WKE JUNE 2019

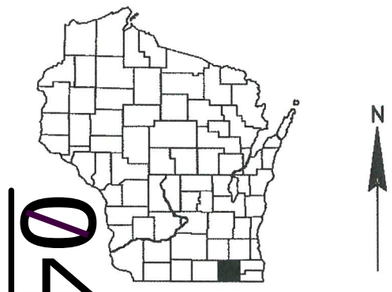
PROJECT ID: 1080-17-70

WITH: N/A

COUNTY: WALWORTH

ORDER OF SHEETS

TOTAL SHEETS = 266



N

DESIGN DESIGNATION		USH 12 SB RAMP	USH 12/ CTH H
A.A.D.T. 2012	=	7,200	12,200
A.A.D.T. 2039	=	9,500	16,200
D.H.V.	=	5.7	5.7
D.D.	=	--/--	60/40
T.	=	6.7%	6.7%
DESIGN SPEED	=	45 MPH	45 MPH
ESALS	=	2,627,500	2,884,300

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

GENOA CITY - LAKE GENEVA

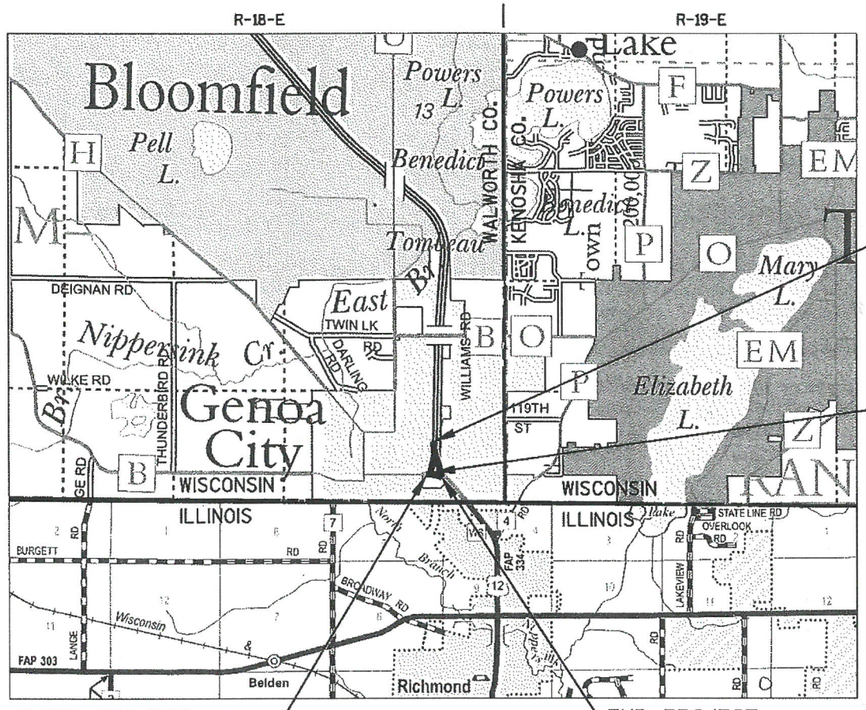
CTH H INTERSECTION

USH 12

WALWORTH COUNTY

STATE PROJECT NUMBER
1080-17-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1080-17-70	WISC 2019494	1



BEGIN PROJECT
STA. 8EB+11.25 (CTH H)
X = 822,818.19
Y = 302,158.94

END PROJECT
STA. 19EB+51.20 (CTH H)
X = 823,925.80
Y = 301,973.26

END PROJECT
STA. 117+10.00 (USH 12)
X = 823,538.33
Y = 303,840.16

BEGIN PROJECT
STA. 100+00.00 (USH 12)
X = 823,286.42
Y = 302,158.14

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.540 MI.

-COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WALWORTH COUNTY NAD 83 (2007).

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

ORIGINAL PLANS PREPARED BY
COLLINS ENGINEERS

WISCONSIN RACHEL A. TRANEL E-35075 MUKWONAGO, WI PROFESSIONAL ENGINEER

5-1-18 (Date) Rachel A Tranel (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	R.A. SMITH NATIONAL, INC.
Designer	COLLINS ENGINEERS, INC.
Project Manager	ALLEN GILBERTSON
Regional Examiner	
Regional Supervisor	JANET CANNON

APPROVED FOR THE DEPARTMENT

DATE: 4/26/18 (Signature)

E

FILE NAME : G:\B602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\010101-TI.DWG PLOT DATE : 4/26/2018 12:46 PM PLOT BY : KEVIN WEIGHNER PLOT NAME : ---------- PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 10

ABBREVIATIONS

AS	ASPHALTIC SURFACE
BAD	BASE AGGREGATE DENSE
BLDG.	BUILDING
BM	BENCH MARK
C.E.	COMMERCIAL ENTRANCE
CNE	CONSTRUCTION EASEMENT
CONC.	CONCRETE
CP	CONTROL POINT
CSW	CONCRETE SIDEWALK
CTR	CENTER
F.E.	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
HSE.	HOUSE
MAX.	MAXIMUM
MIN.	MINIMUM
NOR.	NORMAL
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
R	RADIUS
REQ'D.	REQUIRED
R/L	REFERENCE LINE
R/W	RIGHT-OF-WAY
S.D.D.	STANDARD DETAIL DRAWING
SSPRC	STORM SEWER PIPE REINFORCED
TLE	CONCRETE TEMPORARY LIMITED EASEMENT
TYP	TYPICAL

ORDER OF DETAIL SHEETS

GENERAL NOTES

ALL RADII DIMENSIONS ARE MEASURED TO THE EDGE OF PAVEMENT OR FLANGE OF CURB & GUTTER UNLESS OTHERWISE NOTED.

ALL PAVING DETAILS STATIONING AND OFFSETS ARE TAKEN AT THE EDGE OF PAVEMENT.

ALL GRADES PROVIDED ALONG RADII ARE ALONG EDGE OF PAVEMENT.

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN IN THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES, PRIOR TO THE START OF WORK.

UTILITY REFERENCE LINES ON THE CROSS SECTIONS ARE FOR APPROXIMATE HORIZONTAL REFERENCE ONLY.

REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

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

PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

CONTRACTOR IS RESPONSIBLE FOR RESHAPING AND FINISHING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE THE NORMAL CONSTRUCTION LIMITS.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH/EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER THE PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN (14) CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

THE EXACT LOCATION OF DRIVEWAYS IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER. ALL DRIVEWAYS ARE TO BE REPLACED IN KIND.

SIDEROAD PAVEMENT STRUCTURE SHALL BE THE SAME AS THE MAINLINE UNLESS OTHERWISE NOTED.

THE CONTRACTORS HMA PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN DRIVING, TURNING, PASSING OR PARKING LANE.

UTILITIES

ALLIANT ENERGY
MR. AUSTIN KROHN
400 KOOPMAN LN
ELKHORN, WI 53121
(262) 741-0905
austinkrohn@alliantenergy.com

AT&T WISCONSIN
MR. CHRISTOPHER DUNCAN
2005 PEWAUKEE RD
WAUKESHA, WI 53188
(262) 896-7678
cd8946@att.com

GENOA CITY, VILLAGE OF
MR. TODD SCHILLER
715 WALWORTH ST
P.O. BOX 428
GENOA CITY, WI 53128
(262) 279-5728
gcpw@sbcglobal.net

WISDOT SIGNALS
MR. DENNIS CAULEY
935 S. 60TH ST
WEST ALLIS, WI 53214
(414) 266-1170
dennis.cauley@dot.wi.gov

WE ENERGIES (GAS OPERATIONS)
MR. JACOB SPENCER (FIELD CONTACT)
700 S KANE ST
BURLINGTON, WI 53105
(262) 763-1039
jacob.spencer@we-energies.com

MS. NICOLE SMULLEN (OFFICE CONTACT)
333 W EVERETT ST
MILWAUKEE, WI 53203
(414) 221-5617
nicole.smullen@weenergygroup.com

STATE AGENCIES

DNR LIAISON
CRAIG WEBSTER
141 NW BARSTOW ROOM 180
WAUKESHA, WI. 53188
(262) 574-2141
craig.webster@wiscosin.gov

DOT CONTACT
ALLEN GILBERTSON, P.E.
WISCONSIN DEPARTMENT OF TRANSPORTATION
141 NW BARSTOW STREET
WAUKESHA, WI 53187
(262) 548-8817
allen.gilbertson@dot.wi.gov

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

LOCATION	PAVEMENT DESCRIPTION	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	PAVEMENT TYPES
USH 12 RAMP (MILL AND OVERLAY)	4" HMA PAVEMENT	2 1/4" 1 3/4"	LOWER LAYER UPPER LAYER	3MT58-28S 4MT58-28S
USH 12 RAMP (FULL RECONSTRUCT)	6 1/2" HMA PAVEMENT	2 1/2" 2 1/4" 1 3/4"	LOWER-LOWER LAYER UPPER-LOWER LAYER UPPER LAYER	3MT58-28S 3MT58-28S 4MT58-28S
CTH H (WALWORTH ST)	4" HMA PAVEMENT	2 1/4" 1 3/4"	LOWER LAYER UPPER LAYER	3MT58-28S 4MT58-28S

2

N

FENMORE LN

STERLING PKWY

ELIZABETH LN

BEGIN CONSTRUCTION
STA. 8EB+11.25

SIGN STRUCTURE
S-64-609

PROPOSED TRAFFIC SIGNAL
S64-1441

VILLAGE OF GENOA CITY
TOWN OF BLOOMFIELD

EXISTING R/W

100+00.00 USH 12 SB RAMP =
12EB+79.51 USH 12/CTH H EB

5EB
5WB
10EB
10WB
WALWORTH ST
(CTH H)
15EB
15WB
USH 12 EB
CTH H WB
20EB
20WB
25EB
25WB
USH 12 WB

105
USH 12 SB EXIT RAMP
110
115
120

EXISTING R/W

VILLAGE OF GENOA CITY
TOWN OF BLOOMFIELD

END CONSTRUCTION
STA. 117+10.00

USH 12 SB

USH 12 NB

SIGN STRUCTURE
S-64-220

USH 12 NB ENTRANCE RAMP

TOWN OF BLOOMFIELD
VILLAGE OF GENOA CITY

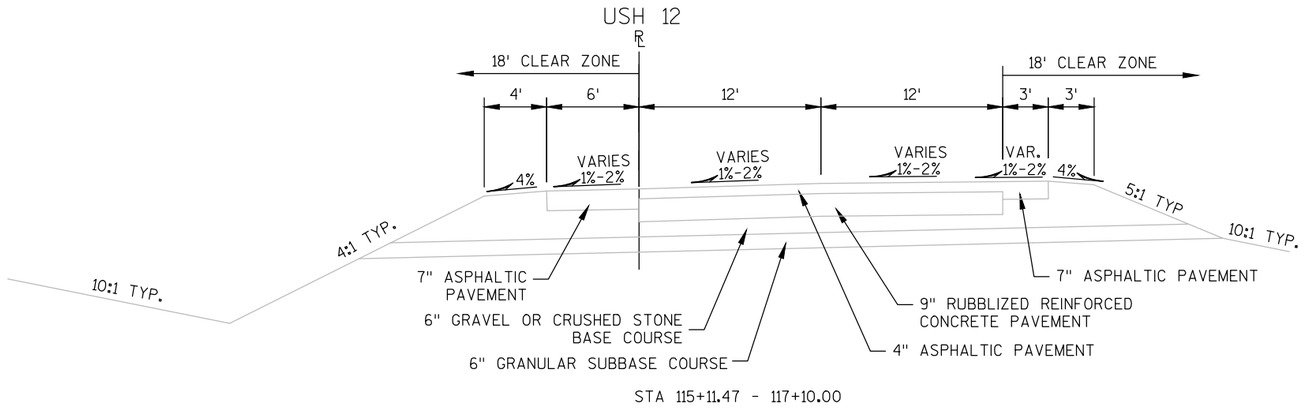
EXISTING R/W

EXISTING R/W

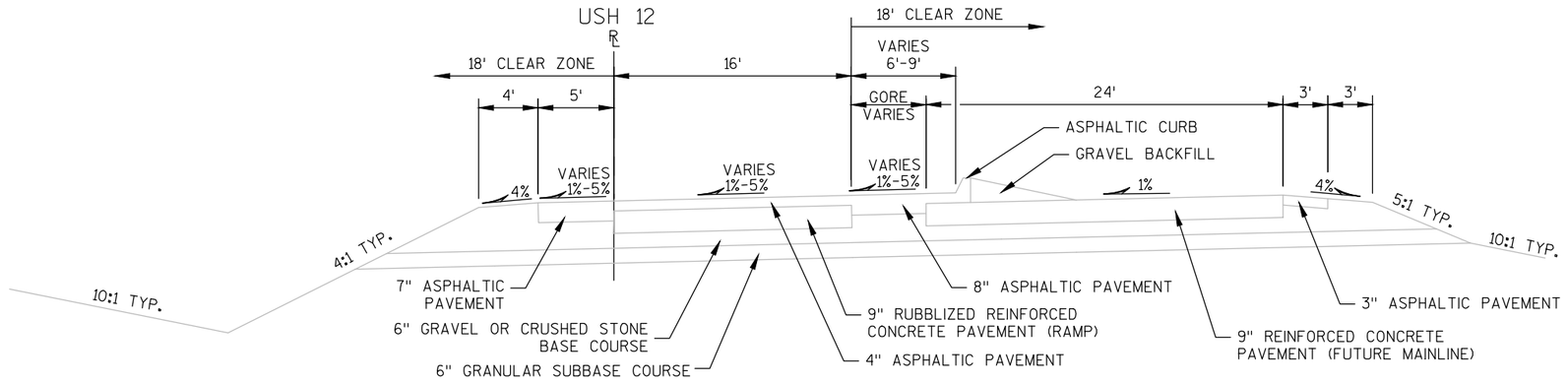
END CONSTRUCTION
STA. 19EB+51.20

WILLIAMS RD

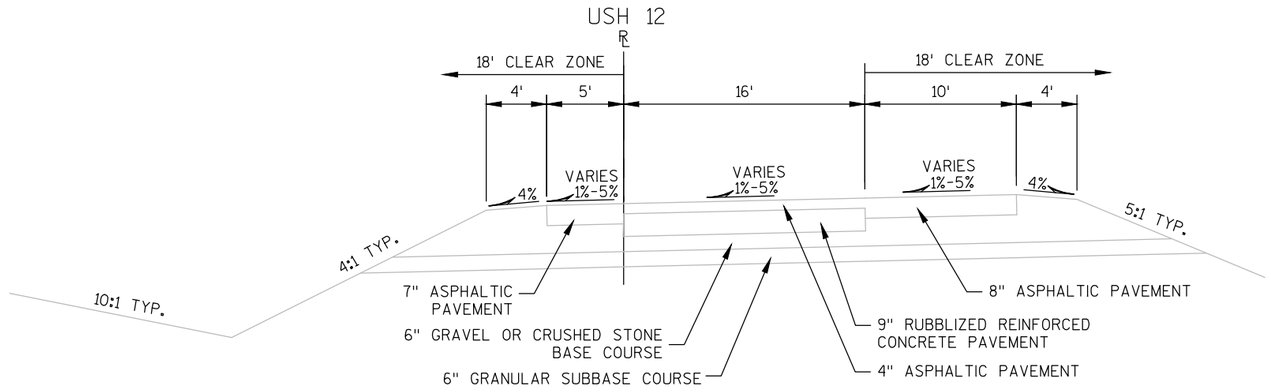
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PROJECT OVERVIEW	SHEET 3	E



STA 115+11.47 - 117+10.00



STA 108+98.40 - STA 115+11.47

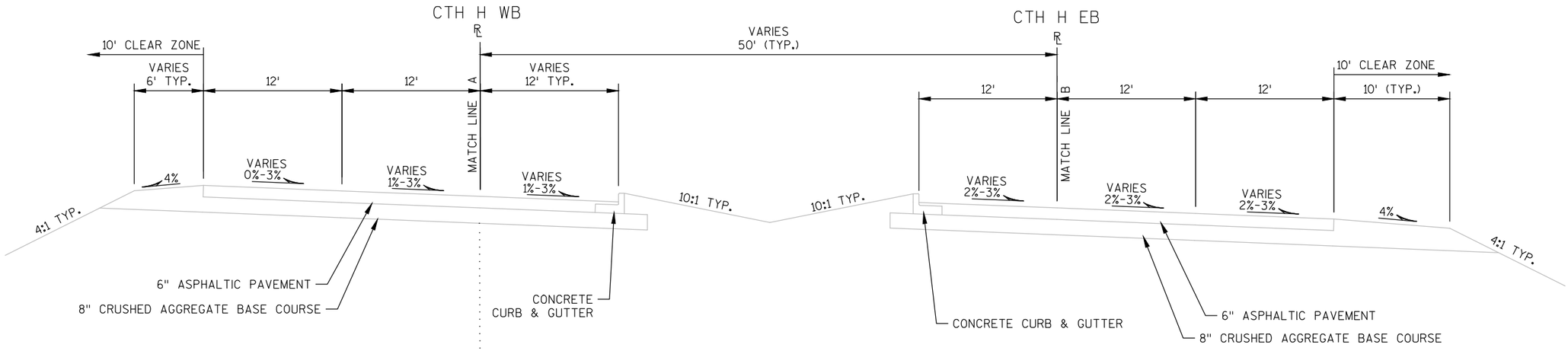


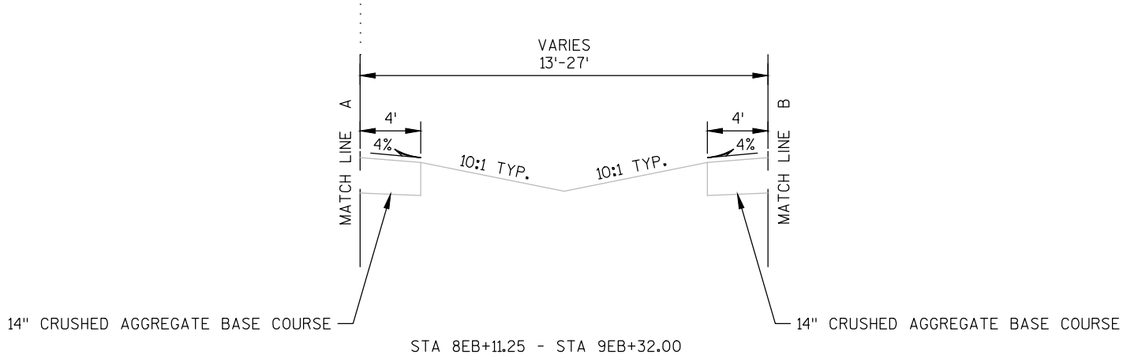
STA 100+00.00 - STA 108+98.40

EXISTING TYPICAL SECTION
USH 12 SOUTHBOUND RAMP
(LOOKING NORTH)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 4	E

2





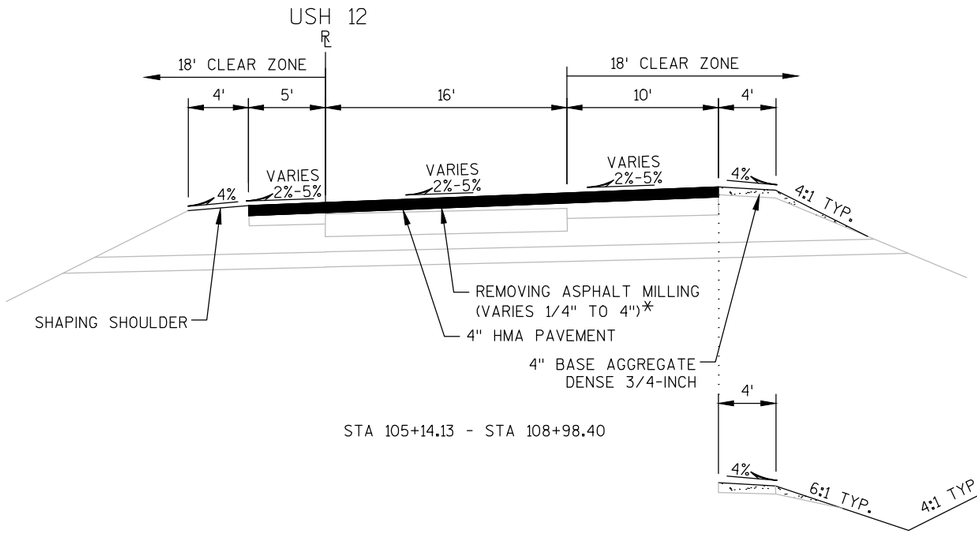
STA 8EB+11.25 - STA 9EB+32.00

EXISTING TYPICAL SECTION
CTH H (WALWORTH STREET)

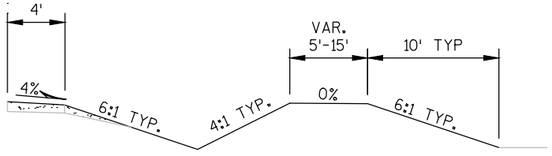
STA 8EB+11.25 - STA 19EB+51.20

(LOOKING EAST)

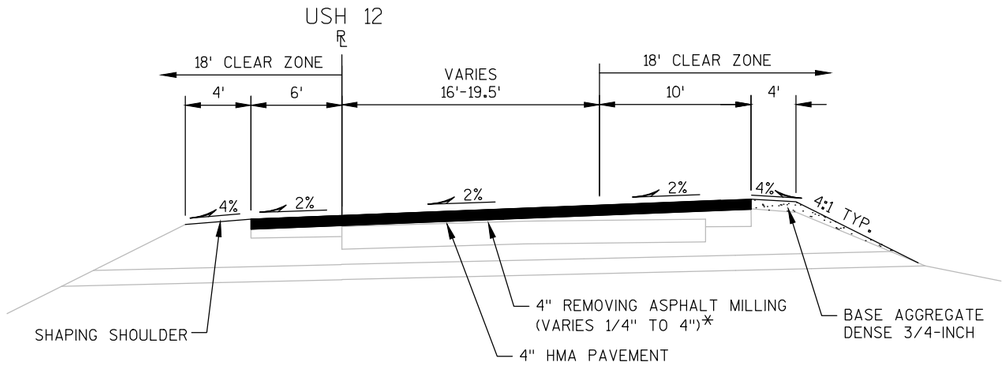
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 5	E



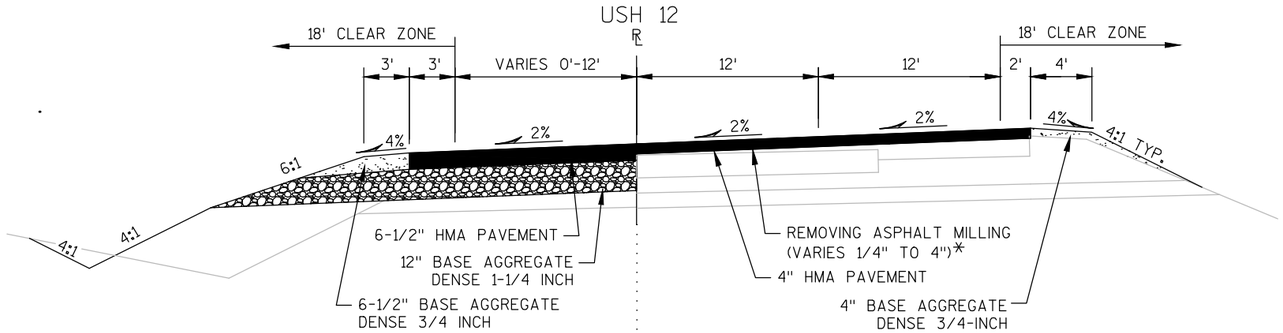
STA 105+14.13 - STA 108+98.40



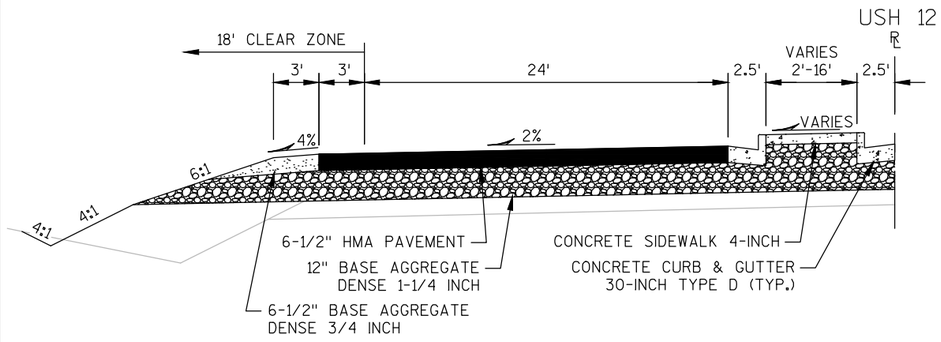
DITCH GRADING
STA 107+79.00 - STA 108+98.40



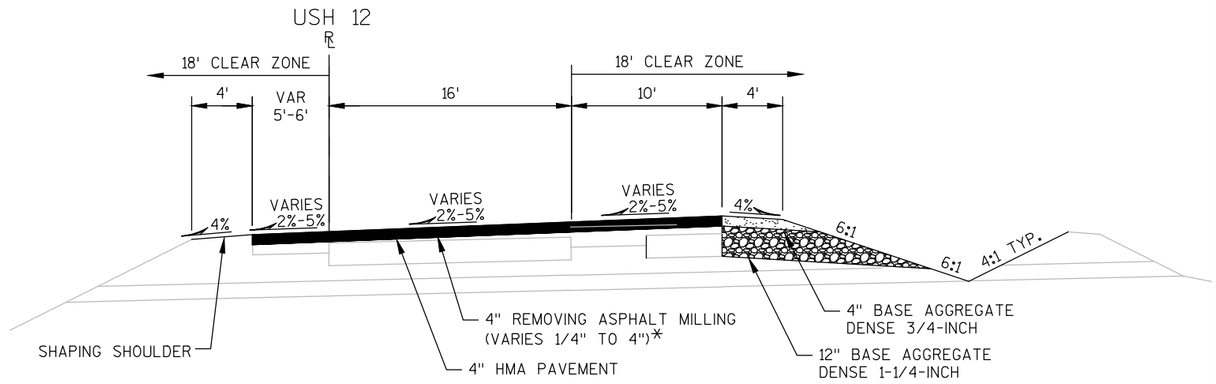
STA 115+11.47 - 117+10.00



STA 100+78.49 - STA 105+14.13



RIGHT TURN ISLAND
STA 100+78.49 - STA 101+17.70



STA 108+98.40 - STA 115+11.47

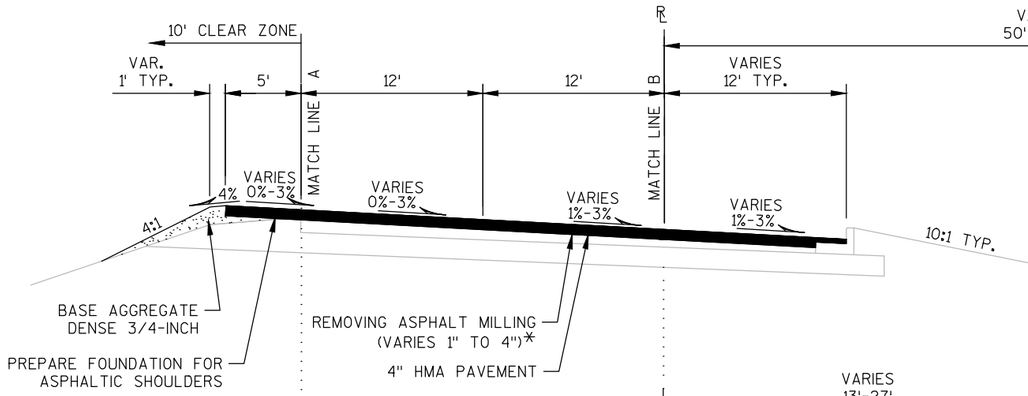
PROPOSED TYPICAL SECTION
USH 12 SOUTHBOUND RAMP
(LOOKING NORTH)

NOTES:
* = REFER TO CONSTRUCTION DETAILS AND REMOVAL PLANS FOR ASPHALT MILLING DEPTHS

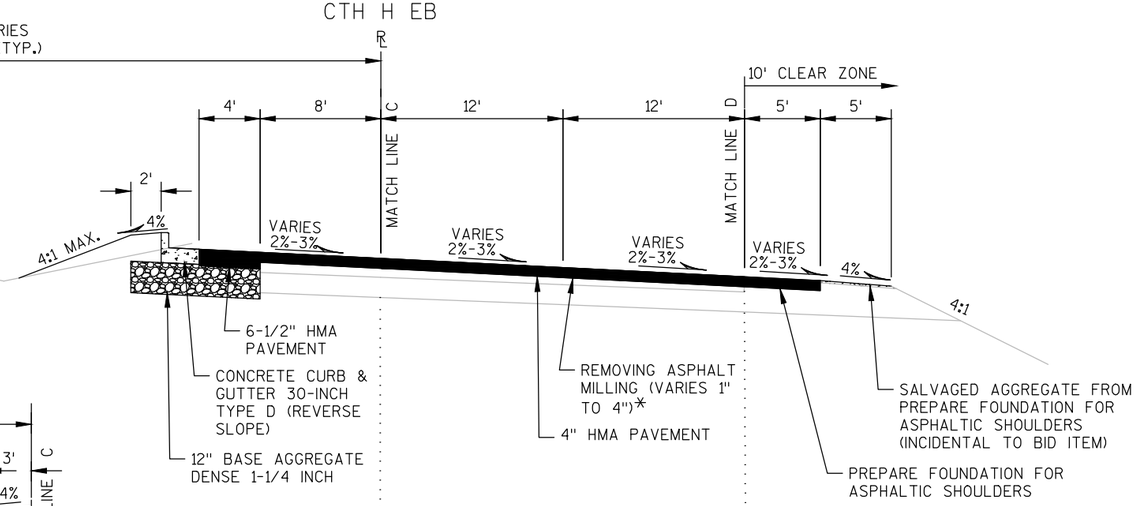
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 6	E

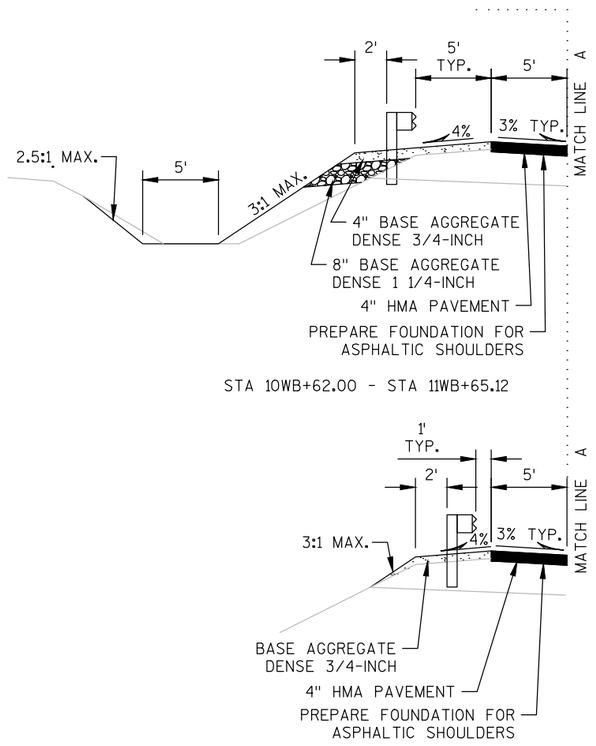
2

CTH H WB



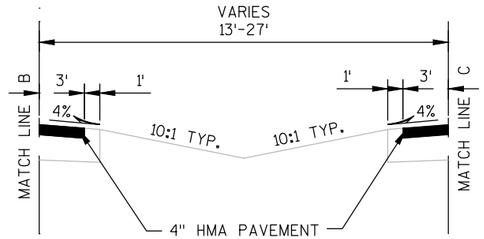
CTH H EB



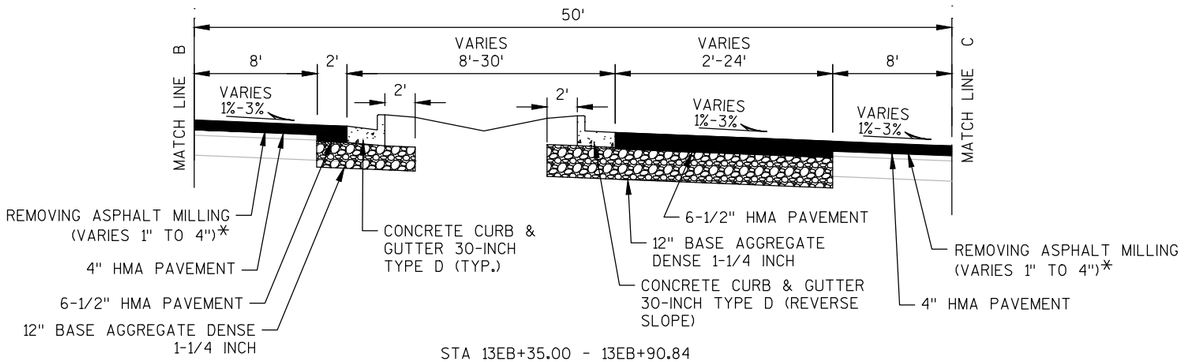


STA 10WB+62.00 - STA 11WB+65.12

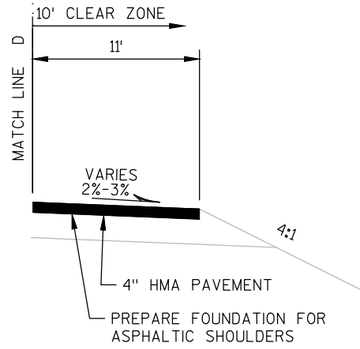
STA 16WB+53.50 - 17WB+81.63



STA 8EB+11.25 - STA 9EB+32.00



STA 13EB+35.00 - 13EB+90.84
MEDIAN NOSE RECONFIGURATION



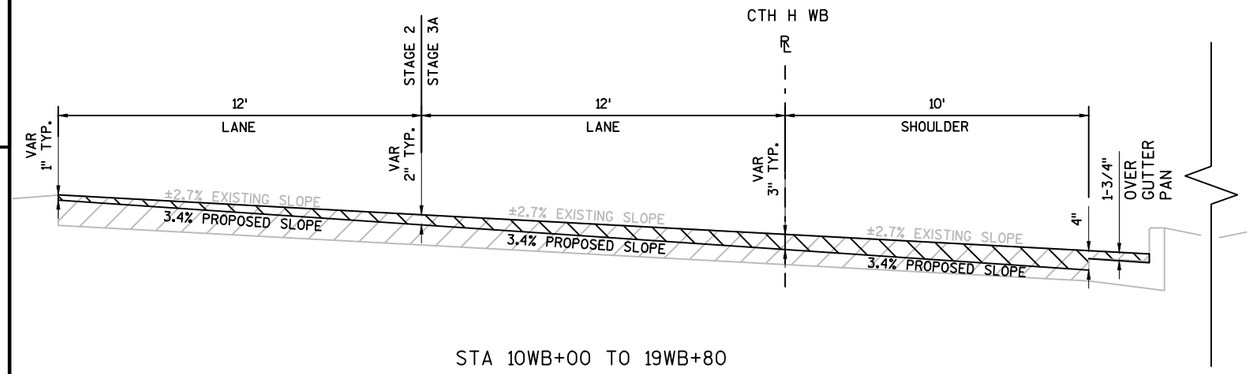
STA 12EB+80.00 - STA 14EB+80.00

PROPOSED TYPICAL SECTION
CTH H (WALWORTH STREET)

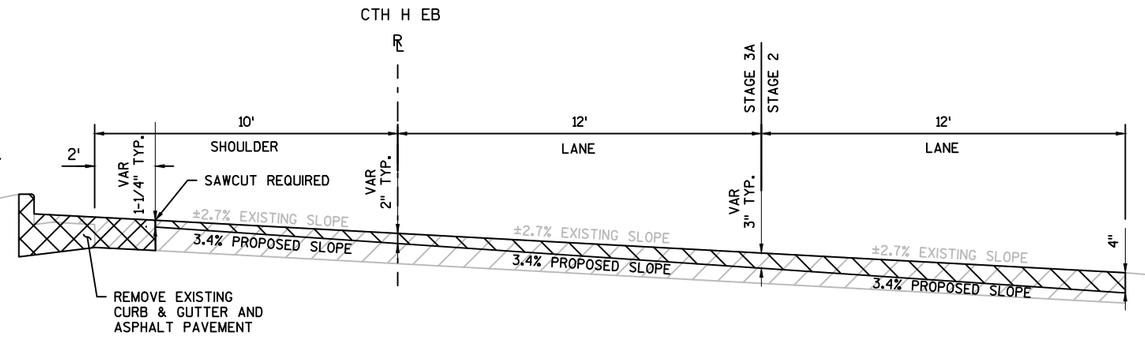
STA 8EB+11.25 - STA 19EB+51.20

NOTES:
* = REFER TO CONSTRUCTION DETAILS AND REMOVAL PLANS FOR ASPHALT MILLING DEPTHS

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TYPICAL SECTIONS	SHEET 7	E

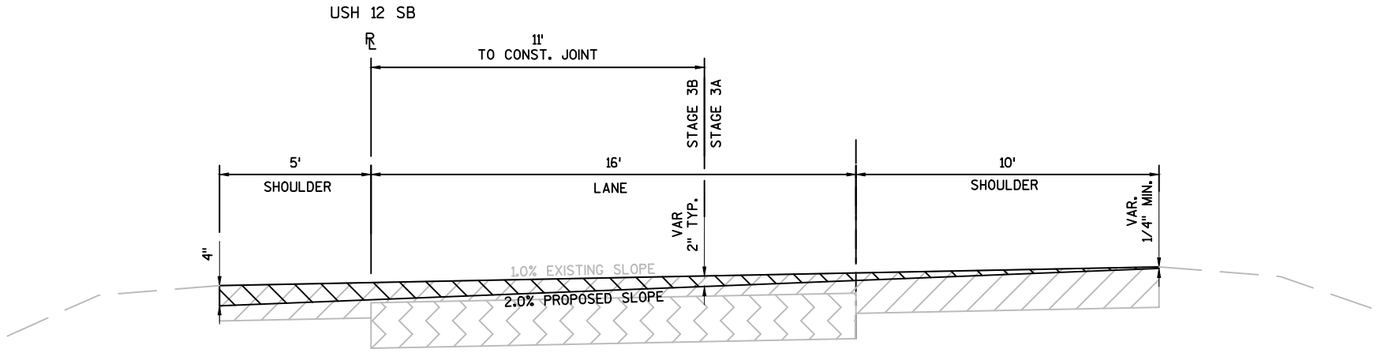


STA 10WB+00 TO 19WB+80

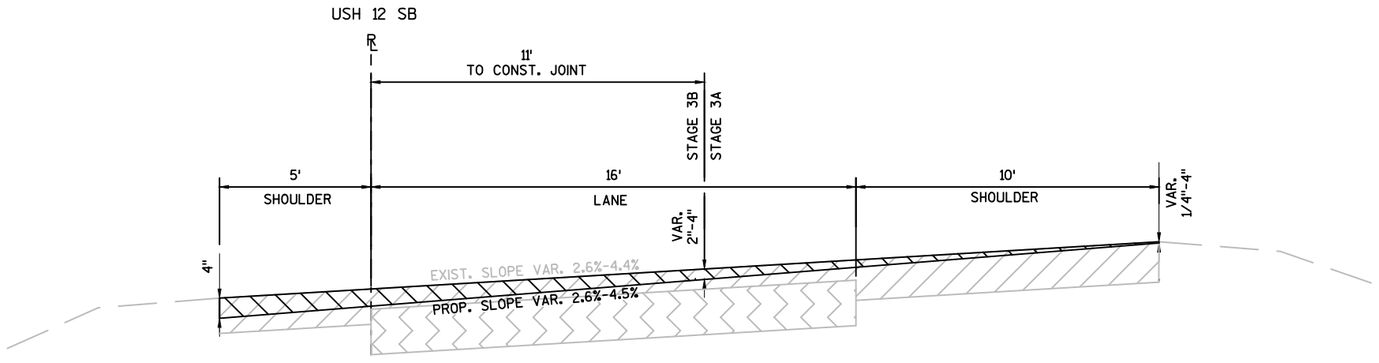


STA 12EB+00 TO 19EB+50

CTH H SUPERELEVATION CORRECTION



USH 12 SB RAMP CROSS SLOPE CORRECTION
STA 100+80 TO 106+00
STA 113+00 TO 117+10

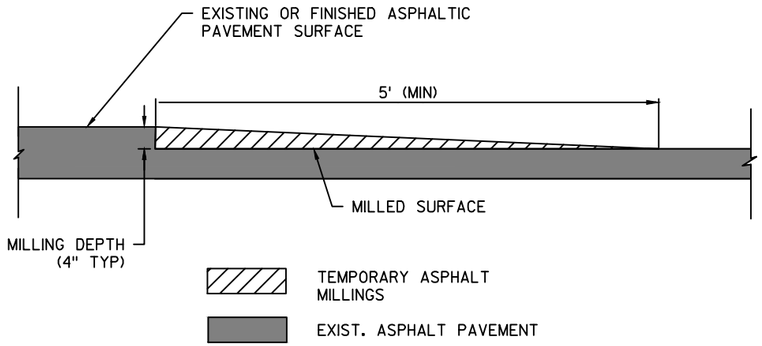


USH 12 SB RAMP SUPERELEVATION CORRECTION
STA 106+00 TO 113+00

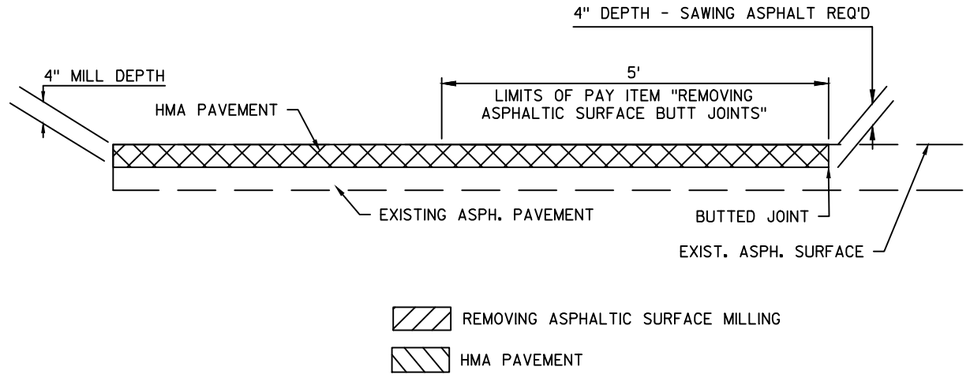
NOTE:
SEE PAVING GRADES FOR ADDITIONAL INFORMATION

ASPHALT MILLING DETAILS

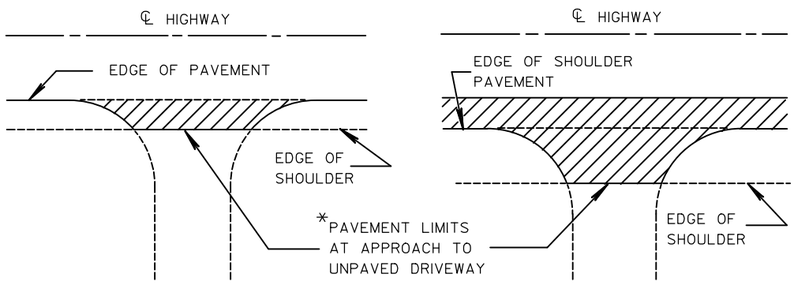
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CONSTRUCTION DETAILS	SHEET 8	E



TEMPORARY ASPHALT WEDGE DETAIL
(INCIDENTAL TO REMOVING ASPHALTIC SURFACE MILLING)

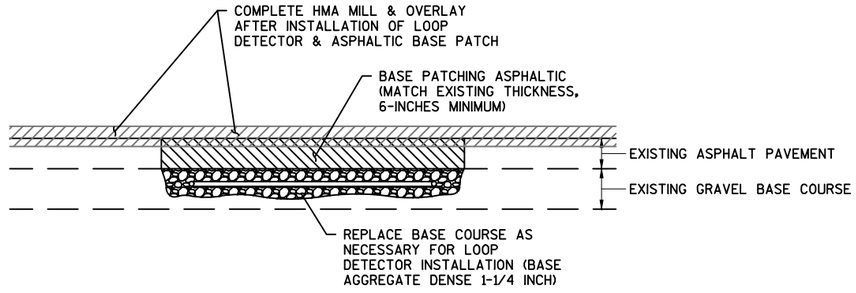


BUTT JOINT DETAIL

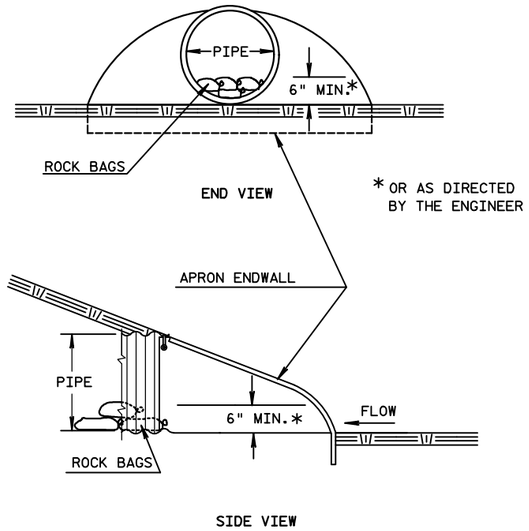


RURAL DRIVEWAY INTERSECTION DETAIL

NOTE: DRIVEWAY SECTION SHALL BE
3" ASPHALTIC SURFACE OVER
6" BASE AGGREGATE DENSE 1-1/4 INCH

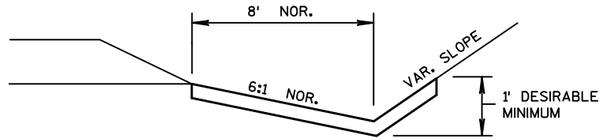


BASE PATCHING DETAIL FOR LOOP DETECTOR INSTALLATION

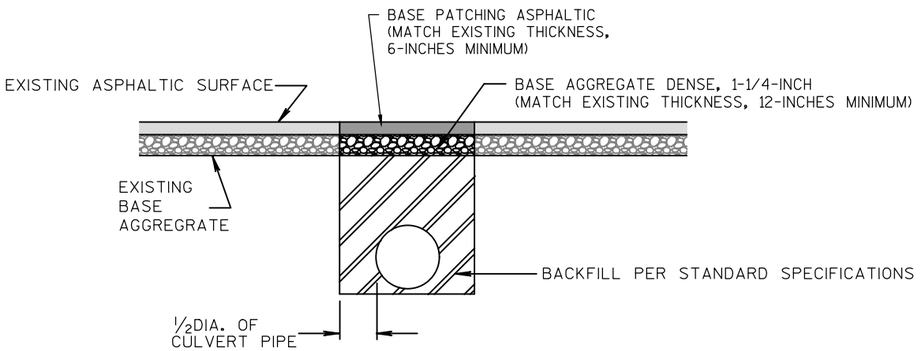


CULVERT PIPE DITCH CHECK

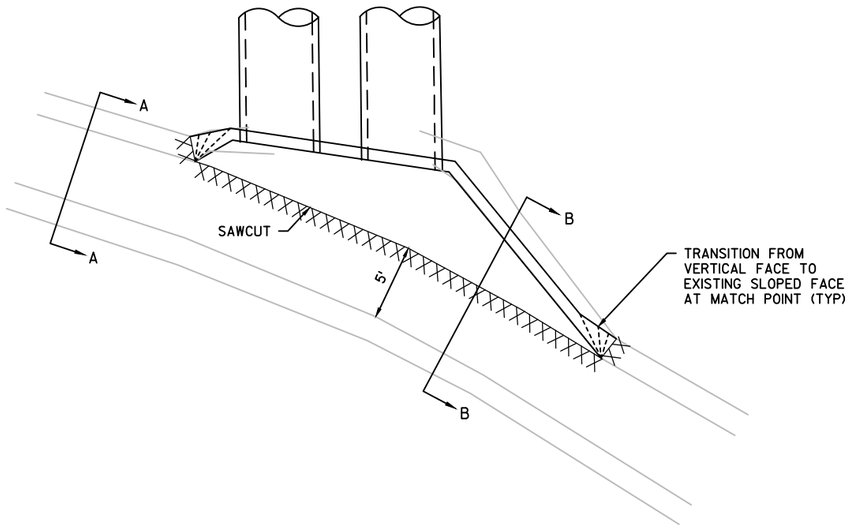
ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NUMBER OF BAGS
18"	2
24"	3
30"	5
34"X53"	10

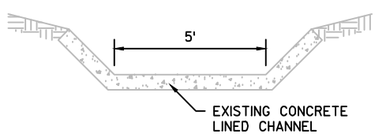


EROSION MAT DETAIL FOR DITCHES

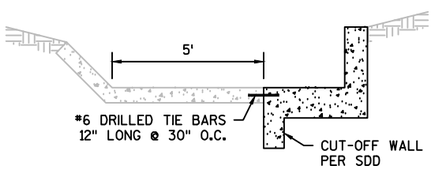


DETAIL FOR CULVERT PIPE INSTALLATION IN AREAS OF EXISTING PAVEMENT





SECTION A-A

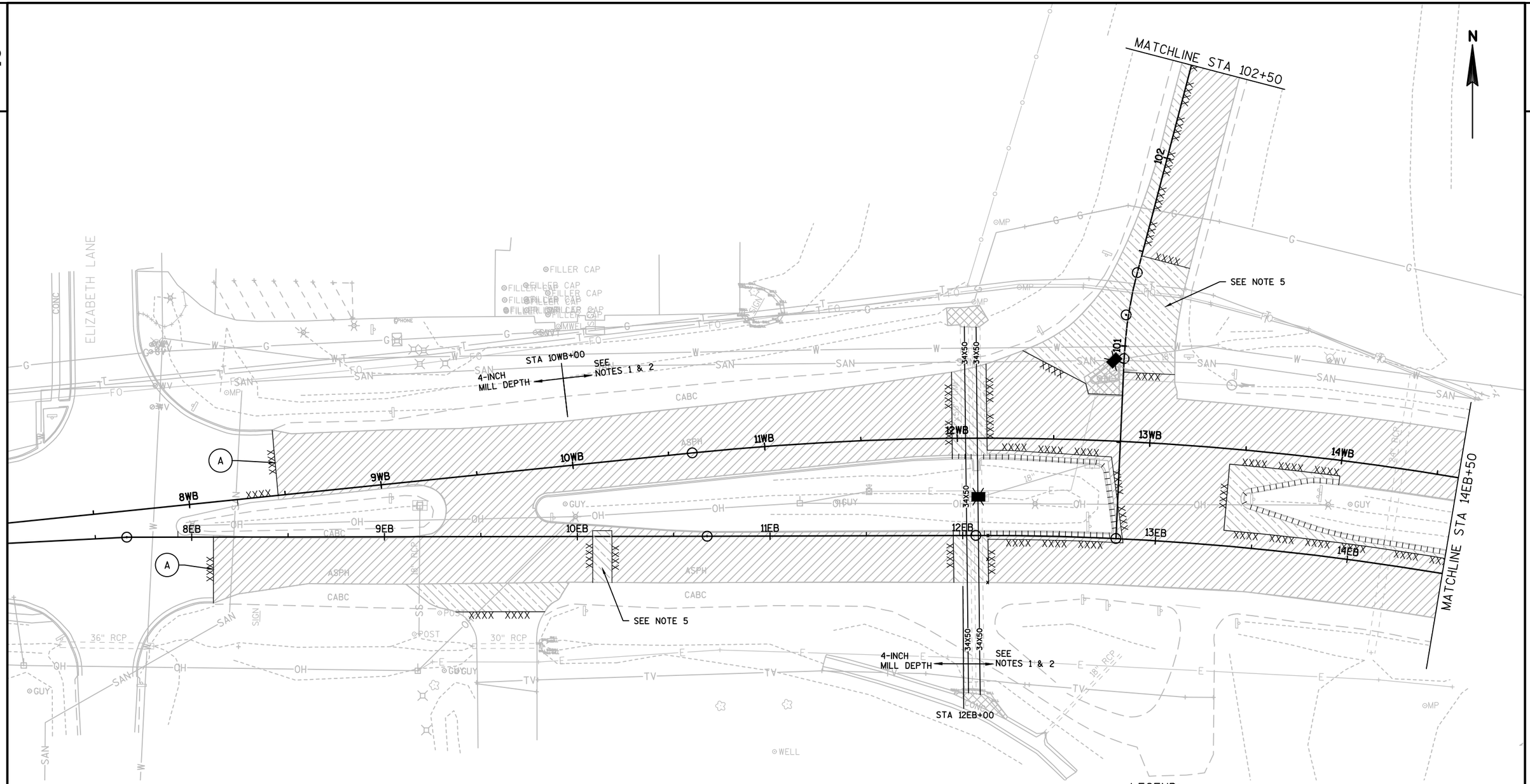


SECTION B-B

CONCRETE MASONRY ENDWALL CONNECTION TO EXISTING CONCRETE CHANNEL

NOTE: ALL DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL BE IN ACCORDANCE WITH SDD 8F10.

2



NOTES:

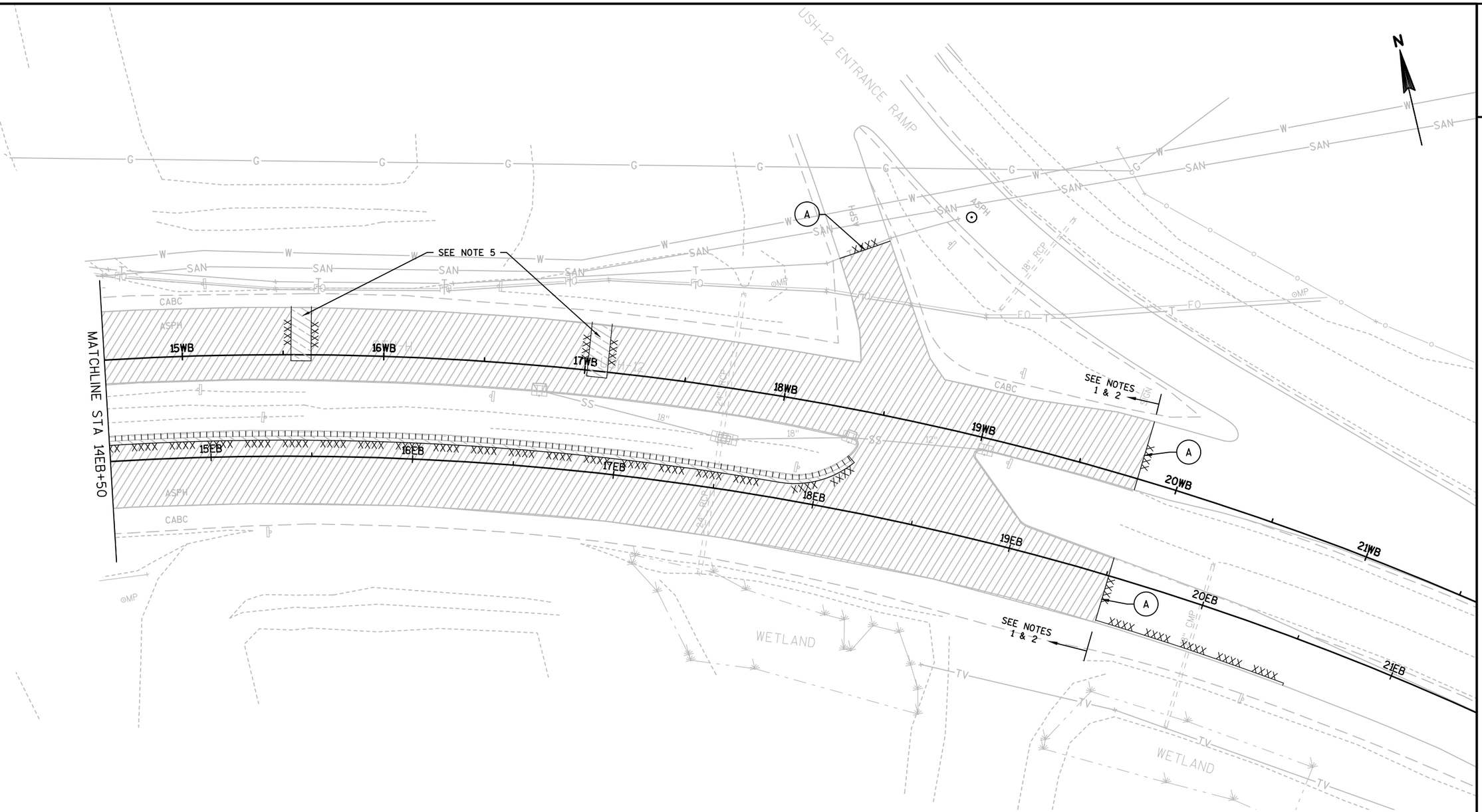
1. CONTRACTOR SHALL MILL TO A DEPTH OF 4-INCHES BELOW FINISHED PAVEMENT GRADE. REFER TO PAVING GRADES FOR ADDITIONAL INFORMATION.
2. REFER TO "CTH H SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
3. REFER TO "USH 12 SB RAMP CROSS SLOPE CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
4. REFER TO "USH 12 SB RAMP SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
5. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.

LEGEND:

- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE (PAID AS EXCAVATION COMMON)
- REMOVING CURB & GUTTER
- REMOVING CURB
- REMOVING INLETS
- 34x50 — REMOVING SMALL CULVERT PIPES (SIZE)
- XXXX — SAWING ASPHALT
- XXXX — SAWING CONCRETE
- (A) REMOVING ASPHALTIC SURFACE BUTT JOINT

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	REMOVAL PLAN	SHEET 11	E

2



NOTES:

1. CONTRACTOR SHALL MILL TO A DEPTH OF 4-INCHES BELOW FINISHED PAVEMENT GRADE. REFER TO PAVING GRADES FOR ADDITIONAL INFORMATION.
2. REFER TO "CTH H SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
3. REFER TO "USH 12 SB RAMP CROSS SLOPE CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
4. REFER TO "USH 12 SB RAMP SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
5. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.

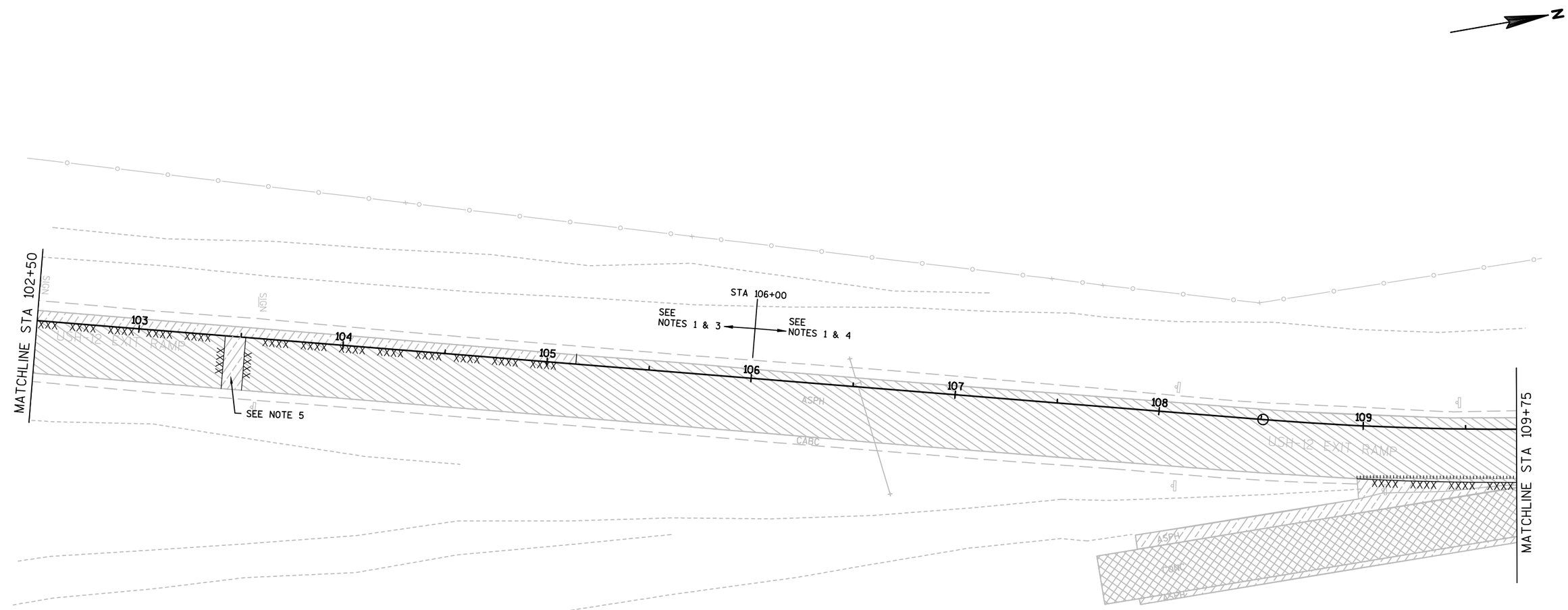
LEGEND:

- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE (PAID AS EXCAVATION COMMON)
- REMOVING CURB & GUTTER
- REMOVING CURB
- REMOVING INLETS
- 34x50 — REMOVING SMALL CULVERT PIPES (SIZE)
- XXXX — SAWING ASPHALT
- XXXX — SAWING CONCRETE
- (A) REMOVING ASPHALTIC SURFACE BUTT JOINT

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	REMOVAL PLAN	SHEET 12	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021101-RM.DWG
LAYOUT NAME - 021101-RM - 021102
PLOT DATE : 4/20/2018 10:56 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



NOTES:

1. CONTRACTOR SHALL MILL TO A DEPTH OF 4-INCHES BELOW FINISHED PAVEMENT GRADE. REFER TO PAVING GRADES FOR ADDITIONAL INFORMATION.
2. REFER TO "CTH H SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
3. REFER TO "USH 12 SB RAMP CROSS SLOPE CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
4. REFER TO "USH 12 SB RAMP SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
5. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.

LEGEND:

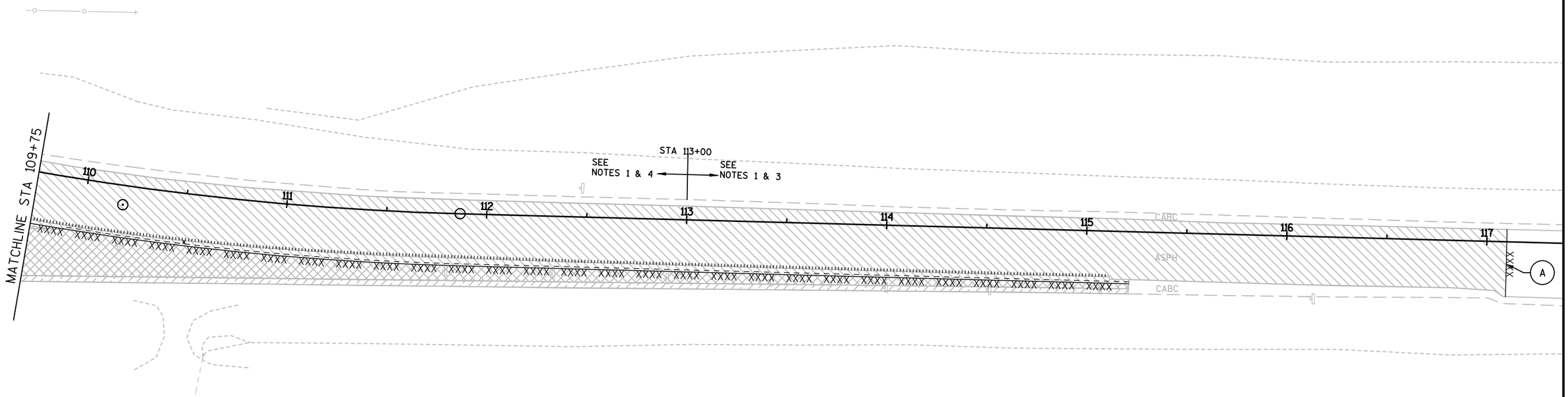
- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE (PAID AS EXCAVATION COMMON)
- REMOVING CURB & GUTTER
- REMOVING CURB
- REMOVING INLETS
- 34x50 — REMOVING SMALL CULVERT PIPES (SIZE)
- XXXX SAWING ASPHALT
- XXXX SAWING CONCRETE
- (A) REMOVING ASPHALTIC SURFACE BUTT JOINT

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	REMOVAL PLAN	SHEET 13	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021101-RM.DWG
LAYOUT NAME - 021101-RM - 021103
PLOT DATE : 4/20/2018 10:56 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N



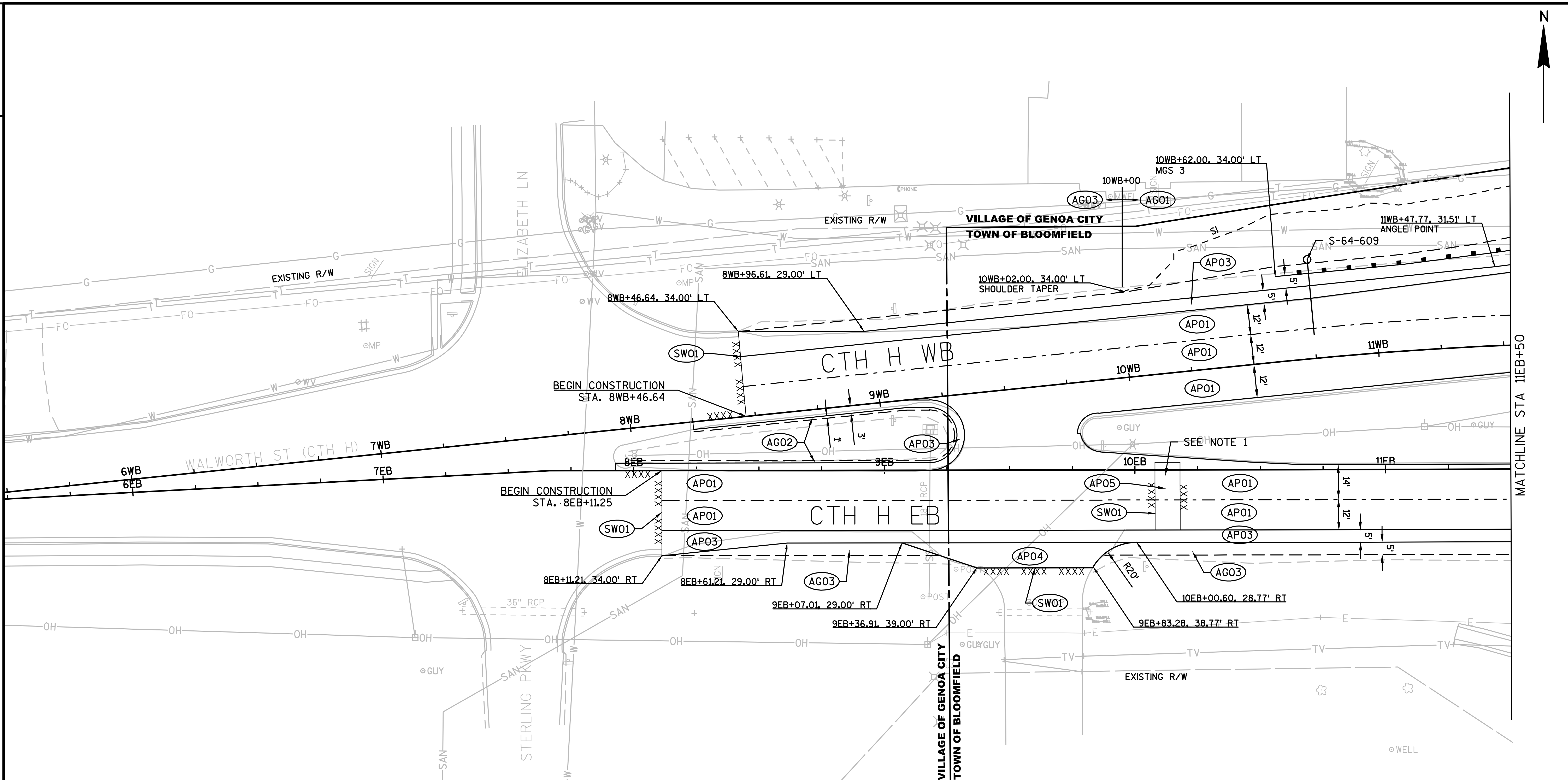
NOTES:
1. CONTRACTOR SHALL MILL TO A DEPTH OF 4-INCHES BELOW FINISHED PAVEMENT GRADE. REFER TO PAVING GRADES FOR ADDITIONAL INFORMATION.
2. REFER TO "CTH H SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
3. REFER TO "USH 12 SB RAMP CROSS SLOPE CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
4. REFER TO "USH 12 SB RAMP SUPERELEVATION CORRECTION" CONSTRUCTION DETAIL FOR TYPICAL MILLING DEPTH AND SLOPE.
5. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.

LEGEND:

- REMOVING PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING
- REMOVING ASPHALTIC SURFACE (PAID AS EXCAVATION COMMON)
- REMOVING CURB & GUTTER
- REMOVING CURB
- REMOVING INLETS
- 34x50 — REMOVING SMALL CULVERT PIPES (SIZE)
- XXXX SAWING ASPHALT
- XXXX SAWING CONCRETE
- (A) REMOVING ASPHALTIC SURFACE BUTT JOINT

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	REMOVAL PLAN	SHEET 14	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021101-RM.DWG
LAYOUT NAME - 021101-RM - 021104
PLOT DATE : 4/20/2018 10:56 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42



LEGEND:

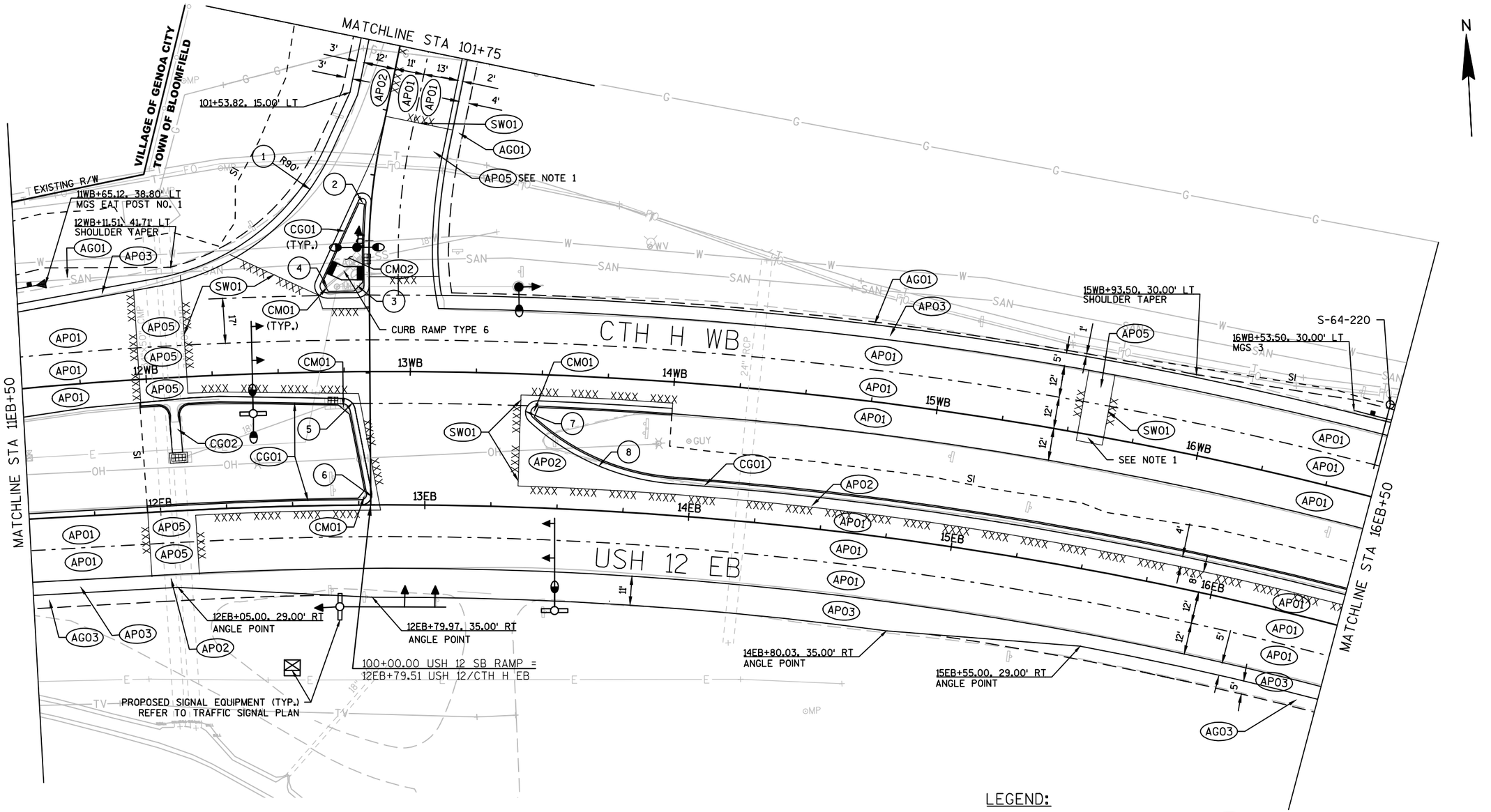
- · -	CONSTRUCTION JOINT
XXXX	SAWING ASPHALT
XXXX	SAWING CONCRETE

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG02	SHAPING SHOULDERS
AG03	SALVAGED AGGREGATE FROM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
AP01	4 INCHES HMA PAVEMENT
AP02	6-1/2 INCHES HMA PAVEMENT OVER 12 INCHES BASE AGGREGATE DENSE 1-1/4 INCH
AP03	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 4 INCHES HMA PAVEMENT
AP04	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
AP05	BASE PATCHING ASPHALTIC, 6-INCH (MINIMUM)
CG01	CONCRETE CURB & GUTTER 30 INCH TYPE D
CG02	CONCRETE SURFACE DRAIN
CM01	CONCRETE MEDIAN NOSE TYPE 2
CM02	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

NOTES

1. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.
2. ALL STATIONS & OFFSETS ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

PROJECT NO:1080-17-70	HWY:USH 12	COUNTY:WALWORTH	PLAN DETAILS	SHEET 15	E



RADIUS TABLE							
				PC		PT	
POINT	STATION	OFFSET	RADIUS	STATION	OFFSET	STATION	OFFSET
1	101+50.63	104.76' LT	90.00'	100+83.38	79.71' LT	101+31.15	17.40' LT
2	101+14.30	3.50' LT	3.50'	101+14.30	0.00'	101+15.43	6.80' LT
3	100+82.99	04.50' LT	4.50'	100+78.49	04.49' LT	100+82.99	0.00'
4	100+82.93	16.13' LT	4.50'	100+78.43	16.09' LT	100+84.83	20.21' LT
5	12WB+74.04	15.07' RT	5.00'	12WB+74.18	10.07' RT	12WB+79.00	14.15' RT
6	12EB+76.00	04.00' LT	4.00'	12EB+76.00	0.00'	12EB+79.92	04.72' LT
7	13WB+48.74	14.50' RT	4.50'	13WB+45.79	17.92' RT	13WB+48.74	10.00' RT
8	13EB+93.17	102.00' LT	90.00'	13EB+38.47	32.55' LT	13EB+93.17	12.00' LT

NOTES

1. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.
2. ALL STATIONS & OFFSETS ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

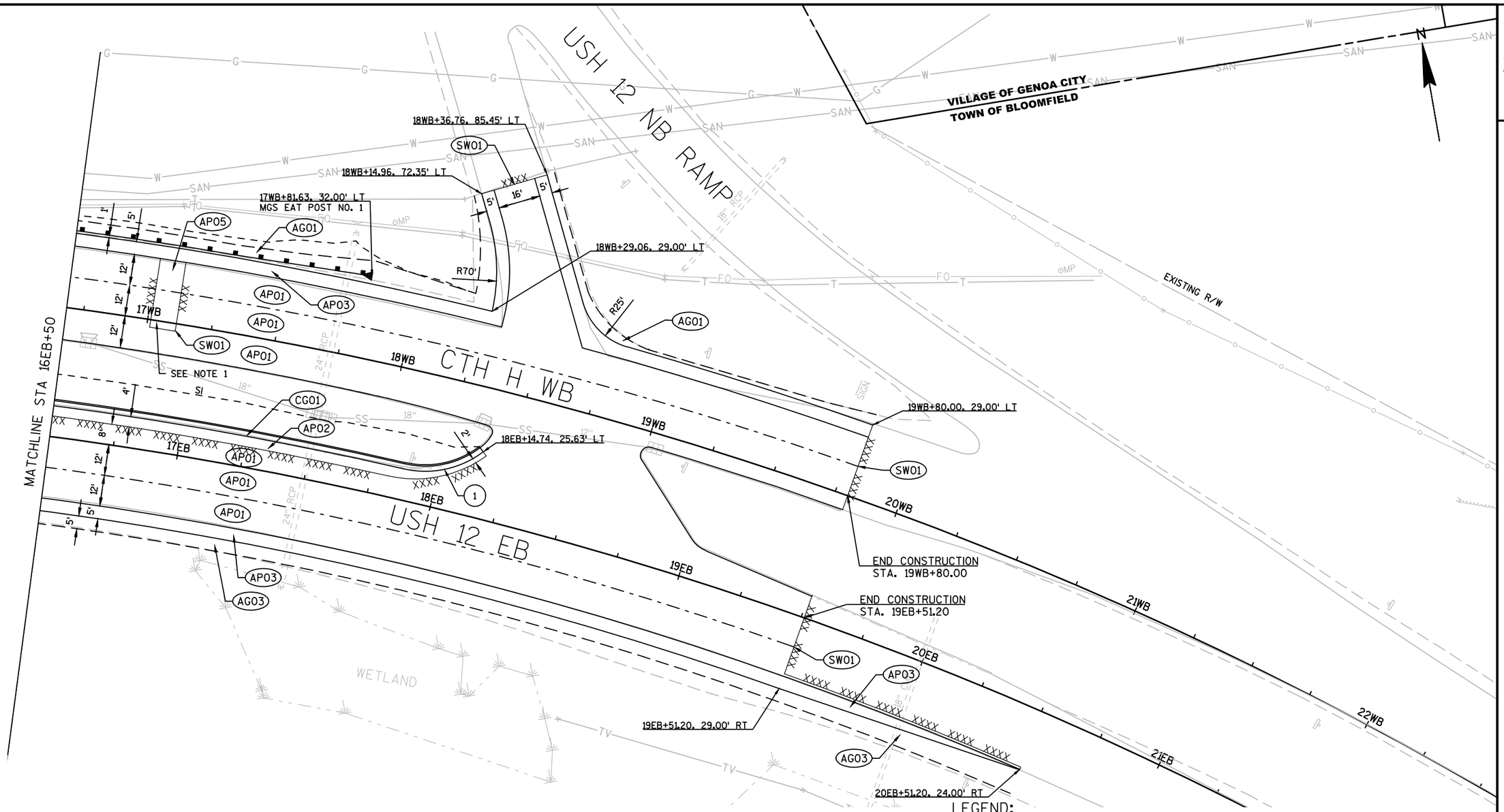
— — — CONSTRUCTION JOINT
XXXX SAWING ASPHALT
XXXX SAWING CONCRETE

LEGEND:

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG02	SHAPING SHOULDERS
AG03	SALVAGED AGGREGATE FROM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
AP01	4 INCHES HMA PAVEMENT
AP02	6-1/2 INCHES HMA PAVEMENT OVER 12 INCHES BASE AGGREGATE DENSE 1-1/4 INCH
AP03	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 4 INCHES HMA PAVEMENT
AP04	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
AP05	BASE PATCHING ASPHALTIC, 6-INCH (MINIMUM)
CG01	CONCRETE CURB & GUTTER 30 INCH TYPE D
CG02	CONCRETE SURFACE DRAIN
CM01	CONCRETE MEDIAN NOSE TYPE 2
CM02	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PLAN DETAILS	SHEET 16	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 021201-PD - 020202
PLOT DATE : 4/20/2018 10:57 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:40 FT



RADIUS TABLE							
				PC		PT	
POINT	STATION	OFFSET	RADIUS	STATION	OFFSET	STATION	OFFSET
1	17EB+86.78	49.00' LT	37.00'	17EB+86.78	12.00' LT	18EB+14.74	25.63' LT

NOTES

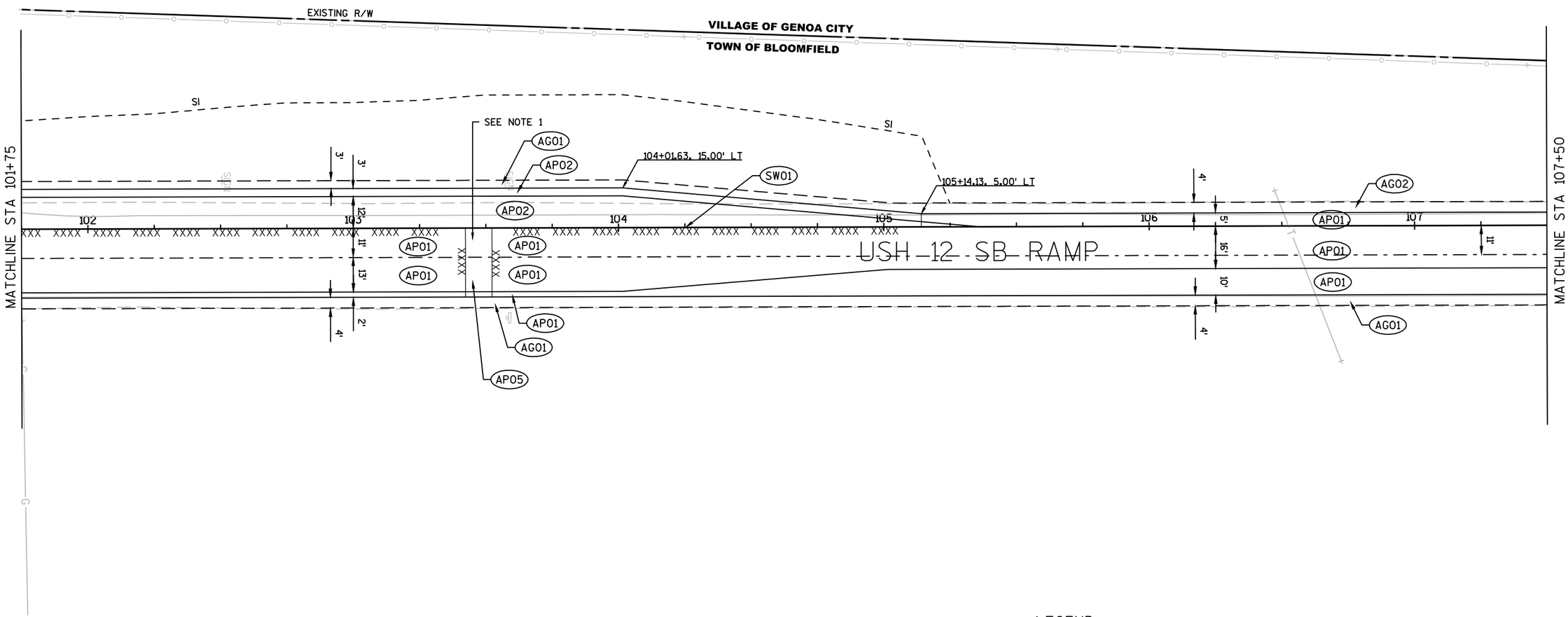
1. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.
2. ALL STATIONS & OFFSETS ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

LEGEND:

- CONSTRUCTION JOINT
- XXXX SAWING ASPHALT
- XXXX SAWING CONCRETE

- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AG02 SHAPING SHOULDERS
- AG03 SALVAGED AGGREGATE FROM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
- AP01 4 INCHES HMA PAVEMENT
- AP02 6-1/2 INCHES HMA PAVEMENT OVER 12 INCHES BASE AGGREGATE DENSE 1-1/4 INCH
- AP03 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 4 INCHES HMA PAVEMENT
- AP04 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
- AP05 BASE PATCHING ASPHALTIC, 6-INCH (MINIMUM)
- CG01 CONCRETE CURB & GUTTER 30 INCH TYPE D
- CG02 CONCRETE SURFACE DRAIN
- CM01 CONCRETE MEDIAN NOSE TYPE 2
- CM02 CONCRETE SIDEWALK 5-INCH
- SW01 SAWING ASPHALT
- SW02 SAWING CONCRETE

2



NOTES

1. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.
2. ALL STATIONS & OFFSETS ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

— - — CONSTRUCTION JOINT

XXXX SAWING ASPHALT

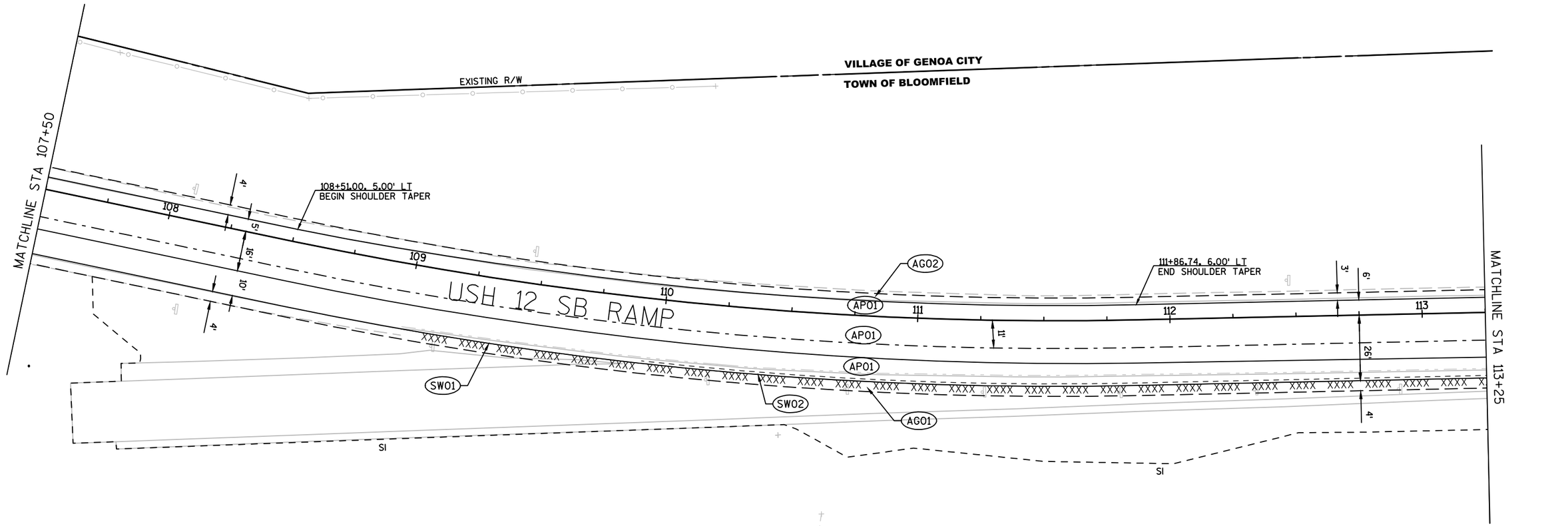
XXXX SAWING CONCRETE

LEGEND:

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG02	SHAPING SHOULDERS
AG03	SALVAGED AGGREGATE FROM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
AP01	4 INCHES HMA PAVEMENT
AP02	6-1/2 INCHES HMA PAVEMENT OVER 12 INCHES BASE AGGREGATE DENSE 1-1/4 INCH
AP03	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 4 INCHES HMA PAVEMENT
AP04	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
AP05	BASE PATCHING ASPHALTIC, 6-INCH (MINIMUM)
CG01	CONCRETE CURB & GUTTER 30 INCH TYPE D
CG02	CONCRETE SURFACE DRAIN
CM01	CONCRETE MEDIAN NOSE TYPE 2
CM02	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

2

N



LEGEND:

— - — CONSTRUCTION JOINT

XXXX SAWING ASPHALT

XXXX SAWING CONCRETE

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG02	SHAPING SHOULDERS
AG03	SALVAGED AGGREGATE FROM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
AP01	4 INCHES HMA PAVEMENT
AP02	6-1/2 INCHES HMA PAVEMENT OVER 12 INCHES BASE AGGREGATE DENSE 1-1/4 INCH
AP03	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 4 INCHES HMA PAVEMENT
AP04	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
AP05	BASE PATCHING ASPHALTIC, 6-INCH (MINIMUM)
CG01	CONCRETE CURB & GUTTER 30 INCH TYPE D
CG02	CONCRETE SURFACE DRAIN
CM01	CONCRETE MEDIAN NOSE TYPE 2
CM02	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

NOTES

1. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.
2. ALL STATIONS & OFFSETS ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PLAN DETAILS	SHEET 19	E

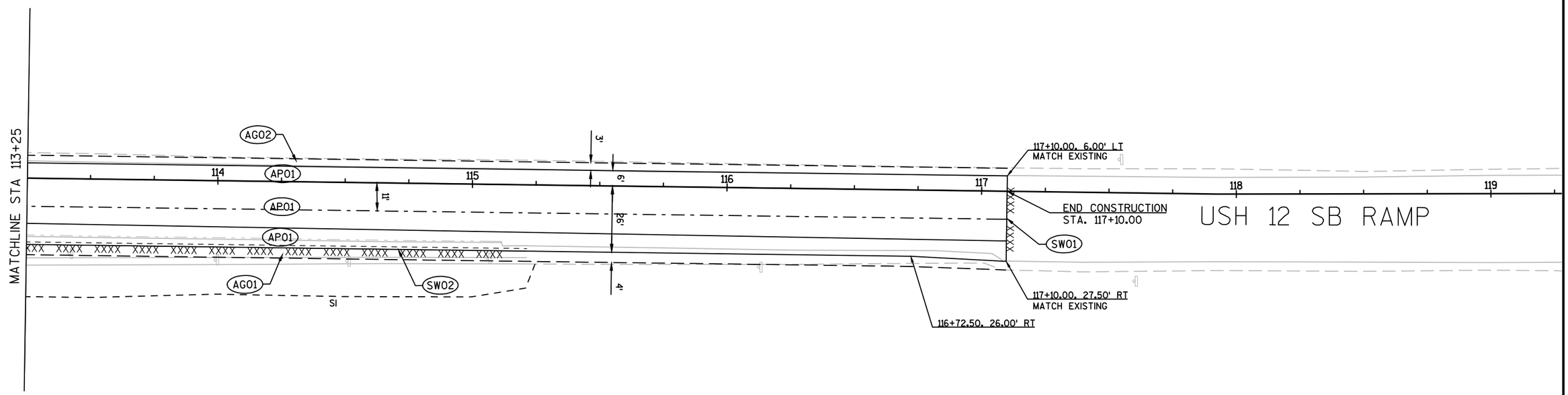
2

N

VILLAGE OF GENOA CITY

TOWN OF BLOOMFIELD

EXISTING R/W



NOTES

1. REFER TO TRAFFIC SIGNAL PLAN FOR PLACEMENT OF LOOP DETECTORS.
2. ALL STATIONS & OFFSETS ARE TO THE EDGE OF PAVEMENT, UNLESS NOTED OTHERWISE.

— - — CONSTRUCTION JOINT

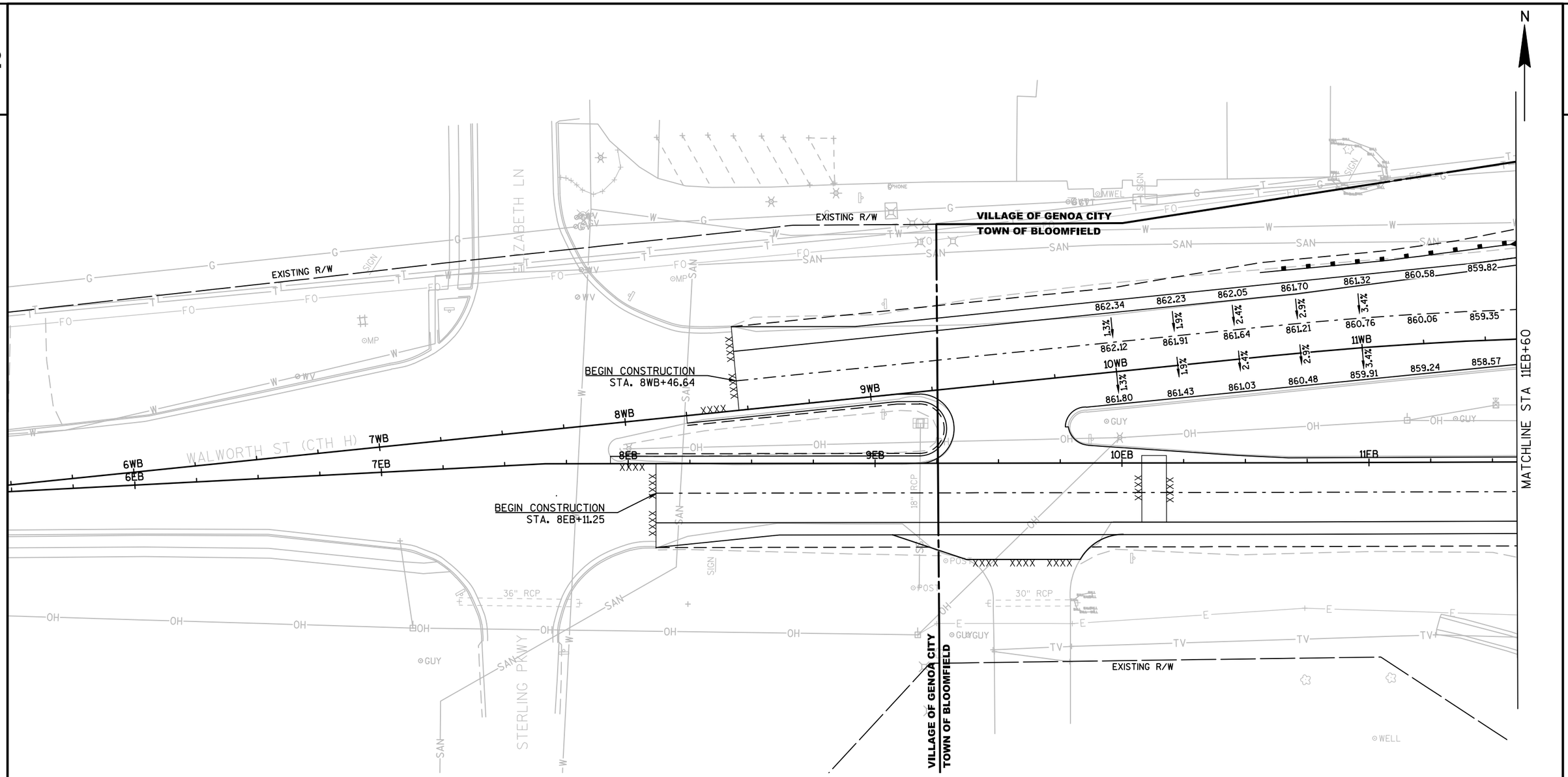
XXXX SAWING ASPHALT

XXXX SAWING CONCRETE

LEGEND:

AG01	BASE AGGREGATE DENSE 3/4-INCH
AG02	SHAPING SHOULDERS
AG03	SALVAGED AGGREGATE FROM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS
AP01	4 INCHES HMA PAVEMENT
AP02	6-1/2 INCHES HMA PAVEMENT OVER 12 INCHES BASE AGGREGATE DENSE 1-1/4 INCH
AP03	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS AND 4 INCHES HMA PAVEMENT
AP04	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 3-INCH
AP05	BASE PATCHING ASPHALTIC, 6-INCH (MINIMUM)
CG01	CONCRETE CURB & GUTTER 30 INCH TYPE D
CG02	CONCRETE SURFACE DRAIN
CM01	CONCRETE MEDIAN NOSE TYPE 2
CM02	CONCRETE SIDEWALK 5-INCH
SW01	SAWING ASPHALT
SW02	SAWING CONCRETE

2



NOTES:

1. ALL ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER FLANGE, OR CONSTRUCTION JOINT. ELEVATIONS ARE GIVEN AT 25' INTERVALS ALONG THE REFERENCE ALIGNMENT, AND AT THE BACK OF MEDIAN NOSES.

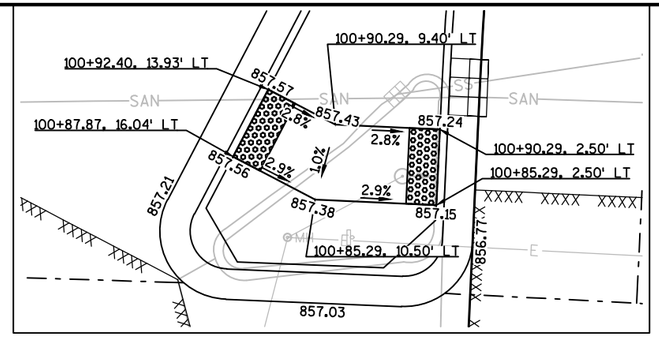
LEGEND:

- — - — CONSTRUCTION JOINT
- 862.34 PAVEMENT GRADE
- 2.0% PAVEMENT CROSS SLOPE

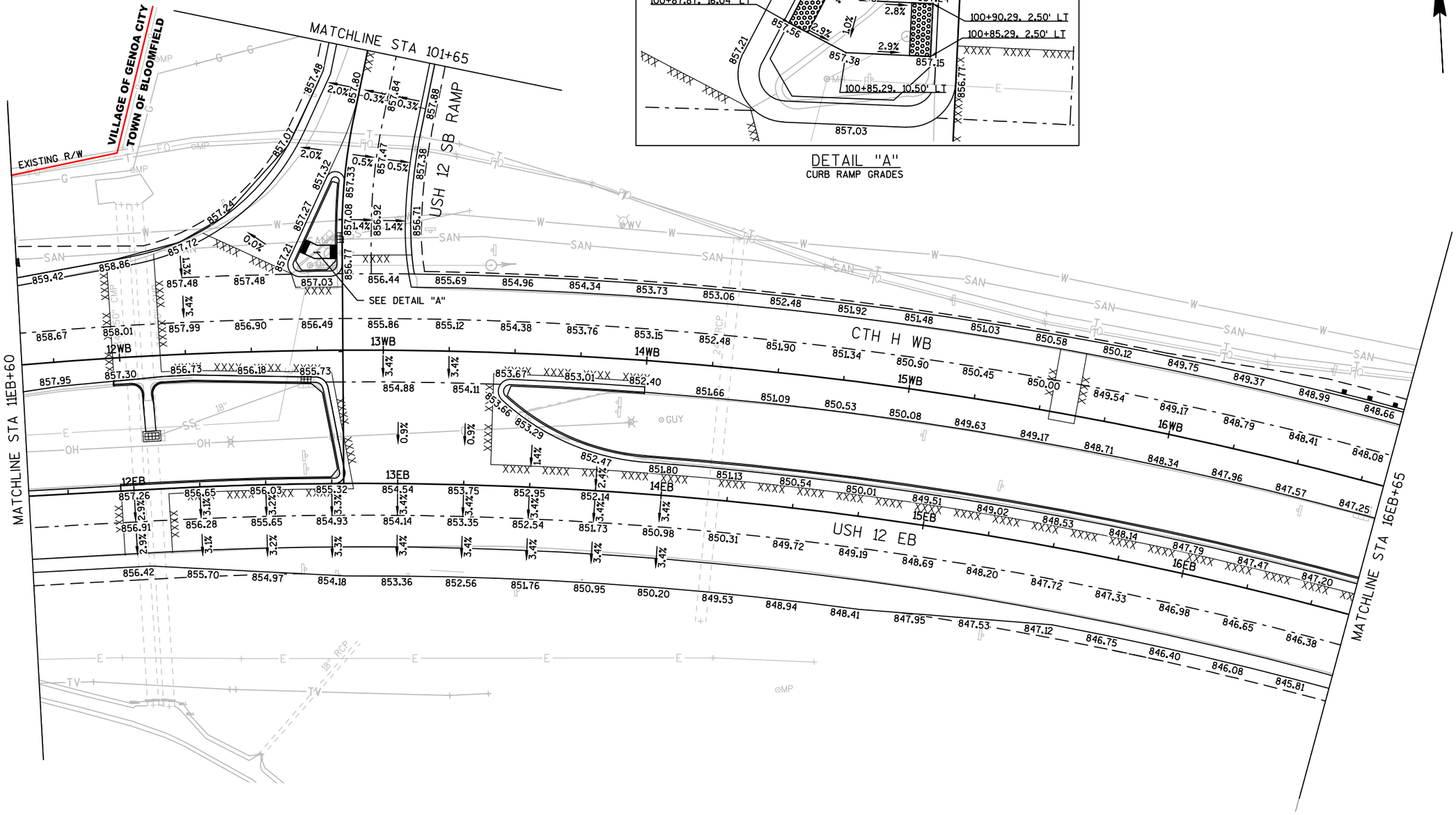
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVING GRADES	SHEET 21	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021211-PG.DWG
LAYOUT NAME - 021211-PG - 021211
PLOT DATE : 4/20/2018 10:58 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2



DETAIL "A"
CURB RAMP GRADES



N

NOTES:

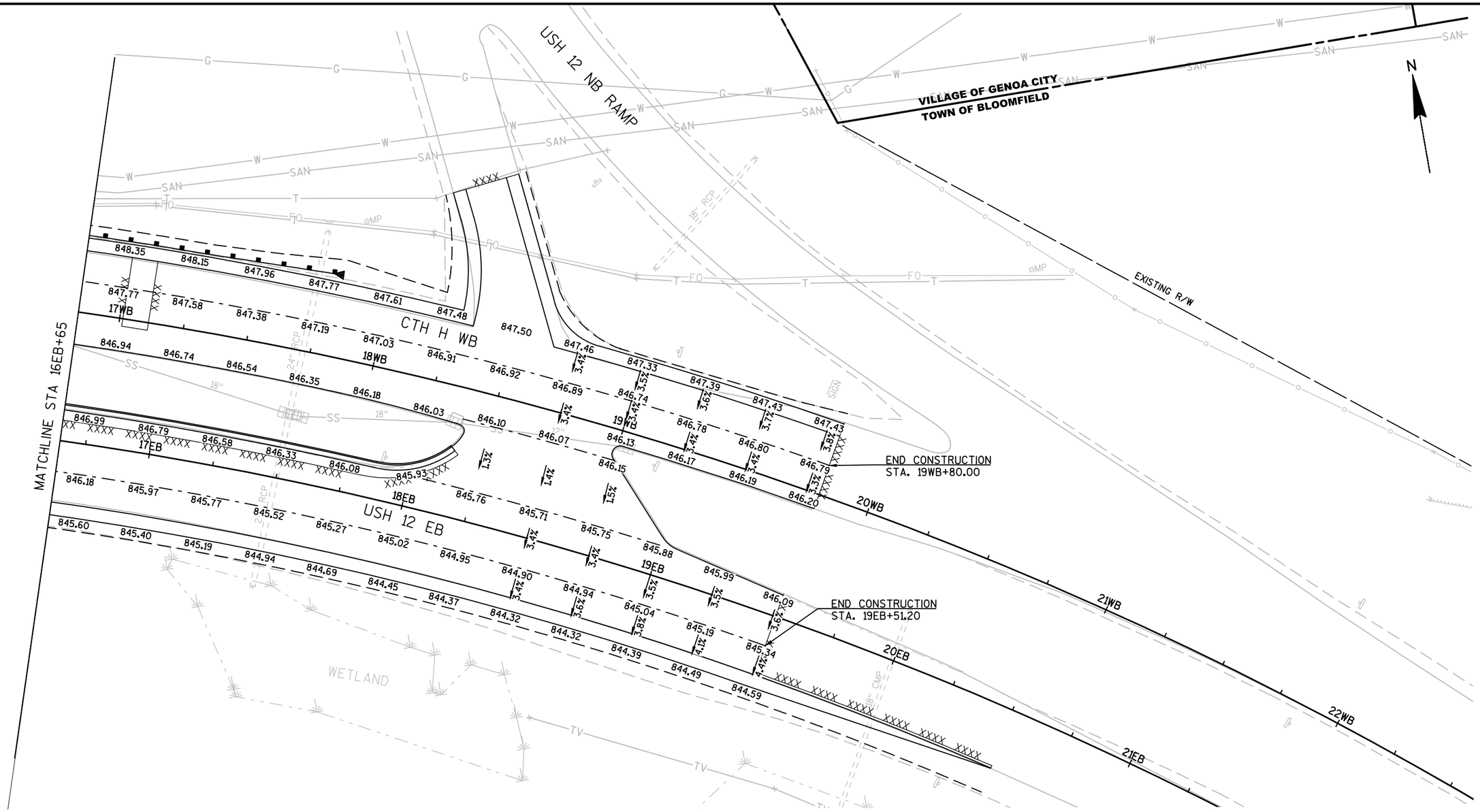
1. ALL ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER FLANGE, OR CONSTRUCTION JOINT. ELEVATIONS ARE GIVEN AT 25' INTERVALS ALONG THE REFERENCE ALIGNMENT, AND AT THE BACK OF MEDIAN NOSES.

LEGEND:

- — - — CONSTRUCTION JOINT
- 862.34 PAVEMENT GRADE
- 2.0% PAVEMENT CROSS SLOPE

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVING GRADES	SHEET 22	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021211-PG.DWG
LAYOUT NAME - 021211-PG - 021212
PLOT DATE : 4/27/2018 8:41 AM PLOT BY : MATT ROESCH PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



NOTES:

1. ALL ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER FLANGE, OR CONSTRUCTION JOINT. ELEVATIONS ARE GIVEN AT 25' INTERVALS ALONG THE REFERENCE ALIGNMENT, AND AT THE BACK OF MEDIAN NOSES.

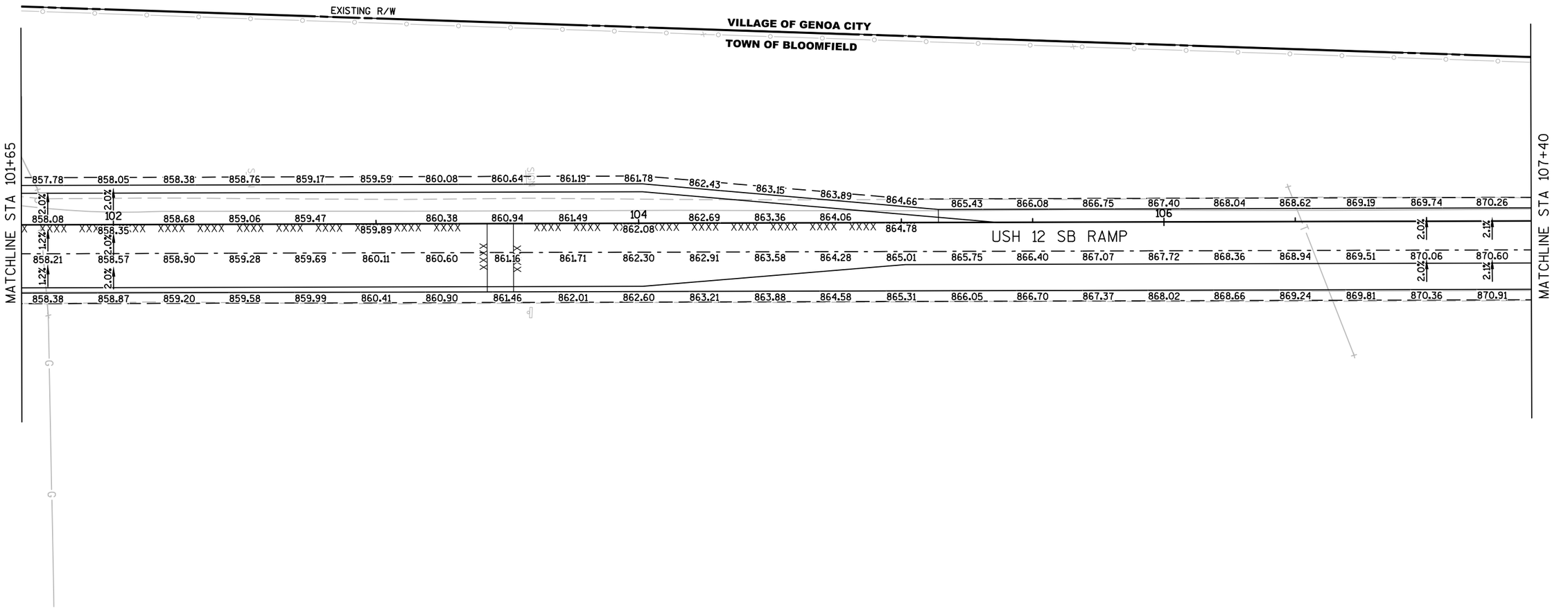
LEGEND:

- — - — CONSTRUCTION JOINT
- 862.34 PAVEMENT GRADE
- 2.0% PAVEMENT CROSS SLOPE

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVING GRADES	SHEET 23	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\021211-PG.DWG
LAYOUT NAME - 021211-PG - 021213
PLOT DATE : 4/20/2018 10:58 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

2



NOTES:

1. ALL ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER FLANGE, OR CONSTRUCTION JOINT. ELEVATIONS ARE GIVEN AT 25' INTERVALS ALONG THE REFERENCE ALIGNMENT, AND AT THE BACK OF MEDIAN NOSES.

LEGEND:

— - — CONSTRUCTION JOINT

862.34 PAVEMENT GRADE

2.0% PAVEMENT CROSS SLOPE

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVING GRADES	SHEET 24	E

2

N

EXISTING R/W

VILLAGE OF GENOA CITY

TOWN OF BLOOMFIELD

MATCHLINE STA 107+40

MATCHLINE STA 113+15

USH 12 SB RAMP

108 110 112

870.76 871.13 871.51 871.89 872.27 872.66 873.07 873.41 873.78 874.08 874.37 874.65 874.87 875.09 875.29 875.47 875.66 875.84 876.00 876.13 876.24 876.36 876.49

871.20 871.66 872.13 872.61 873.09 873.53 873.97 874.31 874.66 874.93 875.19 875.44 875.64 875.86 876.06 876.24 876.35 876.42 876.46 876.49 876.60 876.72 876.85

871.60 872.16 872.72 873.29 873.85 874.34 874.78 875.12 875.44 875.68 875.91 876.13 876.31 876.53 876.73 876.91 876.97 876.92 876.85 876.79 876.90 877.02 877.15

2.7% 3.3% 3.9% 4.5% 5.1% 5.4% 5.2% 5.0% 4.8% 4.6% 4.5% 4.5% 4.5% 4.1% 3.4% 2.6% 2.0%

NOTES:

1. ALL ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER FLANGE, OR CONSTRUCTION JOINT. ELEVATIONS ARE GIVEN AT 25' INTERVALS ALONG THE REFERENCE ALIGNMENT, AND AT THE BACK OF MEDIAN NOSES.

LEGEND:

— - — CONSTRUCTION JOINT

862.34 PAVEMENT GRADE

2.0% PAVEMENT CROSS SLOPE

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVING GRADES	SHEET 25	E

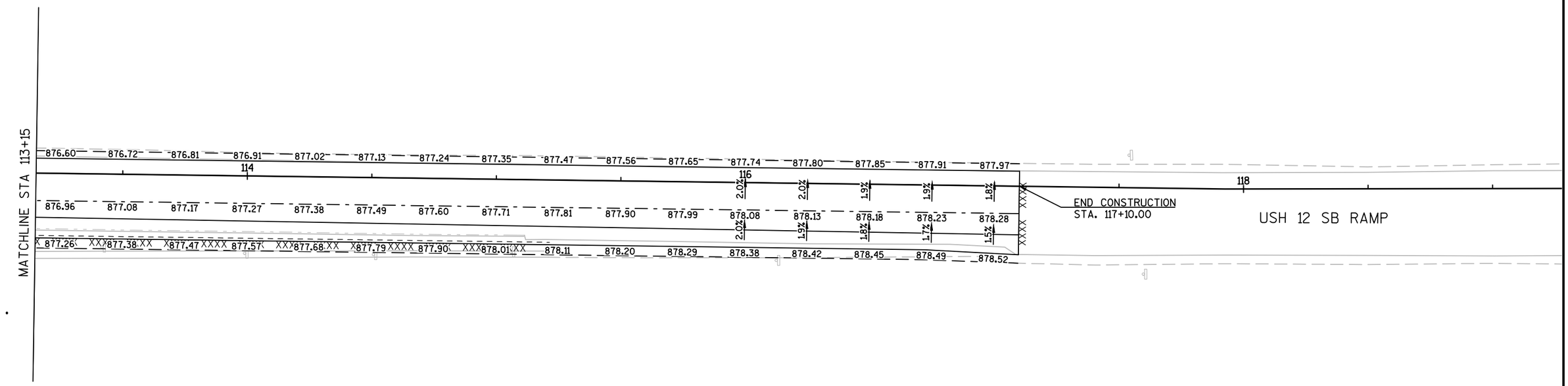
2

N

VILLAGE OF GENOA CITY

TOWN OF BLOOMFIELD

EXISTING R/W



NOTES:

1. ALL ELEVATIONS ARE TO EDGE OF PAVEMENT/GUTTER FLANGE, OR CONSTRUCTION JOINT. ELEVATIONS ARE GIVEN AT 25' INTERVALS ALONG THE REFERENCE ALIGNMENT, AND AT THE BACK OF MEDIAN NOSES.

LEGEND:

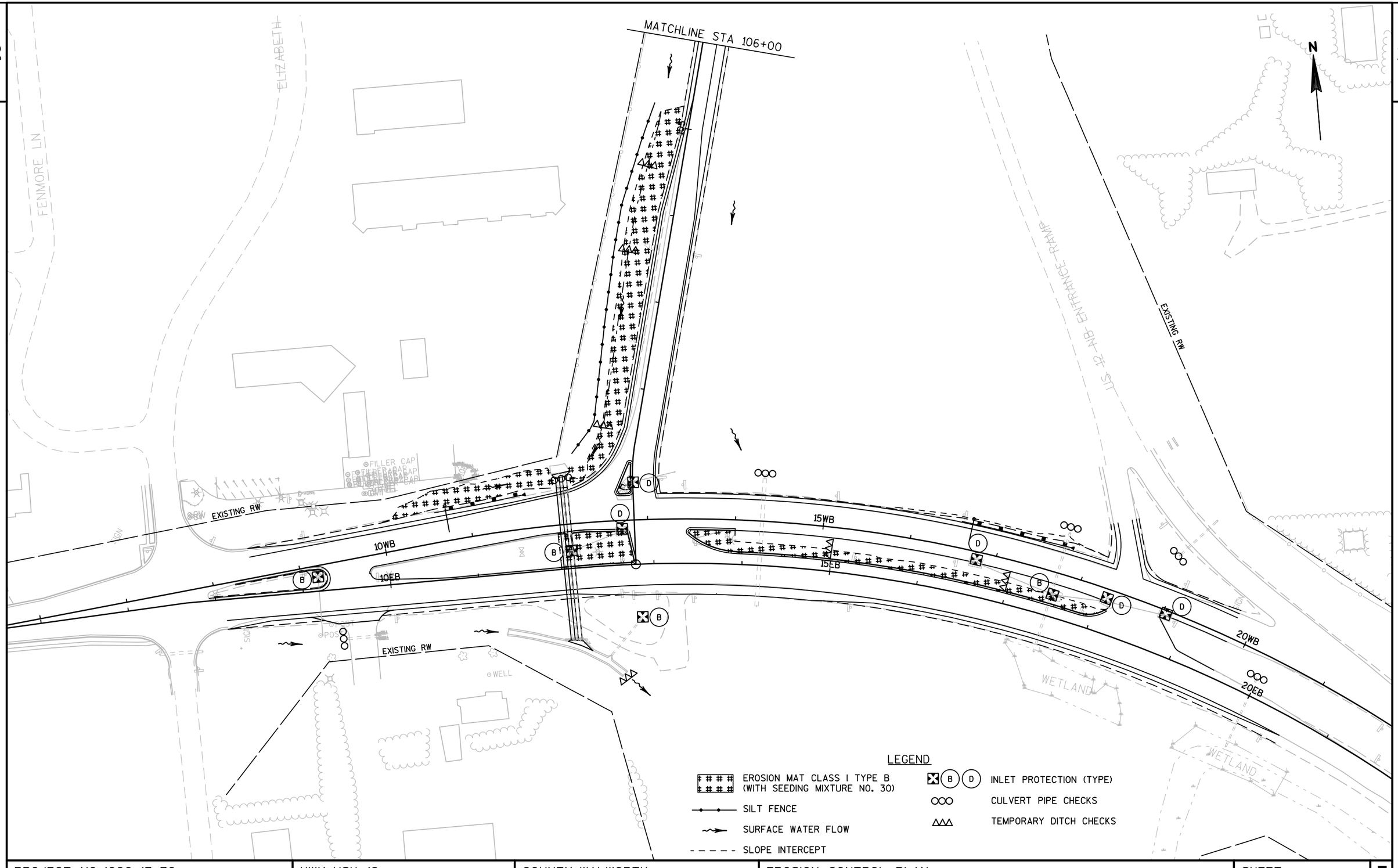
— - — CONSTRUCTION JOINT

862.34 PAVEMENT GRADE

2.0% PAVEMENT CROSS SLOPE

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVING GRADES	SHEET 26	E

2



PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	EROSION CONTROL PLAN	SHEET 27	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-EC - 022001
PLOT DATE : 4/20/2018 10:58 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

EXISTING RW

MATCHLINE STA 106+00

110

115

EXISTING RW

LEGEND

EROSION MAT CLASS I TYPE B (WITH SEEDING MIXTURE NO. 30)

SILT FENCE

SURFACE WATER FLOW

SLOPE INTERCEPT

B D INLET PROTECTION (TYPE)

CULVERT PIPE CHECKS

TEMPORARY DITCH CHECKS

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	EROSION CONTROL PLAN	SHEET 28	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-EC - 022002

PLOT DATE : 4/20/2018 10:58 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

12EB+00.78, 81.36' RT
34X53 HE RCP
INV: 848.20

12EB+08.91, 82.56' RT
34X53 HE RCP
INV: 848.20

CONCRETE MASONRY ENDWALL
PER SDD (SEE CONSTRUCTION
DETAIL FOR TIE-IN TO EXISTING
CONCRETE LINED CHANNEL)

12EB+07.93, 20.06' LT
INLET MEDIAN 2 GRATE
RIM: 853.80
INV 18" E: 851.65
INV 34X53" N: 850.28
INV 34X53" S: 850.20

103 LF @ 1.94%

185 LF @ 2.00%

85 LF @ 1.90%

34"x50" CMP

CONCRETE MASONRY ENDWALL
PER SDD

12WB+02.20, 53.50' LT
34X53 HE RCP
INV: 851.90

12WB+09.90, 54.50' LT
34X53 HE RCP
INV: 851.90

REPLACE INLET COVER
(TYPE WM)
RIM: 855.67

100+93.14, 2.00' LT
INLET 2X2.5-FT
TYPE WM COVER
RIM: 856.87
INV 18" E: 853.10

EX. 18" AEW
INV: 852.32

EXISTING
CULVERT
TO REMAIN

24" RCP

11EB
11WB
12EB
12WB
13EB
13WB
14EB
14WB

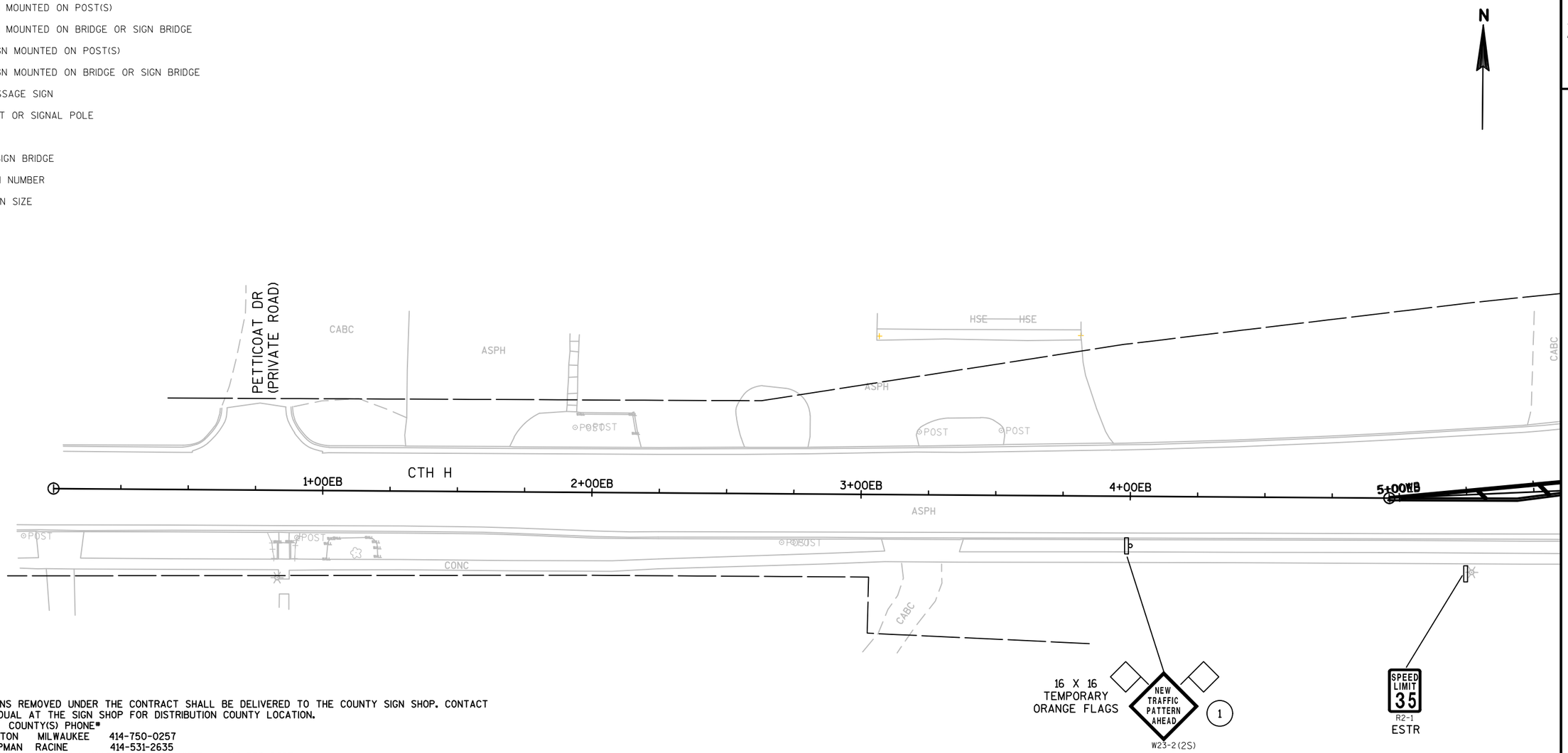
SI
101
102
103
104

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	STORM SEWER & DRAINAGE DETAILS	SHEET 29	E

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.
SIGNING COORDINATOR COUNTY(S) PHONE*

- DENNIS NEWTON MILWAUKEE 414-750-0257
- ANDRE CHAPMAN RACINE 414-531-2635
- JENNY BUCKETT KENOSHA, WASHINGTON, OZAUKEE 414-750-2427
- CHUCK SALDIVAR WALWORTH, WAUKESHA 414-750-1682

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (414-266-1165) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES, FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

ELIZABETH LANE

STOP R1-1 ESTR

STREET NAME SIGNS

REMOVE DO NOT ENTER R5-1 (3) — 5

REMOVE SPEED LIMIT 35 — 6

REMOVE RADAR ENFORCED — MOVE — 7

REMOVE SPEED LIMIT 35 — 8

9 — SPEED LIMIT 35 R2-1 (2M) MOUNT ON UPRIGHT

OVERHEAD SIGN SUPPORT S-64-609

REMOVE R4-7 (2S) — 3

W5-54 (2S) — 4 — MOUNT ON LIGHT POLE

CTH H

6+00WB 6+00EB 7+00WB 7+00EB 8+00WB 8+00EB 9+00WB 9+00EB 10+00WB 10+00EB 11+00WB 11+00EB

ASPH CONC CABC

16 X 16 TEMPORARY ORANGE FLAGS — 2 — W3-3 (2S)

STREET NAME SIGNS

16 — M2-1 JCT END M4-6 / M1-4 12 COUNTY H M1-5A — J1-2 (2S)

STOP R1-1 ESTR

REMOVE JCT END 12 COUNTY H Chicago

14 / 15 — R4-7 (2S)

11 — SPEED LIMIT 35 R2-1 (2M)

Chicago D1-1 — 17

13 — REMOVE

12 — REMOVE

10 — Elizabeth Ln ONLY — TYPE I

SHEET 2 OF 9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 31 E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023202_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

USH 12 EXIT RAMP

SEE SHEET 6 OF 9

CTH H

USH 12

11+00WB
12+00WB
13+00WB
14+00WB
15+00WB
16+00WB
11+00EB
12+00EB
13+00EB
14+00EB
15+00EB
16+00EB

ASPH
CABC
CONC
35'
40'

18 RIGHT LANE MUST TURN RIGHT R3-7-R(3)

19 REMOVE

125 BEGIN LEFT TURN LANE R3-20-L(2M)

20 STOP R1-1F(3) REMOVE

21 DO NOT ENTER R5-1(2M) MOUNT ON SIGNAL POLE

22 REMOVE R3-1(2M)

23 STOP R1-1F(3)

24 STOP R1-1F(3) REMOVE FROM MAST ARM

25 STOP R1-1F(3) REMOVE

130 STOP R1-1F(3) MOUNT ON SIGNAL POLE

26 M3-1 NORTH M1-5A COUNTY H M6-1 J3-1(2M)

27 BEGIN LEFT TURN LANE R3-20-L(2M)

28 29 REMOVE W6-2(2M)

30 31 WRONG WAY REMOVE WRONG WAY R5-1A(2M)

126 R4-7(2M)

NO TURNS REMOVE INCLUDED WITH #19

40 DO NOT ENTER R5-1(2M) REMOVE

45 R3-18(2M)

46 STOP R1-1F(3)

42 43 STOP REMOVE

44 STOP R1-1F(3) MOUNT ON SIGNAL POLE

REMOVE INCLUDED WITH #43

41 W1-6(2M) REMOVE

39 ONE WAY R6-2-L(2M)

NO TURNS REMOVE

38 W1-6(2M) REMOVE

37 R4-7(2M) REMOVE

36 DO NOT ENTER R5-1(2M) REMOVE

34 35 SPEED LIMIT 45 R2-1(2M) SPEED LIMIT 45 REMOVE

33 M3-4 WEST M1-4 12 M5-1L J2-1(2M)

32 EAST M3-2 M1-4 12 M6-1 J2-1(2M) EAST 12 REMOVE

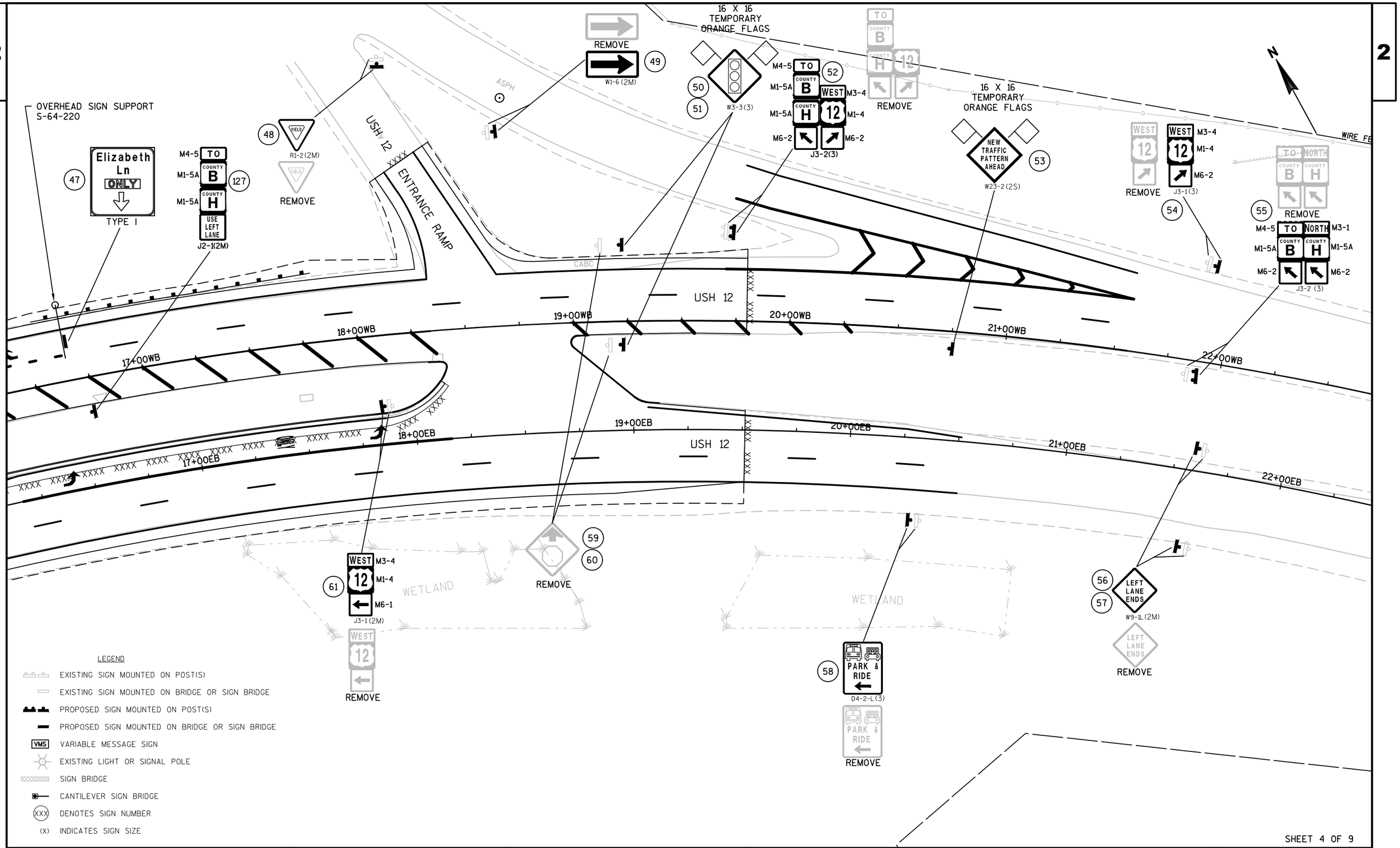
REMOVE INCLUDED WITH #30 & 31

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

SHEET 3 OF 9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 32	E



PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 33	E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023204_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

62 RAMP 40 M.P.H. W13-3(3) REMOVE

RAMP 40 M.P.H.

63 Genoa City / Lake Geneva D1-2

Genoa City / Lake Geneva REMOVE

NORTH WEST COUNTY H 12 REMOVE

64 M3-1 NORTH WEST M3-4 / M1-5A COUNTY H 12 M1-4

65 M5-2L M5-2R J3-2(2M)

ASPH

CABC

USH 12

23+00WB 24+00WB 25+00WB 26+00WB

22+00EB 23+00EB 24+00EB 25+00EB 26+00EB

OLD SOUTH RD

SIGN

CONC

128 W4-2L(2M) REMOVE

200'

66 SPEED LIMIT 45 R2-1(2M)

67 SPEED LIMIT 45 REMOVE

129 W4-2L(2M) REMOVE

SHEET 5 OF 9

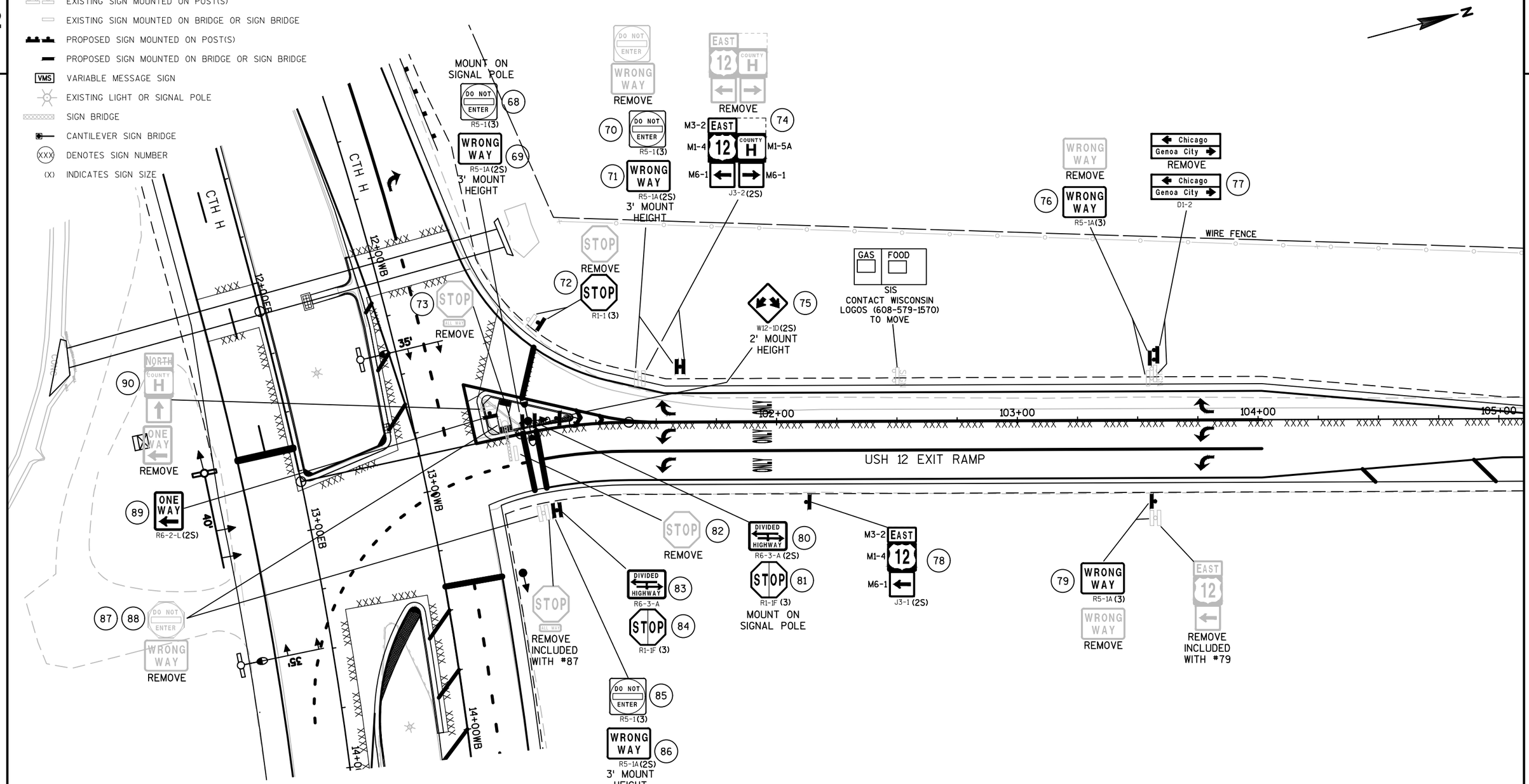
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 34	E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023205_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE



SHEET 6 OF 9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 35 E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023206_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE

N

91 — ONLY ONLY ONLY — R3-8-R (2S)

92 — M3-2 EAST; M1-4 12 COUNTY H M1-5A; M5-1L M5-1R; J3-2 (2S)

16 X 16 TEMPORARY ORANGE FLAGS — 93 94 — W3-3 (5)

95 96 — REMOVE

97 — PARK & RIDE — D4-2-L (3)

PARK & RIDE — REMOVE

98 — REMOVE

WIRE FENCE

105+00 106+00 107+00 108+00 109+00 110+00

XXXX XXXX XXXX XXXX XXXX

ASPH

USH 12 EXIT RAMP

CABC

ASPH

CONC

ASPH

99 100 — W1-8 (4) — 4' MOUNT HEIGHT

102 — REMOVE

103 104 — W1-8 (4) — 4' MOUNT HEIGHT

ROAD CLOSED — 105 — REMOVE

SHEET 7 OF 9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 36	E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023207_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

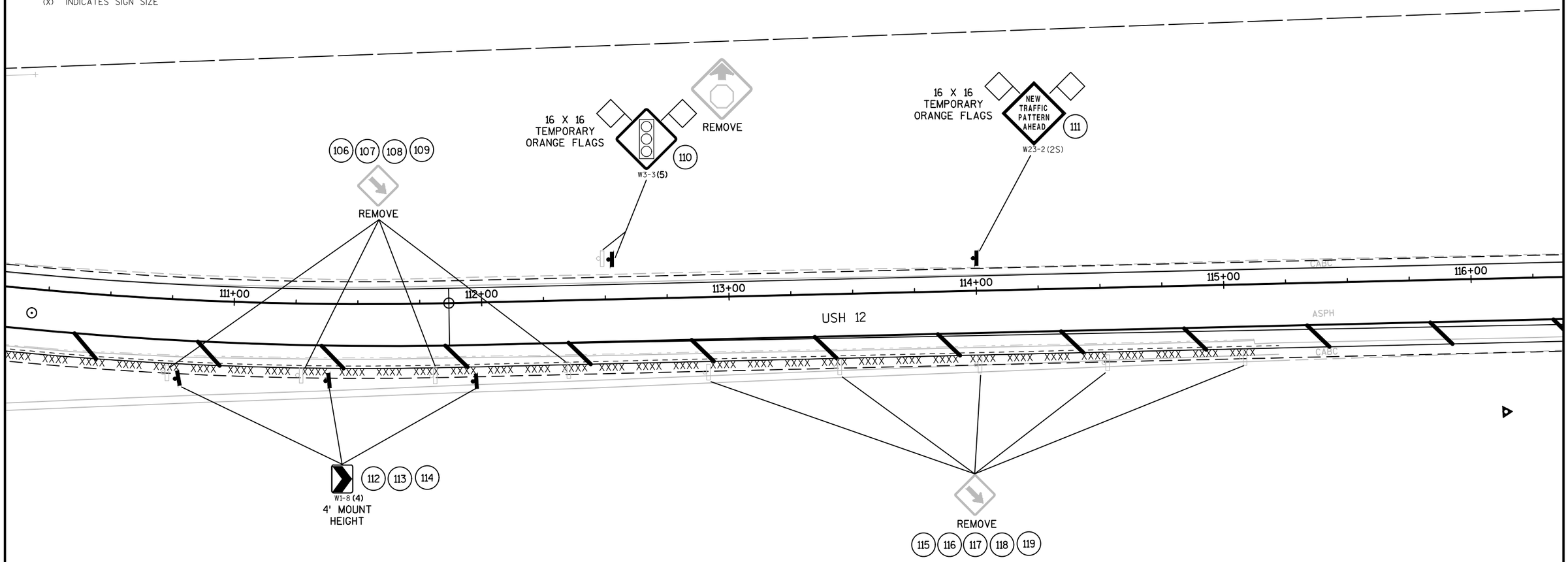
WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE

N



SHEET 8 OF 9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 37	E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023208_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

VMS VARIABLE MESSAGE SIGN

EXISTING LIGHT OR SIGNAL POLE

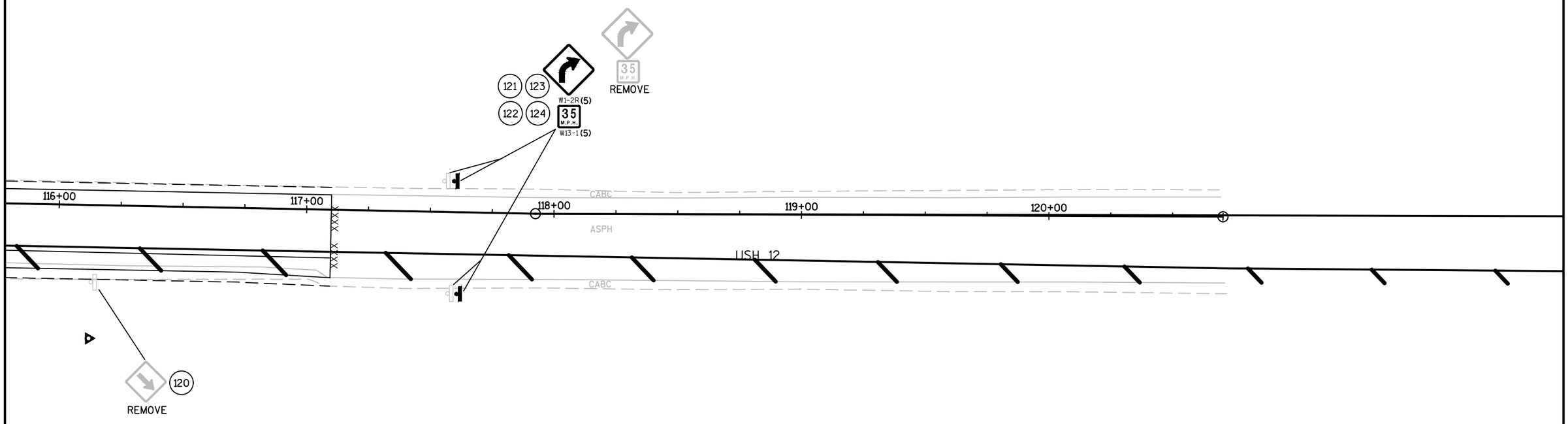
SIGN BRIDGE

CANTILEVER SIGN BRIDGE

(XXX) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE

N



SHEET 9 OF 9

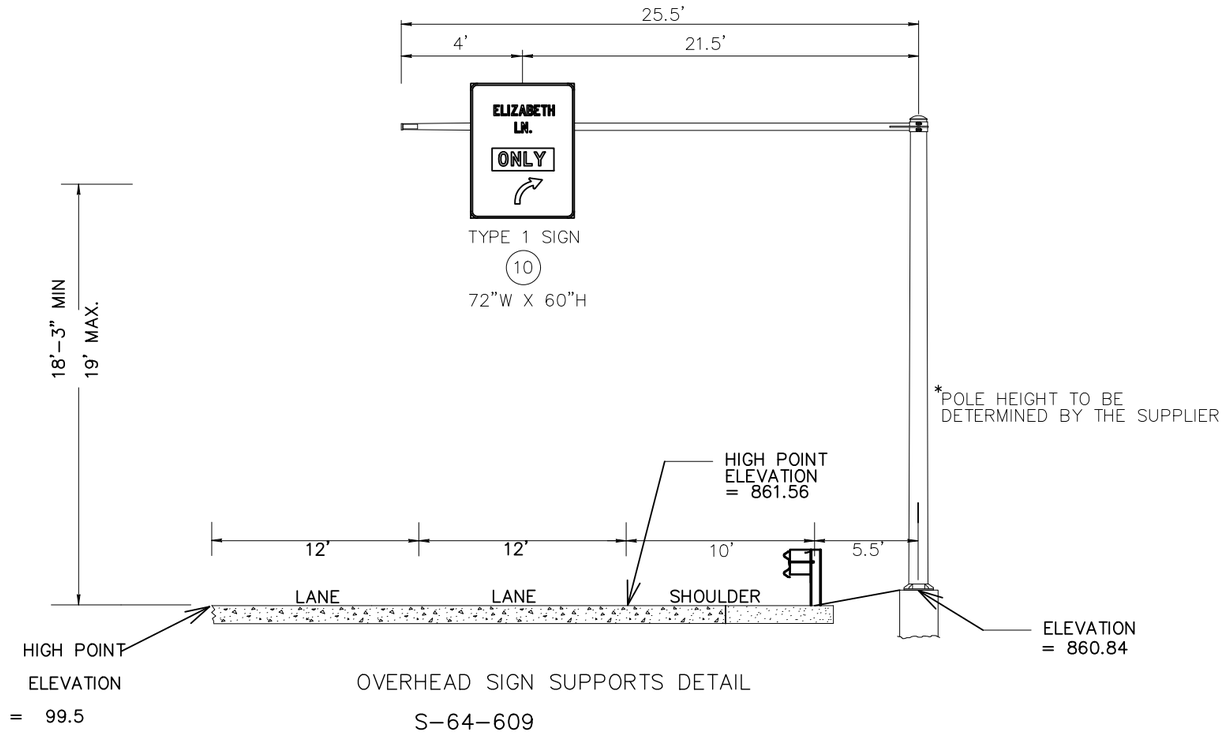
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING PLAN	SHEET 38	E

FILE NAME : N:\PDS\C3D\CAD\10801700\SIGN\023201_PS.DWG
LAYOUT NAME - 023209_PS

PLOT DATE : 4/16/2019 1:42 PM PLOT BY : MARTENS, KAREN L PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



OVERHEAD SIGN SUPPORTS DETAIL

S-64-609
CTH H WB @ ELIZABETH LN.
STATION 10+75

GENERAL NOTES

1.) DRAWINGS NOT TO SCALE.
2.) DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINAIRES AND TRAFFIC SIGNALS". 6TH EDITION & INTERIM REVISIONS FATIGUE CATEGORY 1 CANTILEVERS.
3.) THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGNS SHOWN.
4.) WIND VELOCITY PER WISDOT STD SPECIFICATIONS.
5.) BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

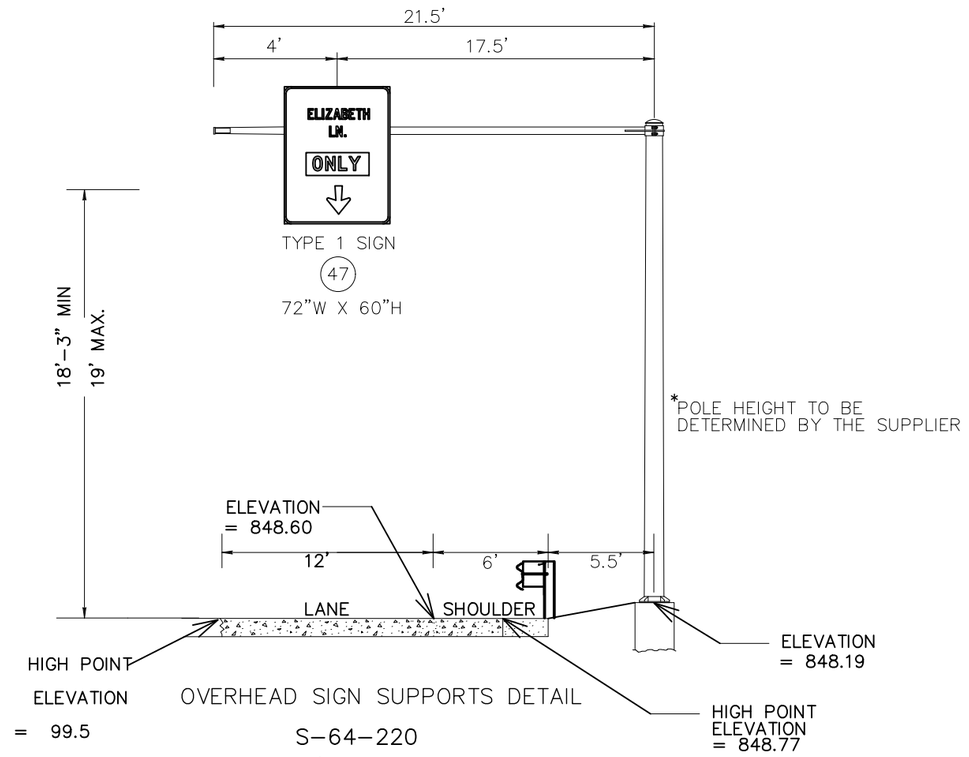
NOTE, CONTRACTOR SHALL:

1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT TO TOM HEYDEL SE TRAFFIC OPS, WISDOT & BUREAU OF STRUCTURES. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT PER STANDARD SPEC 641.3.1.4.
5.) 6 ANCHER RODS MINIMUM PER STANDARD DETAIL DRAWING. DESIGN STRUCTURE BASE PLATE CONNECTION TO ACCOMODATE.
6.) REFER TO SIGN PLATE A4-7.4 FOR ATTACHMENT OF SIGNS TO OVERHEAD SIGN SUPPORT
7.) INSTALL SIGNS OR SIGN BLANKS ON OVERHEAD SIGN SUPPORTS AT THE TIME OF ERECTION AS SPECIFIED IN STANDARD SPEC 641.3.1.4.

CONTRACTOR TO USE SDD 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT

IBEAMS – W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

2



OVERHEAD SIGN SUPPORTS DETAIL

S-64-220

USH 12 / CTH H WESTBOUND
PRIOR TO ELIZABETH LN.
STATION 16+65

GENERAL NOTES

1.) DRAWINGS NOT TO SCALE.
2.) DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS. LUMINAIRES AND TRAFFIC SIGNALS". 6TH EDITION & INTERIM REVISIONS FATIGUE CATEGORY 1 CANTILEVERS.
3.) THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGNS SHOWN.
4.) WIND VELOCITY PER WISDOT STD SPECIFICATIONS.
5.) BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

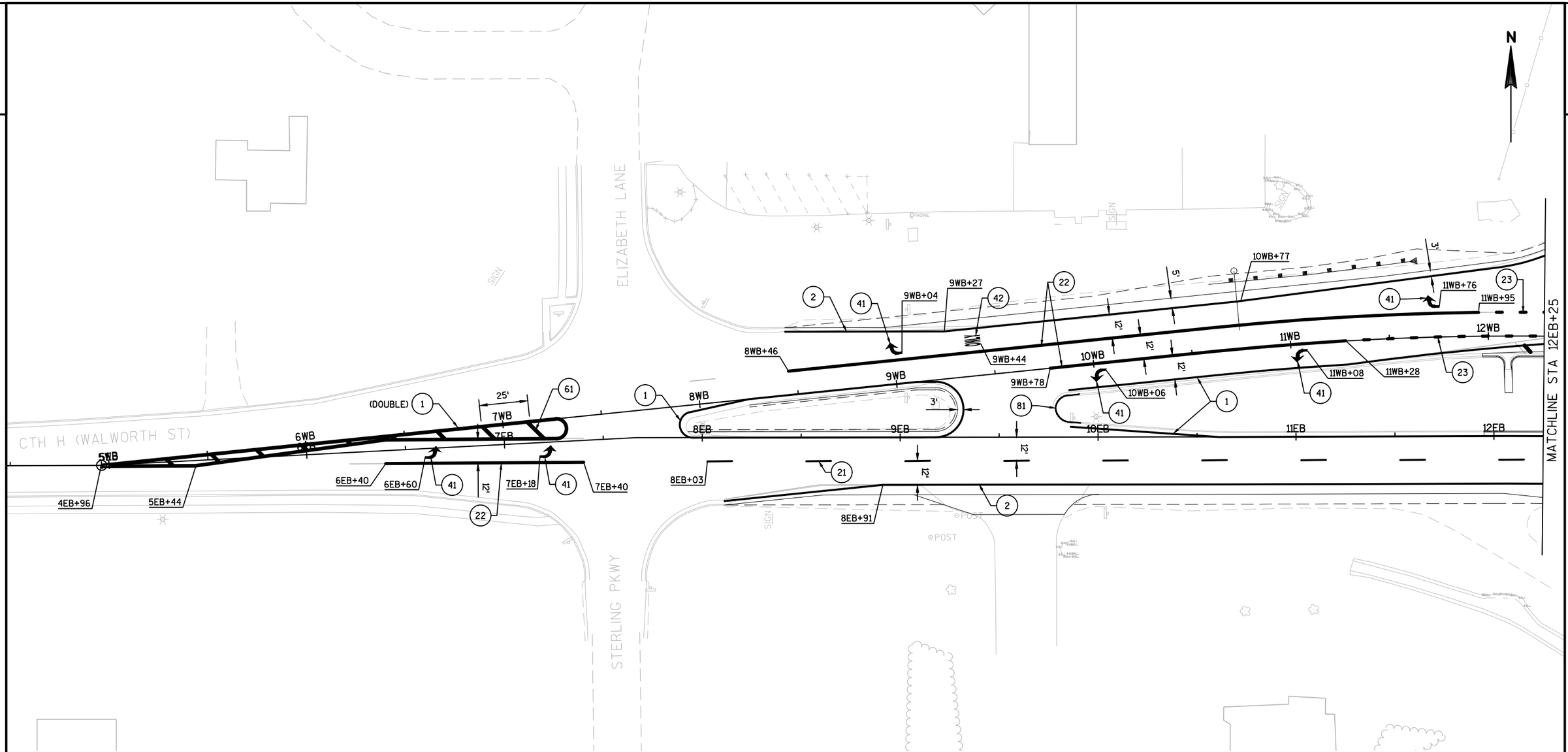
NOTE, CONTRACTOR SHALL:

1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT TO TOM HEYDEL SE TRAFFIC OPS, WISDOT & BUREAU OF STRUCTURES. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2.) PROVIDE DESIGN CALCULATIONS.
3.) SHOW SIGNS ON SHOP DRAWINGS.
4.) I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT PER STANDARD SPEC 641.3.1.4.
5.) 6 ANCHER RODS MINIMUM PER STANDARD DETAIL DRAWING. DESIGN STRUCTURE BASE PLATE CONNECTION TO ACCOMODATE.
6.) REFER TO SIGN PLATE A4-7.4 FOR ATTACHMENT OF SIGNS TO OVERHEAD SIGN SUPPORT
7.) INSTALL SIGNS OR SIGN BLANKS ON OVERHEAD SIGN SUPPORTS AT THE TIME OF ERECTION AS SPECIFIED IN STANDARD SPEC 641.3.1.4.

CONTRACTOR TO USE SDD 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT

IBEAMS - W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS

2



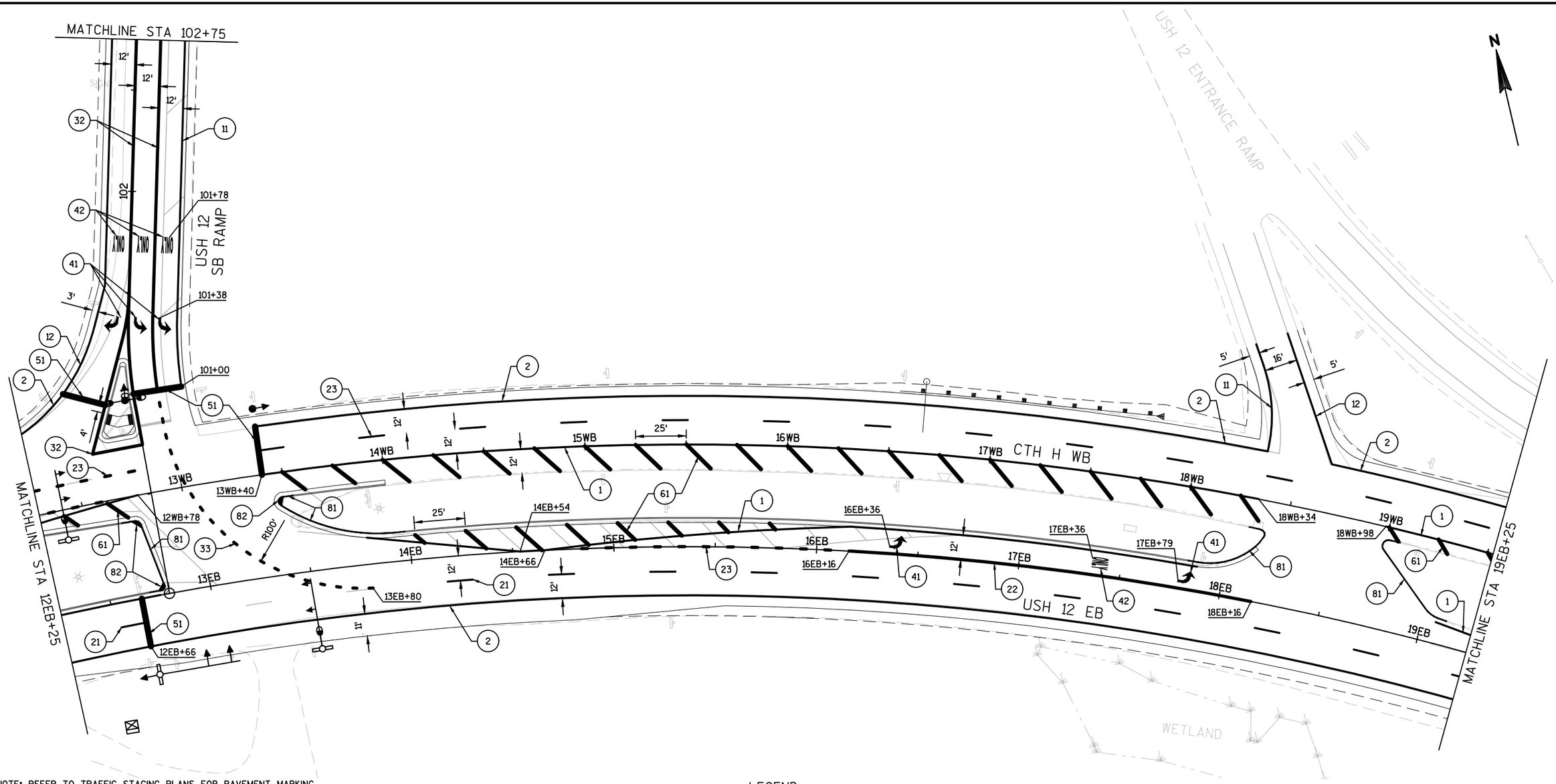
NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

LEGEND:

- (1) MARKING LINE EPOXY 4-INCH (YELLOW)
- (2) MARKING LINE EPOXY 4-INCH (WHITE)
- (11) MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- (12) MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- (21) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (22) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- (23) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- (31) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- (32) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- (33) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- (41) MARKING ARROW EPOXY (WHITE)
- (42) MARKING WORD EPOXY (WHITE) — ONLY
- (51) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (61) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (71) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (81) MARKING CURB EPOXY (YELLOW)
- (82) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 41	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 024501
PLOT DATE : 4/20/2018 10:59 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT



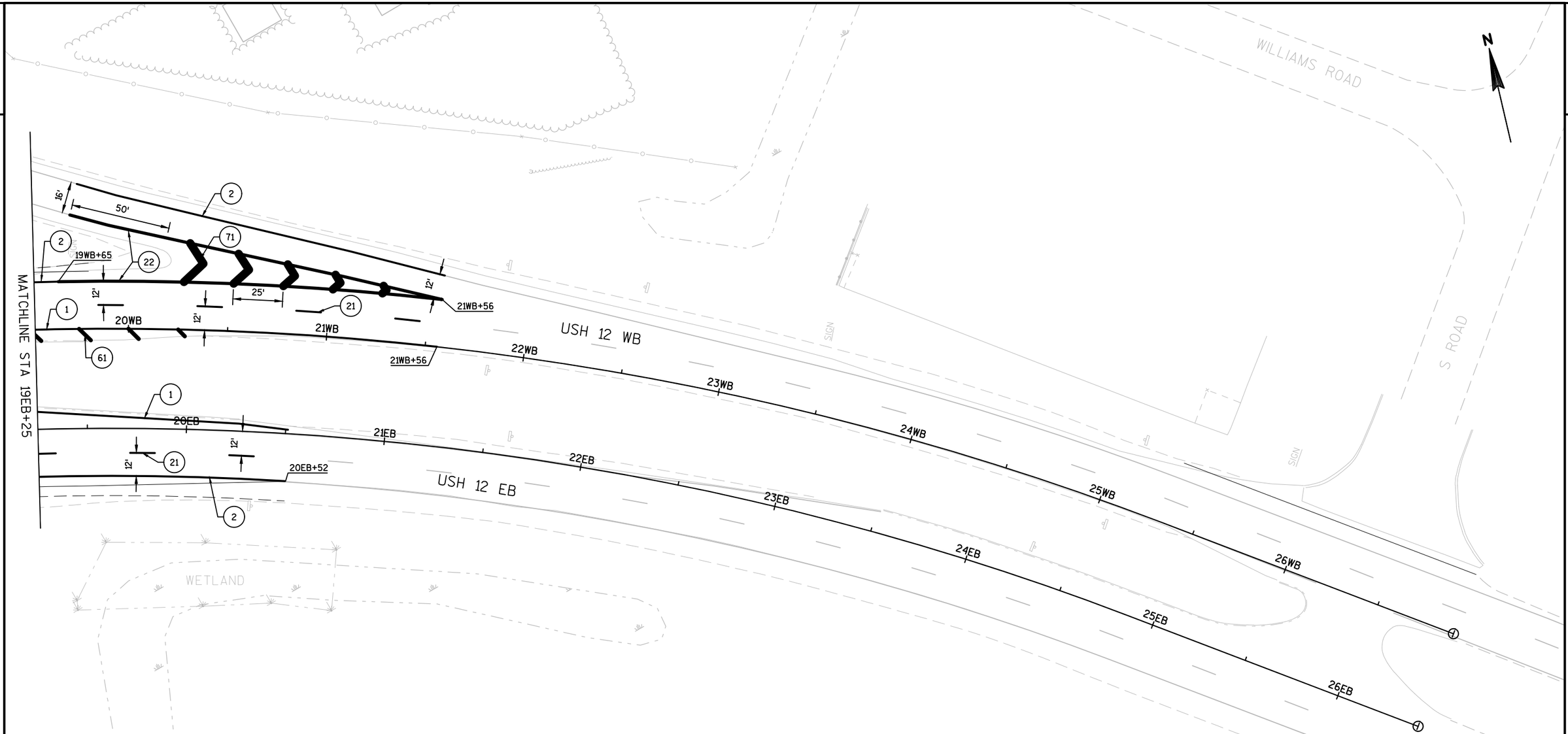
NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

LEGEND:

- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
- 2 MARKING LINE EPOXY 4-INCH (WHITE)
- 11 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- 12 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- 21 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- 22 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- 23 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- 31 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- 32 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- 33 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- 41 MARKING ARROW EPOXY (WHITE)
- 42 MARKING WORD EPOXY (WHITE) — ONLY
- 51 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 61 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 71 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 81 MARKING CURB EPOXY (YELLOW)
- 82 MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 42	E

2



NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

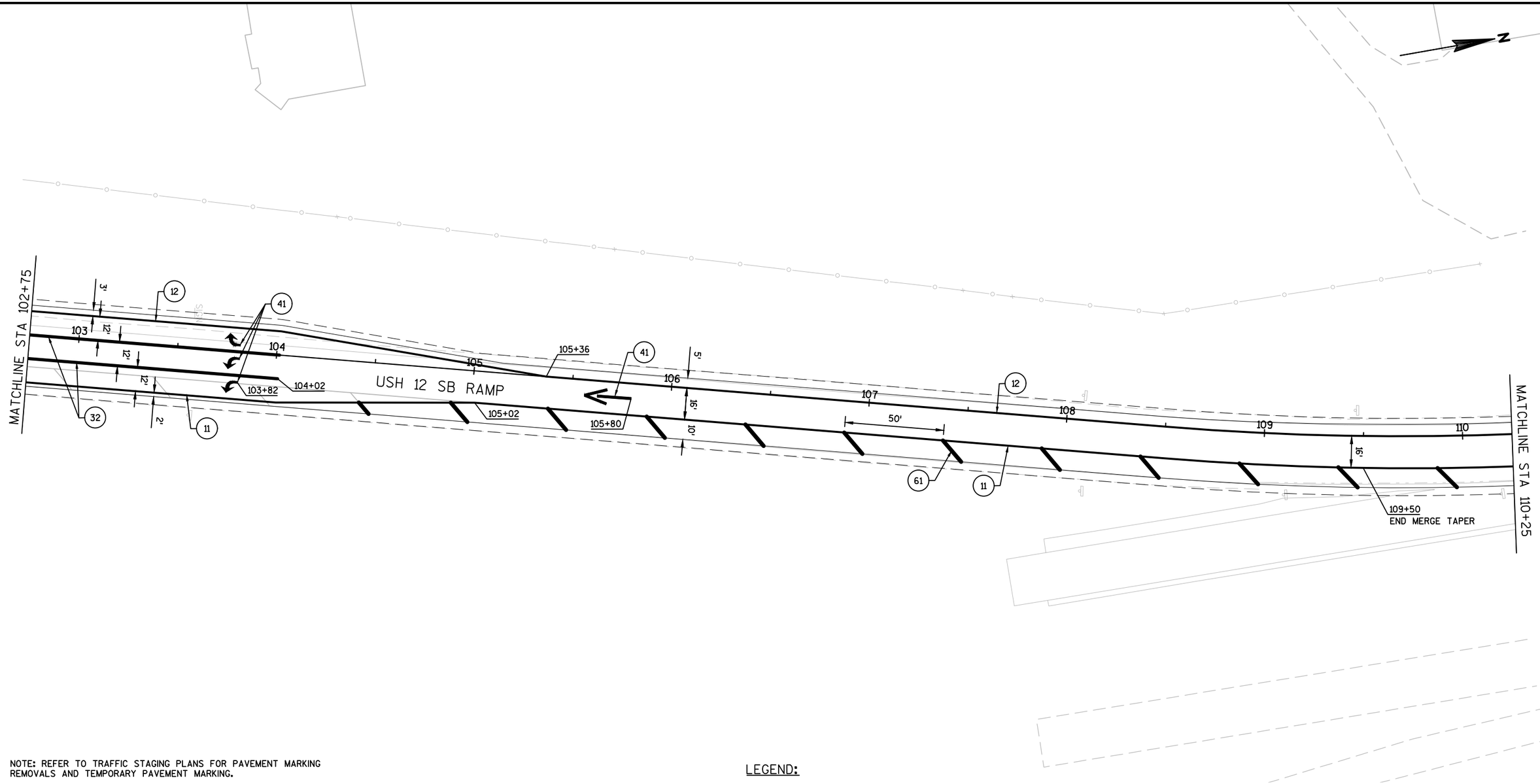
LEGEND:

- (1) MARKING LINE EPOXY 4-INCH (YELLOW)
- (2) MARKING LINE EPOXY 4-INCH (WHITE)
- (11) MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- (12) MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- (21) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (22) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- (23) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- (31) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- (32) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- (33) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- (41) MARKING ARROW EPOXY (WHITE)
- (42) MARKING WORD EPOXY (WHITE) — ONLY
- (51) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (61) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (71) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (81) MARKING CURB EPOXY (YELLOW)
- (82) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 43	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 024503
PLOT DATE : 4/20/2018 10:59 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

LEGEND:

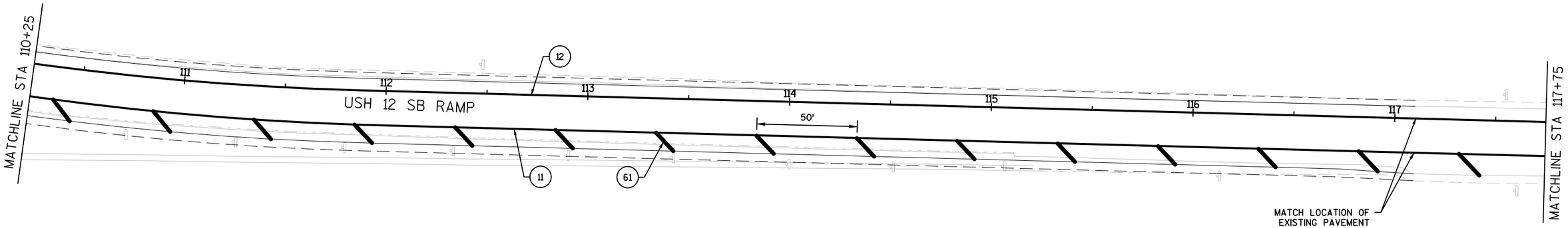
- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
- 2 MARKING LINE EPOXY 4-INCH (WHITE)
- 11 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- 12 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- 21 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- 22 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- 23 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- 31 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- 32 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- 33 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- 41 MARKING ARROW EPOXY (WHITE)
- 42 MARKING WORD EPOXY (WHITE)
- 51 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 61 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 71 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 81 MARKING CURB EPOXY (YELLOW)
- 82 MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 44	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 024504
PLOT DATE : 4/20/2018 10:59 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N



NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

LEGEND:

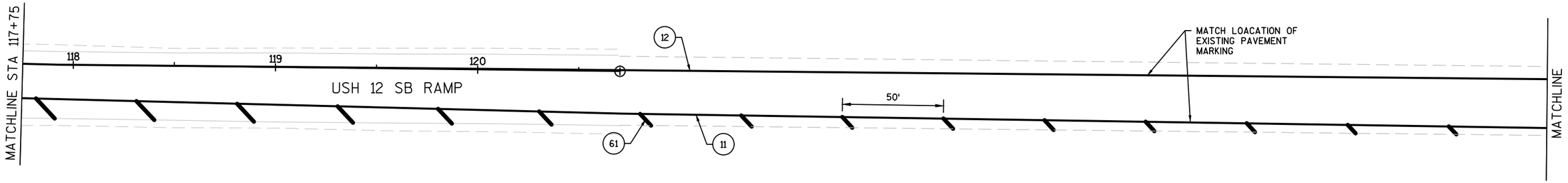
- (1) MARKING LINE EPOXY 4-INCH (YELLOW)
- (2) MARKING LINE EPOXY 4-INCH (WHITE)
- (11) MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- (12) MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- (21) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (22) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- (23) MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- (31) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- (32) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- (33) MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- (41) MARKING ARROW EPOXY (WHITE)
- (42) MARKING WORD EPOXY (WHITE) — ONLY
- (51) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (61) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (71) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- (81) MARKING CURB EPOXY (YELLOW)
- (82) MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 45	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 024505
PLOT DATE : 4/20/2018 11:00 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N



USH 12 NB

NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

LEGEND:

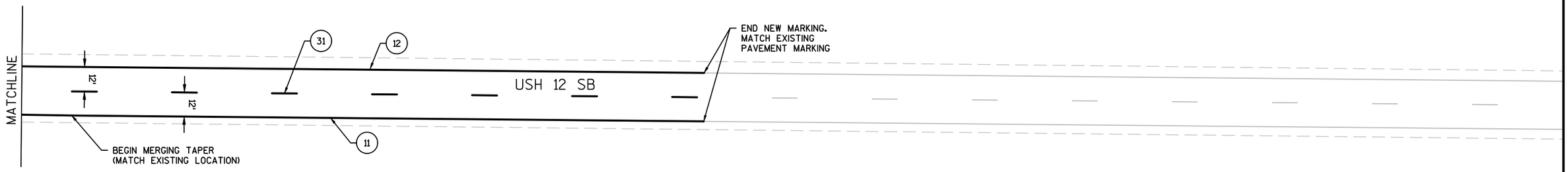
- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
- 2 MARKING LINE EPOXY 4-INCH (WHITE)
- 11 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- 12 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- 21 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- 22 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- 23 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- 31 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- 32 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- 33 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- 41 MARKING ARROW EPOXY (WHITE)
- 42 MARKING WORD EPOXY (WHITE) — ONLY
- 51 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 61 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 71 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 81 MARKING CURB EPOXY (YELLOW)
- 82 MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 46	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 024506
PLOT DATE : 4/20/2018 11:00 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

N



NOTE: REFER TO TRAFFIC STAGING PLANS FOR PAVEMENT MARKING REMOVALS AND TEMPORARY PAVEMENT MARKING.

LEGEND:

- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
- 2 MARKING LINE EPOXY 4-INCH (WHITE)
- 11 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (YELLOW)
- 12 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
- 21 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- 22 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE)
- 23 MARKING LINE GROOVED WET REFLECTIVE CONTRAST EPOXY 8-INCH (WHITE) (3-FT LINE 9-FT SKIP)
- 31 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH (WHITE) (12.5-FT LINE 37.5-FT SKIP)
- 32 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE)
- 33 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH (WHITE) (2-FT LINE 6-FT SKIP)
- 41 MARKING ARROW EPOXY (WHITE)
- 42 MARKING WORD EPOXY (WHITE) — ONLY
- 51 MARKING STOP LINE EPOXY 18-INCH (WHITE)
- 61 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 71 MARKING CHEVRON EPOXY 24-INCH (WHITE)
- 81 MARKING CURB EPOXY (YELLOW)
- 82 MARKING ISLAND NOSE EPOXY (YELLOW)

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PAVEMENT MARKING PLAN	SHEET 47	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-PM - 024507
PLOT DATE : 4/20/2018 11:00 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

LEGEND

- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- XX' SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, UNDER PERMIT TO MUNICIPALITY
- S STOP SIGN
- XX FLASHER HEAD NUMBER
- PULL BOX, 24" X 36"
- (R) RED CIRCULAR INDICATOR

NOTE: SEE ALSO SIGNING REMOVAL PLANS

USH 12 SB OFF-RAMP

USH 12 EXIT RAMP

CTH H

10WB

10EB

15WB

15EB

USH 12

STOP

STOP

EXSB1

EXPB1

EXSB2

25'

15'

34"x50" CMP

24" RCP

18" RCP

REMOVE ELECTRICAL SERVICE METER AND WOOD POLE

EXLP1

EXLP2

REMOVE EXISTING MUNICIPAL LIGHTING UNITS (BY OTHERS)

R/W

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
2. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
USH 12 SB OFF-RAMP & CTH H
VILLAGE OF GENOA CITY
WALWORTH COUNTY

SIGNAL NO. F64-0285

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: raSmith
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 48	E

FILE NAME : T:\1142775\CADD\CIVIL 3D\SHEETSPLAN\024201_SR.DWG
LAYOUT NAME - 024201_SR - S-PLAN 1 IN 40 FT

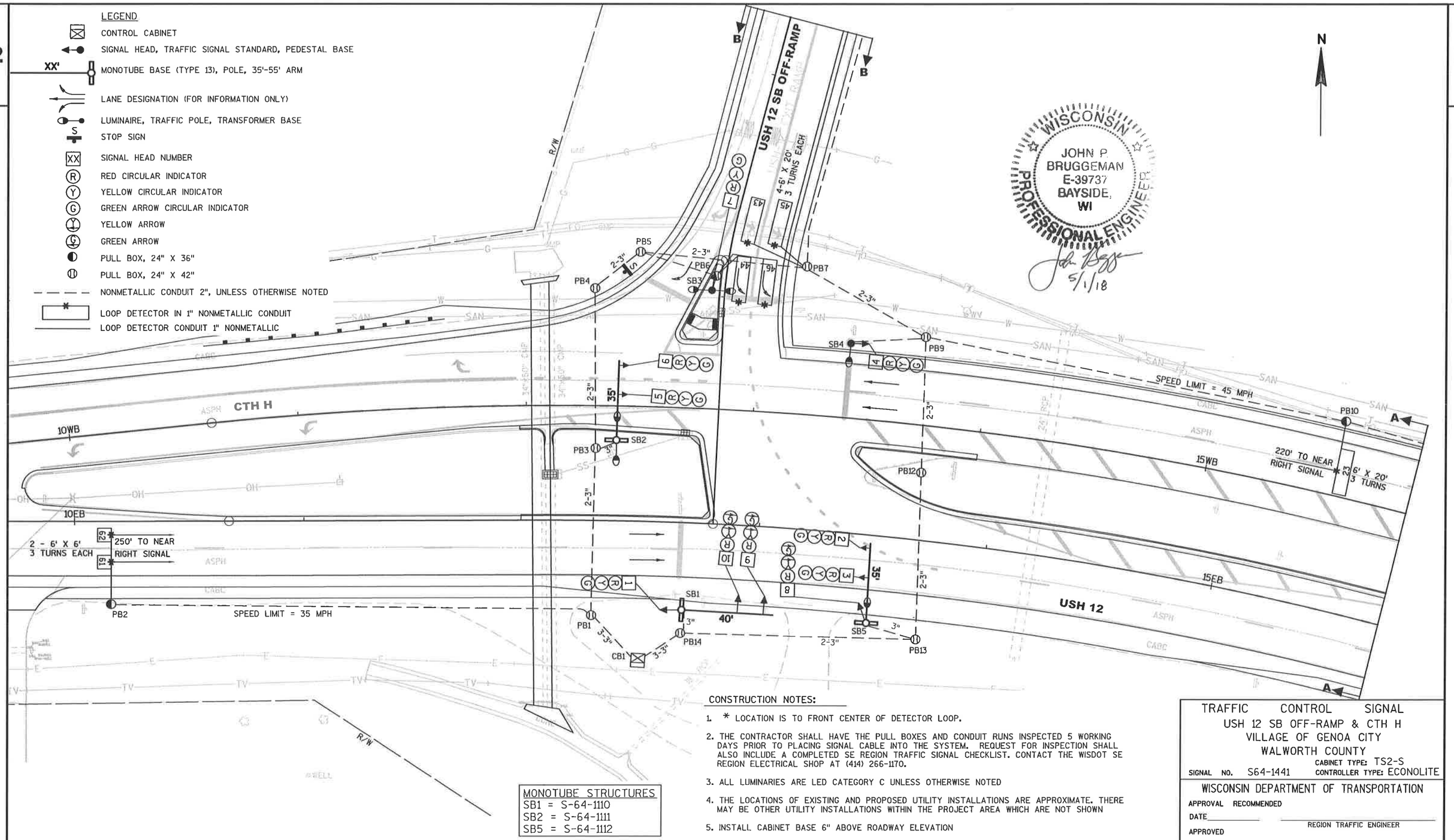
PLOT DATE : 1/25/2018 2:45 PM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- CONTROL CABINET
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- XX' MONOTUBE BASE (TYPE 13), POLE, 35'-55' ARM
- LANE DESIGNATION (FOR INFORMATION ONLY)
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- S STOP SIGN
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN ARROW CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- LOOP DETECTOR CONDUIT 1" NONMETALLIC



WISCONSIN
JOHN P BRUGGEMAN
E-39737
BAYSIDE, WI
PROFESSIONAL ENGINEER
5/1/18

MONOTUBE STRUCTURES
SB1 = S-64-1110
SB2 = S-64-1111
SB5 = S-64-1112

ALL LENSES ARE 12-INCH
NOTE: GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO THE SYSTEM. REQUEST FOR INSPECTION SHALL ALSO INCLUDE A COMPLETED SE REGION TRAFFIC SIGNAL CHECKLIST. CONTACT THE WISDOT SE REGION ELECTRICAL SHOP AT (414) 266-1170.
3. ALL LUMINARIES ARE LED CATEGORY C UNLESS OTHERWISE NOTED
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN
5. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION
6. LOOP DETECTORS SHALL BE INSTALLED IN BASE COURSE. SEE SDD & INTERSECTION DETAIL SHEETS.
7. PROPOSED PAVEMENT MARKINGS SHOWN IN GRAYSHADE FOR PLAN CLARITY.

TRAFFIC CONTROL SIGNAL
USH 12 SB OFF-RAMP & CTH H
VILLAGE OF GENOA CITY
WALWORTH COUNTY
CABINET TYPE: TS2-S
SIGNAL NO. S64-1441 CONTROLLER TYPE: ECONOLITE

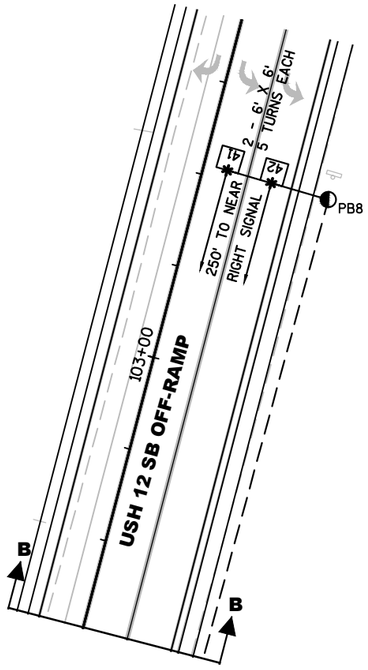
WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVAL RECOMMENDED
DATE _____ REGION TRAFFIC ENGINEER
APPROVED
DATE _____ STATE TRAFFIC ENGINEER

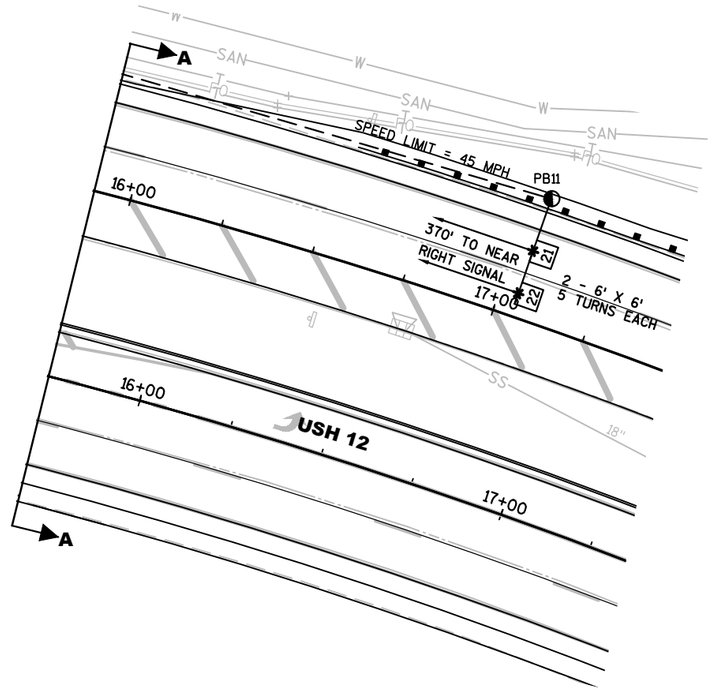
REGION CONTACT: JOYCE MURPHY
DESIGNED BY: raSmith
REVISED BY:
PAGE 1 OF 3

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TRAFFIC SIGNAL PLAN	SHEET 49	E

FILE NAME : T:\1142775\CADD\CIVIL 3D\SHEETSPLAN\024201_SP.DWG
LAYOUT NAME - 024201_SP - S-PLAN 1 IN 40 FT
PLOT DATE : 4/19/2018 10:41 AM PLOT BY : UTIC, ANDY PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2





TRAFFIC CONTROL SIGNAL
USH 12 SB OFF-RAMP & CTH H
VILLAGE OF GENOA CITY
WALWORTH COUNTY

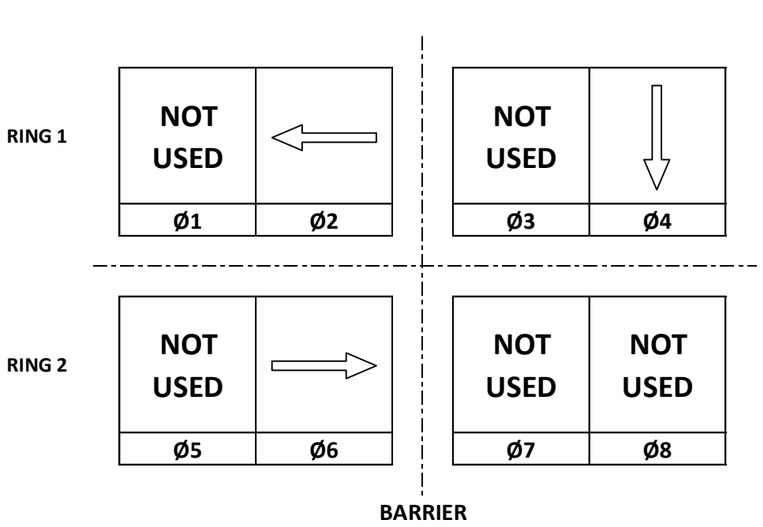
SIGNAL NO. S64-1441

REGION CONTACT: JOYCE MURPHY
DESIGNED BY: raSmith
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	TRAFFIC SIGNAL PLAN	SHEET 50	E

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4, 5, 6	R
Ø3		
Ø4	7, 8, 9, 10	R
Ø5		
Ø6	1, 2, 3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLE		
OLF		
OLG		
OLH		



CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	X
3				
4				X
5				
6	X	2	MIN	X
7				
8				

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	X

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	
SIGNAL SYSTEM NO:	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	21	23	41	43	45	61		
CALLED PHASE	2	2	4	4	4	6		
CALL OPTION	X	X		X	X	X		
DELAY TIME								
EXTENTION OPTION	X	X	X	X	X	X		
EXTEND TIME			X					
USE ADDED INITIAL	X	X				X		
CROSS SWITCH PHASE								

19	17	23	21	27	25	31	29	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	22		42	44	46	62		
CALLED PHASE	2		4	4	4	6		
CALL OPTION	X		X	X	X	X		
DELAY TIME								
EXTENTION OPTION	X		X	X	X	X		
EXTEND TIME			X					
USE ADDED INITIAL	X					X		
CROSS SWITCH PHASE								

20	18	24	22	28	26	32	30	DETECTOR INPUT
								PLAN LOOP DETECTOR*(S)
								CALLED PHASE
								CALL OPTION
								DELAY TIME
								EXTENTION OPTION
								EXTEND TIME
								USE ADDED INITIAL
								CROSS SWITCH PHASE

USH 12 OFF-RAMP & CTH H
VILLAGE OF GENOA CITY
WALWORTH COUNTY

SIGNAL NO: S64-1441 CABINET TYPE: TS2-S
CONTROLLER TYPE: ECONOLITE
DATE: 5/2018 PAGE NO. 3 OF 3

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	SEQUENCE OF OPERATIONS	SHEET NO: 51	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

PROJECT ID:	**1080-17-70**
INTERSECTION:	**USH 12 SB OFF-RAMP & CTH H**

Signal Wire Color Coding	BLK - black	RED - red	GRN - green
	WHT - white	BLU - blue	ORG - orange

DATE	5/1/18

CB1 TO	# OF COND.	HEAD NO.	SIGNAL INDICATION WIRE COLOR									PED BUTTON	OTHER
			RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING YELLOW>	D/WALK	WALK		
SB1	12	9	RED				ORG	GRN					
		10	RED				ORG	GRN					
		1	RED/BLK	ORG/BLK	GRN/BLK								
SB2	7	5	RED	ORG	GRN								
		6	RED	ORG	GRN								
SB3	7	7	RED	ORG	GRN								
SB4	7	4	RED	ORG	GRN								
SB5	12	2	RED	ORG	GRN								
		3	RED	ORG	GRN								
		8	RED/BLK				ORG/BLK	GRN/BLK					

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	**TO**
CB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB1
SB1	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	**TO**
PB1	CB1
PB3	SB2
PB4	SB3
PB5	SB3
PB6	SB3
PB7	SB4
PB9	SB4
PB12	SB4
PB13	SB5
PB14	SB1

LIGHTING UF 2-12 AWG W/GROUND	
FROM	**TO**
CB1	SB2
SB2	SB3
CB1	SB5
SB5	SB4

*Use the white conductor in the cable assembly as the grounded conductor for all traffic signal
*Ensure the grounded conductor in the feeder cable and the pole cables are both 18" longer than the ungrounded conductors.

2

TRAFFIC CONTROL STAGING LEGEND:

- WORK ZONE
- DIRECTION OF TRAFFIC
- TEMPORARY PAVEMENT IN PLACE
- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A
- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A AND ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL NOTES:

ALL TRAFFIC CONTROL SIGNS ARE 48"X48" UNLESS NOTED OTHERWISE.

TRAFFIC SIGNAL LOOP DETECTOR INSTALLATION SHALL BE COMPLETED UNDER FLAGGING OPERATION PRIOR TO MILL & OVERLAY OF HMA PAVEMENT.

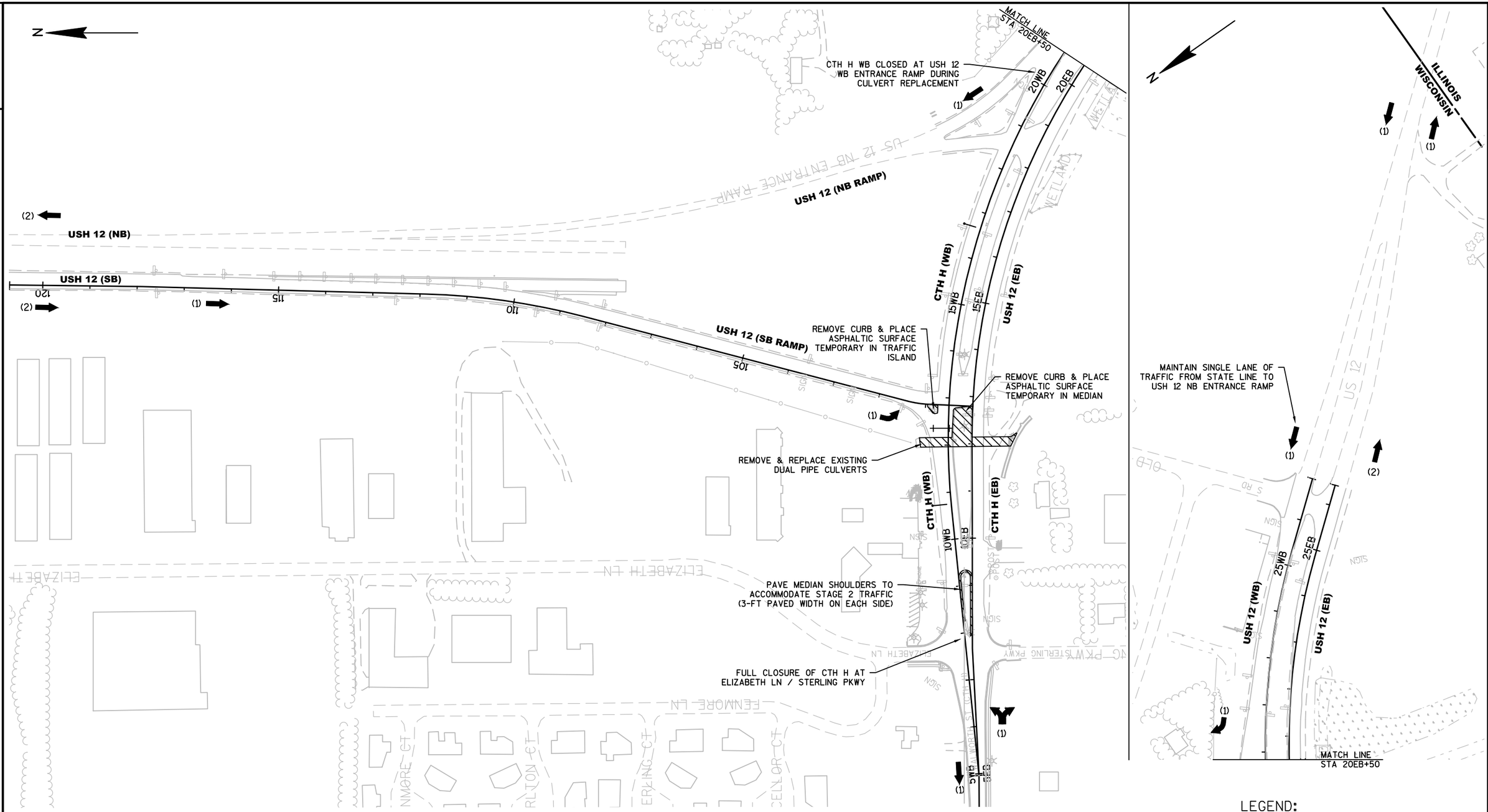
TEMPORARY PAVEMENT MARKING LEGEND:

- 1 — TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- 2 — TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- 3 — TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
- 4 — TEMPORARY MARKING LINE PAINT 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- 11 — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW)
- 12 — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 13 — TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 21 — TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- 22 — TEMPORARY MARKING STOP LINE PAINT 18-INCH (WHITE)
- R — REMOVE PAVEMENT MARKING
- E — EXISTING PAVEMENT MARKING TO REMAIN

2

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL LEGEND	SHEET 53	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\025001-TC.DWG
LAYOUT NAME - 025001-TC - 025001
PLOT DATE : 4/10/2019 1:49 PM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44



STAGE 1:

CONSTRUCTION:
- -REPLACE EXISTING DUAL CULVERT PIPES WEST OF USH 12 SB RAMP
- -CONSTRUCT SHOULDERS & TEMPORARY ASPHALTIC PAVEMENT AREAS AS NECESSARY TO ACCOMMODATE STAGE 2 & 3 TRAFFIC

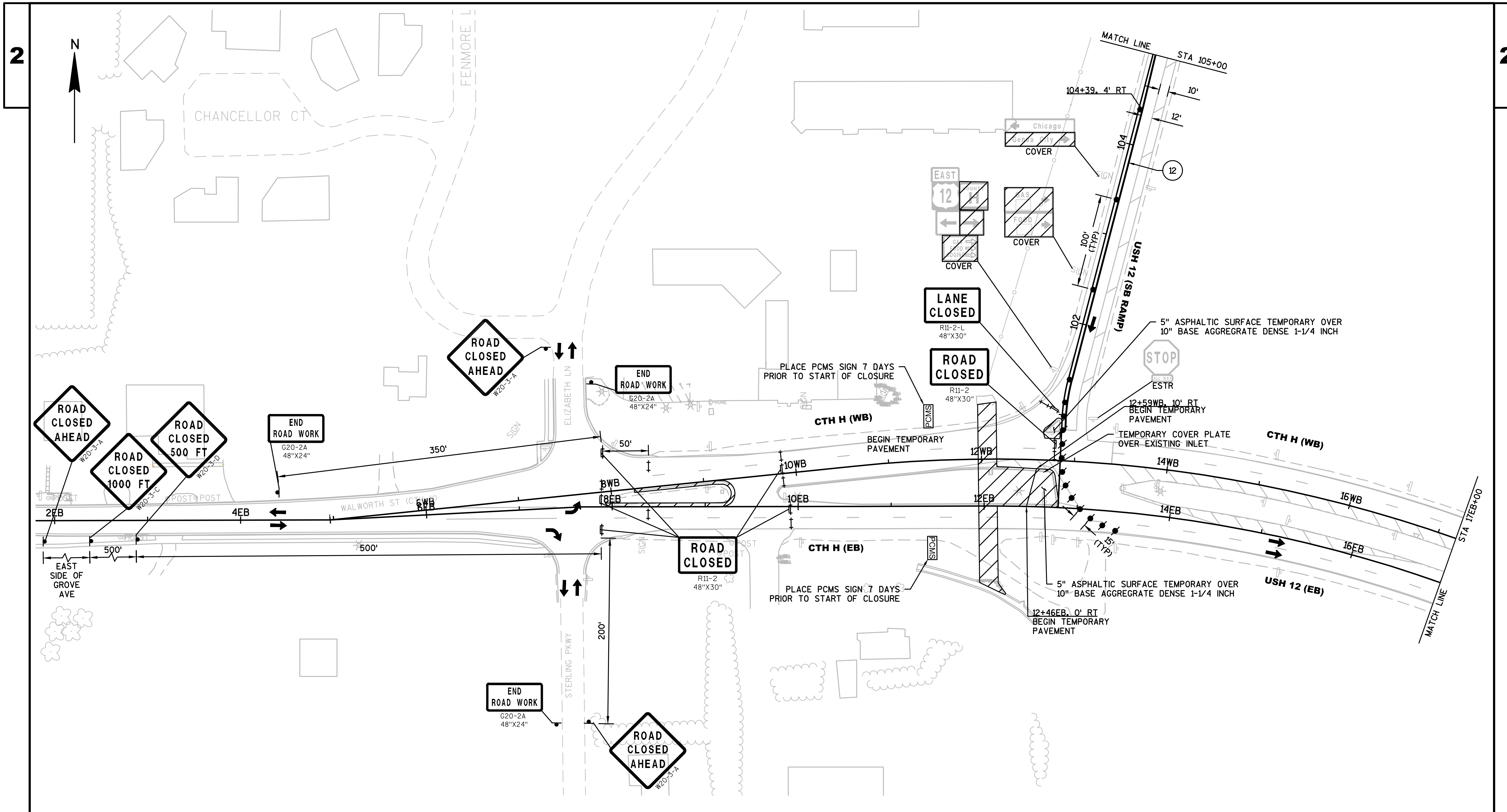
TRAFFIC:
- -FULL CLOSURE OF CTH H FROM ELIZABETH LN / STERLING PKWY TO S RD.

LEGEND:

- WORK ZONE
- (1) ➡ DIRECTION OF TRAVEL (NUMBER OF LANES)
- TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 1 OVERVIEW	SHEET 54	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026001-SOV.DWG
LAYOUT NAME - 026001-SOV - 026101
PLOT DATE : 4/20/2018 11:00 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

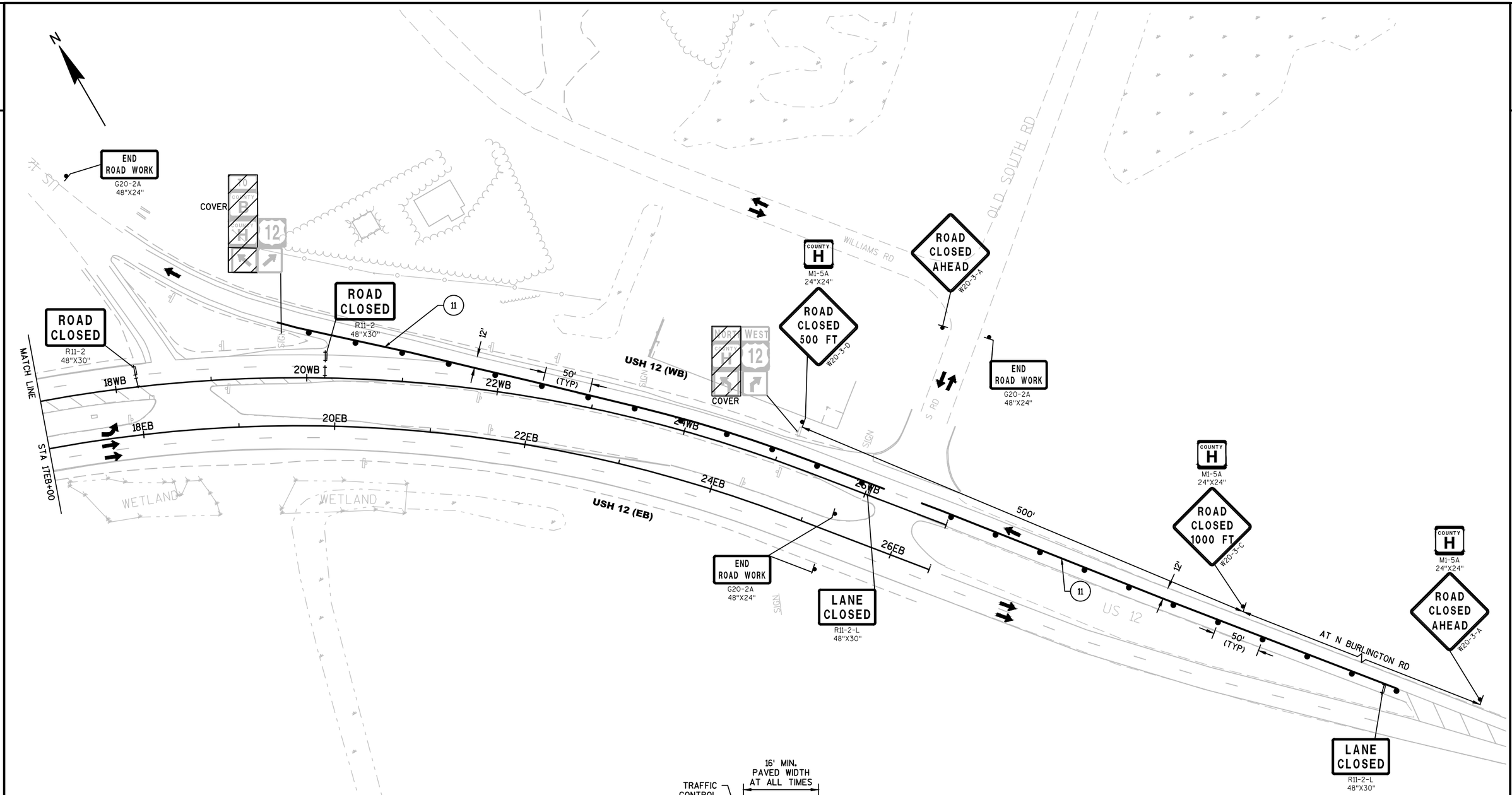


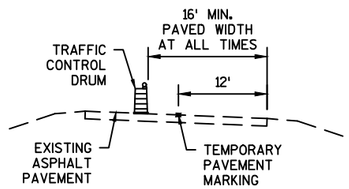
2
N
CHANCELLOR CT
FENMORE LN
MATCH LINE
STA 105+00
104+39, 4' RT
10'
12'
COVER
COVER
COVER
12
LANE CLOSED
R11-2-L
48"X30"
ROAD CLOSED
R11-2
48"X30"
100' (TYP)
USH 12 (SB RAMP)
5" ASPHALTIC SURFACE TEMPORARY OVER 10" BASE AGGREGRATE DENSE 1-1/4 INCH
STOP
ESTR
12+59WB, 10' RT BEGIN TEMPORARY PAVEMENT
TEMPORARY COVER PLATE OVER EXISTING INLET
CTH H (WB)
PLACE PCMS SIGN 7 DAYS PRIOR TO START OF CLOSURE
PCMS
ROAD CLOSED AHEAD
W20-3-A
END ROAD WORK
G20-2A
48"X24"
ELIZABETH LN
CTH H (WB)
BEGIN TEMPORARY PAVEMENT
ROAD CLOSED AHEAD
ROAD CLOSED 1000 FT
W20-3-C
ROAD CLOSED 500 FT
W20-3-D
350'
50'
12WB
14WB
16WB
10WB
8WB
2EB
4EB
WALWORTH ST (CTH H)
8EB
10EB
12EB
14EB
16EB
STA 17EB+00
15' (TYP)
500'
500'
EAST SIDE OF GROVE AVE
ROAD CLOSED
R11-2
48"X30"
CTH H (EB)
PCMS
PLACE PCMS SIGN 7 DAYS PRIOR TO START OF CLOSURE
5" ASPHALTIC SURFACE TEMPORARY OVER 10" BASE AGGREGRATE DENSE 1-1/4 INCH
USH 12 (EB)
MATCH LINE
12+46EB, 0' RT BEGIN TEMPORARY PAVEMENT
200'
STERLING PKWY
END ROAD WORK
G20-2A
48"X24"
ROAD CLOSED AHEAD
W20-3-A

PROJECT NO:1080-17-70	HWY:USH 12/CTH H	COUNTY:WALWORTH	TRAFFIC CONTROL STAGE 1	SHEET 55	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026102-S1.DWG
LAYOUT NAME - 026102-S1 - 026102
PLOT DATE : 4/20/2018 11:01 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

2





USH 12/CTH H WB TYPICAL SECTION
(LOOKING WEST)

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 1	SHEET 56	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026102-S1.DWG
LAYOUT NAME - 026102-S1 - 026103

PLOT DATE : 4/20/2018 11:01 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT

2

N

STA 105+00

MATCH LINE

106

106+39.0'

12 END

50' (TYP)

108

200'

110

112

500'

114

1000'

116

1600'

118

120

PCMS

PLACE PCMS AT USH 12 SB EXIT TO PELL LAKE DR AND USH 12 SB EXIT TO STH 50 DURING CTH H CLOSURE

USH 12 (SB)

USH 12 (NB)

RIGHT SHOULDER CLOSED

W21-5-A

RIGHT SHOULDER CLOSED AHEAD

W21-5-B

COUNTY H

M1-5A

24"X24"

ROAD CLOSED AHEAD

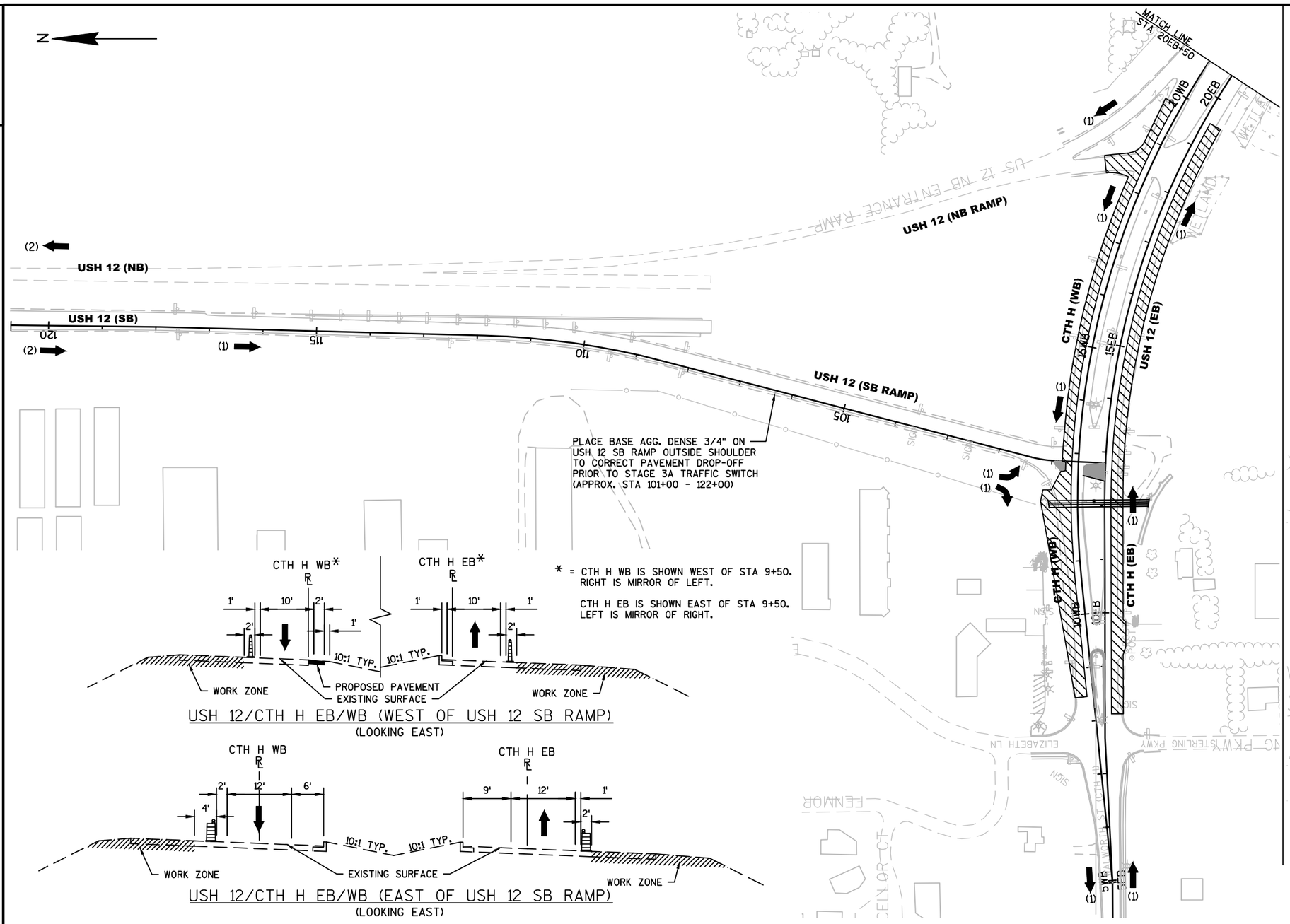
W20-3-A

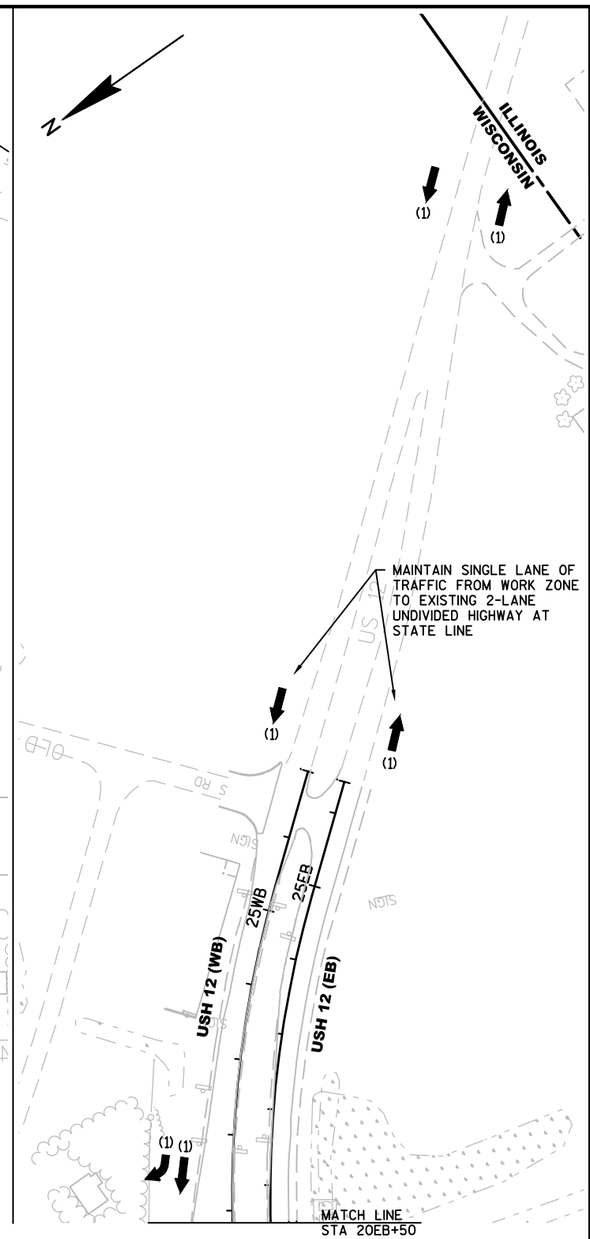
PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 1	SHEET 57	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026102-S1.DWG
LAYOUT NAME - 026102-S1 - 026104

PLOT DATE : 4/20/2018 11:01 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44





* = CTH H WB IS SHOWN WEST OF STA 9+50. RIGHT IS MIRROR OF LEFT.

CTH H EB IS SHOWN EAST OF STA 9+50. LEFT IS MIRROR OF RIGHT.

USH 12/CTH H EB/WB (WEST OF USH 12 SB RAMP)
(LOOKING EAST)

USH 12/CTH H EB/WB (EAST OF USH 12 SB RAMP)
(LOOKING EAST)

STAGE 2:

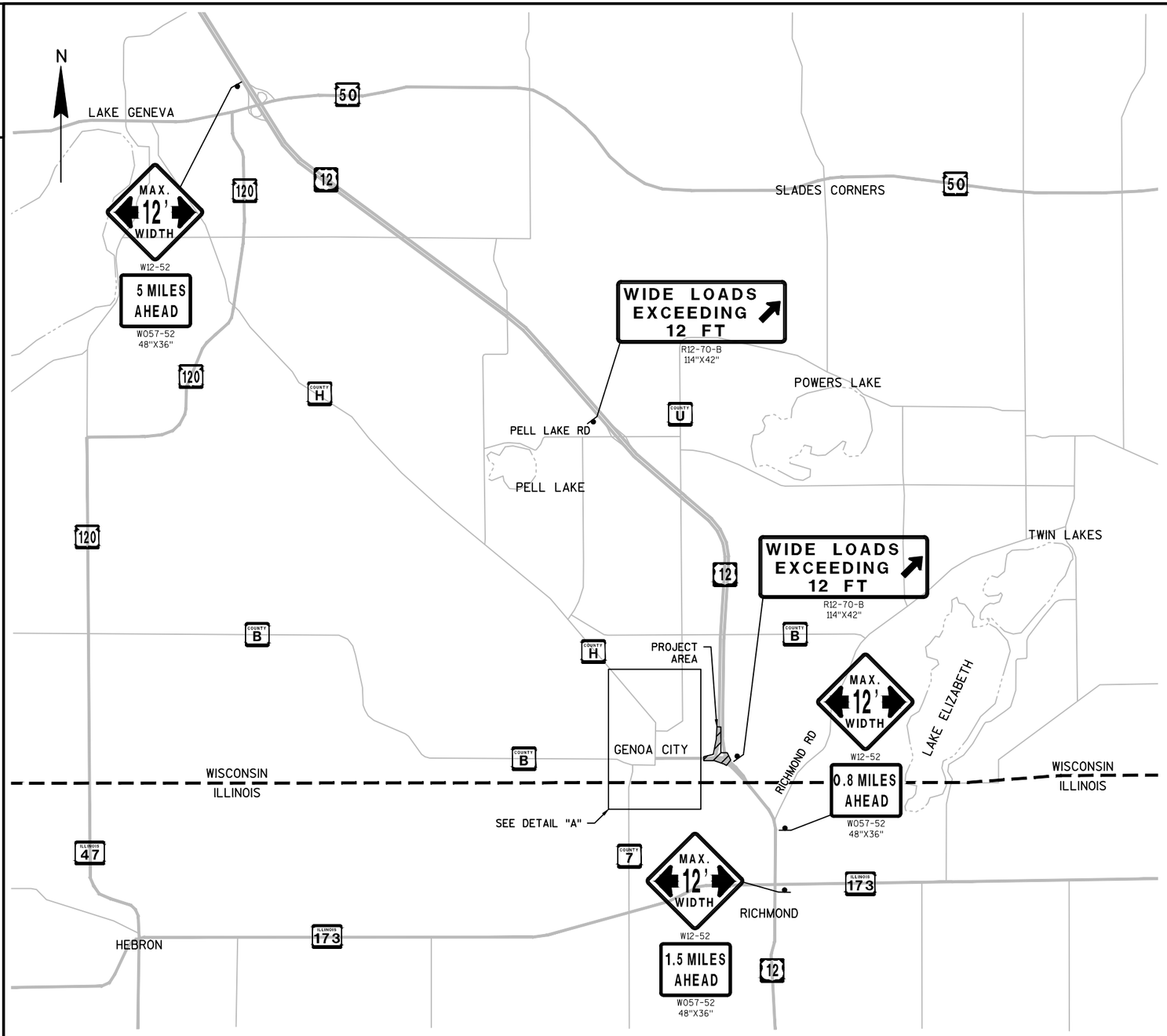
CONSTRUCTION:
- -RESURFACE USH 12/CTH H EB & WB OUTSIDE LANES & SHOULDERS
- -CONSTRUCT SIGN STRUCTURES S-64-609 & S-64-610 AND BEAM GUARD
- -SHAPING SHOULDERS ON USH 12 SB RAMP OUTSIDE SHOULDER

TRAFFIC:
- -CLOSE OUTSIDE LANES ON USH 12/CTH H EB/WB; MAINTAIN TRAFFIC ON EXISTING PAVEMENT
- -CLOSE ENTRANCE RAMP FROM CTH H EB TO USH 12 NB FOR MINIMUM DURATION REQUIRED TO COMPLETE MILLING & PAVING.
- -INSTALL OSOW WIDTH RESTRICTION SIGNING.

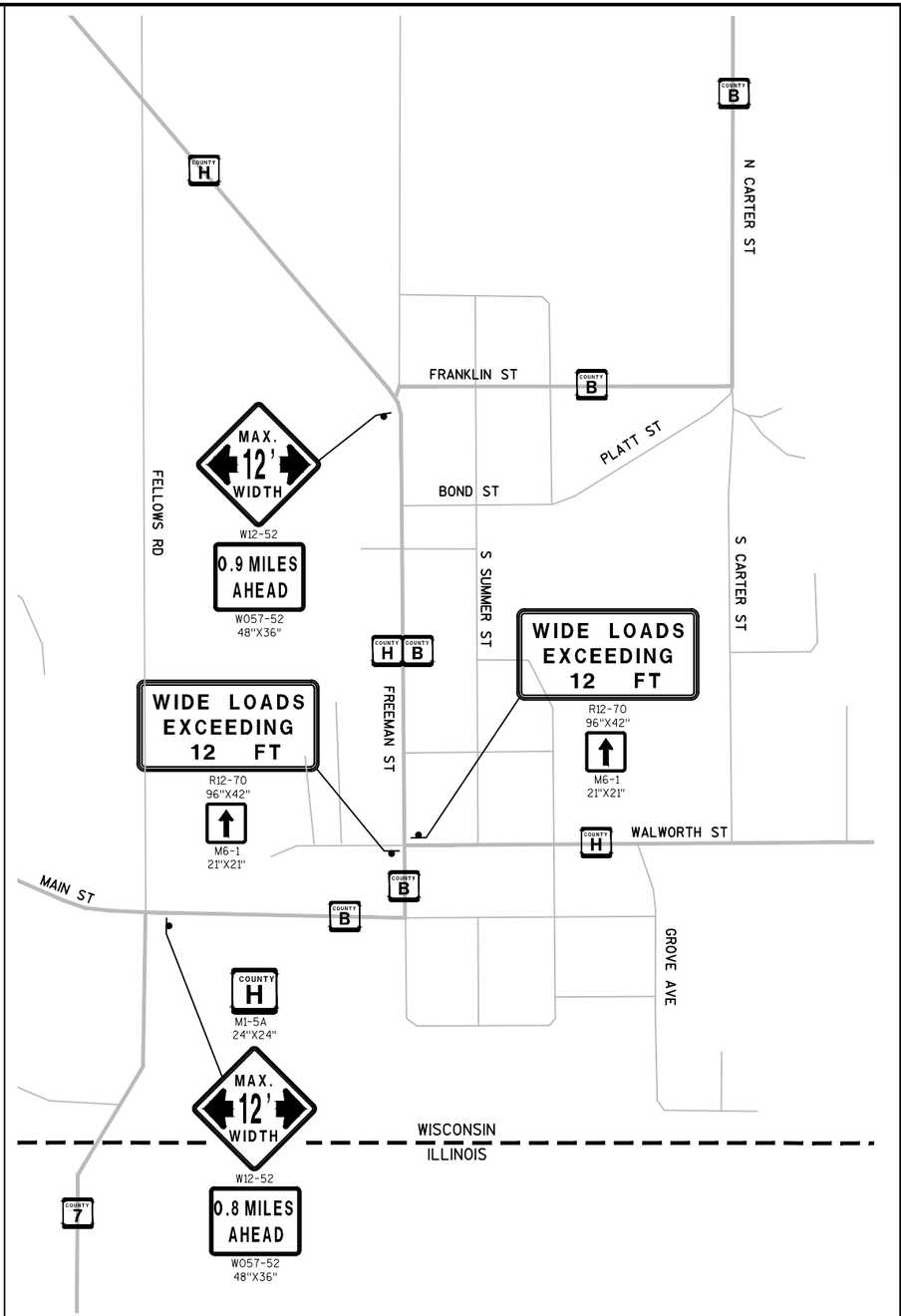
LEGEND:
- WORK ZONE
- (1) → DIRECTION OF TRAVEL (NUMBER OF LANES)
- TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 2 OVERVIEW	SHEET 58	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026001-SOV.DWG
LAYOUT NAME - 026001-SOV - 026201
PLOT DATE : 4/20/2018 11:02 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44



OVERVIEW



DETAIL "A"

OVERSIZE/OVERWEIGHT (OSOW) SIGNING NOTES:
ALL SIGNING SHOWN ON THIS SHEET SHALL BE INSTALLED PRIOR TO STAGE 2 TRAFFIC SHIFT, AND SHALL BE MAINTAINED THRU THE END OF STAGE 3B.

ANY DAILY SINGLE LANE CLOSURES REQUIRED AFTER STAGE 3B FOR PUNCH LIST OR MISCELLANEOUS WORK MUST BE SETUP TO PROVIDE 16-FT OF PAVEMENT WIDTH FOR OSOW VEHCILES. IF 16-FT CANNOT BE MAINTAINED, OSOW SIGNING MUST BE PROVIDED PER THIS SHEET.

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 2 - OSOW SIGNING	SHEET 59 E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026202-S2.DWG
LAYOUT NAME - 026202-S2 - 026202
PLOT DATE : 4/27/2018 8:36 AM PLOT BY : MATT ROESCH PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

N

CHANCELLOR CT

FENMORE L

ELIZABETH LN

STERLING PKWY

WALWORTH ST (CTH H)

USH 12 (SB RAMP)

USH 12 (NB R

CTH H (WB)

CTH H (EB)

USH 12 (EB)

REMOVE COVERING SIGNS FROM STAGE 1

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

LANE CLOSED
R11-2-L
48"X30"

W1-4R
30"X30"

W12-1D
24"X24"

STOP
ESTR

R1-1
30"X30"

R1-3-P
18"X6"

RIGHT LANE CLOSED AHEAD
W20-5A

W1-4L
30"X30"

9+20WB, 1' RT

10+55WB, 6' RT

6+89EB, 10' RT

4+96EB, 12' RT

TEMP. ASPHALT WEDGE

TEMPORARY ASPHALT WEDGE

EAST SIDE OF CARTER ST

EAST SIDE OF PETTICOAT (PRIVATE) DR

STA 1TEB+00

MATCH LINE

350'

105'

200'

25' (TYP)

50' (TYP)

15' (TYP)

10'

12'

5WB

5EB

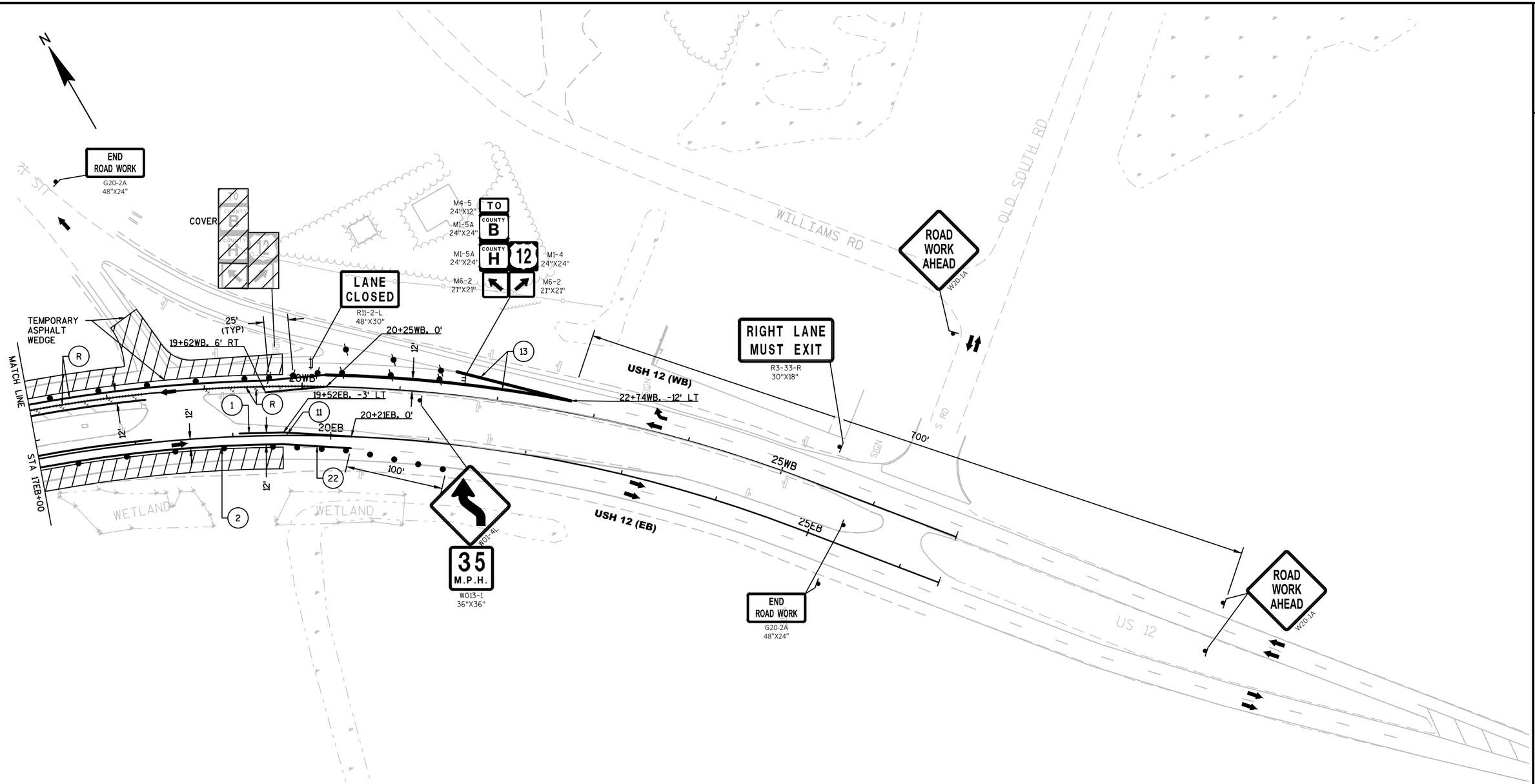
10WB

15EB

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 2	SHEET 60	E

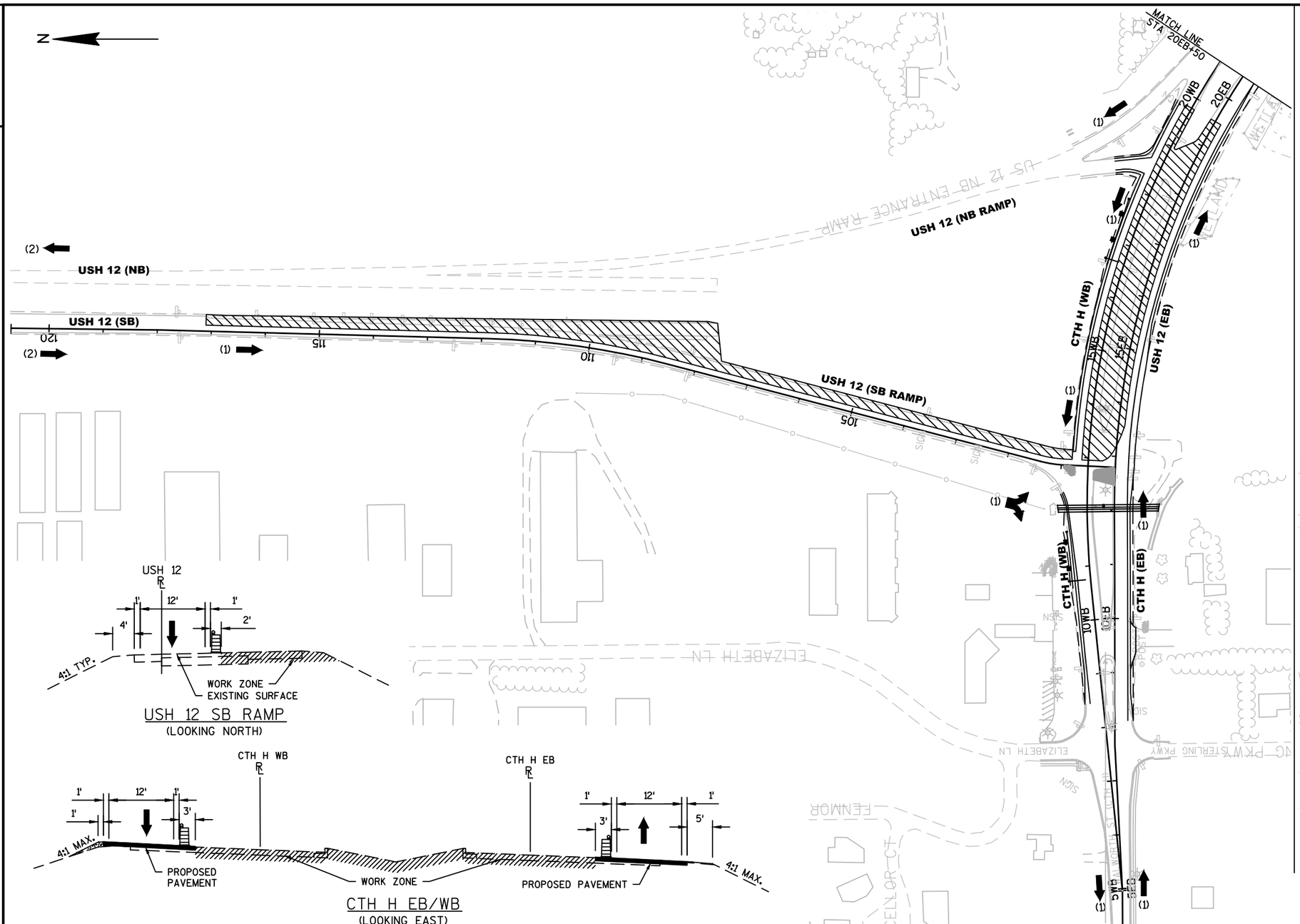
FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026202-S2.DWG
LAYOUT NAME - 026202-S2 - 026203
PLOT DATE : 4/20/2018 11:02 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

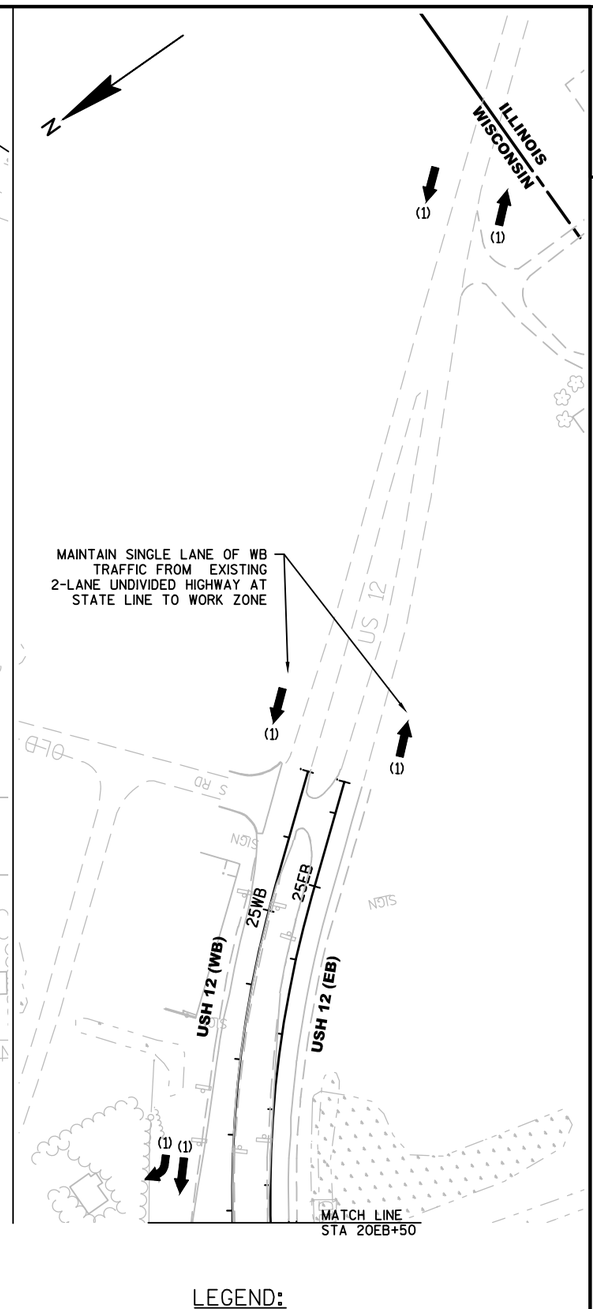
2



PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 2	SHEET 61	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026202-S2.DWG
LAYOUT NAME - 026202-S2 - 026204
PLOT DATE : 4/20/2018 11:02 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44





USH 12 SB RAMP
(LOOKING NORTH)

CTH H EB/WB
(LOOKING EAST)

STAGE 3A:

CONSTRUCTION:
- -RESURFACE EAST HALF OF USH 12 SB RAMP
- -RESURFACE CTH H EB & WB INSIDE LANES & SHOULDERS EAST OF USH 12 SB RAMP
- -RECONSTRUCT CTH H MEDIAN CURB & GUTTER EAST OF USH 12 SB RAMP

TRAFFIC:
- -SHIFT USH 12 SB RAMP TRAFFIC TO THE WEST (ON EXISTING PAVEMENT)
- -SHIFT CTH H EB/WB TRAFFIC ONTO NEW OUTSIDE LANE PAVEMENT
- -CLOSE ENTRANCE RAMP FROM CTH H EB TO USH 12 NB FOR MINIMUM DURATION REQUIRED TO COMPLETE MILLING & PAVING
- -MAINTAIN OSOW SIGNING FROM STAGE 2

LEGEND:
- WORK ZONE
- (1) DIRECTION OF TRAVEL (NUMBER OF LANES)
- TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3A OVERVIEW	SHEET 62	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026001-SOV.DWG
LAYOUT NAME - 026001-SOV - 026301
PLOT DATE : 4/20/2018 11:03 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

2

2

N

CHANCELLOR CT

FENMORE L

ELIZABETH LN

STERLING PKWY

WALWORTH ST (CTH H)

MATCH LINE

STA 105+00

USH 12 (NB RAMP)

USH 12 (SB RAMP)

CTH H (WB)

CTH H (EB)

USH 12 (EB)

STA 176+00

MATCH LINE

ROAD WORK AHEAD
W20-1-A

END ROAD WORK
G20-2A
48"X24"

350'

700'

200'

LANE CLOSED
R11-2-L
48"X30"

STOP
ALL WAY
R1-1
30"X30"

R1-3-P
18"X6"

ESTR

SIGN

POST

2EB
4EB
6WB
8WB
8EB
10WB
10EB
12WB
12EB
14WB
14EB
16WB
16EB
18EB

12'
14'
15' TYP
50' TYP
50' (TYP)
100'
102
104

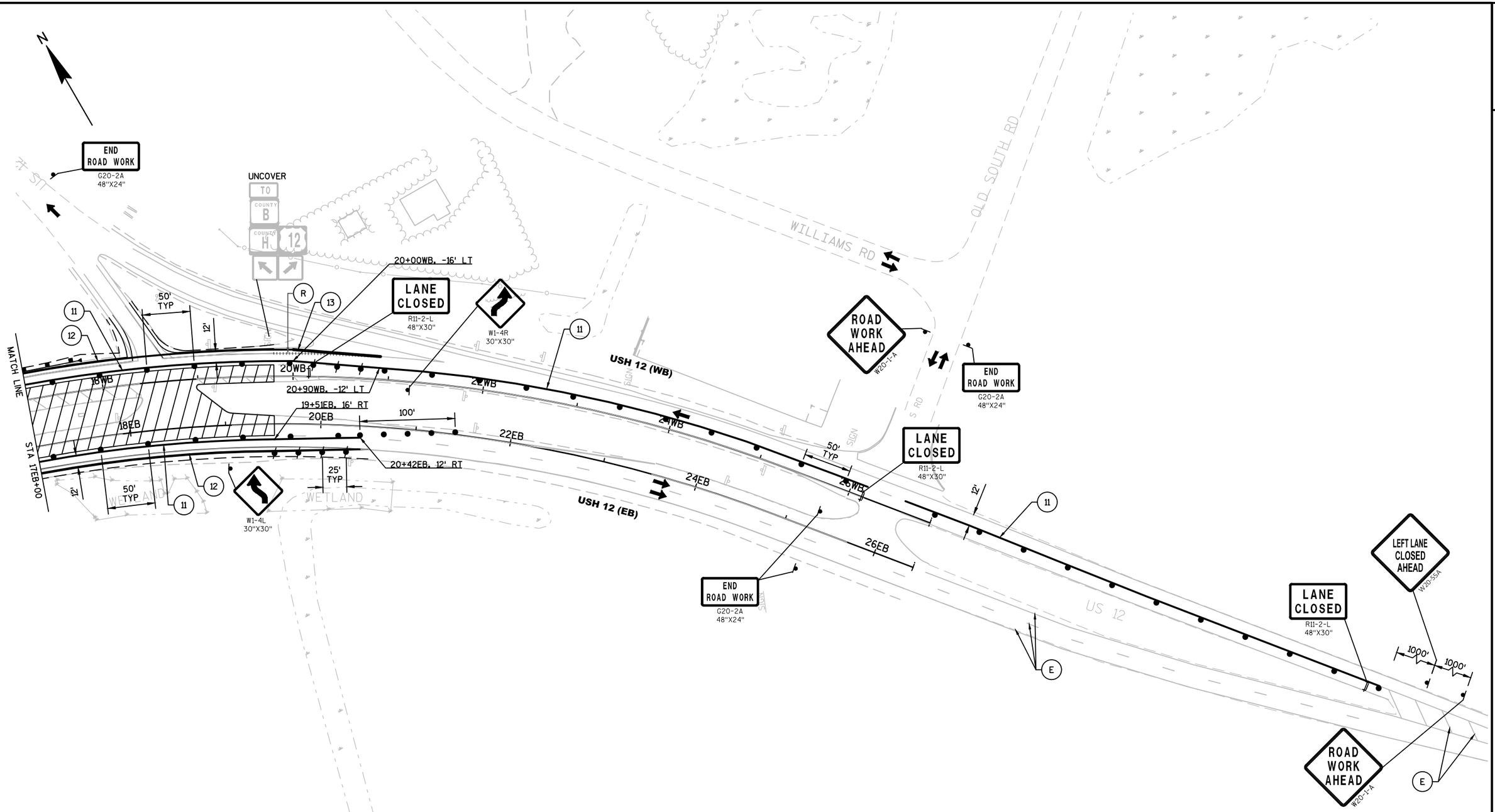
PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3A	SHEET 63	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026302-S3A.DWG
LAYOUT NAME - 026302-S3A - 026302

PLOT DATE : 4/20/2018 11:04 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

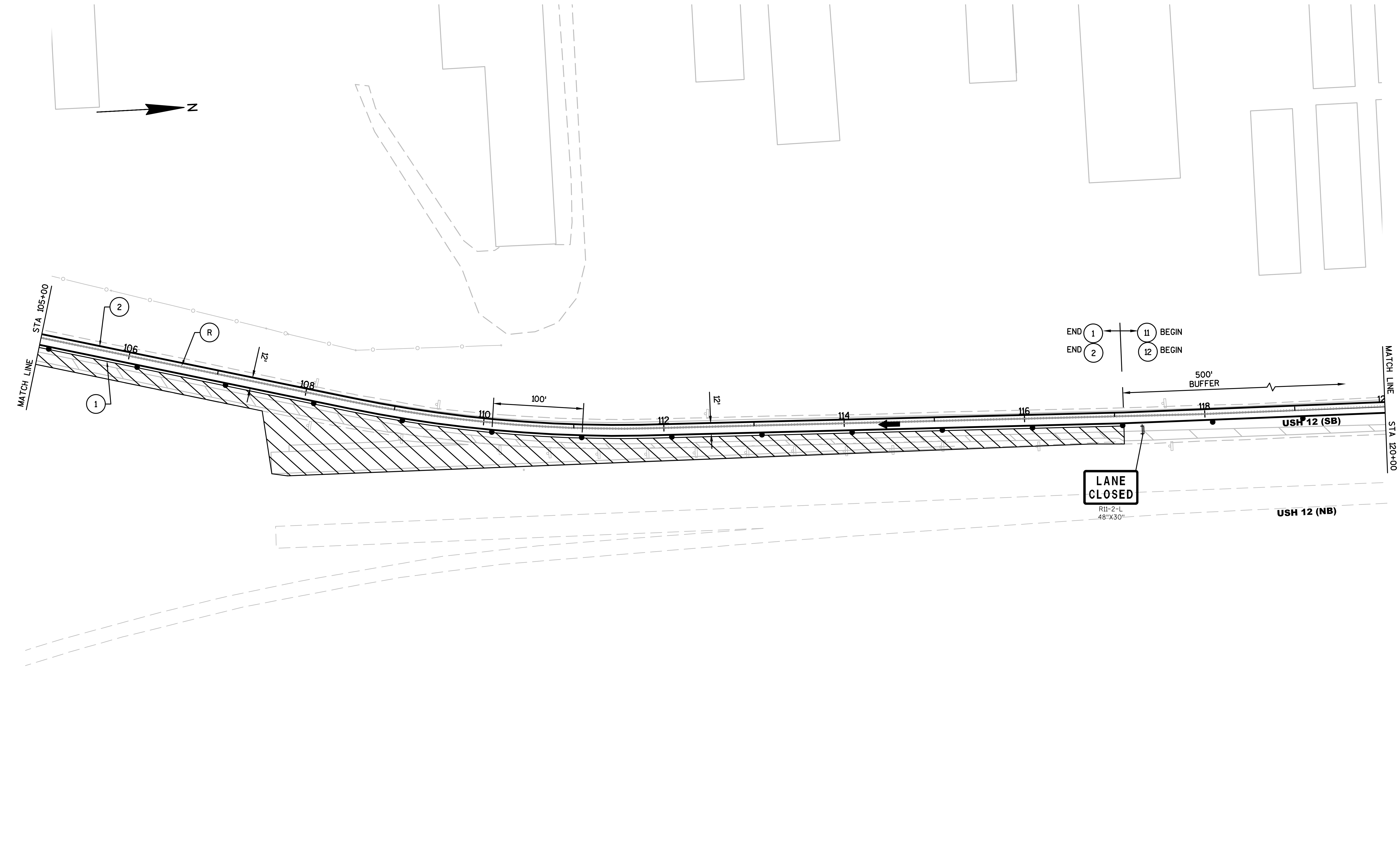
2



PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3A	SHEET 64	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026302-S3A.DWG
LAYOUT NAME - 026302-S3A - 026303
PLOT DATE : 4/20/2018 11:04 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

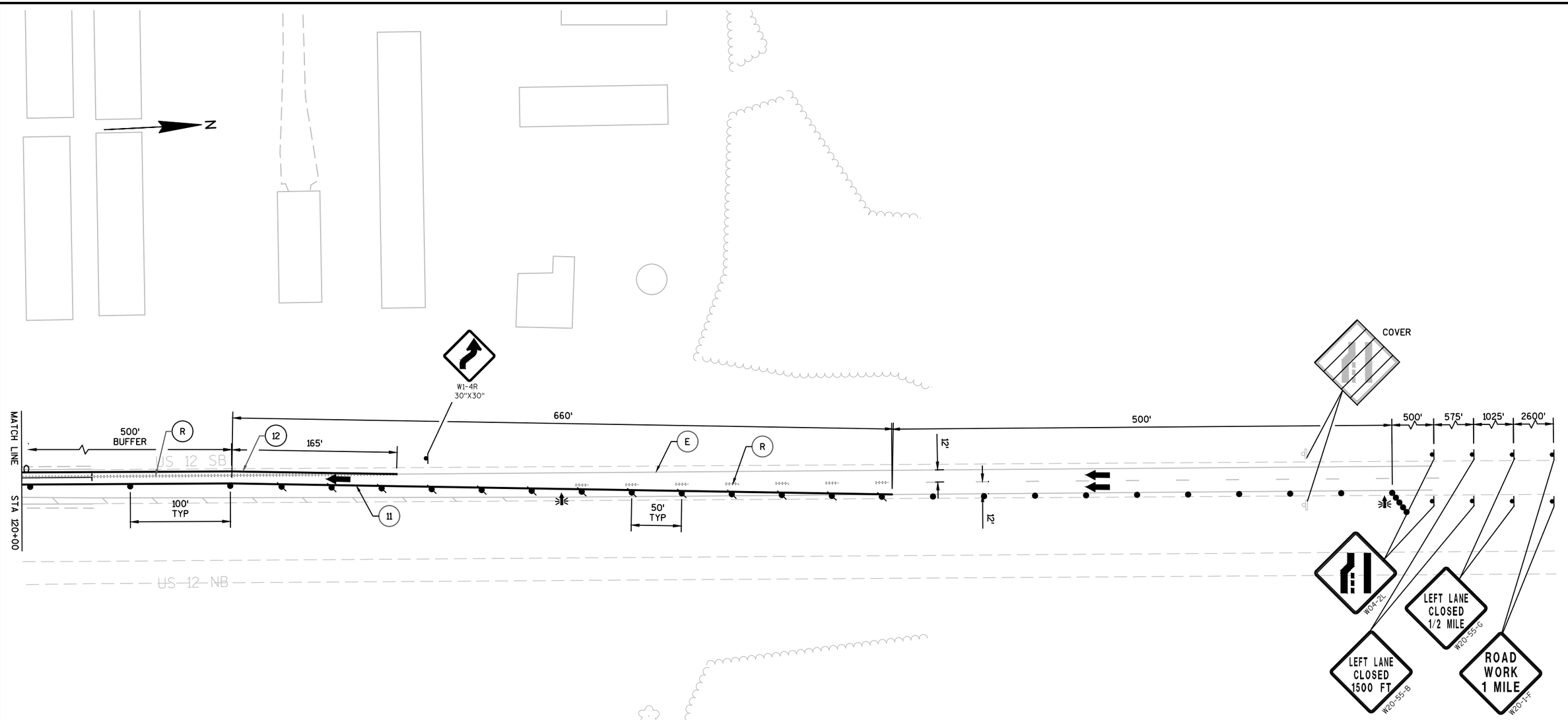
2



2

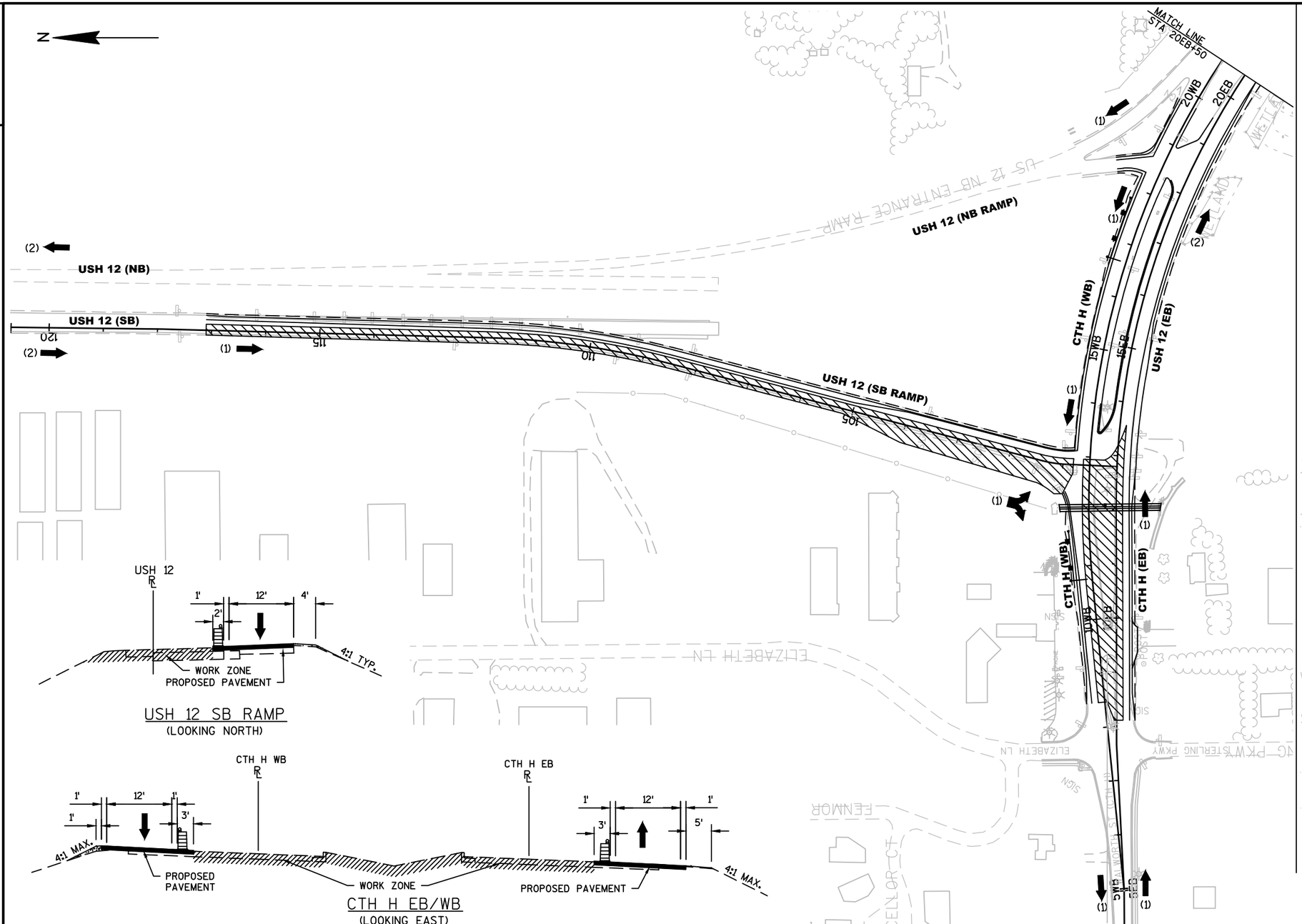
PROJECT NO:1080-17-70	HWY:USH 12/CTH H	COUNTY:WALWORTH	TRAFFIC CONTROL STAGE 3A	SHEET 65	E

2



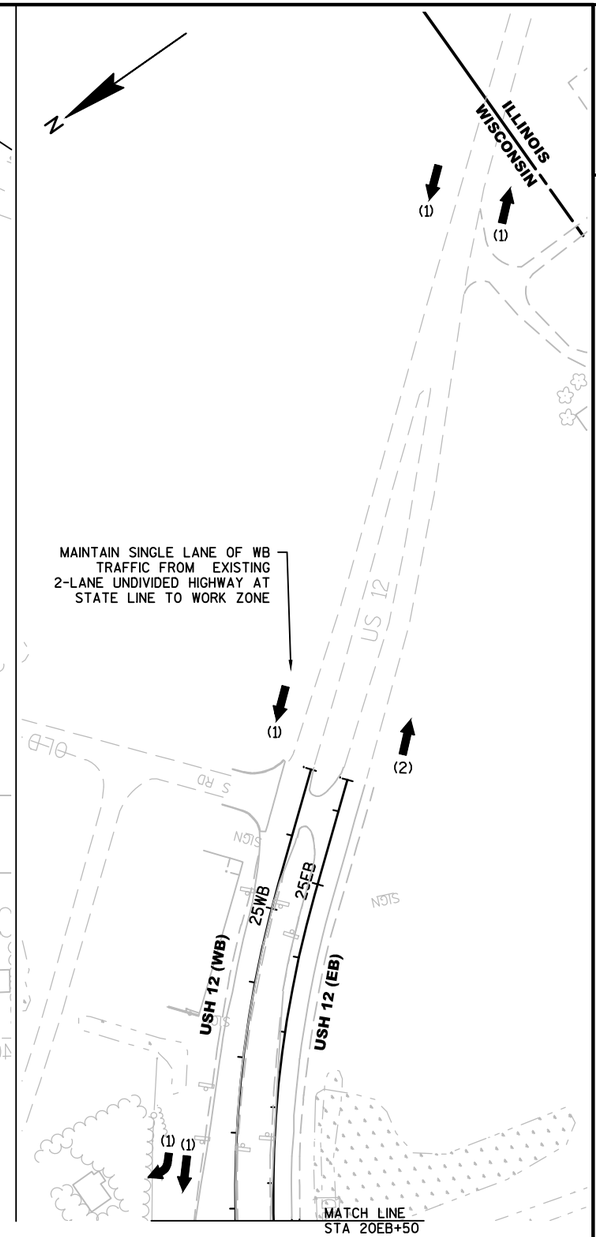
PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3A	SHEET 66	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026302-S3A.DWG
LAYOUT NAME - 026302-S3A - 026305
PLOT DATE : 4/20/2018 11:04 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44



USH 12 SB RAMP
(LOOKING NORTH)

CTH H EB/WB
(LOOKING EAST)



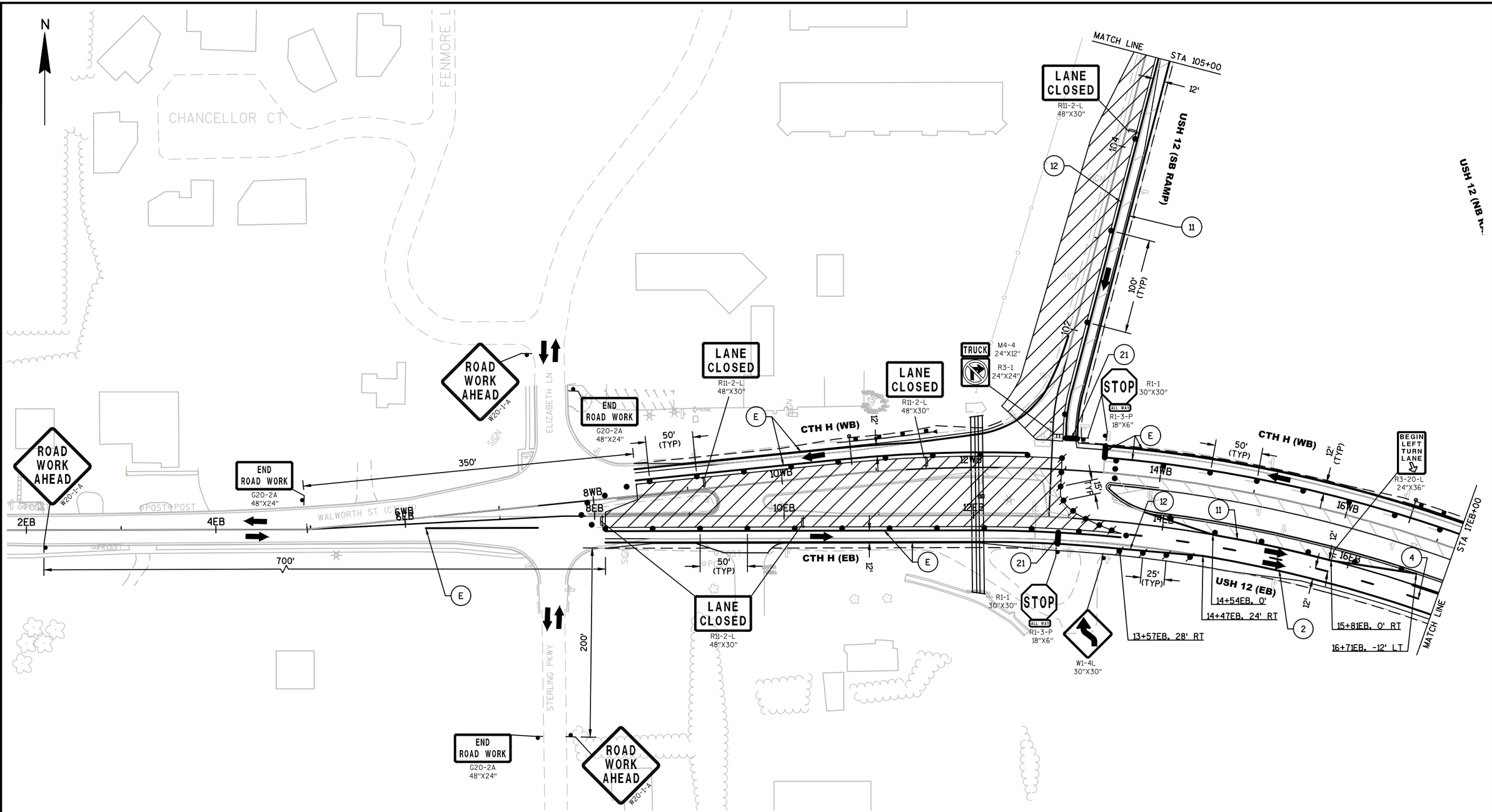
STAGE 3B:

CONSTRUCTION:
- -COMPLETE FULL DEPTH WIDENING FOR USH 12 SB RAMP RIGHT TURN LANE
- -RESURFACE WEST HALF OF USH 12 SB RAMP & WEST HALF OF INTERSECTION WITH CTH H
- -RESURFACE CTH H EB & WB INSIDE LANES & SHOULDERS WEST OF USH 12 SB RAMP AND RECONSTRUCT MEDIAN CURB & GUTTER

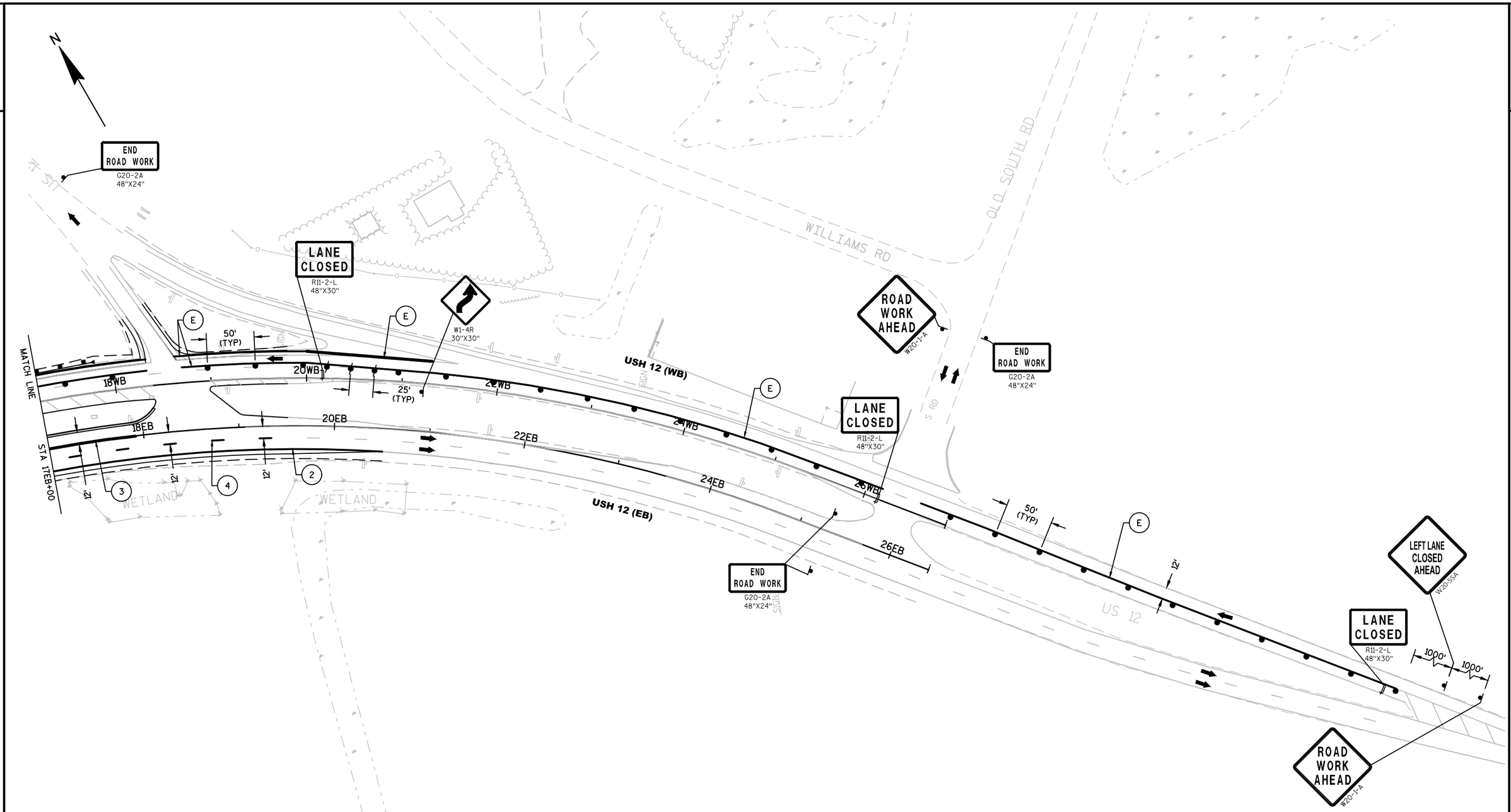
TRAFFIC:
- -SHIFT USH 12 SB RAMP TRAFFIC TO THE EAST (ONTO NEW PAVEMENT)
- -MAINTAIN USH 12/CTH H EB/WB TRAFFIC IN STAGE 3A CONFIGURATION
- -MAINTAIN OSOW SIGNING FROM STAGE 2

LEGEND:
- WORK ZONE
- (1) DIRECTION OF TRAVEL (NUMBER OF LANES)
- TEMPORARY PAVEMENT IN PLACE

PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3B OVERVIEW	SHEET 67	E


N
CHANCELLOR CT
FENMORE L
ELIZABETH LN
STERLING PKWY
WALWORTH ST (CTH H)
MATCH LINE
STA 105+00
USH 12 (SB RAMP)
USH 12 (NB R
ROAD WORK AHEAD
W20-1-A
END ROAD WORK
G20-2A
48"X24"
LANE CLOSED
R11-2-L
48"X30"
TRUCK
M4-4
24"X12"
R3-1
24"X24"
STOP
R1-1
30"X30"
ALL WAY
R1-3-P
18"X6"
BEGIN LEFT TURN LANE
R3-20-L
24"X36"
CTH H (WB)
CTH H (EB)
USH 12 (EB)
50' (TYP)
100' (TYP)
25' (TYP)
350'
700'
200'
15' TYP
2EB
4EB
6EB
8EB
10EB
12EB
8WB
10WB
12WB
14WB
16WB
14+54EB, 0'
14+47EB, 24' RT
13+57EB, 28' RT
15+81EB, 0' RT
16+71EB, -12' LT
STA 17EB+00
MATCH LINE
W1-4L
30"X30"

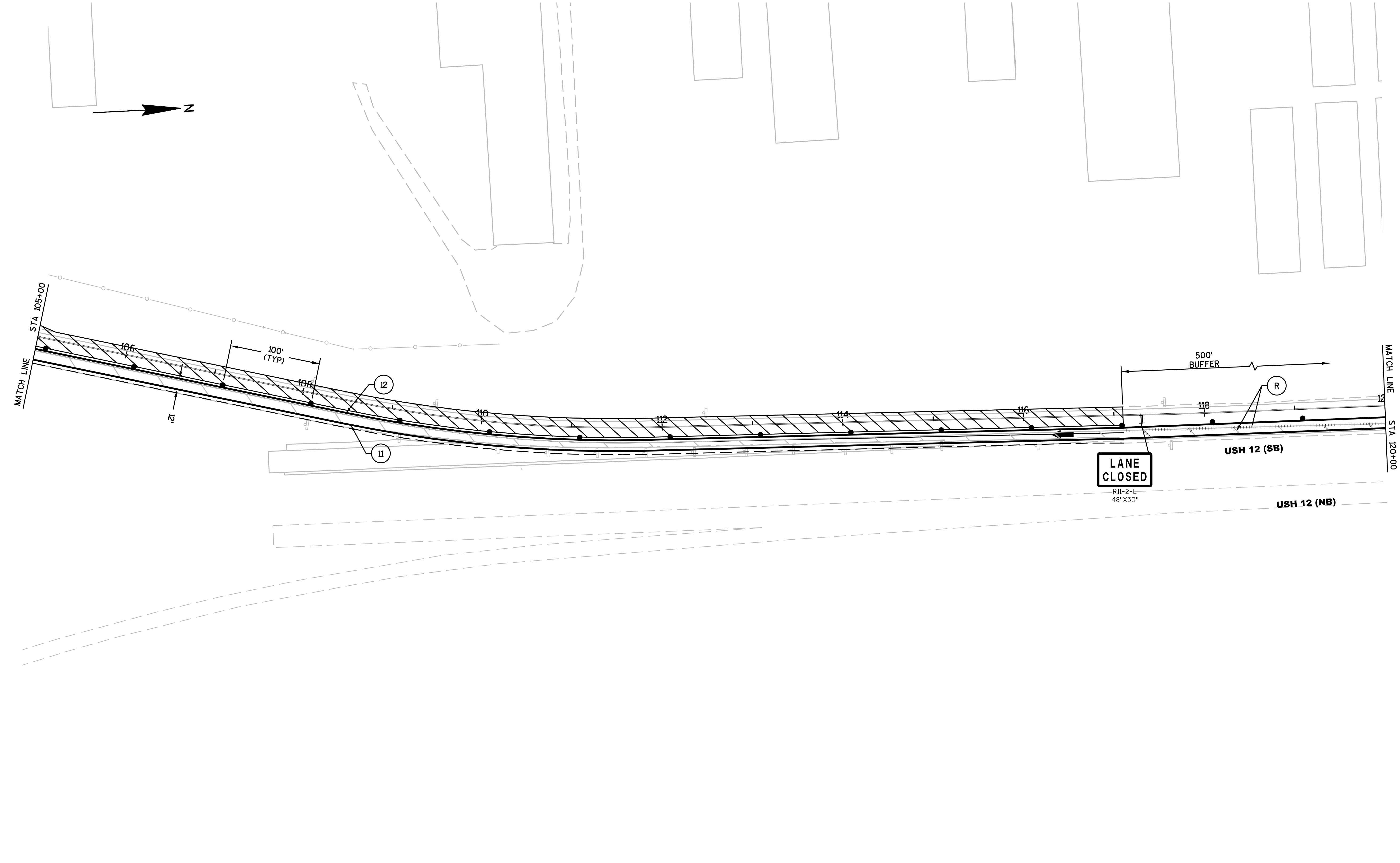
2



PROJECT NO: 1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3B	SHEET 69	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026402-S3B.DWG
LAYOUT NAME - 026402-S3B - 026403
PLOT DATE : 4/20/2018 11:05 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 44

2



2

PROJECT NO:1080-17-70	HWY:USH 12/CTH H	COUNTY:WALWORTH	TRAFFIC CONTROL STAGE 3B	SHEET 70	E

2

N

PLACE PCMS AT USH 12
EXIT TO PELL LAKE DR
NOTIFYING TRUCKS OF NO
RIGHT TURN TO CTH H

PCMS

MATCH LINE
STA 120+00

500'
BUFFER

660'

500'

500'

575'

1025'

2600'

50'
(TYP)

US 12 SB

US 12 NB

12

E

R

11

135'

W1-4L
30"X30"

COVER

W4-2R

RIGHT LANE
CLOSED
1/2 MILE
W20-5-G

RIGHT LANE
CLOSED
1500 FT
W20-5-B

ROAD
WORK
1 MILE
W20-1-F

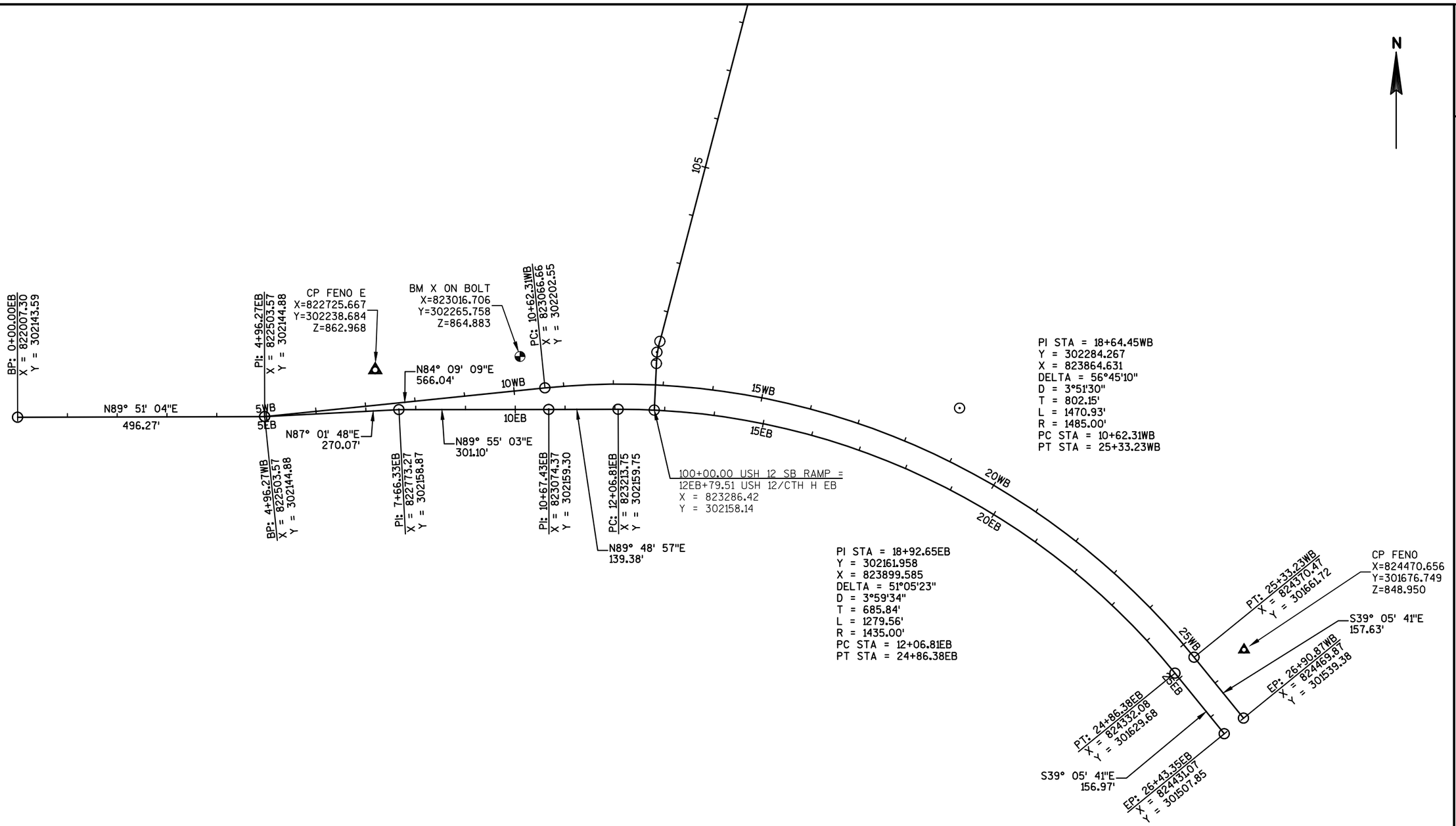
PROJECT NO:1080-17-70	HWY: USH 12/CTH H	COUNTY: WALWORTH	TRAFFIC CONTROL STAGE 3B	SHEET 71	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\026402-S3B.DWG
LAYOUT NAME - 026402-S3B - 026405

PLOT DATE : 4/20/2018 11:05 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

2



PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	ALIGNMENT LAYOUT - USH 12/CTH H EB/WB	SHEET 72	E

2

N

5SB

5EB

CP FENO E
X=822725.667
Y=302238.684
Z=862.968

BM X ON BOLT
X=823016.706
Y=302265.758
Z=864.883

10EB

10WB

PT: 101+38.64
X = 823297.49
Y = 302296.10

100+00.00 USH 12 SB RAMP =
12EB+79.51 USH 12/CTH H EB
X = 823286.42
Y = 302158.14

N2° 38' 19"E
93.48'

N14° 37' 06"E
712.36'

105

PC: 108+51.00
X = 823477.27
Y = 302985.39

110

PT: 111+86.74
X = 823524.34
Y = 303317.09

N1° 31' 55"E
605.77'

115

PI: 117+92.52
X = 823540.53
Y = 303922.64

N0° 40' 34"E
277.87'

120

EP: 120+70.38
X = 823543.81
Y = 304200.49

15EB

15WB

PC: 100+93.48
X = 823290.73
Y = 302251.53

PI STA = 101+16.14
Y = 302274.166
X = 823291.771
DELTA = 11°58'47"
D = 26°31'33"
T = 22.66'
L = 45.16'
R = 216.00'
PC STA = 100+93.48
PT STA = 101+38.64

PI STA = 110+19.60
Y = 303148.540
X = 823519.828
DELTA = 13°05'11"
D = 3°53'52"
T = 168.61'
L = 335.75'
R = 1470.00'
PC STA = 108+51.00
PT STA = 111+86.74

CP FENO E
X=823563.054
Y=303172.893
Z=875.636

20EB

20WB

25WB

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	ALIGNMENT LAYOUT - USH 12 SB RAMP	SHEET 73	E

1080-17-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0004	204.0100	Removing Pavement	SY	1,138.000	1,138.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	109.000	109.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	14,029.000	14,029.000
0010	204.0130	Removing Curb	LF	618.000	618.000
0012	204.0150	Removing Curb & Gutter	LF	729.000	729.000
0014	204.0190	Removing Surface Drains	EACH	1.000	1.000
0016	204.0195	Removing Concrete Bases	EACH	2.000	2.000
0018	204.0220	Removing Inlets	EACH	2.000	2.000
0020	204.9105.S	Removing (item description) 01. Traffic Signals (USH 12 SB off-ramp & CTH H)	LS	1.000	1.000
0022	205.0100	Excavation Common	CY	1,574.000	1,574.000
0024	208.0100	Borrow	CY	16.000	16.000
0026	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	26.350	26.350
0028	213.0100	Finishing Roadway (project) 01. 1080-17-70	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	604.000	604.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,229.000	2,229.000
0034	305.0500	Shaping Shoulders	STA	11.960	11.960
0036	311.0110	Breaker Run	TON	62.000	62.000
0038	390.0201	Base Patching Asphaltic	TON	172.000	172.000
0040	416.0610	Drilled Tie Bars	EACH	12.000	12.000
0042	416.1010	Concrete Surface Drains	CY	2.000	2.000
0044	450.4000	HMA Cold Weather Paving	TON	800.000	800.000
0046	455.0605	Tack Coat	GAL	2,388.000	2,388.000
0048	460.2000	Incentive Density HMA Pavement	DOL	2,610.000	2,610.000
0050	460.6223	HMA Pavement 3 MT 58-28 S	TON	2,359.000	2,359.000
0052	460.6224	HMA Pavement 4 MT 58-28 S	TON	1,715.000	1,715.000
0054	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	13.000	13.000
0056	465.0125	Asphaltic Surface Temporary	TON	45.000	45.000
0058	504.0900	Concrete Masonry Endwalls	CY	12.000	12.000
0060	522.2334	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	LF	373.000	373.000
0062	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	821.000	821.000
0064	602.0410	Concrete Sidewalk 5-Inch	SF	294.000	294.000
0066	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	20.000	20.000
0068	611.0660	Inlet Covers Type WM	EACH	2.000	2.000
0070	611.3225	Inlets 2x2.5-FT	EACH	1.000	1.000
0072	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0074	611.8120.S	Cover Plates Temporary	EACH	1.000	1.000
0076	614.2300	MGS Guardrail 3	LF	125.000	125.000

1080-17-70

Line	Item	Item Description	Unit	Total	Qty
0078	614.2610	MGS Guardrail Terminal EAT	EACH	2.000	2.000
0080	614.2620	MGS Guardrail Terminal Type 2	EACH	2.000	2.000
0082	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1080-17-70	EACH	1.000	1.000
0084	619.1000	Mobilization	EACH	1.000	1.000
0086	620.0300	Concrete Median Sloped Nose	SF	44.000	44.000
0088	624.0100	Water	MGAL	42.000	42.000
0090	625.0500	Salvaged Topsoil	SY	4,626.000	4,626.000
0092	627.0200	Mulching	SY	1,219.000	1,219.000
0094	628.1504	Silt Fence	LF	1,528.000	1,528.000
0096	628.1520	Silt Fence Maintenance	LF	1,528.000	1,528.000
0098	628.1905	Mobilizations Erosion Control	EACH	13.000	13.000
0100	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0102	628.2004	Erosion Mat Class I Type B	SY	4,564.000	4,564.000
0104	628.7010	Inlet Protection Type B	EACH	6.000	6.000
0106	628.7020	Inlet Protection Type D	EACH	7.000	7.000
0108	628.7504	Temporary Ditch Checks	LF	200.000	200.000
0110	628.7555	Culvert Pipe Checks	EACH	46.000	46.000
0112	628.7560	Tracking Pads	EACH	2.000	2.000
0114	628.7570	Rock Bags	EACH	20.000	20.000
0116	629.0210	Fertilizer Type B	CWT	4.000	4.000
0118	630.0130	Seeding Mixture No. 30	LB	105.000	105.000
0120	630.0200	Seeding Temporary	LB	159.000	159.000
0122	633.5200	Markers Culvert End	EACH	2.000	2.000
0124	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	81.000	81.000
0126	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	2.000	2.000
0128	637.1220	Signs Type I Reflective SH	SF	60.000	60.000
0130	637.2210	Signs Type II Reflective H	SF	610.710	610.710
0132	637.2215	Signs Type II Reflective H Folding	SF	44.760	44.760
0134	637.2230	Signs Type II Reflective F	SF	300.750	300.750
0136	638.2102	Moving Signs Type II	EACH	1.000	1.000
0138	638.2602	Removing Signs Type II	EACH	71.000	71.000
0140	638.3000	Removing Small Sign Supports	EACH	67.000	67.000
0142	641.8100	Overhead Sign Support (structure) 01. S-64-609	LS	1.000	1.000
0144	641.8100	Overhead Sign Support (structure) 02. S-64-220	LS	1.000	1.000
0146	643.0300	Traffic Control Drums	DAY	17,316.000	17,316.000
0148	643.0420	Traffic Control Barricades Type III	DAY	1,505.000	1,505.000
0150	643.0705	Traffic Control Warning Lights Type A	DAY	3,010.000	3,010.000
0152	643.0715	Traffic Control Warning Lights Type C	DAY	3,841.000	3,841.000
0154	643.0800	Traffic Control Arrow Boards	DAY	193.000	193.000

1080-17-70

Line	Item	Item Description	Unit	Total	Qty
0156	643.0900	Traffic Control Signs	DAY	8,041.000	8,041.000
0158	643.0920	Traffic Control Covering Signs Type II	EACH	10.000	10.000
0160	643.1050	Traffic Control Signs PCMS	DAY	150.000	150.000
0162	643.1070	Traffic Control Cones 42-Inch	DAY	875.000	875.000
0164	643.5000	Traffic Control	EACH	1.000	1.000
0166	645.0130	Geotextile Type R	SY	12.000	12.000
0168	646.1020	Marking Line Epoxy 4-Inch	LF	5,591.000	5,591.000
0170	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	5,668.000	5,668.000
0172	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	500.000	500.000
0174	646.1555	Marking Line Grooved Contrast Permanent Tape 4-Inch	LF	88.000	88.000
0176	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	1,274.000	1,274.000
0178	646.3555	Marking Line Grooved Contrast Permanent Tape 8-Inch	LF	774.000	774.000
0180	646.5020	Marking Arrow Epoxy	EACH	15.000	15.000
0182	646.5120	Marking Word Epoxy	EACH	5.000	5.000
0184	646.6120	Marking Stop Line Epoxy 18-Inch	LF	94.000	94.000
0186	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	11,847.000	11,847.000
0188	646.6468	Cold Weather Marking Epoxy 8-Inch	LF	2,048.000	2,048.000
0190	646.7120	Marking Diagonal Epoxy 12-Inch	LF	1,004.000	1,004.000
0192	646.7220	Marking Chevron Epoxy 24-Inch	LF	88.000	88.000
0194	646.8120	Marking Curb Epoxy	LF	254.000	254.000
0196	646.8220	Marking Island Nose Epoxy	EACH	3.000	3.000
0198	646.9000	Marking Removal Line 4-Inch	LF	3,976.000	3,976.000
0200	646.9100	Marking Removal Line 8-Inch	LF	230.000	230.000
0202	646.9200	Marking Removal Line Wide	LF	360.000	360.000
0204	649.0105	Temporary Marking Line Paint 4-Inch	LF	7,877.000	7,877.000
0206	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	15,338.000	15,338.000
0208	649.0205	Temporary Marking Line Paint 8-Inch	LF	160.000	160.000
0210	649.0250	Temporary Marking Line Removable Tape 8-Inch	LF	464.000	464.000
0212	649.0805	Temporary Marking Stop Line Paint 18-Inch	LF	64.000	64.000
0214	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	48.000	48.000
0216	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0218	650.4500	Construction Staking Subgrade	LF	1,738.000	1,738.000
0220	650.5000	Construction Staking Base	LF	1,738.000	1,738.000
0222	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	821.000	821.000
0224	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0226	650.8500	Construction Staking Electrical Installations (project) 01. 1080-17-70	LS	1.000	1.000
0228	650.9000	Construction Staking Curb Ramps	EACH	2.000	2.000
0230	650.9910	Construction Staking Supplemental Control (project) 01. 1080-17-70	LS	1.000	1.000

1080-17-70

Line	Item	Item Description	Unit	Total	Qty
0232	650.9920	Construction Staking Slope Stakes	LF	1,771.000	1,771.000
0234	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	811.000	811.000
0236	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	555.000	555.000
0238	652.0615	Conduit Special 3-Inch	LF	737.000	737.000
0240	652.0800	Conduit Loop Detector	LF	820.000	820.000
0242	653.0135	Pull Boxes Steel 24x36-Inch	EACH	4.000	4.000
0244	653.0140	Pull Boxes Steel 24x42-Inch	EACH	10.000	10.000
0246	653.0905	Removing Pull Boxes	EACH	1.000	1.000
0248	654.0102	Concrete Bases Type 2	EACH	2.000	2.000
0250	654.0113	Concrete Bases Type 13	EACH	3.000	3.000
0252	654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1.000	1.000
0254	655.0230	Cable Traffic Signal 5-14 AWG	LF	453.000	453.000
0256	655.0240	Cable Traffic Signal 7-14 AWG	LF	848.000	848.000
0258	655.0260	Cable Traffic Signal 12-14 AWG	LF	244.000	244.000
0260	655.0305	Cable Type UF 2-12 AWG Grounded	LF	599.000	599.000
0262	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,635.000	1,635.000
0264	655.0610	Electrical Wire Lighting 12 AWG	LF	758.000	758.000
0266	655.0700	Loop Detector Lead In Cable	LF	4,189.000	4,189.000
0268	655.0800	Loop Detector Wire	LF	1,952.000	1,952.000
0270	656.0200	Electrical Service Meter Breaker Pedestal (location) 01. USH 12 SB Ramp & CTH H	LS	1.000	1.000
0272	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000
0274	657.0310	Poles Type 3	EACH	2.000	2.000
0276	657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	3.000	3.000
0278	658.0173	Traffic Signal Face 3S 12-Inch	EACH	10.000	10.000
0280	658.5069	Signal Mounting Hardware (location) 01. USH 12 SB Ramp & CTH H	LS	1.000	1.000
0282	659.1125	Luminaires Utility LED C	EACH	6.000	6.000
0284	678.0800	Install Cellular Modems	EACH	1.000	1.000
0286	690.0150	Sawing Asphalt	LF	2,123.000	2,123.000
0288	690.0250	Sawing Concrete	LF	533.000	533.000
0290	740.0440	Incentive IRI Ride	DOL	620.000	620.000
0292	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	800.000	800.000
0294	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	700.000	700.000
0296	SPV.0060	Special 01. Remove And Abandon Existing Electrical Service	EACH	1.000	1.000
0298	SPV.0060	Special 02. Install Poles Type 12	EACH	1.000	1.000
0300	SPV.0060	Special 03. Install Poles Type 13	EACH	2.000	2.000
0302	SPV.0060	Special 04. Install Monotube Arms 35-FT	EACH	2.000	2.000
0304	SPV.0060	Special 05. Install Monotube Arms 40-FT	EACH	1.000	1.000

1080-17-70

Line	Item	Item Description	Unit	Total	Qty
0306	SPV.0060	Special 06. Install Luminaire Arms Steel 15-FT	EACH	3.000	3.000
0308	SPV.0090	Special 01. Construction Staking Asphalt Pavement	LF	3,366.000	3,366.000
0310	SPV.0105	Special 01. Transport And Install State Furnished Traffic Signal Cabinet	LS	1.000	1.000
0312	SPV.0105	Special 02. Transport Signal and Lighting Materials	LS	1.000	1.000

3

REMOVING SMALL PIPE CULVERTS

STA	OFFSET FROM	OFFSET TO	DESCRIPTION	LENGTH	203.0100 REMOVING SMALL PIPE CULVERTS EACH
12WB+04	58' LT	132' RT	34" X 50" CMP ARCH	190'	1
12WB+10	58' LT	132' RT	34" X 50" CMP ARCH	190'	1
TOTAL					2

REMOVING ASPHALT

ROADWAY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
USH 12 SB RAMP	18	5,218
CTH H WB	54	4,851
CTH H EB	37	3,960
TOTAL	109	14,029

3

REMOVING CONCRETE ITEMS

ROADWAY	STATION FROM	STATION TO	SIDE	204.0100 REMOVING PAVEMENT SY	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF
USH 12 SB RAMP	107+75	115+22	RT	1,065	--	--
USH 12 SB RAMP	108+98	115+11	RT	--	618	--
CTH H WB	11+96	12+16	LT	21	--	--
CTH H WB	11+97	12+83	RT	--	--	197
CTH H WB	12+65	12+86	LT	37	--	--
CTH H EB	11+95	12+24	RT	15	--	--
CTH H EB	13+44	18+14	LT	--	--	532
TOTAL				1,138	618	729

REMOVING SURFACE DRAINS AND INLETS

ROADWAY	STA	OFFSET	204.0190 REMOVING SURFACE DRAINS EACH	204.0220 REMOVING INLETS EACH
USH 12 SB RAMP	100+92	5' LT	--	1
CTH H EB	12+08	20' LT	--	1
CTH H WB	12+10	10' RT	1	--
TOTAL			1	2

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

3

EARTHWORK SUMMARY

Division	From/To Station	Location	Common Excavation (1) (item # 205.0100)		Salvaged/ Unusable Pavement Material	Available Material (4)	Reduced EBS in Fill (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Borrow	Comment
			Cut (2)	EBS Excavation (3)			Factor 0.80		Factor 1.20			(Item 208.0100)	
1	12+50 to 12+80	CTH H Temporary	52	0	6	46	0	0	0	46	46	--	
Division 1 (Stage 1) Subtotal			52	0	6	46	0	0	0	46	46	0	See Note 8
2	10+23 to 11+97	CTH H	9	0	0	9	0	59	71	-62	-62	16	
Division 2 (Stage 2) Subtotal			9	0	0	9	0	59	71	-62	-62	16	See Note 9
3	107+79 to 115+21	USH 12	664	0	287	377	0	292	350	27	27	--	
	13+42 to 18+39	CTH H	271	8	66	205	6	30	36	169	169	--	
Division 3 (Stage 3A) Subtotal			935	8	353	582	6	322	387	195	195	0	
4	100+81 to 105+14	USH 12	452	21	83	369	17	394	473	-104	-104	--	
	11+97 to 12+80	CTH H	92	5	24	68	4	1	2	67	67	--	
Division 4 (Stage 3B) Subtotal			544	26	107	437	21	395	474	-37	-37	0	See Note 10
Grand Total			1540	34	466	1074	27	777	932	142	142	16	
		Total Common Exc		1574									

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Breaker Run. EBS estimated at 16" depth over 5% of pavement area.
4) Available Material = Cut - Salvaged/Unusuable Pavement Material
5) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
6) Expanded Fill. Factor = 1.20
   Expanded Fill = (Unexpanded Fill - Reduced EBS) * Fill Factor
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.
8) Excavation for Temporary Pavement - Not shown in Earthwork Detail Sheets.
9) Use 46 CY of material from Division 1.
10) Use 37 CY of material from Division 3.

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

3

AGGREGATE AND SHOULDER ITEMS

LOCATION	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0500 SHAPING SHOULDERS STA	311.0110 BREAKER RUN TON	624.0100 WATER MGAL
TEMP PAVEMENT (STAGE 1)	--	--	87	--	--	1
101+00 - 122+00 (STAGE 2)	--	143	--	--	--	2
USH 12 SB RAMP	--	364	1,463	11.96	38	27
CTH H WB	12.56	97	215	--	--	5
CTH H EB	13.79	--	464	--	24	7
TOTAL	26.35	604	2,229	11.96	62	42

NOTE: BREAKER RUN IS FOR UNDISTRIBUTED EBS BACKFILL.

ASPHALTIC PAVEMENT ITEMS

ROADWAY	390.0201 BASE PATCHING ASPHALTIC TON	455.0605 TACK COAT GAL	460.6223 HMA PAVEMENT 3 MT 58-28 S TON	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
USH 12 SB RAMP	74	866	906	622	--	10
CTH H WB	63	794	741	570	--	--
CTH H EB	35	728	712	523	13	35
TOTAL	172	2,388	2,359	1,715	13	45

3

CONCRETE ITEMS

ROADWAY	416.1010 CONCRETE SURFACE DRAINS CY	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	645.0130 GEOTEXTILE TYPE R SY
USH 12 SB RAMP	--	91	294	20	21	--
CTH H WB	2	164	--	--	16	12
CTH H EB	--	566	--	--	7	--
TOTAL	2	821	294	20	44	12

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

3

CULVERT ITEMS

ROADWAY	STATION / OFFSET INLET	STATION / OFFSET DISCH	INVERT ELEV. INLET	INVERT ELEV. DISCH	SLOPE, %	416.0610 DRILLED TIE BARS EACH	504.0900 CONCRETE MASONRY ENDWALLS CY	522.2334 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 34X53-INCH LF	633.5200 MARKERS CULVERT END EACH
CTH H	12WB+02.20; 53.50' LT	12EB+00.78; 81.36' RT	851.90	848.20	2.00%	--	--	185	--
CTH H	12WB+09.90; 54.50' LT	12EB+07.93; 20.06' LT	851.90	850.28	1.90%	--	5	85	1
CTH H	12EB+07.93; 20.06' LT	12EB+08.91; 82.56' RT	850.20	848.20	1.94%	12	7	103	1
TOTAL						12	12	373	2

STORM SEWER ITEMS

ROADWAY	STATION/OFFSET	RIM ELEV.	INV. ELEV.	611.0660 INLET COVERS TYPE WM EACH	611.3225 INLETS 2X2.5-FT EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.8120.S COVER PLATES TEMPORARY EACH
CTH H	12EB+07.93; 20.06' LT	853.80	850.20	--	--	1	--
CTH H	12WB+70.51; 12.06' RT	855.67	--	1	--	--	1
USH 12 SB RAMP	100+93.14; 2.00' LT	856.87	853.10	1	1	--	--
TOTAL				2	1	1	1

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

3

BEAM GUARD ITEMS

ROADWAY	STATION FROM	STATION TO	SIDE	614.2300 GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 GUARDRAIL TERMINAL TYPE 2 EACH
CTH H WB	10WB+62	11WB+65	LT	50	1	1
CTH H WB	16WB+54	17WB+82	LT	75	1	1
TOTAL				125	2	2

RESTORATION ITEMS

ROADWAY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB
USH 12 SB RAMP	3,309	975	2.1	60	90
CTH H WB	397	0	0.3	7	11
CTH H EB	920	0	0.6	17	26
UNDISTRIBUTED	--	244	1.0	21	32
TOTAL	4,626	1,219	4.0	105	159

3

EROSION CONTROL ITEMS

ROADWAY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.7010 INLET PROTECTION TYPE B EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH
USH 12 SB RAMP	1,222	1,222	4	--	2,334	--	1	100	2	--	--
CTH H WB	--	--	3	--	397	--	4	--	28	--	--
CTH H EB	--	--	3	--	920	4	--	60	7	--	--
UNDISTRIBUTED	306	306	3	4	913	2	2	40	9	2	20
TOTAL	1,528	1,528	13	4	4,564	6	7	200	46	2	20

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X 6"X18' [EA]	634.0622 POSTS WOOD 4"X6"X22" [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLC SH [SF]
1	W23-2(2S)	II	--	36 x 36	--	9.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
2	W3-3(2S)	II	--	36 x 36	--	9.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
3	R4-7(2S)	II	--	24 x 30	5.000	--	--	1	--	--	--	--	--	MOUNT ON LIGHT POLE	-- x --	--
4	W5-54(2S)	II	--	18 x 18	--	2.250	--	--	--	--	--	--	--	MOUNT ON LIGHT POLE	-- x --	--
5	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--
6	R2-1	--	35 MPH	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R5-1	-- x --	--
7	--	--	RADAR ENFORCED	-- x --	--	--	--	--	--	--	--	1	9	--	-- x --	--
8	R2-1	--	35 MPH	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
9	R2-1(2M)	II	35 MPH	30 x 36	7.500	--	--	--	--	--	--	--	--	MOUNT ON UPRIGHT - S-64-609	-- x --	--
10	D16-1R	I	ELIZABETH LN ONLY [RA]	-- x --	--	--	--	--	--	--	--	--	--	S-64-609	6 x 5	30.00
11	R2-1(2M)	II	35 MPH	30 x 36	7.500	--	--	--	--	1	--	--	--	--	-- x --	--
12	W3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE OBJECT MARKER	-- x --	--
13	W3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
14	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	--	-- x --	--
15	R4-7(2S)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	--	-- x --	--
16	J1-2(2S)	II	--	48 x 39	13.000	--	--	1	2	2	--	--	--	ALSO REMOVE D1-1	-- x --	--
	M2-1		--	21 x 15												
	M1-4		USH 12	24 x 24												
	M4-6		--	24 x 12												
	M1-5A		CTH H	24 x 24												
17	D1-1	II	[UA] CHICAGO	60 x 15	6.250	--	--	--	--	2	--	--	--	--	-- x --	--
18	R3-7R(3)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--
19	W5-52R	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R3-3 AND R5-1	-- x --	--
20	R1-1	--	--	-- x --	--	--	--	1	--	--	--	--	--	ALSO REMOVE R1-3P	-- x --	--
21	R5-1(2M)	II	--	36 x 36	9.000	--	--	1	1	--	--	--	--	ALSO REMOVE R3-1	-- x --	--
22	R3-1(2M)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--
23	R1-1F(3)	II	--	36 x 36	--	--	7.460	--	--	1	--	--	--	--	-- x --	--
24	R1-1	--	--	-- x --	--	--	--	1	--	--	--	--	--	REMOVE FROM MAST ARM	-- x --	--
25	R1-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R1-3P	-- x --	--
26	J3-1(2M)	II	--	24 x 57	9.500	--	--	--	--	1	--	--	--	--	-- x --	--
	M3-1		--	24 x 12												
	M1-5A		CTH H	24 x 24												
	M6-1		--	21 x 21												
27	R3-20L(2M)	II	--	24 x 36	6.000	--	--	--	--	1	--	--	--	--	-- x --	--
28	W6-2(2M)	II	--	36 x 36	--	9.000	--	1	1	1	--	--	--	--	-- x --	--
29	W6-2(2M)	II	--	36 x 36	--	9.000	--	1	1	1	--	--	--	--	-- x --	--
30	R5-1A(2M)	II	--	42 x 30	8.750	--	--	1	1	1	--	--	--	ALSO REMOVE W3-1	-- x --	--
31	R5-1A(2M)	II	--	42 x 30	8.750	--	--	1	1	1	--	--	--	ALSO REMOVE W3-1	-- x --	--

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X 6"X18' [EA]	634.0622 POSTS WOOD 4"X6"X22" [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLC SH [SF]
32	J2-1(2M)	II	--	24 x 57	9.500	--	--	1	1	1	--	--	--	--	-- x --	--
	M3-2		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M6-1		--	21 x 21												
33	J2-1(2M)	II	--	24 x 57	9.500	--	--	--	--	1	--	--	--	--	-- x --	--
	M3-4		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M5-1L		--	21 x 21												
34	R2-1(2M)	II	45 MPH	30 x 36	7.500	--	--	1	1	1	--	--	--	--	-- x --	--
35	R2-1(2M)	II	45 MPH	30 x 36	7.500	--	--	1	1	1	--	--	--	--	-- x --	--
36	R5-1(2M)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	--	-- x --	--
37	R4-7(2M)	II	--	24 x 30	5.000	--	--	1	1	1	--	--	--	--	-- x --	--
38	W1-6(2M)	II	--	48 x 24	--	8.000	--	1	1	1	--	--	--	--	-- x --	--
39	R2-6L(2M)	II	--	30 x 36	7.500	--	--	1	1	1	--	--	--	REMOVE W1-6, R3-3 AND W5-52R	-- x --	--
40	R5-1(2M)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--
41	W1-6(2M)	II	--	48 x 24	--	8.000	--	1	1	1	--	--	--	ALSO REMOVE W1-8	-- x --	--
42	R1-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R1-3P	-- x --	--
43	R1-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R1-3P AND W5-52R	-- x --	--
44	R1-1F(3)	II	--	36 x 36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--
45	R3-18(2M)	II	--	36 x 36	9.000	--	--	--	--	1	--	--	--	--	-- x --	--
46	R1-1F(3)	II	--	36 x 36	--	--	7.460	--	--	--	--	--	45	--	-- x --	--
47	D16-1	I	ELIZABETH LN ONLY [DA]	-- x --	--	--	--	--	--	--	--	--	--	S-64-220	6 x 5	30.00
48	R1-2(2M)	II	--	48 x 42	7.000	--	--	1	1	1	--	--	--	--	-- x --	--
49	W1-6(2M)	II	--	48 x 24	--	8.000	--	1	1	1	--	--	--	--	-- x --	--
50	W3-3(3)	II	--	36 x 36	--	9.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
51	W3-3(3)	II	--	36 x 36	--	9.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
52	J3-2(3)	II	--	72 x 120	60.000	--	--	--	--	--	2	--	--	--	-- x --	--
	M4-5		--	36 x 18												
	M1-5A		CTH B	36 x 36												
	M1-5A		CTH H	36 x 36												
	M6-2		--	30 x 30												
	M3-4		--	36 x 18												
	M1-4		USH 12	36 x 36												
	M6-2		--	30 x 30												
53	W23-2(2S)	II	--	36 x 36	--	9.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
54	J3-1(3)	II	--	36 x 84	21.000	--	--	1	1	2	--	--	--	--	-- x --	--
	M3-4		--	36 x 18												
	M1-4		USH 12	36 x 36												
	M6-2		--	30 x 30												

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X 6"X18' [EA]	634.0622 POSTS WOOD 4"X6"X22" [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLC SH [SF]
55	J3-2(3)	--	--	72 x 84	42.000	--	--	1	1	2	--	--	--	--	-- x --	--
	M4-5		--	36 x 18												
	M1-5A		CTH B	36 x 36												
	M6-2		--	30 x 30												
	M3-1		--	36 x 18												
	M1-5A		CTH H	36 x 36												
	M6-2		--	30 x 30												
56	W9-1L(2M)	II	--	36 x 36	--	9.000	--	1	1	1	--	--	--	--	-- x --	--
57	W9-1L(2M)	II	--	36 x 36	--	9.000	--	1	1	1	--	--	--	--	-- x --	--
58	D4-2L(3)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--
59	W3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
60	W3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
61	J3-1(2M)	II	--	24 x 57	9.500	--	--	1	1	1	--	--	--	--	-- x --	--
	M3-4		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M6-1		--	21 x 21												
62	W13-3(3)	II	40 MPH	36 x 48	--	12.000	--	1	1	1	--	--	--	--	-- x --	--
63	D1-2	II	[A] GENOA CITY LAKE GENEVA [A]	84 x 30	17.500	--	--	1	2	2	--	--	--	--	-- x --	--
64	J3-2(2M)	II	--	48 x 57	19.000	--	--	1	1	1	--	--	--	--	-- x --	--
	M3-1		--	24 x 12												
	M1-5A		CTH H	24 x 24												
	M5-2L		--	21 x 21												
	M3-4		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M5-2R		--	21 x 21												
65	J3-2(2M)	II	--	48 x 57	19.000	--	--	1	1	1	--	--	--	--	-- x --	--
	M3-1		--	24 x 12												
	M1-5A		CTH H	24 x 24												
	M5-2L		--	21 x 21												
	M3-4		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M5-2R		--	21 x 21												
66	R2-1(2M)	II	45 MPH	30 x 36	7.500	--	--	1	1	1	--	--	--	--	-- x --	--
67	R2-1(2M)	II	45 MPH	30 x 36	7.500	--	--	1	1	1	--	--	--	--	-- x --	--
68	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE	-- x --	--
69	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	--	MOUNT ON SIGNAL POLE - 3 FT HEIGHT	-- x --	--
70	R5-1(3)	II	--	36 x 36	9.000	--	--	1	1	1	--	--	--	ALSO REMOVE J ASSEMBLY	-- x --	--

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X 6"X18' [EA]	634.0622 POSTS WOOD 4"X6"X22" [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLC SH [SF]
71	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	70	3 FT MOUNT HEIGHT	-- x --	--
72	R1-1(3)	II	--	36 x 36	7.460	--	--	1	1	1	--	--	--	--	-- x --	--
73	R1-1	--	--	-- x --	--	--	--	1	--	--	--	--	--	ALSO REMOVE R1-3P	-- x --	--
74	J3-2(2S)	II	--	48 x 57	19.000	--	--	--	--	--	--	--	70	--	-- x --	--
	M3-2		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M6-1		--	21 x 21												
	M1-5A		CTH H	24 x 24												
	M6-1		--	21 x 21												
75	W12-1D(2S)	II	--	24 x 24	--	4.000	--	--	--	1	--	--	--	2 FT MOUNT HEIGHT	-- x --	--
76	R5-1A(3)	II	--	42 x 30	8.750	--	--	--	--	--	--	--	77	BACK OF SIGN #77	-- x --	--
77	D1-2	II	[LA] CHICAGO	78 x 30	16.250	--	--	1	2	2	--	--	--	--	-- x --	--
			GENOA CITY [RA]													
78	J3-1(2S)	II	--	24 x 57	9.500	--	--	--	--	1	--	--	--	--	-- x --	--
	M3-2		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M6-1		--	21 x 21												
79	R5-1A(3)	II	--	42 x 30	8.750	--	--	1	1	1	--	--	--	ALSO REMOVE J ASSEMBLY	-- x --	--
80	R6-3A(2S)	II	--	30 x 24	5.000	--	--	--	--	1	--	--	--	--	-- x --	--
81	R1-1F(3)	II	--	36 x 36	--	--	7.460	--	--	--	--	--	83	--	-- x --	--
82	R1-1	--	--	-- x --	--	--	--	1	--	--	--	--	--	REMOVE FROM MAST ARM	-- x --	--
83	R6-3A(2S)	II	--	30 x 24	5.000	--	--	1	--	--	--	--	--	--	-- x --	--
84	R1-1F(3)	II	--	36 x 36	--	--	7.460	--	--	--	--	--	83	--	-- x --	--
85	R5-1(3)	II	--	36 x 36	9.000	--	--	--	--	--	--	--	83	--	-- x --	--
86	R5-1A(2S)	II	--	36 x 24	6.000	--	--	--	--	--	--	--	83	3 FT MOUNT HEIGHT	-- x --	--
87	R5-1C	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R5-1A, R1-1 AND R1-3P	-- x --	--
88	R5-1C	--	--	-- x --	--	--	--	1	--	--	--	--	--	ALSO REMOVE R5-1A	-- x --	--
89	R6-2L(2S)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	--	-- x --	--
90	J3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	ALSO REMOVE R6-2L	-- x --	--
91	R3-8R(2S)	II	--	54 x 30	11.250	--	--	--	--	2	--	--	--	--	-- x --	--
92	J3-2(2S)	II	--	48 x 57	19.000	--	--	--	--	1	--	--	--	--	-- x --	--
	M3-2		--	24 x 12												
	M1-4		USH 12	24 x 24												
	M5-1L		--	21 x 21												
	M1-5A		CTH H	24 x 24												
	M5-1R		--	21 x 21												
93	W3-3(5)	II	--	48 x 48	--	16.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
94	W3-3(5)	II	--	48 x 48	--	16.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
95	W3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
96	W3-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
97	D4-2L(3)	II	--	36 x 48	12.000	--	--	1	1	1	--	--	--	--	-- x --	--

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	634.0618 POSTS WOOD 4"X 6"X18' [EA]	634.0622 POSTS WOOD 4"X6"X22" [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [FT.] x H [FT.]	637.1220 SIGNS TYPE I REFLC SH [SF]
98	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
99	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
100	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
101	NOT USED	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--
102	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
103	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
104	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
105	R11-2	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
106	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
107	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
108	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
109	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
110	W3-3(5)	II	--	48 x 48	--	16.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
111	W23-2(2S)	II	--	36 x 36	--	9.000	--	--	--	1	--	--	--	TEMPORARY FLAGS INCIDENTAL	-- x --	--
112	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
113	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
114	W1-8(4)	II	--	30 x 36	--	7.500	--	--	--	1	--	--	--	4 FT MOUNT HEIGHT	-- x --	--
115	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
116	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
117	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
118	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
119	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
120	W12-1	--	--	-- x --	--	--	--	1	1	--	--	--	--	--	-- x --	--
121	W1-2R(5)	II	--	48 x 48	--	16.000	--	1	1	1	--	--	--	ALSO REMOVE W13-1	-- x --	--
122	W13-1(5)	II	35 MPH	36 x 36	--	9.000	--	--	--	--	--	--	121	--	-- x --	--
123	W1-2R(5)	II	--	48 x 48	--	16.000	--	1	1	1	--	--	--	ALSO REMOVE W13-1	-- x --	--
124	W13-1(5)	II	35 MPH	36 x 36	--	9.000	--	--	--	--	--	--	123	--	-- x --	--
125	R3-20L(2M)	II	--	24 x 36	6.000	--	--	--	--	1	--	--	--	SHEET 3 OF 9	-- x --	--
126	R4-7(2M)	II	--	24 x 30	5.000	--	--	--	--	1	--	--	--	SHEET 3 OF 9	-- x --	--
127	J2-1(2M)	II	--	24 x 84	14.000	--	--	--	--	1	--	--	--	SHEET 4 OF 9	-- x --	--
	M4-5		--	24 x 12												
	M1-5A		CTH B	24 x 24												
	M1-5A		CTH H	24 x 24												
	M4-20L		--	24 x 24												
128	W4-2L(2M)	II	--	36 x 36	--	9.000	--	1	1	1	--	--	--	SHEET 5 OF 9	-- x --	--
129	W4-2L(2M)	II	--	36 x 36	--	9.000	--	1	1	1	--	--	--	SHEET 5 OF 9	-- x --	--
130	R1-1F(3)	II	--	36 x 36	--	--	7.460	--	--	--	--	--	--	MOUNT ON SIGNAL POLE - SHEET 3 OF 9	-- x --	--
--	--	--	--	-- x --	--	--	--	--	--	--	--	--	--	--	-- x --	--
TOTALS					610.710	300.750	44.760	71	67	81	2	1				60.000

3

1080-17-70

OVERHEAD SIGN SUPPORTS - MISC QUANTITIES

LOCATION	OVERHEAD SIGN SUPPORT STRUCTURE S-64-609 L.S. 641.8100.01	OVERHEAD SIGN SUPPORT STRUCTURE S-64-220 L.S. 641.8100.01
CTH H WESTBOUND PRIOR TO ELIZABETH LANE	1	
CTH H/USH 12 WESTBOUND ADVANCE TO ELIZABETH LANE		1
TOTAL	1	1

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

SHEET: 1 OF 1

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	MISCELLANEOUS QUANTITIES OVERHEAD SIGN SUPPORTS	SHEET:	E

3

TRAFFIC CONTROL

STAGE	STAGE DURATION	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II CYCLES	643.1070 TRAFFIC CONTROL CONES 42-INCH EACH	643.1070 TRAFFIC CONTROL CONES 42-INCH DAYS
STAGE 1	14	46	644	19	266	38	532	10	140	--	--	35	490	4	28	5	1	--	--
STAGE 2	28	86	2,408	5	140	10	280	24	672	--	--	50	1,400	3	20	1	1	25	700
STAGE 3A	35	149	5,215	12	420	24	840	31	1,085	2	70	59	2,065	3	15	2	1	--	--
STAGE 3B	42	133	5,586	9	378	18	756	28	1,176	2	84	59	2,478	4	57	--	--	--	--
UNDISTRIBUTED	--	--	3,463	--	301	--	602	--	768	--	39	--	1,608	--	30	2	--	--	175
TOTAL			17,316		1,505		3,010		3,841		193		8,041		150	10			875

PAVEMENT MARKING ITEMS

ROADWAY	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW LF	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH LF	646.3545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH LF	646.1555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH LF	646.3555 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH LF
USH 12 SB RAMP	--	--	2,776	2,770	--	--	88	774
CTH H WB	1,209	2,312	68	54	213	941	--	--
CTH H EB	1,226	844	--	--	287	333	--	--
TOTAL	5,591		5,668		500	1,274	88	774

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE

3

PAVEMENT MARKING SPECIAL MARKING ITEMS

ROADWAY	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH LF	646.7220 MARKING CHEVRON EPOXY 24-INCH LF	646.8120 MARKING CURB EPOXY LF	646.8220 MARKING ISLAND NOSE EPOXY EACH
USH 12 SB RAMP	7	3	46	475	12	--	--
CTH H WB	4	1	24	446	76	72	2
CTH H EB	4	1	24	83	--	182	1
TOTAL	15	5	94	1,004	88	254	3

REMOVING PAVEMENT MARKINGS ITEMS

ROADWAY	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.9200 MARKING REMOVAL LINE WIDE LF
STAGE 1			
USH 12 SB RAMP	--	--	--
CTH H WB	--	--	--
CTH H EB	--	--	--
STAGE 2			
USH 12 SB RAMP	--	--	--
CTH H WB	767	--	225
CTH H EB	170	118	30
STAGE 3A			
USH 12 SB RAMP	2,404	--	--
CTH H WB	--	112	18
CTH H EB	--	--	--
STAGE 3B			
USH 12 SB RAMP	635	--	87
CTH H WB	--	--	--
CTH H EB	--	--	--
TOTAL	3,976	230	360

TEMPORARY PAVEMENT MARKING ITEMS

ROADWAY	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH WHITE LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH YELLOW LF	649.0205 TEMPORARY MARKING LINE PAINT 8-INCH LF	649.0805 TEMPORARY MARKING STOP LINE PAINT 18-INCH LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH WHITE LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH YELLOW LF	649.0250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH LF	649.0850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH LF
STAGE 1								
USH 12 SB RAMP	--	--	--	--	554	--	--	--
CTH H WB	--	--	--	--	--	1,192	--	--
CTH H EB	--	--	--	--	--	--	--	--
STAGE 2								
USH 12 SB RAMP	--	--	--	--	--	--	--	--
CTH H WB	1,182	763	--	12	--	--	372	--
CTH H EB	1,150	788	--	--	263	315	--	--
STAGE 3A								
USH 12 SB RAMP	1,624	1,627	40	52	665	1,160	--	--
CTH H WB	--	--	--	--	1,081	2,237	92	12
CTH H EB	--	--	--	--	1,333	1,104	--	12
STAGE 3B								
USH 12 SB RAMP	--	--	--	--	2,787	2,262	--	12
CTH H WB	--	--	--	--	--	--	--	--
CTH H EB	743	--	120	--	90	295	--	12
TOTAL	7,877		160	64	15,338		464	48

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	MISCELLANEOUS QUANTITIES	SHEET 91	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\030201-MQ.DWG
LAYOUT NAME - 030201-MQ - 030207
PLOT DATE : 4/20/2018 3:23 PM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : **********

3

CONSTRUCTION STAKING ITEMS

ROADWAY	650.4000 CONSTRUCTION STAKING STORM SEWER EACH	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 1080-17-70 LS	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	SPV.0090.01 CONSTRUCTION STAKING ASPHALT PAVEMENT LF
USH 12 SB RAMP	1	1,064	1,064	91	--	--	2	1156	1635
CTH H WB	--	123	123	164	1	--	--	142	980
CTH H EB	--	551	551	566	1	--	--	473	751
UNDISTRIBUTED	--	--	--	--	--	1	--	--	--
TOTAL	1	1,738	1,738	821	2	1	2	1,771	3,366

3

SAW CUTTING

ROADWAY	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
USH 12 SB RAMP	669	533
CTH H WB	510	--
CTH H EB	944	--
TOTAL	2,123	533

3

SUMMARY OF STATE FURNISHED MATERIALS

NOTE: THIS TABLE IS FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EA	TRAFFIC SIGNAL CONTROLLER, FULLY ACTUATED, 8 PHASE
1	EA	TRAFFIC SIGNAL CABINET
1	EA	CELL MODEM
1	EA	POLES TYPE 12
2	EA	POLES TYPE 13
2	EA	MONOTUBE ARMS 35-FT
1	EA	MONOTUBE ARMS 40-FT
3	EA	LUMINAIRE ARMS STEEL 15-FT

PULL BOXES

LOCATION	PULL BOX NO.	ALIGNMENT	STATION	OFFSET	653.0135 PULL BOXES STEEL 24" x 36" EACH	653.0140 PULL BOXES STEEL 24" x 42" EACH
USH 12 SB OFF-RAMP & CTH H	PB1	CTH 12 WB	12+30	92.3' RT	--	1
	PB2	CTH 12 WB	10+11	74.9' RT	1	--
	PB3	CTH 12 WB	12+31	18.7' RT	--	1
	PB4	CTH 12 WB	12+30	51.7' LT	--	1
	PB5	CTH 12 WB	12+49	67.9' LT	--	1
	PB6	CTH 12 WB	12+81	58.6' LT	--	1
	PB7	CTH 12 WB	13+19	65.0' LT	--	1
	PB8	CTH 12 WB	13+53	291.4' LT	1	--
	PB9	CTH 12 WB	13+72	38.7' LT	--	1
	PB10	CTH 12 WB	15+55	33.1' LT	1	--
	PB11	CTH 12 WB	17+05	32.8' LT	1	---
	PB12	CTH 12 WB	13+76	20.8' RT	--	1
	PB13	CTH 12 WB	13+83	94.0' RT	--	1
	PB14	CTH 12 WB	12+72	99.1' RT	--	1
PROJECT TOTAL					4	10

3

SIGNAL CONDUIT ITEMS

LOCATION	FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF	CONSTRUCTION METHOD
USH 12 SB OFF-RAMP & CTH H	CB1	PB1	--	75	--	TRENCH
	PB1	PB2	211	--	--	TRENCH
	PB1	PB3	--	--	148	DIRECTIONAL BORE
	PB3	SB2	--	10	--	TRENCH
	PB3	PB4	--	--	140	DIRECTIONAL BORE
	PB4	PB5	--	52	--	TRENCH
	PB5	PB6	--	--	35	DIRECTIONAL BORE
	PB5	PB7	--	--	148	DIRECTIONAL BORE
	PB6	SB3	7	--	--	TRENCH
	PB7	PB8	222	--	--	TRENCH
	PB7	PB9	--	122	--	TRENCH
	PB9	SB4	32	--	--	TRENCH
	PB9	PB10	188	--	--	TRENCH
	PB10	PB11	151	--	--	TRENCH
	PB9	PB12	--	--	120	DIRECTIONAL BORE
	PB12	PB13	--	--	146	DIRECTIONAL BORE
	PB13	SB5	--	23	--	TRENCH
	PB13	PB14	--	206	--	TRENCH
	PB14	SB1	--	10	--	TRENCH
	PB14	CB1	--	57	--	TRENCH
PROJECT TOTAL			811	555	737	

3

3

CONCRETE BASES

LOCATION	SIGNAL BASE NO.	ALIGNMENT	STATION	OFFSET	654.0102 CONCRETE BASES TYPE 2 EACH	654.0113 CONCRETE BASES TYPE 13 EACH	654.0217 CONCRETE CONTROL CABINET BASE TYPE 9 SPECIAL EACH
USH 12 SB OFF-RAMP & CTH H	CB1	CTH H WB	12+52	110.7' RT	--	--	1
	SB1	CTH H WB	12+76	99.0' RT	--	1	--
	SB2	CTH H WB	12+40	15.1' RT	--	1	--
	SB3	CTH H WB	12+79	52.1' LT	1	--	--
	SB4	CTH H WB	13+40	32.8' LT	1	--	--
	SB5	CTH H WB	13+59	89.1' RT	--	1	--
PROJECT TOTAL					2	3	1

SIGNAL BASES, POLES, AND MAST ARMS

LOCATION	SIGNAL BASE NO	657.0255 TRANSFORMER BASES BREAKAWAY 11.5-INCH BOLT CIRCLE EACH	657.0310 POLES TYPE 3 EACH	SPV.0060.02 INSTALL POLES TYPE 12 EACH	SPV.0060.03 INSTALL POLES TYPE 13 EACH	SPV.0060.04 INSTALL MONOTUBE ARMS 35-FT EACH	SPV.0060.05 INSTALL MONOTUBE ARMS 40-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	SPV.0060.06 INSTALL LUMINAIRE ARMS STEEL 15-FT EACH	659.1125 LUMINAIRES UTILITY LED C EACH
USH 12 SB OFF-RAMP & CTH H	SB1	--	--	1	--	--	1	--	--	--
	SB2	--	--	--	1	1	--	--	2	2
	SB3	1	1	--	--	--	--	2	--	2
	SB4	1	1	--	--	--	--	1	--	1
	SB5	--	--	--	1	1	--	--	1	1
PROJECT TOTALS		2	2	1	2	2	1	3	3	6

3

3

SIGNAL FACES

LOCATION	SIG. BASE NO	SIG. HEAD NO	TYPE OF MOUNT	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	* BACKPLATE 3-SEC EACH	* LED RED BALL EACH	* LED YELLOW BALL EACH	* LED GREEN BALL EACH	* LED YELLOW ARROW EACH	* LED GREEN ARROW EACH
USH 12 SB OFF-RAMP & CTH H	SB1	1	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1	1	--	--
	SB1	9	MONOTUBE ARM MOUNT VERTICAL	1	1	1	--	--	1	1
	SB1	10	MONOTUBE ARM MOUNT VERTICAL	1	1	1	--	--	1	1
	SB2	5	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1	1	--	--
	SB2	6	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1	1	--	--
	SB3	7	POST MOUNT VERTICAL	1	1	1	1	1	--	--
	SB4	4	POST MOUNT VERTICAL	1	1	1	1	1	--	--
	SB5	2	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1	1	--	--
	SB5	3	MONOTUBE ARM MOUNT VERTICAL	1	1	1	1	1	--	--
	SB5	8	MONOTUBE UPRIGHT VERTICAL	1	1	1	--	--	1	1
PROJECT TOTAL				10	10	10	7	7	3	3

*INCIDENTAL TO 658.0173

REMOVING TRAFFIC SIGNALS USH 12 SOUTHBOUND OFF-RAMP & CTH H

LOCATION	204.9105.S.01 REMOVING TRAFFIC SIGNALS (USH 12 SB OFF-RAMP & CTH H) LS
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTAL	1

REMOVALS

LOCATION	STRUCTURE NO	ALIGNMENT	STATION	OFFSET	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH	** REMOVING MUNICIPAL LIGHTING POLES EACH
USH 12 SB OFF-RAMP & CTH H	EXSB1	CTH H WB	12+80	36.6' LT	1	--	--
	EXSB2	CTH H WB	13+40	32.9' LT	1	--	--
	EXPB1	CTH H WB	12+73	32.2' LT	--	1	--
	EXLP1	CTH H WB	12+41	33.9' RT	--	--	1
	EXLP2	CTH H WB	13+96	23.6' RT	--	--	1
PROJECT TOTALS					2	1	2

**FOR INFORMATION ONLY, BY OTHERS

ELECTRICAL SERVICE METER PEDESTAL

LOCATION	656.0200.01 ELECTRICAL SERVICE METER PEDESTAL (USH 12 SB OFF-RAMP & CTH H) LS
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTALS	1

TRAFFIC SIGNAL MOUNTING HARDWARE

LOCATION	658.5069.01 TRAFFIC SIGNAL MOUNTING HARDWARE (USH 12 SB OFF-RAMP & CTH H) LS
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTALS	1

TRAFFIC SIGNAL CABLE AND ELECTRICAL WIRE

LOCATION	FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0305 CABLE TYPE TYPE UF 2-12 AWG GROUNDED LF	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
USH 12 SB OFF-RAMP & CTH H	CB1	SB1	--	--	57	--	57	--
	CB1	SB2	--	152	--	--	--	--
	CB1	SB3	--	336	--	--	--	--
	CB1	SB4	--	360	--	--	--	--
	CB1	SB5	--	--	187	187	--	--
	SB1	SB5	--	--	--	--	167	--
	SB2	SB3	--	--	--	182	182	--
	SB3	SB4	--	--	--	--	318	--
	SB4	SB5	--	--	--	230	230	--
	PB1	CB1	--	--	--	--	47	--
	PB3	SB2	--	--	--	--	27	--
	PB4	SB3	--	--	--	--	89	--
	PB5	SB3	--	--	--	--	31	--
	PB6	SB3	--	--	--	--	126	--
	PB7	SB4	--	--	--	--	122	--
	PB9	SB4	--	--	--	--	50	--
	PB12	SB4	--	--	--	--	121	--
	PB13	SB5	--	--	--	--	40	--
	PB14	SB1	--	--	--	--	28	--
	SB1	HEAD 1	26	--	--	--	--	--
	SB1	HEAD 9	65	--	--	--	--	--
	SB1	HEAD 10	65	--	--	--	--	--
	SB2	HEAD 5	60	--	--	--	--	--
	SB2	HEAD 6	60	--	--	--	--	--
	SB2	LUMINAIRE	--	--	--	--	--	263
	SB3	HEAD 7	19	--	--	--	--	--
	SB3	LUMINAIRE	--	--	--	--	--	234
	SB4	HEAD 4	19	--	--	--	--	--
	SB4	LUMINAIRE	--	--	--	--	--	117
	SB5	HEAD 2	60	--	--	--	--	--
	SB5	HEAD 3	60	--	--	--	--	--
	SB5	HEAD 8	19	--	--	--	--	--
	SB5	LUMINAIRE	--	--	--	--	--	144
PROJECT TOTAL			453	848	244	599	1635	758

3

3

TRAFFIC DETECTOR LOOPS

LOCATION	LOOP NO.	HOME RUN PB	ALIGNMENT	STATION/OFFSET*	SIZE	SDD INSTALLATION REFERENCE	NO. OF TURNS	PAVEMENT TYPE	652.0800 CONDUIT LOOP DETECTOR LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	655.0800 LOOP DETECTOR WIRE LF
USH 12 SB OFF-RAMP & CTH H	21	PB11	CTH H WB	17+05, 18' LT	6'x6'	9F15-a	5	ASPHALT	48	602	156
	22	PB11	CTH H WB	17+05, 6' LT	6'x6'	9F15-b	5	ASPHALT	72	602	180
	23	PB10	CTH H WB	15+56, 11' LT	6'x20'	9F15-a	3	ASPHALT	76	451	192
	41	PB8	CTH H WB	13+30, 297' LT	6'x6'	9F15-b	5	ASPHALT	74	508	182
	42	PB8	CTH H WB	13+40, 294' LT	6'x6'	9F15-a	5	ASPHALT	50	508	158
	43	PB7	CTH H WB	12+93, 74' LT	6'x20'	9F15-b	3	ASPHALT	102	277	218
	44	PB6	CTH H WB	12+91, 48' LT	6'x20'	9F15-a	3	ASPHALT	78	238	194
	45	PB7	CTH H WB	13+04, 73' LT	6'x20'	9F15-a	3	ASPHALT	80	277	196
	46	PB6	CTH H WB	13+02, 47' LT	6'x20'	9F15-b	3	ASPHALT	104	238	220
	61	PB2	CTH H WB	10+13, 56' RT	6'x6'	9F15-a	3	ASPHALT	56	244	116
	62	PB2	CTH H WB	10+14, 45' RT	6'x6'	9F15-b	3	ASPHALT	80	244	140
PROJECT TOTAL									820	4189	1952

*LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
9F15-4a: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
9F15-4b: LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)

INSTALL CELLULAR MODEMS

LOCATION	678.0800 INSTALL CELLULAR MODEMS (USH 12 SB OFF-RAMP & CTH H) EACH
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTALS	1

REMOVE AND ABANDON EXISTING ELECTRICAL SERVICE

LOCATION	SPV.0060.01 REMOVE AND ABANDON EXISTING ELECTRICAL SERVICE EACH
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTAL	1

TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET

LOCATION	SPV.0105.01 TRANSPORT AND INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET (USH 12 SB OFF-RAMP & CTH H) LS
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTALS	1

TRANSPORT SIGNAL AND LIGHTING MATERIALS

LOCATION	SPV.0105.02 TRANSPORT SIGNAL AND LIGHTING MATERIALS (USH 12 SB OFF-RAMP & CTH H) LS
USH 12 SB OFF-RAMP & CTH H	1
PROJECT TOTALS	1

Standard Detail Drawing List

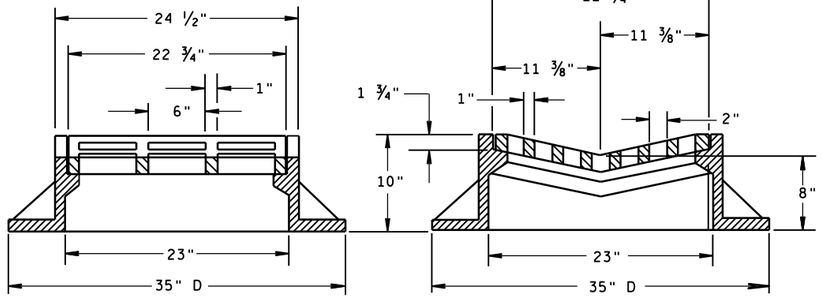
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-08	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C06-07	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09C12-09A	CONCRETE BASE TYPE 13
09C12-09B	CONCRETE BASE TYPE 13
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09E01-15B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E06-05	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-06	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09E08-08C	TYPE 12 POLE 35'-55' MONOTUBE ARM
09E08-08D	TYPE 13 POLE 35'-55' MONOTBE ARM
09E08-08E	GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
14B29-01	SAFETY EDGE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-04	MEDIAN ISLAND MARKING
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-05C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C21-08	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C24-04	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C27-03A	DOUBLE ARROW WARNING SIGN PLACEMENT
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C31-03A	PAVEMENT MARKING (RAMPS AND GORES)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING

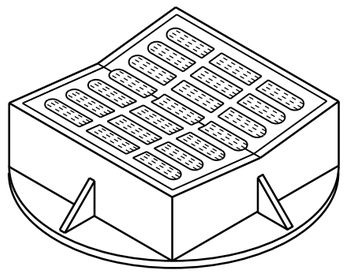
6

Standard Detail Drawing List

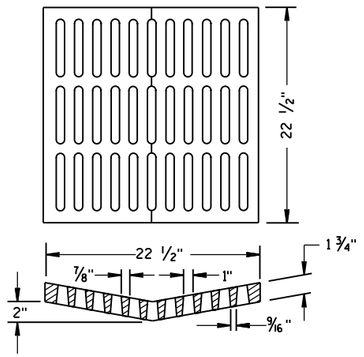
15D12-07A	TRAFFIC CONTROL, LANE CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6



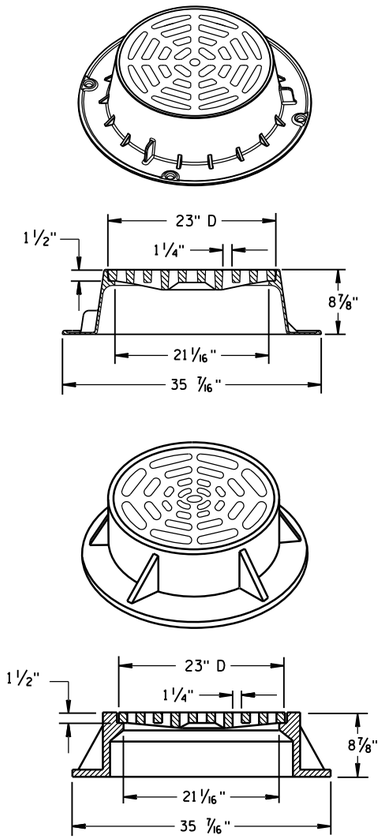


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

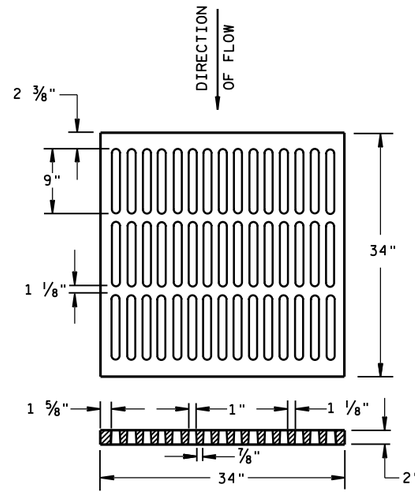
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

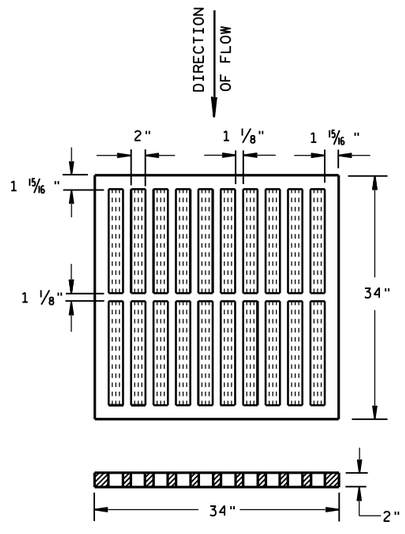
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



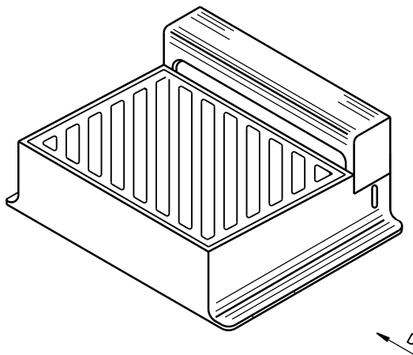
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



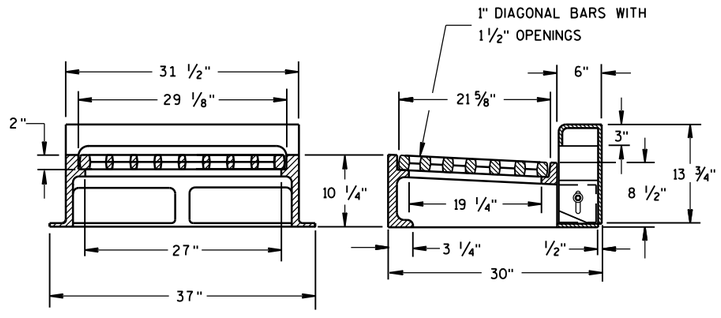
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIRECTION OF FLOW

DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

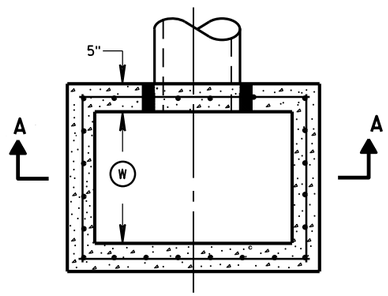
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

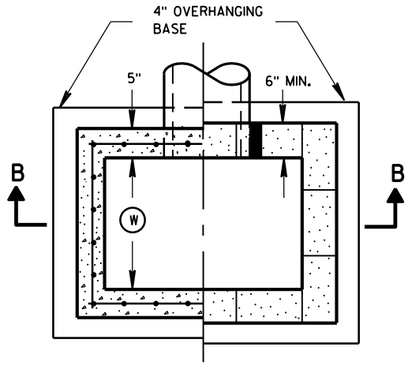
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

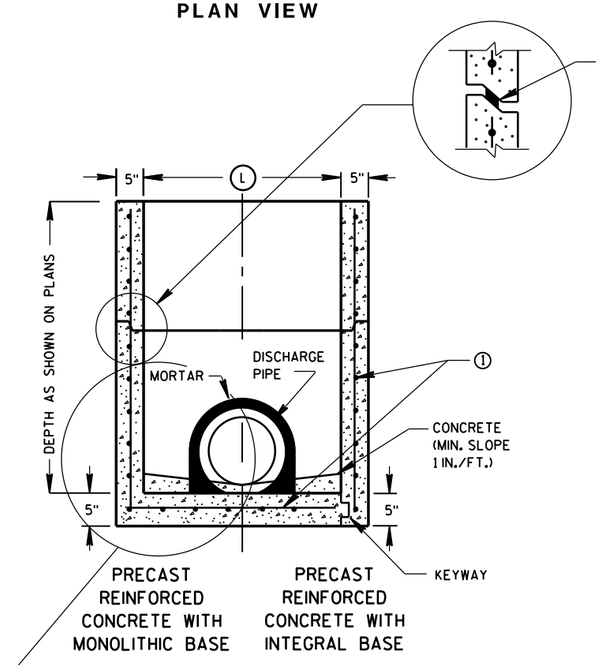
S.D.D. 8 A 5-19b



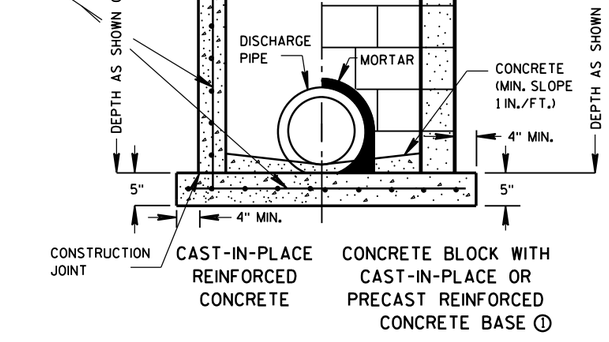
PLAN VIEW



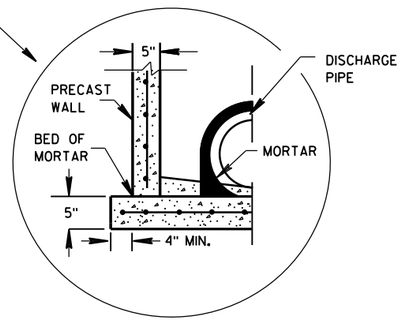
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

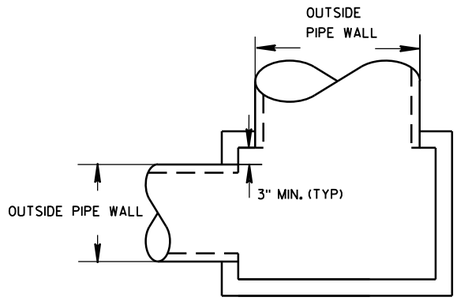
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



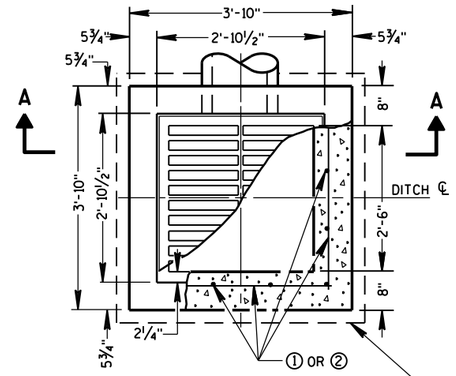
DETAIL "A"

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

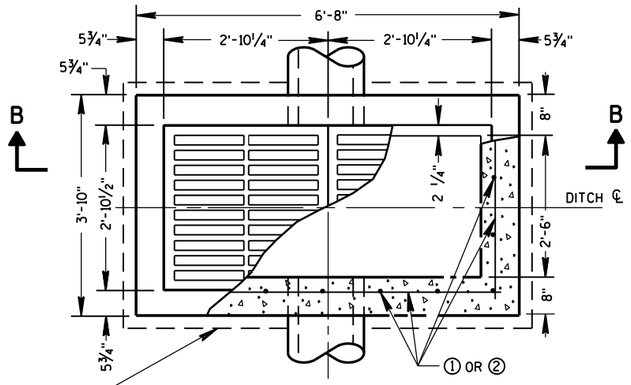
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

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

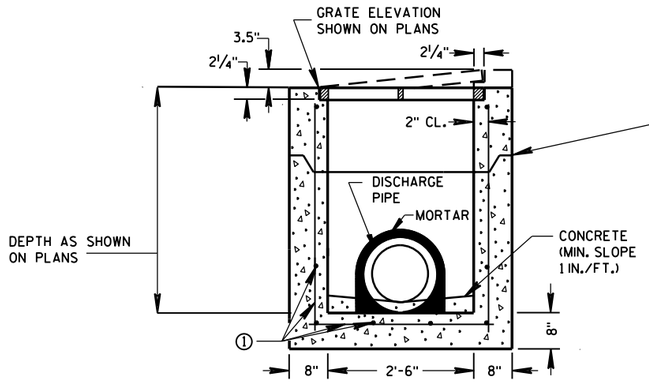


PLAN VIEW

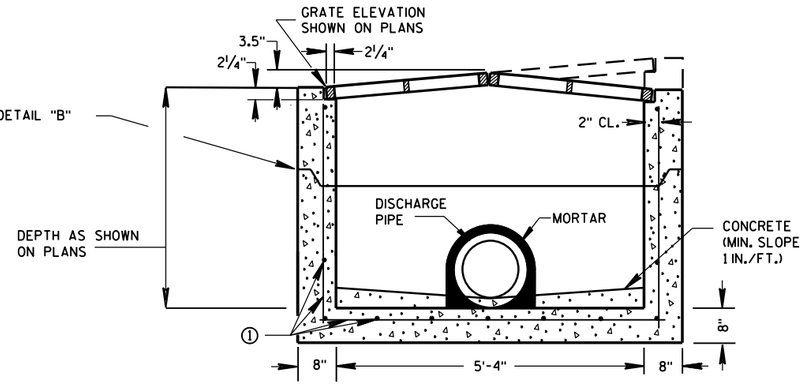


PLAN VIEW

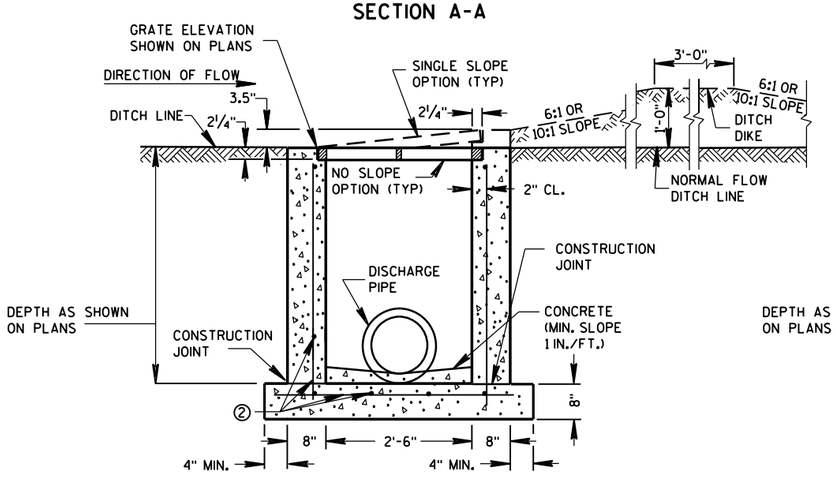
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

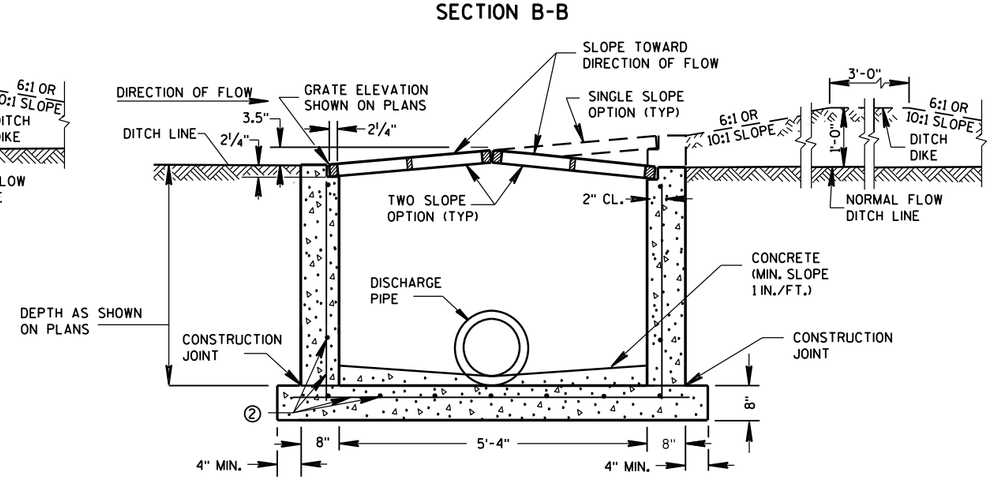


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

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

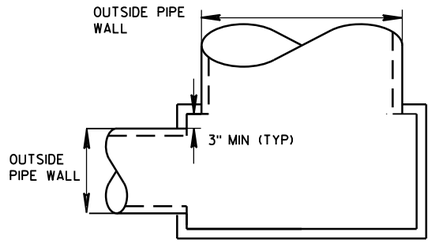
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

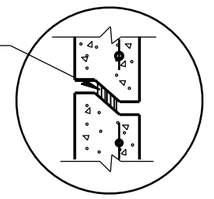
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

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



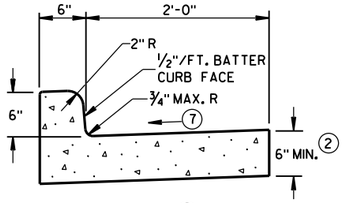
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

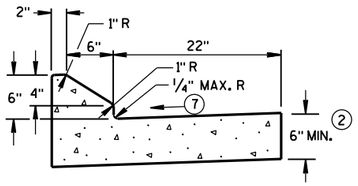
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

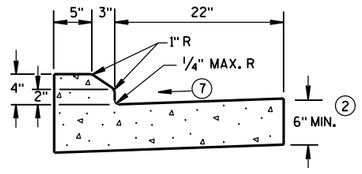
6
S.D.D. 8 C 8-2



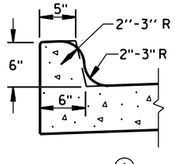
TYPES A (1) & D



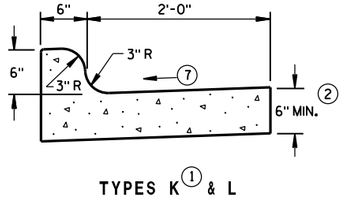
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

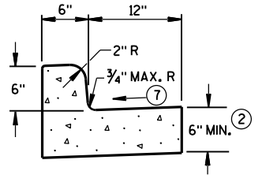


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



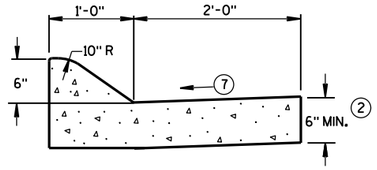
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

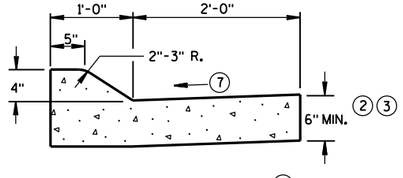


TYPES A (1) & D

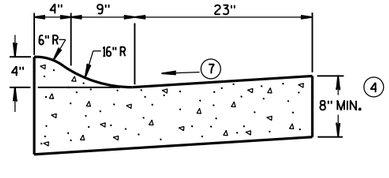
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

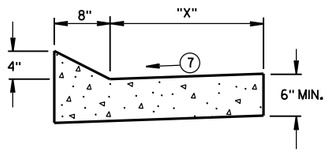


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

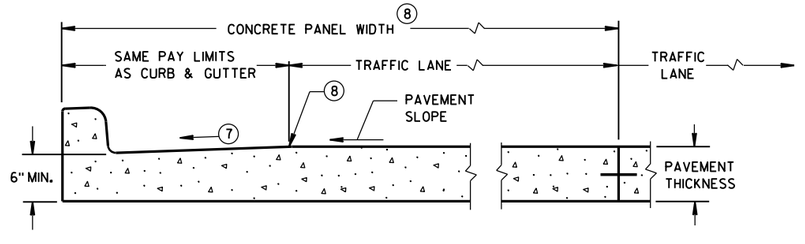
CONCRETE CURB & GUTTER 36"



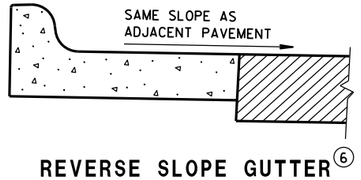
TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

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

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, 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) 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.

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

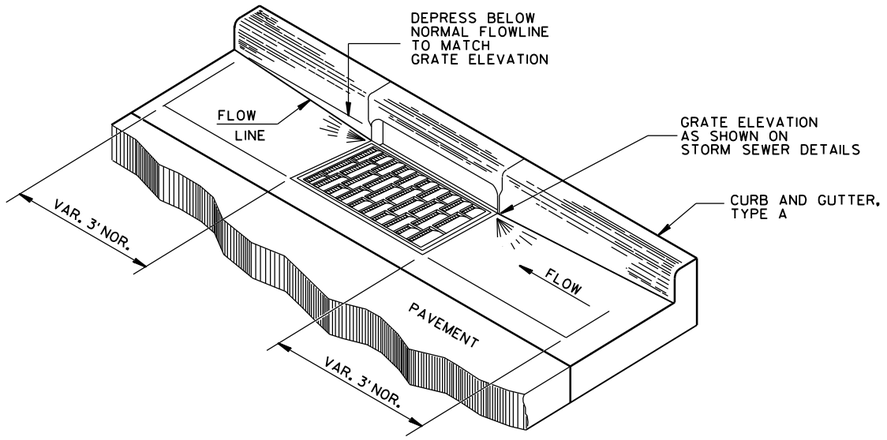
* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

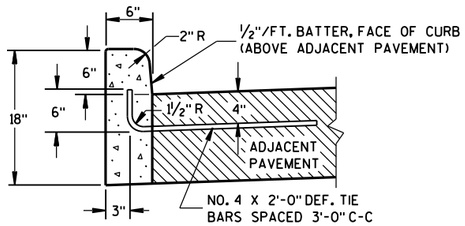
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

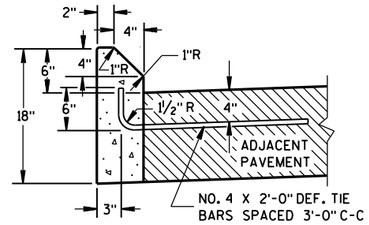
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(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.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

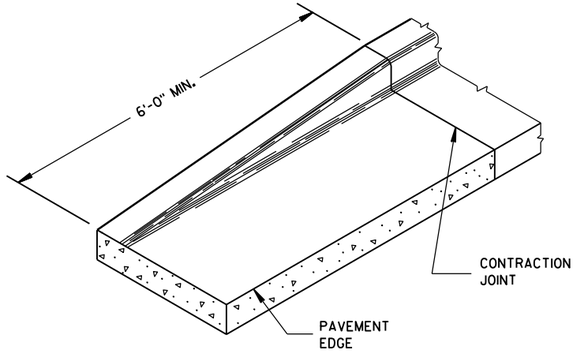


TYPES A (1) & D

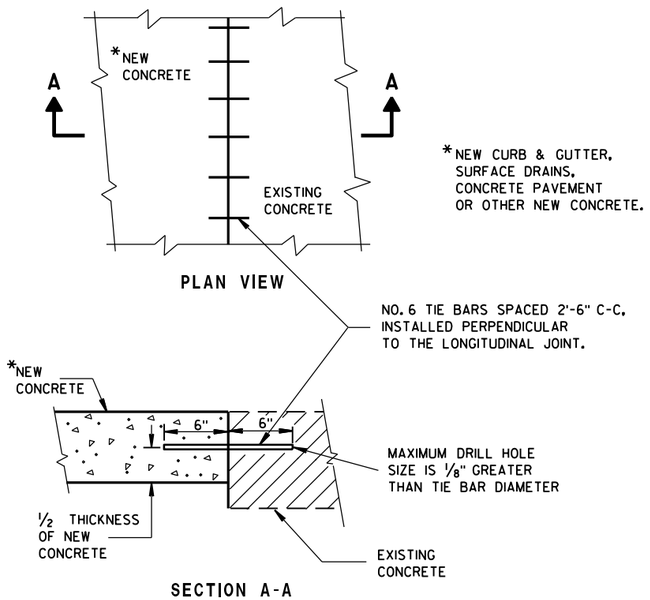


TYPES G (1) & J

CONCRETE CURB



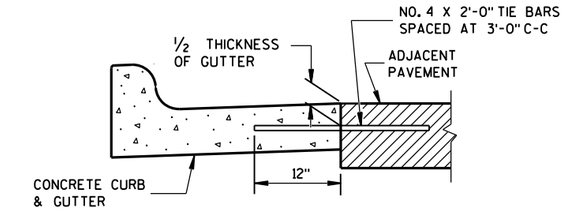
END SECTION CURB & GUTTER



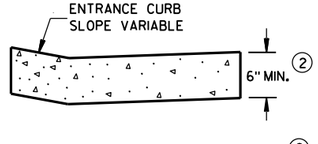
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

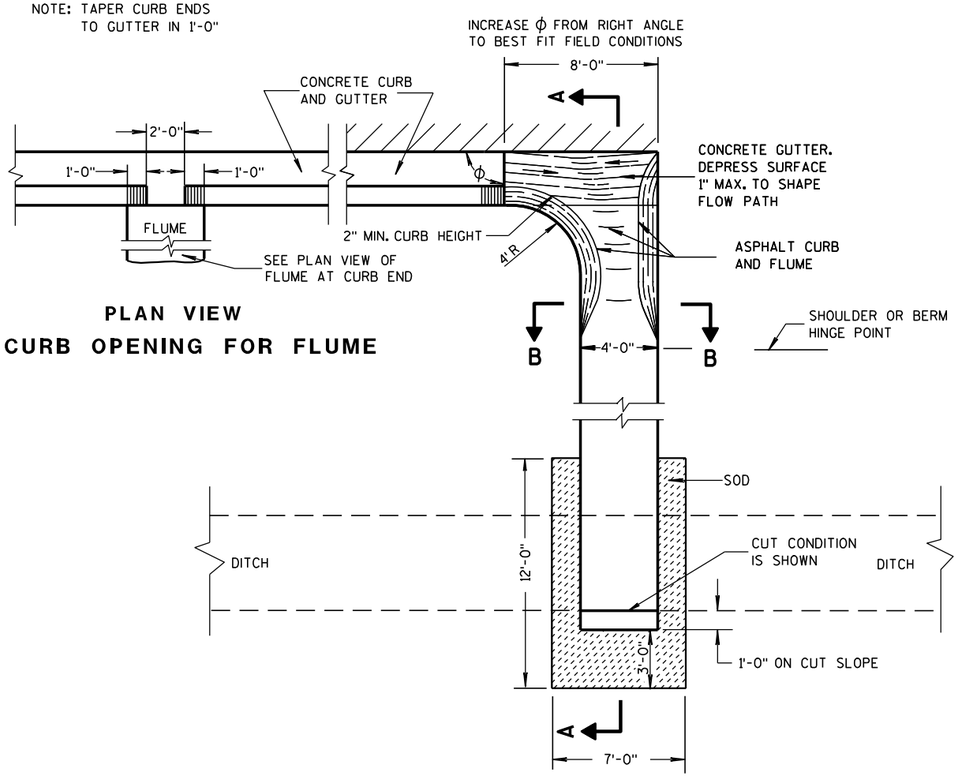
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6

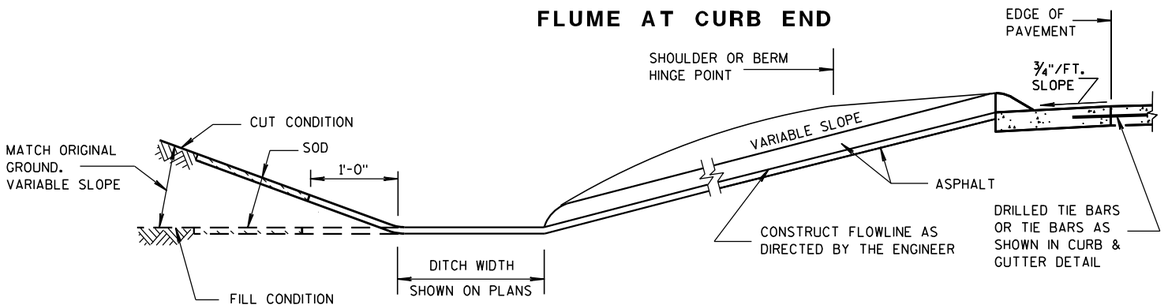
S.D.D. 8 D 1-20b

ASPHALTIC FLUME

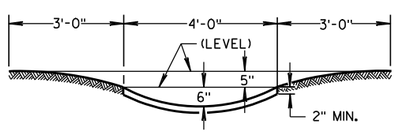


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

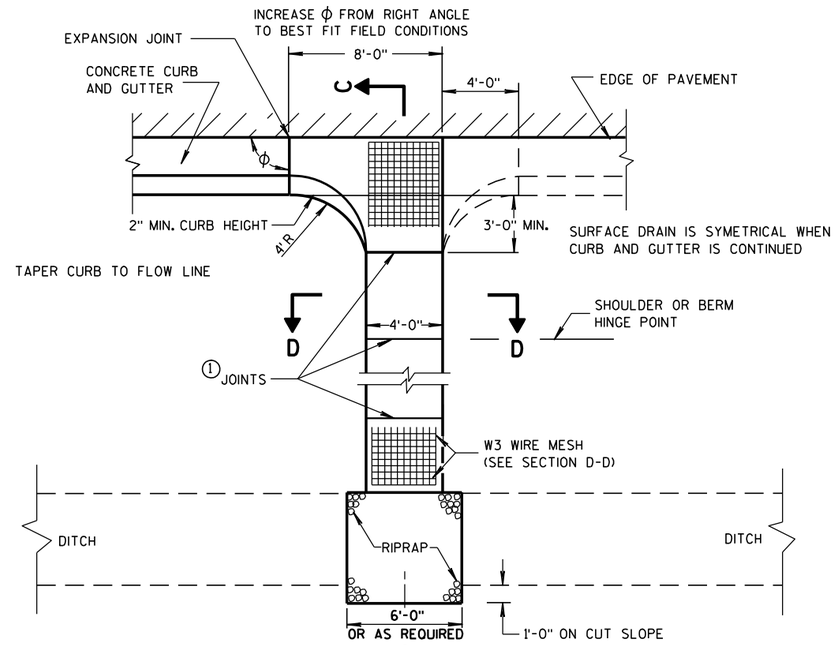
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

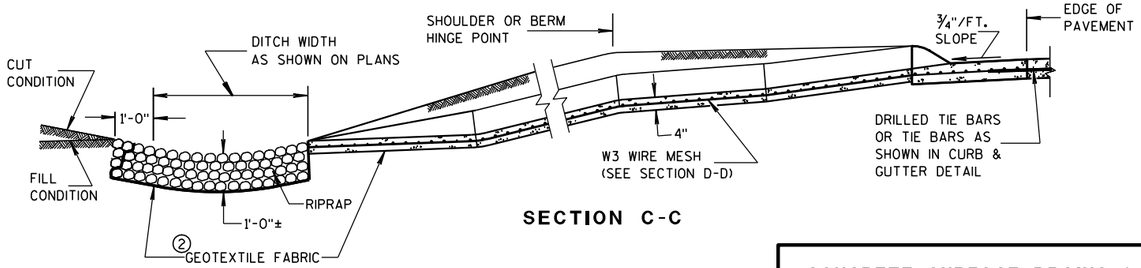
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

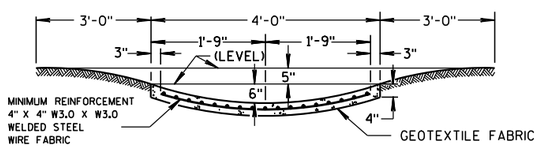
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

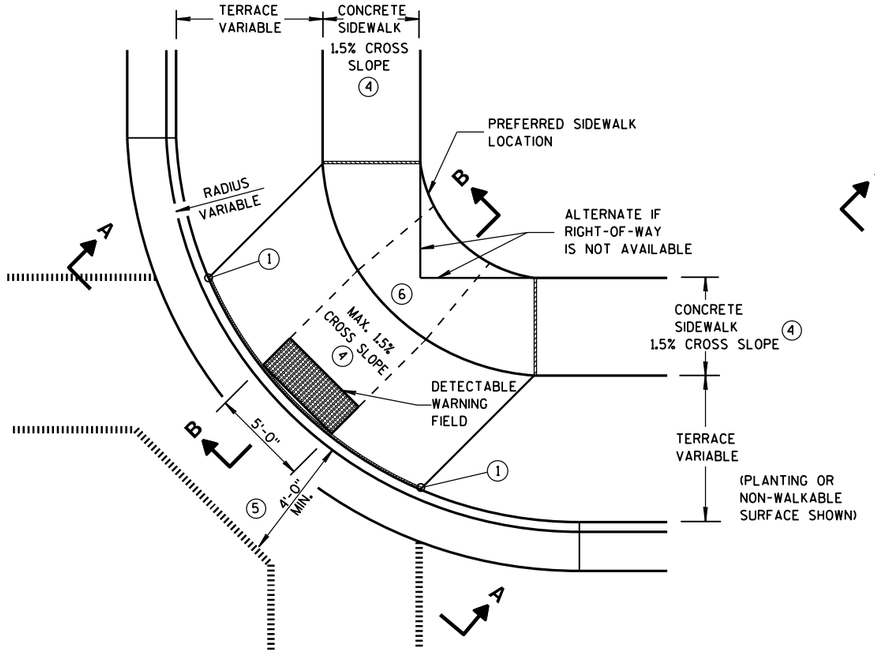
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
105
MENT
FHWA

6

S.D.D. 8 D 4-5

6

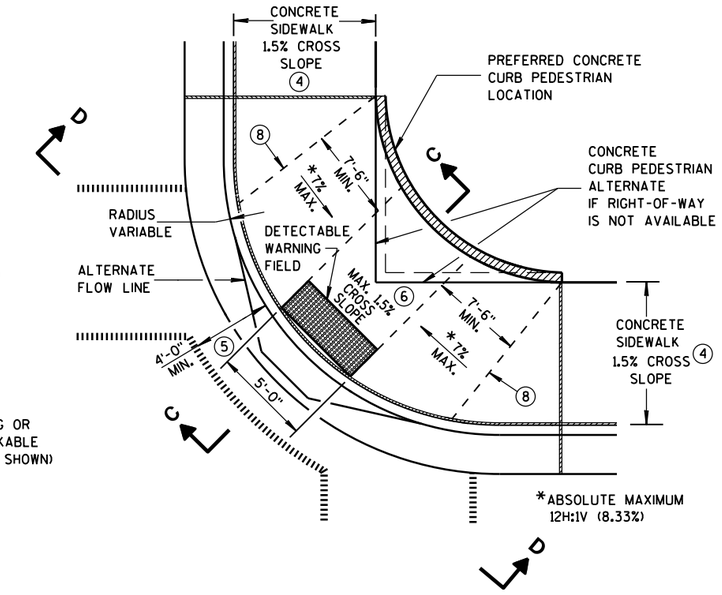
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

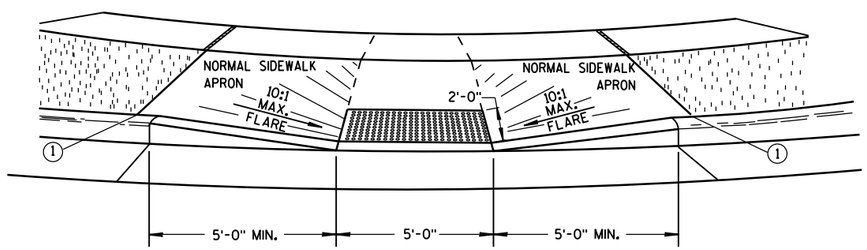
(CENTER OF CORNER RADIUS)



PLAN VIEW

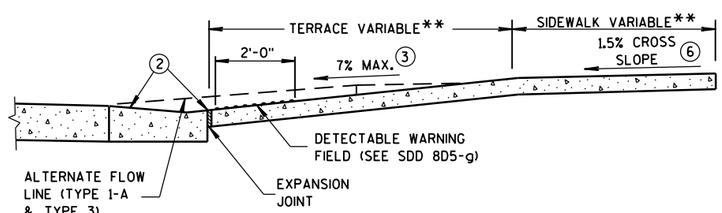
TYPE 1-A RAMP

(NO TERRACE)

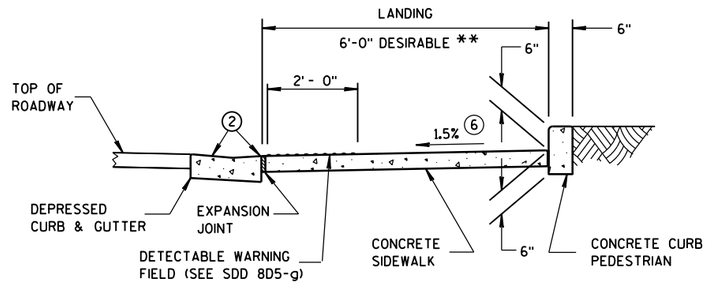


VIEW A-A

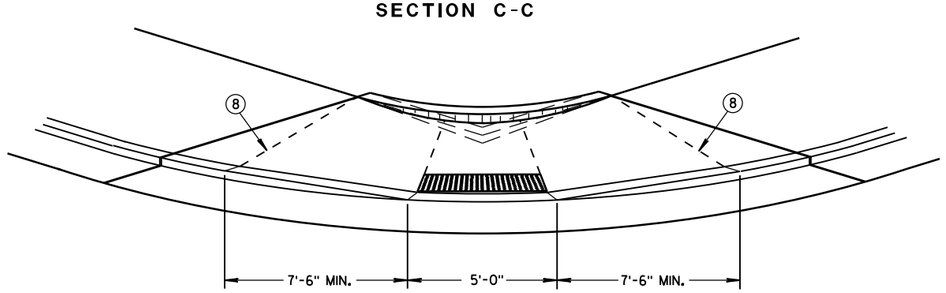
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. 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) ABSOLUTE MAXIMUM 12H:1V (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.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

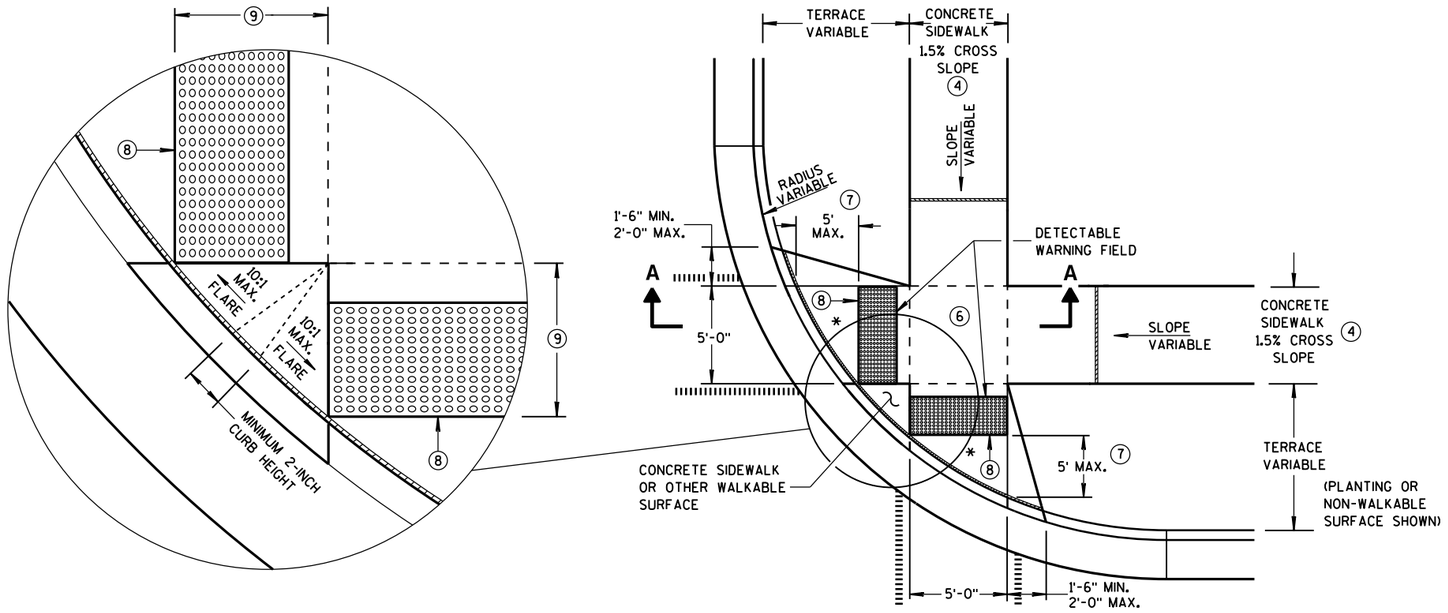
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

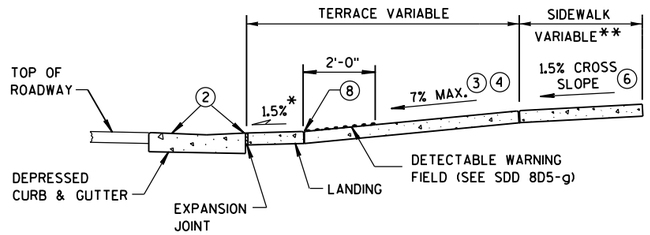
6

S.D.D. 8 D 5-19a



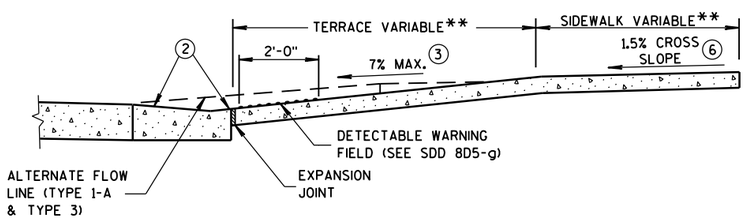
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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) ABSOLUTE MAXIMUM 12H:1V (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 X 5 FEET.

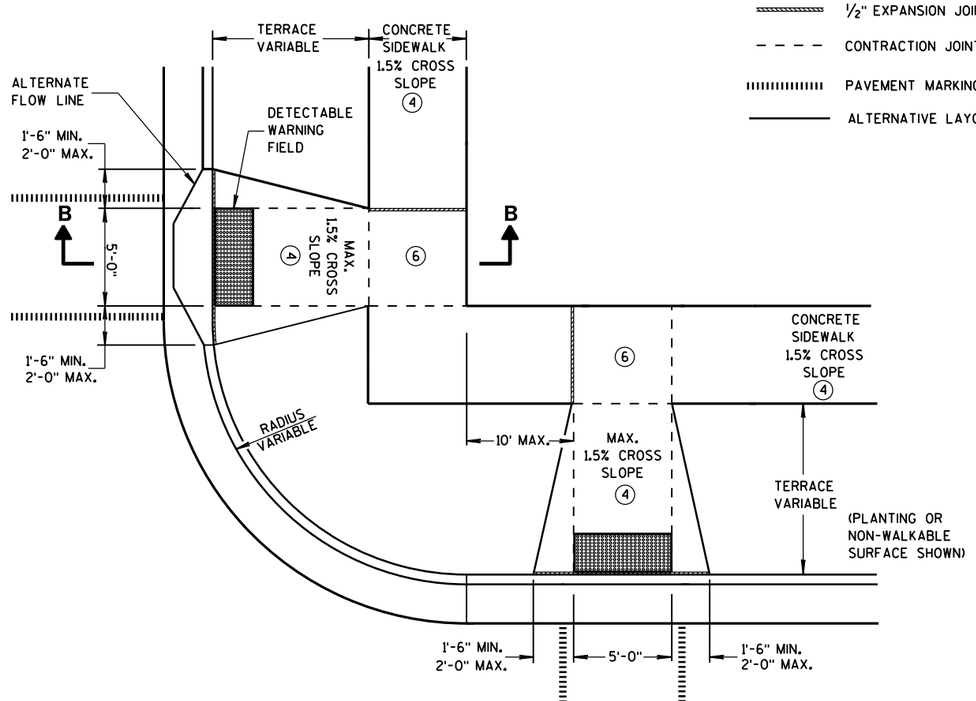
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS 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.

LEGEND

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



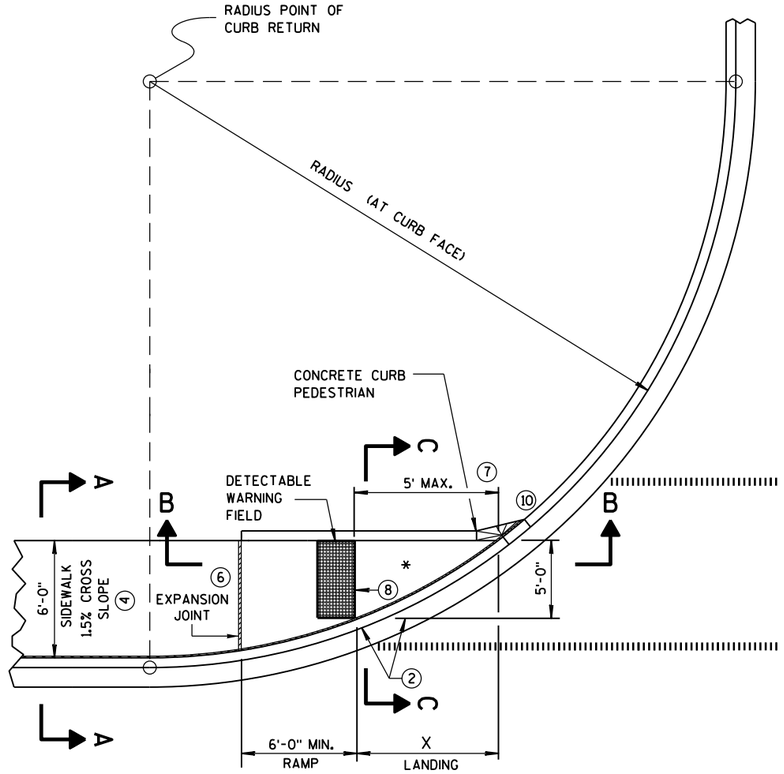
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

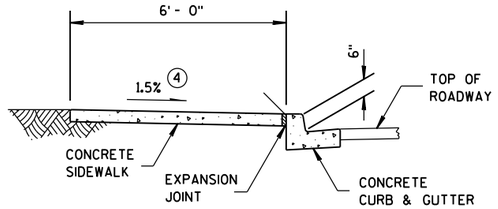
S.D.D. 8 D 5-19b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

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.

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 ¼-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) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

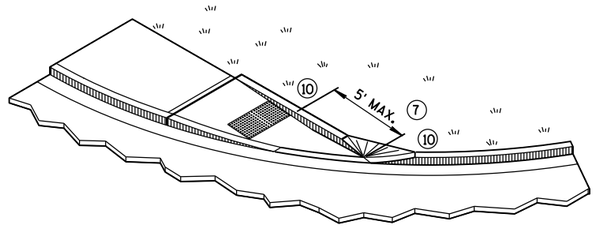
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

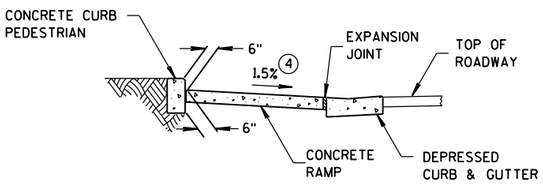
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

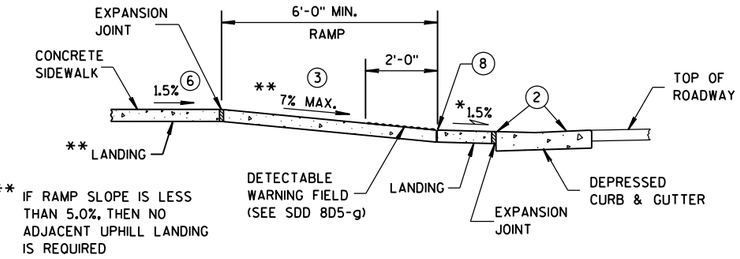


ISOMETRIC VIEW FOR TYPE 4A



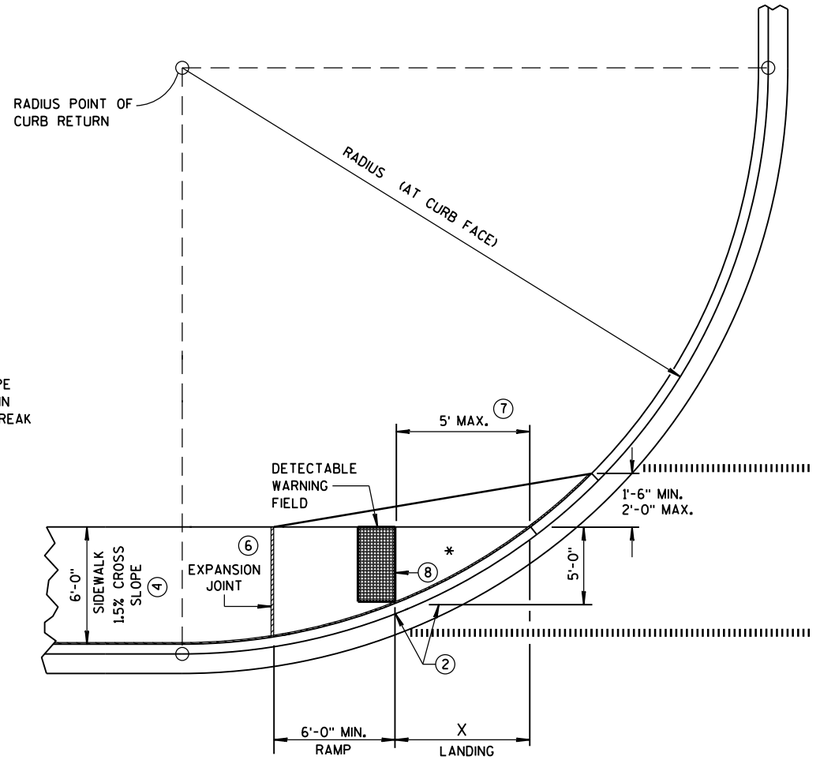
SECTION C-C FOR TYPE 4A

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

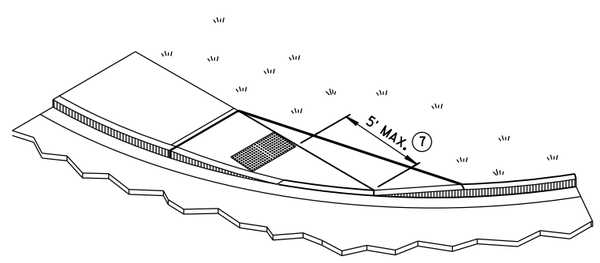


** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

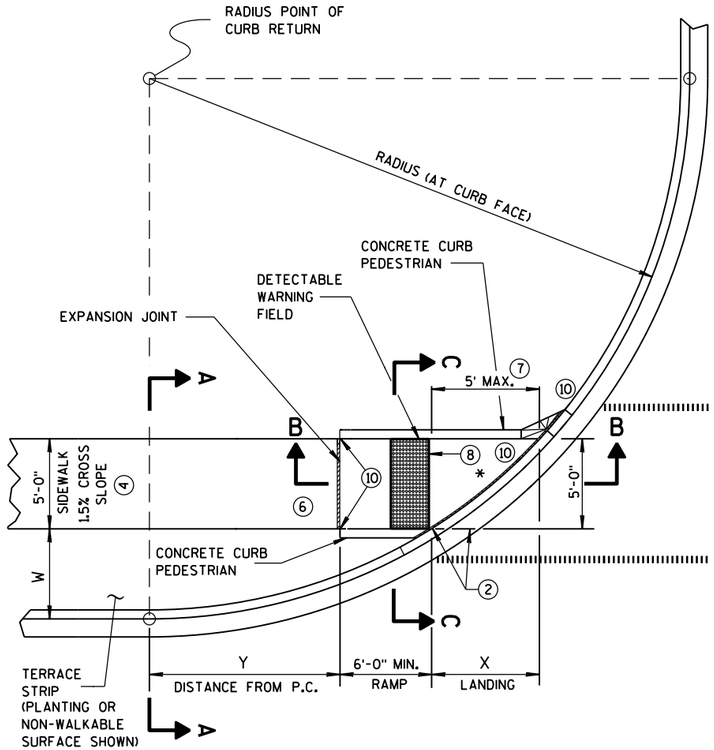
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

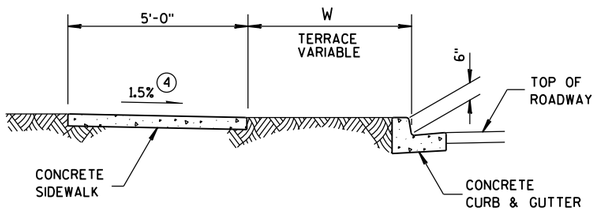
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

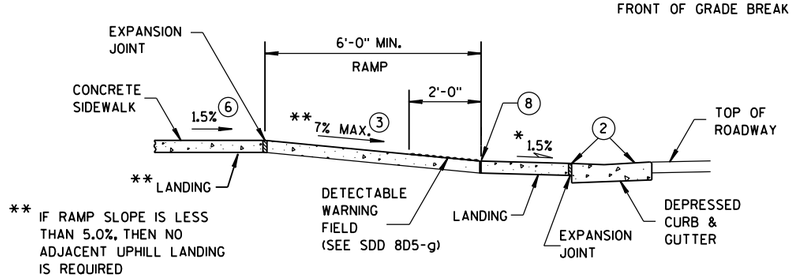
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW

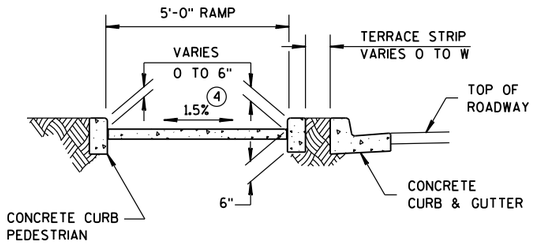


SECTION A-A FOR TYPE 4B



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

SECTION B-B FOR TYPE 4B



SECTION C-C FOR TYPE 4B

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'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 ¼-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) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

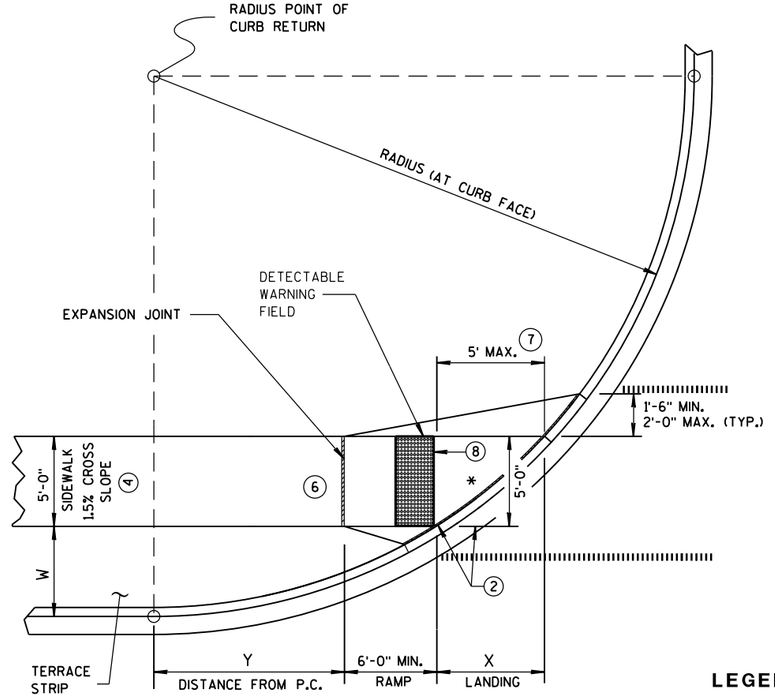
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

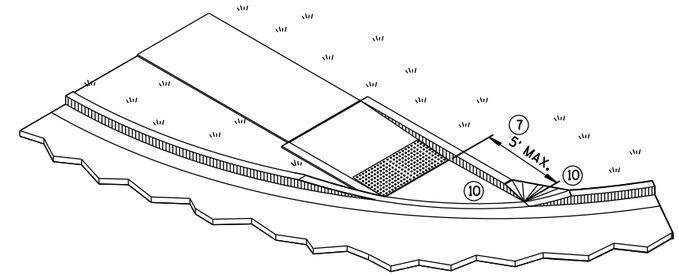
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

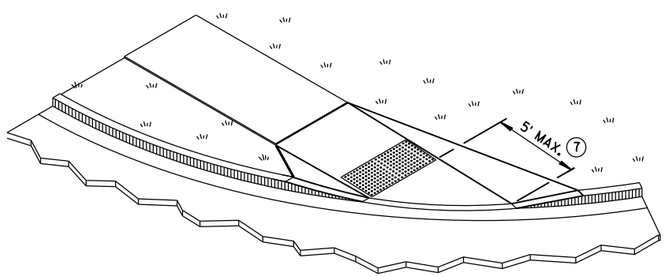
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

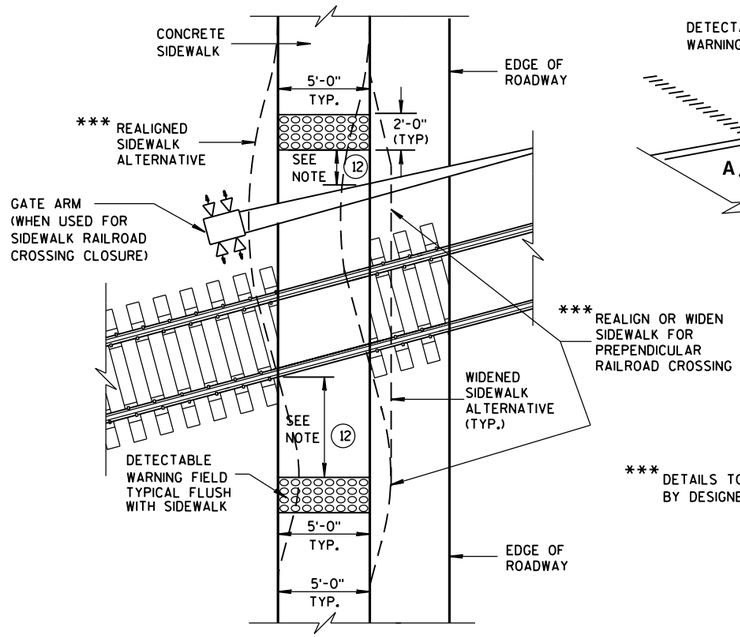
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

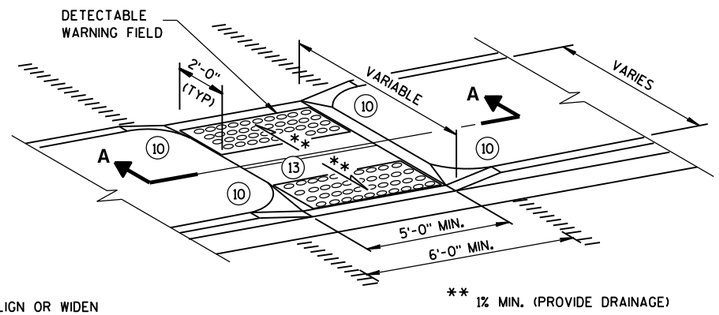
6

S.D.D. 8 D 5-19d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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) ABSOLUTE MAXIMUM 12H:1V (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.

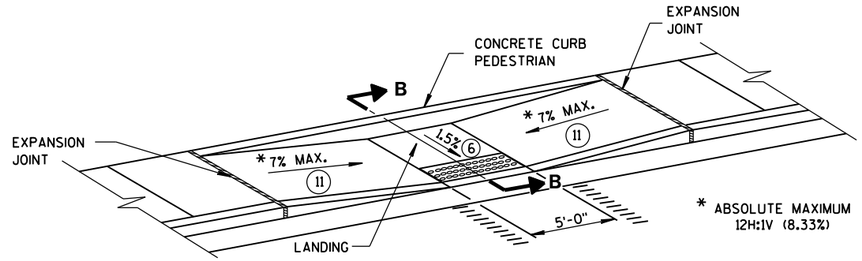
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

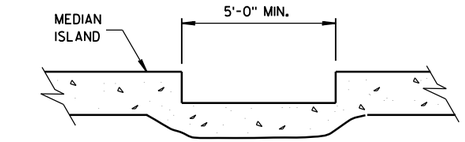
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(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. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

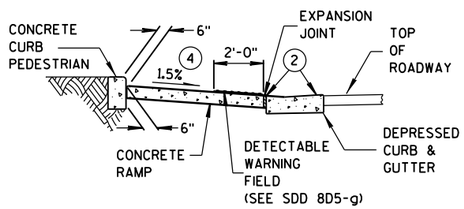
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

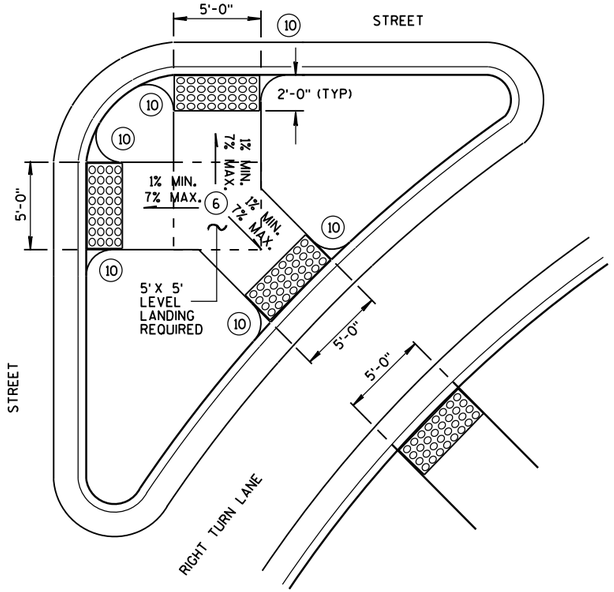


SECTION A-A

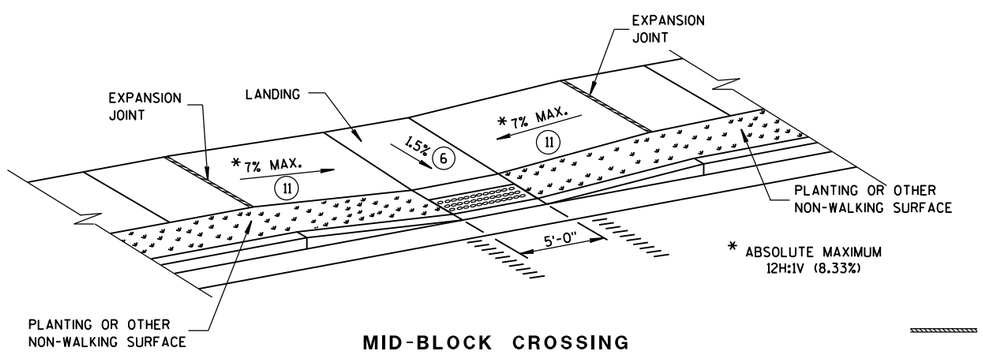


SECTION B-B

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



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

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

LEGEND

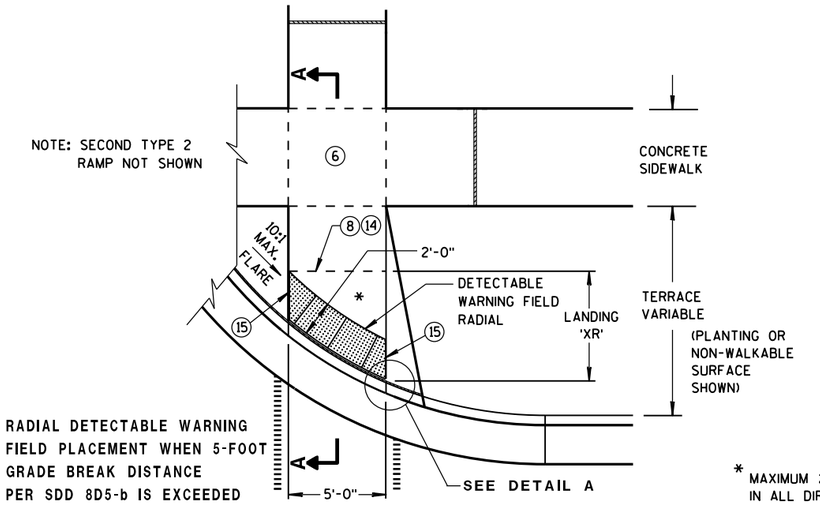
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-19e

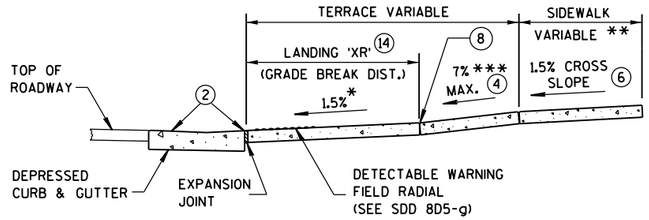


TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

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

LEGEND

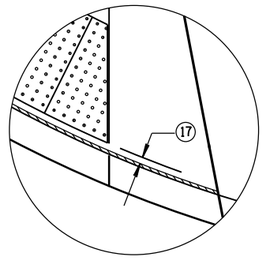
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



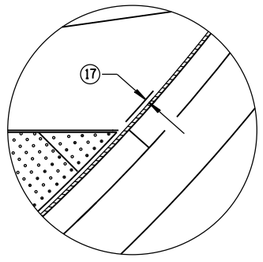
** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

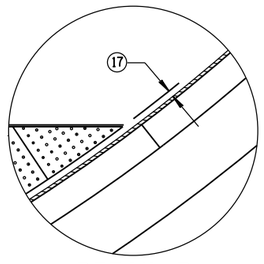
SECTION A-A



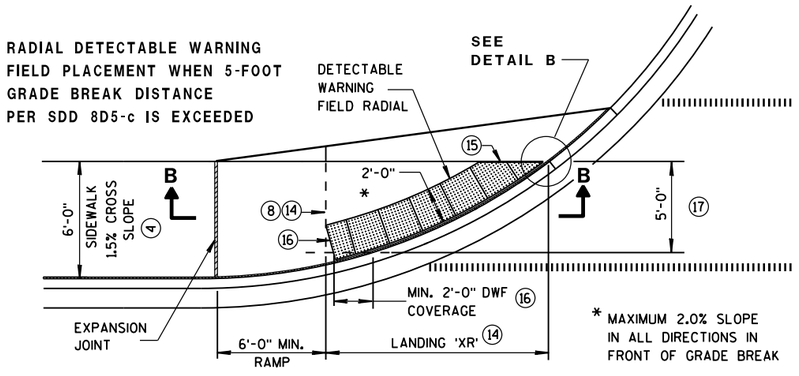
DETAIL A



DETAIL C

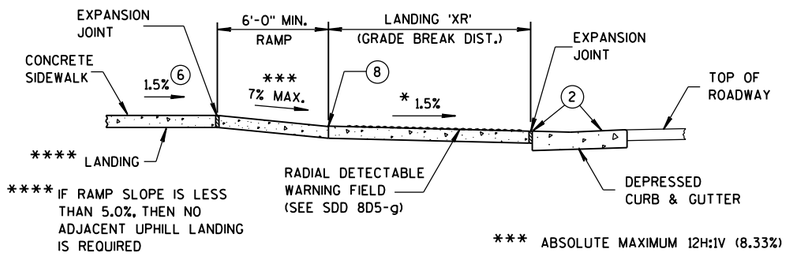


DETAIL B



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

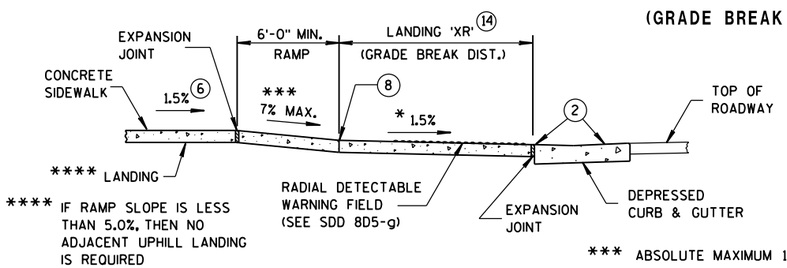
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



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

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

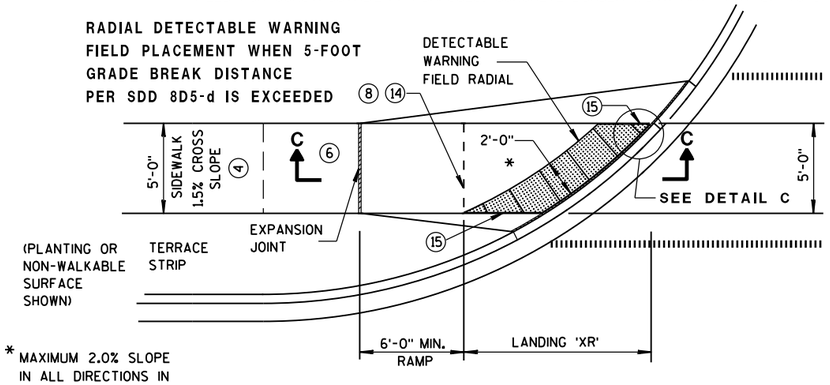
SECTION B-B FOR TYPE 4A1



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

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1



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

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

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS (DWFs) 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 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.

(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 ¼-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) ABSOLUTE MAXIMUM 12H:1V (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 X 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 1/8" 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.

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

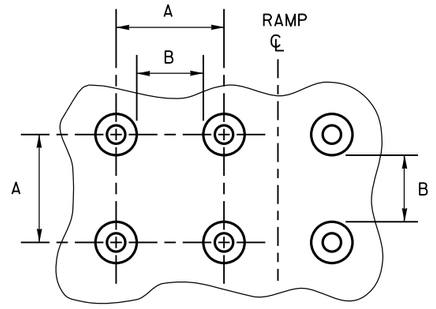
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

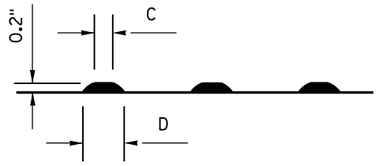
S.D.D. 8 D 5-19f

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

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



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, 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.

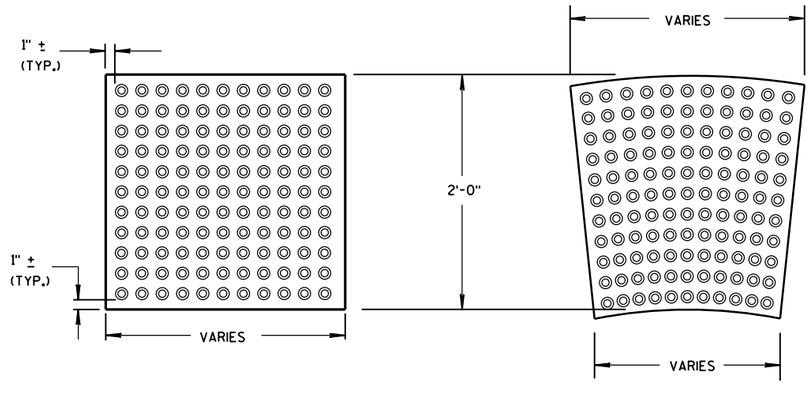
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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 WEDGES IN COMBINATION WITH SQUARE PANELS 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.

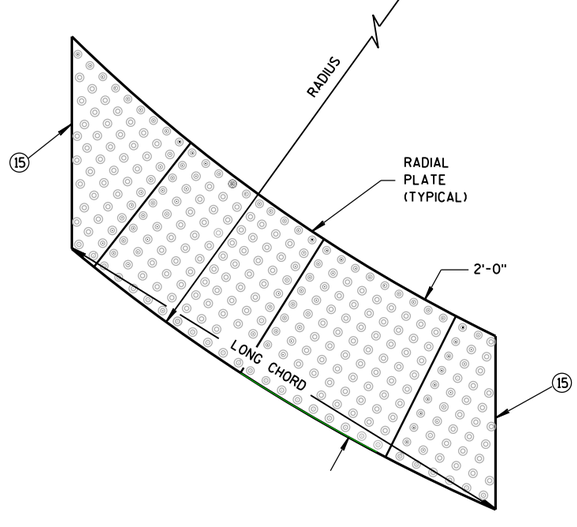


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

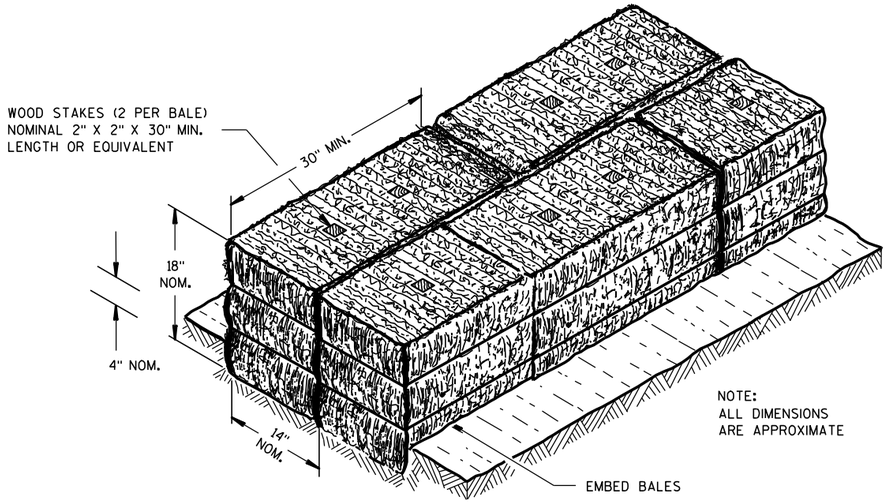
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

6

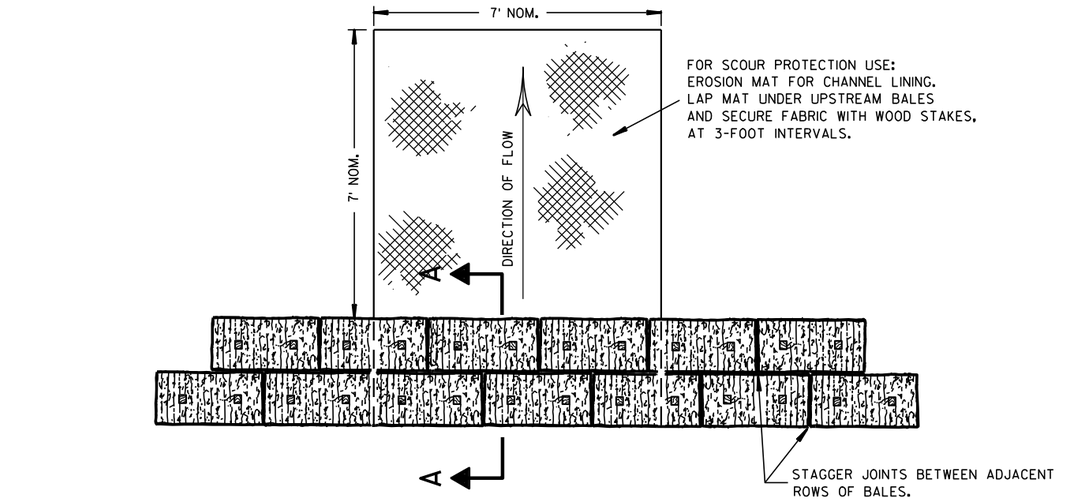
S.D.D. 8 D 5-19g

6

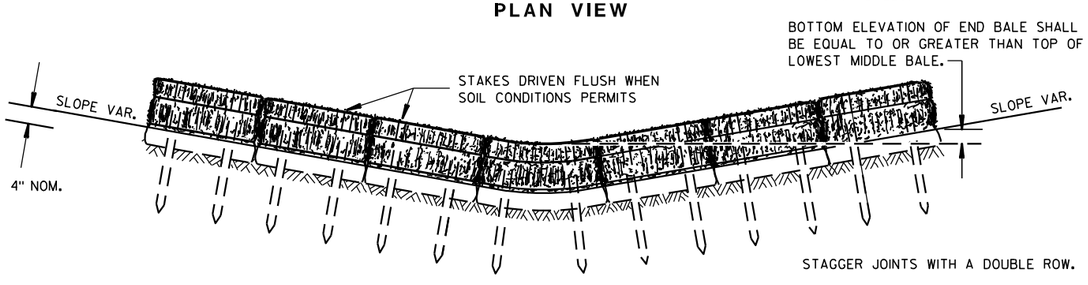
S.D.D. 8 D 5-19g



SECTION A-A



PLAN VIEW



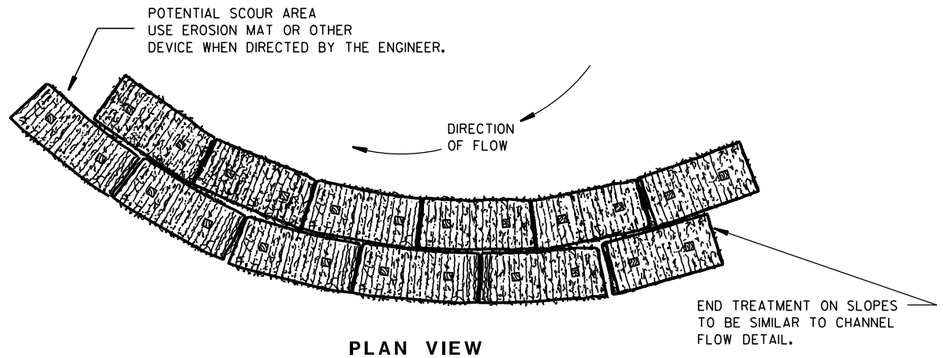
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

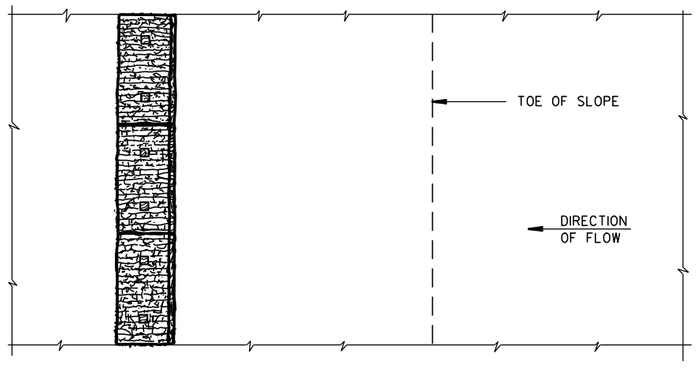
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

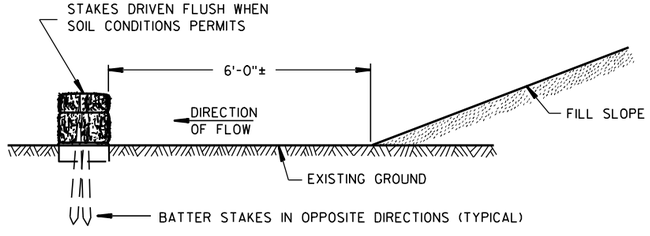


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

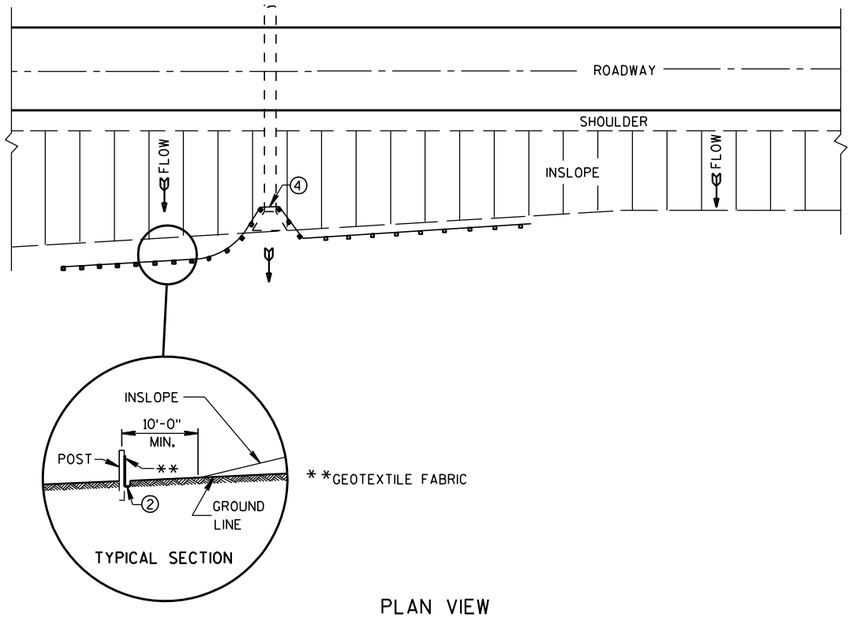
EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

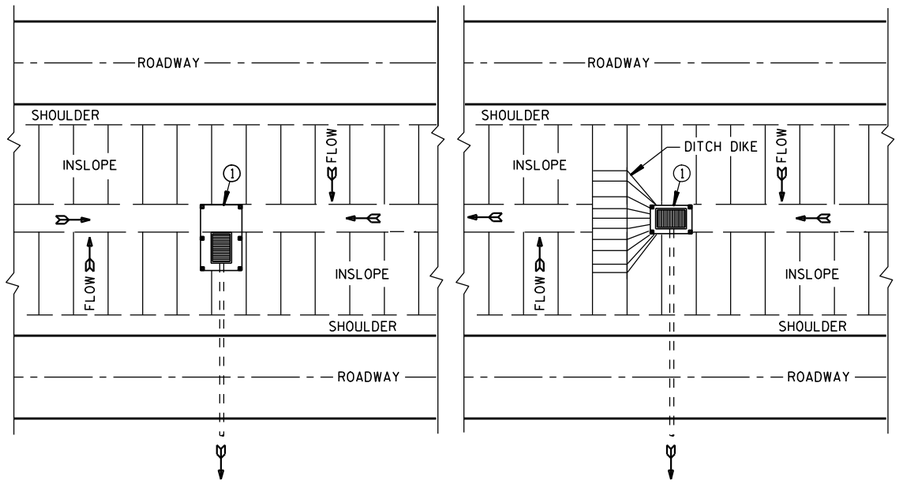
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



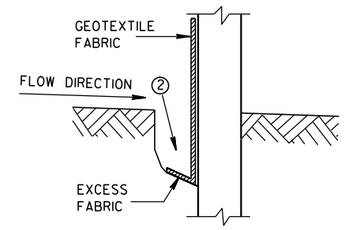
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

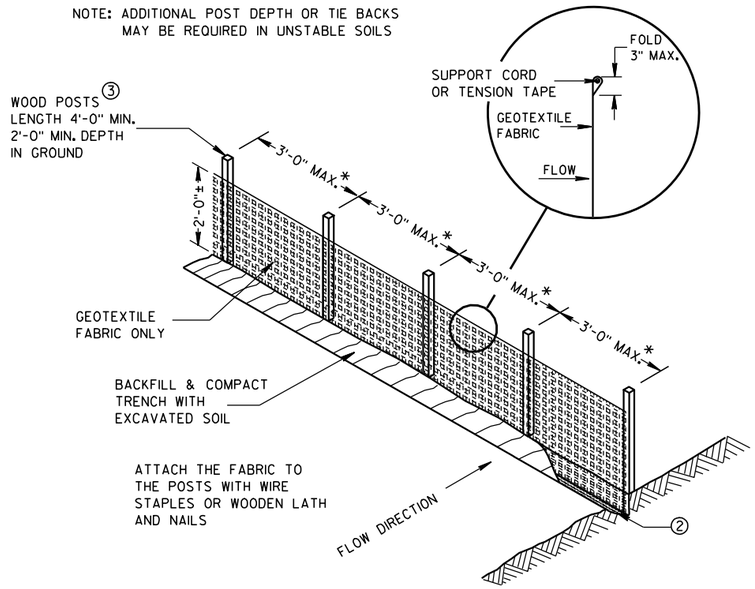
GENERAL NOTES

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

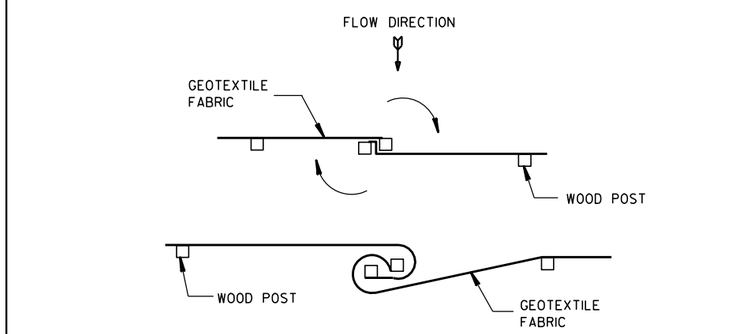
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



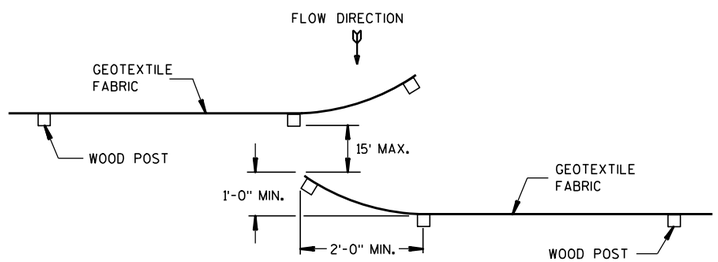
TRENCH DETAIL



SILT FENCE

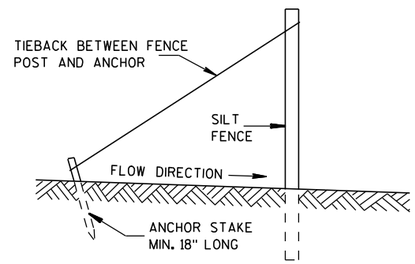


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

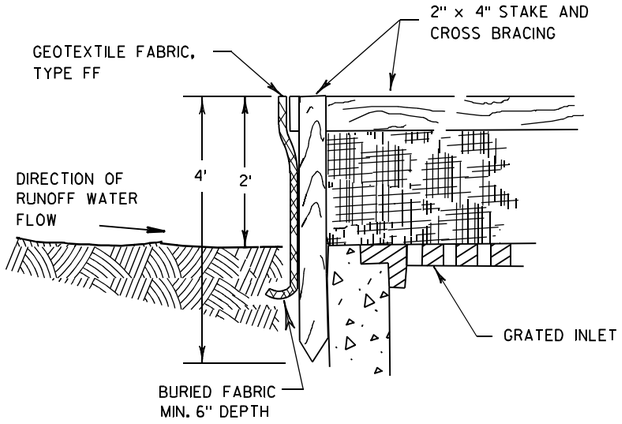
(WHEN REQUIRED BY THE ENGINEER)

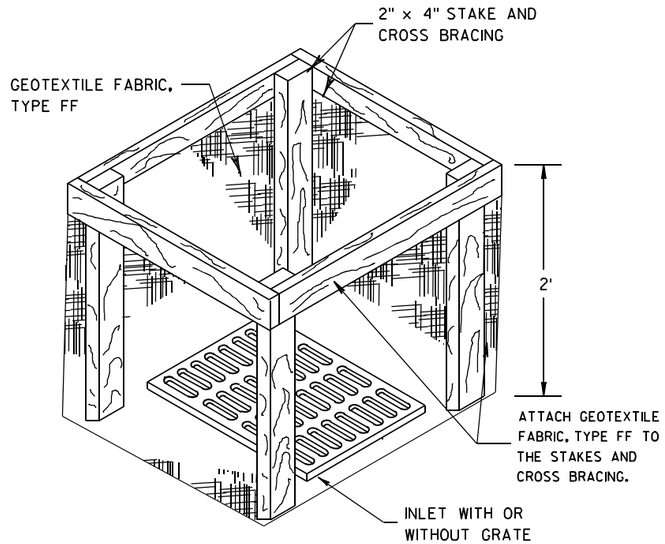
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

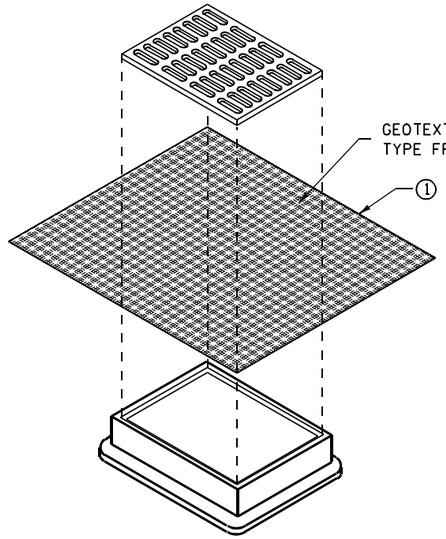
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 9-6



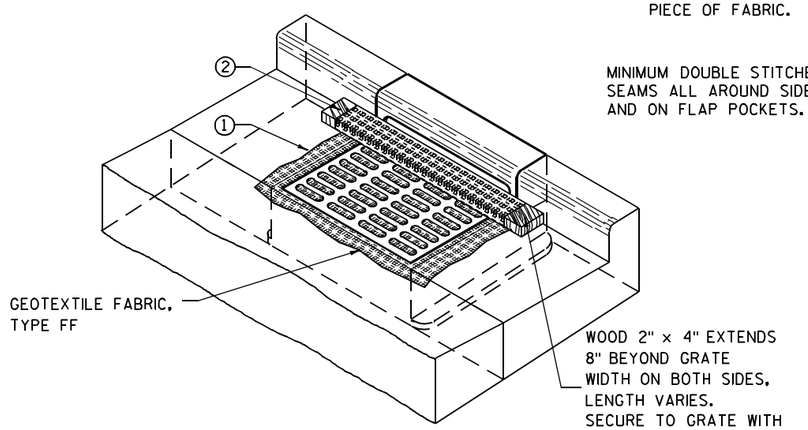


INLET PROTECTION, TYPE A

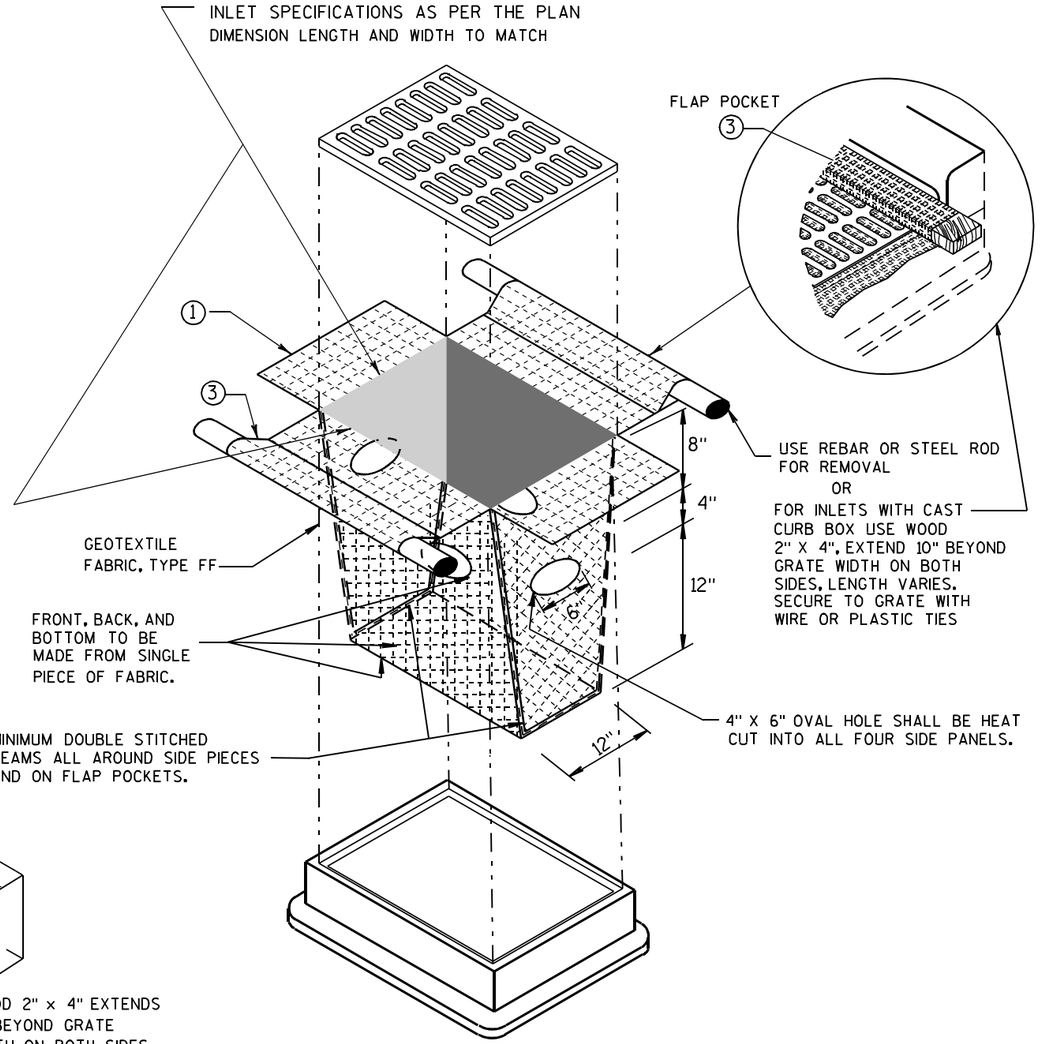


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

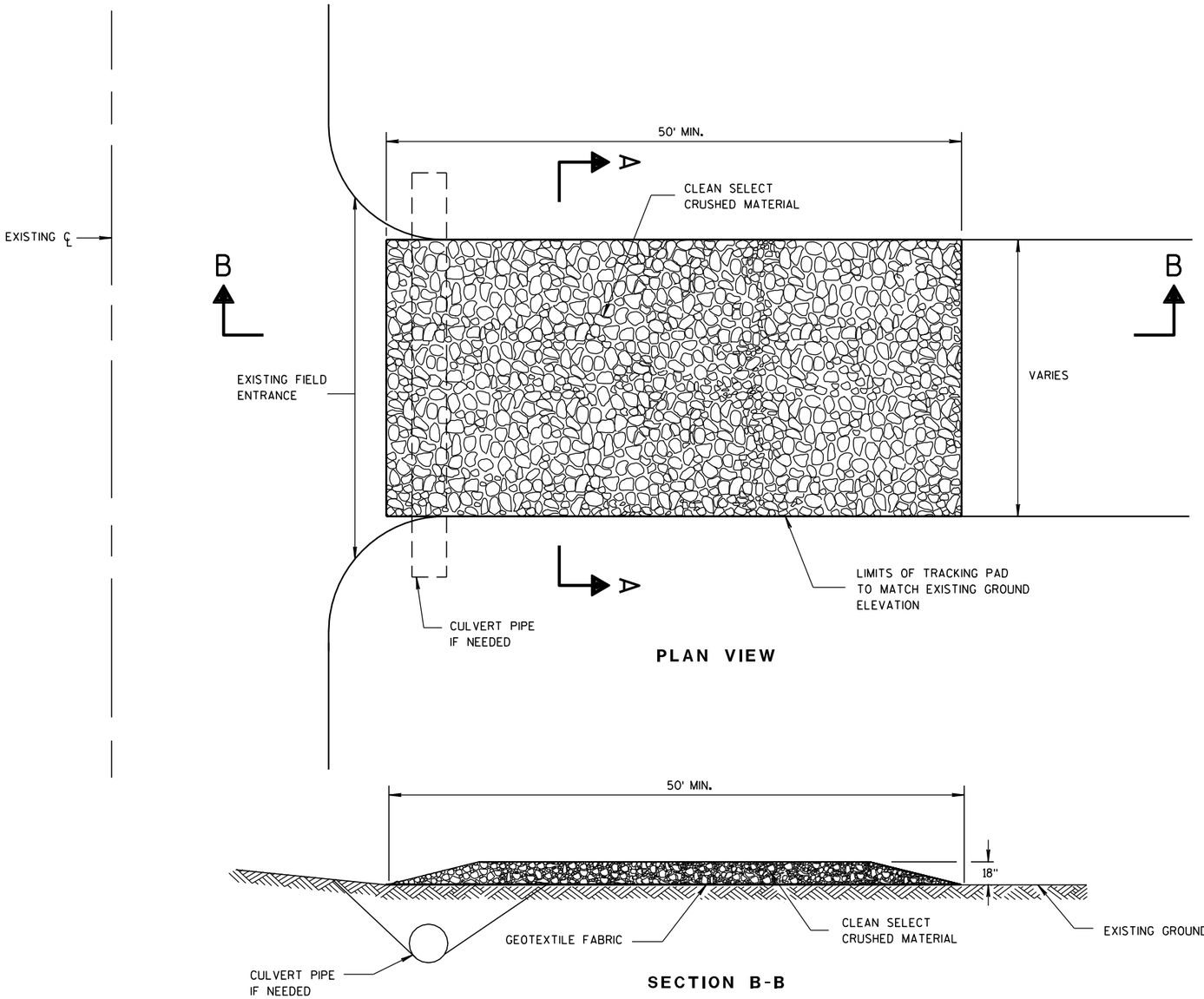
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

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

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

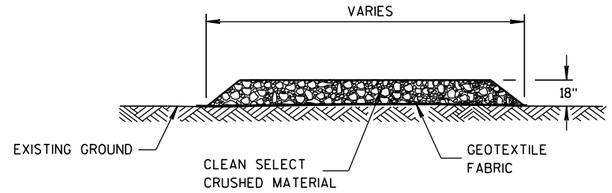
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD

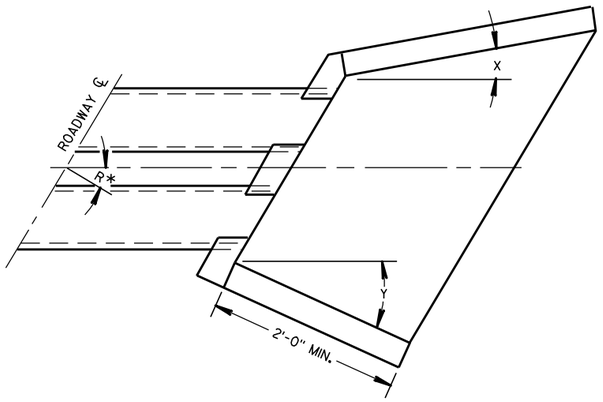
TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1



WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

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.

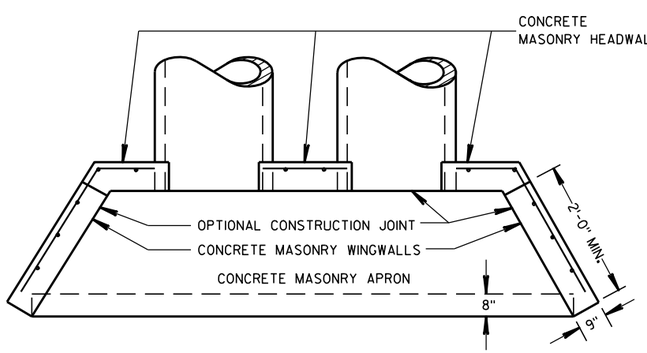
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

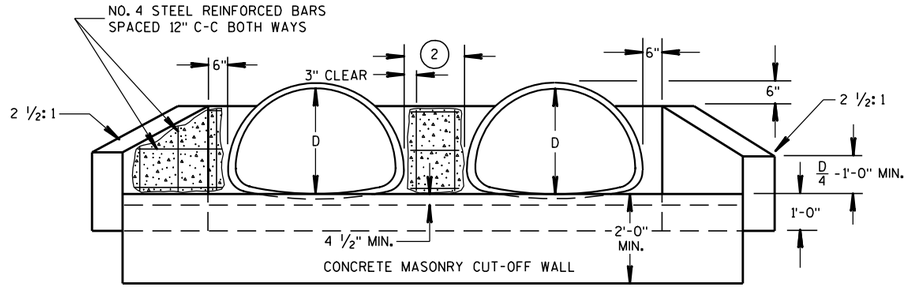
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3'-0"



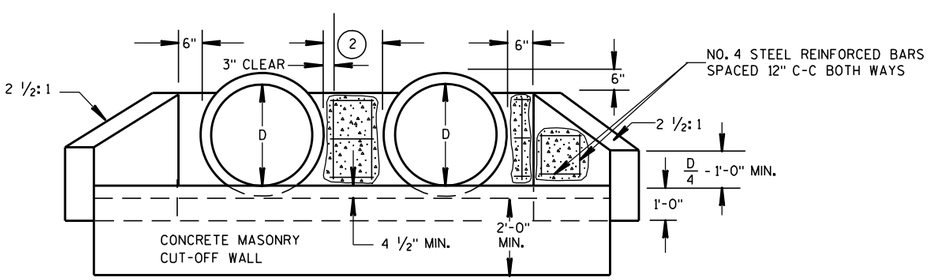
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



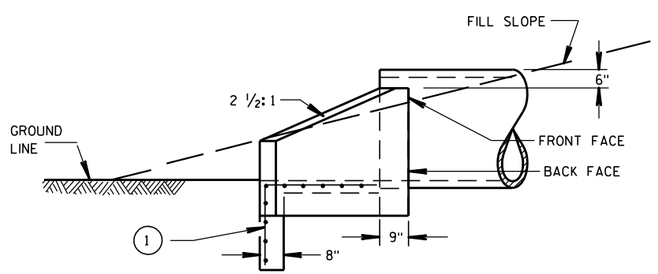
END ELEVATION

PIPE ARCH



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

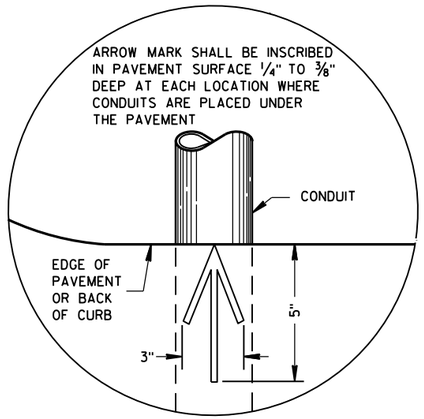
CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

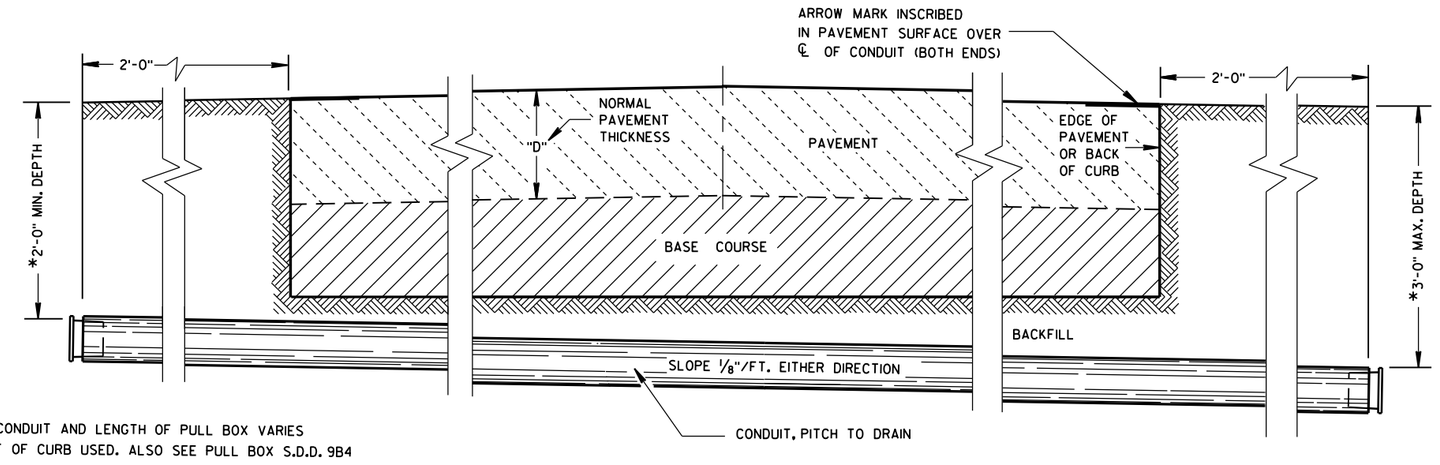
APPROVED
9/14/98 DATE
/S/ Rory L. Rhinehart
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 10-1



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

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.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

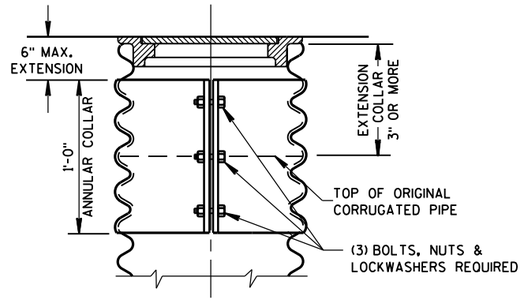
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

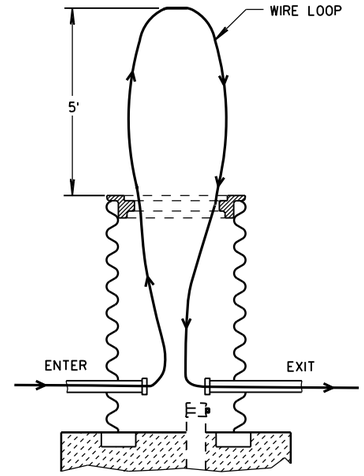
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2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

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

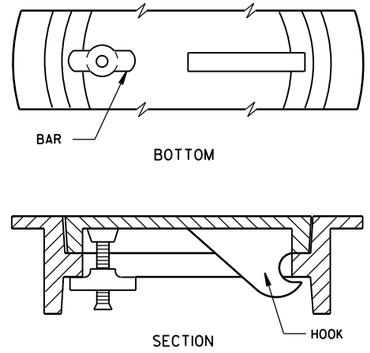
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

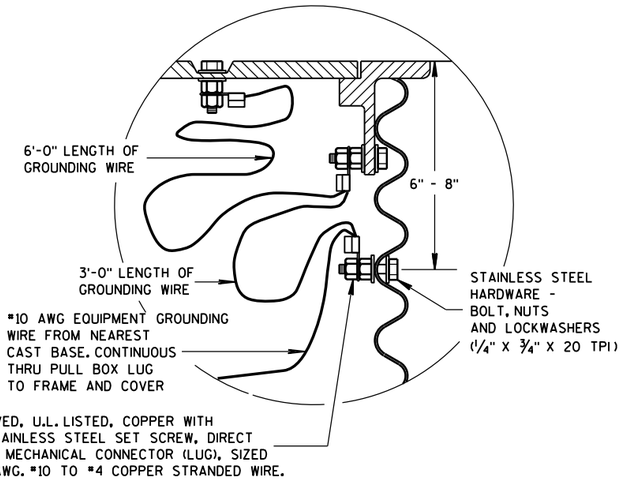


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

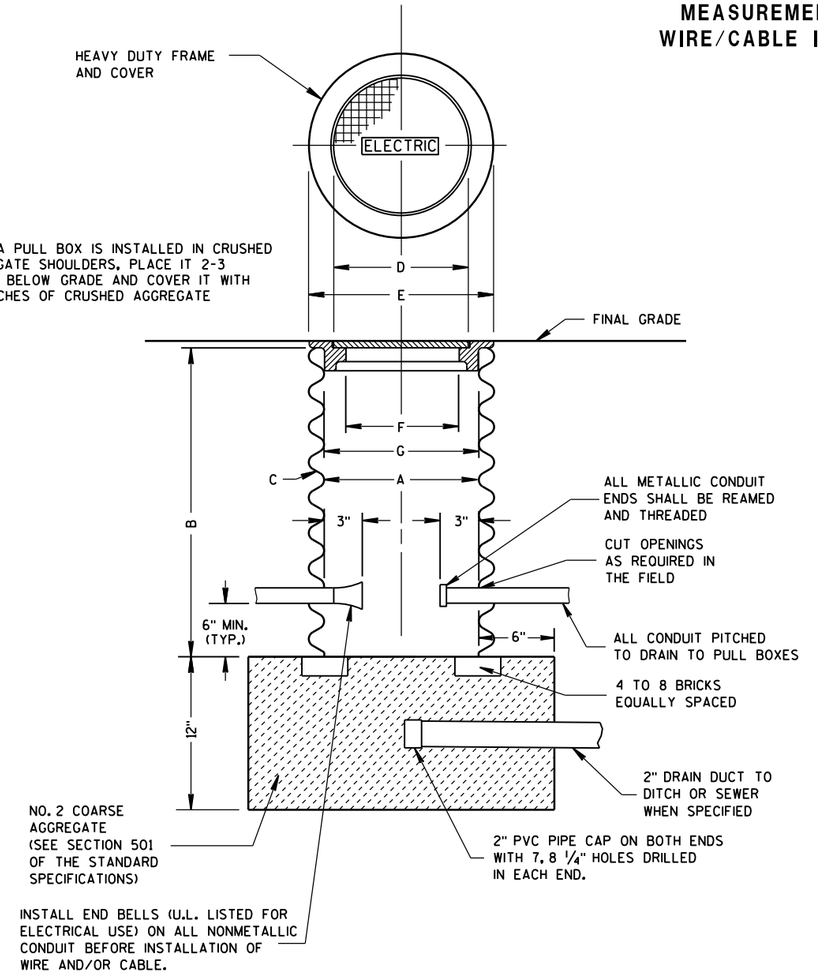
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

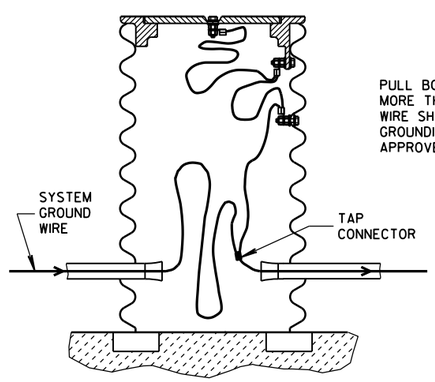
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

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



PULL BOX



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.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

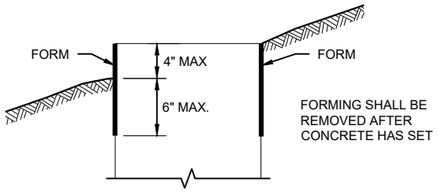
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11

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 DRAWINGSHALL 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 A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO 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 BENDS 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 1, 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.

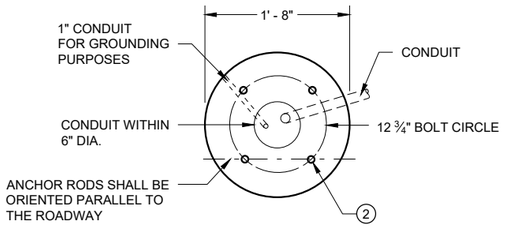
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

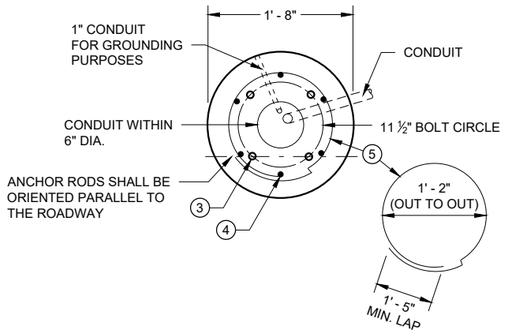
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

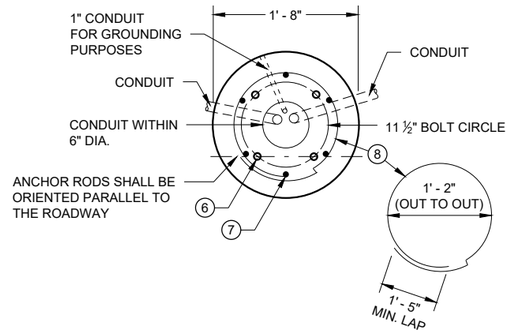
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

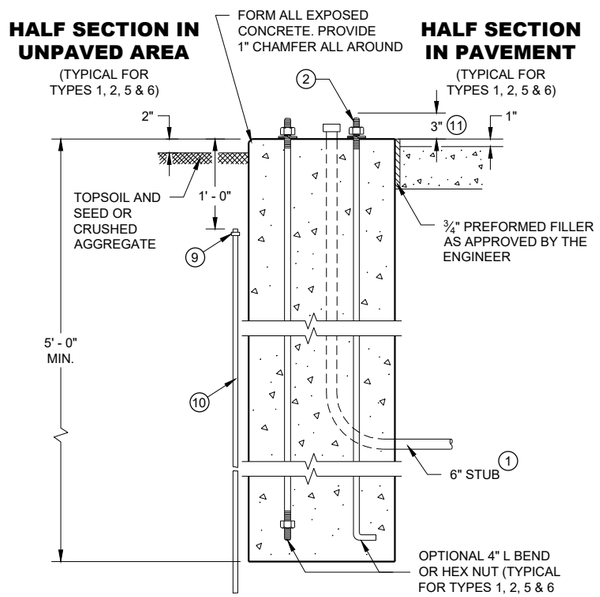
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

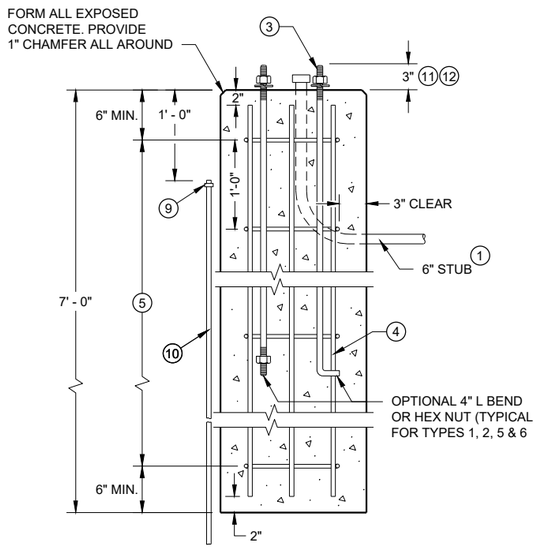
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

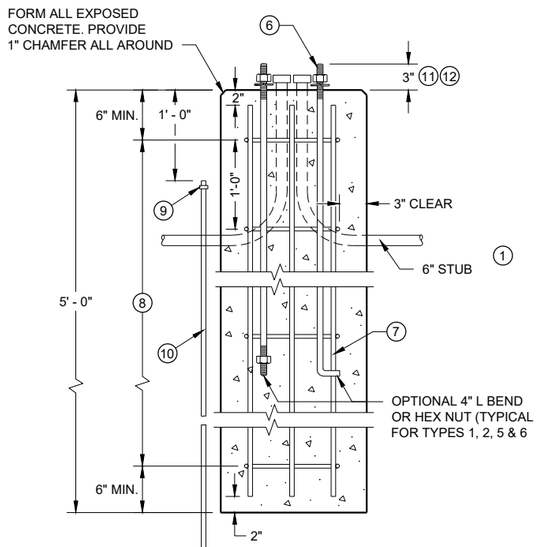












1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN 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 STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

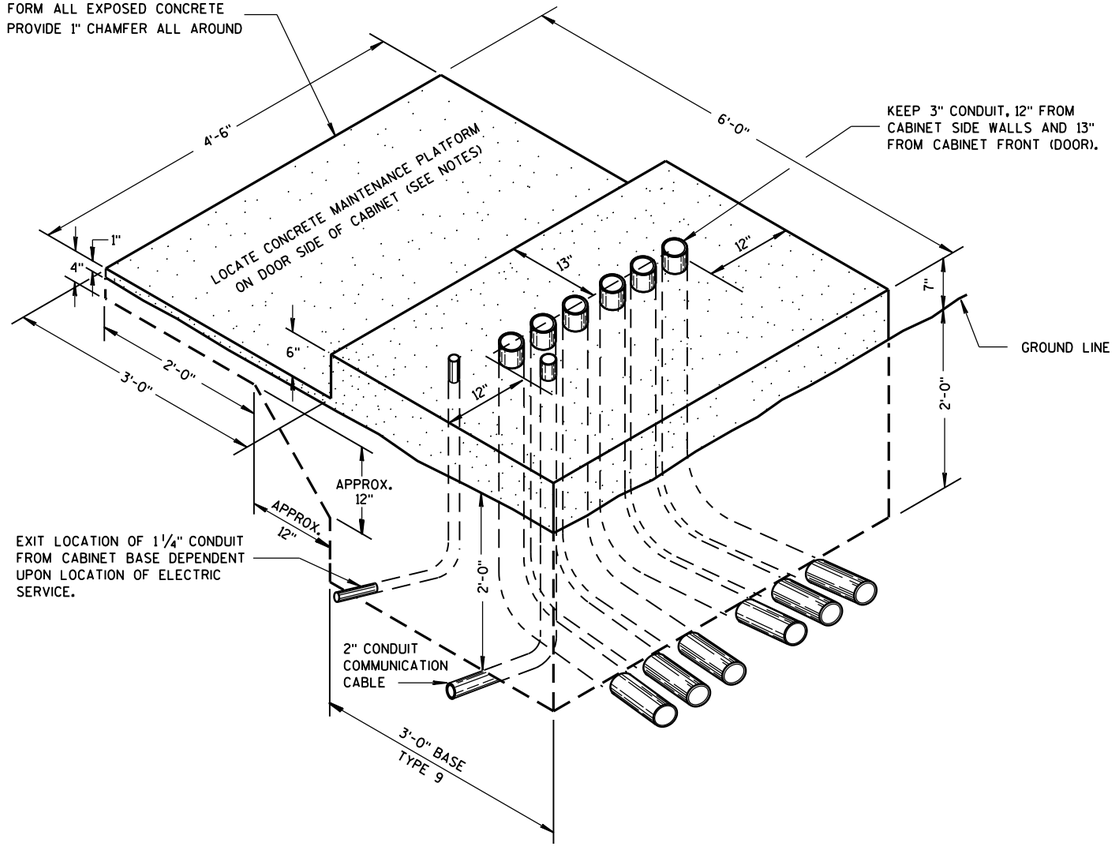
CONCRETE BASES

CONCRETE BASES TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI
FHWA

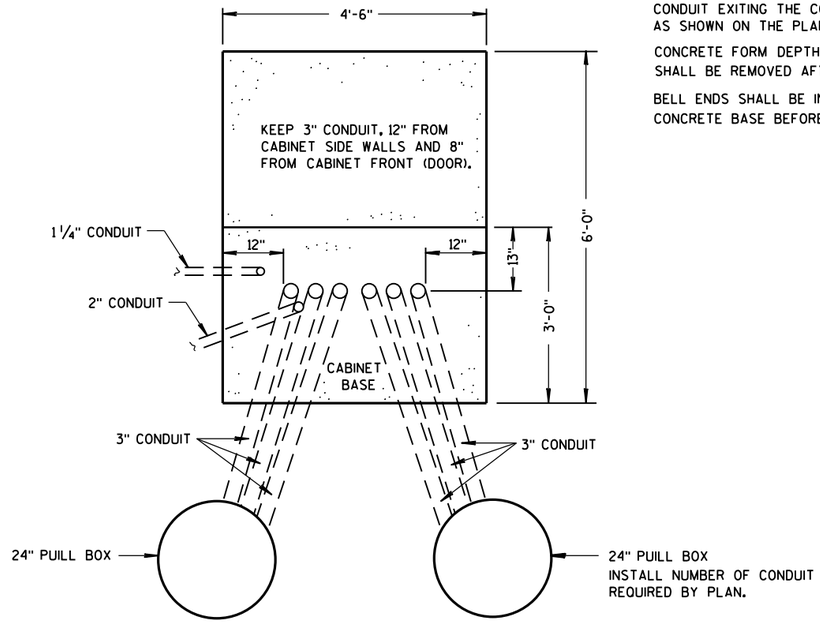
6
SDD 09C02 - 08



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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

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

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

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

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

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

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

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

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

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

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

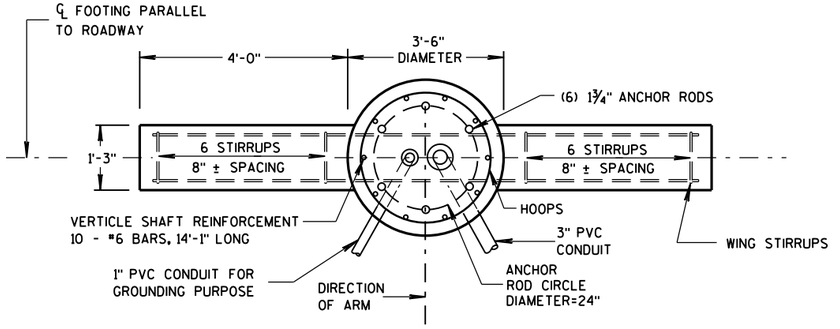
CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

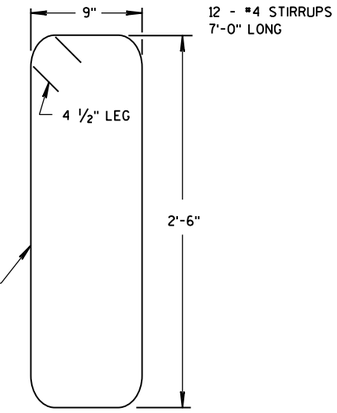
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

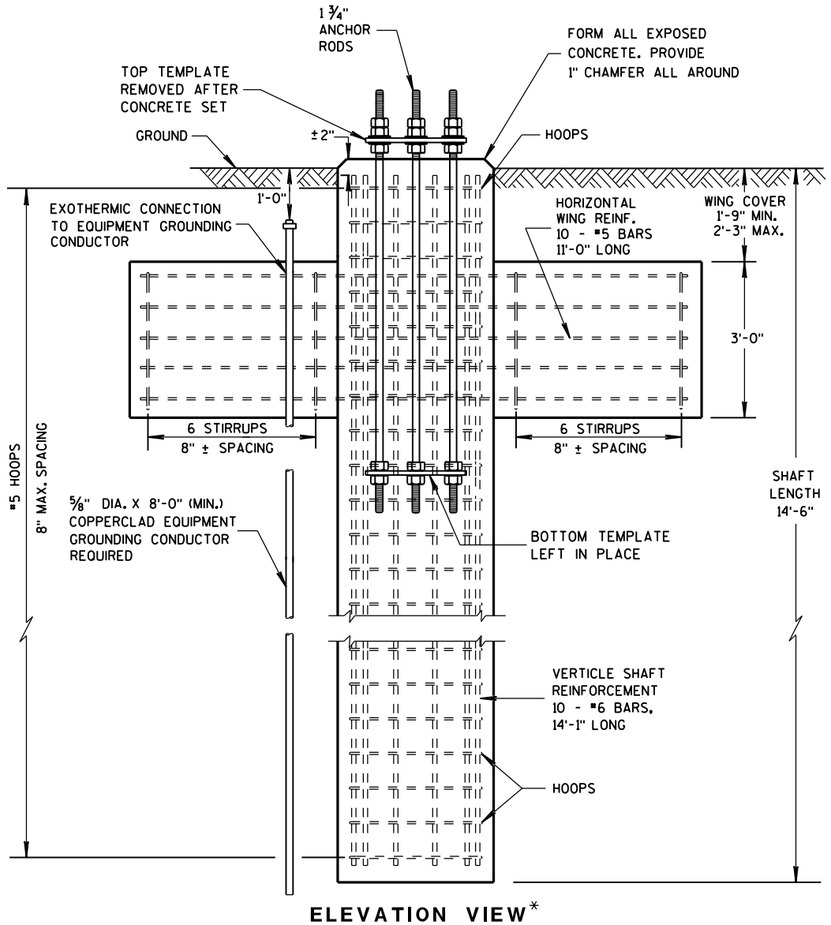
S.D.D. 9 C 6-7



PLAN VIEW

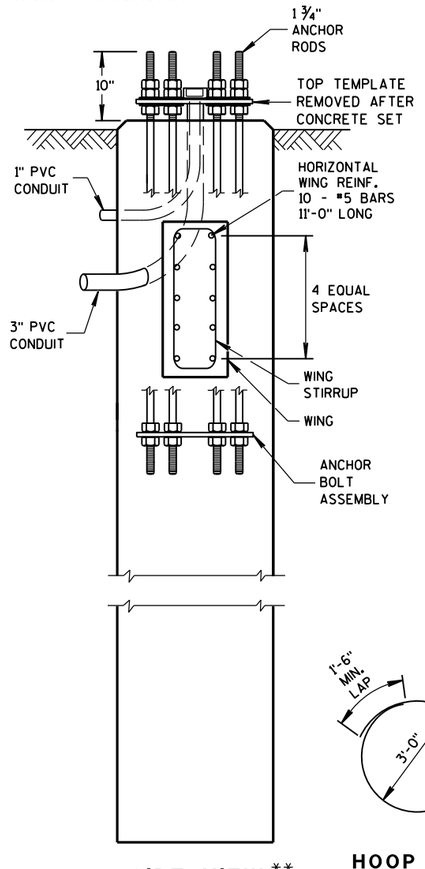


WING STIRRUP



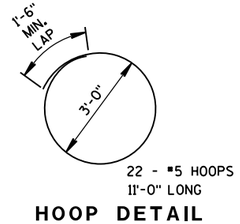
ELEVATION VIEW*

* CONDUITS ARE NOT SHOWN ON THIS VIEW FOR CLARITY



SIDE VIEW**

** HOOPS AND VERTICAL SHAFT REINFORCEMENT NOT SHOWN ON THIS VIEW FOR CLARITY



HOOP DETAIL

GENERAL NOTES

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

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF THE UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BASES (SHAFT), BELOW THE WING, SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUNG THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

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

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

CONDUIT HEIGHT ABOVE CONCRETE BASE SHALL BE 4½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTOR FITTINGS, UL LISTED FOR ELECTRICAL USE, SHALL BE USED.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE 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.

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

THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVEL 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, (GREATER THAN 36-INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

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

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATIONS	fy=55,000 p.s.i.
TEMPLATES, ASTM A709 GRADE 36	fy=36,000 p.s.i.

(FOR TYPE 12 & 13 & OVER HEIGHT (OH) POLES)

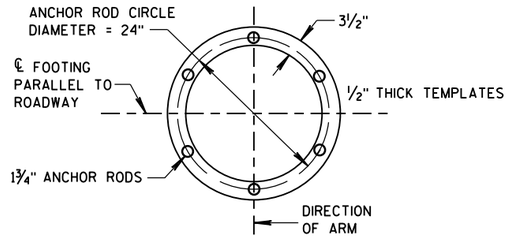
CONCRETE = 6.3 C.Y.
H.S. REINFORCEMENT = 635 LBS.

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.
SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

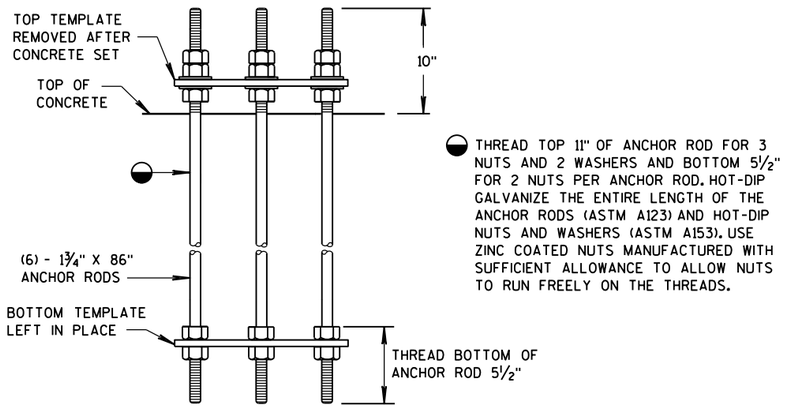
CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 9 C 12-9a

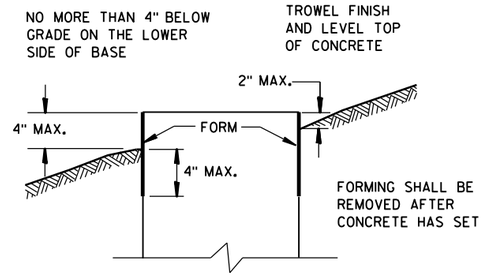


TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 13 ANCHOR ASSEMBLY



FORMING DETAIL

CONCRETE BASE TYPE 13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

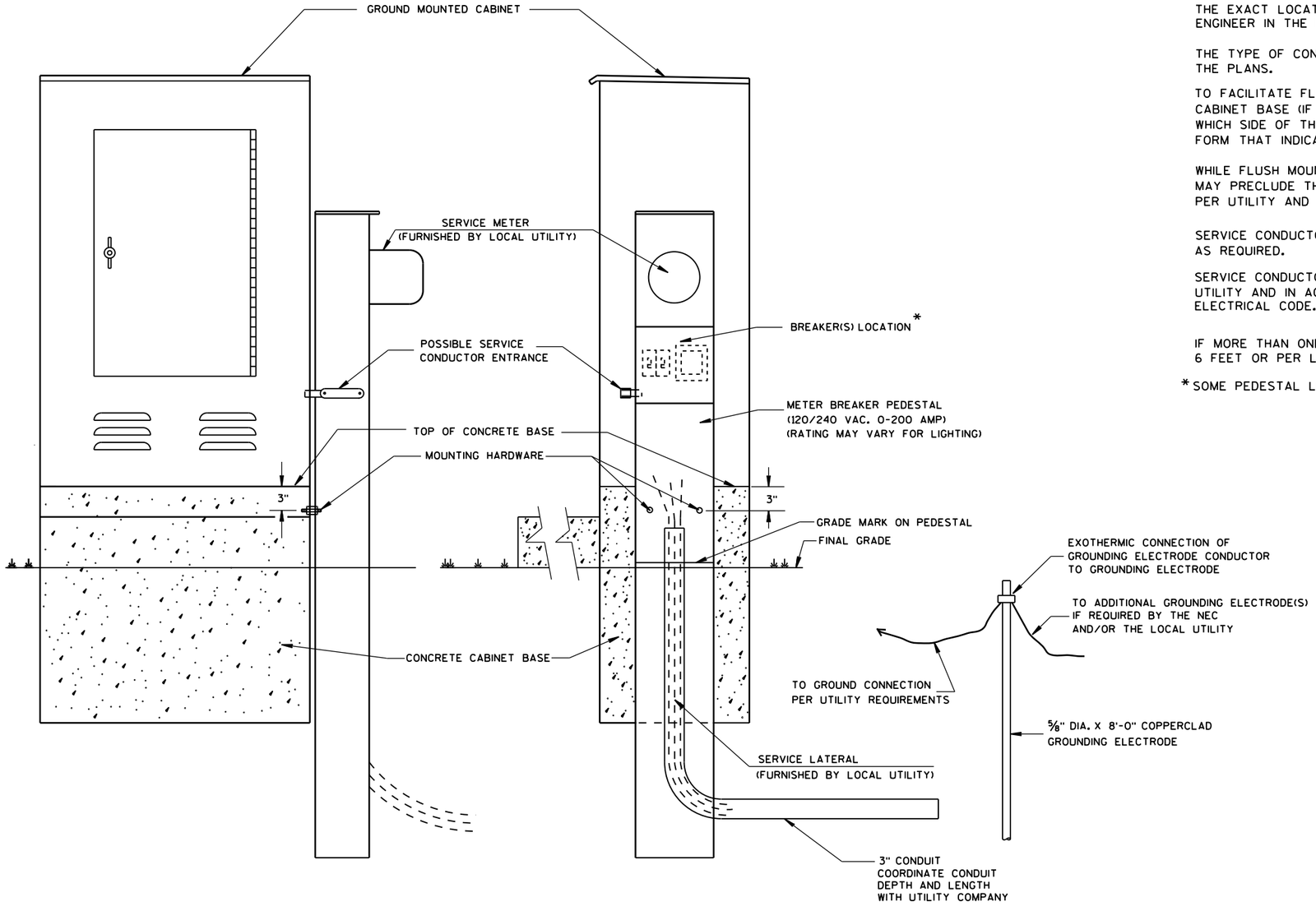
APPROVED
May 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 12-9b

6

S.D.D. 9 C 12-9b



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

6

S.D.D. 9 D 1-5

6

S.D.D. 9 D 1-5

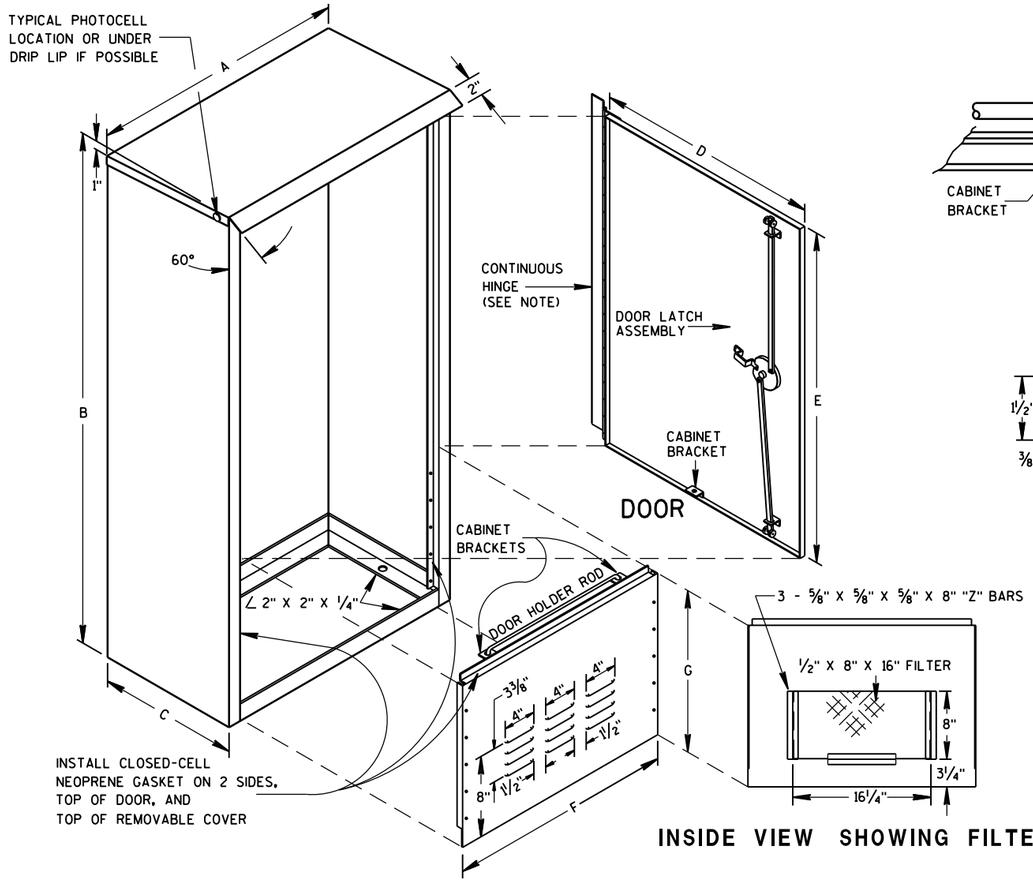
CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

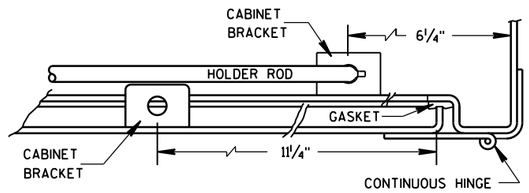
/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

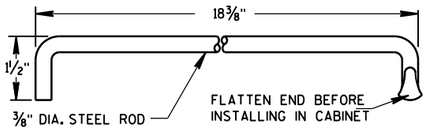


REMOVABLE COVER

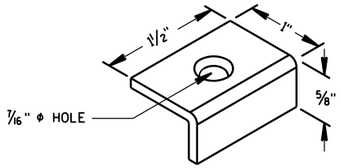
INSIDE VIEW SHOWING FILTER



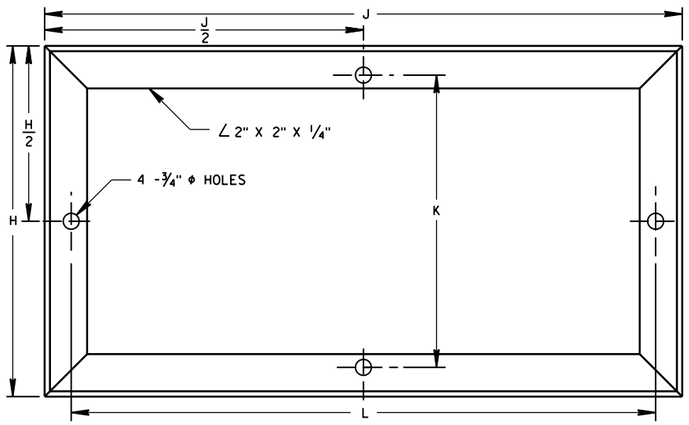
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

GENERAL NOTES

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

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

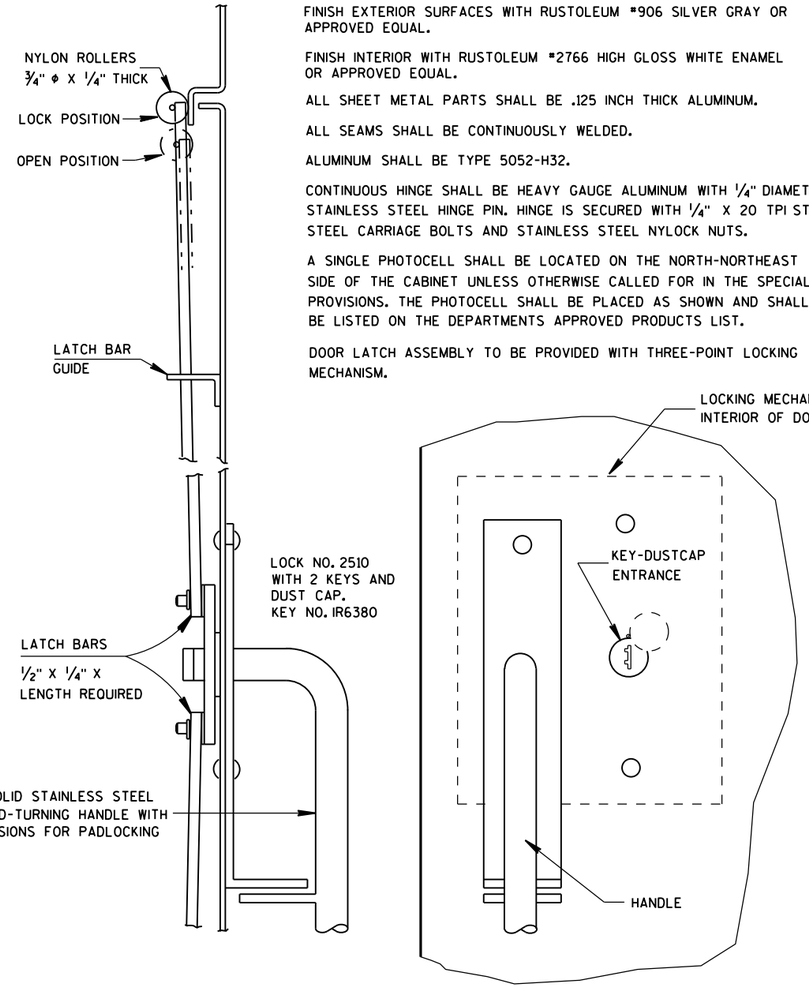
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

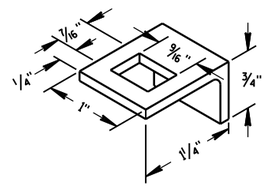
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

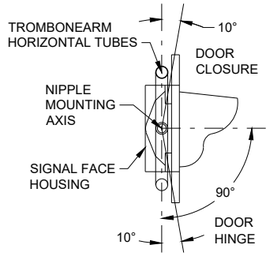
FHWA

6

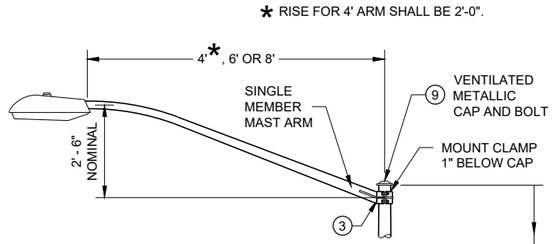
S.D.D. 9 D 2-3

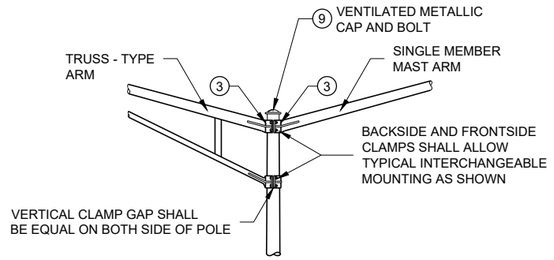
6

S.D.D. 9 D 2-3

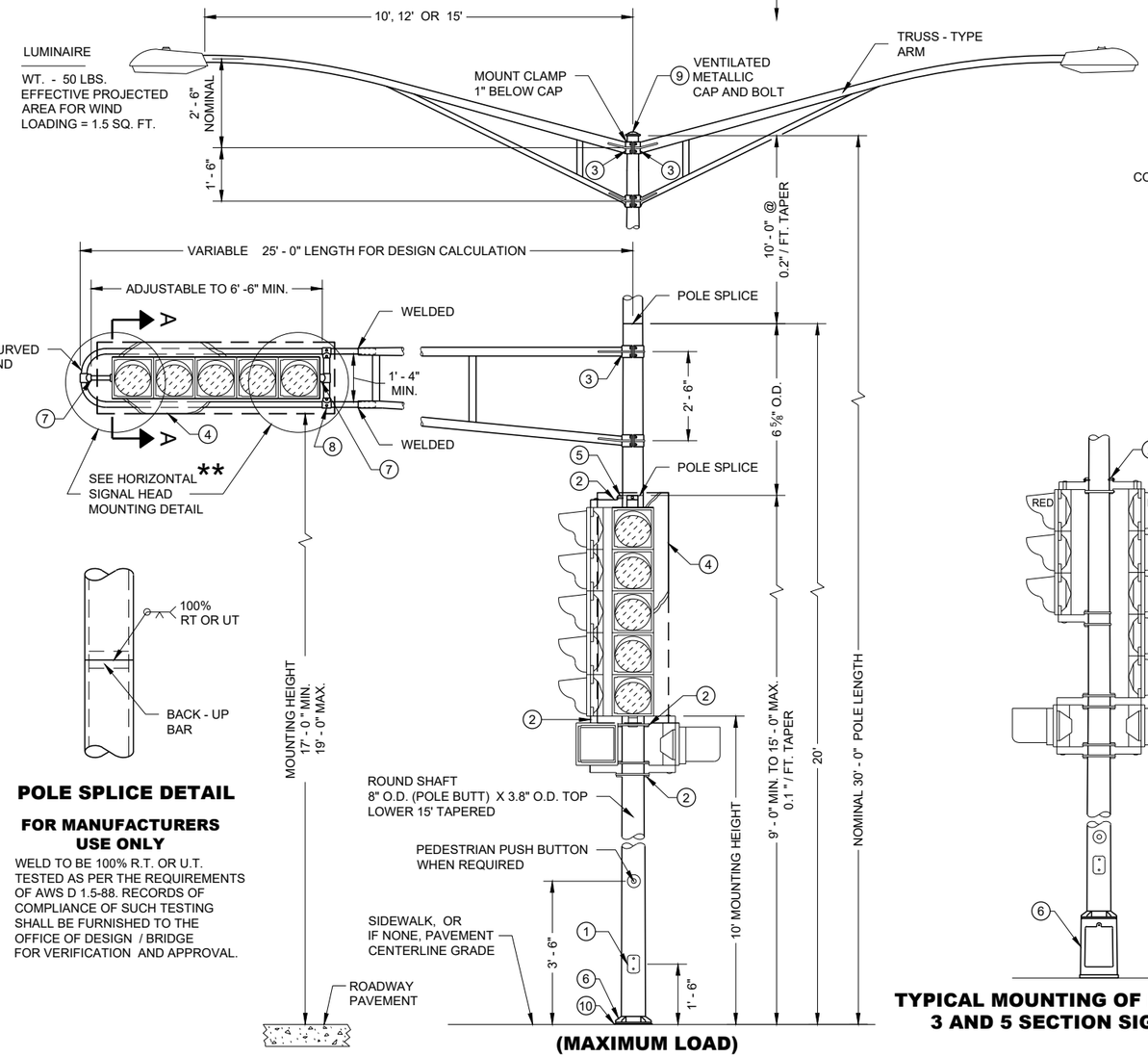


SECTION A-A

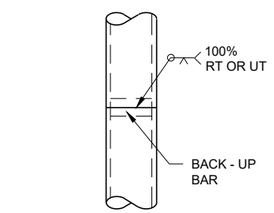




INTERCHANGEABLE MOUNTING DETAIL



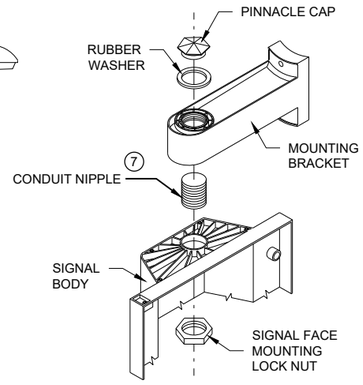
(MAXIMUM LOAD)



POLE SPLICE DETAIL

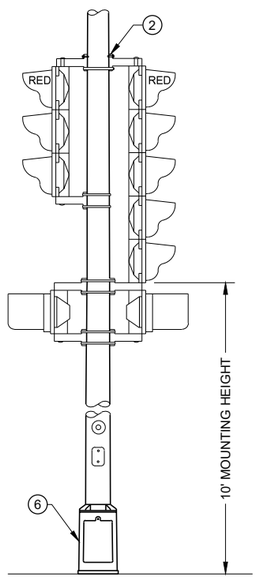
FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.

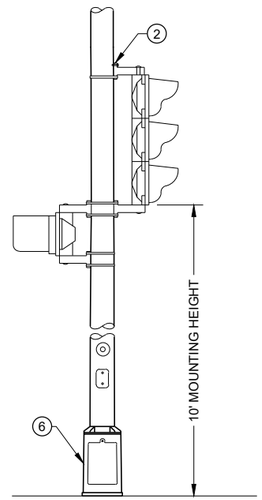


SIGNAL FACE MOUNTING DETAIL

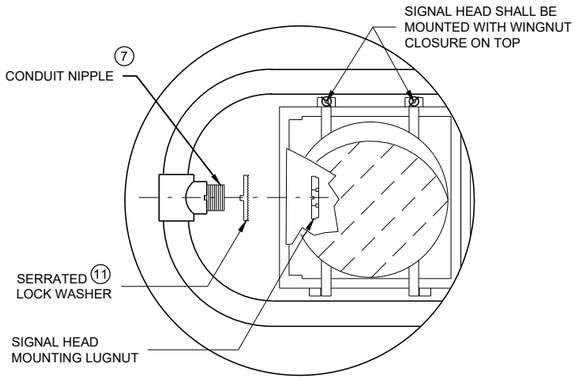
(BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD ** MOUNTING DETAIL

** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

TYPE 3 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

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

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

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) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

(2) SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.

(3) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.

(4) SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.

(5) POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED. UNDER MAX LOADING, TYPE 3 POLE SHALL BE MOUNTED DIRECTLY TO ITS CONCRETE BASE.

(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

(8) VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.

(9) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(11) USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

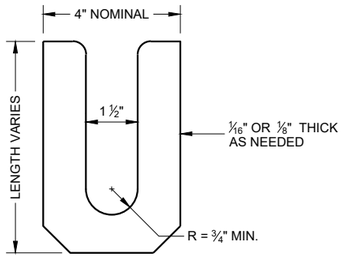
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

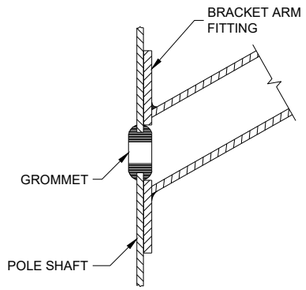
SDD 09E01 - 15b

6

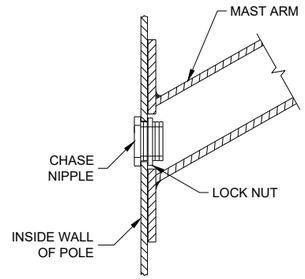
SDD 09E01 - 15b



LEVELING SHIM (1)
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.

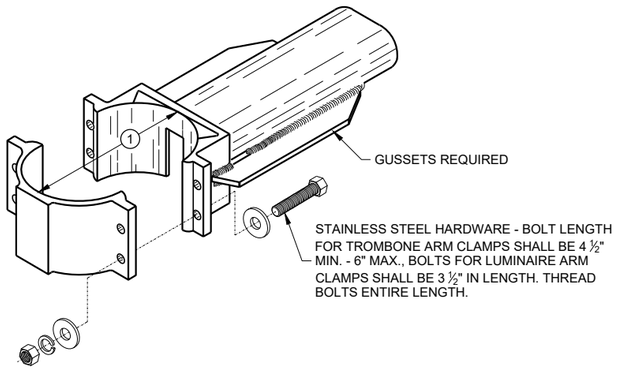
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

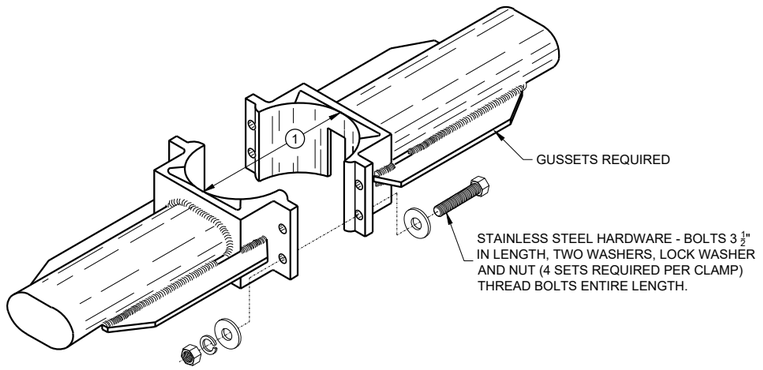
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(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.

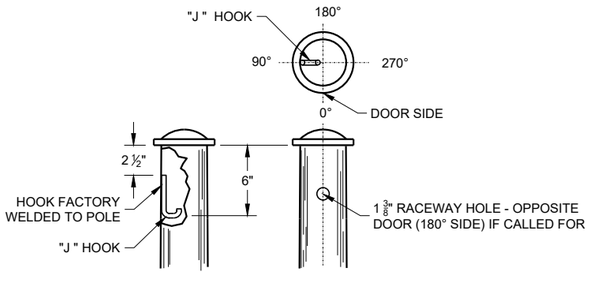
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



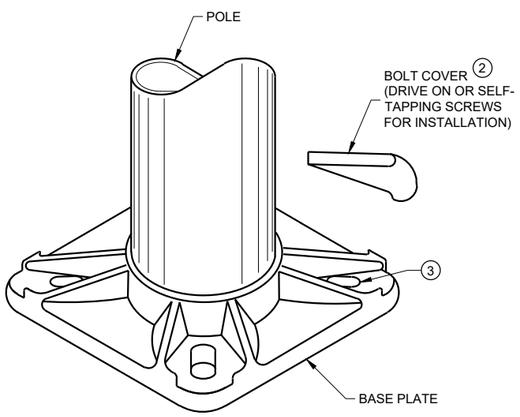
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



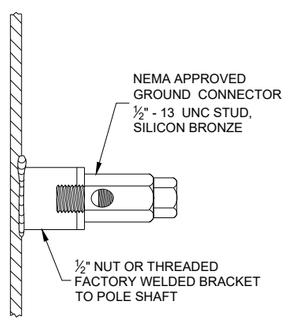
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

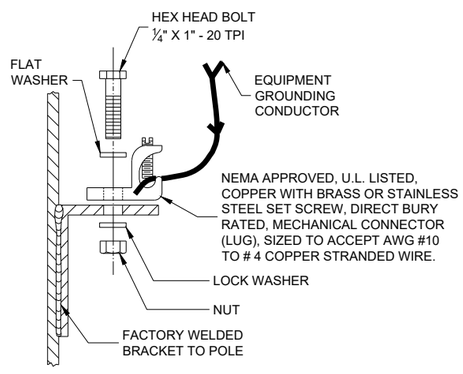


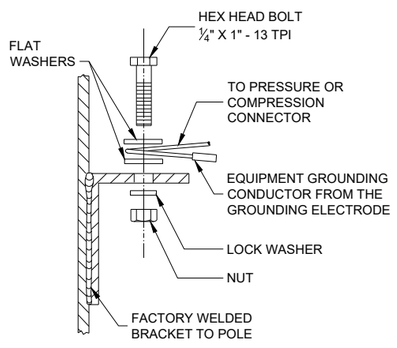
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

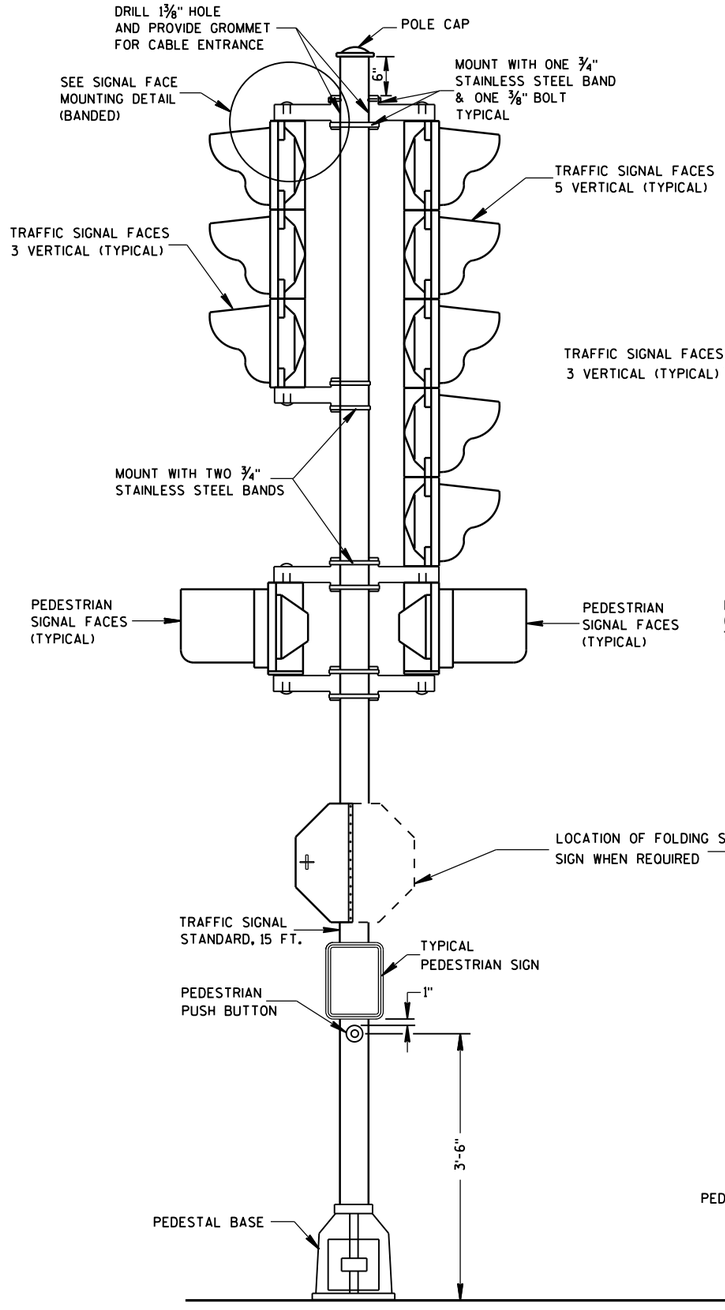
APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

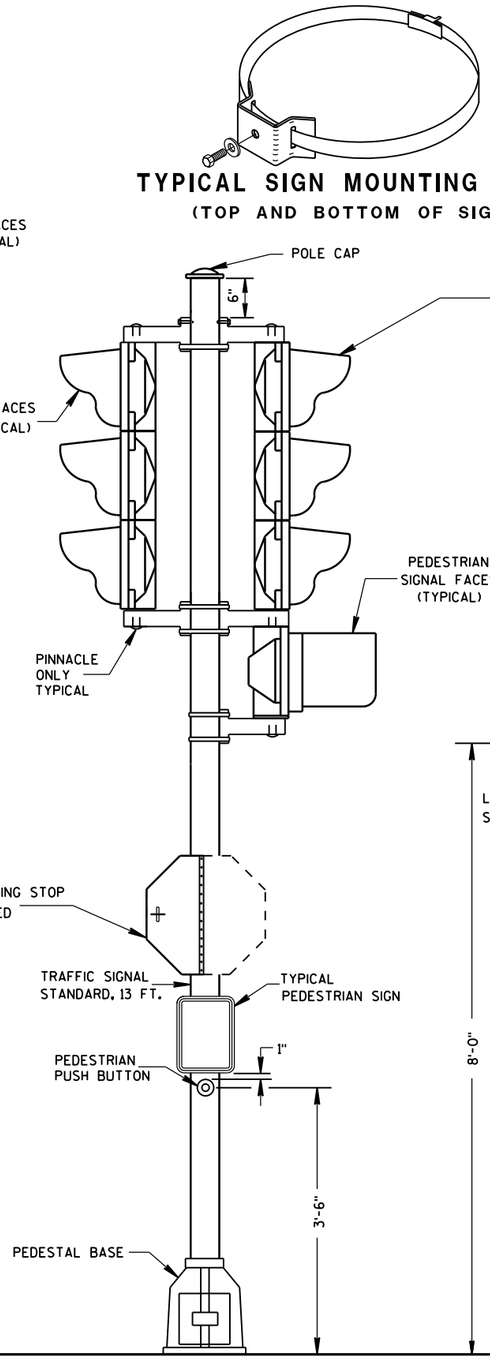
FHWA

6

SDD09A01 - 15g

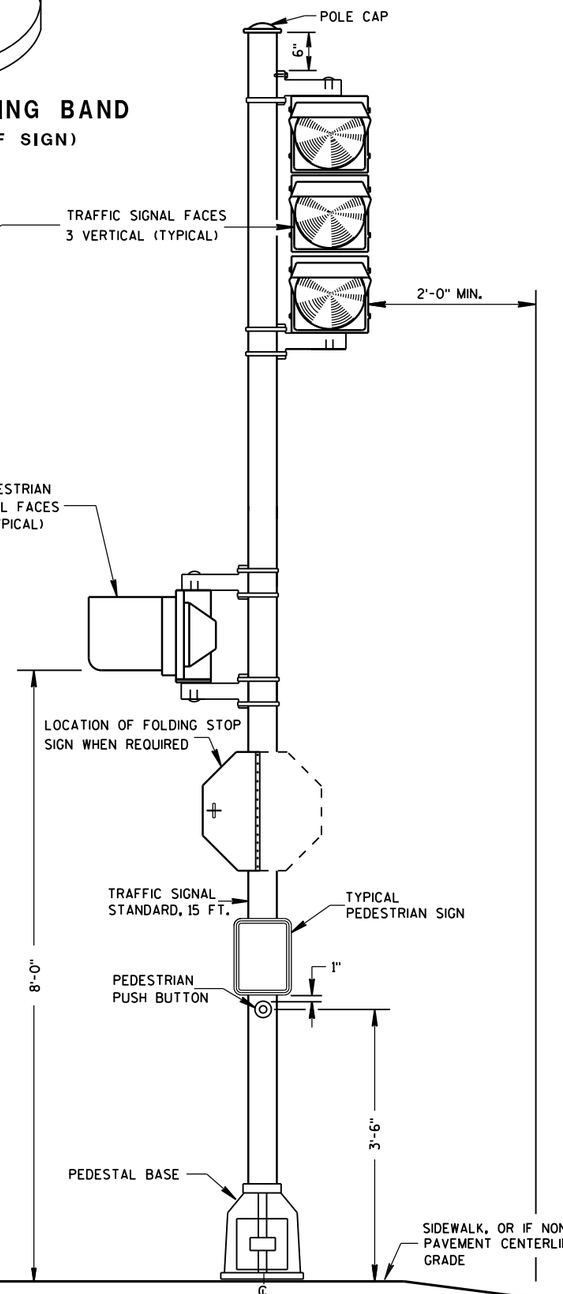


TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.

TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

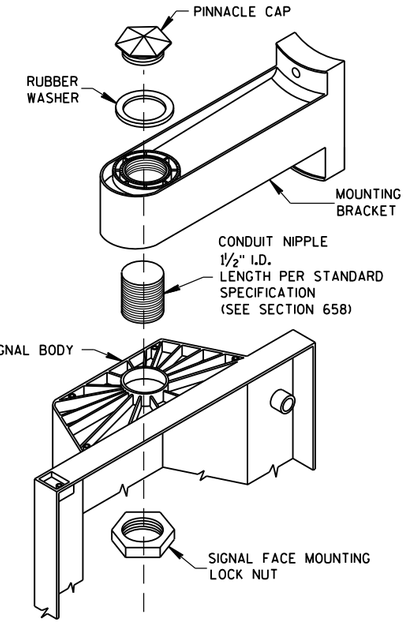
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

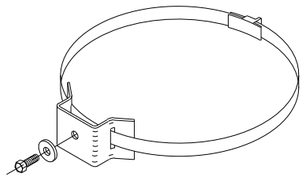
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

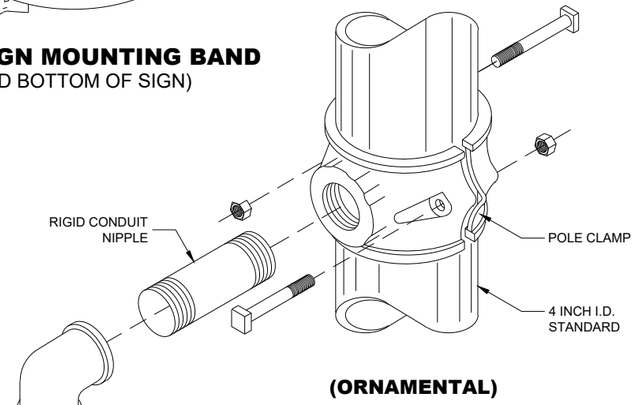
APPROVED
2/28/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

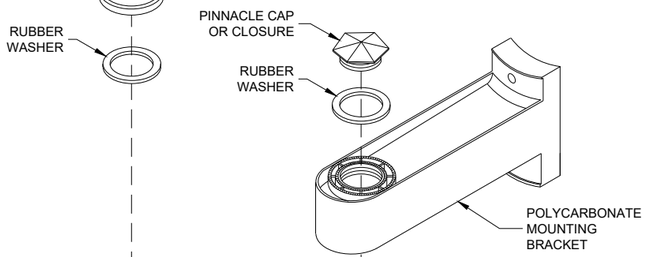
S.D.D. 9 E 6-5



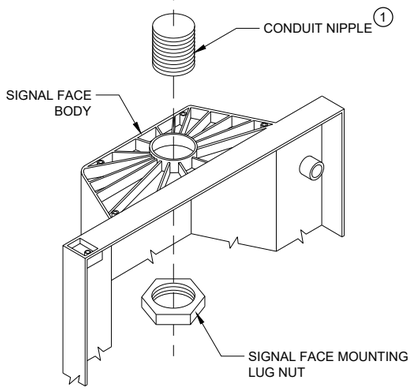
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



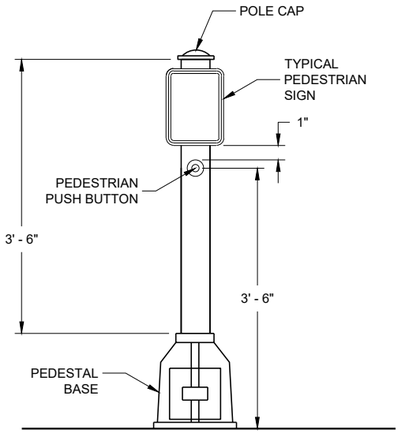
(ORNAMENTAL)



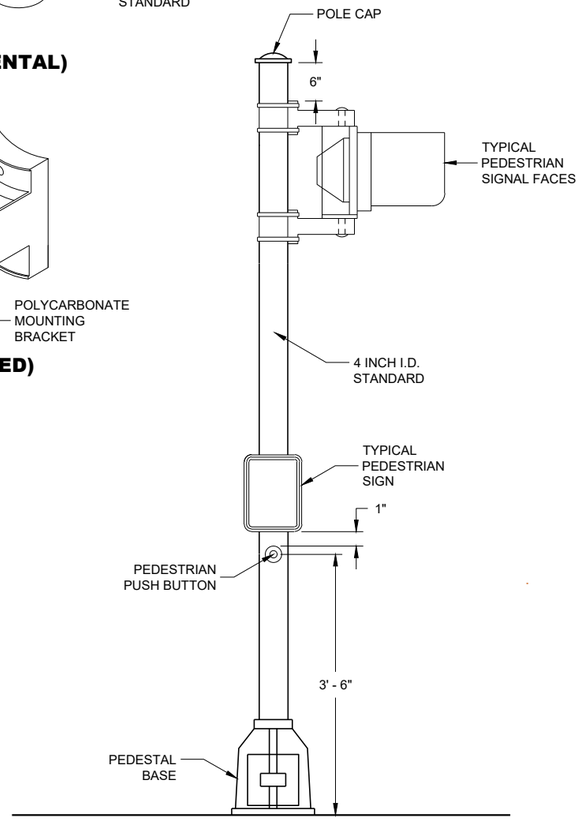
(BANDED)



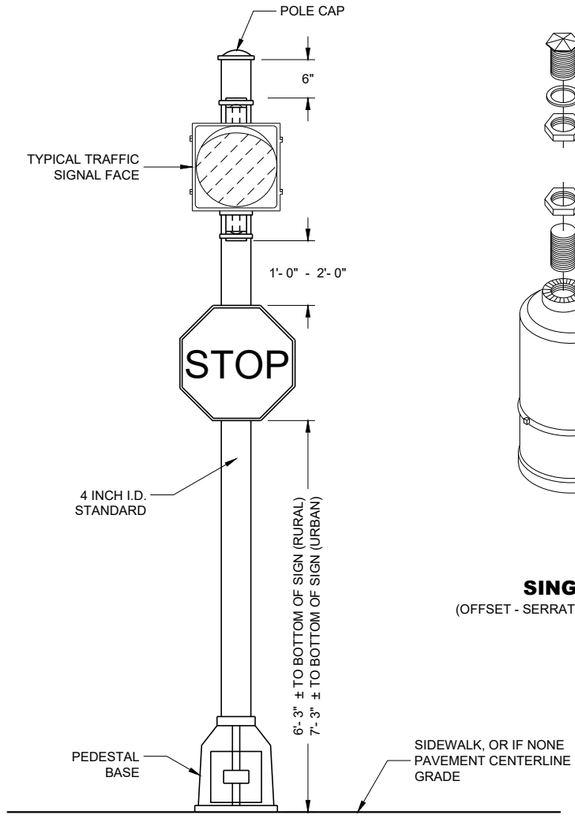
SIGNAL FACE MOUNTING DETAILS



PEDESTRIAN PUSH BUTTON TYPICAL MOUNTING



PEDESTRIAN FACE STANDARD - 10 FT.
(WALK - DON'T WALK)



STANDARD FLASHER
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED

GENERAL NOTES

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

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS, UNLESS APPROVED BY THE ENGINEER IN THE FIELD.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

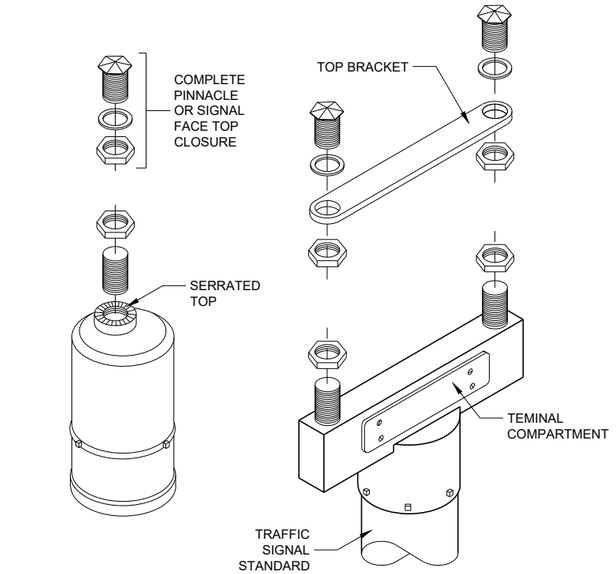
LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE REGION TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(1) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACESAND BRACKET ENDS.



SINGLE
(OFFSET - SERRATED MOUNTING)

DOUBLE
(SERRATED MOUNTING)

SLIPFITTERS

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

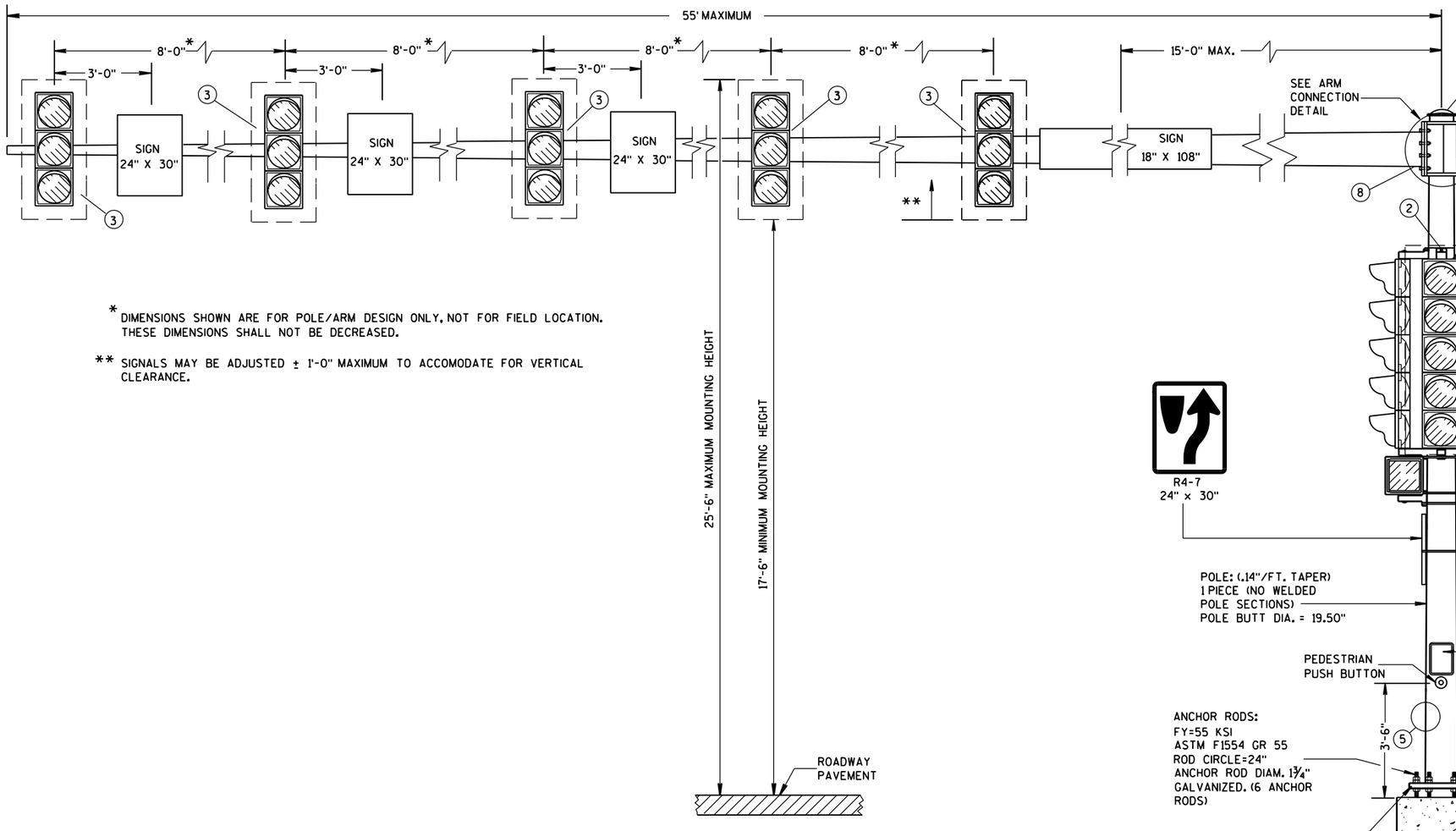
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

6

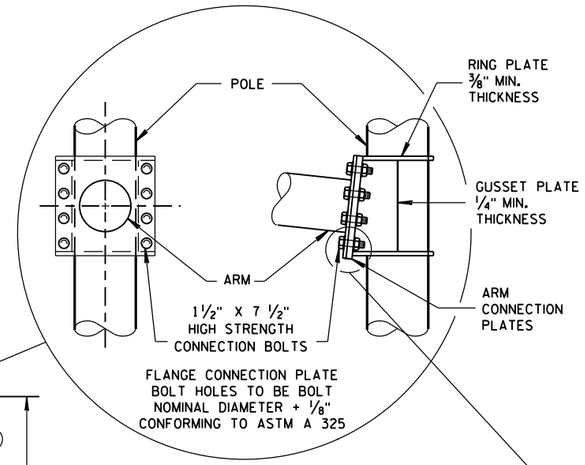
SDD 09E07 - 06

SDD 09E07 - 06

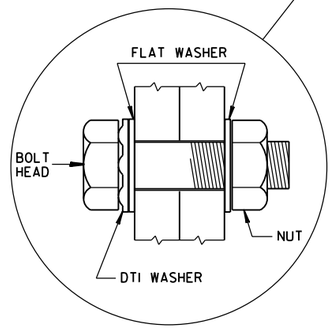


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

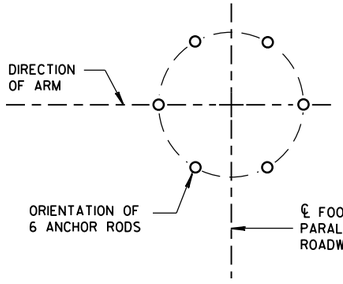
** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



8 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL



ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 12 POLE 35'- 55' MONOTUBE ARM

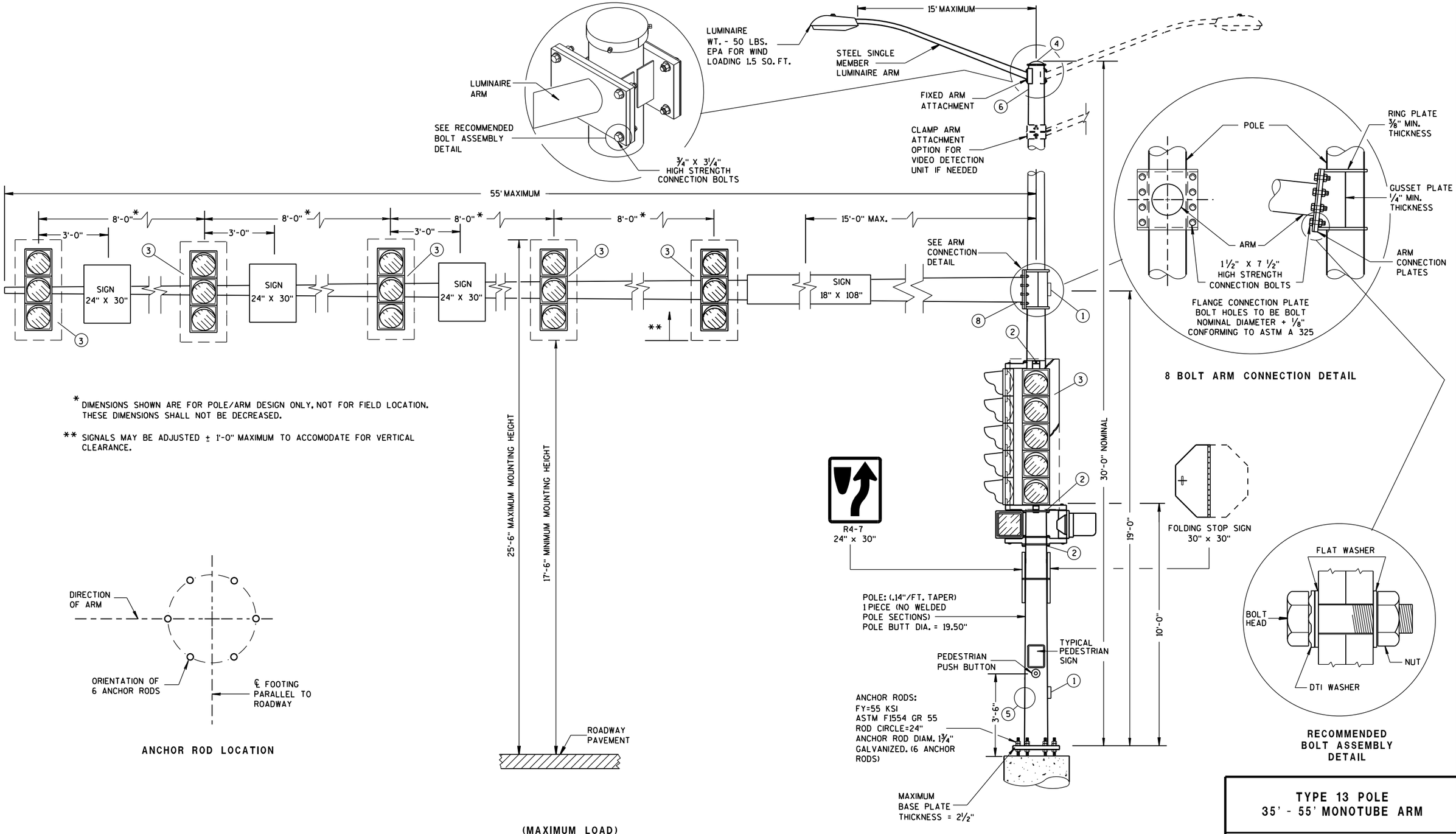
TYPE 12 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-8c



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.

8 BOLT ARM CONNECTION DETAIL

RECOMMENDED BOLT ASSEMBLY DETAIL

ANCHOR ROD LOCATION

(MAXIMUM LOAD)

TYPE 13 POLE 35'- 55' MONOTUBE ARM

TYPE 13 POLE
35' - 55' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

S.D.D. 9 E 8-8d

GENERAL NOTES

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

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15-FOOT TO 30-FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35-FOOT TO 55-FOOT.

MONOTUBE POLE AND ARM SHALL BE GALVANIZED STEEL.

RING-STIFFENED BUILT-UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE (1) PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3 % ± RISE).

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

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO 2013 6TH EDITION AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR TRAFFIC AND LIGHTING STRUCTURES AND AS FOLLOWS:

- CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.
- CATEGORY II FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.
- 90 MPH (3-SECOND GUST) WIND SPEED AND A 50 YEAR DESIGN LIFE.

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" S.S. BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL ½" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR AS DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEADS AT SAME ELEVATION.

SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

(1) DESIGN FOR MAXIMUM ALLOWABLE HANDHOLE WITH COVER ASSEMBLY WITH TWO ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.

(2) SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING, (SEE SPECIFICATIONS SEC. 658).

(3) SECURELY MOUNT BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.

(4) THE TOP OF THE POLE SHAFT AND THE END OF THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.

(5) FACTORY-WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HANDHOLE, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

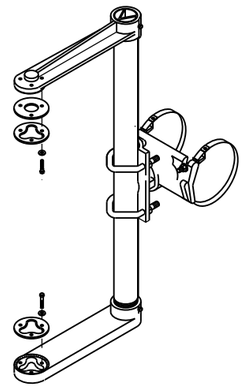
(6) FACTORY-WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

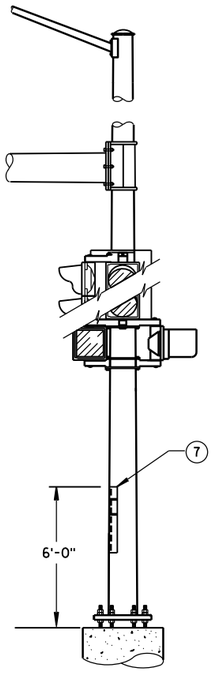
MOUNTING HEIGHT SHALL BE 6'-0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

(8) FACTORY DRILLED ½" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

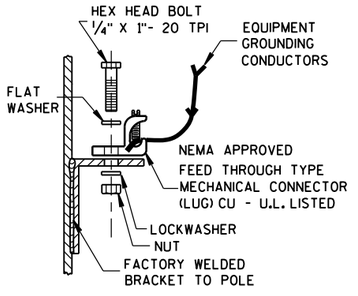


SIGNAL FACE MOUNTING BRACKET
DETAIL FOR MONOTUBE ARM

(MOUNT PER MANUFACTURER'S RECOMMENDATION)

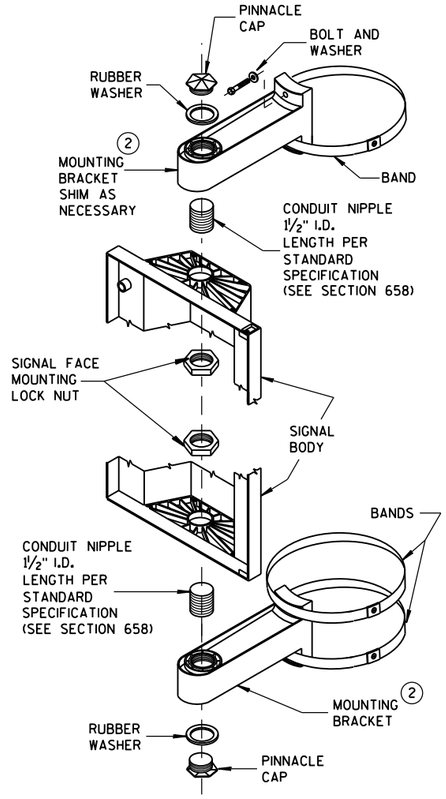


STRUCTURAL IDENTIFICATION
PLAQUE PLACEMENT

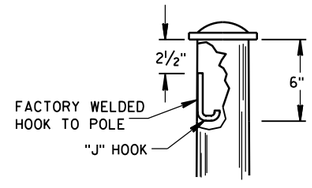


TYPICAL GROUNDING CONNECTIONS (5)

NUT, BOLT AND WASHERS SHALL
BE STAINLESS STEEL



SIGNAL FACE
VERTICAL MOUNTING DETAIL



"J" HOOK WIRE SUPPORT (6)

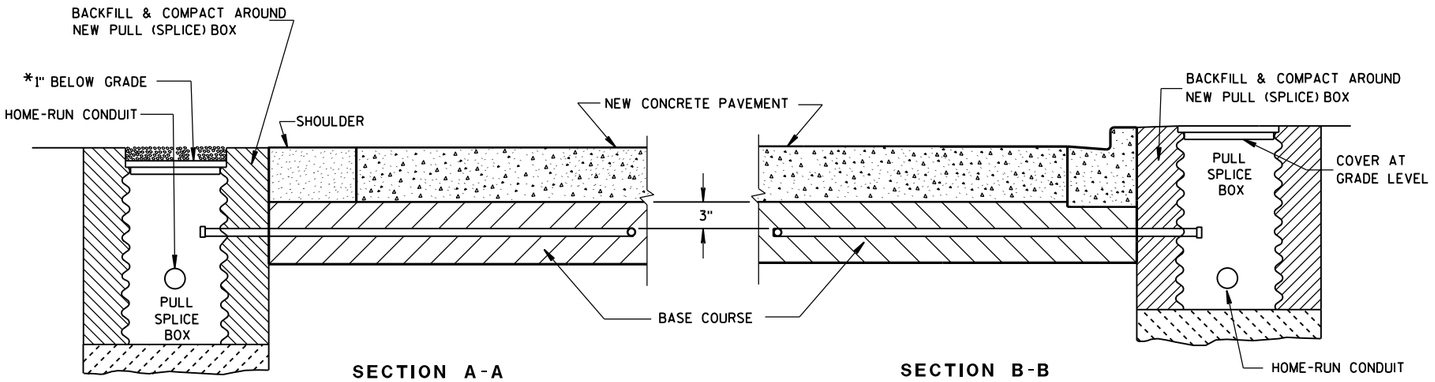
GENERAL NOTES AND HARDWARE DETAILS FOR TYPE 9, 10, 12 & 13 POLES WITH MONOTUBE ARMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2016
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

6

S.D.D. 9 E 8-8e



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

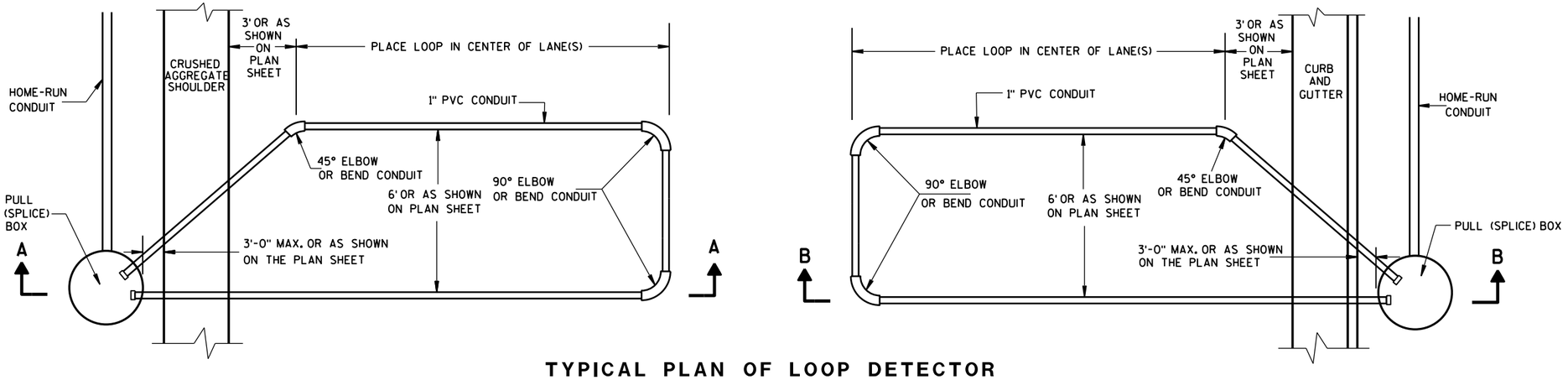
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

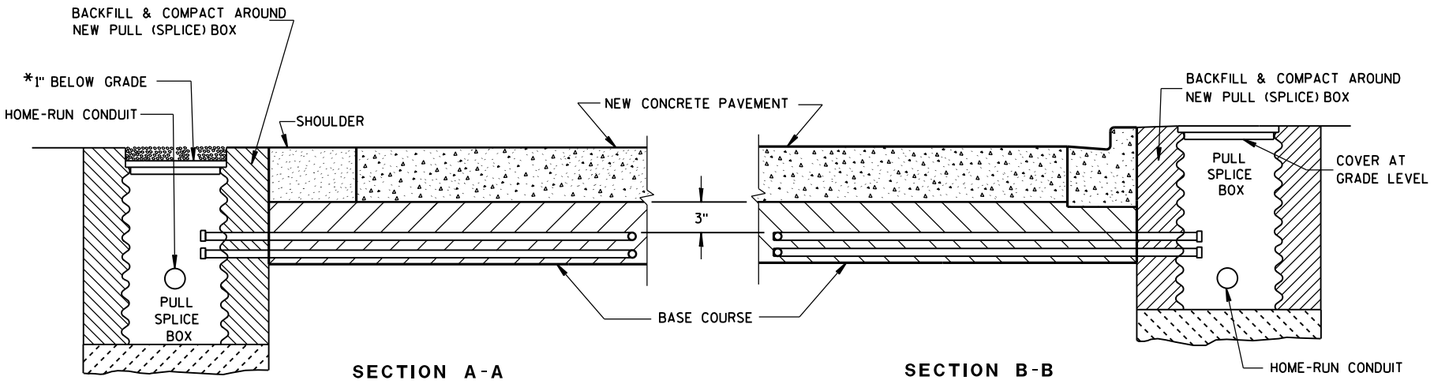
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 F 15-4a

6

S.D.D. 9 F 15-4a



SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

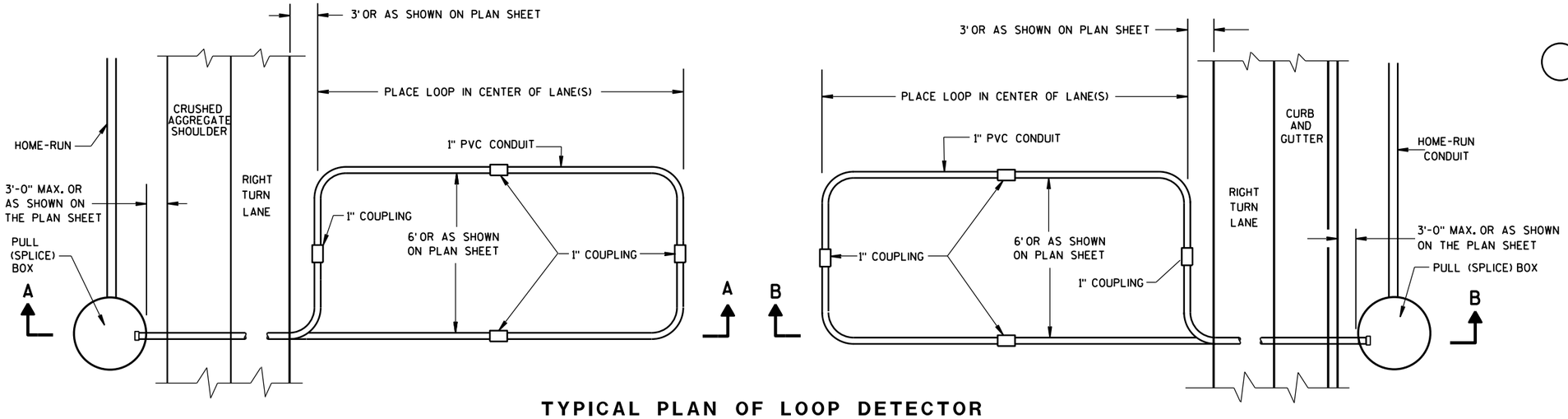
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

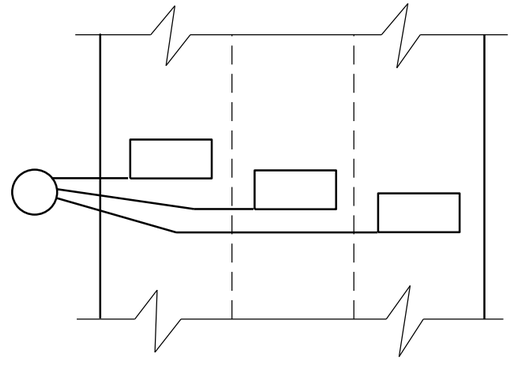
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE CONDUITS IN THE BASE COURSE SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.

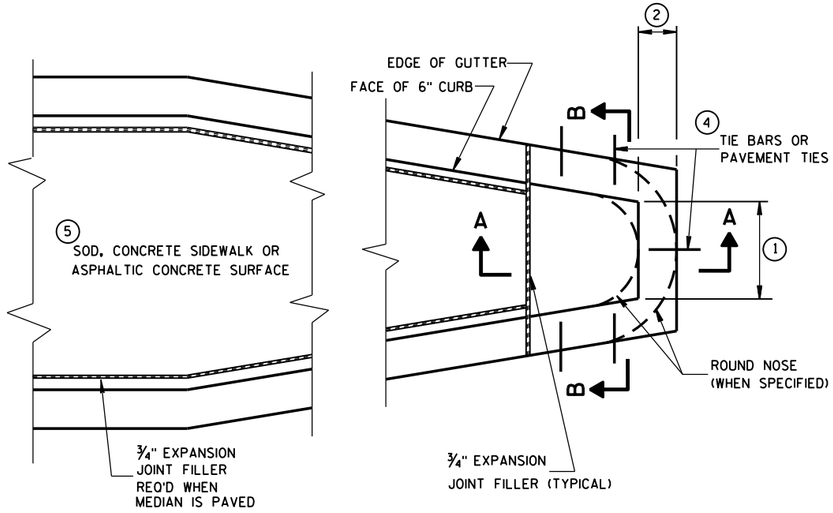


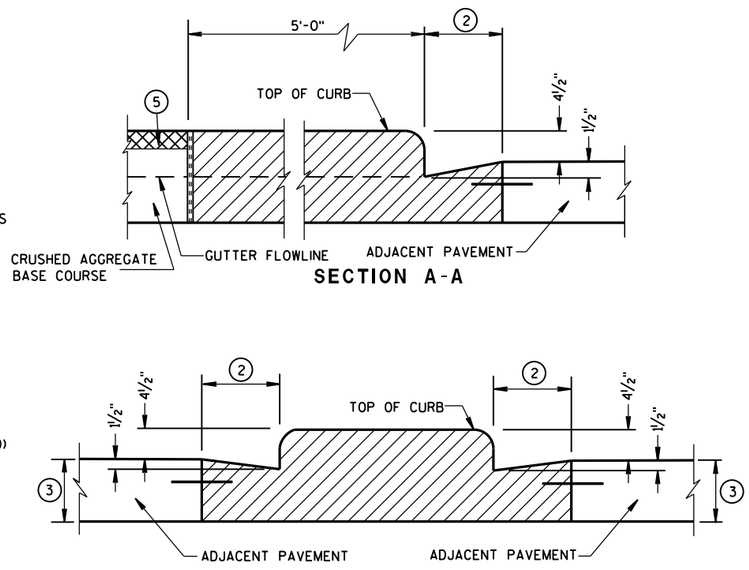
TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

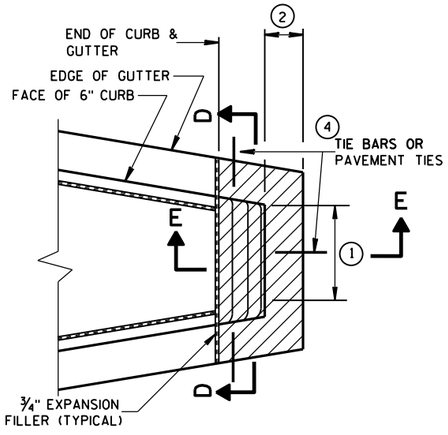
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

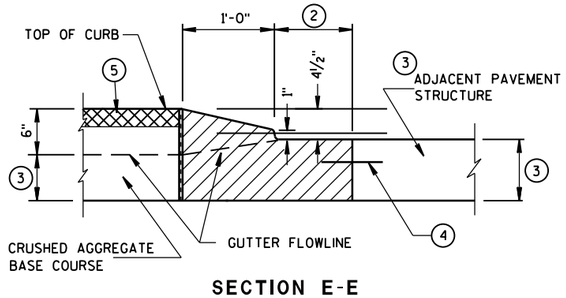
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

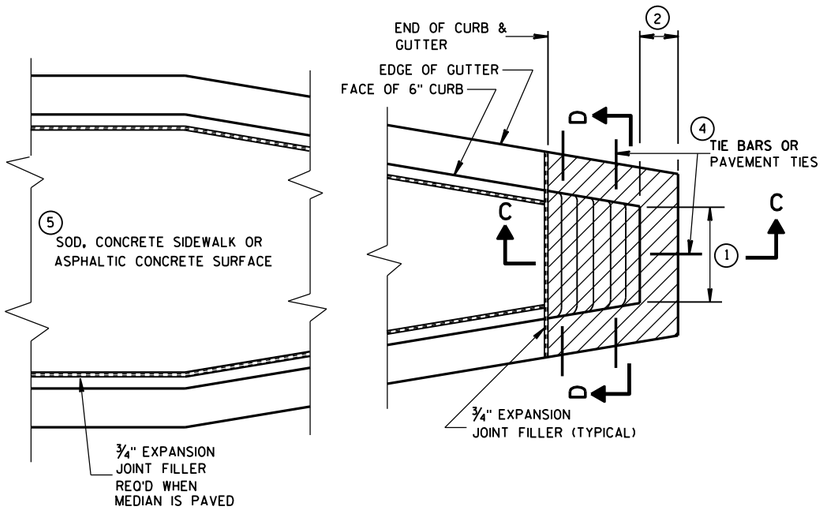
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

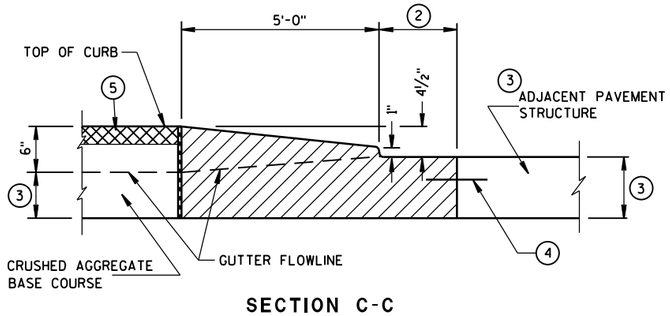
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



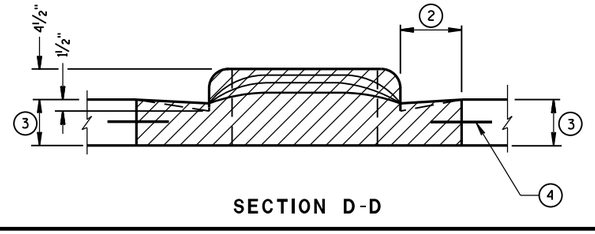


CONCRETE MEDIAN SLOPED NOSE TYPE 2





CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER

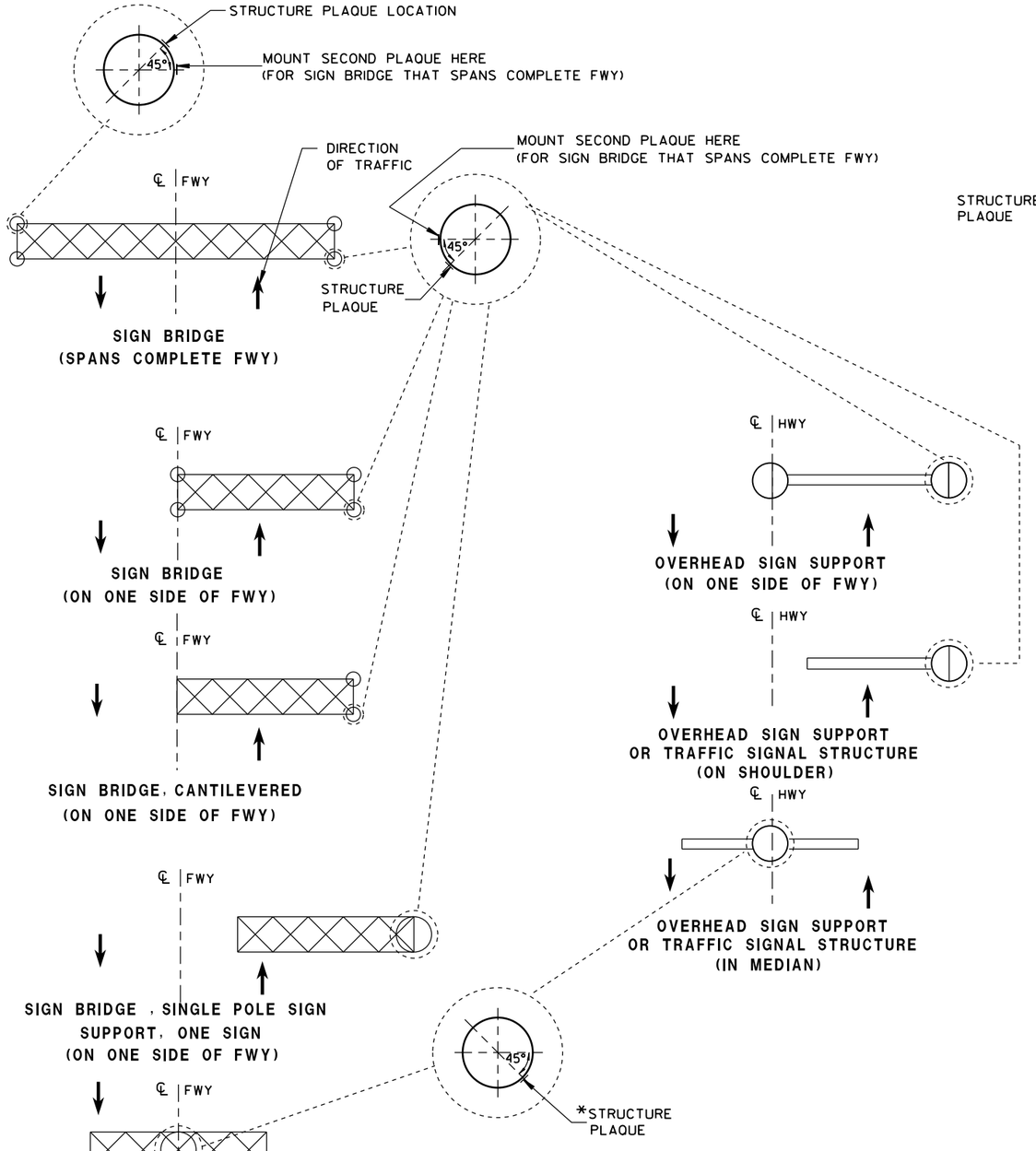
FHWA

6

S.D.D. 11 B 2-2

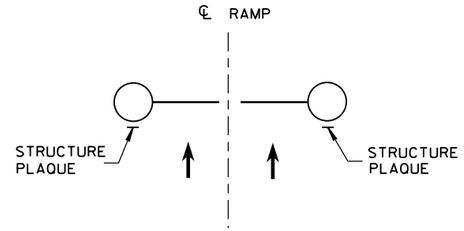
6

S.D.D. 11 B 2-2

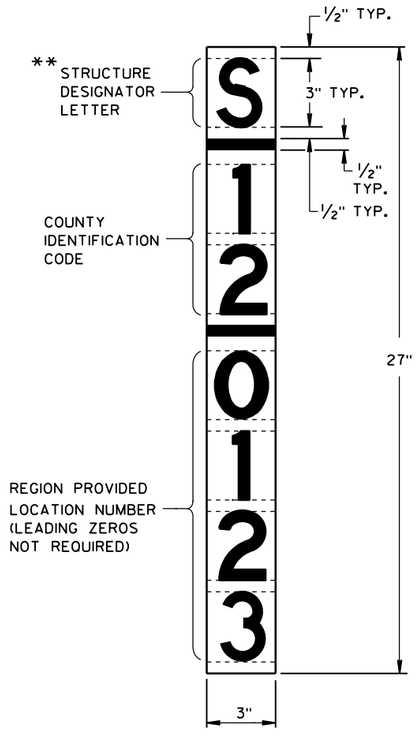


LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.



RAMP GATE
(ACROSS FWY ON-RAMP)



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

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

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

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

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

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

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

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

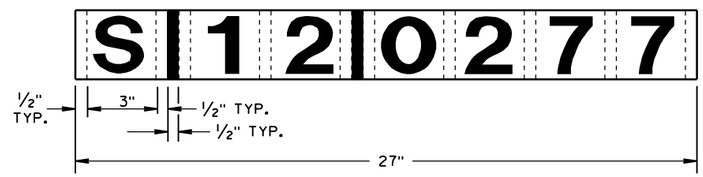
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

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

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



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

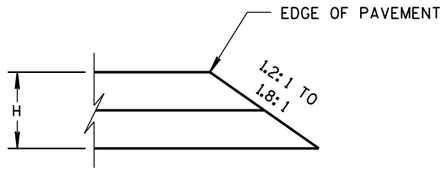
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 12 A 4-3

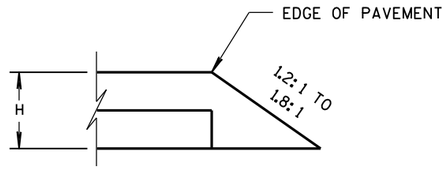
6

S.D.D. 12 A 4-3



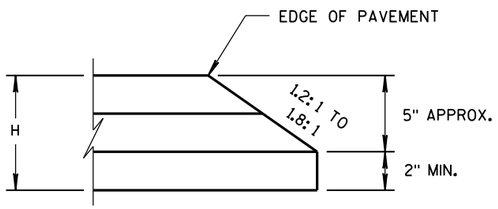
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



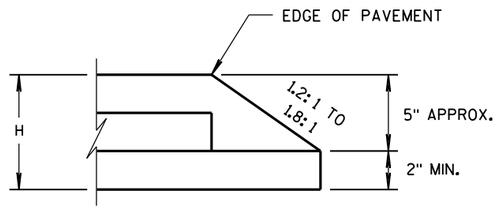
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

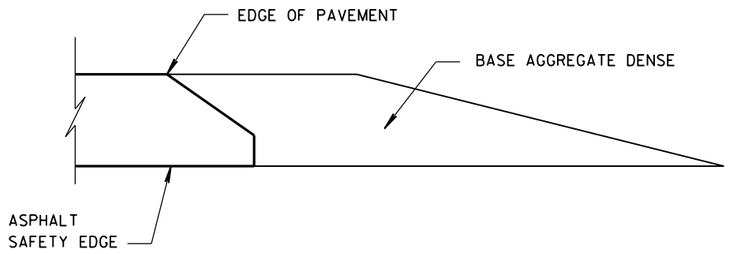
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

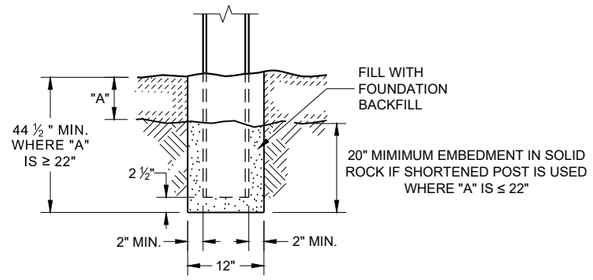
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

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

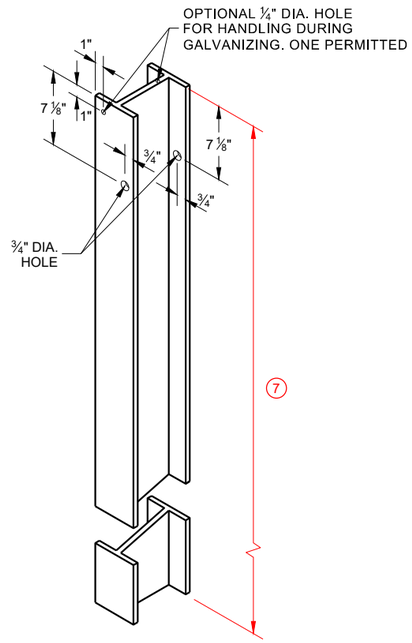
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

6. WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

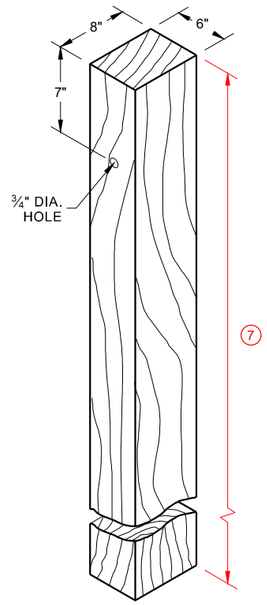
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



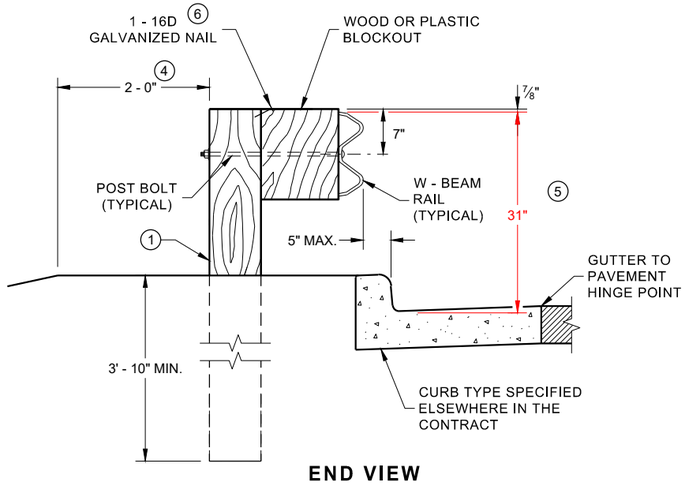
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



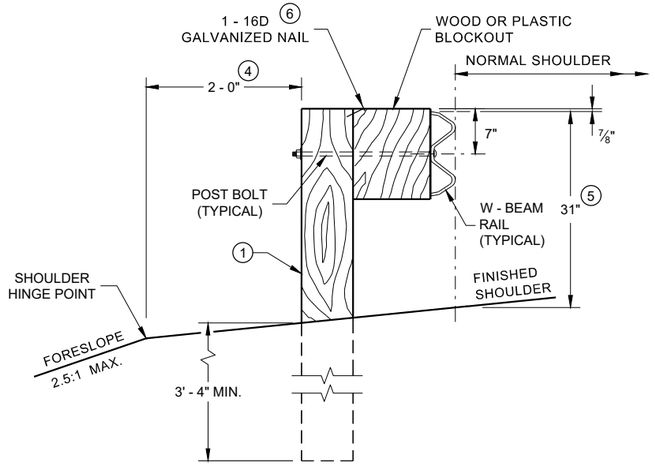
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



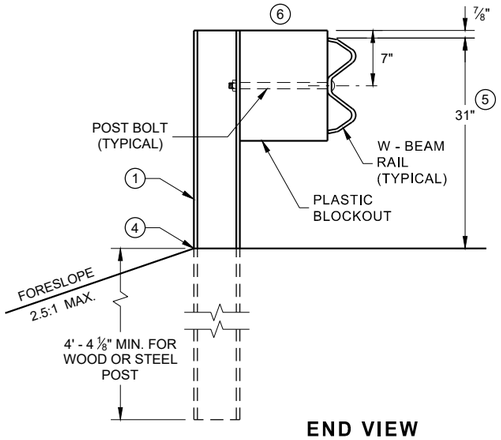
WOOD POST (6" X 8") NOMINAL (1)



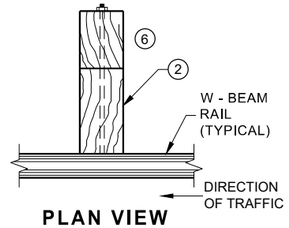
END VIEW
LOCATED ALONG A CURBED ROADWAY



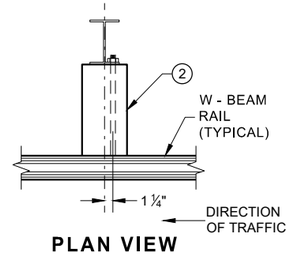
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



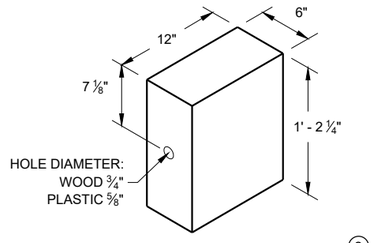
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



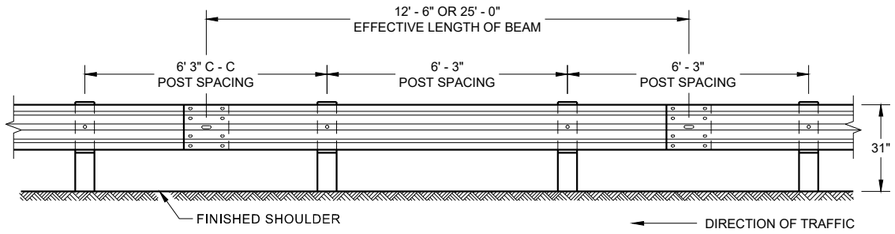
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

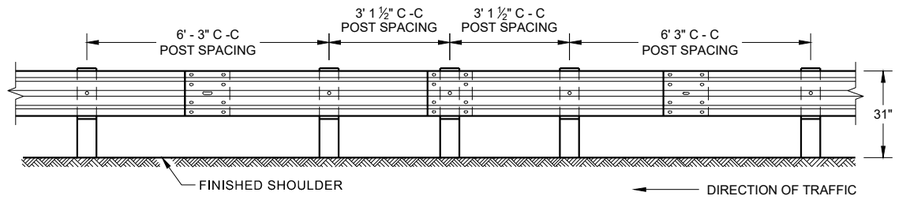
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

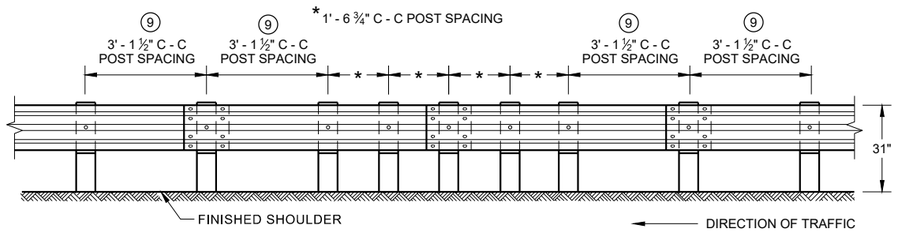
SDD 14B42 - 06a



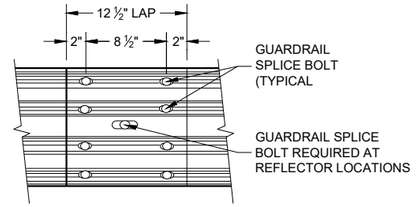
FRONT VIEW
POST SPACING STANDARD INSTALLATION



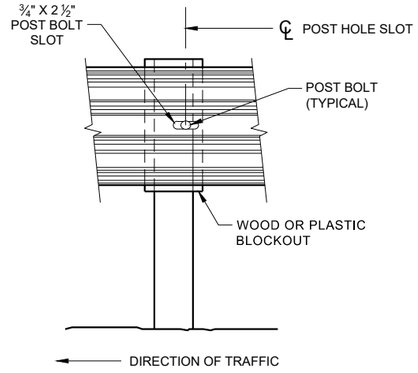
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



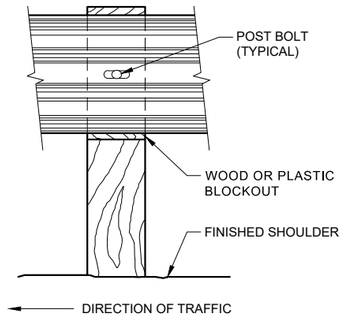
FRONT VIEW
QUARTER POST SPACING (QS)



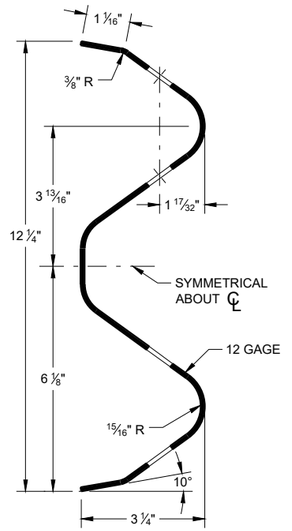
FRONT VIEW
MID-SPAN BEAM SPLICE



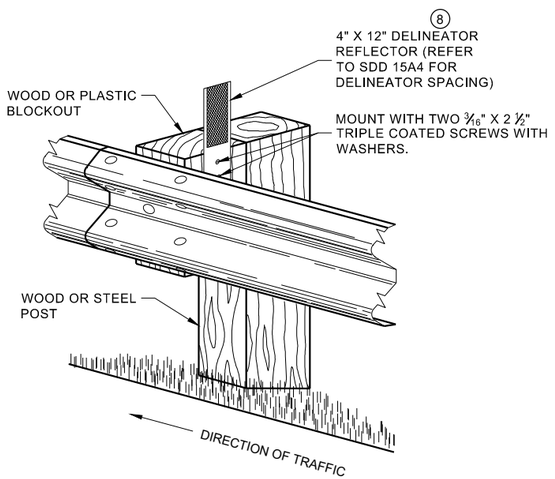
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

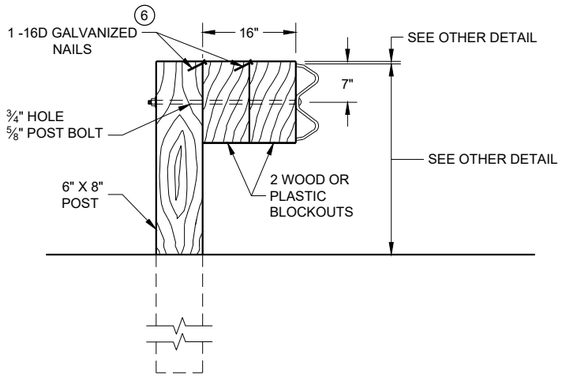
POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 06b

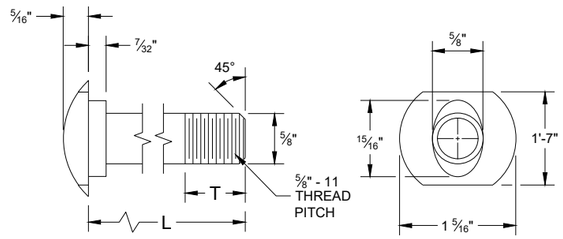


DETAIL FOR 16" BLOCKOUT DEPTH

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

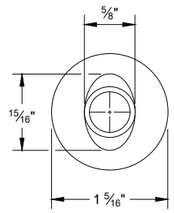
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

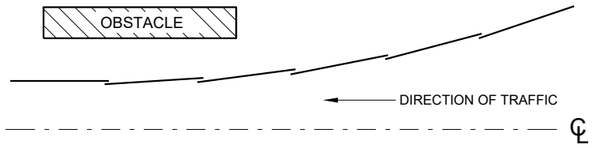


POST BOLT TABLE

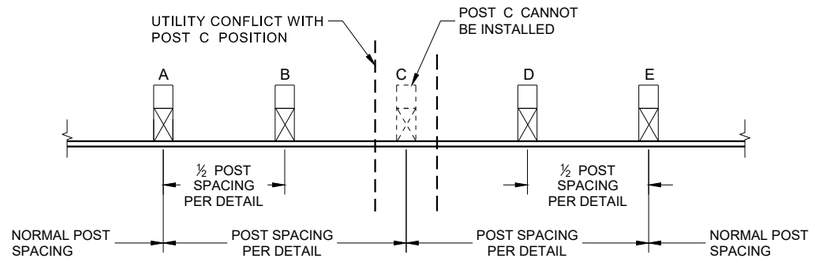
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



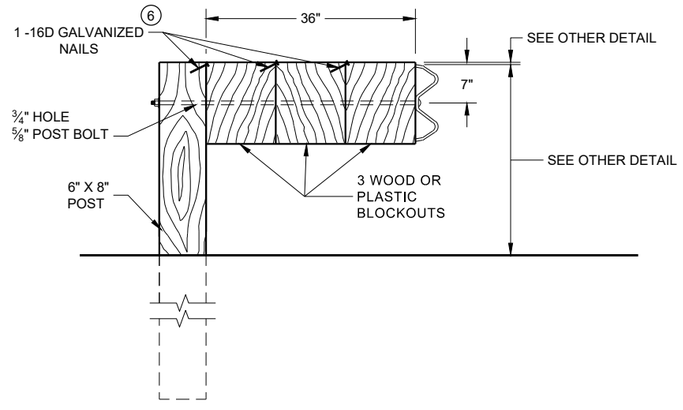
ALTERNATE BOLT HEAD



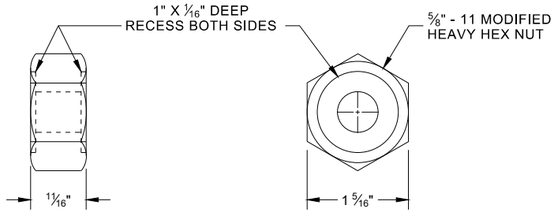
PLAN VIEW
BEAM LAPPING DETAIL



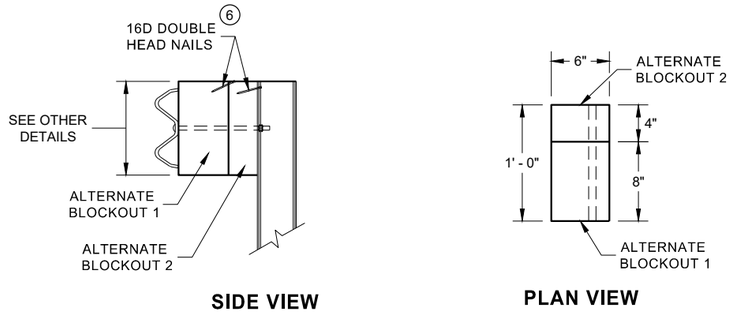
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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

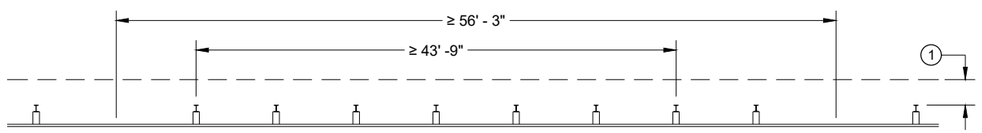
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

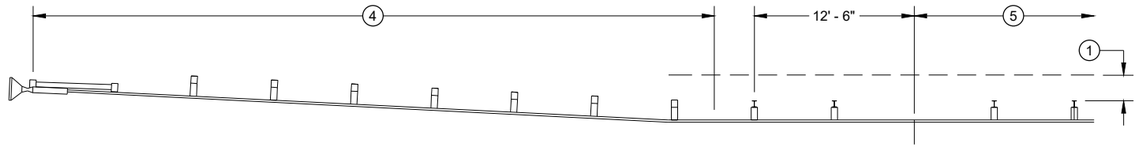
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

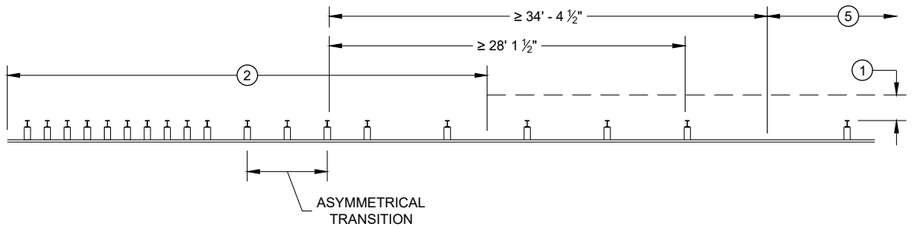
SDD 14B42 - 06c



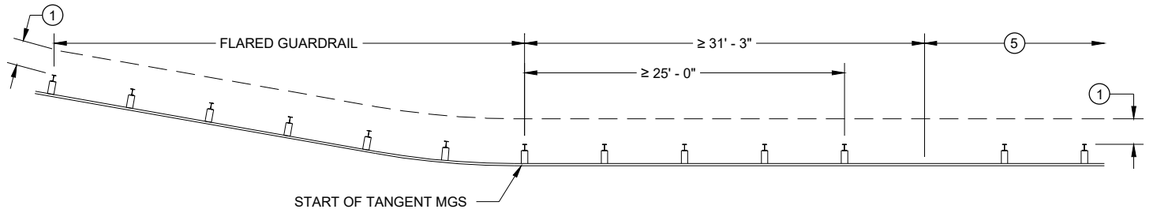
MISSING POST IN NORMAL BEAM GUARD RUN



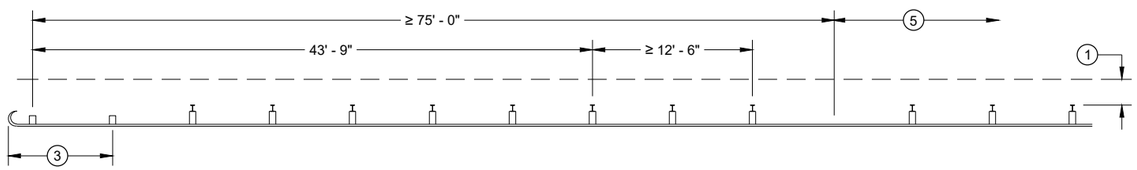
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



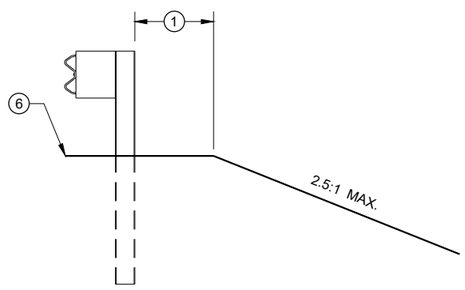
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

6

SDD 14B42 - 06d

GENERAL NOTES

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

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

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

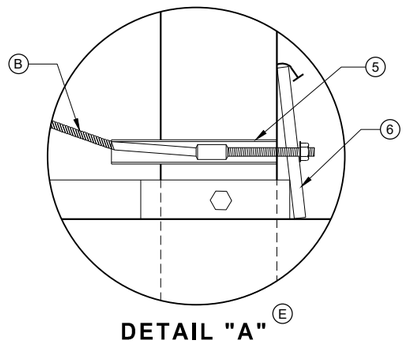
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

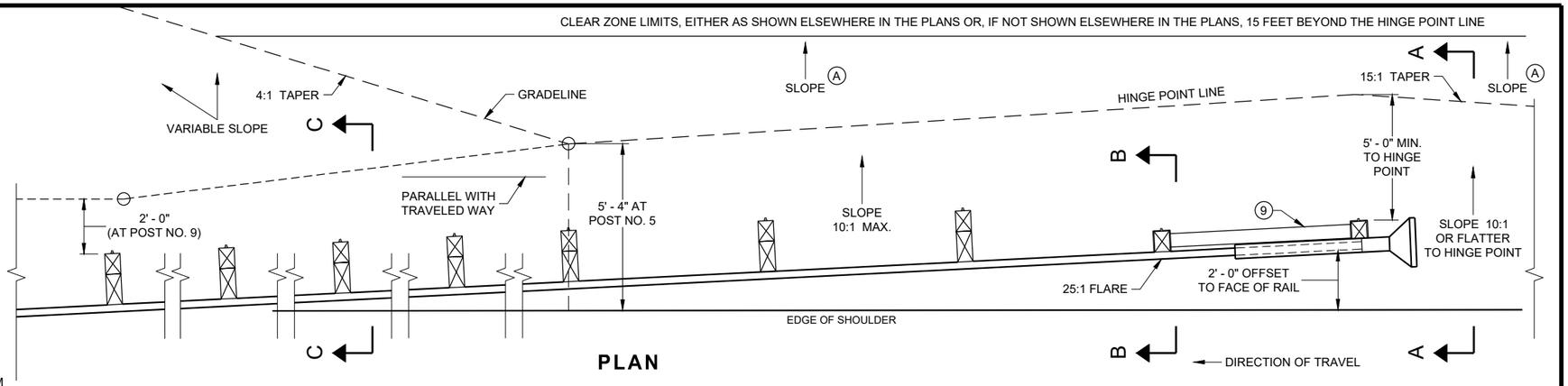
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

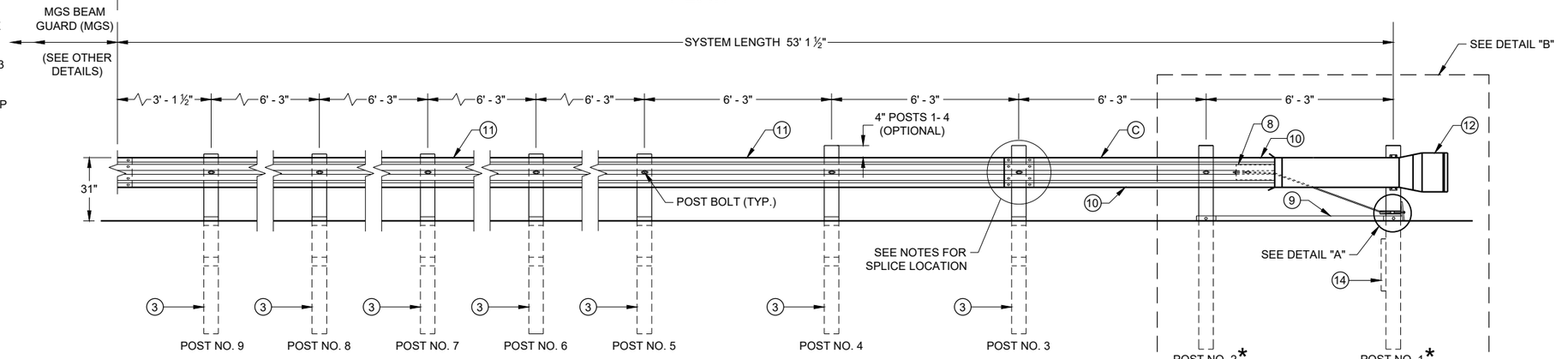
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



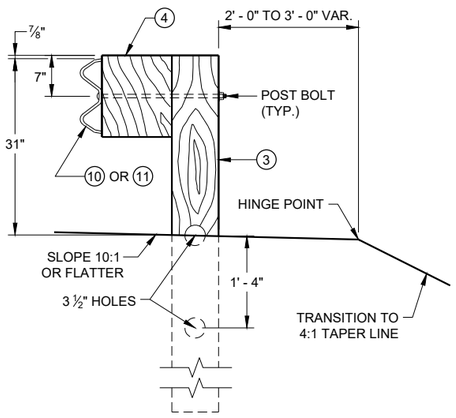
DETAIL "A" (E)



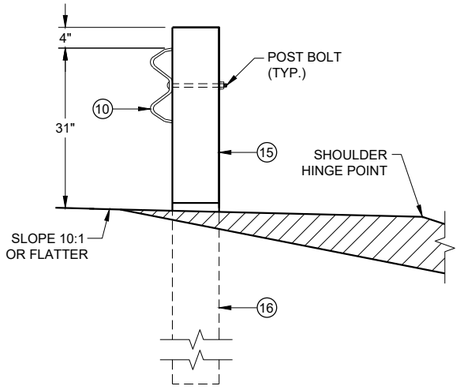
PLAN



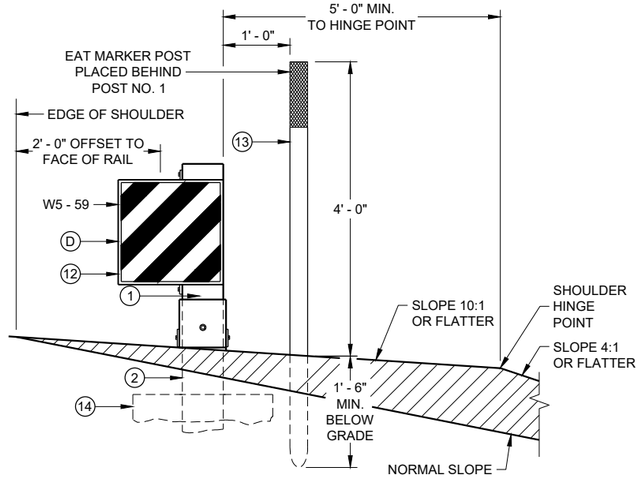
ELEVATION



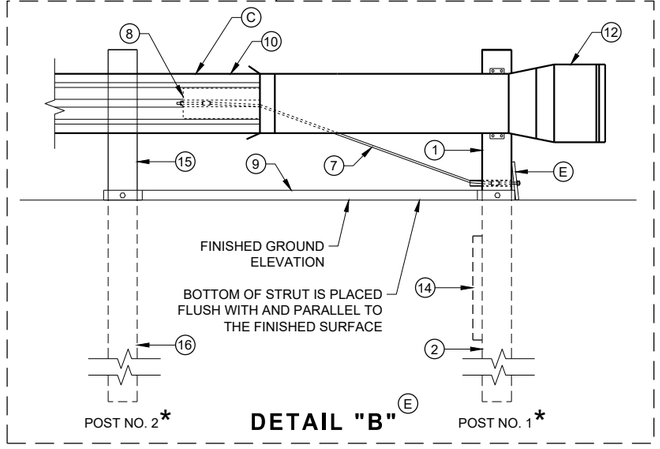
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



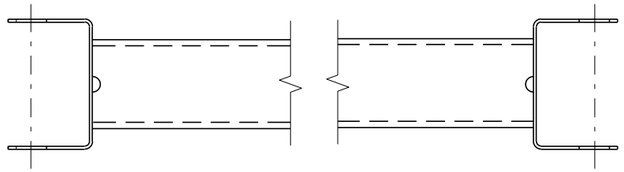
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

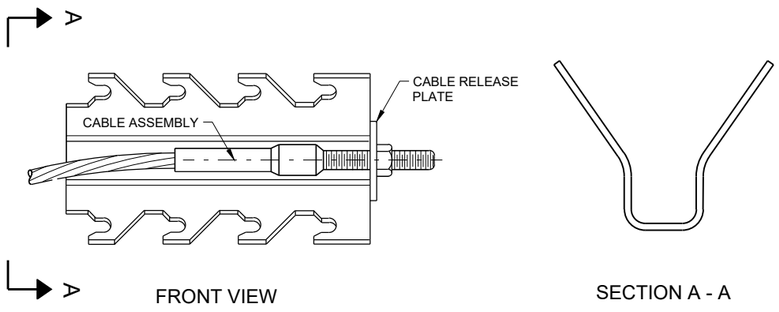
SDD 14B44 - 04a



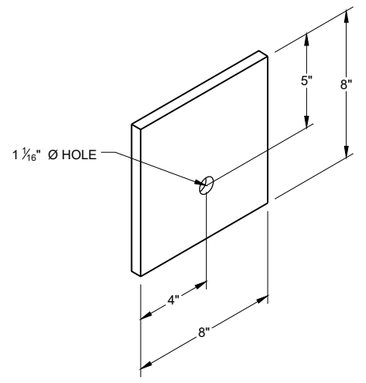
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

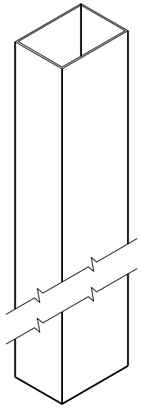
6

SDD 14B45 - 04b

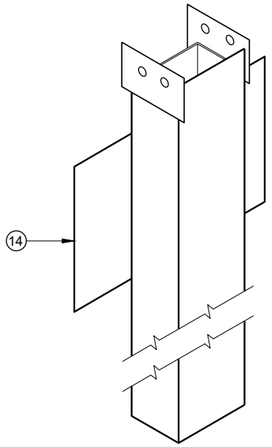
SDD 14B45 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

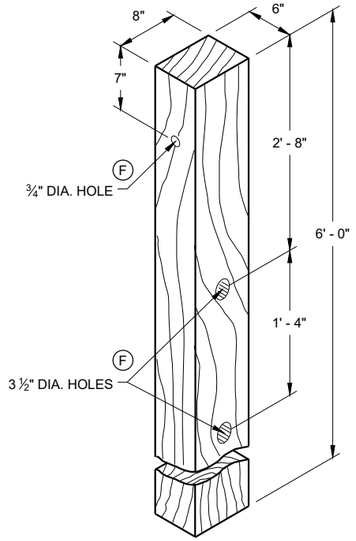
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 ① Ⓔ

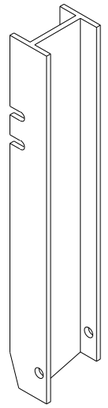


LOWER POST NO. 1 ② Ⓔ

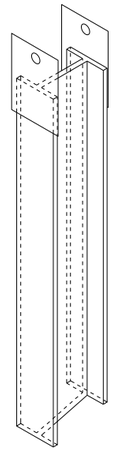


WOOD CRT POST ③ Ⓔ

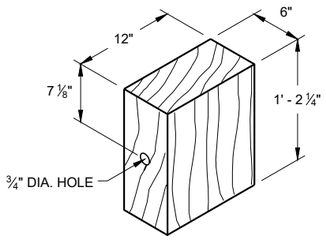
POSTS NUMBER 3-9



UPPER POST NO. 2 ⑮ Ⓔ

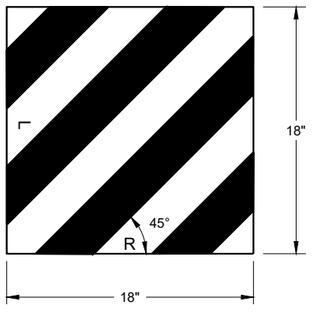


LOWER POST NO. 2 ⑯ Ⓔ



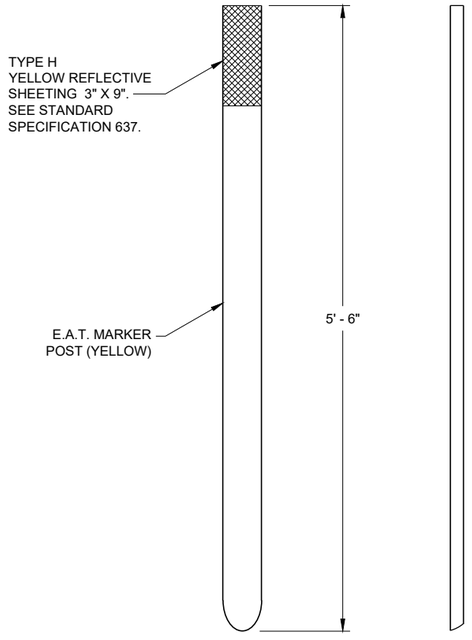
WOOD BLOCKOUT ④

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



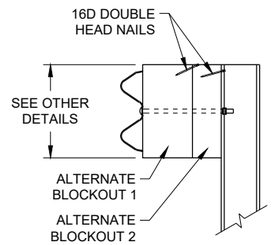
W5 - 59

REFLECTIVE SHEETING DETAIL Ⓔ

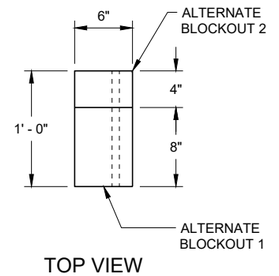


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST ⑬



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

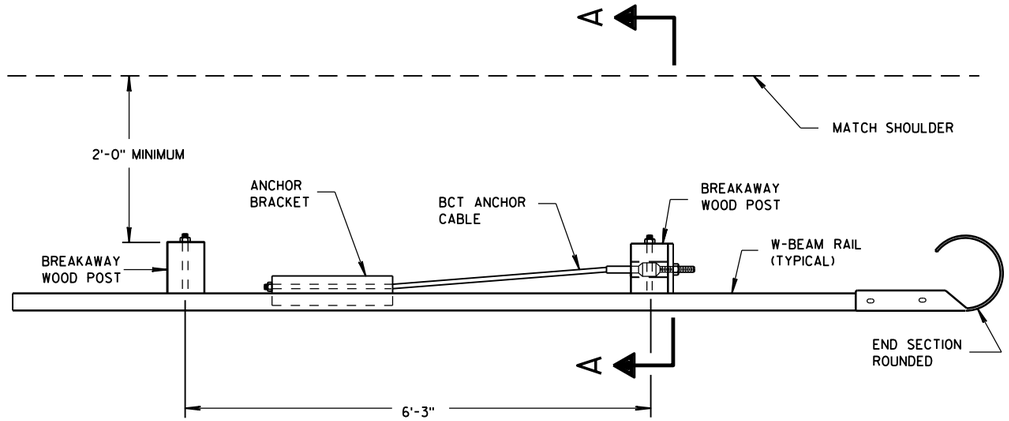
7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

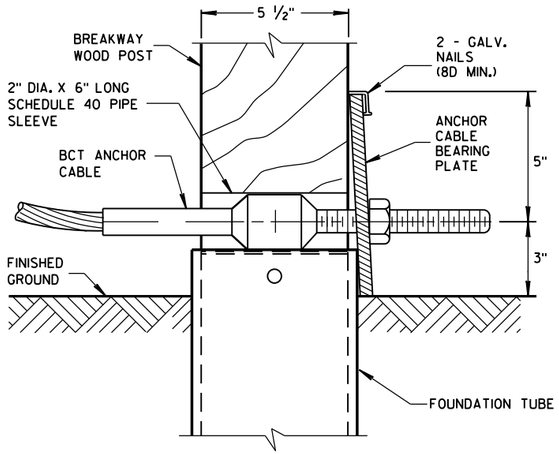
FHWA

6

SDD 14B44 - 04c



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

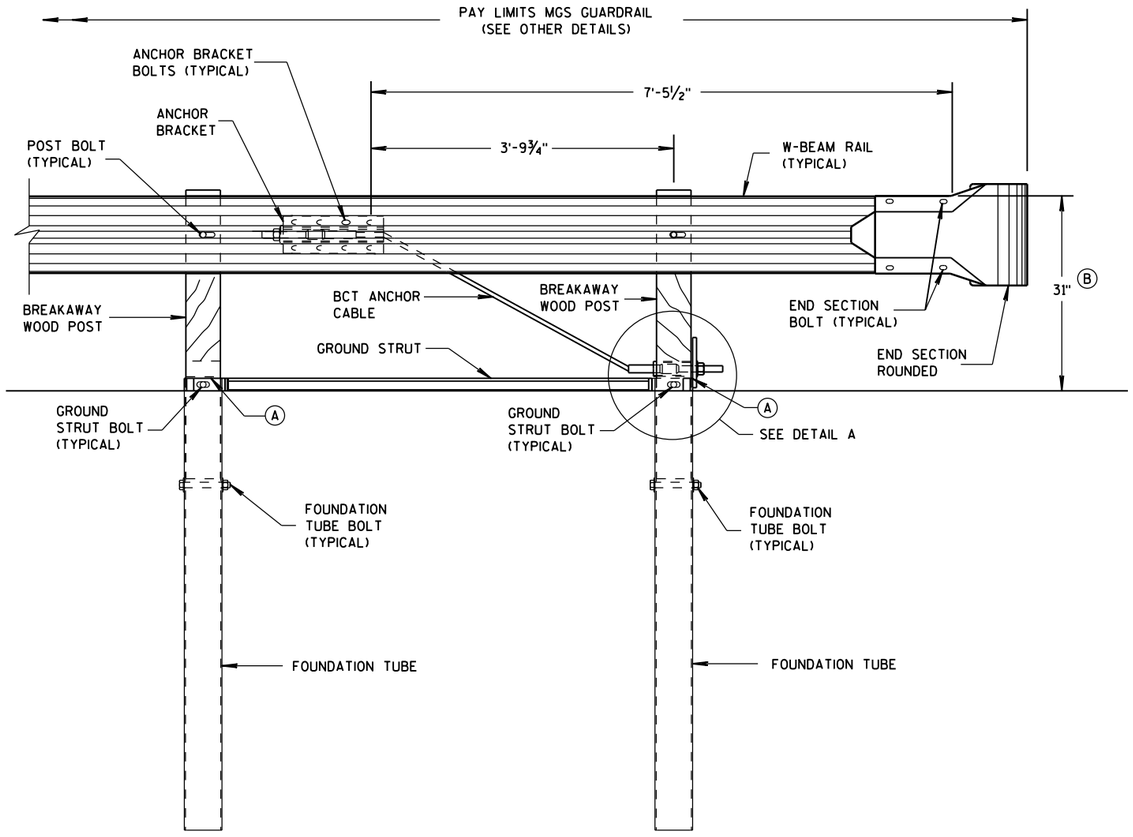
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

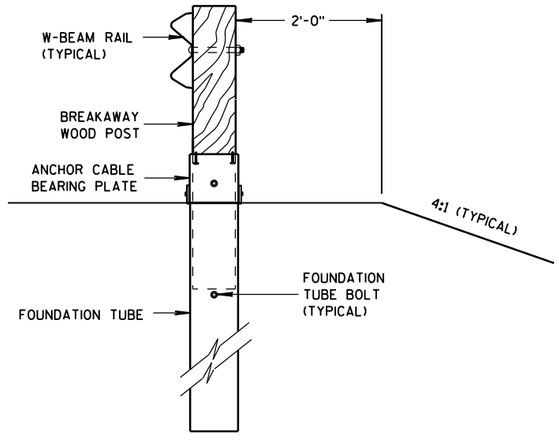
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

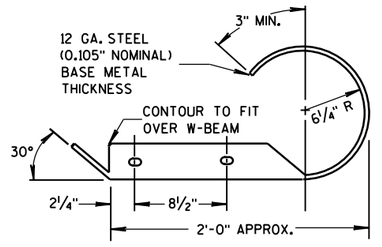


FRONT VIEW

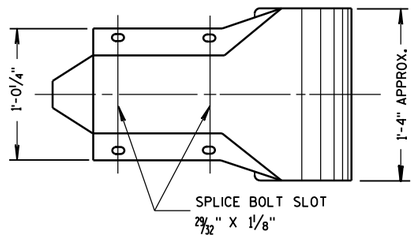
END RAIL DETAIL



SECTION A-A



PLAN VIEW



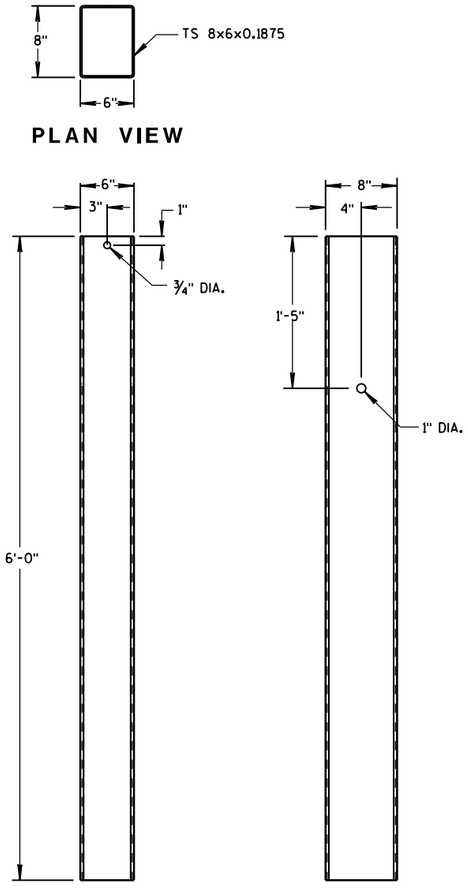
FRONT VIEW

W BEAM END SECTION ROUNDED

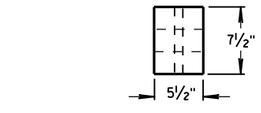
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

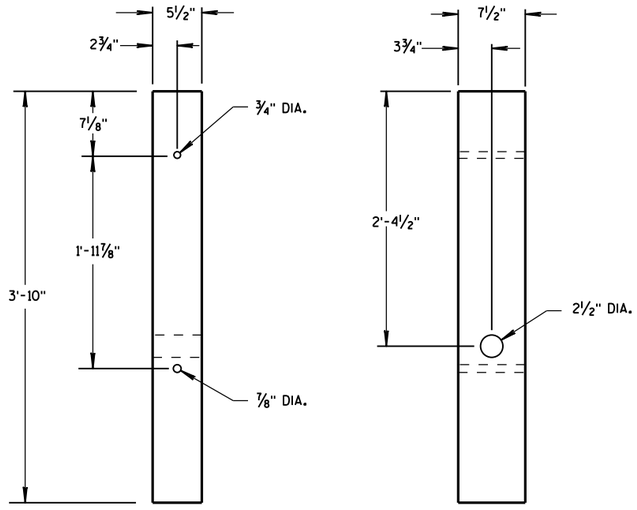
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE



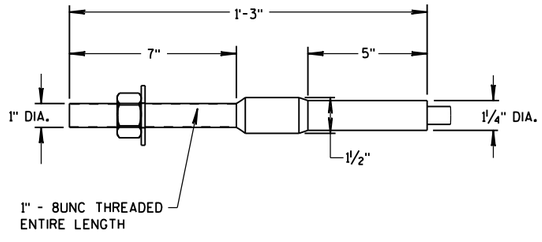


BREAKAWAY WOOD POST

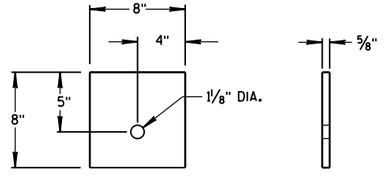
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



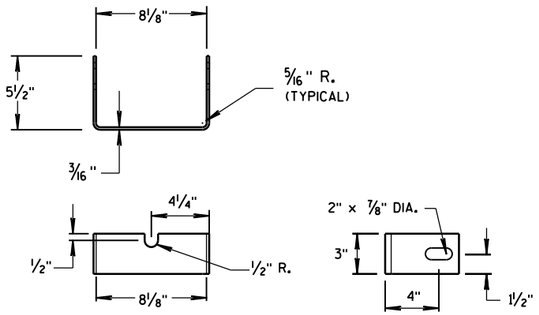
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

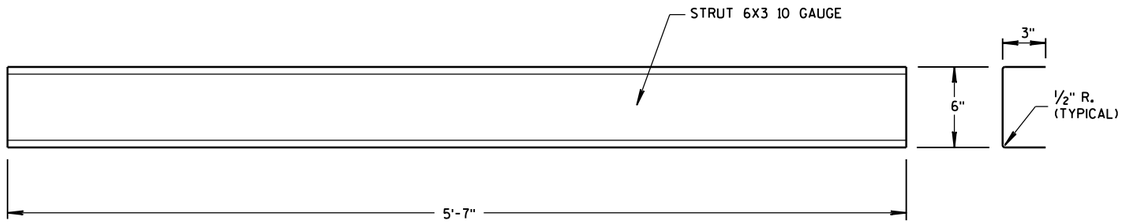
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

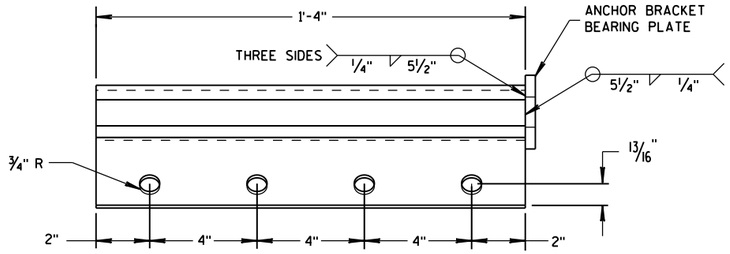
S.D.D. 14 B 47-2b

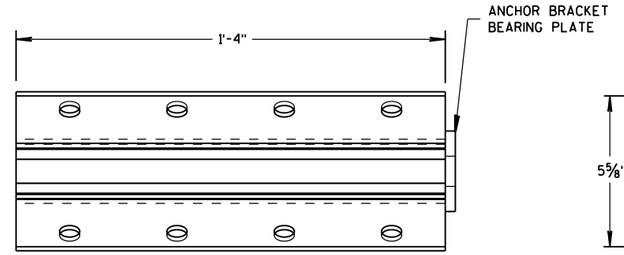


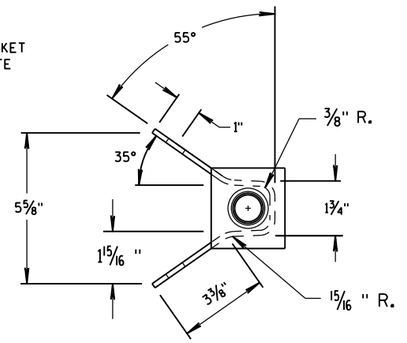
YOKE DETAIL



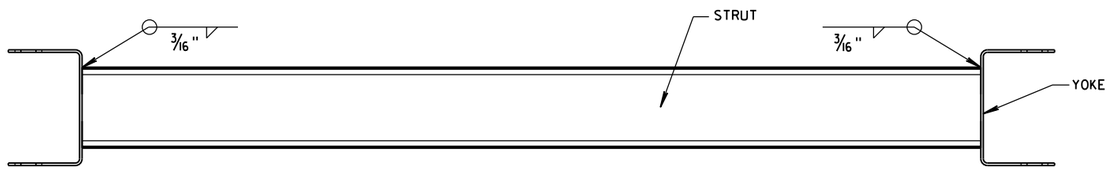
STRUT DETAIL



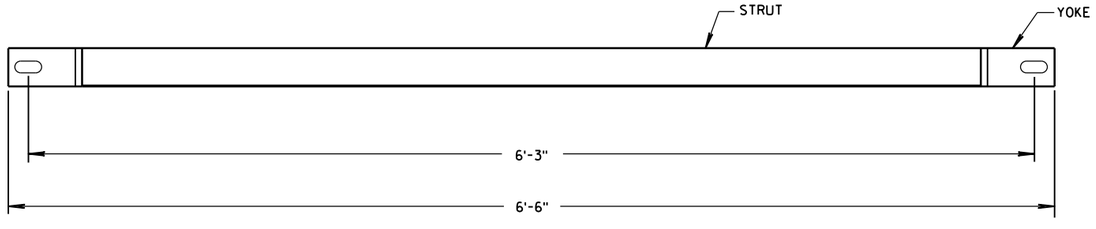




ANCHOR BRACKET

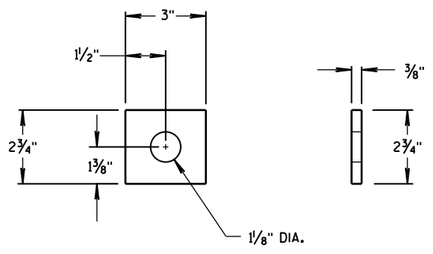


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

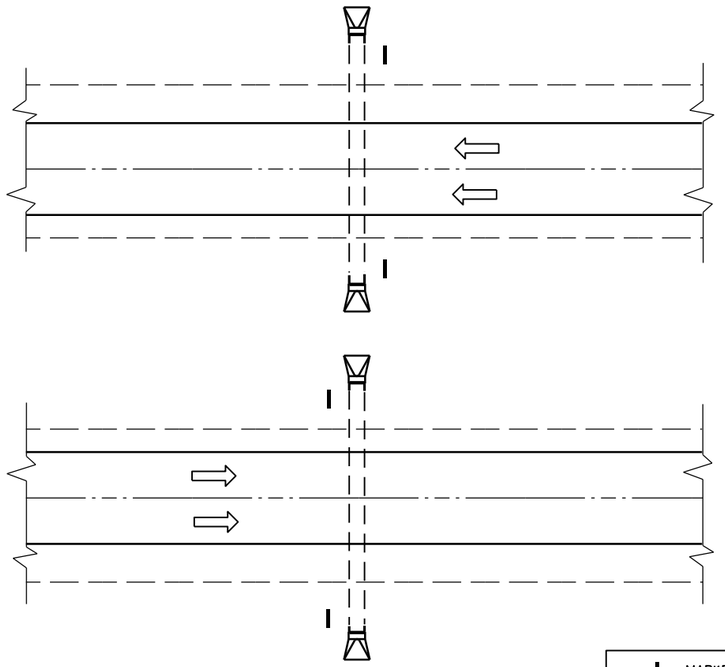
APPROVED
June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

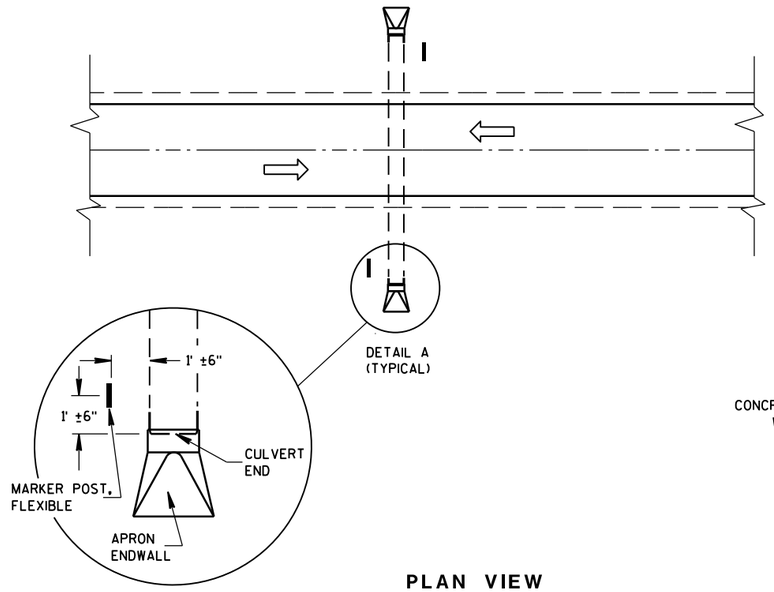
6

S.D.D. 14 B 47-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

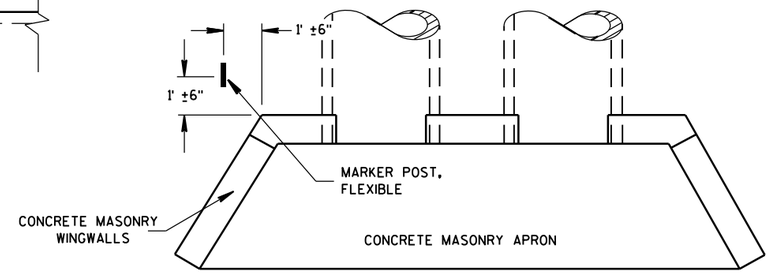
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

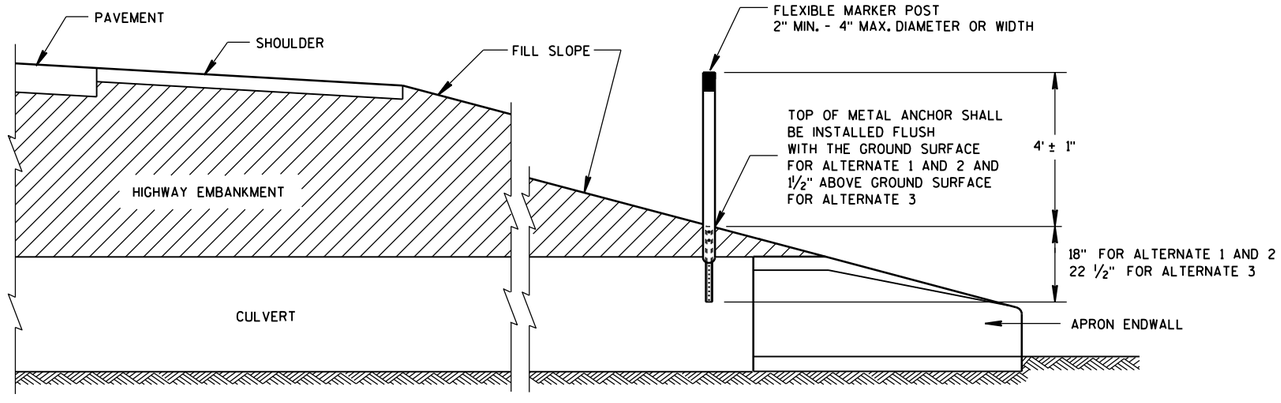
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

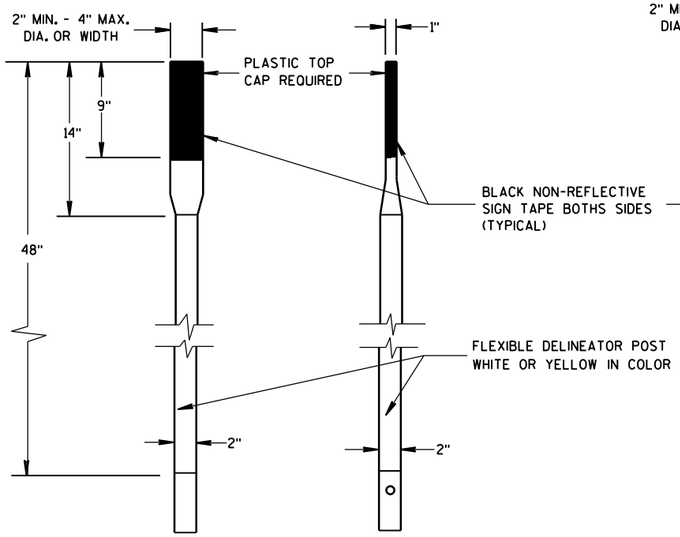
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

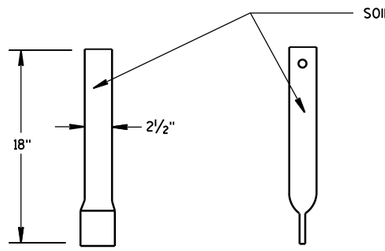
6

S.D.D. 15 A 3-2a

6

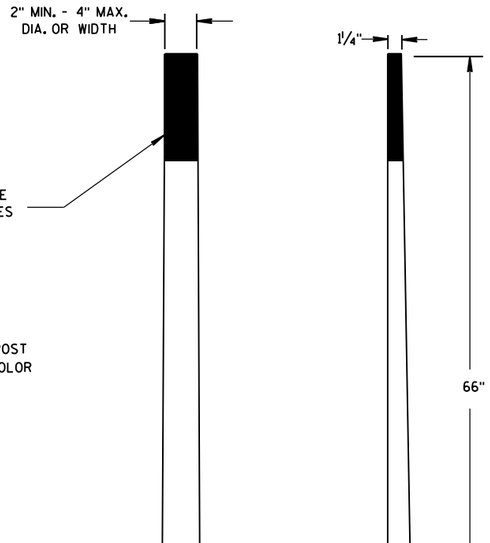
S.D.D. 15 A 3-2a





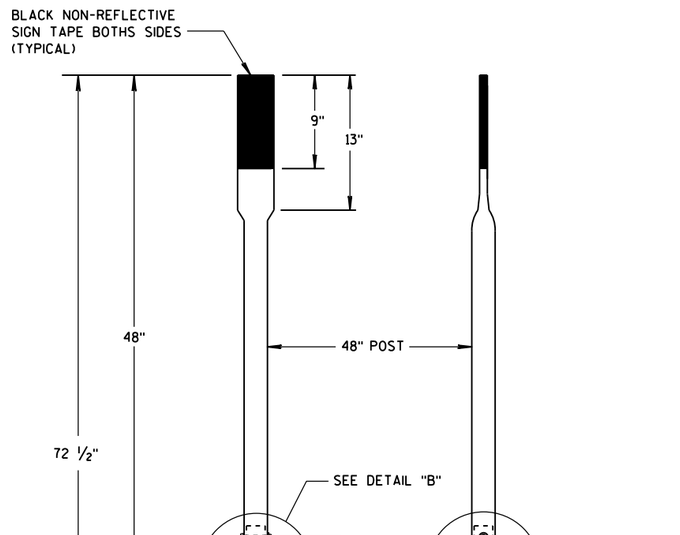
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

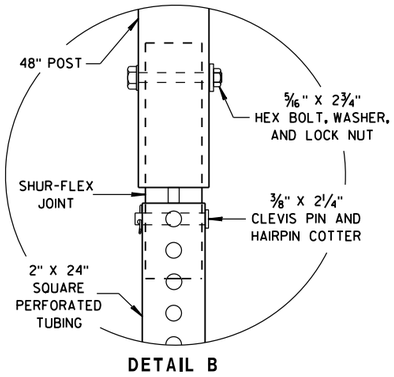
ALTERNATE 2



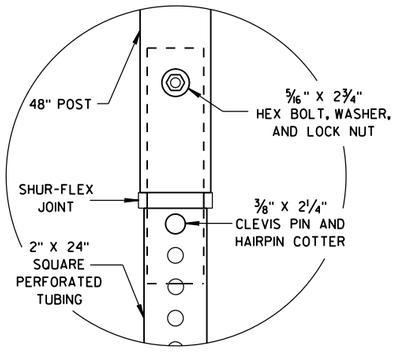
FRONT VIEW SIDE VIEW

ALTERNATE 3

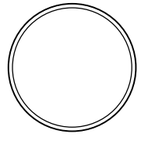
FLEXIBLE MARKER POSTS



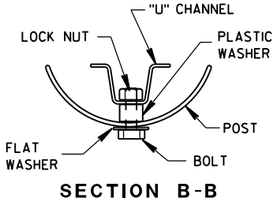
DETAIL B



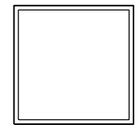
DETAIL C



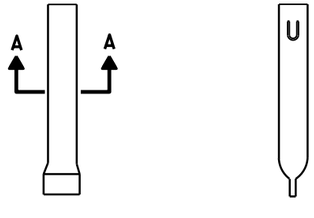
SECTION A-A



SECTION B-B

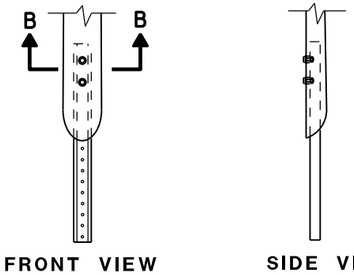


SECTION C-C



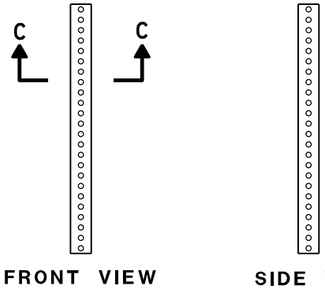
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

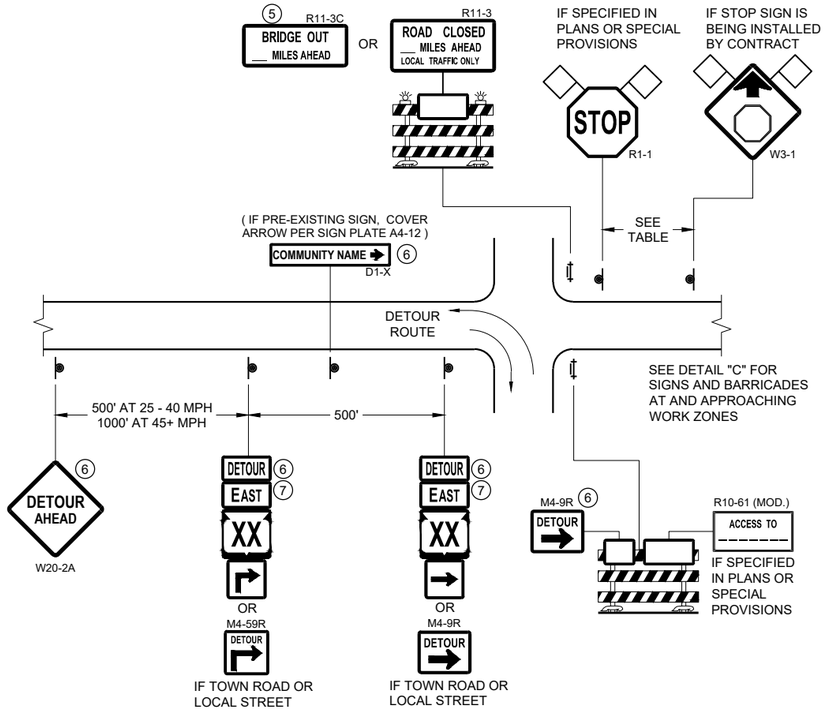
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

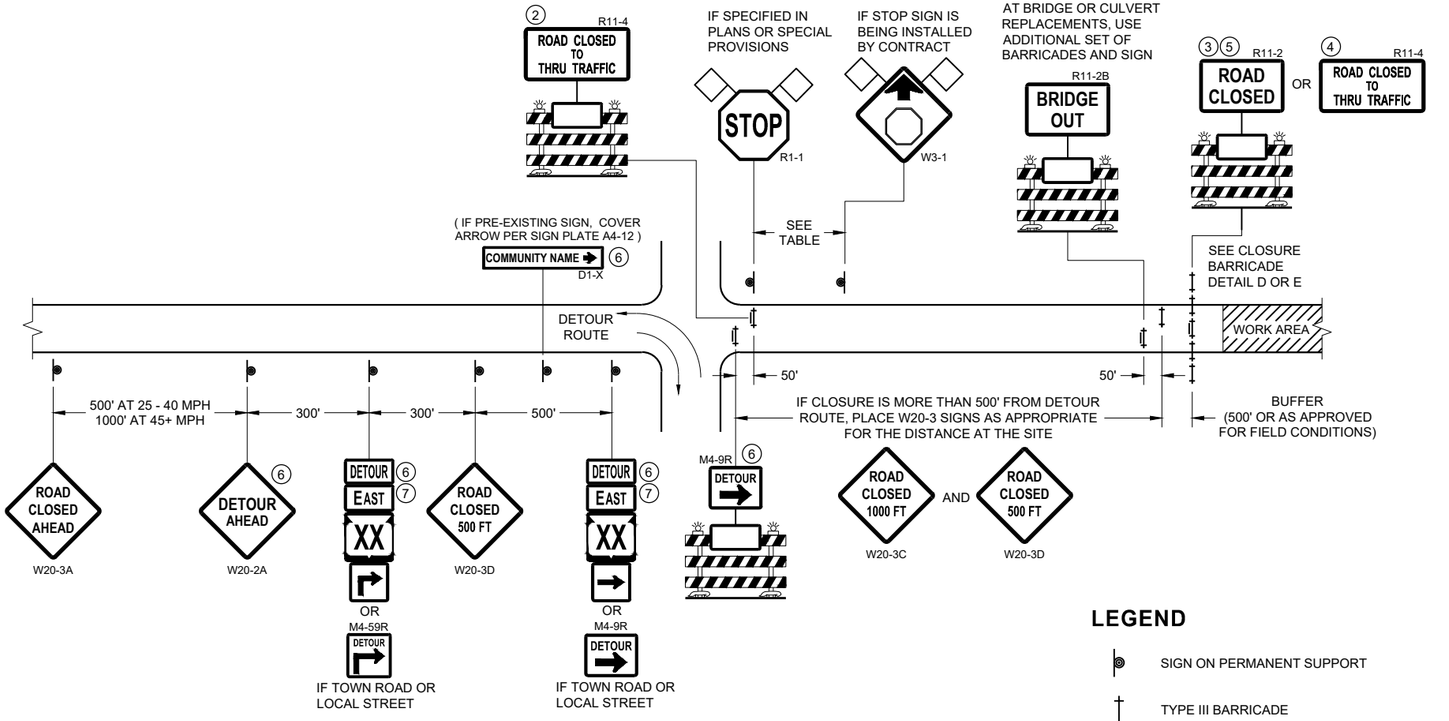
6

S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b



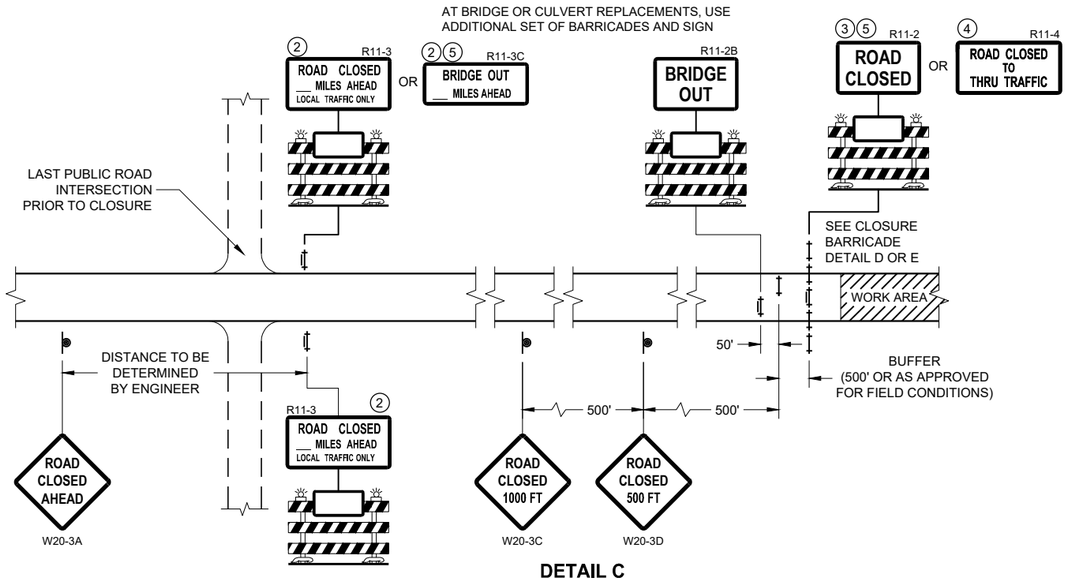


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

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)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

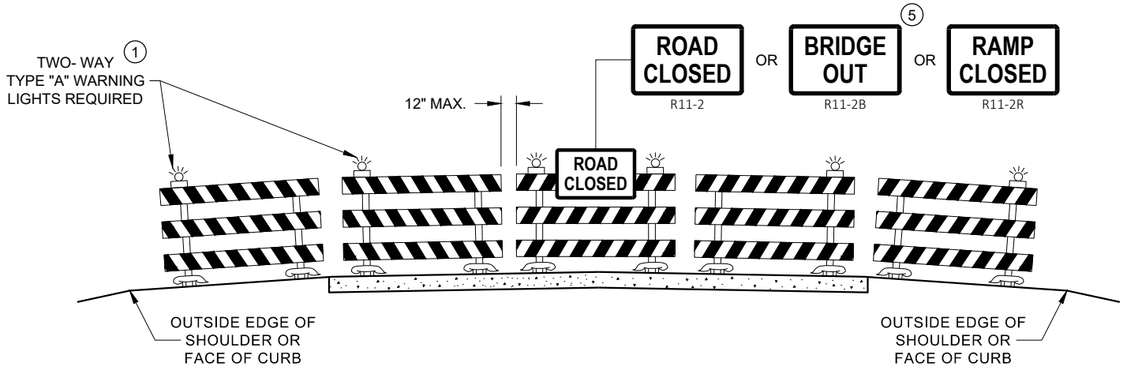
APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

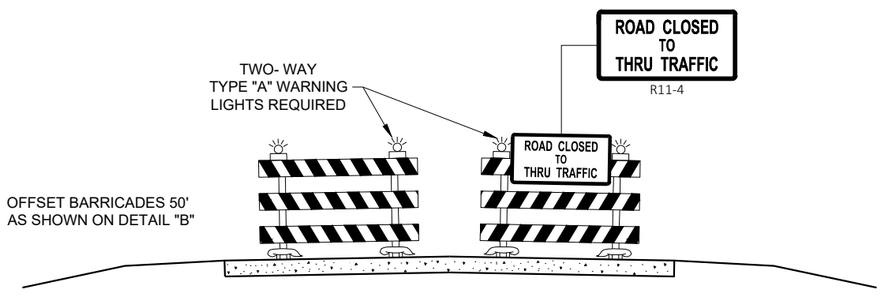
6

SDD 15C02 - 07a

SDD 15C02 - 07a



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 PORTABLBLE 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 15" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- 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 CARDIANAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

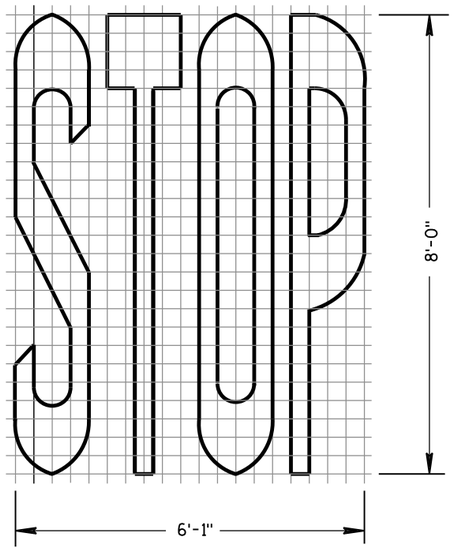
SDD 15C02 - 07b

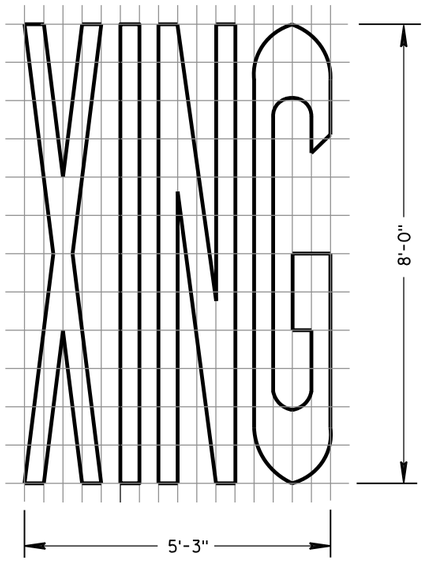
6

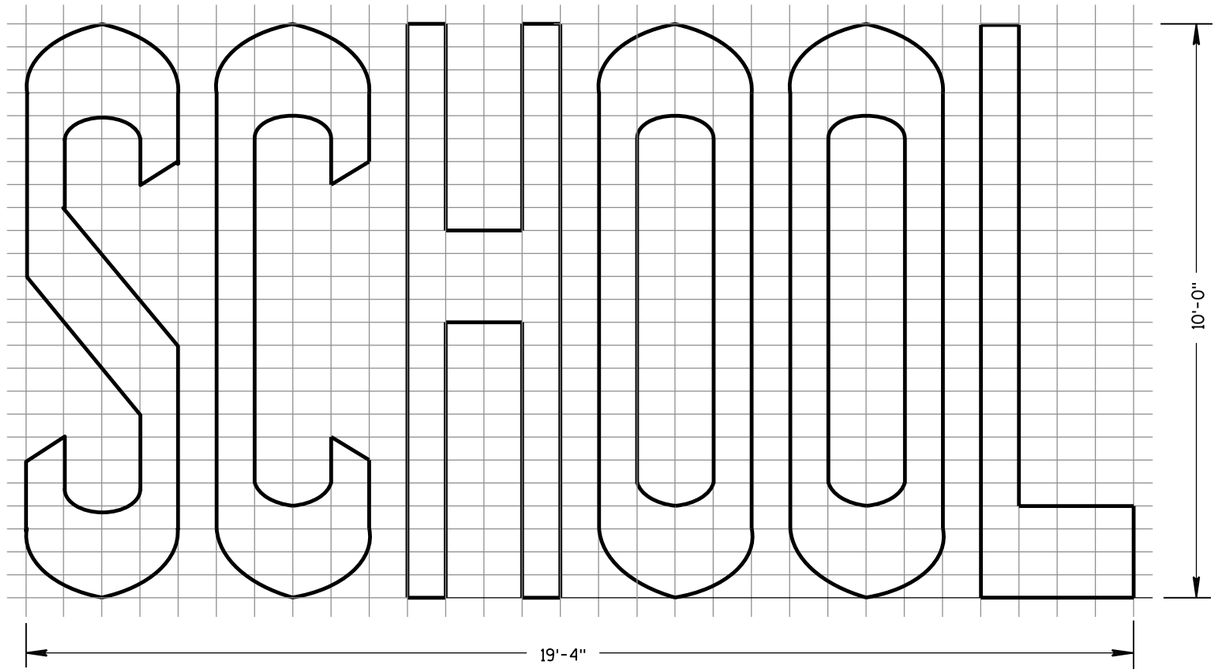
SDD 15C02 - 07b

GENERAL NOTES

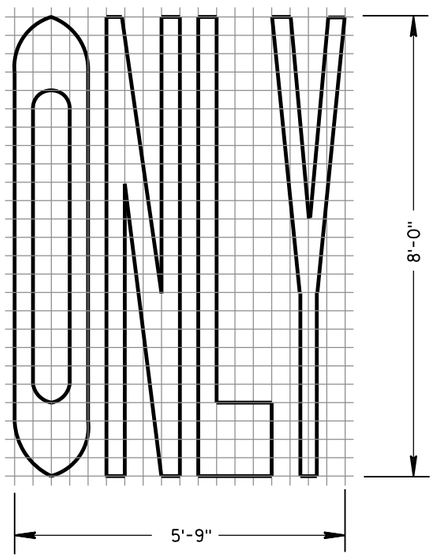
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

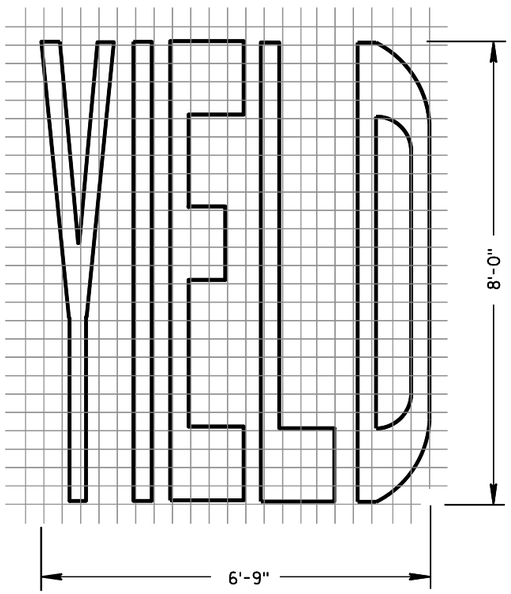


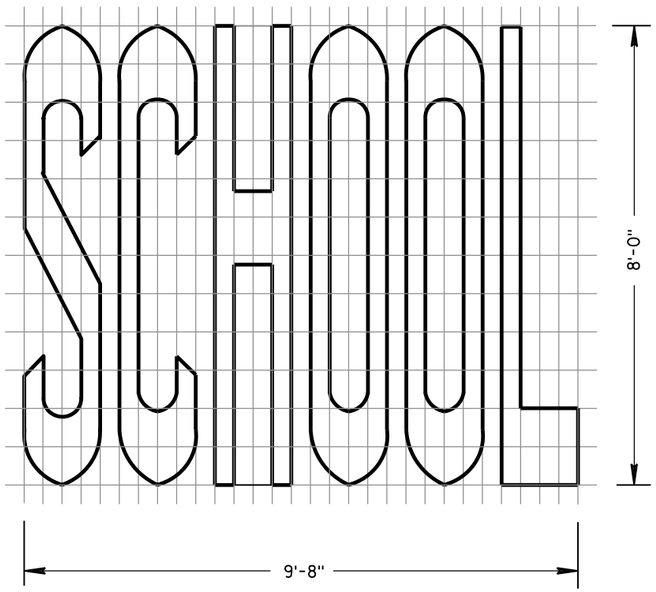




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARK
EER
FHWA

6

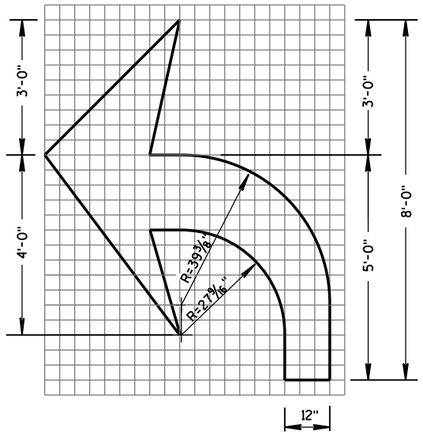
S.D.D. 15 C 7-14b

6

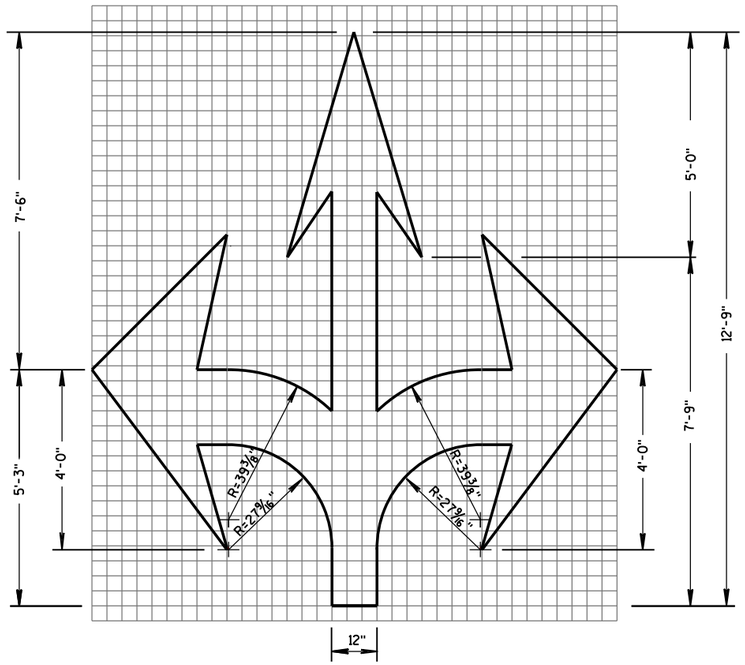
S.D.D. 15 C 7-14b

GENERAL NOTES

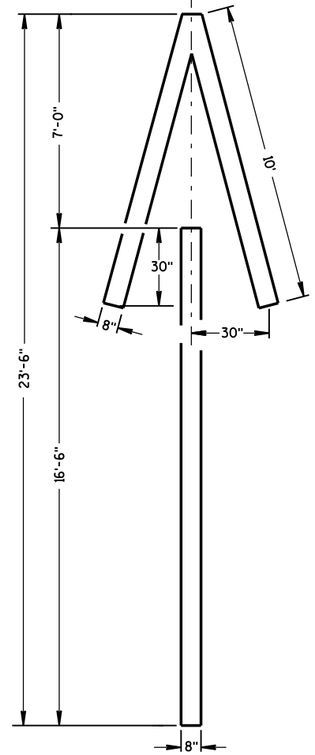
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



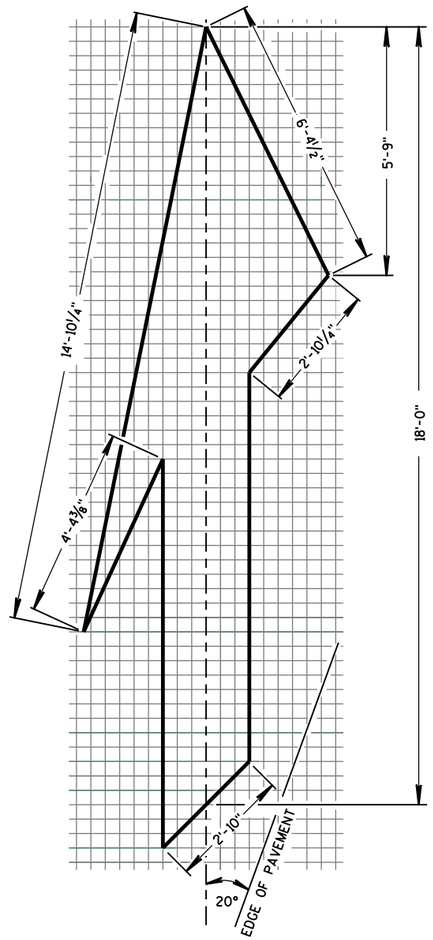
TYPE 2



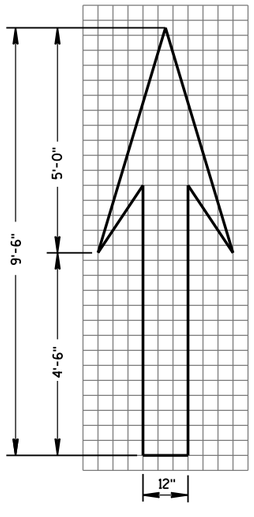
TYPE 6



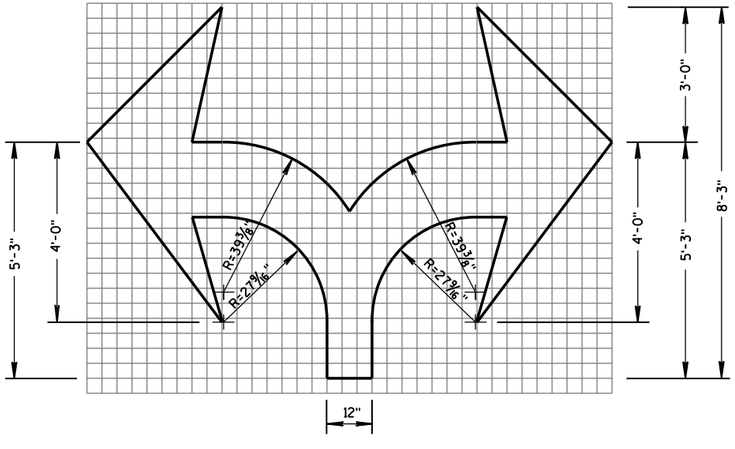
TYPE 4



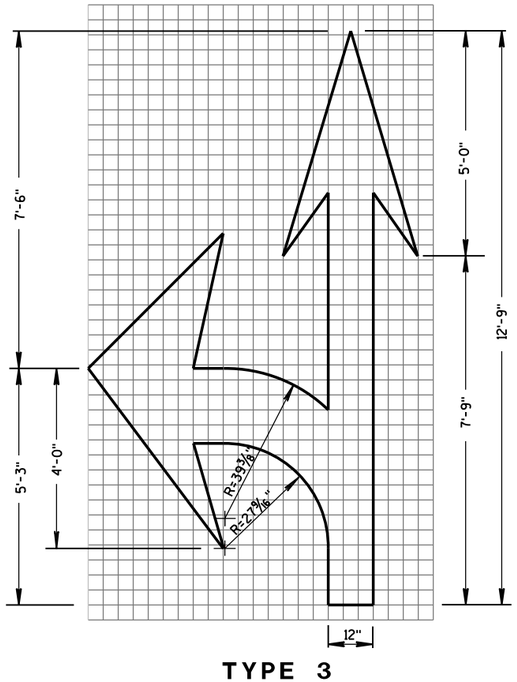
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

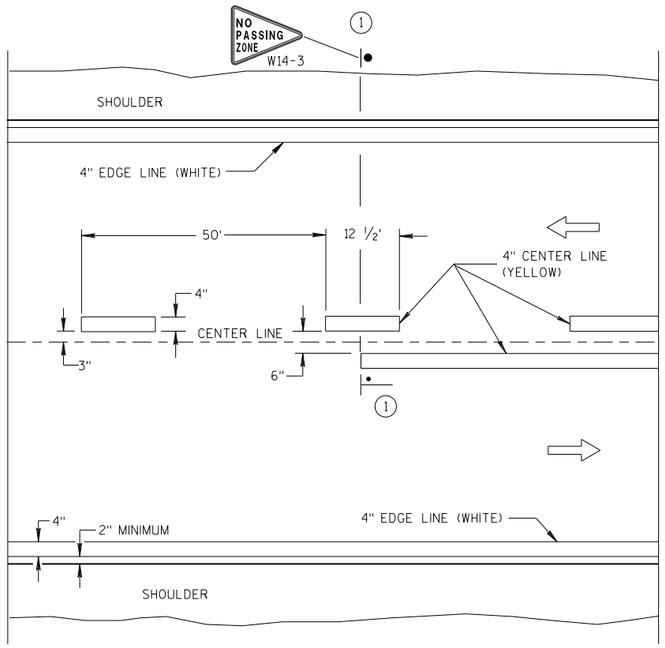
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER
FHWA

6

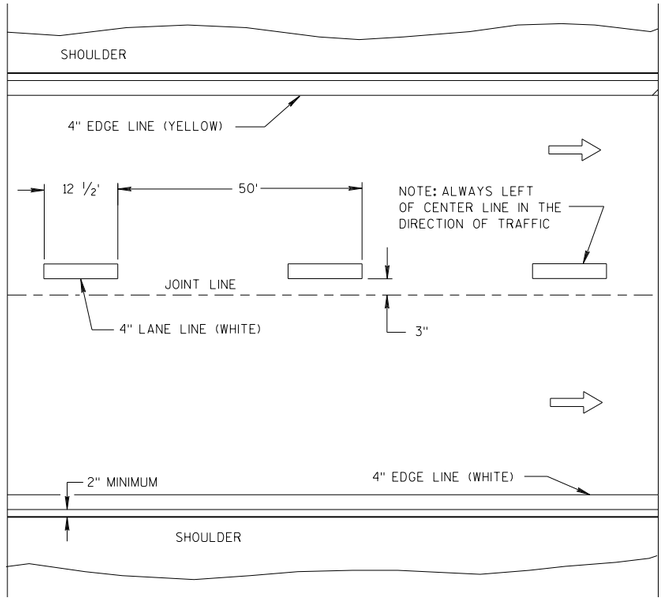
S.D.D. 15 C 7-14c

6

S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

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.

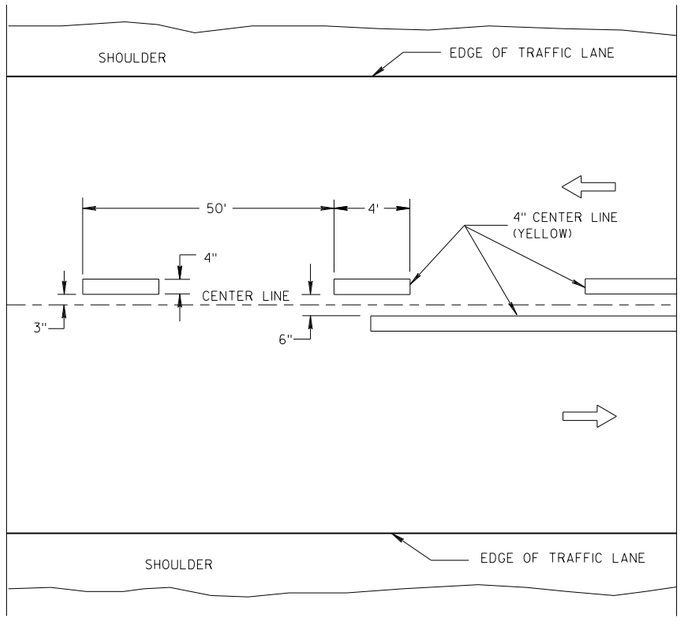
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

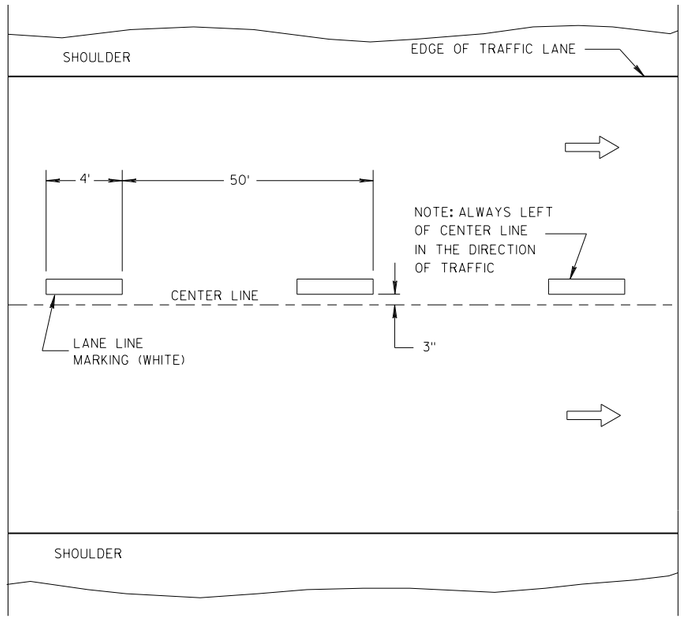
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

6

S.D.D. 15 C 8-19a

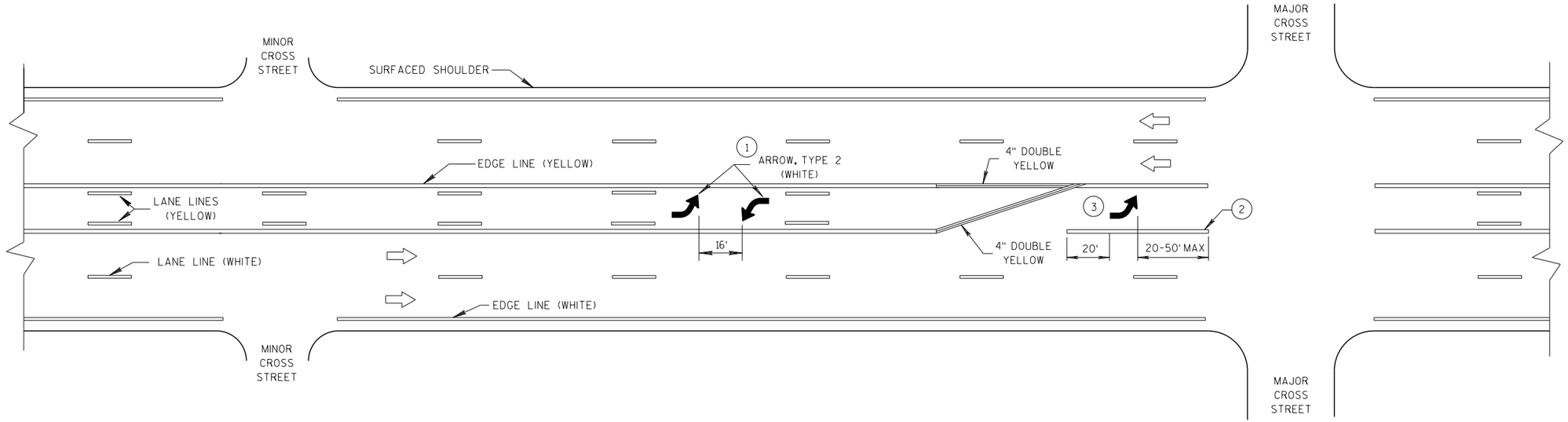
6

S.D.D. 15 C 8-19a

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



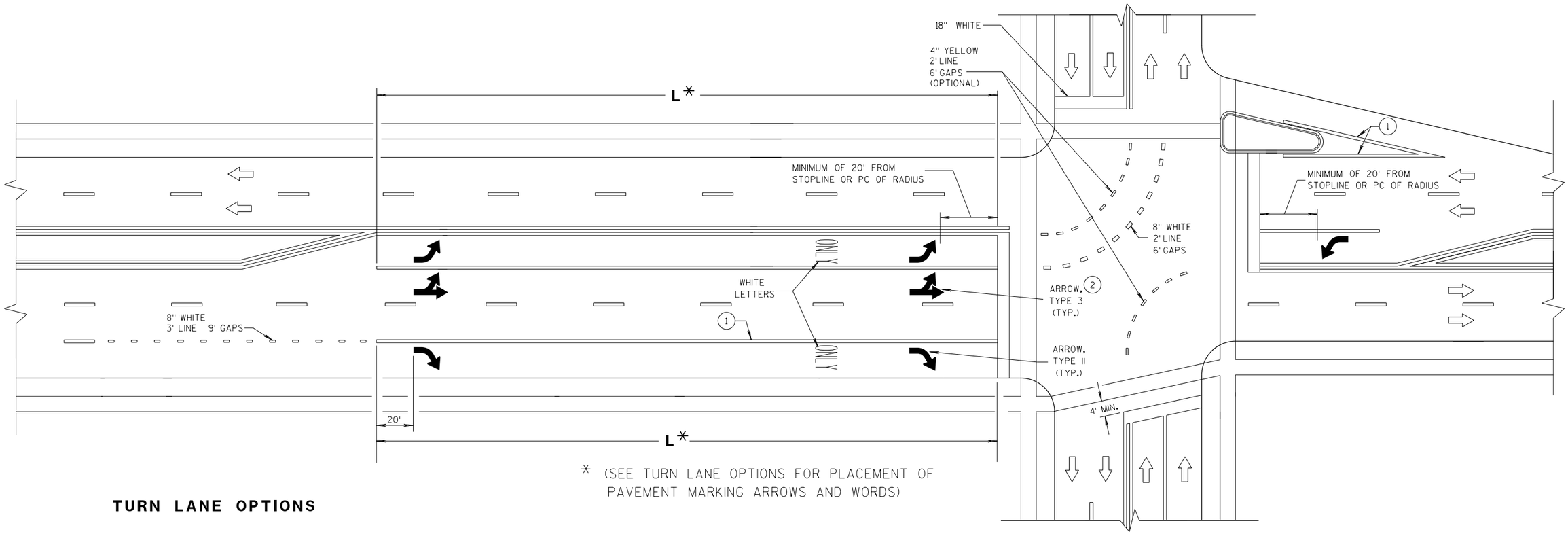
TWO WAY LEFT TURN LANE

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

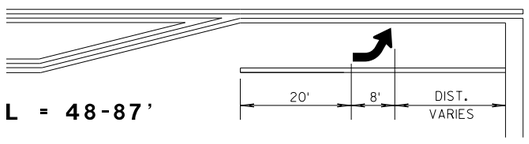
S.D.D. 15 C 8-19b



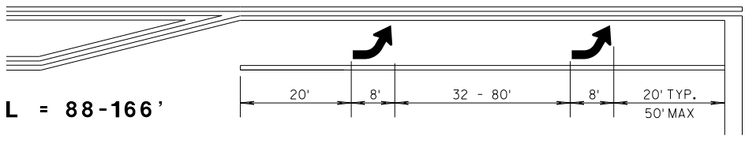
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

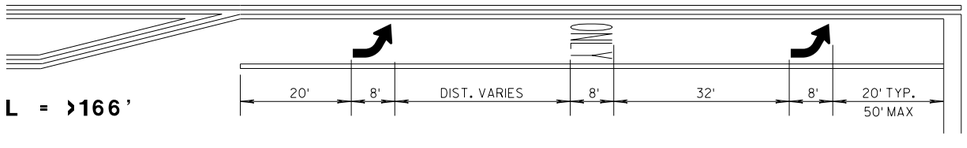
LENGTH OF TURN BAY (**L**) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48-87'



L = 88-166'



L = >166'

GENERAL NOTES

(1) 8" WHITE

(2) QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

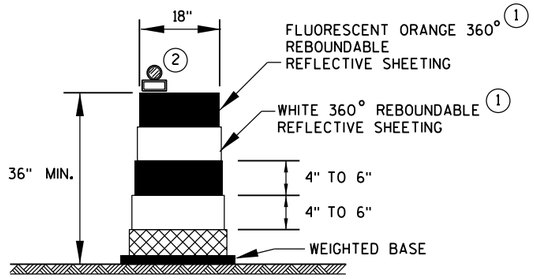
⇨ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

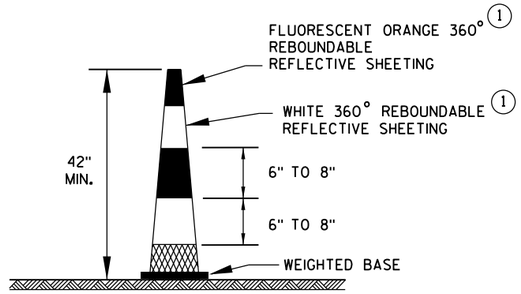
PAVEMENT MARKING (TURN LANES)

6

S.D.D. 15 C 8-19c



DRUM

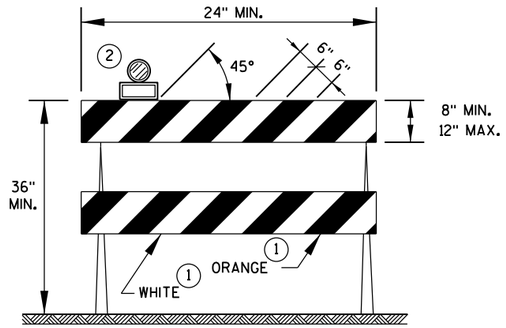


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

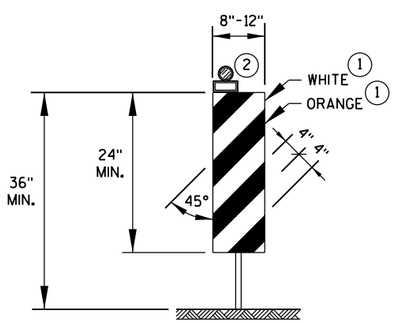
GENERAL NOTES

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.



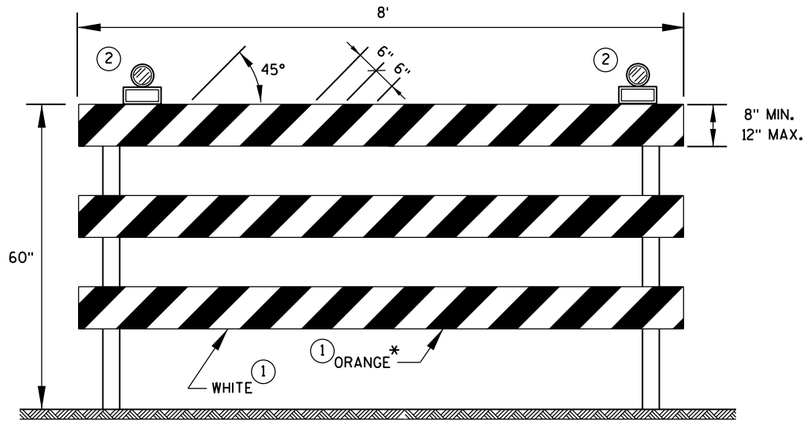
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 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.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

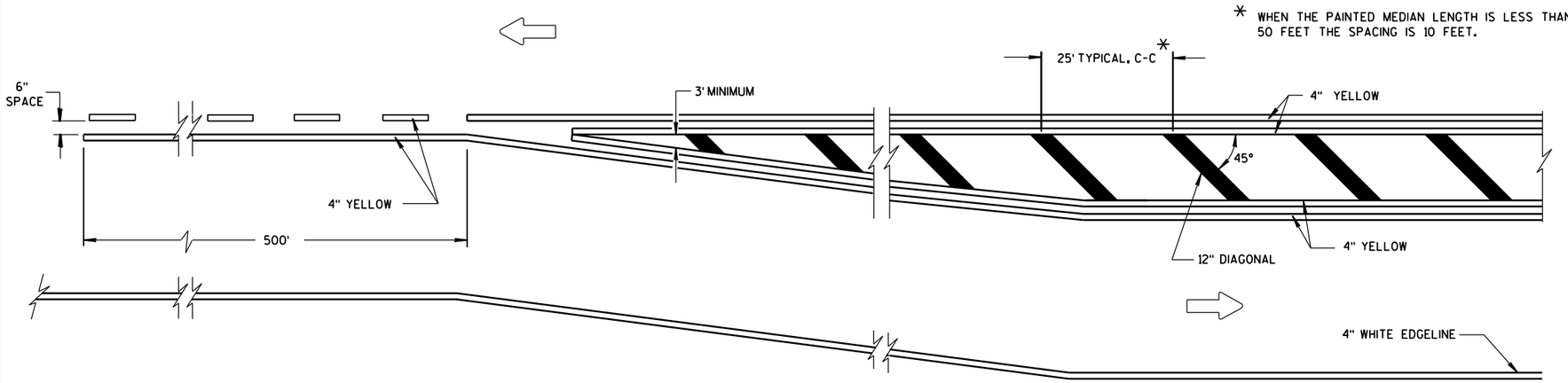
June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

FHWA

6

S.D.D. 15 C 11-7b

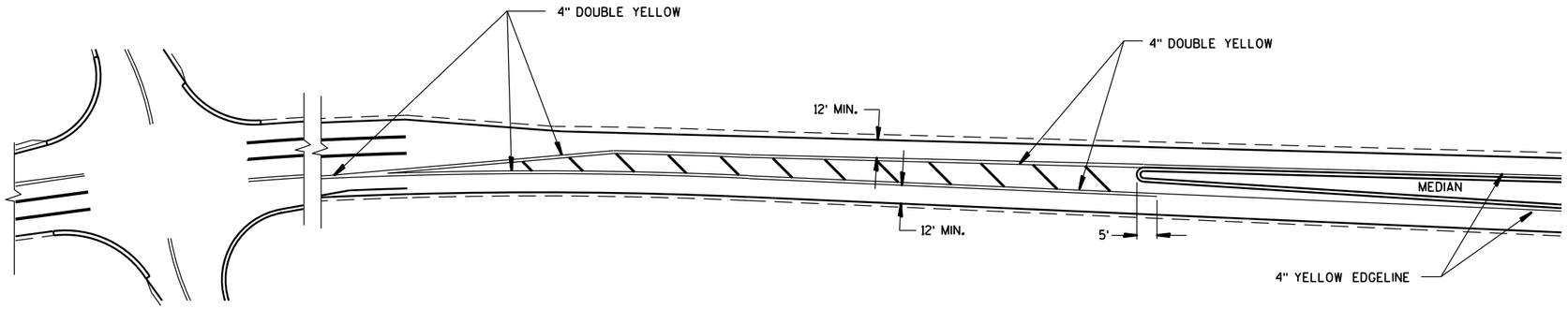


MEDIAN ISLAND DETAIL

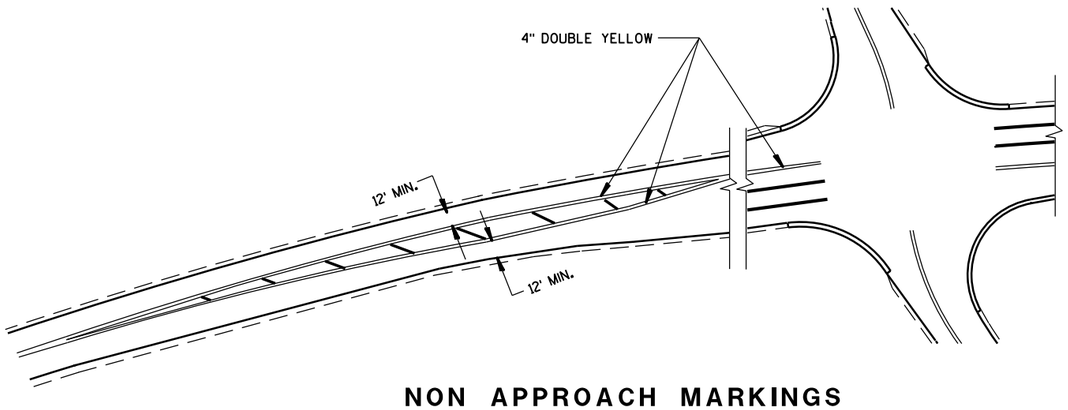
GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

DIRECTION OF TRAVEL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

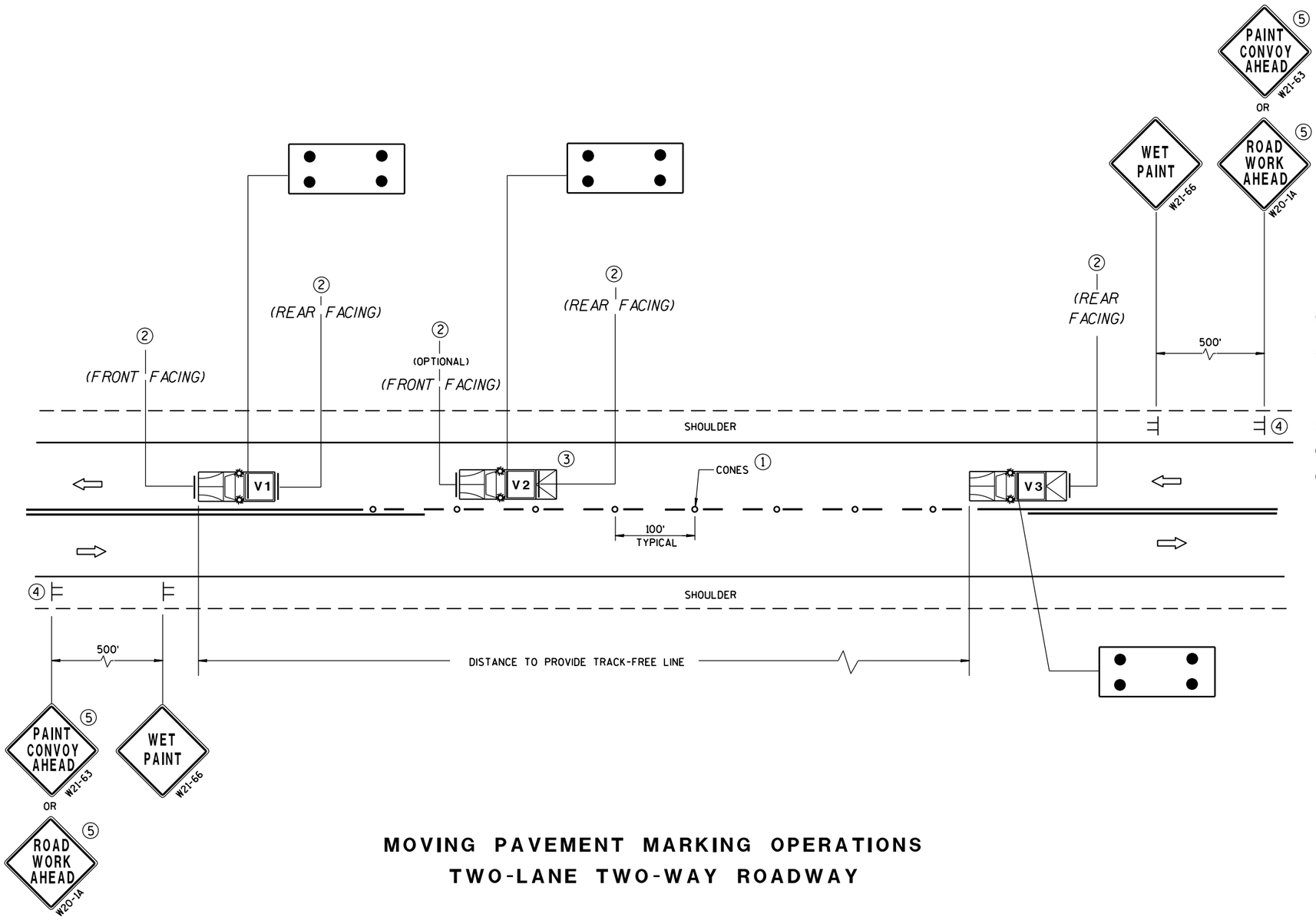
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE FHWA	/S/ Matthew Rauch STATE SIGNING AND MARK 158 EER

6

S.D.D. 15 C 18-4

6

S.D.D. 15 C 18-4



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

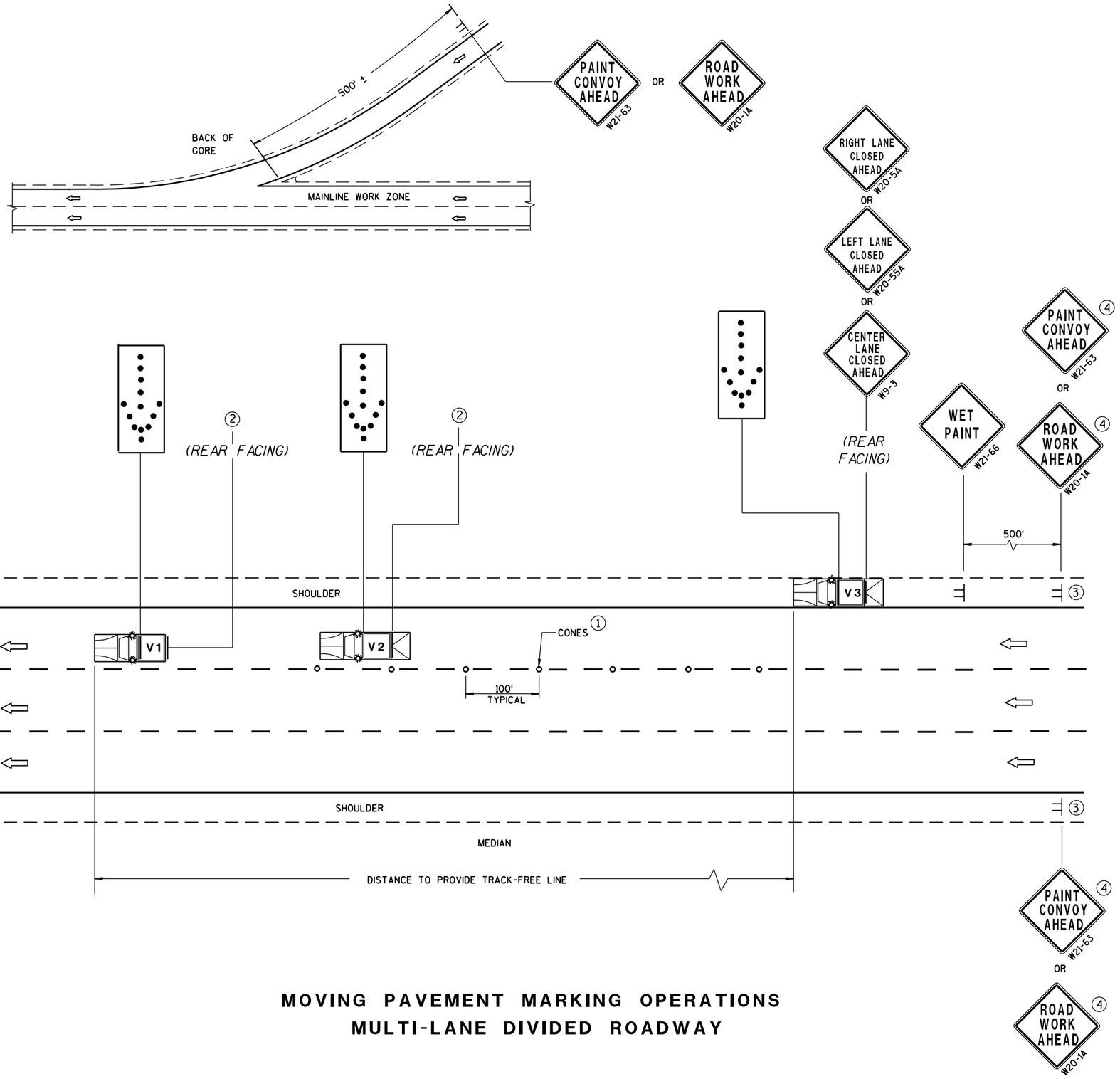
(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGR
FHWA	



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

(4) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2017 — DATE

/S/ Andrew Heldtke — WORK ZONE ENGR

FHWA

6

S.D.D. 15 C 19-5c

6

S.D.D. 15 C 19-5c

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

(1) USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

SYMBOLS

* SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT

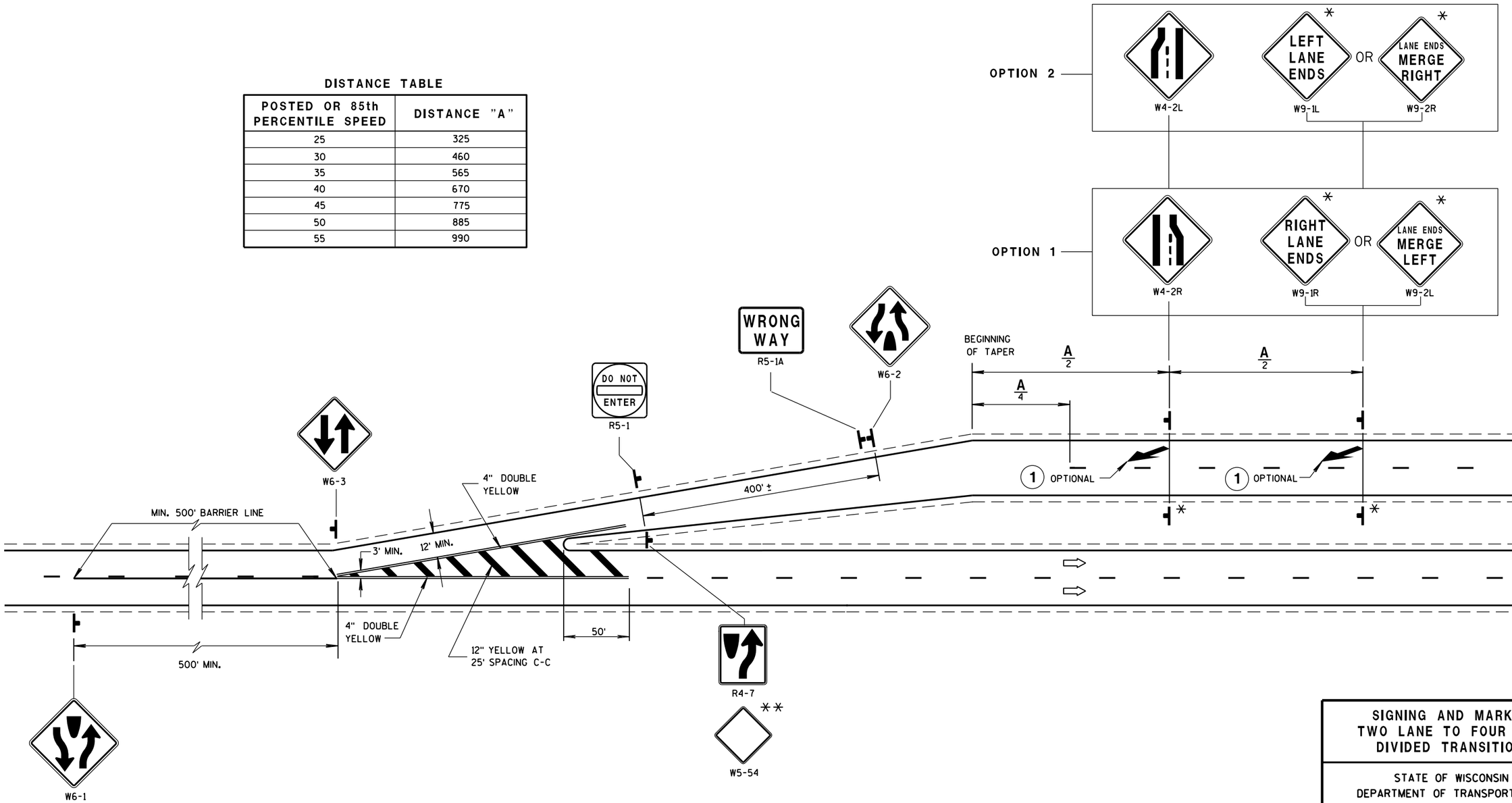
** IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	325
30	460
35	565
40	670
45	775
50	885
55	990



SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

S.D.D. 15 C 21-8

GENERAL NOTES

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

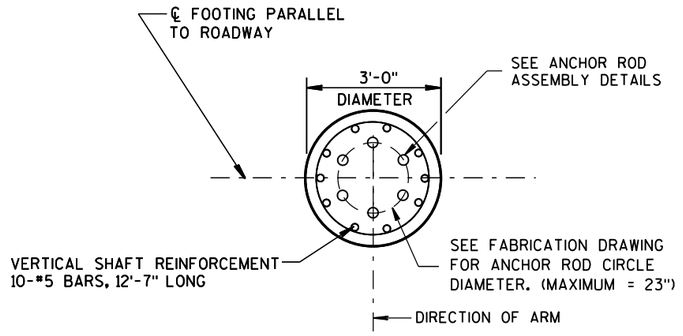
THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

FORM ALL EXPOSED CONCRETE CORNERS WITH ¾" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

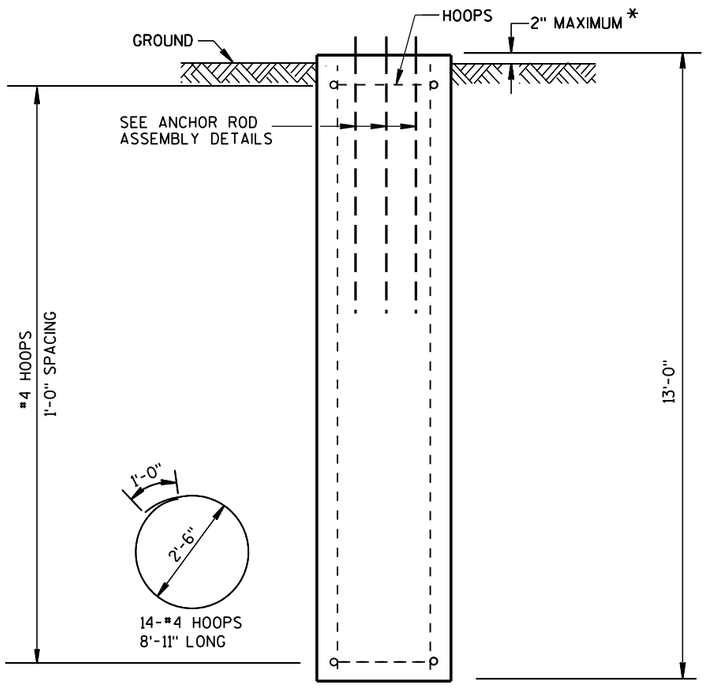
ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554, GRADE 55	fy=55,000 p.s.i.
ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.	
PLATES, ASTM A709, GRADE 36	fy=36,000 p.s.i.

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).

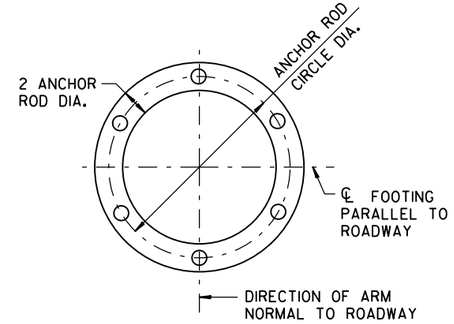


PLAN VIEW

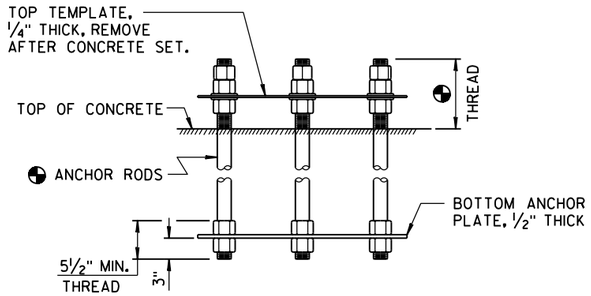


ELEVATION VIEW

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.



TOP TEMPLATE AND BOTTOM ANCHOR PLATE



ANCHOR ROD ASSEMBLY DETAILS

⊕ MINIMUM OF 6 ANCHOR RODS, EXACT NUMBER, SIZE, DIMENSION AND ORIENTATION AS SHOWN ON FABRICATION DRAWING.

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
FHWA

/S/ Vu Thao
WIND LOADED STRU PROGRAM LEAD

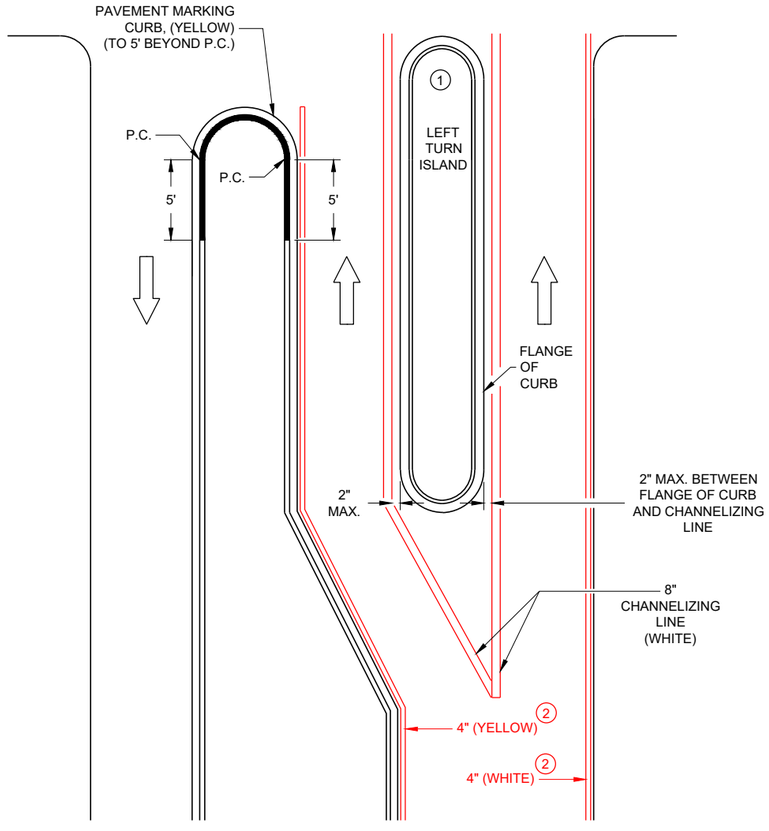
6

S.D.D. 15 C 24-4

6

S.D.D. 15 C 24-4

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



LEFT TURN & MEDIAN ISLAND

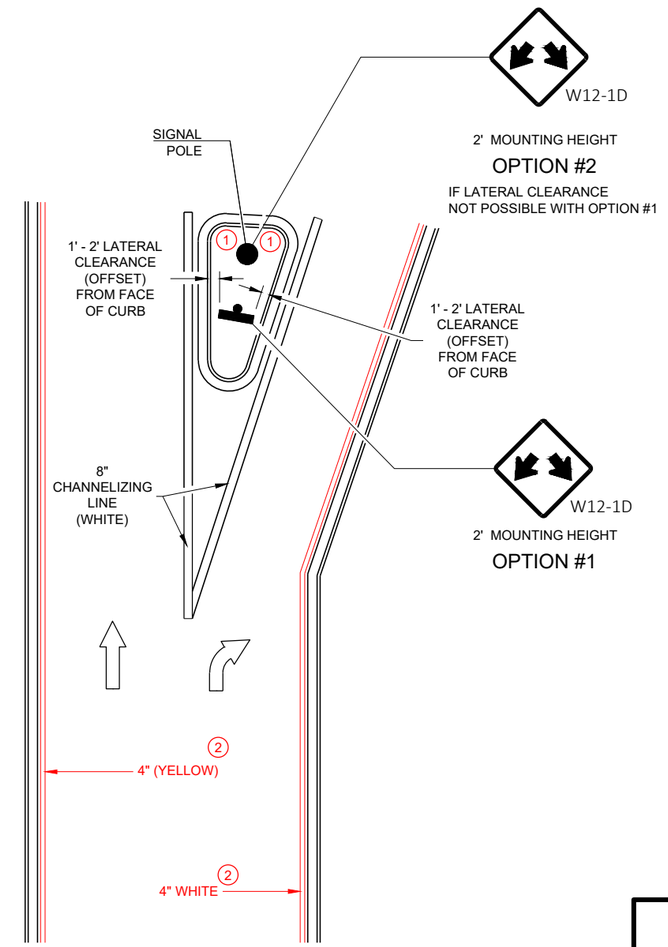
GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

1. MARK CURB NOSES YELLOW.
2. MARK ACCORDING TO TABLE.

DIRECTION OF TRAVEL



RIGHT TURN ISLAND

DOUBLE ARROW
WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAF ENGINEER

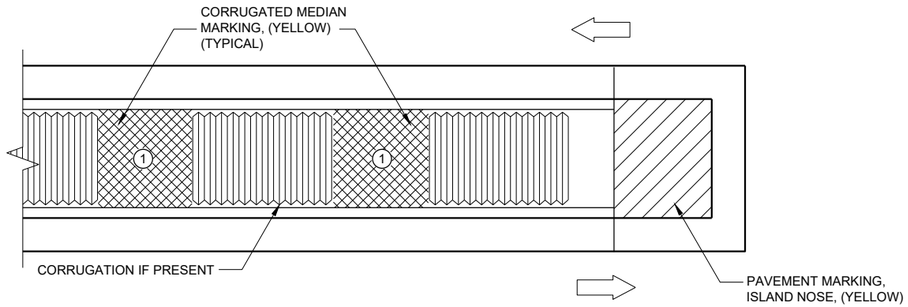
FHWA

6

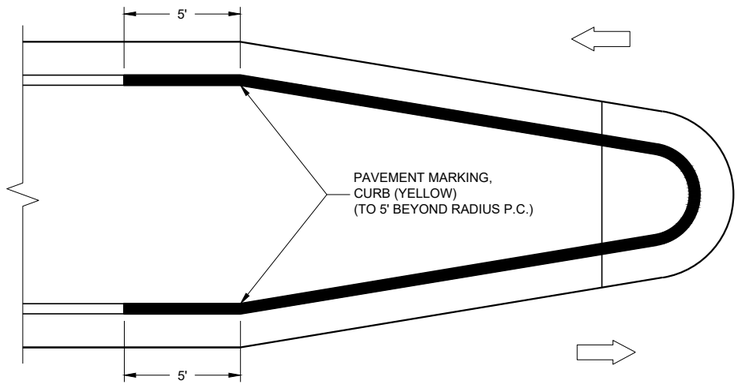
SDD 15C27 - 03a

6

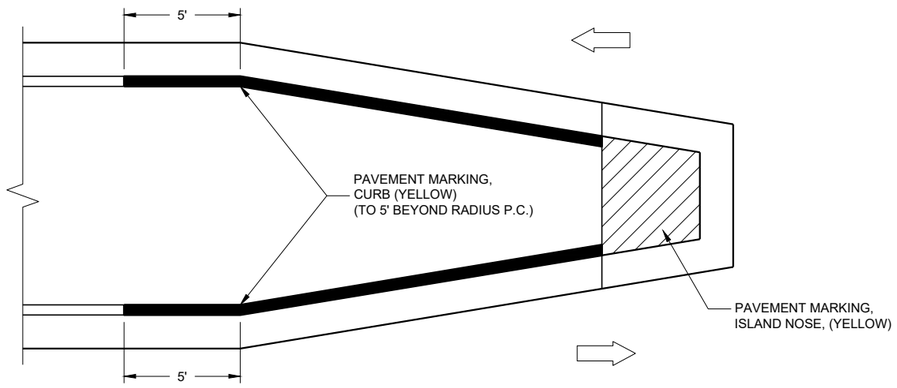
SDD 15C27 - 03a



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.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKINGS (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MAF ENGINEER

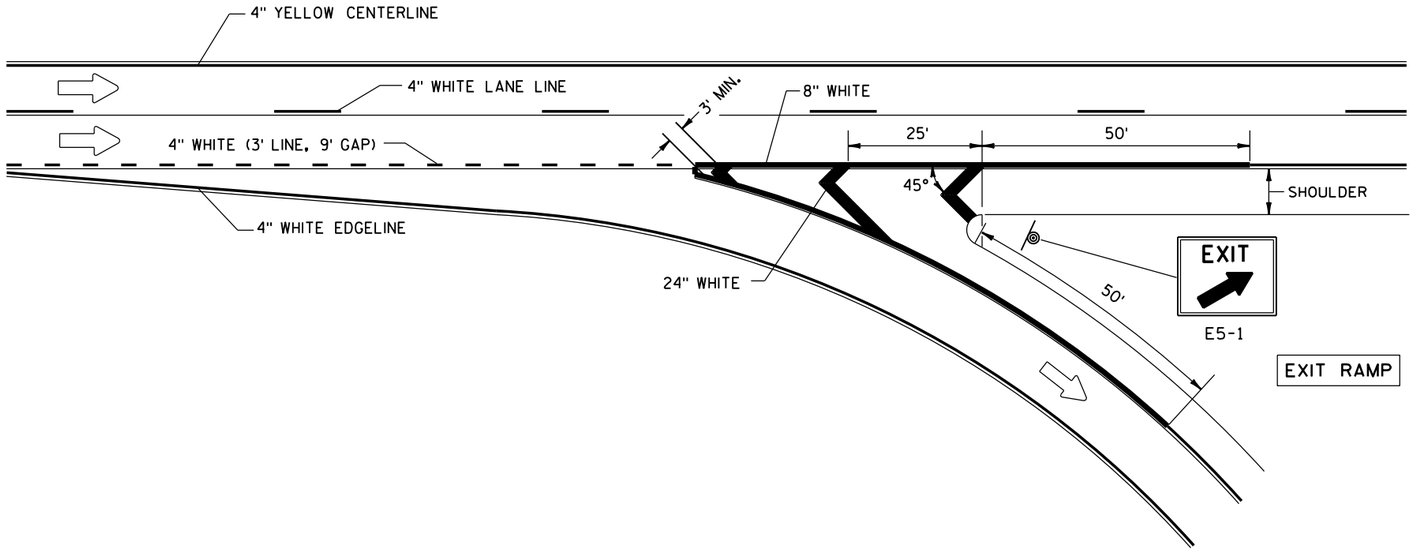
FHWA

6

6

SDD 15C27 - 03b

SDD15C27 - 03b



PAVEMENT MARKING FOR EXIT RAMP

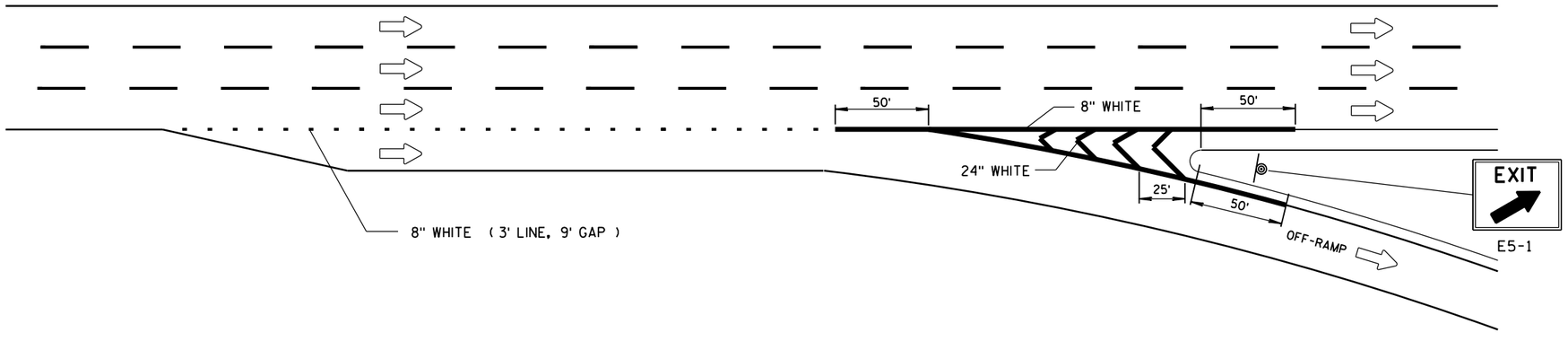
GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

SIGN ON PERMANENT SUPPORT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

6

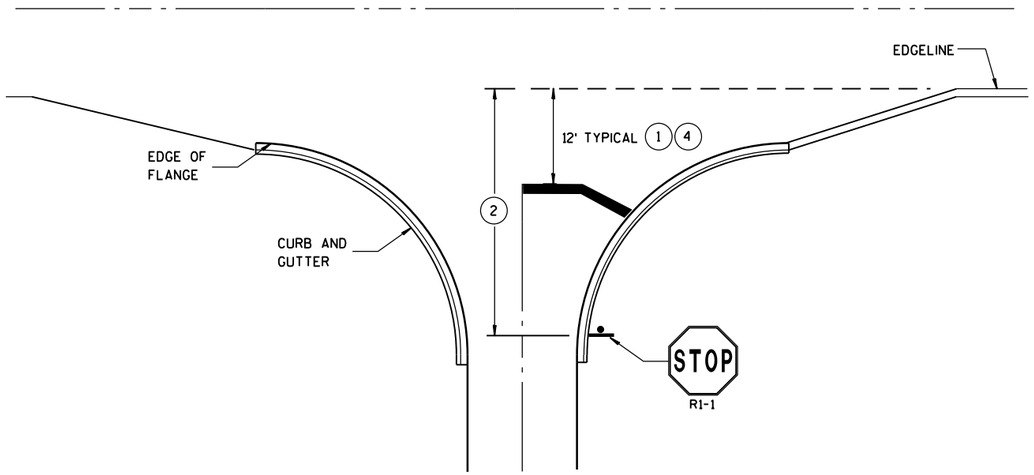
S.D.D. 15 C 31-3a

PAVEMENT MARKING (RAMPS AND GORES)

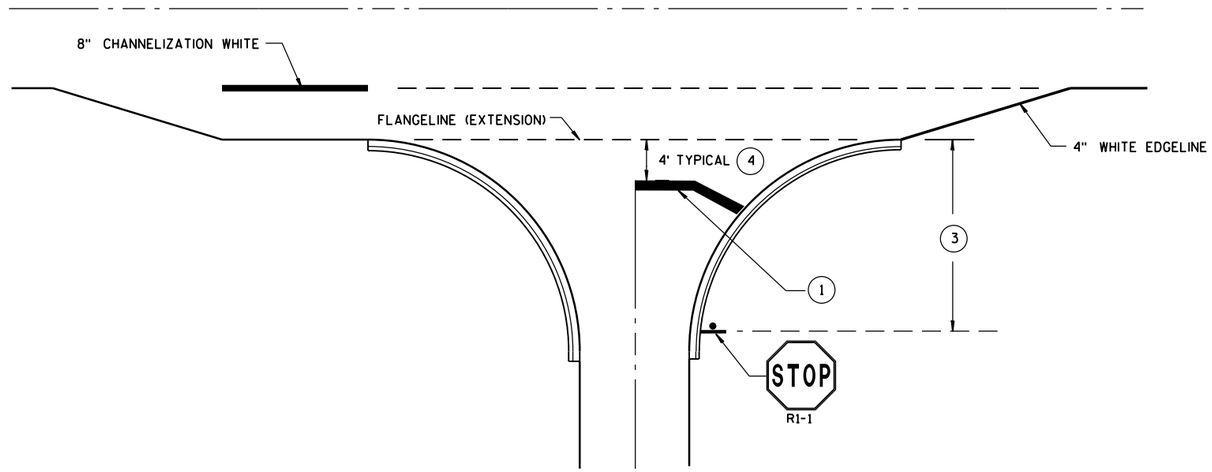
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

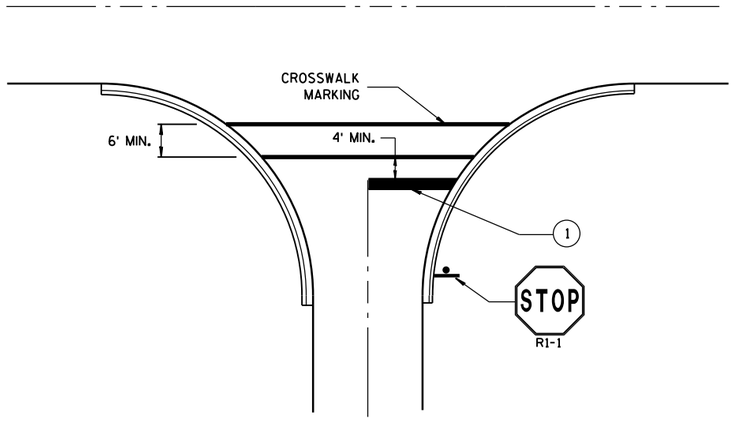
S.D.D. 15 C 31-3a



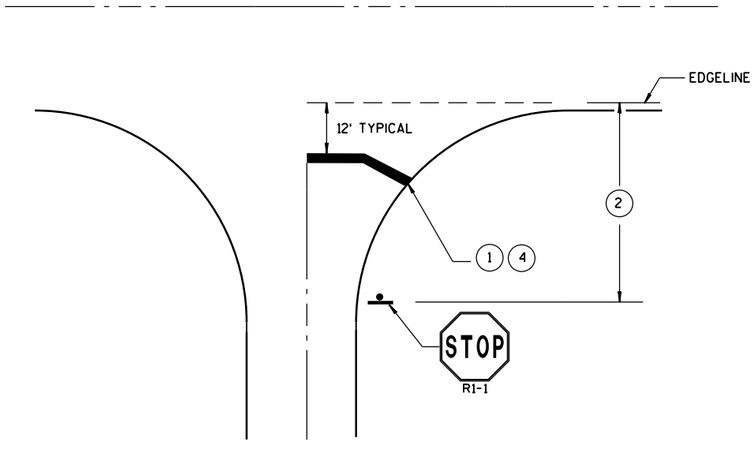
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

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 PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

(2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.

(3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.

(4) MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER

FHWA

6

S.D.D. 15 C 33-3

GENERAL NOTES

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

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

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

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

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

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

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

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

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

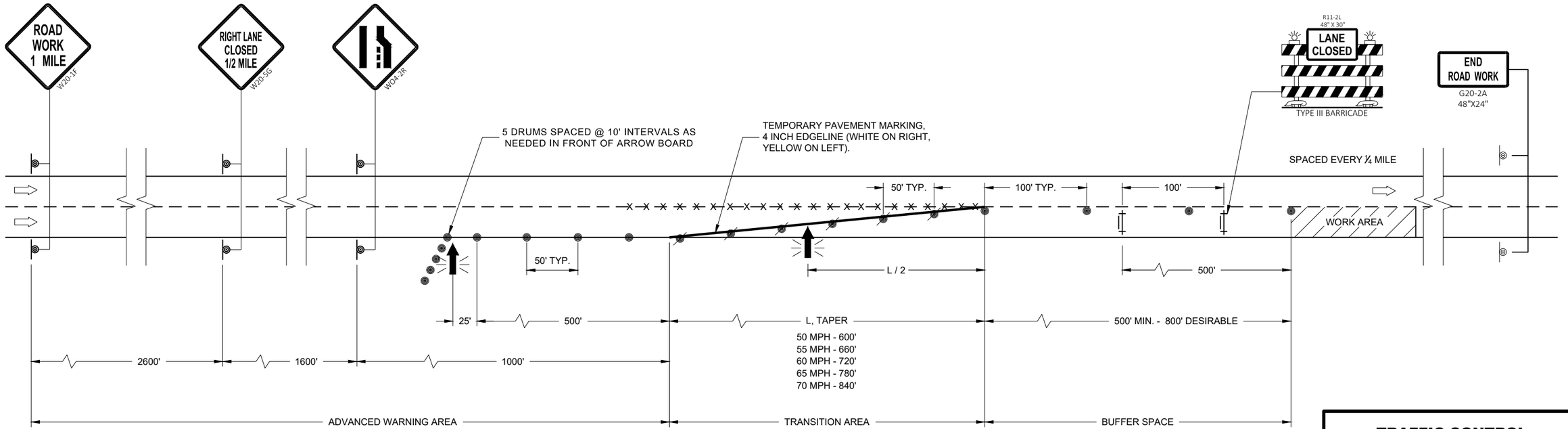
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

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



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

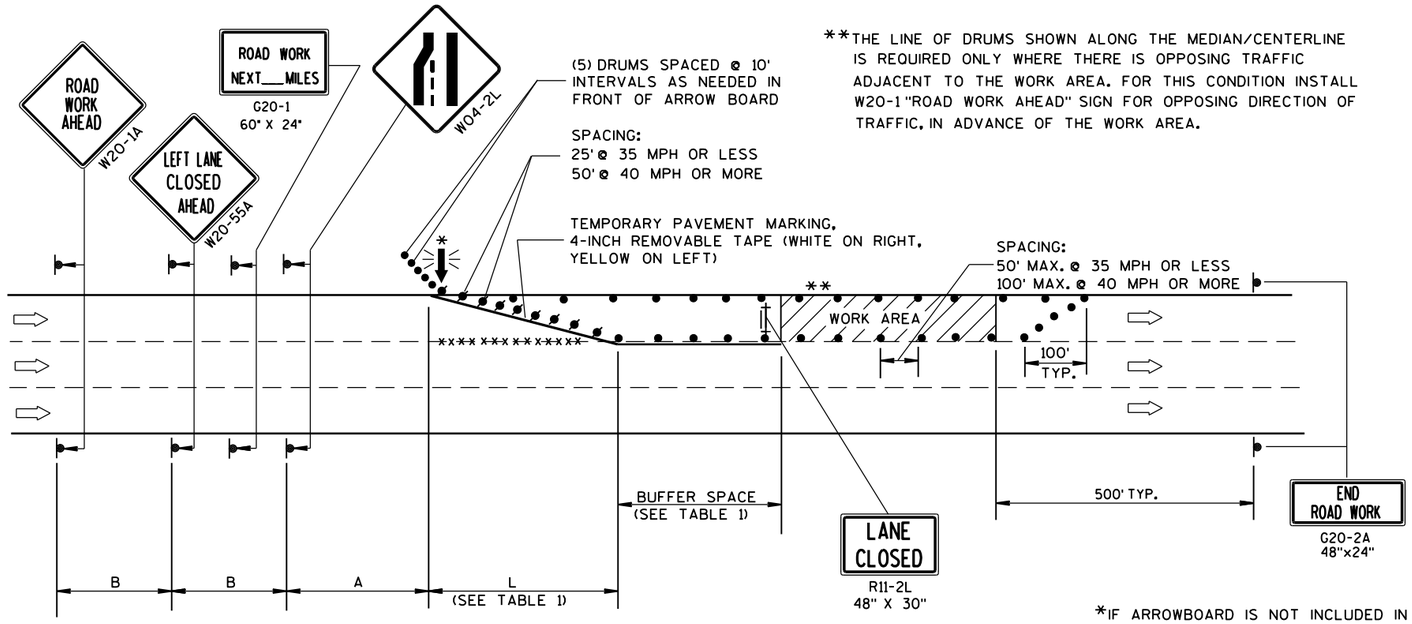
APPROVED
November 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D12 - 07a

SDD 15D12 - 07a



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

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

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

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

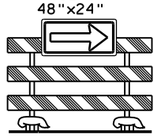


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

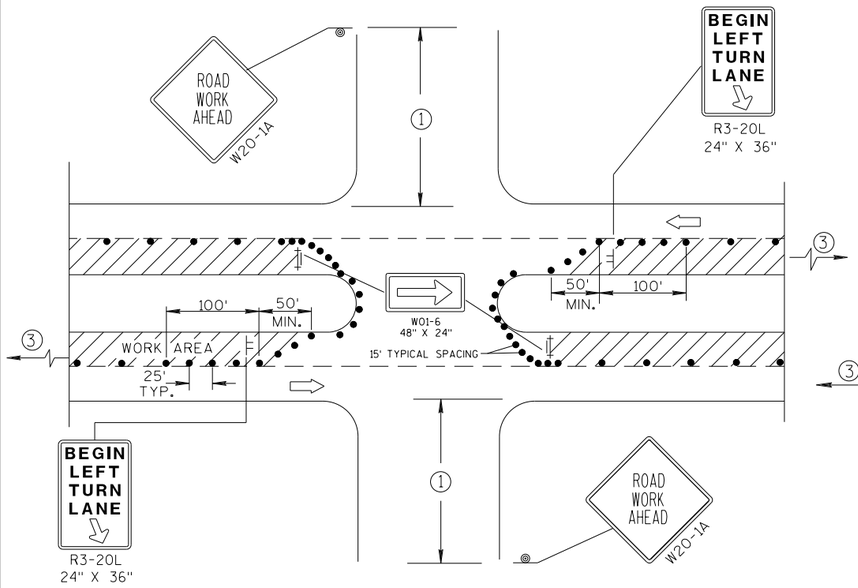
APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 20-4

6

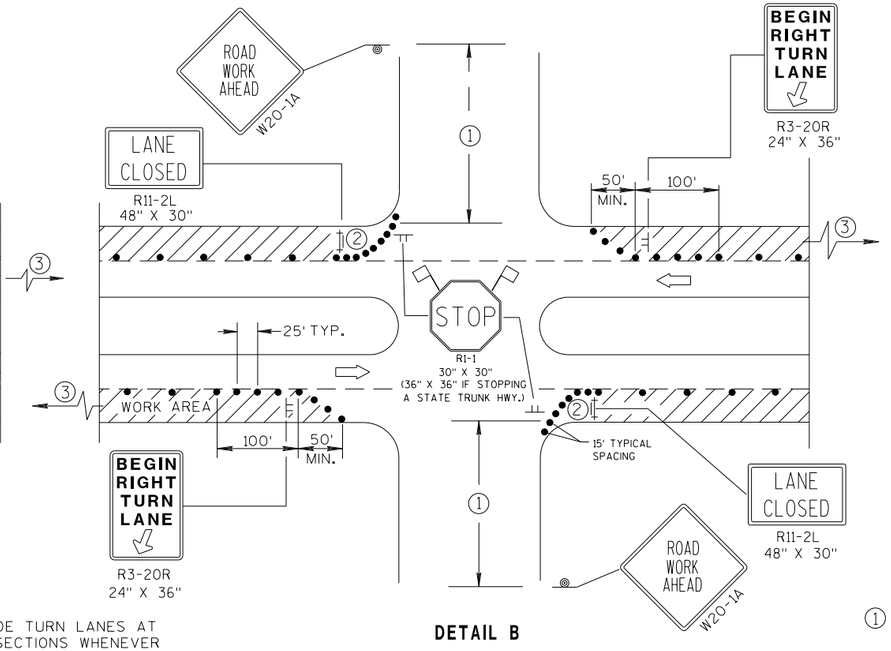
S.D.D. 15 D 20-4



DETAIL A

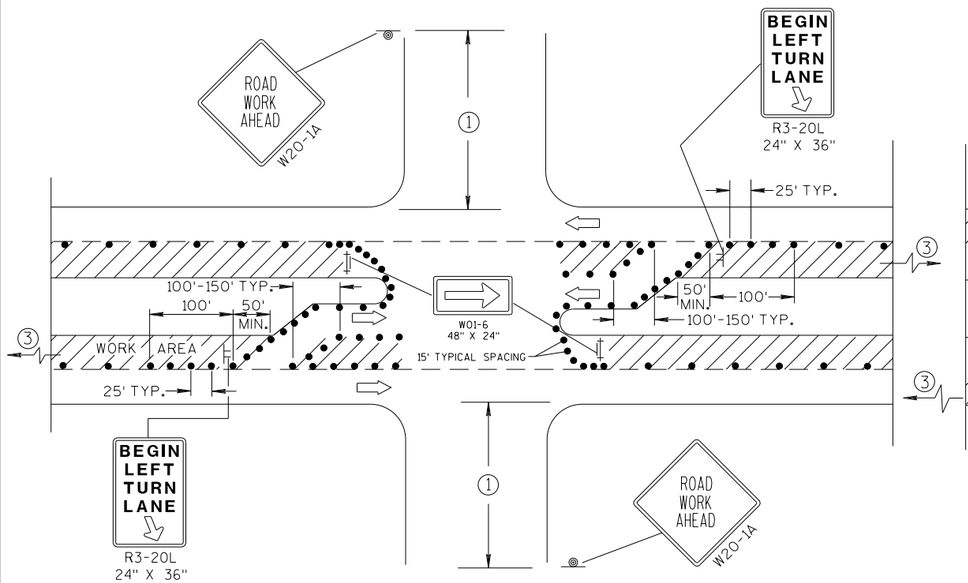
FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

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



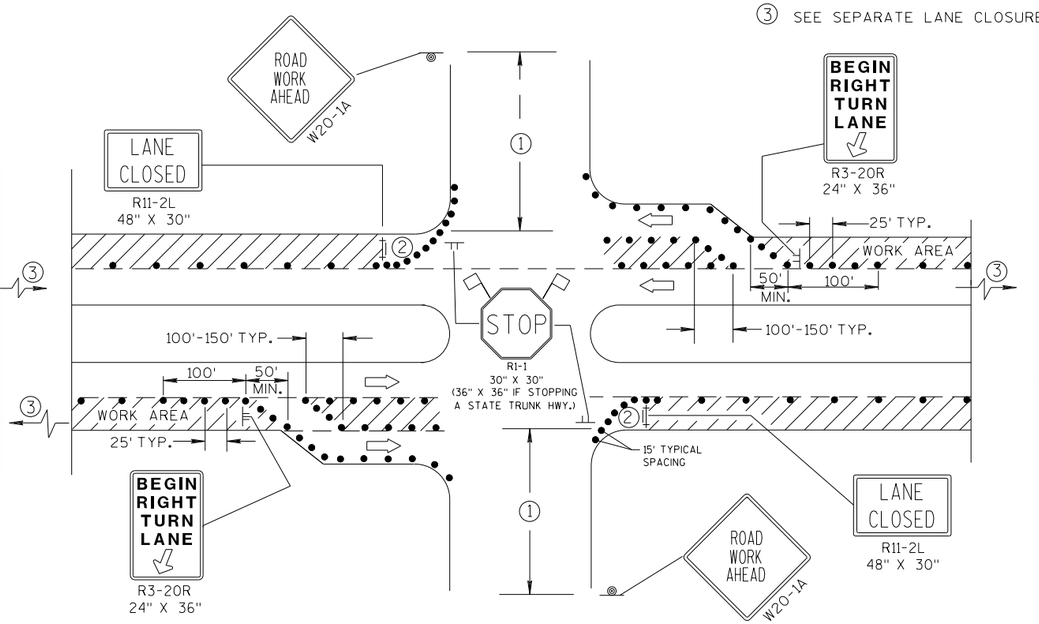
DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION



DETAIL C

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



DETAIL D

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

(2) ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

6

S.D.D. 15 D 21-6

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

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

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

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

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

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

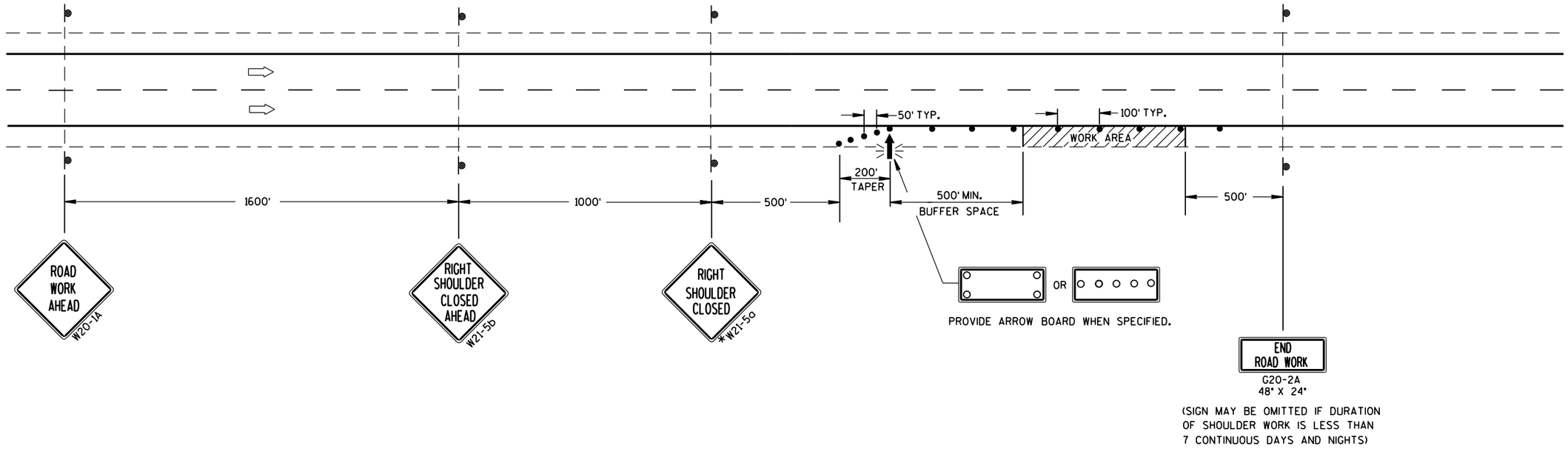
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

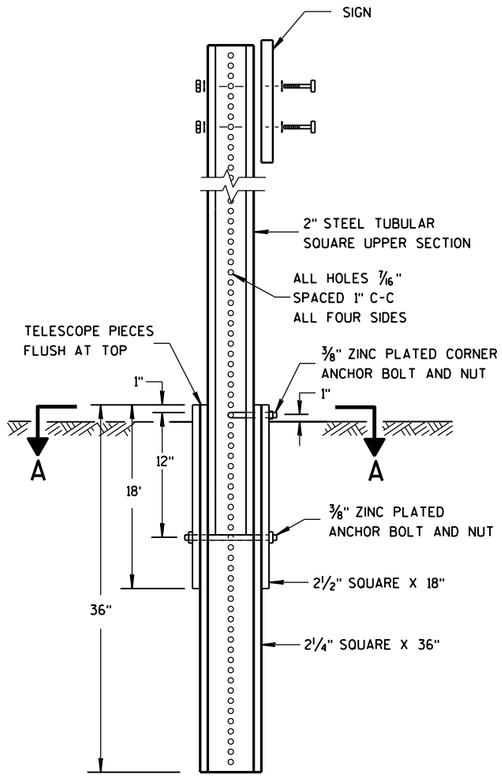
June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

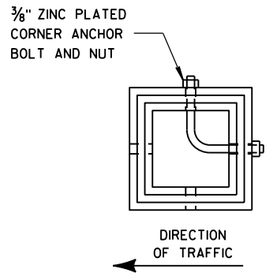
FHWA

6

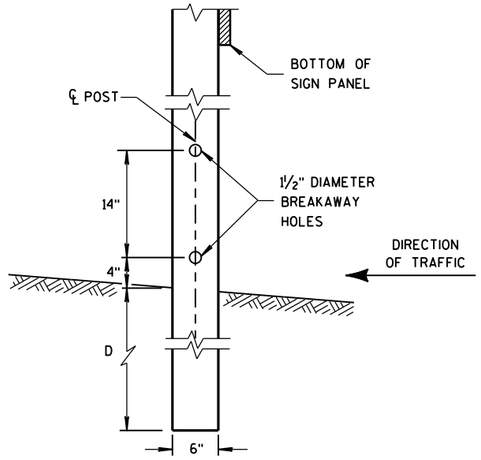
S.D.D. 15 D 27-3



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



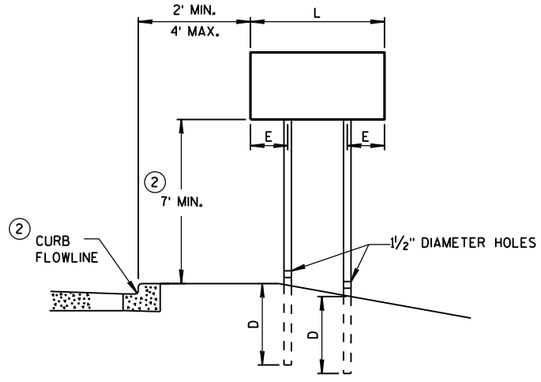
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

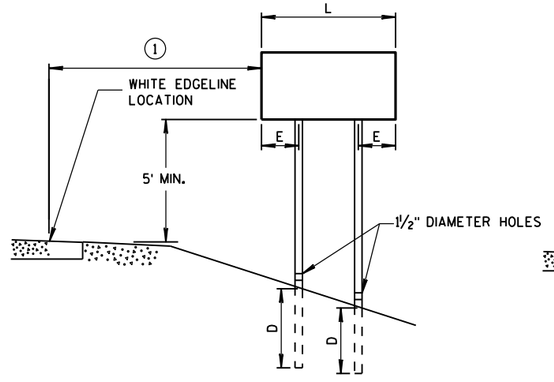
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

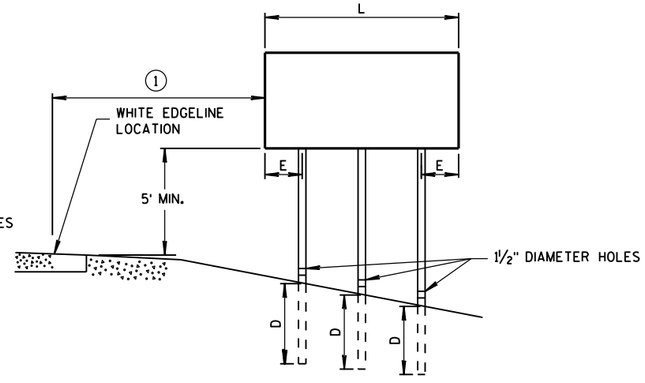
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

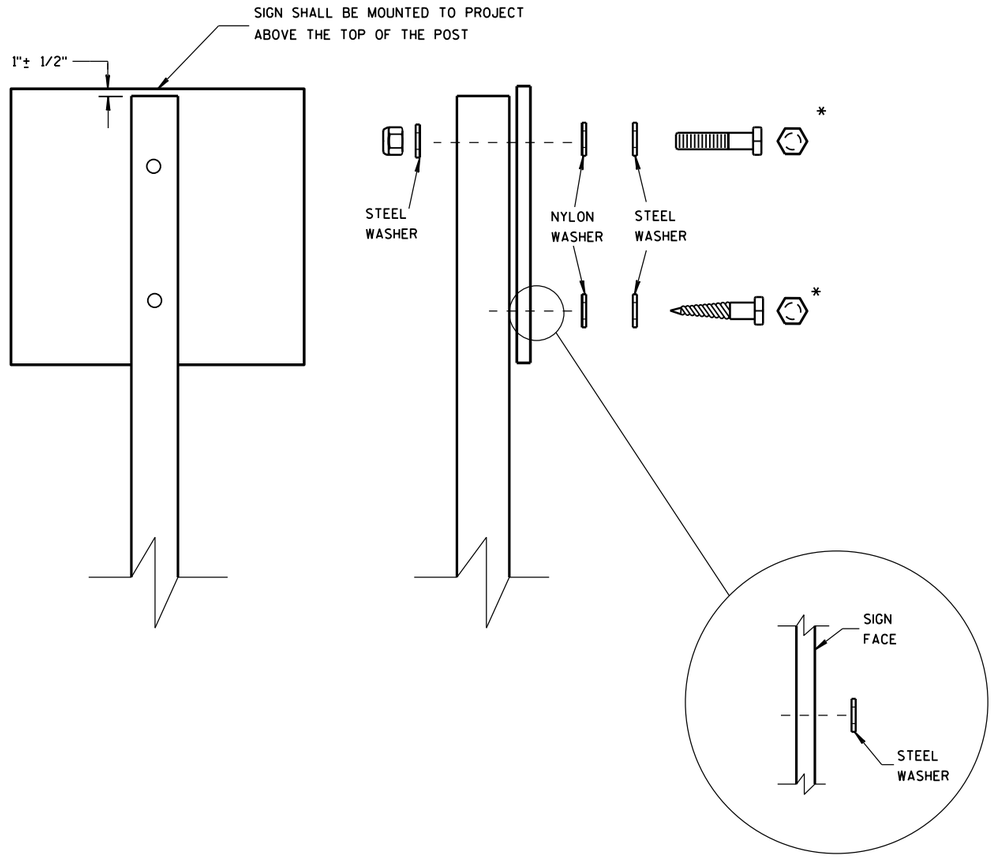
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

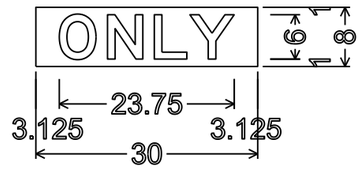
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

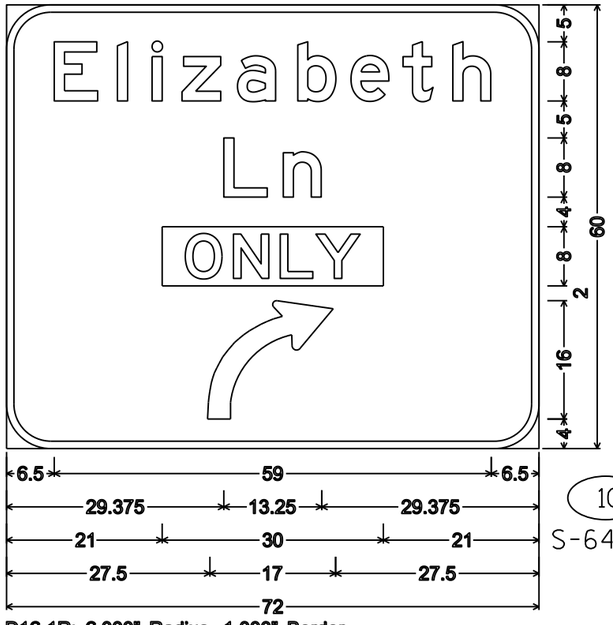
FHWA

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - As noted
4. ONLY plaque basematerial is .040" aluminum on Type F Reflective sheeting with Black Message

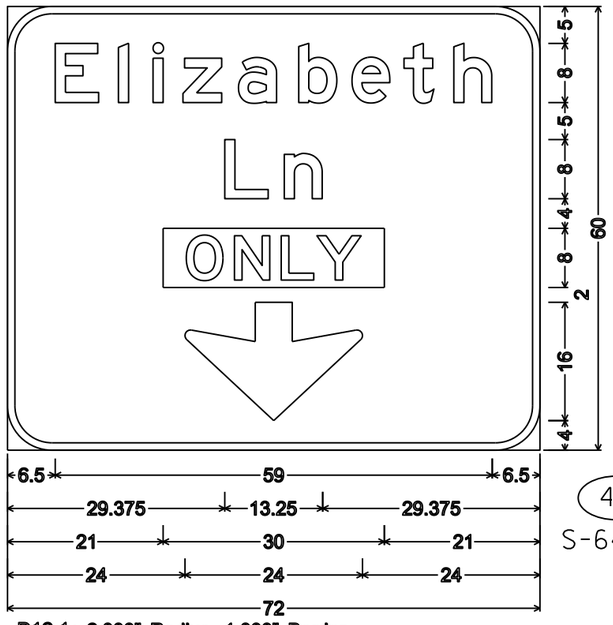


No border, Black on Fluorescent yellow;
"ONLY" Black E



D16-1R; 6.000" Radius, 1.000" Border

10
S-64-609



D16-1; 6.000" Radius, 1.000" Border

47
S-64-220

7

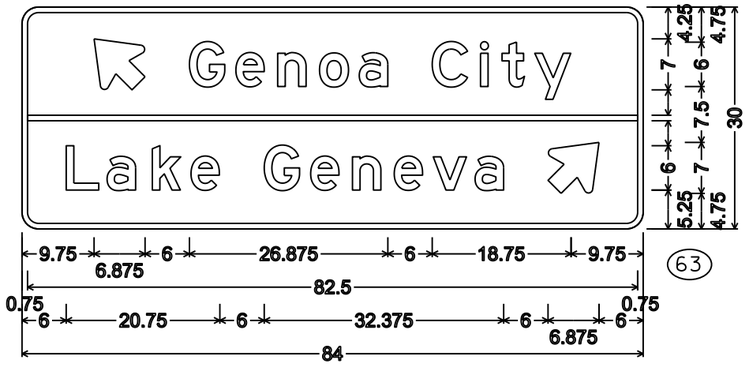
7

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET NO: 173	E

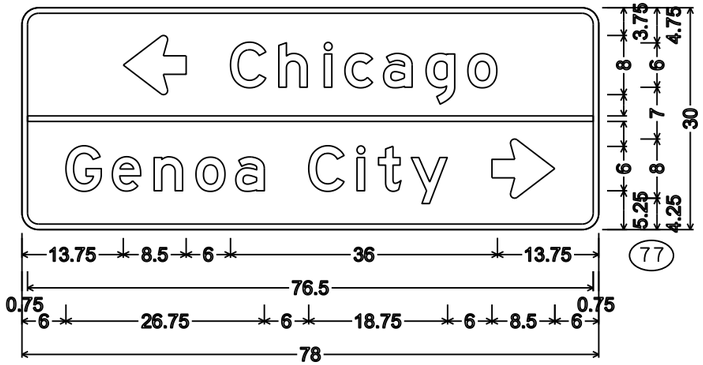
NOTES

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

D1-1;
2.250" Radius, 0.750" Border



D1-2; 2.250" Radius, 0.750" Border



D1-2; 2.250" Radius, 0.750" Border

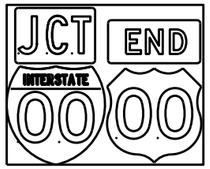
7

7

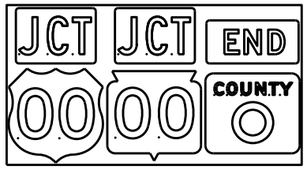
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	PERMANENT SIGNING	SHEET NO: 174	E

TYPICAL ASSEMBLIES

J1-1

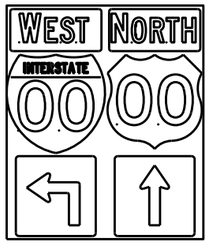


J1-2

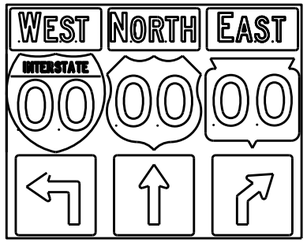


J1-3

J2-1



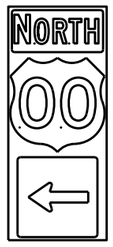
J2-2



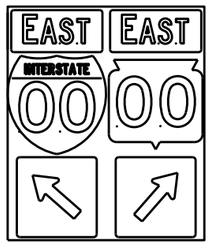
J2-3

JV

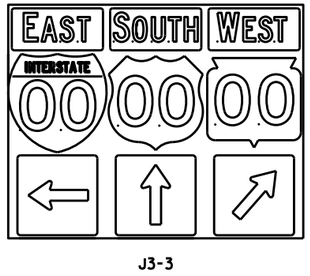
(Typical Vertical J-Assembly
See Note 10 and 11)



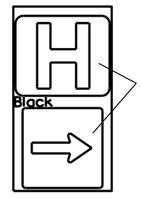
J3-1



J3-2



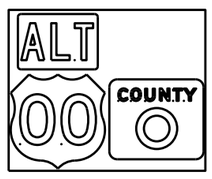
J3-3



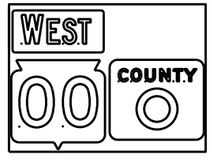
Blue Background

JH-1

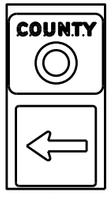
J4-1



J4-2



J4-2



J13-1

J12-1

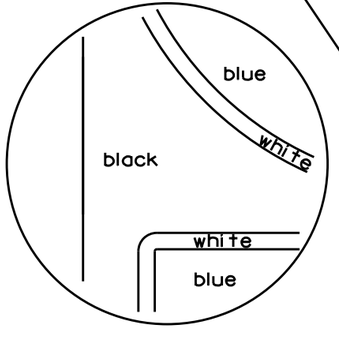
J32-1

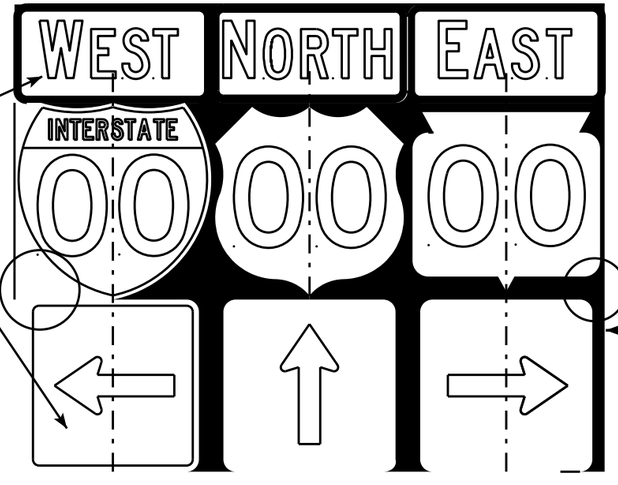
J33-1

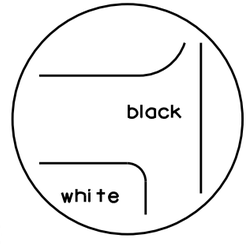
J23-1

J22-1

blue background
with interstate







black background

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

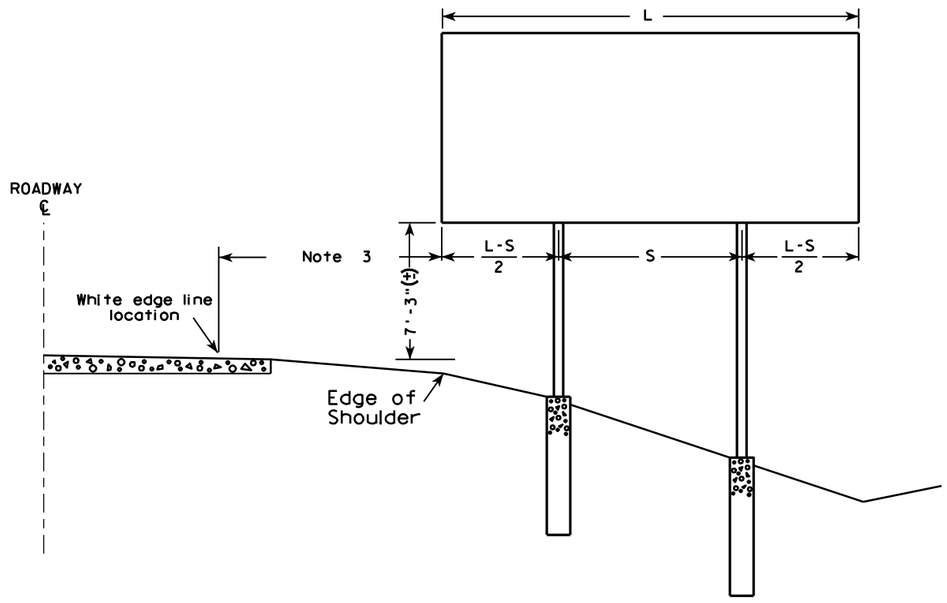
WISCONSIN DEPT OF TRANSPORTATION

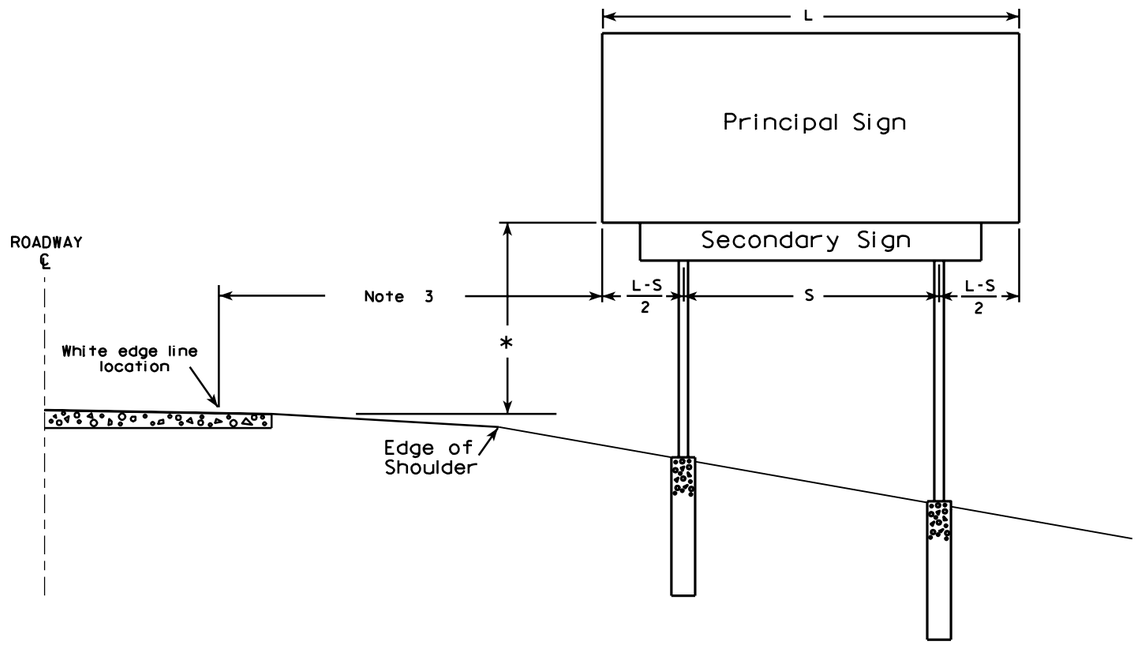
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42





GENERAL NOTES

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

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

7

7

TYPICAL INSTALLATION
OF TYPE I SIGNS

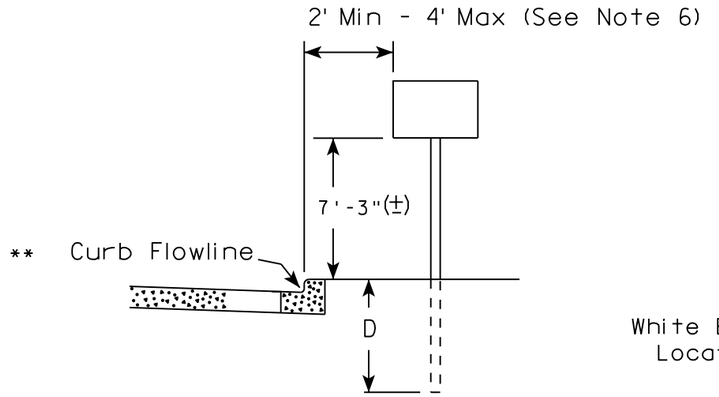
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

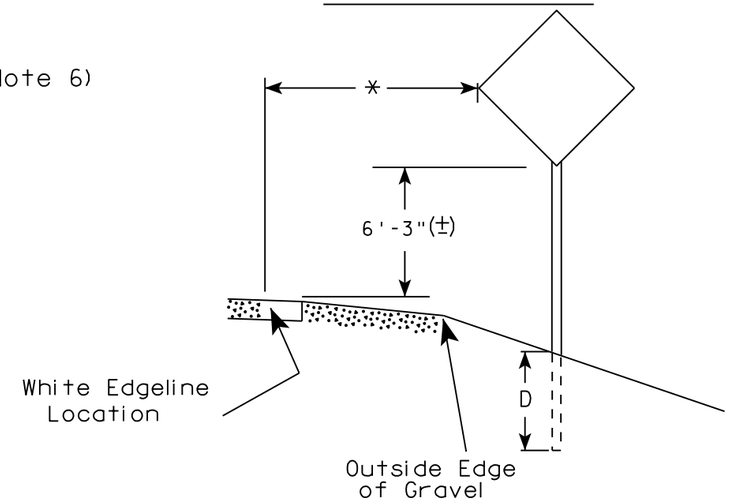
DATE 4/02/08 PLATE NO. A4-1.9

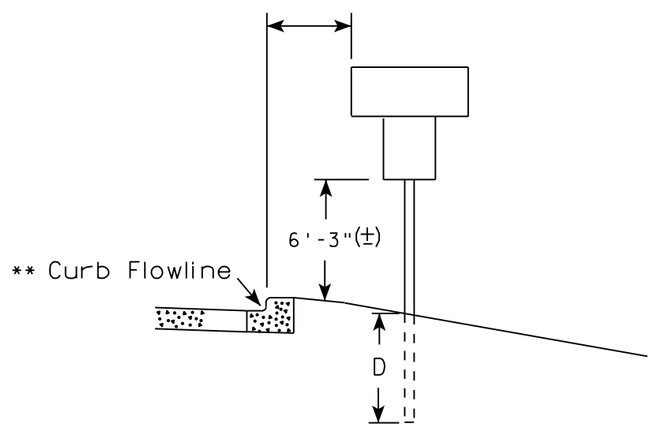
PROJECT NO:				SHEET NO: 176	E

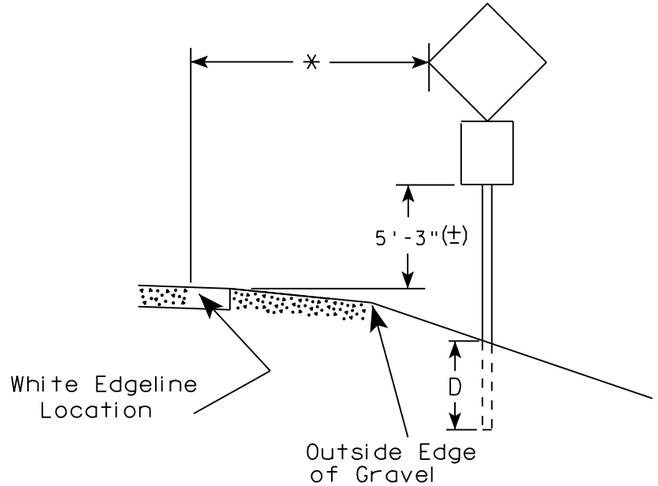
URBAN AREA



RURAL AREA (See Note 2)







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

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

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 barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

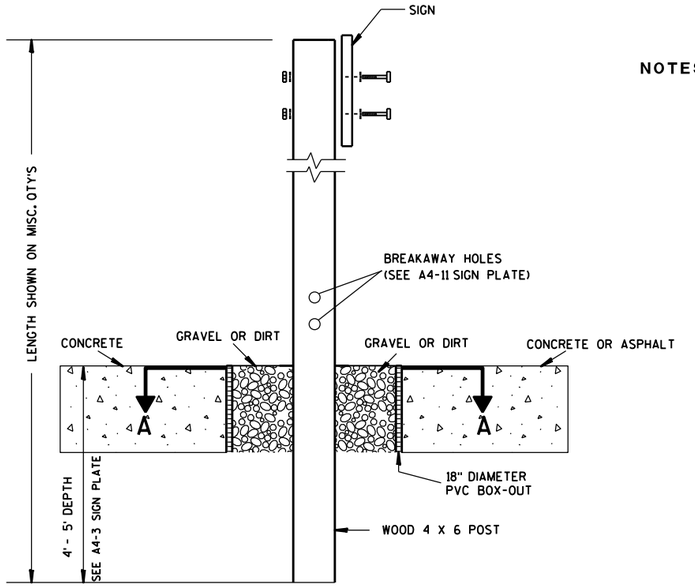
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

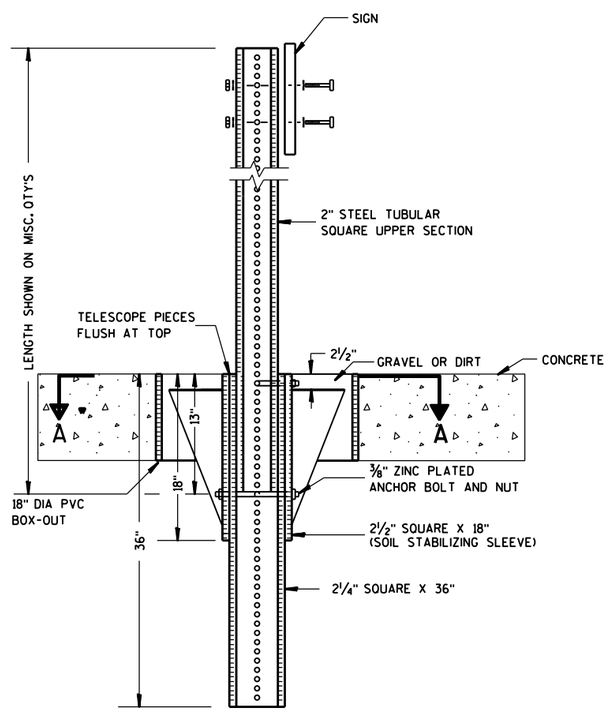
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E



ELEVATION VIEW

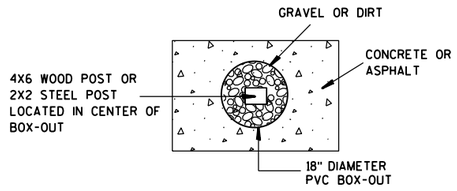
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

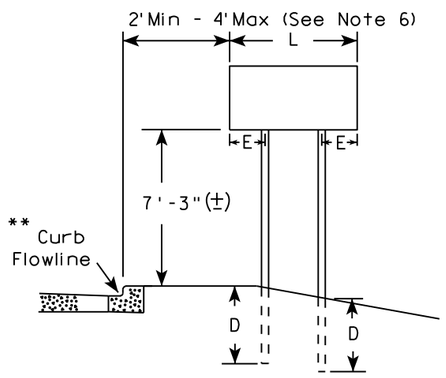
APPROVED Matthew R Rauch
for State Traffic Engineer

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

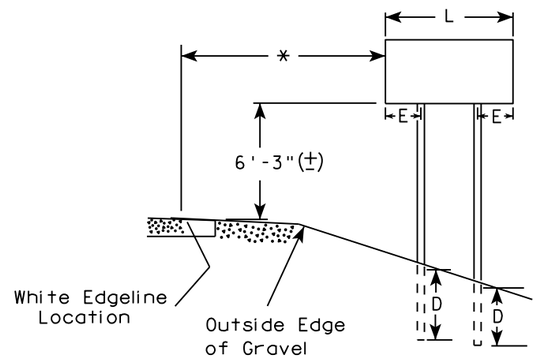
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

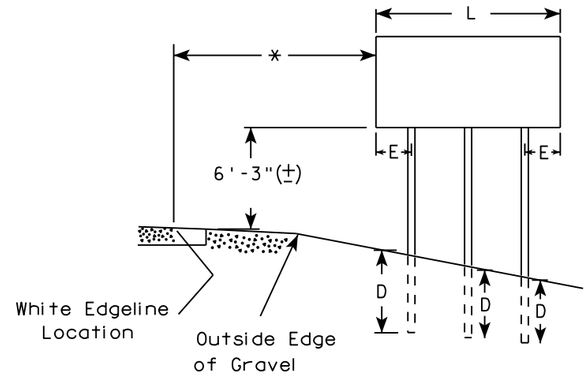
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

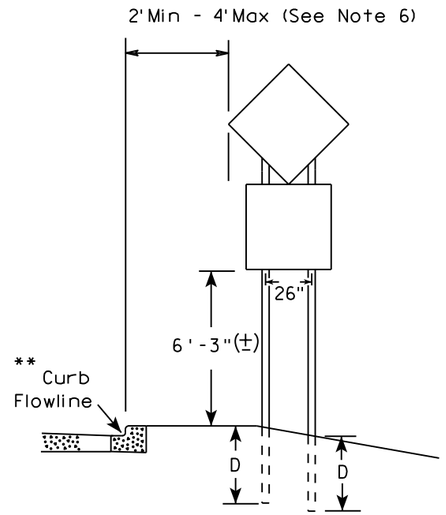
URBAN AREA



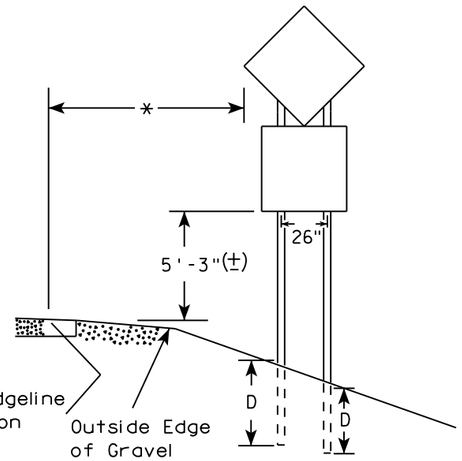
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	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"

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" (±).

* 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.

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

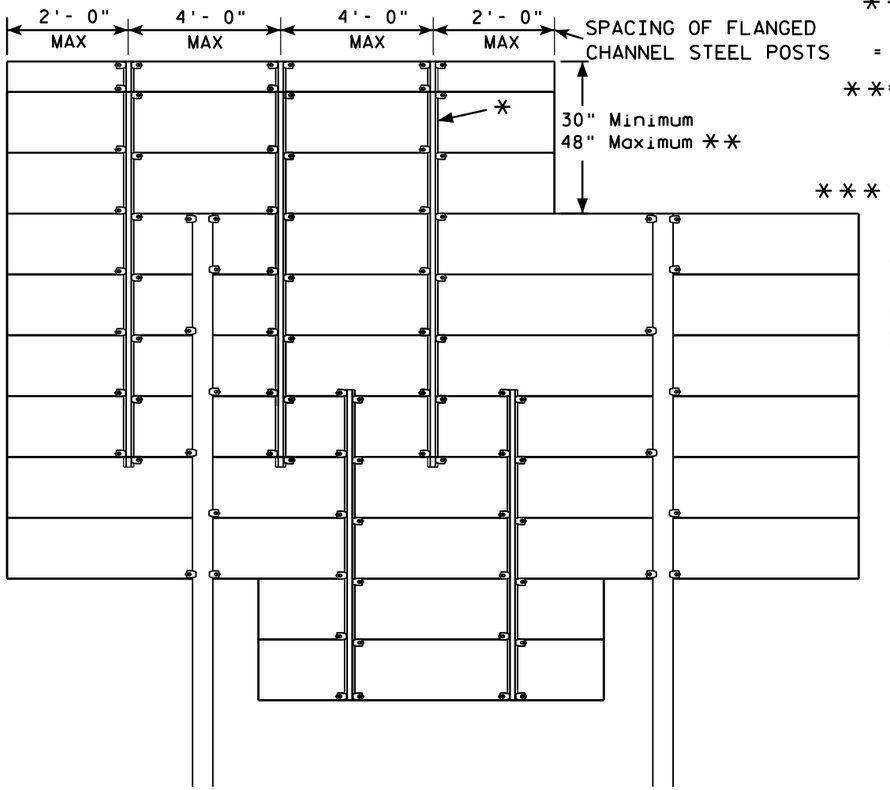
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 179	E

GROUND MOUNTED SIGN

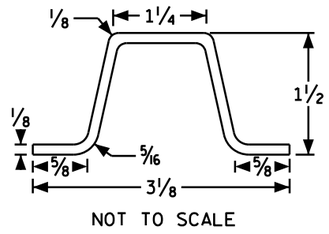


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

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

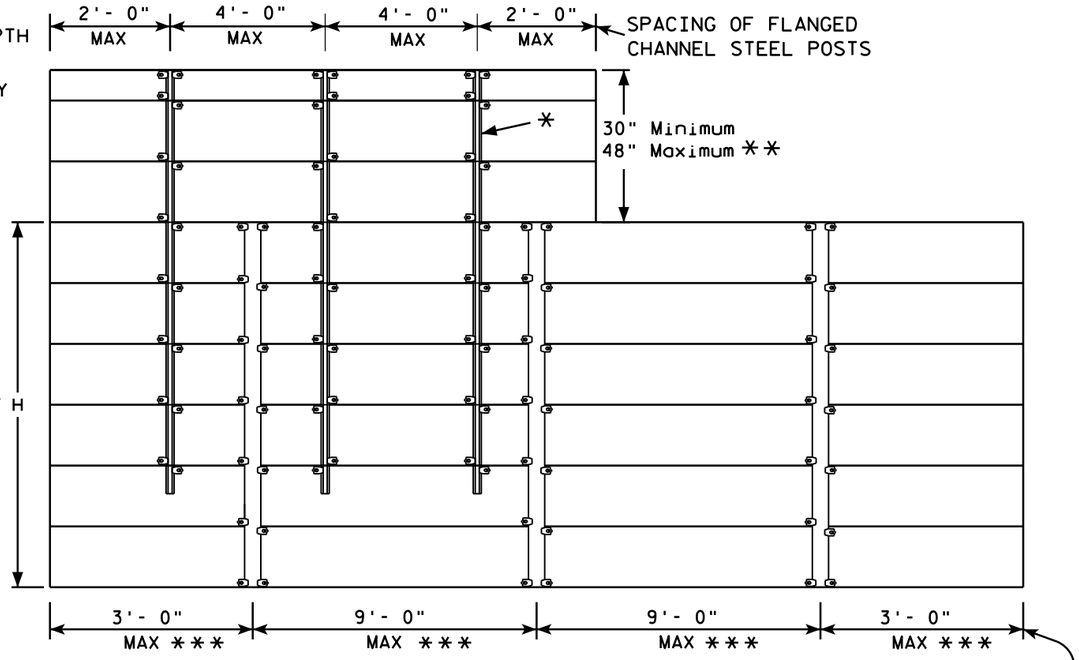
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

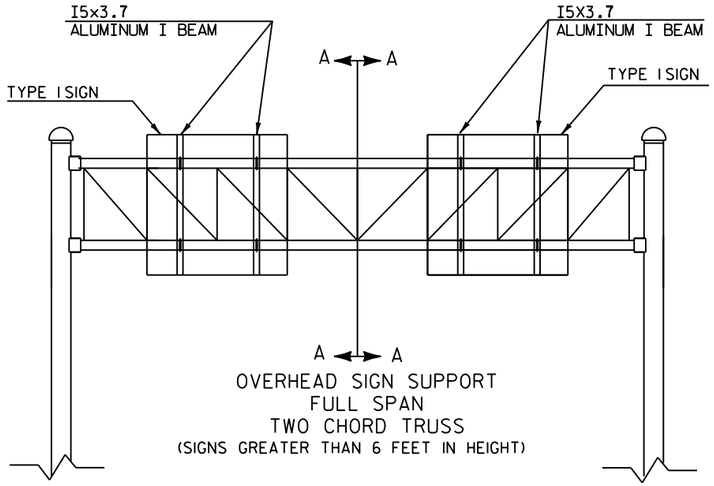
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

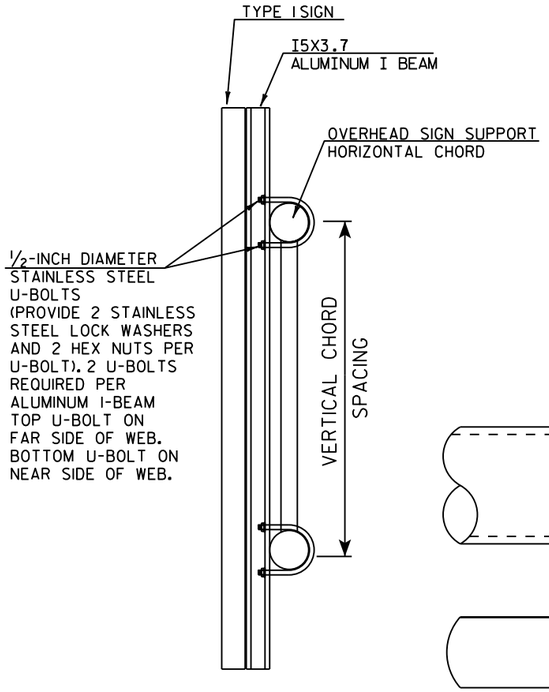
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 180 A4-6.12

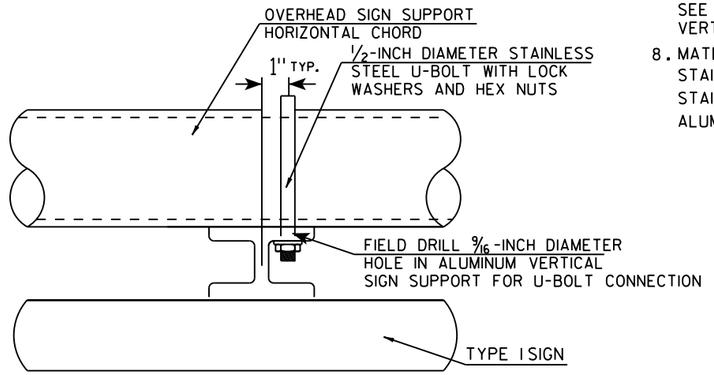
PROJECT NO:				SHEET NO:	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



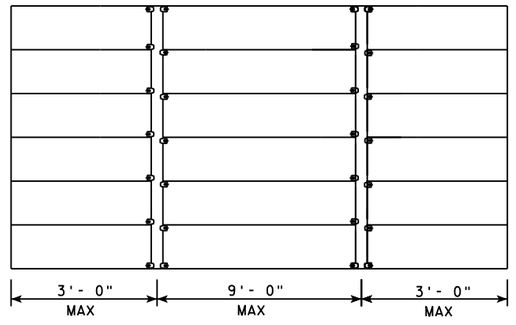
CUT SECTION A-A



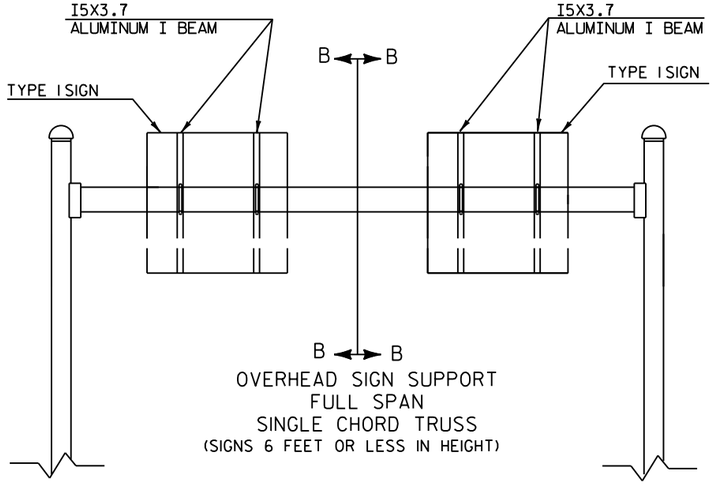
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

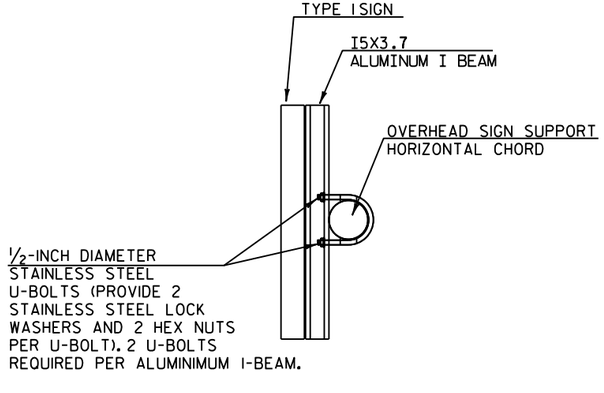
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



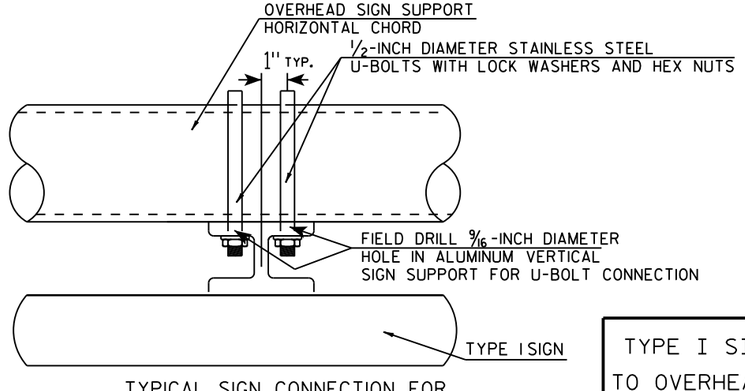
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

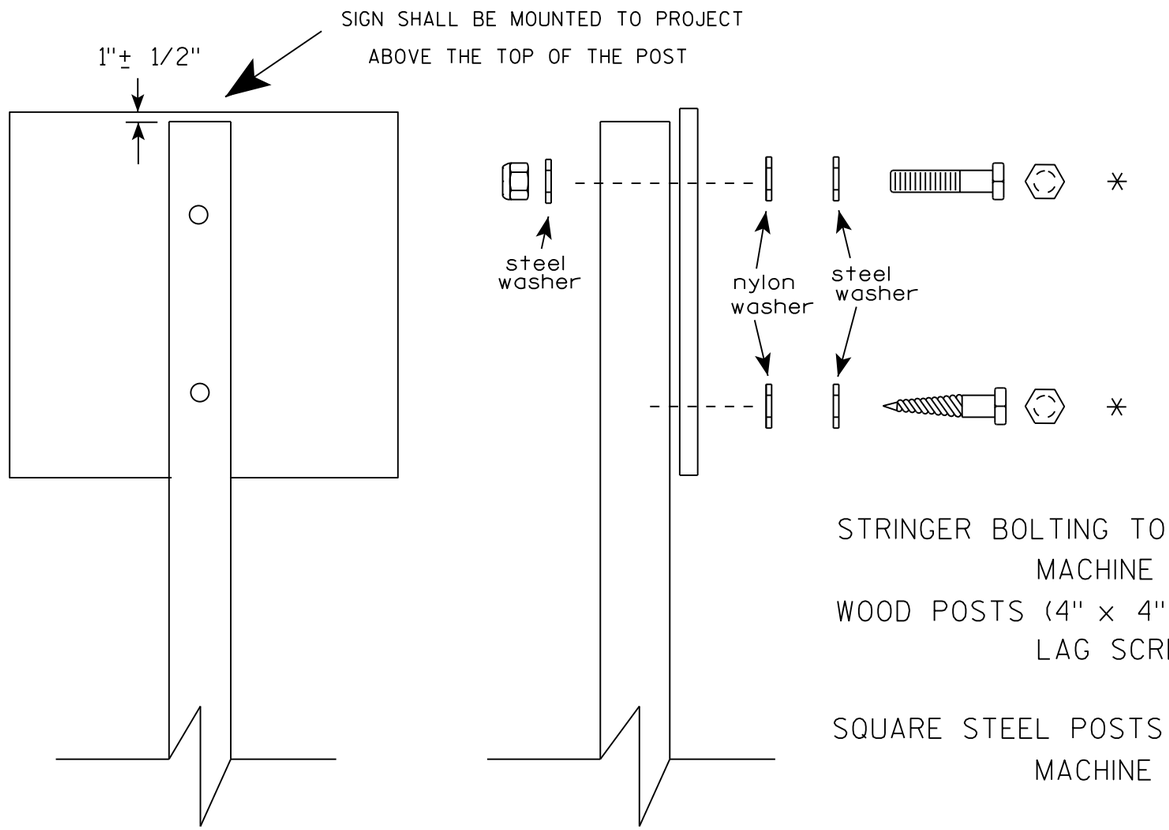
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO. A4-7.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

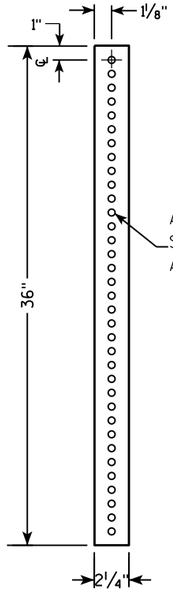
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

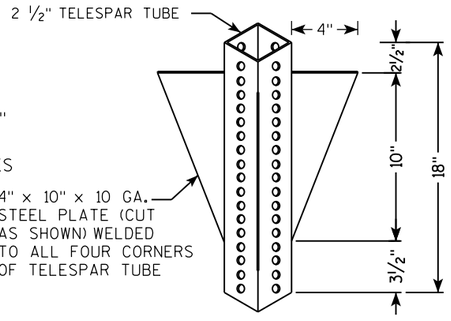
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

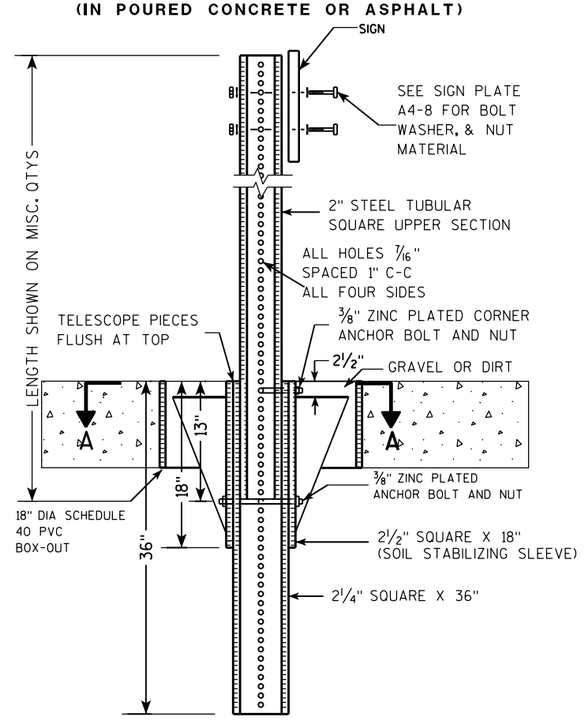
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



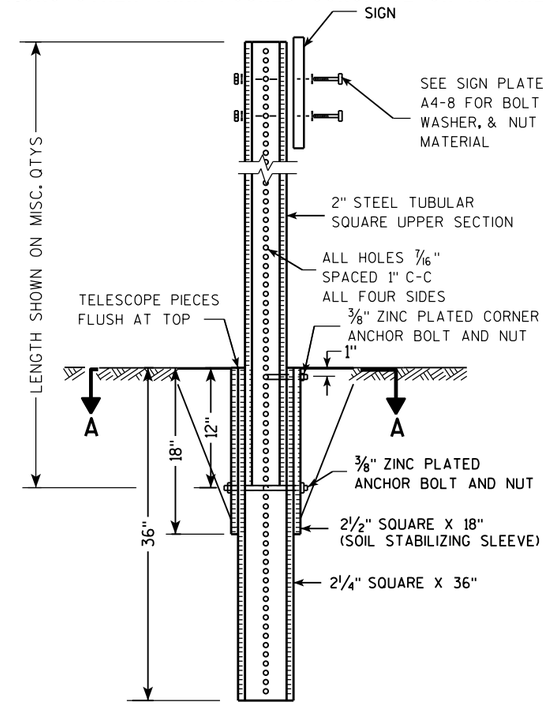
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

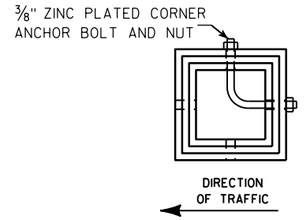


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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).

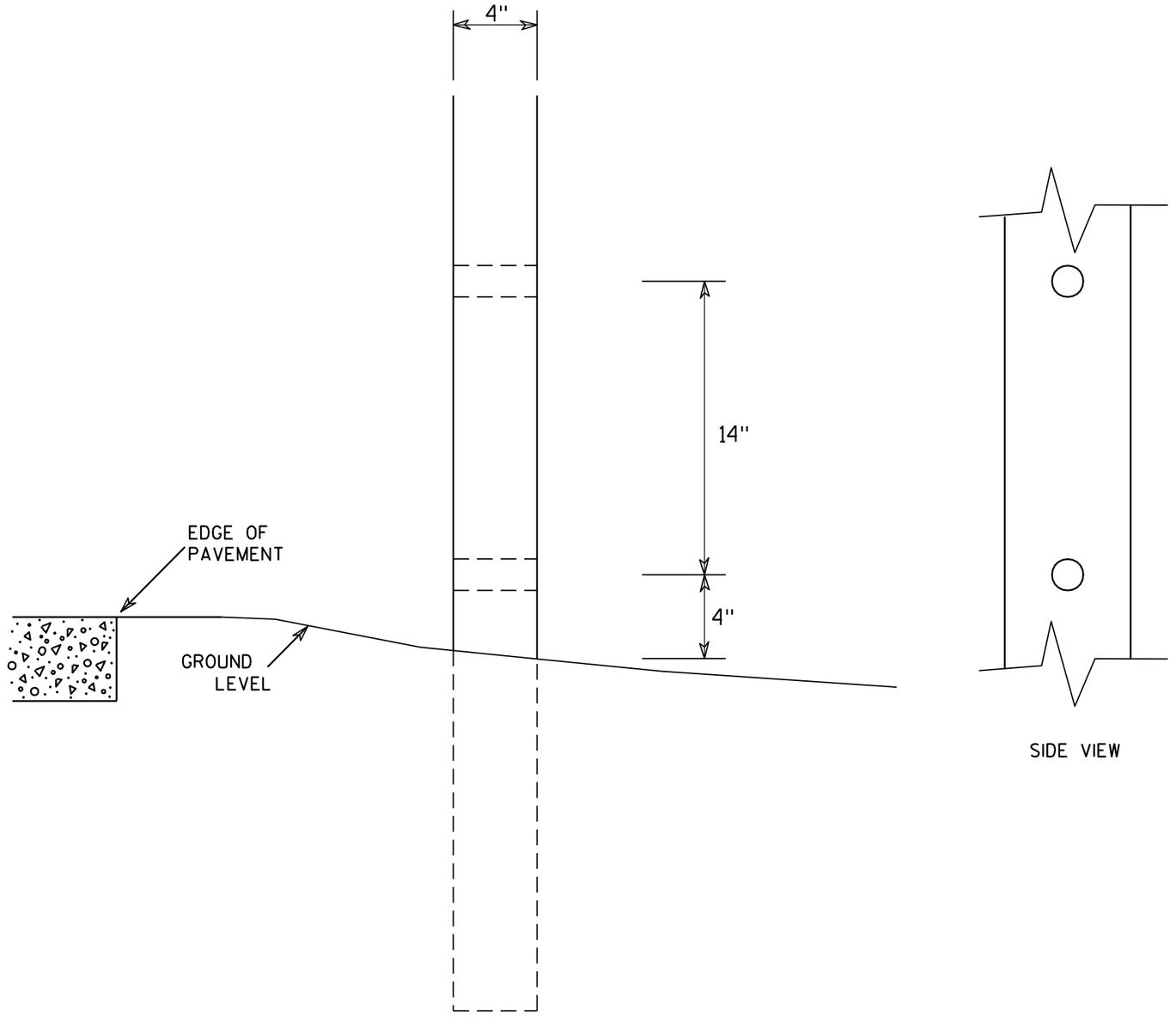
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 183 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

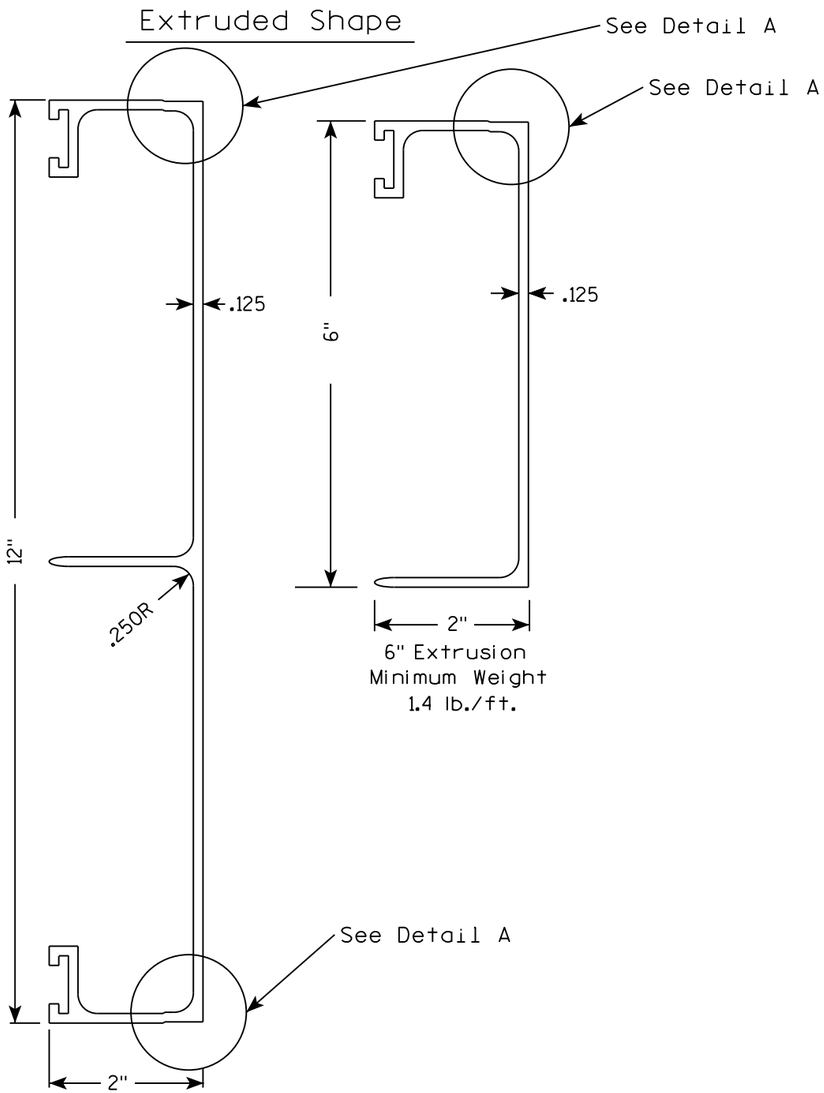
WISCONSIN DEPT OF TRANSPORTATION

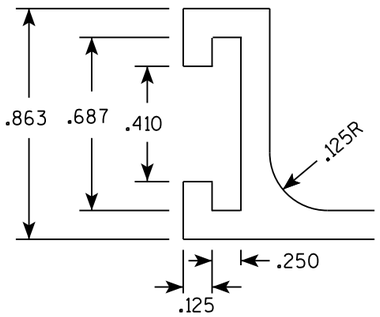
APPROVED Chester J Spang for State Traffic Engineer

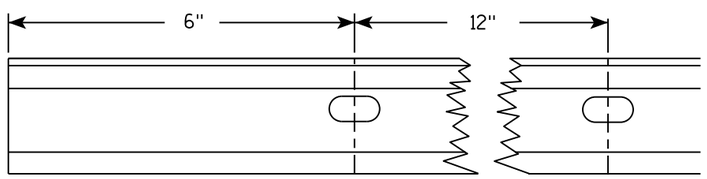
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 184	E

Extruded Shape







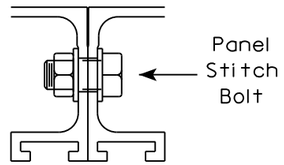
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

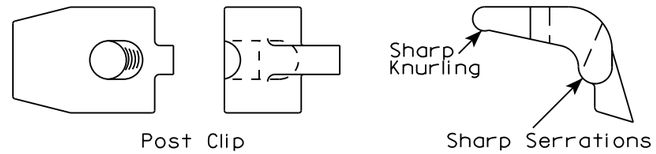
The hardware includes:

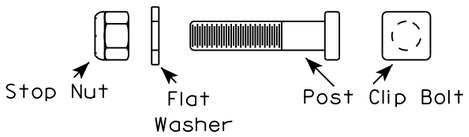
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

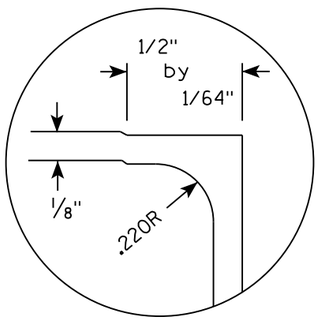
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

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



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

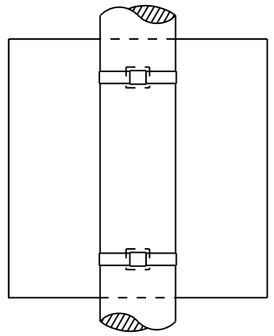
APPROVED Matthew R Rauch
for State Traffic Engineer

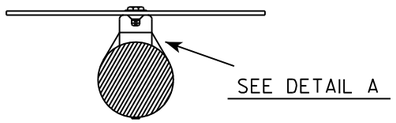
DATE 11/30/16 PLATE NO. A5-2.10

PROJECT NO:				SHEET NO: 185	E

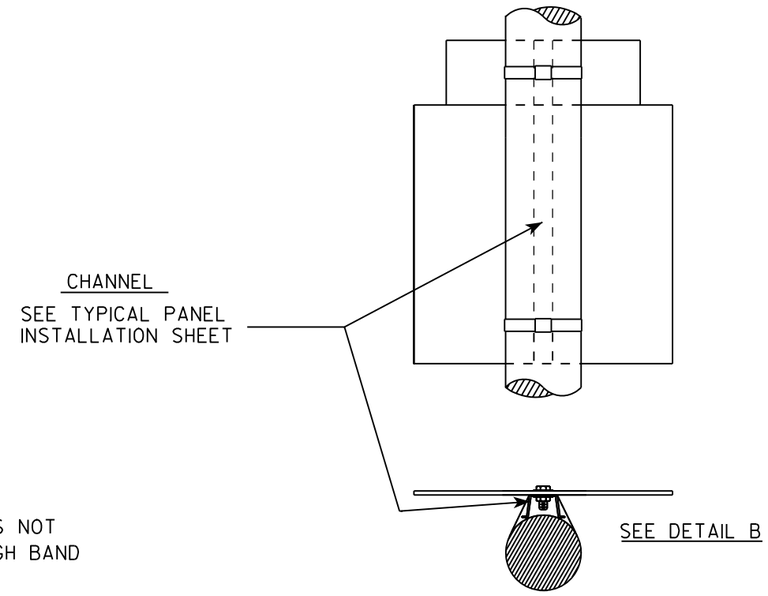
BANDING

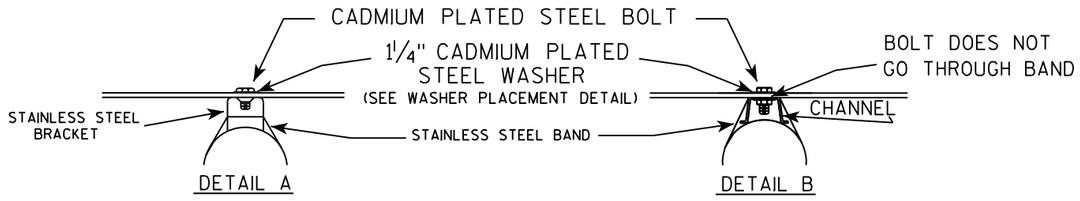
SINGLE SIGN



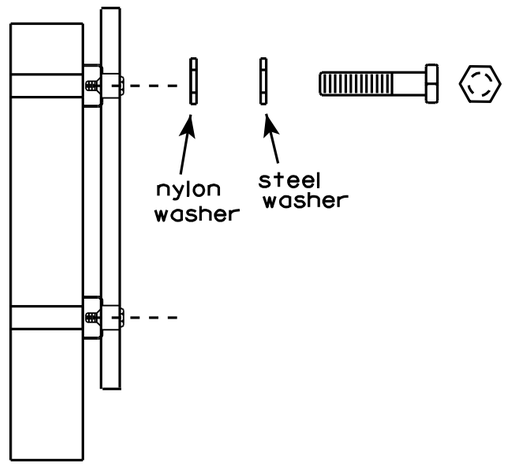


"J" ASSEMBLY





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

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 ¾" in width and 0.025" thickness.

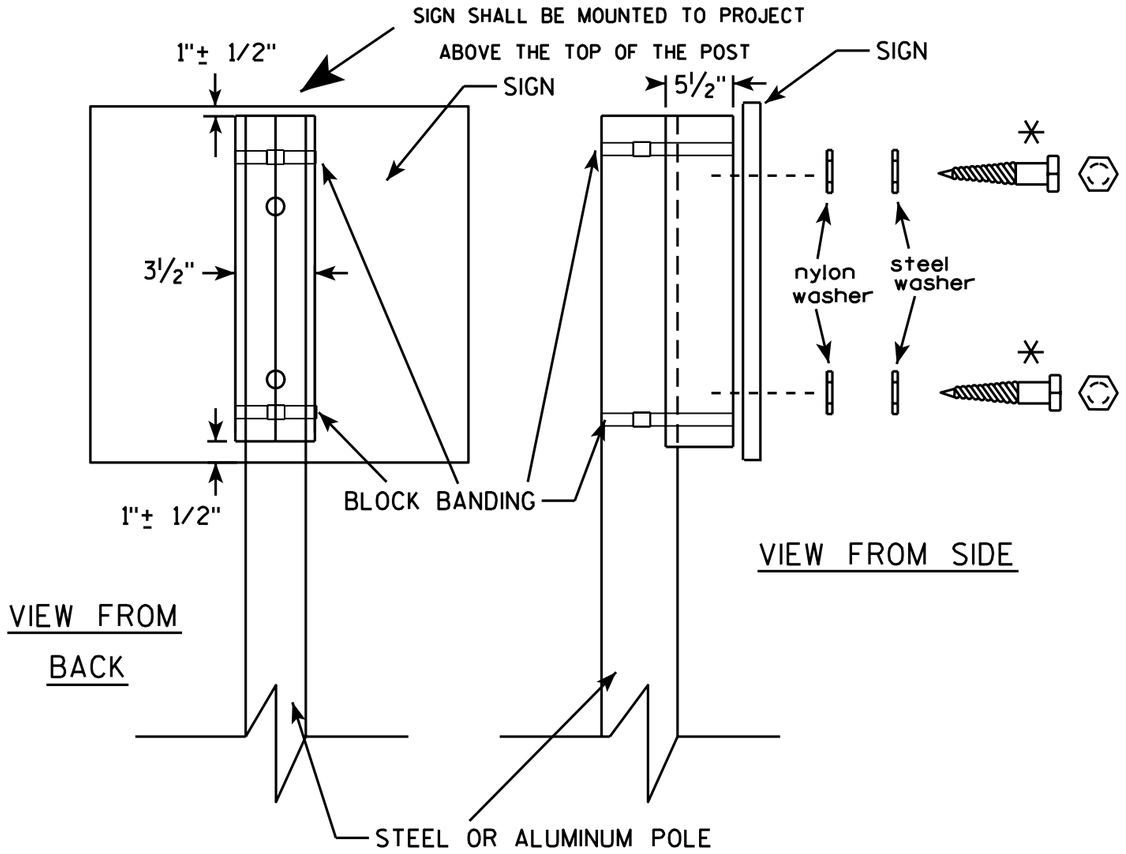
STANDARD SIGN
SIGN BANDING DETAILS

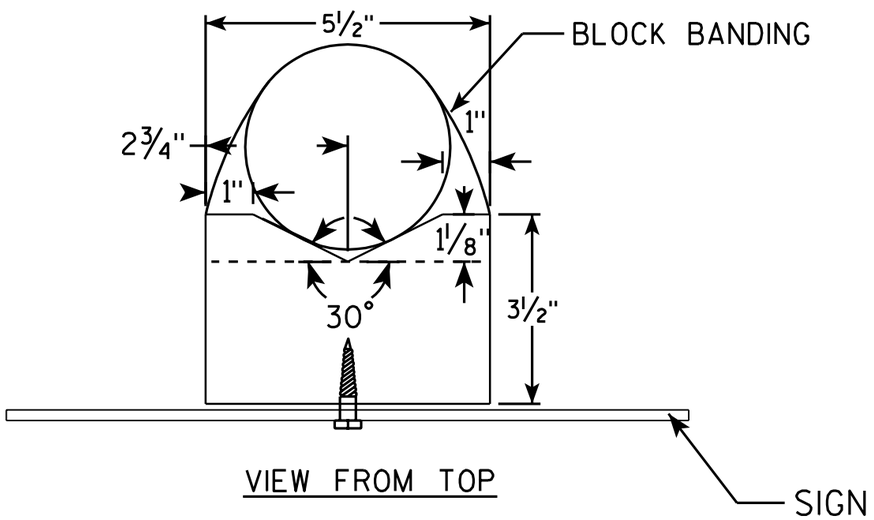
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 186	E





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, ¾" 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 NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

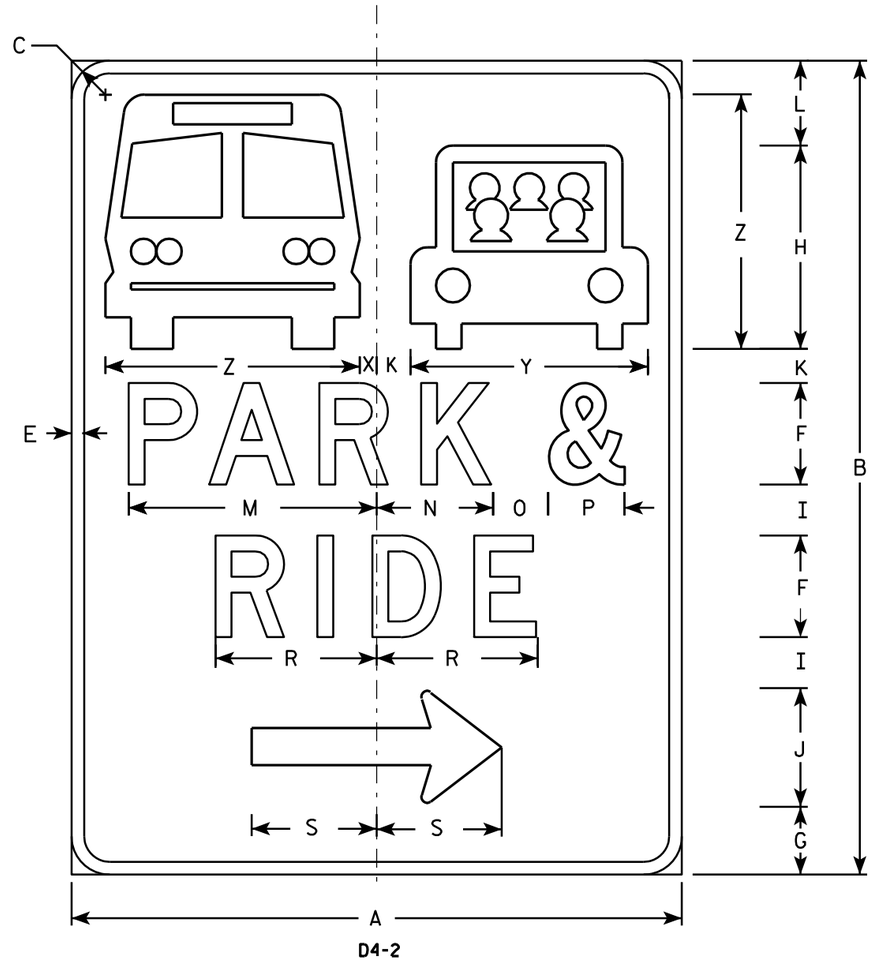
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 187 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

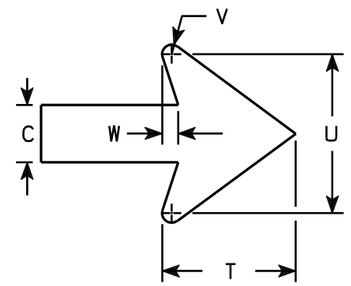
WISDOT/CADDS SHEET 42



D4-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. The D4-2L is the same as a D4-2R except the arrow is reversed.
6. The D4-2 sign may have either symbol or both symbols at the same time.



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	30	1 1/8		1/2	4	1 5/8	7 1/2	1 1/2	4 5/8	1 3/8	3 7/8	9 3/4	4	2 3/4	3		6 3/8	4 7/8	3 1/2	4 1/8	1/4	3/8	5/8	9 3/8	10	5.0
2	30	36	1 3/8		5/8	5	2	9	1 5/8	5 1/2	1 5/8	4 5/8	12 1/4	5 1/8	3 3/8	3 3/4		8	6 1/8	4 3/8	5 1/4	3/8	1/2	7/8	11 3/4	12 1/2	7.50
3	36	48	2 1/4		3/4	6	4	12	3	7	2	5	14 5/8	6 7/8	3 1/4	4 1/2		9 1/2	7 1/2	5 1/4	6 1/4	3/8	5/8	1	14	15	12.0
4																											
5																											

STANDARD SIGN
D4-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/20/10 PLATE NO. D4-2.5

PROJECT NO:

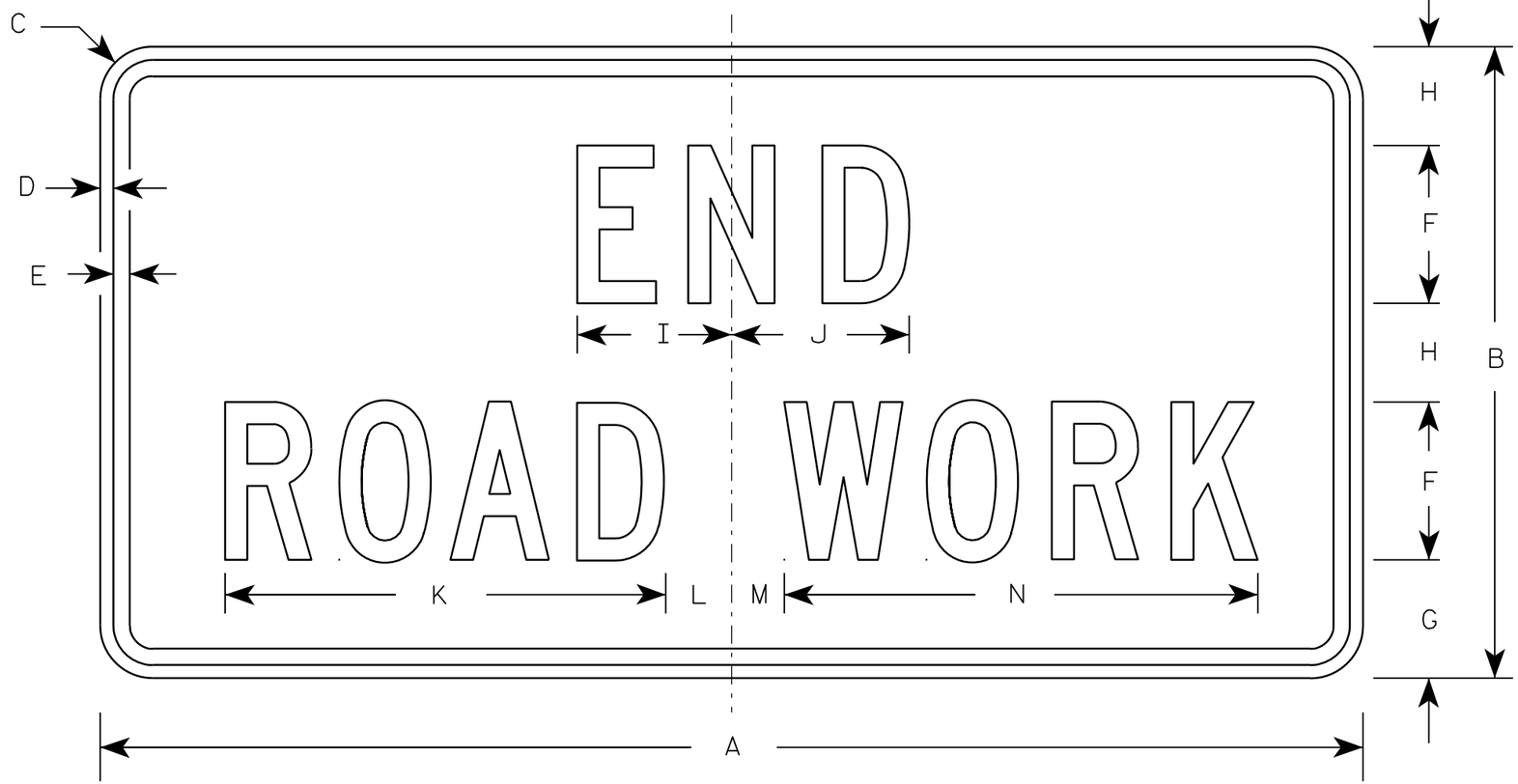
SHEET NO: 188 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\D42.dgn PLOT DATE : 10-FEB-2011 14:21 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

7



G20-2A

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.

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 m2
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

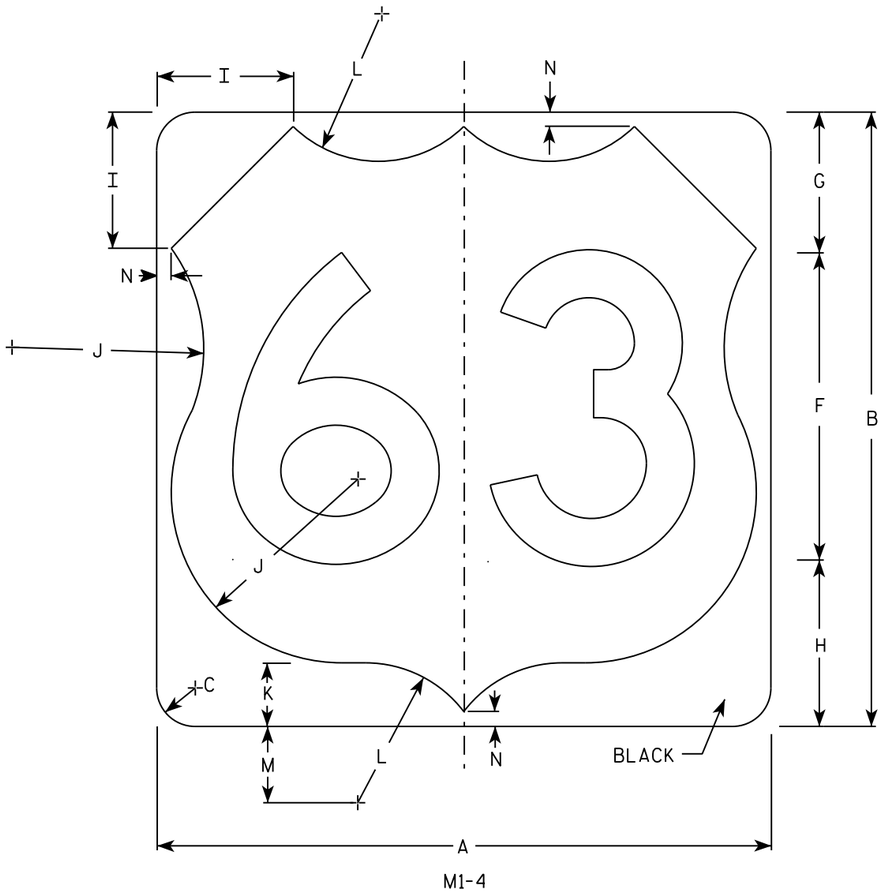
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

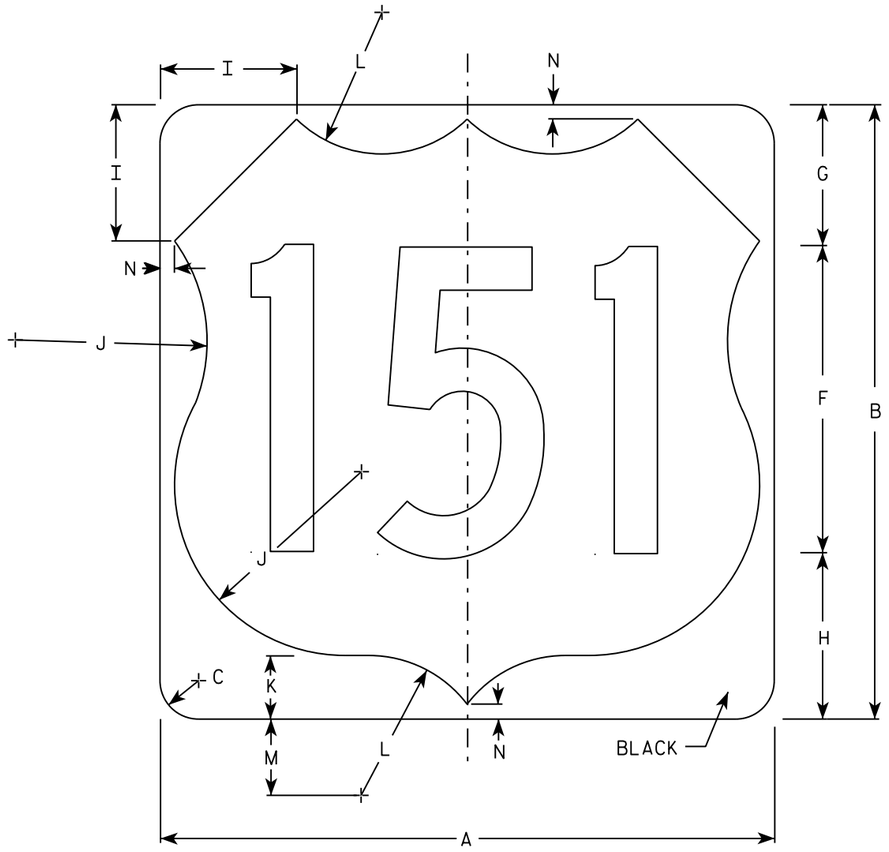
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 189	E

NOTES

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



M1-4



M1-4

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	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0

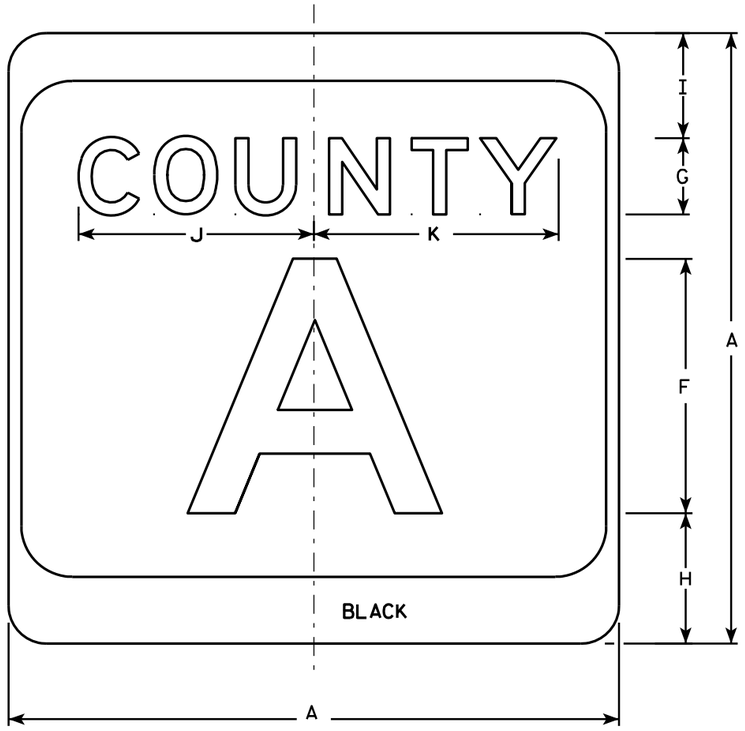
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

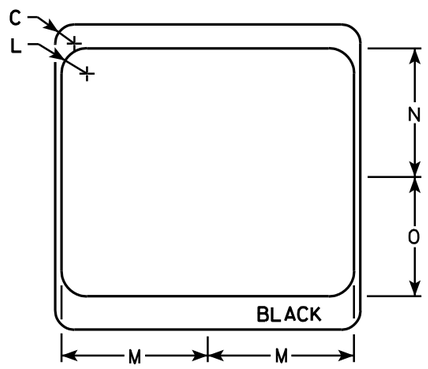
APPROVED Matthew R Rauch
for State Traffic Engineer

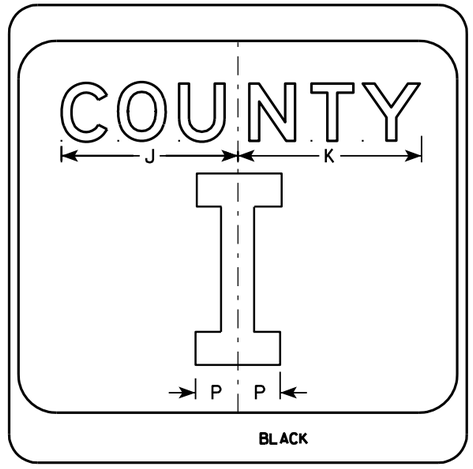
DATE 3/16/18 PLATE NO. M1-4.10

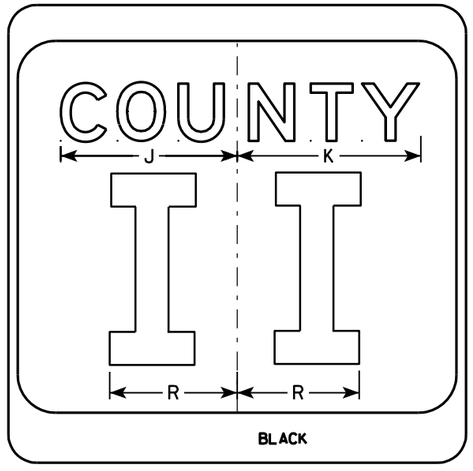
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 190	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

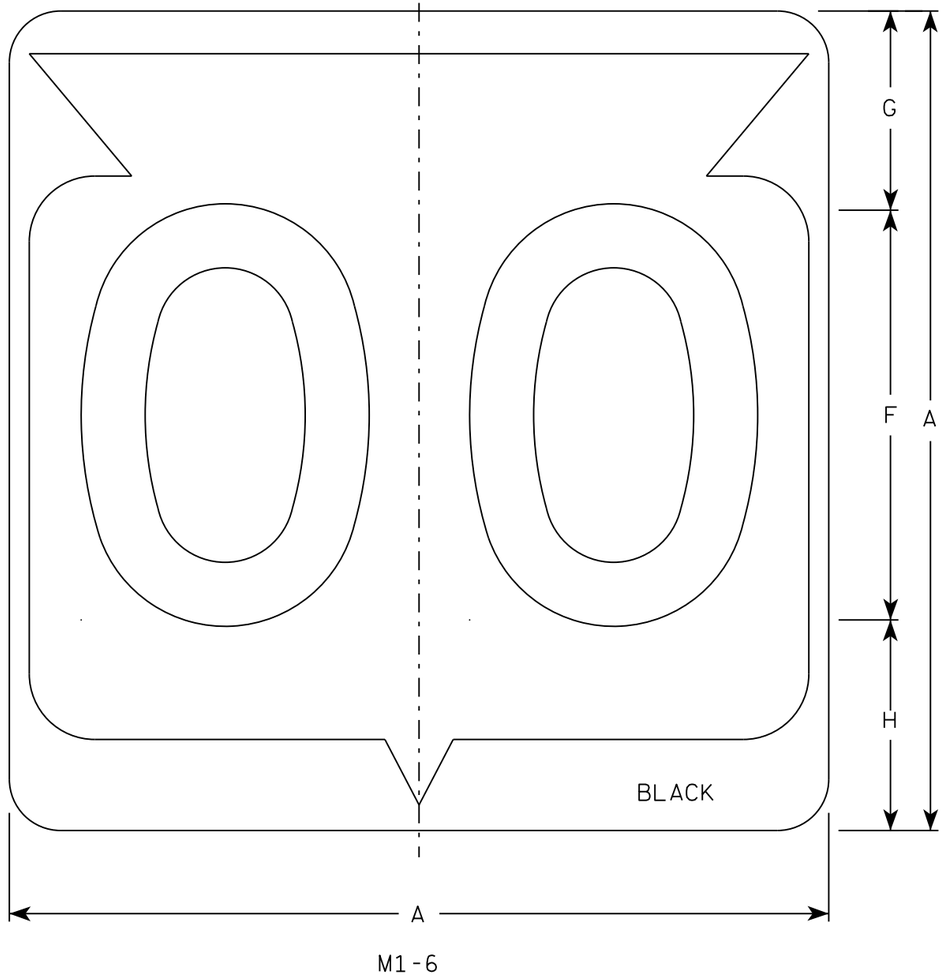
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

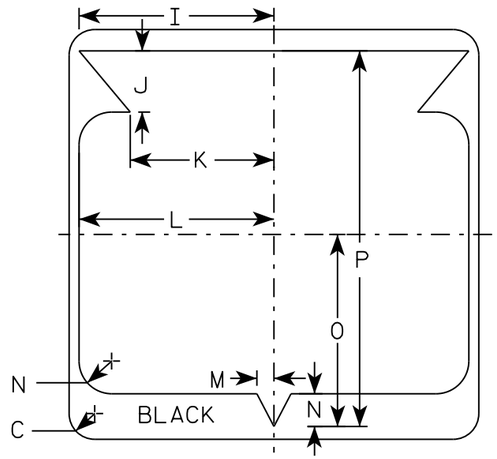
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 191 | E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

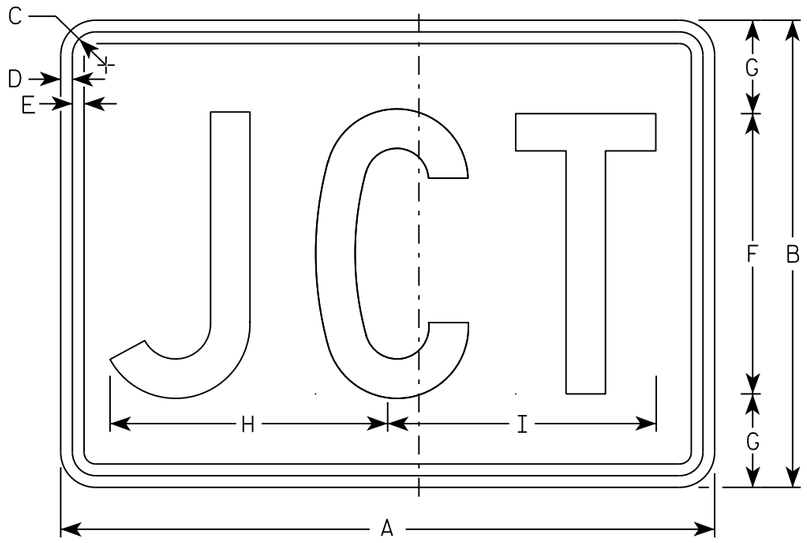
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

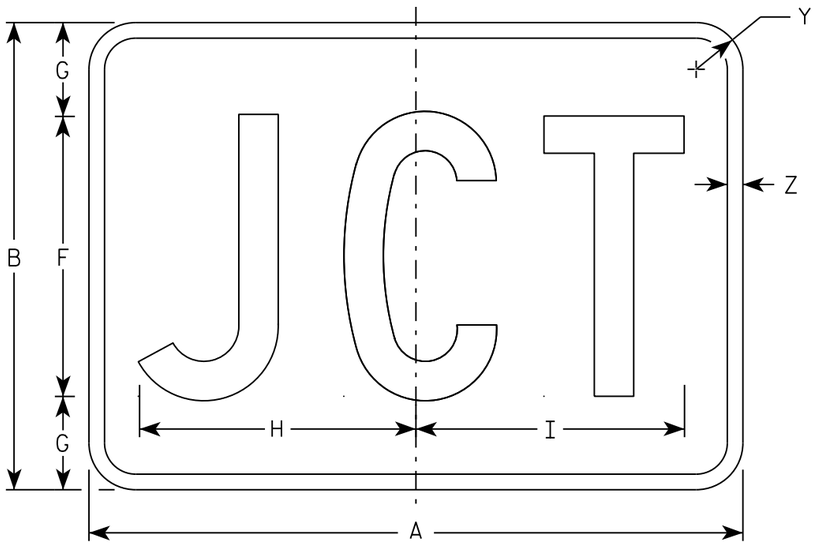
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 192 | E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

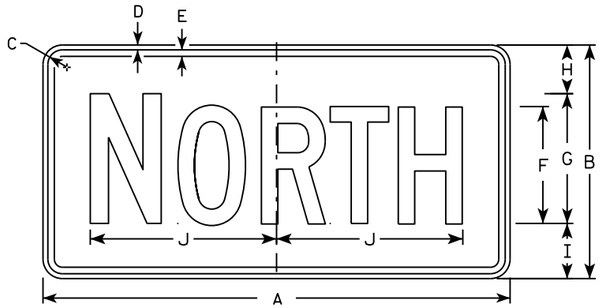
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

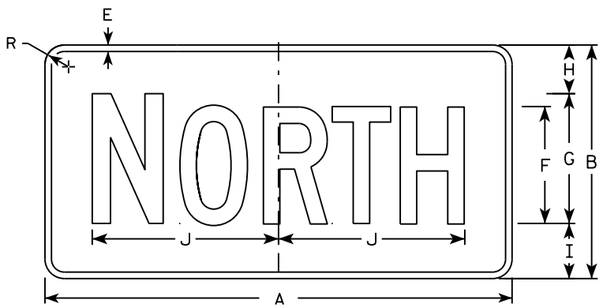
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 193 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



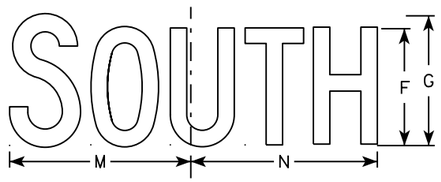
M3-1
MM3-1
MP3-1



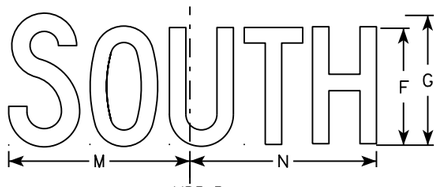
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

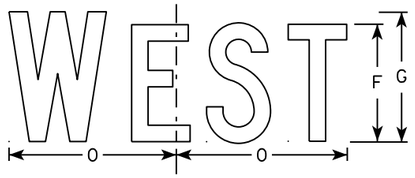
MB3-2
MK3-2
MN3-2



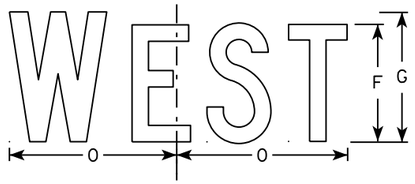
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

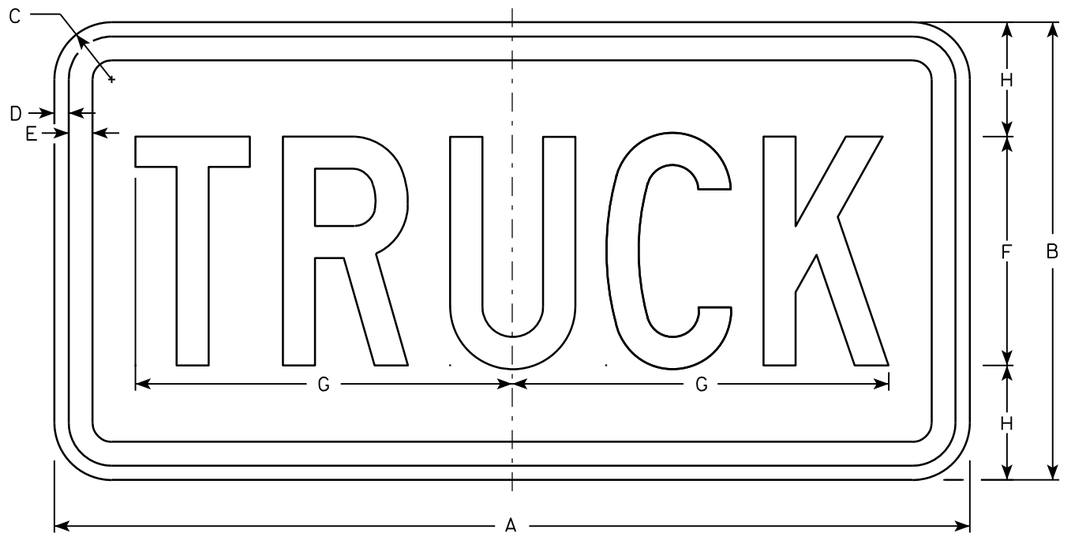
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-4

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - See Note 5
   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. Permanent Signs
   Background - Type H Reflective
   Temporary or other temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	9 7/8	3																			2.0
3	36	18	1 1/2	3/8	1/2	9	15 5/8	4 1/2																			4.5
4																											
5																											

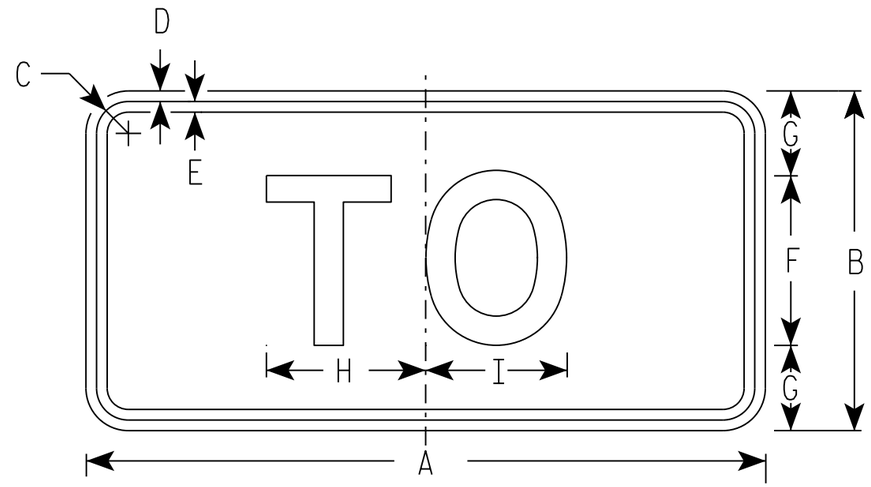
STANDARD SIGN
M4-4

WISCONSIN DEPT OF TRANSPORTATION

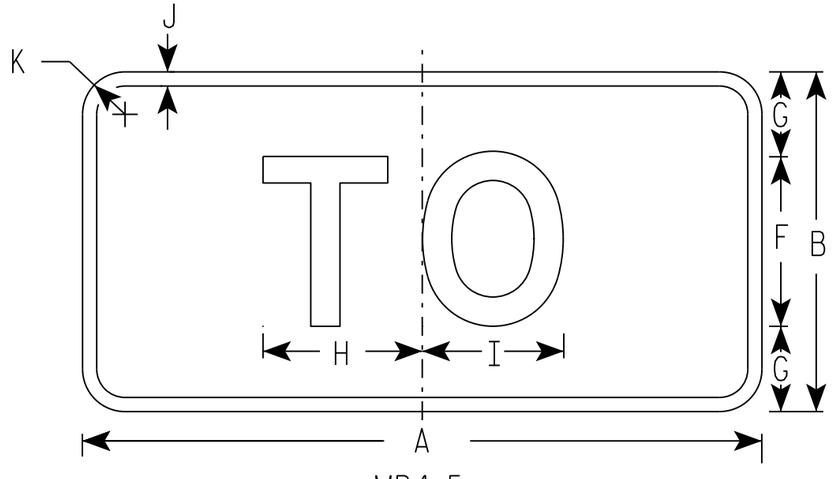
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-4.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 195 | E



M4-5
MM4-5
MP4-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

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

STANDARD SIGN
M4-5

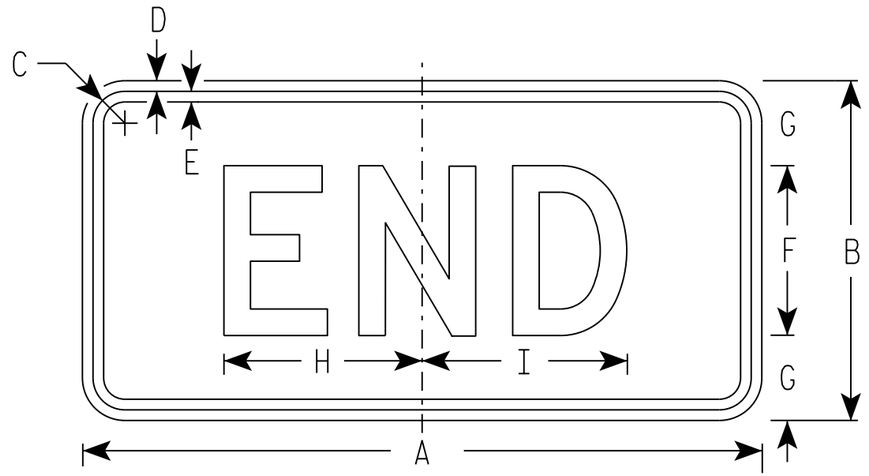
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

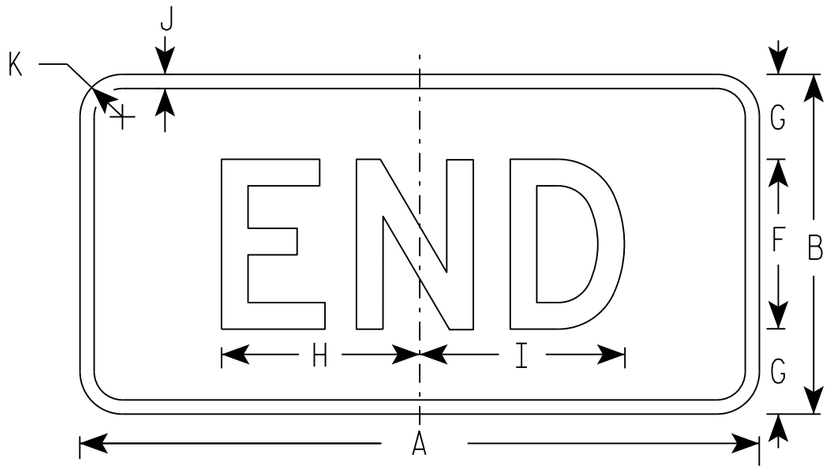
DATE 10/15/15 PLATE 196 M4-5.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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. M4-6 Background - White
   Message - Black

   MB4-6 Background - Blue
   Message - White

   MK4-6 Background - Green
   Message - White

   MM4-6 Background - White
   Message - Green

   MN4-6 Background - Brown
   Message - White

   MP4-6 Background - White
   Message - Blue

   MR4-6 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

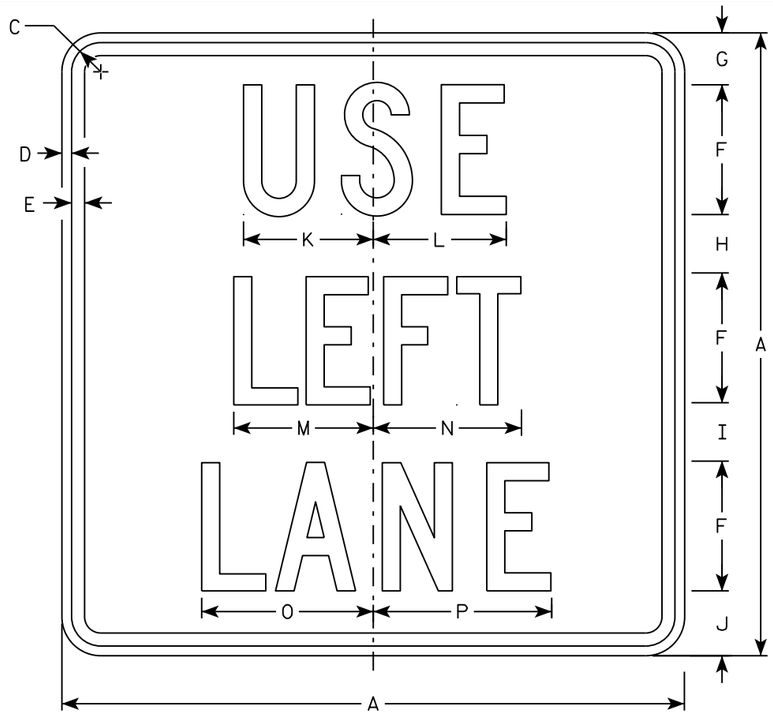
STANDARD SIGN
M4-6

WISCONSIN DEPT OF TRANSPORTATION

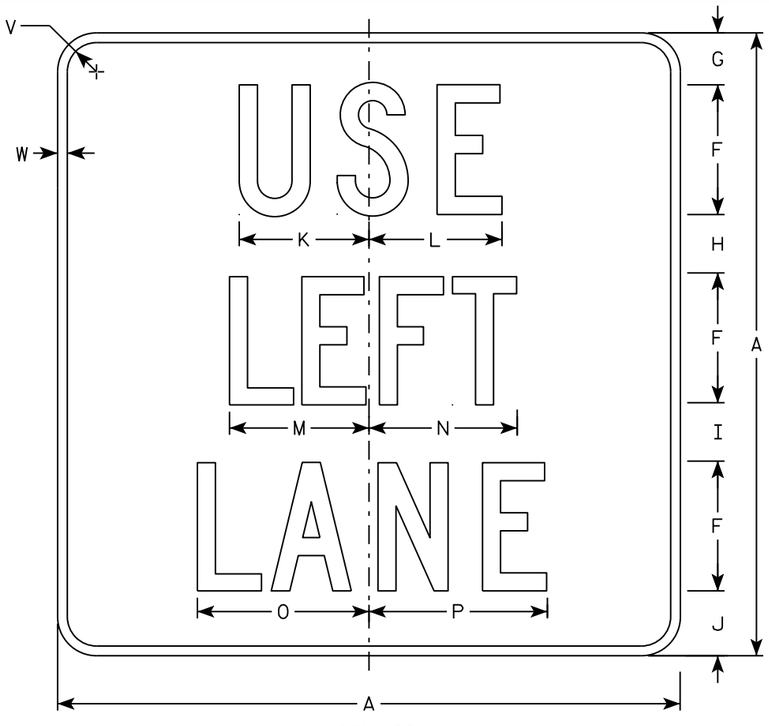
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 197 '14-7.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



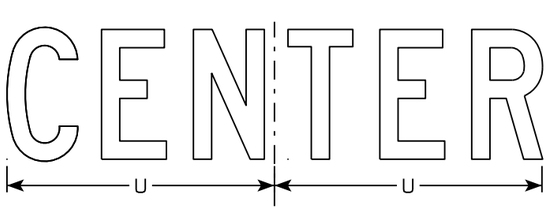
M4-20L



MB4-20L

M4-20L
MM4-20L
M04-20L
MP4-20L

MB4-20L
MK4-20L
MN4-20L
MR4-20L



M4-20C
MB4-20C
MK4-20C
MM4-20C
MN4-20C
M04-20C
MP4-20C
MR4-20C

M4-20R
MB4-20R
MK4-20R
MM4-20R
MN4-20R
M04-20R
MP4-20R
MR4-20R

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-20 Background - White
   Message - Black
   MB4-20 Background - Blue
   Message - White
   MK4-20 Background - Green
   Message - White
   MM4-20 Background - White
   Message - Green
   MN4-20 Background - Brown
   Message - White
   M04-20 Background - Orange - Type F Reflective
   Message - Black
   MP4-20 Background - White
   Message - Blue
   MR4-20 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/8	3/8	1/2	5	2	2 1/4	2 1/4	2 1/2	5	5 1/8	5 3/8	5 3/4	6 5/8	6 7/8			7	7 5/8	10 1/4	1 1/2	1/2				4.0
3	36		1 5/8	5/8	3/4	7	4	3	3 1/2	4 1/2	7 1/2	7 3/4	8	8 5/8	9 7/8	10 1/4			10 3/8	11 3/8	14 3/8	1 7/8	1/2				9.0
4																											
5																											

STANDARD SIGN
M4-20

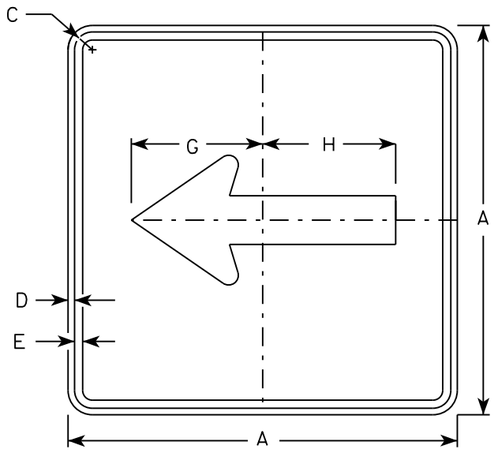
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

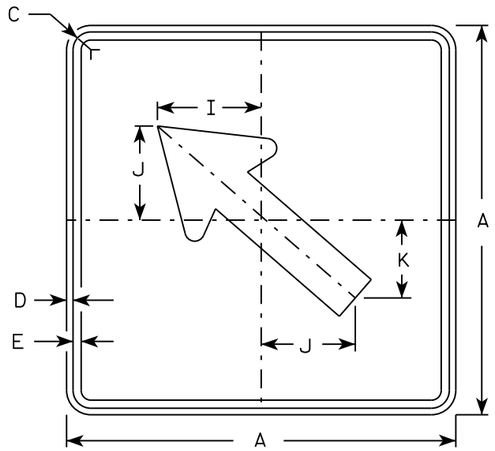
DATE 10/15/15 PLATE NO M4-20.5

198

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



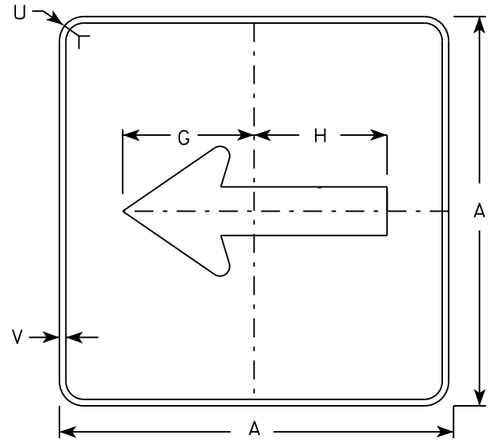
M6-1
MM6-1
MO6-1
MP6-1



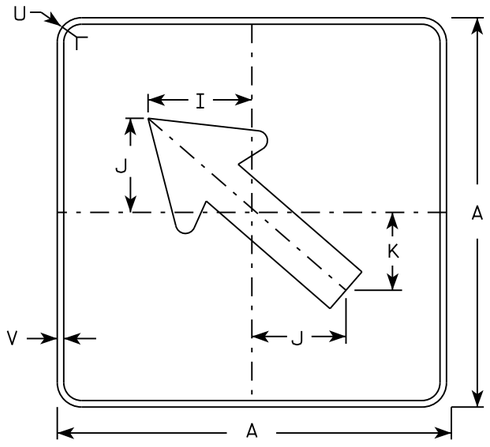
M6-2
MM6-2
MO6-2
MP6-2

NOTES

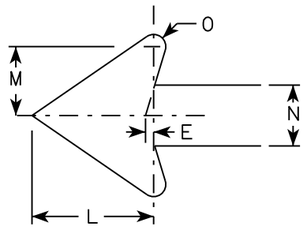
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - 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
   MO6-1 and MO6-2 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



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



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



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

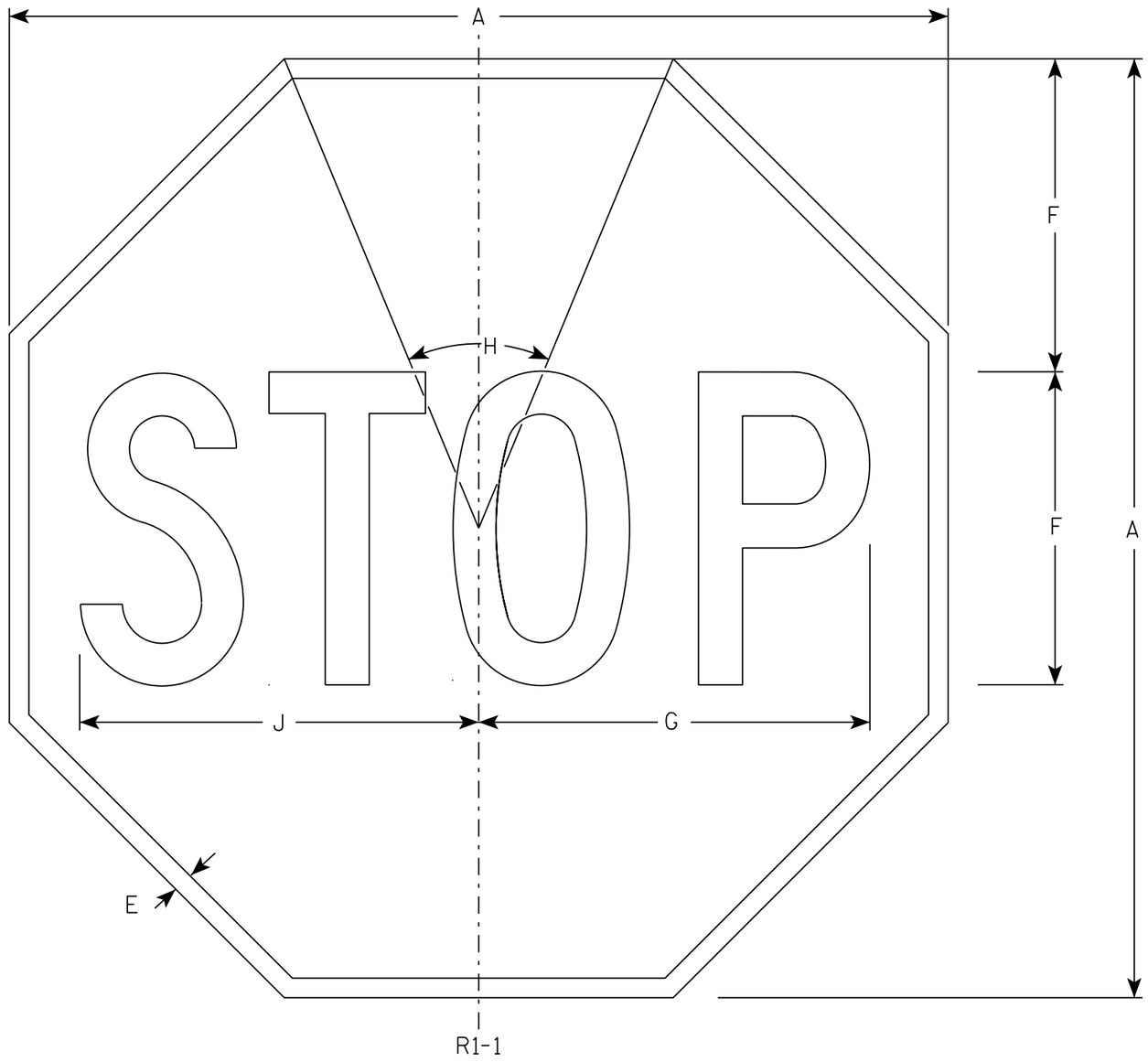
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 199 M6-1.15

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 - Red
   Message - White
3. Message Series - C

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

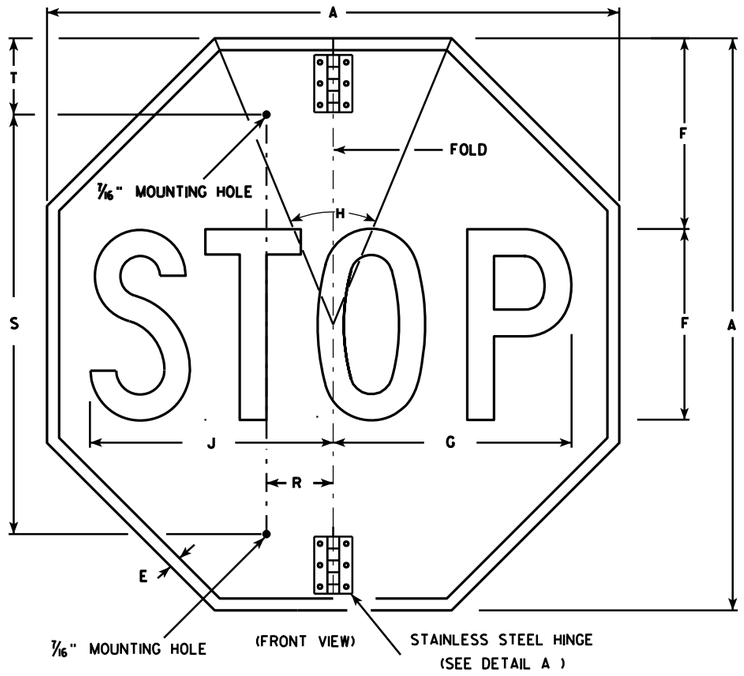
STANDARD SIGN
R1-1

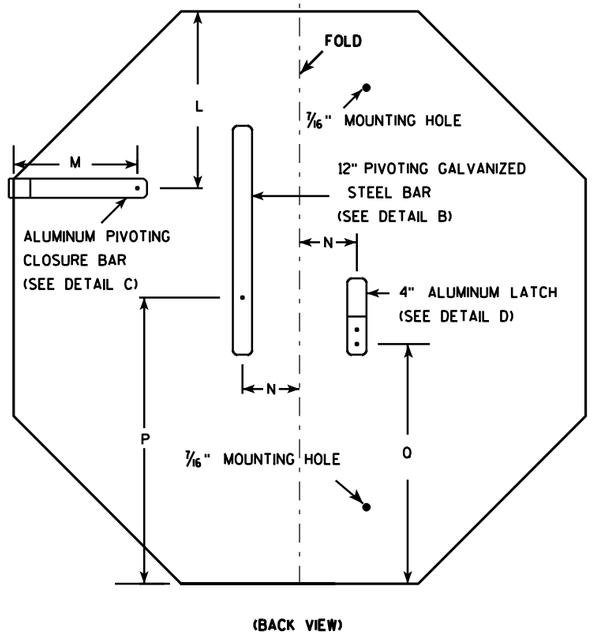
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

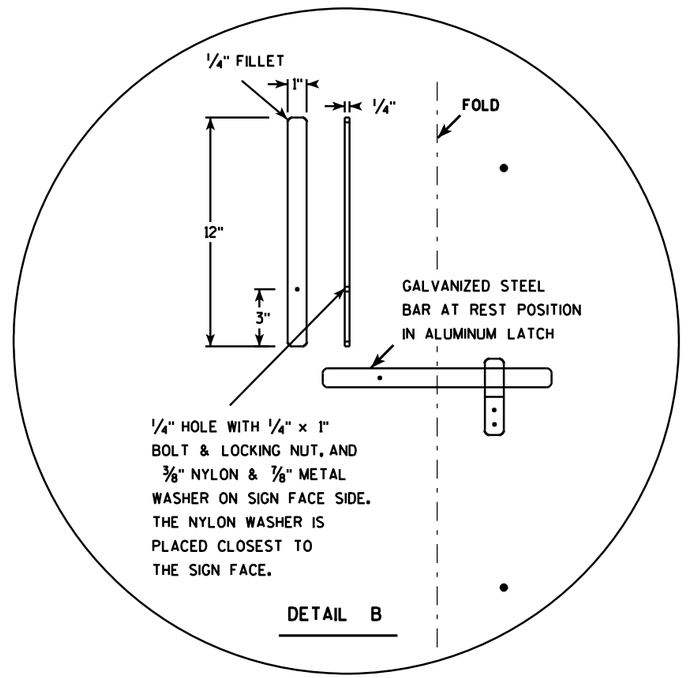
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 200	E

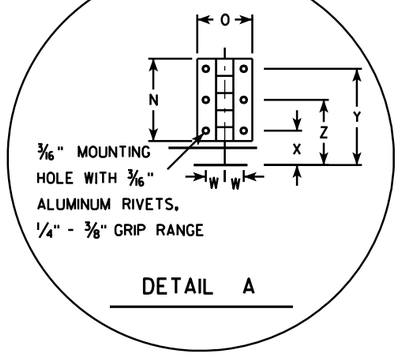


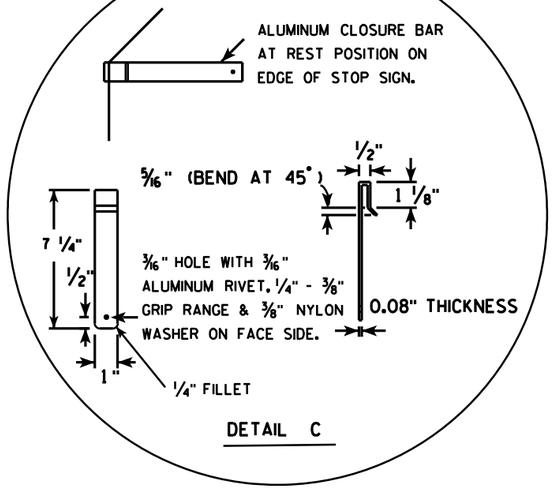


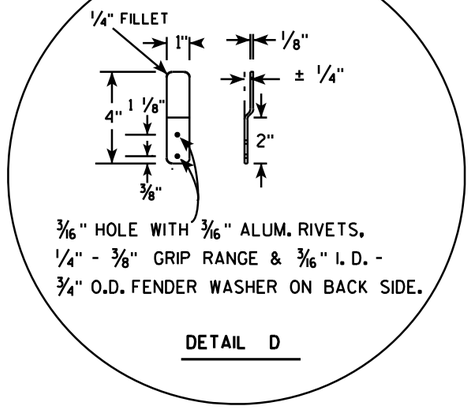
NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.









SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

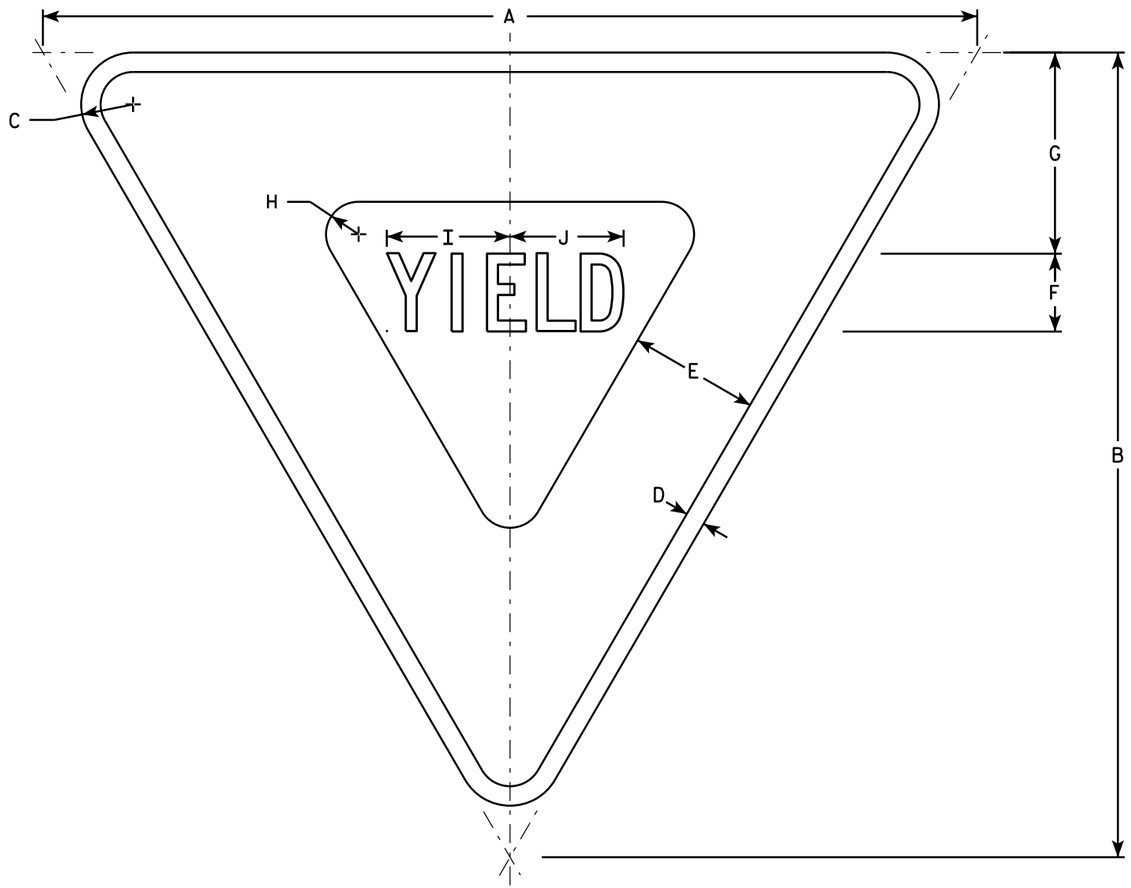
STANDARD SIGN
R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 201	E



R1-2

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 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

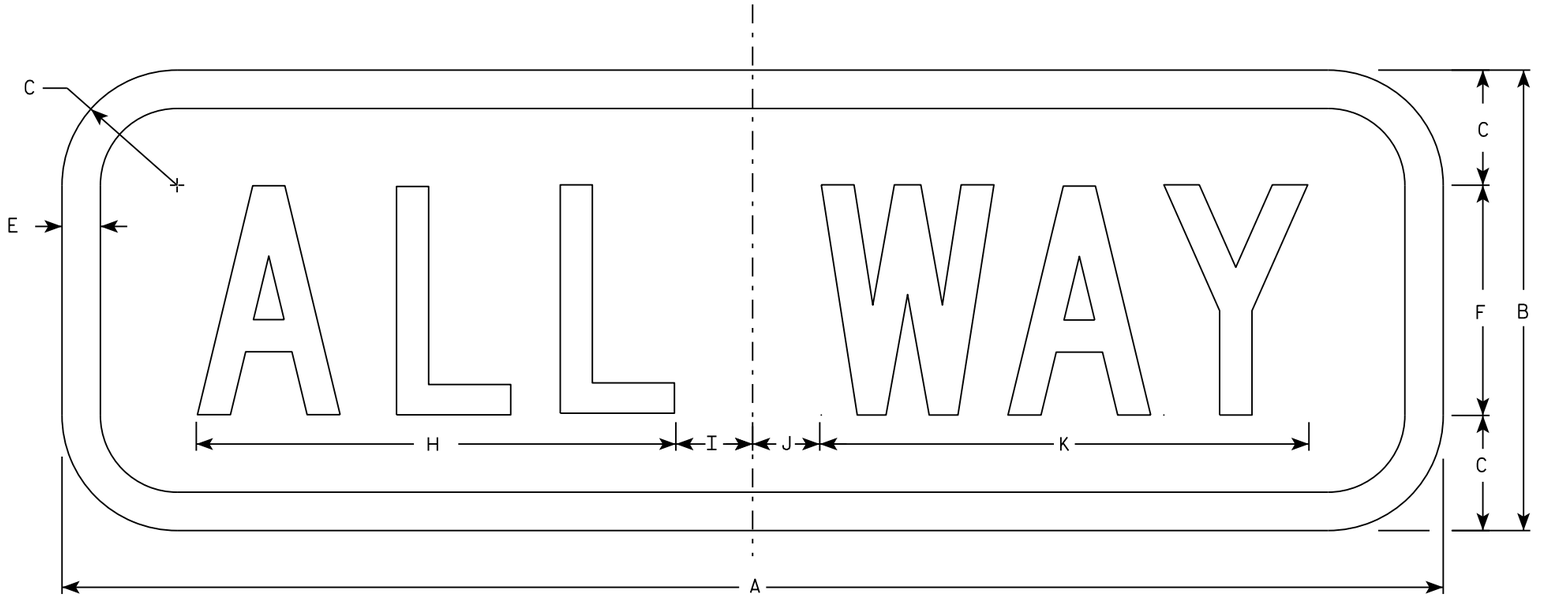
DATE 10/13/14 PLATE R1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. For 30"x30" R1-1 use 18"x6" R1-3P sign
   For 36"x36" R1-1 use 24"x9" R1-3P sign
   For 48"x48" R1-1 use 30"x12" R1-3P sign



R1-3P

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																0.75
2S	18	6	1 ½		½	3		6 ¼	1 ¼	⅞	6 ⅜																1.5
2M	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
3	24	9	1 ½		½	5		9 ¼	1 ¼	¾	9 ¾																1.5
4	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5
5	30	12	2 ¼		⅝	6		11	2 ¼	1 ½	11 ¾																2.5

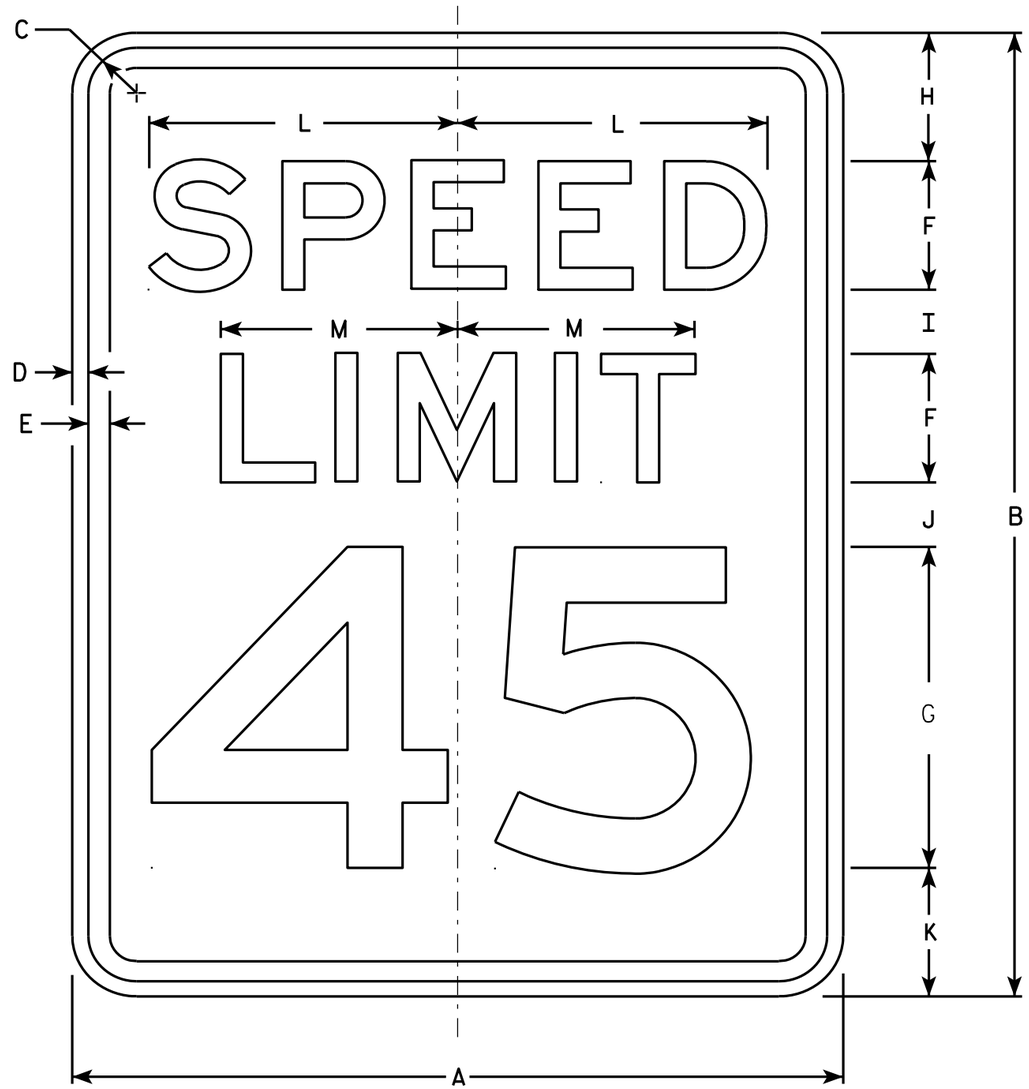
STANDARD SIGN
R1-3P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R1-3P.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 203 | E



R2-1

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

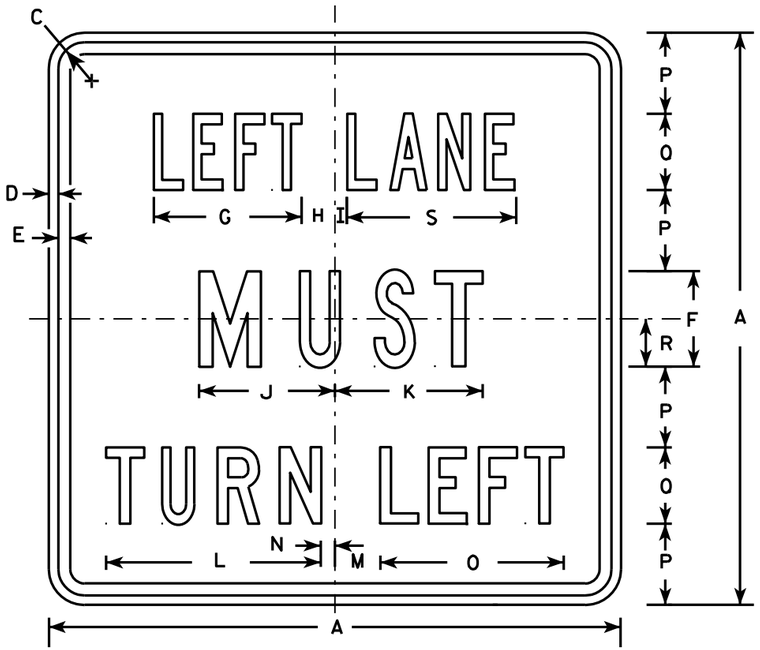
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

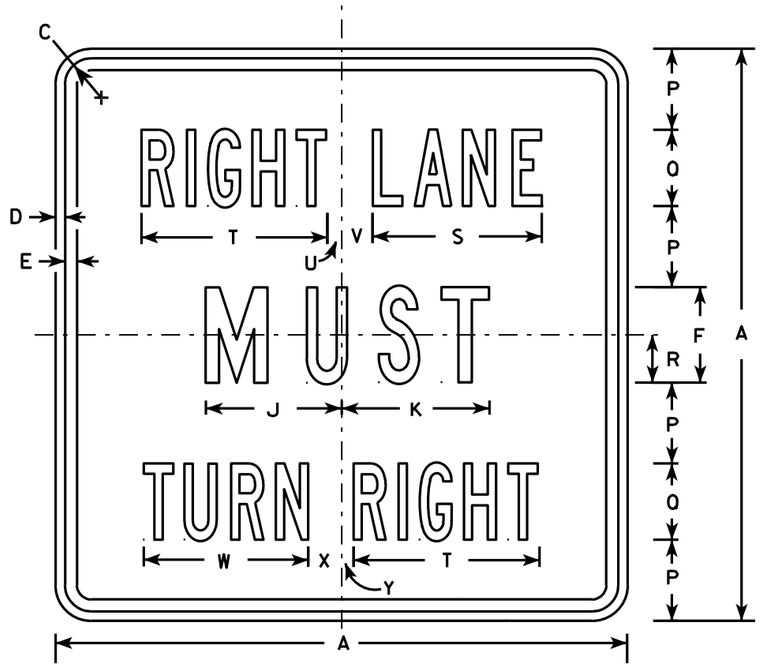
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 204 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R21.DGN PLOT DATE : 28-MAY-2010 08:32 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.717577:1.000000
WISDOT/CADDS SHEET 42



R3-7L



R3-7R

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 - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

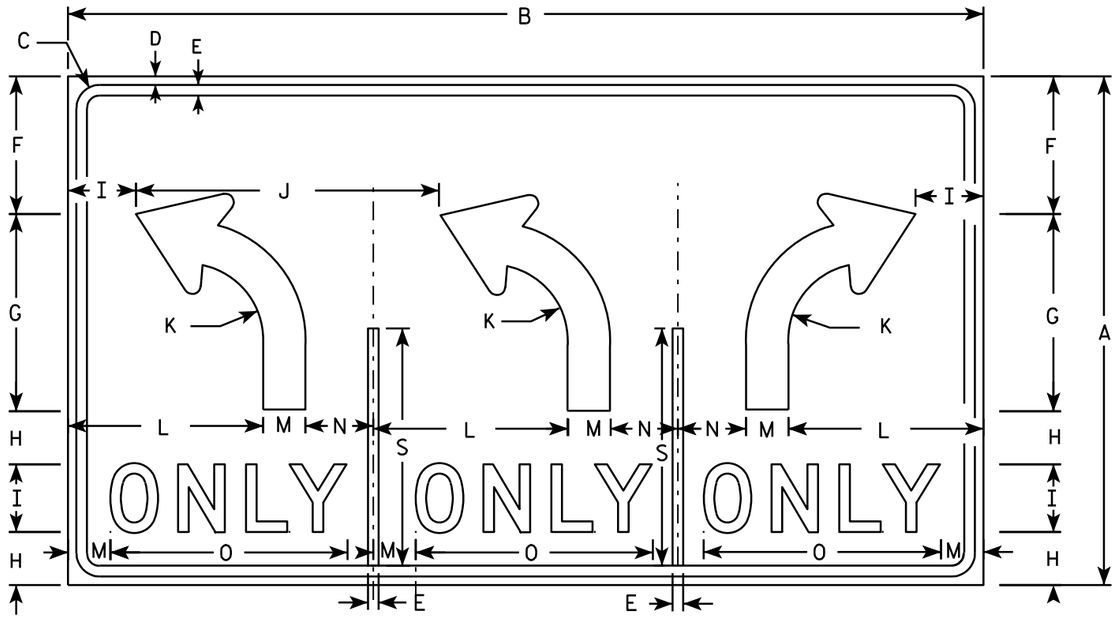
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

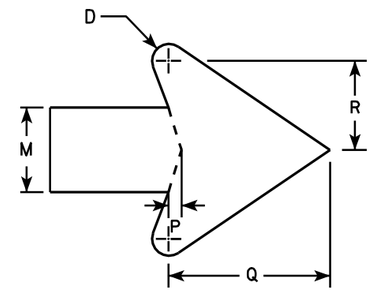
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 205 | E



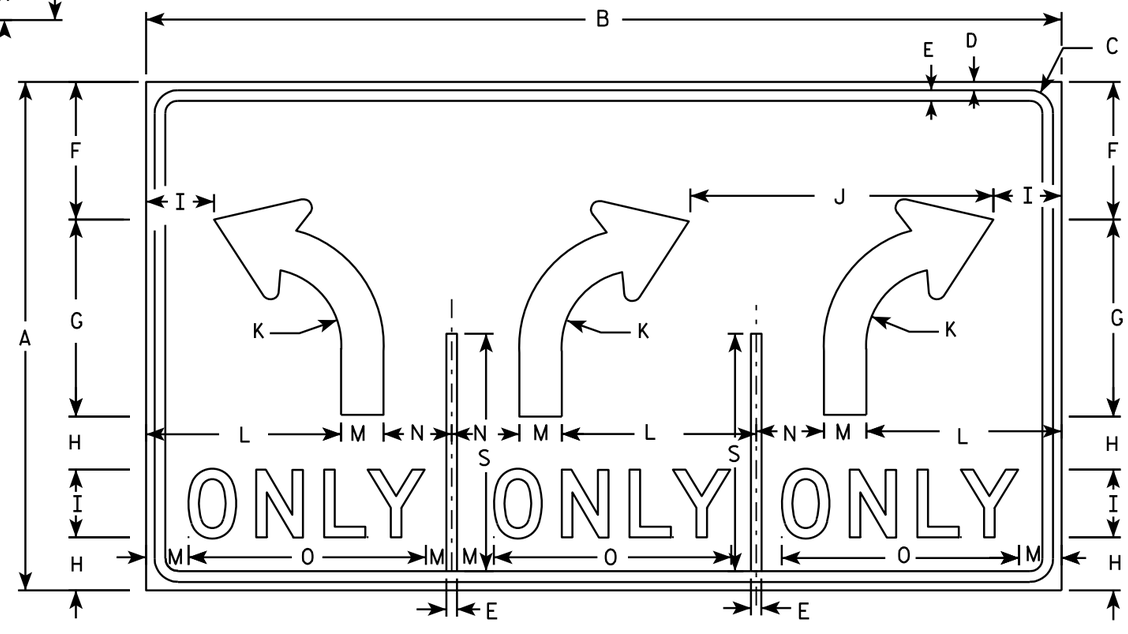
R3-8R

NOTES

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



ARROW DETAIL



R3-8S

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	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	17 7/8	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14								11.25
2M	30	54	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	17 7/8	4 1/2	11 1/2	2 1/2	4	14	3/8	4 3/4	2 5/8	14								11.25
3																											
4	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6		7 1/4	17 1/4	3 3/4	7	20 5/8	5/8	7 1/8	4	22 3/8								28.0
5	48	84	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6		7 1/4	17 1/4	3 3/4	7	20 5/8	5/8	7 1/8	4	22 3/8								28.0

STANDARD SIGN
R3-8R & R3-8S

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

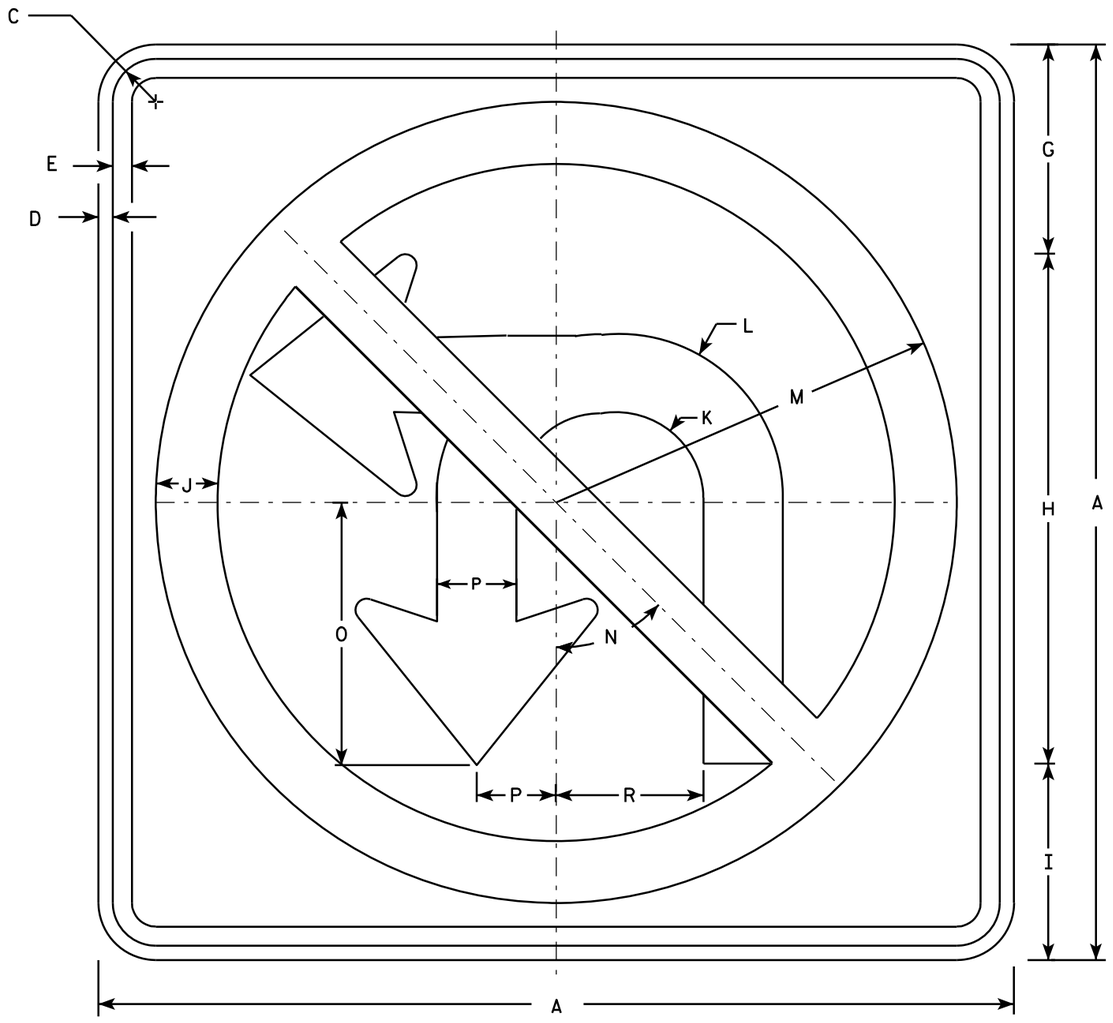
DATE 3/24/2011 PLATE NO. R3-8R.2

PROJECT NO:

SHEET NO: 206 E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38R.DGN PLOT DATE : 24-MAR-2011 09:49 PLOT BY : mscsja PLOT NAME :



R3-18

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.

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		1 1/8	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

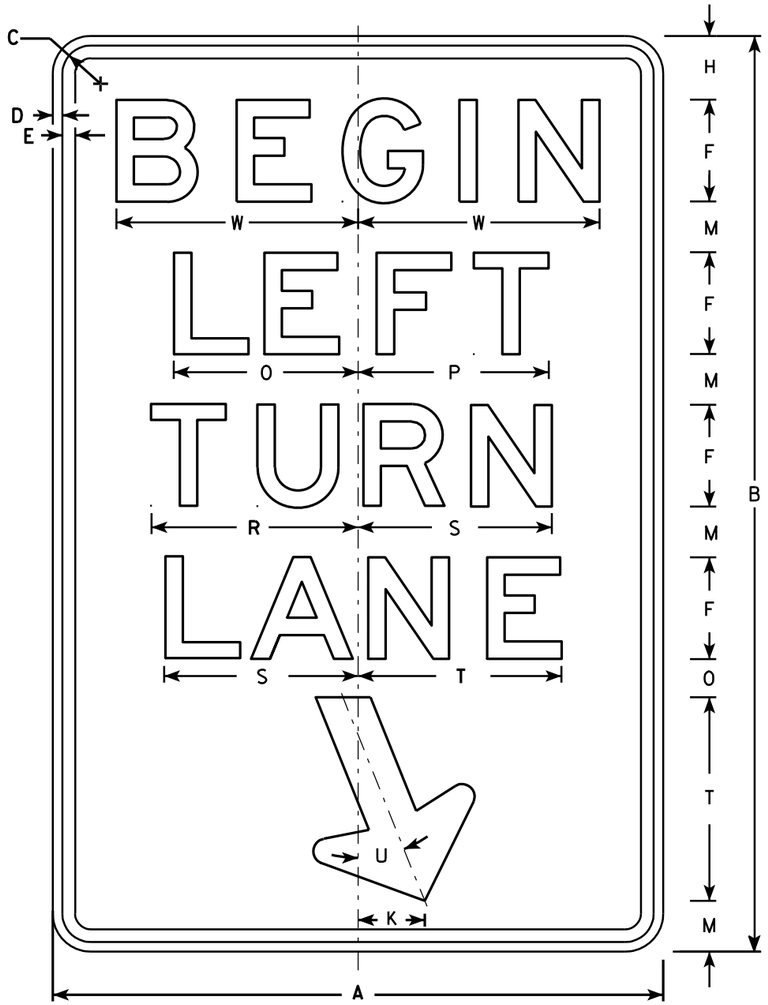
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

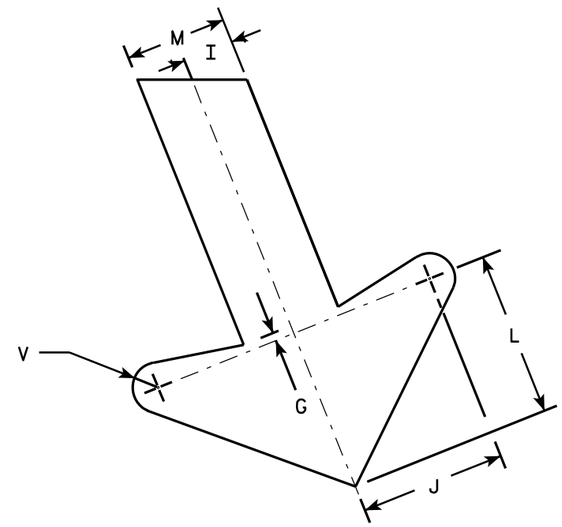
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 207	E



R3-20L

NOTES

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



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	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

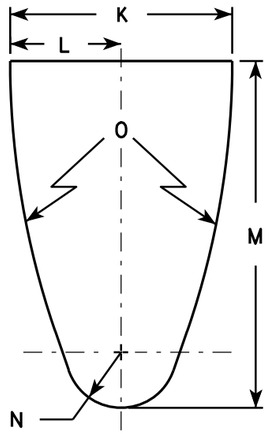
STANDARD SIGN
R3-20L

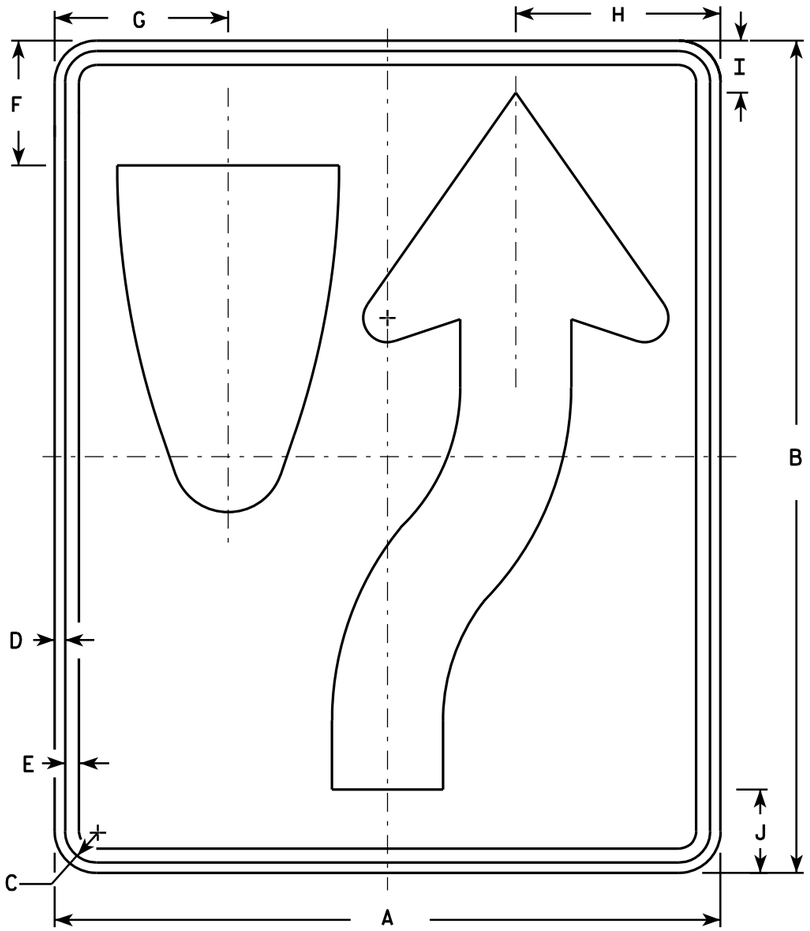
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 208 | E

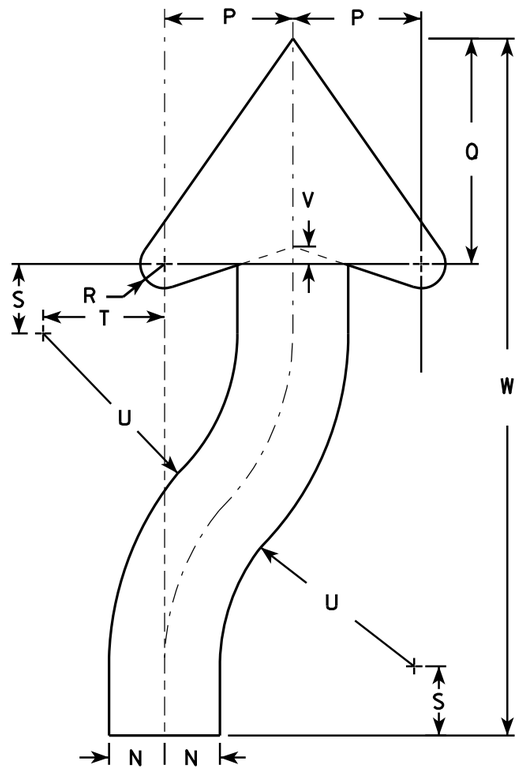




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

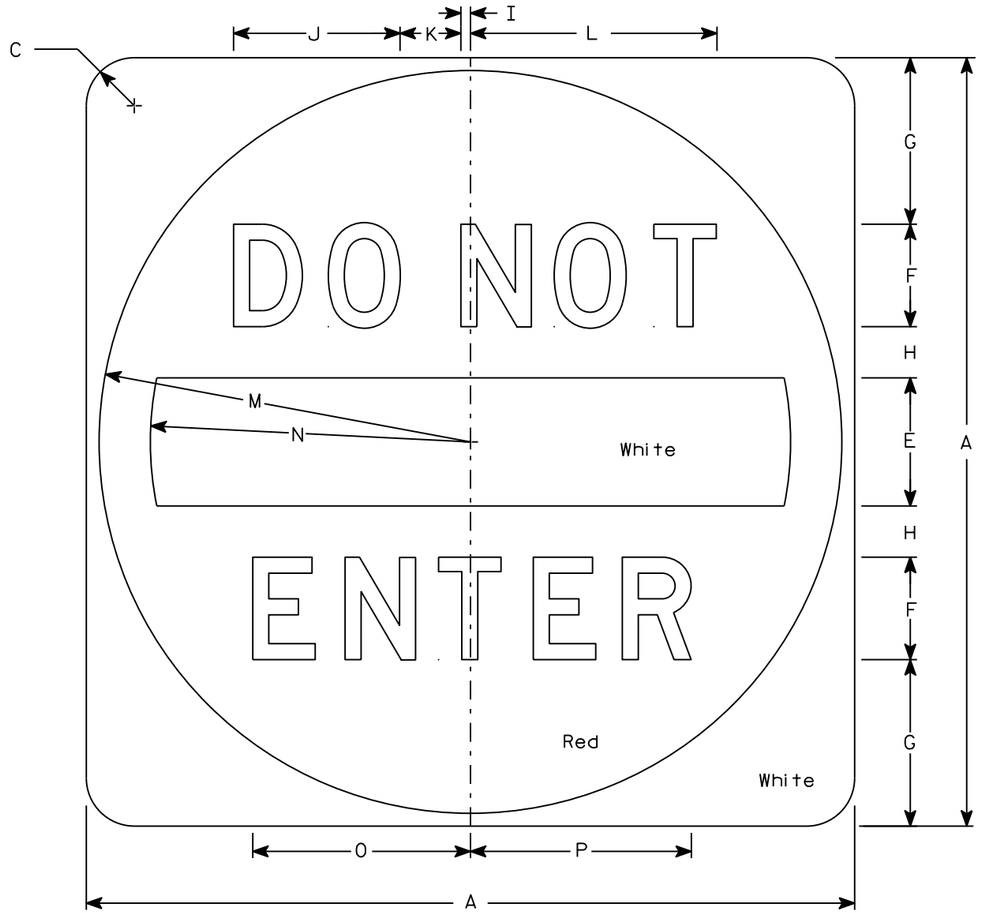
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 209	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
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		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

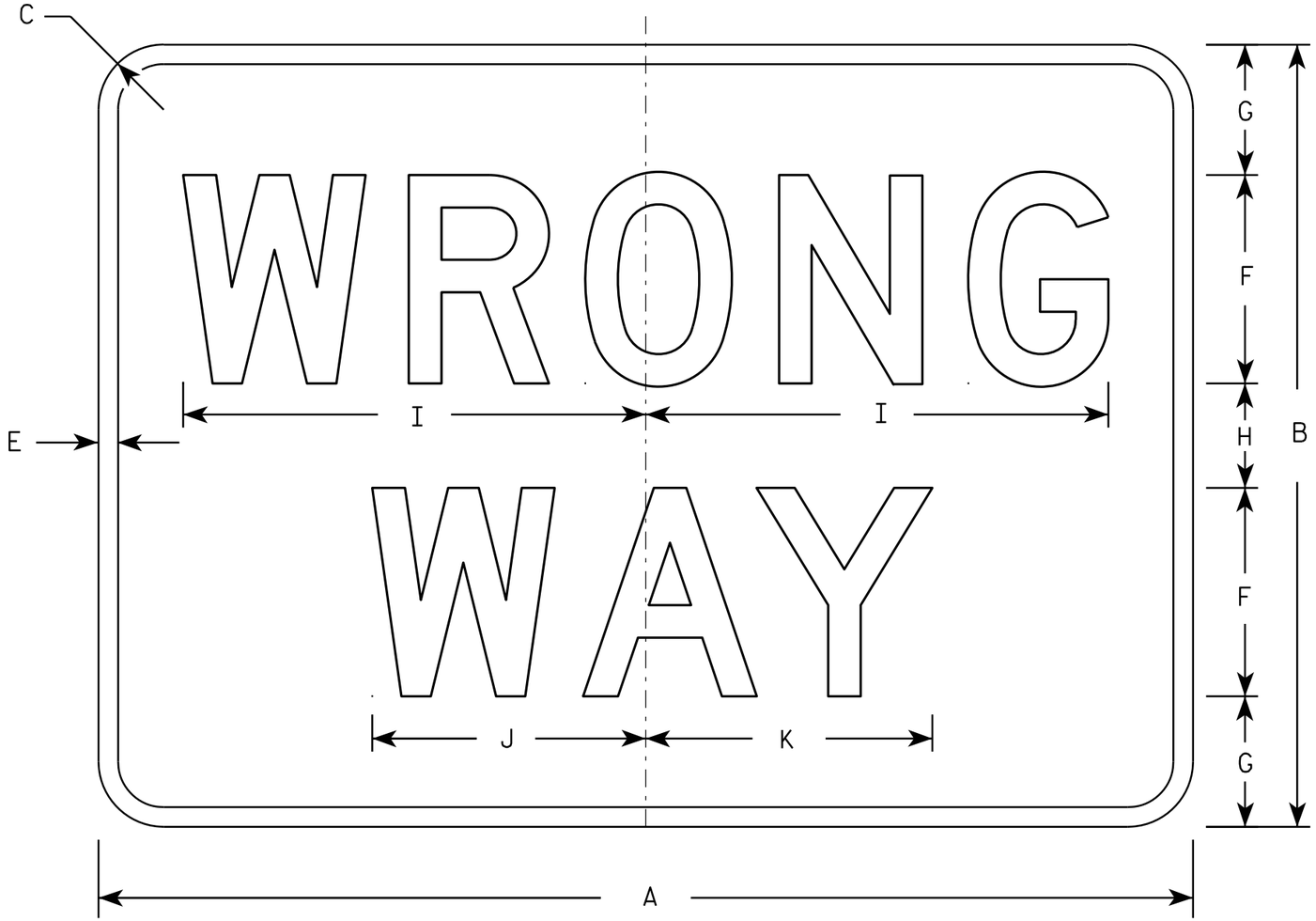
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 210 | E



R5-1A

NOTES

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

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

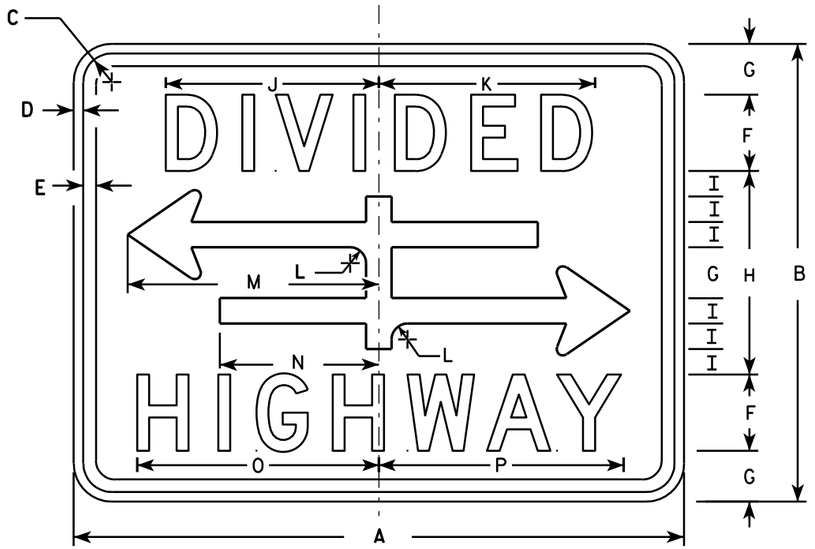
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

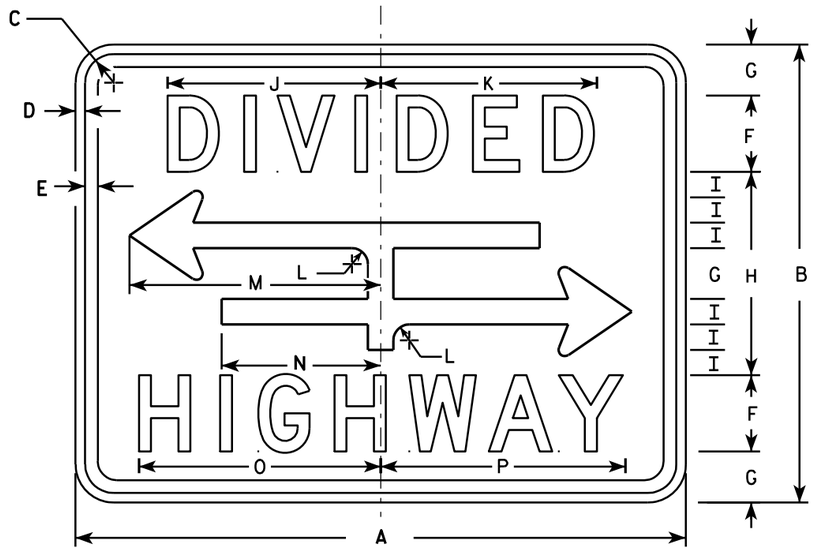
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 211 | E



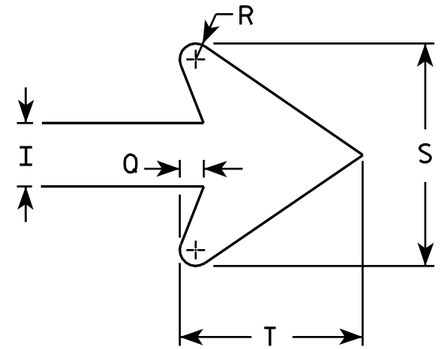
R6-3

NOTES

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



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

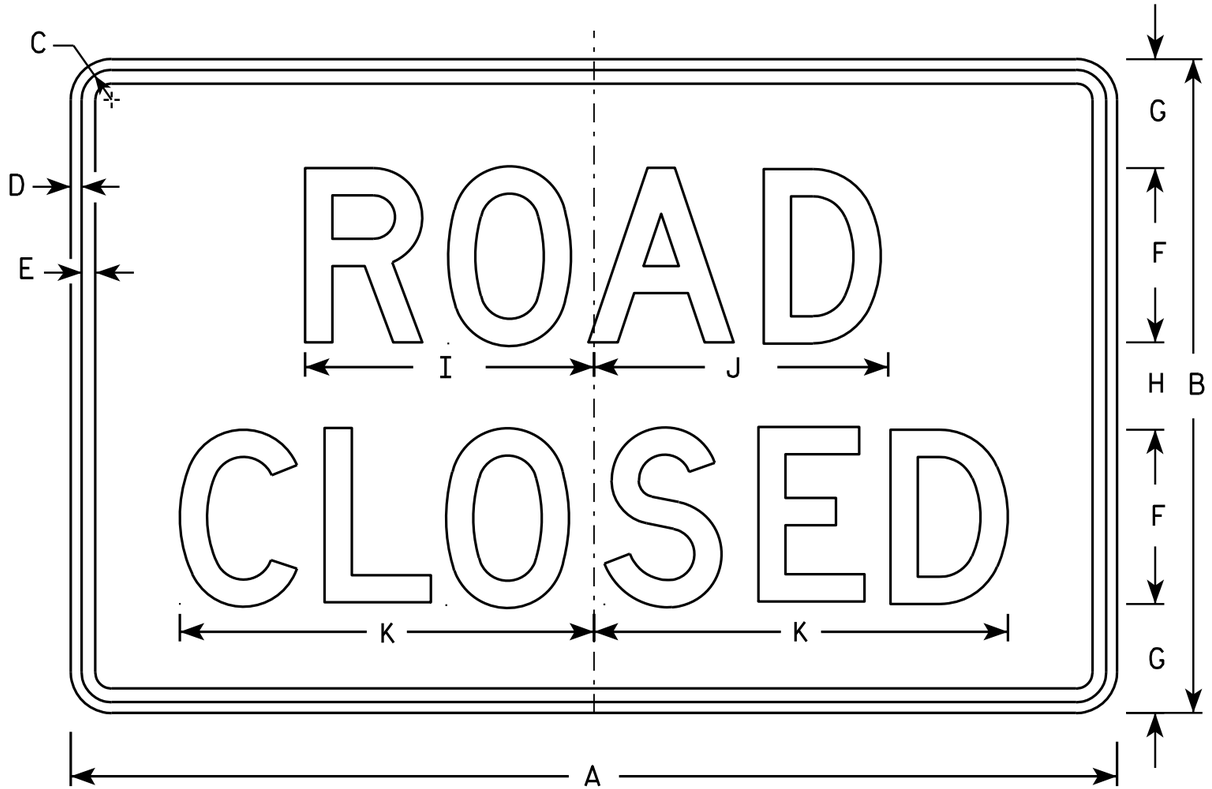
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

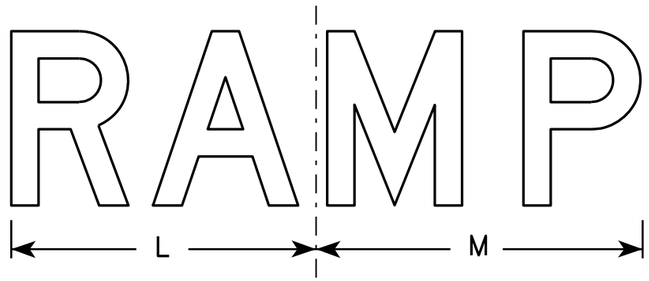
SHEET NO: 212 E



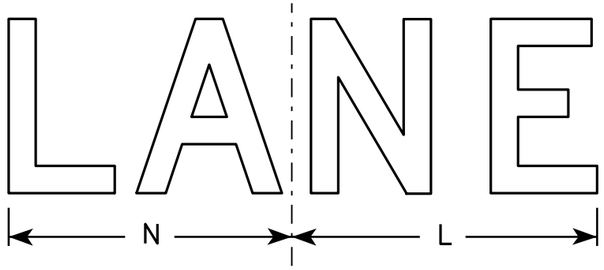
R11-2

NOTES

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



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

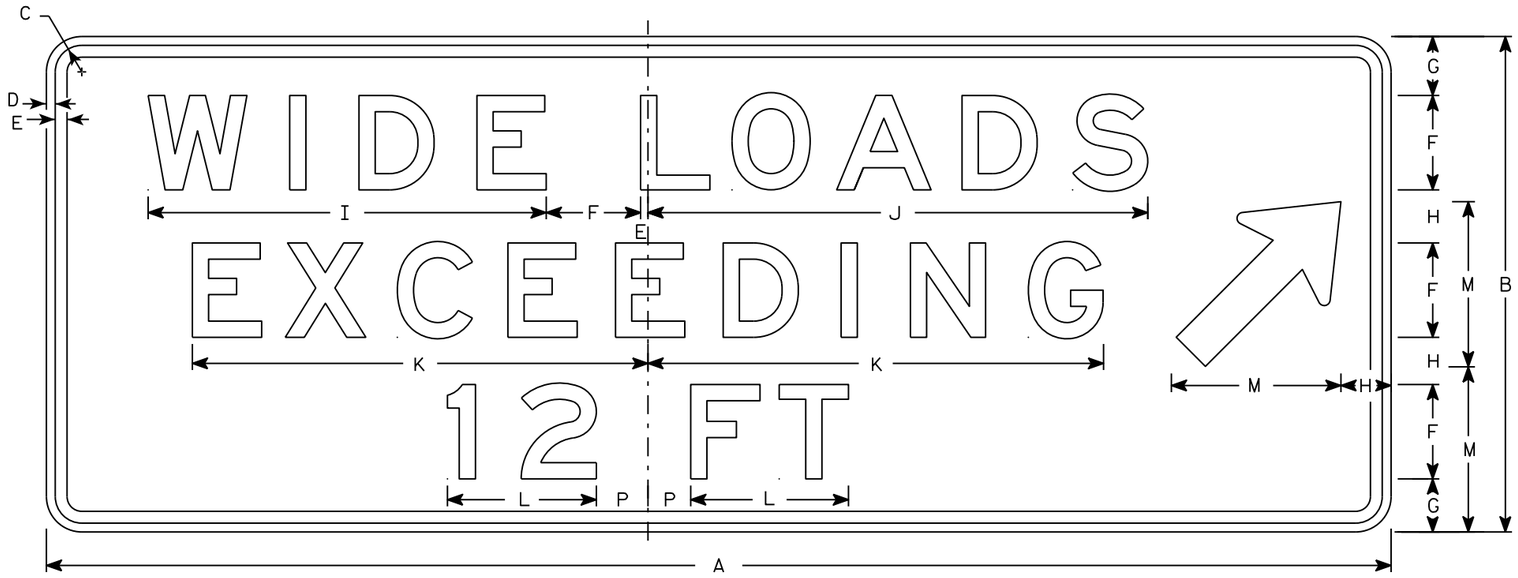
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 213	E

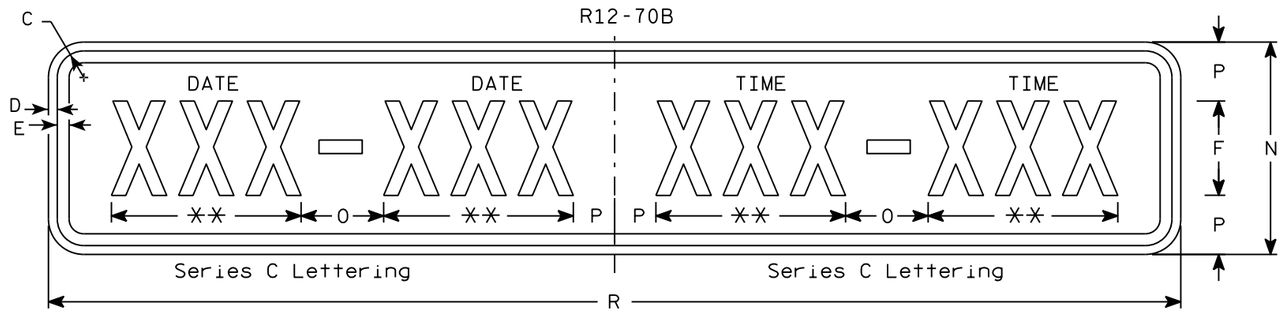
NOTES

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 - E except as noted
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.

** Substitute appropriate message, optically center message



R12-70B



R12-70C

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	R12-70 Area sq. ft.	R12-70C Area sq. ft.
1																												
2S	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
2M	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
3																												
4	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

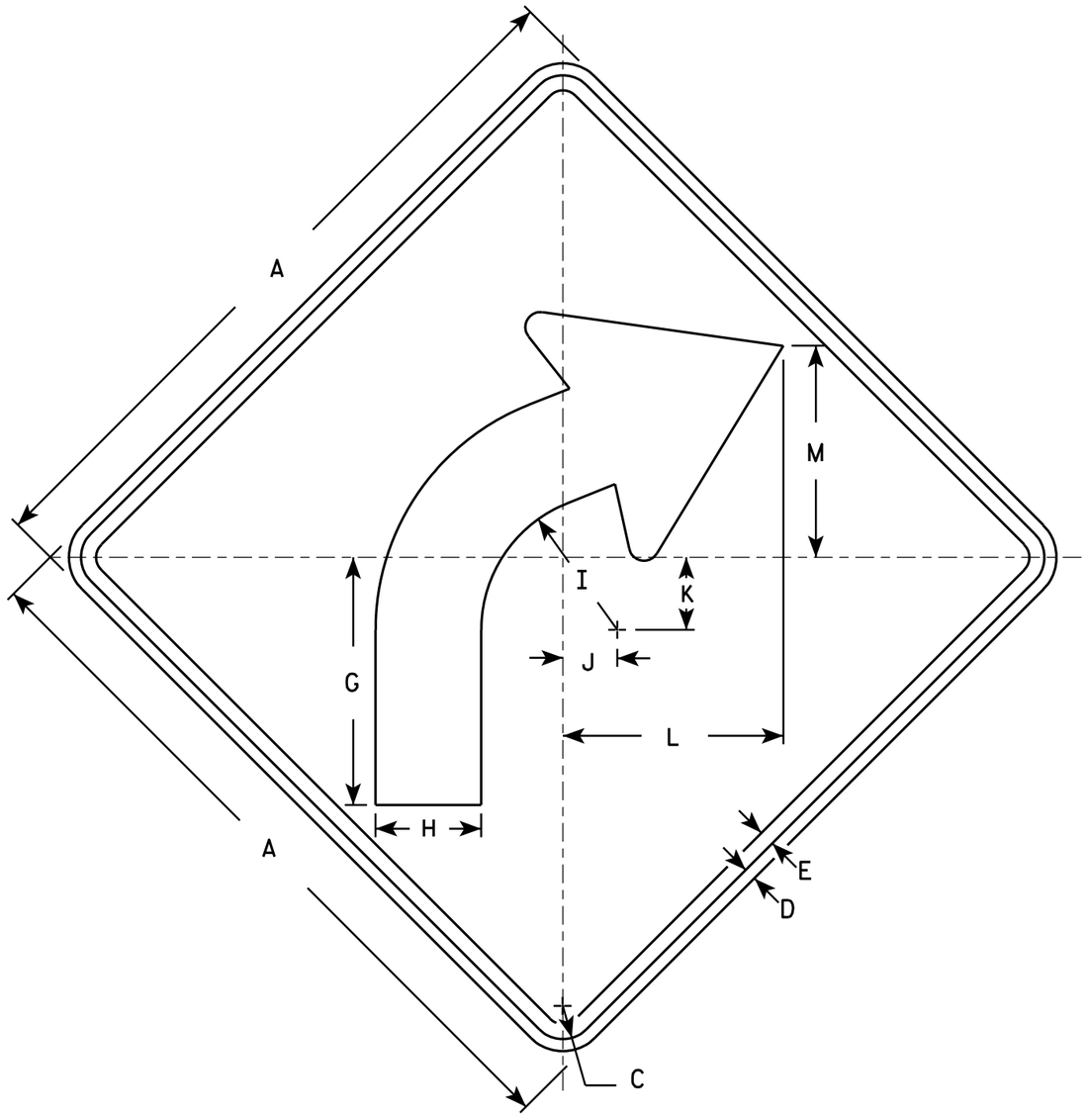
DATE 11/10/15 PLATE NO R12-70B.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

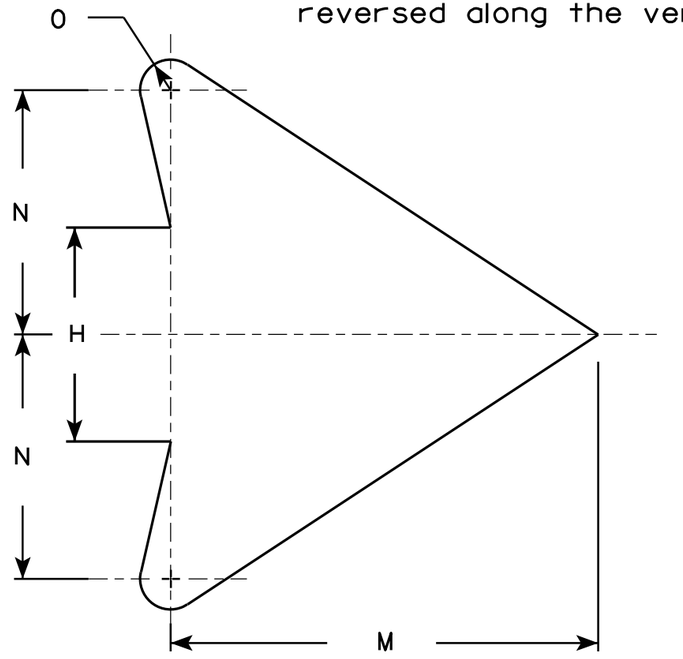
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\R1270B.DGN PLOT DATE : 01-DEC-2015 18:10 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 12.842555:1.000000

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



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		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

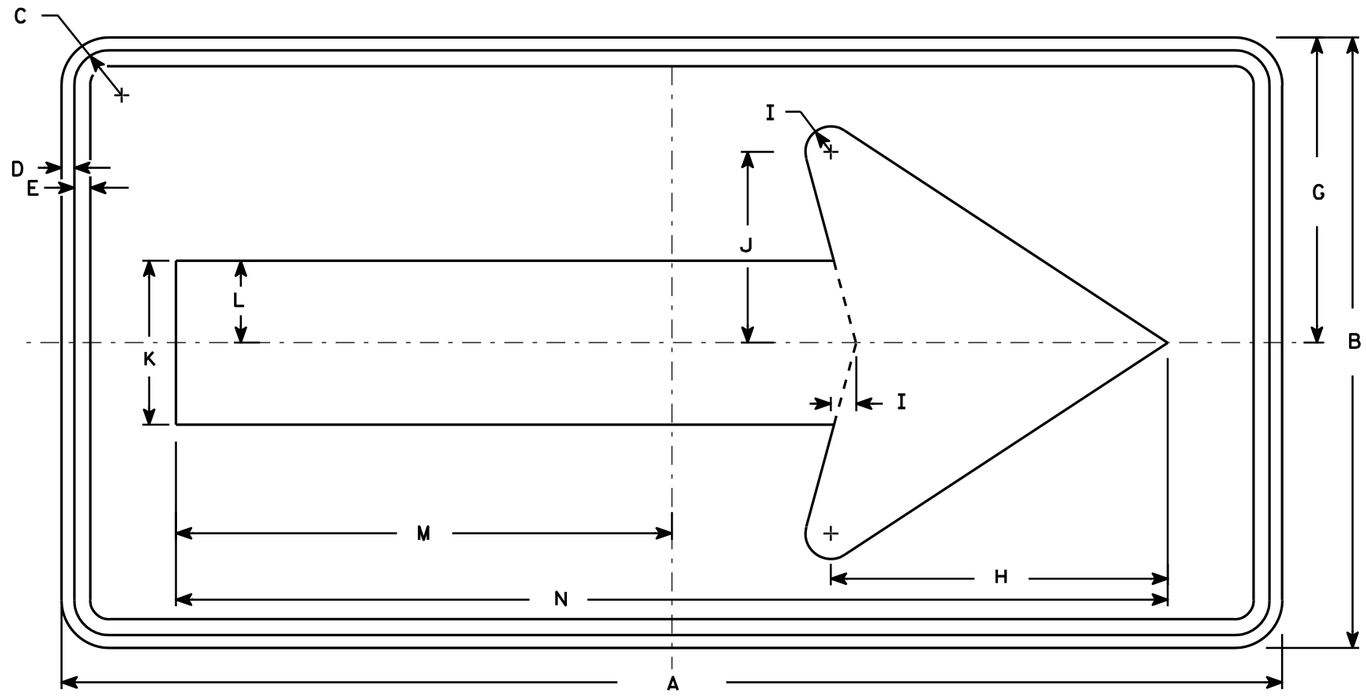
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 215	E



W1-6

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.

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	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

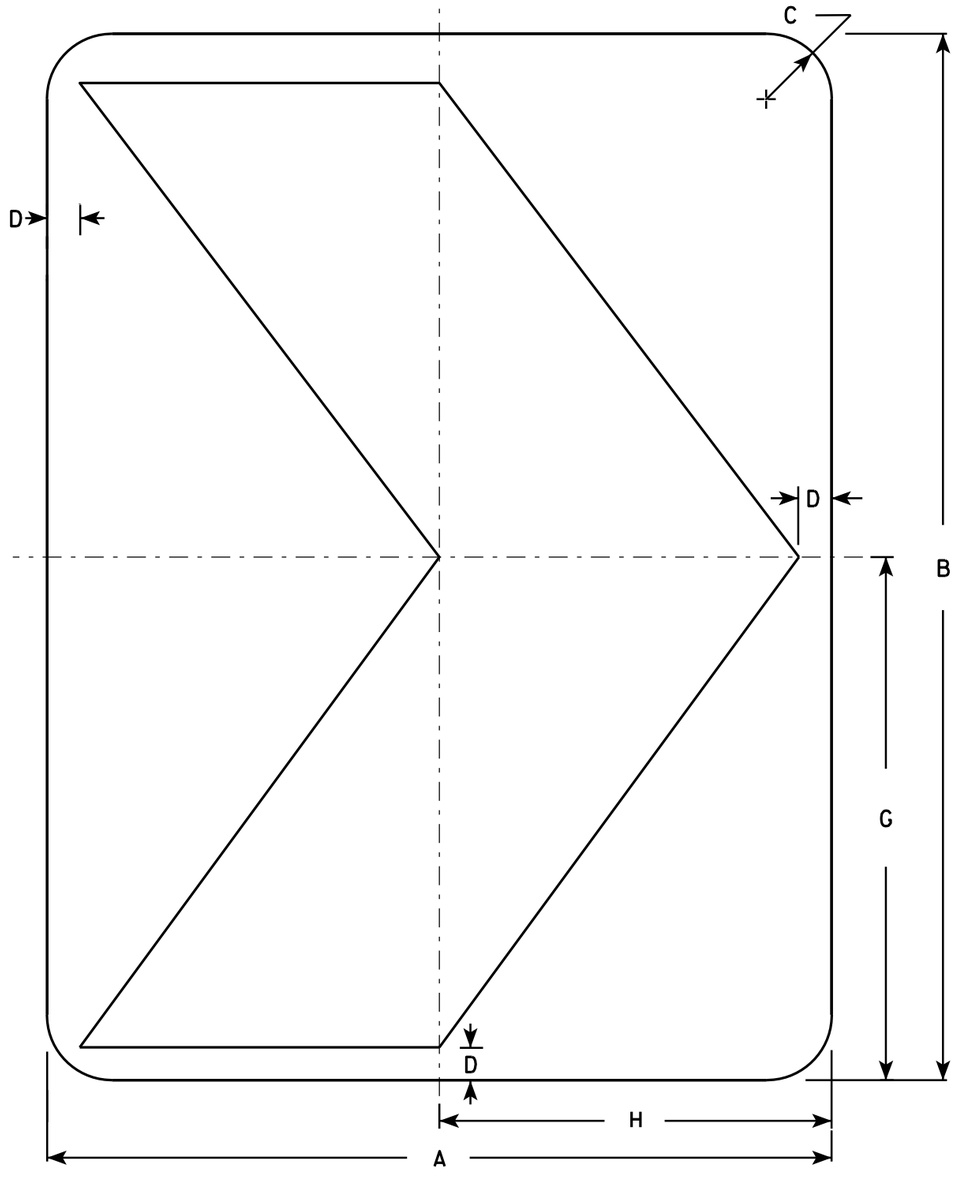
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 216



W1-8

NOTES

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

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 ½	½			9	6																			1.5
2S	18	24	1 ½	¾			12	9																			3.0
2M	18	24	1 ½	¾			12	9																			3.0
3	24	30	1 ½	1			15	12																			5.0
4	30	36	1 ⅞	1 ¼			18	15																			7.5
5	36	48	2 ¼	1 ½			24	18																			12.0

STANDARD SIGN
W1-8

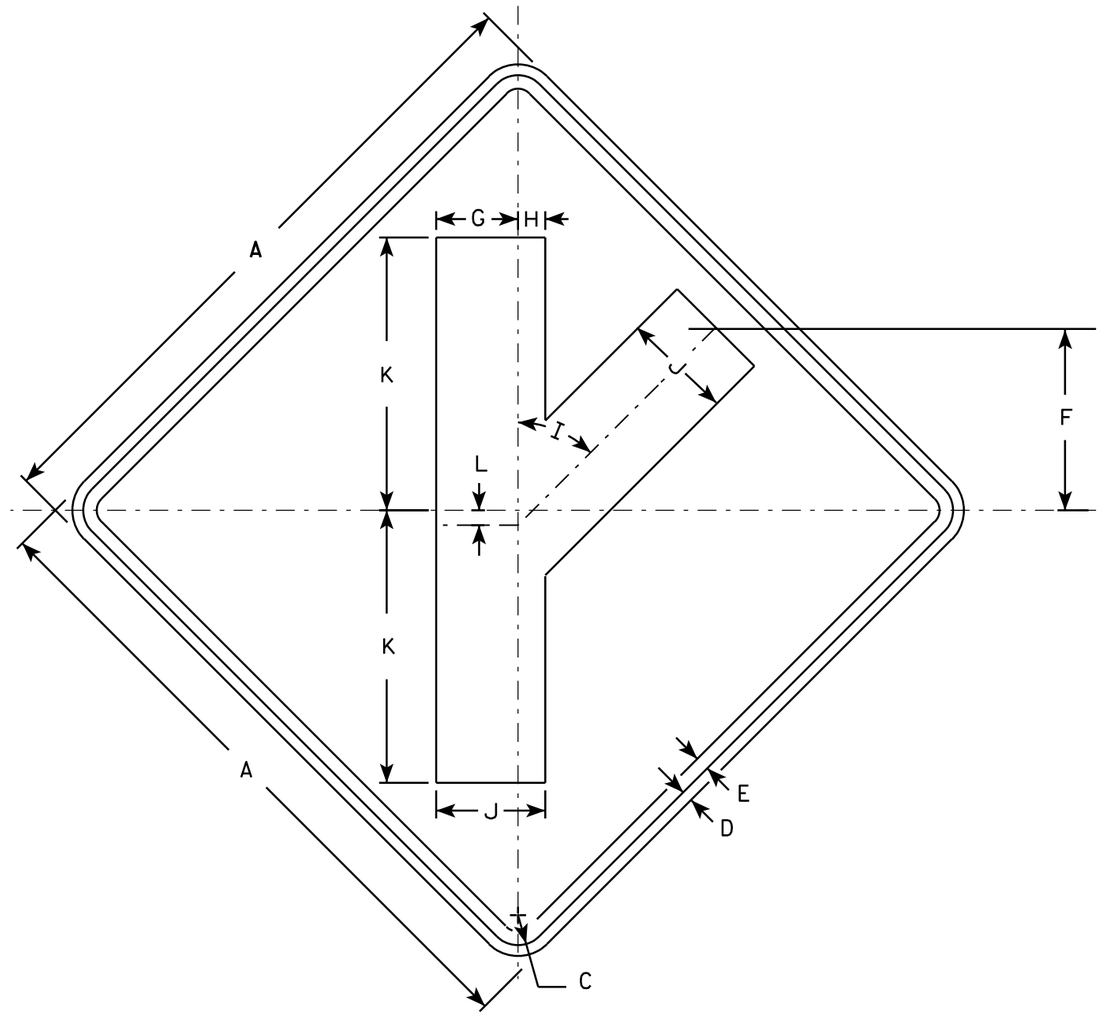
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-8.6

PROJECT NO:

SHEET NO: 217 E



W2-3R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W2-3L is the same as W2-3R except the message reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	6 5/8	3	1	45°	4	10	1/2															4.0
2S	30		1 3/8	1/2	5/8	8 1/4	3 3/4	1 1/4	45°	5	12 1/2	3/4															6.25
2M	30		1 3/8	1/2	5/8	8 1/4	3 3/4	1 1/4	45°	5	12 1/2	3/4															6.25
3	36		1 5/8	5/8	3/4	10	4 1/2	1 1/2	45°	6	15	7/8															9.0
4	48		2 1/4	3/4	1	13 3/8	6	2	45°	8	20	1 1/4															16.0
5																											

STANDARD SIGN
W2-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

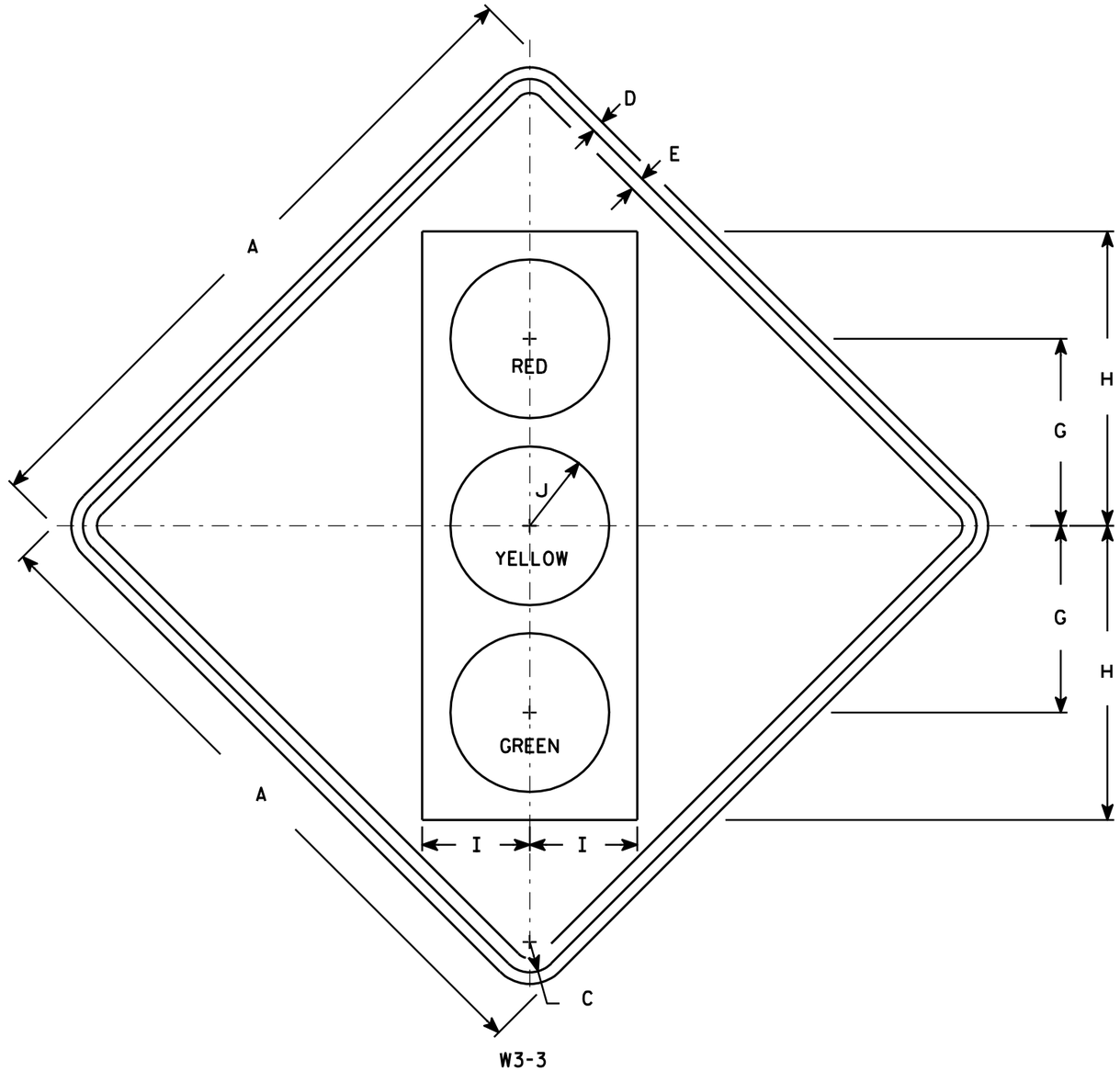
DATE 5/29/12 PLATE NO. W2-3.3

PROJECT NO:

SHEET NO: 218 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W23.DGN PLOT DATE : 29-MAY-2012 10:26 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



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 - 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. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

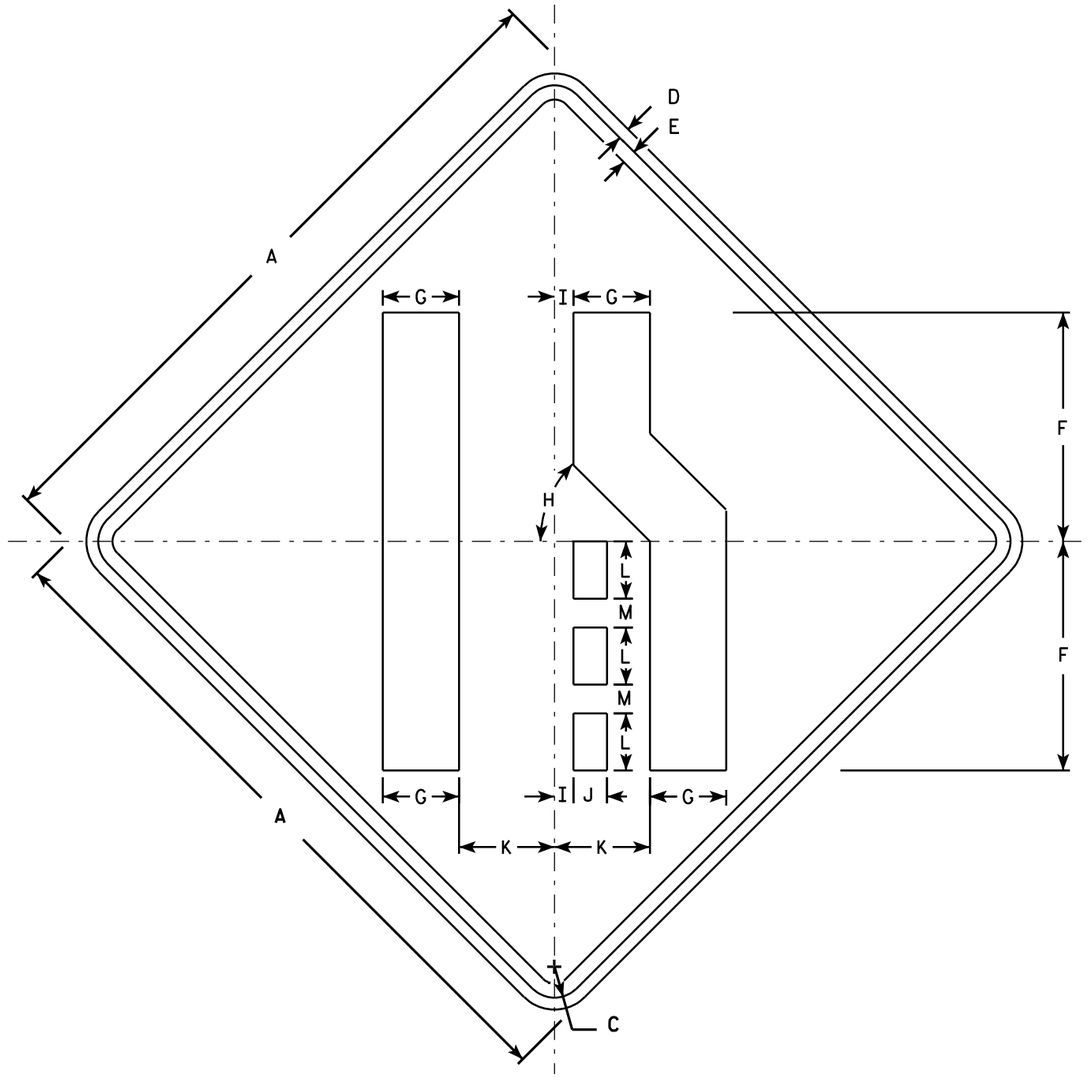
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 219 | E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

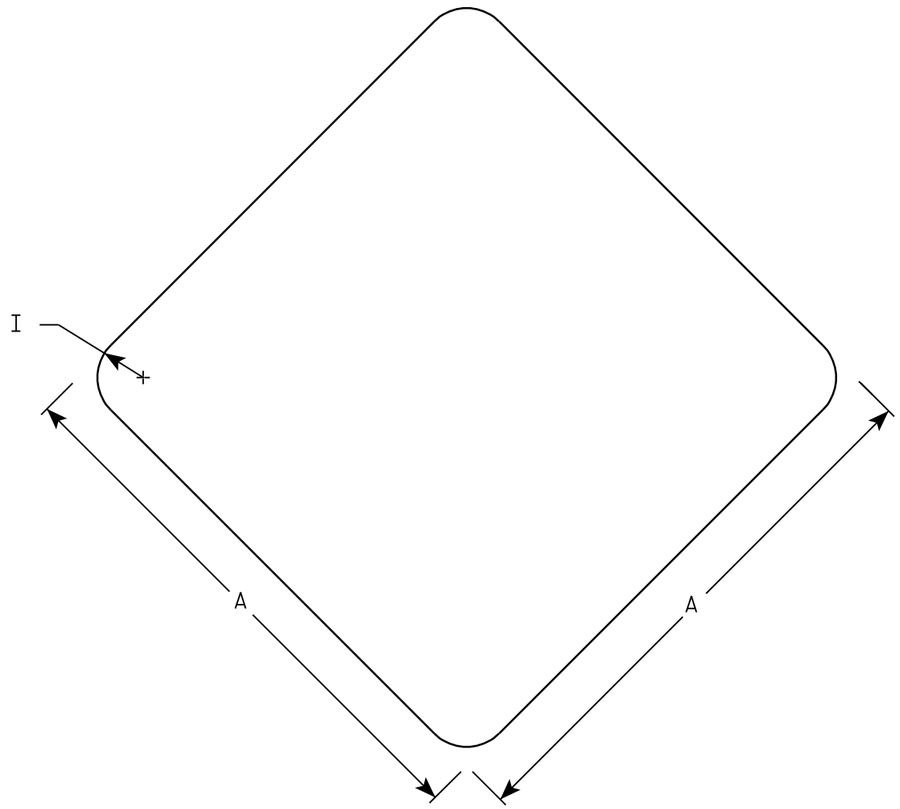
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 220 E



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

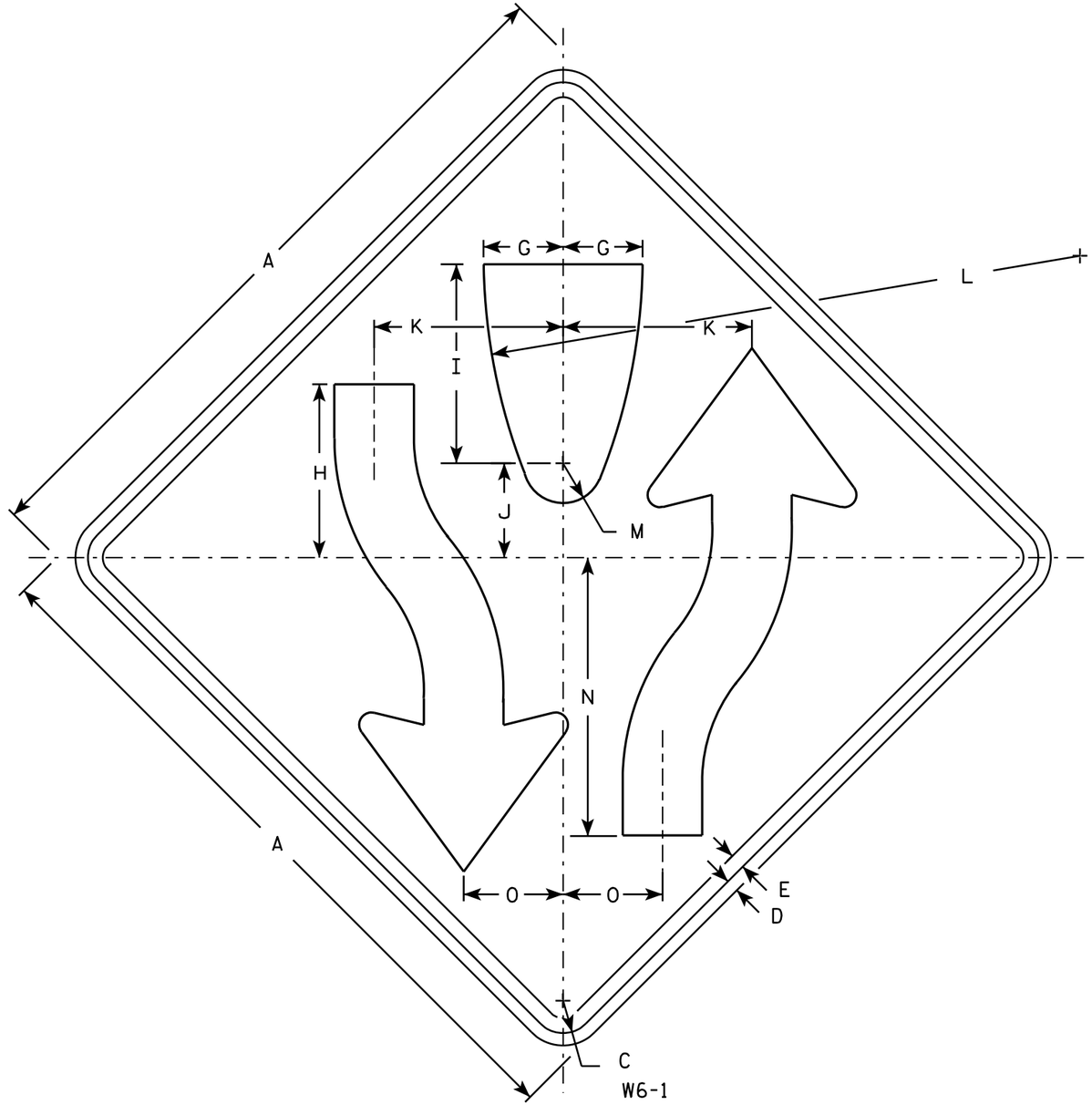
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

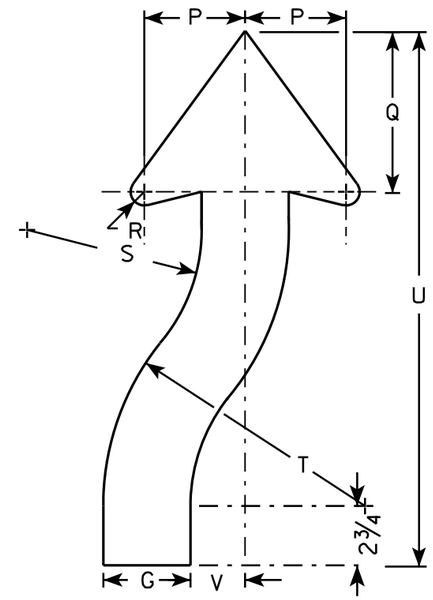
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 221 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W6-2 same as W6-1 but is rotated 180° when mounted.



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	30		1 3/8	1/2	5/8		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

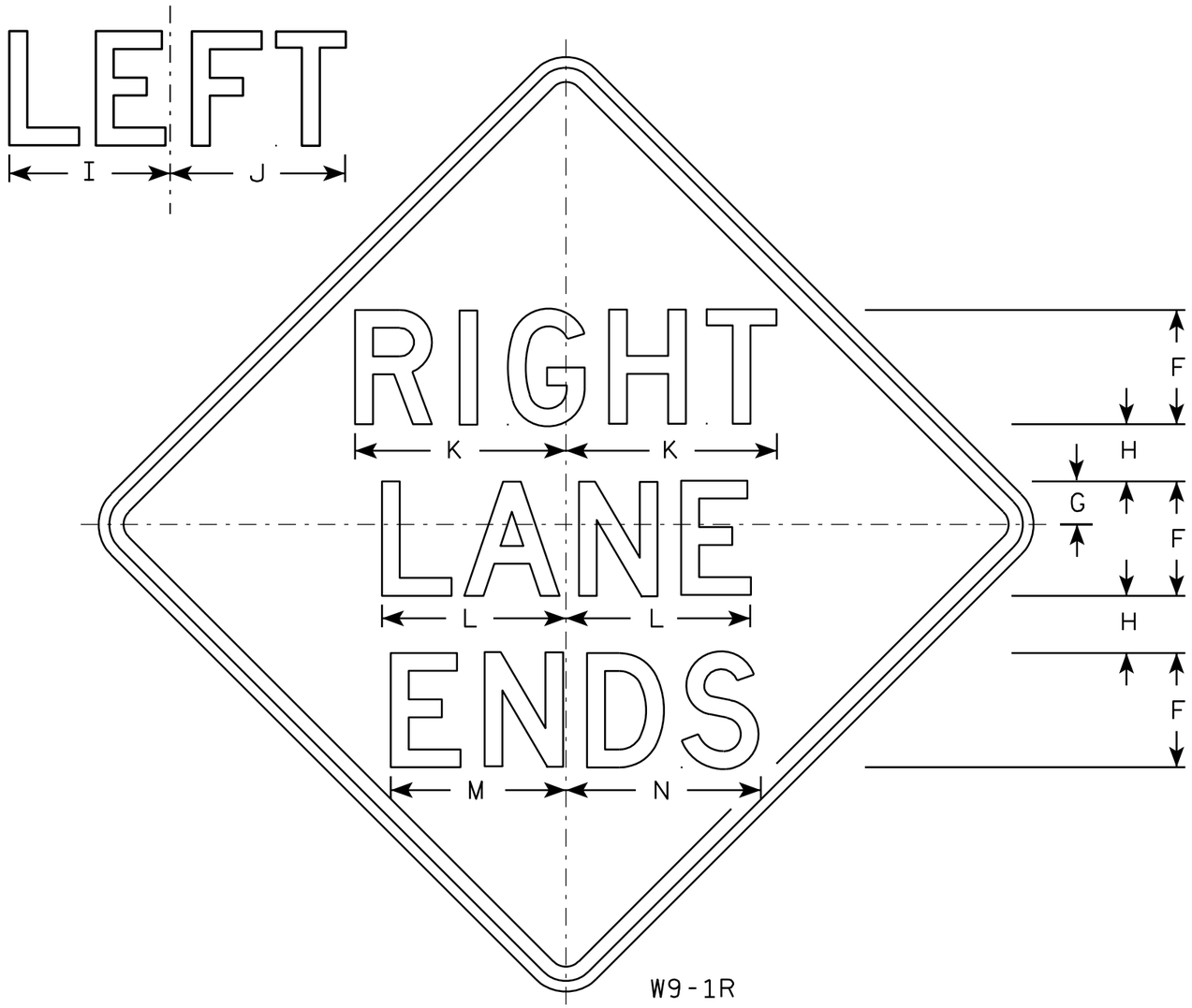
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 222	E

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W61.DGN PLOT DATE : 12-MAR-2013 14:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
WISDOT/CADDS SHEET 42



W9-1R

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. 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. W9-1L same as W9-1R except the word Left replaces 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	30		1 3/8	1/2	5/8	5	1 1/2	2 1/2	7 1/8	7 5/8	9 1/4	8 1/8	7 5/8	8 5/8													6.25
2S	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
2M	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
3	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
4	36		1 5/8	5/8	3/4	6	2	3	8 1/2	9 1/8	11	9 3/4	9	10 3/8													9.0
5	48		2 1/4	3/4	1	8	3	4	11 1/4	12 1/4	14 3/4	12 7/8	12 1/4	13 5/8													16.0

STANDARD SIGN
W9-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

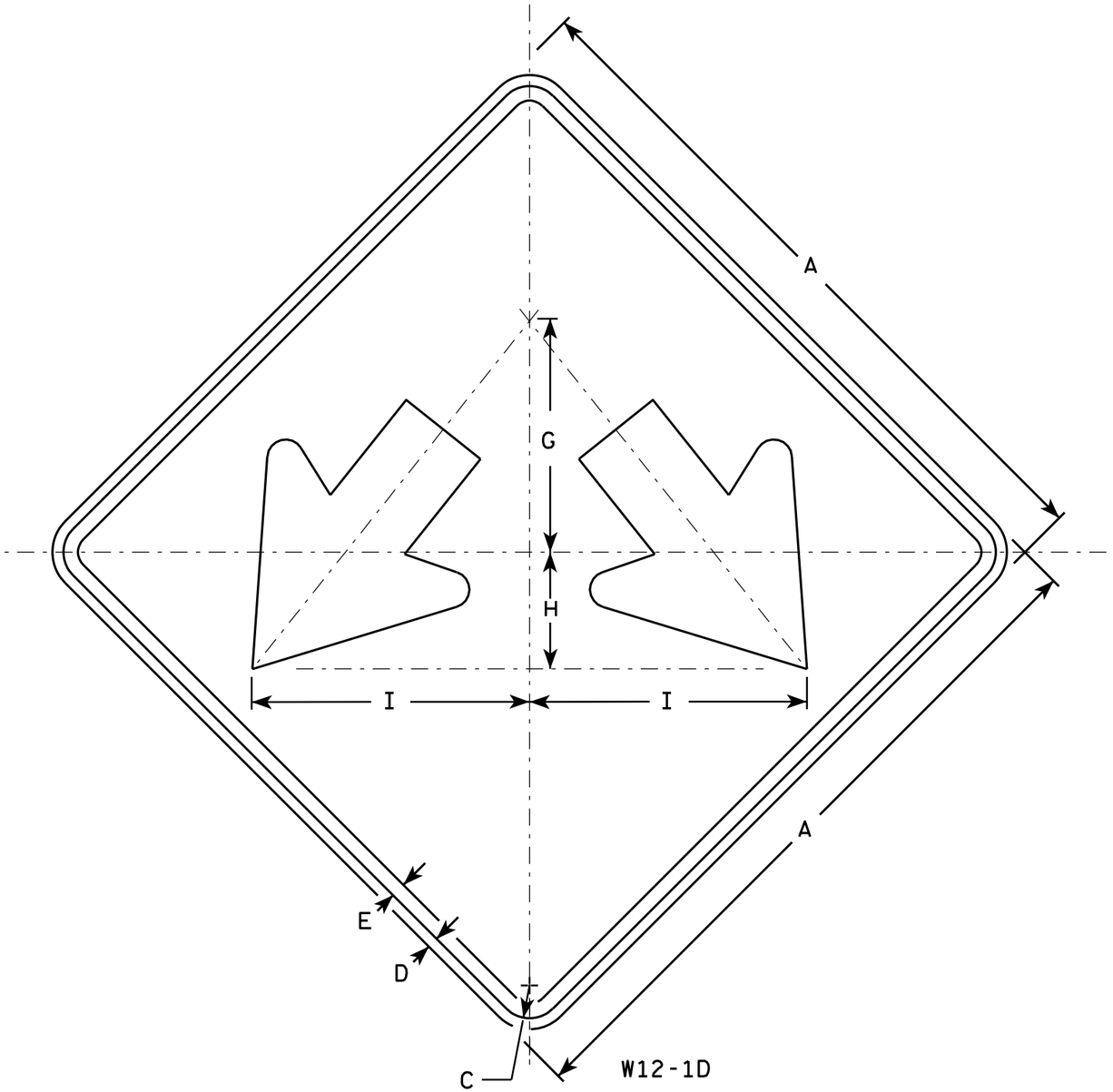
DATE 03/18/13 PLATE NO. W9-1.8

PROJECT NO:

SHEET NO: 223 E

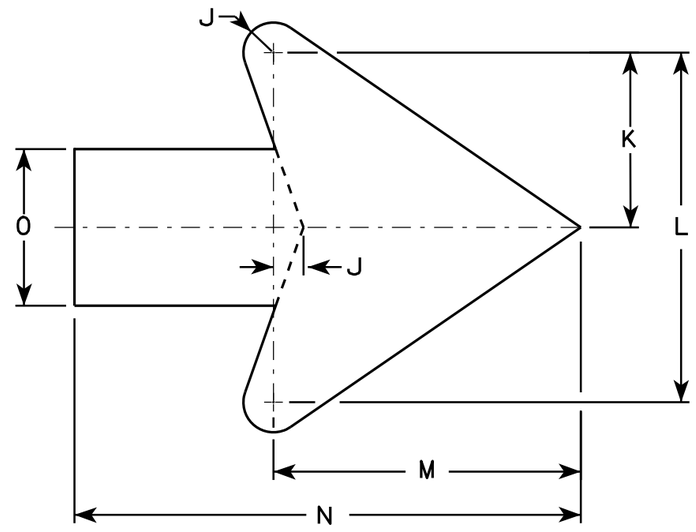
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W91.DGN PLOT DATE : 18-MAR-2013 11:42 PLOT BY : mscsja

WISDOT/CADDS SHEET 42



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.



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	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

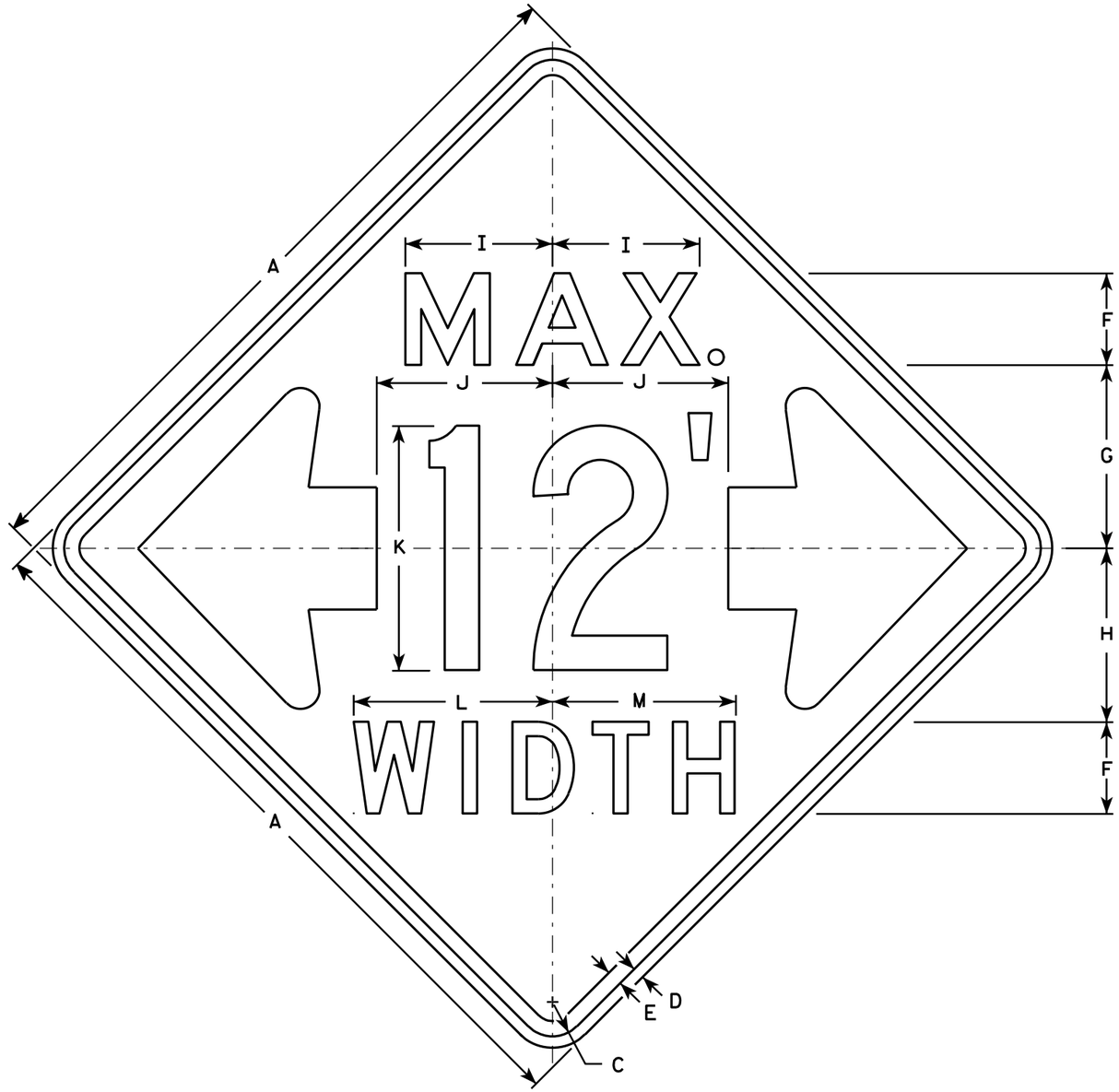
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

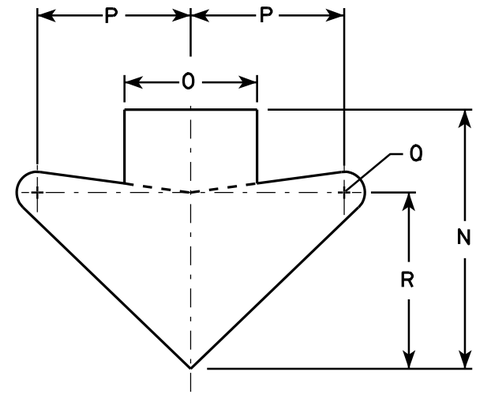
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 224	E



W12-52

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. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



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	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

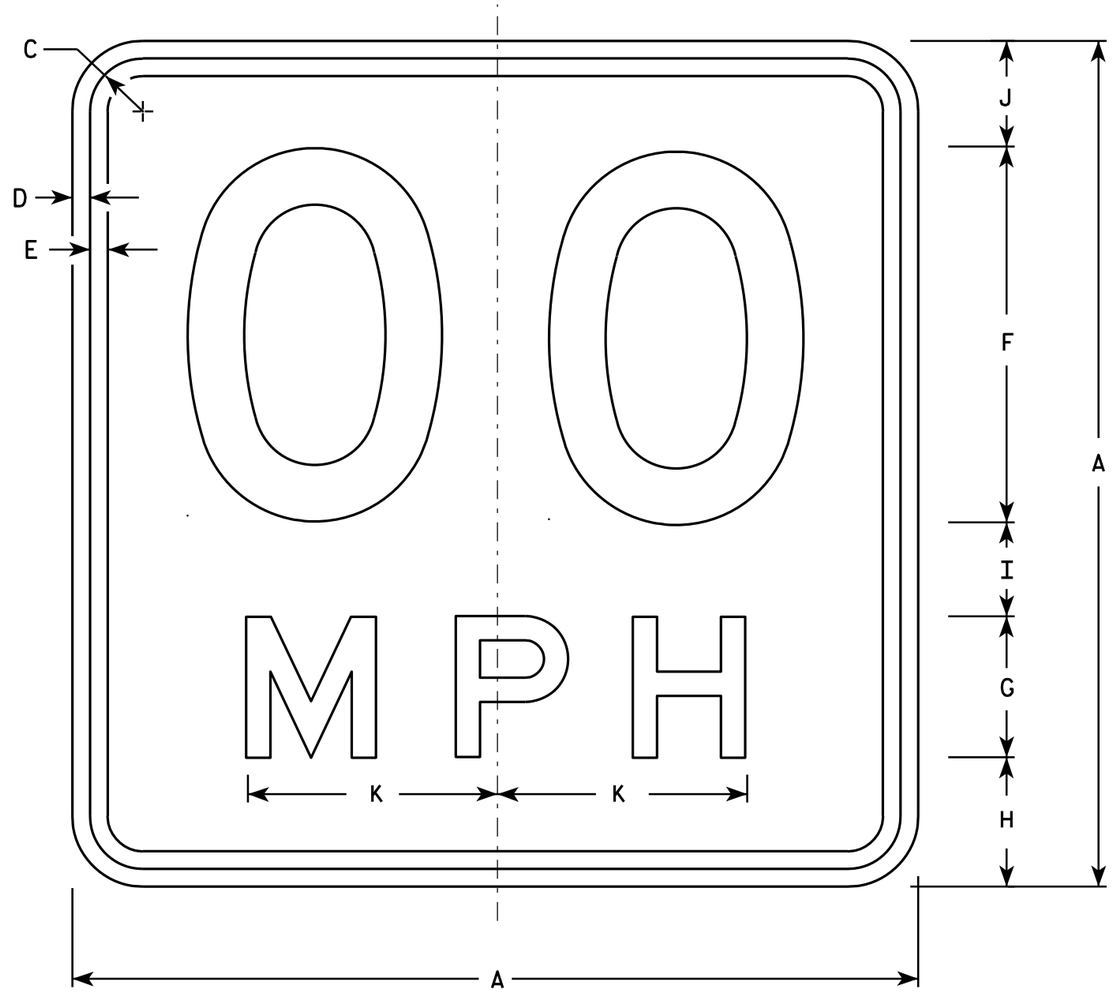
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 225 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

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. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

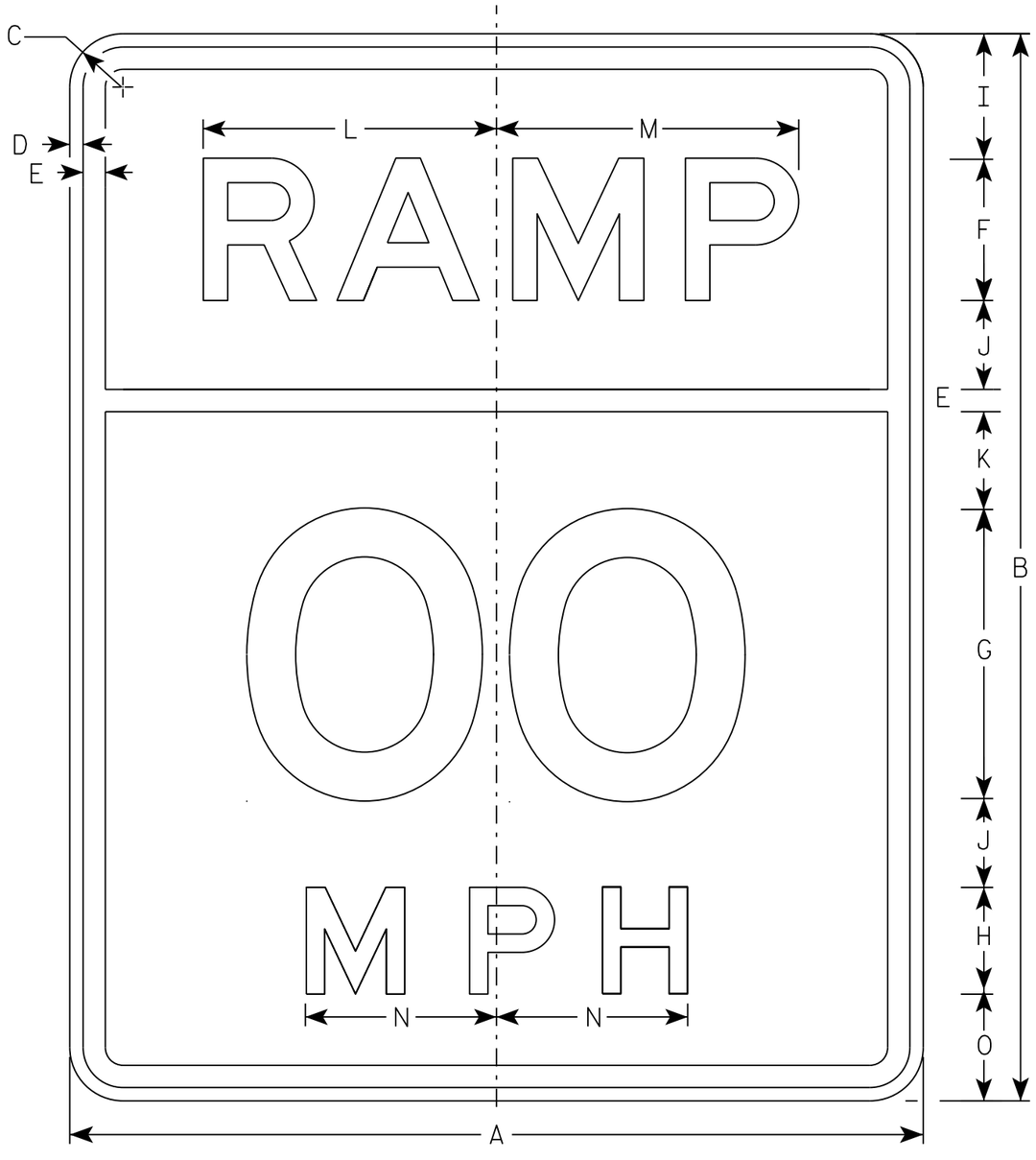
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E



W13-3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically space about centerline to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2S	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
2M	24	30	1 1/8	3/8	5/8	4	8	3	3 1/2	2 1/2	2 7/8	8 1/4	8 1/2	5 3/8	3												5.0
3	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
4	36	48	1 5/8	5/8	7/8	6	12	4	6	4 1/8	5 1/8	13 1/2	13 5/8	7 1/8	6												12.0
5	48	60	2 1/4	3/4	1 1/4	8	16	6	7	5	5 3/4	16 1/2	17	10 5/8	6												20.0

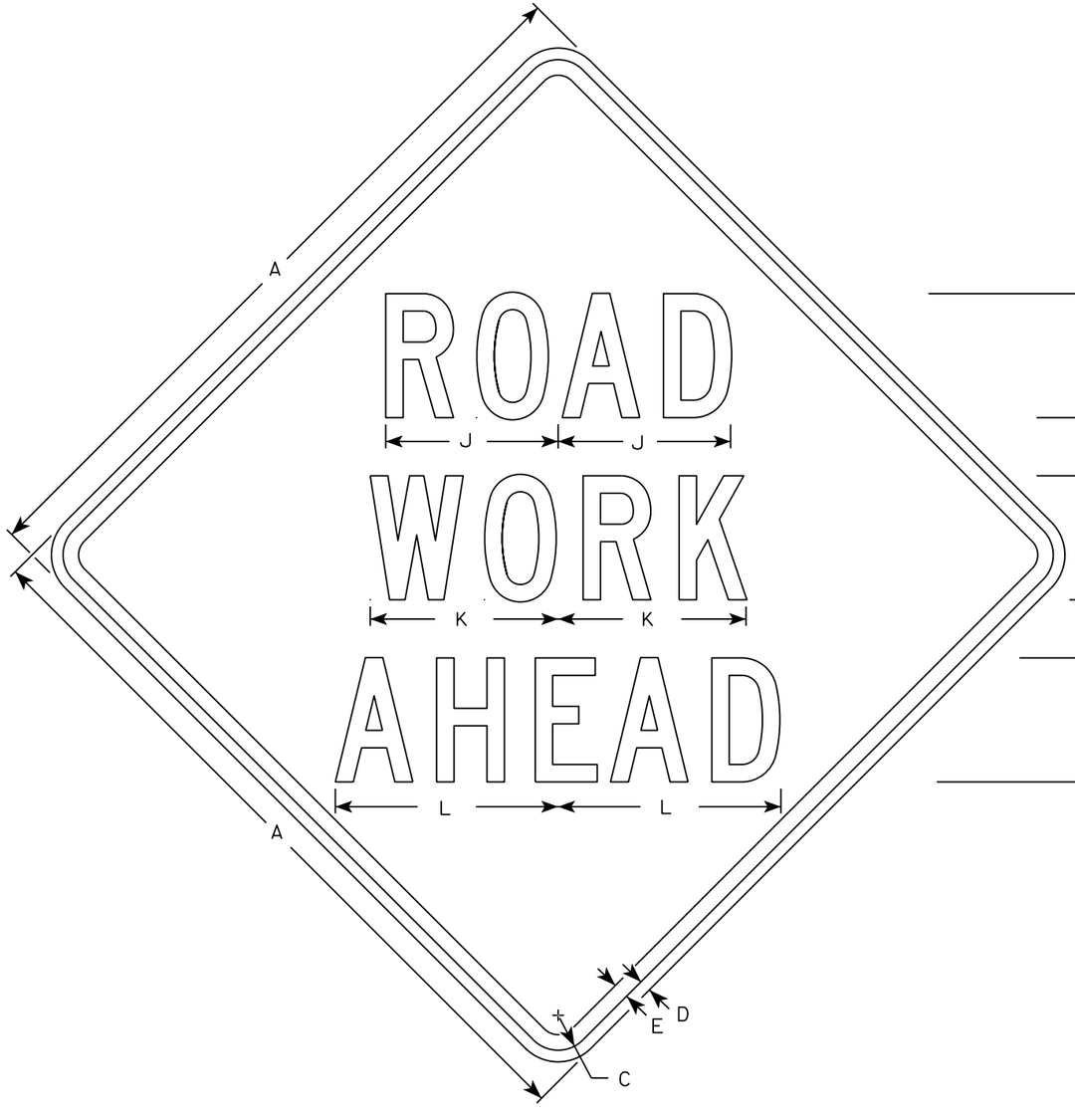
STANDARD SIGN
W13-3

WISCONSIN DEPT OF TRANSPORTATION

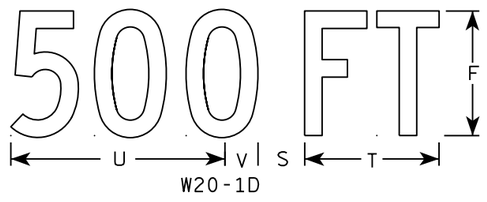
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/1/16 PLATE NO 13-3.10

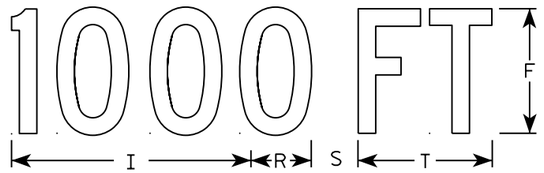
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



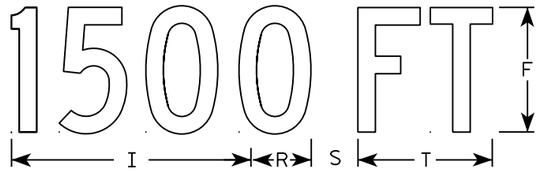
W20-1A



W20-1D

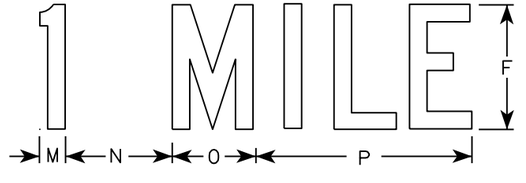


W20-1C

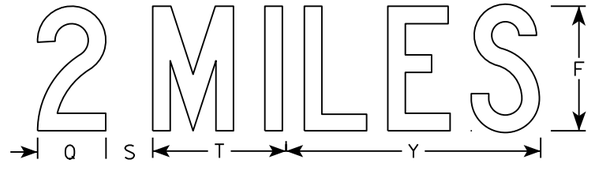


W20-1B

W20-1G



W20-1F



W20-1E

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 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	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, F & G

WISCONSIN DEPT OF TRANSPORTATION

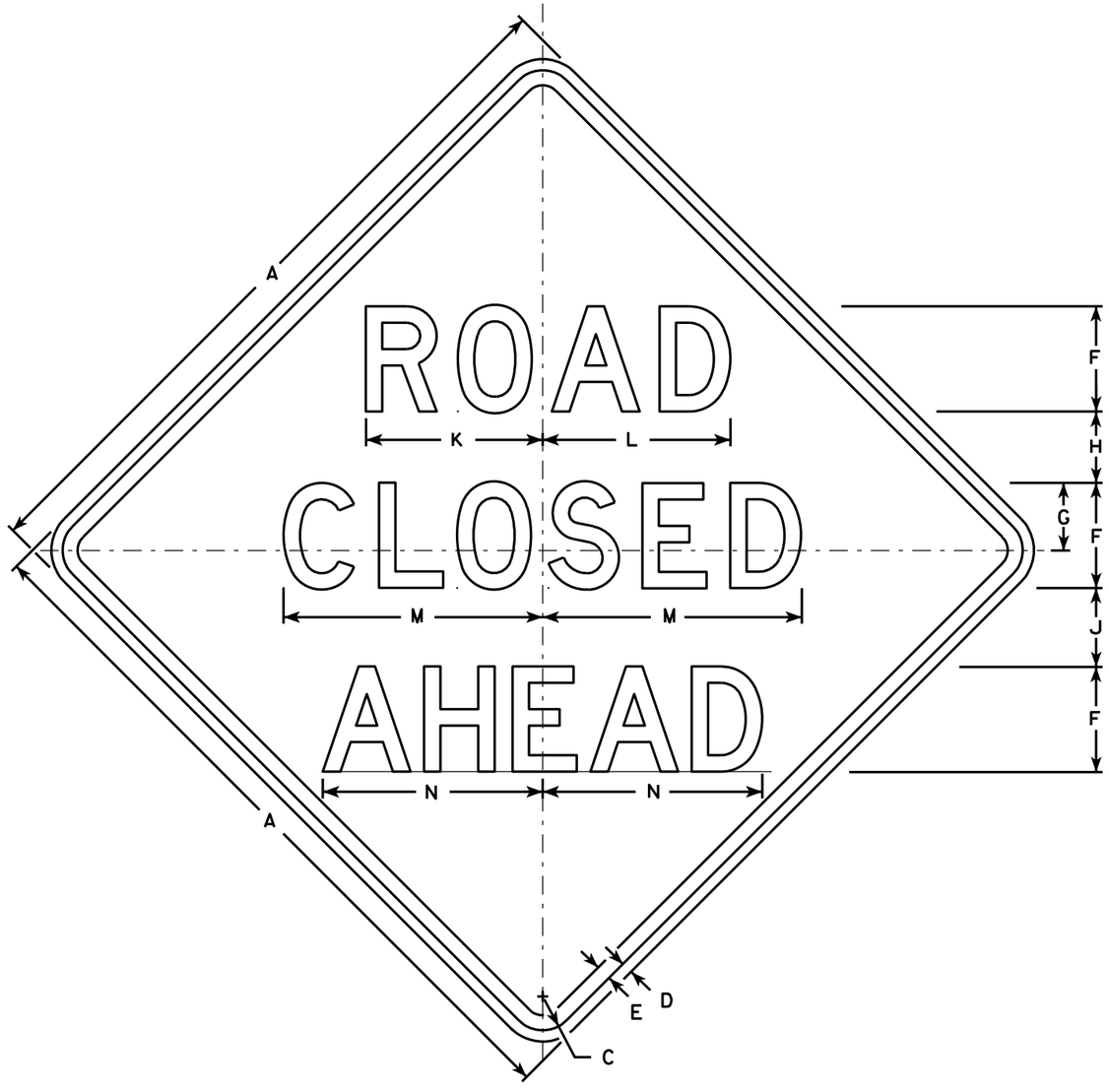
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

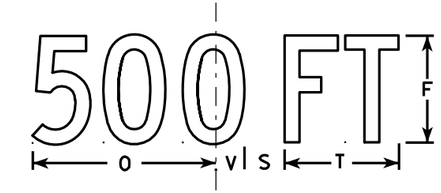
PROJECT NO:

SHEET NO: E

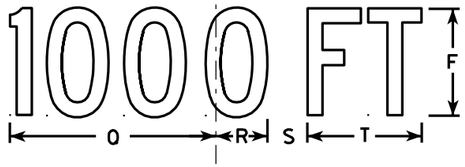
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



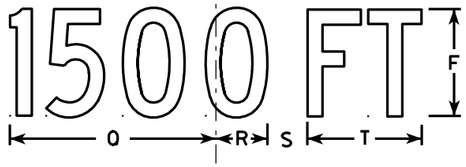
W20-3A



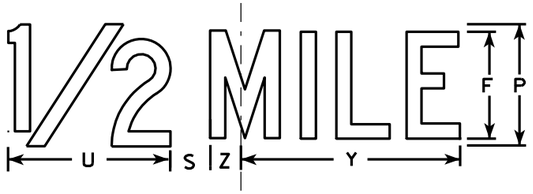
W20-3D



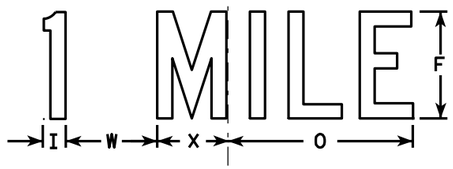
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

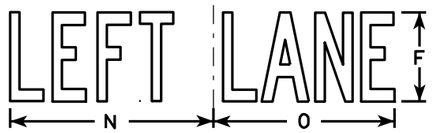
APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 229 | E

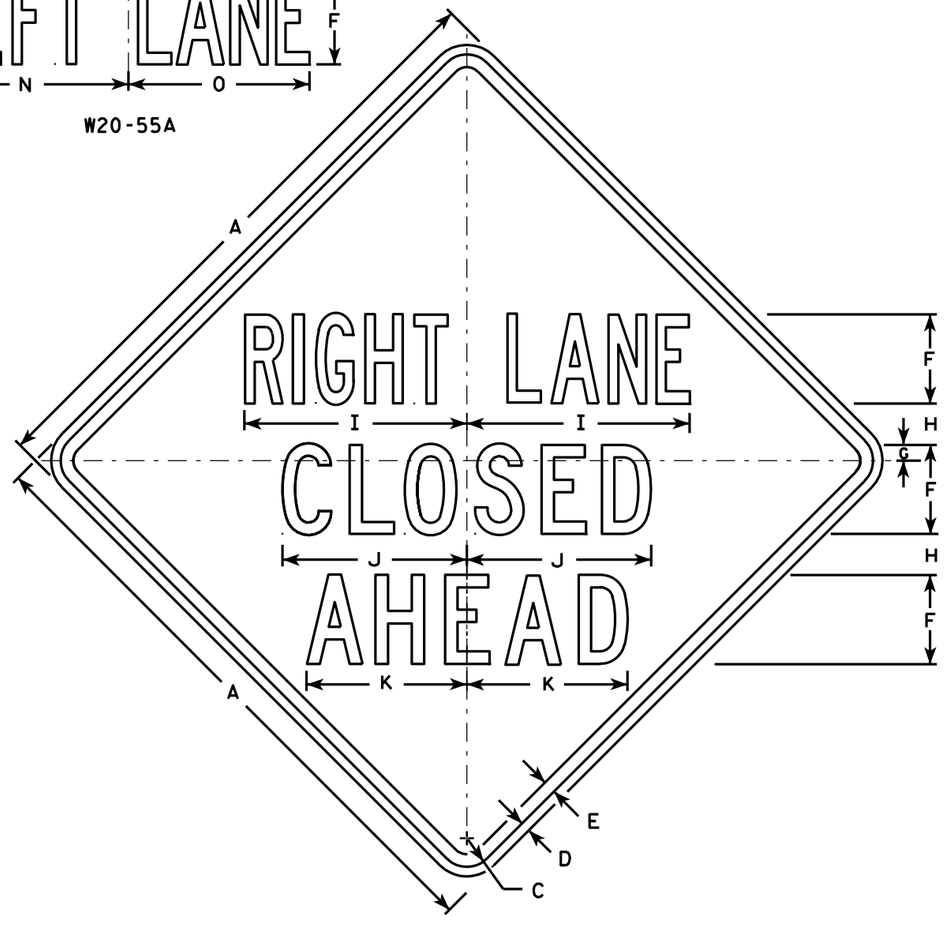
7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42

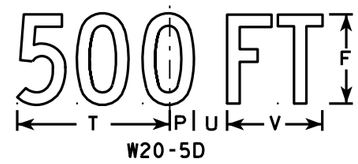
W20-56A



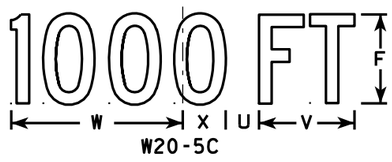
W20-55A



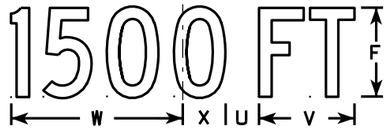
W20-5A



W20-5D

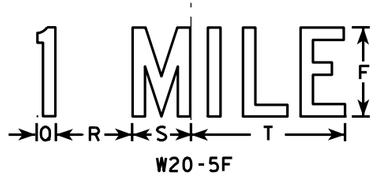


W20-5C



W20-5B

W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

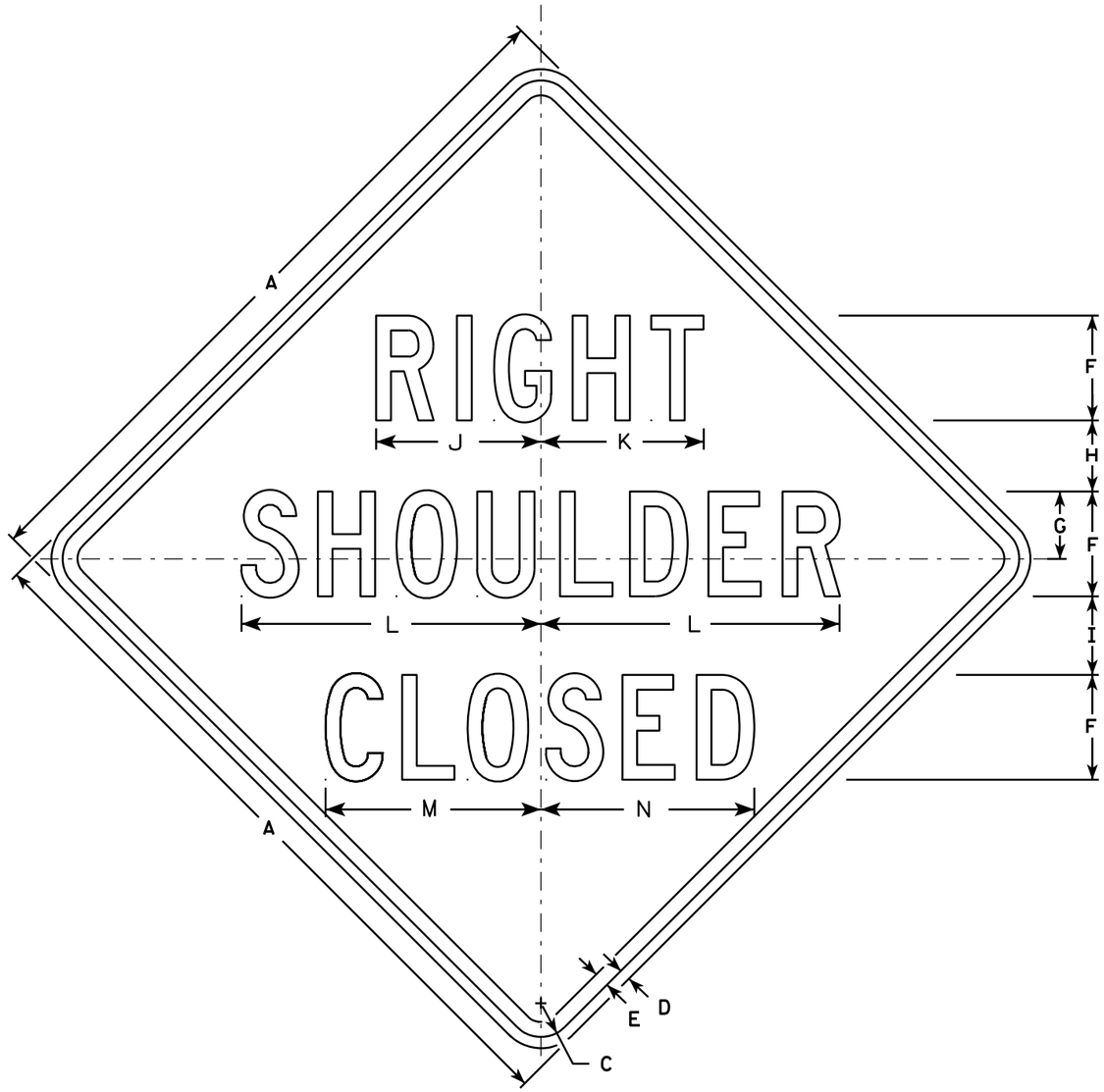
APPROVED Matthew R Rauch
for State Traffic Engineer

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

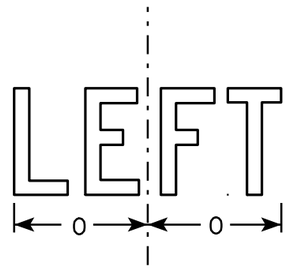
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W21-5A



W21-5AL

NOTES

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

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	4	7 7/8	7 3/4	14 1/4	10 1/4	10 1/8	6 1/4												9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0

STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5A.3

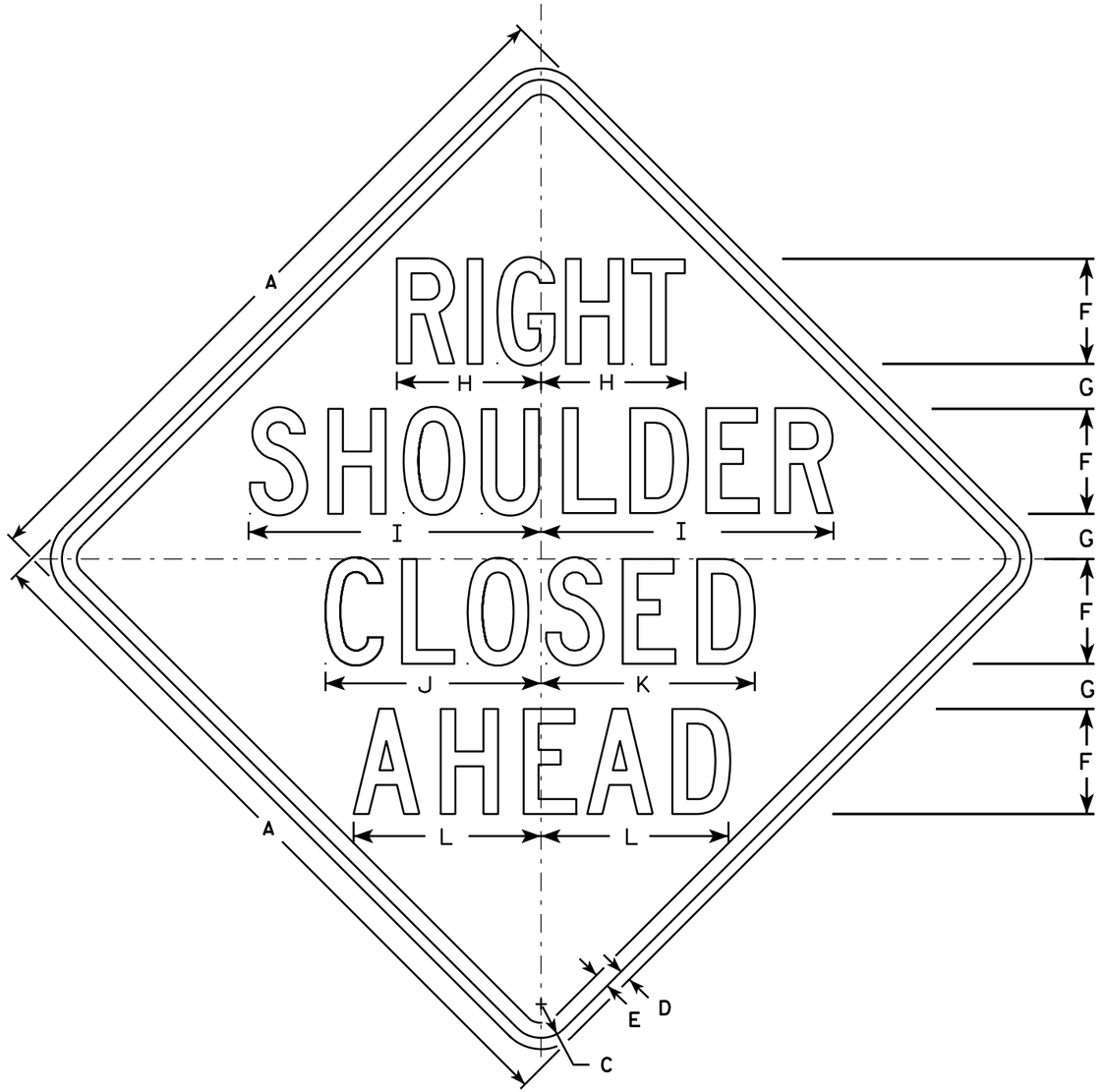
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W215A.DGN PLOT DATE : 21-MAR-2011 09:02 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

WISDOT/CADDS SHEET 42

7

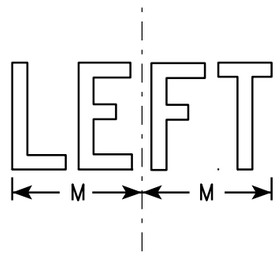
7



W21-5B

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.



W21-5BL

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

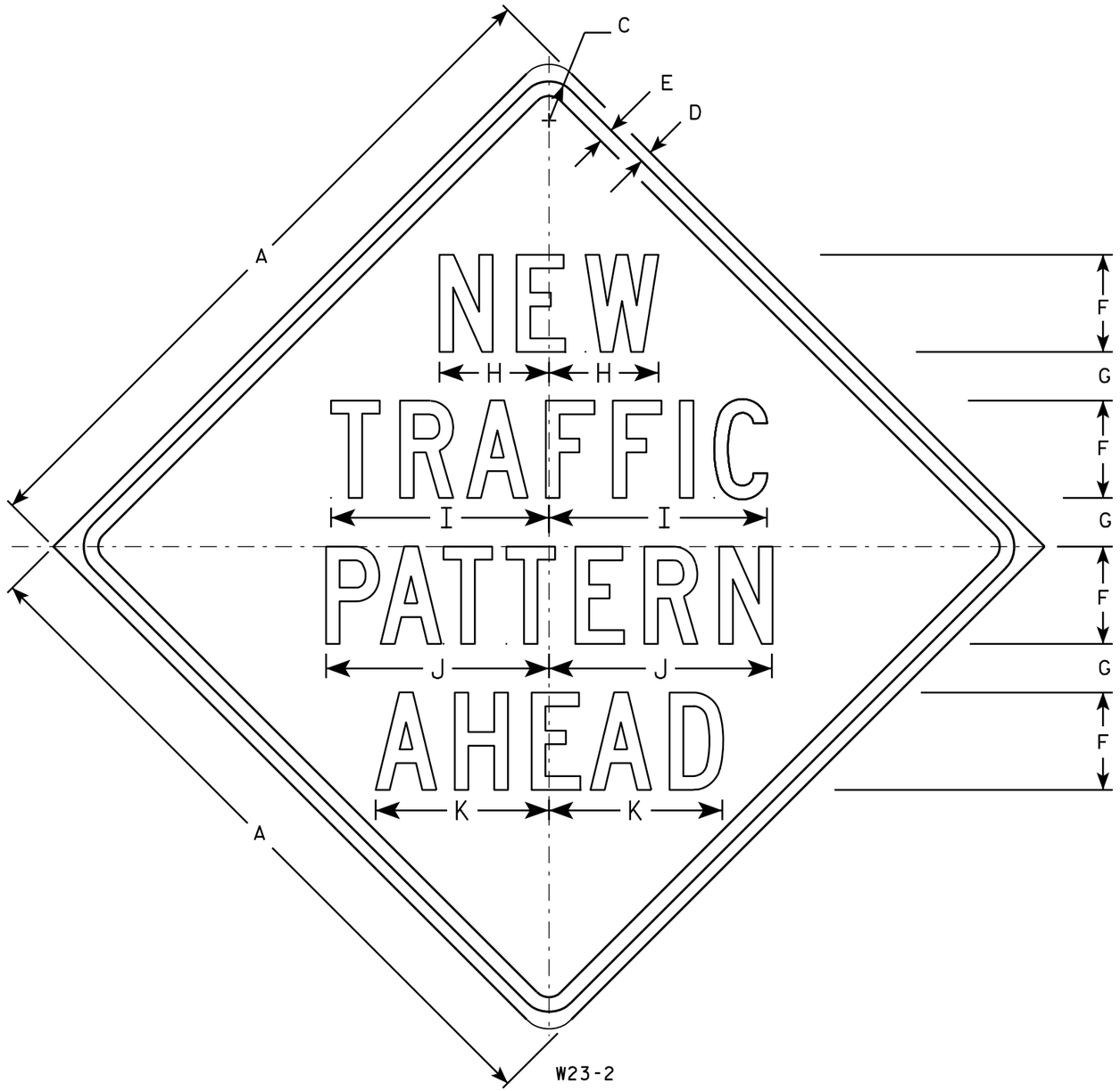
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5B.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 232	E



NOTES

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

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

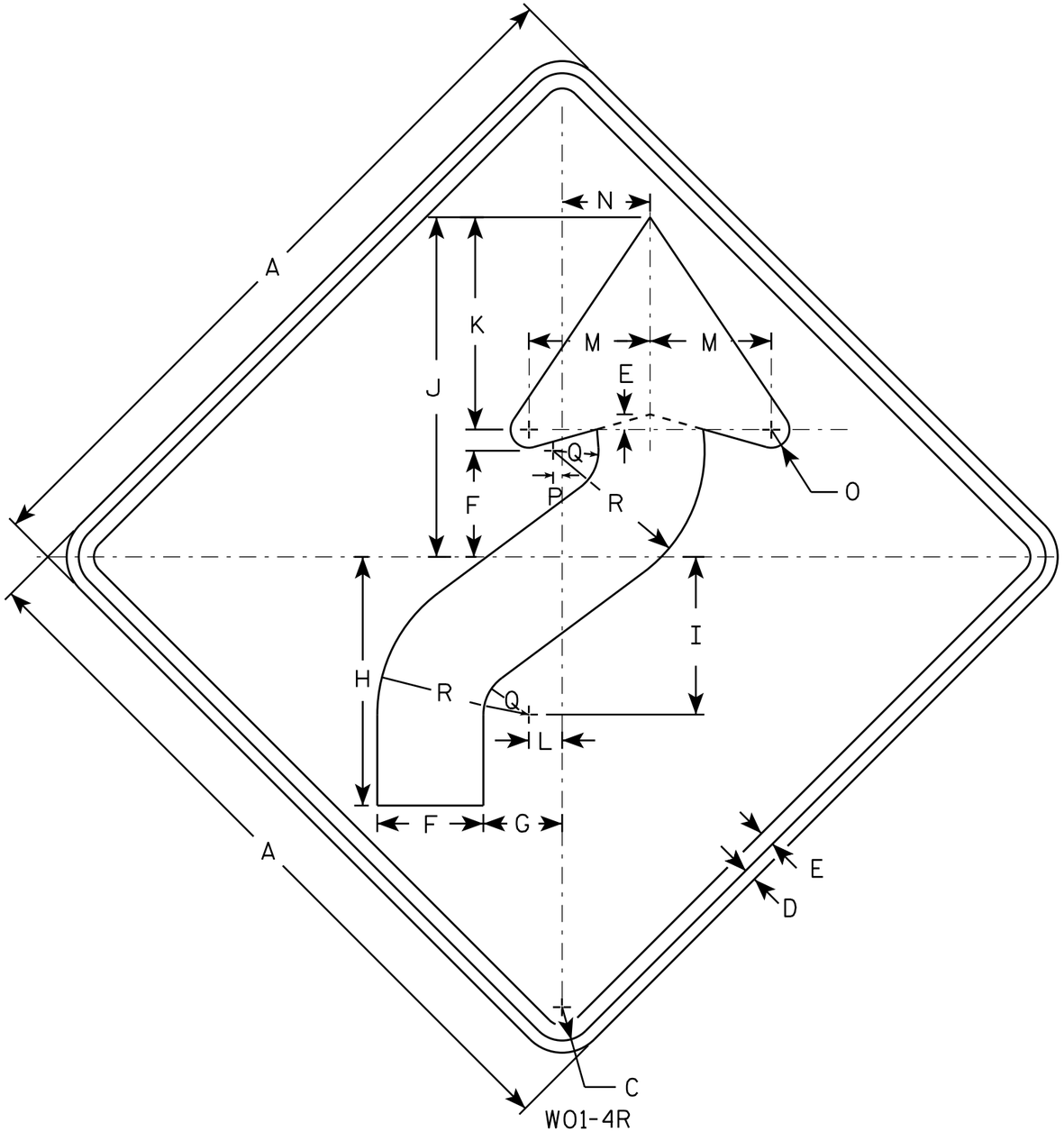
STANDARD SIGN
W23-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W23-2.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 233 | E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

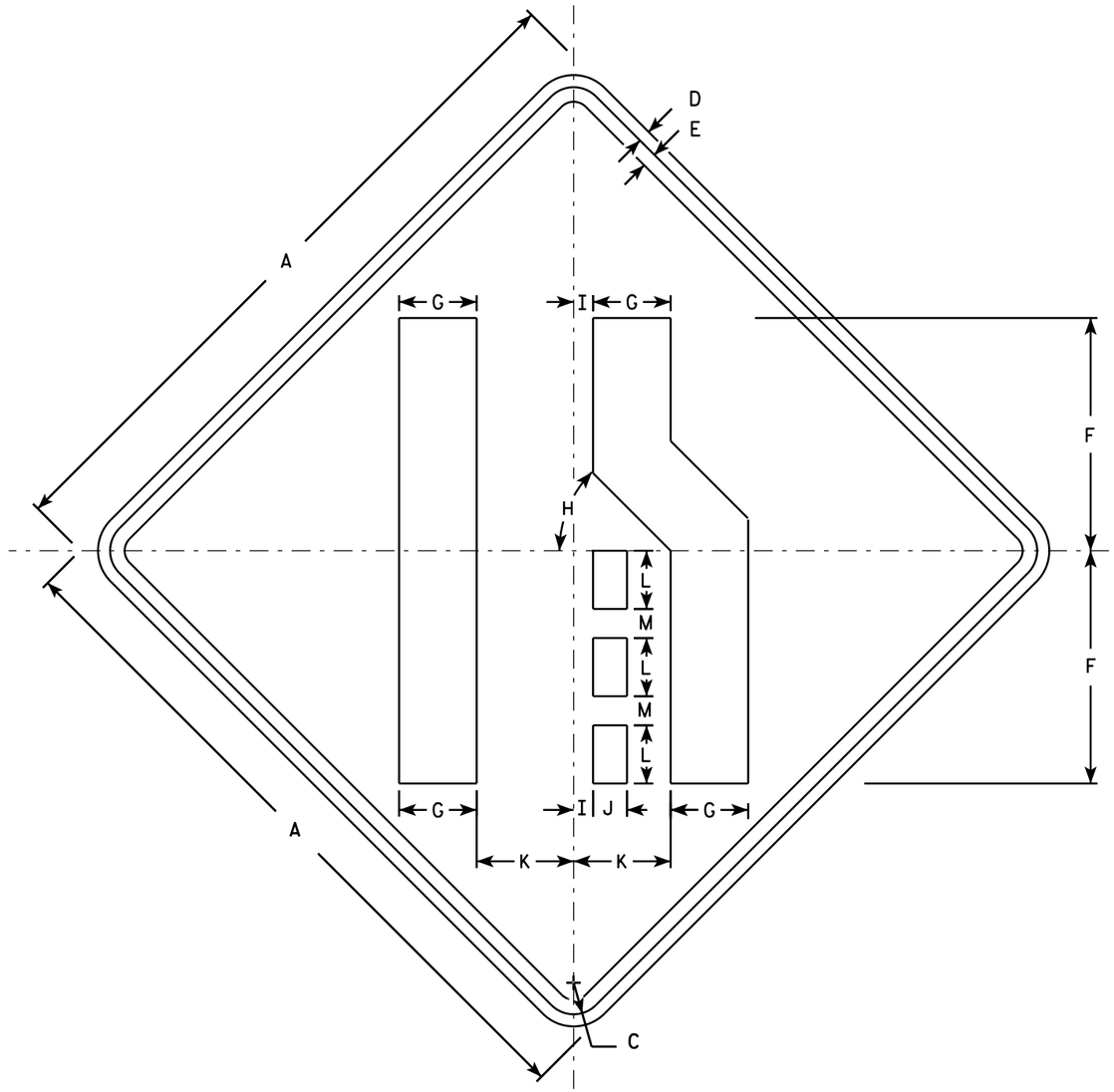
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

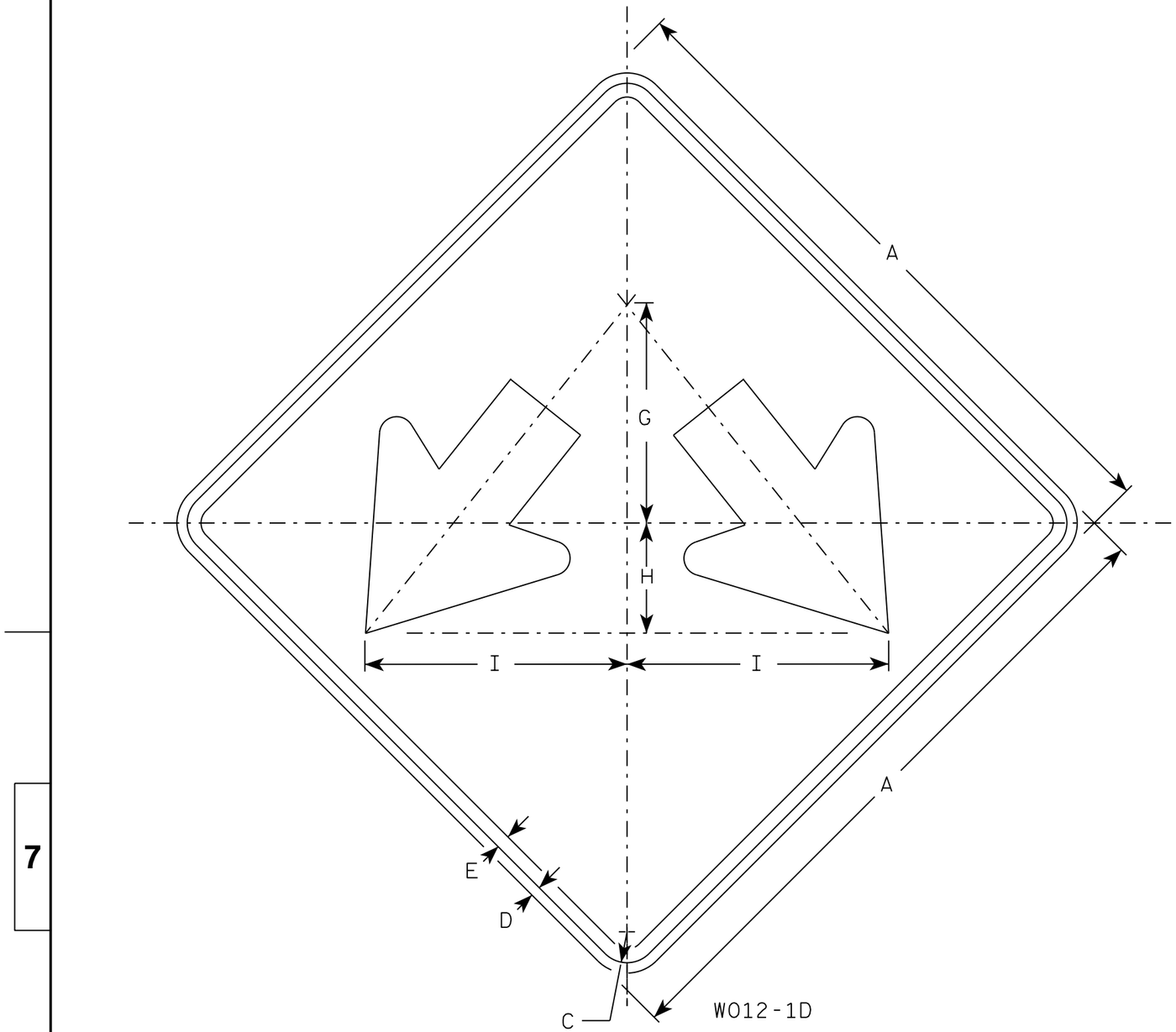
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 235 W04-2.1

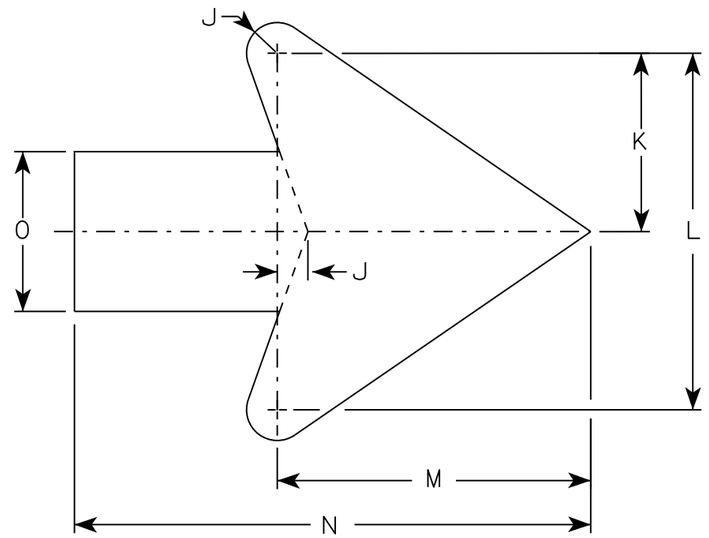
PROJECT NO: | SHEET NO: E



W012-1D

NOTES

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



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	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

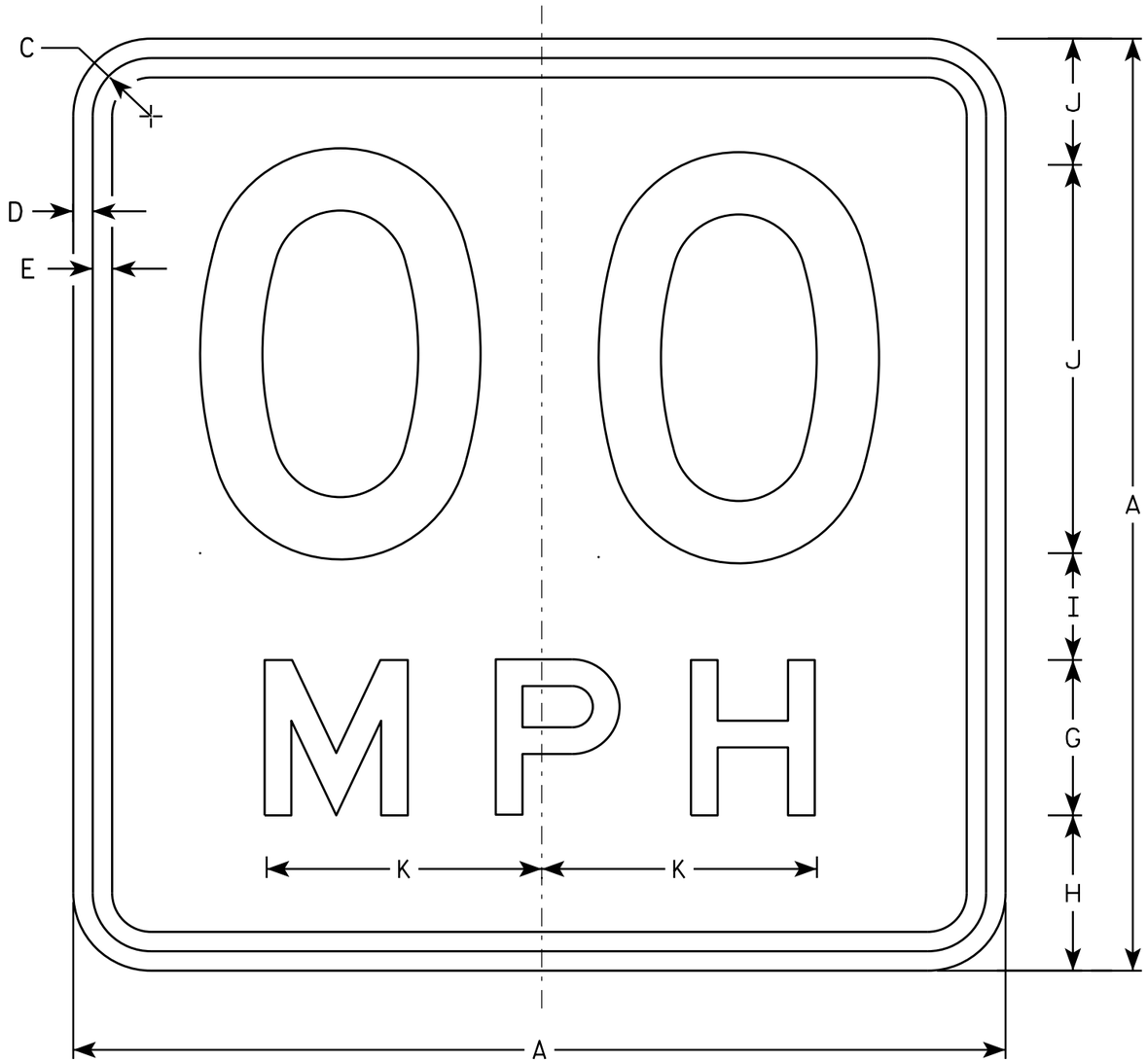
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/28/16 PLATE NO W012-1D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CADfiles\Projects\tr_stdplate\W0121D.DGN PLOT DATE : 11-AUG-2016 11:28 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.621375:1.000000



W013-1

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 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

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	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

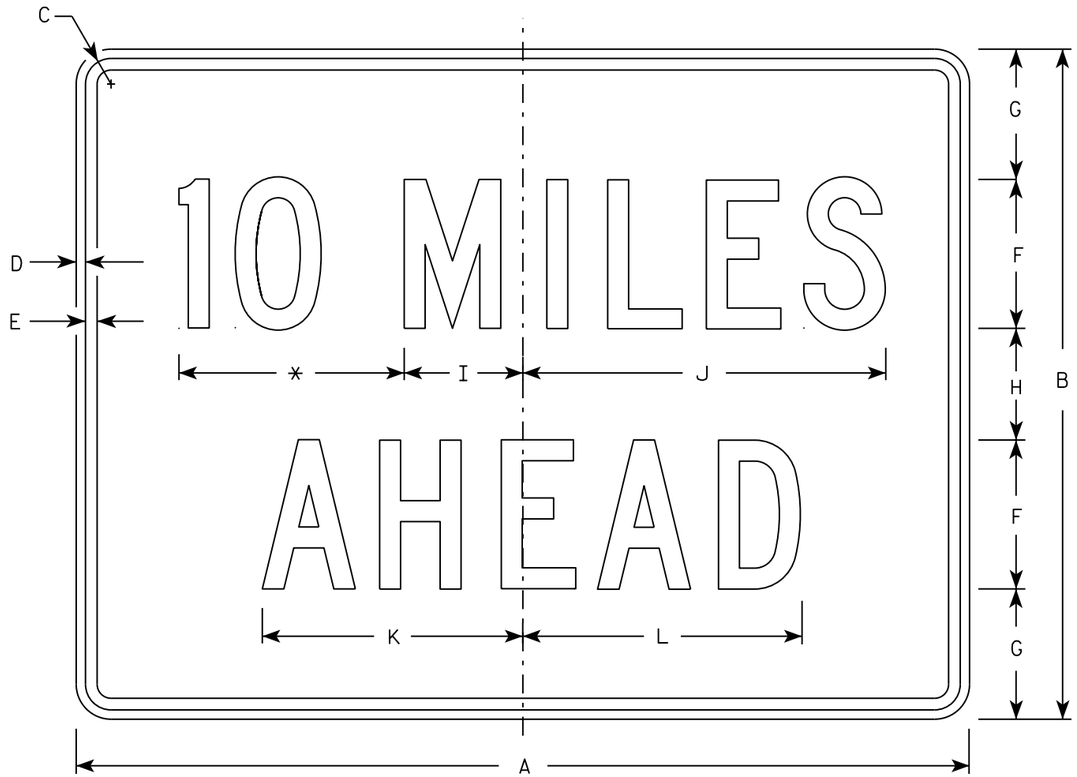
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

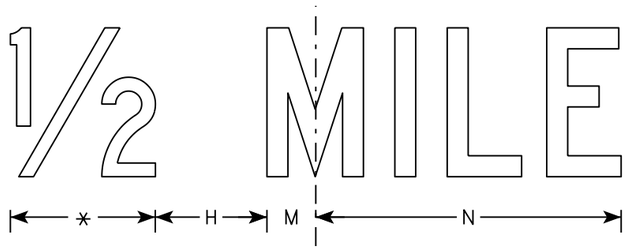
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 237 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W057-52



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.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 238	E

DIVISION 2 (STAGE 2): CTH H

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
10+23	1023	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10+50	1050	27	1	0	4	0	1	0	2	0	1	3	0	0	-2
10+62	1062	12	3	0	6	0	1	0	2	0	2	5	0	0	-4
11+00	1100	38	3	0	9	0	4	0	10	0	6	18	0	0	-12
11+15	1115	15	1	0	10	0	1	0	5	0	7	24	0	0	-17
11+40	1140	25	1	0	14	0	1	0	11	0	8	37	0	0	-29
11+65	1165	25	1	0	21	0	1	0	16	0	9	56	0	0	-48
11+97	1197	32	0	0	0	0	1	0	13	0	9	71	0	0	-62
		Column totals					9	0	59	0					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor]

9

9

DIVISION 3 (STAGE 3A): USH 12

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
107+79	10779	0	14	15	17	0	0	0	0	0	0	0	0	0	0
108+00	10800	21	36	26	68	0	20	16	34	0	20	41	0	0	-37
108+50	10850	50	46	21	47	0	76	43	107	0	96	169	0	0	-132
109+00	10900	50	46	22	37	0	85	40	78	0	181	262	0	0	-181
109+50	10950	50	33	20	17	0	73	39	50	0	254	323	0	0	-208
110+00	11000	50	25	14	3	0	54	31	19	0	308	345	0	0	-208
110+50	11050	50	18	10	0	0	40	22	3	0	348	349	0	0	-192
111+00	11100	50	23	9	0	0	38	18	0	0	387	349	0	0	-172
111+50	11150	50	22	7	0	0	42	15	0	0	429	349	0	0	-145
112+00	11200	50	30	6	0	0	48	12	0	0	477	349	0	0	-108
112+50	11250	50	20	5	0	0	46	11	0	0	523	349	0	0	-73
113+00	11300	50	18	5	0	0	35	10	0	0	558	349	0	0	-48
113+50	11350	50	16	4	0	0	31	9	0	0	589	349	0	0	-25
114+00	11400	50	13	4	0	0	26	7	0	0	615	349	0	0	-7
114+50	11450	50	11	3	1	0	22	6	1	0	637	350	0	0	8
115+00	11500	50	10	3	0	0	19	5	1	0	657	350	0	0	21
115+21	11521	21	9	1	0	0	7	1	0	0	664	350	0	0	27
		Column totals					664	287	292	0					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor]

9

9

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 090101-EW - 090102
PLOT DATE : 1/30/2018 10:49 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

DIVISION 3 (STAGE 3A): CTH H

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
13+42	1342	0	48	17	0	0	0	0	0	0	0	0	0	0	0
13+50	1350	8	43	17	1	0	13	5	0	0	13	0	0	0	8
14+00	1400	50	23	5	3	0	61	21	3	0	74	4	0	0	45
14+50	1450	50	13	2	1	0	33	7	4	0	108	9	0	0	66
15+00	1500	50	13	2	1	0	24	4	2	0	132	12	0	0	84
15+50	1550	50	13	2	1	0	24	4	2	0	156	14	0	0	101
16+00	1600	50	12	2	2	0	22	4	3	0	179	17	0	0	116
16+50	1650	50	12	3	2	0	22	5	4	0	201	22	0	0	129
16+54	1654	4	13	3	1	0	2	0	0	0	202	22	0	0	130
17+00	1700	47	12	2	1	0	21	4	3	0	224	25	0	0	144
17+29	1729	29	11	2	2	0	12	3	2	0	236	27	0	0	152
17+50	1750	1	11	2	2	0	0	0	0	0	236	27	0	0	152
17+57	1757	7	11	2	2	0	3	1	1	0	239	28	0	0	153
17+82	1782	25	10	2	4	0	10	2	3	0	249	31	0	0	157
18+00	1800	18	12	2	2	0	8	2	2	0	256	34	0	0	160
18+39	1839	39	8	4	0	0	15	4	2	0	271	36	0	0	169
		Column totals					271	66	30	0					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor]

9

9

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 090101-EW - 090103
PLOT DATE : 1/30/2018 10:49 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

DIVISION 4 (STAGE 3B): USH 12

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
100+81	10081	0	30	12	0	0	0	0	0	0	0	0	0	0	0
101+00	10100	19	101	26	0	0	47	14	0	0	47	0	0	0	33
101+50	10150	50	23	6	22	0	115	30	21	0	163	25	0	0	94
102+00	10200	50	21	3	23	0	41	8	42	0	204	75	0	0	77
102+50	10250	50	20	3	33	0	38	5	52	0	242	137	0	0	48
103+00	10300	50	22	3	32	0	39	5	60	0	281	209	0	0	10
103+50	10350	50	23	3	38	0	42	5	65	0	322	287	0	0	-32
104+00	10400	50	24	3	35	0	44	5	68	0	367	369	0	0	-75
104+50	10450	50	20	3	23	0	41	5	54	0	408	434	0	0	-103
105+00	10500	50	18	3	9	0	35	5	30	0	443	469	0	0	-109
105+14	10514	14	17	0	0	0	9	1	3	0	452	473	0	0	-104
		Column totals					452	83	394	0					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor]

9

9

PROJECT NO: 1080-17-70 | HWY: USH 12 | COUNTY: WALWORTH | EARTHWORK | SHEET 242 | E

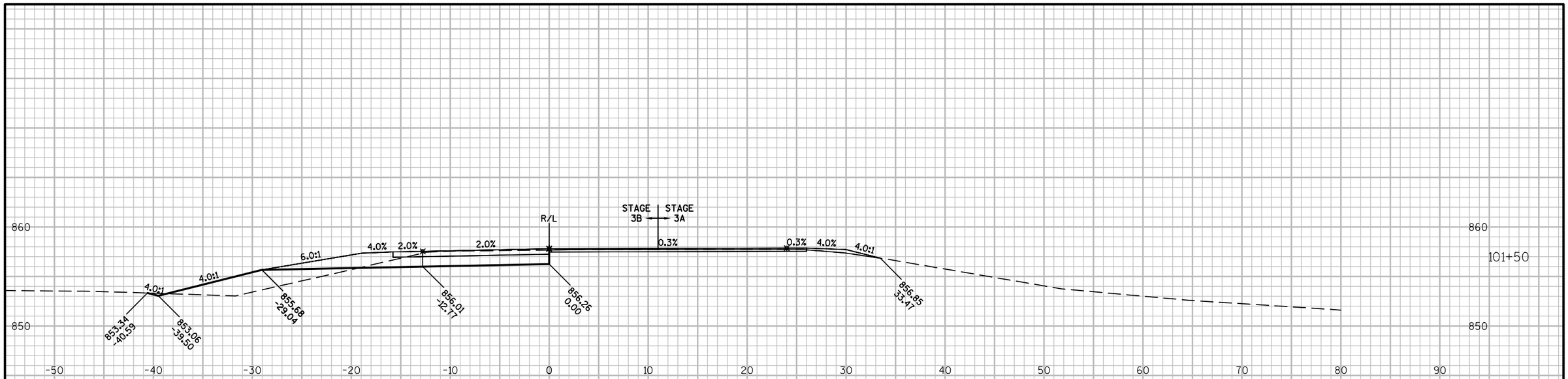
DIVISION 4 (STAGE 3B): CTH H

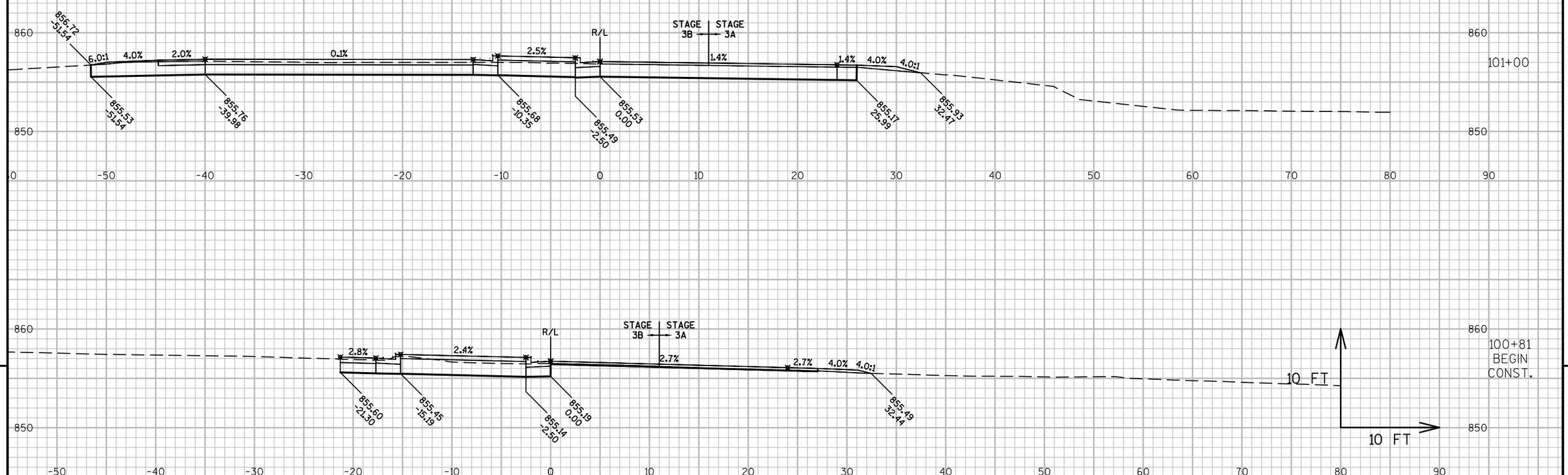
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Salvaged/ Unusable Pavement Material	AREA (SF) Fill	AREA (SF) EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Incremental Vol (CY) (Unadjusted) Salvaged/Unusable Pavement Material Note 2	Incremental Vol (CY) (Unadjusted) Fill Note 3	Incremental Vol (CY) (Unadjusted) EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded EBS Backfill 1.30 Note 4	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
11+97	1197	0	19	4	1	0	0	0	0	0	0	0	0	0	0
12+00	1200	3	22	4	1	0	2	0	0	0	2	0	0	0	1
12+50	1250	50	20	6	1	0	39	10	1	0	41	1	0	0	29
12+80	1280	30	72	18	0	0	51	14	0	0	92	2	0	0	67
Column totals							92	24	1	0					

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
6 - Mass Ordinate	If EBS to be backfilled with Cut or Borrow: [(Cut + EBS) - ((Fill) - (Reduced EBS in Fill)) * Fill Factor]

9

9





9

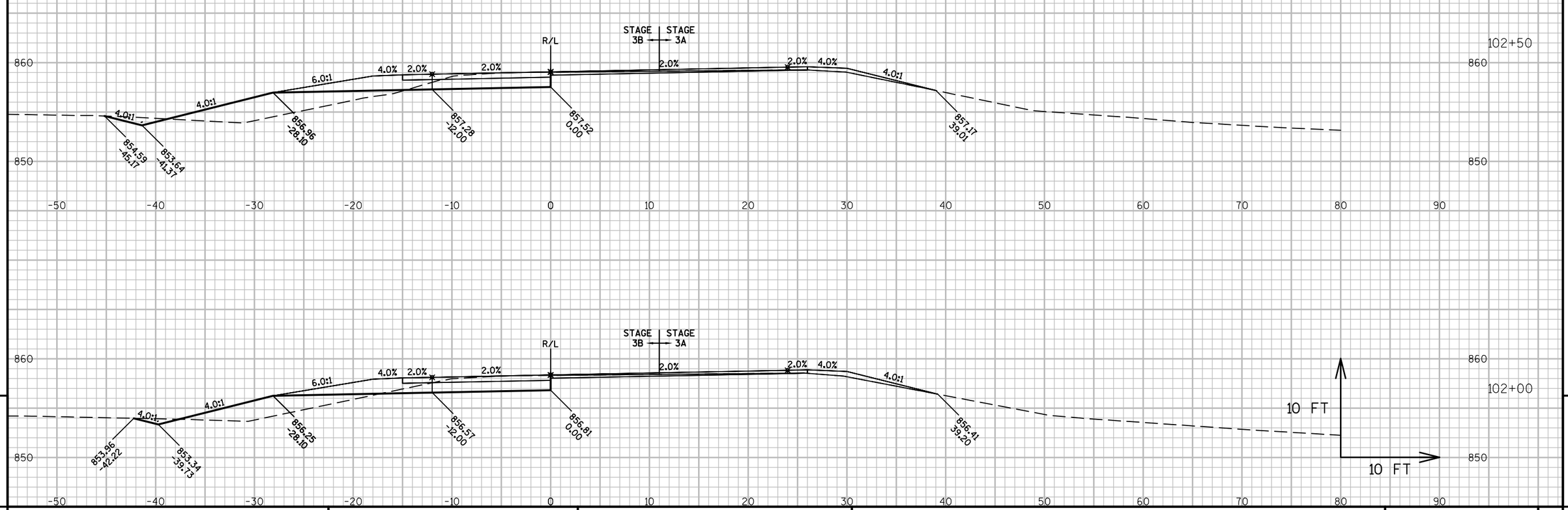
9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 244	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090201

PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49

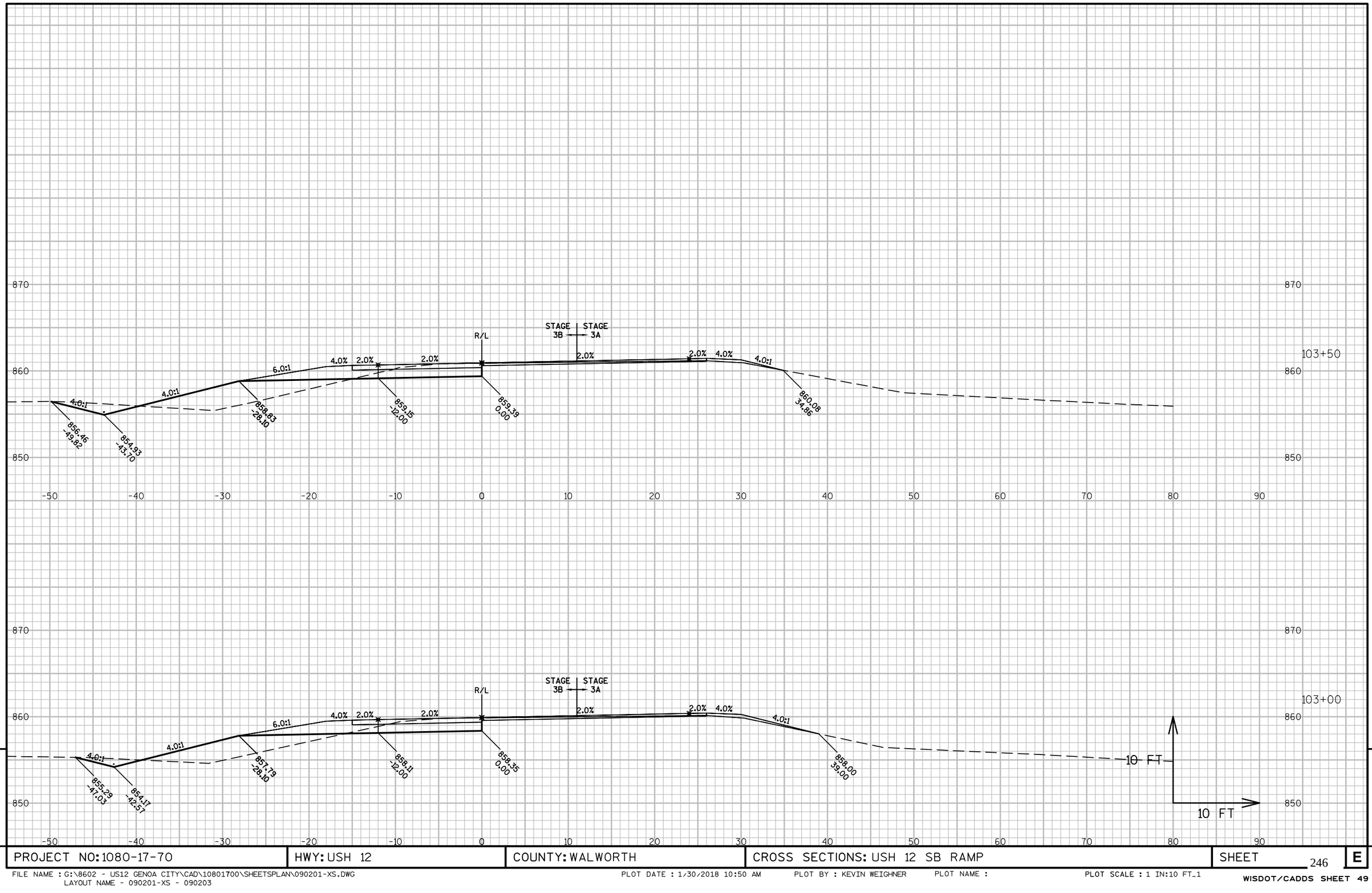


PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 245	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090202

PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49



9

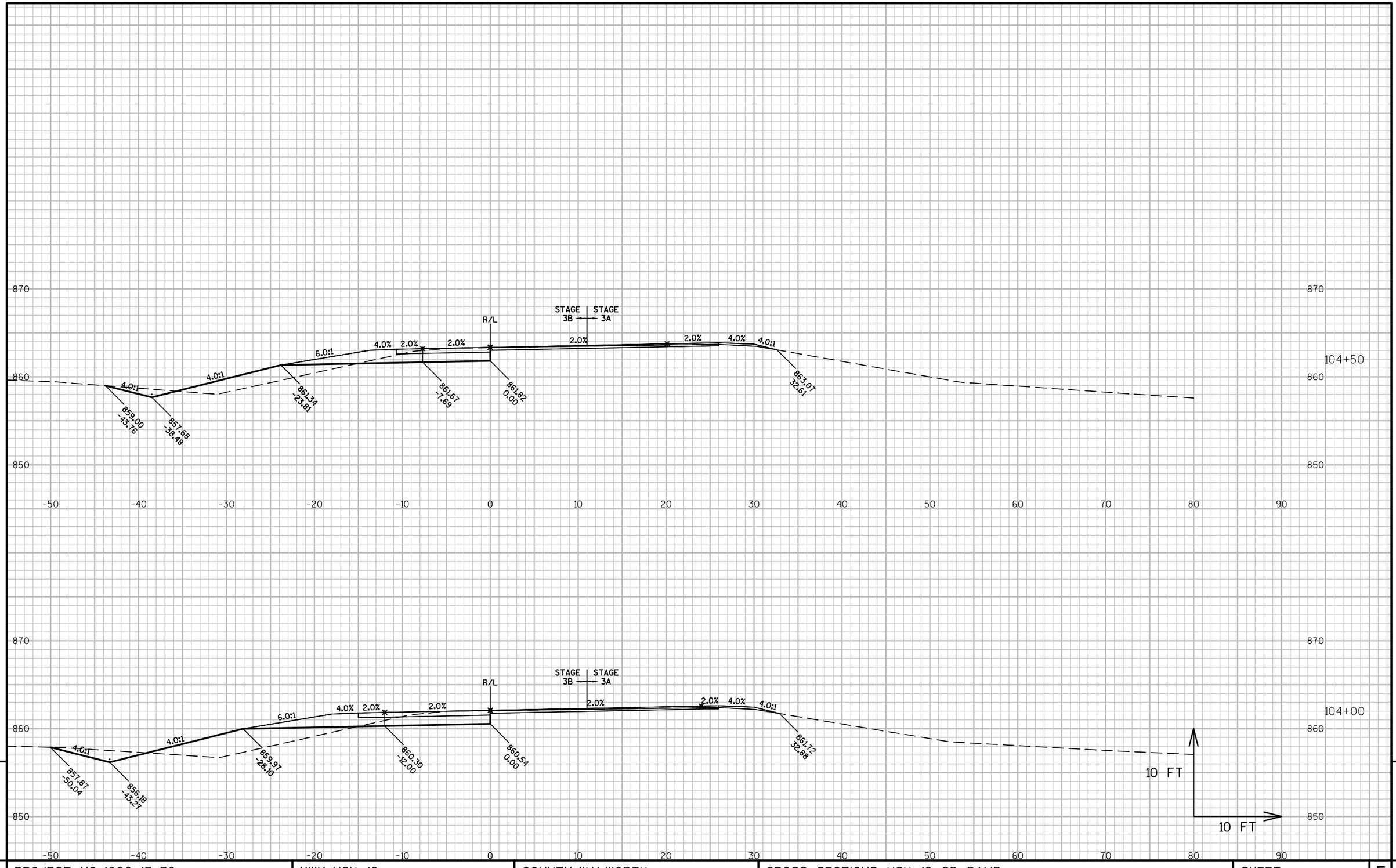
9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 246	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090203

PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49

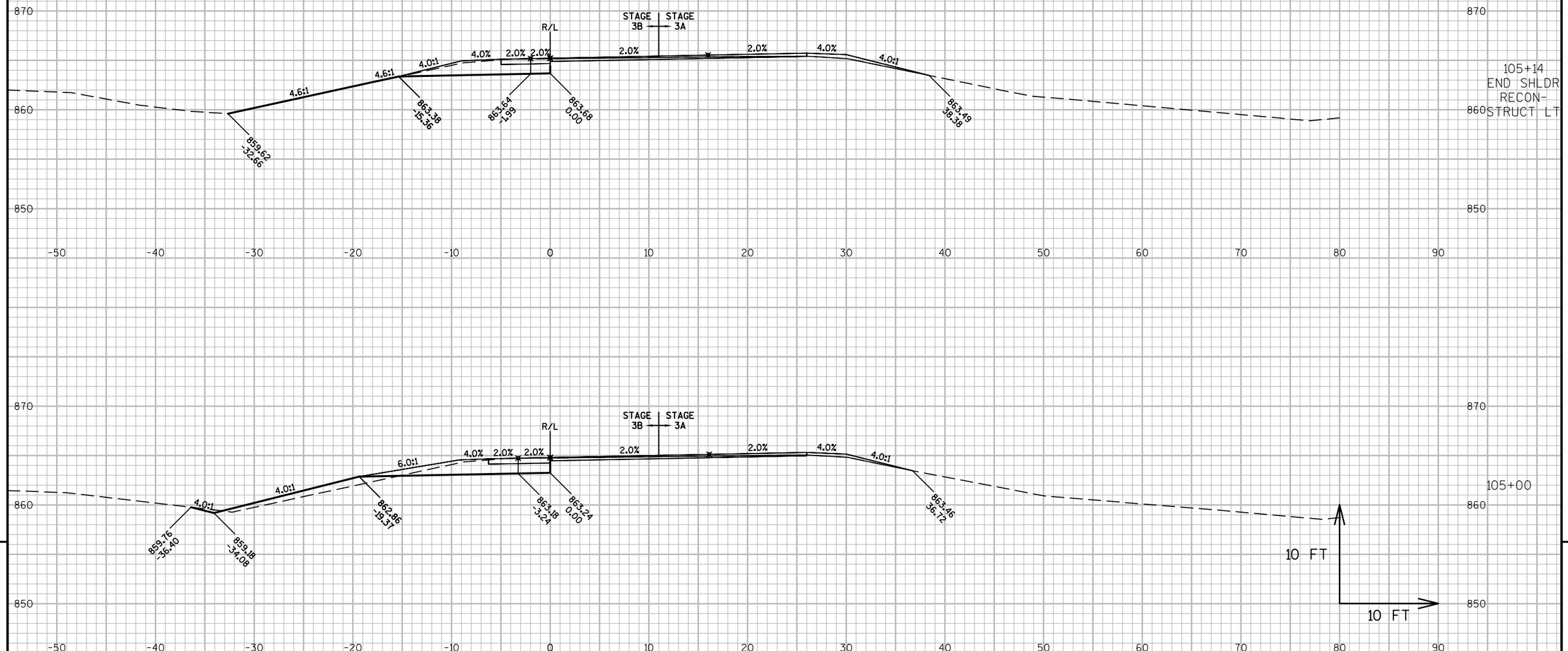


PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 247	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090204

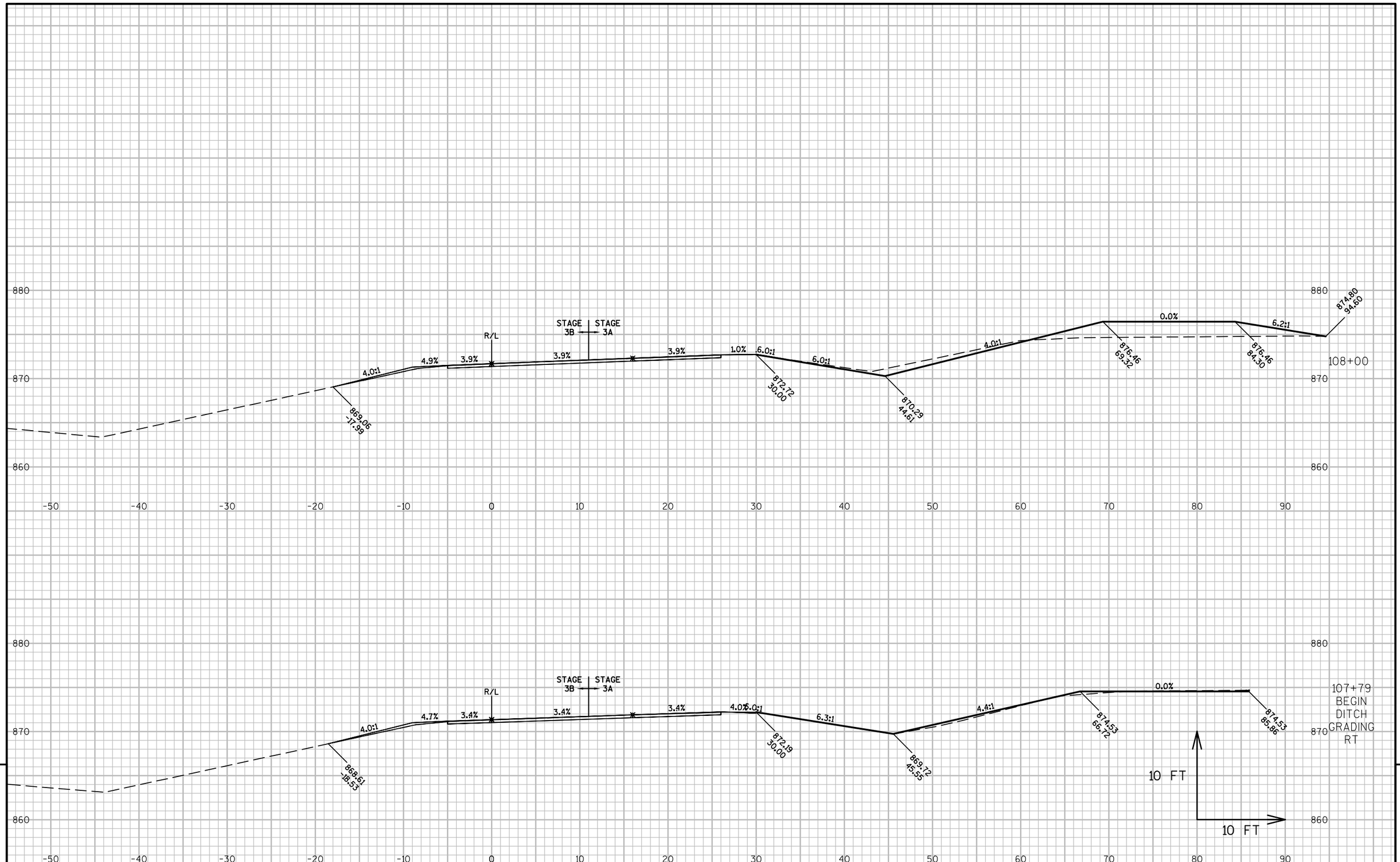
PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 248	E

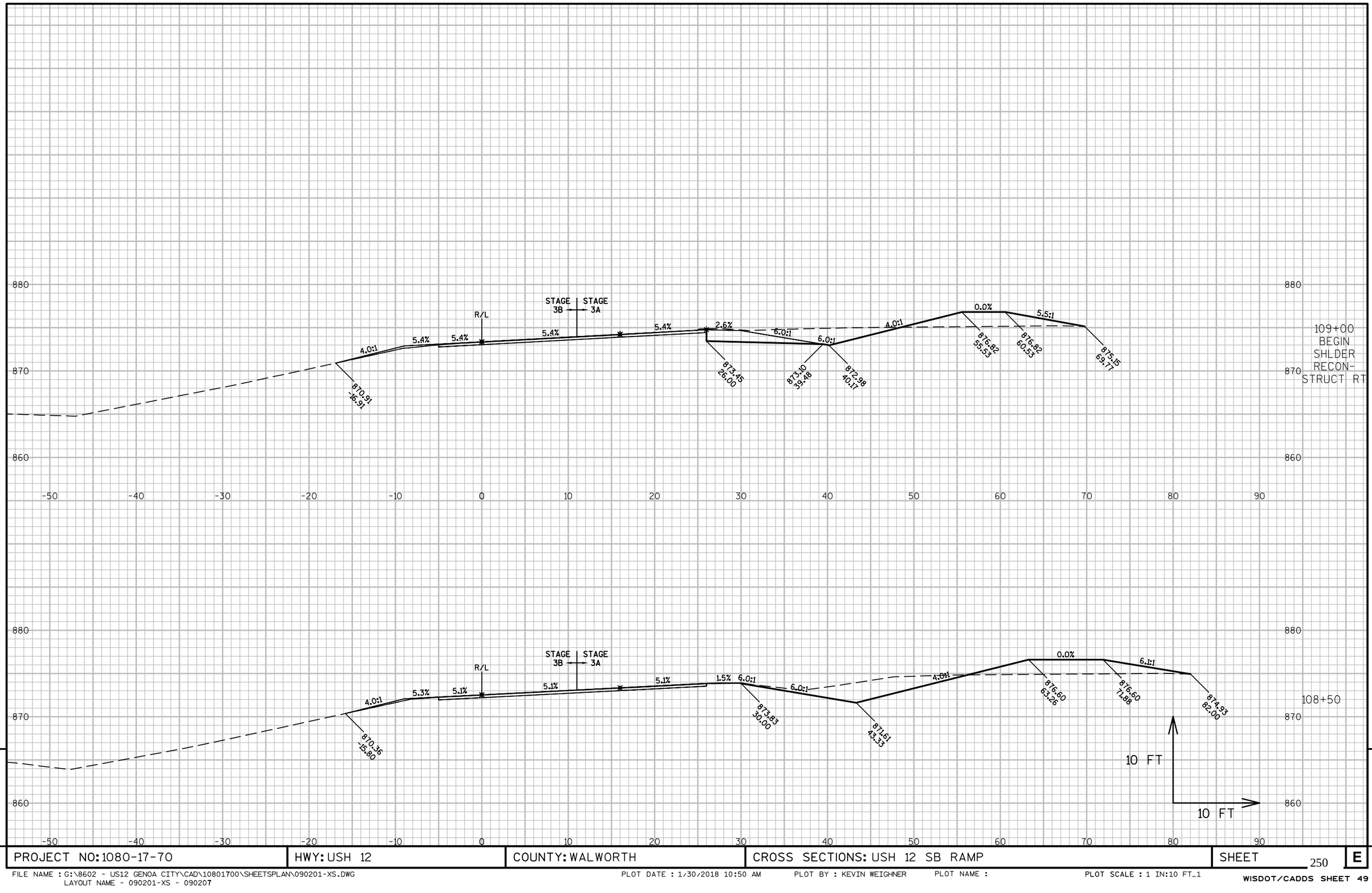


9

9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 249	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090206
PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1
WISDOT/CADDS SHEET 49



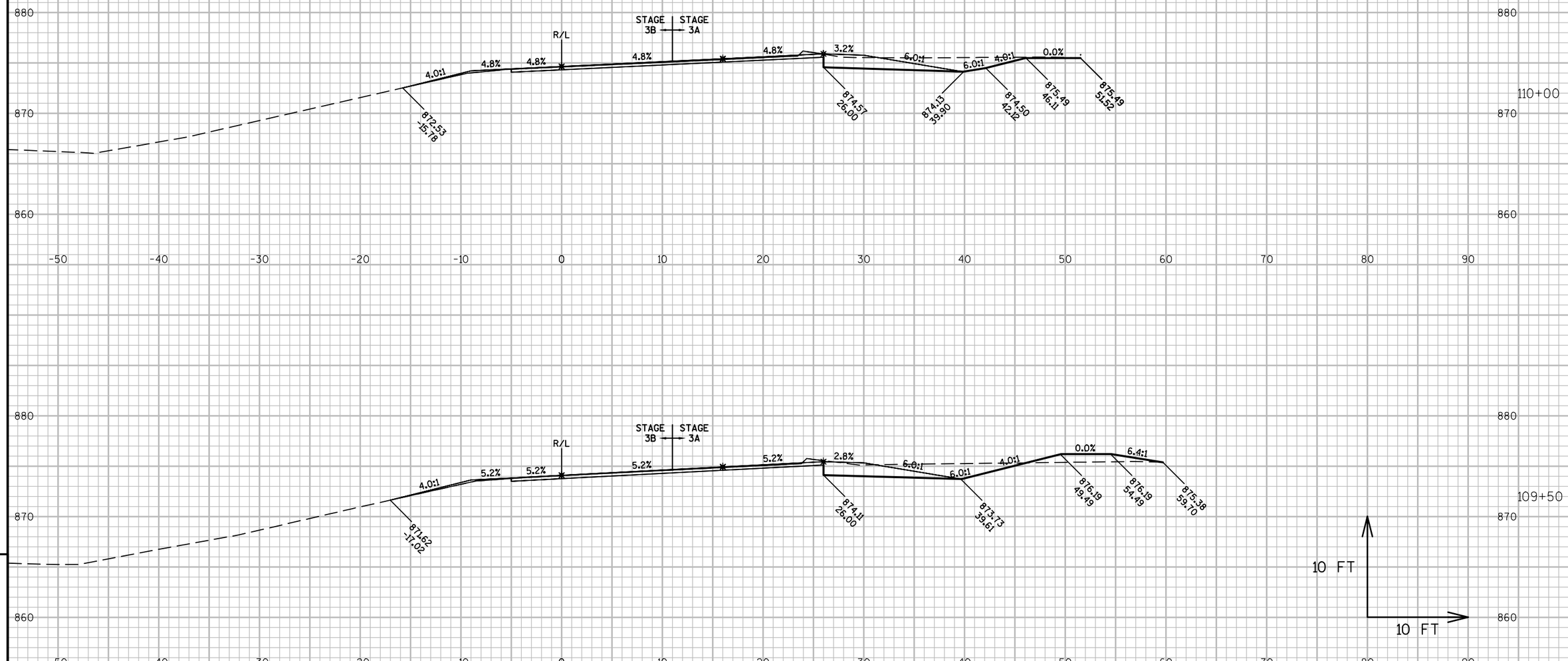
9

9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 250	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090207

PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

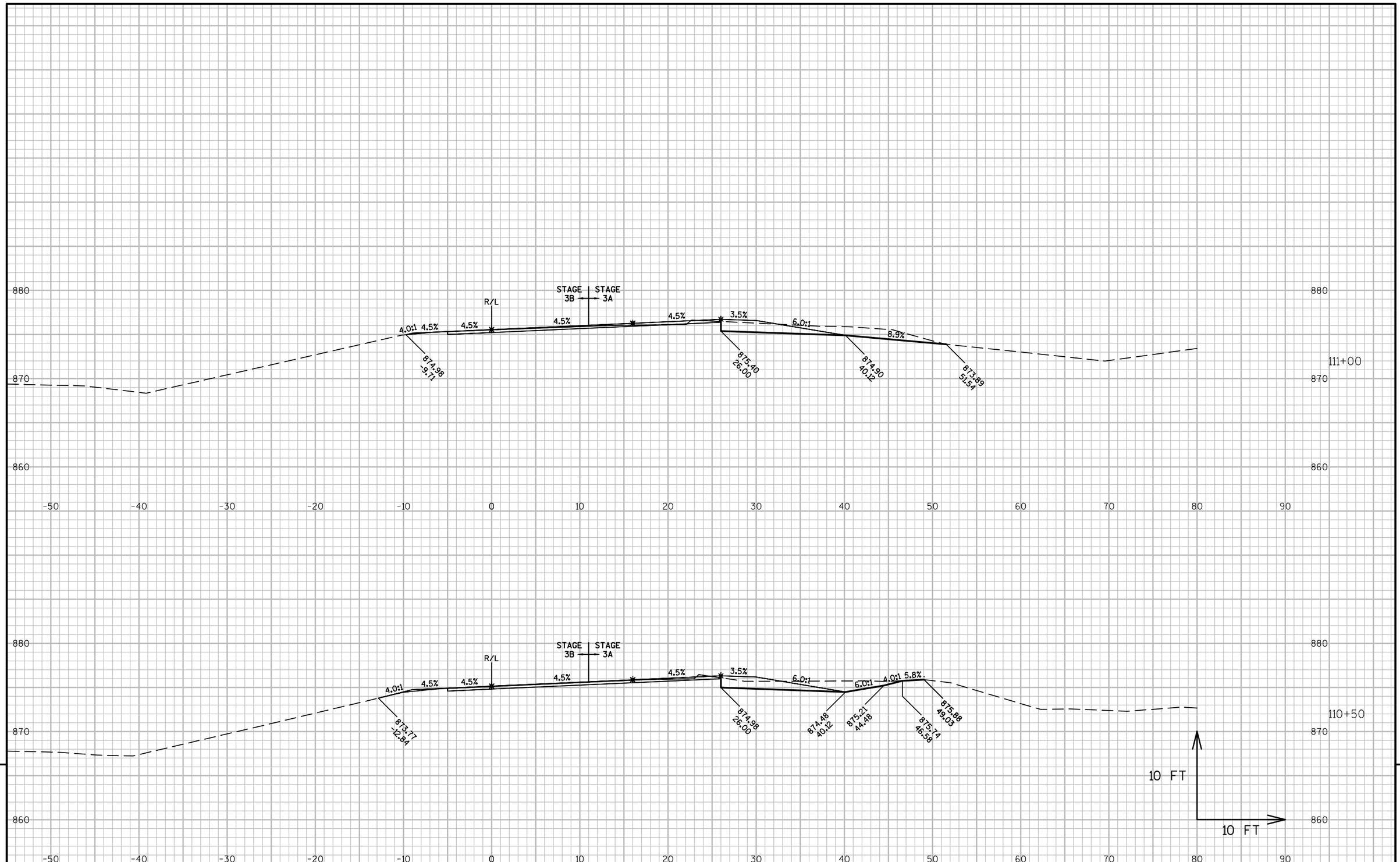


PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 251	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090208

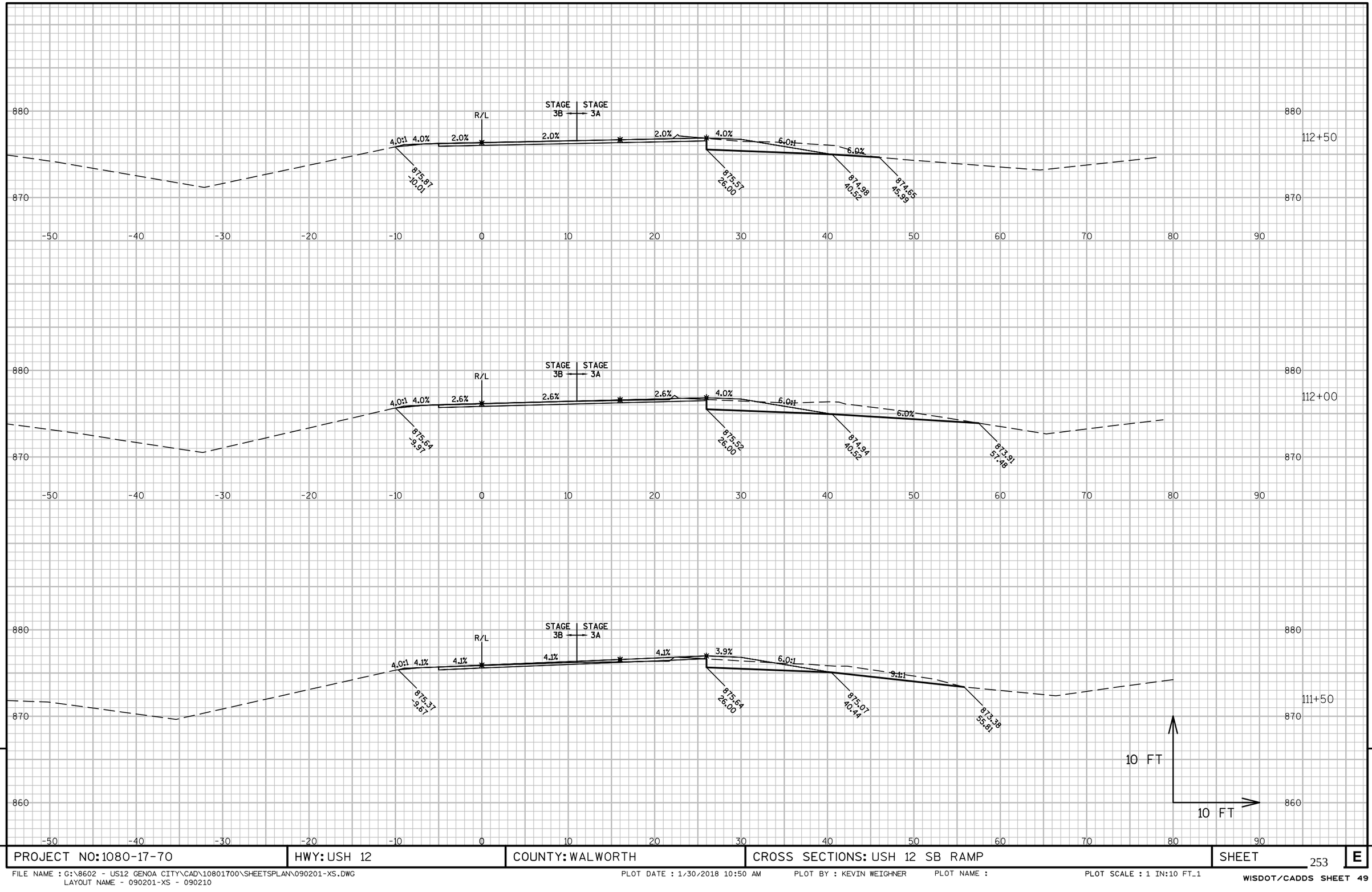
PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 252	E



9

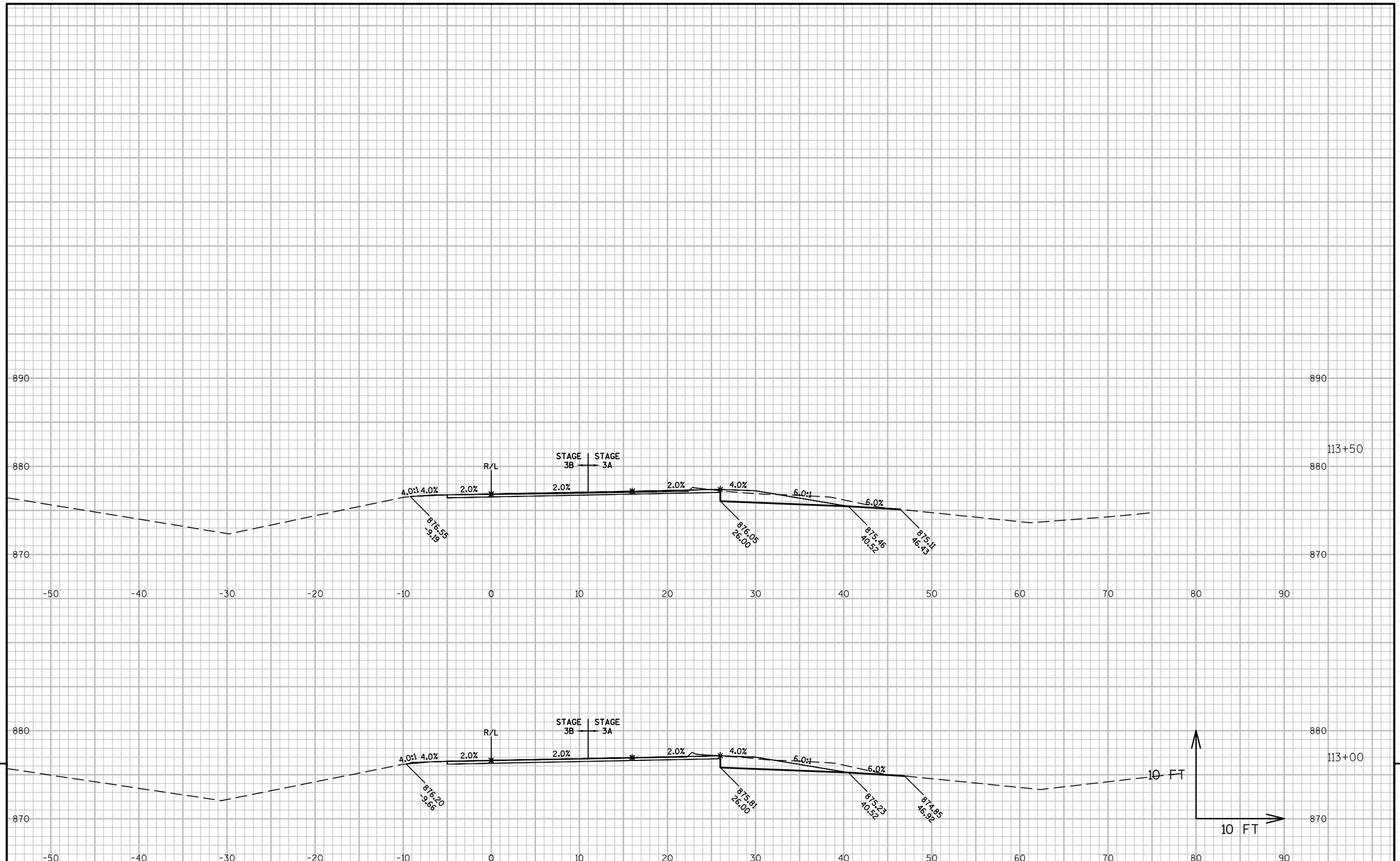
9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 253	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090210

PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1

WISDOT/CADDS SHEET 49

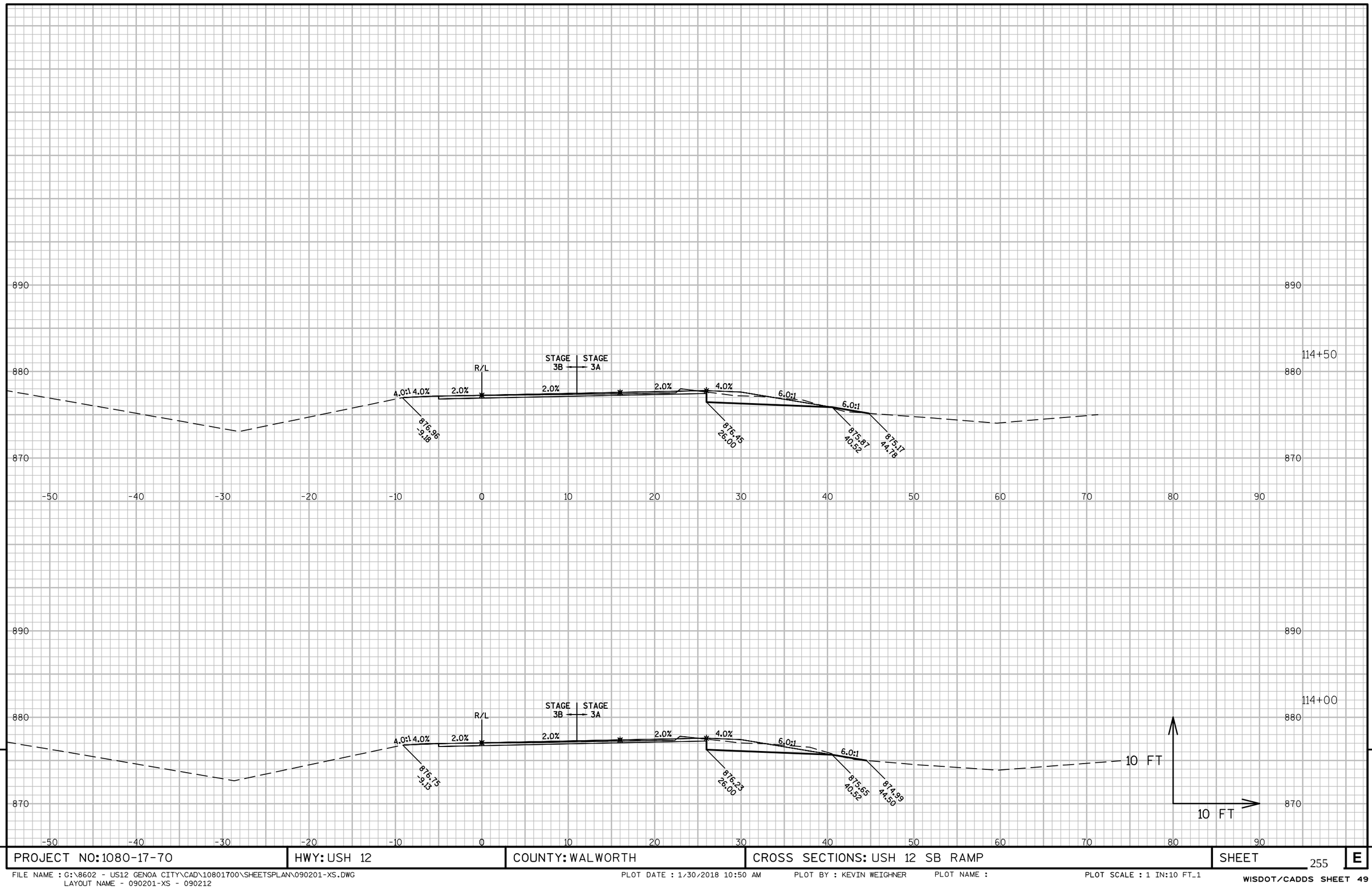


9

9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 254	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090211
PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1
WISDOT/CADDS SHEET 49

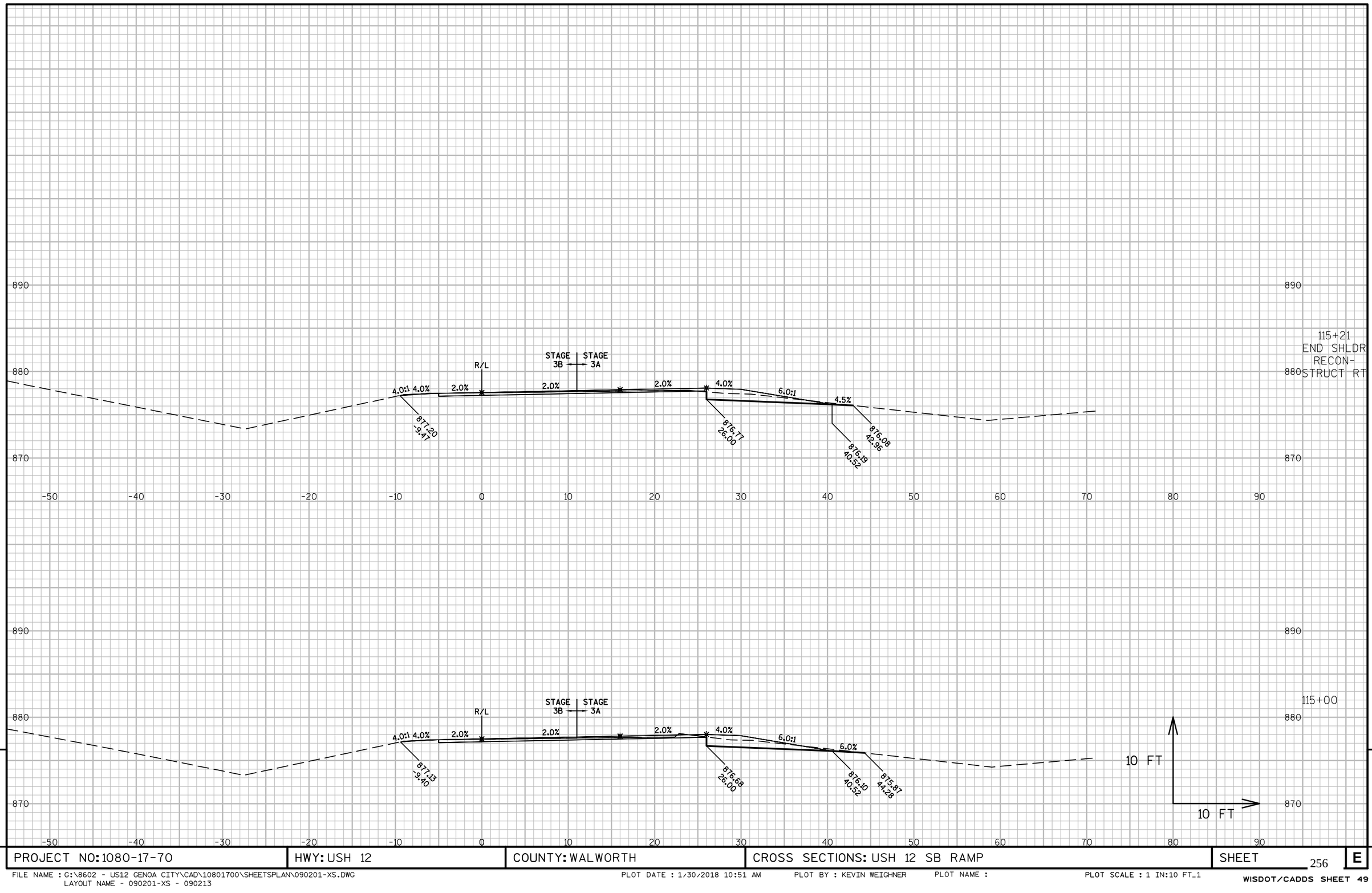


9

9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 255	E

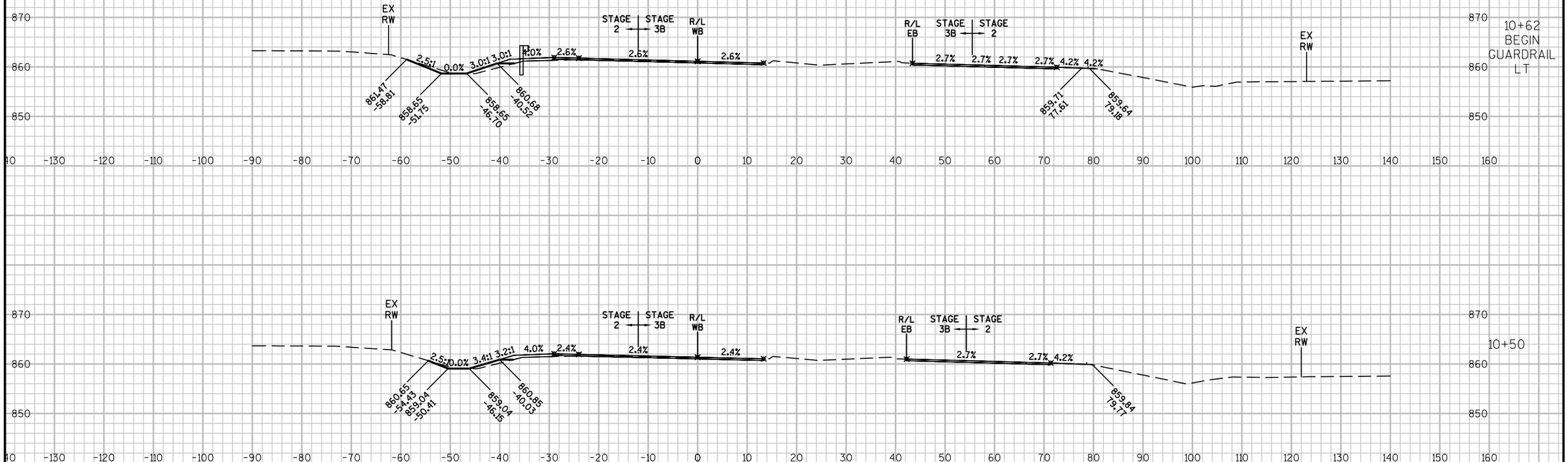
FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-XS - 090212
PLOT DATE : 1/30/2018 10:50 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:10 FT_1
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: USH 12 SB RAMP	SHEET 256	E

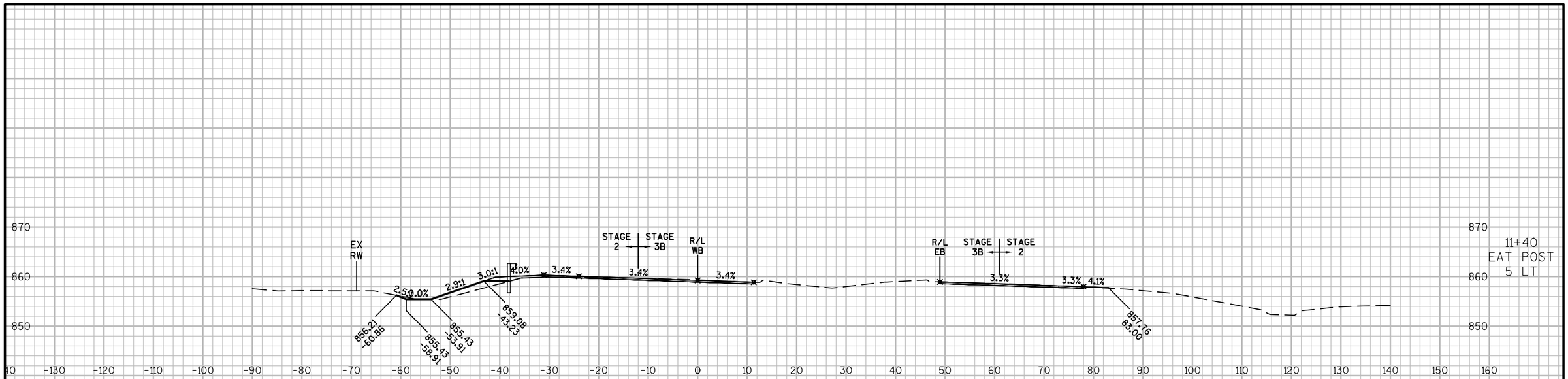


9

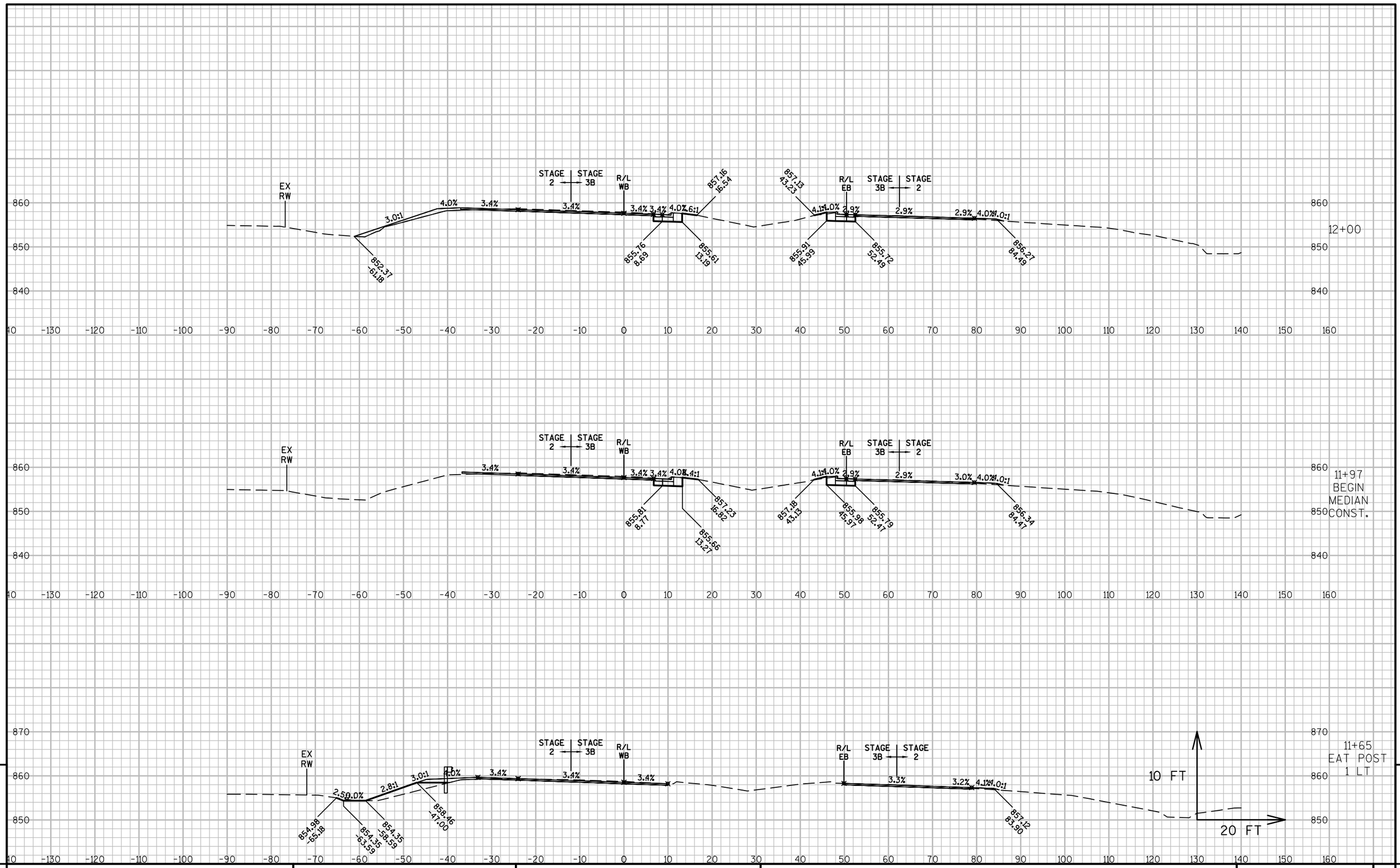
9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 257	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090215-XS.DWG
LAYOUT NAME - 090215
PLOT DATE : 1/30/2018 10:52 AM
PLOT BY : KEVIN WEIGHNER
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 258	E

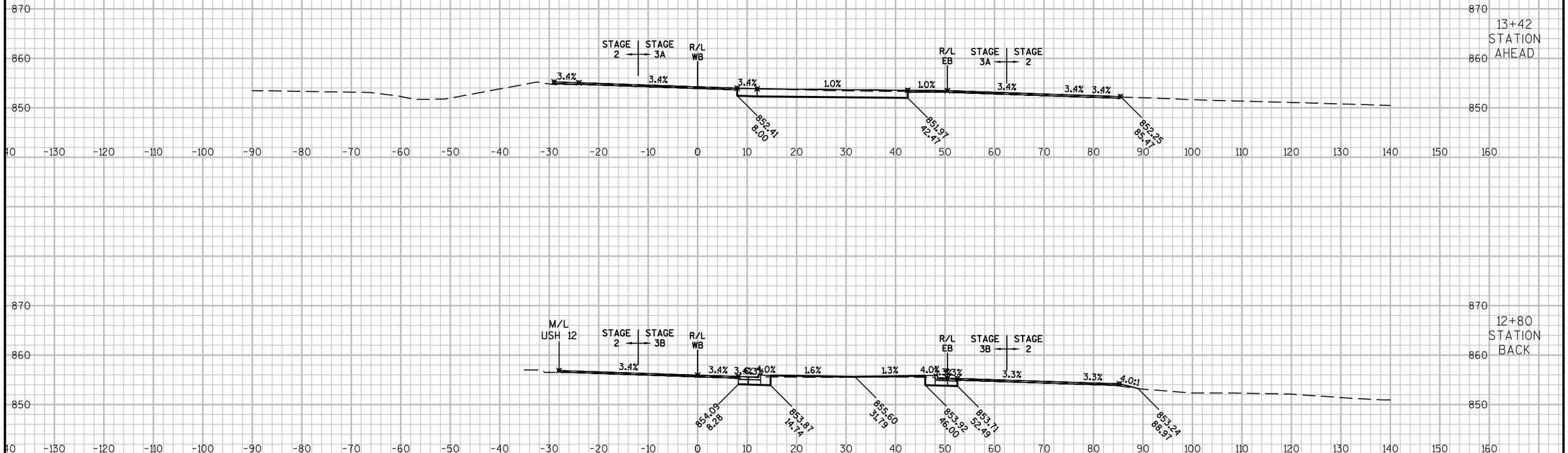


PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 259	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090215-XS.DWG
LAYOUT NAME - 090217

PLOT DATE : 1/30/2018 10:52 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

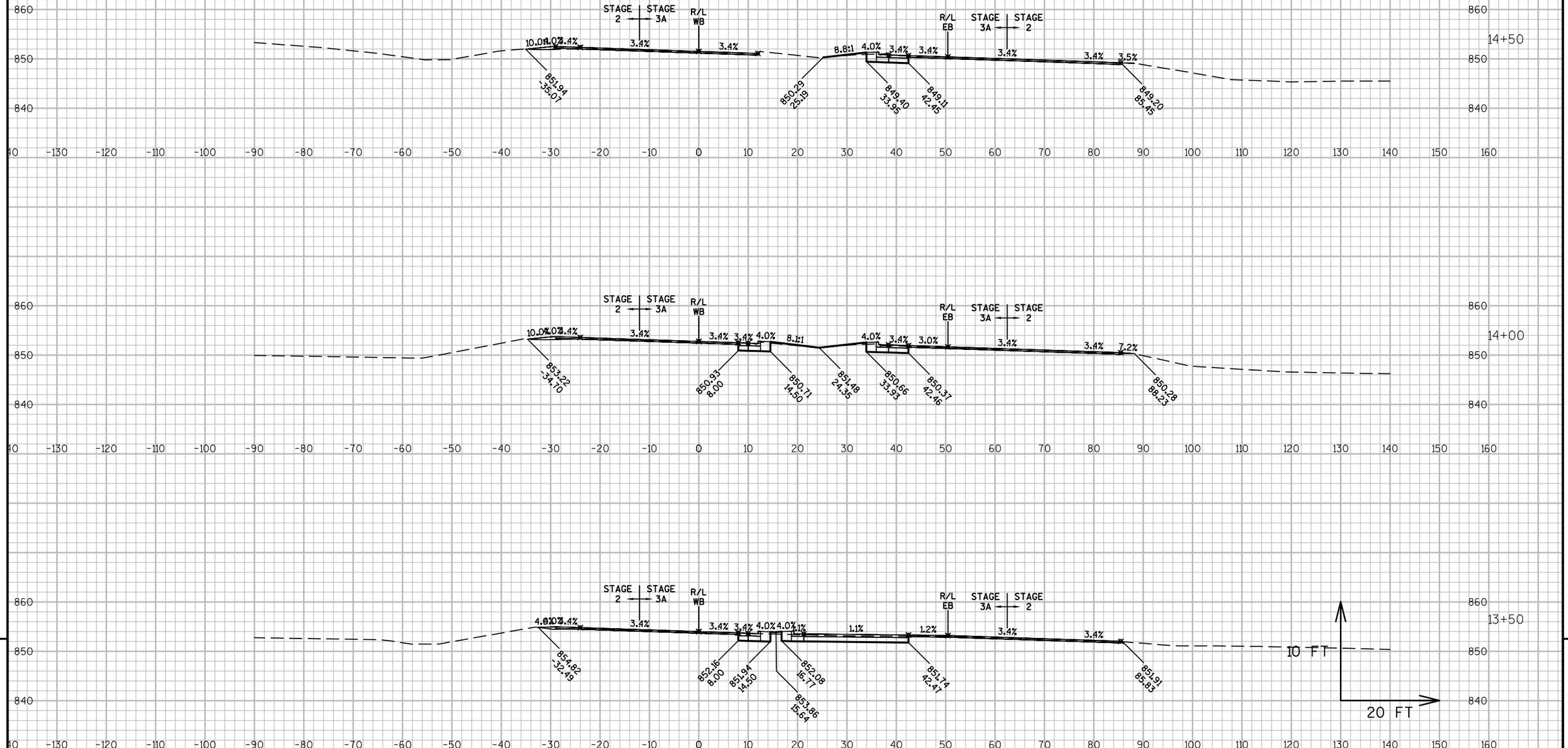


PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 260	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090215-XS.DWG
LAYOUT NAME - 090218

PLOT DATE : 1/30/2018 10:52 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

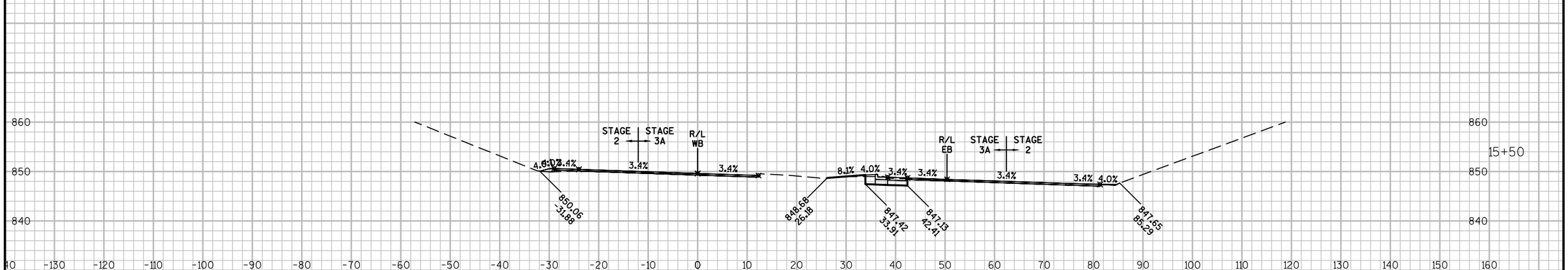


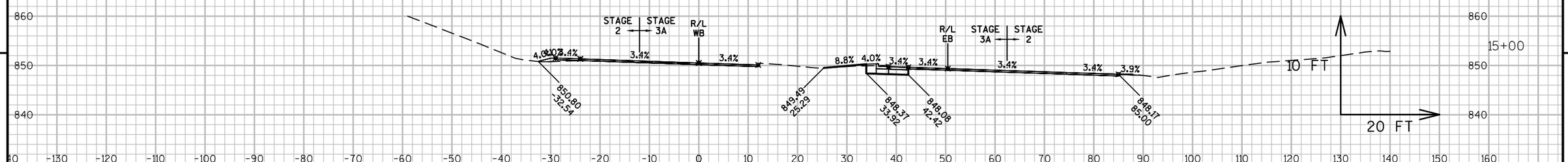
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 261	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090215-XS.DWG
LAYOUT NAME - 090219

PLOT DATE : 1/30/2018 10:52 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





9

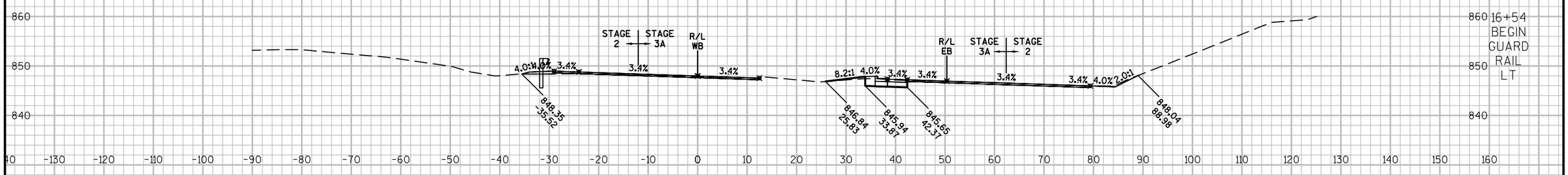
9

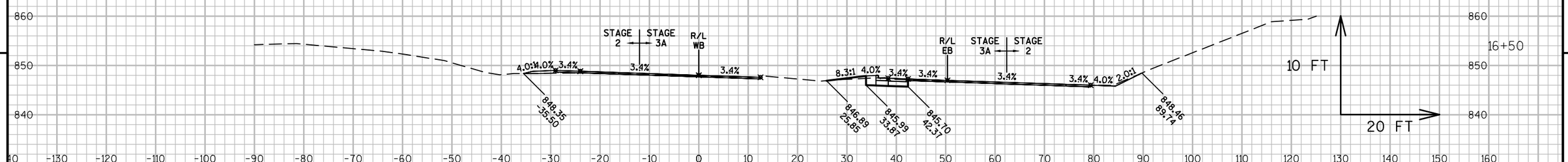
PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 262	E

FILE NAME : G:\8602 - US12 GENOA CITY\CAD\10801700\SHEETSPLAN\090215-XS.DWG
LAYOUT NAME - 090220

PLOT DATE : 1/30/2018 10:52 AM PLOT BY : KEVIN WEIGHNER PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

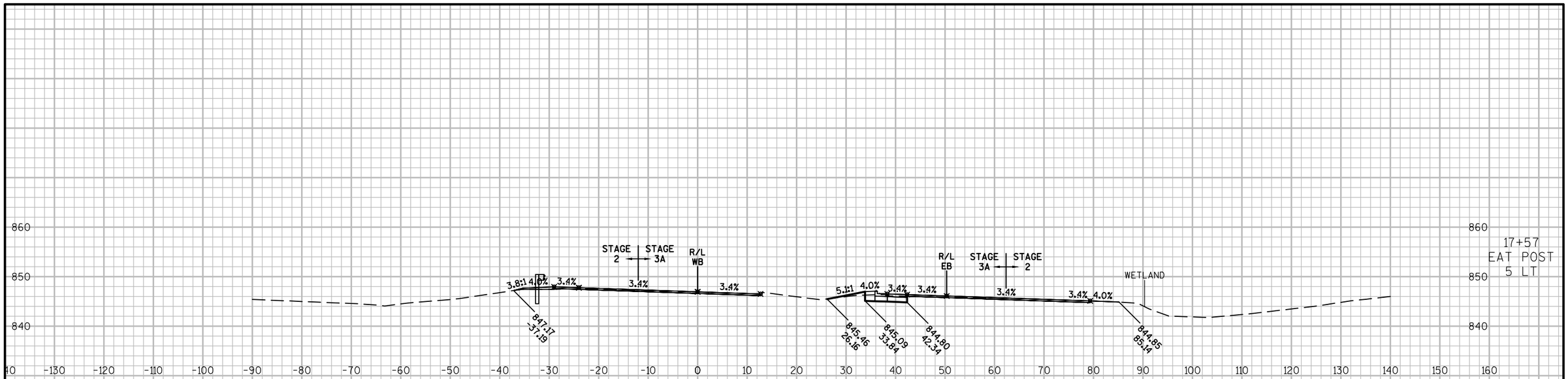


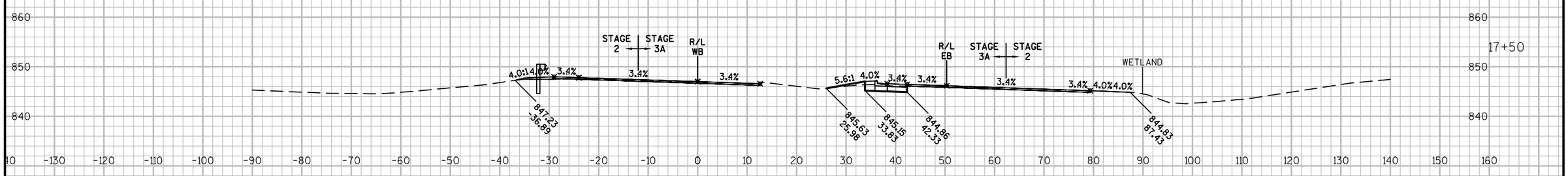


9

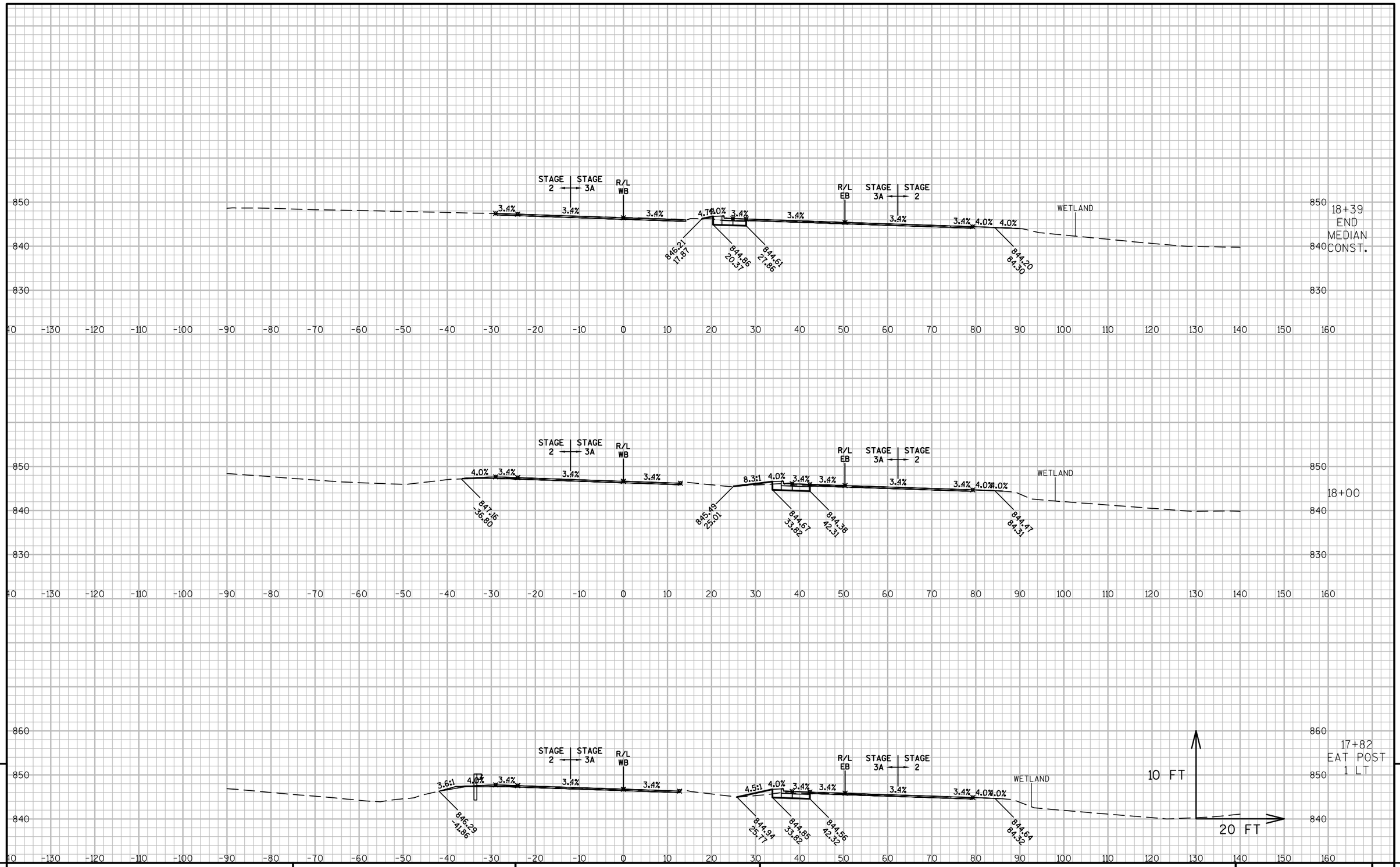
9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 263	E


860
850
840
STAGE 2
STAGE 3A
R/L WB
3.8:1
4.0%
3.4%
847.17
-37.19
R/L EB
5.1:1
845.46
26.16
845.09
33.84
844.80
42.34
WETLAND
844.85
85.14
17+57
EAT POST
5 LT


860
850
840
STAGE 2
STAGE 3A
R/L WB
4.0:1
4.0%
3.4%
847.23
-36.89
R/L EB
5.6:1
845.63
25.98
845.15
33.83
844.96
42.33
WETLAND
844.83
87.43
17+50

860
850
840
STAGE 2
STAGE 3A
R/L WB
4.0:1
4.0%
3.4%
847.49
-35.74
R/L EB
6.6:1
846.01
25.92
845.34
33.84
845.05
42.34
844.94
89.25
10 FT
20 FT
17+29
EAT POST
9 LT



9

PROJECT NO: 1080-17-70	HWY: USH 12	COUNTY: WALWORTH	CROSS SECTIONS: CTH H	SHEET 265	E

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov