

ORDER OF SHEETS

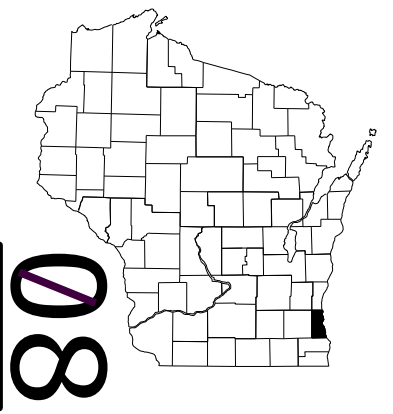
Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section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

TOTAL SHEETS = 164

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PLAN OF PROPOSED IMPROVEMENT  
**C WEST ALLIS, W BELOIT ROAD**  
 MOBILE ST - UP RR CROSS  
 LOCAL STREET  
 MILWAUKEE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2525-03-73	WISC 2024325	1

STATE PROJECT NUMBER  
**2525-03-73**



DESIGN DESIGNATION

	W BELOIT RD	S 55TH STREET
A.A.D.T. 2023	= 12,200	>100
A.A.D.T. 2043	= 13,500	>100
D.H.V.	= 1,350	N/A
D.D.	= 61/39	N/A
T.	= 6.9%	N/A
DESIGN SPEED	= 35 MPH	30 MPH
ESALS	= 1,300,000	N/A

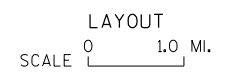
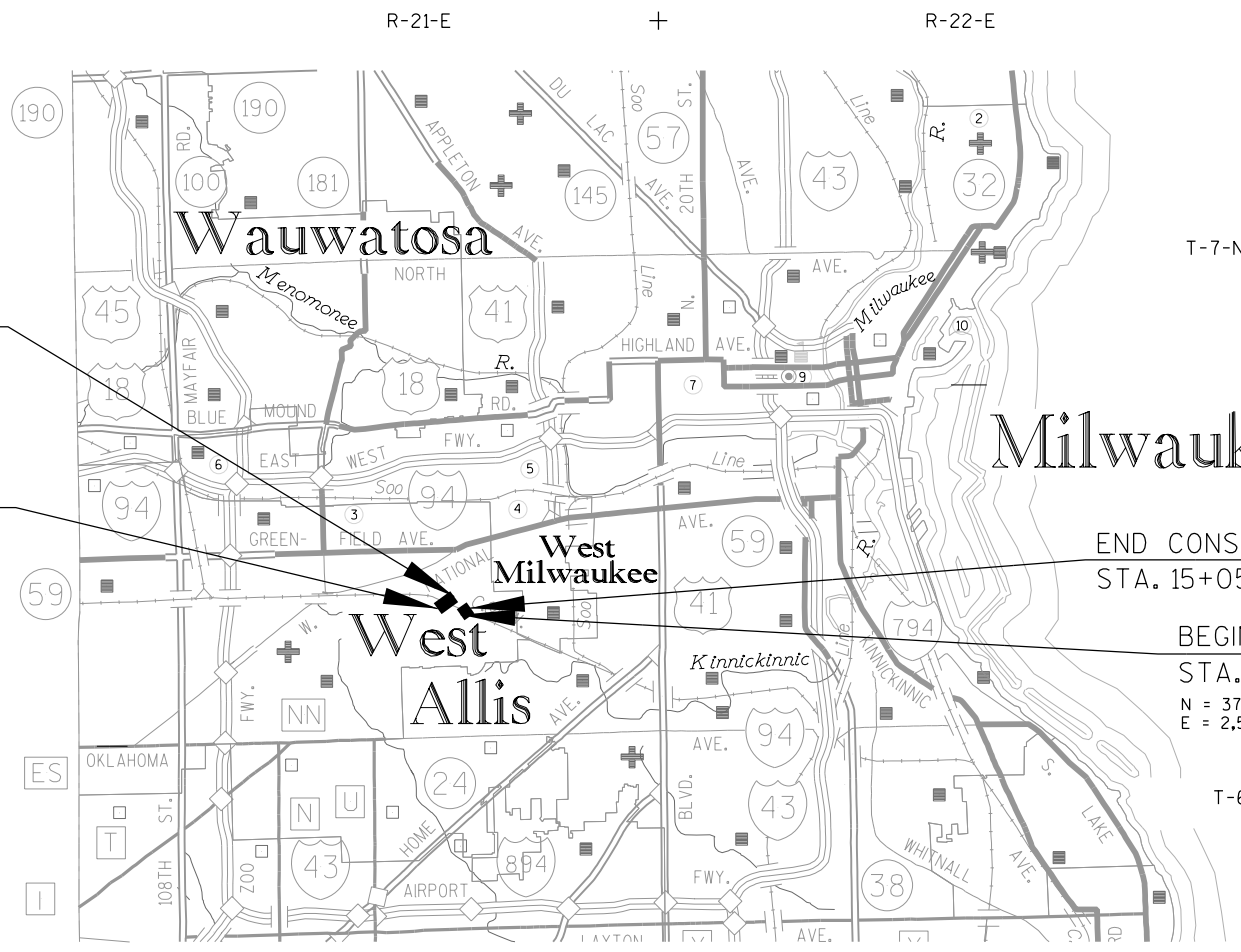
CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

END PROJECT  
 STA. 46+50.00  
 BEGIN PROJECT  
 STA. 43+50.00  
 N = 373,639.42  
 E = 2,537,949.37

END CONSTRUCTION  
 STA. 15+05.35

BEGIN CONSTRUCTION  
 STA. 12+89.67  
 N = 372,718.91  
 E = 2,540,092.12



TOTAL NET LENGTH OF CENTERLINE = 0.098 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM (WSPCS), SOUTH ZONE, NAD27, GROUND, US SURVEY FOOT  
 VERTICAL DATUM - CITY OF WEST ALLIS. (NGVD29 - 580.56)

ACCEPTED FOR  
 CITY WEST ALLIS  
 1/18/2024 (Date)  
*Traci Gengler*  
 Principal Engineer  
 (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY  
**GRAEF**  
 WISCONSIN PROFESSIONAL ENGINEER  
 ROBERT J. STEUCK  
 41177 NEW BERLIN WI  
 1/16/2024 (Date)  
*Robert J. Steuck*  
 (Signature)

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION  
 PREPARED BY  
 Surveyor GRAEF  
 Designer GRAEF  
 Project Manager MICHAEL BAIRD  
 Regional Examiner  
 Regional Supervisor BRIAN BOOTHBY  
 C.O. Examiner

APPROVED FOR THE DEPARTMENT  
 DATE: 1/23/2024  
*Michael J. Baird*  
 (Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER.

THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES OR FROM GRUBBING OF TREES OR STUMPS SHALL BE BACKFILLED WITH GRANULAR BACKFILL GRADE 1. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

THE LOCATION OF KNOWN EXISTING UTILITIES IN THE VICINITY OF THE PROJECT ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITIES IN THE AREA THAT ARE NOT SHOWN.

HMA PAVEMENT WHERE INDICATED ON THE PLANS, SHALL CONSIST OF LAYERS AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER.

6" DEPTH - 2" OF HMA PAVEMENT 4 MT 58-28 H AS THE UPPER LAYER  
4" OF HMA PAVEMENT 3 MT 58-28 S AS THE LOWER LAYER

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

CONCRETE JOINTS SHALL MATCH ABUTTING PAVEMENT AND CURB AND GUTTER JOINTS UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

CONTRACTOR SHALL CONTACT UPRR PUBLIC PROJECTS MANAGER PRIOR TO ANY WORK WITHIN UPRR RIGHT-OF-WAY.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NTS	NOT TO SCALE
PAVT	PAVEMENT
PB	PULL BOX
PC	POINT-OF-CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RAD	RADIUS
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
RCHES	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL STORM SEWER
RCPSS	REINFORCED CONCRETE PIPE - STORM SEWER
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SIGNAL BASE
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT

CITY OF WEST ALLIS

TRACIGENGLER  
CITY OF WEST ALLIS ENGINEERING DEPARTMENT  
7525 W GREENFIELD AVENUE  
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DIR. INDUSTRY & PUBLIC PROJECTS  
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(402) 271-4357

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NG952W@ATT.COM

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BRAHIM.GADDOUR@LUMEN.COM

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GLENDALE, WI 53209  
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(262) 232-1323  
RANDY.CICATELLO@VERIZON.COM

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WEST ALLIS, WI 53214  
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TRAVIS.BANGART@WE-ENERGIES.COM

WE ENERGIES (GAS OPERATIONS)  
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WEST ALLIS, WI 53214  
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WEST ALLIS - SANITARY  
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TLAST@WESTALLISWI.GOV

WEST ALLIS - WATER  
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KRITTENHOUSE@WESTALLISWI.GOV

OTHER CONTACTS

WEST ALLIS - STREET LIGHTING  
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6300 MCGEOCH AVENUE  
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DMOLLESON@WESTALLISWI.GOV

INDEX OF DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
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- REMOVAL PLAN
- PLAN DETAIL
- CURB RAMP DETAIL
- PAVEMENT GRADES
- EROSION CONTROL
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- SANITARY SEWER
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- LANDSCAPE PLAN
- PERMANENT SIGNING
- LIGHTING PLAN
- PAVEMENT MARKING
- TRAFFIC CONTROL AND CONSTRUCTION STAGING
- DETOUR PLAN
- ALIGNMENT PLAN



**Dial 811 or (800) 242-8511**

[www.DiggersHotline.com](http://www.DiggersHotline.com)

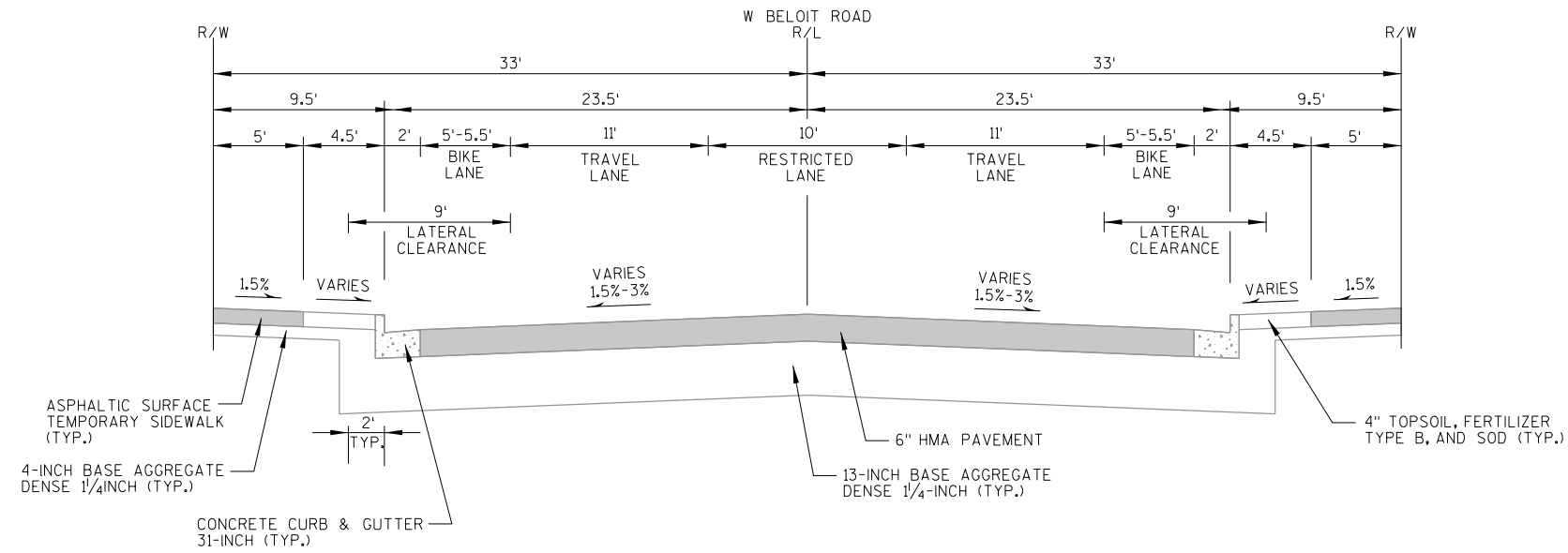




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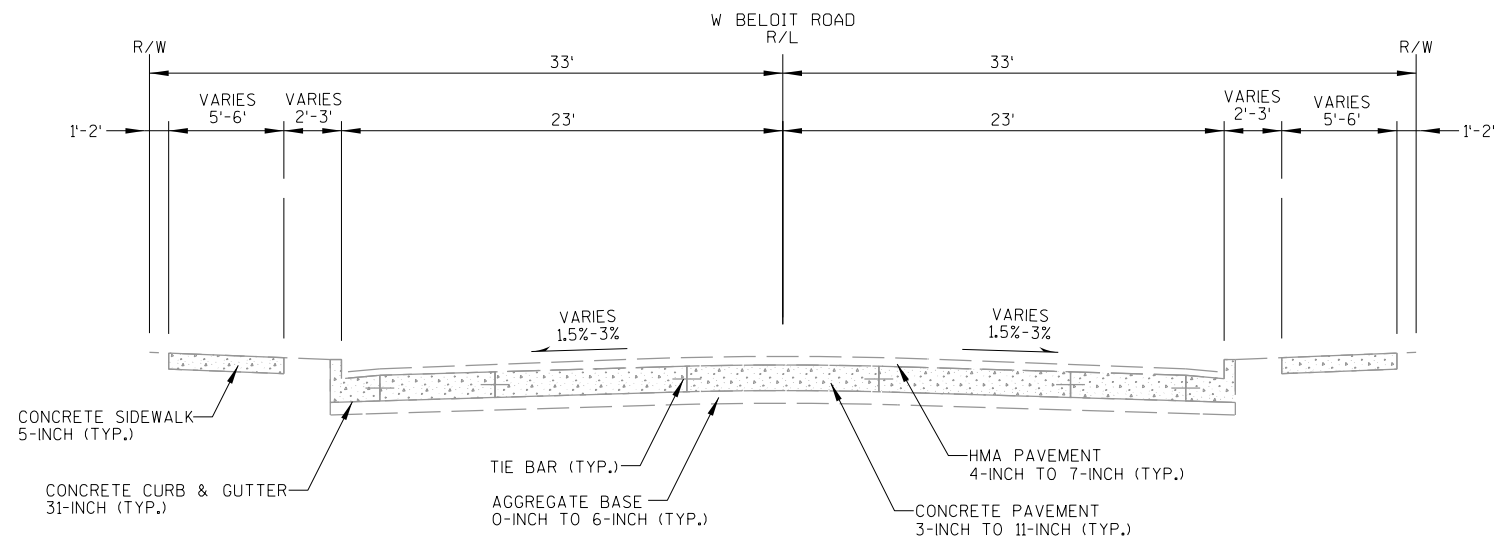
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PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET	<b>E</b>
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TYPICAL EXISTING SECTION

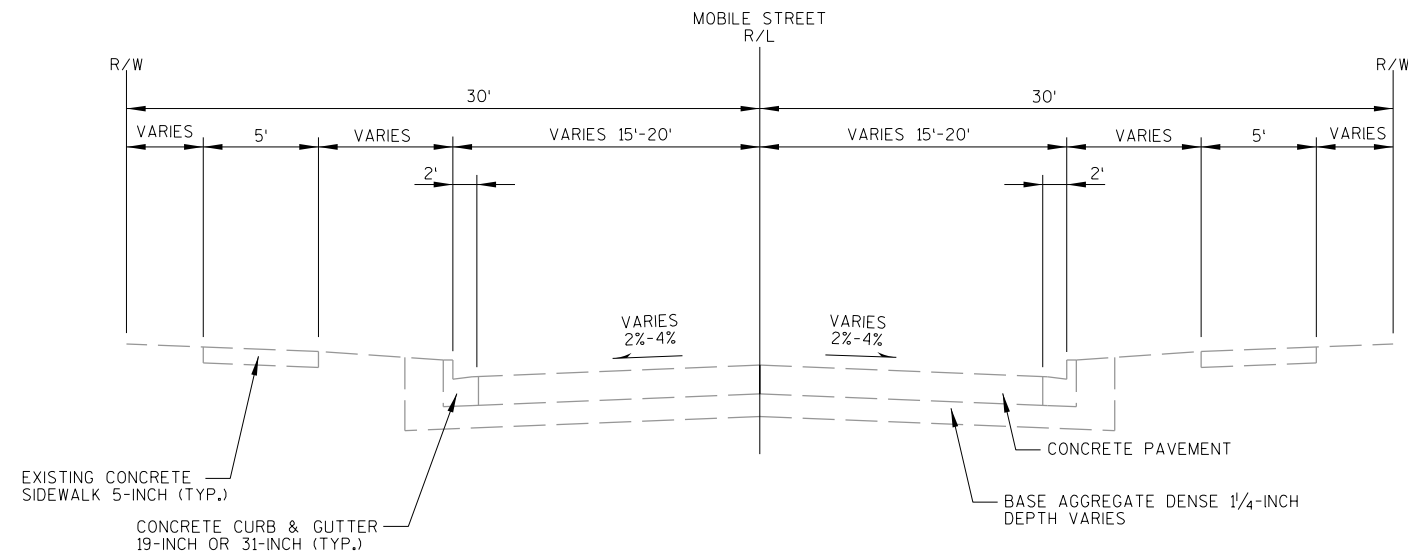
STA 43+50 TO STA 43+75  
STA 46+30 TO STA 46+50



TYPICAL EXISTING SECTION

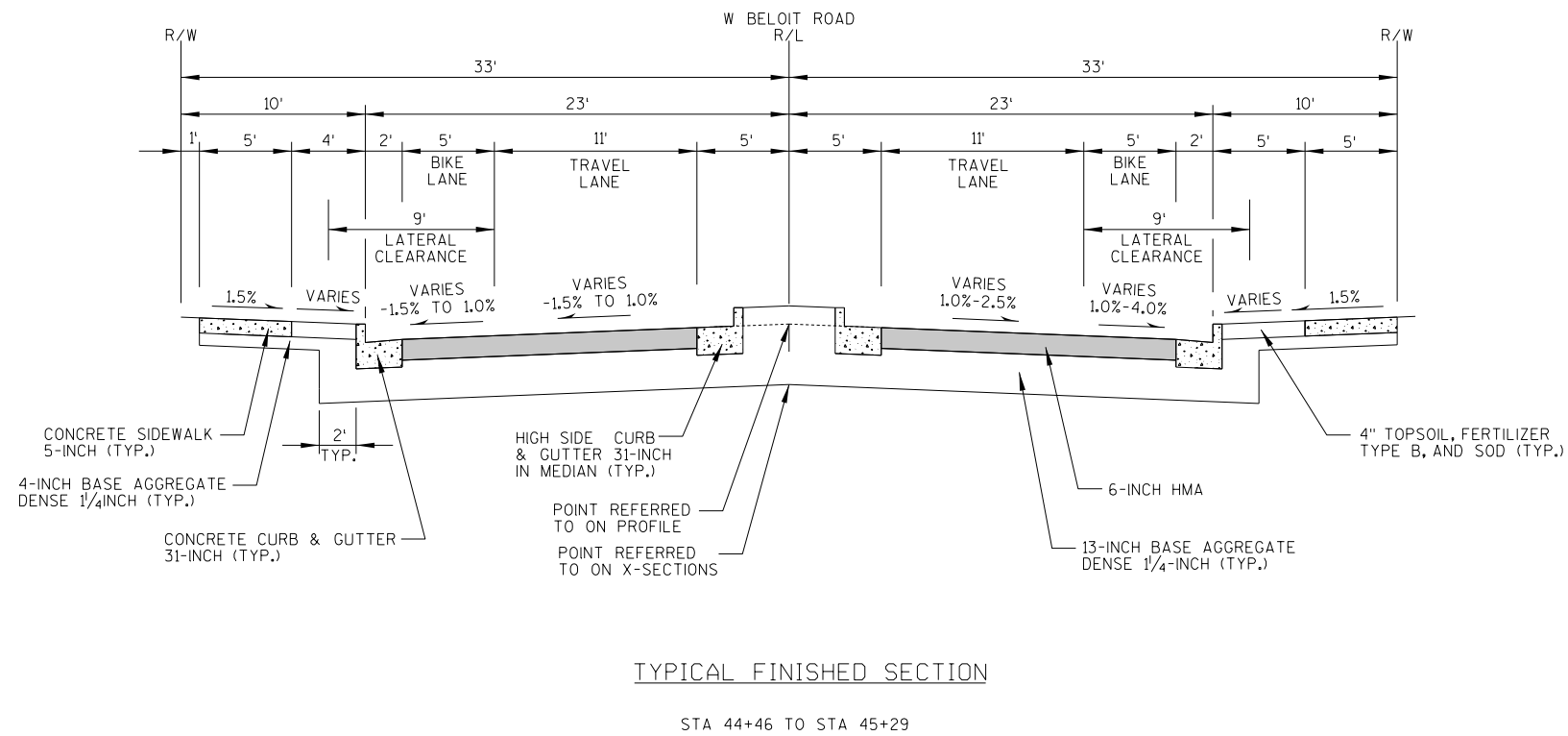
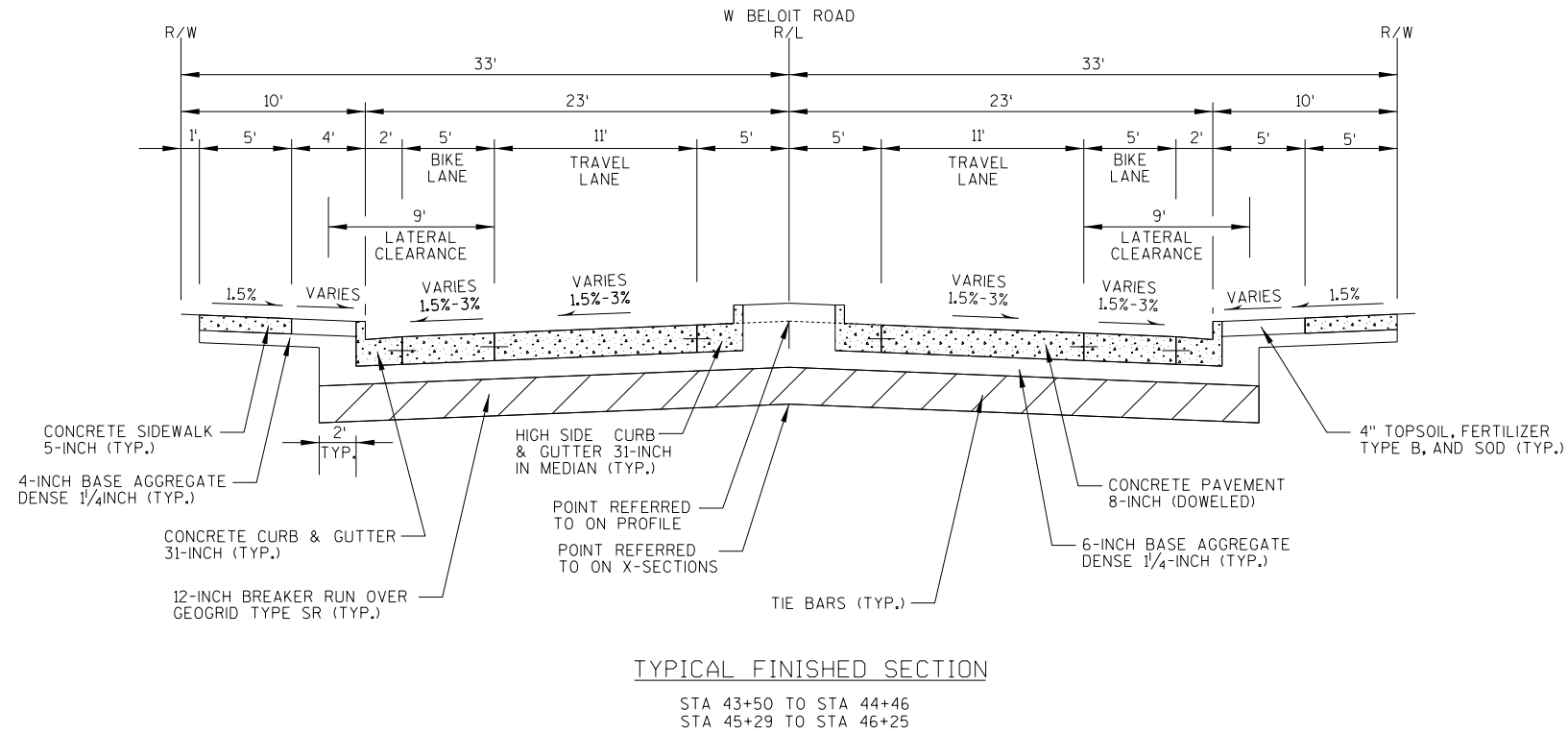
STA 43+75 TO STA 46+30

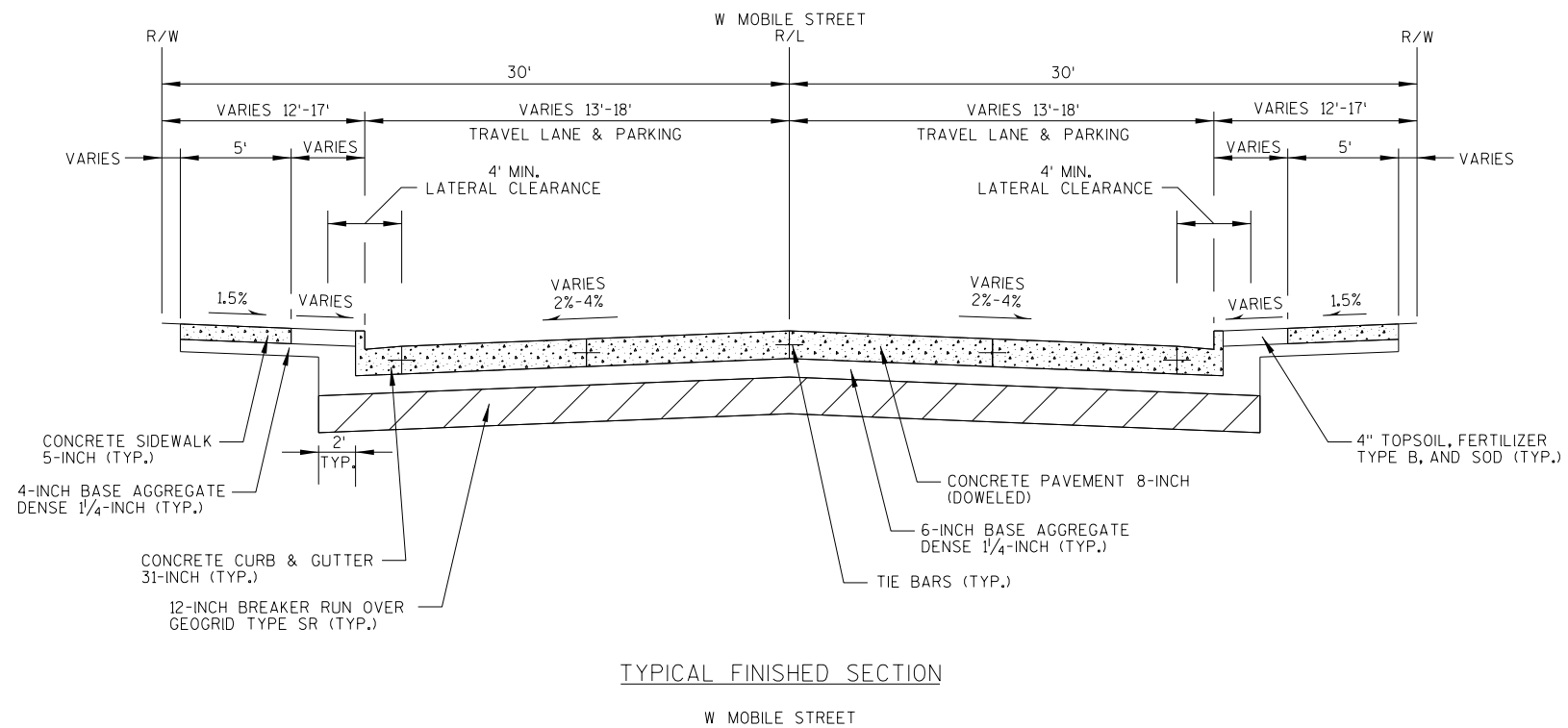
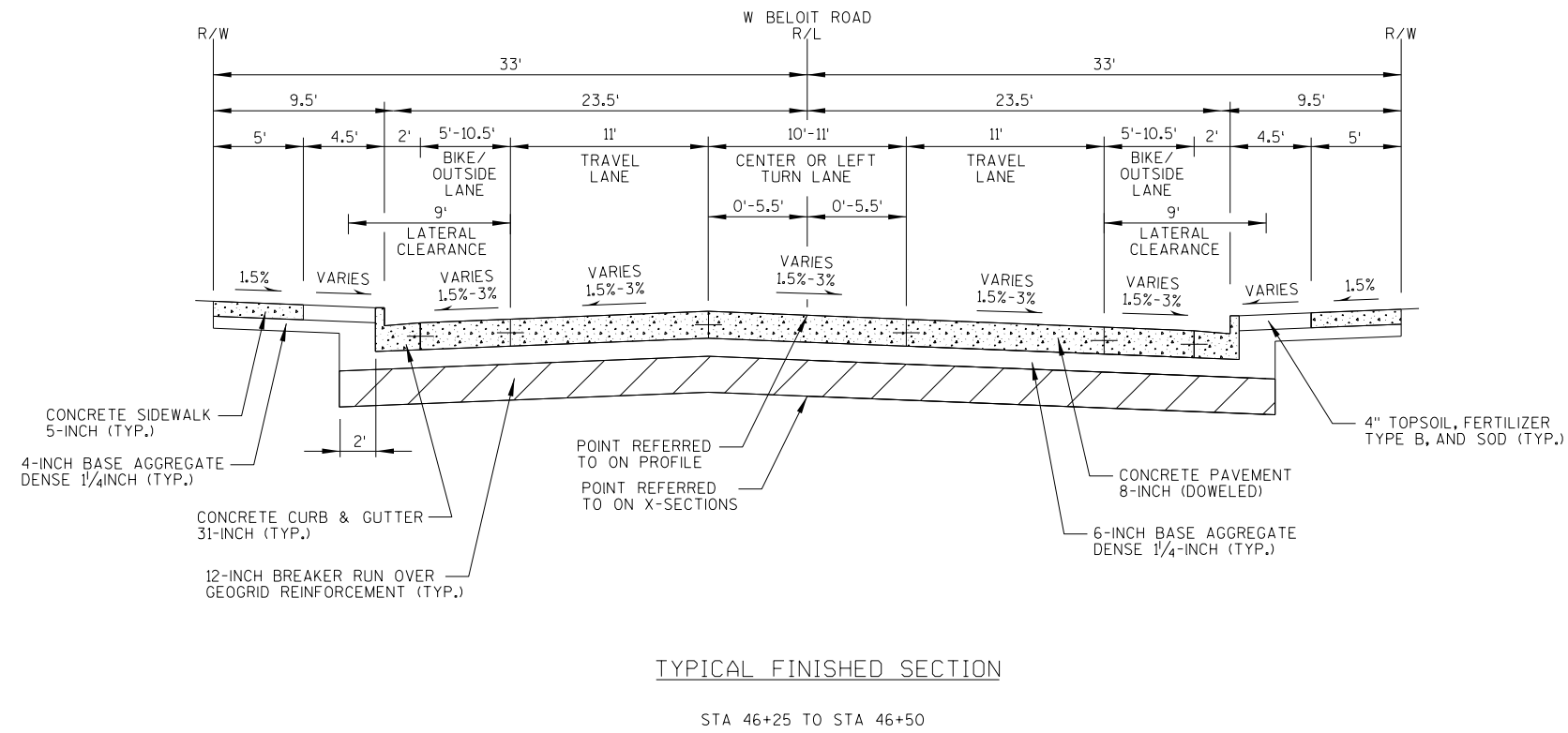




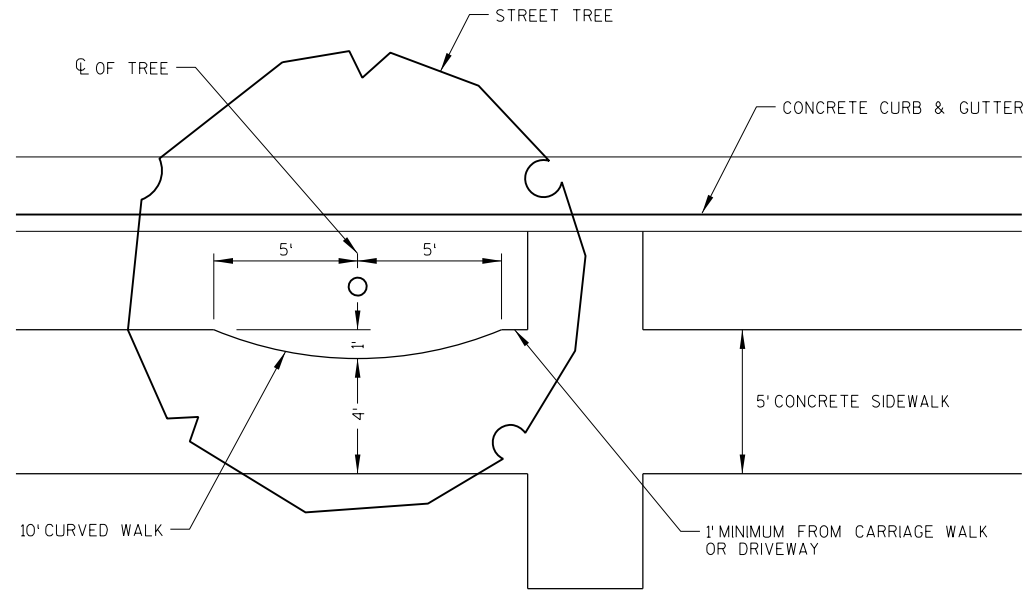
TYPICAL EXISTING SECTION

W MOBILE STREET

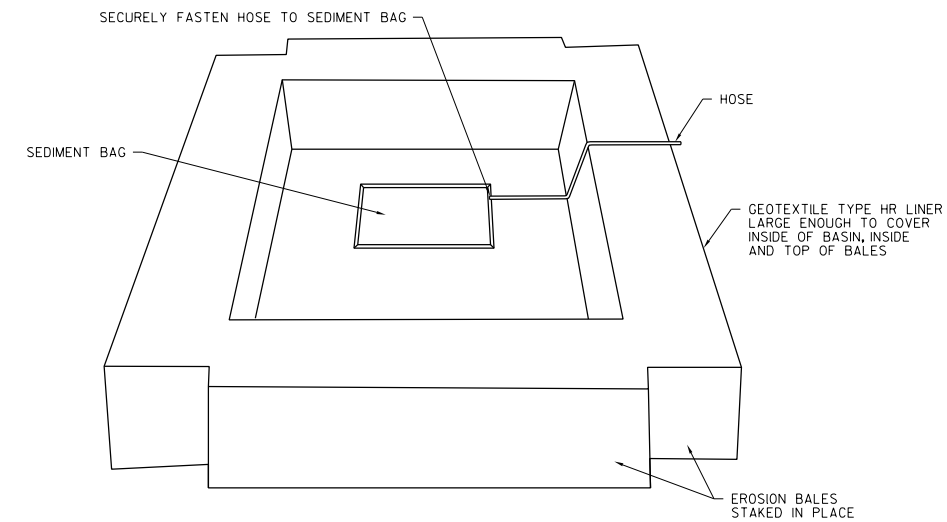




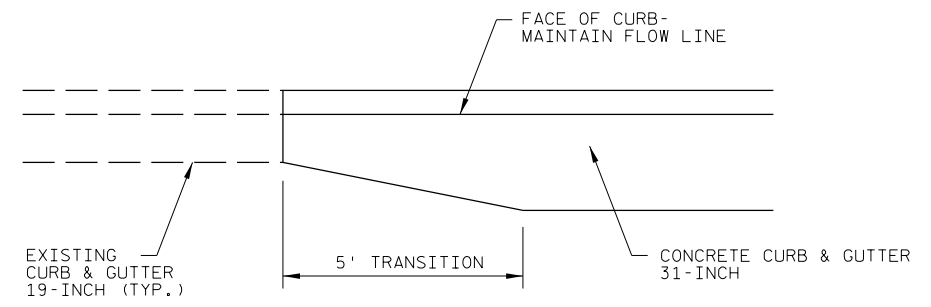




CURVED SIDEWALK ARC AT TREE LOCATIONS



EXAMPLE TEMPORARY SETTLING BASIN DETAIL

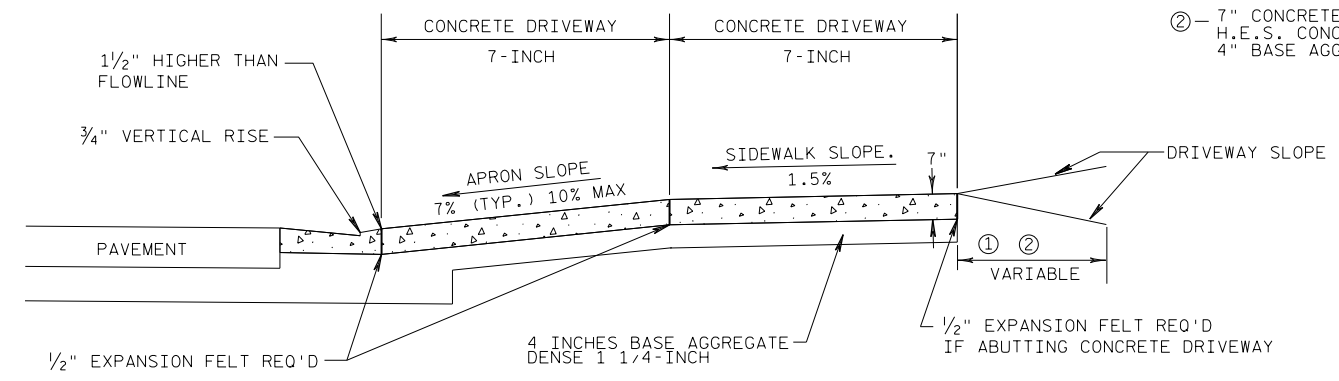


CONCRETE CURB AND GUTTER TRANSITION  
(TRANSITION LENGTH PAID AS CONCRETE CURB AND GUTTER 31-INCH)

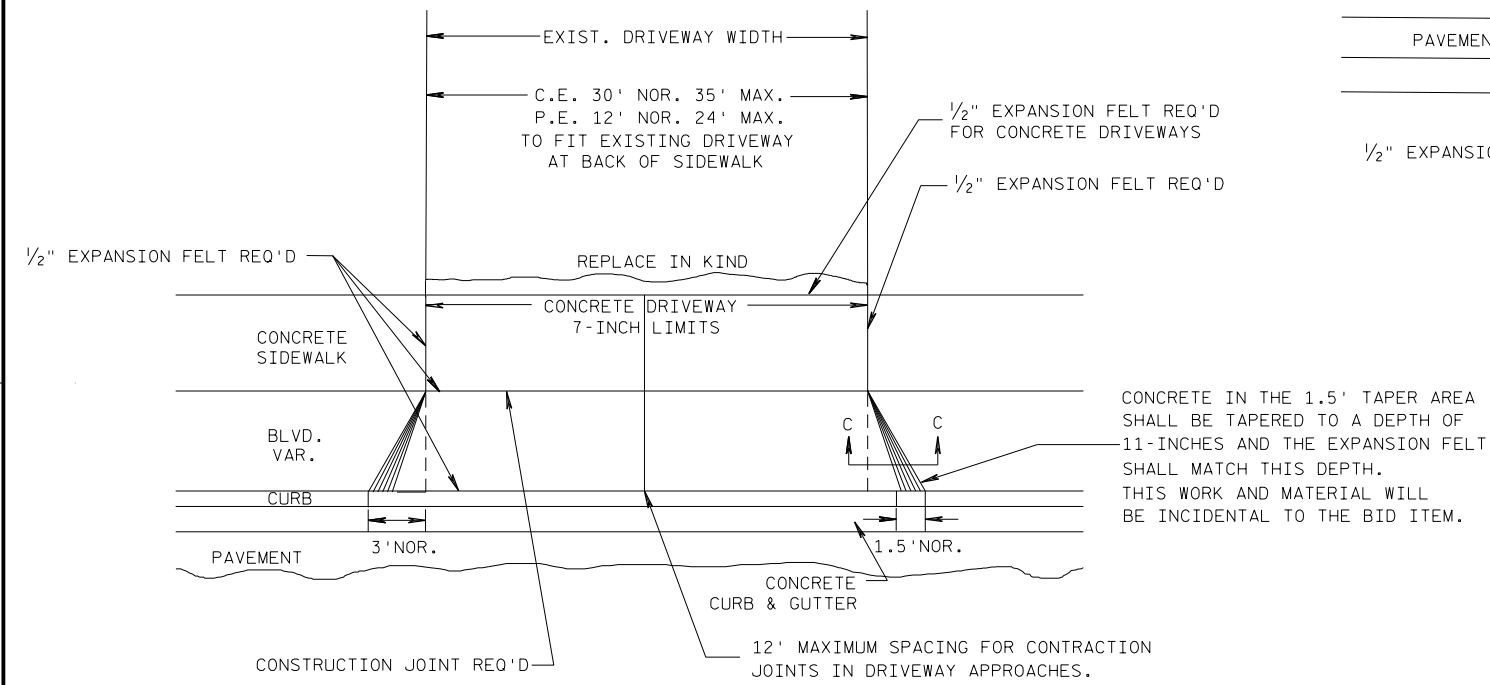
(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)  
 STORAGE VOLUME ( C.F.) = 16 X GPM (PUMP RATE)  
 EXAMPLE:  
 CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM  
 HEIGHT OF BALES = 1.5 FT.  
 SOLUTION:  
 $SV ( C.F.) = 16 \times 50$   
 $SV = 800 C.F.$   
 $\frac{800 C.F.}{1.5 FT.} = 533 S.F.$   
 USE A 20 FT. X 27 FT. BASIN

- NOTES
1. CONTRACTOR SHALL PUMP TURBID WATER FROM EXCAVATION TO SEDIMENT BAG PLACED INSIDE FABRIC LINED STAKED BALE ENCLOSURE PRIOR TO DISCHARGING TO DITCHES/INLETS/WETLANDS OR WATERWAYS.
  2. SEDIMENT BAG TO BE PLACED IN AN UPLAND VEGETATED AREA OR EQUIVALENT LOCATION APPROVED BY THE ENGINEER.
  3. BASIN TO BE KEPT LESS THAN 10% FULL OF SEDIMENT. GEOTEXTILE FABRIC AND SEDIMENTS TO BE DISPOSED BY THE CONTRACTOR OFF OF THE PROJECT SITE.
  4. TEMPORARY SETTLING BASIN IS PAID FOR AS EROSION BALES AND GEOTEXTILE FABRIC TYPE HR. THE SEDIMENT BAGS ARE INCIDENTAL.
  5. SEDIMENT BAG TO BE REPLACED AS NECESSARY AND IS INCIDENTAL TO CONTRACT.
  6. SIZE TO BE DETERMINED BY THE CONTRACTOR AS PART OF THE EICP SUBMITTAL.

- ①— 3/2" ASPHALTIC SURFACE  
6" BASE AGGREGATE DENSE 1/4 INCH
- ②— 7" CONCRETE DRIVEWAY OR  
H.E.S. CONCRETE DRIVEWAY  
4" BASE AGGREGATE DENSE 1/4 INCH

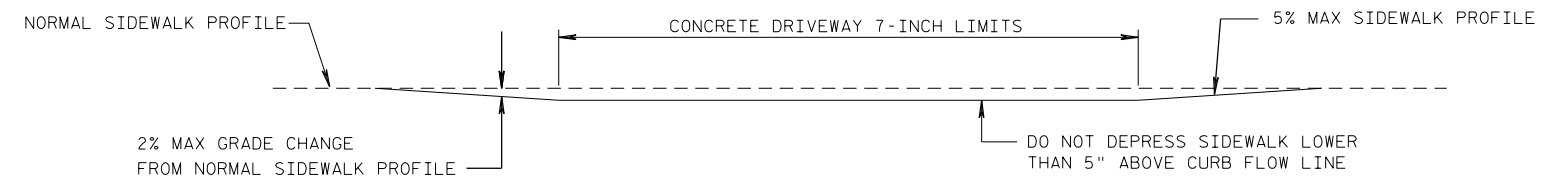
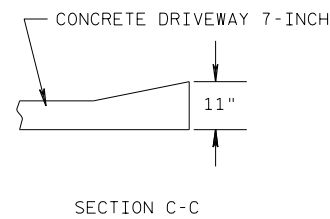


TYPICAL SIDEWALK SECTION



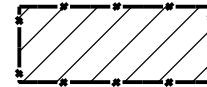
PLAN VIEW

CONCRETE IN THE 1.5' TAPER AREA SHALL BE TAPERED TO A DEPTH OF 11-INCHES AND THE EXPANSION FELT SHALL MATCH THIS DEPTH. THIS WORK AND MATERIAL WILL BE INCIDENTAL TO THE BID ITEM.

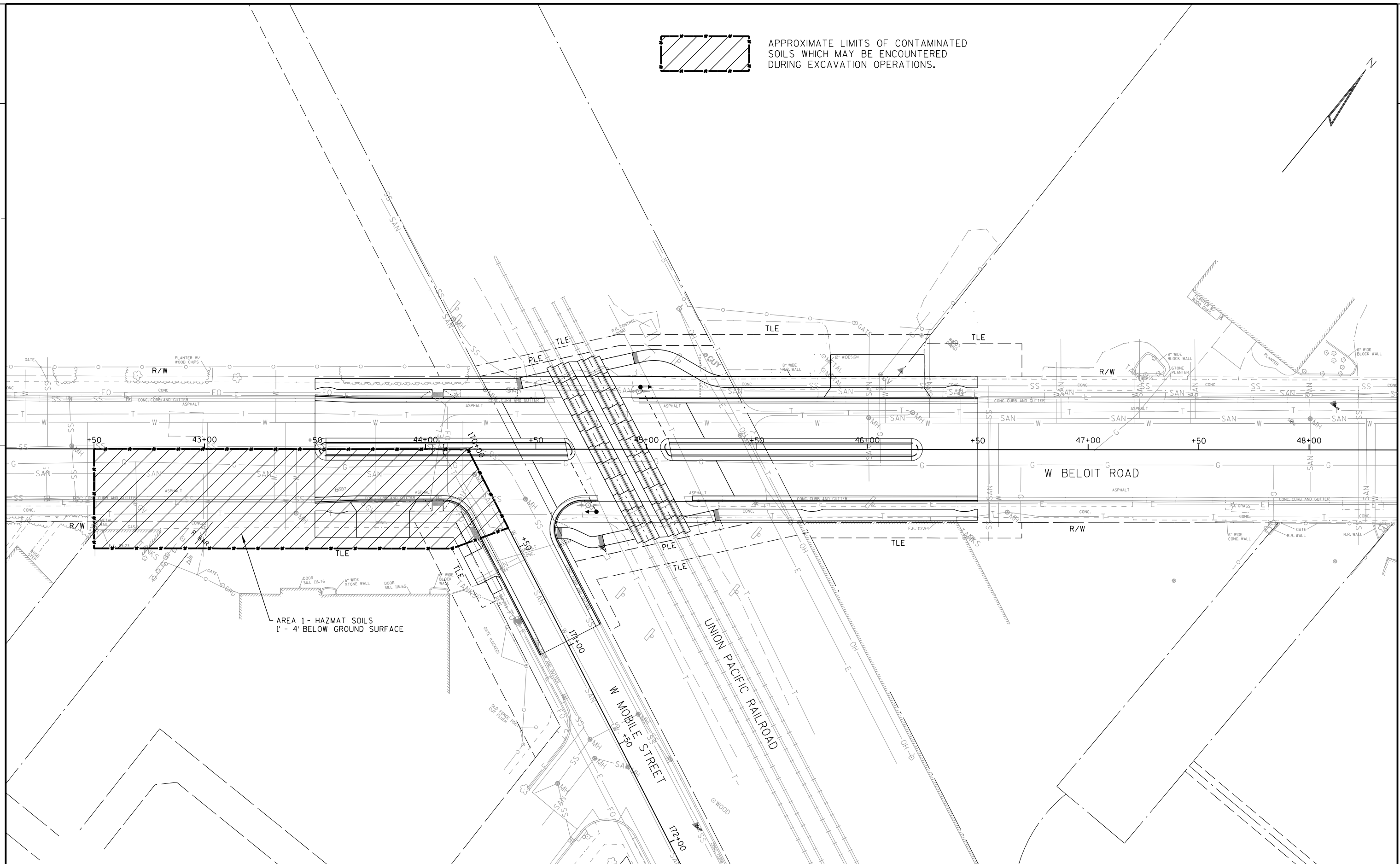
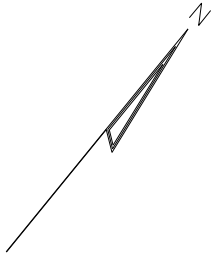


DEPRESSED SIDEWALK PROFILE DETAIL

DRIVEWAY ENTRANCE DETAIL WITH SIDEWALK, CURB & GUTTER









APPROXIMATE LIMITS OF CONTAMINATED SOILS WHICH MAY BE ENCOUNTERED DURING EXCAVATION OPERATIONS.

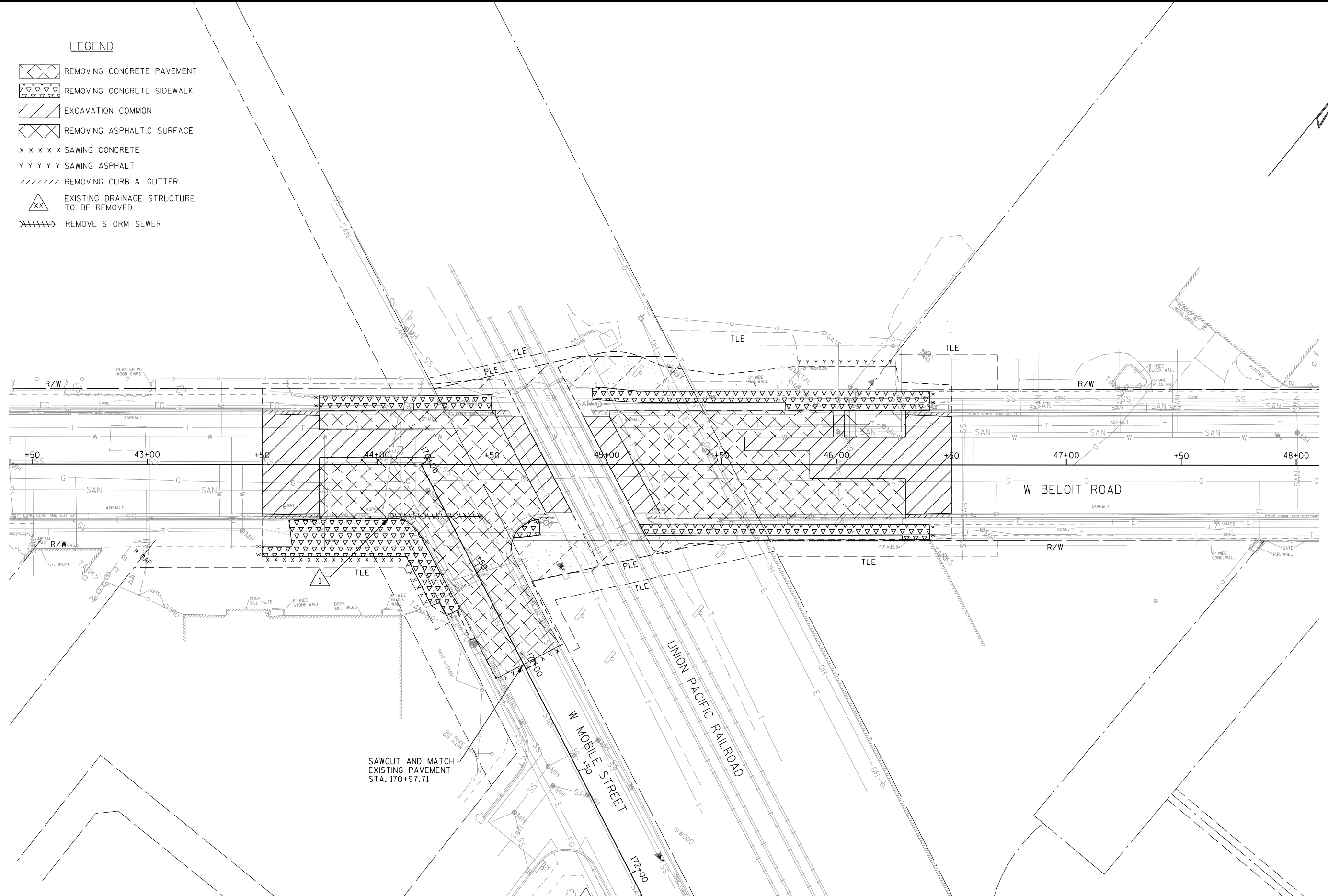


AREA 1 - HAZMAT SOILS  
1' - 4' BELOW GROUND SURFACE









LEGEND

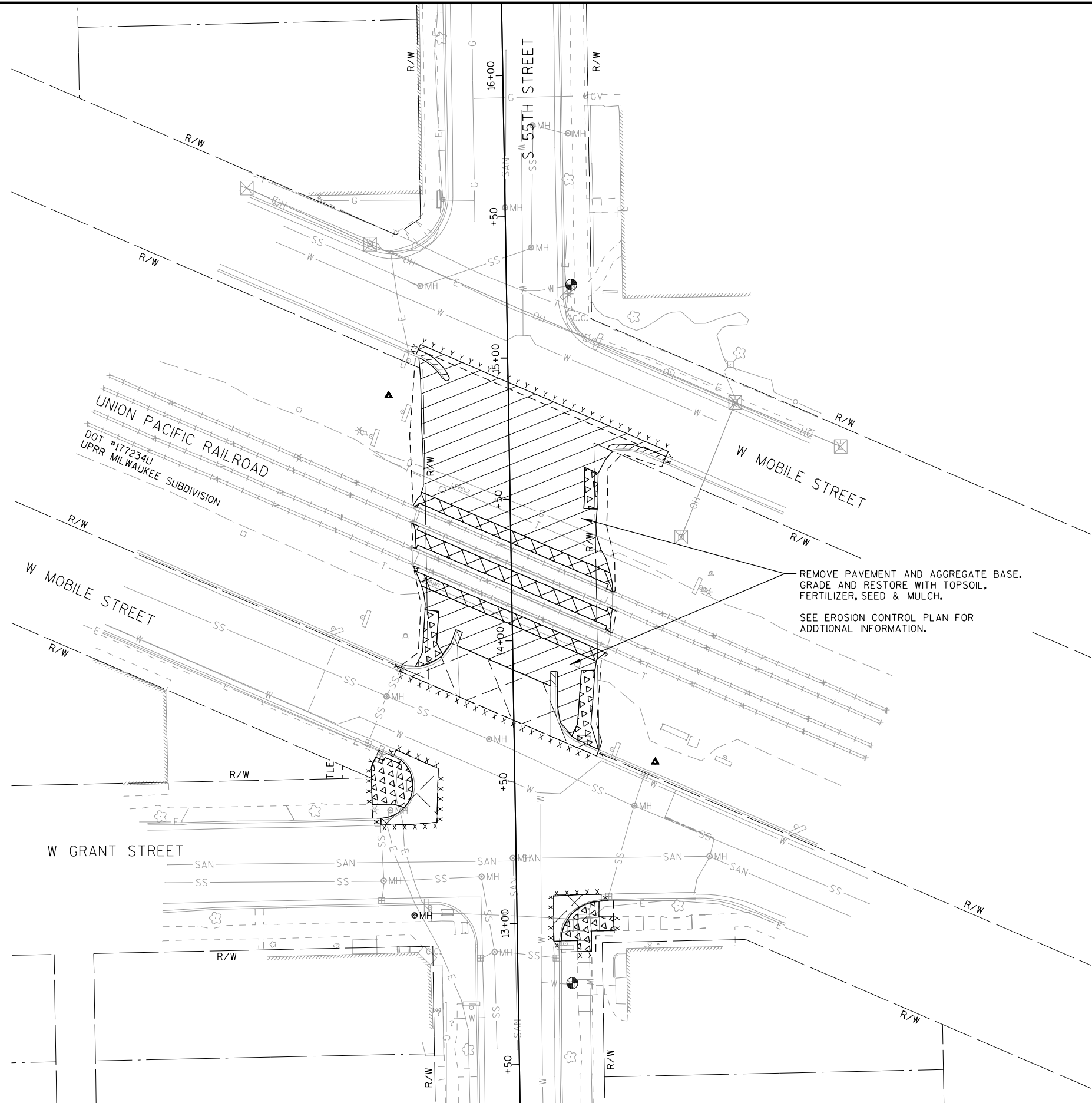
-  REMOVING CONCRETE PAVEMENT
-  REMOVING CONCRETE SIDEWALK
-  EXCAVATION COMMON
-  REMOVING ASPHALTIC SURFACE
- X X X X X SAWING CONCRETE
- Y Y Y Y Y SAWING ASPHALT
- ////// REMOVING CURB & GUTTER
-  EXISTING DRAINAGE STRUCTURE TO BE REMOVED
-  REMOVE STORM SEWER



LEGEND

-  REMOVING CONCRETE PAVEMENT
-  REMOVING CONCRETE SIDEWALK
-  EXCAVATION COMMON
-  REMOVING ASPHALTIC SURFACE
- x x x x x SAWING CONCRETE
- y y y y y SAWING ASPHALT
- ////// REMOVING CURB & GUTTER
-  EXISTING DRAINAGE STRUCTURE TO BE REMOVED
-  REMOVE STORM SEWER

NOTE:  
RAILROAD ENTRANCE GATE MECHANISMS (TWO TOTAL),  
RR SIGNAL HOUSE, AND CONCRETE CROSSING SURFACE  
TO BE REMOVED BY UNION PACIFIC RAILROAD FORCES.



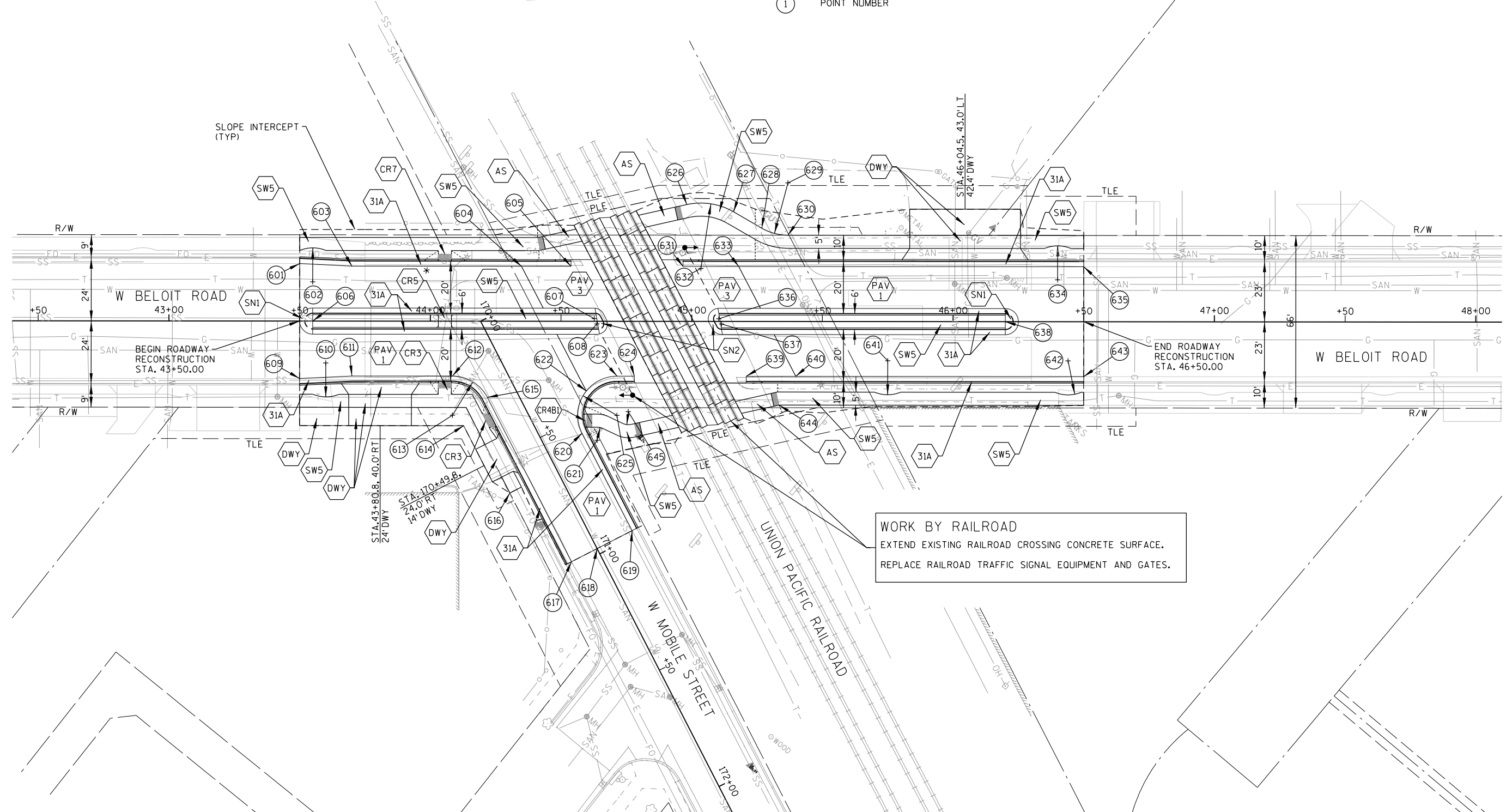
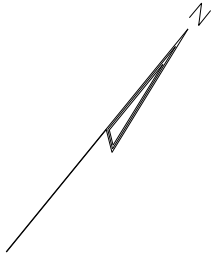
REMOVE PAVEMENT AND AGGREGATE BASE.  
GRADE AND RESTORE WITH TOPSOIL,  
FERTILIZER, SEED & MULCH.  
  
SEE EROSION CONTROL PLAN FOR  
ADDITIONAL INFORMATION.

NOTE:

- SEE CURB RAMP DETAIL SHEET FOR ADDITIONAL GEOMETRIC LAYOUT INFORMATION.
- HIGH SIDE CURB & GUTTER TO BE INSTALLED IN CENTER MEDIAN. (TYPICAL)
- INTEGRAL CONCRETE CURB AND GUTTER 31-INCH TO BE PAID FOR AS CONCRETE CURB AND GUTTER 31-INCH.

LEGEND

- |       |   |       |   |
|-------|---|-------|---|
| 31A   | CONCRETE CURB AND GUTTER 31-INCH          | PAV 1 | 8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH, OVER 12" BREAKER RUN & GEOGRID |
| 31A-1 | INTEGRAL CONCRETE CURB AND GUTTER 31-INCH | PAV 2 | 8" CONCRETE PAVEMENT OVER EXISTING BASE   |
| SW5   | CONCRETE SIDEWALK 5-INCH                  | PAV 3 | 6" HMA PAVEMENT, OVER 13" BASE AGGREGATE DENSE 1 1/4-INCH                                     |
| DWY   | CONCRETE DRIVEWAY 7-INCH                  | PAV 4 | 6" HMA PAVEMENT OVER EXISTING BASE  |
| SN    | SLOPE NOSE TYPE                           | CR1   | CURB RAMP TYPE (SEE DETAIL)   |
| AS    | ASPHALTIC SURFACE - 4-INCHES              | 1     | POINT NUMBER  |





POINT NUMBER	STATION	OFFSET		DESCRIPTION
601	43+50.00	22.00	LT	BEGIN CURB AND GUTTER
602	43+55.00	15.00	LT	CENTER OF 13' R SIDEWALK ARC
603	43+70.00	21.00	LT	CURB & GUTTER/PAVEMENT ANGLE POINT
604	44+34.88	21.00	LT	END CONCRETE PAVEMENT/ BEGIN ASPHALT
605	44+53.83	21.00	LT	END CURB & GUTTER
606	43+55.00	0.00	LT	CENTER 5' RADIUS SLOPE NOSE
607	44+62.70	1.00	LT	CENTER 4' RADIUS SLOPE NOSE
608	44+63.74	1.00	RT	CENTER 4' RADIUS SLOPE NOSE
609	43+50.00	22.00	RT	BEGIN CURB AND GUTTER
610	43+60.00	16.00	RT	CENTER OF 13' R SIDEWALK ARC
611	43+70.00	21.00	RT	CURB & GUTTER/PAVEMENT ANGLE POINT
612	44+08.50	21.00	RT	BEGIN 15' C&G RADIUS
613	44+08.50	36.00	RT	CENTER OF 15' C&G RADIUS
614	44+12.80	40.00	RT	MATCH EXISTING CONCRETE DRIVEWAY
615	44+21.84	29.15	RT	END 15' C&G RADIUS
616	170+63.60	20.00	RT	MATCH EXISTING CONCRETE SIDEWALK
617	170+97.74	11.00	RT	END CURB & GUTTER
618	170+97.74	0.00	RT	END CONSTRUCTION / MATCH EXISTING
619	170+97.74	15.00	LT	BEGIN CURB AND GUTTER
620	170+55.87	15.00	LT	BEGIN 15' C&G RADIUS
621	44+71.45	36.00	RT	CENTER OF 15' C&G RADIUS
622	44+59.71	26.67	RT	END CONCRETE PAVEMENT/ BEGIN ASPHALT
623	44+71.45	21.00	RT	END 15' C&G RADIUS

POINT NUMBER	STATION	OFFSET		DESCRIPTION
624	44+78.09	21.00	RT	END CURB & GUTTER
625	44+71.45	36.00	RT	CENTER OF 15' C&G RADIUS
626	44+98.09	44.67	LT	BEGIN 25' R SIDEWALK ARC
627	45+16.00	41.91	LT	END 25' R SIDEWALK ARC
628	45+26.80	35.68	LT	BEGIN 20' R SIDEWALK ARC
629	45+36.80	53.00	LT	CENTER OF 20' R SIDEWALK ARC
630	45+36.80	33.00	LT	END 20' R SIDEWALK ARC
631	44+96.65	21.00	LT	BEGIN CURB AND GUTTER
632	45+03.50	20.26	LT	CENTER OF 25' R SIDEWALK ARC
633	45+17.98	21.00	LT	END ASPHALT PAVEMENT/ BEGIN CONCRETE
634	46+40.00	16.00	LT	CENTER OF 13' R SIDEWALK ARC
635	46+50.00	21.00	LT	END CURB & GUTTER
636	45+10.36	1.00	LT	CENTER 4' RADIUS SLOPE NOSE
637	45+11.40	1.00	RT	CENTER 4' RADIUS SLOPE NOSE
638	46+20.00	0.00	RT	CENTER 5' RADIUS SLOPE NOSE
639	45+20.91	21.00	RT	BEGIN CURB AND GUTTER
640	45+39.85	21.00	RT	END ASPHALT PAVEMENT/ BEGIN CONCRETE
641	45+75.00	15.00	RT	CENTER OF 13' R SIDEWALK ARC
642	46+44.00	15.00	RT	CENTER OF 13' R SIDEWALK ARC
643	46+50.00	21.00	RT	END CURB & GUTTER
644	45+33.44	32.00	RT	CONCRETE SIDEWALK ANGLE POINT
645	45+75.78	34.55	RT	CENTER OF 5' R SIDEWALK ARC

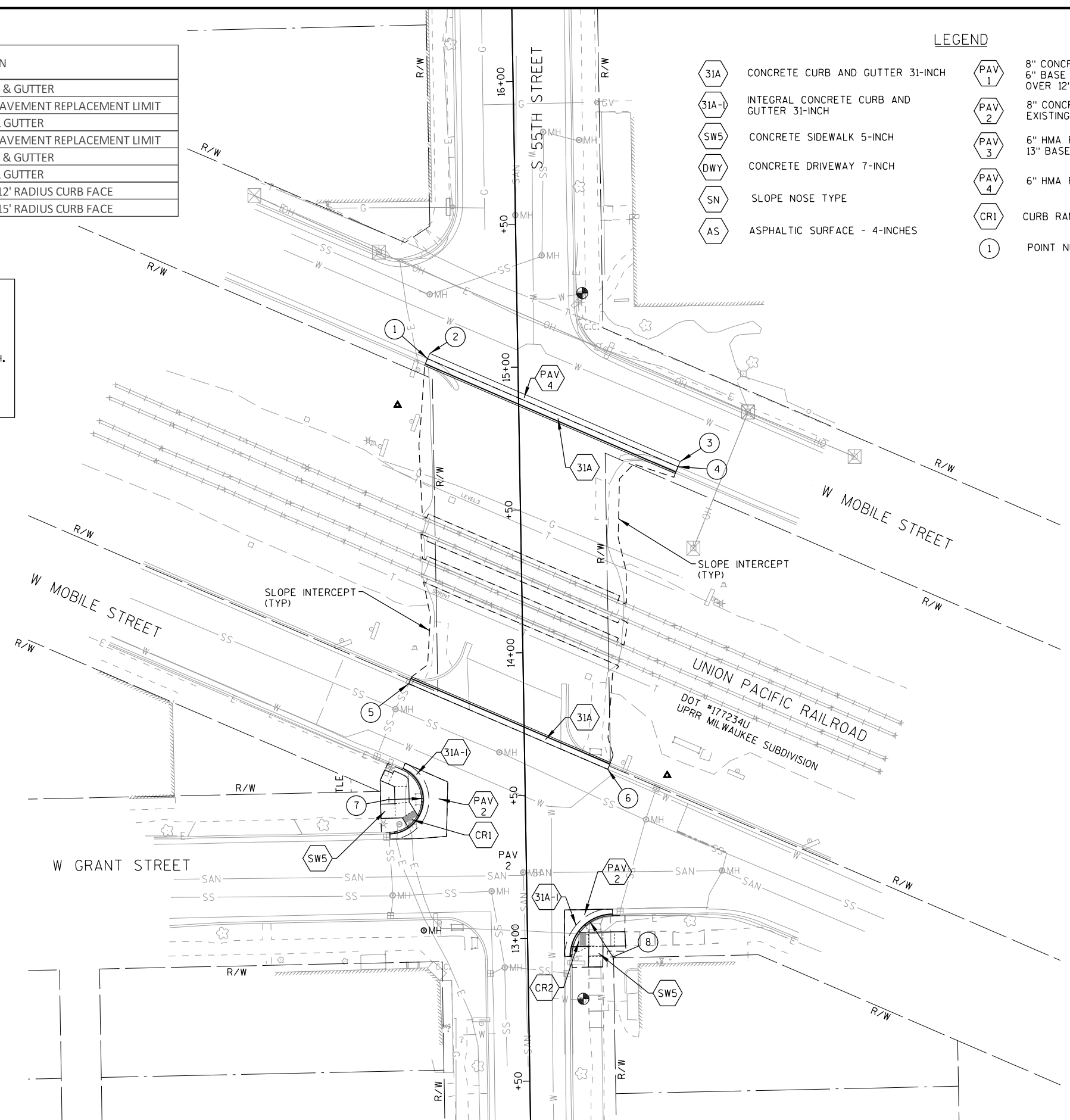
POINT NUMBER	STATION	OFFSET	DESCRIPTION
1	15+03.53	31.58	LT BEGIN CURB & GUTTER
2	15+05.35	30.76	LT SAWCUT / PAVEMENT REPLACEMENT LIMIT
3	14+65.97	56.27	RT END CURB & GUTTER
4	14+64.15	55.45	RT SAWCUT / PAVEMENT REPLACEMENT LIMIT
5	13+89.83	40.11	LT BEGIN CURB & GUTTER
6	13+58.72	29.05	RT END CURB & GUTTER
7	13+49.35	47.72	LT CENTER OF 12' RADIUS CURB FACE
8	12+93.02	29.80	RT CENTER OF 15' RADIUS CURB FACE

NOTE:

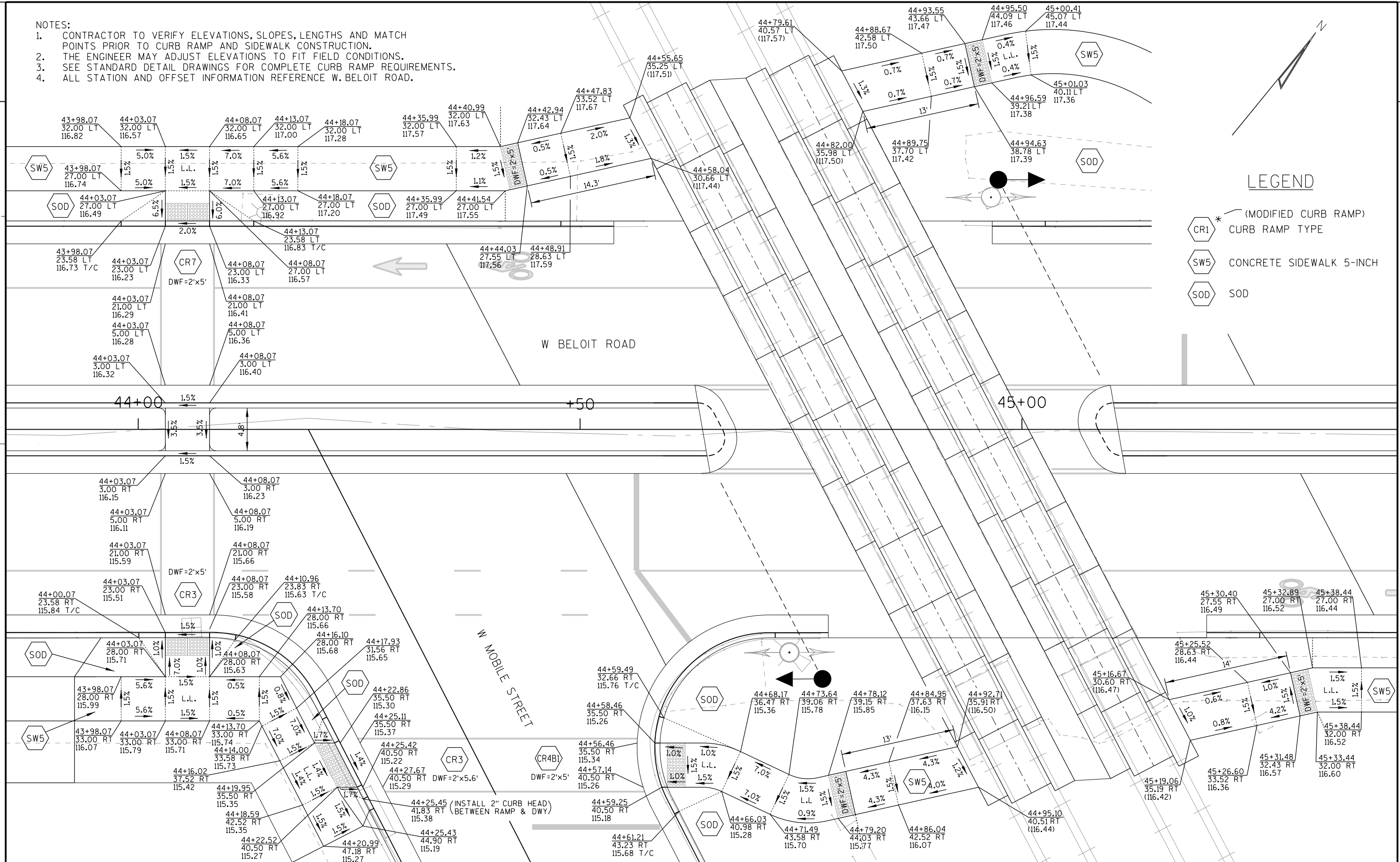
- SEE CURB RAMP DETAIL SHEET FOR ADDITIONAL GEOMETRIC LAYOUT INFORMATION.
- INTEGRAL CONCRETE CURB AND GUTTER 31-INCH TO BE PAID FOR AS CONCRETE CURB AND GUTTER 31-INCH.
- RAILROAD ENTRANCE GATE MECHANISMS (TWO TOTAL), RR SIGNAL HOUSE AND CONCRETE CROSSING SURFACE TO BE REMOVED BY UNION PACIFIC RAILROAD FORCES.

LEGEND

31A	CONCRETE CURB AND GUTTER 31-INCH	PAV 1	8" CONCRETE PAVEMENT, OVER 6" BASE AGGREGATE DENSE 1 1/4-INCH, OVER 12" BREAKER RUN & GEOGRID
31A-I	INTEGRAL CONCRETE CURB AND GUTTER 31-INCH	PAV 2	8" CONCRETE PAVEMENT OVER EXISTING BASE
SW5	CONCRETE SIDEWALK 5-INCH	PAV 3	6" HMA PAVEMENT, OVER 13" BASE AGGREGATE DENSE 1 1/4-INCH
DWY	CONCRETE DRIVEWAY 7-INCH	PAV 4	6" HMA PAVEMENT OVER EXISTING BASE
SN	SLOPE NOSE TYPE	CR1	CURB RAMP TYPE (SEE DETAIL)
AS	ASPHALTIC SURFACE - 4-INCHES	1	POINT NUMBER






- NOTES:
1. CONTRACTOR TO VERIFY ELEVATIONS, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
  2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS.
  3. SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
  4. ALL STATION AND OFFSET INFORMATION REFERENCE W. BELOIT ROAD.

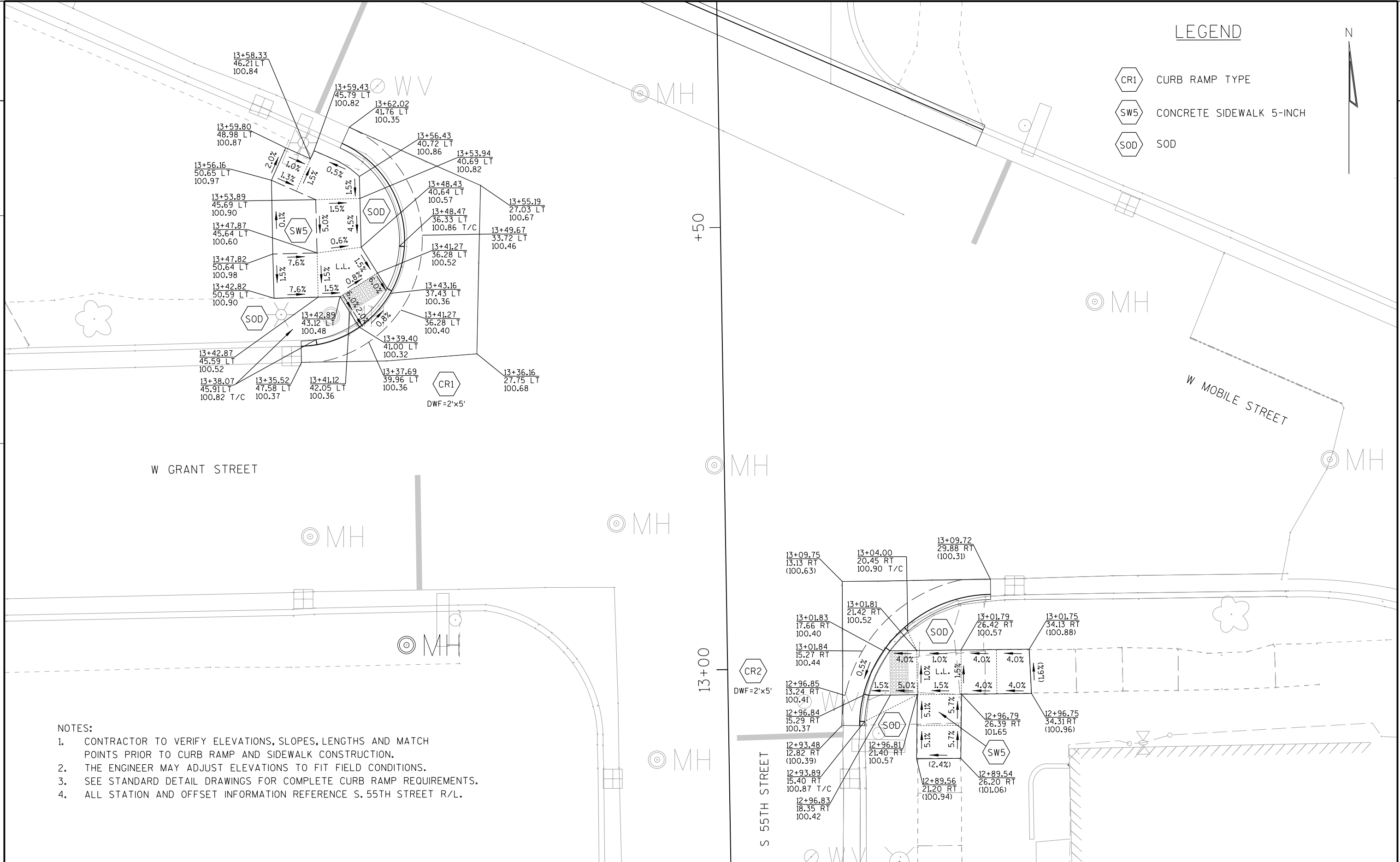


LEGEND

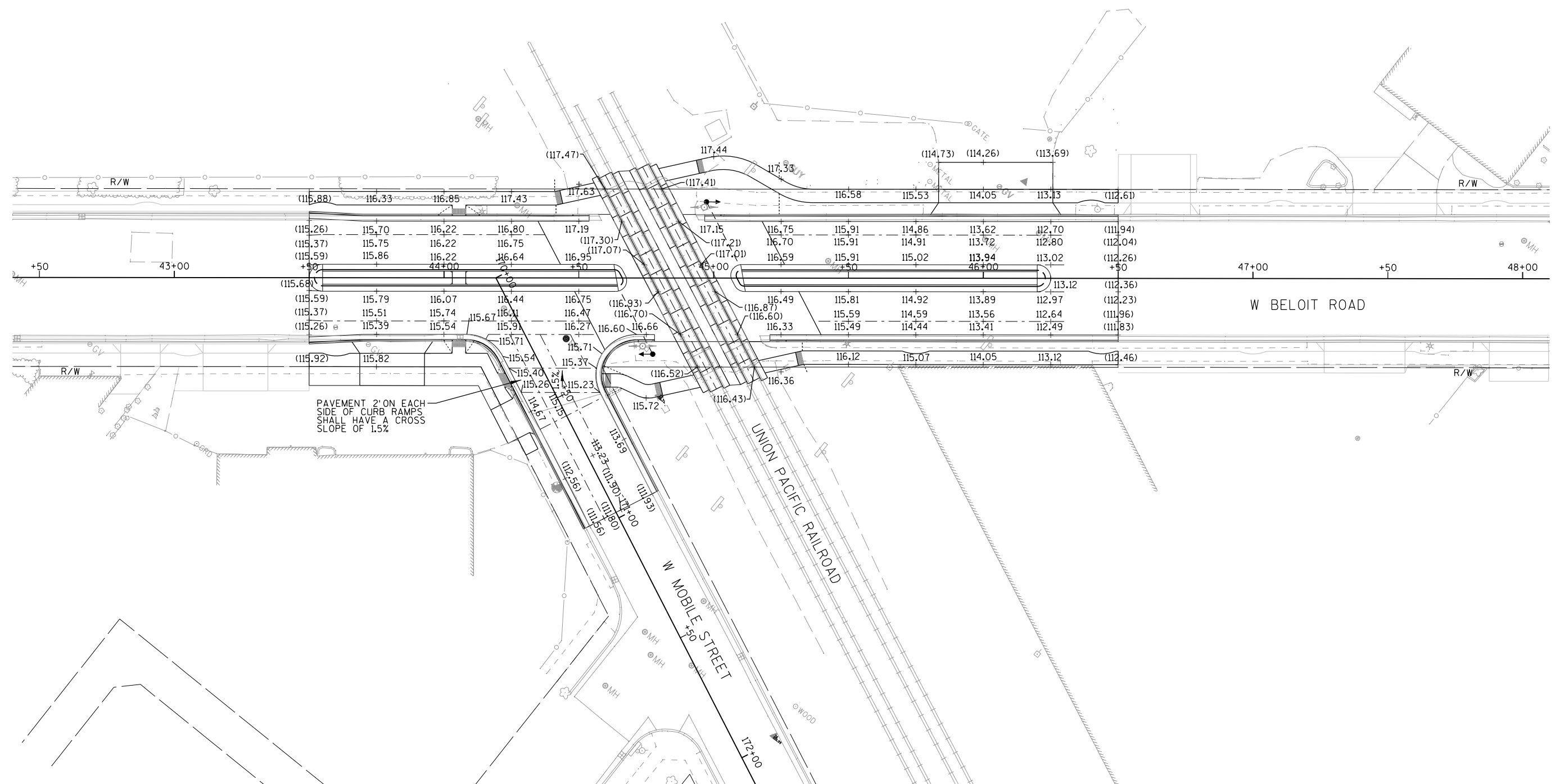
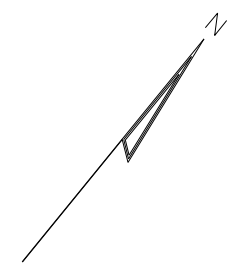
- CR1\* (MODIFIED CURB RAMP) CURB RAMP TYPE
- SW5 CONCRETE SIDEWALK 5-INCH
- SOD SOD

LEGEND

-  CURB RAMP TYPE
-  CONCRETE SIDEWALK 5-INCH
-  SOD





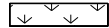



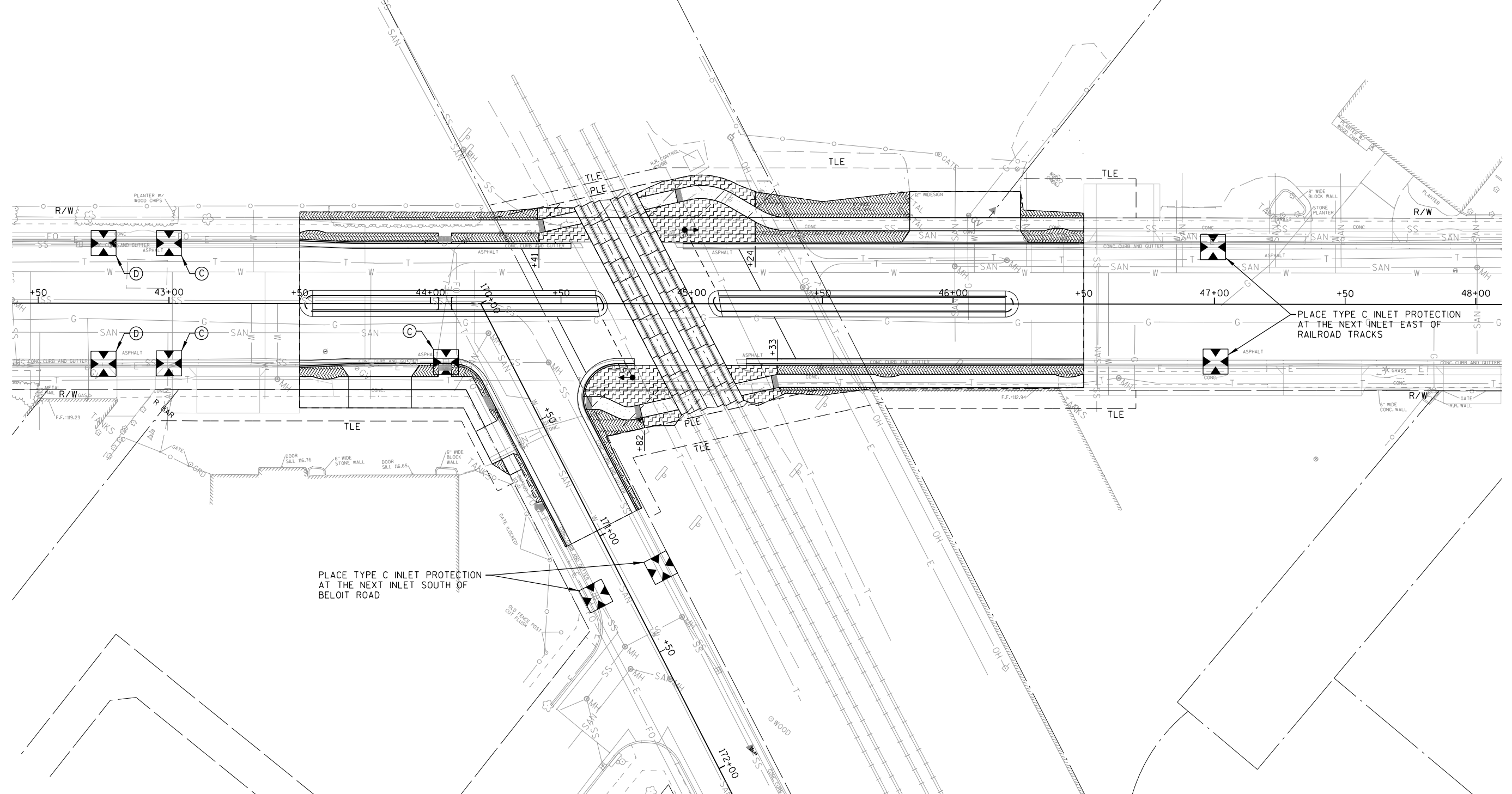
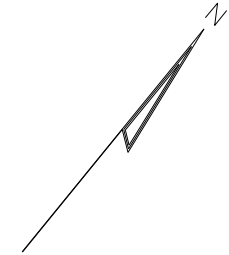
- NOTES:
1. CONTRACTOR TO VERIFY ELEVATIONS, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
  2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS.
  3. SEE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
  4. ALL STATION AND OFFSET INFORMATION REFERENCE S. 55TH STREET R/L.







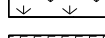

PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET	<b>E</b>
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LEGEND

-  INLET PROTECTION
-  INLET PROTECTION TYPE
-  SLOPE INTERCEPT
-  SOD LAWN / TOPSOIL 4-INCH
-  TOPSOIL 4-INCH, FERTILIZER TYPE B, SEEDING NO. 40 & MULCH
-  6" OF BASE AGGREGATE DENSE 3/4-INCH



LEGEND

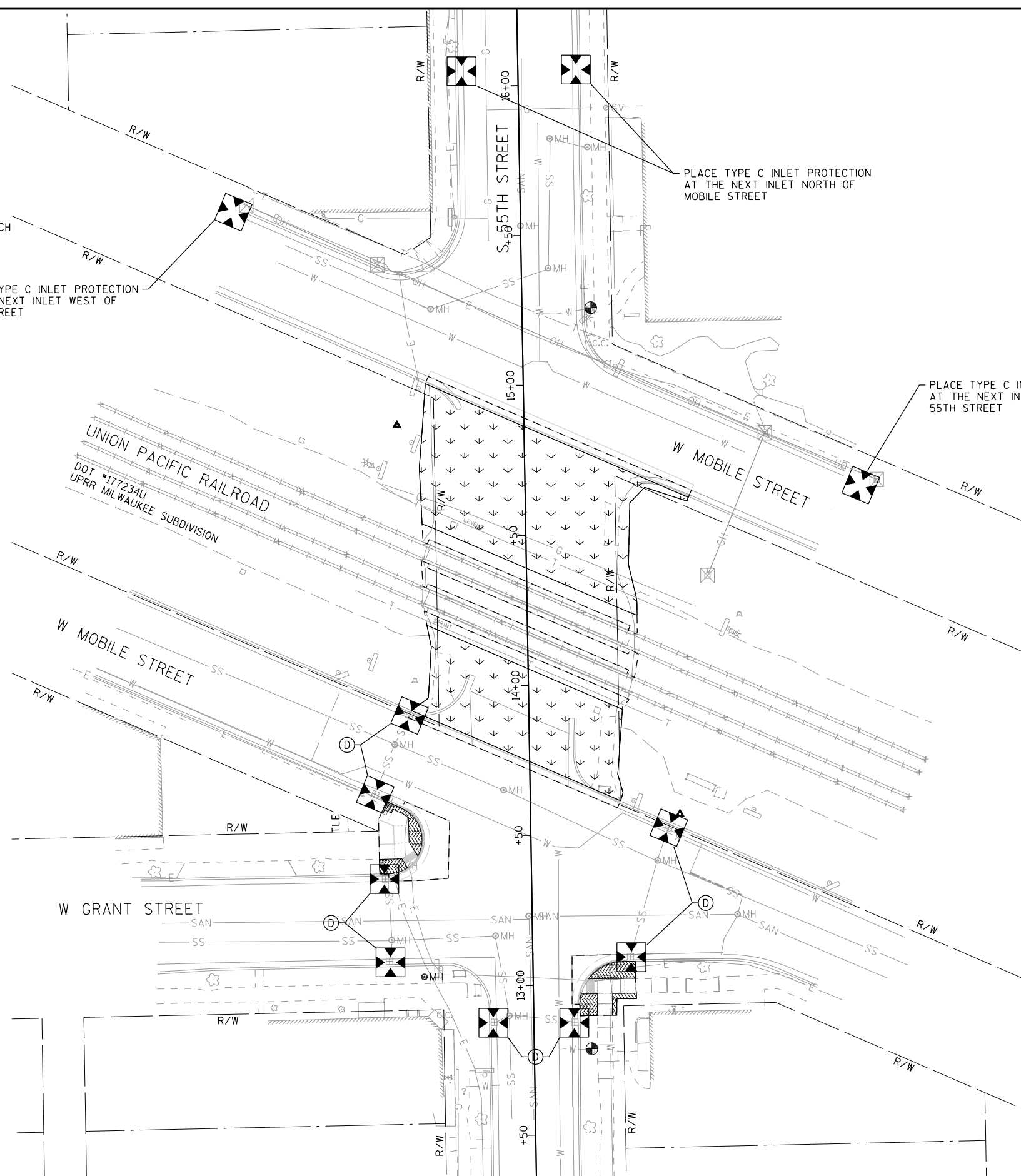
-  INLET PROTECTION
-  INLET PROTECTION TYPE
-  SLOPE INTERCEPT
-  SOD LAWN / TOPSOIL 4-INCH
-  TOPSOIL 4-INCH, FERTILIZER TYPE B, SEEDING NO. 40 & MULCH
-  6" OF BASE AGGREGATE DENSE 3/4-INCH



PLACE TYPE C INLET PROTECTION AT THE NEXT INLET WEST OF 55TH STREET

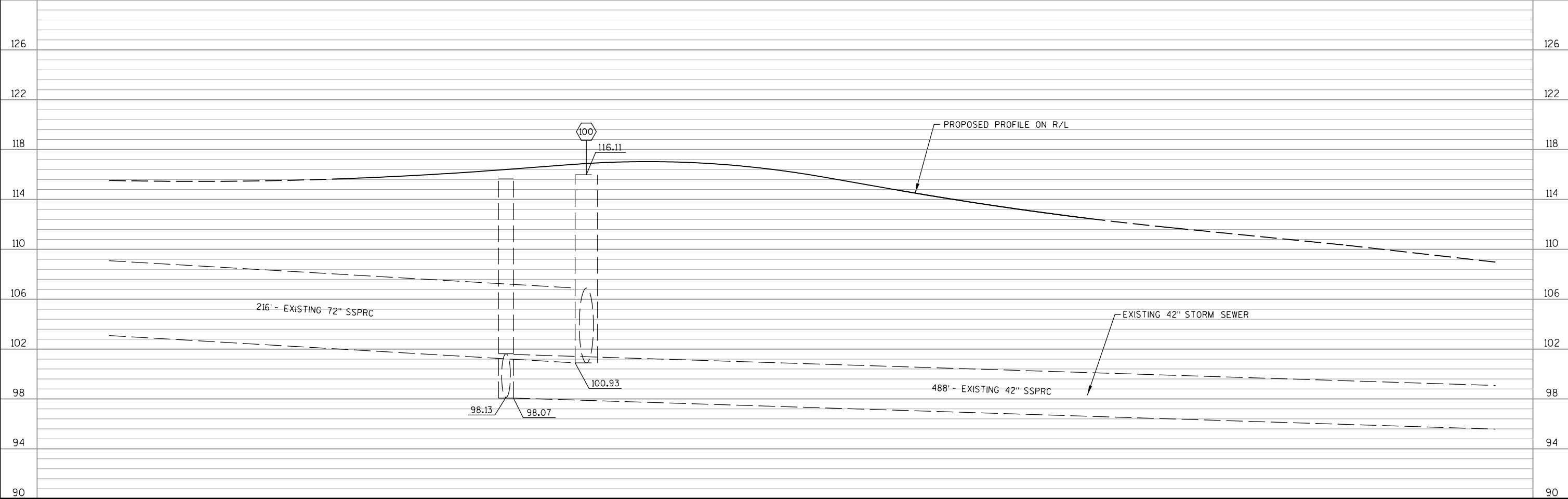
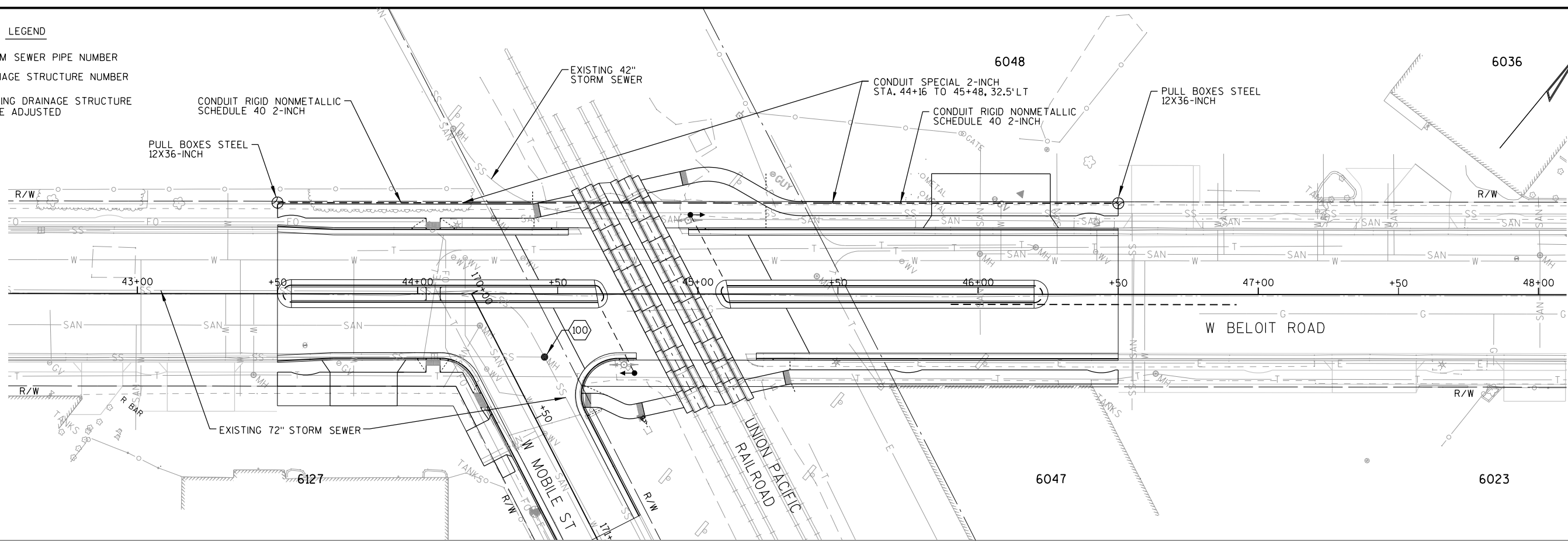
PLACE TYPE C INLET PROTECTION AT THE NEXT INLET NORTH OF MOBILE STREET

PLACE TYPE C INLET PROTECTION AT THE NEXT INLET EAST OF 55TH STREET

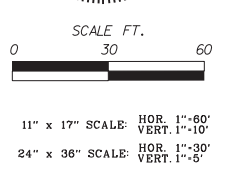
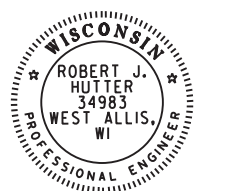
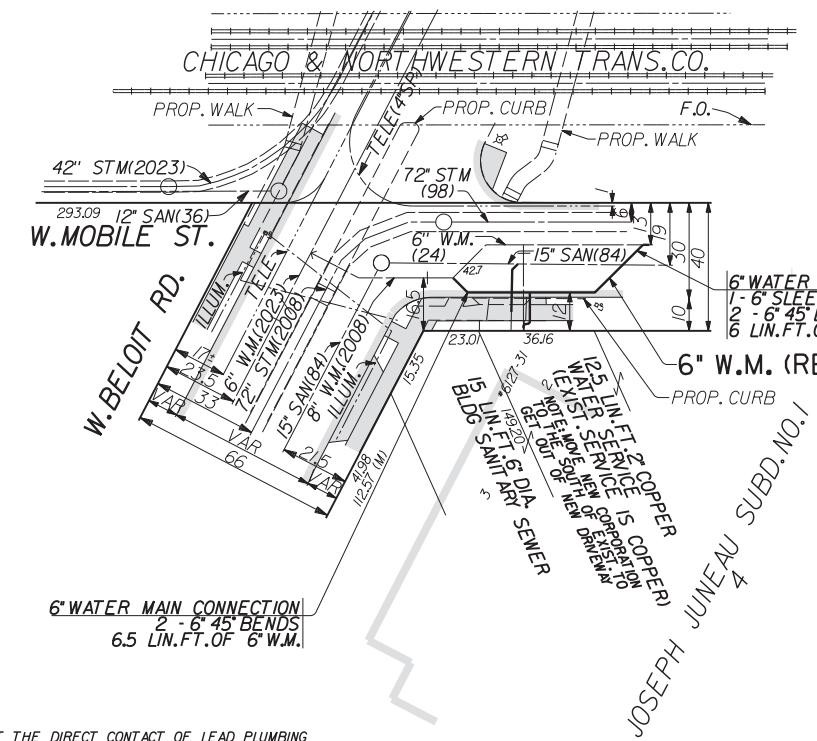
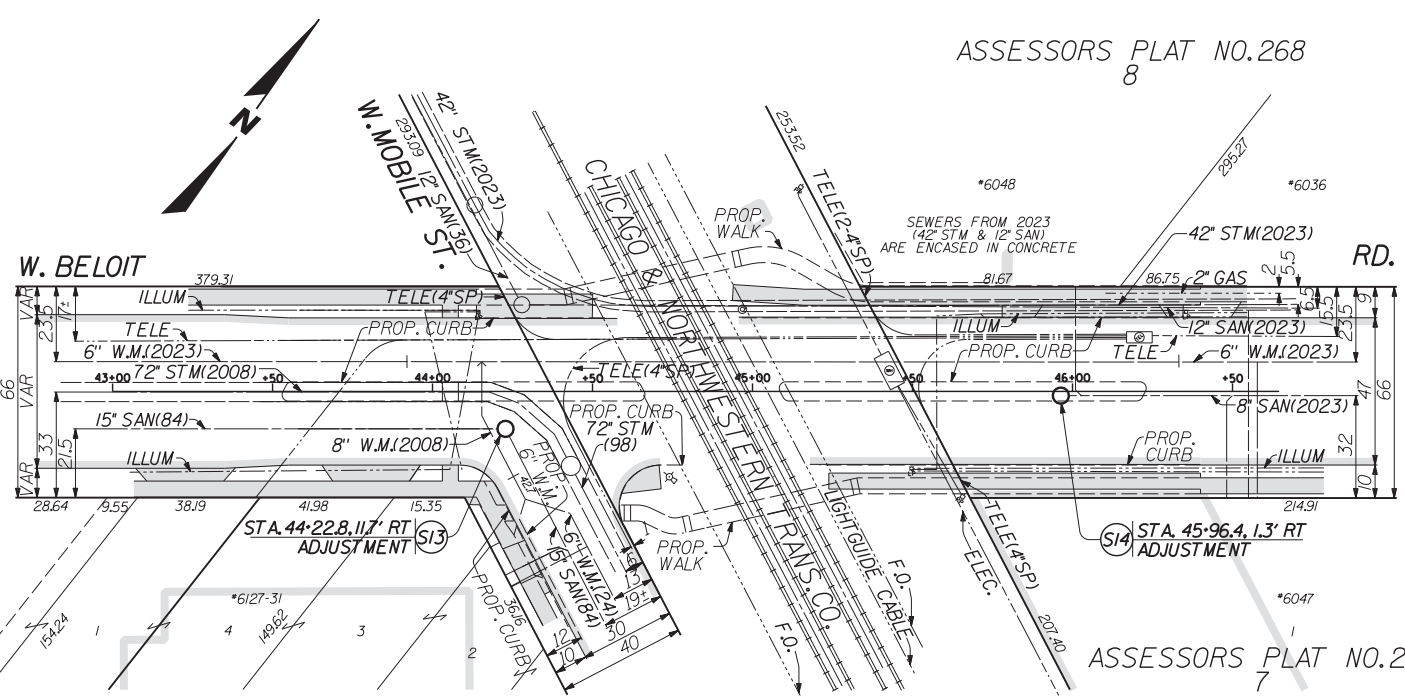
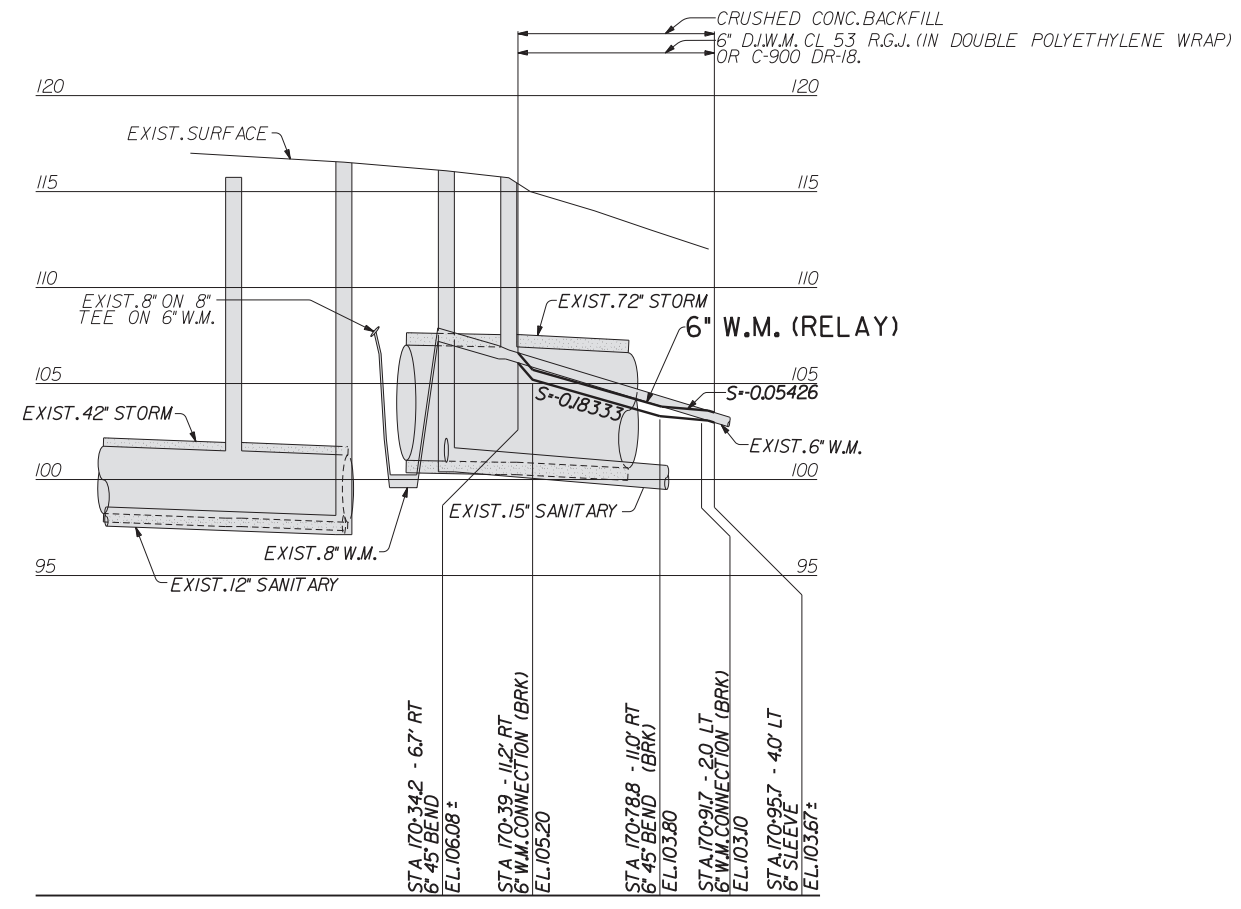
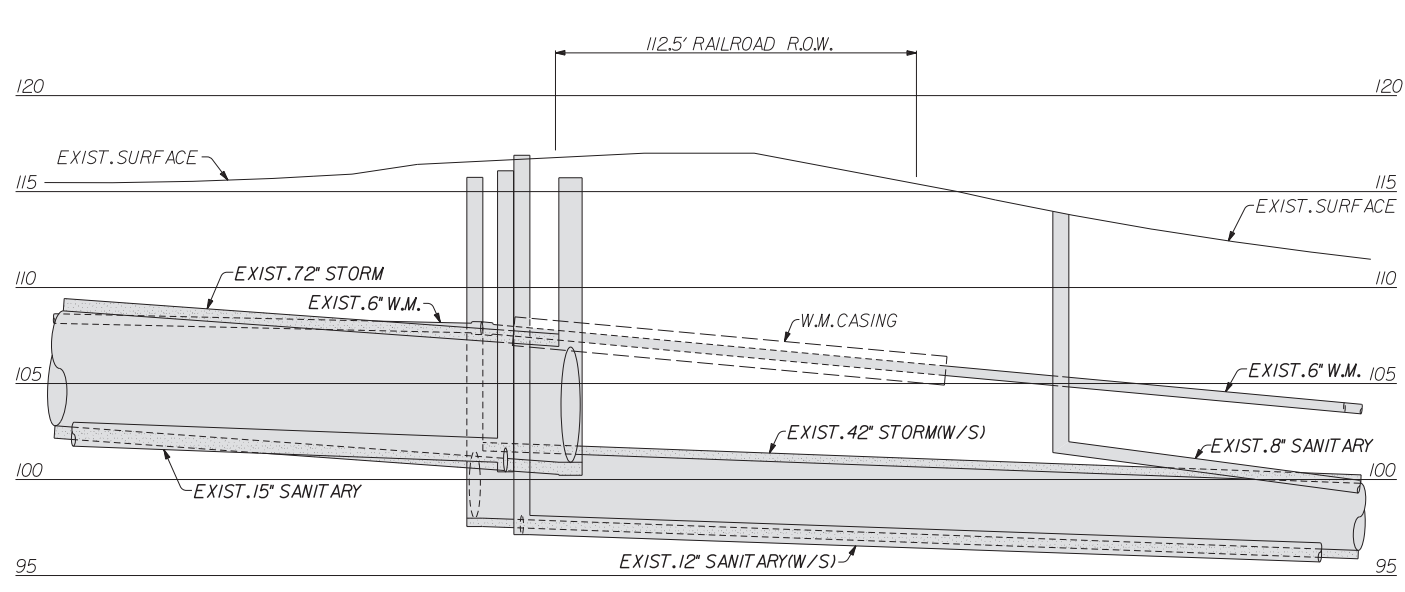




- LEGEND**
- P-XX STORM SEWER PIPE NUMBER
  - (XXX) DRAINAGE STRUCTURE NUMBER
  - XXX EXISTING DRAINAGE STRUCTURE TO BE ADJUSTED



PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	UTILITY PLAN	SHEET	<b>E</b>
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- NOTES:
1. THE EXISTING ROADWAY SURFACE IN WEST BELOIT ROAD FROM SOUTH 60TH STREET TO WEST MOBILE STREET IS CONCRETE. THE EXISTING ROADWAY SURFACE IN WEST MOBILE STREET AT WEST BELOIT ROAD IS ASPHALT OVER A CONCRETE BASE.
  2. THE CONTRACTOR SHALL EXPOSE THE EXISTING WATER MAIN AT CONNECTION AND CROSSING POINTS TO VERIFY ELEVATIONS AND LOCATIONS PRIOR TO INSTALLATION OF THE NEW WATER MAIN.
  3. AT CROSSINGS, ONE FULL LENGTH (SOLID PIECE) OF WATER PIPE SHALL BE CENTERED ABOVE OR BELOW THE SEWER SO THAT BOTH JOINS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.

4. ALL RECONNECTS MUST BE LEAK CHECKED PRIOR TO TAPING AND BACKFILL.
5. WET CONNECTS ARE TO BE LIMITED TO ONE PIPE LENGTH.
6. A NO-CONTACT LEAD PAK COMPRESSION FITTING SHALL BE USED TO PREVENT THE DIRECT CONTACT OF LEAD PLUMBING LINES WITH OTHER METALLIC WATER SYSTEM COMPONENTS, AN APPROVED PRODUCT IS MADE BY THE FORD METER BOX COMPANY.
7. ALL EXISTING CATCH BASINS SHALL HAVE INLET PROTECTION BARRIERS.

<b>CITY OF WEST ALLIS ENGINEERING DEPARTMENT</b>		
PLAN & PROFILE <b>WATER MAIN RELAY SAN. &amp; WATER BLDG. SERV. MISC. ADJ.</b>		
IN WEST BELOIT ROAD FROM SOUTH 60TH STREET TO WEST MOBILE STREET		
CONTRACT NO. <b>STATE CONT.</b>	CONTRACTOR AS-BUILT ENT'D. BY AS-BUILT CHK'D. BY CIS ENTERED BY	SYSTEM NO. SS-14 1/4 SEC. NO. 475
DRAWN BY <b>AW</b>	INSPECTOR <b>[Signature]</b>	DATE <b>2-1-24</b>
DATE DRAWN <b>9-23</b>	DESIGNED BY <b>MIZ</b>	CHECKED BY <b>HMB</b>
CHECKED BY <b>HMB</b>	APPROVED <b>[Signature]</b>	DATE <b>2-1-24</b>
SURVEY	FINAL PLAN DATE	DATE

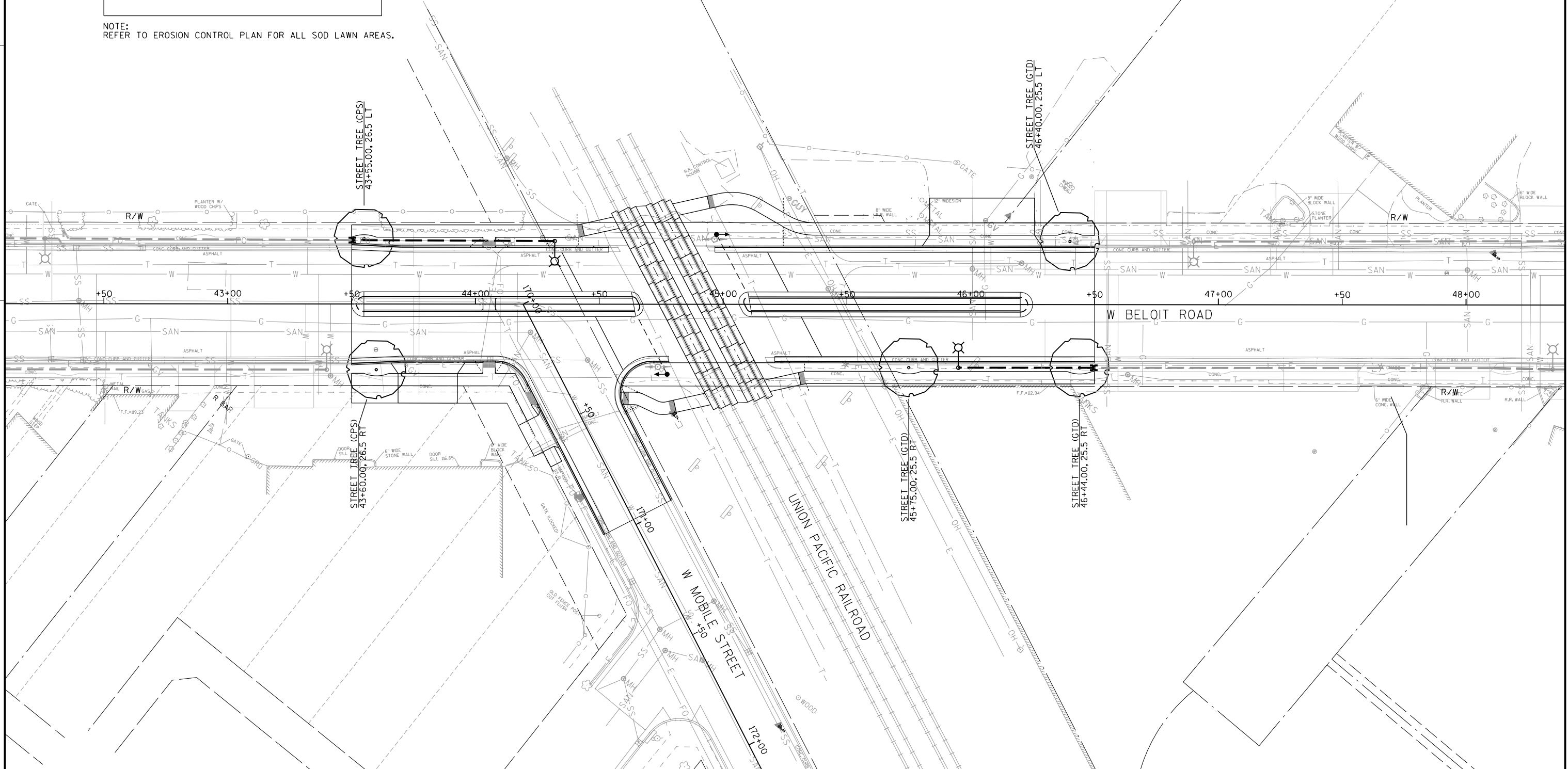
**LEGEND**

SHADE TREE





ROADWAY LIGHTING UNITS - SEE LIGHTING PLAN

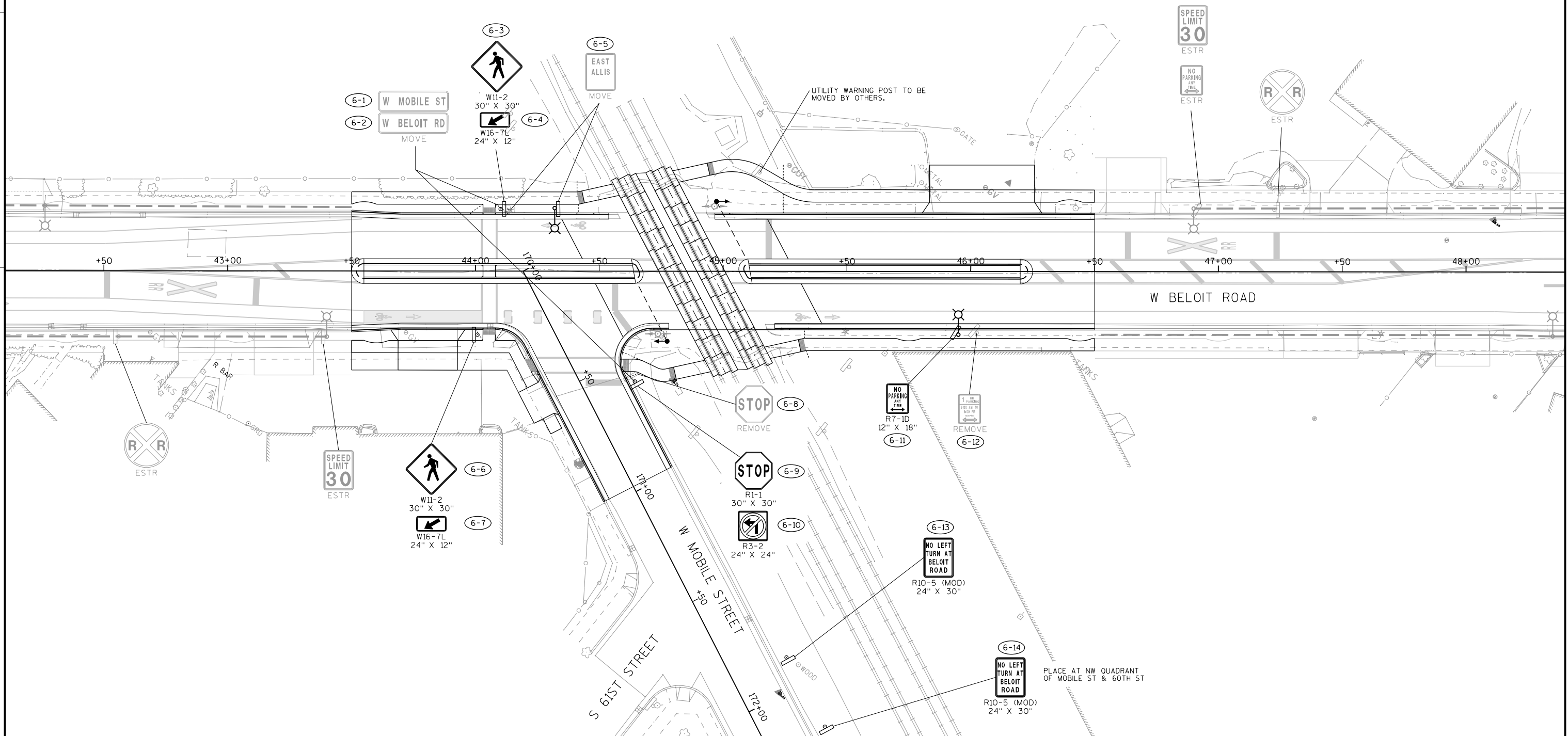
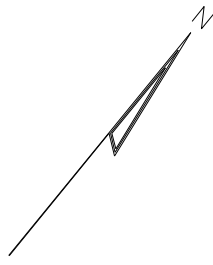
SYMBOL	LARGE DECIDUOUS TREES COMMON NAME	SIZE WHEN PLANTED	ROOT CONDITION
CPS	HACKBERRY, PRAIRIE SENTINEL	2.5" CAL	B&B
GTD	HONEYLOCUST, STREETKEEPER	2.5" CAL	B&B

NOTE:  
REFER TO EROSION CONTROL PLAN FOR ALL SOD LAWN AREAS.



LEGEND

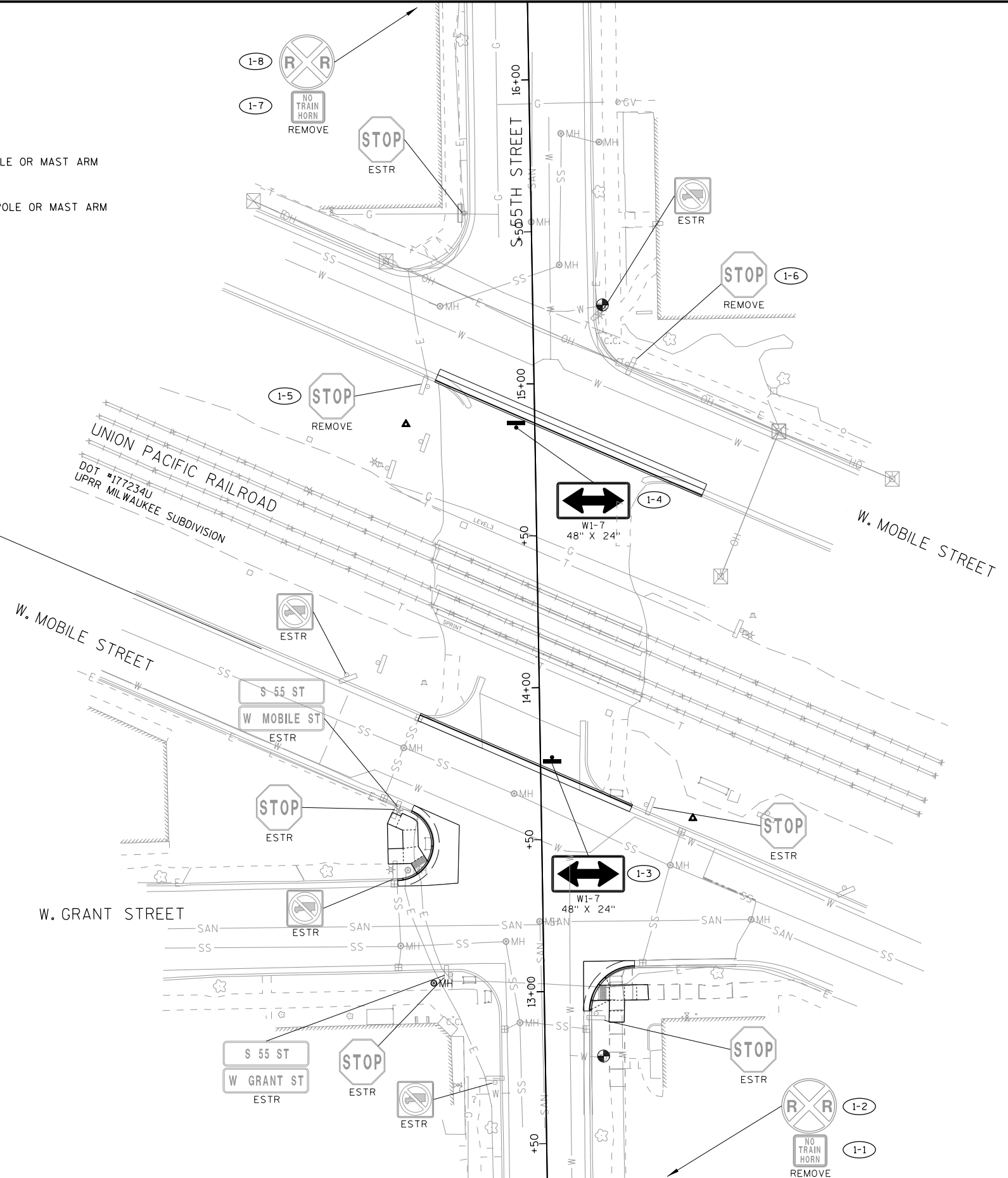
- (XXX) SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN
-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON UTILITY POLE OR MAST ARM
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON UTILITY POLE OR MAST ARM






PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET	<b>E</b>
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LEGEND

- (xxx) SIGN NUMBER
- ESTR EXISTING SIGN TO REMAIN
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON UTILITY POLE OR MAST ARM
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON UTILITY POLE OR MAST ARM



LIGHTING PLAN LEGEND

-  EXISTING MUNICIPAL POLE, ARM, LUMINAIRE, AND BASE TO BE REMOVED.
-  EXISTING MUNICIPAL POLE, ARM, AND LUMINAIRE TO REMAIN.
-  EXISTING DIRECT BURIED CONDUIT AND/OR CABLING TO BE REMOVED.

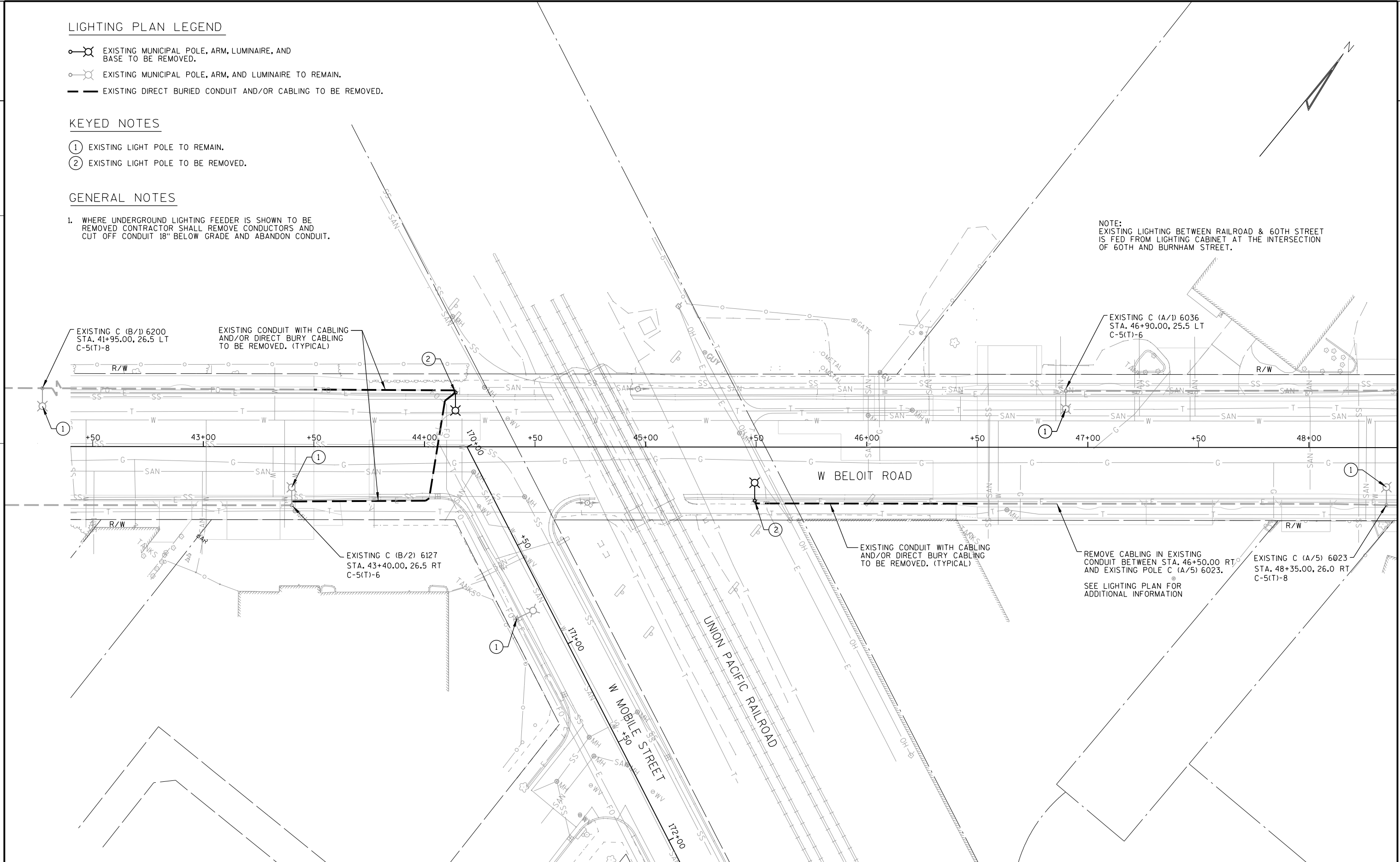
KEYED NOTES

- ① EXISTING LIGHT POLE TO REMAIN.
- ② EXISTING LIGHT POLE TO BE REMOVED.

GENERAL NOTES

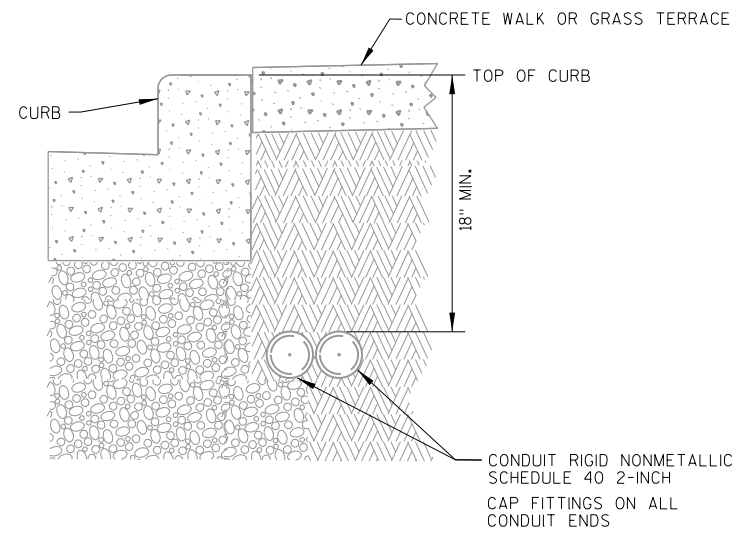
1. WHERE UNDERGROUND LIGHTING FEEDER IS SHOWN TO BE REMOVED CONTRACTOR SHALL REMOVE CONDUCTORS AND CUT OFF CONDUIT 18" BELOW GRADE AND ABANDON CONDUIT.

NOTE:  
EXISTING LIGHTING BETWEEN RAILROAD & 60TH STREET IS FED FROM LIGHTING CABINET AT THE INTERSECTION OF 60TH AND BURNHAM STREET.



PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	LIGHTING REMOVAL PLAN	SHEET	<b>E</b>
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- NOTE:
- 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
  - 2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



TYPICAL CONDUIT INSTALLATION

NTS



CABLE AND CONDUIT LEGEND

- (A) 2 #6 AWG AND 1#6 GROUND IN 2" CONDUIT
- (B) 2 #6 AND 1#6 GROUND IN EXISTING CONDUIT.

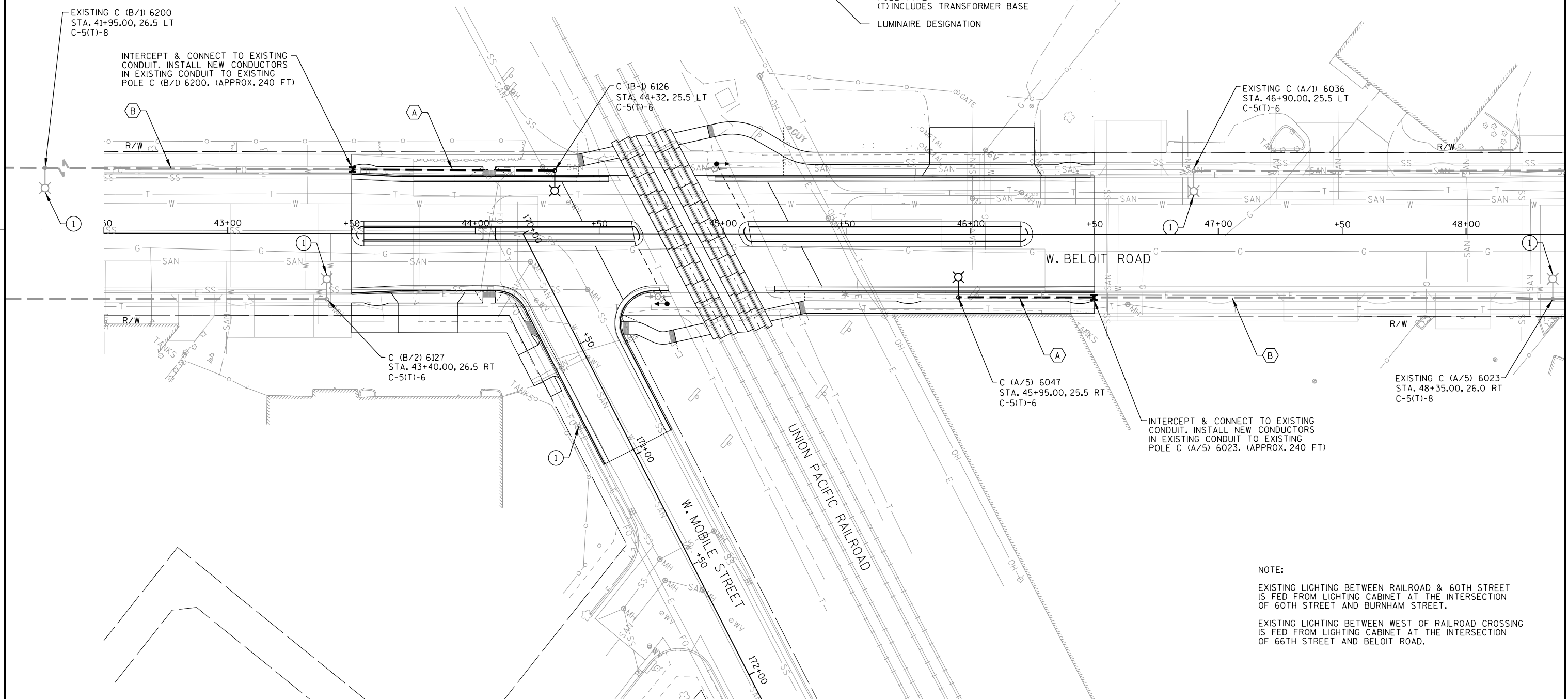
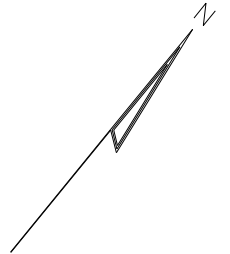
KEYED NOTES

- (1) EXISTING LIGHT POLE TO REMAIN - FOR INFORMATION ONLY.

LIGHTING PLAN LEGEND

- MUNICIPAL LIGHT POLE WITH SINGLE ARM AND LUMINAIRE. PROVIDE NEW CONCRETE BASE TYPE 5.
- EXISTING MUNI. POLE, ARM, AND LUMINAIRE TO REMAIN.
- CONDUIT (SEE CABLE AND CONDUIT LEGEND)

- LIGHTING AREA
- CONTROL CABINET/BREAKER NUMBER
- POLE NUMBER
- C (B-1) XXXX  
STA. XX+XX.XX, XX.X LT = LOCATION (CENTER OF POLE)
- C-5(T)-6  
— LUMINAIRE ARM LENGTH
- POLE TYPE  
(T) INCLUDES TRANSFORMER BASE
- LUMINAIRE DESIGNATION



EXISTING C (B/1) 6200  
STA. 41+95.00, 26.5 LT  
C-5(T)-8

INTERCEPT & CONNECT TO EXISTING  
CONDUIT. INSTALL NEW CONDUCTORS  
IN EXISTING CONDUIT TO EXISTING  
POLE C (B/1) 6200. (APPROX. 240 FT)

C (B-1) 6126  
STA. 44+32, 25.5 LT  
C-5(T)-6

EXISTING C (A/1) 6036  
STA. 46+90.00, 25.5 LT  
C-5(T)-6

C (B/2) 6127  
STA. 43+40.00, 26.5 RT  
C-5(T)-6

C (A/5) 6047  
STA. 45+95.00, 25.5 RT  
C-5(T)-6

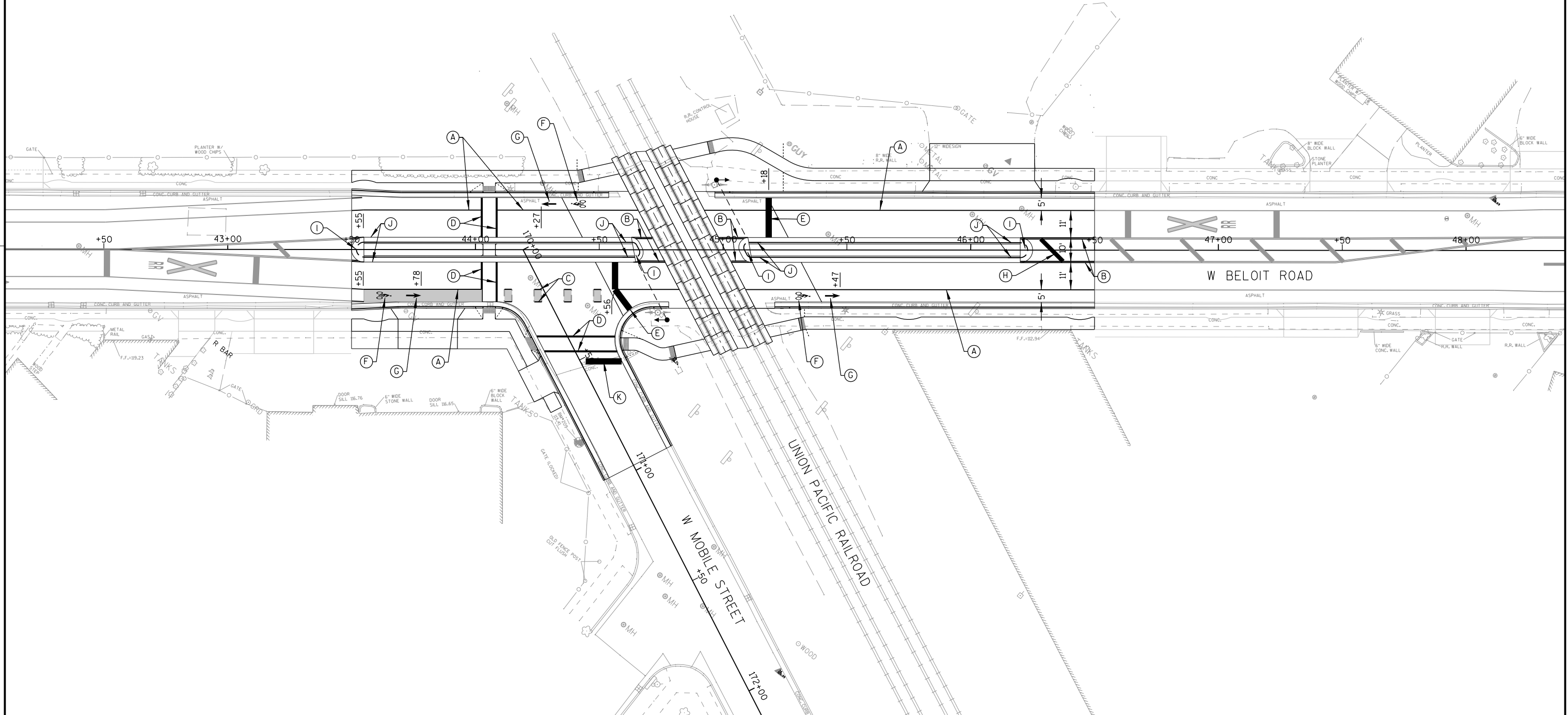
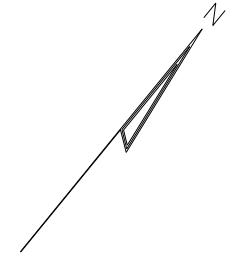
EXISTING C (A/5) 6023  
STA. 48+35.00, 26.0 RT  
C-5(T)-8

INTERCEPT & CONNECT TO EXISTING  
CONDUIT. INSTALL NEW CONDUCTORS  
IN EXISTING CONDUIT TO EXISTING  
POLE C (A/5) 6023. (APPROX. 240 FT)

NOTE:  
EXISTING LIGHTING BETWEEN RAILROAD & 60TH STREET  
IS FED FROM LIGHTING CABINET AT THE INTERSECTION  
OF 60TH STREET AND BURNHAM STREET.  
EXISTING LIGHTING BETWEEN WEST OF RAILROAD CROSSING  
IS FED FROM LIGHTING CABINET AT THE INTERSECTION  
OF 66TH STREET AND BELOIT ROAD.

LEGEND

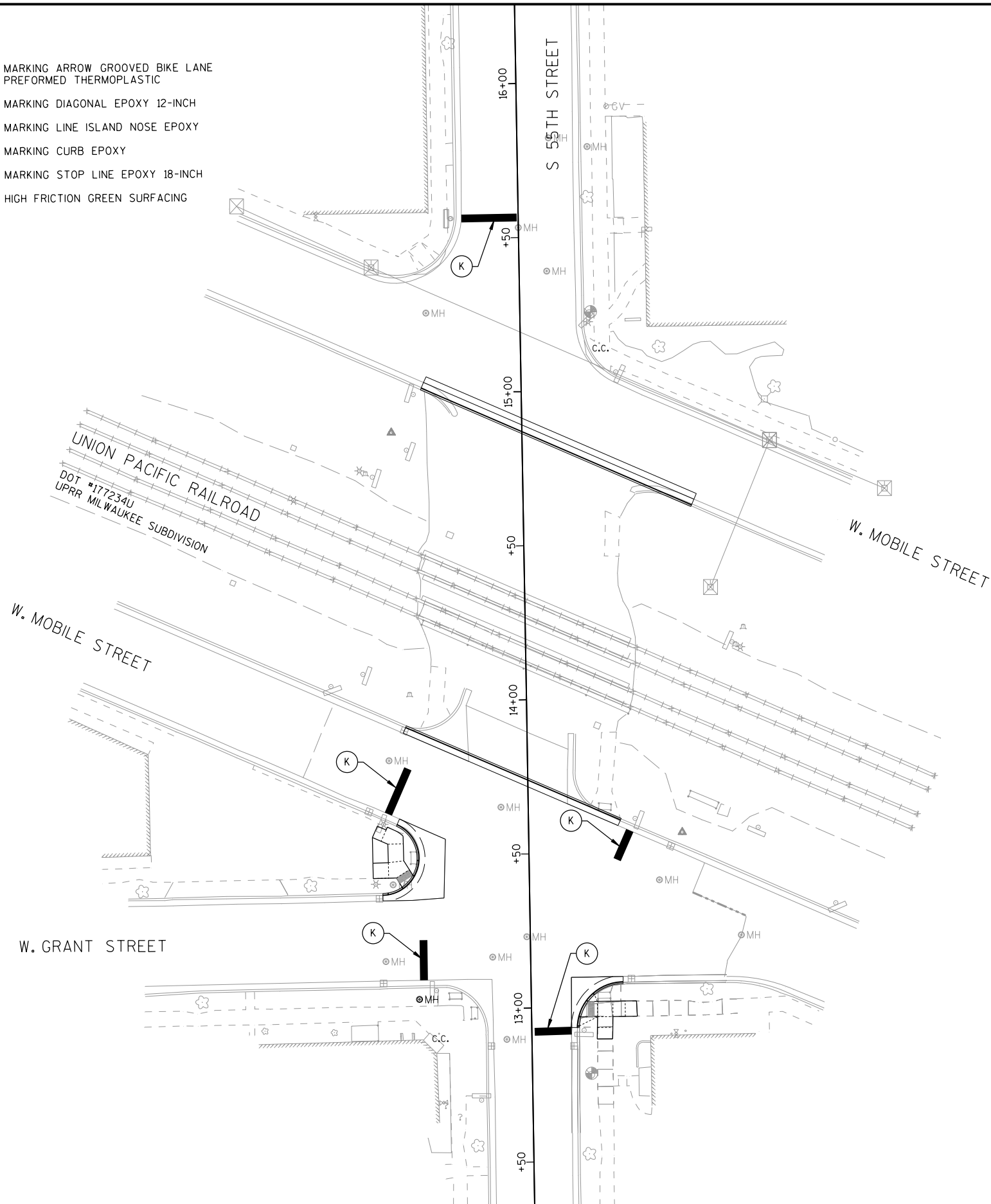
- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, DOUBLE YELLOW
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (D) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (E) MARKING STOP LINE EPOXY 24-INCH
- (F) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (G) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (H) MARKING DIAGONAL EPOXY 12-INCH
- (I) MARKING LINE ISLAND NOSE EPOXY
- (J) MARKING CURB EPOXY
- (K) MARKING STOP LINE EPOXY 18-INCH
- HIGH FRICTION GREEN SURFACING

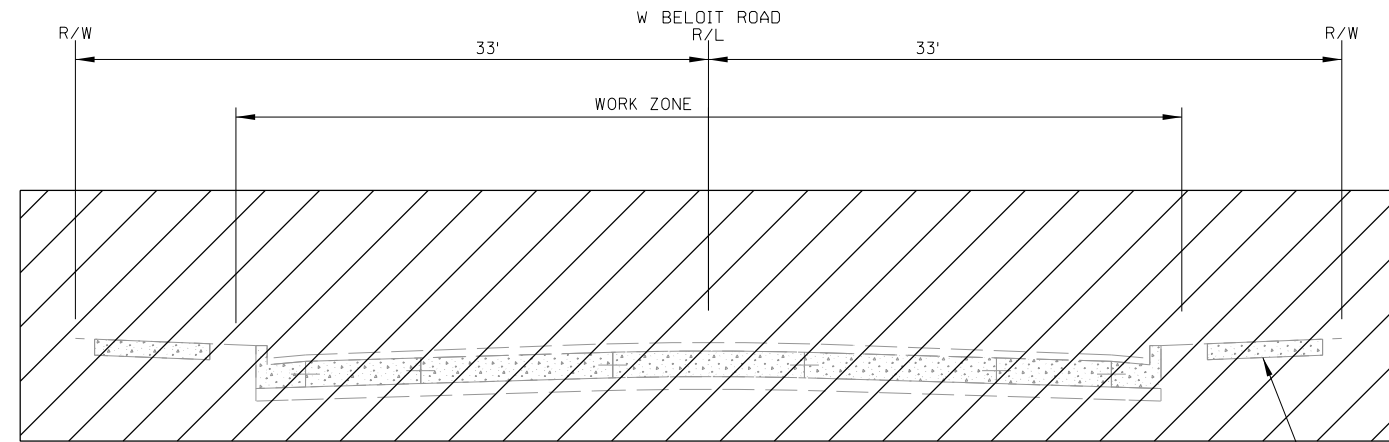


PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	<b>E</b>
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LEGEND

- (A) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE
- (B) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, DOUBLE YELLOW
- (C) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH, WHITE (9' SKIP, 3' LINE)
- (D) MARKING CROSSWALK EPOXY TRAVERSE LINE 6-INCH
- (E) MARKING STOP LINE EPOXY 24-INCH
- (F) MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (G) MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC
- (H) MARKING DIAGONAL EPOXY 12-INCH
- (I) MARKING LINE ISLAND NOSE EPOXY
- (J) MARKING CURB EPOXY
- (K) MARKING STOP LINE EPOXY 18-INCH
- [Grey Box] HIGH FRICTION GREEN SURFACING





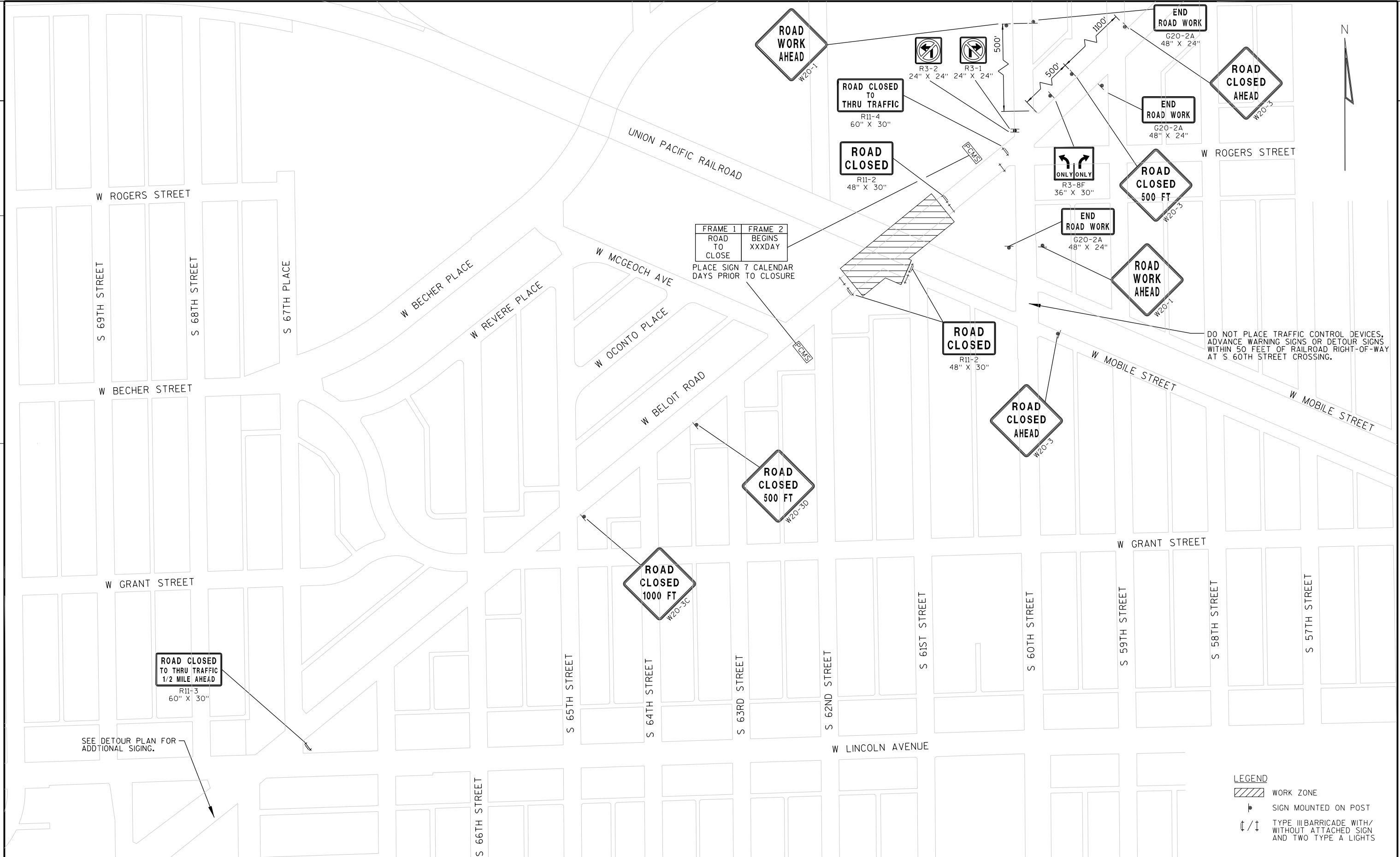
DETOUR PEDESTRIANS AROUND PROJECT WORK ZONE.  
SEE DETOUR PLANS FOR ADDITIONAL INFORMATION.  
(TYPICAL)

**STAGING TYPICAL SECTION - ROADWAY**

W BELOIT ROAD  
(DETOUR PEDESTRIANS AROUND PROJECT WORK ZONE)

TRAFFIC CONTROL NOTES

1. MAINTAIN ACCESS FOR EMERGENCY VEHICLES AND LOCAL TRAFFIC ON BELOIT ROAD AT ALL TIMES.
2. THE CONTRACTOR SHALL COVER ANY SIGN CONFLICTING WITH THE TRAFFIC CONTROL IN OPERATION AS NEEDED OR AS DIRECTED BY THE ENGINEER. COVERING OF SIGNS IS INCLUDED IN "TRAFFIC CONTROL COVERING SIGNS TYPE II" ITEM.
3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, TEMPORARY MARKINGS, FLAGMEN, AND SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
4. DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHODS OR SEQUENCES OF OPERATION.
5. "W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
6. ALL SIGNS ARE 48" X 48" EXCEPT OTHERWISE NOTED.
7. ANY "STOP" SIGNS THAT ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.
8. THE EXACT LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD LOCATIONS AS APPROVED BY THE ENGINEER IN THE FIELD.
9. BOTH STEADY BURN LIGHTS AND FLASHING LIGHTS SHALL BE ONE WAY WITH THE LIGHT SOURCE SHOWING TOWARDS ADJACENT APPROACHING TRAFFIC.
10. MAINTAIN ACCESS TO DRIVEWAYS DURING CONSTRUCTION. FOR PROPERTIES WITH MULTIPLE DRIVEWAYS, ONLY ONE DRIVEWAY CAN BE CLOSED/WORKED ON AT ANY TIME.







FRAME 1 ROAD TO CLOSE  
 FRAME 2 BEGINS XXXDAY  
 PLACE SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE

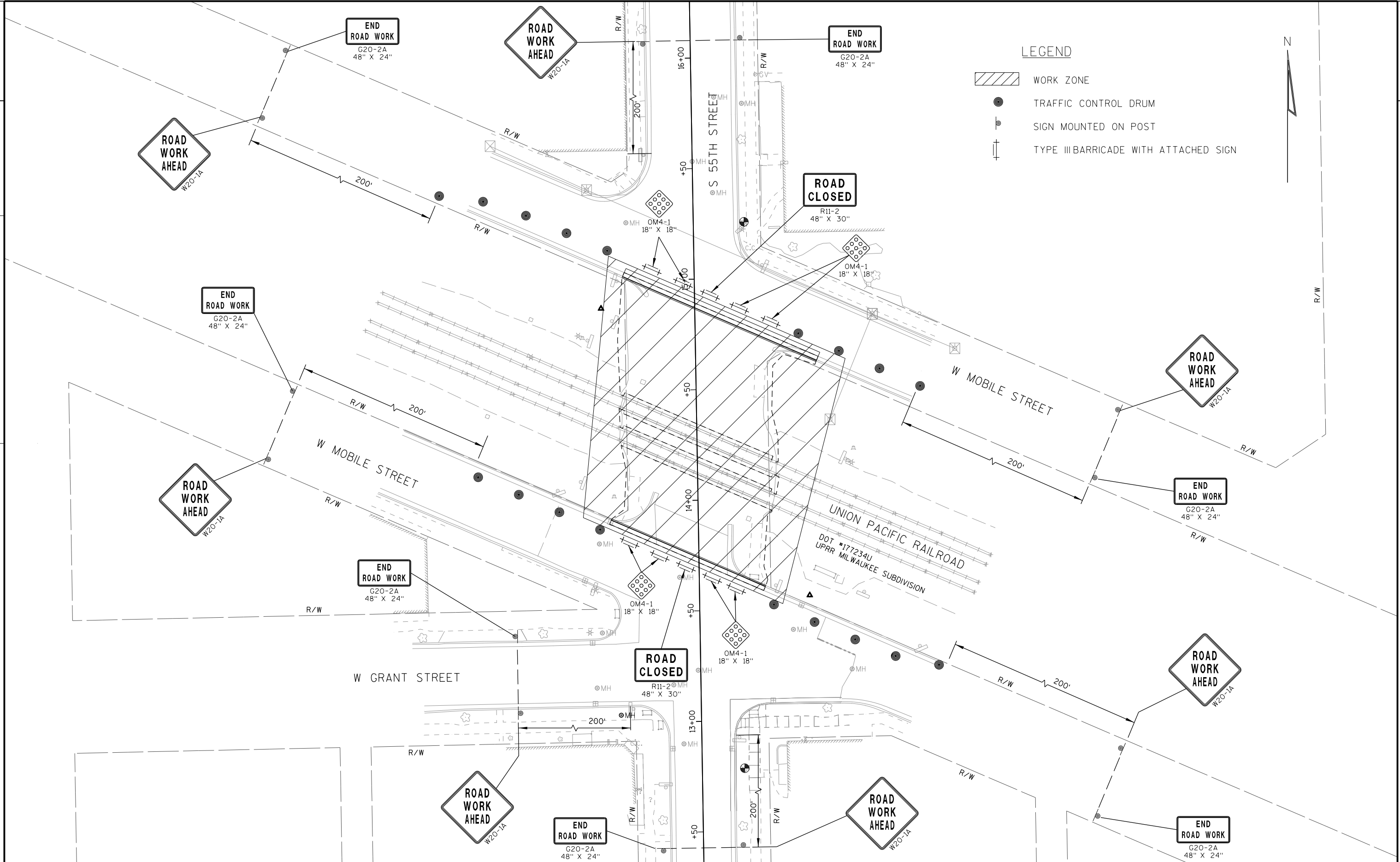
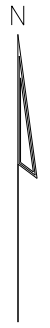
DO NOT PLACE TRAFFIC CONTROL DEVICES, ADVANCE WARNING SIGNS OR DETOUR SIGNS WITHIN 50 FEET OF RAILROAD RIGHT-OF-WAY AT S 60TH STREET CROSSING.

SEE DETOUR PLAN FOR ADDITIONAL SIGING.





- LEGEND**
- WORK ZONE
  - SIGN MOUNTED ON POST
  - TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN AND TWO TYPE A LIGHTS

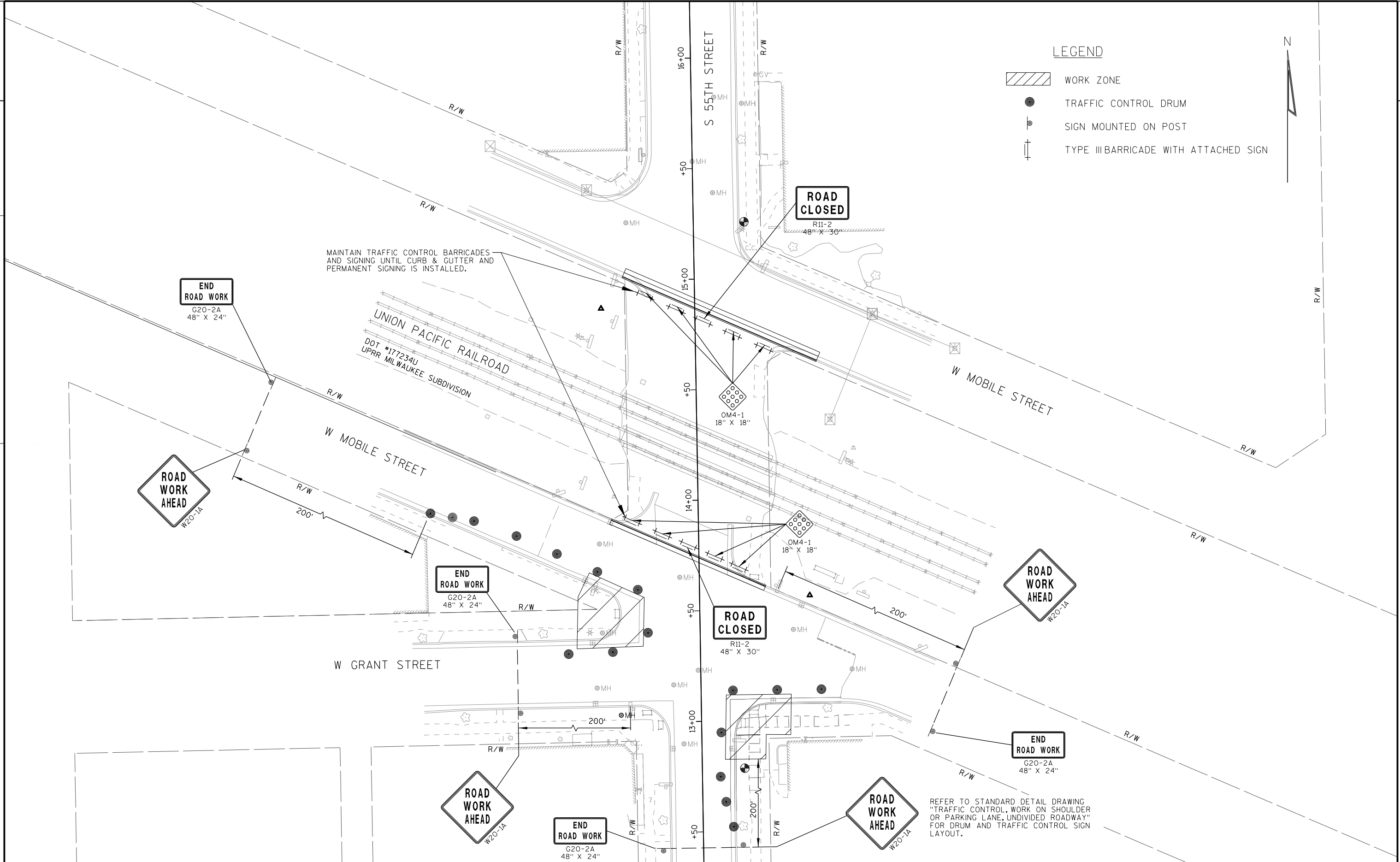
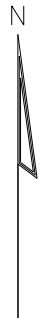
LEGEND

-  WORK ZONE
-  TRAFFIC CONTROL DRUM
-  SIGN MOUNTED ON POST
-  TYPE III BARRICADE WITH ATTACHED SIGN






LEGEND

-  WORK ZONE
-  TRAFFIC CONTROL DRUM
-  SIGN MOUNTED ON POST
-  TYPE III BARRICADE WITH ATTACHED SIGN





LEGEND

-  DETOUR ROUTE
-  WORK ZONE
-  TEMPORARY TRAFFIC CONTROL SIGN POST

NOTES

SEE STAGING PLANS FOR ADDITIONAL TRAFFIC CONTROL DEVICES.



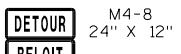
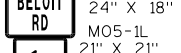


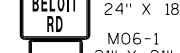


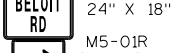


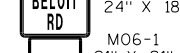


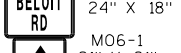


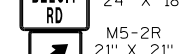



THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

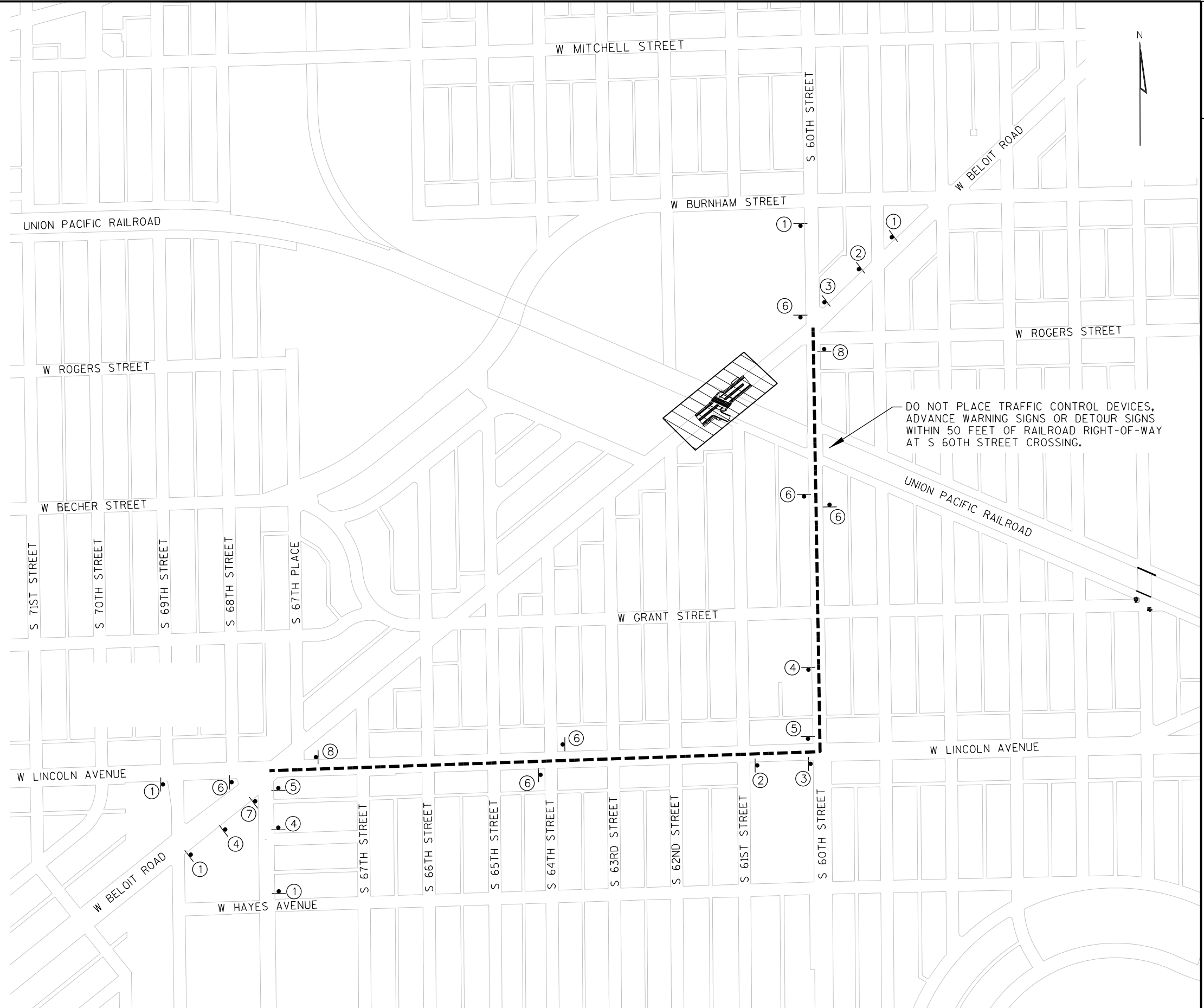
IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.

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


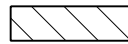



ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

FOLLOW SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR MAINLINE ROAD CLOSED SIGNAGE.

- ①  24" X 18"  

- ②  M4-8 24" X 12"  
 M05-1L 21" X 21"  

- ③  M4-8 24" X 12"  
 M06-1 21" X 21"  

- ④  M4-8 24" X 12"  
 M5-01R 21" X 21"  

- ⑤  M4-8 24" X 12"  
 M06-1 21" X 21"  

- ⑥  M4-8 24" X 12"  
 M06-1 21" X 21"  

- ⑦  M4-8 24" X 12"  
 M5-2R 21" X 21"  

- ⑧  M4-8A 24" X 18"  
 24" X 18"










LEGEND

-  PEDESTRIAN DETOUR ROUTE
-  WORK ZONE
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TEMPORARY PEDESTRIAN BARRICADE


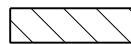



NOTES

SEE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL INFORMATION

- |   |   |   |
|---|---|---|
| ①<br><br>M4-9BL<br>30" X 24" | ②<br><br>M4-9BR<br>30" X 24" |   |
| ③<br><br>R9-9A<br>30" X 18"  | ④<br><br>R9-9A<br>30" X 18"  | ⑤<br><br>R9-9<br>24" X 12" |
| <br>M4-9BL<br>30" X 24"     | <br>M4-9BR<br>30" X 24"     |   |








LEGEND

-  PEDESTRIAN DETOUR ROUTE
-  WORK ZONE
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  TEMPORARY PEDESTRIAN BARRICADE

NOTES

SEE SDD "TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION" FOR ADDITIONAL INFORMATION

- ①   
M4-9BL  
30" X 24"
- ②   
M4-9BR  
30" X 24"
- ③   
R9-9A  
30" X 18"
- ④   
R9-9  
24" X 12"
-   
M4-9BL  
30" X 24"



UNION PACIFIC RAILROAD

W GRANT STREET

②

①

①

②

④

④

③

S 54TH STREET

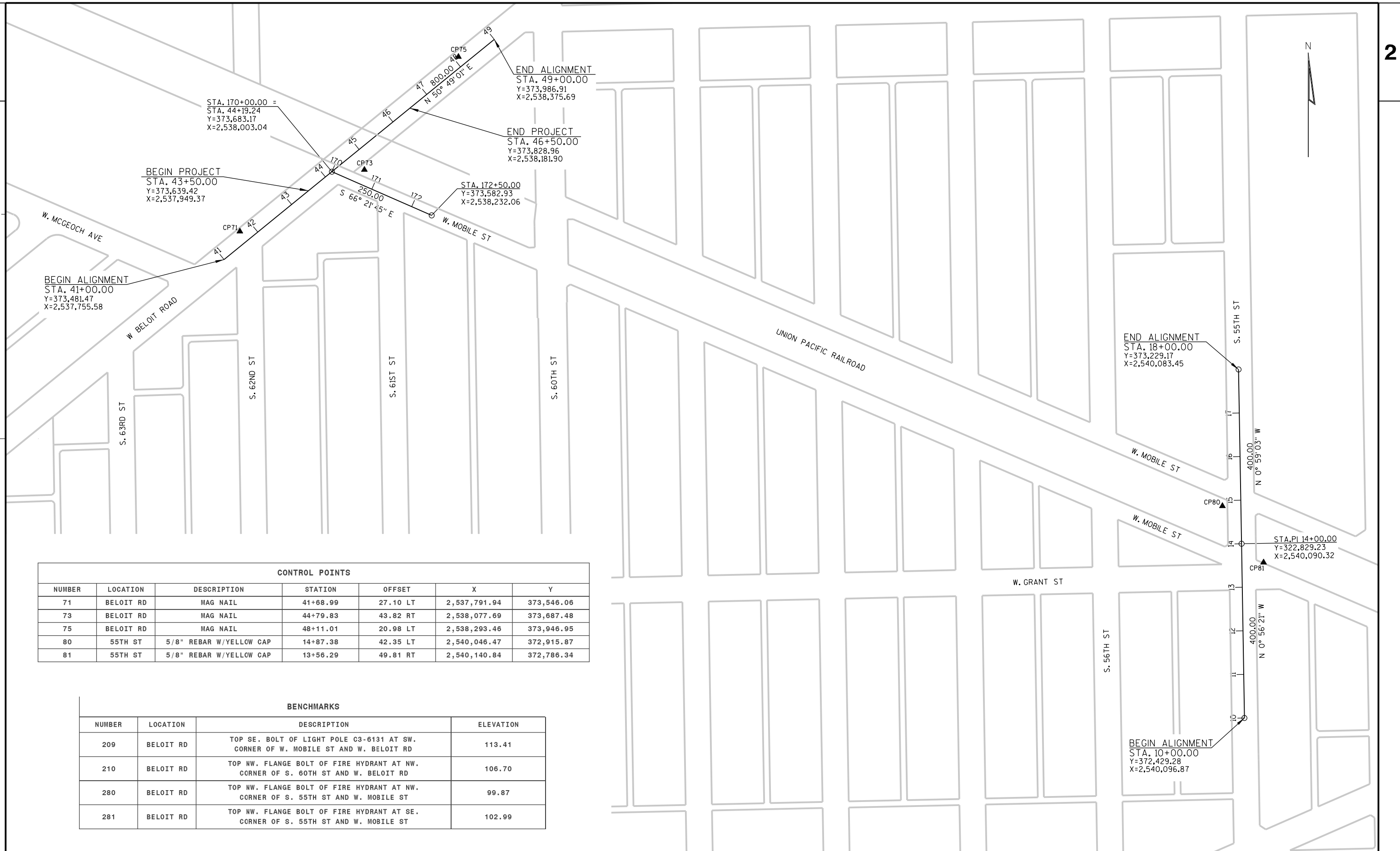
W ELECTRIC AVENUE

S 57TH STREET

S 56TH STREET

S 55TH STREET

W LINCOLN AVENUE



STA. 170+00.00 =  
 STA. 44+19.24  
 Y=373,683.17  
 X=2,538,003.04

BEGIN PROJECT  
 STA. 43+50.00  
 Y=373,639.42  
 X=2,537,949.37

END ALIGNMENT  
 STA. 49+00.00  
 Y=373,986.91  
 X=2,538,375.69

END PROJECT  
 STA. 46+50.00  
 Y=373,828.96  
 X=2,538,181.90

STA. 172+50.00  
 Y=373,582.93  
 X=2,538,232.06

BEGIN ALIGNMENT  
 STA. 41+00.00  
 Y=373,481.47  
 X=2,537,755.58

END ALIGNMENT  
 STA. 18+00.00  
 Y=373,229.17  
 X=2,540,083.45

STA. PI 14+00.00  
 Y=322,829.23  
 X=2,540,090.32

BEGIN ALIGNMENT  
 STA. 10+00.00  
 Y=372,429.28  
 X=2,540,096.87

**CONTROL POINTS**

NUMBER	LOCATION	DESCRIPTION	STATION	OFFSET	X	Y
71	BELOIT RD	MAG NAIL	41+68.99	27.10 LT	2,537,791.94	373,546.06
73	BELOIT RD	MAG NAIL	44+79.83	43.82 RT	2,538,077.69	373,687.48
75	BELOIT RD	MAG NAIL	48+11.01	20.98 LT	2,538,293.46	373,946.95
80	55TH ST	5/8" REBAR W/YELLOW CAP	14+87.38	42.35 LT	2,540,046.47	372,915.87
81	55TH ST	5/8" REBAR W/YELLOW CAP	13+56.29	49.81 RT	2,540,140.84	372,786.34

**BENCHMARKS**

NUMBER	LOCATION	DESCRIPTION	ELEVATION
209	BELOIT RD	TOP SE. BOLT OF LIGHT POLE C3-6131 AT SW. CORNER OF W. MOBILE ST AND W. BELOIT RD	113.41
210	BELOIT RD	TOP NW. FLANGE BOLT OF FIRE HYDRANT AT NW. CORNER OF S. 60TH ST AND W. BELOIT RD	106.70
280	BELOIT RD	TOP NW. FLANGE BOLT OF FIRE HYDRANT AT NW. CORNER OF S. 55TH ST AND W. MOBILE ST	99.87
281	BELOIT RD	TOP NW. FLANGE BOLT OF FIRE HYDRANT AT SE. CORNER OF S. 55TH ST AND W. MOBILE ST	102.99

Estimate Of Quantities

2525-03-73

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Concrete Pavement	SY	1,263.000	1,263.000
0004	204.0110	Removing Asphaltic Surface	SY	106.000	106.000
0006	204.0150	Removing Curb & Gutter	LF	112.000	112.000
0008	204.0155	Removing Concrete Sidewalk	SY	447.000	447.000
0010	204.0195	Removing Concrete Bases	EACH	2.000	2.000
0012	204.0215	Removing Catch Basins	EACH	1.000	1.000
0014	204.0245	Removing Storm Sewer (size) 01. 24-Inch	LF	40.000	40.000
0016	204.9060.S	Removing (item description) 01. Lighting Units	EACH	2.000	2.000
0018	205.0100	Excavation Common	CY	1,668.000	1,668.000
0020	205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON	157.000	157.000
0022	213.0100	Finishing Roadway (project) 01. 2525-03-73	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	54.000	54.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	778.000	778.000
0028	311.0110	Breaker Run	TON	936.000	936.000
0030	415.0080	Concrete Pavement 8-Inch	SY	1,056.000	1,056.000
0032	415.4100	Concrete Pavement Joint Filling	SY	1,056.000	1,056.000
0034	416.0610	Drilled Tie Bars	EACH	55.000	55.000
0036	416.0620	Drilled Dowel Bars	EACH	61.000	61.000
0038	455.0605	Tack Coat	GAL	15.000	15.000
0040	460.2000	Incentive Density HMA Pavement	DOL	60.000	60.000
0042	460.6223	HMA Pavement 3 MT 58-28 S	TON	60.000	60.000
0044	460.6424	HMA Pavement 4 MT 58-28 H	TON	30.000	30.000
0046	465.0105	Asphaltic Surface	TON	7.000	7.000
0048	601.0331	Concrete Curb & Gutter 31-Inch	LF	1,268.000	1,268.000
0050	602.0410	Concrete Sidewalk 5-Inch	SF	3,439.000	3,439.000
0052	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	101.000	101.000
0054	602.0815	Concrete Driveway 7-Inch	SY	191.000	191.000
0056	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0058	611.8120.S	Cover Plates Temporary	EACH	3.000	3.000
0060	618.0100	Maintenance and Repair of Haul Roads (project) 01. 2525-03-73	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	620.0300	Concrete Median Sloped Nose	SF	141.000	141.000
0066	624.0100	Water	MGAL	8.000	8.000
0068	625.0100	Topsoil	SY	1,096.000	1,096.000
0070	627.0200	Mulching	SY	740.000	740.000
0072	628.1104	Erosion Bales	EACH	30.000	30.000
0074	628.1504	Silt Fence	LF	100.000	100.000
0076	628.1520	Silt Fence Maintenance	LF	100.000	100.000
0078	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0082	628.7015	Inlet Protection Type C	EACH	11.000	11.000
0084	628.7020	Inlet Protection Type D	EACH	10.000	10.000
0086	628.7560	Tracking Pads	EACH	2.000	2.000
0088	629.0210	Fertilizer Type B	CWT	0.700	0.700
0090	630.0140	Seeding Mixture No. 40	LB	13.300	13.300
0092	631.0300	Sod Water	MGAL	16.100	16.100
0094	631.1000	Sod Lawn	SY	359.000	359.000
0096	632.0101	Trees (species, root, size) 01. Hackberry, Prairie Sentinel, B&B, 2.5" Cal	EACH	2.000	2.000
0098	632.0101	Trees (species, root, size) 02. Honeylocust, Streetkeeper, B&B, 2.5" Cal	EACH	3.000	3.000
0100	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	15.000	15.000

Estimate Of Quantities

2525-03-73

Line	Item	Item Description	Unit	Total	Qty
0102	637.2210	Signs Type II Reflective H	SF	20.700	20.700
0104	637.2230	Signs Type II Reflective F	SF	32.500	32.500
0106	638.2102	Moving Signs Type II	EACH	3.000	3.000
0108	638.2602	Removing Signs Type II	EACH	8.000	8.000
0110	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0112	642.5001	Field Office Type B	EACH	1.000	1.000
0114	643.0300	Traffic Control Drums	DAY	2,250.000	2,250.000
0116	643.0420	Traffic Control Barricades Type III	DAY	1,923.000	1,923.000
0118	643.0705	Traffic Control Warning Lights Type A	DAY	3,846.000	3,846.000
0120	643.0900	Traffic Control Signs	DAY	11,724.000	11,724.000
0122	643.0920	Traffic Control Covering Signs Type II	EACH	5.000	5.000
0124	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0126	643.5000	Traffic Control	EACH	1.000	1.000
0128	644.1440	Temporary Pedestrian Surface Matting	SF	200.000	200.000
0130	644.1810	Temporary Pedestrian Barricade	LF	180.000	180.000
0132	645.0120	Geotextile Type HR	SY	75.000	75.000
0134	645.0220	Geogrid Type SR	SY	1,558.000	1,558.000
0136	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	730.000	730.000
0138	646.6120	Marking Stop Line Epoxy 18-Inch	LF	84.000	84.000
0140	646.7120	Marking Diagonal Epoxy 12-Inch	LF	13.000	13.000
0142	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	125.000	125.000
0144	646.8120	Marking Curb Epoxy	LF	40.000	40.000
0146	646.8220	Marking Island Nose Epoxy	EACH	4.000	4.000
0148	650.4500	Construction Staking Subgrade	LF	300.000	300.000
0150	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	227.000	227.000
0152	650.7000	Construction Staking Concrete Pavement	LF	300.000	300.000
0154	650.8501	Construction Staking Electrical Installations (project) 01. 2525-03-73	EACH	1.000	1.000
0156	650.9000	Construction Staking Curb Ramps	EACH	6.000	6.000
0158	650.9500	Construction Staking Sidewalk (project) 01. 2525-03-73	EACH	1.000	1.000
0160	650.9911	Construction Staking Supplemental Control (project) 01. 2525-03-73	EACH	1.000	1.000
0162	650.9920	Construction Staking Slope Stakes	LF	300.000	300.000
0164	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	333.000	333.000
0166	652.0605	Conduit Special 2-Inch	LF	132.000	132.000
0168	653.0115	Pull Boxes Steel 12x36-Inch	EACH	2.000	2.000
0170	654.0105	Concrete Bases Type 5	EACH	2.000	2.000
0172	655.0610	Electrical Wire Lighting 12 AWG	LF	246.000	246.000
0174	655.0625	Electrical Wire Lighting 6 AWG	LF	1,491.000	1,491.000
0176	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000
0178	657.0322	Poles Type 5-Aluminum	EACH	2.000	2.000
0180	657.0610	Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	EACH	2.000	2.000
0182	659.1125	Luminaires Utility LED C	EACH	2.000	2.000
0184	659.5100.S	Lamp, Ballast, LED, Switch Disposal by Department	EACH	2.000	2.000
0186	690.0150	Sawing Asphalt	LF	145.000	145.000
0188	690.0250	Sawing Concrete	LF	351.000	351.000
0190	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	317.000	317.000
0192	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	250.000	250.000
0194	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0196	SPV.0060	Special 01. Round Steel Sign Post System	EACH	7.000	7.000
0198	SPV.0060	Special 02. Marking Symbol Grooved Bike Lane Preformed Thermoplastic	EACH	3.000	3.000
0200	SPV.0060	Special 03. Marking Arrow Grooved Bike Lane Preformed Thermoplastic	EACH	3.000	3.000

Estimate Of Quantities

2525-03-73

Line	Item	Item Description	Unit	Total	Qty
0202	SPV.0060	Special 04. Adjust Water Valve Box	EACH	1.000	1.000
0204	SPV.0060	Special 05. Water Main Connection 6-Inch	EACH	2.000	2.000
0206	SPV.0060	Special 06. Adjust Sanitary Manhole Frame	EACH	2.000	2.000
0208	SPV.0090	Special 01. Marking Stop Line Epoxy 24-Inch	LF	37.000	37.000
0210	SPV.0090	Special 02. Water Main Relay 6-Inch	LF	47.000	47.000
0212	SPV.0090	Special 03. Water Service Copper 2-Inch	LF	13.000	13.000
0214	SPV.0090	Special 04. Building Sanitary Sewer 6-Inch	LF	15.000	15.000
0216	SPV.0165	Special 01. High Friction Green Surfacing	SF	298.000	298.000



3

REMOVING CONCRETE PAVEMENT

STREET	FROM	TO	204.0100 SY
W. BELOIT RD	43+50	- 46+50	1,125
S. 55TH STREET	12+90	- 15+10	138
PROJECT TOTAL			1,263

REMOVING CONCRETE SIDEWALK

STREET	FROM STATION	TO STATION	204.0155 SY
W. BELOIT RD	43+50	- 46+50	369
S. 55TH STREET	12+90	- 15+10	78
PROJECT TOTAL:			447

3

REMOVING CATCH BASINS

STREET	STATION	OFFSET	204.0215 EACH
W. BELOIT RD	44+06	23' RT	1
PROJECT TOTAL			1

REMOVING ASPHALTIC SURFACE

STREET	FROM	TO	204.0110 SY
W. BELOIT RD	43+50	- 46+50	0
S. 55TH STREET	12+90	- 15+10	106
PROJECT TOTAL			106

REMOVING STORM SEWER

STREET	STATION - STATION	LOCATION	204.0245.01 24-INCH LF
W. BELOIT RD	44+06 - 44+46	RT	40
PROJECT TOTAL			40

REMOVING CURB & GUTTER

STREET	FROM STATION	TO STATION	204.0150 LF
W. BELOIT RD	43+50	- 46+50	75
S. 55TH STREET	12+90	- 15+10	37
PROJECT TOTAL:			112

LIGHTING REMOVAL

STATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH	204.9060.S REMOVING LIGHTING UNITS EACH	659.5100.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY DEPARTMENT EACH
44+14	LT	1	1	1
45+49	RT	1	1	1
TOTALS		2	2	2

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4) CY	AVAILABLE MATERIAL (5) CY	UNEXPANDED FILL CY	EXPANDED FILL (6) CY	MASS ORDINATE +/- (7) CY	WASTE CY	COMMENT
			CUT (2) CY	EBS EXCAVATION (3) CY				FACTOR 1.11			
	43+50 to 46+50	BELOIT ROAD 55TH STREET	1,353	0	393	960	52	58	902	902	PAVEMENT & BASE REMOVAL
			315	0	116	199	239	266	-66	-	
<b>GRAND TOTAL</b>			1,668	0	508	1,159	291	323	836		
TOTAL COMMON EXC			1,668								

**NOTES:**

- (1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (3) EBS EXCAVATION TO BE BACKFILLED WITH BREAKER RUN.
- (4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (6) EXPANDED FILL FACTOR = 1.11
- (7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL

205.0501.S

STREET	STATION	TO	STATION	OFFSET	TON
W. BELOIT RD	43+50	-	44+20	RT	157
PROJECT TOTAL					157

BREAKER RUN

311.0110

STREET	STATION	TO	STATION	TON
W. BELOIT RD	43+50	-	46+50	936
S. 55TH STREET	12+90	-	15+10	0
PROJECT TOTAL				936

FINISHING ROADWAY (2525-03-73)

213.0100

LOCATION	EACH	
W. BELOIT RD	1	
PROJECT TOTAL		1

CONCRETE PAVEMENT

415.0080

415.4100

STREET	STATION	TO	STATION	8-INCH SY	CONCRETE PAVEMENT 8-INCH SY	CONCRETE PAVEMENT JOINT FILLING SY
W. BELOIT RD	43+50	-	46+50	1,029	1,029	1,029
S. 55TH STREET	12+90	-	15+10	27	27	27
PROJECT TOTAL				1,056	1,056	1,056

BASE AGGREGATE DENSE 3/4-INCH

305.0110

STREET	STATION	TO	STATION	TON
W. BELOIT RD	43+50	-	46+50	54
S. 55TH STREET	12+90	-	15+10	0
PROJECT TOTAL				54

CONCRETE DRIVEWAY 7-INCH

416.0170

CONCRETE

DRIVEWAY

7-INCH

STREET	STATION	TO	STATION	SY
W. BELOIT RD	43+50	-	46+50	191
S. 55TH STREET	12+90	-	15+10	0
PROJECT TOTAL				191

BASE AGGREGATE DENSE 1 1/4 INCH

305.0120

STREET	STATION	TO	STATION	TON
W. BELOIT RD	43+50	-	46+50	770
S. 55TH STREET	12+90	-	15+10	8
PROJECT TOTAL				778

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

3

DRILLED TIE BARS

416.0610

STREET	STATION	TO	STATION	EACH
W. BELOIT RD	43+50	-	46+50	0
S. 55TH STREET	12+90	-	15+10	55
PROJECT TOTAL				55

CONCRETE CURB & GUTTER

601.0331  
CONCRETE CURB  
AND GUTTER  
31-INCH

STREET	STATION	TO	STATION	LF
W. BELOIT RD	43+50	-	46+50	1,041
S 55TH ST	12+90	-	15+10	227
PROJECT TOTAL				1,268

3

DRILLED DOWEL BARS

416.0620

STREET	STATION	TO	STATION	EACH
W. BELOIT ROAD	43+50	-	46+50	61
S. 55TH STREET	12+90	-	15+10	0
PROJECT TOTAL				61

CONCRETE SIDEWALK 5-INCH

602.0410

STREET	STATION	TO	STATION	SF
W. BELOIT RD	43+50	-	46+50	3,145
S. 55TH STREET	12+90	-	15+10	294
PROJECT TOTAL				3,439

ASPHALT

460.6223      460.6424      455.0605      465.0105  
HMA              HMA              TACK COAT      ASPHALTIC  
PAVEMENT      PAVEMENT                              SURFACE  
3 MT 58-28 S    4 MT 58-28 H

STREET	STATION	TO	STATION	TON	TON	GAL	TON
W. BELOIT RD	42+50	-	48+00	55	27	14	7
S. 55TH STREET	12+90	-	15+10	5	3	1	0
PROJECT TOTAL				60	30	15	7

CURB RAMP DETECTABLE WARNING FIELD

YELLOW  
602.0505

STREET	STATION	TO	STATION	SF
W. BELOIT RD	43+50	-	46+50	81
S. 55TH ST	12+90	-	15+10	20
PROJECT TOTAL				101

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

3

ADJUSTING MANHOLE COVERS

STREET	STATION	OFFSET	611.8110 EACH
W. BELOIT RD	44+45	23' RT	1
PROJECT TOTAL			1

CONCRETE MEDIAN SLOPED NOSE

STREET	STATION	TO	STATION	620.0300 SF
W. BELOIT RD	43+50	-	46+50	141
S. 55TH STREET	12+90	-	15+10	0
PROJECT TOTAL				141

3

COVER PLATES TEMPORARY

STREET	STATION	OFFSET	611.8120.S EACH
W. BELOIT RD	44+45	23' RT	1
W. BELOIT RD	44+23	12' RT	1
W. BELOIT RD	45+96	1' RT	1
PROJECT TOTAL			3

WATER

STREET	STATION	TO	STATION	624.0100 MGAL
W. BELOIT ROAD	43+50	-	46+50	8
S. 55TH STREET	12+90	-	15+10	0
PROJECT TOTAL				8

MAINTENANCE AND REPAIR OF HAUL ROADS ID 2525-03-73

LOCATION	CAT 0020 618.0100 EACH
W. BELOIT ROAD & S 55TH STREET	1
PROJECT TOTAL	1

TOPSOIL

STREET	STATION	TO	STATION	625.0100 SY
W. BELOIT ROAD	43+50	-	46+50	261
S. 55TH STREET	12+90	-	15+10	615
UNDISTRIBUTED				219
PROJECT TOTAL				1,096

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

MULCHING

				627.0200
STREET				SY
W. BELOIT ROAD	43+50	-	46+50	0
S. 55TH STREET	12+90	-	15+10	590
UNDISTRIBUTED	12+90	-	15+10	147
				740

INLET PROTECTION

				628.7015	628.7020
				INLET PROTECTION	INLET PROTECTION
				TYPE C	TYPE D
STREET	STATION	TO	STATION	EACH	EACH
W. BELOIT ROAD	43+50	-	46+50	7	2
S. 55TH STREET	12+90	-	15+10	4	8
PROJECT TOTAL				11	10

TEMPORARY SETTLING BASINS

			628.1104	645.0120
			EROSION BALES	GEOTEXTILE
			TYPE	HR
STREET			EACH	SY
UNDISTRIBUTED			30	75
PROJECT TOTAL			30	75

TRACKING PADS

			628.7560
STREET	LOCATION		EACH
W. BELOIT RD	UNDISTRIBUTED		2
PROJECT TOTAL			2

SILT FENCE

			628.1504	628.1520
			SILT FENCE	SILT FENCE
			MAINTENANCE	
STREET			LF	LF
UNDISTRIBUTED			100	100
PROJECT TOTAL			100	100

RESTORATION QUANTITIES

				629.0210	630.0140	631.0300	631.1000
				FERTILIZER	SEEDING	SOD	SOD
				TYPE B	MIXTURE	WATER	LAWN
					NO. 40		
STREET	STATION	TO	STATION	CWT	LB	MGAL	SY
W. BELOIT ROAD	43+50	-	46+50	0.2	0.0	11.7	261
S. 55TH STREET	12+90	-	15+10	0.4	10.6	1.2	26
UNDISTRIBUTED	12+90	-	15+10	0.1	2.7	3.2	72
PROJECT TOTAL				0.7	13.3	16.1	359

EROSION CONTROL MOBILIZATIONS

		628.1905	628.1910
		MOBILIZATIONS	MOBILIZATIONS
		EROSION CONTROL	EMERGENCY
		EROSION CONTROL	
LOCATION	EACH	EACH	
UNDISTRIBUTED	1	2	
PROJECT TOTAL		1	2

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

3

**TREE PLANTING**

CATEGORY	BID NUMBER	SYMBOL	LARGE DECIDUOUS TREES COMMON NAME	SIZE WHEN PLANTED	ROOT CONDITION	UNIT	TOTALS
0010	632.0101.01	CPS	HACKBERRY, PRAIRIE SENTINEL	2.5" CAL	B&B	EA	2
0010	632.0101.02	GTD	HONEYLOCUST, STREETKEEPER	2.5" CAL	B&B	EA	3

B&B: BALLED AND BURLAPED

**MISCELLANEOUS LANDSCAPING**

632.9101

LANDSCAPE PLANTING  
SURVEILLANCE AND  
CARE CYCLES

LOCATION	EACH
PROJECT ID 2525-03-73	15
<b>TOTAL:</b>	<b>15</b>

3

**TYPE II SIGNS**

SIGN NO.	LOCATION	STATION	SIGN CODE	MESSAGE	SIZE	637.2210	637.2230	638.2102	638.2602	638.3000	SPV.0060.01	REMARKS
						SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	ROUND STEEL SIGN POST SYSTEM EACH	
1-1	55TH STREET	11+87	RT	-	-	-	-	-	1	-	-	-
1-2	55TH STREET	11+87	RT	-	-	-	-	-	1	1	-	-
1-3	55TH STREET	13+77	RT	W1-7	48 X 24	-	8.0	-	-	-	1	-
1-4	55TH STREET	14+85	LT	W1-7	48 X 24	-	8.0	-	-	-	1	-
1-5	55TH STREET	15+00	RT	-	-	-	-	-	1	1	-	-
1-6	55TH STREET	15+06	RT	-	-	-	-	-	1	1	-	-
1-7	55TH STREET	16+82	LT	-	-	-	-	-	1	-	-	REMOVE FROM LIGHT POLE
1-8	55TH STREET	16+82	LT	-	-	-	-	-	1	-	-	REMOVE FROM LIGHT POLE
6-1	BELOIT ROAD	44+64	RT	-	W MOBILE ST	-	-	1	-	-	-	MOUNT ON SAME POST AS SIGN 6-9
6-2	BELOIT ROAD	44+64	LT	-	W BELOIT RD	-	-	1	-	-	-	MOUNT ON SAME POST AS SIGN 6-9
6-3	BELOIT ROAD	44+10	LT	W11-2	30 30	-	6.3	-	-	-	1	-
6-4	BELOIT ROAD	44+10	LT	W16-7L	24 12	-	2.0	-	-	-	-	MOUNT ON SAME POST AS SIGN 6-3
6-5	BELOIT ROAD	44+33	LT	-	EAST ALLIS	-	-	1	-	-	-	ATTACH TO NEW LIGHT POLE
6-6	BELOIT ROAD			W11-2	30 30	-	6.3	-	-	-	1	-
6-7	BELOIT ROAD	44+10	LT	W16-7L	24 12	-	2.0	-	-	-	-	MOUNT ON SAME POST AS SIGN 6-6
6-8	BELOIT ROAD	45+93	RT	-	-	-	-	-	1	1	-	-
6-9	BELOIT ROAD	44+62	RT	R1-1	30 X 30	5.2	-	-	-	-	1	-
6-10	BELOIT ROAD	44+62	RT	R3-2	24 X 24	4.0	-	-	-	-	-	MOUNT ON SAME POST AS SIGN 6-9
6-11	BELOIT ROAD	46+02	RT	R7-1D	12 X 18	1.5	-	-	-	-	-	ATTACH TO NEW LIGHT POLE
6-12	BELOIT ROAD	46+35	LT	-	-	-	-	-	1	1	-	-
6-13	MOBILE ST			R10-5 (MOD)	NO LEFT TURN AT BELOIT ROAD	24 X 30	5.0	-	-	-	1	PLACE AT NE QUADRANT OF MOBILE & 61ST STREET
6-14	MOBILE ST			R10-5 (MOD)	NO LEFT TURN AT BELOIT ROAD	24 X 30	5.0	-	-	-	1	PLACE AT NW QUADRANT OF MOBILE & 60TH STREET
<b>TOTAL</b>						<b>20.7</b>	<b>32.5</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>7</b>	

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

FIELD OFFICE TYPE B

LOCATION	642.5001 EACH
BELOIT ROAD	1
<b>PROJECT TOTAL</b>	<b>1</b>

TRAFFIC CONTROL

LOCATION	643.5000 EACH
BELOIT ROAD	1
<b>PROJECT TOTAL</b>	<b>1</b>

GEOGRID TYPE SR

				645.0220
STREET	STATION TO	STATION		SY
W. BELOIT RD	42+50 -	48+00		1,558
S. 55TH ST	12+90 -	15+10		0
<b>PROJECT TOTAL</b>				<b>1,558</b>

TRAFFIC CONTROL

LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0900 TRAFFIC CONTROL SIGNS		643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II		643.1050 TRAFFIC CONTROL SIGNS PCMS		644.1440 TEMPORARY PEDESTRIAN SURFACE MATTING		644.1810 TEMPORARY PEDESTRIAN BARRICADE	
		EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	NO.	CYCLES	EACH	DAY	SF	LF		
W. BELOIT RD	93			11	1,023	22	2,046	98	9,114	5	1	5	14	200	100		
S. 55TH ST	45	50	2,250	20	900	40	1,800	58	2,610						80		
<b>PROJECT TOTALS</b>			<b>2,250</b>		<b>1,923</b>		<b>3,846</b>		<b>11,724</b>			<b>5</b>	<b>14</b>	<b>200</b>	<b>180</b>		

PAVEMENT MARKING

STREET	FROM	TO	646.1545			646.6120	646.7120	646.7420	646.8120	646.8220
			SOLID WHITE LF	SOLID YELLOW LF	SKIP-DASH (9' X 3') WHITE LF	MARKING STOP LINE EPOXY 18-INCH	MARKING DIAGONAL EPOXY 12-INCH	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	MARKING CURB EPOXY	MARKING ISLAND NOSE EPOXY
W. BELOIT RD	42+50	- 48+00	495	211	24	15	13	125	40	4
S. 55TH STREET	12+90	- 15+10	-	-	-	69	-	-	-	-
<b>PROJECT TOTAL</b>				<b>730</b>		<b>84</b>	<b>13</b>	<b>125</b>	<b>40</b>	<b>4</b>

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED



**STREET LIGHTING WIRING AND CONDUIT**

FROM	TO	652.0225 * CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG (UNDERGROUND PHASE AND NEUTRAL WIRES) LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG (UNDERGROUND GROUND WIRES) LF
EXISTING C B/1 6200	C B/1 6126	96	494	247
C A/5 6023	C A/5 6047	69	500	250
SUB TOTAL		165	994	497
TOTAL		165	1,491	

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**CONDUIT**

STREET	STATION TO	STATION	OFFSET	652.0225 * CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	653.0115 PULL BOXES STEEL 12X36-INCH EACH
W. BELOIT RD	43+50 -	46+50	32.5' LT	168	132	2
S. 55TH STREET	12+90 -	15+10	-	0	0	0
PROJECT TOTAL				168	132	2

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

**ELECTRICAL WIRE LIGHTING**

DESCRIPTION	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (POLE PHASE AND NEUTRAL WIRES) LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG (POLE GROUND WIRES) LF
C B/1 6126	82	41
C A/5 6047	82	41
SUBTOTAL	164	82
TOTAL	246	

**LUMINAIRE AND POLE MOUNTINGS**

DESCRIPTION	STATION	OFFSET	654.0105 CONCRETE BASES TYPE 5 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2 INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5- ALUMINUM (30-FOOT) EACH	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6 FT EACH	659.1125 LUMINAIRES UTILITY LED C EACH
C B/1 6126	44+32.00	25.5' LT	1	1	1	1	1
C A/5 6047	45-95.00	25.5' RT	1	1	1	1	1
TOTALS			2	2	2	2	2

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

**CONSTRUCTION STAKING MAINLINE ITEMS**

ITEM	BELOIT RD	S 55TH ST	TOTAL QUANTITY	UNIT	DESCRIPTION
650.4500	300	0	300	LF	CONSTRUCTION STAKING SUBGRADE
650.5500	0	227	227	LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER
650.7000	300	0	300	LF	CONSTRUCTION STAKING CONCRETE PAVEMENT
650.8501	1	0	1	EACH	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (ID 2525-03-73)
650.9000	4	2	6	EACH	CONSTRUCTION STAKING CURB RAMPS
650.9500	1	0	1	EACH	CONSTRUCTION STAKING SIDEWALK (ID 2525-03-73)
650.9911	1	0	1	LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (ID 2525-03-73)
650.9920	300	0	300	LF	CONSTRUCTION STAKING SLOPE STAKES

**SAWING**

STREET	STATION	TO	STATION	690.0150	690.0250
				ASPHALT LF	CONCRETE LF
W. BELOIT RD	42+50	-	48+00	45	140
S. 55TH ST	12+90	-	15+10	100	211
<b>PROJECT TOTAL</b>				<b>145</b>	<b>351</b>

**PAVEMENT MARKING**

STREET	FROM	TO	CAT 0020	CAT 0020	SPV.0090.01	SPV.0165.01
			SPV.0060.02 MARKING SYMBOL GROOVED BIKE LANE PREFORMED THERMOPLASTIC WHITE EACH	SPV.0060.03 MARKING ARROW GROOVED BIKE LANE PREFORMED THERMOPLASTIC WHITE EACH	MARKING STOP LINE EPOXY 24-INCH WHITE LF	HIGH FRICTION GREEN SURFACING SF
W. BELOIT RD	42+50	- 48+00	3	3	37	298
S. 55TH STREET	12+90	- 15+10	-	-	-	-
<b>PROJECT TOTAL</b>			<b>3</b>	<b>3</b>	<b>37</b>	<b>298</b>

ALL ITEMS CATEGORY 0010  
UNLESS OTHERWISE NOTED

3

3

WATER MAIN RELAY

CATEGORY	FROM STA.	TO STA.	SPV.0060.04	SPV.0060.05	SPV.0090.02	LOCATION
			ADJUST WATER VALVE BOX	WATER MAIN CONNECTION 6-INCH	WATER MAIN RELAY 6-INCH	
			EACH	EACH	LF	
0030	170+39.0	170+91.7	1	2	46.2	MOBILE - BELOIT TO A PT 100' SE
PROJECT TOTALS			1	2	47	

WATER SERVICES

CATEGORY	STATION	LOCATION	SPV.0090.03	ADDRESS
			WATER SERVICE COPPER 2-INCH	
			LF	
0030	170+58.5	RT	12.5	#6127-31
PROJECT TOTALS			13	

BUILDING SANITARY SEWER

CATEGORY	STATION	LOCATION	SPV.0090.04	ADDRESS
			BUILDING SANITARY SEWER 6-INCH	
			LF	
0040	170+54.7	RT	15	#6127-31 W. Mobile St.
PROJECT TOTALS			15	

SANITARY SEWER STRUCTURES

CATEGORY	STRUCTURE NUMBER	STATION	LOCATION	SPV.0060.06	COMMENTS	LOCATION
				ADJUST SANITARY MANHOLE FRAME		
				EACH		
0040	S13	44+22.8	11.7 RT	1	REUSE FRAME & SEAL	On Beloit, S of Tracks
	S14	45+96.4	1.3 RT	1	REUSE FRAME & SEAL	On Beloit, N of Tracks
PROJECT TOTALS				2		

ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

### C WEST ALLIS, W BELOIT ROAD

#### MOBILE ST - UP RR CROSS

### LOCAL ROAD

## MILWAUKEE COUNTY

R/W PROJECT NUMBER 2525-03-03 (A)	SHEET NUMBER 4.01	TOTAL SHEETS 4
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C WEST ALLIS, W BELOIT ROAD</b> MOBILE ST - UP RR CROSS		
W BELOIT ROAD		MILWAUKEE CO.
CONSTRUCTION PROJECT NUMBER 2525-03-73		

CAUTION  
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY.  
DEEDS MUST BE CHECKED TO DETERMINE  
PROPERTY BOUNDARIES.

### CONVENTIONAL SYMBOLS

SECTION LINE	SECTION CORNER SYMBOL	R/W MONUMENT (TO BE SET)
QUARTER LINE		NON-MONUMENTED R/W POINT
SIXTEENTH LINE		FOUND IRON PIN (1-INCH UNLESS NOTED)
NEW REFERENCE LINE	SECTION CORNER MONUMENT	GEODETIC SURVEY MONUMENT
NEW R/W LINE		SIXTEENTH CORNER MONUMENT
EXISTING R/W OR HE LINE		SIGN
PROPERTY LINE		OFF-PREMISE SIGN
LOT, TIE & OTHER MINOR LINES		COMPENSABLE
SLOPE INTERCEPT		NON-COMPENSABLE
CORPORATE LIMITS		ELECTRIC POLE
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)		TELEPHONE POLE
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)		PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)
TEMPORARY LIMITED EASEMENT AREA		ACCESS RESTRICTED BY ACQUISITION
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)		NO ACCESS (BY STATUTORY AUTHORITY)
TRANSMISSION STRUCTURES		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
BUILDING TO BE REMOVED		NO ACCESS (NEW HIGHWAY)
BRIDGE		PARCEL NUMBER (25)
		UTILITY NUMBER (40)
		PARALLEL OFFSETS

### CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	POINT OF BEGINNING	POB
ACRES	POINT OF CURVATURE	PC
AHEAD	POINT OF COMPOUND CURVE	PCC
ALUMINUM	POINT OF INTERSECTION	PI
AND OTHERS	POINT OF TANGENCY	PT
BACK	PROPERTY LINE	PL
BLOCK	RECORDED AS	(100')
CENTERLINE	REEL / IMAGE	R/I
CERTIFIED SURVEY MAP	REFERENCE LINE	R
CONCRETE	REMAINING	REM
COUNTY	RESTRICTIVE DEVELOPMENT	RDE
COUNTY TRUNK HIGHWAY	EASEMENT	
DISTANCE	RIGHT	RT
CORNER	RIGHT OF WAY	R/W
DOCUMENT NUMBER	SECTION	SEC
EASEMENT	SEPTIC VENT	SEPV
EXISTING	SQUARE FEET	SF
GAS VALVE	STATE TRUNK HIGHWAY	STH
GRID NORTH	STATION	STA
HIGHWAY EASEMENT	TELEPHONE PEDESTAL	TP
IDENTIFICATION	TEMPORARY LIMITED EASEMENT	TLE
LAND CONTRACT	TRANSPORTATION PROJECT	TPP
LEFT	PLAT	
MONUMENT	UNITED STATES HIGHWAY	USH
NATIONAL GEODETIC SURVEY	VOLUME	V
NUMBER	GRID COORDINATES	Y,X
OUTLOT	GROUND COORDINATES	N,E
PAGE		
PERMANENT LIMITED EASEMENT		

**NOTES:**

COORDINATES SHOWN ON THIS PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD27. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

ALL NEW RIGHT OF WAY MONUMENTS WILL BE TYPE 2 MONUMENTS AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT. NEW RIGHT OF WAY MONUMENTATION THAT FALLS ON CONCRETE SURFACES WILL BE MONUMENTED BY A CHISELED CROSS ON 5' OFFSETS.

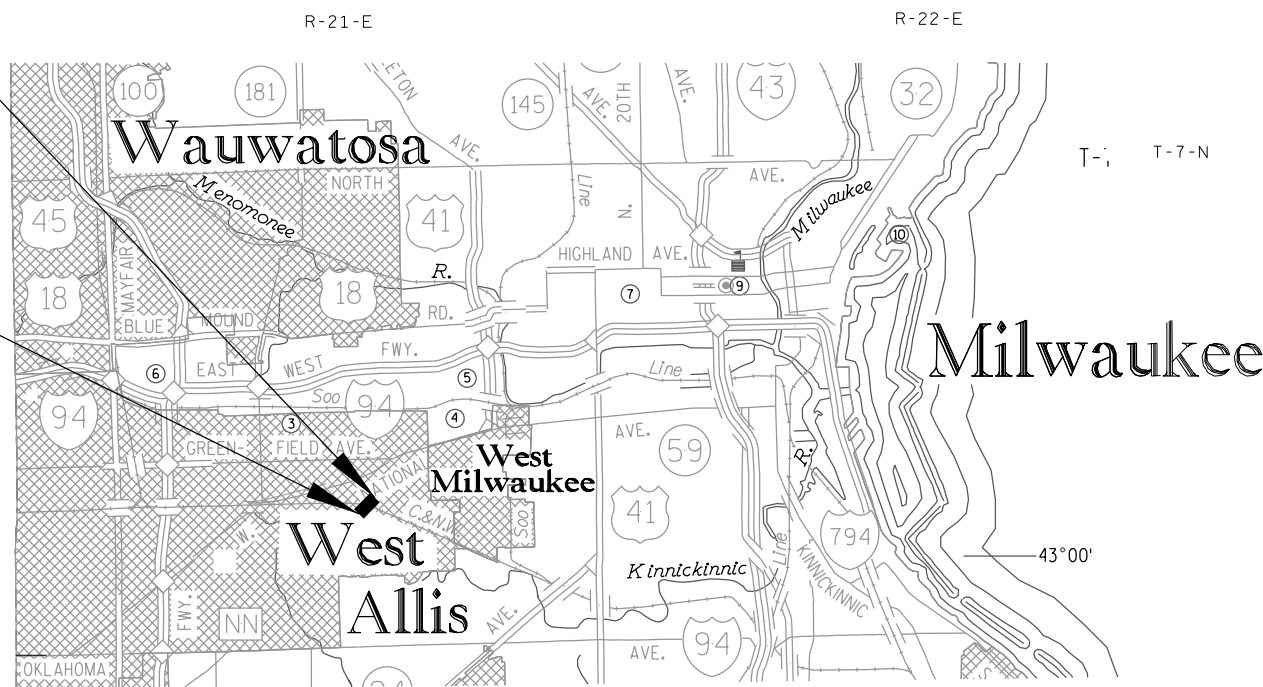
RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE THE 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 HIGHWAY AUTHORITIES DEEM NECESSARY OR DESIRABLE. ALL TLE'S EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

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

**END RELOCATION ORDER**  
**STA. 46+70.00**  
 1,786.97' NORTH OF AND  
 332.60' WEST OF THE  
 SE. CORNER OF THE  
 SE. 1/4, SECTION 3,  
 T.6N., R.21E.  
 N=373,841.59  
 E=2,538,197.40

**BEGIN RELOCATION ORDER**  
**STA. 42+94.27**  
 1,549.59' NORTH OF AND  
 623.83' WEST OF THE  
 SE. CORNER OF THE  
 SE. 1/4, SECTION 3,  
 T.6N., R.21E.  
 N=373,604.21  
 E=2,537,906.17



LAYOUT  
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.069 MI.

### CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

### CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD TRANSMISSION LINES	—OH—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—

ORIGINAL PLAT PREPARED BY

## GRAEF

CARLA J. ROLLINS  
S-3207  
SHEBOYGAN, WI

LAND SURVEYOR

6/22/2023 *Carla J. Rollins*  
(Date) (Signature)

REVISION DATE	CITY OF WEST ALLIS
APPROVED FOR THE CITY	<i>Traci Jungler</i> (Signature)
DATE: 9/25/23	38


# SCHEDULE OF LANDS & INTERESTS REQUIRED

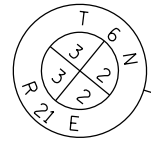
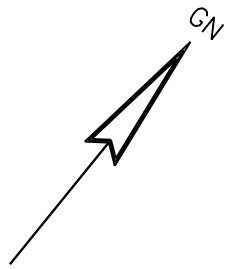
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

4

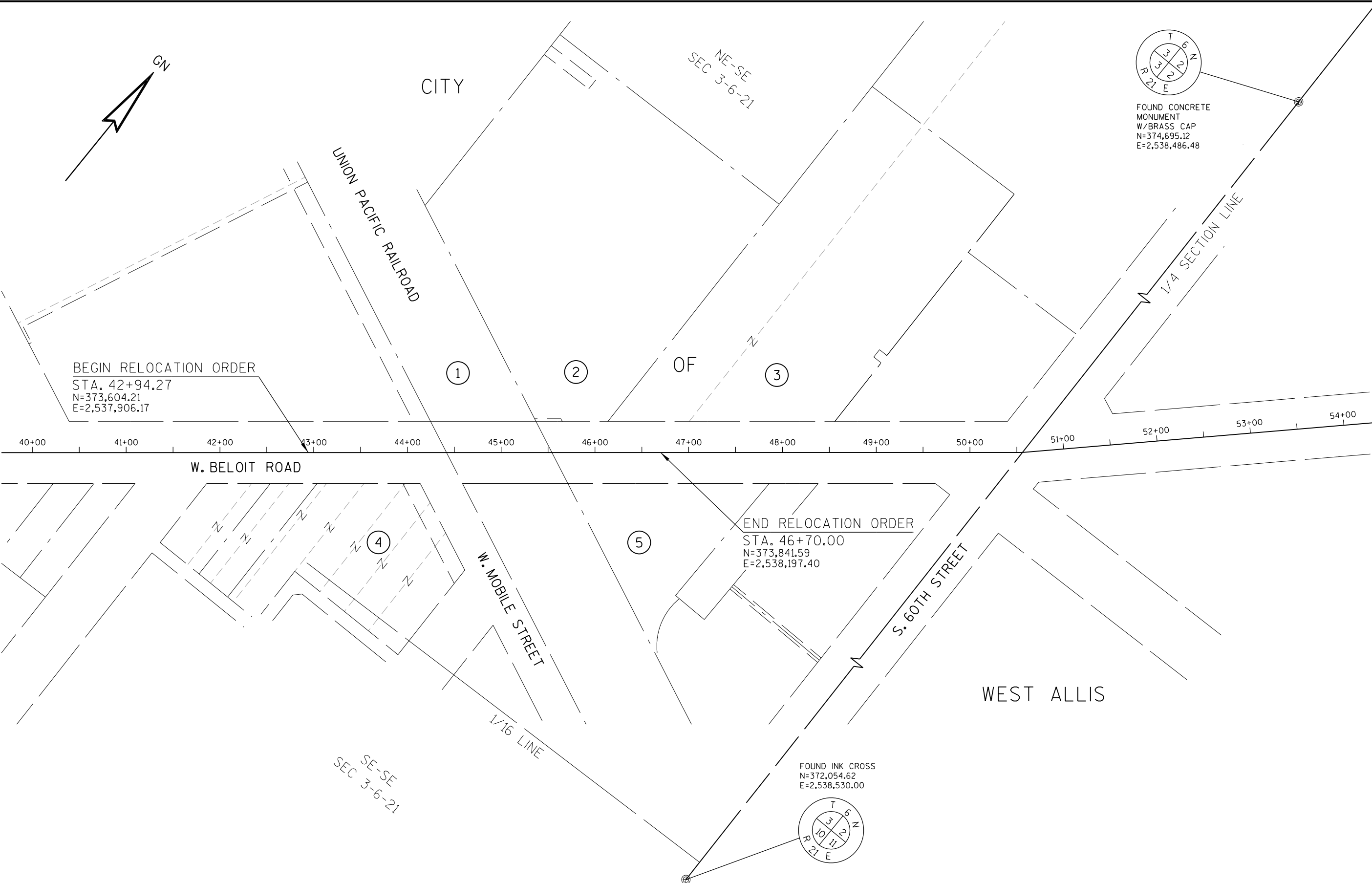
4

PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	NEW	EXISTING	TOTAL	REMAINING ACRES	TEMP. ACRES	PERM. ACRES	PARCEL NUMBER
1	4.04	Milwaukee and Madison Railway Company, Chicago and North Western Railway Company, Chicago and Northwestern Transportation Company and Union Pacific Railroad Company	TLE & PLE	VAST	0.000	0.000	0.000	VAST	0.038	0.043	1
2	4.04	Phoenix West Allis LLC	TLE	2.012	0.000	0.000	0.000	2.012	0.039	0.000	2
3	4.04	S.T. Evenignasiak LLC, a Wisconsin limited liability company	TLE	1.667	0.000	0.000	0.000	1.667	0.017	0.000	3
4	4.04	Land contract between Peter G. Agnos and Eugena P. Agnos, husband and wife, and Jose M. Lopez, as Purchaser	TLE	0.576	0.000	0.000	0.000	0.576	0.037	0.000	4
5	4.04	Dunham 6047 LLC	TLE	0.409	0.000	0.000	0.000	0.409	0.016	0.000	5
50		AT&T Wisconsin	TCE								
51		We Energies - Electric	TCE								
52		Sprint Communications Company	TCE								

REVISION DATE	DATE 06/21/2023	SCALE, FEET 0  N/A	HWY: W BELOIT ROAD	R/W PROJECT NUMBER 2525-03-03 (A)	PLAT SHEET 4.02
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2525-03-73	PS&E SHEET <b>E</b>



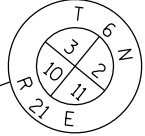
FOUND CONCRETE  
MONUMENT  
W/BRASS CAP  
N=374,695.12  
E=2,538,486.48



BEGIN RELOCATION ORDER  
STA. 42+94.27  
N=373,604.21  
E=2,537,906.17

END RELOCATION ORDER  
STA. 46+70.00  
N=373,841.59  
E=2,538,197.40

FOUND INK CROSS  
N=372,054.62  
E=2,538,530.00



4

4

REVISION DATE	DATE 06/21/2023	SCALE, FEET 0 50 100	HWY: W. BELOIT ROAD	R/W PROJECT NUMBER 2525-03-03 (A)	PLAT SHEET 4.03
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2525-03-73	PS&E SHEET

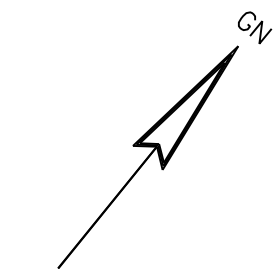
NOTE: THE TLE'S DO NOT INCLUDE ANY PART OF BUILDINGS

HIGHWAY	BASIS OF EXISTING R/W	WIDTH
W. BELOIT ROAD	ASSESSOR'S PLAT NO. 268 JOSEPH JUNEAU SUBDIVISION NO. 2 JOSEPH JUNEAU SUBDIVISION NO. 1	66'
UNION PACIFIC RR	DOCS. 30133, 31178, 31182, 31190, 31193, 31196, 31250, 21542 ASSESSOR'S PLAT NO. 268 JOSEPH JUNEAU SUBDIVISION NO. 1	100'
W. MOBILE STREET	JOSEPH JUNEAU SUBDIVISION NO. 1	40'

UTILITY NO.	OWNER	WIDTH	DOCUMENT NO.	PARCEL
50	AT&T WISCONSIN	16.5'	9803337	4
		BLANKET EASEMENT	3046563	4
		BLANKET EASEMENT	6472407	1
		BLANKET EASEMENT	3669795	3
		BLANKET EASEMENT	3841495	2
51	WE ENERGIES - ELECTRIC	BLANKET EASEMENT	3669795	3
		BLANKET EASEMENT	3841495	2
52	SPRINT COMMUNICATIONS COMPANY	BLANKET EASEMENT	10223155	2, 4, 5
		BLANKET EASEMENT	6134653	1

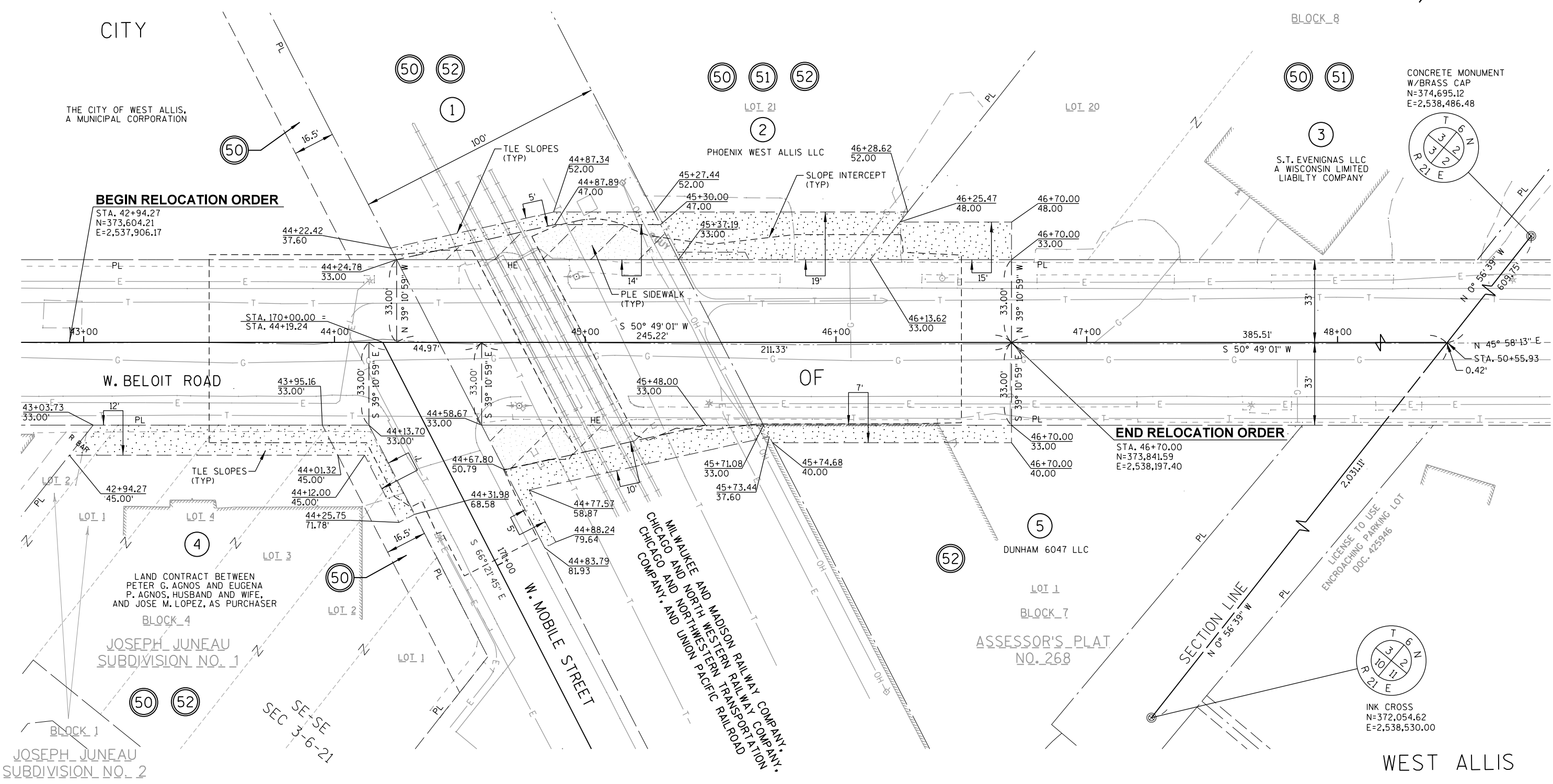
ASSESSOR'S PLAT  
NO. 268

BLOCK 8

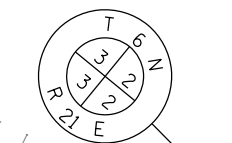


4

4

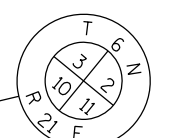


CONCRETE MONUMENT  
W/BRASS CAP  
N=374,695.12  
E=2,538,486.48



END RELOCATION ORDER

STA. 46+70.00  
N=373,841.59  
E=2,538,197.40



INK CROSS  
N=372,054.62  
E=2,538,530.00

REVISION DATE	DATE: 06/21/2023	SCALE, FEET 0 20 40	HWY: W. BELOIT ROAD	R/W PROJECT NUMBER: 2525-03-03 (A)	PLAT SHEET 4.04
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER: 2525-03-73	PS&E SHEET



**STATE OF WISCONSIN**  
**DEPARTMENT OF TRANSPORTATION**  
**PLAN OF PROPOSED IMPROVEMENT**  
**C WEST ALLIS, W BELOIT ROAD**  
**MOBILE ST - UP RR CROSS**  
**LOCAL ROAD**  
**MILWAUKEE COUNTY**

STATE PROJECT NUMBER  
**2525-03-03**

R/W PROJECT NUMBER 2525-03-03 (B)	SHEET NUMBER 4.01	TOTAL SHEETS 4
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT OF WAY REQUIRED FOR <b>C WEST ALLIS, W BELOIT ROAD</b> MOBILE ST - UP RR CROSS S 55TH STREET MILWAUKEE CO.		
CONSTRUCTION PROJECT NUMBER 2525-03-73		

CAUTION  
 THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY.  
 DEEDS MUST BE CHECKED TO DETERMINE  
 PROPERTY BOUNDARIES.

**CURVE DATA**

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

**CONVENTIONAL UTILITY SYMBOLS**

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD TRANSMISSION LINES	—OH—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—



**END RELOCATION ORDER**  
**STA. 15+03.23**  
 820.57' NORTH OF AND  
 1,084.55' WEST OF THE  
 SE. CORNER OF THE  
 SW 1/4, SECTION 2,  
 T.6N., R.21E.  
 N=372,932.44  
 E=2,540,088.54

**BEGIN RELOCATION ORDER**  
**STA. 13+52.25**  
 669.61' NORTH OF AND  
 1,082.00' EAST OF THE  
 SE. CORNER OF THE  
 SW 1/4, SECTION 2,  
 T.6N., R.21E.  
 N=372,781.49  
 E=2,540,091.10

**CONVENTIONAL SYMBOLS**

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	●
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	---	GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	SIXTEENTH CORNER MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	---	SIGN		NON-COMPENSABLE	
EXISTING R/W OR HE LINE	---	ELECTRIC POLE		COMPENSABLE	
PROPERTY LINE	---	TELEPHONE POLE		NON-COMPENSABLE	
LOT, TIE & OTHER MINOR LINES	---	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		ACCESS RESTRICTED BY ACQUISITION	
SLOPE INTERCEPT	---	NO ACCESS (BY STATUTORY AUTHORITY)		NO ACCESS (BY PREVIOUS PROJECT OR CONTROL)	
CORPORATE LIMITS	---	NO ACCESS (NEW HIGHWAY)		PARCEL NUMBER (25)	UTILITY NUMBER (40)
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	---	PARALLEL OFFSETS			
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---				
TEMPORARY LIMITED EASEMENT AREA	---				
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---				
TRANSMISSION STRUCTURES	---				
BUILDING TO BE REMOVED	---				
BRIDGE	---				

**CONVENTIONAL ABBREVIATIONS**

ACCESS RIGHTS	AR	POINT OF BEGINNING	POB
ACRES	AC	POINT OF CURVATURE	PC
AHEAD	AH	POINT OF COMPOUND CURVE	PCC
ALUMINUM	ALUM	POINT OF INTERSECTION	PI
AND OTHERS	ET AL	POINT OF TANGENCY	PT
BACK	BK	PROPERTY LINE	PL
BLOCK	BLK	RECORDED AS (100')	(100')
CENTERLINE	C	REEL / IMAGE	R/I
CERTIFIED SURVEY MAP	CSM	REFERENCE LINE	R
CONCRETE	CONC	REMAINING	REM
COUNTY	CO	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
COUNTY TRUNK HIGHWAY	CTH		
DISTANCE	DIST	RIGHT	RT
CORNER	COR	RIGHT OF WAY	R/W
DOCUMENT NUMBER	DOC	SECTION	SEC
EASEMENT	EASE	SEPTIC VENT	SEPV
EXISTING	EX	SQUARE FEET	SF
GAS VALVE	GV	STATE TRUNK HIGHWAY	STH
GRID NORTH	GN	STATION	STA
HIGHWAY EASEMENT	HE	TELEPHONE PEDESTAL	TP
IDENTIFICATION	ID	TEMPORARY LIMITED EASEMENT	TLE
LAND CONTRACT	LC	TRANSPORTATION PROJECT	TPP
LEFT	LT	PLAT	
MONUMENT	MON	UNITED STATES HIGHWAY	USH
NATIONAL GEODETIC SURVEY	NGS	VOLUME	V
NUMBER	NO	GRID COORDINATES	Y,X
OUTLOT	OL	GROUND COORDINATES	N,E
PAGE	P		
PERMANENT LIMITED EASEMENT	PLE		

**NOTES:**

COORDINATES SHOWN ON THIS PLAT ARE ORIENTED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD27. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

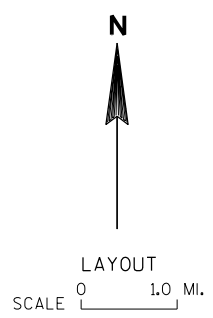
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TOTAL NET LENGTH OF CENTERLINE = 0.029 MI.



REVISION DATE  
11/13/2023 (1)

ORIGINAL PLAT PREPARED BY

**GRÄEF**

WISCONSIN  
 CARLA J. ROLLINS  
 S-3207  
 SHEBOYGAN, WI  
 LAND SURVEYOR

6/22/2023  
 (Date)

CITY OF WEST ALLIS

APPROVED FOR THE CITY  
 DATE: 9/25/23



# SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

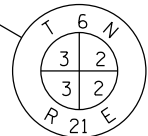
PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	NEW	EXISTING	TOTAL	REMAINING ACRES	TEMP. ACRES	PERM. ACRES	PARCEL NUMBER
1	4.04	MICHAEL ROUBIK	TLE	0.290	0.000	0.000	0.000	0.290	0.0005 (23 SF)	0.000	1
2	4.04	INTENTIONALLY OMITTED <sup>(1)</sup>	TLE	VAST	0.000	0.000	0.000	VAST	0.000	0.000	2
52	4.04	Sprint Communications Company	TCE								

4

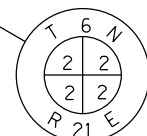
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REVISION DATE 11/13/2023 <sup>(1)</sup>	DATE 06/21/2023	SCALE, FEET 	HWY: S 55TH STREET	R/W PROJECT NUMBER 2525-03-03 (B)	PLAT SHEET 4.02
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2525-03-73	PS&E SHEET

E



FOUND CONCRETE MONUMENT W/BRASS CAP  
N=374,695.12  
E=2,538,486.48



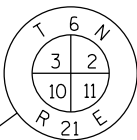
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E=2,541,130.08

GN

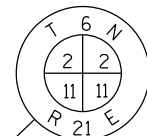


SW-SE  
SEC 2-6-21

FOUND INK CROSS  
N=372,054.62  
E=2,538,530.00



FOUND BRASS CAP IN PAVEMENT  
N=372,111.89  
E=2,541,172.86



WEST ALLIS

CITY

SW-SW  
SEC 2-6-21

SE-SW  
SEC 2-6-21

END RELOCATION ORDER  
STA. 15+03.23  
N=372,932.44  
E=2,540,088.54

BEGIN RELOCATION ORDER  
STA. 13+52.25  
N=372,781.49  
E=2,540,091.10

SIXTEENTH LINE

S 55TH STREET

S 54TH STREET

1/4 SECTION LINE

SECTION LINE

S 56TH STREET

W MOBILE STREET

OF

W MOBILE STREET

W GRANT STREET

SECTION LINE

4

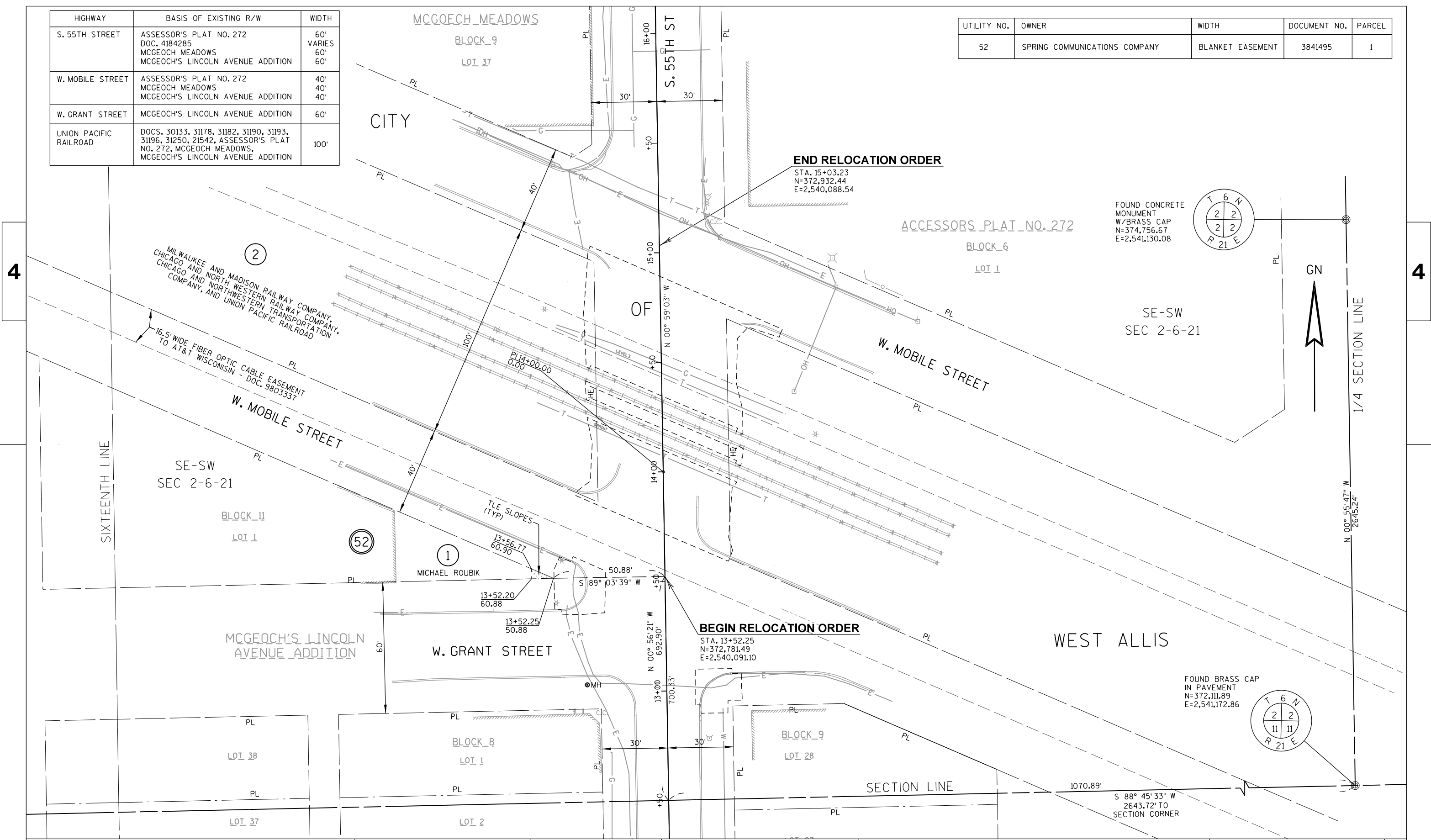
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REVISION DATE	DATE 06/21/2023	SCALE, FEET 0 50 100	HWY: S 55TH STREET	R/W PROJECT NUMBER 2525-03-03 (B)	PLAT SHEET 4.03
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2525-03-73	PS&E SHEET

E

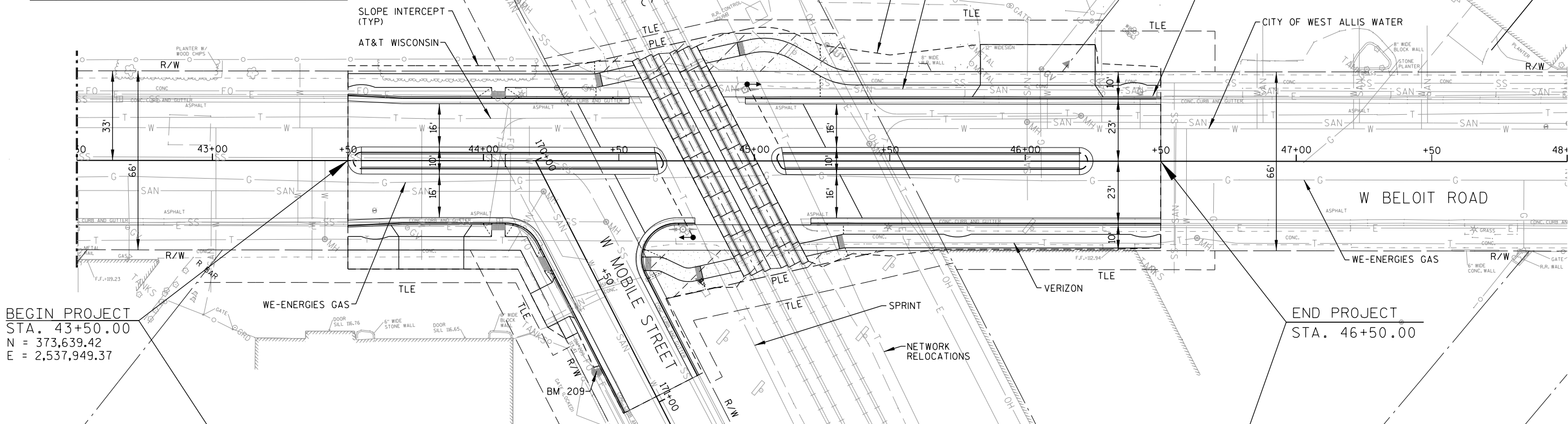
HIGHWAY	BASIS OF EXISTING R/W	WIDTH
S. 55TH STREET	ASSESSOR'S PLAT NO. 272 DOC. 4184285 MCGEOCH MEADOWS MCGEOCH'S LINCOLN AVENUE ADDITION	60' VARIES 60' 60'
W. MOBILE STREET	ASSESSOR'S PLAT NO. 272 MCGEOCH MEADOWS MCGEOCH'S LINCOLN AVENUE ADDITION	40' 40' 40'
W. GRANT STREET	MCGEOCH'S LINCOLN AVENUE ADDITION	60'
UNION PACIFIC RAILROAD	DOCS. 30133, 31178, 31182, 31190, 31193, 31196, 31250, 21542, ASSESSOR'S PLAT NO. 272, MCGEOCH MEADOWS, MCGEOCH'S LINCOLN AVENUE ADDITION	100'

UTILITY NO.	OWNER	WIDTH	DOCUMENT NO.	PARCEL
52	SPRING COMMUNICATIONS COMPANY	BLANKET EASEMENT	3841495	1



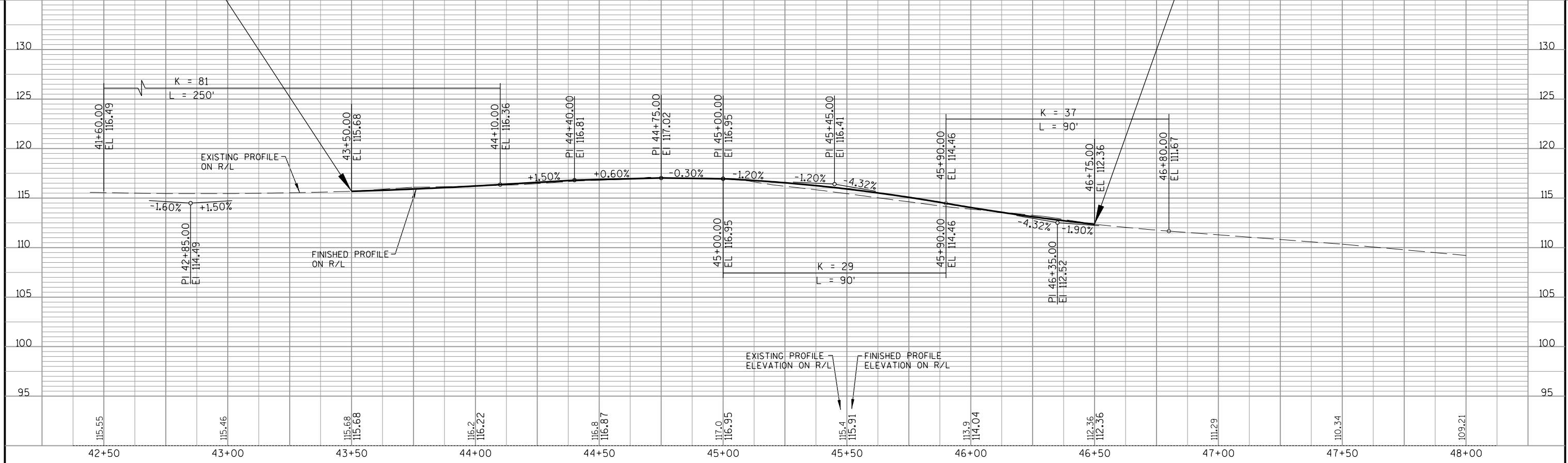
REVISION DATE 11/13/2023 <sup>(1)</sup>	DATE: 06/21/2023	SCALE, FEET 0 20 40	HWY: W. BELOIT ROAD	R/W PROJECT NUMBER: 2525-03-03 (B)	PLAT SHEET 4.04
	GRID FACTOR 0.99992401		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER: 2525-03-73	PS&E SHEET

BENCH MARKS		
NO.	DESCRIPTION	ELEV.
209	TOP SE. BOLT OF LIGHT POLE C3-6131 AT SW. CORNER OF W MOBILE ST. AND W BELOIT RD.	113.41
210	TOP NW. FLANGE BOLT OF FIRE HYDRANT AT NW. CORNER OF S. 60TH ST AND W. BELOIT RD	106.70



BEGIN PROJECT  
 STA. 43+50.00  
 N = 373,639.42  
 E = 2,537,949.37

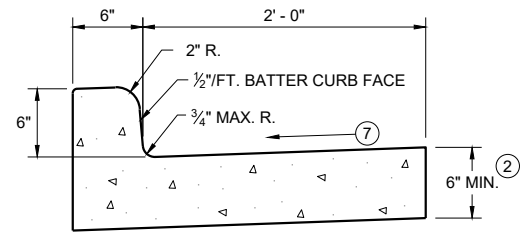
END PROJECT  
 STA. 46+50.00



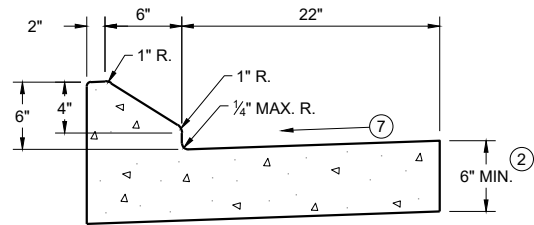
PROJECT NO: 2525-03-73	HWY: W BELOIT ROAD	COUNTY: MILWAUKEE	PLAN AND PROFILE	SHEET	<b>E</b>
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## Standard Detail Drawing List

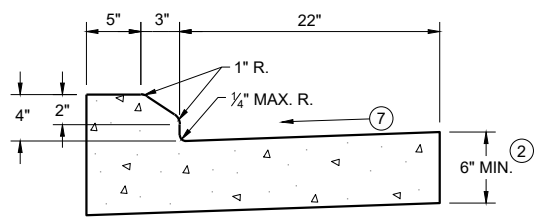
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08D18-04	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
09B02-10	CONDUIT
09B04-12	PULL BOX
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
10A01-04	ELECTRICAL HANDHOLE WIRING
10A06-03	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
13B01-11A	PAVEMENT DETAILS FOR RAILROAD APPROACH
13B01-11B	TYPICAL SECTIONS FOR RAILWAY APPROACH
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
13C19-03	HMA LONGITUDINAL JOINTS
14A02-01	TREE PLANTING DETAIL
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-15E	PAVEMENT MARKING FOR BIKE LANES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C29-08A	BICYCLE LANE MARKING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-09A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-09K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



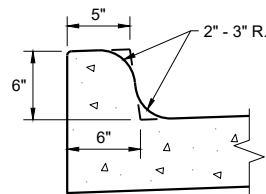
TYPES A<sup>①</sup> & D



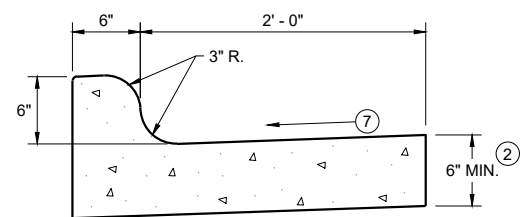
6" SLOPED CURB TYPES G<sup>①</sup> & J



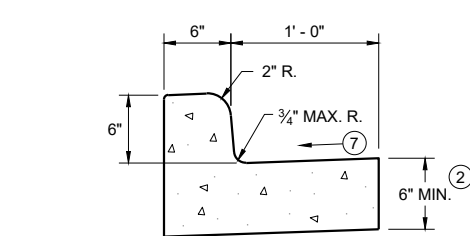
4" SLOPED CURB TYPES G<sup>①</sup> & J



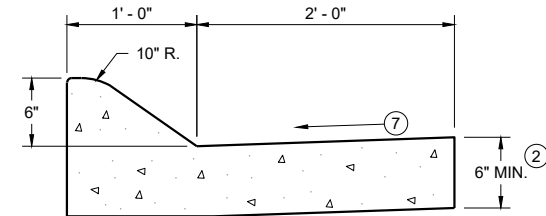
TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



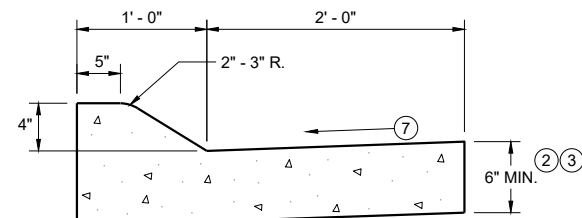
TYPES K<sup>①</sup> & L  
CONCRETE CURB AND GUTTER 30"



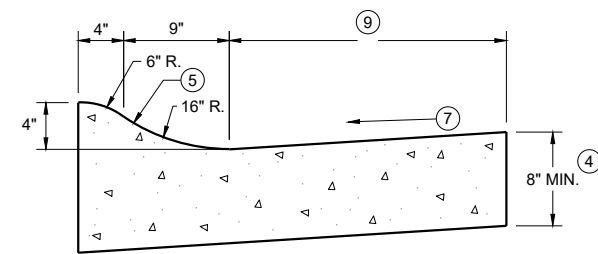
TYPES A<sup>①</sup> & D  
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A<sup>①</sup> & D

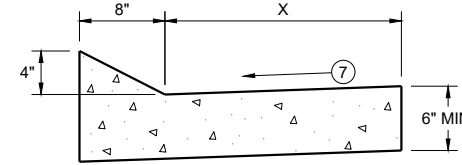


4" SLOPED CURB TYPES A<sup>①</sup> & D  
CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R<sup>①</sup> & T

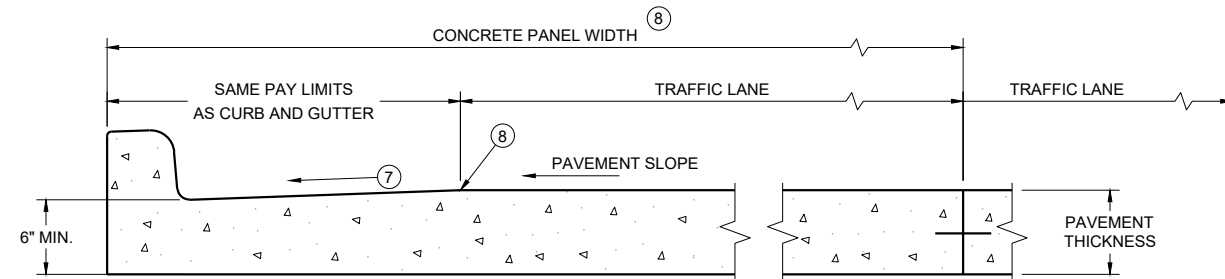
TBT & TBTT	X
30"	22"
36"	28"



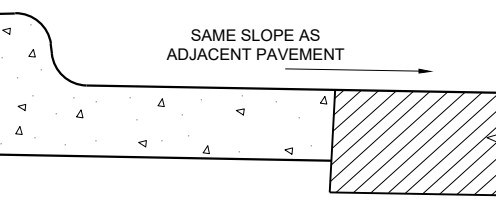
TYPES TBT & TBTT<sup>①</sup>  
CONCRETE CURB AND GUTTER

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

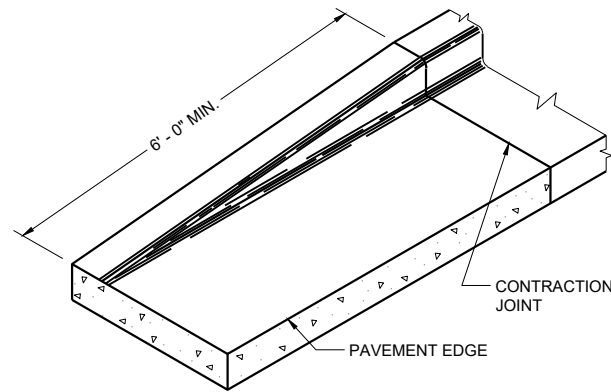
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

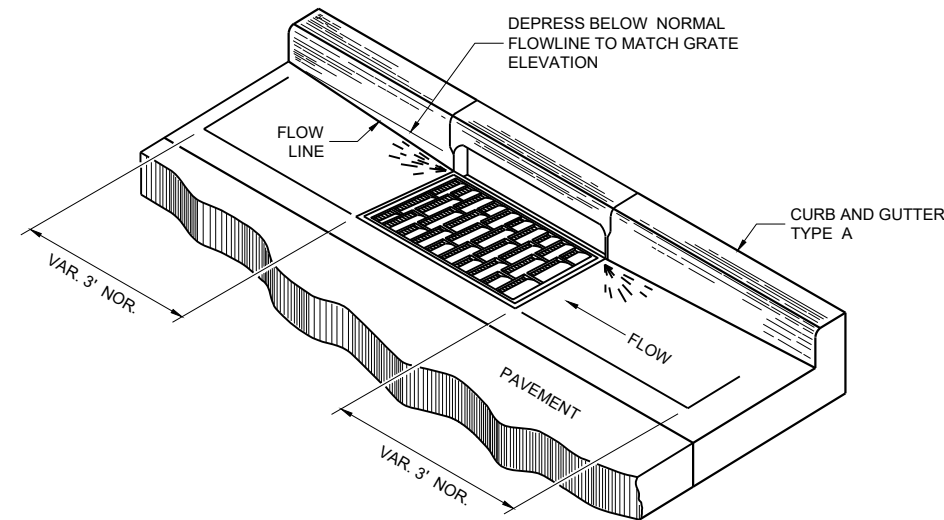
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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 GUTTERS TYPES A, G, K, R, AND TBTT.
- 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 USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ 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.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

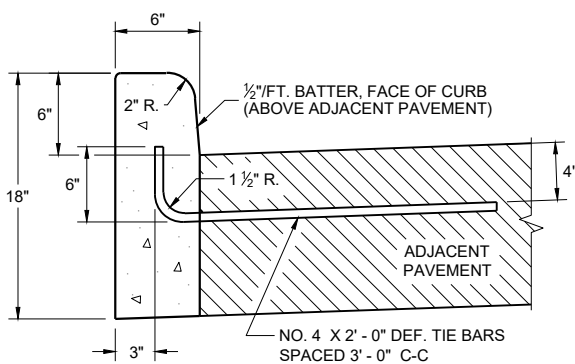


**END SECTION CURB AND GUTTER**

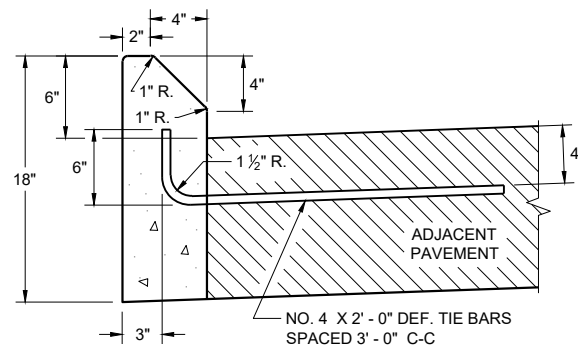


**DETAIL OF CURB AND GUTTER AT INLETS**

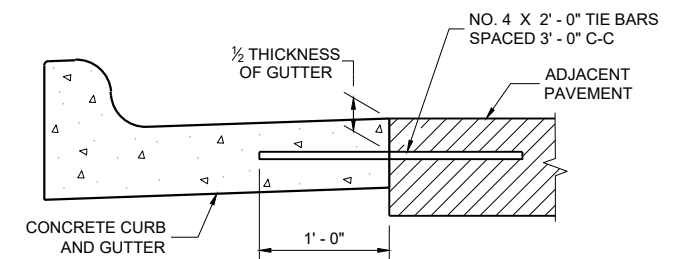
(TYPICAL H INLET COVER SHOWN)



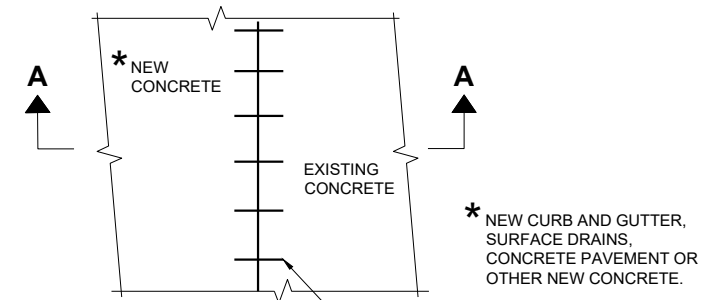
**TYPES A<sup>①</sup> & D**



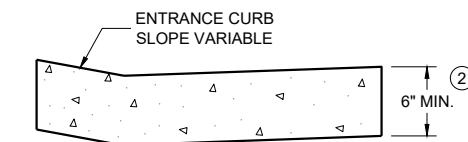
**TYPES G<sup>①</sup> & J  
CONCRETE CURB**



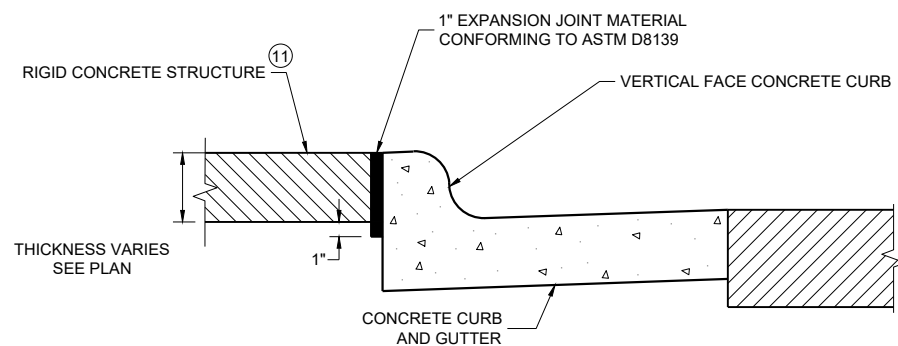
**TYPICAL TIE BAR LOCATION<sup>①</sup>**



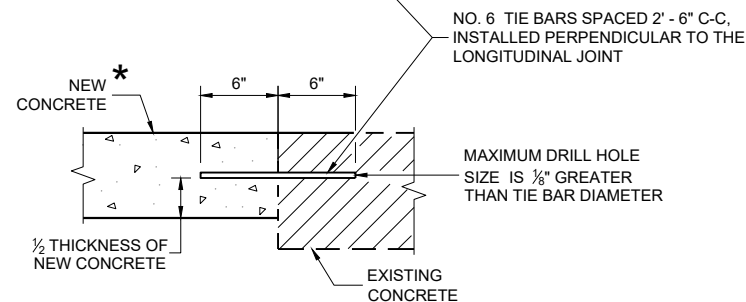
**PLAN VIEW**



**DRIVEWAY ENTRANCE CURB<sup>⑩</sup>  
(WHEN DIRECTED BY THE ENGINEER)**



**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE<sup>⑪</sup>**



**SECTION A - A  
TIE BARS DRILLED INTO EXISTING PAVEMENT**

**GENERAL NOTES**

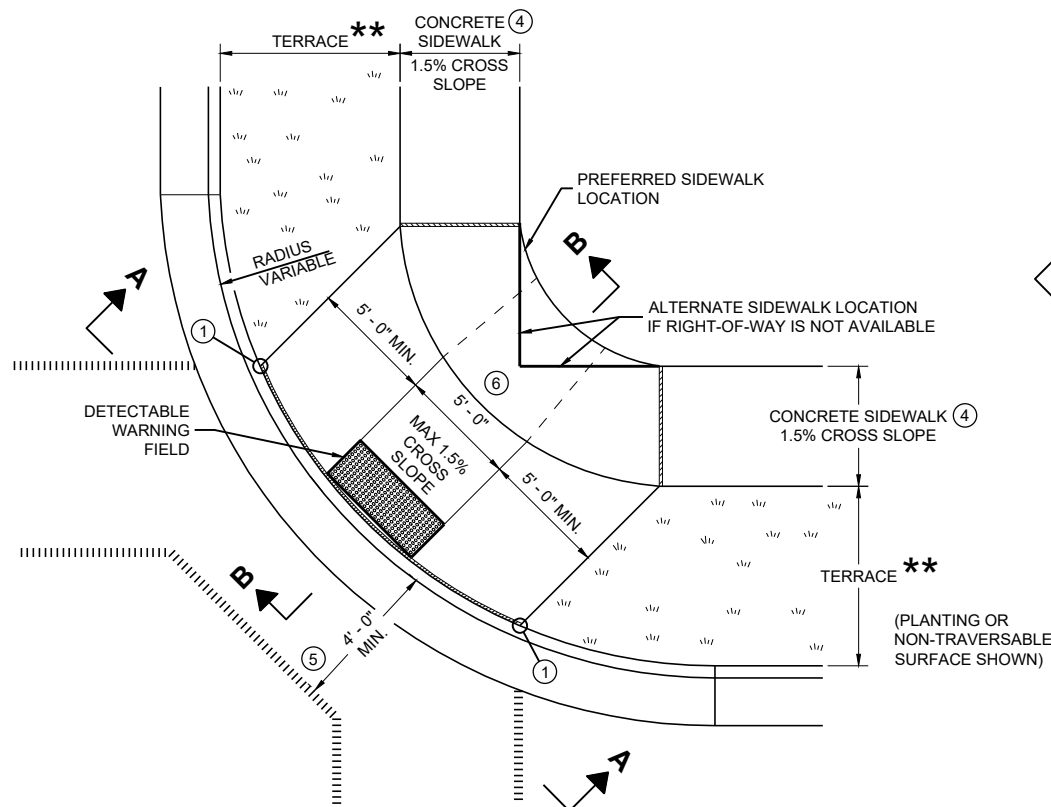
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

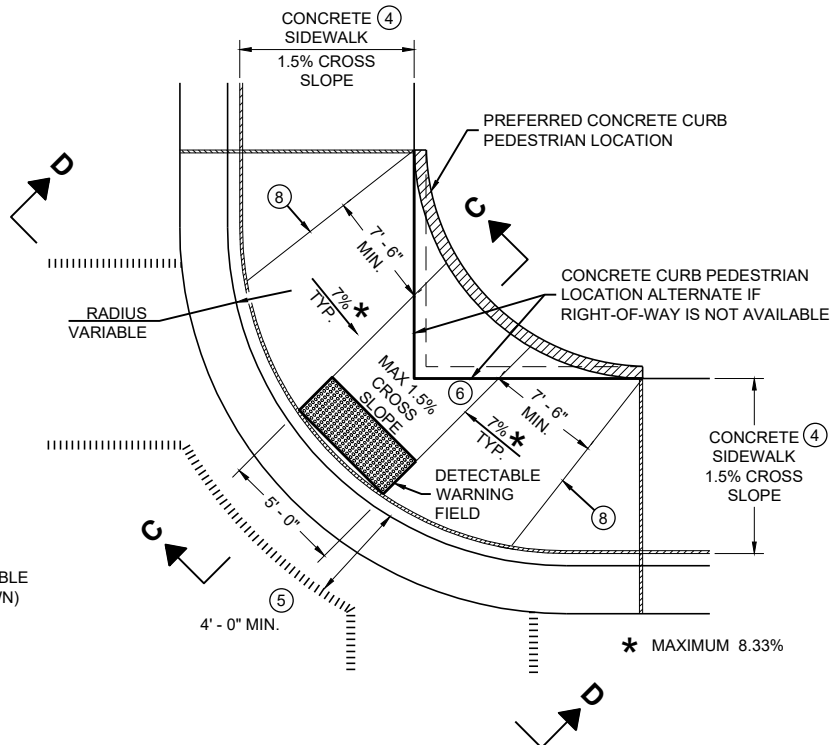
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- 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.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

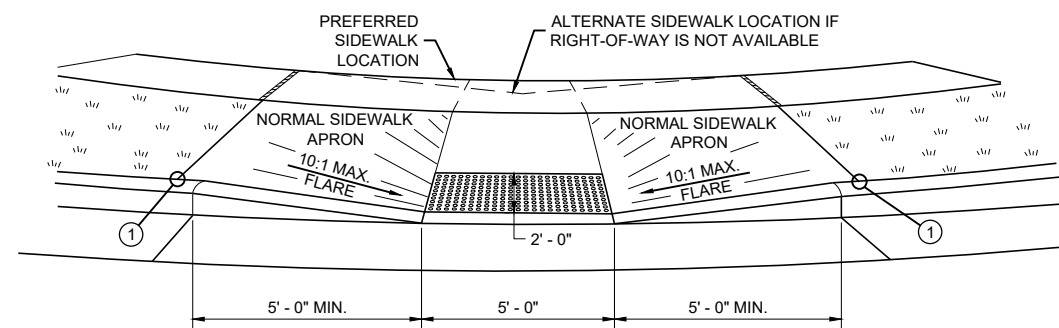
<b>CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



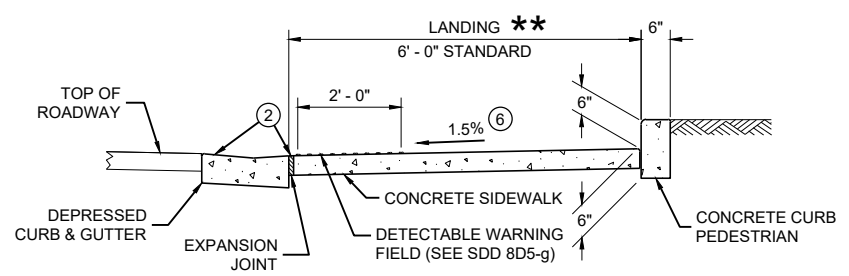
**PLAN VIEW  
CURB RAMP TYPE 1  
(CENTER OF CORNER RADIUS)**



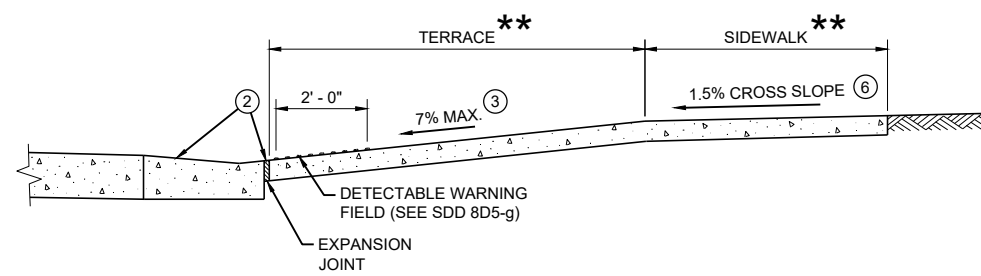
**PLAN VIEW  
CURB RAMP TYPE 1 - A  
(NO TERRACE)**



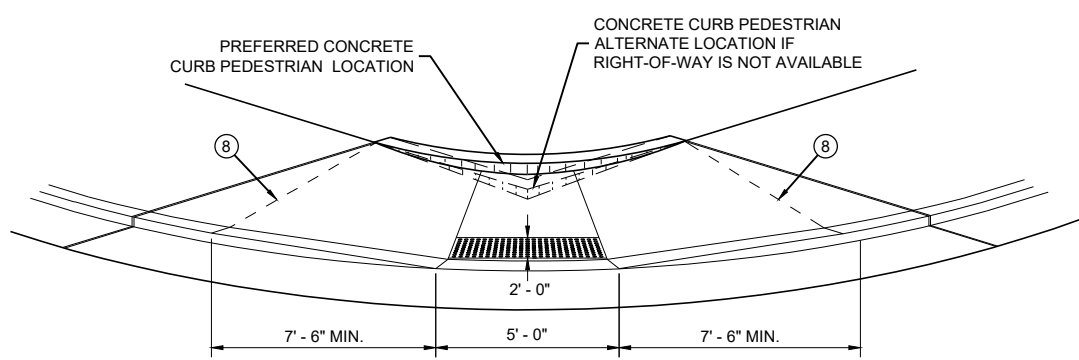
**VIEW A - A FOR TYPE 1**



**SECTION C - C FOR TYPE 1 - A**



**SECTION B - B FOR TYPE 1**



**VIEW D - D FOR TYPE 1 - A**

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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.
- WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
- TYPE 1 CURB 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 LINEAR 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. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

**LEGEND**

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

**CURB RAMPS  
TYPE 1 AND 1-A**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

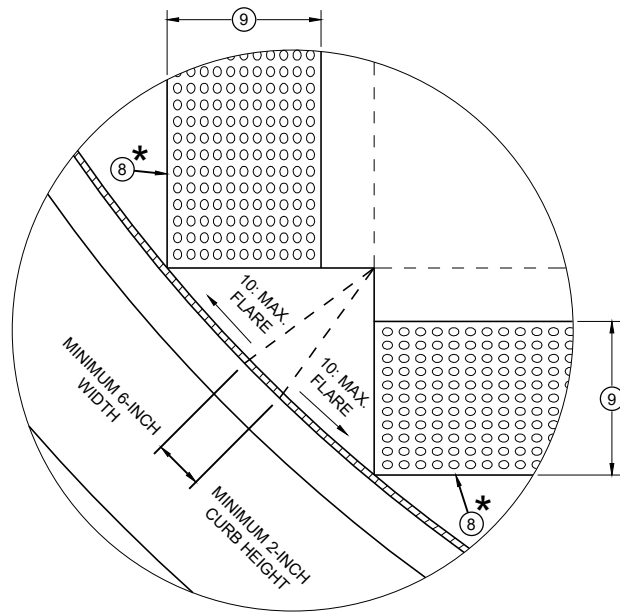
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SDD 08D05-21a

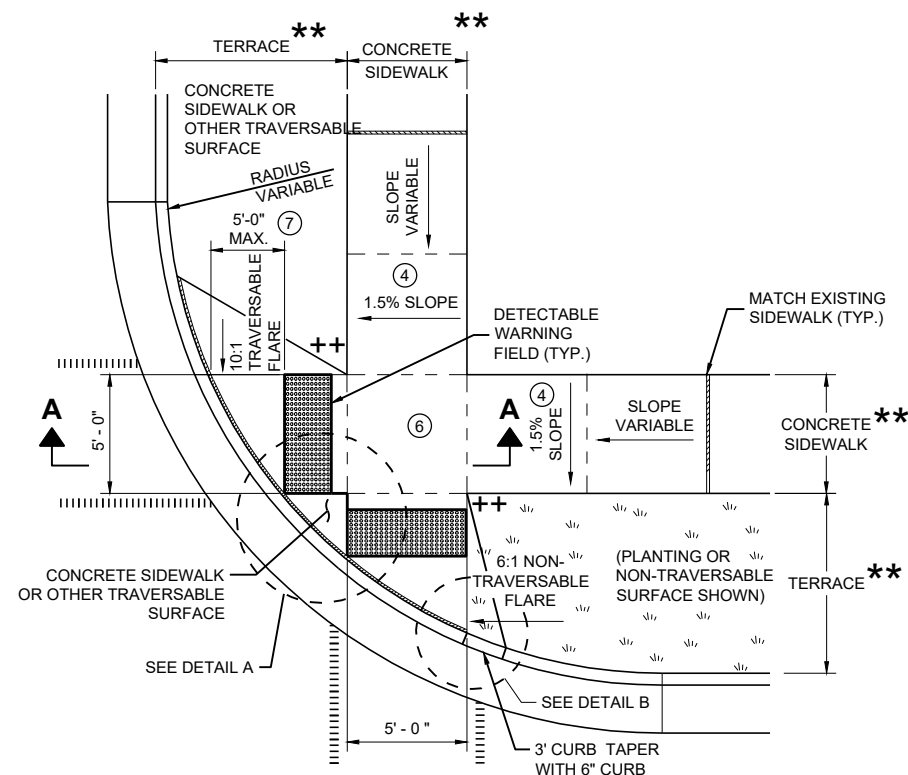
SDD 08D05-21a

\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

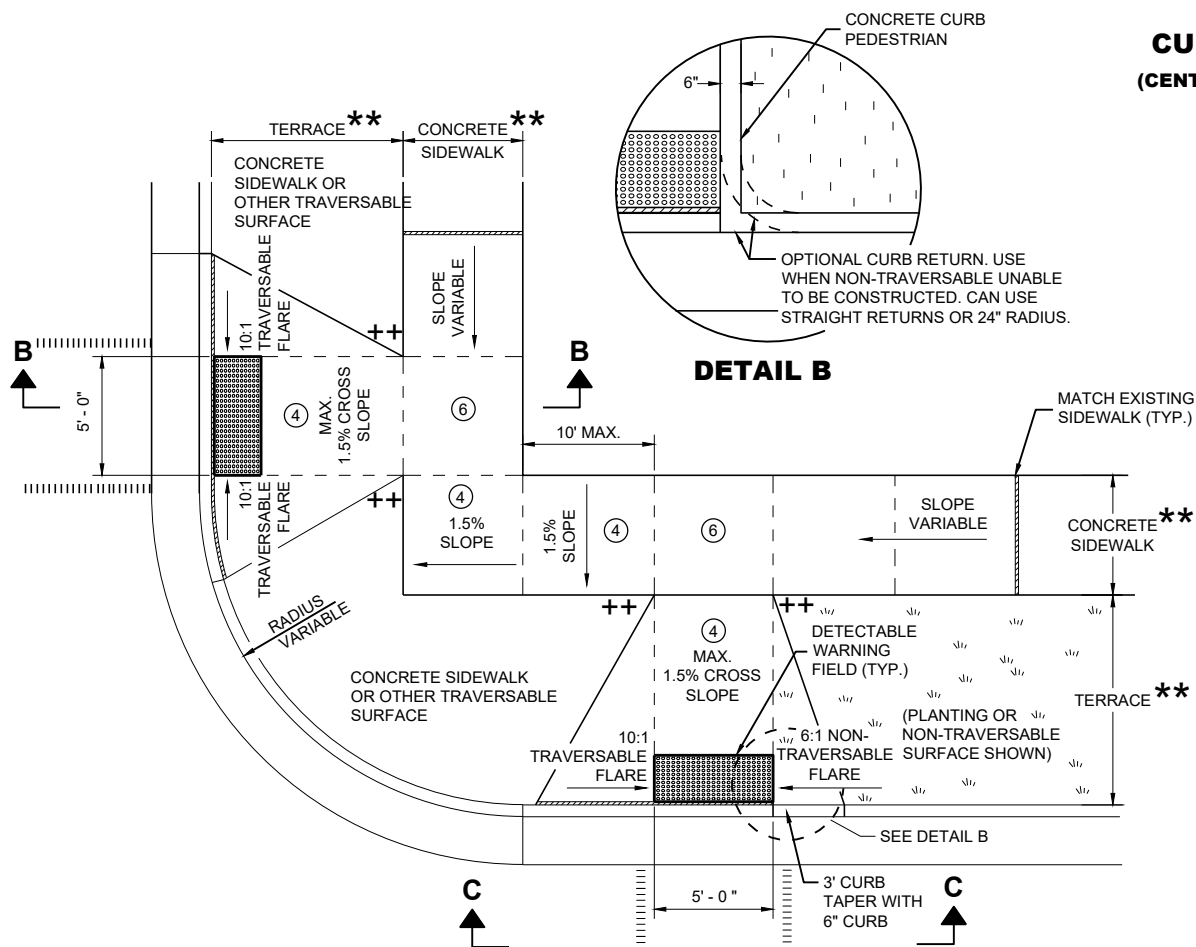




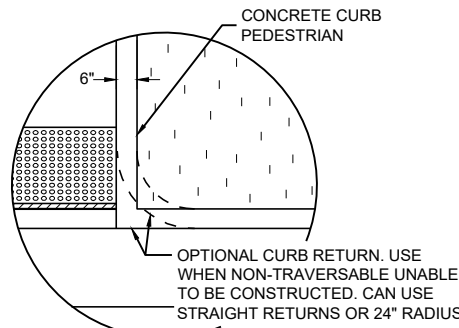
**DETAIL A**



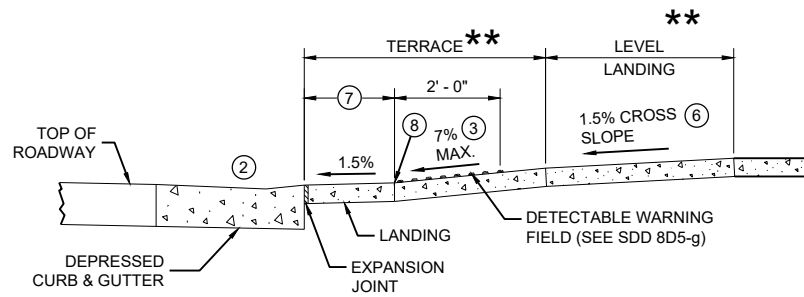
**PLAN VIEW  
CURB RAMP TYPE 2  
(CENTER OF CORNER RADIUS)**



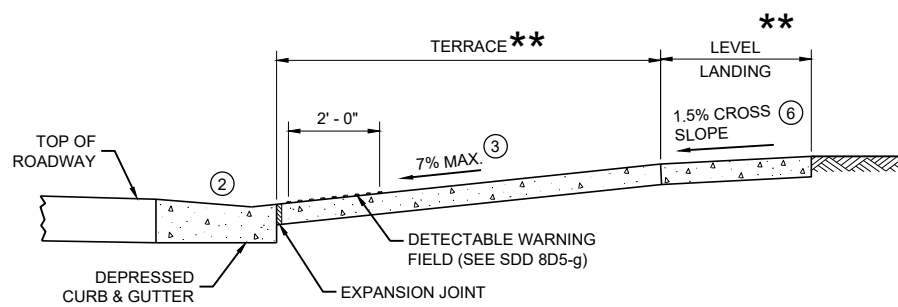
**PLAN VIEW  
CURB RAMP TYPE 3  
(OUTSIDE OF CROSSWALK AREA)**



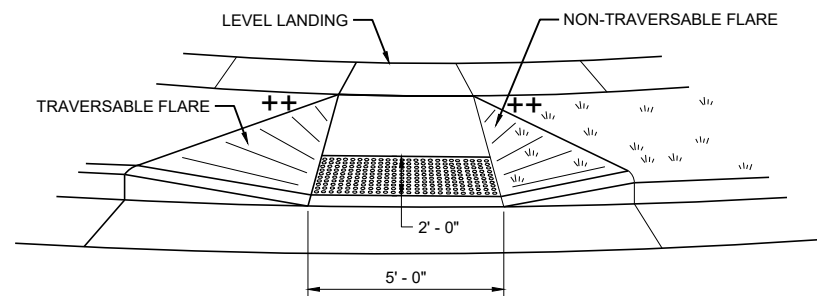
**DETAIL B**



**SECTION A - A FOR TYPE 2**



**SECTION B - B FOR TYPE 3**



**VIEW C - C FOR TYPE 3**

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

- \* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- \*\* WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

**LEGEND**

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

**CURB RAMPS  
TYPE 2 AND 3**

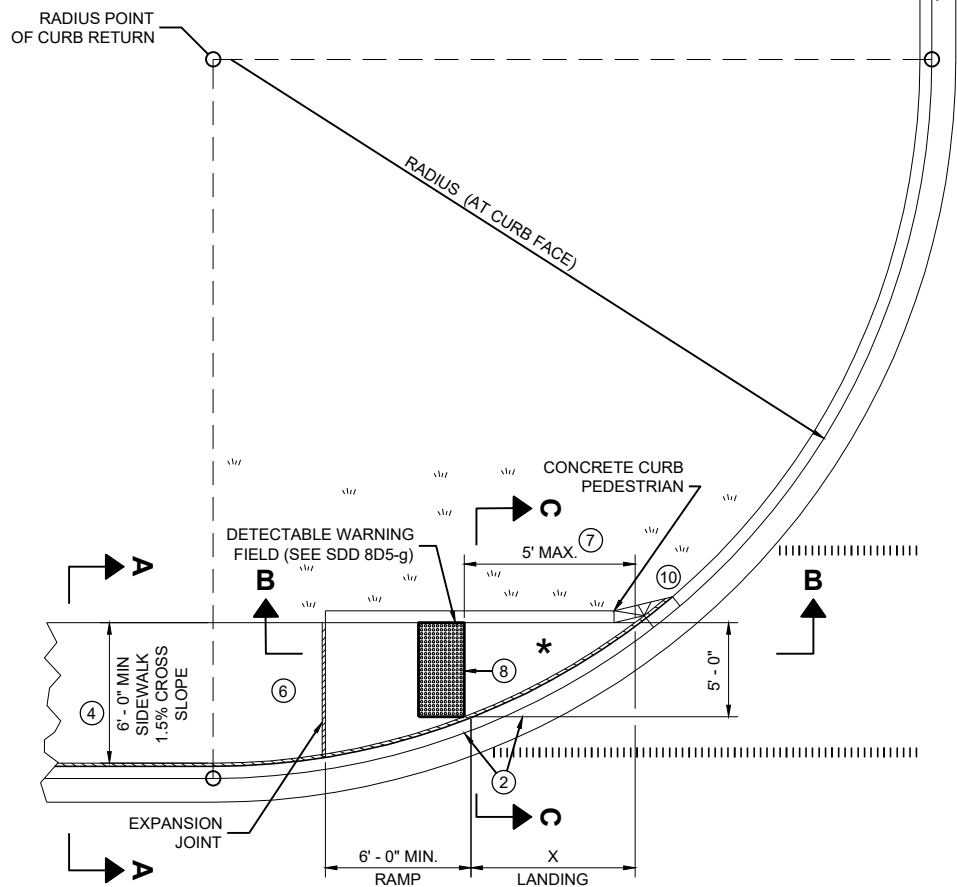
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

6

6

SDD 08D05-21b

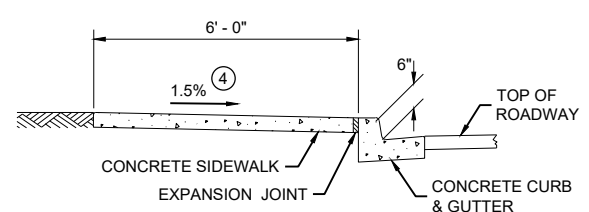
SDD 08D05-21b



**PLAN VIEW  
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



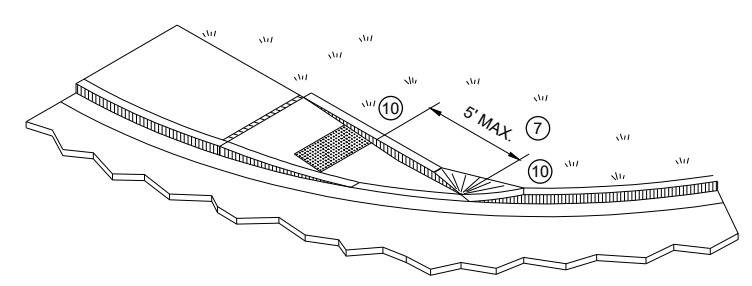
**SECTION A - A FOR TYPE 4A**

**GENERAL NOTES**

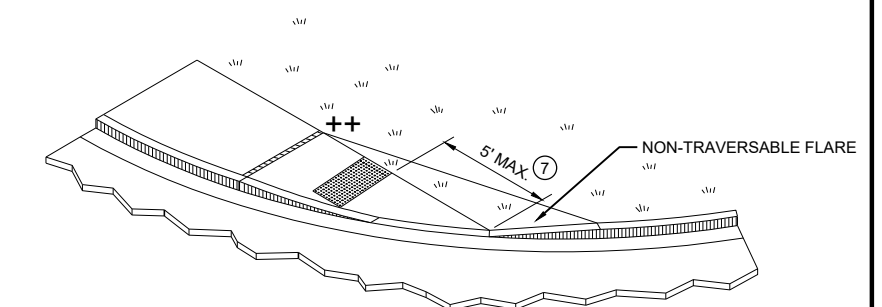
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

**LEGEND**

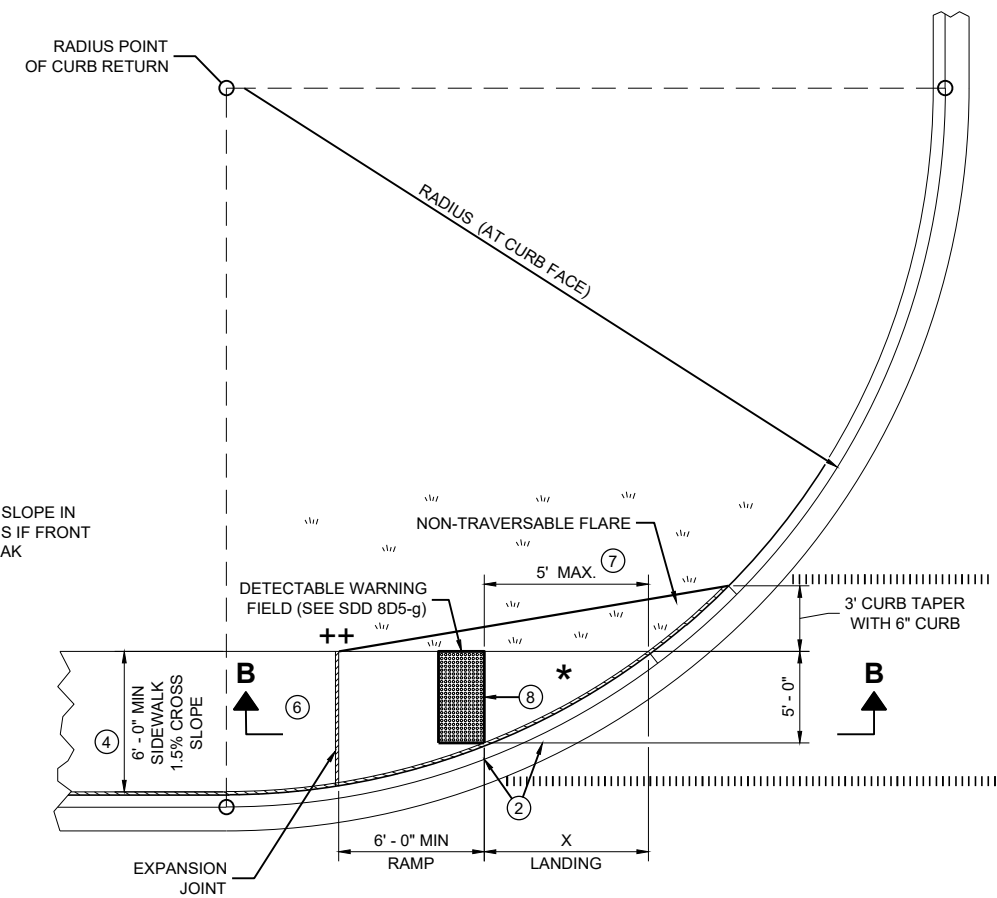
- 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)



**ISOMETRIC VIEW FOR TYPE 4A**



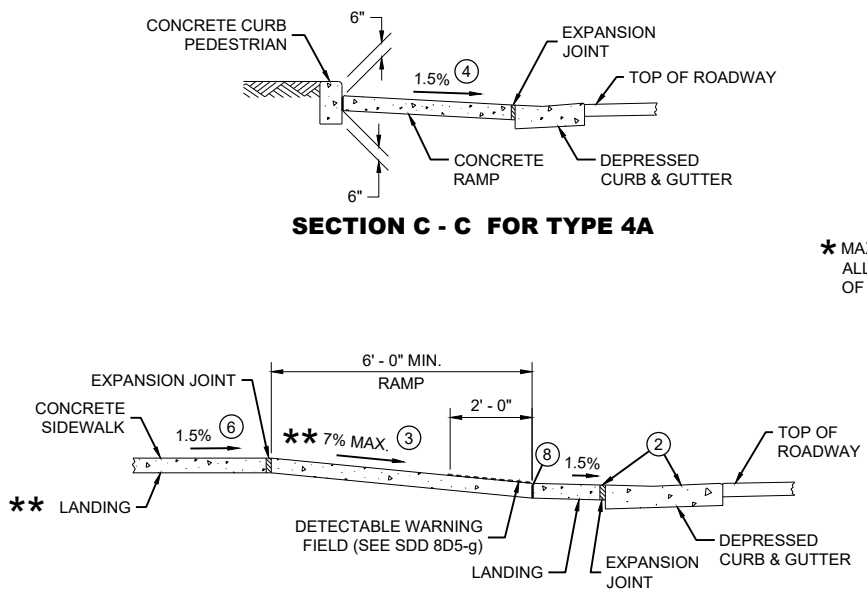
**ISOMETRIC VIEW FOR TYPE 4A1**



**PLAN VIEW  
CURB RAMP TYPE 4A1**

\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

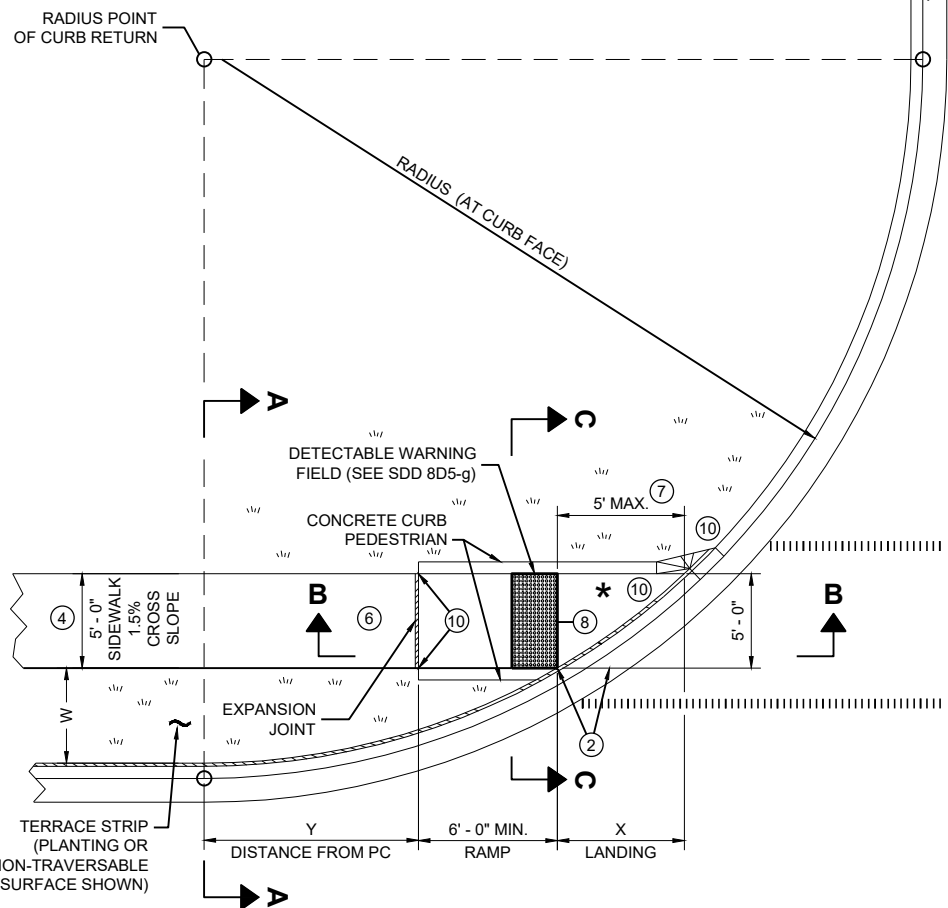


**SECTION B - B FOR  
TYPE 4A AND TYPE 4A1**

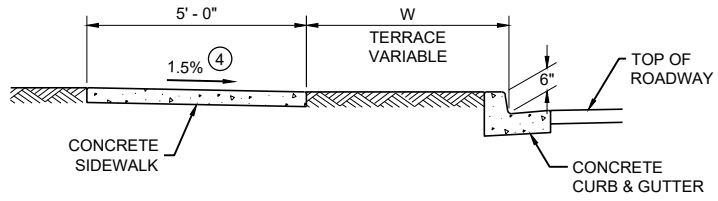
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

**CURB RAMPS  
TYPE 4A AND 4A1**

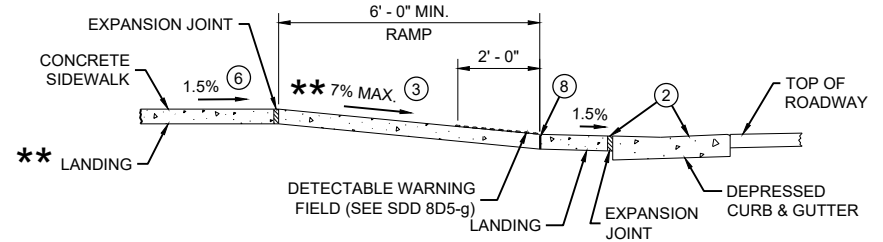
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**PLAN VIEW CURB RAMP TYPE 4B**



**SECTION A - A FOR TYPE 4B**

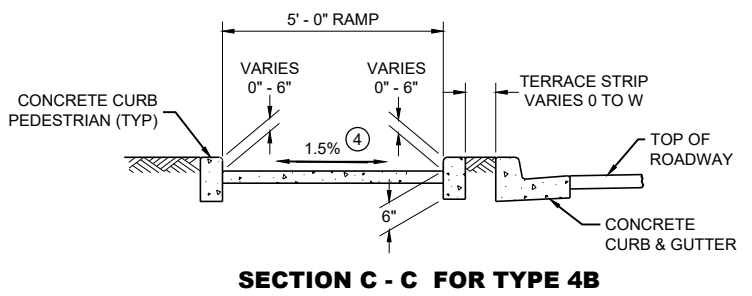


**SECTION B - B FOR TYPE 4B AND TYPE 4B1**

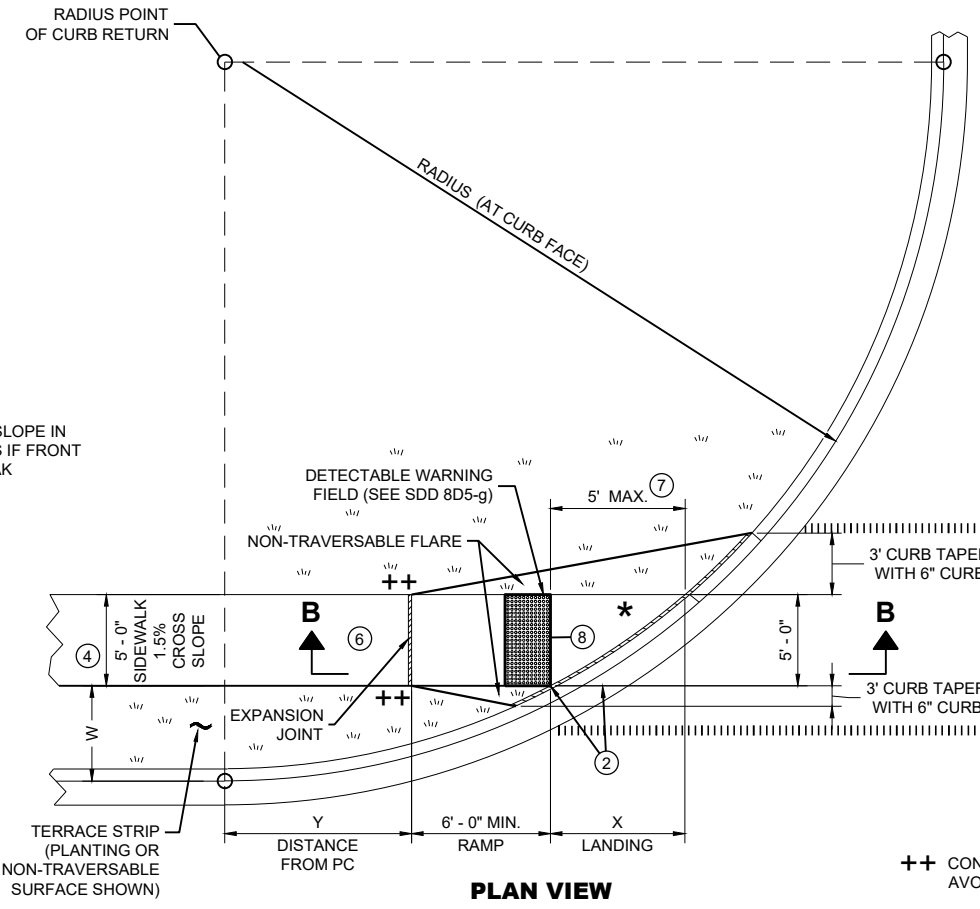
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED  
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

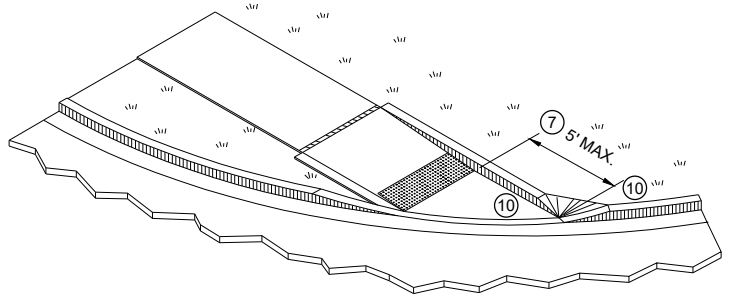


**SECTION C - C FOR TYPE 4B**

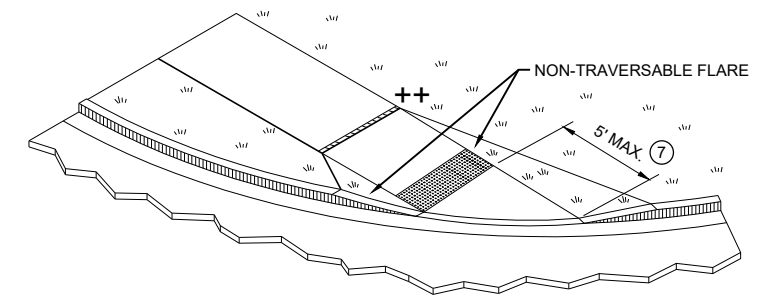


**PLAN VIEW CURB RAMP TYPE 4B1**

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



**ISOMETRIC VIEW FOR TYPE 4B**



**ISOMETRIC VIEW FOR TYPE 4B1**

**LEGEND**

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

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

**CURB RAMPS TYPE 4B AND 4B1**

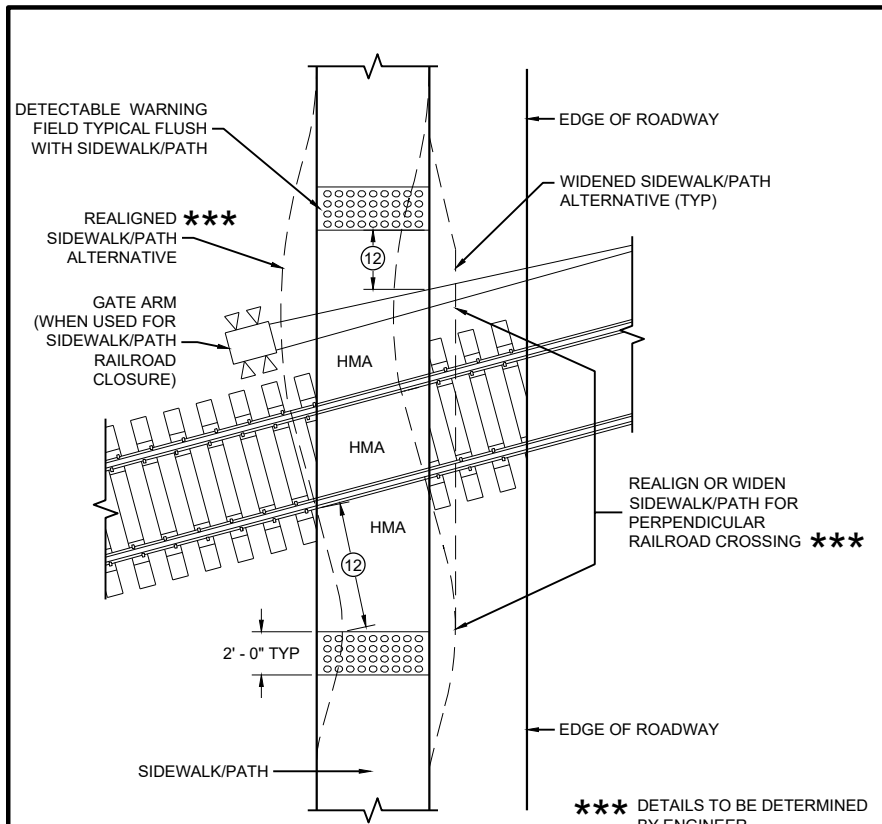
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

6

6

SDD 08D05-21d

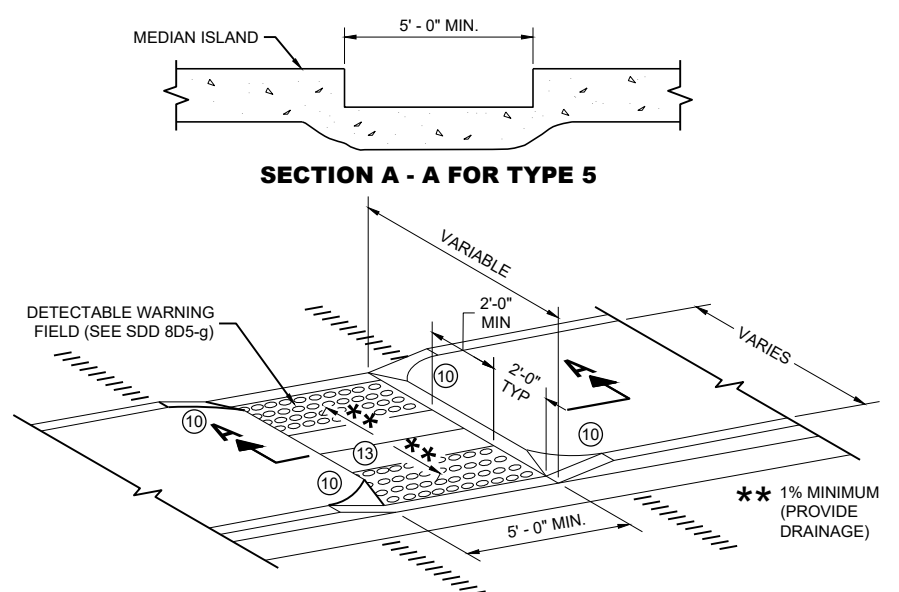
SDD 08D05-21d



**CURB RAMP TYPE 8**

**DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS**

\*\*\* DETAILS TO BE DETERMINED BY ENGINEER



**SECTION A - A FOR TYPE 5**

**CURB RAMP TYPE 5**

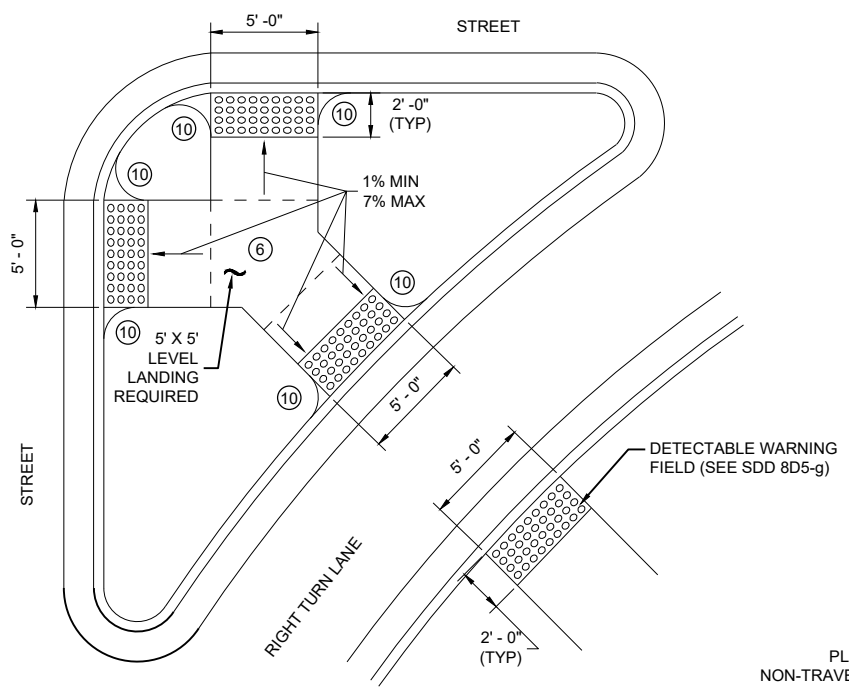
**MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING**

**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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.
- 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.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

**LEGEND**

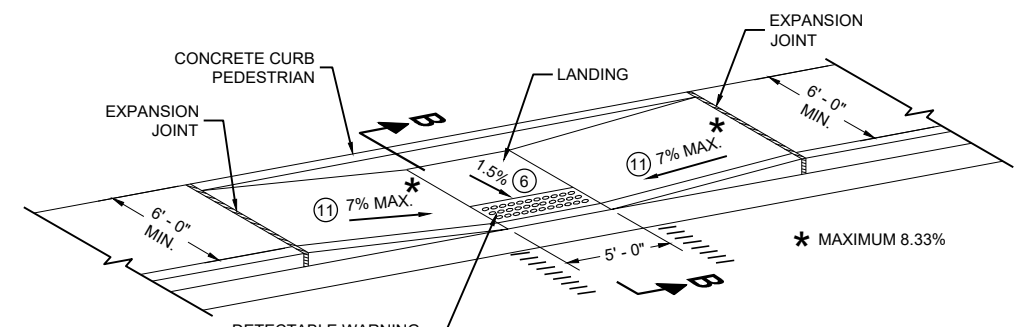
- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)



**CURB RAMP TYPE 6**

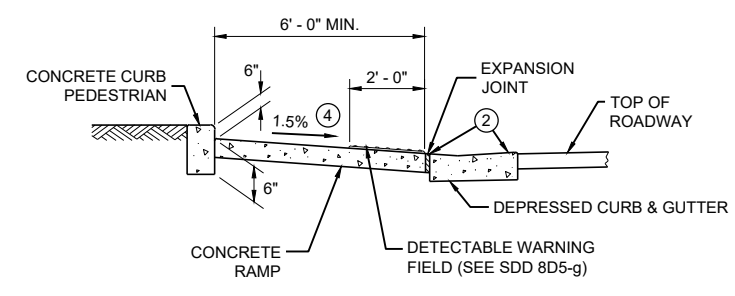
**DETECTABLE WARNING AT ISLANDS**

REFER TO GENERAL NOTES ② AND ③ FOR ALL ISLAND CURB RAMPS

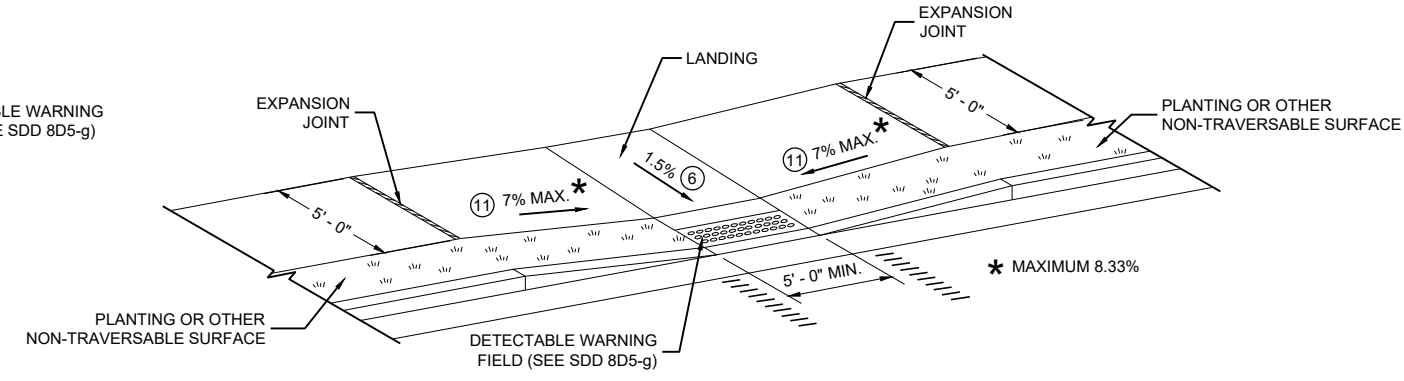


**CURB RAMP TYPE 7A**

**FOR INTERSECTIONS AND MID BLOCK CROSSINGS**



**SECTION B - B FOR TYPE 7A**



**CURB RAMP TYPE 7B**

**FOR INTERSECTIONS AND MID BLOCK CROSSINGS**

**CURB RAMPS TYPE 5, 6, 7A, 7B & 8**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

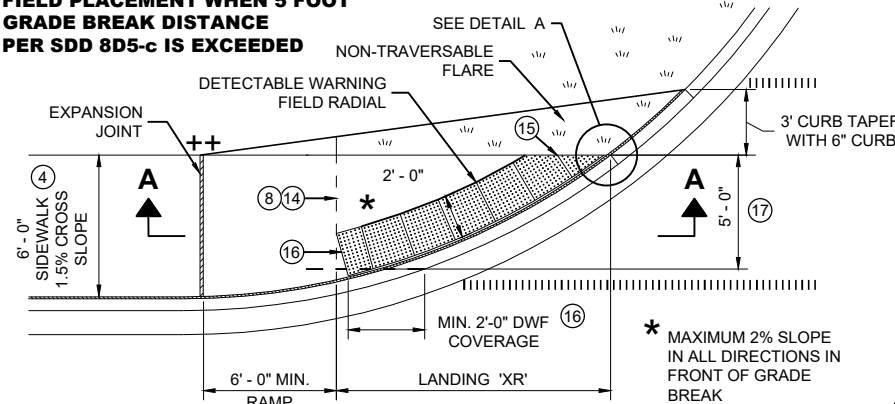
6

6

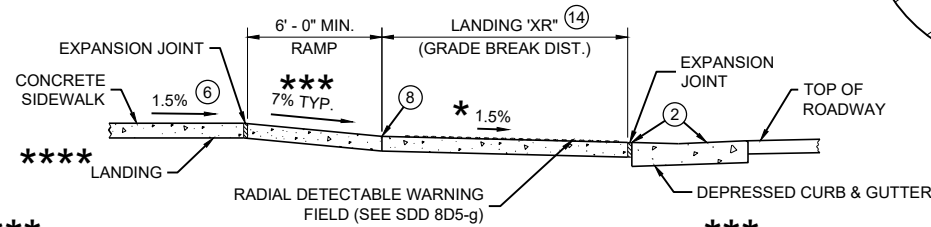
SDD 08D05-21e

SDD 08D05-21e

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-c IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



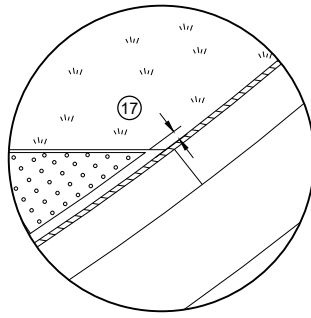
**SECTION A - A FOR TYPE 4A1**

\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%

**LEGEND**

- ===== 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- |||||| PAVEMENT MARKING CROSSWALK (WHITE)

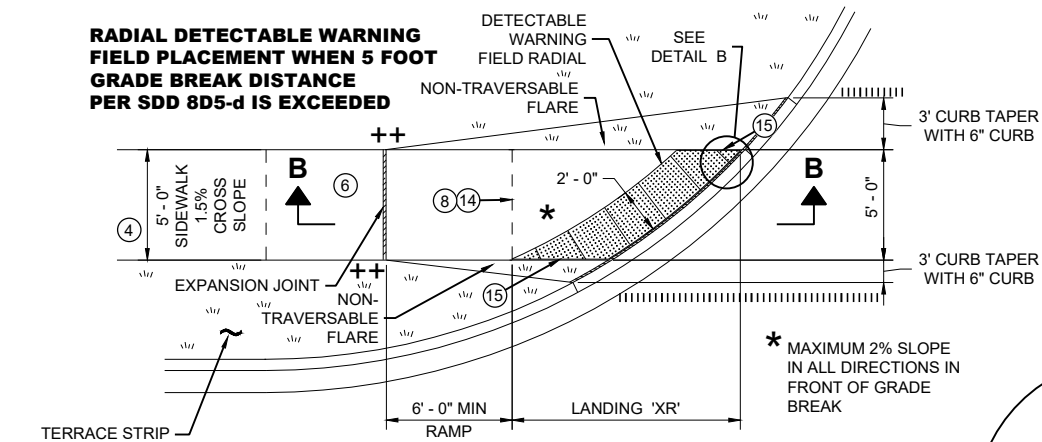


**DETAIL A**

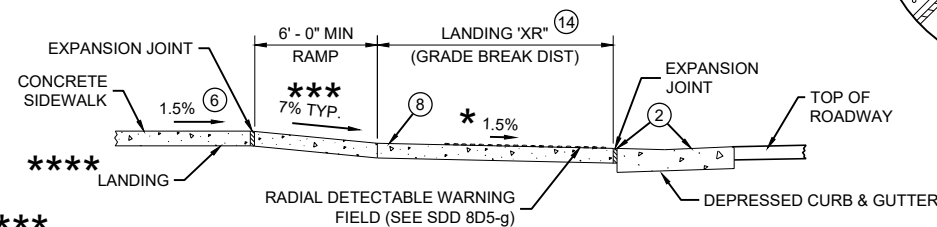
**GENERAL NOTES**

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- (15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/2" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- (16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- (17) A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-d IS EXCEEDED**



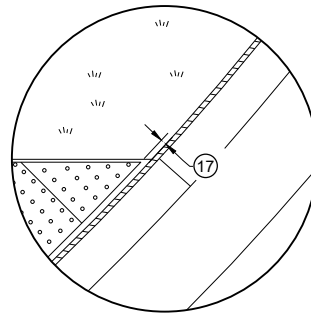
**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION B - B FOR TYPE 4B1**

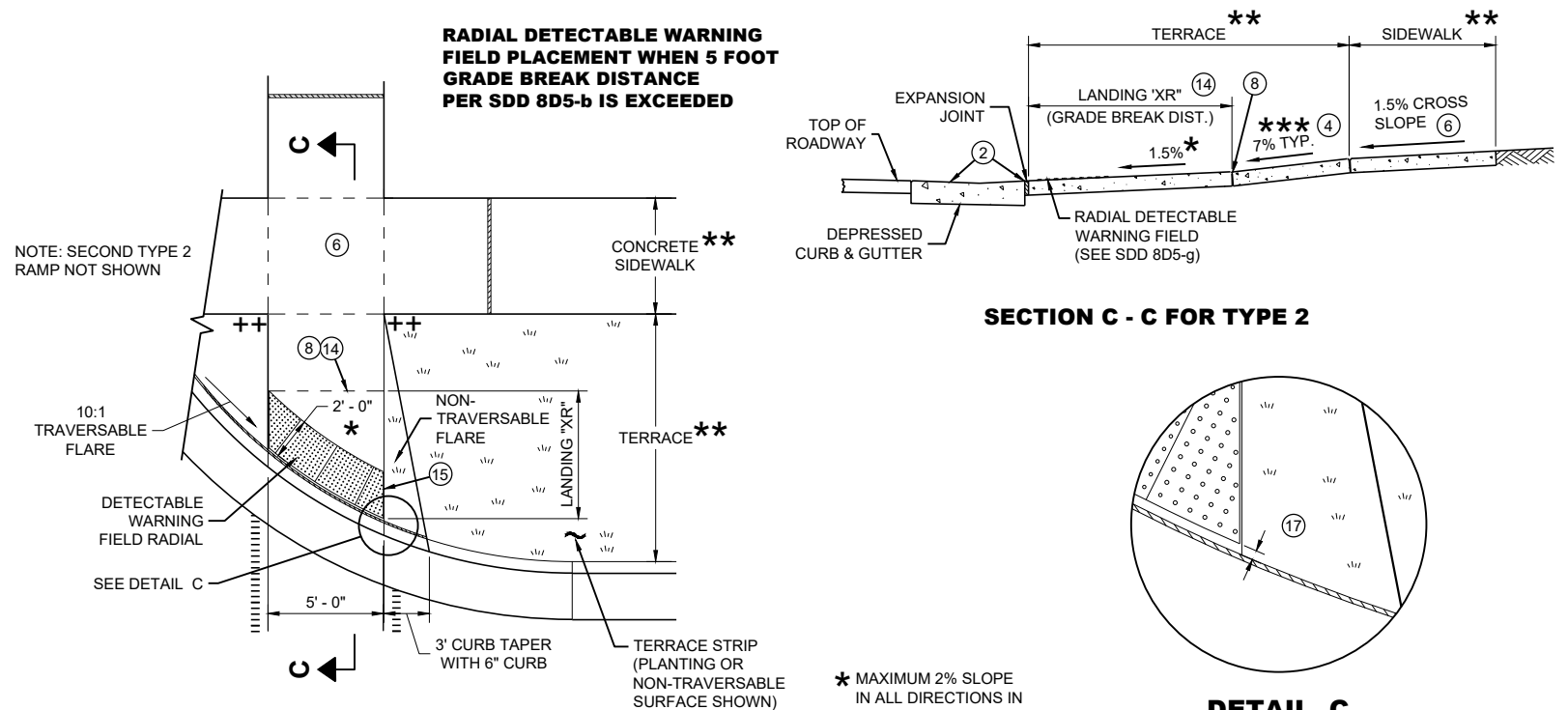
\*\*\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

\*\*\* MAXIMUM 8.33%



**DETAIL B**

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**

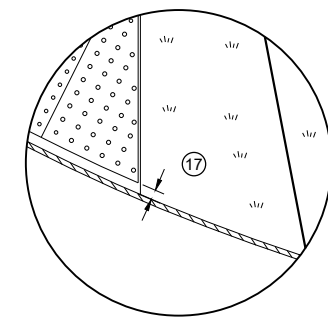
NOTE: SECOND TYPE 2 RAMP NOT SHOWN

\* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

\*\* WIDTH SHOWN ELSEWHERE IN THE PLANS

\*\*\* MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



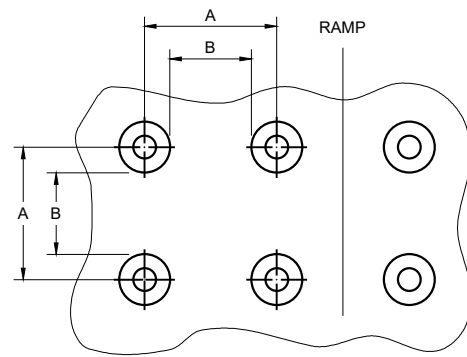
**DETAIL C**

**CURB RAMPS  
RADIAL DETECTABLE WARNING**

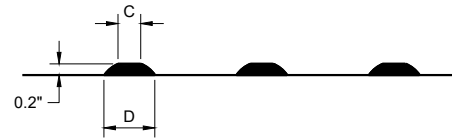
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
<b>A</b>	1.6"	2.4"
<b>B</b>	0.65"	1.5"
<b>C</b>	*	*
<b>D</b>	0.9"	1.4"

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

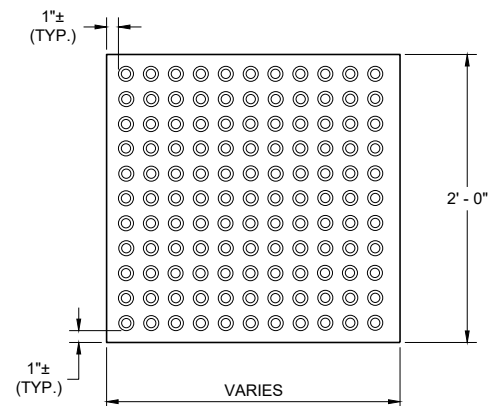


**PLAN VIEW**

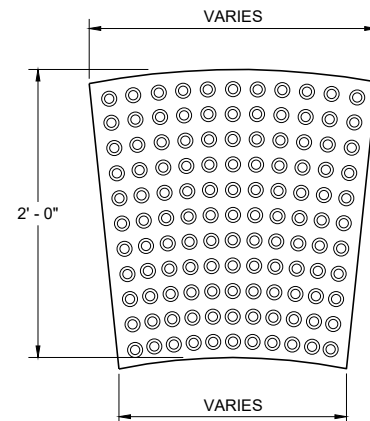


**ELEVATION VIEW**

**TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL**

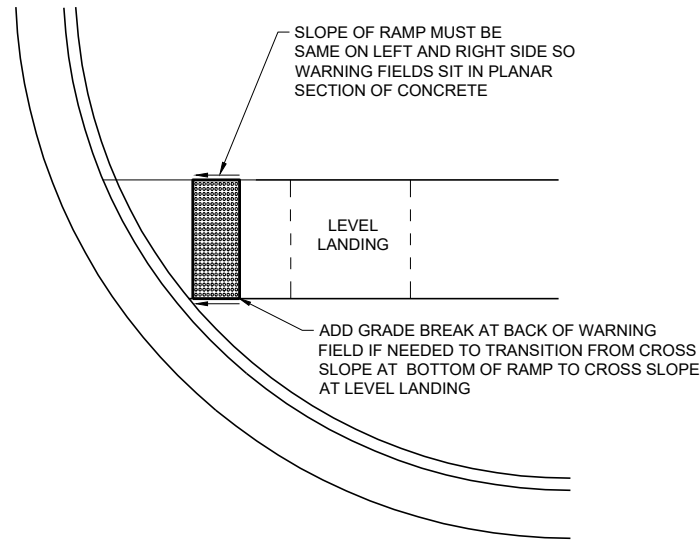


**RECTANGULAR  
PLATES**



**RADIAL  
PLATES**

**PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)**

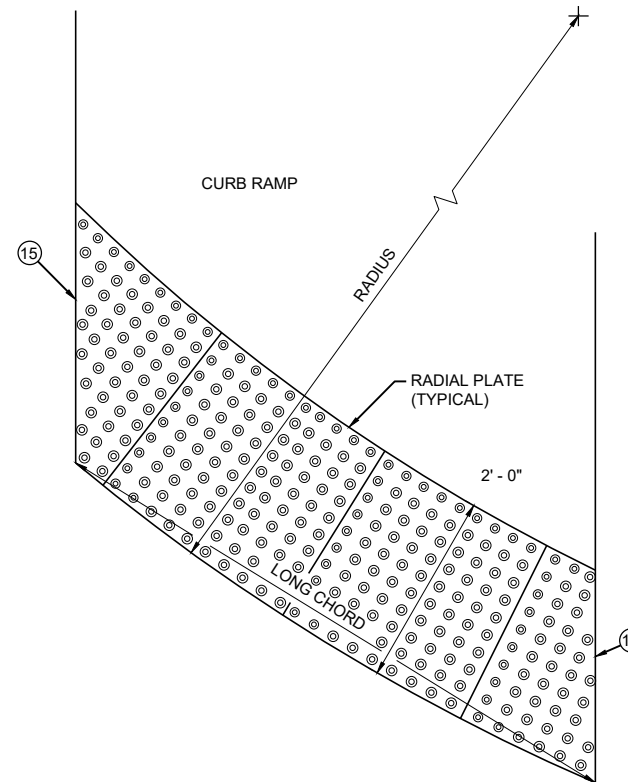


**DETECTABLE WARNING FIELD  
PLANAR INSTALLATION**

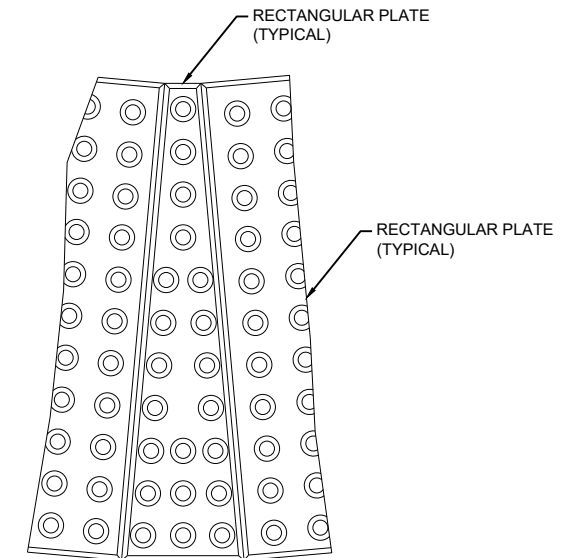
**GENERAL NOTES**

- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.
- PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
- REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.
- DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

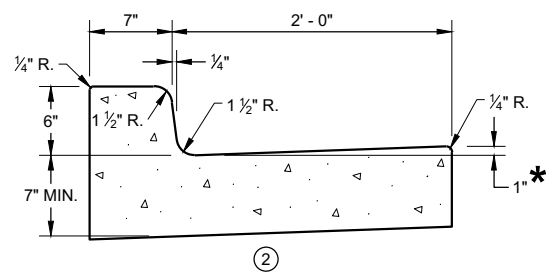


**PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES**

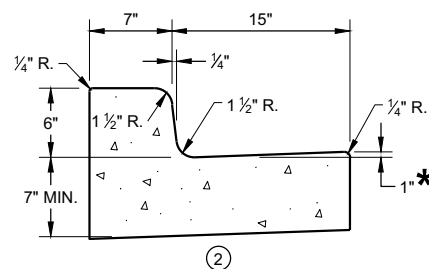


**PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL**

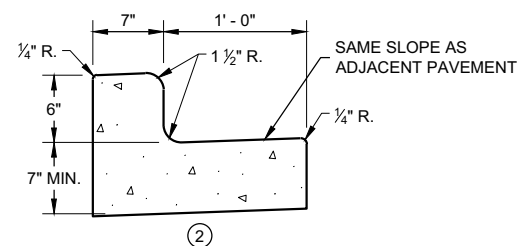
<b>CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 2023 DATE	/s/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



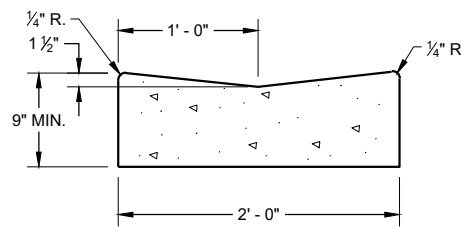
**CONCRETE CURB AND GUTTER 31"** ①



**CONCRETE CURB AND GUTTER 22"** ①

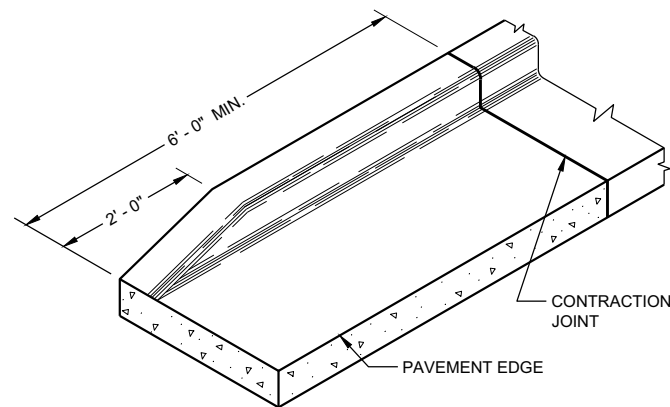


**CONCRETE CURB AND GUTTER 19"** ①

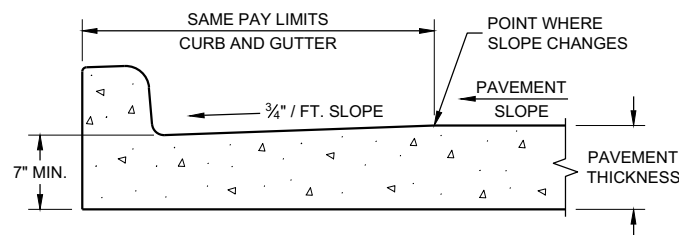


**CONCRETE GUTTER 24"** ①

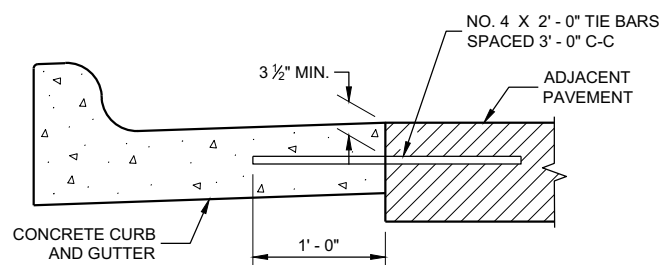
\* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



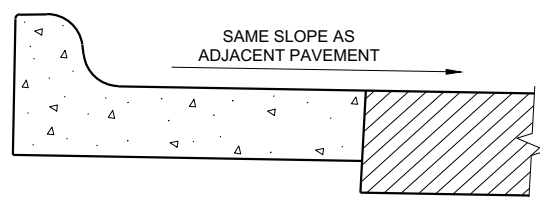
**END SECTION CURB AND GUTTER**



**PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER**



**TYPICAL TIE BAR LOCATION** ①



**HIGH SIDE SECTION** ③  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

**GENERAL NOTES**

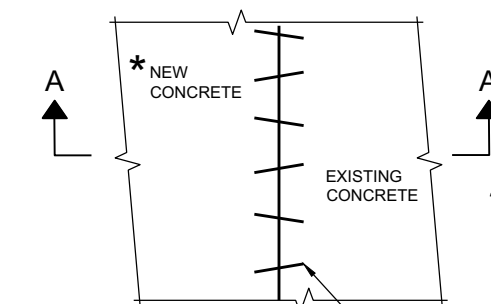
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

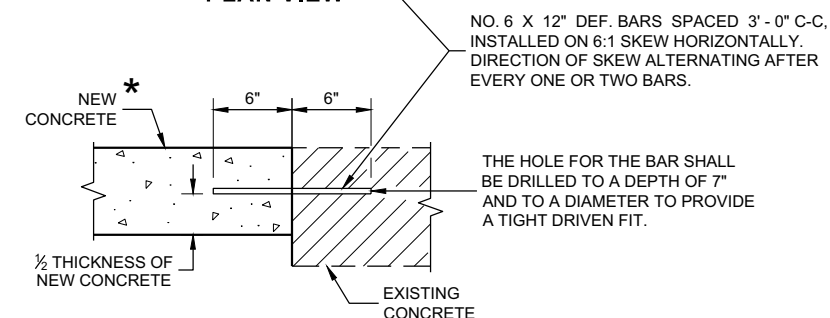
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



**PLAN VIEW**

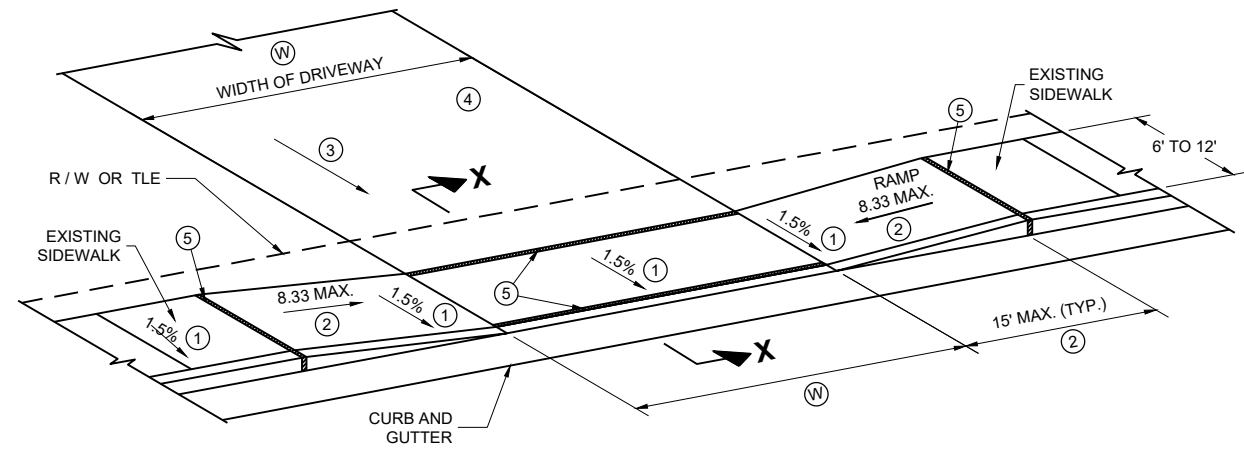


**SECTION A - A  
PAVEMENT TIES**

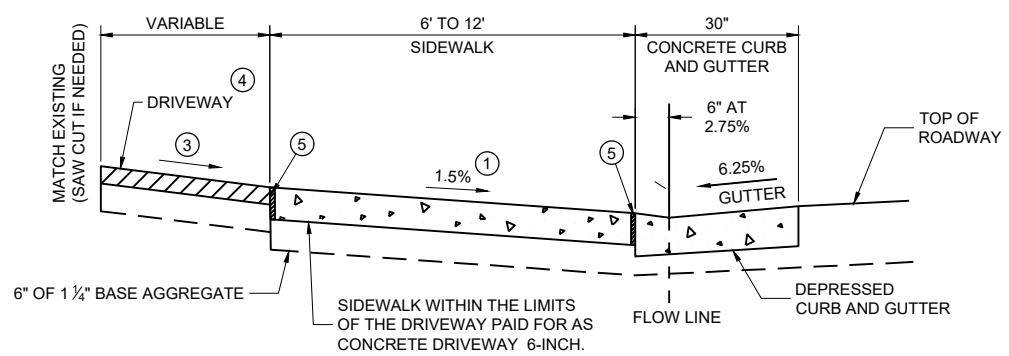
**CONCRETE GUTTER,  
CURB AND GUTTER AND  
PAVEMENT TIES**  
(For Optional use in Milwaukee Co. Only)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

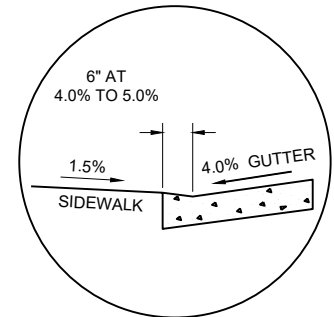
APPROVED  
February 2020 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



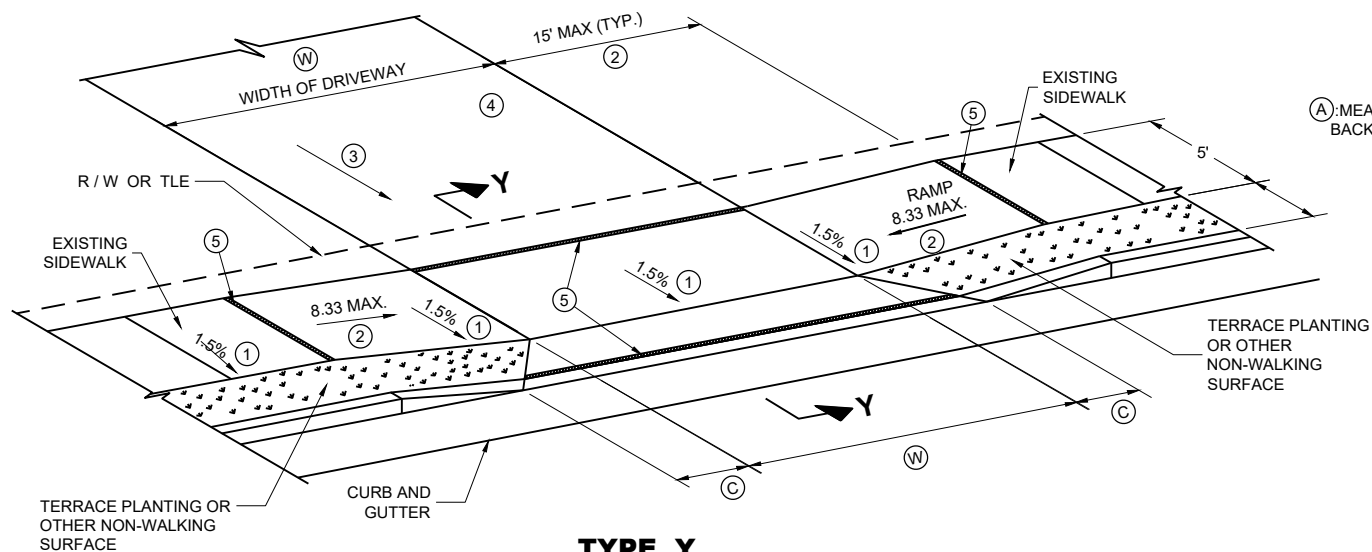
**TYPE X**  
**SIDWALK ABUTS CURB AND GUTTER**  
**TERRACE VARIES 0 TO 3 FEET**



**SECTION X - X**

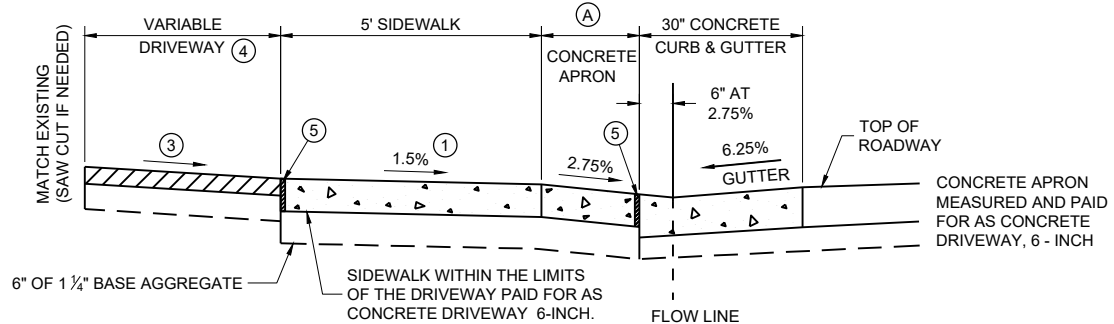


**SECTION X - X**  
**4% GUTTER SLOPE**



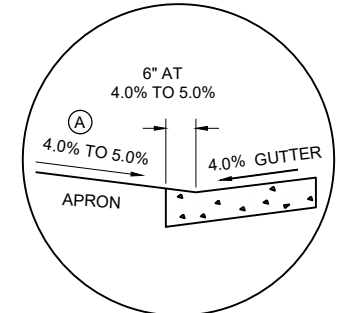
**TYPE Y**  
**SIDWALK WITH NARROWER TERRACE**  
**TERRACE VARIES 4 TO 6 FEET**

(A): MEASURE FROM  
 BACK OF CURB



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

**SECTION Y - Y**  
**DRIVEWAY DETAIL WITH CONCRETE**  
**CURB AND GUTTER**  
**(URBAN AND SUBURBAN)**



**SECTION Y - Y**  
**4% GUTTER SLOPE**

**TABLE Y**

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND  
 NON-COMMERCIAL (PE & FE)  
 16' MIN. - 35' MAX. COMMERCIAL (CE)

**GENERAL NOTES**

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

(1) CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

(2) THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(3) **DRIVEWAY SLOPES: DESIRABLE MAXIMUM**  
 10.5% UP AWAY FROM SIDEWALK (SAG)  
 8.5% DOWN AWAY FROM SIDEWALK (CREST)  
 ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

(4) **DRIVEWAY TYPES**  
 · 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE  
 · 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE  
 · 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

(5) ½" EXPANSION JOINT FILLER

**DRIVEWAY AND**  
**SIDWALK RAMPS**  
**TYPES X AND Y**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

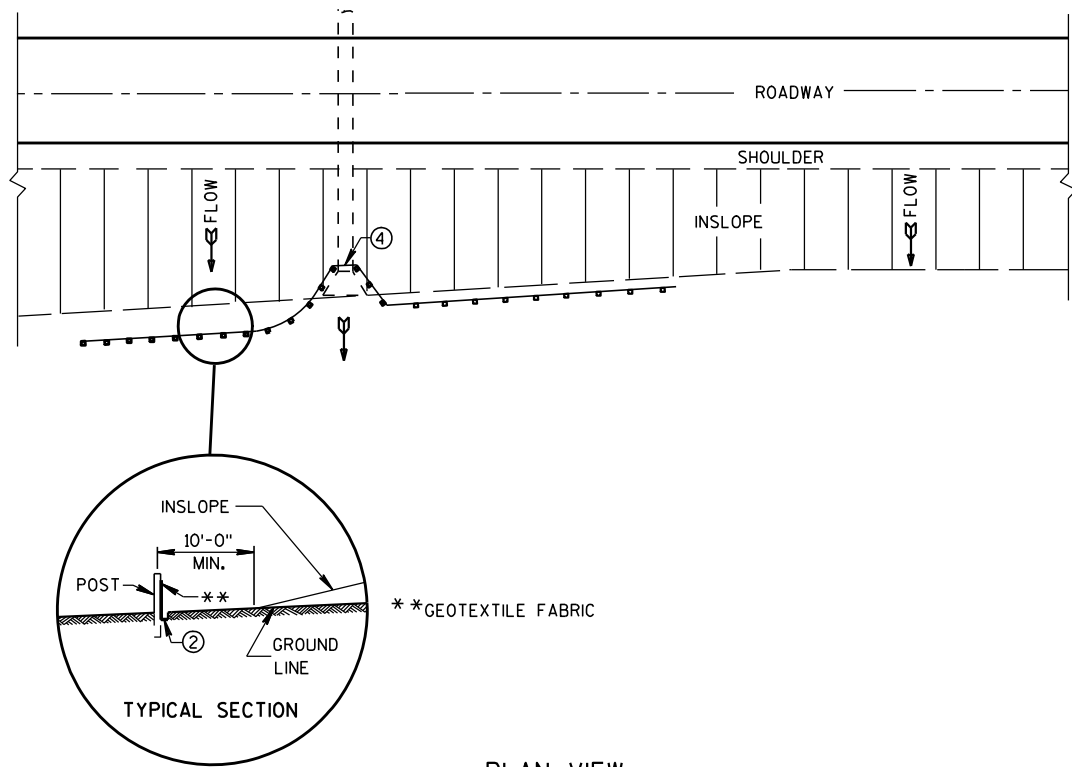
APPROVED

July 2023  
 DATE

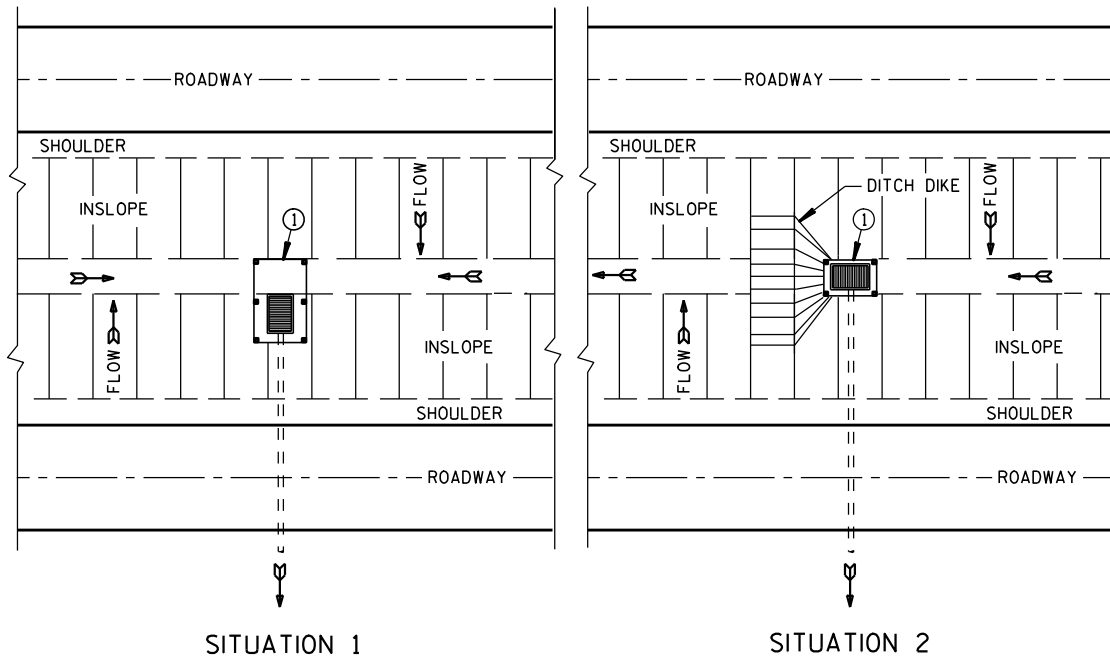
/s/ Rodney Taylor  
 ROADWAY STANDARDS DEVELOPMENT  
 UNIT SUPERVISOR

FHWA





PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

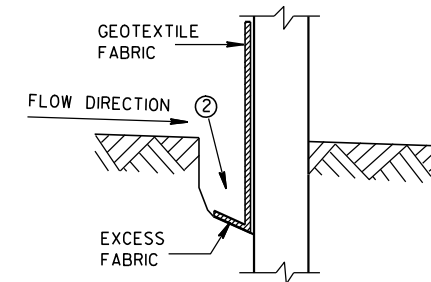


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

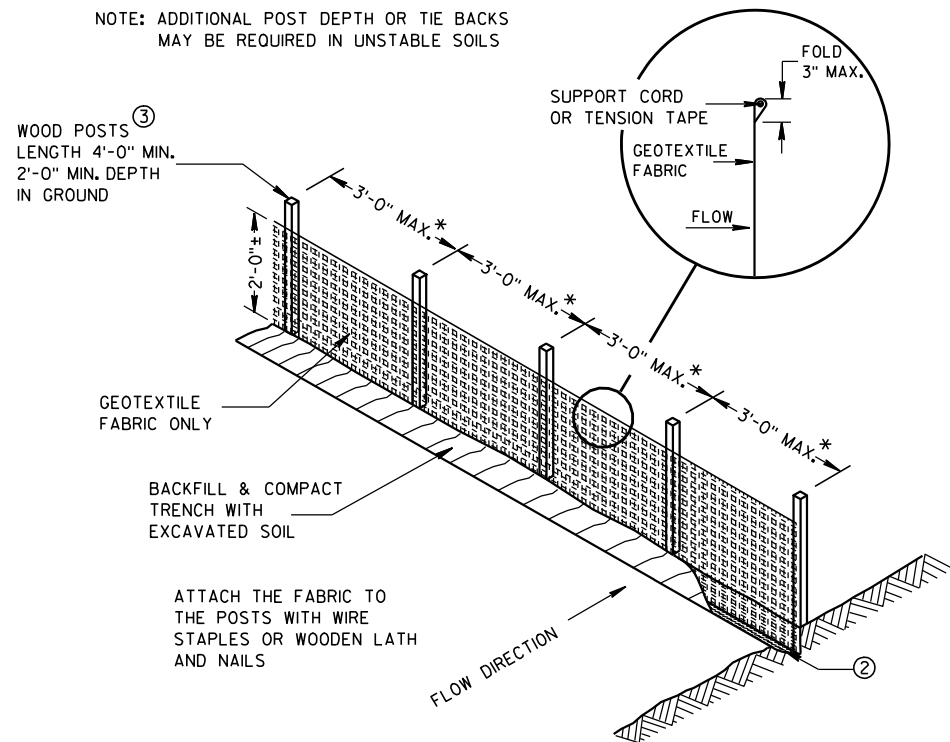
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



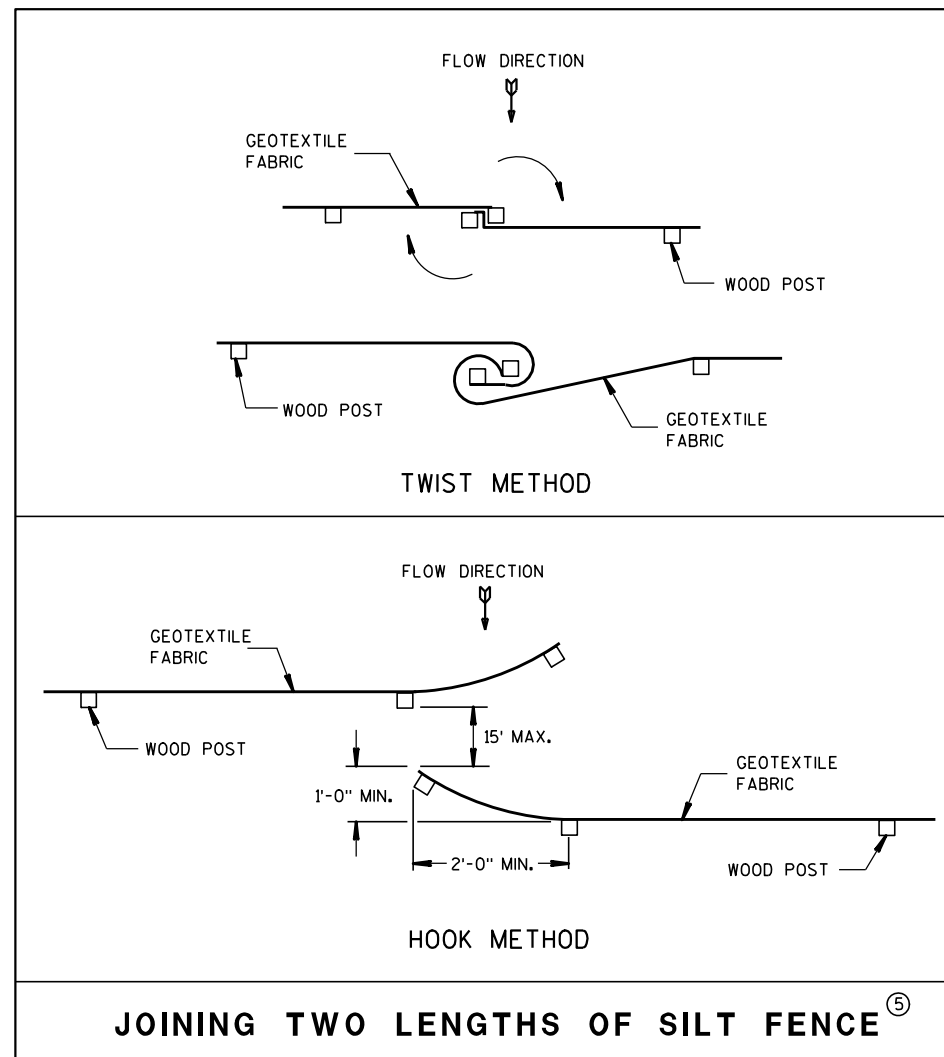
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

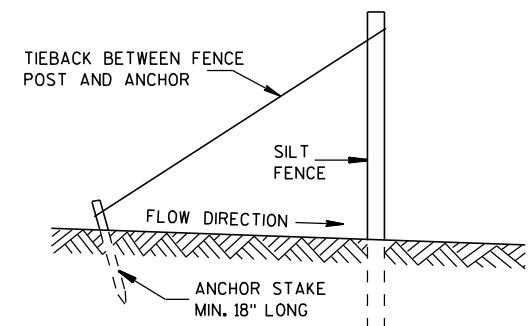


SILT FENCE

\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

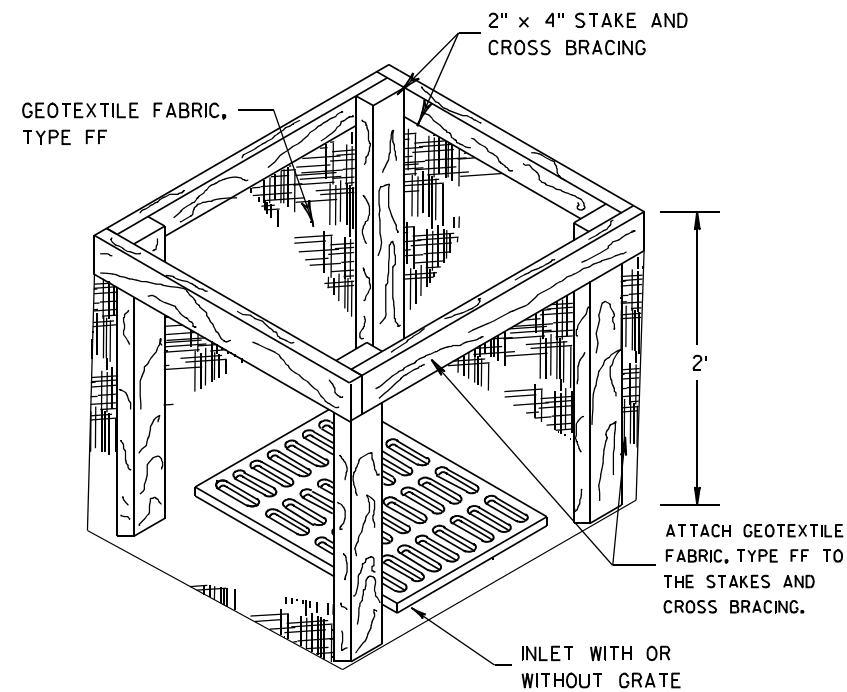
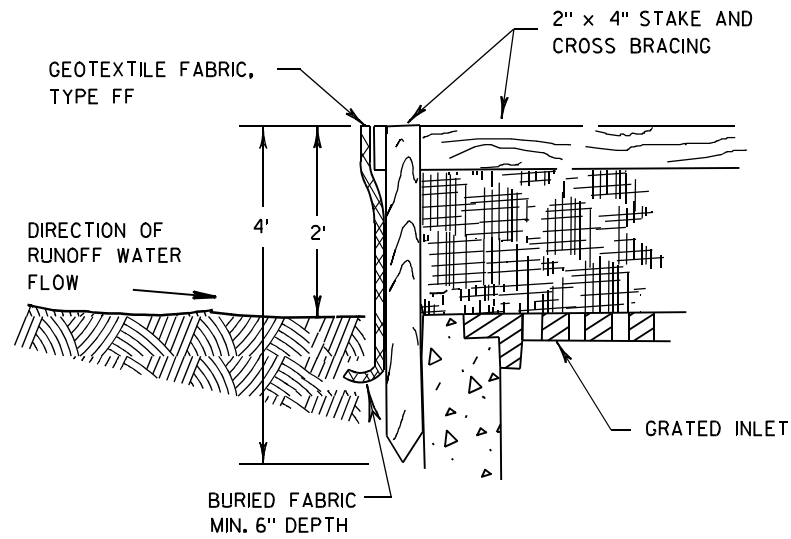


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



**INLET PROTECTION, TYPE A**

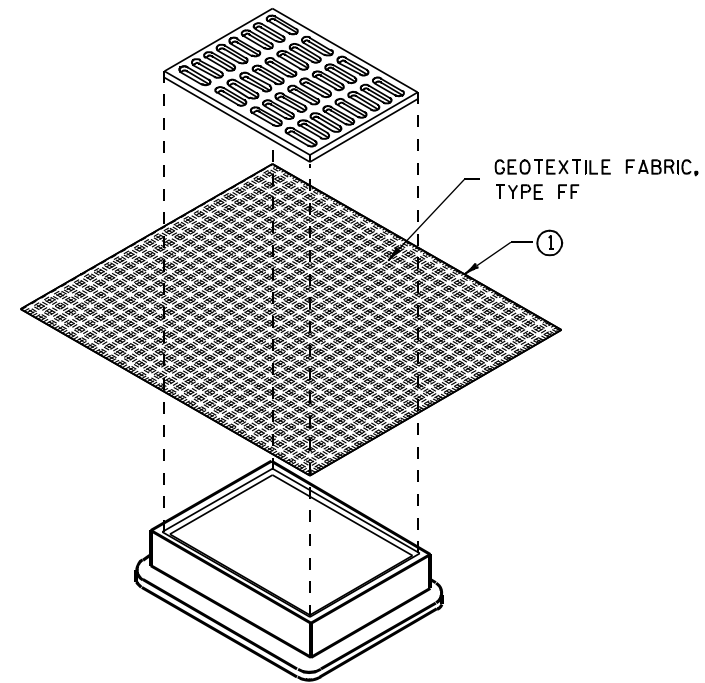
**GENERAL NOTES**

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

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

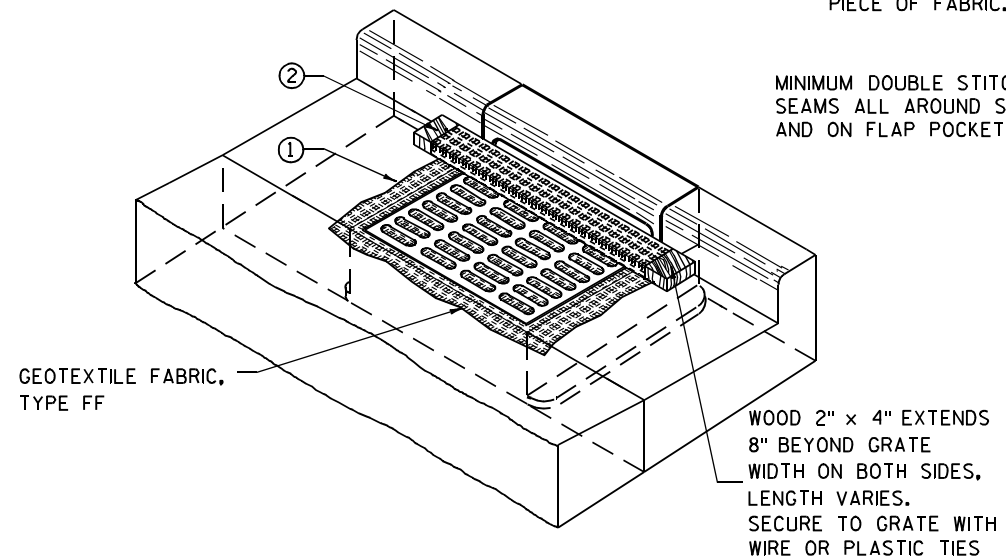
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

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

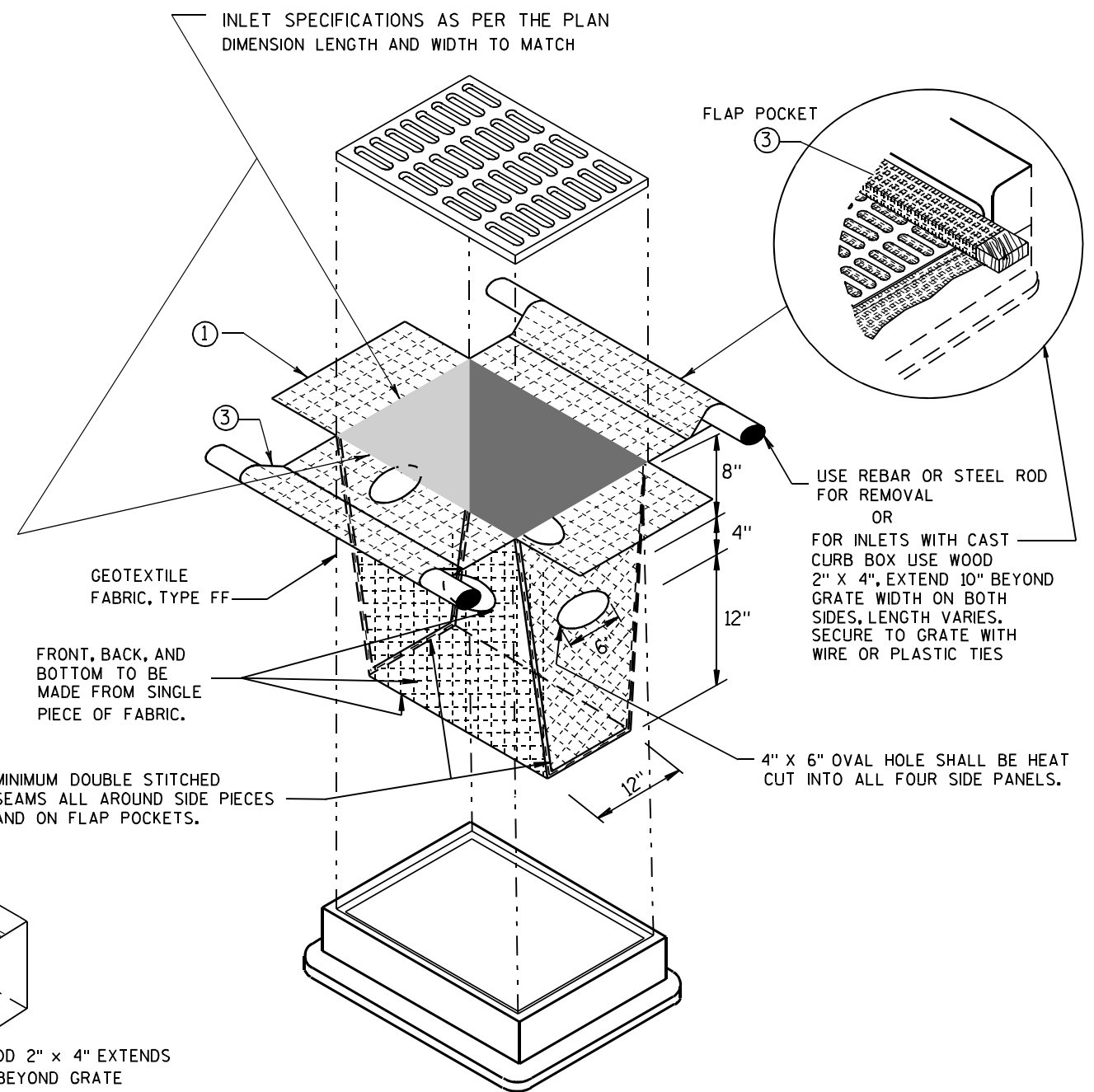
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

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

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

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



**INLET PROTECTION, TYPE D**

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

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

**GENERAL NOTES**

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

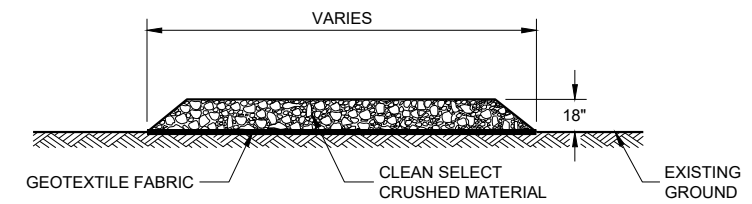
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

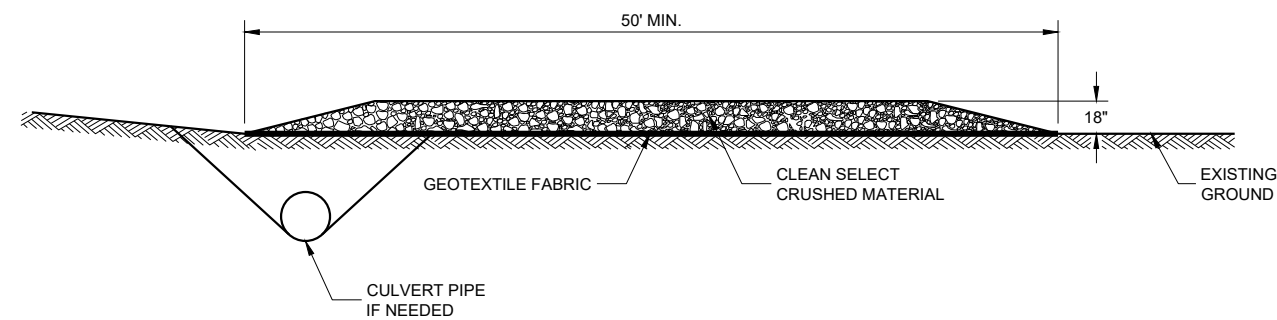
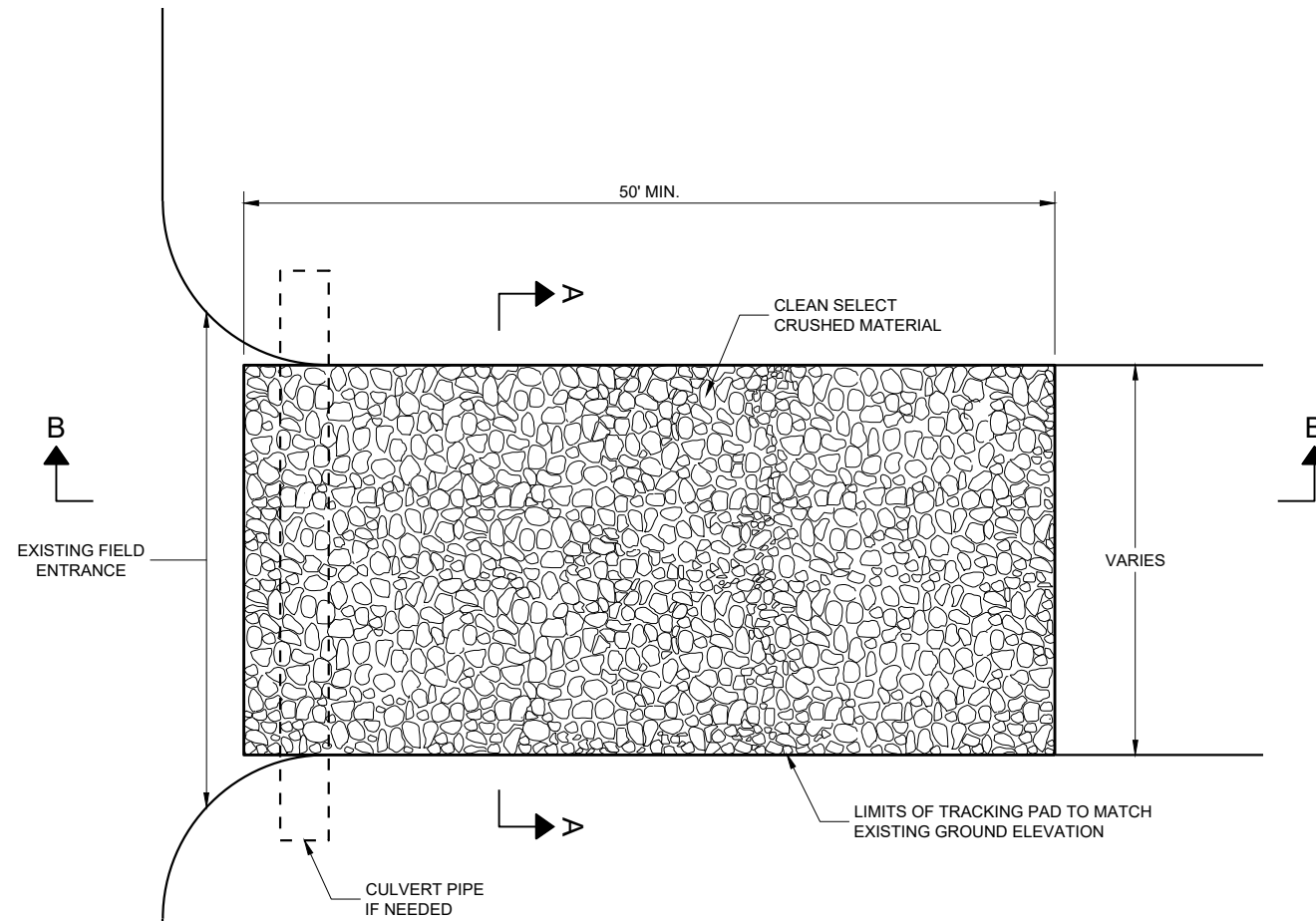
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



**SECTION A - A**



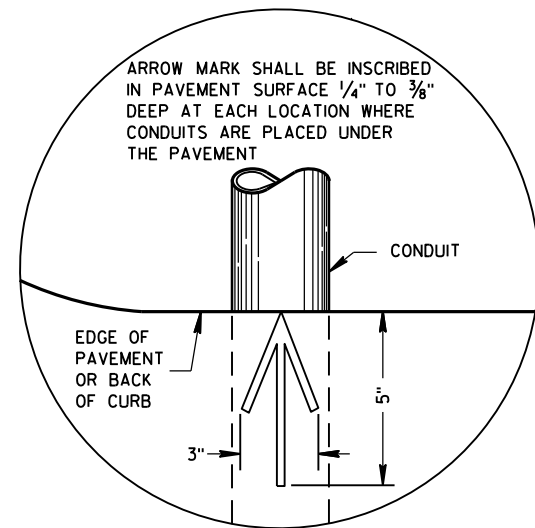
**SECTION B - B**

**TRACKING PAD**

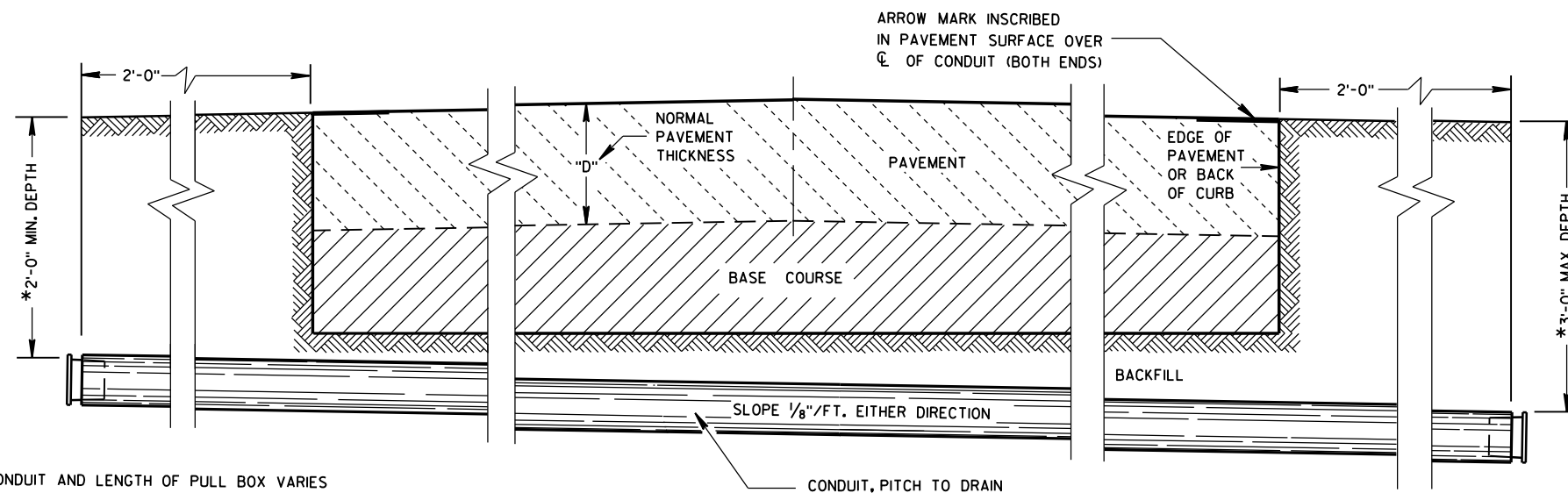
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011 DATE /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



PLAN VIEW  
ARROW MARK



SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

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

### 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 EMERSON 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.).

TRACER 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.

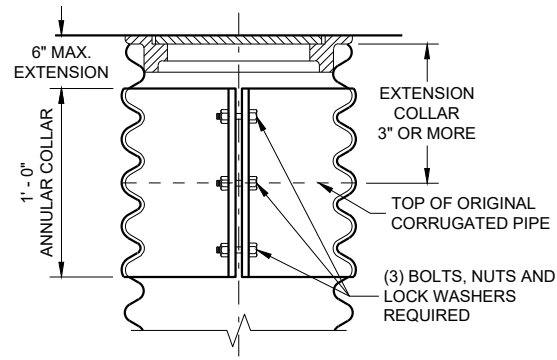
6

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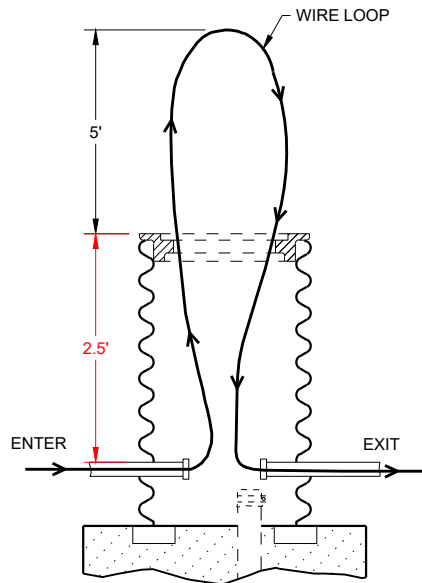
S.D.D. 9 B 2-10

S.D.D. 9 B 2-10

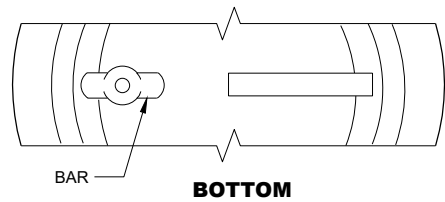
<b>CONDUIT</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March, 2017 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



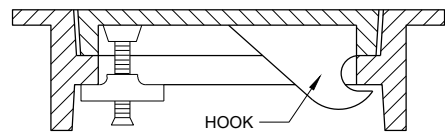
**CORRUGATED PIPE EXTENDER**



**MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX**



**BOTTOM**



**SECTION**

**ALTERNATE COVER (LOCKING)  
TIGHTENING BAR TYPE**

**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.

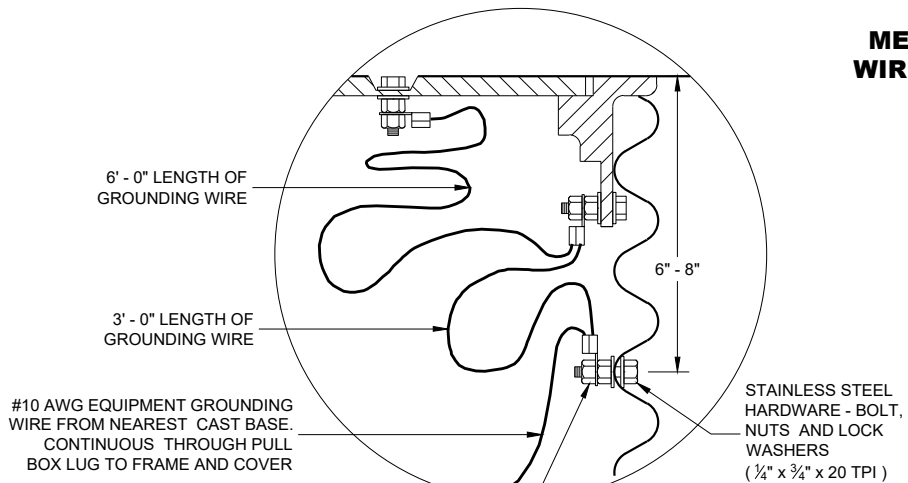
WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

**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 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	

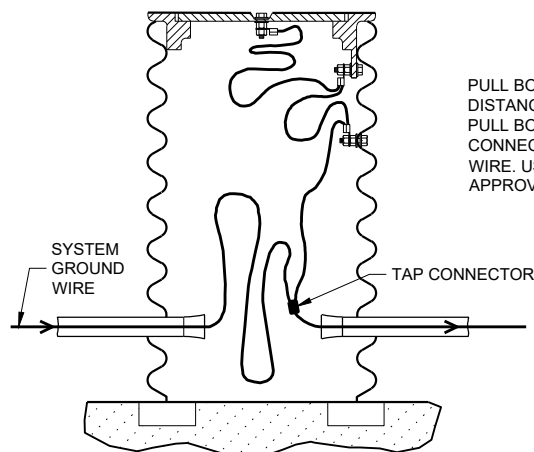
\* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

\*\* 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.



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**

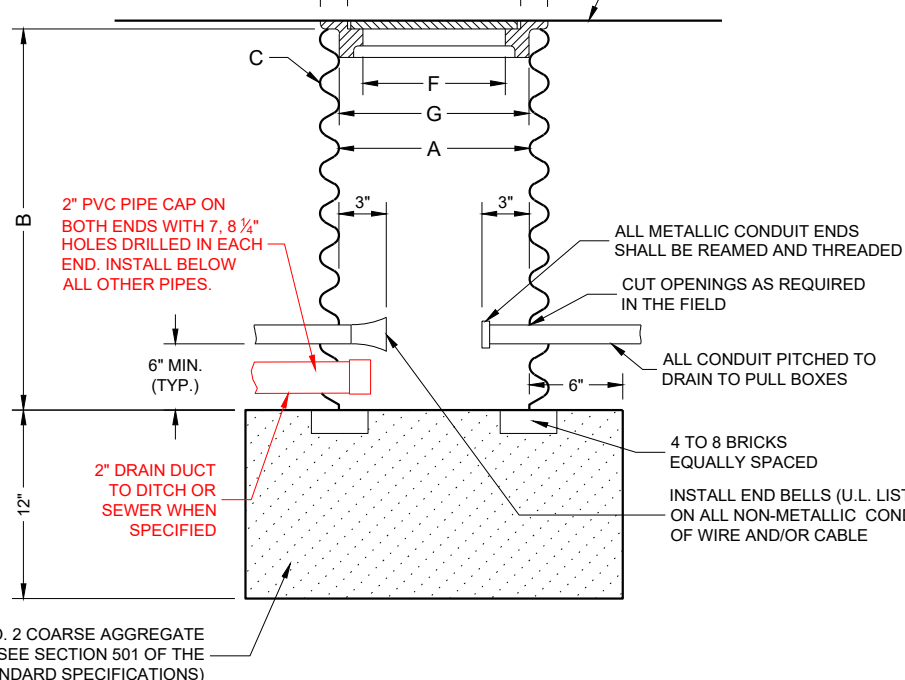
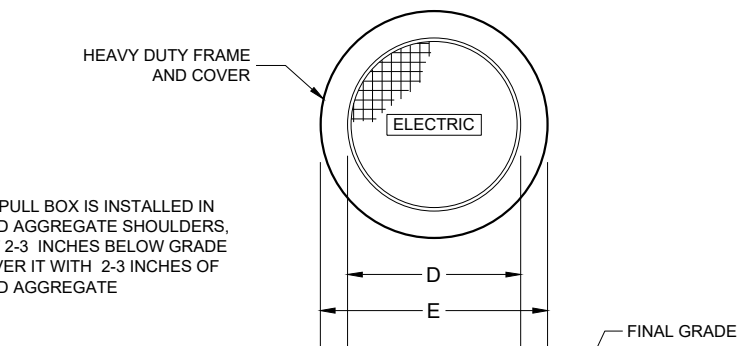
NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE



**EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES**

PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE



**PULL BOX**

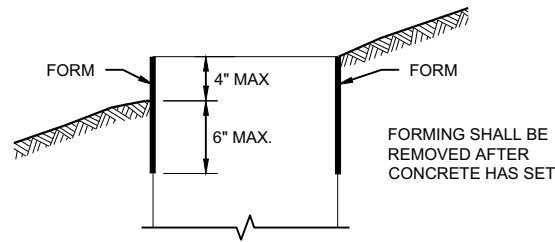
**PULL BOX**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

FHWA

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



**FORMING DETAIL**

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
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 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.

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

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X 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 NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

WHEN REQUIRED TO CONNECT NON-METALLIC 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, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES 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 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

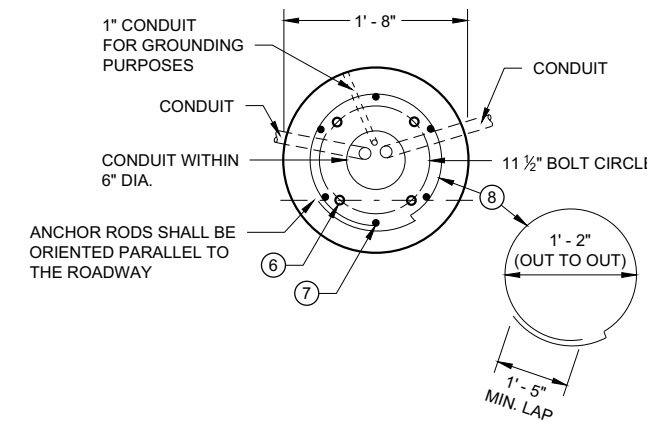
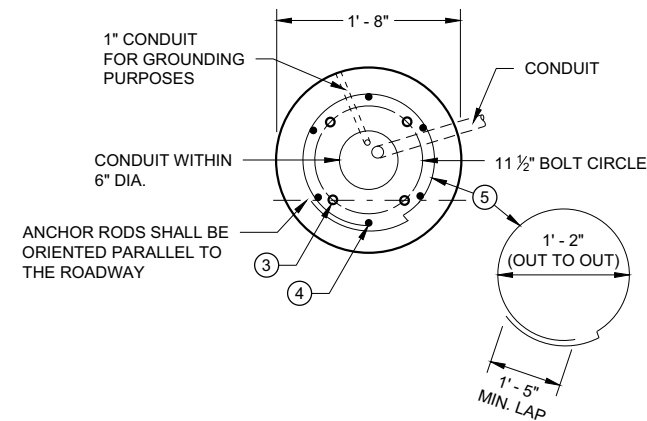
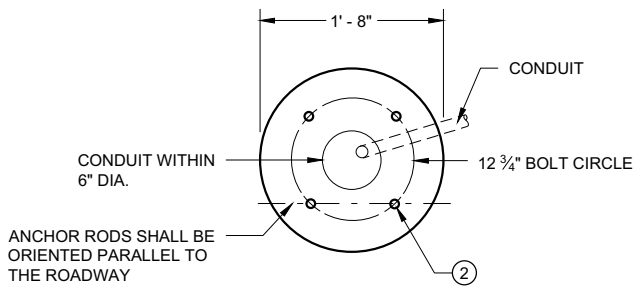
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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

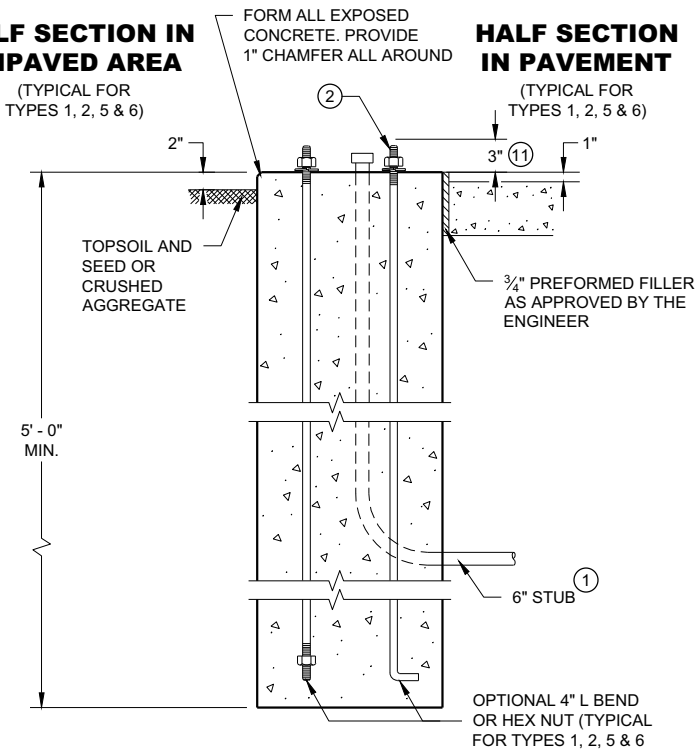
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

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 OF 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.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ 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.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

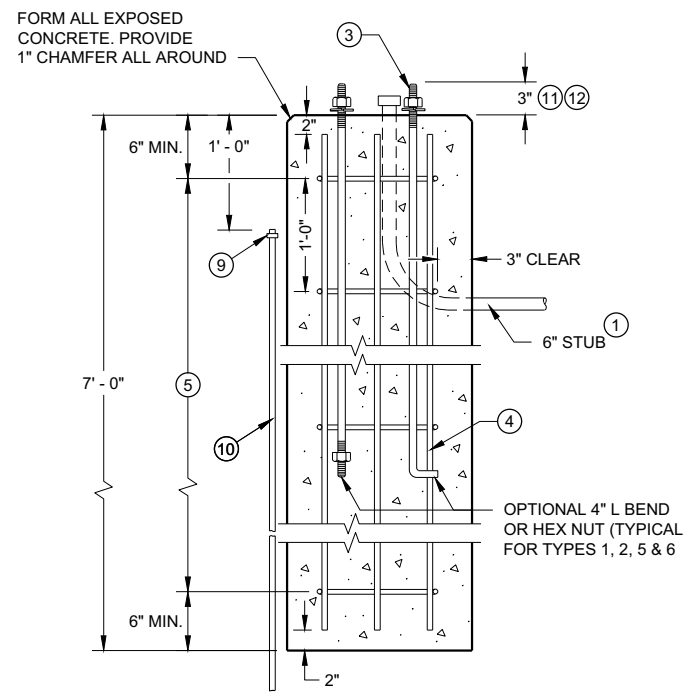


**HALF SECTION IN UNPAVED AREA**

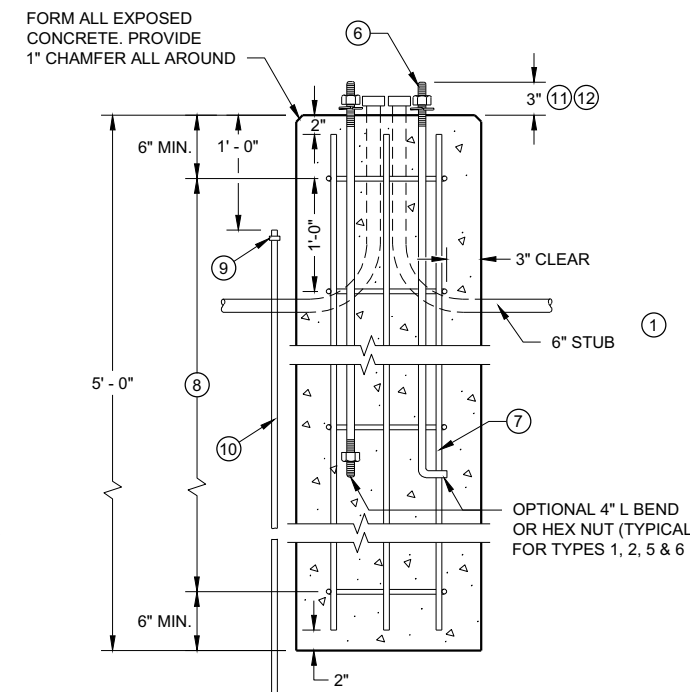


**TYPE 1**

**HALF SECTION IN PAVEMENT**



**TYPE 2**



**TYPE 5 & 6**

**CONCRETE BASES**

**CONCRETE BASES  
TYPES 1, 2, 5, & 6**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

FHWA

**GENERAL NOTES**

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

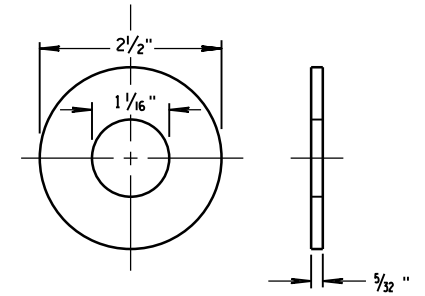
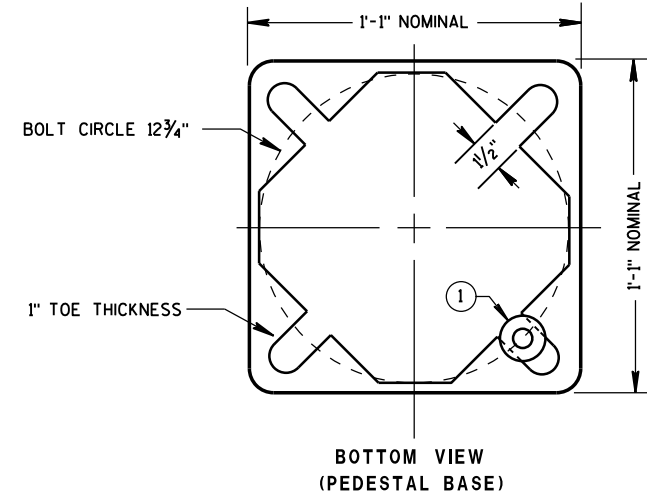
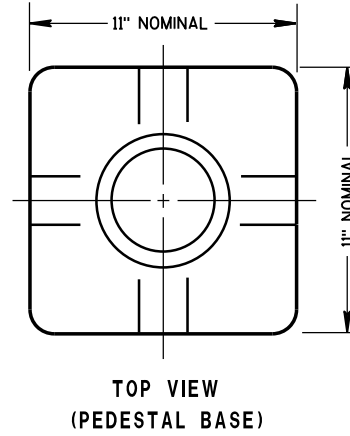
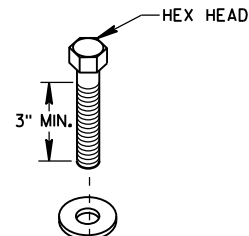
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

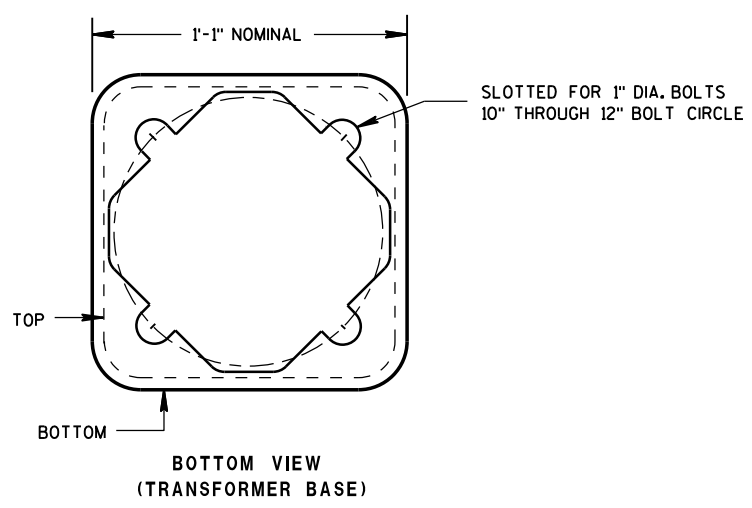
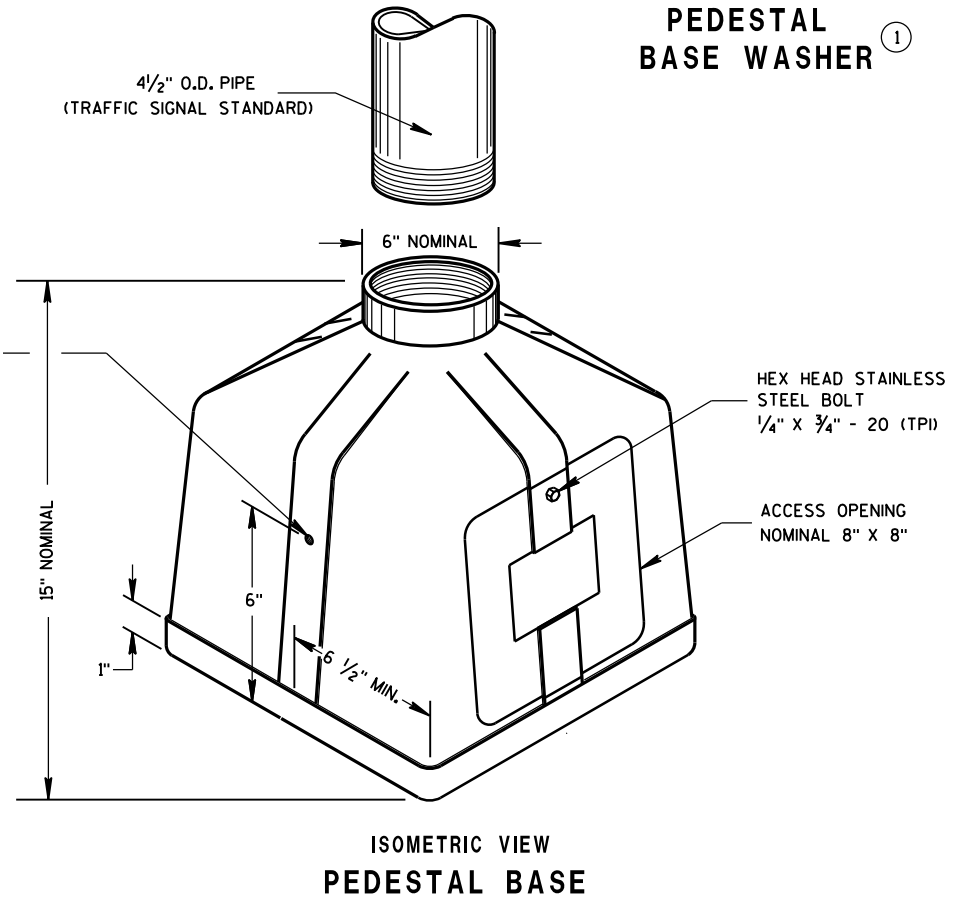
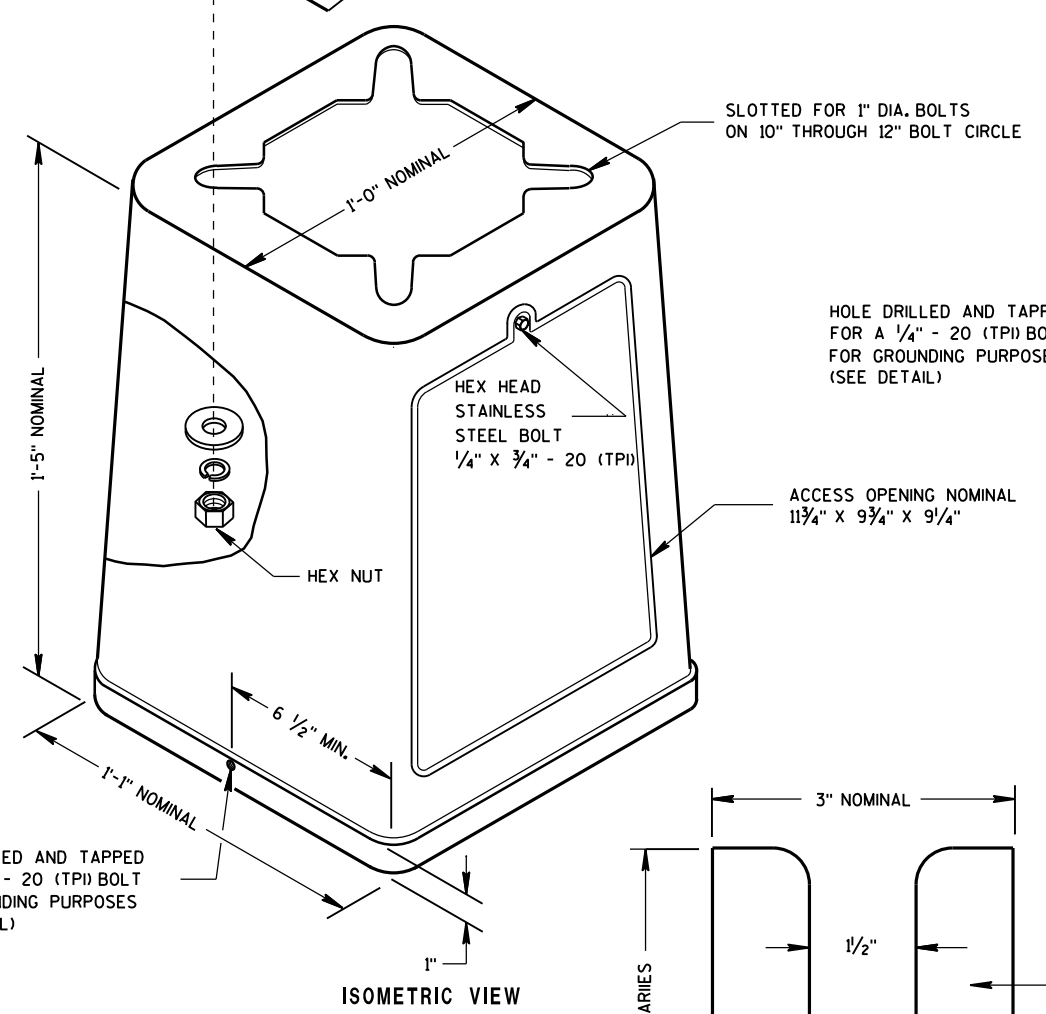
PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

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

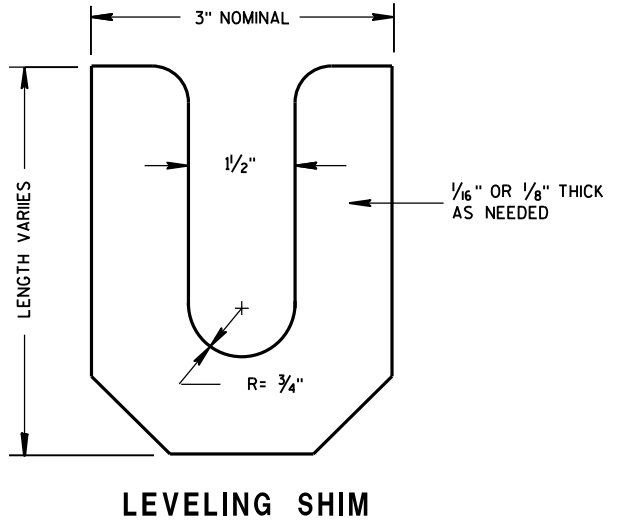
THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



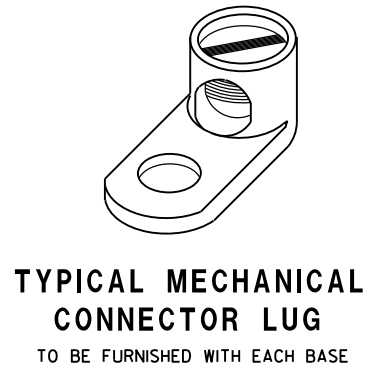
ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR  
**PEDESTAL BASE WASHER** ①



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



**LEVELING SHIM**



**TYPICAL MECHANICAL CONNECTOR LUG**  
TO BE FURNISHED WITH EACH BASE

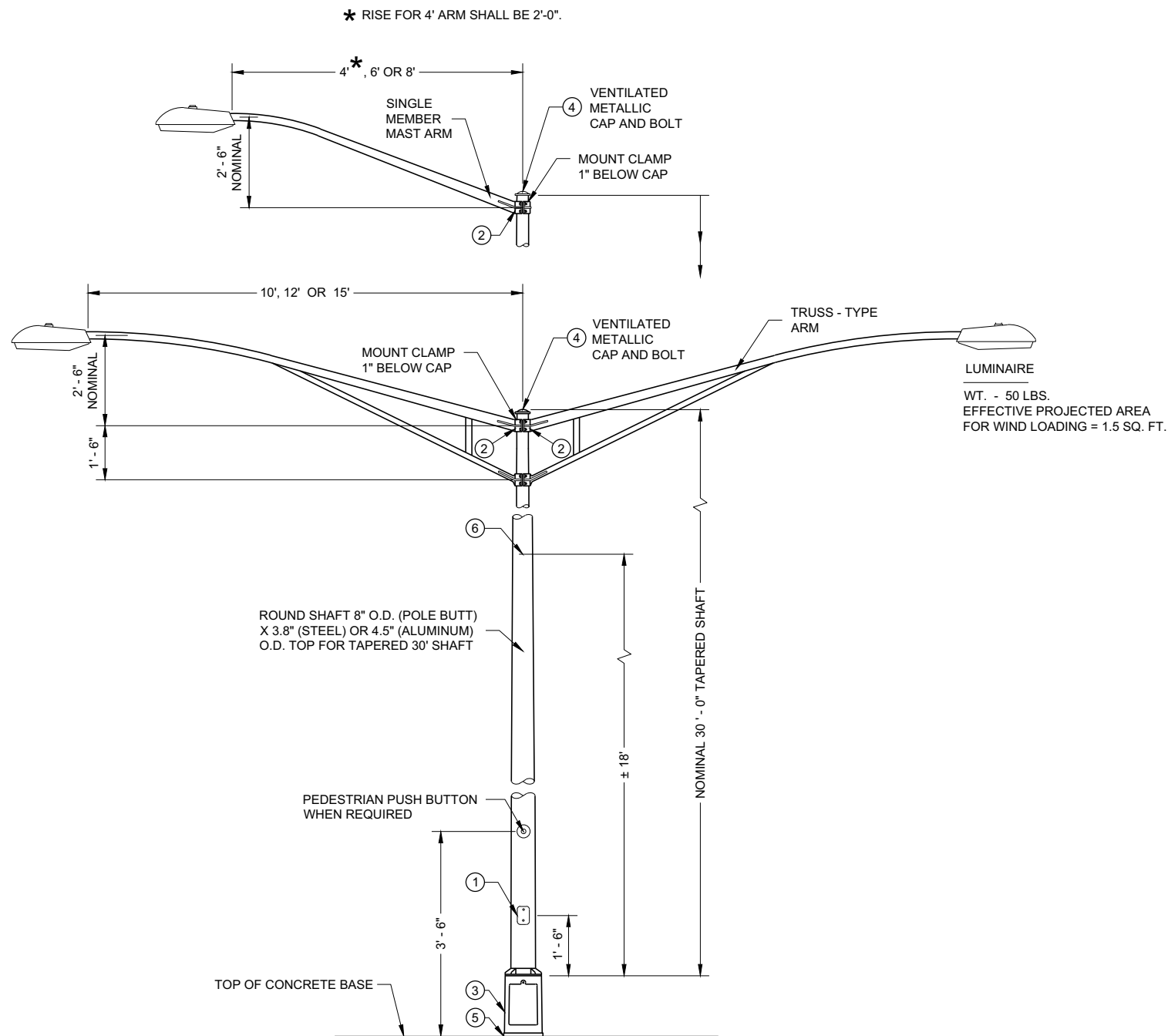
<b>TRANSFORMER/PEDESTAL BASES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4



**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.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

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.

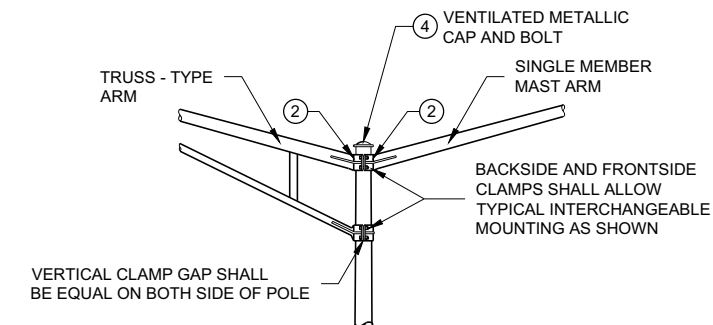
TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST 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 AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 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) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.

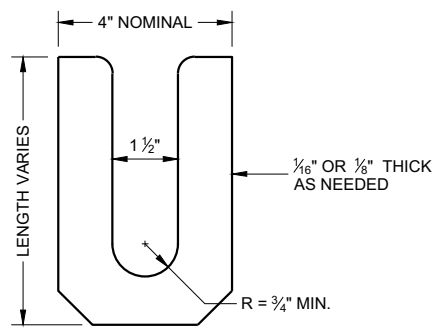


**INTERCHANGEABLE MOUNTING DETAIL**

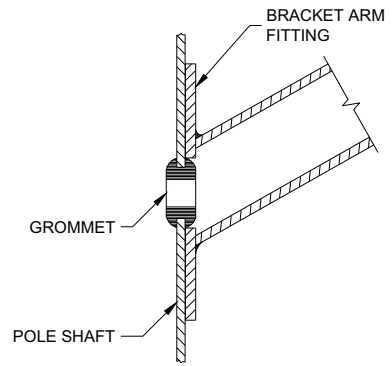
**POLE MOUNTINGS FOR  
LIGHTING UNITS, TYPE 5  
( 30 FEET )**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

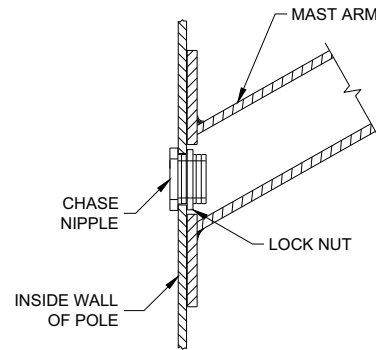




**LEVELING SHIM**  
SHALL BE ALUMINUM



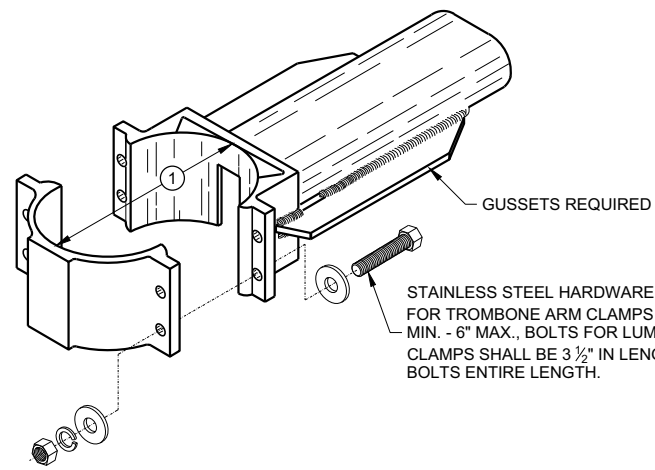
**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



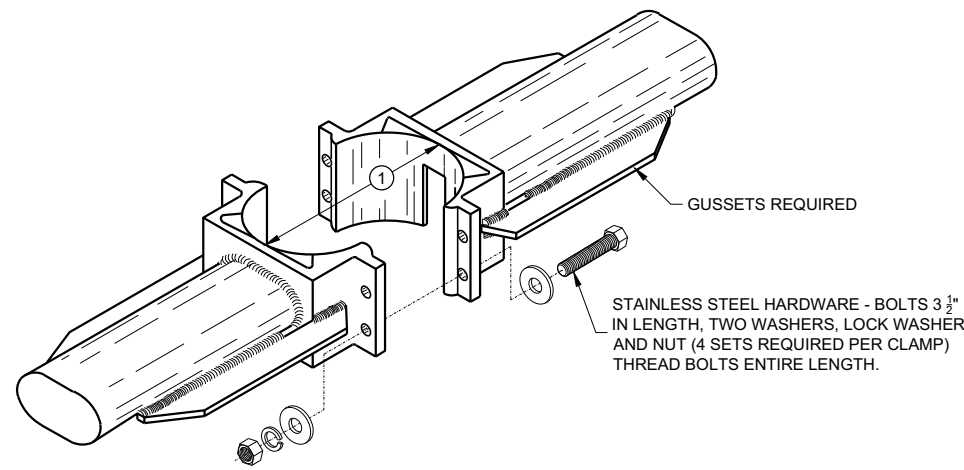
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

**GENERAL NOTES**

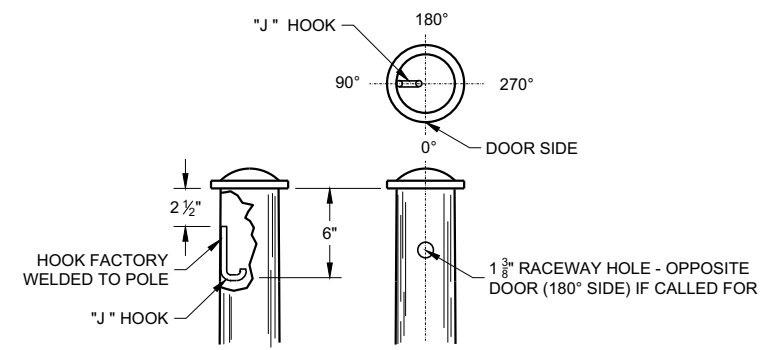
- CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.
- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
  - ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
  - ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
  - ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.
- SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



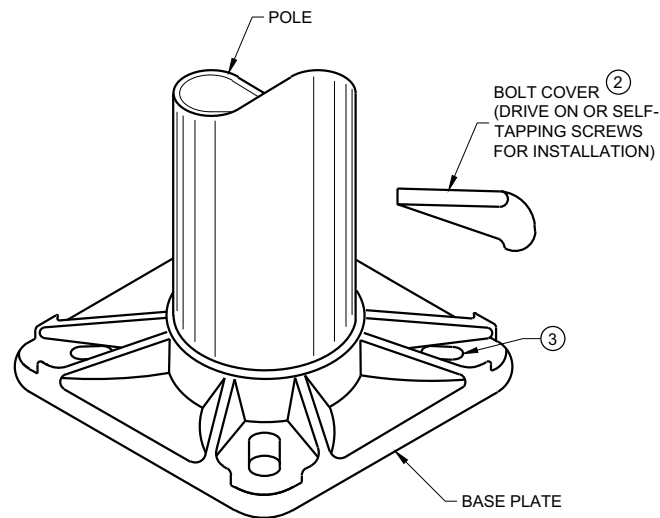
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



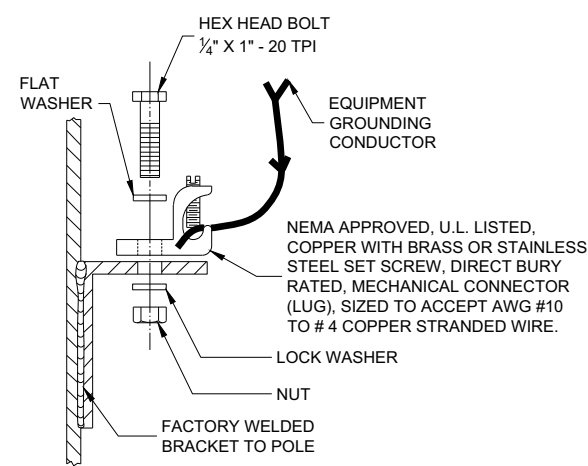
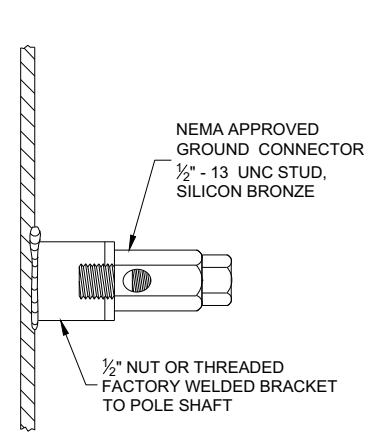
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



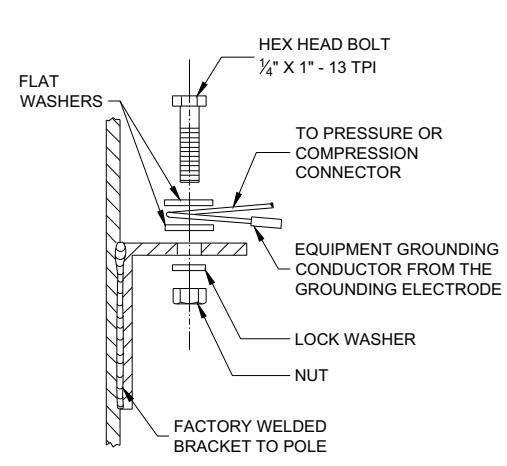
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



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



**HARDWARE DETAILS FOR POLE MOUNTING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

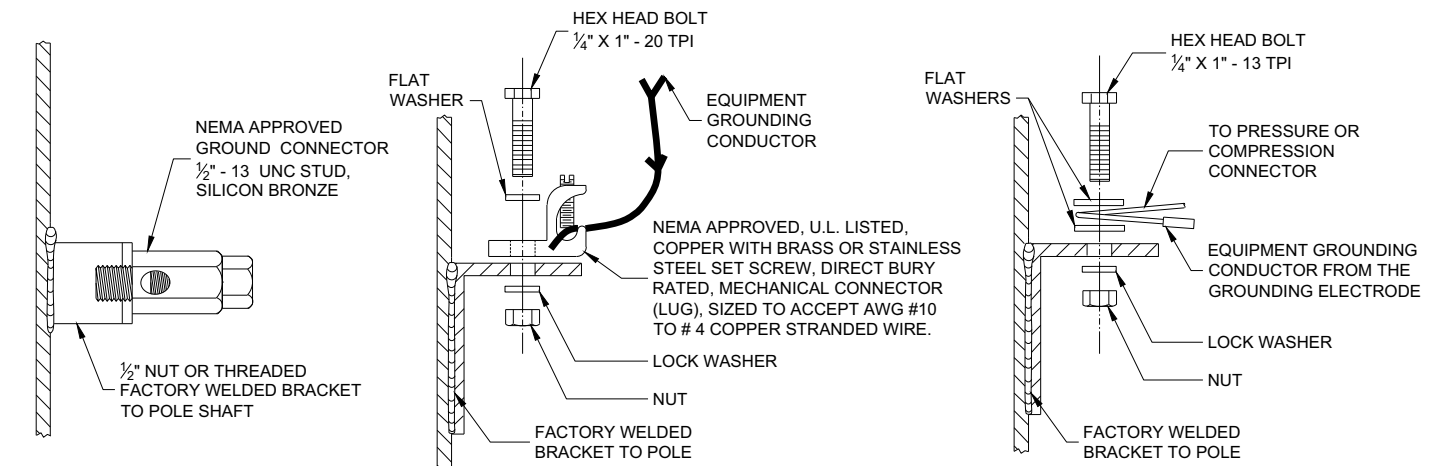
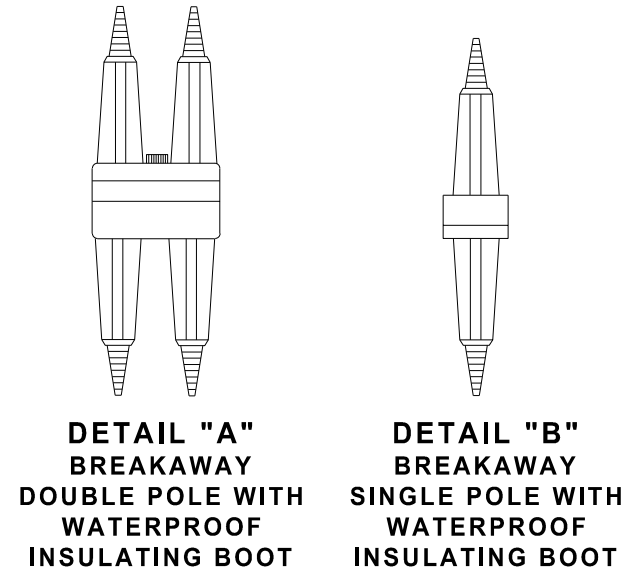
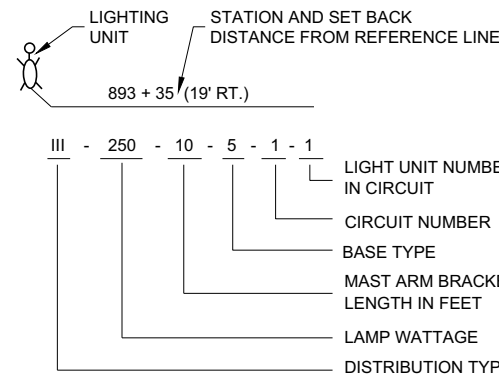
APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

**GENERAL NOTES**

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

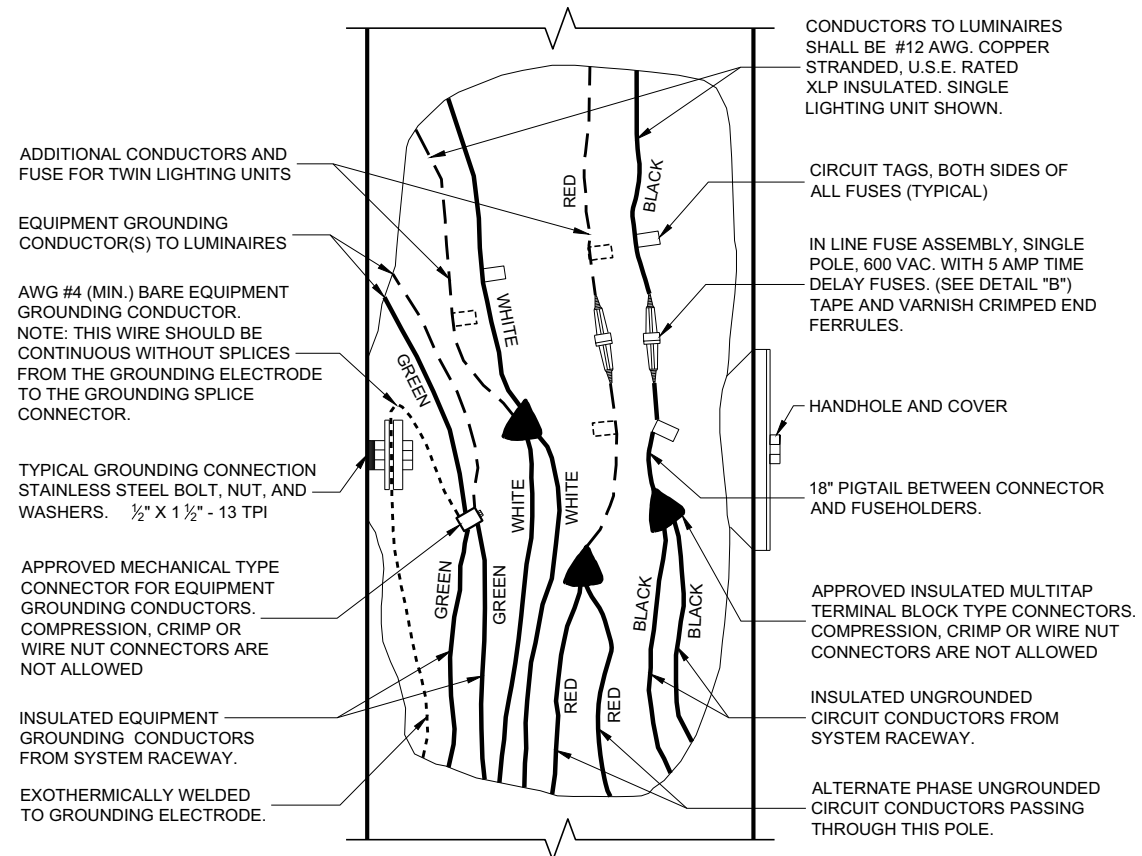
THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

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

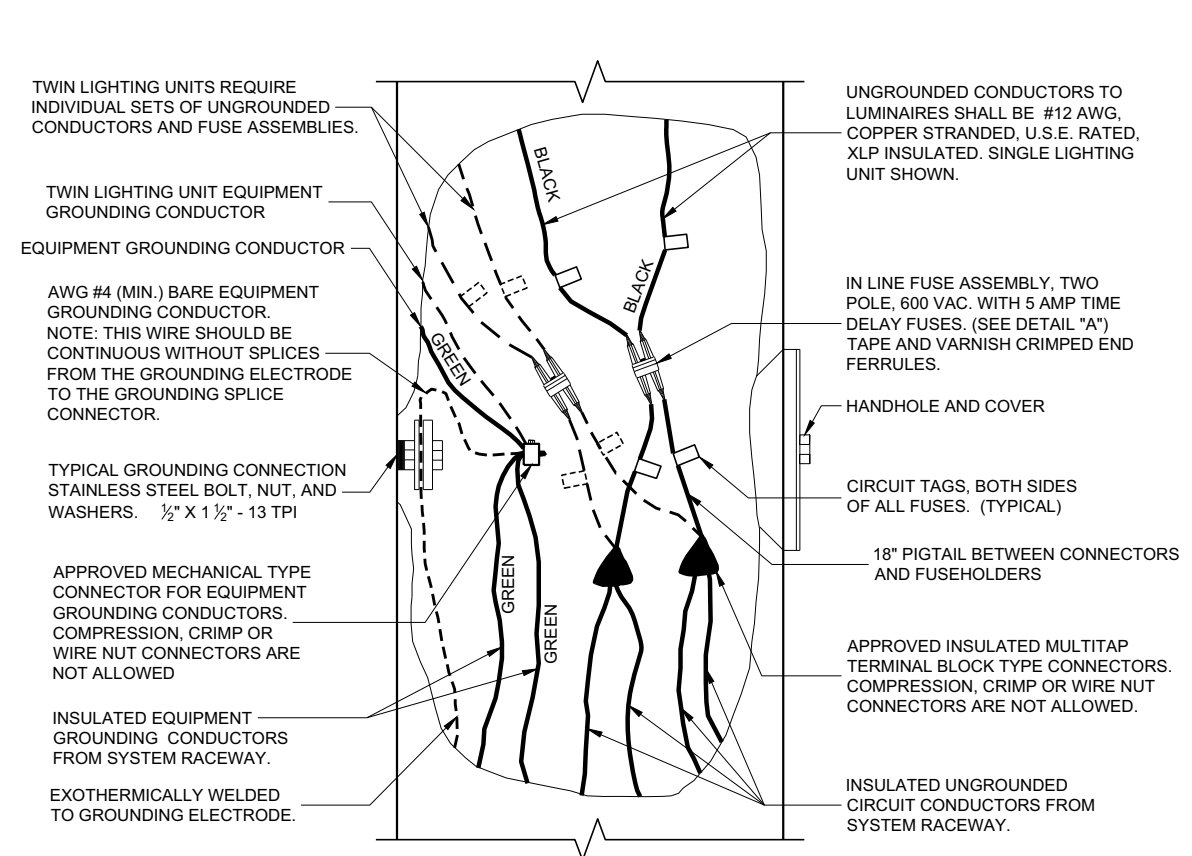


**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**LIGHTING UNIT CODE (TYPICAL)**



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



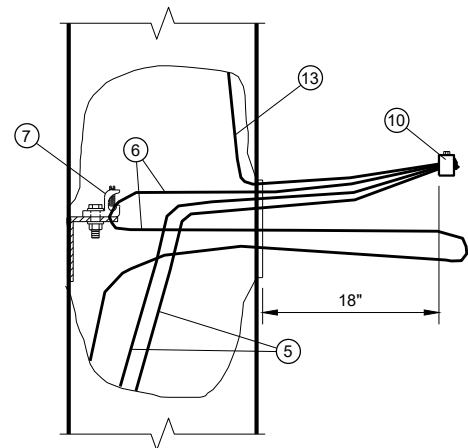
**2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR**

**NON - FREEWAY LIGHTING UNIT POLE WIRING**

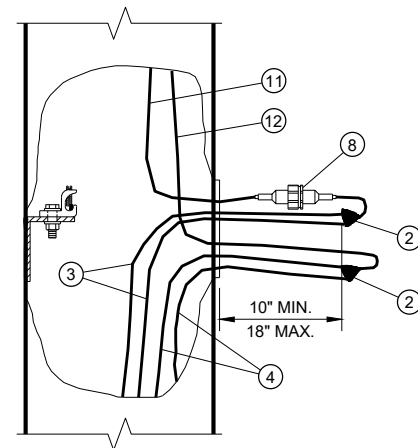
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirelek  
DATE STATE ELECTRICAL ENGINEER

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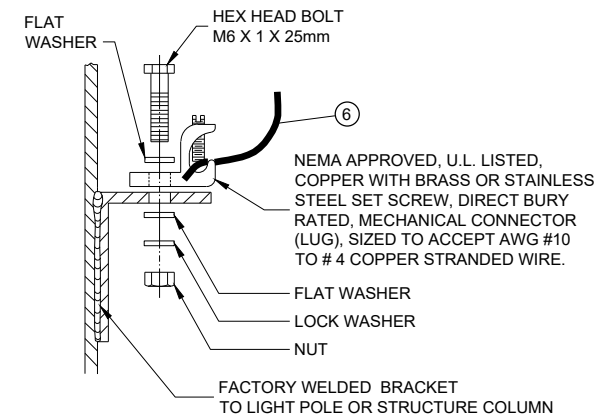


**EQUIPMENT GROUNDING CONDUCTOR SLACK**



**UNGROUND CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)**

**TYPICAL CONDUCTOR SLACK AT HANDHOLES**



**HANDHOLE GROUNDING LUG**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**GENERAL NOTES**

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

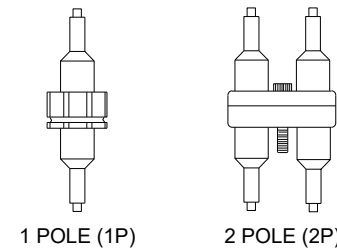
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.

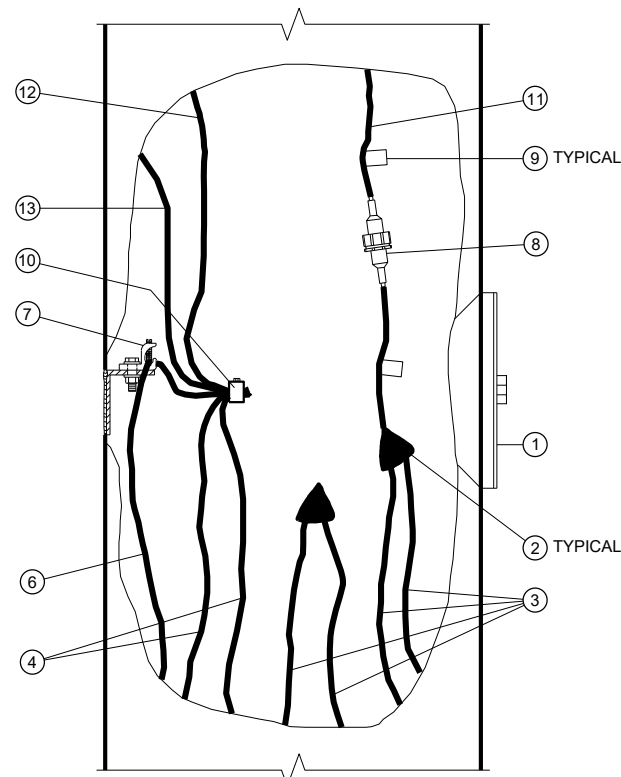


**FUSE ASSEMBLIES**

**CONDUCTOR COLOR CODES**

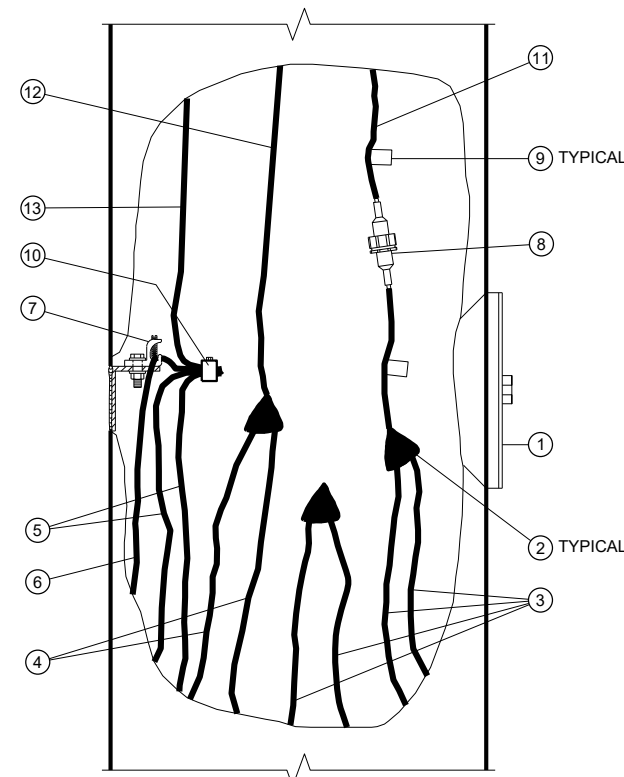
KEY	CONDUCTOR	COLOR
3	UNGROUND LINE WIRE	* WHITE
4	GROUNDED LINE WIRE	GREEN
5	SYSTEM GROUNDING LINE WIRE	BARE
6	GROUNDING ELECTRODE CONDUCTOR	* WHITE
11	UNGROUND POLE WIRE	* WHITE
12	GROUNDED POLE WIRE	GREEN
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

\* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



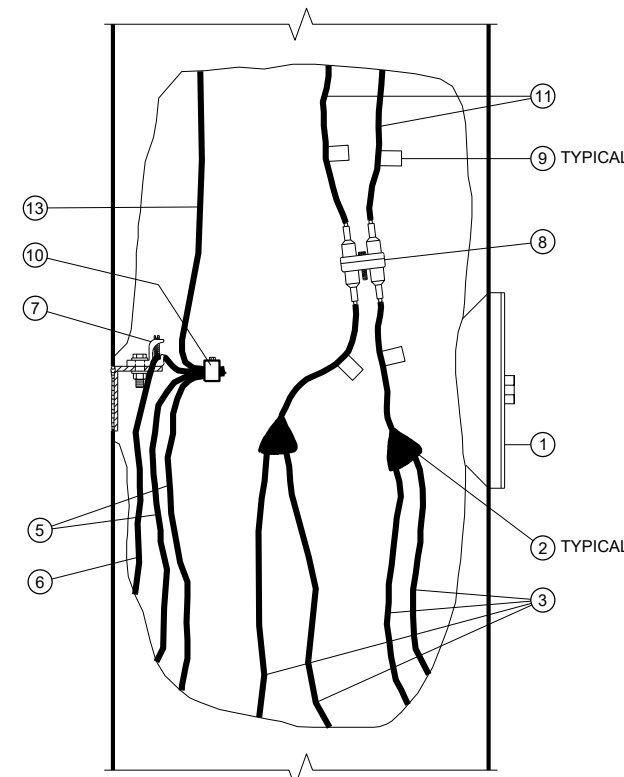
**CUTAWAY HANDHOLE DETAIL**

GROUNDED NEUTRAL SYSTEMS  
1- $\phi$



**CUTAWAY HANDHOLE DETAIL**

ISOLATED NEUTRAL SYSTEMS  
1- $\phi$  SHOWN; 3- $\phi$  WYE SIMILAR  
(SEE GENERAL NOTE)



**CUTAWAY HANDHOLE DETAIL**

PHASE TO PHASE SYSTEMS  
1- $\phi$  SHOWN; 3- $\phi$  DELTA SIMILAR  
(SEE GENERAL NOTE)

- ① HANDHOLE AND COVER
- ② INSULATED SPLICE
- ③ UNGROUNDED LINE WIRE
- ④ GROUNDED LINE WIRE
- ⑤ SYSTEM GROUNDING LINE WIRE
- ⑥ GROUNDING ELECTRODE CONDUCTOR
- ⑦ HANDHOLE GROUNDING LUG
- ⑧ FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
- ⑨ CIRCUIT TAG (SEE GENERAL NOTE)
- ⑩ REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
- ⑪ UNGROUNDED POLE WIRE
- ⑫ GROUNDED POLE WIRE
- ⑬ EQUIPMENT GROUNDING POLE WIRE

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

**ELECTRICAL HANDHOLE WIRING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

FHWA

## GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING, SDD10A01.


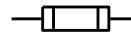
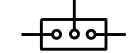
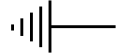
USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

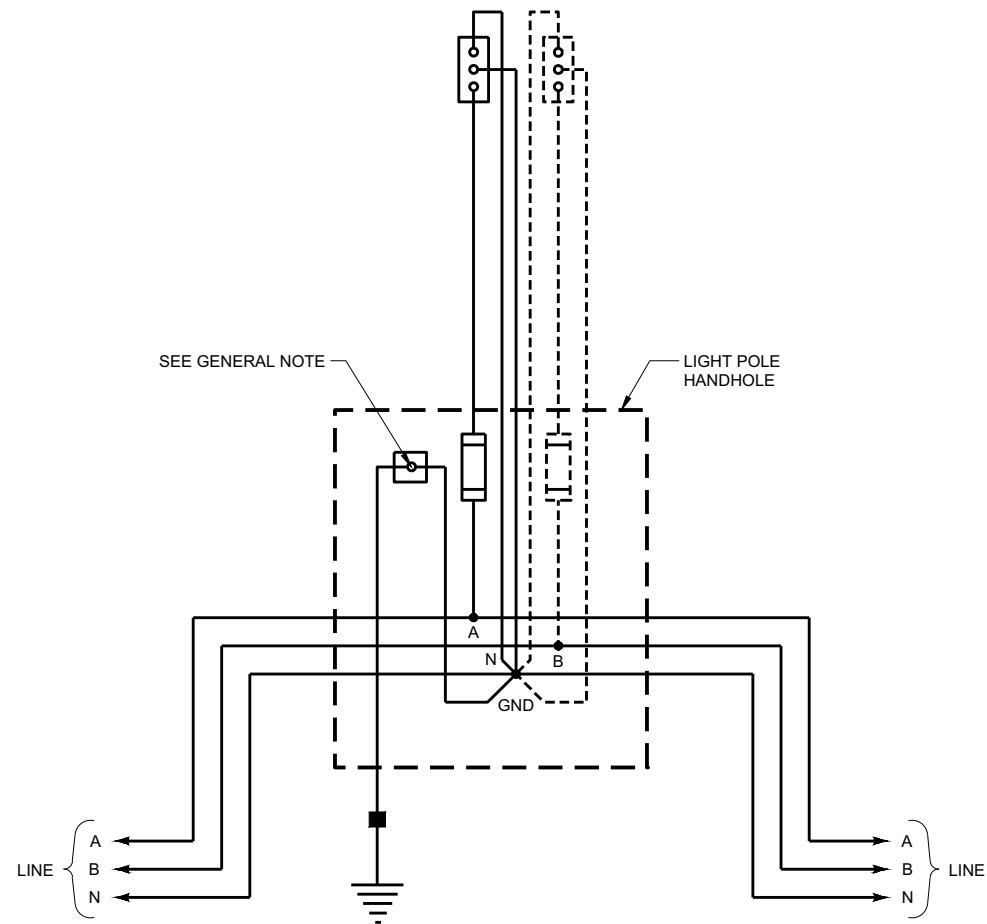
THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLD GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

## LEGEND

A,B,X,Y,Z	UNGROUNDING CIRCUIT CONDUCTORS
N	GROUNDING CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
$\phi$	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
○	TERMINAL
●	SPLICE
—	CONDUCTOR
■	EXOTHERMIC WELD



### TYPICAL WIRING DIAGRAM

GROUNDING NEUTRAL SYSTEM  
1 -  $\phi$  240 / 480VAC 3 WIRE OR 480VAC 2 WIRE

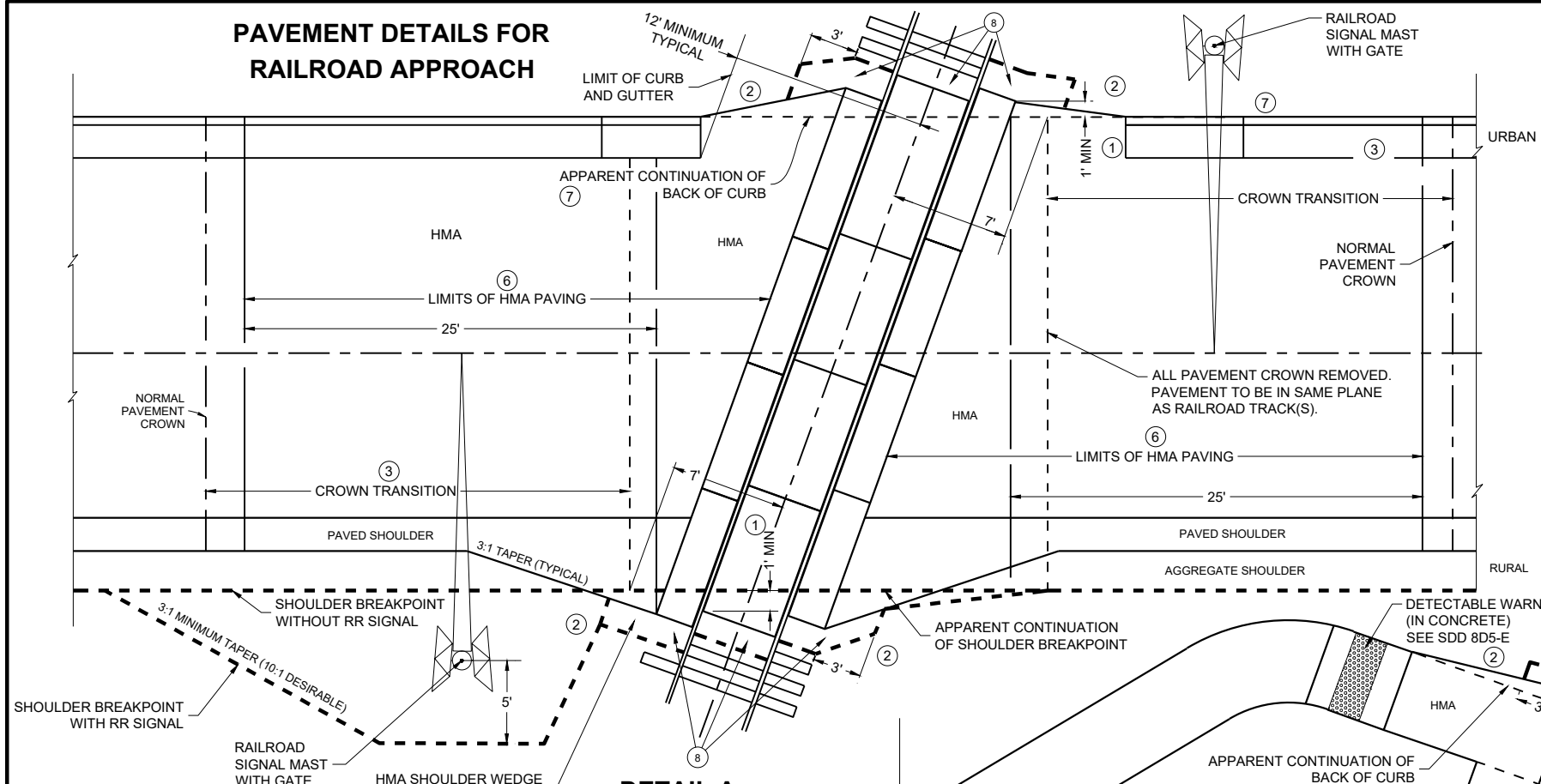
### ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES GROUNDING NEUTRAL SYSTEM

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER

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**PAVEMENT DETAILS FOR RAILROAD APPROACH**



**DETAIL A  
RAILROAD APPROACH**

**GENERAL NOTES**

PLANS AND SECTIONS ARE TYPICAL. DIMENSIONS VARY PER PROJECT.

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

CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS DIRECTED OTHERWISE. IF THE FINAL GRADES DON'T MATCH TO THE PLAN GRADES THEN GRADE ADJUSTMENTS WILL BE NECESSARY. CONFIRM NEW GRADES WITH PROJECT ENGINEER.

HMA PAVEMENT APPROACHES, HMA PAVEMENT CROSSING SURFACES, AND HMA FLANGWAY/FIELD FILLERS TO BE REPLACED BY ROADWAY CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE PLANS, SPECIAL PROVISIONS, RAILROAD ENGINEER, OR PROJECT ENGINEER.

HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

WHEN THERE IS A SIDEWALK OR SHARED-USE PATH, ADD DETECTABLE WARNING FIELDS PER CURRENT STANDARD DETAIL DRAWING 8D5-E.

THE CROSSING SHALL NOT BE OPENED TO ANY TYPE OF TRAFFIC UNTIL IT IS FULLY PAVED AND COOLED SUFFICIENTLY UNLESS OTHERWISE APPROVED BY THE RAILROAD ENGINEER AND THE PROJECT ENGINEER.

NO NON-RUBBER TIRED OR TRACKED EQUIPMENT SHALL CROSS OR SIT ON THE CROSSING SURFACE WITHOUT PROTECTING THE CROSSING SURFACE WITH A METHOD APPROVED BY THE RAILROAD ENGINEER AND PROJECT ENGINEER.

PLACE BASE AGGREGATE DENSELY AROUND SIGNAL BASE. COORDINATE WITH THE RAILROAD ENGINEER.

HMA SHOULDER WEDGE TO END OF CROSSING  
DETECTABLE WARNING FIELD (IN CONCRETE) SEE SDD 8D5-E

15' MIN TYPICAL TO TRACK CENTERLINE  
CONCRETE OR HMA PAVEMENT

DETECTABLE WARNING FIELD (IN CONCRETE) SEE SDD 8D5-E

RAILROAD SIGNAL MAST WITH GATE

RAILROAD SIGNAL MAST WITH GATE

RAILROAD SIGNAL MAST WITH GATE

RAILROAD SIGNAL MAST WITH GATE

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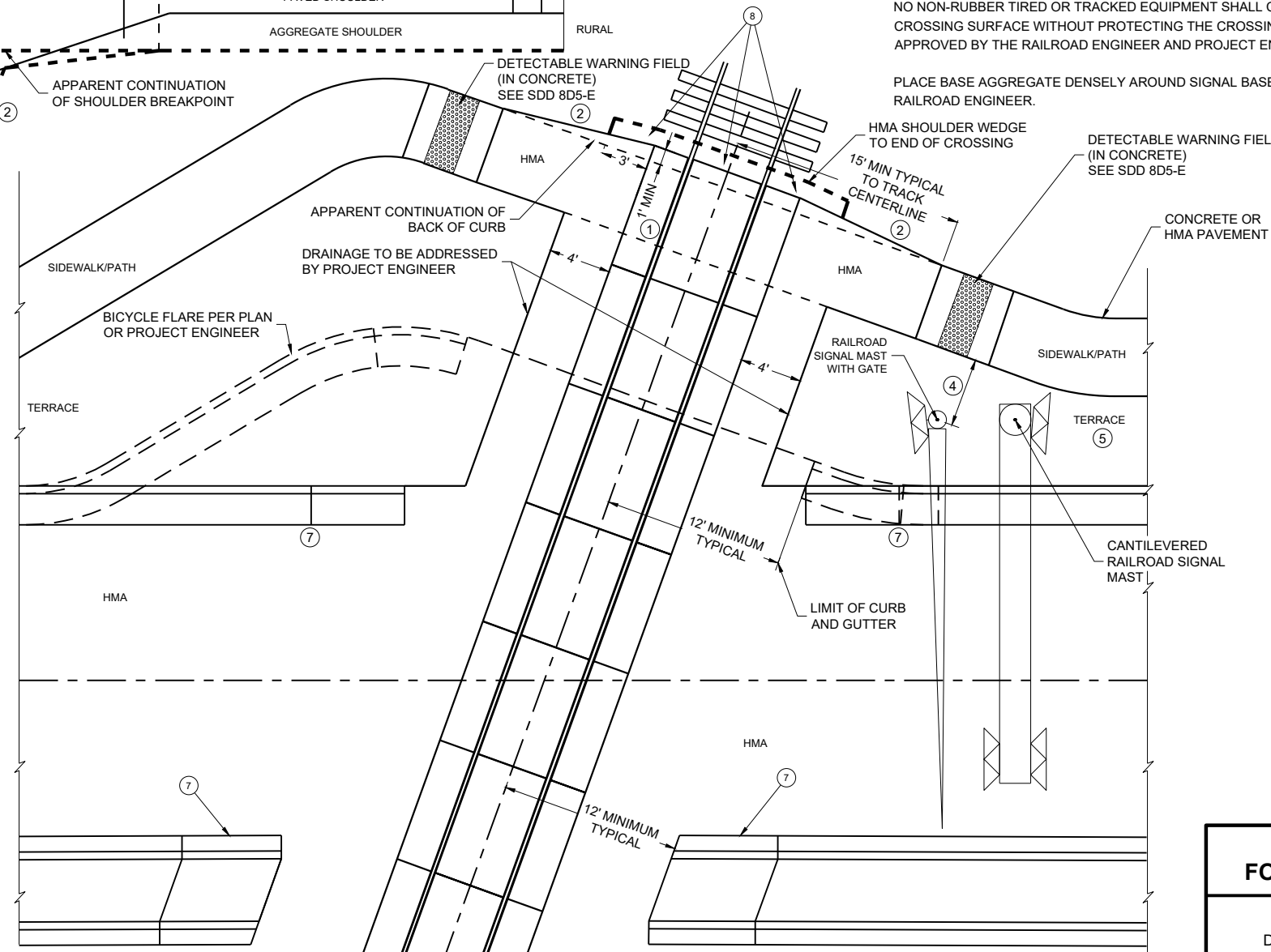
RAILROAD SIGNAL MAST WITH GATE

6

6

**GENERAL NOTES CONTINUED**

- ① 1' MINIMUM CROSSING SURFACE COVERAGE PAST THE APPARENT CONTINUATION OF SHOULDER BREAKPOINT, BACK OF CURB, OR OUTSIDE EDGE OF SIDEWALK/PATH. INDIVIDUAL RAILROADS MAY HAVE DIFFERENT MINIMUM STANDARDS.
- ② HMA FLARE FROM OUTSIDE EDGE OF SIDEWALK/PATH, BACK OF CURB, OR AGGREGATE SHOULDER BREAKPOINT TO THE END OF CROSSING SURFACE MATERIAL.
- ③ CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.
- ④ NEAR EDGE OF PATH TO THE CENTER OF SIGNAL OR GATE MAST SHOULD BE A MINIMUM OF 5'-0". FOR SIDEWALK, THE NEAR EDGE SHOULD BE A MINIMUM OF 3'-0" TO THE CENTER OF SIGNAL OR GATE. NEAR EDGE OF SIDEWALK TO A NON-GATED MAST OR CANTILEVER SHOULD BE A MINIMUM OF 2'-6". SEE PLAN FOR RAILROAD SIGNAL AND GATE LOCATION IF THEY ARE NOT ALREADY INSTALLED.
- ⑤ TERRACE WIDTH VARIES. SEE PLAN FOR RAILROAD SIGNAL AND GATE LOCATIONS. PER PLAN OR PROJECT ENGINEER THE TERRACE AND SIDEWALK/PATH GRADES SHALL BE TRANSITIONED TO MATCH THE GRADE OF THE TRACK. FIELD FIT TO AVOID PONDING.
- ⑥ 25' MINIMUM HMA PAVING MEASURED PARALLEL TO THE ROAD OR 10' MINIMUM MEASURED PERPENDICULAR TO THE TRACK FROM THE EDGE OF THE CROSSING SURFACE, WHICHEVER IS GREATER.
- ⑦ REFERENCE SDD 8-D-01 END SECTION CURB AND GUTTER. MEDIAN END NEAR THE TRACK SHOULD BE PARALLEL TO THE TRACK. 6'-0" TAPER FOR A MEDIAN SHOULD BE REDUCED TO GET FULL HEIGHT CURB WHERE THE GATE COMES DOWN. DESIGN OPTION TO POUR MEDIAN TAPER IN ONE PIECE. BUILD PER PLAN UNLESS OTHERWISE APPROVED BY THE RAILROAD ENGINEER AND THE PROJECT ENGINEER.
- ⑧ IF METAL END PLATES ARE NOT INSTALLED BY THE RAILROAD THEN HMA PAVEMENT WEDGE SHALL BE PLACED AT THE END OF THE LAST PANEL TAPERED TO BACK EDGE OF NEXT TIE AND THOROUGHLY COMPACTED. SEE DETAIL G.



**DETAIL B  
MEDIAN AND SIDEWALK/SHARED-USE PATH APPROACH**

**PAVEMENT DETAILS FOR RAILROAD APPROACH**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023  
DATE

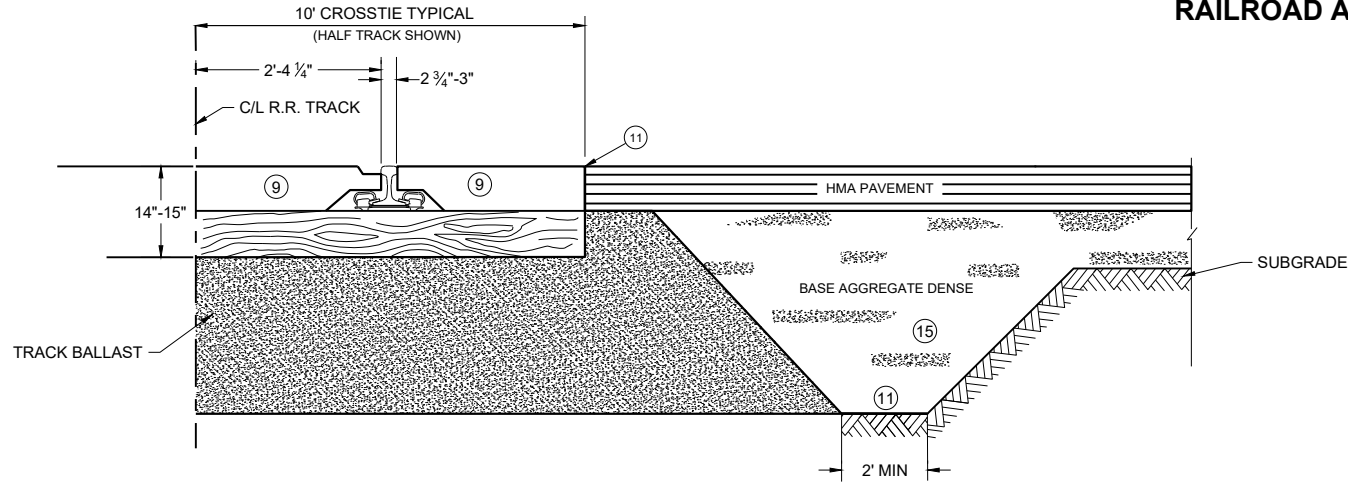
/s/ Kristen Sommers  
STATE RAILROAD ENGINEERING  
AND SAFETY SUPERVISOR

FHWA

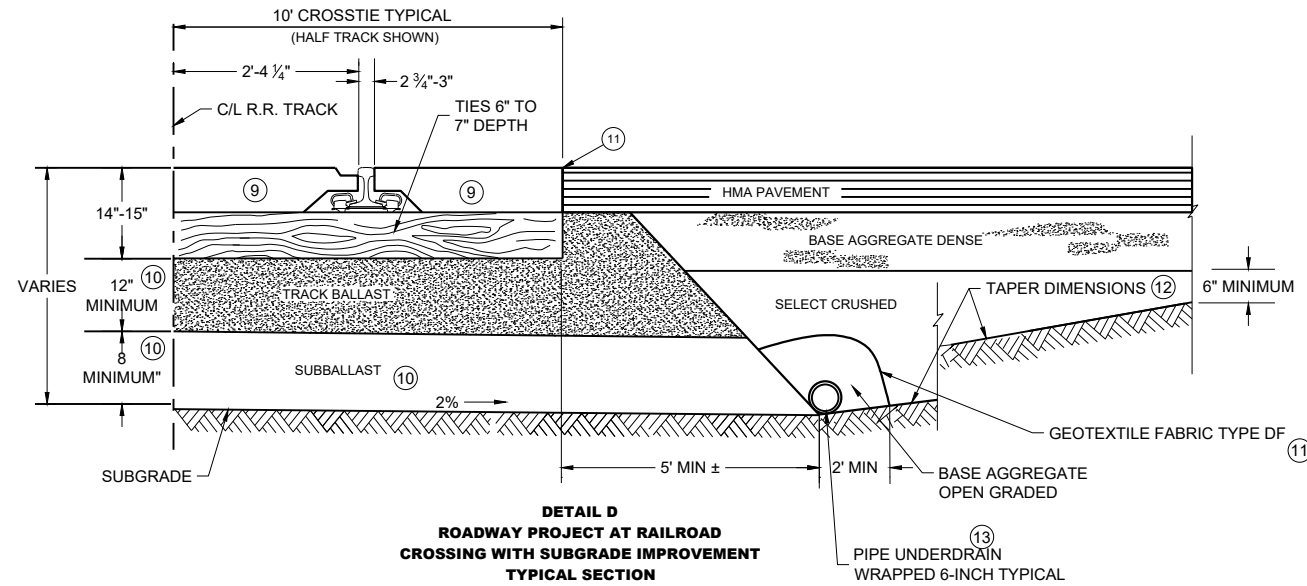
SDD 13B01-11a

SDD 13B01-11a

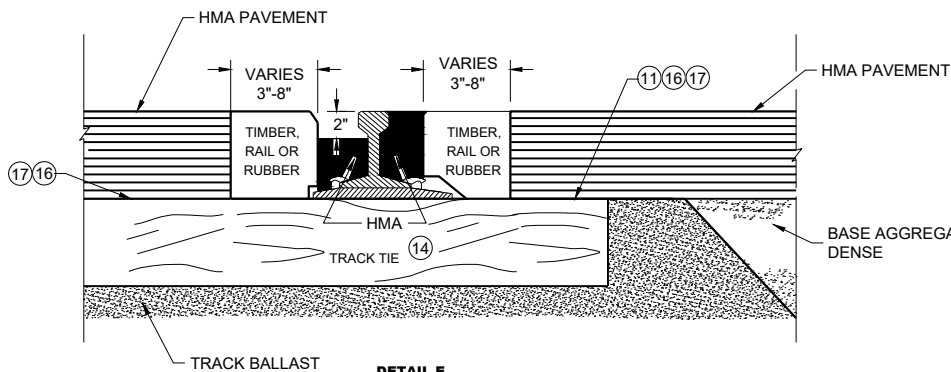
**TYPICAL SECTIONS FOR RAILROAD APPROACH**



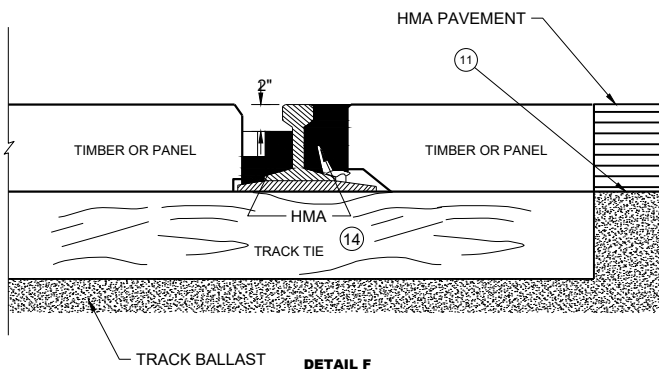
**DETAIL C  
ROADWAY PROJECT AT RAILROAD  
CROSSING WITHOUT SUBGRADE IMPROVEMENT  
TYPICAL SECTION**



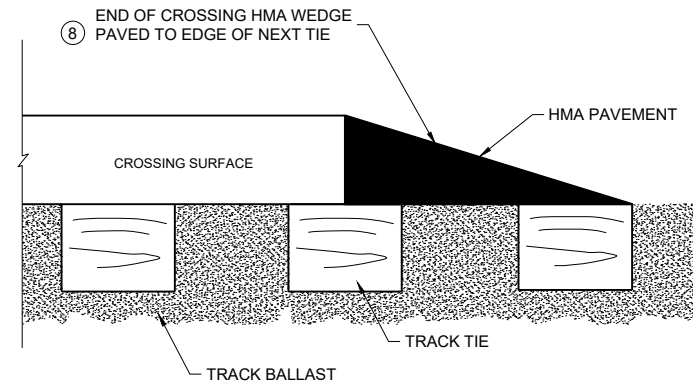
**DETAIL D  
ROADWAY PROJECT AT RAILROAD  
CROSSING WITH SUBGRADE IMPROVEMENT  
TYPICAL SECTION**



**DETAIL E  
TIMBER, RAIL OR  
RUBBER SECTION  
HMA FLANGEWAY  
AND FIELD FILLERS**



**DETAIL F  
PANEL SECTION  
HMA FLANGEWAY  
AND FIELD FILLERS**



**DETAIL G  
END OF CROSSING HMA WEDGE**

**GENERAL NOTES**

- ⑧ IF METAL END PLATES ARE NOT INSTALLED BY THE RAILROAD THEN HMA PAVEMENT WEDGE SHALL BE PLACED AT THE END OF THE LAST PANEL TAPERED TO BACK EDGE OF NEXT TIE AND THOROUGHLY COMPACTED. SEE DETAIL A AND B.
- ⑨ MATCH THE CROSSING TYPE THAT IS INSTALLED UNLESS OTHERWISE DIRECTED BY PROJECT ENGINEER.
- ⑩ TRACK BALLAST AND SUBBALLAST REQUIRED 12" AND 8" MINIMUM DEPTHS RESPECTIVELY. DIMENSION FROM BOTTOM OF TRACK TIE TO HIGH SIDE OF 2% SLOPE. THE 2% SLOPE IS REQUIRED ON RAILROAD SUBBALLAST. SEE PLAN FOR CROWN, MATERIAL THICKNESS, AND SLOPE DIRECTION. SUBBALLAST CAN BE HMA, 1 1/2" BASE AGGREGATE DENSE, SELECT CRUSHED, OR A COMBINATION OF THEM.
- ⑪ GEOTEXTILE FABRIC TYPE SAS PLACED IN ORDER TO PROVIDE STABILIZATION AND SEPARATION ON TOP OF THE TRACK BALLAST WHERE IT IS UNDER HMA PAVEMENT, BASE AGGREGATE DENSE OR SELECT CRUSHED MATERIAL AND THE FIELD SIDE BALLAST CRIBS. GEOTEXTILE FABRIC TYPE DF PLACED IN ORDER TO PROVIDE STABILIZATION AND SEPARATION UNDER AND AROUND THE PIPE UNDERDRAIN. PLACING GEOTEXTILE FABRIC OR GEOGRID UNDER THE SUBBALLAST IS OPTIONAL.
- ⑫ TAPER DIMENSIONS PROVIDED BY PLAN OR BY PROJECT ENGINEER.
- ⑬ IF SHOWN ON THE PLAN, TYPICAL 6-INCH PERFORATED PVC SCHEDULE 80 PIPE UNDERDRAIN TO BE PLACED ALONG THE TOE OF SLOPE, GRADED TO DRAIN AND DAYLIGHT OR INTO STORM SEWER. BASE AGGREGATE OPEN GRADED OVER PIPE UNDERDRAIN AND THEN WRAPPED IN GEOTEXTILE FABRIC TYPE DF SCHEDULE A IN ORDER TO STABILIZE AND SEPARATE FROM SELECT CRUSHED.
- ⑭ HMA FLANGEWAY AND FIELD FILLERS ARE TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR, WHEN NOT PROVIDED BY OTHERS AS PART OF THE CROSSING SURFACE MATERIAL. IF THE CROSSING SURFACE IS NOT BEING REPLACED, THEN REMOVE AND REPLACE THE HMA FLANGEWAY AND FIELD FILLERS AS DIRECTED BY THE RAILROAD OR PROJECT ENGINEER.
- ⑮ GRADE TO MATCH EXISTING OR PROPOSED TYPICAL SECTION OF ROADWAY. SEE PLAN OR PROJECT ENGINEER FOR MORE DETAIL. IF NOT NOTED OTHERWISE IN THE PLAN, BACKFILL ANY REMOVED BASE AND SUBGRADE WITH BASE AGGREGATE DENSE.
- ⑯ IF THE CROSSING IS NOT BEING REPLACED, REMOVE AND REPLACE HMA AS DIRECTED BY RAILROAD AND PROJECT ENGINEER. CARE MUST BE TAKEN TO NOT DAMAGE CROSSING PANELS, TIES, RAIL, PLATES AND SPIKES.
- ⑰ PLACE HMA FULL DEPTH. AGGREGATE IS NOT TO BE PLACED BETWEEN THE RAILROAD TIES AND THE HMA PAVEMENT.

**TYPICAL SECTIONS FOR RAILWAY APPROACH**

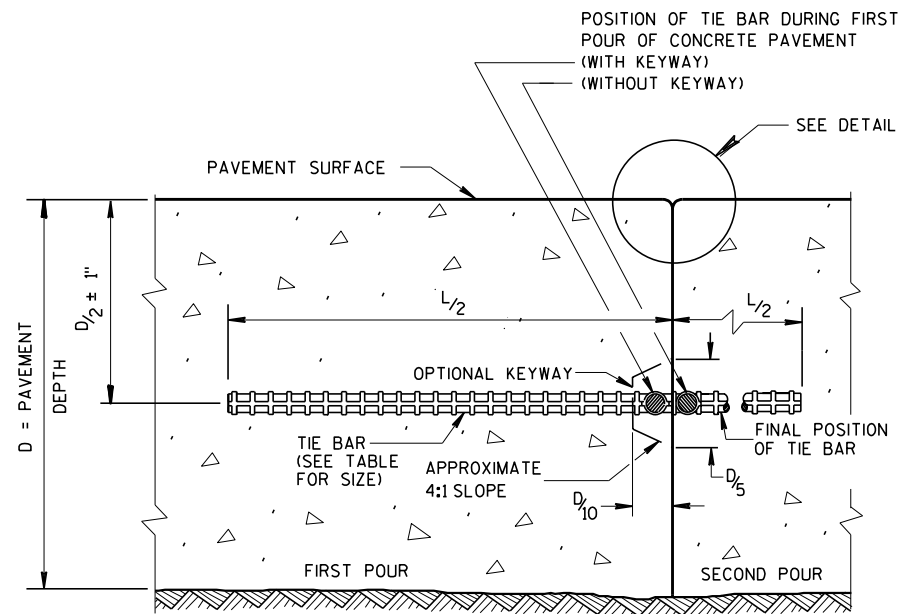
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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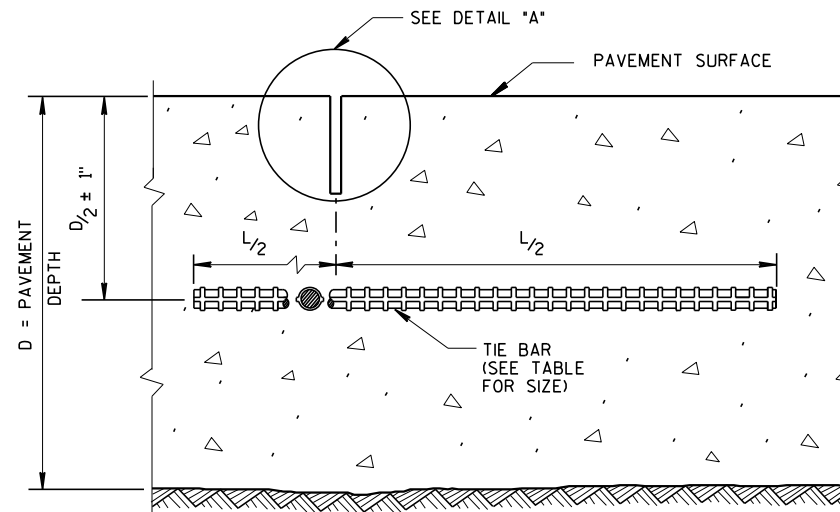
May 2023  
DATE

/s/ Kristen Sommers  
STATE RAILROAD ENGINEERING  
AND SAFETY SUPERVISOR

FHWA



**CONSTRUCTION JOINT**



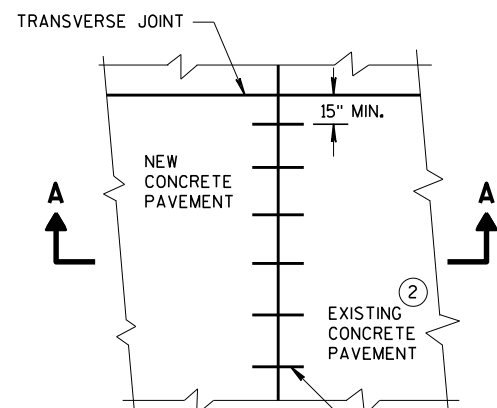
**SAWED JOINT**

**GENERAL NOTES**

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

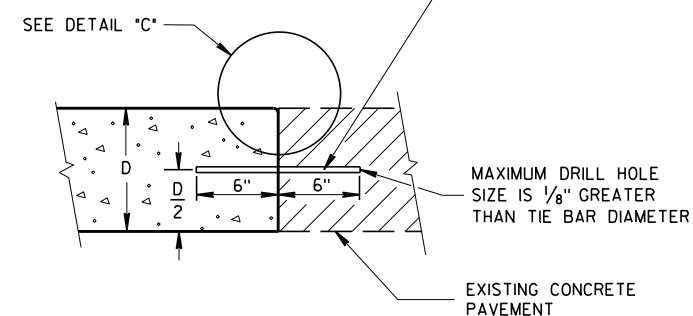
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

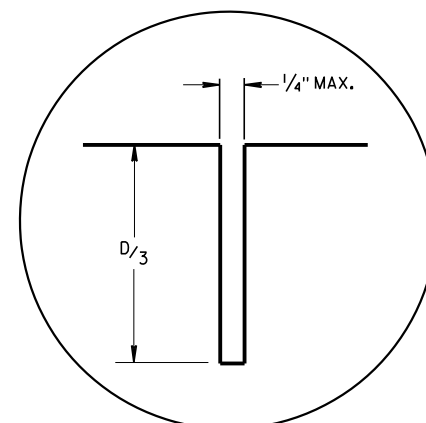


**PLAN VIEW**

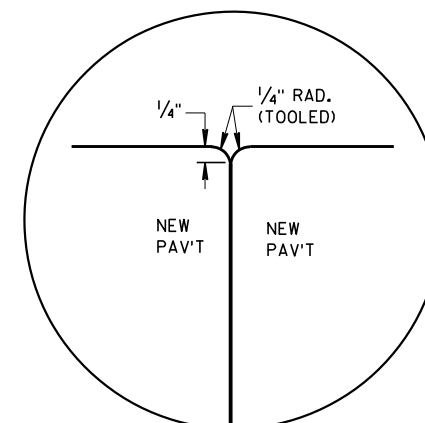
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



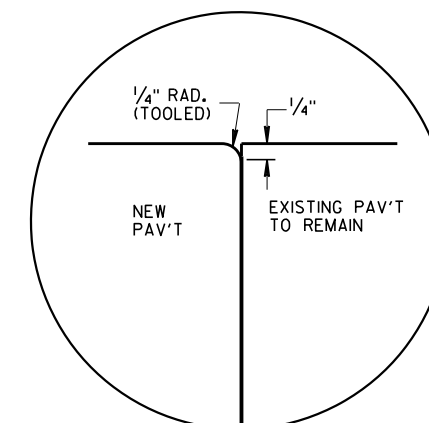
**SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT**



**DETAIL "A"**



**DETAIL "B"**



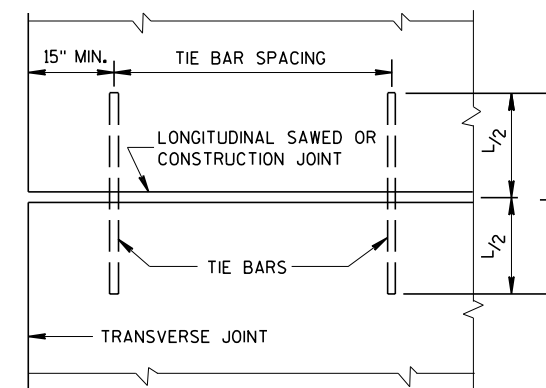
**DETAIL "C"**

**TIE BAR TABLE**

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

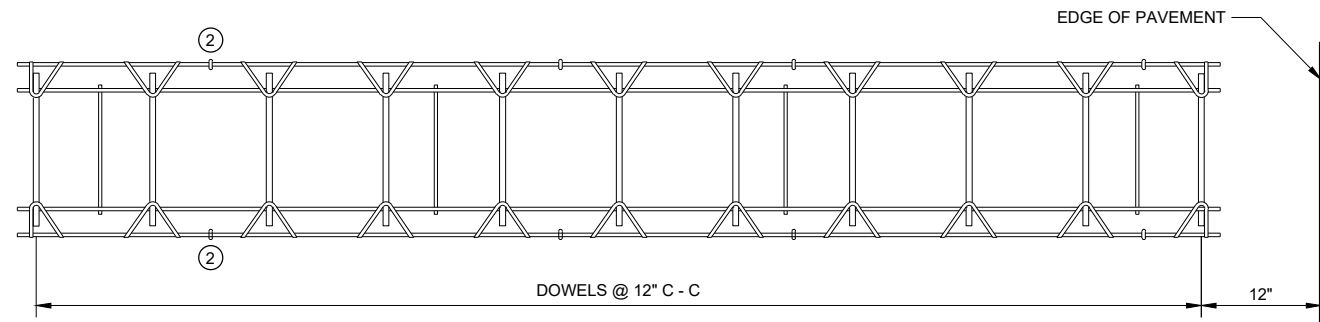


**PLAN VIEW  
SHOWING LOCATION OF TIE BARS**

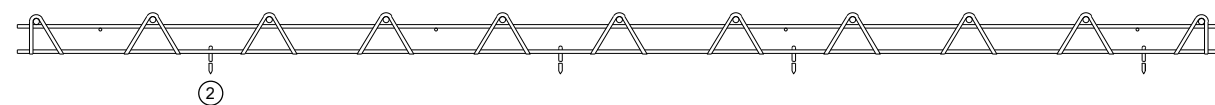
**CONCRETE PAVEMENT  
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Peter Kemp, P.E.  
DATE PAVEMENT SUPERVISOR  
FHWA

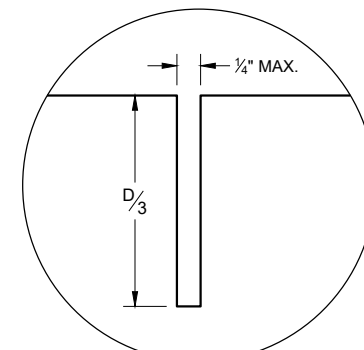


**PLAN VIEW**



**SIDE VIEW**

**CONTRACTION JOINT DOWEL ASSEMBLY** ①



**JOINT DETAIL**

**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.

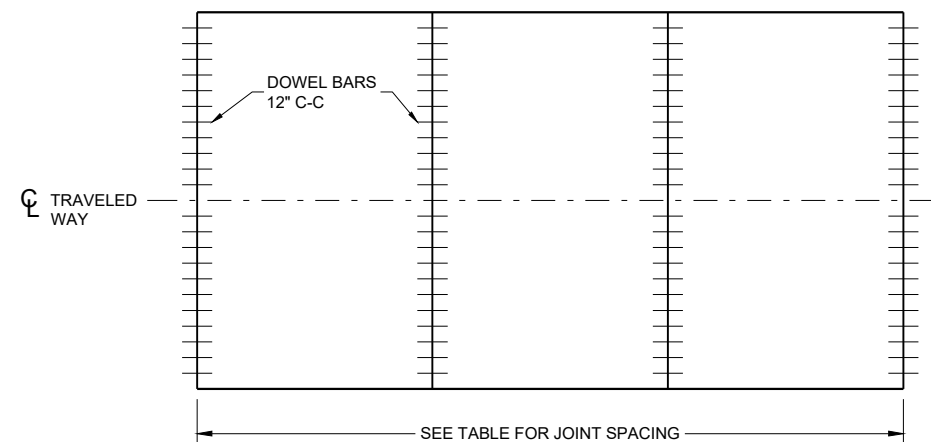
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

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 FROM AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

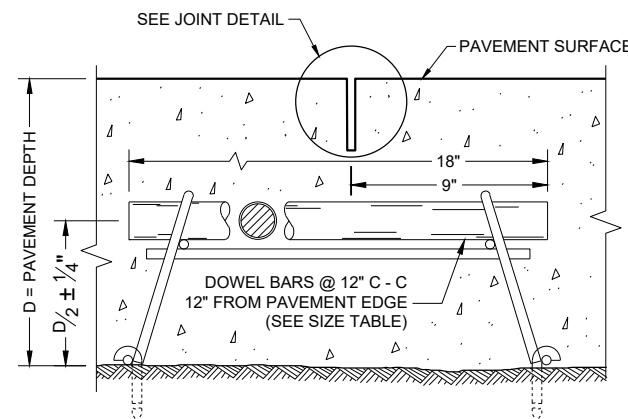
CONSTRUCTION JOINTS

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

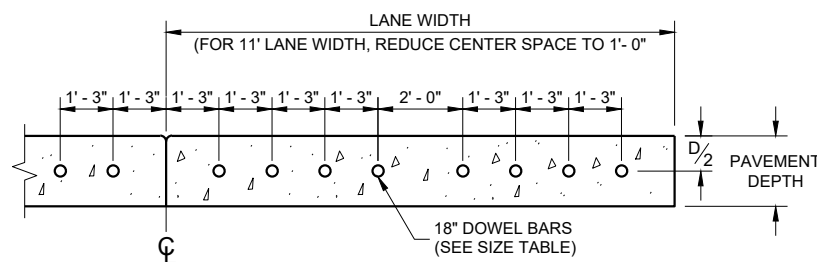
- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4" RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ 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 THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



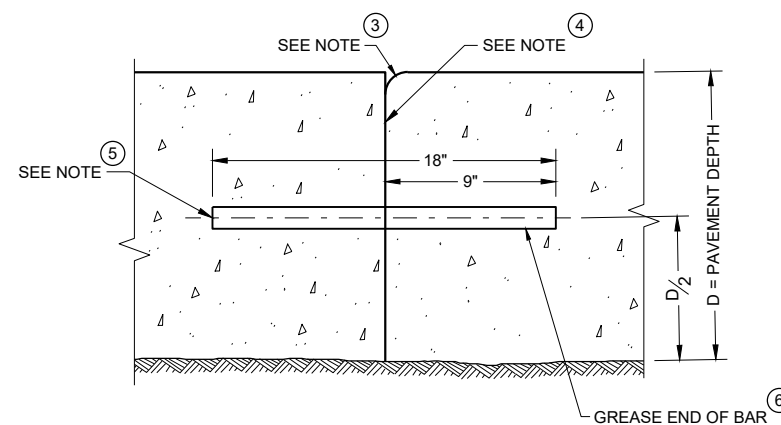
**CONTRACTION JOINT LOCATIONS**



**DOWELED CONTRACTION JOINT**



**DRILLED DOWEL BAR CONSTRUCTION JOINT** ⑦



**TRANSVERSE CONSTRUCTION JOINT**

**PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE**

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

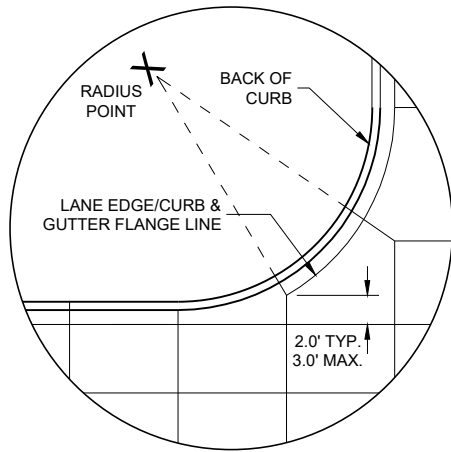
**URBAN DOWELED CONCRETE PAVEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

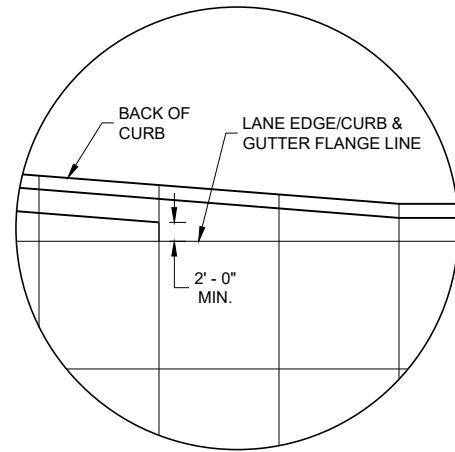
APPROVED  
November 2022 /S/ Peter Kemp P.E.  
DATE PAVEMENT SUPERVISOR

FHWA

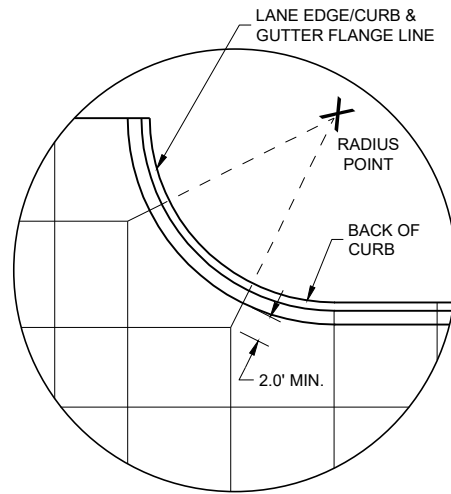




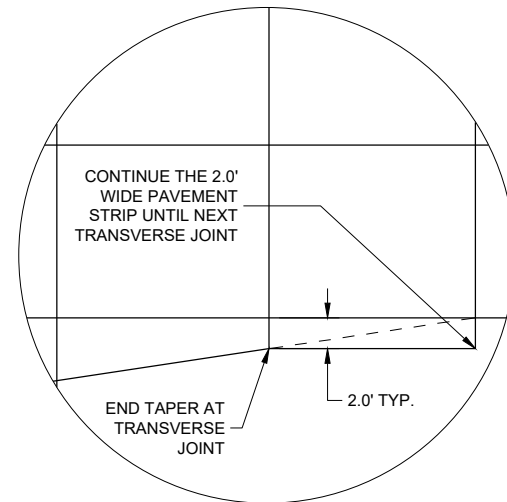
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

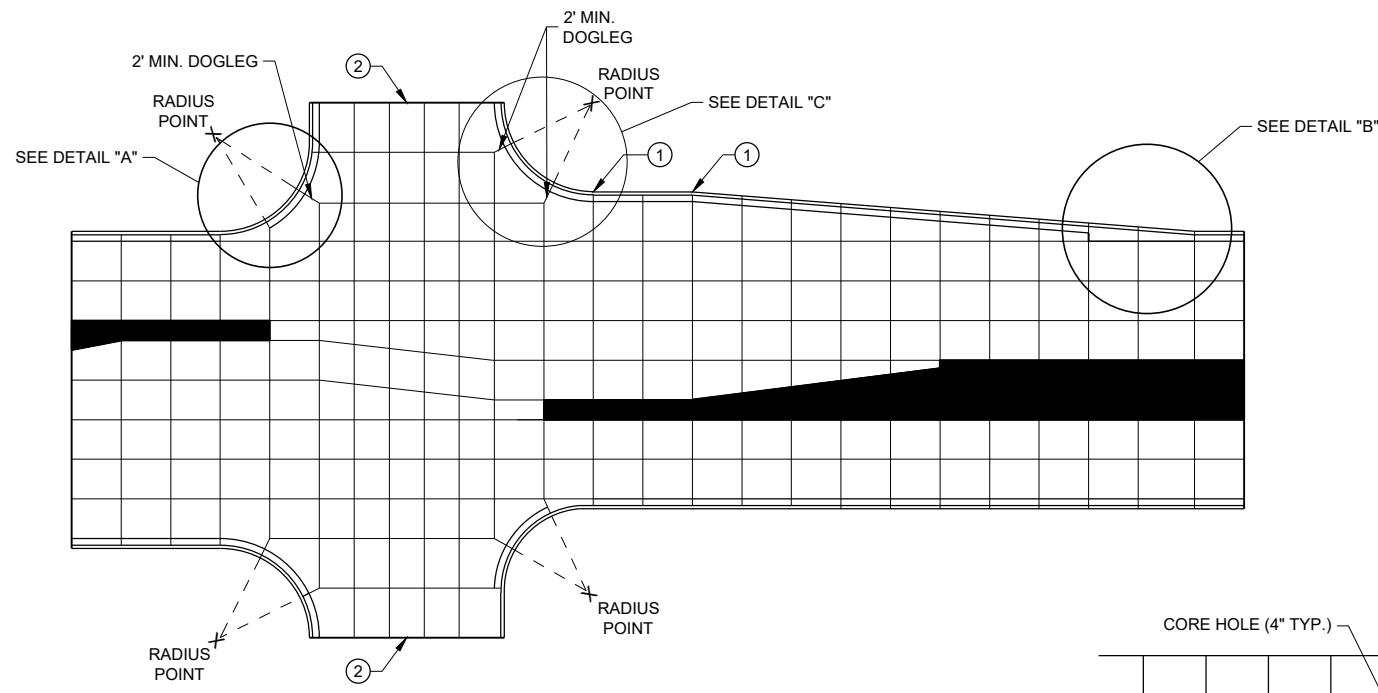
**GENERAL NOTES**

- 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.

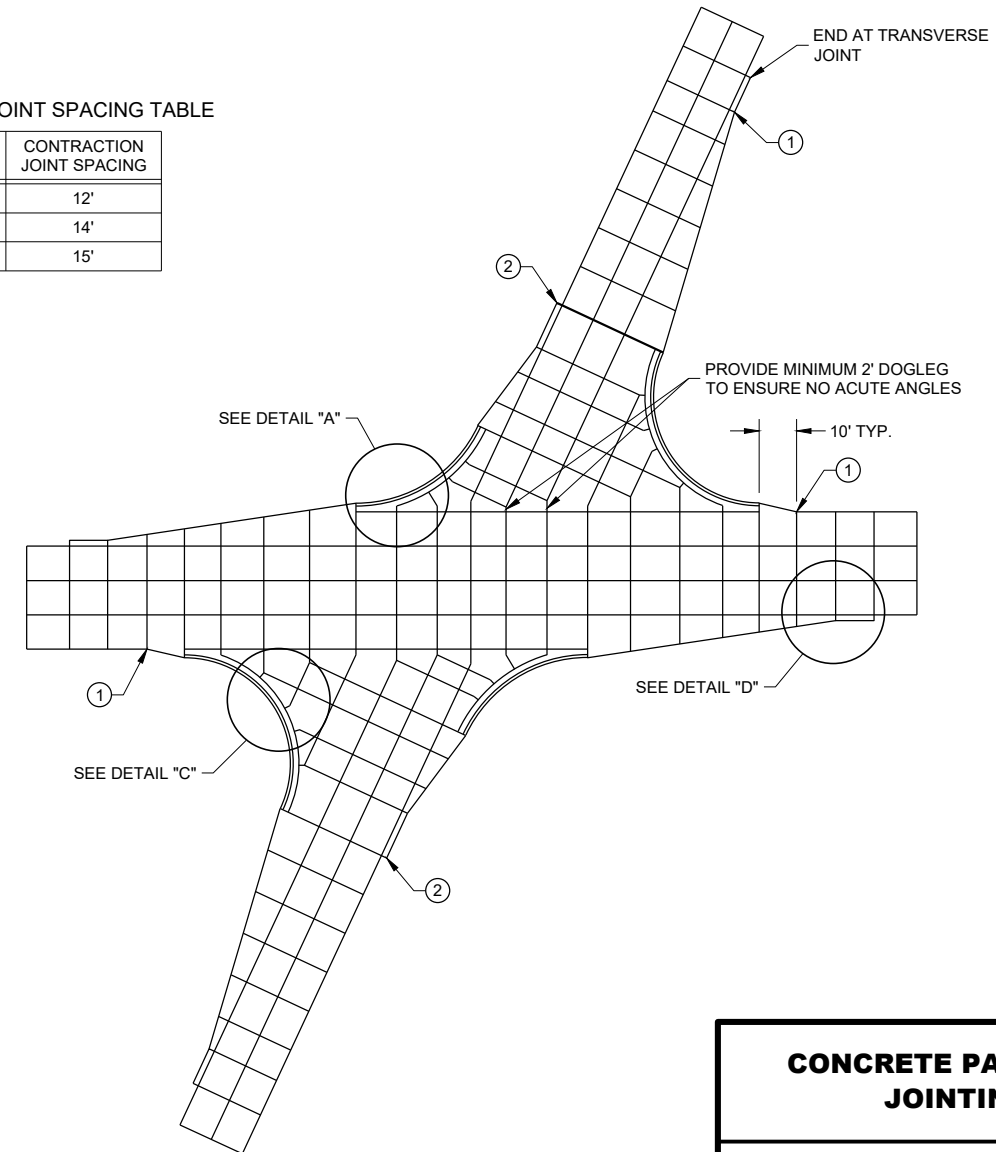
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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

PAVEMENT DEPTH AND JOINT SPACING TABLE

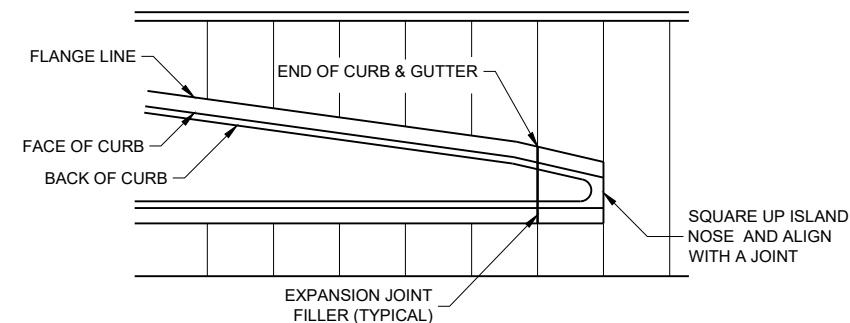
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



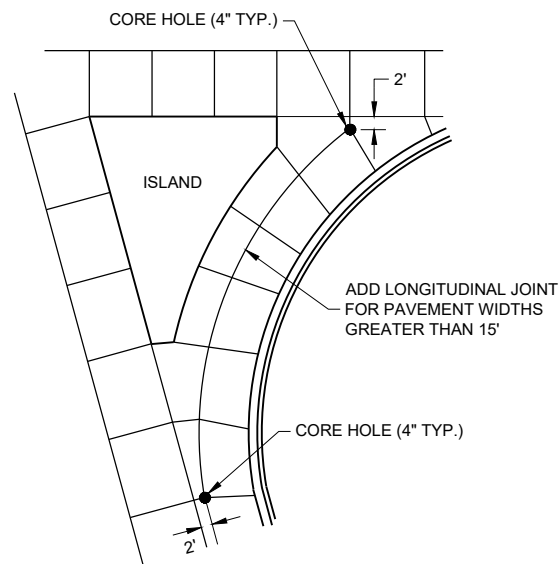
STANDARD INTERSECTION



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

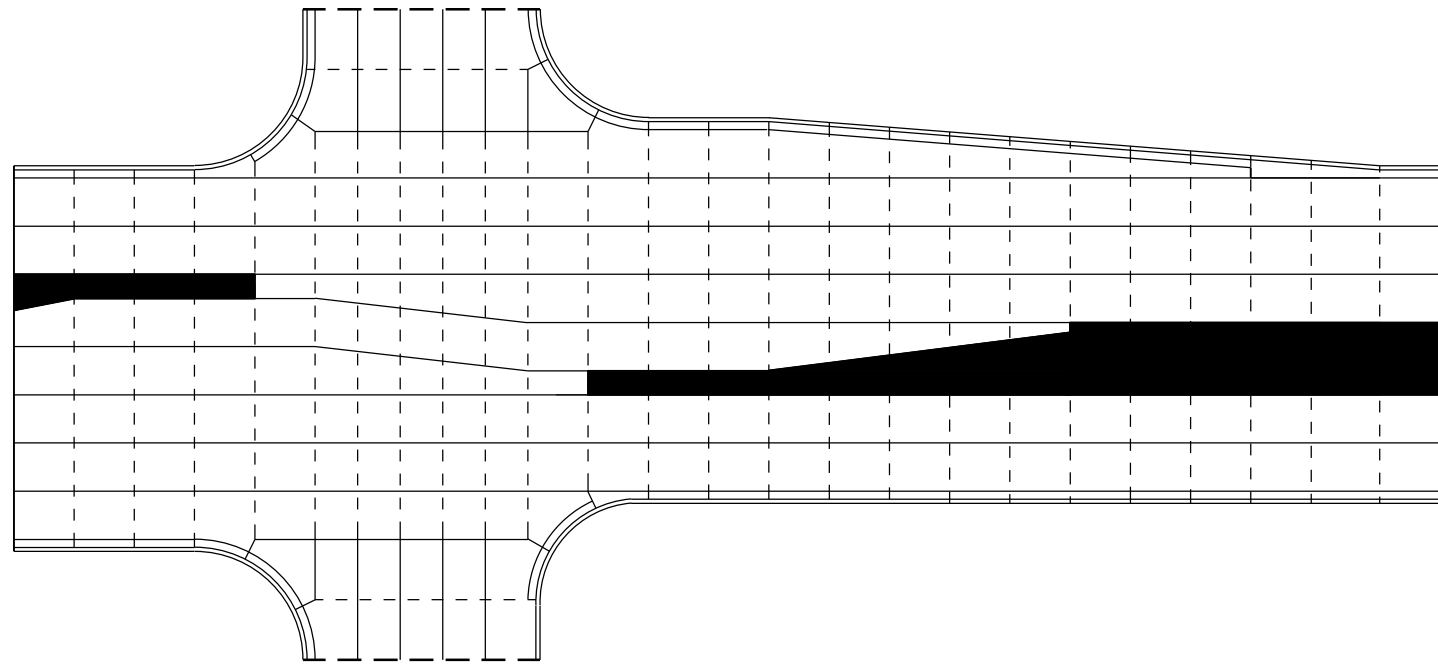
**LEGEND**

- - - - - POTENTIAL DOWELED EXPANSION JOINT
- - - - - DOWELED JOINT
- TIED JOINT

**GENERAL NOTES**

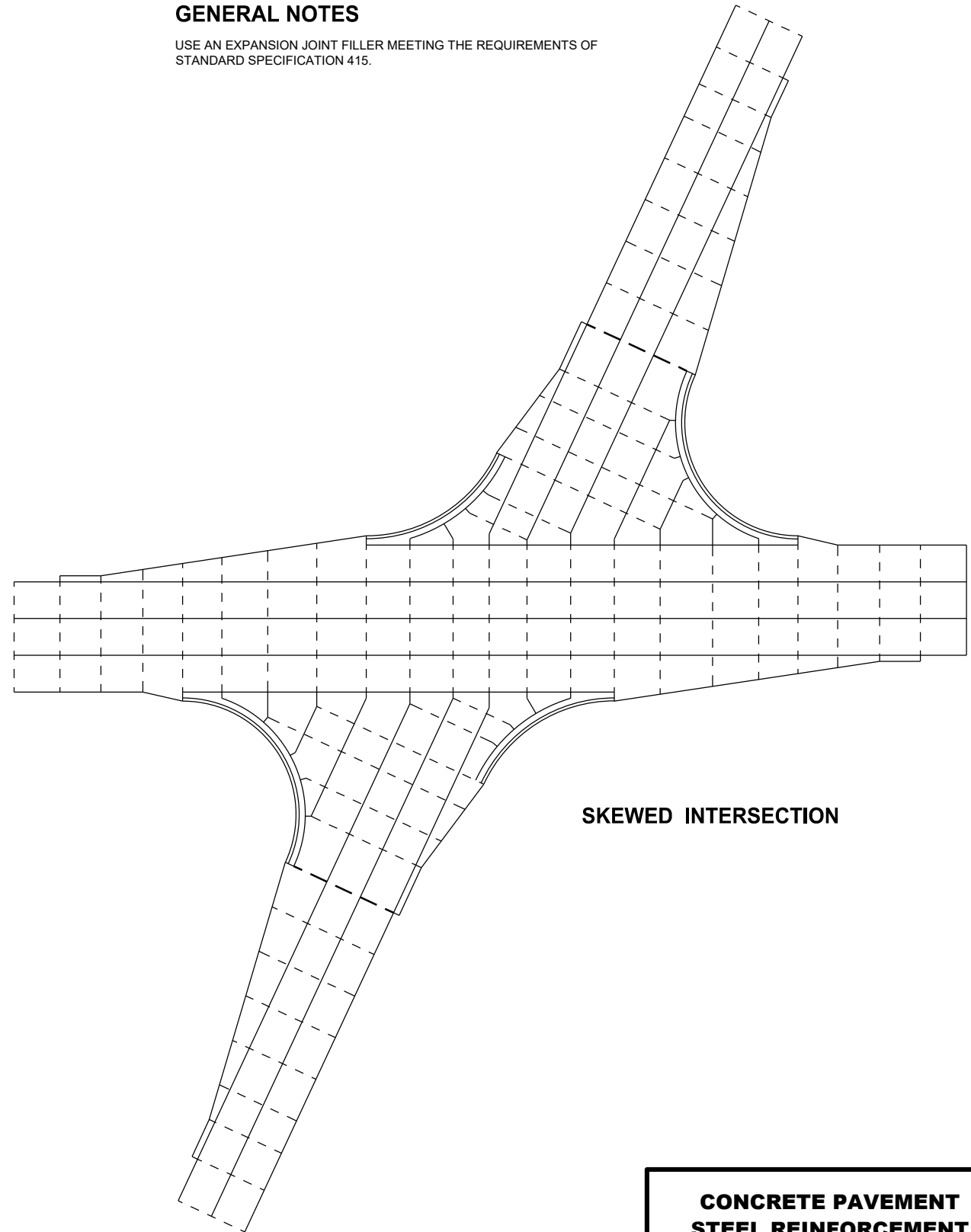
USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

6



**STANDARD INTERSECTION**

6



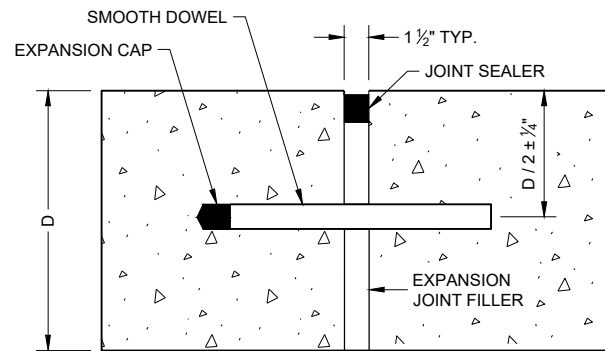
**SKEWED INTERSECTION**

**CONCRETE PAVEMENT  
STEEL REINFORCEMENT**

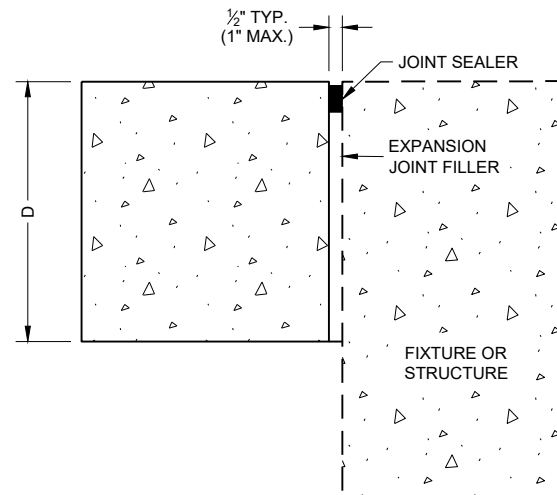
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

SDD 13C18 - 08b

SDD 13C18 - 08b



**DOWELED TRANSVERSE** ①



**UNTIED - LONGITUDINAL**

**EXPANSION JOINTS**

**TIE BAR TABLE**

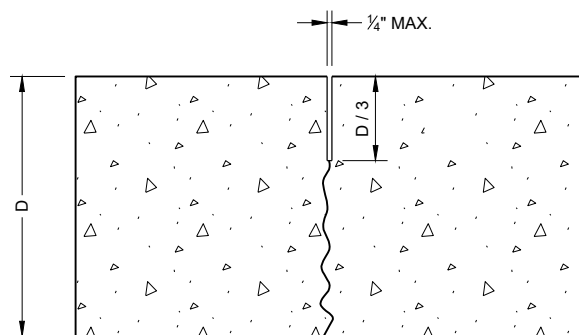
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

\* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

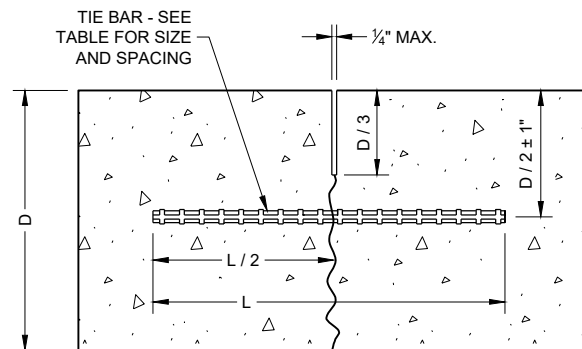
\*\* CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

**GENERAL NOTES**

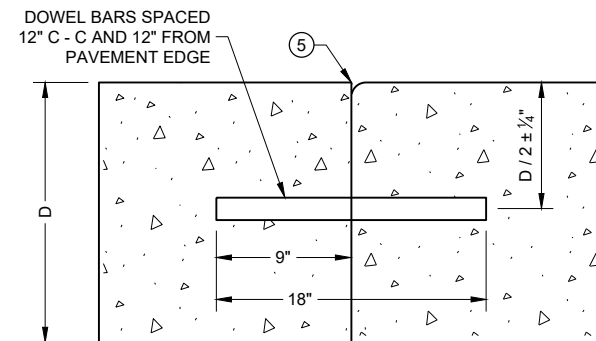
- ① USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
- ② SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
- ③ LOCATE CONSTRUCTION JOINTS A MINIMUM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



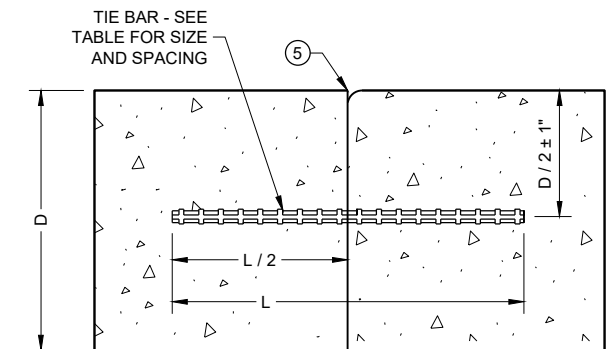
**UNDOWELED TRANSVERSE**



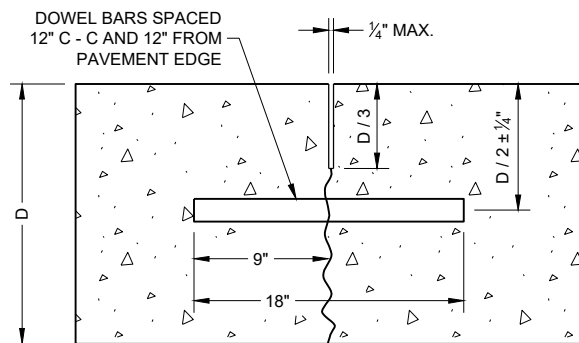
**TIED LONGITUDINAL**



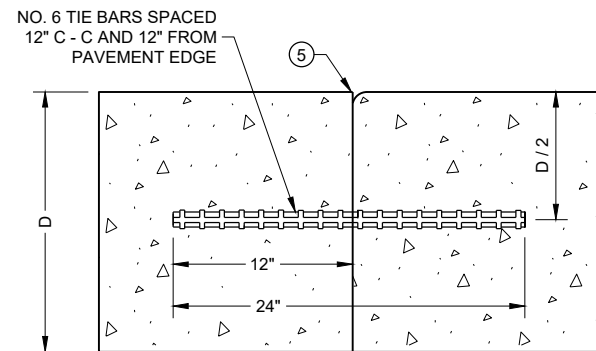
**DOWELED TRANSVERSE** ③



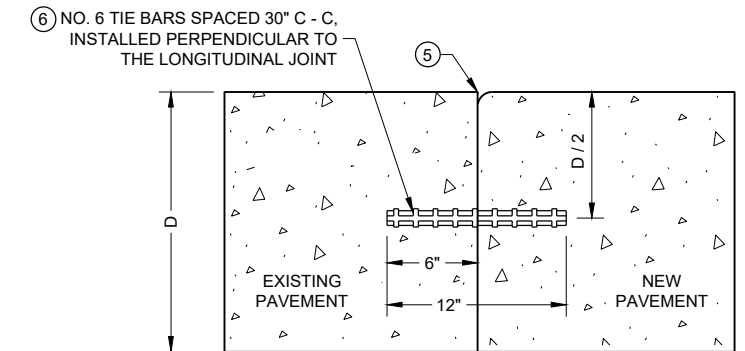
**TIED LONGITUDINAL**



**DOWELED TRANSVERSE**



**TIED TRANSVERSE** ③  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



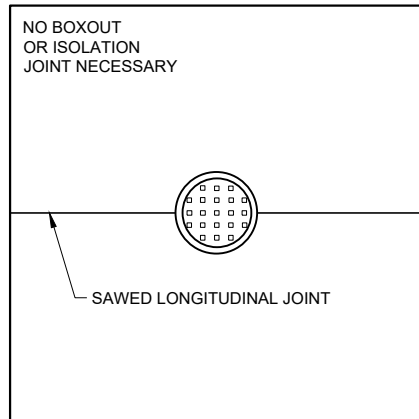
**TIED LONGITUDINAL TO EXISTING**

**CONTRACTION JOINTS** ②

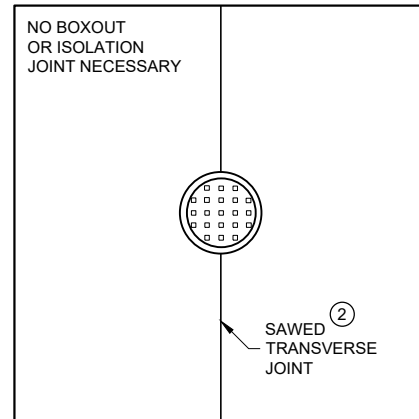
**CONSTRUCTION JOINTS** ④

**CONCRETE PAVEMENT  
JOINT TYPES**

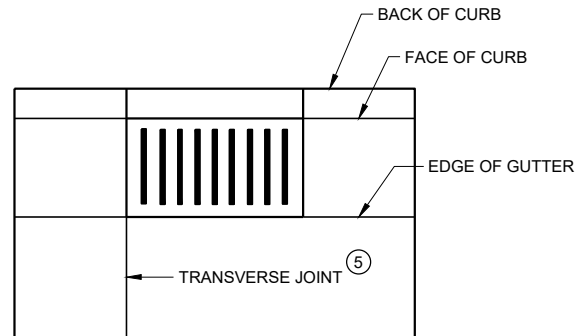
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**MANHOLE WITH LONGITUDINAL JOINT**



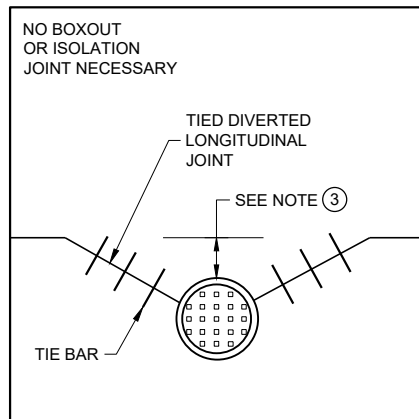
**MANHOLE WITH TRANSVERSE JOINT**



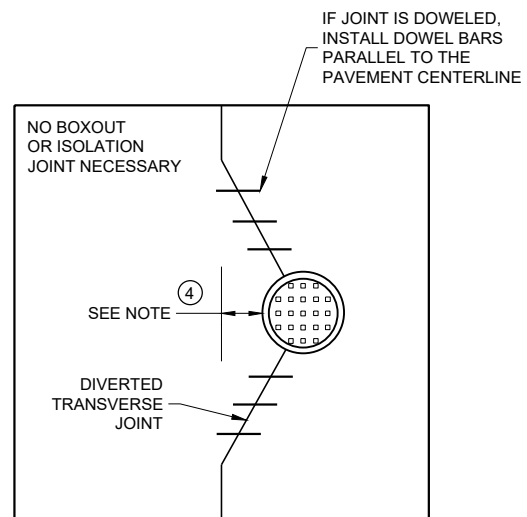
**INLET WITH TRANSVERSE JOINT**

**GENERAL NOTES**

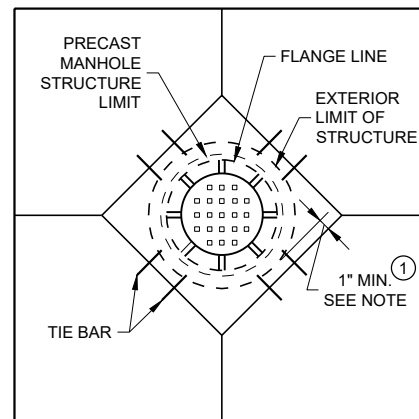
- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE 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 REINFORCEMENT REBAR AROUND THE MANHOLE.
- ④ IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 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 REINFORCEMENT REBAR AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



**MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT**



**MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT**



**DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS**

**CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

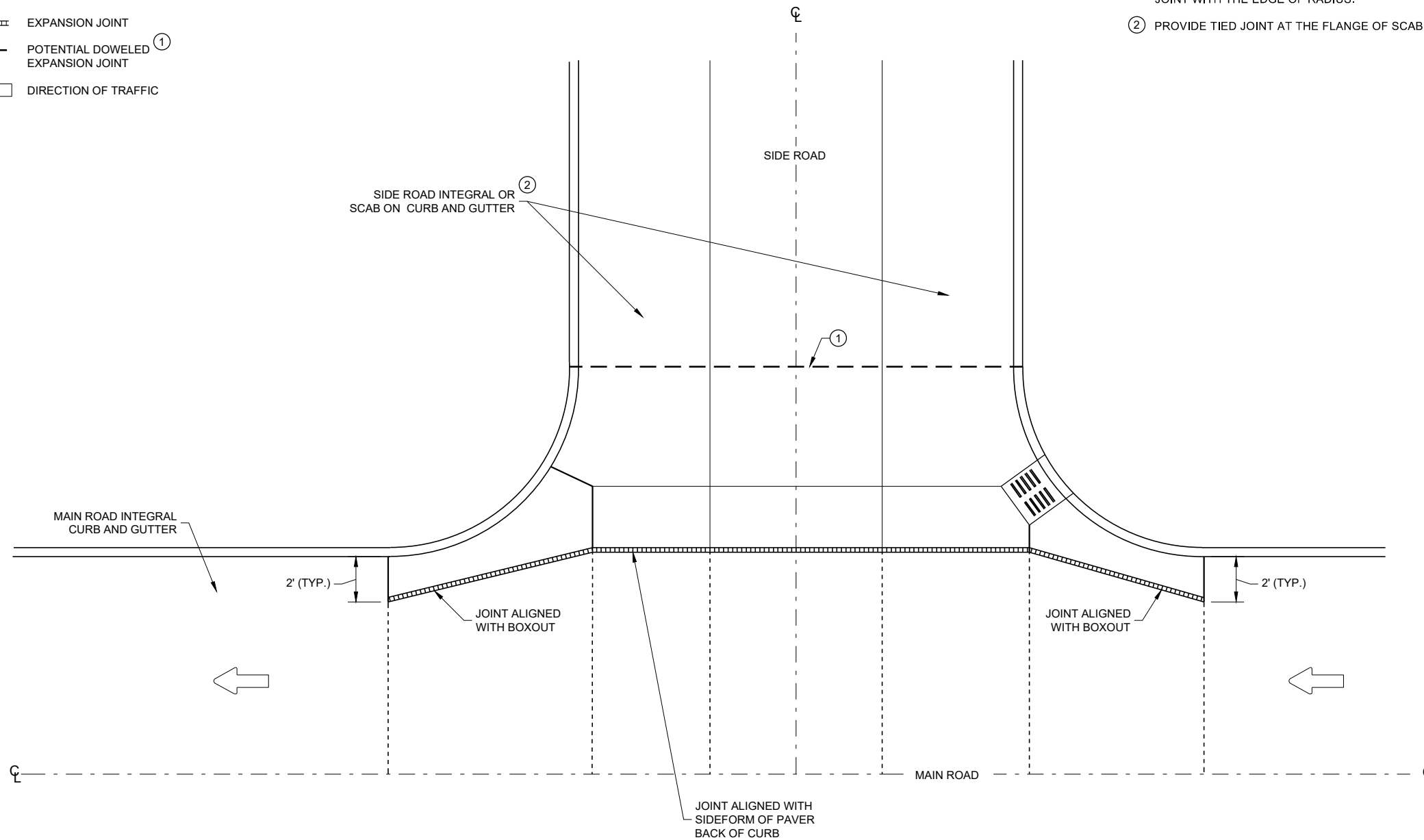
APPROVED	
May 2023	/s/ Peter Kemp P.E.
DATE	PAVEMENT SUPERVISOR

**LEGEND**

- DOWELED JOINT
- TIED JOINT
- ▨▨▨▨ EXPANSION JOINT
- — — — POTENTIAL DOWELED <sup>①</sup> EXPANSION JOINT
- ← DIRECTION OF TRAFFIC

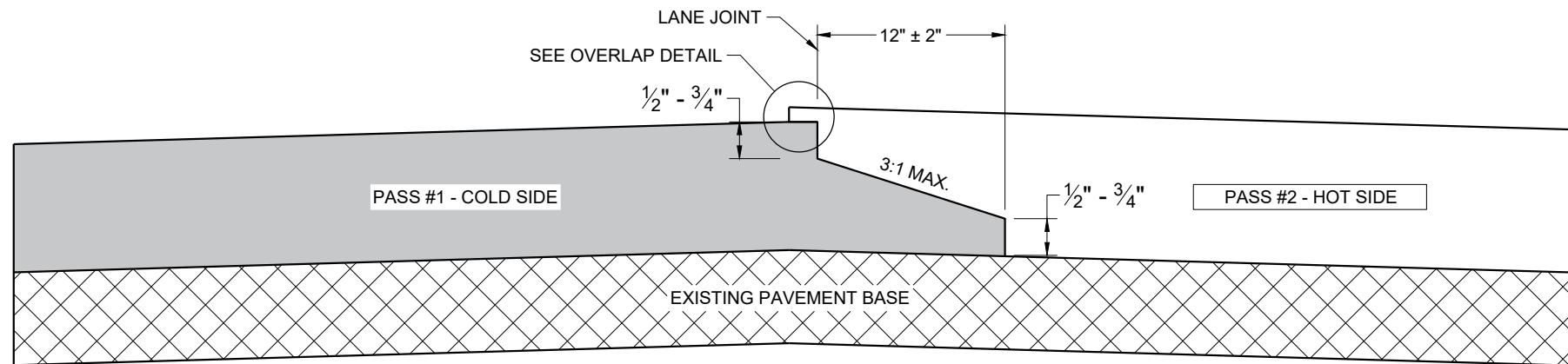
**GENERAL NOTES**

- ① 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 THE EDGE OF RADIUS.
- ② PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

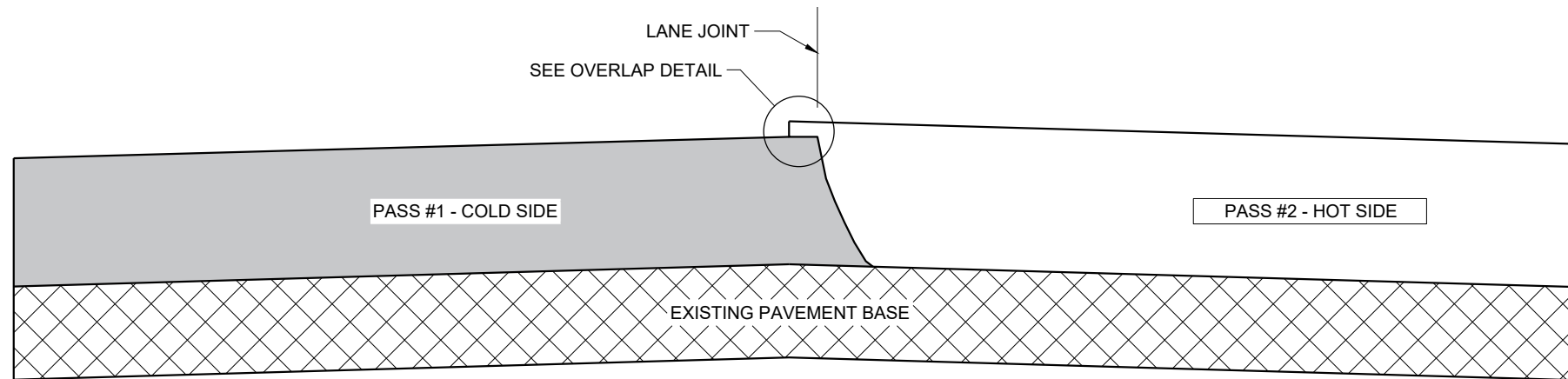


**INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

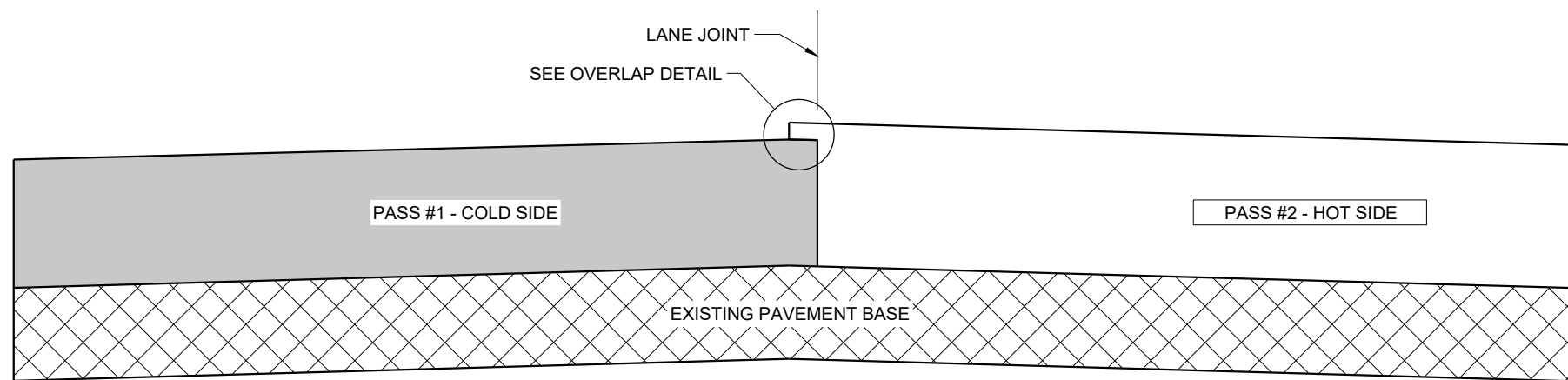
<b>CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Peter Kemp P.E. PAVEMENT SUPERVISOR
FHWA	



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

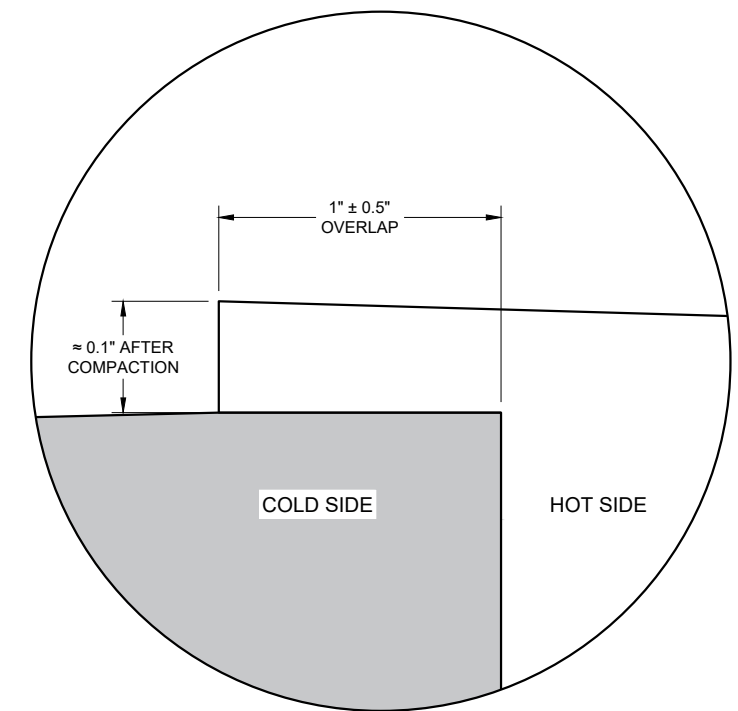
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY  $0.1"$  AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO  $2"$  FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



**OVERLAP DETAIL (TYPICAL)**

6

6

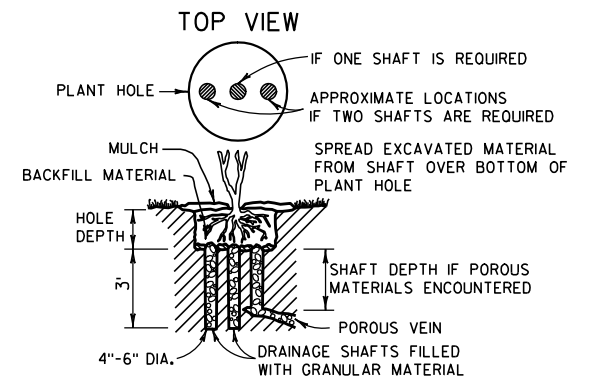
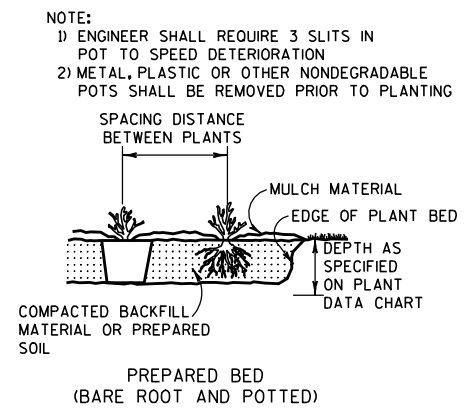
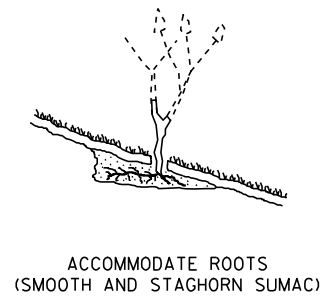
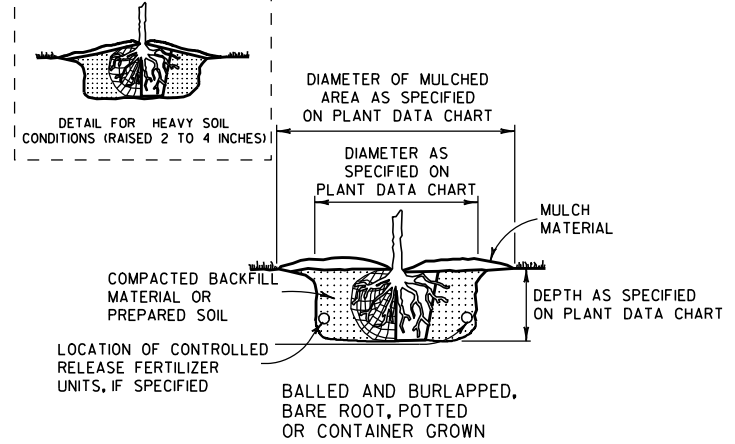
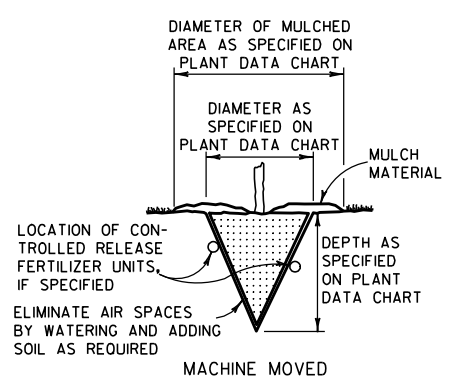
SDD 13C19 - 03

SDD 13C19 - 03

**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

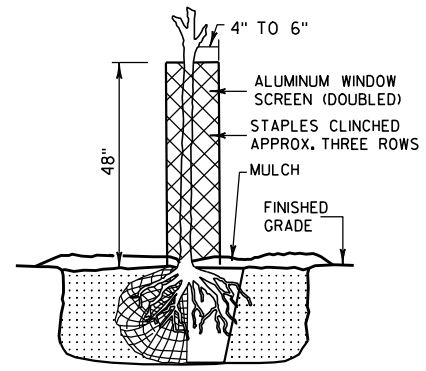
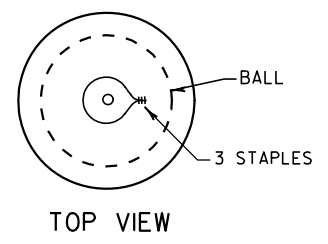
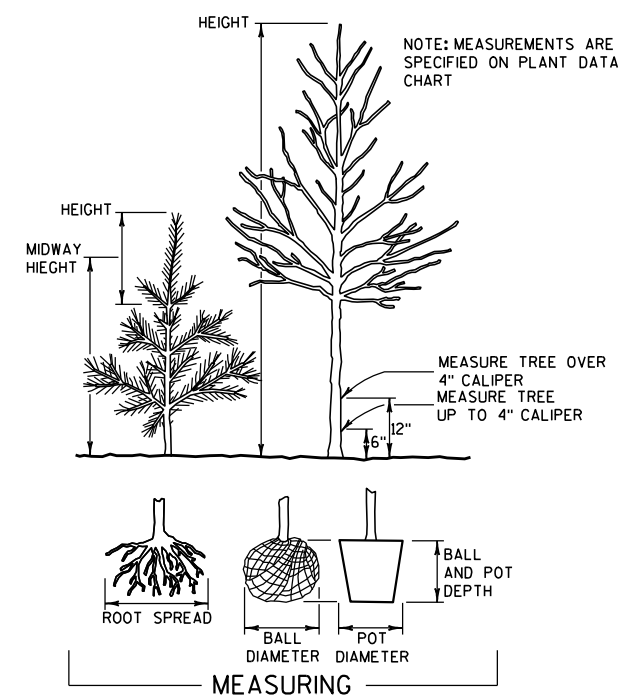
APPROVED  
November 2020 DATE /S/ Steven Hefel  
HMA PAVEMENT ENGINEER  
FHWA



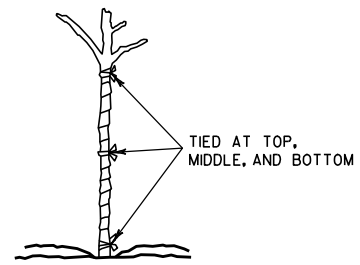
PLANTING

NOTE: DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

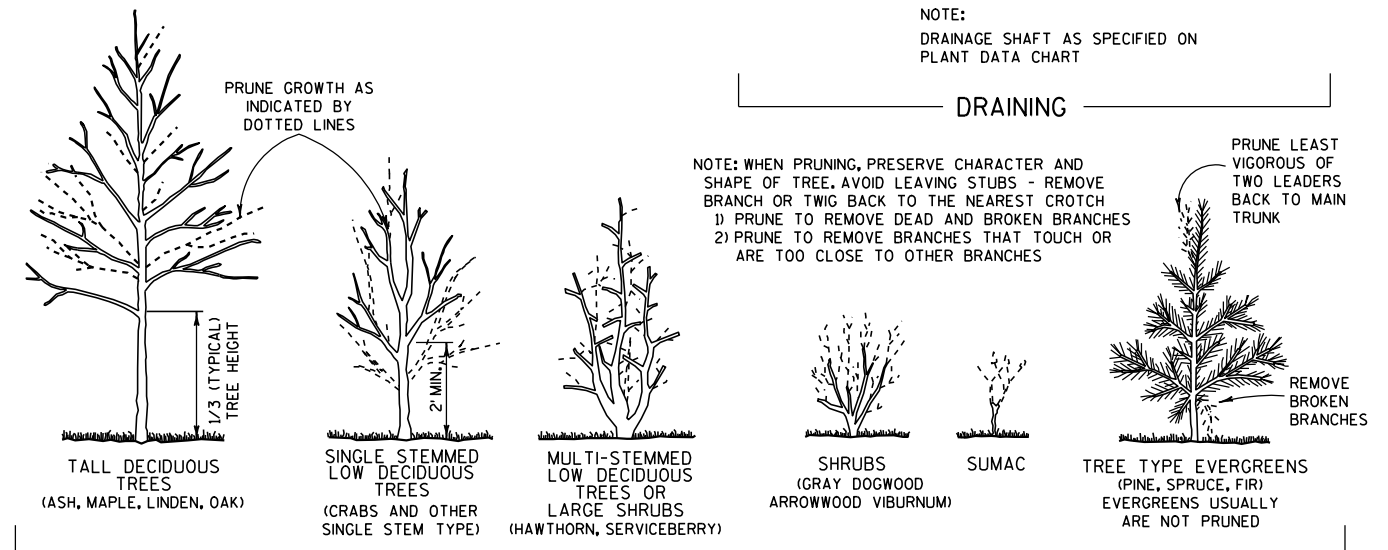
DRAINING



RODENT PROTECTION

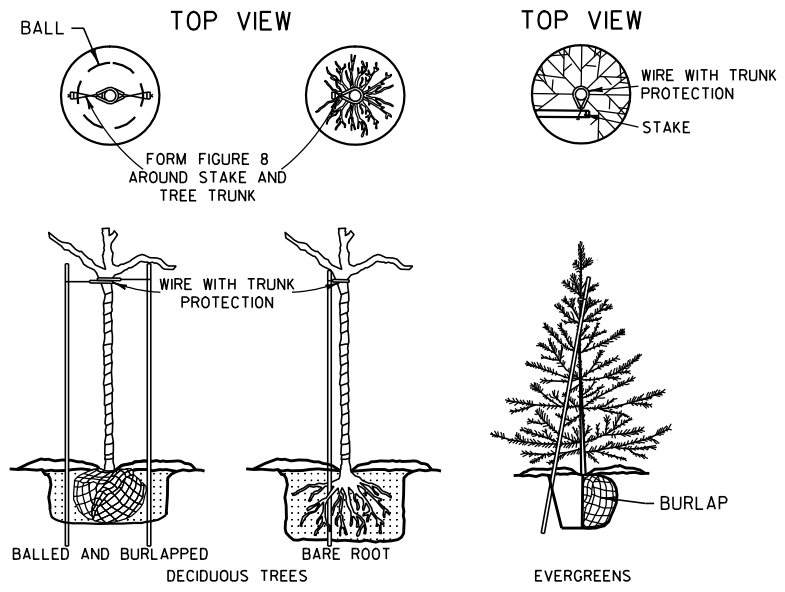


WRAPPING



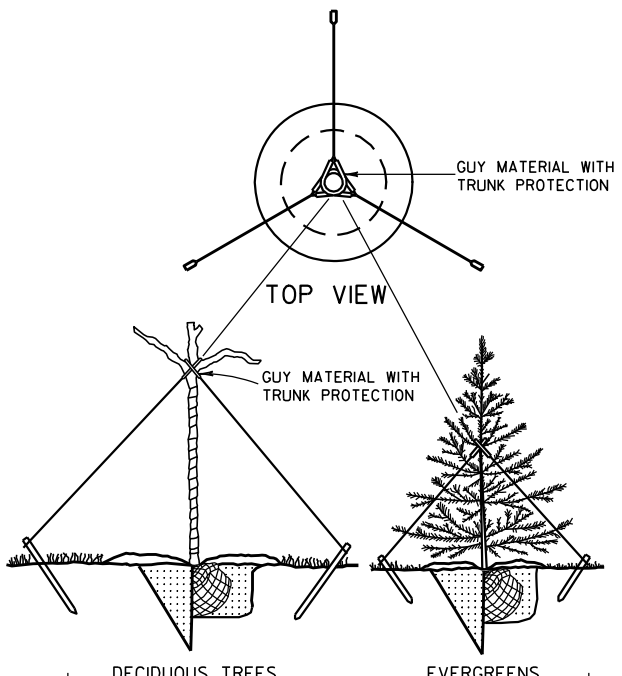
PRUNING

NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH  
 1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES  
 2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES



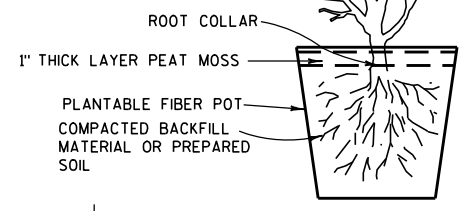
BRACING

NOTE: BRACING STAKE  
 1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.  
 2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.  
 3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND  
 4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE

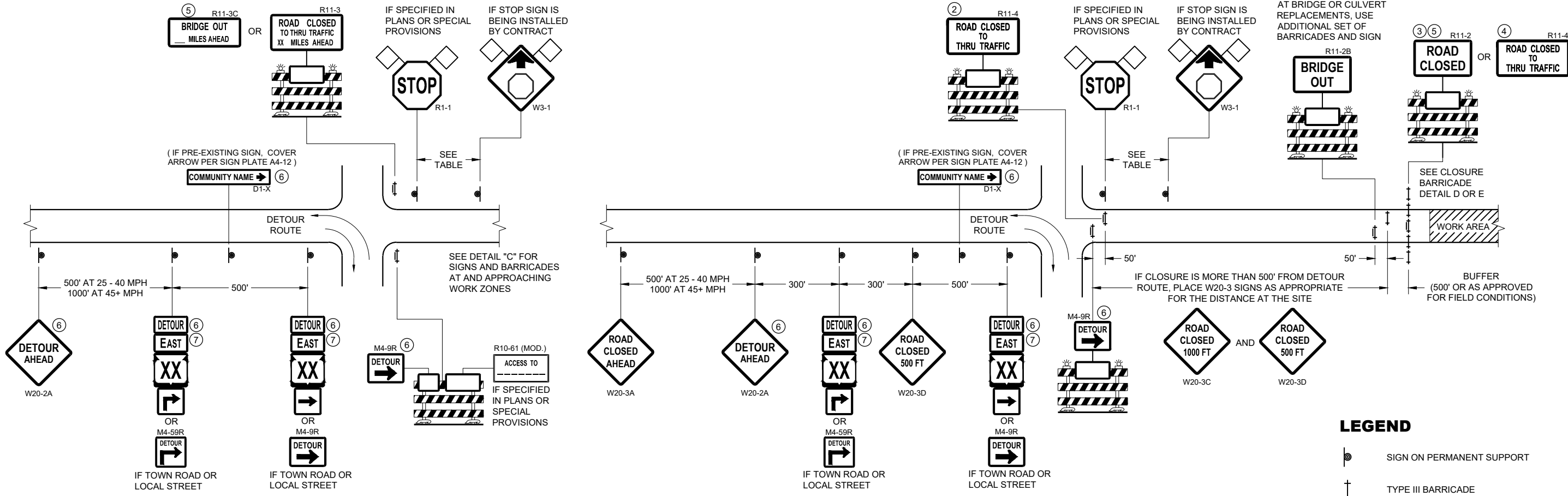


POTTING

NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.  
 BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4/11/94 DATE	/s/ Rory L. Rhinesmith CHIEF METHODS DEVELOPMENT ENGINEER
FHWA	



**DETAIL A  
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B  
MAINLINE CLOSURE WITH POSTED DETOUR**

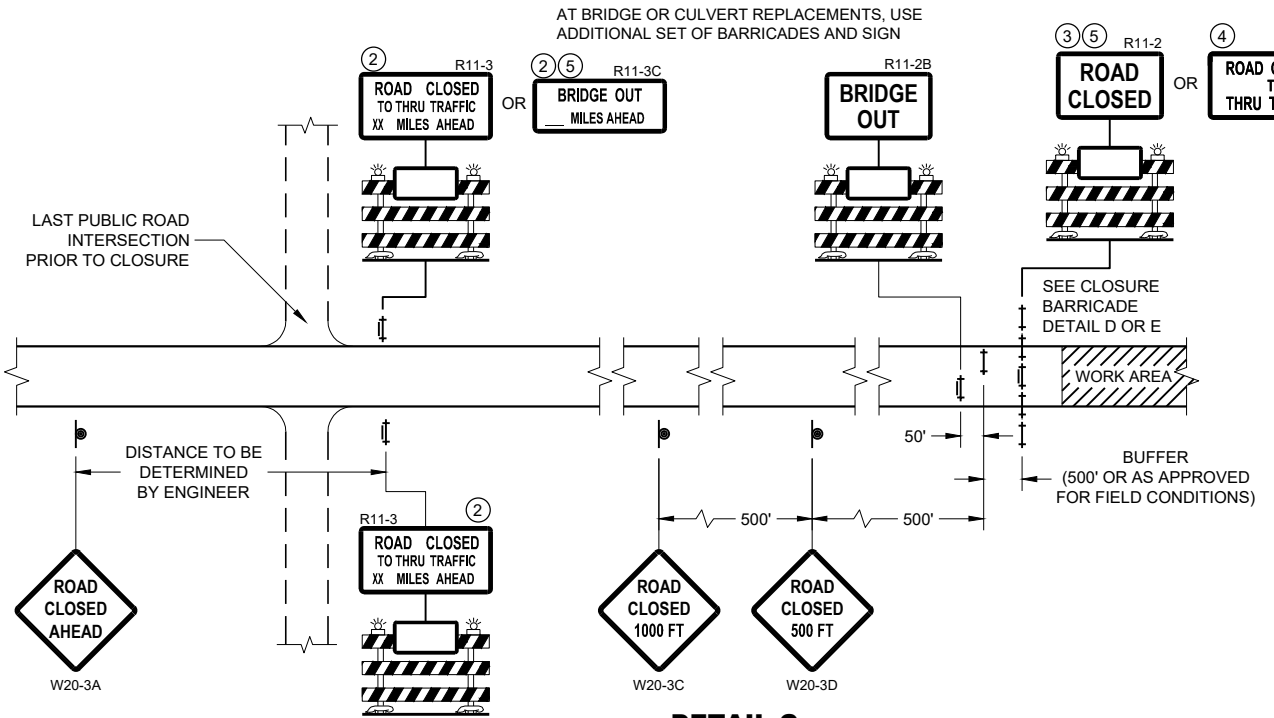
WORK ZONE LESS THAN 1/2 MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



**DETAIL C  
MAINLINE CLOSURE, NO POSTED DETOUR**

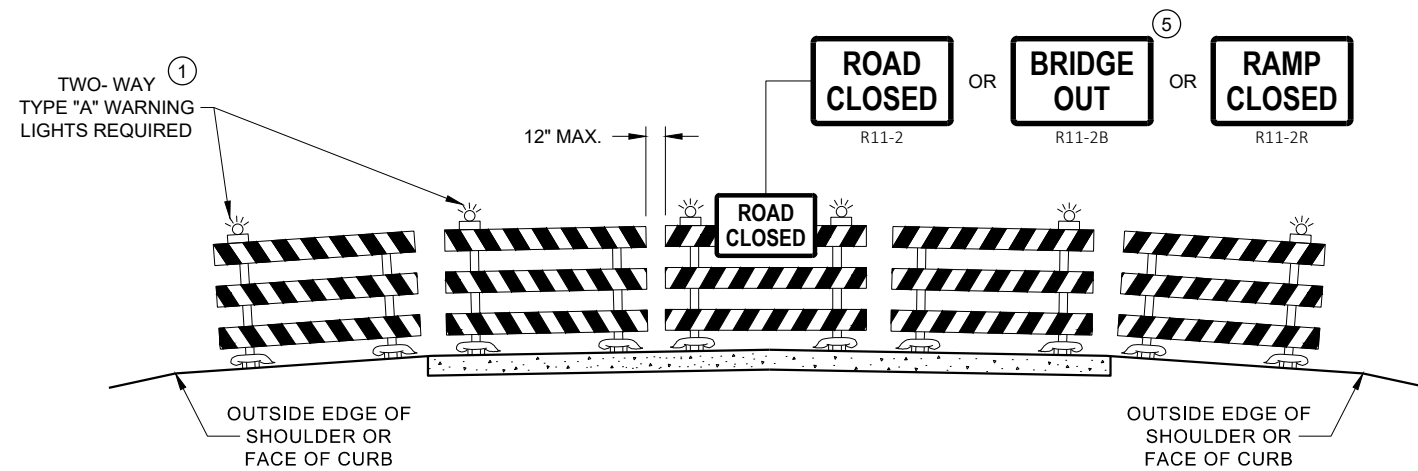
SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

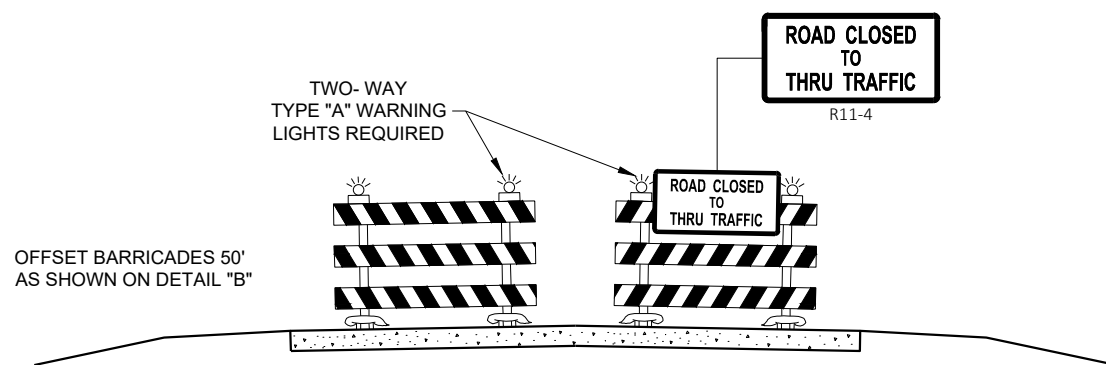
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE DATE WORK ZONE ENGINEER  
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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL 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 SHALL, 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" (36" X 18" 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)
- MO5 - 1 AND MO6 - 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"

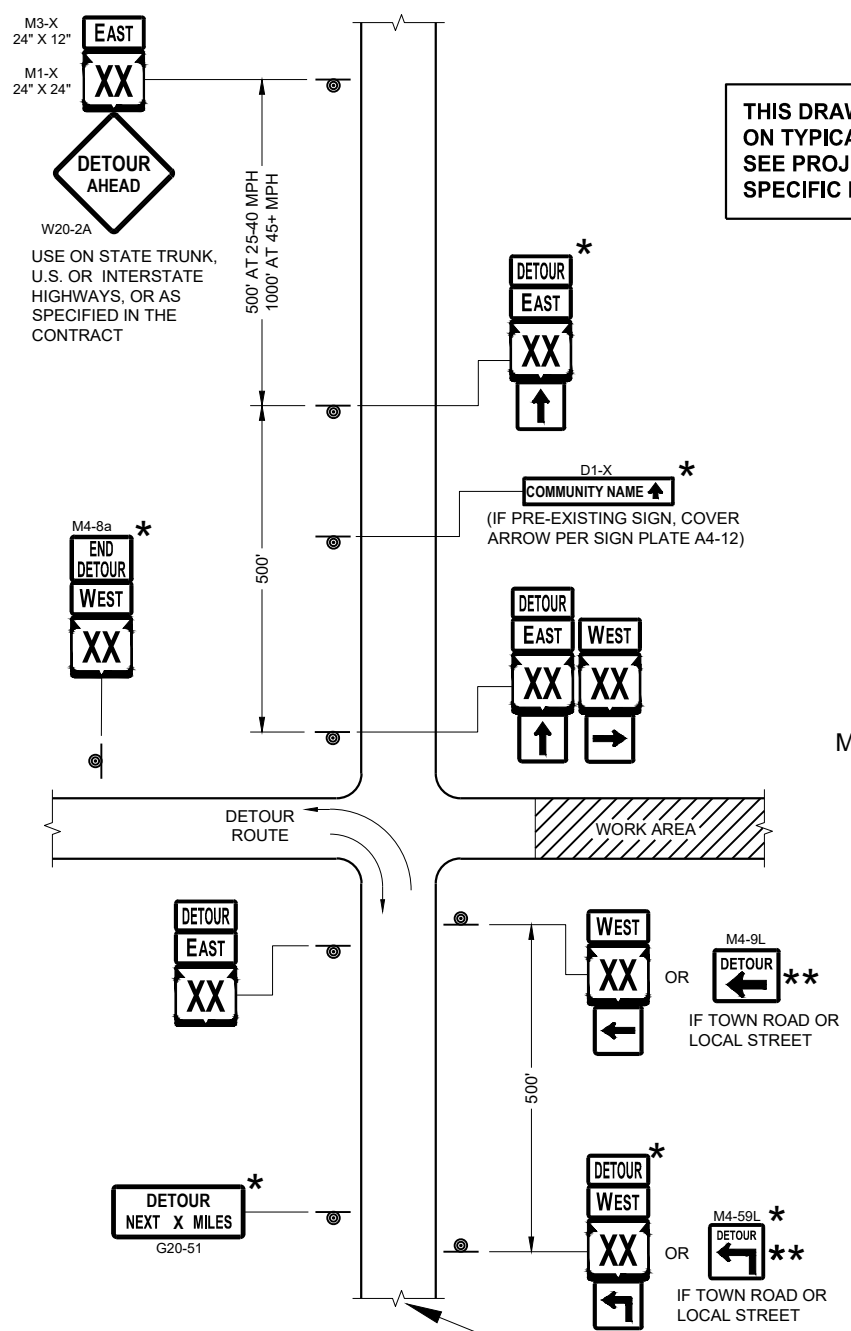
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN 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 ROAD 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  
VARIOUS CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



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

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

**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.

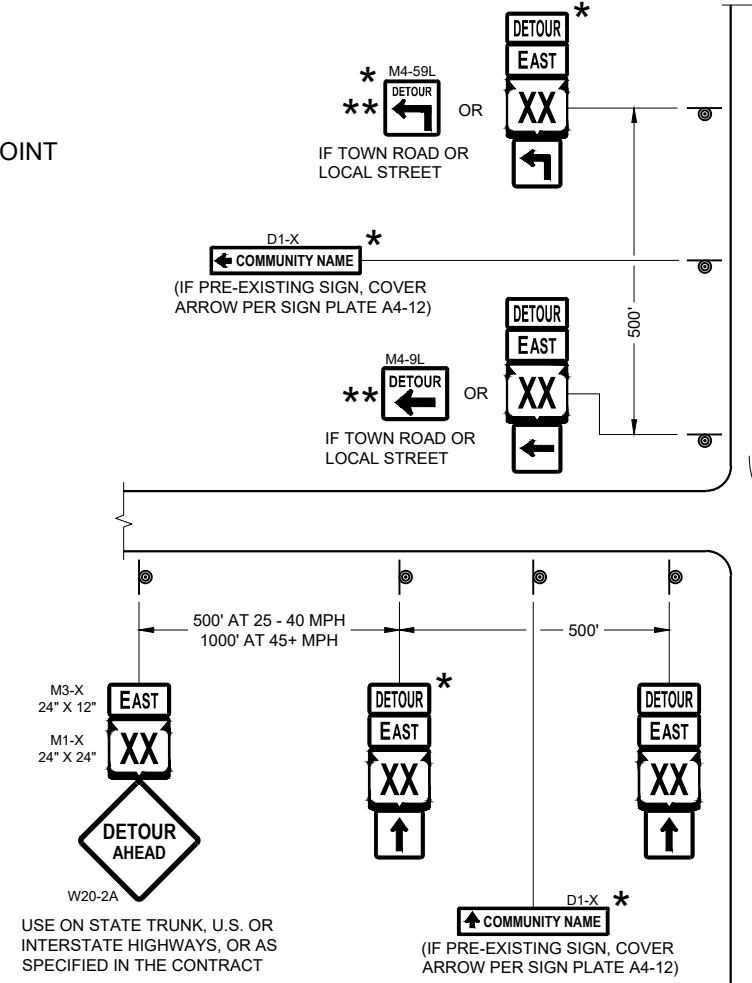
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

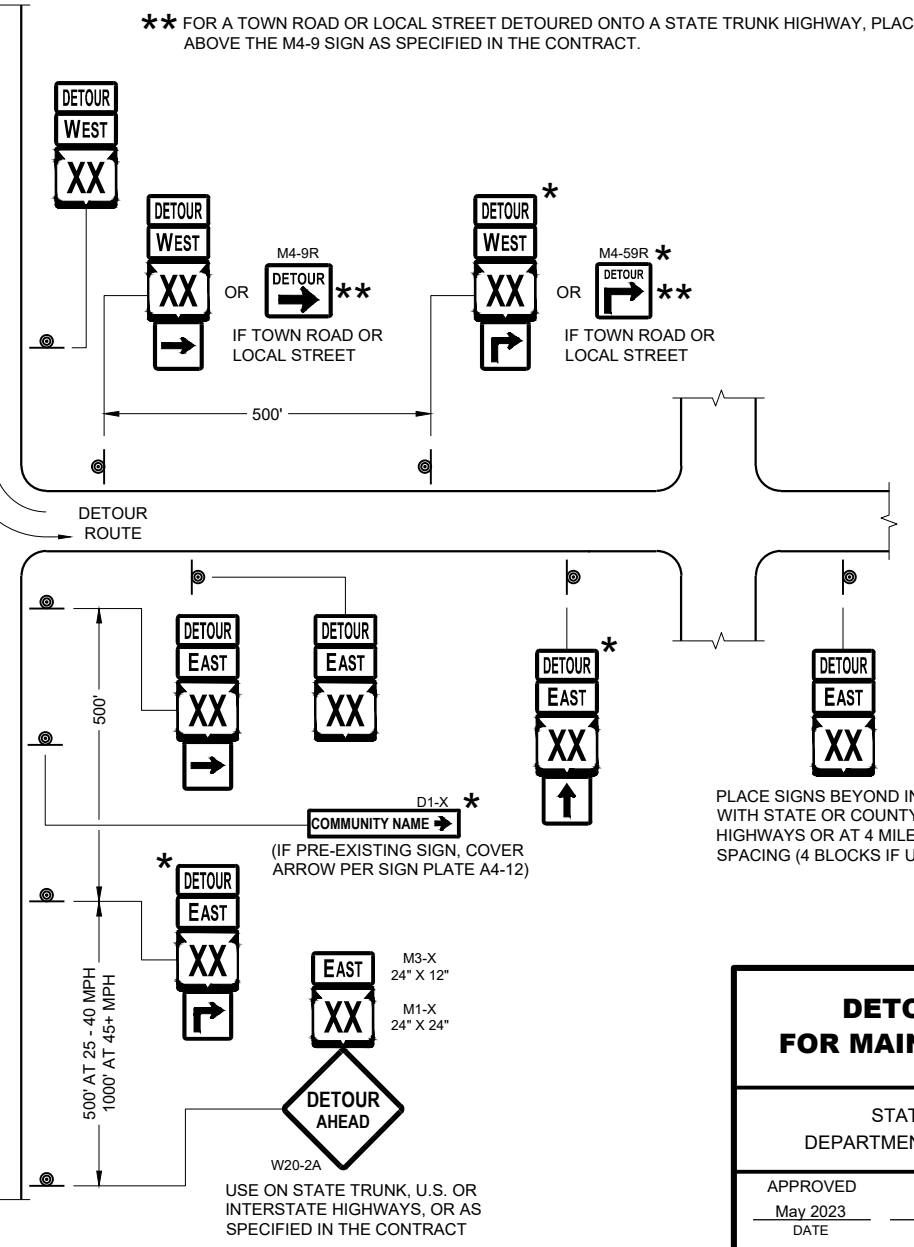
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A 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.

MATCH POINT



**DETAIL F  
DETOUR SIGNING**



**DETOUR SIGNING  
FOR MAINLINE CLOSURES**

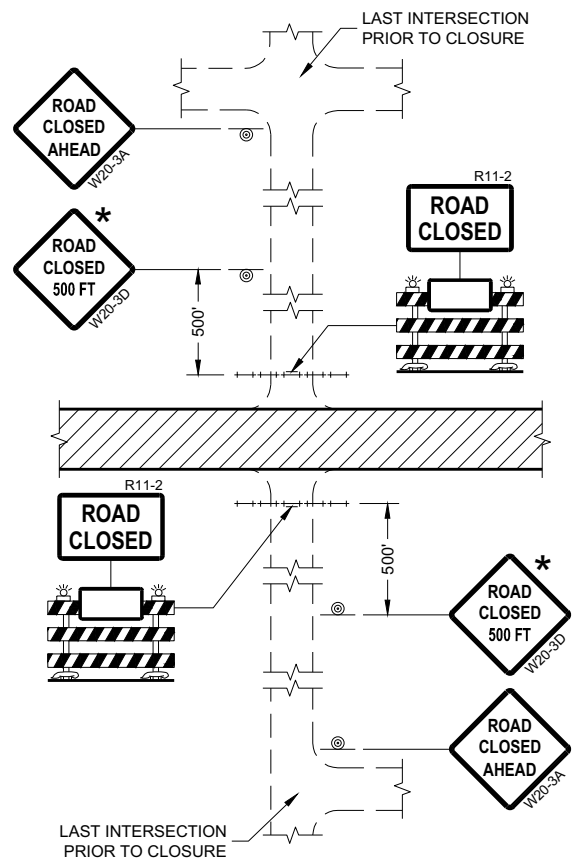
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

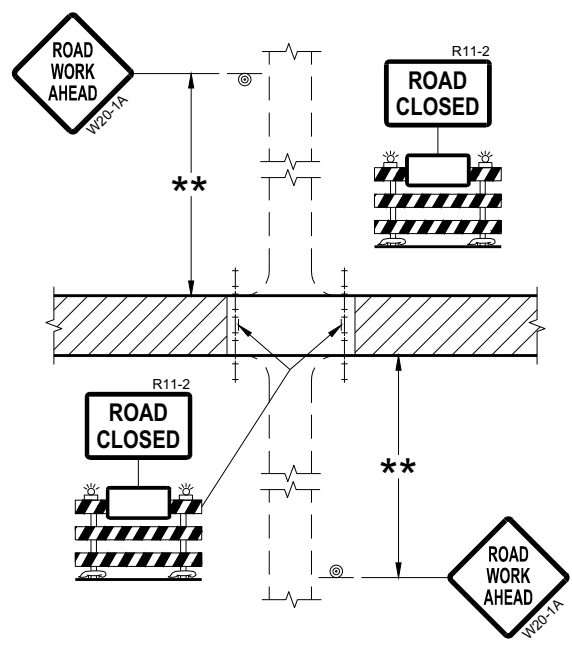
FHWA

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

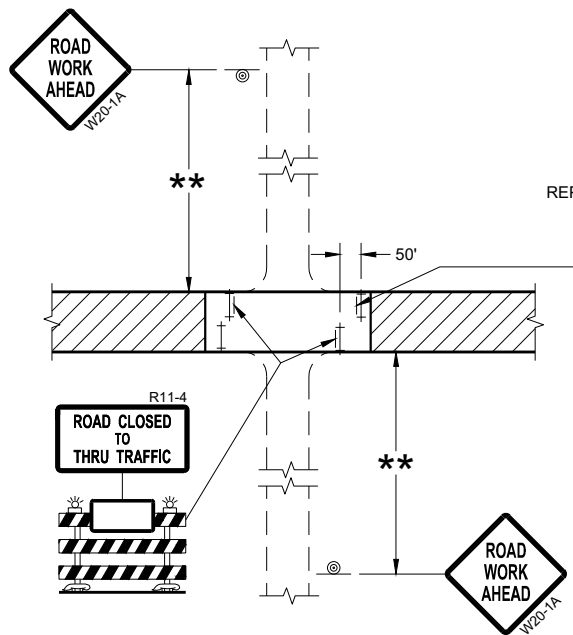
PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)



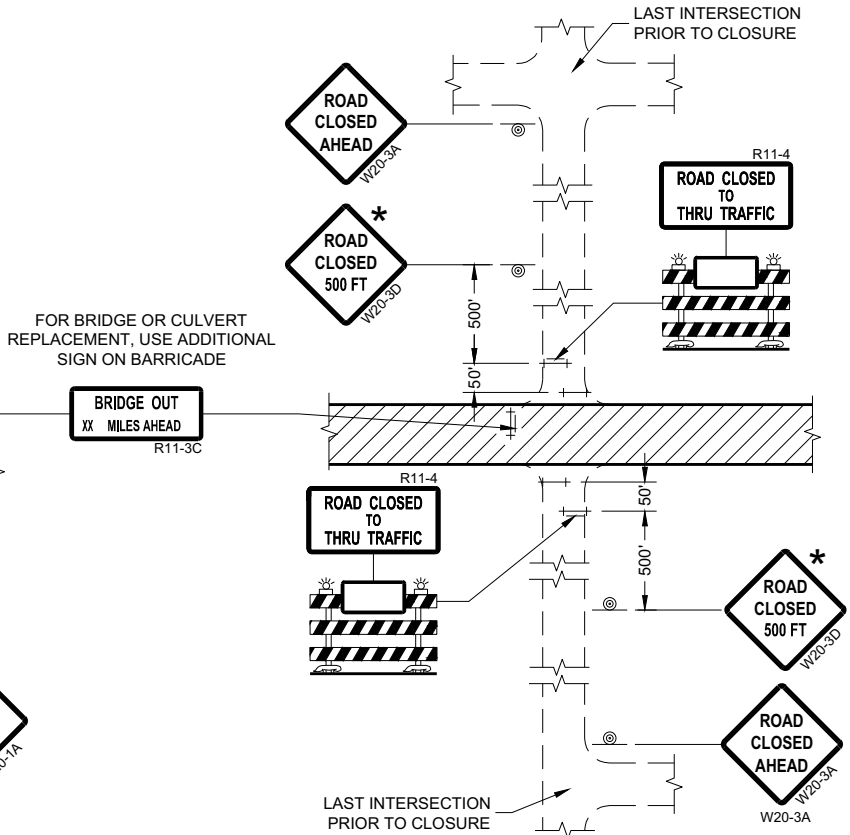
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT 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 (500 FEET DESIRABLE) 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 REESTABLISHED.

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

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

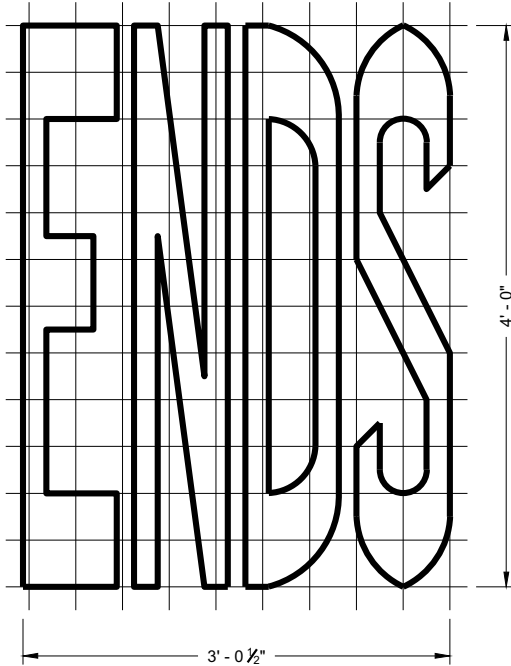
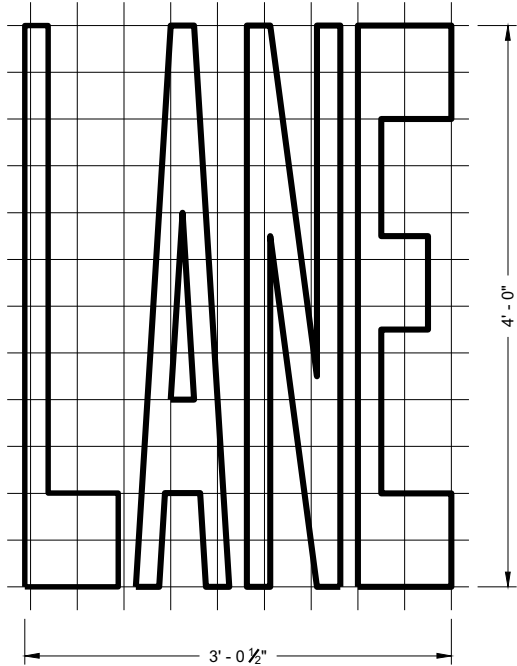
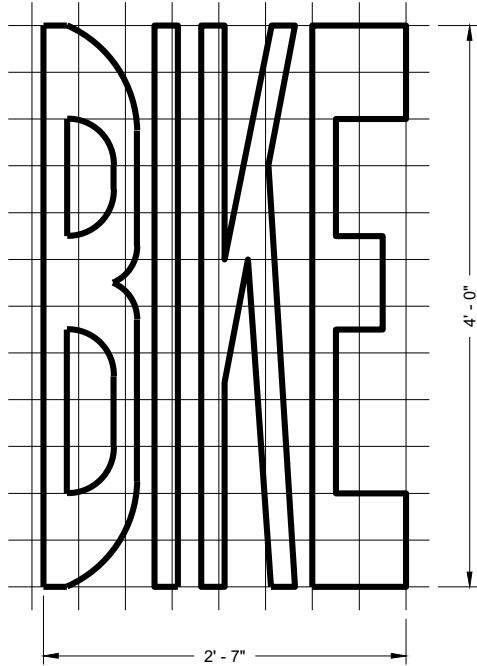
**LEGEND**

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

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

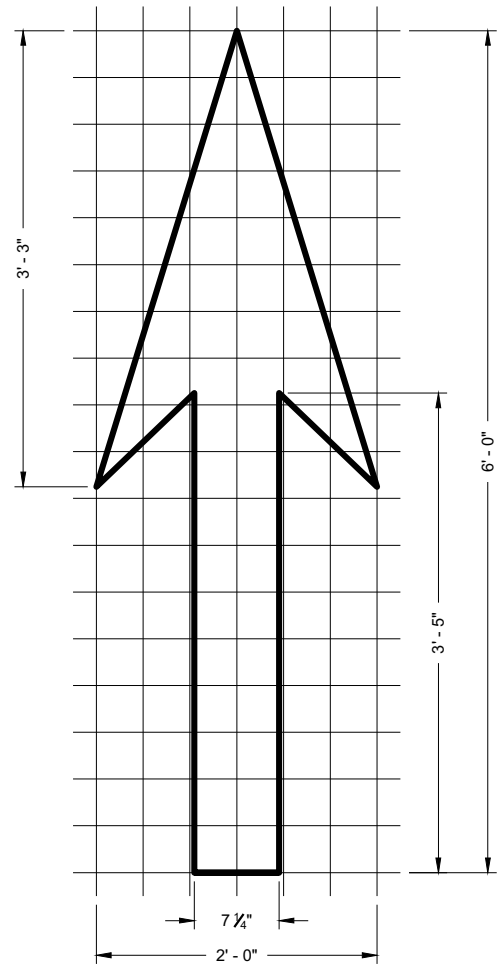
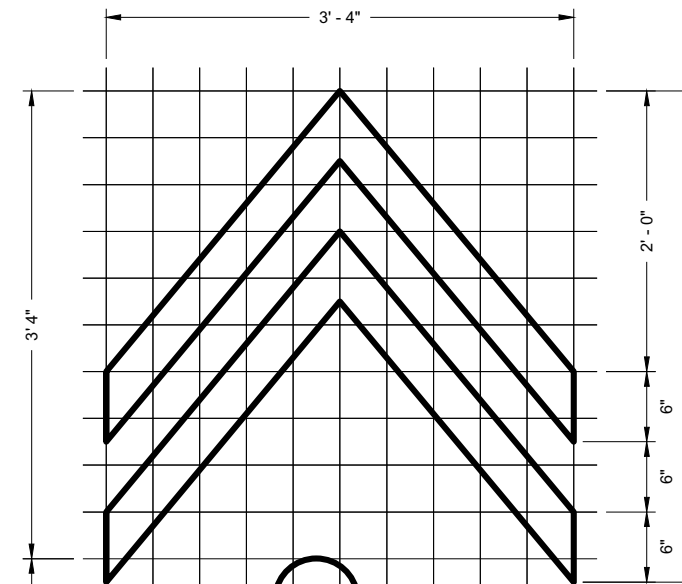
APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



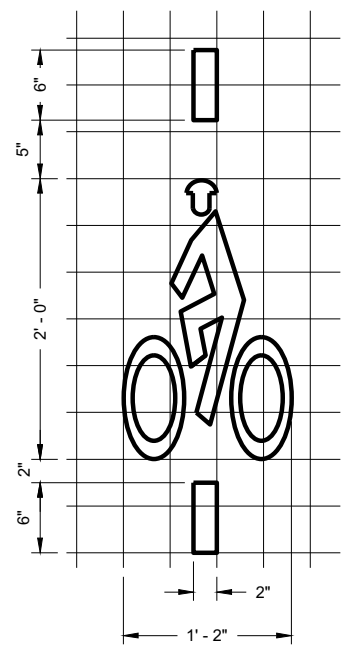
BIKE LANE WORDS

**GENERAL NOTES**

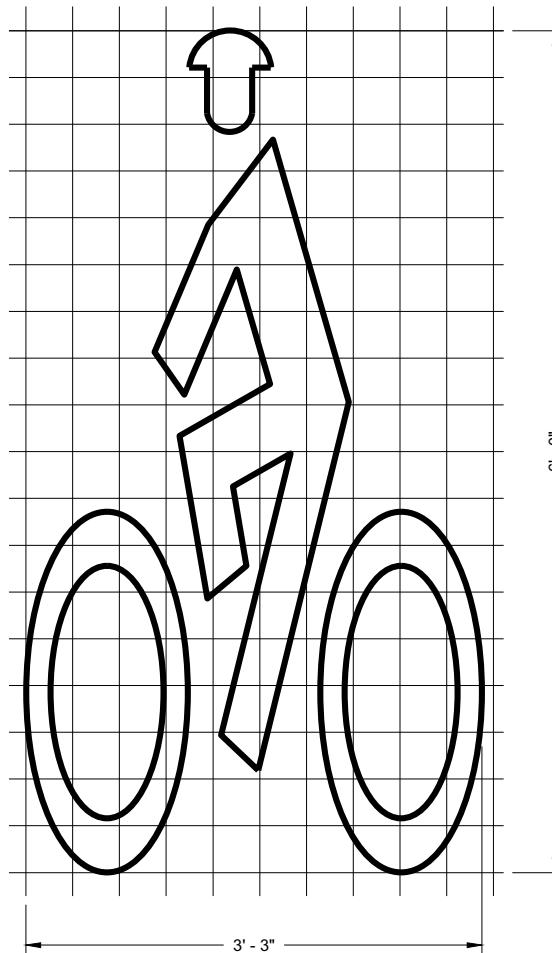
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



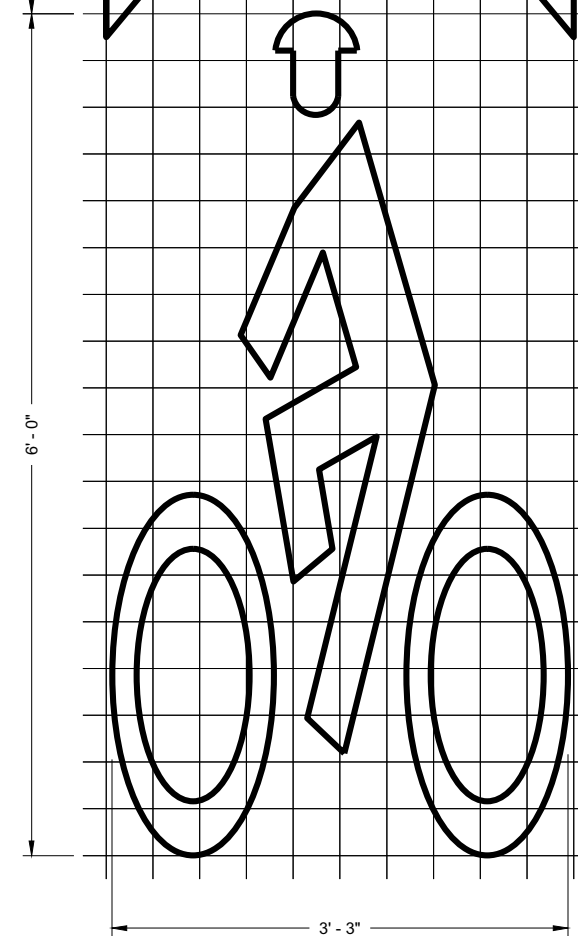
BIKE LANE ARROW



BIKE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL



BIKE LANE SYMBOL FOR SHARED LANE

6

6

**PAVEMENT MARKING FOR BIKE LANES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING  
ENGINEER




FHWA

**GENERAL NOTES**

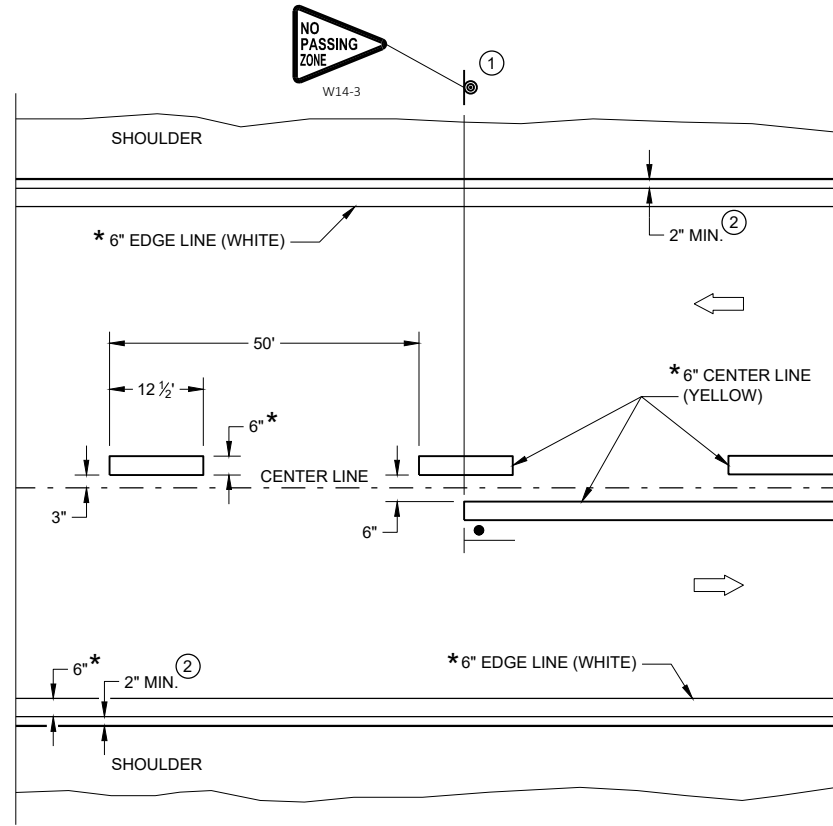
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

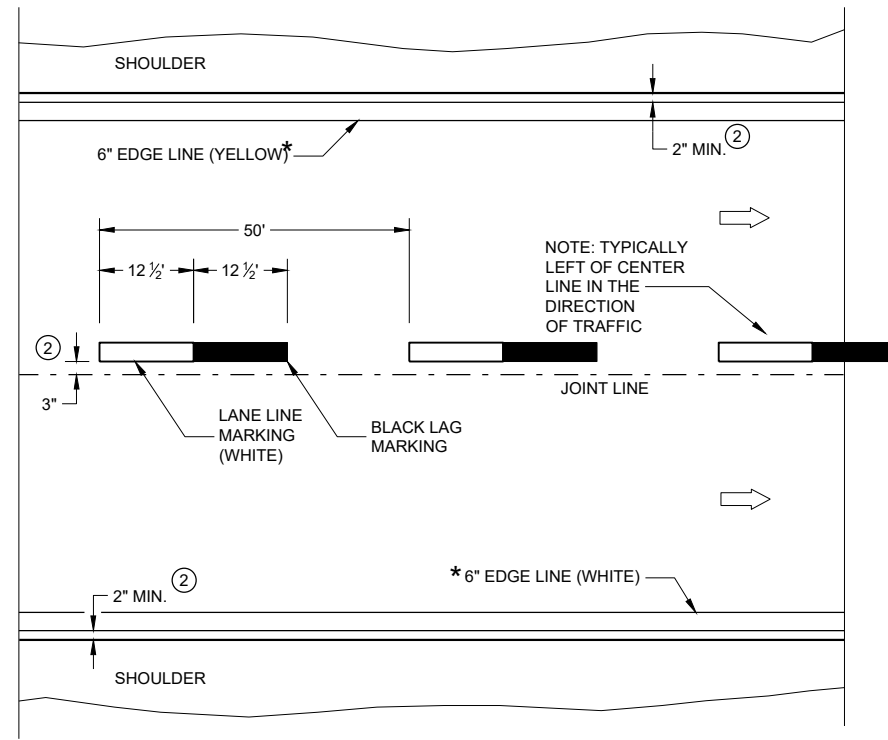
**LEGEND**

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



**TWO WAY TRAFFIC**



**ONE WAY TRAFFIC**

**PERMANENT PAVEMENT MARKING**

6

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SDD 15C08-23a

SDD 15C08-23a

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

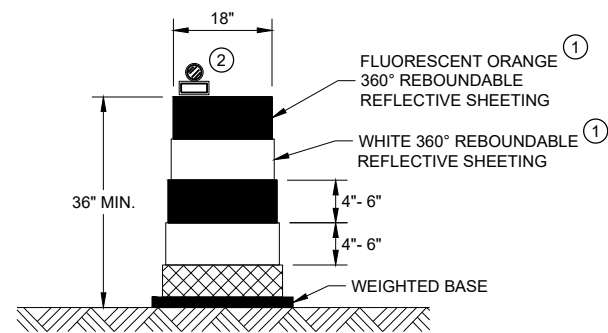
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Jeannie Silver  
DATE STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

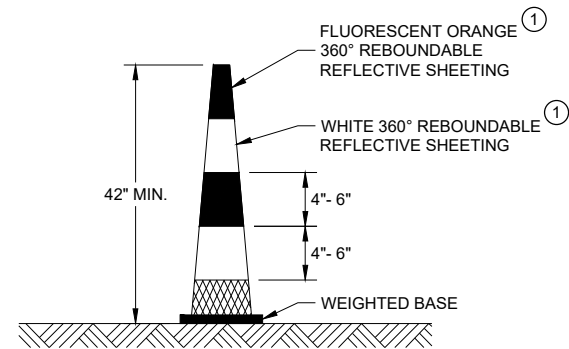
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



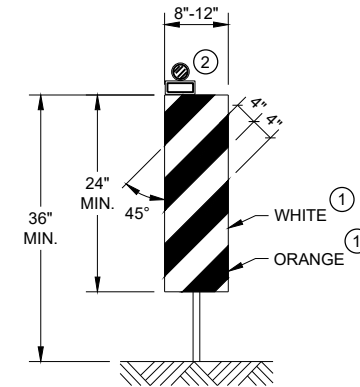
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



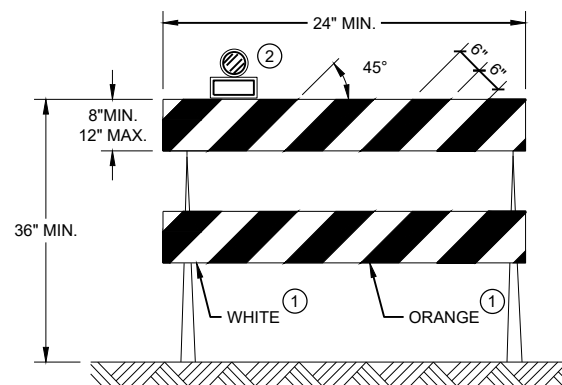
**42" CONE**

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS  
BALLAST WIDTHS  
RANGE FROM 14"-20"



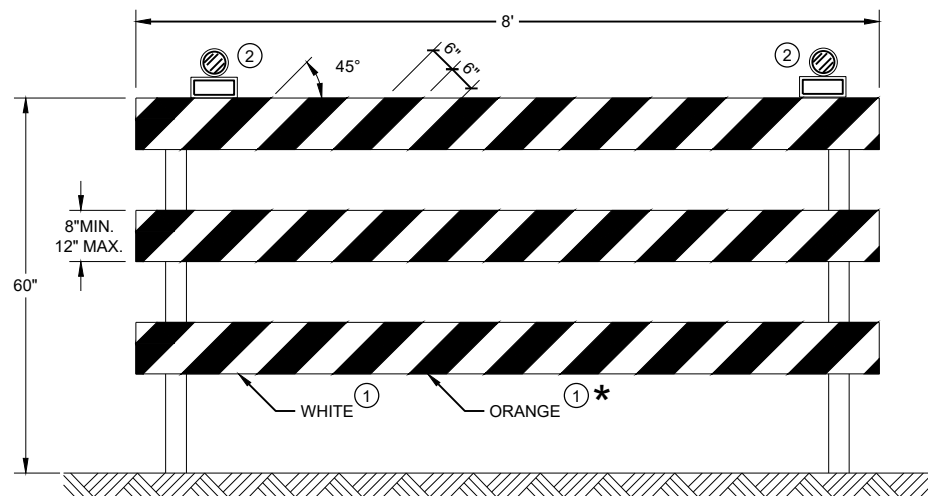
**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
TO THE TRAFFIC SIDE FOR CHANNELIZATION.

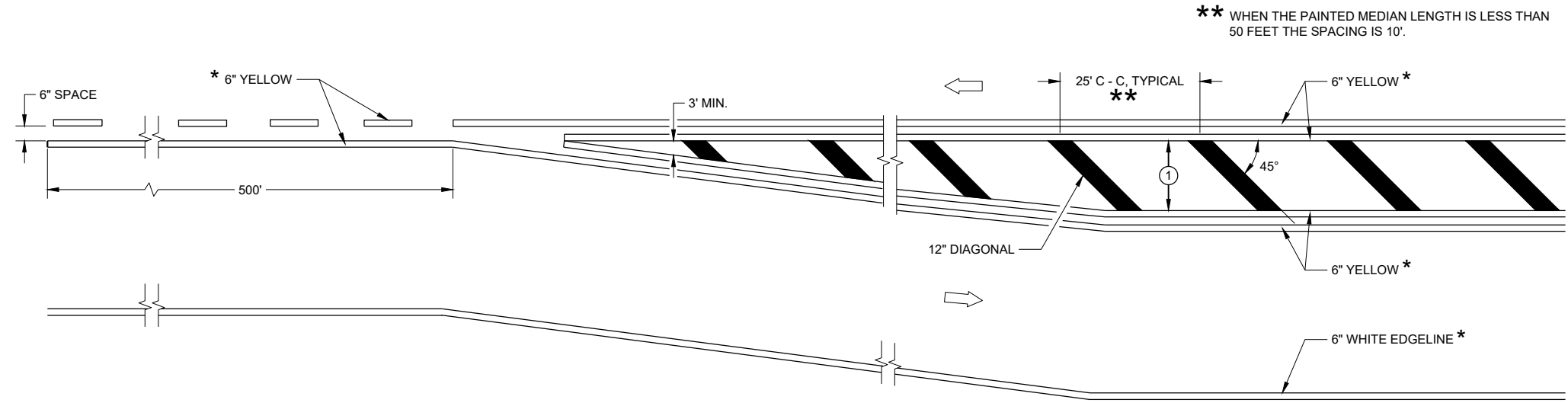


**TYPE III BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

<b>CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	



**MEDIAN ISLAND DETAIL**

**\*\*** WHEN THE PAINTED MEDIAN LENGTH IS LESS THAN 50 FEET THE SPACING IS 10'.

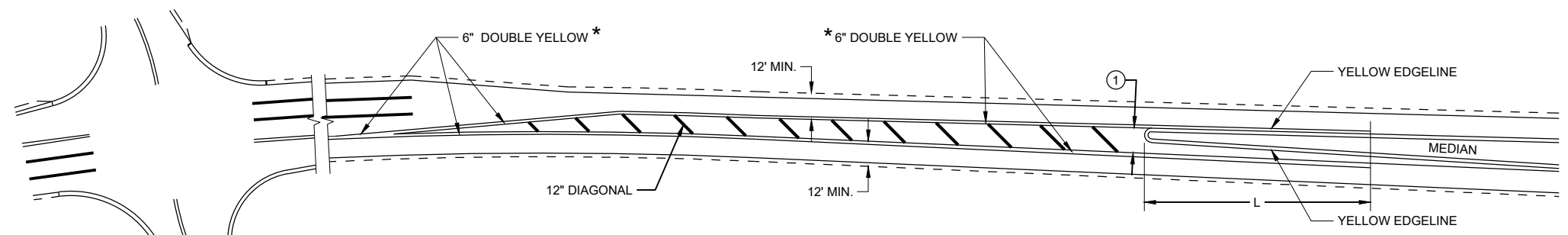
**GENERAL NOTES**

① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

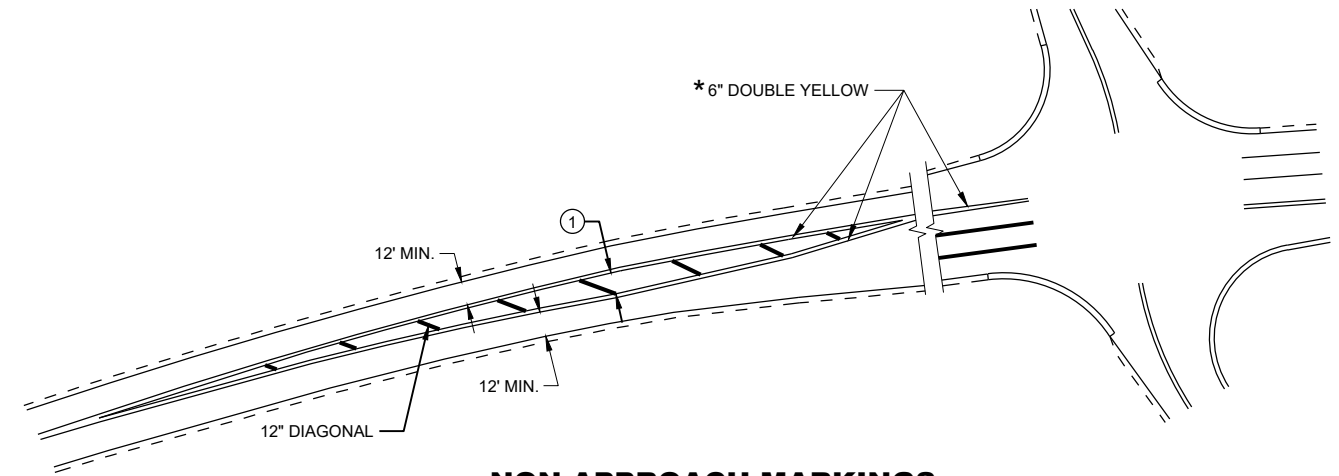
➔ DIRECTION OF TRAVEL

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'



**APPROACH MARKINGS FOR OTHER MEDIAN TYPES**



**NON-APPROACH MARKINGS**

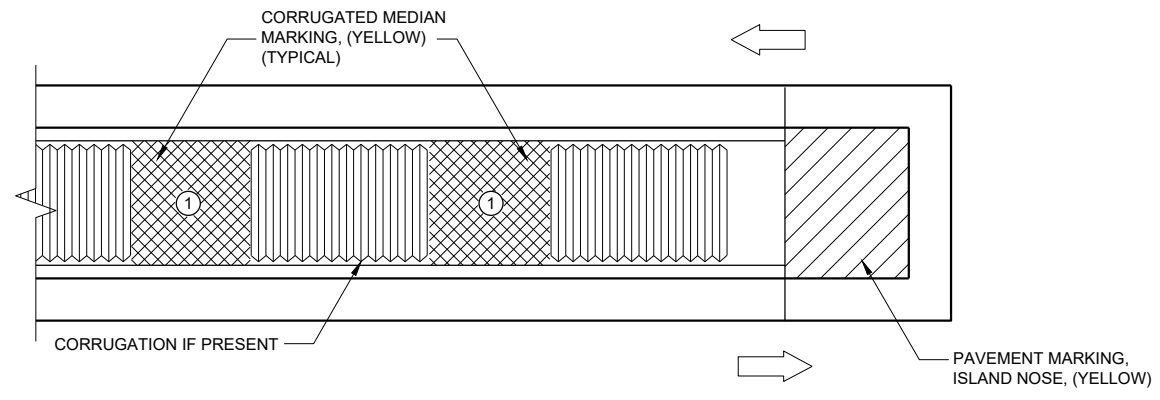
6

6

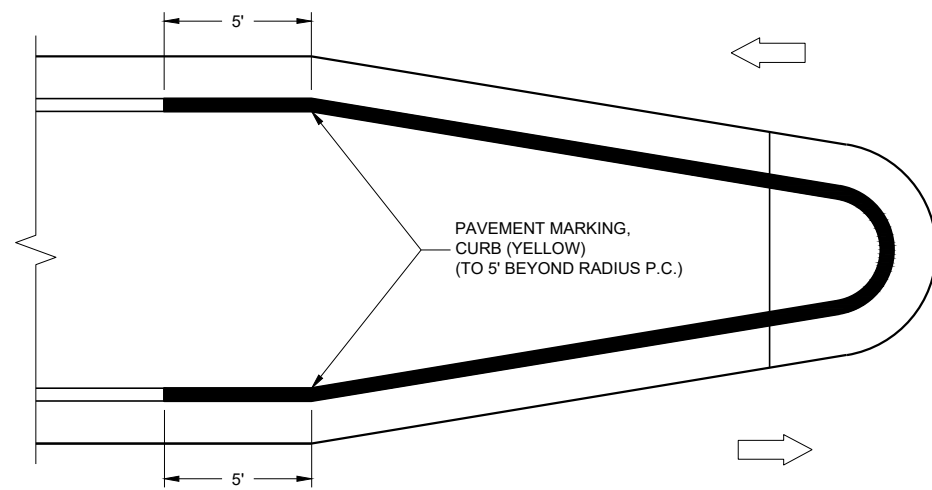
SDD 15C18-08a

SDD 15C18-08a

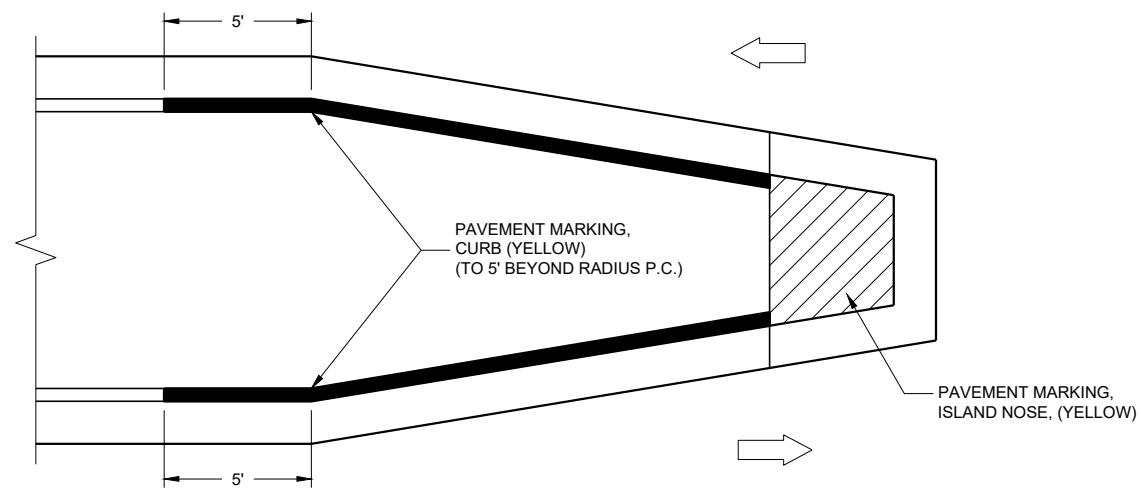
<b>MEDIAN ISLAND PAVEMENT MARKINGS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	



**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**



**MEDIAN ISLAND WITH ROUND BLUNT NOSE**



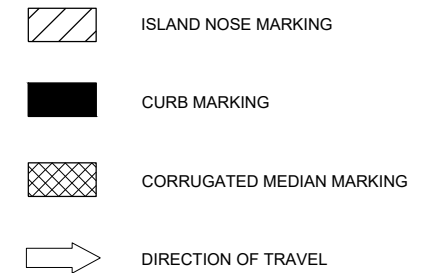
**MEDIAN ISLAND WITH SLOPED NOSE**

**TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS**

**GENERAL NOTES**

WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.



6

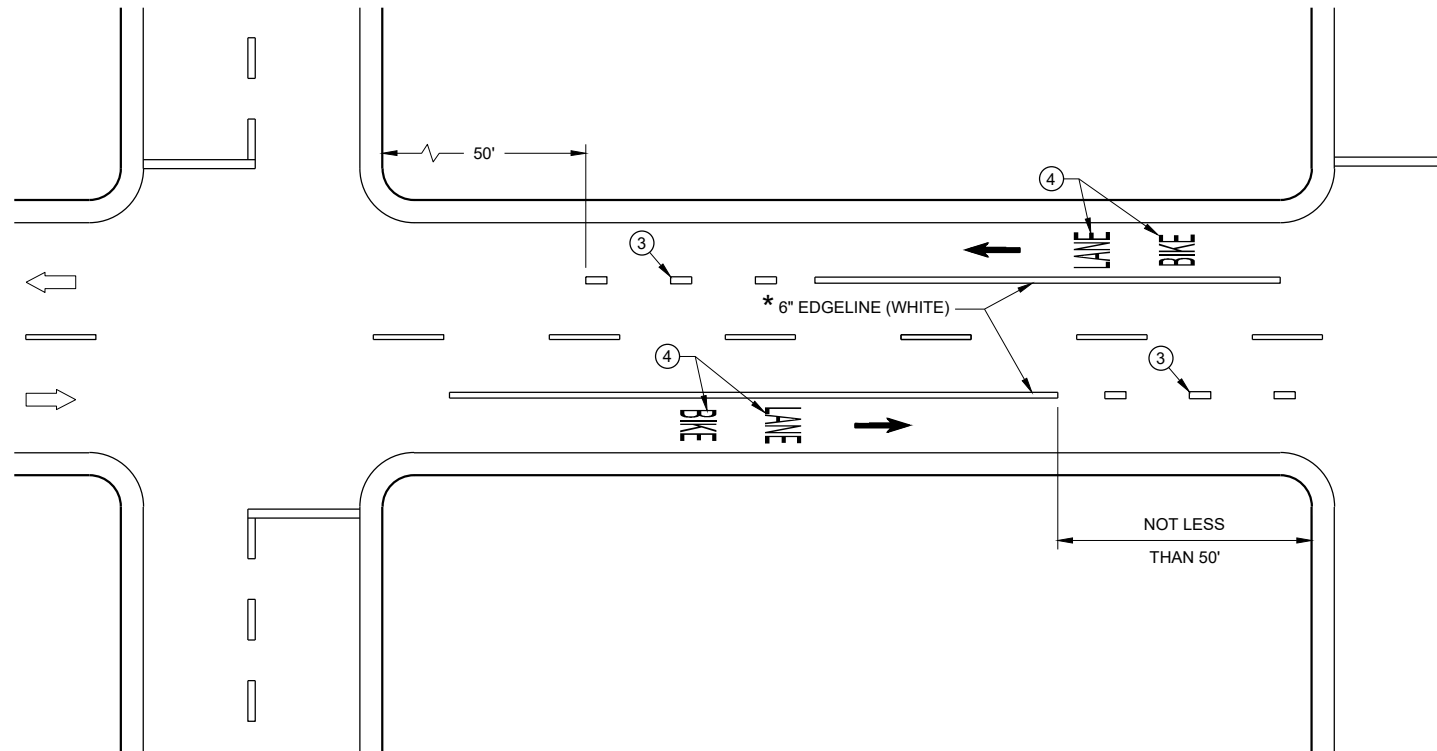
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SDD 15C18-08b

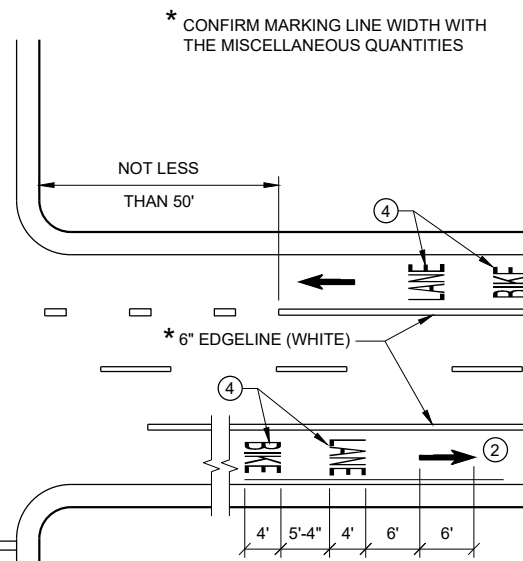
SDD 15C18-08b

<b>PAVEMENT MARKINGS, MEDIAN ISLAND NOSE</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MARKING ENGINEER
<small>FHWA</small>	



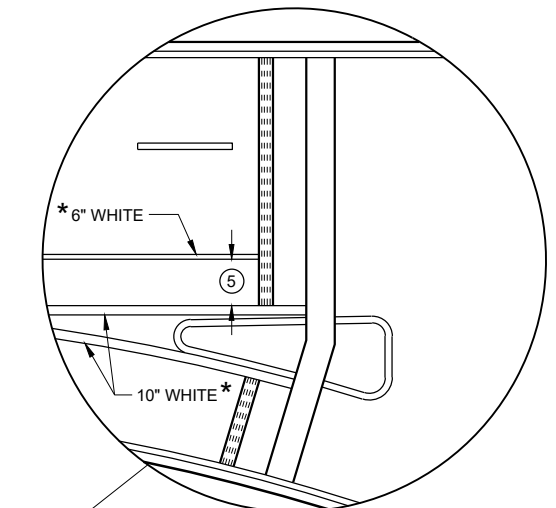
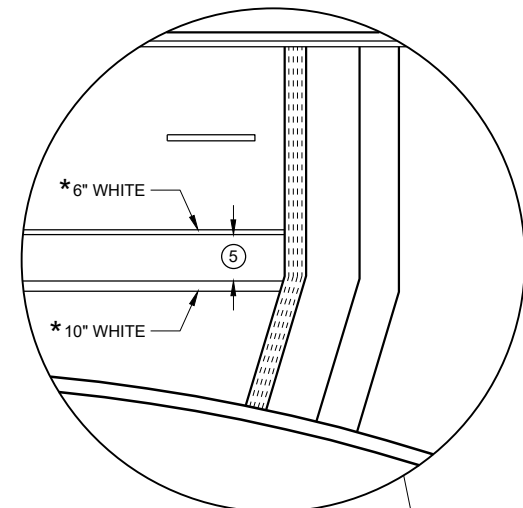


**DESIGNATED BIKE LANE - NO PARKING**

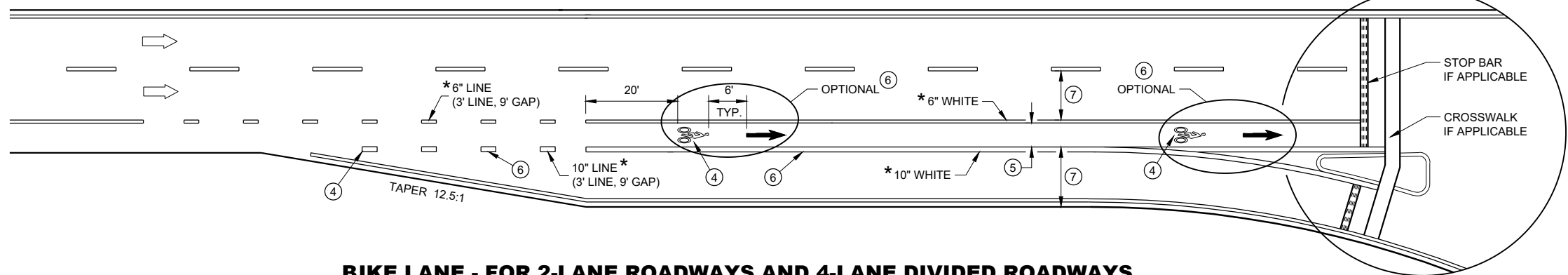


**4 LANE DIVIDED WITHOUT ISLAND**

- GENERAL NOTES**
- 1 DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
  - 2 MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
  - 3 DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY LANE AND THERE IS HEAVY RIGHT TURN TRAFFIC OR THERE IS A NEAR-SIDE BUS STOP. AT OTHER INTERSECTIONS WHERE RIGHT TURN TRAFFIC IS LIGHT TO MODERATE, A SOLID LINE CAN BE USED UP TO THE INTERSECTION.
  - 4 BIKE SYMBOLS OR WORDS MAY BE USED.
  - 5 BIKE ACCOMMODATION IS TYPICAL 5 FEET WIDE AND MINIMUM OF 4 FEET FROM A LONGITUDINAL JOINT. USE 5 FEET AT  $\geq 45$  MPH.
  - 6 OMIT THESE MARKINGS FOR WIDER TURN LANE APPLICATIONS (MINIMUM OF 15 FOOT WIDE TURN LANE).
  - 7 REFER TO CONTRACT PLANS FOR LANE WIDTH.
- DIRECTION OF TRAVEL →



**4 LANE DIVIDED WITH ISLAND**



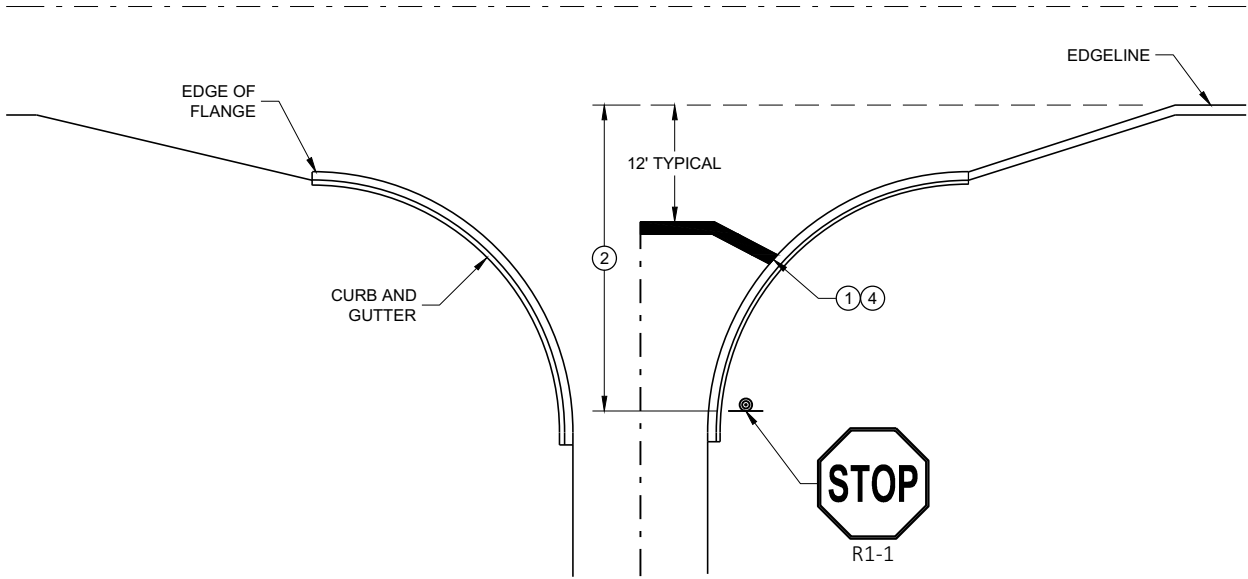
**BIKE LANE - FOR 2-LANE ROADWAYS AND 4-LANE DIVIDED ROADWAYS (4-LANE DIVIDED WITH RIGHT TURN LANE SHOWN)**

BIKE LANE MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	

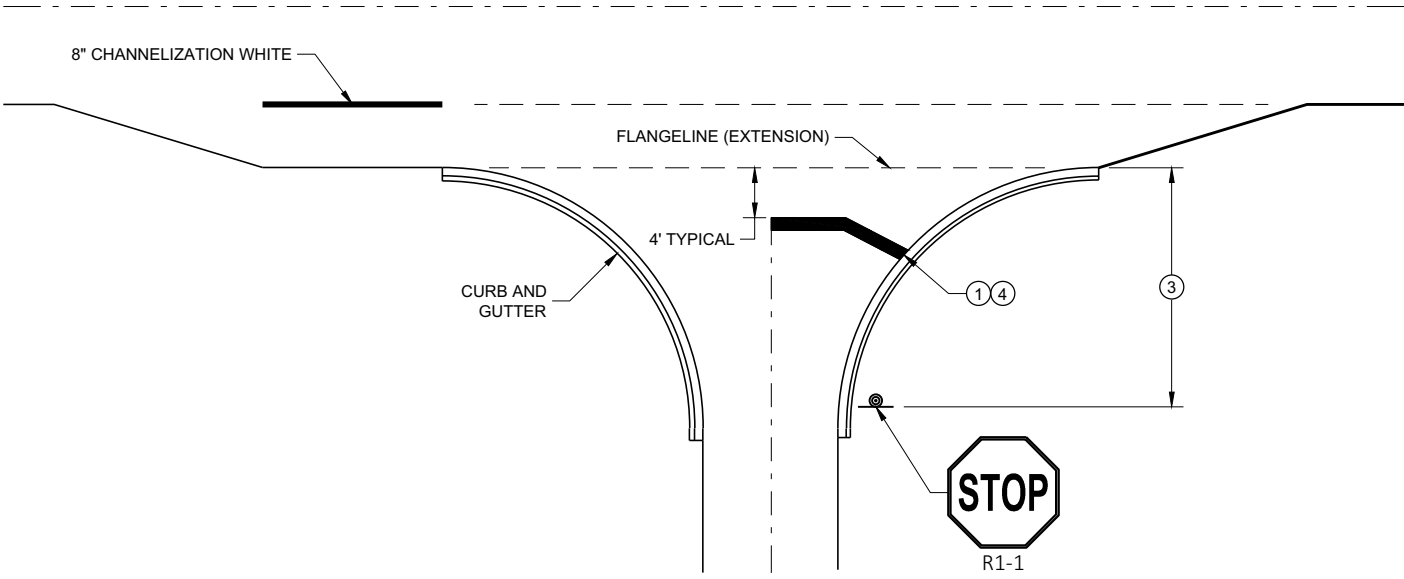
**GENERAL NOTES**

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

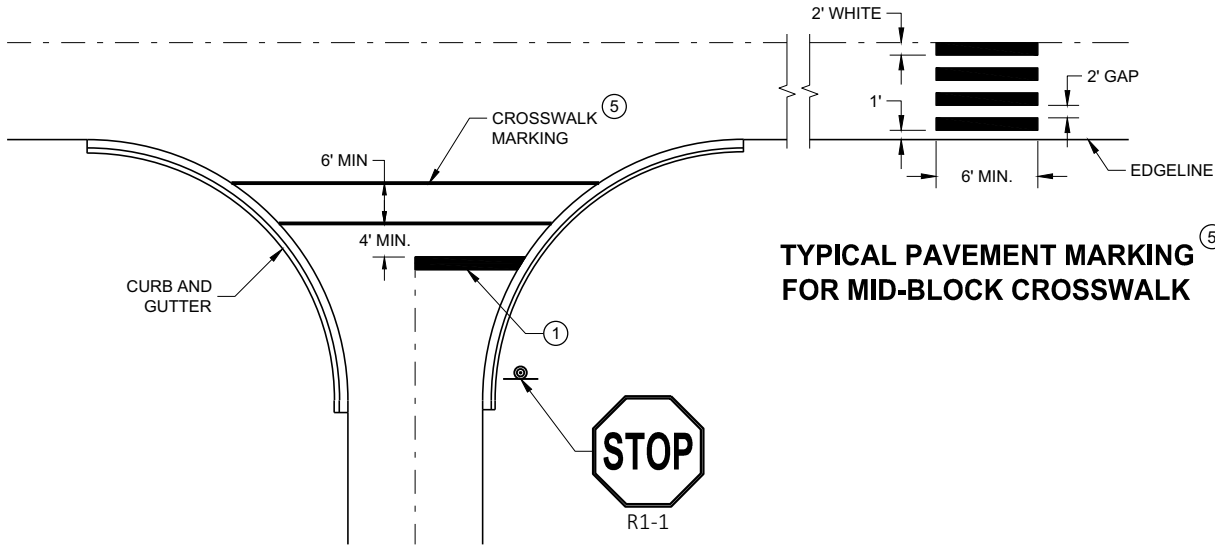
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



**TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER**

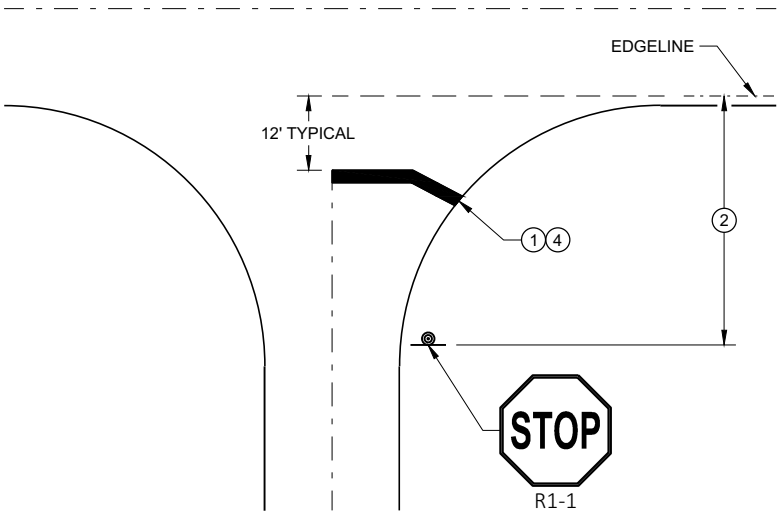


**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING**

**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK**



**TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER**





**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Matthew Rauch  
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

**GENERAL NOTES**

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 THE REGIONAL TRAFFIC UNIT.

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

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

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

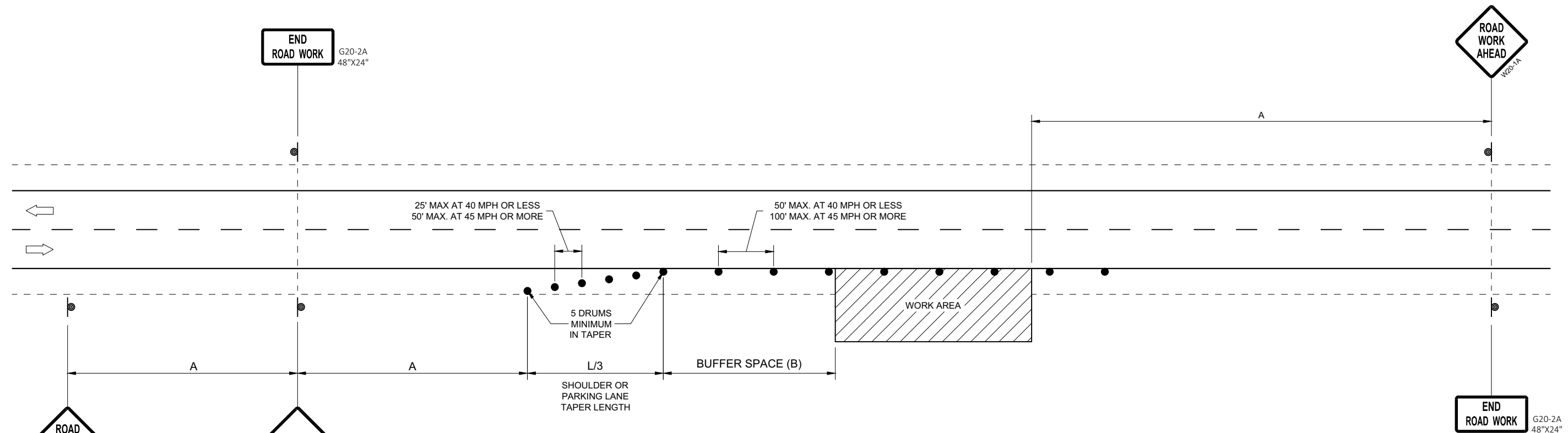
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6



OR  
IF TRAFFIC CONTROL DEVICES  
ENCROACH ONTO TRAVELED WAY, USE

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

**TRAFFIC CONTROL, WORK ON  
SHOULDER OR PARKING LANE,  
UNDIVIDED ROADWAY**

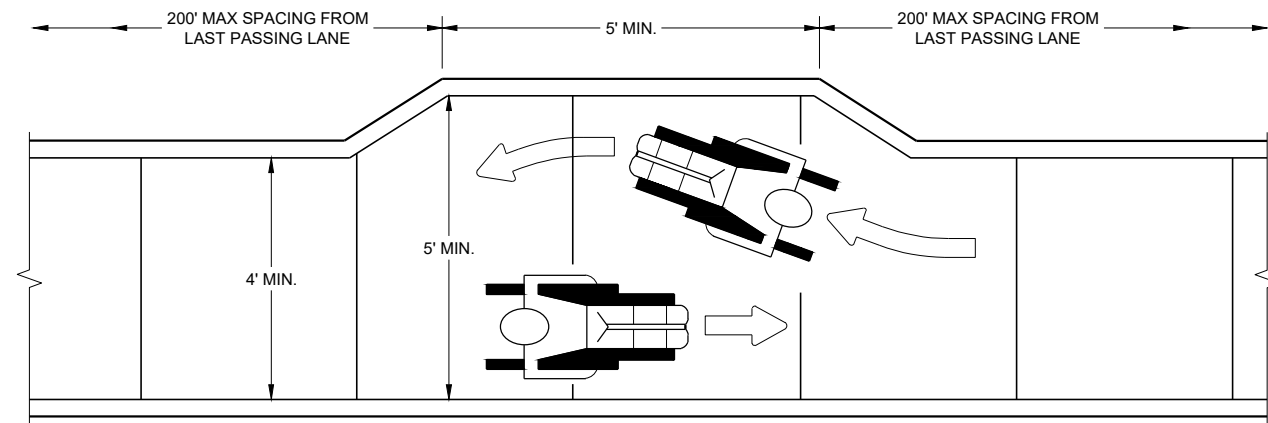
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER

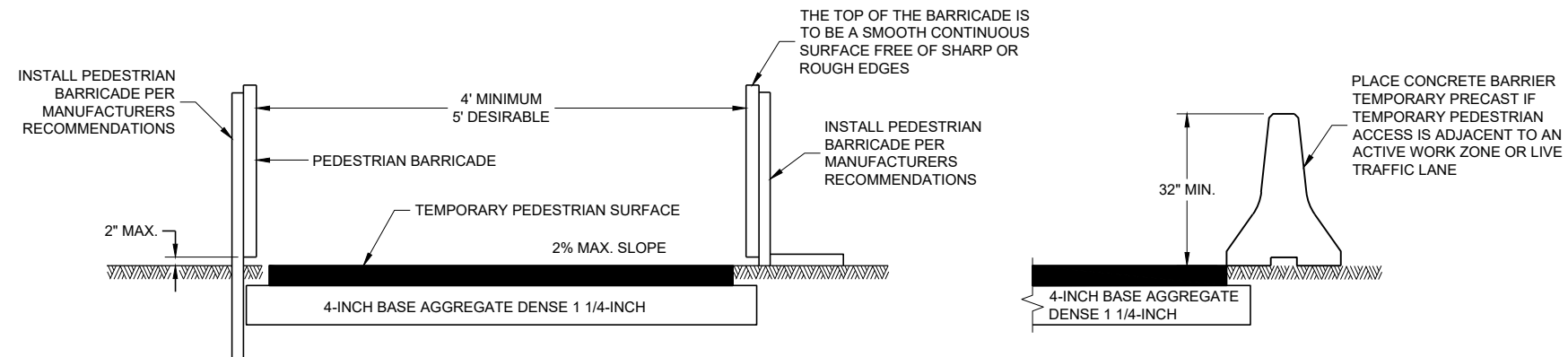
FHWA

SDD 15D28 - 04

SDD 15D28 - 04



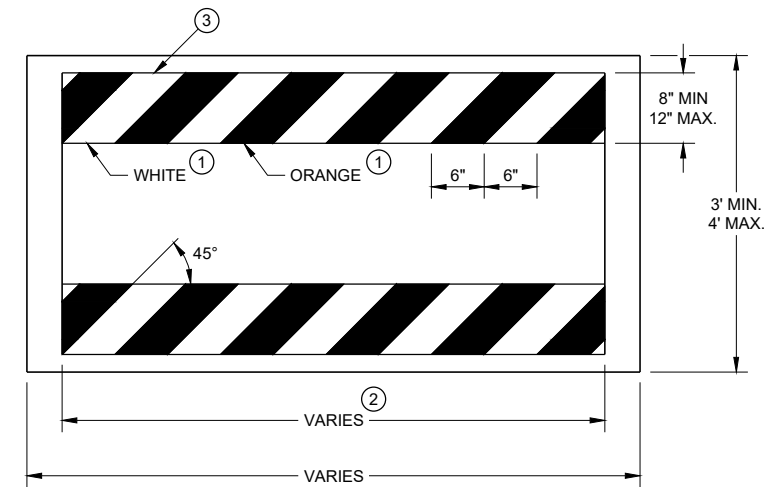
**NARROW SIDEWALK PASSING DETAIL**



**TEMPORARY PEDESTRIAN ACCESS**

**GENERAL NOTES**

- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- \* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

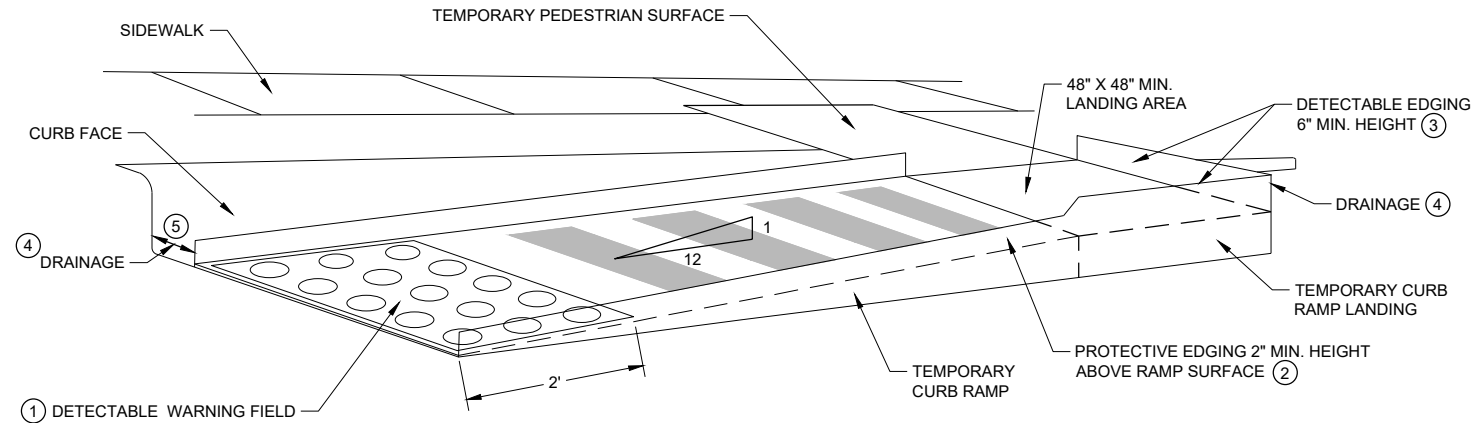


**TEMPORARY PEDESTRIAN BARRICADE\***

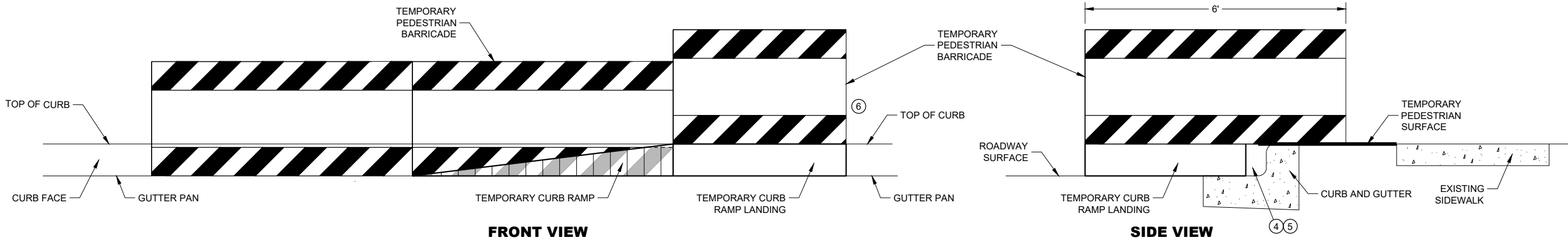
**GENERAL NOTES**

CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.  
 CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.  
 CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.  
 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.  
 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



**PERSPECTIVE VIEW**

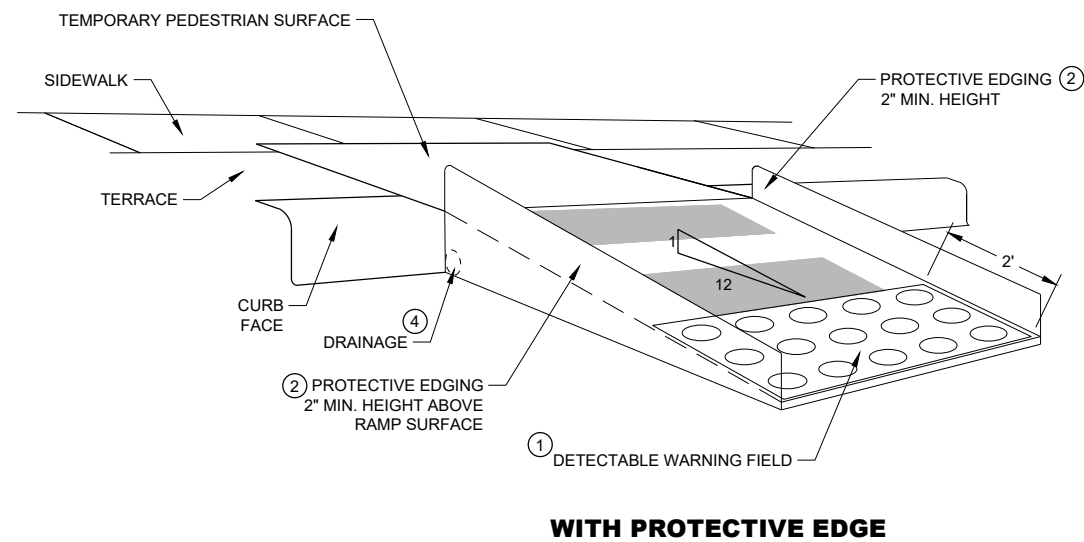
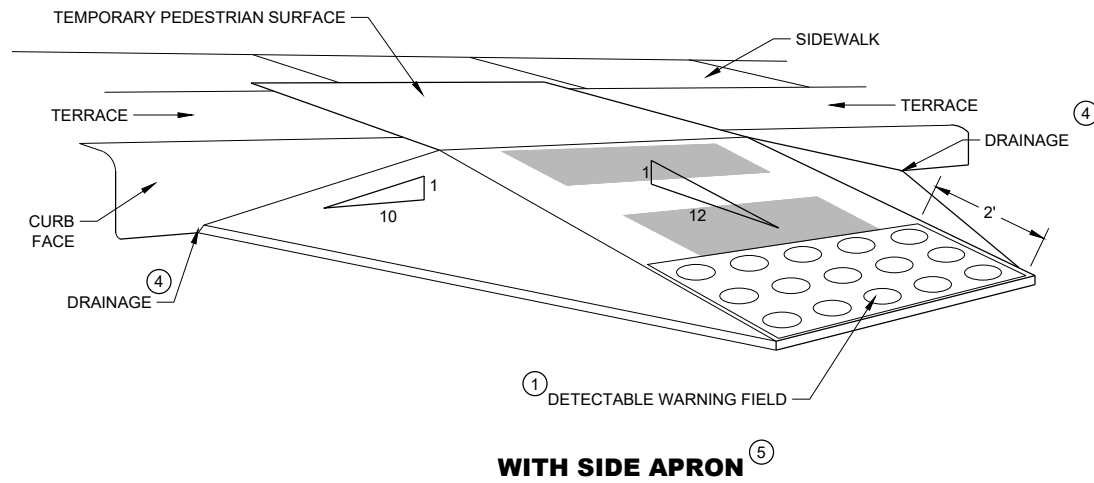


**FRONT VIEW**

**SIDE VIEW**

**TEMPORARY CURB RAMP PARALLEL TO CURB**

<p><b>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</b></p>
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>



**TEMPORARY CURB RAMP PERPENDICULAR TO CURB**

**GENERAL NOTES**

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

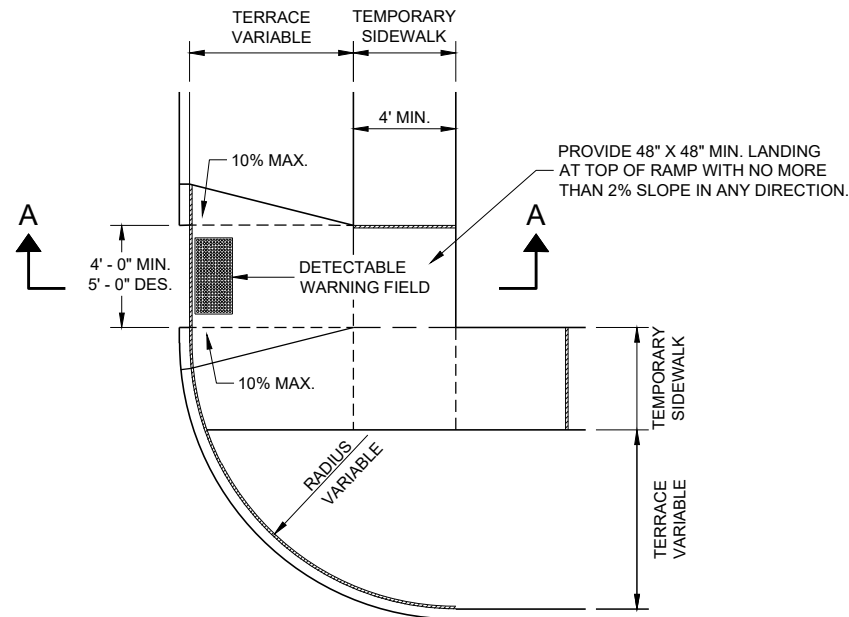
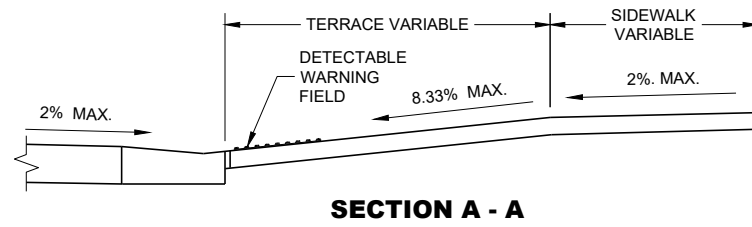
LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

**GENERAL NOTES**

- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- ★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



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

6







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SDD 15D30-09d

SDD 15D30-09d

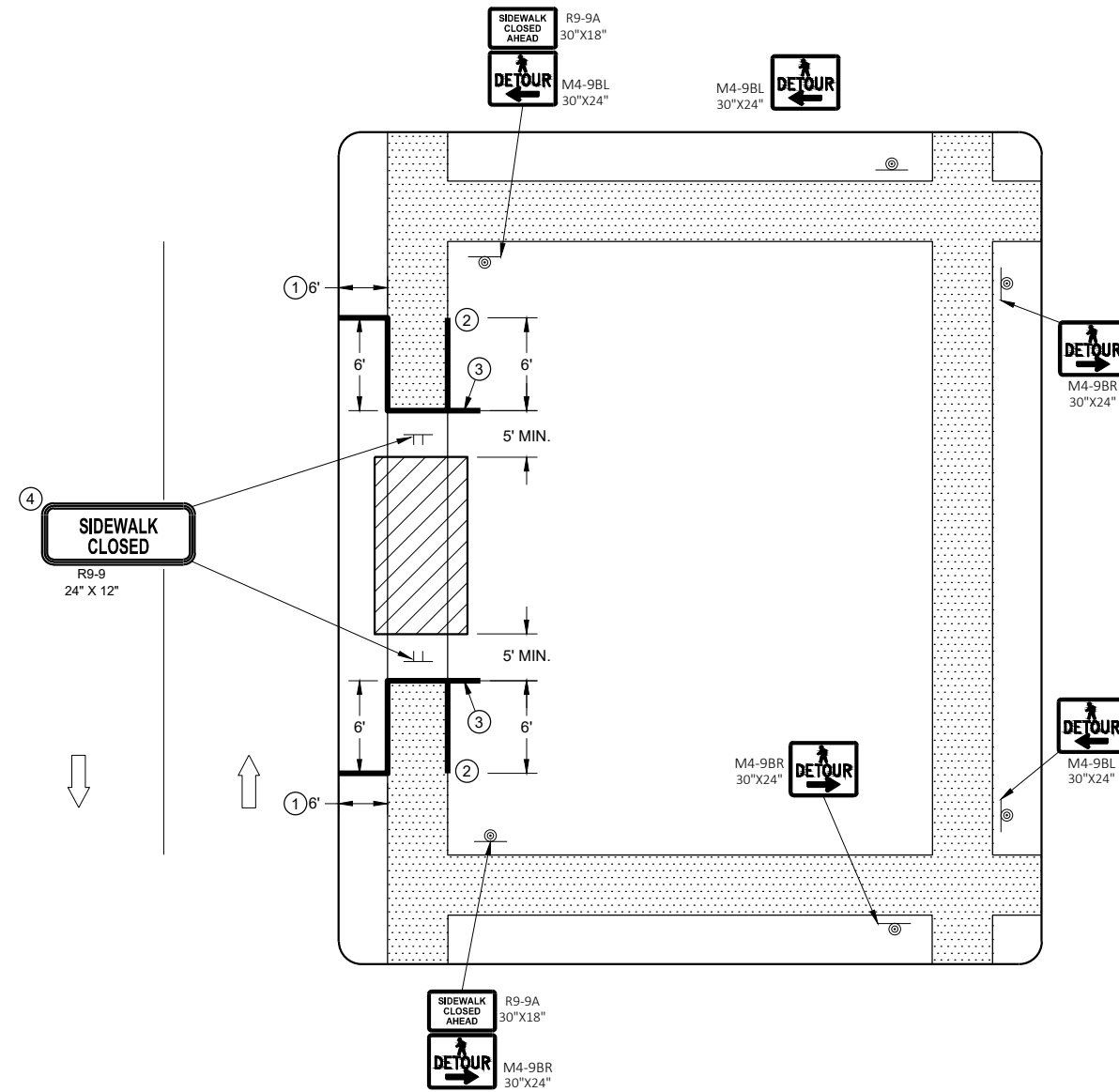
<b>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

**GENERAL NOTES**

- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
  - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
  - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
  - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.









**SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE**

<b>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

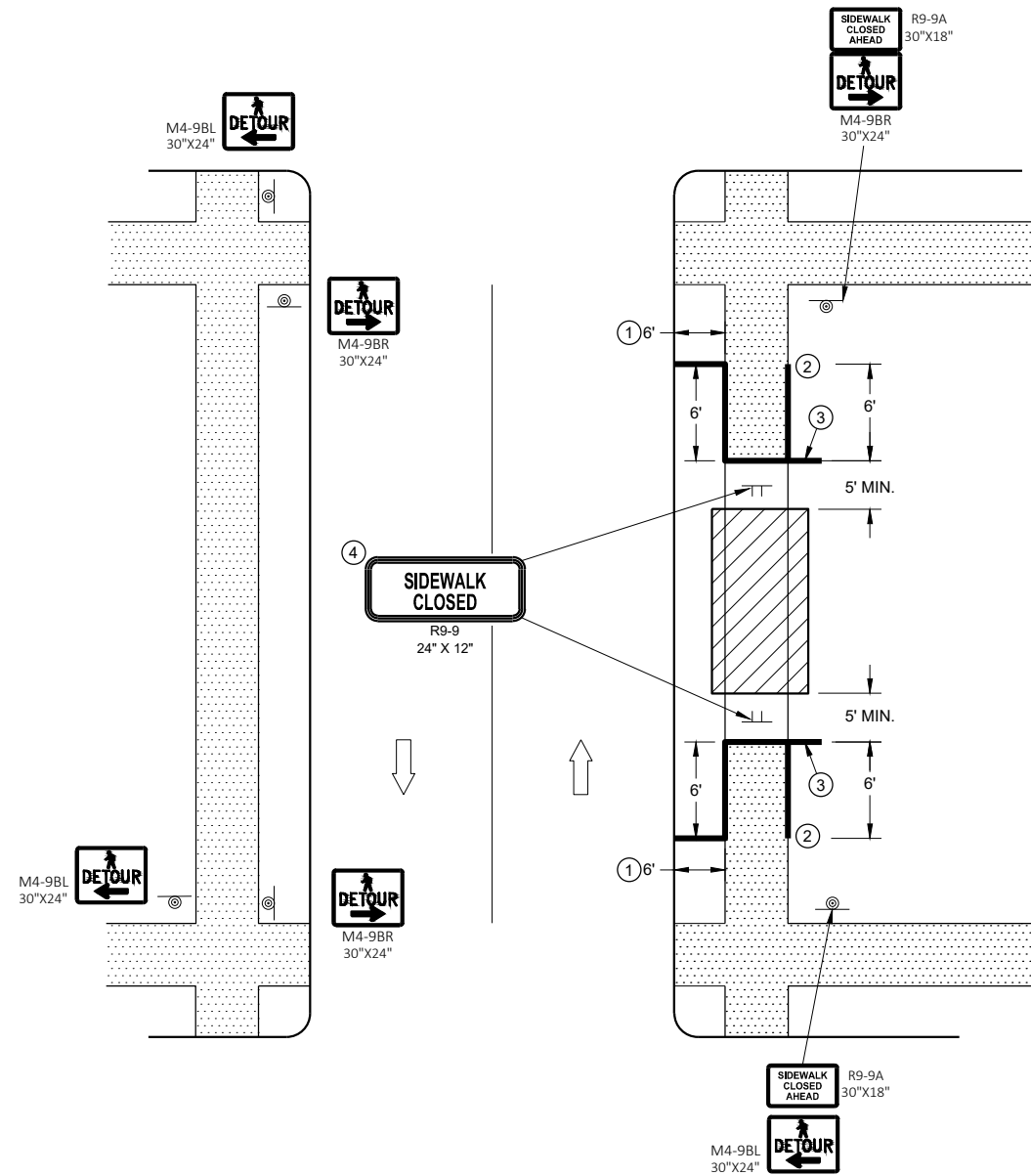


**LEGEND**

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC

**GENERAL NOTES**

- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
  - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
  - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
  - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

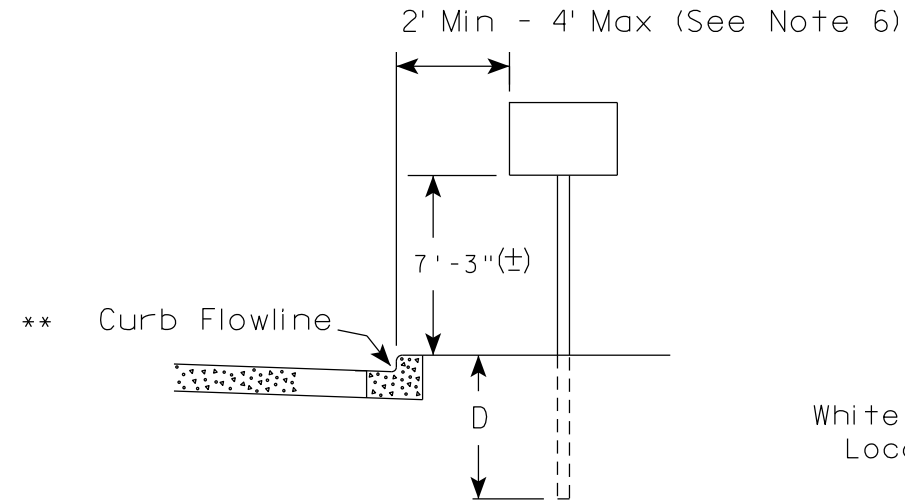


**SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES**

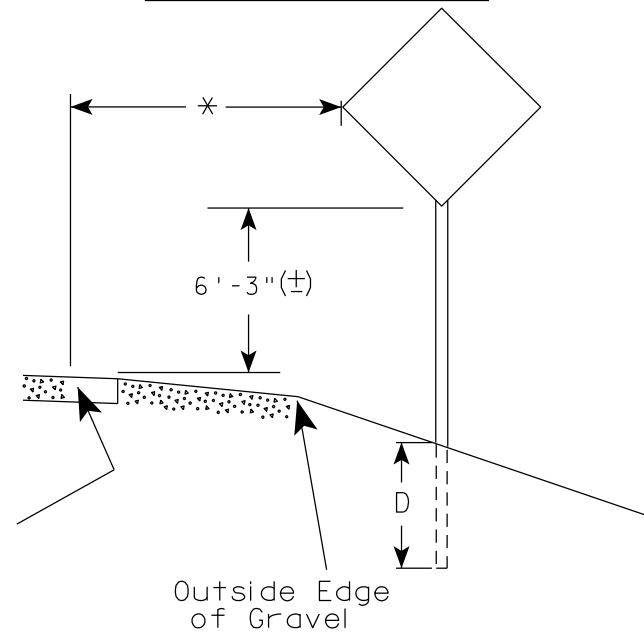
<b>TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION</b>
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

URBAN AREA

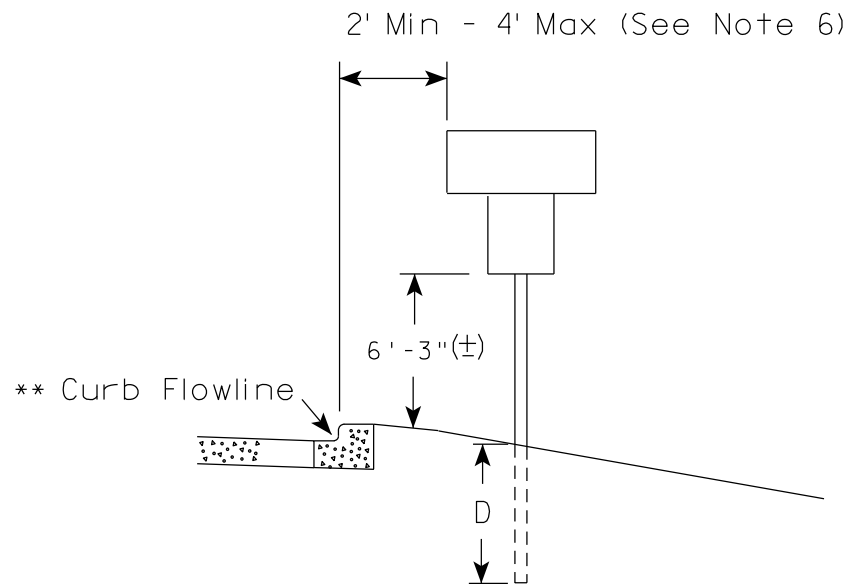
RURAL AREA (See Note 2)



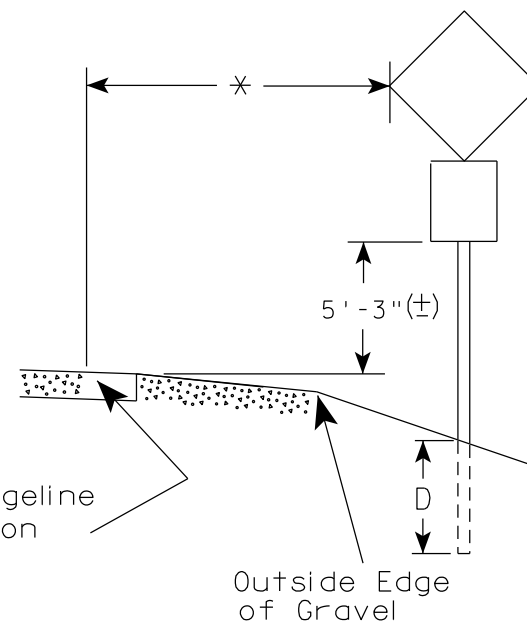
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) 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" (±).
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 signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the 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.

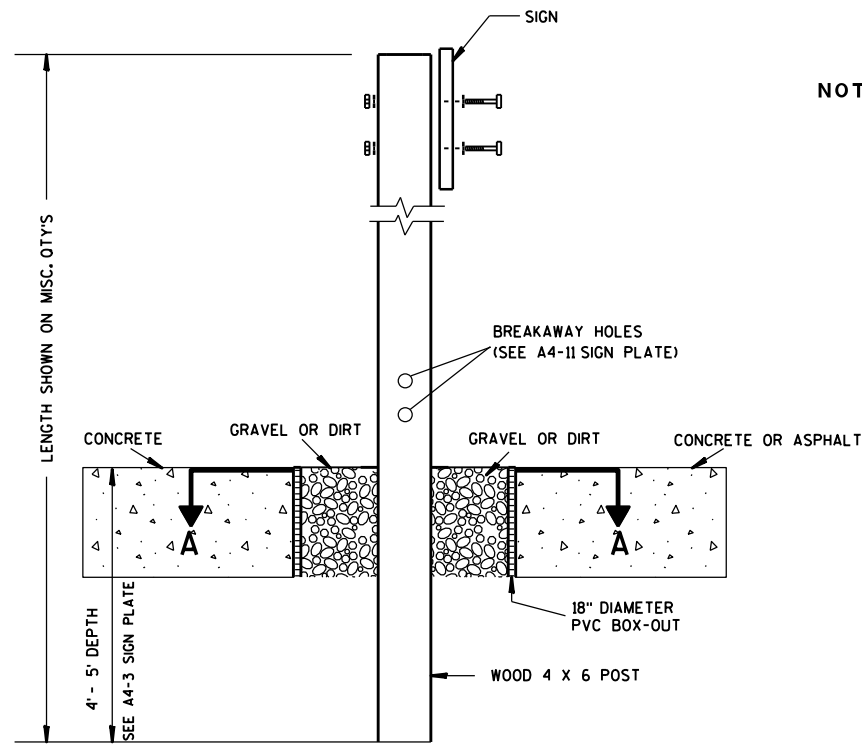
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

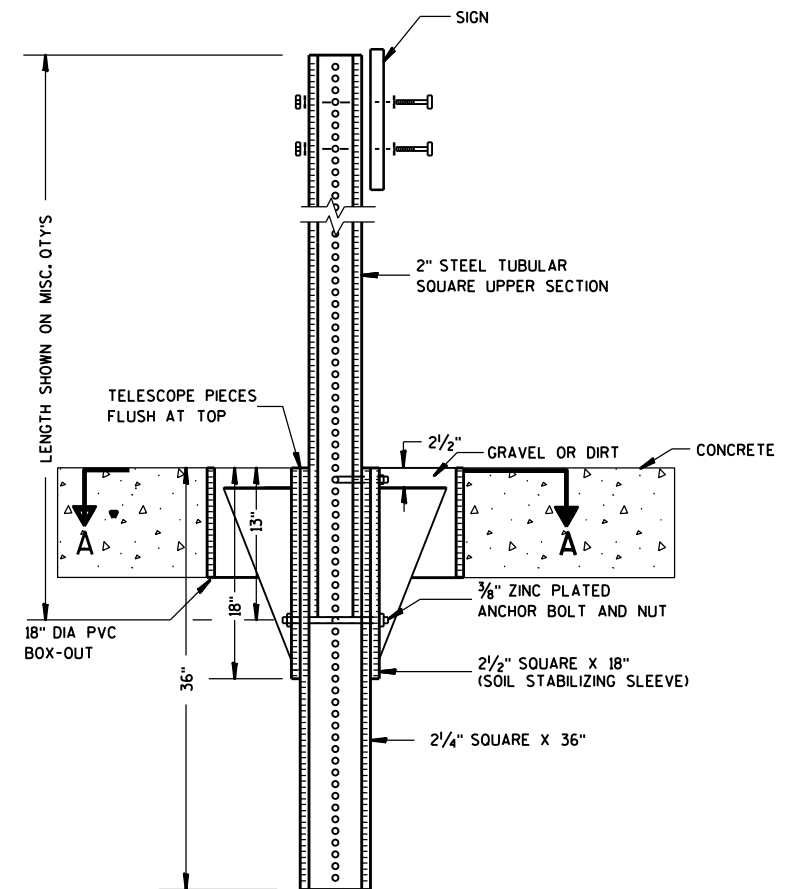
DATE 5/13/2020 PLATE NO. A4-3.22



**ELEVATION VIEW**

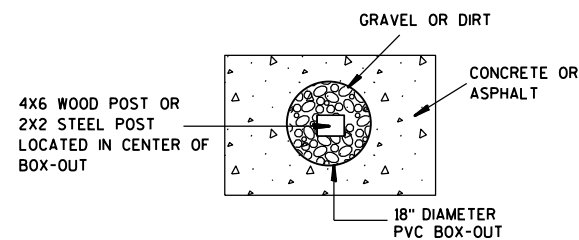
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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**

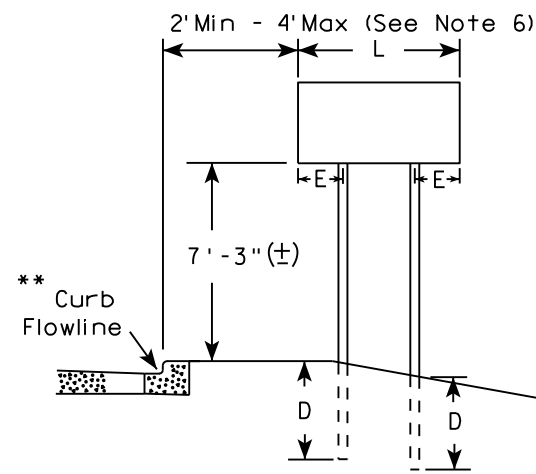
**FOR NEW CONCRETE/ ASPHALT INSTALLATIONS**

<b>SIGN POST BOX-OUTS A4-3B</b>	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

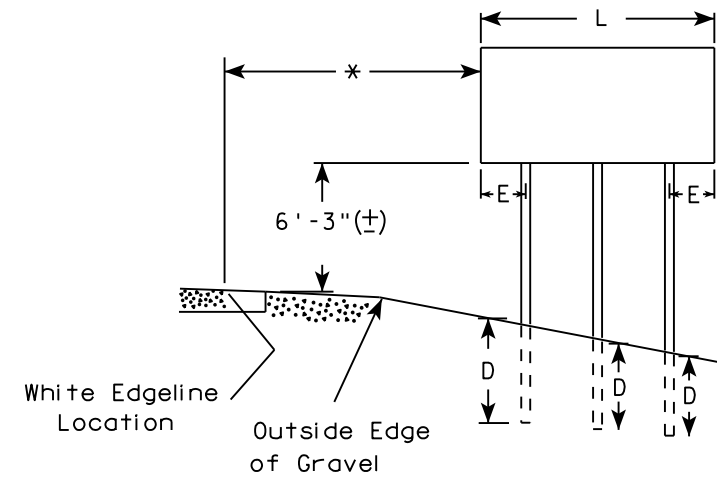
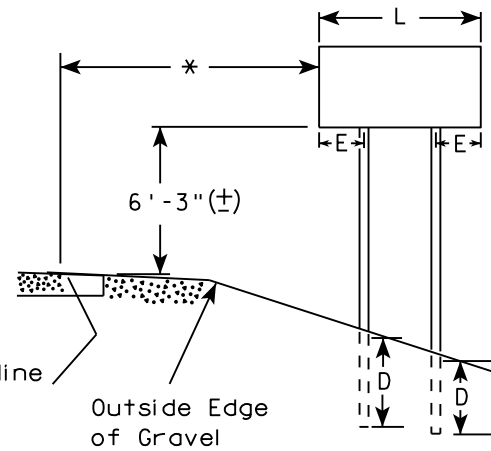
**GENERAL NOTES**

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. J-Assemblies are considered to be one sign for mounting height.
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" (±).

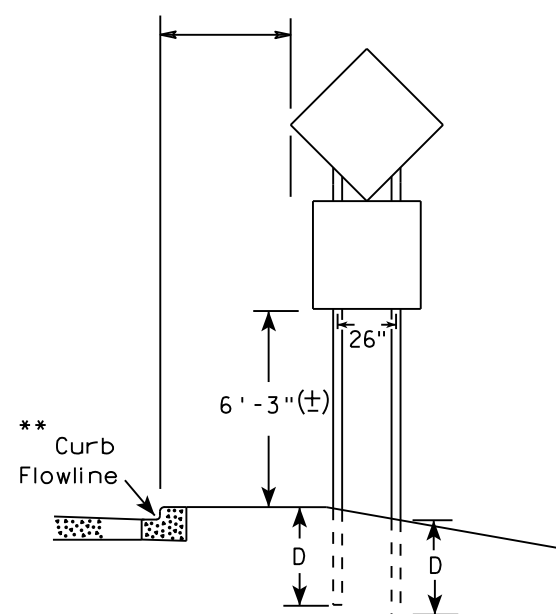
**URBAN AREA**



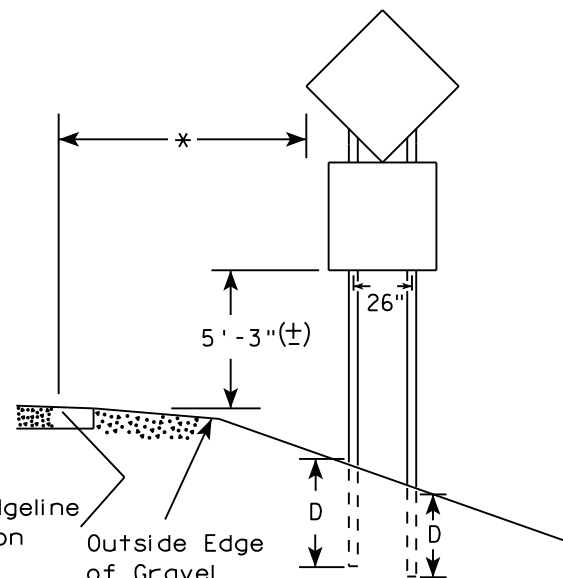
**RURAL AREA (See Note 3)**



2' Min - 4' Max (See Note 6)



**48" DIAMOND WARNING SIGN**



**48" DIAMOND WARNING SIGN**

\* 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 and 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 108"	L/5

\*\*\*

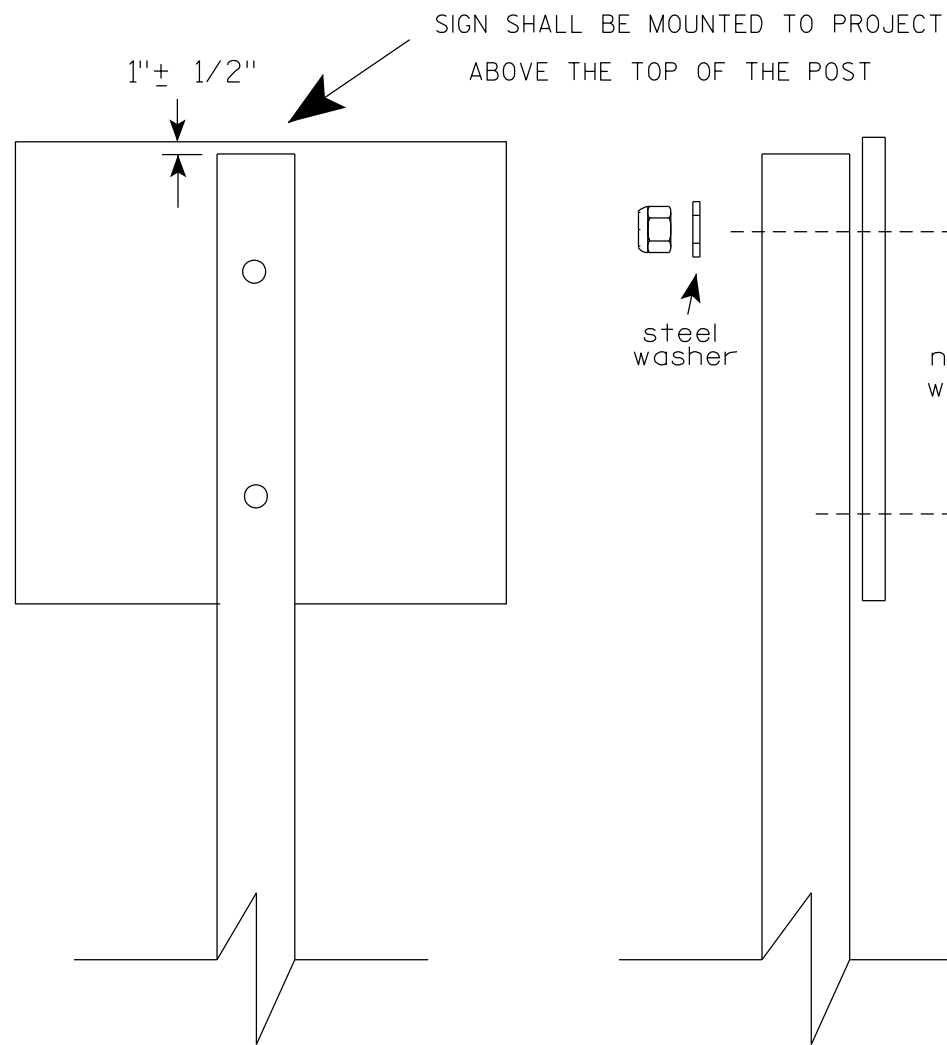
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

**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 8/21/17 PLATE NO. A4-4.15



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

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

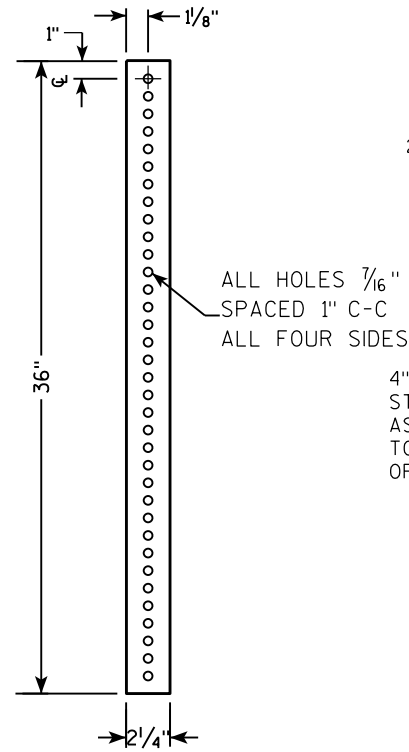
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
  - $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
  - 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

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

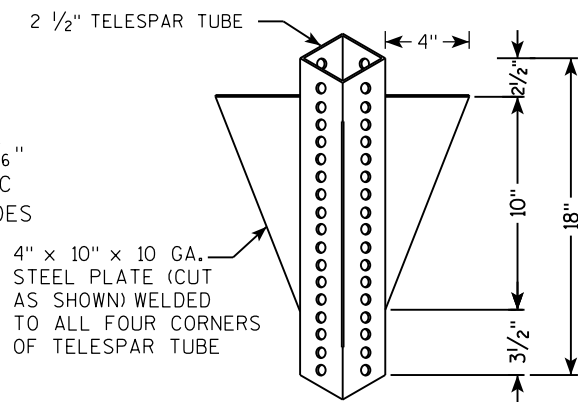
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

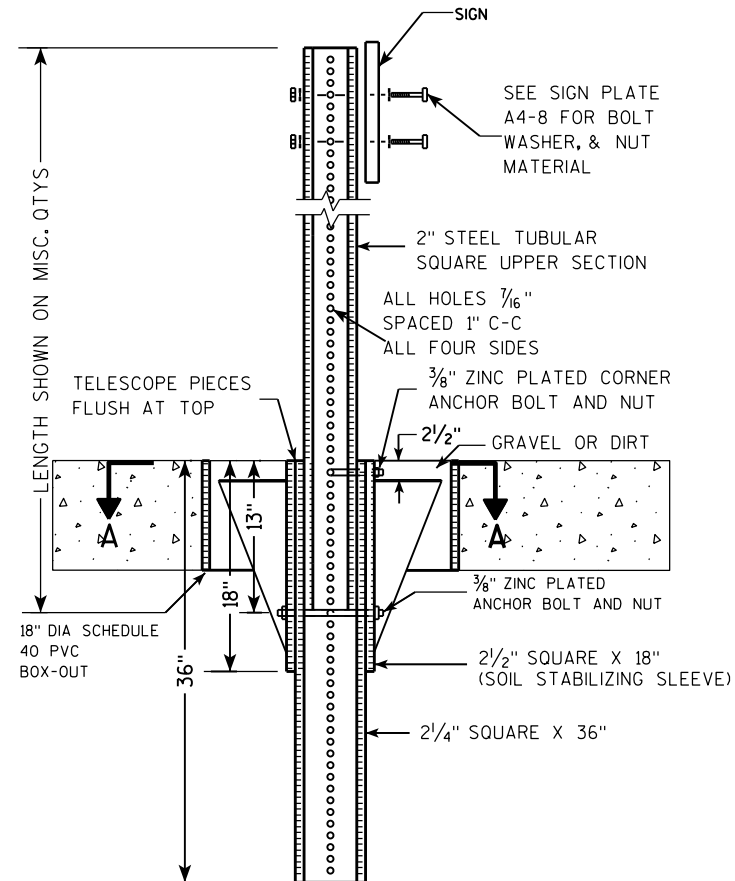
**2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH**



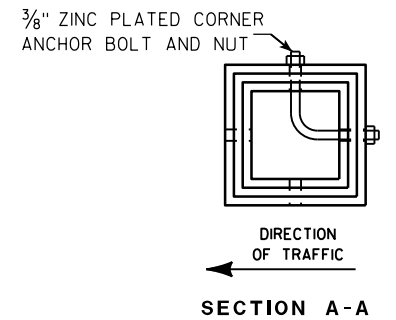
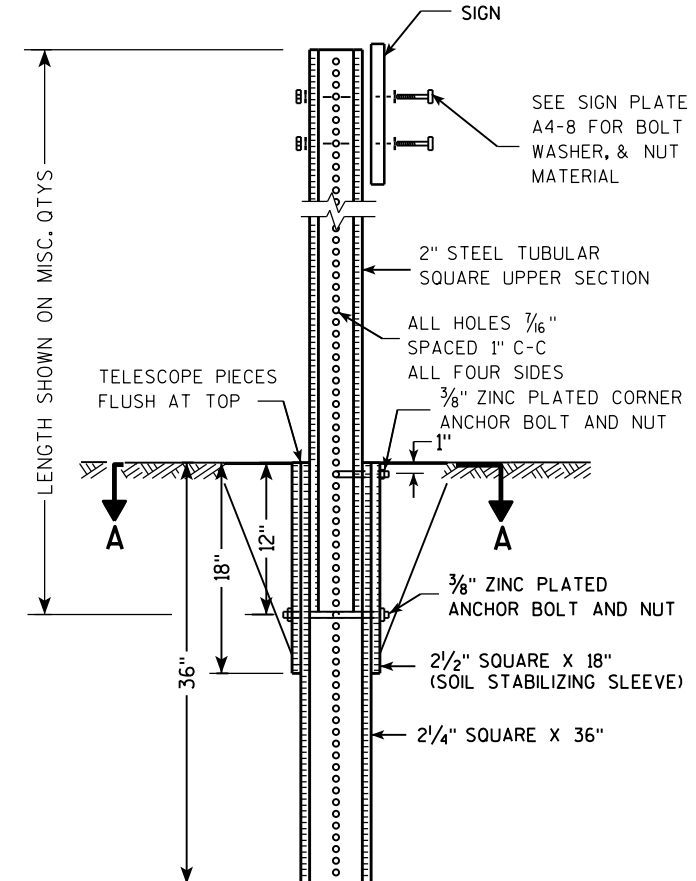
**2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH**



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



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



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

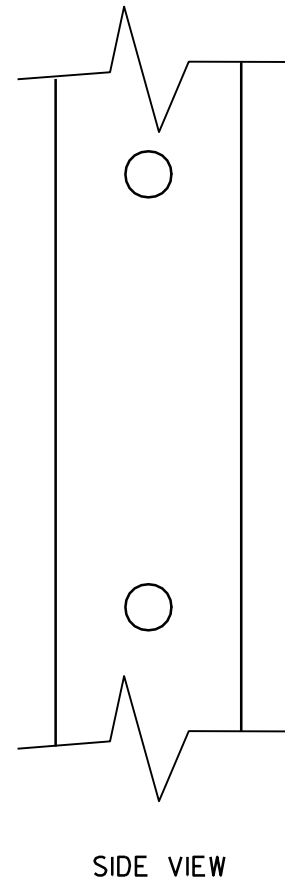
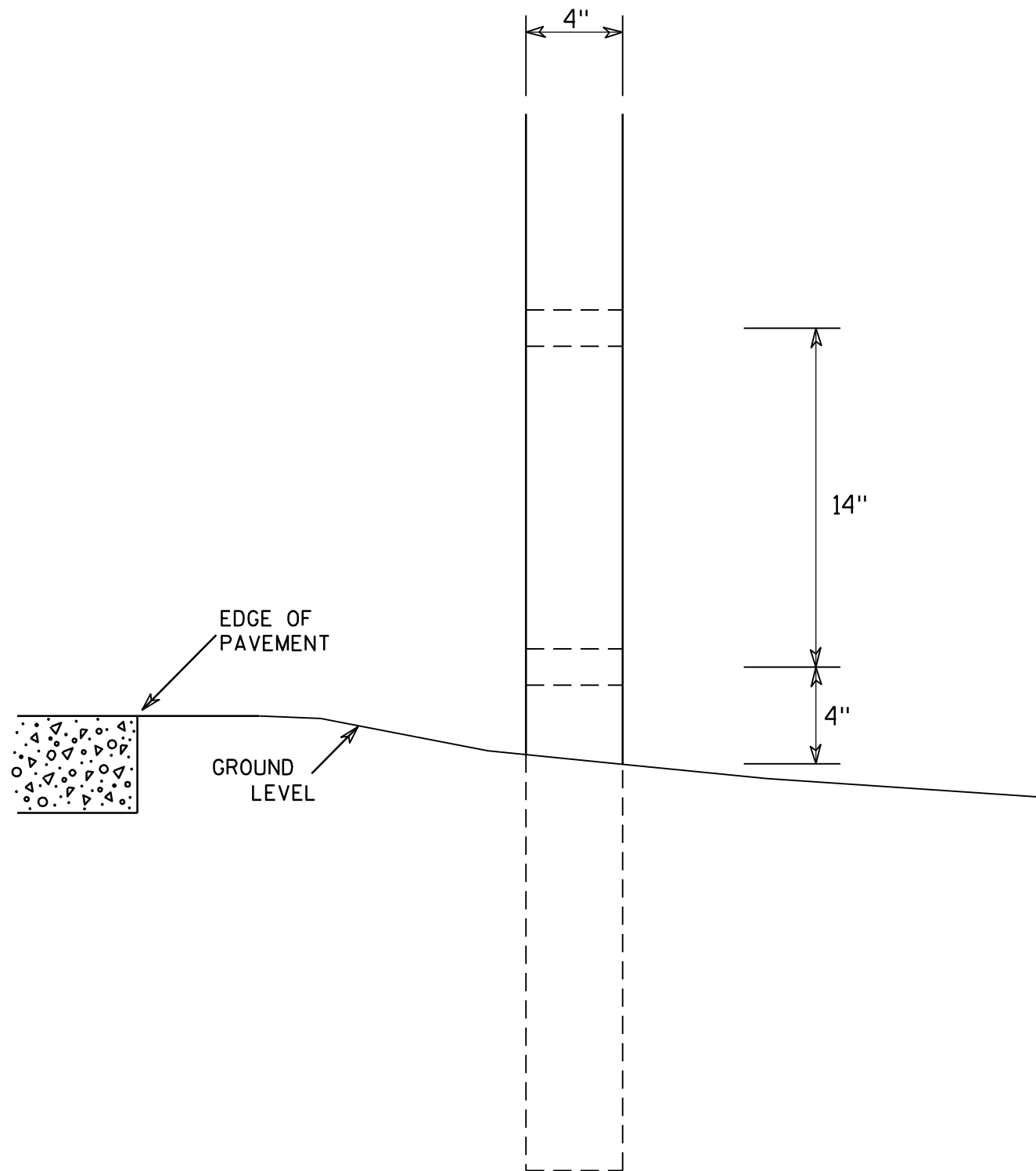
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

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

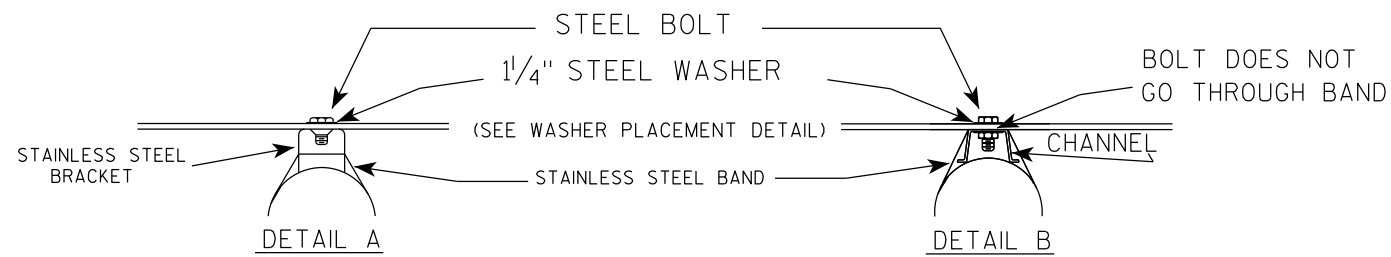
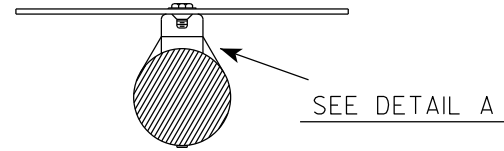
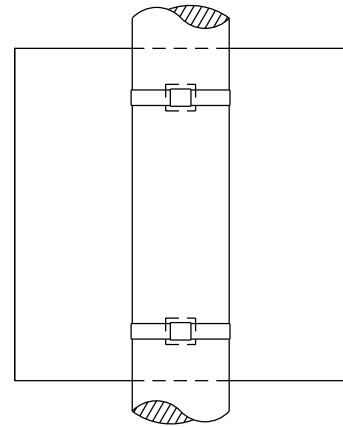
7

7

<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# BANDING

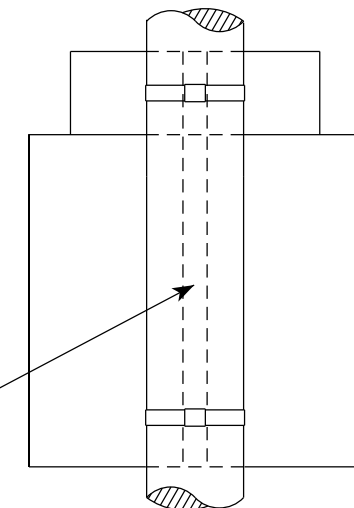
SINGLE SIGN



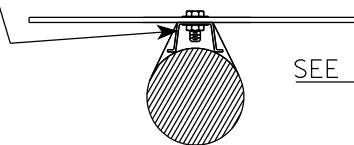
## GENERAL NOTES

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.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

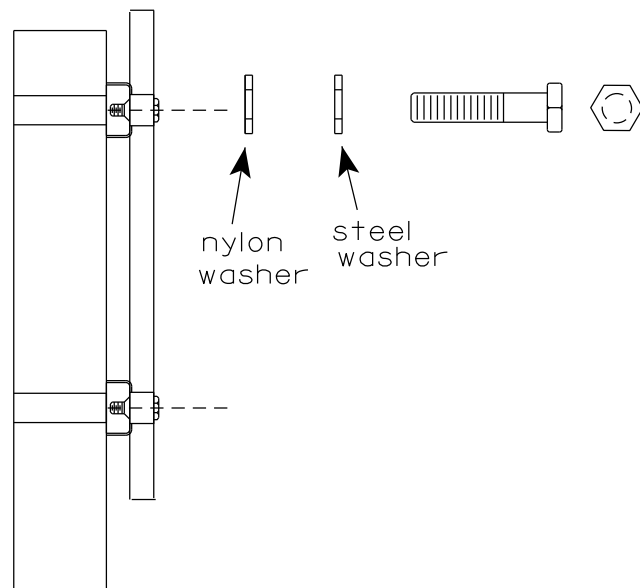
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



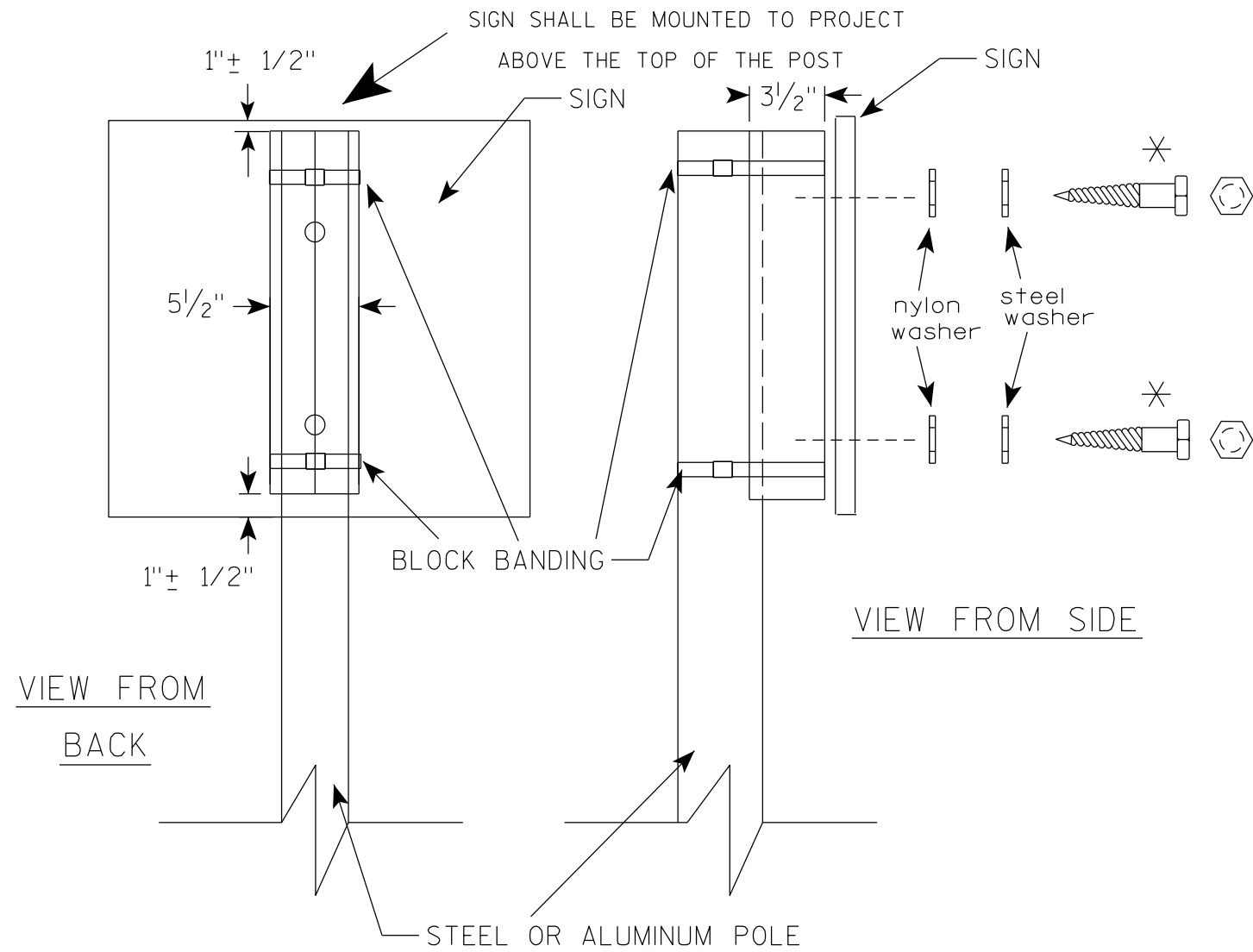
WASHER PLACEMENT



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

STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-9.4

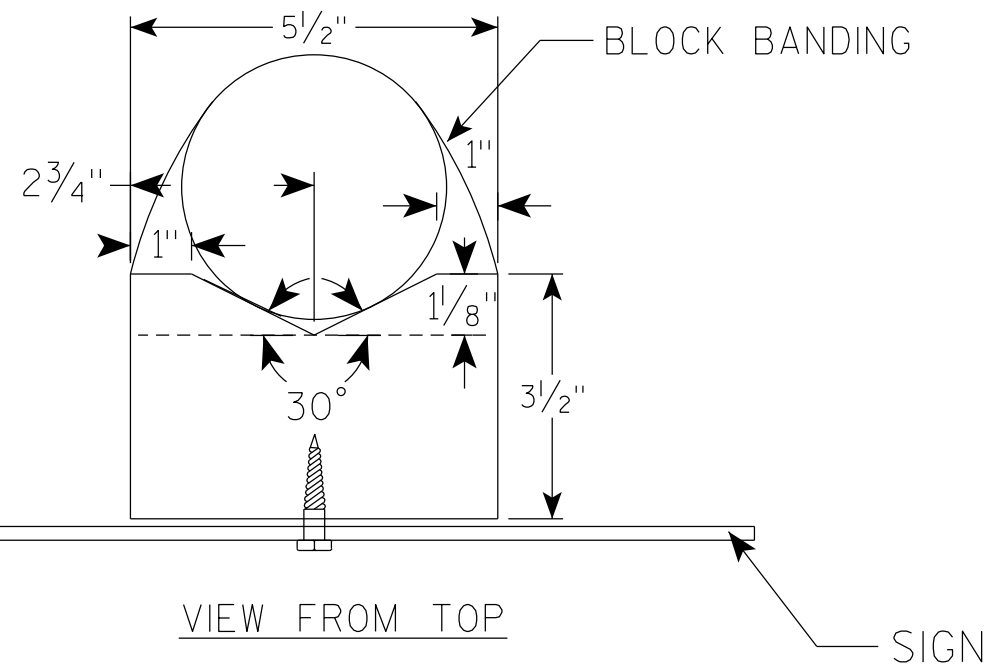




GENERAL NOTES

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
  - b. 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 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 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 )

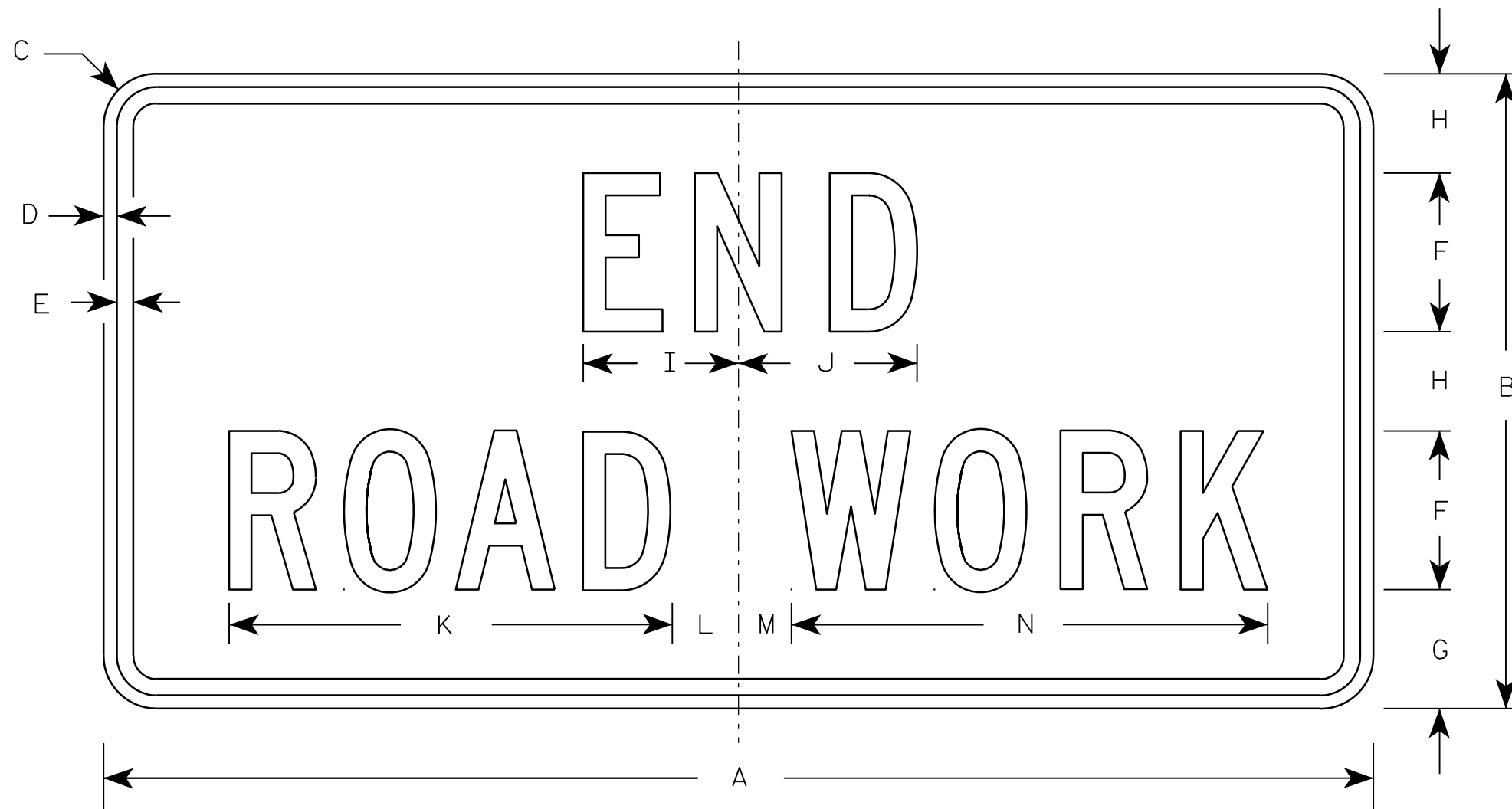
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

NOTES

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



G20-2A

7

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Metric equivalent  
for this sign is:

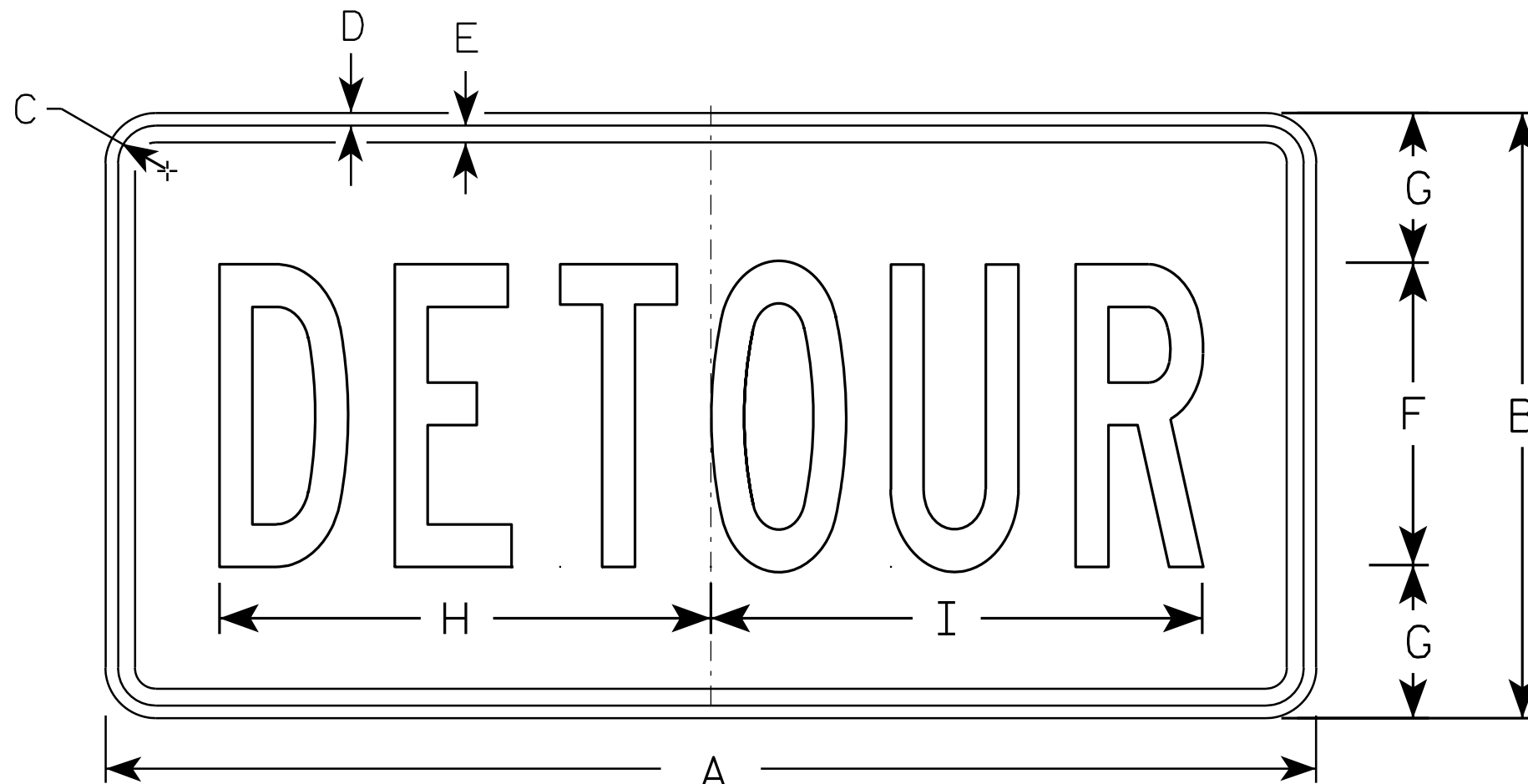
SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	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

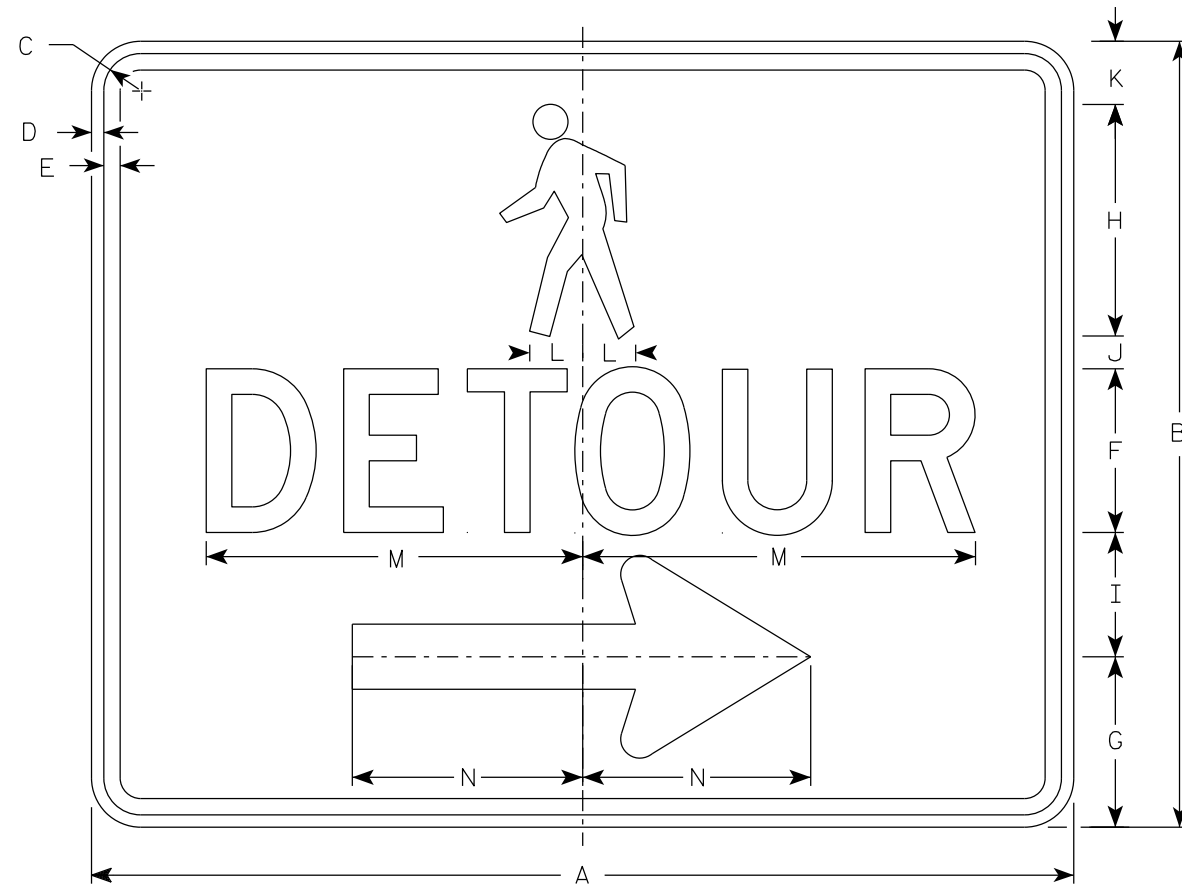
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

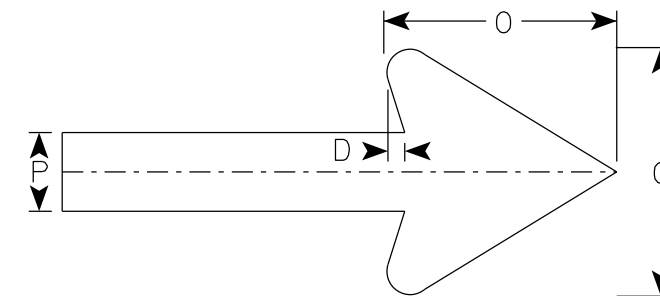
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II-Type F Reflective
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. M4-9BL is the same as M4-9BR except the arrow is reversed.



M4-9BR



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	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.00
3																											
4																											
5																											

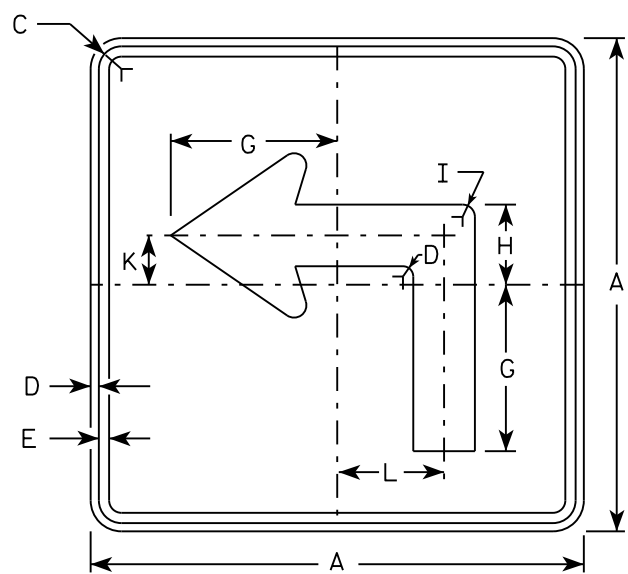
STANDARD SIGN  
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

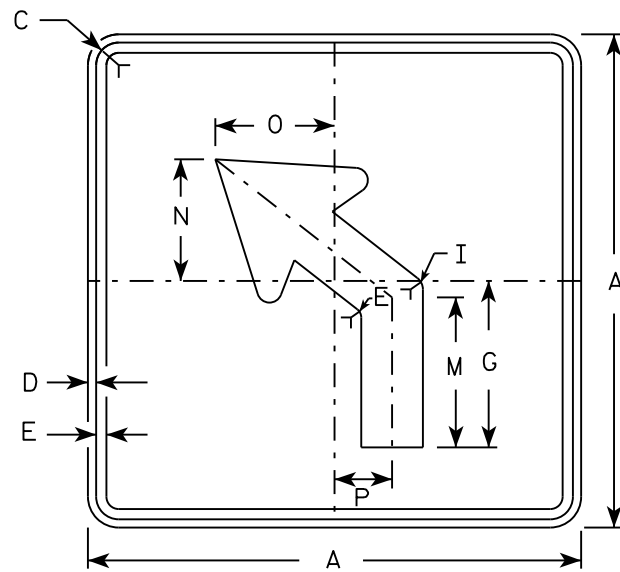
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 7/1/19 PLATE NO. M4-9B.2

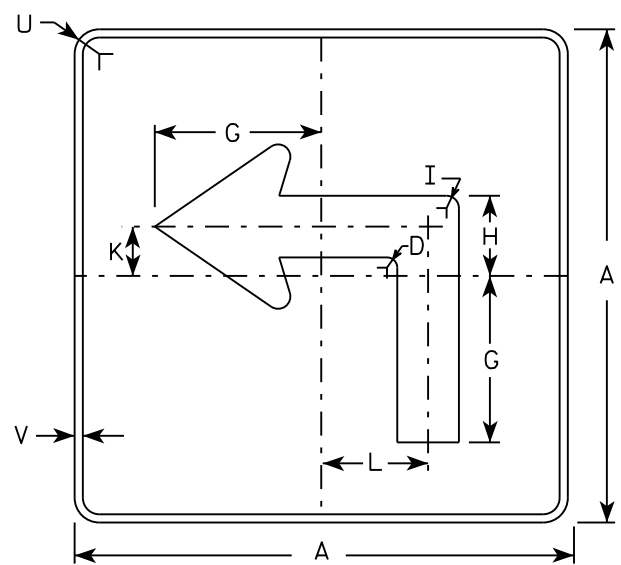
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



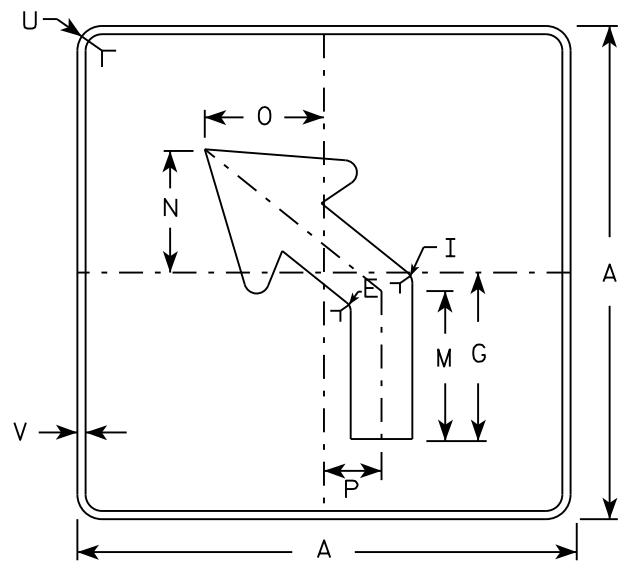
M5-1L  
MM5-1L  
M05-1L  
MP5-1L



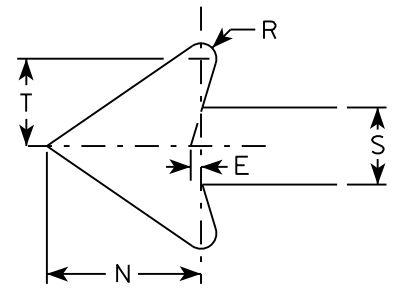
M5-2L  
MM5-2L  
M05-2L  
MP5-2L



MB5-1L  
MK5-1L  
MN5-1L  
MR5-1L



MB5-2L  
MK5-2L  
MN5-2L  
MR5-2L



NOTES

- Signs are Type II - Type H reflective 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.
- |                 |   |
|-----------------|---|
| M5-1 and M5-2   | Background - White                      |
|                 | Message - Black                         |
| MB5-1 and MB5-2 | Background - Blue                       |
|                 | Message - White                         |
| MK5-1 and MK5-2 | Background - Green                      |
|                 | Message - White                         |
| MM5-1 and MM5-2 | Background - White                      |
|                 | Message - Green                         |
| MN5-1 and MN5-2 | Background - Brown                      |
|                 | Message - White                         |
| 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                        |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

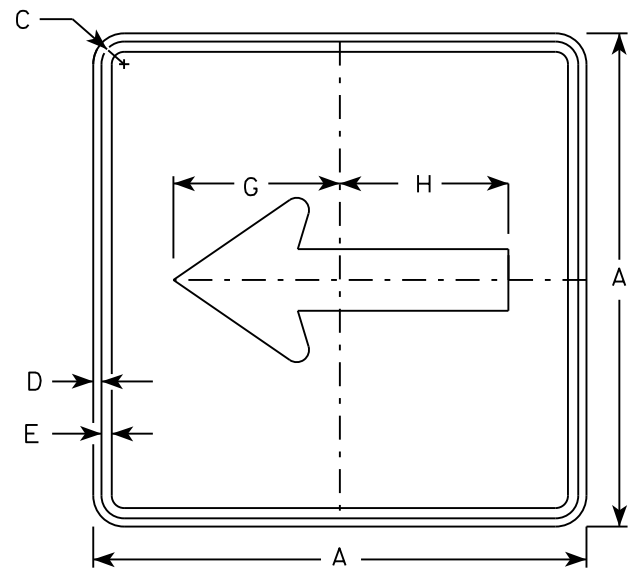
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
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

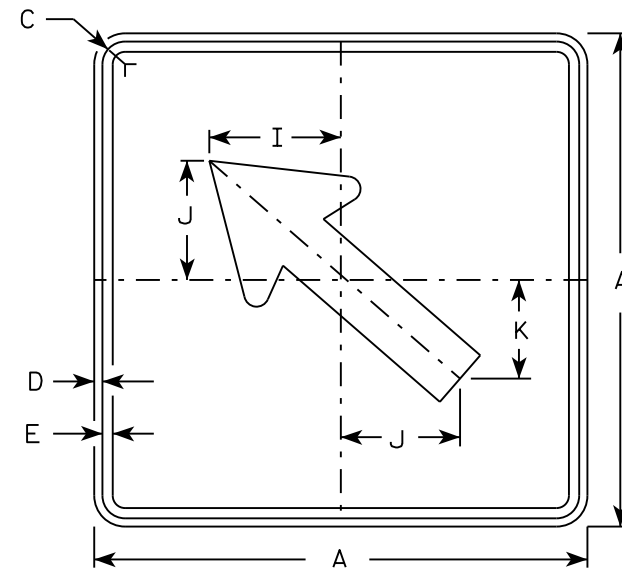
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

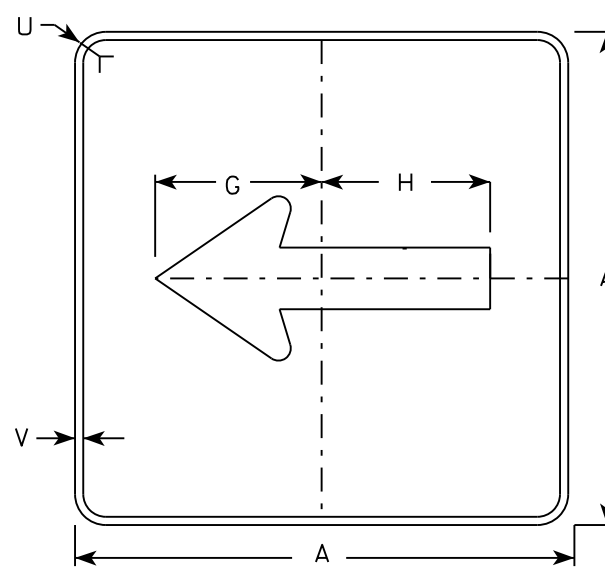
DATE 10/15/15 PLATE NO. M5-1.13



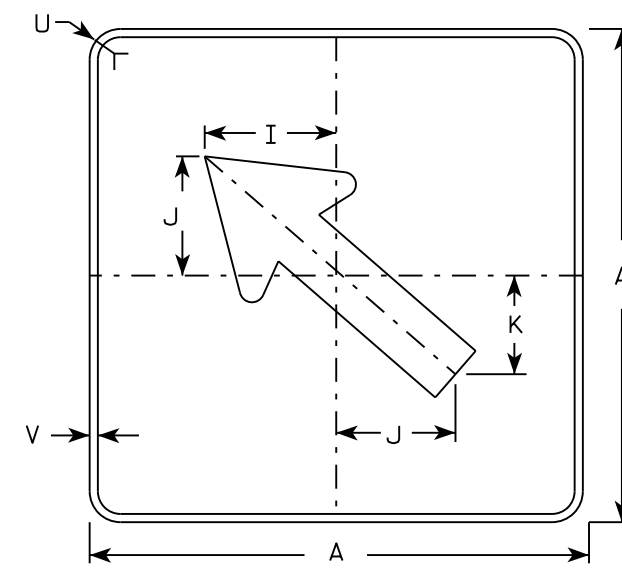
M6-1  
MM6-1  
M06-1  
MP6-1



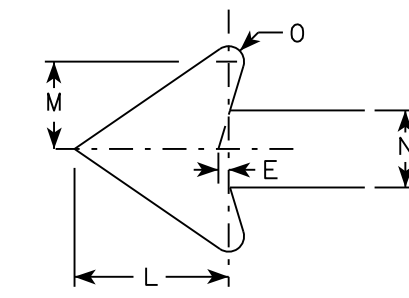
M6-2  
MM6-2  
M06-2  
MP6-2



MB6-1  
MK6-1  
MN6-1  
MR6-1



MB6-2  
MK6-2  
MN6-2  
MR6-2



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  
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

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	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

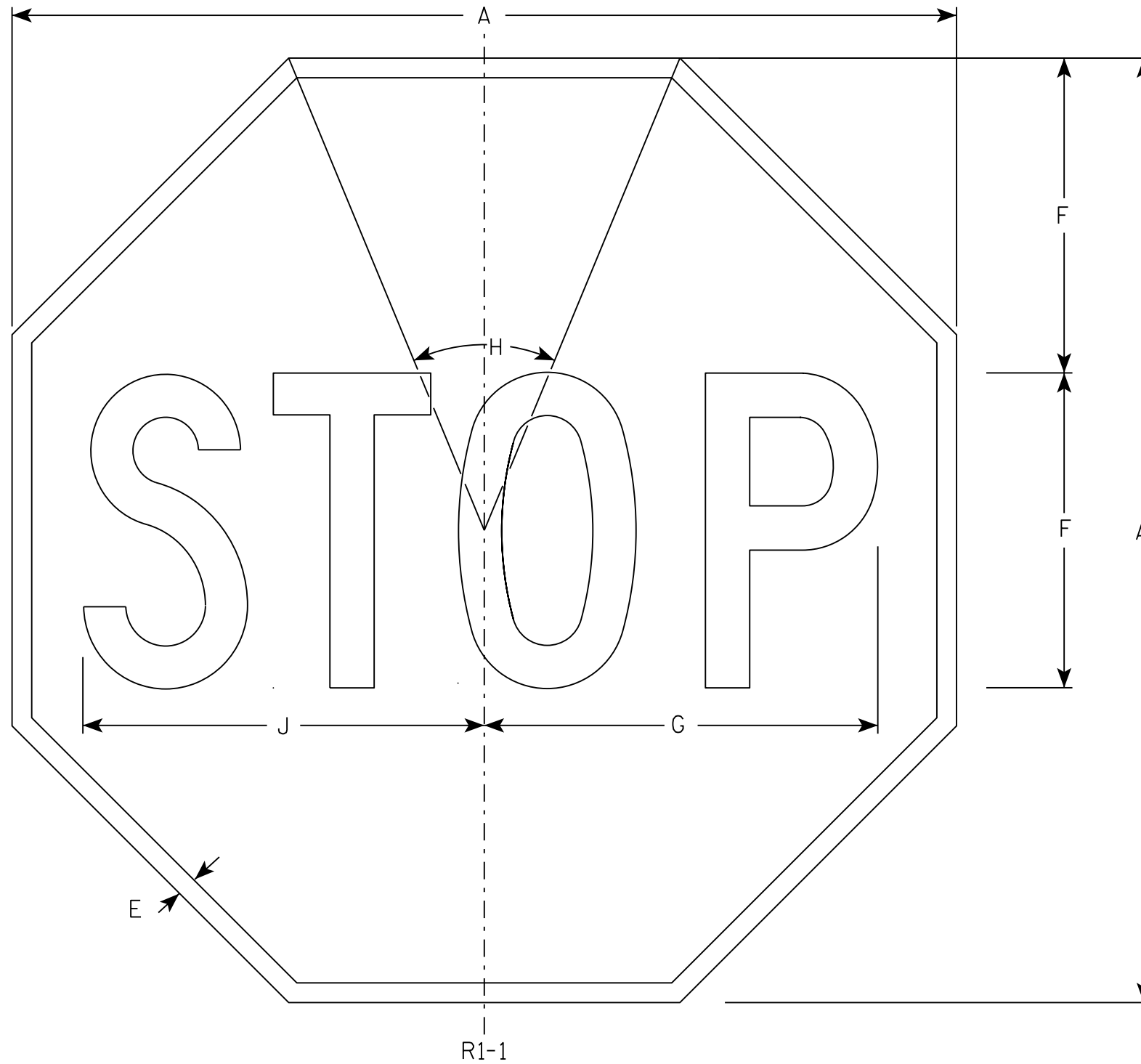
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
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

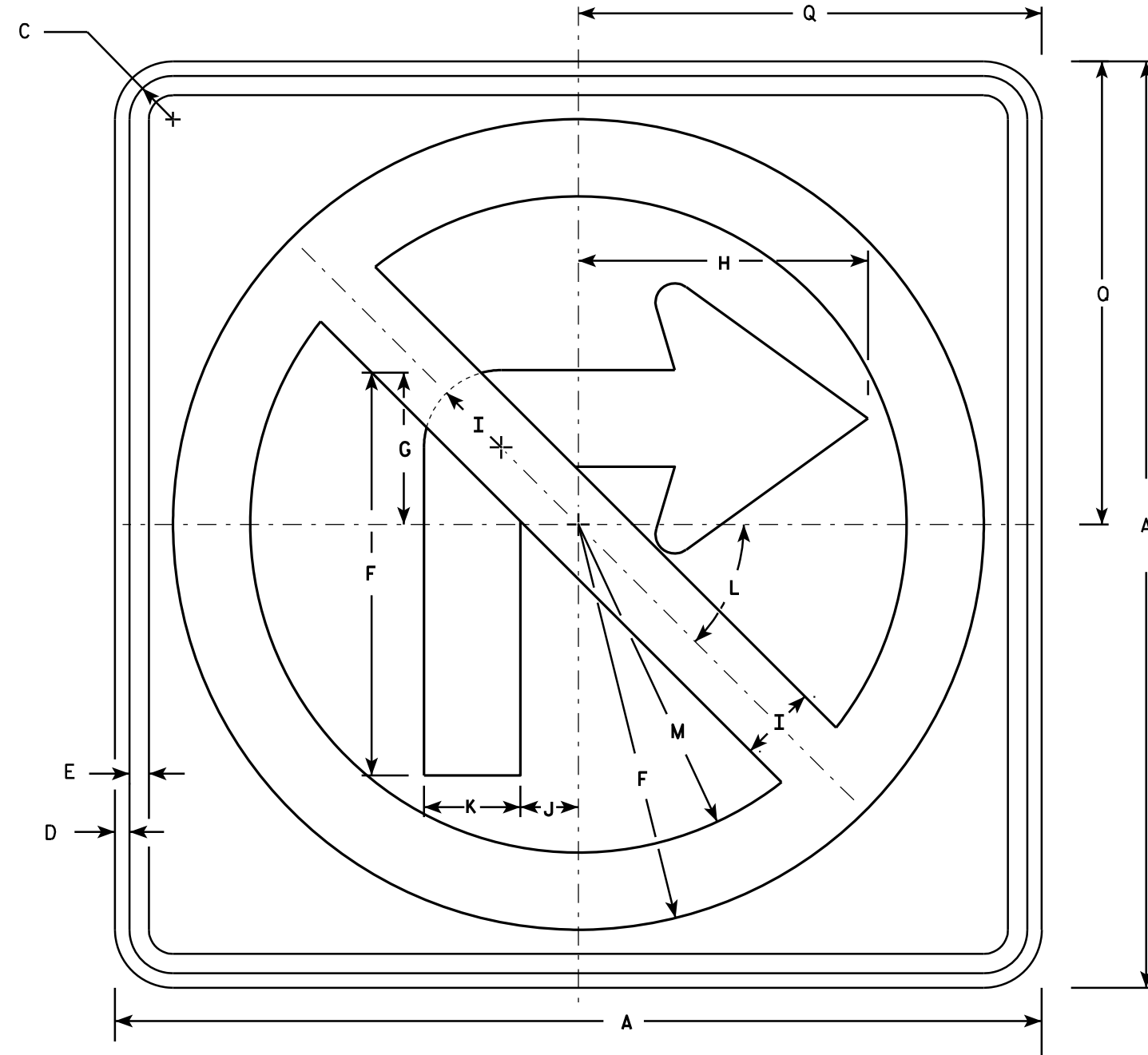
STANDARD SIGN  
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

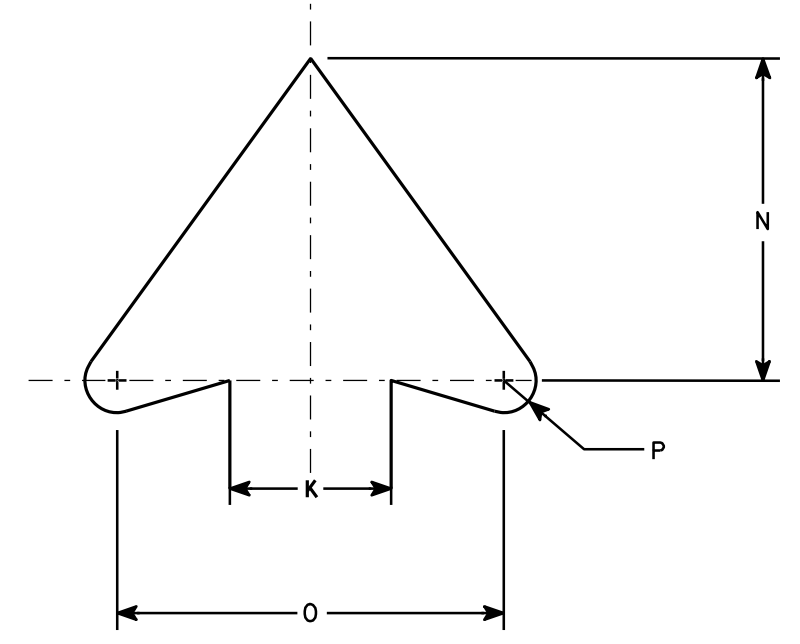
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



R3-1

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 - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

**STANDARD SIGN**  
**R3-1**

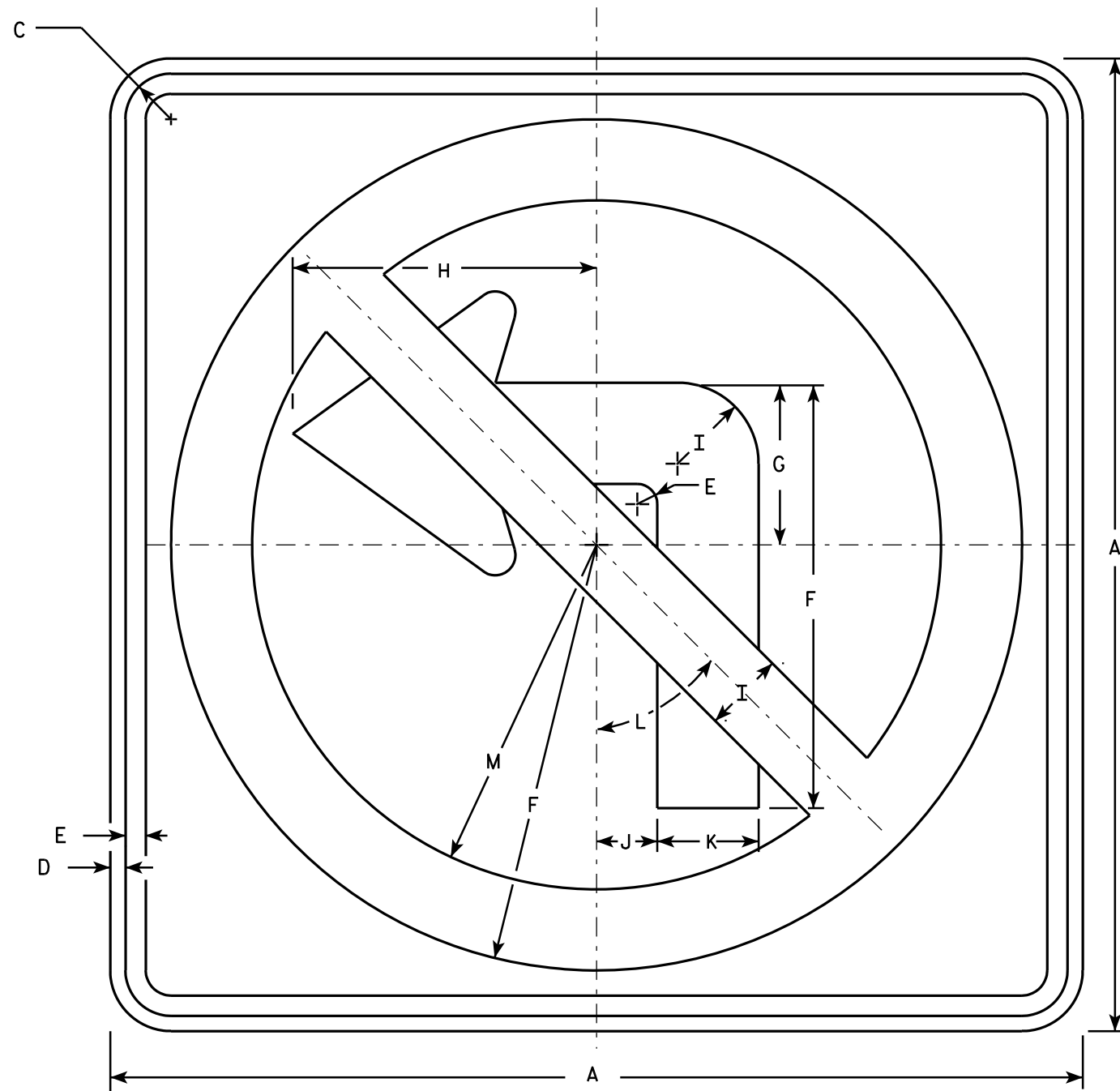
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**

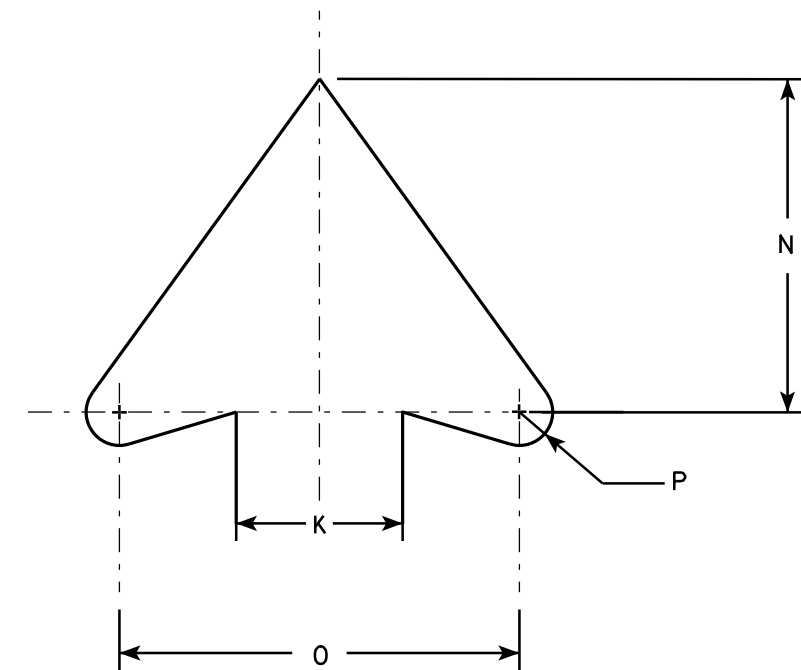




R3-2

**NOTES**

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. Ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

**STANDARD SIGN**  
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sigs are Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code  
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

- |             |                            |
|-------------|----------------------------|
| 1 Letter =  | 3.75 sq ft for Size 2      |
|             | 6.0 sq ft for Size 3       |
|             | 10.0 sq ft for Size 4 or 5 |
| 2 Letters = | 7.5 sq ft for Size 2       |
|             | 12.0 sq ft for Size 3      |
|             | 20.0 sq ft for Size 4 or 5 |
| 3 Letters = | 11.25 sq ft for Size 2     |
|             | 18.0 sq ft for Size 3      |
|             | 30.0 sq ft for Size 4 or 5 |
| 4 Letters = | 15.0 sq ft for Size 2      |
|             | 24.0 sq ft for Size 3      |
|             | 40.0 sq ft for Size 4 or 5 |
| 5 Letters = | 18.75 sq ft for Size 2     |
|             | 30.0 sq ft for Size 3      |
|             | 50.0 sq ft for Size 4 or 5 |
| 6 Letters = | 22.5 sq ft for Size 2      |
|             | 36.0 sq ft for Size 3      |
|             | 60.0 sq ft for Size 4 or 5 |

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

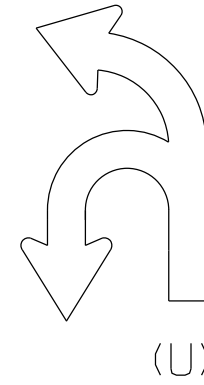
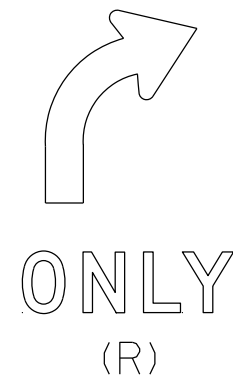
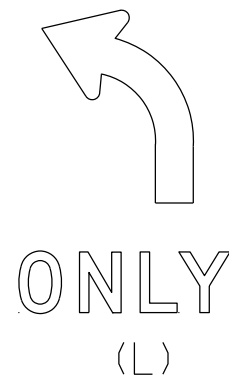
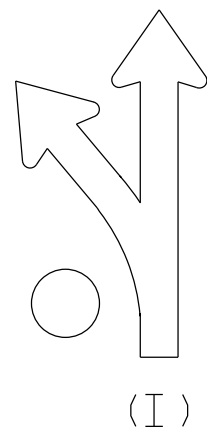
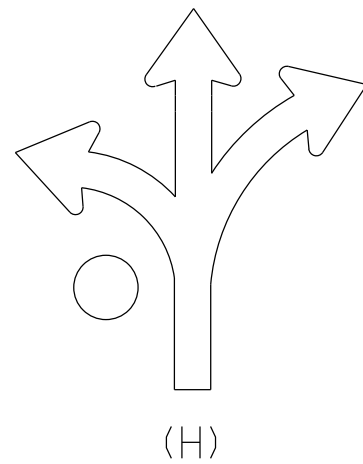
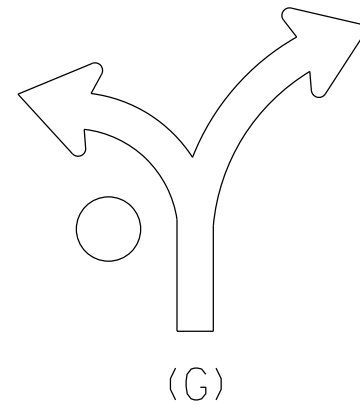
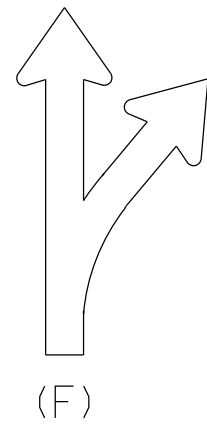
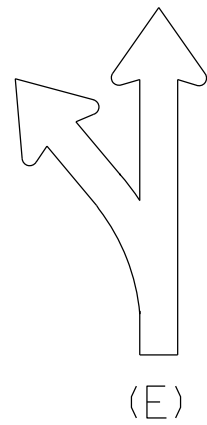
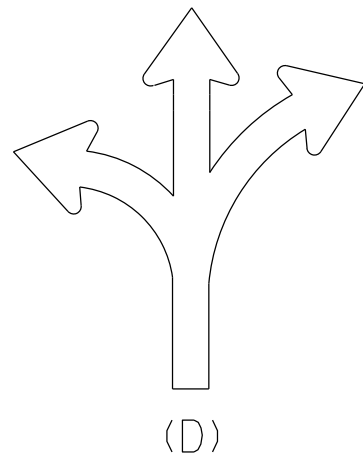
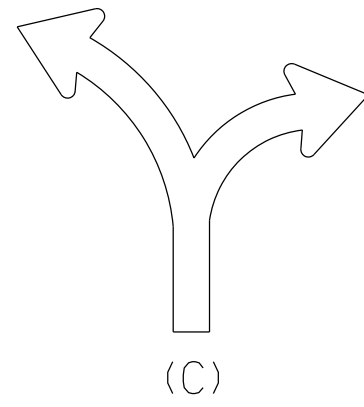
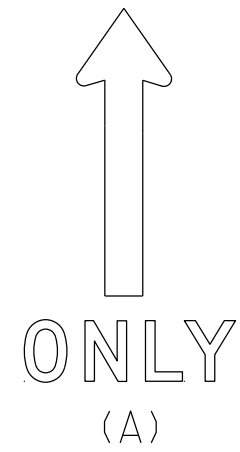
- 1.25 sq ft for Size 2
- 1.5 sq ft for Size 3
- 2.0 sq ft for Size 4 or 5

STANDARD SIGN  
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

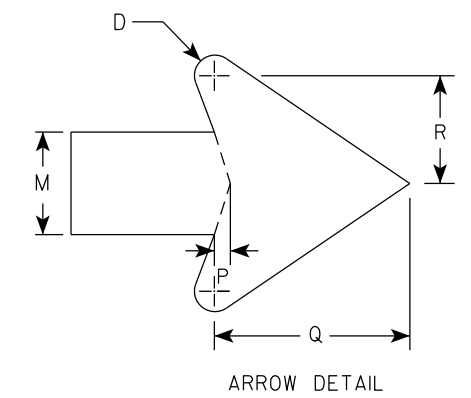
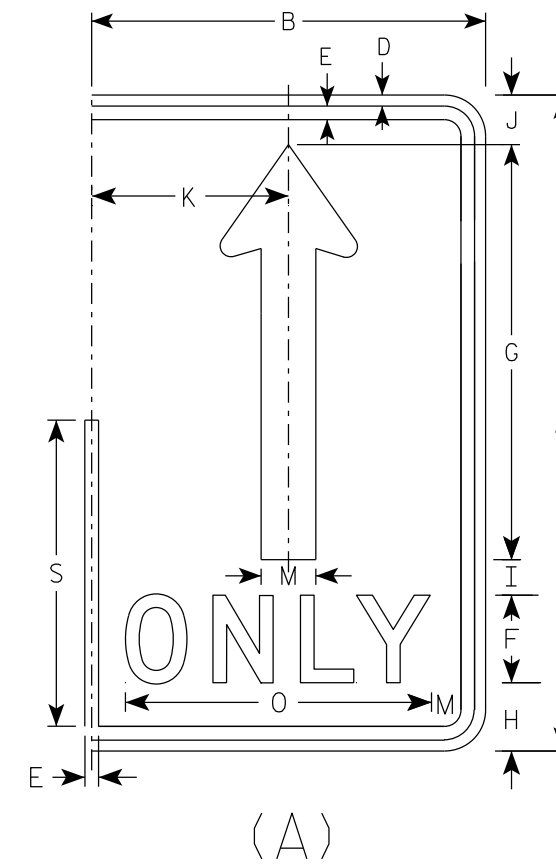
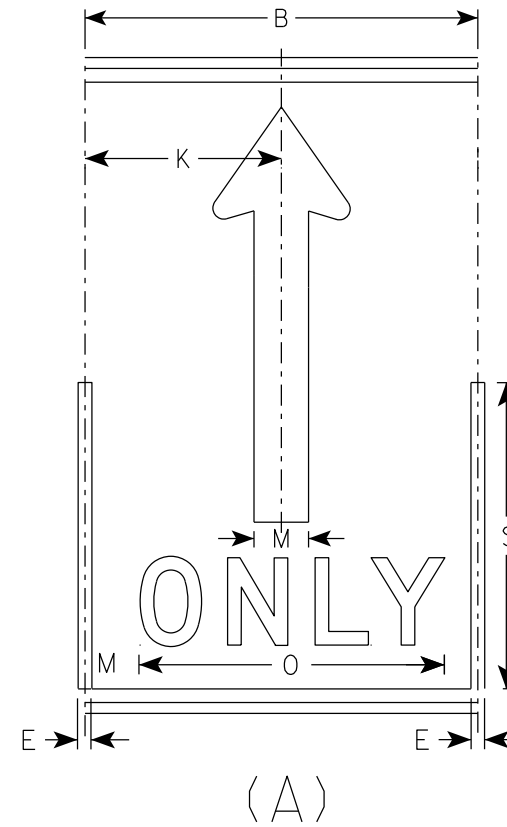
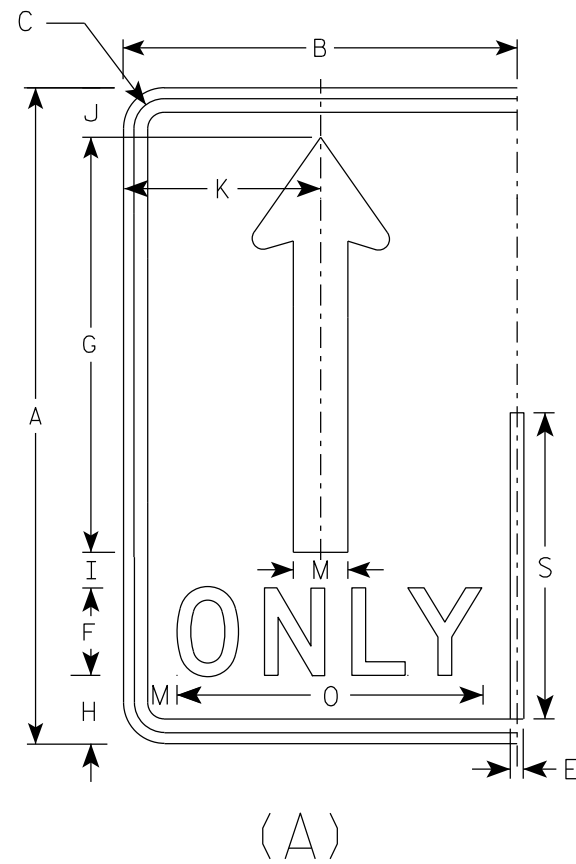


7

7

NOTES

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



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 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8	4	19	3 1/8	1 5/8	2 1/4	9		2 1/2		14	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8	5	22 3/4	3 3/4	1 3/4	2 3/4	12		3		17 5/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1	6	30 3/8	5 1/8	2 7/8	3 5/8	15		4		21 3/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN  
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

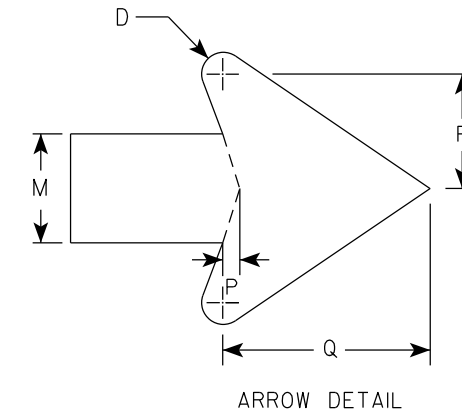
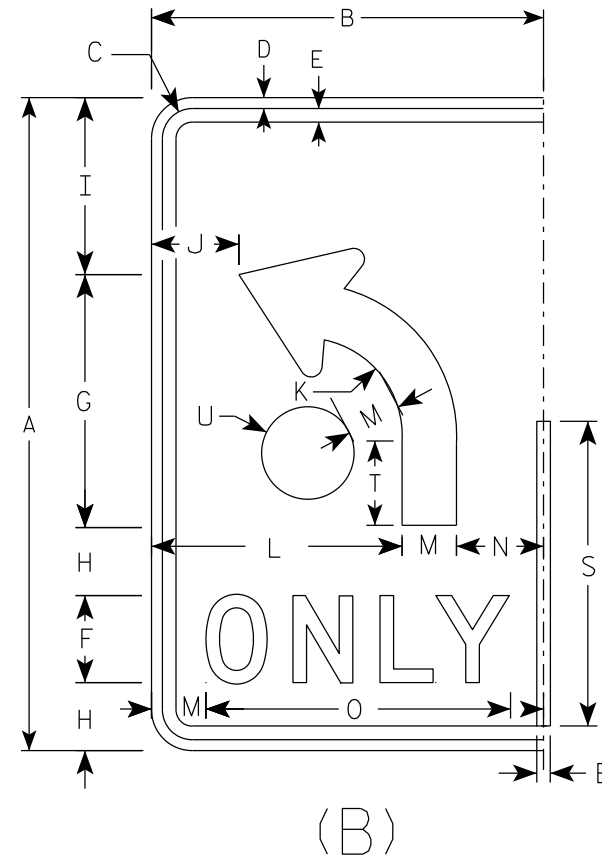
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
  - Background - White
  - Message - Black
  - Message Series - D



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 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8	2 1/8						3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8	2 1/2						6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4	3 3/8						10.0

STANDARD SIGN  
R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

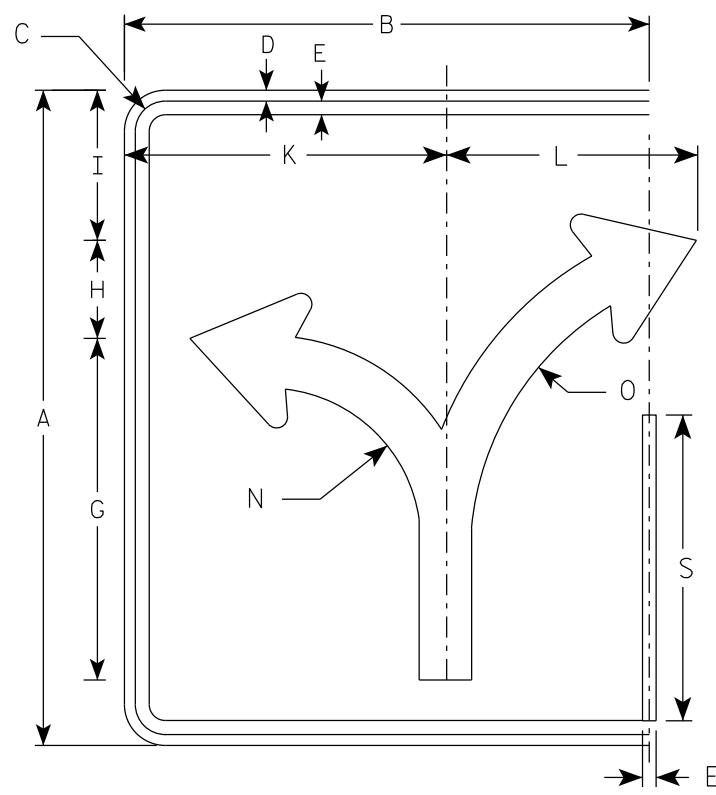
PROJECT NO:

SHEET NO:

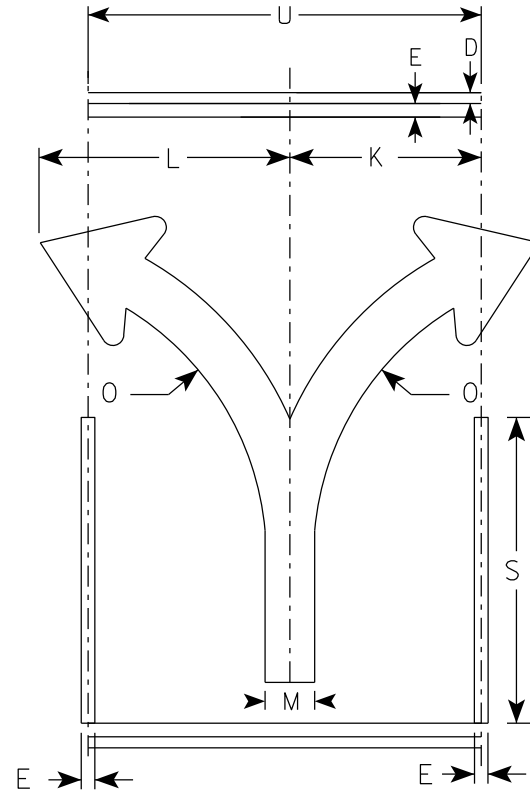
E

NOTES

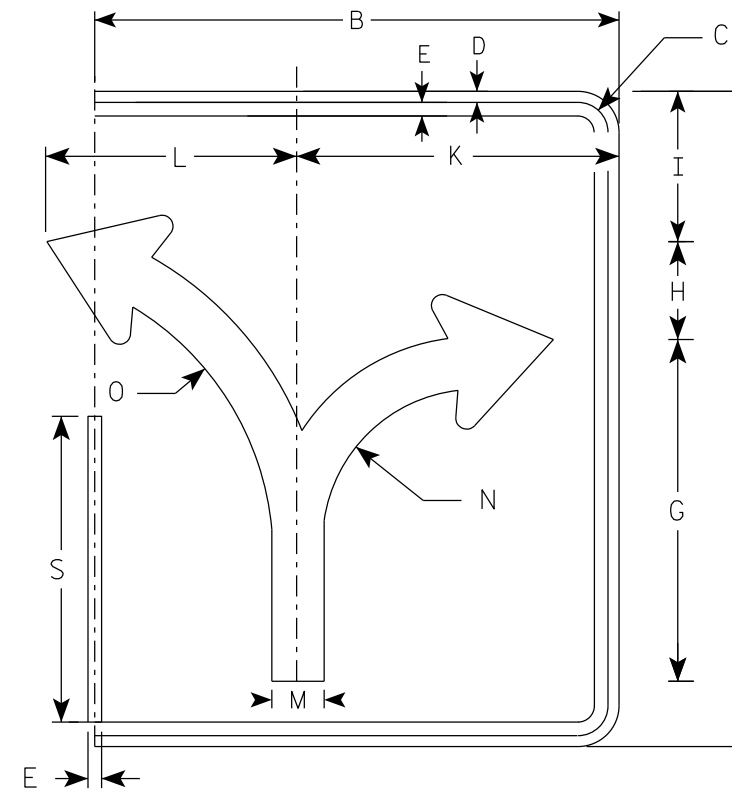
1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



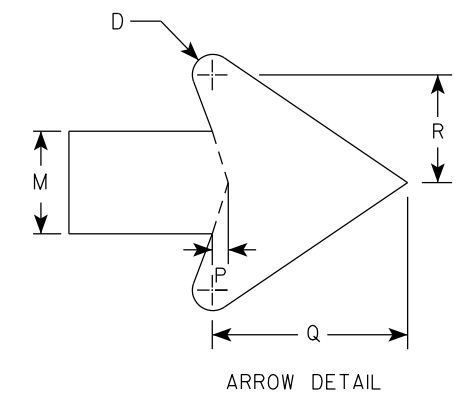
(C)



(C)



(C)



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	ENDS	MIDDLE
																											Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

STANDARD SIGN  
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

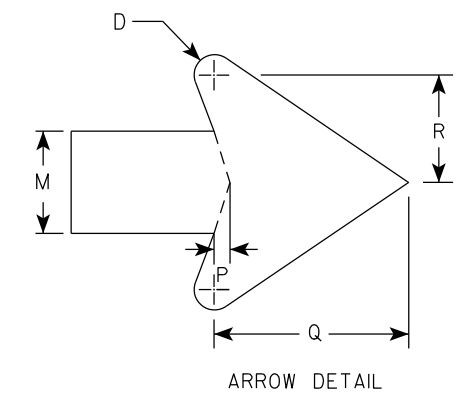
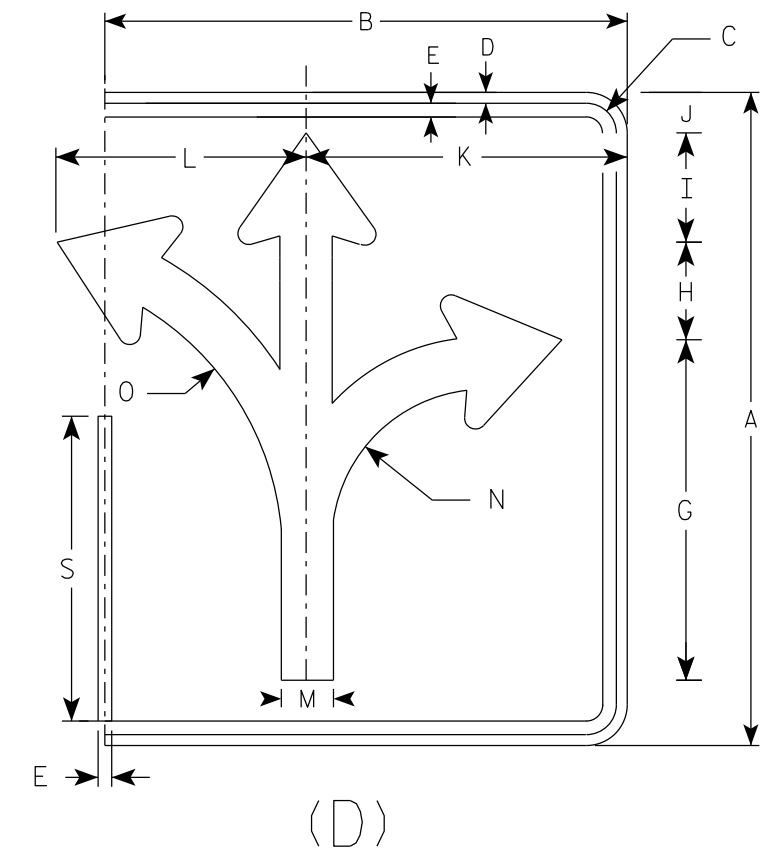
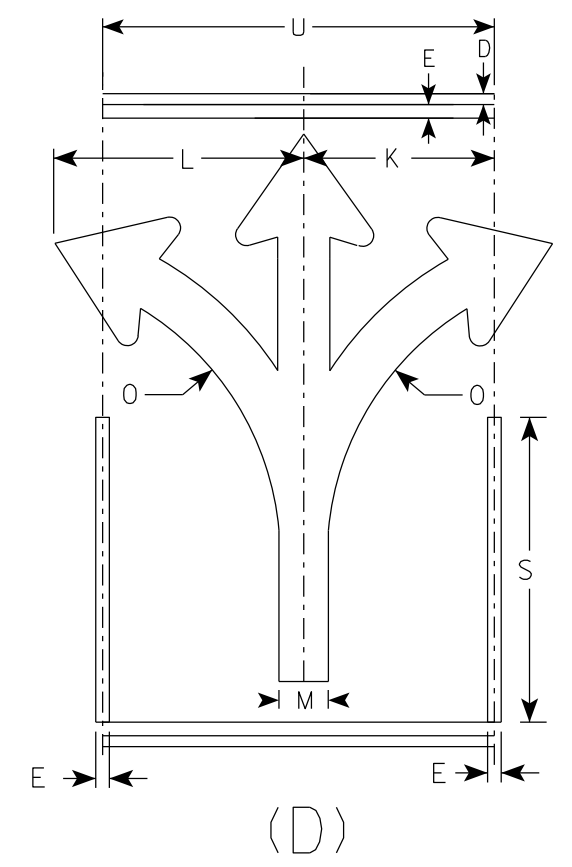
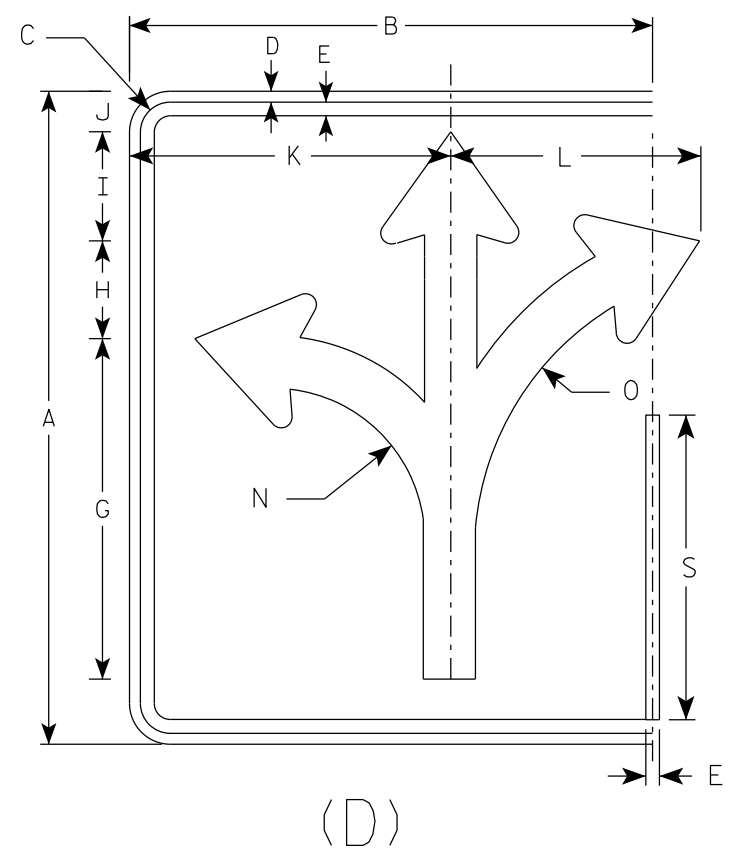
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



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	ENDS	MIDDLE
																											Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18					5.0	3.75	
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	2 1/4	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24					7.5	6.0	
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30					12.0	10.0	
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30					12.0	10.0	

STANDARD SIGN  
R3-8 (D) Arrow

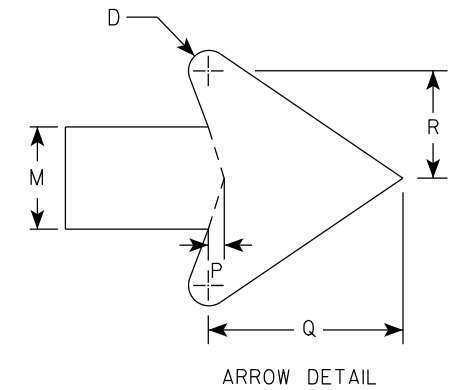
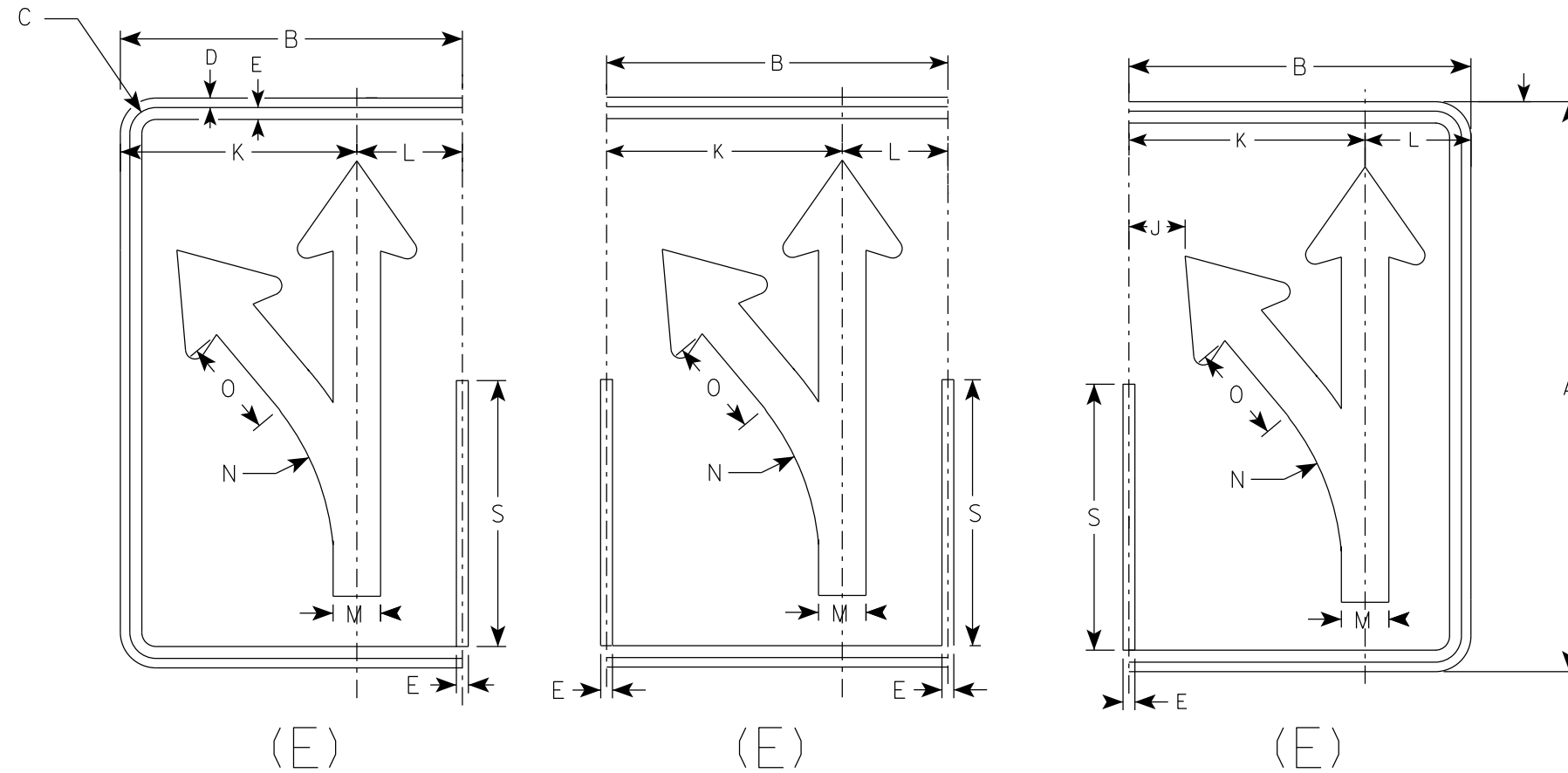
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



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 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN  
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

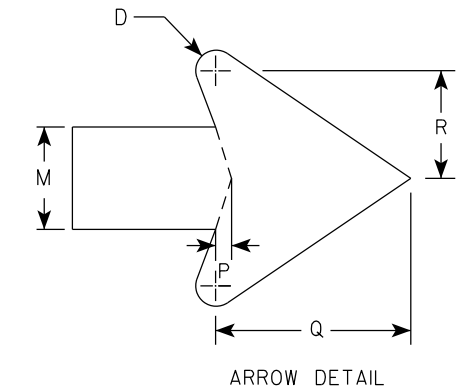
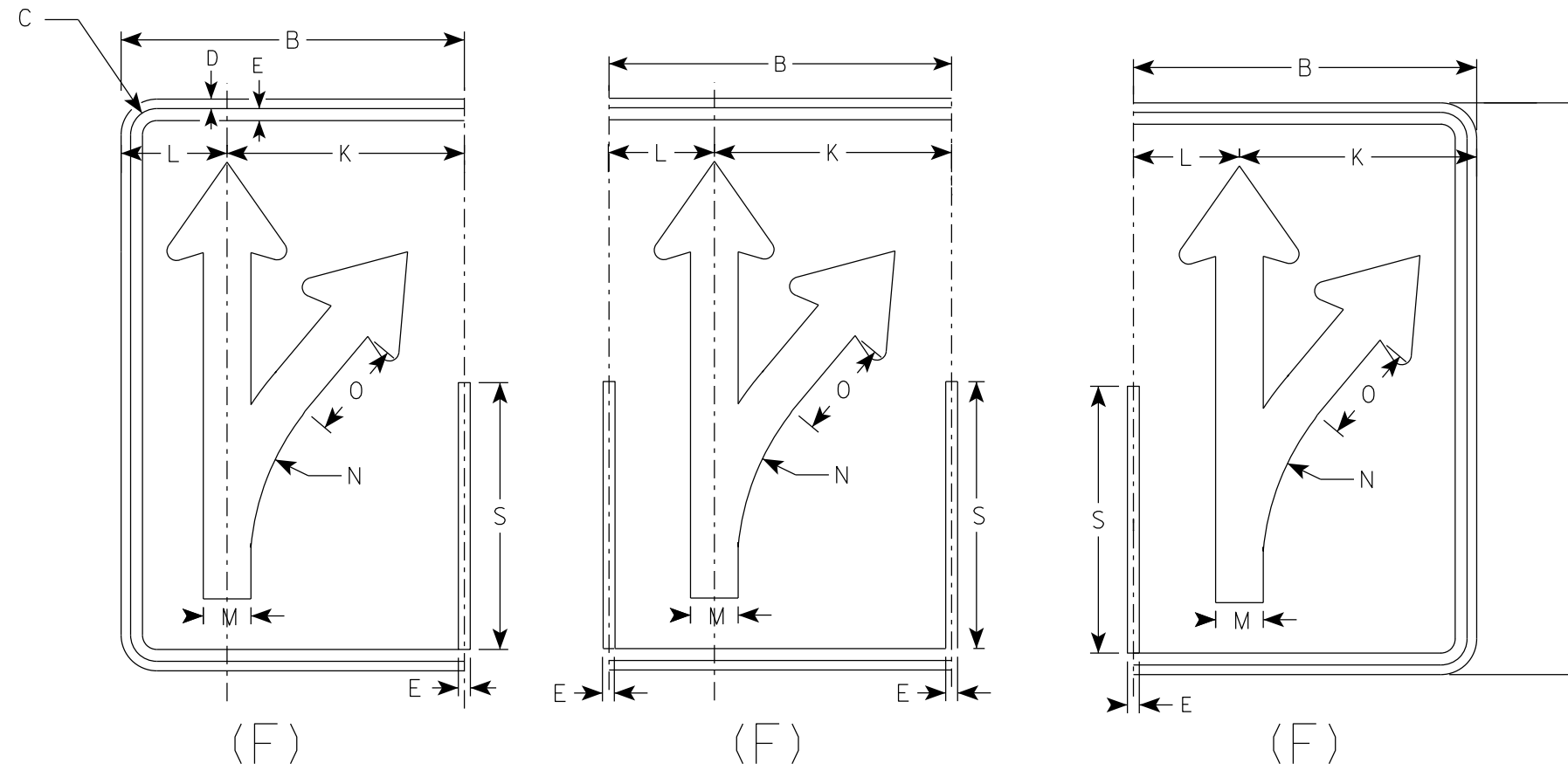
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14								3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4								6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8								10.0

STANDARD SIGN  
R3-8 (F) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

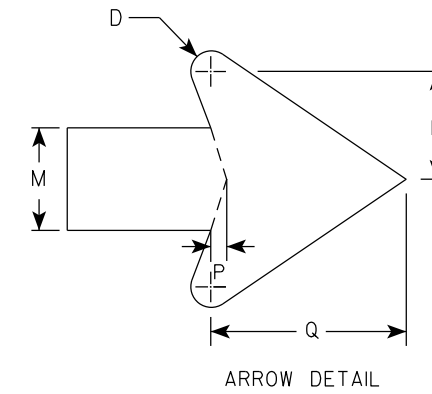
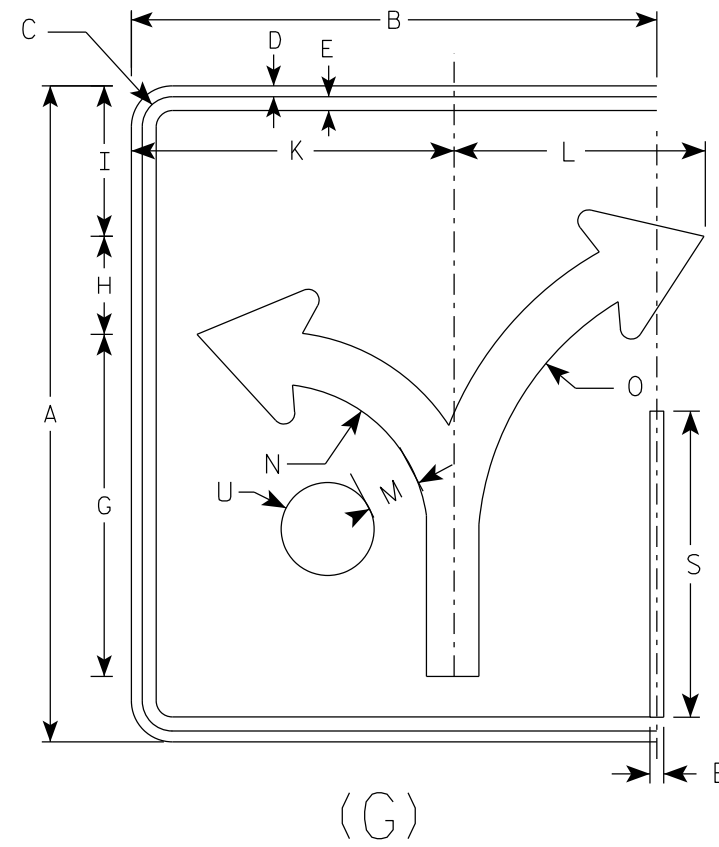
DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



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	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN  
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

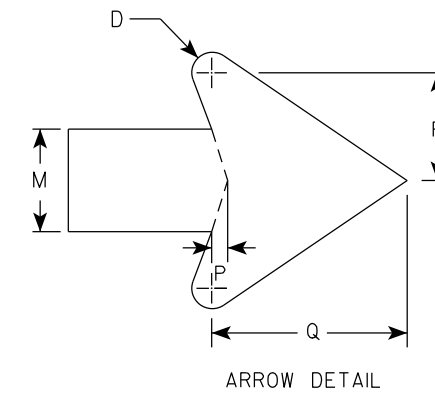
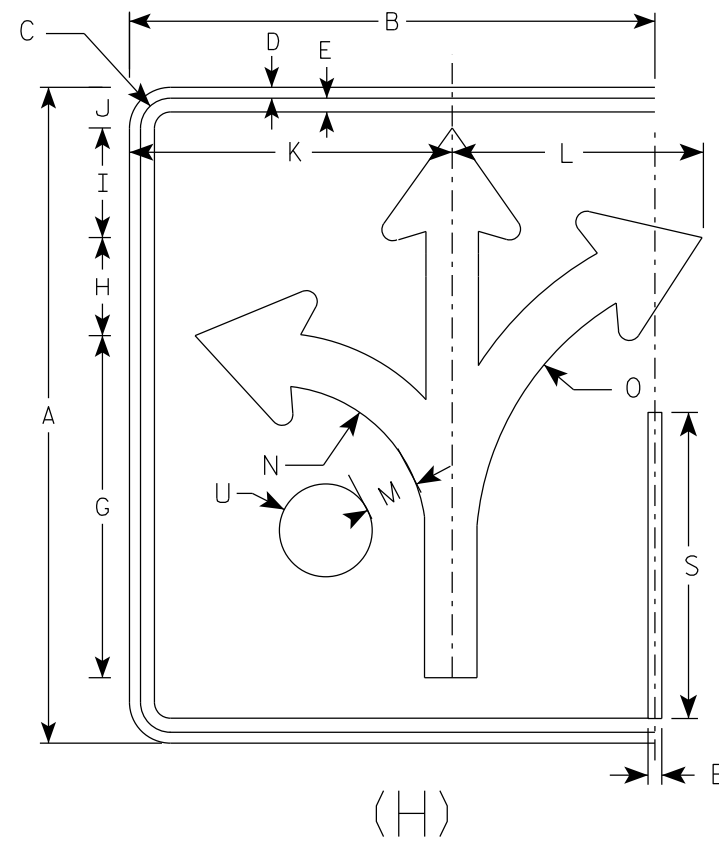
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

7

7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



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	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	5	1 7/8	14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		2 1/8						5.0
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	6	3 1/8	17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		2 1/2						7.5
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	7 7/8	3 1/8	23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		3 3/8						12.0

STANDARD SIGN  
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

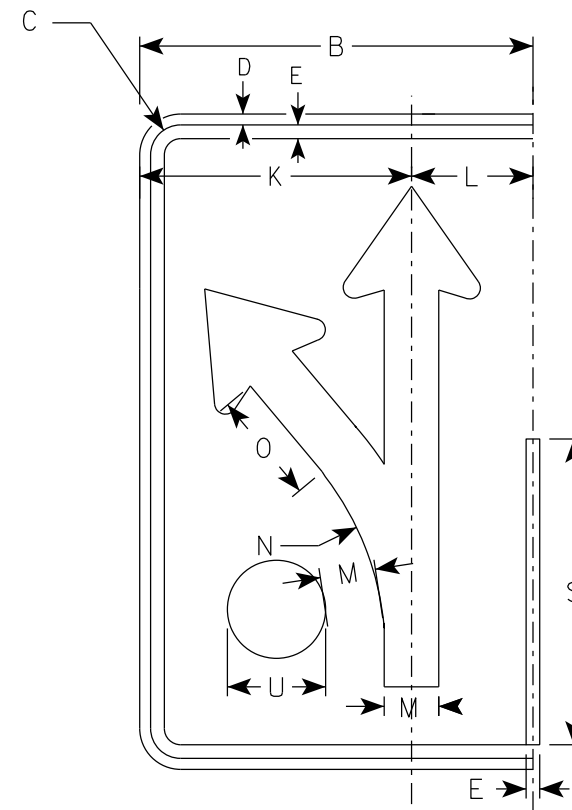
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

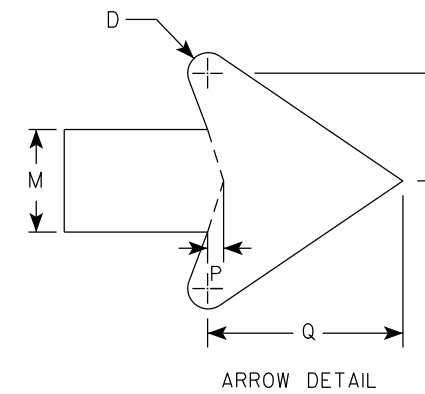
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



( I )



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
2M	30	18	1 3/8	1/2	5/8		18 1/4	4 3/4	3 1/4	3	12 1/2	5 1/2	2 1/2	13 1/4	5 1/8	3/8	4 3/4	2 5/8	14		2 1/8						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	5 5/8	4	4 7/8	16 1/8	7 3/4	3	15 7/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4		2 1/2						6.0
4	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0
5	48	30	2 1/4	3/4	1		29 1/8	7 1/2	5 1/4	5 3/8	20 1/2	9 1/2	4	21 1/4	8 1/4	5/8	7 5/8	4 1/4	22 3/8		3 3/8						10.0

STANDARD SIGN  
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

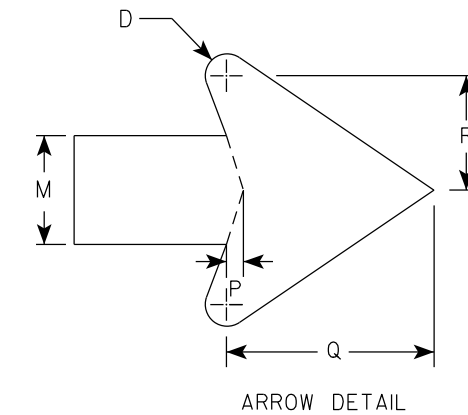
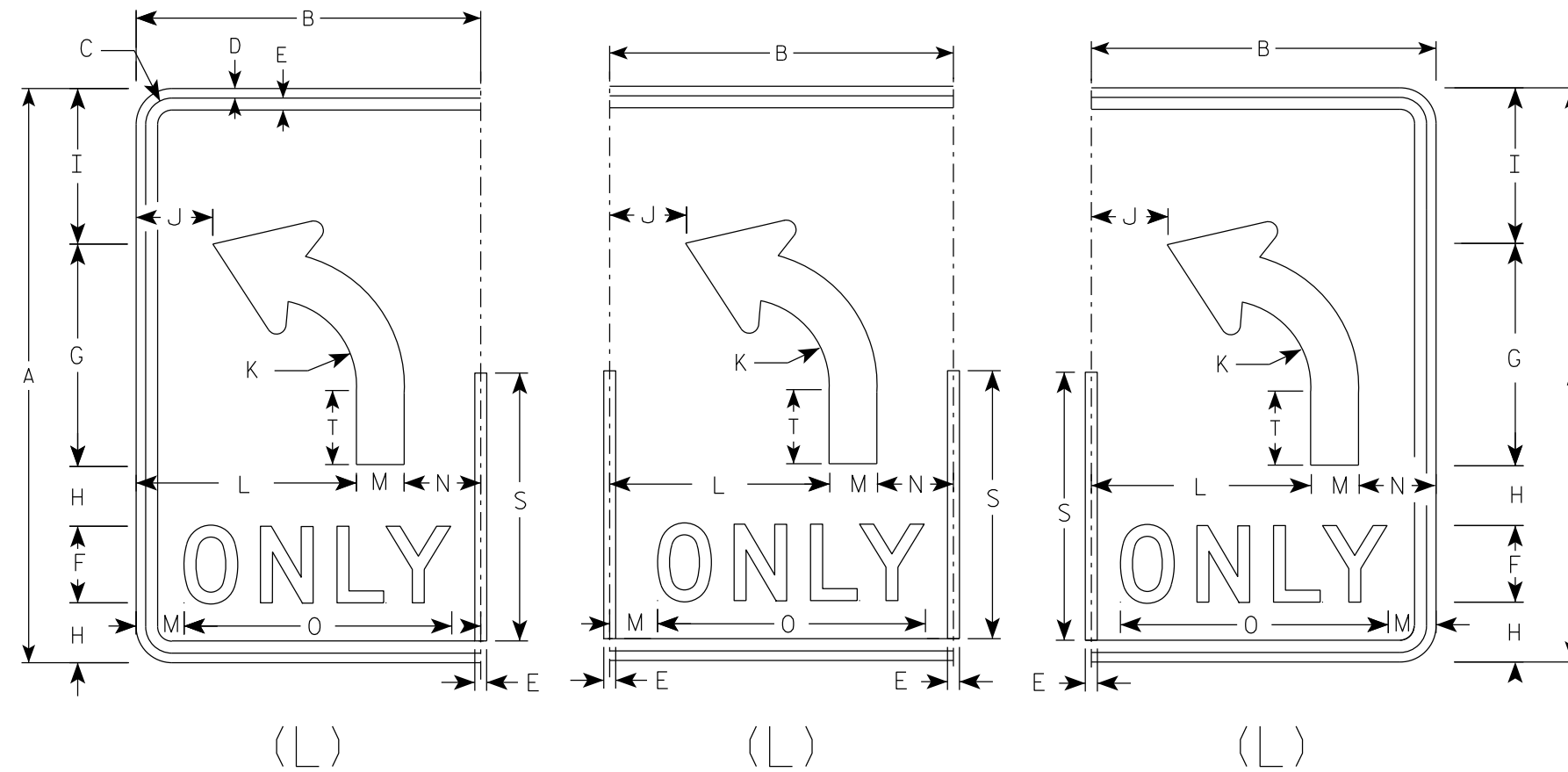
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

NOTES

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



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 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4		5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN  
R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

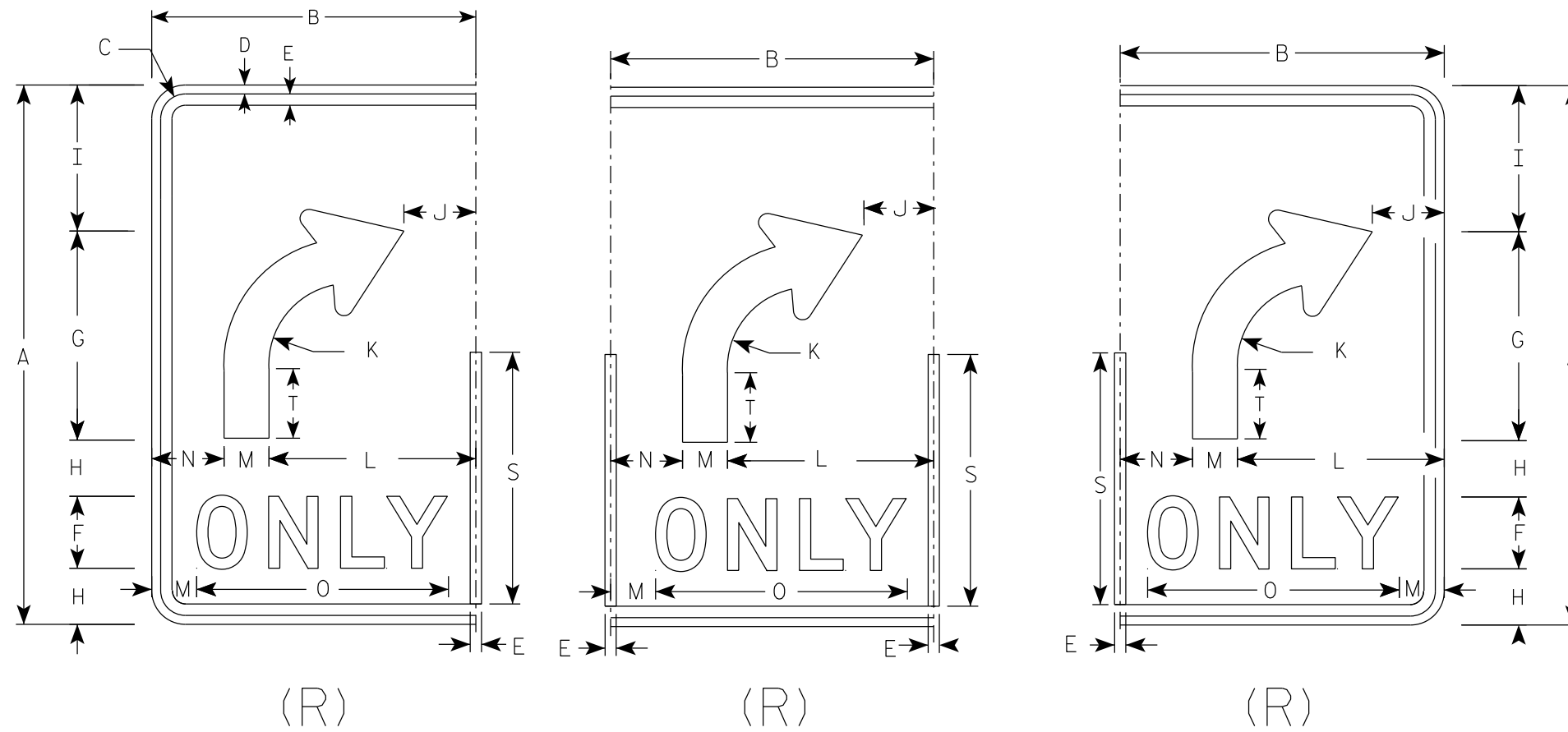
PROJECT NO:

SHEET NO:

E

NOTES

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



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 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
2M	30	18	1 3/8	1/2	5/8	4	11 5/8	3 1/8	8 1/8	4	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14	3 7/8							3.75
3	36	24	1 3/8	1/2	5/8	5	14	3 1/2	9 3/4	6	5 3/8	15	3	6	17 5/8	1/2	5 3/4	3 1/8	16 3/4	4 5/8							6.0
4	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0
5	48	30	2 1/4	3/4	1	6	18 5/8	5 1/8	13 1/8	6 1/8	7 1/4	18	4	8	21 3/4	5/8	7 5/8	4 1/4	22 3/8	6 1/4							10.0

STANDARD SIGN  
R3-8 (R) Arrow

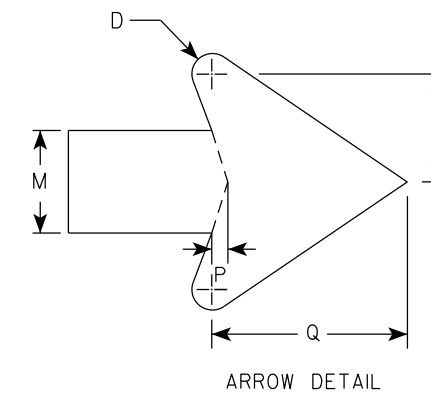
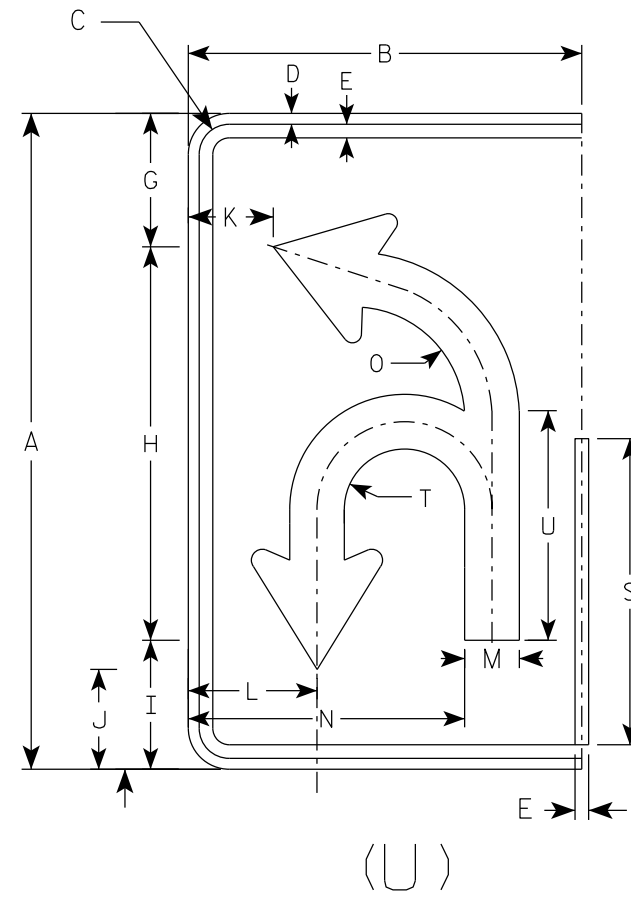
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - None



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 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
2M	30	18	1 3/8	1/2	5/8		6 1/8	18	5 7/8	4 5/8	3 7/8	5 7/8	2 1/2	12 5/8	5 1/8	3/8	4 3/4	2 5/8	14	2 3/4	10 1/2						3.75
3	36	24	1 3/8	1/2	5/8		21 7/8	21 5/8	7 1/8	5 1/2	5 7/8	8 1/4	3	16 3/8	6 1/8	1/2	5 3/4	3 1/8	16 3/4	3 1/4	12 5/8						6.0
4	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0
5	48	30	2 1/4	3/4	1		29 1/8	28 3/4	9 3/8	7 1/4	6 7/8	10	4	20 7/8	8 1/8	5/8	7 5/8	4 1/4	22 3/8	4 3/8	16 3/4						10.0

STANDARD SIGN  
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

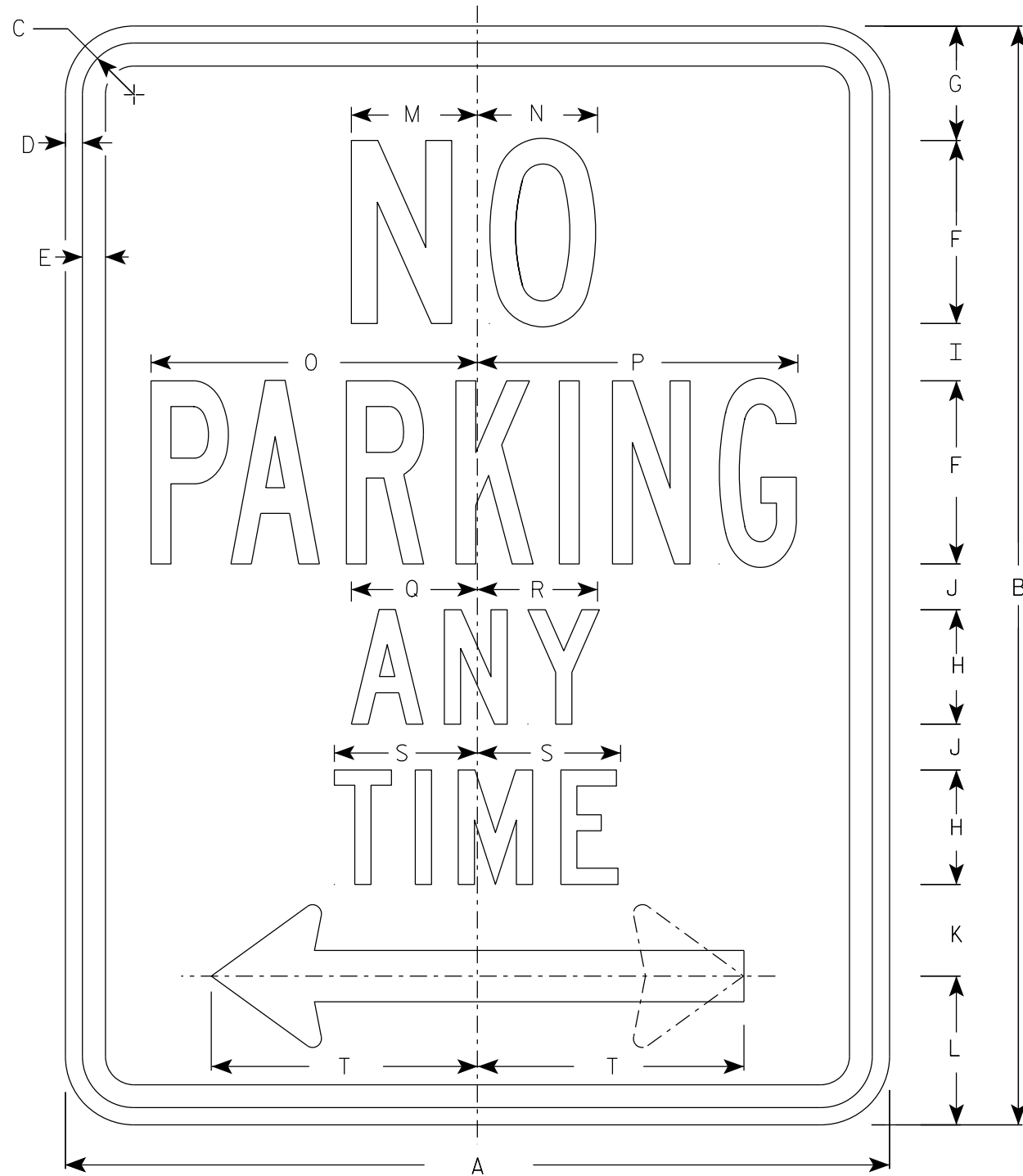
APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**

7

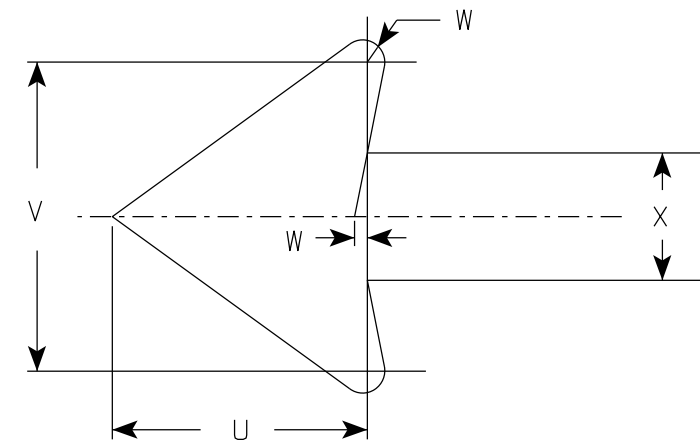
7



R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Red
3. Message Series - See Note 5
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. 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

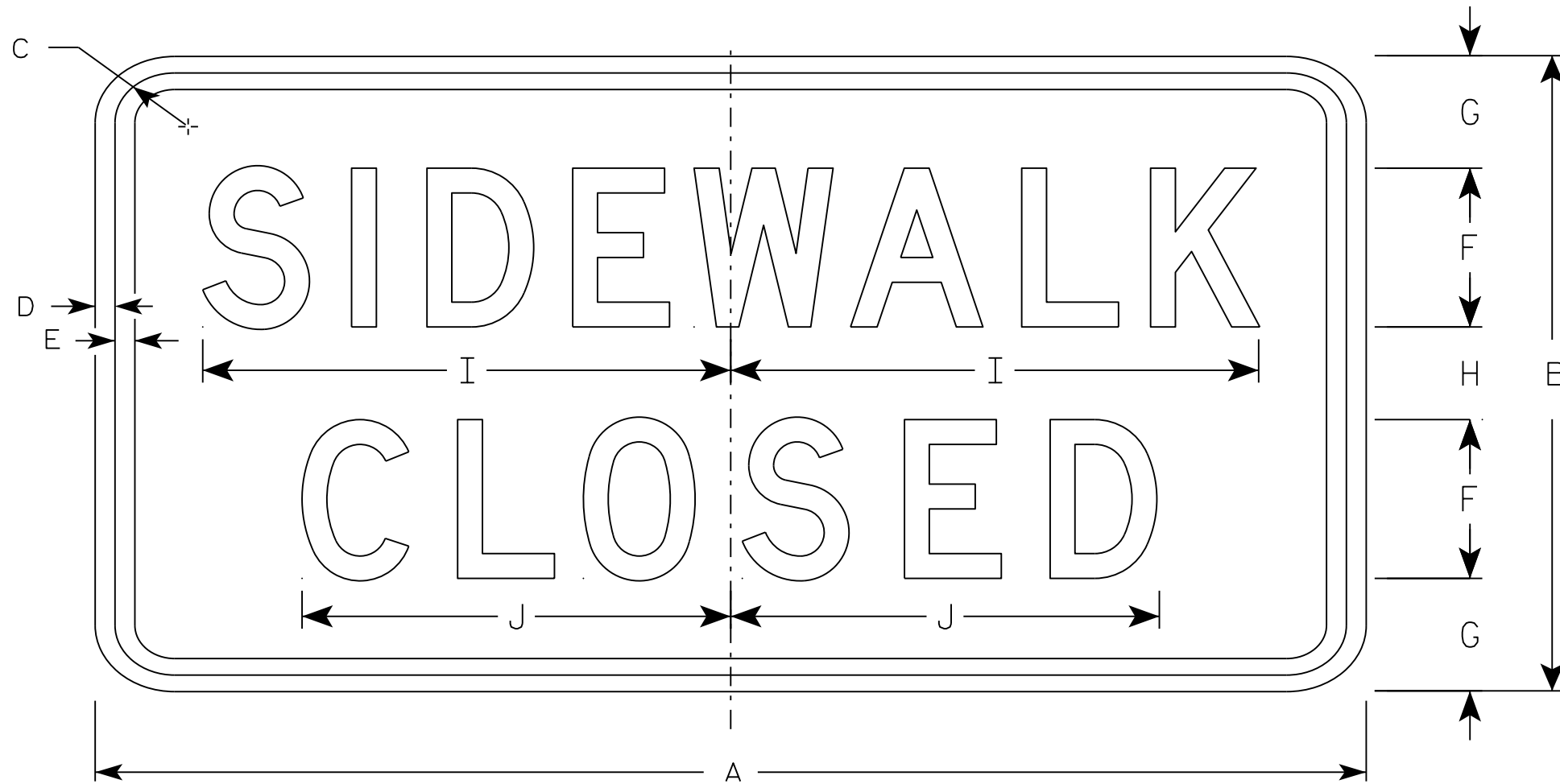
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

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. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.



R9-9

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	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

STANDARD SIGN  
R9-9

WISCONSIN DEPT OF TRANSPORTATION

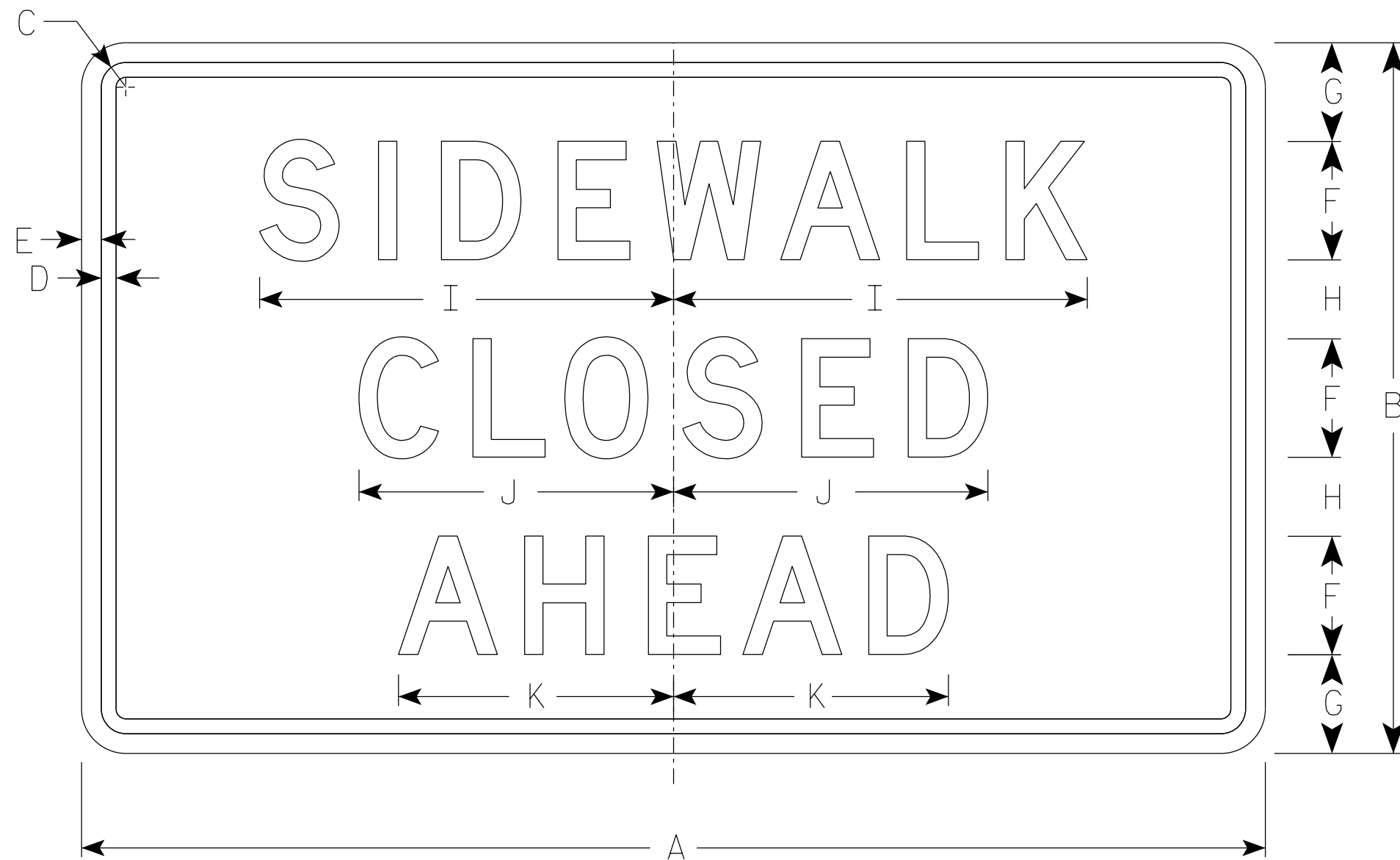
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/11/16 PLATE NO. R9-9.6



NOTES

1. Sign is Type II - Type H Reflective
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.



R9-9A

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 1/8	3/8	1/2	3	2 1/2	2	10 1/2	8	7																3.75
2M	30	18	1 1/8	3/8	1/2	3	2 1/2	2	10 1/2	8	7																3.75
3																											
4																											
5																											

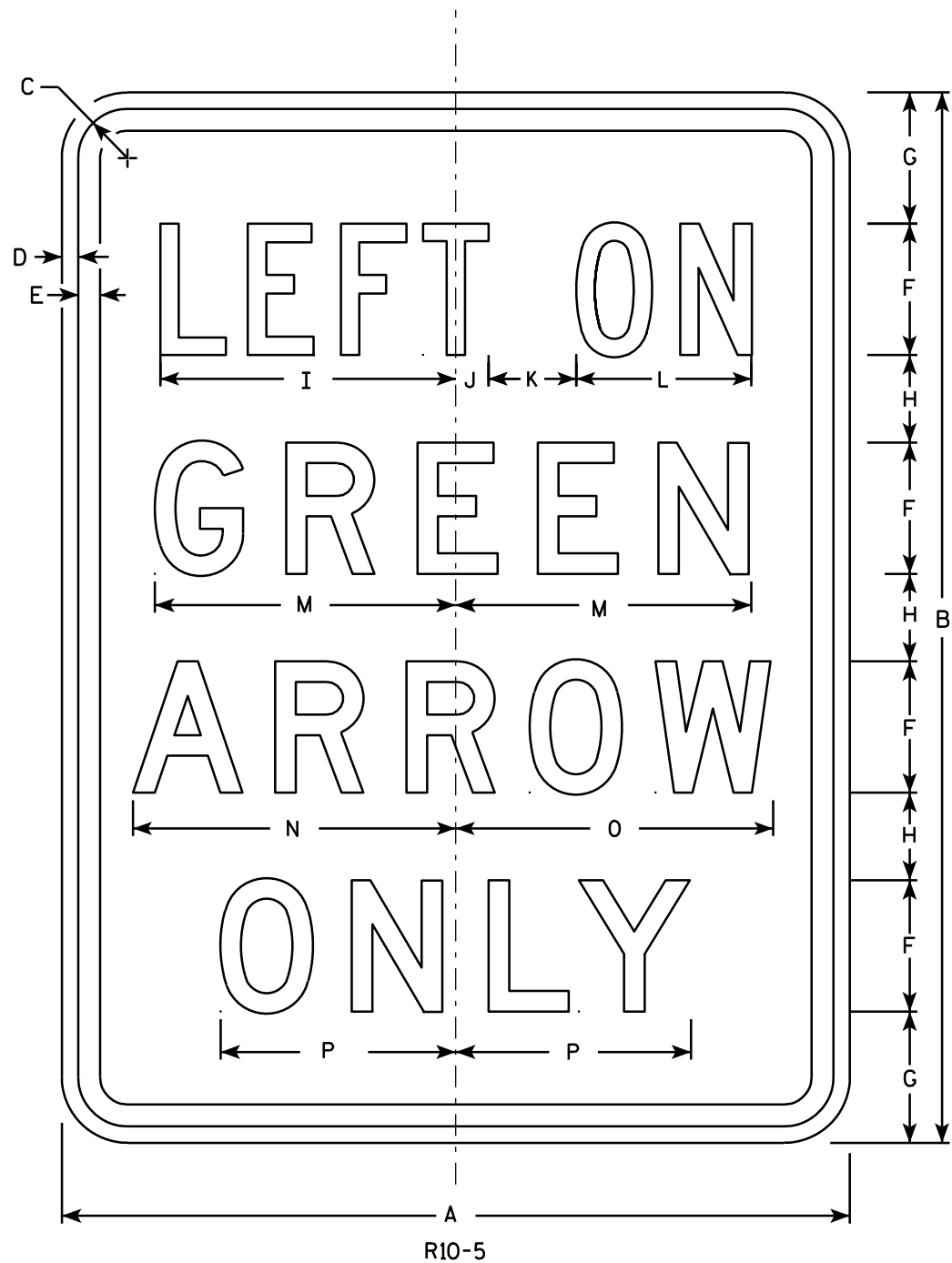
STANDARD SIGN  
R9-9A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 8/31/2020 PLATE NO. R9-9A.1

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



NOTES

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

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	24	30	1 1/8	3/8	1/2	4	3 1/4	2 1/2	9 1/4	3/4	3	5 3/8	8 5/8	9 1/2	9 5/8	7											5.0
2S	30	36	1 3/8	1/2	5/8	5	4 1/4	2 1/2	11 5/8	7/8	4	6 5/8	10 3/4	11 3/4	11 1/2	8 3/4											7.5
2M	30	36	1 3/8	1/2	5/8	5	4 1/4	2 1/2	11 5/8	7/8	4	6 5/8	10 3/4	11 3/4	11 1/2	8 3/4											7.5
3																											
4																											
5																											

STANDARD SIGN  
R10-5

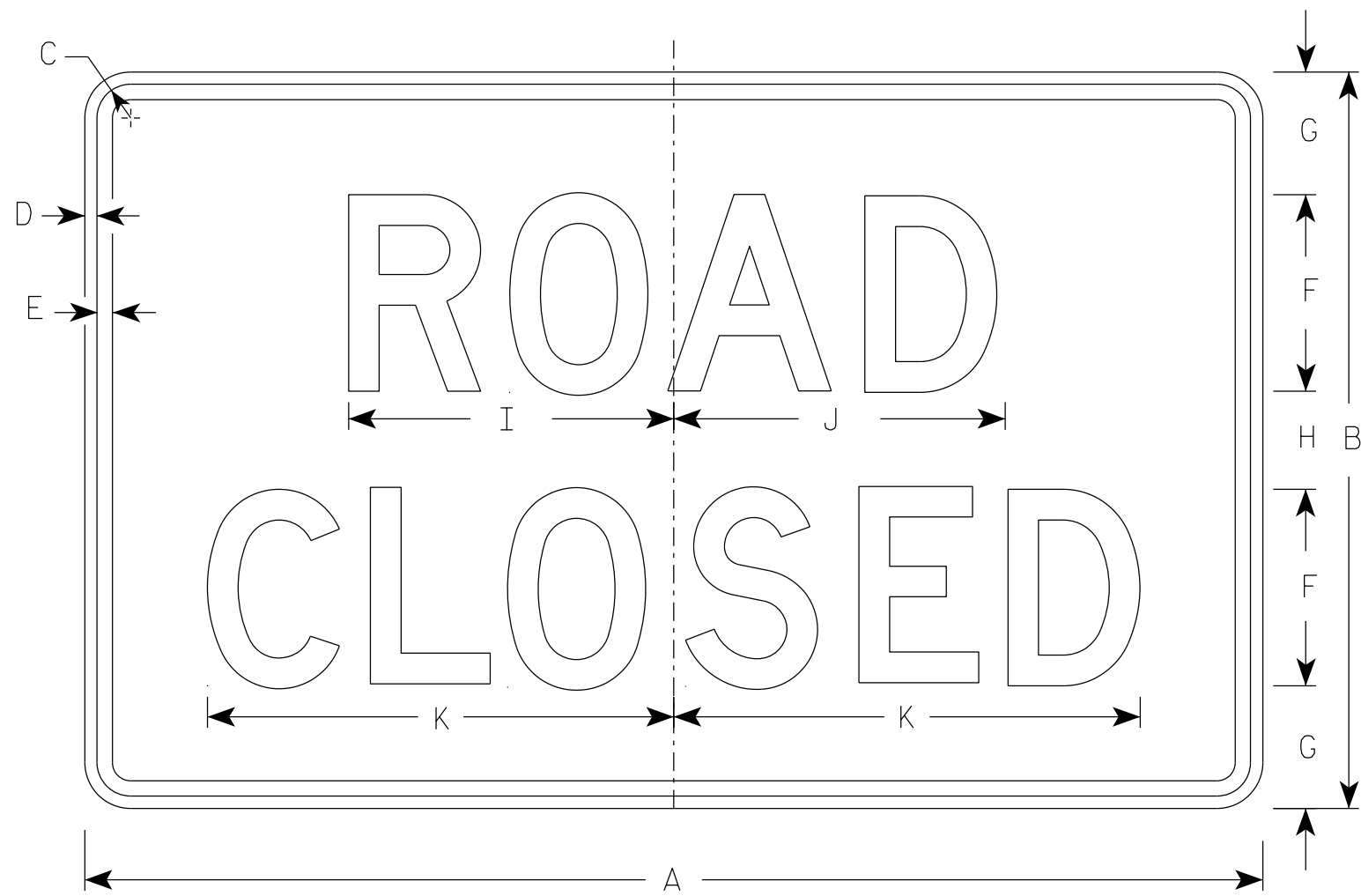
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer  
DATE 11/02/10 PLATE NO. R10-5.7

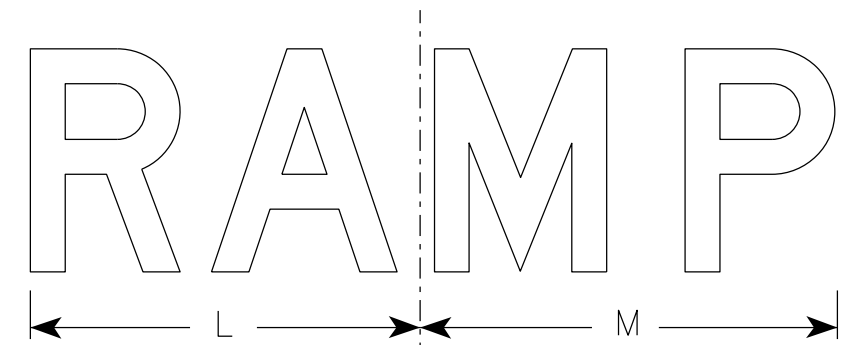
PROJECT NO:

SHEET NO:

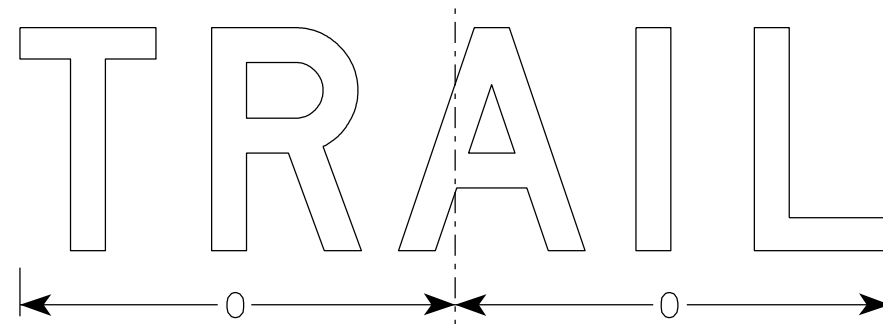
E



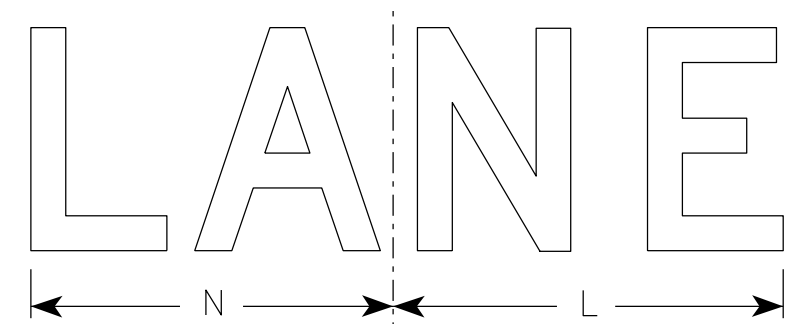
R11-2



R11-2R



R11-2T



R11-2L

NOTES

1. Sign is Type II - Type H Reflective
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.

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

STANDARD SIGN  
R11-2

WISCONSIN DEPT OF TRANSPORTATION

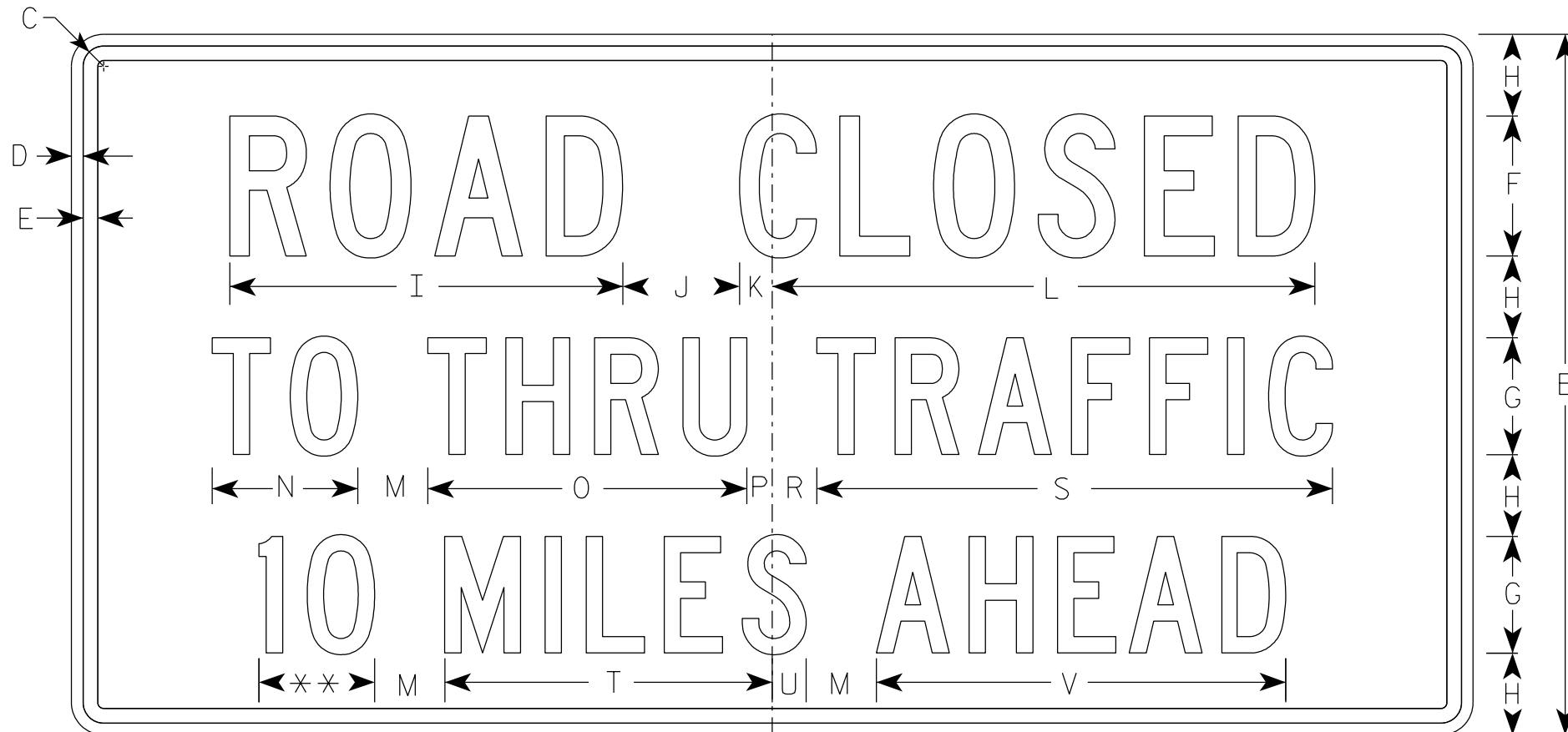
APPROVED *Matthew R Rauch*  
For State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**

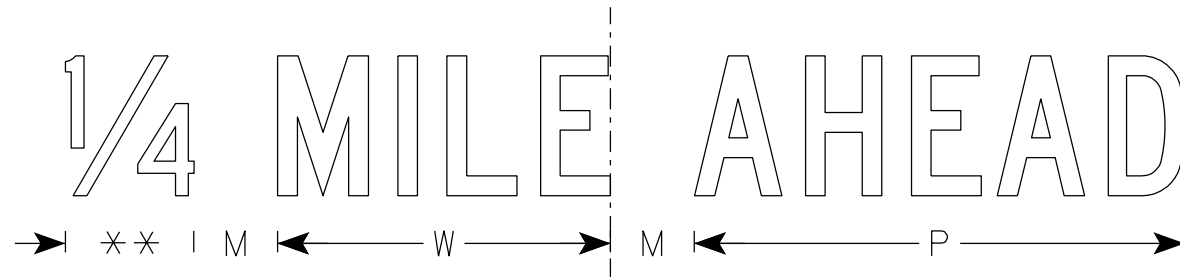
NOTES

1. Sign is Type II - Type H Reflective
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 to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

\*\* 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 1/4	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8			4.5	
2S	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8			12.5	
2M	60	30	1 3/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8			12.5	
3																											
4																											
5																											

STANDARD SIGN  
R11-3

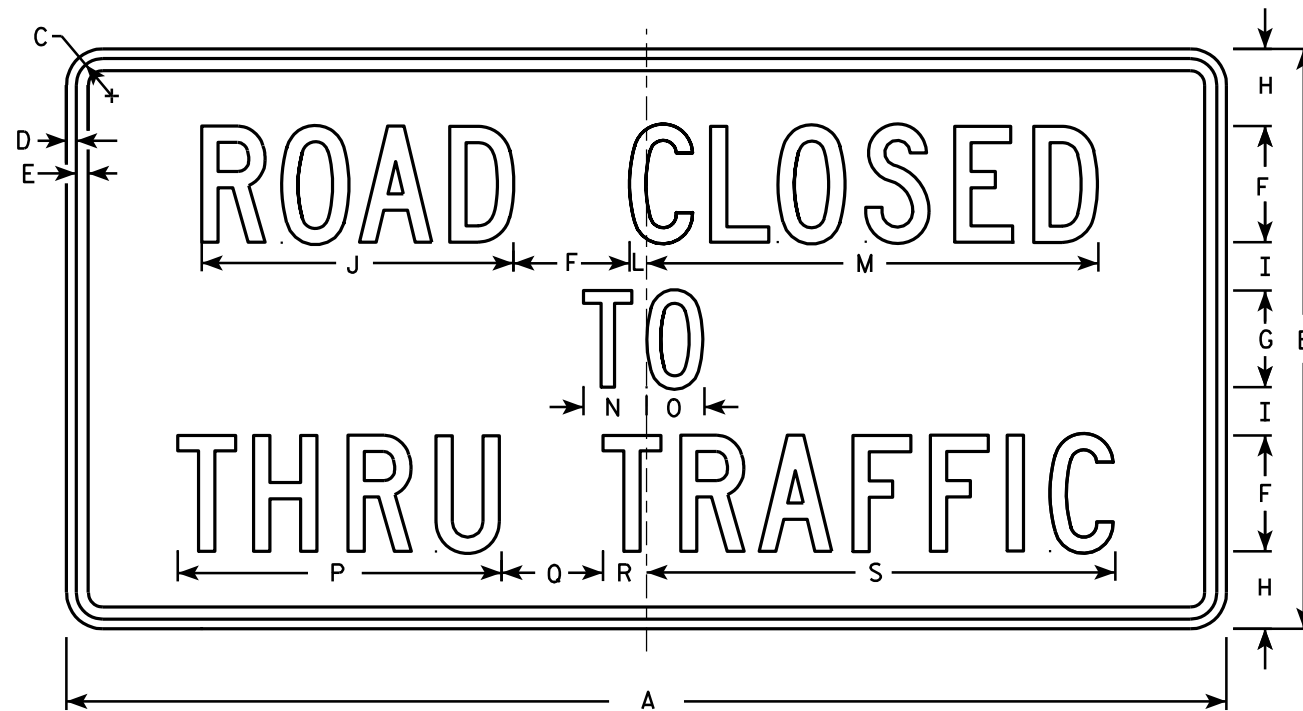
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/14/2021 PLATE NO. R11-3.9

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.



R11-4

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	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

**STANDARD SIGN**  
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

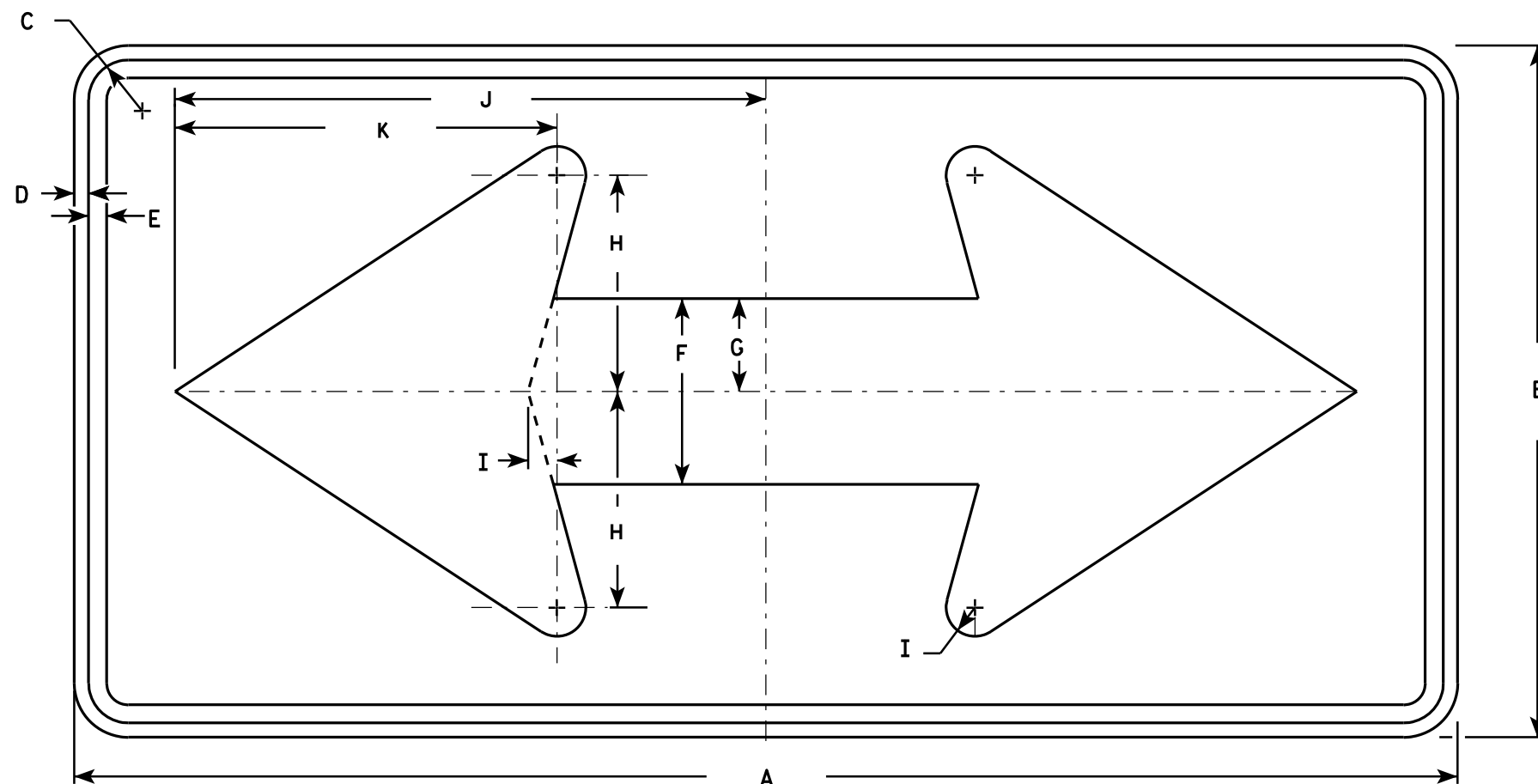
APPROVED *Matthew R. Raush*  
for State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

**NOTES**

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



W1-7

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	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

**STANDARD SIGN**  
W1-7

WISCONSIN DEPT OF TRANSPORTATION

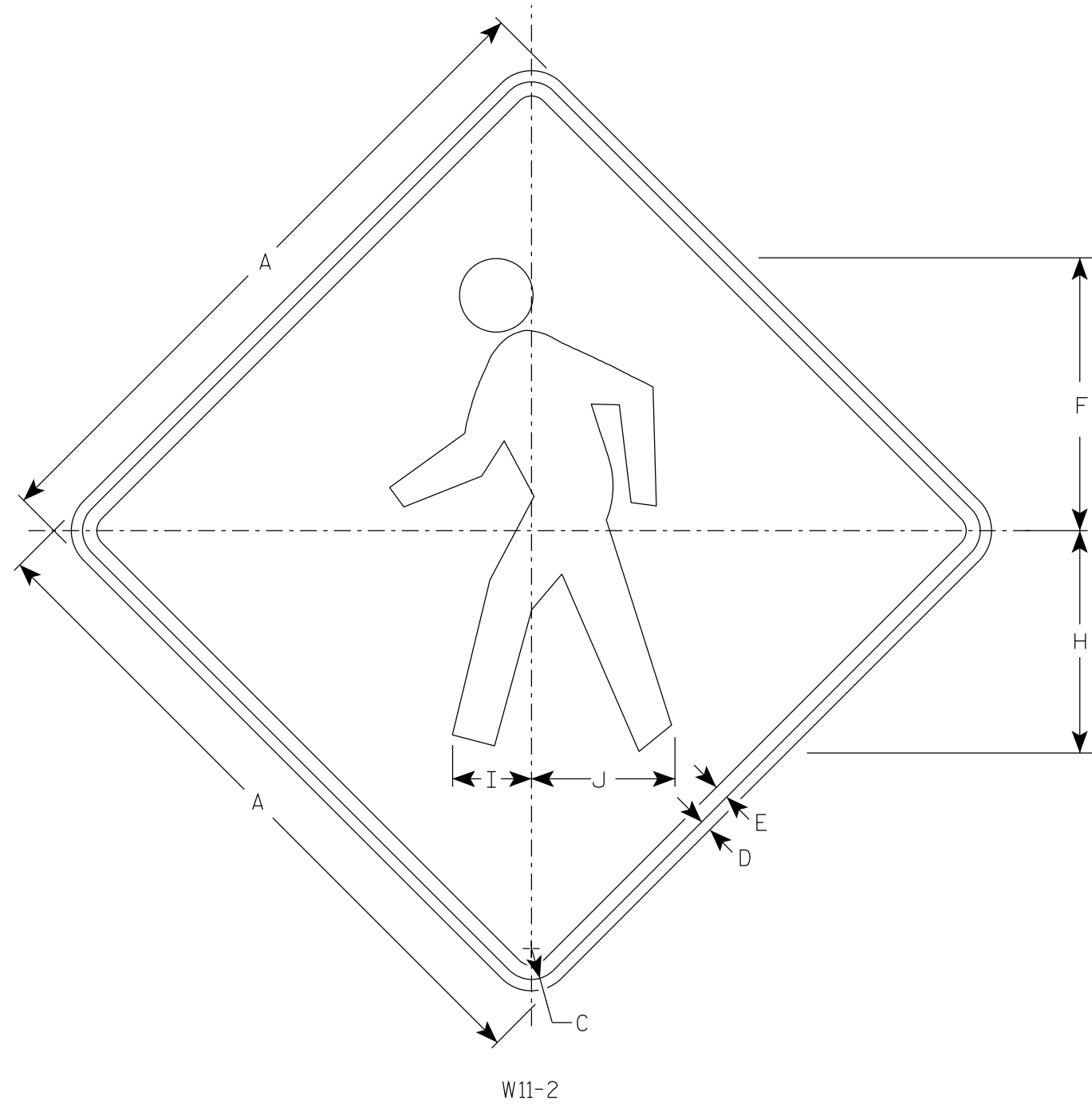
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
     Background - Yellow  
     Message - Black



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	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN  
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
for State Traffic Engineer

DATE 4/8/2020 PLATE NO. W11-2.8

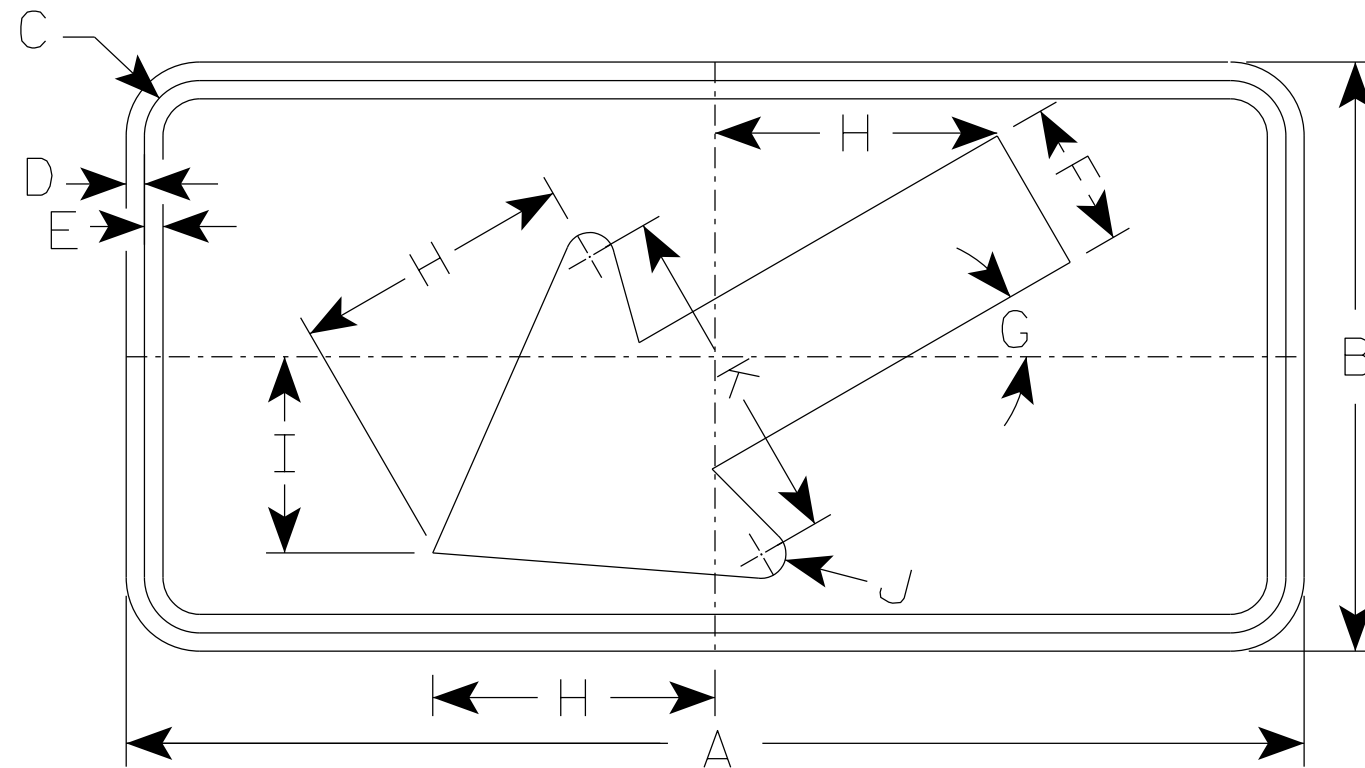
PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: \_\_\_\_\_ **E**

7

7

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. W16-7R is the same as W16-7L  
except the arrow is reversed along  
the vertical centerline.



W16-7L

- \* For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
- \* For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	3	30°	5 3/4	4	1/2	7																2.0
* 2M	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
* 3	30	18	1 1/8	3/8	1/2	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
* 4	48	24	1 3/8	1/2	5/8	6	30°	11 1/2	8	1	14																8.0
5																											

STANDARD SIGN  
W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

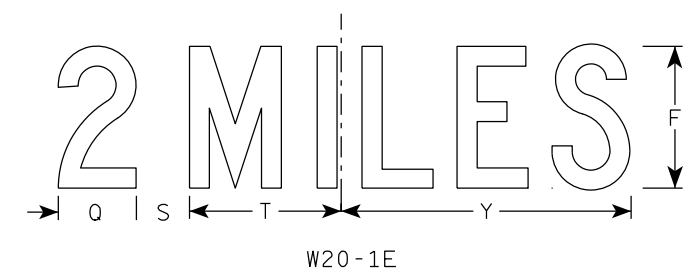
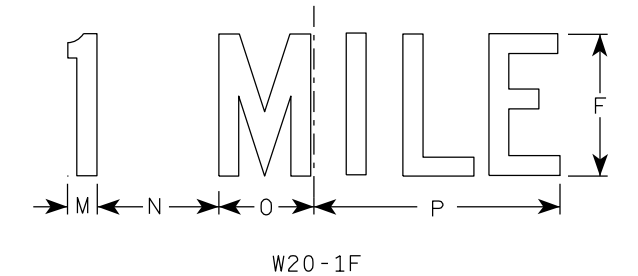
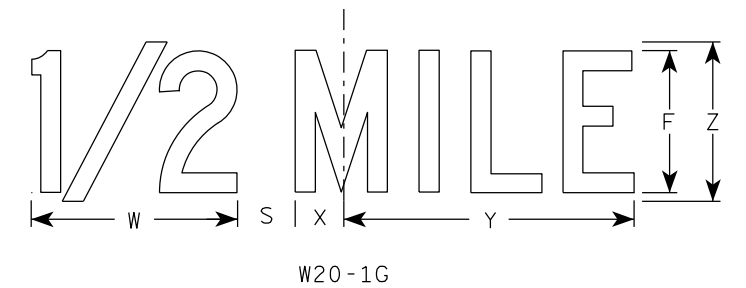
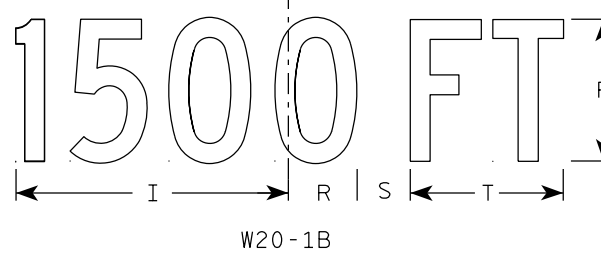
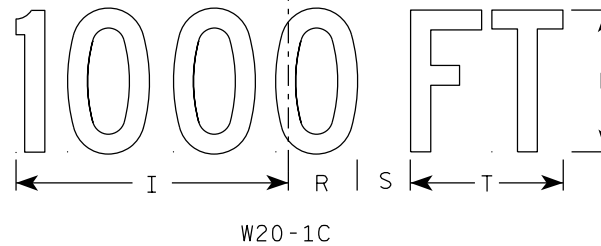
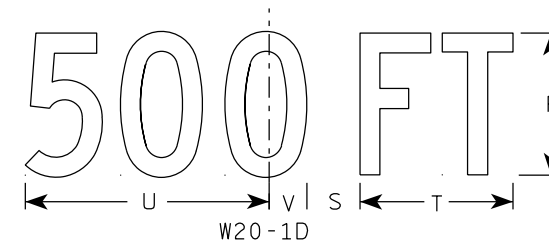
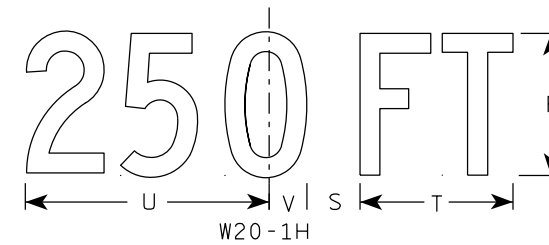
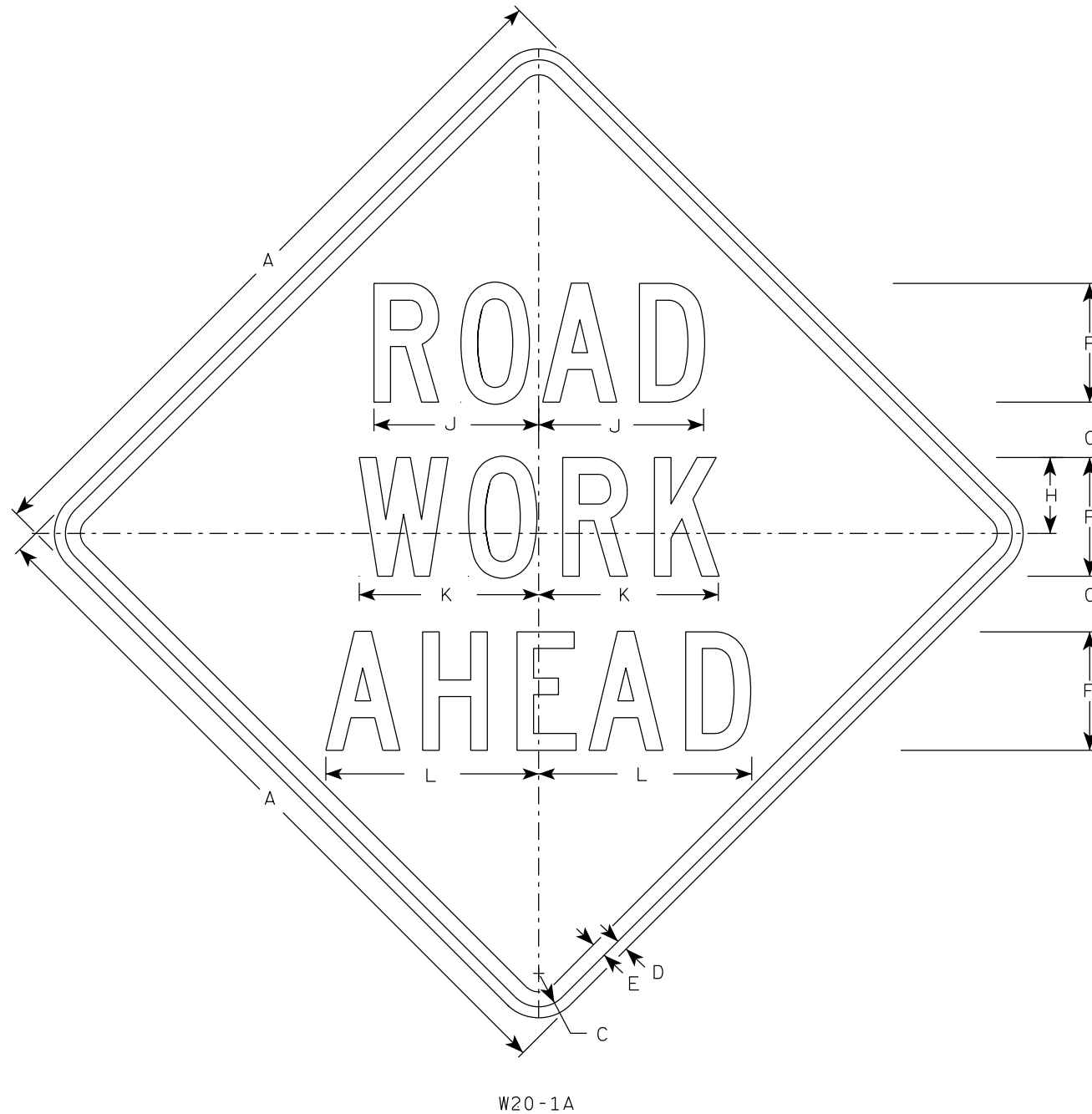
DATE 3/16/2021 PLATE NO. W16-7.8

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: **E**



**NOTES**

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



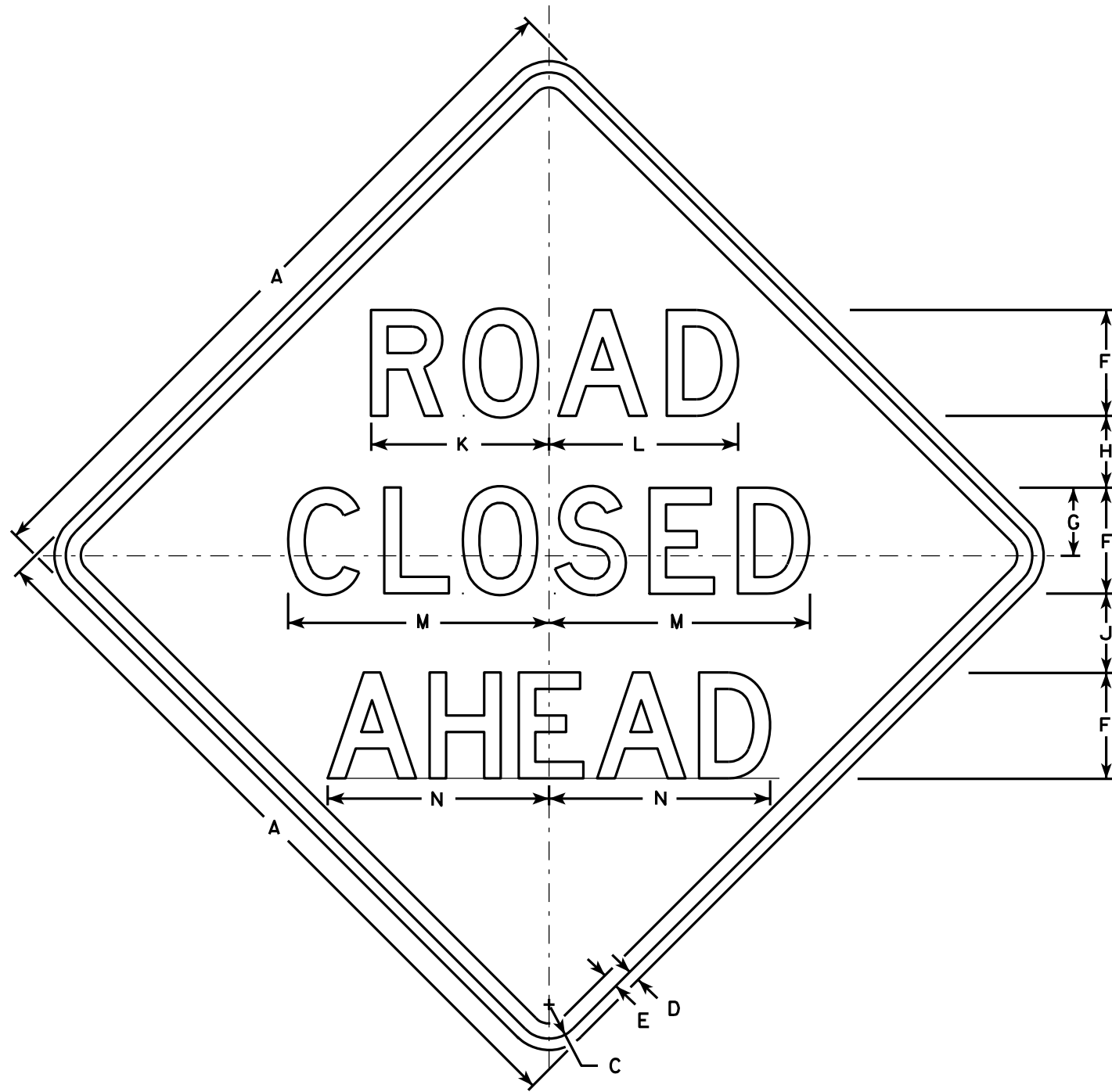
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

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

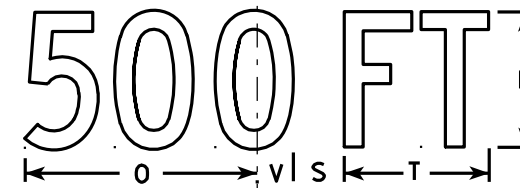
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

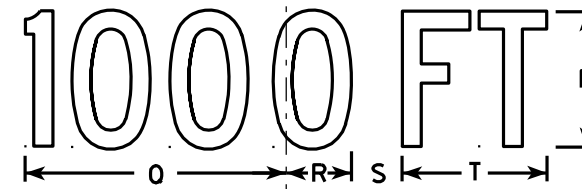
DATE 3/25/2020 PLATE NO. W20-1.11



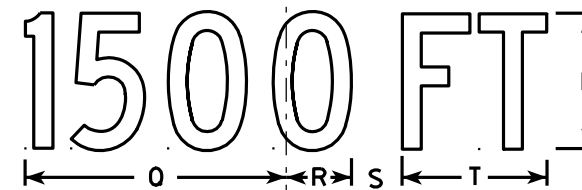
W20-3A



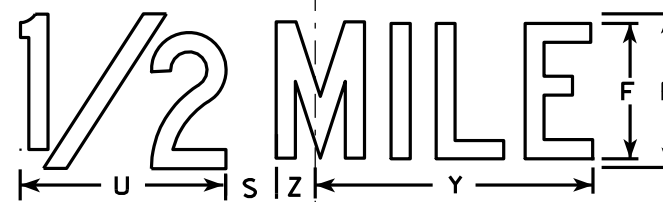
W20-3D



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.

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	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

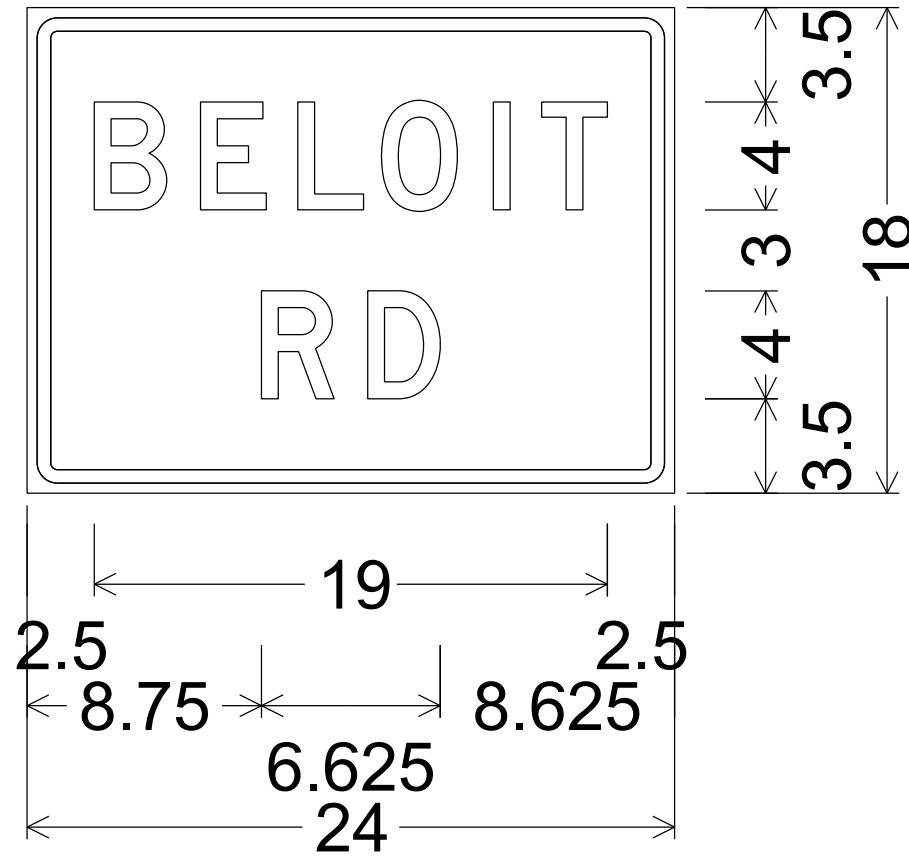
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

NOTES

1. Fixed Message sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D



1.125" Radius, 0.500" Border, 0.375" Indent

7

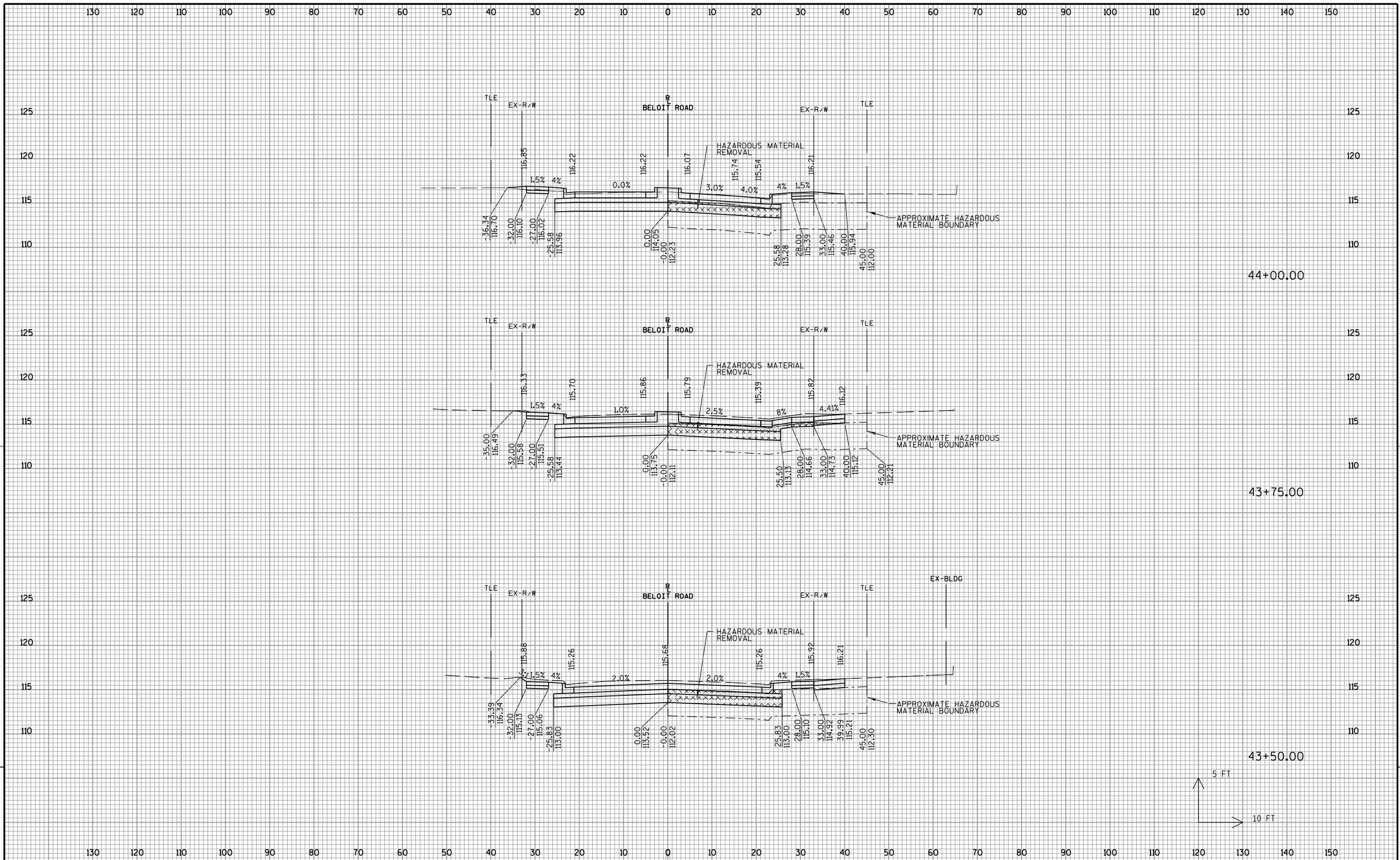
7

**BELOIT ROAD**

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.11	MASS ORDINATE
43+50.00	4350		148	32	0	0	0	0	0	0	0
43+75.00	4375	25	143	32	0	135	29	0	135	0	106
44+00.00	4400	25	111	32	2	118	29	1	252	1	193
44+25.00	4425	25	135	53	1	114	39	1	366	3	266
44+50.00	4450	25	219	76	3	164	60	2	530	5	368
44+75.00	4475	25	63	14	5	131	42	4	661	9	453
45+00.00	4500	25	58	15	13	56	13	8	717	18	486
45+25.00	4525	25	100	32	16	73	22	13	790	33	523
45+50.00	4550	25	82	32	11	84	29	13	874	47	564
45+75.00	4575	25	89	32	5	79	29	7	953	55	606
45+86.00	4586	11	108	32	0	40	13	1	993	56	632
46+00.00	4600	25	123	32	0	107	29	2	1100	57	708
46+25.00	4625	25	145	32	0	124	29	0	1224	57	803
46+50.00	4650	25	132	32	0	128	29	0	1353	57	902
						<b>1353</b>	<b>393</b>	<b>52</b>			

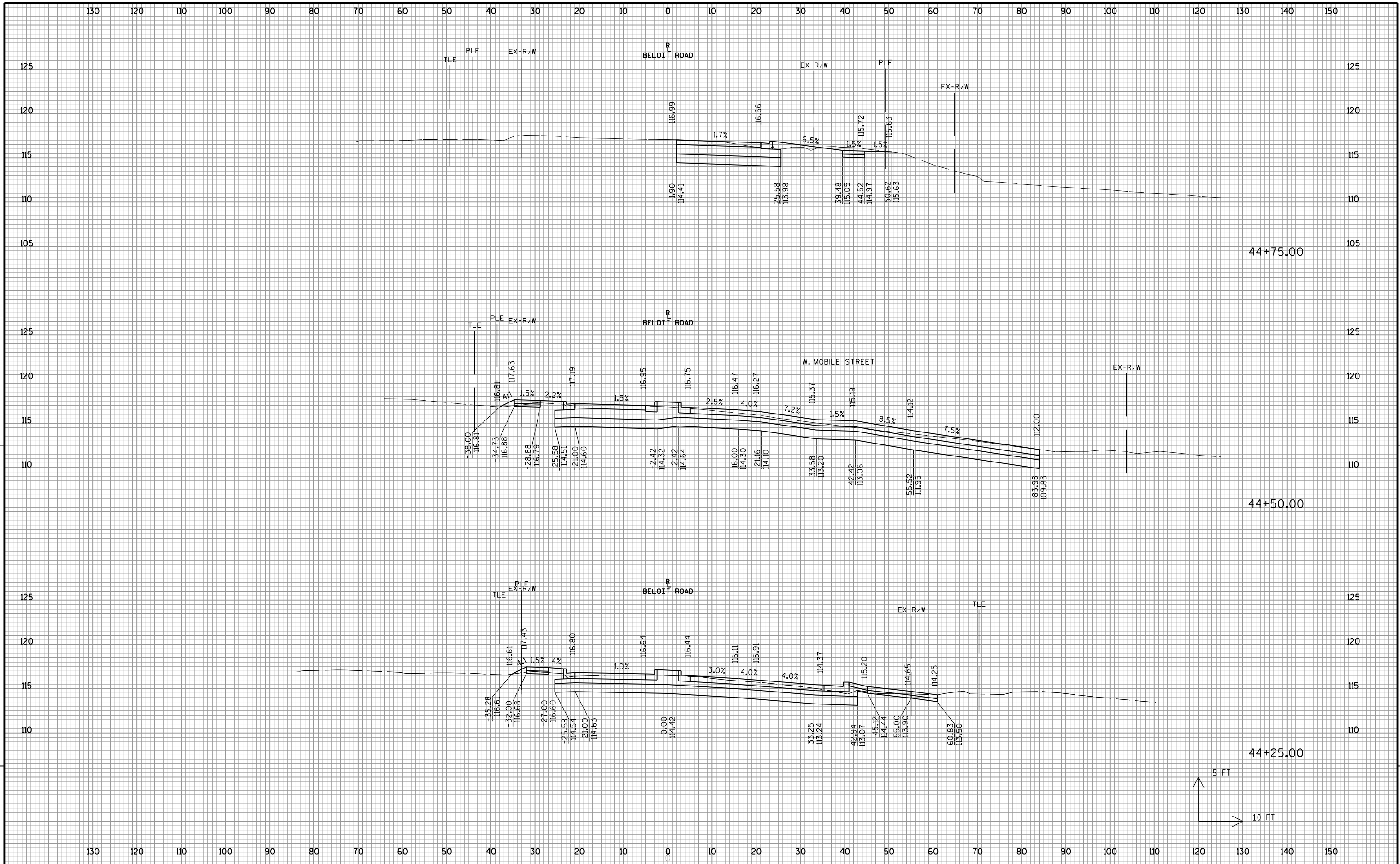
ALL CATEGORY 0010

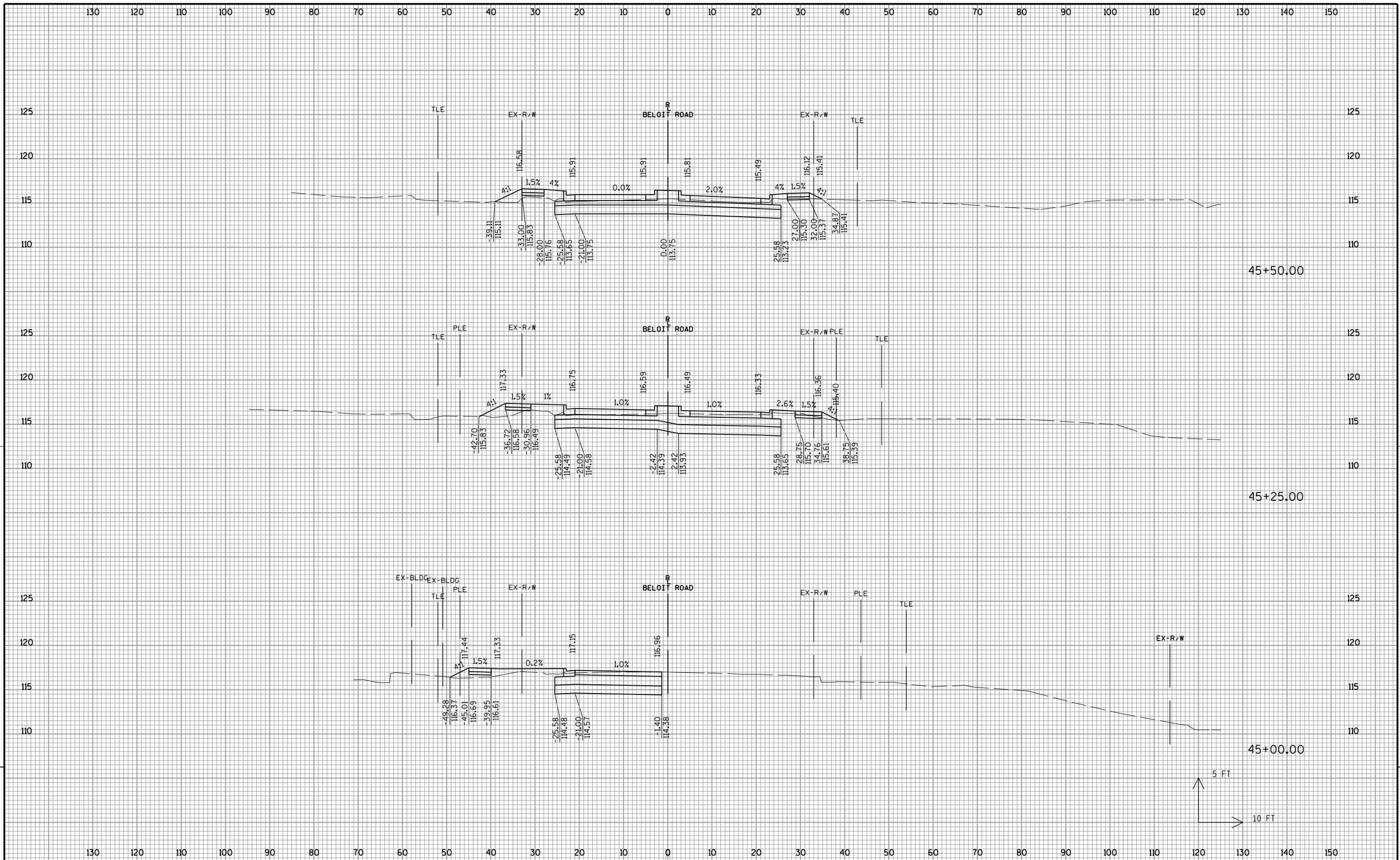




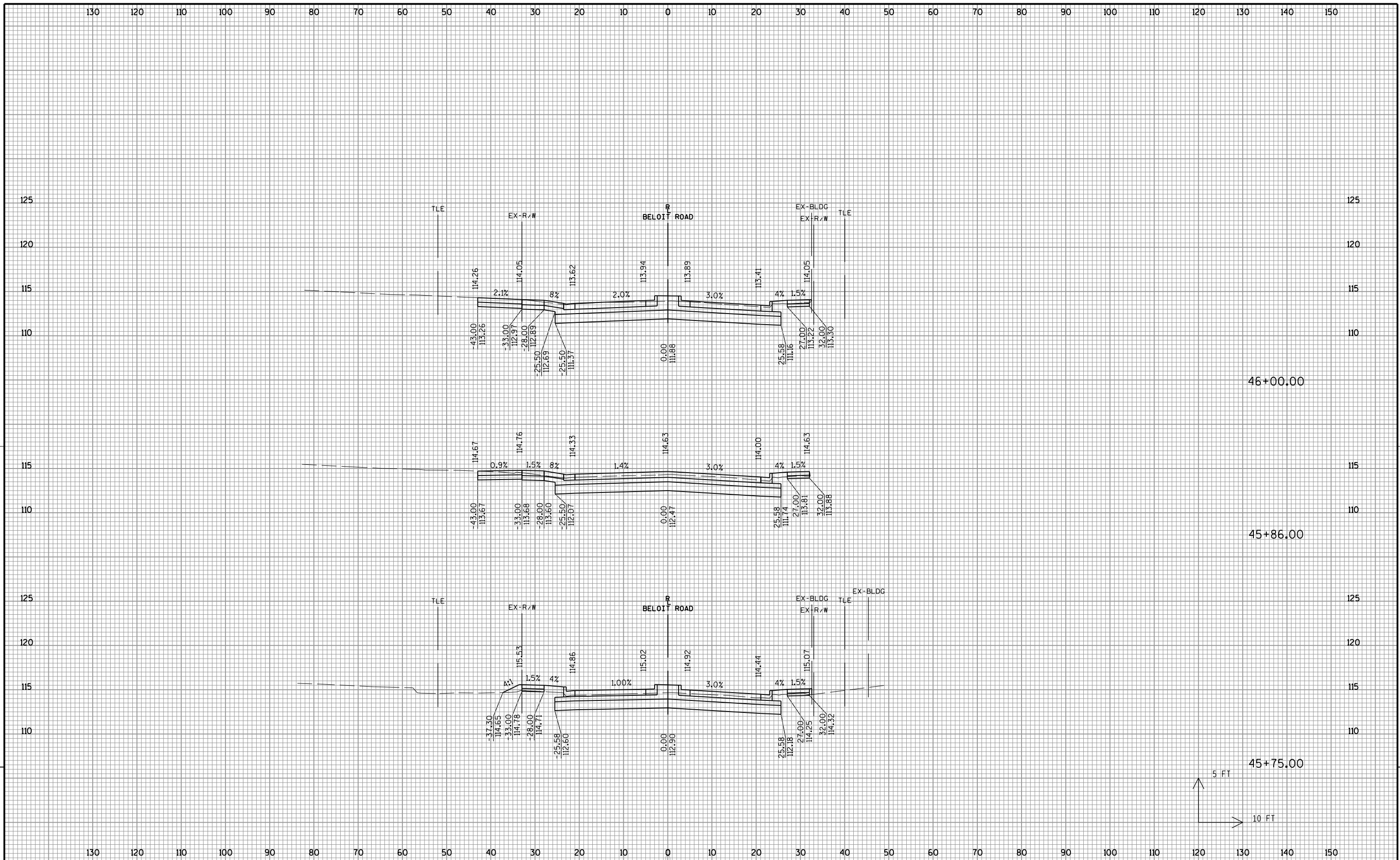
9

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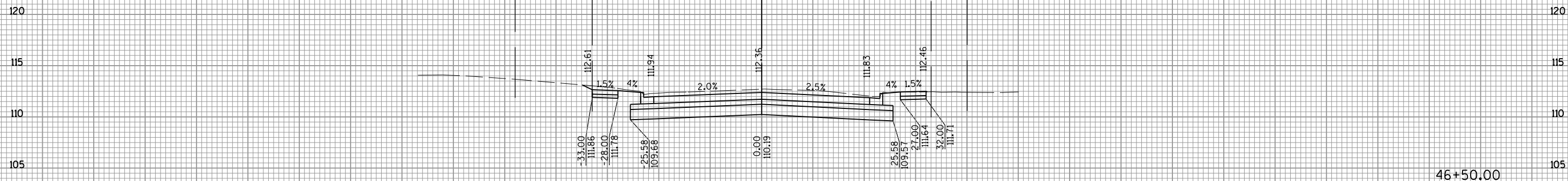




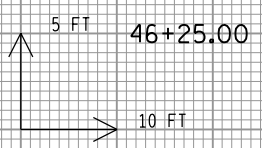
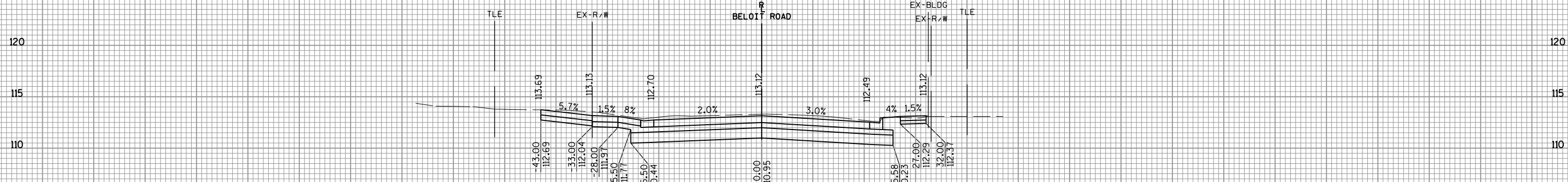


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130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

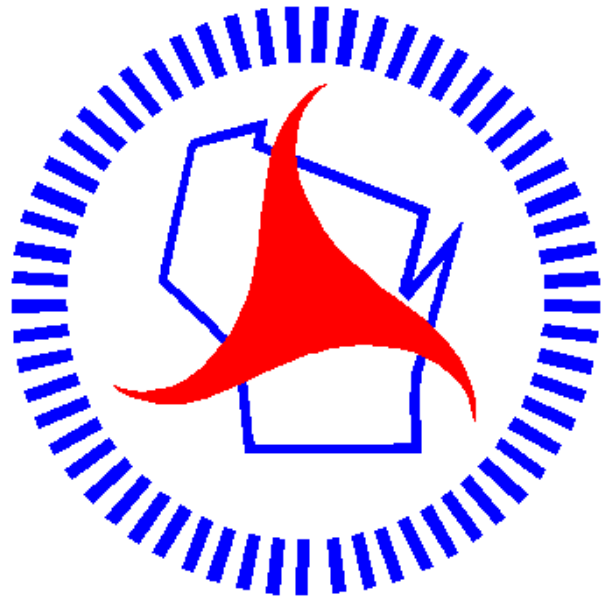


46+50.00



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