

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 Plot
Section No. 5	Plan and Profile (Includes Erosion Control)
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 = 142

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

14TH STREET, CITY OF SHEBOYGAN

SHEBOYGAN RIVER BRIDGE

STH 28

SHEBOYGAN COUNTY

STATE PROJECT NUMBER

4640-06-71



SHEBOYGAN COUNTY

BEGIN PROJECT 4640-06-71
STA 97+25.00
Y = 177997.174
X = 216303.587

DESIGN DESIGNATION

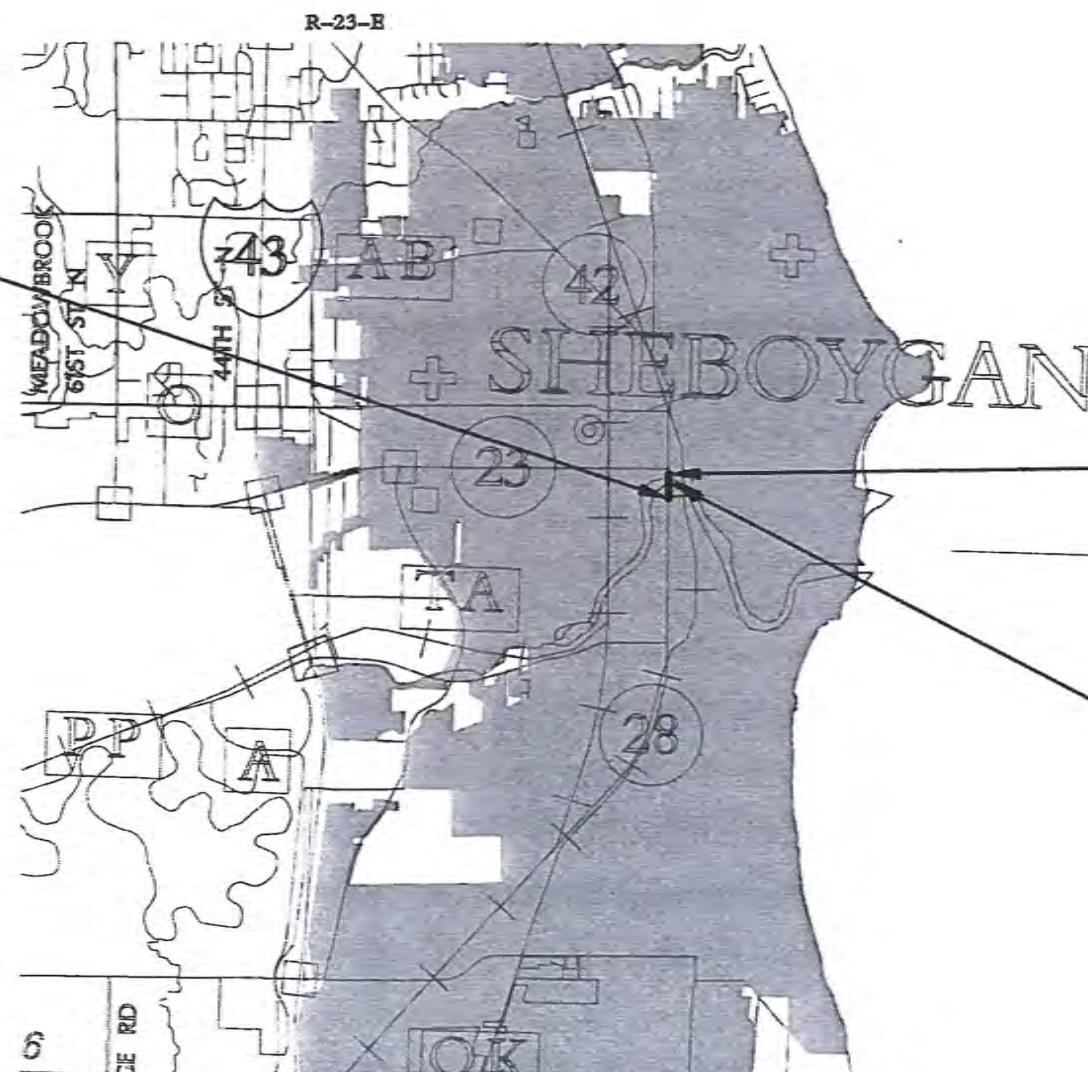
A.A.D.T. (2015)	=	21,900
A.A.D.T. (2035)	=	24,600
D.H.V. (K100)	=	10.1
D.D.	=	59/41
T. (DHV)	=	4.6%
DESIGN SPEED	=	30 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	PL + 59.1
LOT LINE	-----
LIMITED HIGHWAY EASEMENT	-----
EXISTING RIGHT OF WAY	-----
PROPOSED OR NEW R/W LINE	-----
SLOPE INTERCEPT	-----
REFERENCE LINE	-----
EXISTING CULVERT	-----
PROPOSED CULVERT (Box or Pipe)	-----
COMBUSTIBLE FLUIDS	CAUTION
MARSH AREA	-----
WOODED OR SHRUB AREA	-----

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

ROCK	-----
LABEL	-----
95.36	-----
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LAYOUT
SCALE 0 1/2 MI. 1 MI.

TOTAL NET LENGTH OF CENTERLINE 4640-06-71 = 0.074 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO
NAD 1983 (2011 ADJUSTMENT). VERTICAL CONTROL IS
REFERENCED TO NAVD 1983 (2012 ADJUSTMENT).

STATE PROJECT

4640-06-71

FEDERAL PROJECT

PROJECT

WISC 2015296

CONTRACT

1

ORIGINAL PLANS PREPARED BY
OMNI
ASSOCIATES



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	OMNI ASSOCIATES, INC.
Project Manager	PAUL BRAUER
Regional Examiner	
Regional Supervisor	R. WAGNER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 1/16/2015 Paul Brauer
(Signature)

E

2

GENERAL NOTES

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

FILL AS SHOWN ON THE PLANS PERTAIN TO EMBANKMENTS CONSTRUCTED FROM COMMON OR BORROW EXCAVATION.

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

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER RADII ARE SHOWN TO THE BACK OF CURB.

THE EXACT LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CURB RAMPS OPENING AS SHOWN ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE GIVEN BY THE ENGINEER IN THE FIELD.

BASE AGGREGATE DENSE WILL BE USED UNDER ALL DRIVEWAYS AND SIDEWALKS.

CONCRETE SIDEWALK CROSSING DRIVEWAYS SHALL BE 8-INCH DEPTH AND WILL BE PAID FOR AS CONCRETE DRIVEWAY 8-INCH.

WHERE SLOPE INTERCEPT LINES FALL OUTSIDE OF THE EXISTING RIGHT-OF-WAY, TEMPORARY INTERESTS TO ACCOMPLISH CONSTRUCTION WORK WITHIN THE SLOPE INTERCEPTS HAVE BEEN OBTAINED. THESE RIGHTS ARE EXTENDED TO THE CONTRACTOR.

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS TO MINIMIZE SEDIMENTATION IN THE INLET AND STORM SEWER.

ALL MANHOLE AND INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGES INFORMATION IN THE PLAN WITH THE ENGINEER.

THE COST OF CONNECTING EXISTING STORM SEWERS OR DRAINAGE STRUCTURES TO THE NEW STORM SEWER SHALL BE INCIDENTAL TO THE COST OF THE STORM SEWER.

GENERAL NOTES

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

ALL TRANSVERSE CONTRACTION JOINTS, LONGITUDINAL JOINTS AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT AND CONCRETE CURB AND GUTTER SHALL BE SAWED AND SEALED AS SHOWN IN CONSTRUCTION AND PAVING DETAILS.

EROSION CONTROL NOTES

RUNOFF COEFFICIENT FOR THIS PROJECT: EXISTING PAVEMENT 0.95, EXISTING SLOPES 0.30,
NEW PAVEMENT 0.95, NEW SLOPES 0.30.

TOTAL PROJECT AREA = 0.9 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.4 ACRES

ORDER OF "SECTION 2" SHEETS

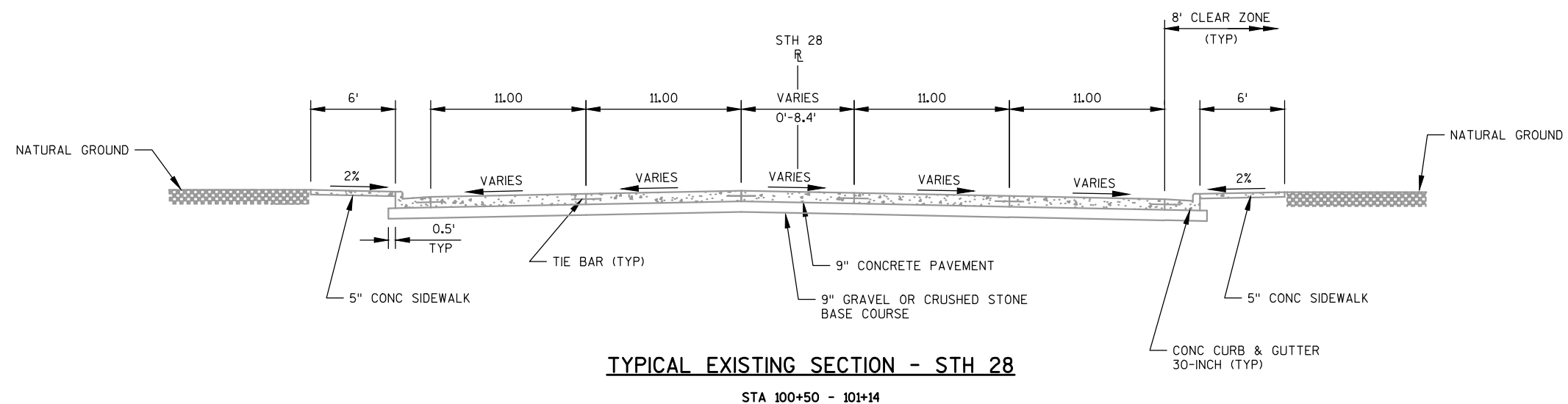
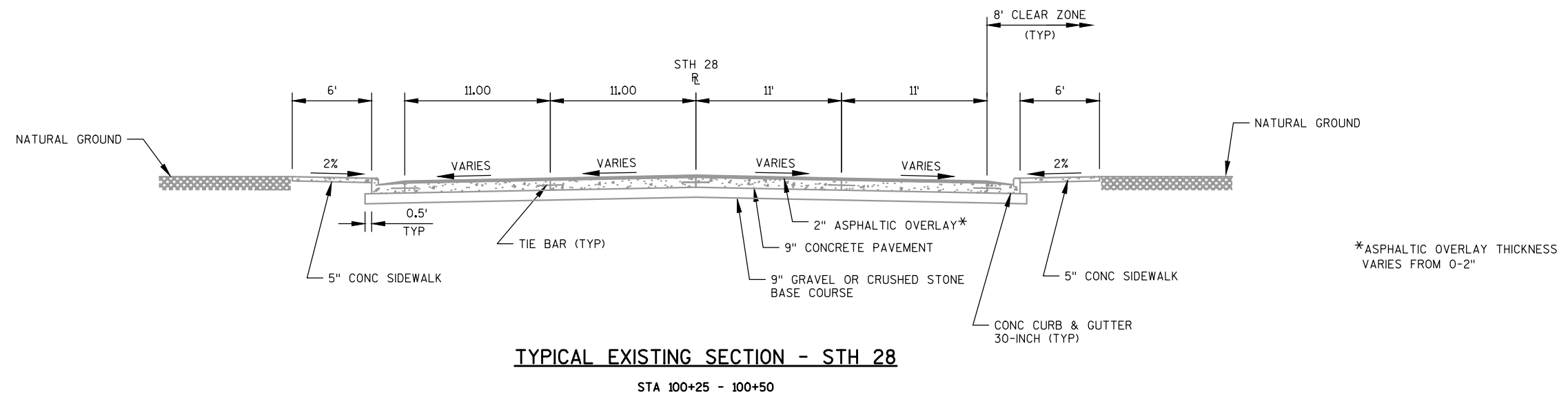
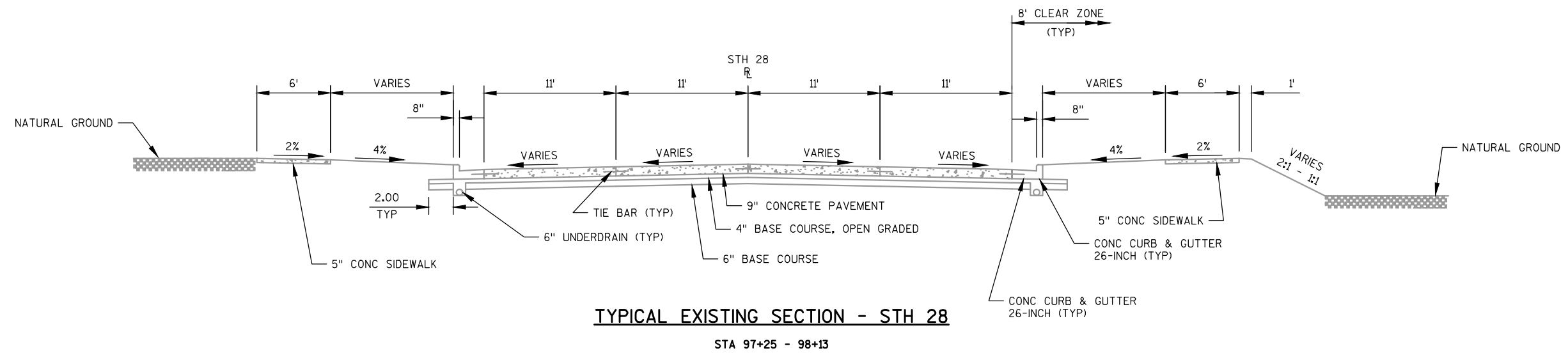
SHEET TITLE

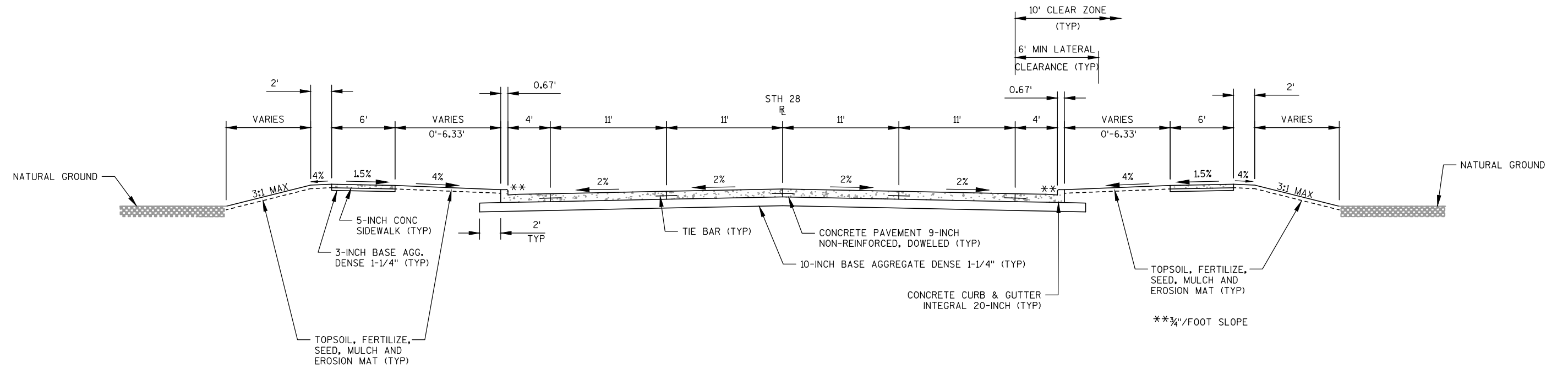
GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVING DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
PERMANENT SIGNING PLAN
LIGHTING PLAN AND DETAILS
PAVEMENT MARKING PLAN
MARINE TRAFFIC PLANS
DETOUR AND TRAFFIC CONTROL PLAN

2

DIRECTOR	SHEBOYGAN COUNTY TRANSPORTATION DEPARTMENT HIGHWAY DIVISION 1211 N 23RD STREET SHEBOYGAN, WI 53081 ATTN: GREG SCHNELL TELEPHONE: 920-459-3822 E-MAIL: GREG.SCHNELL@SHEBOYGANCOUNTY.COM
DNR LIAISON	WISCONSIN DEPARTMENT OF NATURAL RESOURCES 2984 SHAWNO AVENUE GREEN BAY, WI 54313-6727 ATTN: JAY SCHIEFELBEIN TELEPHONE: 920-662-5130 E-MAIL: JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV
COUNTY	SHEBOYGAN COUNTY ENGINEER/SURVEYOR HIGHWAY ADMINISTRATION BUILDING 1211 N 23RD STREET SHEBOYGAN, WI 53081 ATTN: EDGAR HARVEY JR TELEPHONE: 920-459-3826 EMAIL: HARVEELH@CO.SHEBOYGAN.WI.US

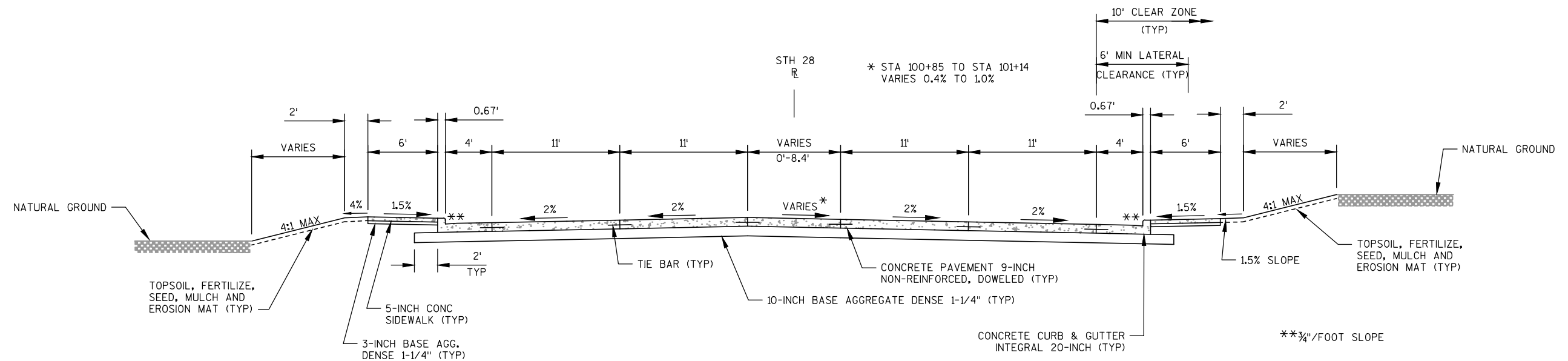






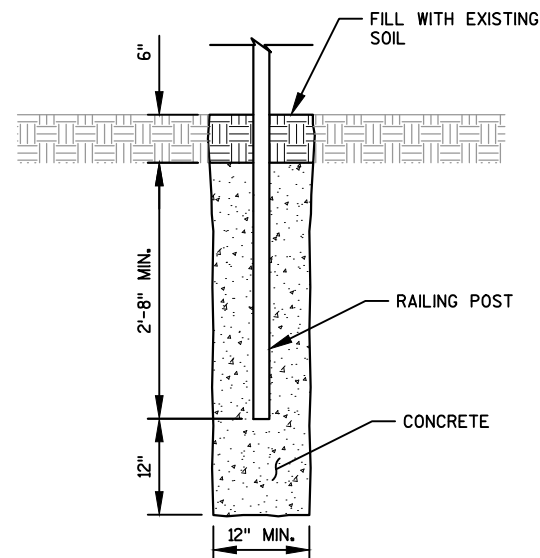
TYPICAL FINISHED SECTION - STH 28

STA 97+25 - 98+13

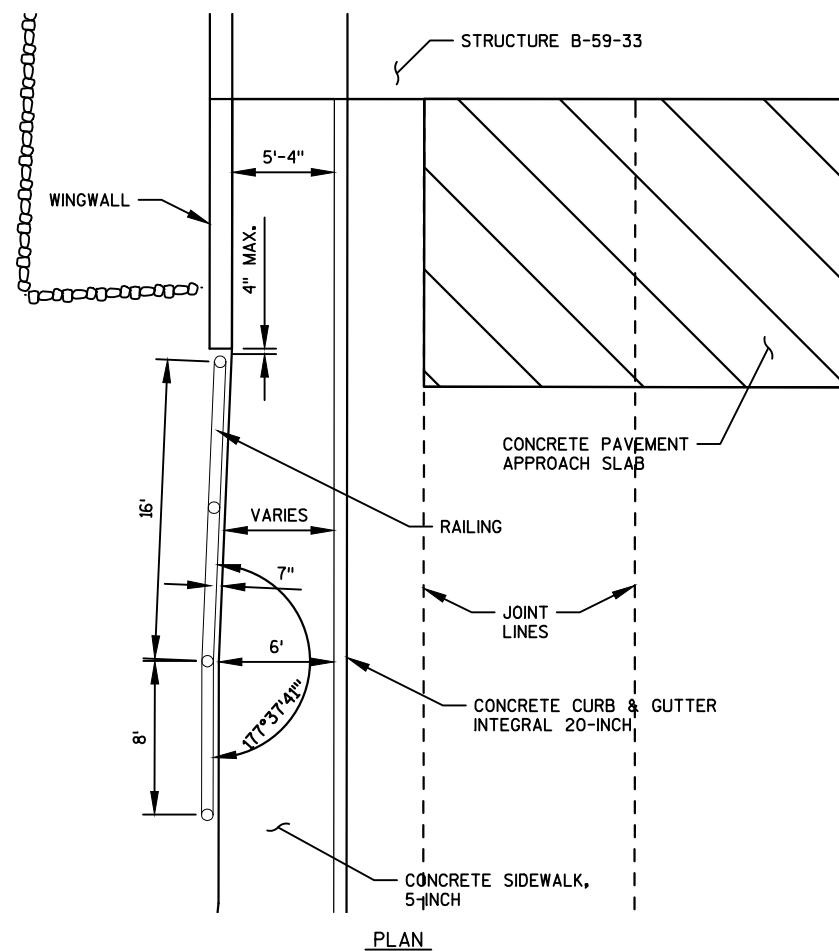


TYPICAL FINISHED SECTION - STH 28

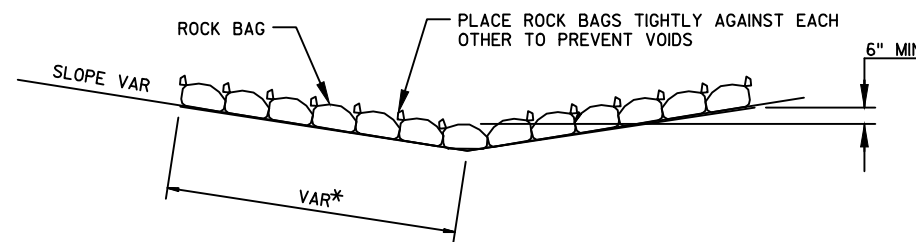
STA 100+25 - 101+14



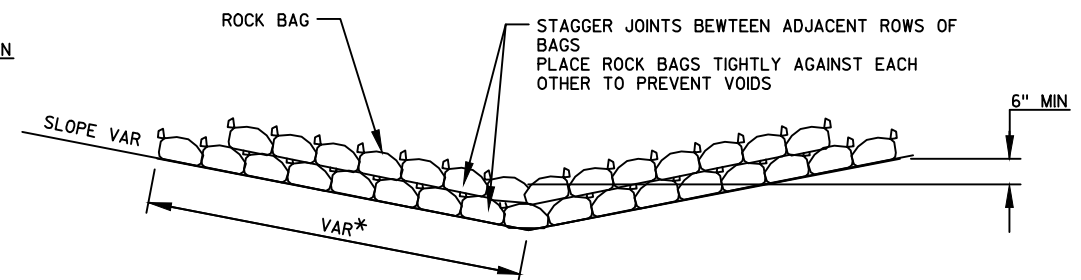
RAILING STEEL TYPE C-3 GALVANIZED OFF-STRUCTURE FOUNDATION DETAIL, TYP.



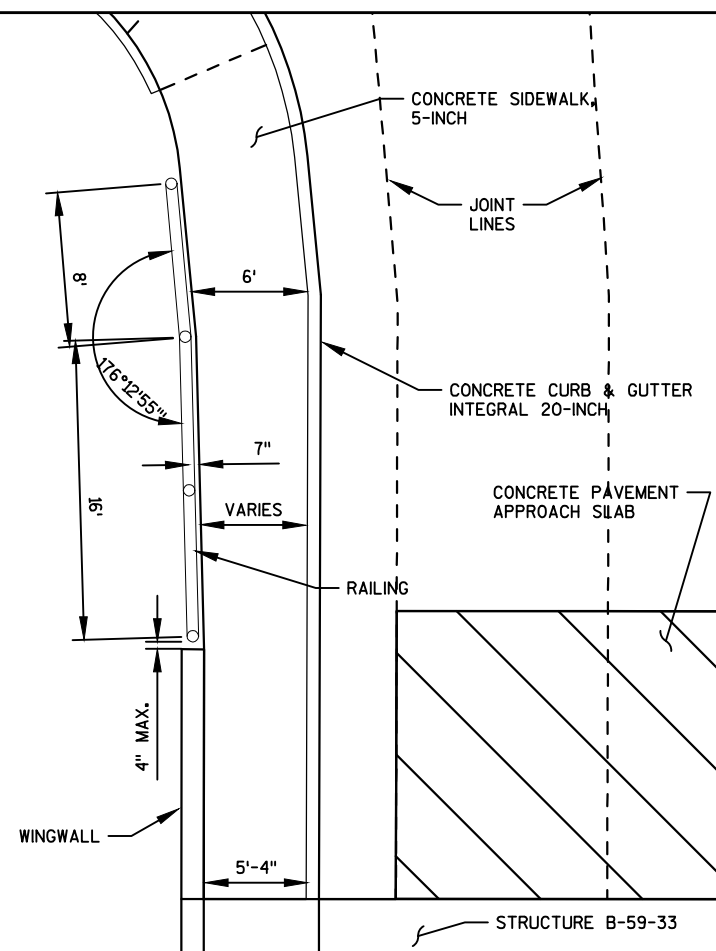
RAILING STEEL TYPE C-3 GALVANIZED OFF-STRUCTURE SIDEWALK DETAIL AT SW WINGWALL END (SE WINGWALL MIRROR)



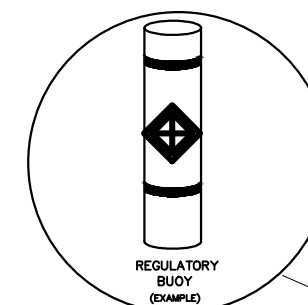
SIDE VIEW (SINGLE LAYER)



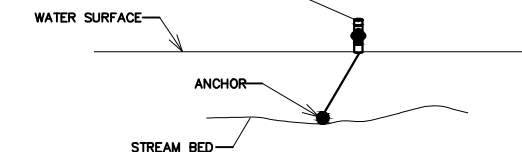
SIDE VIEW (MULTIPLE LAYER)

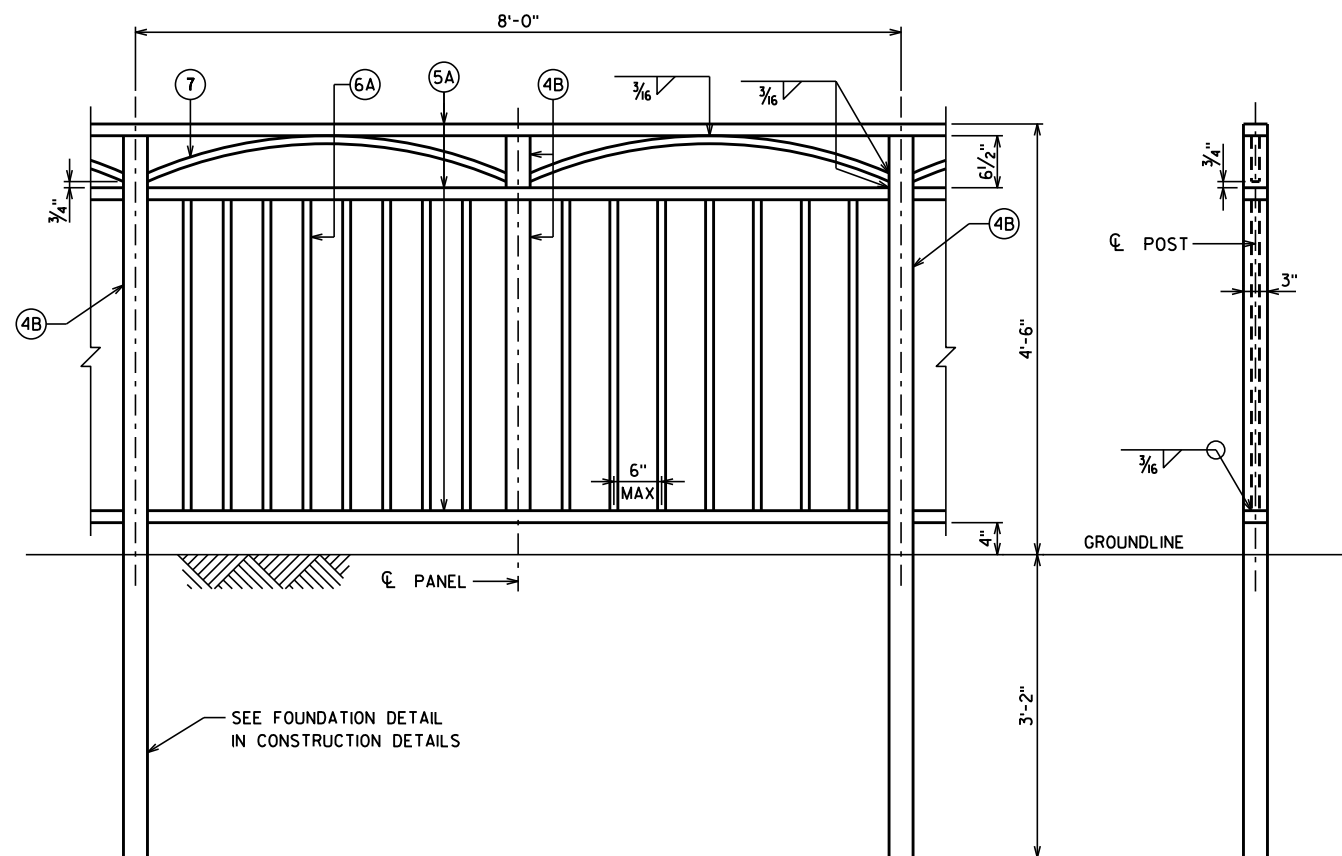
ROCK BAGS DITCH CHECK
PAID AS ROCK BAGS

RAILING STEEL TYPE C-3 GALVANIZED OFF-STRUCTURE SIDEWALK DETAIL AT NW WINGWALL END

**GENERAL NOTES**

- SEE MARINE TRAFFIC PLAN SHEETS FOR LOCATIONS.
- 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.
- BUOYS SHALL COMPLY WITH 33CFR66.
- FURNISHING, PLACEMENT, MOVING, MAINTENANCE AND REMOVAL OF BUOYS AND APPURTENANCES, PLUS SPOTTING OF MARINE TRAFFIC IS INCLUDED IN THE ITEM "MARINE TRAFFIC CONTROL".

**BUOY DETAIL**



TYPICAL ELEVATION OF RAILING

SECTION THRU RAILING

RAILING STEEL TYPE C3 GALVANIZED OFF-STRUCTURELEGEND

- (4B) STRUCTURAL TUBING 3" X 3" X $\frac{3}{16}$ ". PLACE VERTICAL. WELD TO NO. 5.
- (5A) STRUCTURAL TUBING 3" X $1\frac{1}{2}$ " X $\frac{3}{16}$ " RAILS. WELD TO NO. 1 & NO. 4. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- (6A) BAR 1" X 1" PICKETS. WELD TO NO. 5. PLACE VERTICAL.
- (7) BAR 1" X 1". BEND TO REQUIRED RADIUS. WELD TO NO. 4 & 5.

RAILING NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE C3 GALVANIZED OFF-STRUCTURE", WHICH SHALL INCLUDE ALL STEEL ITEMS SHOWN INCLUDING CONCRETE FOUNDATION.

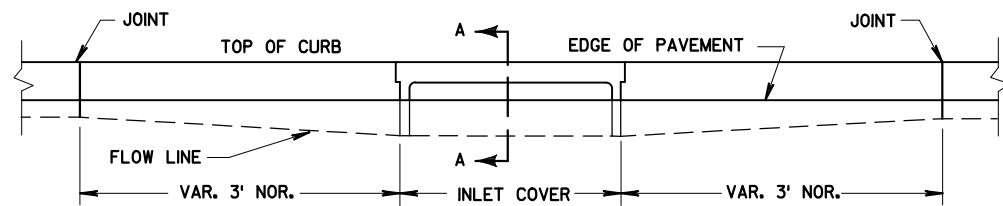
ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE STEEL RAILING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. COAT ALL EXTERIOR GALVANIZED SURFACES WITH AN APPROVED DUPLEX COATING SYSTEM AS SPECIFIED IN THE "RAILING STEEL TYPE C3 GALVANIZED OFF-STRUCTURE" ITEM. THE RAILING SHALL BE COATED FEDERAL COLOR NO. 27038, BLACK.

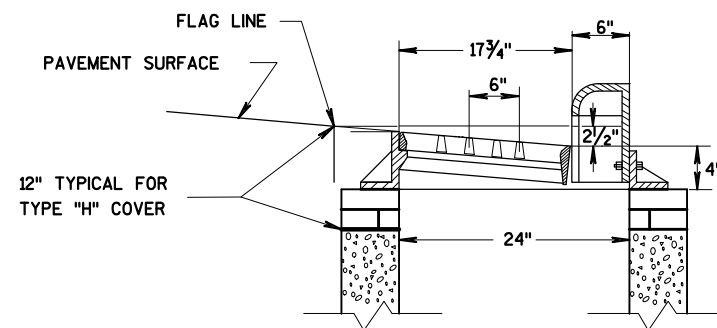
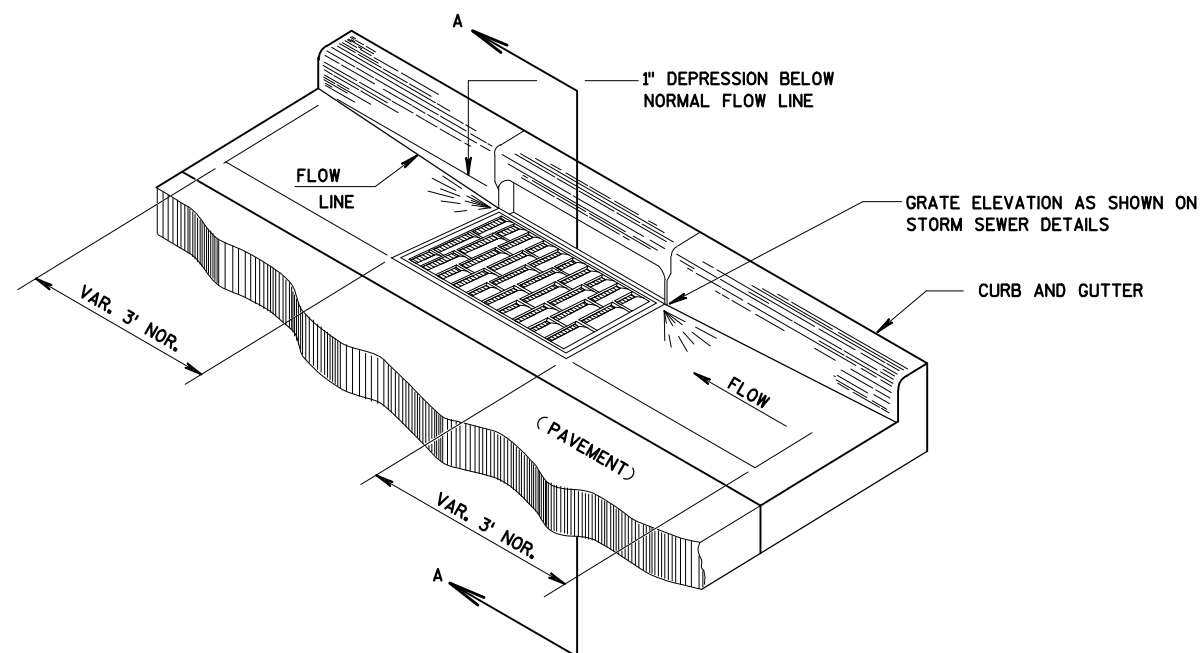
VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.

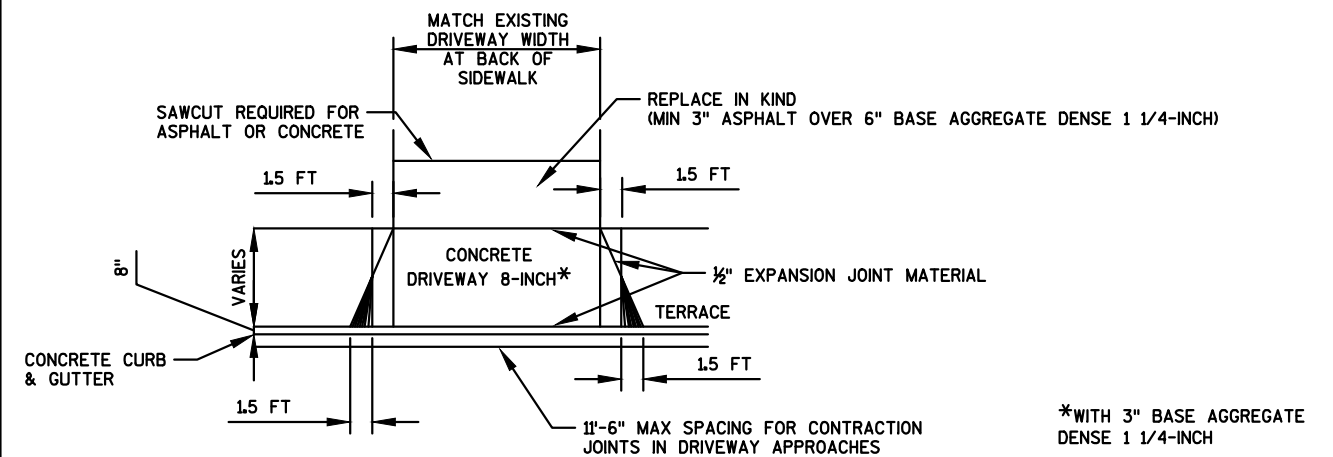


ELEVATION

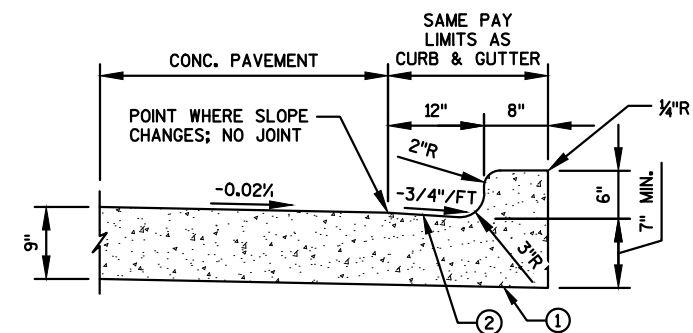


SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS
(TYPE 3-H INLET SHOWN)

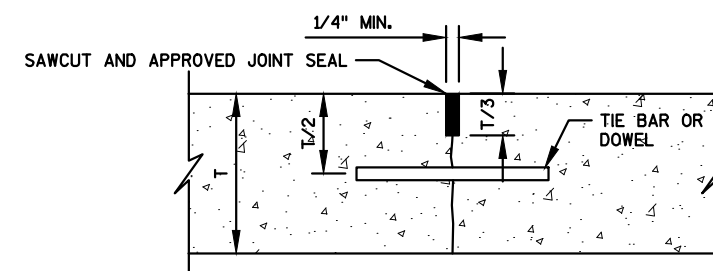


PRIVATE OR COMMERCIAL DRIVEWAYS

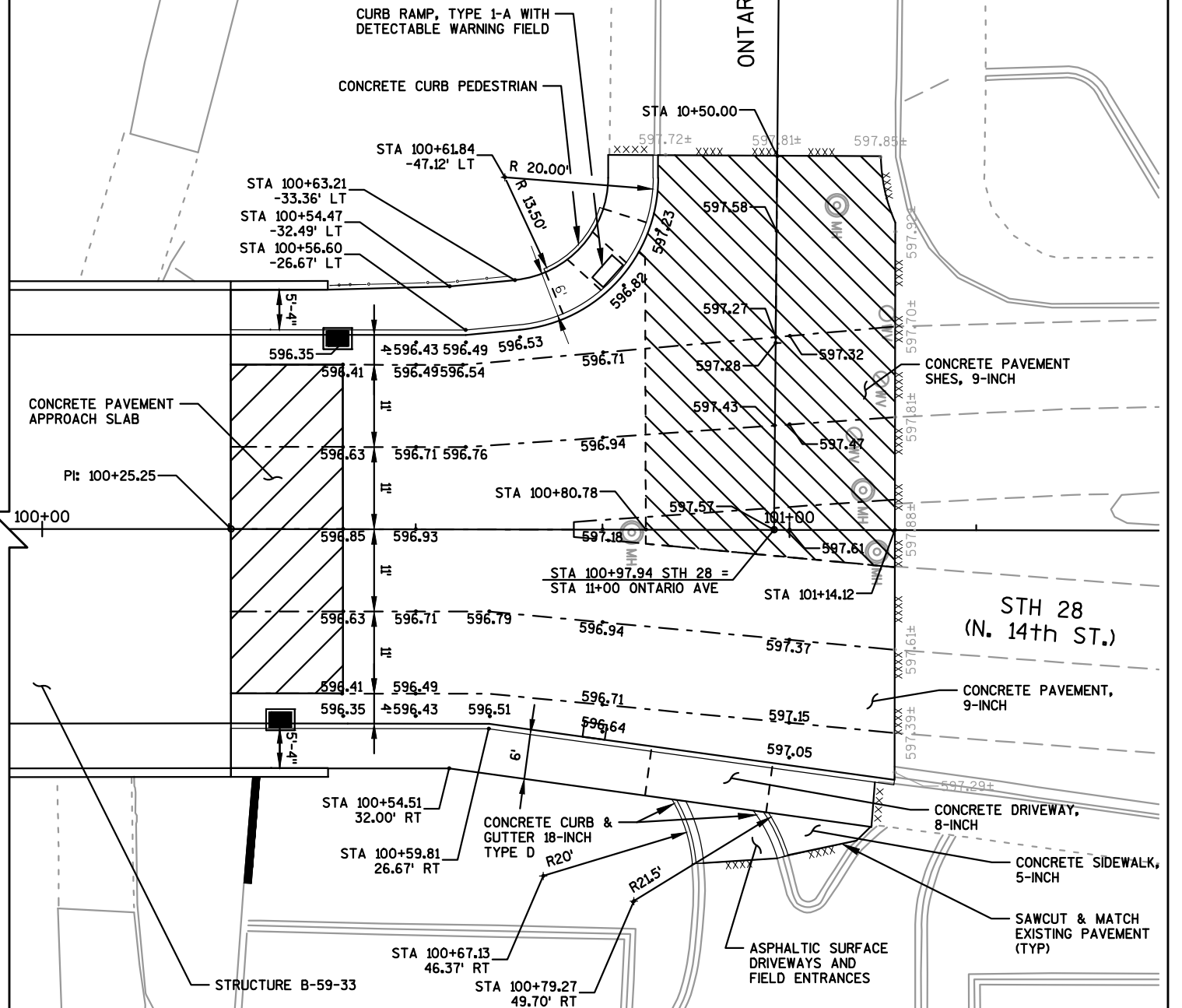
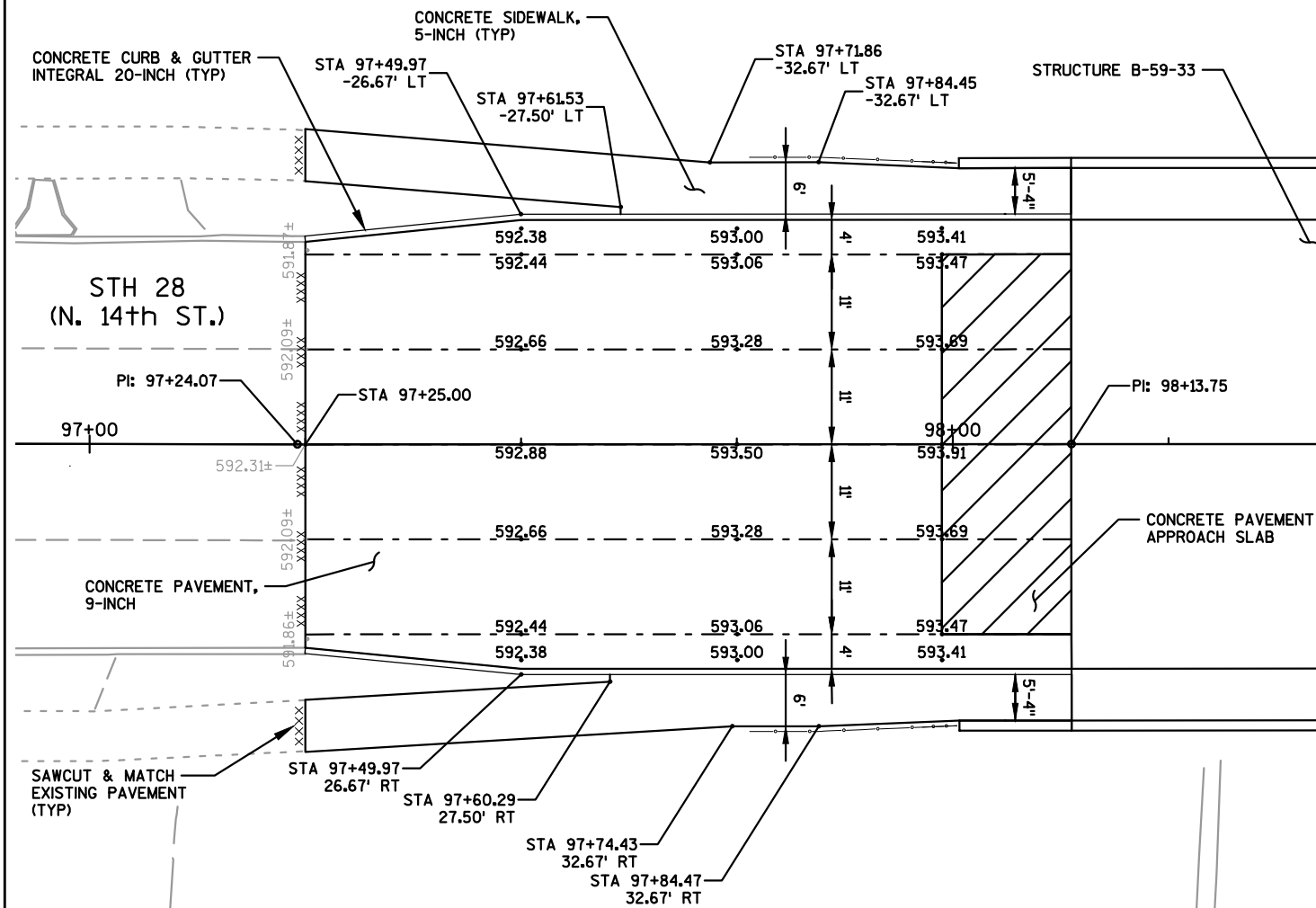


- NOTES:
- ① THE BOTTOM OF THE CURB & GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
 - ② SEAL JOINTS IN INTEGRAL CURB & GUTTER TO THE FACE OF CURB. SEALING JOINTS SHALL BE PAID UNDER THE CONCRETE JOINT SEALING ITEM.

CONCRETE CURB & GUTTER INTEGRAL 20-INCH

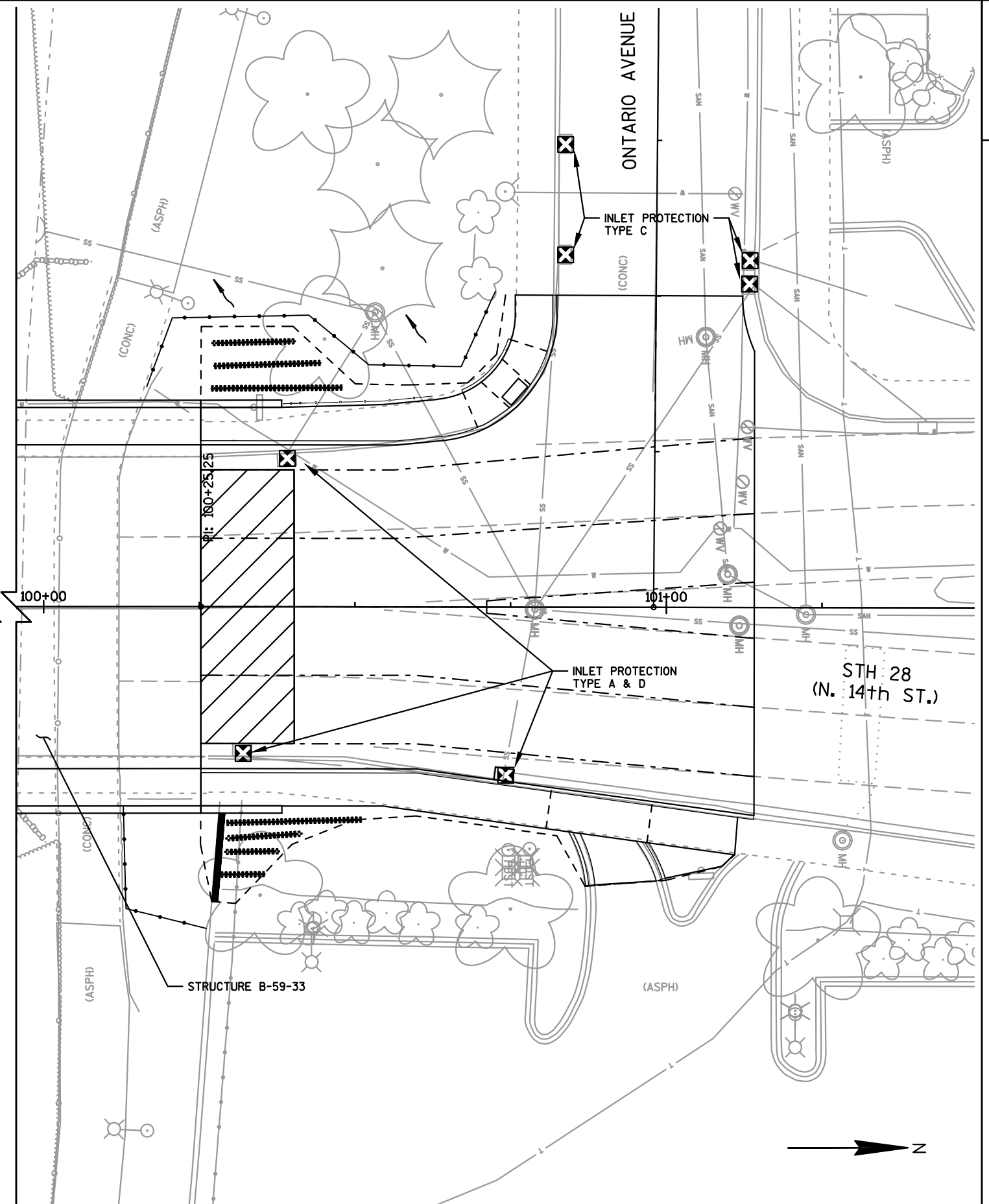
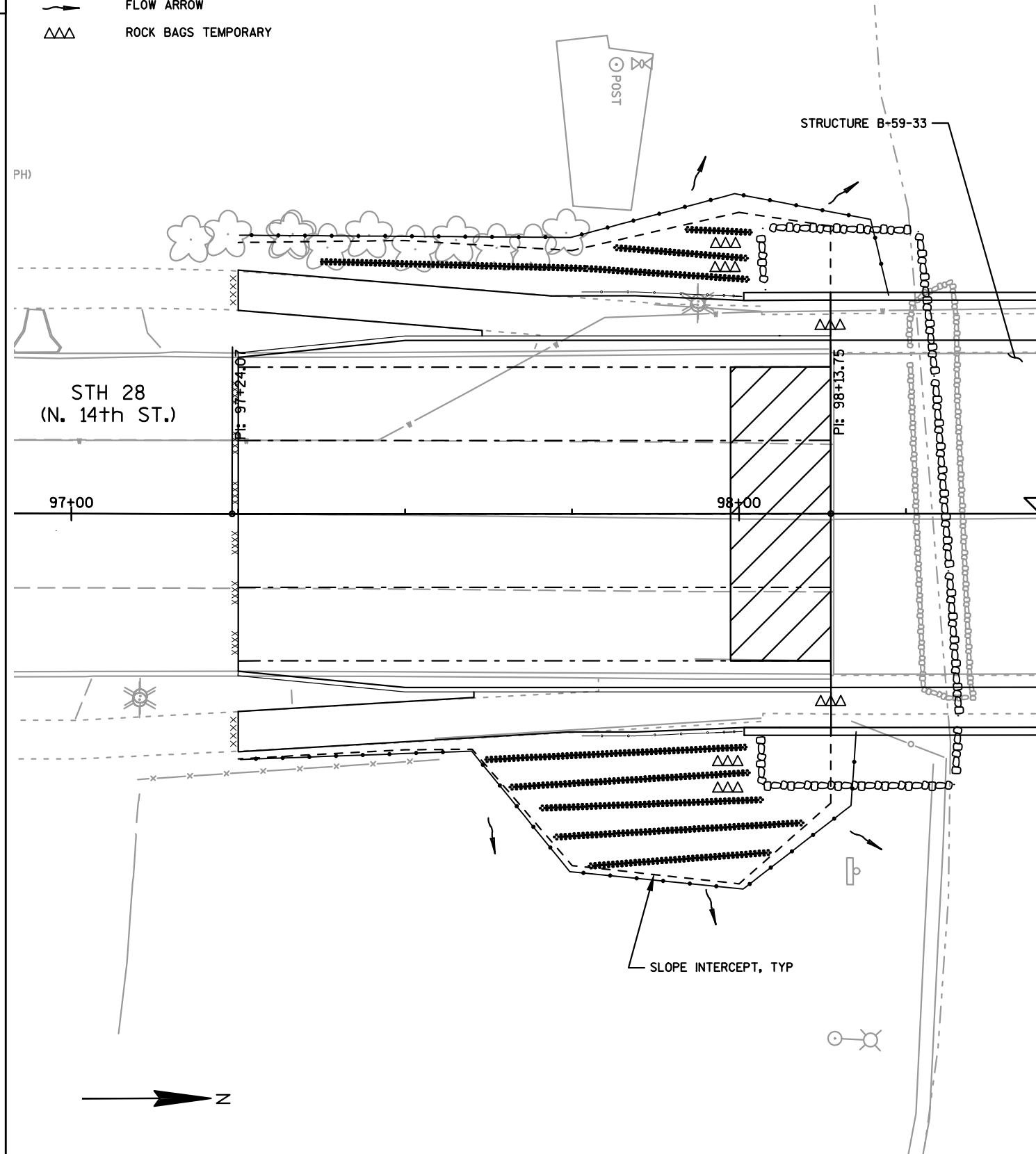


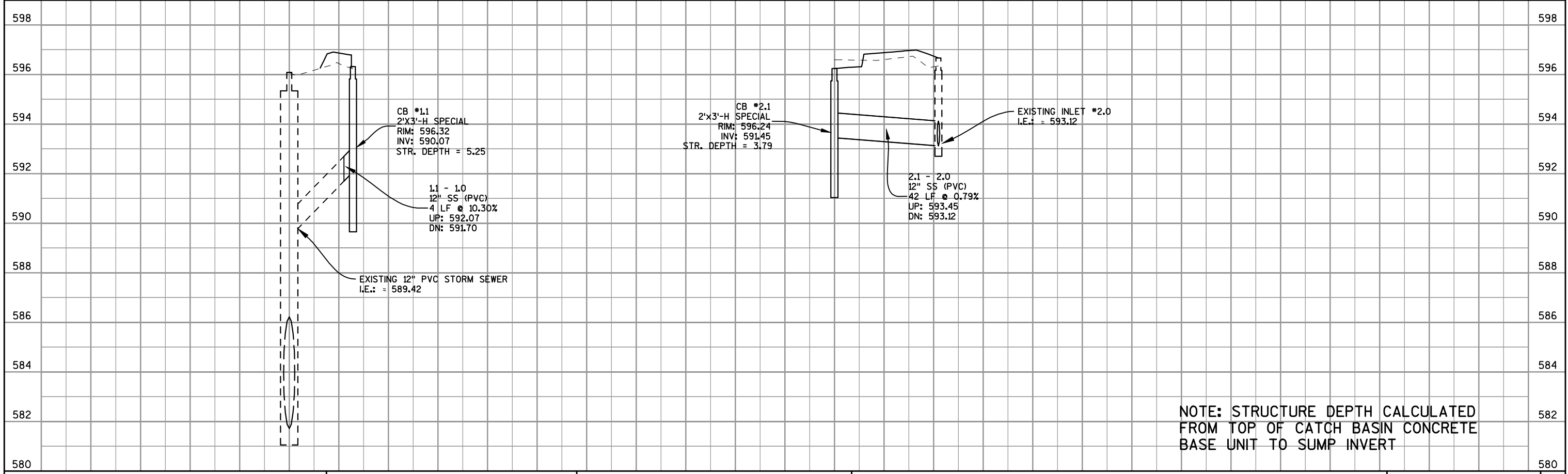
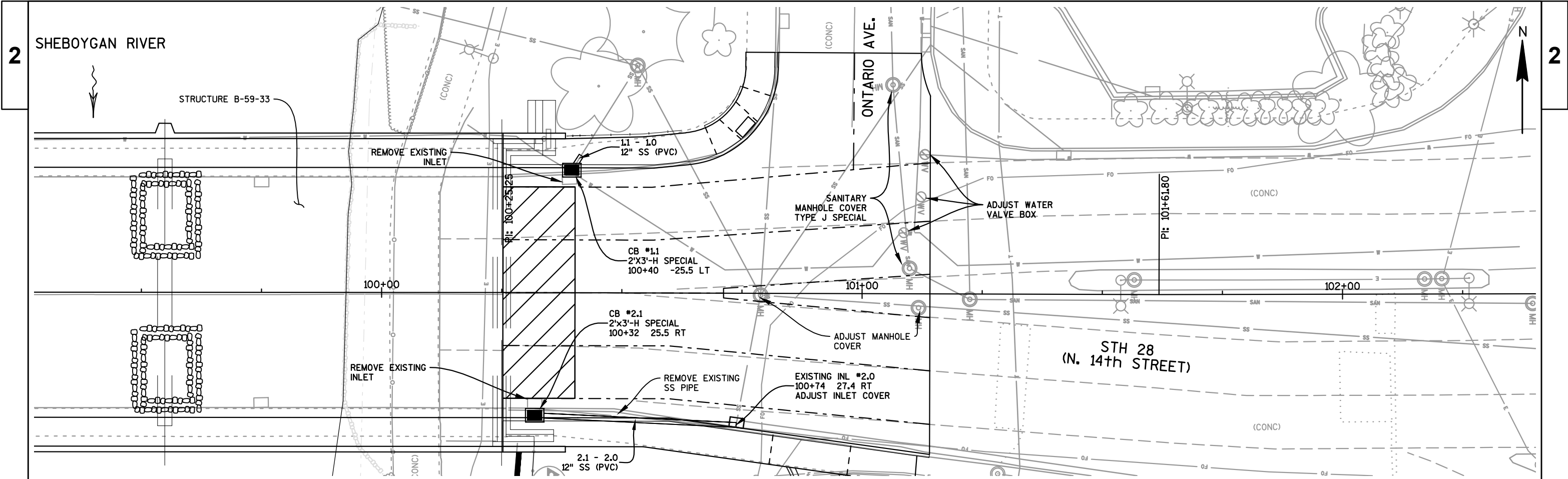
CONCRETE JOINT SAWING AND SEALING
PROVIDE AT ALL JOINTS



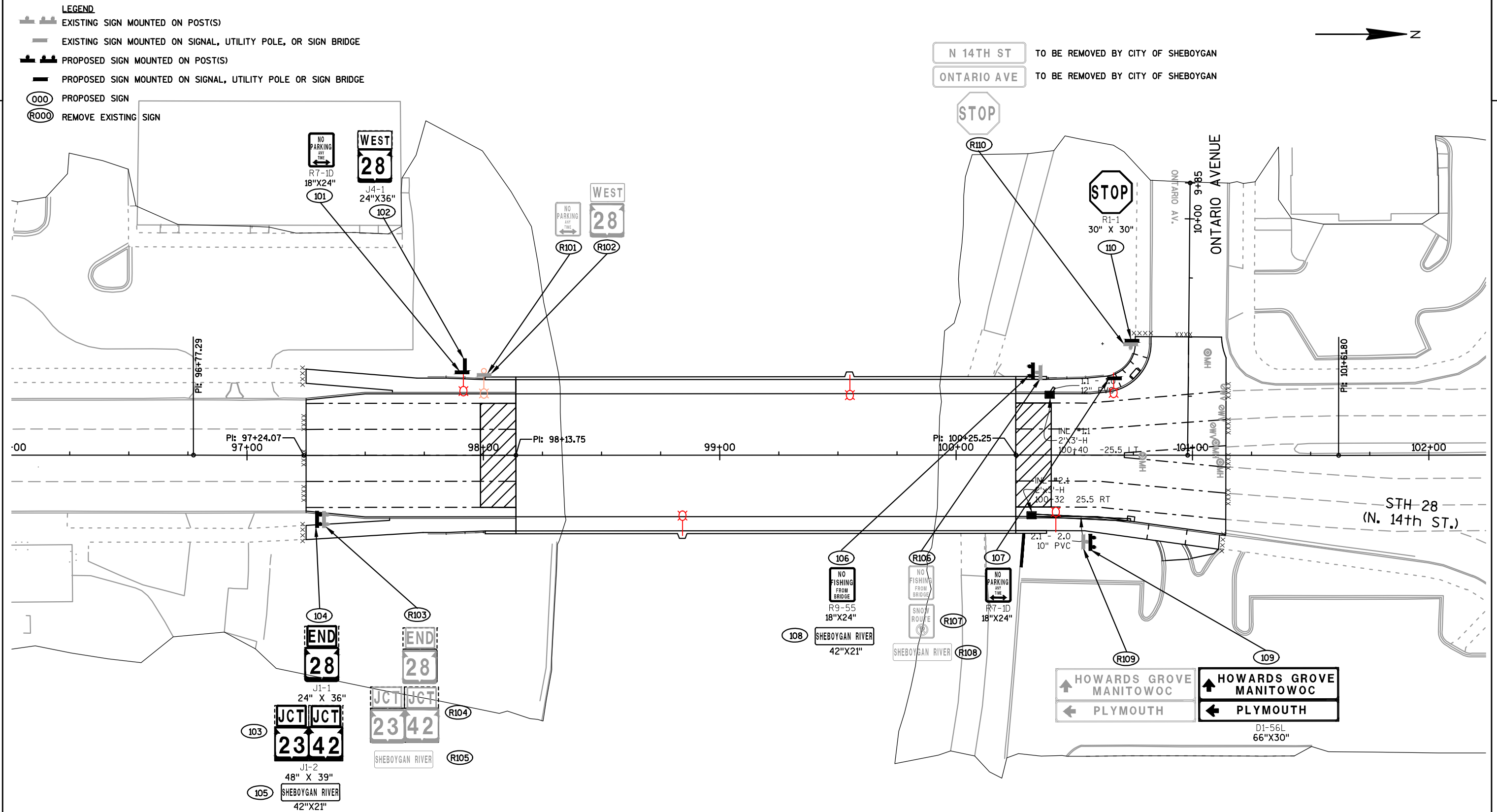
LEGEND

- SEED AND EROSION MAT
- SILT FENCE
- INLET PROTECTION
- FLOW ARROW
- ROCK BAGS TEMPORARY





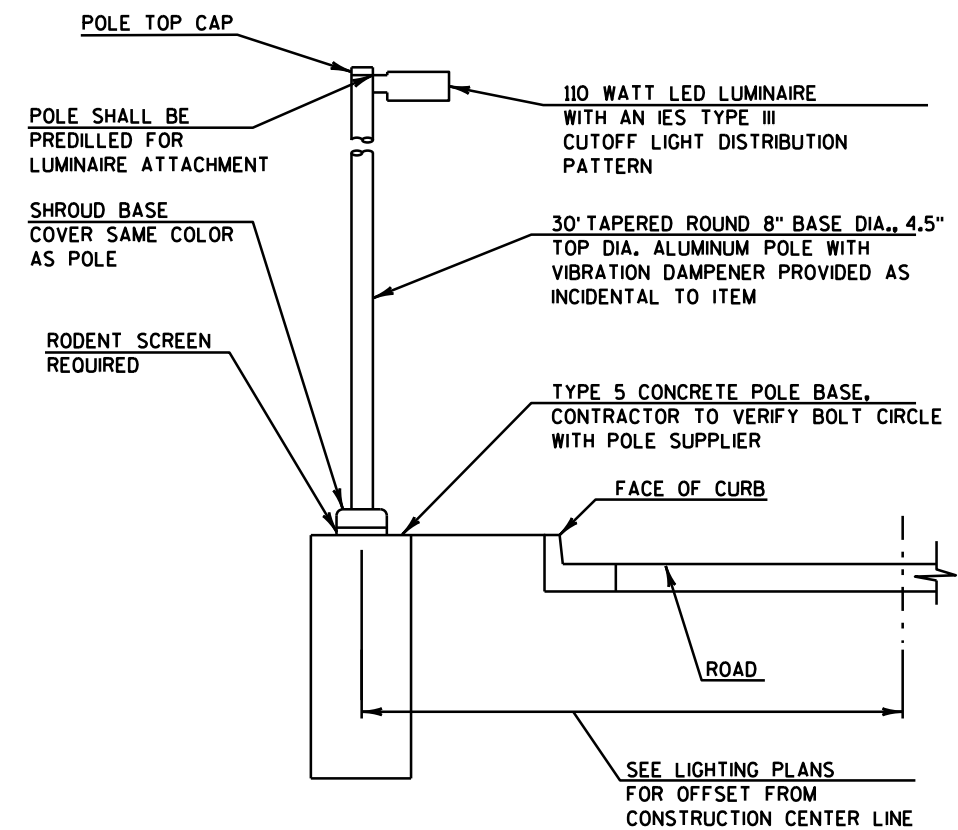
NOTE: STRUCTURE DEPTH CALCULATED FROM TOP OF CATCH BASIN CONCRETE BASE UNIT TO SUMP INVERT



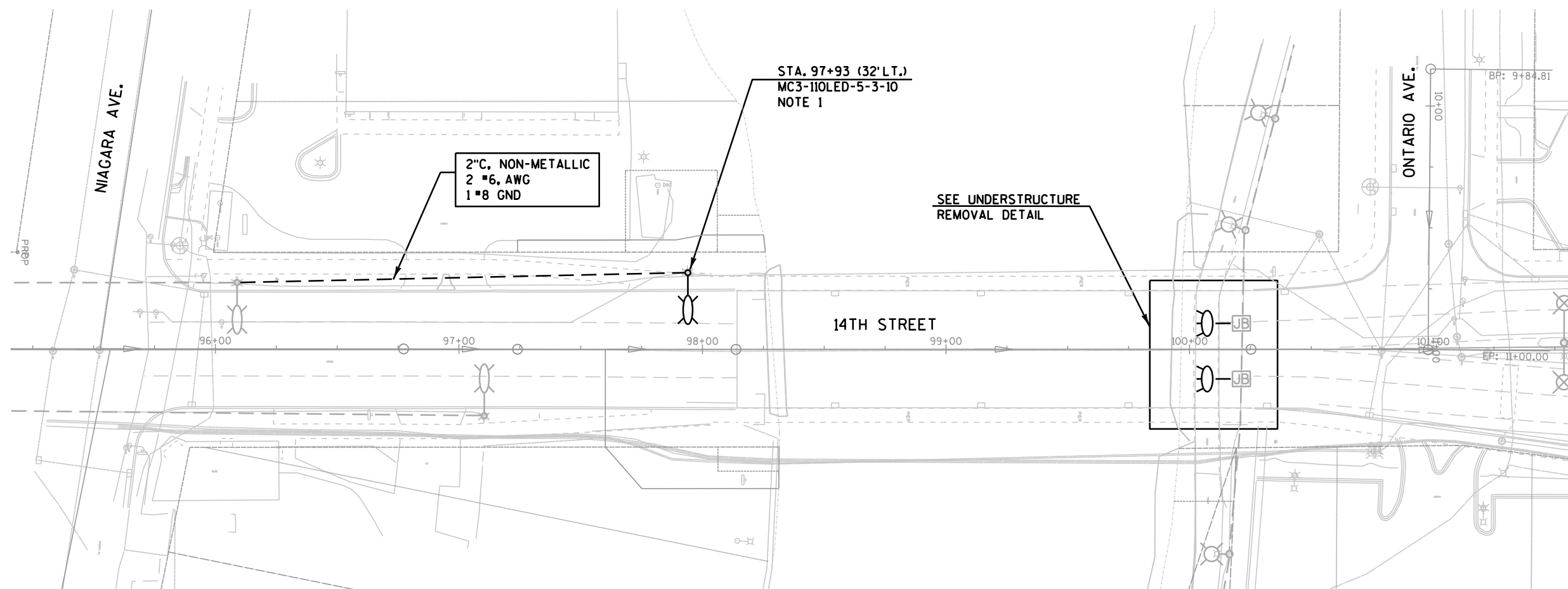
GENERAL NOTES:

ROADWAY LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657, 659 AND CITY OF SHEBOYGAN STANDARDS EXCEPT:

1. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
2. LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE ENGINEER, APPROPRIATE ADJUSTMENT OF CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.
3. THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.
4. ALL OPEN AND UN-TERMINATED CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.
5. BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.
6. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.
7. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT THAT CAN BE EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.
8. CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX, JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.
9. PULL ROPE (3*8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.
10. CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.
11. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.
12. ALL LIGHT POLES SHALL BE INSTALLED SUCH THAT LUMINAIRE ARMS ARE PERPENDICULAR TO THE NEAREST EDGE OF THE PAVEMENT OF ROADWAY THE LUMINAIRE IS AIMED.
13. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH CITY OF SHEBOYGAN ENGINEERING DEPARTMENT FOR CONNECTING NEW LIGHTING TO EXISTING LIGHTING SYSTEM.
14. ALL CONDUITS ATTACHED TO STRUCTURE SHALL BE REINFORCED THERMOSETTING RESIN CONDUIT (RTRC).



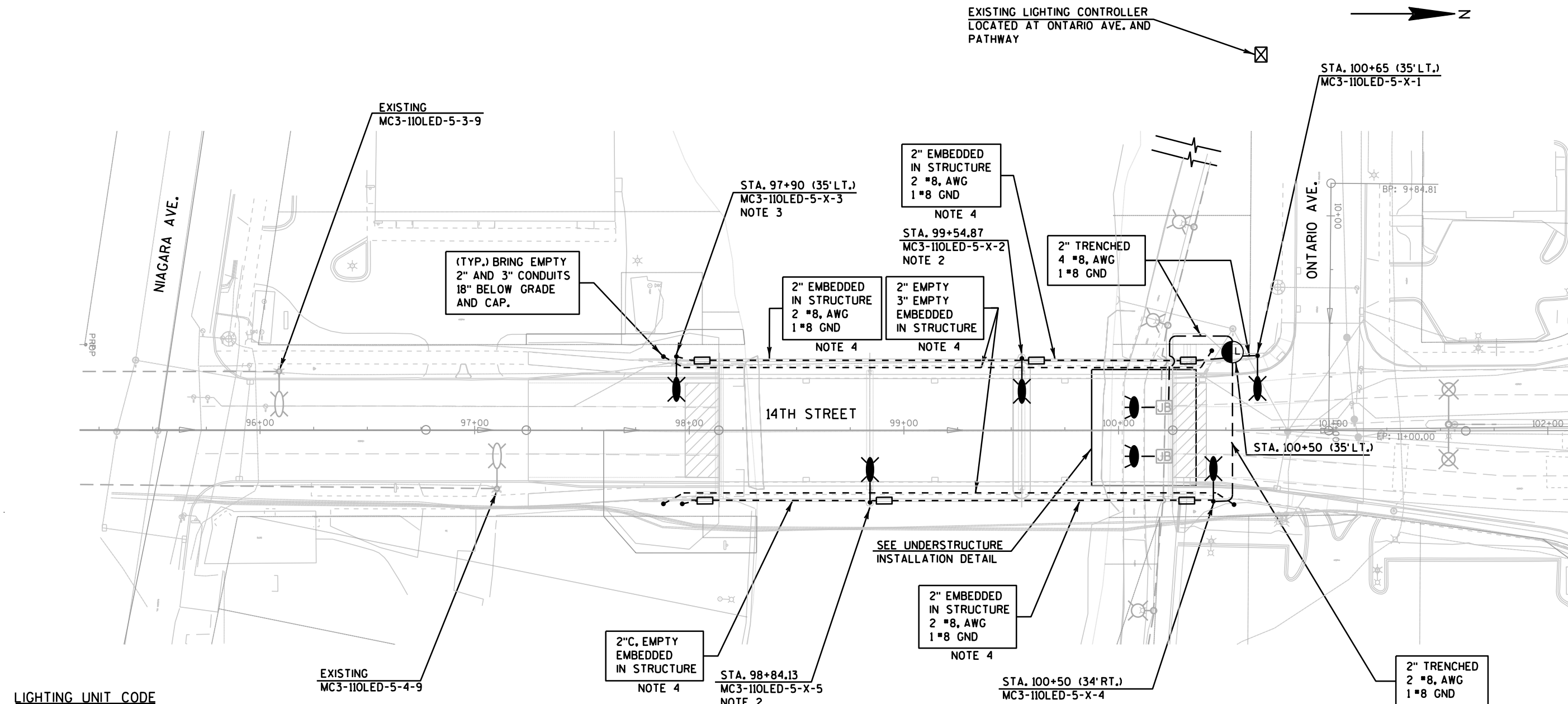
DECORATIVE LIGHT POLE DETAIL
N.T.S.

**NOTES:**

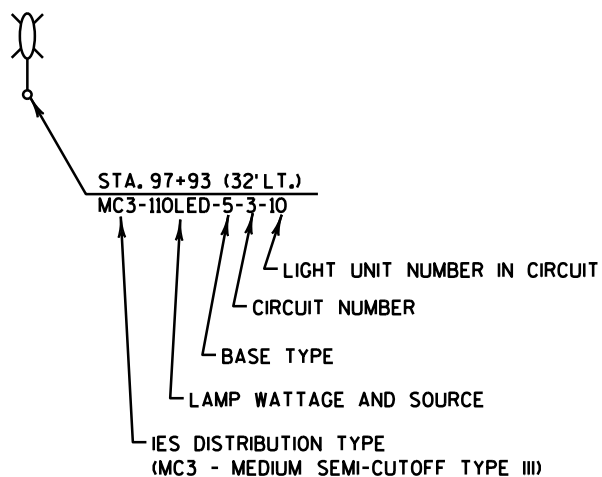
1. REMOVED LIGHT POLES SHALL BE REINSTALLED ON THE NEW CONCRETE FOUNDATION PER SPECIAL PROVISIONS.
2. EQUIPMENT SHOWN IN BLACK BOLD SHALL BE REMOVED AS PART OF THIS PROJECT. EQUIPMENT SHOWN IN GREYSCALE SHALL REMAIN IN PLACE UNLESS DIRECTED BY THE ENGINEER.
3. WIRE AND CONDUIT SHOWN TO BE REMOVED SHALL BE ABANDONED IN PLACE UNLESS OTHERWISE SPECIFIED. CONTRACTOR MAY CHOOSE TO REMOVE WIRES FROM ABANDONED CONDUIT AT OWN EXPENSE.
4. CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH SPECIAL PROVISIONS.

REMOVAL LEGEND

- EXISTING LIGHTING UNIT, TWIN ARM
- EXISTING LIGHTING UNIT, CITY OF SHEBOYGAN
- EXISTING PATH LIGHTING UNIT, CITY OF SHEBOYGAN
- EXISTING UNDERPASS LUMINAIRE, CITY OF SHEBOYGAN
- JUNCTION BOX ATTACHED TO STRUCTURE
- WIRE IN CONDUIT



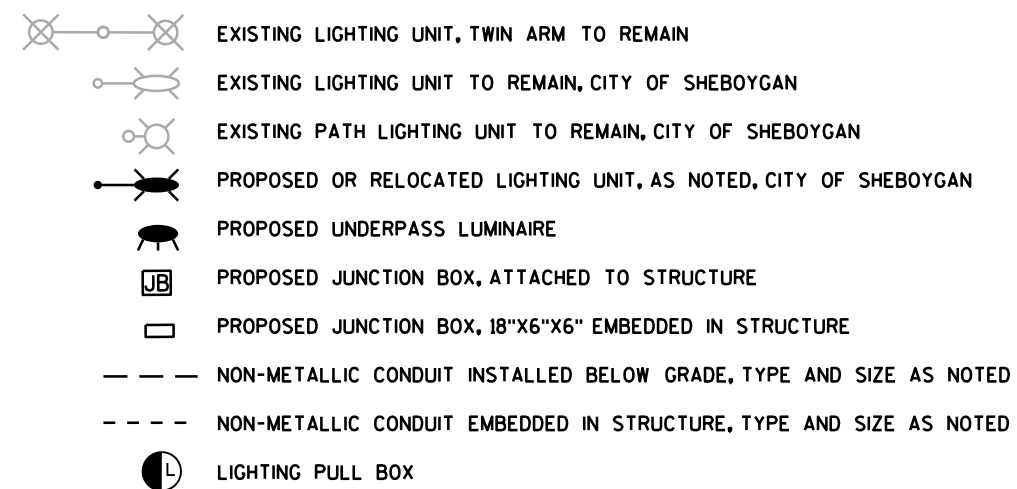
LIGHTING UNIT CODE



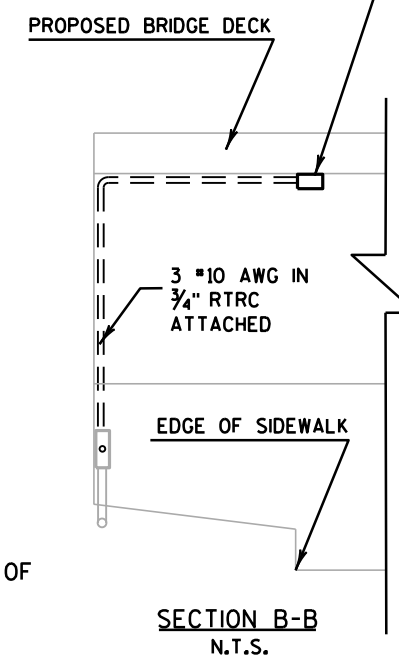
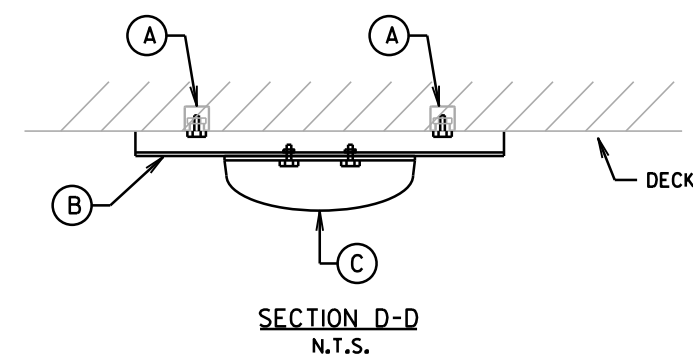
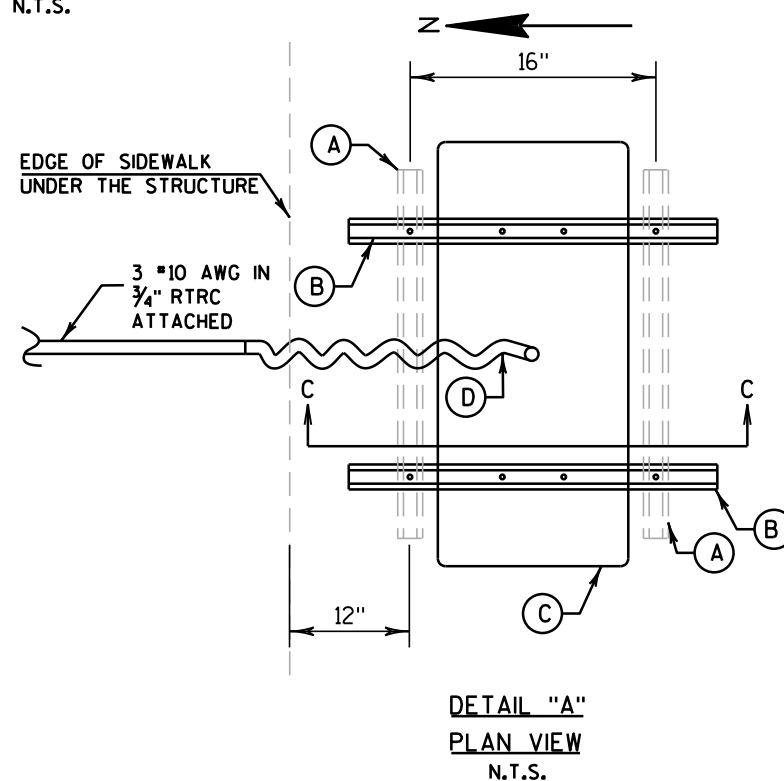
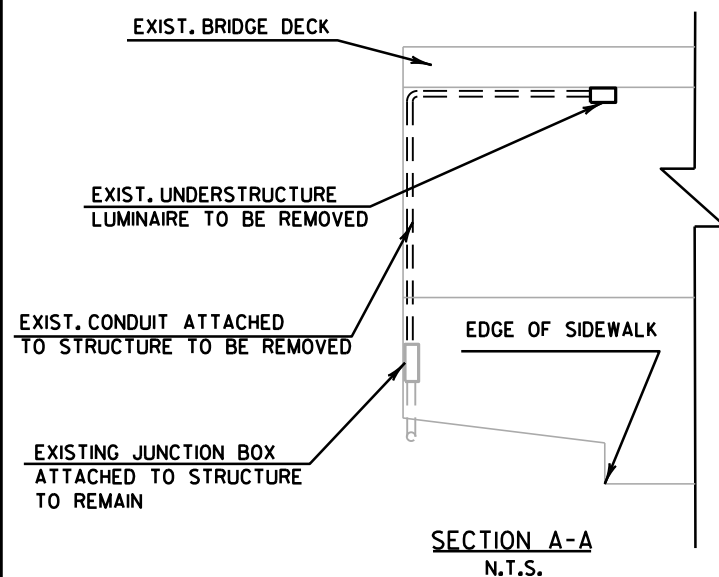
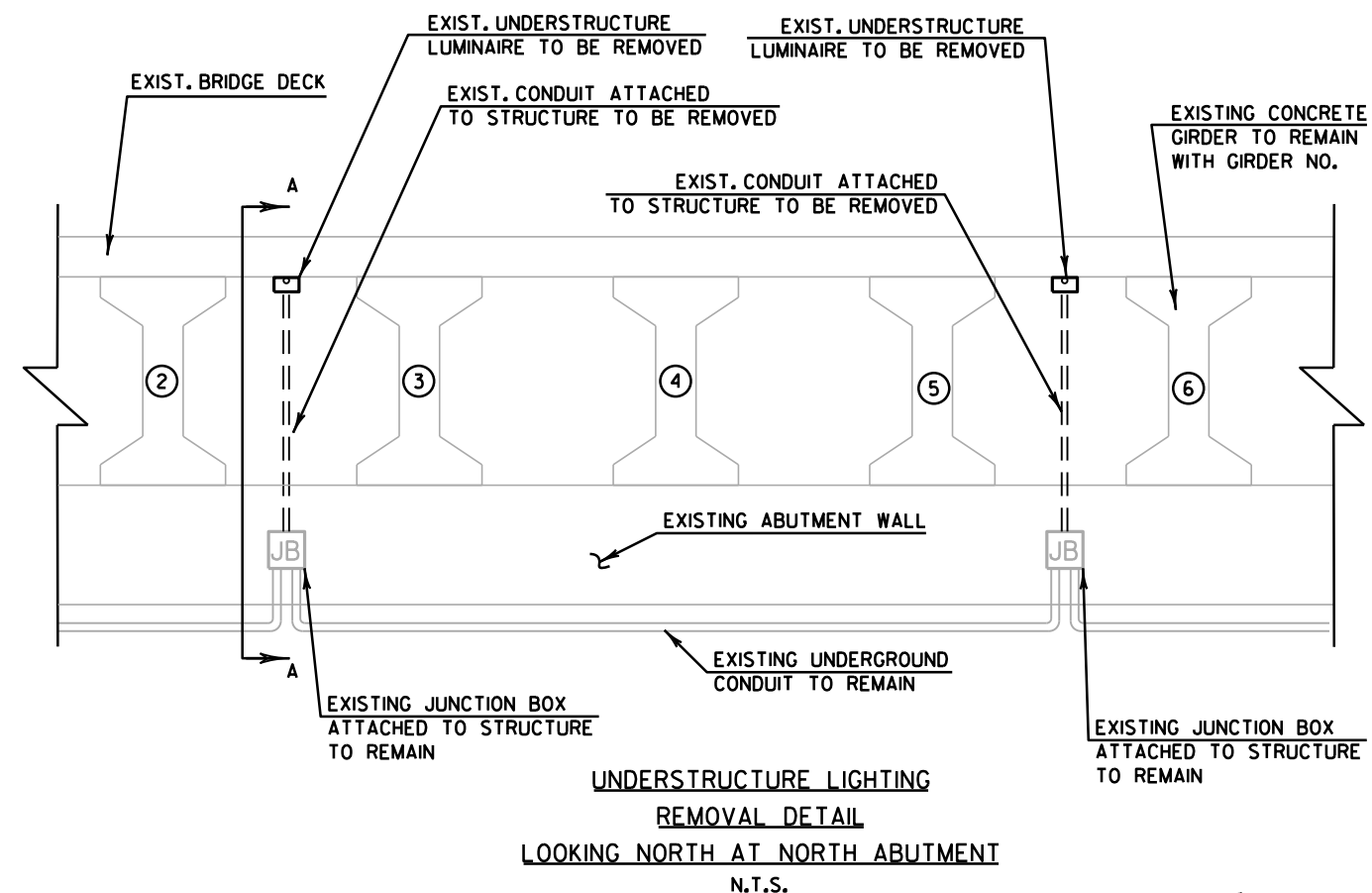
NOTES:

- EQUIPMENT SHOWN IN BLACK BOLD SHALL BE INSTALLED AS PART OF THIS PROJECT. EXISTING EQUIPMENT SHOWN IN GRAYSCALE SHALL REMAIN IN PLACE UNLESS DIRECTED BY ENGINEER.
- SEE STRUCTURE PLANS FOR EXACT LOCATION OF LIGHT POLES.
- RELOCATED LIGHT POLE AND LUMINAIRE, PROVIDE NEW INLINE FUSES, FUSE HOLDER, AND POLE WIRES PER SPECIAL PROVISIONS.
- ALL EMBEDDED CONDUITS AND JUCTION BOXES WILL BE PAID AS PART OF STRUCTURE PAY ITEMS.

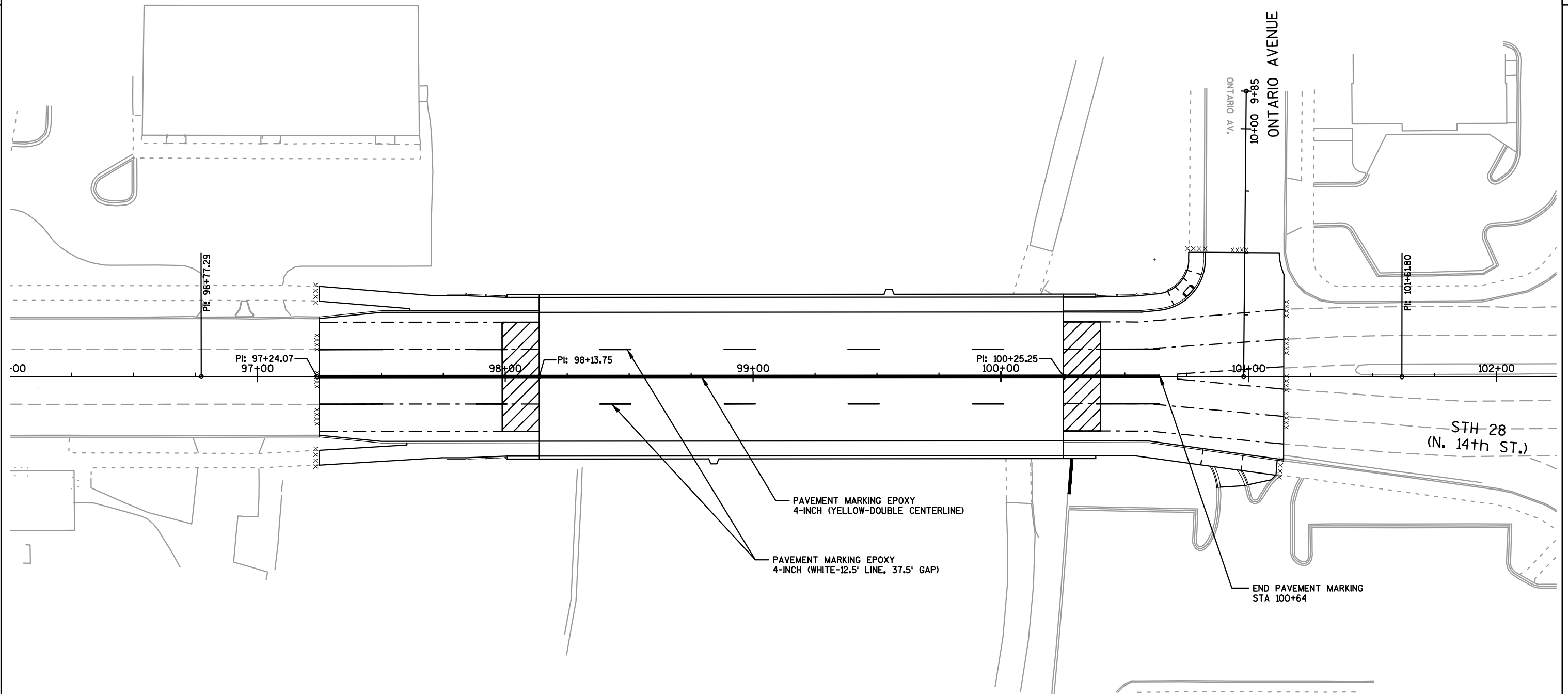
LIGHTING INSTALLATION LEGEND



2



- (A) - PROVIDE (2) 24" LONG 1 5/8" GALVANIZED STEEL STRUT EMBEDDED IN STRUCTURE, CENTERED BETWEEN GIRDERS. INCLUDED AS PART OF THE STRUCTURE WORK.
- (B) - PROVIDE (2) 24" LONG 1 5/8" GALVANIZED STEEL STRUT FOR LIGHT FIXTURE MOUNTING, ATTACHED TO EMBEDDED STRUT.
- (C) - LIGHT FIXTURE, 56W LED.
- (D) - 3/4" LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT, 24" PIECE

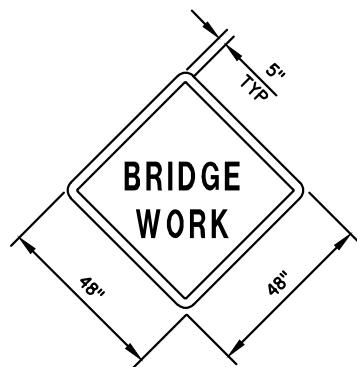
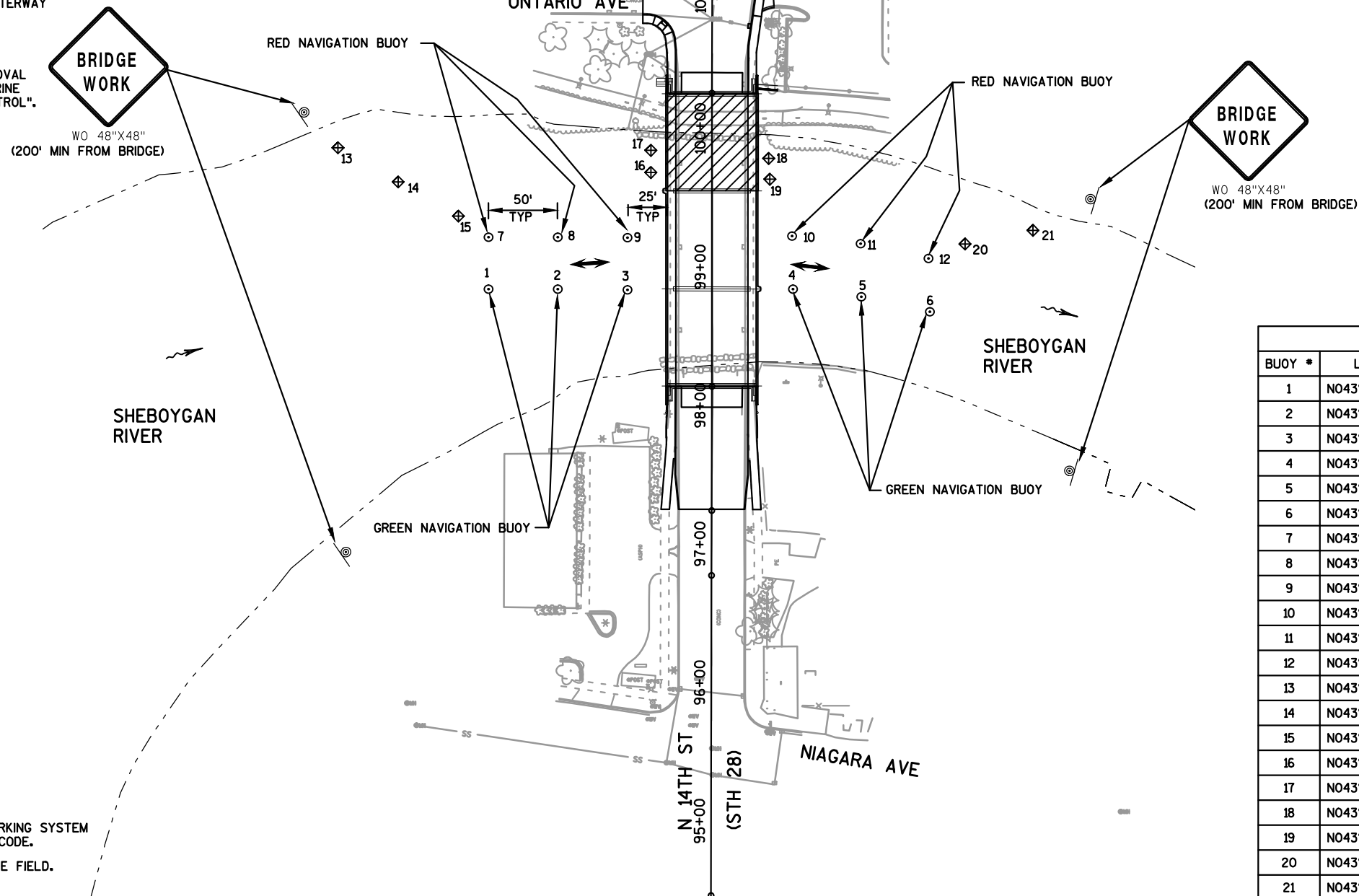


LEGEND

- WORK AREA
NAVIGATION BUOY
REGULATORY BUOY - BOATS KEEP OUT
CHANNEL FLOW
SIGN ON TEMPORARY SUPPORT
SEE DETAIL
MARINE TRAFFIC FLOW

NOTE:

1. REGULATORY AND NAVIGATION AID BUOY'S SHALL CONFORM TO THE PLAN DETAILS, WIS DNR REGULATIONS, AND SHALL COMPLY WITH THE APPROVED WIS DNR CONSTRUCTION WATERWAY MARKER PERMIT AND US COAST GUARD PRIVATE AIDS TO NAVIGATION PERMIT.
2. BUOYS SHALL COMPLY WITH 33CFR66.
3. FURNISHING, PLACEMENT, MOVING, MAINTENANCE AND REMOVAL OF BUOYS AND APPURTENANCES, PLUS SPOTTING OF MARINE TRAFFIC IS INCLUDED IN THE ITEM "MARINE TRAFFIC CONTROL".



TEMPORARY SIGN DETAIL

12-INCH BLACK BLOCK LETTERING.

ALL SIGNS SHALL CONFORM TO THE UNIFORM WATERWAY MARKING SYSTEM SET FORTH IN SECTION NR 5.09 WISCONSIN ADMINISTRATIVE CODE.

SIGNS TO BE PLACED AS SPECIFIED BY THE ENGINEER IN THE FIELD.

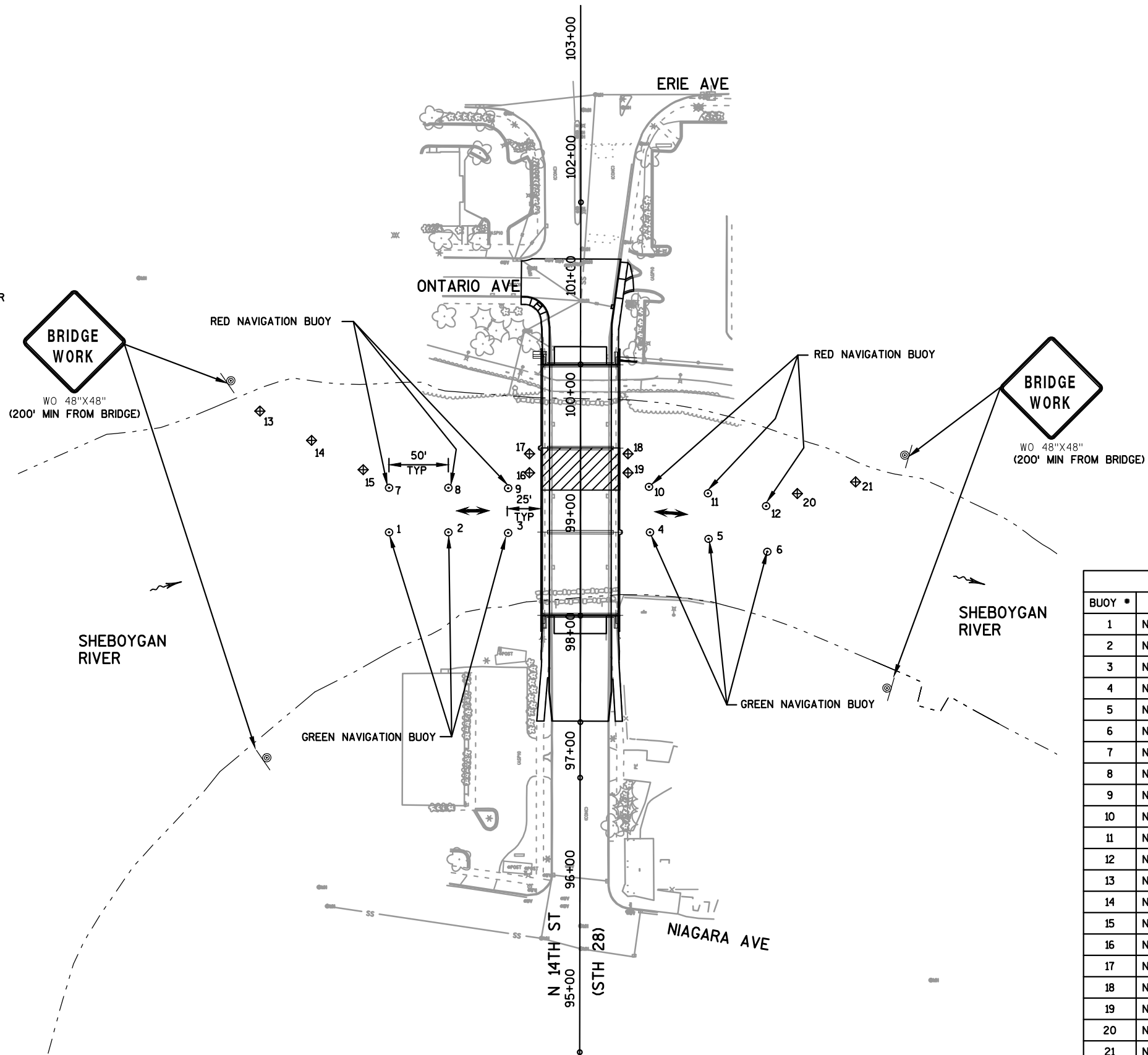
LATITUDE AND LONGITUDE				
BUOY #	LATITUDE	LONGITUDE	Y	X
1	N043° 45' 19.00"	W087° 43' 24.79"	178156	216142
2	N043° 45' 19.00"	W087° 43' 24.11"	178156	216192
3	N043° 45' 19.00"	W087° 43' 23.42"	178156	216243
4	N043° 45' 19.01"	W087° 43' 21.79"	178156	216362
5	N043° 45' 18.96"	W087° 43' 21.12"	178151	216412
6	N043° 45' 18.85"	W087° 43' 20.45"	178140	216461
7	N043° 45' 19.37"	W087° 43' 24.79"	178194	216142
8	N043° 45' 19.38"	W087° 43' 24.11"	178194	216192
9	N043° 45' 19.37"	W087° 43' 23.42"	178193	216243
10	N043° 45' 19.39"	W087° 43' 21.81"	178194	216362
11	N043° 45' 19.33"	W087° 43' 21.13"	178189	216411
12	N043° 45' 19.23"	W087° 43' 20.46"	178178	216460
13	N043° 45' 20.01"	W087° 43' 26.27"	178258	216034
14	N043° 45' 19.77"	W087° 43' 25.68"	178234	216077
15	N043° 45' 19.53"	W087° 43' 25.09"	178209	216121
16	N043° 45' 19.84"	W087° 43' 23.19"	178240	216260
17	N043° 45' 20.00"	W087° 43' 23.19"	178256	216260
18	N043° 45' 19.94"	W087° 43' 22.04"	178250	216345
19	N043° 45' 19.79"	W087° 43' 22.02"	178235	216346
20	N043° 45' 19.33"	W087° 43' 20.10"	178189	216487
21	N043° 45' 19.43"	W087° 43' 19.43"	178199	216536

LEGEND

- WORK AREA
NAVIGATION BUOY
REGULATORY BUOY - BOATS KEEP OUT
CHANNEL FLOW
SIGN ON TEMPORARY SUPPORT
SEE DETAIL
MARINE TRAFFIC FLOW

NOTES:

1. REGULATORY AND NAVIGATION AID BUOY'S SHALL CONFORM TO THE PLAN DETAILS, WIS DNR REGULATIONS, AND SHALL COMPLY WITH THE APPROVED WIS DNR CONSTRUCTION WATERWAY MARKER PERMIT AND US COAST GUARD PRIVATE AIDS TO NAVIGATION PERMIT.
2. UNLESS A TEMPORARY CLOSURE AT THE MAIN CHANNEL UNDER THE CENTRAL SPAN IS APPROVED IN ADVANCE AND A SHORT TERM WAIVER GRANTED BY THE US COAST GUARD, THE CONTRACTOR MUST KEEP AT LEAST HALF THE OPENING THRU THE MAIN CHANNEL ACCESSIBLE AT ALL TIMES. THE CONTRACTOR WILL NEED TO MOVE EQUIPMENT FOR PASSAGE AS REQUESTED. TIME FRAME FOR MOVING SHALL BE DICTATED BY THE USCG.
3. NAVIGATION BUOYS ARE TO BE PLACED AND RELOCATED BASED ON LOCATION OF CONSTRUCTION ACTIVITIES.
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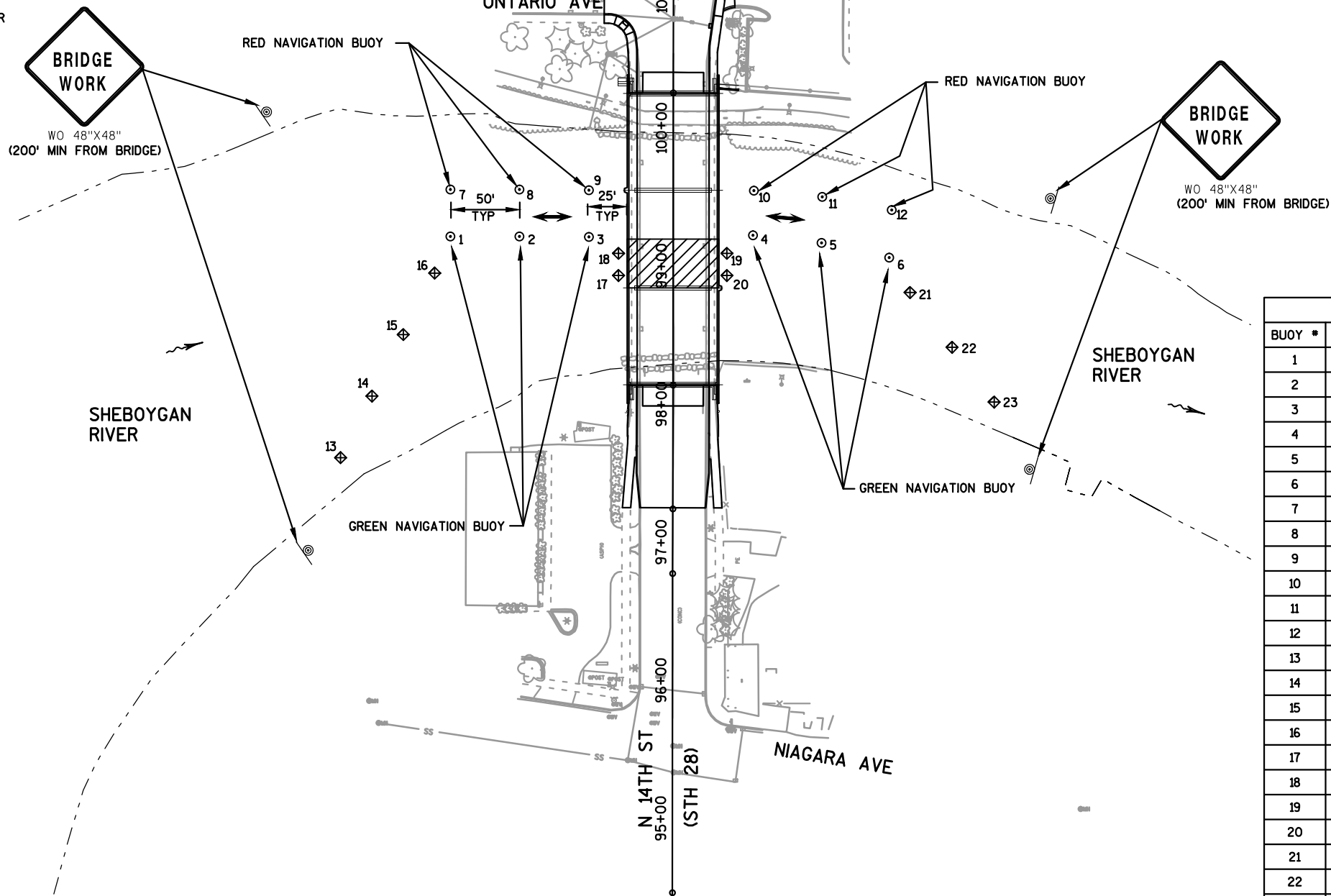
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5	N043° 45' 18.96"	W087° 43' 21.12"	178151	216412
6	N043° 45' 18.85"	W087° 43' 20.45"	178140	216461
7	N043° 45' 19.37"	W087° 43' 24.79"	178194	216142
8	N043° 45' 19.38"	W087° 43' 24.11"	178194	216192
9	N043° 45' 19.37"	W087° 43' 23.42"	178193	216243
10	N043° 45' 19.39"	W087° 43' 21.81"	178194	216362
11	N043° 45' 19.33"	W087° 43' 21.13"	178189	216411
12	N043° 45' 19.23"	W087° 43' 20.46"	178178	216460
13	N043° 45' 20.01"	W087° 43' 26.27"	178258	216034
14	N043° 45' 19.77"	W087° 43' 25.68"	178234	216077
15	N043° 45' 19.53"	W087° 43' 25.09"	178209	216121
16	N043° 45' 19.50"	W087° 43' 23.18"	178206	216261
17	N043° 45' 19.66"	W087° 43' 23.18"	178222	216261
18	N043° 45' 19.66"	W087° 43' 22.05"	178222	216344
19	N043° 45' 19.50"	W087° 43' 22.05"	178206	216344
20	N043° 45' 19.33"	W087° 43' 20.10"	178189	216487
21	N043° 45' 19.43"	W087° 43' 19.43"	178199	216536

LEGEND

- WORK AREA
NAVIGATION BUOY
REGULATORY BUOY - BOATS KEEP OUT
CHANNEL FLOW
SIGN ON TEMPORARY SUPPORT
SEE DETAIL
MARINE TRAFFIC FLOW

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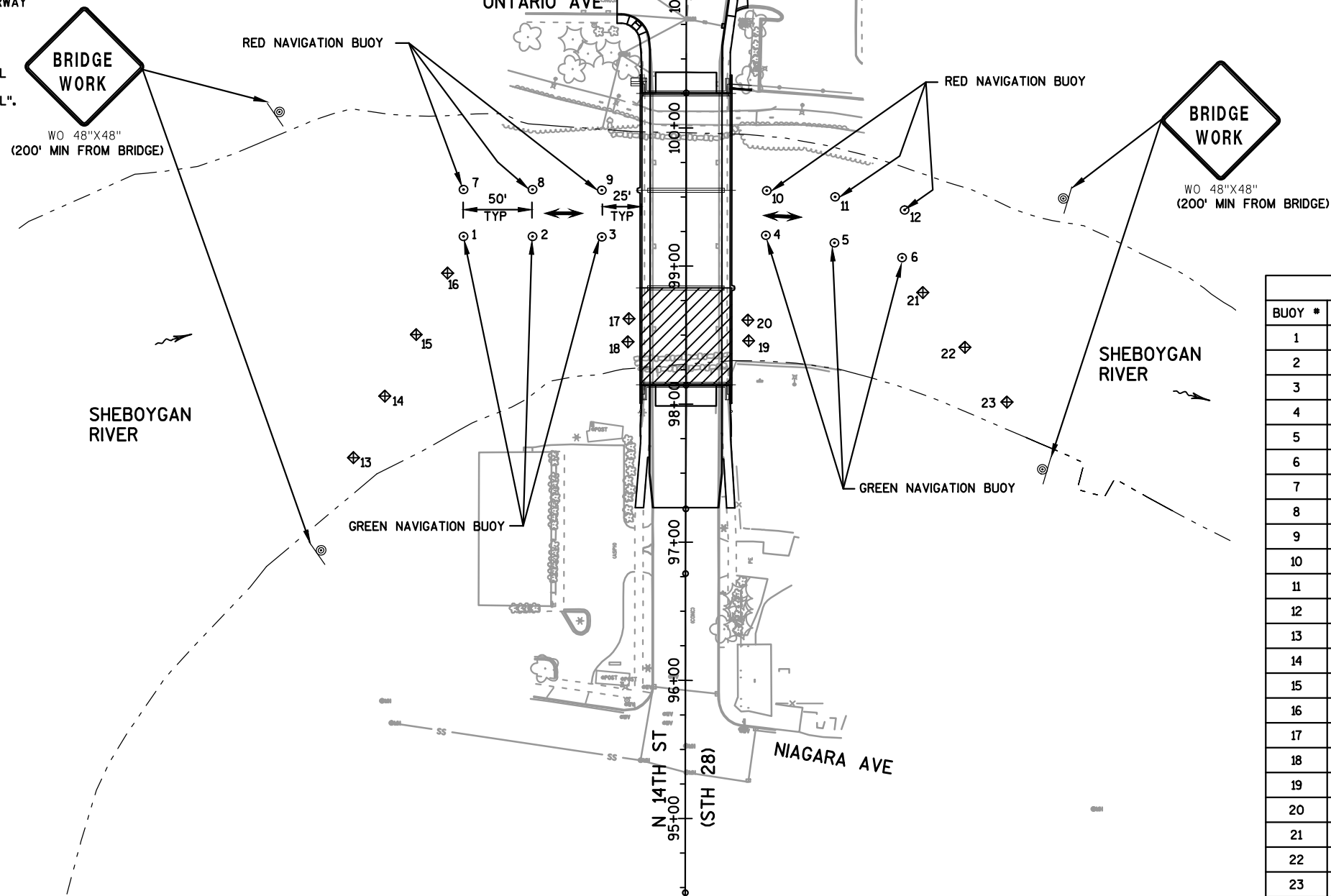
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4	N043° 45' 19.39"	W087° 43' 21.81"	178194	216362
5	N043° 45' 19.33"	W087° 43' 21.13"	178189	216411
6	N043° 45' 19.23"	W087° 43' 20.46"	178178	216460
7	N043° 45' 19.71"	W087° 43' 24.79"	178227	216142
8	N043° 45' 19.71"	W087° 43' 24.11"	178227	216192
9	N043° 45' 19.71"	W087° 43' 23.42"	178227	216243
10	N043° 45' 19.71"	W087° 43' 21.80"	178227	216362
11	N043° 45' 19.66"	W087° 43' 21.12"	178222	216412
12	N043° 45' 19.57"	W087° 43' 20.44"	178213	216462
13	N043° 45' 17.79"	W087° 43' 25.87"	178033	216063
14	N043° 45' 18.23"	W087° 43' 25.56"	178078	216086
15	N043° 45' 18.67"	W087° 43' 25.25"	178123	216108
16	N043° 45' 19.11"	W087° 43' 24.94"	178167	216131
17	N043° 45' 19.10"	W087° 43' 23.13"	178165	216264
18	N043° 45' 19.26"	W087° 43' 23.13"	178181	216264
19	N043° 45' 19.26"	W087° 43' 22.06"	178181	216343
20	N043° 45' 19.10"	W087° 43' 22.06"	178165	216343
21	N043° 45' 18.98"	W087° 43' 20.25"	178153	216475
22	N043° 45' 18.59"	W087° 43' 19.84"	178113	216506
23	N043° 45' 18.20"	W087° 43' 19.42"	178074	216536

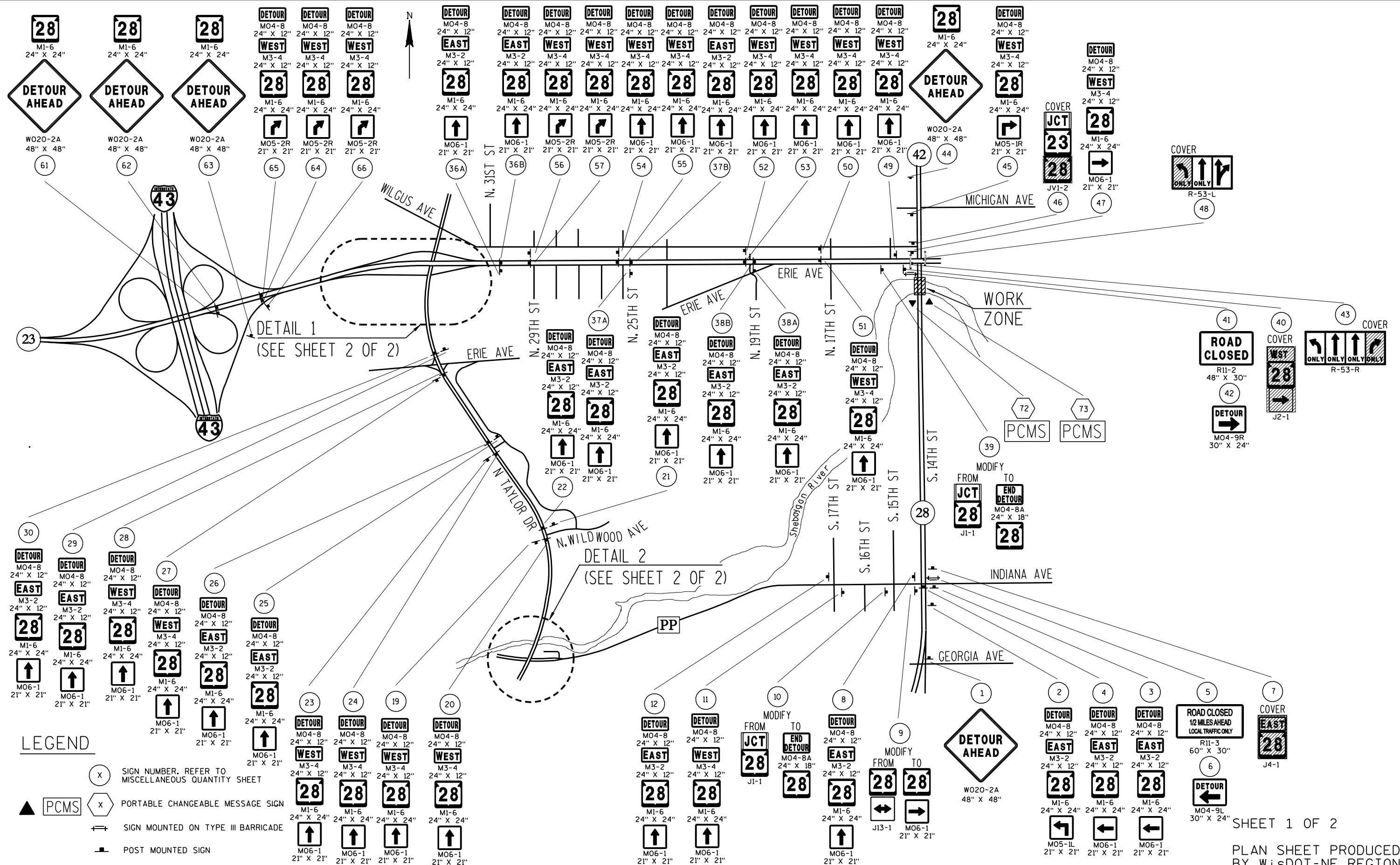
LEGEND

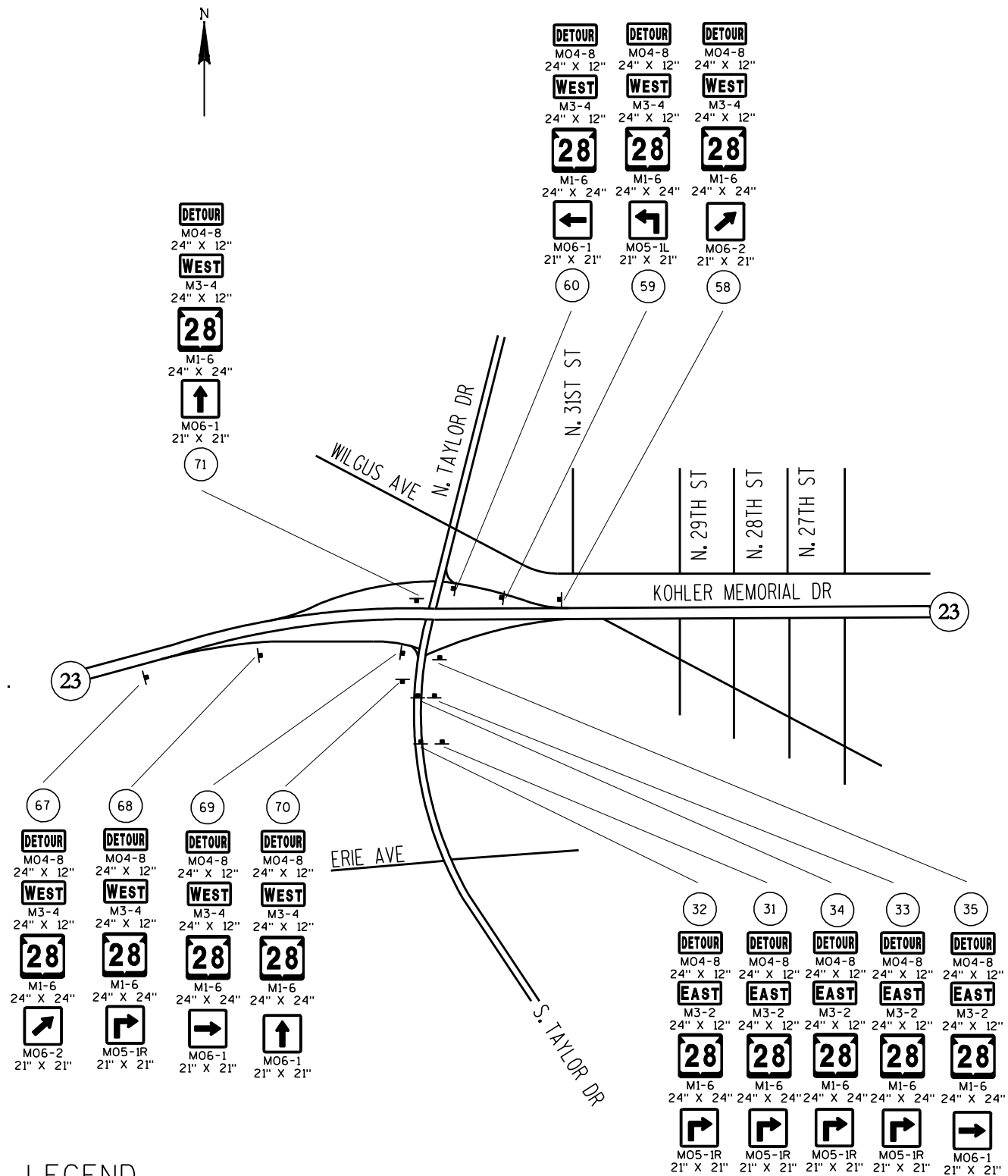
- WORK AREA
NAVIGATION BUOY
REGULATORY BUOY - BOATS KEEP OUT
CHANNEL FLOW
SIGN ON TEMPORARY SUPPORT
SEE DETAIL
MARINE TRAFFIC FLOW

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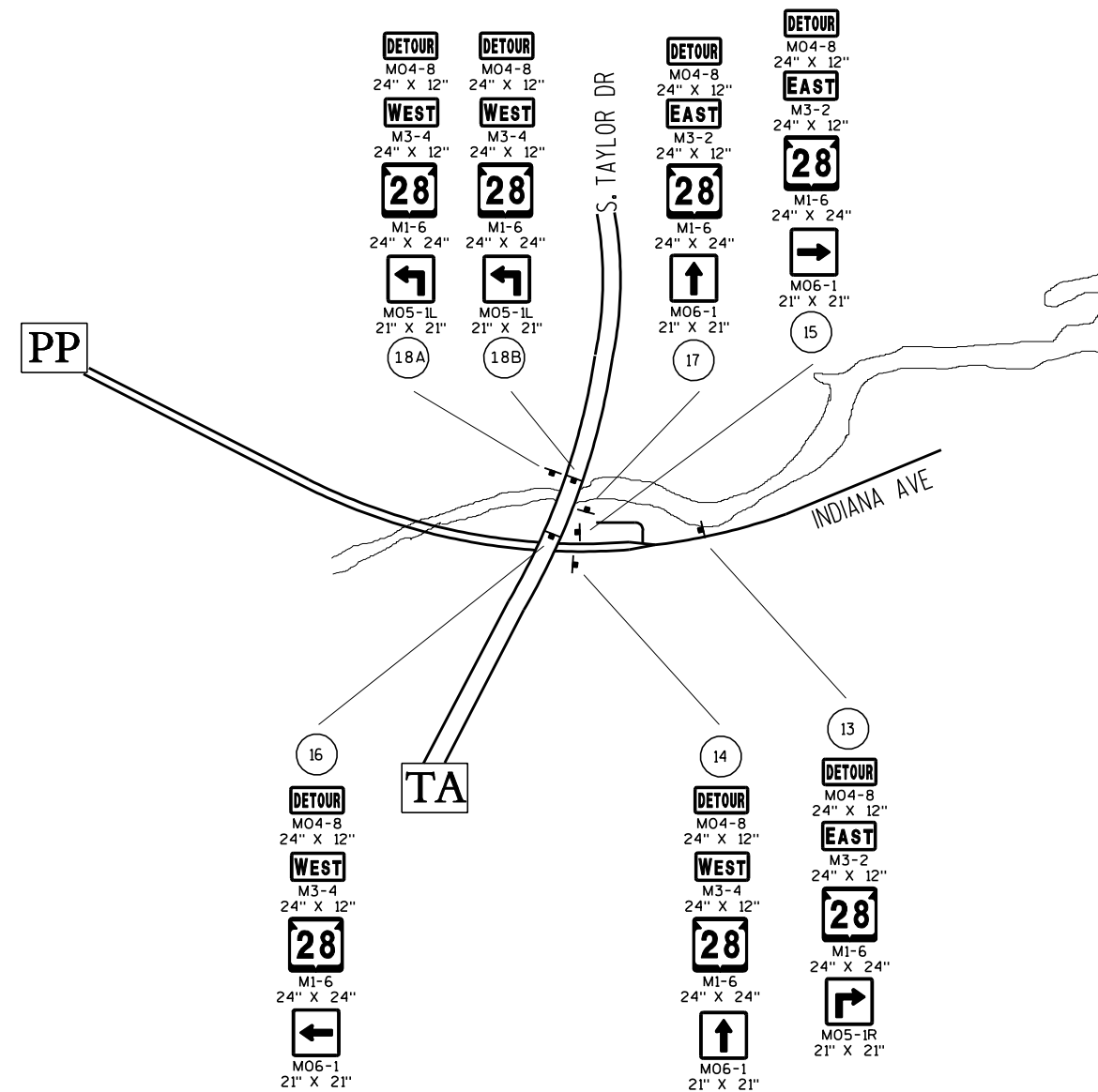




LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
 ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
 ⇄ SIGN MOUNTED ON TYPE III BARRICADE
 ┌ POST MOUNTED SIGN

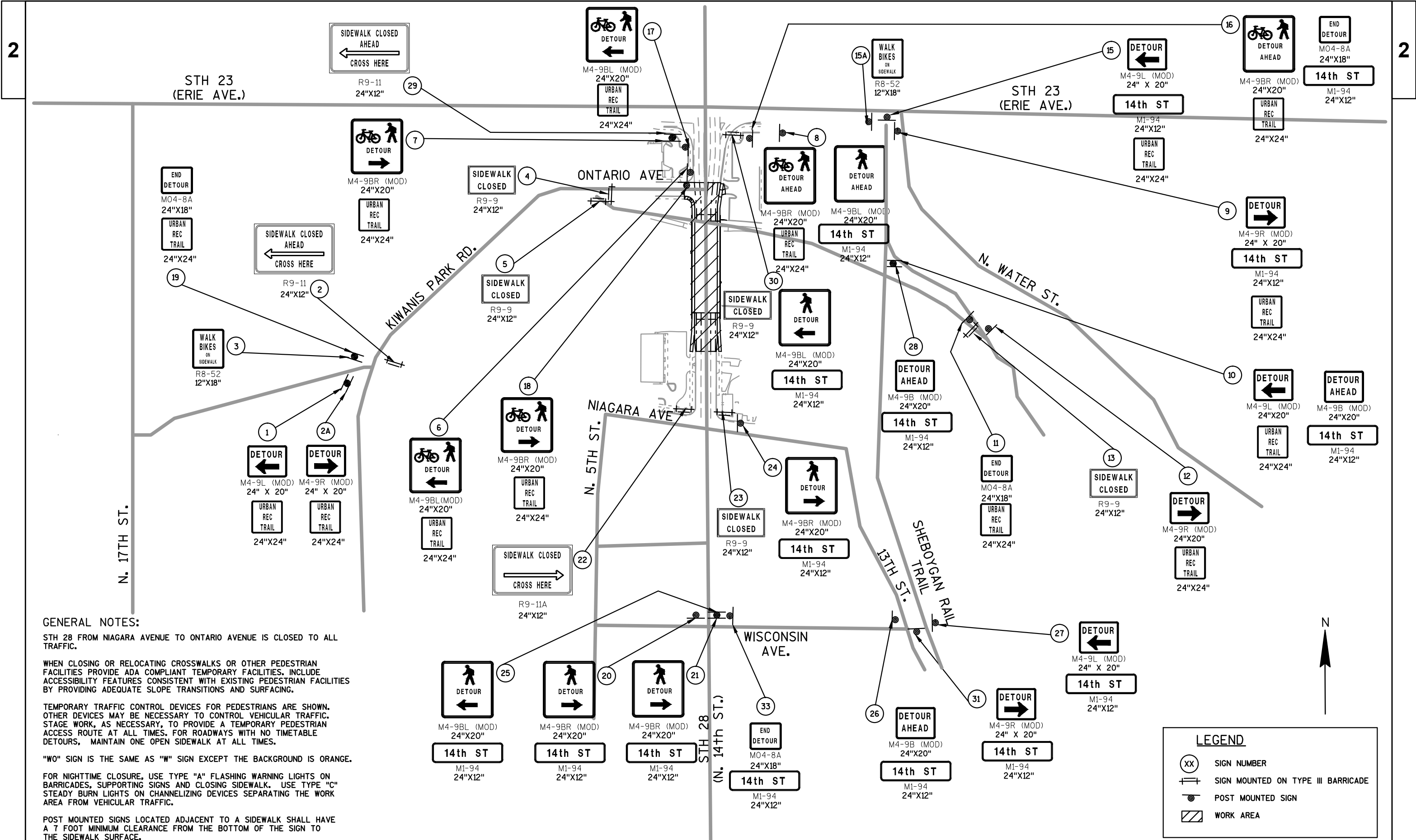
DETAIL 1



DETAIL 2

SHEET 2 OF 2

PLAN SHEET PRODUCED
BY WISDOT-NE REGION



GENERAL NOTES:

STH 28 FROM NIAGARA AVENUE TO ONTARIO AVENUE IS CLOSED TO ALL TRAFFIC.

WHEN CLOSING OR RELOCATING CROSSWALKS OR OTHER PEDESTRIAN FACILITIES PROVIDE ADA COMPLIANT TEMPORARY FACILITIES. INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES BY PROVIDING ADEQUATE SLOPE TRANSITIONS AND SURFACING.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO TIMETABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

LEGEND

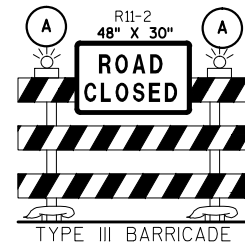
XX

SIGN NUMBER

SIGN MOUNTED ON TYPE III BARRICADE

POST MOUNTED SIGN

WORK AREA



100
101
103

104
**NO
TURN
ON RED**
R10-11B
24" X 24"
(MOUNT ON EXISTING SIGNAL POST)

SEE TRAFFIC CONTROL
PLAN- STAGES 1 AND 2,
DETAIL 4

STH 23
(ERIE AVE)

TEMPORARY PAVEMENT MARKING
4-INCH REMOVABLE TAPE
(YELLOW ON LEFT)

TEMPORARY PAVEMENT MARKING
4-INCH REMOVABLE TAPE
(WHITE ON RIGHT, YELLOW ON LEFT)

102
YIELD
R1-2
36" X 31"
NO LEFT TURN
R3-2
24"X24"



ONTARIO AVE

KEEP RIGHT OUT EXIT OPEN
DURING CONSTRUCTION

CLOSE ENTRANCE
DURING CONSTRUCTION

EXISTING STOP SIGN TO REMAIN
UNTIL NEW STOP SIGN IS INSTALLED

100

101

BRIDGE

WORK AREA

NORTH SIDE

DETAIL 3

LEGEND

- TYPE "A" WARNING LIGHT (FLASHING)
- ⚡ TYPE III BARRICADE WITH ATTACHED SIGN
- ⚡ TYPE III BARRICADE
- ⦿ POST MOUNTED SIGN
- ▨ WORK AREA
- TRAFFIC CONTROL DRUM
- ⚡ TRAFFIC CONTROL DRUM W/TYPE C STEADY BURN LIGHT
- ➡ TRAFFIC FLOW

NOTE: ONTARIO AVENUE MUST REMAIN OPEN TO 2 WAY
TRAFFIC DURING STAGE 1 AND STAGE 3.

SOUTH SIDE

STH 28
(N. 14th ST.)

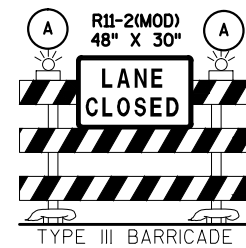
WORK AREA

103

* NOTE:

STAGE 1 TRAFFIC IS ALLOWED TO TURN RIGHT OR TRAVEL THROUGH INTERSECTION.

STAGE 2 TRAFFIC IS ALLOWED TO TURN RIGHT ONLY. FOR STAGE 2, INSTALL ROAD CLOSED AHEAD AND ROAD CLOSED 500 FT PER SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".



105

106

107

100' MIN

10' TYP

STH 28
(N. 14th ST.)

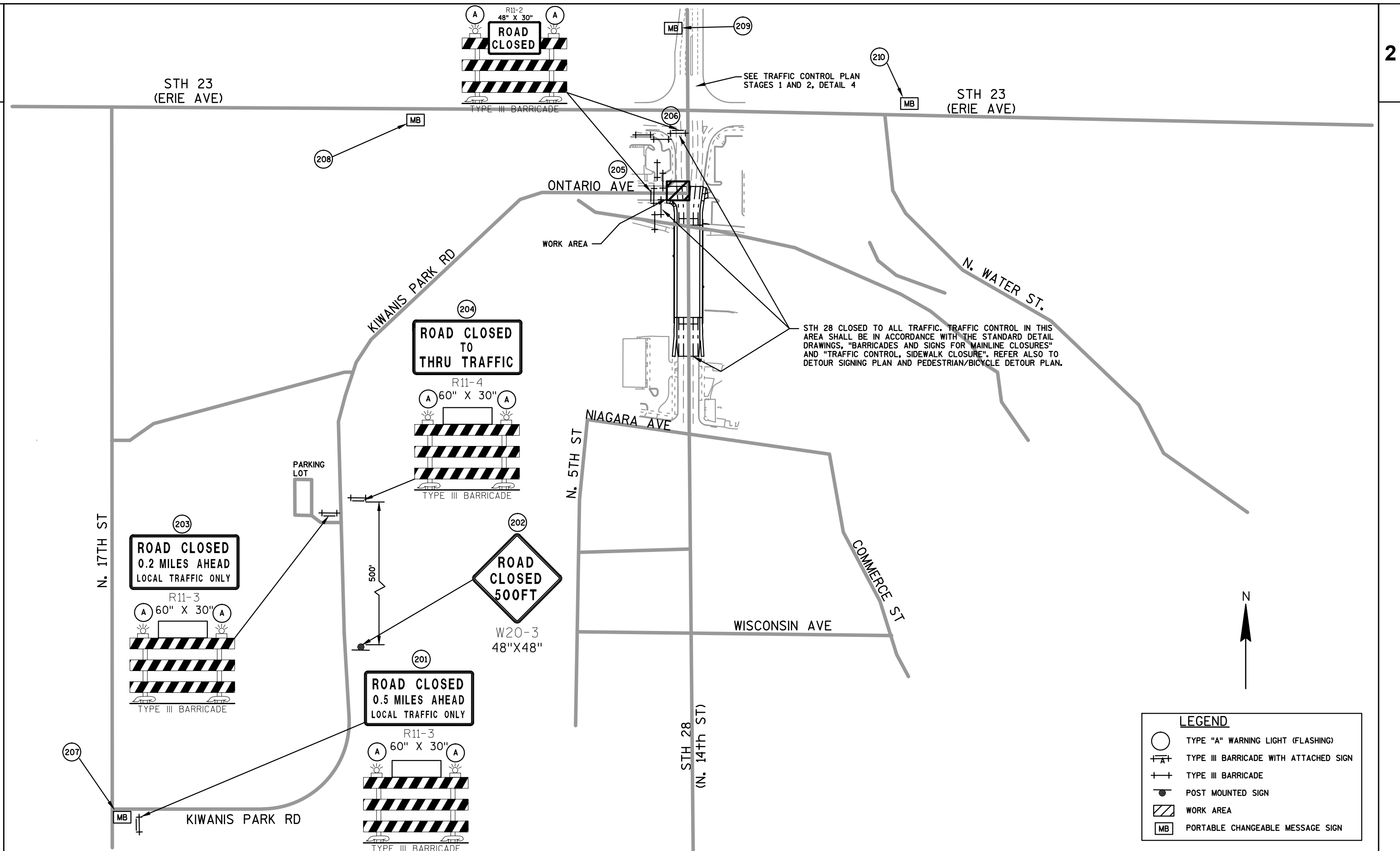
STH 23
(ERIE AVE)

DETAIL 4



LEGEND

- (A) TYPE "A" WARNING LIGHT (FLASHING)
- ⊢⊢ TYPE III BARRICADE WITH ATTACHED SIGN
- ⊢⊢ TYPE III BARRICADE
- ⦿ POST MOUNTED SIGN
- ▨ WORK AREA
- TRAFFIC CONTROL DRUM
- ⦿ TRAFFIC CONTROL DRUM W/TYPE C STEADY BURN LIGHT
- ➡ TRAFFIC FLOW



3

DATE 18MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE				4640-06-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0210.S	Abatement of Asbestos Containing Material (structure) 01. B-59-33	LS	1.000	1.000
0020	203.0225.S	Debris Containment (structure) 01. B-59-33	LS	1.000	1.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. STA 99+19.5	LS	1.000	1.000
0040	204.0100	Removing Pavement	SY	950.000	950.000
0050	204.0150	Removing Curb & Gutter	LF	16.000	16.000
0060	204.0155	Removing Concrete Sidewalk	SY	215.000	215.000
0070	204.0195	Removing Concrete Bases	EACH	1.000	1.000
0080	204.0220	Removing Inlets	EACH	2.000	2.000
0090	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	46.000	46.000
0100	204.9090.S	Removing (item description) 01. Removing Steel Pipe Railing	LF	66.000	66.000
0110	205.0100	Excavation Common	CY	615.000	615.000
0120	206.1000	Excavation for Structures Bridges (structure) 01. B-59-33	LS	1.000	1.000
0130	210.0100	Backfill Structure	CY	155.000	155.000
0140	213.0100	Finishing Roadway (project) 01. 4640-06-71	EACH	1.000	1.000
0150	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	750.000	750.000
0160	415.0090	Concrete Pavement 9-Inch	SY	800.000	800.000
0170	415.0410	Concrete Pavement Approach Slab	SY	150.000	150.000
0180	416.0180	Concrete Driveway 8-Inch	SY	10.000	10.000
0190	416.0610	Drilled Tie Bars	EACH	18.000	18.000
0200	416.0620	Drilled Dowel Bars	EACH	102.000	102.000
0210	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	2.000	2.000
0220	502.0100	Concrete Masonry Bridges	CY	528.000	528.000
0230	502.3200	Protective Surface Treatment	SY	1,640.000	1,640.000
0240	502.5005	Masonry Anchors Type L No. 5 Bars	EACH	144.000	144.000
0250	502.5010	Masonry Anchors Type L No. 6 Bars	EACH	148.000	148.000
0260	503.0145	Prestressed Girder Type I 45-Inch	LF	281.000	281.000
0270	505.0405	Bar Steel Reinforcement HS Bridges	LB	980.000	980.000
0280	505.0605	Bar Steel Reinforcement HS Coated Bridges	LB	126,975.000	126,975.000
0290	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0300	506.4000	Steel Diaphragms (structure) 01. B-59-33	EACH	18.000	18.000
0310	509.1500	Concrete Surface Repair	SF	86.000	86.000
0320	509.9020.S	Epoxy Crack Sealing	LF	57.000	57.000
0330	516.0500	Rubberized Membrane Waterproofing	SY	34.000	34.000
0340	517.1010.S	Concrete Staining (structure) 01. B-59-33	SF	2,155.000	2,155.000
0350	517.1050.S	Architectural Surface Treatment (structure) 01. B-59-33	SF	2,155.000	2,155.000
0360	517.4500.S	Negative Pressure Containment and Collection of Waste Materials (structure) 01. B-59-33	LS	1.000	1.000
0370	517.6001.S	Portable Decontamination Facility 01. B-59-33	EACH	1.000	1.000
0380	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	16.000	16.000
0390	602.0410	Concrete Sidewalk 5-Inch	SF	1,870.000	1,870.000
0400	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	8.000	8.000
0410	604.0400	Slope Paving Concrete	SY	10.000	10.000

3

DATE 18MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE				4640-06-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0420	606.0300	Riprap Heavy	CY	300.000	300.000
0430	607.0600.S	Storm Sewer Pipe (inch) 01. 12-Inch	LF	46.000	46.000
0440	611.1230	Catch Basins 2x3-FT	EACH	2.000	2.000
0450	611.8110	Adjusting Manhole Covers	EACH	2.000	2.000
0460	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0470	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0480	616.0700.S	Fence Safety	LF	250.000	250.000
0490	619.1000	Mobilization	EACH	1.000	1.000
0500	624.0100	Water	MGAL	4.000	4.000
0510	625.0100	Topsoil	SY	700.000	700.000
0520	628.1504	Silt Fence	LF	400.000	400.000
0530	628.1520	Silt Fence Maintenance	LF	400.000	400.000
0540	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0550	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0560	628.2008	Erosion Mat Urban Class I Type B	SY	700.000	700.000
0570	628.7005	Inlet Protection Type A	EACH	5.000	5.000
0580	628.7015	Inlet Protection Type C	EACH	11.000	11.000
0590	628.7020	Inlet Protection Type D	EACH	3.000	3.000
0600	628.7570	Rock Bags	EACH	140.000	140.000
0610	629.0210	Fertilizer Type B	CWT	1.000	1.000
0620	630.0140	Seeding Mixture No. 40	LB	10.000	10.000
0630	634.0811	Posts Tubular Steel 2x2-Inch X 11-FT	EACH	3.000	3.000
0640	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	2.000	2.000
0650	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	2.000	2.000
0660	637.2210	Signs Type II Reflective H	SF	65.180	65.180
0670	638.2602	Removing Signs Type II	EACH	10.000	10.000
0680	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0690	642.5001	Field Office Type B	EACH	1.000	1.000
0700	643.0100	Traffic Control (project) 01. 4640-06-71	EACH	1.000	1.000
0710	643.0300	Traffic Control Drums	DAY	7,595.000	7,595.000
0720	643.0420	Traffic Control Barricades Type III	DAY	2,219.000	2,219.000
0730	643.0705	Traffic Control Warning Lights Type A	DAY	3,355.000	3,355.000
0740	643.0715	Traffic Control Warning Lights Type C	DAY	2,717.000	2,717.000
0750	643.0900	Traffic Control Signs	DAY	1,437.000	1,437.000
0760	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0770	643.1050	Traffic Control Signs PCMS	DAY	42.000	42.000
0780	643.3000	Traffic Control Detour Signs	DAY	36,110.000	36,110.000
0790	645.0120	Geotextile Fabric Type HR	SY	313.000	313.000
0800	646.0106	Pavement Marking Epoxy 4-Inch	LF	848.000	848.000
0810	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	403.000	403.000
0820	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0830	650.4500	Construction Staking Subgrade	LF	228.000	228.000
0840	650.6500	Construction Staking Structure Layout (structure) 01. B-59-33	LS	1.000	1.000
0850	650.7000	Construction Staking Concrete Pavement	LF	228.000	228.000
0860	650.8500	Construction Staking Electrical Installations (project) 01. 4640-06-71	LS	1.000	1.000
0870	650.9910	Construction Staking Supplemental Control (project) 01. 4640-06-71	LS	1.000	1.000
0880	650.9920	Construction Staking Slope Stakes	LF	228.000	228.000
0890	652.0125	Conduit Rigid Metallic 2-Inch	LF	48.000	48.000
0900	652.0135	Conduit Rigid Metallic 3-Inch	LF	24.000	24.000

3

DATE 18MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE					4640-06-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0910	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,142.000	1,142.000
0920	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	490.000	490.000
0930	652.0405	Conduit Reinforced Thermosetting Resin 2-Inch	LF	30.000	30.000
0940	653.0135	Pull Boxes Steel 24x36-Inch	EACH	1.000	1.000
0950	653.0220	Junction Boxes 18x6x6-Inch	EACH	6.000	6.000
0960	654.0105	Concrete Bases Type 5	EACH	3.000	3.000
0970	655.0610	Electrical Wire Lighting 12 AWG	LF	525.000	525.000
0980	655.0615	Electrical Wire Lighting 10 AWG	LF	120.000	120.000
0990	655.0620	Electrical Wire Lighting 8 AWG	LF	2,055.000	2,055.000
1000	657.6005.S	Anchor Assemblies Light Poles on Structures	EACH	2.000	2.000
1010	690.0150	Sawing Asphalt	LF	10.000	10.000
1020	690.0250	Sawing Concrete	LF	315.000	315.000
1030	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
1040	715.0502	Incentive Strength Concrete Structures	DOL	3,168.000	3,168.000
1050	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
1060	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
1070	SPV.0060	Special 01. Inlet Covers Type H Special	EACH	2.000	2.000
1080	SPV.0060	Special 02. Lamp Disposal High Intensity Discharge	EACH	2.000	2.000
1090	SPV.0060	Special 03. Removing And Re-Installing Lighting Units	EACH	1.000	1.000
1100	SPV.0060	Special 04. Light Poles City Of Sheboygan Aluminum Round Tapered 30-Ft	EACH	4.000	4.000
1110	SPV.0060	Special 05. Luminaires City Of Sheboygan Decorative Led	EACH	4.000	4.000
1120	SPV.0060	Special 06. Luminaires City Of Sheboygan Pathway Underdeck Led	EACH	2.000	2.000
1130	SPV.0060	Special 07. Sanitary Manhole Covers Type J Special	EACH	2.000	2.000
1140	SPV.0060	Special 08. Adjusting Water Valve Box	EACH	3.000	3.000
1150	SPV.0090	Special 01. Conduit Reinforced Thermosetting Resin 3/4-Inch	LF	30.000	30.000
1160	SPV.0090	Special 02. Concrete Curb And Gutter Integral 20-Inch	LF	340.000	340.000
1170	SPV.0090	Special 03. Railing Steel Type C3 Galvanized B-59-33	LF	476.000	476.000
1180	SPV.0090	Special 04. Railing Steel Type C3 Galvanized Off-Structure	LF	72.000	72.000
1190	SPV.0105	Special 01. Removing Underdeck Lighting	LS	1.000	1.000
1200	SPV.0105	Special 02. Concrete Pavement Joint Layout	LS	1.000	1.000
1210	SPV.0105	Special 03. Remove And Replace Existing Retaining Wall	LS	1.000	1.000
1220	SPV.0105	Special 04. Marine Traffic Control	LS	1.000	1.000
1230	SPV.0120	Special 01. Water For Seeded Areas	MGAL	4.000	4.000
1240	SPV.0180	Special 01. Concrete Pavement Shes 9-Inch	SY	195.000	195.000
1250	SPV.0180	Special 02. Concrete Joint Sealing	SY	995.000	995.000
1260	SPV.0180	Special 03. Concrete Pavement Cold Weather Covering	SY	995.000	995.000
1270	SPV.0180	Special 04. Cleaning Concrete	SY	310.000	310.000

3

3

REMOVALS

STATION TO STATION	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0150 REMOVING CURB & GUTTER LF
CATEGORY 0030			
97+25 - 98+14	STH 28	480	---
100+25 - 101+14	STH 28	470	16

PROJECT TOTAL 950 16

REMOVING CONCRETE SIDEWALK

STATION TO STATION	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
CATEGORY 0030		
97+25 - 98+14	STH 28	125
100+25 - 101+14	STH 28	90

PROJECT TOTAL 215

REMOVING INLETS

STATION	DIR	LOCATION	204.0220 REMOVING INLETS EACH
CATEGORY 0030			
100+32	23' RT	STH 28	1
100+39	23' LT	STH 28	1

PROJECT TOTAL 2
TRAFFIC CONTROL COVERING SIGNS

BASE COURSE

STATION TO STATION	LOCATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	NOTES
CATEGORY 0030				
97+25 - 98+14	STH 28	330	2	
100+25 - 101+14	STH 28	400	2	
100+80 - 101+14	STH 28	20	0	AS NEEDED TEMP. DURING CONC. PAVEMENT SHES CONSTRUCTION

PROJECT TOTALS 750 4

CONCRETE PAVEMENT

STATION TO STATION	LOCATION	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	SPV.0105.02 CONCRETE PAVEMENT JOINT LAYOUT LS	SPV.0180.01 CONCRETE PAVEMENT SHES 9-INCH SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
CATEGORY 0030							
97+25 - 98+14	STH 28	435	75	---	---	---	32
100+25 - 101+14	STH 28	365	75	---	195	18	70

PROJECT TOTALS 800 150 1 195 18 102

CONCRETE CURB & GUTTER

STATION TO STATION	LOCATION	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D LF	SPV.0090.02 CONCRETE CURB AND GUTTER INTEGRAL 20-INCH LF
CATEGORY 0030			
97+25 - 98+14	STH 28	---	180
100+25 - 101+14	STH 28	16	160

PROJECT TOTALS 16 340

REMOVING STORM SEWER

STATION TO STATION	LOCATION	204.0245.01 REMOVING STORM SEWER 12-INCH LF
CATEGORY 0030		
100+33 - 100+73	STH 28 RT	40
100+40 - 100+42	STH 28 RT	6

PROJECT TOTAL 46

SIGN NO.	STAGE	643.0920			
		TRAFFIC CONTROL COVERING SIGNS TYPE II			
		EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	
CATEGORY 0030					
7	1 & 2	1	1	1	
40	1 & 2	1	1	1	
43	1 & 2	1	1	1	
46	1 & 2	1	1	1	
48	1 & 2	1	1	1	

DRIVEWAYS

STATION TO STATION	LOCATION	416.0180 CONCRETE DRIVEWAY 8-INCH SY	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
CATEGORY 0030			
97+25 - 98+14	STH 28	---	---
100+25 - 101+14	STH 28	10	2

PROJECT TOTALS 10 2

CONCRETE SIDEWALK

STATION TO STATION	LOCATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
CATEGORY 0030			
97+25 - 98+14	STH 28	1050	---
100+25 - 101+14	STH 28	820	8

PROJECT TOTALS 1,870 8

3

EARTHWORK SUMMARY

From/To Station	Location	Excavation Common 205.0100 **	Salvaged/ Unusable Pavement Material (2)	Available Material (5)	Unexpand. Fill (3)	Expanded Fill (7)	Mass Ordinate +/- (8)	Waste
		Cut (1)				Factor 1.25		
97+25 to 98+14	STH 28	303	151	152	77	96	56	56
100+25 to 101+14	STH 28	312	220	92	4	5	88	88

Project Totals 615 371 244 81 101 143 143

- Notes:
- (1) Salvaged/Unusable Pavement Material is included in Cut.
 - (2) Limits of Salvaged/ Unusable Pavement Material are not shown in the cross sections.
 - (3) Does not include exc volume of unusable pavement in fill sections.
 - (5) Available Material = Cut - Salvaged/Unusable Pavement Material
 - (7) Expanded Fill. Factor = 1.25 (Unexpanded Fill x Fill Factor)
 - (8) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.
Mass Ordinate = Cut - Salvaged/ Unusable Pavement Material - (Unexpanded Fill - Rock*Rock Factor)* Fill Factor

3

STORM SEWER PIPE

STRUCTURE		607.0600.S STORM SEWER PIPE 12-INCH LF
FROM	TO	
CATEGORY 0030		
INL 1.1	EXISTING	4
INL 2.1	INL 2.0	42

PROJECT TOTAL 46

LANDSCAPING

STATION TO STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE NO. 40 LB	SPV.0120.01 WATER FOR SEEDED AREAS MGAL
CATEGORY 0030						
97+25 - 98+14	STH 28	350	350	0.2	5	2
100+25 - 101+14	STH 28	200	200	0.1	5	1
UNDISTRIBUTED		150	150	0.6	0	1

PROJECT TOTALS 700 700 1 10 4

3

EROSION CONTROL

STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINT. LF	628.7005 INLET PROTECTION TYPE A EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7570 ROCK BAGS EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMER. EROSION CONTROL EACH
CATEGORY 0030									
97+25 - 98+14	STH 28	230	230	---	2	---	90	---	---
100+25 - 101+14	STH 28	120	120	3	4	3	---	---	---
UNDISTRIBUTED		50	50	2	5	---	50	3	3

PROJECT TOTALS 400 400 5 11 3 140 3 3

STORM SEWER STRUCTURES

STRUCT NUM					611.1230 CATCH BASINS 2 X 3-FT EACH	611.8110 ADJUSTING MANHOLE COVERS EACH	SPV.0060.07* SANITARY MANHOLE COVER TYPE J SPECIAL EACH	611.8115 ADJUSTING INLET COVERS EACH	SPV.0060.01 INLET COVERS TYPE H SPECIAL EACH
	STA	RL	DIST.	DIR					
CATEGORY 0030									
1.1	100+40.	STH 28	25.5	LT	1	---	---	---	1
2.0	100+74.	STH 28	27.4	RT	---	---	---	---	---
2.1	100+32.	STH 28	25.5	RT	1	---	---	---	1
---	100+73.77	STH 28	27.8	RT	---	---	---	1	---
---	100+78.87	STH 28	0.4	RT	---	1	---	---	---
---	101+06.5	STH 28	43.5	LT	---	---	1	---	---
---	101+09.85	STH 28	5.3	LT	---	---	1	---	---
---	101+11.72	STH 28	3.0	RT	---	1	---	---	---

PROJECT TOTALS 2 2 2 1 2

FENCE SAFETY

STATION TO STATION	DIR	LOCATION	616.0700.S FENCE SAFETY LF
CATEGORY 0030			
97+25 - 98+14	RT	STH 28	85
97+25 - 98+14	LT	STH 28	100
100+25 - 101+14	RT	STH 28	65

PROJECT TOTAL 250

*CATEGORY 0040

3

PAVEMENT MARKING

STATION - STATION	LOCATION	646.0106		REMARKS
		EPOXY 4-INCH		
		WHITE LF	YELLOW LF	
CATEGORY 0030				
97+25 - 100+64	STH 28	---	678	DOUBLE CENTERLINE
97+25 - 100+64	STH 28	85	---	NB LANE LINE
97+25 - 100+64	STH 28	85	---	SB LANE LINE
SUB TOTALS		170	678	
PROJECT TOTAL		848		

TEMPORARY PAVEMENT MARKING

STATION - STATION	LOCATION	649.0400	
		REMOVABLE TAPE 4-INCH	
		WHITE LF	YELLOW LF
CATEGORY 0030			
100+80 - 102+30	STH 28	229	174
SUB TOTALS		229	174
PROJECT TOTAL		403	

3

CONSTRUCTION STAKING

STATION TO STATION	REFERENCE LINE	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.6500* STRUCTURE LAYOUT B-59-33 LS	650.7000 CONCRETE PAVEMENT LF	650.8500** ELECTRICAL INSTALLATIONS LS	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
CATEGORY 0030								
97+25 - 98+14	STH 28	---	89	---	89	---	---	89
100+25 - 101+14	STH 28	2	89	---	89	---	---	89
10+50 - 11+00	ONTARIO AV	---	50	---	50	---	---	50
	PROJECT	---	---	1	---	1	1	---
PROJECT TOTALS		2	228	1*	228	1	1	228

*CATEGORY 0010

**CATEOGRY 0020

SAWING

		690.0150 SAWING ASPHALT	690.0250 SAWING CONCRETE
STATION TO STATION	LOCATION	LF	LF
CATEGORY 0030			
97+25 - 98+14	STH 28	---	60
100+25 - 101+14	STH 28	10	255
PROJECT TOTALS		10	315

ADJUSTING WATER VALVES

LOCATION				SPV.0060.08
				ADJUSTING WATER VALVE BOX EACH
STA	RL	DIST.	DIR	
CATEGORY 0040				
101+08.62	STH 28	12.8	LT	1
101+12.11	STH 28	20.2	LT	1
101+12.89	STH 28	28.8	LT	1
PROJECT TOTAL				3

RAILING

			SPV.0090.04 RAILING STEEL TYPE C3 GALVANIZED OFF- STRUCTURE
STATION TO STATION	DIR	LOCATION	LF
CATEGORY 0030			
97+76 - 98+00	RT	STH 28	24
97+76 - 98+00	LT	STH 28	24
100+38 - 100+62	LT	STH 28	24
PROJECT TOTAL			72

CONCRETE JOINT SEALING

		SPV.0180.02 CONCRETE JOINT SEALING
STATION TO STATION	LOCATION	SY
CATEGORY 0040		
97+25 - 98+14	STH 28	435
100+25 - 101+14	STH 28	560
PROJECT TOTAL		995

3

PERMANENT SIGNS TYPE II AND SIGN SUPPORTS

										634.0811	634.0812	634.0816	637.2210	
										POSTS TUBULAR STEEL 2 X 2 - INCH			SIGNS TYPE II	
SIGN NO.	STATION	REFERENCE	FACE LINE DIR.	SIGN CODE	DESCRIPTION	SIGN W X H IN X IN	ASSEMBLY			11-FT EACH	12-FT EACH	16-FT EACH	REFLECTIVE H SF	REMARKS
CATEGORY 0030														
101	97+94 , LT	STH 28	SB	R7-1D	NO PARKING ANY TIME	18 X 24				---	---	---	3.00	INSTALL ON PROPOSED LIGHT POLE
102	97+94 , LT	STH 28	SB	M3-4	DIRECTION MARKER	24 X 12	J4-1	24.00	36.00	---	---	---	6.00	INSTALL ON PROPOSED LIGHT POLE
				M1-6	STH ROUTE MARKER	24 X 24				---	---	---	---	STH 28
103	97+33 , RT	STH 28	NB	M2-1	JCT	21 X 15	J1-2	48.00	39.00	---	---	2	13.00	
				M1-6	STH ROUTE MARKER	24 X 24				---	---	---	---	STH 23
				M2-1	JCT	21 X 15				---	---	---	---	
				M1-6	STH ROUTE MARKER	24 X 24				---	---	---	---	STH 42
104	97+33 , RT	STH 28	NB	M4-6	END	24 X 12	J1-1	24.00	36.00	---	---	---	6.00	
				M1-6	STH ROUTE MARKER	24 X 24				---	---	---	---	STH 28
105	97+33 , RT	STH 28	NB		SHEBOYGAN RIVER	42 X 21				---	---	---	6.13	
106	100+34 , LT	STH 28	SB	R9-55	NO FISHING FROM BRIDGE	18 X 24				---	2	---	3.00	
107	100+34 , LT	STH 28	SB	R7-1D	NO PARKING ANY TIME	18 X 24				---	---	---	3.00	INSTALL ON PROPOSED LIGHT POLE
108	100+34 , LT	STH 28	SB		SHEBOYGAN RIVER	42 X 21				---	---	---	6.13	
109	100+50 , RT	STH 28	NB	D1-3	DESTINATION DIRECTION	66 X 30				2	---	---	13.75	HOWARDS GROVE, MANITOWOC, PLYMOUTH
110	10+54 , RT	ONTARIO	EB	R1-1	STOP	30 X 30				1	---	---	5.18	
PROJECT TOTALS										3	2	2	65.18	

3

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS

SIGN NO.	STATION	LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS	
CATEGORY 0030							
R101	98+00	LT	STH 28	NO PARKING ANY TIME	1	---	ON EXISTING LIGHT POST
R102	98+00	LT	STH 28	WEST 28	1	---	ON EXISTING LIGHT POST
R103	97+35	RT	STH 28	END 28	1	---	ON POST R104
R104	97+35	RT	STH 28	JCT 23, JCT 42	1	2	
R105	97+35	RT	STH 28	SHEBOYGAN RIVER	1	---	ON POST R104
R106	100+35	LT	STH 28	NO FISHING FROM BRIDGE	1	1	
R107	100+35	LT	STH 28	SNOW ROUTE NO PARKING	1	---	ON POST R106
R108	100+35	LT	STH 28	SHEBOYGAN RIVER	1	---	ON POST R106
R109	100+50	RT	STH 28	DESTINATION DIRECTION	1	1	
R110	100+75	LT	ONTARIO AVE	STOP	1	1	
PROJECT TOTALS				10	5		

MARINE TRAFFIC CONTROL SIGN SUMMARY

SPAN		SIGN	DESCRIPTION	SIZE	NUMBER IN	APPROX. SERVICE PERIOD	643.0900 SIGNS *
	LOCATION	CODE		W X H	SERVICE	DAYS	DAYS
NORTH	SHEBOYGAN RIVER BANK, WEST OF STH 28 BRIDGE	WO	BRIDGE WORK	48 X 48	2	29	58
	SHEBOYGAN RIVER BANK, EAST OF STH 28 BRIDGE	WO	BRIDGE WORK	48 X 48	2	29	58
	SHEBOYGAN RIVER, WEST OF STH 28 BRIDGE					29	
	SHEBOYGAN RIVER, EAST OF STH 28 BRIDGE					29	
CENTRAL	SHEBOYGAN RIVER BANK, WEST OF STH 28 BRIDGE	WO	BRIDGE WORK	48 X 48	2	29	58
	SHEBOYGAN RIVER BANK, EAST OF STH 28 BRIDGE	WO	BRIDGE WORK	48 X 48	2	29	58
	SHEBOYGAN RIVER, WEST OF STH 28 BRIDGE					29	
	SHEBOYGAN RIVER, EAST OF STH 28 BRIDGE					29	
SOUTH	SHEBOYGAN RIVER BANK, WEST OF STH 28 BRIDGE	WO	BRIDGE WORK	48 X 48	2	28	56
	SHEBOYGAN RIVER BANK, EAST OF STH 28 BRIDGE	WO	BRIDGE WORK	48 X 48	2	28	56
	SHEBOYGAN RIVER, WEST OF STH 28 BRIDGE					28	
	SHEBOYGAN RIVER, EAST OF STH 28 BRIDGE					28	
TOTALS					12		344

CAT. 0030
* ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL SUMMARY" TABLE

TRAFFIC CONTROL SUMMARY

PHASE NO.	SIGN NO.	LOCATION	SIGN CODE	DESCRIPTION	SIZE W X H	APPROX. SERVICE PERIOD DAYS	643.0300 TRAFFIC CONTROL DRUMS		643.0900 SIGNS *		643.0420 BARRICADES TYPE III **		643.0705 WARNING LIGHTS TYPE A **		643.0715 WARNING LIGHTS TYPE C		643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE*** DAYS
							NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	
1	100	14TH STREET, SOUTH OF ERIE AVE	R11-2	ROAD CLOSED	48 X 30	115	35	4025	1	115	3	345	2	230	13	1,495	---
1	101	14TH STREET, SOUTH OF ERIE AVE	R11-2	ROAD CLOSED	48 X 30	115	---	---	1	115	2	230	2	230	---	---	---
1	102	14TH STREET, SOUTH OF ERIE AVE	R1-2	YIELD	36 X 31	115	---	---	1	115	---	---	---	---	---	---	---
			R3-2	NO LEFT TURN	24 X 24	115	---	---	1	115	---	---	---	---	---	---	---
1	103	14TH STREET, SOUTH BRIDGE	R11-2	ROAD CLOSED	48 X 30	115	---	---	1	115	4	460	5	575	---	---	---
1	104	ERIE AVE., WEST OF STH 28	R10-11B	NO TURN ON RED	24 X 24	115	---	---	1	115	---	---	---	---	---	---	---
1	105	14TH STREET, NORTH OF ERIE AVE	W20-56A	CENTER LANE CLOSED AHEAD	48 X 30	115	30	3450	1	115	---	---	---	---	10	1,150	---
1	106	14TH STREET, NORTH OF ERIE AVE	W12-1D	DOUBLE DOWN ARROWS	24 X 24	115	---	---	1	115	---	---	---	---	---	---	---
1	107	14TH STREET, NORTH OF ERIE AVE	R11-2	ROAD CLOSED	48 X 30	115	---	---	1	115	1	115	2	230	---	---	---
2		14TH STREET, NORTH OF ERIE AVE	W20-3	ROAD CLOSED AHEAD	48 X 48	2	---	---	1	2	---	---	---	---	---	---	---
2		14TH STREET, NORTH OF ERIE AVE	W20-3	ROAD CLOSED 500 FT	48 X 48	2	---	---	1	2	---	---	---	---	---	---	---
2	201	N 17TH ST AND KIWANIS PARK RD	R11-3	ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY	60 X 30	2	---	---	1	2	1	2	2	4	---	---	---
2	202	KIWANIS PARK RD	W20-3	ROAD CLOSED 500 FT	48 X 48	2	---	---	1	2	---	---	---	---	---	---	---
2	203	KIWANIS PARK RD	R11-3	ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY	60 X 30	2	---	---	1	2	1	2	2	4	---	---	---
2	204	KIWANIS PARK RD	R11-4	ROAD CLOSED TO THRU TRAFFIC	60 X 30	2	---	---	1	2	1	2	2	4	---	---	---
2	205	ONTARIO AVE	R11-2	ROAD CLOSED	48 X 30	2	---	---	1	2	5	10	2	4	---	---	---
2	206	N 14TH ST	R11-2	ROAD CLOSED	48 X 30	2	---	---	1	2	3	6	2	4	---	---	---
2	207	FIELD DETERMINED KIWANIS PARK RD		PCMS		7	---	---	---	---	---	---	---	---	---	---	7
2	208	FIELD DETERMINED ERIE AVE, EAST OF 14TH ST		PCMS		7	---	---	---	---	---	---	---	---	---	---	7
2	209	FIELD DETERMINED ERIE AVE, WEST OF 14TH ST		PCMS		7	---	---	---	---	---	---	---	---	---	---	7
2	210	FIELD DETERMINED 14TH ST, NORTH OF ERIE AVE		PCMS		7	---	---	---	---	---	---	---	---	---	---	7
3		2016 CONSTRUCTION SEASON - DAYTIME LANE CLOSURES		SEE SDD 15D20		6	20	120	7	42	2	12	0	0	12	72	---
TOTALS							7,595		1,093		1,184		1,285		2,717		28

CAT. 0030

* ADDITIONAL QUANTITIES ARE LOCATED IN THE "MARINE TRAFFIC CONTROL SIGN SUMMARY" TABLE

** ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL DETOUR SIGN SUMMARY" AND THE "TRAFFIC CONTROL PEDESTRIAN/BICYCLE DETOUR SIGN SUMMARY" TABLES

*** ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL DETOUR SIGN SUMMARY" TABLE

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
1	100' N OF GEORGIA AVE INTERSECTION ON HWY 28(NB)	WO 20-2-A	48"x48"	1	115	115				
2	500' S OF SIGN # 3 (MOUNT TO BRIDGE RAILING - VERTICAL SUPPORT)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-L	21"x21"	1	115	115				
3	ABOVE J13-1 (PP-LT) ON HWY 28 (NB) @ INDIANA AVE INTERSECTION	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				LEFT
4	ACROSS FROM SIGN # 3 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				LEFT
5	NE QUAD OF HWY 28 & INDIANA AVE INTERSECTION	R 11-3	60"x30"	1	115	115	115	230		1/2 MILE
6	BELOW SIGN # 5	MO 4-9-L	30"x34"	1	115	115				
8	200' W OF HWY 28 INTERSECTION ON INDIANA AVE (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
9	MODIFY J13-1 (28-LT & RT) ON INDIANA AVE (EB)	M 1-6	EXISTING							28
	"	MO 6-1	21"x21"	1	115	115				RIGHT
10	MODIFY J1-1 (JCT 28) ON INDIANA AVE (EB)	MO 4-8-A	24"x18"	1	115	115				28
	"	M 1-6	EXISTING							
11	200' E OF 17th St INTERSECTION ON INDIANA AVE (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
12	200' W OF 17th St INTERSECTION ON INDIANA AVE (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
13	LT OF J1-1 (JCT TA) ON INDIANA AVE (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
14	200' E OF CTY TA INTERSECTION ON INDIANA AVE (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
PAGE SUBTOTAL				37		4,255	115	230	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONT.										
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
15	LT OF J13-1 (TA-LT & RT) ON INDIANA AVE (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				RIGHT
16	100' N OF INDANIA AVE INTERSECTION ON CTY TA (SB - MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				LEFT
17	200' N OF INDANIA AVE INTERSECTION ON CTY TA (NB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
18A	500' N OF INDANIA AVE INTERSECTION ON CTY TA (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-L	21"x21"	1	115	115				
18B	ACROSS FROM SIGN # 18A (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-L	21"x21"	1	115	115				
19	200' S OF NEW JERSEY AVE INTERSECTION ON CTY TA (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
20	ACROSS FROM SIGN # 19 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
21	200' N OF NEW JERSEY AVE INTERSECTION ON CTY TA (NB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
22	ACROSS FROM SIGN # 21 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
23	200' S OF FRONTAGE RD ACCESS INTERSECTION ON CTY TA (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
24	ACROSS FROM SIGN # 23 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
PAGE SUBTOTAL				44		5,060	0	0	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONT.										
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
25	200' N OF FRONTAGE RD ACCESS INTERSECTION ON CTY TA (NB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
26	ACROSS FROM SIGN # 25 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
27	200' S OF ERIE AVE INTERSECTION ON CTY TA (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
28	ACROSS FROM SIGN # 28 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
29	200' N OF ERIE AVE INTERSECTION ON CTY TA (NB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
30	ACROSS FROM SIGN # 29 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
31	ABOVE J1-2 (JCT 23; END TA) ON CTY TA (NB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
32	ACROSS FROM SIGN # 31 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
33	RT OF J2-2 (W-23-AD; E-23-AH RT) CTY TA (NB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
34	ACROSS FROM SIGN # 33 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
PAGE SUBTOTAL				40		4,600	0	0	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONT.										
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
35	RT OF TRAFFIC SIGNAL ON CTY TA @ EB ON-RAMP TO HWY 23 (NEAR RT)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				RIGHT
36A	RT OF J4-1 (E-23) ON HWY 23 (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
36B	ACROSS FROM SIGN # 36A (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
37A	200' E OF 25TH ST INTERSECTION ON HWY 23 (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
37B	ACROSS FROM SIGN # 37A (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
38A	200' E OF 19TH ST INTERSECTION ON HWY 23 (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
38B	ACROSS FROM SIGN # 38A (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-2	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
39	MODIFY J1-1 (JCT 23) @ HWY 42/28 INTERSECTION	MO 4-8-A	24"x18"	1	115	115				
	"	M 1-6	EXISTING							
41	SW QUAD OF HWY 23 & HWY 28 (14TH ST) INTERSECTION	R 11-2	48"x30"	1	115	115	115	230		
42	BELOW SIGN # 41	MO 4-9-R	30"x34"	1	115	115				
44	50' S OF HURON ST INTERSECTION ON HWY 42 (SB)	M 1-6	24"x24"	1	115	115				28
	"	WO 20-2-A	48"x48"	1	115	115				
45	50' S OF MICHIGAN ST INTERSECTION ON HWY 42 (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
47	75'S OF SIGN # 46 ON HWY 42 (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				RIGHT
PAGE SUBTOTAL				41		4,715	115	230	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONT.										
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
49	ABOVE J4-2 (W-23; TO-43) ON HWY 23 (WB) @ HWY 42 INTERSECTION	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
50	50' W OF 17TH ST INTERSECTION ON HWY 23 (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
51	ACROSS FROM SIGN # 50 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
52	ABOVE J4-2 (W-23; TO-43) ON HWY 23 (WB) @ 19TH ST INTERSECTION	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
53	ACROSS FROM SIGN # 52 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
54	200' W OF 25TH ST INTERSECTION ON HWY 23 (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
55	ACROSS FROM SIGN # 54 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				AHEAD
56	500' E OF HWY 23 WB OFF RAMP TO CTY TA (TAYLOR AVE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-2-R	21"x21"	1	115	115				
57	ACROSS FROM SIGN # 54 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-2-R	21"x21"	1	115	115				
58	ABOVE D1-1 (TAYLOR DR; TILT RT) ON HWY 23 (WB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-2	21"x21"	1	115	115				RIGHT
PAGE SUBTOTAL				40		4,600	0	0	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONT.										
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
59	ACROSS FROM SIGNAL AHEAD SIGN ON HWY 23 (WB) OFF-RAMP TO CTY TA	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-L	21"x21"	1	115	115				
60	LT OF J13-1 (TA-LT) ON HWY 23 (WB) OFF-RAMP	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				LEFT
61	200' E OF EXIT TILT RT ON HWY 23 (EB) OFF-RAMP TO I 43 (SB)	M 1-6	24"x24"	1	115	115				28
	"	WO 20-2-A	48"x48"	1	115	115				
62	ACROSS FROM SIGN # 61 (MEDIAN SIDE)	M 1-6	24"x24"	1	115	115				28
	"	WO 20-2-A	48"x48"	1	115	115				
63	LT OF SIS (LODGING) RT SIDE OF I 43 (NB) OFF-RAMP TO HWY 23 (EB)	M 1-6	24"x24"	1	115	115				28
	"	WO 20-2-A	48"x48"	1	115	115				
64	LT OF TYPE 1 (TAYLOR DR; EXIT 1/4 MILE) ON HWY 23 (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-2-R	21"x21"	1	115	115				
65	ACROSS FROM SIGN # 64 (MEDIAN SIDE)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-2-R	21"x21"	1	115	115				
66	500' E OF SIGN # 65 ON I 43 (NB) OFF-RAMP TO HWY 23 (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-2-R	21"x21"	1	115	115				
67	RT LEG OF SIGN STRUCTURE S-59-10 ON HWY 23 (EB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-2	21"x21"	1	115	115				RIGHT
PAGE SUBTOTAL				30		3,450	0	0	0	

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONT.										
SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE *** DAYS	REMARKS
68	100' W OF SIGNAL AHEAD SIGN ON HWY 23 (EB) OFF-RAMP TO TAYLOR DR	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
69	RT OF ONE WAY SIGN ON HWY 23 (EB) OFF-RAMP TO TAYLOR DR	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				RIGHT
70	300' S OF HWY 23 (EB) OFF-RAMP INTERSECTION ON CTY TA (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 5-1-R	21"x21"	1	115	115				
71	RT OF J2-1 (E-23-AH LT) ON CTY TA (SB)	MO 4-8	24"x12"	1	115	115				
	"	M 3-4	24"x12"	1	115	115				
	"	M 1-6	24"x24"	1	115	115				28
	"	MO 6-1	21"x21"	1	115	115				RIGHT
72	FIELD DETERMINED HWY 28 (WB)	PCMS		1					7	
73	FIELD DETERMINED HWY 28 (EB)	PCMS		1					7	
PAGE SUBTOTAL				16		1,840	0	0	14	
TOTAL				248		28,520	230	460	14	

CAT. 0030
* ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL PEDESTRIAN / BICYCLE DETOUR SIGN SUMMARY" TABLE
** ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL PEDESTRIAN / BICYCLE DETOUR SIGN SUMMARY" AND THE "TRAFFIC CONTROL SUMMARY" TABLES
*** ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL SUMMARY" TABLE

TRAFFIC CONTROL COVERING SIGNS				
SIGN NO.	STAGE	643.0920		
		TRAFFIC CONTROL COVERING SIGNS TYPE		
		II		
		EACH	NUMBER OF CYCLES	NUMBER OF SIGNS
CATEGORY 0030				
7	1 & 2	1	1	1
40	1 & 2	1	1	1
43	1 & 2	1	1	1
46	1 & 2	1	1	1
48	1 & 2	1	1	1
PROJECT TOTAL		5		

NOTE: SIGNS ARE COVERED AT BEGINNING OF STAGE 1 AND UNCOVERED AT END OF STAGE 2

TRAFFIC CONTROL PEDESTRIAN/BICYCLE DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 115 DAYS	643.3000 DETOUR SIGNS * DAYS	643.0420 BARRICADES TYPE III ** DAYS	643.0705 WARNING LIGHTS TYPE A ** DAYS	REMARKS
1	URBAN REC TRAIL, ONTARIO STREET	M4-9L (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
2	URBAN REC TRAIL, ONTARIO STREET	R9-11	24 X 12	1	115	115	115	230	
2A	URBAN REC TRAIL, ONTARIO STREET	M4-9R (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
3	SIDEWALK, ONTARIO STREET		12 X 18	1	115	115			WALK BIKES ON SIDEWALK
4	SIDEWALK, ONTARIO STREET	R9-9	24 X 12	1	115	115	115	230	
5	SIDEWALK, ONTARIO STREET	R9-9	24 X 12	1	115	115	115	230	
6	SIDEWALK, ONTARIO STREET	M4-9BL (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
7	SIDEWALK, ERIE AVE AND N 14TH ST	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
8	SIDEWALK, ERIE AVE	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
		M4-9BL (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
9	SIDEWALK, ERIE AVE AND N WATER ST	M4-9R (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
		NAME	24 X 12	1	115	115			14TH ST
10	SHEBOYGAN RAIL TRAIL	M4-9L (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
		M4-9B (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
11	URBAN REC TRAIL, N WATER STREET	MO4-8A	24 X 18	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
12	URBAN REC TRAIL, N WATER STREET	M4-9R (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
13	URBAN REC TRAIL, N WATER STREET	R9-9	24 X 12	1	115	115	115	230	
15	SIDEWALK, ERIE AVE AND N WATER ST	M4-9L (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
		NAME	24 X 12	1	115	115			14TH ST
15A	SIDEWALK, ERIE AVE AND N WATER ST		12 X 18	1	115	115			WALK BIKES ON SIDEWALK
16	SIDEWALK, ERIE AVE AND N 14TH ST	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
		MO4-8A	24 X 18	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
PAGE SUBTOTAL				36		4,140	460	920	

TRAFFIC CONTROL PEDESTRIAN/BICYCLE DETOUR SIGN SUMMARY CONTINUED

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD DAYS	643.3000 DETOUR SIGNS *	643.0420 BARRICADES TYPE III **	643.0705 WARNING LIGHTS TYPE A **	REMARKS
17	SIDEWALK, ERIE AVE AND N 14TH ST	M4-9BL (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
18	SIDEWALK, ONTARIO ST AND N 14TH ST	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
19	URBAN REC TRAIL, ONTARIO STREET	MO4-8A	24 X 18	1	115	115			
		NAME	24 X 24	1	115	115			URBAN REC TRAIL
20	WISCONSIN AVE AND N 14TH ST	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
21	WISCONSIN AVE AND N 14TH ST	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
22	COMMERCE ST AND N 14TH ST	R9-11A	24 X 12	1	115	115	115	230	
23	COMMERCE ST AND N 14TH ST	R9-9	24 X 12	1	115	115	115	230	
24	COMMERCE ST AND N 14TH ST	M4-9BR (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
25	WISCONSIN AVE AND N 14TH ST	M4-9BL (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
26	WISCONSIN AVE AND COMMERCE ST	M4-9B (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
27	SHEBOYGAN RAIL TRAIL, WISCONSIN AVE	M4-9L (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
28	SHEBOYGAN RAIL TRAIL, N WATER ST	M4-9B (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
29	SIDEWALK, ERIE AVE AND N 14TH ST	R9-11	24 X 12	1	115	115			
30	SIDEWALK, ERIE AVE AND N 14TH ST	R9-9	24 X 12	1	115	115	115	230	
		M4-9BL (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
31	SHEBOYGAN RAIL TRAIL, WISCONSIN AVE	M4-9R (MOD)	24 X 20	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
33	SIDEWALK, WISCONSIN AVE	MO4-8A	24 X 18	1	115	115			
		NAME	24 X 12	1	115	115			14TH ST
PAGE SUBTOTAL				30		3,450	345	690	
TOTAL				66		7,590	805	1,610	

CAT. 0030
* ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL DETOUR SIGN SUMMARY" TABLE
** ADDITIONAL QUANTITIES ARE LOCATED IN THE "TRAFFIC CONTROL DETOUR SIGN SUMMARY" AND THE "TRAFFIC CONTROL SUMMARY" TABLES

LIGHTING REMOVALS AND MISCELLANEOUS

			204.0195 REMOVING CONCRETE BASES	SPV.0060.03 REMOVING AND RE-INSTALLING LIGHTING UNITS	653.0135 PULL BOXES STEEL 24X36-INCH
CATEGORY	SYSTEM	DESCRIPTION	EACH	EACH	EACH
0020	14TH STREET LIGHTING	STA. 97+93, 32LT	1	--	--
0020	14TH STREET LIGHTING	STA. 100+50, 35LF	--	--	1
CATEGORY TOTAL			1	0	1
0030	14TH STREET LIGHTING	STA. 97+93, 32LT	--	1	--
CATEGORY TOTAL			0	1	0
PROJECT TOTAL			1	1	1

LIGHTING CONDUITS AND WIRES

					652.0225*	652.0405	655.0620
					CONDUIT	CONDUIT	ELECTRICAL
					RIGID	REINFORCED	WIRE
					NONMETALLIC	THERMOSETTING	LIGHTING
					SCHEDULE 40	RESIN	8 AWG
					2-INCH	2-INCH	
CATEGORY	SYSTEM	DESCRIPTION	FROM	TO	LF	LF	LF
0020	ONTARIO AVE. LIGHTING CONTROLLER	STREET LIGHTING	JUNCTION	PULL BOX	30	30	350
0020		STREET LIGHTING	PULL BOX	POLE 1	12	--	85
0020		STREET LIGHTING	PULL BOX	POLE 2	20	--	330
0020		STREET LIGHTING	POLE 2	POLE 3	10	--	510
0020		STREET LIGHTING	PULL BOX	POLE 4	80	--	270
0020		STREET LIGHTING	POLE 4	POLE 5	10	--	510
TOTAL					162	30	2055

*ADDITIONAL QUANTITIES SHOWN IN STRUCTURE PLANS

LIGHTING POLES AND LUMINAIRES

				654.0105 CONCRETE BASES TYPE 5	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	SPV.0060.04 LIGHT POLES CITY OF SHEBOYGAN ALUMINUM ROUND TAPERED 30-FOOT	SPV.0060.05 LUMINAIRES CITY OF SHEBOYGAN DECORATIVE LED
CATEGORY	SYSTEM	DESCRIPTION	STATION/OFFSET	EACH	LF	EACH	EACH
0020	ONTARIO AVE. LIGHTING CONTROLLER	POLE 1	STA. 100+65, 35LT	1	105	1	1
0020		POLE 2	STA. 99+54.87 BRIDGE	--	105	1	1
0020		POLE 3	STA. 97+90, 35LT	1	105	--	--
0020		POLE 4	STA. 100+50, 34RT	1	105	1	1
0020		POLE 5	STA. 98+84.13 BRIDGE	--	105	1	1
TOTAL				3	525	4	4

UNDERDECK LIGHTING REMOVALS

SPV.0060.02 SPV.0105.01
LAMP DISPOSAL REMOVING
HIGH UNDERDECK
INTENSITY LIGHTING
DISCHARGE

CATEGORY	SYSTEM	DESCRIPTION	EACH	LSUM
0010	ONTARIO AVE. LIGHTING CONTROLLER	UNDERDECK LIGHTING	2	1
TOTAL			2	1

LIGHTING CONDUITS AND WIRES

SPV.0090.01 655.0615
CONDUIT ELECTRICAL
REINFORCED WIRE
THERMOSETTING LIGHTING
RESIN 10 AWG
3/4-INCH

CATEGORY	SYSTEM	DESCRIPTION	FROM	TO	LF	LF
0010	ONTARIO AVE. LIGHTING CONTROLLER	UNDERDECK LIGHTING	JUNCTION-1	UDL	15	60
0010		UNDERDECK LIGHTING	JUNCTION-2	UDL	15	60
TOTAL					30	120

UNDERDECK LUMINAIRES

SPV.0060.06
LUMINAIRES
CITY OF
SHEBOYGAN
PATHWAY
UNDERDECK
LED

CATEGORY	SYSTEM	DESCRIPTION	STATION/OFFSET	EACH
0010	ONTARIO AVE. LIGHTING CONTROLLER	UNDERDECK	BETWEEN GIRDER 2&3	1
0010		UNDERDECK	BETWEEN GIRDER 5&6	1
TOTAL				2

CONVENTIONAL SYMBOLS	
FOUND IRON PIPE/PIPE	PROPOSED R/W LINE
R/W MOMENT	EXISTING H&L LINE
R/W STANDARD	PROPERTY LINE
150N	LOT & TIE LINES
SECTION CORNER MONUMENT	30% INTERCROPS
SECTION CORNER SYMBOL	COMPACTE LIMITS
	ACCESS RESTRICTED
	BY PREVIOUS ACQUISITION/INSTRUMENT
	ACCESS RESTRICTED
	BY ACQUISITION
	NO ACCESS
	(BY STATUTORY AUTHORITY)
	SECTION LINE
	QUARTER A/LINE
	SIXTEENTH LINE
	EXISTING CENTERLINE
	PROPOSED REFERENCE LINE
	PARALLEL OFFSET

TRANSPORTATION PROJECT PLAT NO: 4640-06-21 - 4.01

BEING PART OF LOT 18, BLOCK 111, LOT 1, BLOCK 112, AND LOT 1 BLOCK 89 1/2, ORIGINAL PLAT OF THE CITY OF SHEBOYGAN; AND PART OF CSM NO. 1593757, VOL 17, PAGES 242-244; ALL LOCATED IN PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 22, T15N, R23E, CITY OF SHEBOYGAN, SHEBOYGAN COUNTY, WISCONSIN.

RELOCATION ORDER STH 28 SHEBOYGAN COUNTY

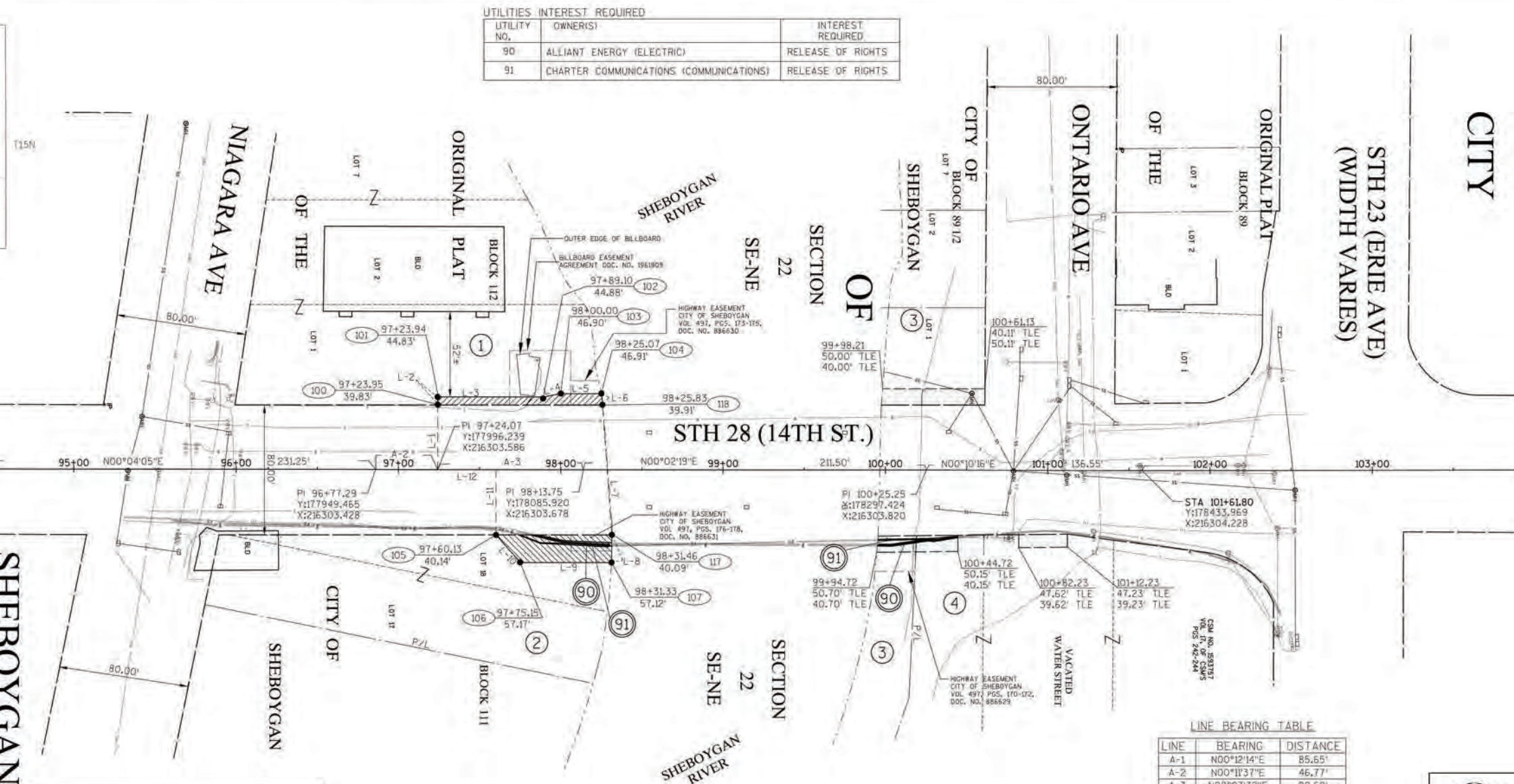
TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE CITY OF SHEBOYGAN DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

- TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 62.22 WISCONSIN STATUTES, THE CITY OF SHEBOYGAN HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
 2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE CITY OF SHEBOYGAN, PURSUANT TO THE PROVISIONS OF SECTION 84.03 (1) OR (2), WISCONSIN STATUTES.

ACCEPTED FOR RECORDING AND FILING IN
THE OFFICE OF THE REGISTER OF DEEDS
IN SHEBOYGAN COUNTY, WISCONSIN AT
3:26PM ON 8-12-2014
AS DOCUMENT # 1990305 AND _____
FILED IN Vol. 1 of TPP Page 43

Ellen R. Schleicher
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4640-06-21 - 4.01
AMENDMENT NO: _____



UTILITIES INTEREST REQUIRED		
UTILITY NO.	OWNER(S)	INTEREST REQUIRED
90	ALLIANT ENERGY (ELECTRIC)	RELEASE OF RIGHTS
91	CHARTER COMMUNICATIONS (COMMUNICATIONS)	RELEASE OF RIGHTS

PT#	Y	X
100	177996.263	216263.760
101	177996.266	216258.760
102	178061.318	216258.770
103	178072.222	216256.768
104	178097.273	216256.772
105	179032.259	216343.766
106	178047.261	216360.804
107	178103.466	216360.813
117	178103.607	216343.778
118	178098.026	216263.777

LINE TABLE		
LINE	BEARING	DISTANCE
L-1	N89°57'55"W	39.83'
L-2	N89°57'55"W	5.00'
L-3	N00°00'34"E	65.05'
L-4	N10°24'18"W	11.09'
L-5	N00°00'34"E	25.05'
L-6	N83°51'57"E	7.05'
L-7	N86°00'34"E	80.19'
L-8	S89°31'32"E	17.04'
L-9	S00°00'34"W	56.21'
L-10	S48°38'06"W	22.70'
L-11	N89°57'55"W	40.14'
L-12	S00°03'32"W	36.04'

LINE	BEARING	DISTANCE
A-1	N00°12'14"E	85.65'
A-2	N00°11'37"E	46.77'
A-3	N00°03'32"E	89.68'

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, SHEBOYGAN COUNTY, NAD 83 (1991) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1-INCH BY 24-INCH IRON PIPE) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY. LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF RECORD.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. EXCLUDING RIGHT-OF-WAY BOUNDARIES, THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

DIMENSIONS FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S EXPIRE AT THE COMPLETION OF THE PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

FILE NAME : F:\TR\JOBS\E2101A13\CIVIL 3D 2012\SHEET\PLAN\46400600_040101_RP.DWG
APPRAISAL PLAT DATE : -----

SCHEDULE OF LANDS AND INTEREST

PARCEL NO.	OWNER	INTEREST REQUIRED	AREA ACRES REQUIRED			
			NEW	EXISTING	TOTAL	TLE
1	OFFICE SERVICE COMPANY, LLC	FEE	0.01 A.C.	0.00	0.01 A.C.	0.01 A.C.
2	HARMONY BAR LLC	FEE	0.02 A.C.	0.00	0.02 A.C.	0.02 A.C.
3	CITY OF SHEBOYGAN	TLE	0.00	0.00	0.00	0.02 A.C.
4	MRED (14TH/ERIE) ASSOCIATES	TLE	0.00	0.00	0.00	0.01 A.C.

"OWNERS" NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY
AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND
INTERESTS TO THE CITY OF SHEBOYGAN

ROAD NAME	BASIS OF EXISTING R/W	YEAR
STH 28 (14TH ST)	ORIGINAL PLAT OF THE CITY OF SHEBOYGAN	184
	RIGHT-OF-WAY PLAT PROJECT NO: 4631-01-20	NO DATE
	CSM NO: 1593757	200
ONTARIO AVE. NIAGARA AVE.	ORIGINAL PLAT OF THE CITY OF SHEBOYGAN	184

OMNI
ASSOCIATE

OMNI ASSOCIATES
ONE SYSTEMS DRIVE
APPLETON, WI 54914-1654
PHONE (920) 735-6900
FAX (920) 830-6100

I, PAUL D. NORDWIG, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED TRANSPORTATION PROJECT PLAT 4640-06-21 - 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



(SIGNATURE) Paul D. Norbury DATE 8-7-2014

(PRINTED NAME) PAUL D. NORDWIC

(REGISTRATION NO.) 5-2784

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
THE CITY OF SHERBOGAN.

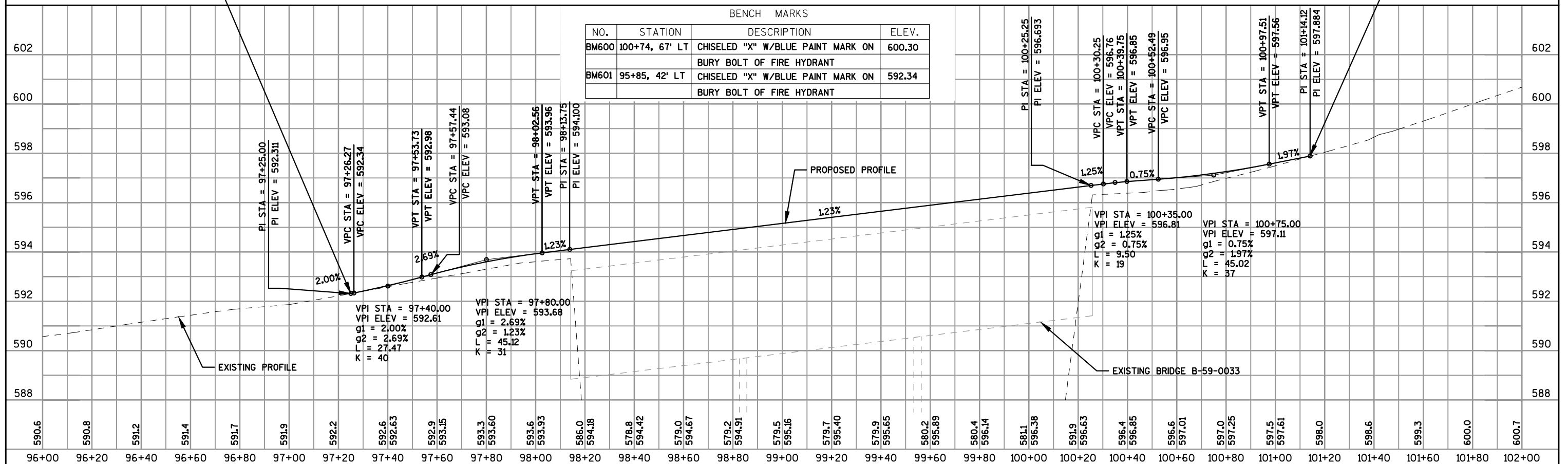
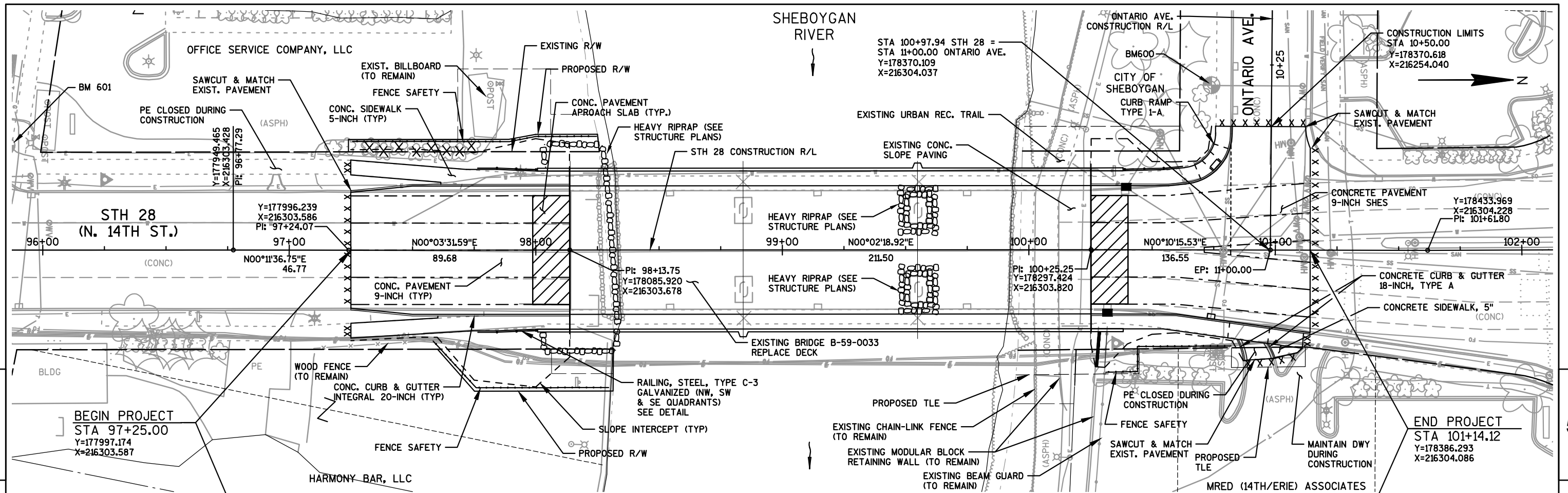
(SIGNATURE) Rya J. Saxon DATE 8/08/1

(PRINTED NAME) RYAN 49

PLOT DATE : 8/7/2014 10:14 AM

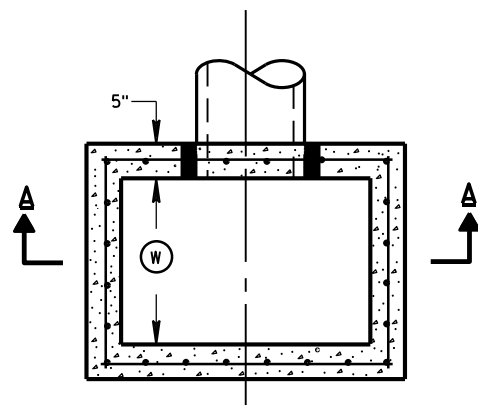
PLOT BY : OMNI ASSOCIATES, INC. - JARED STODDARD

4

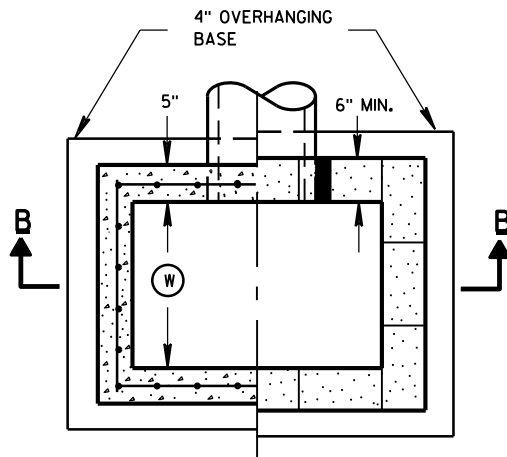


Standard Detail Drawing List

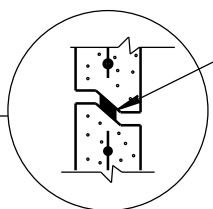
08A09-01	CATCH BASINS 2X3-FT AND 2.5X3-FT
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-08	CONDUIT UNDER PAVED HIGHWAYS
09B04-11	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09E01-12D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
12A03-10	NAME PLATE (STRUCTURES)
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13B02-07A	CONCRETE BRIDGE APPROACH
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-02	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE



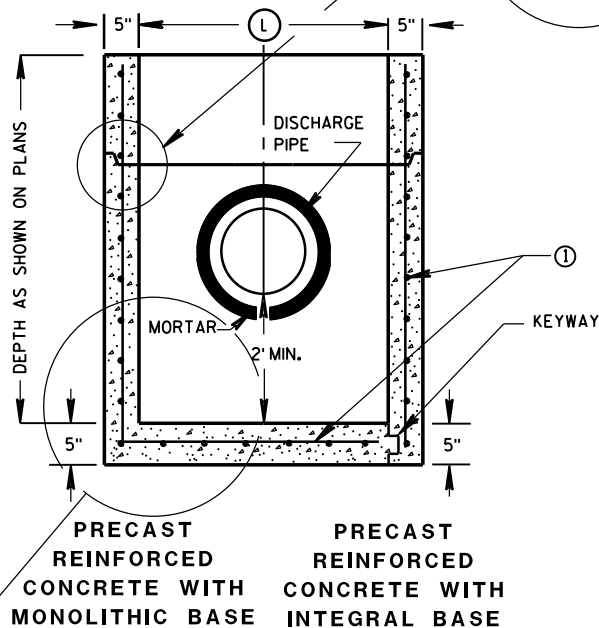
PLAN VIEW



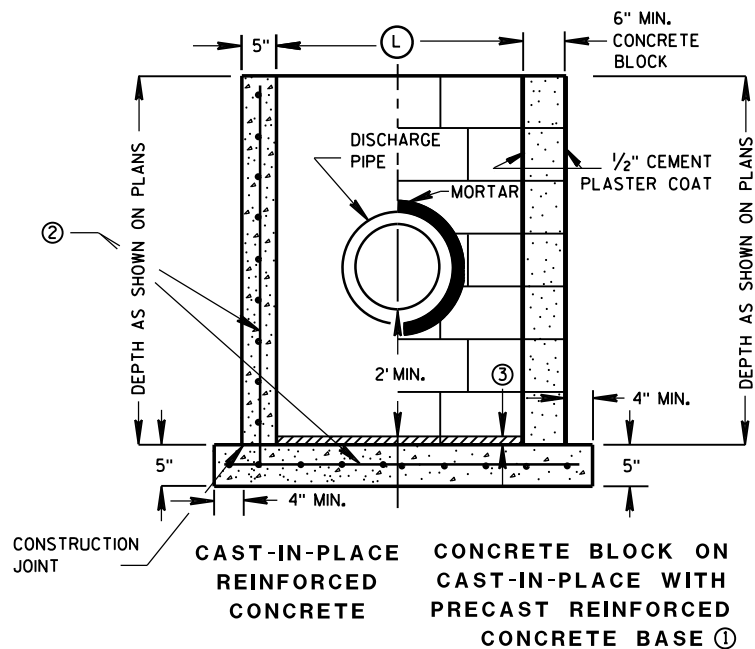
PLAN VIEW



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



SECTION A-A



SECTION B-B

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

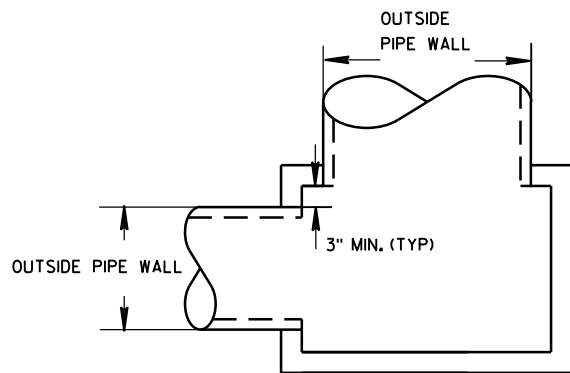
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2' SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	WIDTH (W) (FT)	LENGTH (L) (FT)	INLET COVER TYPE	F	ALL H'S
2X3-FT	2	3			X
2.5X3-FT	2.5	3		X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

CATCH BASINS 2X3-FT AND 2.5X3-FT

CATCH BASINS 2X3-FT
AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012

DATE

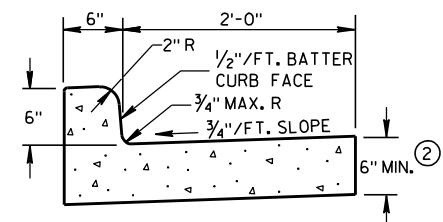
FHWA

/S/ Jerry H. Zogg

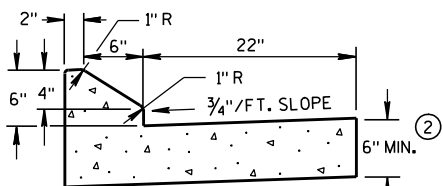
ROADWAY STANDARDS 152

ENGINEER

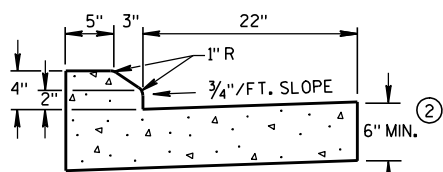
NT



TYPES A & D ①



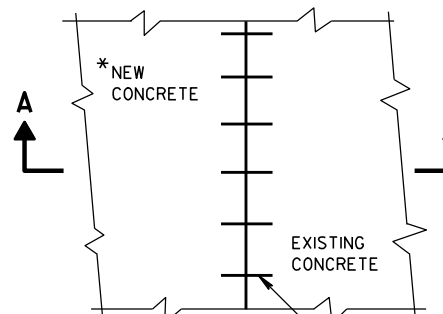
6" SLOPED CURB TYPES G & J ①



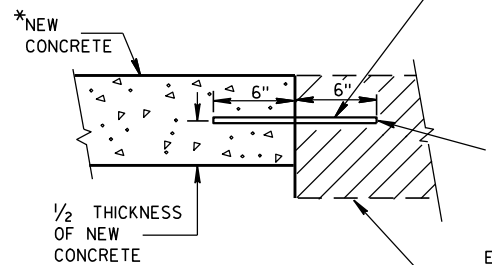
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

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



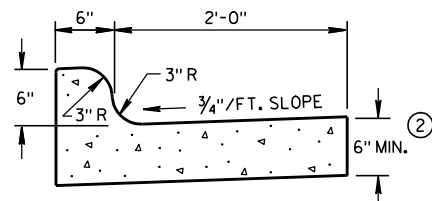
PLAN VIEW

SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

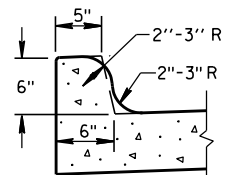
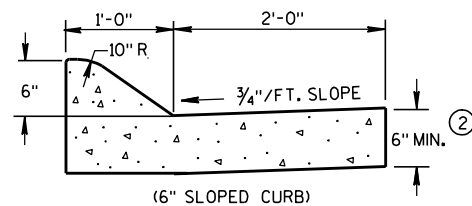
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

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

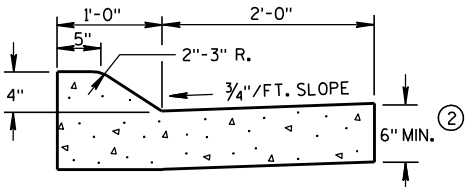
EXISTING
CONCRETE



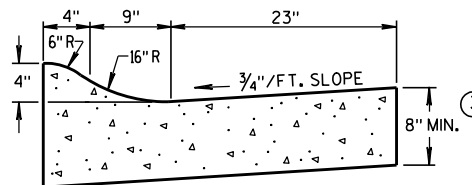
TYPES K & L ①

OPTIONAL CURB SHAPE
FOR TYPES K & L ①

(6" SLOPED CURB)

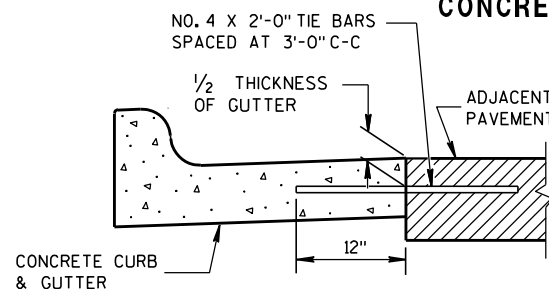


TYPES A & D ①

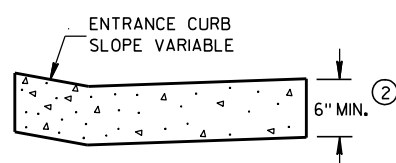
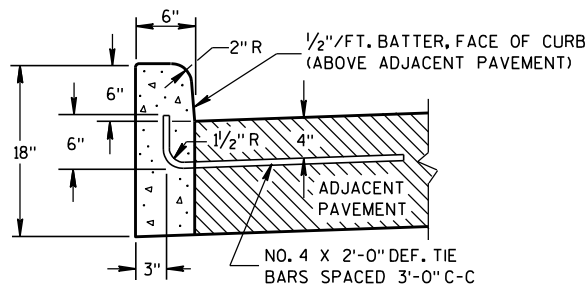


4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

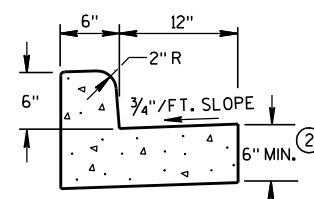
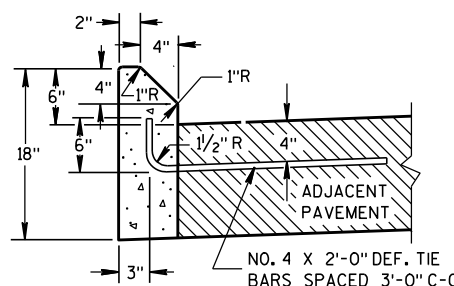


TYPICAL TIE BAR LOCATION ①

DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

TYPES A & D ①

CONCRETE CURB

TYPES A & D
CONCRETE CURB & GUTTER 18"

TYPES G & J ①

GENERAL NOTES

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

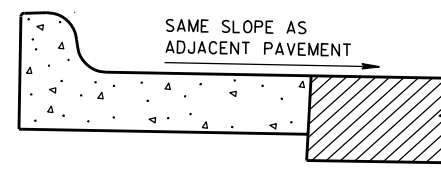
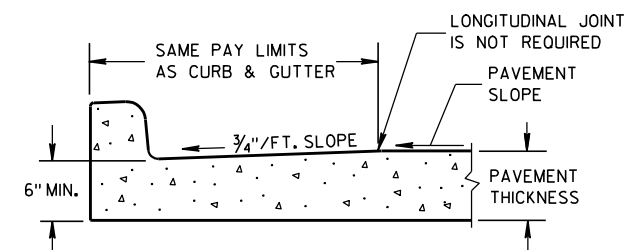
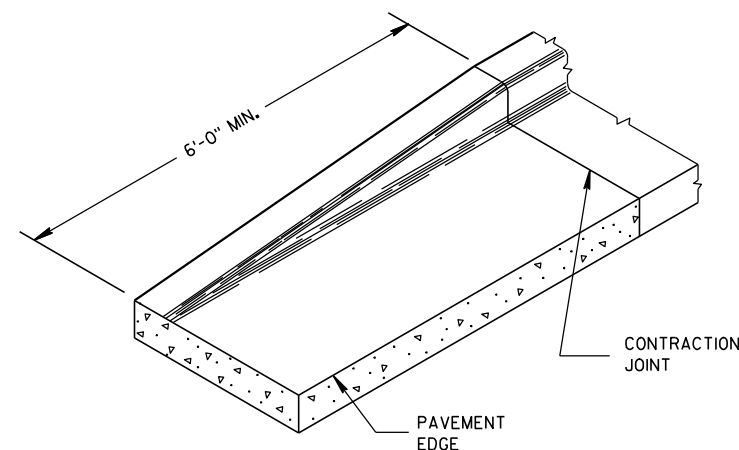
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER

END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/4/08

DATE

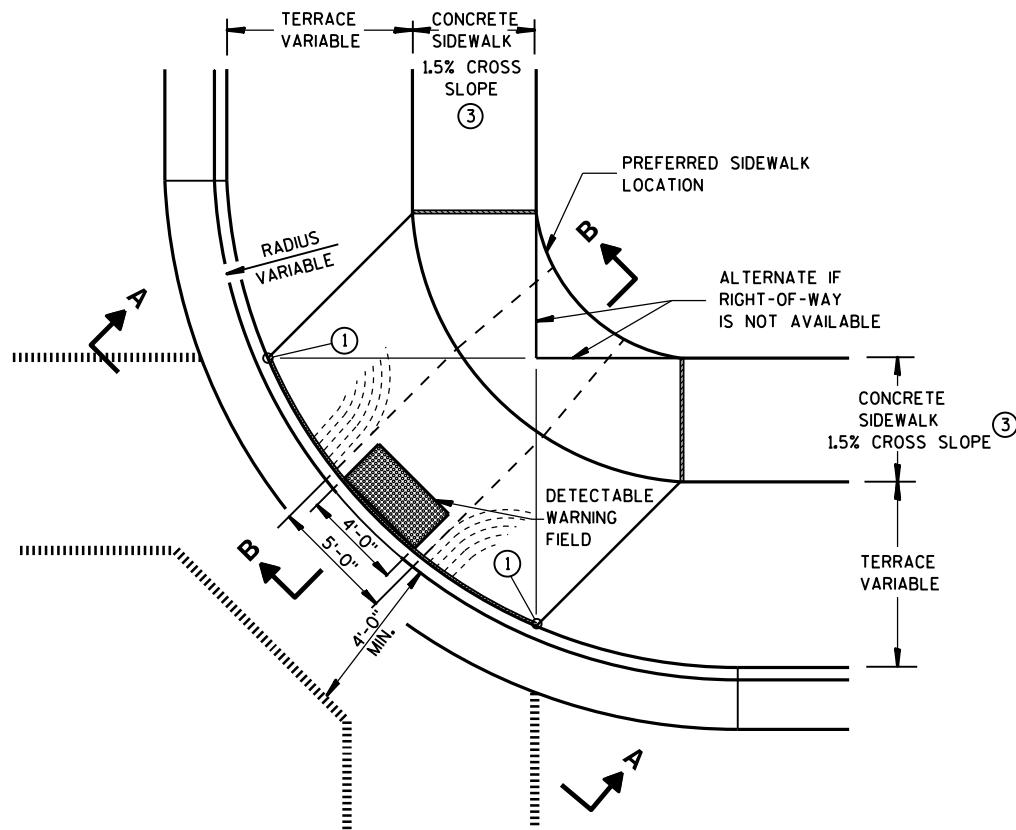
FHWA

/S/ Jerry H. 7

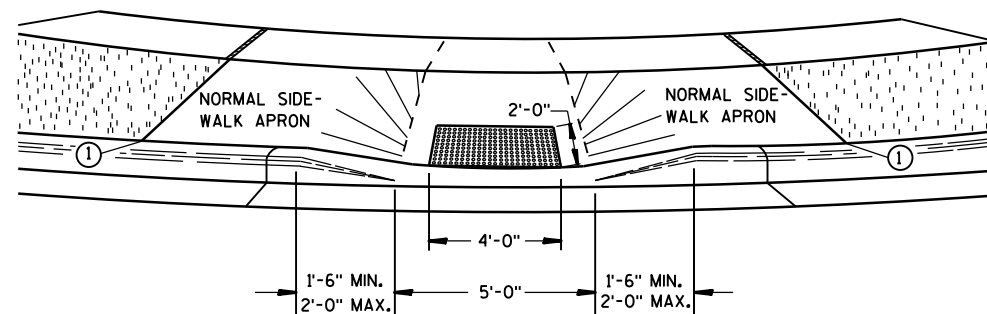
ROADWAY STANDARDS 53

ENGINEER

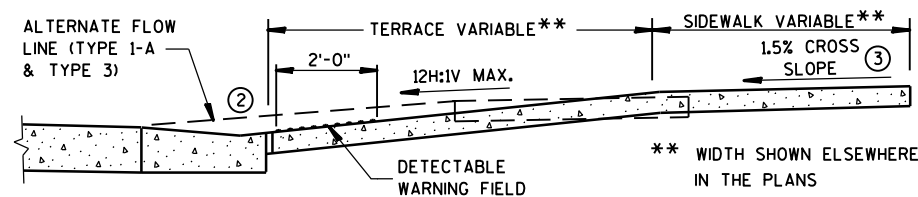
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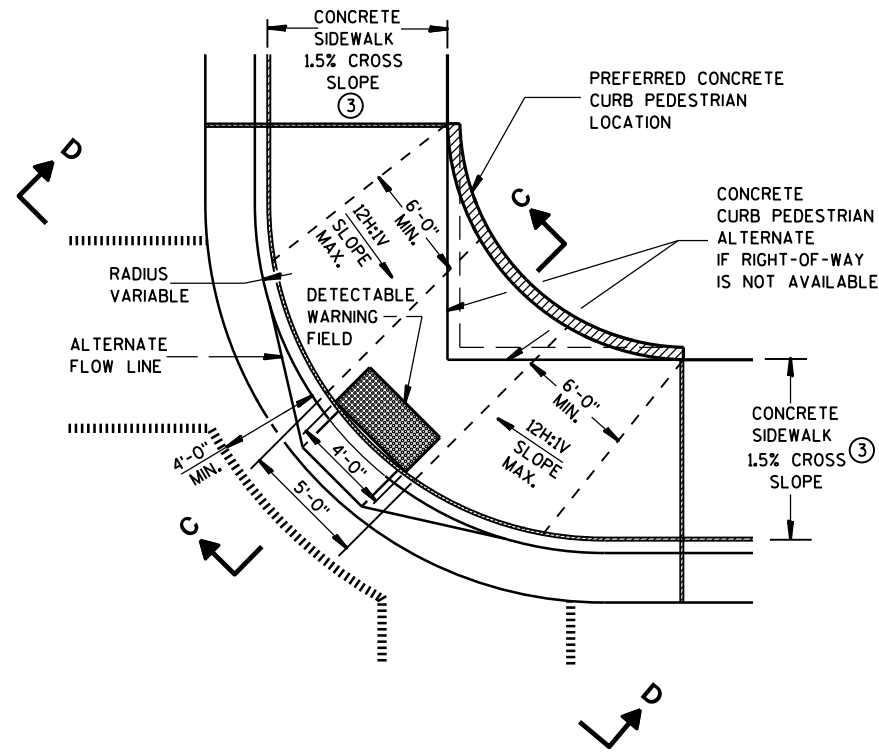
**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)



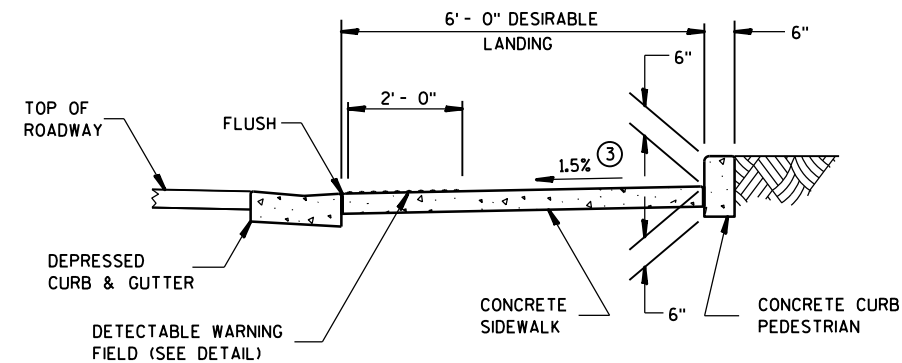
VIEW A-A



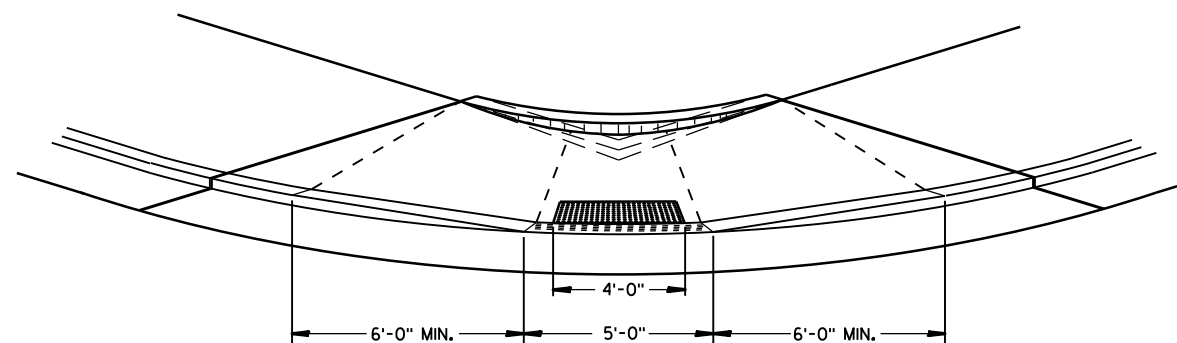
SECTION B-B



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



SECTION C-C



VIEW D-D

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

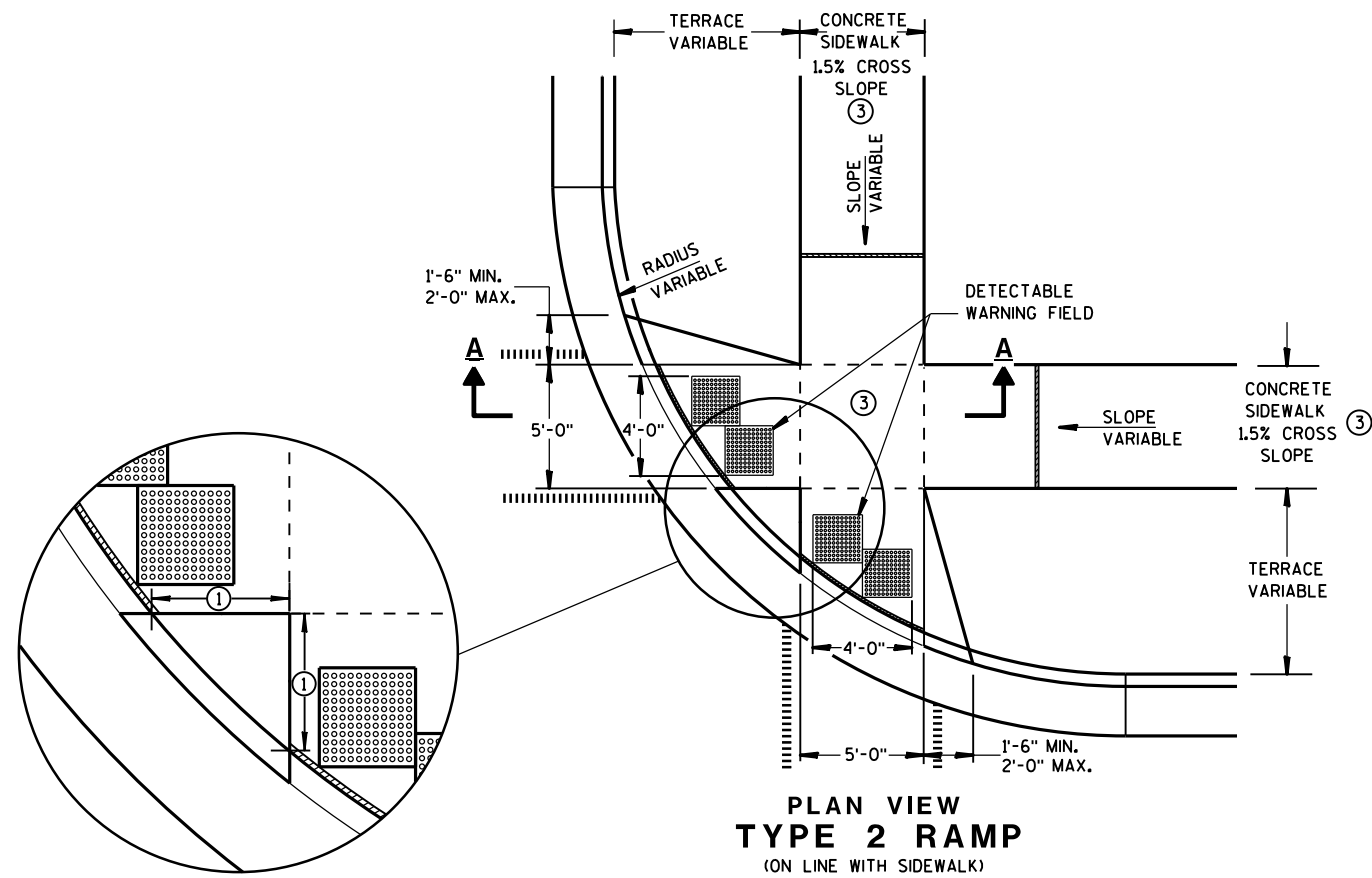
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

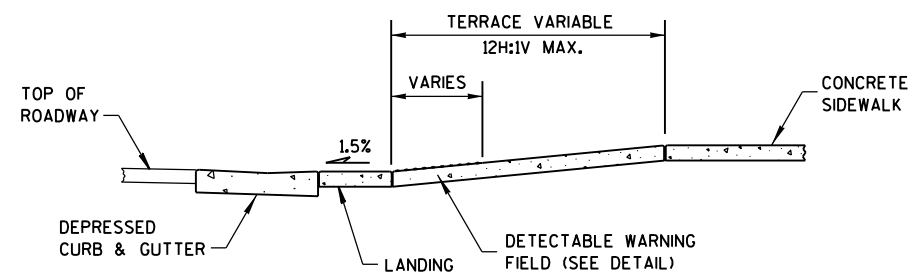
- 1/2" EXPANSION JOINT-SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

**CURB RAMPS
TYPES 1 AND 1-A**

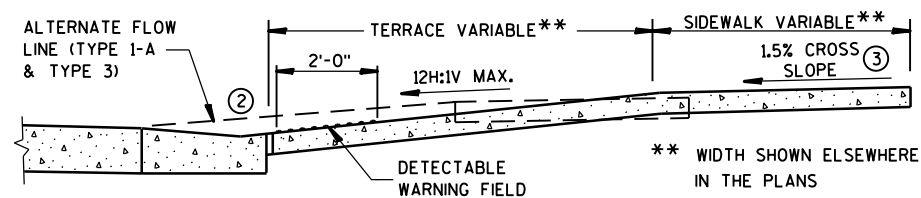
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

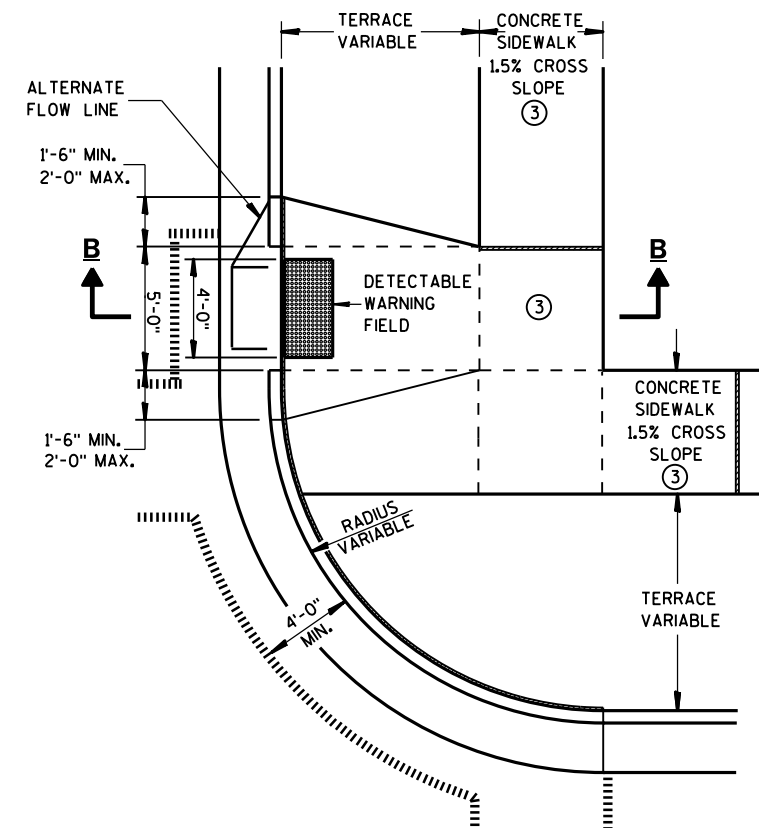
USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

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



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

**CURB RAMPS
TYPES 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

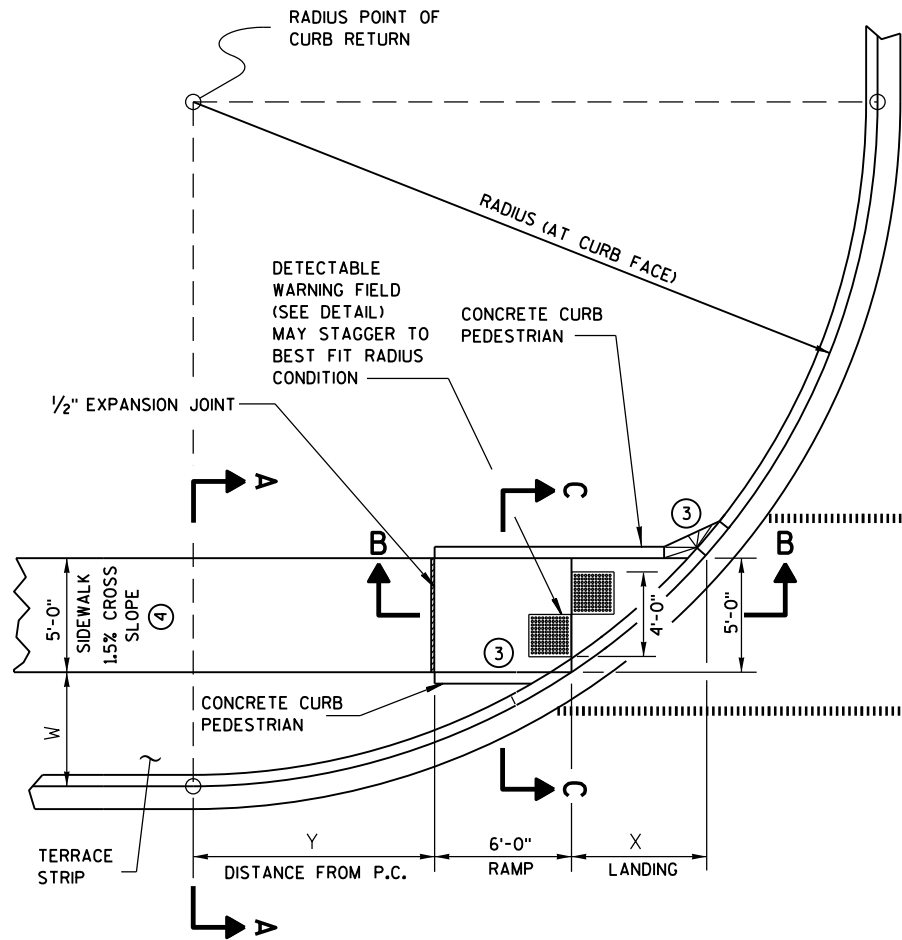


CURB RAMP TYPE 4A

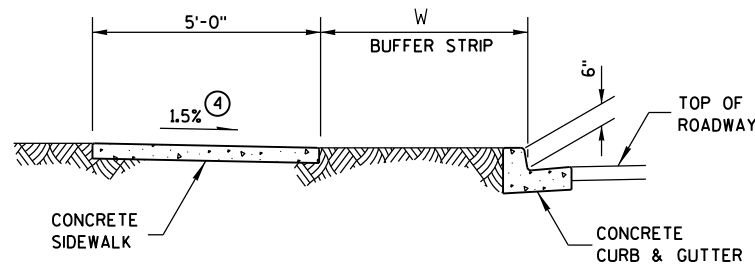


INTERMEDIATE RADII CAN BE INTERPOLATED

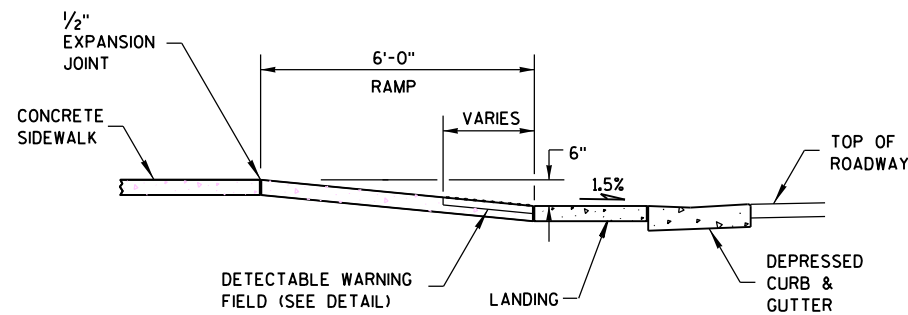




CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



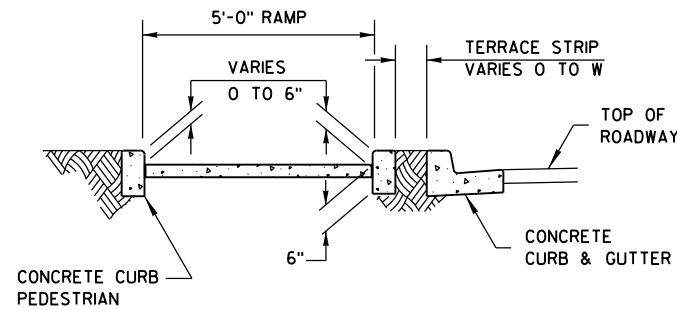
SECTION B-B FOR TYPE 4B

LEGEND

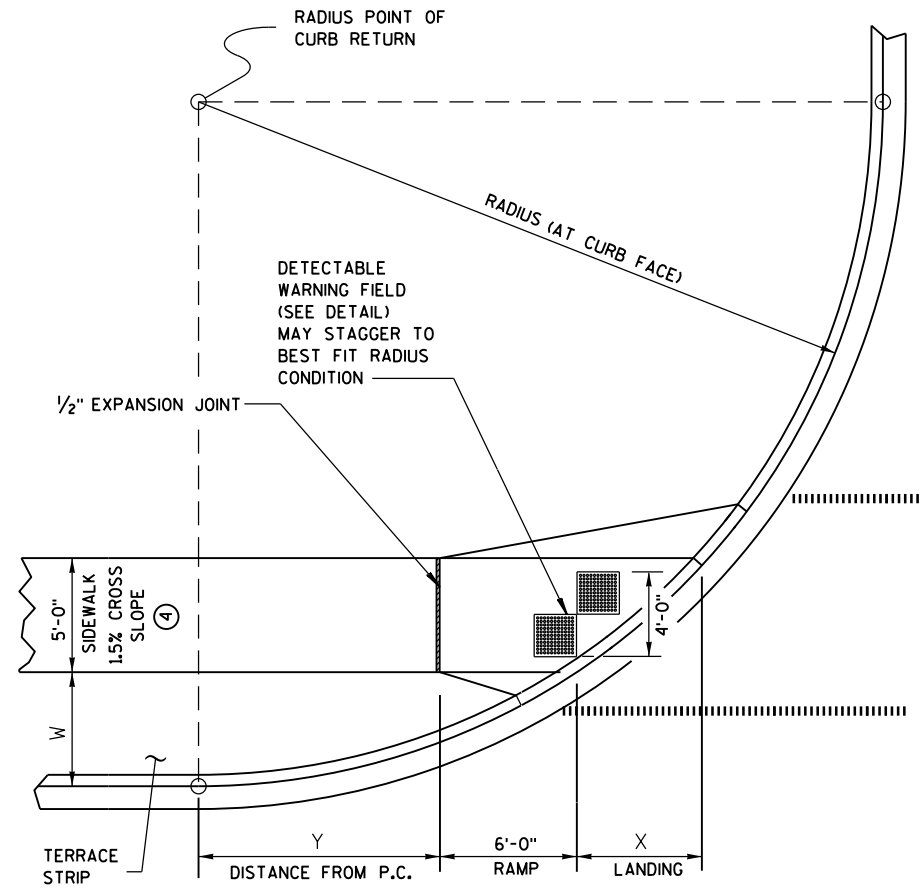
	1/2" EXPANSION JOINT-SIDEWALK
	CONTRACTION JOINT FIELD LOCATED
	PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

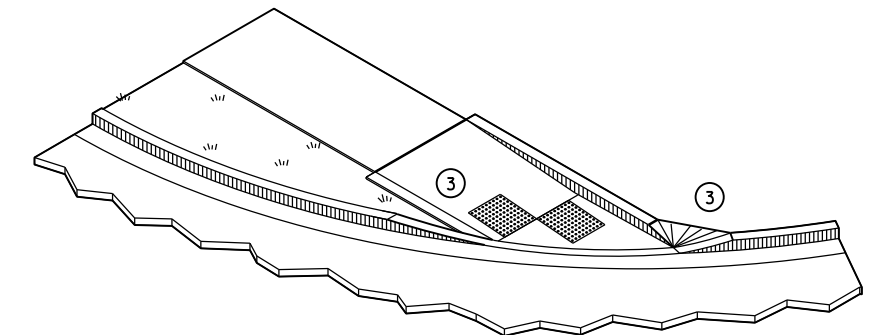
INTERMEDIATE RADII CAN BE INTERPOLATED



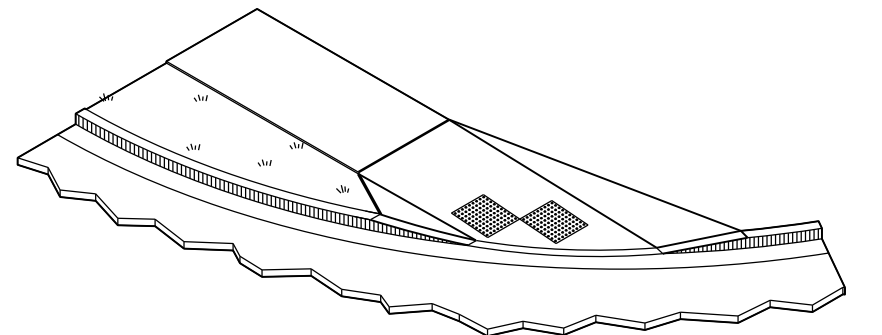
SECTION C-C FOR TYPE 4B



CURB RAMP TYPE 4B1
PLAN VIEW



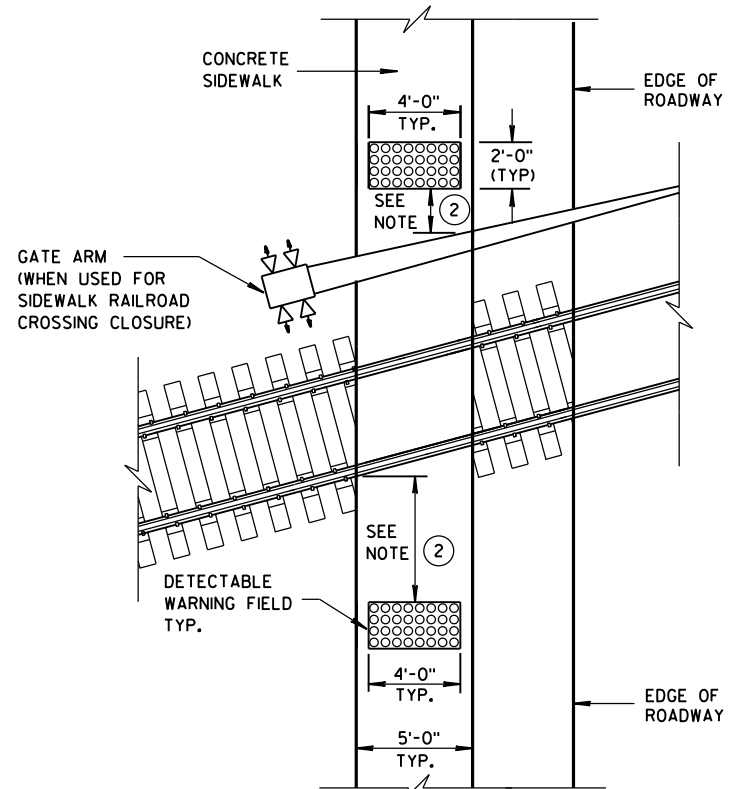
ISOMETRIC VIEW FOR TYPE 4B



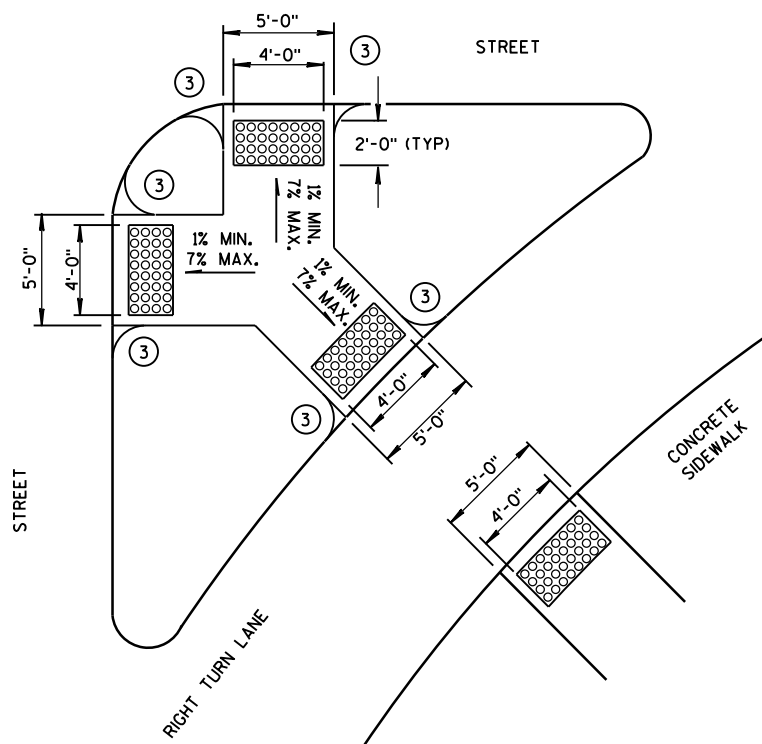
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

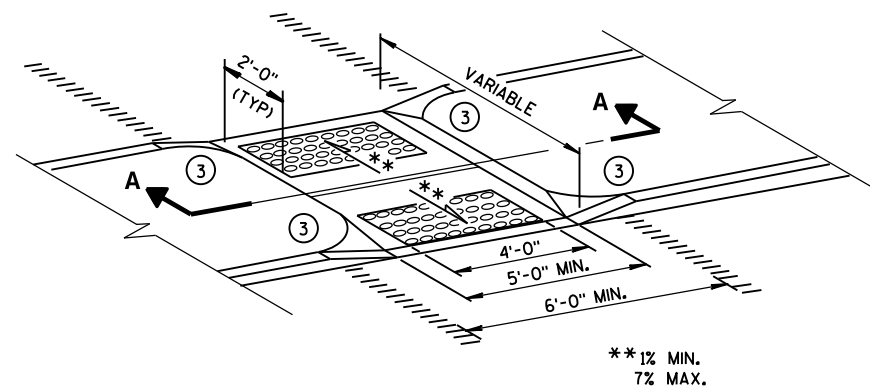
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



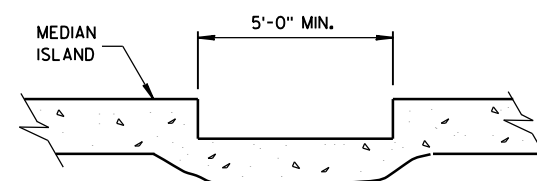
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



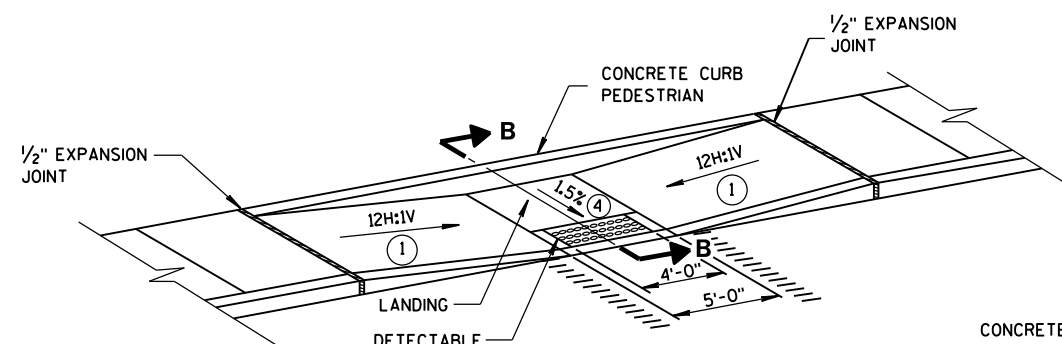
TYPE 6
DETECTABLE WARNING AT ISLANDS



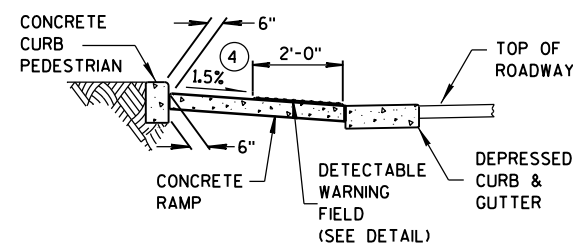
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



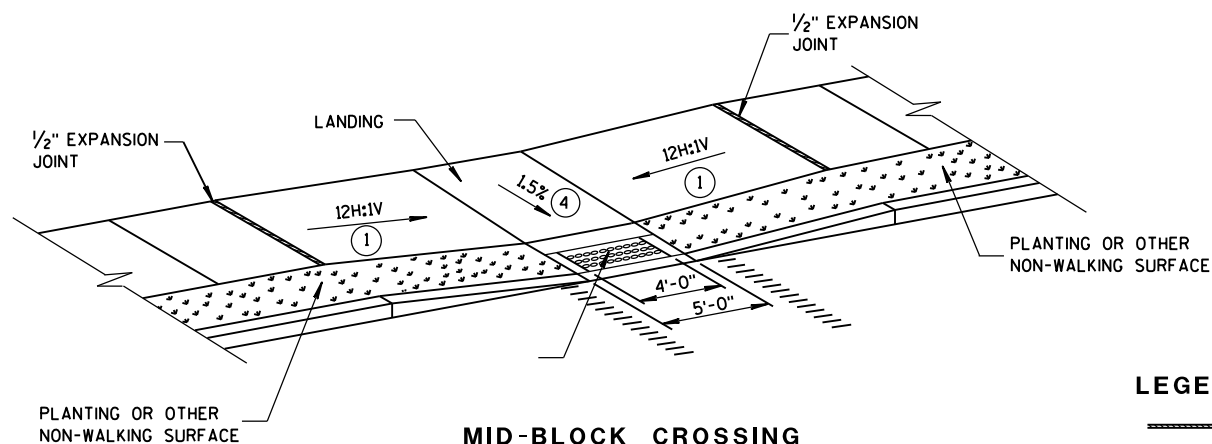
SECTION A-A



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

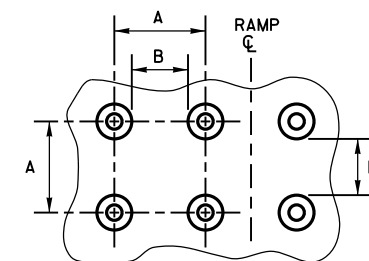
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

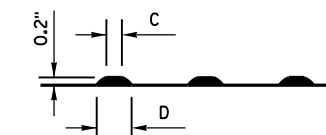
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE,
SHALL BE FROM THE SAME MANUFACTURER.

- 1 SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE
THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- 2 THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE
1.5 FEET $\pm$ 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE
SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD
NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- 3 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.)
DO NOT MARK TRANSITION NOSE.
- 4 $\pm$ 0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS
SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



PLAN VIEW



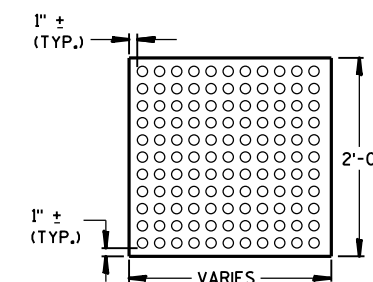
ELEVATION VIEW

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

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

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

LEGEND

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

CURB RAMPS

TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

2-6-2013
DATE

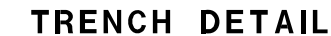
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

58 INT



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

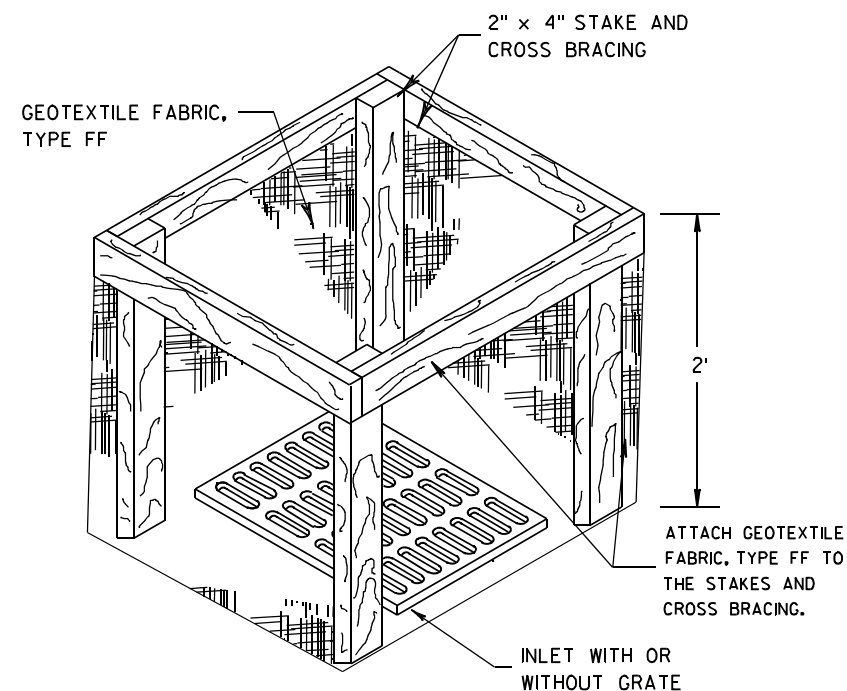
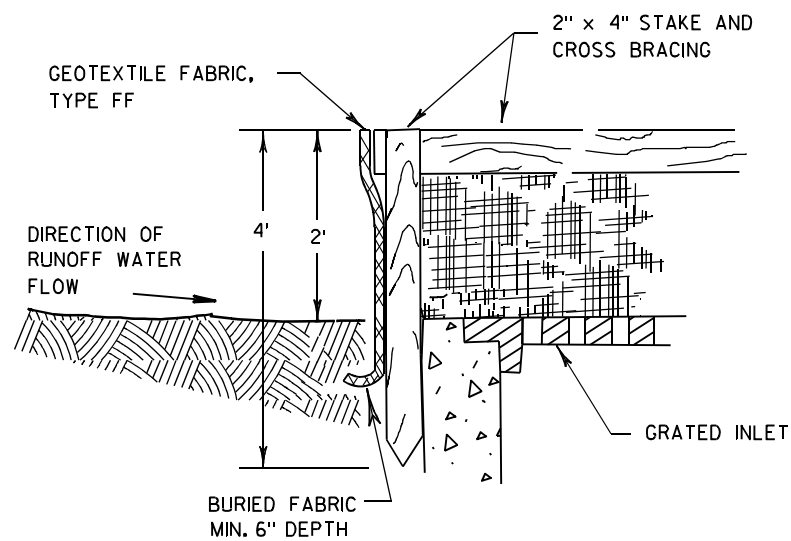


SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05
DATE /S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT **59** **ENGINEER**

FHWA



INLET PROTECTION, TYPE A

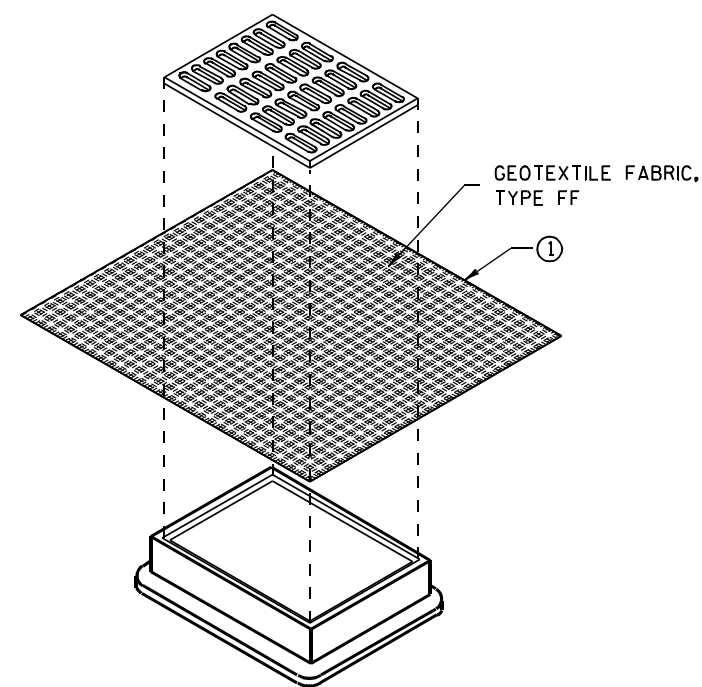
GENERAL NOTES

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

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

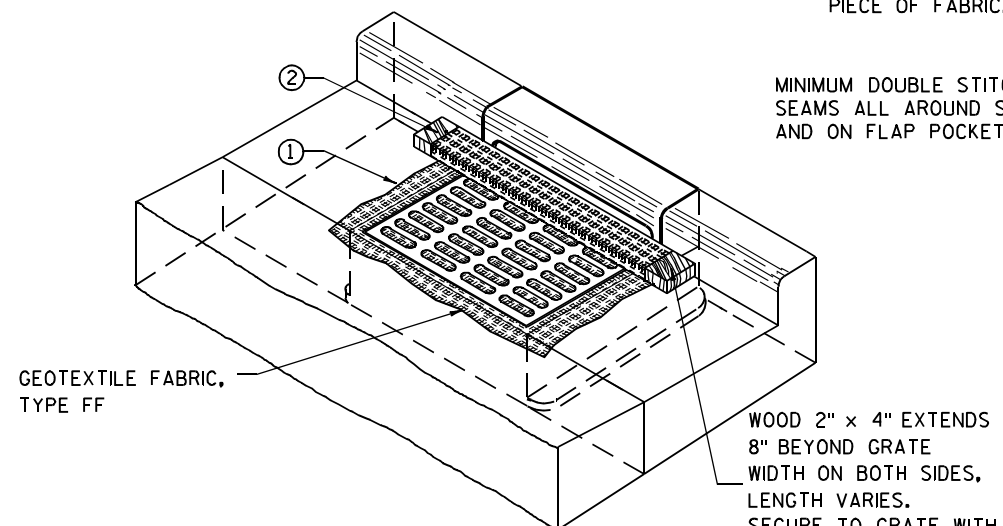
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

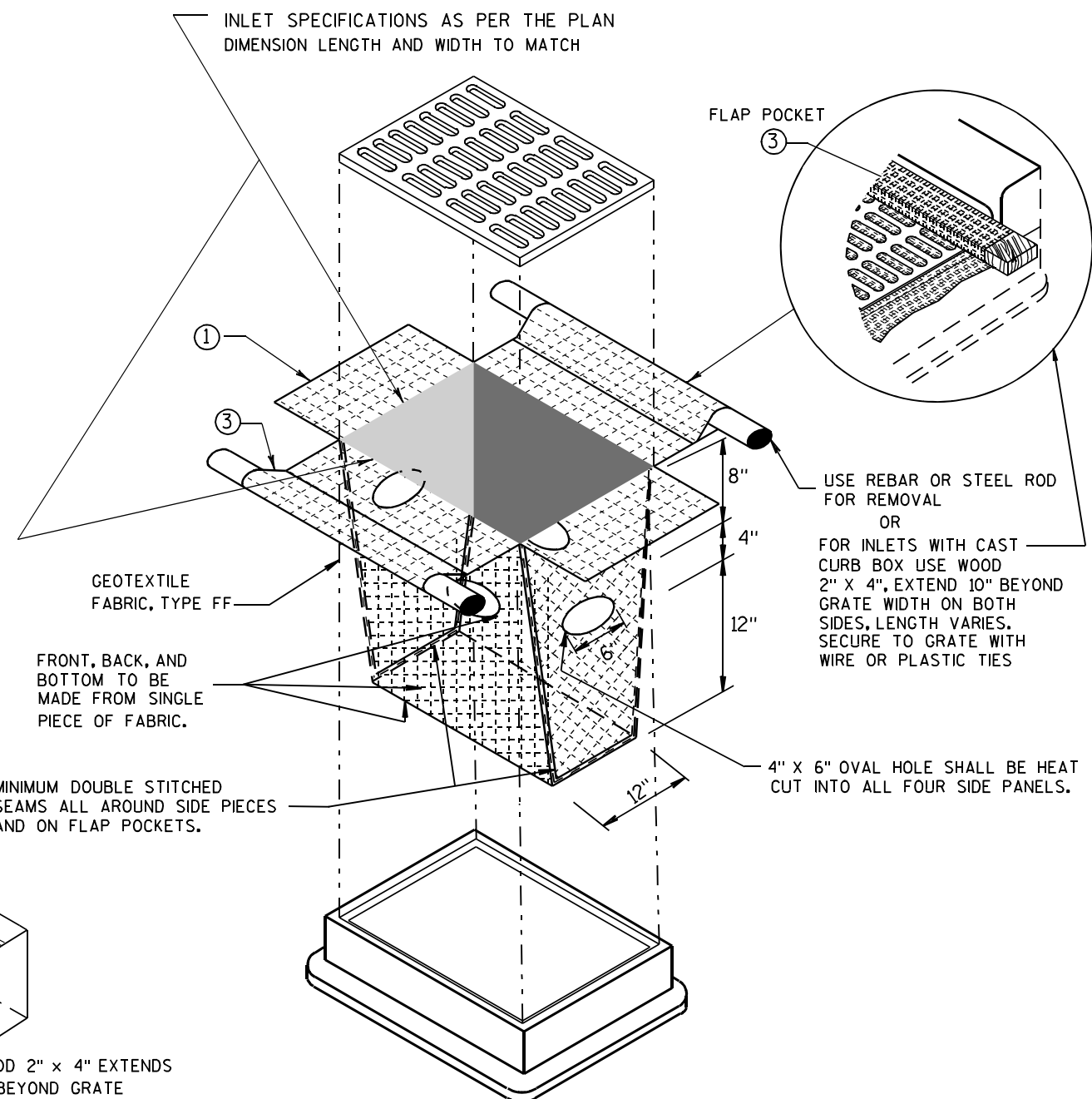
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



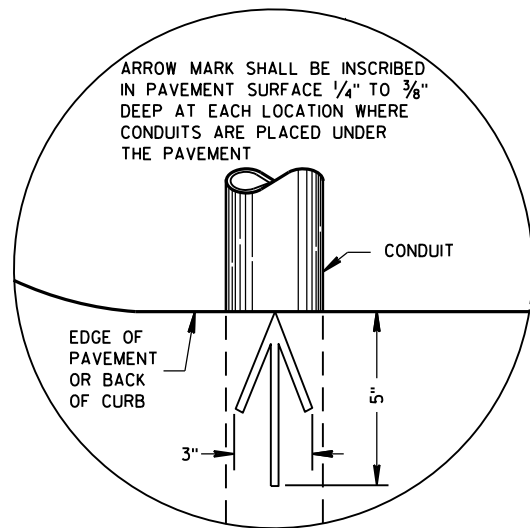
INLET PROTECTION, TYPE D

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

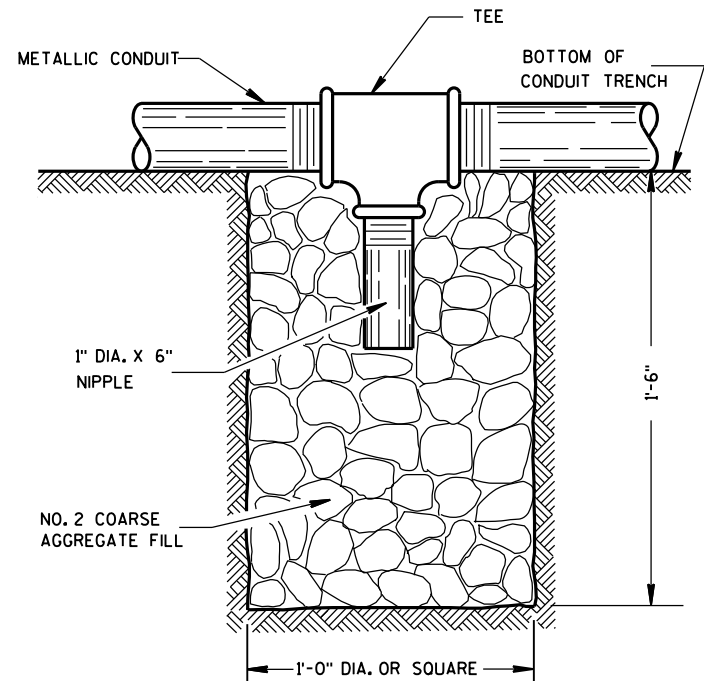
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 60
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

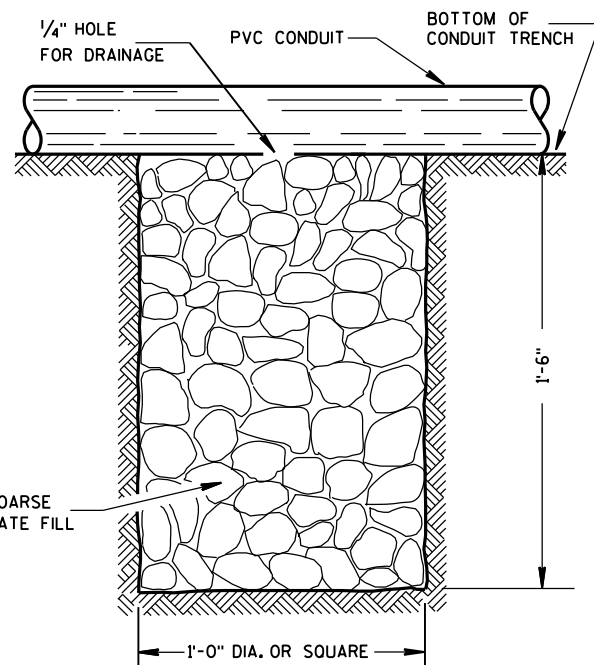


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR 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.

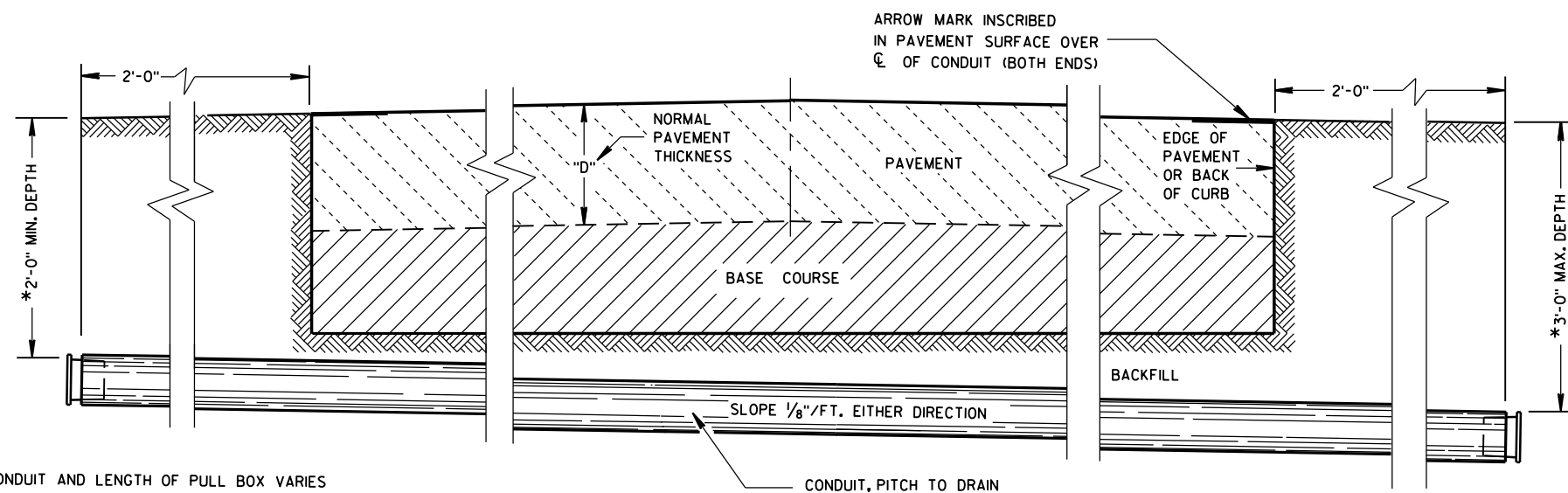
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.



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

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT UNDER PAVED HIGHWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014

DATE

FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL 61

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.

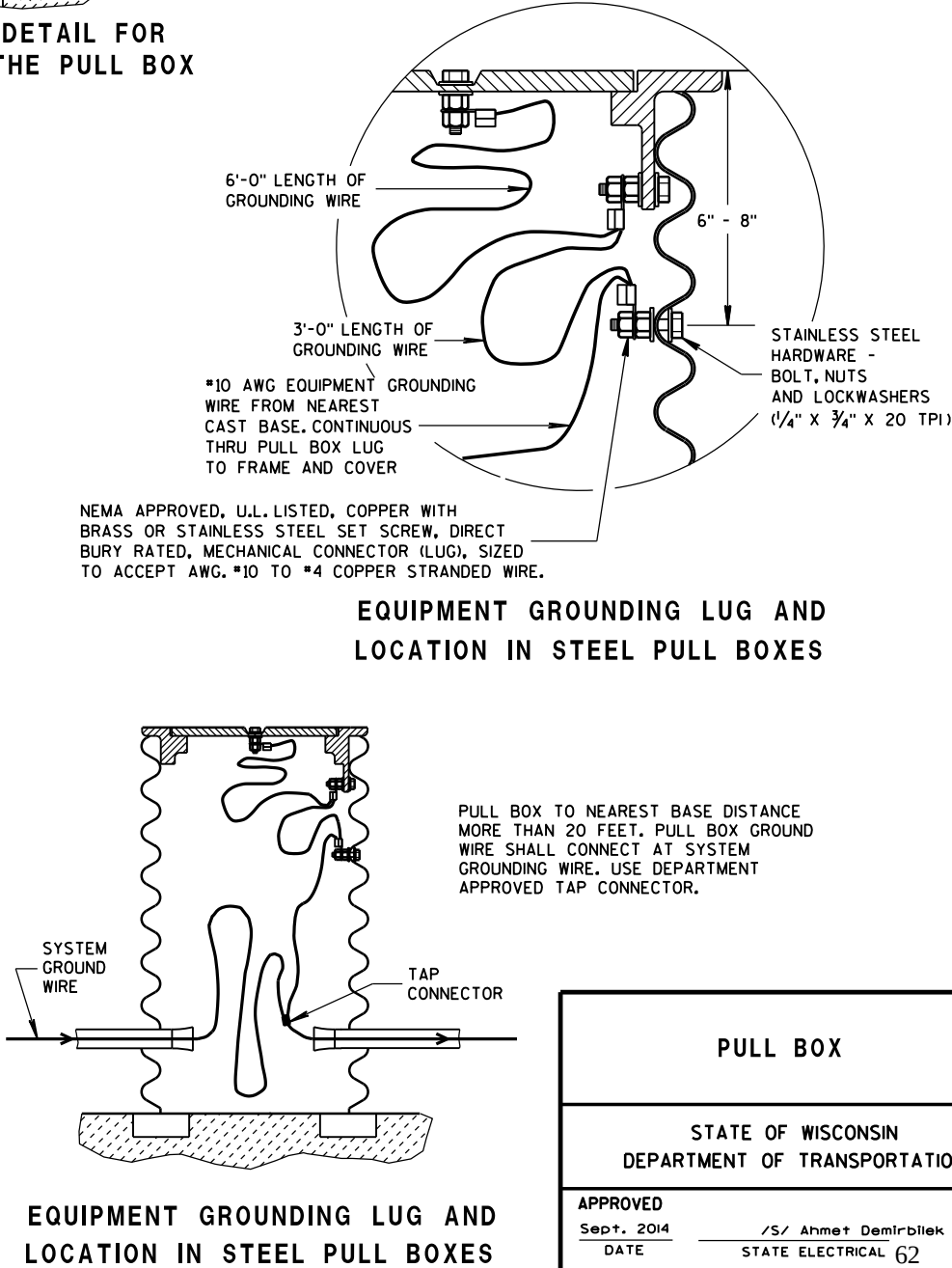
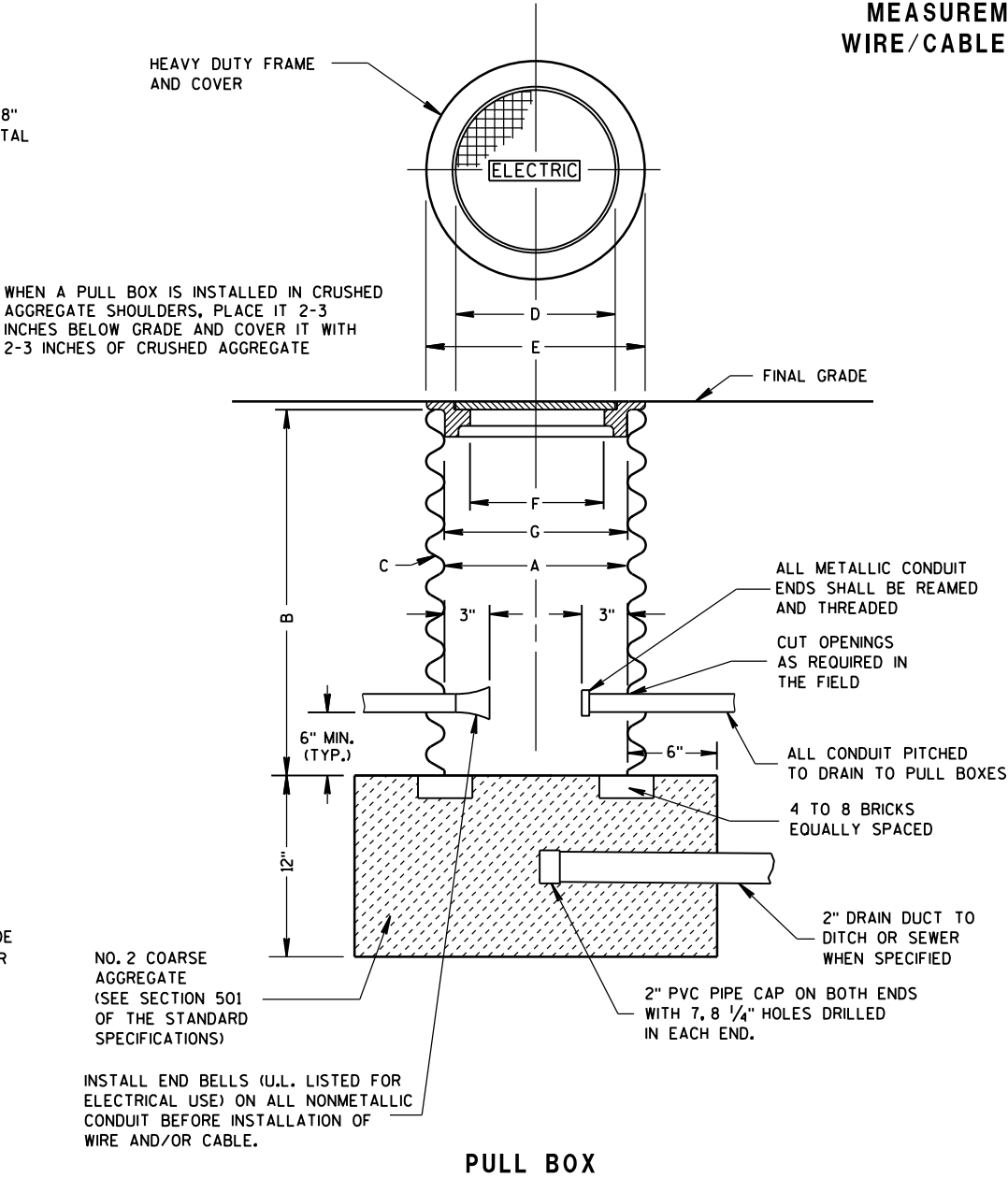
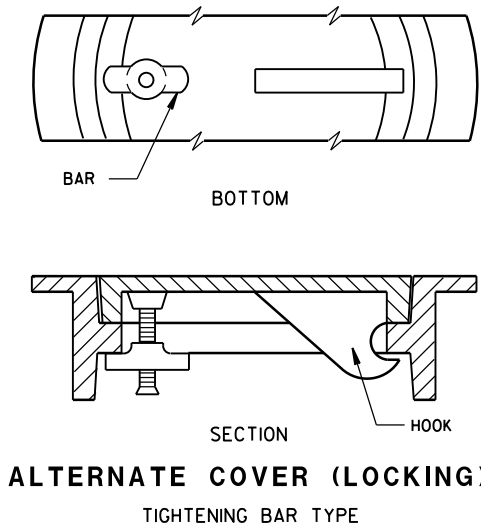
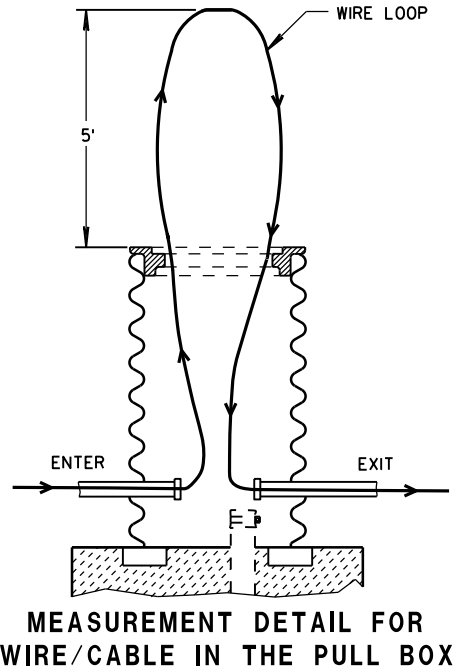
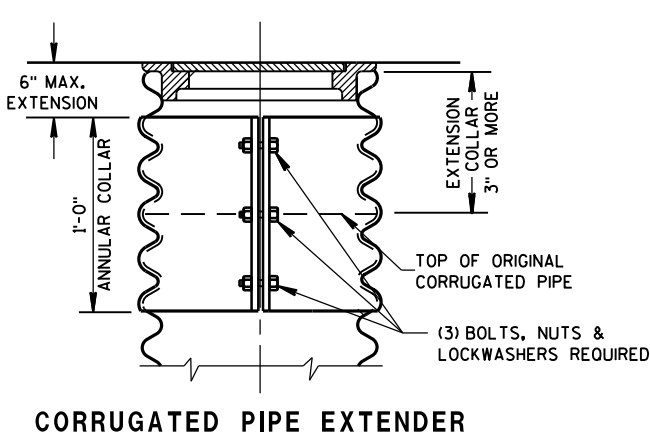
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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.

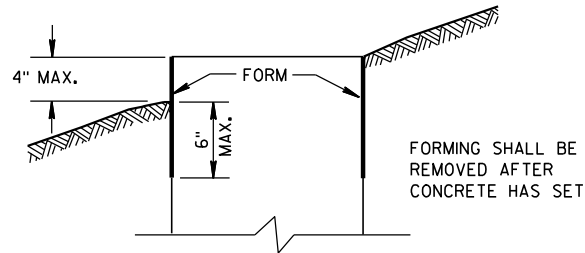
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

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 Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL 62
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.

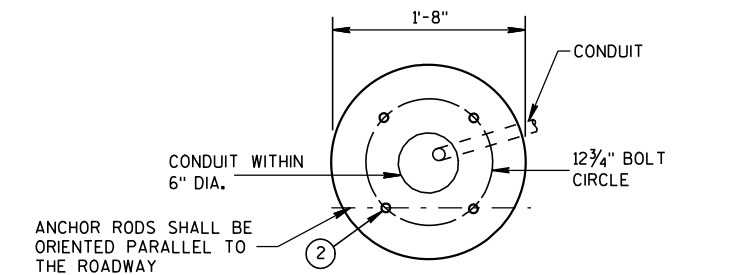
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

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

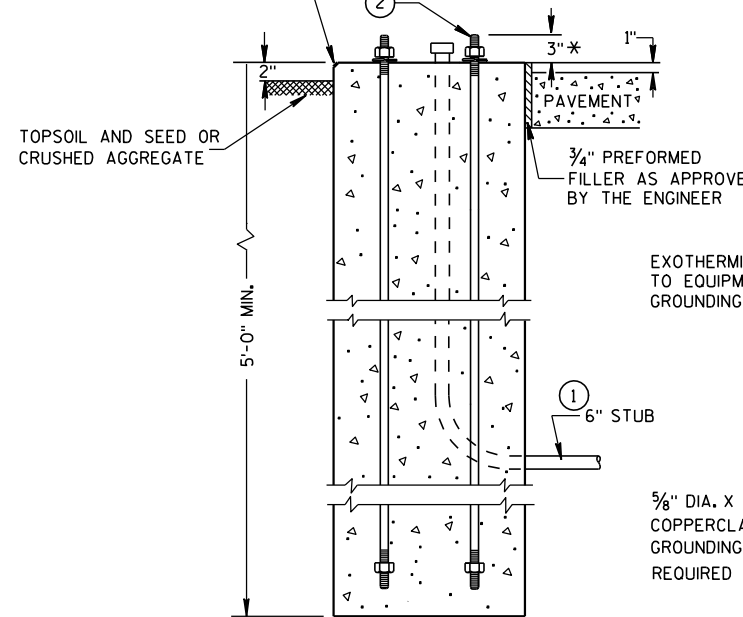
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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

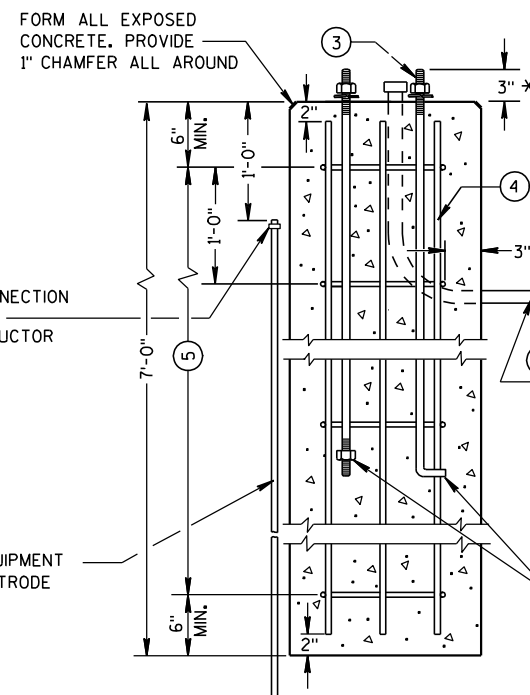
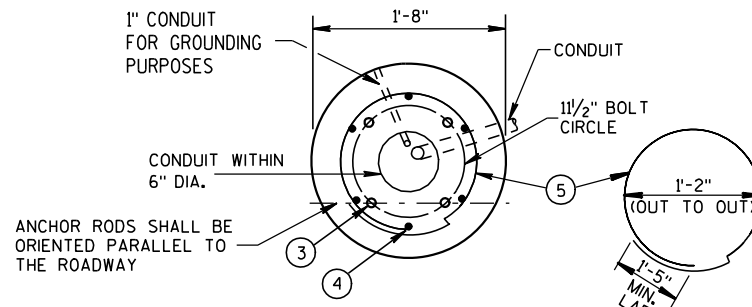
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN 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.



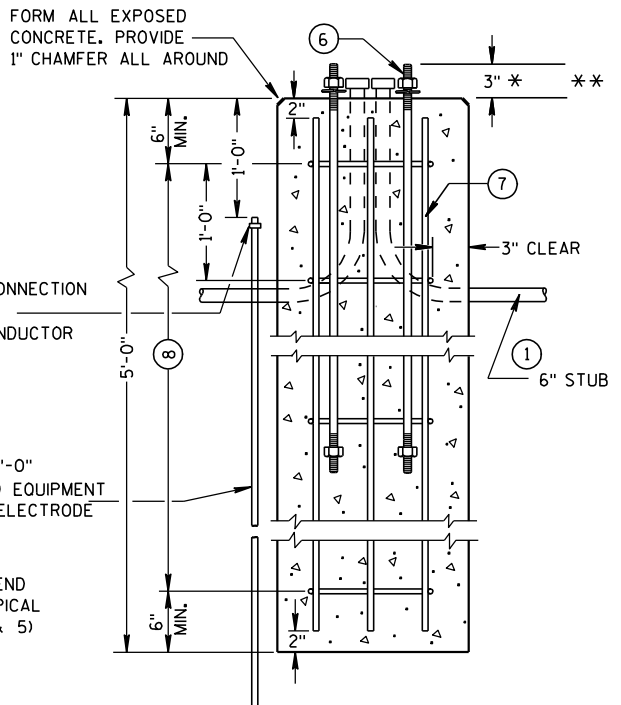
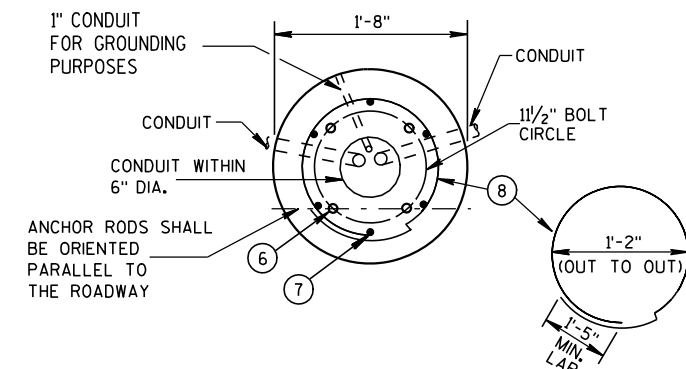
HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2 & 5)



TYPE 1



TYPE 2



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.

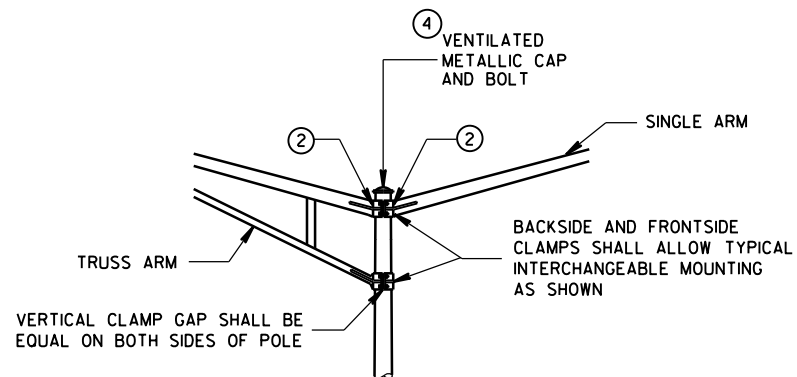
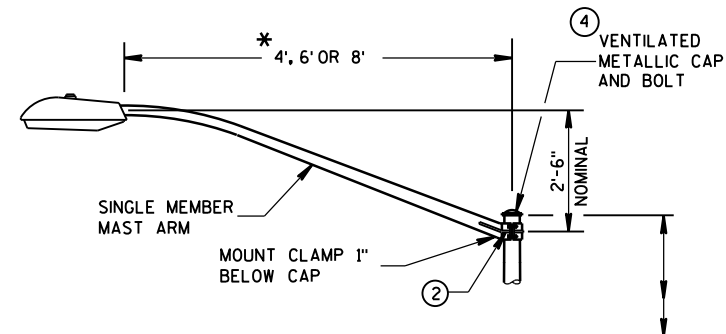
** FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

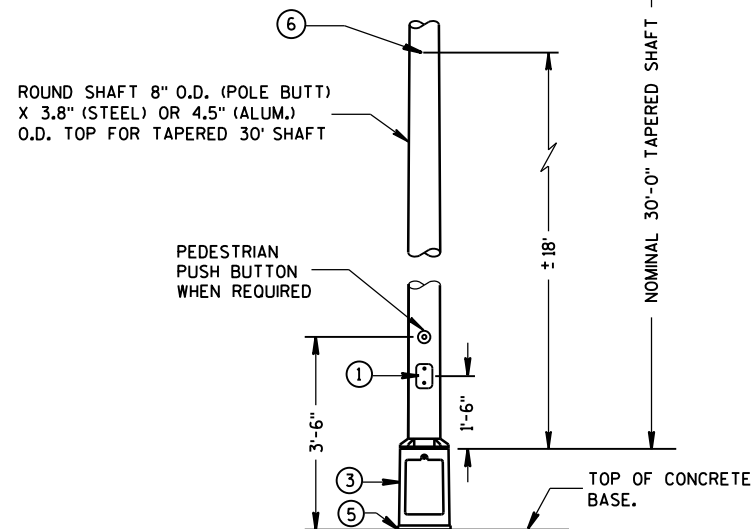
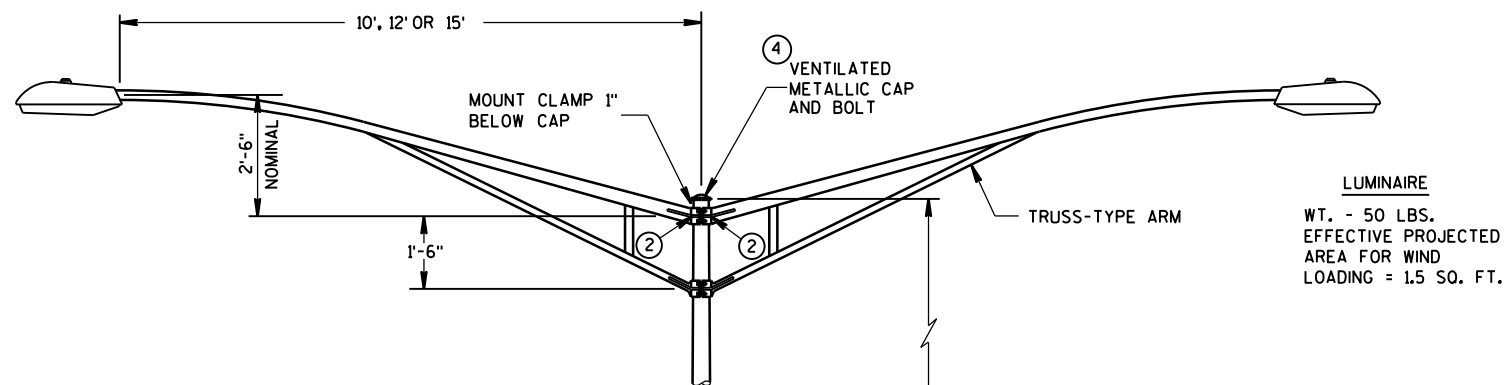
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 DATE /S/ Joanna L. Bush STATE ELECTRICAL ENGR 63 HWYS
FHWA

* RISE FOR 4' ARM SHALL BE 2'-0".



INTERCHANGEABLE MOUNTING DETAIL



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

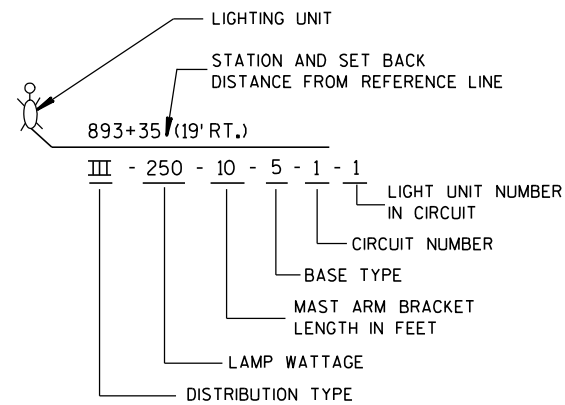
THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL $2\frac{3}{8}$ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

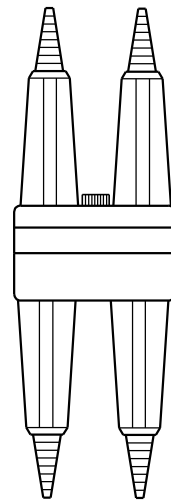
- ① 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) $\frac{1}{4}$ " x $\frac{3}{4}$ " - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR $1\frac{3}{8}$ " HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) $\frac{1}{4}$ " x $\frac{3}{4}$ " - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑥ INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

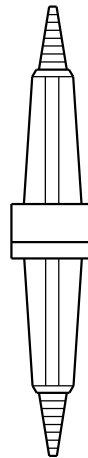
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



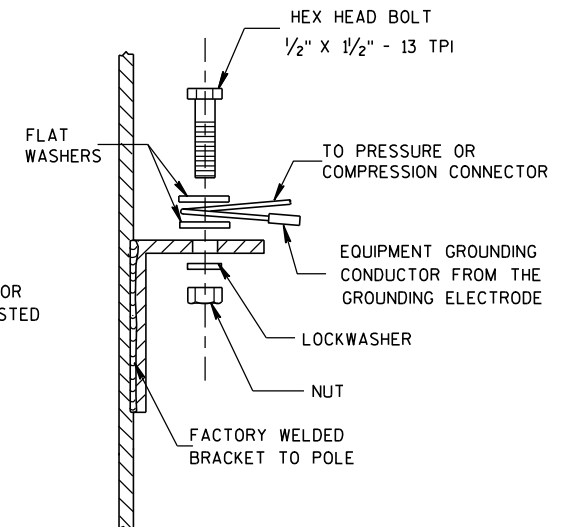
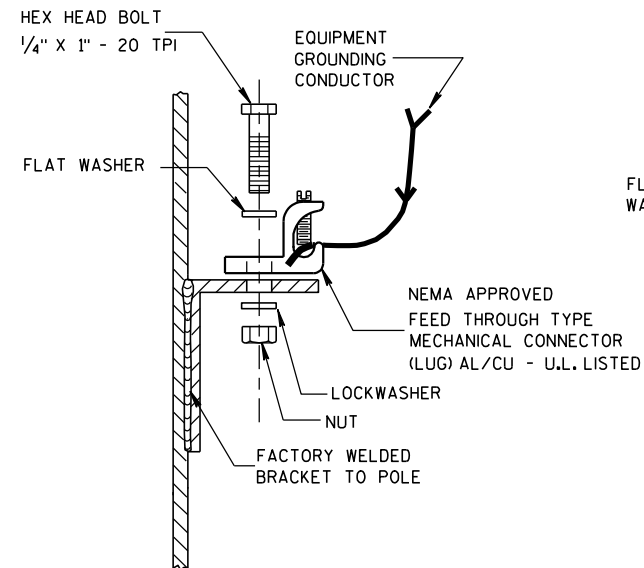
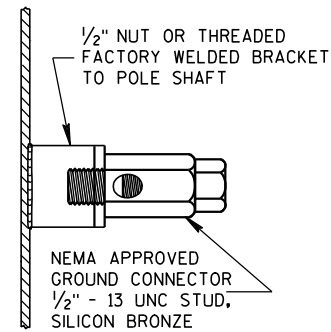
LIGHTING UNIT CODE
(TYPICAL)



DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



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

GENERAL NOTES

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

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

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

ADDITIONAL CONDUCTORS
AND FUSE FOR TWIN
LIGHTING UNITS

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)

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

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

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

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

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

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

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

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTOR AND FUSEHOLDER

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

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

ALTERNATE PHASE UNGROUNDED
CIRCUIT CONDUCTOR PASSING
THROUGH THIS POLE

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

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

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

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

EQUIPMENT GROUNDING
CONDUCTOR(S) TO LUMINAIRE(S)
TYPICAL GROUNDING CONNECTION -
STAINLESS STEEL BOLT,
NUT AND WASHERS
1/2" X 1/2" - 13 TPI

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

INSULATED EQUIPMENT GROUNDING
CONDUCTORS FROM SYSTEM RACEWAY

EXOTHERMICALLY WELDED
TO GROUNDING ELECTRODE

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

CIRCUIT TAGS, BOTH SIDES
OF ALL FUSES (TYPICAL)

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

HANDHOLE & COVER

18" PIGTAIL BETWEEN
CONNECTORS AND FUSEHOLDERS

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

INSULATED UNGROUNDED CIRCUIT
CONDUCTORS FROM SYSTEM RACEWAY

NON-FREWAY LIGHTING UNIT
POLE WIRING

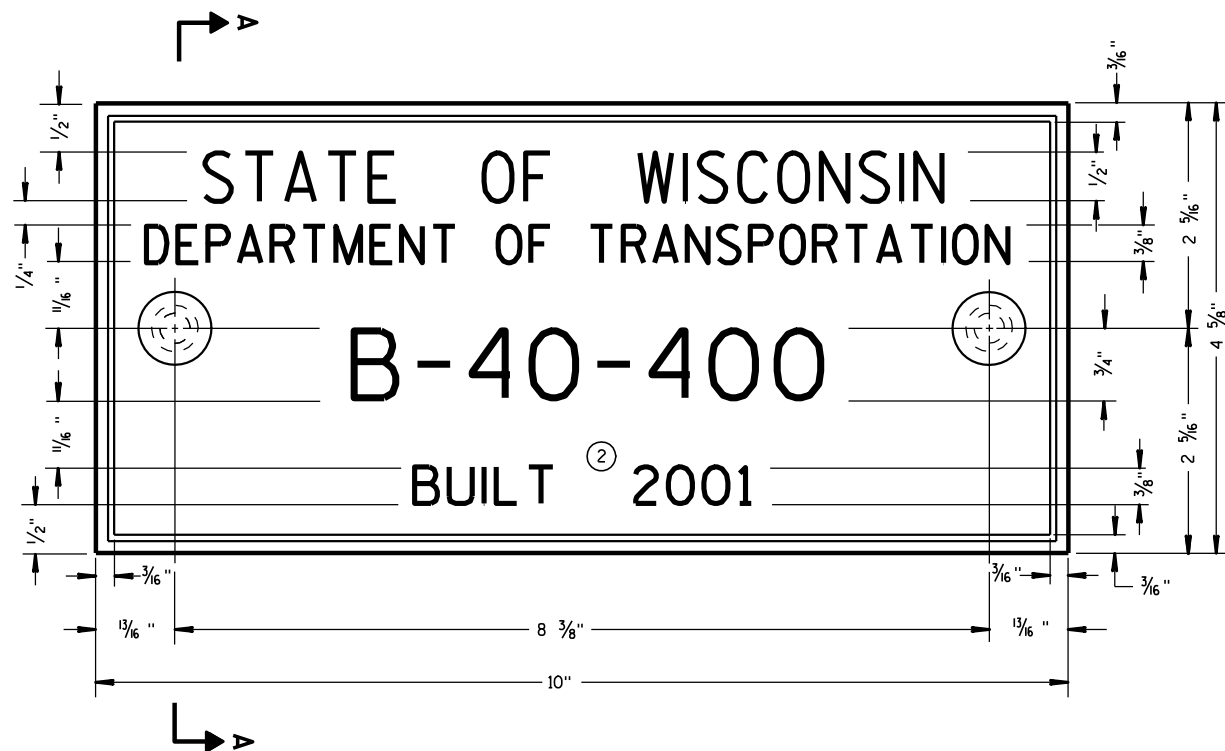
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

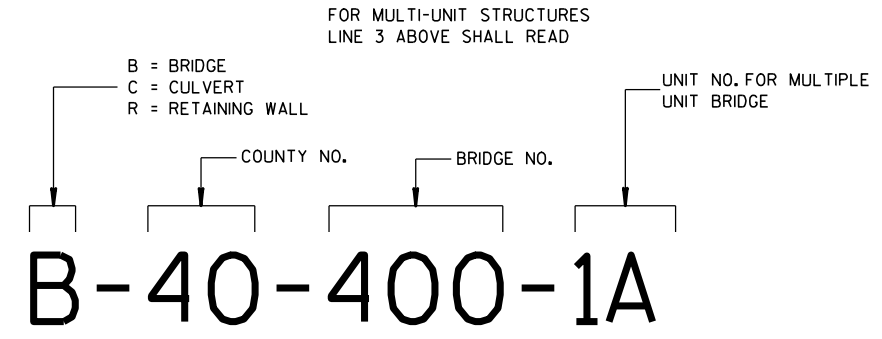
3/2/2011
DATE

FHWA

/S/ Thomas J. Gossion
STATE ELECTRICAL ENGI 65 HWYS



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



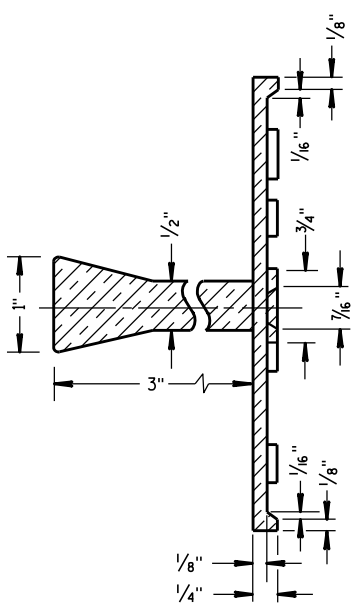
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

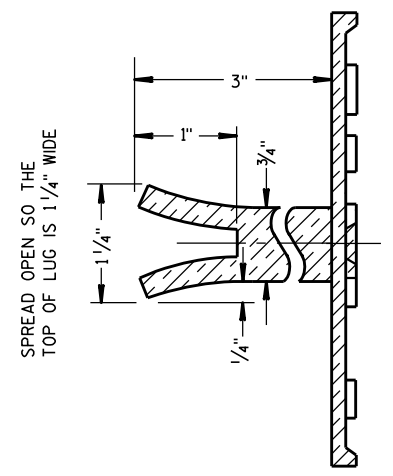
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

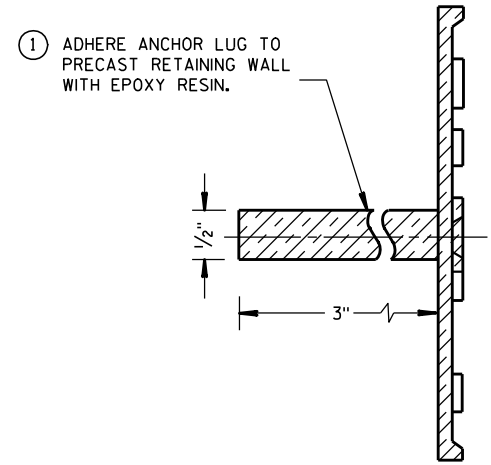
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A

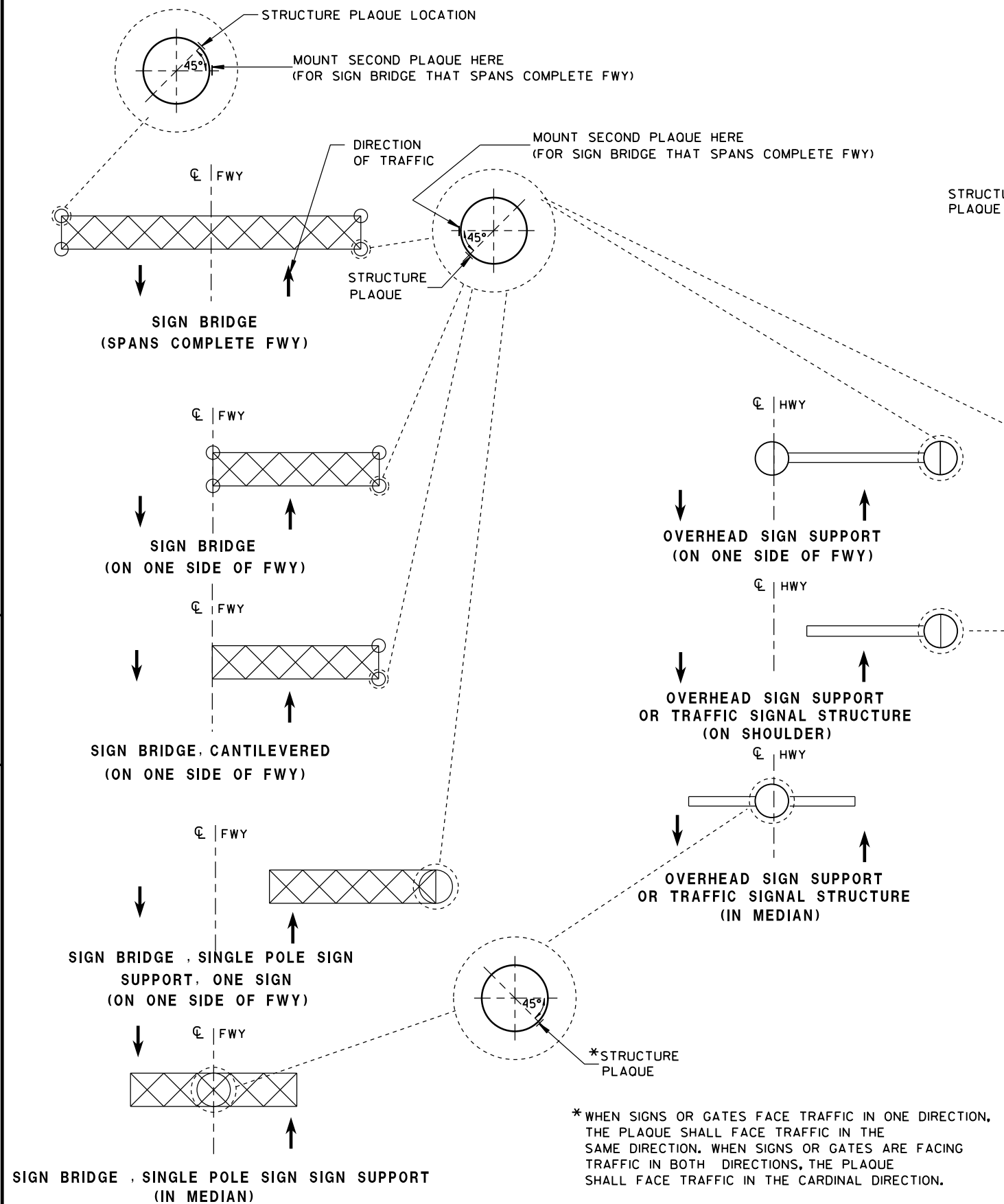


ALTERNATE LUG

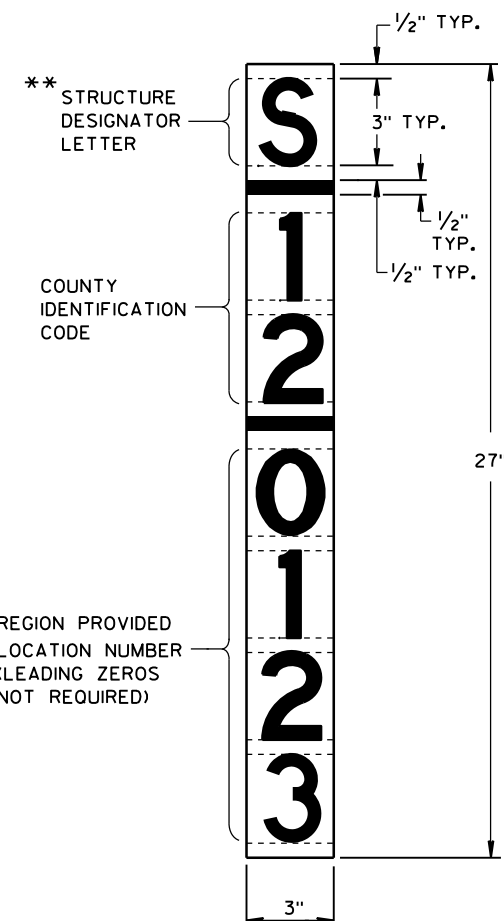
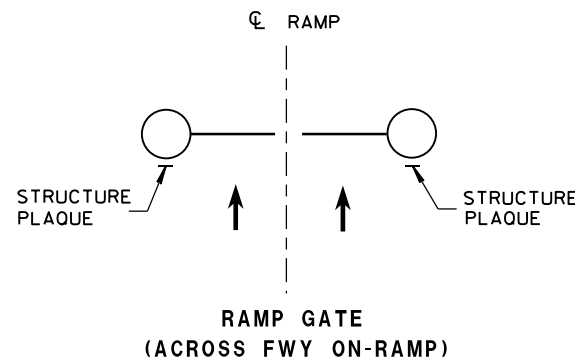


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED 3/26/10 DATE	/S/ Scot Beck CHIEF STRUCTURAL DEVELOPER	JEER
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.

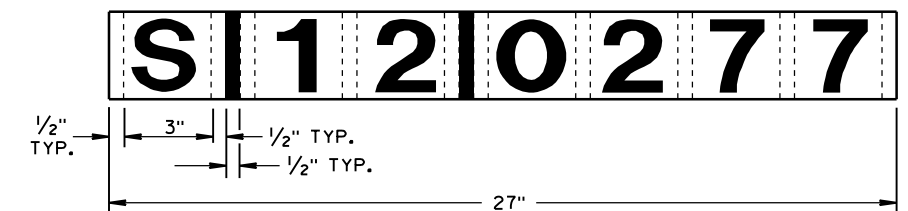
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

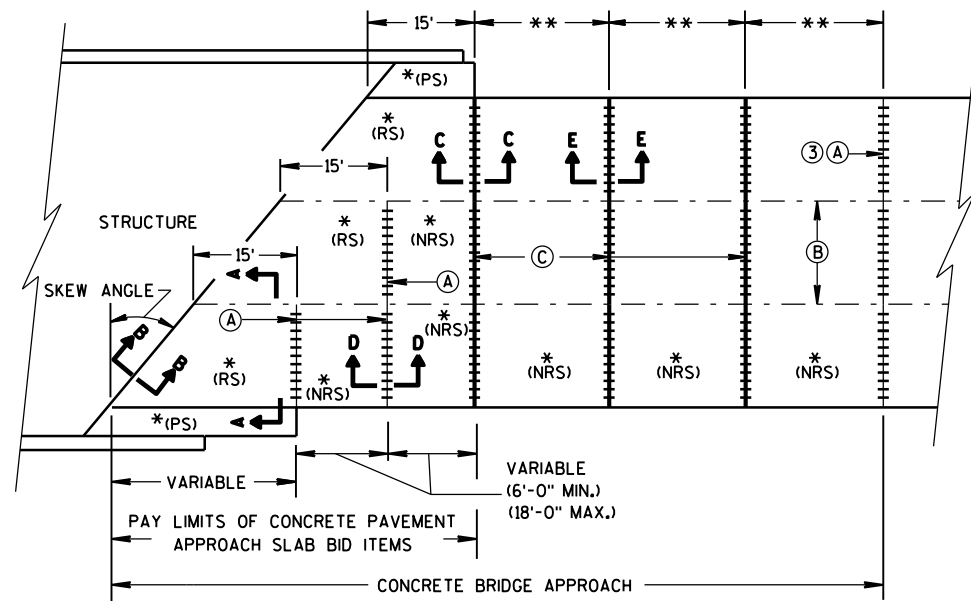
DATE

FHWA

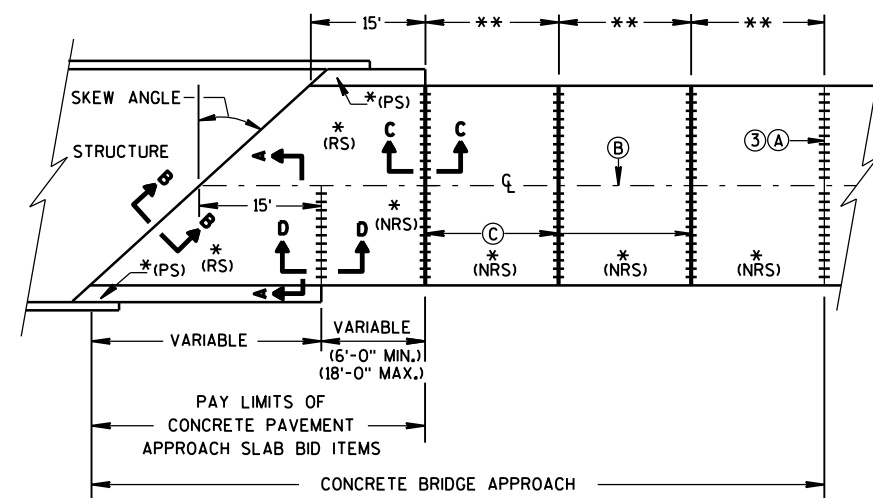
/S/ Travis Fettes

STATE TRAFFIC ENGINE 67

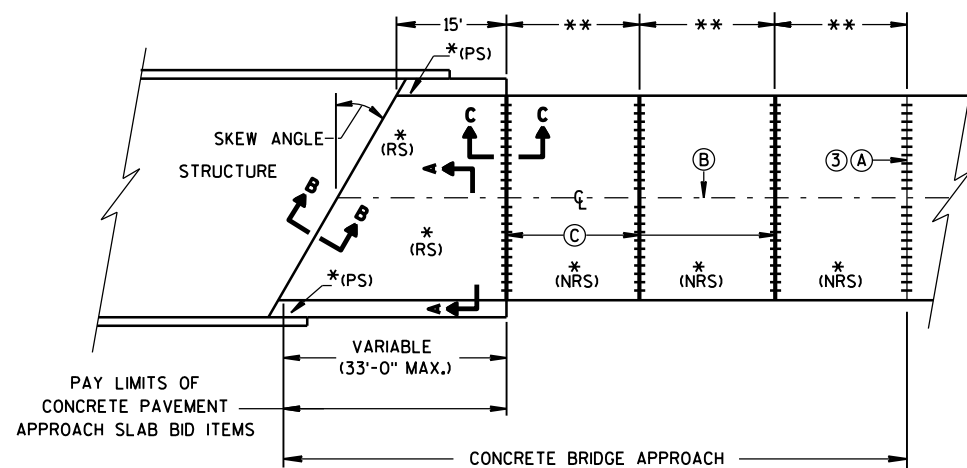
SIGN



SKewed APPROACH
(PAVEMENT MORE THAN 2 LANES)



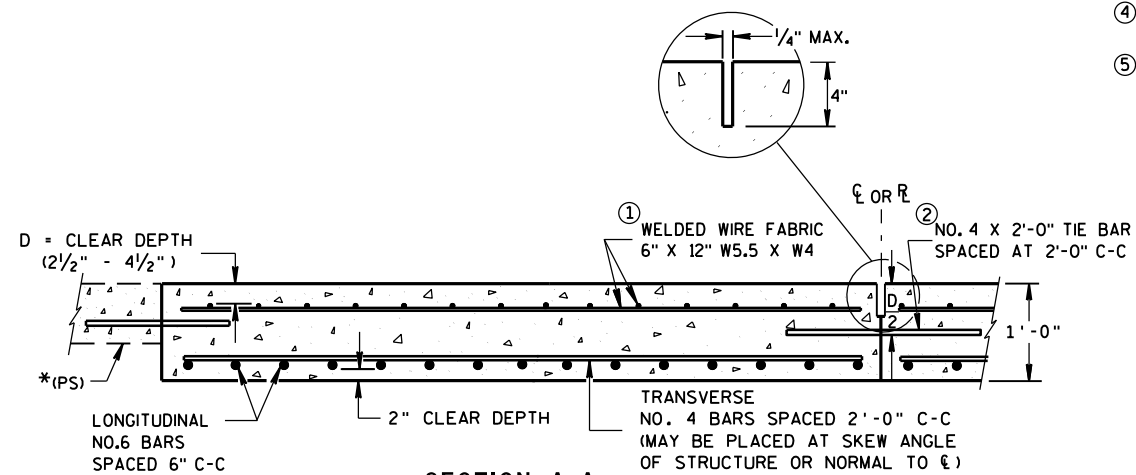
SKews > 30°
(PAVEMENT WIDTH ≤ 30')



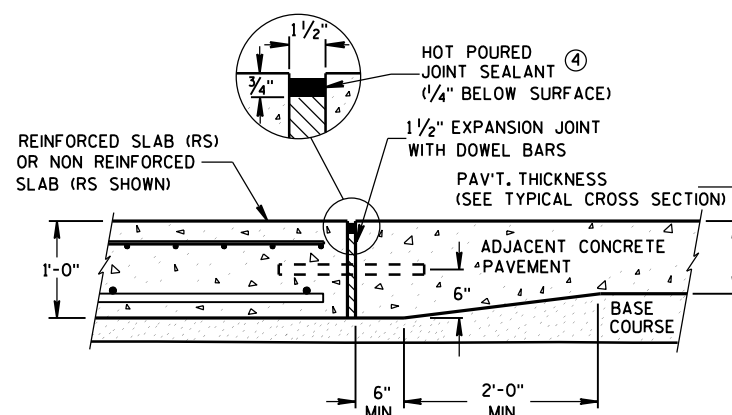
SKews ≤ 30°
(PAVEMENT WIDTH ≤ 30')
APPROACH SLAB AND ADJACENT PAVEMENT

- *(RS) = REINFORCED CONCRETE SLAB
 *(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
 (SEE DETAILS ELSEWHERE IN THE PLAN)
 *(NRS) = NON-REINFORCED CONCRETE SLAB
 **STANDARD TRANSVERSE JOINT SPACING
 (SEE SDD 13C4, SDD 13C11, & SDD 13C13)
 ***STANDARD DOWEL BAR DIAMETER
 (SEE SDD 13C11, & SDD 13C13)

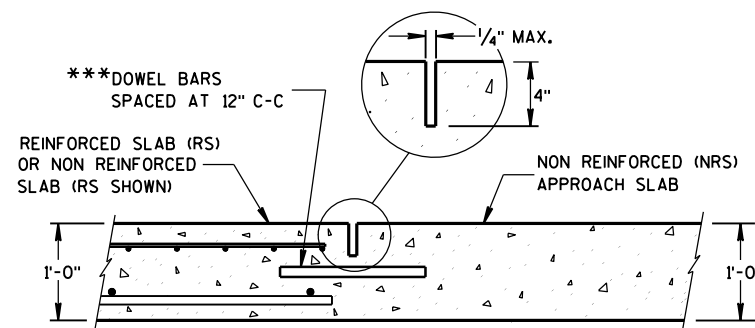
- (A) STANDARD CONTRACTION JOINT NORMAL TO R_L OR R_C
 (B) STANDARD LONGITUDINAL JOINT AND TIE BARS.
 (C) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO R_L OR R_C



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



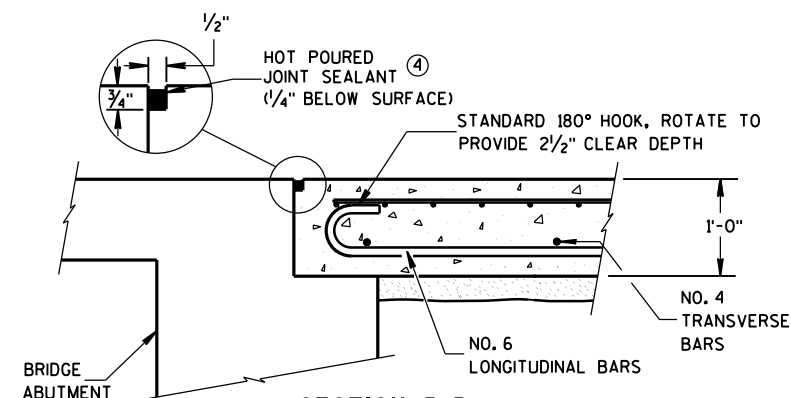
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

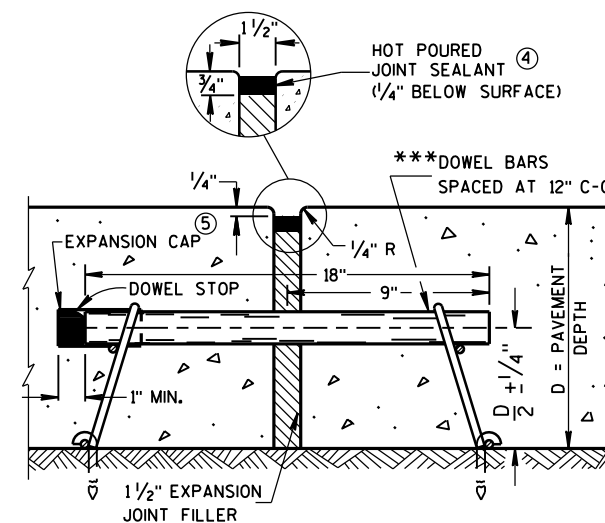
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

- THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- DO NOT DOWEL A CONTRACTION JOINT THAT ABUTS AN HMA PAVEMENT.
- USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.
- PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION E-E
EXPANSION JOINT

CONCRETE BRIDGE
APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2014

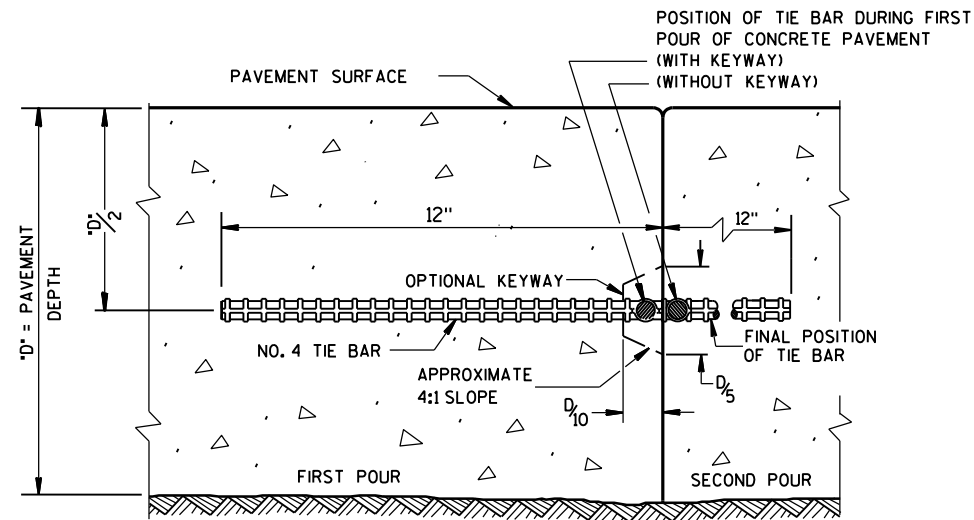
DATE

/S/ Deb Bischoff

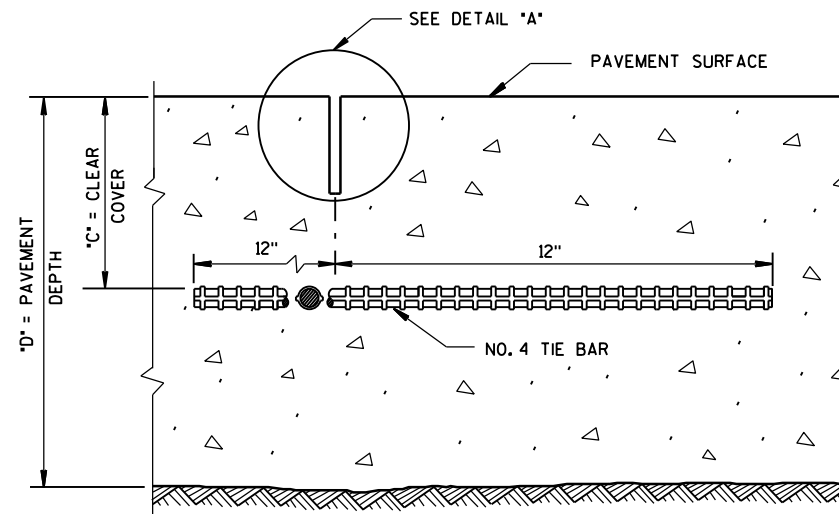
PAVEMENT POLICY & DE' 68

FHWA

EER



CONSTRUCTION JOINT



SAWED JOINT

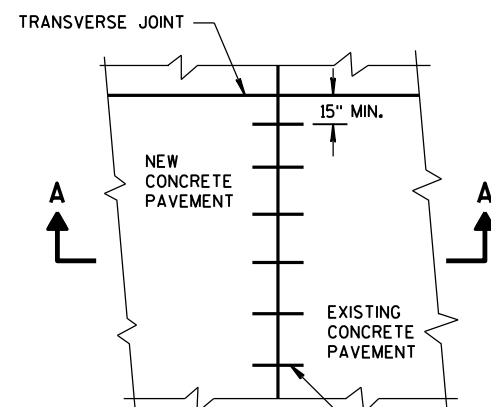
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

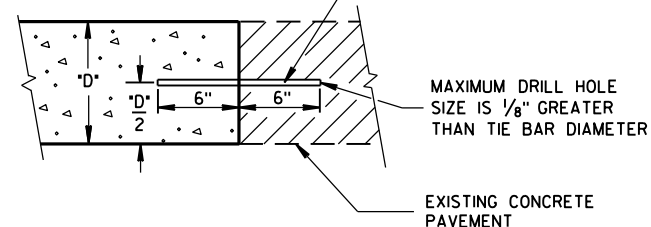
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

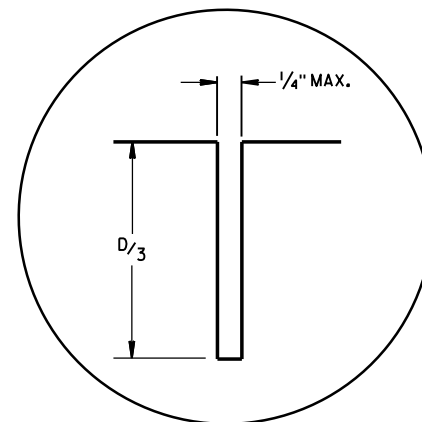


PLAN VIEW

NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



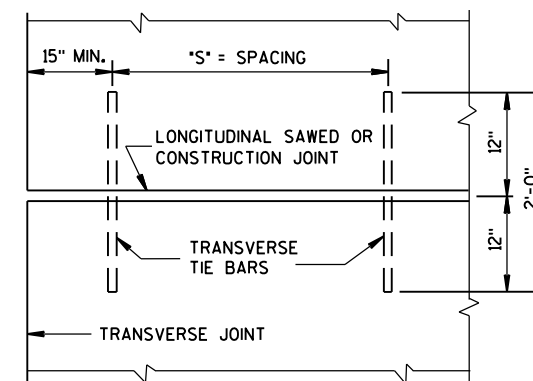
SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

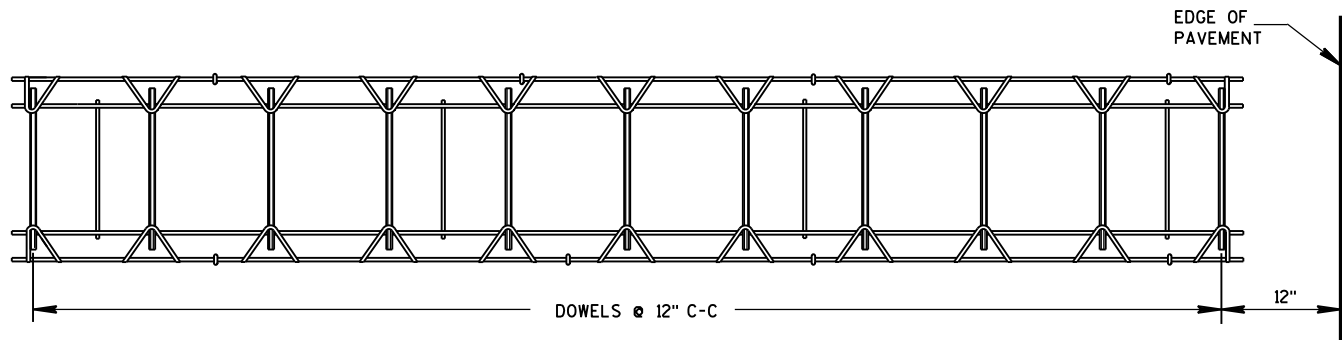
APPROVED

5-3-2013
DATE

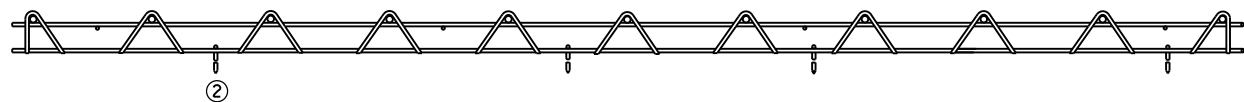
/S/ Deb Bischoff
PAVEMENT POLICY & DE 69

VEER

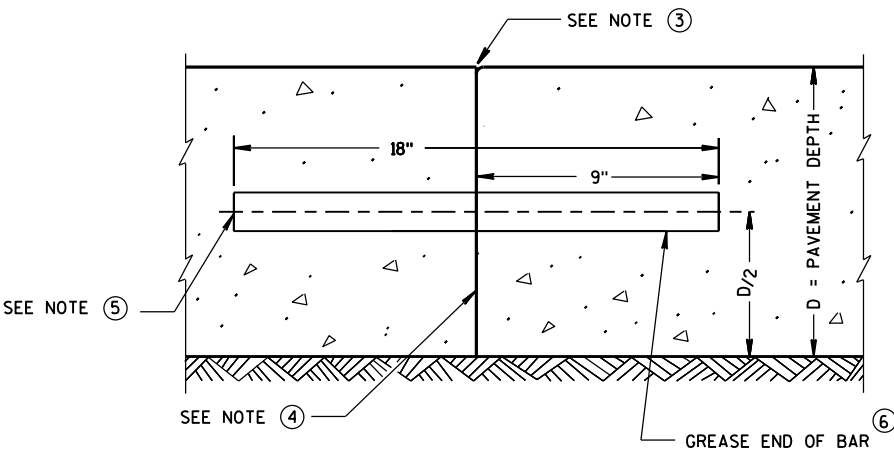
FHWA



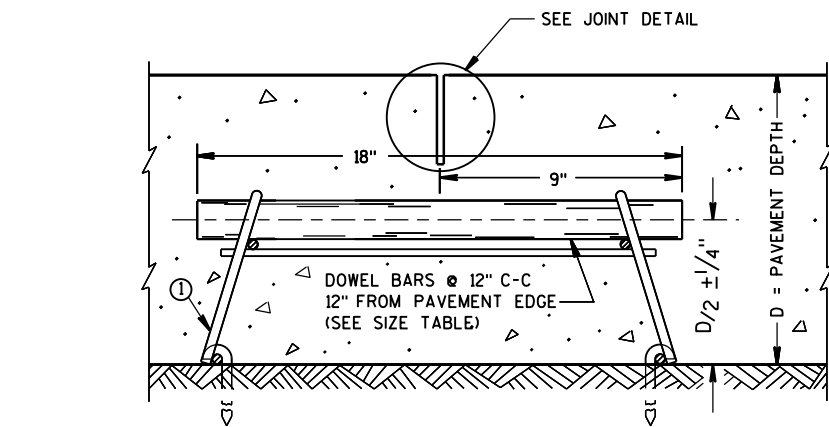
PLAN VIEW



SIDE VIEW
CONTRACTION JOINT DOWEL ASSEMBLY



TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

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

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

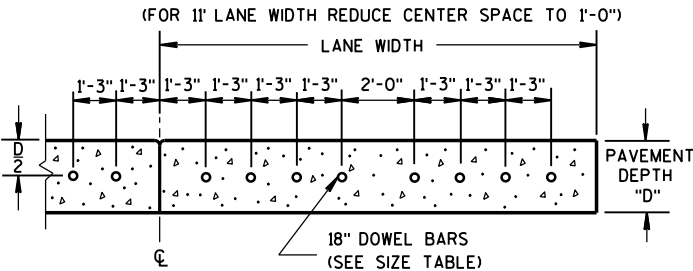
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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

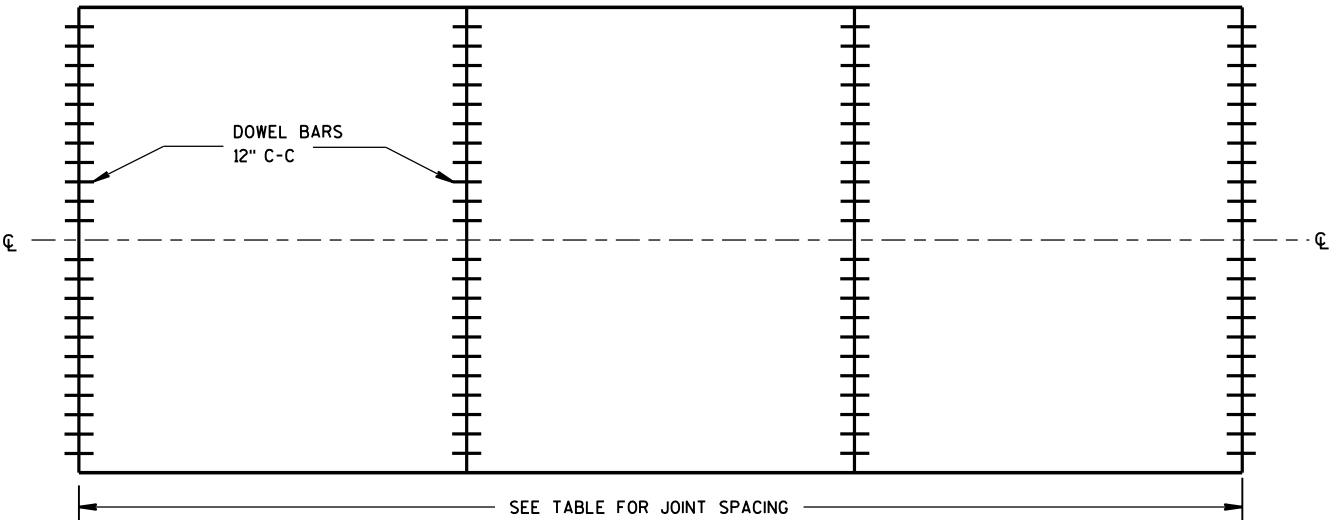
CONSTRUCTION JOINTS

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

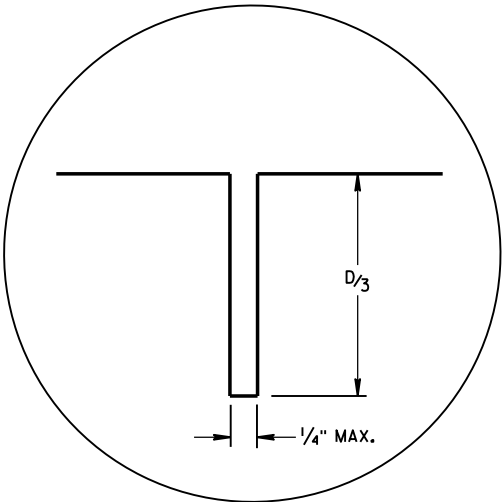
- OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH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



DRILLED DOWEL BAR CONSTRUCTION JOINT



CONTRACTION JOINT LOCATIONS

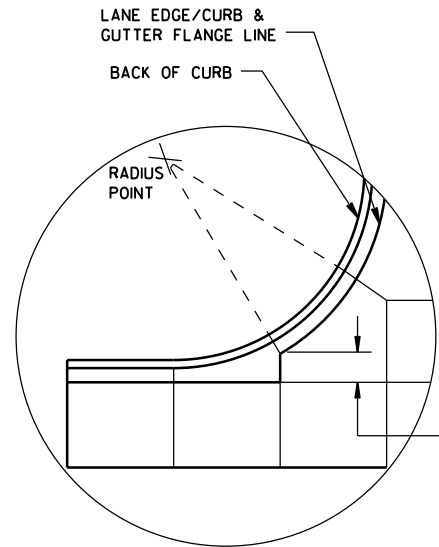


JOINT DETAIL

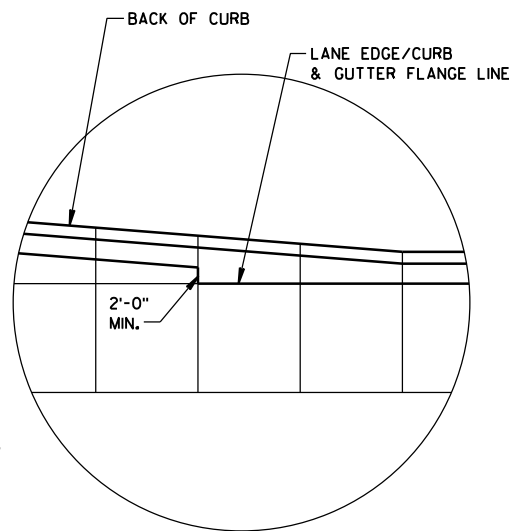
URBAN DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

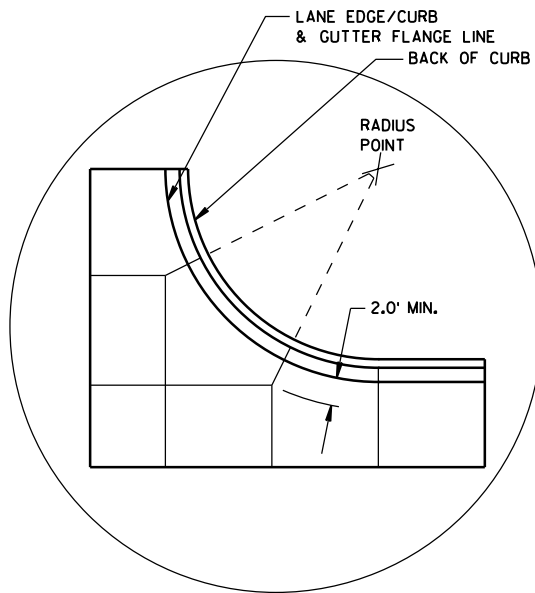
APPROVED
5/3/2013 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DE 70 JEER
FHWA



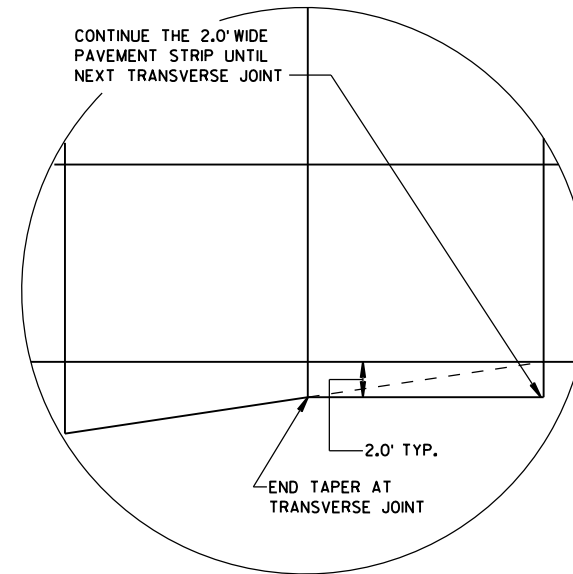
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

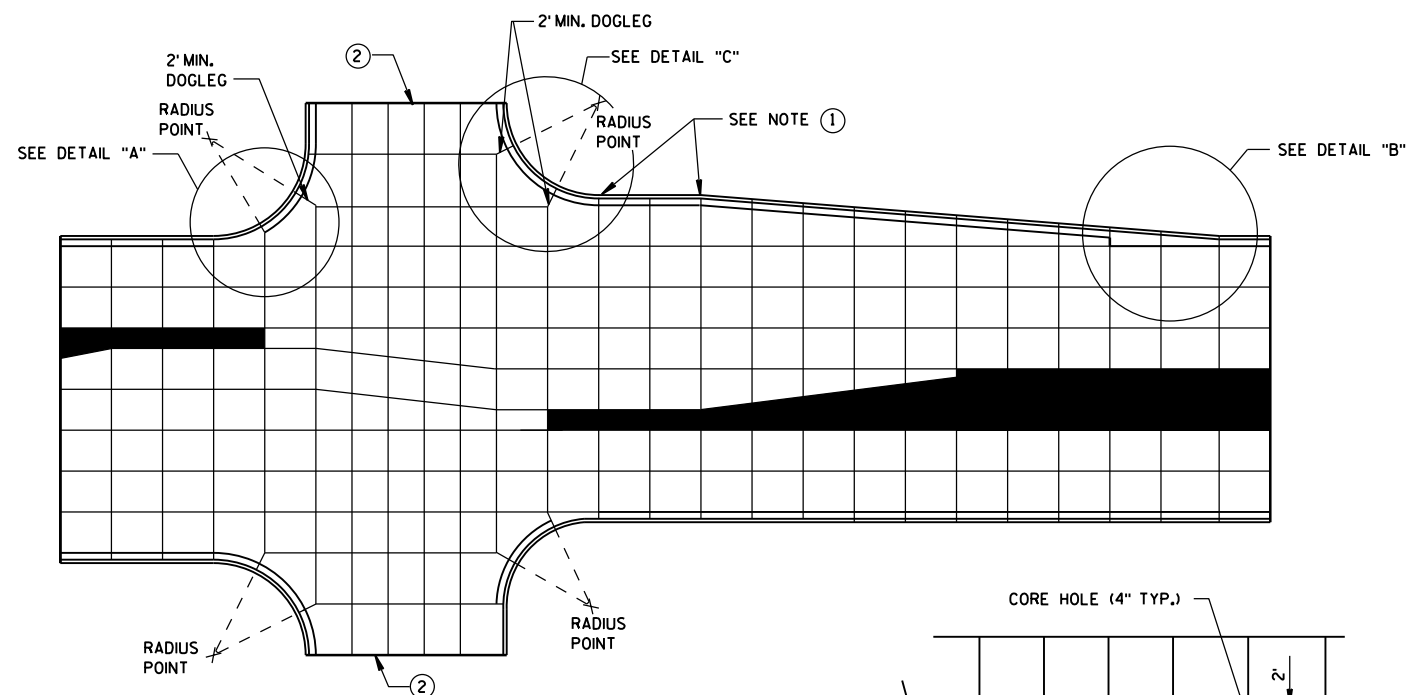
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

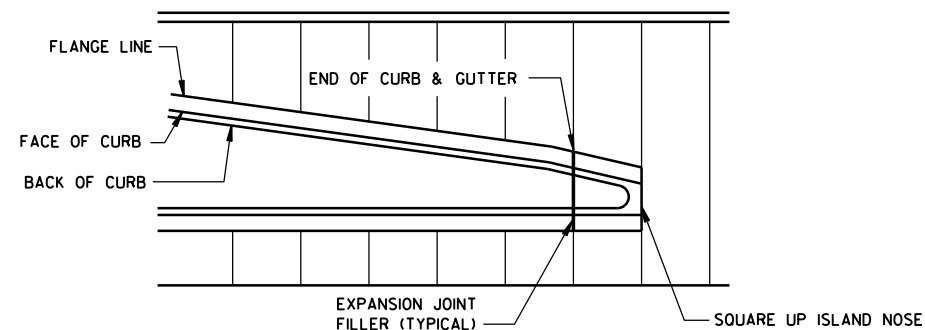
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

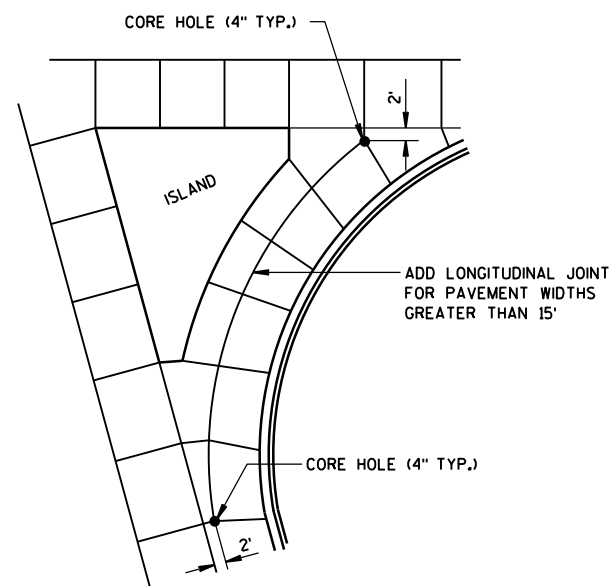
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



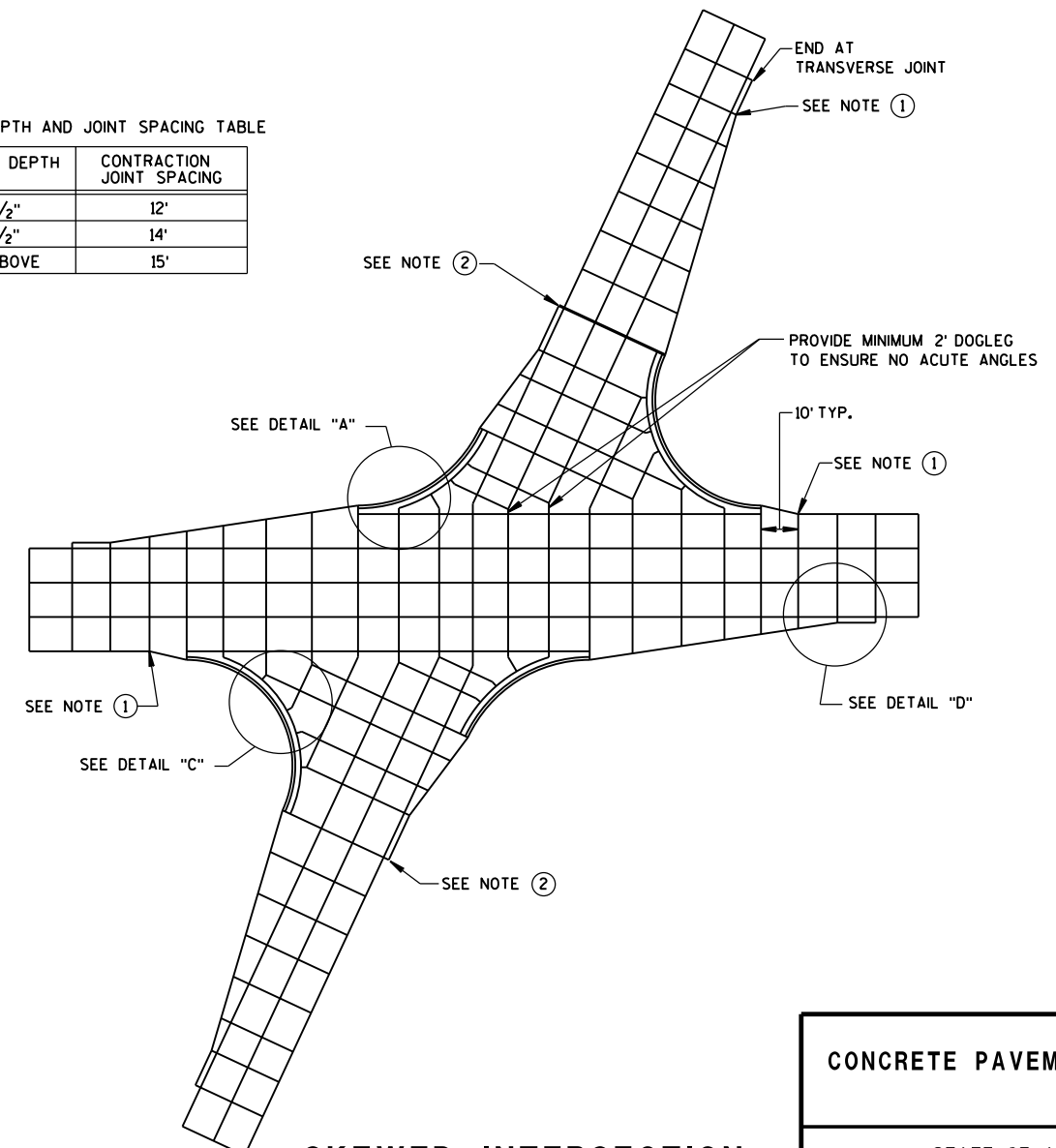
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



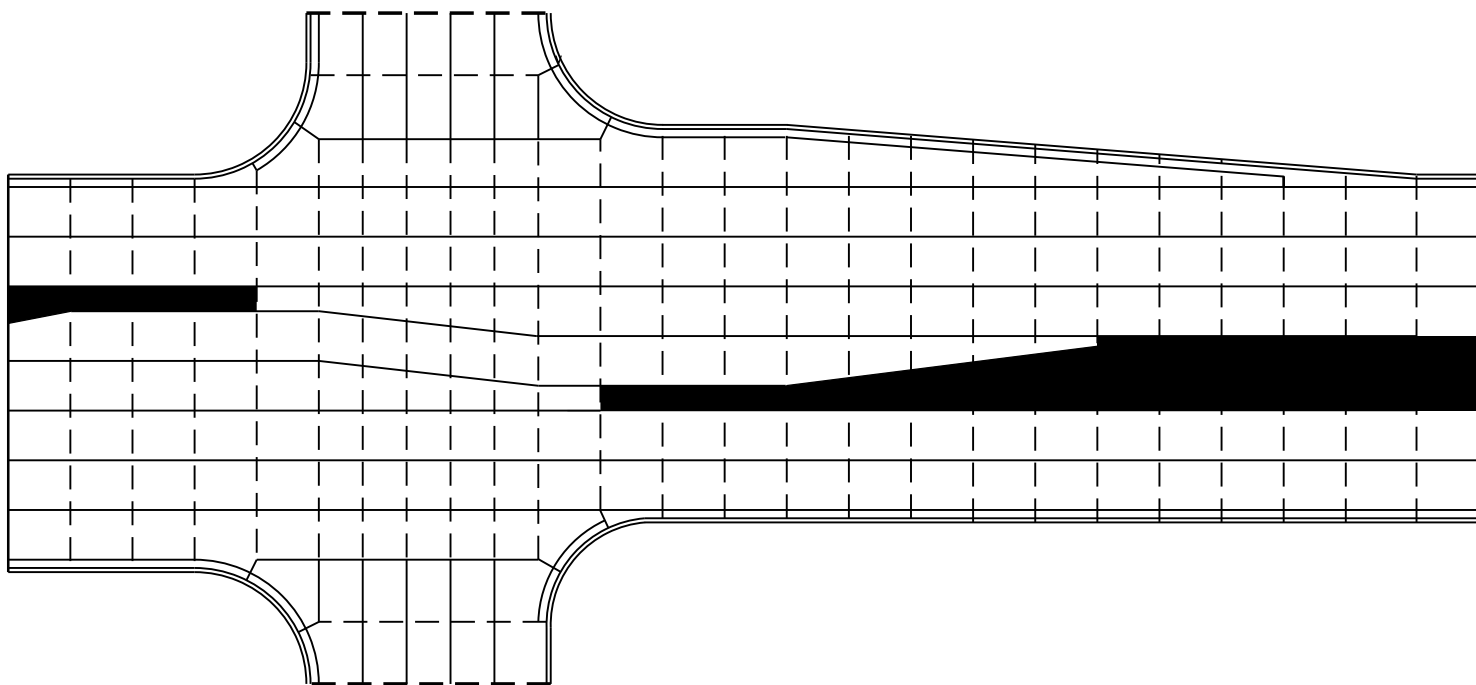
SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

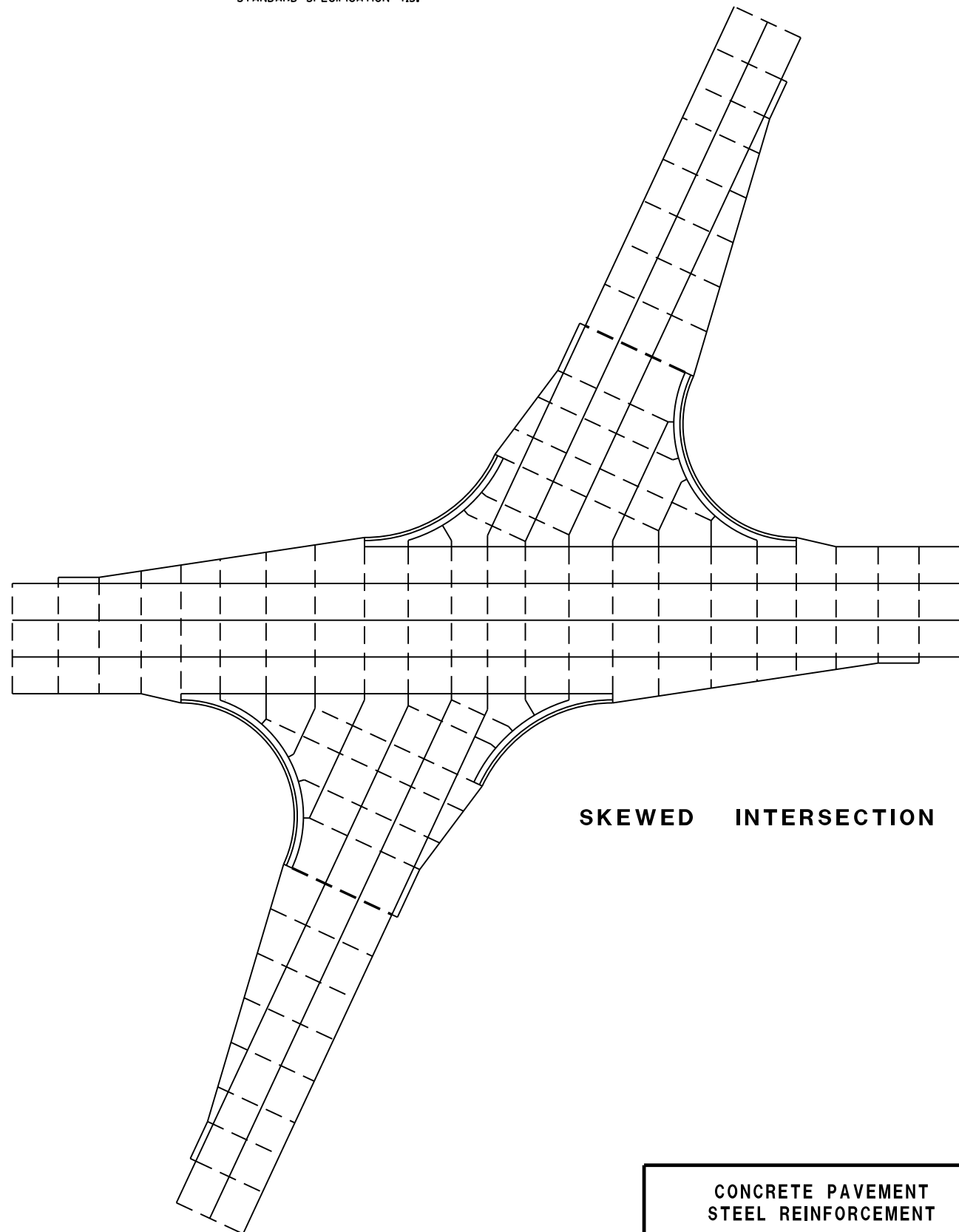
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

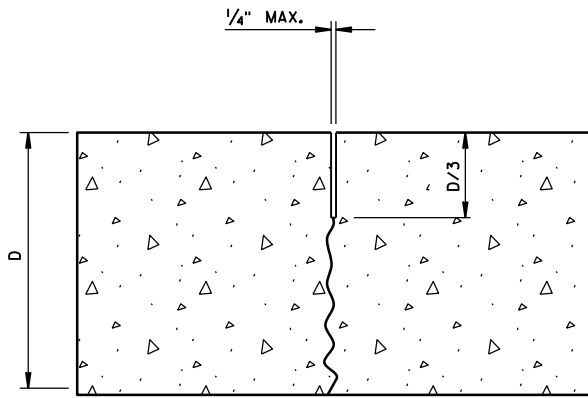
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



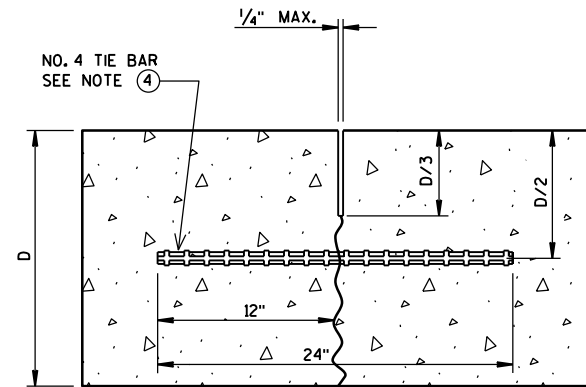
SKewed INTERSECTION

**CONCRETE PAVEMENT
STEEL REINFORCEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

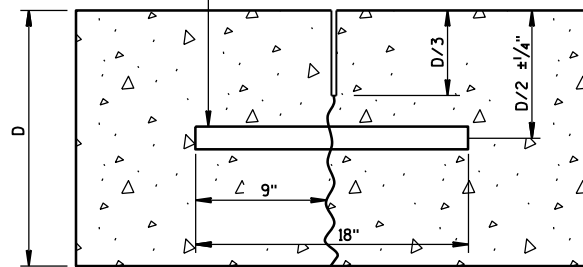


UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

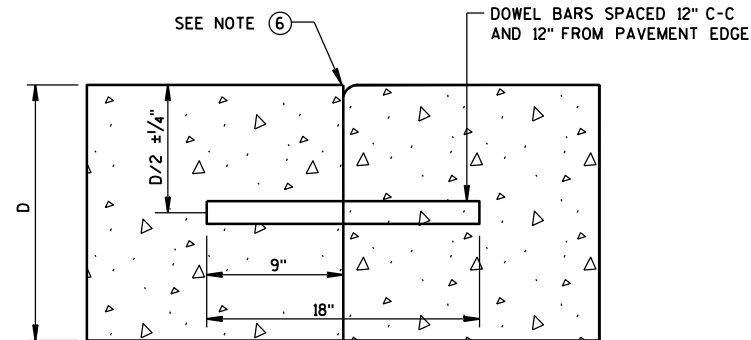
DOWEL BARS AT 12" C-C
12" FROM PAVEMENT EDGE



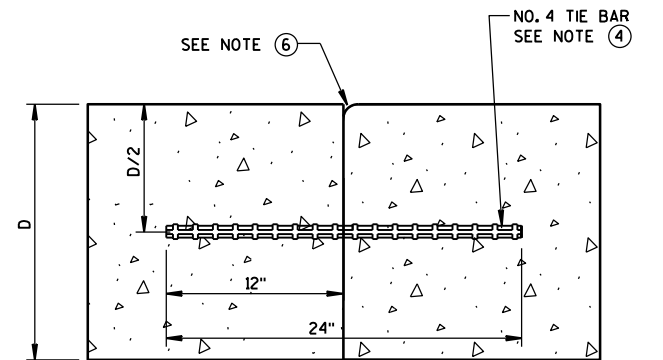
DOWELED-TRANSVERSE

CONTRACTION JOINTS

SEE NOTE ②

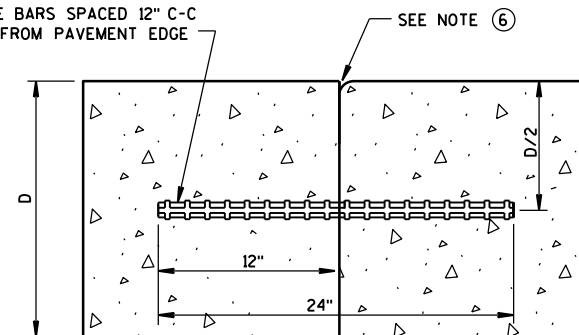


DOWELED TRANSVERSE

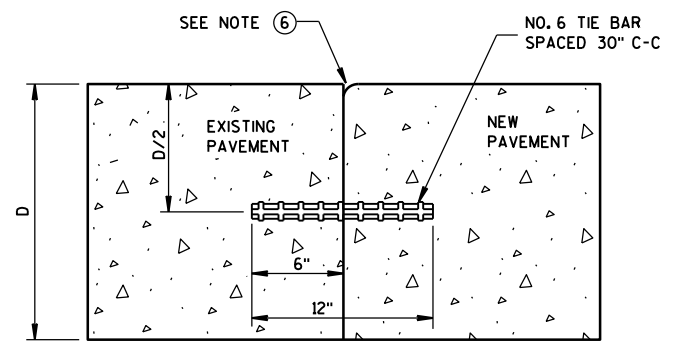


TIED LONGITUDINAL

NO. 6 TIE BARS SPACED 12" C-C
AND 12" FROM PAVEMENT EDGE



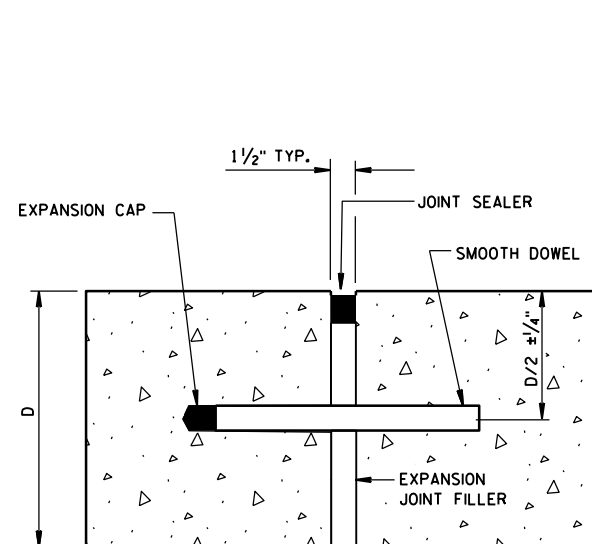
TIED TRANSVERSE
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

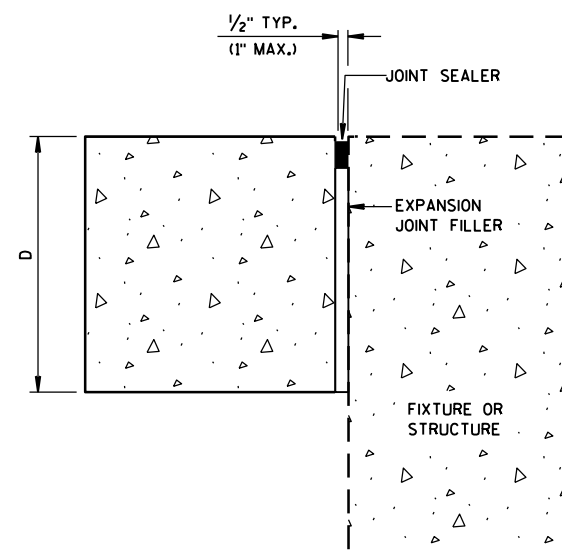
CONSTRUCTION JOINTS

SEE NOTE ⑤



DOWELED-TRANSVERSE

SEE NOTE ①



UNTIED-LONGITUDINAL

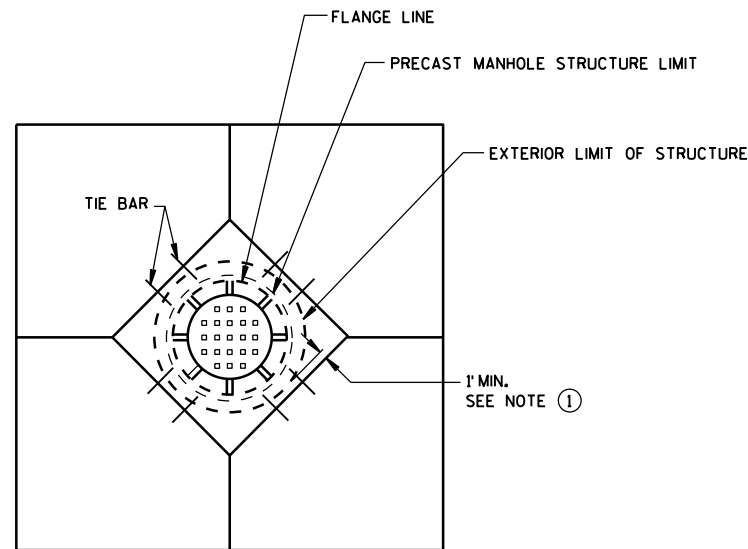
EXPANSION JOINTS

GENERAL NOTES

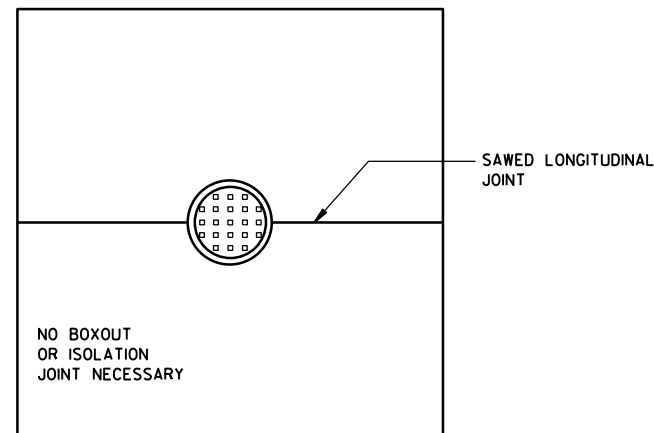
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.

CONCRETE PAVEMENT
JOINT TYPES

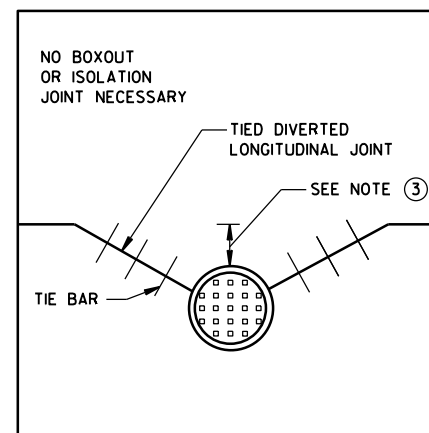
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



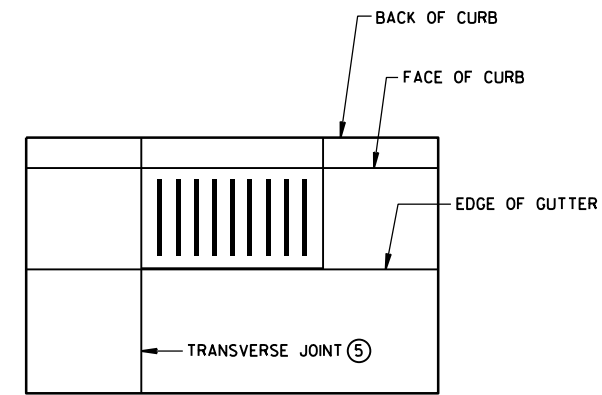
**DIAGONAL MANHOLE BOXOUT
FOR CONSTRUCTION JOINTS**



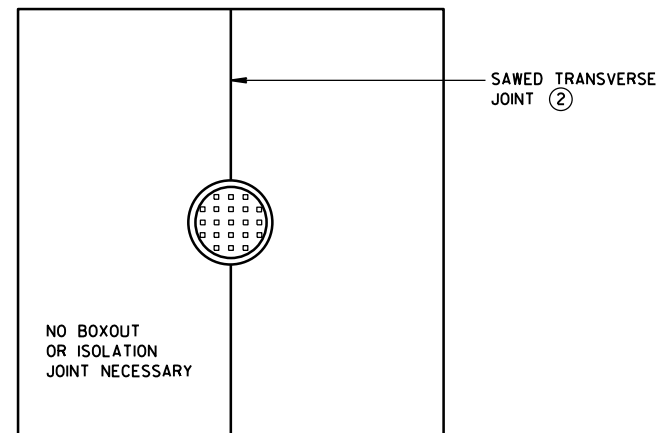
**MANHOLE WITH
LONGITUDINAL JOINT**



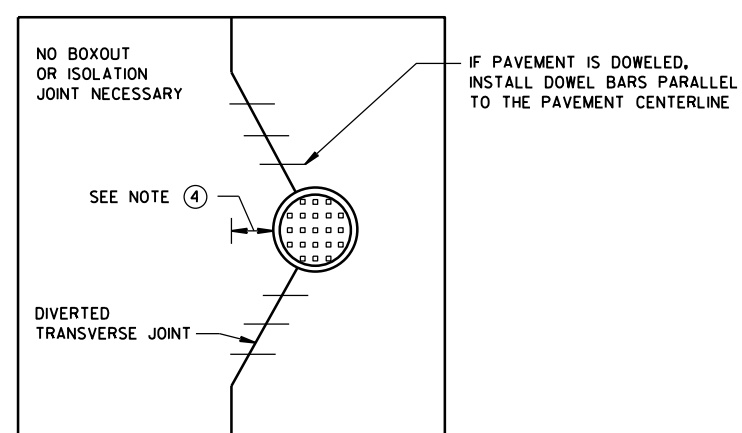
**MANHOLE WITH DIVERTED
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH
TRANSVERSE JOINT**



**MANHOLE WITH
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED
TRANSVERSE CONTRACTION JOINT**

GENERAL NOTES

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

**CONCRETE PAVEMENT
JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

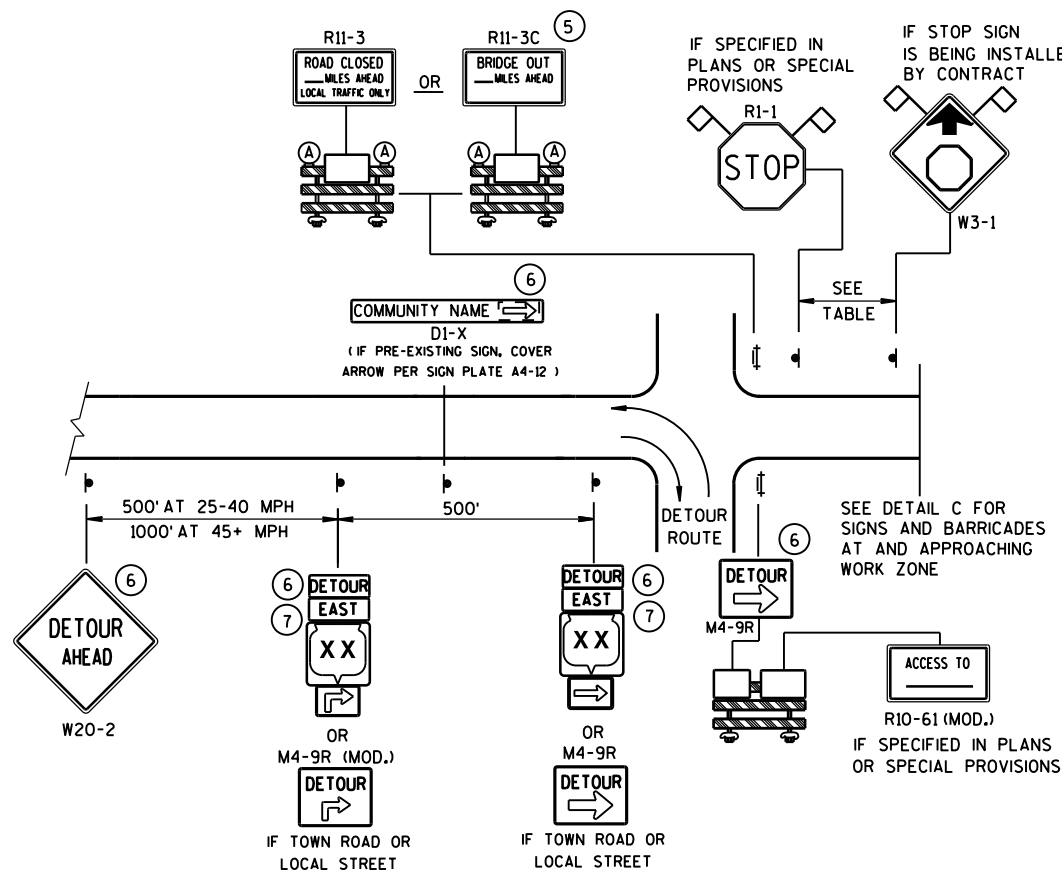
APPROVED

5-3-2013
DATE

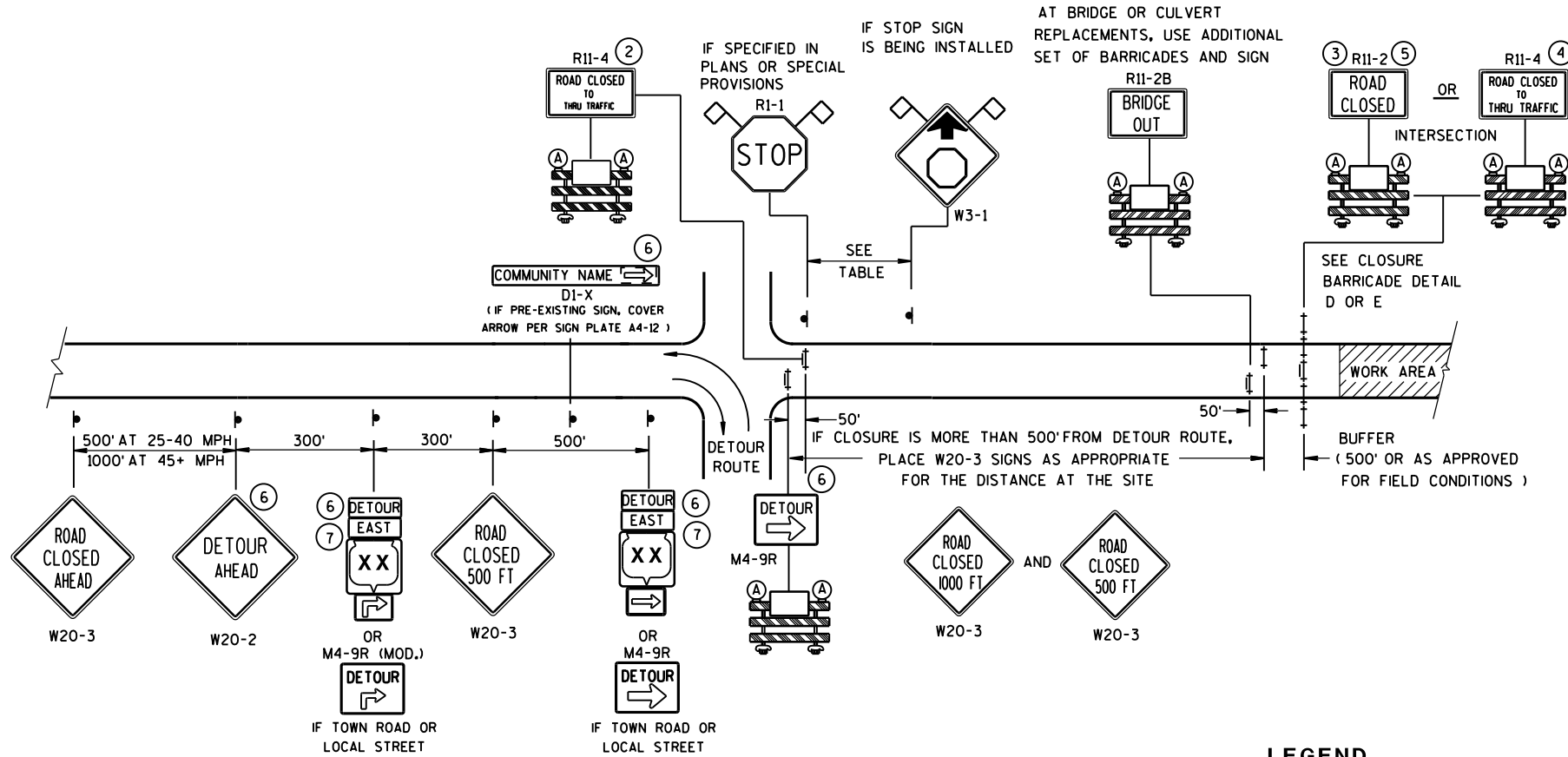
/S/ Deb Bischoff
PAVEMENT POLICY & DE 74

NEER

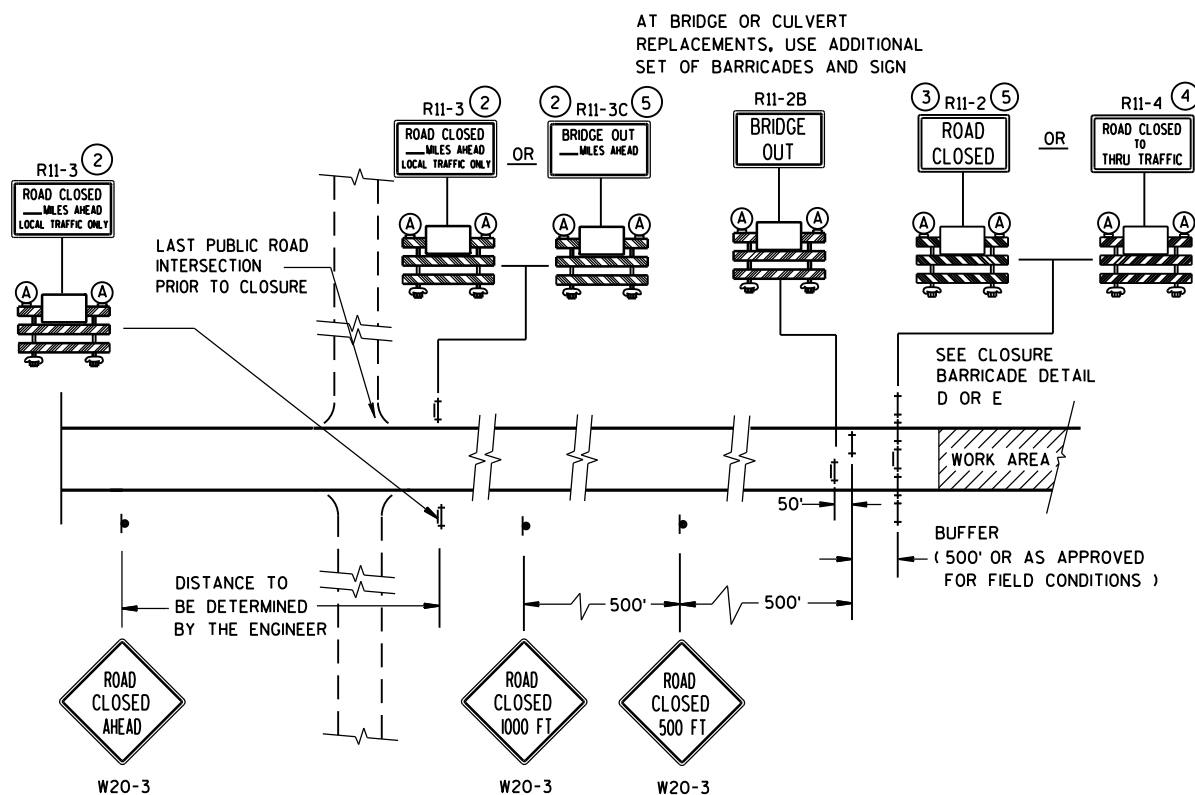
FHWA



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



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

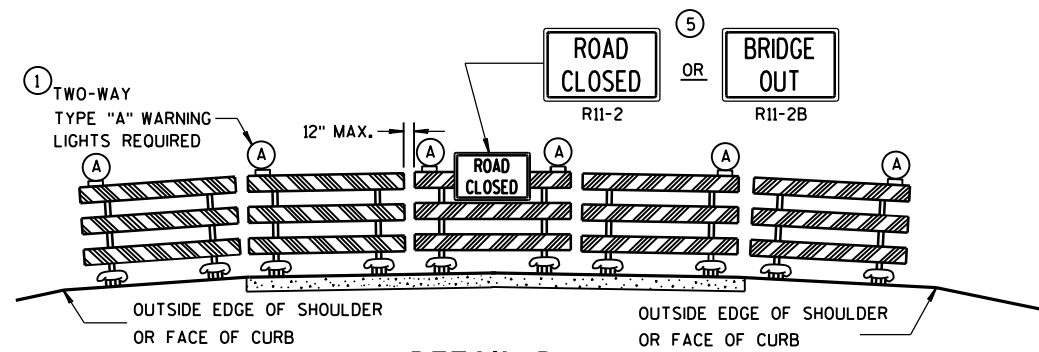


DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

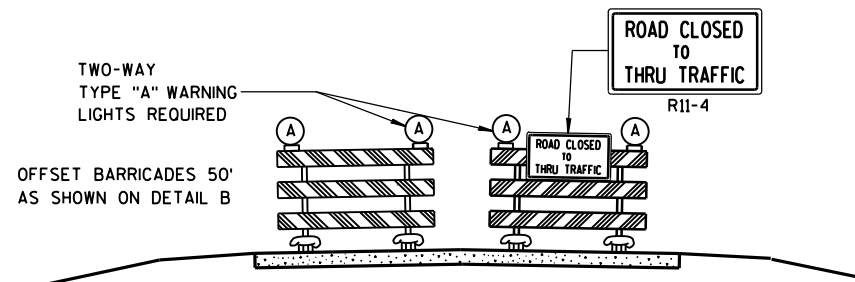
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
8/2013 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINE 75	ESIGN
FHWA		



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

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

M4-9 SHALL BE 30" X 24".

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

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

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

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

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

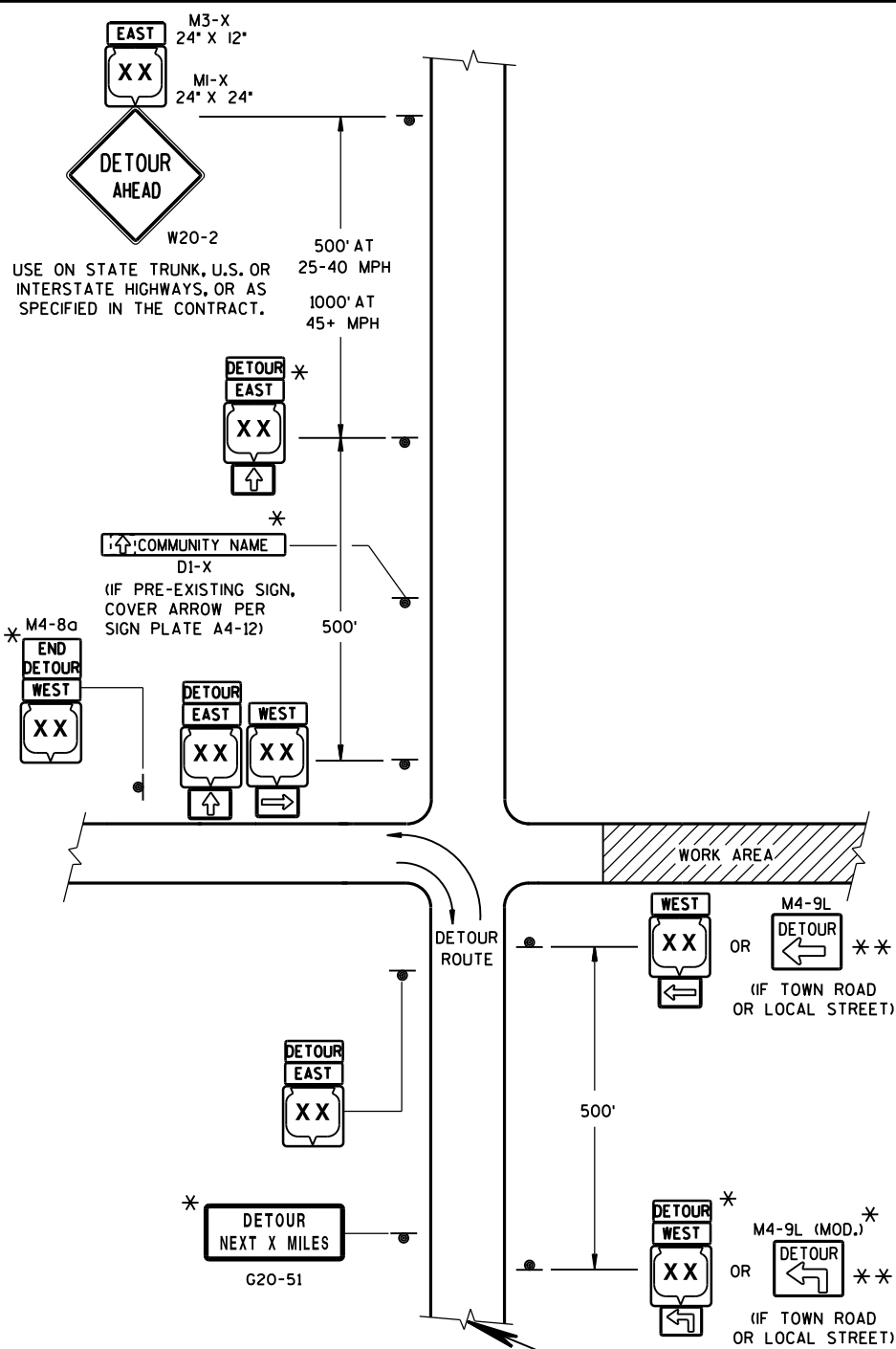
R1-1 SHALL BE 36" X 36".

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 76 ESIGN
FHWA



LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR EAST M4-8 M3-X
- MI-4 MI-5A MI-6
- M05-1 M06-1 M06-1

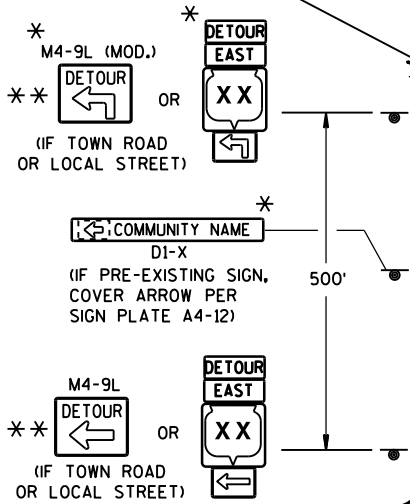
SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD 15C2-SHEET "a"

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

DETAIL F
DETOUR SIGNING

USE ON STATE TRUNK, U.S. OR INTERSTATE HIGHWAYS, OR AS SPECIFIED IN THE CONTRACT.



GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS, MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

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

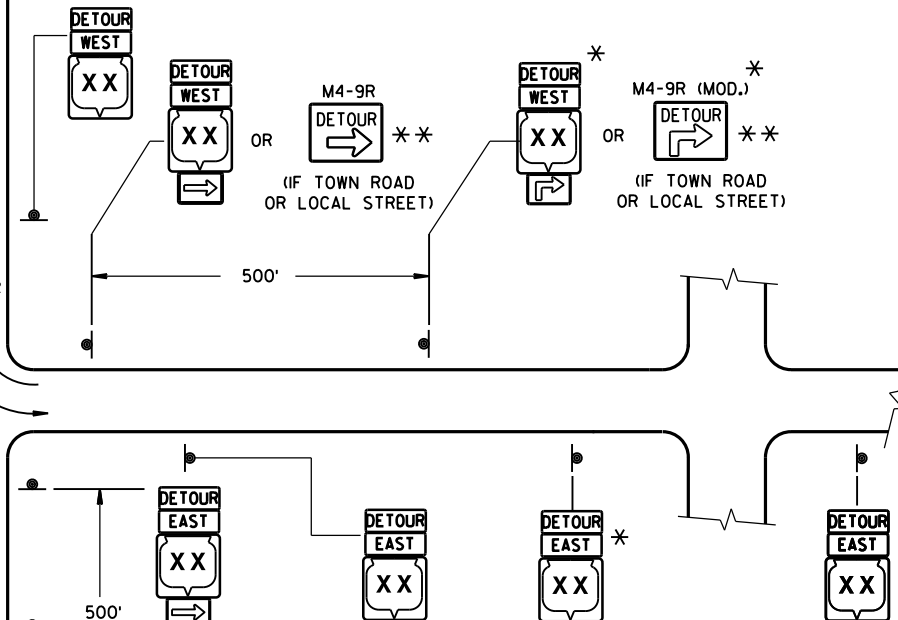
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

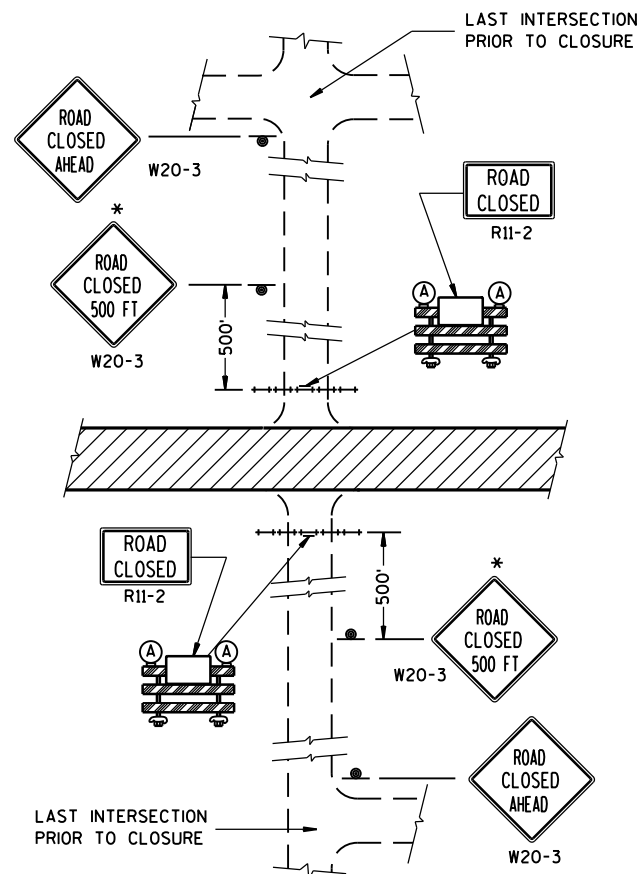


PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA.)

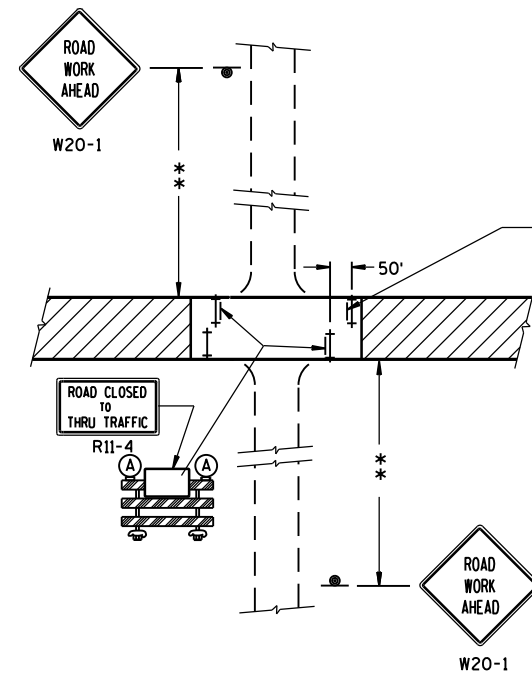
DETOUR SIGNING FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

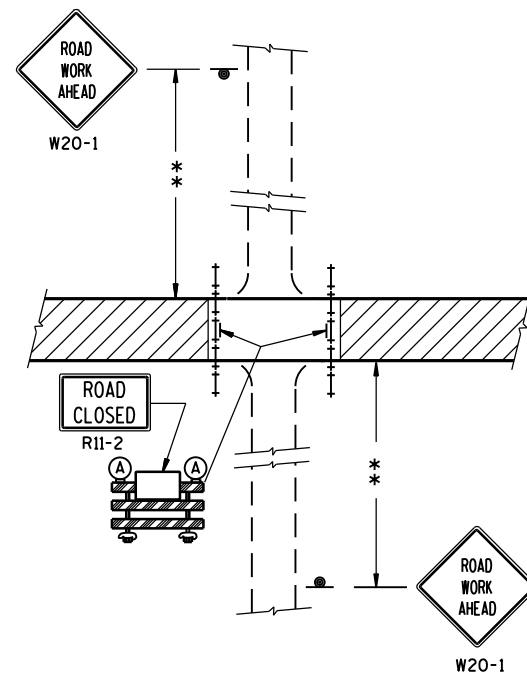
APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 77
FHWA SIGN



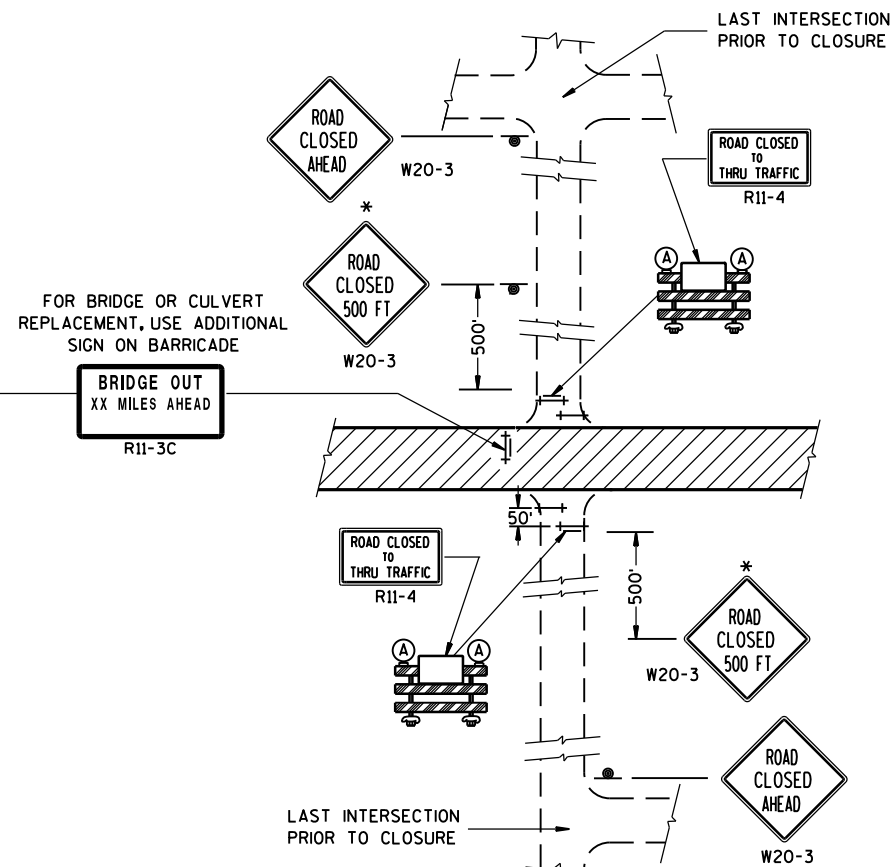
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

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

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- ▨ WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

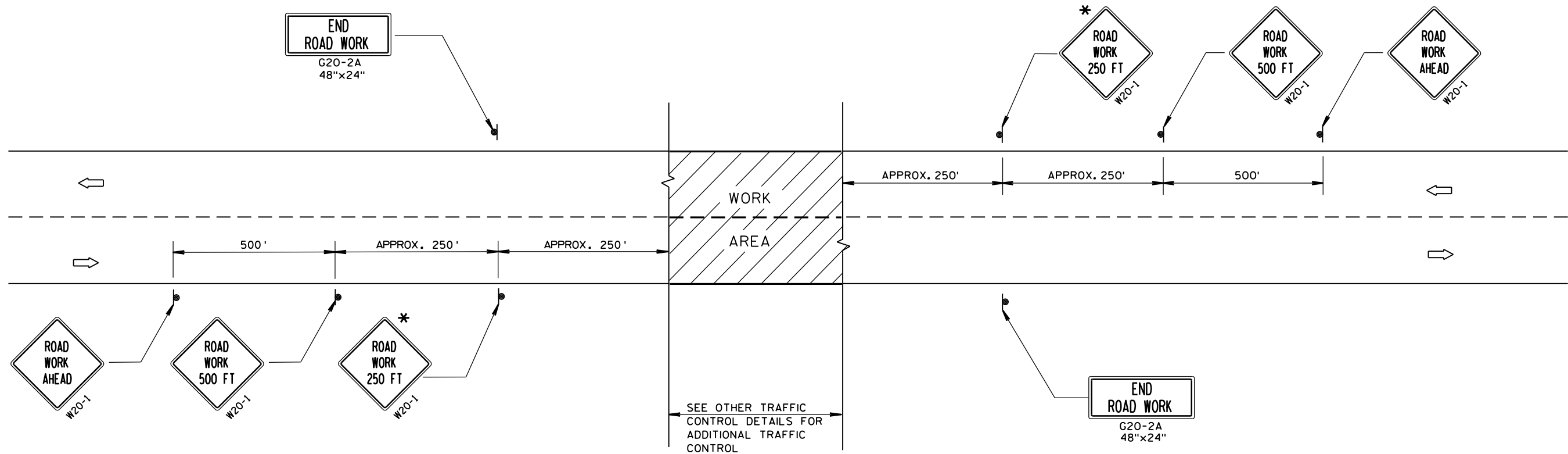
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 /S/ Travis Fettes

DATE STATE TRAFFIC ENGINE 78

FWHA SIGN



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

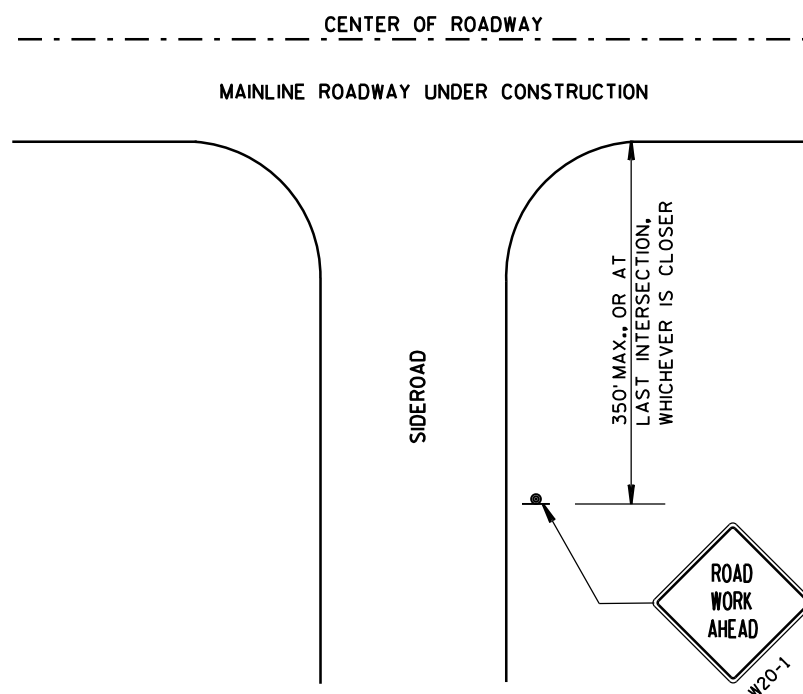
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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



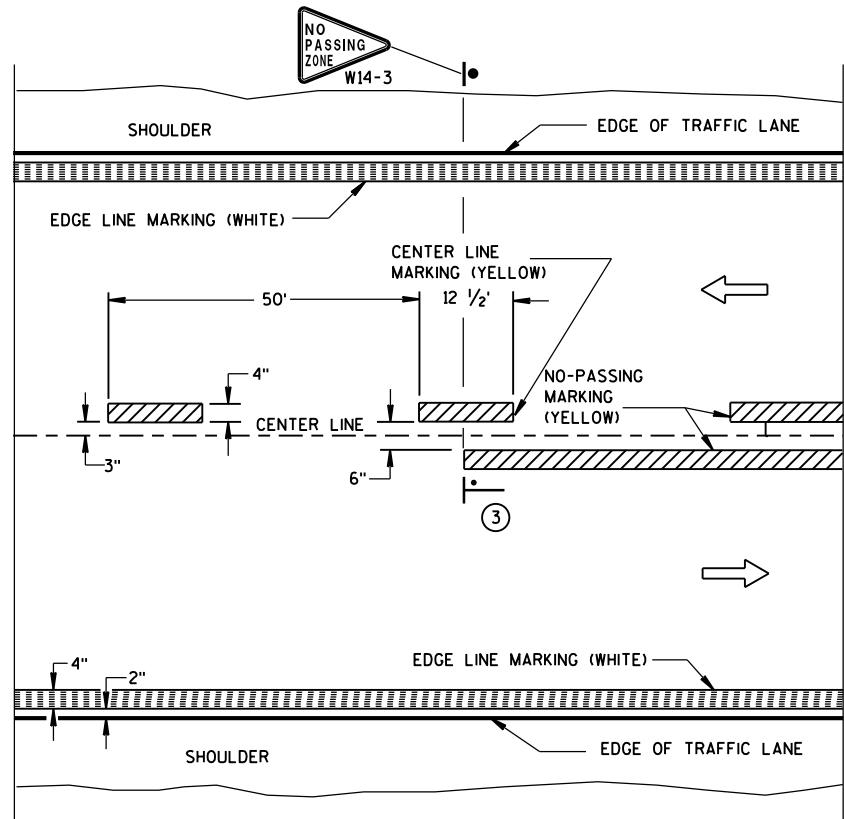
LEGEND

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

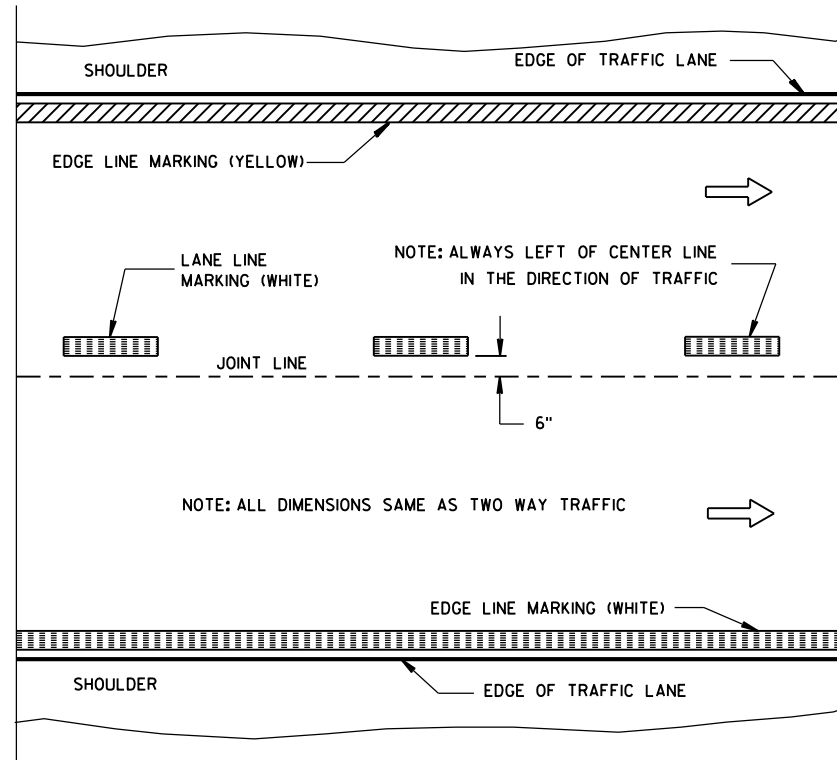
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

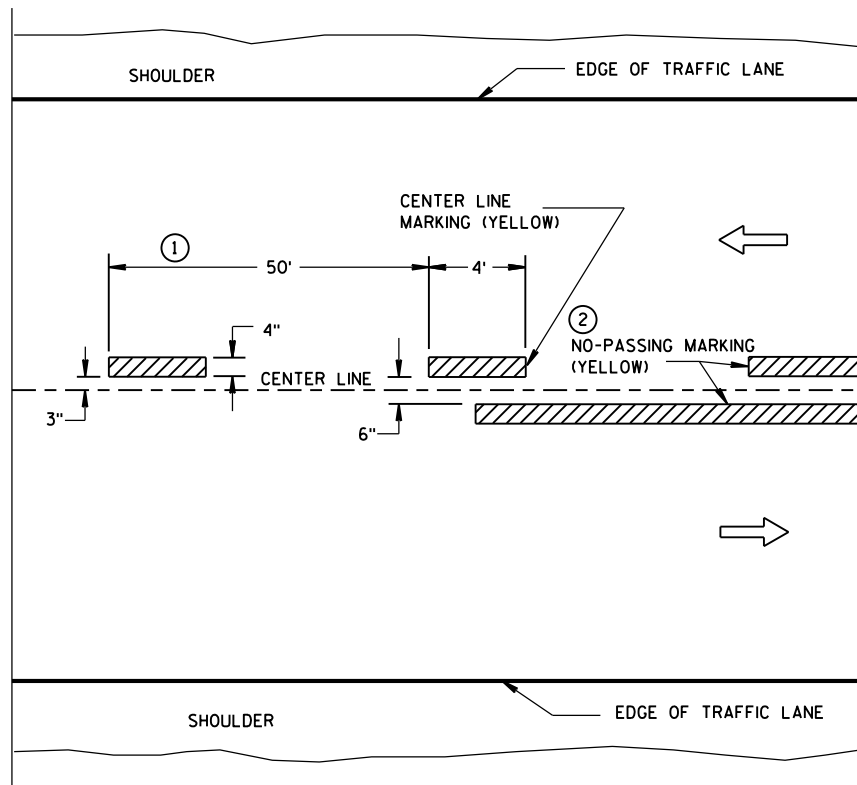


TWO WAY TRAFFIC

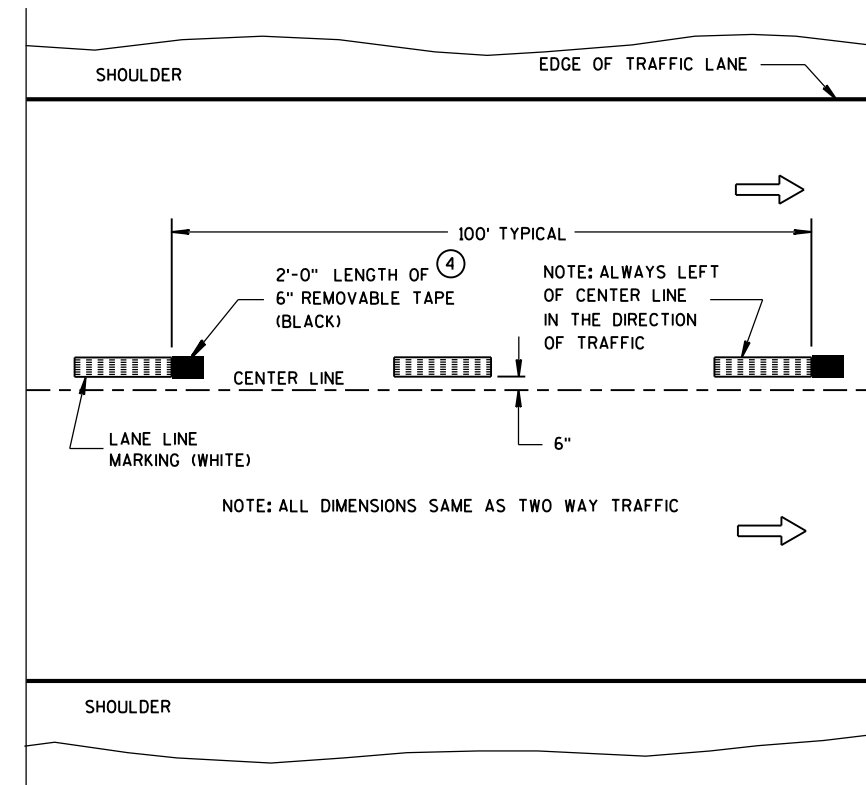


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

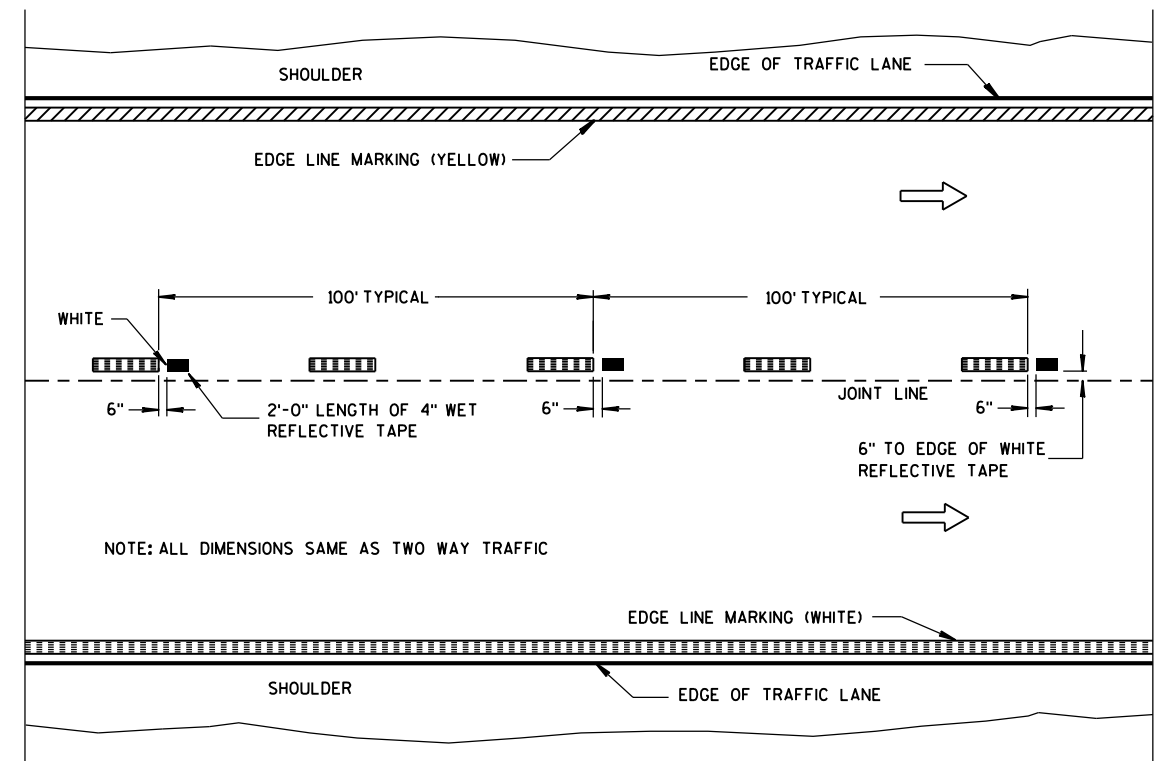
GENERAL NOTES

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

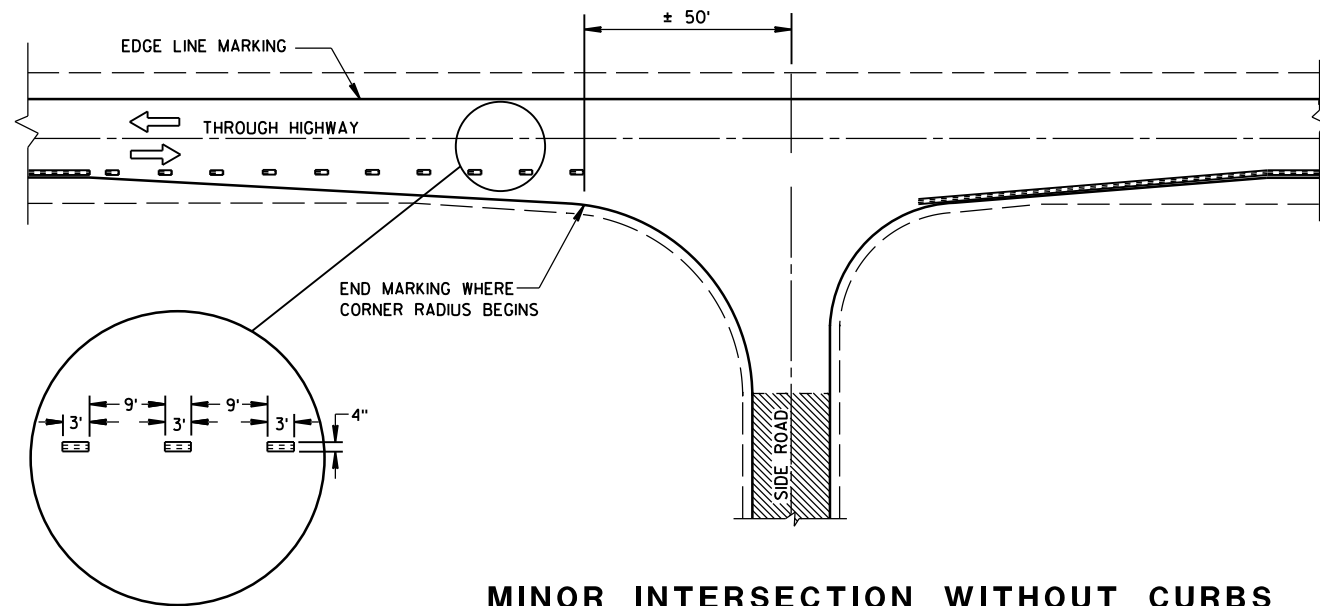
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

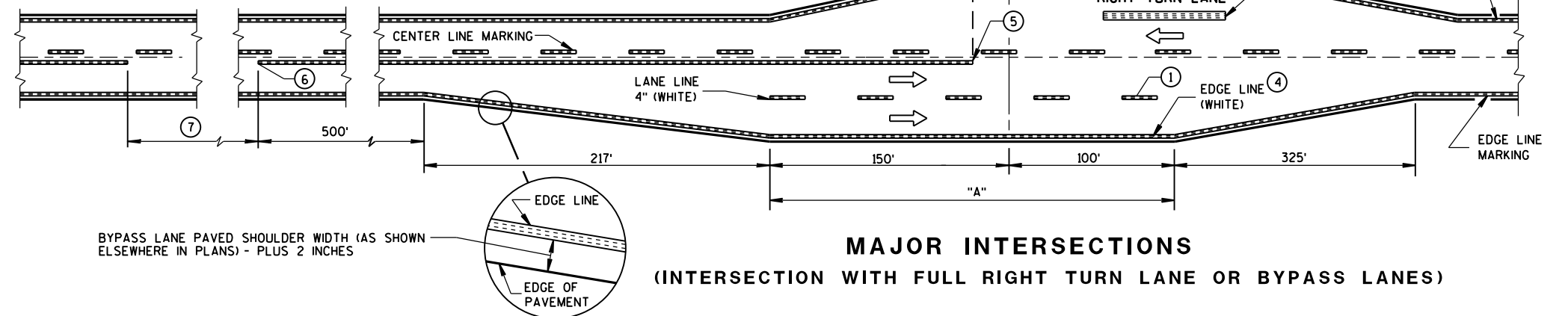
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC E 80
FHWA



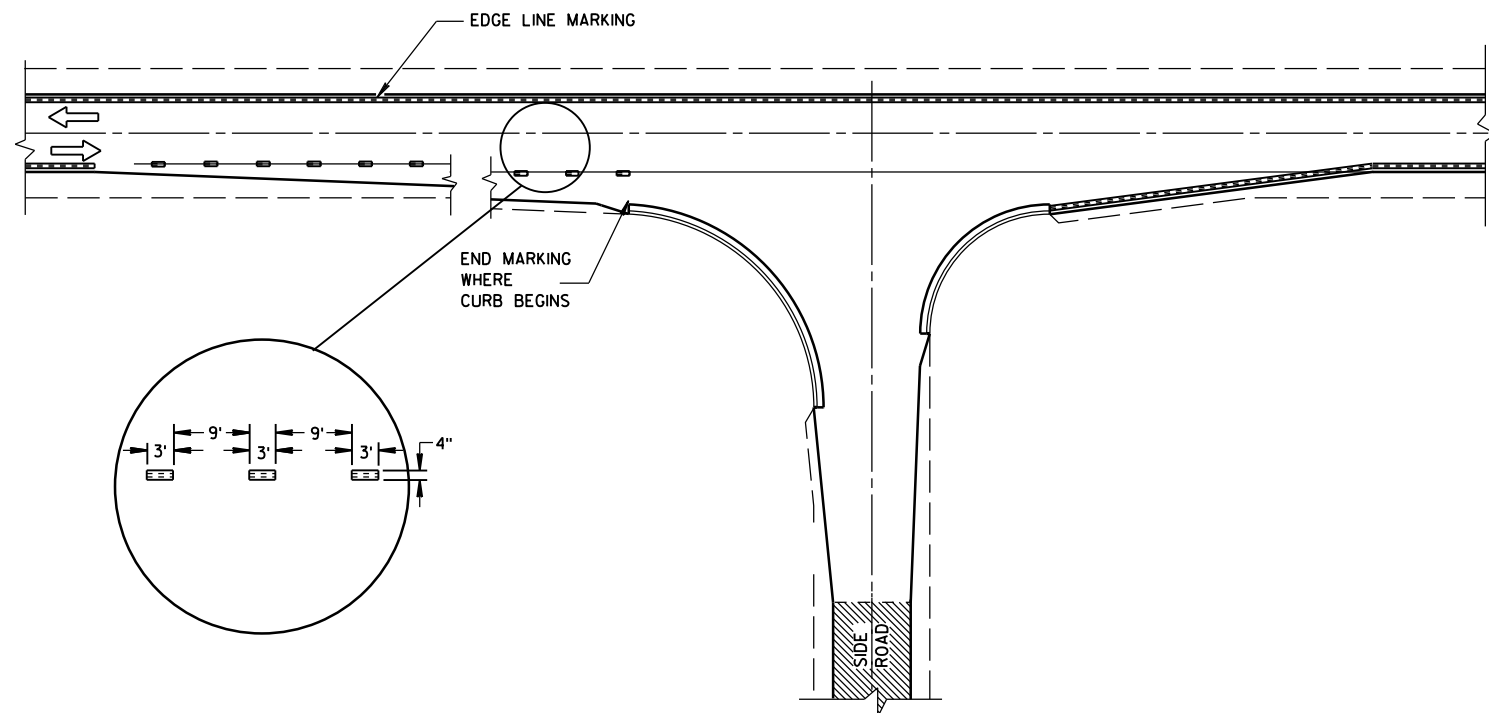
MINOR INTERSECTION WITHOUT CURBS

⑦

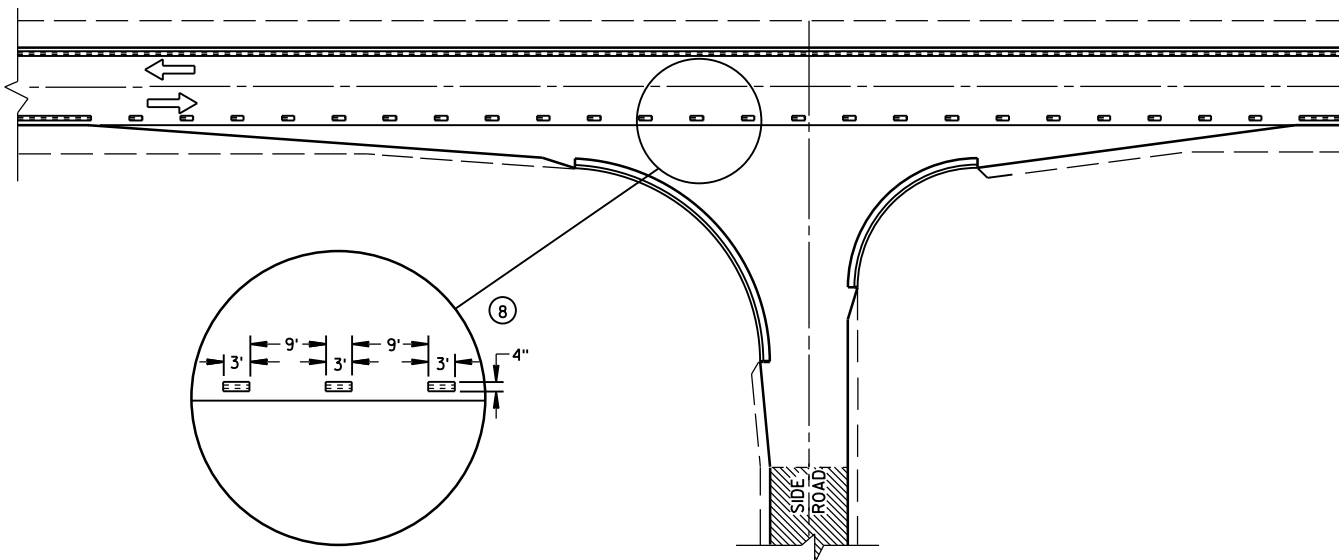
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



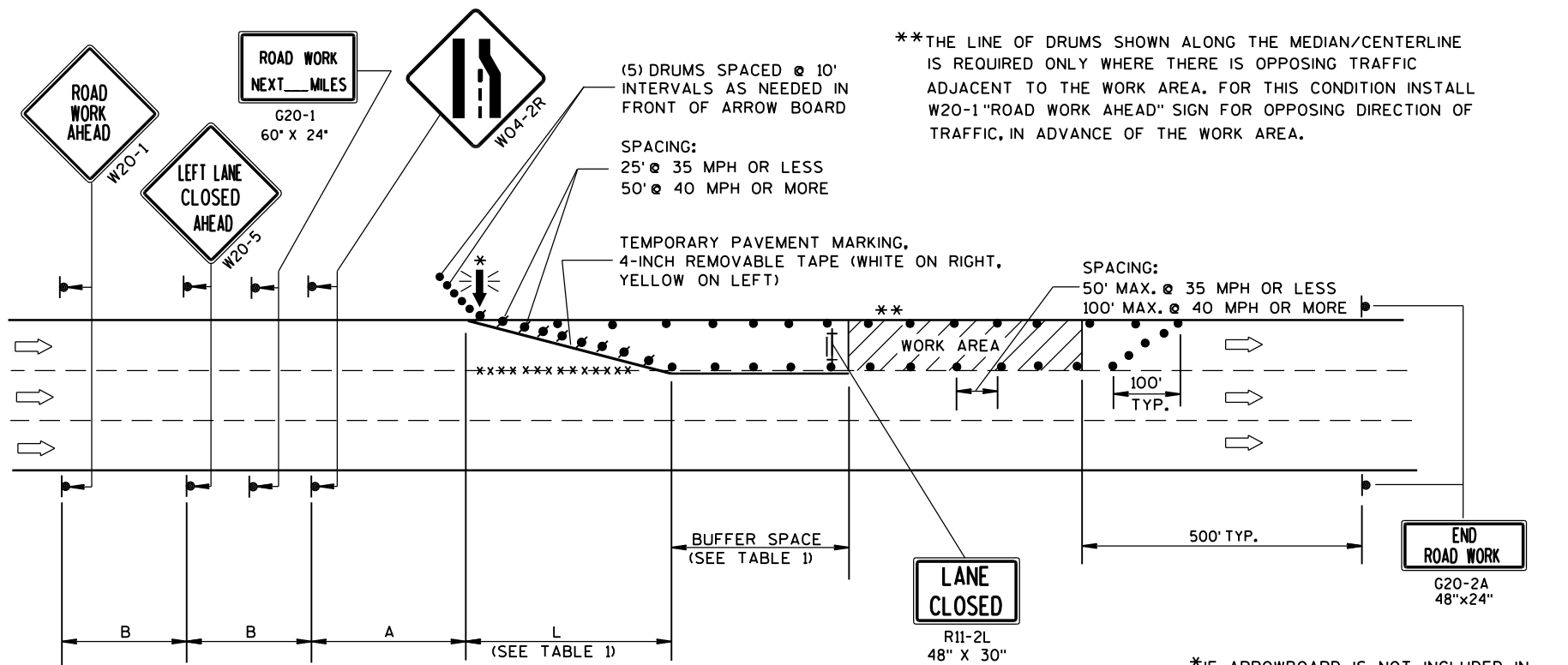
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER
L = $\frac{WS^2}{60}$ AT 40 MPH OR LESS
L = TAPER LENGTH IN FEET
S = NON-CONSTRUCTION SPEED LIMIT (MPH)
W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

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

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

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

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

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

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

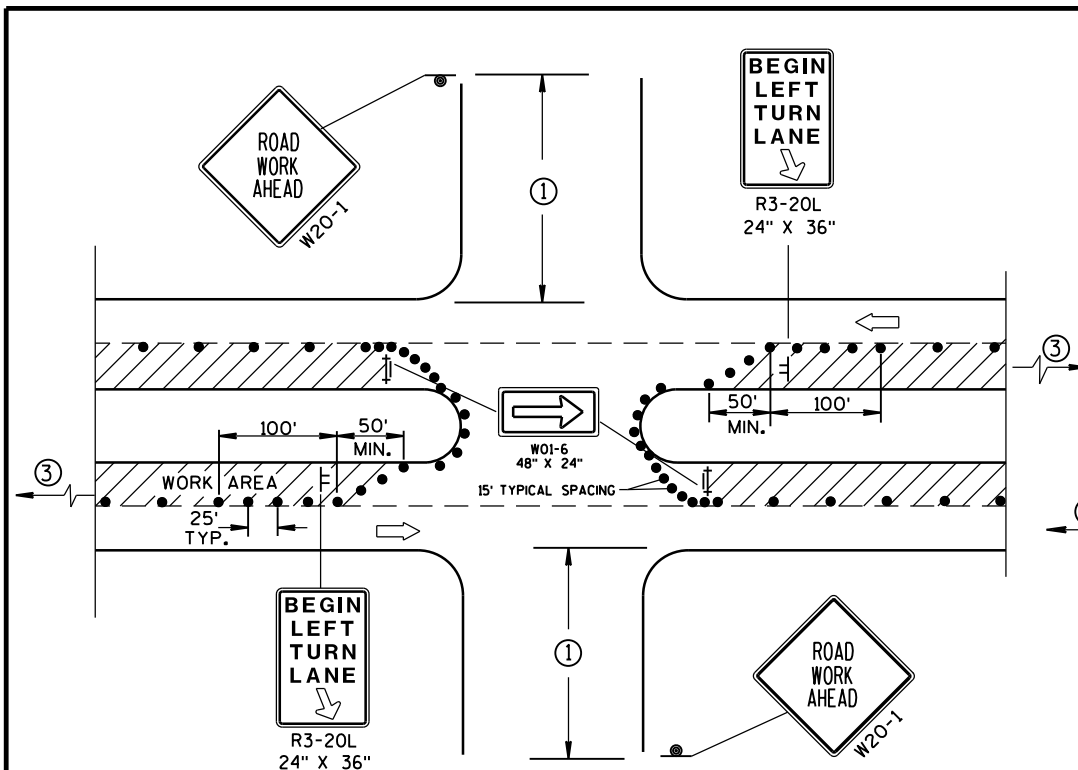
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

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

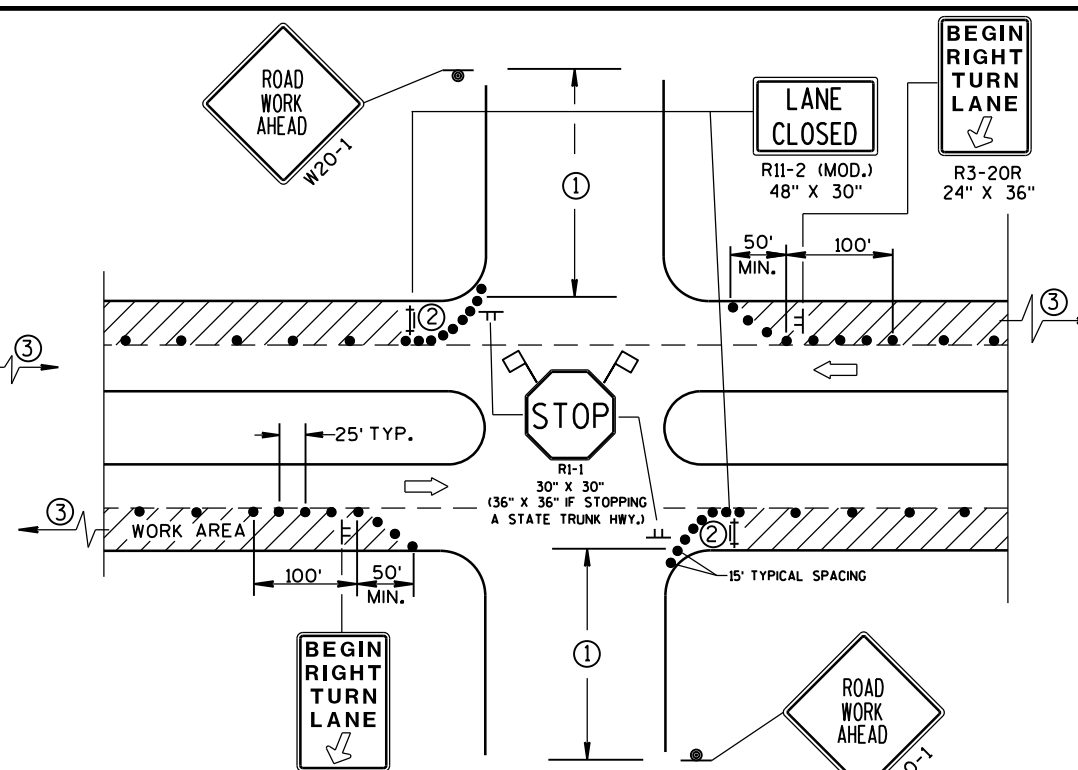
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINE 82 :SIGN
FHWA



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

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



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

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

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

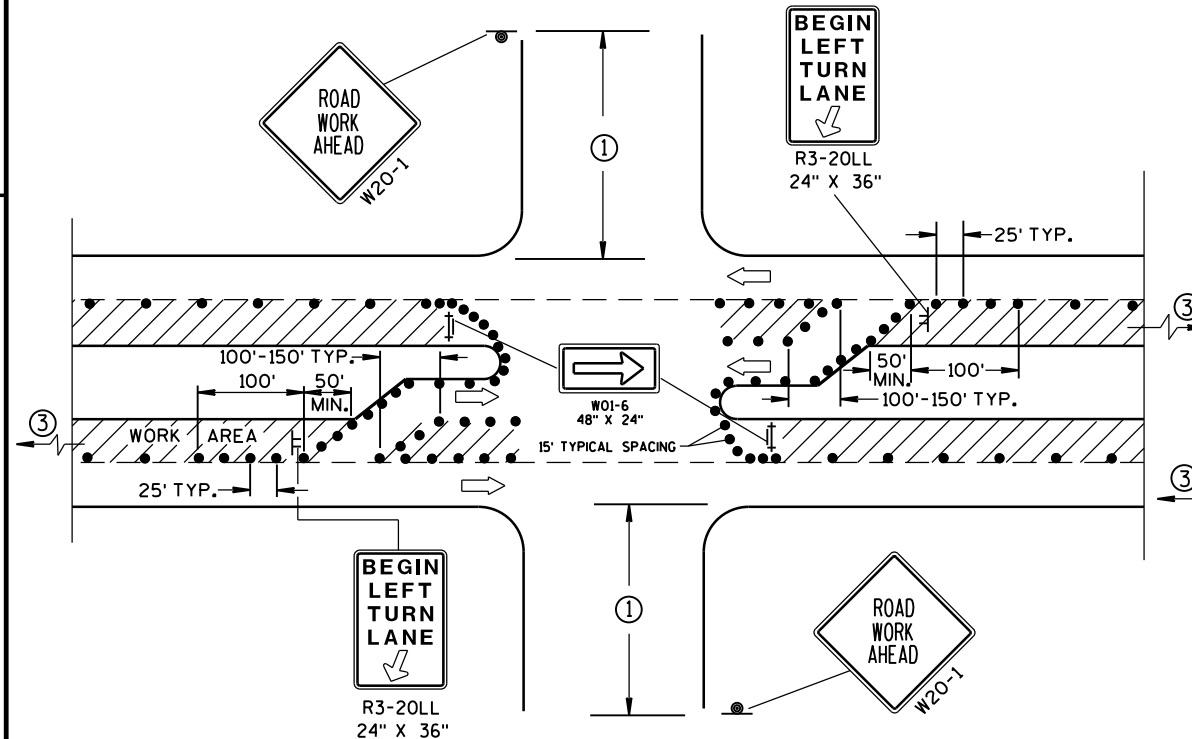
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

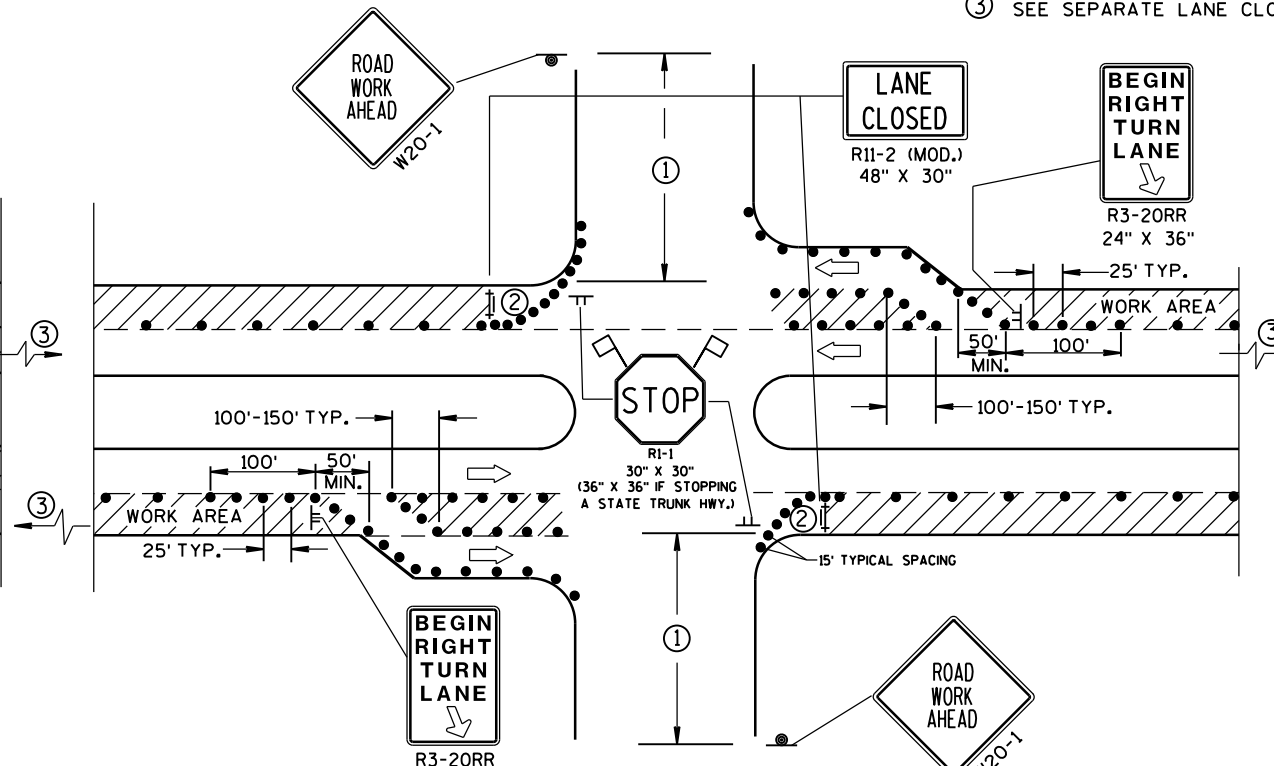
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

LEGEND

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



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

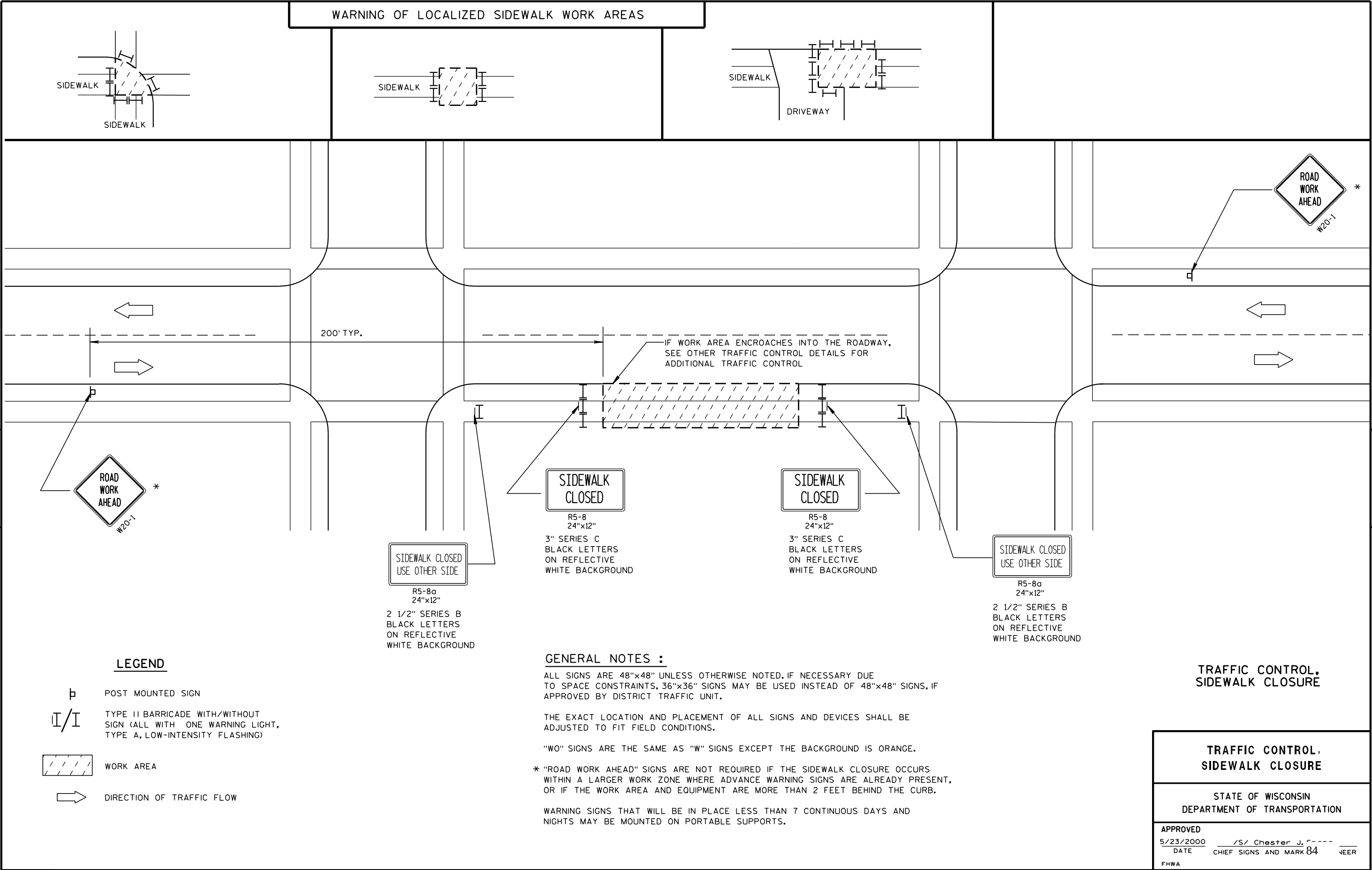


DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

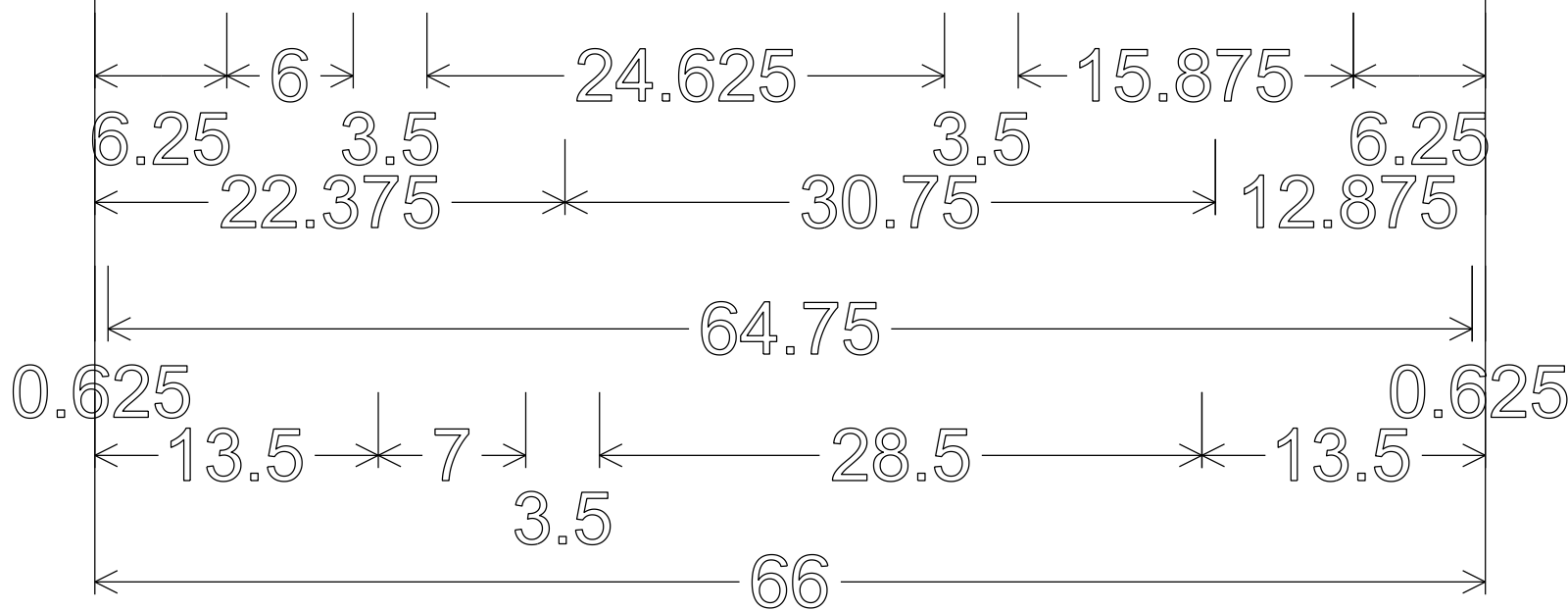
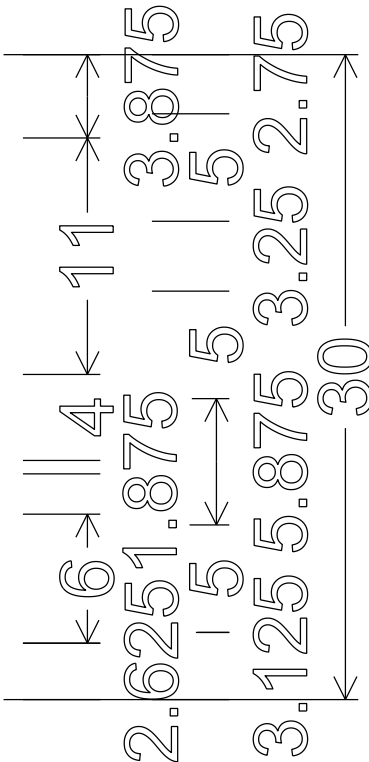
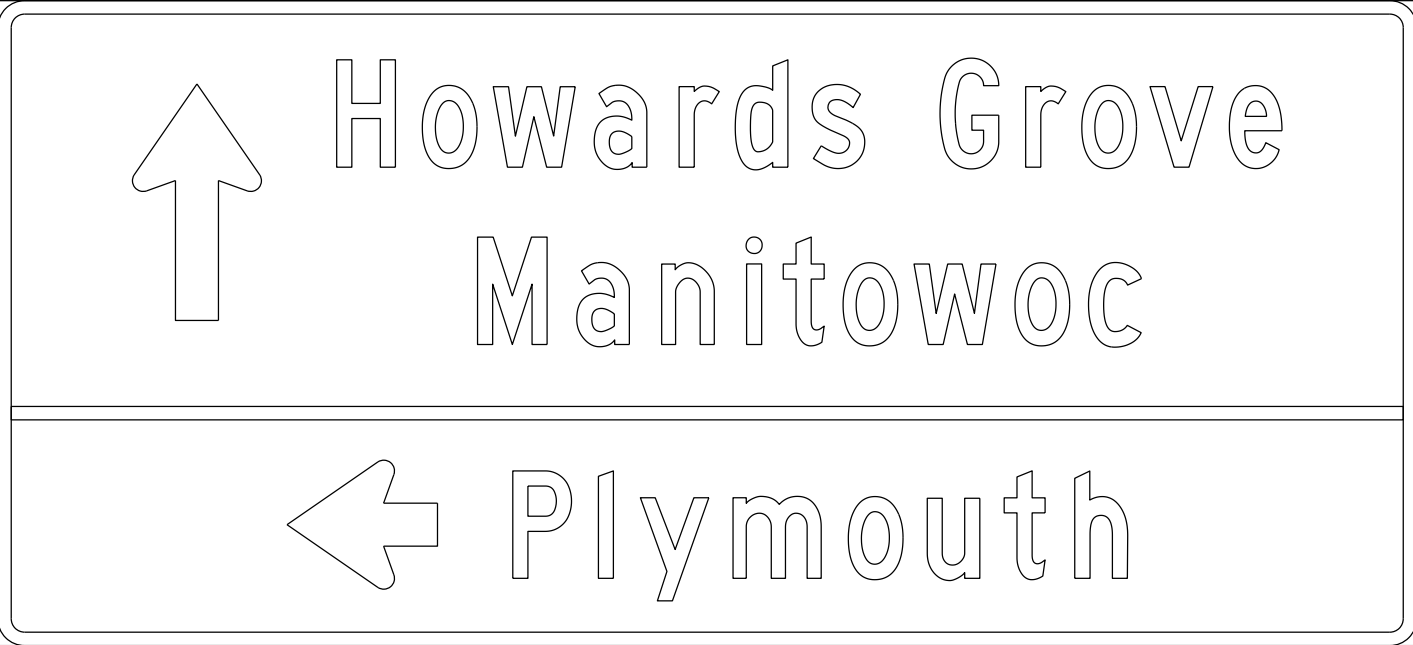
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 /S/ Travis Feites
DATE STATE TRAFFIC ENGINE 83 SIGN
FHWA



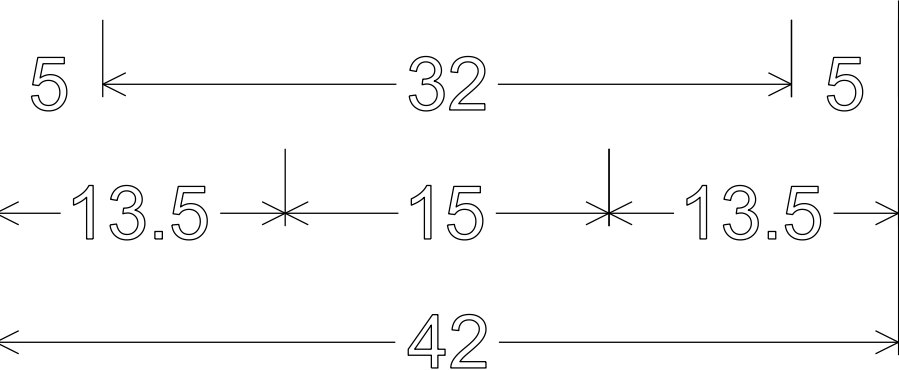
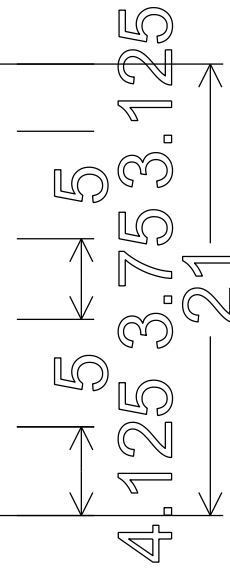
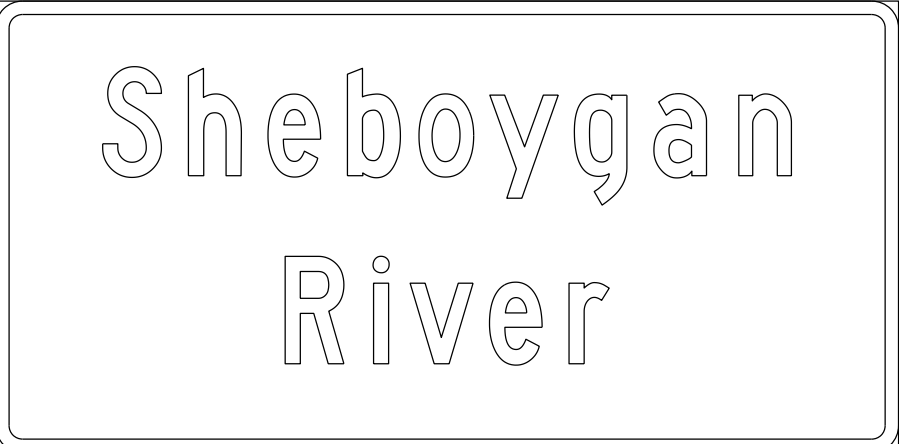
NOTES

- 1. All Signs are Type II - Type H Reflective
- 2. Color:
 - Background - Green
 - Message - White
- 3. Message Series - E



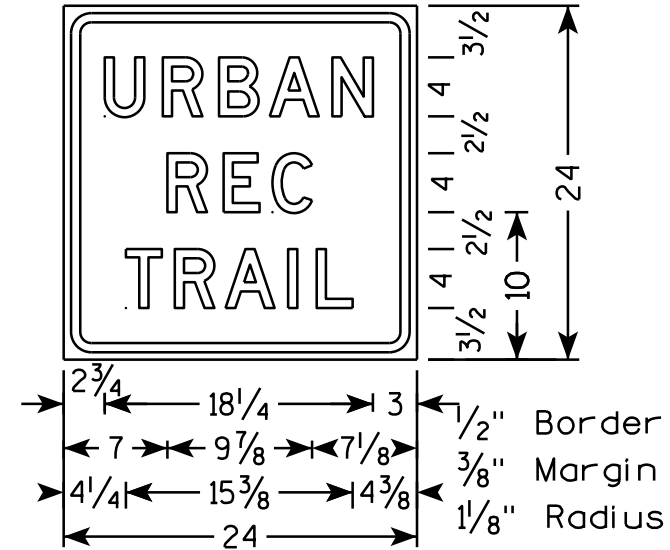
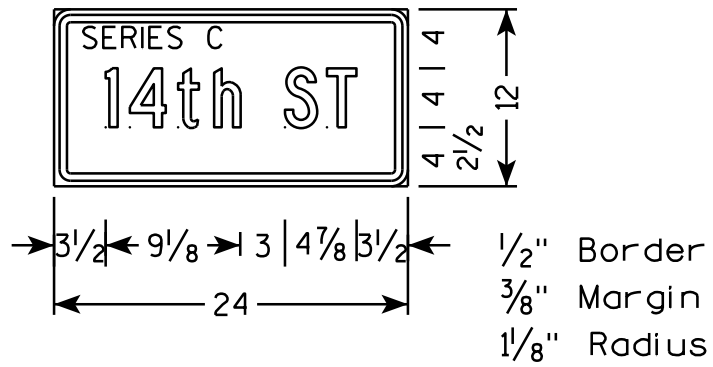
1.250" Radius, 0.625" Border

D1-3

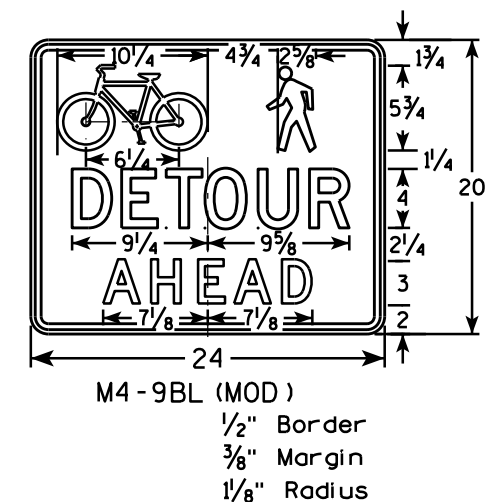
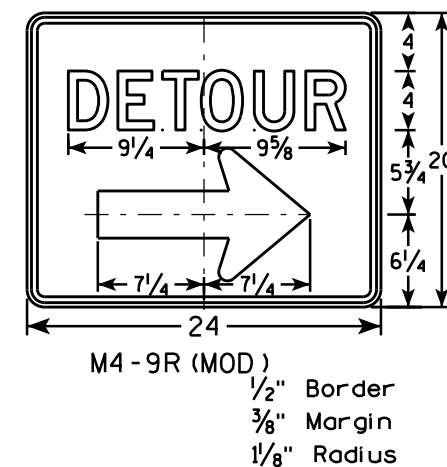
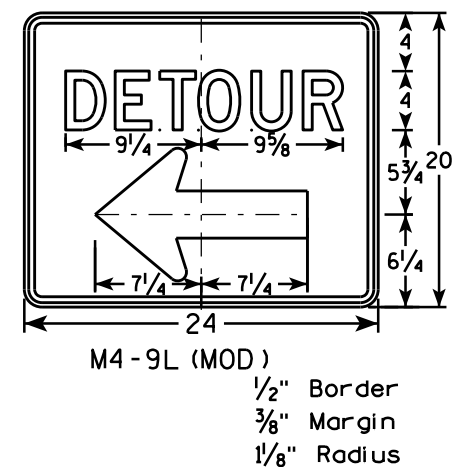
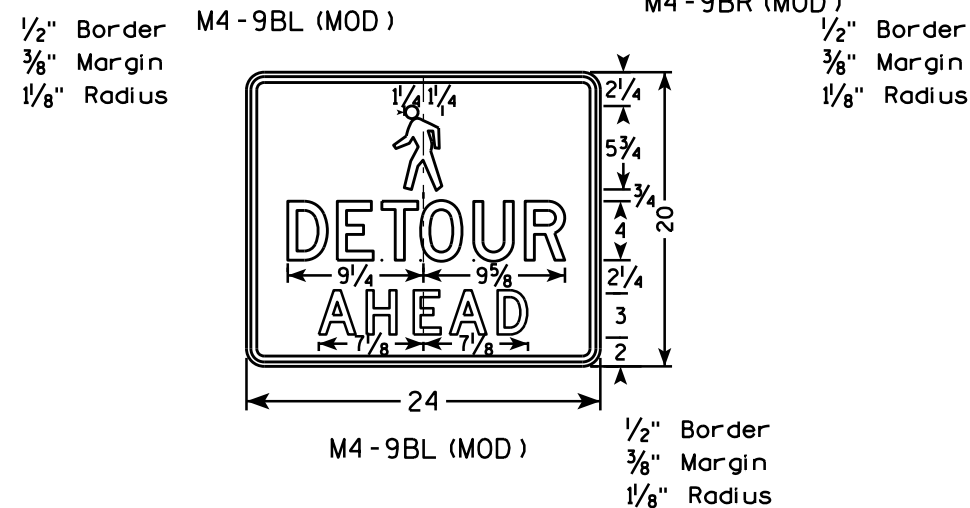
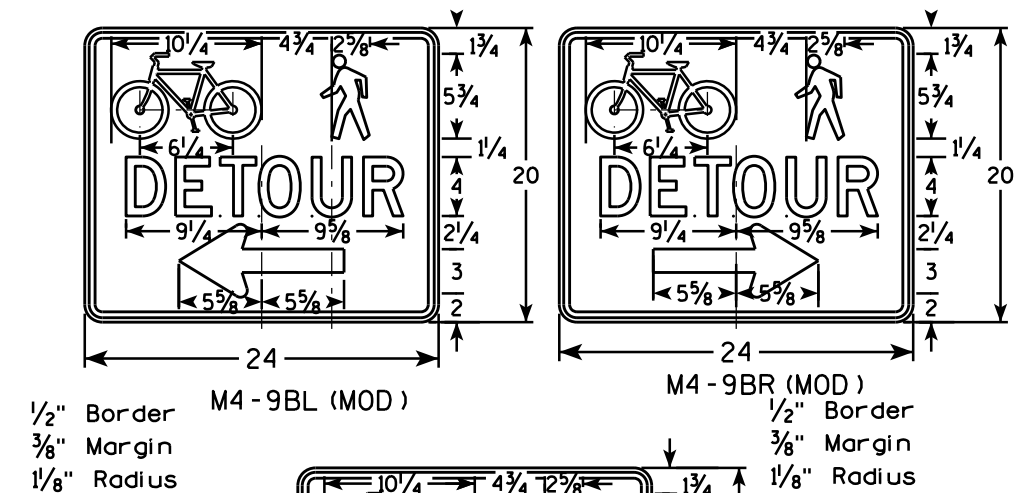
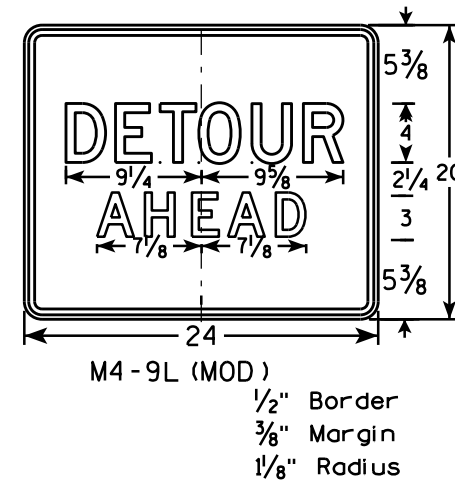
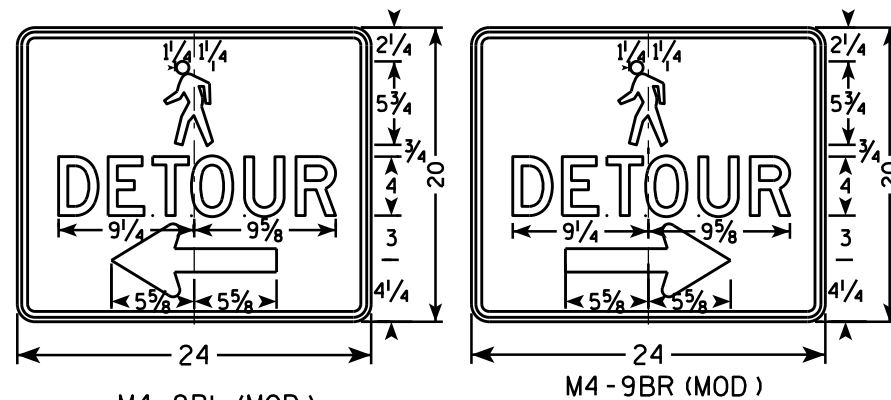


1.250" Radius, 0.625" Border

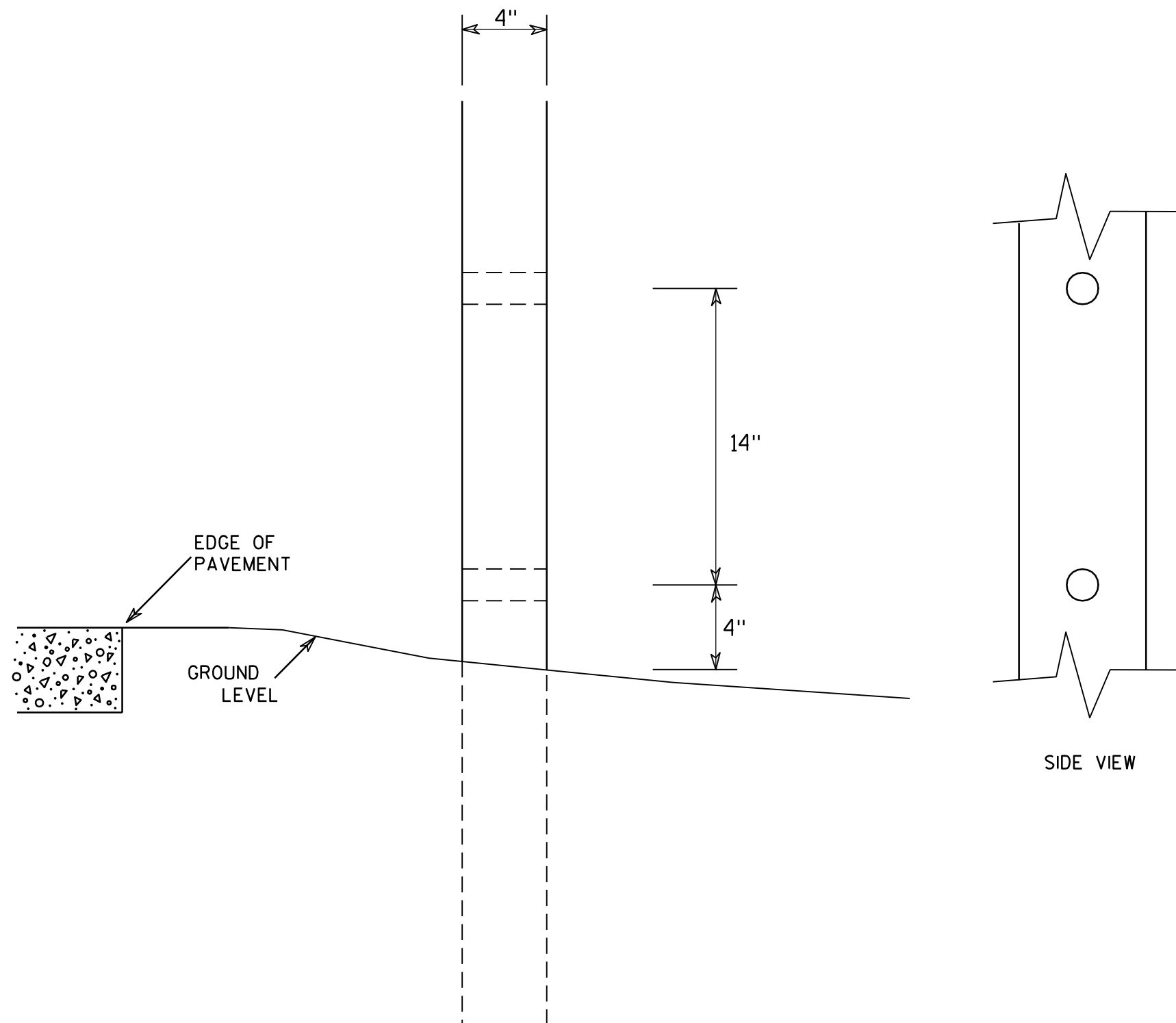
I3-1



- NOTES**
1. All Signs are Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - D except as Shown



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:

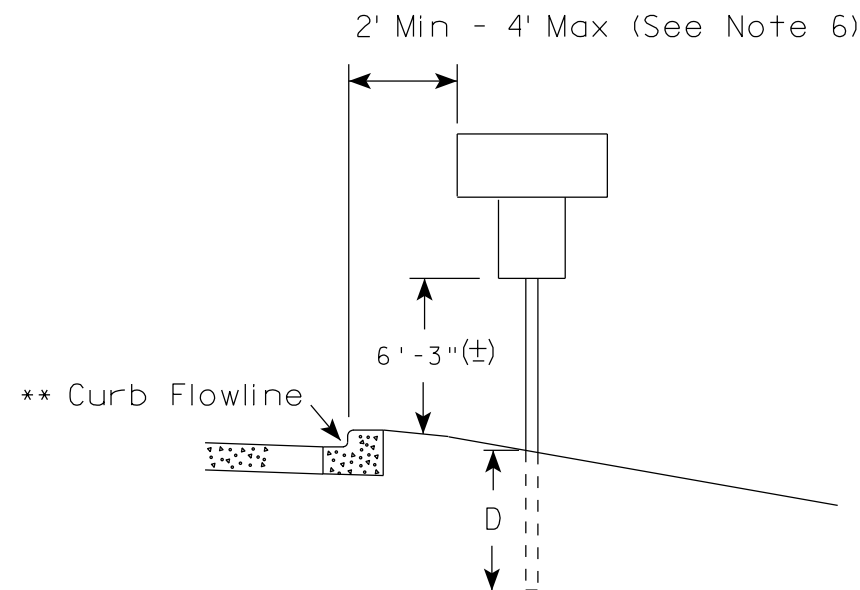
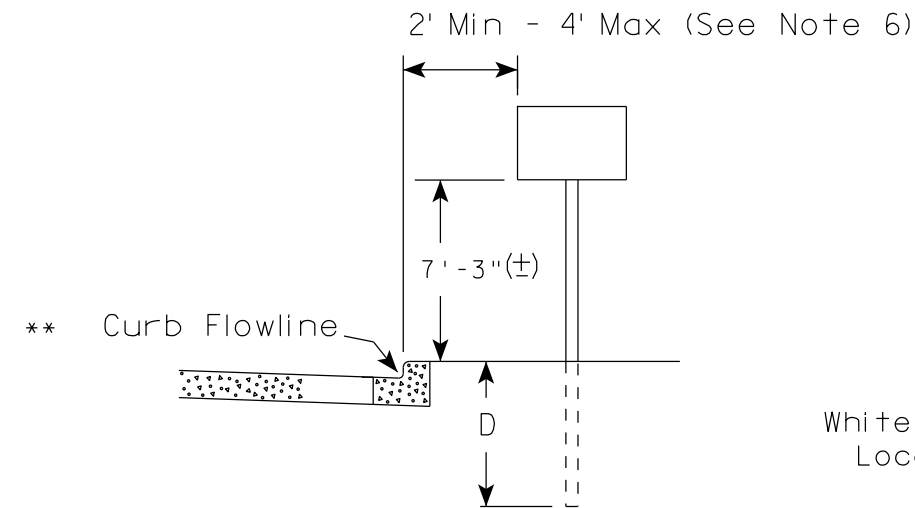
HWY:

COUNTY:

SHEET NO: 87

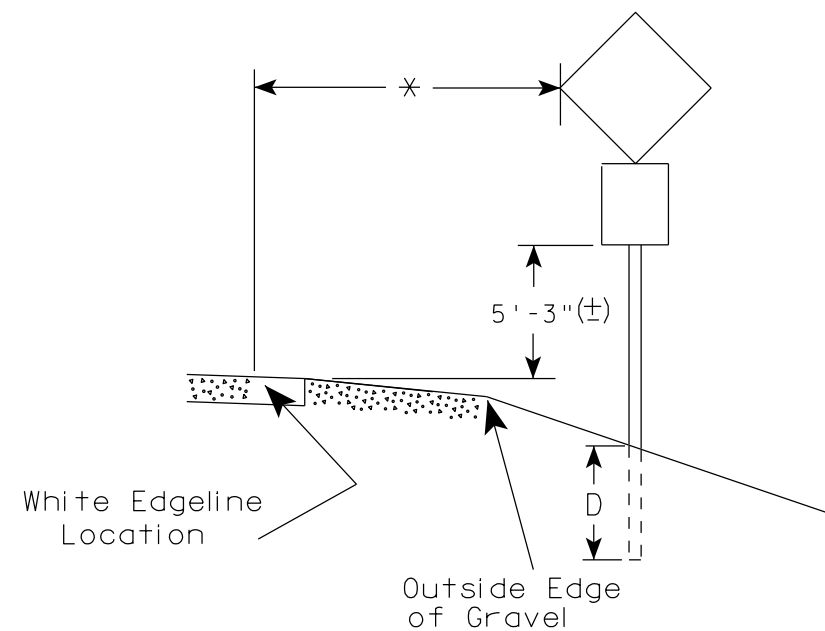
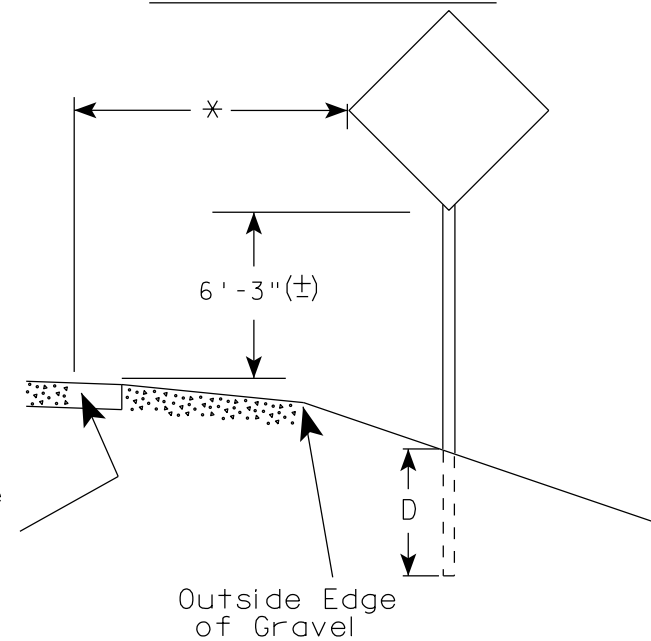
E

URBAN AREA



White Edgeline Location

RURAL AREA (See Note 2)



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.

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 (A2-1S) 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 signs 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), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

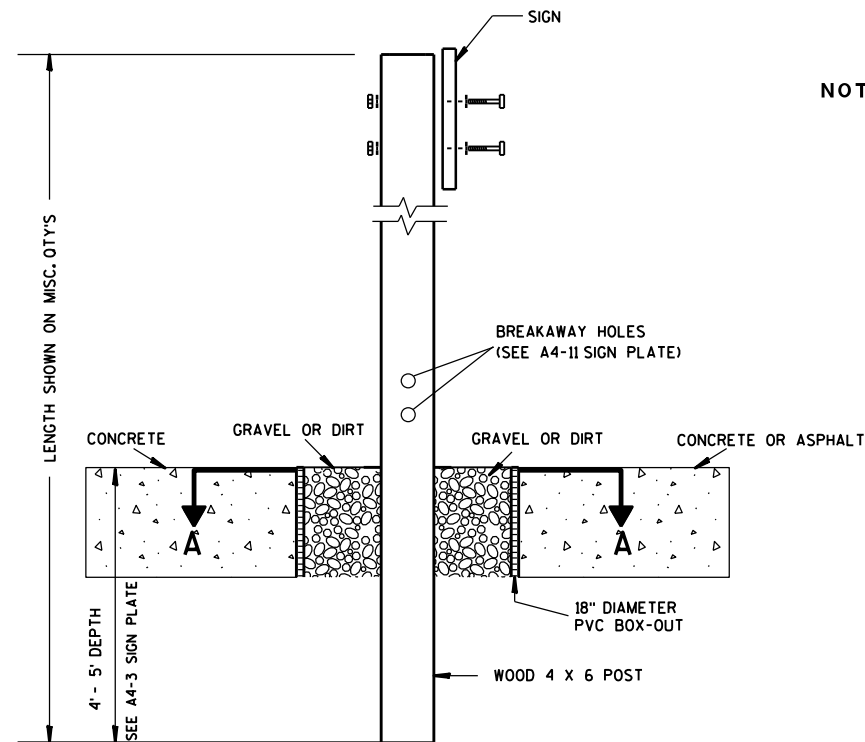
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

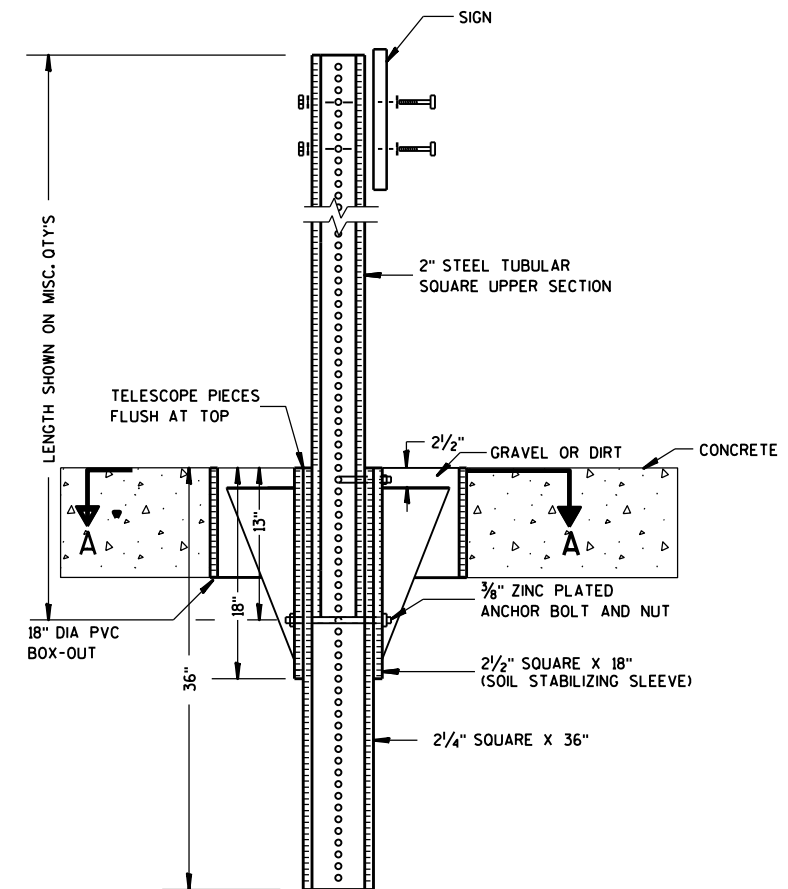
E



ELEVATION VIEW

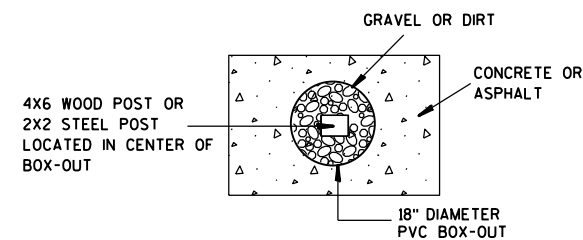
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLAT 89 A4-3B.1

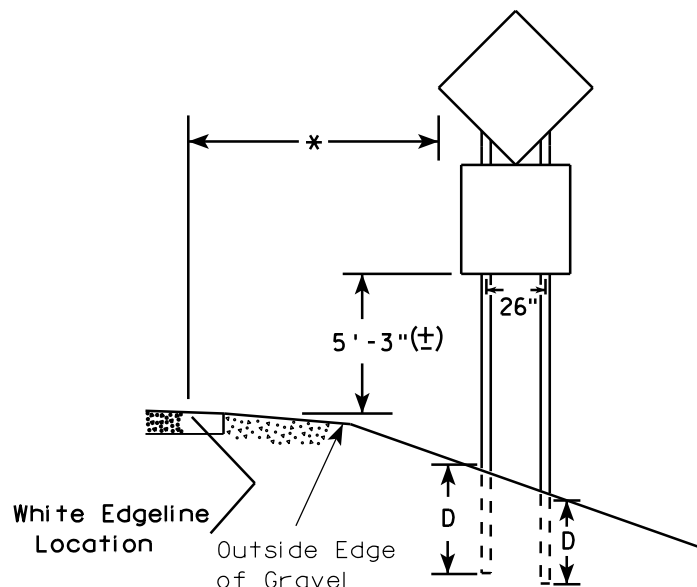
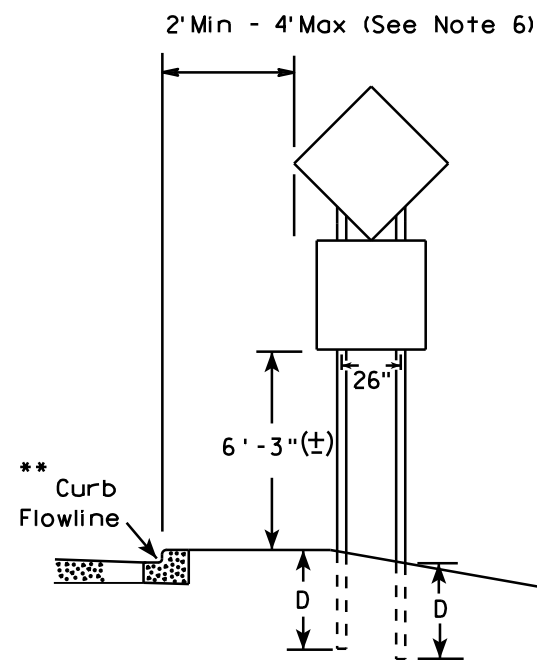
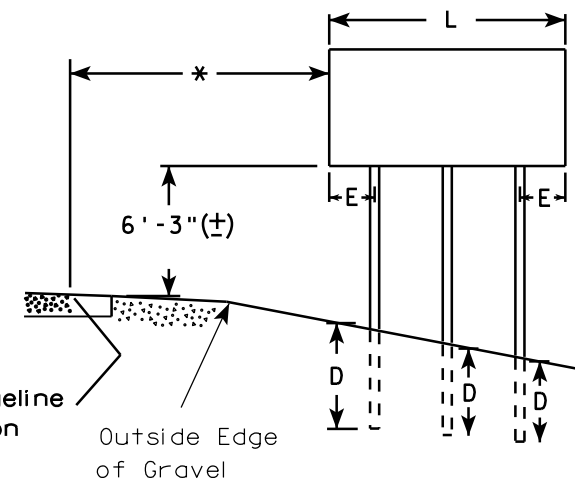
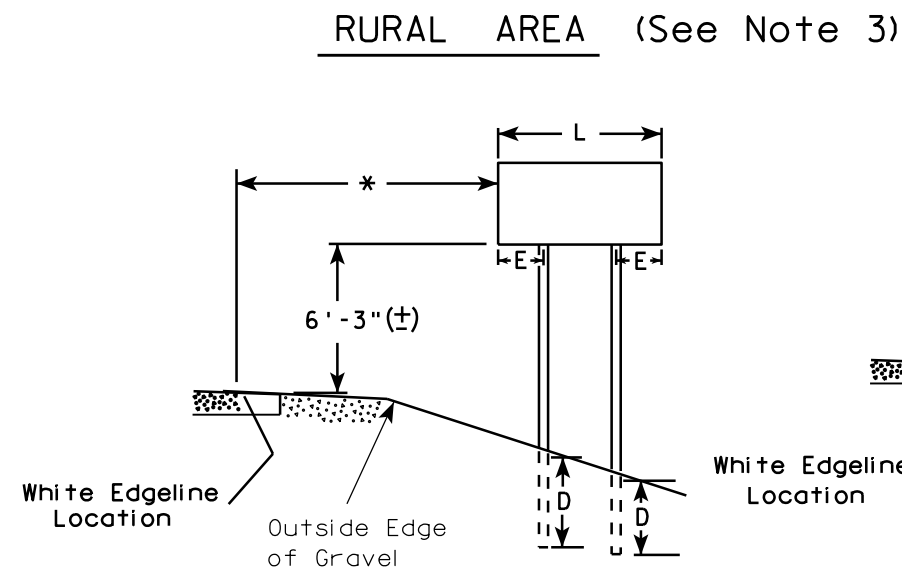
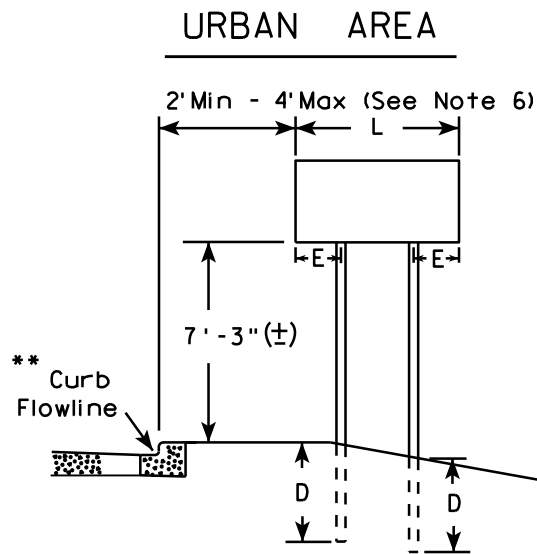
PROJECT NO:

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 (A2-1S) 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 signs 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), In Road Object Markers (W5-54) & End of Road Markers (W5-56) 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 11/12/14 PLATE NO. 13

PROJECT NO:

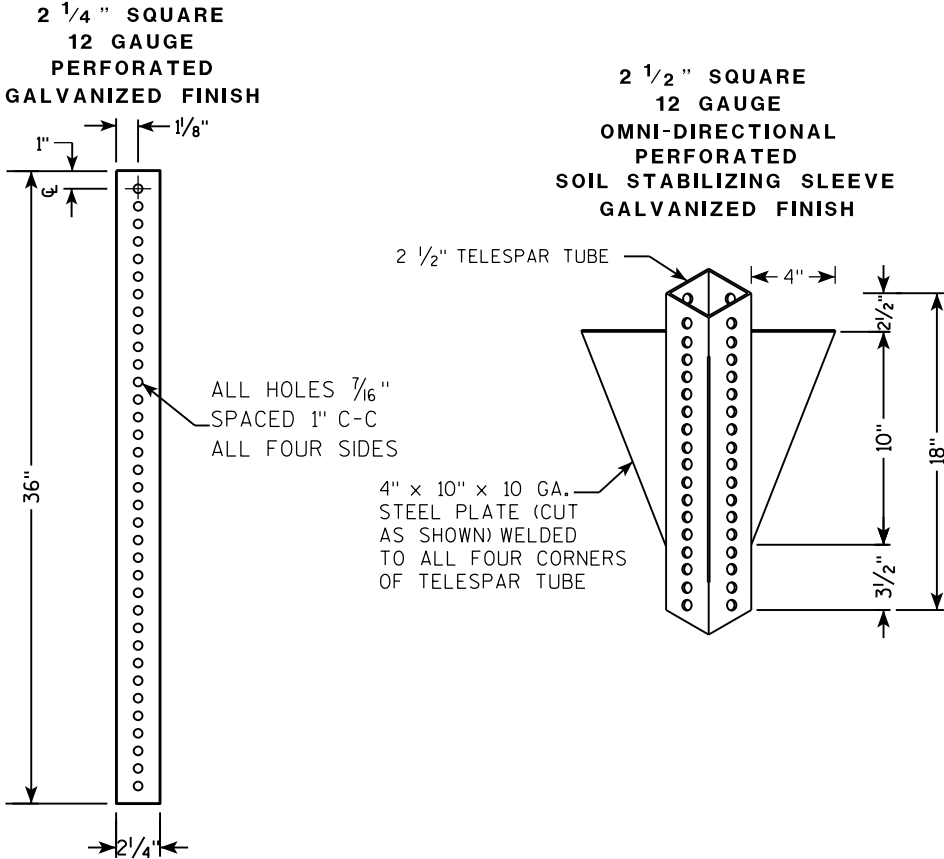
HWY:

COUNTY:

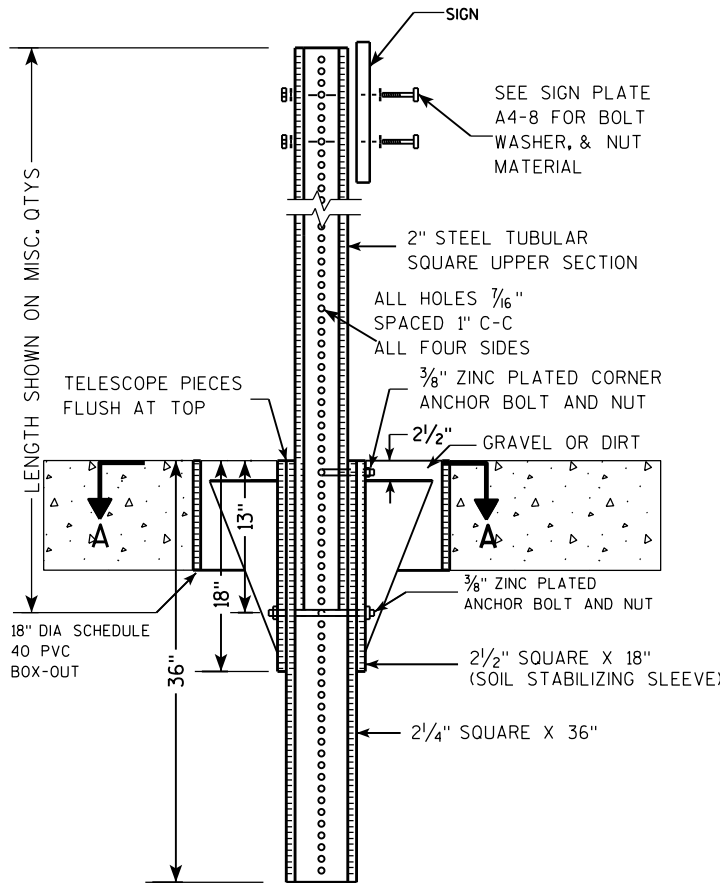
SHEET NO:

E

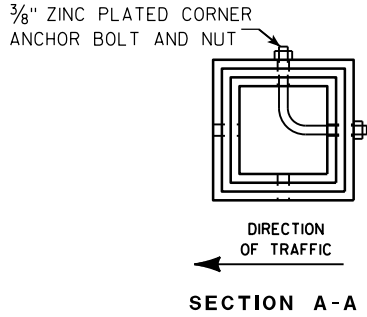
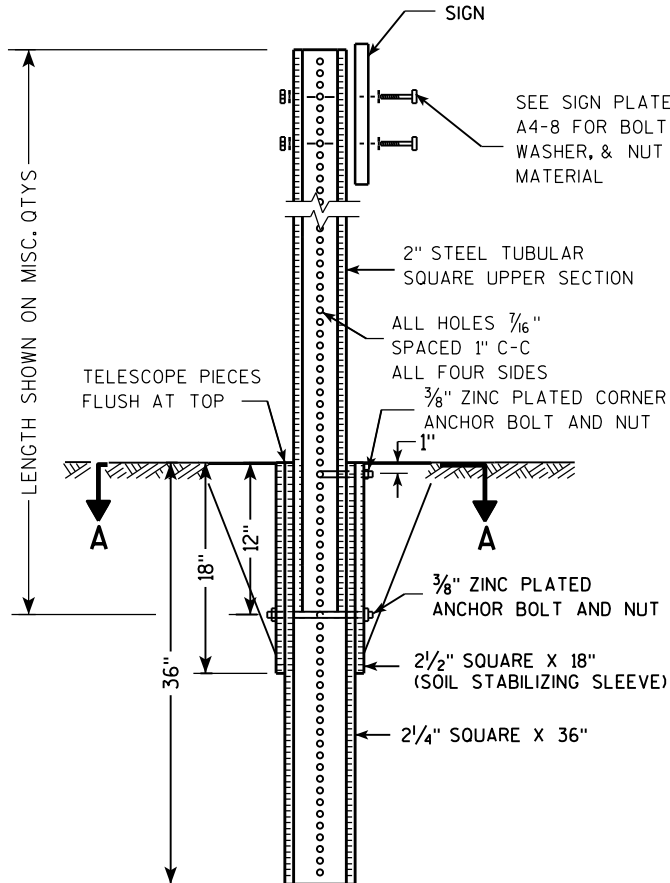
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM



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

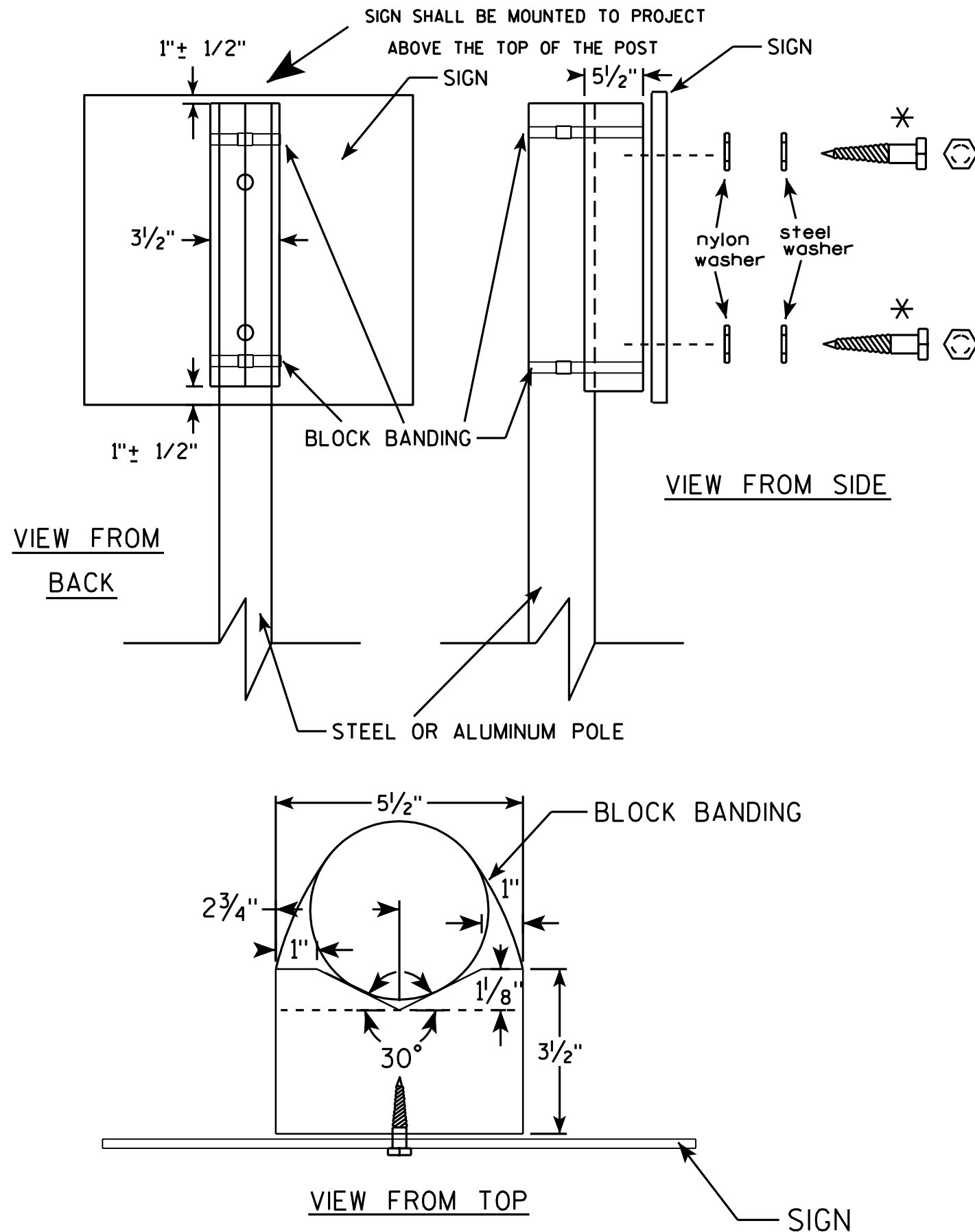
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLAT 91 14-9.9



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

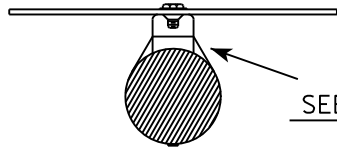
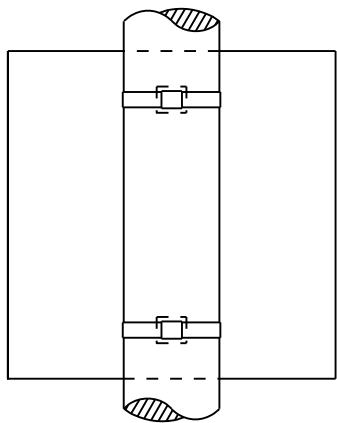
PROJECT NO:

SHEET NO: 92

E

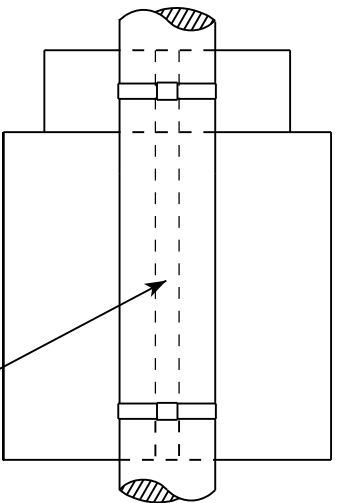
BANDING

SINGLE SIGN

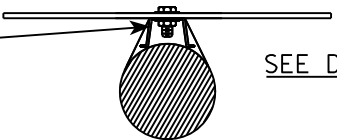


SEE DETAIL A

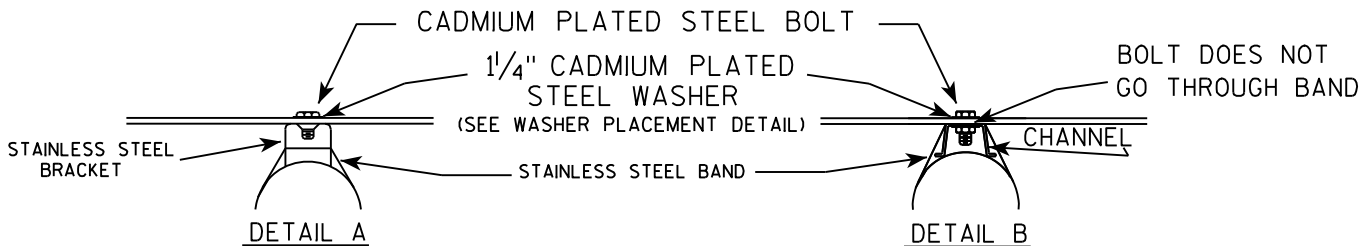
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



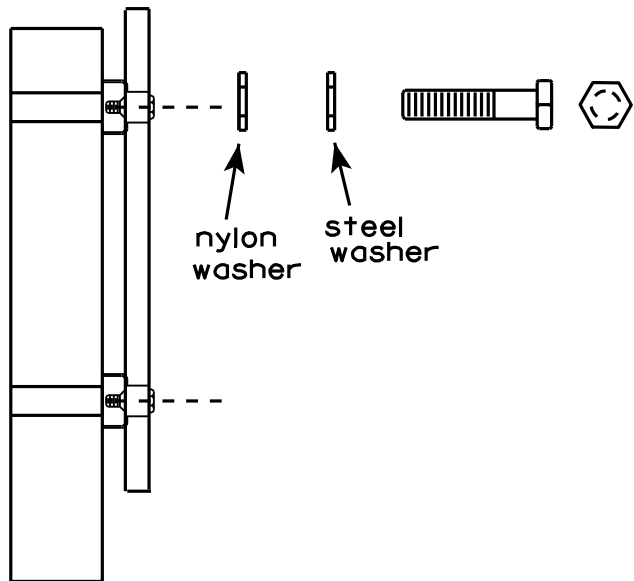
SEE DETAIL B



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



nylon washer

steel washer

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

PROJECT NO:

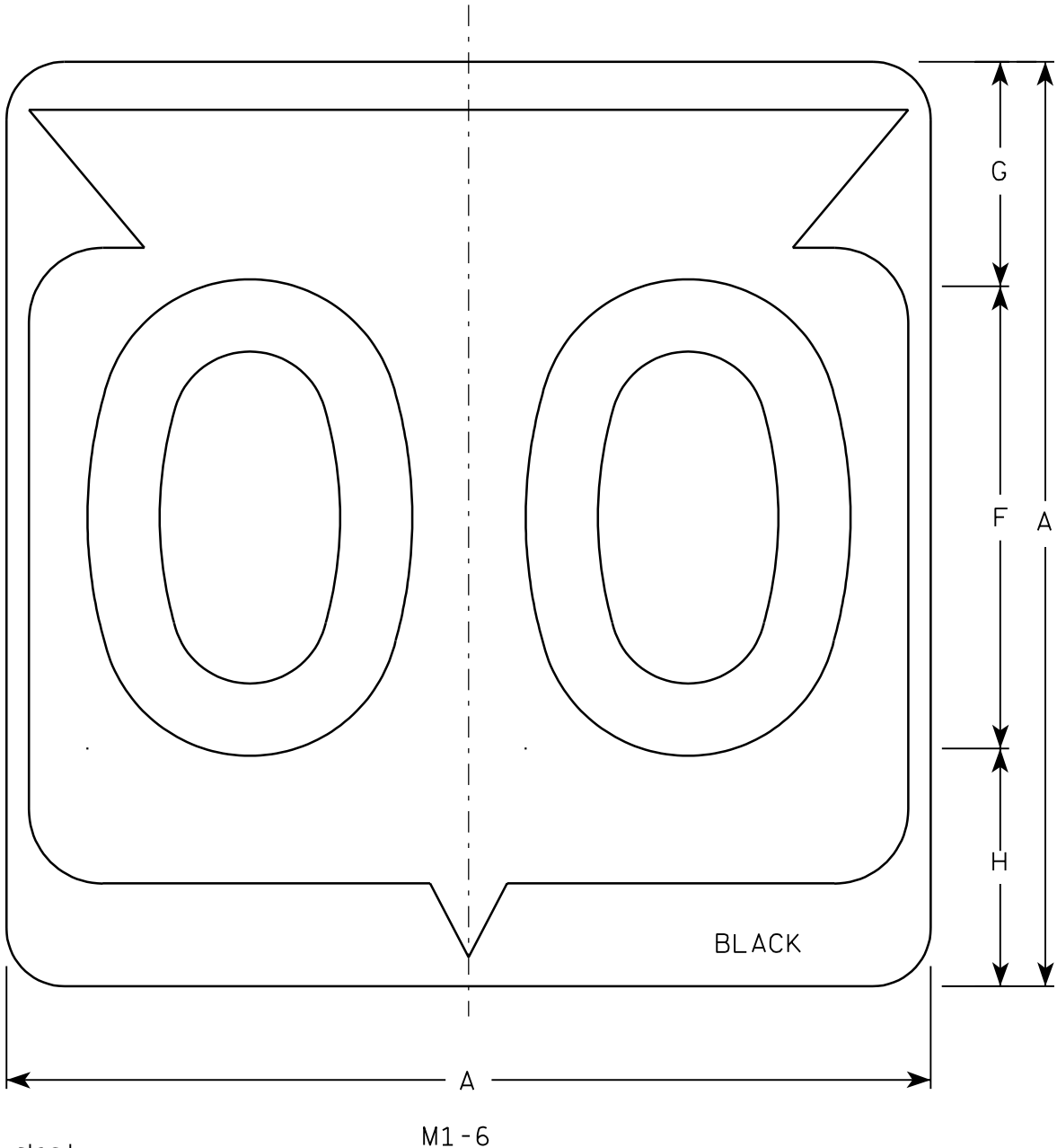
HWY:

COUNTY:

SHEET NO: 93

E

7



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 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	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

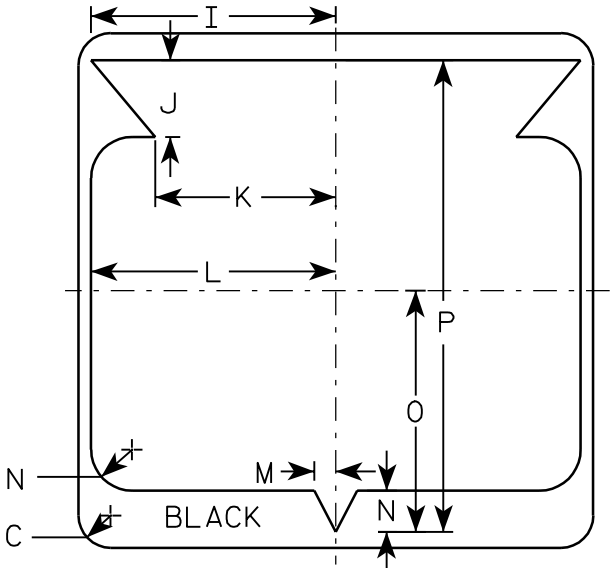
COUNTY:

SHEET NO: 94

E

NOTES

- Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 6
Message - Black
- Message Series - See note 5
- 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.
- Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
- Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

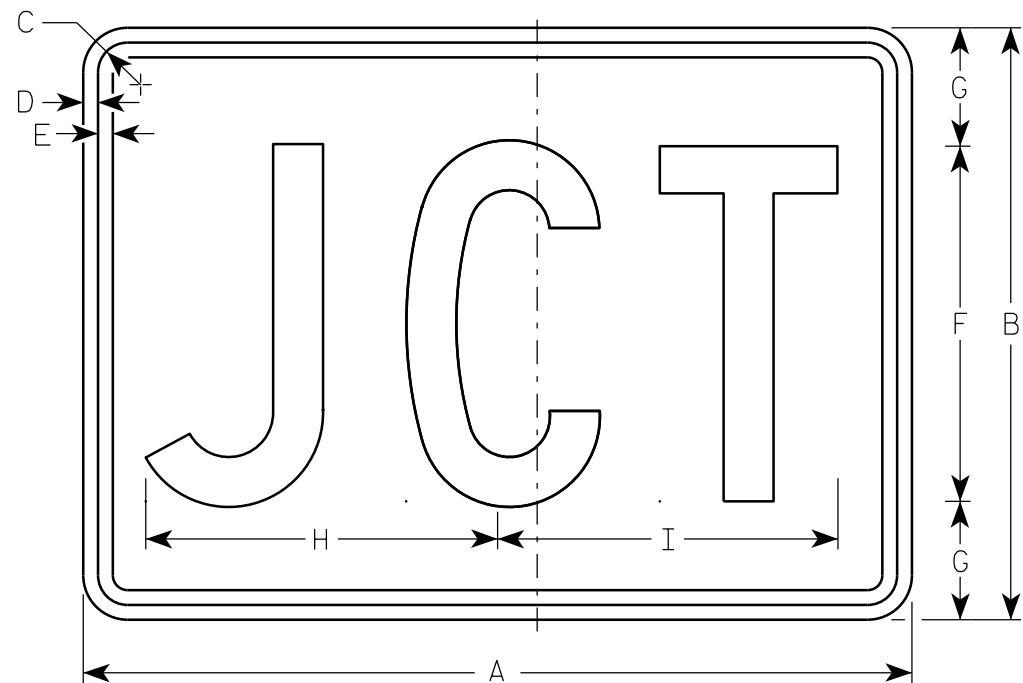
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

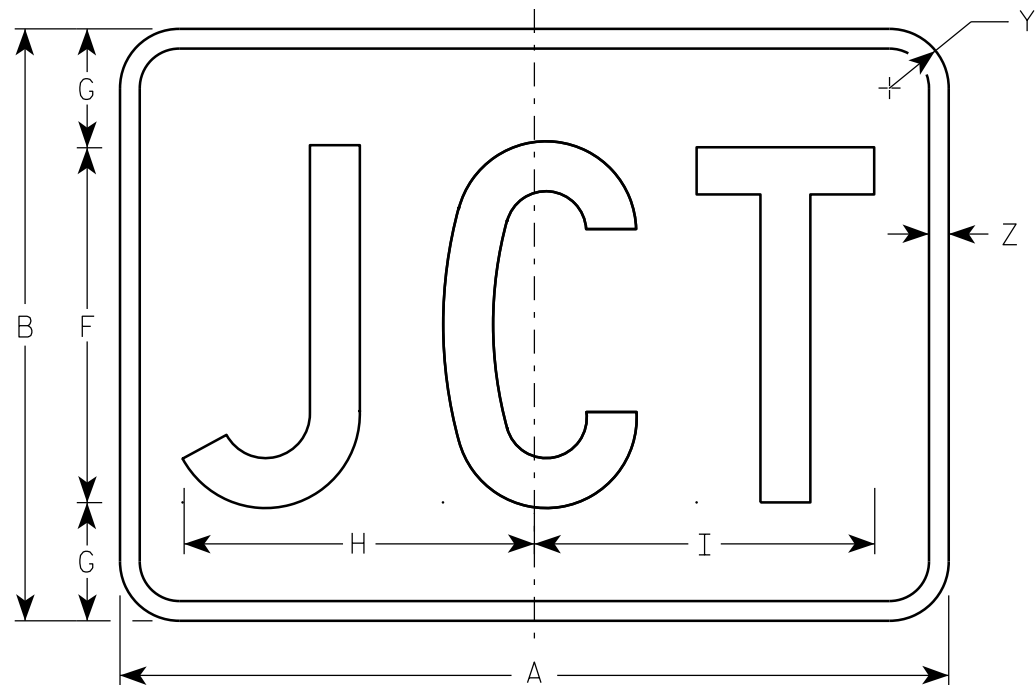

for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9



M2-1
MK2-1
MM2-1
MN2-1
MR2-1



MB2-1

NOTES

1. Sign is 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. M2-1 Background - White
Message - Black
MB2-1 Background - Blue
Message - White
MK2-1 Background - Green
Message - White
MM2-1 Background - White
Message - Green
MN2-1 Background - Brown
Message - White
MR2-1 Background - Brown
Message - Yellow

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	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

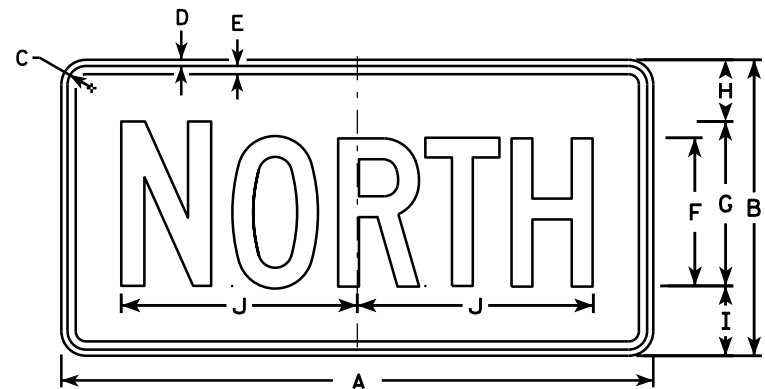
Matthew R. Rauch

For State Traffic Engineer

DATE 6/30/14

PLATE 95

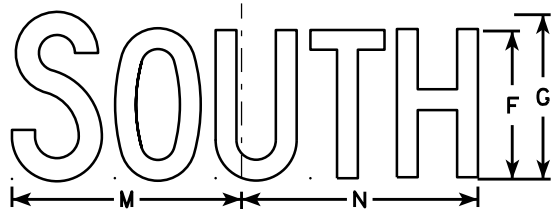
'2-1.11



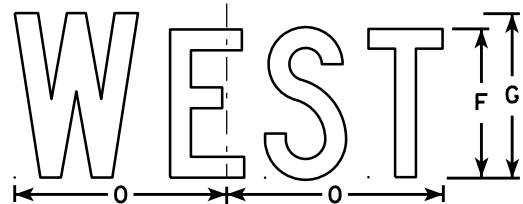
M3-1
MK3-1
MM3-1
MN3-1



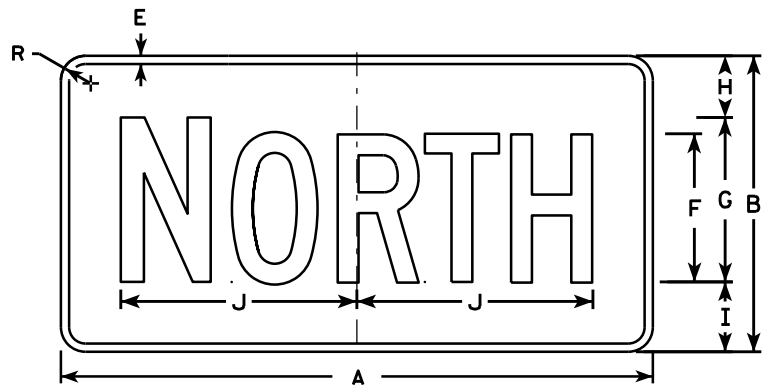
M3-2
MK3-2
MM3-2
MN3-2



M3-3
MK3-3
MM3-3
MN3-3



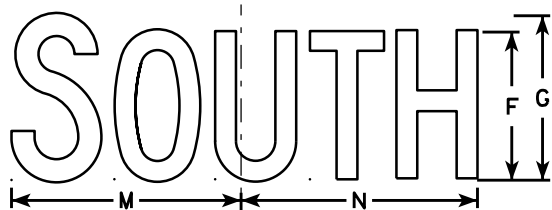
M3-4
MK3-4
MM3-4
MN3-4



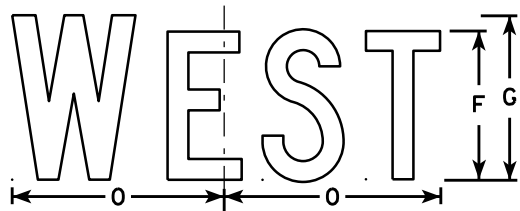
MB3-1



MB3-2



MB3-3



MB3-4

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
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.

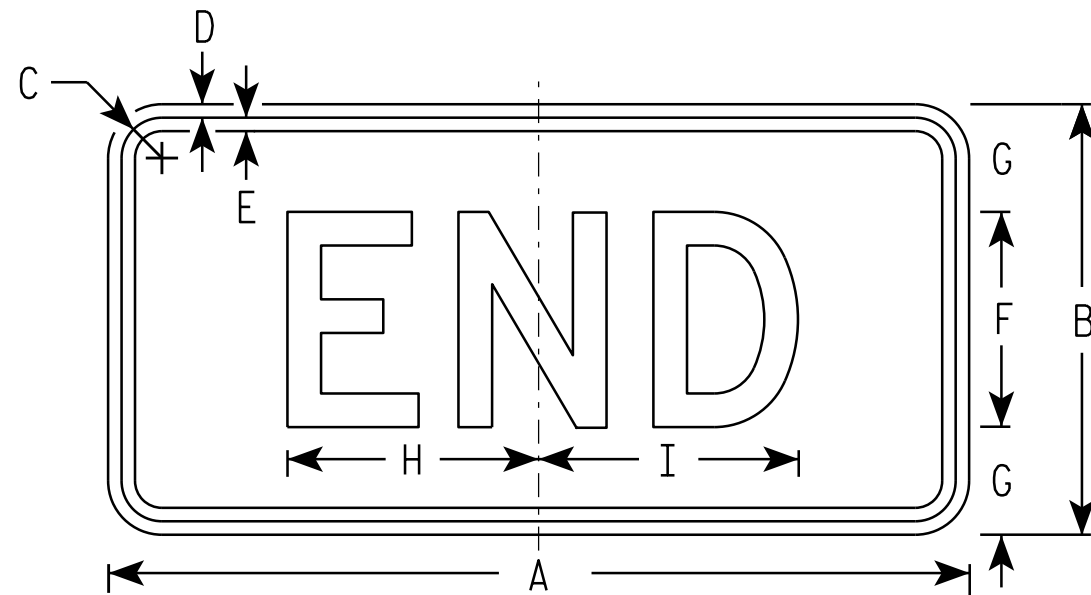
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	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

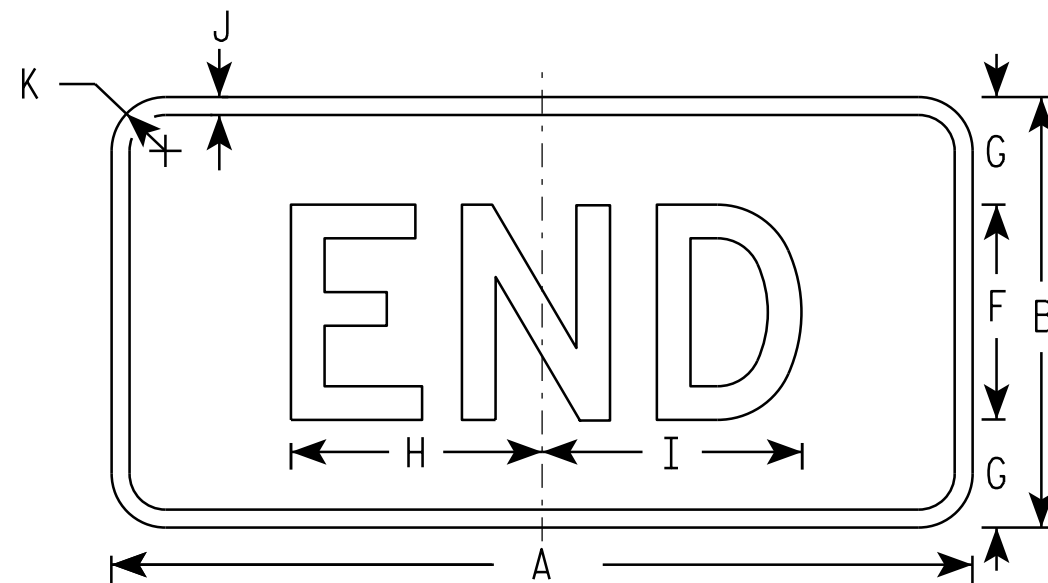
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/30/14 PLAT 96 M3-1.13



M4-6
MK4-6
MM4-6
MN4-6
MR4-6



MB4-6

NOTES

- Sign is Type II - Type H
- Color:
Background - See note 5
Message - See note 5
- 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.
- M4-6 Background - White
Message - Black
MB4-6 Background - Blue
Message - White
MK4-6 Background - Green
Message - White
MM4-6 Background - White
Message - Green
MN4-6 Background - Brown
Message - White
MR4-6 Background - Brown
Message - Yellow

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	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

STANDARD SIGN M4-6

WISCONSIN DEPT OF TRANSPORTATION

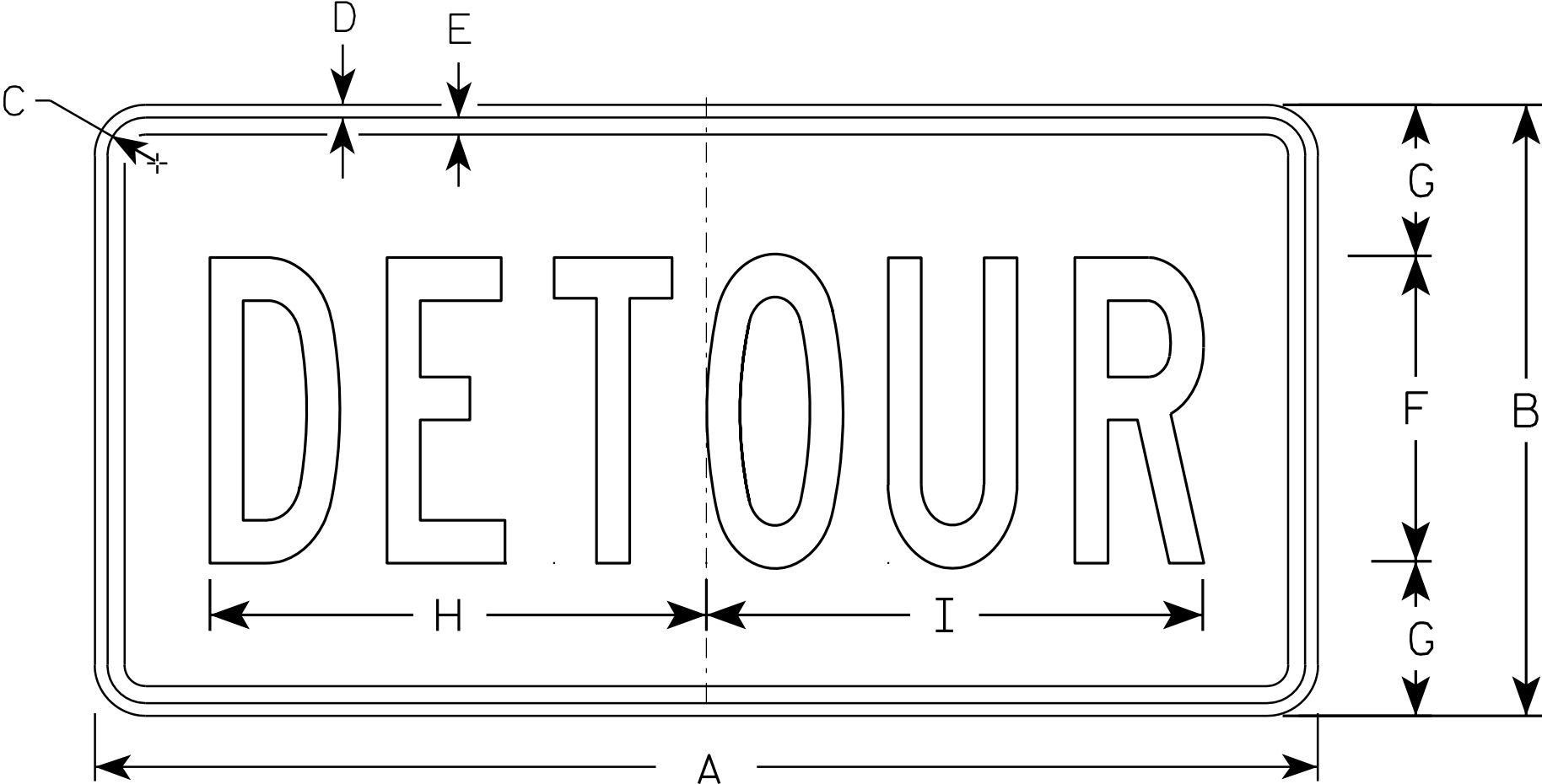
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/30/14 PLAT 97 '14-7.8

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 - 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.



M4 - 8

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	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

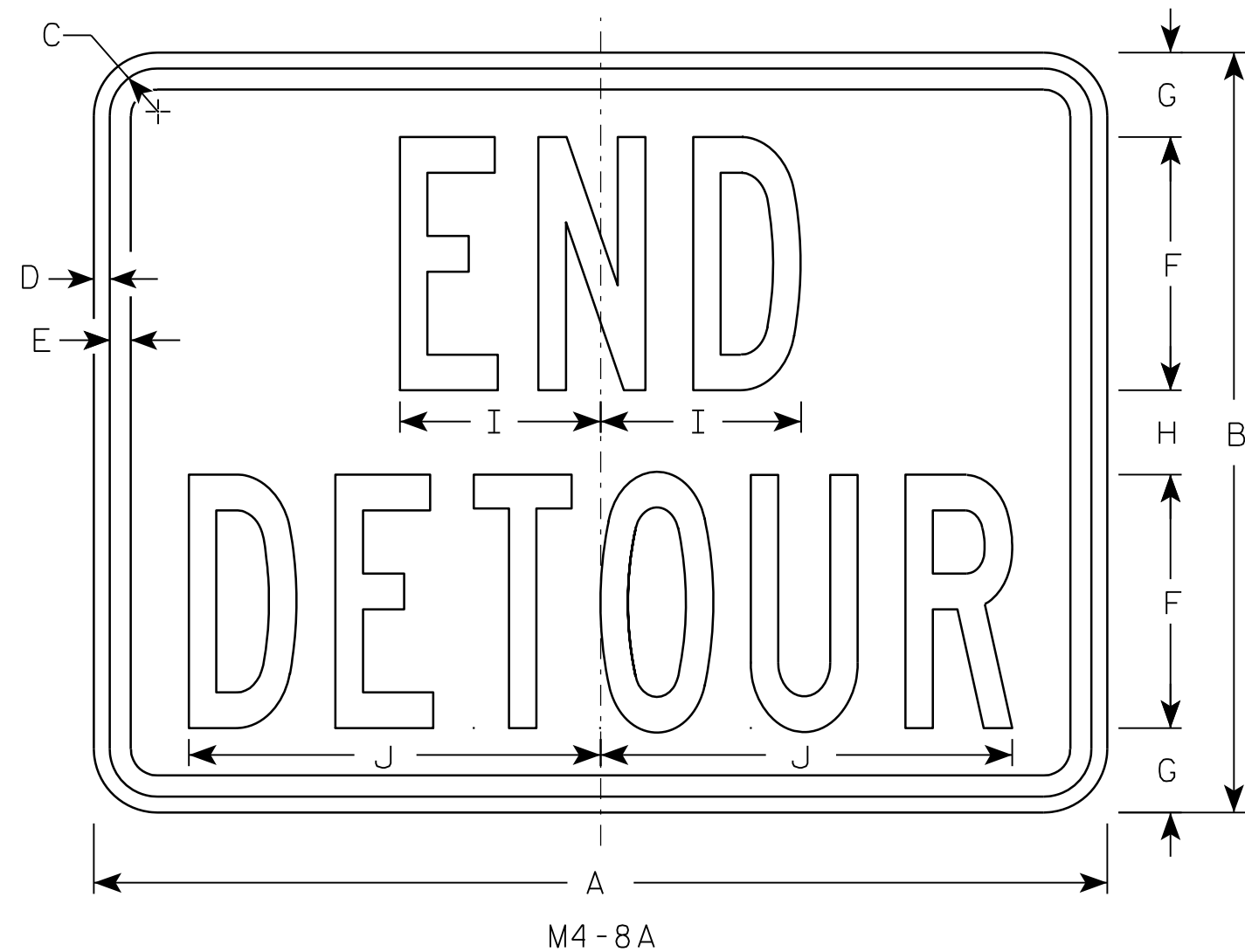
STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

7



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 - 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.

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	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

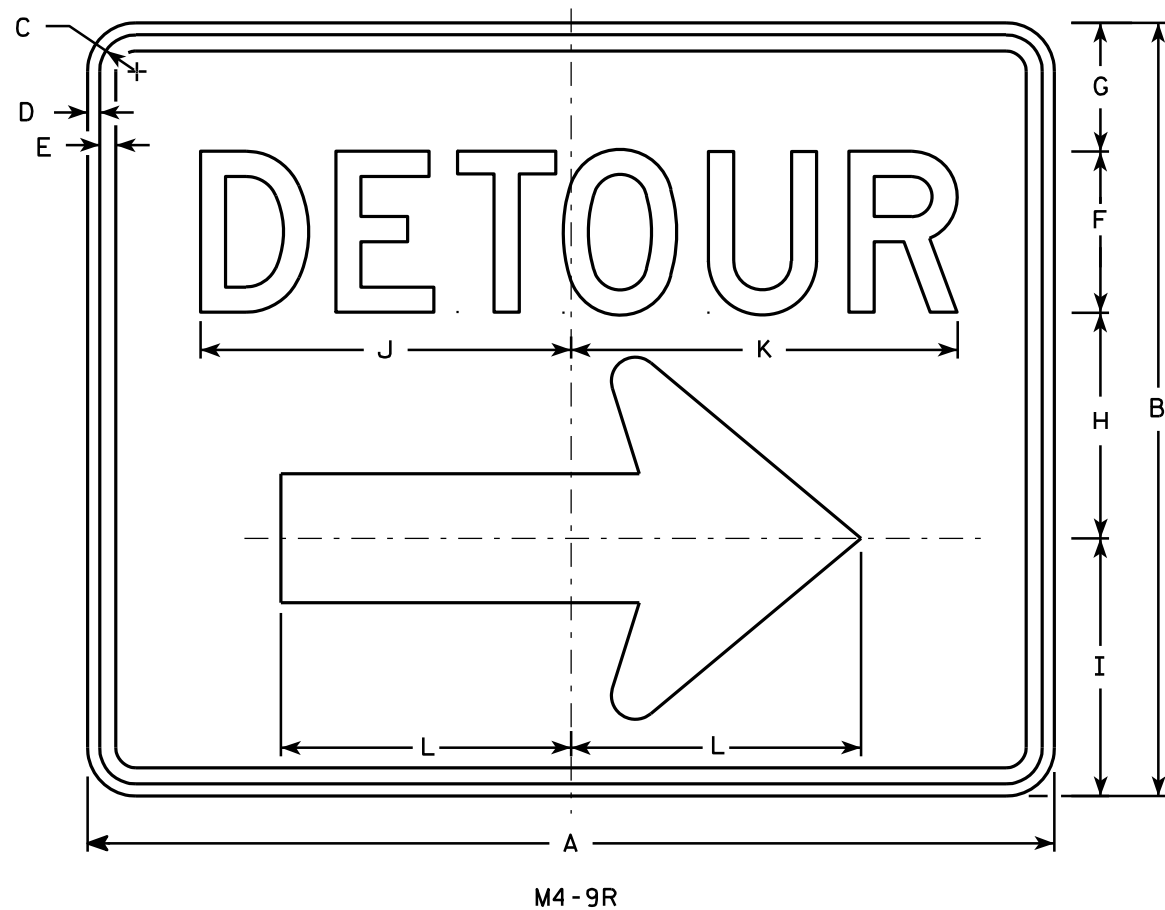
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	E
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STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

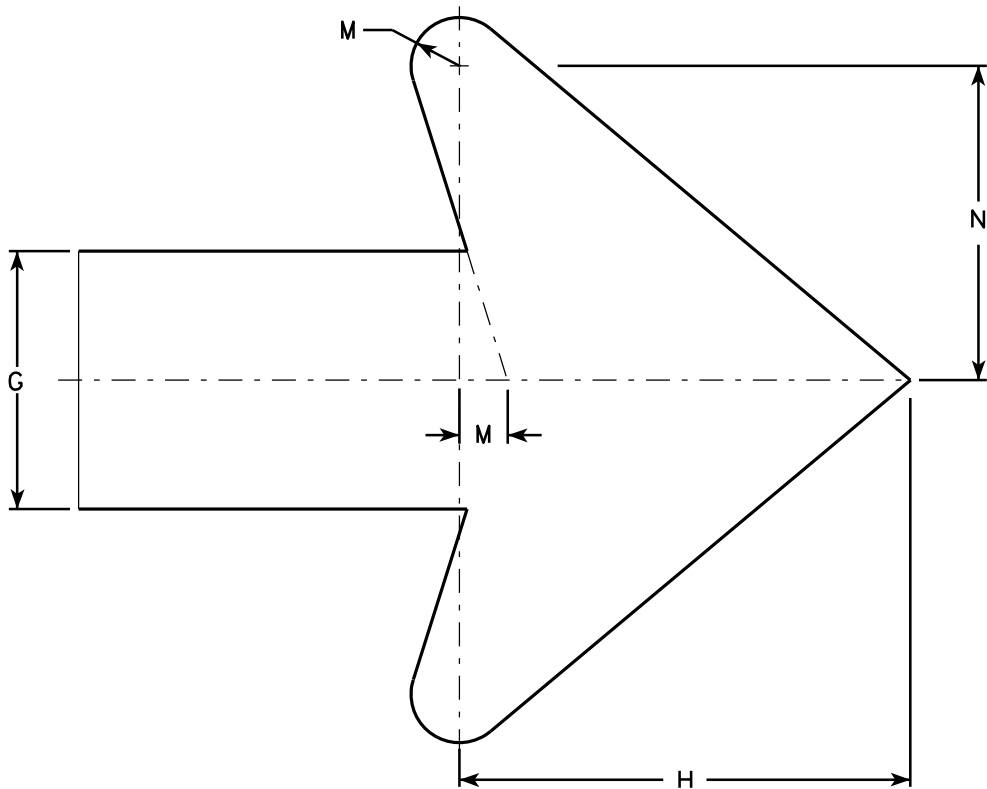
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2



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 - 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. M4-9L is the same as M4-9R except the arrow is reversed.



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																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

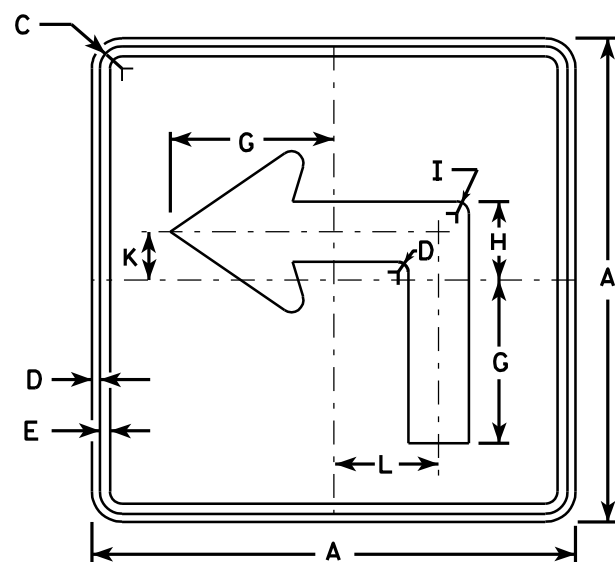
PROJECT NO:

HWY:

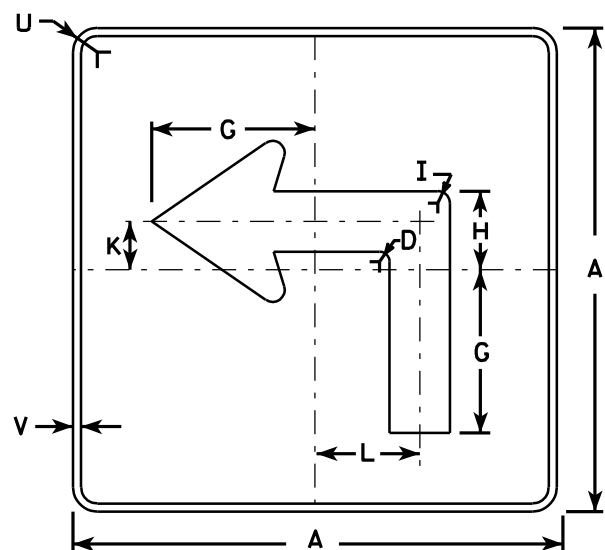
COUNTY:

SHEET NO: 100

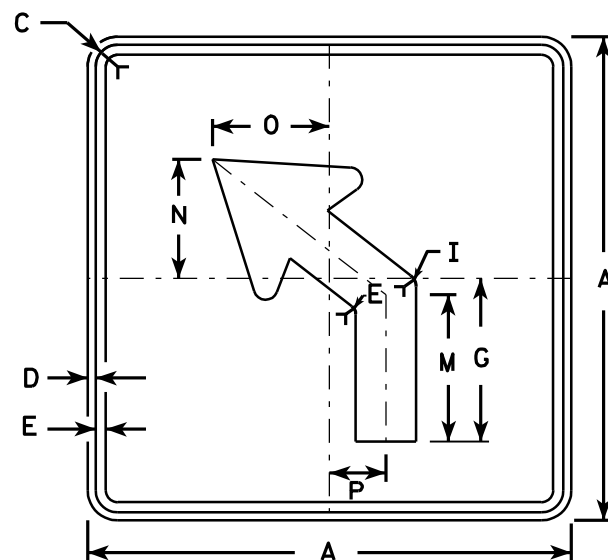
E



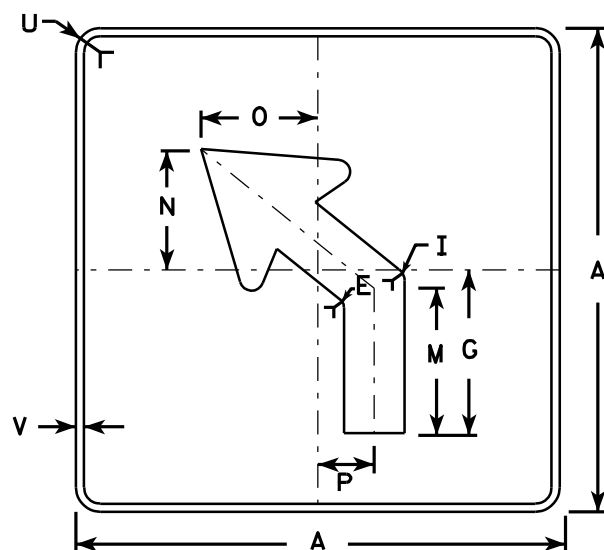
M5-1L
MK5-1L
MM5-1L
M05-1L
MP5-1L
MR5-1L



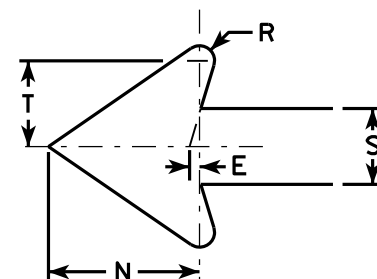
MB5-1L
MG5-1L
MN5-1L



M5-2L
MK5-2L
MM5-2L
M05-2L
MP5-2L
MR5-2L



MB5-2L
MG5-2L
MN5-2L

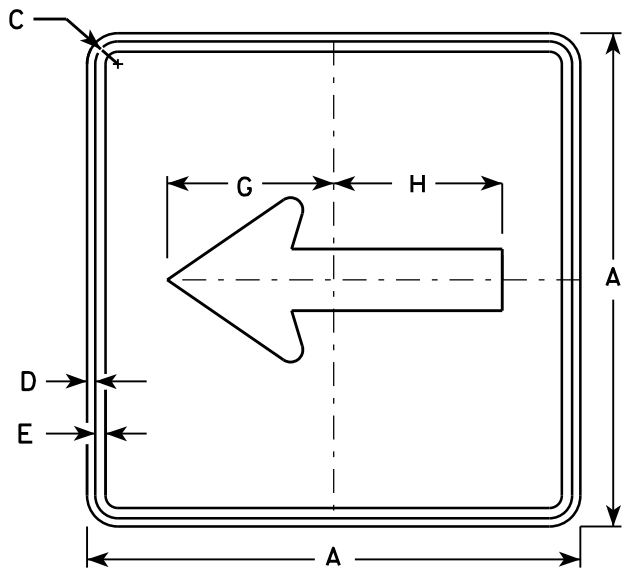


NOTES

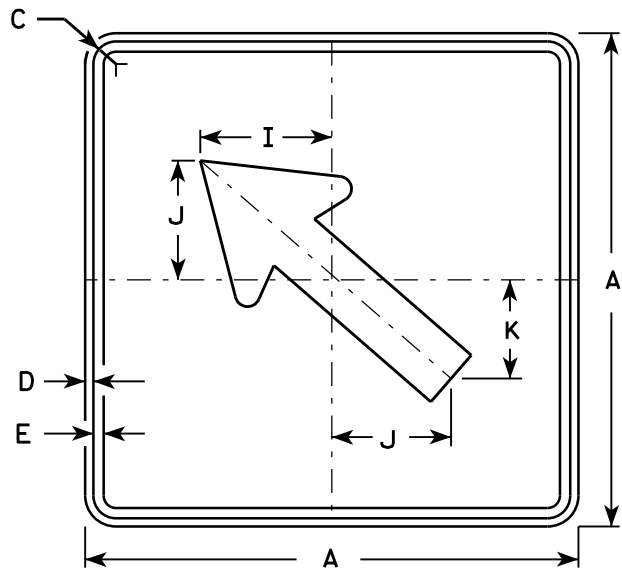
- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White - Type H Reflective
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White - Type H Reflective
MG5-1 and MG5-2 Background - Green
Message - White - Type H Reflective
MK5-1 and MK5-2 Background - Green
Message - White Type H Reflective
MM5-1 and MM5-2 Background - White - Type H Reflective
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White - Type H Reflective
M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
MR5-1 and MR5-2 Background - Brown
Message - Yellow - Type H Reflective
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts 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	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

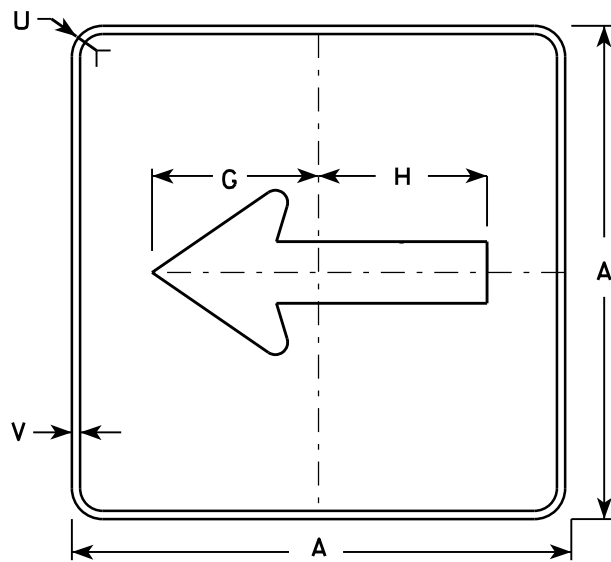
STANDARD SIGN	
M5-1 & M5-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/29/13	PLATE NO. M5-1.12



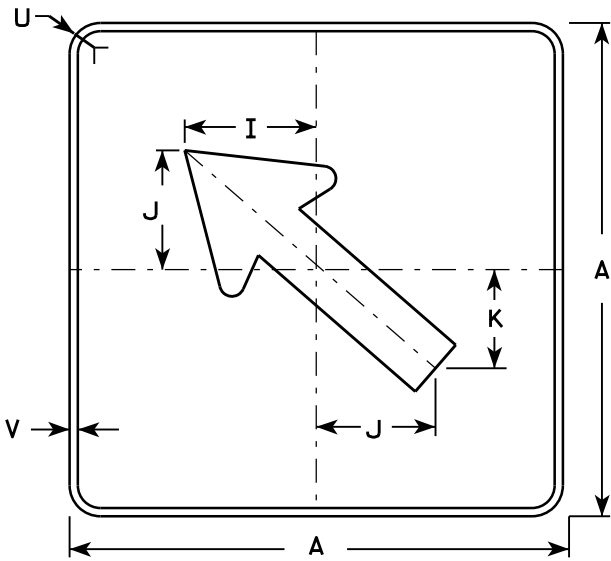
M6 - 1
MK6 - 1
MM6 - 1
MN6 - 1
M06 - 1
MP6 - 1
MR6 - 1



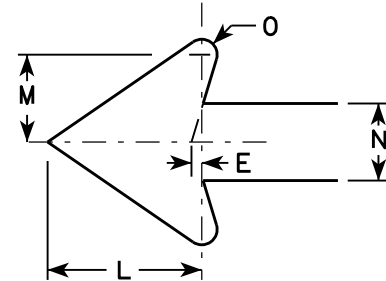
M6 - 2
MK6 - 2
MM6 - 2
MN6 - 2
M06 - 2
MP6 - 2
MR6 - 2



MB6 - 1



MB6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- 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
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MG6-1 and MG6-2 Background - Green
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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

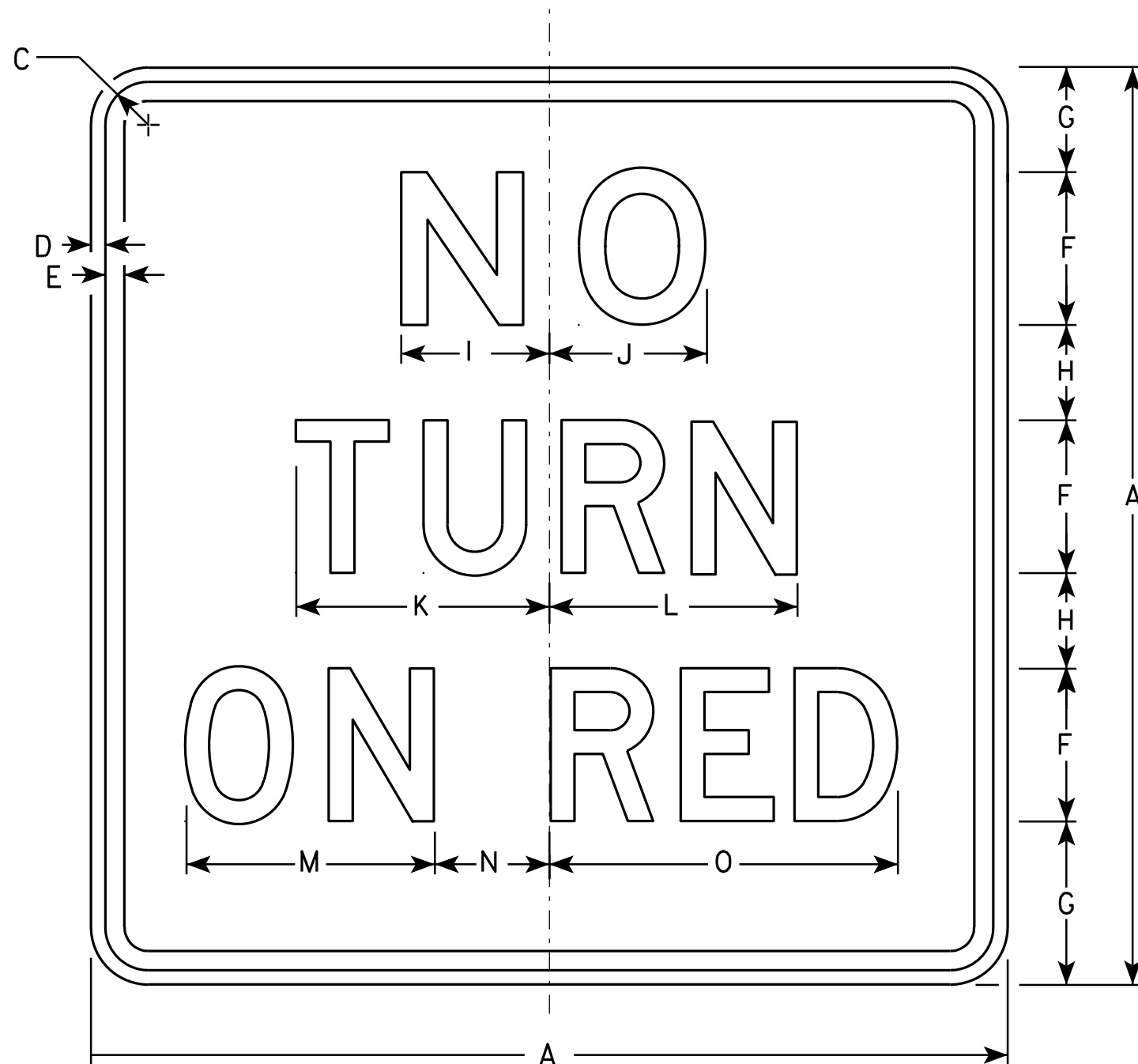
STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 7/03/14 PLAT 102 M6-1.14

7



R10-11B

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 - 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. Line 1 is Series E.
Lines 2 and 3 are Series D.

7

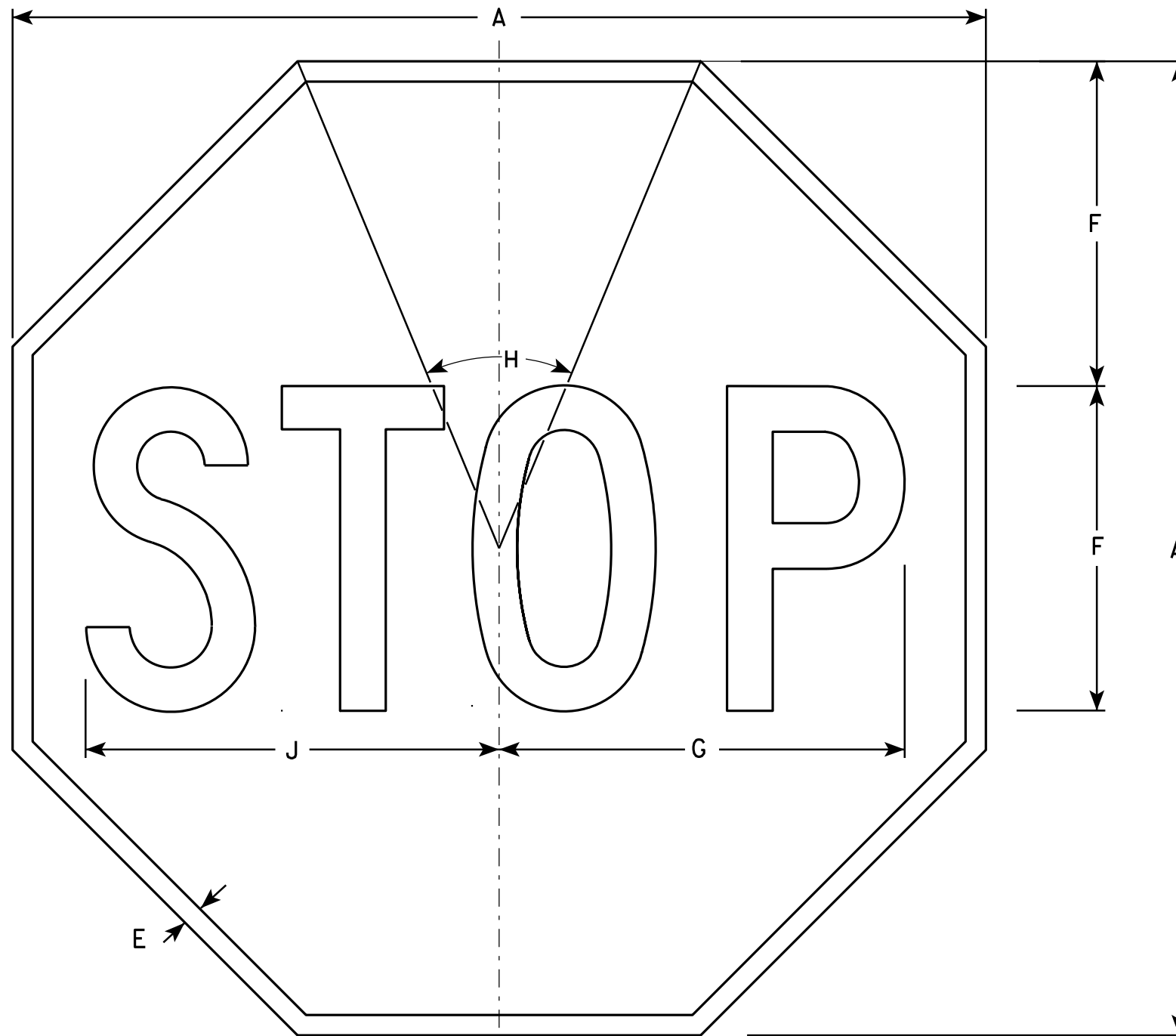
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8	3/8	3/8	3	2 3/4	1 3/4	3	3 1/8	5	4 7/8	5 1/4	1 7/8	7 1/8												2.25
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	3 7/8	4 1/8	6 5/8	6 1/2	6 1/2	3	9 1/8												4.0
3	30		1 3/8	1/2	5/8	5	4 1/2	3	4 7/8	5 1/4	8 1/4	8 1/8	7 3/4	4 1/8	11 7/8												6.25
4																											
5																											

STANDARD SIGN
R10-11B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-11B.4



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

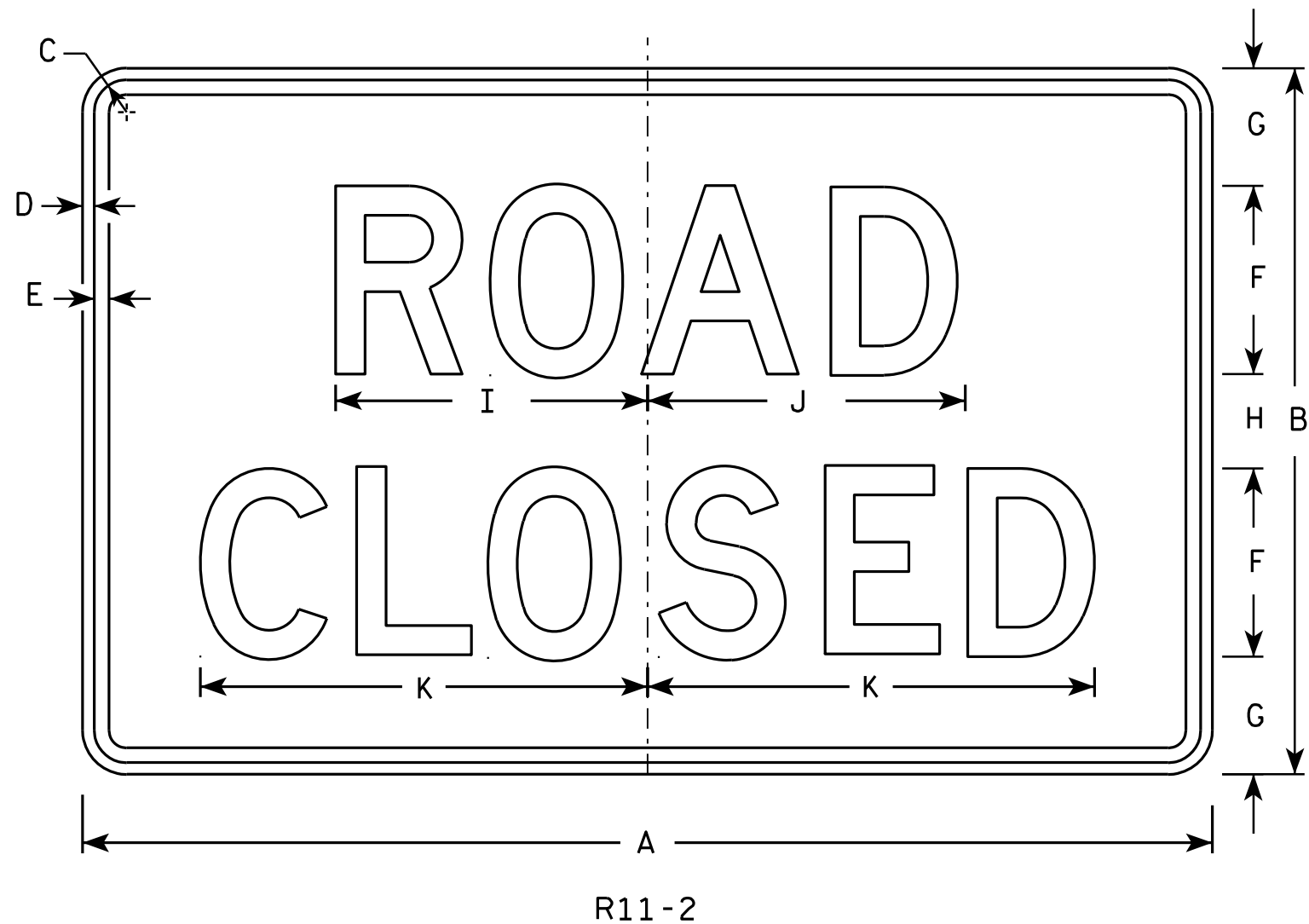
STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

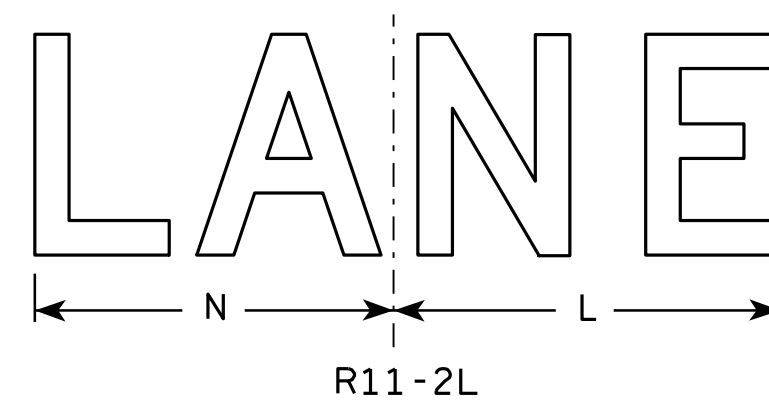
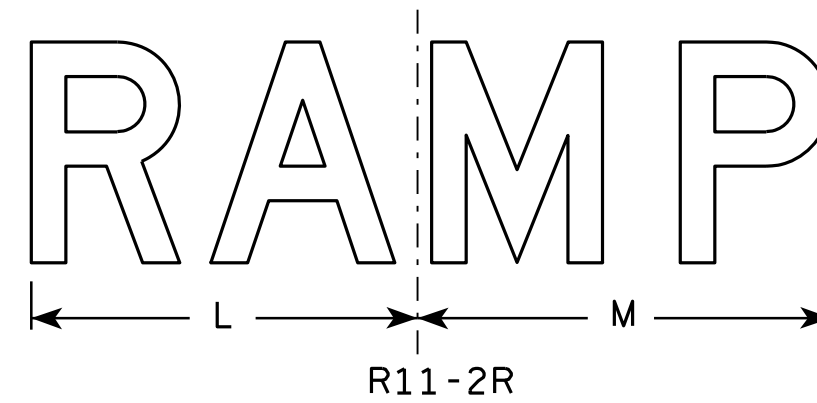
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 104	E
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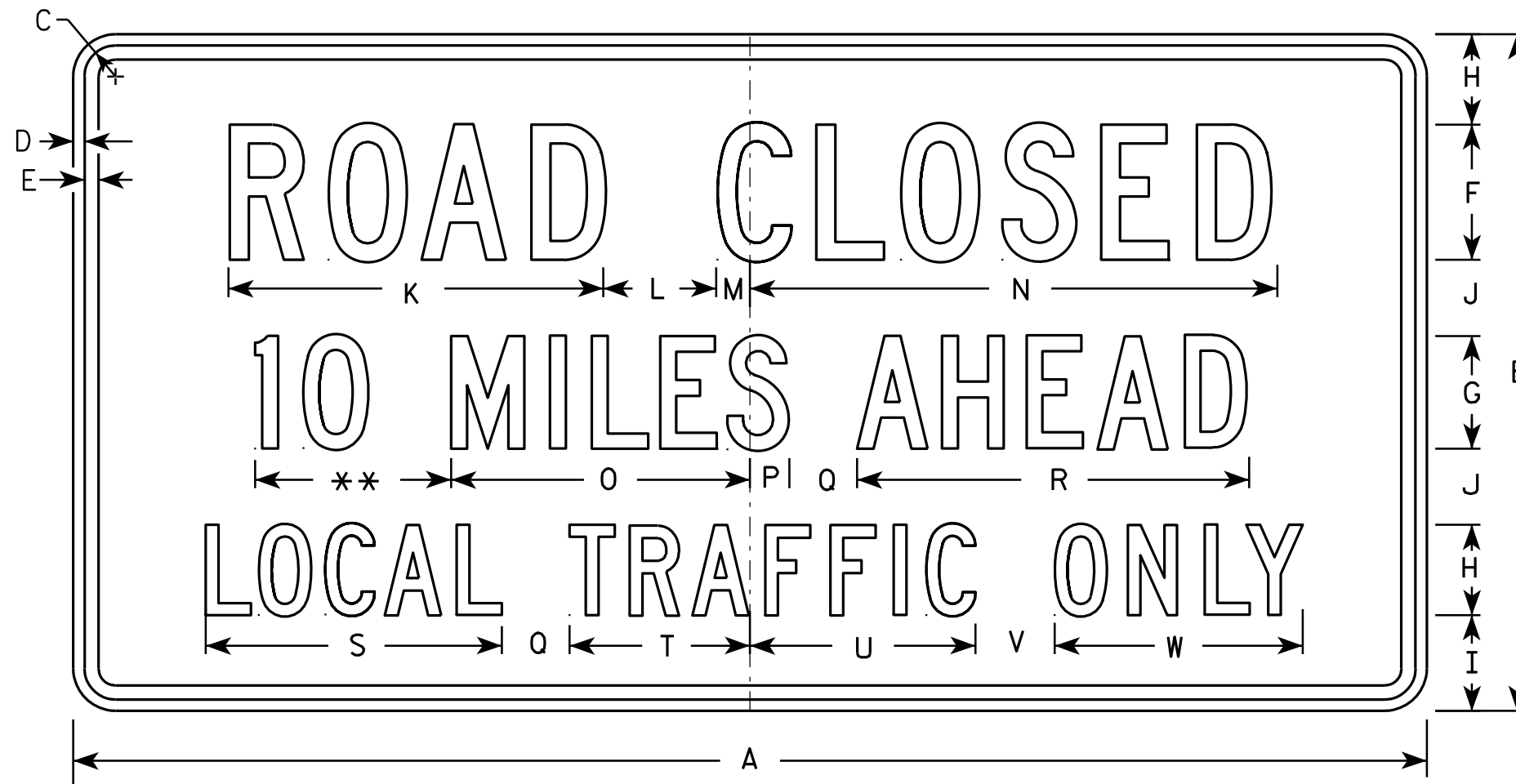
- NOTES
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.



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	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:	
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R11-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
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.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** See Note 5

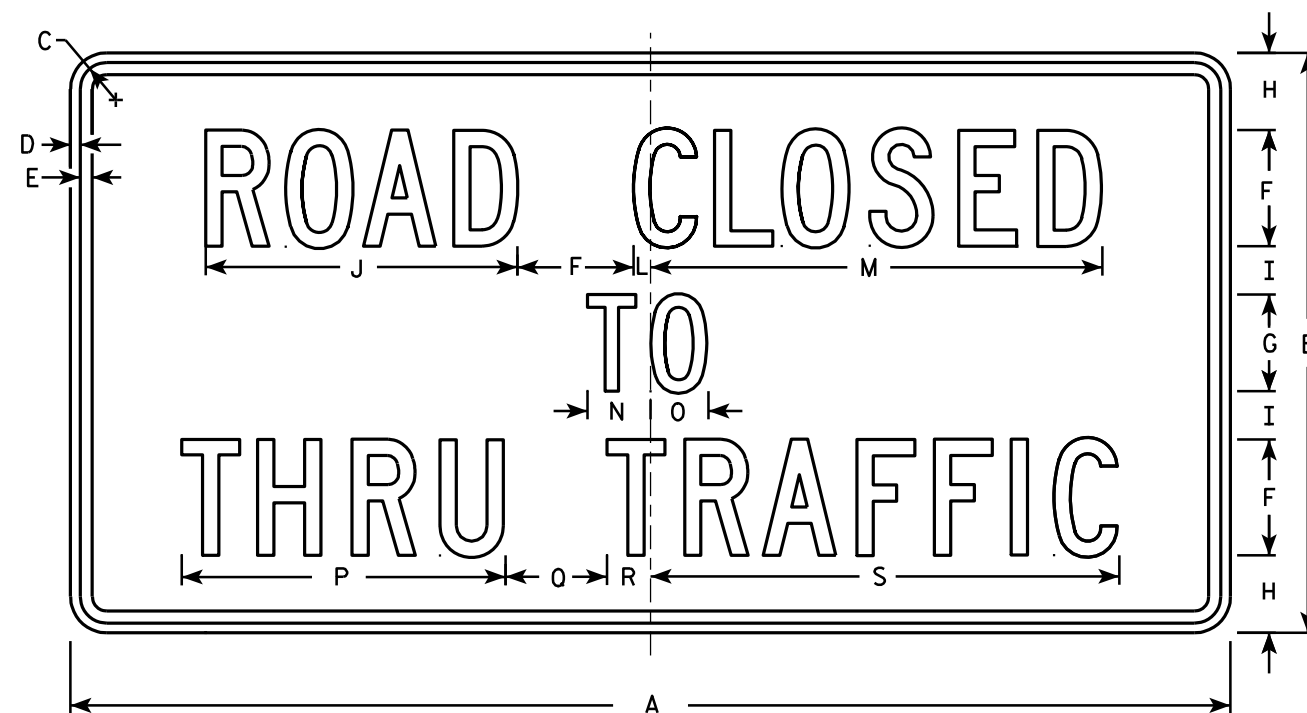
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

STANDARD SIGN R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-3.6

PROJECT NO: HWY: COUNTY: SHEET NO: 106 E



R11-4

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 - 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																											
2S	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

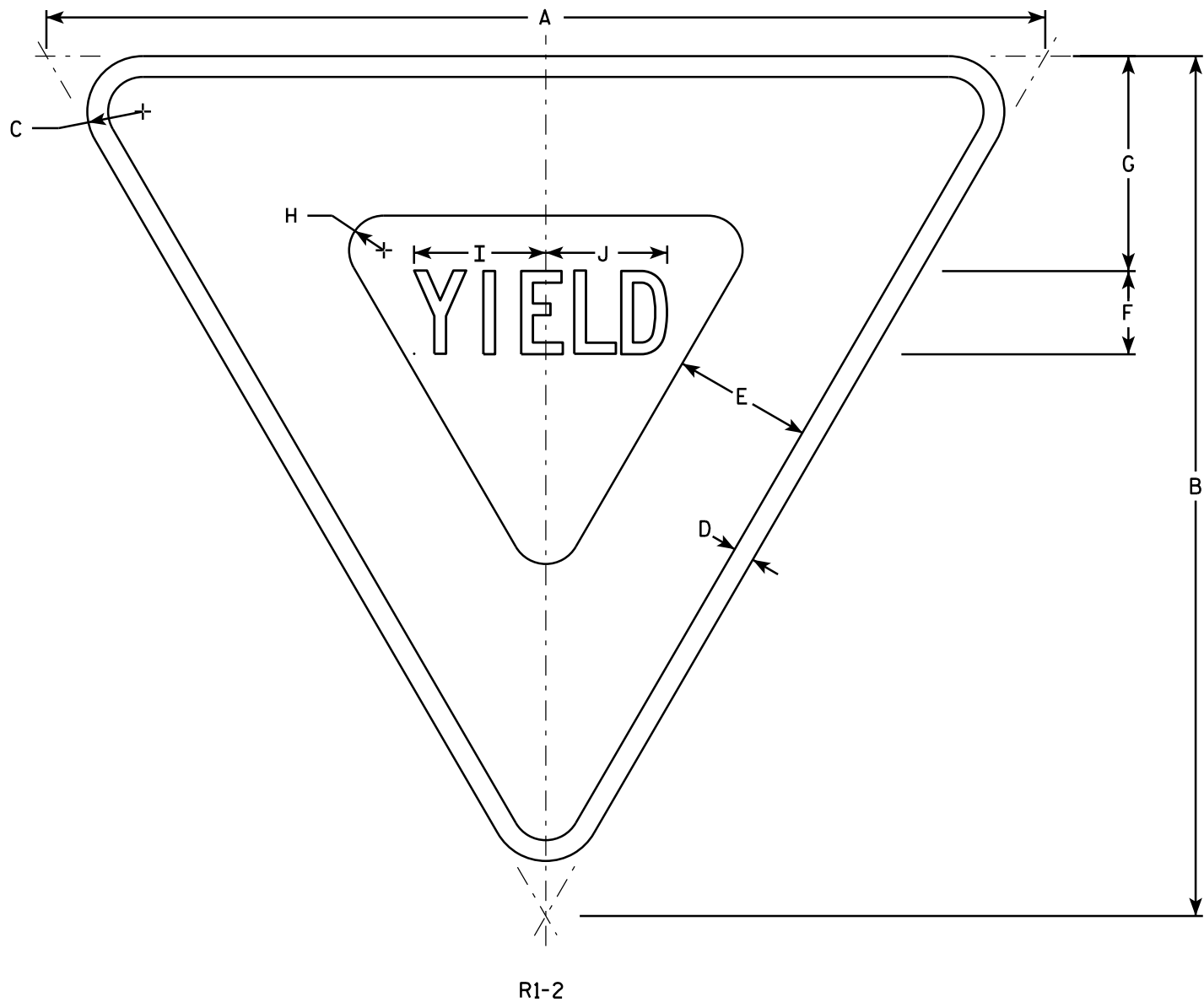
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 107

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 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.

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																											
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

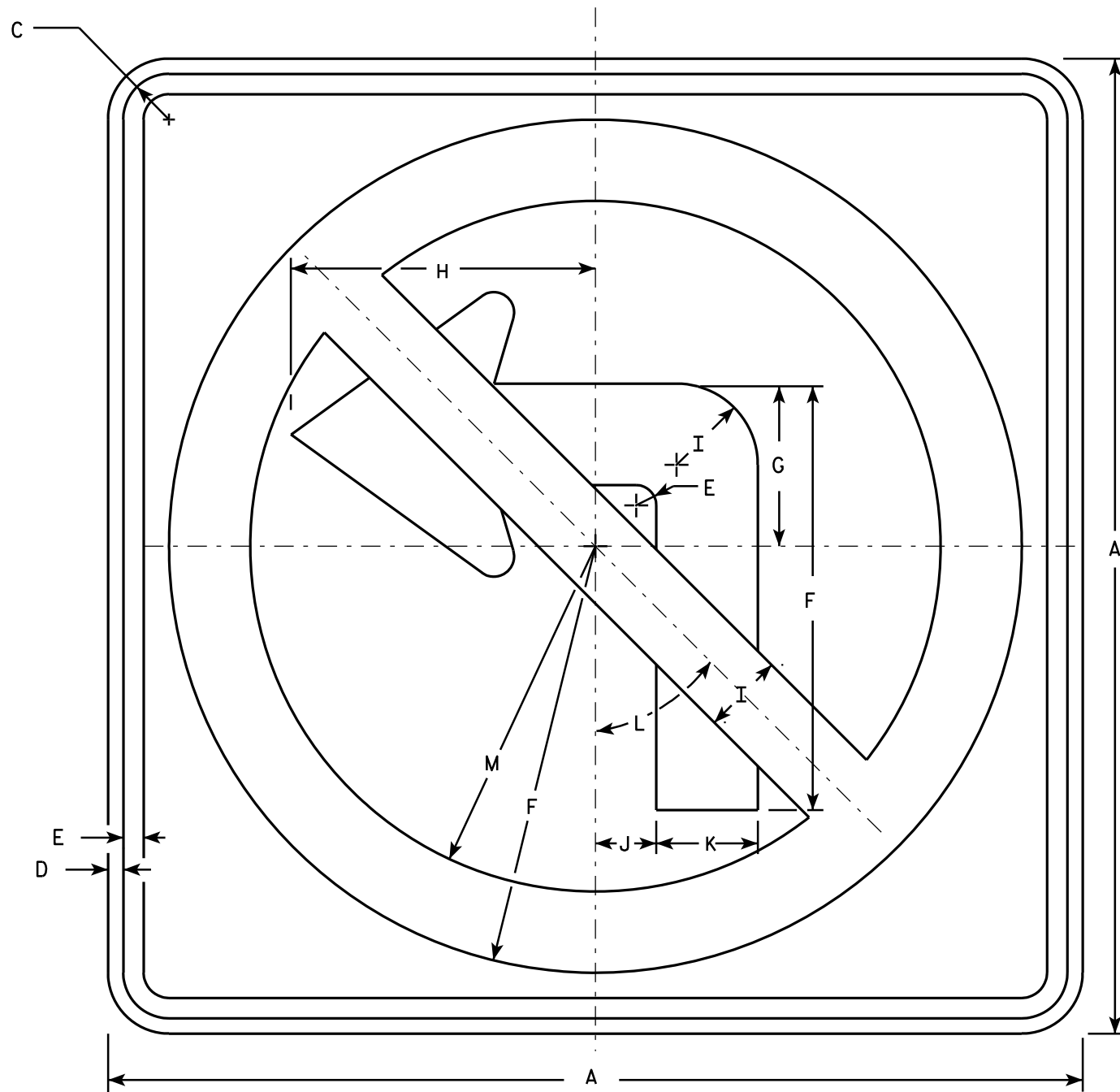
STANDARD SIGN

R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

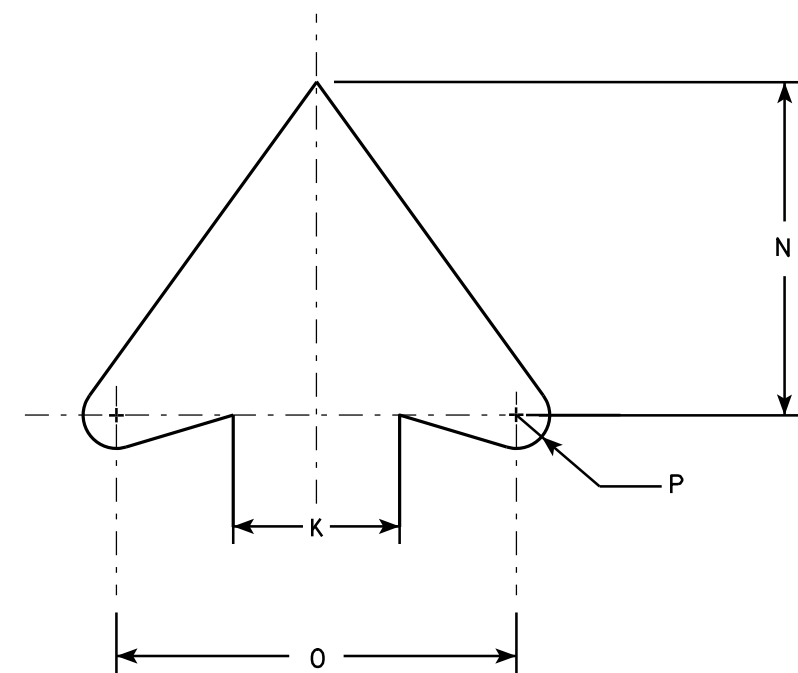
DATE 10/13/14 PLATE 108 P1-2.12



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 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 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: 109

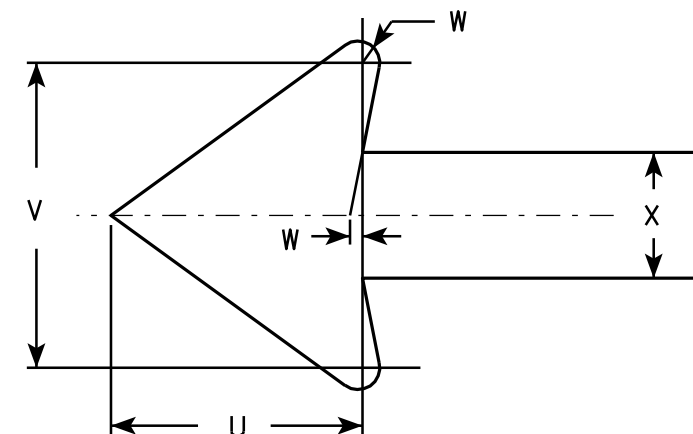
E



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

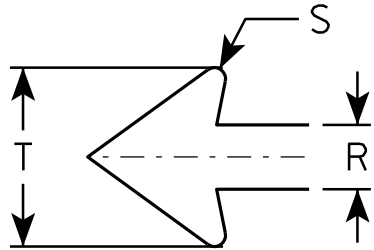
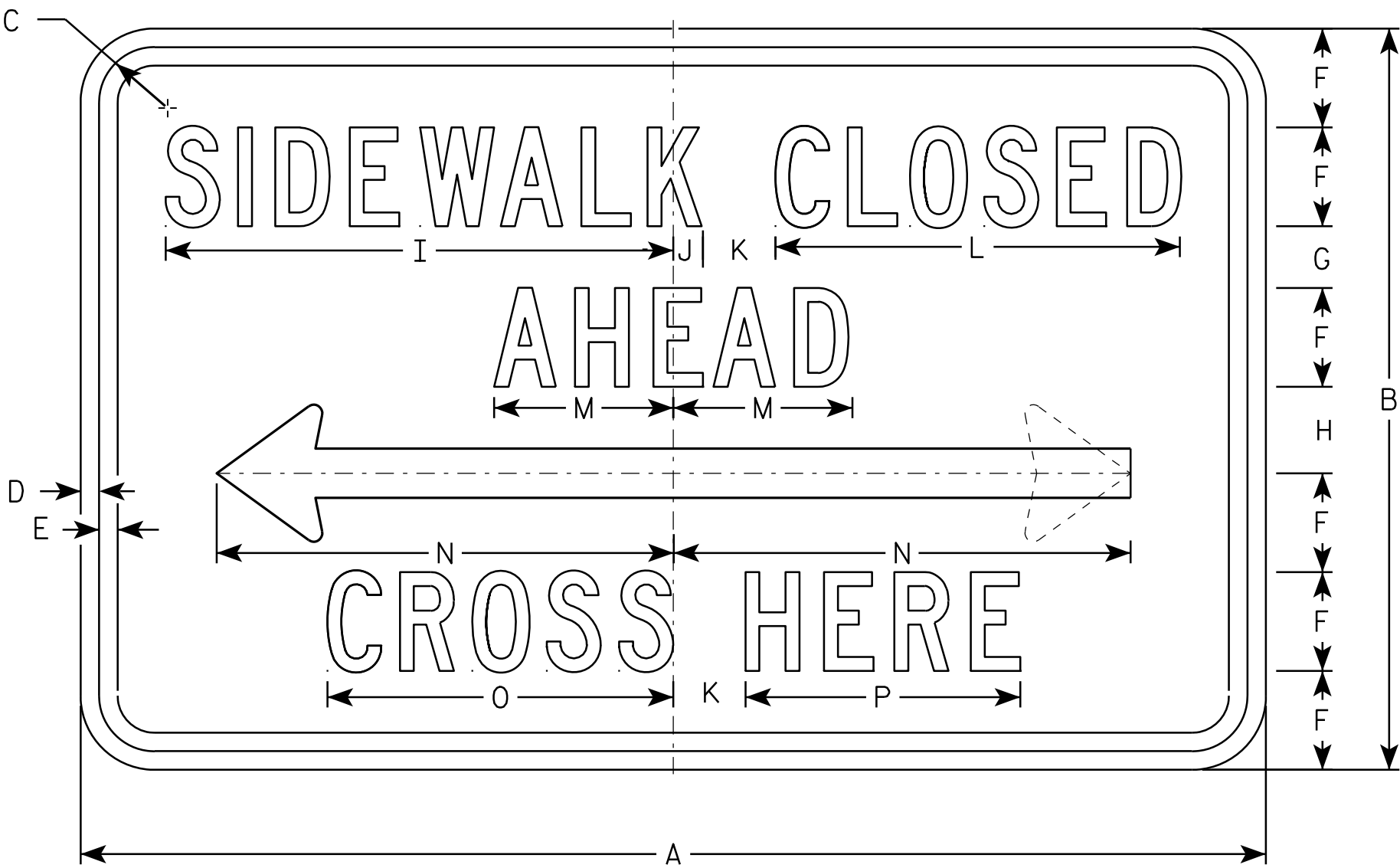
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO: HWY: COUNTY: SHEET NO: 110 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 - C except Size 1 is 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.



R9-11

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	12	1 1/8	3/8	3/8	1 1/2	1 1/2	1 1/2	9 3/4	5/8	1 1/2	7 5/8	3 1/2	9 1/4	6 5/8	5 1/8		1	1/8	2 3/4							2.0
2S	48	30	2 3/4	3/4	3/4	4	2 1/2	3 1/2	20 1/2	1 1/4	3	16 3/8	7 1/4	18 1/2	14	11 1/8		2	3/8	5 1/2							10.0
2M	48	30	2 3/4	3/4	3/4	4	2 1/2	3 1/2	20 1/2	1 1/4	3	16 3/8	7 1/4	18 1/2	14	11 1/8		2	3/8	5 1/2							10.0
3																											
4																											
5																											

STANDARD SIGN
R9-11

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/17/2012 PLATE NO. R9-11.2



R9-55

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 - 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. Line 1 is Series E.
Lines 2, 3 and 4 are 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																											
2S	18	24	1 1/8	3/8	1/2	4	3	2 1/2	1 7/8	2 1/8	1 1/4	2 1/4	3 3/4	7 1/4	7 1/2	5 1/2											3.0
2M	18	24	1 1/8	3/8	1/2	4	3	2 1/2	1 7/8	2 1/8	1 1/4	2 1/4	3 3/4	7 1/4	7 1/2	5 1/2											3.0
3																											
4																											
5																											

STANDARD SIGN
R9-55

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/4/2011 PLATE NO. R9-55.6

PROJECT NO: HWY: COUNTY: SHEET NO: 112 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 - 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.



R9-9

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																											
2S	30	18	1 ¾	½	½	4	3 ½	3	10 ¾	8 ⅛																	3.75
2M	30	18	1 ¾	½	½	4	3 ½	3	10 ¾	8 ⅛																	3.75
3																											
4																											
5																											

STANDARD SIGN

R9-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/2011 PLATE NO. R9-9.5

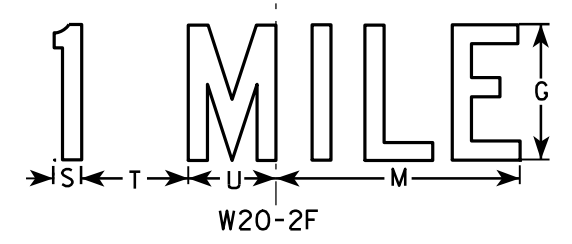
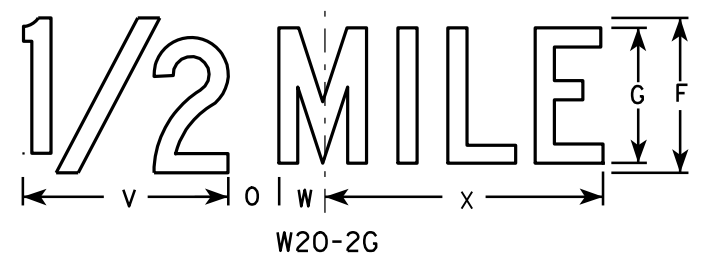
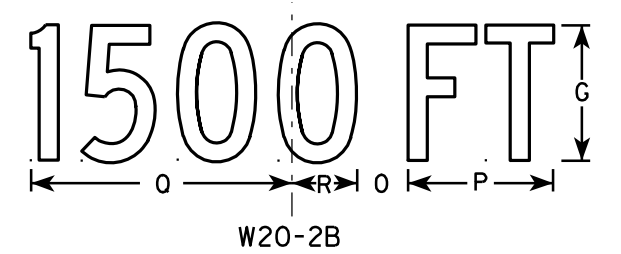
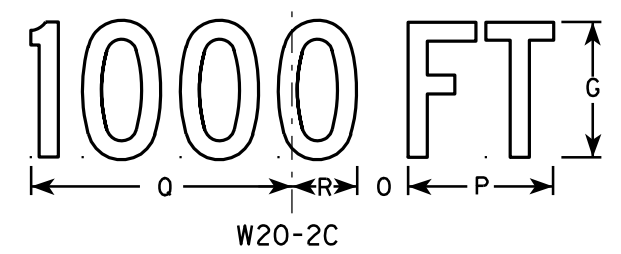
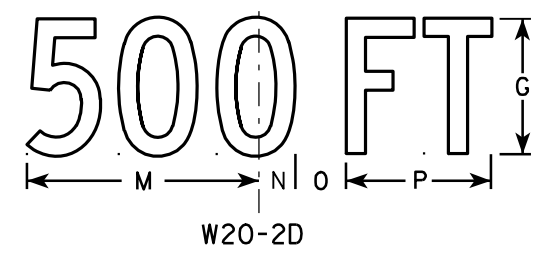
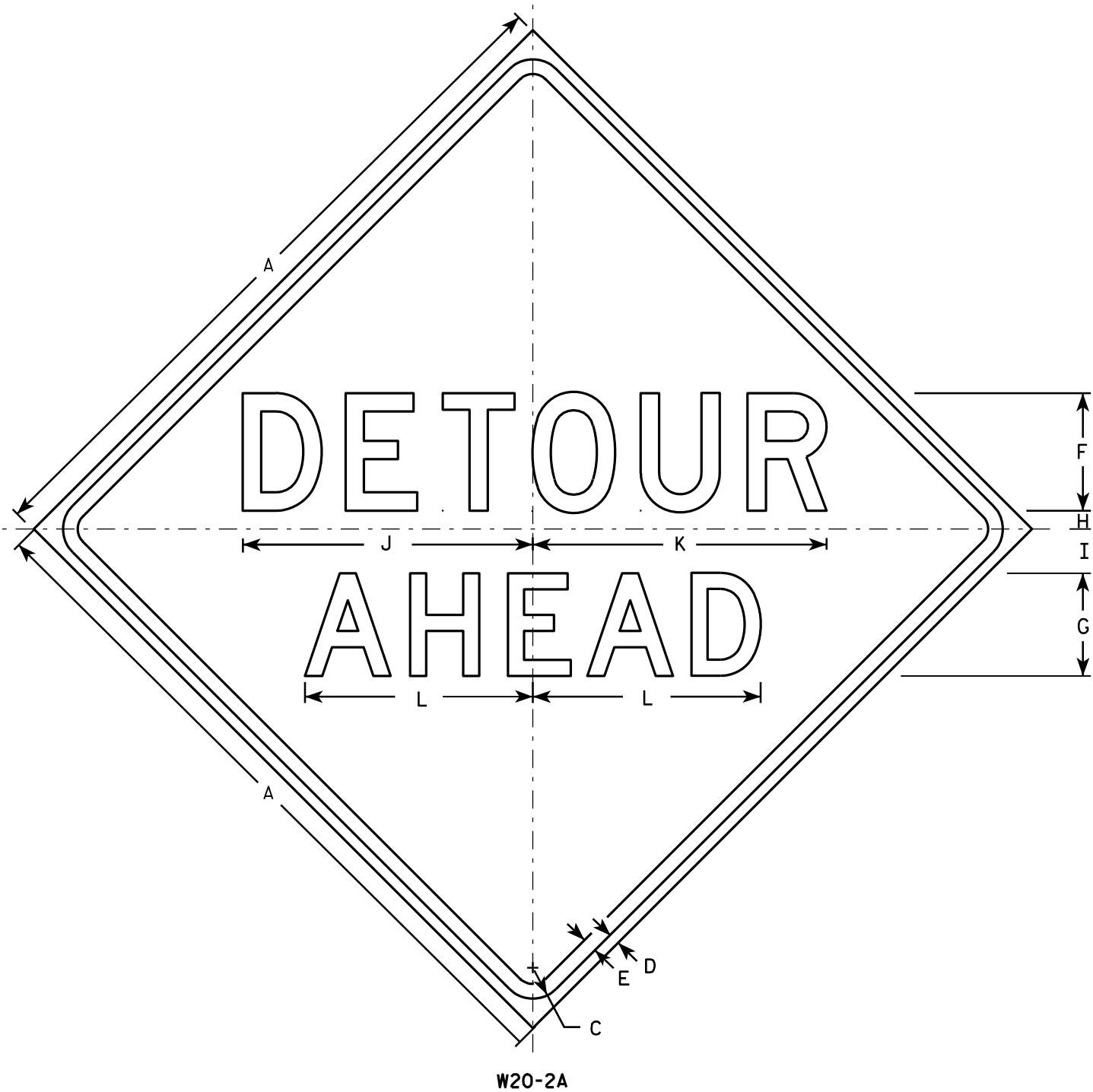
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 113

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 - 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. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

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	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

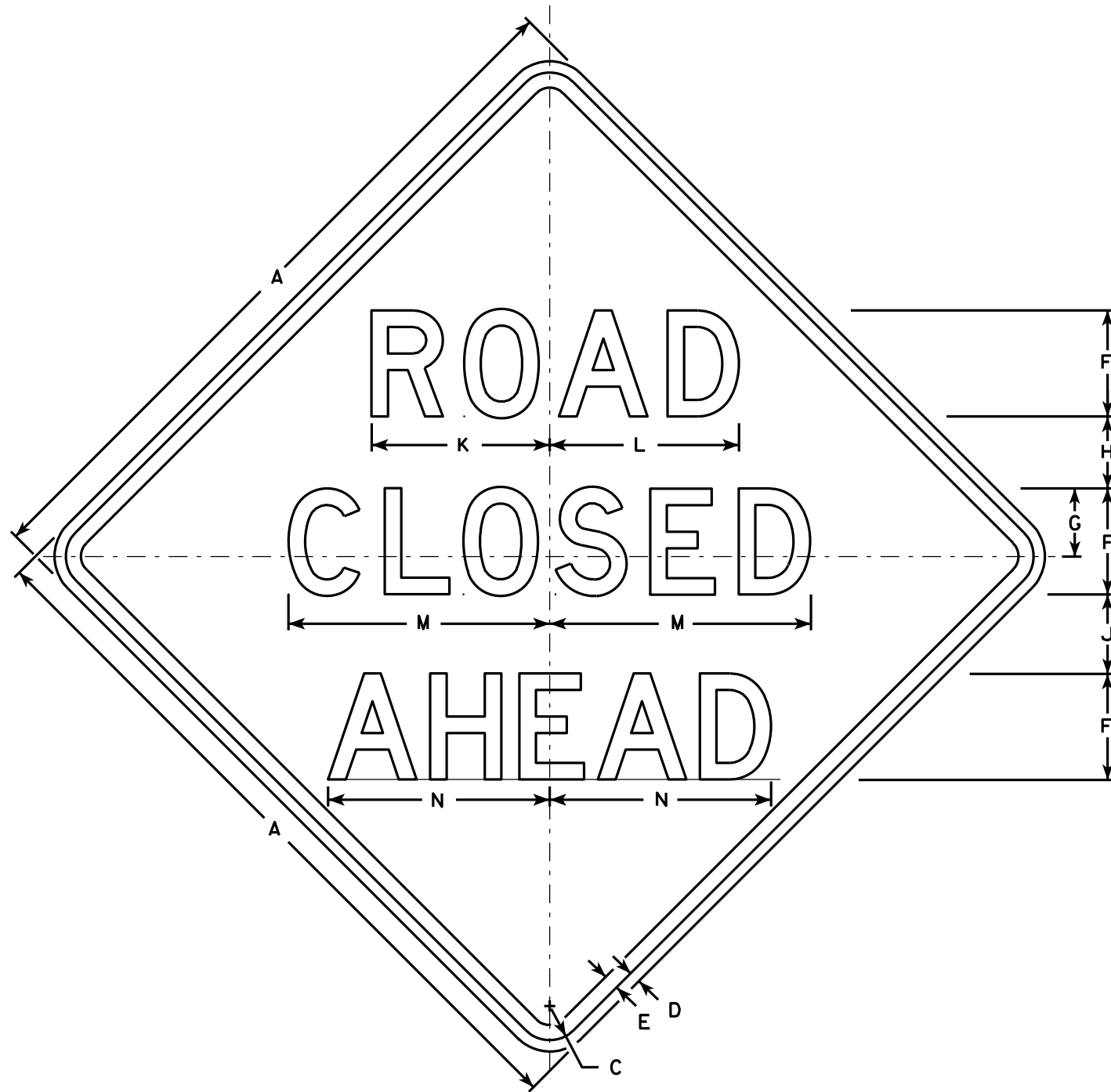
PROJECT NO:

HWY:

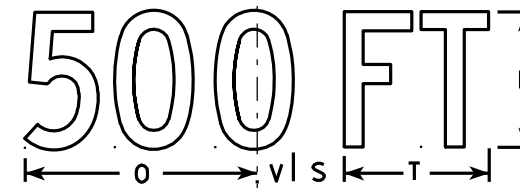
COUNTY:

SHEET NO: 114

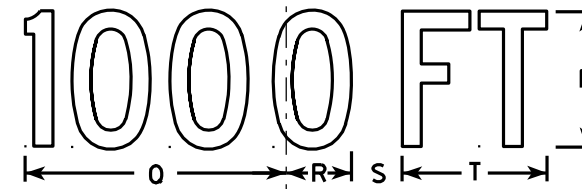
E



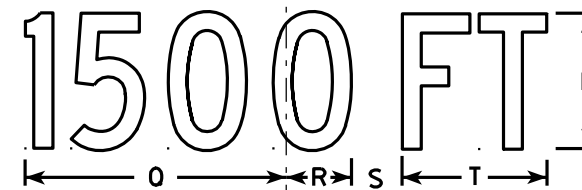
W20-3A



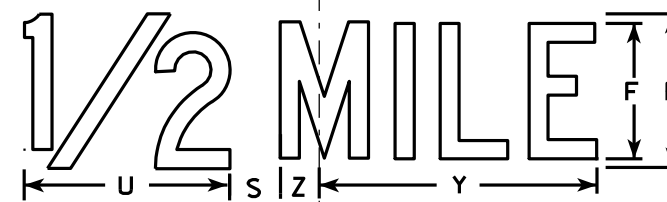
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

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. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

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	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO:

HWY:

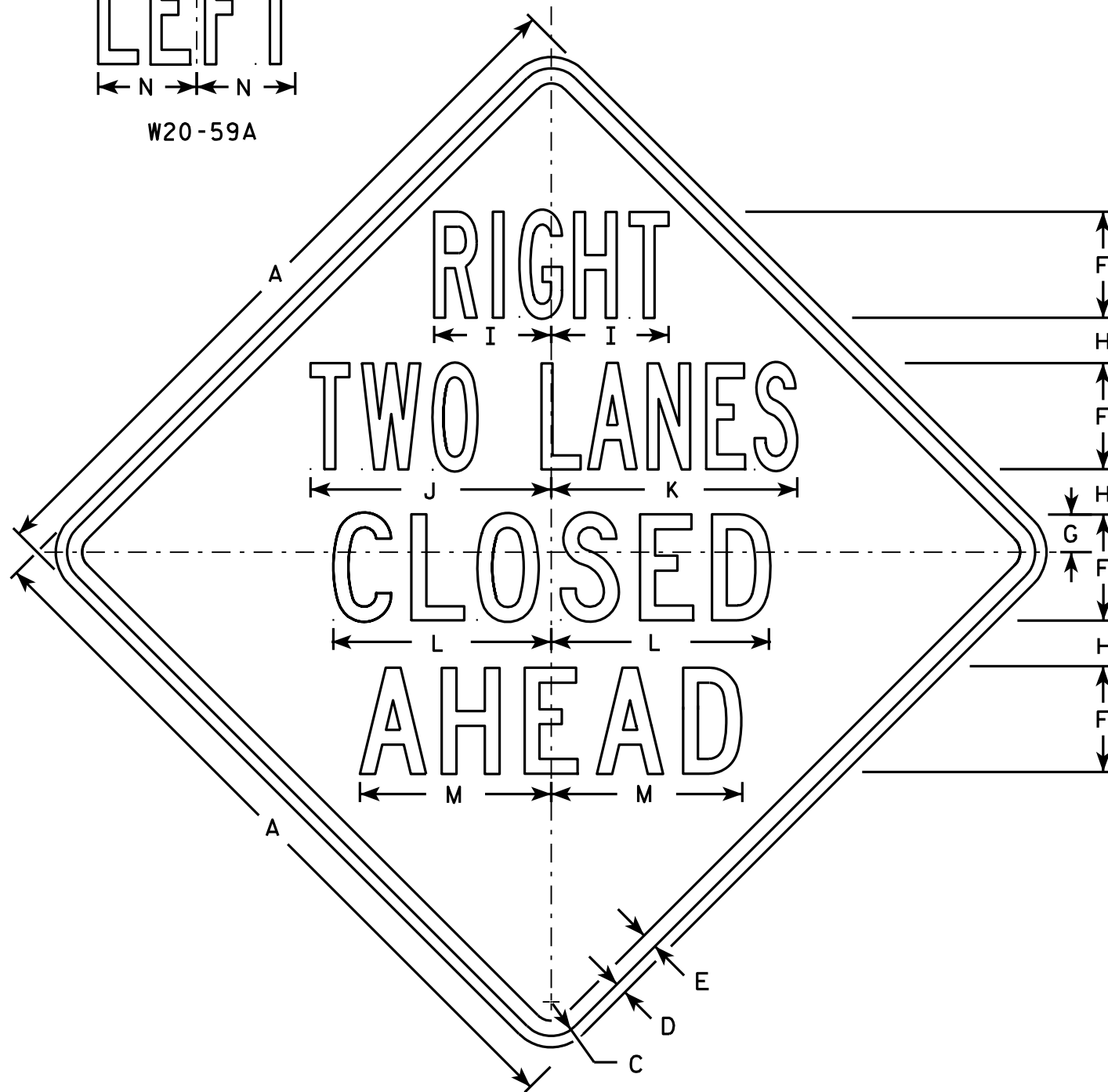
COUNTY:

SHEET NO: 115

E

LEFT

W20-59A



W20-58A

500 FT

W20-58D

1000 FT

W20-58C

1500 FT

W20-58B

1/2 MILE

W20-58G

1 MILE

W20-58F

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. Lines 1 & 2 Series B.
Lines 3 & 4 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		1 5/8	5/8	3/4	5	1 7/8	2 1/4	5 7/8	11 7/8	12 1/8	10 3/4	9 1/2	4 7/8	6	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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		2 1/4	3/4	1	7	2 1/2	3	7 3/4	15 7/8	16 1/4	14 3/8	12 5/8	6 1/2	8	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: 116

E

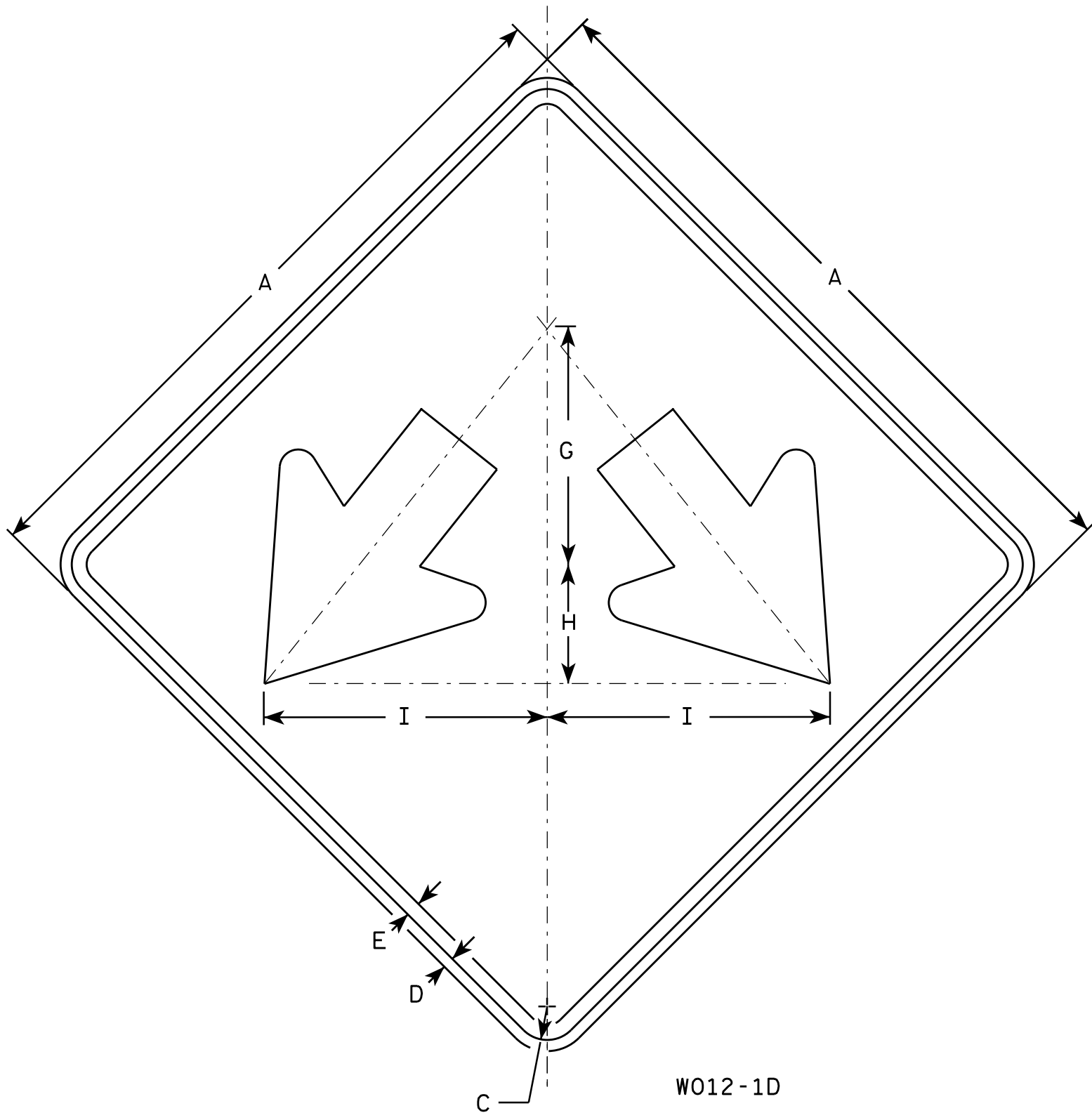
STANDARD SIGN

W20-58A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

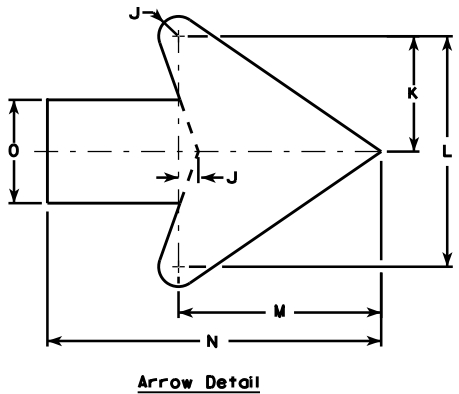
DATE 3/18/11 PLATE NO. W20-58.4



W012-1D

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.



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		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
2S	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0
2M	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0
3	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0
4	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W012-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/20/13 PLATE 117 W012-1D.1

DESIGN DATA

LIVE LOAD:
INVENTORY RATING: HS-16
OPERATIONAL RATING: HS-38
MAXIMUM STANDARD PERMIT VEHICLE
LOAD = 250 KIPS.

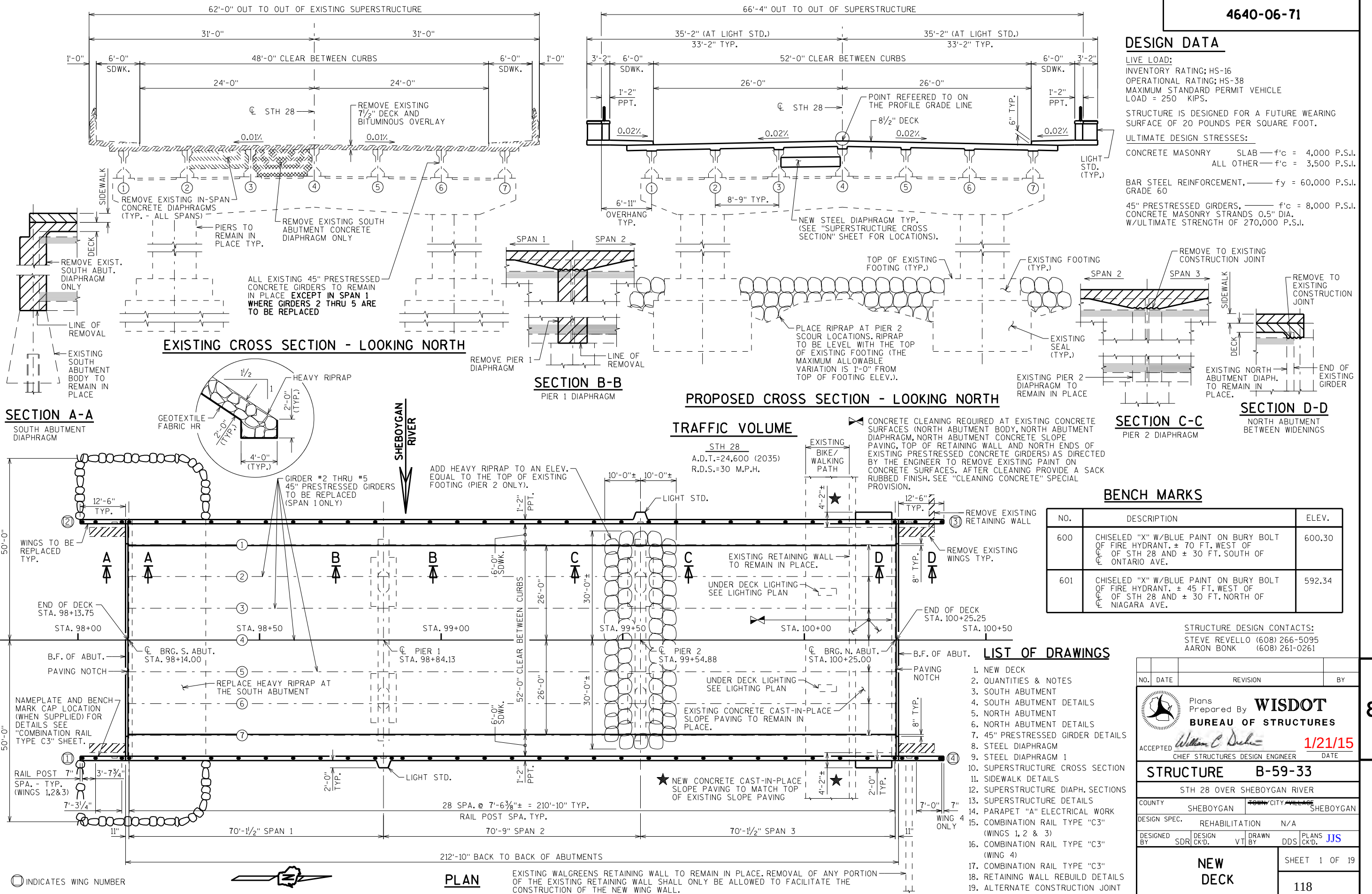
STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

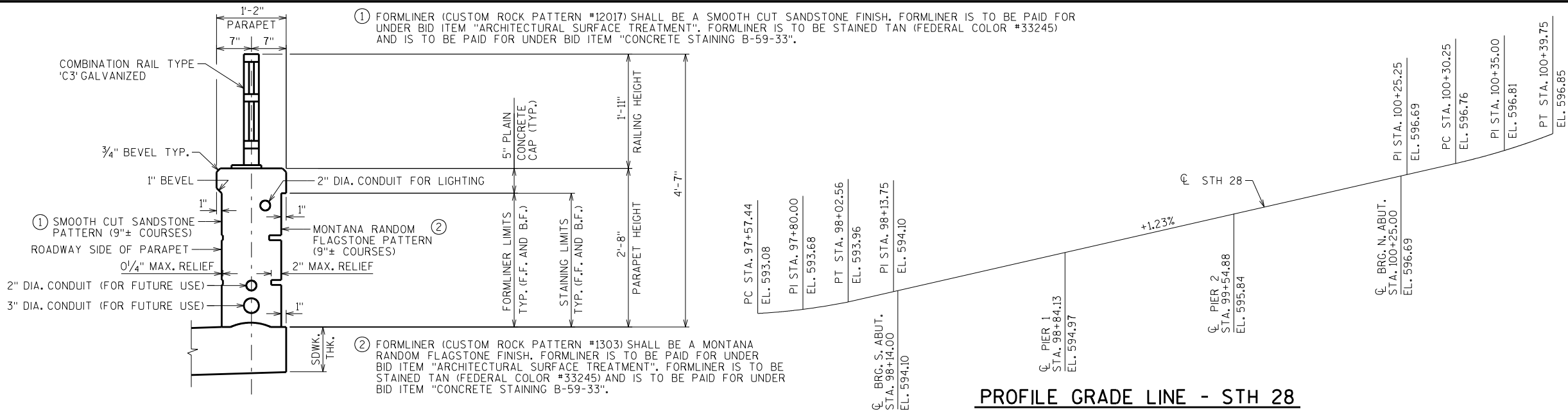
ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'_c = 4,000 P.S.I.
ALL OTHER — f'_c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, — f_y = 60,000 P.S.I.
GRADE 60

45" PRESTRESSED GIRDERS, — f'_c = 8,000 P.S.I.
CONCRETE MASONRY STRANDS 0.5" DIA.
W/ULTIMATE STRENGTH OF 270,000 P.S.I.





PARAPET DETAIL

PROFILE GRADE LINE - STH 28

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	PIER 1	PIER 2	NORTH ABUT.	TOTALS
203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-59-33	LS	—	—	—	—	—	1
203.0225.S	DEBRIS CONTAINMENT B-59-33	LS	—	—	—	—	—	1
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 99+19.50	LS	—	—	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-59-33	LS	—	—	—	—	—	1
210.0100	BACKFILL STRUCTURE	CY	—	120	—	—	35	155
502.0100	CONCRETE MASONRY BRIDGES	CY	487	21	—	—	20	528
502.3200	PROTECTIVE SURFACE TREATMENT	SY	1,640	—	—	—	—	1,640
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	144	—	—	—	—	144
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	28	60	—	—	60	148
503.0145	PRESTRESSED GIRDER TYPE I 45-INCH	LF	281	—	—	—	—	281
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	—	490	—	—	490	980
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	122,240	2,200	—	—	2,535	126,975
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	—	4	4	—	—	8
506.4000	STEEL DIAPHRAGMS B-59-33	EACH	18	—	—	—	—	18
509.1500	CONCRETE SURFACE REPAIR	SF	—	50	—	—	36	86
509.9020.S	EPOXY CRACK SEALING	LF	—	33	—	—	24	57
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	17	—	—	17	34
517.1010.S	CONCRETE STAINING B-59-33	SF	1,925	115	—	—	115	2,155
517.1050.S	ARCHITECTURAL SURFACE TREATMENT B-59-33	SF	1,925	115	—	—	115	2,155
517.4500.S	NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS B-59-33	LS	—	—	—	—	—	1
517.6001.S	PORTABLE DECONTAMINATION FACILITY	EACH	1	—	—	—	—	1
604.0400	SLOPE PAVING CONCRETE	SY	—	—	—	—	10	10
606.0300	RIPRAP HEAVY	CY	—	210	—	90	—	300
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	—	100	—	—	90	190
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	—	313	—	—	—	313
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	48	—	—	—	—	48
652.0135	CONDUIT RIGID METALLIC 3-INCH	LF	24	—	—	—	—	24
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	980	—	—	—	—	980
652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	490	—	—	—	—	490
653.0220	JUNCTION BOXES 18X6X6-INCH	EACH	6	—	—	—	—	6
657.6005.S	ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	EACH	2	—	—	—	—	2
SPV.0090	RAILING STEEL TYPE C3 GALVANIZED B-59-33	LF	476	—	—	—	—	476
SPV.0105	REMOVE AND REPLACE EXISTING RETAINING WALL	LS	—	—	—	—	—	1
SPV.0180	CLEANING CONCRETE	SY	175	—	—	—	135	310
	NON-BID ITEMS							
	BRIDGE SEAT PROTECTION	LS	—	—	—	—	—	1
	FILLER	SIZE	—	—	—	—	—	1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

EXISTING ASBESTOS AT RAIL POSTS AND AT ALL OTHER AREAS DESIGNATED BY THE ENGINEER SHALL BE REMOVED UNDER THE BID ITEM "ABATEMENT OF ASBESTOS CONTAINING MATERIALS B-59-33".

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK, SIDEWALK SURFACES, PLAIN CAPS AND THE TOP OF PARAPET INCLUDING PARAPETS ON ABUTMENT WINGS. DO NOT APPLY PROTECTIVE SUFACE TREATMENT TO LOCATIONS RECEIVING STAIN.

STAIN BOTH THE EXTERIOR AND INTERIOR FACES OF PARAPET TAN (FEDERAL COLOR NO. 33245).

THE COLOR OF THE FINISH TOP COAT OF THE COMBINATION TYPE C3 RAILINGS SHALL BE BLACK, (FEDERAL STANDARD COLOR NO. 27038) OR SIMILAR COLOR APPROVED BY THE ENGINEER.

DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1966.

REMOVE AND SALVAGE THE EXISTING RAILINGS (INCLUDES RAILS, POSTS AND ALL ASSOCIATED HARDWARE). AFTER REMOVAL, THE RAILINGS ARE TO BE SET ASIDE AND SHALL REMAIN THE PROPERTY OF THE STATE OF WISCONSIN. THE CONTRACTOR WILL COORDINATE WITH SHEBOYGAN COUNTY HIGHWAY DEPARTMENT, AS TO WHEN THE RAILINGS ARE READY TO BE PICKED UP. THIS SHALL BE INCIDENTAL TO "REMOVING OLD STRUCTURE STA. 98+19.50".

THE CONTRACTOR SHALL ONLY REMOVE THAT PORTION OF THE EXISTING PUBLICALLY OWNED RETAINING WALL NEAR BIKE/WALKING PATHWAY THAT IS REQUIRED TO FACILITATE CONSTRUCTION. THE WALL SHALL BE REPLACED IN KIND, TO THE SATISFACTION OF THE STATE OF WISCONSIN D.O.T. FIELD ENGINEER AND THE CURRENT OWNERS OF THE RETAINING WALL. THIS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 99+19.50".

REMOVE ANY/ALL LOOSE DECK CONCRETE UNDER BID ITEM "CONCRETE SURFACE REPAIR". SURFACES SHALL BE BLAST CLEANED AND ANY EXPOSED STEEL SHALL BE BRUSHED CLEANED PRIOR TO THE CONCRETE SURFACE REPAIRS BEING COMPLETED. REPAIR AREAS SHALL BE VERIFIED AND APPROVED BY THE FIELD ENGINEER.

THE CONTRACTOR IS TO ADD HEAVY RIPRAP EXISTING PIER 2 AS ILLUSTRATED ON THE "NEW DECK" SHEET BEING CAREFUL NOT TO DAMAGE THE EXISTING SUBSTRUCTURES IN ANY WAY. IF DAMAGE DOES OCCUR DURING THE PLACEMENT OF THE NEW RIPRAP, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAKE ANY/ALL REPAIRS TO THE EXISTING SUBSTRUCTURE TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST.

REPLACE HEAVY RIPRAP AT THE SOUTH ABUTMENT TO THE ORIGINAL TOP OF BERM ELEVATION. THE SLOPE IN FRONT OF THE SOUTH ABUT. SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON "NEW DECK" SHEET AND IN THE ABUTMENT DETAILS.

STATE PROJECT NUMBER

4640-06-71

GENERAL NOTES (CONTINUED)

EXISTING PAINT TO BE REMOVED FROM THE FOLLOWING CONCRETE SURFACES AS DIRECTED BY THE ENGINEER: NORTH ABUTMENT BODY, NORTH ABUTMENT DIAPHRAGM, NORTH ABUTMENT CONCRETE SLOPE PAVING, TOP OF RETAINING WALL AND NORTH ENDS OF EXISTING PRESTRESSED CONCRETE GIRDERS. REMOVE OR PROTECT ANY EXISTING LIGHTING OR ELECTRICAL ITEMS THAT ARE TO BE RE-USED OR SALVAGED AND COORDINATE CONCRETE CLEANING WITH THE INSTALLATION OF NEW UNDER DECK LIGHTING ITEMS SO THEY ARE NOT DAMAGED BY THE CLEANING PROCESS. REMOVAL OF EXISTING PAINT AND FINAL CONCRETE SURFACE FINISH IS COVERED IN THE SPECIAL PROVISION "CLEANING CONCRETE".

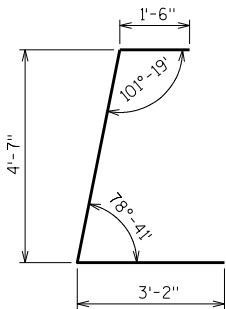
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-33	
DRAWN BY		DDS	PLANS CK'D. JJS
QUANTITIES & NOTES		SHEET 2	
		119	

SCALE = 1

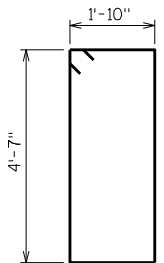


NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

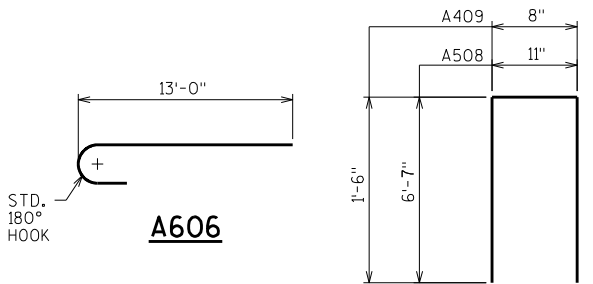
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		16	9'-1"	X		ABUT. BODY - VERT.
A602		24	1'-10"			ABUT. BODY - HORIZ.
A603		60	3'-0"			CONCRETE MASONRY ANCHORS TYPE L
A504	X	24	13'-6"	X		WINGS 1&2 - STIRRUP
A505	X	12	13'-9"			WINGS 1&2 - HORIZ. - F.F.
A606	X	18	13'-8"	X		WINGS 1&2 - HORIZ.
A407	X	28	12'-2"			WINGS 1&2 - HORIZ. - F.F. & B.F.
A508	X	34	13'-10"	X		WINGS 1&2 - VERT.
A409	X	34	3'-6"	X		WINGS 1&2 - VERT. - TOP
A610	X	4	12'-2"			WINGS 1&2 - HORIZ. - TOP



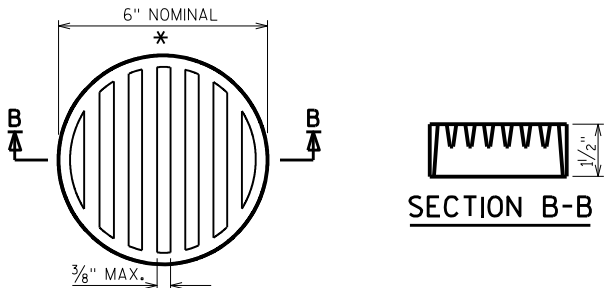
A501



A504



A508, A409

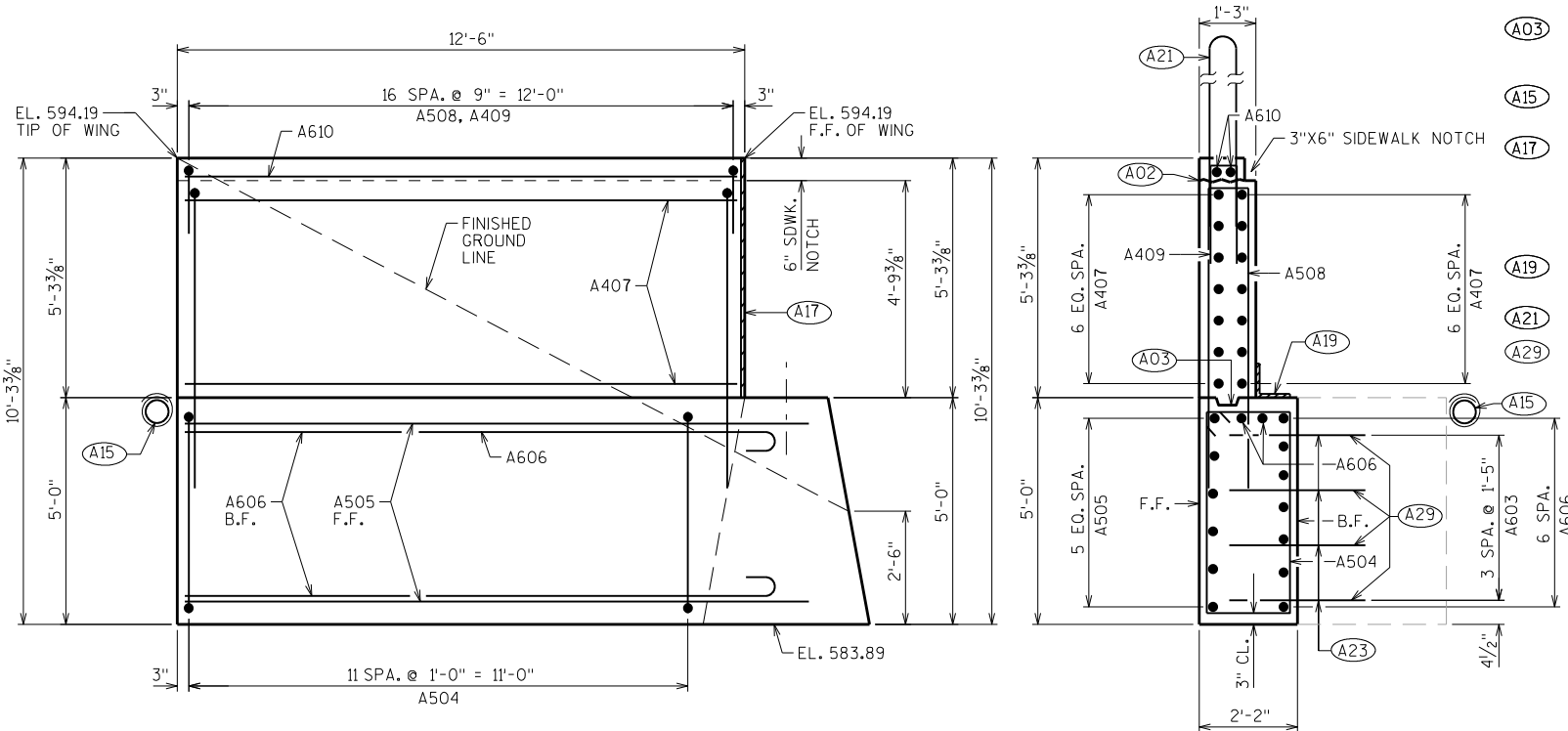


SECTION B-B

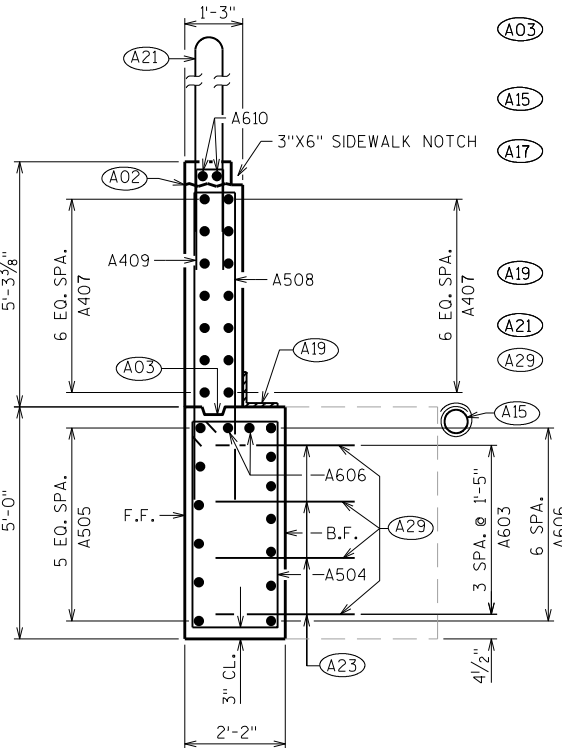
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

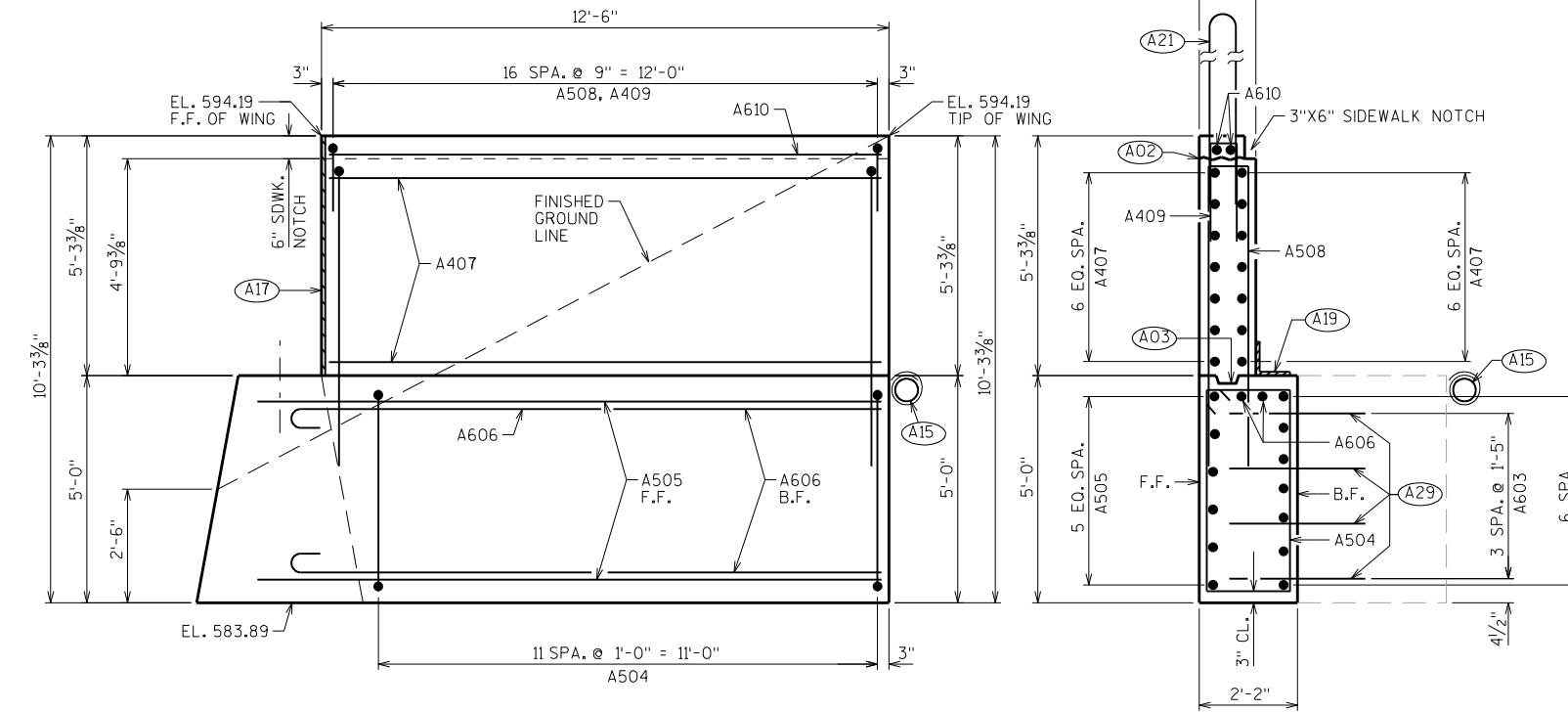
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



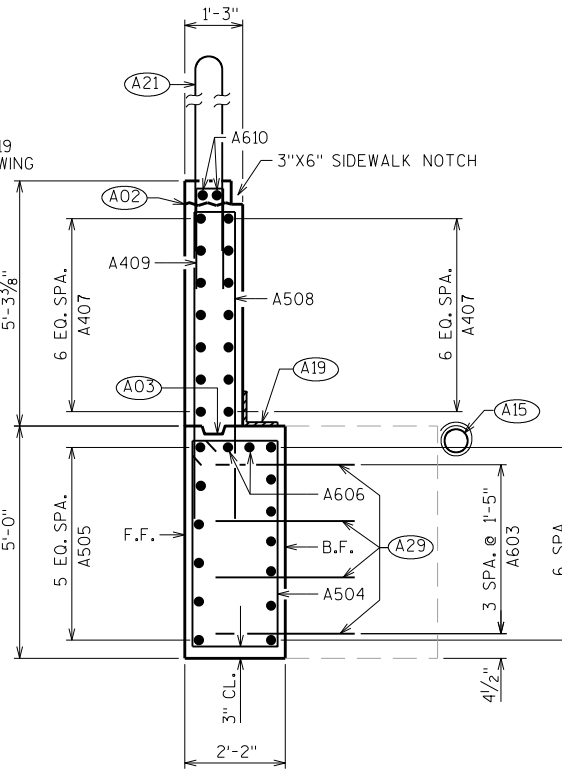
ELEVATION - WING 1



SECTION - WING 1



ELEVATION - WING 2



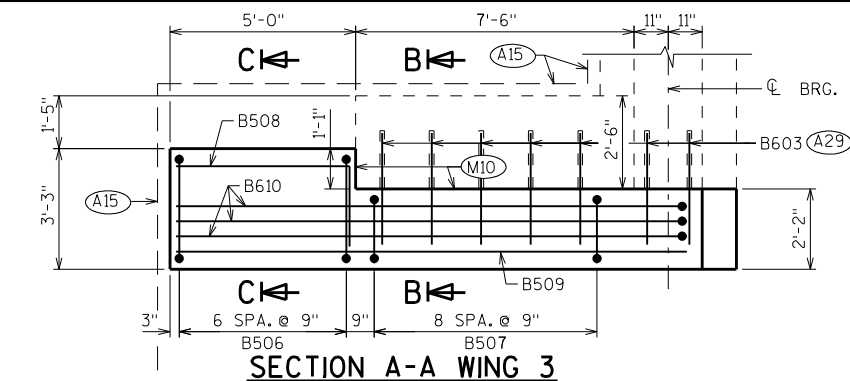
SECTION - WING 2



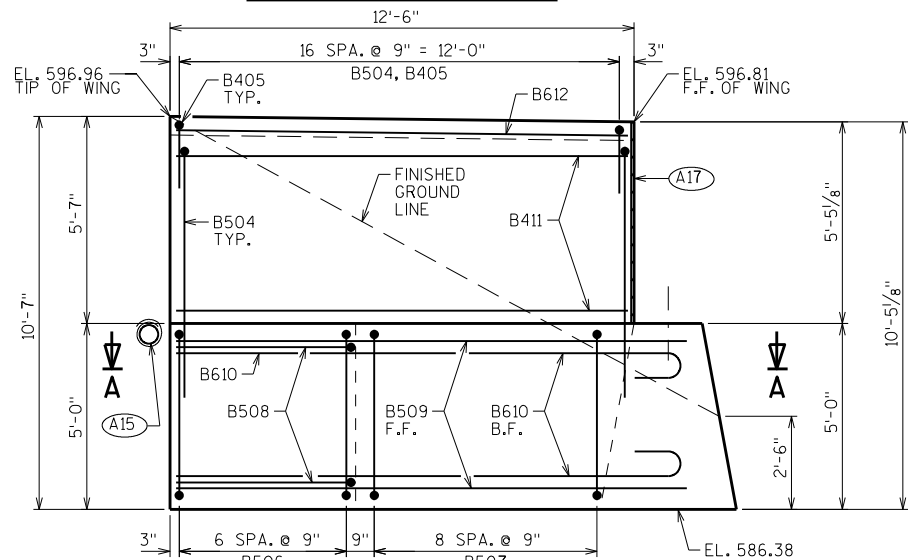
BILL OF BARS

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

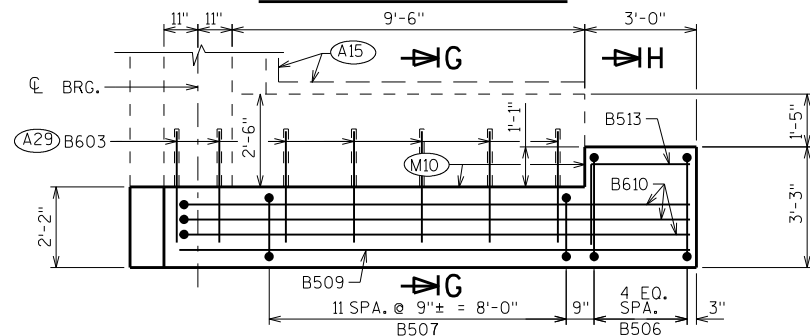
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		16	9'-1"	X		BODY - VERT
B602		24	1'-10"			BODY - HORIZ.
B603		60	3'-0"			CONCRETE MASONRY ANCHORS TYPE L
B504	X	34	14'-2"	X		WINGS 3&4 - VERT.
B405	X	34	4'-2"	X		WINGS 3&4 - VERT.
B506	X	12	15'-8"	X		WINGS 3&4 - STIRRUPS
B507	X	21	13'-6"	X		WINGS 3&4 STIRRUPS
B508	X	7	7'-5"	X		WING 3 - HORIZ.
B509	X	12	13'-9"			WINGS 3&4 - HORIZ. - F.F.
B610	X	18	14'-3"	X		WINGS 3&4 - HORIZ.
B411	X	32	12'-2"			WINGS 3&4 - HORIZ.
B612	X	4	12'-2"			WINGS 3&4 - HORIZ. - TOP
B513	X	7	5'-5"	X		WING 4 - HORIZ.
B514	X	6	2'-0"			DOWEL BARS



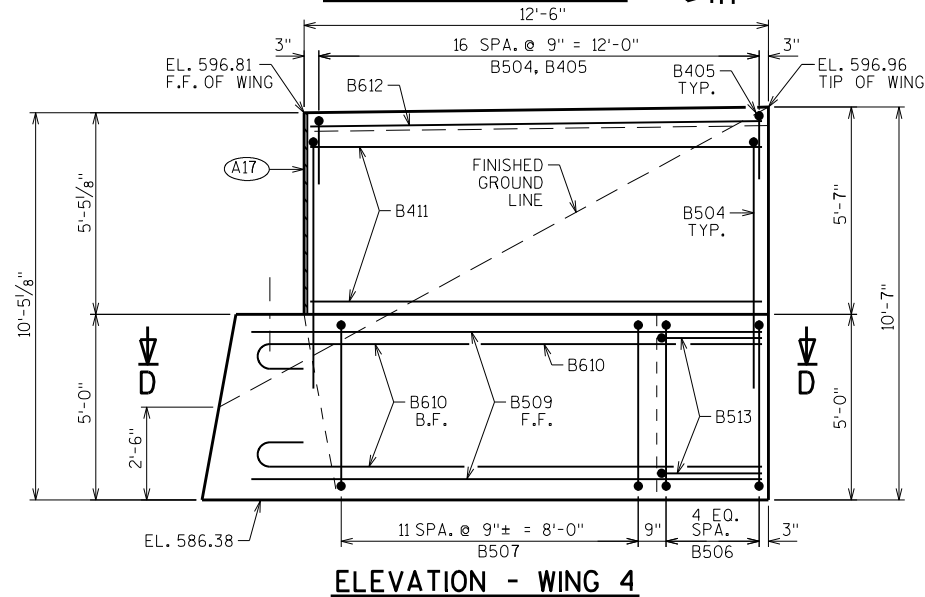
SECTION A-A WING 3



ELEVATION - WING 3



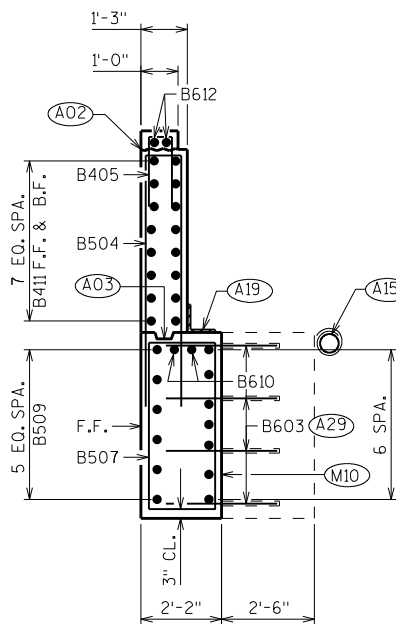
SECTION D-D WING 4



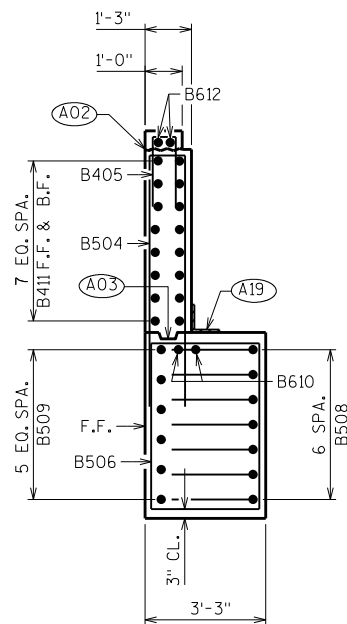
ELEVATION - WING 4

- (A02) CONSTRUCTION JOINT: POUR CONCRETE ABOVE THIS JOINT AFTER SUPERSTRUCTURE CONCRETE IS IN PLACE. STRIKE OFF AND LEAVE ROUGH.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

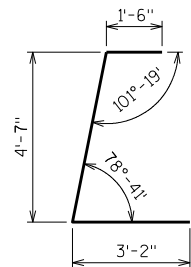
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A29) MASONRY ANCHORS TYPE L NO. 6 BARS, EMBED 1'-6" IN CONCRETE.
- (M10) ROUGHEN EXISTING CONCRETE 1/4" MIN. WHERE NEW CONCRETE COMES INTO CONTACT WITH EXISTING CONCRETE (TYP.).



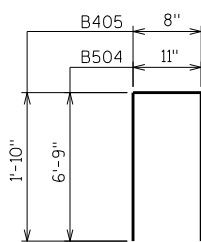
SECTION B-B



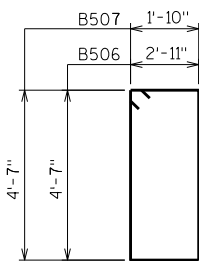
SECTION C-C



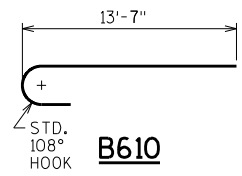
B501



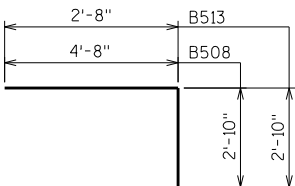
B504, B405



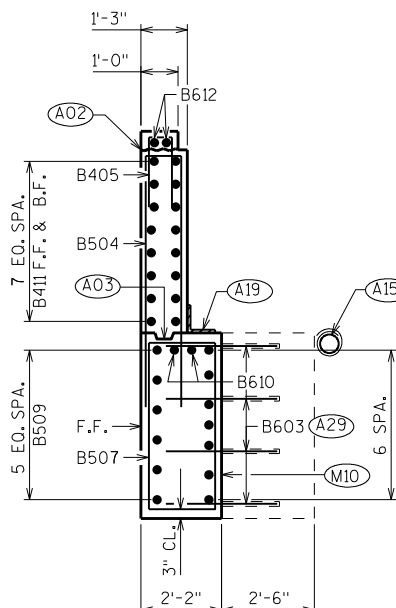
B506, B507



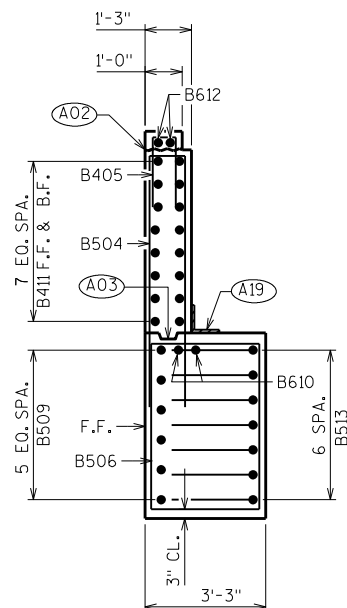
B610



B508, B513



SECTION G-G



SECTION H-H

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-33			
DRAWN BY DDS		PLANS CK'D. JJS	
NORTH ABUTMENT DETAILS		SHEET 6	
		123	

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE
LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF)
ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP
REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES
DEVELOPMENT SECTION

BEND EACH END OF #4 STIRRUPS $4\frac{1}{2}$ " AND #6 STIRRUPS $6\frac{1}{2}$ ".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE
"STEEL DIAPHRAGM" SHEET.

SPAN	GIRDER	CAMBER (IN.) *
1	2-5	1.68

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

2 #4 BARS BEND DOWN 16 BAR DIA. AT ENDS



UNDRAPED PATTERN



FOR NEW GIRDERS



IF 1/4" MINIMUM HAUNG HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

TO DETERMINE 'I', ELEV. OF TOP OF GIR'S. AT $\frac{1}{4}$ OF SUBSTRUCTURE UNITS
& AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS
PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEAD LOAD DEFLECTION
- DECK THICKNESS

= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4 1/4" WAS USED IN THE QUANTITY
"CONCRETE MASONRY BRIDGES".

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

[illegible]

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE		B-59-33			
		DRAWN BY	DDS	PLANS CK'D.	JJS
45" PRESTRESSED GIRDER DETAILS			SHEET 7		
			124		

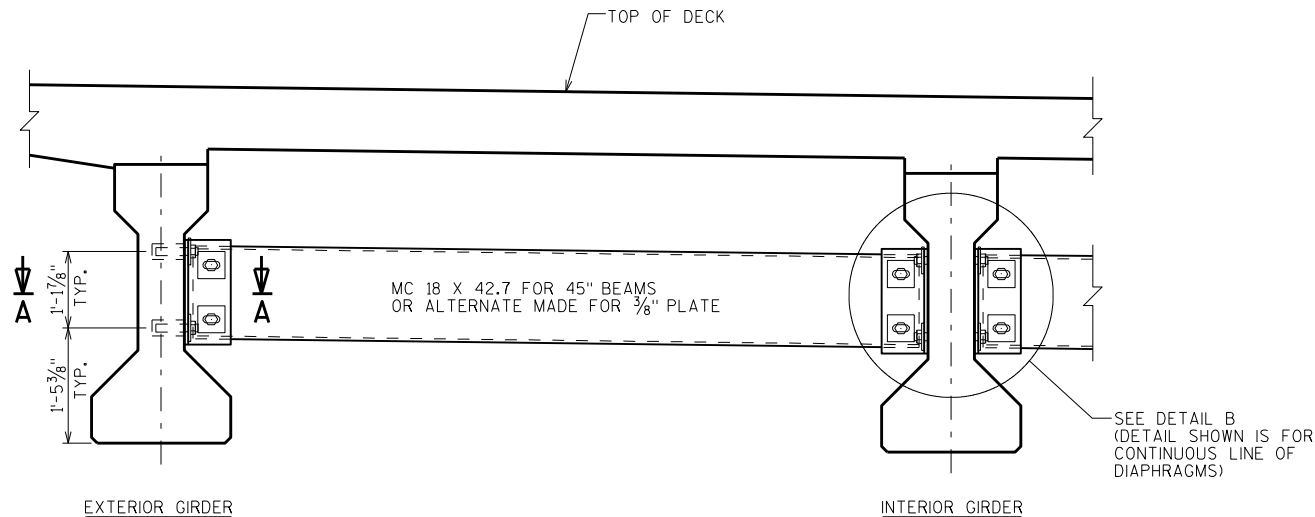
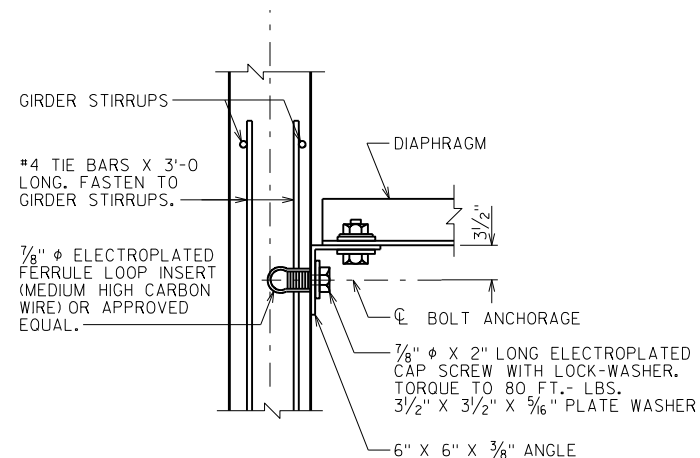
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-59-33", EACH.

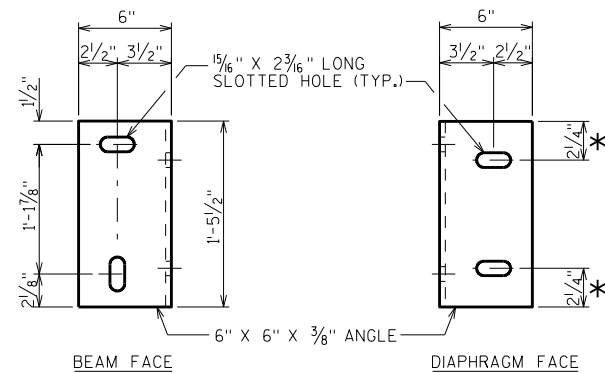
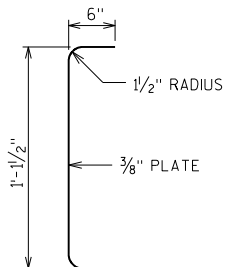
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

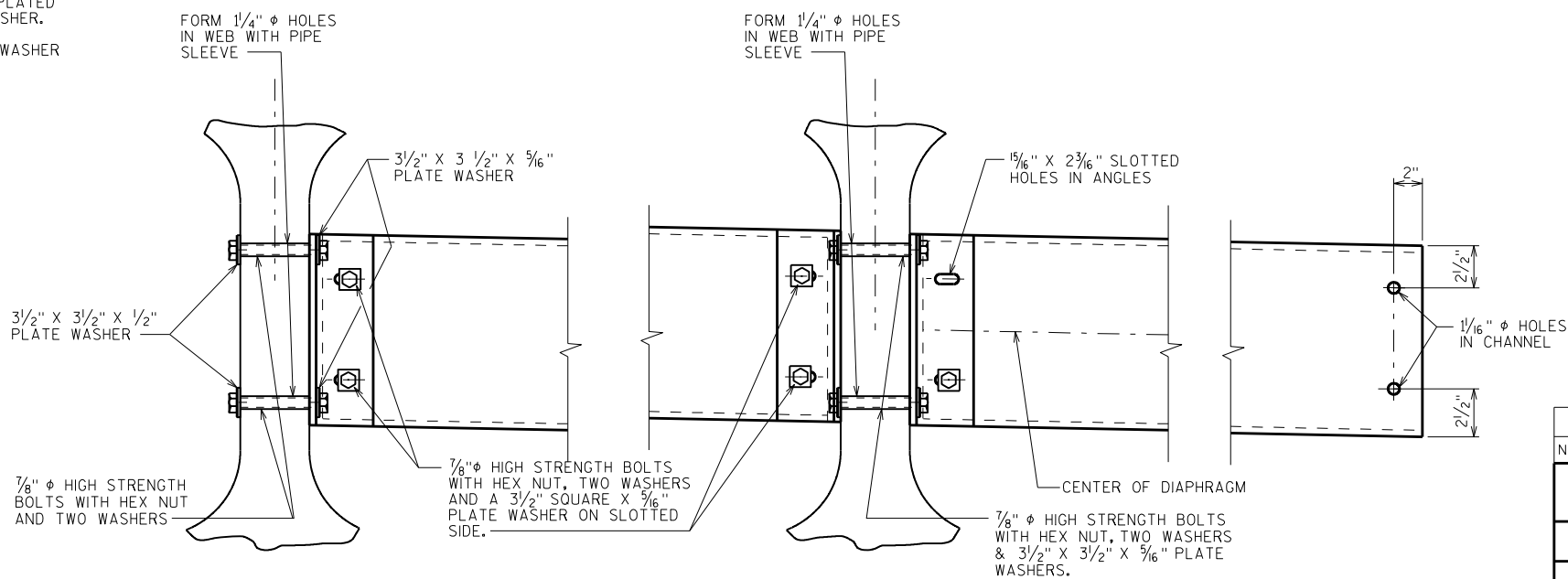
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S10F OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

**PART TRANSVERSE SECTION AT DIAPHRAGM****SECTION A-A**

(FOR EXTERIOR ATTACHMENT)

**DIAPHRAGM SUPPORT****SECTION THRU
ALTERNATE DIAPHRAGM**

* 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM

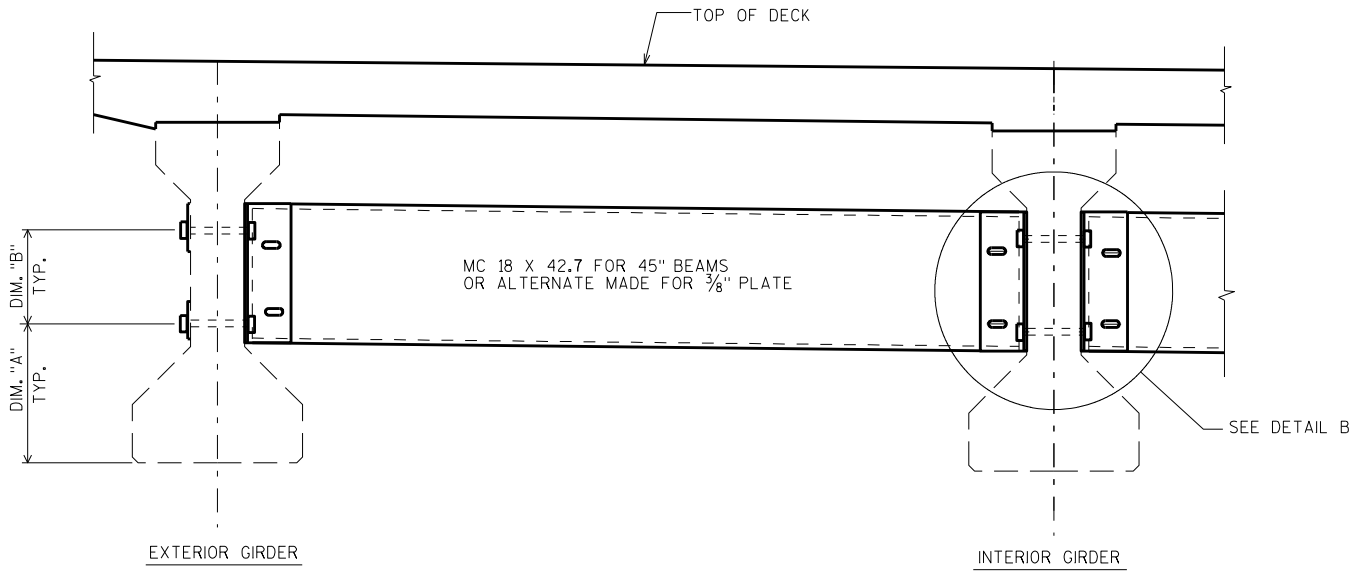
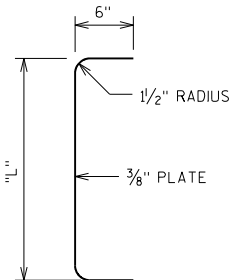
**DETAIL B**

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-33			
DRAWN BY DDS		PLANS CK'D. JJS	
STEEL DIAPHRAGM			SHEET 8
			125

TABLE

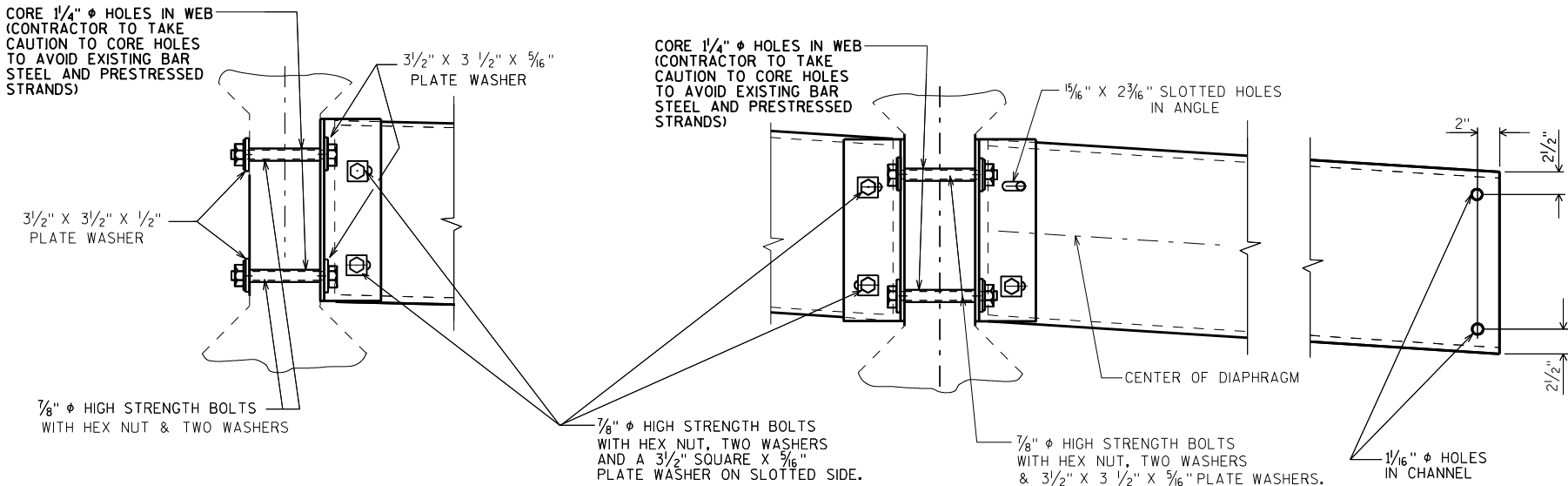
GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	* DIM. "X"
45"	1'-5 3/8"	1'-1 7/8"	1'-5 1/2"	2 1/4"



PART TRANSVERSE SECTION AT DIAPHRAGM

SECTION THRU ALTERNATE DIAPHRAGM

*DIM "X" = 2 1/2" FOR ALTERNATE PLATE DIAPHRAGM



(FOR EXTERIOR GIRS. & STAGGERED DIAPHRAGMS)

DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

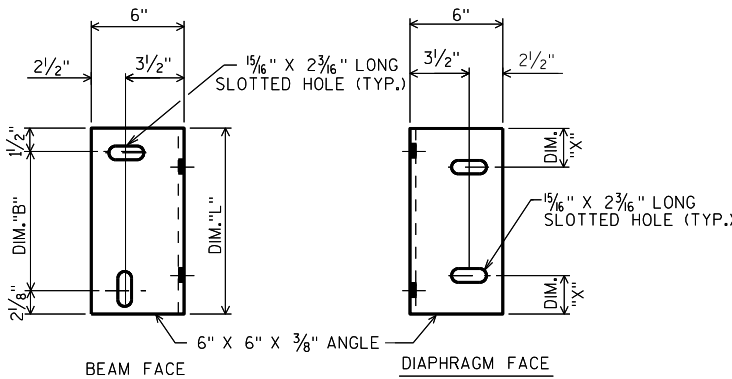
NOTES

ALL DIAPHRAGM MATERIAL AND CORED HOLES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-59-33", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

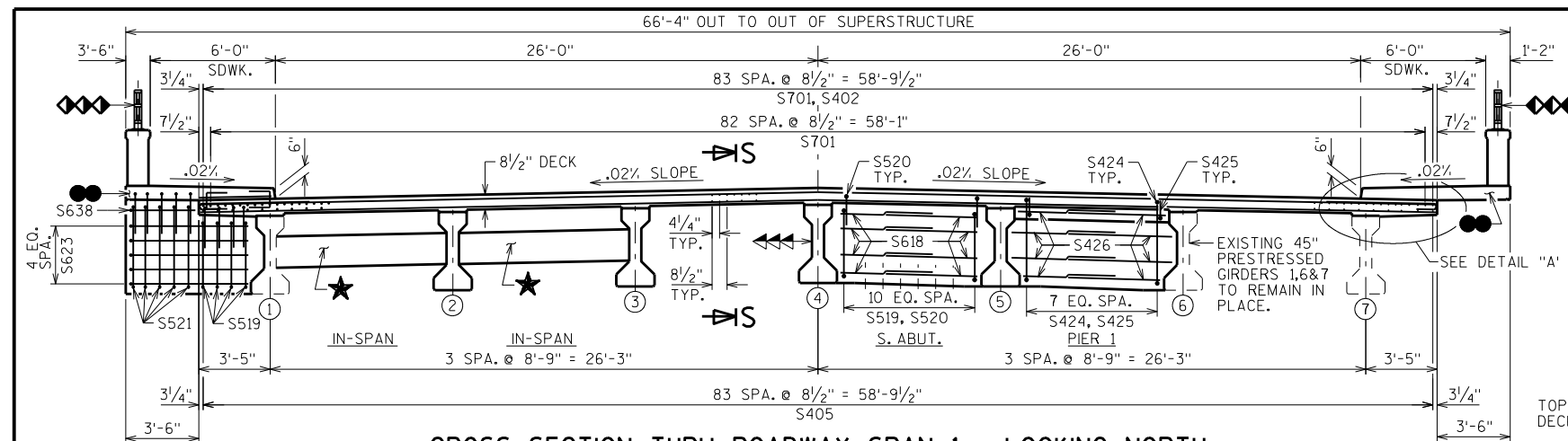
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

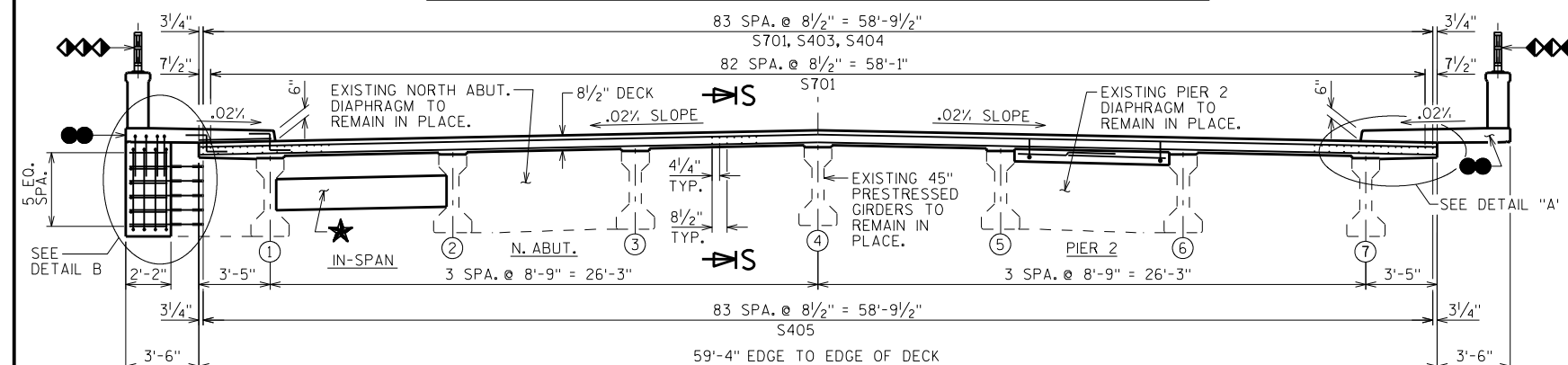


DIAPHRAGM SUPPORT

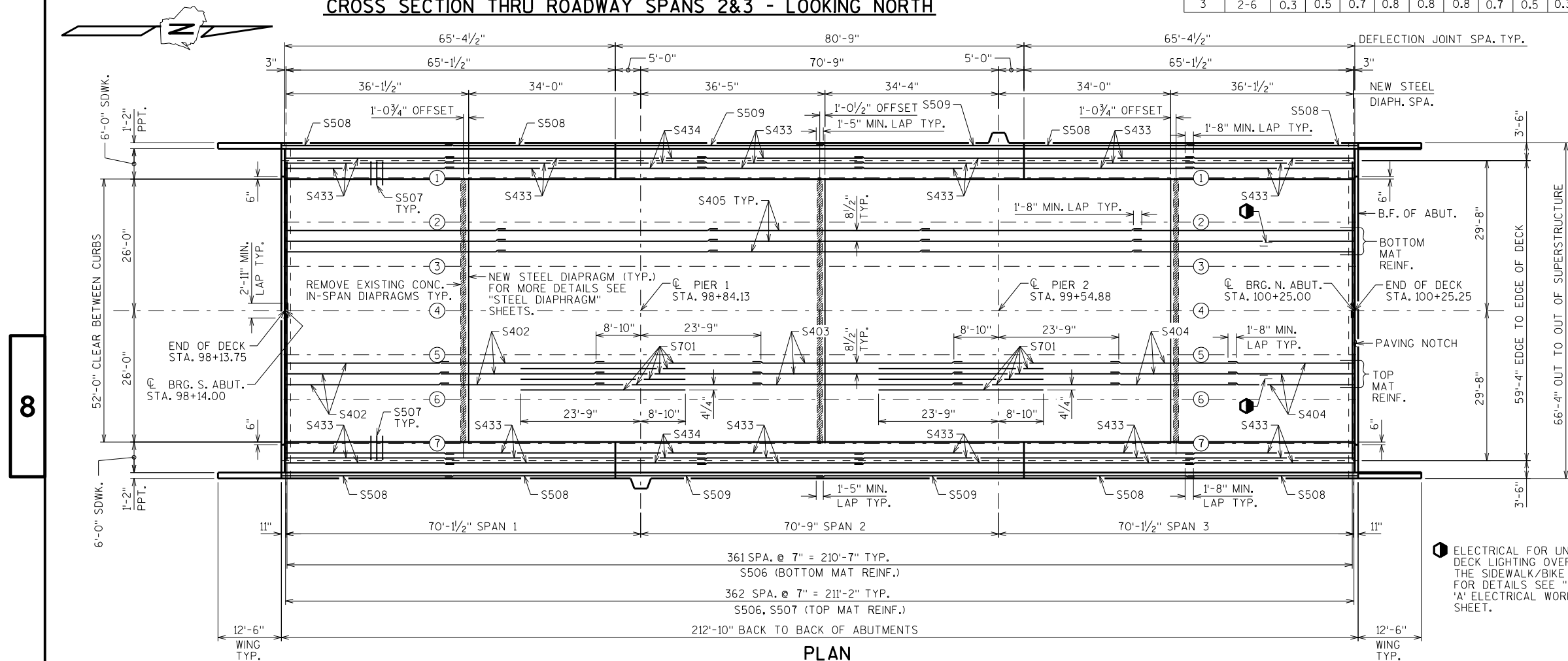
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-33	
DRAWN BY		DDS	PLANS CK'D. JJS
STEEL DIAPHRAGM 1		SHEET	9
		126	



CROSS SECTION THRU ROADWAY SPAN 1 - LOOKING NORTH



CROSS SECTION THRU ROADWAY SPANS 2&3 - LOOKING NORTH



PLAN

LEGEND

-  = STEEL DIAPHRAGM FOR DETAILS SEE "STEEL DIAPHRAGM" OR "STEEL DIAPHRAGM 1" SHEETS.
-  = NEW 45" PRESTRESSED GIRDERS. FOR DETAILS "45" PRESTRESSED GIRDER DETAILS" SHEET.
-  = COMBINATION RAILING TYPE C3 FOR DETAILS SEE "COMBINATION RAIL TYPE C3 SHEETS".
-  = FOR SIDEWALK DETAILS AND REINFORCEMENT SEE "SIDEWALK DETAIL" SHEET.
-  MASONRY ANCHORS TYPE L NO. 6 BARS, EMBED 1'-6" IN CONCRETE.
-  ROUGHEN SURFACE OF CONCRETE 1/4" DEEP MINIMUM AT ALL AREAS WHERE NEW CONCRETE CONTACTS EXISTING CONCRETE.

DEAD LOAD DEFL.-

TOP OF GIRDER BEFORE
DECK IS POURED.

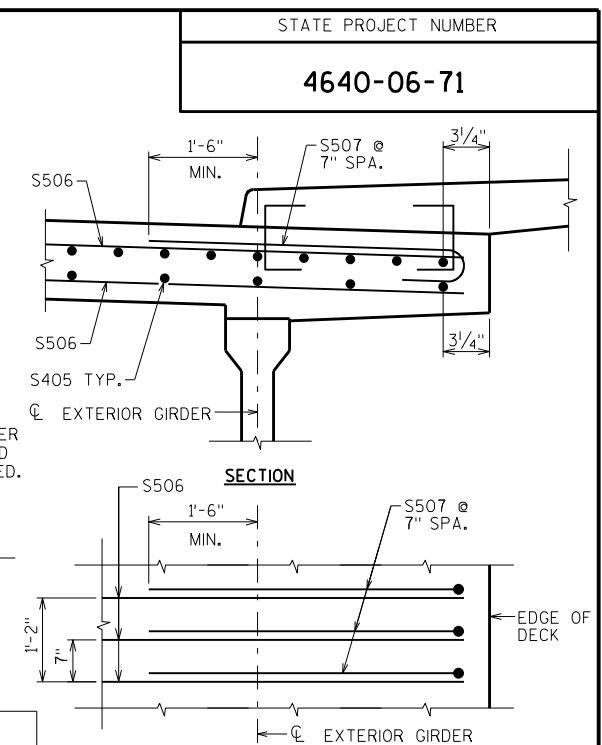
TOP OF GIRDER AFTER
DECK, SIDEWALKS AND
PARAPET ARE POURED.



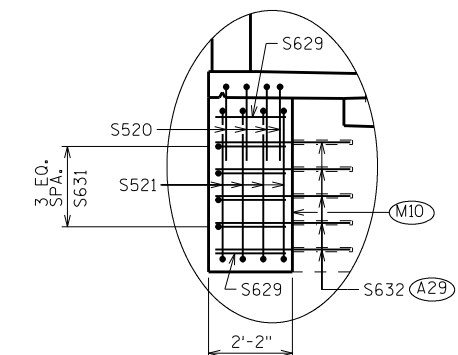
DEAD LOAD DEFLECTION DIAGRAM

FOR EXISTING GIRDERS

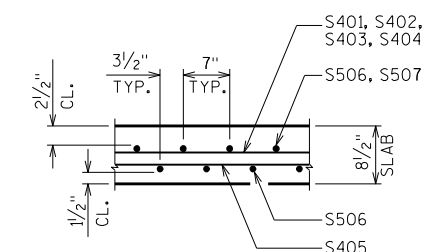
SPAN	GIRDER	DEAD LOAD DEFL. (IN.)									
		1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	10/10
1	1 & 7	0.3	0.6	0.8	0.9	0.9	0.9	0.7	0.5	0.3	
1	2-6	0.3	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.3	
2	1 & 7	0.3	0.5	0.7	0.8	0.9	0.8	0.7	0.5	0.3	
2	2-6	0.3	0.5	0.7	0.8	0.9	0.8	0.7	0.5	0.3	
3	1 & 7	0.3	0.5	0.7	0.9	0.9	0.9	0.8	0.6	0.3	
3	2-6	0.3	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.3	



PLAN
DETAIL A



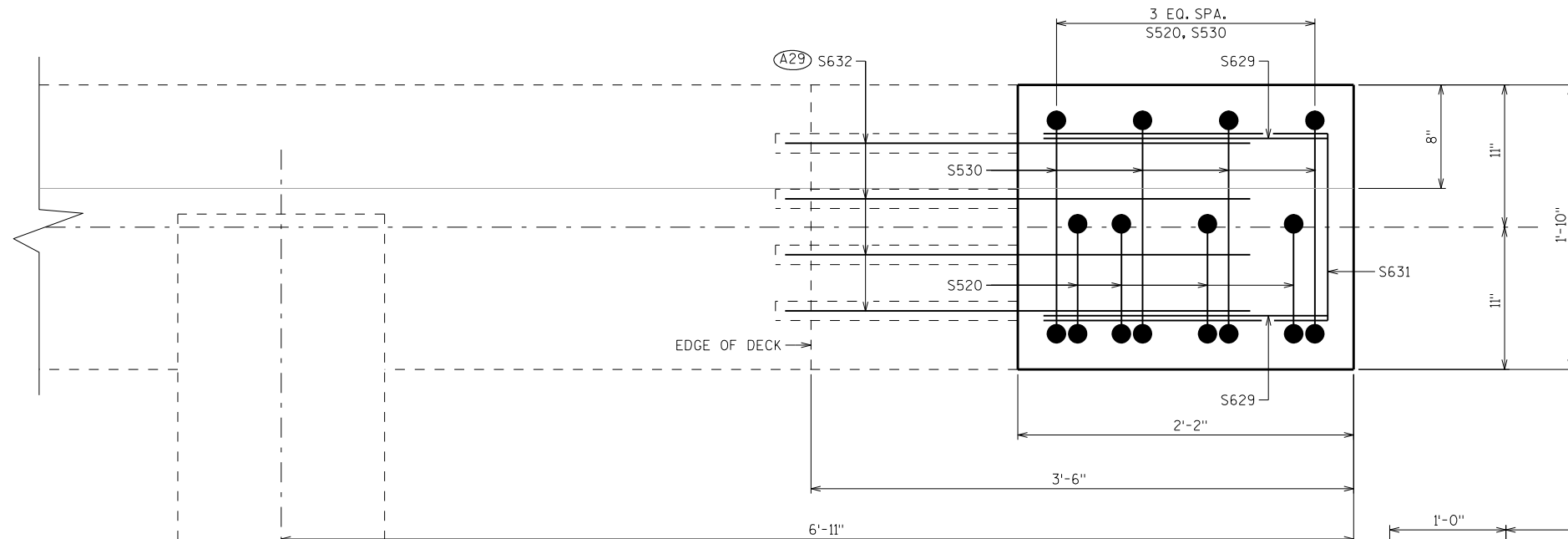
DETAIL B



SECTION S

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-33	
DRAWN BY		DDS	PLANS CK'D. JJS
SUPERSTRUCTURE CROSS SECTION		SHEET 10	
		127	

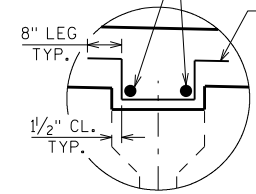
(A29) MASONRY ANCHORS TYPE L NO. 6 BARS,
EMBED 1'-6" IN CONCRETE.



PLAN - NORTH ABUTMENT

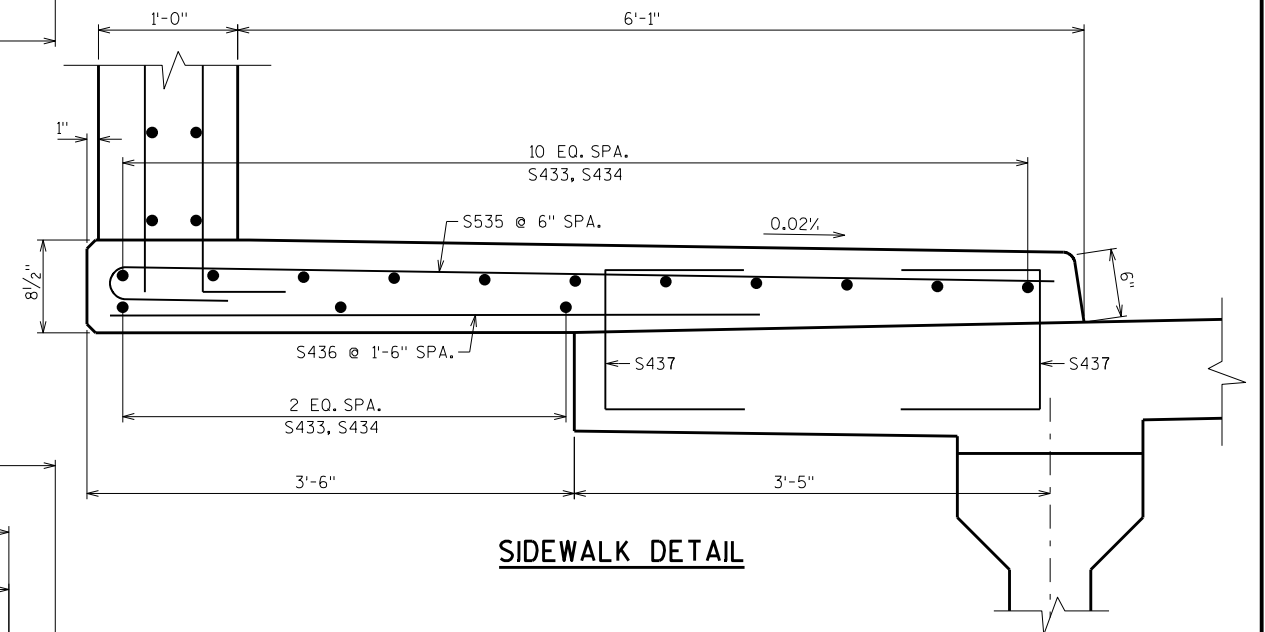
TYP. - BOTH ENDS OF ABUTMENT DIAPHRAGMS

S443 (EXISTING GIRDERS 1, 6 & 7),
S444 (EXISTING GIRDERS 2-5) BARS
AT 1'-8" MIN. LAP TYP.

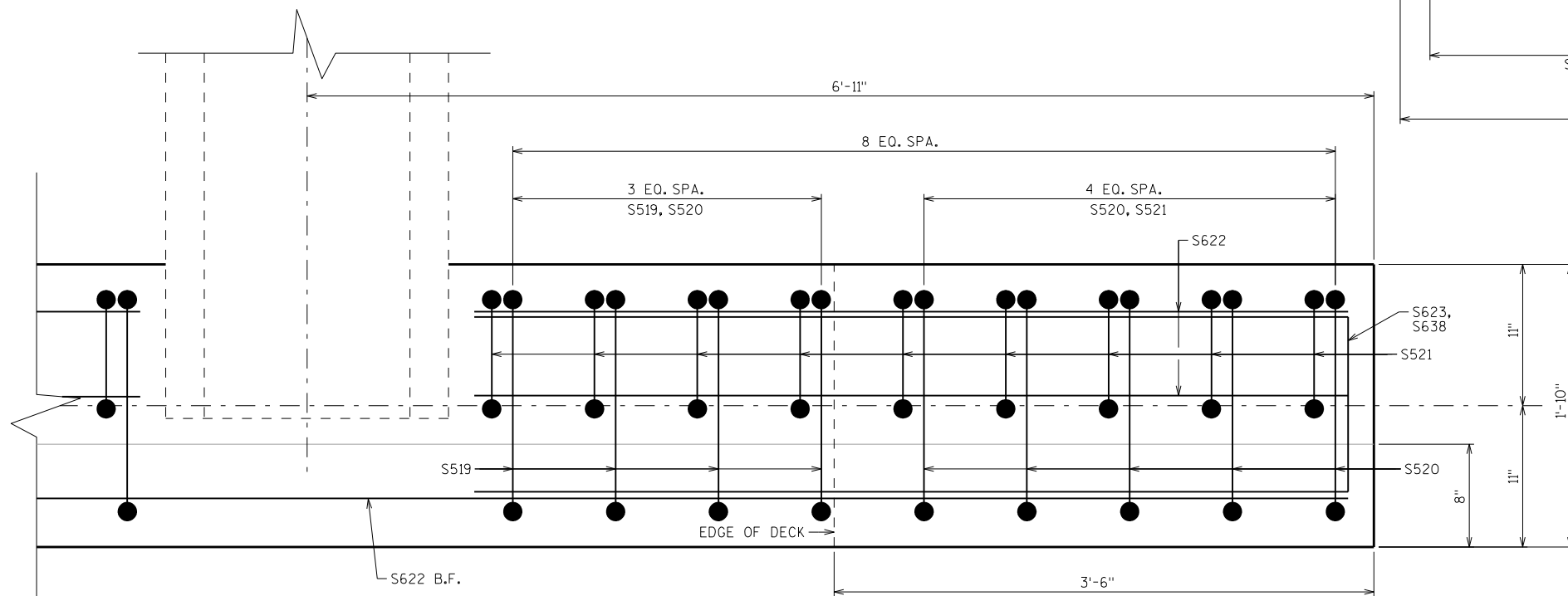


GIRDER HAUNCH DETAIL

S439 BARS AT EXISTING GIRDERS 1&7,
S440 BARS AT EXISTING GIRDERS 2&6,
S441 BARS AT EXISTING GIRDERS 3&5,
S442 BARS AT EXISTING GIRDER 4
ALL AT 1'-0" MAX. SPA. TIP FROM
VERTICAL FOR VARING HAUNCH HEIGHTS.



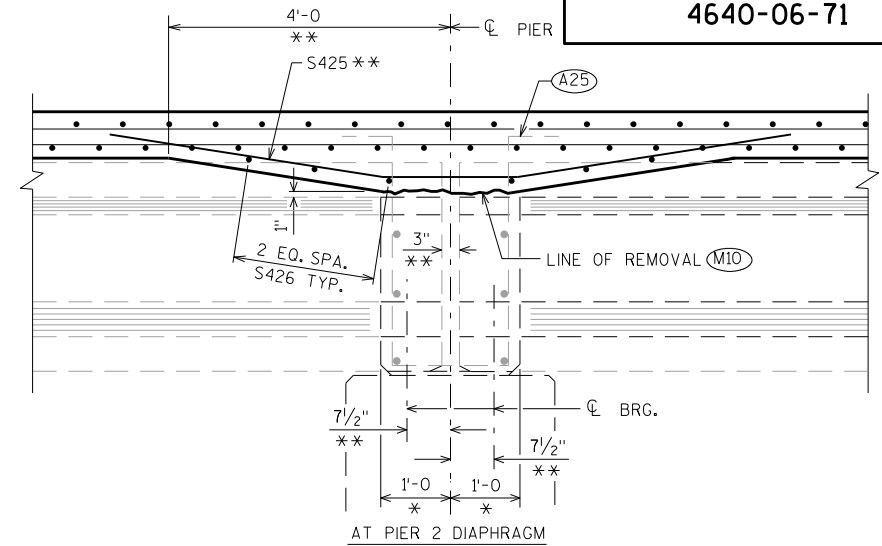
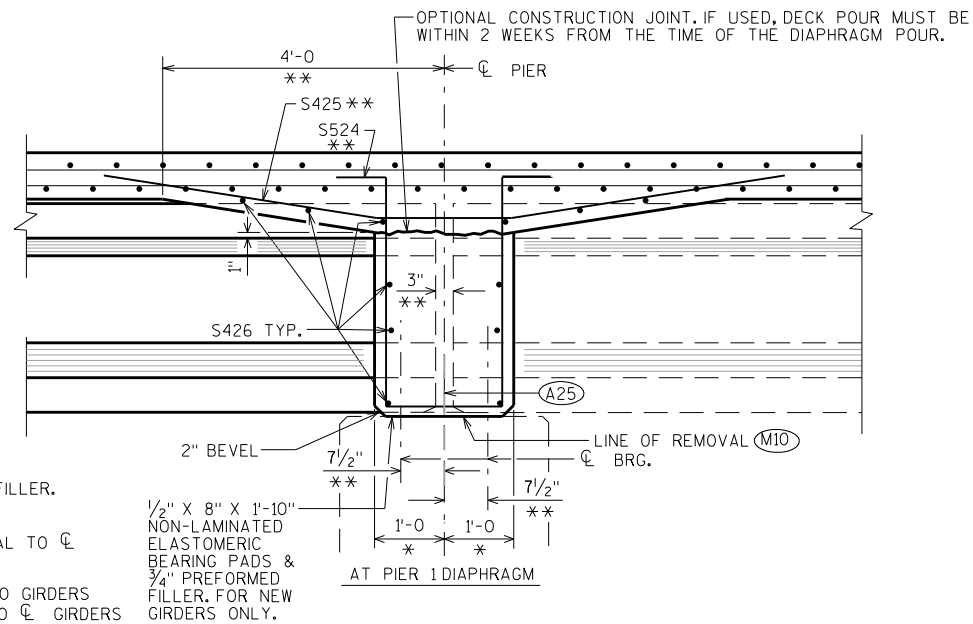
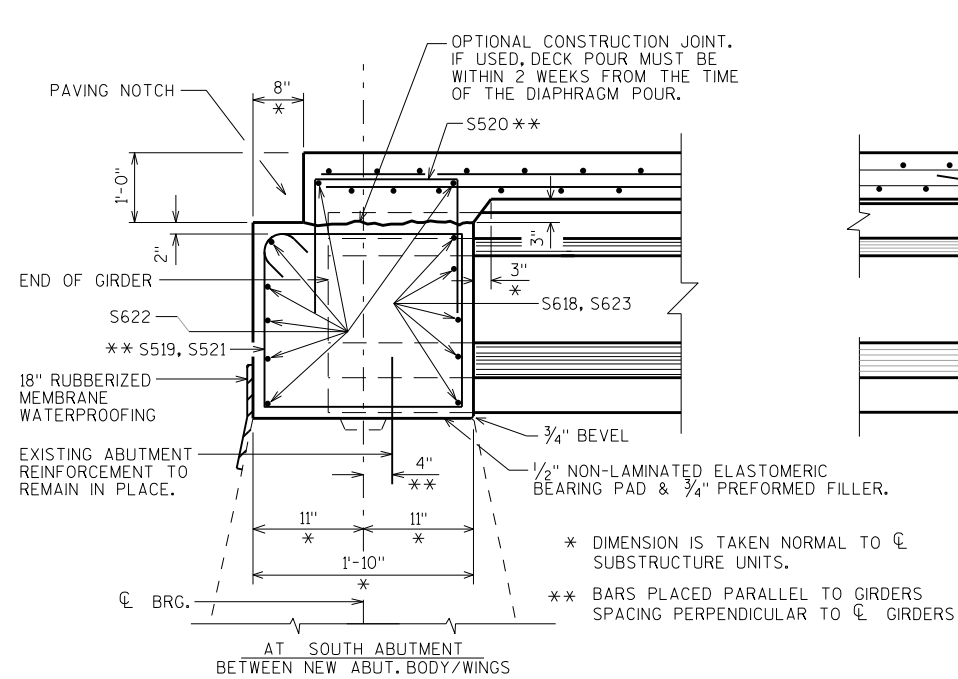
SIDEWALK DETAIL



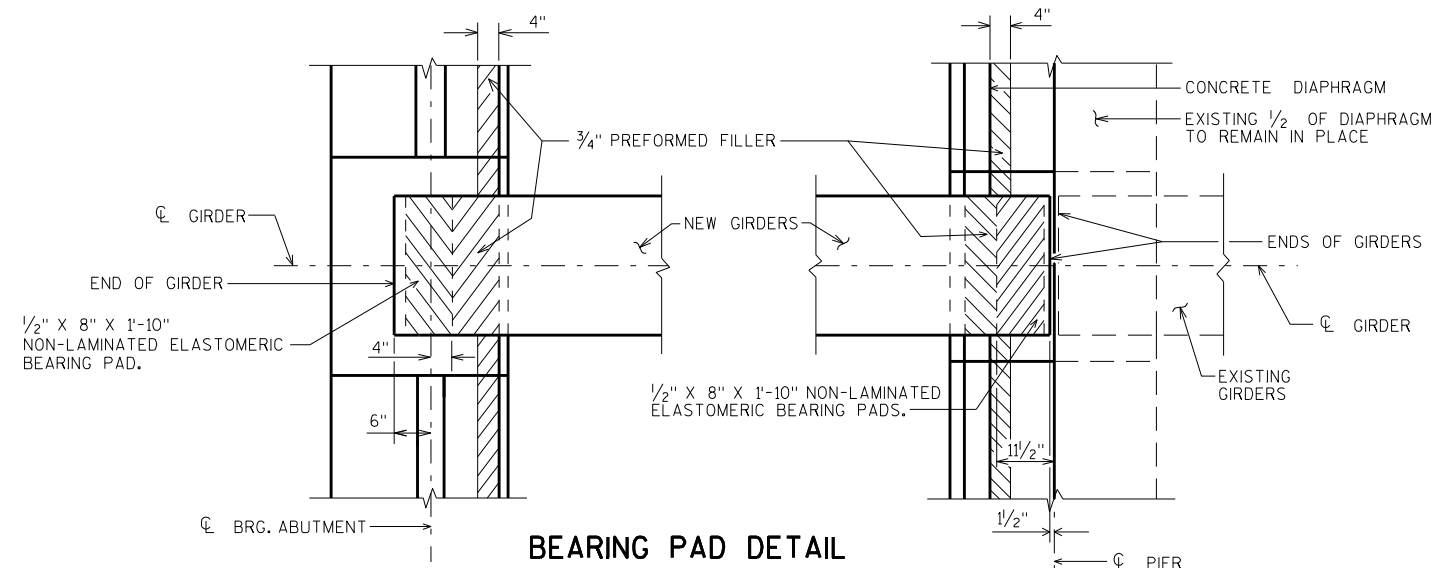
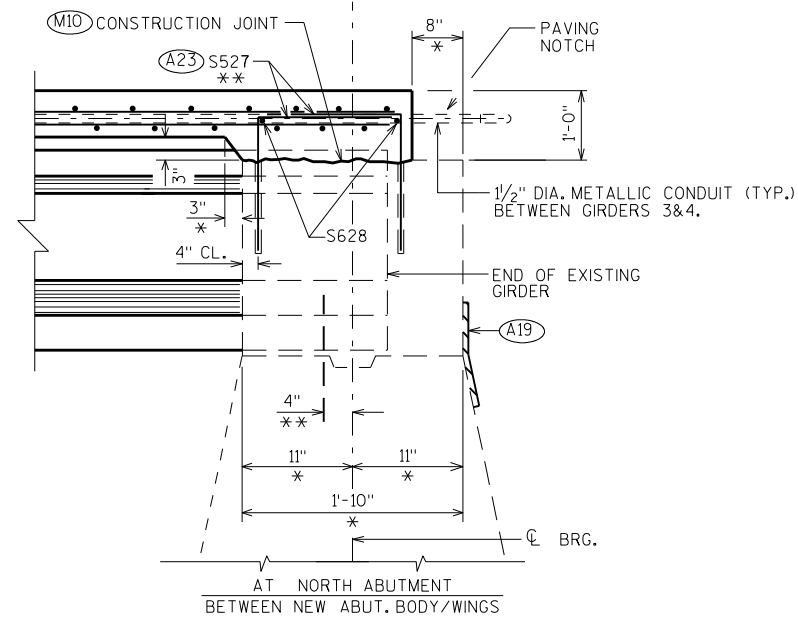
PLAN - SOUTH ABUTMENT

TYP. - BOTH ENDS OF ABUTMENT DIAPHRAGMS

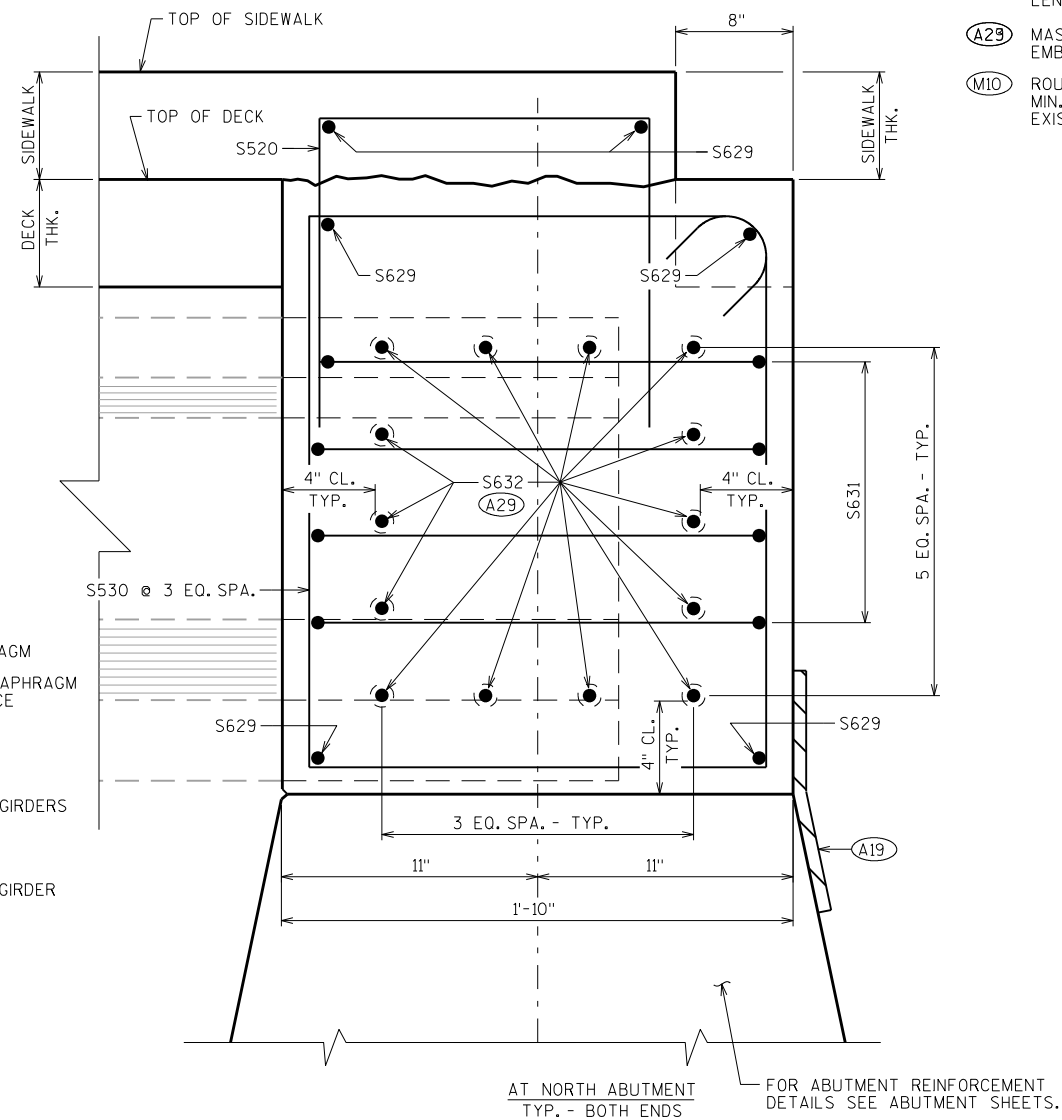
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-33			
DRAWN BY DDS		PLANS CK'D. JJS	
SIDEWALK DETAILS		SHEET 11	
		128	



PART LONGIT. SECTION



BEARING PAD DETAIL



- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A25) SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.
- (A29) MASONRY ANCHORS TYPE L NO. 5 BARS, EMBED 1'-6" IN CONCRETE.
- (M10) ROUGHEN EXISTING CONCRETE SURFACE 1/4" DEEP MIN. WHERE NEW CONCRETE CONTACTS EXISTING CONCRETE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-33			
DRAWN BY DDS		PLANS CKD. JJS	
SUPERSTRUCTURE DIAPH. SECTIONS			SHEET 12
			129

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S701	X	334	32'-7"			CONTINUITY STEEL OVER PIER
S402	X	168	32'-5"			LONGITUDINAL - TOP
S403	X	84	41'-6"			LONGITUDINAL - TOP
S404	X	168	24'-11"			LONGITUDINAL - TOP
S405	X	420	43'-7"			LONGITUDINAL - BOTTOM
S506	X	725	59'-0"			TRANSVERSE - TOP & BOTTOM
S507	X	726	5'-4"	X		TRANSVERSE - TOP (BOTH EDGES)
S508	X	48	33'-9"			PARAPET - HORIZ.
S509	X	24	40'-11"			PARAPET - HORIZ.
S510	X	428	6'-10"	X		PARAPET - VERT.
S611	X	14	10'-1"	X		PARAPET - LIGHT STD. - HORIZ.
S512	X	8	6'-0"	X		PARAPET - LIGHT STD. - VERT.
S513	X	4	3'-0"	X		PARAPET - LIGHT STD. - VERT.
S514	X	4	3'-0"	X		PARAPET - LIGHT STD. - VERT.
S515	X	8	6'-11"	X		PARAPET - LIGHT STD. - VERT.
S516	X	20	7'-0"	X		PARAPET - LIGHT STD. - HORIZ. - TOP
S517	X	20	6'-5"			PARAPET - LIGHT STD. - HORIZ. - BOTTOM
S618	X	60	4'-10"			SOUTH ABUT. DIAPH. - HORIZ.
S519	X	74	11'-0"	X		SOUTH ABUT. DIAPH. - STIRRUP
S520	X	84	4'-7"	X		SOUTH ABUT. DIAPH. - VERT.
S521	X	10	12'-6"	X		SOUTH ABUT. DIAPH. - STIRRUP - ENDS
S622	X	14	34'-9"			SOUTH ABUT. DIAPH. - HORIZ. - B.F.
S623	X	10	12'-5"	X		SOUTH ABUT. DIAPH. - HORIZ. - ENDS
S524	X	48	10'-8"	X		PIER 1 DIAPH. - VERT.
S425	X	96	10'-1"	X		PIERS 1&2 DIAPH. - VERT.
S426	X	216	4'-5"			PIERS 1&2 DIAPH. - HORIZ.
A23 S527	X	124	2'-2"	X		NORTH ABUT. DIAPH. - VERT.
S628	X	12	8'-3"			NORTH ABUT. DIAPH. - HORIZ.
S629	X	8	1'-10"			NORTH ABUT. DIAPH. - HORIZ. - ENDS
S530	X	8	12'-6"	X		NORTH ABUT. DIAPH. - STIRRUP - ENDS
S631	X	8	4'-9"	X		NORTH ABUT. DIAPH. - HORIZ. - ENDS
A29 S632	X	28	3'-0"			NORTH ABUT. DIAPH. - HORIZ.
S433	X	168	33'-6"			SIDEWALK - LONGITUDINAL
S434	X	28	16'-9"			SIDEWALK - LONGITUDINAL
S535	X	846	7'-2"	X		SIDEWALK TRANSVERSE - TOP
S436	X	284	4'-4"			SIDEWALK - TRANSVERSE - BOTTOM
S437	X	1692	2'-9"	X		SIDEWALK - VERT. - TIE BARS
S638	X	2	7'-6"	X		SOUTH ABUT. DIAPH. - HORIZ. -
S439	X	414	3'-3"	X		GIRDER HAUNCH - VERT. - HAT BARS
S440	X	345	3'-5"	X		GIRDER HAUNCH - VERT. - HAT BARS
S441	X	276	3'-7"	X		GIRDER HAUNCH - VERT. - HAT BARS
S442	X	138	3'-9"	X		GIRDER HAUNCH - VERT. - HAT BARS
S443	X	30	43'-0"			GIRDER HAUNCH - HORIZ. - GIRDERS 1, 6&7
S444	X	32	36'-0"			GIRDER HAUNCH - HORIZ. - GIRDERS 2-5

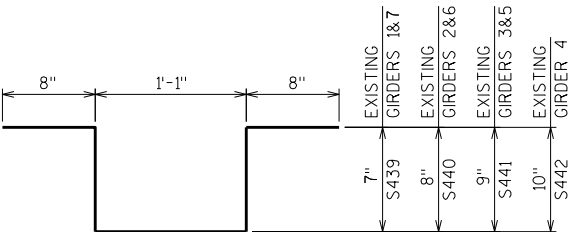
A23 MASONRY ANCHORS TYPE L NO. 5 BARS, EMBED 1'-6" IN CONCRETE.

A29 MASONRY ANCHORS TYPE L NO. 6 BARS, EMBED 1'-6" IN CONCRETE.

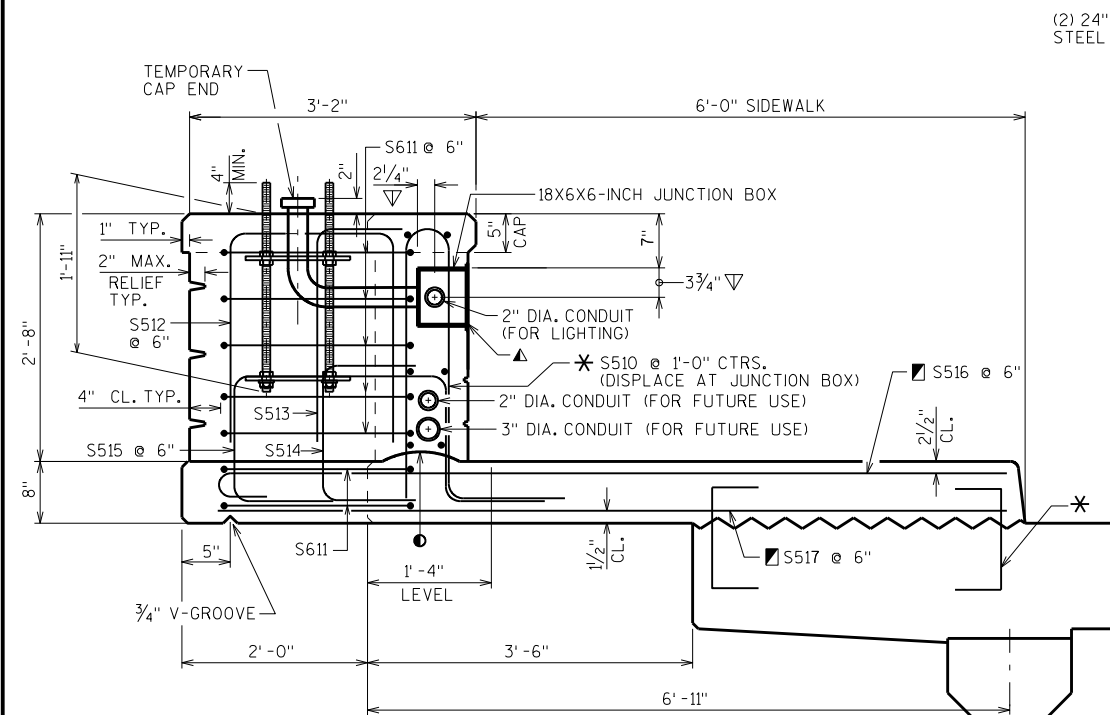
TOP OF DECK ELEVATIONS

	SOUTH ABUT. CL. BRG.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL. PIER 1	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CL. PIER 2
L.T. EOD	593.51	593.59	593.68	593.77	593.85	593.94	594.03	594.11	594.20	594.28	594.37	594.46	594.55	594.63	594.72	594.81	594.89	594.98	595.07	595.16	595.24
GIRDER 1	593.58	593.66	593.75	593.84	593.92	594.01	594.10	594.18	594.27	594.35	594.44	594.53	594.61	594.70	594.79	594.88	594.96	595.05	595.14	595.22	595.31
GIRDER 2	593.75	593.84	593.93	594.01	594.10	594.18	594.27	594.36	594.44	594.53	594.62	594.70	594.79	594.88	594.96	595.05	595.14	595.22	595.31	595.40	595.49
GIRDER 3	593.93	594.01	594.10	594.19	594.27	594.36	594.45	594.53	594.62	594.70	594.79	594.88	594.96	595.05	595.14	595.23	595.31	595.40	595.49	595.57	595.66
GIRDER 4	594.10	594.19	594.28	594.36	594.45	594.53	594.62	594.71	594.79	594.88	594.97	595.05	595.14	595.23	595.31	595.40	595.49	595.57	595.66	595.75	595.84
GIRDER 5	593.93	594.01	594.10	594.19	594.27	594.36	594.45	594.53	594.62	594.70	594.79	594.88	594.96	595.05	595.14	595.23	595.31	595.40	595.49	595.57	595.66
GIRDER 6	593.75	593.84	593.93	594.01	594.10	594.18	594.27	594.36	594.44	594.53	594.62	594.70	594.79	594.88	594.96	595.05	595.14	595.22	595.31	595.40	595.49
GIRDER 7	593.58	593.66	593.75	593.84	593.92	594.01	594.10	594.18	594.27	594.35	594.44	594.53	594.61	594.70	594.79	594.88	594.96	595.05	595.14	595.22	595.31
RT. EOD	593.51	593.59	593.68	593.77	593.85	593.94	594.03	594.11	594.20	594.28	594.37	594.46	594.55	594.63	594.72	594.81	594.89	594.98	595.07	595.16	595.24

	CL. PIER 2	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	NORTH ABUT. CL. BRG.
L.T. EOD	595.24	595.33	595.42	595.50	595.59	595.67	595.76	595.85	595.93	596.02	596.11
GIRDER 1	595.31	595.40	595.48	595.57	595.66	595.74	595.83	595.91	596.00	596.09	596.17
GIRDER 2	595.49	595.57	595.66	595.74	595.83	595.92	596.00	596.09	596.18	596.26	596.35
GIRDER 3	595.66	595.75	595.83	595.92	596.01	596.09	596.18	596.26	596.35	596.44	596.52
GIRDER 4	595.84	595.92	596.01	596.09	596.18	596.27	596.35	596.44	596.53	596.61	596.70
GIRDER 5	595.66	595.75	595.83	595.92	596.01	596.09	596.18	596.26	596.35	596.44	596.52
GIRDER 6	595.49	595.57	595.66	595.74	595.83	595.92	596.00	596.09	596.18	596.26	596.35
GIRDER 7	595.31	595.40	595.48	595.57	595.66	595.74	595.83	595.91	596.00	596.09	596.17
RT. EOD	595.24	595.33	595.42	595.50	595.59	595.67	595.76	595.85	595.93	596.02	596.11



S439, S440, S441, S442



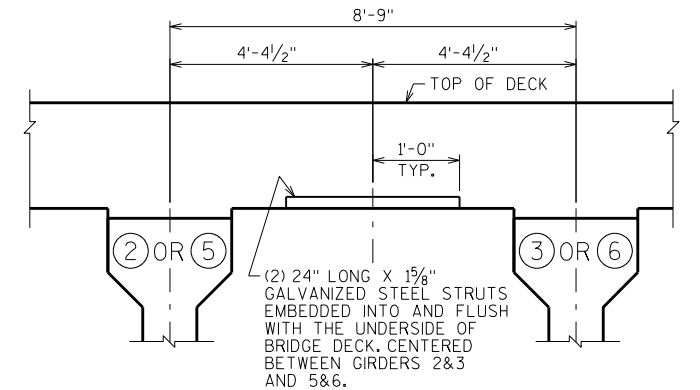
SECTION A-A

PROPOSED UNDER DECK LIGHTING DETAILS

SEE LIGHTING PLAN

NOTES

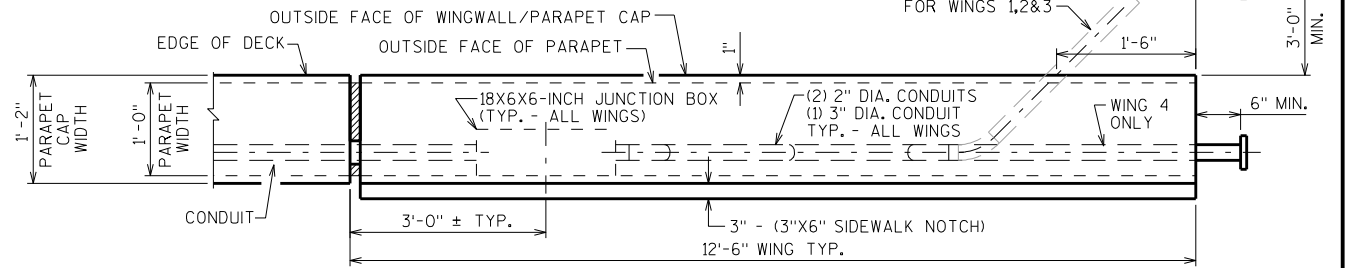
BID ITEMS SHALL BE:
 "JUNCTION BOXES 18X6X6-INCH", EACH.
 "ANCHOR ASSEMBLIES LIGHT POLES", EACH.
 "CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
 "CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH"
 "CONDUIT RIGID METALLIC 2-INCH"
 "CONDUIT RIGID METALLIC 3-INCH"
 APPROVED MANUFACTURERS - JUNCTION BOXES:
 SEE APPROVED MATERIAL LIST.



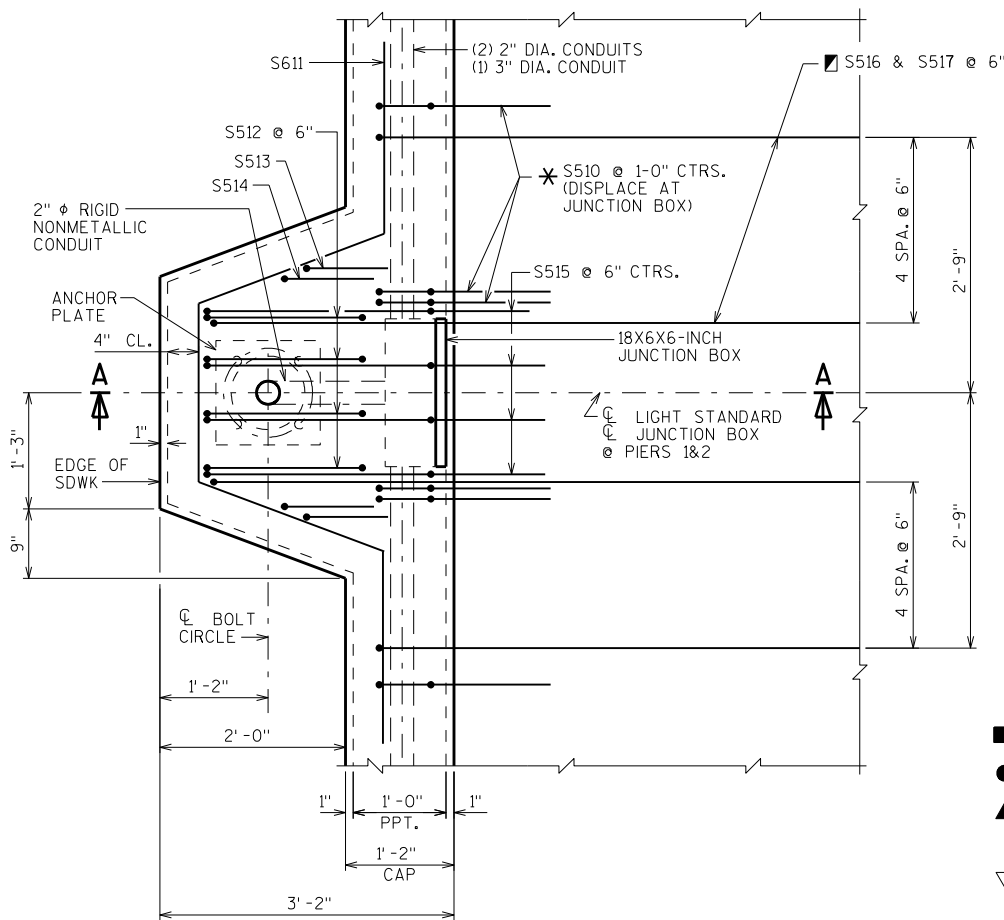
FOR BID ITEMS, QUANTITIES AND DETAILS ON INSTALLATION, RELATED TO THE UNDER DECK LIGHTING - INCLUDING STRUTS, WIRING, LIGHT FIXTURES AND ALL OTHER ASSOCIATED HARDWARE, SEE LIGHTING PLAN.

LIGHTING DETAILS

LOOKING NORTH



PLAN OF PARAPET AT WINGWALL

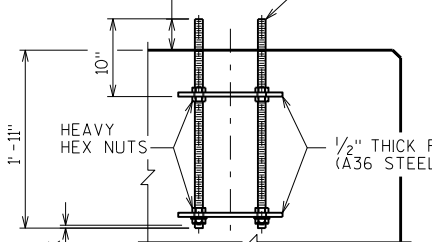


PLAN AT LIGHT STANDARD

PLATE DETAIL

(4 REQ'D.)

4" MIN. BOLT PROJECTION (NO GROUT REQ'D.)



ANCHORAGE DETAIL

(2 REQ'D.)

■ USE 3" DIA. RIGID NONMETALLIC CONDUIT.

● CONSTR. JT. STRIKE OFF AS SHOWN

▲ CUT OUT ± 1" OF GASKET AT BOTTOM OF JUNCTION BOX COVER TO ALLOW FOR DRAINAGE.

▽ LOCATION OF CONDUIT IS MEASURED FROM OUTSIDE EDGE OF JUNCTION BOX.

■ THESE BARS ARE IN ADDITION TO STANDARD TRANSVERSE BARS IN SIDEWALK.

● 1" THREADED ANCHOR BOLTS ASTM A449 OR AASHTO M 314-90 GR 55. HOT DIP ASTM A153, CLASS C, UPPER 8" OF BOLT INCLUDING NUTS & WASHERS. PROVIDE ENLARGED THREAD ON NUTS FOR PROPER FIT AFTER GALVANIZING. PROVIDE DOUBLE FLAT WASHERS & NUTS.

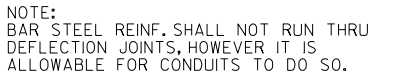
* SEE VERTICAL FACE PARAPET "A", SHEET, FOR ADDITIONAL BAR STEEL DETAILS.

NOTES (CONTINUED)

EXPANSION FITTINGS, ANGLES, ADAPTER FITTINGS, STRUTS AND LIGHT FIXTURE SHALL BE INCIDENTAL TO EITHER "CONDUIT RIGID METALLIC 2-INCH" OR "CONDUIT RIGID METALLIC SCHEDULE 40 2-INCH" OR "CONDUIT RIGID METALLIC 3-INCH" OR "CONDUIT NONMETALLIC SCHEDULE 40 3-INCH".

WHEN CONNECTING NONMETALLIC CONDUIT AND METALLIC CONDUIT, ONLY ADAPTER FITTINGS U.L. OR NRTL LISTED FOR ELECTRICAL USE SHALL BE USED.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-33	
DRAWN BY		DDS	PLANS CKD. JJS
PARAPET "A" ELECTRICAL WORK		SHEET 14	
		131	



FOR FORMLINER DETAILS SEE "COMBINATION RAIL TYPE C3 GALVANIZED" SHEET



* ADJUST LOCATIONS OF BARS TO ALLOW
PLACEMENT OF ANCHOR ASSEMBLY FOR
RAILING AND BEAM GUARD.



NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR
ASSEMBLIES FOR STEEL PLATE BEAM
GUARD", EACH.



(SHOWING DEFLECTION JOINT IN PARAPET
AND SIDEWALK.)

WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF $\frac{1}{8}$ " ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION A-A BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

☒ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN
AND LEAVE ROUGH.



NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE		B-59-33			
		DRAWN BY	DDS	PLANS CK'D.	JJS
COMBINATION RAIL TYPE "C3" (WINGS 1,2&3)			SHEET 15		
			132		



12'-6" WING LENGTH



NOTE:
BAR STEEL REINF. SHALL NOT RUN THRU
DEFLECTION JOINTS, HOWEVER IT IS
ALLOWABLE FOR CONDUITS TO DO SO.

FOR FORMLINER DETAILS SEE "COMBINATION RAIL TYPE C3 GALVANIZED" SHEET



* ADJUST LOCATIONS OF BARS TO ALLOW
PLACEMENT OF ANCHOR ASSEMBLY FOR
RAILING AND BEAM GUARD.



NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR
ASSEMBLIES FOR STEEL PLATE BEAM
GUARD", EACH.

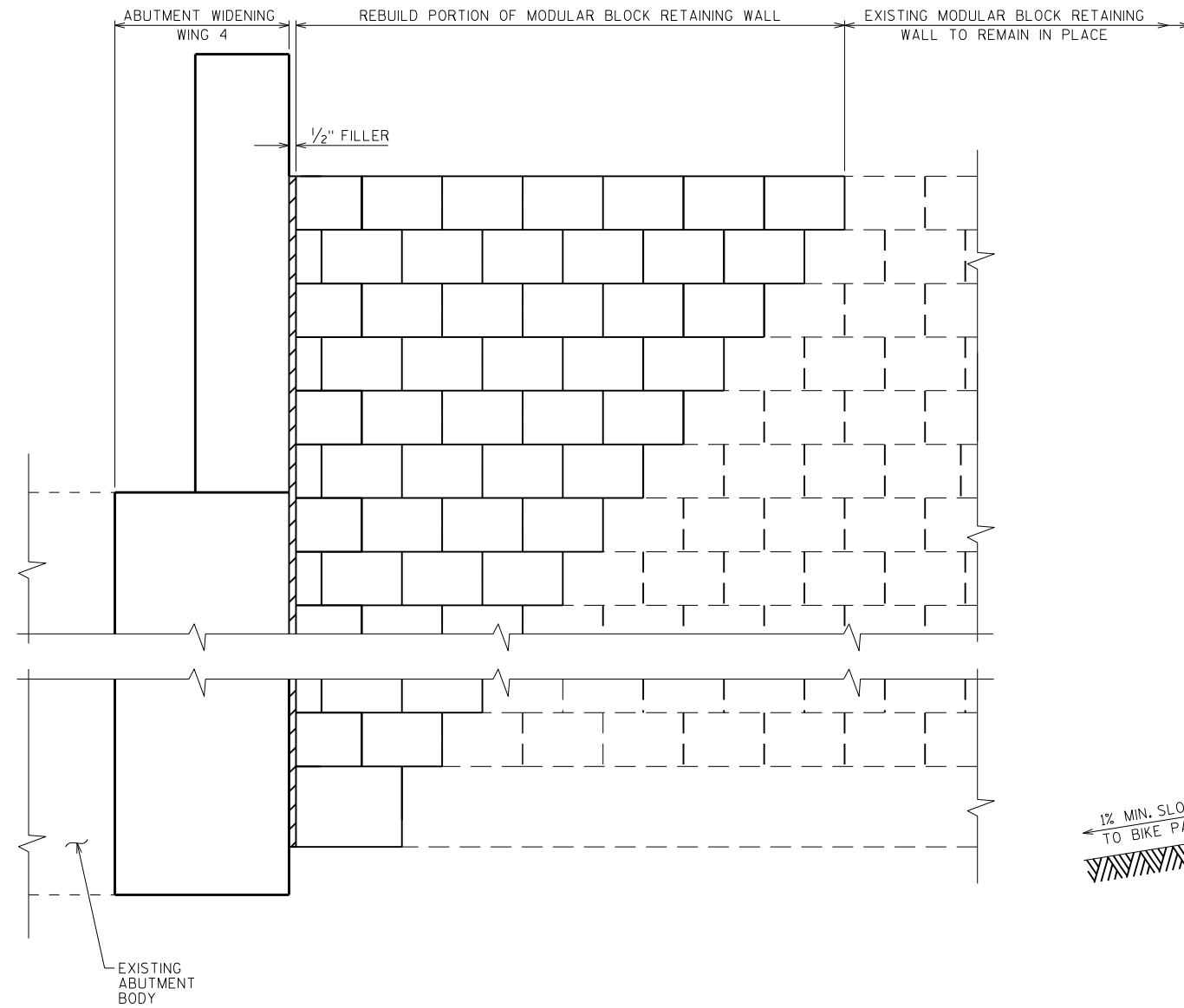


(SHOWING DEFLECTION JOINT IN PARAPET
AND SIDEWALK.)

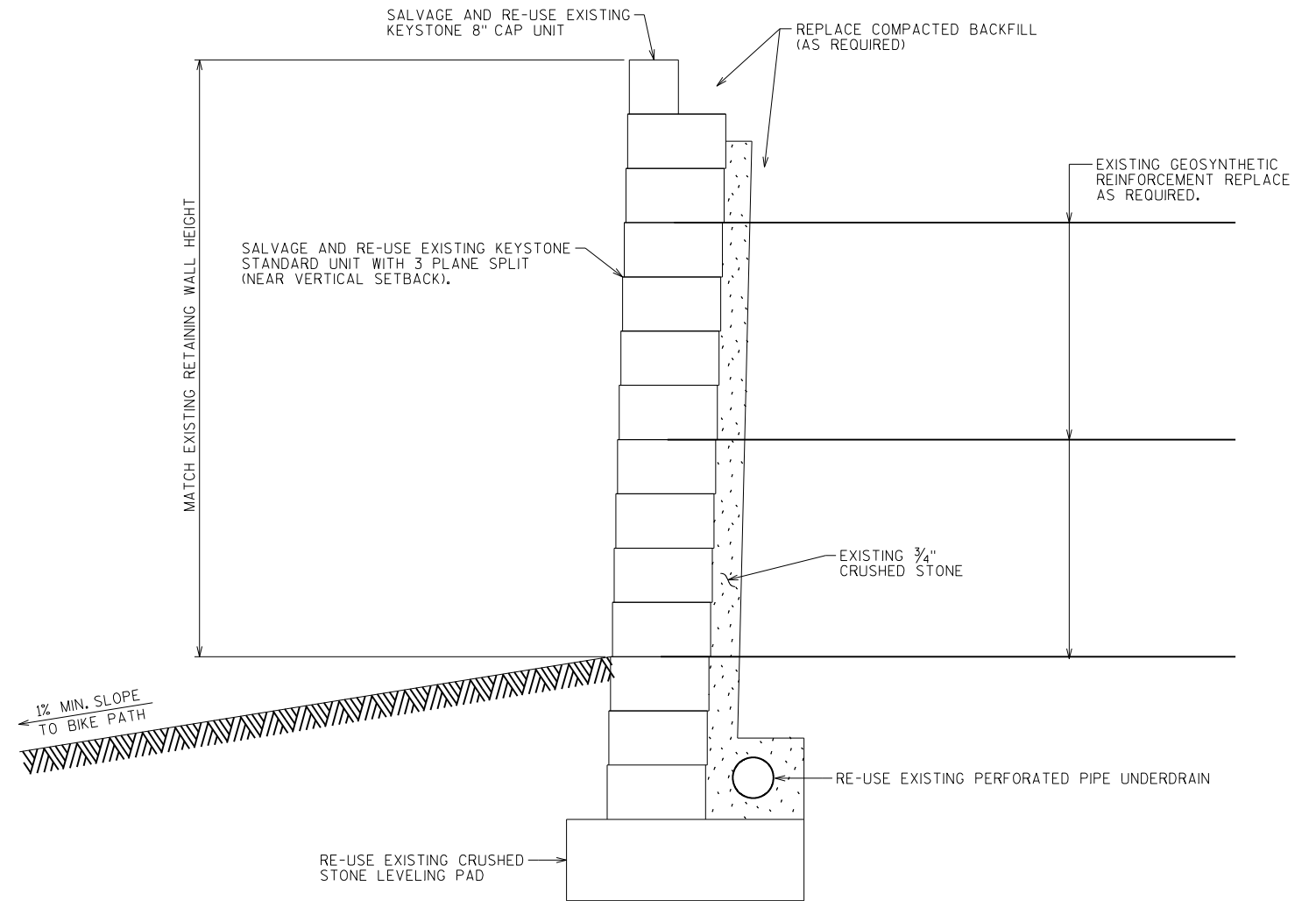
WHEN PARAPETS ARE POURED CONTINUOUSLY FROM END TO END, THEY SHALL BE SEPARATED AT THE DEFLECTION JOINTS BY A PIECE OF 1/8" ZINC OR PLASTIC PLATE CUT AS SHOWN IN SECTION A-A BY SHADED AREA. IF CONSTRUCTION JOINTS IN PARAPETS ARE USED AT THE DEFLECTION JOINTS, ONE SIDE OF JOINT SHALL BE COATED WITH AN APPROVED LIQUID BOND BREAKER AND PLATE SEPARATORS MAY BE OMITTED.

☒ HORIZ. CONST. JOINT - STRIKE OFF AS SHOWN
AND LEAVE ROUGH.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-33	
		DRAWN BY	DDS PLANS CK'D. JJS
COMBINATION RAIL TYPE "C3" (WING 4)		SHEET 16	
		133	



ELEVATION
AT WING 4



SECTION THRU EXISTING MODULAR BLOCK RETAINING WALL
AT WING 4

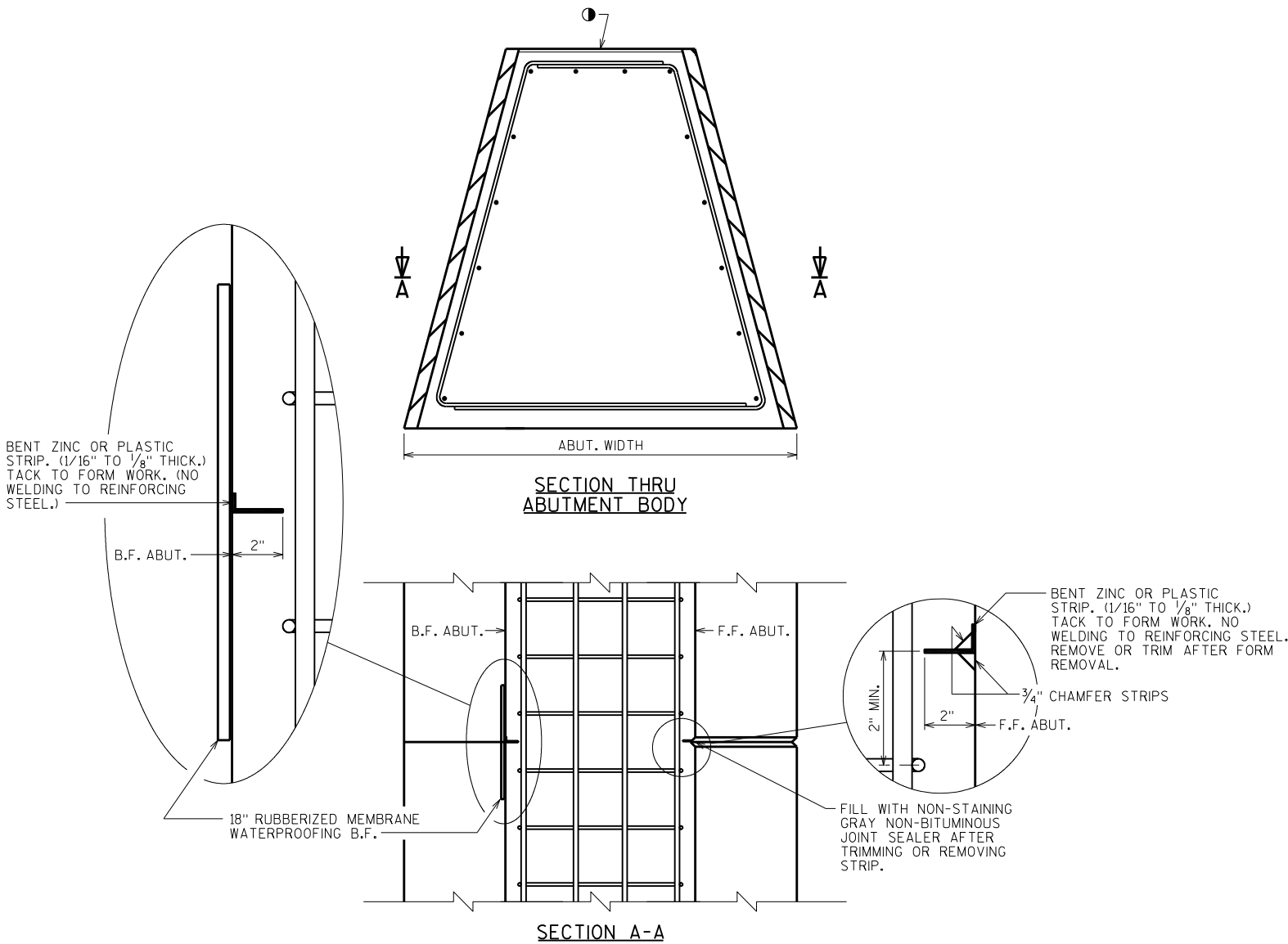
NOTES:

REMOVE EXISTING MODULAR BLOCK RETAINING WALL AS REQUIRED FOR NEW CONSTRUCTION.

REPLACE MODULAR BLOCK RETAINING WALL (IN KIND) TO EXTEND TO ABUTMENT WIDENING/NEW CONSTRUCTION.

ALL COST ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE EXISTING MODULAR BLOCK RETAINING WALL SHALL BE PAID FOR UNDER THE BID ITEM "REMOVE AND REPLACE EXISTING RETAINING WALL".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-59-33			
DRAWN BY		DDS	PLANS CK'D. JJS
RETAINING WALL REBUILD DETAILS			SHEET 18
			135



NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

- 1 USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE		B-59-33	
DRAWN BY		DDS	PLANS CK'D. JJS
ALTERNATE CONSTRUCTION JOINT		SHEET 19	
		136	

STH 28

STATION	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut	Salvaged / Unusable Pavement Material	Fill	EBS	Cut 1.00	Expanded Fill 1.25	
Note 1	Note 2	Note 3		Note 1	Note 2	Note 4						
START ABRUPTLY												
97+25	---	96.4	45.80	0	0.00	0	0	0	0	0	0	0
97+50	25.00	96.4	45.80	3.3	0.00	89	42	2	0	89	2	45
97+75	25.00	86	45.80	30.2	0.00	84	42	16	0	174	21	68
98+00	25.00	87.6	45.80	62.3	0.00	80	42	43	0	254	75	52
98+14	14.00	100.1	45.80	3.3	0.00	49	24	17	0	303	96	56
END ABRUBTLY												

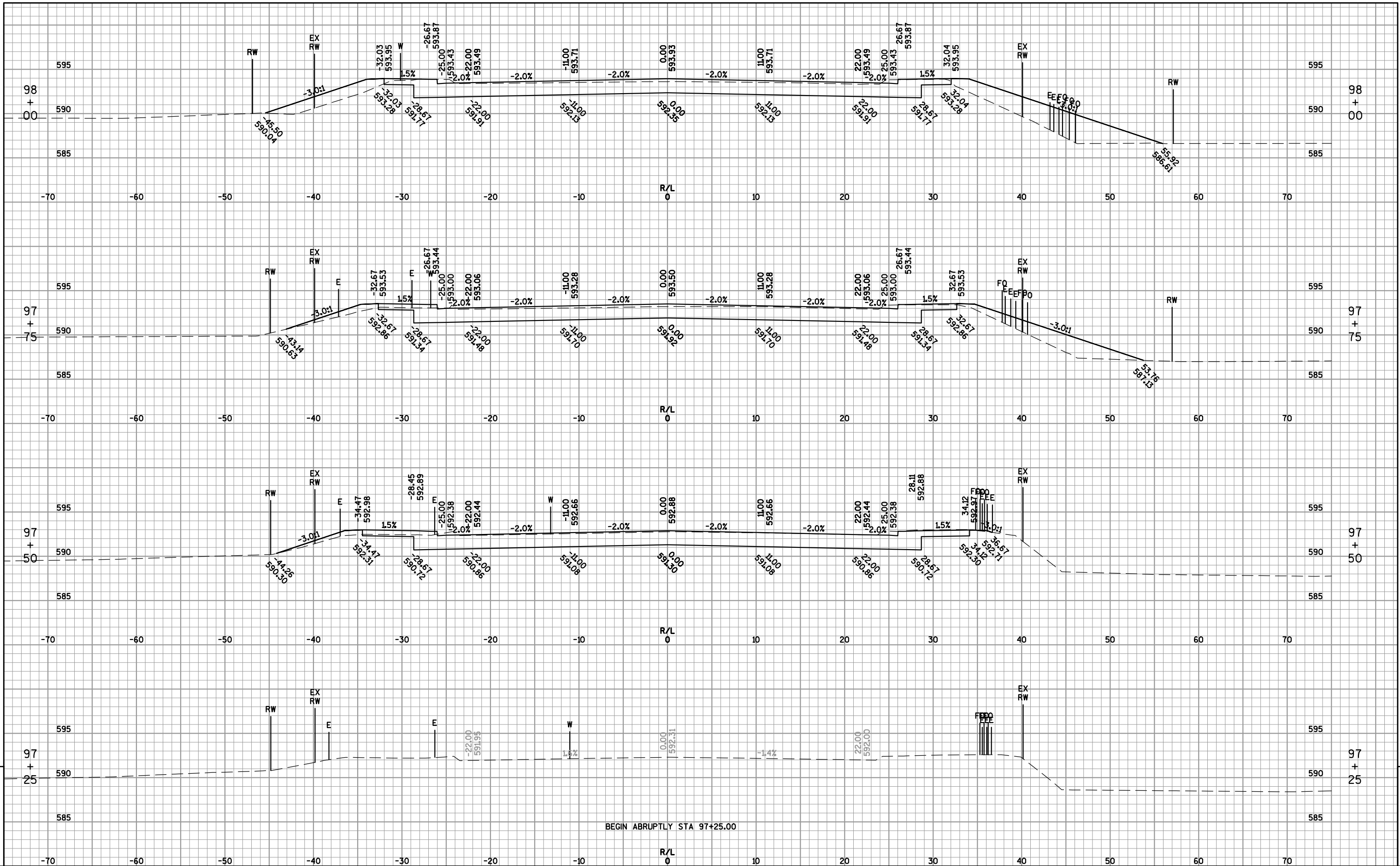
Incremental Column Totals 303 151 77 0

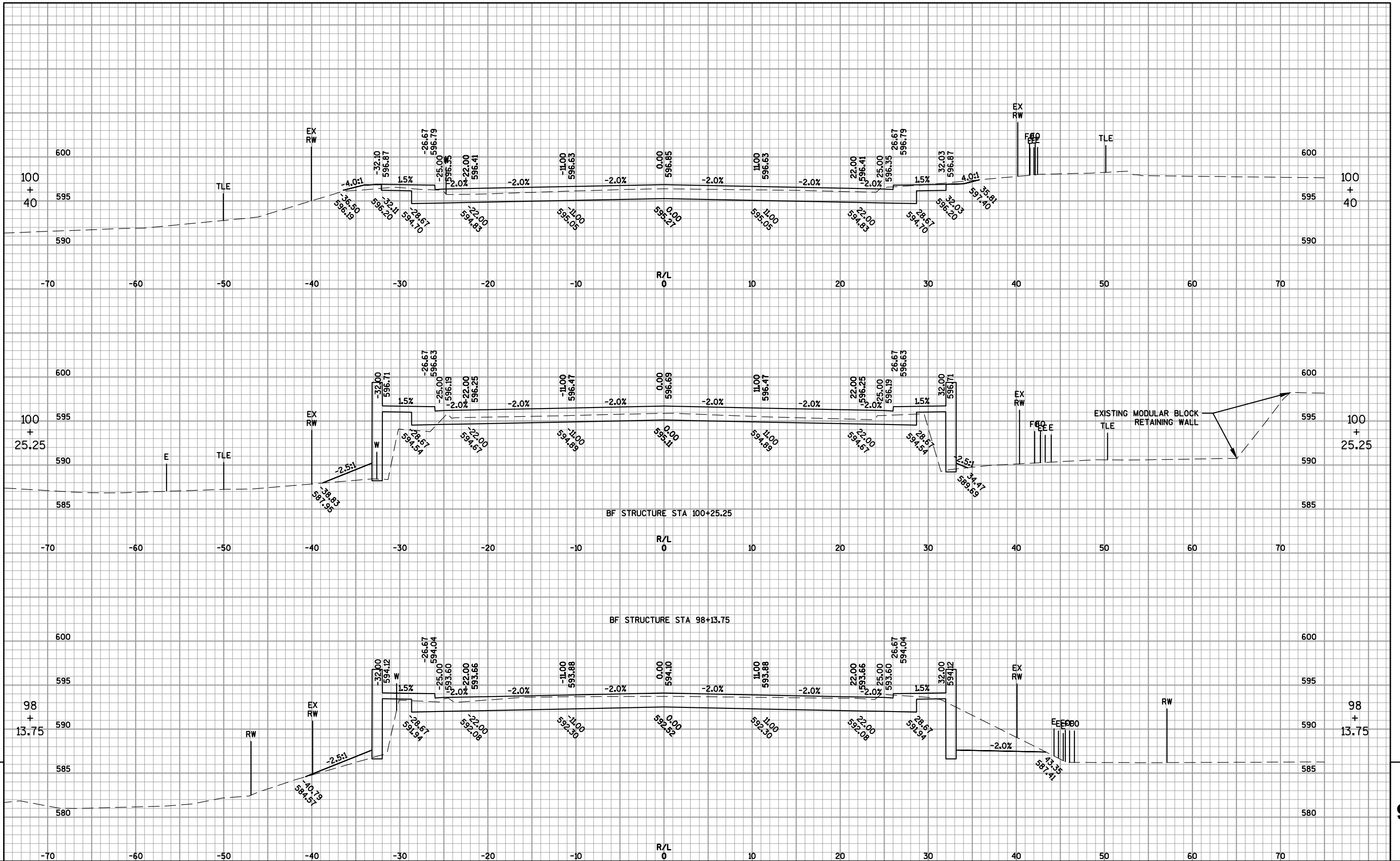
STH 28

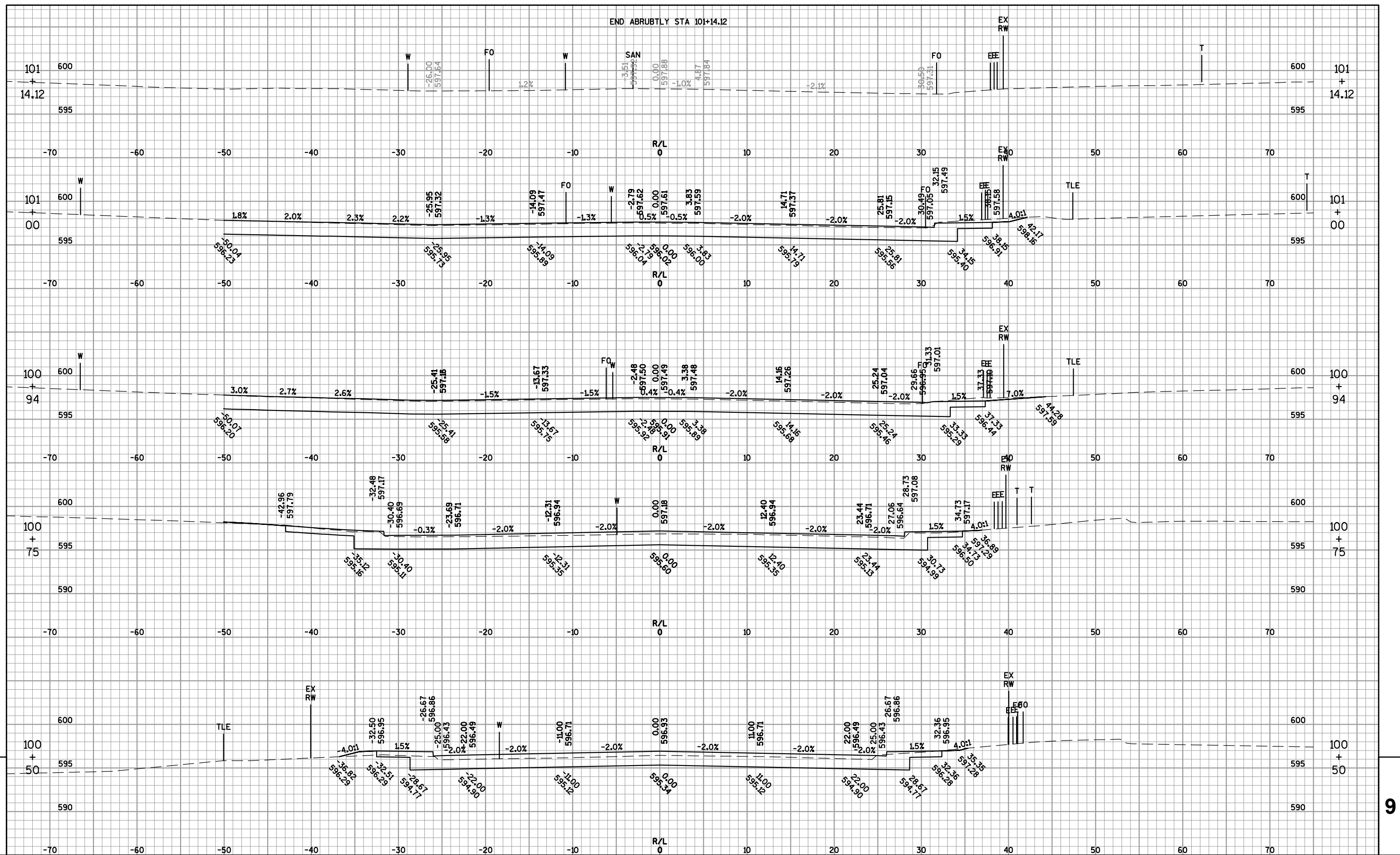
STATION	Distance	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)		Mass Ordinate
		Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Cut 1.00 Note 1	Expanded Fill 1.25 Note 2	
Note 1	Note 2	Note 3		Note 1	Note 2	Note 4						
START ABRUPTLY												
100+25	---	46.7	40.90	6	0.00	0	0	0	0	0	0	0
100+40	15.00	72.4	46.80	2	0.00	33	24	2	0	33	3	6
100+50	10.00	70.3	47.50	2	0.00	26	17	1	0	26	1	5
100+75	25.00	95.8	55.80	0	0.00	77	48	1	0	110	4	31
100+94	19.00	127.6	71.40	0	0.00	79	45	0	0	105	1	29
101+00	6.00	132.3	71.40	0	0.00	29	16	0	0	139	4	41
101+14	14.00	132.3	71.40	0	0.00	69	37	0	0	174	1	60
END ABRUBTLY												

Incremental Column Totals 312 187 4 0

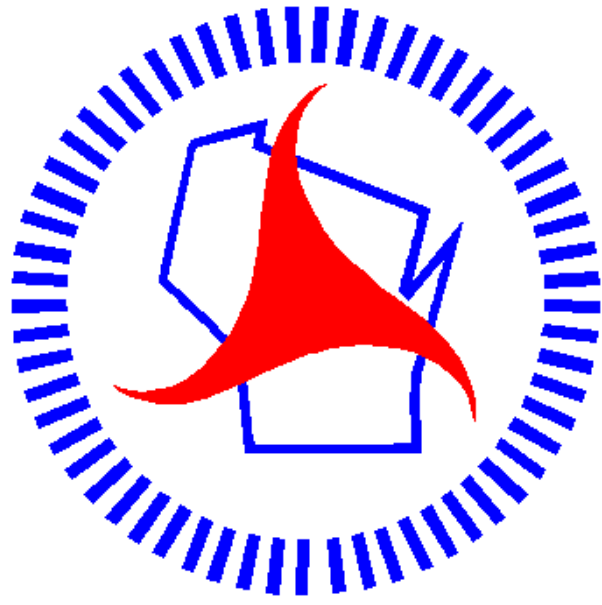
- Notes:
- 1.) Cut includes salvaged unusable pavement material
 - 2.) Salvaged unusable pavement material is not shown in the cross sections. Total amount shown in Earthwork Summary table.
 - 3.) Does not include exc volume of unusable pavement in fill sections
 - 4.) Mass Ordinate = Cut - Salvaged/ Unusable Pavement Material - (Unexpanded Fill - Rock*Rock Factor)* Fill Factor







Notes



Wisconsin Department of Transportation

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