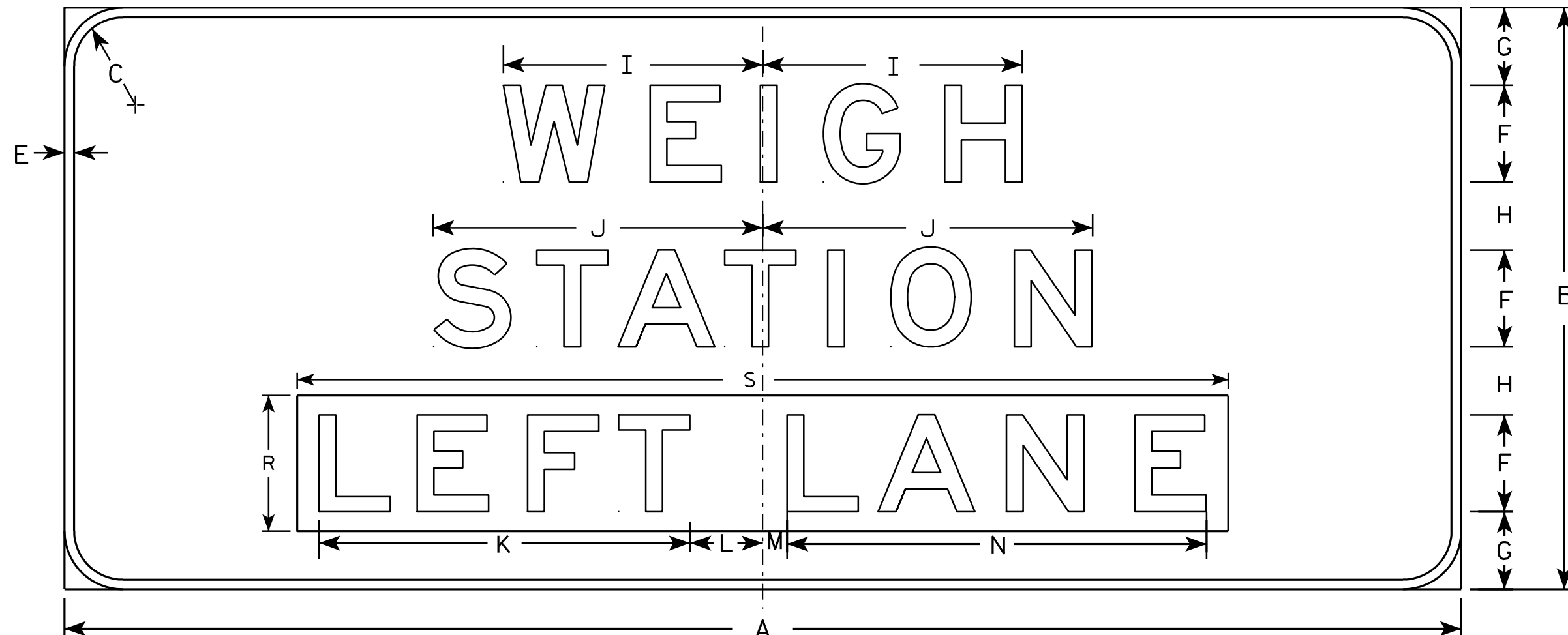
DATE 12/8/08 PLATE NO. E5-51.8



E5-57E

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E
4. LEFT LANE PLAQUE COLOR:
Background - Yellow - Type F Reflective
Message - Black
5. RIGHT LANE is on Green Background with White Message



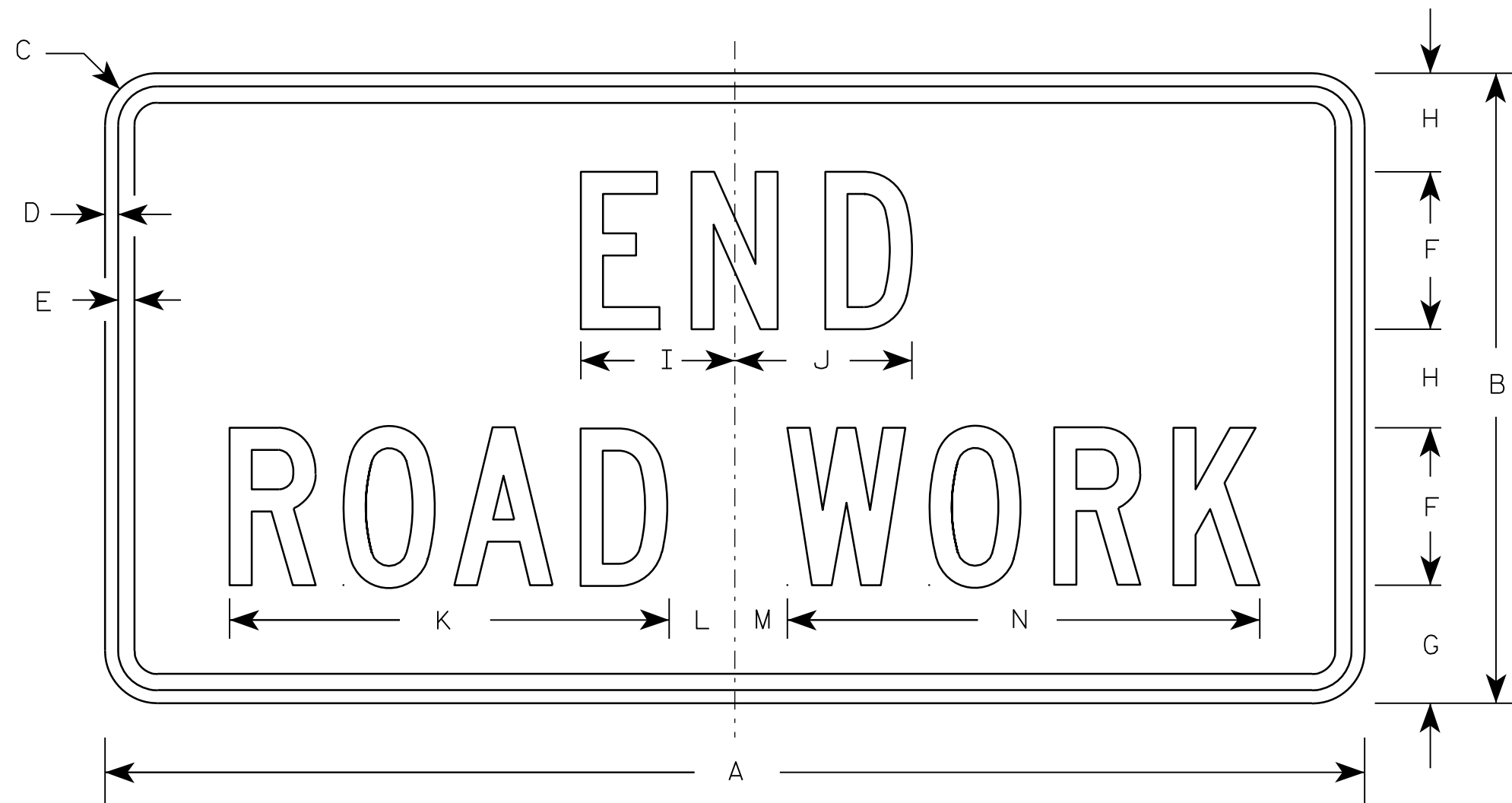
E5-57D

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																											
2																											
3																											
4	144	60	6		1	10	8	7	26 ³ / ₄	34	38 ¹ / ₄	7 ¹ / ₂	2 ¹ / ₂	43 ¹ / ₄	50 ¹ / ₈	1 ⁵ / ₈	8 ³ / ₈	14	96								60.0
5	144	60	6		1	10	8	7	26 ³ / ₄	34	38 ¹ / ₄	7 ¹ / ₂	2 ¹ / ₂	43 ¹ / ₄	50 ¹ / ₈	1 ⁵ / ₈	8 ³ / ₈	14	96								60.0

STANDARD SIGN E5-57D & E	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/5/2012	PLATE NO. E5-57D.5

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7



G20-2A

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - C
- 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.

7

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

7

Metric equivalent
for this sign is:

SIZE	
1	450 mm X 450 mm
2	600 mm X 600 mm
3	750 mm X 750 mm
4	
5	

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.	Area m2
1	18		1 1/8		3/8	15	1 1/2																			2.25	0.20	
2	24		1 1/2		1/2	20	2																			4.0	0.37	
3	30		2 1/4		3/4	25	2 1/2																			6.25	0.58	
4																												
5																												

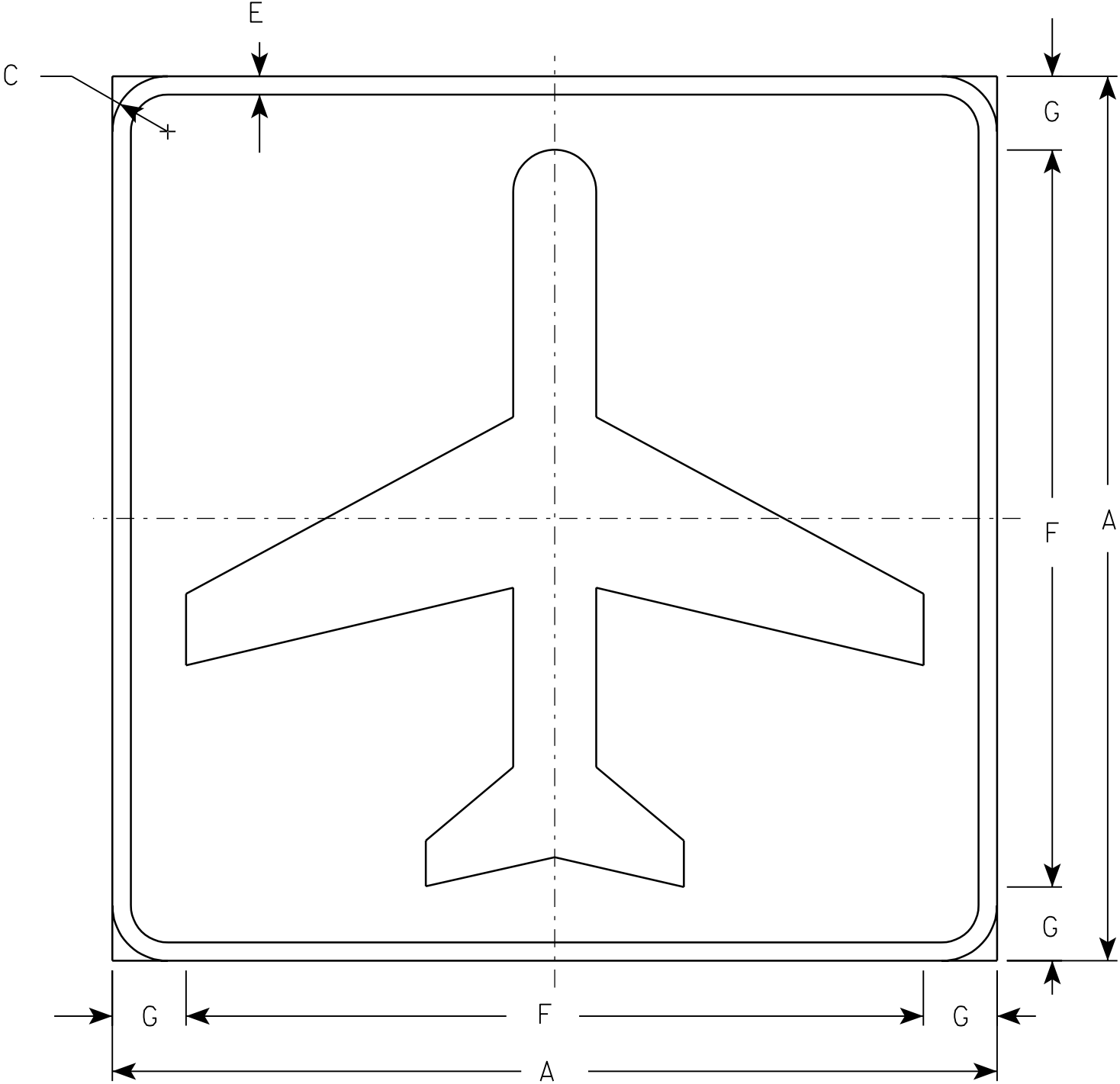
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



I5 - 1

NOTES

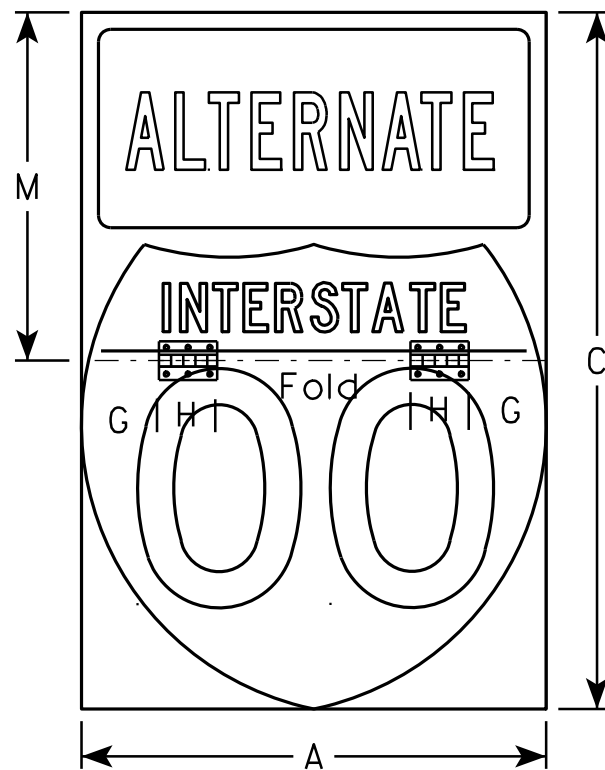
- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Green
Message - White - Type H Reflective
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

STANDARD SIGN
I5-1

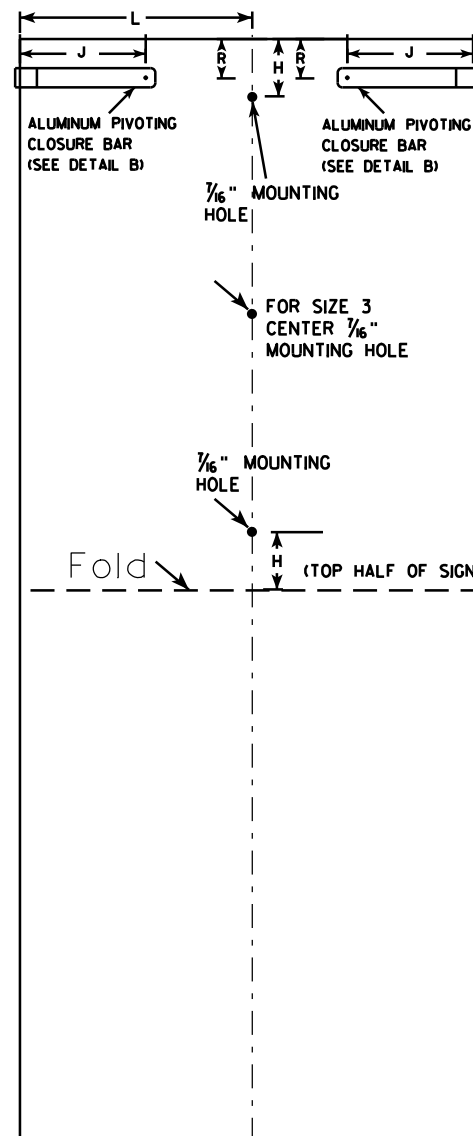
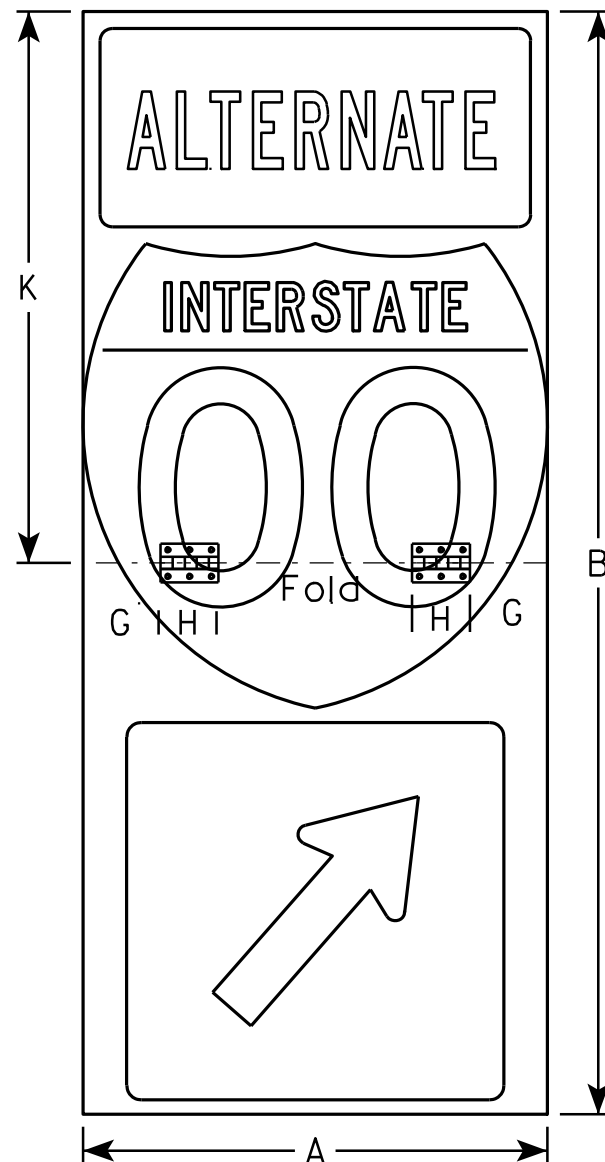
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Christa J Spang*
for State Traffic Engineer

DATE 1/25/02 PLATE NO. 15-1.3



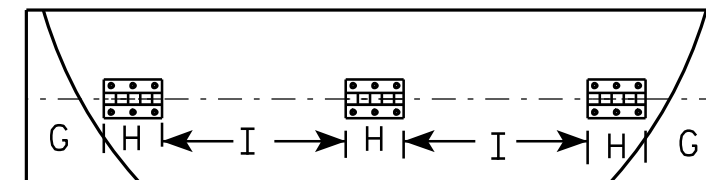
SIZE	Area sq. ft.
1	
2	6.0
3	13.5



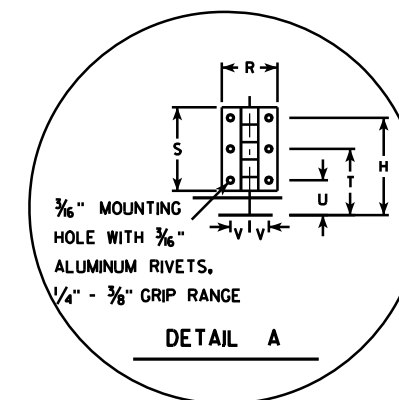
(BACK VIEW)

NOTES

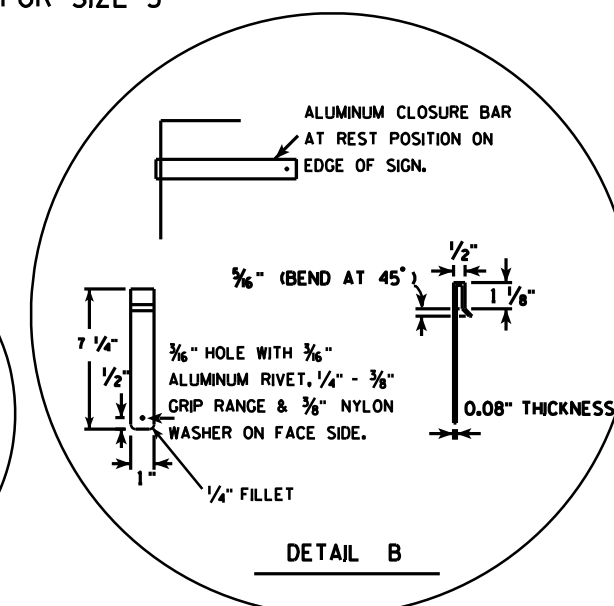
- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
 - Background - *
 - Message - *
- Message Series - C
- Sign Base Material shall be aluminum and borders shall be rounded.
- All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
- Size 3 shall have 3 hinges see detail below
 - * See Appropriate Route Shield, Cardinals, Arrow, and A2-1S Sign Plates.



HINGE PLACEMENT FOR SIZE 3



DETAIL A



DETAIL B

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																											
2	24	57	36				4	3		6 1/2	28 1/2	12	18					2	3	2 5/8	1 1/4	11/16					9.5
3	36	81	54				4	3	9 1/2	6 1/2	40 1/2	18	27					2	3	2 5/8	1 1/4	11/16					20.2
4																											
5																											

STANDARD SIGN

JV-F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/17/12 PLATE NO. JV-F.2

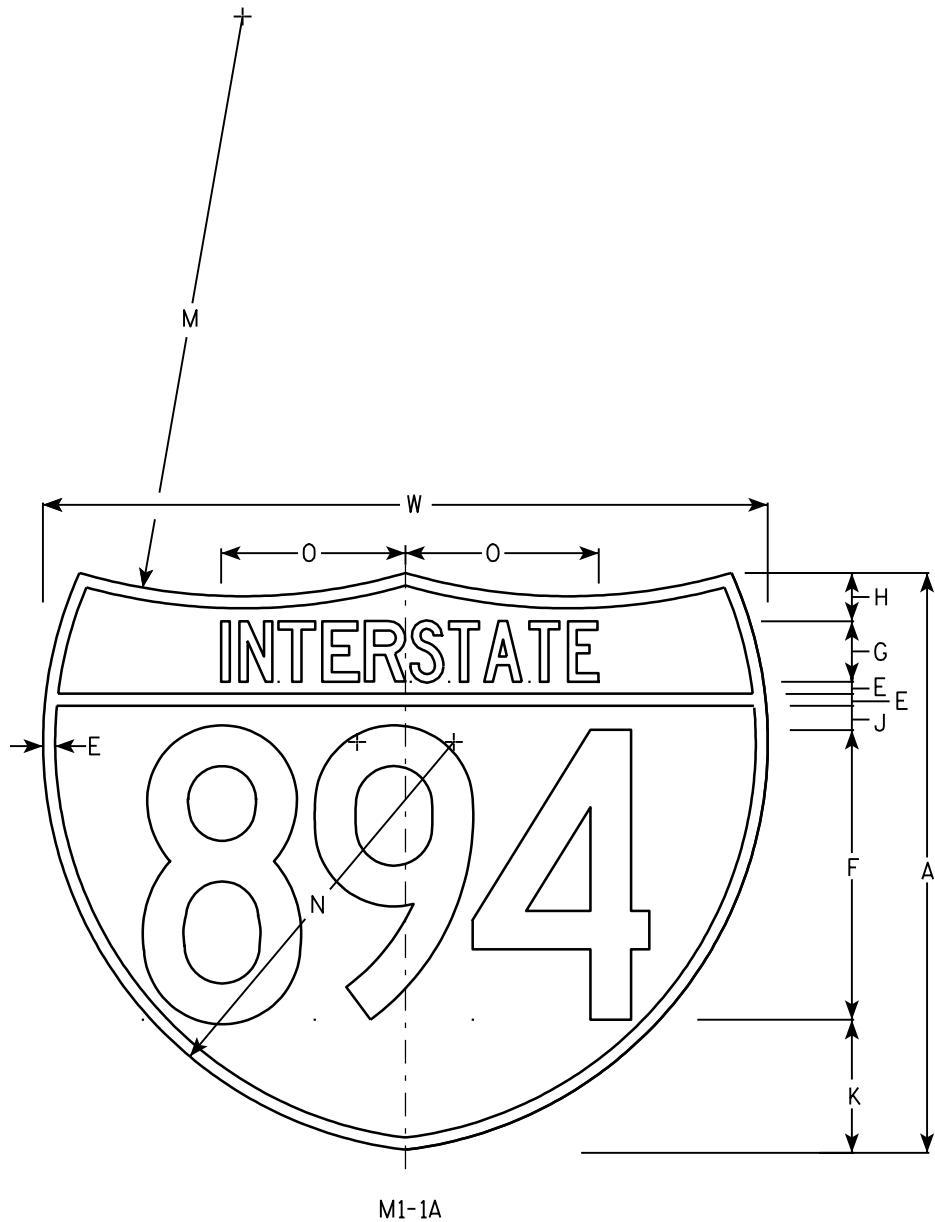
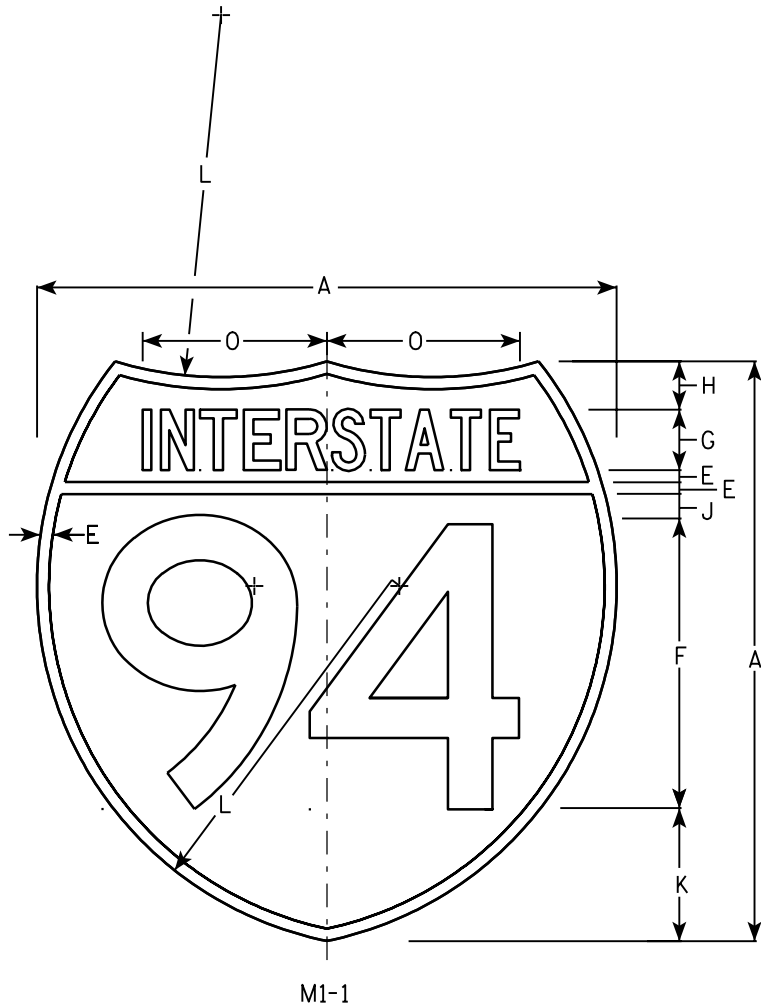
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

- 1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Top Red - Bottom Blue (See Note 6)
Message - White - See Note 6
- 3. Message Series - See note 5
- 4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
- 5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C
- 6. Permanent Signs
Message - Type H Reflective
Detour or other temporary signs
Background - Reflective
Message - Reflective

Metric equivalent for these signs are:

SIZE	M1 - 1	SIZE	M1 - 1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

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	Area sq. ft.	Area sq. ft.	Area m ²	Area m ²
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

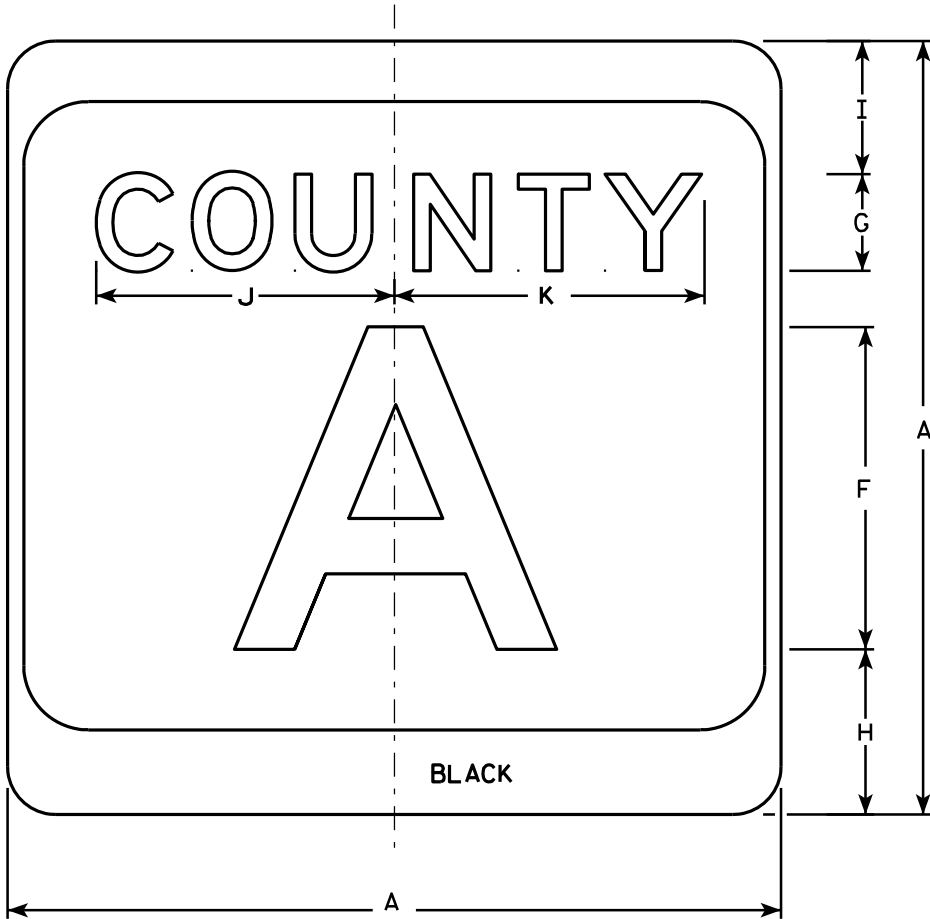
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

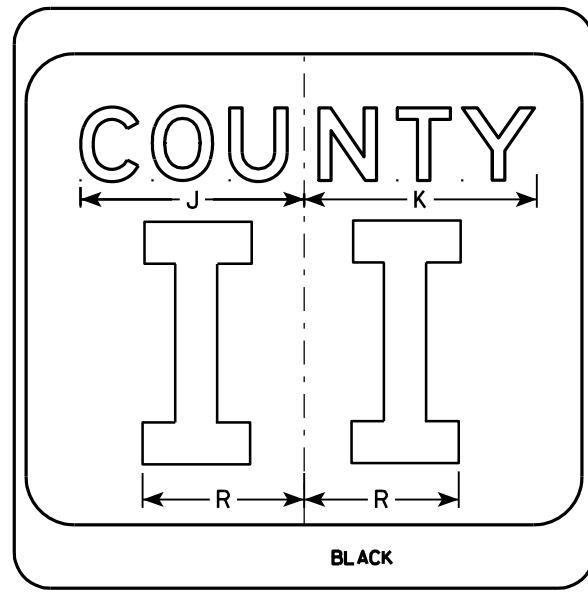
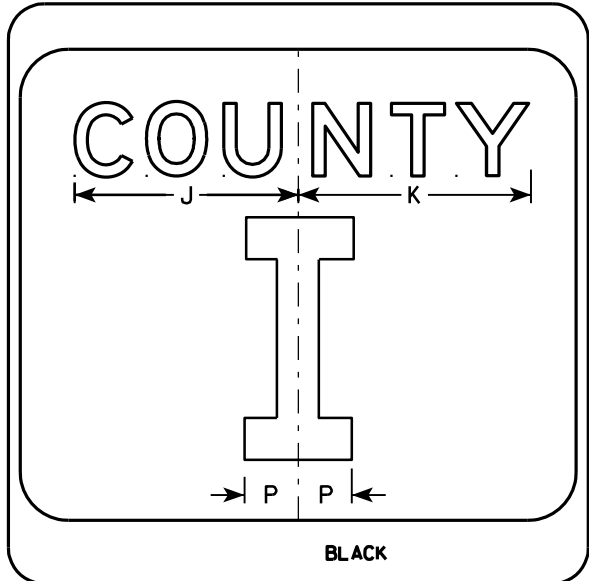
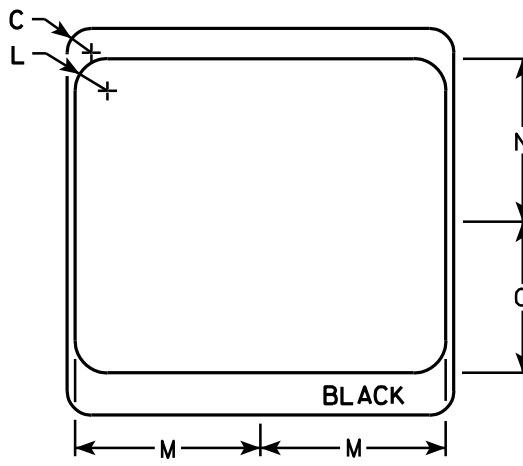
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

7



M1-5A



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. 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.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

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																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER

M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO:

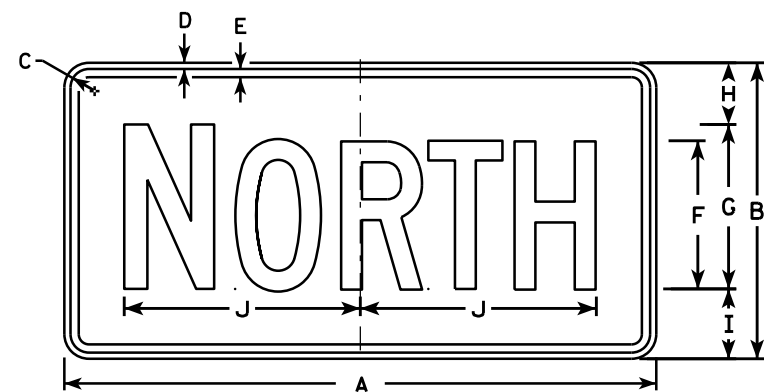
HWY:

COUNTY:

SHEET NO:

E

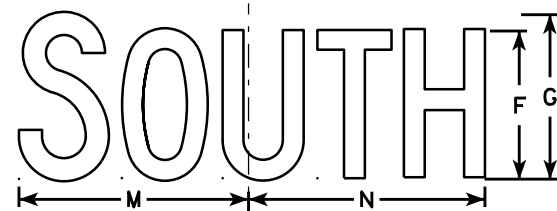
7



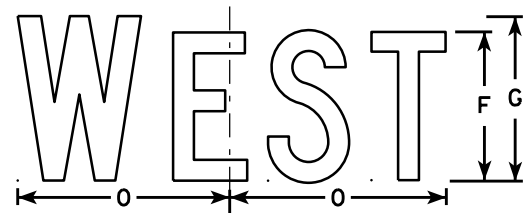
M3-1
MK3-1



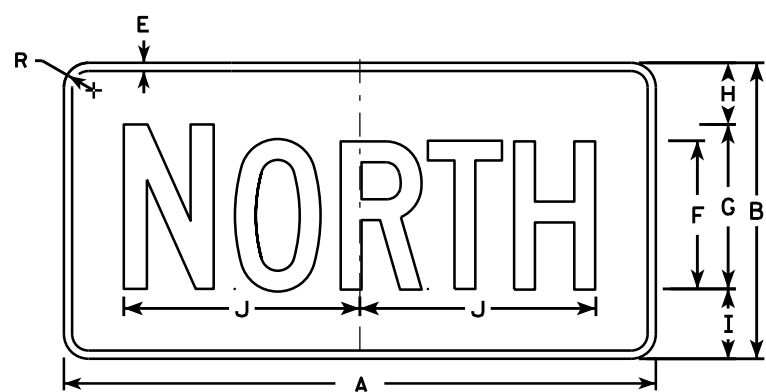
M3-2
MK3-2



M3-3
MK3-3



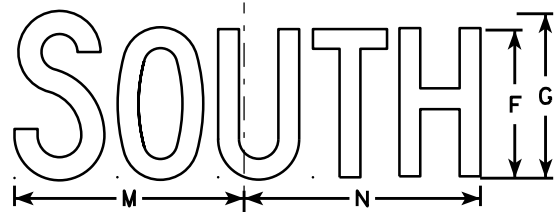
M3-4
MK3-4



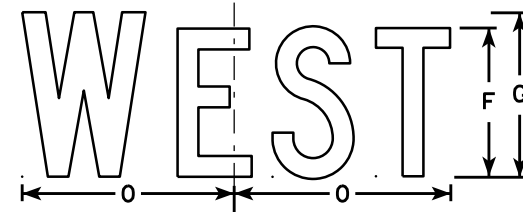
MB3-1
MG3-1
MM3-1
MN3-1



MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. 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.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MG3-1 thru MG3-4 Background - Green
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White

6. Note the first letter of each direction is larger than the remainder of the message.

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																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

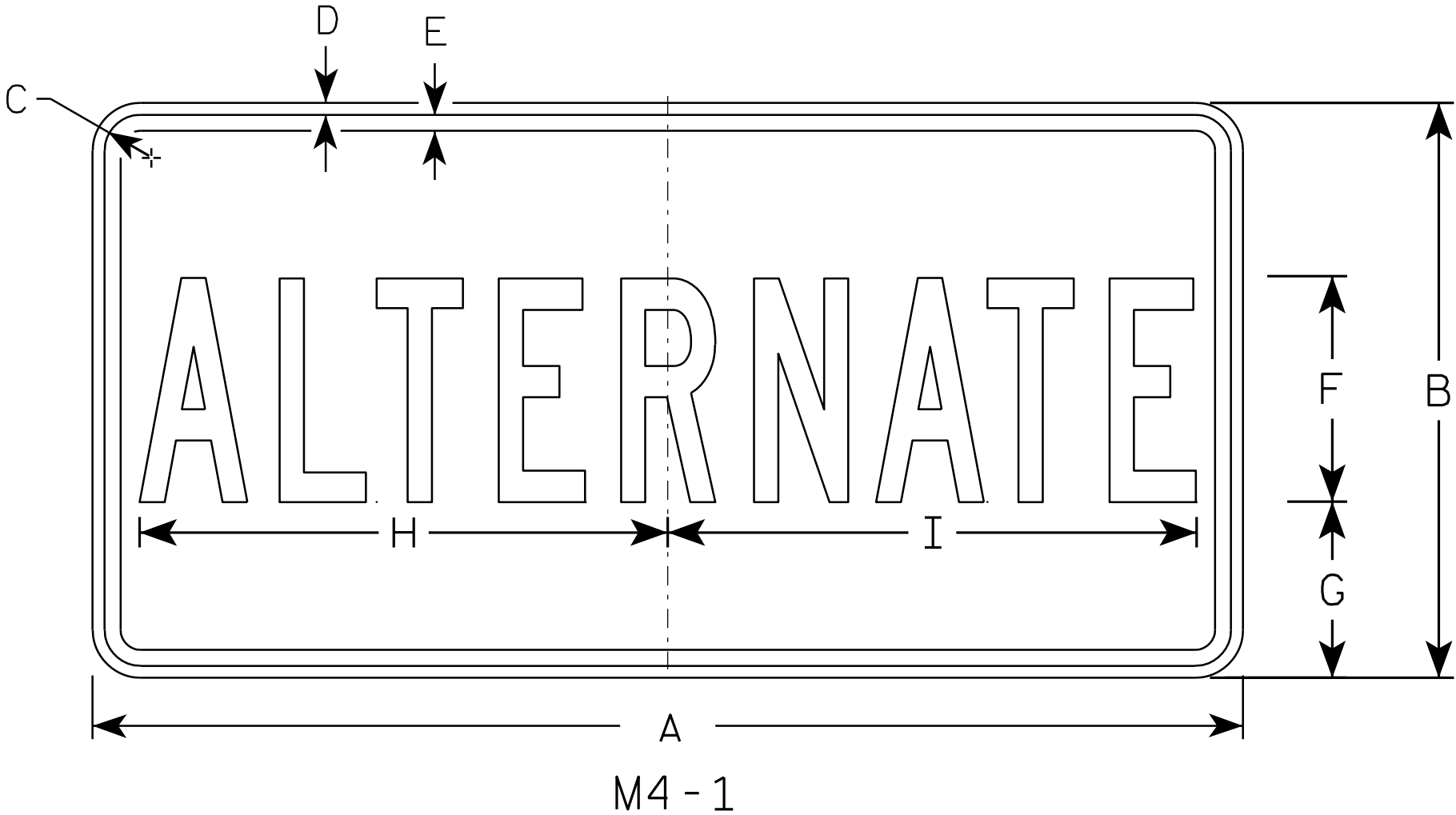
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 6/19/14 PLATE NO. M3-1.13

NOTES

- 1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - See Note 5
 - Message - See note 5
- 3. Message Series - B
- 4. 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.
- 5. M4-1 Background - White - Type H Reflective
Message - Black
- MB4-1 Background - Blue
Message - White - Type H Reflective
- M04-1 Background - Orange - Reflective
Message - Black



7

7

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																											
2	24	12	1 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
3	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

M4 - 1

WISCONSIN DEPT OF TRANSPORTATION

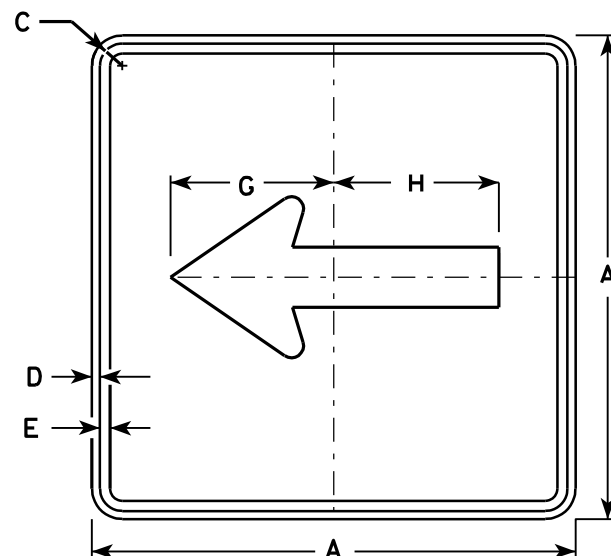
APPROVED

Matthew R. Rauch

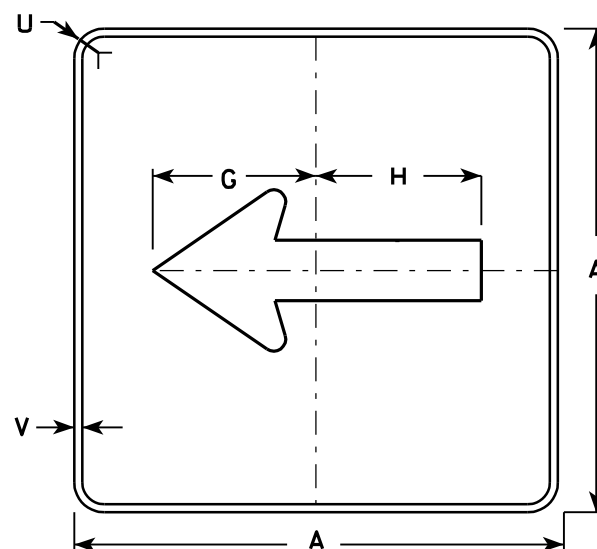
For State Traffic Engineer

DATE 11/10/10

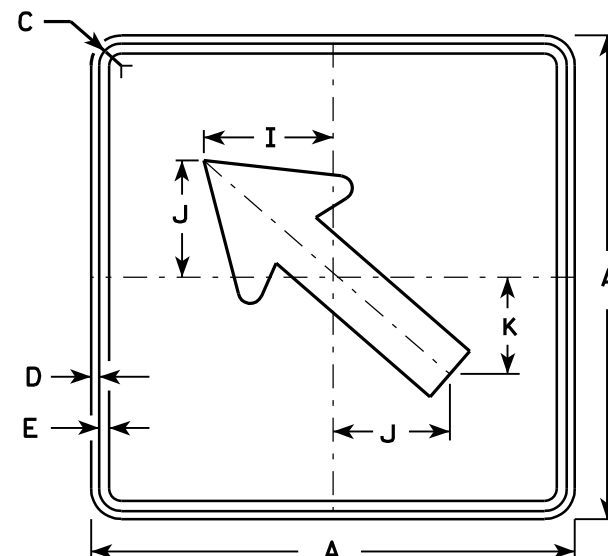
PLATE NO. M4-1.7



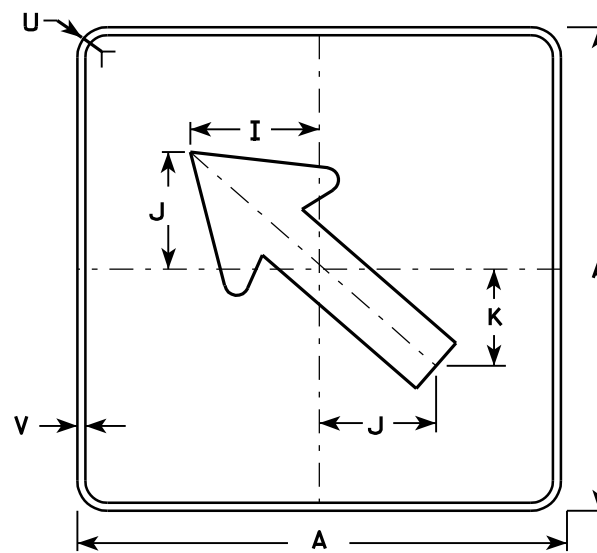
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



MB6-1
MG6-1
MN6-1



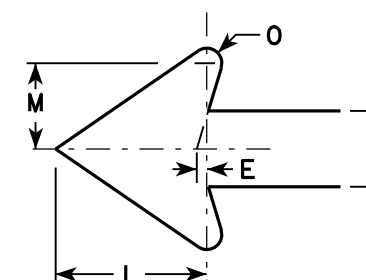
M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-2
MG6-2
MN6-2

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
 - Background - See note 4
 - Message - See note 4
- 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.
- M6-1 and M6-2 Background - White - Type H Reflective
Message - Black
 MB6-1 and MB6-2 Background - Blue
 Message - White - Type H Reflective
 MG6-1 and MG6-2 Background - Green
 Message - White - Type H Reflective
 MK6-1 and MK6-2 Background - Green
 Message - White - Type H Reflective
 MM6-1 and MM6-2 Background - White - Type H Reflective
 Message - Green
 MN6-1 and MN6-2 Background - Brown
 Message - White - Type H Reflective
 MO6-1 and MO6-2 Background - Orange - Type F Reflective
 Message - Black
 MP6-1 and MP6-2 Background - White - Type H Reflective
 Message - Blue
 MR6-1 and MR6-2 Background - Brown
 Message - Yellow - Type H Reflective



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																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

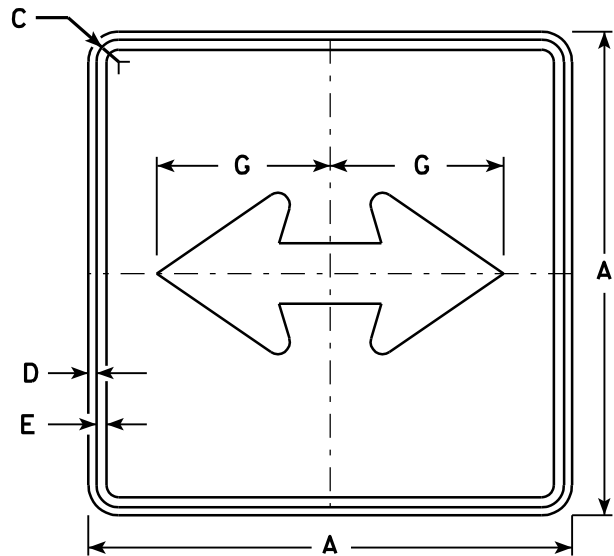
E

STANDARD SIGN
M6-1 & M6-2
SERIES

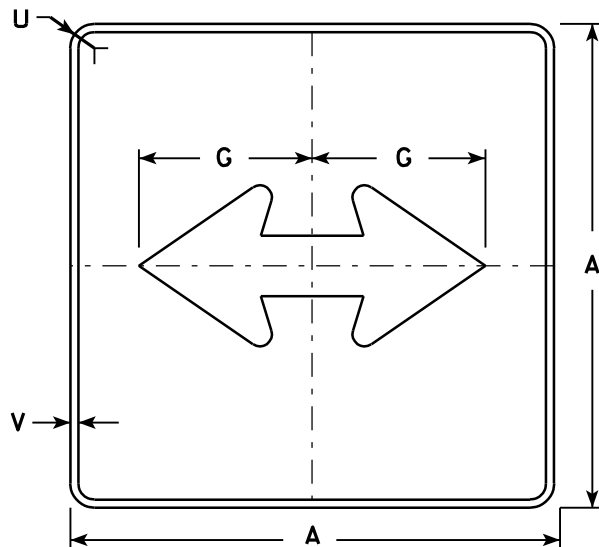
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

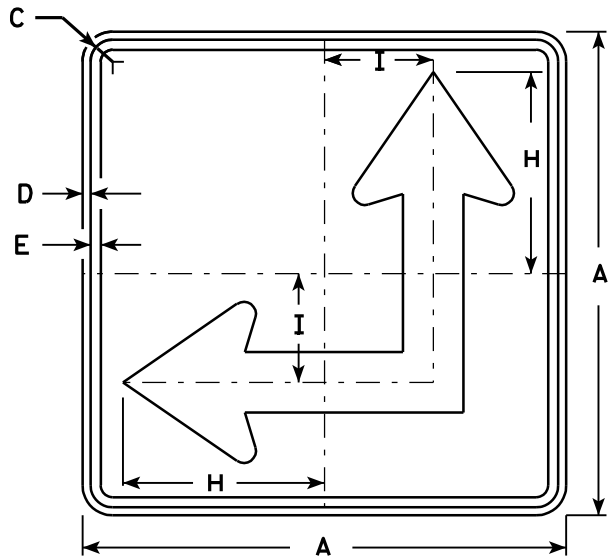
DATE 7/29/13 PLATE NO. M6-1.13



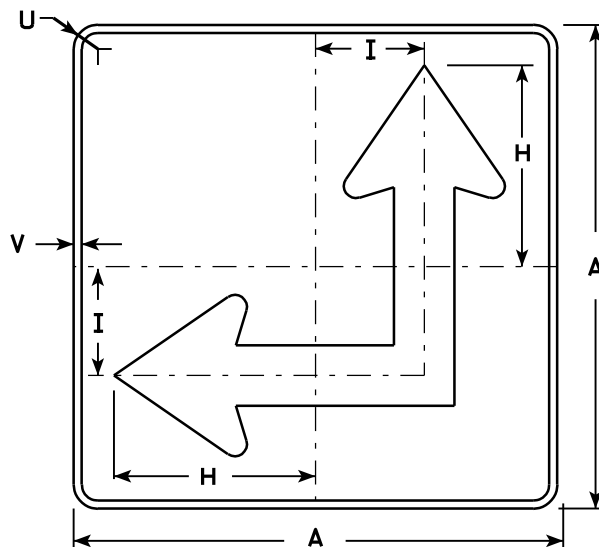
M6 - 4
MK6 - 4
MM6 - 4
MO6 - 4
MP6 - 4
MR6 - 4



MB6 - 4
MG6 - 4
MN6 - 4



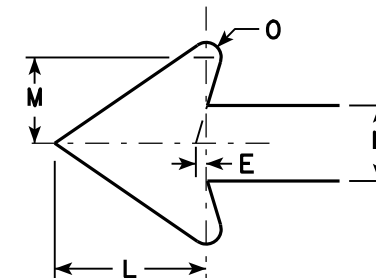
M6 - 6
MK6 - 6
MM6 - 6
MO6 - 6
MP6 - 6
MR6 - 6



MB6 - 6
MG6 - 6
MN6 - 6

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See Note 4
Message - See Note 4
- 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.
- M6-4 and M6-6 Background - White - Type H Reflective
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White - Type H Reflective
MG6-4 and MG6-6 Background - Green
Message - White - Type H Reflective
MK6-4 and MK6-6 Background - Green
Message - White - Type H Reflective
MM6-4 and MM6-6 Background - White - Type H Reflective
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White - Type H Reflective
MO6-4 and MO6-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White - Type H Reflective
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow - Type H Reflective
- M6-6R same as M6-6L except arrow points ahead and right.



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																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

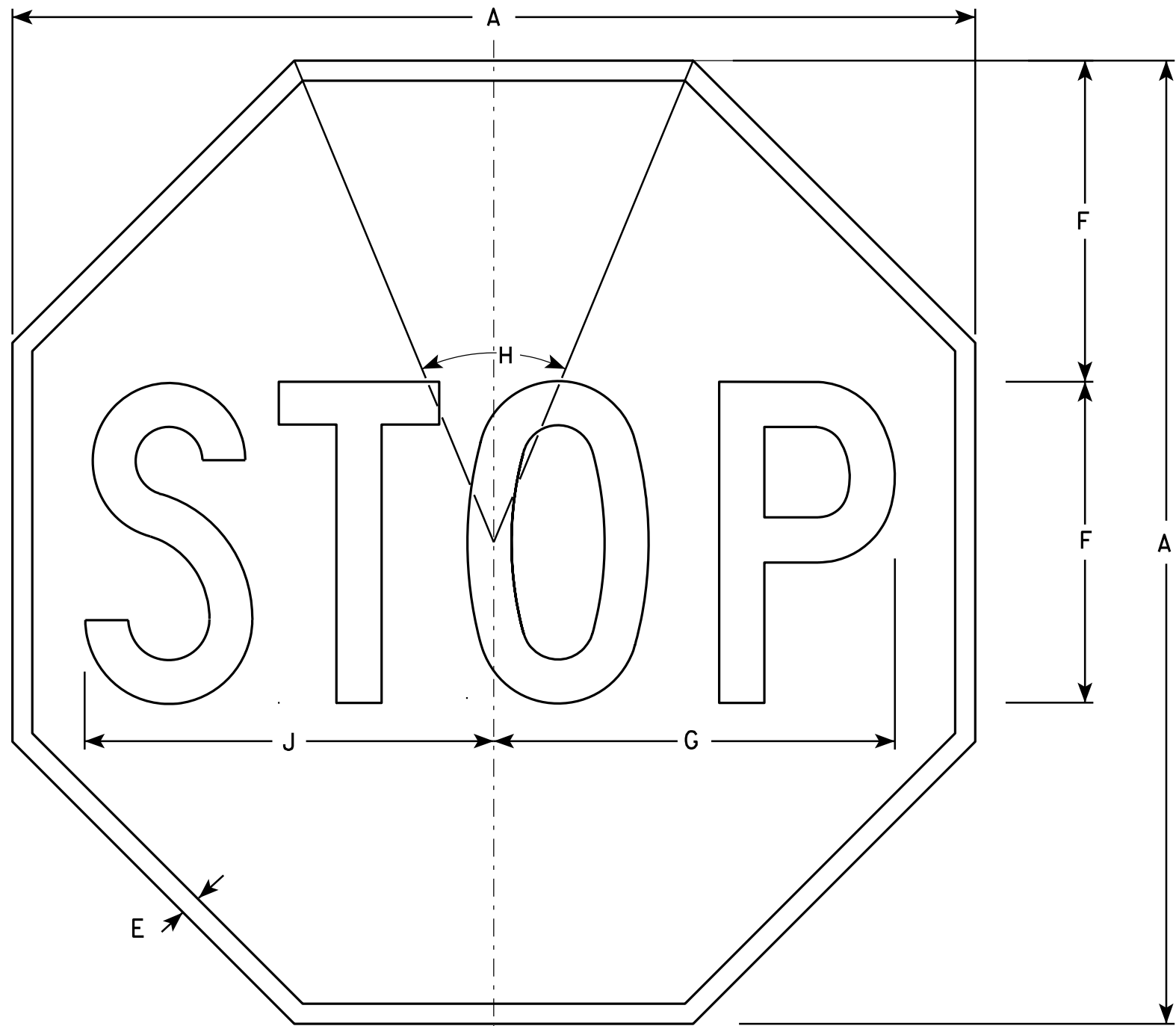
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-4.8



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

R1-1

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	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

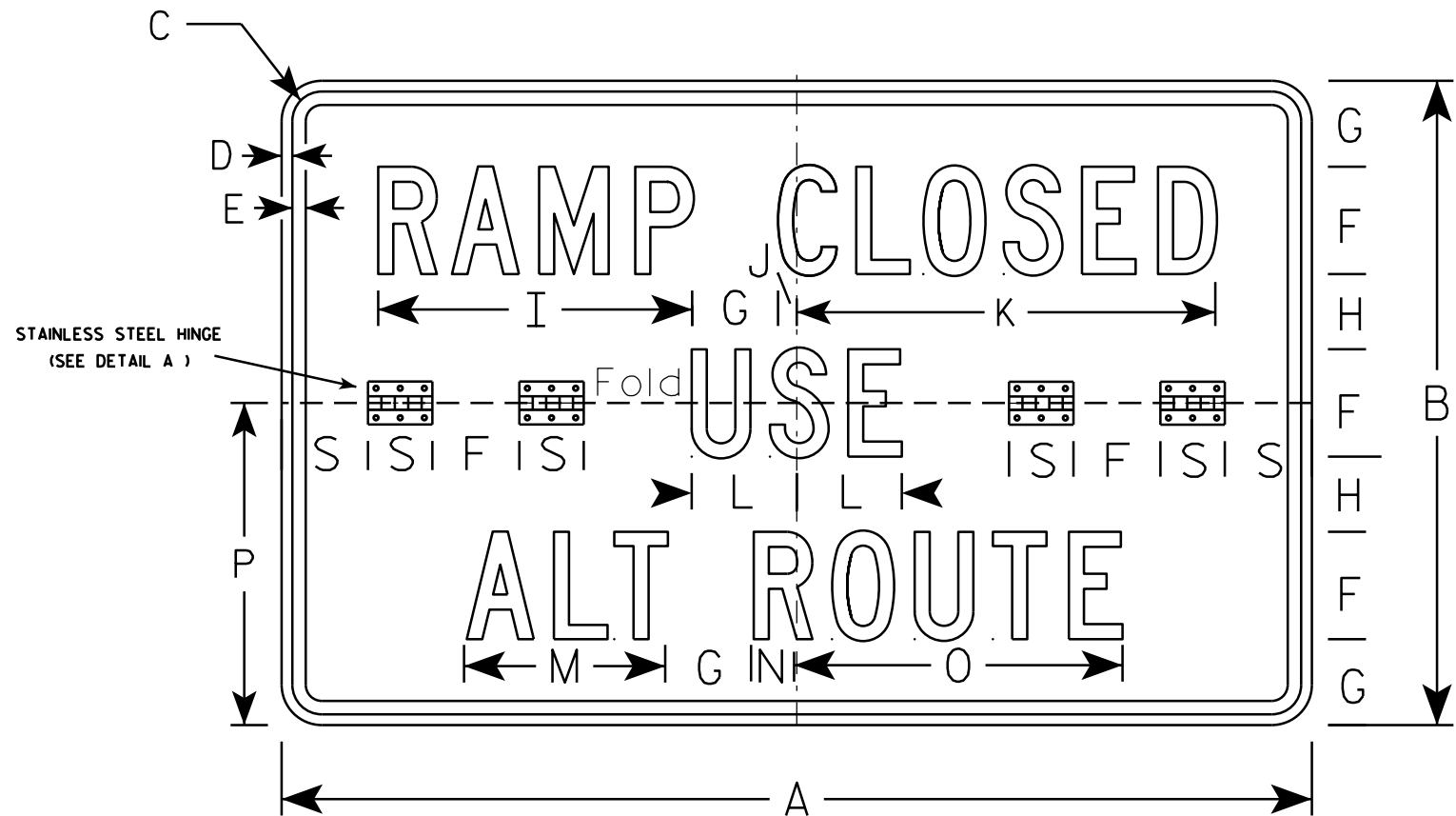
PROJECT NO:

HWY:

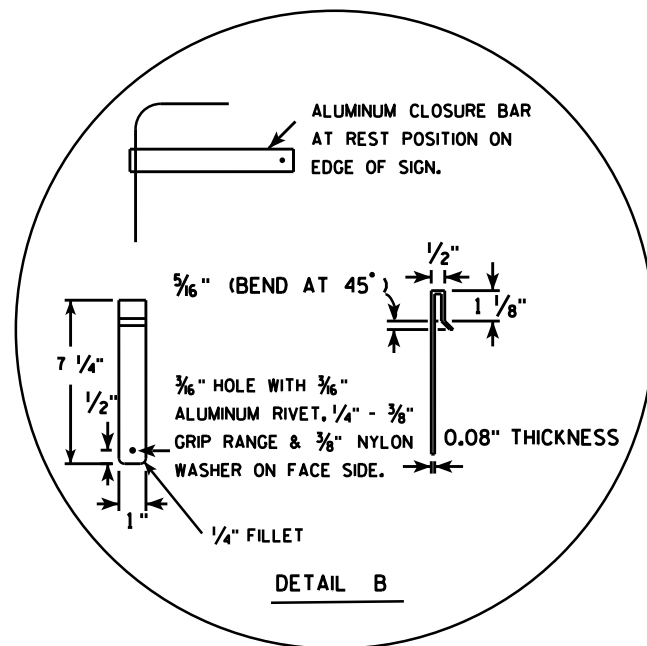
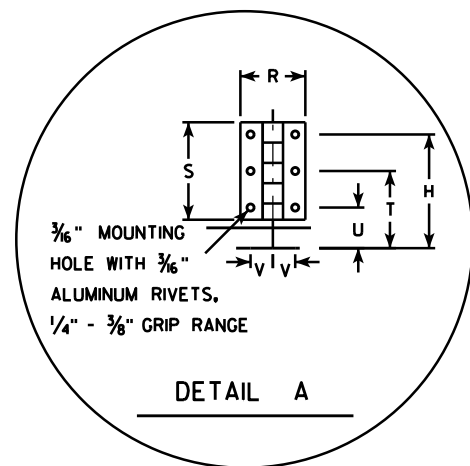
COUNTY:

SHEET NO:

E

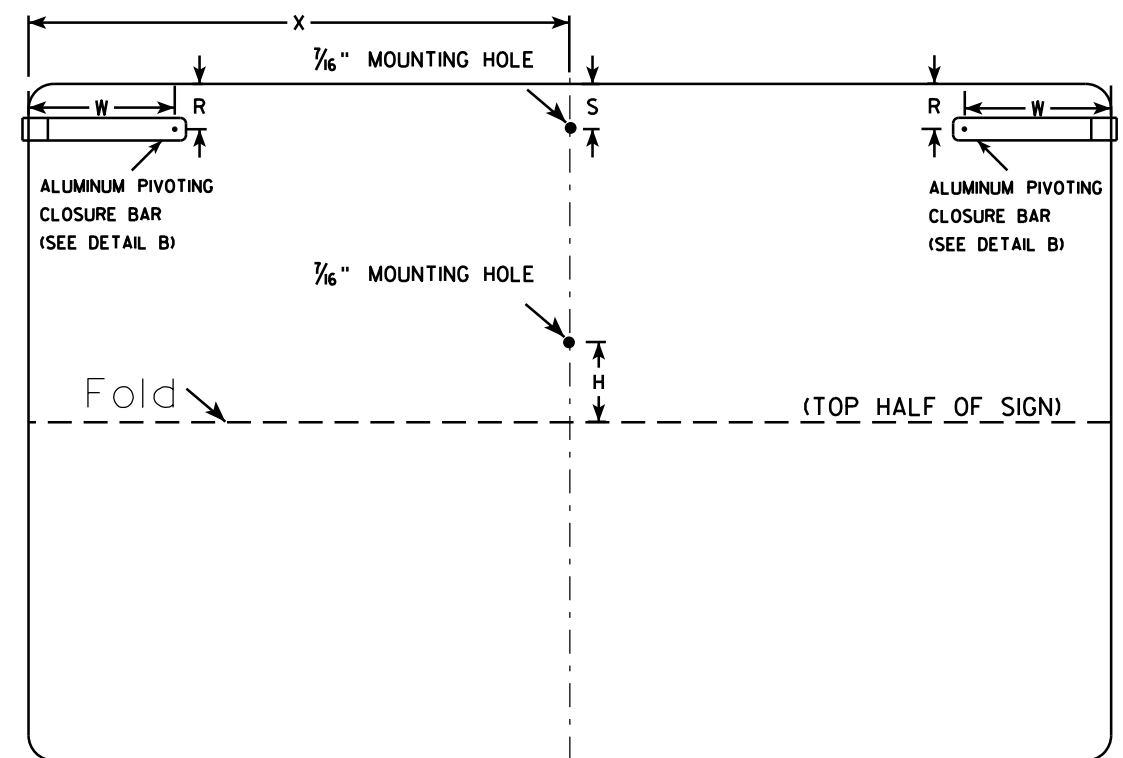


R11-54F



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - WHITE
Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



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	48	30	1 3⁄8	1⁄2	5⁄8	5	4	3 1⁄2	14 5⁄8	7⁄8	19 1⁄2	4 7⁄8	9 3⁄8	2	15 1⁄4	15		2	3	2 5⁄8	1 1⁄4	11⁄16	6 1⁄2	24			10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	5	4	3 1⁄2	14 5⁄8	7⁄8	19 1⁄2	4 7⁄8	9 3⁄8	2	15 1⁄4	15		2	3	2 5⁄8	1 1⁄4	11⁄16	6 1⁄2	24			10.0
3																											
4																											
5																											

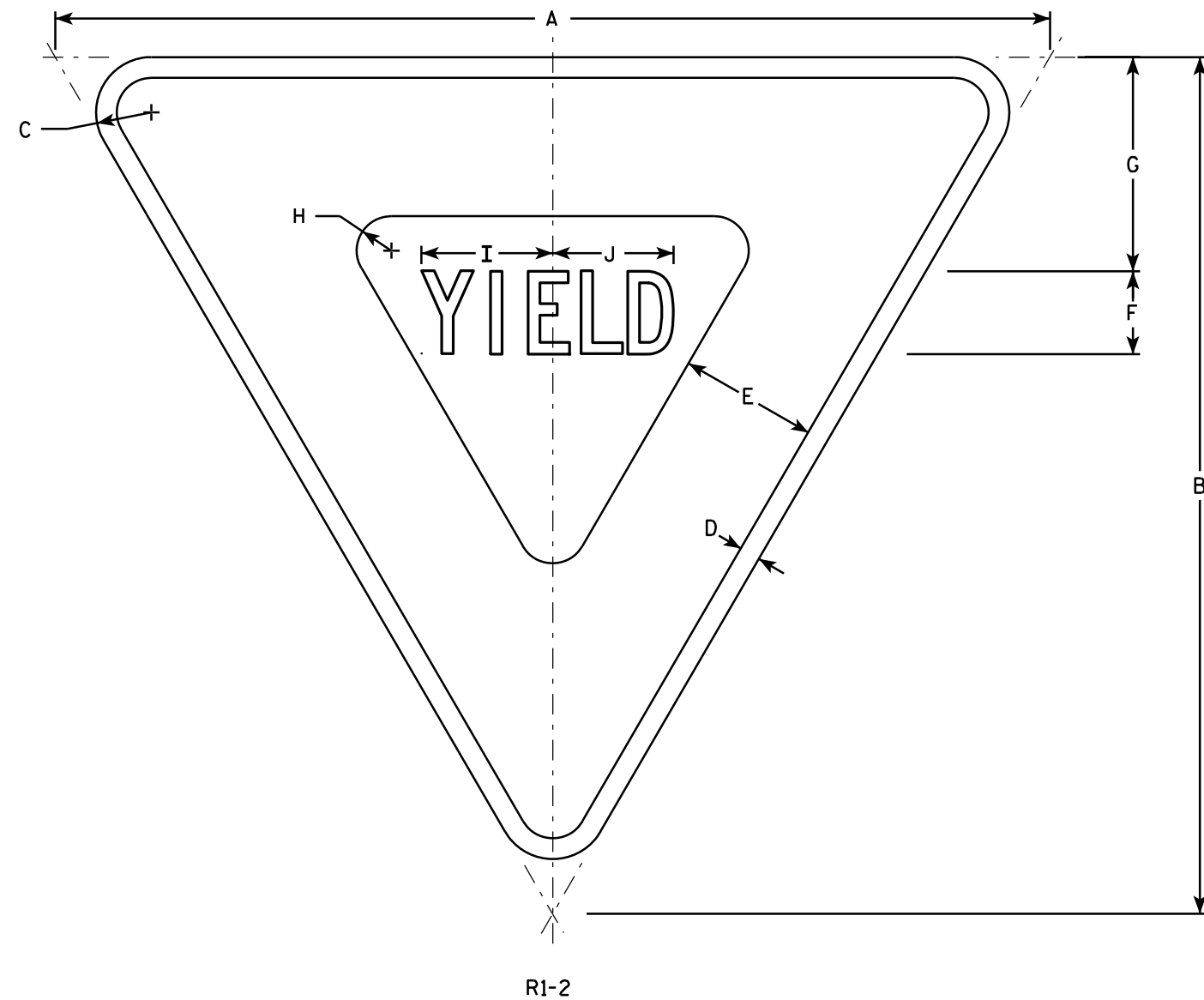
STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO: HWY: COUNTY: SHEET NO: E

7



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 5
3. Message Series - C
4. 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.
5. The border strip and word message are reflectorized red.

7

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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

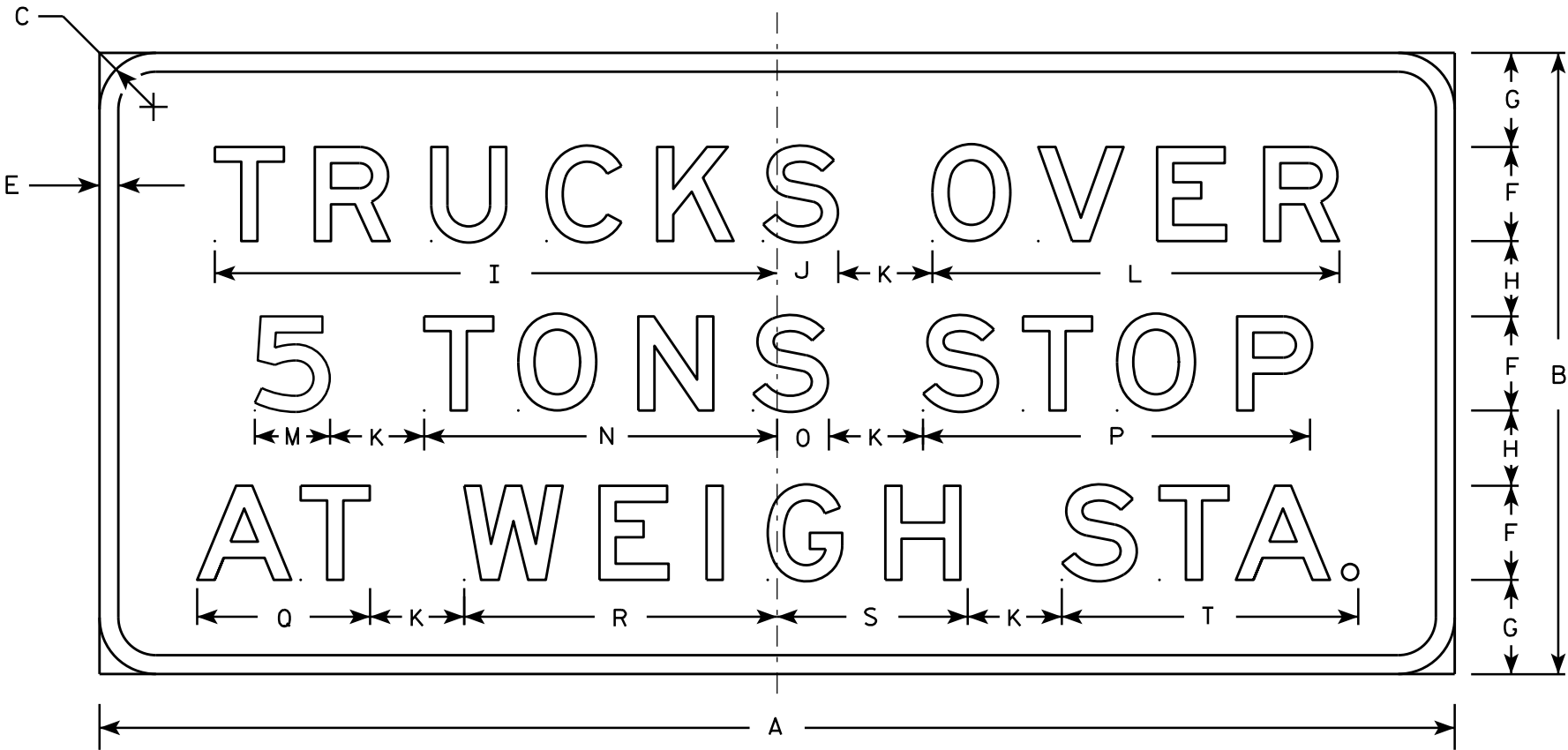
PROJECT NO:	HWY:	COUNTY:	SHEET NO:		E
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STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11



R13-1

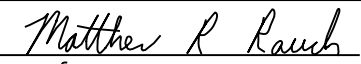
NOTES

- 1. Sign is Type I or Type II - Non-Reflective
- 2. Color:
 - Background - Black (Non-reflective)
 - Message - White Type H Reflective
- 3. Message Series - E
- 4. Corners may be square or rounded but borders shall be rounded as shown.
- 5. Code sizes 2 & 4 are Type II, Code size 5 is Type I. All code sizes have a non-reflective background.
- 6. Base material for Type II signs shall be plywood.

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	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
2M	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
3																											
4	120	48	6		1	8	7	5	47 7/8	5 1/8	8	34 3/4	6 3/8	30 1/8	4 3/8	33 1/8	14 7/8	26 3/8	17 1/8	26 1/8							40.0
5	144	66	6		2	10	10	8	59 3/4	6 1/2	10	43 1/4	8	37 1/2	5 1/2	36 7/8	17 3/4	33 1/4	20 1/4	31 1/2							66.0

STANDARD SIGN
R13-1

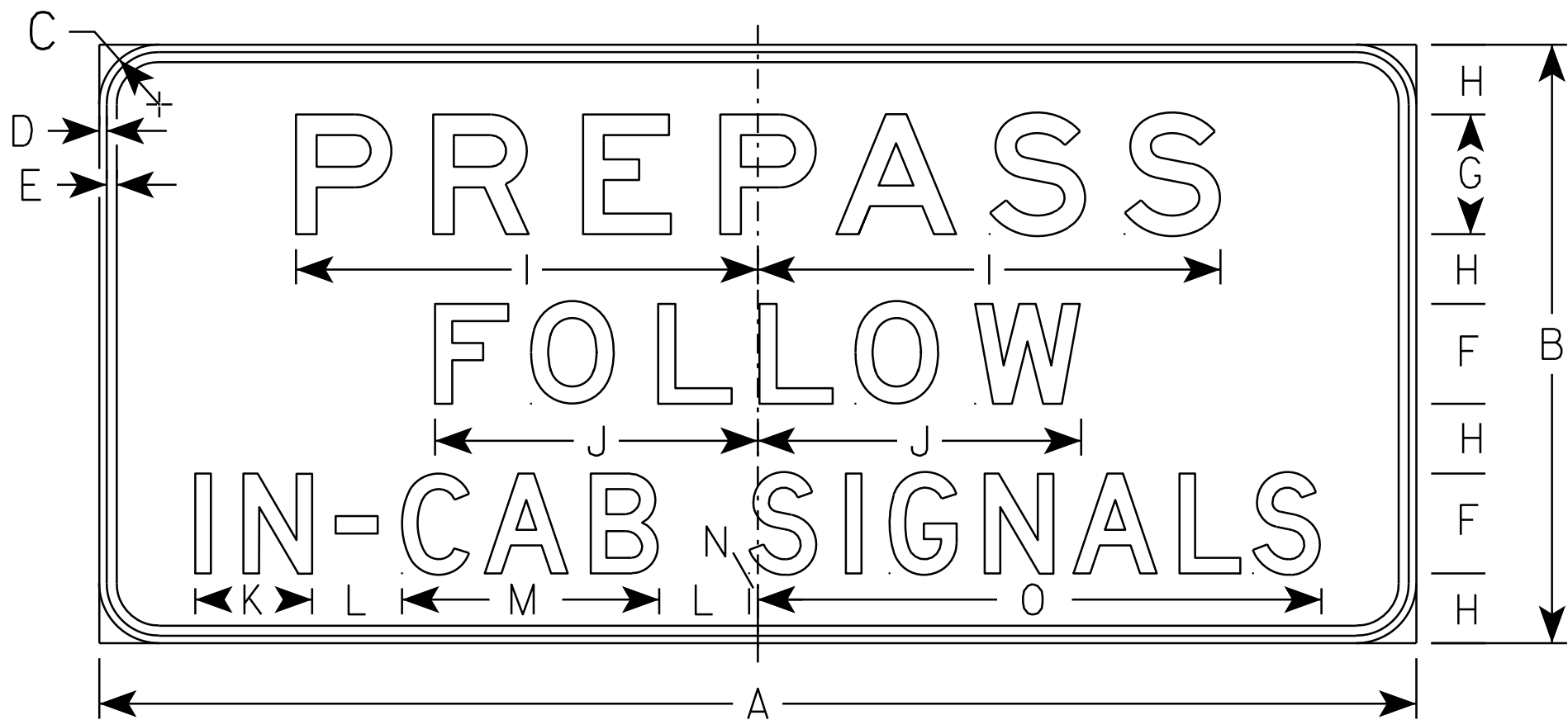
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

for State Traffic Engineer

DATE 6/23/14 PLATE NO. R13-1.7

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - Series E - Line 1 & 2
Series C - Line 3



R13-49

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																											
2M																											
3																											
4	132	60	6	¾	1	10	12	7	46 ¼	32 ⅜	11 ¾	9	25 ¾	⅞	56 ½												55.0
5																											

STANDARD SIGN
R13-49

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 4/1/11

PLATE NO. R13-49.3

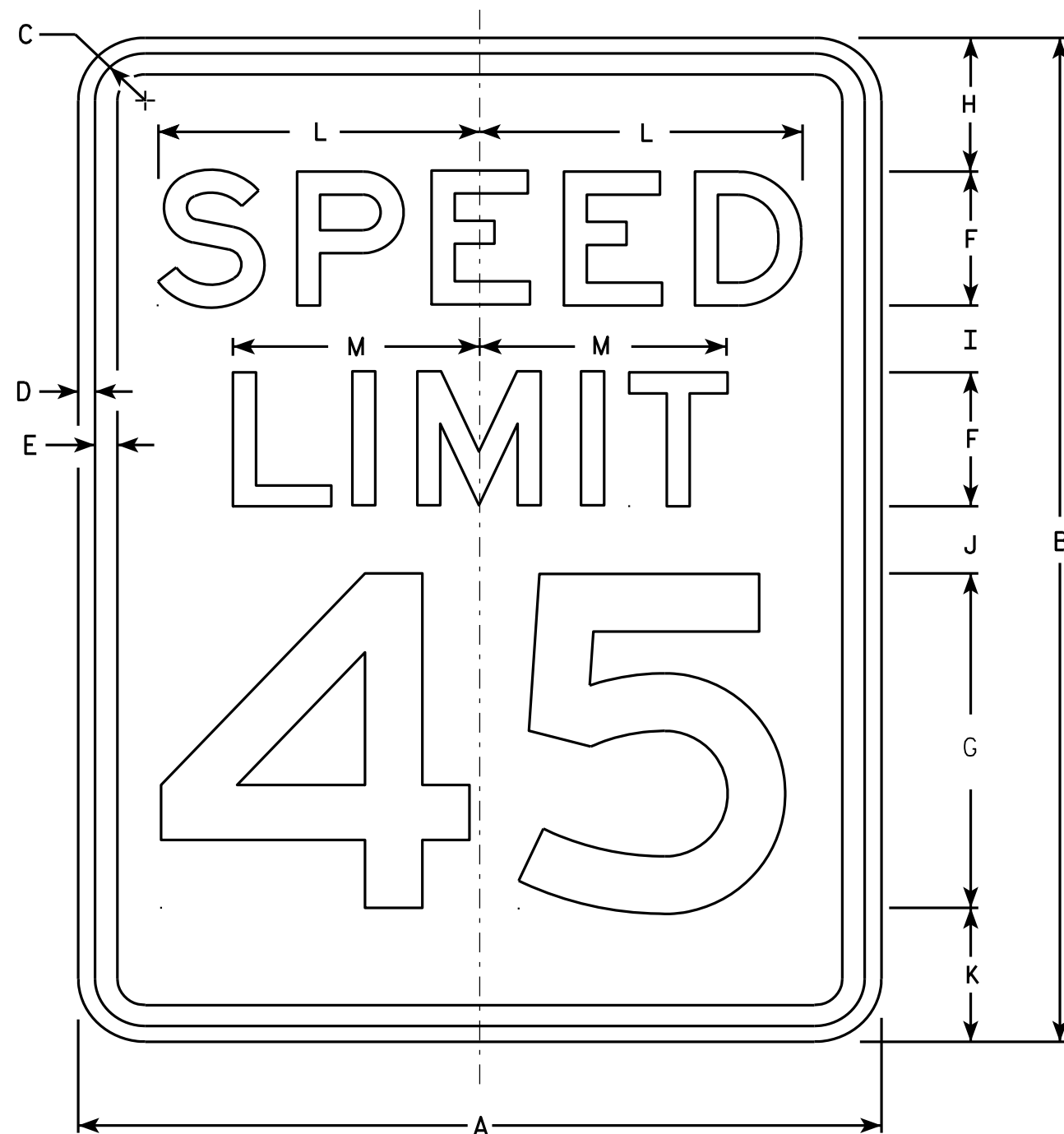
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



R2-1

NOTES

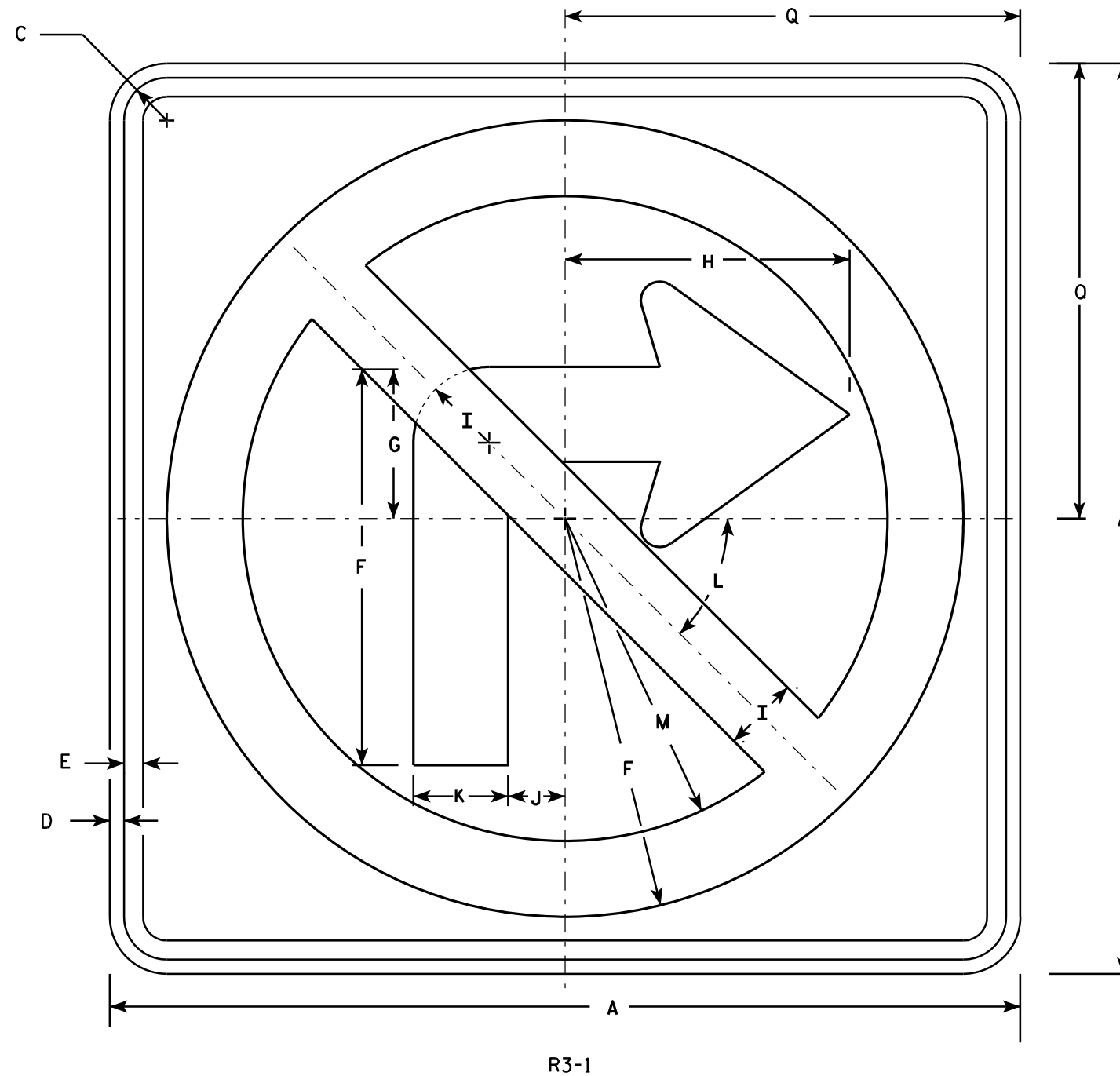
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

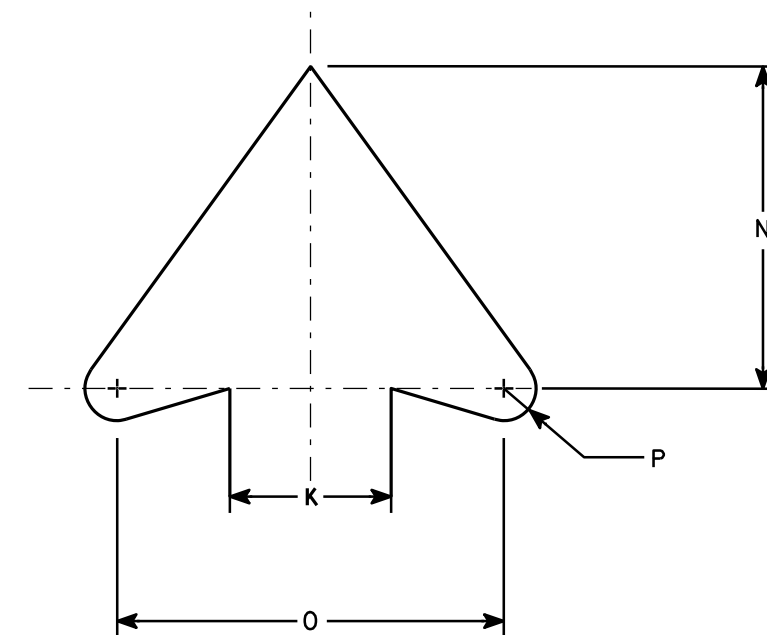
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

STANDARD SIGN

R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

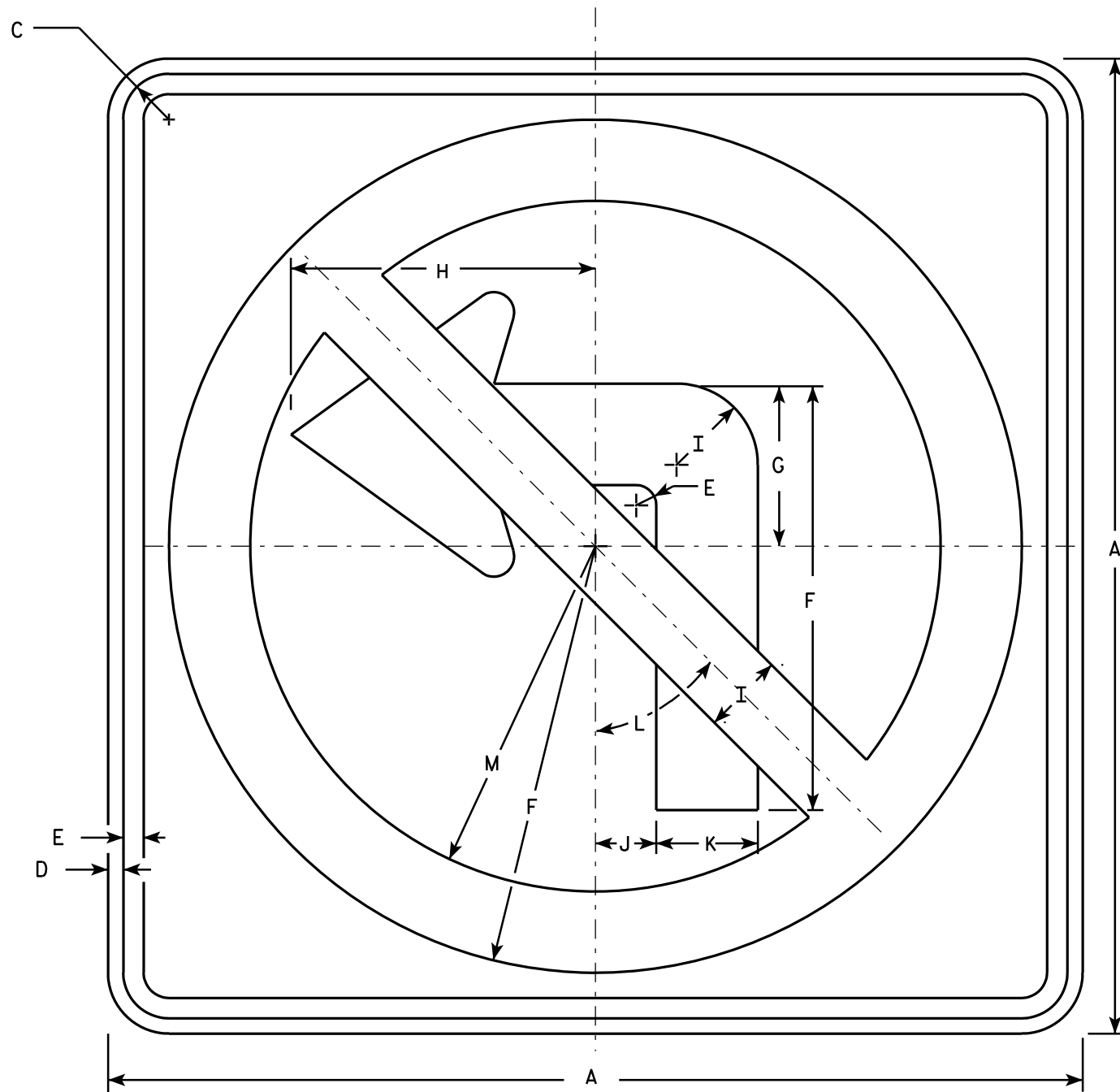
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

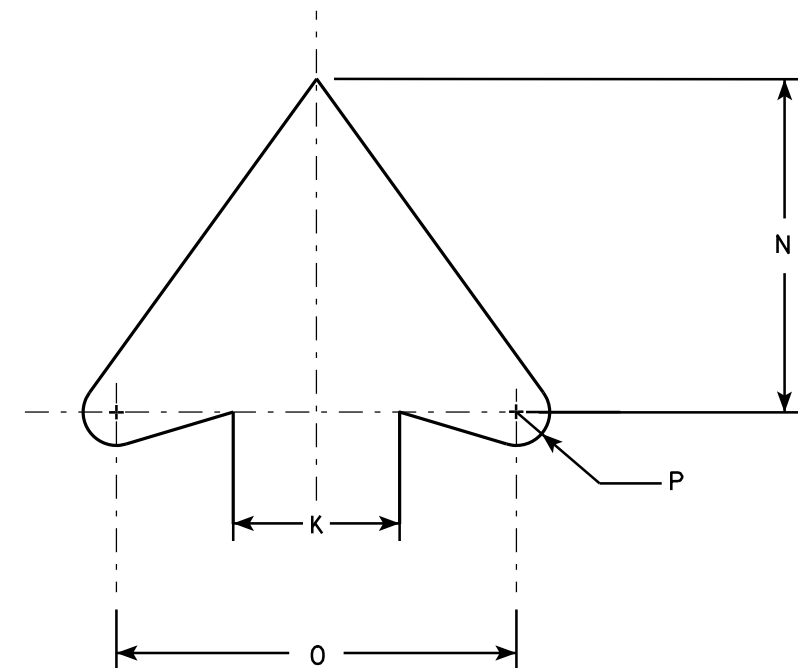
E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

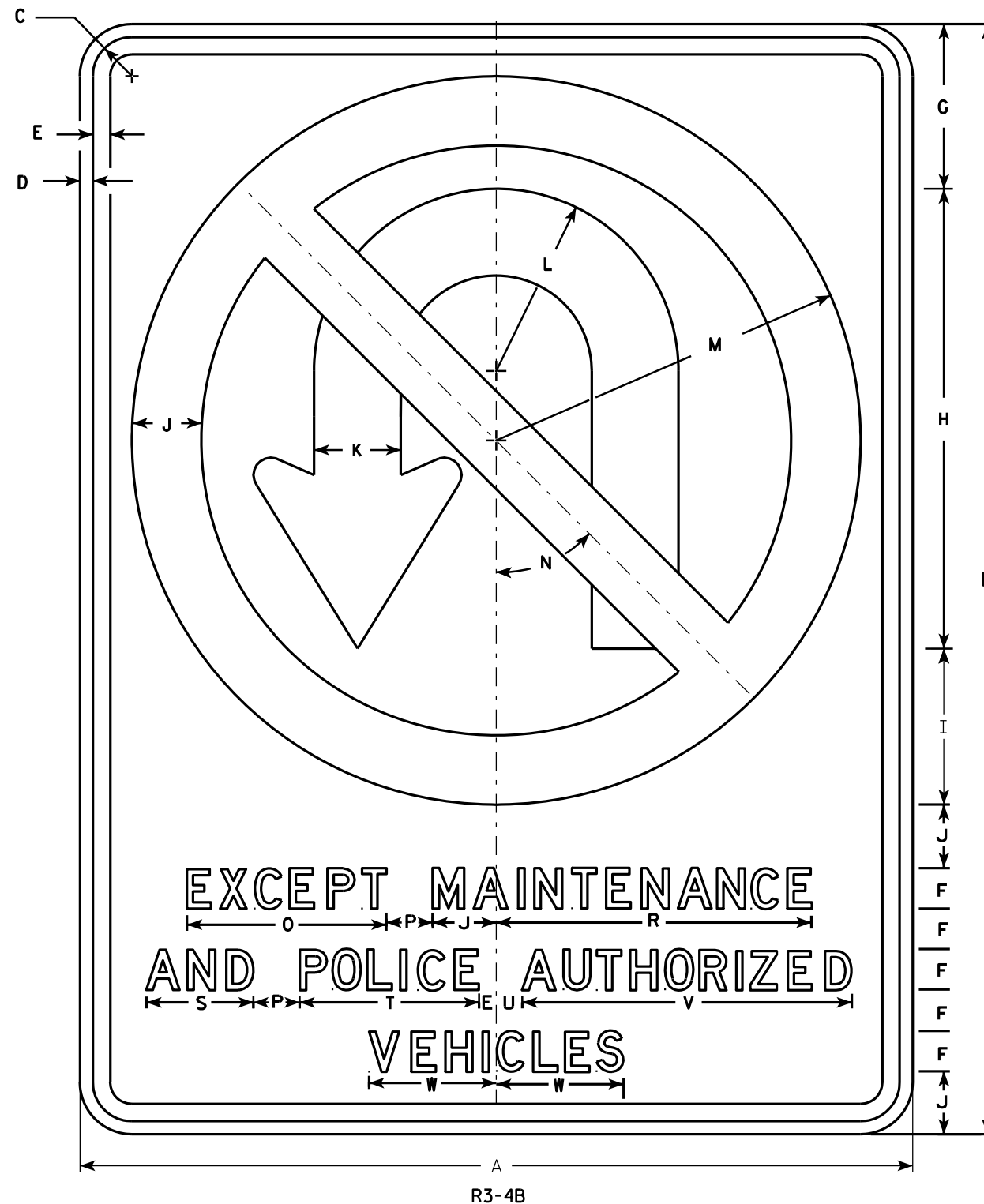
PROJECT NO:

HWY:

COUNTY:

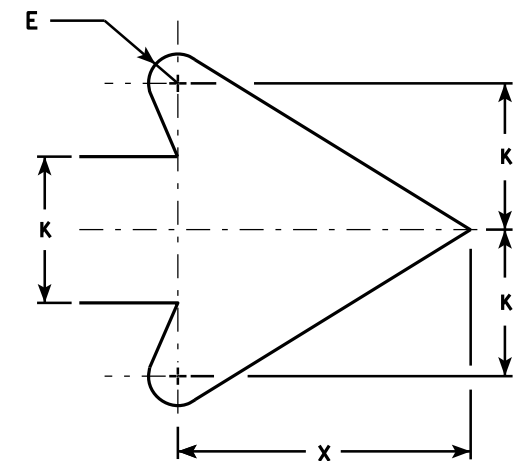
SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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																											
2M																											
3																											
4	36	48	1 5⁄8	5⁄8	¾	1 ¾	7 1⁄8	19 7⁄8	6 ¾	2 ¾	3 ¾	7 7⁄8	15 ¾	45°	8 5⁄8	2		13 5⁄8	4 5⁄8	7 ¾	1 1⁄8	14 1⁄4	5 1⁄2	7 5⁄8			12.0
5	36	48	1 5⁄8	5⁄8	¾	1 ¾	7 1⁄8	19 7⁄8	6 ¾	2 ¾	3 ¾	7 7⁄8	15 ¾	45°	8 5⁄8	2		13 5⁄8	4 5⁄8	7 ¾	1 1⁄8	14 1⁄4	5 1⁄2	7 5⁄8			12.0

STANDARD SIGN R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO: HWY: COUNTY: SHEET NO: E



R4-3

NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White
Message - Black
- Message Series - D
- 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.

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	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN R4-3

WISCONSIN DEPT OF TRANSPORTATION

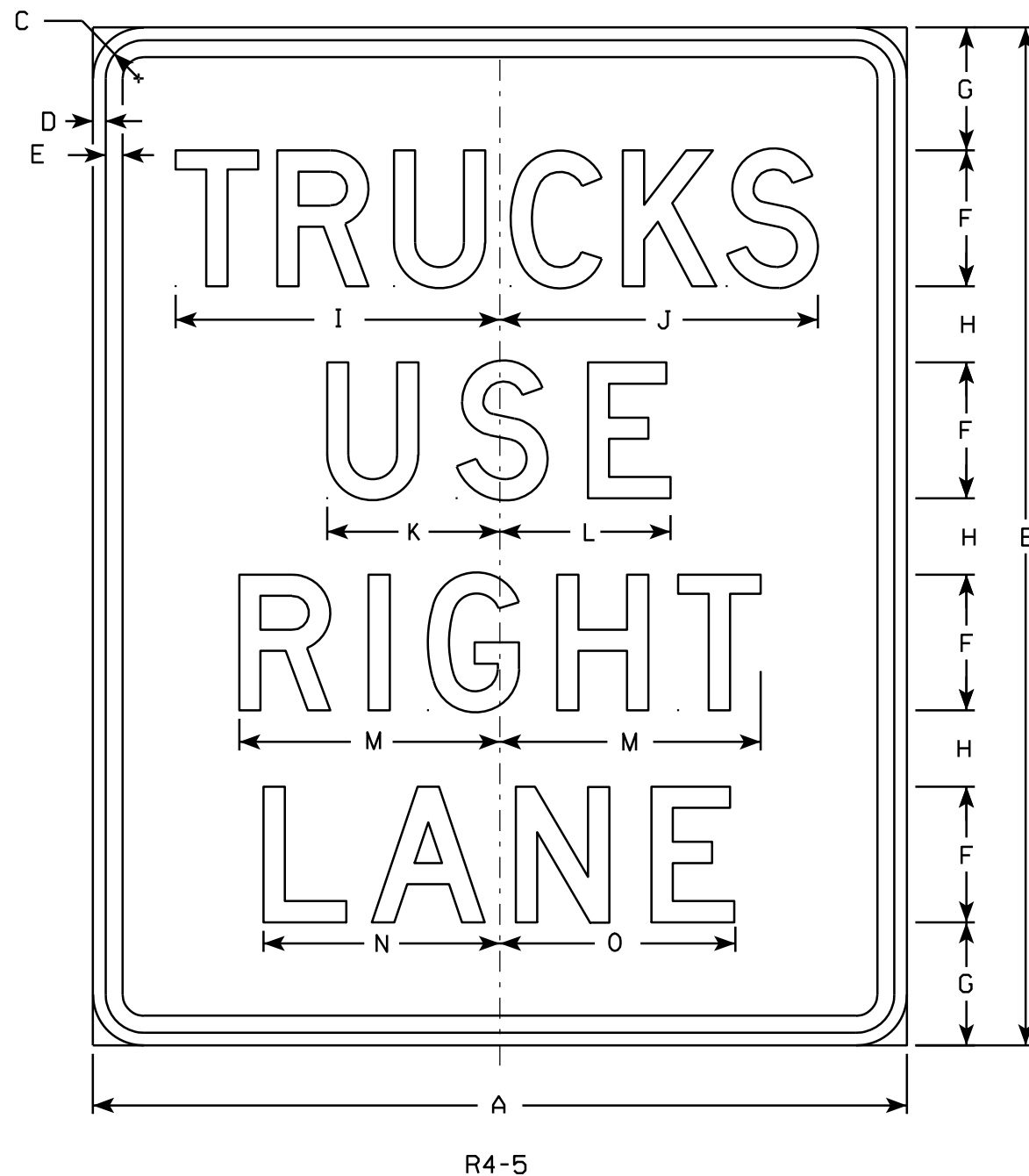
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

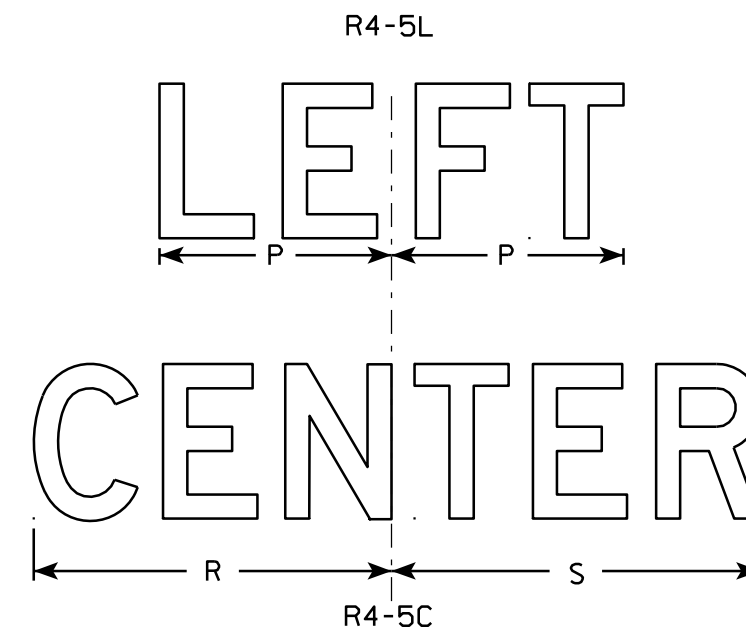
PROJECT NO:

SHEET NO:

E



- NOTES
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. 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.
 5. R4-5L & R4-5C are the same as R4-5 except LEFT or CENTER replaces RIGHT as order by code.



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	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 5/8	9 3/8	5 1/8	5 1/8	7 3/4	7 1/4	7	6		9 1/4	9 1/2								5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 5/8	9 3/8	5 1/8	5 1/8	7 3/4	7 1/4	7	6		9 1/4	9 1/2								5.0
3																											
4	36	48	2 1/4	5/8	3/4	6	6	4	14 3/8	14 1/8	7 7/8	7 7/8	12 1/4	10 3/4	10 1/2	9 5/8		13 7/8	14 1/4								12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/8	18 3/4	10 1/4	10 1/8	15 3/8	14	13 7/8	12		18 1/2	19 1/8								20.0

STANDARD SIGN R4-5	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED <i>Matthew R. Rauch</i> for State Traffic Engineer	DATE 3/25/2011 PLATE NO. R4-5.3

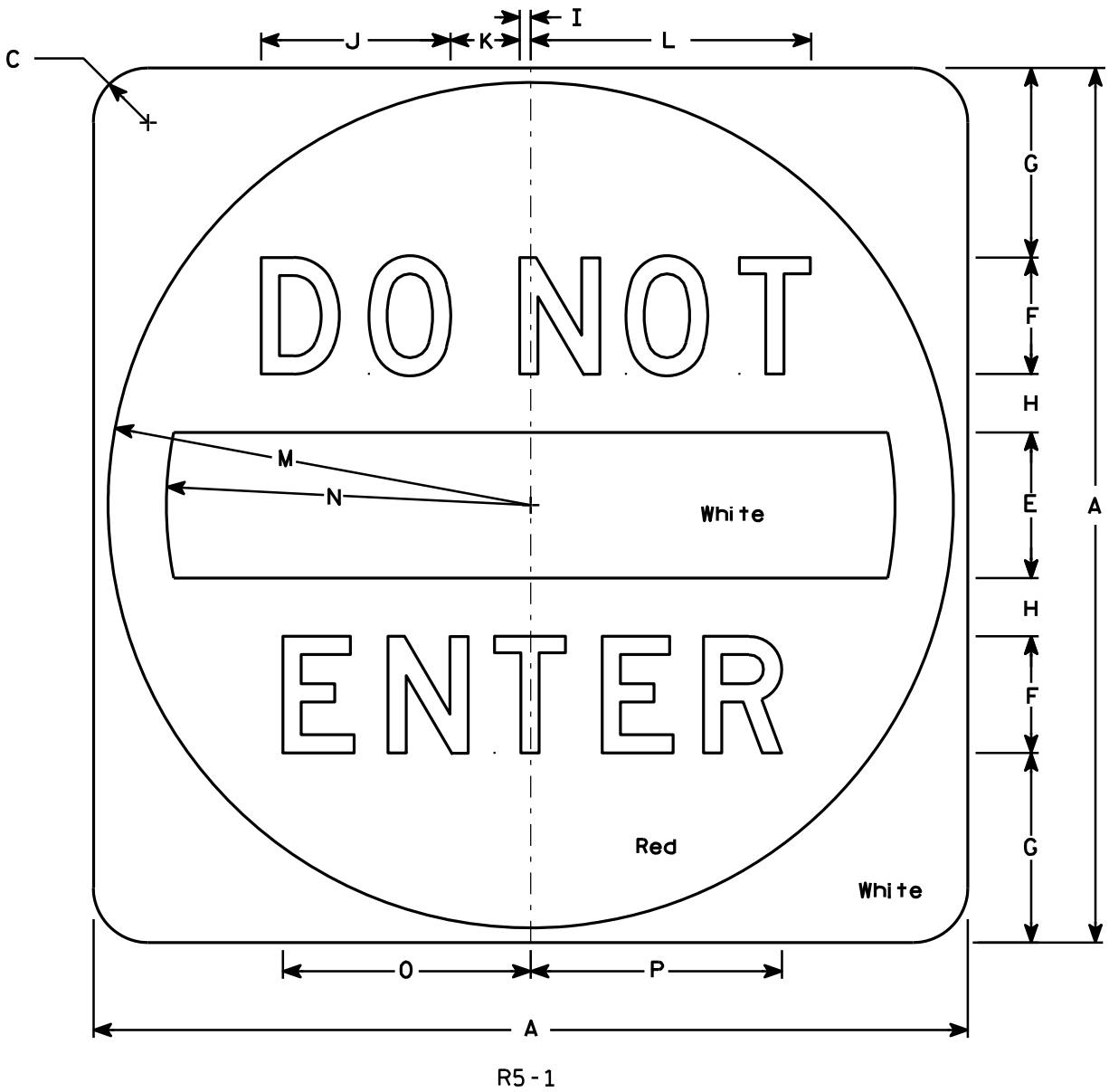
PROJECT NO:	HWY:	COUNTY:	SHEET NO: E
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NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:

Background - See detail

Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



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	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN

R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

for State Traffic Engineer

DATE 12/17/10PLATE NO. R5-1.15

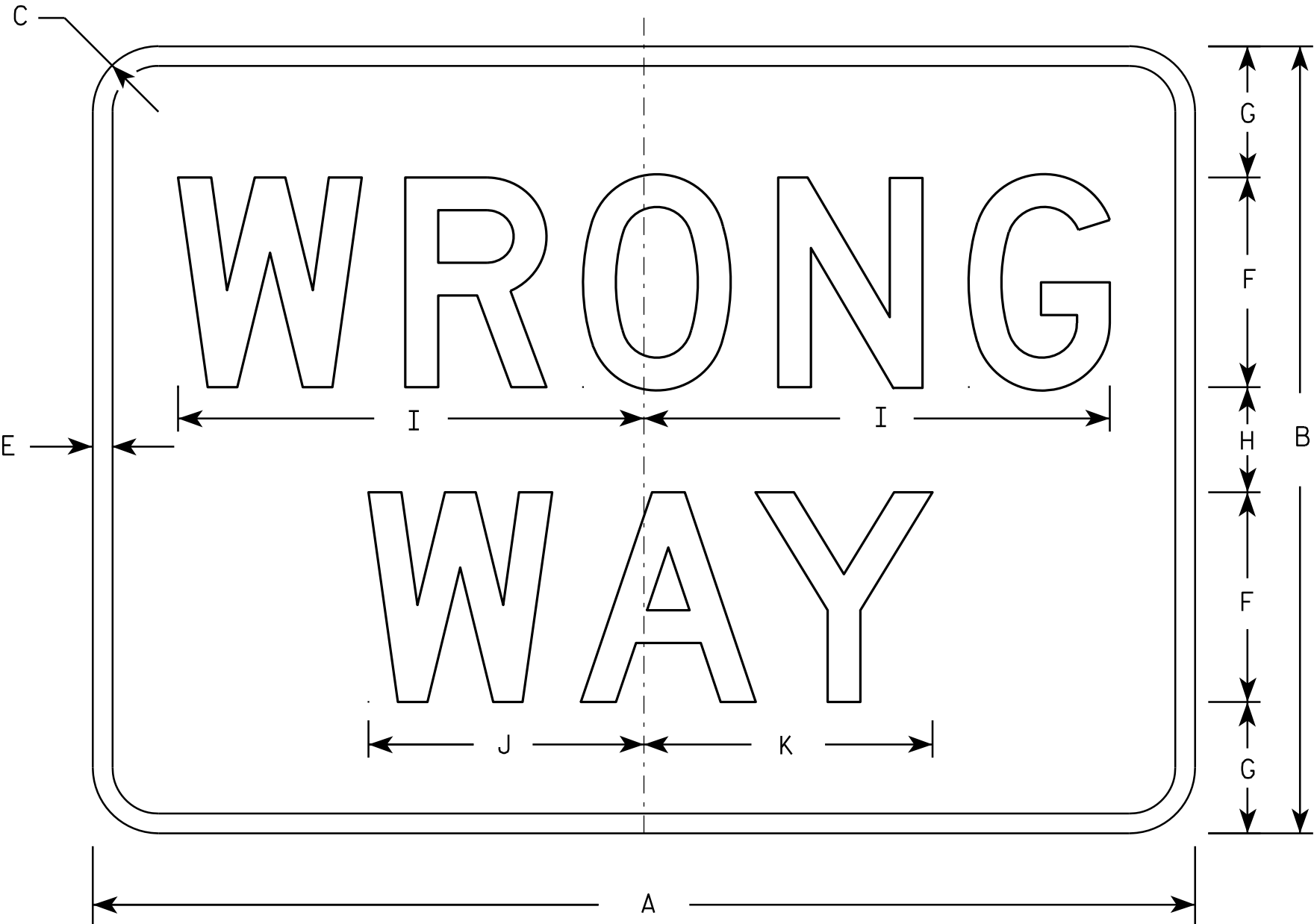
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - D
4. 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.

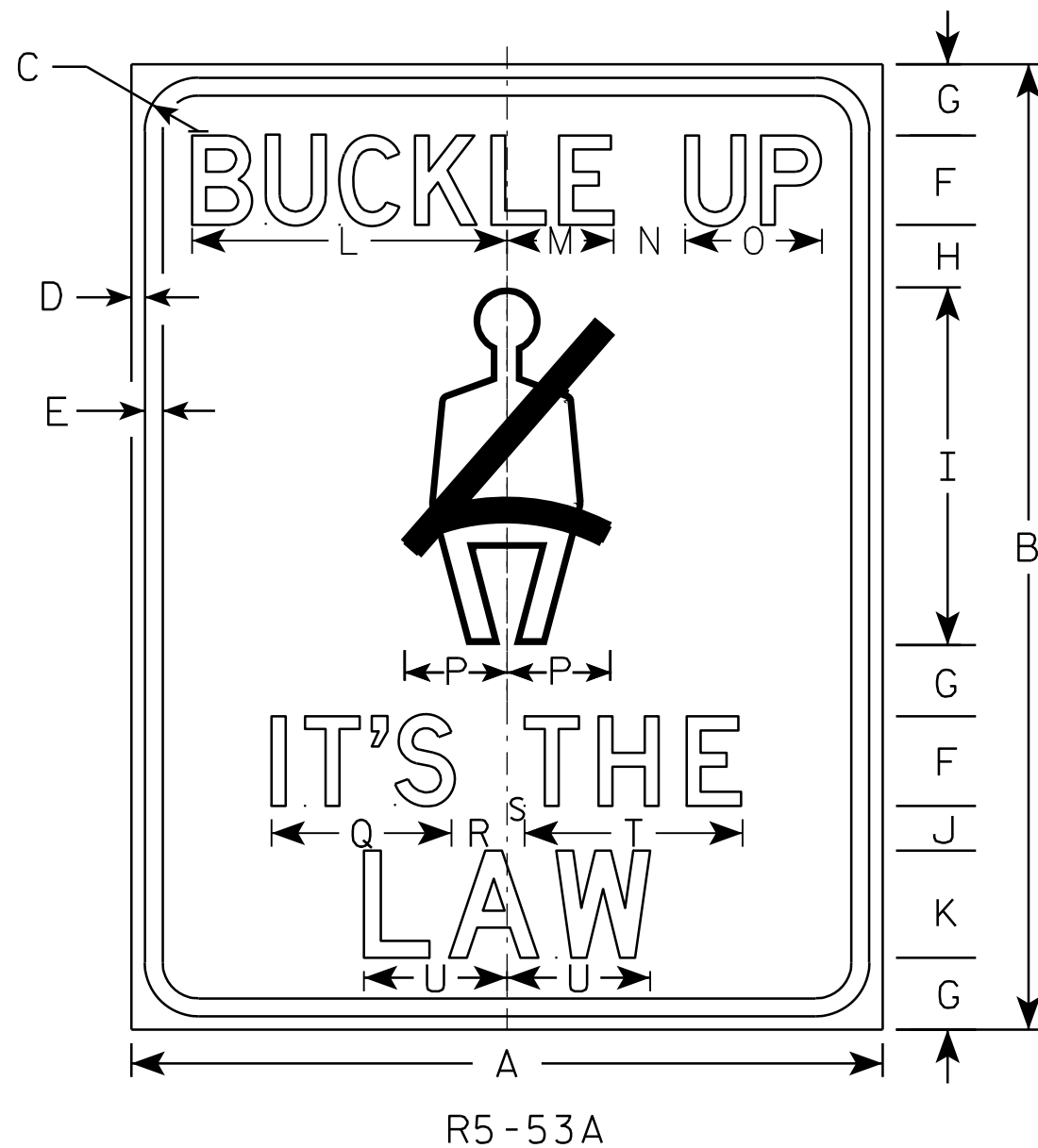
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

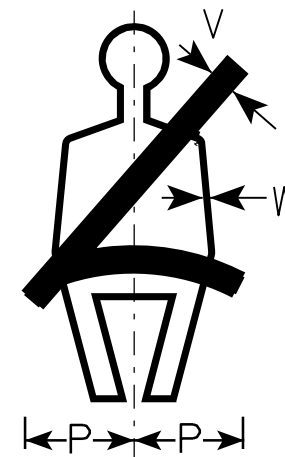
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 12/17/10
PLATE NO. R5-1A.2



NOTES

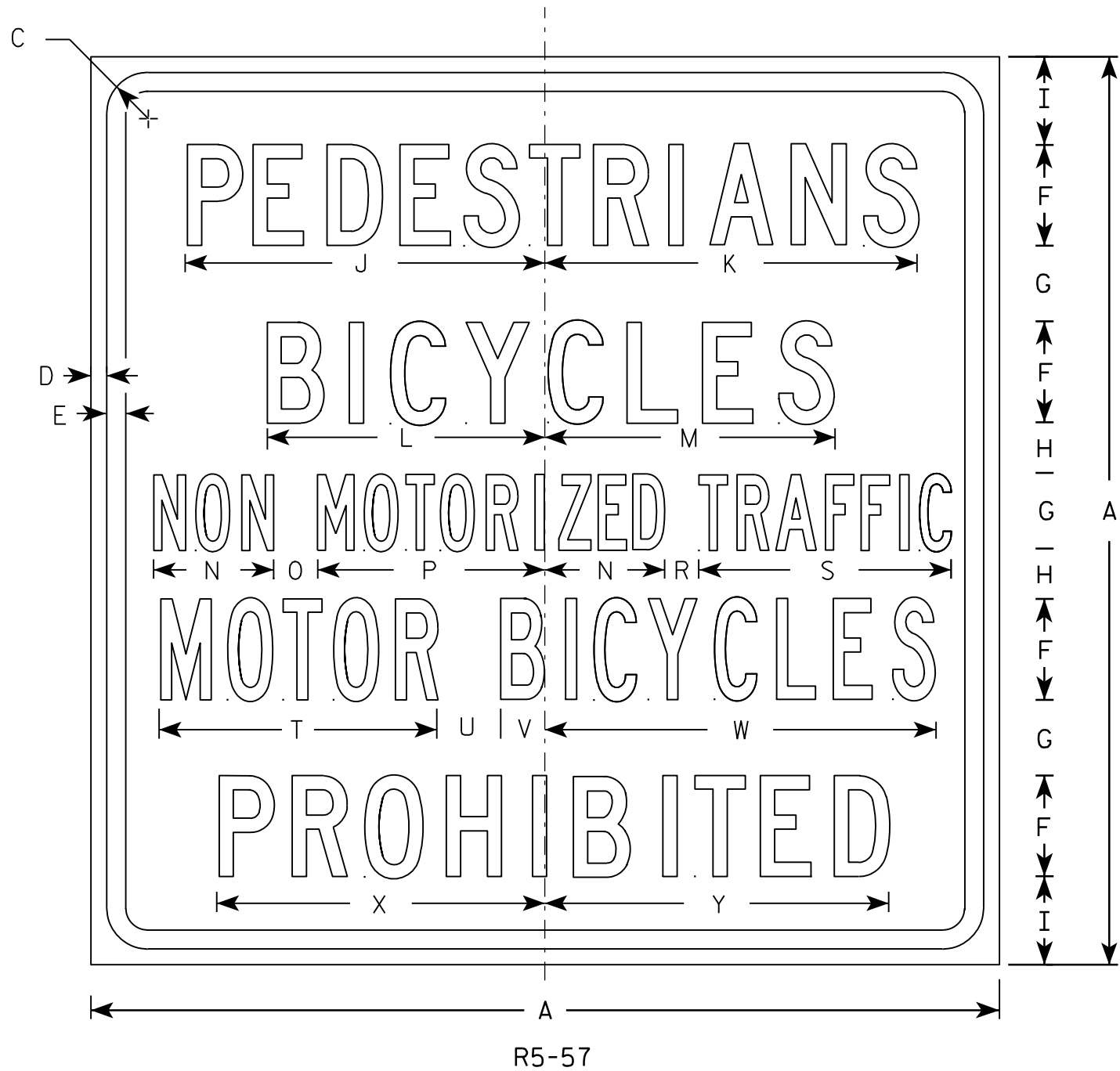
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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



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	18	24	1 1/8	3/8	3/8	2	1 3/4	1 1/2	9	1 1/4	3	6 3/4	2 1/4	1 1/2	2 7/8	2 1/2	3 7/8	1 1/4	3/8	4 5/8	3 7/8	5/8	1/8				3.00
2M	18	24	1 1/8	3/8	3/8	2	1 3/4	1 1/2	9	1 1/4	3	6 3/4	2 1/4	1 1/2	2 7/8	2 1/2	3 7/8	1 1/4	3/8	4 5/8	3 7/8	5/8	1/8				3.00
3																											
4																											
5	42	54	2 1/4	3/4	1	5	4	3 1/2	20	2 1/2	6	17 5/8	6	4	7 5/8	5 3/4	10	3 1/2	1	12 1/4	8	1 1/2	3/8				15.75

STANDARD SIGN R5-53A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/29/2011	PLATE NO. R5-53A.5

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - Lines 1, 2, and 5 are Series C. Lines 3 and 4 are Series B.
- 4. 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.

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																											
2M																											
3																											
4	36		1 5⁄8	5⁄8	3⁄4	4	3	2	3 1⁄2	14 1⁄4	14 7⁄8	11	11 1⁄2	4 3⁄4	1 3⁄4	9		1 3⁄8	10	11	2 1⁄2	1 3⁄4	15 1⁄2	13	13 5⁄8		9.0
5	36		1 5⁄8	5⁄8	3⁄4	4	3	2	3 1⁄2	14 1⁄4	14 7⁄8	11	11 1⁄2	4 3⁄4	1 3⁄4	9		1 3⁄8	10	11	2 1⁄2	1 3⁄4	15 1⁄2	13	13 5⁄8		9.0

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

PROJECT NO:

HWY:

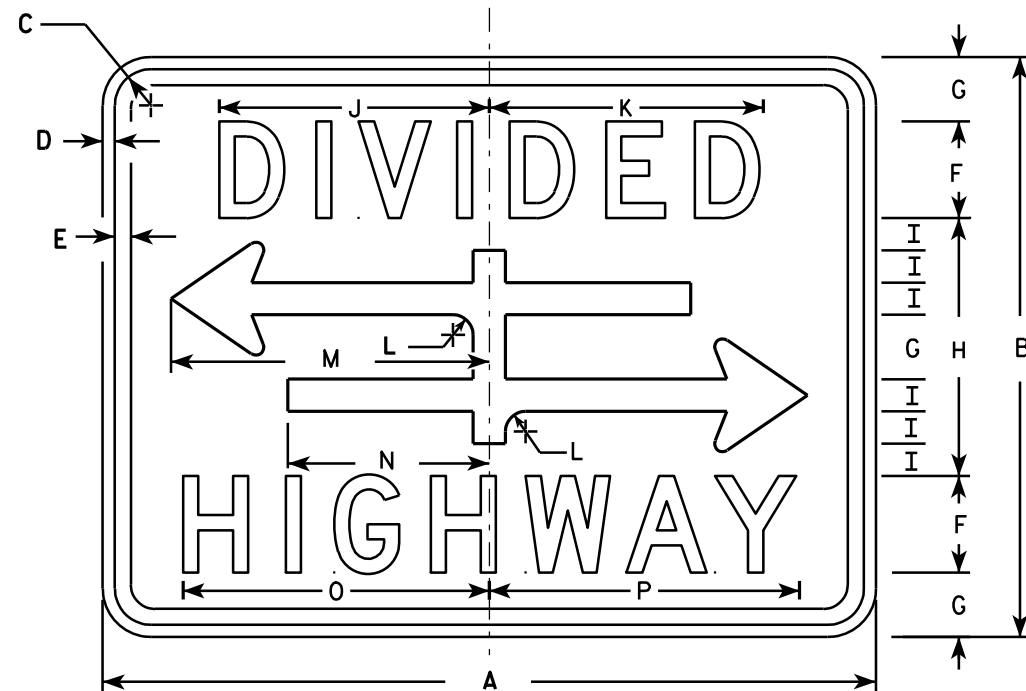
COUNTY:

SHEET NO:

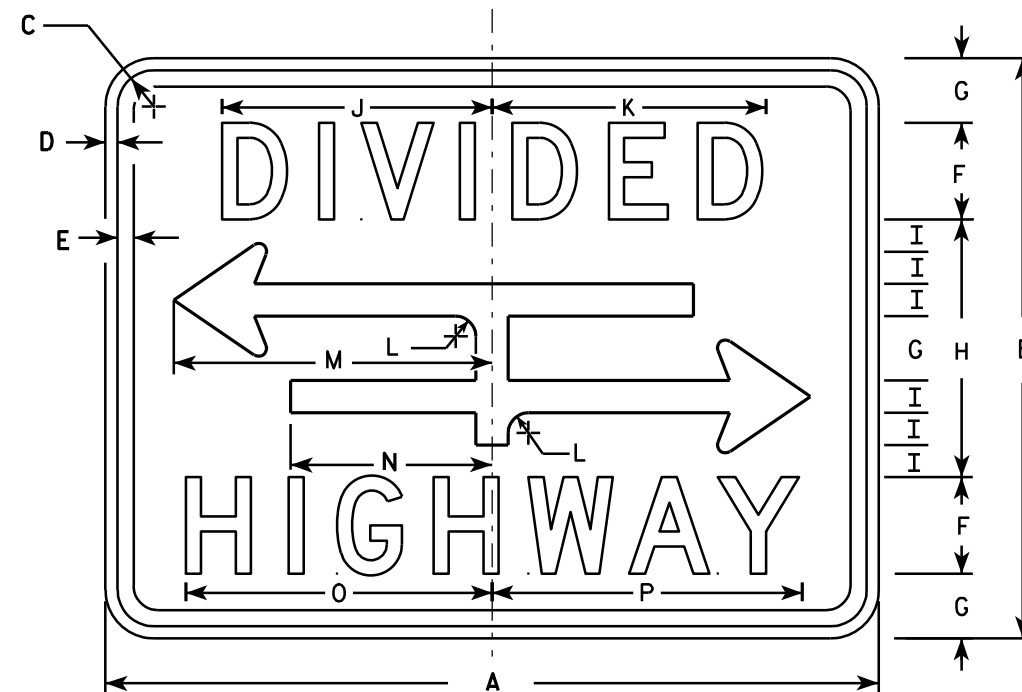
E

NOTES

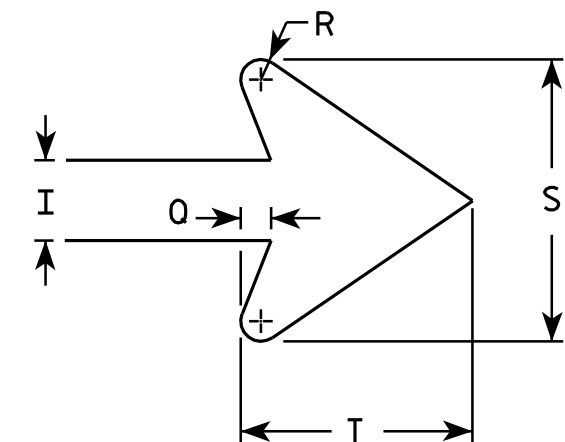
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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



R6-3



R6-3A



ARROW DETAIL

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	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO:

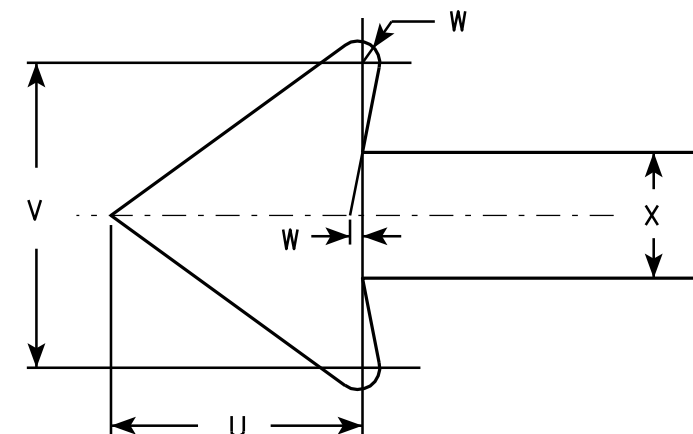
E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Red
3. Message Series - See Note 5
4. 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.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

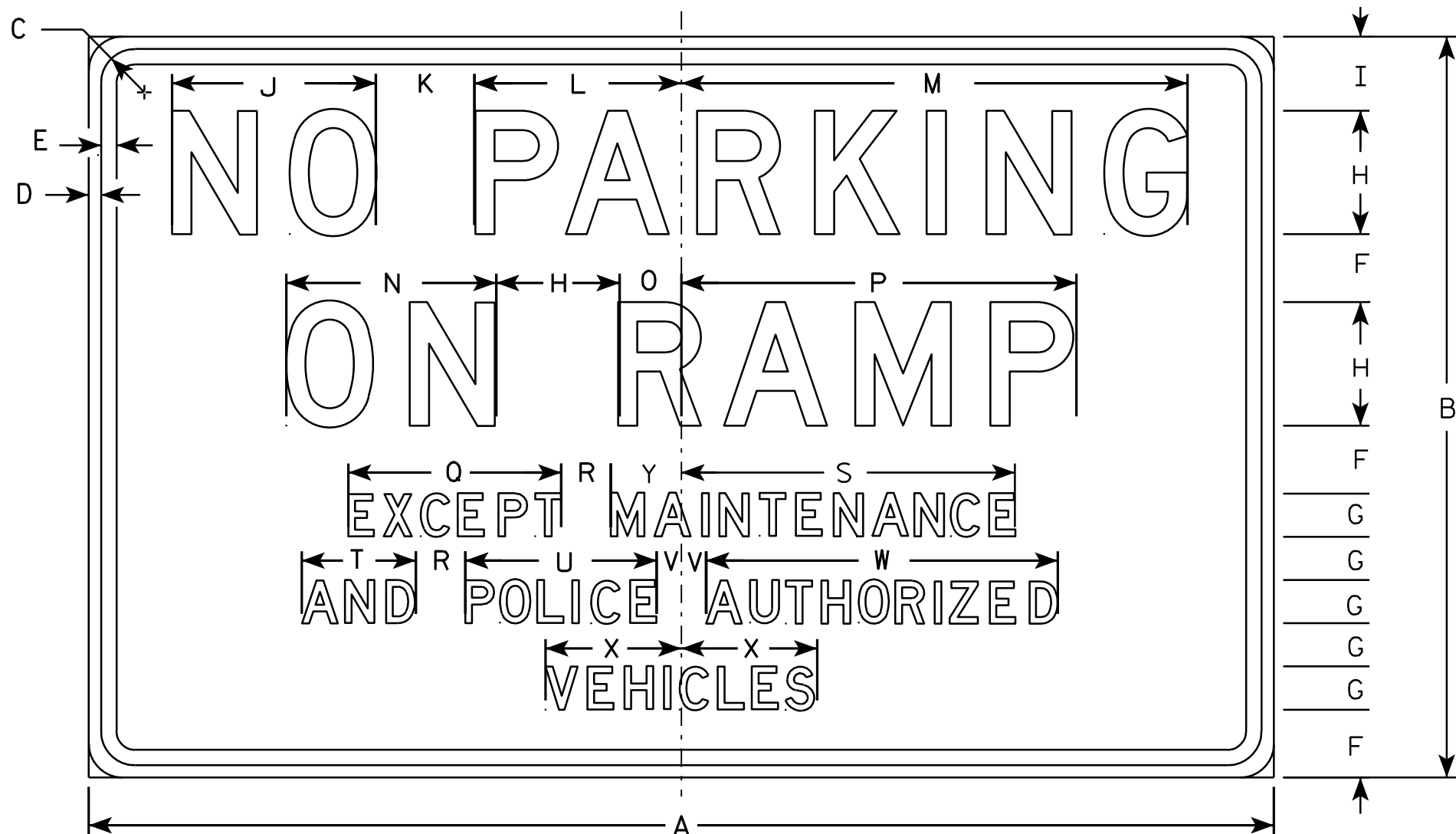
STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - WHITE
Message - Lines 1 & 2 and Border are RED
Lines 3, 4, & 5 are BLACK
3. Message Series - D
4. 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.

R7-64

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																											
2M																											
3	48	30	1 3⁄8	1⁄2	5⁄8	2 3⁄4	1 3⁄4	5	3	8 1⁄4	4	8 3⁄8	20 1⁄2	8 1⁄2	2 1⁄2	16	8 5⁄8	2	13 5⁄8	4 5⁄8	7 3⁄4	1	14 1⁄4	5 1⁄2			10.0
4																											
5																											

STANDARD SIGN
R7-64

WISCONSIN DEPT OF TRANSPORTATION

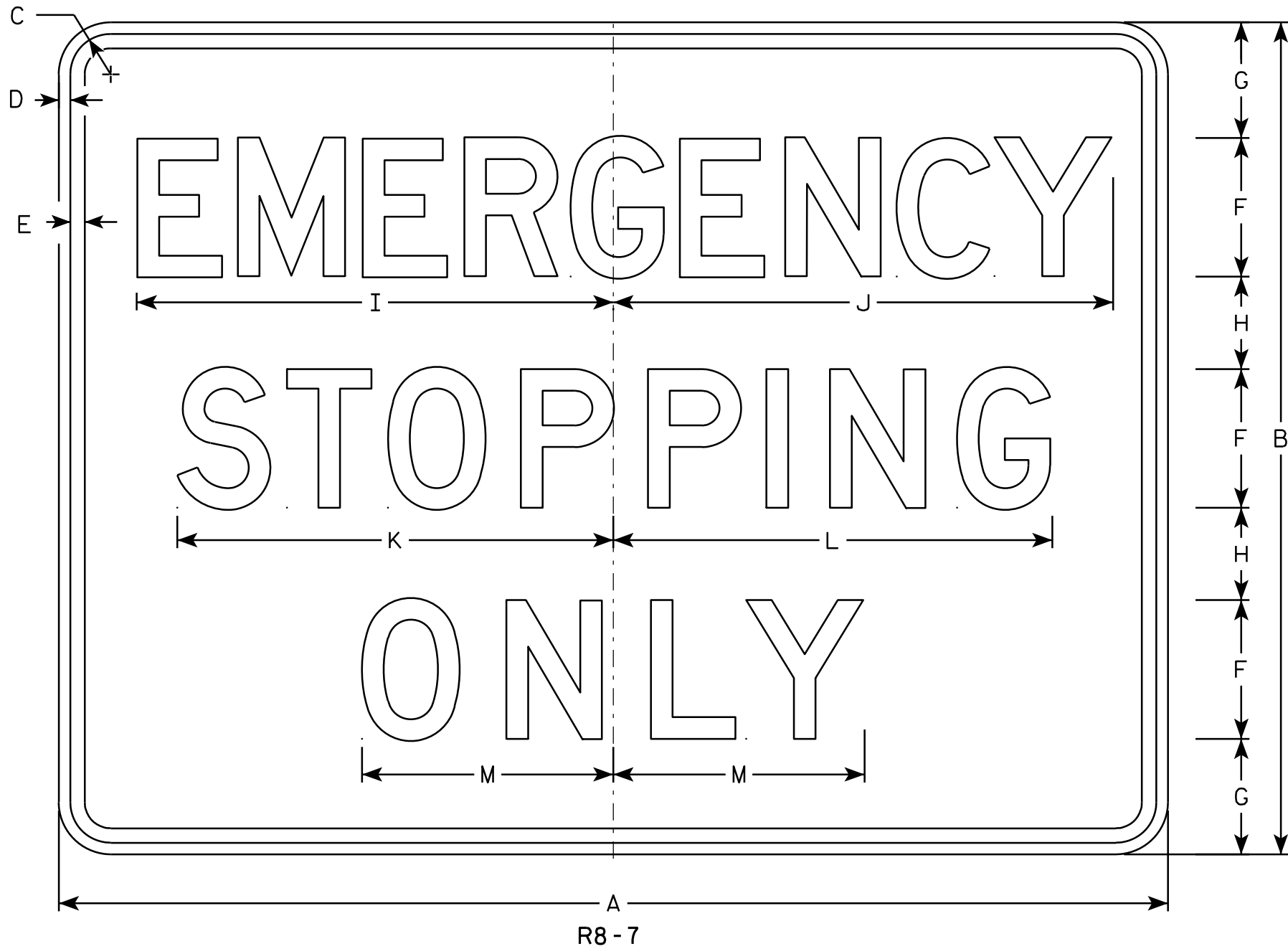
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-64.3

PROJECT NO:

SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. 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.

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																											
2M																											
3																											
4	48	36	1 ¾	½	⅝	6	5	4	20 ⅝	21 ⅝	18 ⅞	19	10 ⅞														12.0
5	48	36	1 ¾	½	⅝	6	5	4	20 ⅝	21 ⅝	18 ⅞	19	10 ⅞														12.0

STANDARD SIGN

R8-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 3/31/2011

PLATE NO. R8-7.6

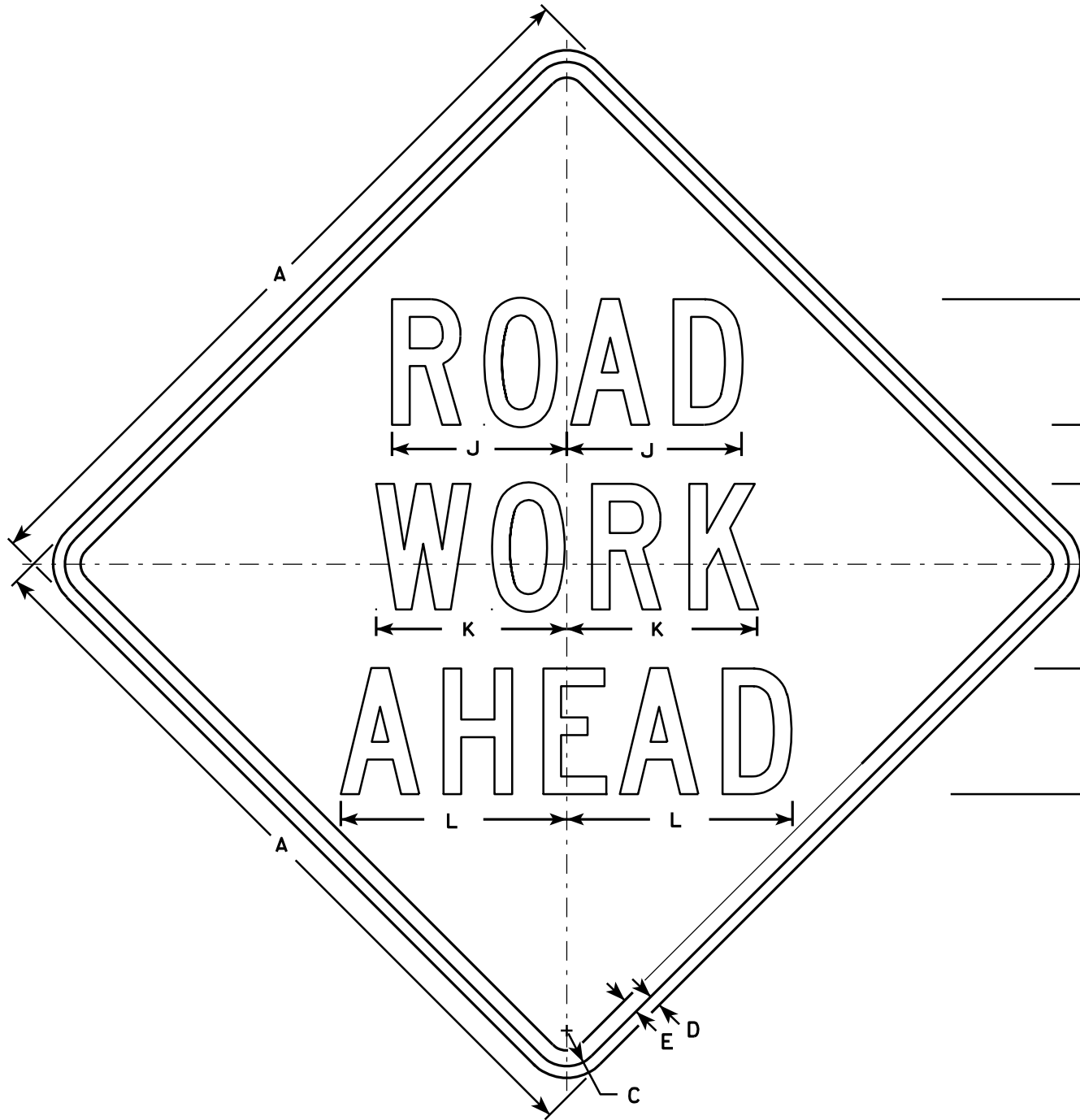
PROJECT NO:

HWY:

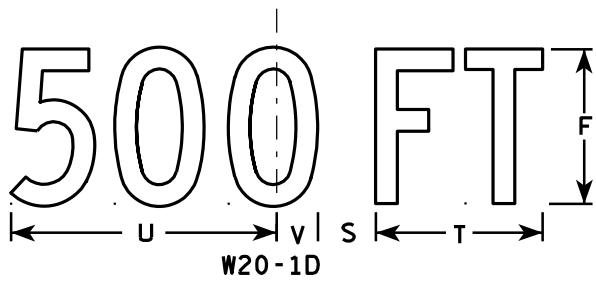
COUNTY:

SHEET NO:

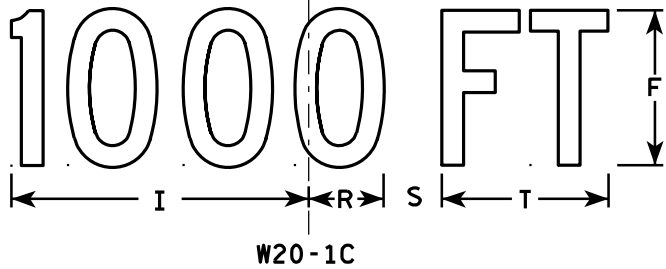
E



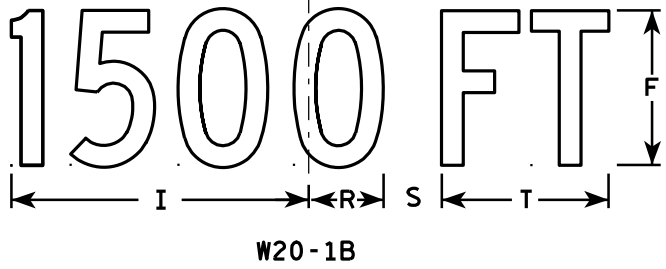
W20-1A



W20-1D



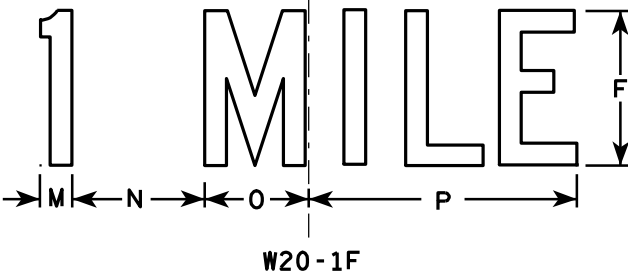
W20-1C



W20-1B



W20-1G



W20-1F

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C
- 4. 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.

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	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

PROJECT NO:

SHEET NO:

E

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

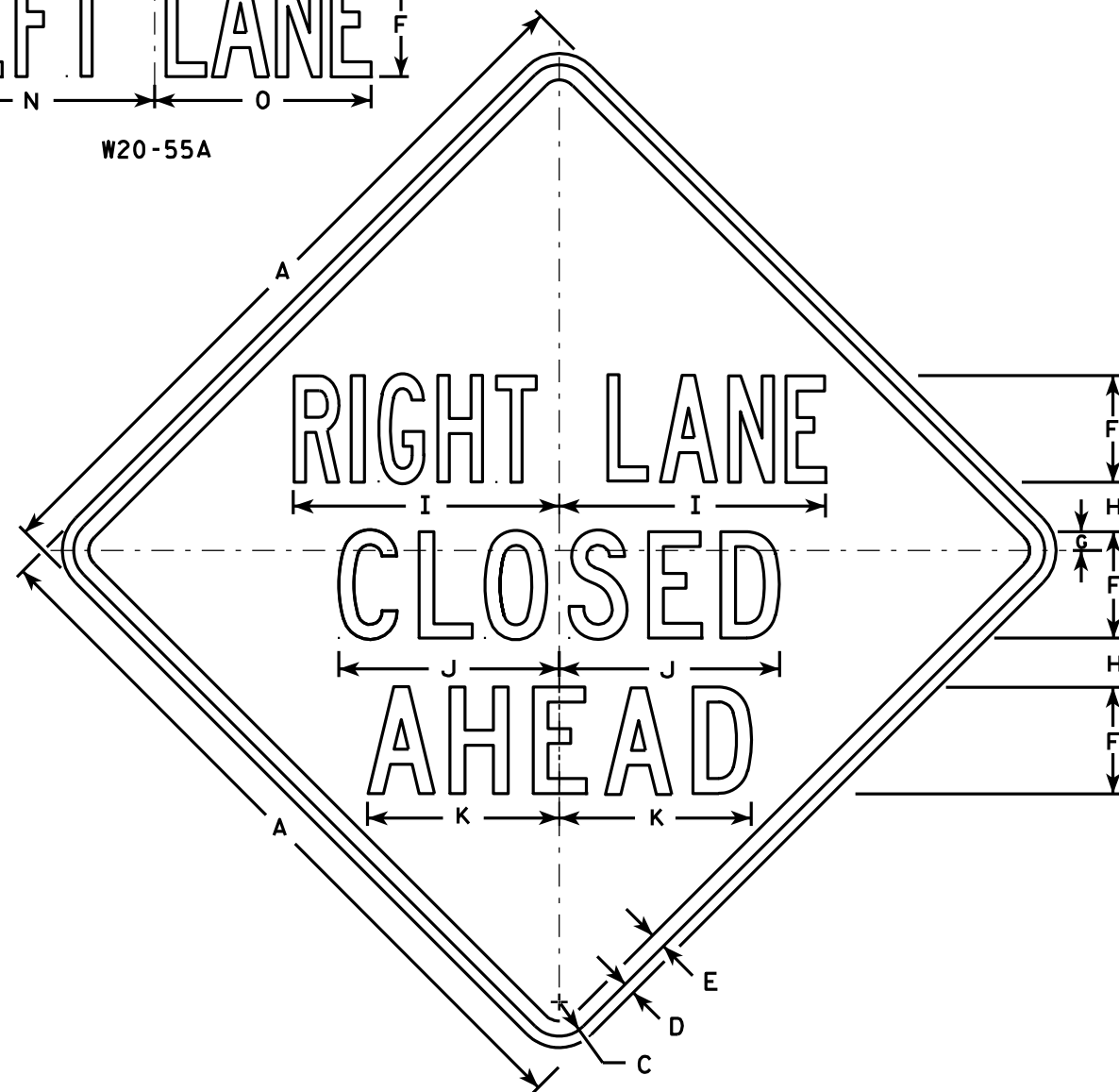
DATE 3/18/11
PLATE NO. W20-19

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See Note 5
4. 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.
5. "-----LANE" is Series B.
All other copy is Series C.

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	36	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

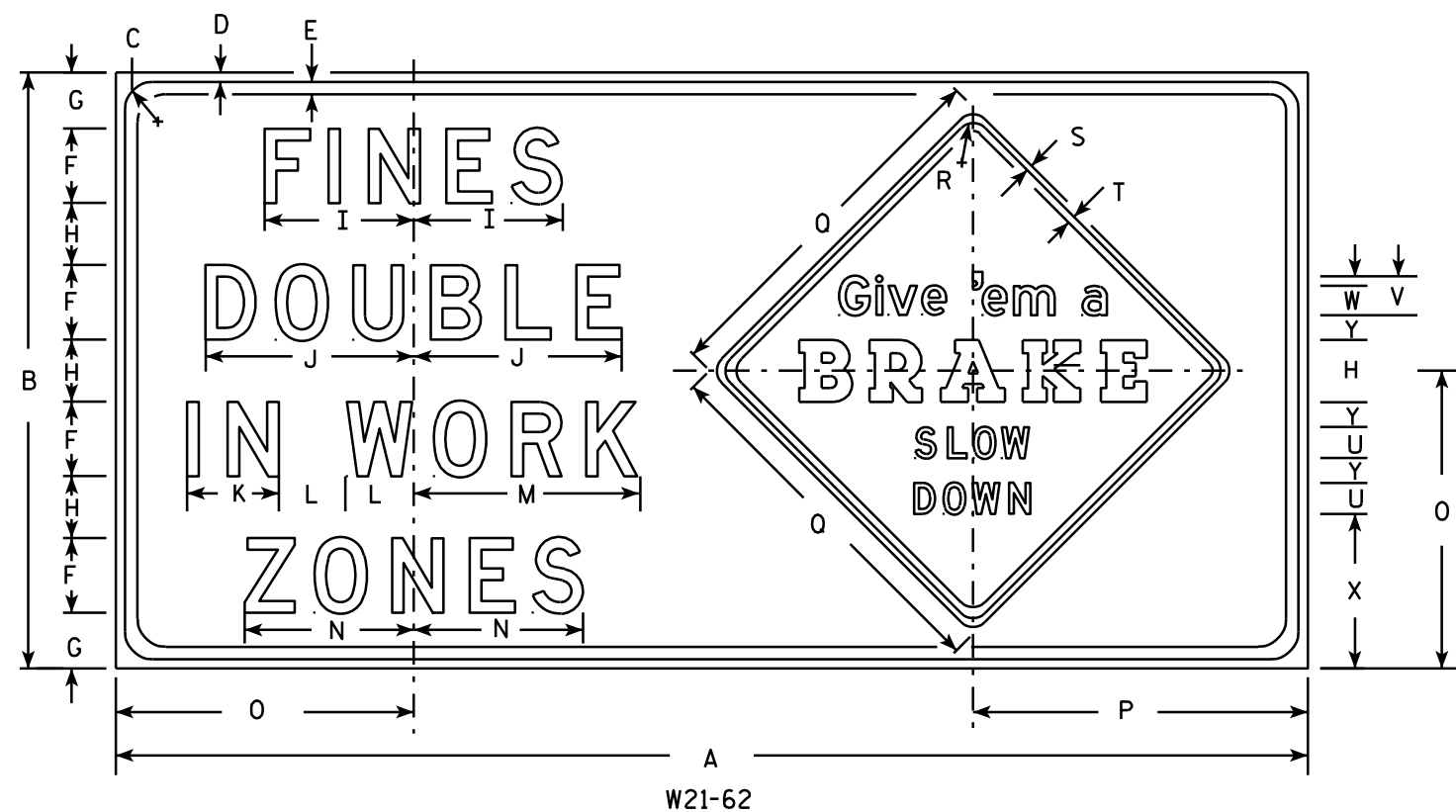
E

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

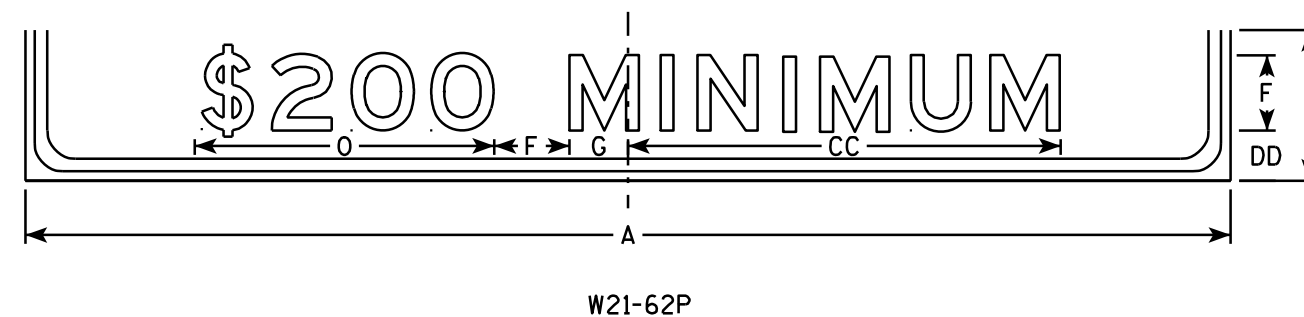
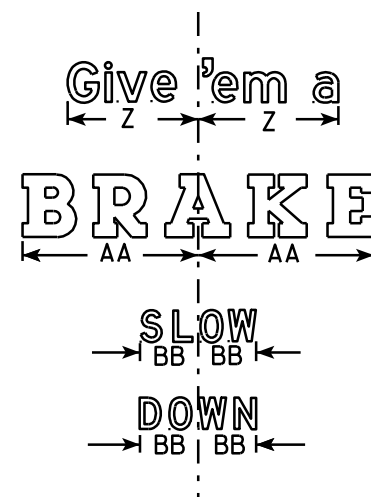
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11



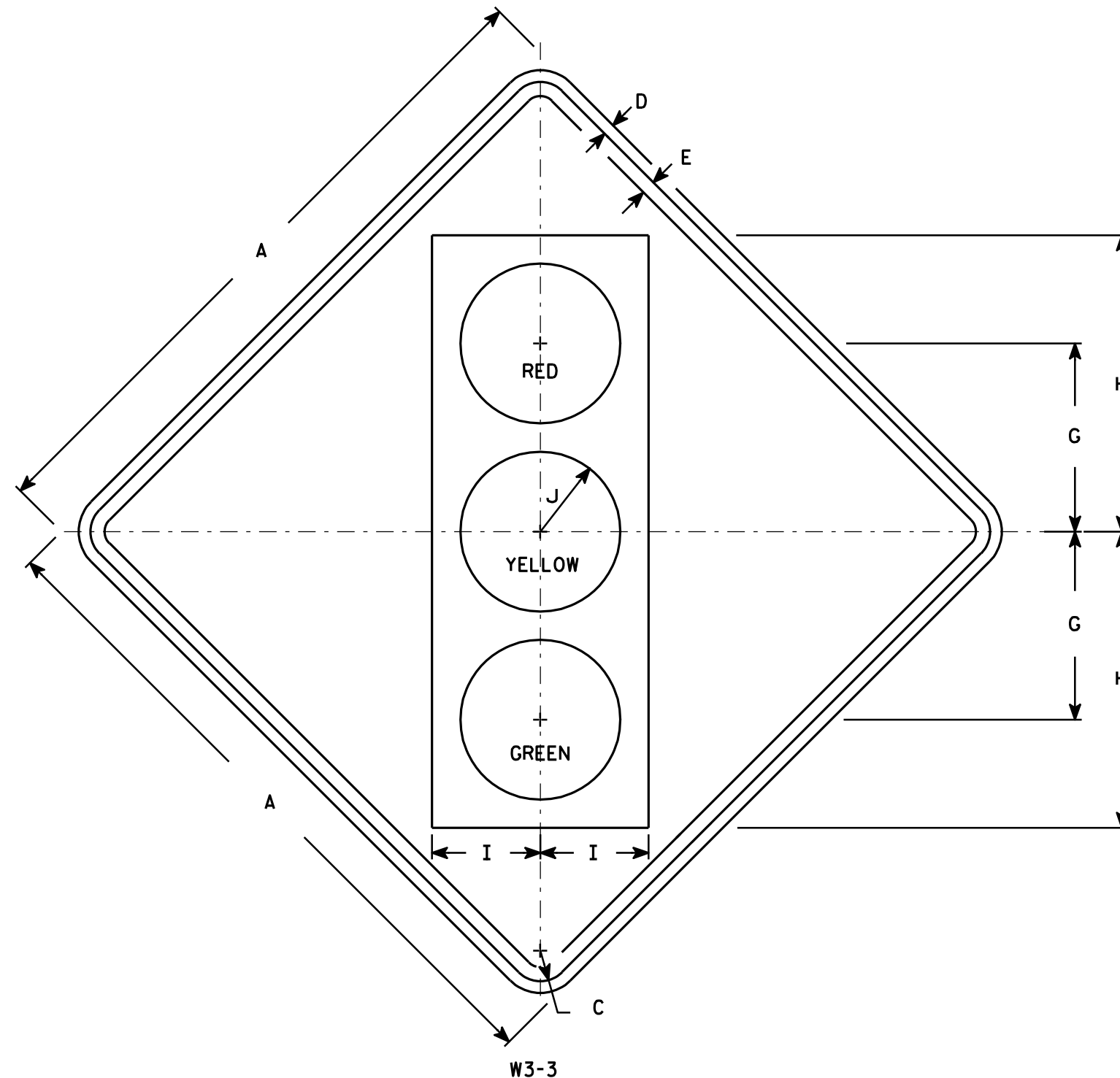
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White - (See Note 5)
Message - Black
3. Message Series -
Fines Double Message - All lines are Series D
Give 'em a Brake -
Line one is Series E, line two is a Special Graphic Series and lines three and four are Series D.
4. The base material shall be plywood. Corners may be square or rounded, but borders shall be rounded as shown. The base material for Give 'em a Brake sign can be a separate sheet of aluminum with the corners and borders rounded as shown. This separate panel shall then be attached to the plywood with aluminum or stainless steel sheet metal screws.
5. Background for the Give 'em a Brake sign shall be Type F reflective orange.



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	AA	BB	CC	DD	Area sq. ft.
1																															
2S																															
2M																															
3	96	48	2 1/4	3/4	1	6	4 1/2	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24	27	30	1 3/8	1/2	5/8	2 1/2	3 1/8	2 3/8	12 1/2	2	10 3/4	14	4 5/8	34 1/2	4	32.0
4																															
5																															

STANDARD SIGN W21-62	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/21/11	PLATE NO. W21-62.5



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - See Note 4
- 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.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

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	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 6/7/10

PLATE NO. W3-3.11

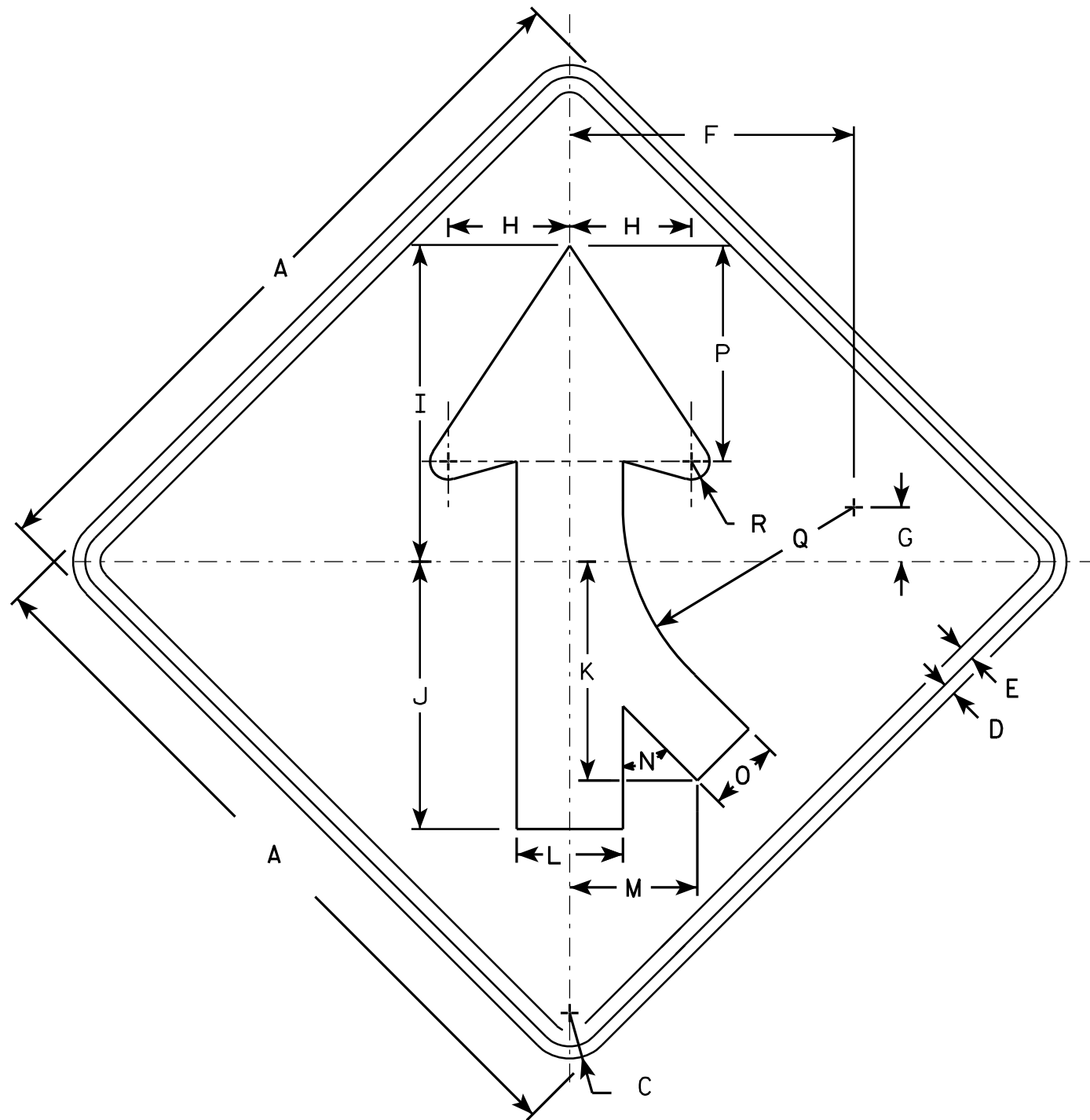
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W4-1 R

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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

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	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

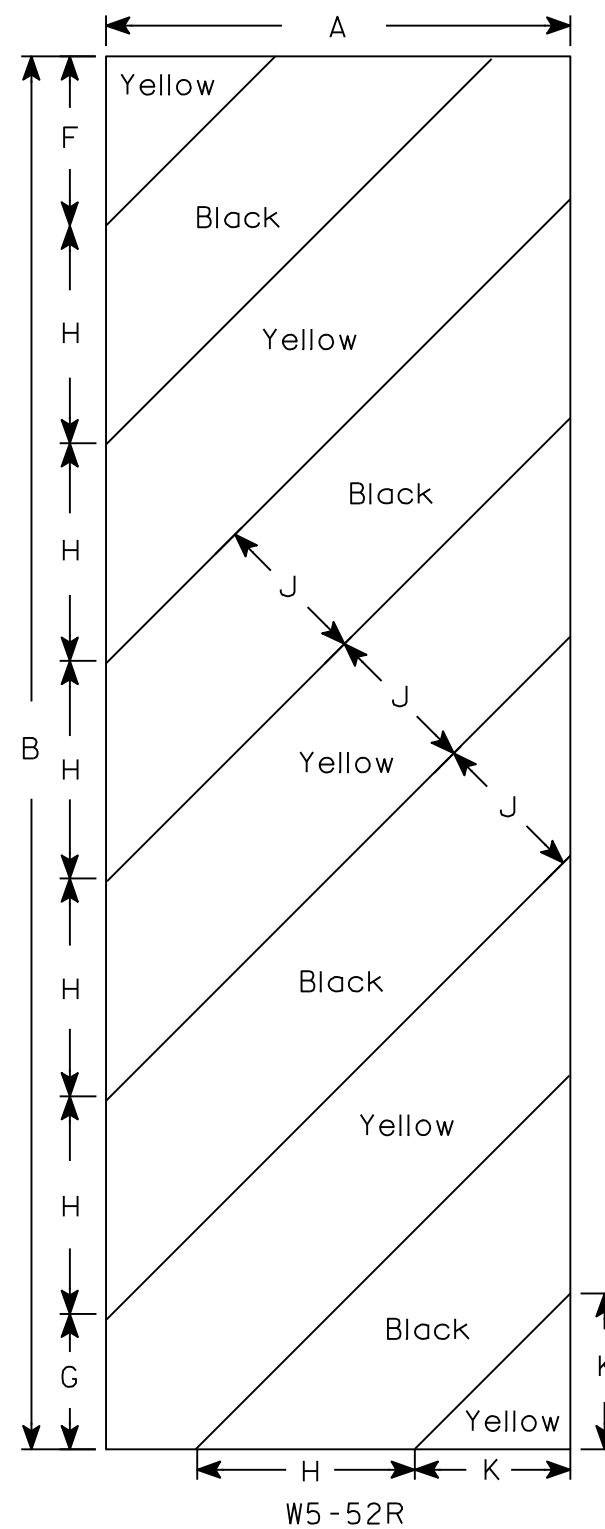
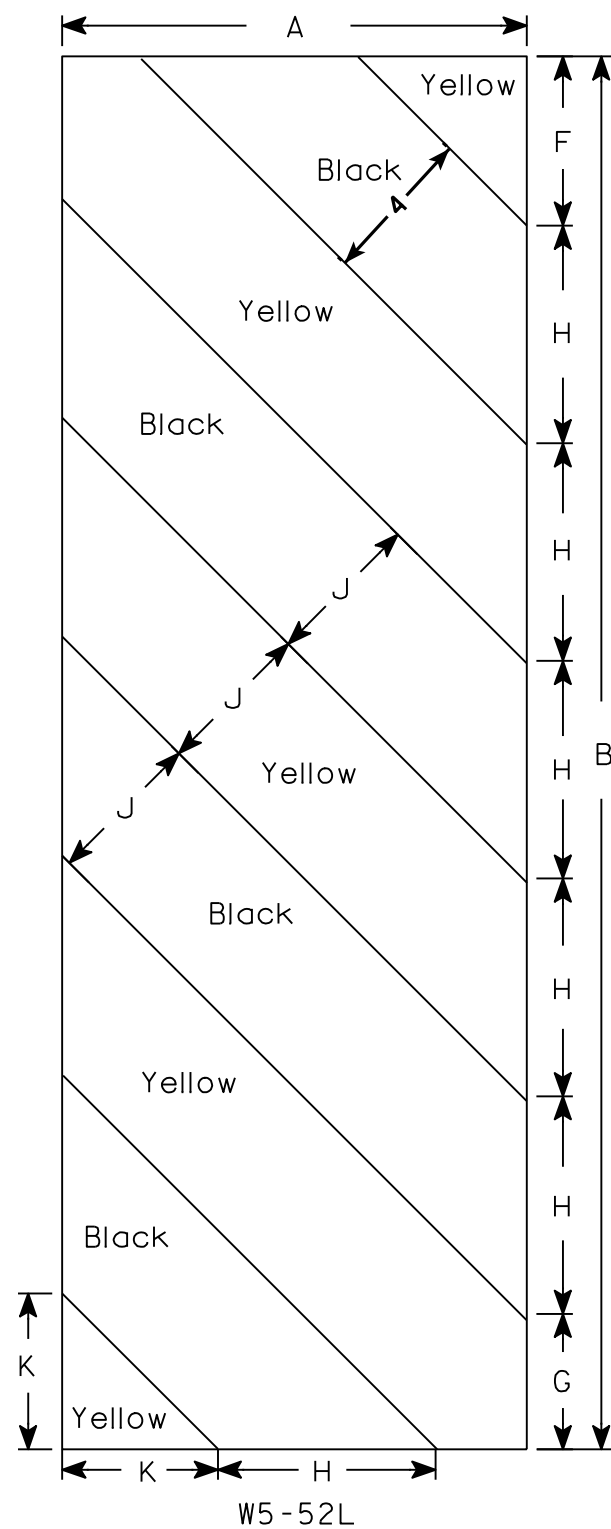
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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.

[illegible]

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

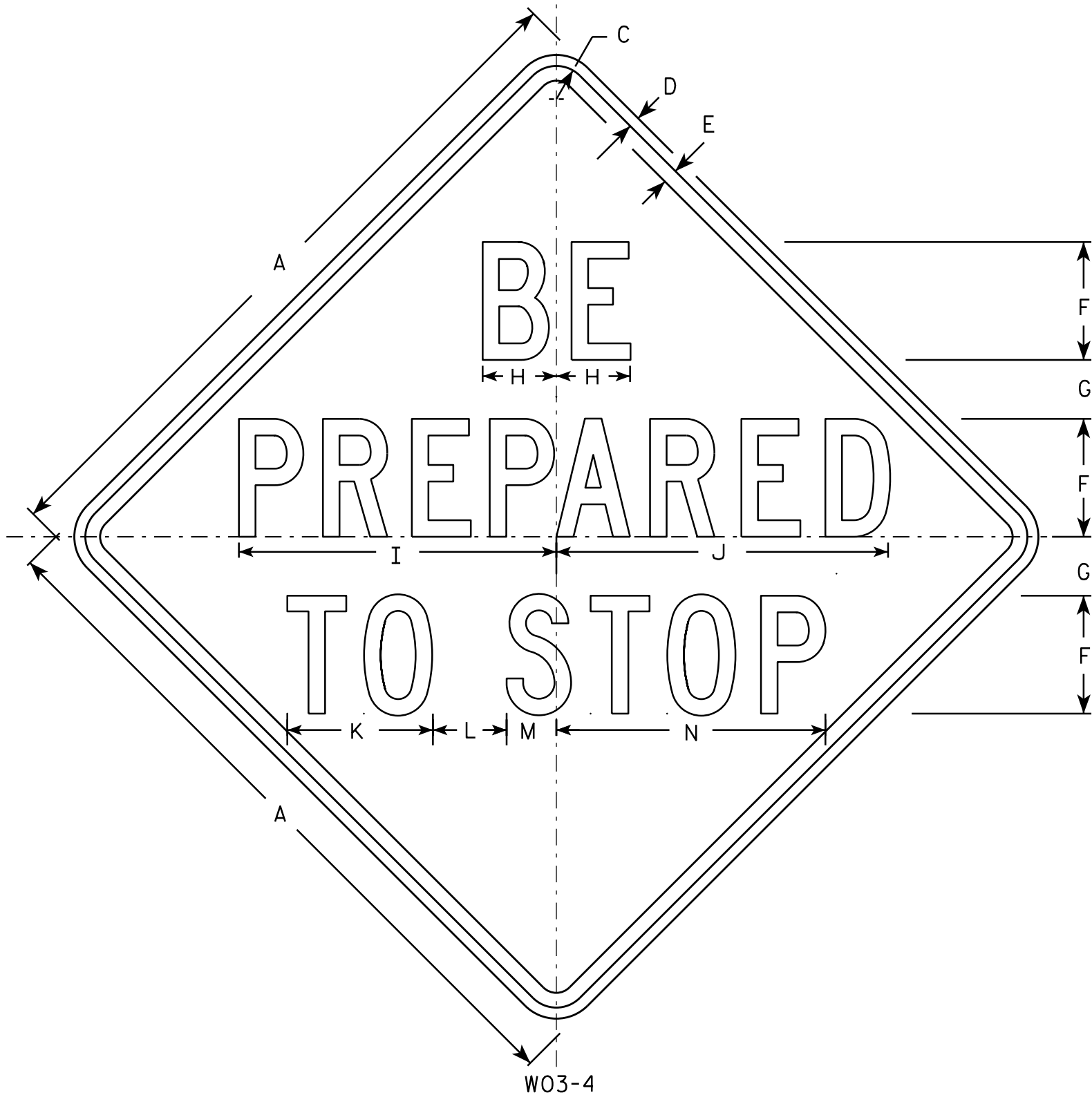
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - C
4. 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.

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	36		1 3/8	1/2	5/8	6	2 1/2	3 3/4	15 7/8	16 7/8	7 3/8	4	2 3/8	13 3/4													9.0
2S	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
2M	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
3	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
4	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0
5	48		2 1/4	3/4	1	8	4	5	21 1/2	22 1/2	9 7/8	5	3 3/8	18 1/4													16.0

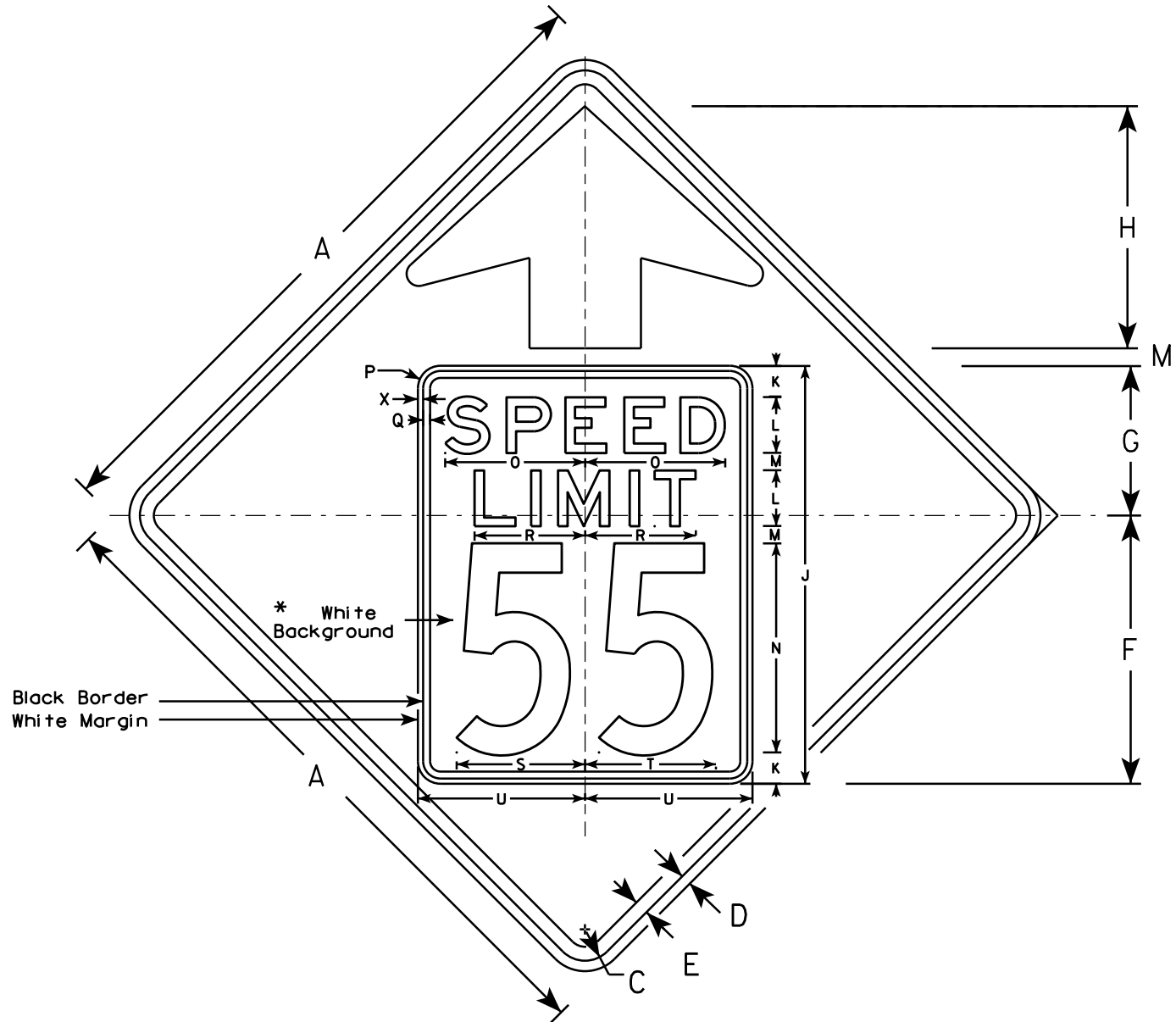
STANDARD SIGN W03-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/02/13 PLATE NO. W03-4.1

PROJECT NO: HWY: COUNTY: SHEET NO: E

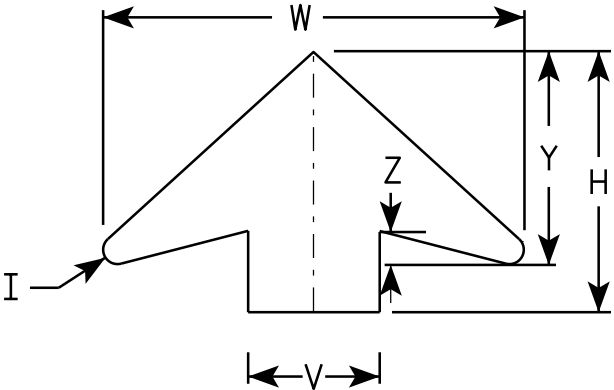


W03-5

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color: *
Background - ORANGE*
Message - BLACK
- 3. Message Series - C for numbers Series E for wording
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

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	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2S	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
2M	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
3	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

PROJECT NO:

STANDARD SIGN
W03-5

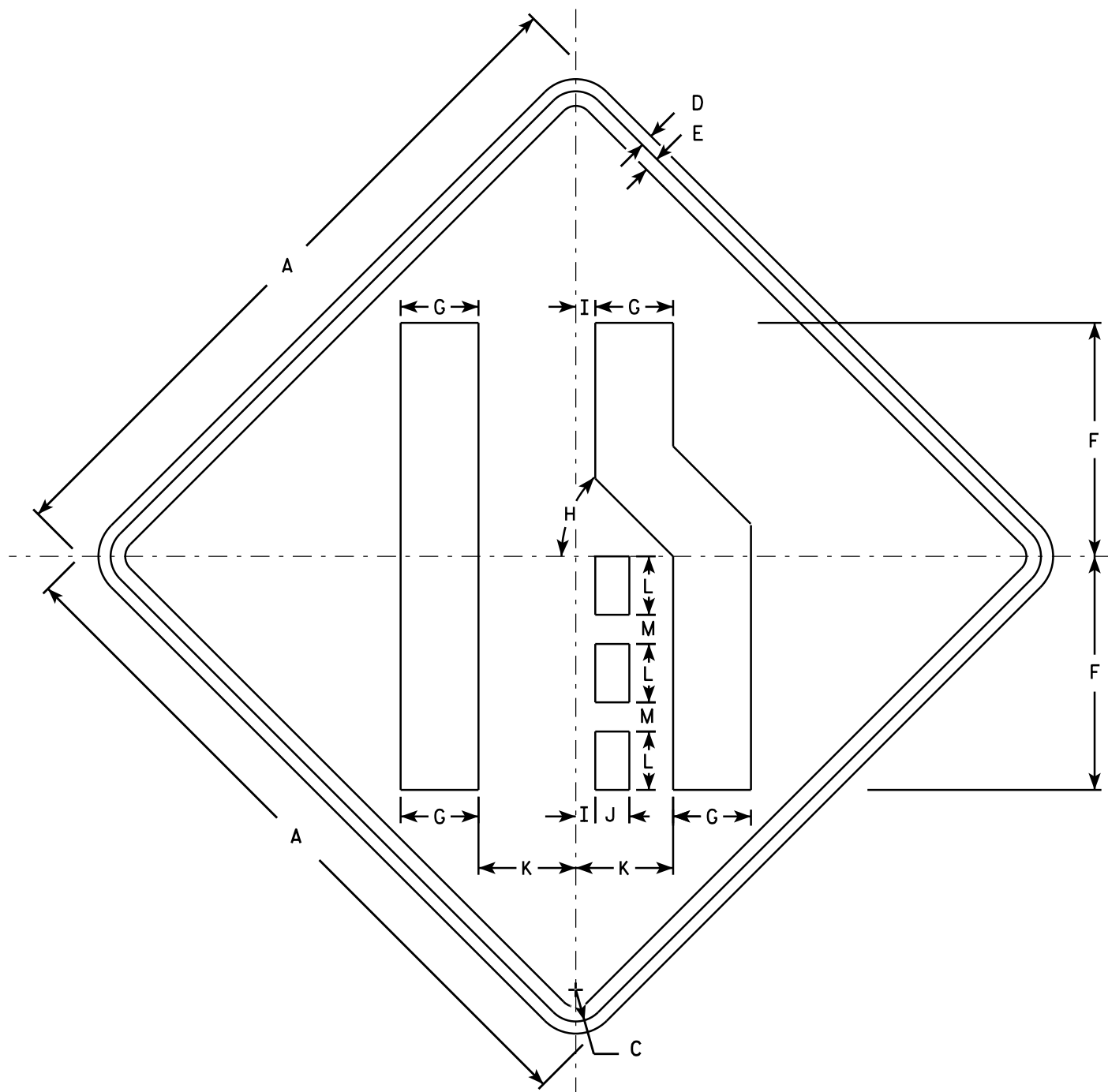
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W03-5.1

SHEET NO:

E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
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. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

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	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN

W04-2

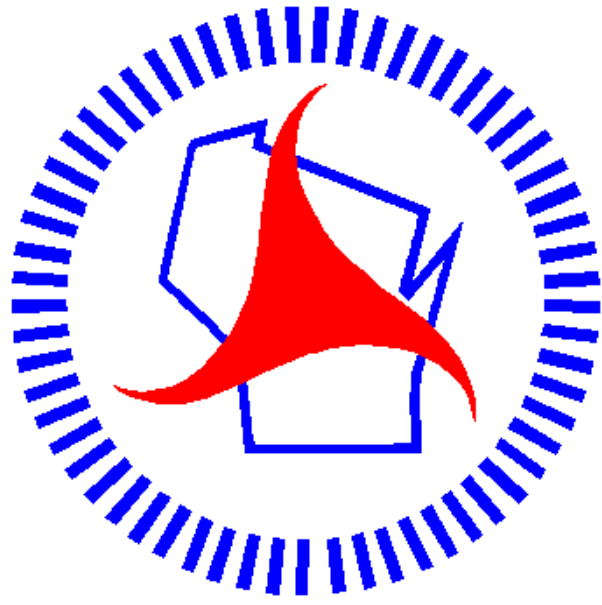
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 11/20/13

PLATE NO. W04-2.1



Wisconsin Department of Transportation

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