WKE

PROJECT ID: 2450-06-71

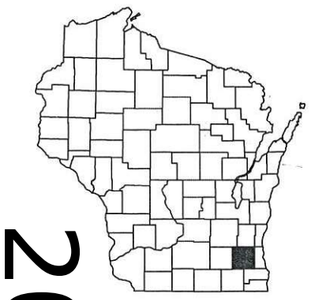
COUNTY: WAUKESHA

DECEMBER 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 242



20

DESIGN DESIGNATION 2450-06-01

| | | | |
|---|---|---|---|
| A.A.D.T. | 2027 | = | 34,780 |
| A.A.D.T. | 2047 | = | 41,530 |
| D.H.V. | | = | 5,275 |
| D.D. | | = | 54/46 |
| T. | | = | 8.2% |
| DESIGN SPEED | | = | 50 MPH |
| ESALS | | = | 9,300,000 |

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- 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

# V LISBON, REDFORD BLVD

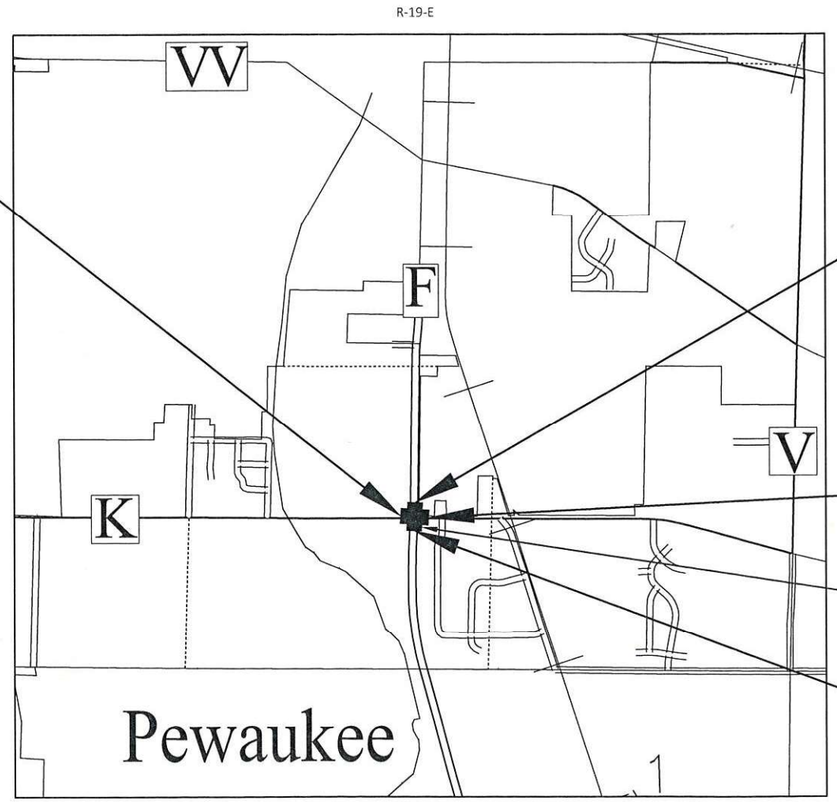
INTERSECTION WITH LISBON RD

## CTH F

## WAUKESHA COUNTY

| STATE PROJECT NUMBER |
|---|
| 2450-06-71 |

| STATE PROJECT | FEDERAL PROJECT | |
|---|---|---|
| | PROJECT | CONTRACT |
| 2450-06-71 | WISC 2027075 | 1 |
| | | |
| | | |
| | | |




BEGIN CONSTRUCTION
STA 2K+04.73

END PROJECT
STA 288F+81.93

END CONSTRUCTION
STA 15K+45.86

STA 278F+58.28 BK=
STA 280F+20.69 AHD

BEGIN PROJECT
STA 275F+46.89
Y = 197076.442
X = 688915.746

LAYOUT

SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.222 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WAUKESHA COUNTY, NAD83 ( 2011 ), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 ( 2012 ). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

APPROVED FOR
WAUKESHA COUNTY
DEPARTMENT OF PUBLIC WORKS

7-30-26 Date — Director

7-30-26 Date — Engineering Services Manager

ORIGINAL PLANS PREPARED BY

JT ENGINEERING, INC
Consultant Services

WISCONSIN
DYLAN A DOUGLAS
E-44729
MADISON
WI
PROFESSIONAL ENGINEER

07/15/2026 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

| PREPARED BY | |
|---|---|
| Surveyor | JT ENGINEERING |
| Designer | JT ENGINEERING |
| Project Manager | JOSEPH JELACIC |
| Regional Examiner | REGIONAL EXAMINER |
| Regional Supervisor | AMY TAETSCH |

APPROVED FOR THE DEPARTMENT
DATE: 7/30/26
Joseph C Jelacic (Signature)

E

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\010101-TI.DWG

PLOT DATE : 7/15/2026 8:23 AM

PLOT BY : ALEX ZINDA

PLOT NAME :

## GENERAL NOTES

1. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN
3. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
4. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
5. FERTILIZER SHALL NOT BE USED WITHIN 20 FEET OF NAVIGABLE WATERWAYS OR WETLANDS.
6. CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE. CURB AND GUTTER RADII DIMENSIONS ARE MEASURED TO THE FLANGE LINE UNLESS OTHERWISE NOTED.
7. THE PRESENCE OR REMOVAL OF ANY REINFORCEMENT, REBAR OR WIRE MESH FOUND IN ANY EXISTING CONCRETE PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE REMOVING PAVEMENT ITEM.
8. APPLY TACK COAT AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT.
9. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

### DESIGN CONTACT

DYLAN DOUGLAS, PE
JT ENGINEERING
281 W NETHERWOOD RD
OREGON, WI 53575
PHONE: (608) 216-3304
EMAIL: DYLAND@JT-ENGINEERING.COM

### VILLAGE OF LISBON

DANIEL GREEN
ADMINISTRATOR
W234N8676 WOODSIDE ROAD
LISBON, WI 53089
PHONE: (262) 246-6100 (EXT. 1003)
EMAIL: DGREEN@LISBONWI.GOV

### WISCONSIN DNR LIAISON

CRAIG WEBSTER
SE REGION
141 NW BARSTOW ST
WAUKESHA, WI 53095
PHONE: (262) 574-2141
EMAIL: CRAIG.WEBSTER@WISCONSIN.GOV

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

### WAUKESHA COUNTY DEPT. OF PUBLIC WORKS

ETHAN MOSER
CIVIL ENGINEER
515 W. MORELAND BLVD., RM 220
WAUKESHA, WI 53188
PHONE: (262) 548-7746
EMAIL: EMOSER@WAUKESHACOUNTY.GOV

### VILLAGE OF SUSSEX

JODY NEU
N63W24335 MAIN STREET
SUSSEX ,WI 53089
PHONE: (262) 246-5229 (EXT. 1306)
EMAIL: JNEU@VILLAGESUSSEX.ORG

### UTILITIES

AT&T
STEVE BURTCH
220 WISCONSIN AVE
WAUKESHA, WI 53816
PHONE: 262-506-2849
EMAIL: SB7561@ATT.COM

ATC
TONY MARCINIAK
PO BOX 47
WAUKESHA, WI 53187
PHONE: 262-506-6814
EMAIL: TMARCINIAK@ATCLLC.COM

CHARTER/SPECTRUM
GENERAL MAILBOX - SPECTRUM
SPECTRUM COMMUNICATIONS
1320 N MARTIN LUTHER KING JR DR
MILWAUKEE, WI 53212
EMAIL: CHTR_WI_CONST@CHARTER.COM

EVERSTREAM
ABIGAIL STEIN
324 E WISCONSIN AVE, SUITE 730
MILWAUKEE, WI 53202
PHONE: 414-409-9316
EMAIL: ASTEIN@EVERSTREAM.NET

WE ENERGIES ELECTRIC & GAS
DAN SANDE
333 W EVERETT ST - A279
MILWAUKEE, WI 53203
PHONE: 414-221-4578
EMAIL: DAN.SANDE@WE-ENERGIES.COM

## STANDARD ABBREVIATIONS

| | |
|---|---|
| AEW | APRON ENDWALL |
| ADT | AVERAGE DAILY TRAFFIC |
| BM | BENCH MARK |
| CL | CENTERLINE |
| CMCP | CORRUGATED METAL CULVERT PIPE |
| EX R/W | EXISTING RIGHT-OF-WAY |
| PC | POINT OF CURVATURE |
| PI | POINT OF INTERSECTION |
| PT | POINT OF TANGENCY |
| RL | REFERENCE LINE |
| DHV | DESIGN HOURLY VOLUME |
| SI | SLOPE INTERCEPT |
| STA | STATION |
| T | TRUCK PERCENTAGE OR TANGENT |
| TLE | TEMPORARY LIMITED EASEMENT |

## SEQUENCE OF PLANS AND DETAILS IN SECTION 2

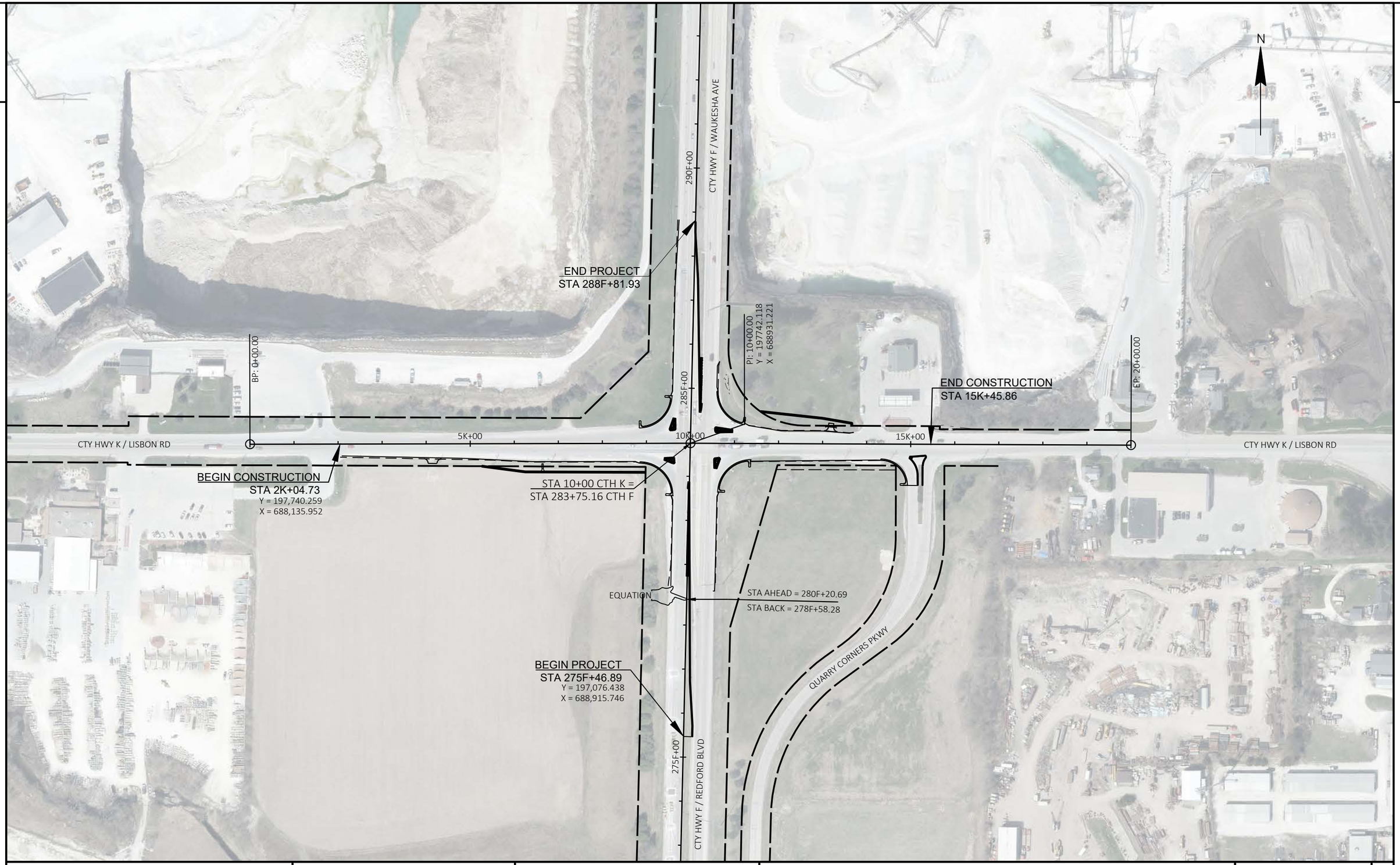
GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
REMOVAL DETAILS
INTERSECTION DETAILS
EROSION CONTROL
STORM SEWER PLAN
PERMANENT SIGNING
TRAFFIC SIGNAL TEMPORARY
TRAFFIC SIGNAL PLAN
PAVEMENT MARKING
STAGE CONSTRUCTION
ALIGNMENT

## RUNOFF COEFFICIENT TABLE

| | HYDROLOGIC SOIL GROUP | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | | | B | | | C | | | D | | |
| | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | | SLOPE RANGE (PERCENT) | | |
| LAND USE: | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6 | 6 & OVER | 0-2 | 2-6 | 6 & OVER |
| ROW CROPS: | .08<br>.22 | .16<br>.30 | .22<br>.38 | .12<br>.26 | .20<br>.34 | .27<br>.44 | .15<br>.30 | .24<br>.37 | .33<br>.50 | .19<br>.34 | .28<br>.41 | .38<br>.56 |
| MEDIAN STRIPTURF: | .19<br>.24 | .20<br>.26 | .24<br>.30 | .19<br>.25 | .22<br>.28 | .26<br>.33 | .20<br>.26 | .23<br>.30 | .30<br>.37 | .20<br>.27 | .25<br>.32 | .30<br>.40 |
| SIDE SLOPETURF: | | | .25<br>.32 | | | .27<br>.34 | | | .28<br>.36 | | | .30<br>.38 |
| PAVEMENT: | | | | | | | | | | | | |
| ASPHALT: | .70 - .95 | | | | | | | | | | | |
| CONCRETE: | .80 - .95 | | | | | | | | | | | |
| BRICK: | .70 - .80 | | | | | | | | | | | |
| DRIVES, WALKS: | .75 - .85 | | | | | | | | | | | |
| ROOFS: | .75 - .95 | | | | | | | | | | | |
| GRAVEL ROADS, SHOULDERS: | .40 - .60 | | | | | | | | | | | |

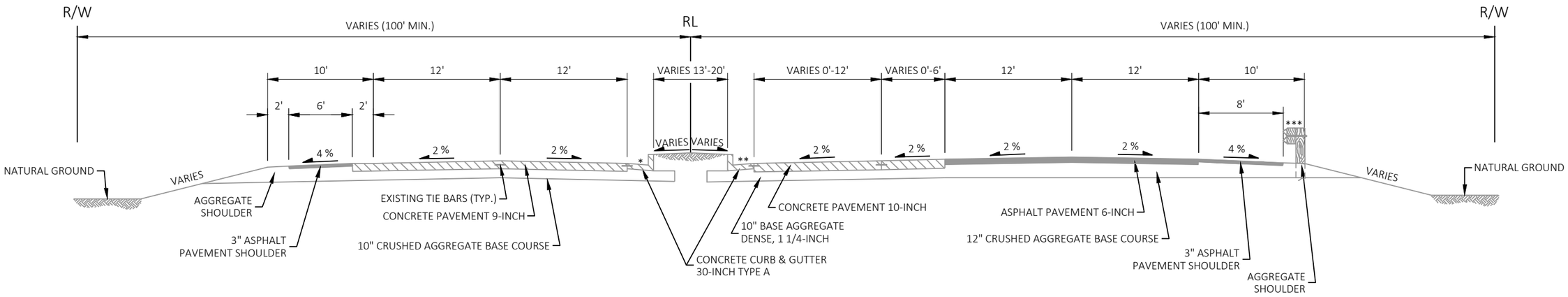
TOTAL PROJECT AREA = 4.80 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.52 ACRES

2




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PROJECT OVERVIEW | SHEET 3 | E |
|---|---|---|---|---|---|

2




## EXISTING TYPICAL SECTION - CTH F

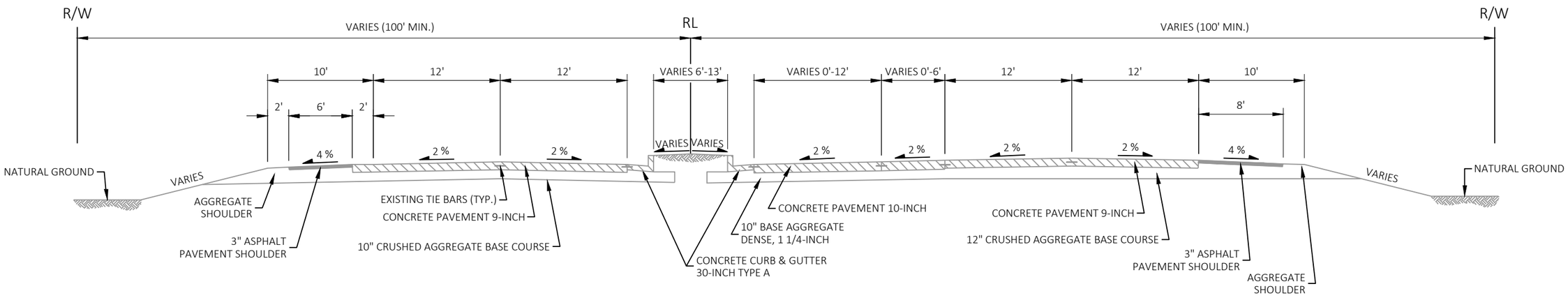
275+46.89 - 278+58.28

280+20.69 - 280+63.64

* RURAL SHOULDER
(2-FOOT PAVED & 1-FOOT GRAVEL)
FROM STATION 275+47-280+53

** RURAL SHOULDER
(4-FOOT PAVED & 2-FOOT GRAVEL)
FROM STATION 275+47 - 278+00

*** NO GUARDRAIL FROM STATION
280+57 - 280+64



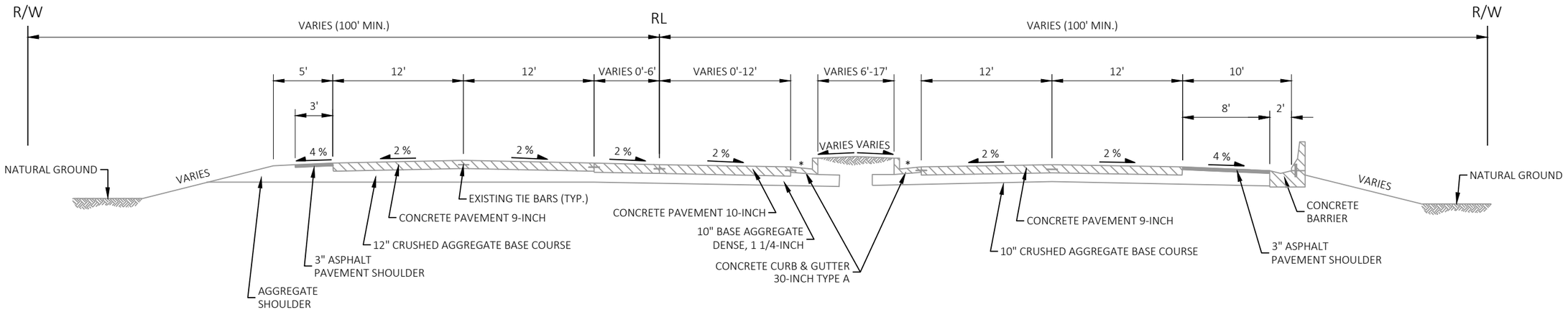

## EXISTING TYPICAL SECTION - CTH F

280+63.64 - 282+75.64

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH F | SHEET 4 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 01-10ft
PLOT DATE : 5/27/2026 3:33 PM
PLOT BY : ALEX ZINDA
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



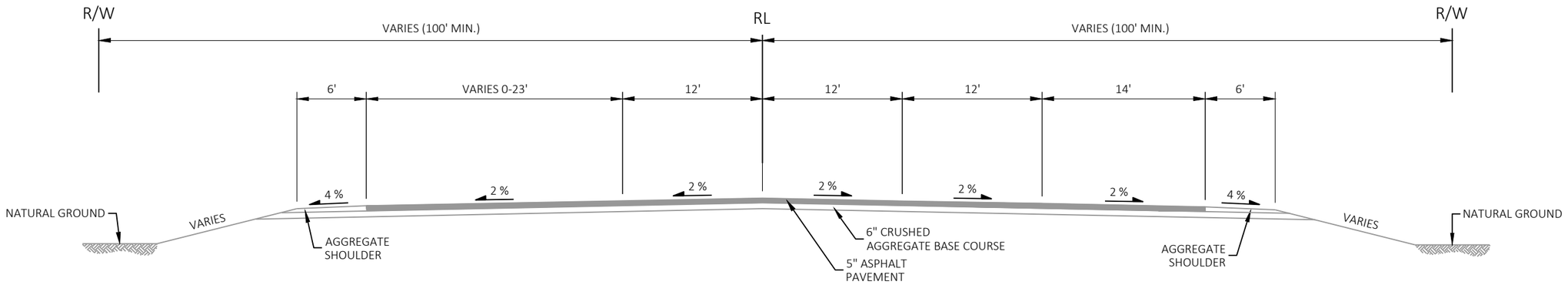

## EXISTING TYPICAL SECTION - CTH F

284+78.18 - 288+81.93

* RURAL SHOULDER
(3-FOOT PAVED & 3-FOOT GRAVEL)
FROM STATION 288+13 - 288+82

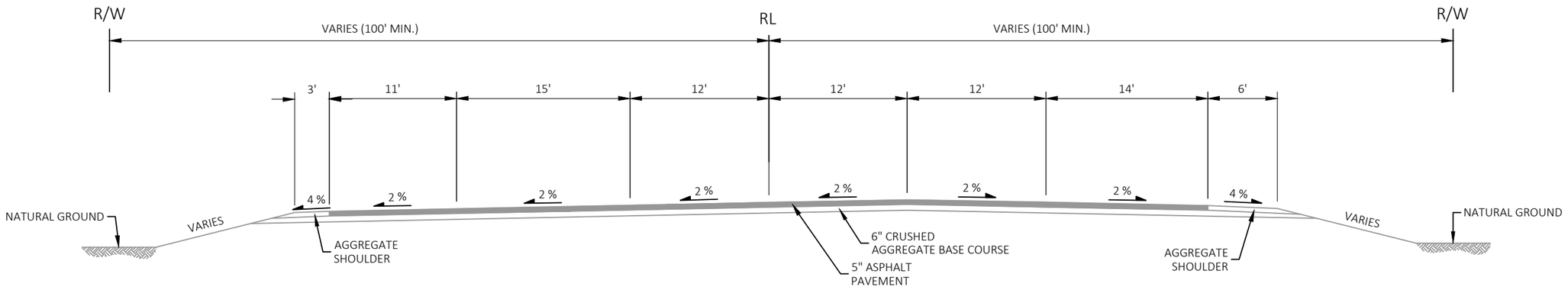
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH F | SHEET 5 | E |
|---|---|---|---|---|---|

2




EXISTING TYPICAL SECTION - CTH K

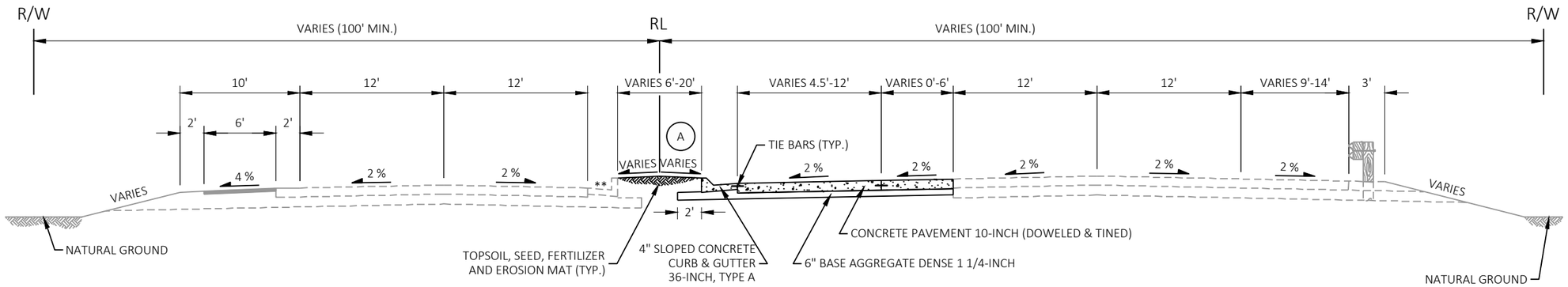
2+14.34 - 8+89.20




EXISTING TYPICAL SECTION - CTH K

11+67.84 - 18+92.93

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH K | SHEET 6 | E |
|---|---|---|---|---|---|




## FINISHED TYPICAL SECTION - CTH F

275+46.89 - 280+41.00

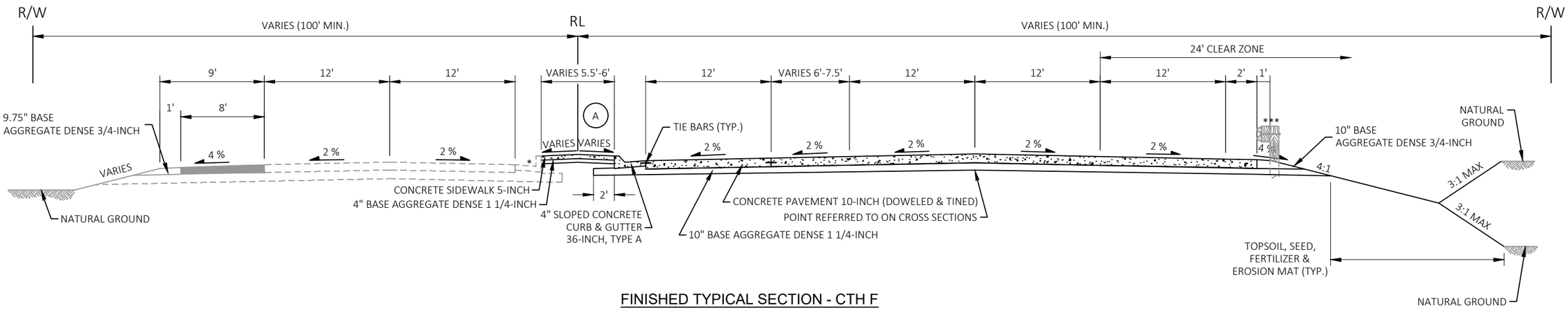
(A) IF LESS THAN 6' WIDE PLACE 5" CONCRETE SIDEWALK OVER 4" BASE AGGREGATE.
IF GREATER THAN 6' WIDE PLACE TOPSOIL, SEED, FERTILIZER AND EROSION MAT AS SHOWN IN THE EROSION CONTROL PLAN.

* RURAL SHOULDER
(2-FOOT PAVED & 1-FOOT GRAVEL)
FROM STATION 275+47-280+53

** RURAL SHOULDER
(4-FOOT PAVED & 2-FOOT GRAVEL)
FROM STATION 275+47 - 278+00

*** NO GUARDRAIL FROM STATION
280+57 - 280+95

| PAVEMENT BORING LOG | | | |
|---|---|---|---|
| BORING/CORE NO. | STATION | OFFSET | UNDERLYING MATERIAL |
| C-04 | 280+52 CTH F | 53' R | 6.25" ASPHALT 3" GRAVEL |

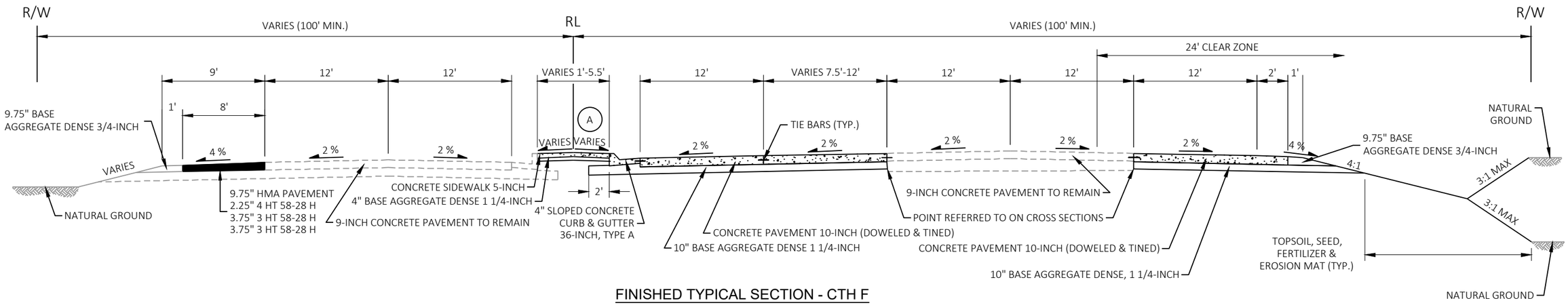



## FINISHED TYPICAL SECTION - CTH F

280+41.00 - 280+95.00

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH F | SHEET 7 | E |
|---|---|---|---|---|---|

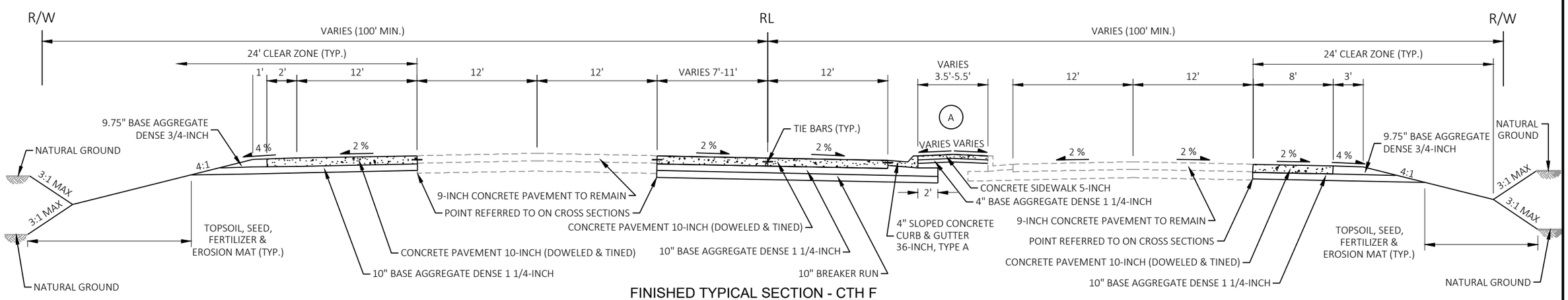
2




## FINISHED TYPICAL SECTION - CTH F

280+95.00 - 282+55.76

(A) IF LESS THAN 6' WIDE PLACE 5" CONCRETE SIDEWALK OVER 4" BASE AGGREGATE.
IF GREATER THAN 6' WIDE PLACE TOPSOIL, SEED, FERTILIZER AND EROSION MAT AS SHOWN IN THE EROSION CONTROL PLAN.

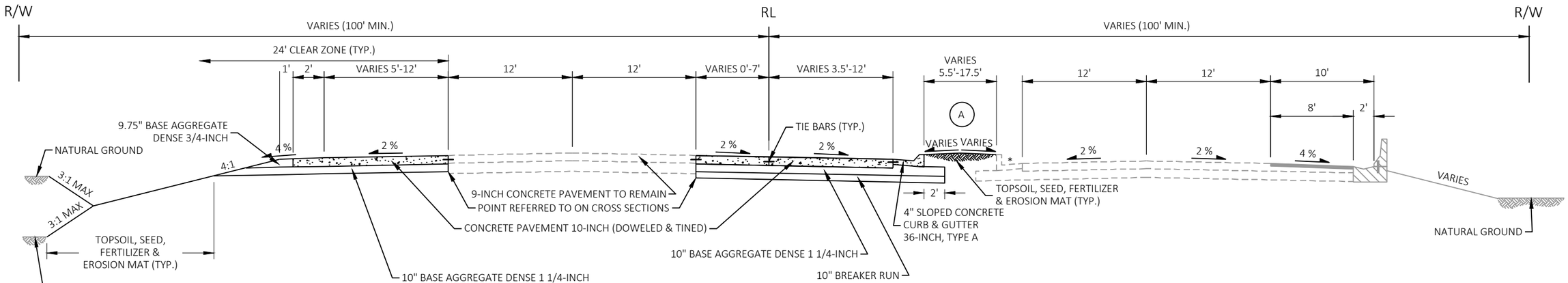



## FINISHED TYPICAL SECTION - CTH F

285+03.68 - 285+62.40

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH F | SHEET 8 | E |
|---|---|---|---|---|---|

| PAVEMENT BORING LOG | | | |
|---|---|---|---|
| BORING/CORE NO. | STATION | OFFSET | UNDERLYING MATERIAL |
| C-02 | 285+77 CTH F | 30' L | 9.75" CONCRETE 3" GRAVEL |




## FINISHED TYPICAL SECTION - CTH F

285+62.40 - 288+81.93

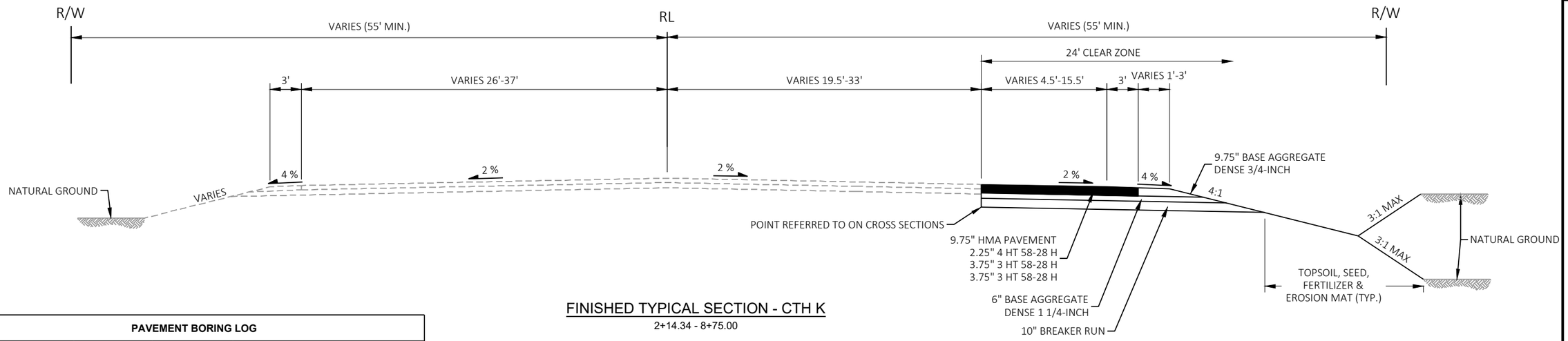
(A) IF LESS THAN 6' WIDE PLACE 5" CONCRETE SIDEWALK OVER 4" BASE AGGREGATE.
IF GREATER THAN 6' WIDE PLACE TOPSOIL, SEED, FERTILIZER AND EROSION MAT AS SHOWN IN THE EROSION CONTROL PLAN.

* RURAL SHOULDER (3-FOOT PAVED & 3-FOOT GRAVEL) FROM STATION 288+13 - 288+82

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH F | SHEET 9 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 06-10ft
PLOT DATE : 5/27/2026 3:33 PM
PLOT BY : ALEX ZINDA
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

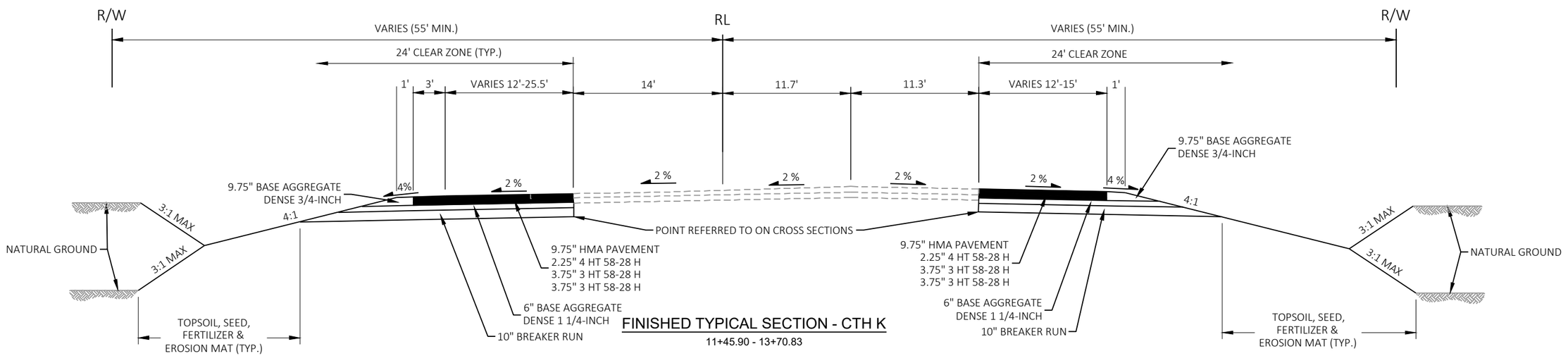
2




FINISHED TYPICAL SECTION - CTH K

2+14.34 - 8+75.00

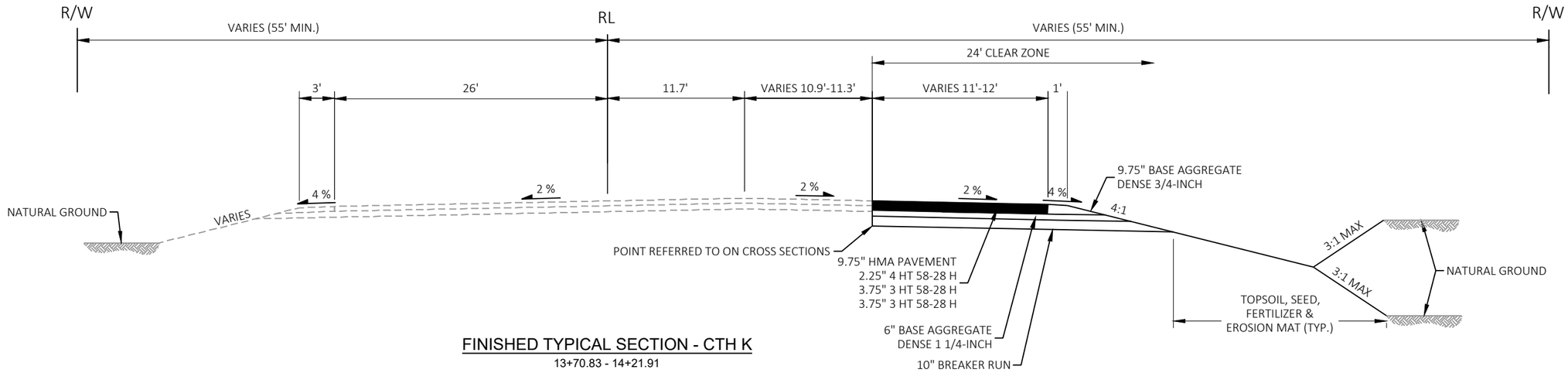
| PAVEMENT BORING LOG | | | |
|---|---|---|---|
| BORING/CORE NO. | STATION | OFFSET | UNDERLYING MATERIAL |
| B-01 | 11+22 CTH K | 43' L | 5" ASPHALT 3" GRAVEL |
| C-01 | 13+24 CTH K | 18' L | 6.25" ASPHALT, 3" GRAVEL |
| C-03 | 6+95 CTH K | 19' R | 9.75" ASPHALT, 4" GRAVEL |




FINISHED TYPICAL SECTION - CTH K

11+45.90 - 13+70.83

2




## FINISHED TYPICAL SECTION - CTH K

13+70.83 - 14+21.91

| | | | | | |
|---|---|---|---|---|---|
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TYPICAL SECTIONS - CTH K | SHEET 11 | E |

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\020301-TS.DWG
LAYOUT NAME - 08-10ft

PLOT DATE : 5/27/2026 3:33 PM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:10 FT

2

## DEMOLITION LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CURB & GUTTER
- XXXXXXXXX SAWCUT ASPHALT
- YYYYYYYYY SAWCUT CONCRETE

N

MATCH LINE 281+00

COUNTY HWY F/
REDFORD BLVD

STA BACK = 278+58.28
STA AHEAD = 280+20.69

STA 280'F'+50
-29.00' LT

274+00 275+00 276+00 277+00 278+00 281

STA 275'F'+46.89
25.50' RT

STA 280'F'+95
25.50' RT

STA 280'F'+41
25.50' RT

STA 280'F'+41
58.95' RT

STA 280'F'+95
49.02' RT

BORE

EL

GUY

OH

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 12 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021101-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

## DEMOLITION LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CURB & GUTTER
- XXXXXXXXX SAWCUT ASPHALT
- YYYYYYYYY SAWCUT CONCRETE

COUNTY HWY F/
REDFORD BLVD

COUNTY HWY F/
REDFORD BLVD

COUNTY HWY K/
LISBON RD

COUNTY HWY K/
LISBON RD

COUNTY HWY F/
WAUKESHA AVE

MATCH LINE 281+00

MATCH LINE 286+00

STA 282'F'+71.79
-5.00' LT

STA 283'F'+37.23
-6.52' LT

STA 283'F'+37.98
25.50' RT

STA 283'F'+49.25
-29.00' LT

STA 283'F'+97.92
-29.00' LT

STA 283'F'+53.09
49.35' RT

STA 283'F'+90.10
49.61' RT

STA 284'F'+16.97
-5.00' LT

STA 284'F'+17.68
25.50' RT

STA 284'F'+66.50
25.00' RT

STA 285'F'+62.40
49.24' RT

REMOVING TRAFFIC SIGNALS
AND REMOVING CONCRETE BASE

REMOVING TRAFFIC SIGNALS
AND REMOVING CONCRETE BASE

REMOVING TRAFFIC SIGNALS
AND REMOVING CONCRETE BASE

REMOVING TRAFFIC SIGNALS
AND REMOVING CONCRETE BASE

REMOVING TRAFFIC SIGNALS
AND REMOVING CONCRETE BASE

REMOVING TRAFFIC SIGNALS
AND REMOVING CONCRETE BASE

282+00
283+00
284+00
285+00
286
9+00
10+00
11+00

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 13 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021102-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

## DEMOLITION LEGEND

REMOVING CONCRETE PAVEMENT

REMOVING CURB & GUTTER

SAWCUT ASPHALT

SAWCUT CONCRETE

N

REMOVE EXISTING
18-INCH CMCP

STA 288'F'+81.93
-29.00' LT

COUNTY HWY F/
WAUKESHA AVE

STA 288'F'+78.53
-5.00' LT

287+00

288+00

289+00

290+00

291+00

MATCH LINE 286+00

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 14 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021103-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

## DEMOLITION LEGEND

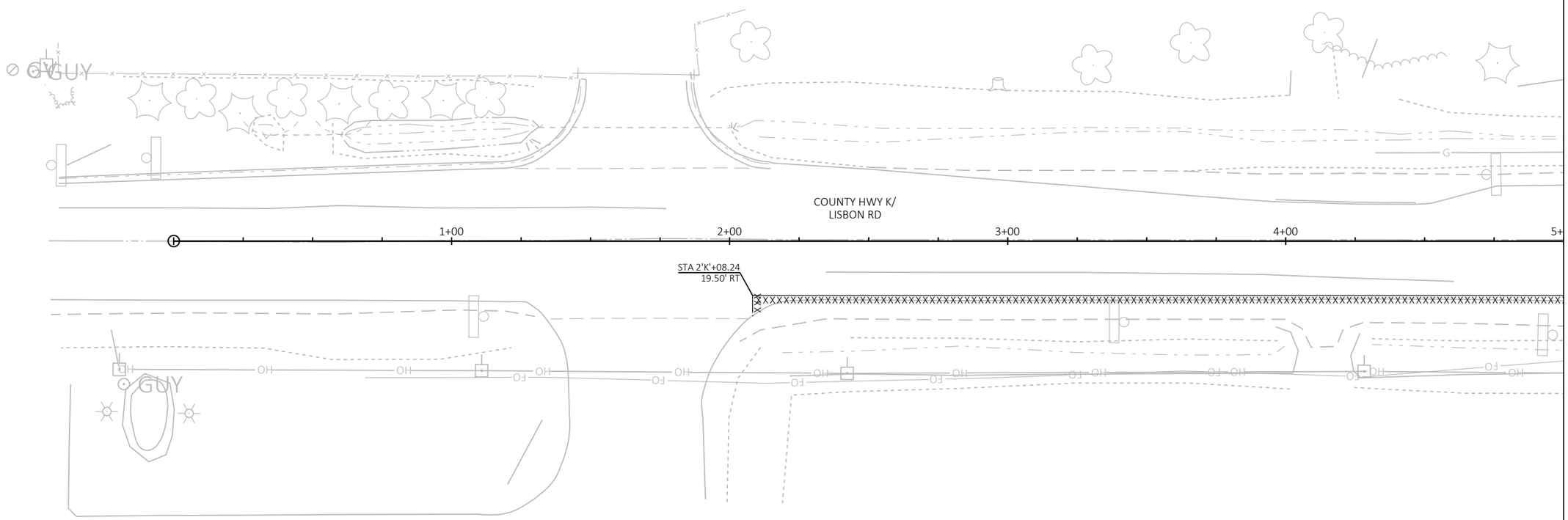
REMOVING CONCRETE PAVEMENT

REMOVING CURB & GUTTER

XXXXXXXXX SAWCUT ASPHALT

YYYYYYYYY SAWCUT CONCRETE

N




2

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 15 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021104-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

## DEMOLITION LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CURB & GUTTER
- XXXXXXXXX SAWCUT ASPHALT
- YYYYYYYYY SAWCUT CONCRETE

N

MATCH LINE 5+00

COUNTY HWY K/
LISBON RD

COUNTY HWY F/
WAUKESHA AVE

6+00 7+00 8+00 9+00 10+00

284+00

STA 8'K'+83.68
-25.00' LT

STA 9'K'+71.65
-25.00' LT

STA 5'K'+70.84
19.50' RT

STA 6'K'+25.32
23.75' RT

STA 9'K'+23.12
23.75' RT

STA 9'K'+70.36
25.16' RT

REMOVE ENDWALL

MATCH LINE 10+00

COUNTY HWY F/
REDFORD BLVD

282+00

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 16 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021105-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

## DEMOLITION LEGEND

- REMOVING CONCRETE PAVEMENT
- REMOVING CURB & GUTTER
- XXXXXXXXX SAWCUT ASPHALT
- YYYYYYYYY SAWCUT CONCRETE

REMOVE EXISTING 18-INCH CMCP

MATCH LINE 10+00

285+00

COUNTY HWY F/
WAUKESHA AVE

STA 10'K'+49.89
-14.00' LT

STA 13'K'+70.58
-14.00' LT

11+00

12+00

13+00

COUNTY HWY K/
LISBON RD

STA 10'K'+48.57
23.00' RT

MATCH LINE 14+00

283+00

COUNTY HWY F/
REDFORD BLVD

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 17 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021106-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

## DEMOLITION LEGEND

REMOVING CONCRETE PAVEMENT

REMOVING CURB & GUTTER

XXXXXXXXX SAWCUT ASPHALT

YYYYYYYYY SAWCUT CONCRETE

N

MATCH LINE 14+00

G.P.

FLAG

EL

POST

COUNTY HWY K/
LISBON RD

15+00 16+00 17+00 18+00 19+00

STA 15'K'+45.86
23.00' RT

STA 14'K'+93.18
93.57' RT

STA 15'K'+15.10
93.57' RT

STA 15'K'+30.69
93.71' RT

GV

GUY

POST

BLDG

QUARRY CORNERS
PKWY

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | REMOVAL DETAILS | SHEET 18 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-RM.DWG
LAYOUT NAME - 021107-RM

PLOT DATE : 10/26/2026 3:00 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

XXXXXXXXX SAWCUT ASPHALT

YYYYYYYYY SAWCUT CONCRETE

N

R/W

STA BACK = 278F+58.28
STA AHEAD = 280F+20.69

274F+00 275F+00 276F+00 277F+00 278F+00 281

MATCH LINE 281+00

STA 275F+46.89
21.00' RT

STA 275F+71.89
21.00' RT

STA 276F+72.51
13.00' RT

COUNTY HWY F/
REDFORD BLVD

R/W

R/W

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | INTERSECTION DETAILS: CTH F | SHEET 19 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-ID.DWG
LAYOUT NAME - 04

PLOT DATE : 6/30/2026 3:27 PM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 15 | 283+23.35 | 58.68 RT | 10+57.68 | 52.91 RT | 197688.961 | 688988.678 | N/A |
| 16 | 283+40.28 | 64.48 RT | 10+63.80 | 36.10 RT | 197705.748 | 688994.869 | 4.5' |
| 17 | 283+39.11 | 57.64 RT | 10+56.95 | 37.14 RT | 197704.742 | 688988.010 | 4.5' |
| 18 | 284+27.54 | 38.05 LT | 9+63.31 | 53.34 LT | 197795.376 | 688894.400 | N/A |

| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 19 | 284+06.19 | 45.21 LT | 9+55.60 | 32.18 LT | 197774.197 | 688886.748 | 4' |
| 20 | 284+07.29 | 37.16 LT | 9+63.68 | 33.08 LT | 197775.108 | 688894.821 | 4' |
| 33 | 283+31.41 | 37.69 LT | 9+61.20 | 42.76 RT | 197699.264 | 688892.520 | 4' |
| 34 | 283+38.97 | 38.54 LT | 9+60.55 | 35.19 RT | 197706.833 | 688891.847 | 4' |

| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 35 | 283+37.70 | 55.00 LT | 9+44.07 | 36.04 RT | 197705.946 | 688875.370 | N/A |
| 36 | 284+03.86 | 58.48 RT | 10+59.01 | 27.59 LT | 197769.456 | 688990.349 | 4' |
| 37 | 284+05.30 | 91.59 RT | 10+92.15 | 28.40 LT | 197770.127 | 689023.484 | N/A |
| 38 | 284+09.89 | 57.66 RT | 10+58.32 | 33.63 LT | 197775.499 | 688989.677 | 4' |

| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 44 | 282+84.95 | 1.50 LT | 9+96.19 | 90.14 RT | 197651.970 | 688927.620 | N/A |
| 45 | 282+71.79 | 85.00 RT | 10+83.02 | 104.97 RT | 197636.802 | 689013.796 | 90' |
| 46 | 284+48.38 | 20.60 RT | 10+21.99 | 72.82 LT | 197814.844 | 688953.521 | N/A |
| 47 | 284+66.50 | 65.00 LT | 9+37.36 | 92.97 LT | 197834.946 | 688868.362 | 90' |

LEGEND

XXXXXXXXX SAWCUT ASPHALT

YYYYYYYYY SAWCUT CONCRETE

N

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | INTERSECTION DETAILS: CTH F | SHEET 20 | E |
|---|---|---|---|---|---|

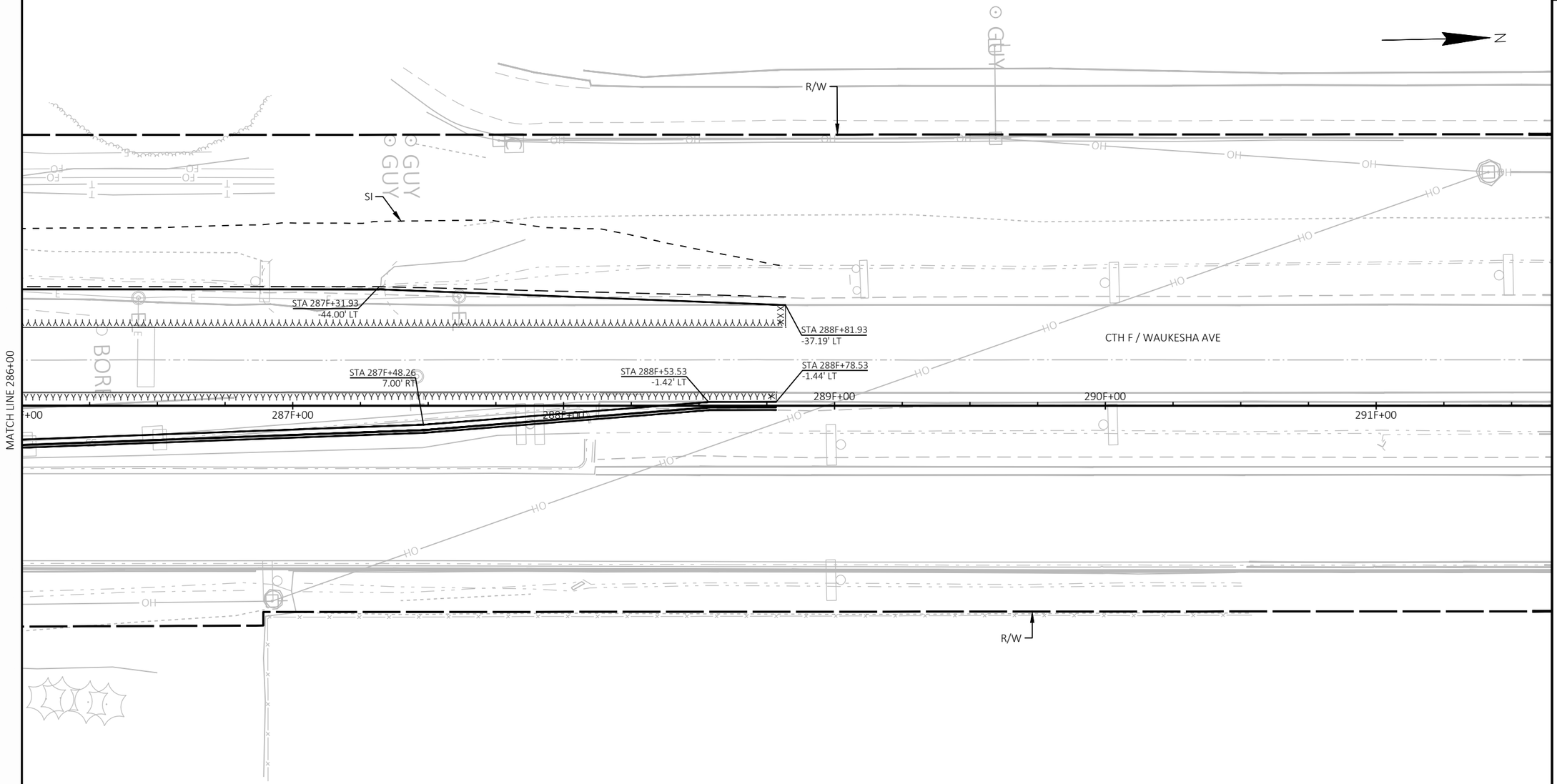
2

2

LEGEND

XXXXXXXX SAWCUT ASPHALT

YYYYYYYY SAWCUT CONCRETE




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | INTERSECTION DETAILS: CTH F | SHEET 21 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-ID.DWG
LAYOUT NAME - 06

PLOT DATE : 6/30/2026 3:27 PM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

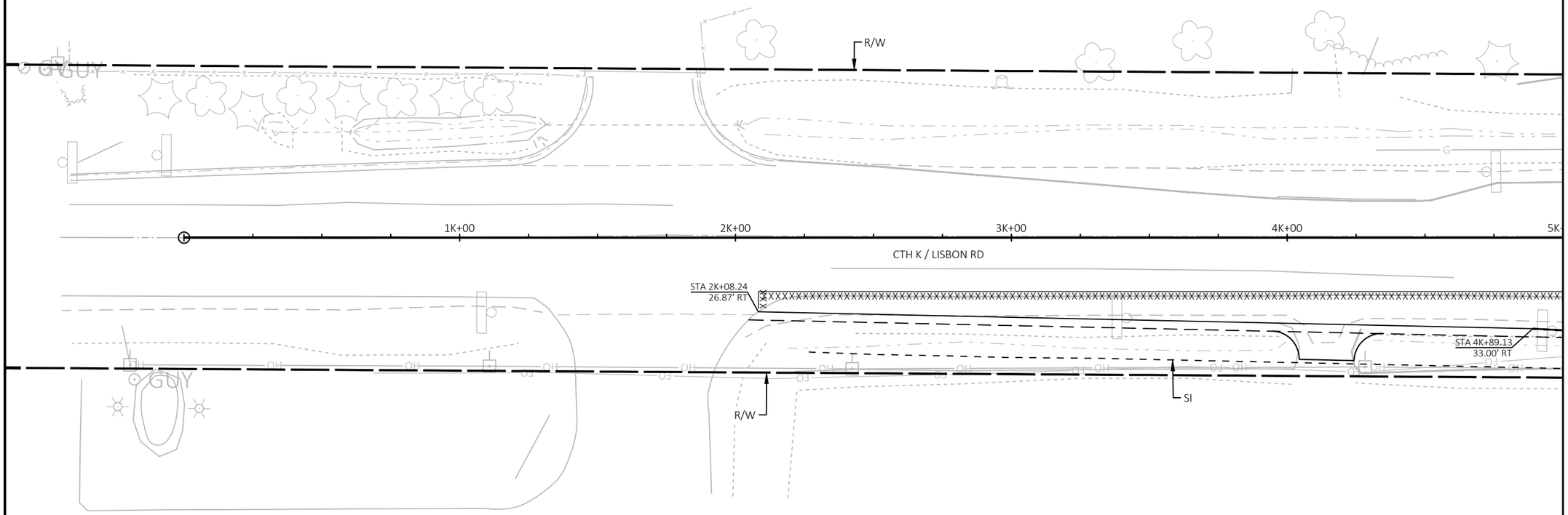
2

## LEGEND

XXXXXXXXX SAWCUT ASPHALT

YYYYYYYYY SAWCUT CONCRETE

N




2

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | INTERSECTION DETAILS: CTH K | SHEET 22 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-ID.DWG
LAYOUT NAME - 25

PLOT DATE : 6/30/2026 3:27 PM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

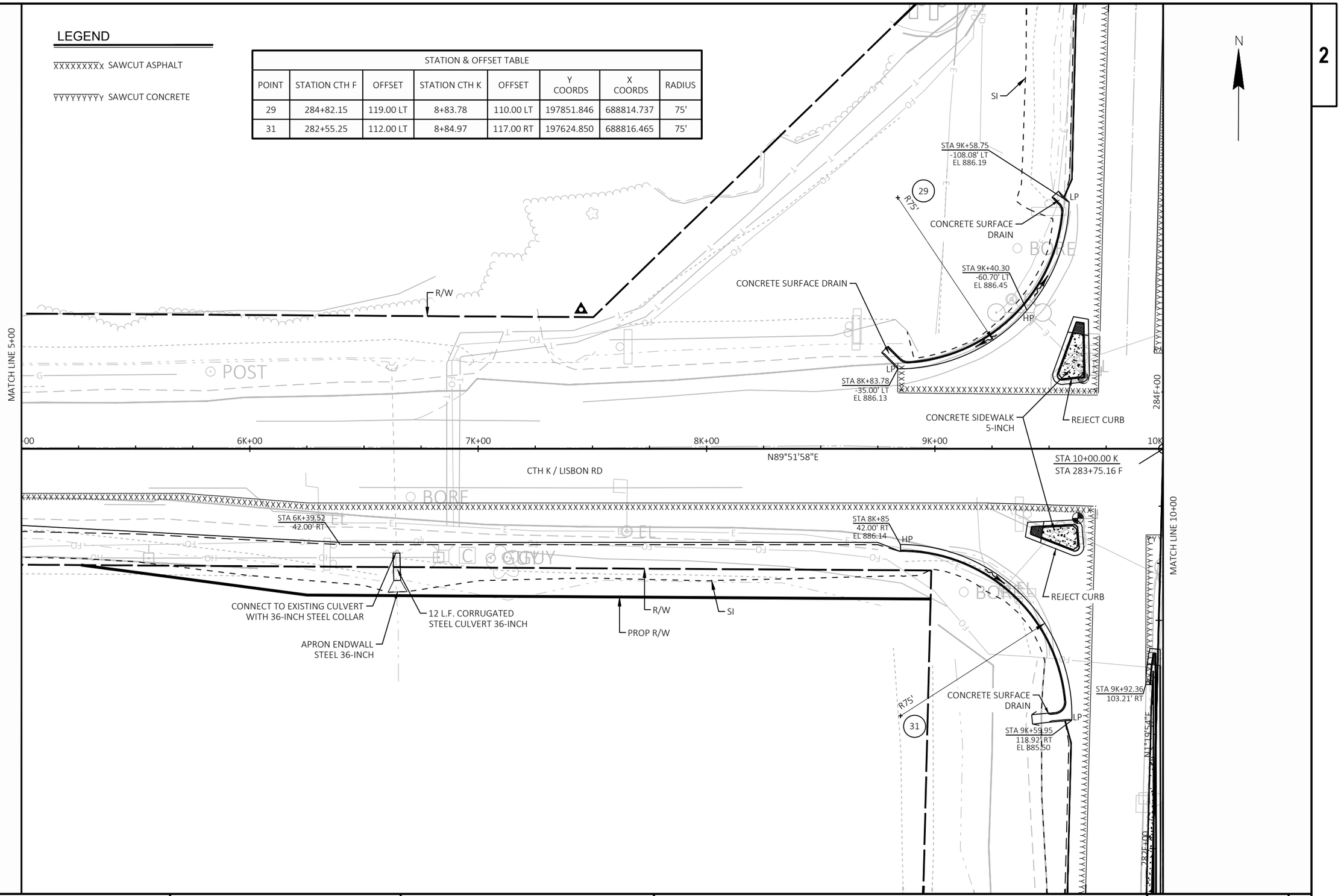
WISDOT/CADDS SHEET 42

## LEGEND

XXXXXXXXX SAWCUT ASPHALT

YYYYYYYYY SAWCUT CONCRETE

| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 29 | 284+82.15 | 119.00 LT | 8+83.78 | 110.00 LT | 197851.846 | 688814.737 | 75' |
| 31 | 282+55.25 | 112.00 LT | 8+84.97 | 117.00 RT | 197624.850 | 688816.465 | 75' |




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | INTERSECTION DETAILS: CTH K | SHEET 23 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\021101-ID.DWG
LAYOUT NAME - 26

PLOT DATE : 6/30/2026 3:27 PM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 30 | 284+94.70 | 132.00 RT | 11+34.25 | 117.01 LT | 197858.557 | 689065.961 | 75' |
| 32 | 282+65.78 | 139.00 RT | 11+36.90 | 112.00 RT | 197629.539 | 689067.641 | 75' |

LEGEND

XXXXXXXX SAWCUT ASPHALT

YYYYYYYY SAWCUT CONCRETE

N1°19'54"E

285F+00

MATCH LINE 10+00

STA 10K+50.26
118.43' LT
EL 886.63

HP

30

STA 10K+26.73
90.85' LT

R/W

R75'

PROP R/W

SI

20 L.F. CULVERT PIPE
CORRUGATED STEEL
18-INCH

CONCRETE SURFACE
DRAIN

LP

REJECT CURB

STA 12K+05.96
-30.00' LT

STA 11+22.79,
42.89' LT
EL 885.12

APRON ENDWALL
STEEL 18-INCH

STA 12K+99.75
-30.00' LT

STA 13K+70.83
-26.19' LT

STA 283+75.16 F
STA 10+00.00 K

10K+00

11K+00

12K+00

13K+00

14K

S89°45'26"E

CTH K / LISBON RD

CONCRETE SIDEWALK
5-INCH

STA 11K+36.90
37.00' RT
EL 885.38

LP

REJECT CURB

CONCRETE SURFACE
DRAIN

HP

STA 10K+77.02
66.84' RT
EL 885.97

283F+00

R75'

R/W

TLE

SI

CONCRETE SURFACE
DRAIN

LP

32

STA 10K+61.91
110.57' RT
EL 885.49

MATCH LINE 14+00

N

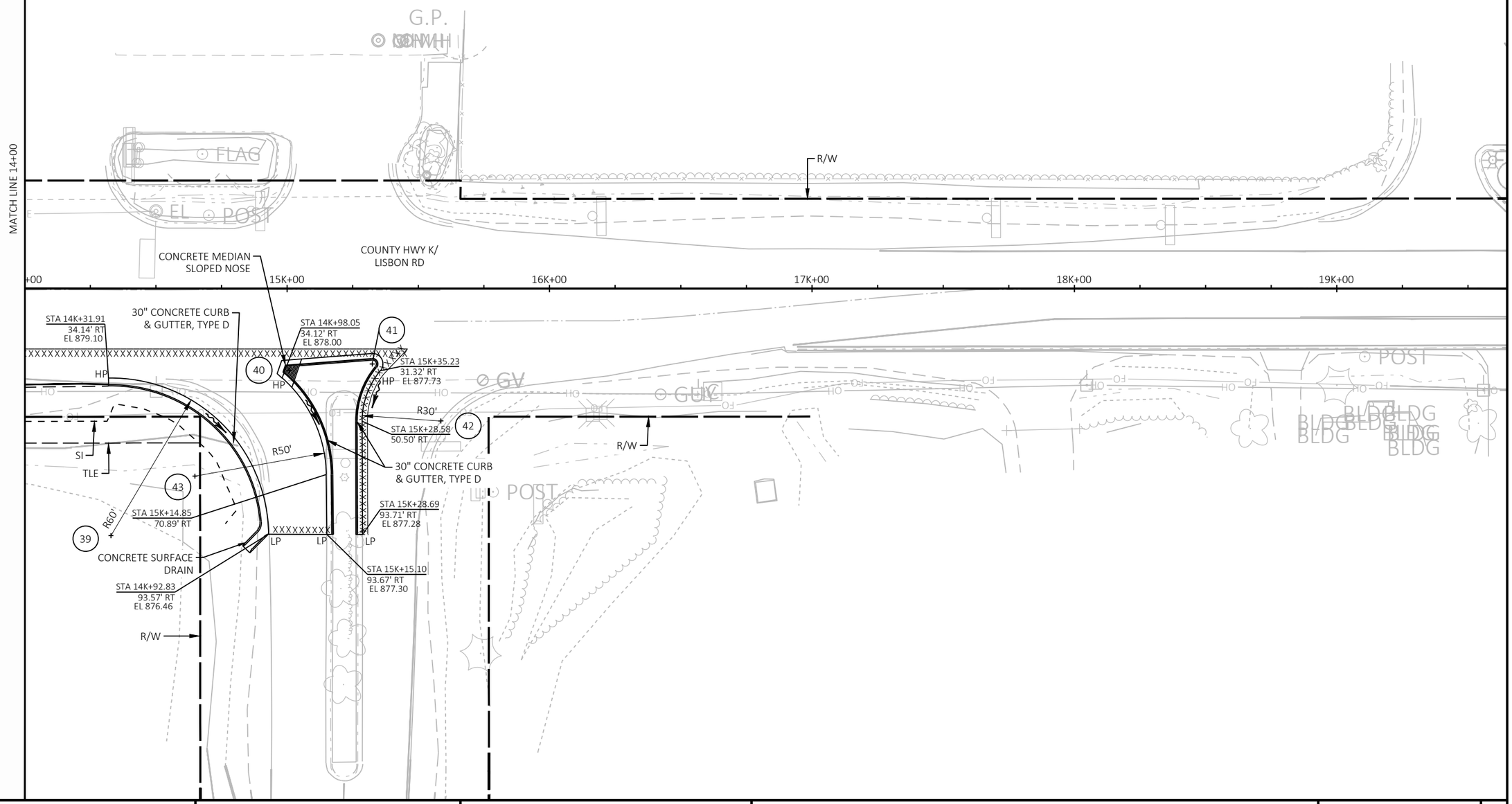
| STATION & OFFSET TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| POINT | STATION CTH F | OFFSET | STATION CTH K | OFFSET | Y COORDS | X COORDS | RADIUS |
| 39 | 282+89.26 | 434.54 RT | 14+32.83 | 94.14 RT | 197646.147 | 689363.642 | 60' |
| 40 | 283+53.50 | 501.33 RT | 15+00.83 | 31.18 RT | 197708.818 | 689431.909 | N/A |
| 41 | 283+56.55 | 532.85 RT | 15+32.41 | 28.73 RT | 197711.135 | 689463.498 | 4' |
| 42 | 286+35.36 | 559.44 RT | 15+58.58 | 50.42 RT | 197689.326 | 689489.582 | 30' |
| 43 | 283+12.56 | 466.12 RT | 14+64.85 | 71.45 RT | 197668.701 | 689395.762 | 50' |

LEGEND

XXXXXXXX SAWCUT ASPHALT

YYYYYYYY SAWCUT CONCRETE

N




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | INTERSECTION DETAILS: CTH K | SHEET 25 | E |
|---|---|---|---|---|---|

2

2

N

BP: 271+85.21

272+00 273+00 274+00 275+00 276

COUNTY HWY F/
REDFORD BLVD

MATCH LINE 276+00

## LEGEND

- SILT FENCE
- CULVERT PIPE CHECKS
- EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION TYPE D (UNLESS OTHERWISE NOTED)
- DITCH CHECK
- FLOW ARROW
- MEDIUM RIP RAP

MATCH LINE 276+00

STA BACK = 278+58.28
STA AHEAD = 280+20.69

+00 277+00 278+00 281+00 282+00 283

SI

A STAGE 1
D STAGE 2-5

COUNTY HWY F/
REDFORD BLVD

BORE

R/W

SI

SI

MATCH LINE 283+00

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | EROSION CONTROL - CTH F | SHEET 26 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 04

PLOT DATE : 10/26/2026 1:30 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

N

MATCH LINE 283+00

COUNTY HWY K/
LISBON RD

SI

BORE

284+00

PI: 10+00.00

285+00

286+00

287+00

288

COUNTY HWY F/
WAUKESHA AVE

MATCH LINE 288+00

WETLANDS

R/W

## LEGEND

- SILT FENCE
- CULVERT PIPE CHECKS
- EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION TYPE D (UNLESS OTHERWISE NOTED)
- DITCH CHECK
- FLOW ARROW
- MEDIUM RIP RAP

MATCH LINE 288+00

COUNTY HWY F/
WAUKESHA AVE

289+00

290+00

291+00

292+00

293+00

MATCH LINE 293+50

R/W

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | EROSION CONTROL - CTH F | SHEET 27 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 05

PLOT DATE : 10/26/2026 1:30 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

2

N

BP: 0+00.00

R/W

1+00 2+00 3+00 4+00

COUNTY HWY K/
LISBON RD

R/W

SI

MATCH LINE 4+50

## LEGEND

- SILT FENCE
- CULVERT PIPE CHECKS
- EROSION MAT URBAN CLASS I TYPE B
- INLET PROTECTION TYPE D (UNLESS OTHERWISE NOTED)
- DITCH CHECK
- FLOW ARROW
- MEDIUM RIP RAP

MATCH LINE 4+50

R/W

POST

SI

5+00 6+00 7+00 8+00 9+00

COUNTY HWY K/
LISBON RD

BORE

MATCH LINE 9+50

R/W

SI

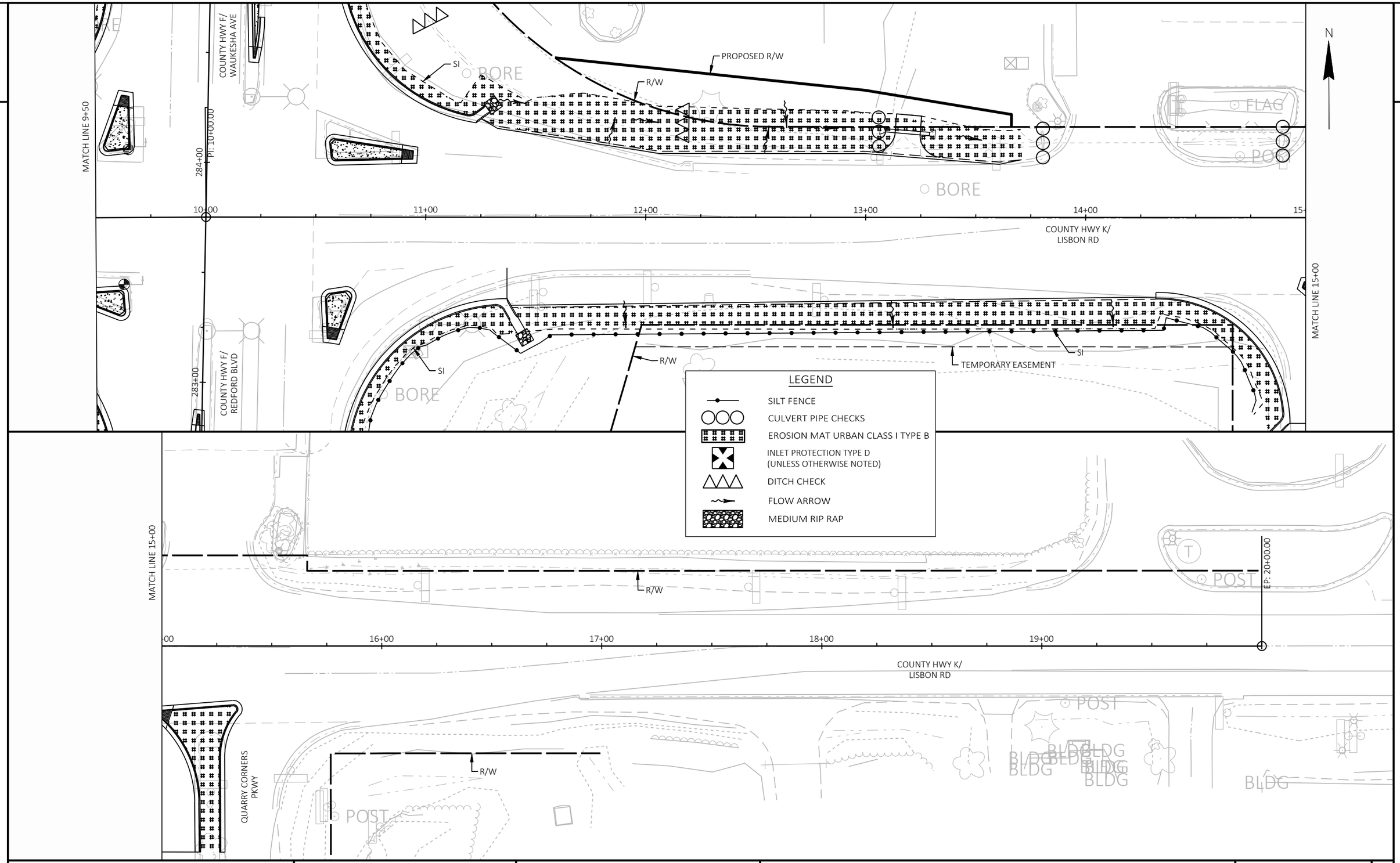
PROPOSED R/W

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | EROSION CONTROL - CTH K | SHEET 28 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - 07

PLOT DATE : 10/26/2026 1:30 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44


MATCH LINE 9+50
COUNTY HWY F/
WAUKESHA AVE
284+00
PI: 10+00.00
SI
BORE
PROPOSED R/W
R/W
FLAG
POST
BORE
10+00
11+00
12+00
13+00
14+00
15+
N
COUNTY HWY K/
LISBON RD
MATCH LINE 15+00
283+00
COUNTY HWY F/
REDFORD BLVD
SI
BORE
R/W
TEMPORARY EASEMENT
SI
LEGEND
SILT FENCE
CULVERT PIPE CHECKS
EROSION MAT URBAN CLASS I TYPE B
INLET PROTECTION TYPE D
(UNLESS OTHERWISE NOTED)
DITCH CHECK
FLOW ARROW
MEDIUM RIP RAP
MATCH LINE 15+00
R/W
T
POST
EP: 20+00.00
00
16+00
17+00
18+00
19+00
COUNTY HWY K/
LISBON RD
POST
BLDG
BLDG
BLDG
BLDG
BLDG
QUARRY CORNERS
PKWY
R/W
POST

2

2

N

SI

EXISTING STORM SEWER TO REMAIN

CONNECT TO EXISTING WITH CONCRETE COLLAR FOR PIPE

STA 276+99.54, 4.12' RT
INLETS MEDIAN 1G-MS
1.0

STA 276+99.50, 10.78' RT
INLETS 2x3-HM-S
1.1

274+00 275+00 276+00 277+00 278+00 281+00

STA BACK = 278+58.28
STA AHEAD = 280+20.69

CTH F / REDFORD BLVD

WAUKESHA COUNTY PUBLIC WORKS

ATC

885 880 875 870

1.1
1.0
881.84
880.99
SSPRC CLASS III 12-INCH @ 0.92%
877.90
877.83
SSPRC CLASS III 18-INCH @ 1.23%
877.33

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STORM SEWER | SHEET 30 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\022501-SS.DWG
LAYOUT NAME - 022501-SS

PLOT DATE : 10/26/2026 11:44 AM PLOT BY : NIK OHUAFI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 41

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| 500 | 283F+43.79 LT | 887.82 | CHISELED X IN CONCRETE BASE |
| 501 | 284F+05.17 LT | 887.60 | CHISELED X IN CONCRETE BASE |

EXISTING STORM SEWER TO REMAIN
EVERSTREAM
CONNECT TO EXISTING INLET
STA 282+19.25, 1.25' RT
INLETS 2x3-HM-S
2.0
COUNTY HWY K/
LISBON RD
COUNTY HWY F/
REDFORD BLVD
ATC
SPECTRUM
SI
BM 501
COUNTY HWY F/
WAUKESHA AVE
PI: 10+00.00
STA 285+25.54, 16.75' RT
INLETS 4-HM-S
3.0
CONNECT TO EXISTING WITH
CONCRETE COLLAR FOR PIPE
EXISTING STORM SEWER TO REMAIN
STA 286+00.16, 13.99' RT
EXISTING INLET 4-WM
1 - INLET COVER HM-S
1 - ADJUST INLET
3.1
STA 286+48.35, 12.20' RT
EXISTING INLET 4-WM
1 - INLET COVER HM-S
1 - ADJUST INLET
3.2
SI
R/W
282+00
283+00
284+00
285+00
286+00
287+00
10+00
890
885
880
875
884.91
882.46
882.51
SSPRC CLASS III 12-INCH @ 1.08%
885.72
885.83
885.91
SSPRC CLASS III 12-INCH
SSPRC CLASS III 12-INCH
SURVEY UNABLE TO ACCURATELY MEASURE EXISTING INVERT DUE TO DEBRIS
SET INVERTS TO MATCH EXISTING AND MAINTAIN POSITIVE DRAINAGE

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STORM SEWER | SHEET 31 | E |
|---|---|---|---|---|---|

2

N

COUNTY HWY K/
LISBON RD

1+00

2+00

MATCH LINE 2+50

GUY

OH

FO

1

REMOVE

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 32 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 01

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

MATCH LINE 2+50

MATCH LINE 7+50

REMOVE TRUCK ROUTE

TRUCK ROUTE R14-1 24"X18" 2A

TRUCK ROUTE M6-1 21"X21" 2B

POST

3+00 4+00 5+00 6+00 7+00

COUNTY HWY K/
LISBON RD

JCT COUNTY F REMOVE

JCT COUNTY F M2-1 21"X15" 3A

M1-5A 24"X24" 3B

4 W3-3 36"X36"

LEFT LANE MUST TURN LEFT REMOVE 5

6A M3-1 24"X12"

6C M1-5A 24"X24"

6E M6-1 21"X21"

6G

NORTH SOUTH COUNTY F COUNTY F TRUCK ROUTE R14-1 24"X18"

M3-3 24"X12" 6B

M1-5A 24"X24" 6D

M6-1 21"X21" 6F

NORTH SOUTH COUNTY F COUNTY F TRUCK ROUTE REMOVE 7

ONLY ONLY ONLY R3-8LAR 54"X30" 8

SIGNING LEGEND

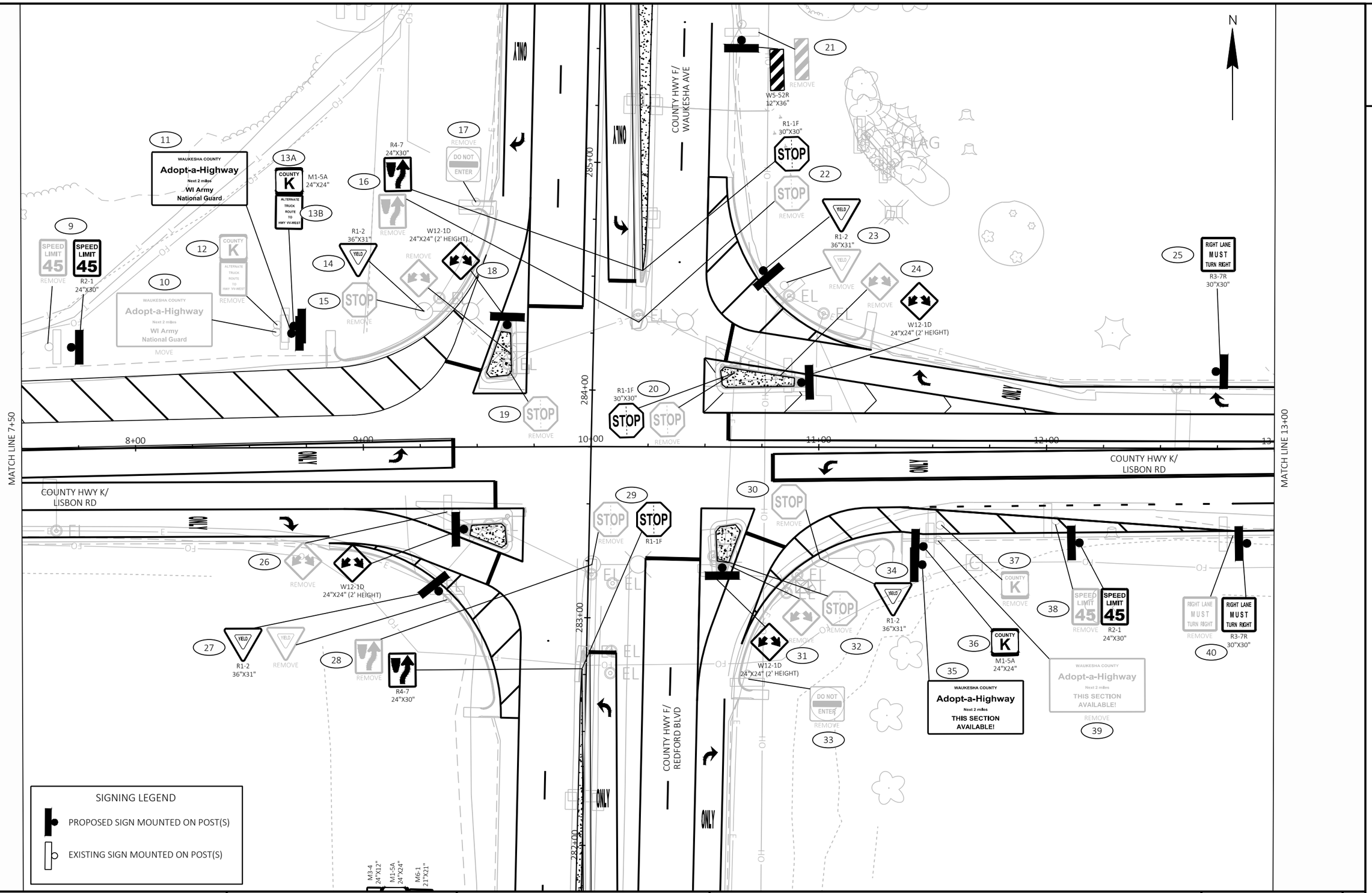
PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 33 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 02

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 34 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 03

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

41

SOUTH / COUNTY F — SOUTH / COUNTY F

REMOVE

42

RIGHT LANE MUST TURN RIGHT

REMOVE

43A M3-3 24"X12" — 43B M3-1 24"X12"

43C M1-5A 24"X24" — 43D M1-5A 24"X24"

43E M6-1 21"X21" — 43F M6-1 21"X21"

44

DO NOT BLOCK DRIVEWAY — REMOVE

DO NOT BLOCK DRIVEWAY 24"X30"

45A JCT COUNTY F — ALTERNATE TRUCK ROUTE TO HWY VV-WEST — REMOVE

JCT COUNTY F — ALTERNATE TRUCK ROUTE TO HWY VV-WEST

45B M2-1 21"X15"

45C M1-5A 24"X24"

45D

45E M6-1 21"X21"

46

BEGIN LEFT TURN LANE

R3-20LL 24"X36"

47

W3-3 36"X36"

48

LEFT LANE MUST TURN LEFT

REMOVE

MATCH LINE 13+00

14+00 15+00 16+00 17+00 18+

MATCH LINE 18+00

COUNTY HWY K/
LISBON RD

STA 15+25.29

49

R3-2 24"X24"

QUARRY CORNERS PKWY

WELCOME TO LISBON

REMOVE BY OTHERS

50

STOP — REMOVE

STOP

R1-1 30"X30"

51

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 35 | E |
|---|---|---|---|---|---|

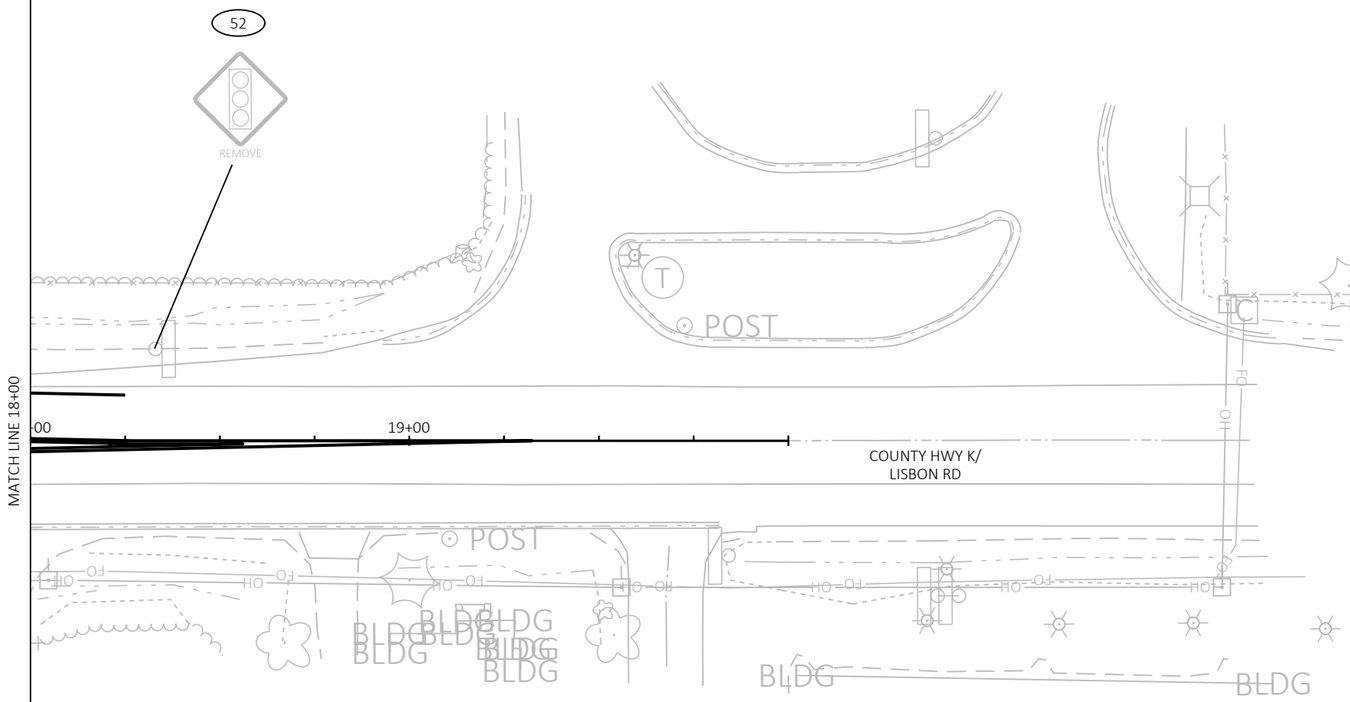
FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 04

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N




SIGNING LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 36 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 05

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

53
SPEED LIMIT 45
REMOVE
SPEED LIMIT 45
W3-5
36"X36"

54
W3-3
36"X36"

55
JCT
COUNTY K
REMOVE

56
BEGIN LEFT TURN LANE
R3-20LL
24"X36"

57
REMOVE
SPEED LIMIT 55
R2-1
24"X30"
SPEED LIMIT 55

58
REMOVE
SPEED LIMIT 55
R2-1
24"X30"
SPEED LIMIT 55

COUNTY HWY F/
REDFORD BLVD

272+00 273+00 274+00 275+00 276+00

MATCH LINE 276+50

OH

COUNTY HWY F/
REDFORD BLVD

59
REMOVE
SPEED LIMIT 45
W3-5
36"X36"

60A
60B
JCT
COUNTY K
M2-1
21"X15"
M1-5A
24"X24"

61
W3-3
36"X36"

62
BEGIN LEFT TURN LANE
R3-20LL
24"X36"

63A
63B
ALTERNATE TRUCK ROUTE TO HWY VV-WEST
REMOVE
ALTERNATE TRUCK ROUTE TO HWY VV-WEST
M5-1L
21"X21"

64
SPEED LIMIT 45
REMOVE
SPEED LIMIT 45
R2-1
24"X30"

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

| | | | | |
|---|---|---|---|---|
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 37 E |

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 06

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

N

MATCH LINE 276+50

STA BACK = 278+58.28
STA AHEAD = 280+20.69

277+00 278+00 281+00 282+00

COUNTY HWY F/
REDFORD BLVD

COUNTY HWY F/
REDFORD BLVD

65 REMOVE

66A M3-4 24"X12"
66B M3-2 24"X12"
66C M1-5A 24"X24"
66D M1-5A 24"X24"
66E M5-1L 21"X21"
66F M5-1R 21"X21"

67 REMOVE

68 COUNTY F REMOVE
M1-5A 24"X24"

69 BEGIN LEFT TURN LANE REMOVE

70 WRONG WAY REMOVE
WRONG WAY R5-1A 36"X24"

71 WEST COUNTY K REMOVE

72A M3-4 24"X12"
72B M1-5A 24"X24"
72C M6-1 21"X21"

73 REMOVE

74A M3-4 24"X12"
74B M3-2 24"X12"
74C M1-5A 24"X24"
74D M1-5A 24"X24"
74E M5-1L 21"X21"
74F M5-1R 21"X21"

75 REMOVE

76 EAST COUNTY K REMOVE

77A M3-2 24"X12"
77B M1-5A 24"X24"
77C M6-1 21"X21"

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 38 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 07

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

78 EAST COUNTY K REMOVE

79A WEST M3-4 24"X12"
79B COUNTY K M1-5A 24"X24"
79C M6-1 21"X21"

80 WEST COUNTY K REMOVE

81 WRONG WAY R5-1A 36"X24" REMOVE

82 BEGIN LEFT TURN LANE REMOVE

83 WRONG WAY R5-1A 36"X24"

84 BEGIN LEFT TURN LANE R3-20LL 24"X36"

85A M3-2 24"X12" EAST
85C M1-5A 24"X24" COUNTY K
85E M5-1L 21"X21"
WEST M3-4 24"X12"
COUNTY K M1-5A 24"X24"
85B
85D
85F M5-1R 21"X21"

86 EAST WEST COUNTY K COUNTY K REMOVE

87 REMOVE W3-3 36"X36"

GUY

OH

HO

COUNTY HWY F

286+00 287+00 288+00 289+00 290+00 291

MATCH LINE 291+00

88A EAST M3-2 24"X12"
88B COUNTY K M1-5A 24"X24"
88C M6-1 21"X21"

NORTH COUNTY F REMOVE

NORTH COUNTY F M3-1 24"X12" M1-5A 24"X24"
89A
89B

SPEED LIMIT 45 REMOVE
90 SPEED LIMIT 45 R2-1 24"X30"

SPEED LIMIT 45 REMOVE
91 SPEED LIMIT 45 R2-1 24"X30"

REMOVE W3-3 36"X36"
92

SIGNING LEGEND

PROPOSED SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON POST(S)

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PERMANENT SIGNING | SHEET 39 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\023201-PS.DWG
LAYOUT NAME - 08

PLOT DATE : 4/28/2026 11:18 AM PLOT BY : ALEX ZINDA PLOT NAME : PLOT SCALE : 1 IN:40 FT

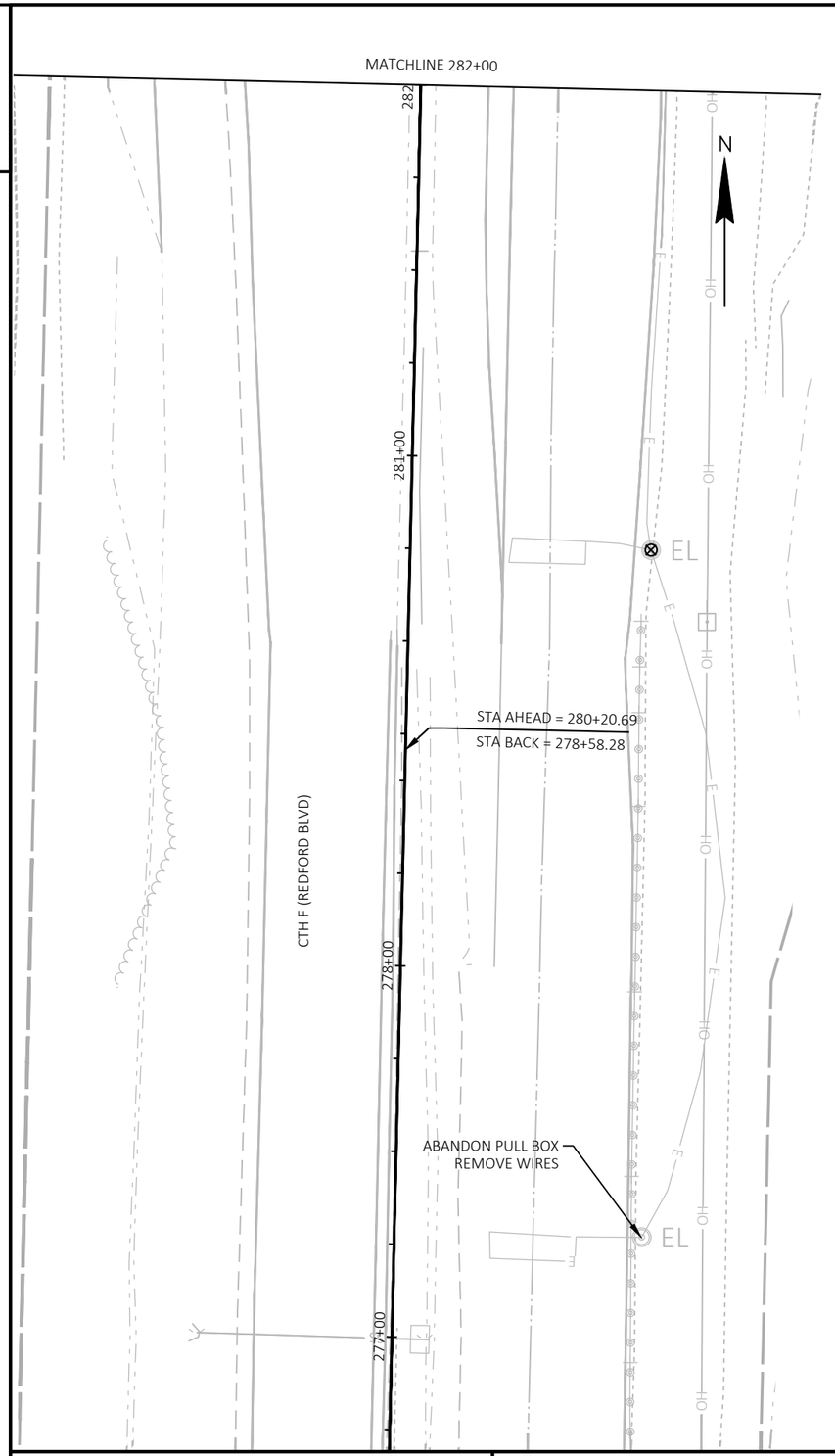
2

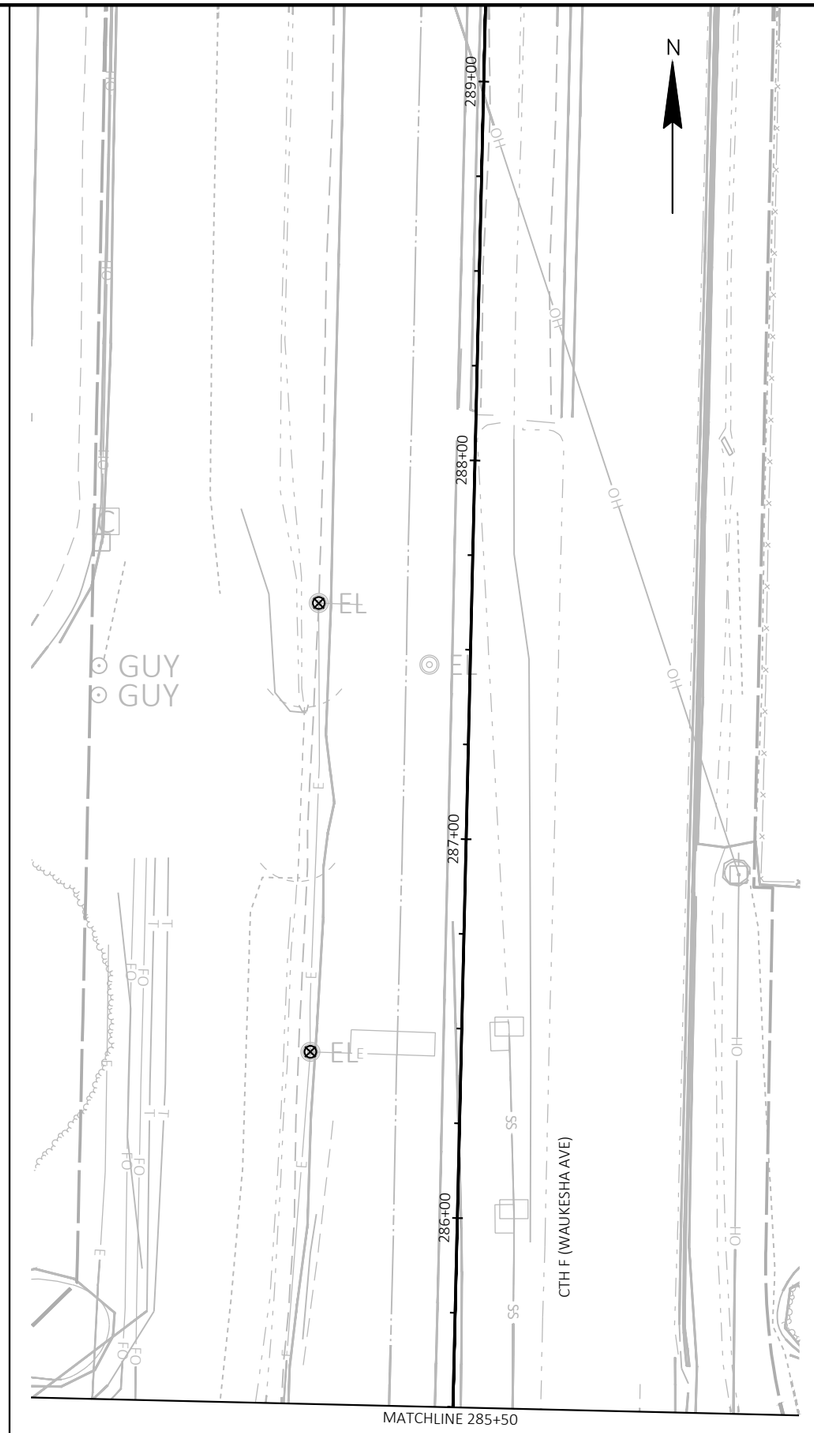


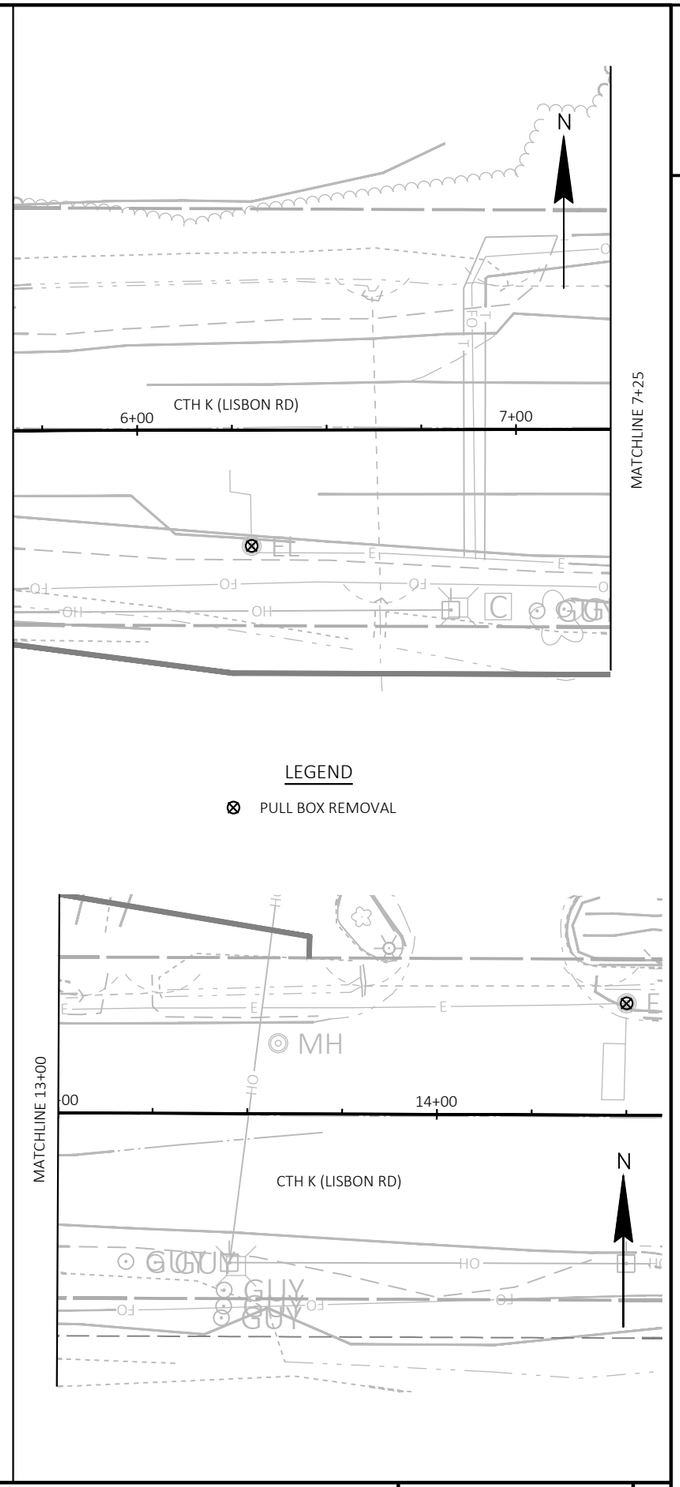

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL REMOVAL | SHEET 40 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024001-SR.DWG
LAYOUT NAME - 01

PLOT DATE : 6/26/2026 2:21 PM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT






| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL REMOVAL | SHEET 41 | E |
|---|---|---|---|---|---|

2

2

LEGEND

- CONTROL CABINET
- OH — TEMPORARY OVERHEAD SIGNAL WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY WOOD POLE
- LUMINAIRE
- VIDEO DETECTION AREA
- 1 — VIDEO DETECTION CAMERA
- XX — SIGNAL HEAD NUMBER
- R — RED CIRCULAR INDICATOR
- Y — YELLOW CIRCULAR INDICATOR
- G — GREEN CIRCULAR INDICATOR
- R — RED ARROW
- FY Y — YELLOW ARROW
- G — GREEN ARROW

MATCHLINE 285+50

SPEED LIMIT 35MPH

285+00

COUNTY HWY F/
WAUKESHA AVE

284+00

COUNTY HWY K/
LISBON RD

7+00 8+00 9+00 10+00 11+00 12+00 13+00

SPEED LIMIT 35MPH

255' TO STOP BAR

255' TO STOP BAR

SPEED LIMIT 35MPH

COUNTY HWY K/
LISBON RD

283+00

COUNTY HWY F/
REDFORD BLVD

SPEED LIMIT 35MPH

282+00

MATCHLINE 282+00

N

CONSTRUCTION NOTES:

- INSTALL TEMPORARY TRAFFIC SIGNALS PRIOR TO STAGE 1 USING TEMPORARY SHOULDER CLOSURES.
- POLES AND POSTS INSTALLED BEHIND CURBS SHALL BE OFFSET A MINIMUM OF 2 FEET FROM THE FACE OF CURB TO THE SIDE OF THE POST OR POLE.
- GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
- CONTRACTOR TO ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
- ANY KNOCKDOWNS TO PERMANENT/TEMPORARY SIGNAL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR.
- ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
- ALL EXISTING SIGNAL HEADS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC IMMEDIATELY AFTER TURNING ON TEMPORARY SIGNALS.

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

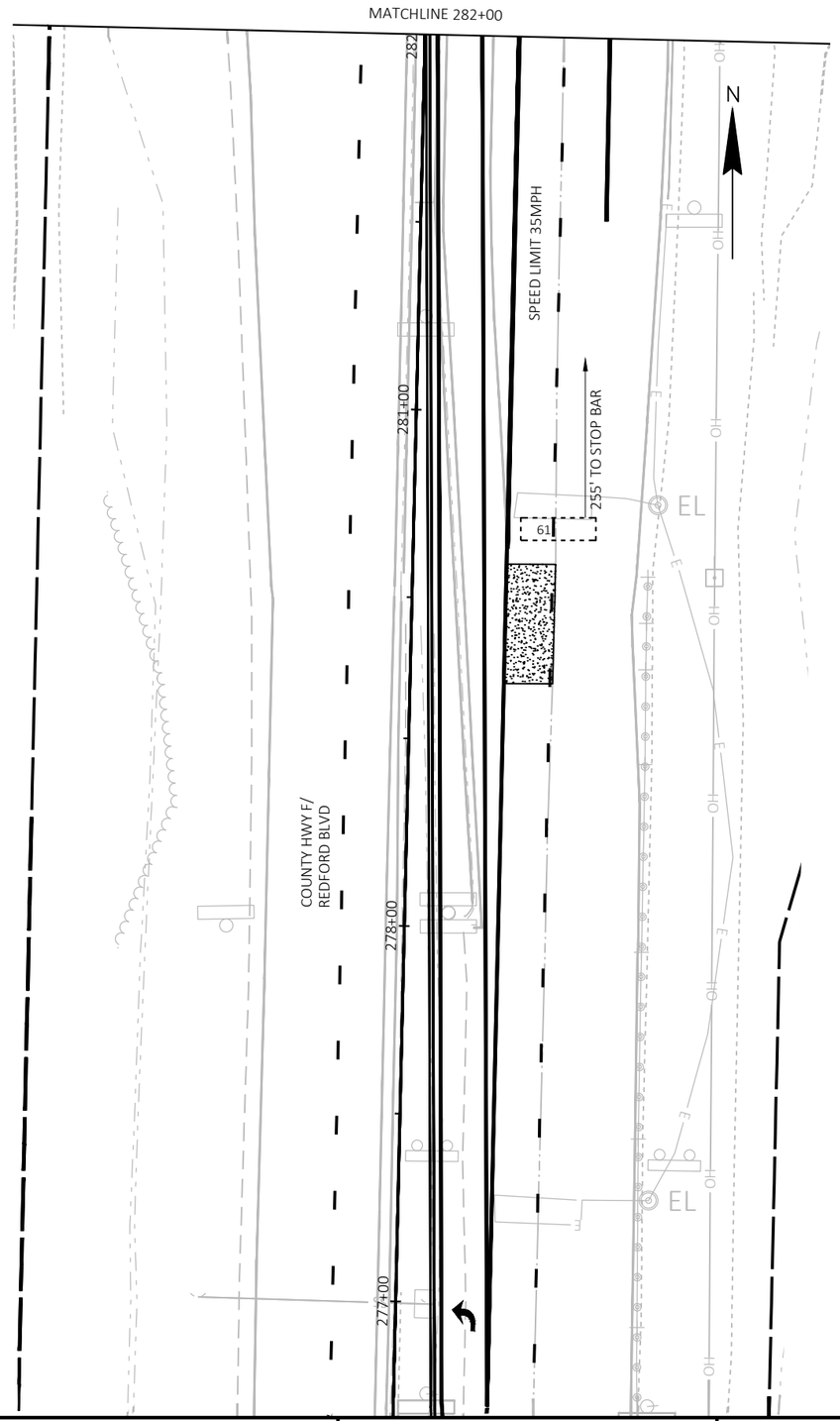
PAGE 1 OF 9

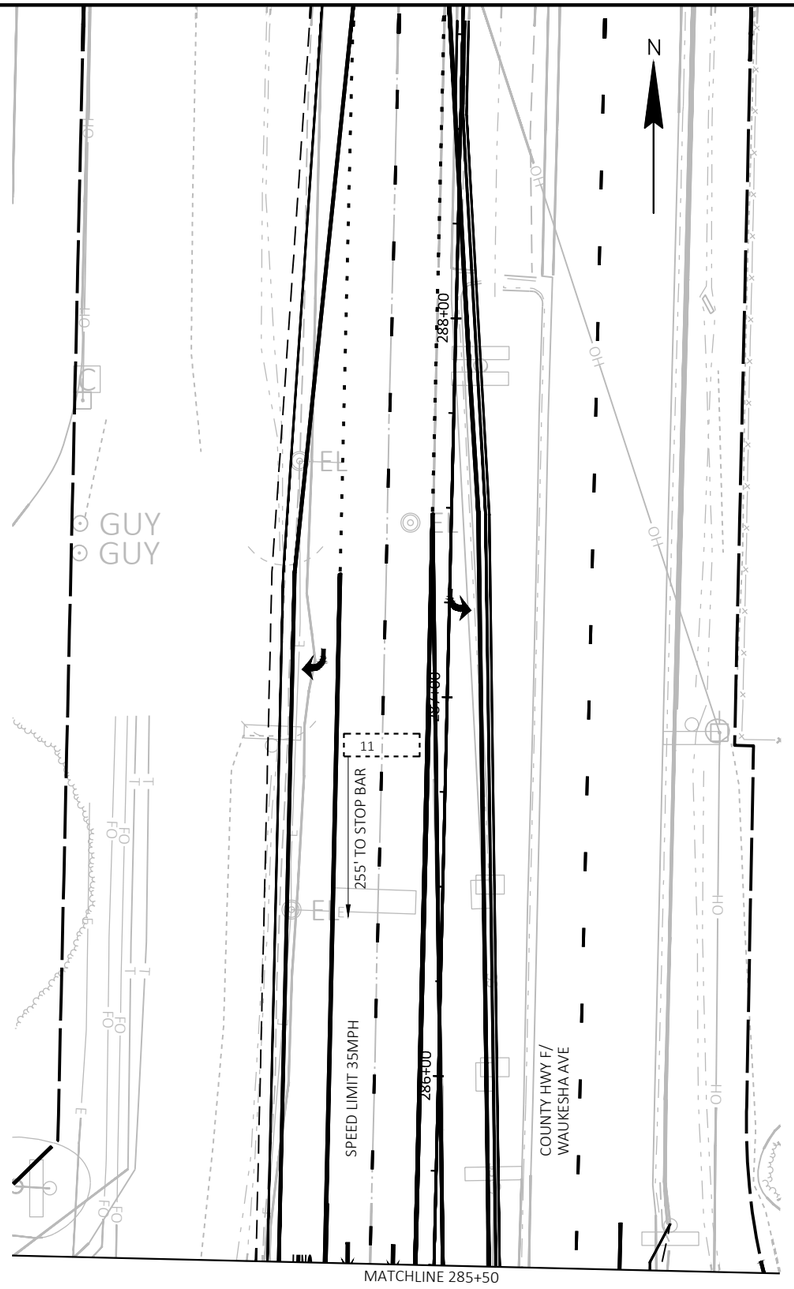
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - STAGE 1 | SHEET 42 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024101A-st

PLOT DATE : 6/24/2026 11:06 AM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42




2

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

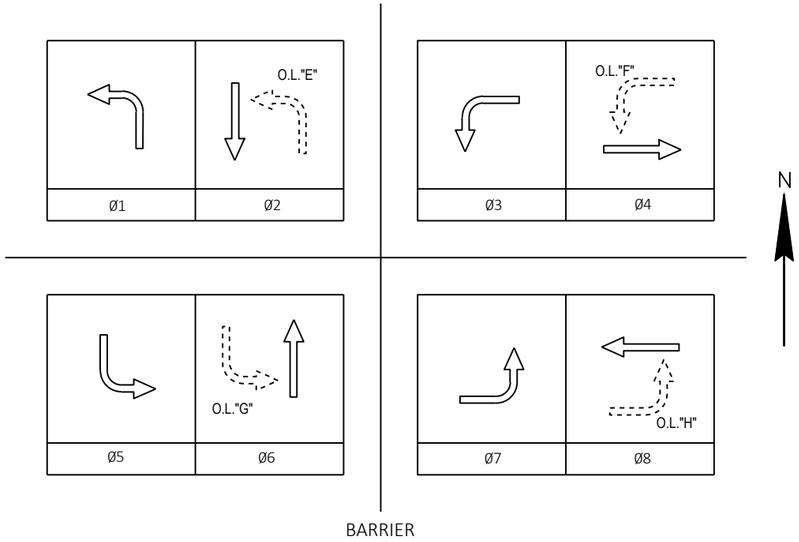


| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - FAR DETECTION - STAGES 1 & 3-5 | SHEET 43 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024101B-st

PLOT DATE : 6/24/2026 11:06 AM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

| | HEAD NUMBERS | FLASH |
|---|---|---|
| Ø1 | 14,15 | R |
| Ø2 | 1-3 | R |
| Ø3 | 19,20 | R |
| Ø4 | 6-8 | R |
| Ø5 | 4,5 | R |
| Ø6 | 11-13 | R |
| Ø7 | 9,10 | R |
| Ø8 | 16-18 | R |
| O.L."E" | 14,15 | R |
| O.L."F" | 19,20 | R |
| O.L."G" | 4,5 | R |
| O.L."H" | 9,10 | R |




CONTROLLER LOGIC

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

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

DETECTOR LOGIC

| DETECTOR INPUT | 3 | 1 | 7 | 5 | 11 | 9 | 15 | 13 |
|---|---|---|---|---|---|---|---|---|
| DETECTOR #(S) | 11 | 51 | 31 | 41 | 71 | 81 | | |
| PHASE CALLED | 1 | 5 | 3 | 4 | 7 | 8 | | |
| PHASE EXTENDED | 1 | 5 | 3 | 4 | 7 | 8 | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | | | | | |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| 19 | 17 | 23 | 21 | 27 | 25 | 31 | 29 | DETECTOR INPUT |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | DETECTOR #(S) |
| | | | | | | | | PHASE CALLED |
| | | | | | | | | PHASE EXTENDED |
| | | | | | | | | DISCONNECT TIME |
| | | | | | | | | CALLING DELAY |
| | | | | | | | | EXTENSION STRETCH |
| | | | | | | | | ADDED INITIAL |
| | | | | | | | | MAXIMUM INITIAL |
| | | | | | | | | LOOP FUNCTION |

| DETECTOR INPUT | 4 | 2 | 8 | 6 | 12 | 10 | 16 | 14 |
|---|---|---|---|---|---|---|---|---|
| DETECTOR #(S) | 61 | 21 | | 82 | | 42 | | |
| PHASE CALLED | 6 | 2 | | 8 | | 4 | | |
| PHASE EXTENDED | 6 | 2 | | 8 | | 4 | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | 26 | 26 | | | | | | |
| MAXIMUM INITIAL | 1 SEC | 1 SEC | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| 20 | 18 | 24 | 22 | 28 | 26 | 32 | 30 | DETECTOR INPUT |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | DETECTOR #(S) |
| | | | | | | | | PHASE CALLED |
| | | | | | | | | PHASE EXTENDED |
| | | | | | | | | DISCONNECT TIME |
| | | | | | | | | CALLING DELAY |
| | | | | | | | | EXTENSION STRETCH |
| | | | | | | | | ADDED INITIAL |
| | | | | | | | | MAXIMUM INITIAL |
| | | | | | | | | LOOP FUNCTION |

| TYPE OF REMOTE COMMUNICATION | |
|---|---|
| NONE | X |
| FIBER | |
| CELL MODEM | |
| PHONE | |

| TYPE OF INTERCONNECT | |
|---|---|
| NONE | X |
| TBC | |
| CLOSED LOOP TWISTED PAIR | |
| CLOSED LOOP FIBER OPTIC | |
| RADIO | |

| TYPE OF LIGHTING | |
|---|---|
| BY OTHER AGENCY | X |
| * IN TRAFFIC SIGNAL CABINET | |
| IN SEPARATE DOT LIGHTING CABINET | |

* WISDOT OWNS AND OPERATES THE LIGHTING UNITS ON THE SIGNAL MAST ARMS

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:



PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL PHASING - 1 & 3-5 | SHEET 44 | E

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024111-st
PLOT DATE : 6/24/2026 11:06 AM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- OH — TEMPORARY OVERHEAD SIGNAL WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY WOOD POLE
- LUMINAIRE
- VIDEO DETECTION AREA
- 1 — VIDEO DETECTION CAMERA
- XX — SIGNAL HEAD NUMBER
- R — RED CIRCULAR INDICATOR
- Y — YELLOW CIRCULAR INDICATOR
- G — GREEN CIRCULAR INDICATOR
- R — RED ARROW
- FY Y — YELLOW ARROW
- G — GREEN ARROW

MATCHLINE 285+50

SPEED LIMIT 35MPH

285+00

COUNTY HWY F/
WAUKESHA AVE

FLAG

N

284+00

COUNTY HWY K/
LISBON RD

7+00 8+00 9+00 10+00 11+00 12+00 13+00

42 255' TO STOP BAR

SPEED LIMIT 35MPH

SPEED LIMIT 35MPH

255' TO STOP BAR 82

COUNTY HWY K/
LISBON RD

283+00

COUNTY HWY F/
REDFORD BLVD

SPEED LIMIT 35MPH

MATCHLINE 282+00

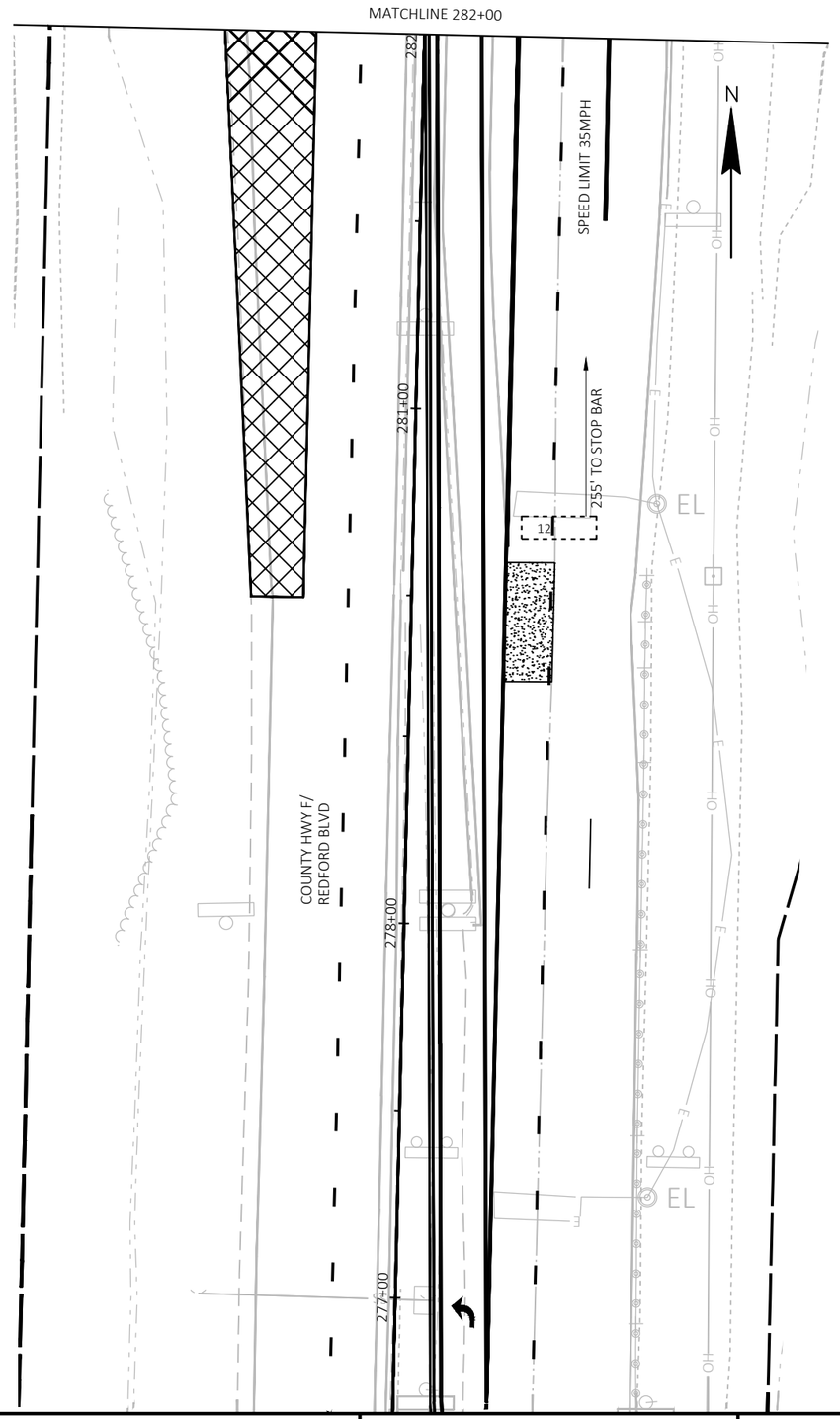
TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

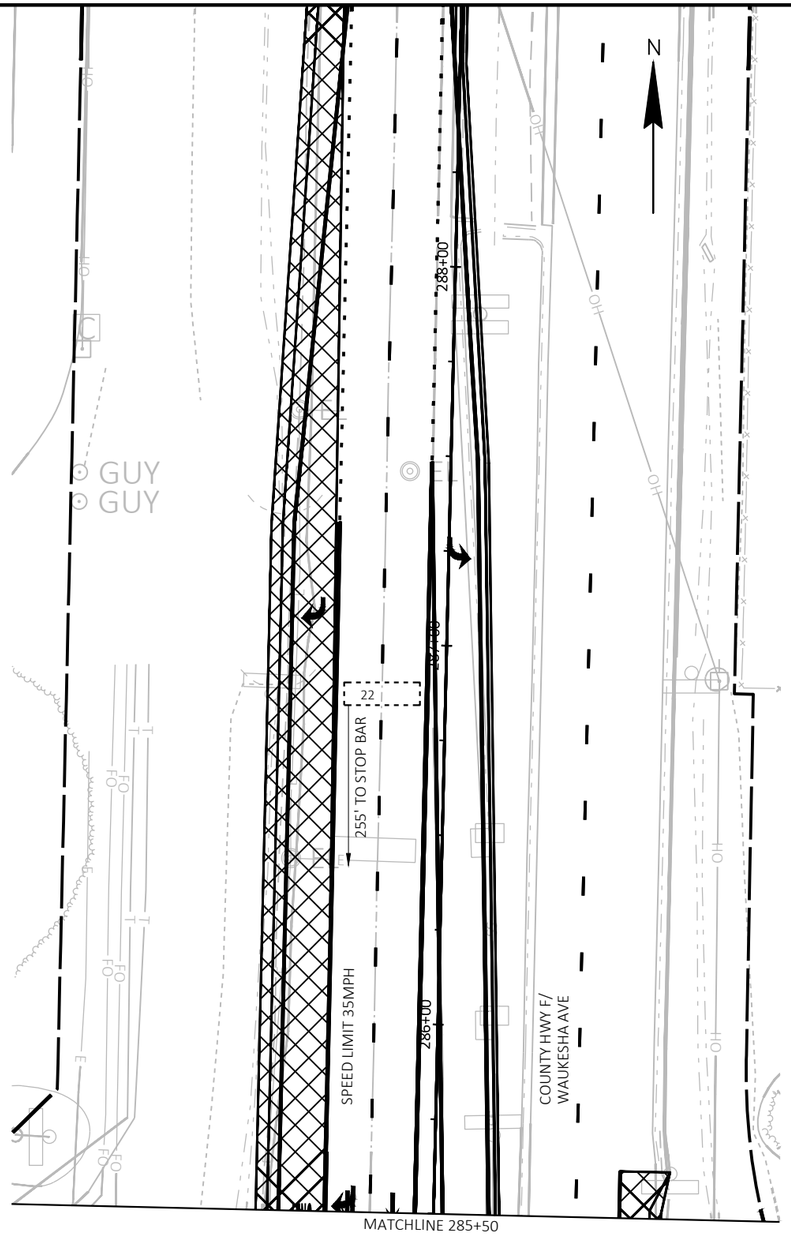
SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

PAGE 4 OF 9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - STAGE 2 | SHEET 45 | E |
|---|---|---|---|---|---|




2

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

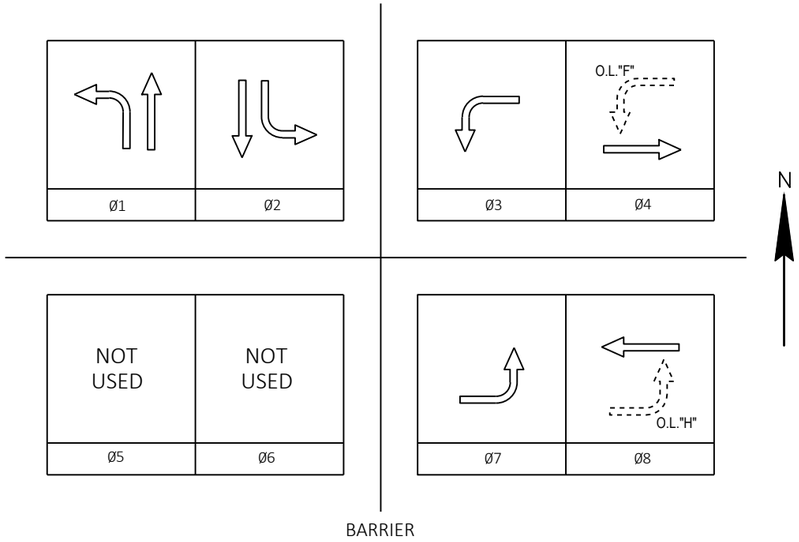
COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

PAGE 5 OF 9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - FAR DETECTION - STAGE 2 | SHEET 46 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024102B-st
PLOT DATE : 6/24/2026 11:06 AM
PLOT BY : JIM PAVELSKI
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

| | HEAD NUMBERS | FLASH |
|---|---|---|
| Ø1 | 11-15 | R/R |
| Ø2 | 1-5 | R/R |
| Ø3 | 19,20 | R |
| Ø4 | 6-8 | R |
| Ø5 | | R |
| Ø6 | | R |
| Ø7 | 9,10 | R |
| Ø8 | 16-18 | R |
| O.L."E" | | |
| O.L."F" | 19,20 | |
| O.L."G" | | |
| O.L."H" | 9,10 | |




CONTROLLER LOGIC

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

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

DETECTOR LOGIC

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 3 | 1 | 7 | 5 | 11 | 9 | 15 | 13 |
| DETECTOR #(S) | 11 | 21 | 31 | 41 | 71 | 81 | | |
| PHASE CALLED | 1 | 2 | 3 | 4 | 7 | 8 | | |
| PHASE EXTENDED | 1 | 2 | 3 | 4 | 7 | 8 | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | | | | | |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 19 | 17 | 23 | 21 | 27 | 25 | 31 | 29 |
| DETECTOR #(S) | | | | | | | | |
| PHASE CALLED | | | | | | | | |
| PHASE EXTENDED | | | | | | | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | | | | | |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 4 | 2 | 8 | 6 | 12 | 10 | 16 | 14 |
| DETECTOR #(S) | 12 | 22 | | 82 | | 42 | | |
| PHASE CALLED | 1 | 2 | | 8 | | 4 | | |
| PHASE EXTENDED | 1 | 2 | | 8 | | 4 | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | 26 | 26 | | | | | | |
| MAXIMUM INITIAL | 1 SEC | 1 SEC | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 20 | 18 | 24 | 22 | 28 | 26 | 32 | 30 |
| DETECTOR #(S) | | | | | | | | |
| PHASE CALLED | | | | | | | | |
| PHASE EXTENDED | | | | | | | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | | | | | |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| TYPE OF REMOTE COMMUNICATION | |
|---|---|
| NONE | X |
| FIBER | |
| CELL MODEM | |
| PHONE | |

| TYPE OF INTERCONNECT | |
|---|---|
| NONE | X |
| TBC | |
| CLOSED LOOP TWISTED PAIR | |
| CLOSED LOOP FIBER OPTIC | |
| RADIO | |

| TYPE OF LIGHTING | |
|---|---|
| BY OTHER AGENCY | X |
| * IN TRAFFIC SIGNAL CABINET | |
| IN SEPARATE DOT LIGHTING CABINET | |

* WISDOT OWNS AND OPERATES THE LIGHTING UNITS ON THE SIGNAL MAST ARMS

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

REGION CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:



PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL PHASING - STAGE 2 | SHEET 47 | E

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024112-st
PLOT DATE : 6/24/2026 11:06 AM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- CONTROL CABINET
- TEMPORARY OVERHEAD SIGNAL WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY WOOD POLE
- LUMINAIRE
- VIDEO DETECTION AREA
- VIDEO DETECTION CAMERA
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW

MATCHLINE 285+50

SPEED LIMIT 35MPH

285+00

ONLY

COUNTY HWY F/
WAUKESHA AVE

284+00

N

COUNTY HWY K/
LISBON RD

7+00

8+00

9+00

10+00

11+00

12+00

13+00

42 255' TO STOP BAR

SPEED LIMIT 35MPH

255' TO STOP BAR 82

COUNTY HWY K/
LISBON RD

283+00

COUNTY HWY F/
REDFORD BLVD

SPEED LIMIT 35MPH

ONLY

MATCHLINE 282+00

CONSTRUCTION NOTES:

- ADJUST TEMPORARY TRAFFIC SIGNAL HEAD LOCATIONS TO NOT CONFLICT WITH NEW, PERMANENT TRAFFIC SIGNAL HEADS.
- FOR FAR DETECTION AND SEQUENCE OF OPERATIONS, SEE STAGE 1.

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

PAGE 7 OF 9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - STAGE 3 | SHEET 48 | E |
|---|---|---|---|---|---|

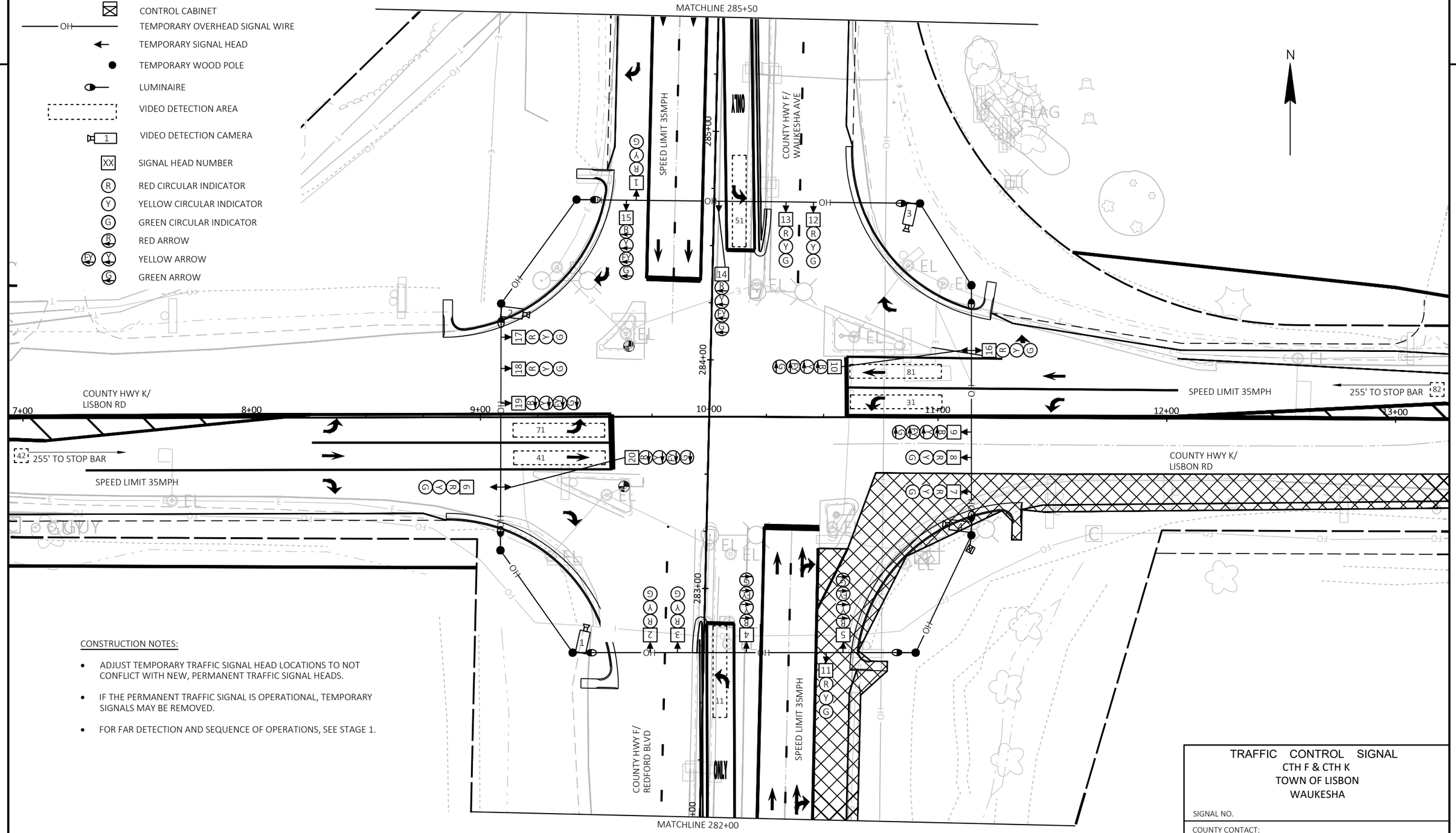
FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024103A-st

PLOT DATE : 6/24/2026 11:06 AM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- CONTROL CABINET
- TEMPORARY OVERHEAD SIGNAL WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY WOOD POLE
- LUMINAIRE
- VIDEO DETECTION AREA
- VIDEO DETECTION CAMERA
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW




CONSTRUCTION NOTES:

- ADJUST TEMPORARY TRAFFIC SIGNAL HEAD LOCATIONS TO NOT CONFLICT WITH NEW, PERMANENT TRAFFIC SIGNAL HEADS.
- IF THE PERMANENT TRAFFIC SIGNAL IS OPERATIONAL, TEMPORARY SIGNALS MAY BE REMOVED.
- FOR FAR DETECTION AND SEQUENCE OF OPERATIONS, SEE STAGE 1.

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

PAGE 8 OF 9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - STAGE 4 | SHEET 49 | E |
|---|---|---|---|---|---|

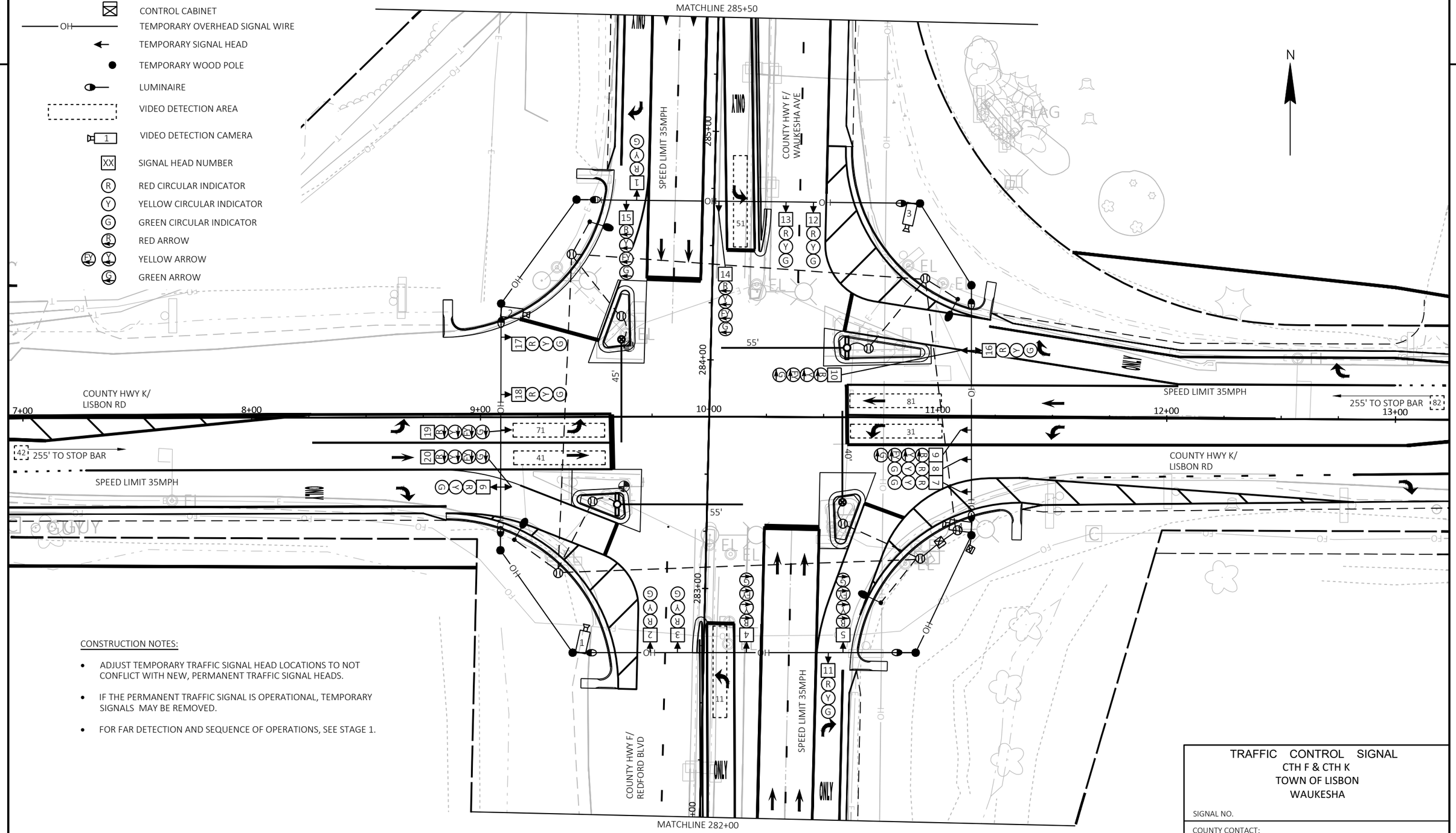
FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024104A-st
PLOT DATE : 6/24/2026 11:06 AM
PLOT BY : JIM PAVELSKI
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

LEGEND

- CONTROL CABINET
- TEMPORARY OVERHEAD SIGNAL WIRE
- TEMPORARY SIGNAL HEAD
- TEMPORARY WOOD POLE
- LUMINAIRE
- VIDEO DETECTION AREA
- VIDEO DETECTION CAMERA
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW




CONSTRUCTION NOTES:

- ADJUST TEMPORARY TRAFFIC SIGNAL HEAD LOCATIONS TO NOT CONFLICT WITH NEW, PERMANENT TRAFFIC SIGNAL HEADS.
- IF THE PERMANENT TRAFFIC SIGNAL IS OPERATIONAL, TEMPORARY SIGNALS MAY BE REMOVED.
- FOR FAR DETECTION AND SEQUENCE OF OPERATIONS, SEE STAGE 1.

TRAFFIC CONTROL SIGNAL
CTH F & CTH K
TOWN OF LISBON
WAUKESHA

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

PAGE 9 OF 9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL TEMPORARY - STAGE 5 | SHEET 50 | E |
|---|---|---|---|---|---|

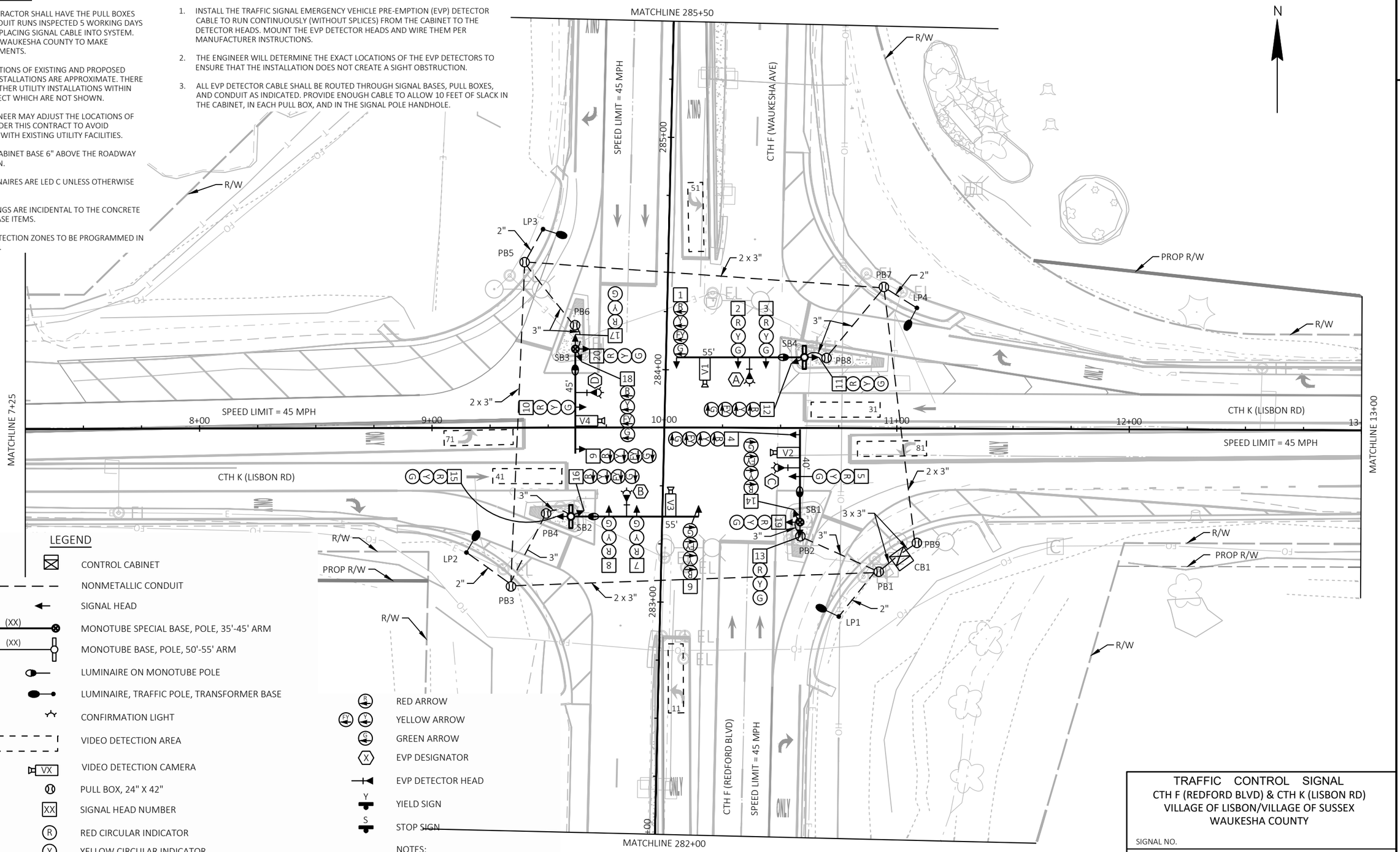

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024101-ST.DWG
LAYOUT NAME - 024105A-st
PLOT DATE : 6/24/2026 11:06 AM
PLOT BY : JIM PAVELSKI
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT WAUKESHA COUNTY TO MAKE ARRANGEMENTS.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE THE ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED C UNLESS OTHERWISE NOTED.
6. ANY CASINGS ARE INCIDENTAL TO THE CONCRETE SIGNAL BASE ITEMS.
7. VIDEO DETECTION ZONES TO BE PROGRAMMED IN THE FIELD.

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION (EVP) DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURER INSTRUCTIONS.
2. THE ENGINEER WILL DETERMINE THE EXACT LOCATIONS OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH SIGNAL BASES, PULL BOXES, AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULL BOX, AND IN THE SIGNAL POLE HANDHOLE.




LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT
- SIGNAL HEAD
- (XX) MONOTUBE SPECIAL BASE, POLE, 35'-45' ARM
- (XX) MONOTUBE BASE, POLE, 50'-55' ARM
- LUMINAIRE ON MONOTUBE POLE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- CONFIRMATION LIGHT
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- PULL BOX, 24" X 42"
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- R RED ARROW
- Y YELLOW ARROW
- G GREEN ARROW
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- Y YIELD SIGN
- S STOP SIGN

NOTES:
- ALL LENSES ARE 12-INCH

TRAFFIC CONTROL SIGNAL
CTH F (REDFORD BLVD) & CTH K (LISBON RD)
VILLAGE OF LISBON/VILLAGE OF SUSSEX
WAUKESHA COUNTY

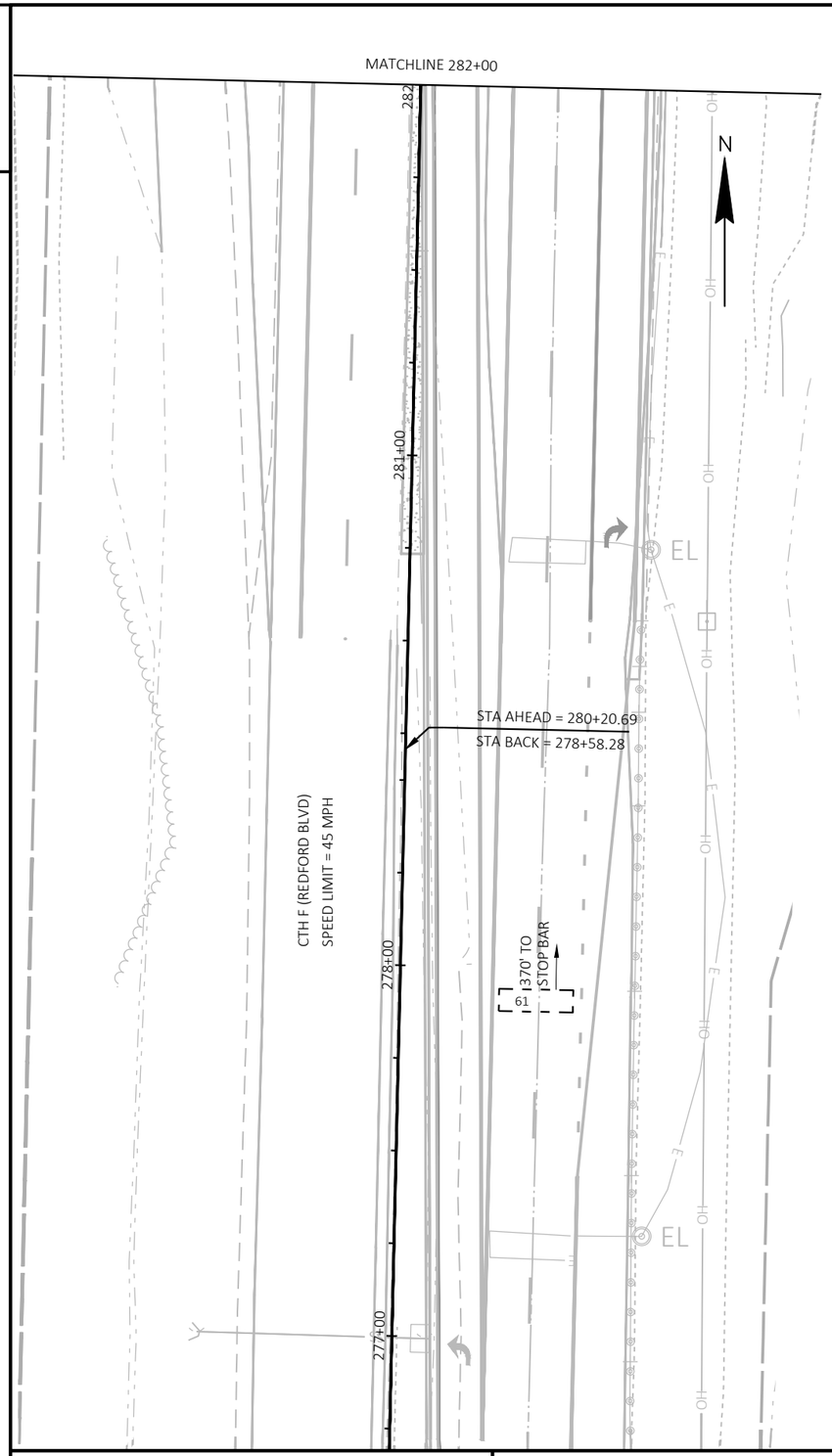
SIGNAL NO.

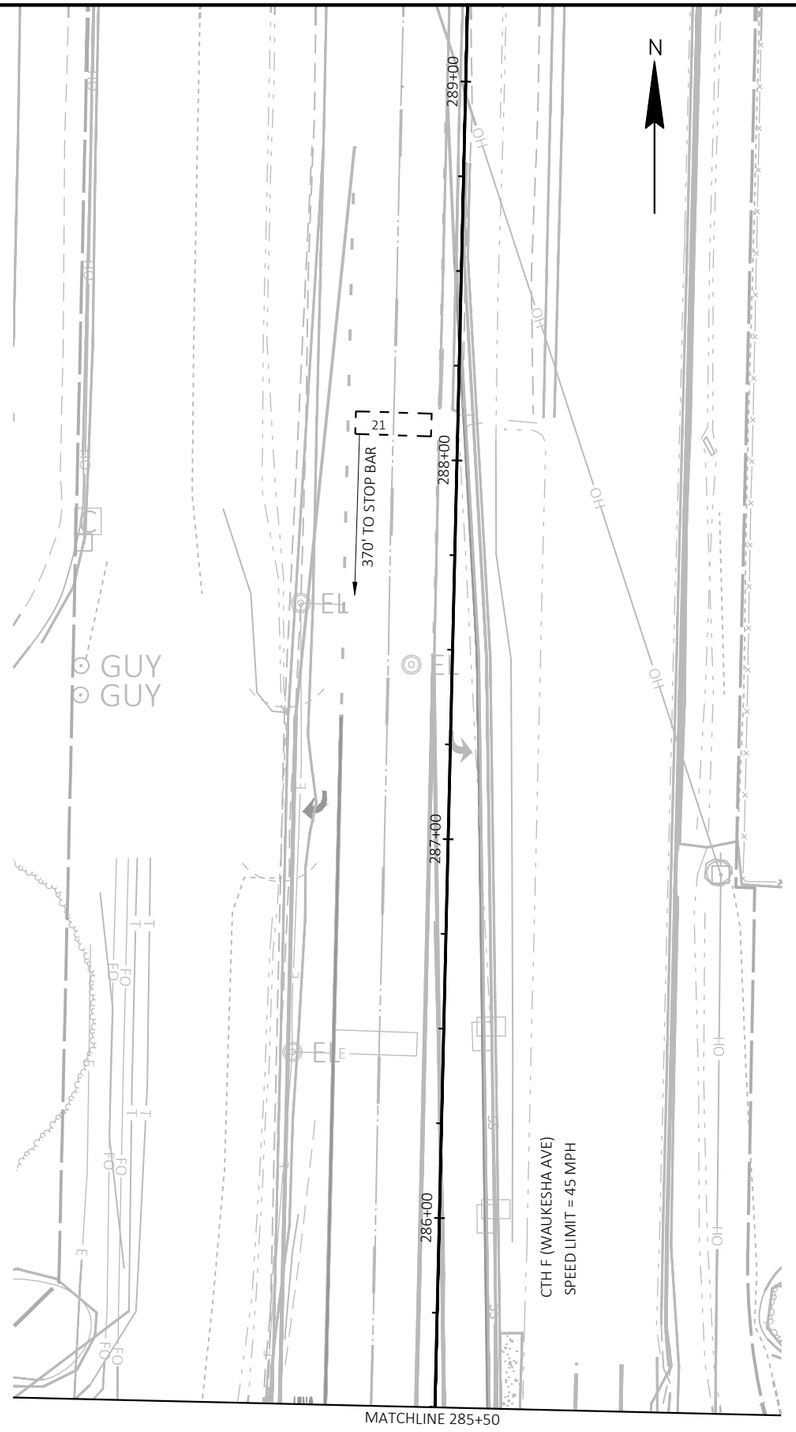
COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

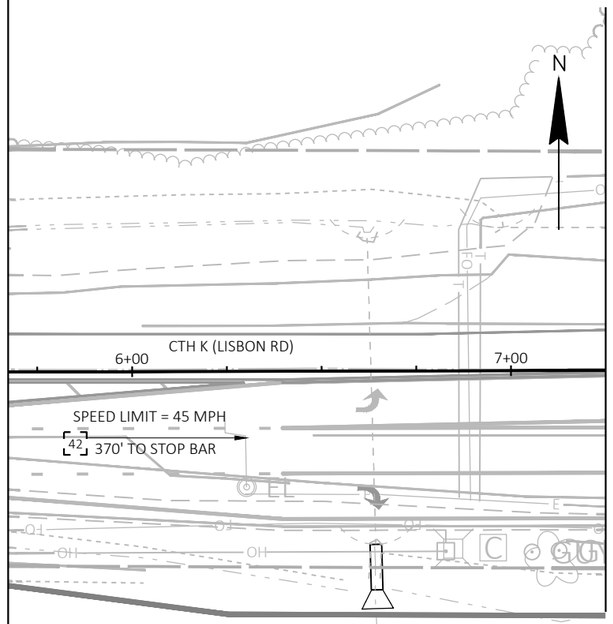


| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL PLAN | SHEET 51 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024201-SP.DWG
LAYOUT NAME - 01
PLOT DATE : 6/25/2026 3:38 PM
PLOT BY : JIM PAVELSKI
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

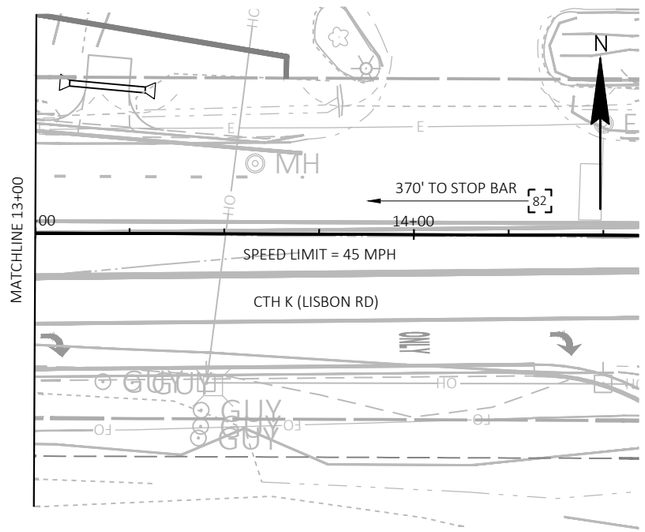



LEGEND

VIDEO DETECTION AREA




# TRAFFIC CONTROL SIGNAL

CTH F (REDFORD BLVD) & CTH K (LISBON RD)
VILLAGE OF LISBON/VILLAGE OF SUSSEX
WAUKESHA COUNTY

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

PAGE 2 OF 4

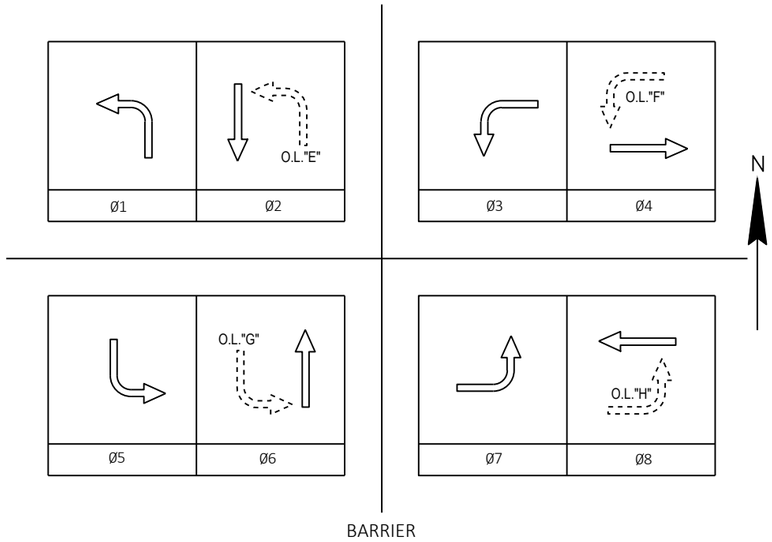
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | TRAFFIC SIGNAL PLAN | SHEET 52 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024201-SP.DWG
LAYOUT NAME - 02

PLOT DATE : 6/25/2026 3:38 PM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

| | HEAD NUMBERS | FLASH |
|---|---|---|
| Ø1 | 1,18 | R |
| Ø2 | 7,8,17 | R |
| Ø3 | 9,16 | R |
| Ø4 | 5,15,19 | R |
| Ø5 | 6,14 | R |
| Ø6 | 2,3,13 | R |
| Ø7 | 4,12 | R |
| Ø8 | 10,11,20 | R |
| O.L. E | 1,18 | |
| O.L. F | 9,16 | |
| O.L. G | 6,14 | |
| O.L. H | 4,12 | |




CONTROLLER LOGIC

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

| TYPE OF INTERCONNECT | |
|---|---|
| NONE | X |
| TBC | |
| CLOSED LOOP TWISTED PAIR | |
| CLOSED LOOP FIBER OPTIC | |
| RADIO | |

| TYPE OF REMOTE COMMUNICATION | |
|---|---|
| NONE | X |
| FIBER | |
| CELL MODEM | |
| PHONE | |

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

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

DETECTOR LOGIC

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 3 | 1 | 7 | 5 | 11 | 9 | 15 | 13 |
| DETECTOR #(S) | 11 | 21 | 31 | 41 | 51 | 61 | 71 | 81 |
| PHASE CALLED | 1 | 2 | 3 | 4 | 7 | 8 | 7 | 8 |
| PHASE EXTENDED | 1 | 2 | 3 | 4 | 7 | 8 | 7 | 8 |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | 1 SEC | | | | 1 SEC | | |
| MAXIMUM INITIAL | | 26 | | | | 26 | | |
| LOOP FUNCTION | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 19 | 17 | 23 | 21 | 27 | 25 | 31 | 29 |
| DETECTOR #(S) | | | | | | | | |
| PHASE CALLED | | | | | | | | |
| PHASE EXTENDED | | | | | | | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | | | | | |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 4 | 2 | 8 | 6 | 12 | 10 | 16 | 14 |
| DETECTOR #(S) | | | | 42 | | | | 82 |
| PHASE CALLED | | | | 4 | | | | 8 |
| PHASE EXTENDED | | | | 4 | | | | 8 |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | X | | | | X |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DETECTOR INPUT | 20 | 18 | 24 | 22 | 28 | 26 | 32 | 30 |
| DETECTOR #(S) | | | | | | | | |
| PHASE CALLED | | | | | | | | |
| PHASE EXTENDED | | | | | | | | |
| DISCONNECT TIME | | | | | | | | |
| CALLING DELAY | | | | | | | | |
| EXTENSION STRETCH | | | | | | | | |
| ADDED INITIAL | | | | | | | | |
| MAXIMUM INITIAL | | | | | | | | |
| LOOP FUNCTION | | | | | | | | |

EMERGENCY VEHICLE PREEEMPTION SEQUENCE

| EMERGENCY VEHICLE PREEMPTOR | A | B | C | D |
|---|---|---|---|---|
| MOVEMENT |  |  |  |  |
| PHASE | 6+1 | 2+5 | 3+8 | 4+8 |

AT THE BEGINNING OF PREEMPTION, TERMINATE ANY FLASHING YELLOW ARROW INDICATION THROUGH AN ALL RED PHASE.
AFTER PRE-EMPTION SEQUENCE 6+1 OR 2&5, CONTROLLER SHALL RETURN TO PHASES 4+8.
AFTER PRE-EMPTION SEQUENCE 3+8 OR 4+7, CONTROLLER SHALL RETURN TO PHASES 2&6.
FLASHING YELLOW OVERLAPS SHALL NOT BE ACTIVE DURING PRE-EMPTION.

TRAFFIC CONTROL SIGNAL
CTH F (REDFORD BLVD) & CTH K (LISBON RD)
VILLAGE OF LISBON/VILLAGE OF SUSSEX
WAUKESHA COUNTY

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:



| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | SEQUENCE OF OPERATIONS | SHEET 53 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024201-SP.DWG
LAYOUT NAME - 03
PLOT DATE : 6/25/2026 3:38 PM PLOT BY : JIM PAVELSKI PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

## CABLE ROUTING DETAIL

| CABINET TO | AWG 14 # OF CONDUCTORS | HEAD NO. | SIGNAL INDICATION WIRE COLOR | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | RED | YELLOW | GREEN | <RED> | <YELLOW> | <GREEN> | <FLASHING YELLOW> | DON'T WALK | WALK | PEDESTRIAN BUTTON |
| | | | | | | | | | | | | |
| SB1 | 12 | 4 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| | | 5 | RED | ORG | GRN | | | | | | | |
| | | 19 | RED | ORG | GRN | | | | | | | |
| | 12 | 13 | RED | ORG | GRN | | | | | | | |
| | | 14 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| SB2 | 12 | 6 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| | | 7 | RED | ORG | GRN | | | | | | | |
| | | 8 | RED | ORG | GRN | | | | | | | |
| | 12 | 15 | RED | ORG | GRN | | | | | | | |
| | | 16 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| SB3 | 12 | 9 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| | | 10 | RED | ORG | GRN | | | | | | | |
| | | 20 | RED | ORG | GRN | | | | | | | |
| | 12 | 17 | RED | ORG | GRN | | | | | | | |
| | | 18 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| SB4 | 12 | 1 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |
| | | 2 | RED | ORG | GRN | | | | | | | |
| | | 3 | RED | ORG | GRN | | | | | | | |
| | 12 | 11 | RED | ORG | GRN | | | | | | | |
| | | 12 | | | | RED/BLK | ORG/BLK | GRN/BLK | BLU/BLK | | | |

| SIGNAL WIRE CODING | | |
|---|---|---|
| RED = RED | ORG = ORANGE | GRN = GREEN |
| BLU = BLUE | WHT = WHITE | BLK = BLACK |

| EQUIPMENT GROUNDING CONDUCTOR 10 AWG GREEN XLP | |
|---|---|
| FROM | TO |
| CABINET | SB1 |
| SB1 | SB2 |
| SB2 | SB3 |
| SB3 | SB4 |
| SB4 | CABINET |

| LIGHTING UF #12 W/ GROUND | |
|---|---|
| FROM | TO |
| CABINET | LP1 |
| LP1 | SB1 |
| SB1 | LP2 |
| LP2 | SB2 |
| CABINET | LP4 |
| LP4 | SB4 |
| SB4 | LP3 |
| LP3 | SB3 |

| TRAFFIC SIGNAL EVP DETECTOR CABLE | | |
|---|---|---|
| FROM | TO | DESIGNATION |
| CABINET | SB4 | A |
| CABINET | SB2 | B |
| CABINET | SB1 | C |
| CABINET | SB3 | D |

## GENERAL NOTES:

1. TRAFFIC SIGNAL CABLE WHITE WIRE SHALL BE USED AS THE GROUNDED CONDUCTOR.

TRAFFIC CONTROL SIGNAL
CTH F (REDFORD BLVD) & CTH K (LISBON RD)
VILLAGE OF LISBON/VILLAGE OF SUSSEX
WAUKESHA COUNTY

SIGNAL NO.

COUNTY CONTACT:
DESIGNED BY: JT ENGINEERING, INC.
REVISED BY:

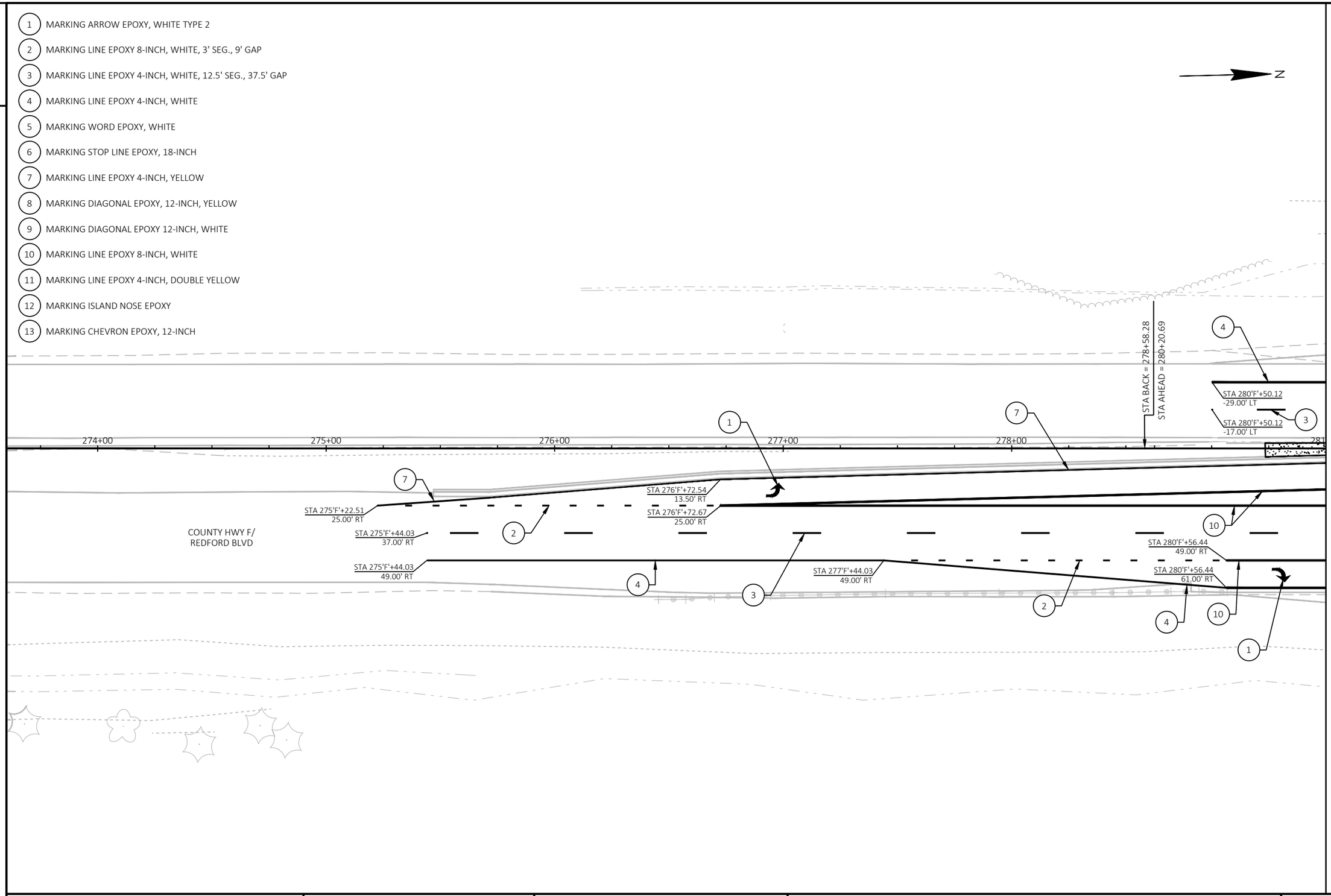


| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CABLE ROUTING CHART | SHEET 54 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024201-SP.DWG
LAYOUT NAME - 04
PLOT DATE : 6/25/2026 3:38 PM
PLOT BY : JIM PAVELSKI
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

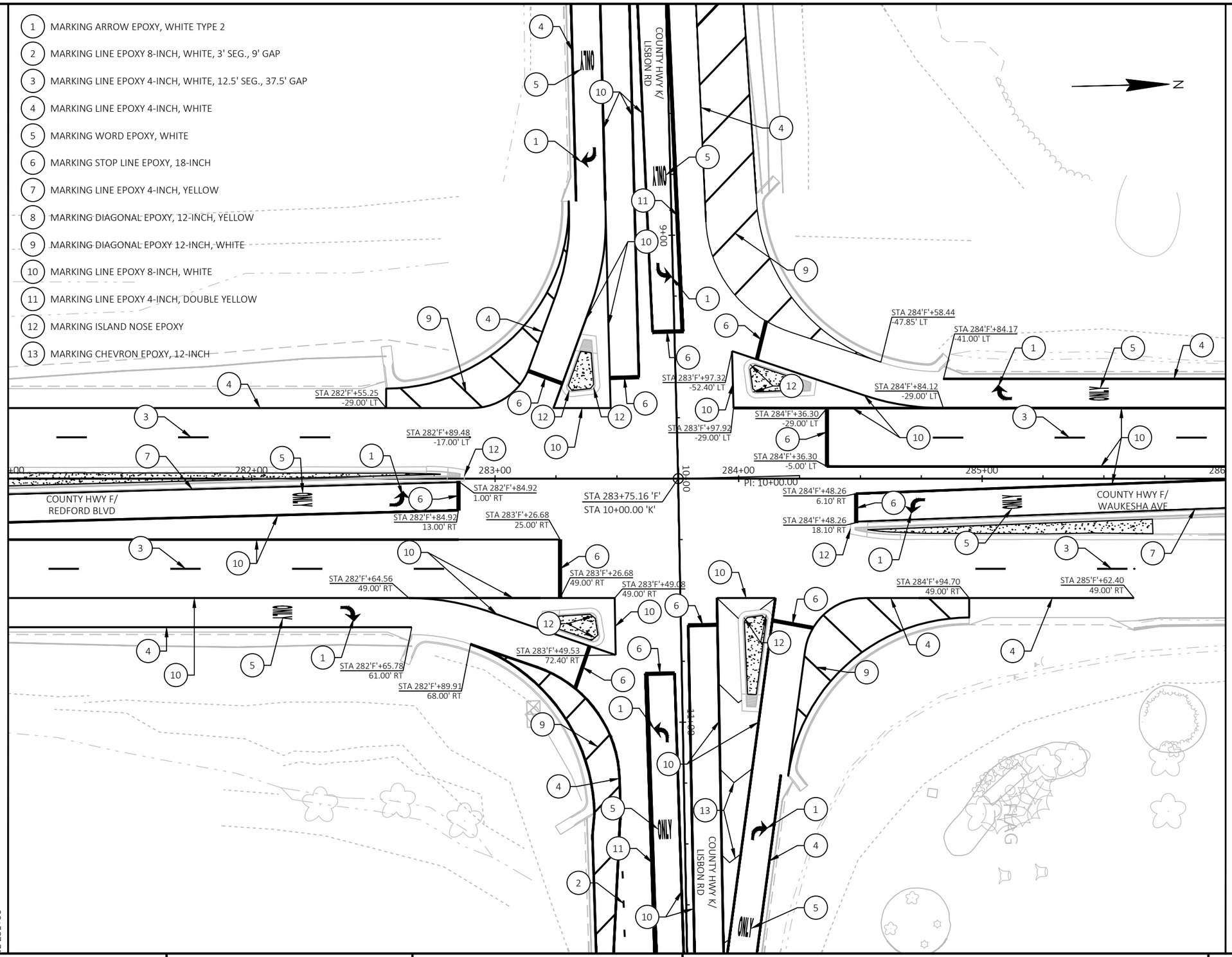
1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3 MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4 MARKING LINE EPOXY 4-INCH, WHITE
5 MARKING WORD EPOXY, WHITE
6 MARKING STOP LINE EPOXY, 18-INCH
7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH F | SHEET 55 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024501-pm
PLOT DATE : 6/9/2026 1:17 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3 MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4 MARKING LINE EPOXY 4-INCH, WHITE
5 MARKING WORD EPOXY, WHITE
6 MARKING STOP LINE EPOXY, 18-INCH
7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH

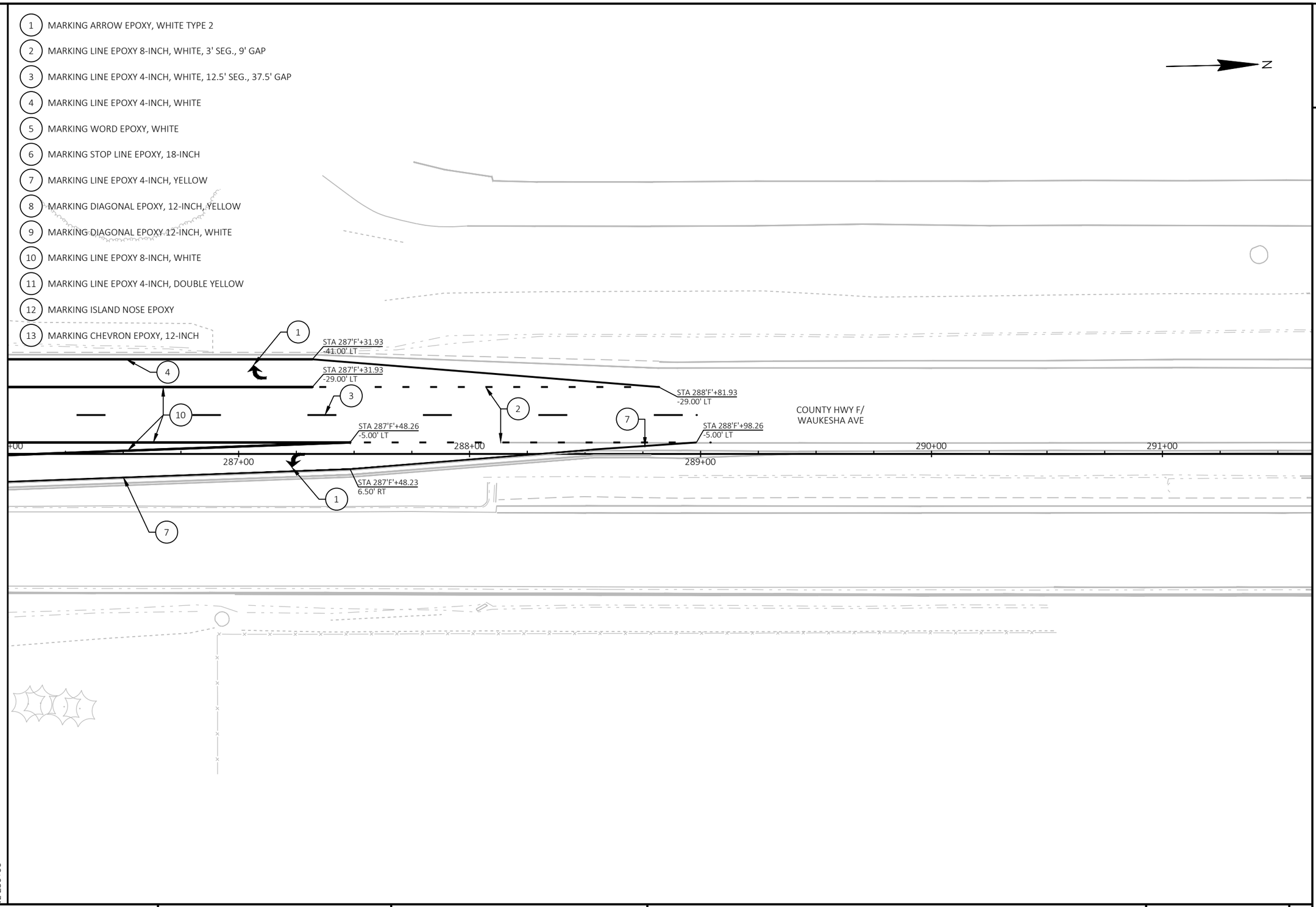



| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH F | SHEET 56 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024502-pm
PLOT DATE : 6/9/2026 1:17 PM
PLOT BY : EMILY LUSSO
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

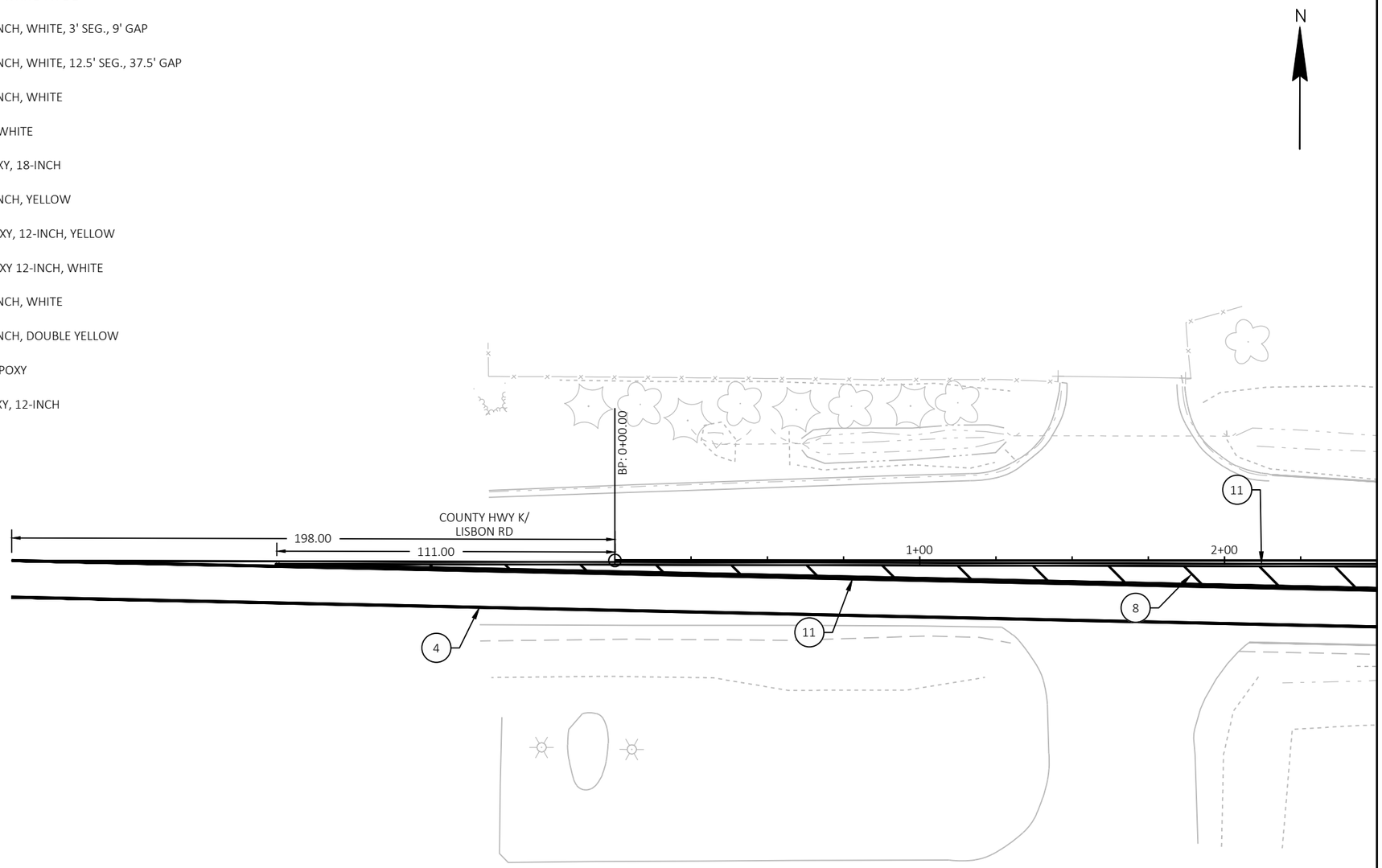
1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3 MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4 MARKING LINE EPOXY 4-INCH, WHITE
5 MARKING WORD EPOXY, WHITE
6 MARKING STOP LINE EPOXY, 18-INCH
7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH F | SHEET 57 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024503-pm
PLOT DATE : 6/9/2026 1:17 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

1. MARKING ARROW EPOXY, WHITE TYPE 2
2. MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3. MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4. MARKING LINE EPOXY 4-INCH, WHITE
5. MARKING WORD EPOXY, WHITE
6. MARKING STOP LINE EPOXY, 18-INCH
7. MARKING LINE EPOXY 4-INCH, YELLOW
8. MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9. MARKING DIAGONAL EPOXY 12-INCH, WHITE
10. MARKING LINE EPOXY 8-INCH, WHITE
11. MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12. MARKING ISLAND NOSE EPOXY
13. MARKING CHEVRON EPOXY, 12-INCH

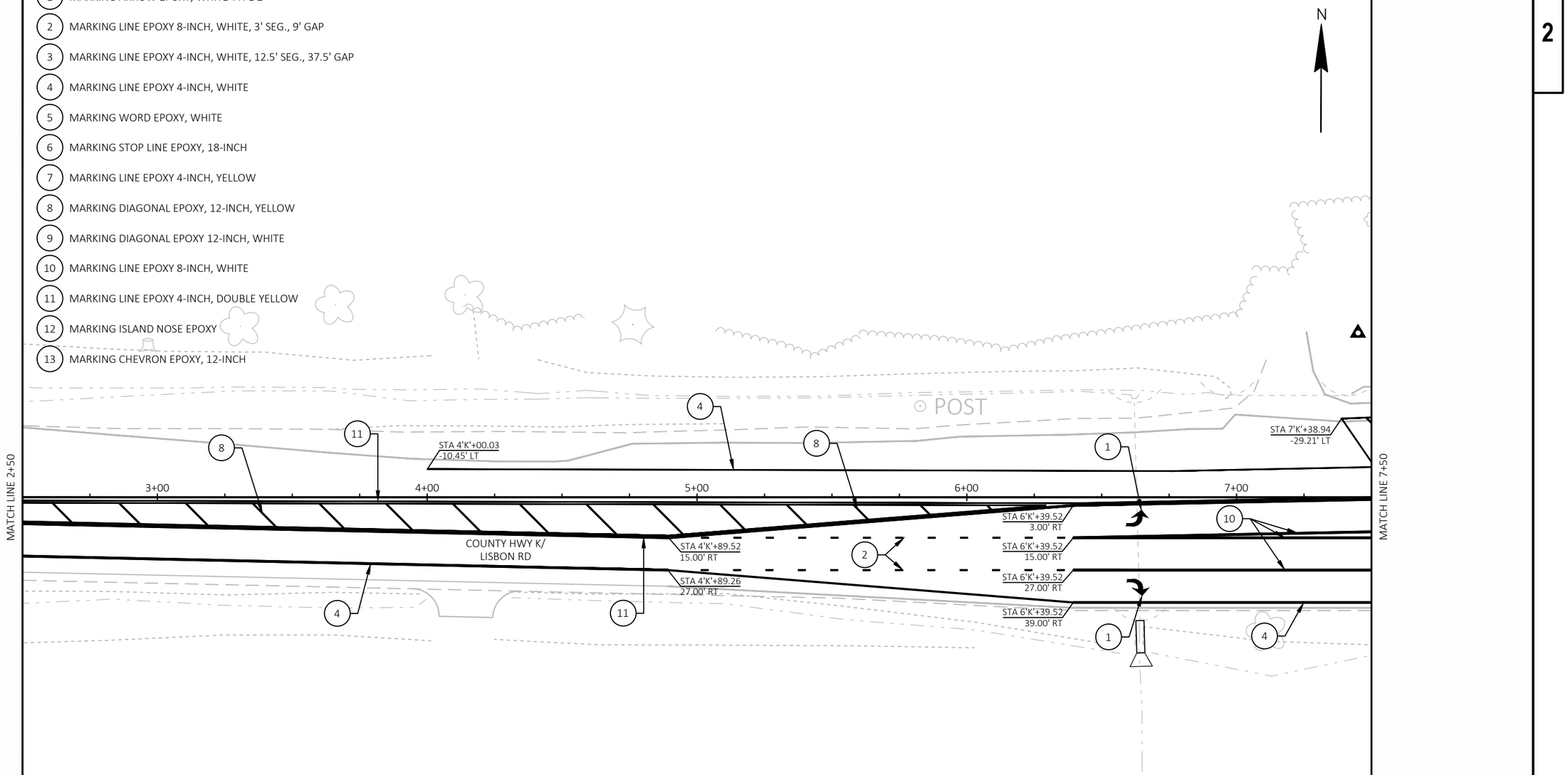



2

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH K | SHEET 58 | E |
|---|---|---|---|---|---|

2

1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3 MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4 MARKING LINE EPOXY 4-INCH, WHITE
5 MARKING WORD EPOXY, WHITE
6 MARKING STOP LINE EPOXY, 18-INCH
7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH

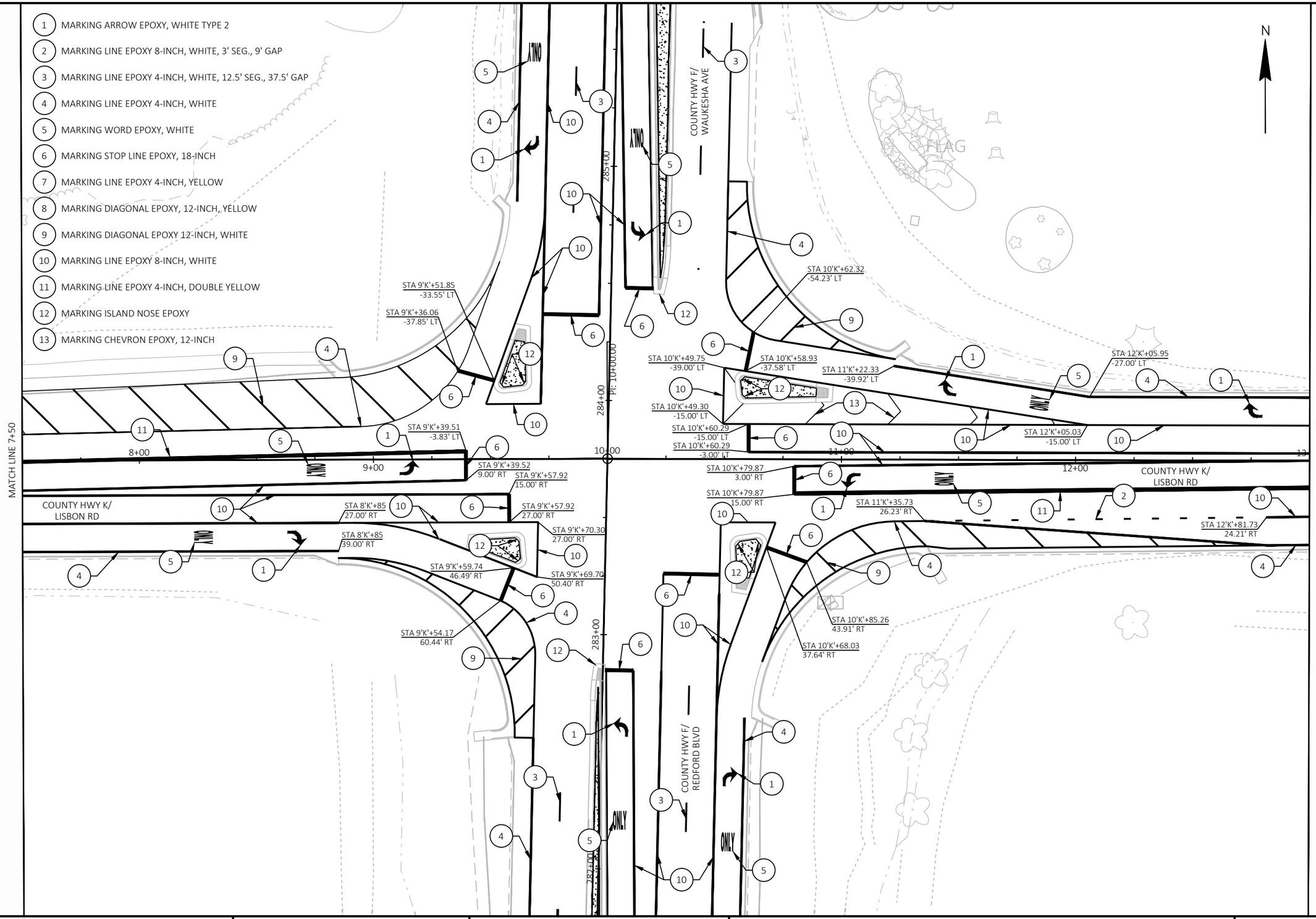



2

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH K | SHEET 59 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024505-pm
PLOT DATE : 6/9/2026 1:17 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

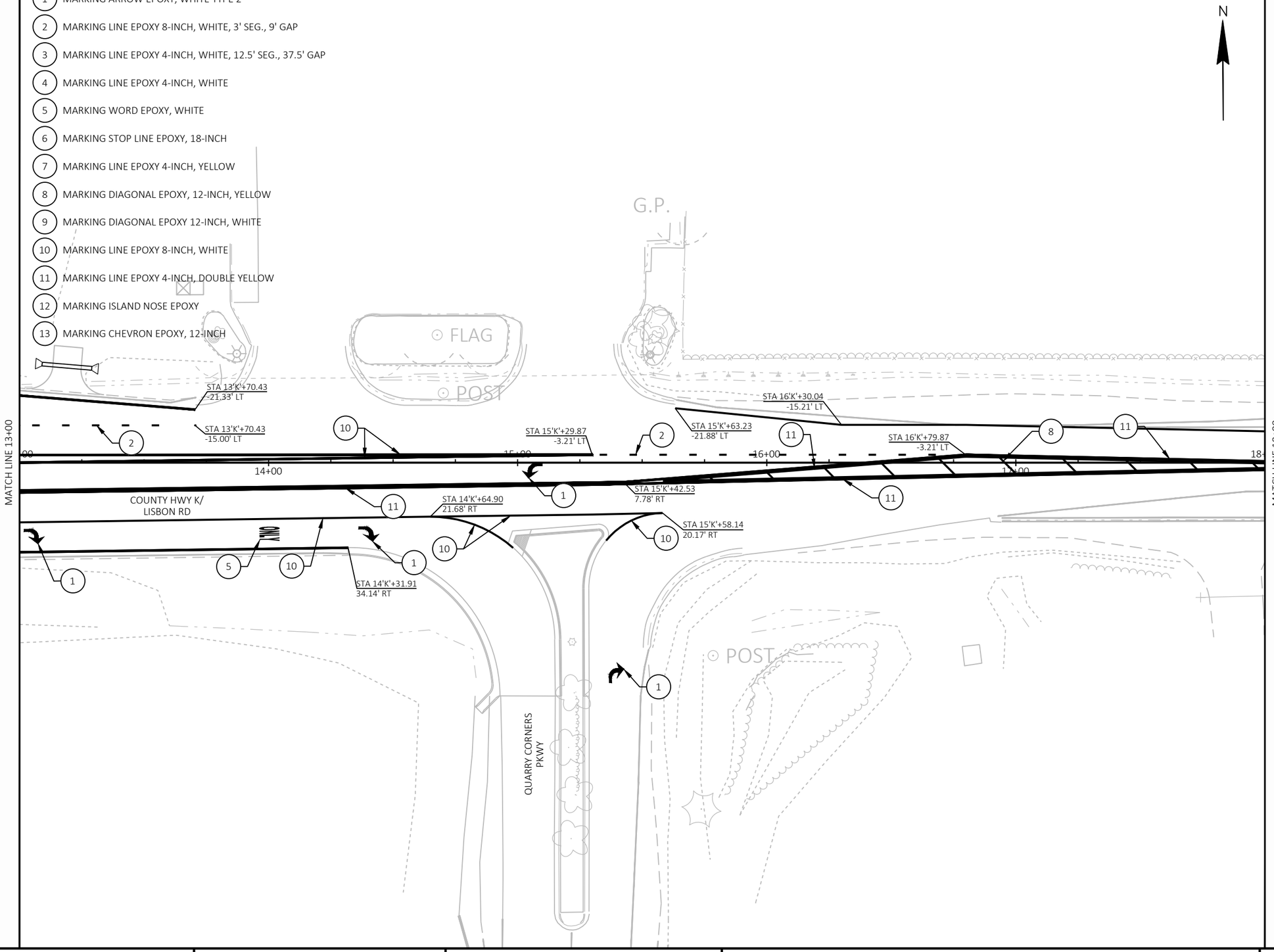
1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
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7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH K | SHEET 60 | E |
|---|---|---|---|---|---|

2

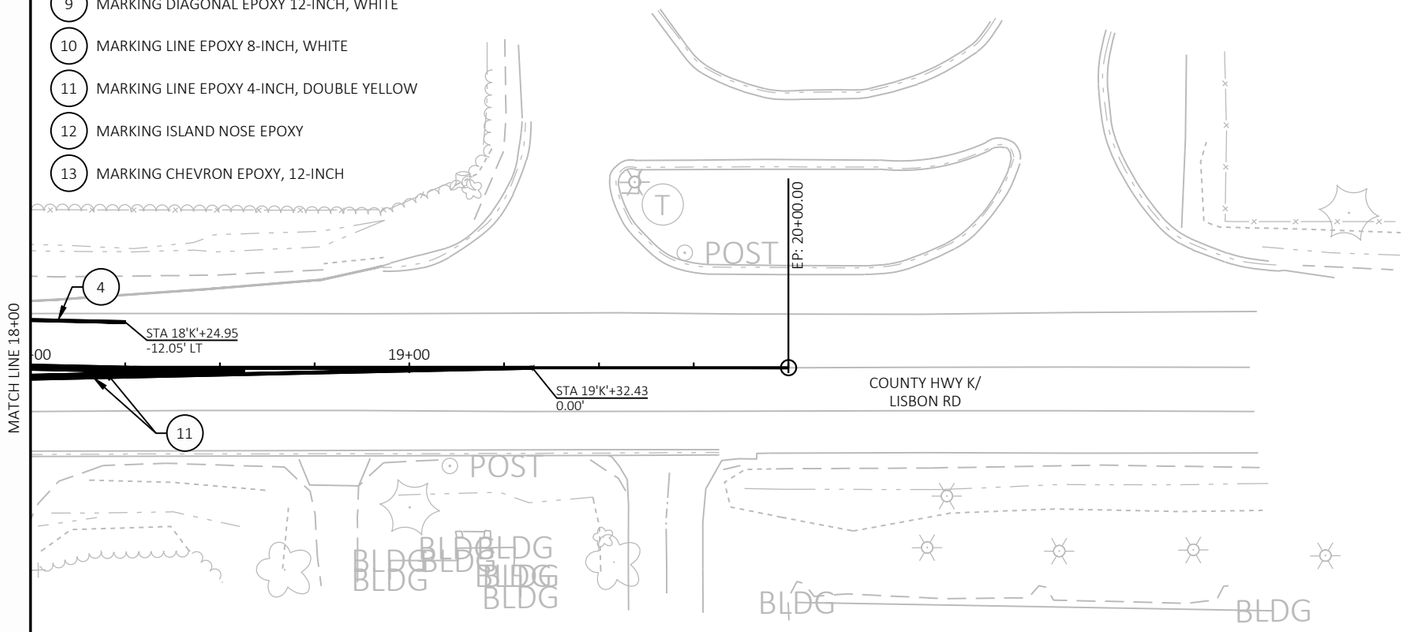
1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3 MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4 MARKING LINE EPOXY 4-INCH, WHITE
5 MARKING WORD EPOXY, WHITE
6 MARKING STOP LINE EPOXY, 18-INCH
7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH K | SHEET 61 E |
|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024507-pm
PLOT DATE : 6/9/2026 1:17 PM
PLOT BY : EMILY LUSSO
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

1 MARKING ARROW EPOXY, WHITE TYPE 2
2 MARKING LINE EPOXY 8-INCH, WHITE, 3' SEG., 9' GAP
3 MARKING LINE EPOXY 4-INCH, WHITE, 12.5' SEG., 37.5' GAP
4 MARKING LINE EPOXY 4-INCH, WHITE
5 MARKING WORD EPOXY, WHITE
6 MARKING STOP LINE EPOXY, 18-INCH
7 MARKING LINE EPOXY 4-INCH, YELLOW
8 MARKING DIAGONAL EPOXY, 12-INCH, YELLOW
9 MARKING DIAGONAL EPOXY 12-INCH, WHITE
10 MARKING LINE EPOXY 8-INCH, WHITE
11 MARKING LINE EPOXY 4-INCH, DOUBLE YELLOW
12 MARKING ISLAND NOSE EPOXY
13 MARKING CHEVRON EPOXY, 12-INCH




2

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PAVEMENT MARKING PLAN - CTH K | SHEET 62 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\024501-PM.DWG
LAYOUT NAME - 024508-pm
PLOT DATE : 6/9/2026 1:17 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

## PRE-STAGE 1

- PLACE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) ON CTH F & CTH K 7-DAYS PRIOR TO START OF CONSTRUCTION.

## STAGE 1

CONSTRUCTION
- REMOVE EXISTING TRAFFIC SIGNALS AT THE INTERSECTION AND INSTALL TEMPORARY SIGNALS.
- REMOVE EXISTING SPLITTER ISLANDS.
- PAVE TEMPORARY ASPHALT IN OLD SPLITTER ISLAND AREA FOR FUTURE TRAFFIC IN STAGE 3 & 4.

TRAFFIC
- CTH F & CTH K TRAFFIC REMAINS THE SAME AS THE EXISTING CONDITION.
- CTH F & CTH K RT LANE CLOSURES TO ACCOMMODATE SPLITTER ISLAND REMOVALS AND TEMPORARY ASPHALT PLACEMENT. CLOSURES & CONSTRUCTION ANTICIPATED TO OCCUR AT NIGHT.
- POTENTIAL FLAGGING OPERATIONS TO ACCOMMODATE VARIOUS OPERATIONS.

## STAGE 2

CONSTRUCTION
- REMOVE AND REPLACE LT TURN LANES FOR CTH F NB/SB.
- PAVEMENT REPLACEMENT IN THE TEMPORARY CTH F COMBINED THRU/LEFT TURN LANE USING HIGH EARLY STRENGTH OR SUPER HIGH EARLY STRENGTH CONCRETE.

TRAFFIC
- CTH F NB/SB EXISTING LANE 1 TO BE CONVERTED INTO A TEMPORARY COMBINED THRU/LEFT TURN LANE FOR EACH DIRECTION. A LIMITED DURATION NB CTH F LANE 1 CLOSURE WILL BE SETUP TO ACCOMMODATE PAVEMENT REPLACEMENT WORK.
- CTH K TRAFFIC REMAINS THE SAME AS THE EXISTING CONDITION.

## STAGE 3

CONSTRUCTION
- RECONSTRUCT ALL RT TURN LANES ON CTH K & SB RIGHT TURN LANE ON CTH F.

TRAFFIC
- CTH F SB EXISTING LANE 2 CONVERTED TO A THRU/RT CONFIGURATION DURING THIS STAGE. A CTH F NB THRU/RT TURN LANE CLOSURE WILL BE SETUP TO ACCOMMODATE PAVEMENT REPLACEMENT WORK.
- CTH K TRAFFIC REMAINS THE SAME AS THE EXISTING CONDITION.

## STAGE 4

CONSTRUCTION
- RECONSTRUCT NB RT TURN LANE ON CTH F.
- PAVEMENT REPLACEMENT IN THE TEMPORARY CTH F NB THRU/RT TURN LANE USING HIGH EARLY STRENGTH OR SUPER HIGH EARLY STRENGTH CONCRETE.

TRAFFIC
- CTH F NB EXISTING LANE 2 CONVERTED TO A THRU/RT CONFIGURATION DURING THIS STAGE. A LIMITED DURATION NB CTH F LANE 2 CLOSURE WILL BE SETUP TO ACCOMMODATE PAVEMENT REPLACEMENT WORK.
- CTH K WB TRAFFIC SHIFTS NORTH 12 FT TO ACCOMMODATE TRUCKS TURNING RIGHT GOING NB ON CTH F. CTH K EB TRAFFIC REMAINS AS THE EXISTING CONDITION

## STAGE 5

CONSTRUCTION
- REMOVE TEMPORARY ASPHALT PLACED IN STAGE 1.
- CONSTRUCT NEW SPLITTER ISLANDS AT THE INTERSECTION.
- INSTALL REMAINING TRAFFIC SIGNAL COMPONENTS. PAVE TEMPORARY ASPHALT IN OLD SPLITTER ISLAND AREA FOR FUTURE TRAFFIC IN STAGE 3.

TRAFFIC
- CTH F & CTH K TRAFFIC MOVED TO FINAL CONFIGURATION.
- CTH F & CTH K RT LANE CLOSURES TO ACCOMMODATE SPLITTER ISLAND CONSTRUCTION. CLOSURES & CONSTRUCTION ANTICIPATED TO OCCUR AT NIGHT.
- POTENTIAL FLAGGING OPERATIONS TO ACCOMMODATE VARIOUS OPERATIONS.

2

GENERAL NOTES:
-THE EXACT NUMBER, LOCATION AND SPACING OF ALL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
-TYPICAL SPACING FOR ALL TRAFFIC CONTROL DRUMS SHALL BE 50-FT AND 25-FT FOR TRAFFIC CONTROL CONES 42-INCH, UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
-ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
-PROVIDE DROP-OFF PROTECTION IN ACCORDANCE WITH SECTION 104 OF THE STANDARD SPECIFICATIONS.
-ALL DEVICES AND COSTS ASSOCIATED WITH CONTRACTOR FLAGGING OPERATIONS ARE INCIDENTAL TO STANDARD SPECIFICATION 104.

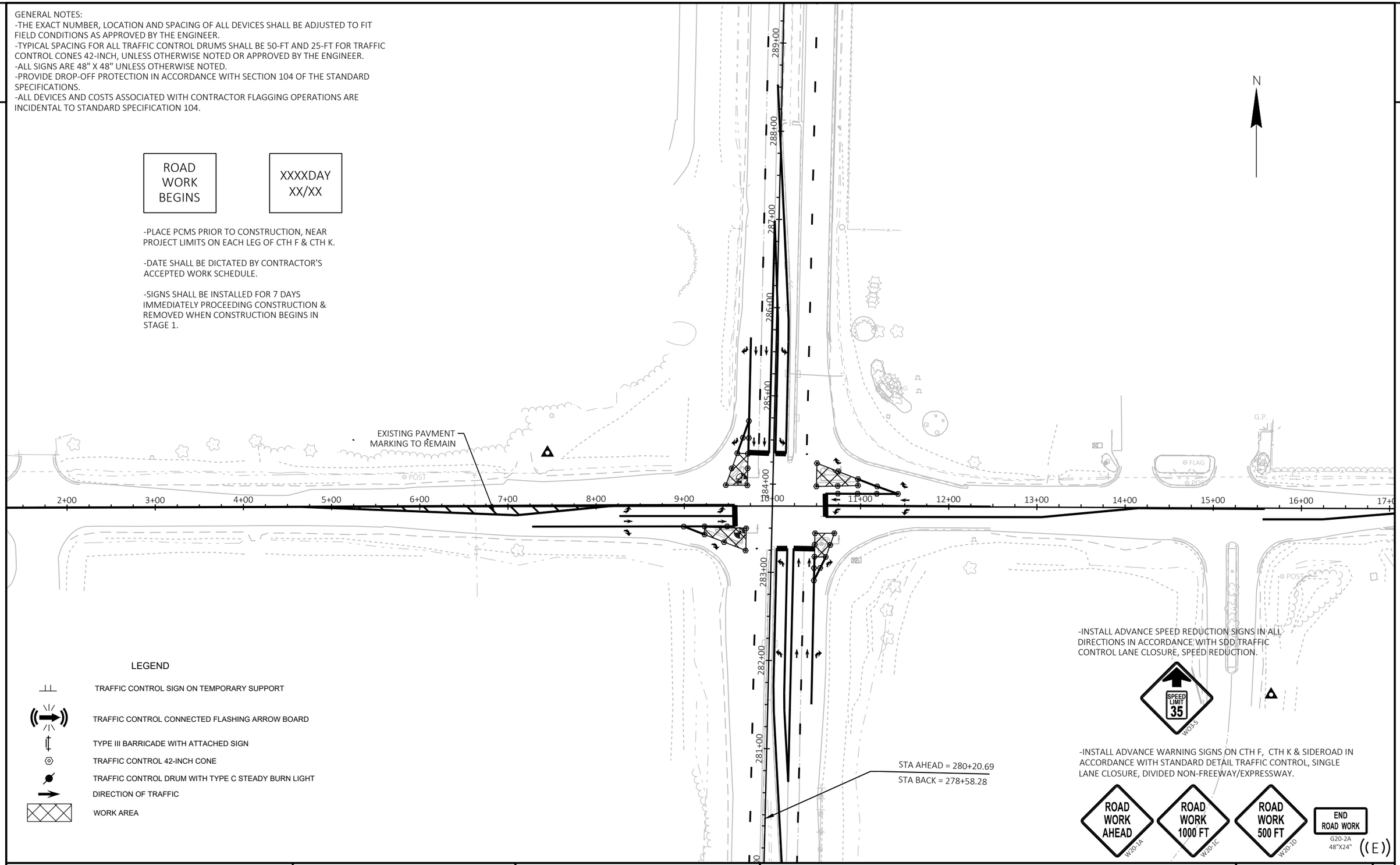
ROAD WORK BEGINS

XXXXDAY XX/XX

-PLACE PCMS PRIOR TO CONSTRUCTION, NEAR PROJECT LIMITS ON EACH LEG OF CTH F & CTH K.

-DATE SHALL BE DICTATED BY CONTRACTOR'S ACCEPTED WORK SCHEDULE.

-SIGNS SHALL BE INSTALLED FOR 7 DAYS IMMEDIATELY PROCEEDING CONSTRUCTION & REMOVED WHEN CONSTRUCTION BEGINS IN STAGE 1.




LEGEND

- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL CONNECTED FLASHING ARROW BOARD
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL 42-INCH CONE
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- WORK AREA

-INSTALL ADVANCE SPEED REDUCTION SIGNS IN ALL DIRECTIONS IN ACCORDANCE WITH SDD TRAFFIC CONTROL LANE CLOSURE, SPEED REDUCTION.



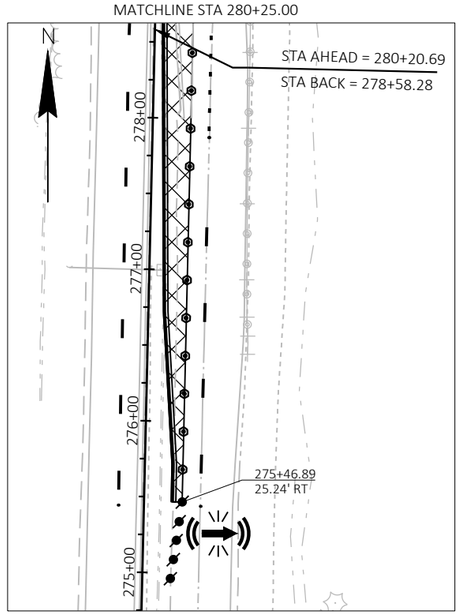

-INSTALL ADVANCE WARNING SIGNS ON CTH F, CTH K & SIDEROAD IN ACCORDANCE WITH STANDARD DETAIL TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY.




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STAGE CONSTRUCTION - STAGE 1 | SHEET 64 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\026001-S1.DWG
LAYOUT NAME - Stage 1
PLOT DATE : 10/26/2026 1:10 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:100 FT

GENERAL NOTES:
-THE EXACT NUMBER, LOCATION AND SPACING OF ALL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
-TYPICAL SPACING FOR ALL TRAFFIC CONTROL DRUMS SHALL BE 50-FT AND 25-FT FOR TRAFFIC CONTROL CONES 42-INCH, UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
-ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
-PROVIDE DROP-OFF PROTECTION IN ACCORDANCE WITH SECTION 104 OF THE STANDARD SPECIFICATIONS.
-ALL DEVICES AND COSTS ASSOCIATED WITH CONTRACTOR FLAGGING OPERATIONS ARE INCIDENTAL TO STANDARD SPECIFICATION 104.







-INSTALL ADVANCE SPEED REDUCTION SIGNS IN ALL DIRECTIONS IN ACCORDANCE WITH SDD TRAFFIC CONTROL LANE CLOSURE, SPEED REDUCTION.




-INSTALL ADVANCE WARNING SIGNS ON CTH F, CTH K & SIDEROAD IN ACCORDANCE WITH STANDARD DETAIL TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY.

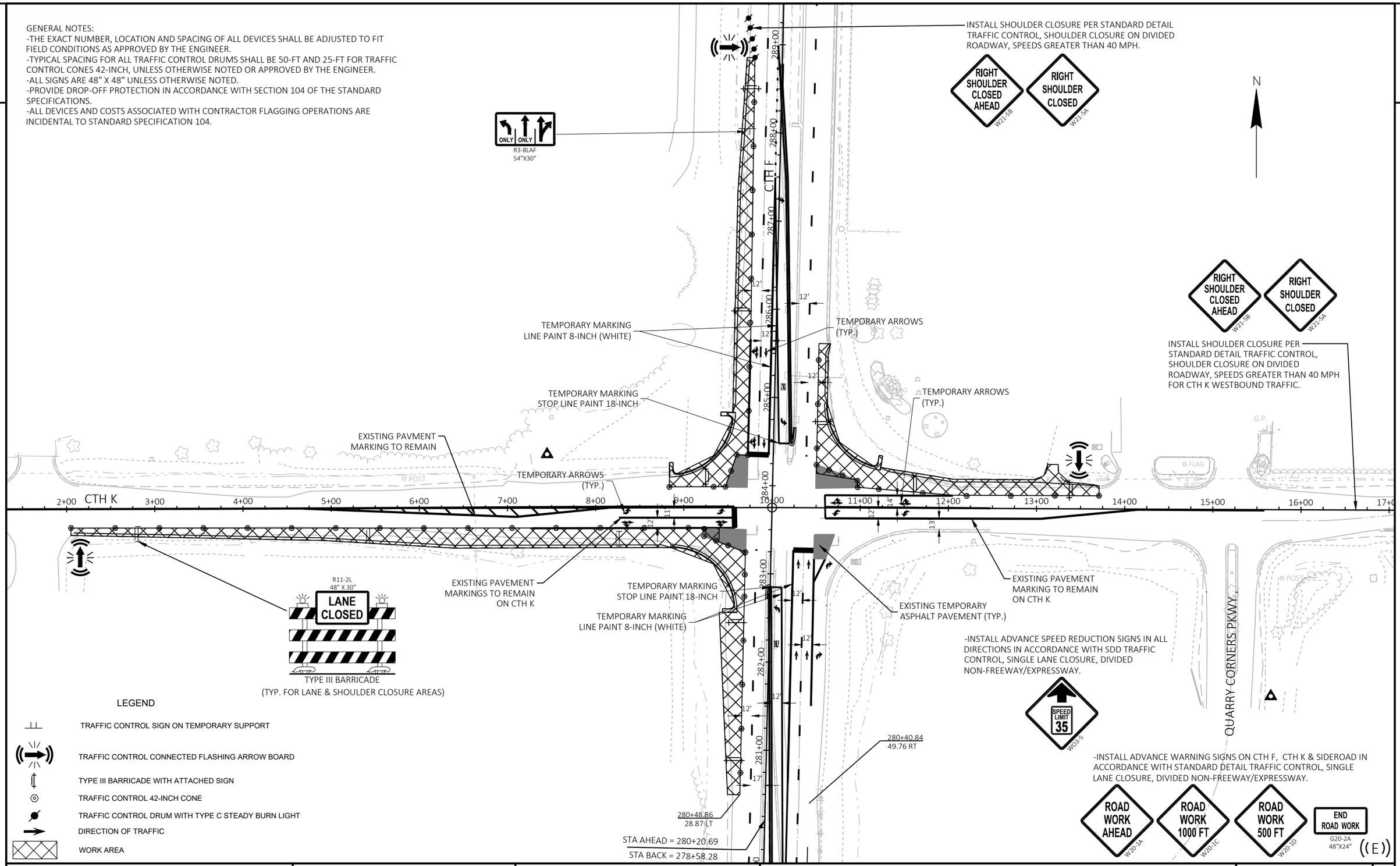



LEGEND

- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL CONNECTED FLASHING ARROW BOARD
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL 42-INCH CONE
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- WORK AREA

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STAGE CONSTRUCTION - STAGE 2 | SHEET 65 | E |
|---|---|---|---|---|---|

GENERAL NOTES:
-THE EXACT NUMBER, LOCATION AND SPACING OF ALL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
-TYPICAL SPACING FOR ALL TRAFFIC CONTROL DRUMS SHALL BE 50-FT AND 25-FT FOR TRAFFIC CONTROL CONES 42-INCH, UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
-ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
-PROVIDE DROP-OFF PROTECTION IN ACCORDANCE WITH SECTION 104 OF THE STANDARD SPECIFICATIONS.
-ALL DEVICES AND COSTS ASSOCIATED WITH CONTRACTOR FLAGGING OPERATIONS ARE INCIDENTAL TO STANDARD SPECIFICATION 104.



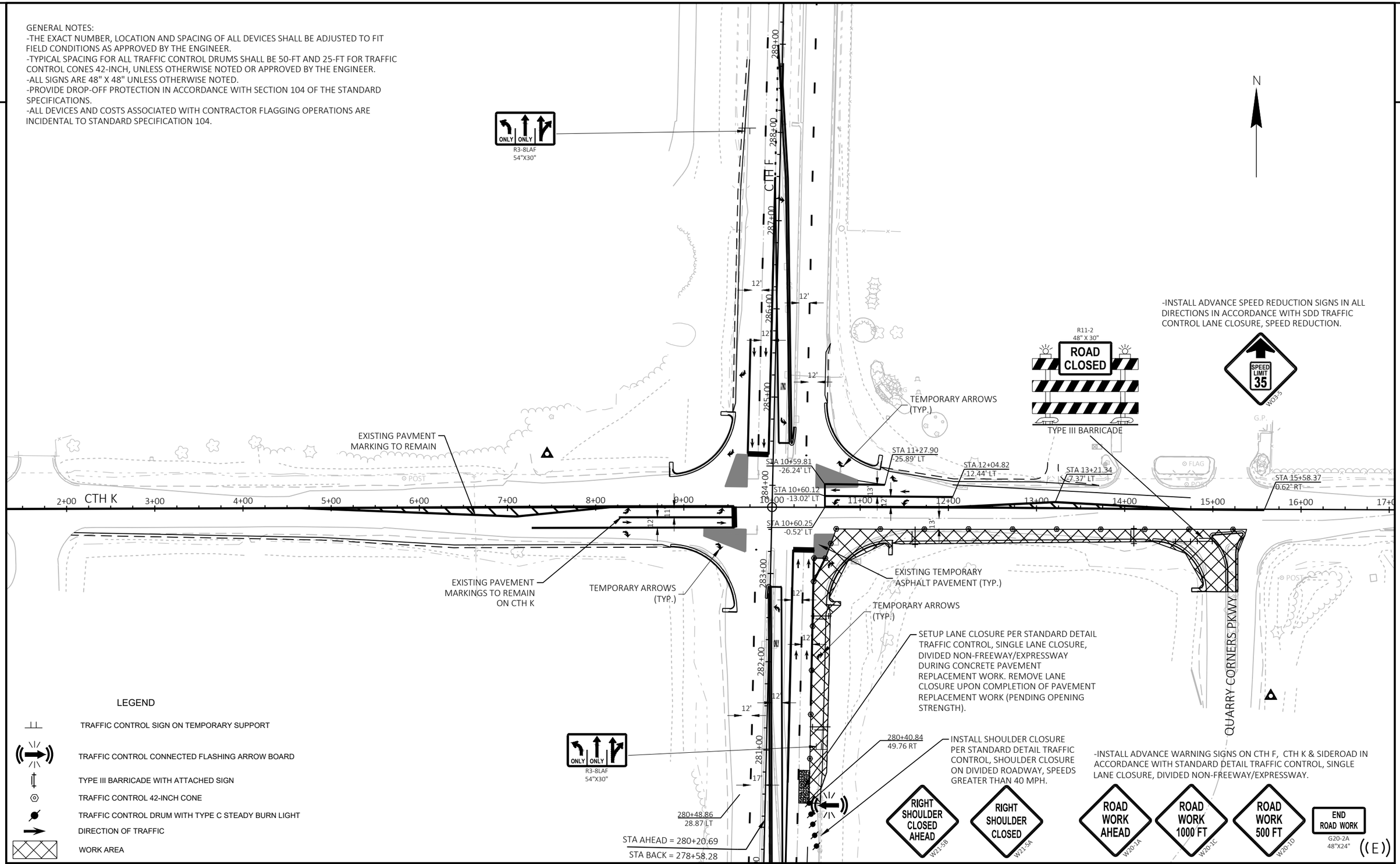

LEGEND

- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL CONNECTED FLASHING ARROW BOARD
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL 42-INCH CONE
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- WORK AREA

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STAGE CONSTRUCTION - STAGE 3 | SHEET 66 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\026001-S3.DWG
LAYOUT NAME - Stage 3
PLOT DATE : 10/26/2026 1:08 PM
PLOT BY : EMILY LUSSO
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

GENERAL NOTES:
-THE EXACT NUMBER, LOCATION AND SPACING OF ALL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
-TYPICAL SPACING FOR ALL TRAFFIC CONTROL DRUMS SHALL BE 50-FT AND 25-FT FOR TRAFFIC CONTROL CONES 42-INCH, UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
-ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
-PROVIDE DROP-OFF PROTECTION IN ACCORDANCE WITH SECTION 104 OF THE STANDARD SPECIFICATIONS.
-ALL DEVICES AND COSTS ASSOCIATED WITH CONTRACTOR FLAGGING OPERATIONS ARE INCIDENTAL TO STANDARD SPECIFICATION 104.



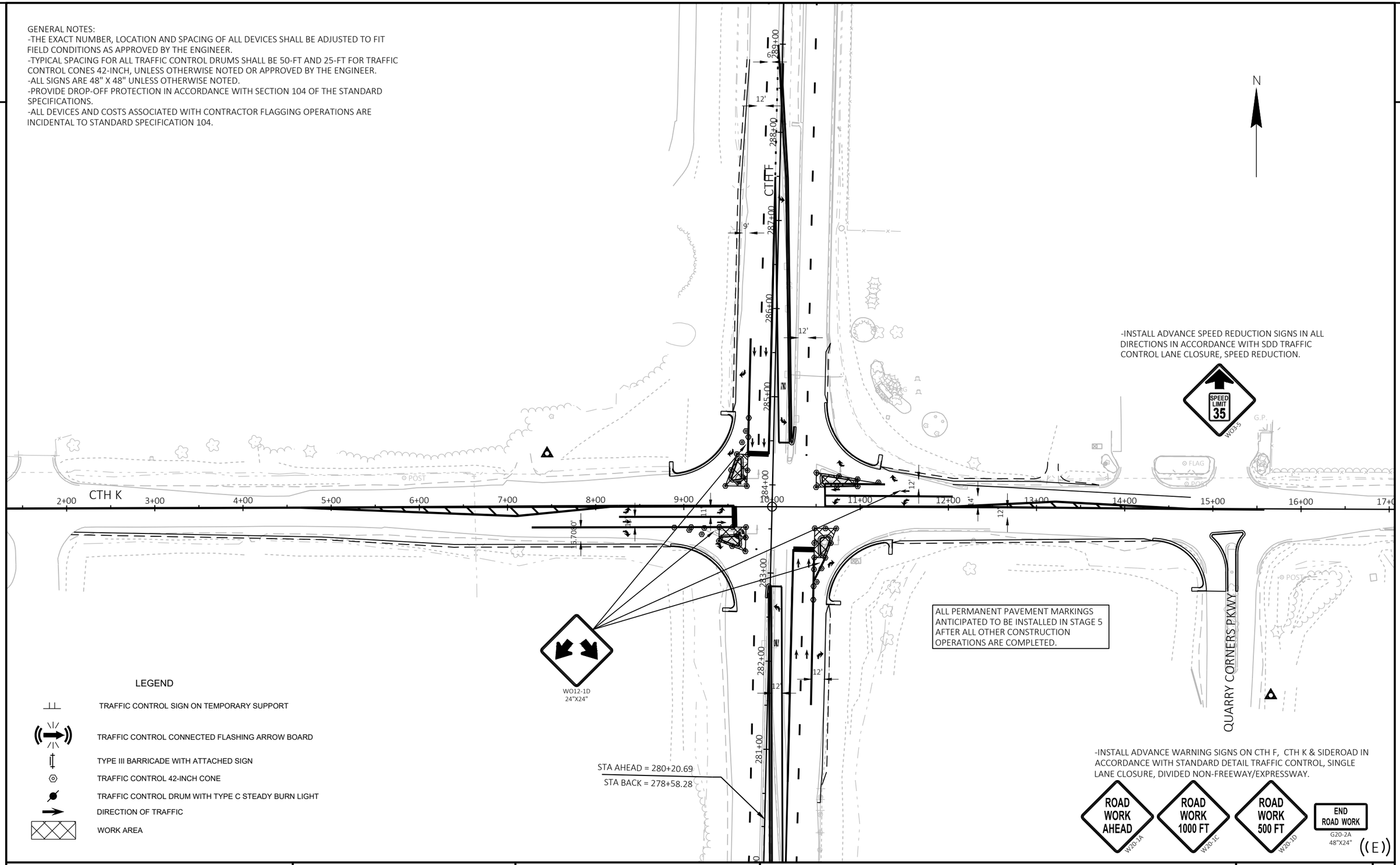

LEGEND

- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL CONNECTED FLASHING ARROW BOARD
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL 42-INCH CONE
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- WORK AREA

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STAGE CONSTRUCTION - STAGE 4 | SHEET 67 | E |
|---|---|---|---|---|---|

2

GENERAL NOTES:
-THE EXACT NUMBER, LOCATION AND SPACING OF ALL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
-TYPICAL SPACING FOR ALL TRAFFIC CONTROL DRUMS SHALL BE 50-FT AND 25-FT FOR TRAFFIC CONTROL CONES 42-INCH, UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
-ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
-PROVIDE DROP-OFF PROTECTION IN ACCORDANCE WITH SECTION 104 OF THE STANDARD SPECIFICATIONS.
-ALL DEVICES AND COSTS ASSOCIATED WITH CONTRACTOR FLAGGING OPERATIONS ARE INCIDENTAL TO STANDARD SPECIFICATION 104.



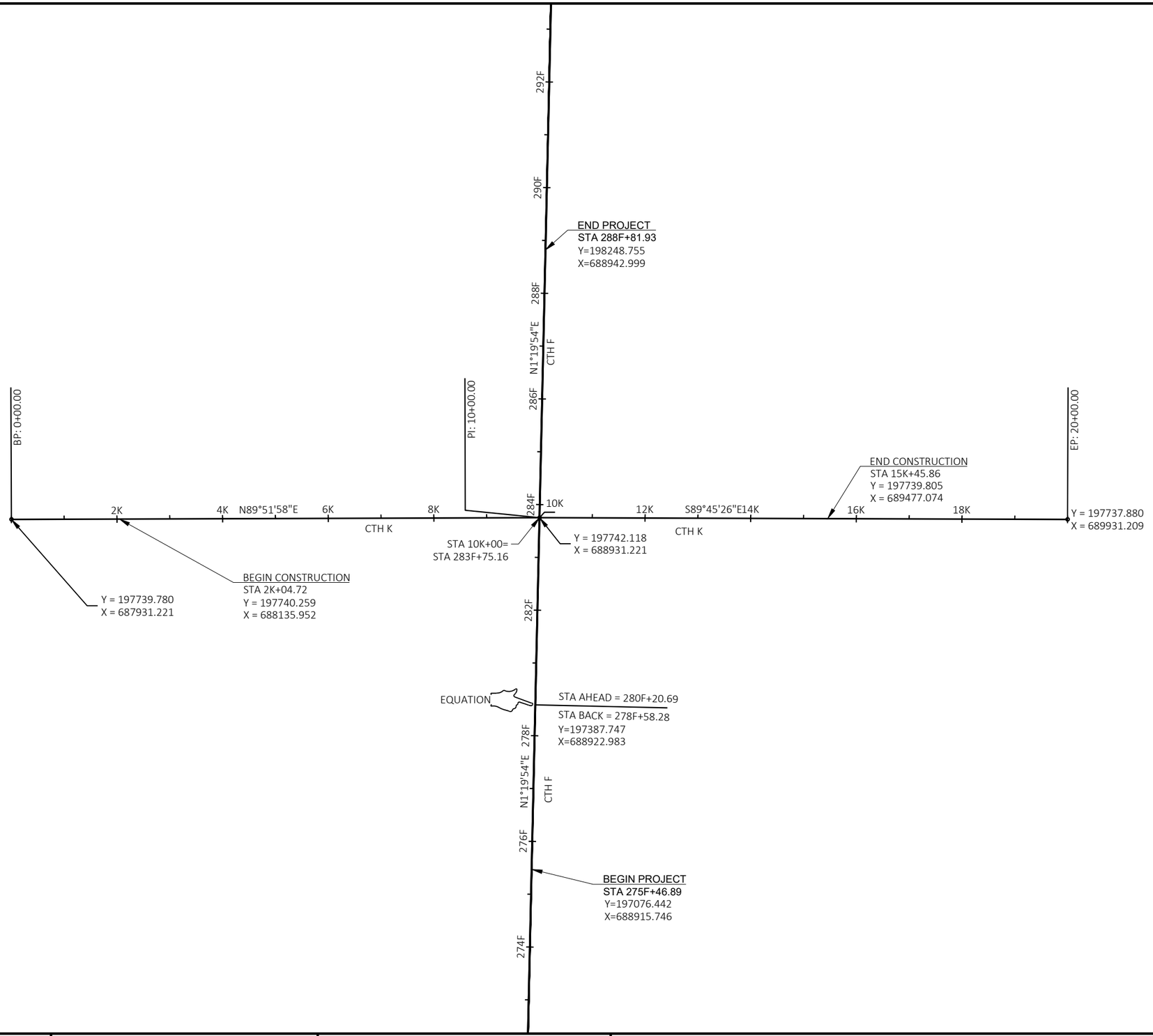

LEGEND

- TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL CONNECTED FLASHING ARROW BOARD
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL 42-INCH CONE
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- DIRECTION OF TRAFFIC
- WORK AREA

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | STAGE CONSTRUCTION - STAGE 5 | SHEET 68 E |
|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\026001-S5.DWG
LAYOUT NAME - Stage 5
PLOT DATE : 10/26/2026 1:07 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

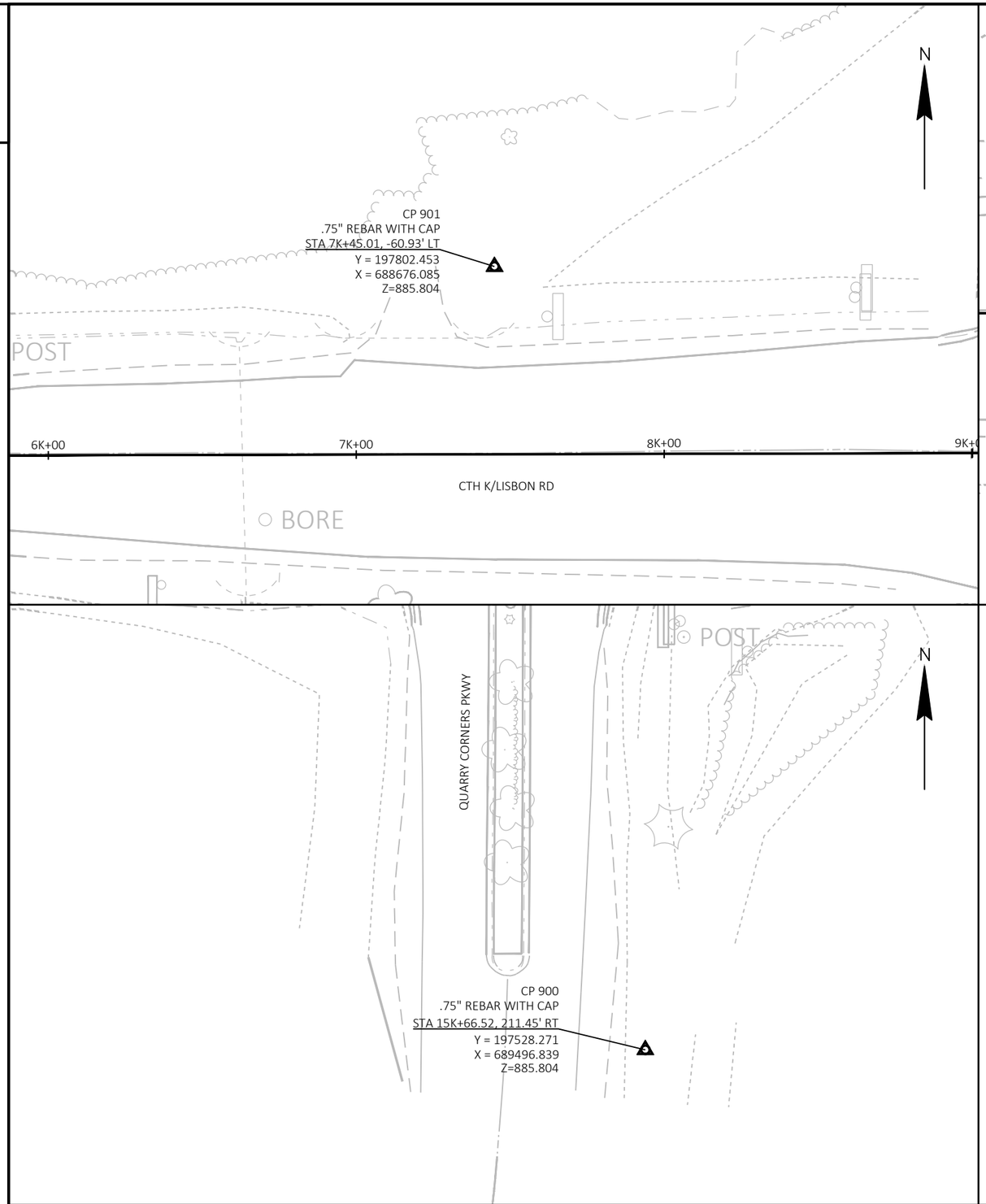


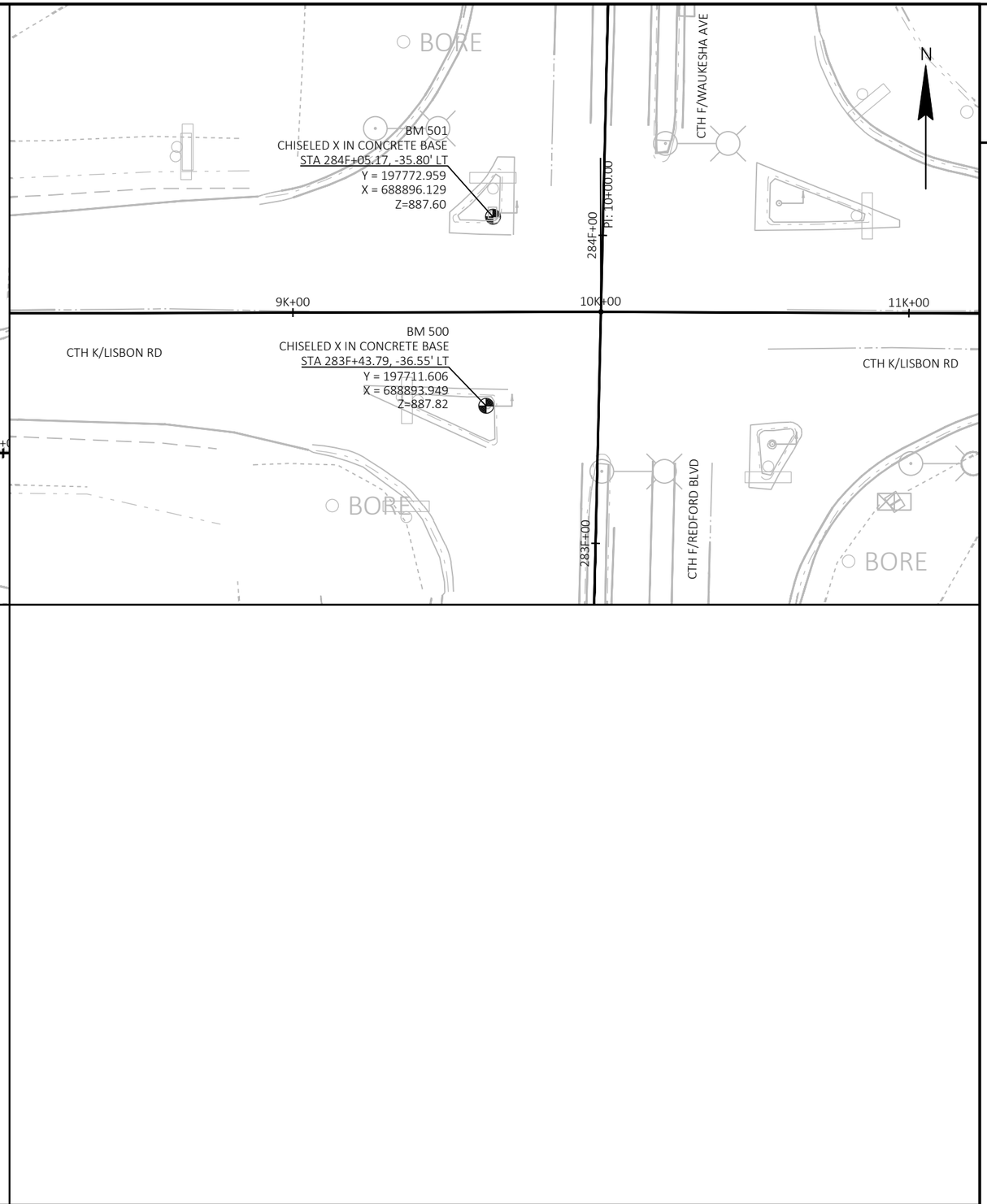

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | ALIGNMENT | SHEET 69 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\027201-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 6/9/2026 1:13 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:200 FT

2




2

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | ALIGNMENT LAYOUT SURVEY CONTROL | SHEET 70 | E |
|---|---|---|---|---|---|

## Estimate Of Quantities

2450-06-71

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0002 | 203.0100 | Removing Small Pipe Culverts | EACH | 2.000 | 2.000 |
| 0004 | 204.0100 | Removing Concrete Pavement | SY | 1,711.000 | 1,711.000 |
| 0006 | 204.0150 | Removing Curb & Gutter | LF | 1,010.000 | 1,010.000 |
| 0008 | 204.0195 | Removing Concrete Bases | EACH | 9.000 | 9.000 |
| 0010 | 204.0220 | Removing Inlets | EACH | 3.000 | 3.000 |
| 0012 | 204.9060.S | Removing (item description) 01. Traffic Signals - CTH F & CTH K | EACH | 1.000 | 1.000 |
| 0014 | 205.0100 | Excavation Common | CY | 5,568.000 | 5,568.000 |
| 0016 | 213.0100 | Finishing Roadway (project) 01. 2450-06-71 | EACH | 1.000 | 1.000 |
| 0018 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 366.000 | 366.000 |
| 0020 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 4,320.000 | 4,320.000 |
| 0022 | 311.0110 | Breaker Run | TON | 2,302.000 | 2,302.000 |
| 0024 | 415.0100 | Concrete Pavement 10-Inch | SY | 3,704.000 | 3,704.000 |
| 0026 | 416.0610 | Drilled Tie Bars | EACH | 1,266.000 | 1,266.000 |
| 0028 | 416.0620 | Drilled Dowel Bars | EACH | 20.000 | 20.000 |
| 0030 | 416.1725 | Concrete Pavement Replacement SHES | SY | 36.000 | 36.000 |
| 0032 | 455.0605 | Tack Coat | GAL | 252.000 | 252.000 |
| 0034 | 460.2000 | Incentive Density HMA Pavement | DOL | 1,131.000 | 1,131.000 |
| 0036 | 460.7423 | HMA Pavement 3 HT 58-28 H | TON | 1,361.000 | 1,361.000 |
| 0038 | 460.7424 | HMA Pavement 4 HT 58-28 H | TON | 409.000 | 409.000 |
| 0040 | 465.0125 | Asphaltic Surface Temporary | TON | 103.000 | 103.000 |
| 0042 | 520.8000 | Concrete Collars for Pipe | EACH | 4.000 | 4.000 |
| 0044 | 521.1018 | Apron Endwalls for Culvert Pipe Steel 18-Inch | EACH | 2.000 | 2.000 |
| 0046 | 521.1036 | Apron Endwalls for Culvert Pipe Steel 36-Inch | EACH | 1.000 | 1.000 |
| 0048 | 521.3118 | Culvert Pipe Corrugated Steel 18-Inch | LF | 20.000 | 20.000 |
| 0050 | 521.3136 | Culvert Pipe Corrugated Steel 36-Inch | LF | 12.000 | 12.000 |
| 0052 | 601.0409 | Concrete Curb & Gutter 30-Inch Type A | LF | 94.000 | 94.000 |
| 0054 | 601.0411 | Concrete Curb & Gutter 30-Inch Type D | LF | 276.000 | 276.000 |
| 0056 | 601.0551 | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A | LF | 1,020.000 | 1,020.000 |
| 0058 | 601.0555 | Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A | LF | 232.000 | 232.000 |
| 0060 | 601.0557 | Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D | LF | 310.000 | 310.000 |
| 0062 | 602.0410 | Concrete Sidewalk 5-Inch | SF | 1,686.000 | 1,686.000 |
| 0064 | 602.3010 | Concrete Surface Drains | CY | 14.000 | 14.000 |
| 0066 | 606.0200 | Riprap Medium | CY | 14.000 | 14.000 |
| 0068 | 608.0312 | Storm Sewer Pipe Reinforced Concrete Class III 12-Inch | LF | 27.000 | 27.000 |
| 0070 | 608.0318 | Storm Sewer Pipe Reinforced Concrete Class III 18-Inch | LF | 8.000 | 8.000 |
| 0072 | 611.0636 | Inlet Covers Type HM-S | EACH | 5.000 | 5.000 |
| 0074 | 611.0642 | Inlet Covers Type MS | EACH | 1.000 | 1.000 |
| 0076 | 611.3004 | Inlets 4-FT Diameter | EACH | 1.000 | 1.000 |
| 0078 | 611.3230 | Inlets 2x3-FT | EACH | 2.000 | 2.000 |
| 0080 | 611.3901 | Inlets Median 1 Grate | EACH | 1.000 | 1.000 |
| 0082 | 611.8115 | Adjusting Inlet Covers | EACH | 2.000 | 2.000 |
| 0084 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0086 | 620.0300 | Concrete Median Sloped Nose | SF | 363.000 | 363.000 |
| 0088 | 624.0100 | Water | MGAL | 67.000 | 67.000 |
| 0090 | 625.0100 | Topsoil | SY | 6,150.000 | 6,150.000 |
| 0092 | 628.1504 | Silt Fence | LF | 1,832.000 | 1,832.000 |
| 0094 | 628.1520 | Silt Fence Maintenance | LF | 1,832.000 | 1,832.000 |
| 0096 | 628.1905 | Mobilizations Erosion Control | EACH | 5.000 | 5.000 |
| 0098 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 10.000 | 10.000 |

2450-06-71

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0100 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 6,150.000 | 6,150.000 |
| 0102 | 628.7005 | Inlet Protection Type A | EACH | 1.000 | 1.000 |
| 0104 | 628.7020 | Inlet Protection Type D | EACH | 7.000 | 7.000 |
| 0106 | 628.7504 | Temporary Ditch Checks | LF | 50.000 | 50.000 |
| 0108 | 628.7555 | Culvert Pipe Checks | EACH | 6.000 | 6.000 |
| 0110 | 629.0210 | Fertilizer Type B | CWT | 3.900 | 3.900 |
| 0112 | 630.0130 | Seeding Mixture No. 30 | LB | 280.000 | 280.000 |
| 0114 | 630.0200 | Seeding Temporary | LB | 171.000 | 171.000 |
| 0116 | 630.0500 | Seed Water | MGAL | 137.000 | 137.000 |
| 0118 | 633.5200 | Markers Culvert End | EACH | 3.000 | 3.000 |
| 0120 | 634.0803 | Posts Tubular Steel 2x2-Inch x 3-FT | EACH | 4.000 | 4.000 |
| 0122 | 634.0816 | Posts Tubular Steel 2x2-Inch x 16-FT | EACH | 55.000 | 55.000 |
| 0124 | 637.2210 | Signs Type II Reflective H | SF | 331.550 | 331.550 |
| 0126 | 637.2230 | Signs Type II Reflective F | SF | 91.000 | 91.000 |
| 0128 | 638.2102 | Moving Signs Type II | EACH | 3.000 | 3.000 |
| 0130 | 638.2602 | Removing Signs Type II | EACH | 103.000 | 103.000 |
| 0132 | 638.3000 | Removing Small Sign Supports | EACH | 55.000 | 55.000 |
| 0134 | 642.5201 | Field Office Type C | EACH | 1.000 | 1.000 |
| 0136 | 643.0300 | Traffic Control Drums | DAY | 786.000 | 786.000 |
| 0138 | 643.0420 | Traffic Control Barricades Type III | DAY | 582.000 | 582.000 |
| 0140 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 1,164.000 | 1,164.000 |
| 0142 | 643.0715 | Traffic Control Warning Lights Type C | DAY | 540.000 | 540.000 |
| 0144 | 643.0810 | Traffic Control Connected Arrow Boards | DAY | 28.000 | 28.000 |
| 0146 | 643.0900 | Traffic Control Signs | DAY | 4,520.000 | 4,520.000 |
| 0148 | 643.1050 | Traffic Control Signs PCMS | DAY | 110.000 | 110.000 |
| 0150 | 643.1070 | Traffic Control Cones 42-Inch | DAY | 4,334.000 | 4,334.000 |
| 0152 | 643.1222 | Traffic Control Connected Work Zone End Location Marker | DAY | 28.000 | 28.000 |
| 0154 | 643.3105 | Temporary Marking Line Paint 4-Inch | LF | 1,374.000 | 1,374.000 |
| 0156 | 643.3205 | Temporary Marking Line Paint 8-Inch | LF | 2,064.000 | 2,064.000 |
| 0158 | 643.3505 | Temporary Marking Arrow Paint | EACH | 34.000 | 34.000 |
| 0160 | 643.3605 | Temporary Marking Word Paint | EACH | 4.000 | 4.000 |
| 0162 | 643.3805 | Temporary Marking Stop Line Paint 18-Inch | LF | 91.000 | 91.000 |
| 0164 | 643.3905 | Temporary Marking Diagonal Paint 12-Inch | LF | 68.000 | 68.000 |
| 0166 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0168 | 645.0120 | Geotextile Type HR | SY | 28.000 | 28.000 |
| 0170 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 8,092.000 | 8,092.000 |
| 0172 | 646.3020 | Marking Line Epoxy 8-Inch | LF | 3,898.000 | 3,898.000 |
| 0174 | 646.5020 | Marking Arrow Epoxy | EACH | 30.000 | 30.000 |
| 0176 | 646.5120 | Marking Word Epoxy | EACH | 8.000 | 8.000 |
| 0178 | 646.6120 | Marking Stop Line Epoxy 18-Inch | LF | 208.000 | 208.000 |
| 0180 | 646.7120 | Marking Diagonal Epoxy 12-Inch | LF | 557.000 | 557.000 |
| 0182 | 646.7320 | Marking Chevron Epoxy 12-Inch | LF | 63.000 | 63.000 |
| 0184 | 646.8220 | Marking Island Nose Epoxy | EACH | 7.000 | 7.000 |
| 0186 | 646.9010 | Marking Removal Line Water Blasting 4-Inch | LF | 2,912.000 | 2,912.000 |
| 0188 | 646.9210 | Marking Removal Line Water Blasting Wide | LF | 208.000 | 208.000 |
| 0190 | 646.9300 | Marking Removal Special Marking | EACH | 6.000 | 6.000 |
| 0192 | 646.9310 | Marking Removal Special Marking Water Blasting | EACH | 16.000 | 16.000 |
| 0194 | 650.4000 | Construction Staking Storm Sewer | EACH | 6.000 | 6.000 |
| 0196 | 650.4500 | Construction Staking Subgrade | LF | 2,560.000 | 2,560.000 |

2450-06-71

| Line | Item | Item Description | Unit | Total | Qty |
|---|---|---|---|---|---|
| 0198 | 650.5000 | Construction Staking Base | LF | 1,264.000 | 1,264.000 |
| 0200 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 586.000 | 586.000 |
| 0202 | 650.6000 | Construction Staking Pipe Culverts | EACH | 3.000 | 3.000 |
| 0204 | 650.7000 | Construction Staking Concrete Pavement | LF | 1,296.000 | 1,296.000 |
| 0206 | 650.8501 | Construction Staking Electrical Installations (project) 01. 2450-06-71 | EACH | 1.000 | 1.000 |
| 0208 | 650.9500 | Construction Staking Sidewalk (project) 01. 2450-06-71 | EACH | 1.000 | 1.000 |
| 0210 | 650.9911 | Construction Staking Supplemental Control (project) 01. 2450-06-71 | EACH | 1.000 | 1.000 |
| 0212 | 650.9920 | Construction Staking Slope Stakes | LF | 2,560.000 | 2,560.000 |
| 0214 | 652.0225 | Conduit Rigid Nonmetallic Schedule 40 2-Inch | LF | 170.000 | 170.000 |
| 0216 | 652.0235 | Conduit Rigid Nonmetallic Schedule 40 3-Inch | LF | 166.000 | 166.000 |
| 0218 | 652.0615 | Conduit Special 3-Inch | LF | 1,092.000 | 1,092.000 |
| 0220 | 653.0140 | Pull Boxes Steel 24x42-Inch | EACH | 9.000 | 9.000 |
| 0222 | 653.0905 | Removing Pull Boxes | EACH | 20.000 | 20.000 |
| 0224 | 654.0105 | Concrete Bases Type 5 | EACH | 4.000 | 4.000 |
| 0226 | 654.0113 | Concrete Bases Type 13 | EACH | 2.000 | 2.000 |
| 0228 | 654.0120 | Concrete Bases Type 10-Special | EACH | 2.000 | 2.000 |
| 0230 | 654.0217 | Concrete Control Cabinet Bases Type 9 Special | EACH | 1.000 | 1.000 |
| 0232 | 655.0230 | Cable Traffic Signal 5-14 AWG | LF | 386.000 | 386.000 |
| 0234 | 655.0240 | Cable Traffic Signal 7-14 AWG | LF | 1,177.000 | 1,177.000 |
| 0236 | 655.0260 | Cable Traffic Signal 12-14 AWG | LF | 914.000 | 914.000 |
| 0238 | 655.0320 | Cable Type UF 2-10 AWG Grounded | LF | 1,281.000 | 1,281.000 |
| 0240 | 655.0515 | Electrical Wire Traffic Signals 10 AWG | LF | 1,162.000 | 1,162.000 |
| 0242 | 655.0610 | Electrical Wire Lighting 12 AWG | LF | 1,044.000 | 1,044.000 |
| 0244 | 655.0900 | Traffic Signal EVP Detector Cable | LF | 1,069.000 | 1,069.000 |
| 0246 | 656.0201 | Electrical Service Meter Breaker Pedestal (location) 01. CTH F & CTH K | EACH | 1.000 | 1.000 |
| 0248 | 657.0255 | Transformer Bases Breakaway 11 1/2-Inch Bolt Circle | EACH | 4.000 | 4.000 |
| 0250 | 657.0322 | Poles Type 5-Aluminum | EACH | 4.000 | 4.000 |
| 0252 | 657.0352 | Poles Type 10-Special | EACH | 2.000 | 2.000 |
| 0254 | 657.0360 | Poles Type 13 | EACH | 2.000 | 2.000 |
| 0256 | 657.0541 | Monotube Arms 40-FT-Special | EACH | 1.000 | 1.000 |
| 0258 | 657.0546 | Monotube Arms 45-FT-Special | EACH | 1.000 | 1.000 |
| 0260 | 657.0555 | Monotube Arms 55-FT | EACH | 2.000 | 2.000 |
| 0262 | 657.0609 | Luminaire Arms Single Member 4-Inch Clamp 6-FT | EACH | 4.000 | 4.000 |
| 0264 | 657.0610 | Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT | EACH | 4.000 | 4.000 |
| 0266 | 658.0173 | Traffic Signal Face 3S 12-Inch | EACH | 12.000 | 12.000 |
| 0268 | 658.0174 | Traffic Signal Face 4S 12-Inch | EACH | 8.000 | 8.000 |
| 0270 | 658.5070 | Signal Mounting Hardware (location) 01. CTH F & CTH K | EACH | 1.000 | 1.000 |
| 0272 | 659.1125 | Luminaires Utility LED C | EACH | 8.000 | 8.000 |
| 0274 | 659.5000.S | Lamp, Ballast, LED, Switch Disposal by Contractor | EACH | 20.000 | 20.000 |
| 0276 | 661.0201 | Temporary Traffic Signals for Intersections (location) 01. CTH F & CTH K | EACH | 1.000 | 1.000 |
| 0278 | 690.0150 | Sawing Asphalt | LF | 2,871.000 | 2,871.000 |
| 0280 | 690.0250 | Sawing Concrete | LF | 2,447.000 | 2,447.000 |
| 0282 | 715.0720 | Incentive Compressive Strength Concrete Pavement | DOL | 1,112.000 | 1,112.000 |
| 0284 | ASP.1T0A | On-the-Job Training Apprentice at $5.00/HR | HRS | 500.000 | 500.000 |
| 0286 | ASP.1T0G | On-the-Job Training Graduate at $5.00/HR | HRS | 900.000 | 900.000 |
| 0288 | SPV.0060 | Special 01. Traffic Signal Cabinet and Controller (CTH F & CTH K) | EACH | 1.000 | 1.000 |
| 0290 | SPV.0060 | Special 02. Retroreflective Backplates 3S | EACH | 12.000 | 12.000 |
| 0292 | SPV.0060 | Special 03. Retroreflective Backplates 4S | EACH | 8.000 | 8.000 |
| 0294 | SPV.0060 | Special 04. Furnish and Install Video Detection System (CTH F & CTH K) | EACH | 1.000 | 1.000 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | 2450-06-71 |
| 0296 | SPV.0060 | Special 05. Furnish and Install Emergency Vehicle Preemption (EVP) | EACH | 1.000 | 1.000 |

REMOVALS

| CATEGORY | STATION | TO | STATION | LOCATION | 204.0100 REMOVING CONCRETE PAVEMENT SY | 204.0150 REMOVING CURB & GUTTER LF | 204.0195 REMOVING CONCRETE BASES EACH | 690.0150 SAWING ASPHALT LF | 690.0250 SAWING CONCRETE LF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 284+03 F | - | 284+21 F | NW PORKCHOP | - | 56 | 1 | 75 | 36 | STAGE 1 |
| 0010 | 284+03 F | - | 284+21 F | NE PORKCHOP | - | 87 | 1 | 104 | 26 | STAGE 1 |
| 0010 | 283+22 F | - | 283+39 F | SE PROKCHOP | - | 49 | 1 | 64 | 27 | STAGE 1 |
| 0010 | 283+31 F | - | 283+47 F | SW PORKCHOP | - | 85 | 1 | 106 | 25 | STAGE 1 |
| 0010 | 280+41 F | - | 280+95 F | NB PATCH LT LANE | 74 | - | - | - | 79 | STAGE 2 |
| 0010 | 275+47 F | - | 283+38 F | NB LT TURN LANE | 791 | - | 1 | 258 | 421 | STAGE 2 |
| 0010 | 284+18 F | - | 288+79 F | SB LT TURN LANE | 778 | - | 1 | 4 | 543 | STAGE 2 |
| 0010 | 280+41 F | - | 280+95 F | NB PATCH RT LANE | 68 | - | - | - | 76 | STAGE 4 |
| 0010 | 282+76 F | - | 283+54 F | NB RT TURN LANE | - | 221 | 2 | 123 | 224 | STAGE 4 |
| 0010 | 284+10 F | - | 284+77 F | SB RT TURN LANE | - | 100 | 1 | 135 | 448 | STAGE 3 |
| 0010 | 282+83 F | - | 283+28 F | EB RT TURN LANE | - | 69 | - | 789 | 274 | STAGE 3 |
| 0010 | 284+00 F | - | 284+65 F | WB RT TURN LANE | - | 174 | - | 359 | 137 | STAGE 3 |
| 0010 | 14+54 K | - | 15+31 K | QRY CORNERS | - | 169 | - | 485 | - | STAGE 4 |
| 0010 | 283+98 F | - | 284+34 F | NW PORKCHOP | - | - | - | 75 | 36 | STAGE 5 |
| 0010 | 283+90 F | - | 284+25 F | NE PORKCHOP | - | - | - | 114 | 35 | STAGE 5 |
| 0010 | 283+19 F | - | 283+53 F | SE PROKCHOP | - | - | - | 74 | 35 | STAGE 5 |
| 0010 | 283+24 F | - | 283+49 F | SW PORKCHOP | - | - | - | 106 | 25 | STAGE 5 |
| | | | | TOTAL 0010 | 1,711 | 1,010 | 9 | 2,871 | 2,447 | |

STAKING

| CATEGORY | STATION | TO | STATION | LOCATION | 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 | 650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF | 650.8501.01 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) (01. 2450-06-71) EACH | 650.9500.01 CONSTRUCTION STAKING SIDEWALK (PROJECT) (01. 2450-06-71) EACH | 650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 2450-06-71) EACH | 650.9920 CONSTRUCTION STAKING SLOPE STAKES LF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 275+46 | - | 283+53 | CTH F | - | 807 | - | - | - | 807 | - | - | - | 807 | |
| 0010 | 283+90 | - | 288+79 | CTH F | - | 489 | - | - | - | 489 | - | - | - | 489 | |
| 0010 | 2+04 | - | 9+70 | CTH K | - | 766 | 766 | - | - | - | - | - | - | 766 | |
| 0010 | 10+48 | - | 15+46 | CTH K | - | 498 | 498 | - | - | - | - | - | - | 498 | |
| | | | | PROJECT | 6 | - | - | 586 | 3 | - | 1 | 1 | 1 | - | |
| | | | | TOTAL 0010 | 6 | 2,560 | 1,264 | 586 | 3 | 1,296 | 1 | 1 | 1 | 2,560 | |

3

| DIVISION | FROM/TO STATION | LOCATION | 205.0100 EXCAVATION COMMON (1) | | SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4) | AVAILABLE MATERIAL (5) | UNEXPANDED FILL | EXPANDED FILL (13) | MASS ORDINATE +/- (14) | WASTE | COMMENT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT (2) | EBS EXCAVATION (3) | | | | FACTOR 1.25 | | | |
| DIVISION 1 | | | | | | | | | | | |
| CTH F | 275+46.89/288+81.93 | | 2,769 | 0 | 560 | 2,209 | 55 | 69 | 2,700 | | |
| CTH-K | 2+26.66/14+31.74 | | 2,470 | 0 | 350 | 2,120 | 64 | 80 | 2,390 | | |
| QUARRY CORNERS | 14+31.74/15+57.92 | | 329 | 0 | 0 | 329 | 14 | 18 | 312 | | |
| DIVISION 1 SUBTOTAL | | | 5,568 | 0 | 910 | 4,658 | 133 | 166 | 5,402 | 5,402 | |
| GRAND TOTAL | | | 5,568 | 0 | 910 | 4,658 | 133 | 166 | 5,402 | 5,402 | |
| TOTAL COMMON EXC | | | 5,568 | | | | | | | | |

NOTES:

(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) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(5) EXPANDED FILL FACTOR = 1.25

DEPENDING ON SELECTIONS**EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR**

OR EXPANDED FILL = (UNEXPANDED FILL) * FILL FACTOR

(6) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICAT

(7) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

PAVEMENT STRC

| CATEGORY | STATION | TO | STATION | LOCATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON | 311.0110 BREAKER RUN TON | 415.0100 CONCRETE PAVEMENT 10-INCH SY | 416.0610 DRILLED TIE BARS EACH | 416.0620 DRILLED DOWEL BARS EACH | 416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY | 455.0605 TACK COAT GAL | 460.7423 HMA PAVEMENT 3 HT 58-28 H TON | 460.7424 HMA PAVEMENT 4 HT 58-28 H TON | 465.0125 ASPHALTIC SURFACE TEMPORARY TON | 624.0100 WATER MGAL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 283+98 F | - | 284+34 F | NW PORKCHOP | - | 41 | - | - | - | - | - | 6 | - | - | 25 | 1 | STAGE 1 |
| 0010 | 283+90 F | - | 284+25 F | NE PORKCHOP | - | 49 | - | - | - | - | - | 7 | - | - | 30 | 1 | STAGE 1 |
| 0010 | 283+19 F | - | 283+53 F | SE PORKCHOP | - | 29 | - | - | - | - | - | 4 | - | - | 18 | 1 | STAGE 1 |
| 0010 | 283+24 F | - | 283+49 F | SW PORKCHOP | - | 49 | - | - | - | - | - | 7 | - | - | 30 | 1 | STAGE 1 |
| 0010 | 280+41 F | - | 280+95 F | NB PATCH LT LANE | - | - | - | - | 33 | 10 | 19 | - | - | - | - | - | STAGE 2 |
| 0010 | 275+47 F | - | 283+38 F | NB LT TURN LANE | - | 842 | - | 1,216 | 491 | - | - | - | - | - | - | 17 | STAGE 2 |
| 0010 | 284+18 F | - | 288+79 F | SB LT TURN LANE | - | 576 | - | 792 | 394 | - | - | - | - | - | - | 12 | STAGE 2 |
| 0010 | 280+41 F | - | 280+95 F | NB PATCH RT LANE | - | - | - | - | 33 | 10 | 17 | - | - | - | - | - | STAGE 4 |
| 0010 | 280+41 F | - | 283+53 F | NB RT TURN LANE | 40 | 485 | - | 688 | 78 | - | - | - | - | - | - | - | STAGE 4 |
| 0010 | 283+98 F | - | 288+82 F | SB RT TURN LANE | 71 | 669 | - | 859 | 179 | - | - | - | - | - | - | - | STAGE 3 |
| 0010 | 2+08 K | - | 9+70 K | EB RT TURN LANE | 155 | 638 | 1,067 | - | - | - | - | 109 | 651 | 196 | - | 16 | STAGE 3 |
| 0010 | 10+50 K | - | 13+71 K | WB RT TURN LANE | 50 | 377 | 617 | - | - | - | - | 61 | 364 | 109 | - | 9 | STAGE 3 |
| 0010 | 11+37 K | - | 15+46 K | QRY CORNERS | 50 | 380 | 618 | - | - | - | - | 58 | 346 | 104 | - | 9 | STAGE 4 |
| 0010 | 284+05 F | - | 284+25 F | NW PORKCHOP | - | - | - | 36 | 30 | - | - | - | - | - | - | - | STAGE 5 |
| 0010 | 284+02 F | - | 284+11 F | NE PORKCHOP | - | - | - | 38 | - | - | - | - | - | - | - | - | STAGE 5 |
| 0010 | 283+25 F | - | 283+42 F | SE PORKCHOP | - | - | - | 19 | 29 | - | - | - | - | - | - | - | STAGE 5 |
| 0010 | 283+30 F | - | 283+40 F | SW PORKCHOP | - | - | - | 56 | - | - | - | - | - | - | - | - | STAGE 5 |
| | | | | PROJECT | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | | TOTAL 0010 | 366 | 4,135 | 2,302 | 3,704 | 1,266 | 20 | 36 | 252 | 1,361 | 409 | 103 | 67 | |

PAVEMENT MARKING

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

| CATEGORY | STATION | TO | STATION | LOCATION | 646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF | 646.1020 MARKING LINE EPOXY 4-INCH WHITE LF | 646.3020 MARKING LINE EPOXY 8-INCH LF | 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 YELLOW LF | 646.7120 MARKING DIAGONAL EPOXY 12-INCH WHITE LF | 646.7320 MARKING CHEVRON EPOXY 12-INCH LF | 646.8220 MARKING ISLAND NOSE EPOXY EACH | * 646.9010 MARKING REMOVAL LINE WATER BLASTING 4- LF | * 646.9210 MARKING REMOVAL LINE WATER BLASTING WIDE LF | 646.9300 MARKING REMOVAL SPECIAL MARKING EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 0+00 | - | 10+00 | CTH K (WEST) | 2,693 | 926 | 504 | 6 | 2 | 39 | 101 | 287 | 63 | 1 | 1,280 | 24 | 1 | |
| 0010 | 10+00 | - | 20+00 | CTH K (EAST) | 996 | 564 | 966 | 9 | 2 | 43 | - | 169 | - | 2 | 950 | 36 | 5 | |
| 0010 | 275+00 | - | 283+75 | CTH F (SOUTH) | 600 | 1,155 | 1,363 | 7 | 2 | 54 | - | - | - | 2 | - | 24 | - | |
| 0010 | 283+75 | - | 289+00 | CTH F (NORTH) | 450 | 708 | 1,065 | 8 | 2 | 72 | - | - | - | 2 | - | 24 | - | |
| | | | | SUBTOTAL | 4,739 | 3,353 | | | | | 101 | 456 | | | | | | |
| | | | | TOTAL 0010 | 8,092 | | 3,898 | 30 | 8 | 208 | 557 | | 63 | 7 | 2,230 | 108 | 6 | |

3

C&G & MEDIANS

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

| CATEGORY | STATION | TO | STATION | LOCATION | * 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON | 601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF | 601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF | 601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF | 601.0555 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A LF | 601.0557 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF | 602.0410 CONCRETE SIDEWALK 5-INCH SF | 602.3010 CONCRETE SURFACE DRAINS CY | 620.0300 CONCRETE MEDIAN SLOPED NOSE SF | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 275+47 F | - | 282+87 F | NB LT LANE | 17 | - | - | 580 | - | - | 662 | - | 37 | STAGE 2 |
| 0010 | 284+45 F | - | 288+79 F | SB LT LANE | 11 | - | - | 440 | - | - | 426 | - | 37 | STAGE 2 |
| 0010 | 282+66 F | - | 283+41 F | NB RT TURN LANE | 35 | - | - | - | 116 | - | - | 4 | - | STAGE 4 |
| 0010 | 284+07 F | - | 284+82 F | SB RT TURN LANE | 35 | - | - | - | 116 | - | - | 4 | - | STAGE 3 |
| 0010 | 8+85 K | - | 9+60 K | EB RT TURN LANE | 37 | - | - | - | - | 120 | - | 2 | - | STAGE 3 |
| 0010 | 10+59 K | - | 11+23 K | WB RT TURN LANE | 33 | - | - | - | - | 108 | - | 2 | - | STAGE 3 |
| 0010 | 14+32 K | - | 15+34 K | QRY CORNERS | - | - | 159 | - | - | 82 | - | 2 | 59 | STAGE 4 |
| 0010 | 284+02 F | - | 284+32 F | NW PORKCHOP | 4 | 51 | - | - | - | - | 150 | - | 56 | STAGE 5 |
| 0010 | 284+00 F | - | 284+14 F | NE PORKCHOP | 6 | - | 74 | - | - | - | 203 | - | 56 | STAGE 5 |
| 0010 | 283+27 F | - | 283+43 F | SW PORKCHOP | 3 | - | 43 | - | - | - | 117 | - | 56 | STAGE 5 |
| 0010 | 283+18F | - | 283+45 F | SE PORKCHOP | 4 | 43 | - | - | - | - | 128 | - | 62 | STAGE 5 |
| | | | | TOTAL 0010 | 185 | 94 | 276 | 1,020 | 232 | 310 | 1,686 | 14 | 363 | |

3

INLETS

| CATEGORY | STATION | LOCATION | 204.0220 REMOVING INLETS EACH | 628.7005 INLET PROTECTION TYPE A EACH | 628.7020 INLET PROTECTION TYPE D EACH | REMARKS |
|---|---|---|---|---|---|---|
| 0010 | 277+02 | NB LT TURN LANE | - | 1 | - | STAGE 1 |
| 0010 | 277+02 | NB LT TURN LANE | 1 | - | 1 | STAGE 2 |
| 0010 | 282+21 | NB LT TURN LANE | 1 | - | 1 | STAGE 2 |
| 0010 | 282+22 | SB MEDIAN | - | - | 1 | STAGE 2 |
| 0010 | 284+78 | NB MEDIAN | - | - | 1 | STAGE 2 |
| 0010 | 285+29 | SB LT TURN LANE | 1 | - | 1 | STAGE 2 |
| 0010 | 286+03 | SB LT TURN LANE | - | - | 1 | STAGE 2 |
| 0010 | 286+50 | SB LT TURN LANE | - | - | 1 | STAGE 2 |
| | | TOTAL 0010 | 3 | 1 | 7 | |

PIPE CULVERTS

| CATEGORY | STATION | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | 521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH | 521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH EACH | 521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF | 521.3136 CULVERT PIPE CORRUGATED STEEL 36-INCH LF | 633.5200 MARKERS CULVERT END EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| 0010 | 6+65 | CTH K RT | - | - | 1 | - | 12 | 1 | STAGE 3; Minimum Required Wall Thickness = 0.079" |
| 0010 | 13+15 | CTH K LT | 1 | 2 | - | 20 | - | 2 | STAGE 3; Minimum Required Wall Thickness = 0.079" |
| 0010 | 287+15 | CTH F LT | 1 | - | - | - | - | - | STAGE 3; Minimum Required Wall Thickness = 0.079" |
| | | TOTAL 0010 | 2 | 2 | 1 | 20 | 12 | 3 | |

3

## STORM STRUCTURES

| CATEGORY | STRUCTURE | STATION | OFFSET* | LOCATION | * 611.0636 INLET COVERS TYPE HM-S EACH | * 611.0642 INLET COVERS TYPE MS EACH | * 611.3004 INLETS 4-FT DIAMETER EACH | * 611.3230 INLETS 2X3-FT EACH | * 611.3901 INLETS MEDIAN 1 GRATE EACH | * 611.8115 ADJUSTING INLET COVERS EACH | REMARKS | RIM** ELEVATION | INVERT*** ELEVATION | DEPTH**** FT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 1.0 | 276+99.54 | 4.12' RT | CTH F | - | 1 | -- | -- | 1 | -- | | 880.99 | 877.33 | 3.87 |
| 0010 | 1.1 | 276+99.50 | 10.78' RT | CTH F | 1 | -- | -- | 1 | -- | -- | | 881.84 | 877.90 | 3.11 |
| 0010 | 2.0 | 282+19.25 | 1.25' RT | CTH F | 1 | -- | -- | 1 | -- | -- | | 884.91 | 882.51 | 1.57 |
| 0010 | 3.0 | 285+25.54 | 16.75' RT | CTH F | 1 | -- | 1 | -- | -- | -- | SET INVERT TO MATCH EXISTING AND MAINTAIN POSITIVE DRAINAGE | 885.91 | -- | -- |
| 0010 | 3.1 | 286+00.16 | 13.99' RT | CTH F | 1 | -- | -- | -- | -- | 1 | | 885.83 | -- | -- |
| 0010 | 3.2 | 286+48.35 | 12.20' RT | CTH F | 1 | -- | -- | -- | -- | 1 | | 885.72 | -- | -- |
| | | | | TOTAL 0010 | 5 | 1 | 1 | 2 | 1 | 2 | | | | |

REMARKS:

*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

**RIM ELEV IS AT THE INLET COVER FLANGE LOCATION

***FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE

****DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

## STORM PIPES

| CATEGORY | STRUCTURE | TO | STRUCTURE | LOCATION | 520.8000 CONCRETE COLLARS FOR PIPE EACH | 608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF | 608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF | REMARKS | INLET ELEVATION | DISCHARGE ELEVATION | SLOPE FT/FT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 1.0 | - | 1.0-A | CTH F | 1 | - | 8 | | 877.33 | 877.24 | 0.012 |
| 0010 | 1.1 | - | 1.0 | CTH F | - | 7 | - | | 877.90 | 877.83 | 0.009 |
| 0010 | 2.0 | - | EXIST2 | CTH F | 1 | 5 | - | | 882.51 | 882.46 | 0.011 |
| 0010 | 3.0-A | - | 3.0 | CTH F | 1 | 8 | - | | 883.40 | 883.38 | 0.003 |
| 0010 | 3.0 | - | EXIST5 | CTH F | 1 | 7 | - | | | 883.38 | |
| | | | | TOTAL 0010 | 4 | 27 | 8 | | | | |

EROSION CONTROL

| CATEGORY | STATION | TO | STATION | LOCATION | 606.0200 RIPRAP MEDIUM CY | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH | 628.7504 TEMPORARY DITCH CHECKS LF | 628.7555 CULVERT PIPE CHECKS EACH | 645.0120 GEOTEXTILE TYPE HR SY | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 10+59 K | - | 11+23 K | NE QUAD | 2 | - | - | - | - | - | - | 4 | STAGE 3 |
| 0010 | 284+07 F | - | 284+82 F | NW QUAD | 4 | - | - | - | - | - | - | 8 | STAGE 3 |
| 0010 | 10+73 K | - | 14+75 K | SE QUAD | 4 | 695 | 695 | - | - | - | - | 8 | STAGE 4 |
| 0010 | 2+05 K | - | 9+41 K | SW QUAD | 2 | 770 | 770 | - | - | - | - | 4 | STAGE 3 |
| 0010 | 14+32 K | - | 15+34 K | QRY CORNERS | 2 | - | - | - | - | - | - | 4 | STAGE 4 |
| | | | | UNDISTRIBUTED | - | 367 | 367 | 5 | 10 | 50 | 6 | - | |
| | | | | TOTAL 0010 | 14 | 1,832 | 1,832 | 5 | 10 | 50 | 6 | 28 | |

RESTORATION

| CATEGORY | STATION | TO | STATION | LOCATION | 625.0100 TOPSOIL SY | 628.2008 EROSION MAT URBAN CLASS I TYPE B SY | 629.0210 FERTILIZER TYPE B CWT | 630.0130 SEEDING MIXTURE NO. 30 LB | 630.0200 SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 275+47 | - | 280+74 | NB LT TURN LANE | 415 | 415 | 0.3 | 19 | 12 | 9 | STAGE 2 |
| 0010 | 285+70 | - | 288+79 | SB LT TURN LANE | 410 | 410 | 0.3 | 19 | 12 | 9 | STAGE 2 |
| 0010 | 10+75 K | - | 13+70 K | NE QUAD | 685 | 685 | 0.4 | 31 | 19 | 15 | STAGE 3 |
| 0010 | 284+11 F | - | 288+82 F | NW QUAD | 935 | 935 | 0.6 | 43 | 26 | 21 | STAGE 3 |
| 0010 | 10+73 K | - | 14+75 K | SE QUAD | 955 | 955 | 0.6 | 43 | 26 | 21 | STAGE 4 |
| 0010 | 2+05 K | - | 9+41 K | SW QUAD | 1,110 | 1,110 | 0.7 | 50 | 30 | 25 | STAGE 3 |
| 0010 | 15+03 K | - | 15+34 K | QRY CORNERS ISLAND | 410 | 410 | 0.3 | 19 | 12 | 9 | STAGE 4 |
| | | | | UNDISTRIBUTED | 1,230 | 1,230 | 0.7 | 56 | 34 | 28 | |
| | | | | TOTAL 0010 | 6,150 | 6,150 | 3.9 | 280 | 171 | 137 | |

TRAFFIC CONTROL

| | | | 643.0300 | | 643.0420 | | 643.0705 | | 643.0715 | | 643.0810 | | 643.0900 | | 643.1050 | | 643.1070 | | 643.1222 | | 643.5000 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CATEGORY | LOCATION | APPROX SERVICE PERIOD | TRAFFIC CONTROL DRUMS | | TRAFFIC CONTROL BARRICADES TYPE III | | TRAFFIC CONTROL WARNING LIGHTS TYPE A | | TRAFFIC CONTROL WARNING LIGHTS TYPE C | | TRAFFIC CONTROL CONNECTED ARROW BOARDS | | TRAFFIC CONTROL SIGNS | | TRAFFIC CONTROL SIGNS PCMS | | TRAFFIC CONTROL CONES 42-INCH | | TRAFFIC CONTROL CONNECTED WORK ZONE END LOCATION MARKERS | | TRAFFIC CONTROL | REMARKS |
| | | | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | NO. IN SERVICE | DAY | EACH | |
| 0010 | CTH K /CTH F | 7 | - | - | - | - | - | - | - | - | - | - | | - | 4 | 28 | - | - | - | - | - | PRE-STAGE |
| 0010 | CTH K (WEST) | 14 | - | - | - | - | - | - | - | - | - | - | 8 | 112 | - | - | 7 | 98 | - | - | - | STAGE 1 |
| 0010 | CTH K (EAST) | 14 | - | - | - | - | - | - | - | - | - | - | 8 | 112 | - | - | 11 | 154 | - | - | - | STAGE 1 |
| 0010 | CTH F (SOUTH) | 14 | - | - | - | - | - | - | - | - | - | - | 8 | 112 | - | - | 9 | 126 | - | - | - | STAGE 1 |
| 0010 | CTH F (NORTH) | 14 | - | - | - | - | - | - | - | - | - | - | 8 | 112 | - | - | 9 | 126 | - | - | - | STAGE 1 |
| 0010 | CTH K (WEST) | 21 | - | - | - | - | - | - | - | - | - | - | 7 | 147 | - | - | - | - | - | - | - | STAGE 2 |
| 0010 | CTH K (EAST) | 21 | - | - | - | - | - | - | - | - | - | - | 7 | 147 | - | - | - | - | - | - | - | STAGE 2 |
| 0010 | CTH F (SOUTH) | 21 | 5 | 105 | 2 | 42 | 4 | 84 | 5 | 105 | - | - | 13 | 273 | 1 | 21 | 25 | 525 | - | - | - | STAGE 2 |
| 0010 | CTH F (NORTH) | 21 | 5 | 105 | 2 | 42 | 4 | 84 | 5 | 105 | - | - | 13 | 273 | 1 | 21 | 19 | 399 | - | - | - | STAGE 2 |
| 0010 | CTH F (PATCH LANE 1) | 7 | 24 | 168 | 2 | 14 | 4 | 28 | 10 | 70 | 2 | 14 | 8 | 56 | - | - | - | - | 2 | 14 | - | STAGE 2 |
| 0010 | CTH K (WEST) | 28 | - | - | 4 | 112 | 8 | 224 | - | - | - | - | 13 | 364 | - | - | 22 | 616 | - | - | - | STAGE 3 |
| 0010 | CTH K (EAST) | 28 | - | - | 2 | 56 | 4 | 112 | - | - | - | - | 13 | 364 | - | - | 10 | 280 | - | - | - | STAGE 3 |
| 0010 | CTH F (SOUTH) | 28 | - | - | 2 | 56 | 4 | 112 | - | - | - | - | 11 | 308 | - | - | 7 | 196 | - | - | - | STAGE 3 |
| 0010 | CTH F (NORTH) | 28 | - | - | - | - | - | - | - | - | - | - | 8 | 224 | - | - | - | - | - | - | - | STAGE 3 |
| 0010 | CTH K (WEST) | 28 | - | - | - | - | - | - | - | - | - | - | 8 | 224 | - | - | - | - | - | - | - | STAGE 4 |
| 0010 | CTH K (EAST) | 28 | - | - | 4 | 112 | 8 | 224 | - | - | - | - | 7 | 196 | - | - | 11 | 308 | - | - | - | STAGE 4 |
| 0010 | CTH F (SOUTH) | 28 | - | - | - | - | - | - | - | - | - | - | 9 | 252 | | - | | - | - | - | - | STAGE 4 |
| 0010 | CTH F (NORTH) | 28 | 5 | 140 | 3 | 84 | 6 | 168 | 5 | 140 | - | - | 15 | 420 | 1 | 28 | 15 | 420 | - | - | - | STAGE 4 |
| 0010 | CTH F (PATCH LANE 2) | 7 | 24 | 168 | 2 | 14 | 4 | 28 | 10 | 70 | 2 | 14 | 10 | 70 | - | - | - | - | 2 | 14 | - | STAGE 4 |
| 0010 | CTH K (WEST) | 14 | - | - | - | - | - | - | - | - | - | - | 9 | 126 | - | - | 12 | 168 | - | - | - | STAGE 5 |
| 0010 | CTH K (EAST) | 14 | - | - | - | - | - | - | - | - | - | - | 9 | 126 | - | - | 15 | 210 | - | - | - | STAGE 5 |
| 0010 | CTH F (SOUTH) | 14 | - | - | - | - | - | - | - | - | - | - | 9 | 126 | - | - | 12 | 168 | - | - | - | STAGE 5 |
| 0010 | CTH F (NORTH) | 14 | - | - | - | - | - | - | - | - | - | - | 9 | 126 | - | - | 10 | 140 | - | - | - | STAGE 5 |
| 0010 | UNDISTRIBUTED | | | 100 | | 50 | | 100 | | 50 | | | | 250 | | 12 | | 400 | | | 1 | |
| | | | 786 | | 582 | | 1,164 | | 540 | | 28 | | 4,520 | | 110 | | 4,334 | | 28 | | 1 | |

3

TEMPORARY MARKING

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

| CATEGORY | STATION | TO | STATION | LOCATION | 643.3105 TEMPORARY MARKING LINE PAINT 4-INCH LF | 643.3205 TEMPORARY MARKING LINE PAINT 8-INCH LF | 643.3505 TEMPORARY MARKING ARROW PAINT EACH | 643.3605 TEMPORARY MARKING WORD PAINT EACH | 643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH LF | 643.3905 TEMPORARY MARKING DIAGONAL PAINT 12-INCH LF | * 646.9010 MARKING REMOVAL LINE WATER BLASTING 4- LF | * 646.9210 MARKING REMOVAL LINE WATER BLASTING WIDE LF | 646.9310 MARKING REMOVAL SPECIAL MARKING EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 0+00 | - | 10+00 | CTH K (WEST) | - | - | - | - | - | - | - | - | - | STAGE 1 |
| 0010 | 10+00 | - | 20+00 | CTH K (EAST) | - | - | - | - | - | - | - | - | - | STAGE 1 |
| 0010 | 275+00 | - | 283+75 | CTH F (SOUTH) | - | - | - | - | - | - | - | - | - | STAGE 1 |
| 0010 | 283+75 | - | 289+00 | CTH F (NORTH) | - | - | - | - | - | - | - | - | - | STAGE 1 |
| 0010 | 0+00 | - | 10+00 | CTH K (WEST) | - | - | - | - | - | - | - | - | - | STAGE 2 |
| 0010 | 10+00 | - | 20+00 | CTH K (EAST) | - | - | - | - | - | - | - | - | - | STAGE 2 |
| 0010 | 275+00 | - | 283+75 | CTH F (SOUTH) | - | - | 2 | - | 12 | - | - | - | 2 | STAGE 2 |
| 0010 | 283+75 | - | 289+00 | CTH F (NORTH) | - | - | 2 | - | 12 | - | - | - | 2 | STAGE 2 |
| 0010 | 0+00 | - | 10+00 | CTH K (WEST) | - | - | 2 | - | - | - | - | - | 2 | STAGE 3 |
| 0010 | 10+00 | - | 20+00 | CTH K (EAST) | - | - | 2 | - | - | - | - | - | 2 | STAGE 3 |
| 0010 | 275+00 | - | 283+75 | CTH F (SOUTH) | - | 768 | 4 | 1 | 15 | - | - | - | 2 | STAGE 3 |
| 0010 | 283+75 | - | 289+00 | CTH F (NORTH) | - | 828 | 4 | 1 | 15 | - | - | - | 2 | STAGE 3 |
| 0010 | 0+00 | - | 10+00 | CTH K (WEST) | - | - | 2 | - | - | - | - | - | - | STAGE 4 |
| 0010 | 10+00 | - | 20+00 | CTH K (EAST) | 974 | 68 | 6 | - | 26 | 45 | 482 | - | - | STAGE 4 |
| 0010 | 275+00 | - | 283+75 | CTH F (SOUTH) | - | - | 2 | 1 | - | - | - | - | - | STAGE 4 |
| 0010 | 283+75 | - | 289+00 | CTH F (NORTH) | - | - | 2 | - | - | - | - | - | - | STAGE 4 |
| 0010 | 0+00 | - | 10+00 | CTH K (WEST) | - | - | - | - | - | - | - | - | - | STAGE 5 |
| 0010 | 10+00 | - | 20+00 | CTH K (EAST) | - | - | - | - | - | - | - | - | - | STAGE 5 |
| 0010 | 275+00 | - | 283+75 | CTH F (SOUTH) | - | - | - | - | - | - | - | - | - | STAGE 5 |
| 0010 | 283+75 | - | 289+00 | CTH F (NORTH) | - | - | 2 | - | - | - | - | - | 2 | STAGE 5 |
| 0010 | | | | UNDISTRIBUTED | 400 | 400 | 4 | 1 | 11 | 23 | 200 | 100 | 2 | |
| | | | | SUBTOTAL | | | | | | | | | | |
| | | | | TOTAL 0010 | 1,374 | 2,064 | 34 | 4 | 91 | 68 | 682 | 100 | 16 | |

PERMANENT SIGNS

| CATEGORY | SIGN NO. | STA | LOCATION | SIGN CODE | SIZE | SIGN WORDING & PICTORIALS | 634.0803 POSTS TUBULAR STEEL 2X2-INCH X 3-FT EACH | 634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 1 | 1+11 | CTH K, R | - | - | TRAFFIC SIGNALS AHEAD SYMBOL | - | - | - | - | - | 1 | 1 | |
| 0010 | 2A | 4+72 | CTH K, L | R14-1 | 24"X18" | TRUCK ROUTE | - | 1 | 3.00 | - | - | 1 | 1 | |
| 0010 | 2B | 4+72 | CTH K, L | M6-1 | 21"X21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | 1 | - | MOUNT WITH SIGN 2A |
| 0010 | 3A | 3+42 | CTH K, R | M2-1 | 21"X15" | JCT | - | 1 | 2.20 | - | - | 1 | 1 | |
| 0010 | 3B | 3+42 | CTH K, R | M1-5A | 24"X24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | 1 | - | MOUNT WITH SIGN 3A |
| 0010 | 4 | 4+77 | CTH K, R | W3-3 | 36"X36" | TRAFFIC SIGNALS AHEAD SYMBOL | - | 1 | - | 9.00 | - | - | - | |
| 0010 | 5 | 4+96 | CTH K, R | - | - | LEFT LANE MUST TURN LEFT | - | - | - | - | - | 1 | 1 | |
| 0010 | 6A | 5+03 | CTH K, R | M3-1 | 24"X12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 6B | 5+03 | CTH K, R | M3-3 | 24"X12" | CARDINAL DIRECTION | - | - | 2.00 | - | - | - | - | MOUNT WITH SIGN 6A |
| 0010 | 6C | 5+03 | CTH K, R | M1-5A | 24"X24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 6A |
| 0010 | 6D | 5+03 | CTH K, R | M1-5A | 24"X24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 6A |
| 0010 | 6E | 5+03 | CTH K, R | M6-1 | 21"X21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 6A |
| 0010 | 6F | 5+03 | CTH K, R | M6-1 | 21"X21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 6A |
| 0010 | 6G | 5+03 | CTH K, R | R14-1 | 24"X18" | TRUCK ROUTE | - | - | 3.00 | - | - | - | - | MOUNT WITH SIGN 6A |
| 0010 | 7 | 6+34 | CTH K, R | - | - | | - | - | - | - | - | 7 | 1 | |
| 0010 | 8 | 6+42 | CTH K, R | R3-8LAR | 54"x30" | ONLY ARROWS | - | 1 | 11.25 | - | - | - | - | |
| 0010 | 9 | 7+62 | CTH K, L | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 10 | 8+62 | CTH K, L | - | - | ADOPT-A-HIGHWAY | - | - | - | - | 1 | - | 1 | |
| 0010 | 11 | 8+62 | CTH K, L | | | ADOPT-A-HIGHWAY | - | 1 | - | - | - | - | - | |
| 0010 | 12 | 8+62 | CTH K, L | - | - | | - | - | - | - | - | 2 | 1 | |
| 0010 | 13A | 8+62 | CTH K, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | 1 | 4.00 | - | - | - | - | |
| 0010 | 13B | 8+62 | CTH K, L | - | 24"x30" | ALT. TRUCK ROUTE TO HWY VV-WEST | - | - | | | - | - | - | MOUNT WITH SIGN 13A |
| 0010 | 14 | 9+27 | CTH K, L | R1-2 | 36"x31" | YIELD | - | 1 | 3.88 | - | - | - | - | |
| 0010 | 15 | 9+27 | CTH K, L | - | - | STOP SIGN | - | - | - | - | - | 1 | - | |
| 0010 | 16 | 10+21 | CTH K, L | R4-7 | 24"x30" | KEEP RIGHT | - | - | 5.00 | - | - | 1 | - | SIGN MOUNTED ON LIGHT POLE/TRAFFIC SIGNAL |
| 0010 | 17 | 9+50 | CTH K, L | - | - | DO NOT ENTER | - | - | - | - | - | 1 | 1 | |
| 0010 | 18 | 9+63 | CTH K, L | W12-1D | 24"x24" | DOUBLE DIAGONAL ARROW | 1 | 1 | - | 4.00 | - | 1 | 1 | |
| 0010 | 19 | 6+65 | CTH K, L | - | - | FOLDING STOP SIGN | - | - | - | - | - | 1 | - | |
| 0010 | 20 | 10+63 | CTH K, L | R1-1F | 30"x30" | FOLDING STOP SIGN | - | - | 5.18 | - | - | 1 | - | SIGN MOUNTED ON LIGHT POLE/TRAFFIC SIGNAL |
| 0010 | 21 | 10+66 | CTH K, L | W5-52R | 12"x36" | BRIDGE HASH MARKS | - | 1 | - | 3.00 | - | 1 | 1 | |
| 0010 | 22 | 10+21 | CTH K, L | R1-1F | 30"x30" | FOLDING STOP SIGN | - | - | 5.18 | - | - | 1 | - | SIGN MOUNTED ON LIGHT POLE/TRAFFIC SIGNAL |
| 0010 | 23 | 10+84 | CTH K, L | R1-2 | 36"x31" | YIELD | - | 1 | 3.88 | - | - | 1 | 1 | |
| 0010 | 24 | 10+83 | CTH K, L | W12-1D | 24"x24" | DOUBLE DIAGONAL ARROW | 1 | 1 | - | 4.00 | - | 1 | 1 | |
| 0010 | 25 | 12+74 | CTH K, L | R3-7R | 30"x30" | RIGHT LANE MUST TURN RIGHT | - | 1 | 6.25 | - | - | - | - | |
| 0010 | 26 | 9+44 | CTH K, R | W12-1D | 24"x24" | DOUBLE DIAGONAL ARROW | 1 | 1 | - | 4.00 | - | 1 | 1 | |
| SUBTOTAL | | | | | | | 3 | 15 | 83.00 | 24.00 | 1 | 27 | 14 | |

PERMANENT SIGNS

| CATEGORY | SIGN NO. | STA | LOCATION | SIGN CODE | SIZE | SIGN WORDING & PICTORIALS | 634.0803 POSTS TUBULAR STEEL 2X2-INCH X 3-FT EACH | 634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 27 | 9+35 | CTH K, R | R1-2 | 36"x31" | YIELD | - | 1 | 3.88 | - | - | 1 | 1 | |
| 0010 | 28 | 10+00 | CTH K, R | R4-7 | 24"x30" | KEEP RIGHT | - | - | 5.00 | - | - | 1 | - | SIGN MOUNTED ON LIGHT POLE/TRAFFIC SIGNAL |
| 0010 | 29 | 10+00 | CTH K, R | R1-1F | 30"x30" | FOLDING STOP SIGN | - | - | 5.18 | - | - | 1 | - | SIGN MOUNTED ON LIGHT POLE/TRAFFIC SIGNAL |
| 0010 | 30 | 11+01 | CTH K, R | - | - | STOP SIGN | - | - | - | - | - | 1 | - | |
| 0010 | 31 | 10+58 | CTH K, R | W12-1D | 24"x24" | DOUBLE DIAGONAL ARROW | 1 | 1 | - | 4.00 | - | 1 | 1 | |
| 0010 | 32 | 10+58 | CTH K, R | - | - | FOLDING STOP SIGN | - | - | - | - | - | 1 | - | |
| 0010 | 33 | 10+68 | CTH K, R | - | - | DO NOT ENTER | - | - | - | - | - | 1 | 1 | |
| 0010 | 34 | 11+01 | CTH K, R | R1-2 | 36"x31" | YIELD | - | 1 | 3.88 | - | - | - | - | |
| 0010 | 35 | 11+52 | CTH K, R | | | ADOPT-A-HIGHWAY | - | 1 | - | - | 1 | - | - | |
| 0010 | 36 | 11+52 | CTH K, R | M1-5A | 24"X24" | CTH ROUTE MARKER | - | 1 | 4.00 | - | | - | - | |
| 0010 | 37 | 11+52 | CTH K, R | - | - | CTH ROUTE MARKER | - | - | - | - | - | 1 | 1 | |
| 0010 | 38 | 12+05 | CTH K, R | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 39 | 11+52 | CTH K, R | - | - | ADOPT-A-HIGHWAY | - | - | - | - | - | - | 1 | |
| 0010 | 40 | 12+82 | CTH K, R | R3-7R | 30"x30" | RIGHT LANE MUST TURN RIGHT | - | 1 | 6.25 | - | | 1 | 1 | |
| 0010 | 41 | 13+04 | CTH K, L | - | - | | - | - | - | - | - | 6 | 1 | |
| 0010 | 42 | 13+55 | CTH K, L | - | - | RIGHT LANE MUST TURN RIGHT | - | - | - | - | - | 1 | 1 | |
| 0010 | 43A | 13+64 | CTH K, L | M3-3 | 24"X12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 43B | 13+64 | CTH K, L | M3-1 | 24"X12" | CARDINAL DIRECTION | - | - | 2.00 | - | - | - | - | MOUNT WITH SIGN 43A |
| 0010 | 43C | 13+64 | CTH K, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 43A |
| 0010 | 43D | 13+64 | CTH K, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 43A |
| 0010 | 43E | 13+64 | CTH K, L | M6-1 | 21"X21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 43A |
| 0010 | 43F | 13+64 | CTH K, L | M6-1 | 21"X21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 43A |
| 0010 | 44 | 14+90 | CTH K, L | - | 24"x30" | DO NOT BLOCK DRIVEWAY | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 45A | 16+16 | CTH K, L | - | - | | - | - | - | - | - | 4 | 1 | |
| 0010 | 45B | 16+16 | CTH K, L | M2-1 | 21"x15" | JCT | - | 1 | 2.20 | - | - | - | - | |
| 0010 | 45C | 16+16 | CTH K, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 45B |
| 0010 | 45D | 16+16 | CTH K, L | - | 24"x30" | ALT. TRUCK ROUTE TO HWY VV-WEST | - | - | | | - | - | - | MOUNT WITH SIGN 45B |
| 0010 | 45E | 16+16 | CTH K, L | M6-1 | 21"x21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 45B |
| 0010 | 46 | 16+74 | CTH K, L | R3-20LL | 24"x36" | BEGIN LEFT TURN LANE WITH ARROW | - | 1 | 6.00 | - | - | - | - | |
| 0010 | 47 | 17+49 | CTH K, L | W3-3 | 36"x36" | TRAFFIC SIGNALS AHEAD SYMBOL | - | 1 | - | 9.00 | - | - | - | |
| 0010 | 48 | 17+67 | CTH K, L | - | - | LEFT LANE MUST TURN LEFT | - | - | - | - | - | 1 | 1 | |
| 0010 | 49 | 15+25 | CTH K, R | R3-2 | 24"X24" | NO LEFT TURN SYMBOL | - | 1 | 4.00 | - | - | - | - | |
| 0010 | 50 | 15+22 | CTH K, R | - | - | WELCOME TO LISBON SIGN | - | - | - | - | 1 | - | - | |
| 0010 | 51 | 15+58 | CTH K, R | R1-1 | 30"x30" | STOP SIGN | - | 1 | 5.18 | - | - | 1 | 1 | |
| 0010 | 52 | 18+33 | CTH K, L | - | - | | - | - | - | - | - | 1 | 1 | |
| SUBTOTAL | | | | | | | 1 | 14 | 80.75 | 13.00 | 2 | 25 | 14 | |

PERMANENT SIGNS

| CATEGORY | SIGN NO. | STA | LOCATION | SIGN CODE | SIZE | SIGN WORDING & PICTORIALS | 634.0803 POSTS TUBULAR STEEL 2X2-INCH X 3-FT EACH | 634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 53 | 273+87 | CTH F, R | W3-5 | 36"x36" | SPEED REDUCTION AHEAD 45 MPH | - | 1 | - | 9.00 | - | 1 | 1 | |
| 0010 | 54 | 275+05 | CTH F, R | W3-3 | 36"x36" | TRAFFIC SIGNALS AHEAD SYMBOL | - | 1 | - | 9.00 | - | - | - | |
| 0010 | 55 | 275+51 | CTH F, R | - | - | | - | - | - | - | - | 2 | 1 | |
| 0010 | 56 | 275+72 | CTH F, R | R3-20LL | 34"x36" | BEGIN LEFT TURN LANE WITH ARROW | - | 1 | 6.00 | - | - | - | - | |
| 0010 | 57 | 276+13 | CTH F, R | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 58 | 276+19 | CTH F, L | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 59 | 273+87 | CTH F, R | W3-5 | 36"x36" | SPEED REDUCTION AHEAD 45 MPH | - | 1 | - | 9.00 | - | 1 | 1 | |
| 0010 | 60A | 274+67 | CTH F, R | M2-1 | 21"x15" | JCT | - | 1 | 2.20 | - | - | - | - | |
| 0010 | 60B | 274+67 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 60A |
| 0010 | 61 | 275+03 | CTH F, R | W3-3 | 36"x36" | TRAFFIC SIGNALS AHEAD SYMBOL | - | 1 | - | 9.00 | - | - | - | |
| 0010 | 62 | 275+51 | CTH F, R | R3-20LL | 24"x36" | BEGIN LEFT TURN LANE WITH ARROW | - | 1 | 6.00 | - | - | - | - | |
| 0010 | 63A | 275+50 | CTH F, R | - | 24"x30" | ALT. TRUCK ROUTE TO HWY VV-WEST | - | 1 | | | - | 1 | 1 | |
| 0010 | 63B | 275+50 | CTH F, R | M5-1L | 21"x21" | ADVANCE TURN ARROW (LEFT) | - | - | 3.06 | - | - | 1 | - | MOUNT WITH SIGN 63A |
| 0010 | 64 | 276+14 | CTH F, R | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 65 | 276+76 | CTH F, R | - | - | TRAFFIC SIGNALS AHEAD SYMBOL | - | - | - | - | - | 1 | 1 | |
| 0010 | 66A | 276+91 | CTH F, R | M3-4 | 24"x12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 66B | 276+91 | CTH F, R | M3-2 | 24"X12" | CARDINAL DIRECTION | - | - | 2.00 | - | - | - | - | MOUNT WITH SIGN 66A |
| 0010 | 66C | 276+91 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 66A |
| 0010 | 66D | 276+91 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 66A |
| 0010 | 66E | 276+91 | CTH F, R | M5-1L | 21"X21" | ADVANCE TURN ARROW (LEFT) | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 66A |
| 0010 | 66F | 276+91 | CTH F, R | M5-1R | 21"X21" | ADVANCE TURN ARROW (RIGHT) | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 66A |
| 0010 | 67 | 277+39 | CTH F, R | - | - | | - | - | - | - | - | 6 | 2 | |
| 0010 | 68 | 277+99 | CTH F, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | 1 | 4.00 | - | - | 1 | 1 | |
| 0010 | 69 | 278+01 | CTH F, R | - | - | BEGIN LEFT TURN LANE WITH ARROW | - | - | - | - | - | 1 | - | |
| 0010 | 70 | 278+17 | CTH F, R | R5-1A | 36"x24" | WRONG WAY | - | 1 | 6.00 | - | - | 1 | 1 | |
| 0010 | 71 | 281+22 | CTH F, R | - | - | | - | - | - | - | - | 3 | 1 | |
| 0010 | 72A | 281+64 | CTH F, L | M3-4 | 24"x12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 72B | 281+64 | CTH F, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 72A |
| 0010 | 72C | 281+64 | CTH F, L | M6-1 | 21"x21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 72A |
| 0010 | 73 | 276+74 | CTH F, R | - | - | TRAFFIC SIGNALS AHEAD SYMBOL | - | - | - | - | - | 1 | 1 | |
| 0010 | 74A | 276+89 | CTH F, R | M3-4 | 24"x12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 74B | 276+89 | CTH F, R | M3-2 | 24"X12" | CARDINAL DIRECTION | - | - | 2.00 | - | - | - | - | MOUNT WITH SIGN 74A |
| 0010 | 74C | 276+89 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 74A |
| 0010 | 74D | 276+89 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 74A |
| 0010 | 74E | 276+89 | CTH F, R | M5-1L | 21"X21" | ADVANCE TURN ARROW (LEFT) | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 74A |
| SUBTOTAL | | | | | | | - | 16 | 88.50 | 36.00 | - | 23 | 14 | |

PERMANENT SIGNS

| CATEGORY | SIGN NO. | STA | LOCATION | SIGN CODE | SIZE | SIGN WORDING & PICTORIALS | 634.0803 POSTS TUBULAR STEEL 2X2-INCH X 3-FT EACH | 634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT EACH | 637.2210 SIGNS TYPE II REFLECTIVE H SF | 637.2230 SIGNS TYPE II REFLECTIVE F SF | 638.2102 MOVING SIGNS TYPE II EACH | 638.2602 REMOVING SIGNS TYPE II EACH | 638.3000 REMOVING SMALL SIGN SUPPORTS EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | 74F | 276+89 | CTH F, R | M5-1R | 21"X21" | ADVANCE TURN ARROW (RIGHT) | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 74A |
| 0010 | 75 | 277+38 | CTH F, R | - | - | | - | - | - | - | - | 6 | 2 | |
| 0010 | 76 | 281+56 | CTH F, R | - | - | | - | - | - | - | - | 3 | 1 | |
| 0010 | 77A | 281+56 | CTH F, R | M3-2 | 24"X12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 77B | 281+56 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 77A |
| 0010 | 77C | 281+56 | CTH F, R | M6-1 | 21"x21" | DIRECTIONAL ARROW | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 77A |
| 0010 | 78 | 285+71 | CTH F, R | - | - | | - | - | - | - | - | 3 | 1 | |
| 0010 | 79A | 286+70 | CTH F, L | M3-4 | 24"x12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 79B | 286+70 | CTH F, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 79A |
| 0010 | 79C | 286+70 | CTH F, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 79A |
| 0010 | 80 | 286+86 | CTH F, L | - | - | | - | - | - | - | - | 3 | 1 | |
| 0010 | 81 | 287+88 | CTH F, R | - | - | WRONG WAY | - | - | - | - | - | 1 | 1 | |
| 0010 | 82 | 287+88 | CTH F, R | - | - | BEGIN LEFT TURN LANE WITH ARROW | - | - | - | - | - | 1 | - | |
| 0010 | 83 | 289+05 | CTH F, R | R5-1A | 36"x24" | WRONG WAY | - | - | 6.00 | - | - | - | - | MOUNT ON BACKSIDE OF SIGN 84 |
| 0010 | 84 | 289+05 | CTH F, R | R3-20LL | 24"x36" | BEGIN LEFT TURN LANE WITH ARROW | - | 1 | 6.00 | - | - | - | - | |
| 0010 | 85A | 289+10 | CTH F, L | M3-2 | 24"X12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 85B | 289+10 | CTH F, L | M3-4 | 24"x12" | CARDINAL DIRECTION | - | - | 2.00 | - | - | - | - | MOUNT WITH SIGN 85A |
| 0010 | 85C | 289+10 | CTH F, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 85A |
| 0010 | 85D | 289+10 | CTH F, L | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 85A |
| 0010 | 85E | 289+10 | CTH F, L | M5-1L | 21"X21" | ADVANCE TURN ARROW (LEFT) | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 85A |
| 0010 | 85F | 289+10 | CTH F, L | M5-1R | 21"X21" | ADVANCE TURN ARROW (RIGHT) | - | - | 3.06 | - | - | - | - | MOUNT WITH SIGN 85A |
| 0010 | 86 | 289+10 | CTH F, L | - | - | | - | - | - | - | - | 6 | 2 | |
| 0010 | 87 | 290+00 | CTH F, L | W3-3 | 36"x36" | TRAFFIC SIGNALS AHEAD SYMBOL | - | 1 | - | 9.00 | - | 1 | 1 | |
| 0010 | 88A | 286+70 | CTH F, R | M3-2 | 24"X12" | CARDINAL DIRECTION | - | 1 | 2.00 | - | - | - | - | |
| 0010 | 88B | 286+70 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 88A |
| 0010 | 88C | 286+70 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 88A |
| 0010 | 89A | 286+94 | CTH F, R | M6-1 | 21"x21" | DIRECTIONAL ARROW | - | 1 | 3.06 | - | - | 1 | 1 | |
| 0010 | 89B | 286+94 | CTH F, R | M1-5A | 24"x24" | CTH ROUTE MARKER | - | - | 4.00 | - | - | - | - | MOUNT WITH SIGN 89A |
| 0010 | 90 | 289+02 | CTH F, R | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 91 | 289+02 | CTH F, R | R2-1 | 24"x30" | SPEED LIMIT | - | 1 | 5.00 | - | - | 1 | 1 | |
| 0010 | 92 | 290+00 | CTH F, R | W3-3 | 36"x36" | TRAFFIC SIGNALS AHEAD SYMBOL | - | 1 | - | 9.00 | - | 1 | 1 | |
| | | | | | | | 4 | 55 | 331.55 | 91.00 | 3 | 103 | 55 | |

3

## TEMPORARY TRAFFIC SIGNALS

| CATEGORY | LOCATION | 204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. TRAFFIC SIGNALS - CTH F & CTH K) EACH | 661.0201.01 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) (01. CTH F & CTH K) EACH | REMARKS |
|---|---|---|---|---|
| 0010 | CTH F & CTH K | 1 | 1 | |
| | TOTAL 0010 | 1 | 1 | |

## TRAFFIC SIGNALS - CONDUIT

| CATEGORY | 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 | REMARKS |
|---|---|---|---|---|---|---|
| 0010 | CB1 | PB1 | - | 21 | - | |
| 0010 | PB1 | PB2 | - | 33 | - | |
| 0010 | PB1 | PB3 | - | - | 308 | |
| 0010 | PB3 | PB4 | - | 31 | - | |
| 0010 | PB3 | PB5 | - | - | 270 | |
| 0010 | PB5 | PB6 | - | 31 | - | |
| 0010 | PB5 | PB7 | - | - | 300 | |
| 0010 | PB7 | PB8 | - | 35 | - | |
| 0010 | PB7 | PB9 | - | - | 214 | |
| 0010 | PB9 | CB1 | - | 15 | - | |
| 0010 | PB1 | LP1 | 40 | - | - | |
| 0010 | PB2 | SB1 | 5 | - | - | |
| 0010 | PB3 | LP2 | 38 | - | - | |
| 0010 | PB4 | SB2 | 6 | - | - | |
| 0010 | PB5 | LP3 | 35 | - | - | |
| 0010 | PB6 | SB3 | 6 | - | - | |
| 0010 | PB7 | LP4 | 35 | - | - | |
| 0010 | PB8 | SB4 | 5 | - | - | |
| | | TOTAL 0010 | 170 | 166 | 1,092 | |

## TRAFFIC SIGNALS - BASES

| CATEGORY | BASE NO. | STATION | OFFSET | 654.0105 CONCRETE BASES TYPE 5 EACH | 654.0113 CONCRETE BASES TYPE 13 EACH | 654.0120 CONCRETE BASES TYPE 10-SPECIAL EACH | 654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 0010 | CB1 | 283+23 F | 101.8' RT | - | - | - | 1 | |
| 0010 | SB1 | 283+35.7 F | 59.3' RT | - | - | 1 | - | |
| 0010 | SB2 | 283+35.9 F | 39.4' LT | - | 1 | - | - | |
| 0010 | SB3 | 284+08.0 F | 39.1' LT | - | - | 1 | - | |
| 0010 | SB4 | 284+06.7 F | 59.5' RT | - | 1 | - | - | |
| 0010 | LP1 | 282+95.5 F | 76.9' RT | 1 | - | - | - | |
| 0010 | LP2 | 283+19.4 F | 83.9' LT | 1 | - | - | - | |
| 0010 | LP3 | 284+59.2 F | 54.2' LT | 1 | - | - | - | |
| 0010 | LP4 | 284+29.1 F | 107.4' RT | 1 | - | - | - | |
| | | | TOTAL 0010 | 4 | 2 | 2 | 1 | |

## TRAFFIC SIGNALS - HARDWARE

| CATEGORY | LOCATION | 658.5070.01 SIGNAL MOUNTING HARDWARE (LOCATION) (01. CTH F & CTH K) EACH | 659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH | REMARKS |
|---|---|---|---|---|
| 0010 | CTH F & CTH K | 1 | - | |
| 0010 | TRAFFIC SIGNAL, 3-SECTION | - | 6 | |
| 0010 | TRAFFIC SIGNAL, 4-SECTION | - | 6 | |
| 0010 | TRAFFIC SIGNAL, 5-SECTION | - | 2 | |
| 0010 | HIGH PRESSURE SODIUM LAMP | - | 6 | |
| | TOTAL 0010 | 1 | 20 | |

## TRAFFIC SIGNALS - HEADS

| CATEGORY | SIGNAL HEAD NO. | SIGNAL BASE NO. | 658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH | 658.0174 TRAFFIC SIGNAL FACE 4S 12-INCH EACH | SPV.0060.02 SPECIAL (02. RETROREFLECTIVE BACKPLATES 3S) EACH | SPV.0060.03 SPECIAL (03. RETROREFLECTIVE BACKPLATES 4S) EACH | REMARKS |
|---|---|---|---|---|---|---|---|
| 0010 | 1 | SB4 | - | 1 | - | 1 | |
| 0010 | 2 | SB4 | 1 | - | 1 | - | |
| 0010 | 3 | SB4 | 1 | - | 1 | - | |
| 0010 | 4 | SB1 | - | 1 | - | 1 | |
| 0010 | 5 | SB1 | 1 | - | 1 | - | |
| 0010 | 6 | SB2 | - | 1 | - | 1 | |
| 0010 | 7 | SB2 | 1 | - | 1 | - | |
| 0010 | 8 | SB2 | 1 | - | 1 | - | |
| 0010 | 9 | SB3 | - | 1 | - | 1 | |
| 0010 | 10 | SB3 | 1 | - | 1 | - | |
| 0010 | 11 | SB4 | 1 | - | 1 | - | |
| 0010 | 12 | SB4 | - | 1 | - | 1 | |
| 0010 | 13 | SB1 | 1 | - | 1 | - | |
| 0010 | 14 | SB1 | - | 1 | - | 1 | |
| 0010 | 15 | SB2 | 1 | - | 1 | - | |
| 0010 | 16 | SB2 | - | 1 | - | 1 | |
| 0010 | 17 | SB3 | 1 | - | 1 | - | |
| 0010 | 18 | SB3 | - | 1 | - | 1 | |
| 0010 | 19 | SB1 | 1 | - | 1 | - | |
| 0010 | 20 | SB3 | 1 | - | 1 | - | |
| TOTAL 0010 | | | 12 | 8 | 12 | 8 | |

## TRAFFIC SIGNALS - PULL BOXES

| CATEGORY | LOCATION | STATION | OFFSET | 653.0140 PULL BOXES STEEL 24X42-INCH EACH | 653.0905 REMOVING PULL BOXES EACH | REMARKS |
|---|---|---|---|---|---|---|
| 0010 | PB1 | 283+15.2 F | 93.6' RT | 1 | - | |
| 0010 | PB2 | 283+29.6 F | 59.5' RT | 1 | - | |
| 0010 | PB3 | 283+05.2 F | 64.4' LT | 1 | - | |
| 0010 | PB4 | 283+36.9 F | 50.1' LT | 1 | - | |
| 0010 | PB5 | 284+44.8 F | 61.8' LT | 1 | - | |
| 0010 | PB6 | 284+18.2 F | 39.5' LT | 1 | - | |
| 0010 | PB7 | 284+37.8 F | 93.0' RT | 1 | - | |
| 0010 | PB8 | 284+06.6 F | 69.0' RT | 1 | - | |
| 0010 | PB9 | 283+28.0 F | 109.7' RT | 1 | - | |
| 0010 | CTH F & CTH K | | | - | 20 | |
| TOTAL 0010 | | | | 9 | 20 | |

## TRAFFIC SIGNALS - POLES & ARMS

| CATEGORY | SIGNAL BASE NO. | 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH | 657.0322 POLES TYPE 5-ALUMINUM EACH | 657.0352 POLES TYPE 10-SPECIAL EACH | 657.0360 POLES TYPE 13 EACH | 657.0541 MONOTUBE ARMS 40-FT-SPECIAL EACH | 657.0546 MONOTUBE ARMS 45-FT-SPECIAL EACH | 657.0555 MONOTUBE ARMS 55-FT EACH | 657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH | 657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT EACH | 659.1125 LUMINAIRES UTILITY LED C EACH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0010 | SB1 | - | - | 1 | - | 1 | - | - | 1 | - | 1 | |
| 0010 | SB2 | - | - | - | 1 | - | - | 1 | 1 | - | 1 | |
| 0010 | SB3 | - | - | 1 | - | - | 1 | - | 1 | - | 1 | |
| 0010 | SB4 | - | - | - | 1 | - | - | 1 | 1 | - | 1 | |
| 0010 | LP1 | 1 | 1 | - | - | - | - | - | - | 1 | 1 | |
| 0010 | LP2 | 1 | 1 | - | - | - | - | - | - | 1 | 1 | |
| 0010 | LP3 | 1 | 1 | - | - | - | - | - | - | 1 | 1 | |
| 0010 | LP4 | 1 | 1 | - | - | - | - | - | - | 1 | 1 | |
| TOTAL 0010 | | 4 | 4 | 2 | 2 | 1 | 1 | 2 | 4 | 4 | 8 | |

3

## TRAFFIC SIGNALS - AG CABLE

| * ADDITIONAL QUANTITIES SHOWN ELSEWHERE | | | 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG | * 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG | |
|---|---|---|---|---|---|
| CATEGORY | FROM | TO | LF | LF | REMARKS |
| 0010 | SB1 | HEAD 4 | - | 55 | |
| 0010 | | HEAD 5 | 40 | - | |
| 0010 | | HEAD 13 | 19 | - | |
| 0010 | | HEAD 14 | 19 | - | |
| 0010 | | HEAD 15 | 19 | - | |
| 0010 | SB2 | HEAD 6 | - | 75 | |
| 0010 | | HEAD 7 | 48 | - | |
| 0010 | | HEAD 8 | 35 | - | |
| 0010 | | HEAD 15 | 19 | - | |
| 0010 | | HEAD 16 | - | 19 | |
| 0010 | SB3 | HEAD 9 | - | 65 | |
| 0010 | | HEAD 10 | 45 | - | |
| 0010 | | HEAD 17 | 19 | - | |
| 0010 | | HEAD 18 | - | 19 | |
| 0010 | | HEAD 20 | 19 | - | |
| 0010 | SB4 | HEAD 1 | - | 75 | |
| 0010 | | HEAD 2 | 50 | - | |
| 0010 | | HEAD 3 | 35 | - | |
| 0010 | | HEAD 11 | 19 | - | |
| 0010 | | HEAD 12 | - | 19 | |
| | | TOTAL 0010 | 386 | 327 | |

## TRAFFIC SIGNALS - UG CABLE

| * ADDITIONAL QUANTITIES SHOWN ELSEWHERE | | | * 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG | 655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG | |
|---|---|---|---|---|---|
| CATEGORY | FROM | TO | LF | LF | REMARKS |
| 0010 | CB1 | SB1 | - | 85 | |
| 0010 | CB1 | SB2 | - | 253 | |
| 0010 | CB1 | SB3 | - | 369 | |
| 0010 | CB1 | SB4 | - | 207 | |
| 0010 | CB1 | LP1 | 72 | - | |
| 0010 | CB1 | LP2 | 239 | - | |
| 0010 | CB1 | LP3 | 352 | - | |
| 0010 | CB1 | LP4 | 187 | - | |
| | | TOTAL 0010 | 850 | 914 | |

## TRAFFIC SIGNALS - WIRE

| | | | 655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG | |
|---|---|---|---|---|
| CATEGORY | FROM | TO | LF | REMARKS |
| 0010 | CB1 | SB1 | 86 | |
| 0010 | SB1 | SB2 | 301 | |
| 0010 | SB2 | SB3 | 266 | |
| 0010 | SB3 | SB4 | 300 | |
| 0010 | SB4 | CB1 | 209 | |
| | | TOTAL 0010 | 1,162 | |

## TRAFFIC SIGNALS - DETECTION

| | | SPV.0060.04 SPECIAL (04. FURNISH AND INSTALL VIDEO DETECTION SYSTEM (CTH F & CTH K)) | |
|---|---|---|---|
| CATEGORY | LOCATION | EACH | REMARKS |
| 0010 | CTH F & CTH K | 1 | |
| | TOTAL 0010 | 1 | |

TRAFFIC SIGNALS - LIGHTING WIRE

| CATEGORY | FROM | TO | 655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF | 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF | REMARKS |
|---|---|---|---|---|---|
| 0010 | CB1 | LP1 | 72 | - | |
| 0010 | LP1 | LUM (1) | - | 117 | |
| 0010 | LP1 | SB1 | 119 | - | |
| 0010 | SB1 | LUM (1) | - | 144 | |
| 0010 | SB1 | LP2 | 285 | - | |
| 0010 | LP2 | LUM (1) | - | 117 | |
| 0010 | LP2 | SB2 | 115 | - | |
| 0010 | SB2 | LUM (1) | - | 144 | |
| 0010 | CB1 | LP4 | 187 | - | |
| 0010 | LP4 | LUM (1) | - | 117 | |
| 0010 | LP4 | SB4 | 116 | - | |
| 0010 | SB4 | LUM (1) | - | 144 | |
| 0010 | SB4 | LP3 | 280 | - | |
| 0010 | LP3 | LUM (1) | - | 117 | |
| 0010 | LP3 | SB3 | 107 | - | |
| 0010 | SB3 | LUM (1) | - | 144 | |
| | | TOTAL 0010 | 1,281 | 1,044 | |

TRAFFIC SIGNALS - CABINET

| CATEGORY | STATION | OFFSET | 656.0201.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) (01. CTH F & CTH K) EACH | SPV.0060.01 SPECIAL (01. TRAFFIC SIGNAL CABINET AND CONTROLLER (CTH F & CTH K)) EACH | REMARKS |
|---|---|---|---|---|---|
| 0010 | 283+23 F | 101.8' RT | 1 | 1 | |
| | | TOTAL 0010 | 1 | 1 | |

3

TRAFFIC SIGNALS - EVP

| CATEGORY | FROM | TO | 655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF | SPV.0060.05 SPECIAL (05. FURNISH AND INSTALL EMERGENCY VEHICLE PREEMPTION (EVP)) EACH | REMARKS |
|---|---|---|---|---|---|
| 0010 | CB1 | SB4 (HEAD A) | 247 | - | |
| 0010 | CB1 | SB2 (HEAD B) | 293 | - | |
| 0010 | CB1 | SB1 (HEAD C) | 120 | - | |
| 0010 | CB1 | SB3 (HEAD D) | 409 | - | |
| 0010 | | PROJECT | - | 1 | |
| | | TOTAL 0010 | 1,069 | 1 | |

## CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
EXISTING CENTERLINE
CORPORATE LIMITS
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
NON-PERMITTED SIGN
PERMITTED SIGN
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25

R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND SURVEY MONUMENT (SEE FOUND MONUMENT TABLE) IP

BUILDING
TO BE REMOVED
BRIDGE
CULVERT
PARALLEL OFFSETS

## CONVENTIONAL UTILITY SYMBOLS

| | | | | | |
|---|---|---|---|---|---|
| FIRE HYDRANT | | WATER | W | ELECTRIC POLE | |
| WATER VALVE | WV | GAS | G | ELECTRIC POLE W/ LIGHT | |
| WATER VALVE SERVICE | WVS | TELEPHONE | T | GUY WIRE ANCHOR | GUY |
| WELL | WELL | OVERHEAD TRANSMISSION LINES | OH | GUY POLE | GUY POLE |
| SANITARY MANHOLE | SAN | ELECTRIC | E | LIGHT POLE | |
| SEPTIC COVER | SEPTIC | CABLE TELEVISION | TV | TRAFFIC SIGNAL POLE | |
| STORM MANHOLE | SS | FIBER OPTIC | FO | ELECTRIC MANHOLE | EL |
| MANHOLE (GENERIC) | MH | SANITARY SEWER | SAN | ELECTRIC METER | |
| GAS VALVE | GV | STORM SEWER | SS | ELECTRIC PULLBOX | |
| GAS VAULT | | COMBINED SEWER | SSS | ELECTRIC VAULT | |
| GAS VENT | GVT | | | TELEPHONE MANHOLE | TEL |
| CONTROL BOX | | | | TELEPHONE PEDESTAL | |
| COMMUNICATIONS VAULT | | | | CABLE TV MANHOLE | TV |
| ELECTRIC TOWER | | | | CABLE TV PEDESTAL | |

## NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WAUKESHA COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY ¾" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.

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

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

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

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

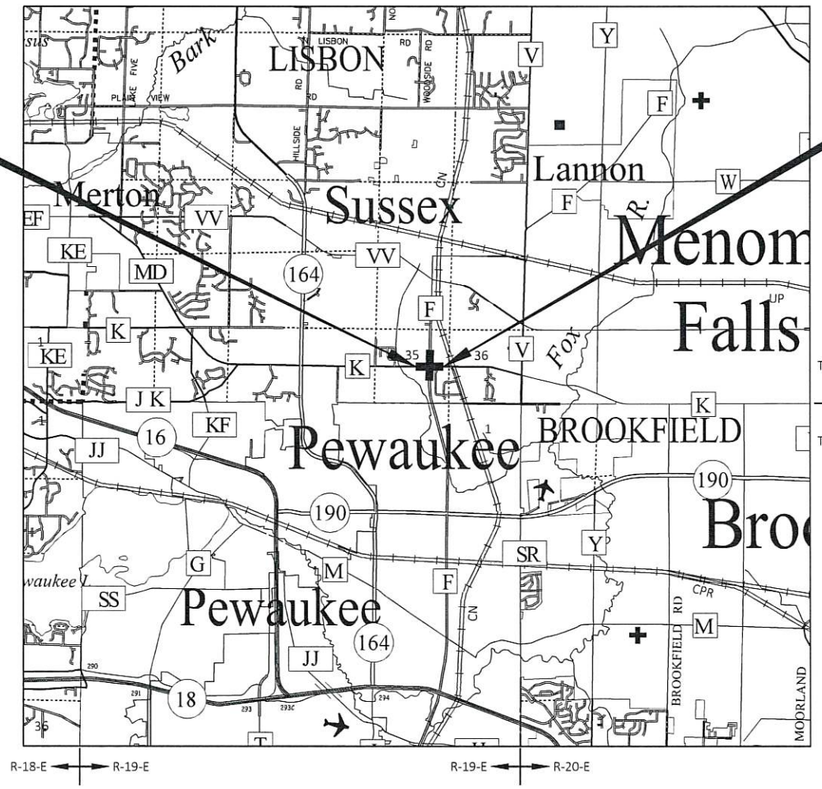
AN EASEMENT FOR HIGHWAY PURPOSES (HE), AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT WAUKESHA COUNTY HIGHWAY DEPARTMENT.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE DETAIL PAGES.




BEGIN RELOCATION ORDER
STA 5'K'+00.00
Y = 197,740.949
X = 688,431.220
LOCATED 7.32' SOUTH AND 776.34' EAST OF THE CENTER QUARTER CORNER OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 19 EAST

END RELOCATION ORDER
STA 15'K'+00.00
Y = 197,739.999
X = 689,431.214
LOCATED 2.24' NORTH AND 895.07' WEST OF THE EAST QUARTER CORNER OF SECTION 35, TOWNSHIP 8 NORTH, RANGE 19 EAST

TOTAL NET LENGTH OF CENTERLINE = 0.189 MILES

LAYOUT
SCALE 0 2 MI

## CONVENTIONAL ABBREVIATIONS

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

## CURVE DATA ABBREVIATIONS

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

| R/W PROJECT NUMBER | SHEET NUMBER | TOTAL SHEETS |
|---|---|---|
| 2450-06-01 | | |
| FEDERAL PROJECT NUMBER | 4.00 | 2 |

PLAT OF RIGHT OF WAY REQUIRED FOR

# V LISBON, REDFORD BLVD INTERSECTION WITH LISBON RD

| CTH F | WAUKESHA COUNTY |
|---|---|

CONSTRUCTION PROJECT NUMBER
2450-06-71



THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

APPROVED FOR
WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS
10-16-26
DATE (SIGNATURE)

jt ENGINEERING
REAL.TRUSTED.PROVEN.

THE SURVEY IS PREPARED AT THE REQUEST OF WAUKESHA COUNTY. THE TOPOGRAPHY AND UTILITY SURVEY WAS PERFORMED IN MARCH 2025. THIS THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
James R. Cappeart
S-3044
Green Bay
Wis.
LAND SURVEYOR

2/24/2026
JAMES CAPPEART DATE
REGISTRATION NUMBER S-3044

REVISION DATE
9/3/2026

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WAUKESHA COUNTY, NAD83(2011) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH F/WAUKESHA AVE ESTABLISHED FROM PREVIOUS PROJECTS 0805(2) AND S0483(1).

EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH K/LISBON RD ESTABLISHED FROM PREVIOUS PROJECT s0805(2), S0483(1), DOC 371016, DOC 2604306, DOC 2604307, DOC 2604308, AND CSM 9066.

EXISTING HIGHWAY RIGHT-OF-WAY FOR QUARRY CORNERS PKWY ESTABLISHED FROM PREVIOUS PROJECTS DOC 2604306, DOC 2604307, DOC 2604308, AND CSM 9066.

## SCHEDULE OF LANDS & INTERESTS REQUIRED

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

| PARCEL NUMBER | OWNER (S) | INTEREST(S) REQUIRED | R/W ACRES(S) REQUIRED NEW | EXISTING | TOTAL | TLE (AC) |
|---|---|---|---|---|---|---|
| 1 | HALQUIST STONE COMPANY INC | FEE | 0.092 | 0.471 | 0.563 | --- |
| 2 | HAMDAN HOLDINGS II LLC<br>VILLAGE OF SUSSEX | FEE | 0.020 | 0.698 | 0.718 | --- |
| 3 | NAJWA HAMDAN | TLE | --- | --- | --- | 0.062 |

THE PURPOSE FOR ALL TLE AREAS IS FOR GRADING, UNLESS OTHERWISE NOTED.

## UTILITY INTERESTS REQUIRED

| UTILITY NUMBER | UTILITY OWNER(S) | INTERESTS REQUIRED |
|---|---|---|
| 201 | WE ENERGIES - ELECTRIC | RELEASE OF RIGHTS |

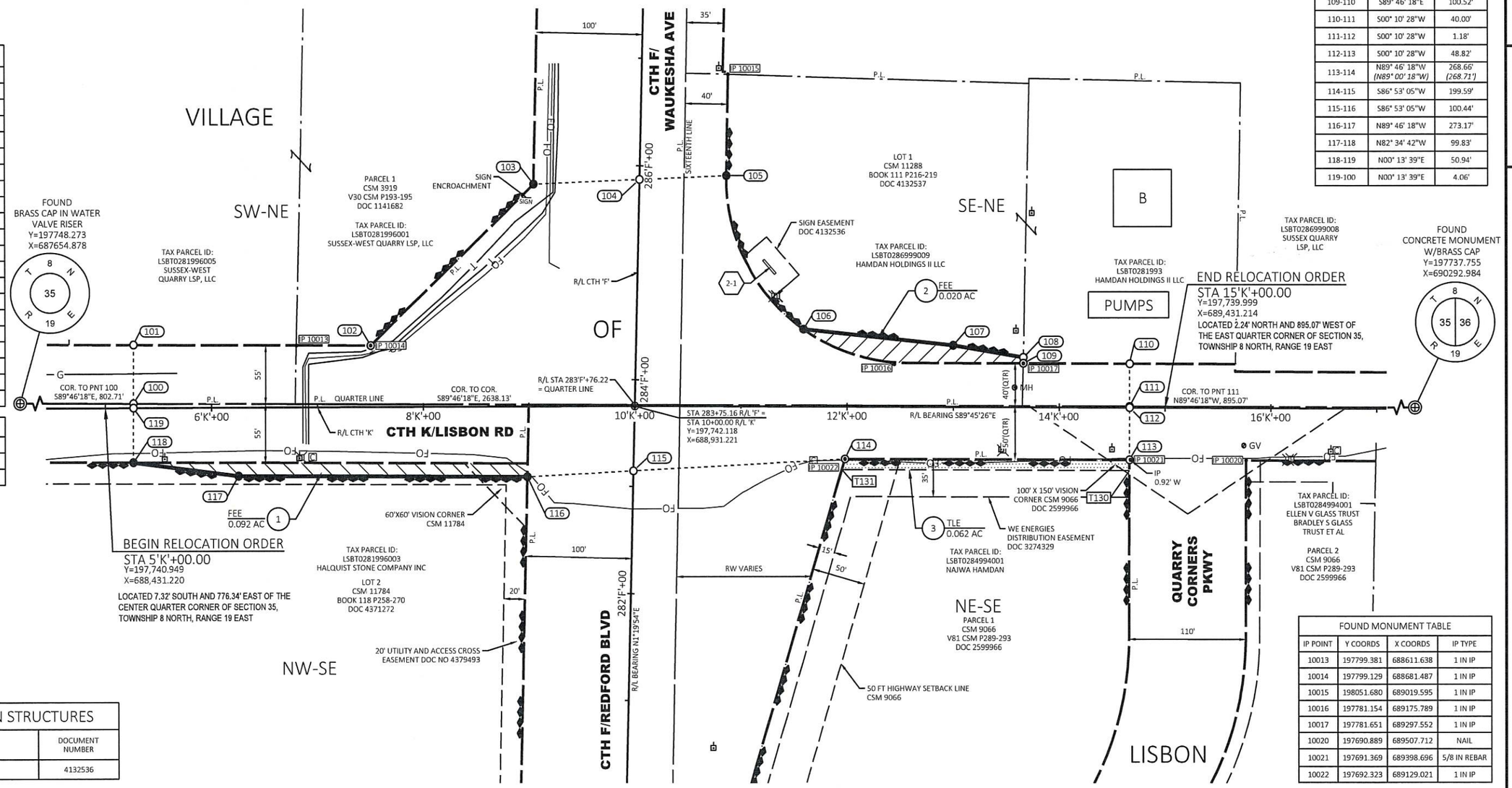
201 WE ENERGIES - ELECTRIC
UTILITY EASEMENT- PARCEL 3
DOC 3274329

| CURVE TABLE | | | | |
|---|---|---|---|---|
| COURSE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH |
| 105-106 | 167.36' | 172.05' | S26° 44' 59"E | 160.84' |

| COURSE TABLE | | |
|---|---|---|
| COURSE | BEARING | DISTANCE |
| 100-101 | N00° 13' 39"E | 55.00' |
| 101-102 | S89° 46' 18"E | 223.74' |
| 102-103 | N45° 42' 07"E<br>*(N44° 30' 01"E)* | 215.81'<br>*(215.87')* |
| 103-104 | N87° 35' 13"E | 100.24' |
| 104-105 | N87° 35' 13"E | 81.72' |
| 105-106 | SEE CURVE TABLE | |
| 106-107 | S83° 48' 49"E | 141.85' |
| 107-108 | S80° 21' 49"E | 67.39' |
| 108-109 | S01° 13' 16"W | 5.64' |
| 109-110 | S89° 46' 18"E | 100.52' |
| 110-111 | S00° 10' 28"W | 40.00' |
| 111-112 | S00° 10' 28"W | 1.18' |
| 112-113 | S00° 10' 28"W | 48.82' |
| 113-114 | N89° 46' 18"W<br>*(N89° 00' 18"W)* | 268.66'<br>*(268.71')* |
| 114-115 | S86° 53' 05"W | 199.59' |
| 115-116 | S86° 53' 05"W | 100.44' |
| 116-117 | N89° 46' 18"W | 273.17' |
| 117-118 | N82° 34' 42"W | 99.83' |
| 118-119 | N00° 13' 39"E | 50.94' |
| 119-100 | N00° 13' 39"E | 4.06' |

| R/W STATION & OFFSET TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| 100 | 5'K'+26.37 | 4.06 LT |
| 101 | 5'K'+26.72 | 59.06 LT |
| 102 | 7'K'+50.46 | 57.65 LT |
| 103 | 285'F'+80.67 | 100.03 LT |
| 104 | 285'F'+87.21 | 0.00 RT |
| 105 | 285'F'+92.55 | 81.55 RT |
| 106 | 11'K'+58.67 | 72.49 LT |
| 107 | 12'K'+99.76 | 57.80 LT |
| 108 | 13'K'+66.24 | 46.80 LT |
| 109 | 13'K'+66.14 | 41.16 LT |
| 110 | 14'K'+66.66 | 41.18 LT |
| 111 | 14'K'+66.71 | 1.18 LT |
| 112 | 14'K'+66.71 | 0.00 RT |
| 113 | 14'K'+66.77 | 48.82 RT |
| 114 | 11'K'+98.10 | 48.88 RT |
| 115 | 9'K'+98.45 | 60.57 RT |
| 116 | 8'K'+98.15 | 65.79 RT |
| 117 | 6'K'+24.99 | 64.06 RT |
| 118 | 5'K'+26.03 | 50.94 RT |
| 119 | 5'K'+26.35 | 0.00 RT |

| TLE STATION & OFFSET TABLE | | |
|---|---|---|
| POINT | STATION | OFFSET |
| T130 | 14'K'+66.77 | 58.82 RT |
| T131 | 11'K'+95.22 | 58.88 RT |



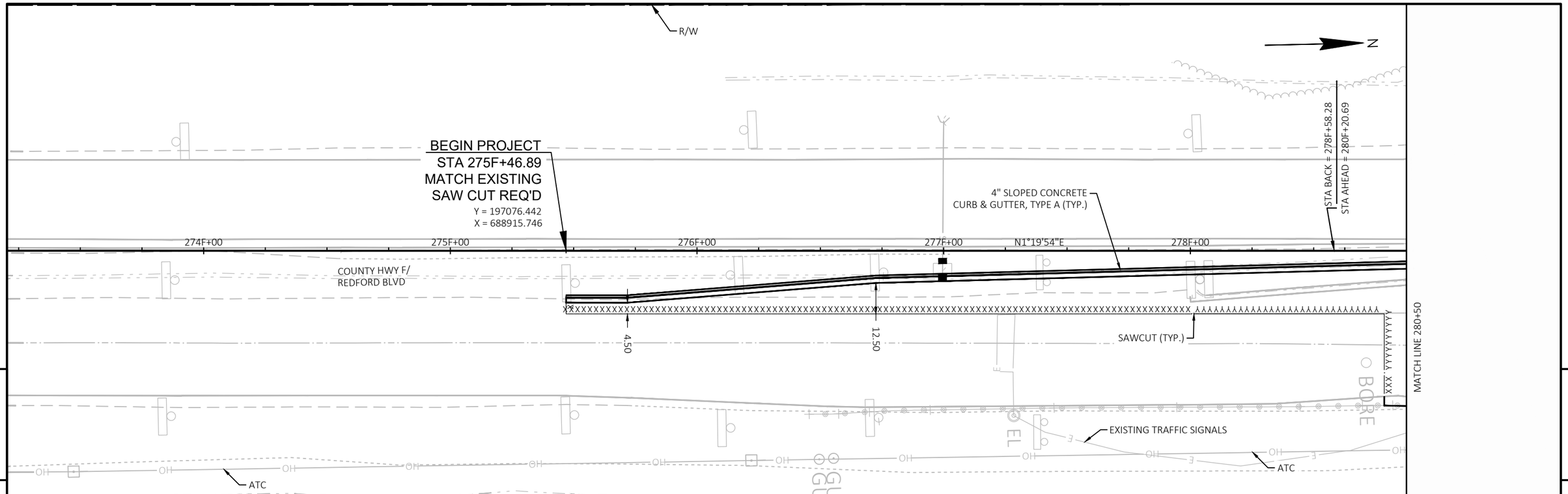

## SCHEDULE OF SIGN STRUCTURES

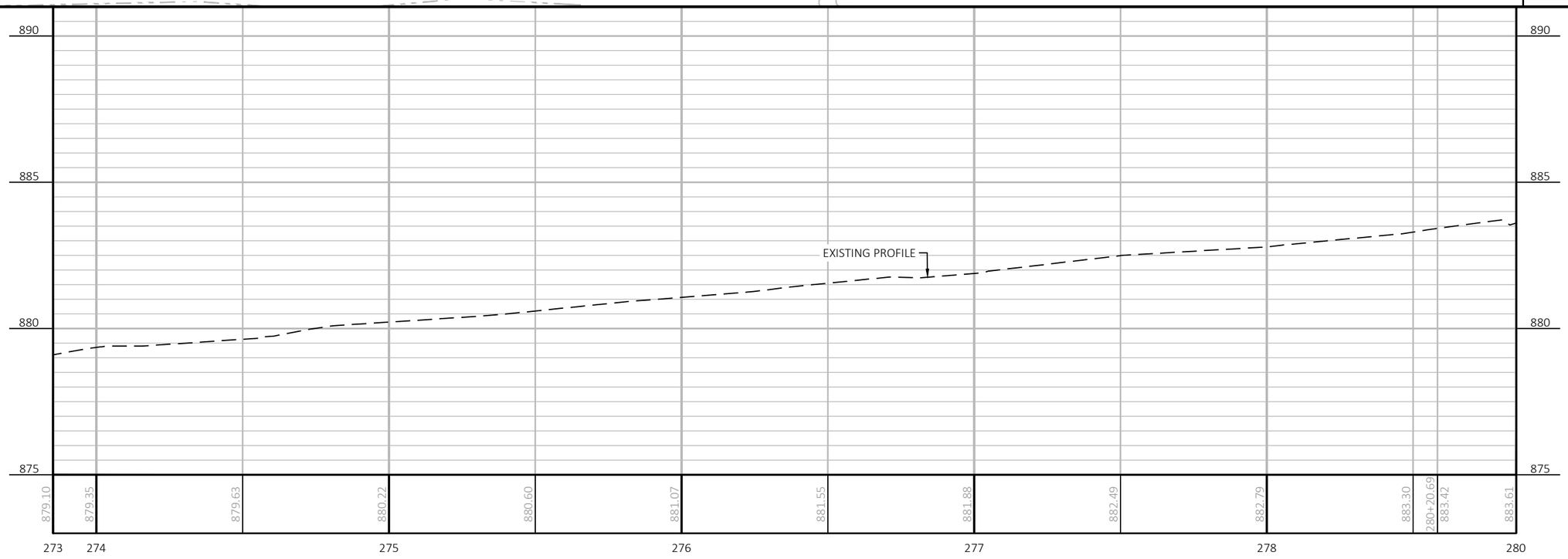
| SIGN NUMBER | SIGN OWNER | DOCUMENT NUMBER |
|---|---|---|
| 2-1 | VILLAGE OF SUSSEX<br>HAMDAN HOLDINGS II LLC | 4132536 |

| FOUND MONUMENT TABLE | | | |
|---|---|---|---|
| IP POINT | Y COORDS | X COORDS | IP TYPE |
| 10013 | 197799.381 | 688611.638 | 1 IN IP |
| 10014 | 197799.129 | 688681.487 | 1 IN IP |
| 10015 | 198051.680 | 689019.595 | 1 IN IP |
| 10016 | 197781.154 | 689175.789 | 1 IN IP |
| 10017 | 197781.651 | 689297.552 | 1 IN IP |
| 10020 | 197690.889 | 689507.712 | NAIL |
| 10021 | 197691.369 | 689398.696 | 5/8 IN REBAR |
| 10022 | 197692.323 | 689129.021 | 1 IN IP |

| | | | | | |
|---|---|---|---|---|---|
| REVISION DATE 9/3/2026 | DATE 2/24/2026 | SCALE, FEET 0 50 100 | HWY: CTH F | COUNTY R/W PROJECT NUMBER 2450-06-01 | PLAT SHEET 4.01 |
| | GRID FACTOR N/A | | COUNTY: WAUKESHA | CONSTRUCTION PROJECT NUMBER 2450-06-71 | PS&E SHEET ____ E |

FILE NAME : 040101-RP-4.01.DWG
LAYOUT NAME - 4.01
PLOT DATE : 9/3/2026 5:09 AM
PLOT BY: RYAN MALUEG




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH F | SHEET 94 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - 18

PLOT DATE : 6/9/2026 1:48 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| 500 | 283F+43.79 LT | 887.82 | CHISELED X IN CONCRETE BASE |
| 501 | 284F+05.17 LT | 887.60 | CHISELED X IN CONCRETE BASE |

MATCH LINE 280+50

R/W

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

SI

CN 30"

30" CONCRETE CURB & GUTTER, TYPE D

EVERSTREAM

4" SLOPED CONCRETE CURB & GUTTER, TYPE A

281F+00

282F+00

283F+00

N1°19'54"E

COUNTY HWY F/ REDFORD BLVD

14.00

1.00

30" CONCRETE CURB & GUTTER, TYPE D

SAWCUT (TYP.)

ATC

SI

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

COUNTY HWY K/ LISBON RD

N89°51'58"E

10K+00

PI

STA 10K+00.00 = STA 283F+75.16

S89°45'26"E

11K+00

SPECTRUM

N

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

SI

1.00

BM 501

30" CONCRETE CURB & GUTTER, TYPE D

14.00

284F+00

N1°19'54"E

285F+00

4" SLOPED CONCRETE CURB & GUTTER, TYPE A

COUNTY HWY F/ WAUKESHA AVE

8.00

30" CONCRETE CURB & GUTTER, TYPE D

ATC

WETLAND

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

3.00

R/W

SI

MATCH LINE 285+50

EXISTING PROFILE

EXISTING PROFILE

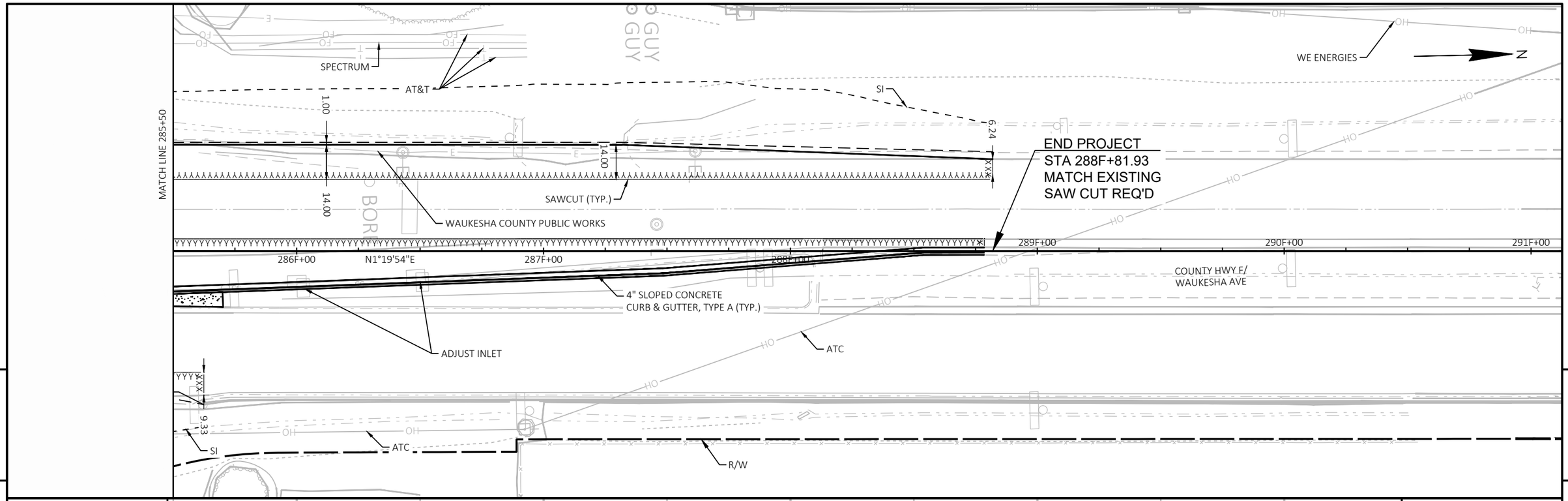
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 895 | | | | | | | | | | 895 |
| 890 | | | | | | | | | | 890 |
| 885 | | | | | | | | | | 885 |
| 880 | | | | | | | | | | 880 |
| | 883.61 883.57 | 884.72 | 884.96 | 885.42 | 886.05 | 886.67 | | 886.74 | 886.55 | 886.38 |
| 280 | | 281 | | 282 | | 283 | | 284 | 285 | 285 |

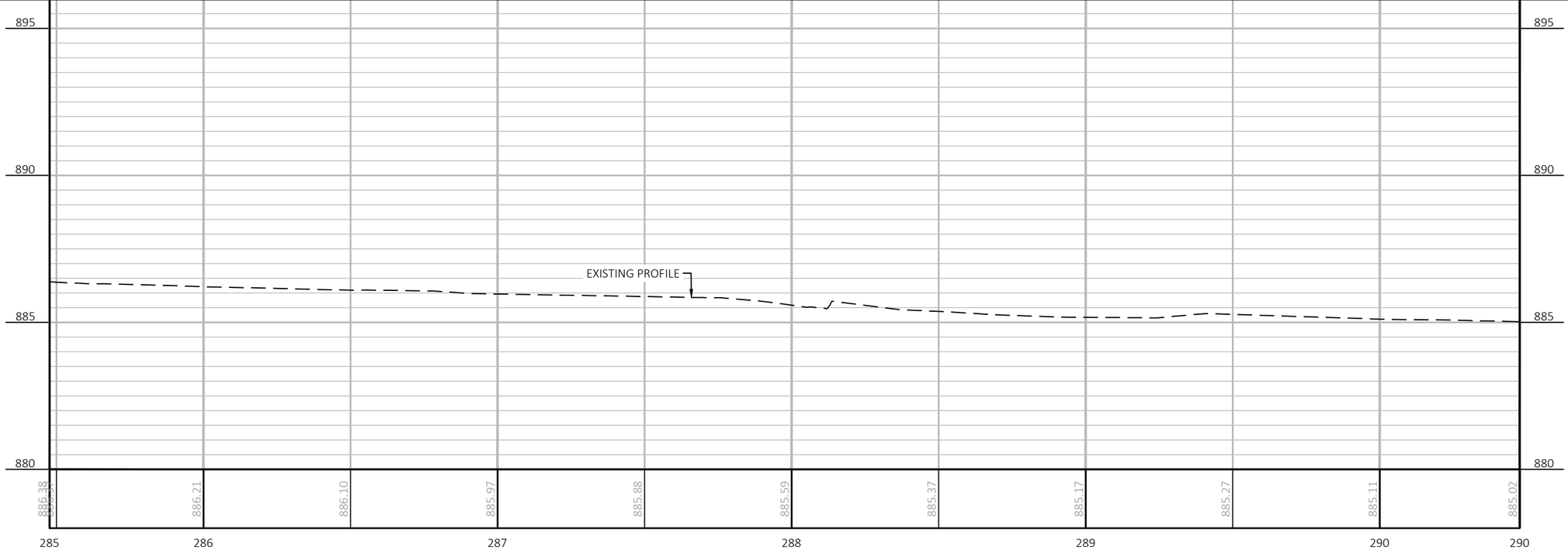
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH F | SHEET 95 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - 19

PLOT DATE : 6/9/2026 1:48 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

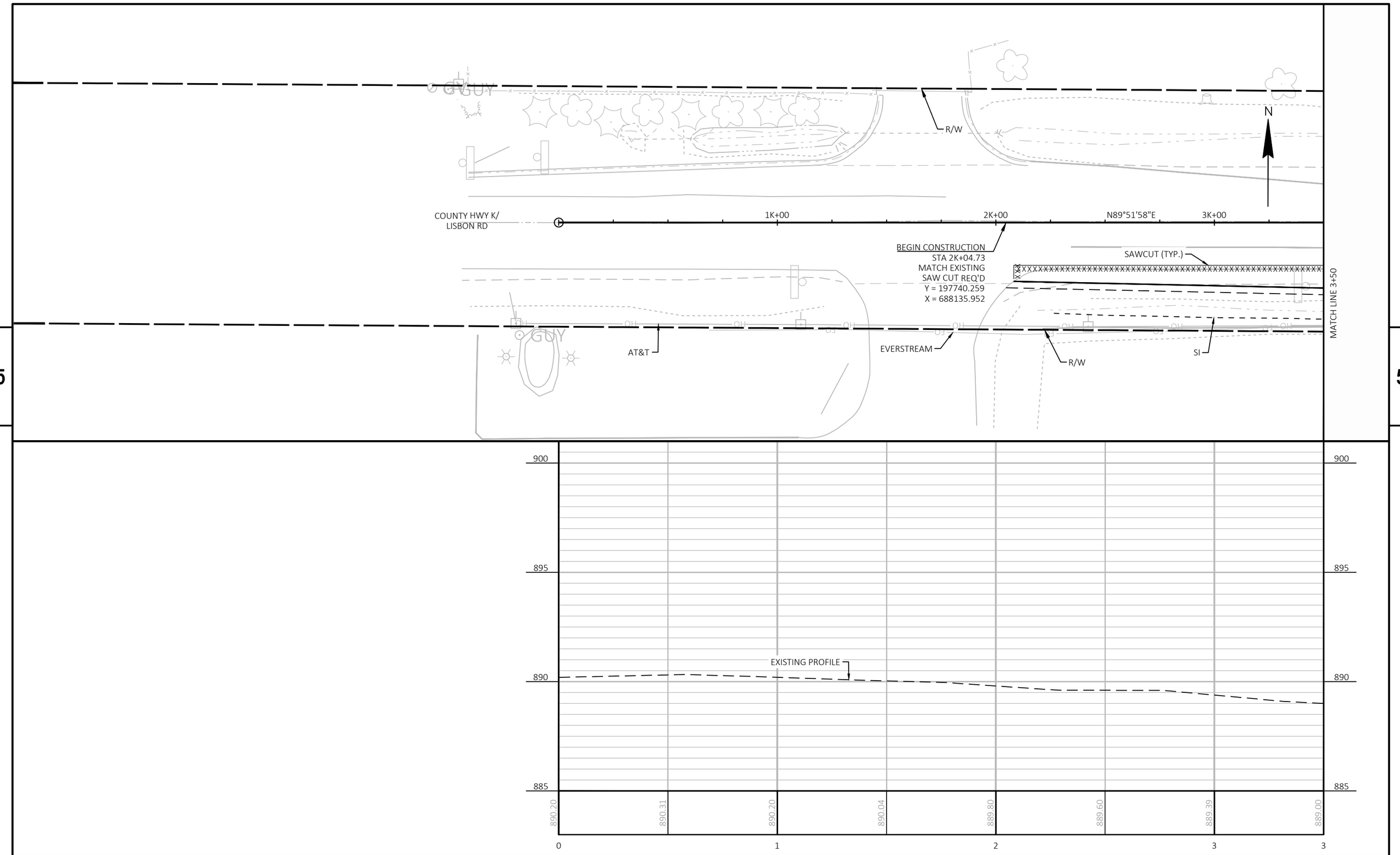



| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH F | SHEET 96 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - 20

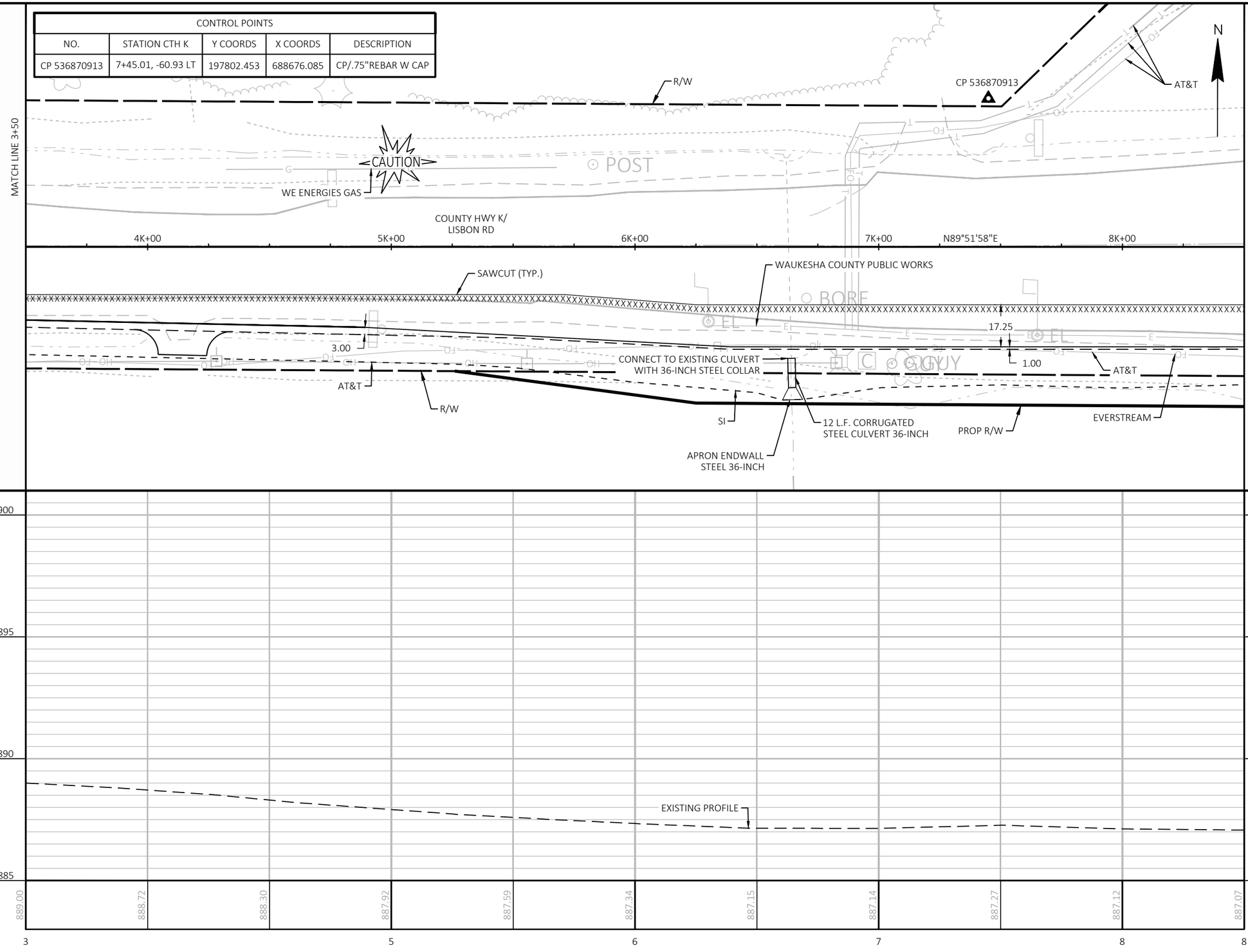
PLOT DATE : 6/9/2026 1:48 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH K | SHEET 97 | E |
|---|---|---|---|---|---|


FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - 30
PLOT DATE : 6/9/2026 1:48 PM
PLOT BY : EMILY LUSSO
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

| CONTROL POINTS | | | | |
|---|---|---|---|---|
| NO. | STATION CTH K | Y COORDS | X COORDS | DESCRIPTION |
| CP 536870913 | 7+45.01, -60.93 LT | 197802.453 | 688676.085 | CP/.75"REBAR W CAP |




| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH K | SHEET 98 | E |
|---|---|---|---|---|---|

| BENCH MARKS | | | |
|---|---|---|---|
| NO. | STATION | ELEV. | DESCRIPTION |
| 500 | 9K+62.66 RT | 887.82 | CHISELED X IN CONCRETE BASE |
| 501 | 9K+64.98 LT | 887.60 | CHISELED X IN CONCRETE BASE |

MATCH LINE 8+50

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

SI

30" CONCRETE CURB & GUTTER, TYPE D

BM 501

9.00

COUNTY HWY K/ LISBON RD

9K+00

N89°51'58"E

10K+00

284F+00

N1°19'54"E

COUNTY HWY F/ WAUKESHA AVE

S89°45'26"E

11K+00

12K+00

13K+00

AT&T

14K

R/W

PROP R/W

SI

20 L.F. CULVERT PIPE CORRUGATED STEEL 18-INCH

APRON ENDWALL STEEL 18-INCH

12.19

15.00

N

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

30" CONCRETE CURB & GUTTER, TYPE D

COUNTY HWY K/ LISBON RD

PI

STA 10K+00.00 = STA 283F+75.16

COUNTY HWY K/ LISBON RD

17.25

30" CONCRETE CURB & GUTTER, TYPE D

BM 500

1.00

PROP R/W

R/W

EVERSTREAM

SI

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

N1°19'54"E

SAWCUT (TYP.)

283F+00

COUNTY HWY F/ REDFORD BLVD

17.00

30" CONCRETE CURB & GUTTER, TYPE D

1.00

SI

6" SLOPED CONCRETE CURB & GUTTER, TYPE D

AT&T

SPECTRUM

EVERSTREAM

R/W

TLE

MATCH LINE 14+00

EXISTING PROFILE

EXISTING PROFILE

| 895 | 890 | 885 | 880 |
|---|---|---|---|

| 887.07 | 887.10 | | | 887.02 | 886.20 | 885.50 | 884.43 | 883.35 | 882.52 | 881.67 | 880.72 |
|---|---|---|---|---|---|---|---|---|---|---|---|

| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH K | SHEET 99 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - 32

PLOT DATE : 6/9/2026 1:48 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

MATCH LINE 14+00

MATCH LINE 20+00

R/W

FLAG

EL

POST

WETLAND

END CONSTRUCTION
STA 15K+45.86
MATCH EXISTING
SAW CUT REQ'D

N

T

POST

+00 S89°45'26"E 15K+00 16K+00 17K+00 18K+00 19K+00

COUNTY HWY K/
LISBON RD

SAWCUT (TYP.)

CAUTION

WE ENERGIES GAS

SPECTRUM

AT&T

GV

GUY

1.00

SI

30" CONCRETE CURB
& GUTTER, TYPE D

EVERSTREAM

R/W

TLE

6" SLOPED CONCRETE
CURB & GUTTER, TYPE D

QUARRY CORNERS
PKWY

R/W

POST

BLDG

BLDG

BLDG

BLDG

BLDG

5

5

885

880

875

870

EXISTING PROFILE

880.72 879.81 878.87 878.26 877.53 877.08 876.57 875.94 875.48 874.91 874.16 873.66 873.03

14 15 16 17 18 19 20

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | PLAN AND PROFILE: CTH K | SHEET 100 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - 33

PLOT DATE : 6/9/2026 1:48 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

# Standard Detail Drawing List

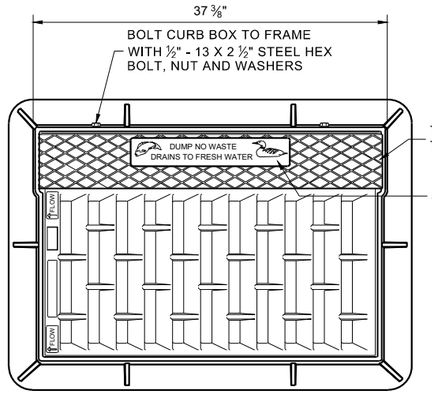
| | |
|---|---|
| 08A05-22A | INLET COVERS TYPE A, H, A-S, H-S AND Z |
| 08A05-22B | INLET COVERS TYPE B, B-A, C, MS, MS-A, DW AND WM |
| 08A05-22C | INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S |
| 08C06-03 | INLETS 3-FT AND 4-FT DIAMETER |
| 08C07-03 | INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT |
| 08D01-24A | CONCRETE CURB AND GUTTER |
| 08D01-24B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D04-07 | CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E10-02 | INLET PROTECTION TYPES A, B, C AND D |
| 08E12-01 | SILT SCREEN |
| 08E15-01 | CULVERT PIPE CHECK |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE  AND CONCRETE COLLAR DETAIL |
| 09A14-01 | DRIVEWAYS WITHOUT CURB AND GUTTER |
| 09B02-10 | CONDUIT |
| 09B04-13 | PULL BOX |
| 09C02-09 | CONCRETE BASES, TYPES 1, 2,  5, & 6 |
| 09C03-04 | TRANSFORMER/PEDESTAL BASES |
| 09C06-07 | CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL |
| 09C12-10A | CONCRETE BASE TYPE 13 |
| 09C12-10B | CONCRETE BASE TYPE 13 |
| 09C15-03 | CONCRETE BASE TYPE 10 SPECIAL |
| 09D01-05 | CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL) |
| 09D02-03 | SIGNAL CONTROL CABINET |
| 09E01-17D | POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET) |
| 09E01-17G | HARDWARE DETAILS FOR POLE MOUNTING |
| 09E03-06 | NON-FREEWAY LIGHTING UNIT POLE WIRING |
| 09E08-11G | TYPE 10 SPECIAL POLE 40' MONOTUBE ARM |
| 09E08-11H | TYPE 10 SPECIAL POLE 45' MONOTUBE ARM |
| 09E08-11J | TYPE 13 POLE 35'-55' MONOTUBE ARM |
| 09E08-11K | GENERAL NOTES AND HARDWARE FOR TYPES 9, 10, 9/10 SPECIAL,12 AND13 POLES WITH MONOTUBE ARMS |
| 09G01-04A | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 09G01-04B | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 09G01-04C | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 09G01-04D | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 09G01-04E | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 09G01-04F | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 09G01-04G | SPAN WIRE TEMPORARY TRAFFIC SIGNAL |
| 11B02-02 | CONCRETE MEDIAN NOSE |
| 13C01-19 | CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES |
| 13C09-18A | CONCRETE PAVEMENT REPAIR AND REPLACEMENT |
| 13C09-18B | CONCRETE PAVEMENT REPAIR AND REPLACEMENT |
| 13C09-18C | CONCRETE PAVEMENT REPAIR AND REPLACEMENT |
| 13C09-18D | CONCRETE PAVEMENT REPAIR AND REPLACEMENT |
| 13C18-08A | CONCRETE PAVEMENT JOINTING |
| 13C18-08B | CONCRETE PAVEMENT STEEL REINFORCEMENT |
| 13C18-08C | CONCRETE PAVEMENT JOINT TYPES |
| 13C18-08D | CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES |
| 13C18-08F | CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER |
| 13C19-03 | HMA LONGITUDINAL JOINTS |
| 14B29-01 | SAFETY EDGE |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END |
| 15C02-10A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-10B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C03-05 | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES |
| 15C04-05 | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C07-16B | PAVEMENT MARKING WORDS |
| 15C07-16C | PAVEMENT MARKING ARROWS |
| 15C08-24A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS |
| 15C08-24B | TEMPORARY LONGITUDINAL PAVEMENT MARKING |
| 15C08-24C | PAVEMENT MARKING (TURN LANES) |
| 15C08-24D | PAVEMENT MARKING (TURN LANES) |
| 15C11-11B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS |

6

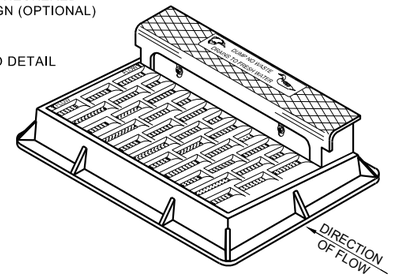
# Standard Detail Drawing List

| | |
|---|---|
| 15C18-09A | MEDIAN ISLAND PAVEMENT MARKINGS |
| 15C18-09B | PAVEMENT MARKINGS, MEDIAN ISLAND NOSE |
| 15C33-05 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15C35-06A | PAVEMENT MARKING (INTERSECTIONS) |
| 15D12-17A | TRAFFIC CONTROL, LANE CLOSURE |
| 15D12-17B | TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION |
| 15D20-12A | TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY |
| 15D20-12B | TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY |
| 15D20-12C | TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY |
| 15D21-07A | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE |
| 15D21-07B | TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE |
| 15D27-06 | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY,  SPEEDS GREATER THAN 40 MPH |

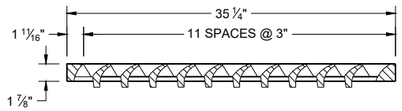

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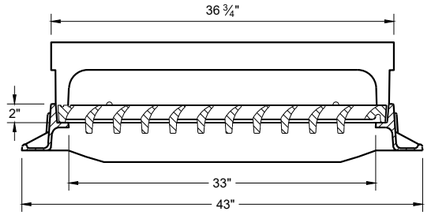


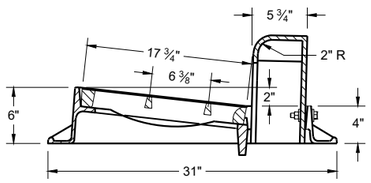

NOTE: EITHER CASTING IS ACCEPTABLE

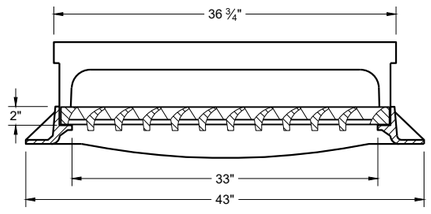


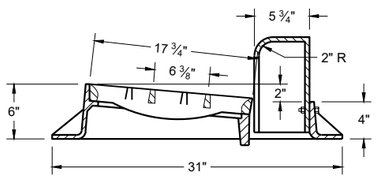

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



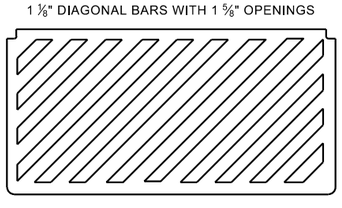




**TYPE "H"**

NOTE: EITHER CASTING IS ACCEPTABLE

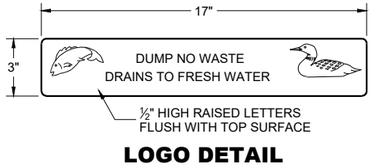
1 ⅛" DIAGONAL BARS WITH 1 ⅝" OPENINGS



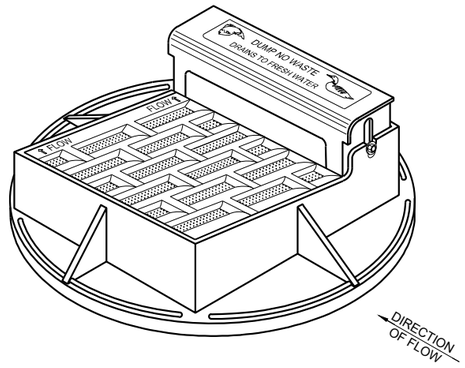
**SPECIAL GRATE FOR TYPE "H" COVER**

(MEASURES 35" X 17 ¾" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

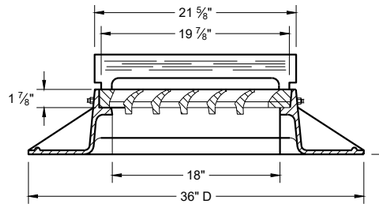


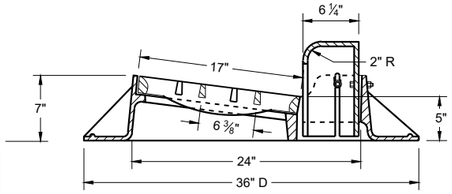

**LOGO DETAIL**



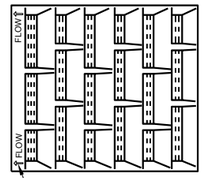

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE

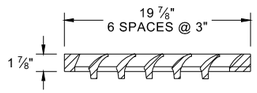



**TYPE "A"**




DIRECTION OF FLOW ARROWS



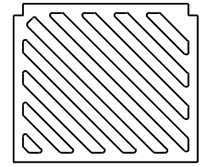

## GENERAL NOTES

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.

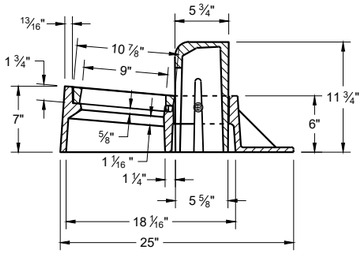
1" DIAGONAL BARS
WITH 1 ½" OPENINGS

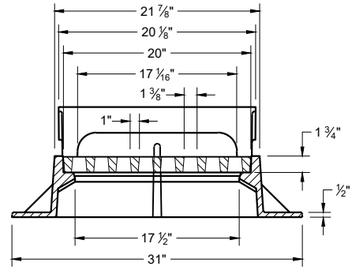


**SPECIAL GRATE FOR TYPE "A" COVER**

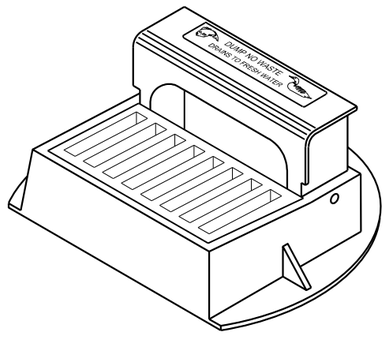
(MEASURES 19 ¾" X 17" X 1 ⅞")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)




**TYPE "Z"**



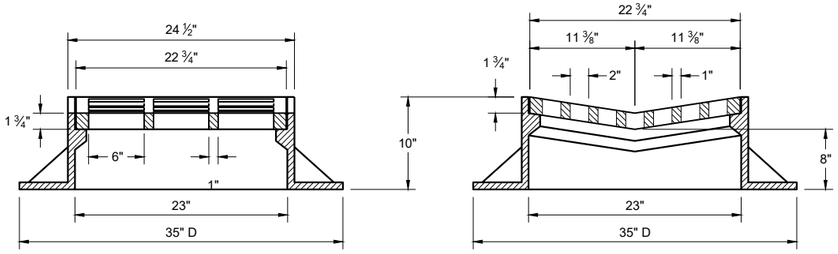

**INLET COVERS**
**TYPES A, H, A-S, H-S AND Z**

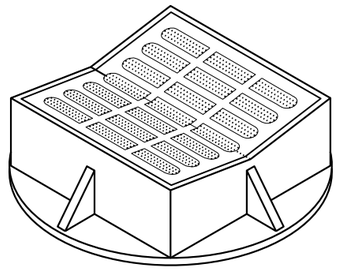
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE

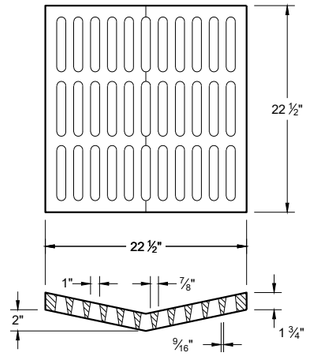
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA



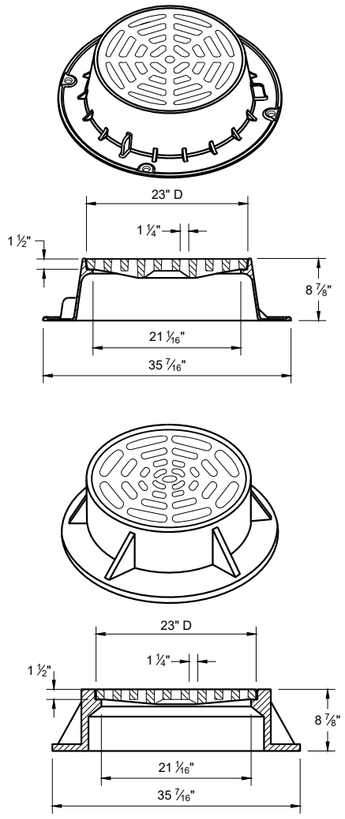
**TYPE "B"**




**ALTERNATIVE GRATE FOR TYPE "B" COVER**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

**NOTED AS TYPE B - A ON THE DRAINAGE TABLE**




**TYPE "C"**

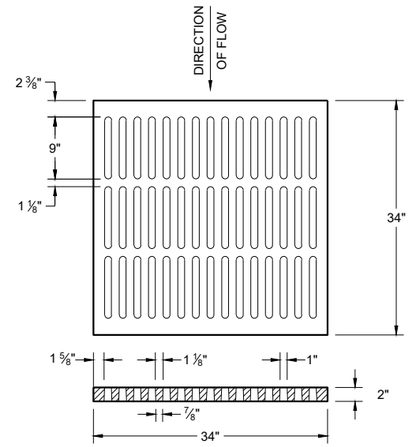
NOTE: EITHER CASTING IS ACCEPTABLE

## 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.

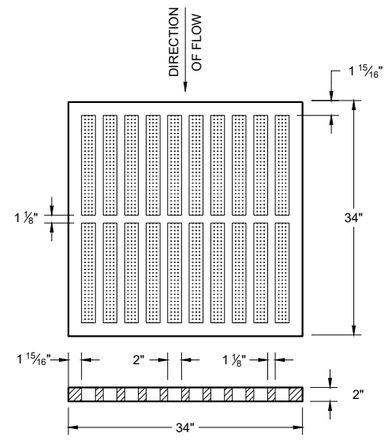
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.




**ALTERNATIVE TYPE "MS"**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

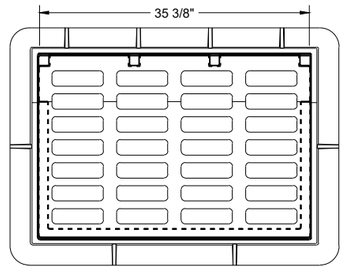
**NOTED AS TYPE MS-A ON THE DRAINAGE TABLE**

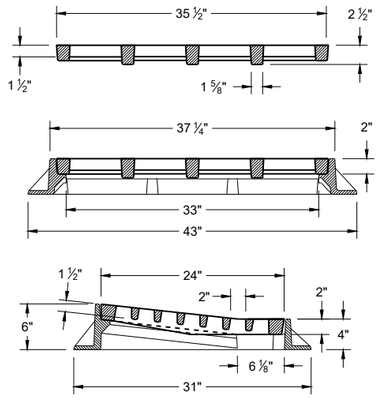



**TYPE "MS"**

USE ON FREEWAYS AND EXPRESSWAYS

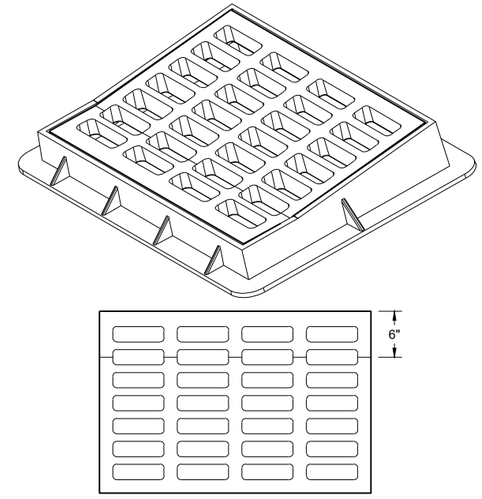
**NOTED AS TYPE MS ON THE DRAINAGE TABLE**

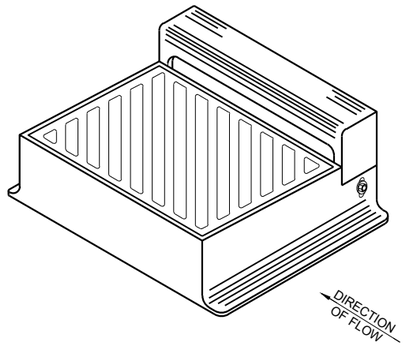


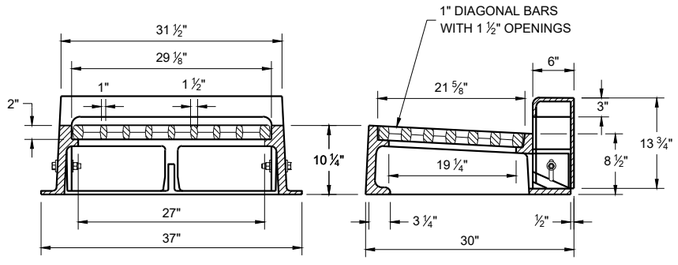

**TYPE "DW"**

NOTES: FOR USE IN A SUMP CONDITION. THIS OPTION IS ONLY TO BE USED IF NO OTHER INLETS ARE APPLICABLE.




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




**TYPE "WM"**

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

**INLET COVERS**
**TYPES B, B-A, C,**
**MS, MS-A ,DW AND WM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA



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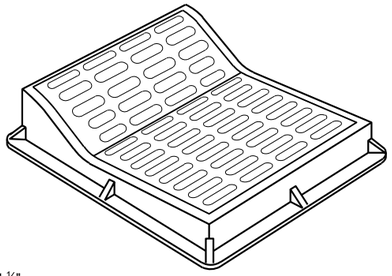
SDD 08A05-22b

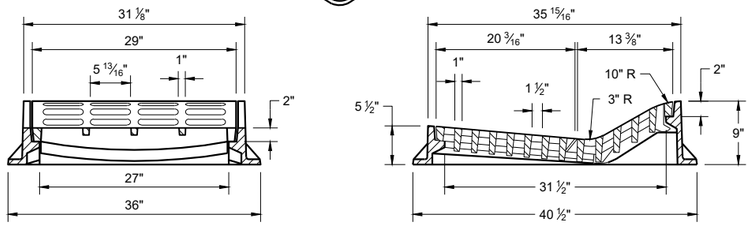
SDD 08A05-22b

## GENERAL NOTES

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

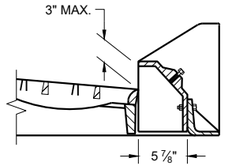
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.






### TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

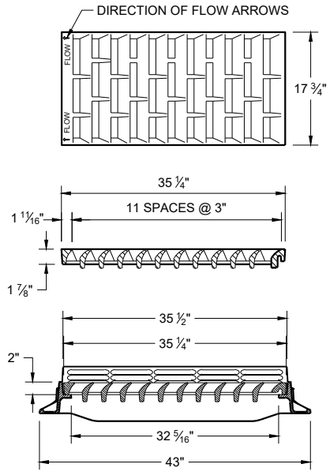



### ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH
**NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE**

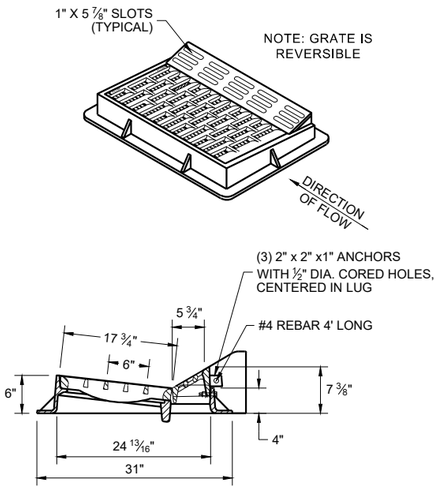
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**



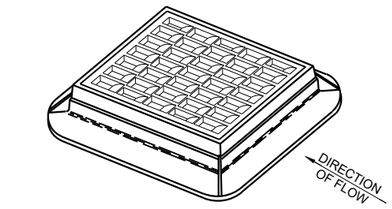

### TYPE "HM"

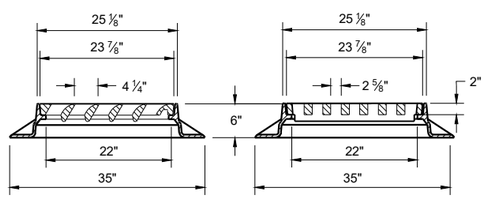
USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"



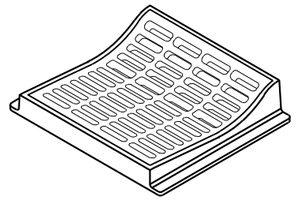

NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

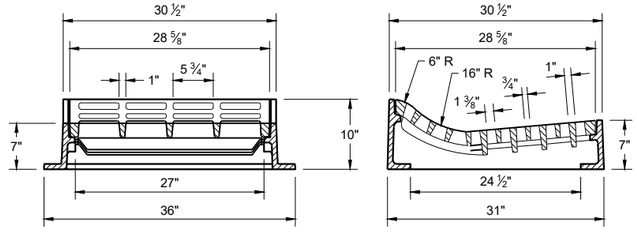
**NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.**




### TYPE "S"






### TYPE "T"

USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"

**INLET COVERS**
**TYPES F, HM, HM-S, S, T, HM-GJ AND HM-GJ-S**

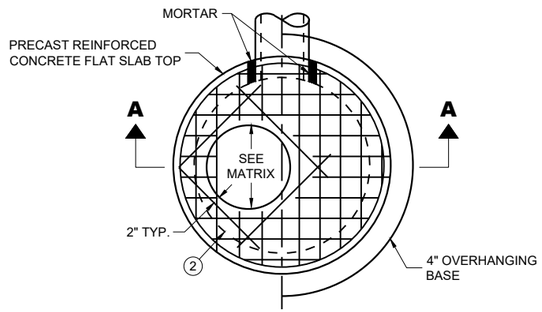
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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February 2025 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

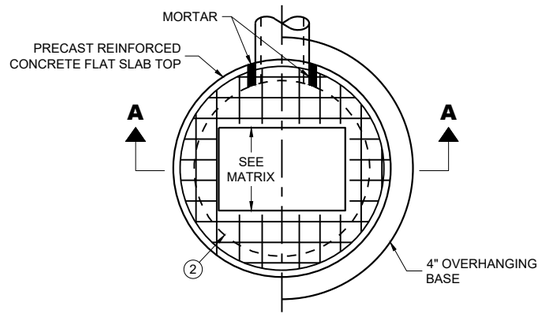
FHWA



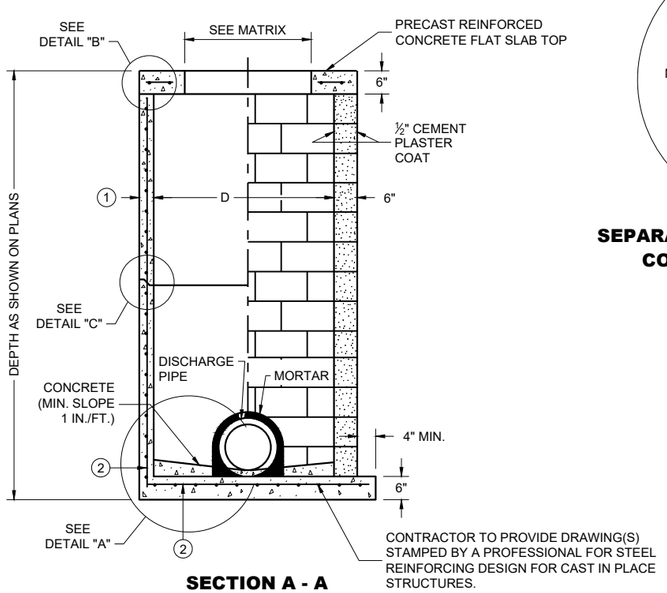
6
SDD 08A05-22c




**PLAN VIEW CIRCULAR OPENING**




**PLAN VIEW RECTANGULAR OPENING**




**SECTION A - A**

**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (2)

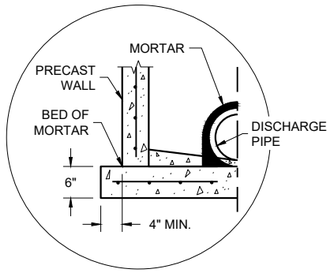
**CIRCULAR INLETS WITH FLAT TOP**

## CATCH BASIN COVER OPENING MATRIX

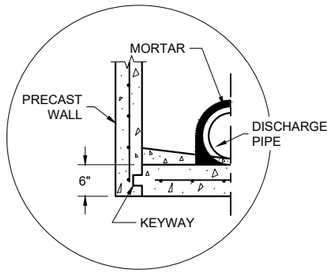
| INLET SIZE | INLET COVER TYPE | ALL A'S | ALL B'S | BW | C | F | ALL H'S | S | T | V V-B | WM | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | OPENING SIZE (FT.) | | | | | | | | | | | |
| 3-FT | 2 DIA. | | | | X | | | | | | | X |
| | 2 X 2 | X | X | | | | | X | | X | | |
| 4-FT | 2 DIA. | | | | X | | | | | | | X |
| | 2 X 2 | X | X | | | | | X | | X | | |
| | 2 X 2.5 | | | X | | | | X | X | X | X | |
| | 2 X 3 | | | | | | X | | | | | |
| | 2.5 X 3 | | | | | X | | | | | | |

## PIPE MATRIX

| INLET SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | 180° SEPARATION (IN) | 90° SEPARATION (IN) |
| 3-FT | 15 | 12 |
| 4-FT | 24 | 18 |

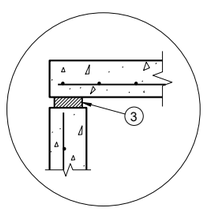



**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

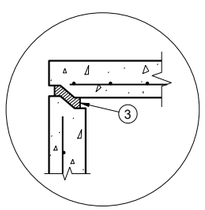



**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION**

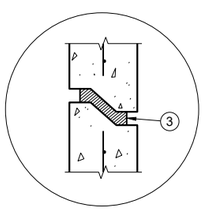
**DETAIL "A"**




**TOP WITH PLAIN END JOINT**




**TOP WITH TONGUE AND GROOVE JOINT**




**RISER WITH TONGUE AND GROOVE JOINT**

**DETAIL "B"** **DETAIL "C"**

**INLETS 3-FT AND 4-FT DIAMETER**

## 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 DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE 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.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

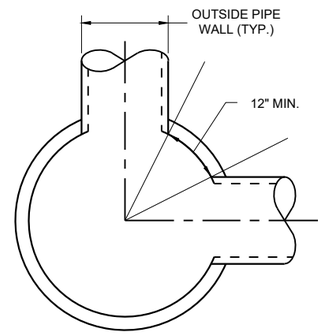
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

(1) MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMTER PRECAST INLETS.

(2) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(3) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.




**MINIMUM HORIZONTAL PIPE SEPARATION**

**DETAIL "D"**

**INLETS 3-FT AND 4-FT DIAMETER**

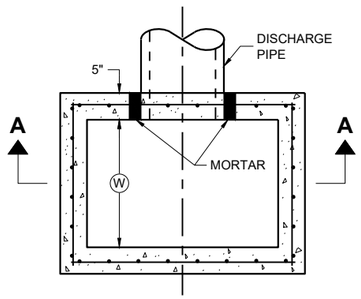
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

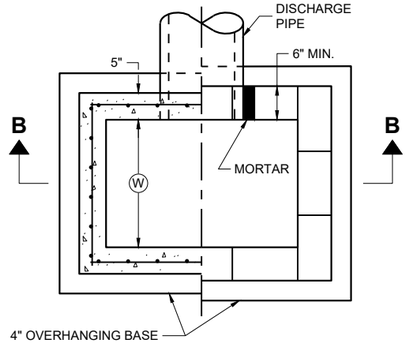
FHWA



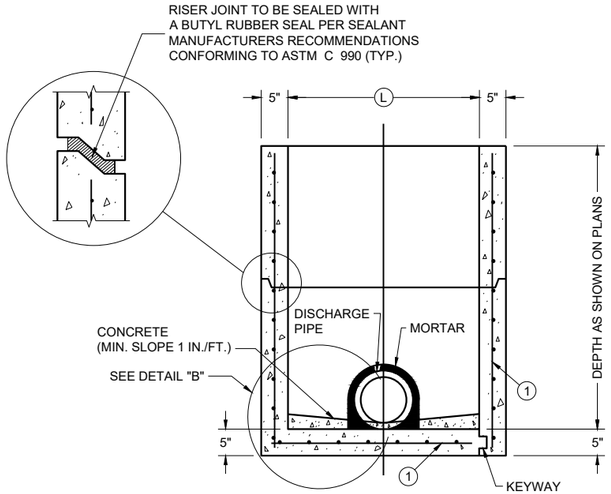
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SDD 08C06-03




**PLAN VIEW**



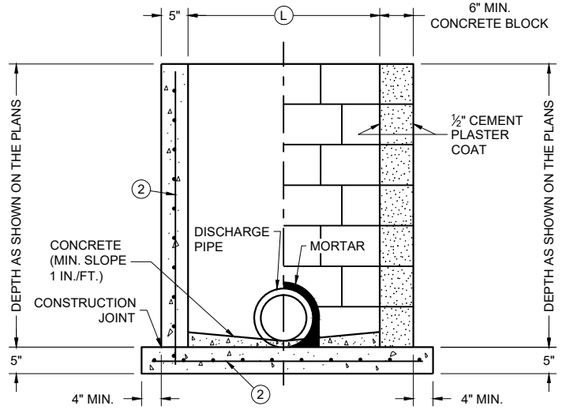

**PLAN VIEW**




**PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE**

**PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE**

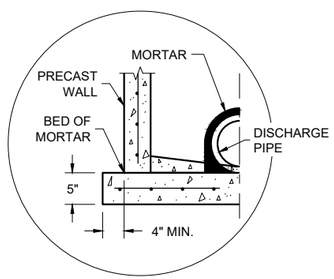
**SECTION A - A**




**CAST IN PLACE REINFORCED CONCRETE**

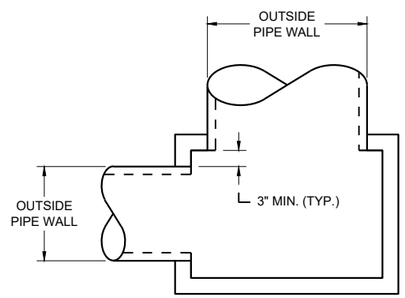
**CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE** (1)

**SECTION B - B**




**SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION**

**DETAIL "B"**




**DETAIL "A"**

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T 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" 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 AND REINFORCED CONCRETE BASES 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.

## CATCH BASIN COVER MATRIX

| INLET SIZE | WIDTH (W) (FT.) | LENGTH (L) (FT.) | INLET COVER TYPE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ALL A'S | ALL B'S | BW | F | ALL H'S | S | T | V | WM | V V-B |
| 2 X 2-FT | 2 | 2 | X | X | | | | X | | | | |
| 2 X 2.5-FT | 2 | 2.5 | | | X | | | X | X | X | X | |
| 2 X 3-FT | 2 | 3 | | | | | X | | | | | |
| 2.5 X 3-FT | 2.5 | 3 | | | | X | | | | | | |
| 2 X 3.5-FT | 2 | 3.5 | | | | | | | | | | X |

## PIPE MATRIX

| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|---|---|---|
| | WIDTH (IN) | LENGTH (IN) |
| 2 X 2-FT | 12 | 12 |
| 2 X 2.5-FT | 12 | 18 |
| 2 X 3-FT | 12 | 24 |
| 2.5 X 3-FT | 18 | 24 |
| 2 X 3.5-FT | 12 | 30 |

**INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT**

**INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

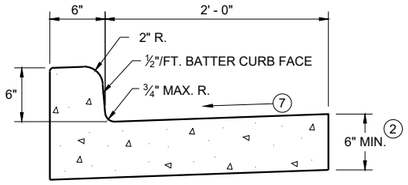
APPROVED
December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

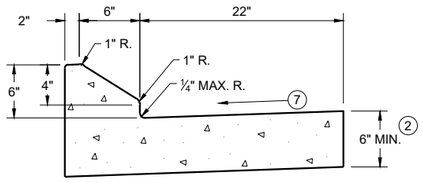
FHWA



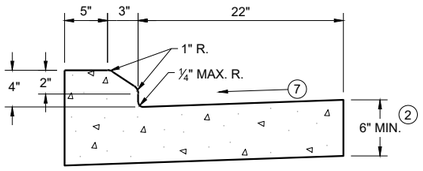
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SDD 08C07-03



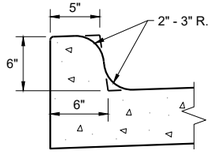

**TYPES A (1) & D**



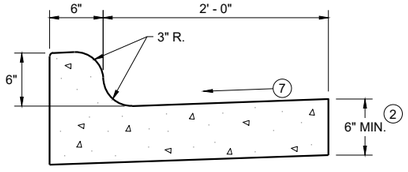

**6" SLOPED CURB TYPES G (1) & J**




**4" SLOPED CURB TYPES G (1) & J**

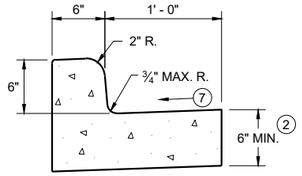



**TYPES K (1) & L**
(OPTIONAL CURB SHAPE)



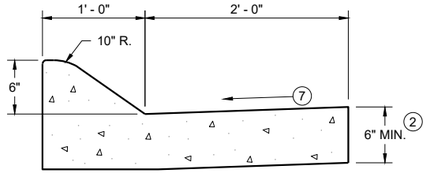

**TYPES K (1) & L**

**CONCRETE CURB AND GUTTER 30"**

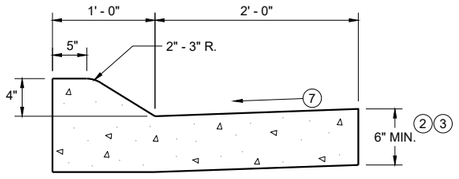



**TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 18"**

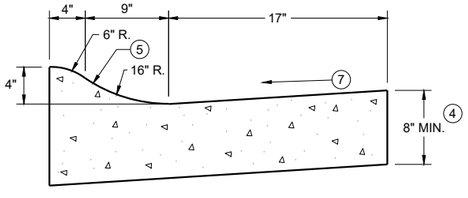



**6" SLOPED CURB TYPES A (1) & D**



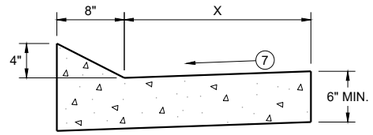

**4" SLOPED CURB TYPES A (1) & D**

**CONCRETE CURB AND GUTTER 36"**




**4" SLOPED CURB TYPES R (1) & T**
**CONCRETE CURB AND GUTTER 30"**

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

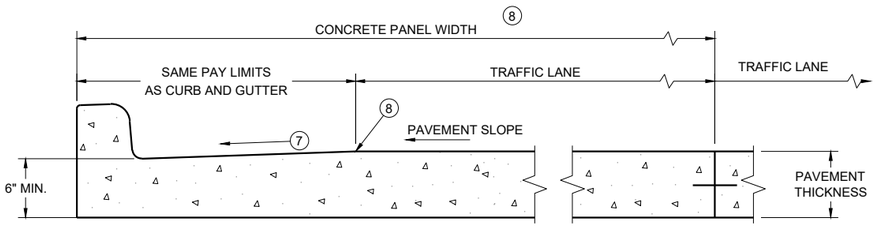



**TYPES TBT & TBTT (1)**

**CONCRETE CURB AND GUTTER**

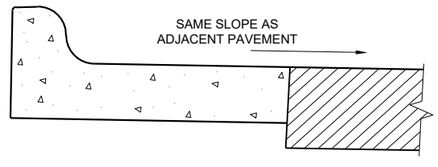
**PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE**

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




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

* BIKE LANE IS NOT SHOWN




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

## GENERAL NOTES

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

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

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

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

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

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

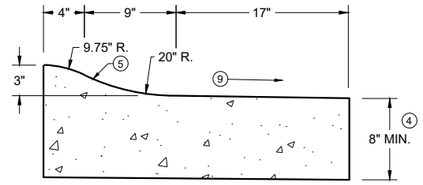
(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

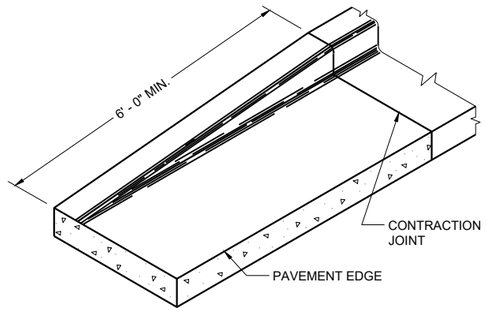
(9) SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY



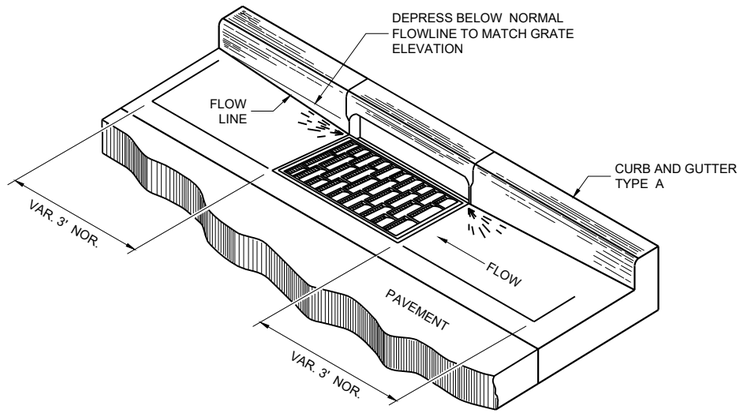

**3" SLOPED CURB TYPES R (1) & T**

**CONCRETE CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




**END SECTION CURB AND GUTTER**




**DETAIL OF CURB AND GUTTER AT INLETS**

(TYPICAL H INLET COVER SHOWN)

## GENERAL NOTES

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

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

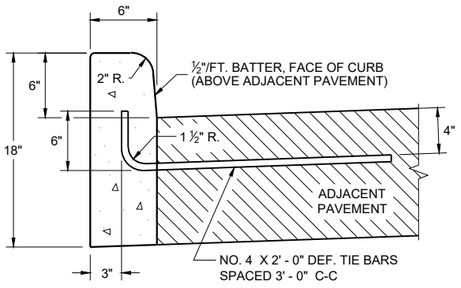
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

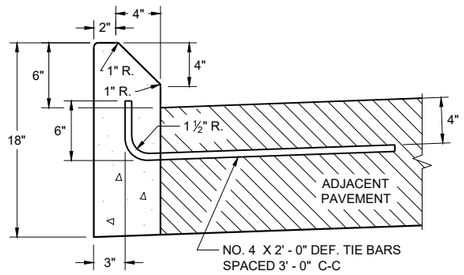
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

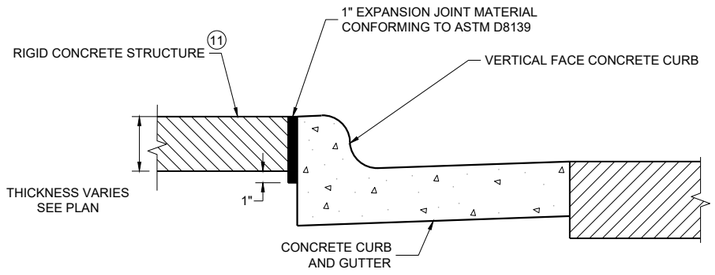



**TYPES A (1) & D**

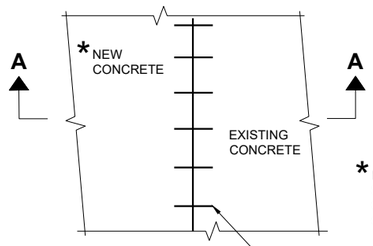



**TYPES G (1) & J**

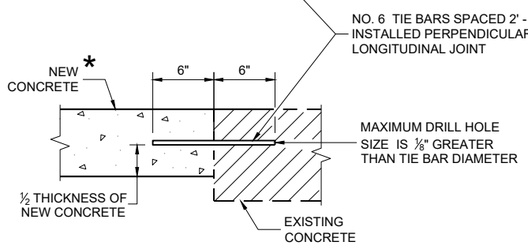
**CONCRETE CURB**




**EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)**

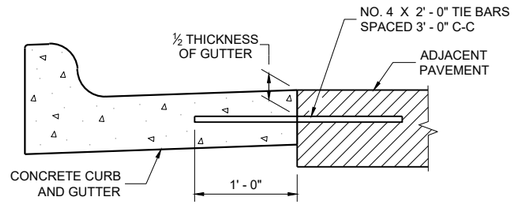



**PLAN VIEW**

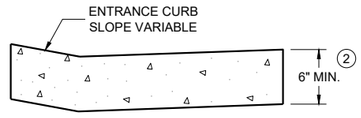



**SECTION A - A**

**TIE BARS DRILLED INTO EXISTING PAVEMENT**




**TYPICAL TIE BAR LOCATION (1)**




**DRIVEWAY ENTRANCE CURB (10)**

(WHEN DIRECTED BY THE ENGINEER)

**CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

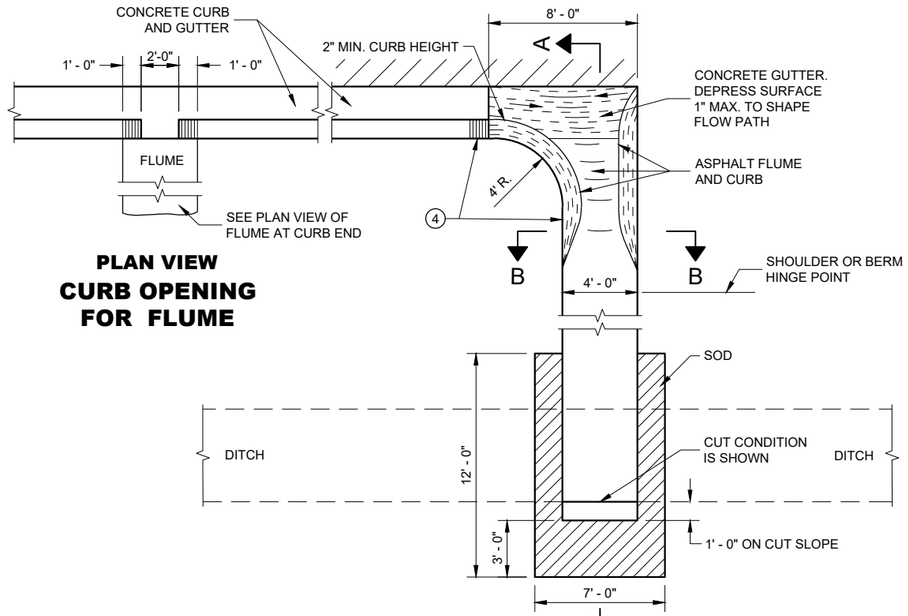
APPROVED
February 2025 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA


6
SDD 08D01-24b

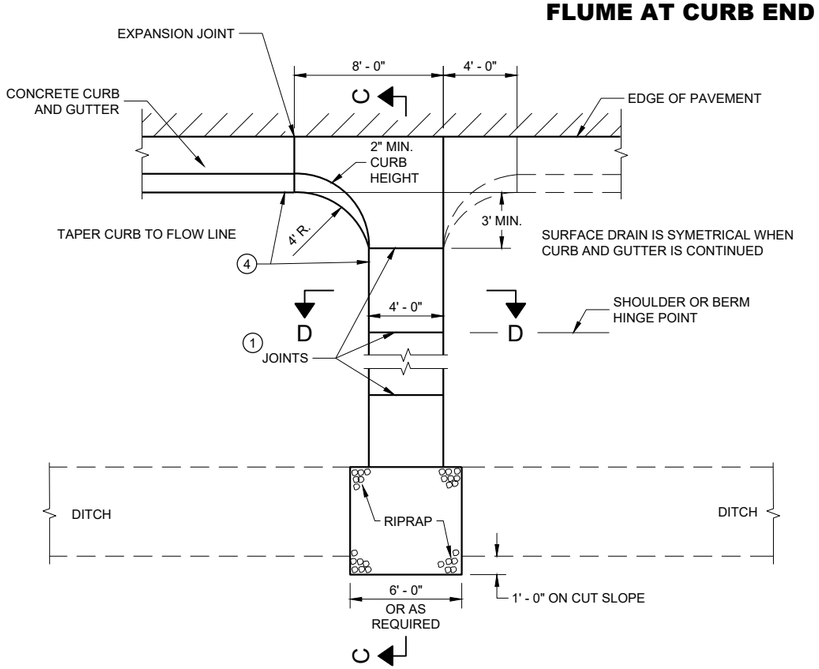
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

## ASPHALTIC FLUME




**PLAN VIEW**
**CURB OPENING FOR FLUME**

**PLAN VIEW**
**FLUME AT CURB END**



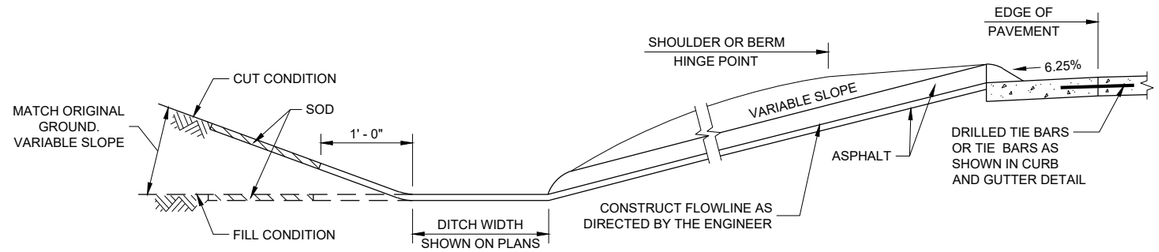

**PLAN VIEW**
**CONCRETE SURFACE DRAIN**

## 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.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

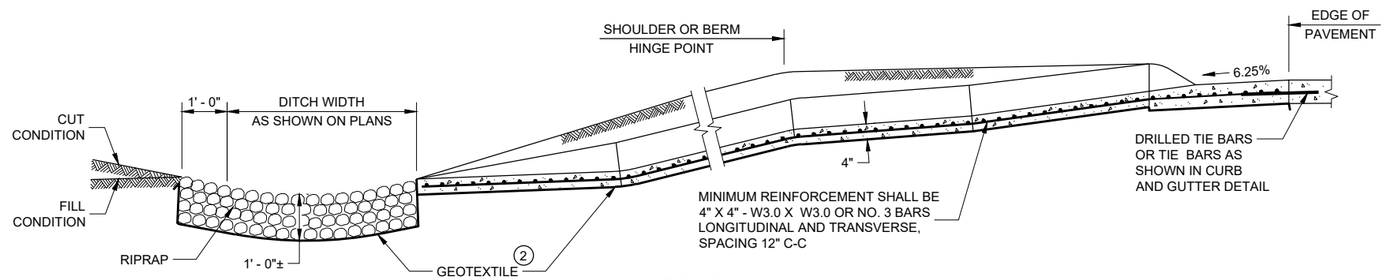
1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
3. CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



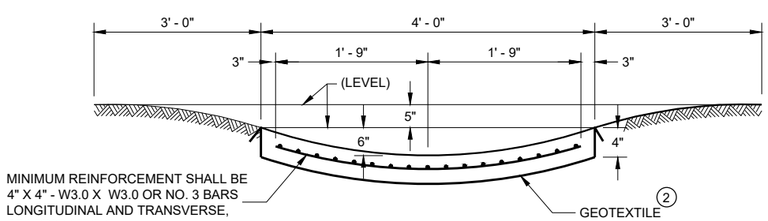

**SECTION A - A**




**SECTION B - B**




**SECTION C - C**




**SECTION D - D**

**CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

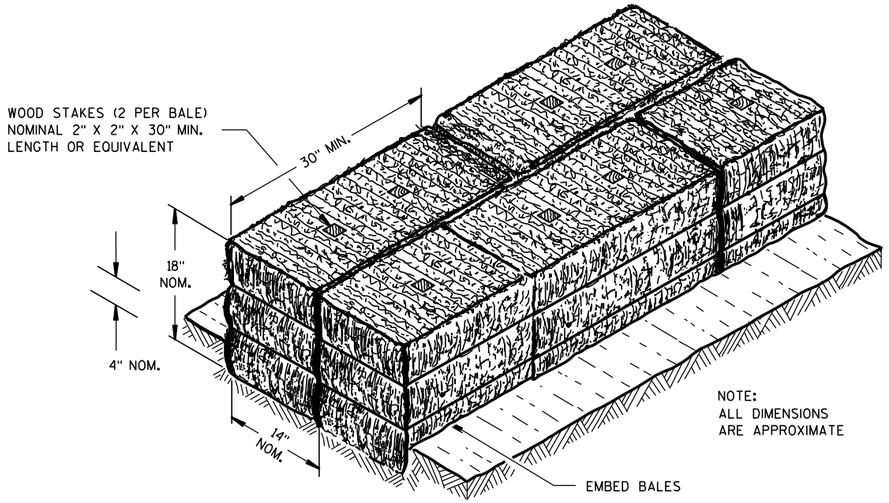


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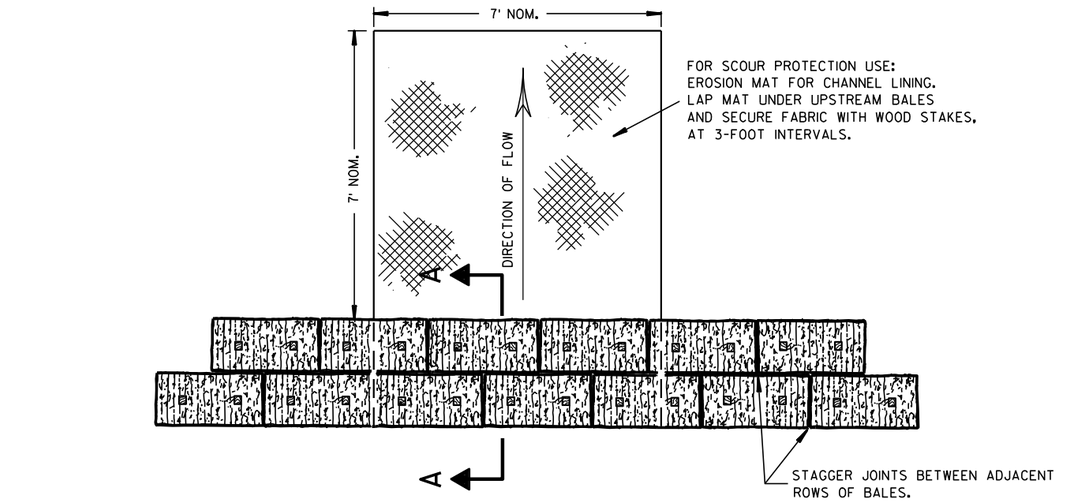
SDD 08D04 - 07

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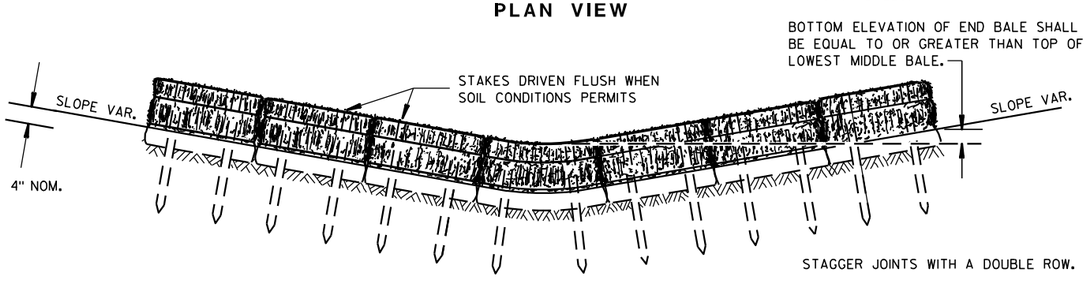
SDD 08D04 - 07




**SECTION A-A**




**PLAN VIEW**



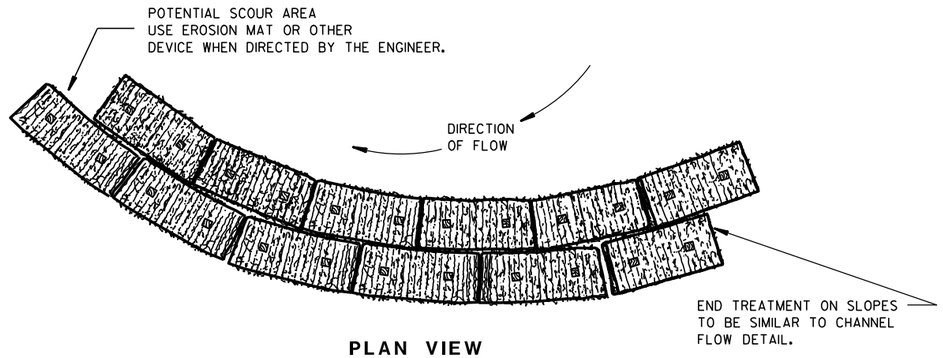

**FRONT ELEVATION**

## TEMPORARY DITCH CHECK USING EROSION BALES (1)

## GENERAL NOTES

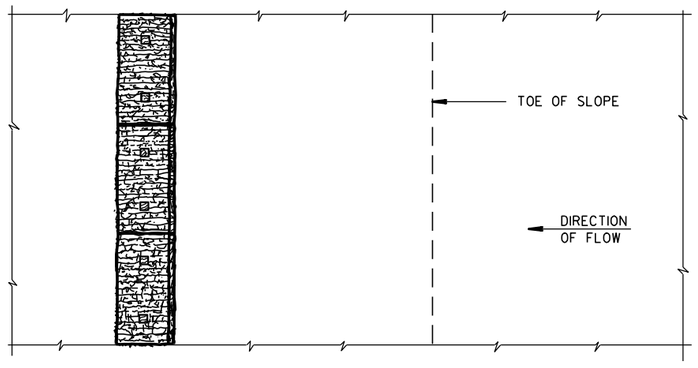
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

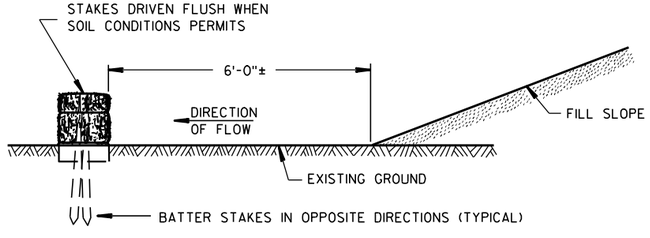



**PLAN VIEW**

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

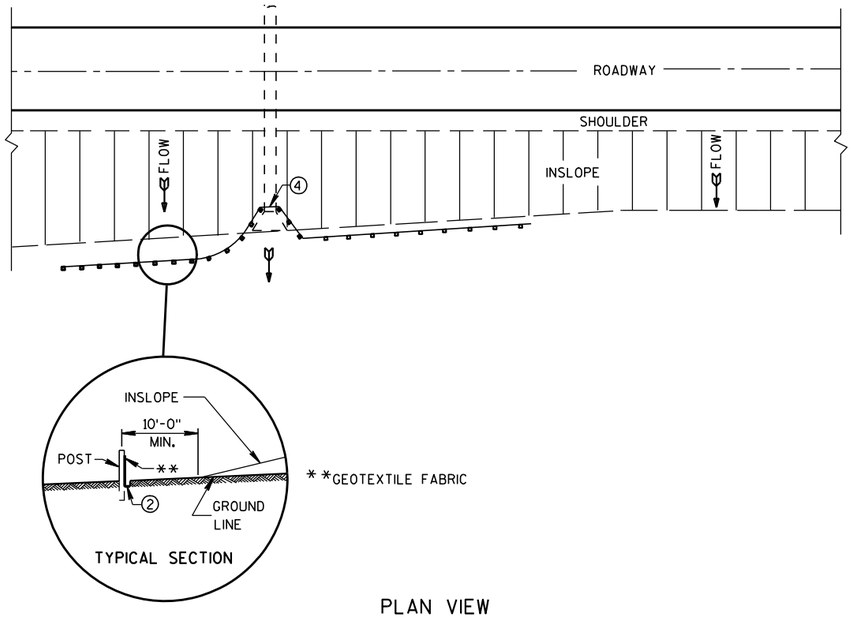
APPROVED

6/04/02 DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

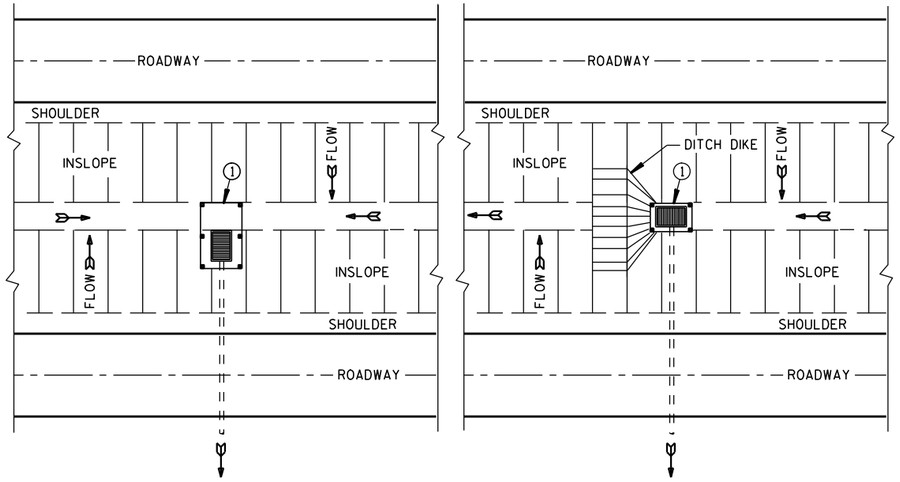
FHWA


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.

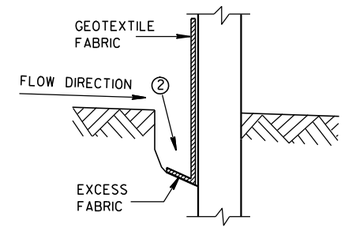
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

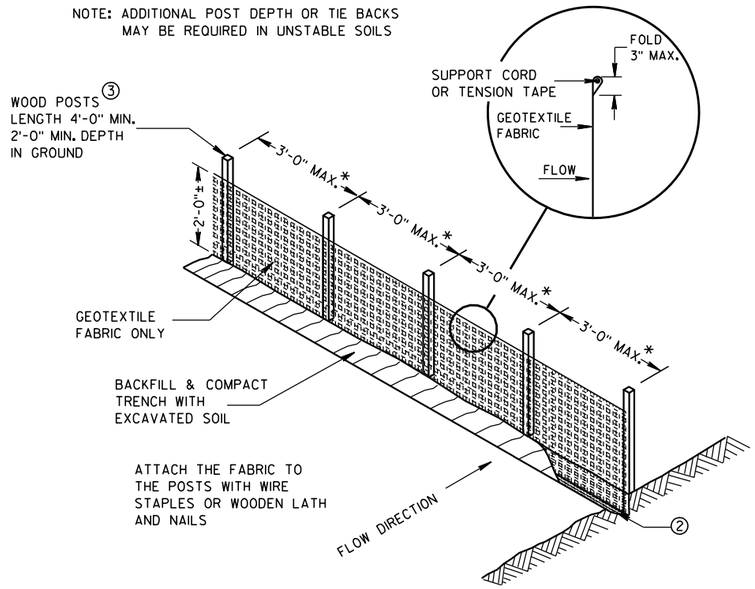
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

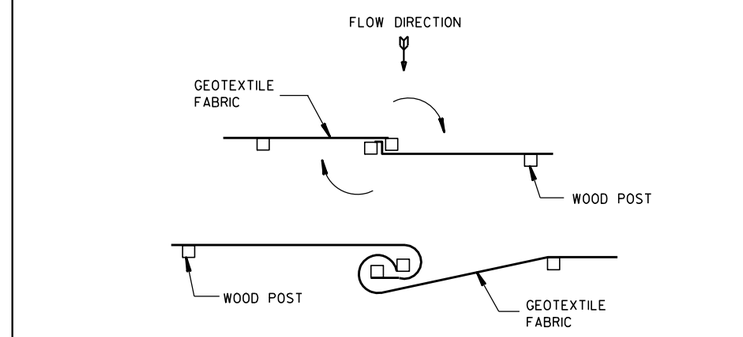



## TRENCH DETAIL

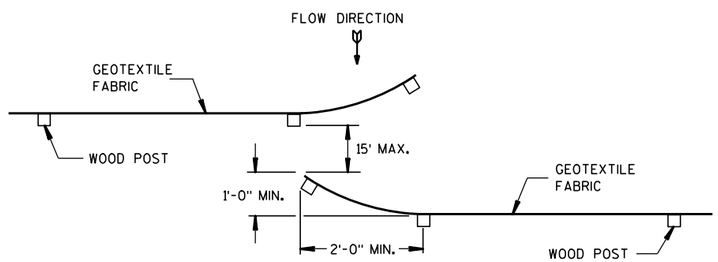



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

## SILT FENCE

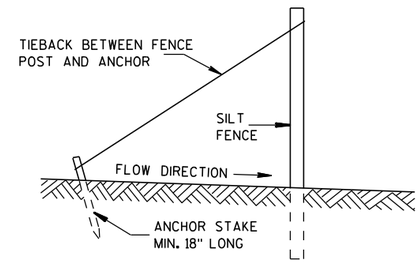



TWIST METHOD




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

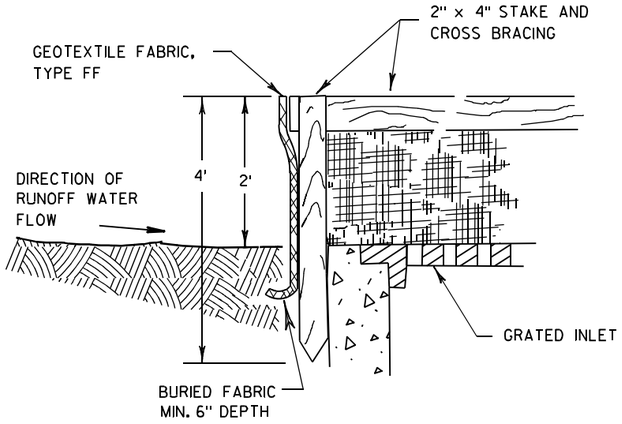


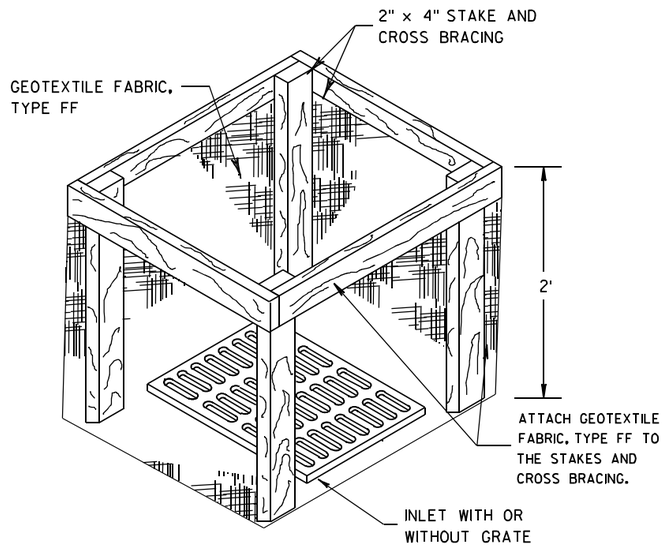
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S.D.D. 8 E 9-6

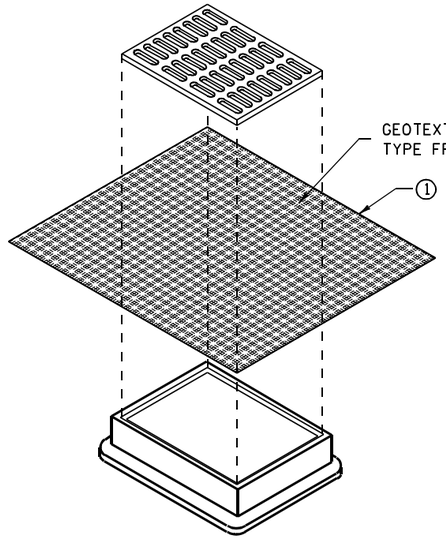
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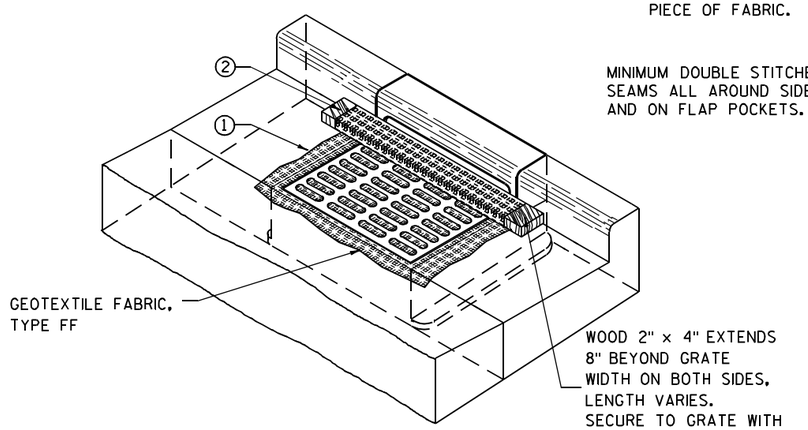




## INLET PROTECTION, TYPE A

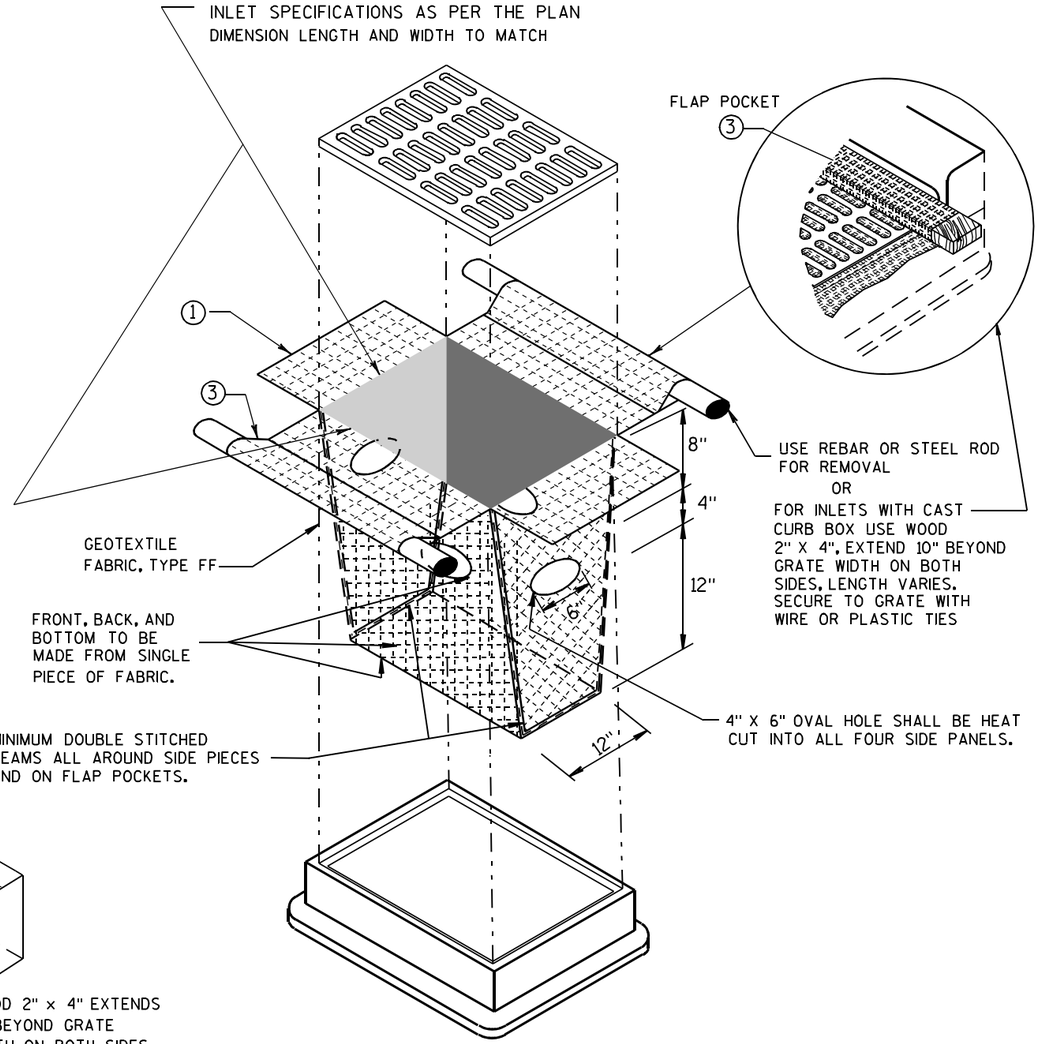



## INLET PROTECTION, TYPE B
## (WITHOUT CURB BOX)

(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



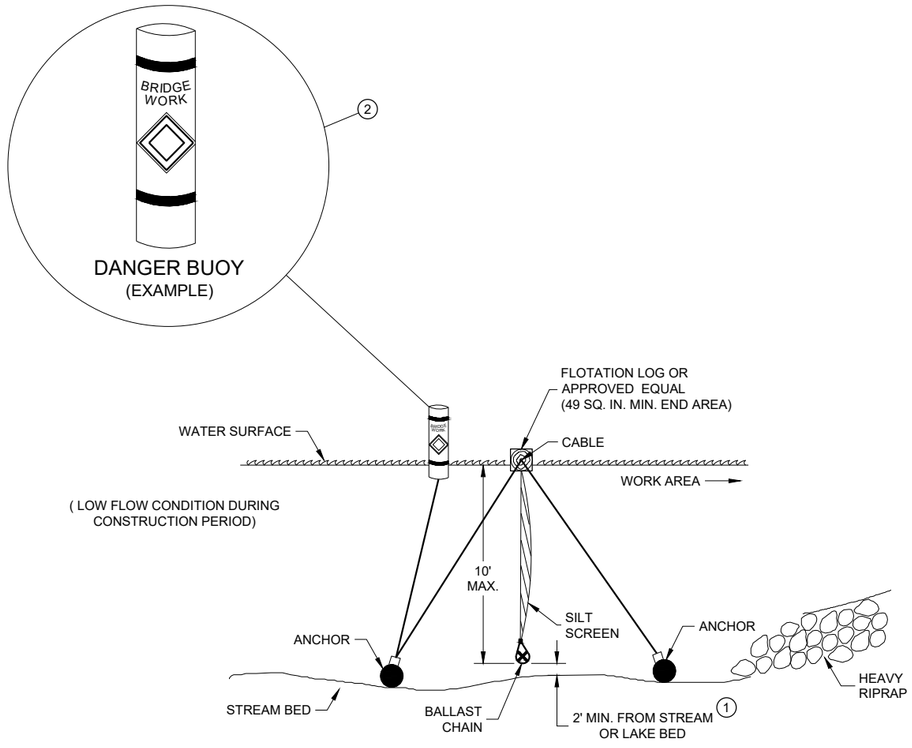

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S.D.D. 8 E 10-2

## GENERAL NOTES

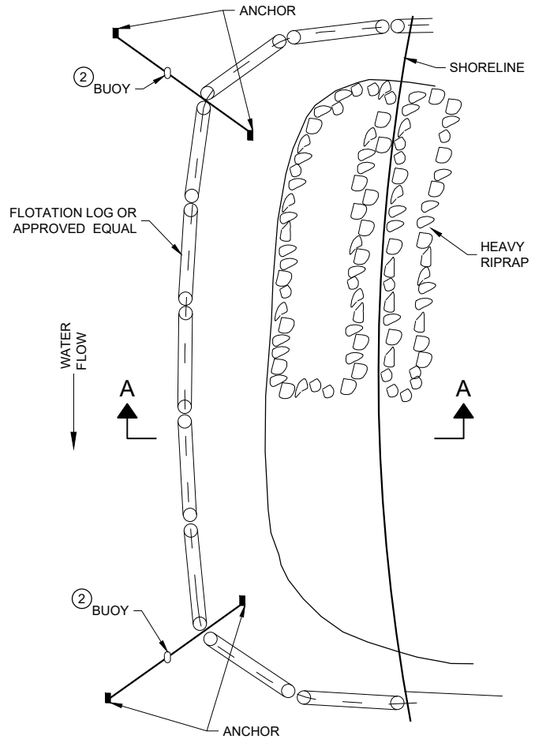
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) 2' MINIMUM SHALL BE MAINTAINED DURING CONSTRUCTION PERIOD.

(2) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.




**SECTION A - A**




**PLAN VIEW**

## SILT SCREEN PLACEMENT DETAIL

**SILT SCREEN**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

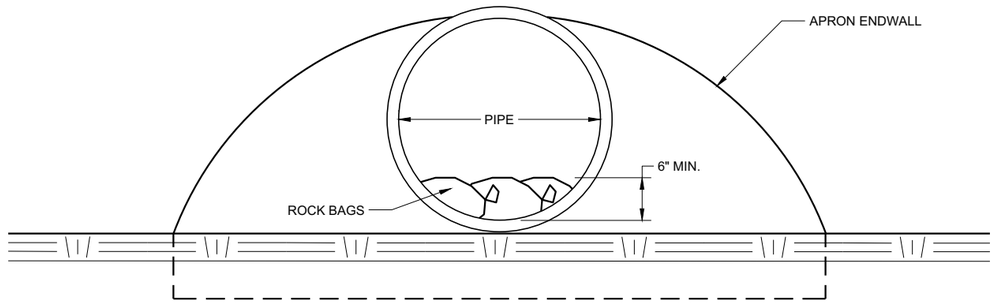
FHWA



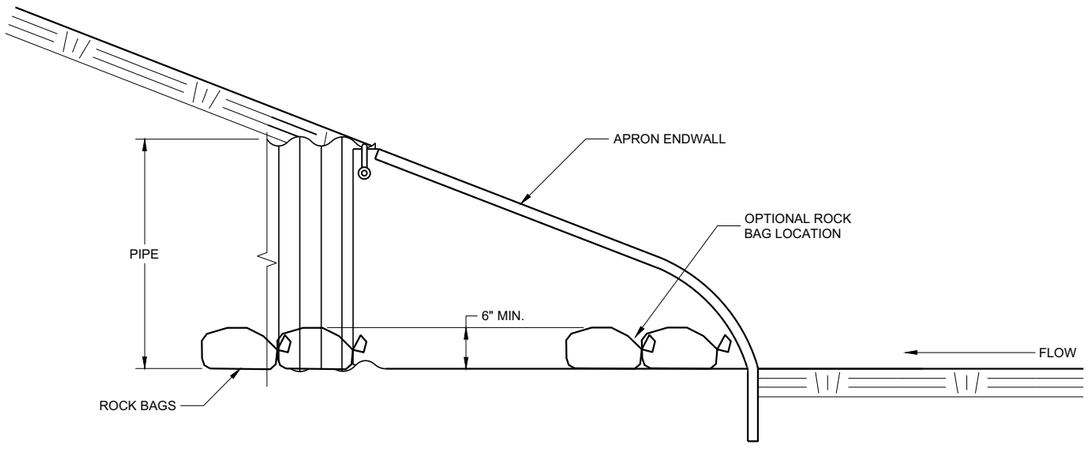


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SDD 08E12 - 01




**END VIEW**




**SIDE VIEW**

## CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

**CULVERT PIPE CHECK**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Daniel Schave — EROSION CONTROL ENGI
FHWA



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SDD 08E15 - 01

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SDD 08E15 - 01

## METAL APRON ENDWALLS

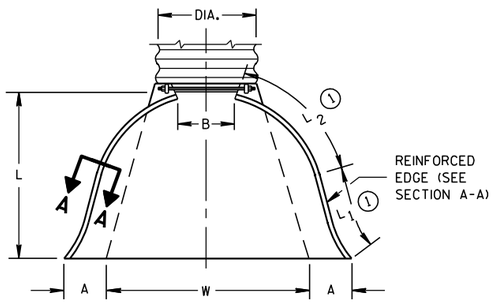
| PIPE DIA. (IN.) | MIN. THICK. (Inches) STEEL | MIN. THICK. (Inches) ALUM. | DIMENSIONS (Inches) A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 ① | L2 ① | W (±2") | APPROX. SLOPE | BODY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | .064 | .060 | 6 | 6 | 6 | 21 | 12 | 17 1/2 | 24 | 2 1/2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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

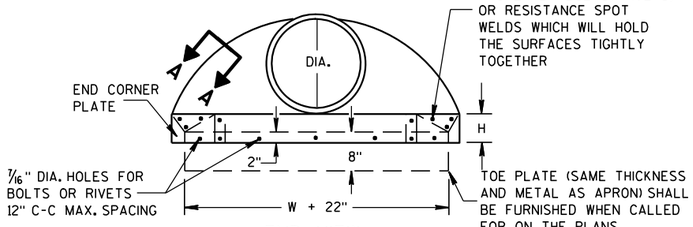
## REINFORCED CONCRETE APRON ENDWALLS

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

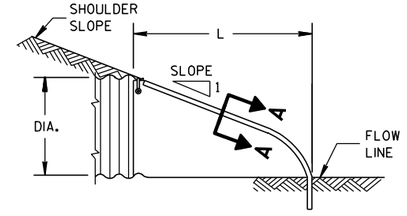
*MINIMUM
**MAXIMUM




PLAN VIEW

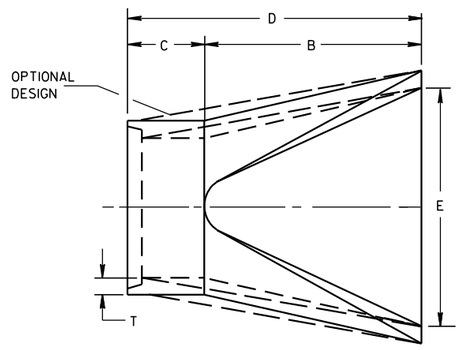



END VIEW

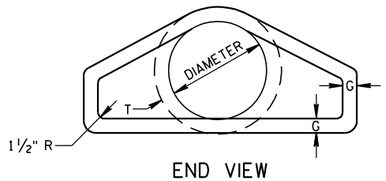



SIDE ELEVATION

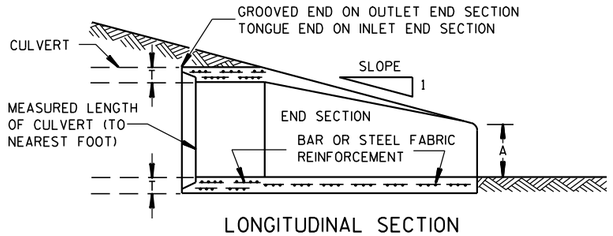
## METAL ENDWALLS




PLAN

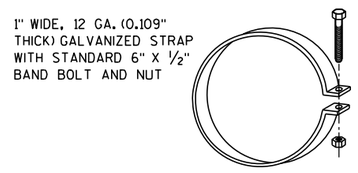



END VIEW



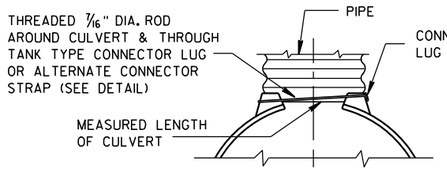

LONGITUDINAL SECTION

## CONCRETE ENDWALLS

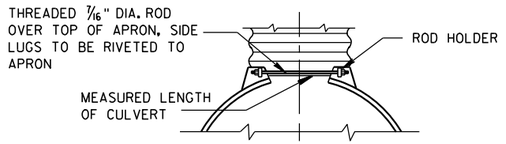



ALTERNATE FOR TYPE 1 CONNECTION

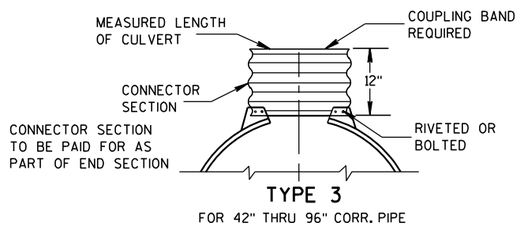
## END SECTION CONNECTOR STRAP



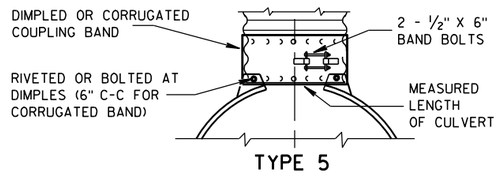

TYPE 1
FOR 12" THRU 24" CORR. PIPE




TYPE 2
FOR 30" THRU 96" CORR. PIPE




TYPE 3
FOR 42" THRU 96" CORR. PIPE




TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

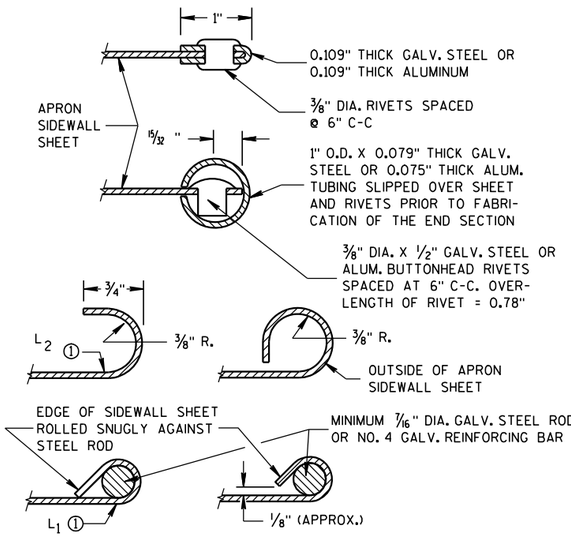
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

## CONNECTION DETAILS




## SECTION A-A

## GENERAL NOTES

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

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

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

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

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

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

# APRON ENDWALLS FOR CULVERT PIPE

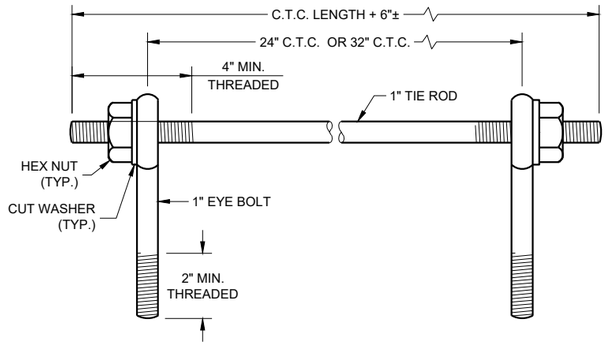
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

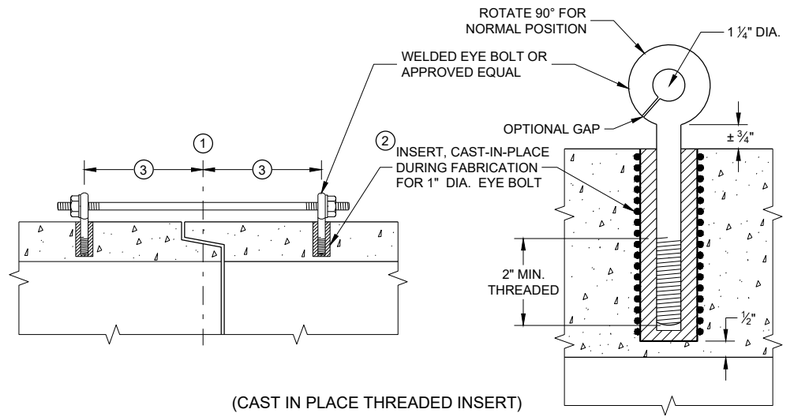


6

S.D.D. 8 F 1-11




**EYE BOLTS AND TIE ROD**




(CAST IN PLACE THREADED INSERT)

**LONGITUDINAL SECTIONS**

## EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

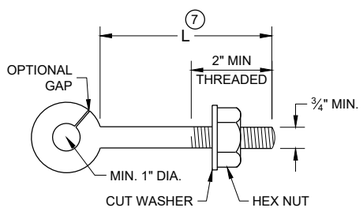
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

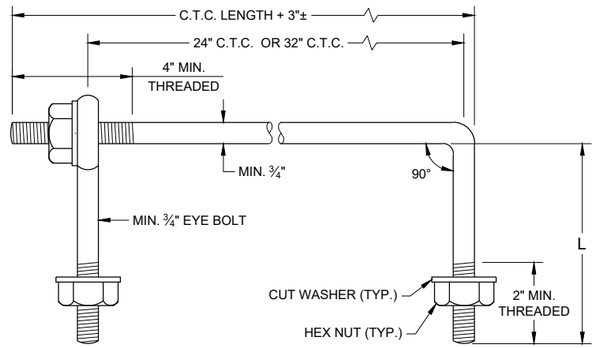
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

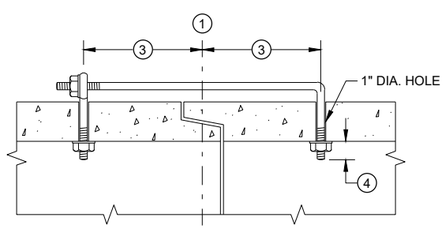



**EYE BOLT** (7)

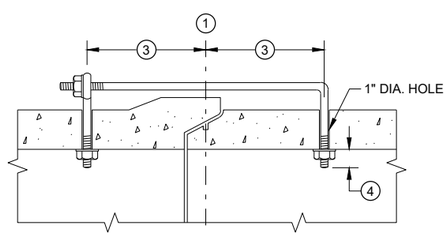
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.




**EYE BOLT AND TIE ROD**




(TONGUE AND GROOVE PIPE)




(MODIFIED BELL PIPE)

**LONGITUDINAL SECTION**

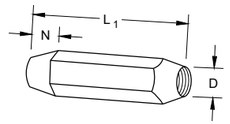
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

## EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

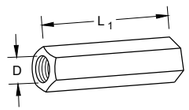
ADJUSTABLE TIE ROD TABLE

| PIPE DIAMETER | TIE ROD DIAMETER | D | $L_1$ | N |
|---|---|---|---|---|
| 12 - 60 | ⅝ | ⅝ | 5 | ½ |
| 66 - 84 | ¾ | ¾ | 5 | ½ |
| 90 - 144 | 1 | 1 | 7 | 1 7/16 |

DIMENSIONS SHOWN ARE IN INCHES



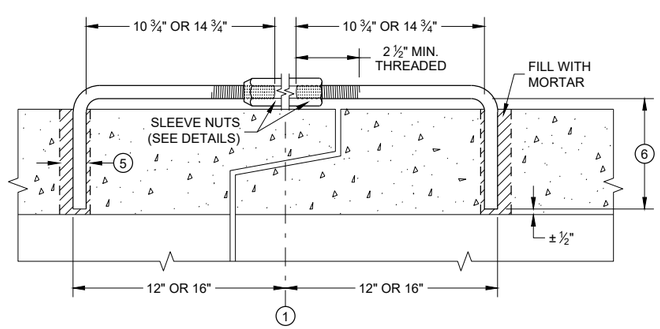

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PLAIN

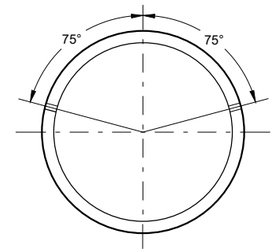
RIGHT AND LEFT THREADS

**SLEEVE NUTS**



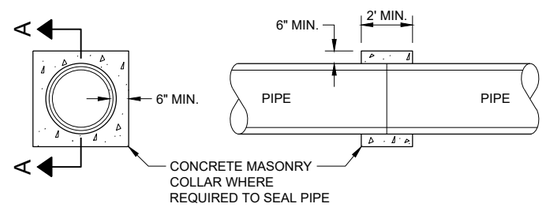

**LONGITUDINAL SECTION**

## ADJUSTABLE TIE ROD (ALTERNATE NO. 3)




PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

**TRANSVERSE SECTION**




**SECTION A - A**

## CONCRETE COLLAR DETAIL

**JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

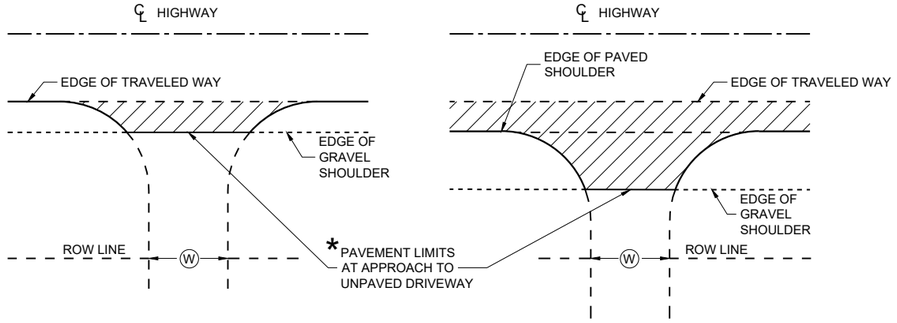
APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA





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SDD 08F04 - 08

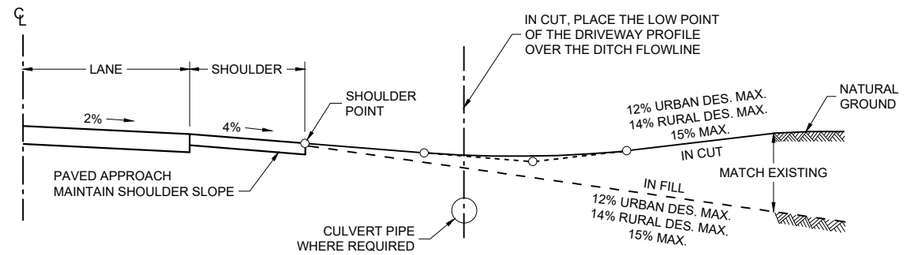



* WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

**PLAN VIEW**
(UNPAVED SHOULDER ON HIGHWAY)

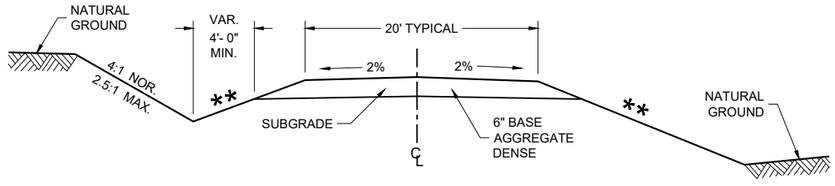
**PLAN VIEW**
(PAVED SHOULDER ON HIGHWAY)

## RURAL DRIVEWAY INTERSECTION DETAIL (NO CURB AND GUTTER OR SIDEWALK)




## TYPICAL DRIVEWAY PROFILES

Ⓦ : DRIVEWAY WIDTHS (MEASURED AT ROW LINE)
- ~ COMMERCIAL & INDUSTRIAL 16' MIN. - 35' MAX.
- ~ RESIDENTIAL & AGRICULTURAL (NONCOMMERCIAL) 16' MIN. - 24' MAX.

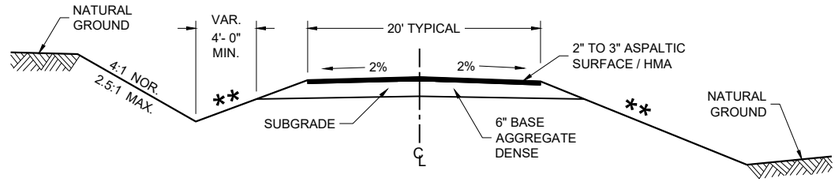



**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

| POSTED SPEED MPH | MAX. SLOPE |
|---|---|
| <35 | 4:1 |
| ≥ 35 TO < 60 | 6:1 |
| ≥60 | 10:1 |



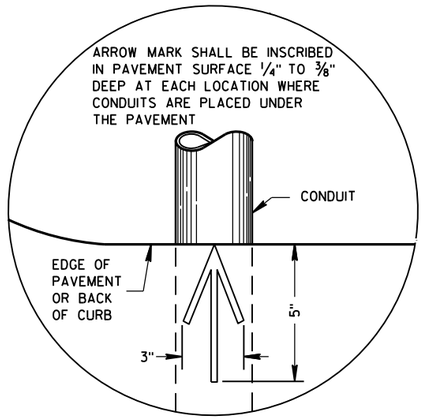

**IN CUT** **IN FILL**

## TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

## DRIVEWAYS WITHOUT CURB AND GUTTER

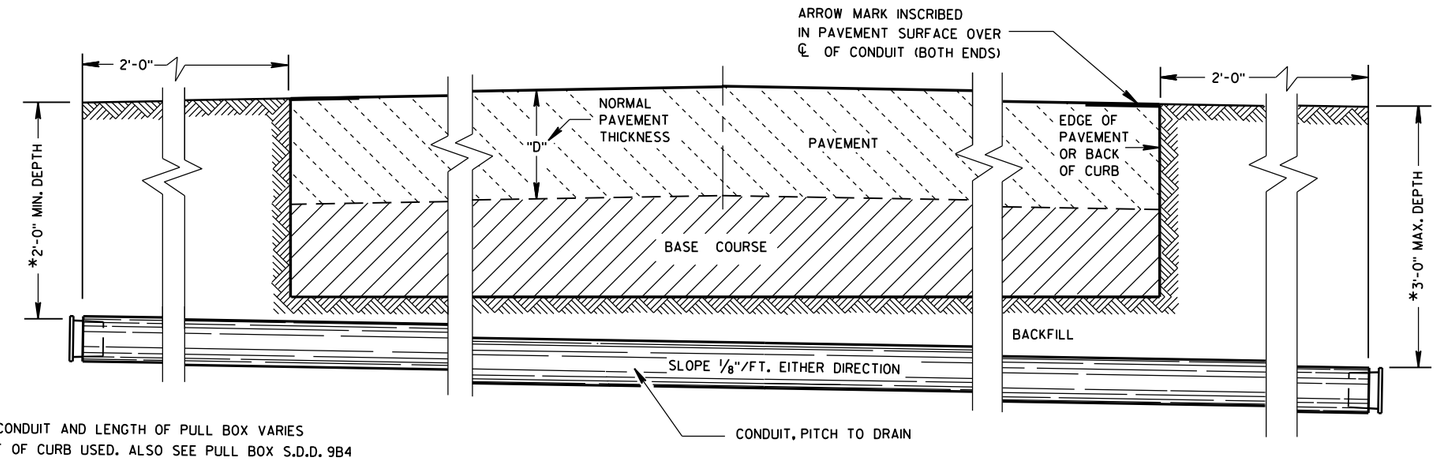
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA




**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

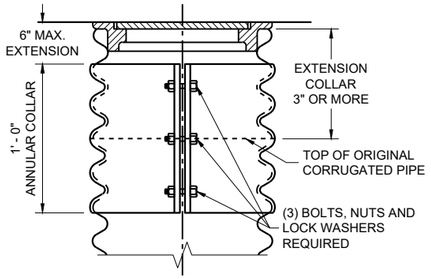
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

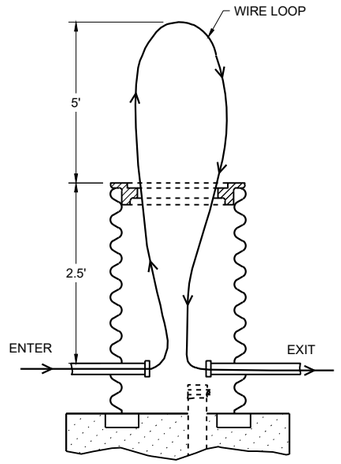



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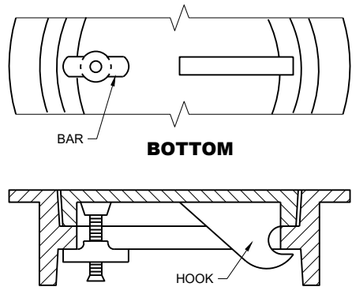
S.D.D. 9 B 2-10




## CORRUGATED PIPE EXTENDER




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




## BOTTOM




## SECTION

## ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

## GENERAL NOTES

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

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

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

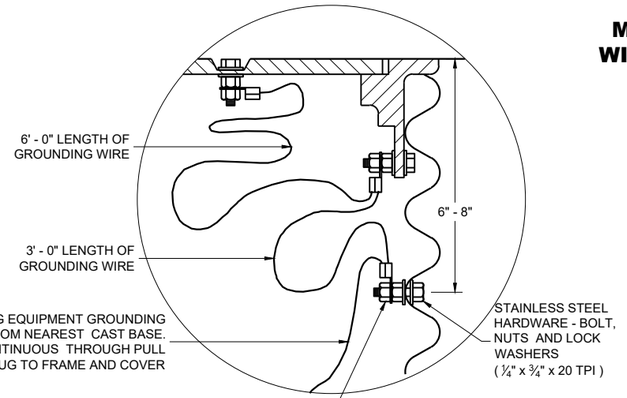
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

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

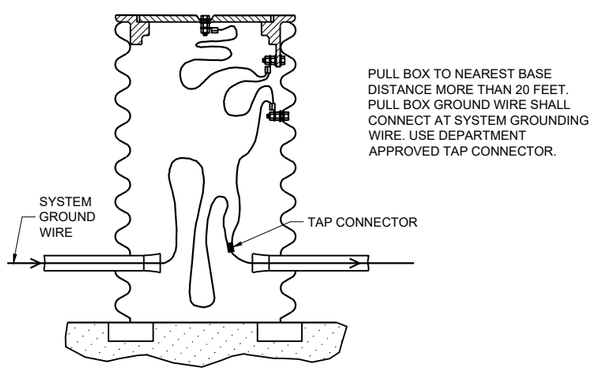
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

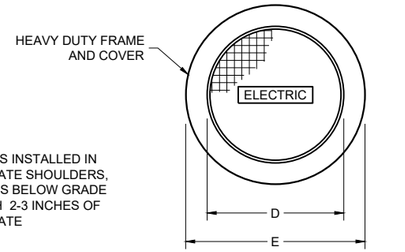
WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



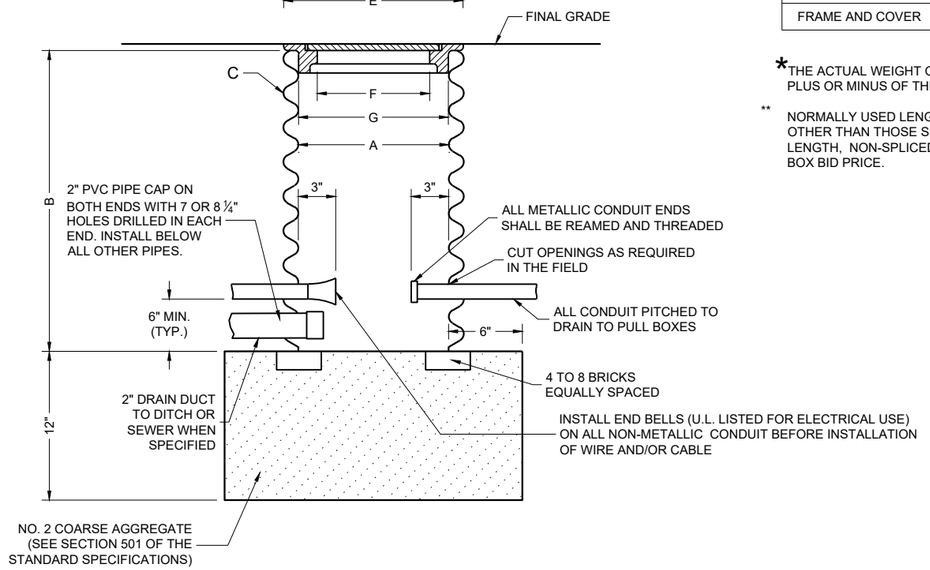

## EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES




## EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES




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




## PULL BOX

### 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 ¼ | 10 ¼ | 10 ¼ | 16 ¼ | 16 ¼ | 16 ¼ | 22 ¼ | 22 ¼ | 22 ¼ |
| FRAME | E | 14 ½ | 14 ½ | 14 ½ | 20 ½ | 20 ½ | 20 ½ | 26 ½ | 26 ½ | 26 ½ |
| FRAME | F | 8 ½ | 8 ½ | 8 ½ | 14 ½ | 14 ½ | 14 ½ | 20 ½ | 20 ½ | 20 ½ |
| FRAME | G | 11 ½ | 11 ½ | 11 ½ | 17 ½ | 17 ½ | 17 ½ | 23 ½ | 23 ½ | 23 ½ |
| **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.

**PULL BOX**

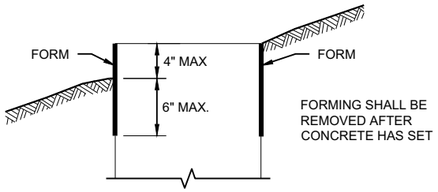
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA


6
SDD 09B04-13

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

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

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

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

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

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

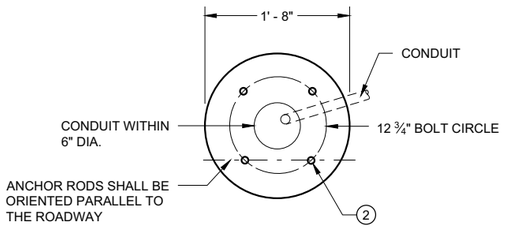
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

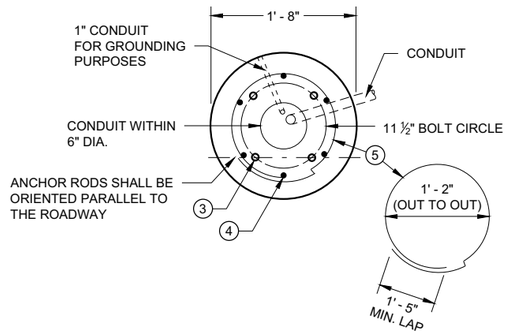
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

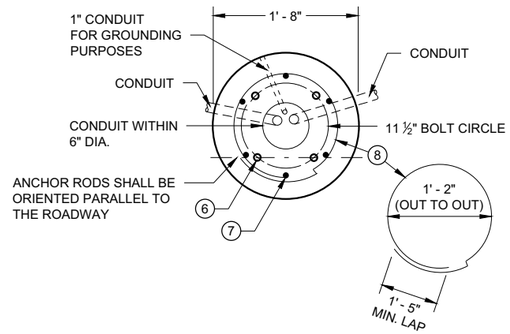
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

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




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

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

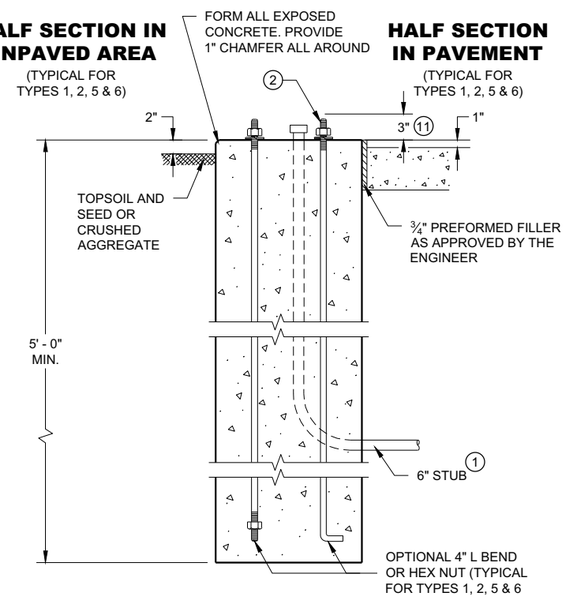
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

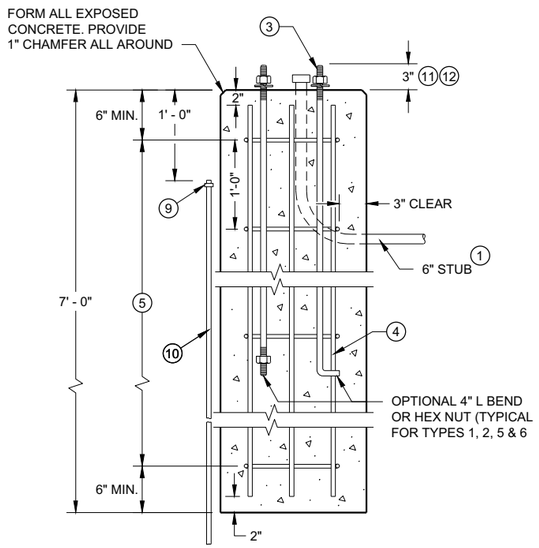
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

**HALF SECTION IN UNPAVED AREA**
(TYPICAL FOR TYPES 1, 2, 5 & 6)

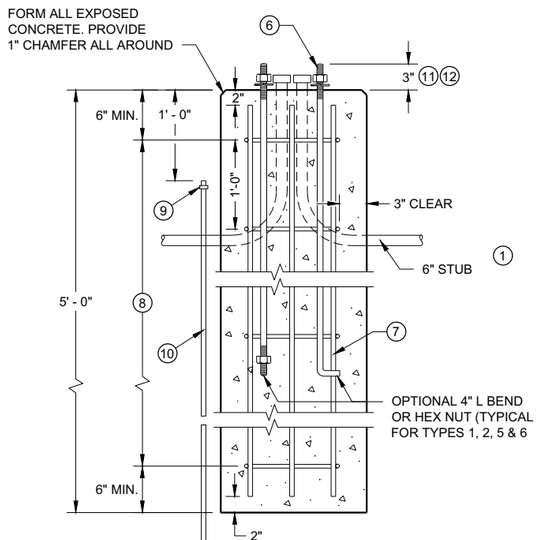
**HALF SECTION IN PAVEMENT**
(TYPICAL FOR TYPES 1, 2, 5 & 6)




TYPE 1




TYPE 2




TYPE 5 & 6

## CONCRETE BASES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

## GENERAL NOTES

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

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

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

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

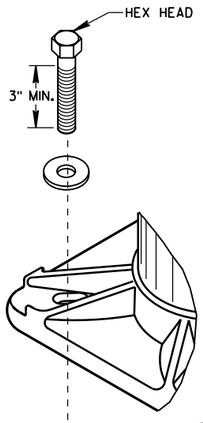
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

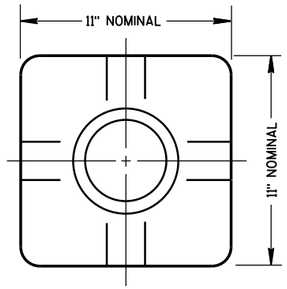
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

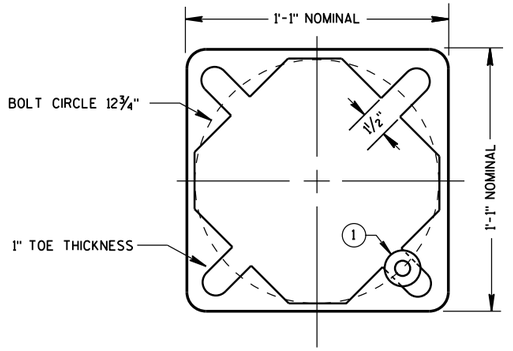
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

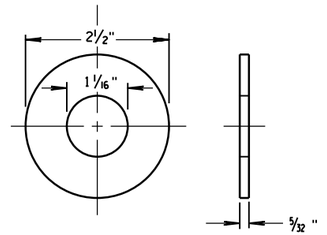



TOP VIEW
(PEDESTAL BASE)

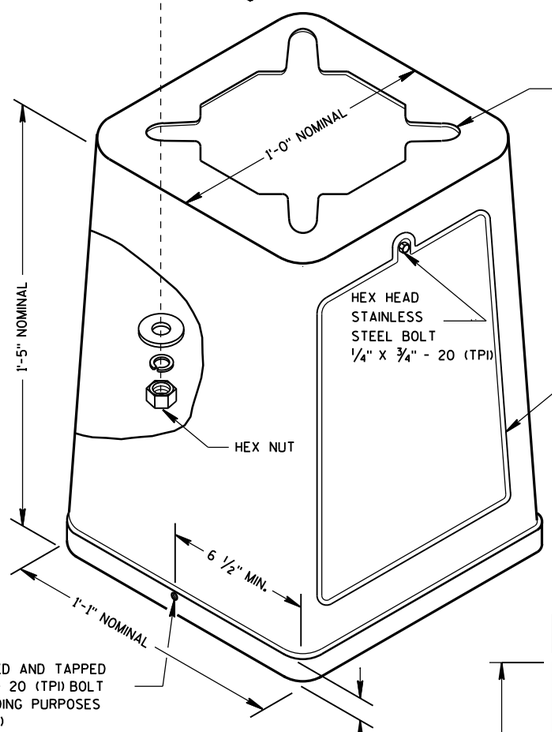



BOTTOM VIEW
(PEDESTAL BASE)

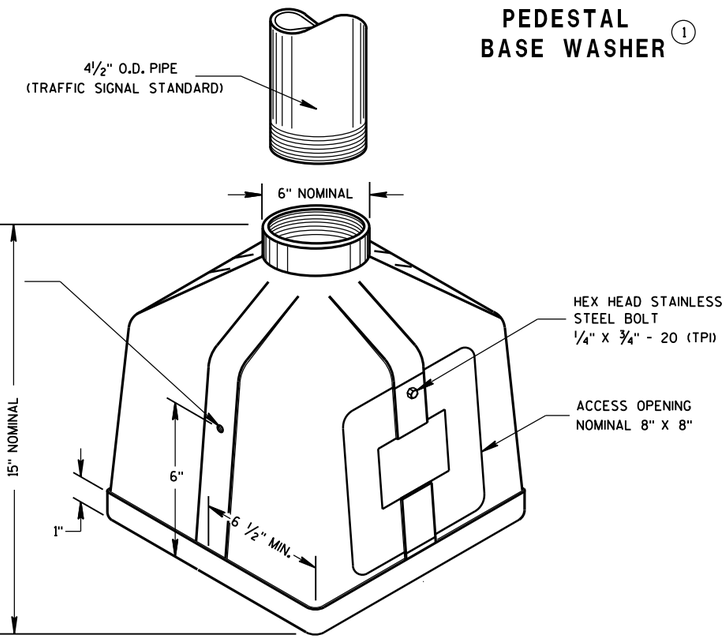



ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

**PEDESTAL BASE WASHER** (1)

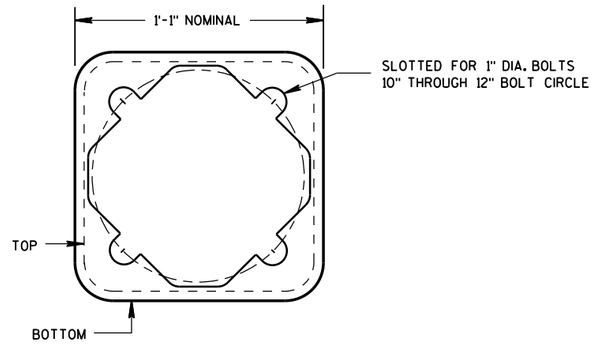



ISOMETRIC VIEW

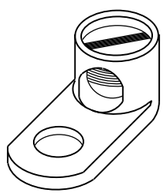



ISOMETRIC VIEW

**PEDESTAL BASE**




BOTTOM VIEW
(TRANSFORMER BASE)

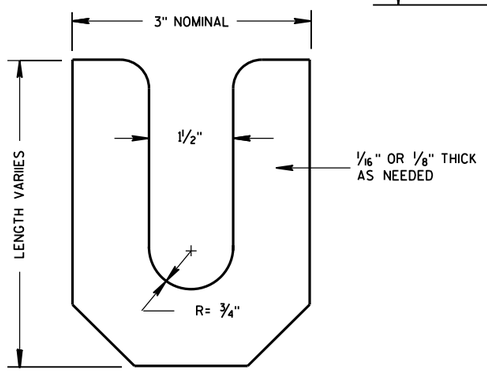


**TYPICAL MECHANICAL CONNECTOR LUG**

TO BE FURNISHED WITH EACH BASE

**TRANSFORMER BASE**

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




**LEVELING SHIM**

**TRANSFORMER/PEDESTAL BASES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



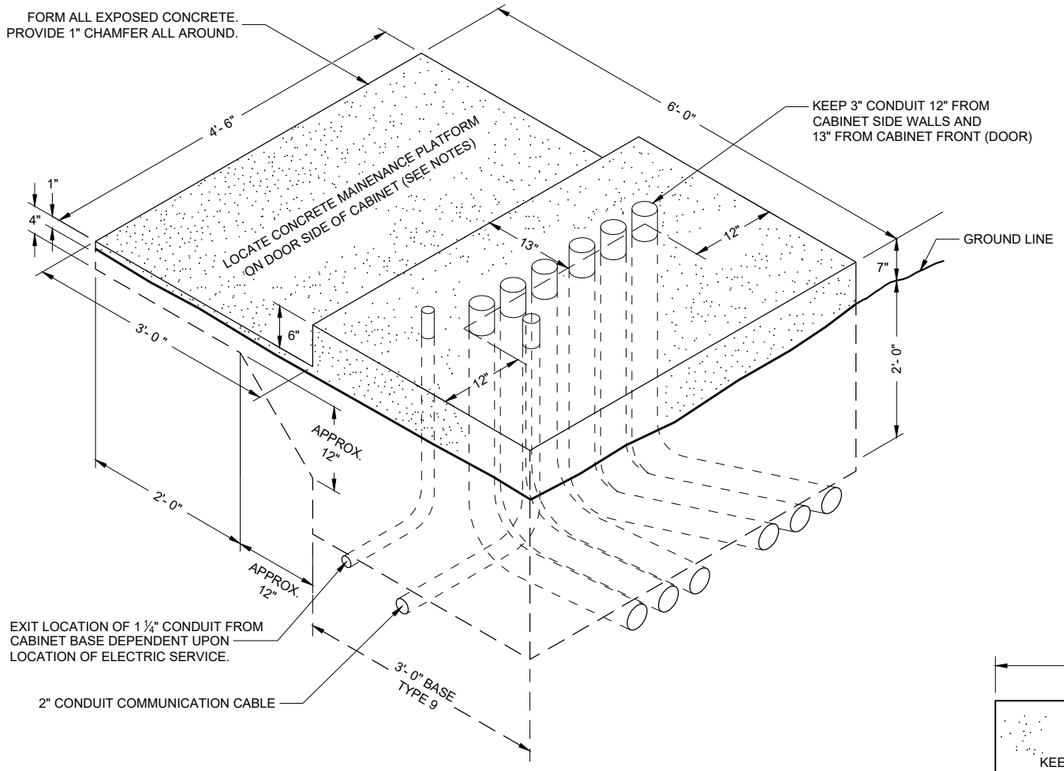
6

S.D.D. 9 C 3-4

6

S.D.D. 9 C 3-4

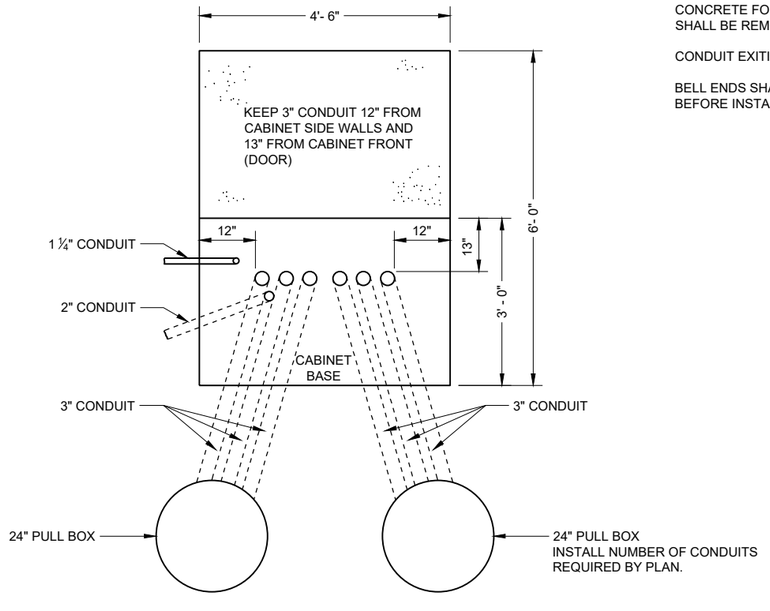
# SDD 09C06 Concrete Control Cabinet Base, Type 9, Special




**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 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 NON - METALLIC 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 LEVEL.

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

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

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

CONDUIT EXITING THE CONCRETE BASE (SIX 3") SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

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

**CONCRETE CONTROL CABINET BASE TYPE 9, SPECIAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA

## GENERAL NOTES

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

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 AROUND 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.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

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

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

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

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 4 ½ 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 CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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, U.L. 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.

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.

(1) 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.

(2) (6) 1 ¾" DIA. X 7' - 2" ANCHOR RODS

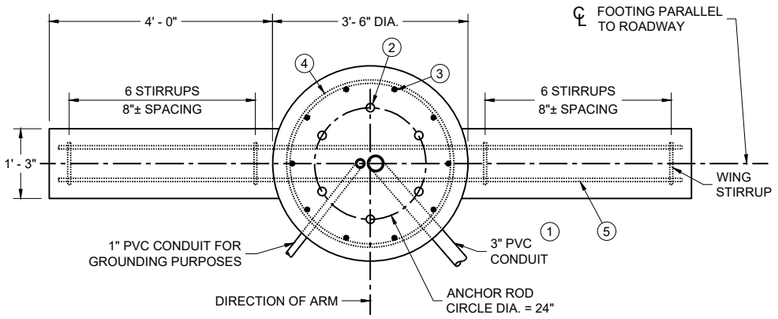
(3) (10) NO. 6 X 14' - 1" BAR STEEL VERTICAL REINFORCEMENT.

(4) (22) NO. 5 X 11'- 0" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

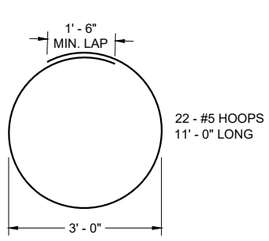
(5) (10) NO. 5 X 11' - 0" BAR STEEL HORIZONTAL REINFORCEMENT

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 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.

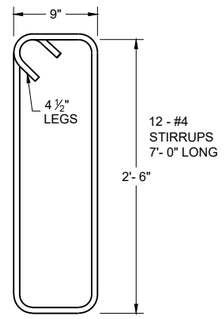
** RODENT PROTECTION REQUIRED



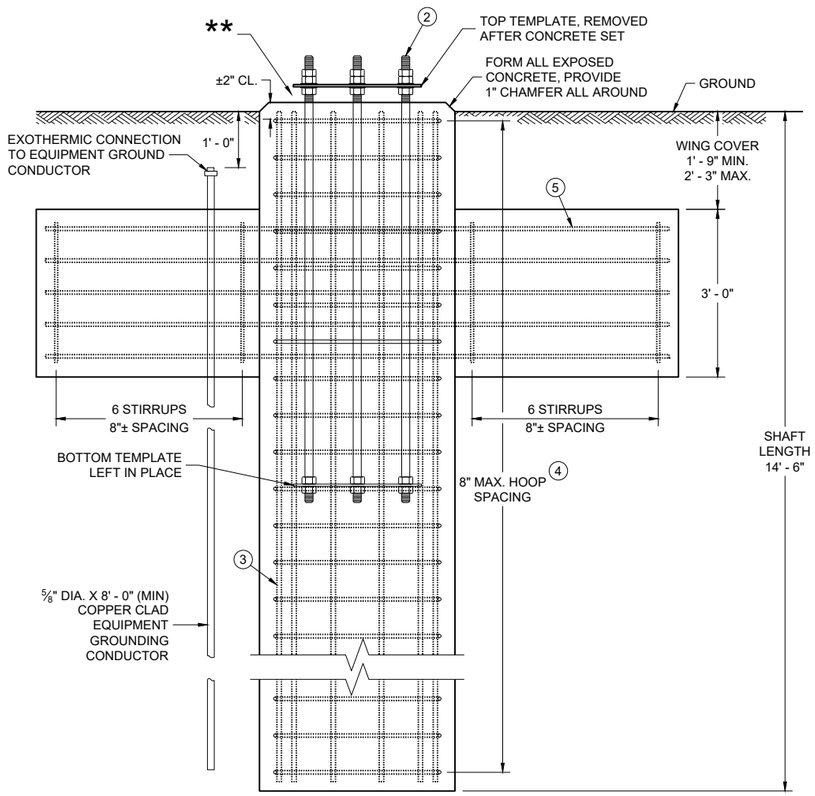

**PLAN VIEW**



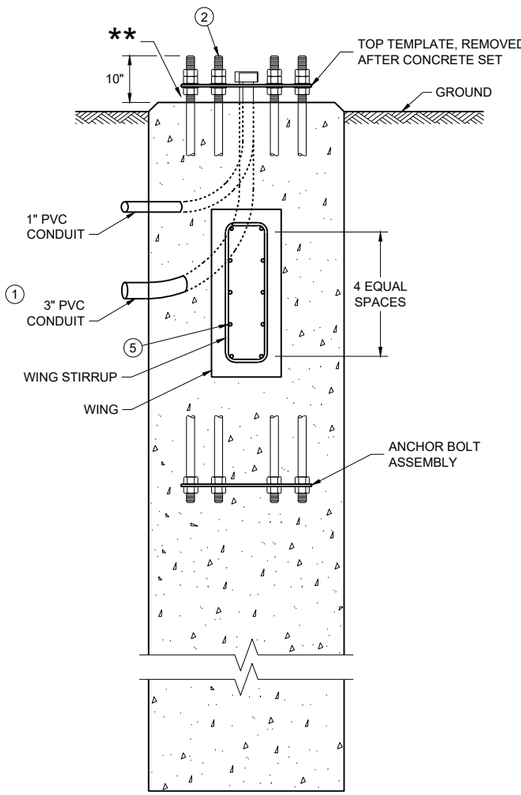

**HOOP DETAIL**




**WING STIRRUP DETAIL**




**ELEVATION VIEW**
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)




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

## CONCRETE BASE, TYPE 13

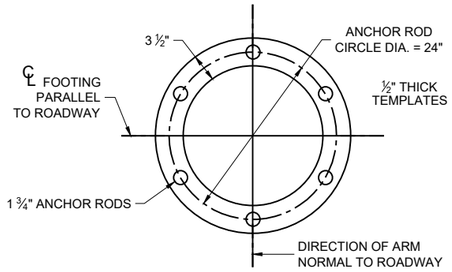
### (FOR TYPE 12, TYPE 13 AND OVER HEIGHT (OH) POLES)

CONCRETE = 6.3 CUBIC YARD
H.S. REINFORCEMENT = 635 LBS.

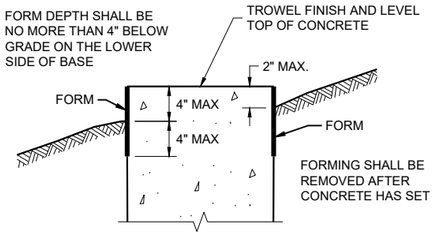
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION

**CONCRETE BASE TYPE 13**

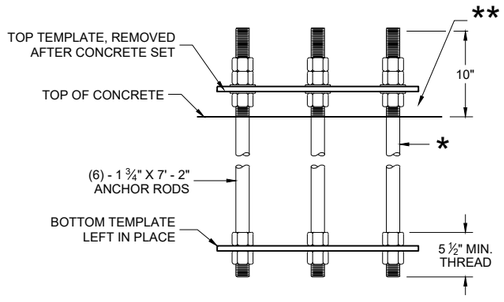
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




**TOP AND BOTTOM TEMPLATE**




**FORMING DETAIL**




**ANCHOR ROD ASSEMBLY DETAILS**

* THREAD TOP 11" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

** RODENT PROTECTION REQUIRED

**CONCRETE BASE TYPE 13**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA



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SDD 09C12-10b

SDD 09C12-10b

## GENERAL NOTES

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

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

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE 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.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

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

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

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

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

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

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 ½" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

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

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

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

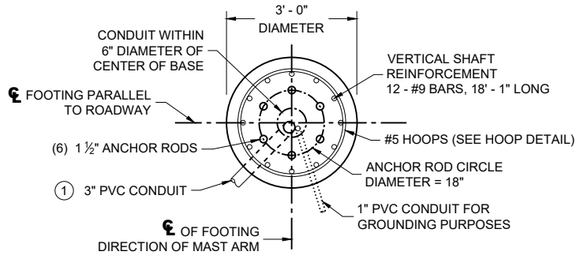
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

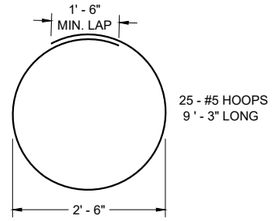
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

(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 (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

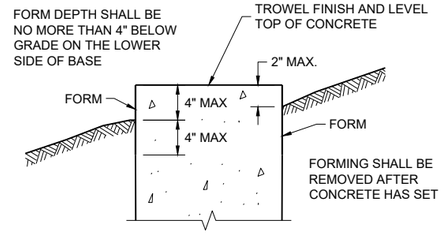
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55.....fy = 55,000 p.s.i.
(IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



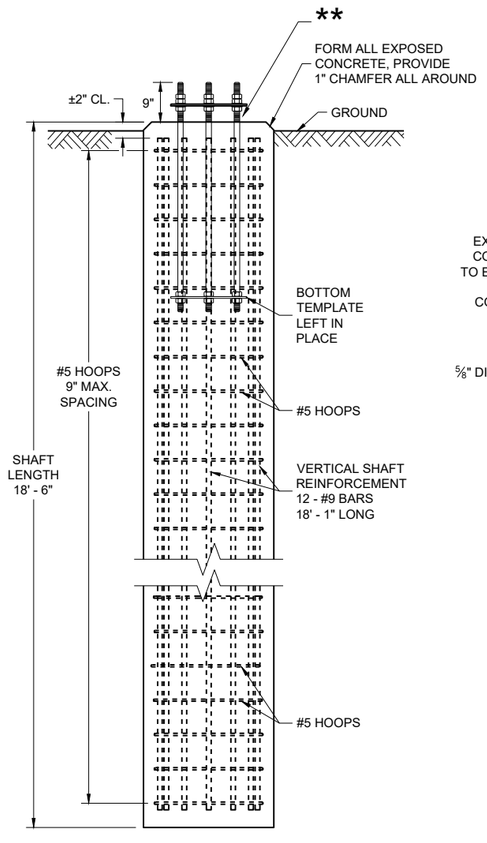

**PLAN VIEW**



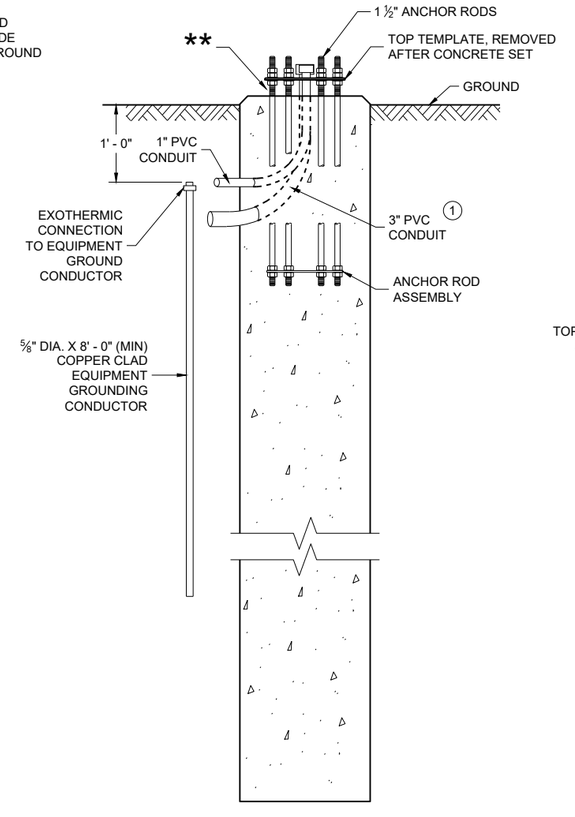

**HOOP DETAIL**



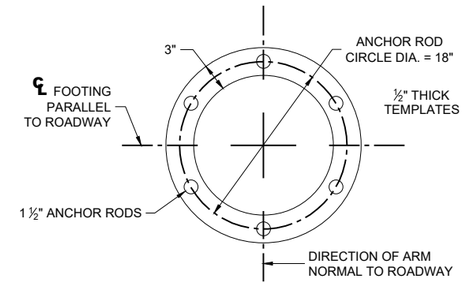

**FORMING DETAIL**



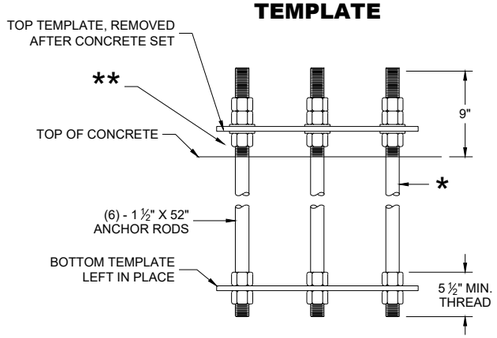

**ELEVATION VIEW**
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)




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




**TOP AND BOTTOM TEMPLATE**




**ANCHOR ROD ASSEMBLY DETAILS**

* THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 ½" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

** RODENT PROTECTION REQUIRED

## CONCRETE BASE, TYPE 10 SPECIAL
## (FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES AND OVER HEIGHT (OH) POLES)

CONCRETE = 4.8 CUBIC YARD
H.S. REINFORCEMENT = 979 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

**CONCRETE BASE TYPE 10 SPECIAL**

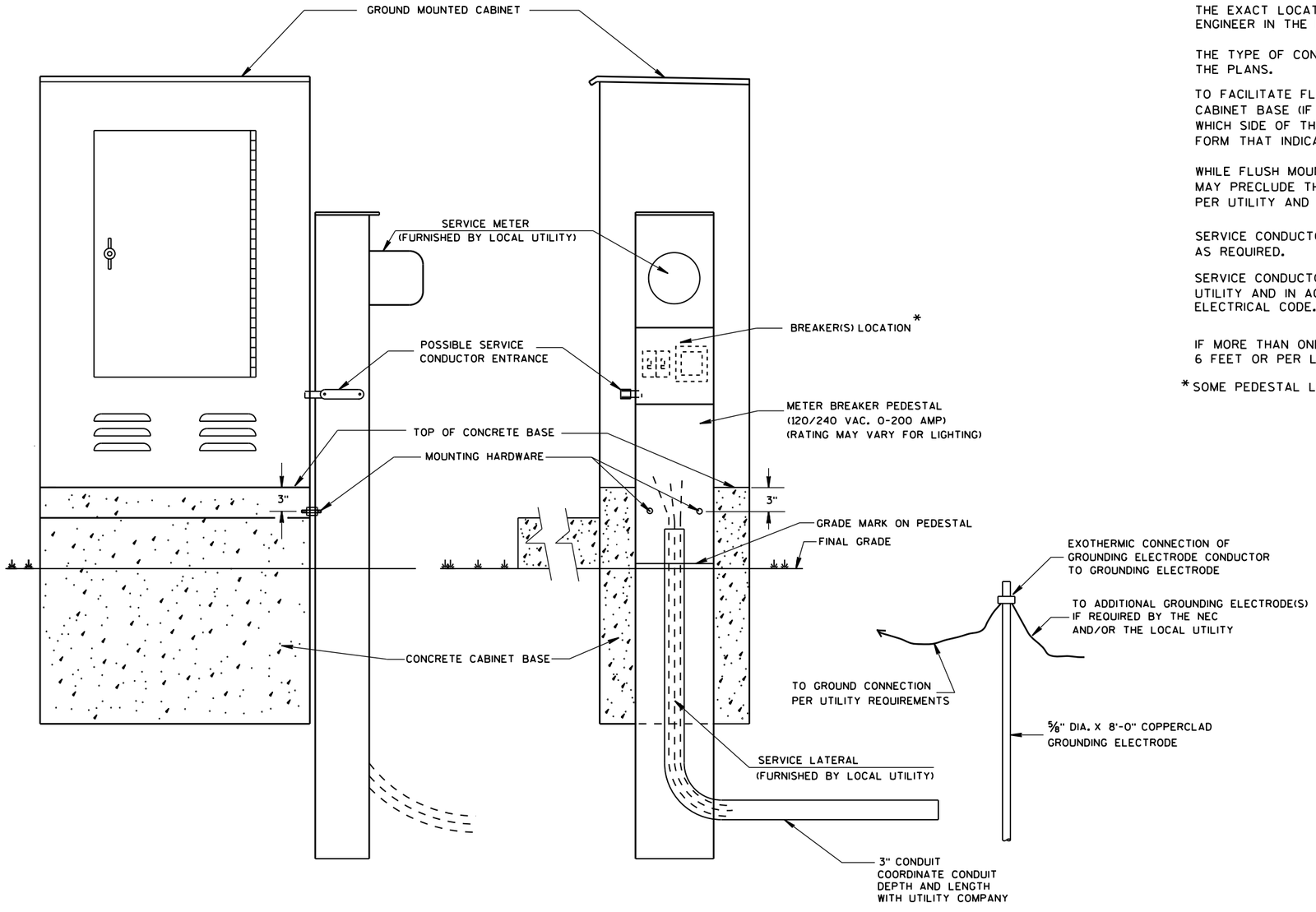
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTURES PROGRAM LEADER

FHWA




6
SDD 09C15-03




**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.

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S.D.D. 9 D 1-5

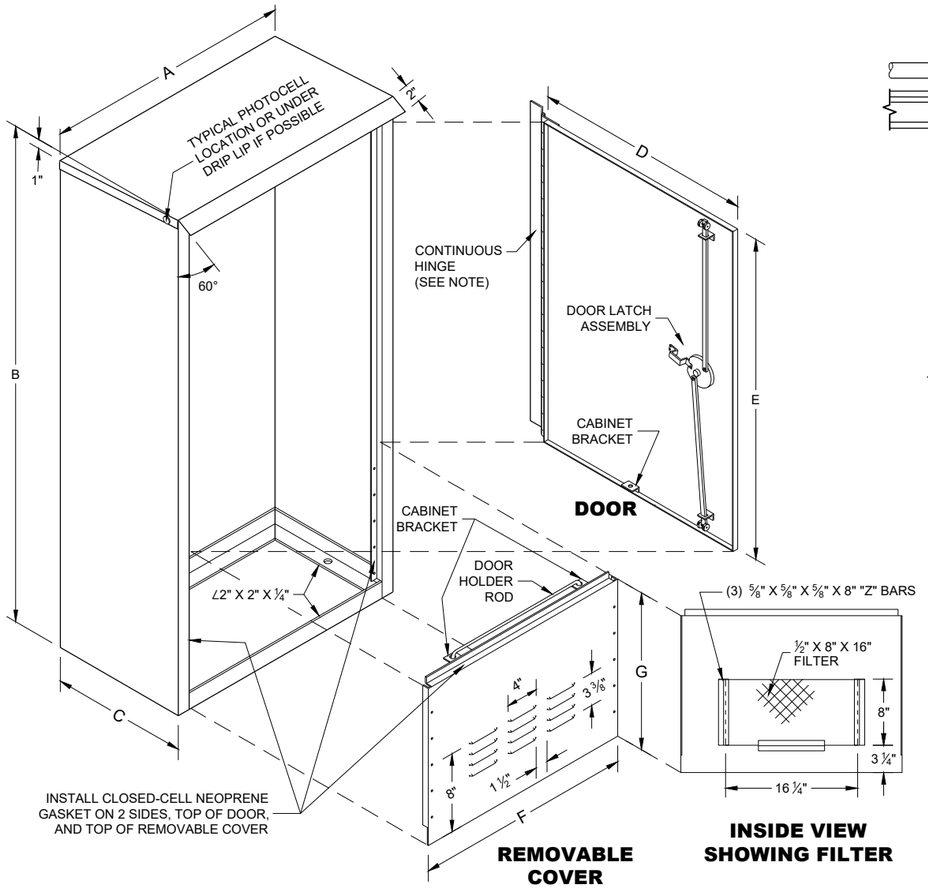
**CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

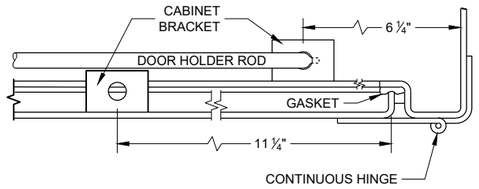



**DOOR**

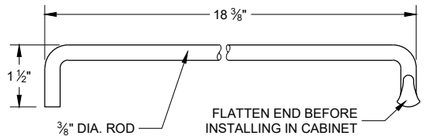
**REMOVABLE COVER**



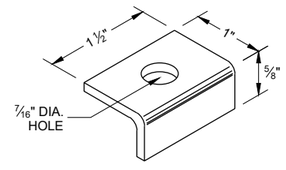

**INSIDE VIEW SHOWING FILTER**



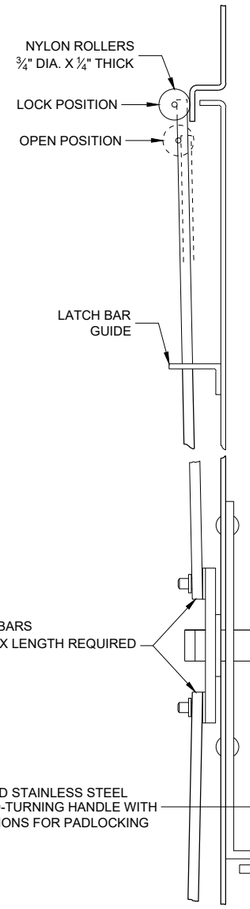

**HINGE AND DOOR HOLDER**

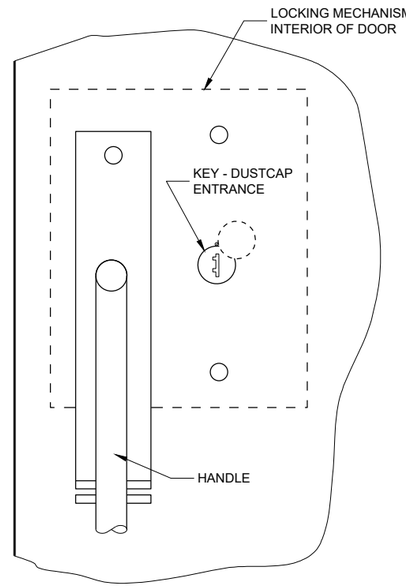



**HOLDER ROD**




**CABINET BRACKET**




**SIDE VIEW** **FRONT VIEW**

**LATCH ASSEMBLY**

## 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.

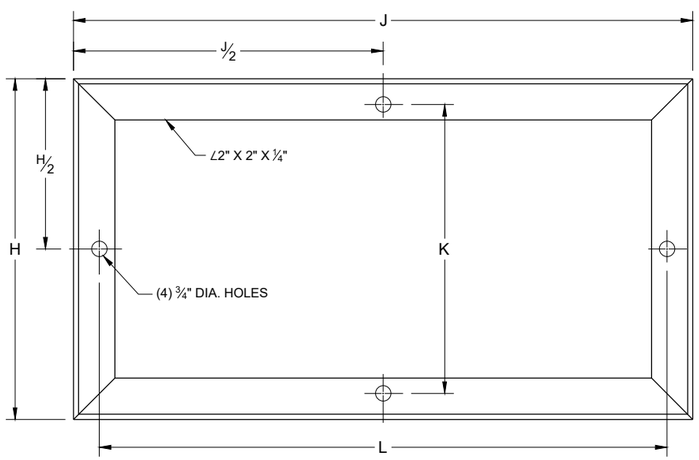
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH ¼" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH ¼" 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.

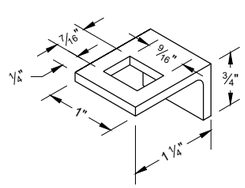
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.




**MOUNTING BASE**

TABLE OF DIMENSIONS (INCHES)

| MARK | CABINET TYPE | | |
|---|---|---|---|
| | 3060 | 3860 | 3866 |
| A | 30 | 38 | 38 |
| B | 60 | 60 | 66 |
| C | 16 ½ | 16 ½ | 24 |
| D | 26 ½ | 34 ¾ | 33 ¾ |
| E | 38 ¾ | 38 ¾ | 38 ¾ |
| F | 26 ½ | 34 ¾ | 33 ¾ |
| G | 19 | 19 | 25 |
| H | 16 ½ | 16 ½ | 24 |
| H/2 | 8 ¼ | 8 ¼ | 12 |
| J | 30 | 38 | 38 |
| J/2 | 15 | 19 | 19 |
| K | 13 ¾ | 13 ¾ | 21 ¼ |
| L | 27 ½ | 35 ½ | 35 ½ |




**LATCH BAR GUIDE**

**SIGNAL CONTROL CABINET**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE

/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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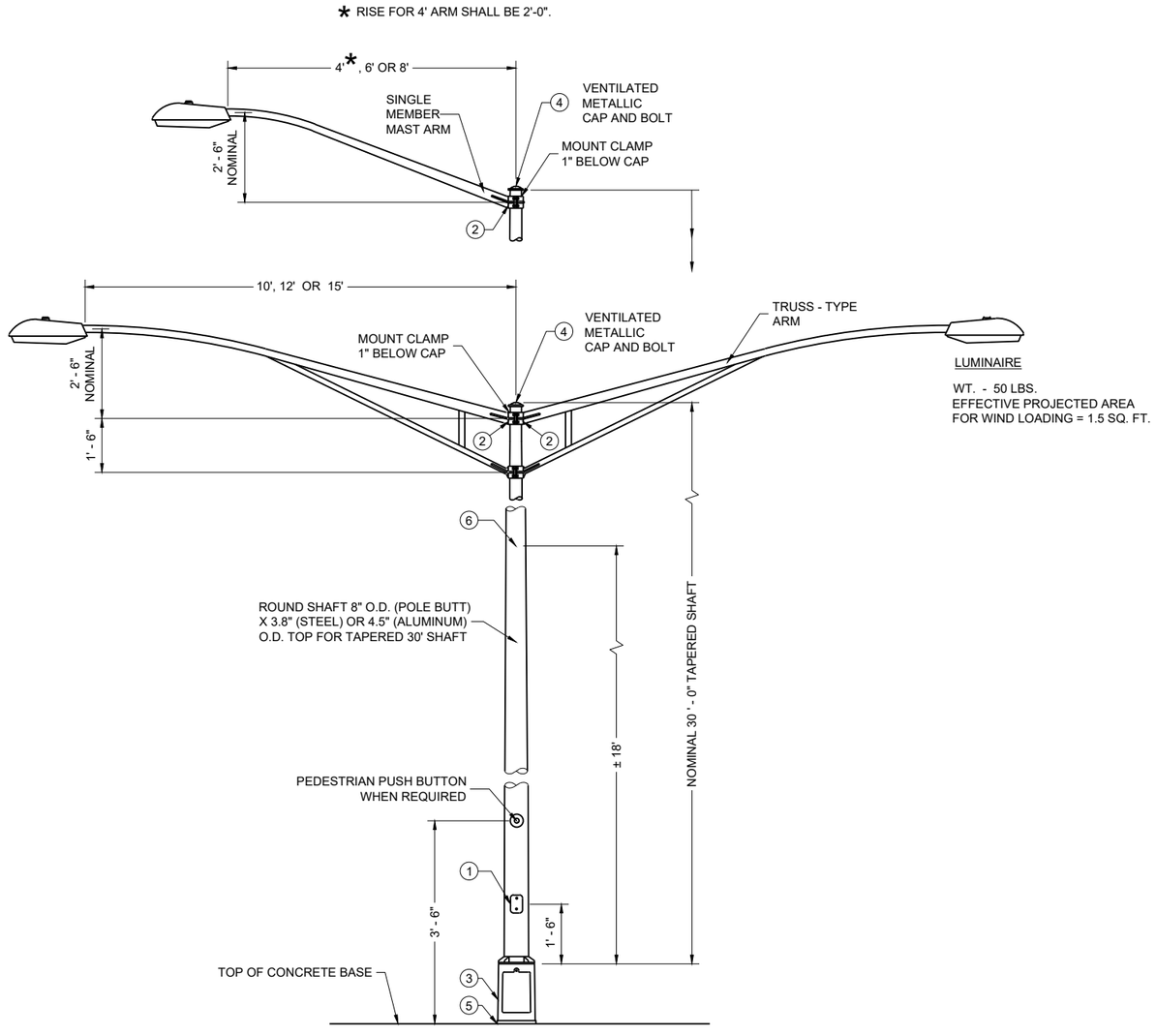
FHWA

SDD 09D02 - 03

SDD 09D02 - 03

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**TYPE 5 POLE MOUNTING CONFIGURATION**

**(MAXIMUM LOAD)**

**LIGHTING ONLY**

## GENERAL NOTES

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

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

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

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

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

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

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜" 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"X¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

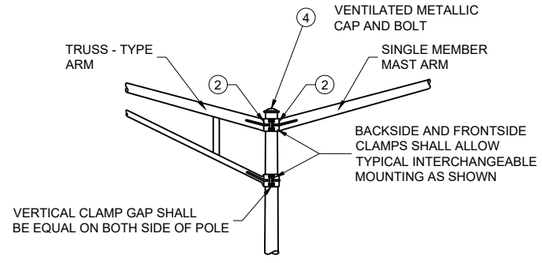
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ¼"X¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT. ONE (1)

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

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



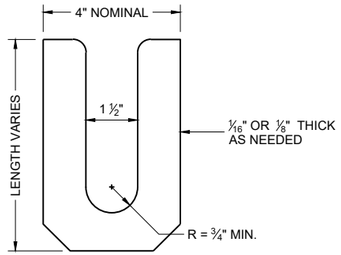

**INTERCHANGEABLE MOUNTING DETAIL**

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

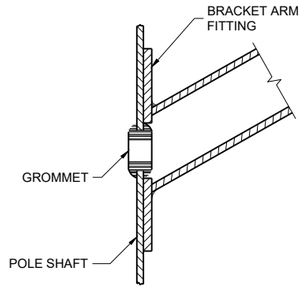


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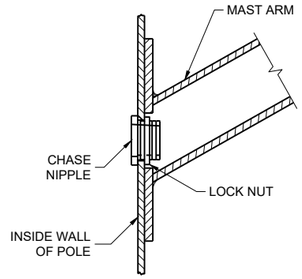



①

**LEVELING SHIM**
**SHALL BE ALUMINUM**




**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**




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

## GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

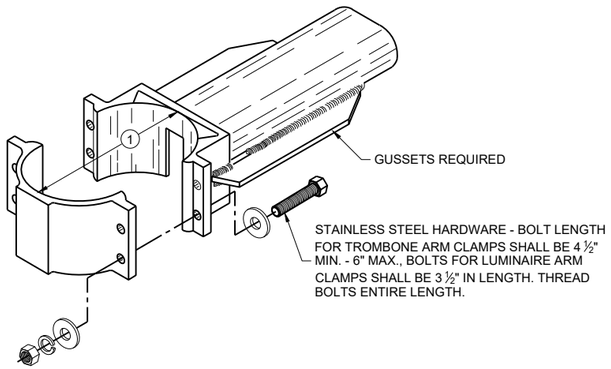
① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

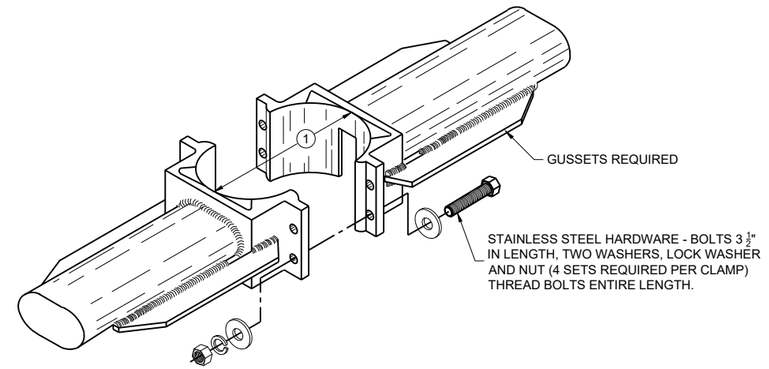
③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

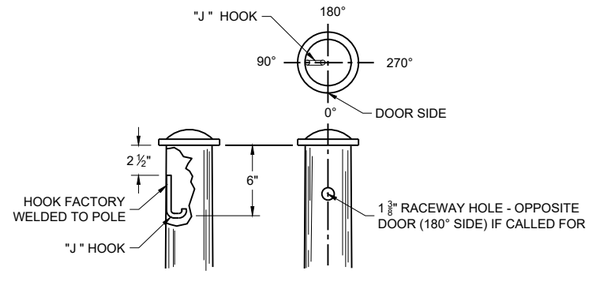
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



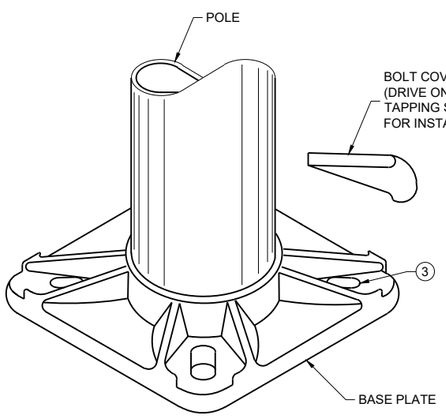

**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



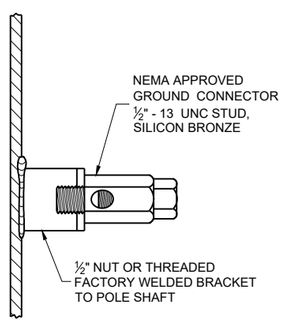

**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**

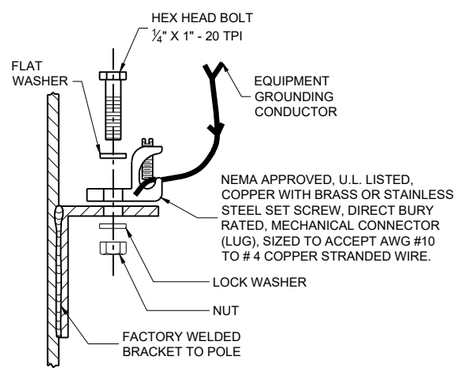


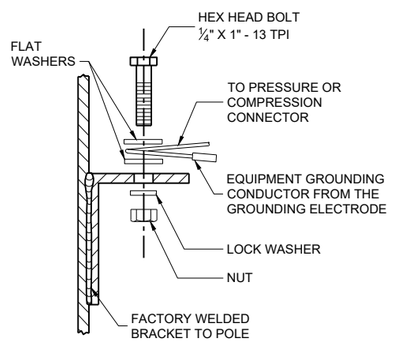

**TYPICAL "J" HOOK LOCATION**




**BASE PLATE**




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

**HARDWARE DETAILS FOR POLE MOUNTING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

FHWA



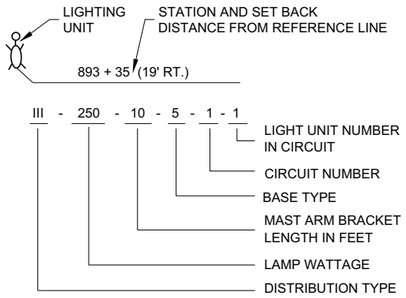

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## GENERAL NOTES

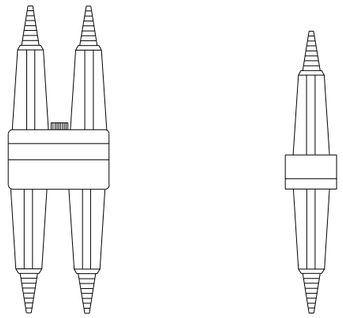
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

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



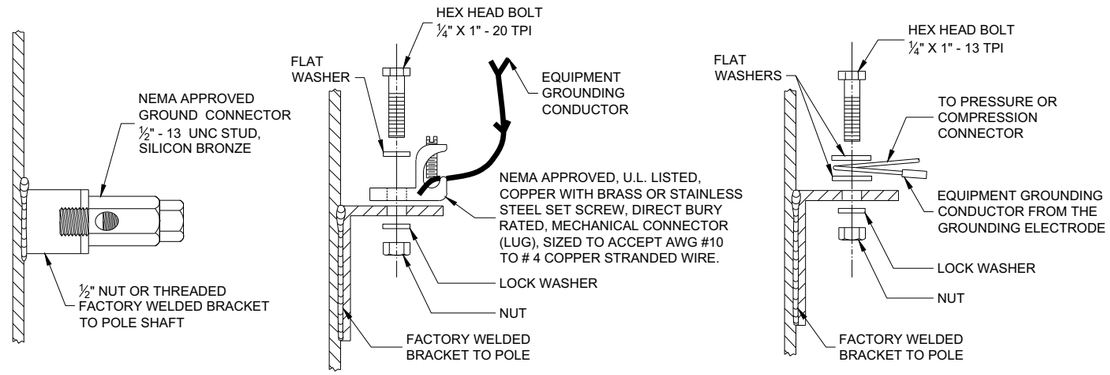

**LIGHTING UNIT CODE**
**(TYPICAL)**



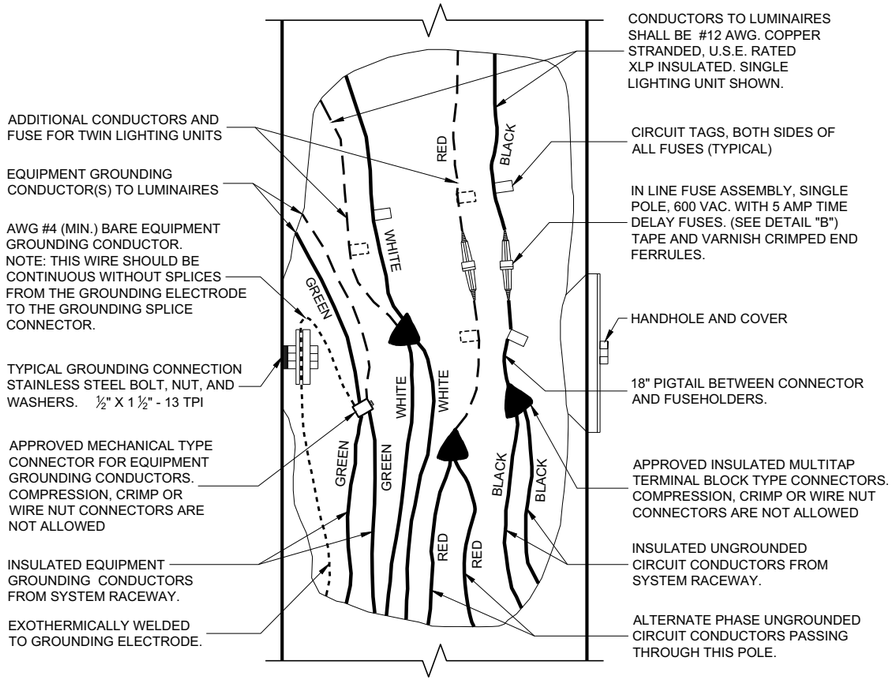
**DETAIL "A"**
**BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT**



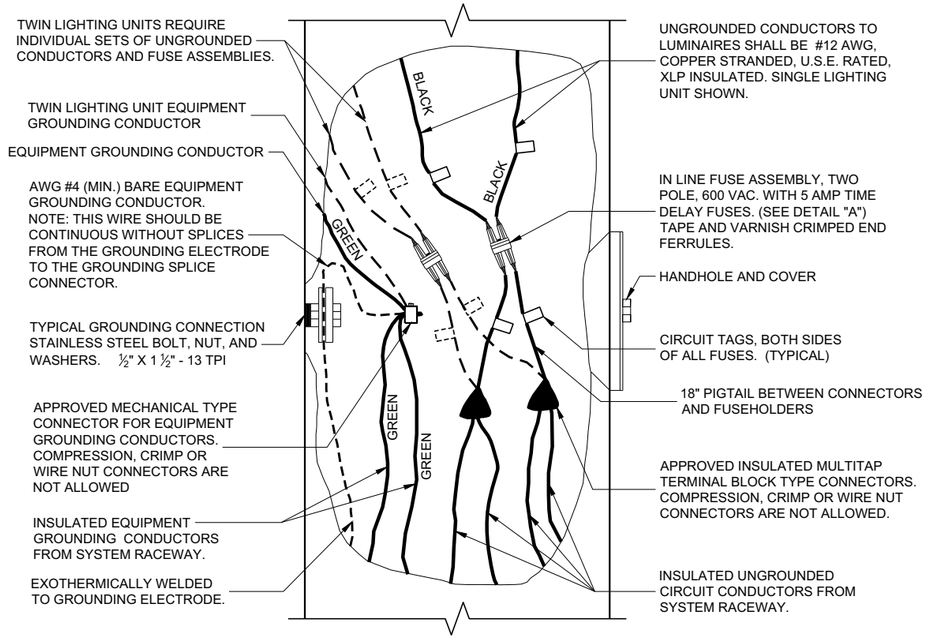
**DETAIL "B"**
**BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT**




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




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



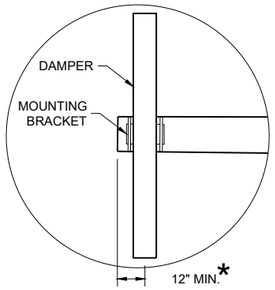

**2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR**

**NON - FREEWAY LIGHTING UNIT POLE WIRING**

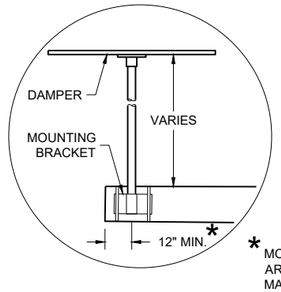
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 131

FHWA

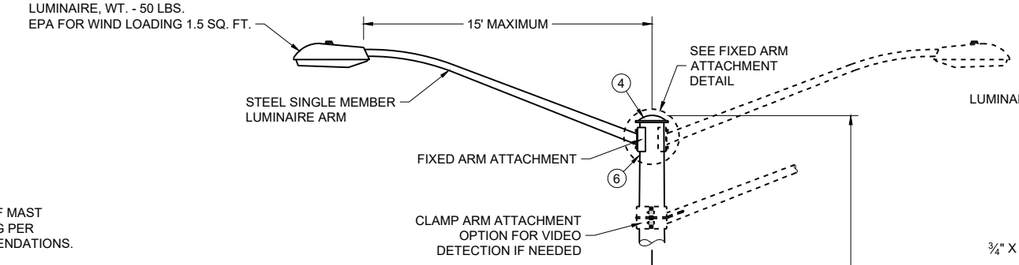


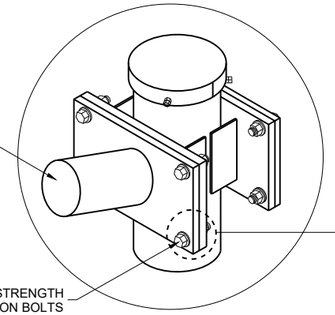

**DUMBBELL VIBRATION DAMPER**



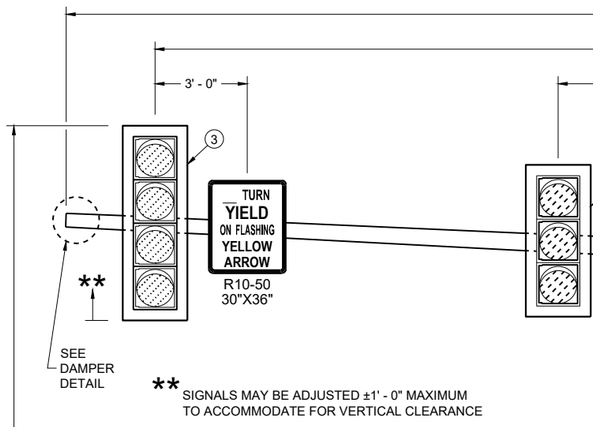

**FLAT VIBRATION DAMPER**

* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.

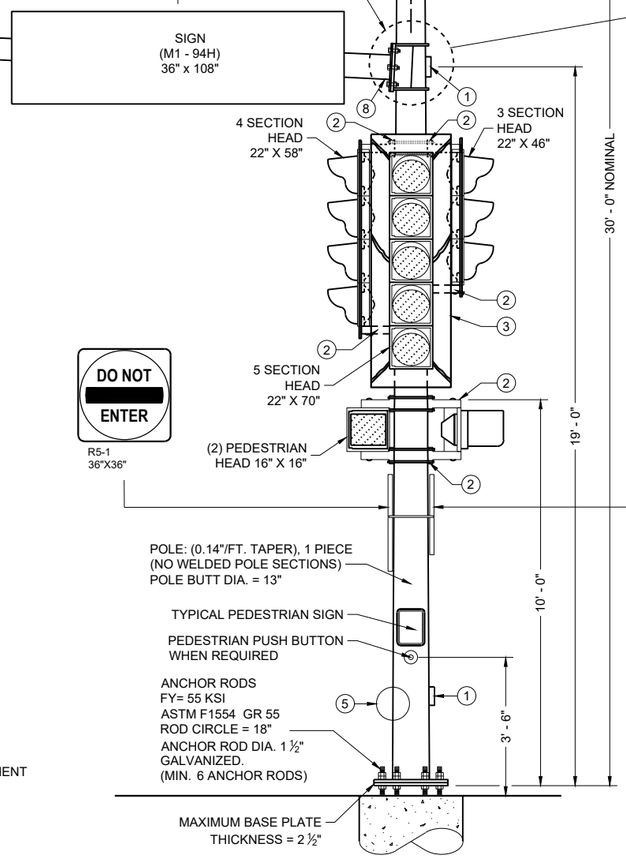


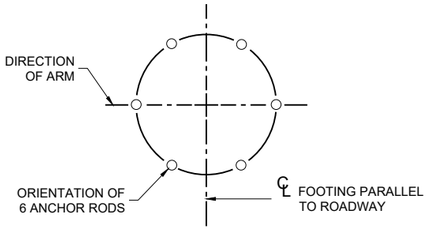




**FIXED ARM ATTACHMENT DETAIL**

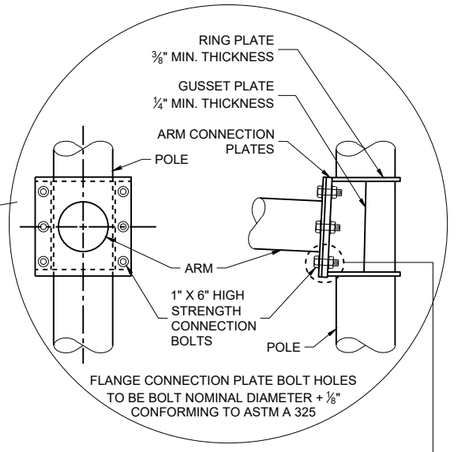



** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

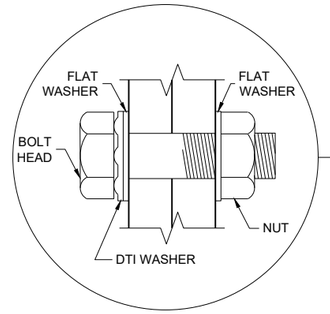



**ANCHOR ROD LOCATION**




**6 BOLT ARM CONNECTION DETAIL**




**RECOMMENDED BOLT ASSEMBLY DETAIL**



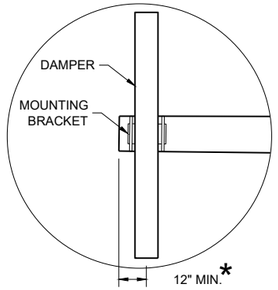

**TYPE 10 SPECIAL POLE**
**40' MONOTUBE ARM**
(MAXIMUM LOAD)

6

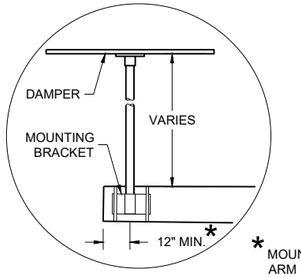
SDD 09E08-11g

**TYPE 10 SPECIAL POLE**
**40' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

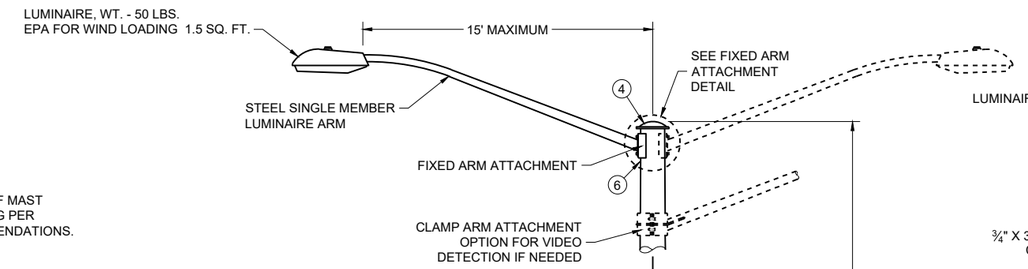


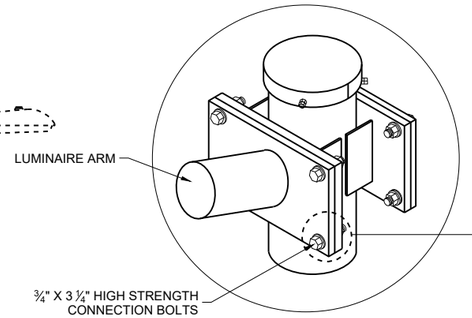

**DUMBBELL VIBRATION DAMPER**



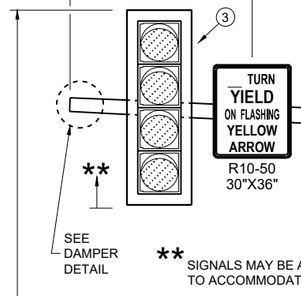

**FLAT VIBRATION DAMPER**

* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.




**FIXED ARM ATTACHMENT DETAIL**




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







**ANCHOR ROD LOCATION**

**TYPE 10 SPECIAL POLE**
**45' MONOTUBE ARM**
(MAXIMUM LOAD)




**6 BOLT ARM CONNECTION DETAIL**

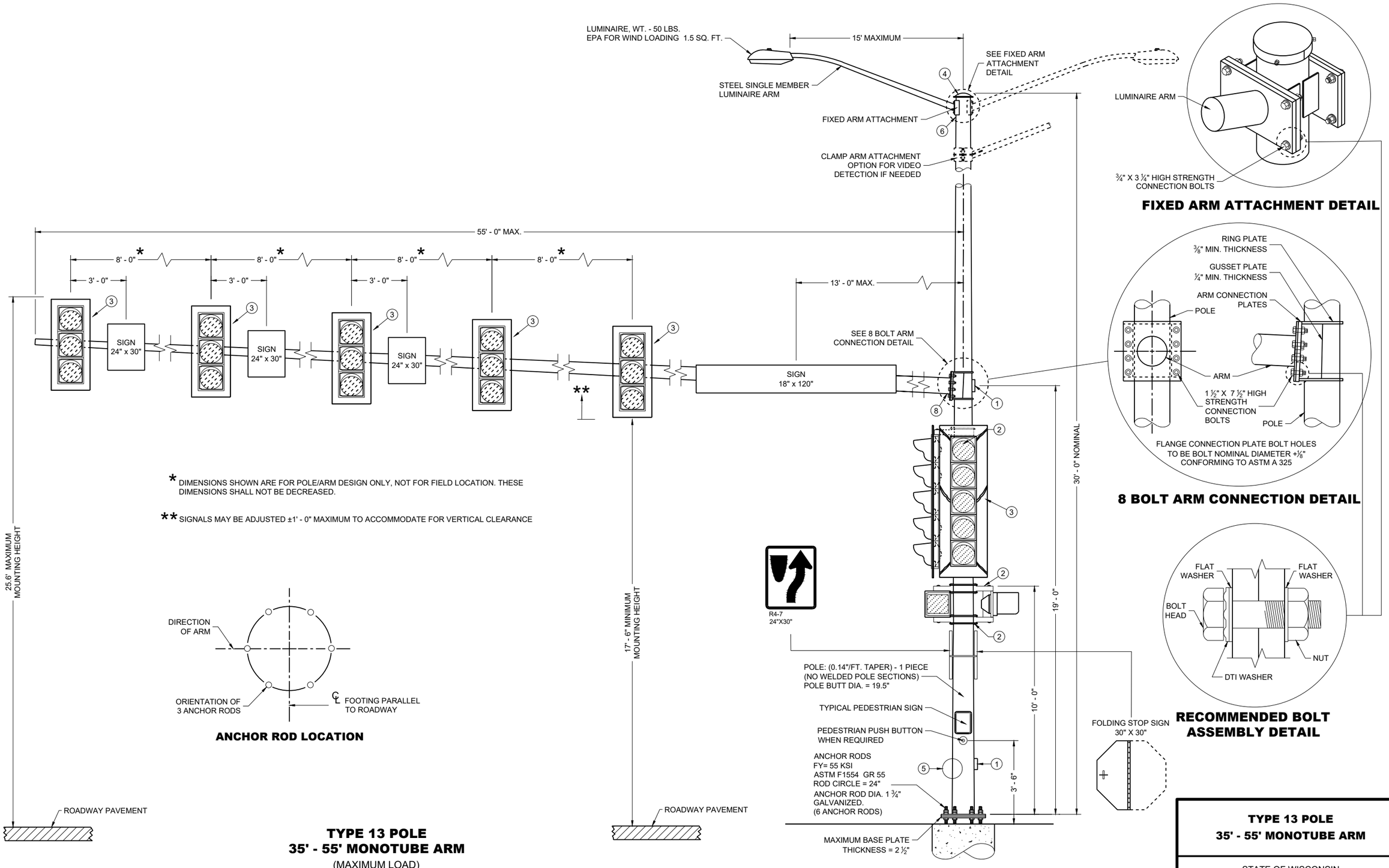



**RECOMMENDED BOLT ASSEMBLY DETAIL**

**TYPE 10 SPECIAL POLE**
**45' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 09E08-11h




* 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 ACCOMMODATE FOR VERTICAL CLEARANCE

**FIXED ARM ATTACHMENT DETAIL**

**8 BOLT ARM CONNECTION DETAIL**

**RECOMMENDED BOLT ASSEMBLY DETAIL**

**ANCHOR ROD LOCATION**

**TYPE 13 POLE**
**35' - 55' MONOTUBE ARM**
(MAXIMUM LOAD)

**TYPE 13 POLE**
**35' - 55' MONOTUBE ARM**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

## GENERAL NOTES

DETAILS OF CONSTRUCTION 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 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

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

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

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

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION 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 "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES 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 TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH ¾" STAINLESS STEEL 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 A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD 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 HAND HOLE 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 SPECIFICATION SECTION 658).

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

(4) THE TOP OF THE POLE SHAFT AND 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 HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR ¼" X ¾" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.

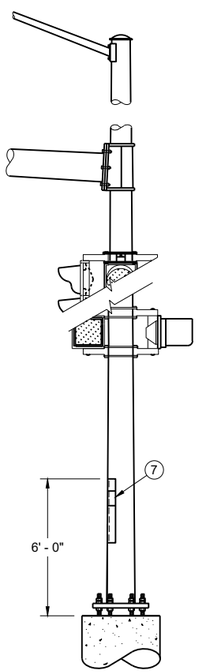
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

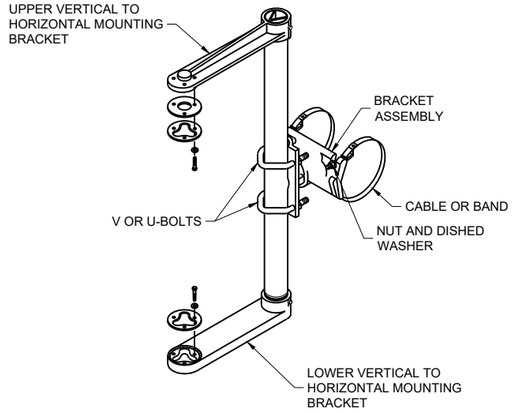
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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.

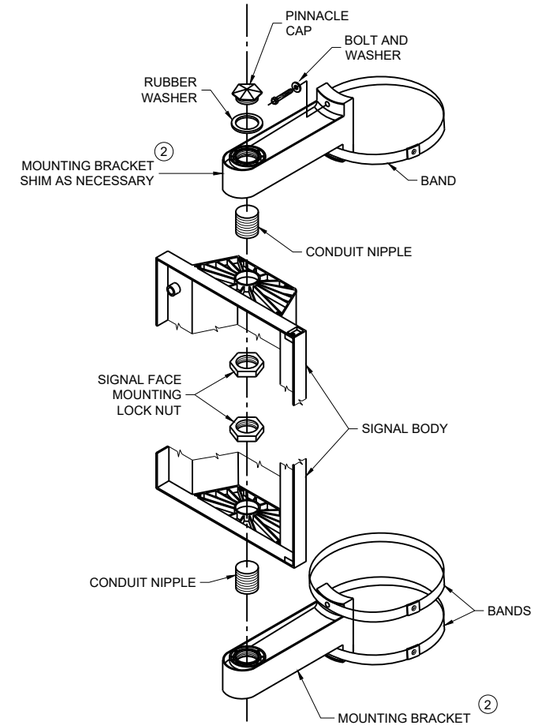



**STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT**

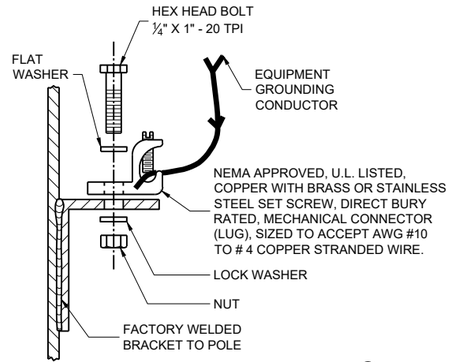



**SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM**

**(MOUNT PER MANFACTURER'S RECOMMENDATION)**

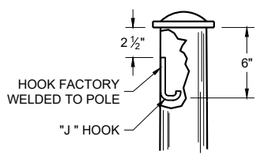



**SIGNAL FACE VERTICAL MOUNTING DETAIL**




**TYPICAL GROUNDING (5) CONNECTIONS**

**NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL**




**TYPICAL "J" HOOK WIRE SUPPORT (6)**

**GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS**

**STATE OF WISCONSIN**
**DEPARTMENT OF TRANSPORTATION**

APPROVED
May 2026
DATE

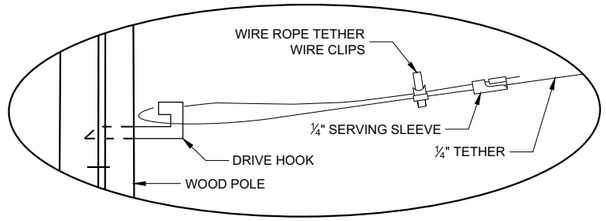
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINFFR

FHWA



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SDD 09E08-11k

| MINIMUM POLE LENGTHS | POLE BURIAL DEPTHS |
|---|---|
| 25' | 5' |
| 30' | 6' |
| 35' | 7' |
| 40' | 8' |
| 45' | 9' |

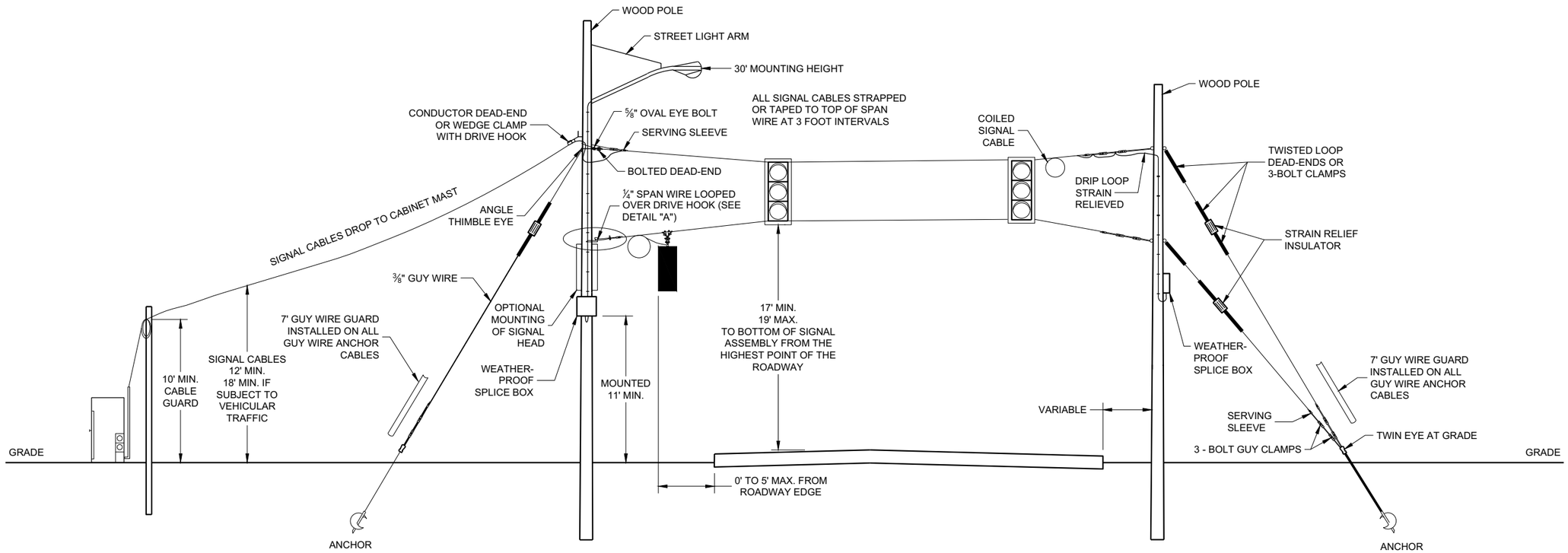



**DETAIL "A"**

## GENERAL NOTES

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

1. WOOD POLES SHALL BE CLASS 4. LENGTH DETERMINED BY SIGNAL PLAN.
2. SIGNAL FACES:
   A. ALL SECTIONS SHALL BE 12" AND POLYCARBONATE.
   B. EACH SHALL CONTAIN A 5" WIDE DULL BLACK POLYCARBONATE BACKPLATE.
   C. EACH SHALL BE WIRED FROM THE TOP SIGNAL MOUNTING BRACKET.
   D. NEAR RIGHT SIGNAL FACE SUSPENDED ON THE TETHER (NO BACKPLATE) SHALL NOT BE OVER THE TRAVELED WAY. IF THE POLE IS WITHIN 5 FEET OF THE TRAVELED WAY MOUNT THE SIGNAL FACE ON THE WOOD POLE WITH BACKPLATE.
3. SPAN WIRE:
   A. EACH SPAN WIRE SHALL BE INDIVIDUALLY DOWN GUYED
   B. SIGNAL AND LIGHTING CABLES SHALL ONLY BE ATTACHED TO THE UPPER SPAN WIRE.
   C. THE SIGNAL ASSEMBLY SHALL HAVE A 17' MIN. HEIGHT ABOVE THE ROADWAY. THIS SHALL BE MEASURED AFTER THE SPAN WIRE INSTALLATION IS COMPLETED WITH ALL CABLES AND SIGNAL FACES IN PLACE. MAINTAIN MINIMUM AND MAXIMUM HEIGHTS AS ROADWAY WORK PROGRESSES.




**SPAN WIRE**
**TEMPORARY SIGNALS**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

FHWA



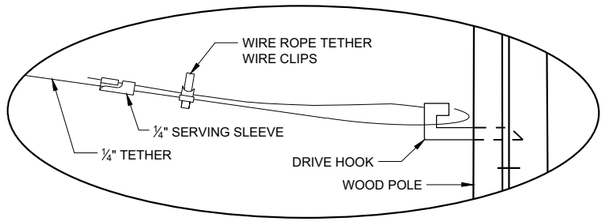
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SDD09G01 - 04a

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SDD09G01 - 04a

| MINIMUM POLE LENGTHS | CLASS | POLE BURIAL DEPTHS |
|---|---|---|
| 25' | V | 5' |
| 30' | V | 6' |
| 35' | IV | 7' |
| 40' | IV | 8' |
| 45' | IV | 9' |

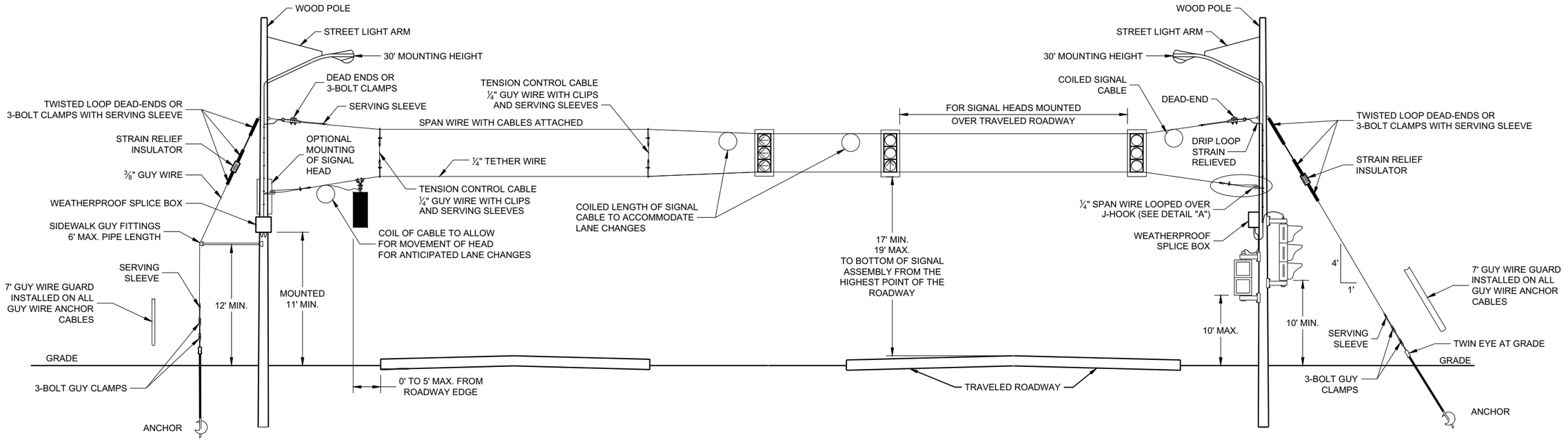



**DETAIL "A"**

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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**SPAN WIRE**
**TEMPORARY SIGNALS**
**4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

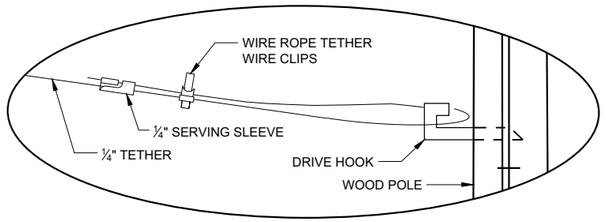
FHWA



SDD09G01 - 04b

SDD09G01 - 04b

| MINIMUM POLE LENGTHS | CLASS | POLE BURIAL DEPTHS |
|---|---|---|
| 25' | V | 5' |
| 30' | V | 6' |
| 35' | IV | 7' |
| 40' | IV | 8' |
| 45' | IV | 9' |

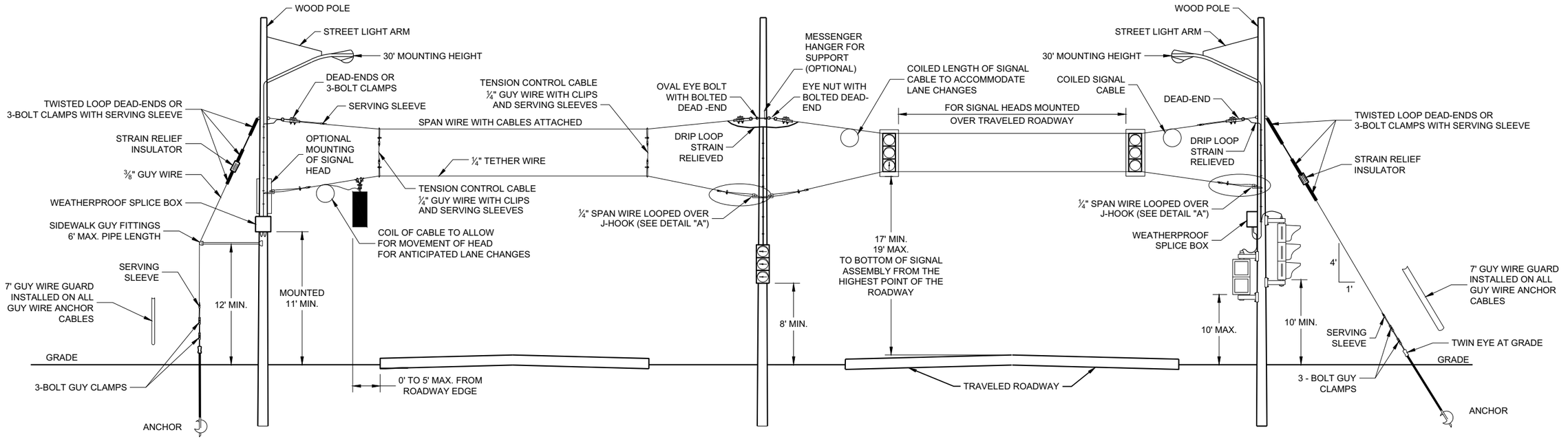



**DETAIL "A"**

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**SPAN WIRE**
**TEMPORARY SIGNALS**
**4 LANE ROADWAYS**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

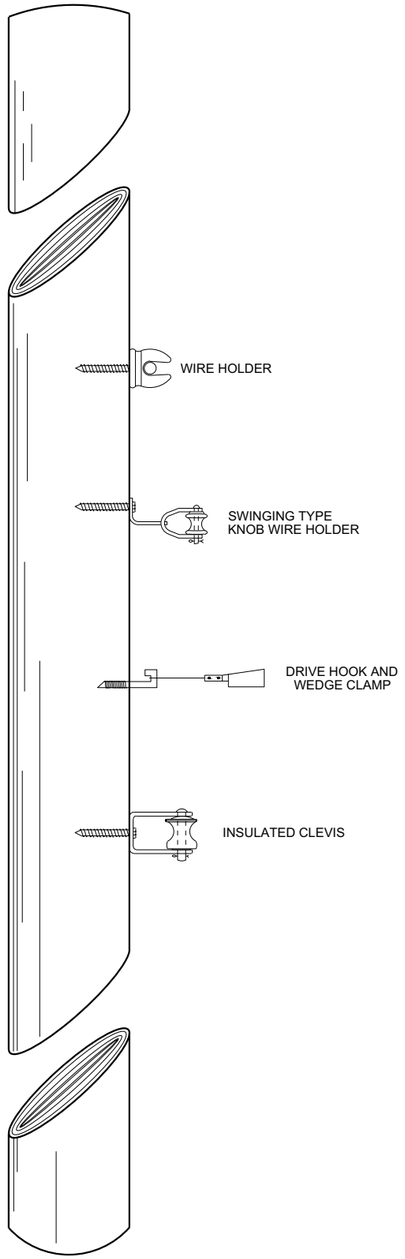
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

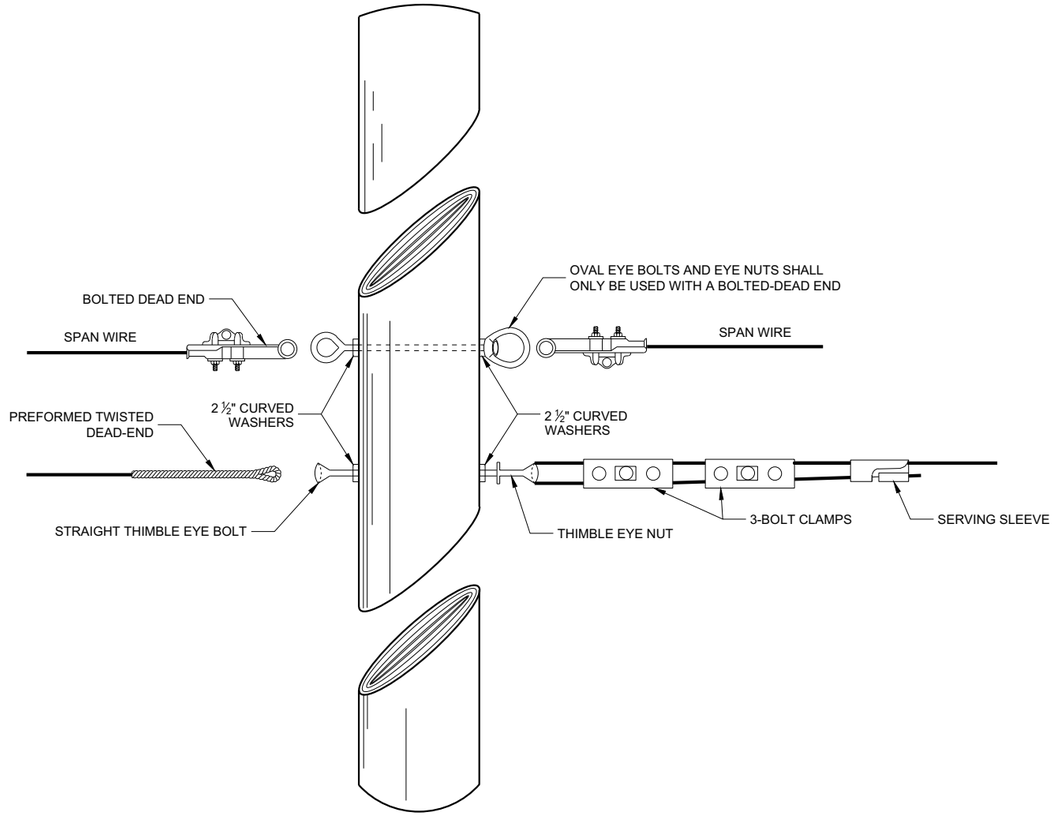
FHWA




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SDD09G01 - 04c




**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA



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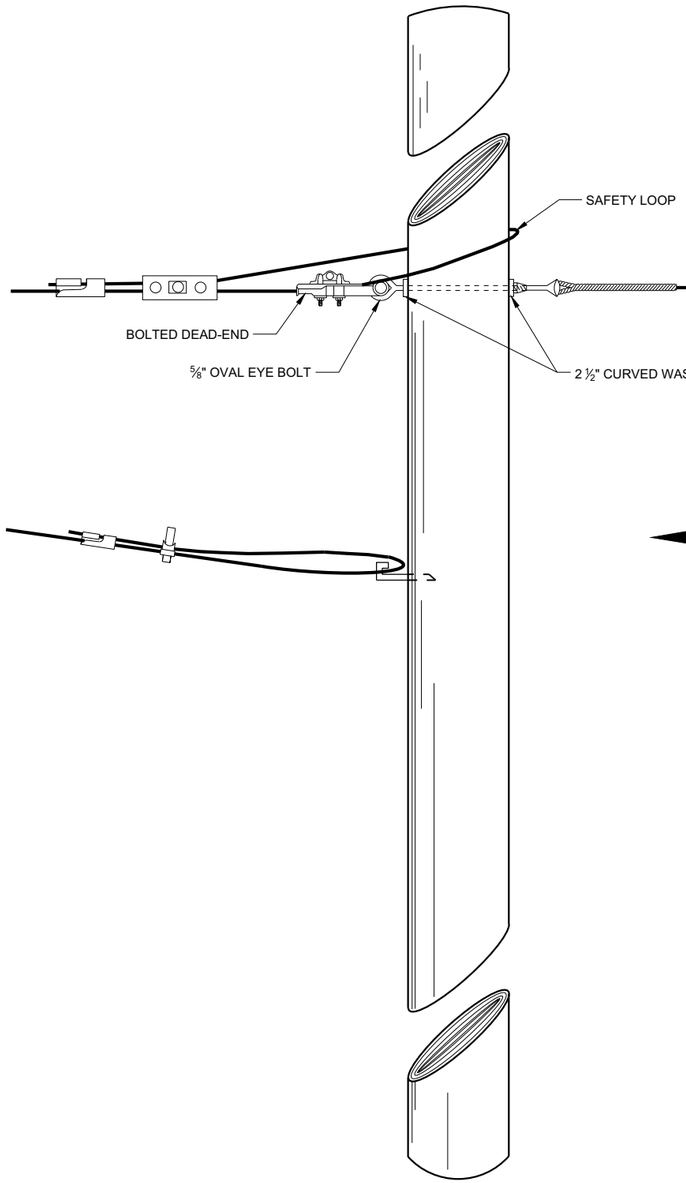
SDD 09G01 - 4d

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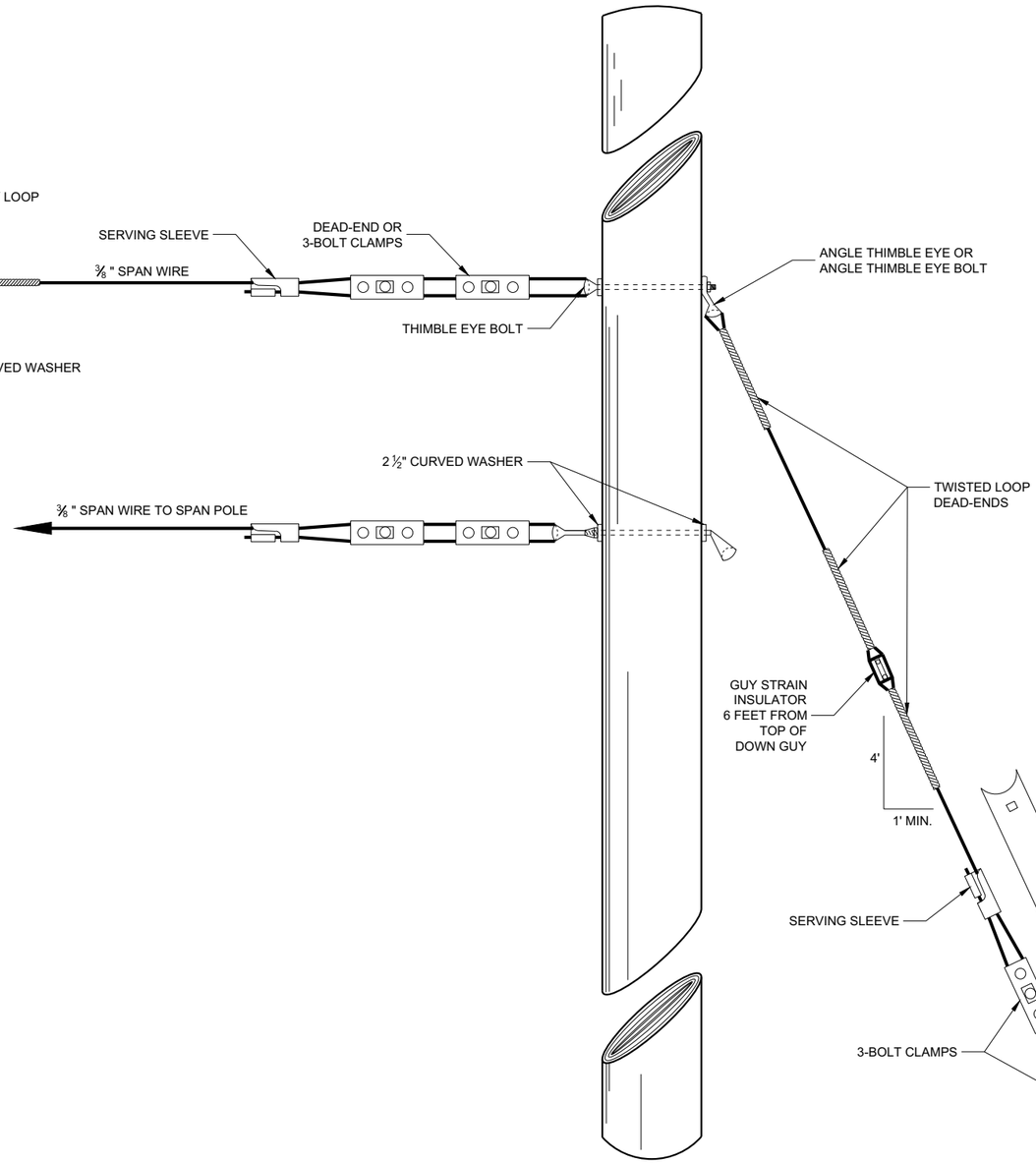
SDD 09G01 - 4d

## GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.




SPAN WIRE POLE




GUY POLE




**TYPICAL DEAD-ENDINGS OR GUYING**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

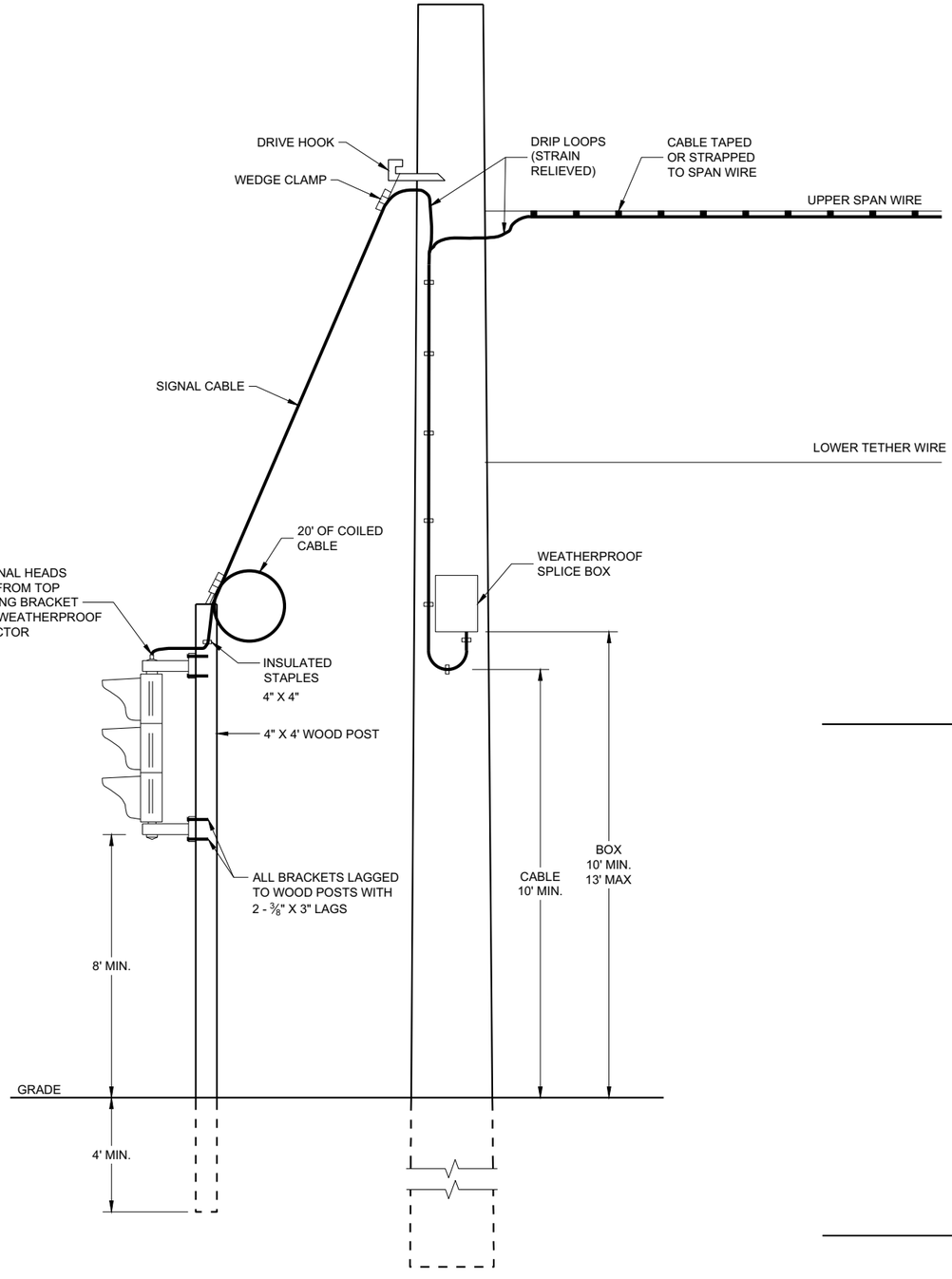
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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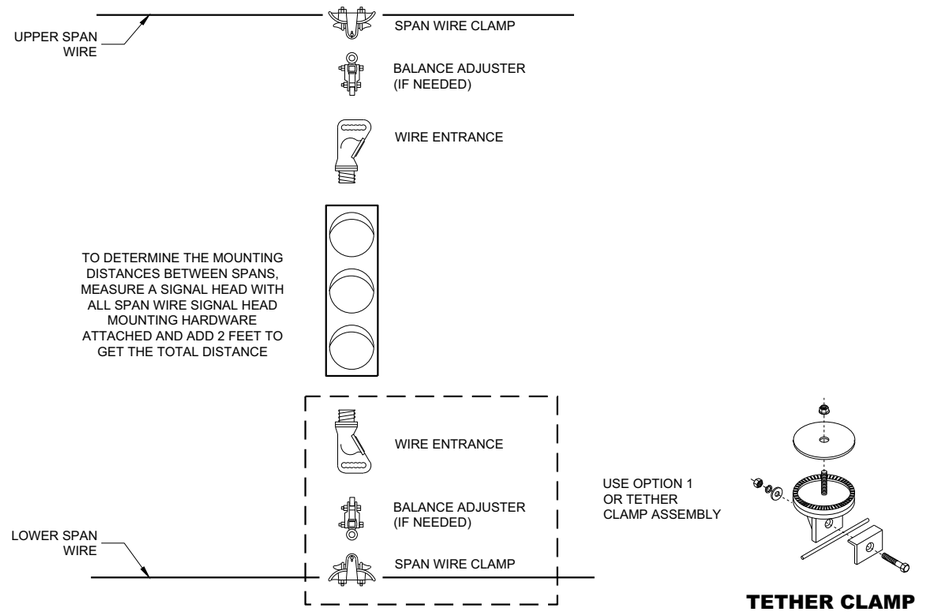



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SDD 09G01 - 4e




**TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL**



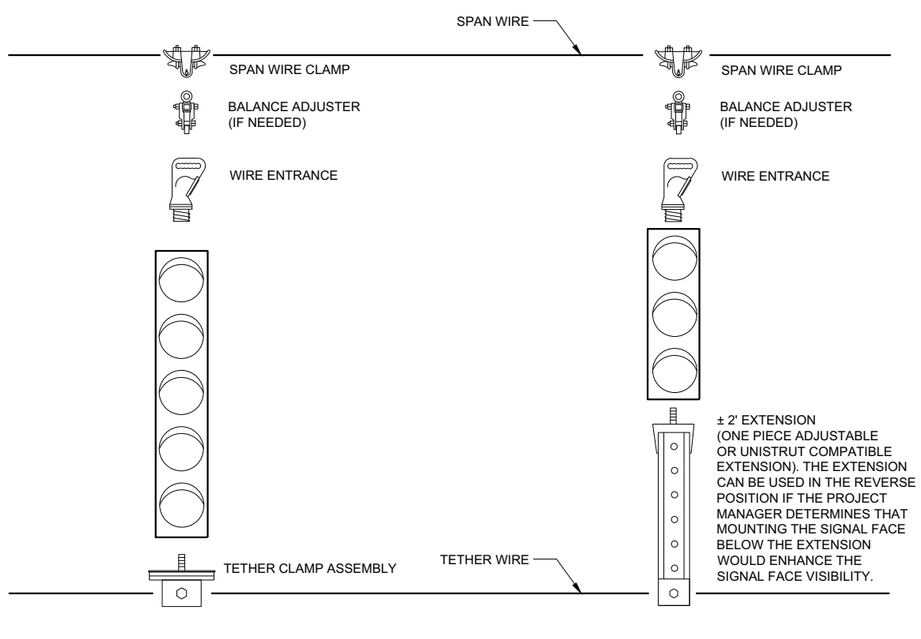

**OPTION 1**

USE OPTION 1 OR TETHER CLAMP ASSEMBLY



**TETHER CLAMP ASSEMBLY OPTION**

## TYPICAL SPAN WIRE MOUNTING HARDWARE




**5 SECTION VERTICAL WITH 3 SECTION VERTICAL ON ONE SPAN WIRE**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

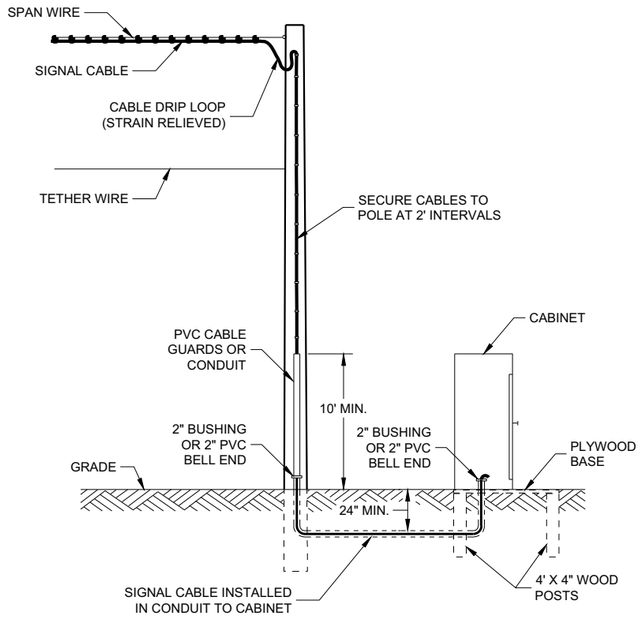
FHWA

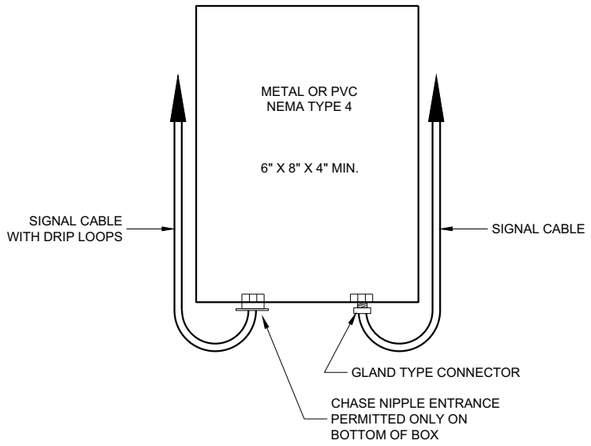




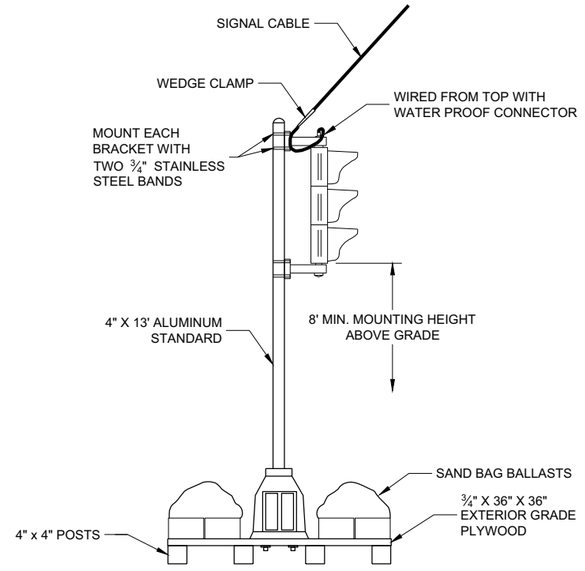
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SDD 09G01 - 4f

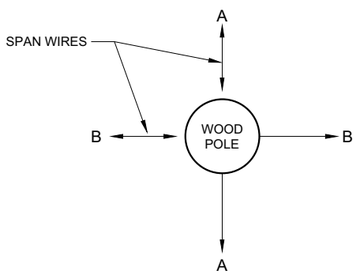



**SPLICE BOX**

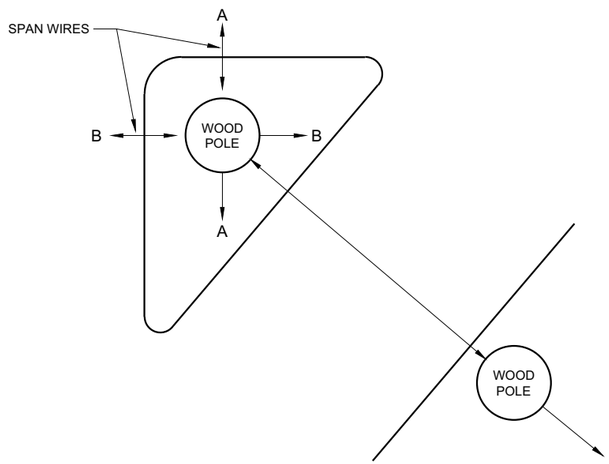



**TYPICAL SKID TYPE TEMPORARY**

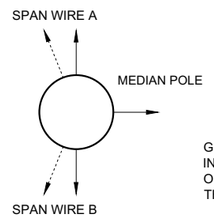



ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

**CORNER POLES**




**ISLAND POLES**




GUY AWAY FROM
INTERSECTION OR IN
OPPOSITE DIRECTION OF
THE SPAN LOADING

**MEDIAN POLES**

**SPAN WIRE TEMPORARY TRAFFIC SIGNAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015
DATE

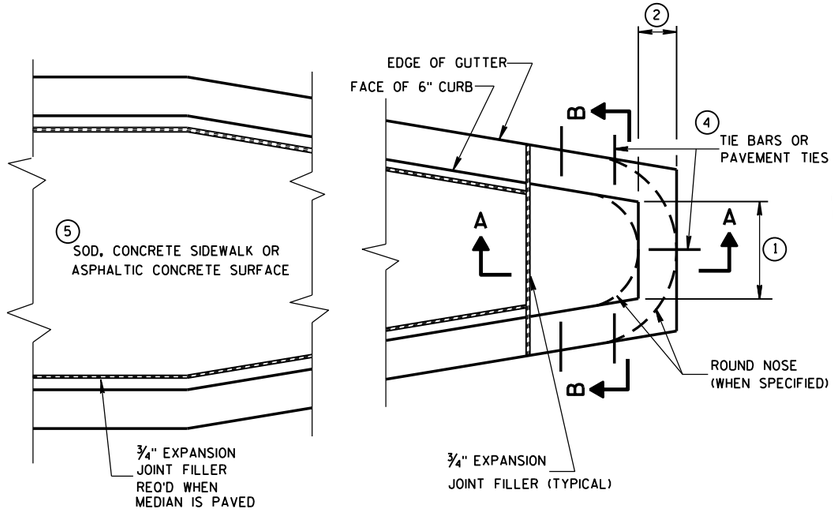
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

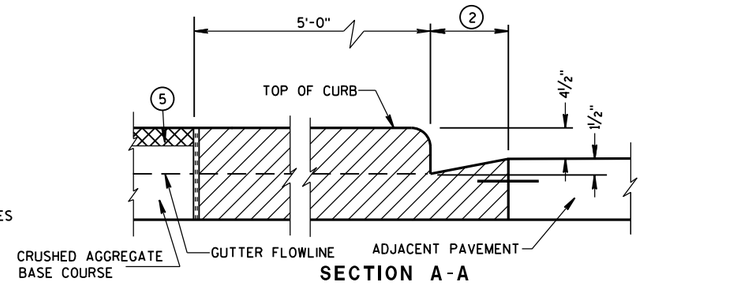
FHWA



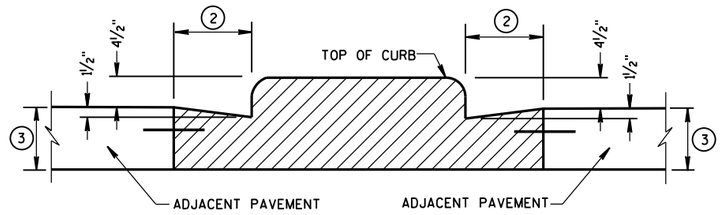
SDD 09G01 - 4g

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SECTION A-A




SECTION B-B

## 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.

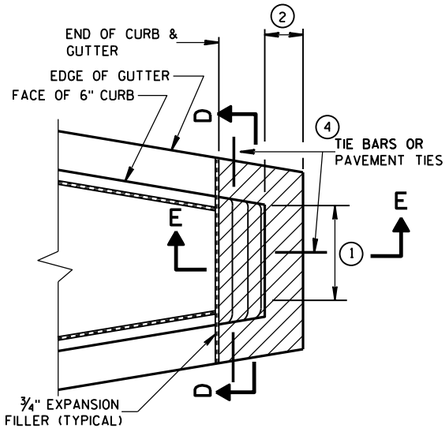
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

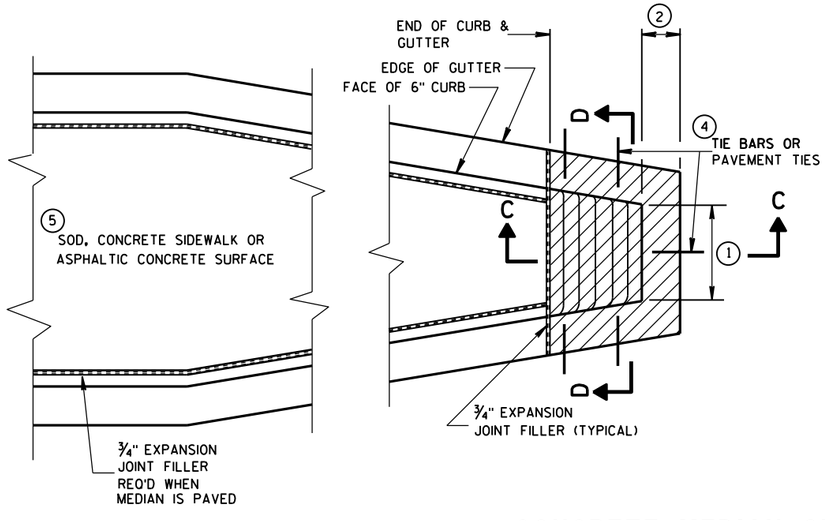
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

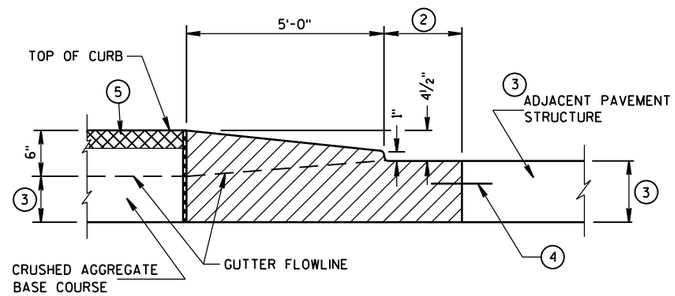
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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.

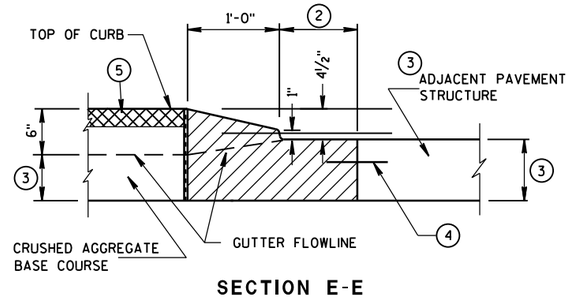
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



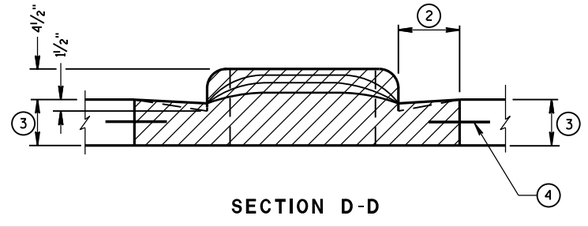

SECTION C-C




SECTION E-E

## CONCRETE MEDIAN SLOPED NOSE TYPE 2

## CONCRETE MEDIAN SLOPED NOSE TYPE 1



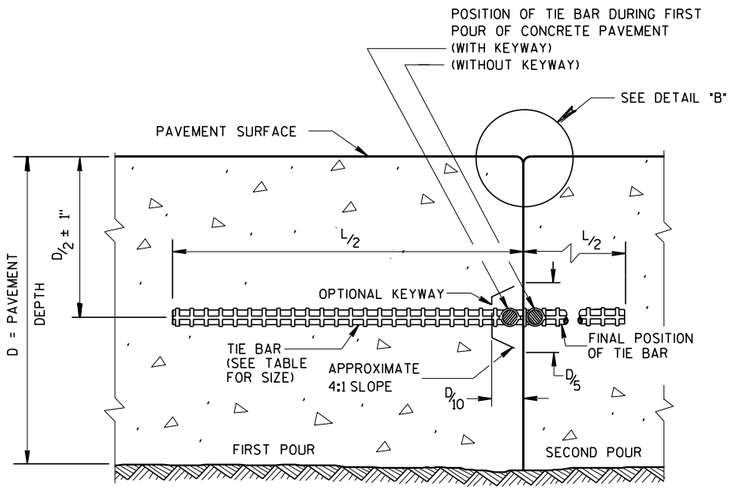

SECTION D-D

| CONCRETE MEDIAN NOSE | |
|---|---|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION | |
| APPROVED<br>6/8/2006<br>DATE<br>FHWA | /S/ Jerry H. Zogg<br>ROADWAY STANDARDS D<br>ENGINEER |

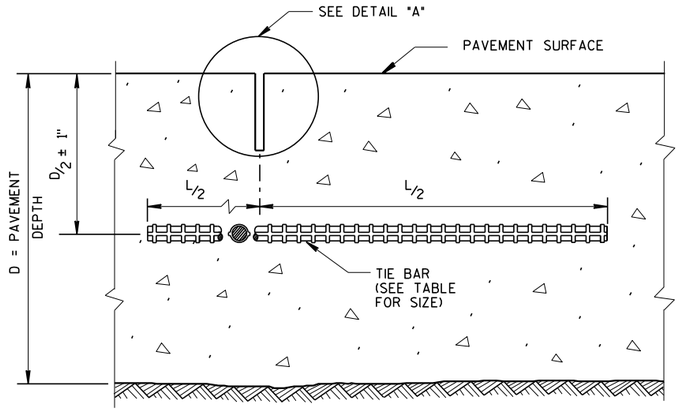



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S.D.D. 11 B 2-2




## CONSTRUCTION JOINT




## SAWED JOINT

## GENERAL NOTES

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

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.




PLAN VIEW




SECTION A-A

## LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT




DETAIL "A"




DETAIL "B"




DETAIL "C"

## TIE BAR TABLE

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

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

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




PLAN VIEW
SHOWING LOCATION OF TIE BARS

## CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE
/S/ Peter Kemp PE
PAVEMENT SUPE
FHWA

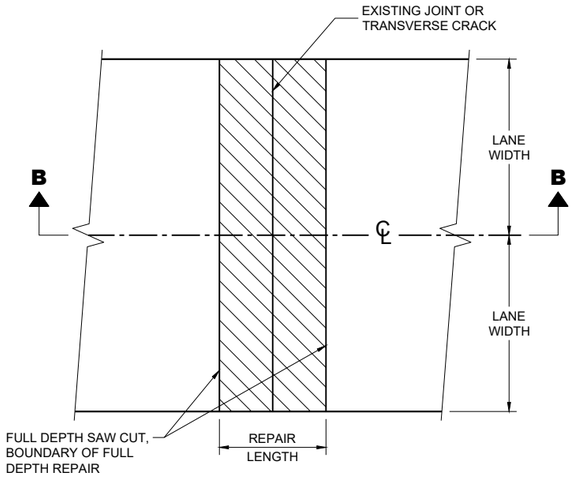


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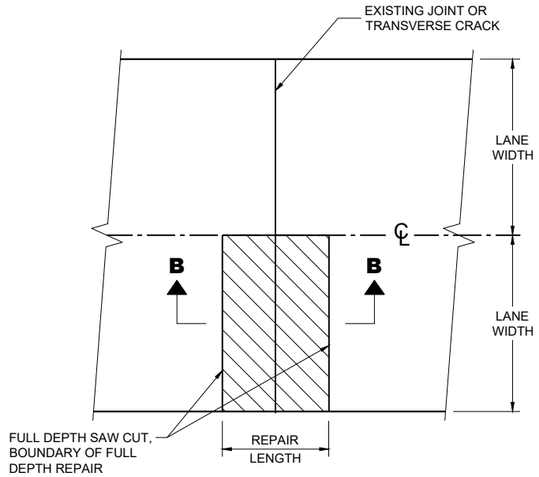
S.D.D. 13 C 1-19

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S.D.D. 13 C 1-19




**PLAN VIEW**
**(DOUBLE LANE REPAIR)**




**PLAN VIEW**
**(SINGLE LANE REPAIR)**

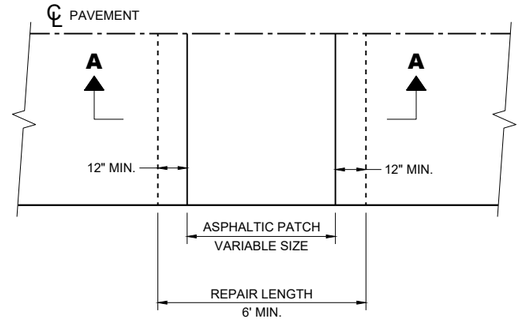
## GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE A 6 FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREA TO ADJACENT TRANSVERSE JOINT OR CRACK.

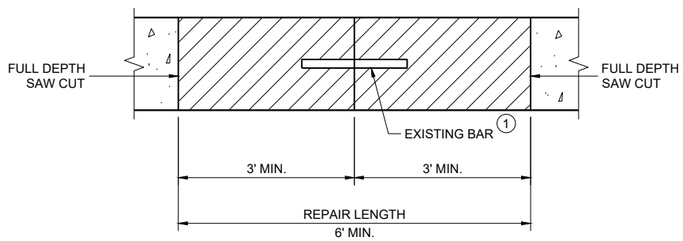
THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NON-DOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

(1) DOWEL BARS MAY NOT BE PRESENT.



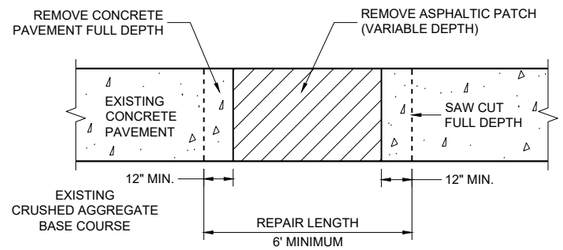

**PLAN VIEW**

## FULL DEPTH CONCRETE PAVEMENT REMOVAL




**SECTION B - B**

**CONCRETE REMOVAL**

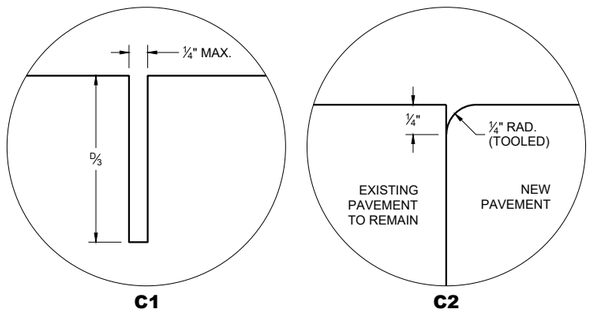



**SECTION A - A**

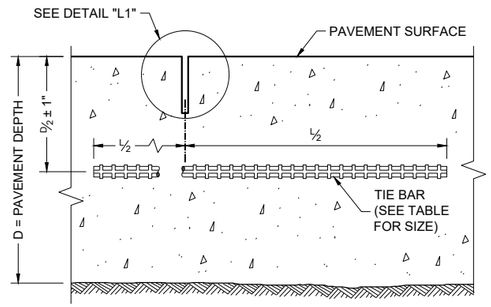
**HMA PATCH REMOVAL**

**CONCRETE PAVEMENT**
**REPAIR AND REPLACEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

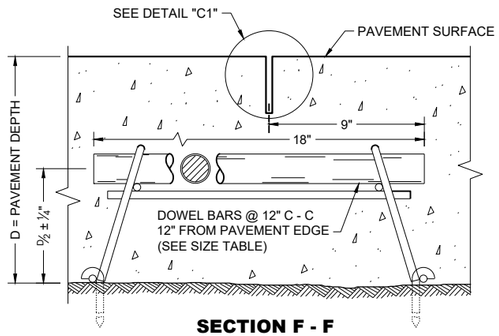



**TRANSVERSE JOINTS**




**SECTION C - C**

**SAWED LONGITUDINAL JOINT**




**SECTION F - F**

**DOWELED CONTRACTION JOINT**

## GENERAL NOTES

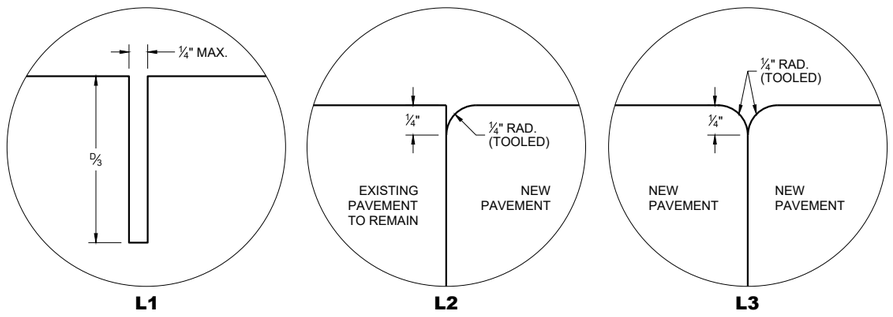
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NON-DOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

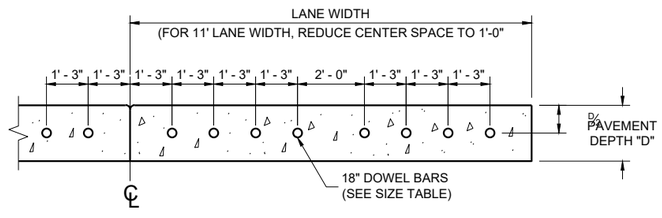
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

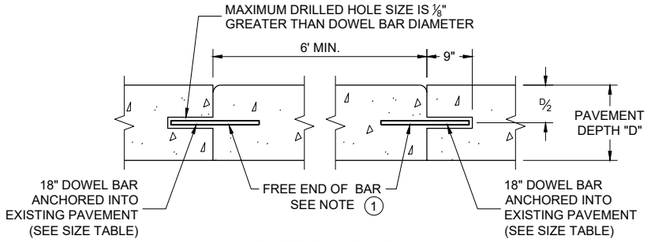



**LONGITUDINAL JOINTS**




**SECTION E - E**

**DRILLED DOWEL BAR CONSTRUCTION JOINT**




**SECTION D - D**

### TIE BAR TABLE

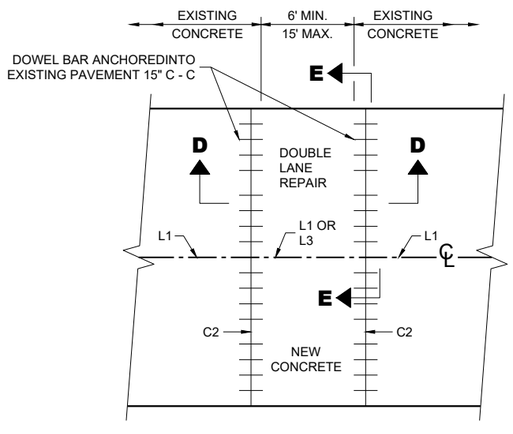
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|---|---|---|---|
| < 10 ½" | NO. 4 | 30" | 36" |
| ≥ 10 ½" | NO. 5 | 36" | 36" |
| | NO. 4* | 30" | 24" ** |

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

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

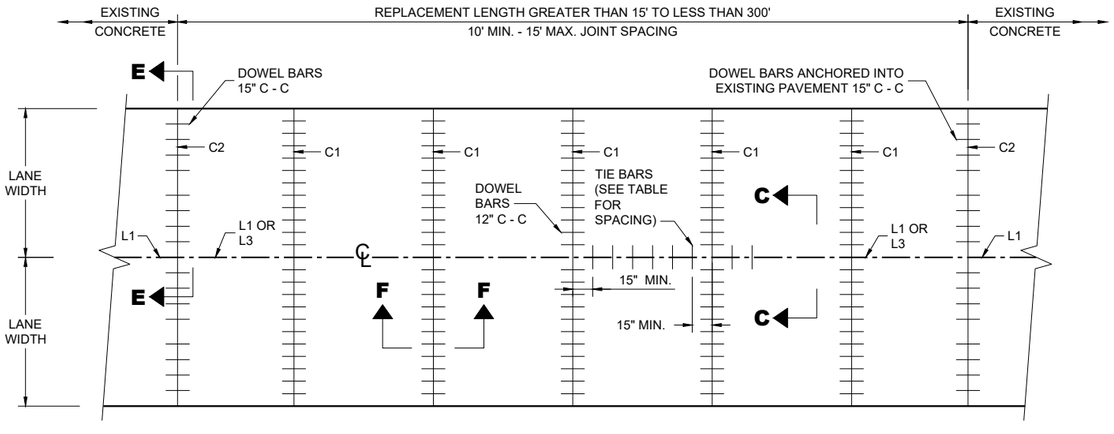
### PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

| PAVEMENT DEPTH (D) | DOWEL BAR DIAMETER | DRILLED DOWEL BAR DIAMETER | CONTRACTION JOINT SPACING |
|---|---|---|---|
| 6", 6 ½" | NONE | NONE | 12' |
| 7", 7 ½" | 1" | 1" | 14' |
| 8" & ABOVE | 1 ¼" | 1 ¼" | 15' |




**PLAN VIEW**

**MULTILANE CONCRETE PAVEMENT REPAIR**

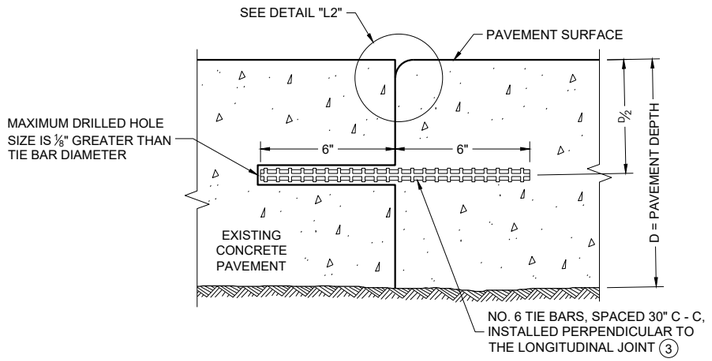



**PLAN VIEW**

**MULTILANE CONCRETE PAVEMENT REPLACEMENT**

**CONCRETE PAVEMENT REPAIR AND REPLACEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

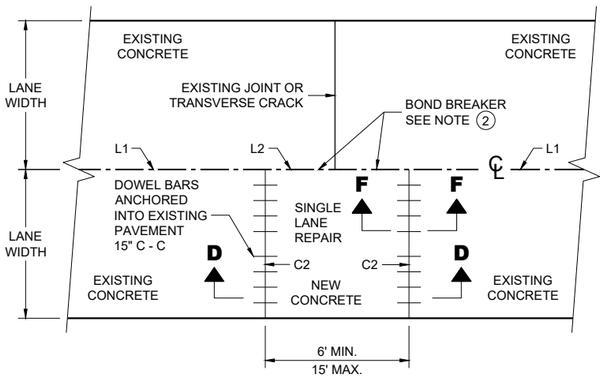



**SECTION G - G**

## TIE BARS ANCHORED INTO EXISTING PAVEMENT

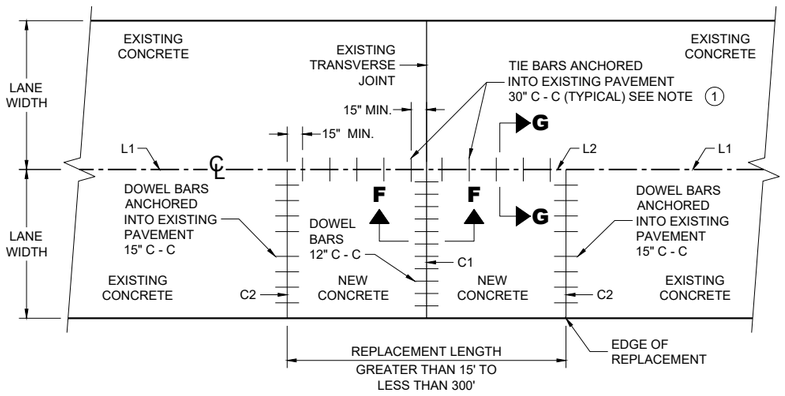
## GENERAL NOTES

1. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
2. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
3. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.




**PLAN VIEW**

## SINGLE LANE CONCRETE PAVEMENT REPAIR




**PLAN VIEW**

## SINGLE LANE CONCRETE PAVEMENT REPLACEMENT



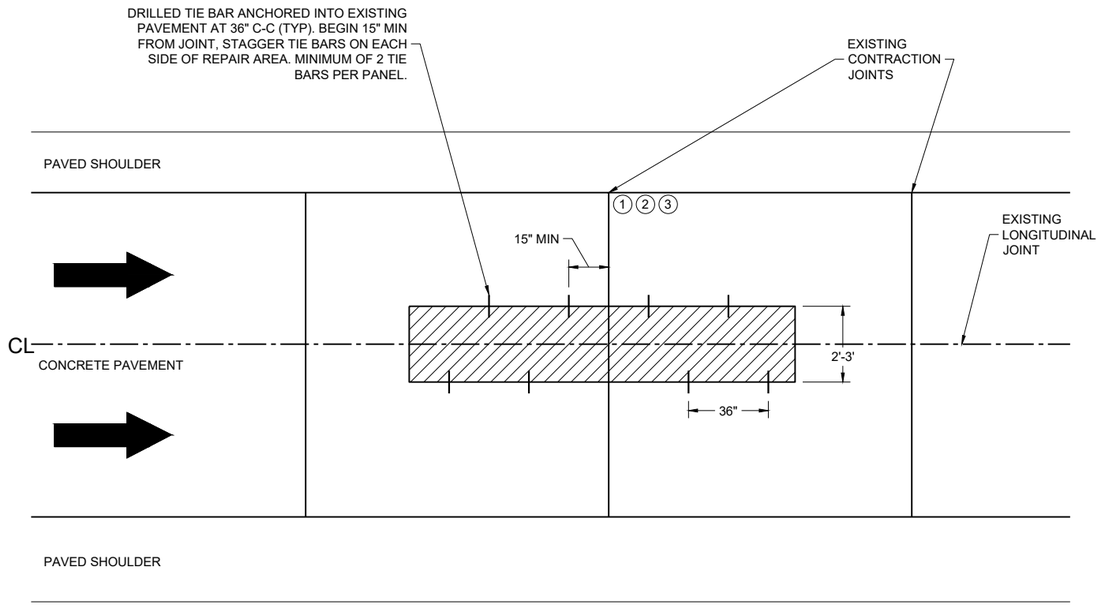
6



SDD 13C09-18c

**CONCRETE REPAIR AND REPLACEMENT**

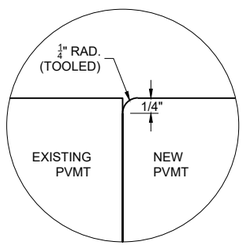
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




**PLAN VIEW**

## GENERAL NOTES

1. TIE BARS MIN 15" FROM JOINT.
2. LOCATION AND WIDTH OF PATCH ARE VARIABLE DEPENDING ON FIELD CONDITION
3. PRESERVE OR REESTABLISH EXISTING CONTRACTION JOINTS, KEEPING PATCH MATERIALS OUT OF REMAINING CONTRACTION JOINT.




**DETAIL L2**




**SECTION VIEW**

| TABLE 1 | |
|---|---|
| PATCH WIDTH | TIE BAR LENGTH |
| 24" | 12" |
| 36" | 18" |

**CONCRETE PAVEMENT CENTERLINE JOINT REPAIR**

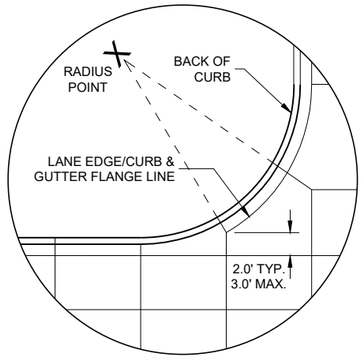
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
NOVEMBER 2025 — DATE
/S/ Peter Kemp P.E. — PAVEMENT SUPERVISOR

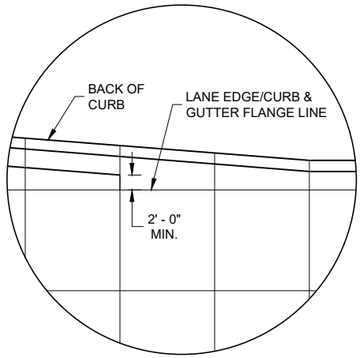
FHWA


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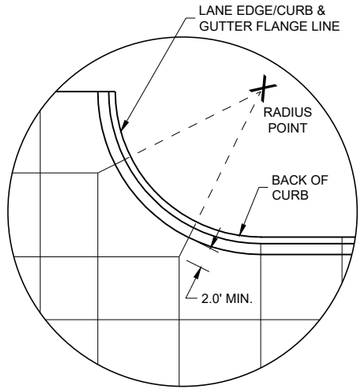
SDD 13C09-18d



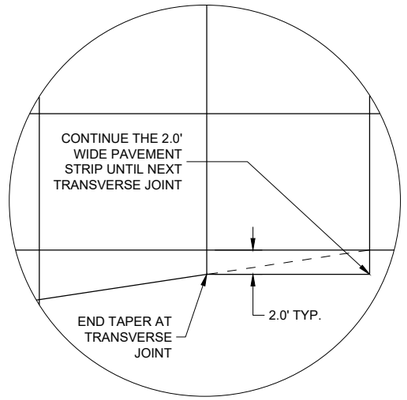

**DETAIL "A"**




**DETAIL "B"**




**DETAIL "C"**




**DETAIL "D"**

## GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

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

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

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

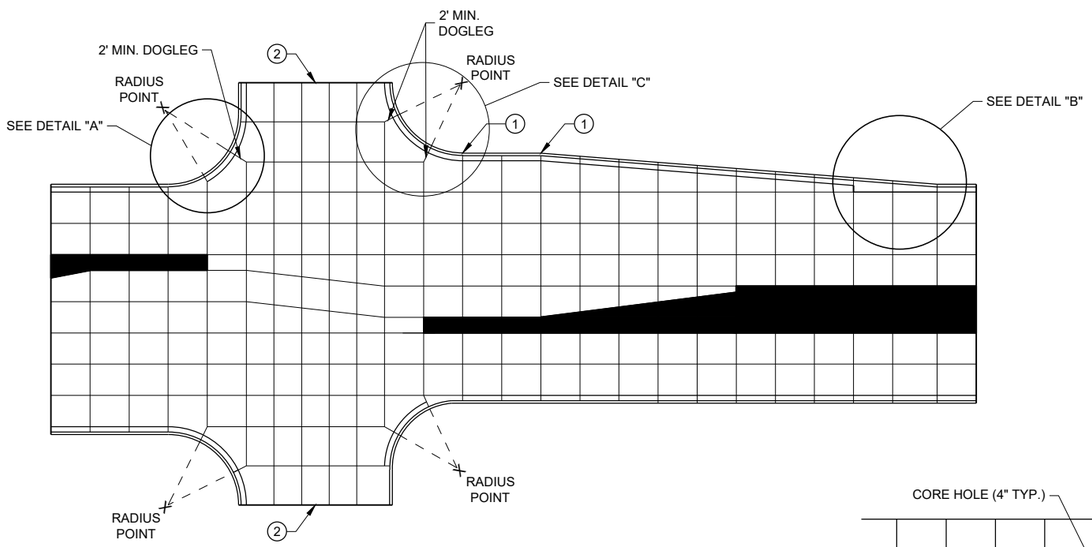
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

(2) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

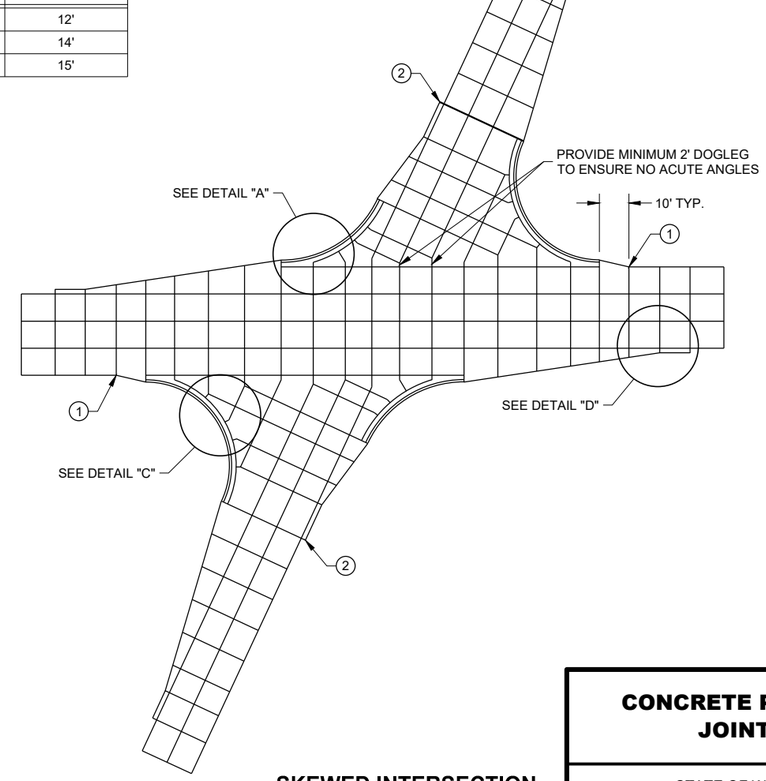
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



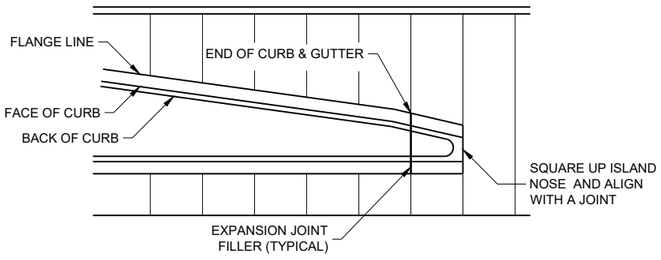

**STANDARD INTERSECTION**

PAVEMENT DEPTH AND JOINT SPACING TABLE

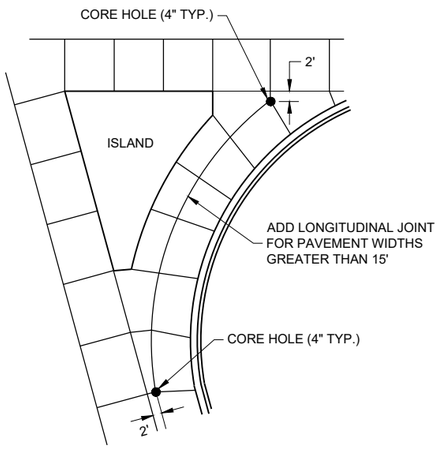
| PAVEMENT DEPTH (D) | CONTRACTION JOINT SPACING |
|---|---|
| 6", 6 ½" | 12' |
| 7", 7 ½" | 14' |
| 8" & ABOVE | 15' |




**SKEWED INTERSECTION**




**APPROACH TO MEDIAN**




**LARGE RIGHT TURN**

**CONCRETE PAVEMENT JOINTING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

SDD 13C18 - 08a

6

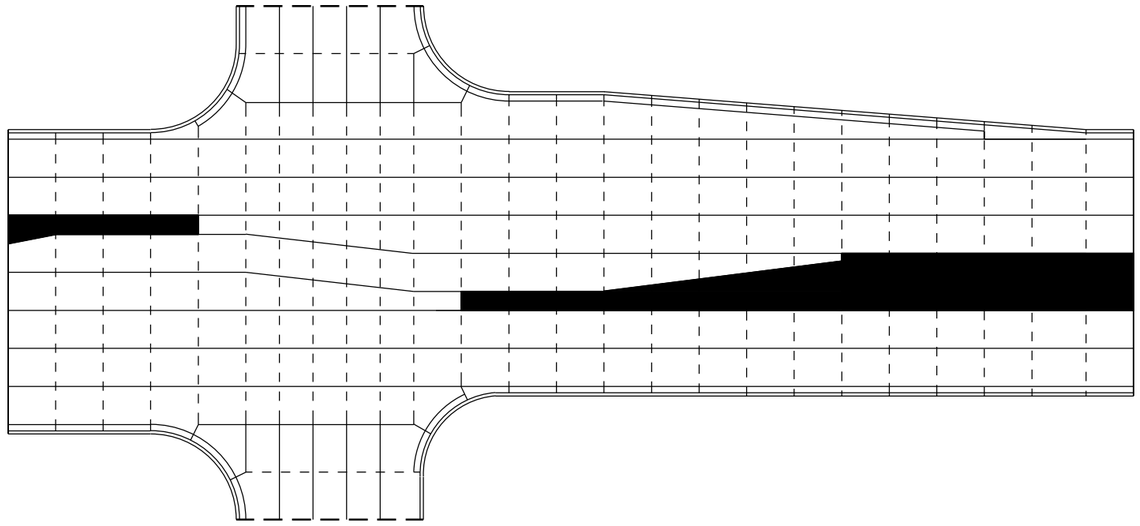
SDD 13C18 - 08a

## LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

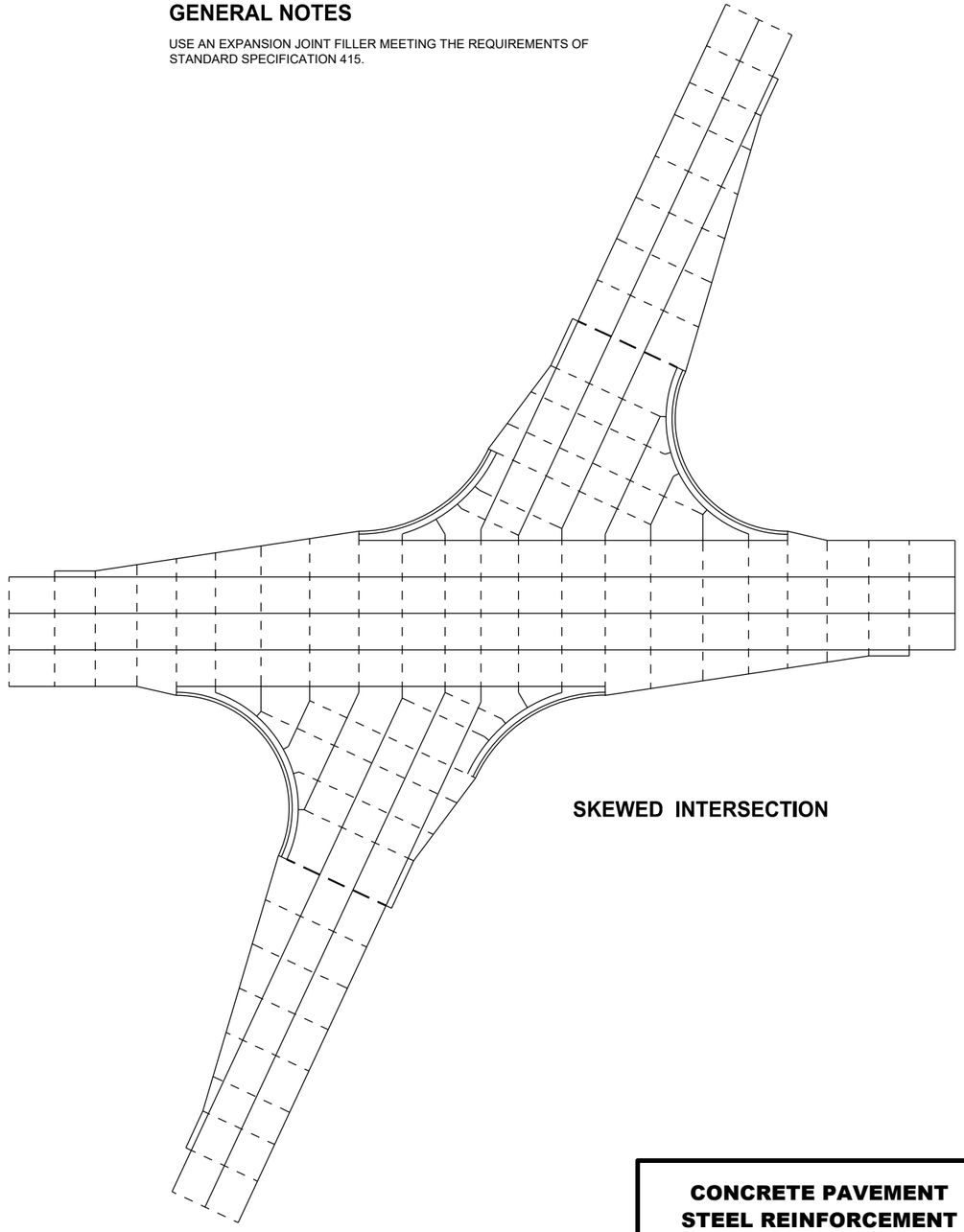
TIED JOINT



STANDARD INTERSECTION

## GENERAL NOTES

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



SKEWED INTERSECTION

6

SDD 13C18 - 08b

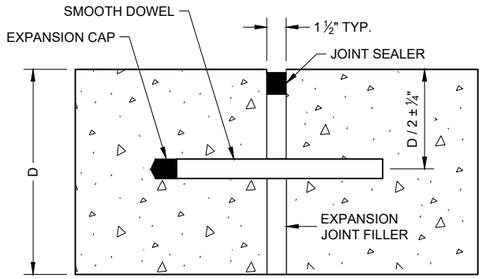
**CONCRETE PAVEMENT STEEL REINFORCEMENT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

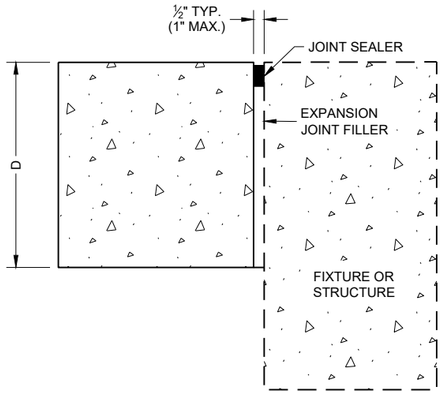


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SDD 13C18 - 08b




**DOWELED TRANSVERSE** (1)




**UNTIED - LONGITUDINAL**

## EXPANSION JOINTS

### TIE BAR TABLE

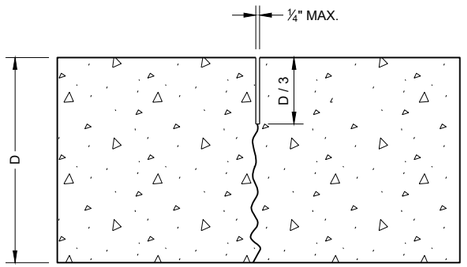
| PAVEMENT DEPTH (D) | TIE BAR SIZE | TIE BAR LENGTH (L) | MAX. TIE BAR SPACING |
|---|---|---|---|
| < 10 ½" | NO. 4 | 30" | 36" |
| ≥ 10 ½" | NO. 5 | 36" | 36" |
| | NO. 4 * | 30" | 24" ** |

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

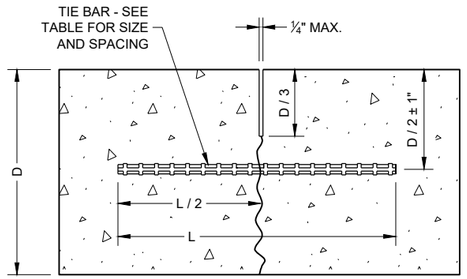
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

### GENERAL NOTES

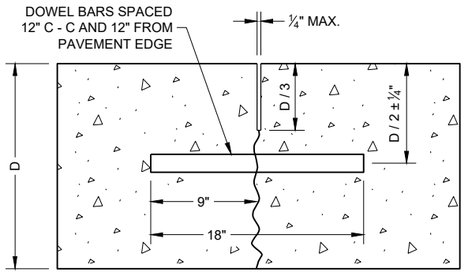
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.




**UNDOWELED TRANSVERSE**

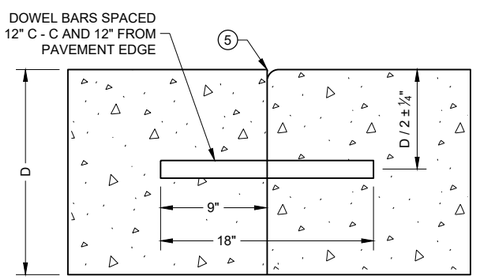



**TIED LONGITUDINAL**

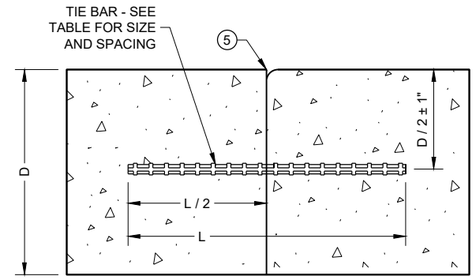



**DOWELED TRANSVERSE**

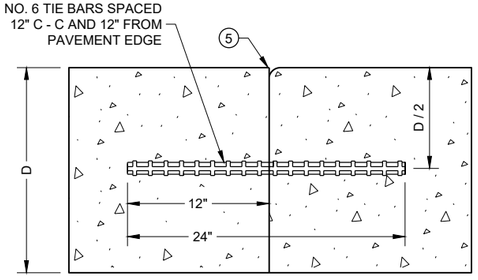
## CONTRACTION JOINTS (2)



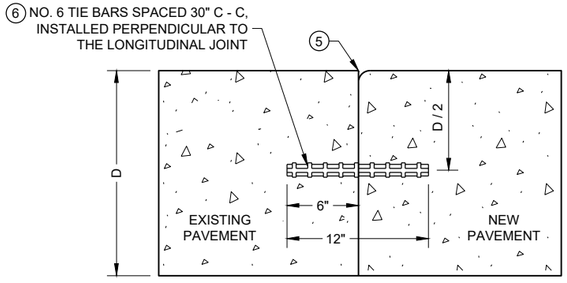

**DOWELED TRANSVERSE** (3)




**TIED LONGITUDINAL**




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




**TIED LONGITUDINAL TO EXISTING**

## CONSTRUCTION JOINTS (4)

**CONCRETE PAVEMENT JOINT TYPES**

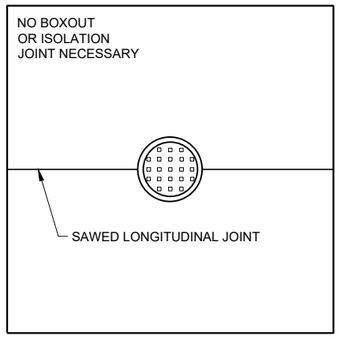
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



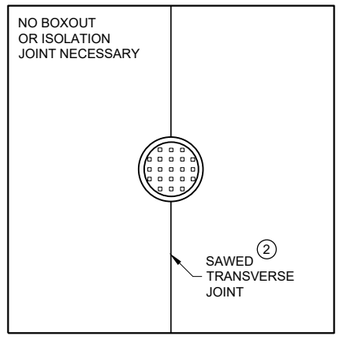


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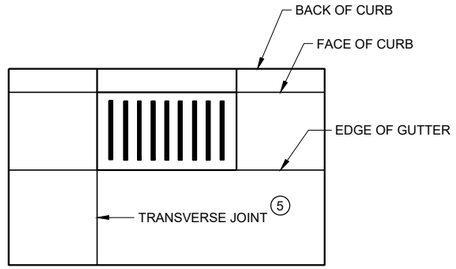
SDD 13C18 - 08c




**MANHOLE WITH LONGITUDINAL JOINT**



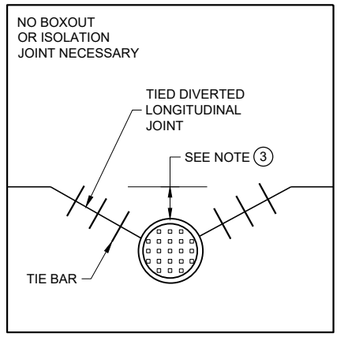

**MANHOLE WITH TRANSVERSE JOINT**



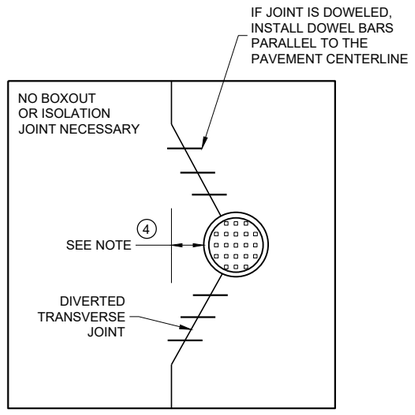

**INLET WITH TRANSVERSE JOINT**

## GENERAL NOTES

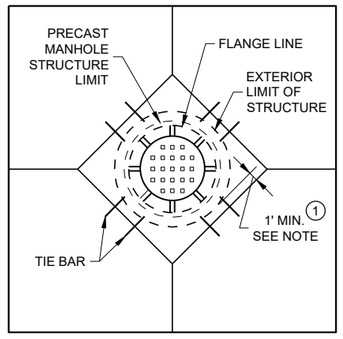
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF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




**MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT**




**MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT**




**DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS**

**CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISO

FHWA



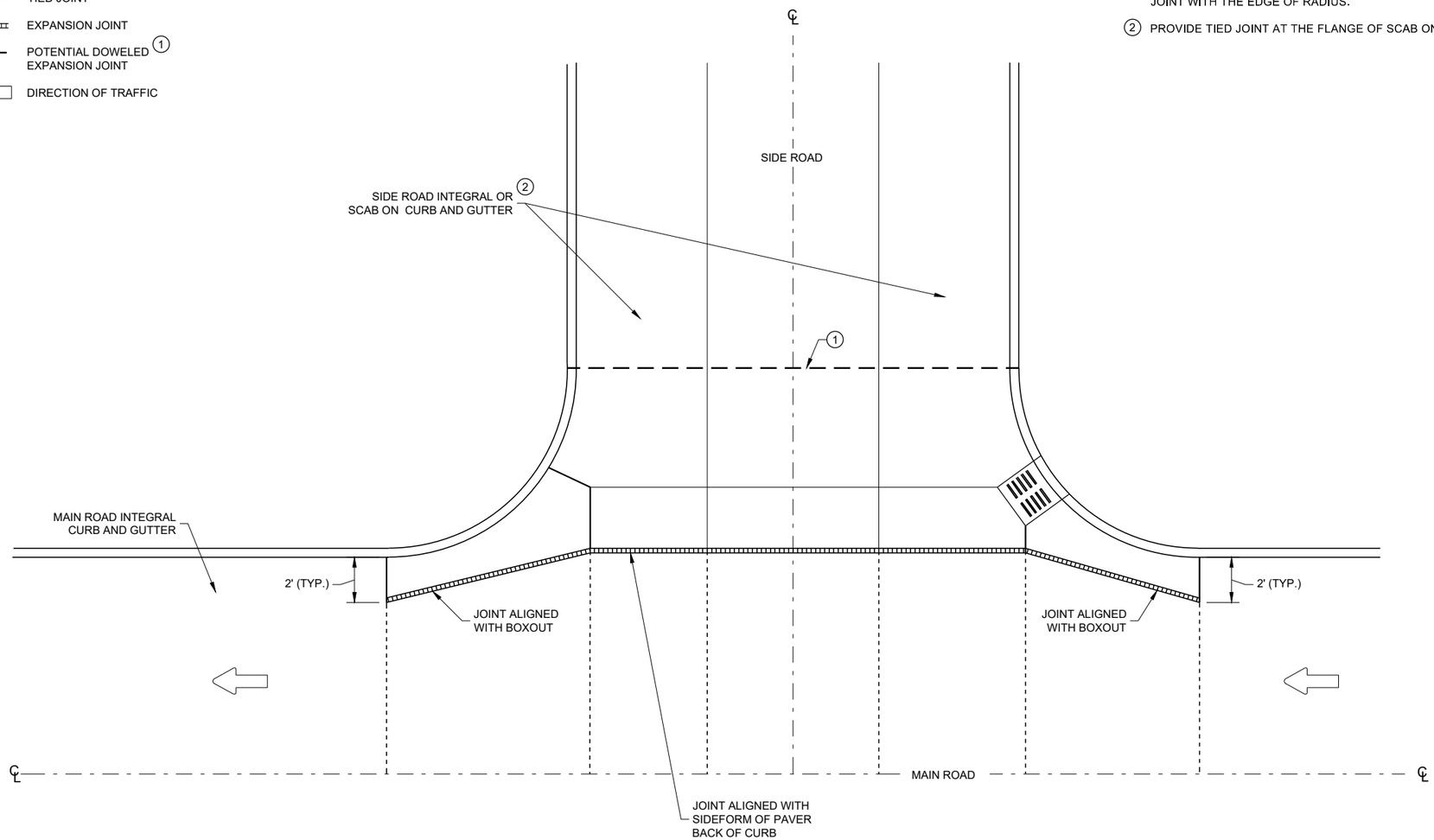
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SDD13C18 - 08d

SDD13C18 - 08d

## LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT (1)
- DIRECTION OF TRAFFIC




## GENERAL NOTES

(1) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH THE EDGE OF RADIUS.

(2) PROVIDE TIED JOINT AT THE FLANGE OF SCAB ON CURB IF SCAB ON CURB AND GUTTER IS USE.

**INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

**CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

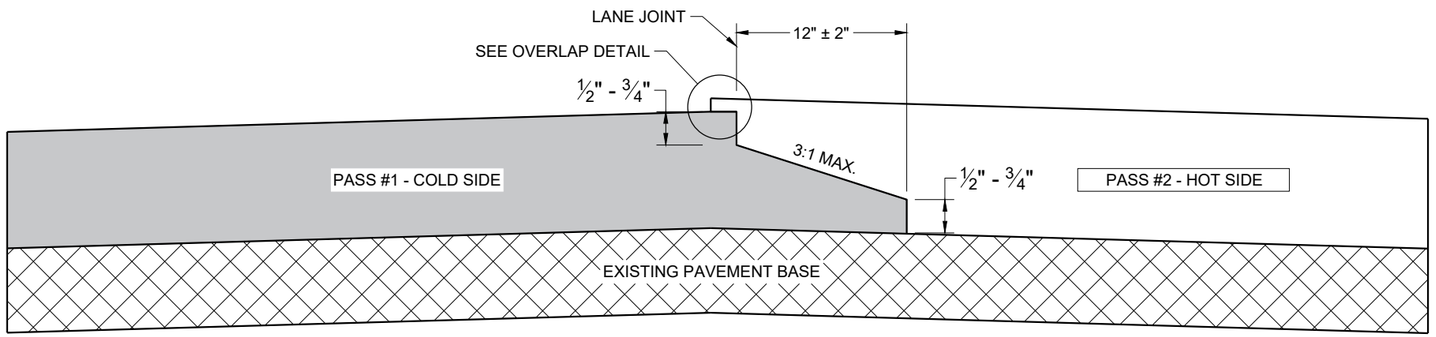


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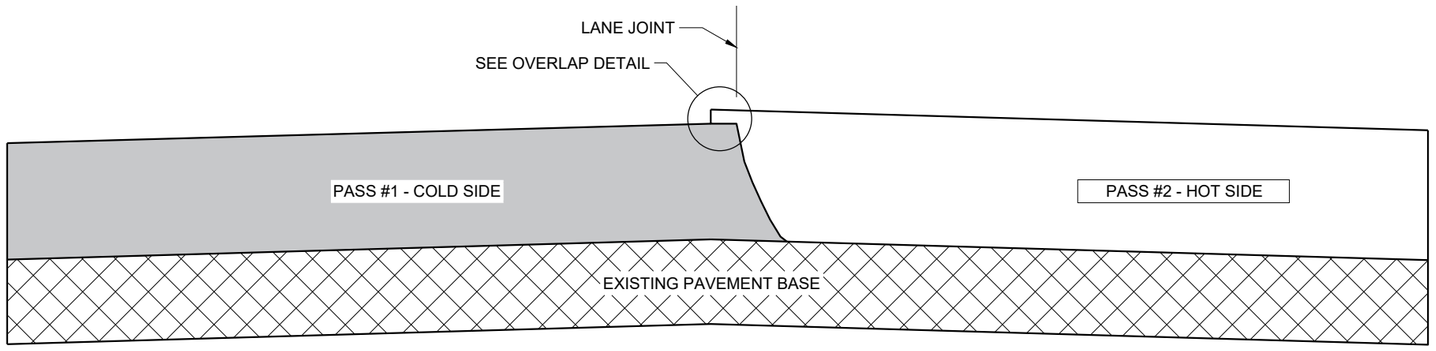
SDD 13C18 - 08f

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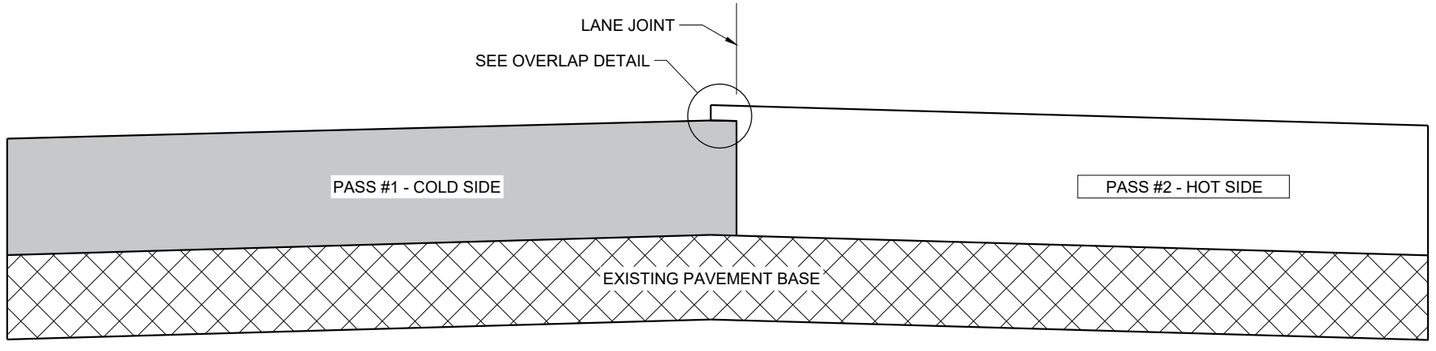
SDD 13C18 - 08f




**TYPICAL PAVEMENT CROSS SECTION**
**NOTCHED WEDGE JOINT**




**TYPICAL PAVEMENT CROSS SECTION**
**VERTICAL JOINT**




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

## GENERAL NOTES

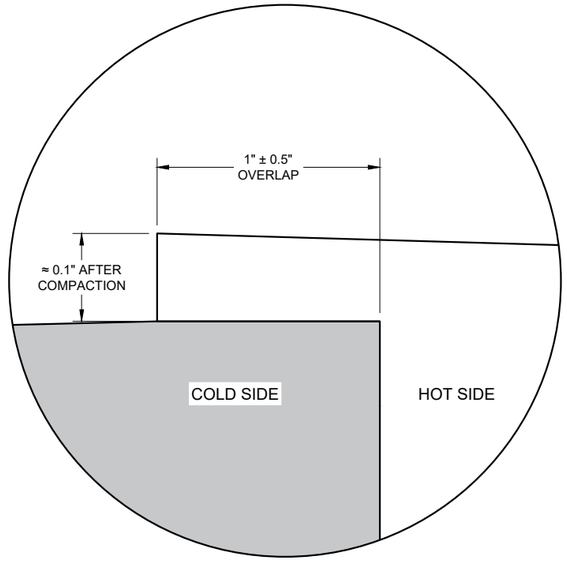
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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




**OVERLAP DETAIL (TYPICAL)**

| | |
|---|---|
| **HMA LONGITUDINAL JOINTS** | |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION | |
| APPROVED<br>November 2020<br>DATE | /S/ Steven Hefel<br>HMA PAVEMENT ENGIN |

FHWA

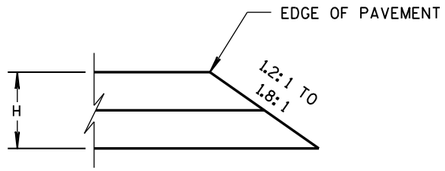


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SDD 13C19 - 03

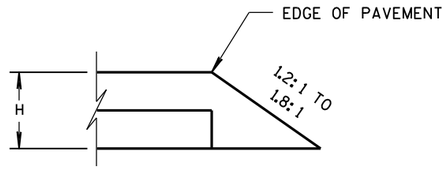
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SDD 13C19 - 03



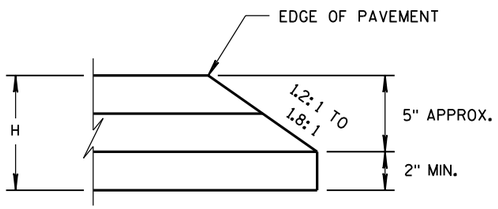

CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



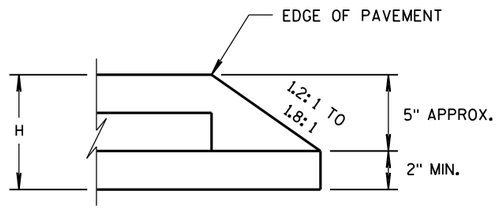

CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS




CONSTRUCTED WITH FINAL TWO LAYERS

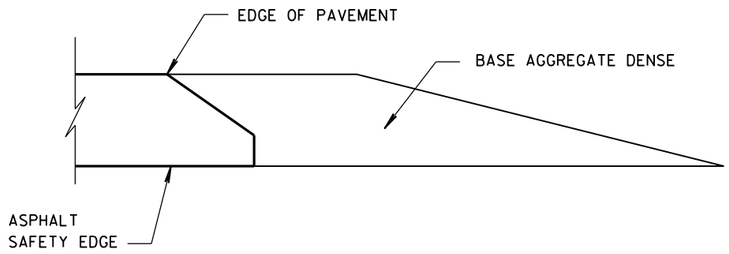
FOR H GREATER THAN 5"




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

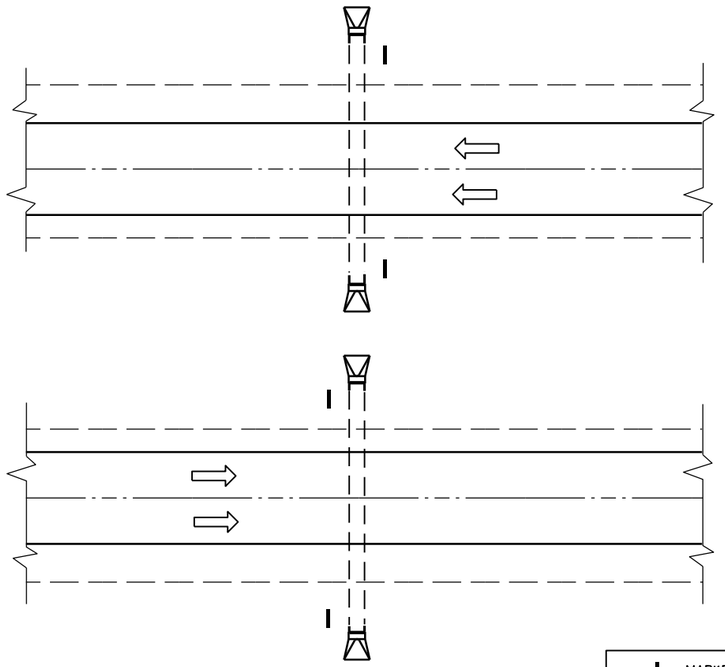
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

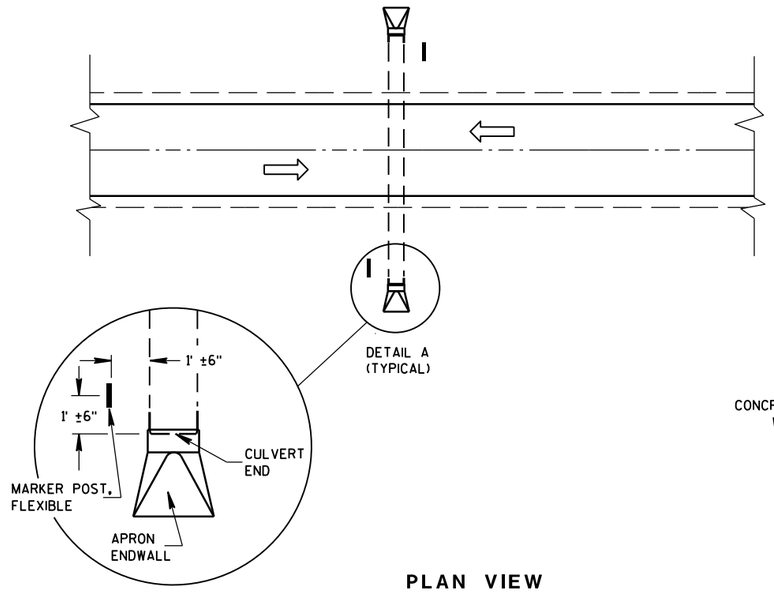
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

**DIVIDED HIGHWAY**




DETAIL A
(TYPICAL)

PLAN VIEW

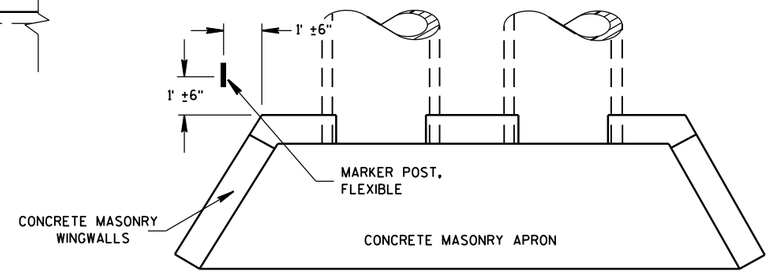
**UNDIVIDED HIGHWAY**

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

## GENERAL NOTES

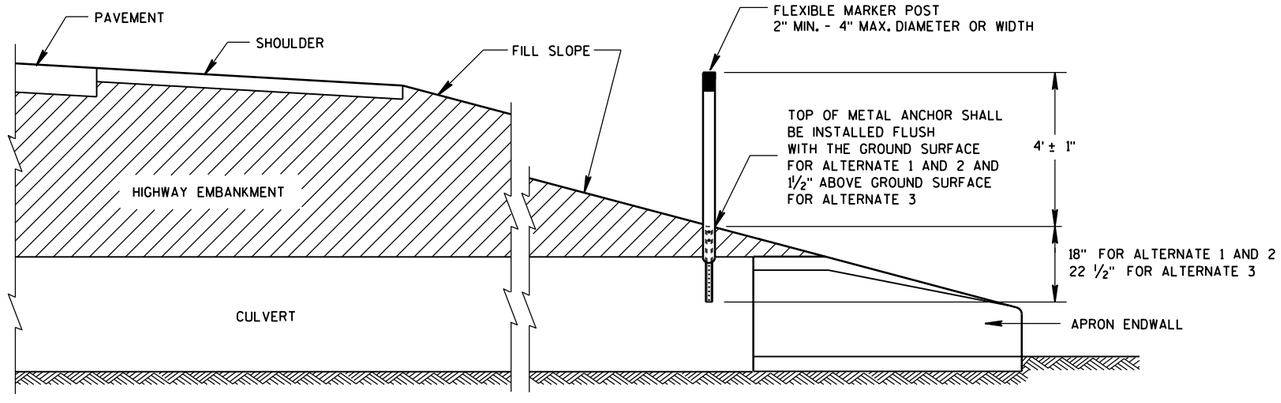
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.




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

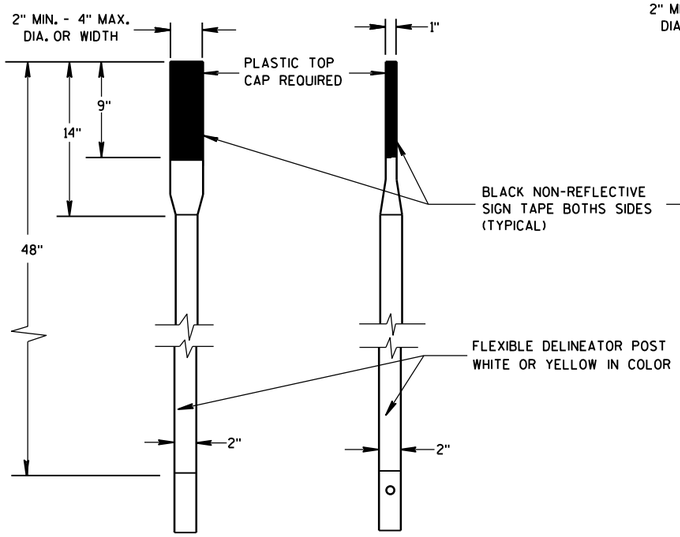


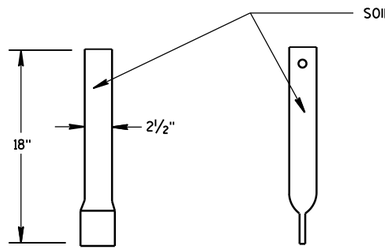
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S.D.D. 15 A 3-2a

6

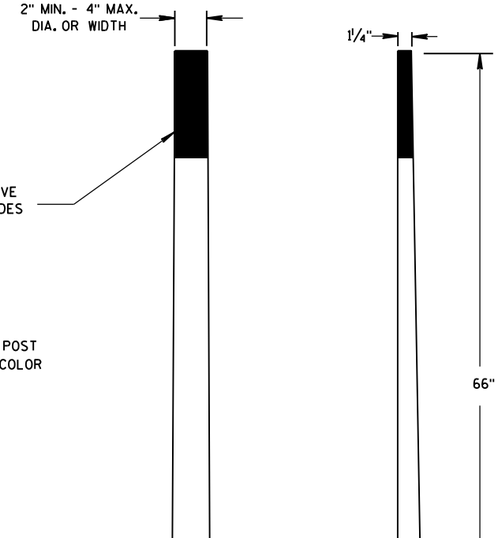
S.D.D. 15 A 3-2a



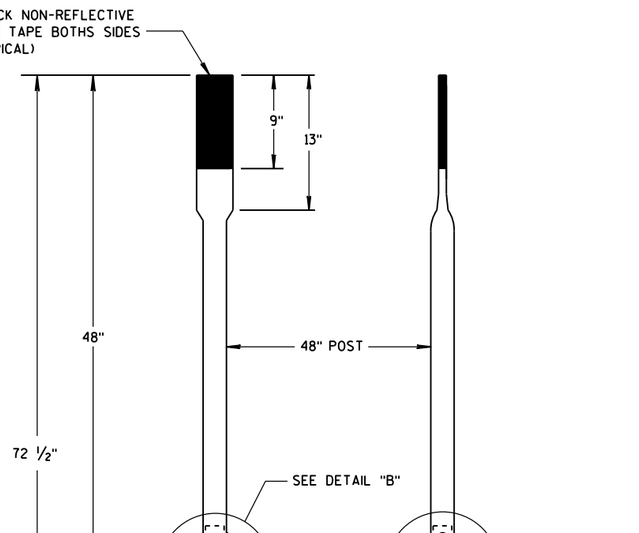

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

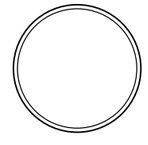
ALTERNATE 2



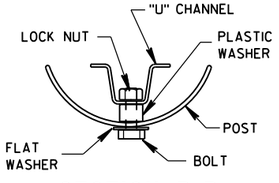

FRONT VIEW SIDE VIEW

ALTERNATE 3

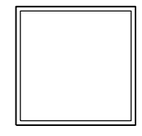
## FLEXIBLE MARKER POSTS



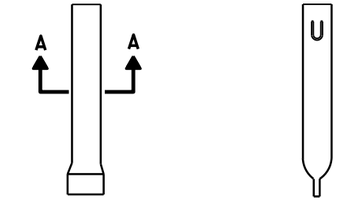
SECTION A-A




SECTION B-B

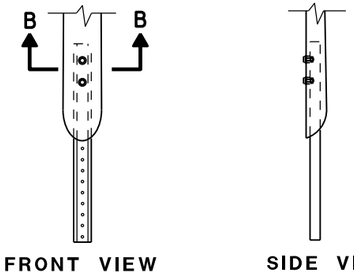


SECTION C-C



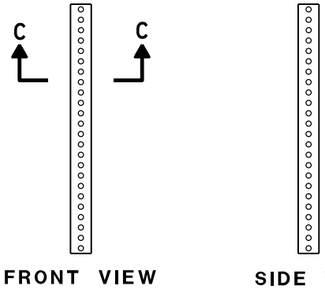

FRONT VIEW SIDE VIEW

ALTERNATE 1




FRONT VIEW SIDE VIEW

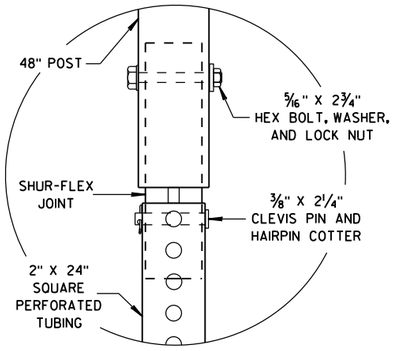
ALTERNATE 2



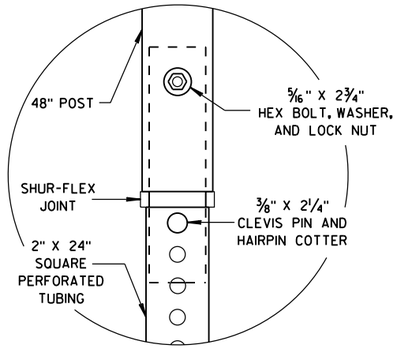

FRONT VIEW SIDE VIEW

ALTERNATE 3

## FLEXIBLE MARKER POST ANCHORS




DETAIL B




DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

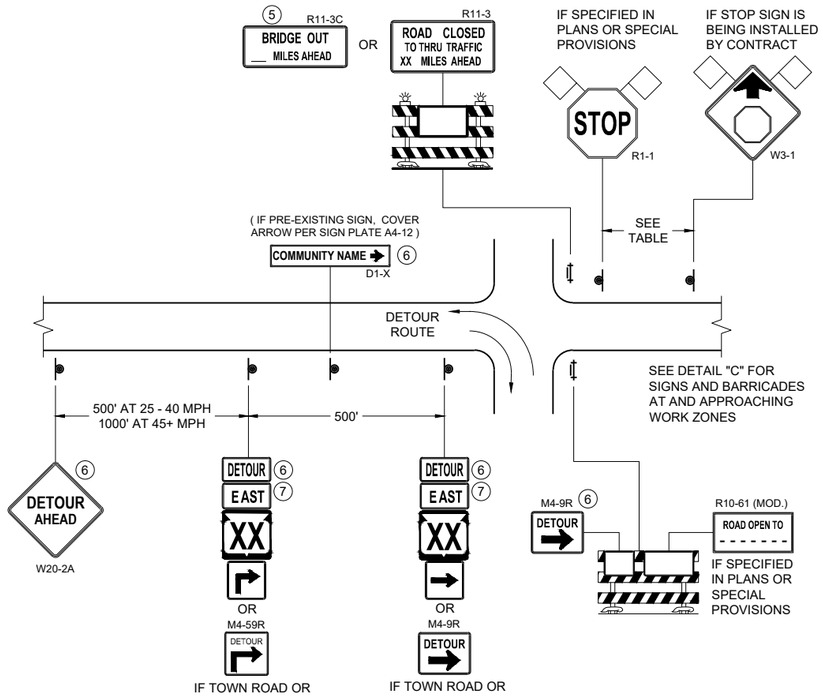


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S.D.D. 15 A 3-2b

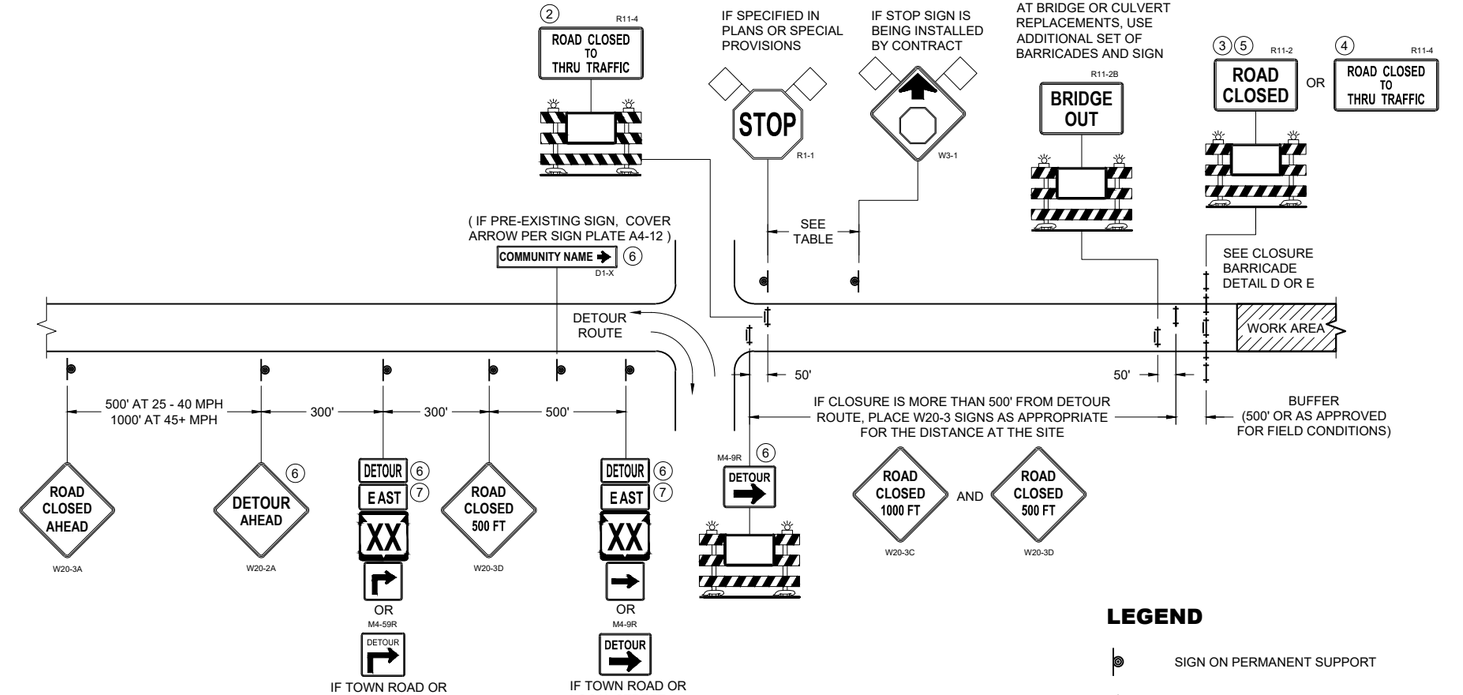
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S.D.D. 15 A 3-2b




## DETAIL A
## MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO 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 )

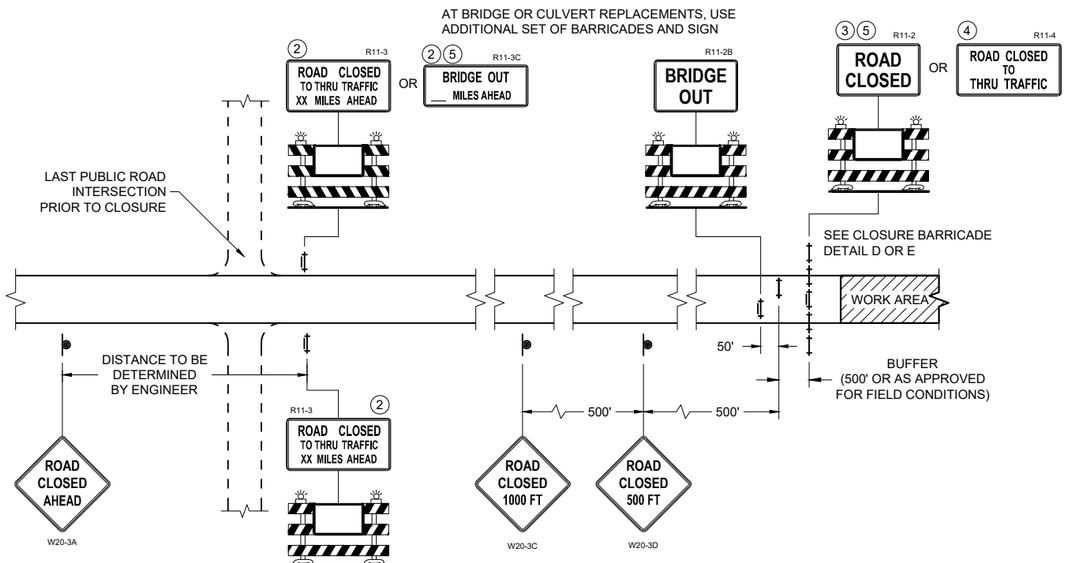
| SPEED LIMIT (MPH) | "STOP AHEAD" ADVANCE WARNING DISTANCE (FT) |
|---|---|
| 25 | 200 |
| 30 | 200 |
| 35 | 350 |
| 40 | 350 |
| 45 | 500 |
| 50 | 550 |
| 55 | 750 |

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




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

**BARRICADES AND SIGNS FOR MAINLINE CLOSURES**

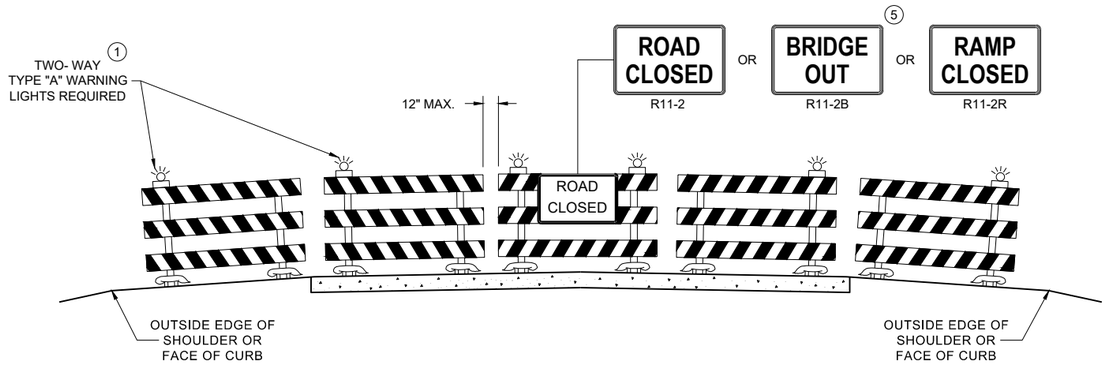
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA



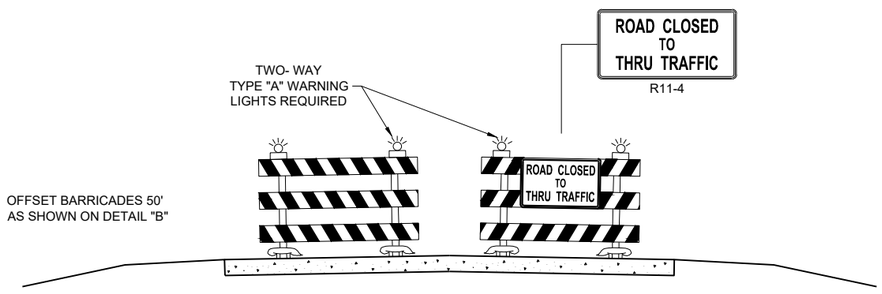
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SDD 15C02-10a




**DETAIL D**

**ROAD CLOSURE BARRICADE DETAIL**

**APPROACH VIEW**




**DETAIL E**

**LANE CLOSURE BARRICADE DETAIL**

**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

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

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

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

SIGNS PLACED ON TYPE III BARRICADES THAT ARE SIZES OTHER THAN 48"X30" SHALL HAVE A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE.

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

**BARRICADES AND SIGNS FOR VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

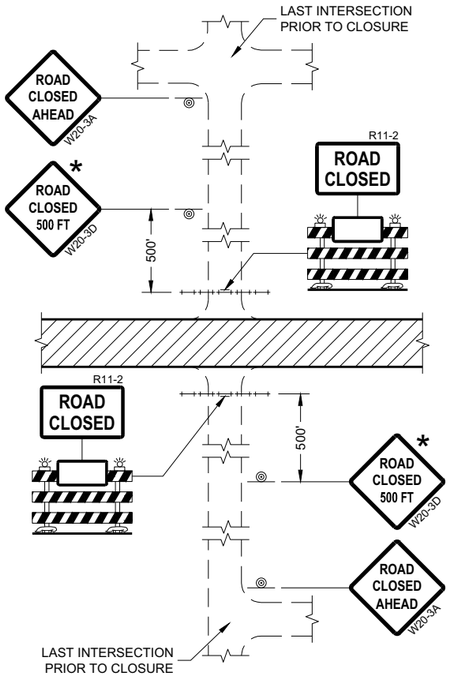
APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

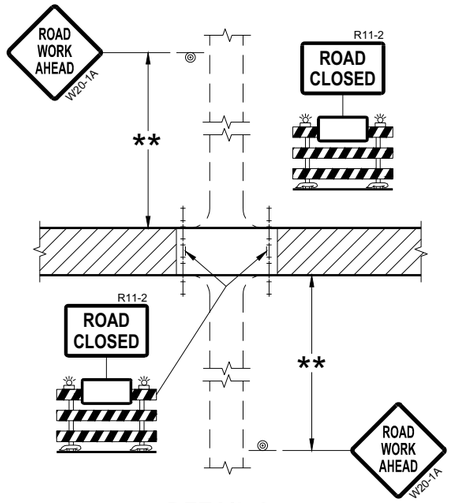



6

SDD 15C02-10b




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




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

## GENERAL NOTES

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

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

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

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

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

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

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

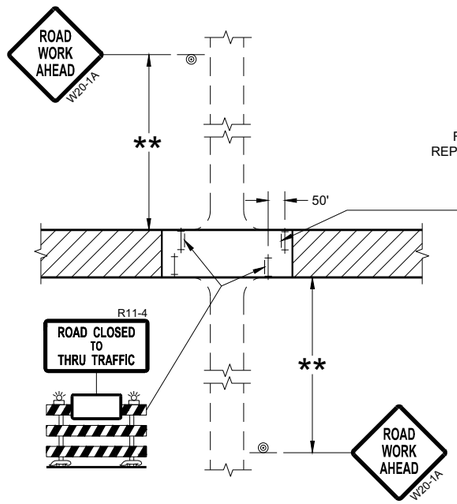
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

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

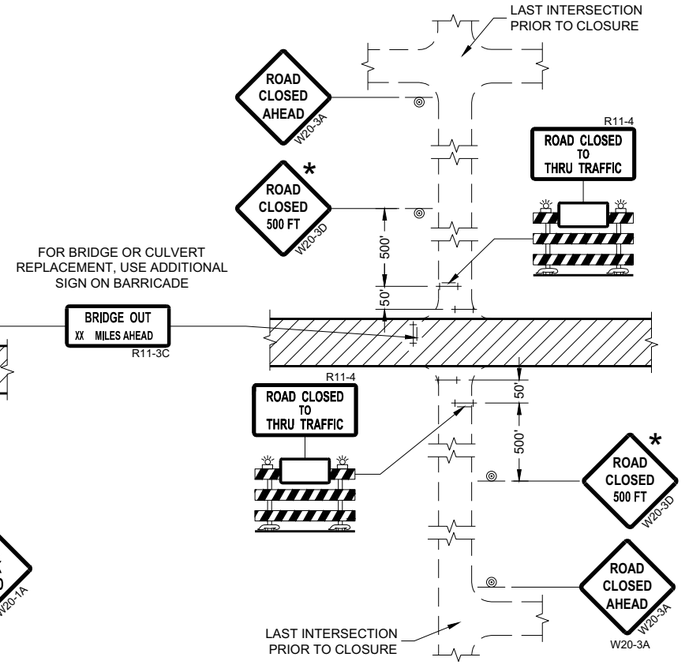
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

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

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.




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




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

## LEGEND

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

**BARRICADES AND SIGNS FOR SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA





6

SDD 15C03 - 05

## GENERAL NOTES

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

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

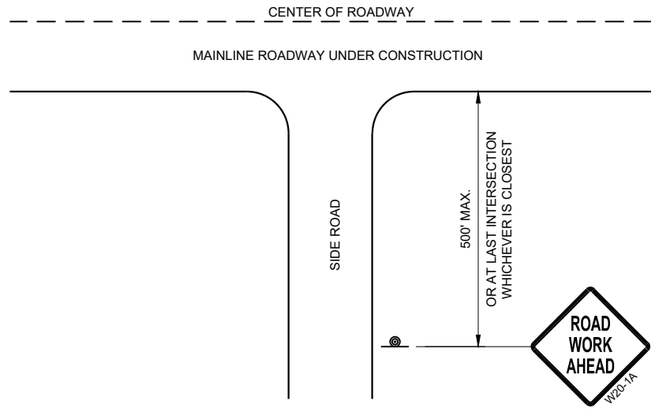
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



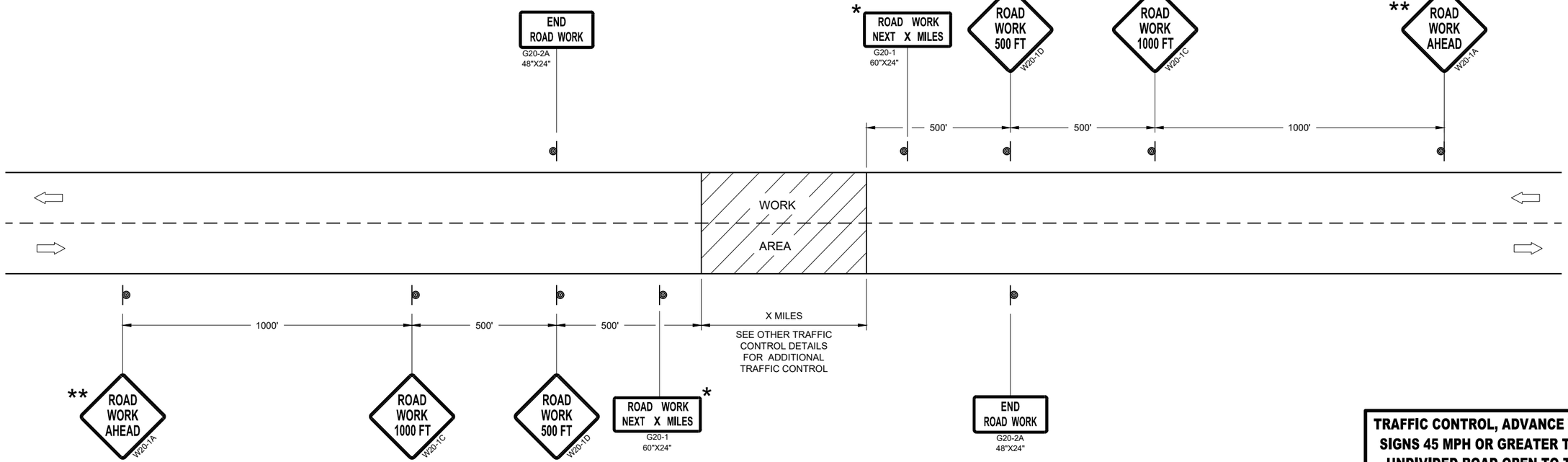

**TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL**

## LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA




**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER**

**TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

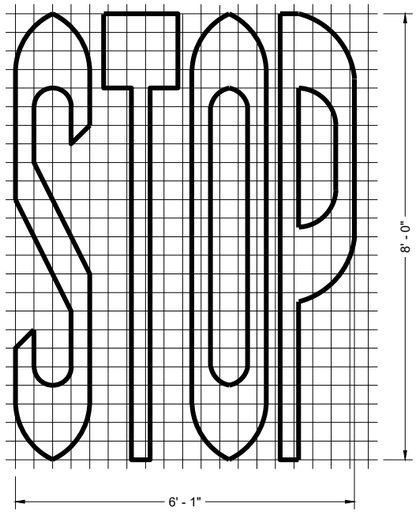
/S/ Andrew Heidtke
WORK ZONE ENGINEE

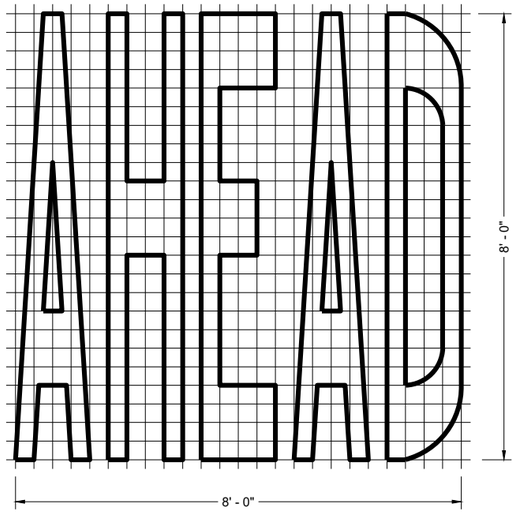
FHWA

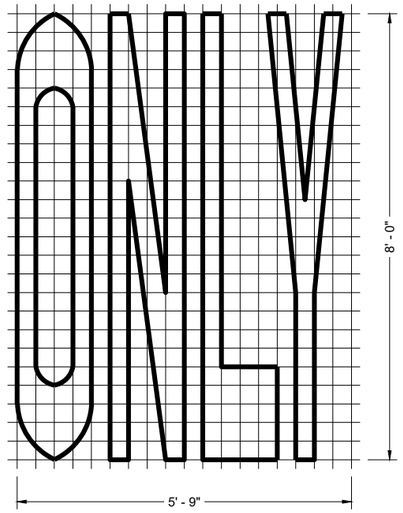


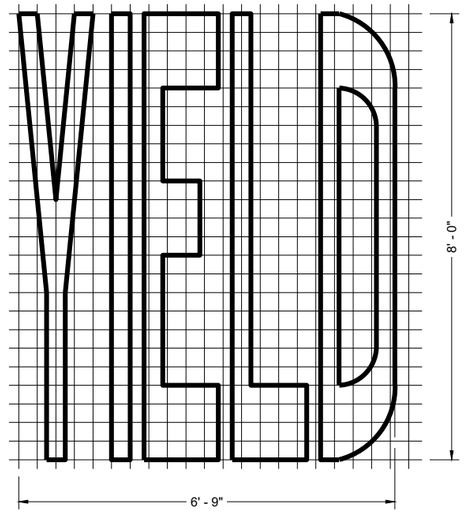

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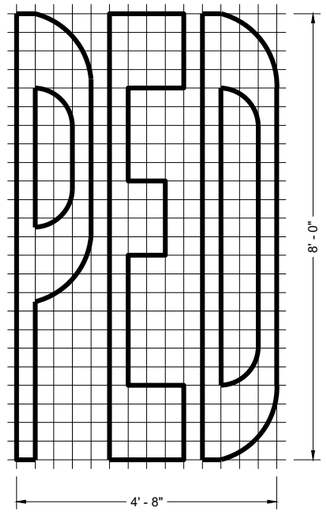

SDD 15C04 - 05

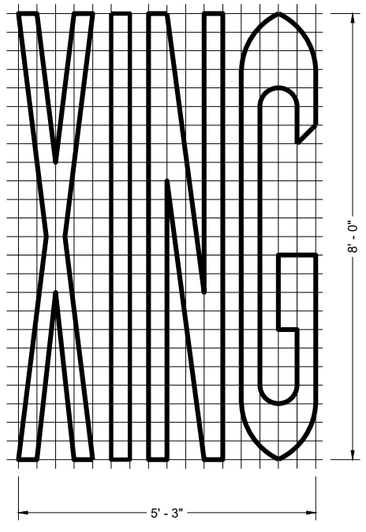


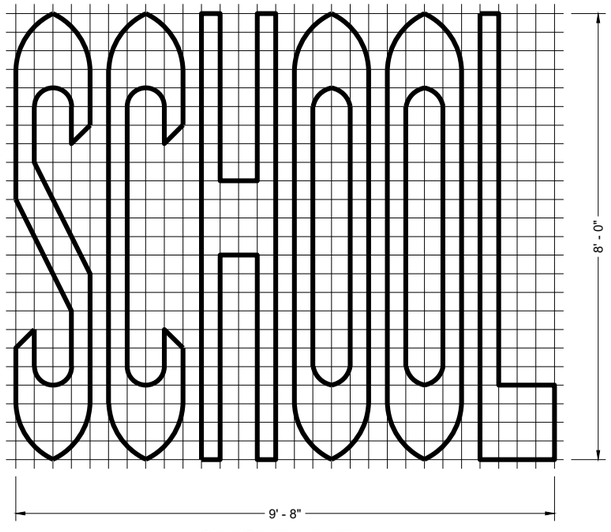



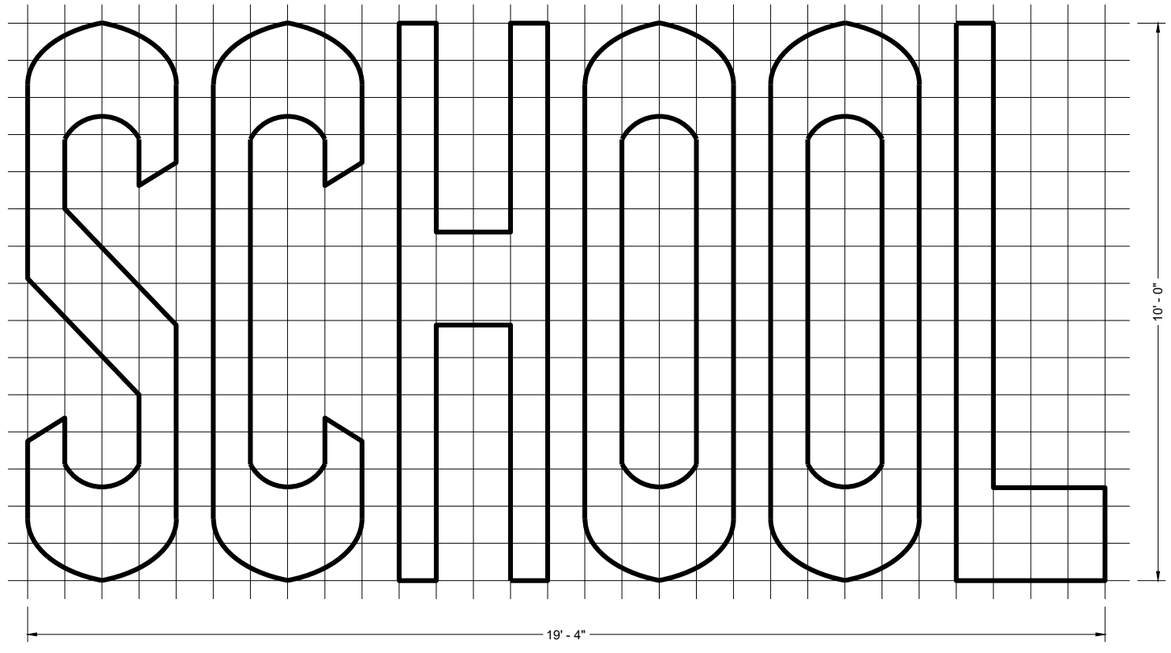




**SINGLE LANE**




**TWO - LANE**

## 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.

**PAVEMENT MARKING WORDS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA



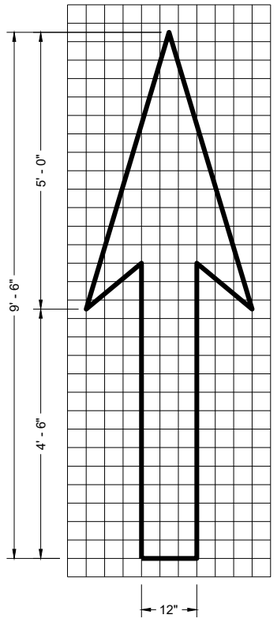
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SDD 15C07-16b

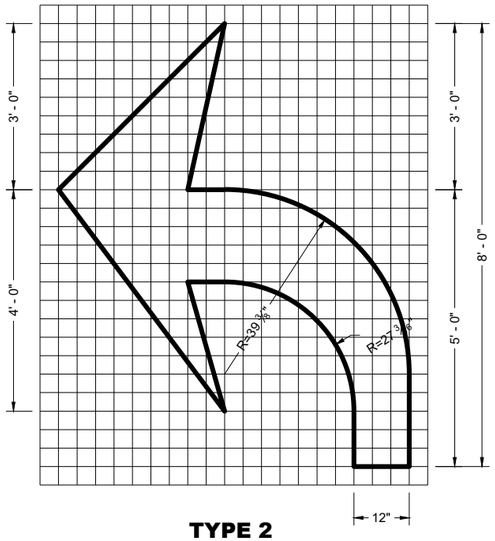
SDD 15C07-16b

## GENERAL NOTES

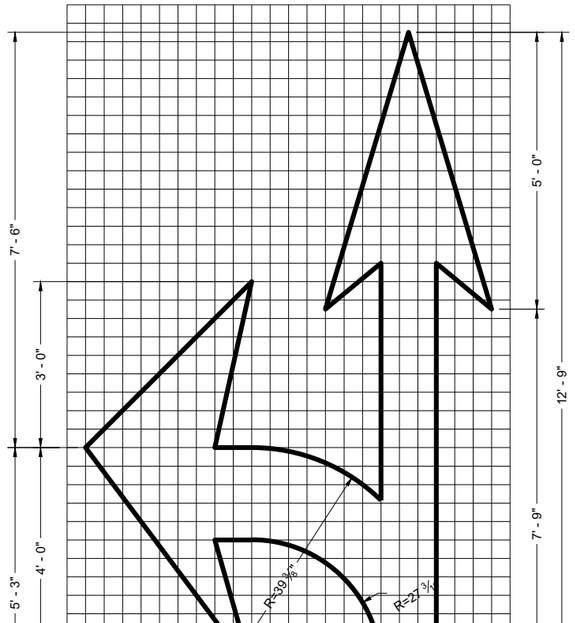
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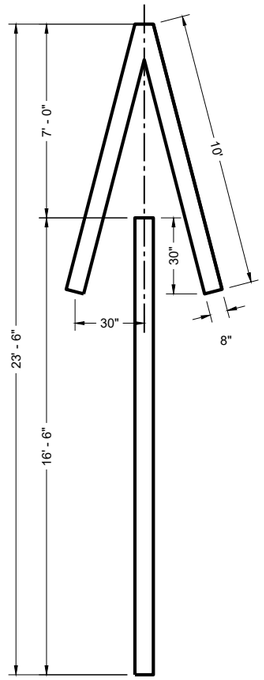

TYPE 1



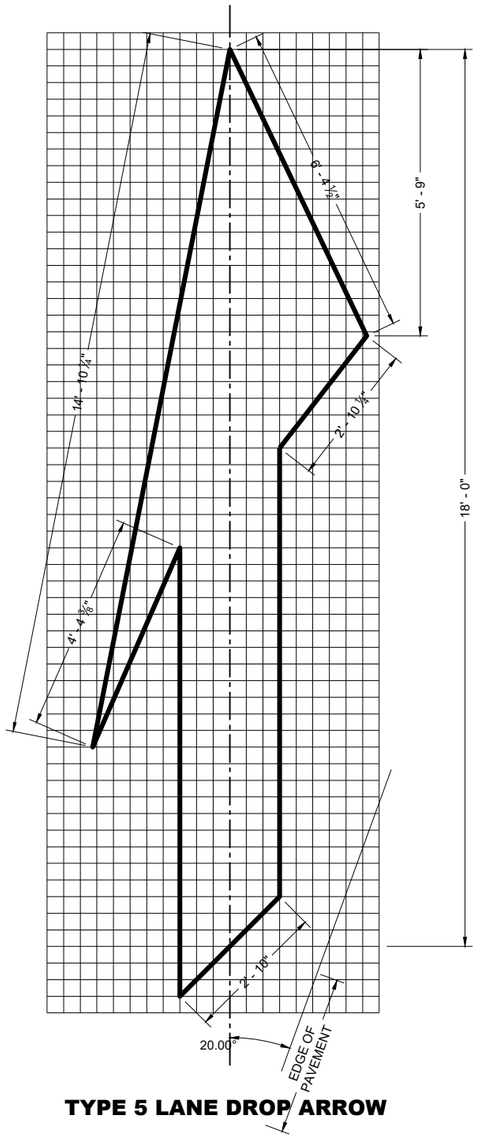

TYPE 2



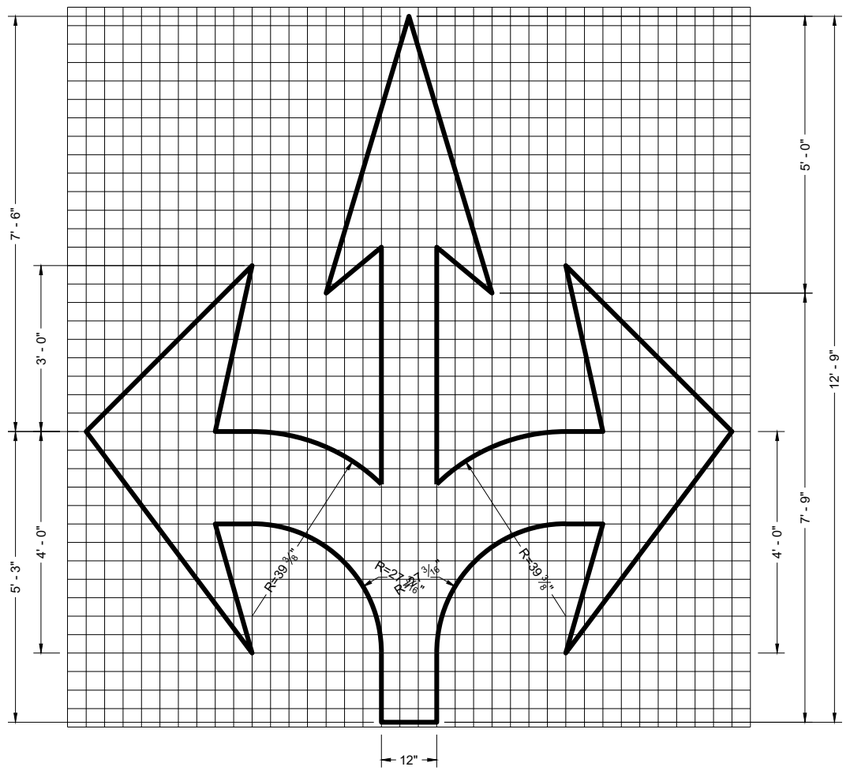

TYPE 3



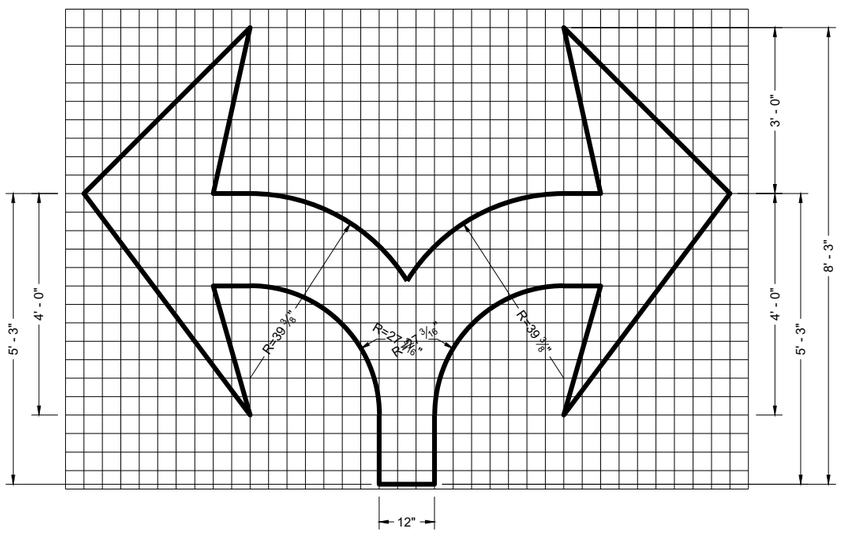

TYPE 4




TYPE 5 LANE DROP ARROW




TYPE 6




TYPE 7

**PAVEMENT MARKING ARROWS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2024 — DATE
/S/ Jeannie Silver — STATE SIGNING AND MARKING ENGINEER

FHWA



6
SDD 15C07-16c

## GENERAL NOTES

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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

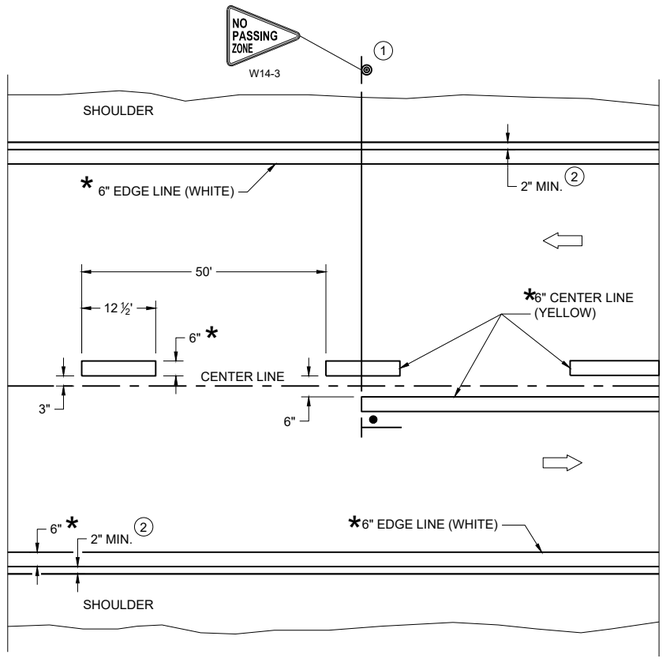
② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

## LEGEND

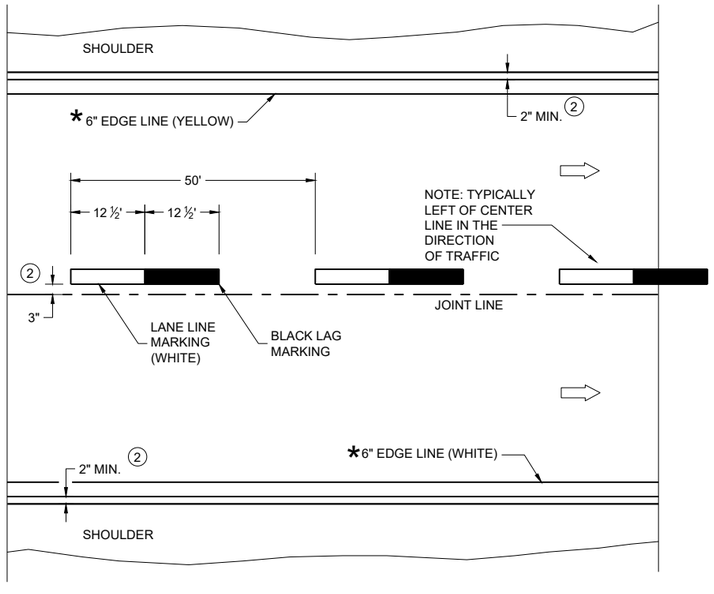
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC




TWO WAY TRAFFIC




ONE WAY TRAFFIC

**PERMANENT PAVEMENT MARKING**

6

**PERMANENT LONGITUDINAL PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

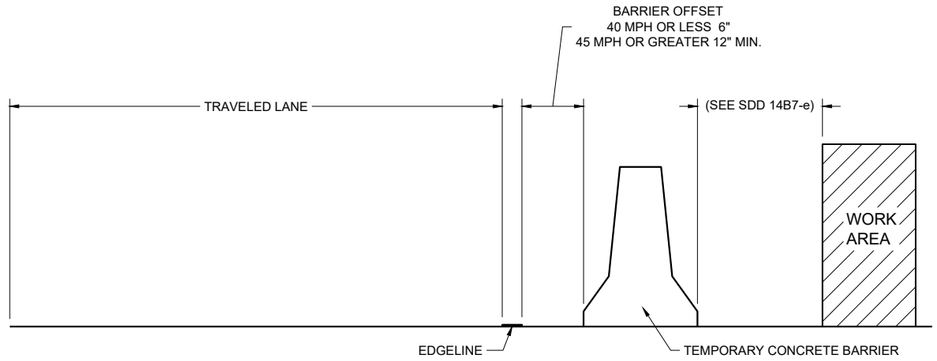
APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA



SDD 15C08-24a




**TEMPORARY BARRIER OFFSET FROM EDGELINE**

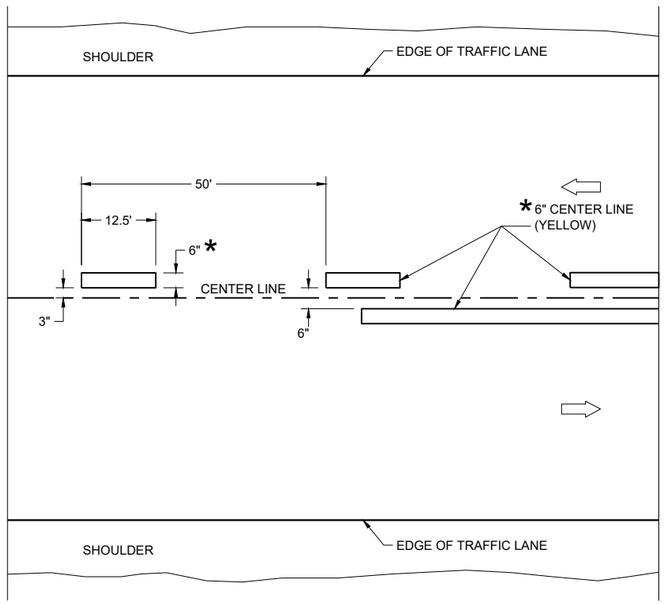
## GENERAL NOTES

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

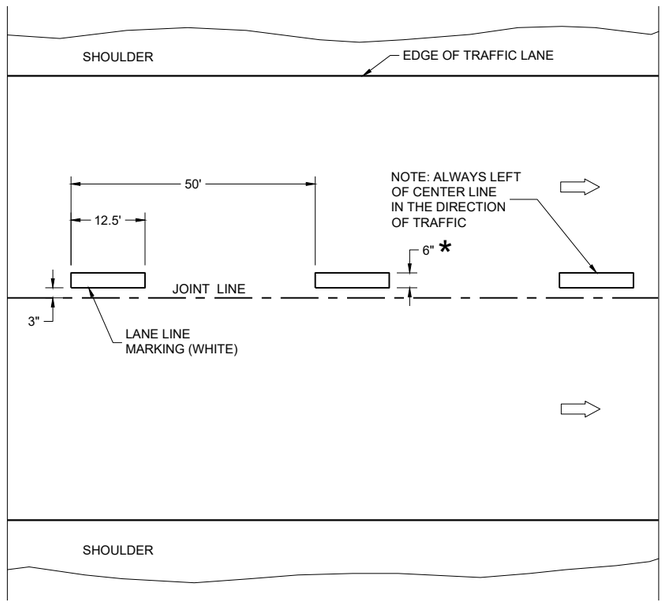
## LEGEND

DIRECTION OF TRAFFIC

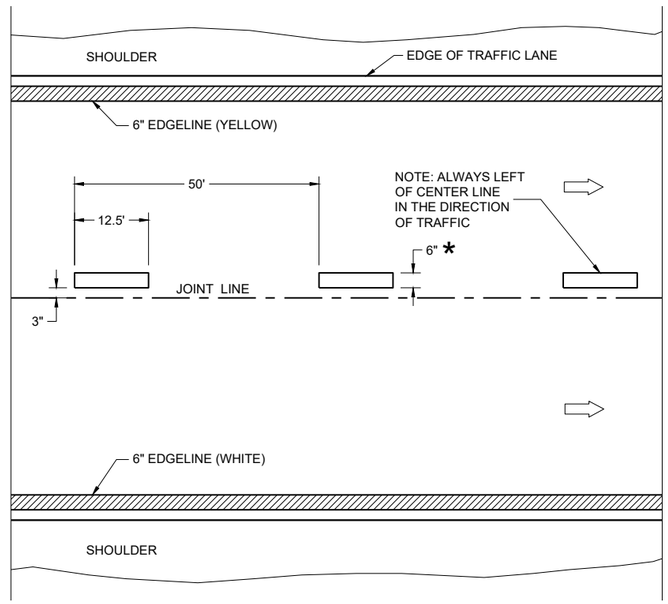
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES




**TWO WAY TRAFFIC**




**ONE WAY TRAFFIC**




**FREEWAYS AND EXPRESSWAYS**

**TEMPORARY PAVEMENT MARKING**

**TEMPORARY LONGITUDINAL PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA



6

SDD 15C08-24b

6

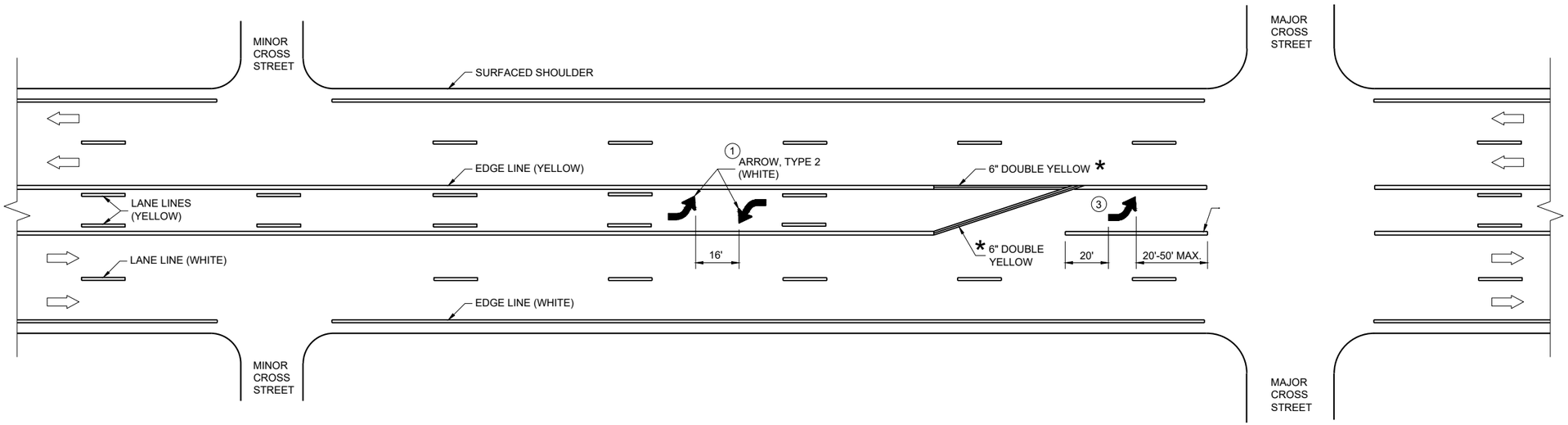
SDD 15C08-24b

## GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 10" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

⇨ DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES




**TWO WAY LEFT TURN LANE**





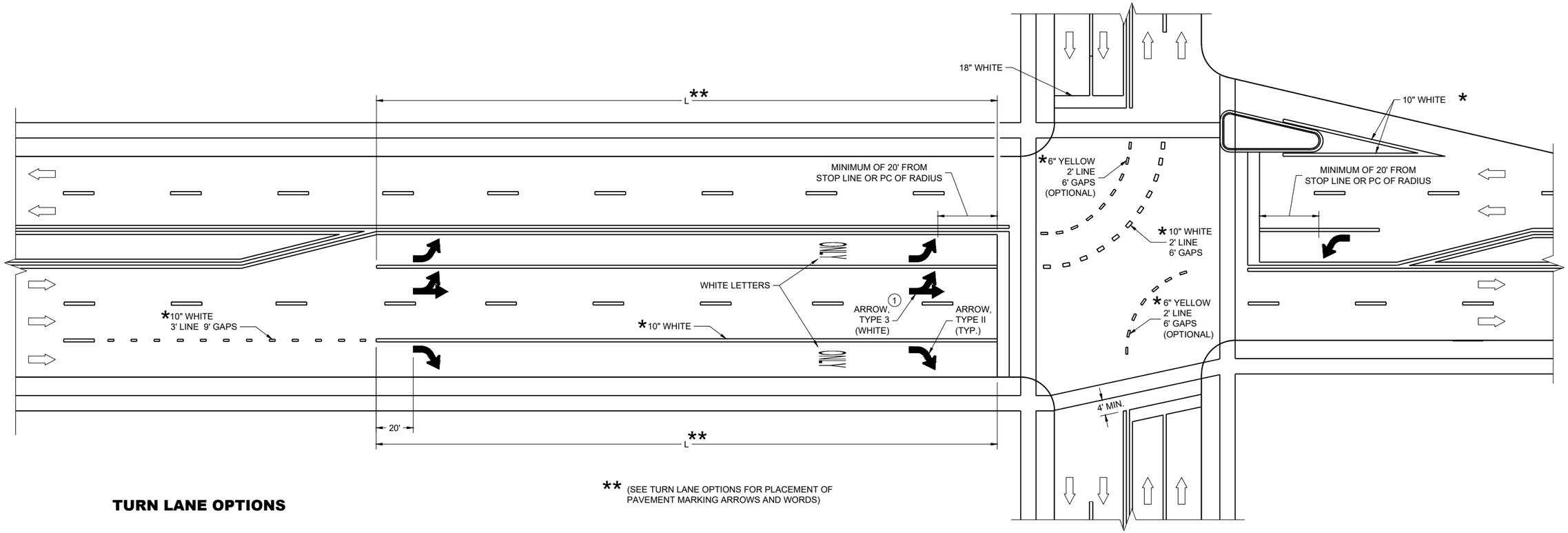
**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

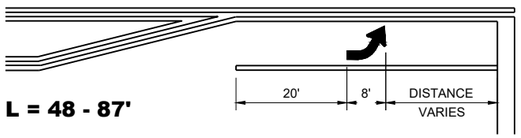
SDD 15C08-24c



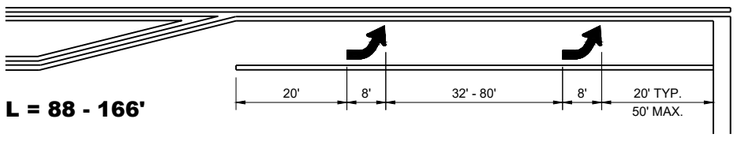

** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

## TURN LANE OPTIONS

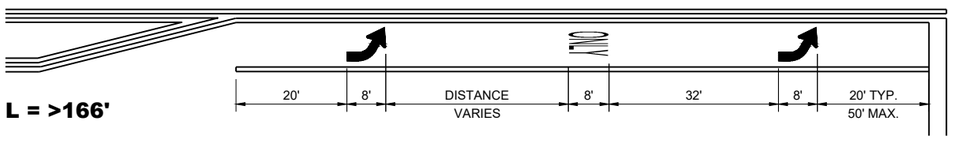
LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT
REQUIRE PAVEMENT MARKING ARROWS OR WORDS




**L = 48 - 87'**




**L = 88 - 166'**




**L = >166'**

## GENERAL NOTES

1. QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

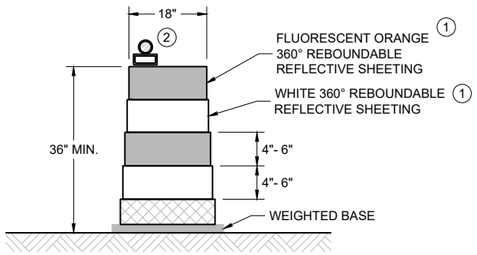
**PAVEMENT MARKING (TURN LANES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

## GENERAL NOTES

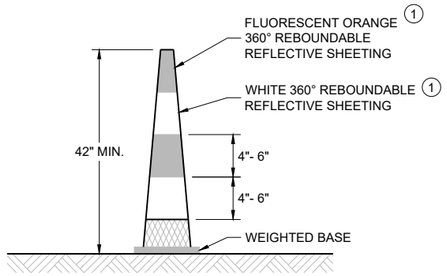
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.




### DRUM

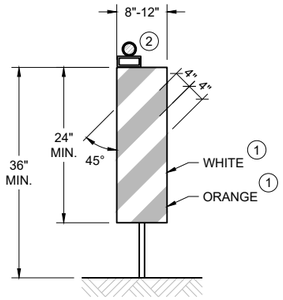
BALLAST WIDTHS
RANGE FROM 24"-36"




### 42" CONE

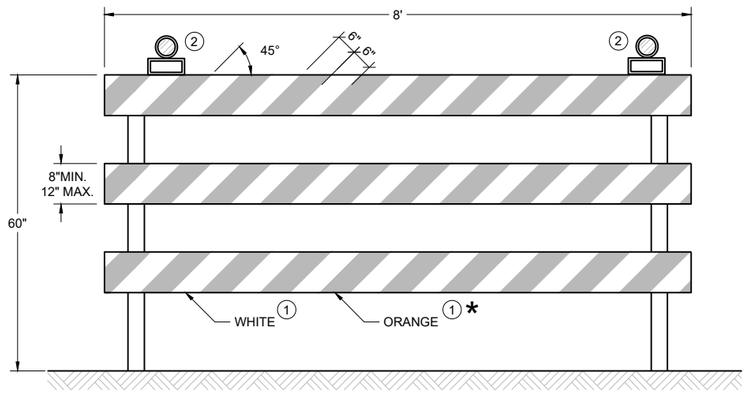
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"




### VERTICAL PANEL

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




### TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES**
**DRUMS, CONES, BARRICADES**
**AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

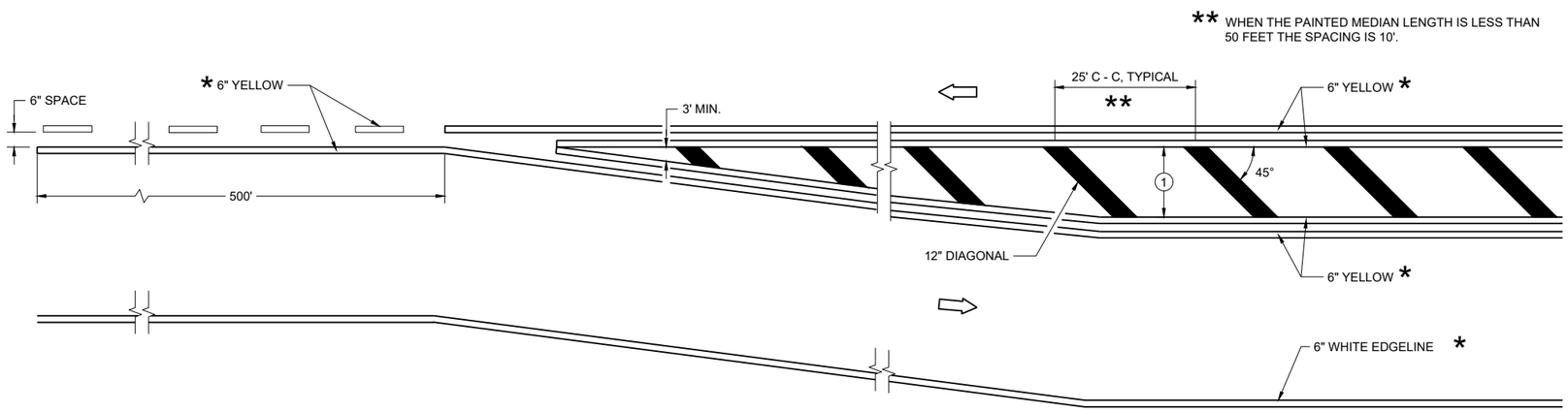
APPROVED
February 2026 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA





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SDD 15C11-11b



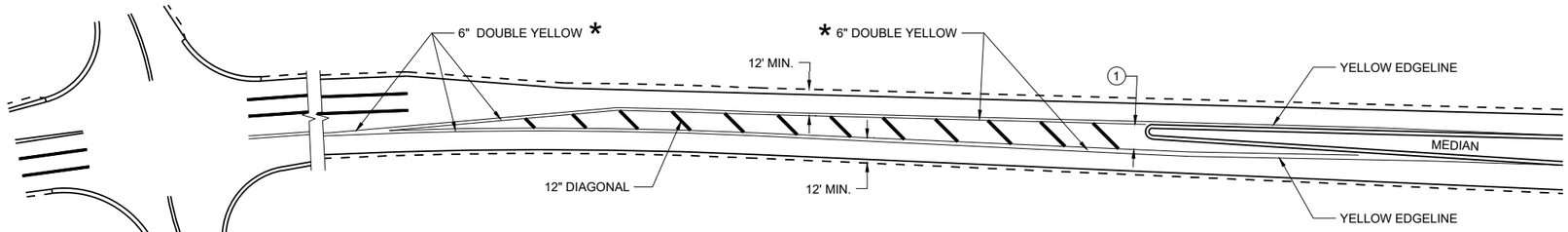

**MEDIAN ISLAND DETAIL**

## GENERAL NOTES

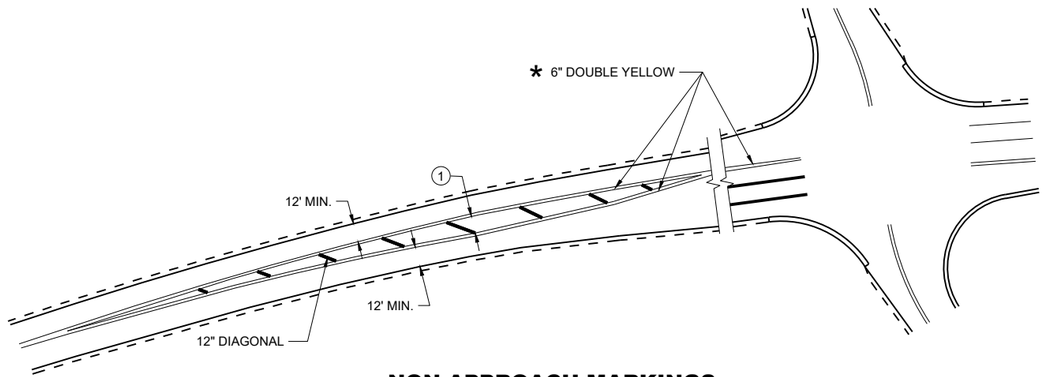
(1) DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES




**APPROACH MARKINGS FOR OTHER MEDIAN TYPES**




**NON-APPROACH MARKINGS**

**MEDIAN ISLAND PAVEMENT MARKINGS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

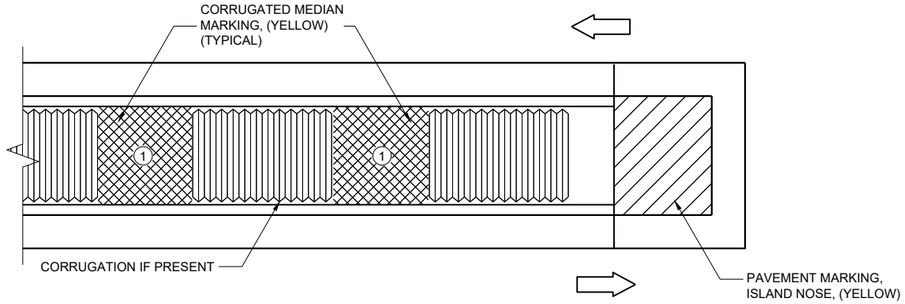
APPROVED
August 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA



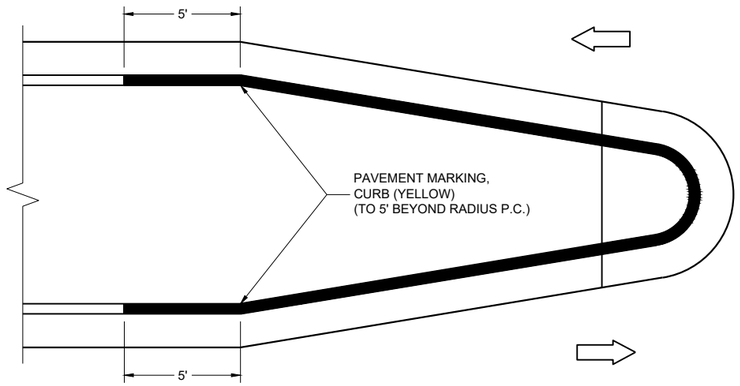
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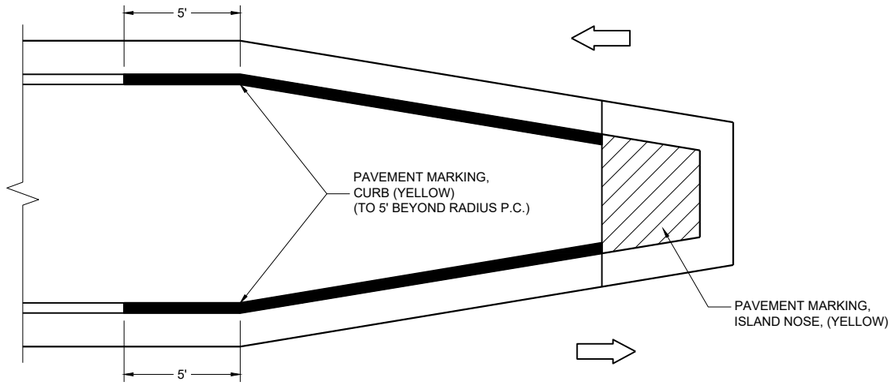
SDD 15C18-09a




**MEDIAN ISLAND WITH SQUARE BLUNT NOSE**




**MEDIAN ISLAND WITH ROUND BLUNT NOSE**




**MEDIAN ISLAND WITH SLOPED NOSE**

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

## GENERAL NOTES

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

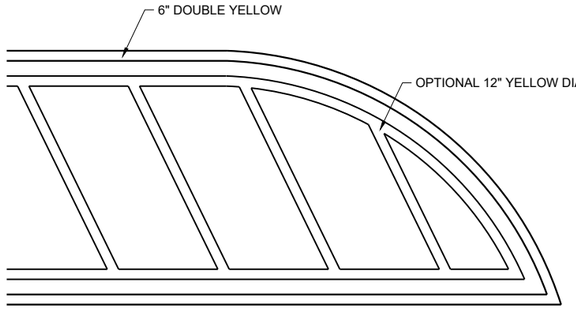
(1) APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL




**FLUSH MEDIAN ISLAND NOSE**

**PAVEMENT MARKINGS,
MEDIAN ISLAND NOSE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA





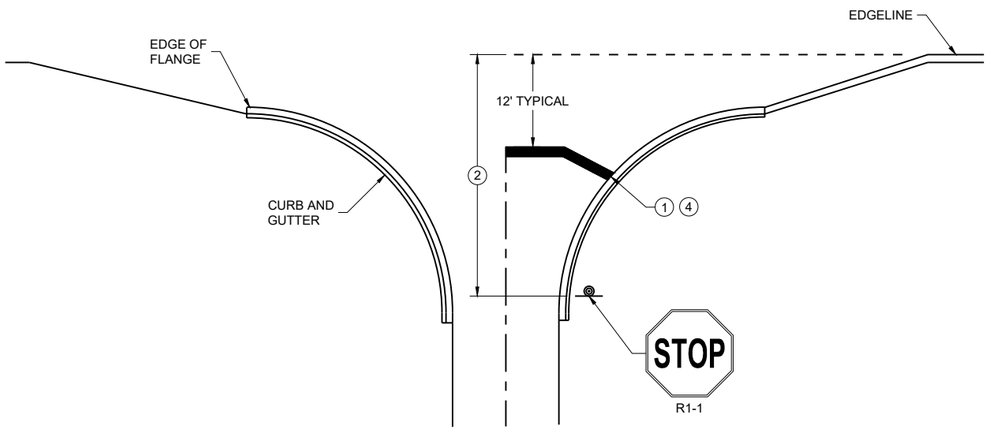
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SDD 15C18-09b

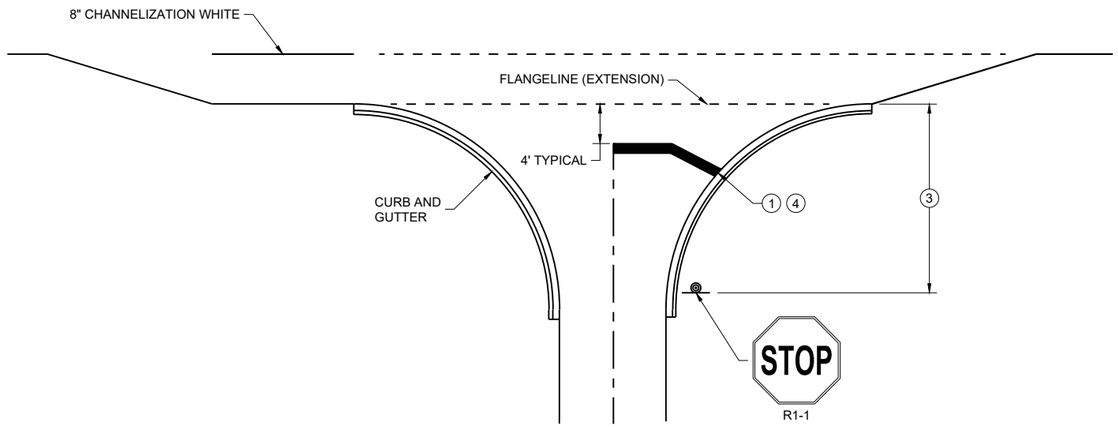
## GENERAL NOTES

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

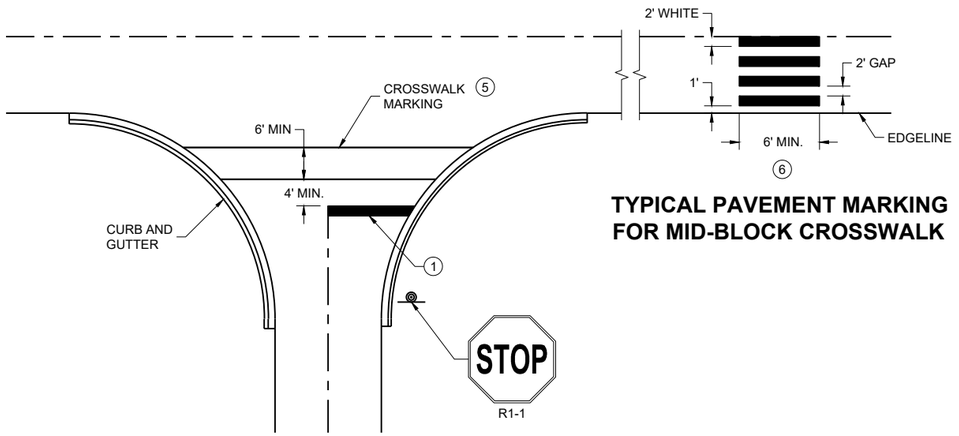
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
6. POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS




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

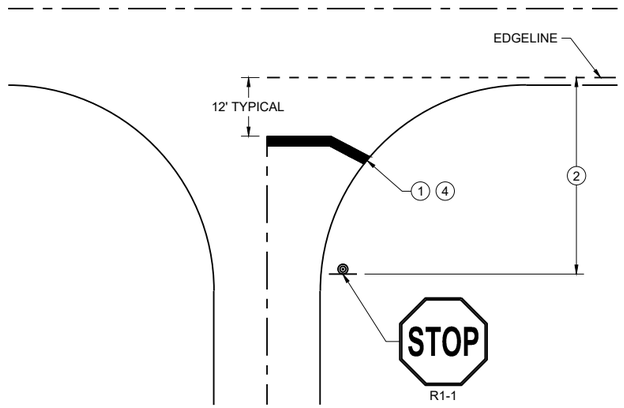



**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE**




**TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK** 5

**TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING**




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

**STOP LINE AND CROSSWALK PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

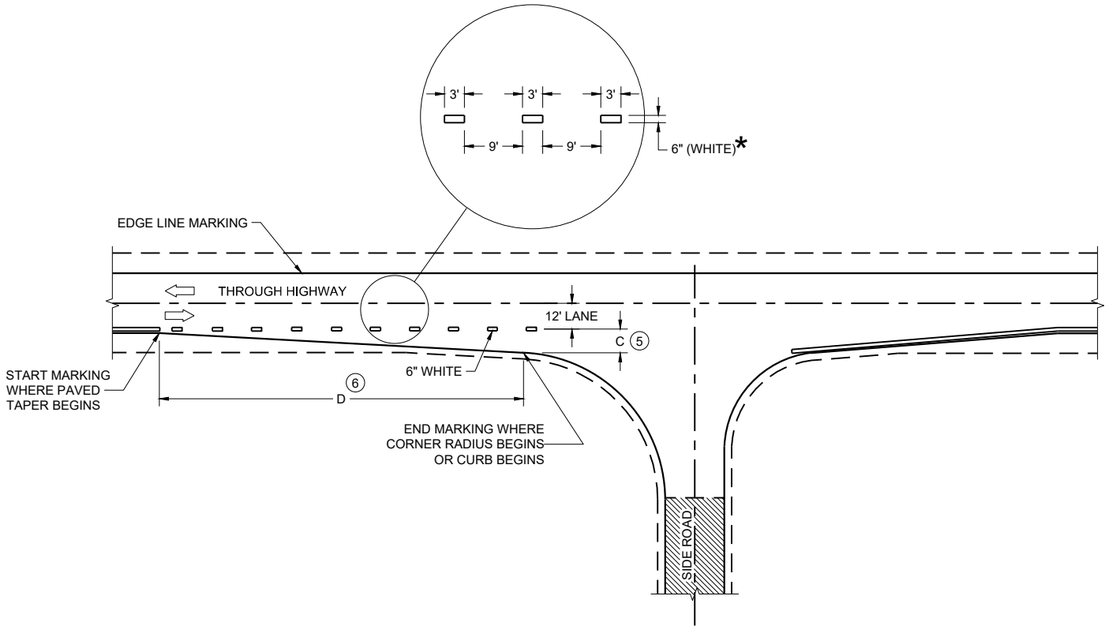
March 2024 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

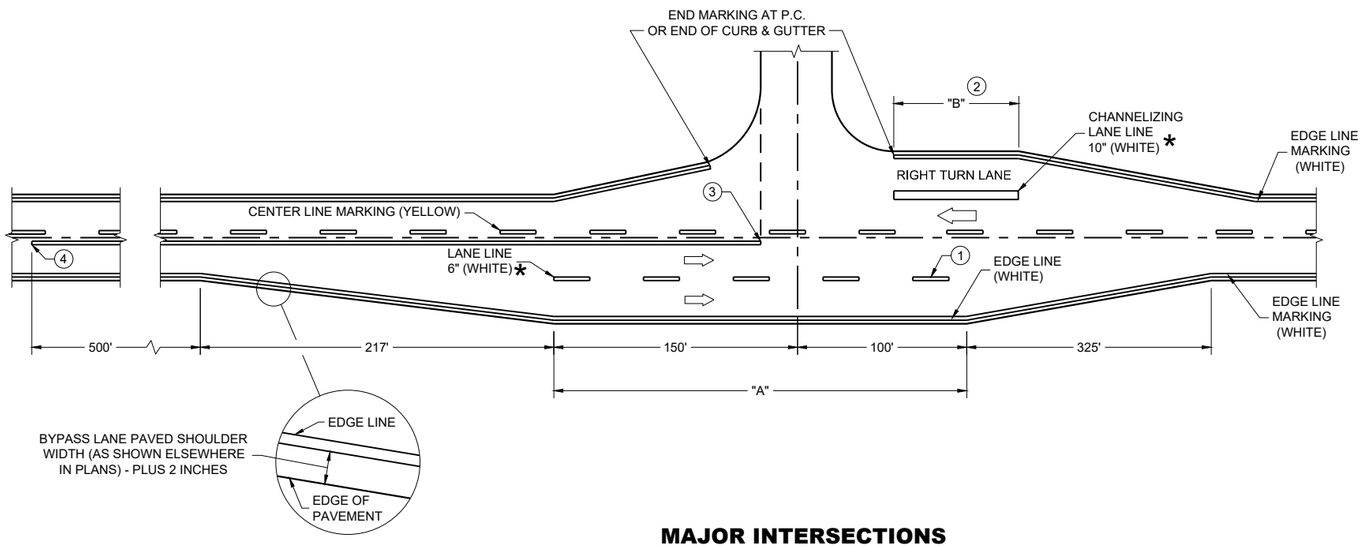
FHWA

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SDD 15C33-05




**MINOR INTERSECTION**




**MAJOR INTERSECTIONS**

**(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

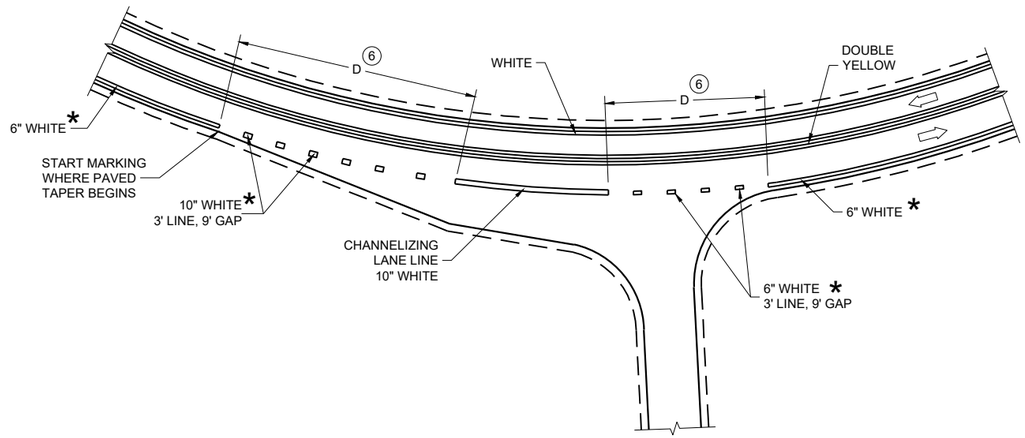
## GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

## LEGEND

DIRECTION OF TRAVEL




**INTERSECTION ON OUTSIDE OF CURVE**

**PAVEMENT MARKING (INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

## 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 AND PLACE TEMPORARY PAVEMENT MARKING LINE 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.

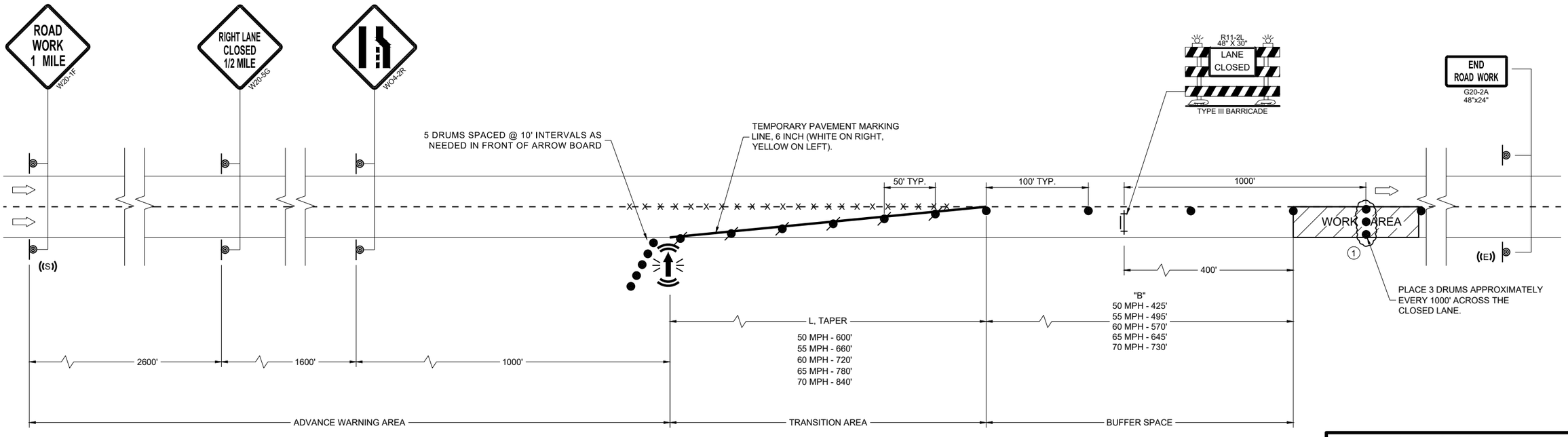
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE 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.

(1) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER




# TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA



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SDD 15D12-17a

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SDD 15D12-17a

## 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" SIGNS ARE THE SAME AS "W" SIGNS 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.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A 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 AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

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.

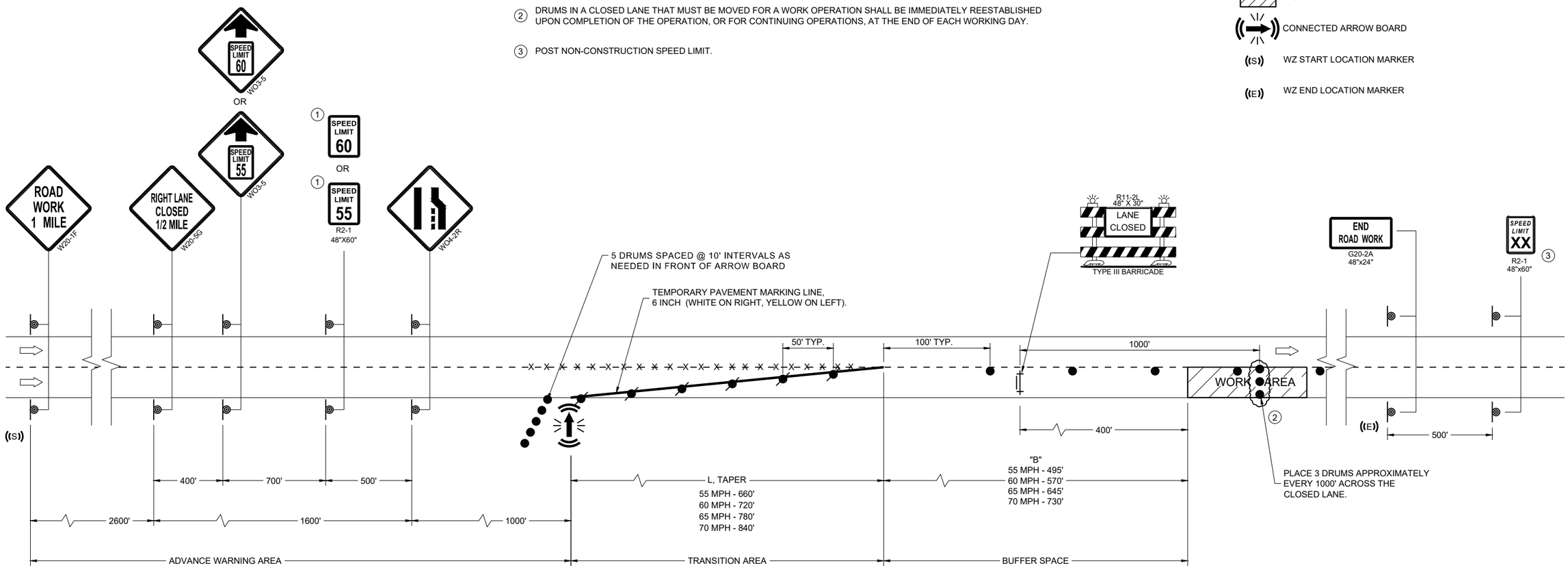
① A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES.

② DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

③ POST NON-CONSTRUCTION SPEED LIMIT.

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER




# TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA





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SDD 15D12-17b

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

## GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

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.

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 REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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 TEMPORARY SUPPORTS.

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 TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

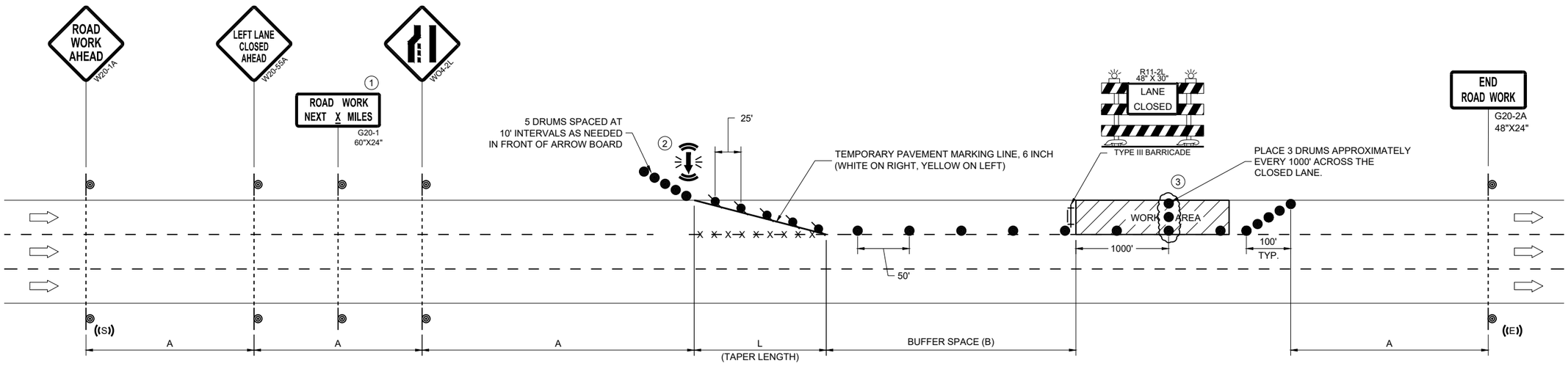
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.

(3) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.




| POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH) | ADVANCE WARNING SIGN SPACING (A) FEET | TAPER LENGTH (12 FT. LANE) (L) FEET | BUFFER SPACE (B) FEET |
|---|---|---|---|
| 25 | 200' | 125' | 155' |
| 30 | 200' | 180' | 200' |
| 35 | 350' | 245' | 250' |
| 40 | 350' | 320' | 305' |
| 45 | 500' | 540' | 360' |

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6
SDD 15D20-12a

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

## GENERAL NOTES

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

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 REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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 TEMPORARY SUPPORTS.

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 TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

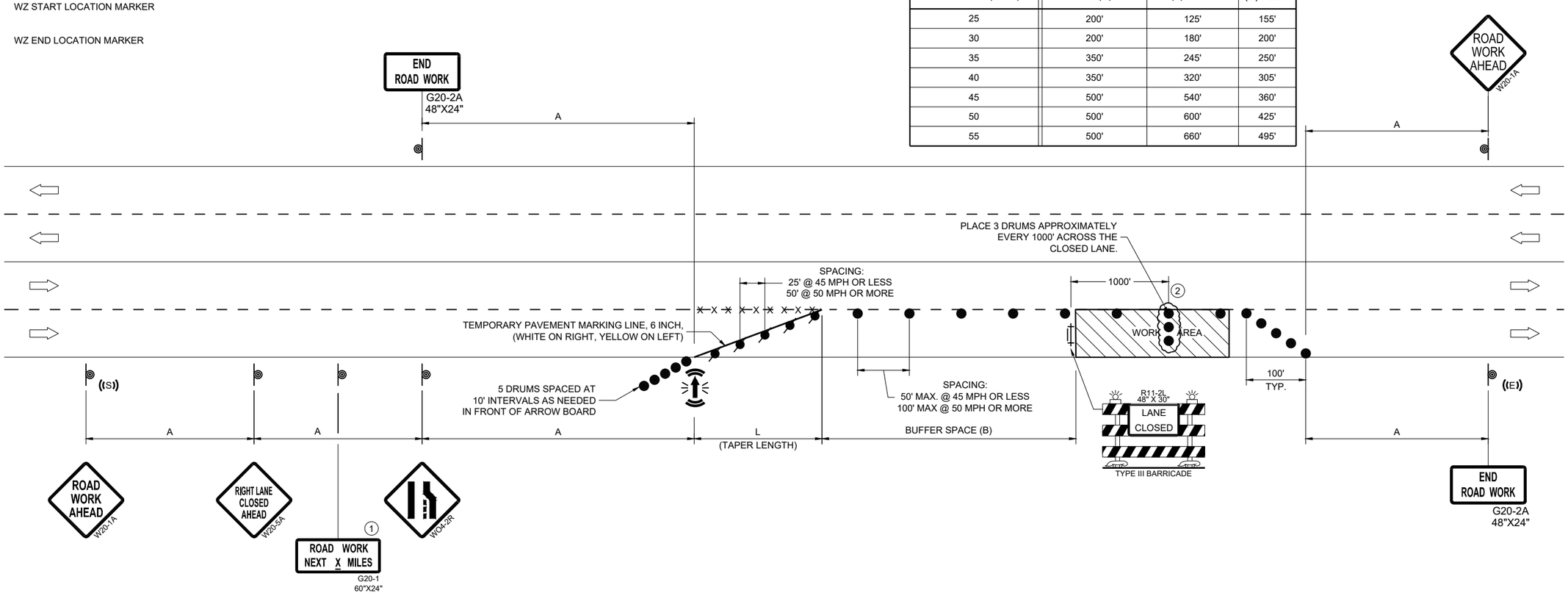
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

(2) DRUMS IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

| POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH) | ADVANCE WARNING SIGN SPACING (A) FEET | TAPER LENGTH (12 FT. LANE) (L) FEET | BUFFER SPACE (B) FEET |
|---|---|---|---|
| 25 | 200' | 125' | 155' |
| 30 | 200' | 180' | 200' |
| 35 | 350' | 245' | 250' |
| 40 | 350' | 320' | 305' |
| 45 | 500' | 540' | 360' |
| 50 | 500' | 600' | 425' |
| 55 | 500' | 660' | 495' |




**TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 15D20-12b

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

## GENERAL NOTES

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

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 REGIONAL TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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 TEMPORARY SUPPORTS.

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 TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

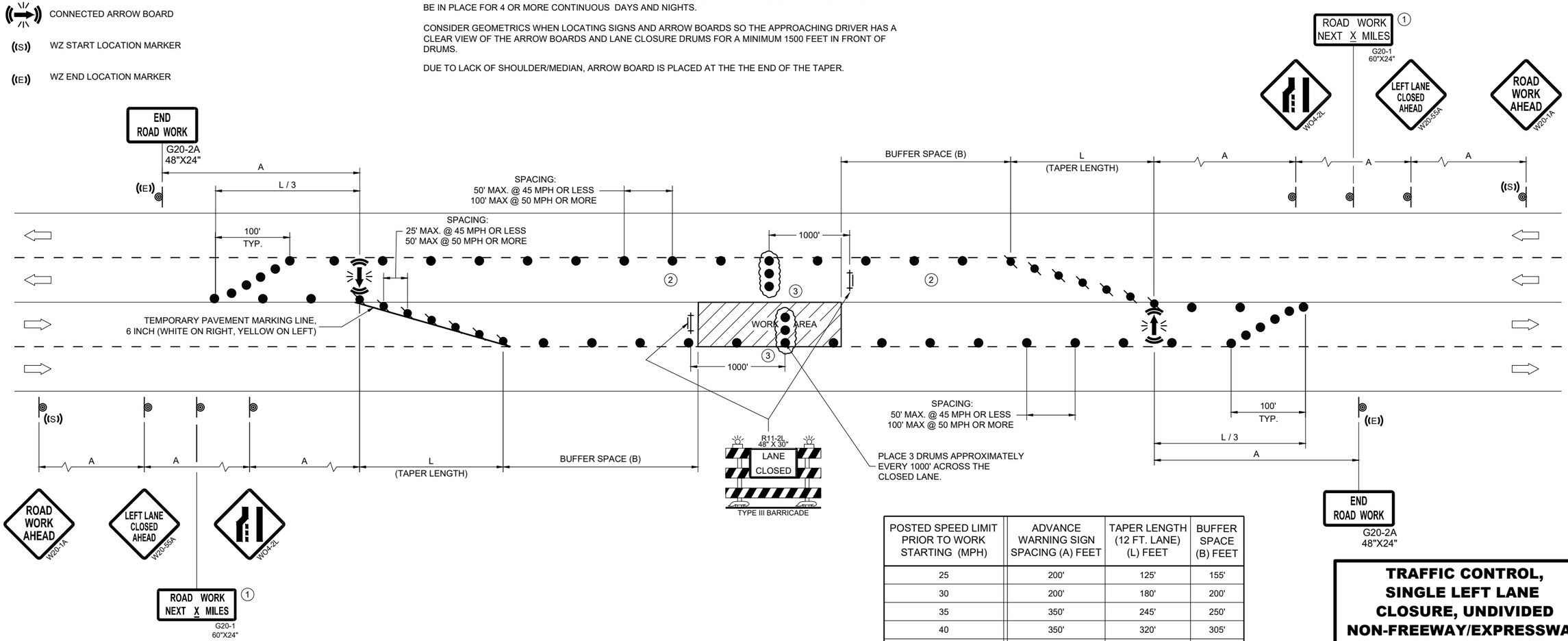
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

(2) LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.

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




| POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH) | ADVANCE WARNING SIGN SPACING (A) FEET | TAPER LENGTH (12 FT. LANE) (L) FEET | BUFFER SPACE (B) FEET |
|---|---|---|---|
| 25 | 200' | 125' | 155' |
| 30 | 200' | 180' | 200' |
| 35 | 350' | 245' | 250' |
| 40 | 350' | 320' | 305' |
| 45 | 500' | 540' | 360' |
| 50 | 500' | 600' | 425' |
| 55 | 500' | 660' | 495' |

# TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2026
DATE

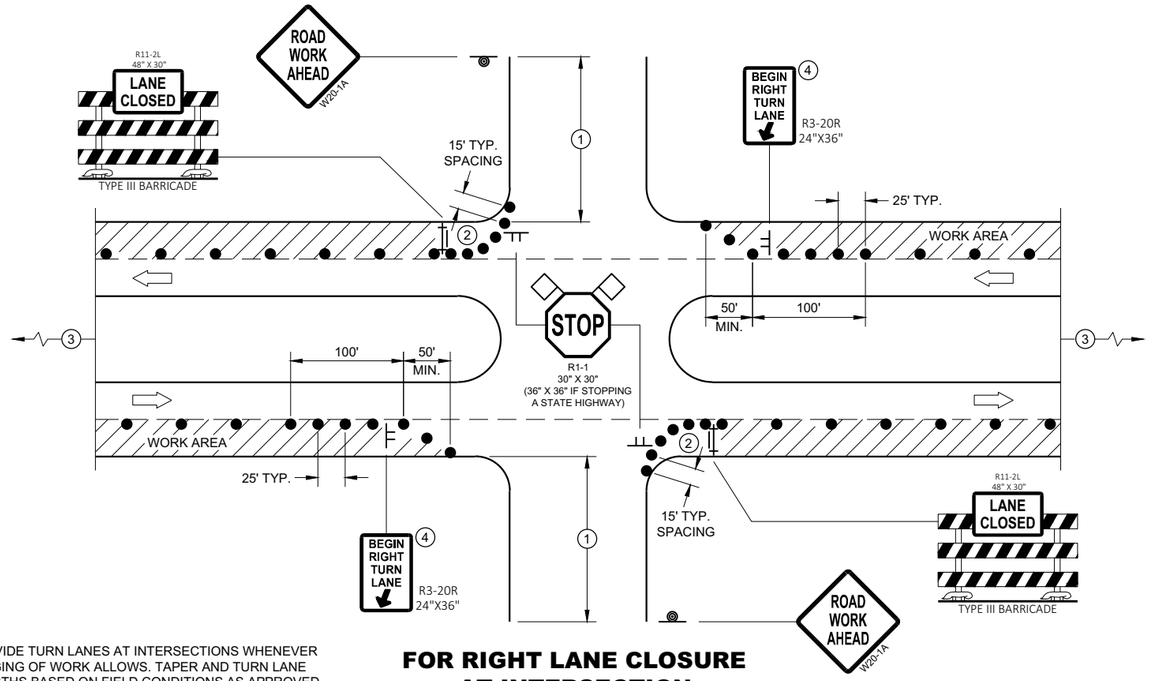
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



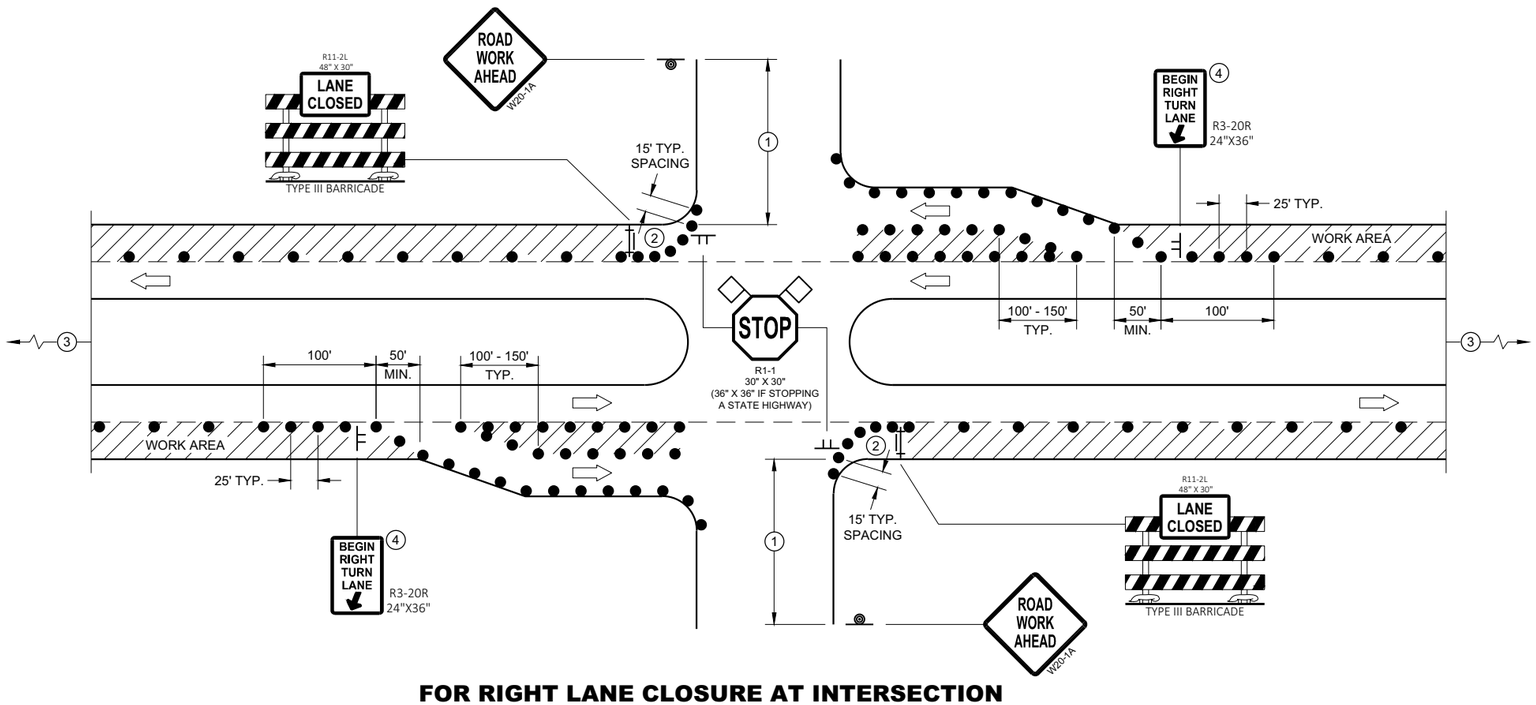
SDD 15D20-12c

SDD 15D20-12c




**FOR RIGHT LANE CLOSURE AT INTERSECTION**

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




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

## GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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 TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

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

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

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

(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.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

## LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

**TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

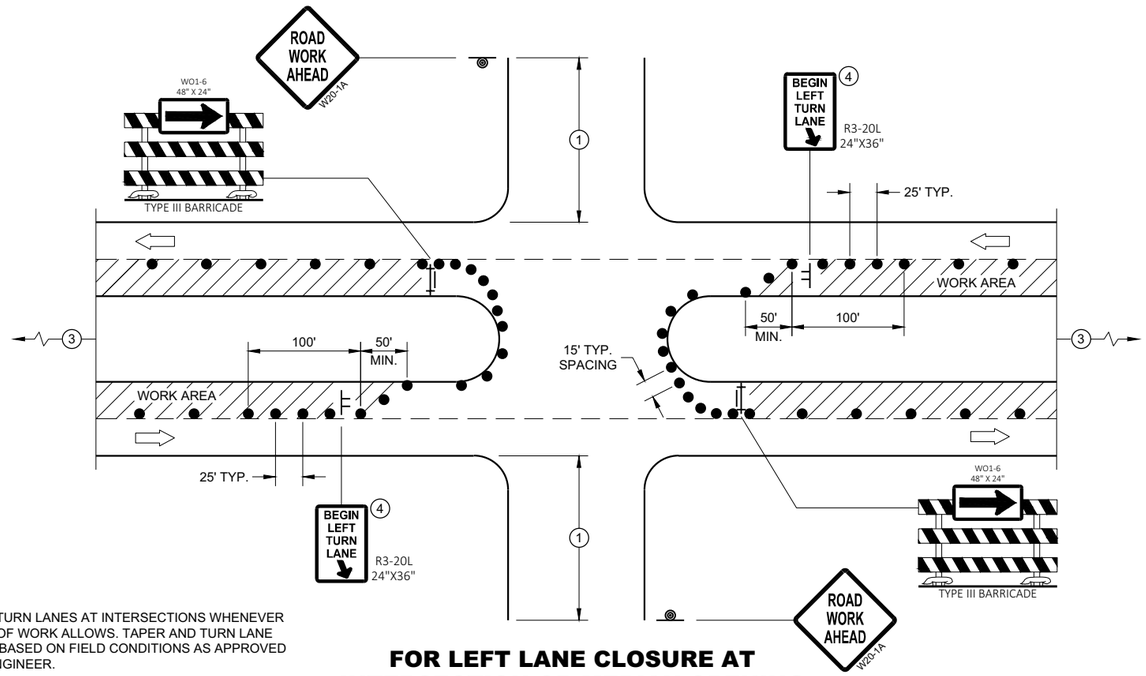


6

SDD 15D21 - 07a

6

SDD 15D21 - 07a




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

## FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

## GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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 TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

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

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

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

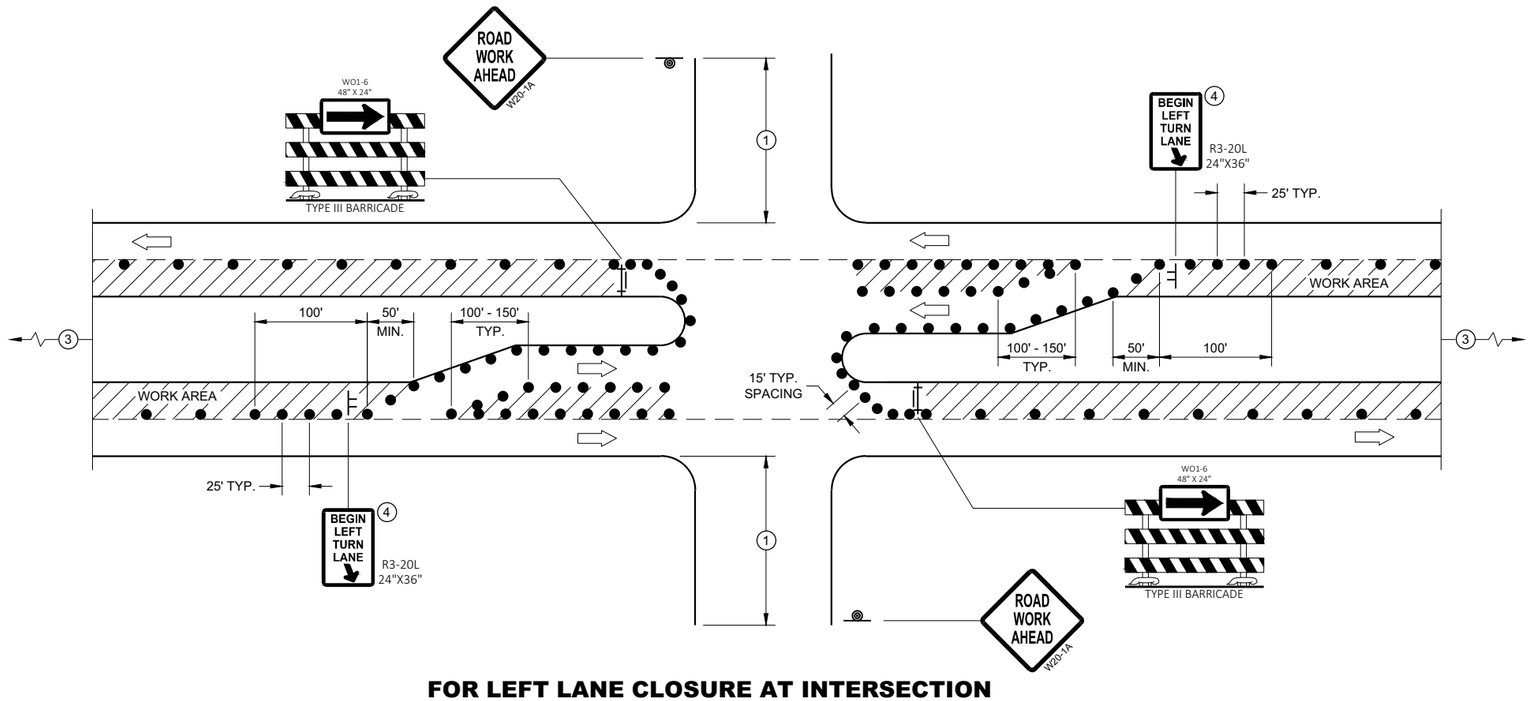
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(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.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.




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

## LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

## TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA



6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

## LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- CONNECTED ARROW BOARD
- WORK AREA
- (S) WZ START LOCATION MARKER
- (E) WZ END LOCATION MARKER

## 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.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

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

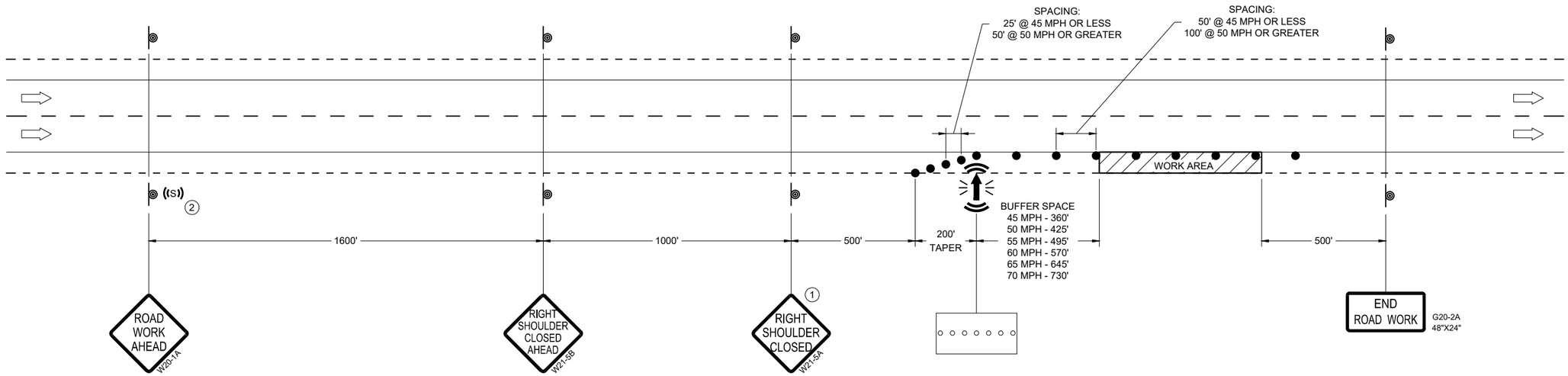
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

(1) FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR THE W21-5A SIGN MAY BE OMITTED.

(2) IF ALREADY PRESENT WITHIN PROJECT , DO NOT INCLUDE ADDITIONAL DEVICE.




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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2026
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

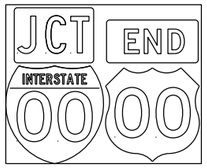


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SDD 15D27-06

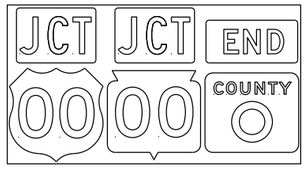
# TYPICAL ASSEMBLIES



J1-1



J1-2



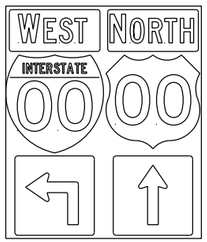
J1-3



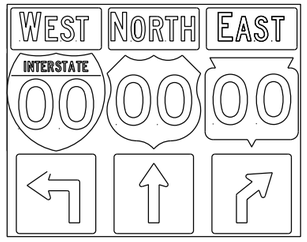
JR1-1



J2-1



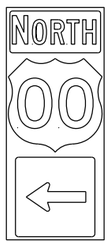
J2-2



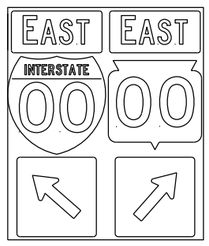
J2-3



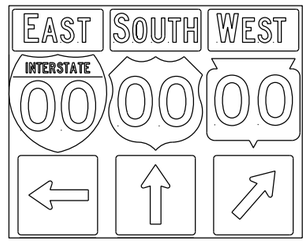
JV
( Typical Vertical J-Assembly
See Note 10 and 11 )



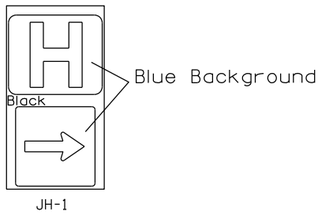
J3-1



J3-2



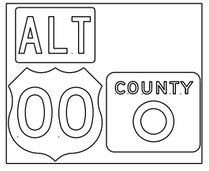
J3-3



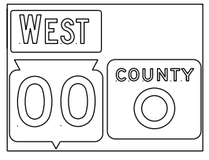
JH-1



J4-1



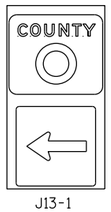
J4-2



J4-2



J12-1



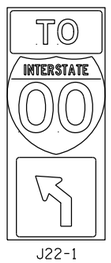
J13-1



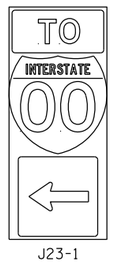
J32-1



J33-1



J22-1



J23-1



JR13-1



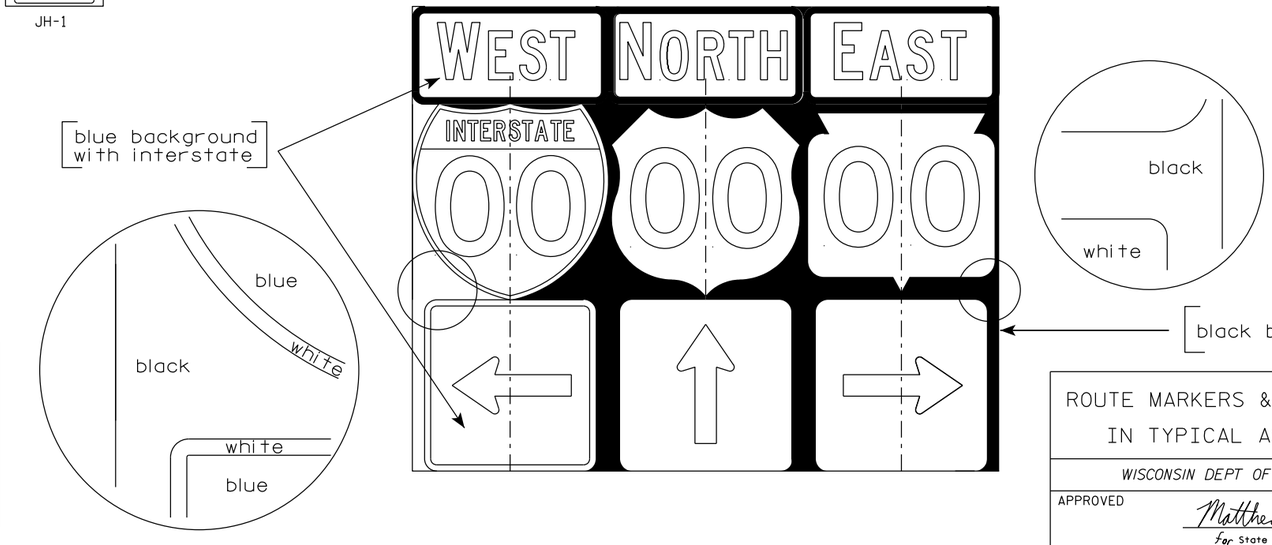
JR23-1



JR99-1

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. 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.
6. 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.
7. 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.
8. 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.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.




ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

*WISCONSIN DEPT OF TRANSPORTATION*

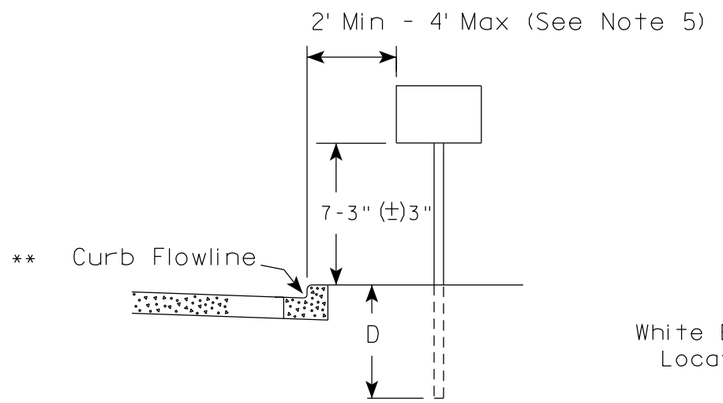
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/23 PLATE NO. A2-1S.10

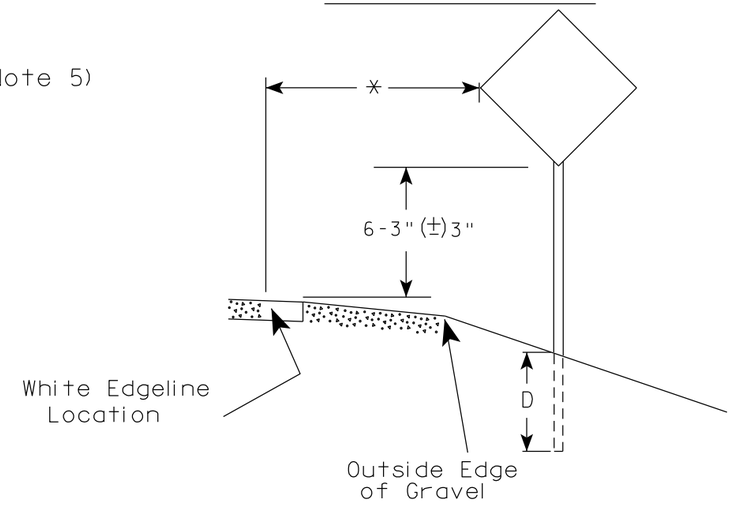
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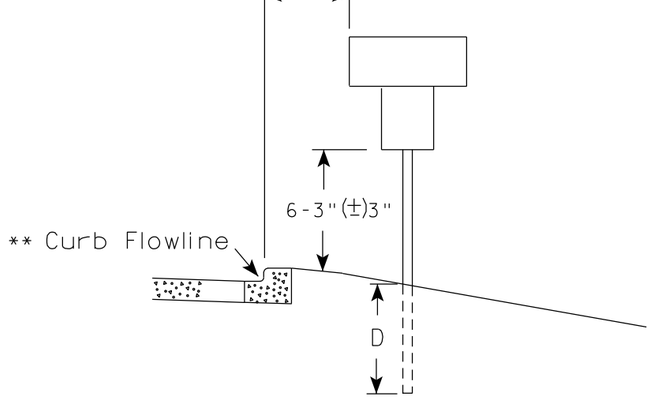
SHEET NO: 181 E

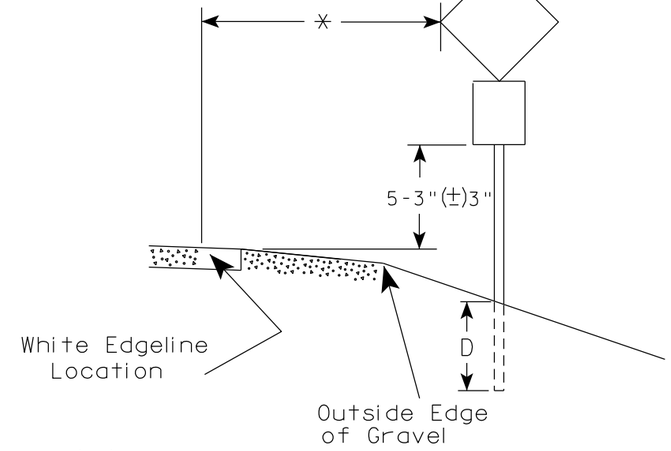
## URBAN AREA




## 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 or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

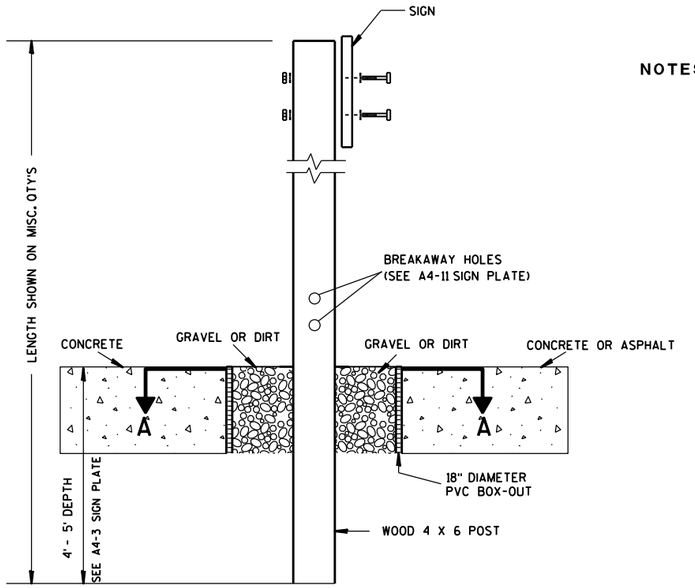
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

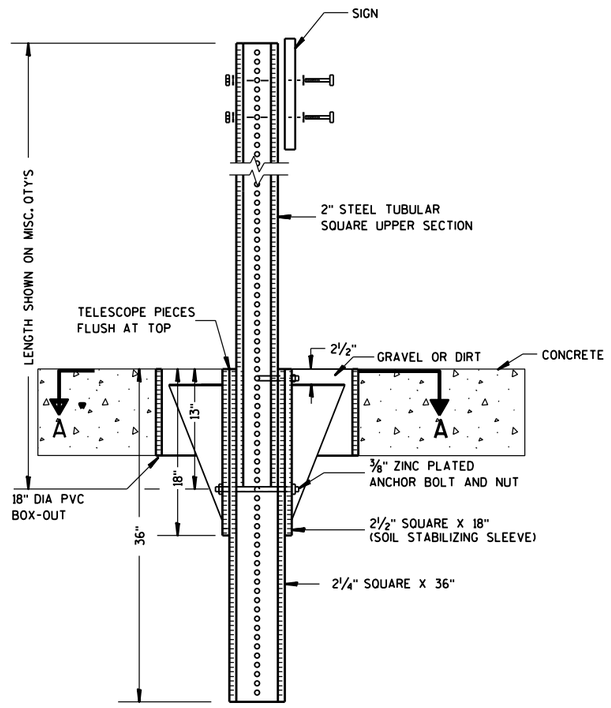
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 182 | E |
|---|---|---|---|---|---|




**ELEVATION VIEW**

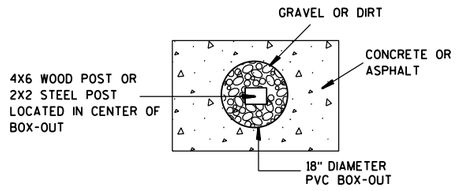
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

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

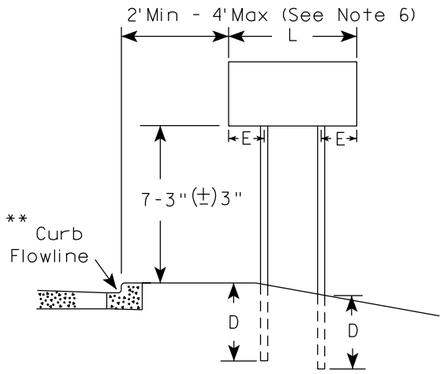
DATE 1/27/14 PLATE NO. A4-3B.1

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

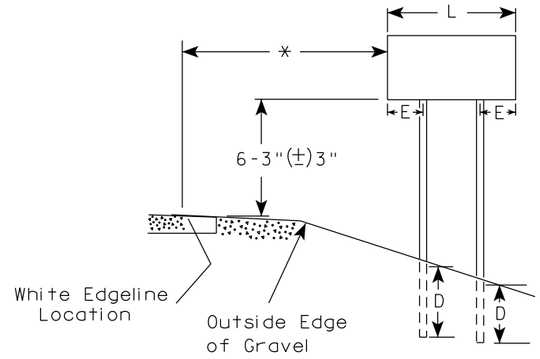


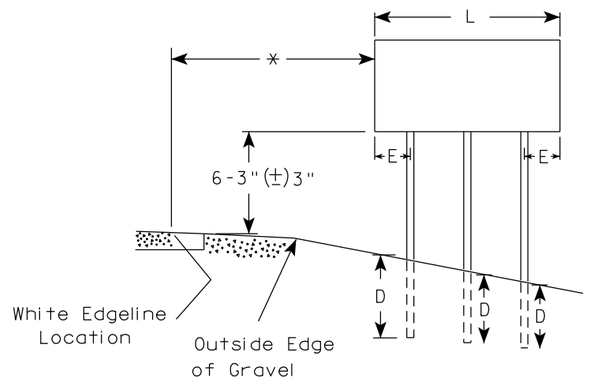
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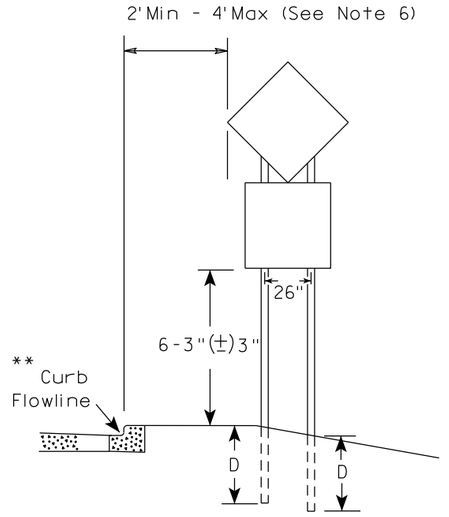
## URBAN AREA



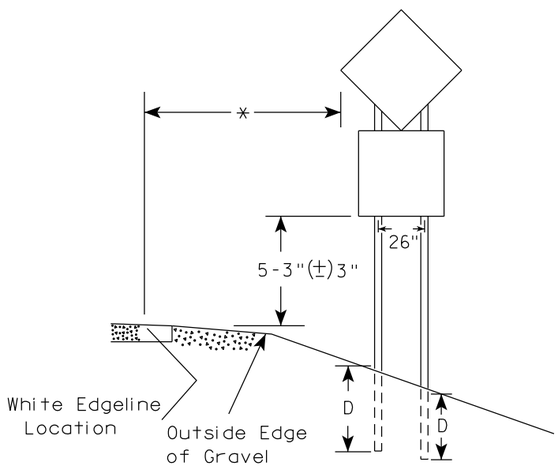

## RURAL AREA (See Note 3)




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" (±) 3" or 6'-3" (±) 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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' |

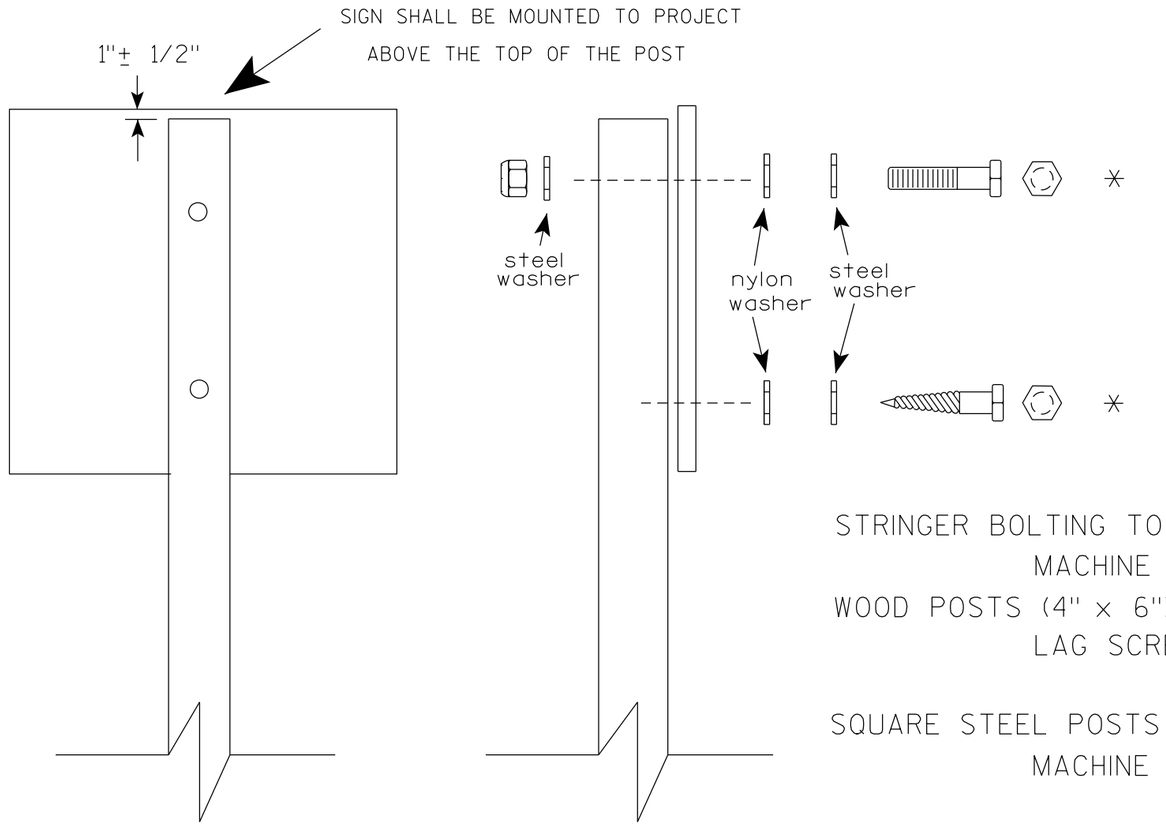
# TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 184 | 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 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

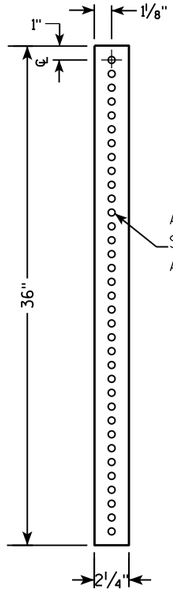
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

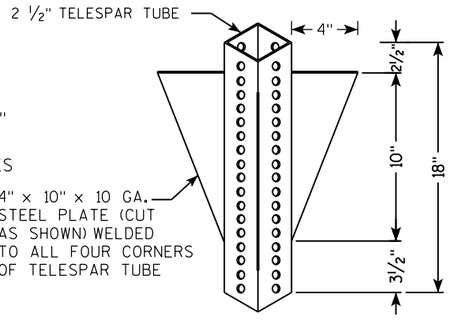
DATE 4/1/2020 PLATE NO. A4-8.9

## TELESCOPIC TUBING ANCHORS
## TWO PIECE SYSTEM

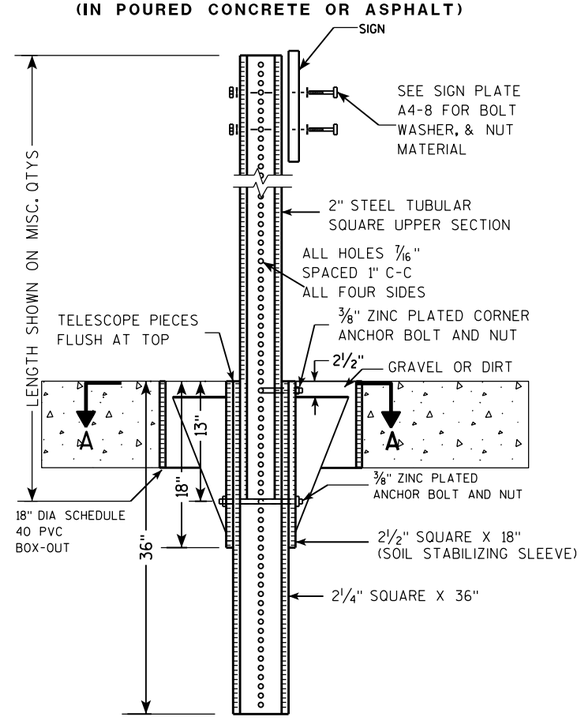
**2 ¼ " SQUARE**
**12 GAUGE**
**PERFORATED**
**GALVANIZED FINISH**



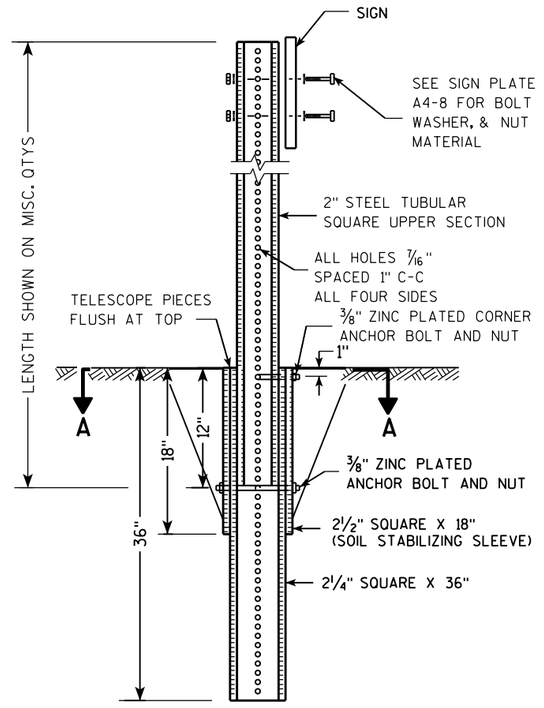

**2 ½ " SQUARE**
**12 GAUGE**
**OMNI-DIRECTIONAL**
**PERFORATED**
**SOIL STABILIZING SLEEVE**
**GALVANIZED FINISH**

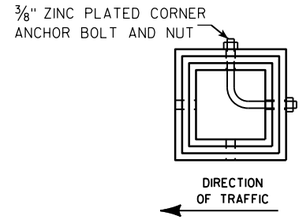



## DETAIL OF TUBULAR STEEL SIGN POST
**(IN POURED CONCRETE OR ASPHALT)**




## 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*

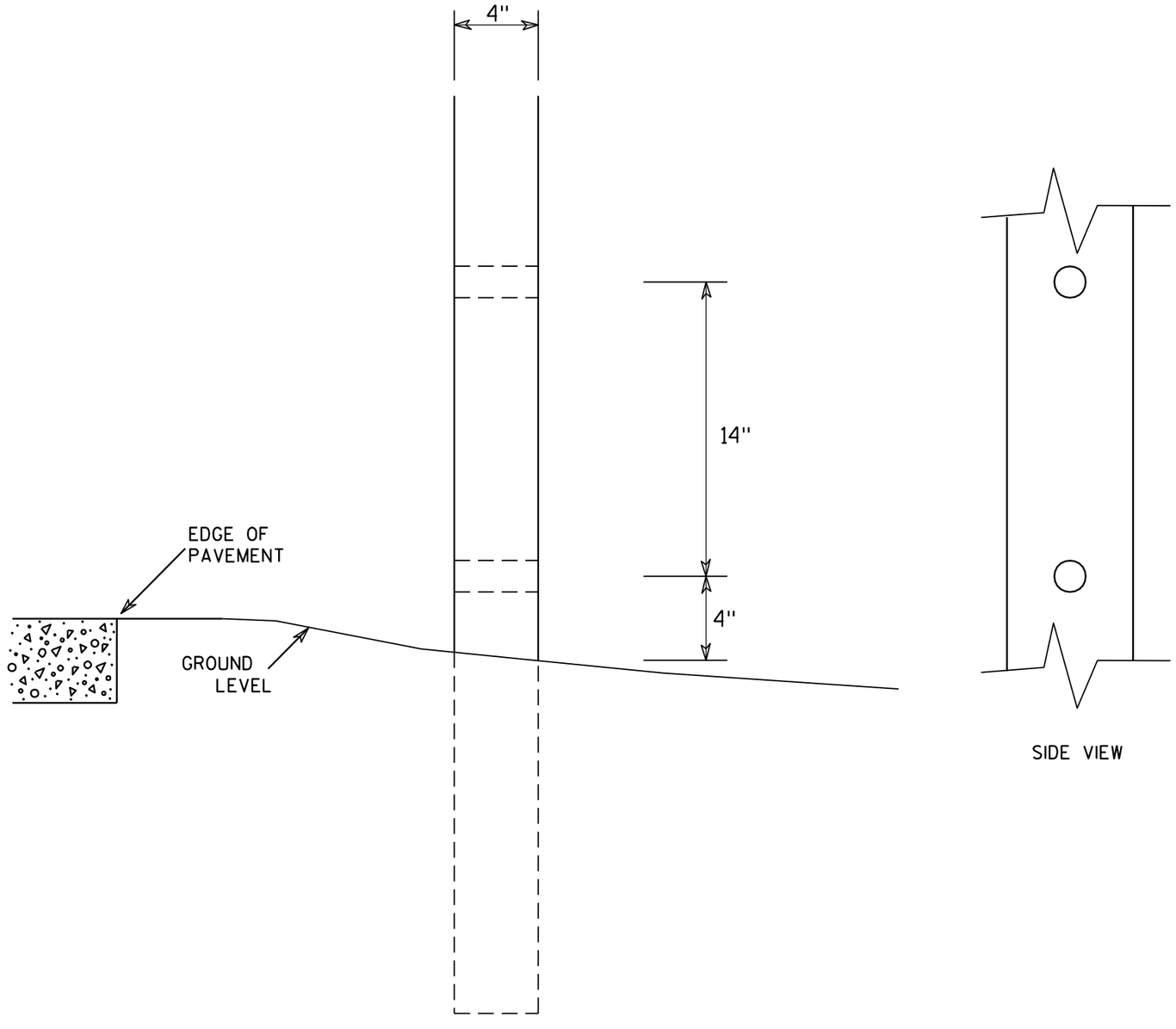
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|



FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42






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.

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

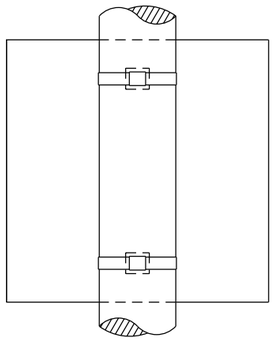
APPROVED Chester J Spang for State Traffic Engineer

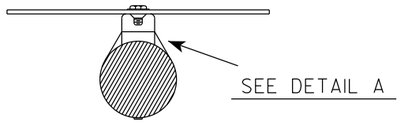
DATE 3/27/97 PLATE NO. A4-11.2

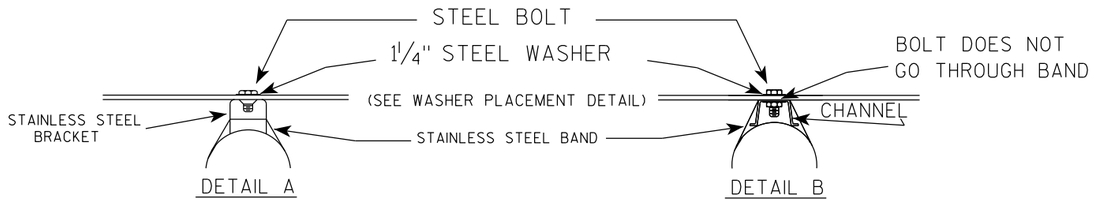
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 187 | E |
|---|---|---|---|---|---|

# BANDING

SINGLE SIGN



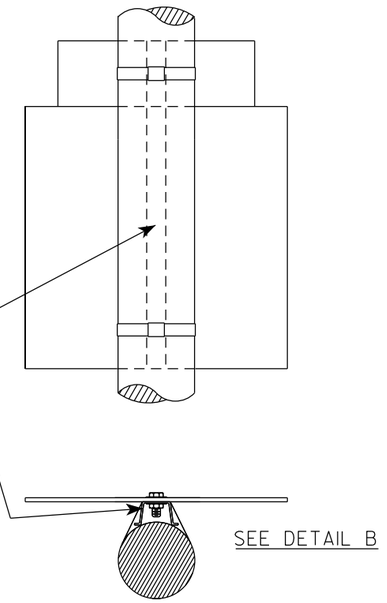


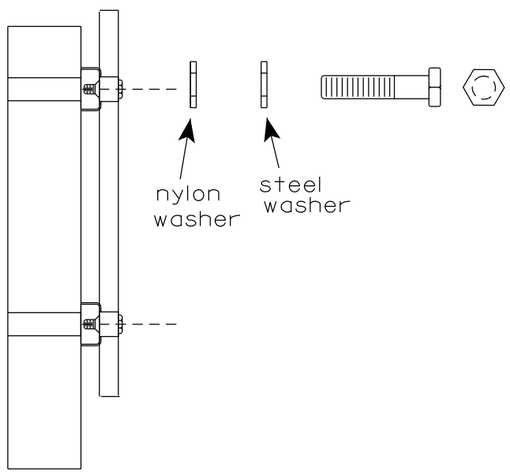

## GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY




WASHER PLACEMENT




WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

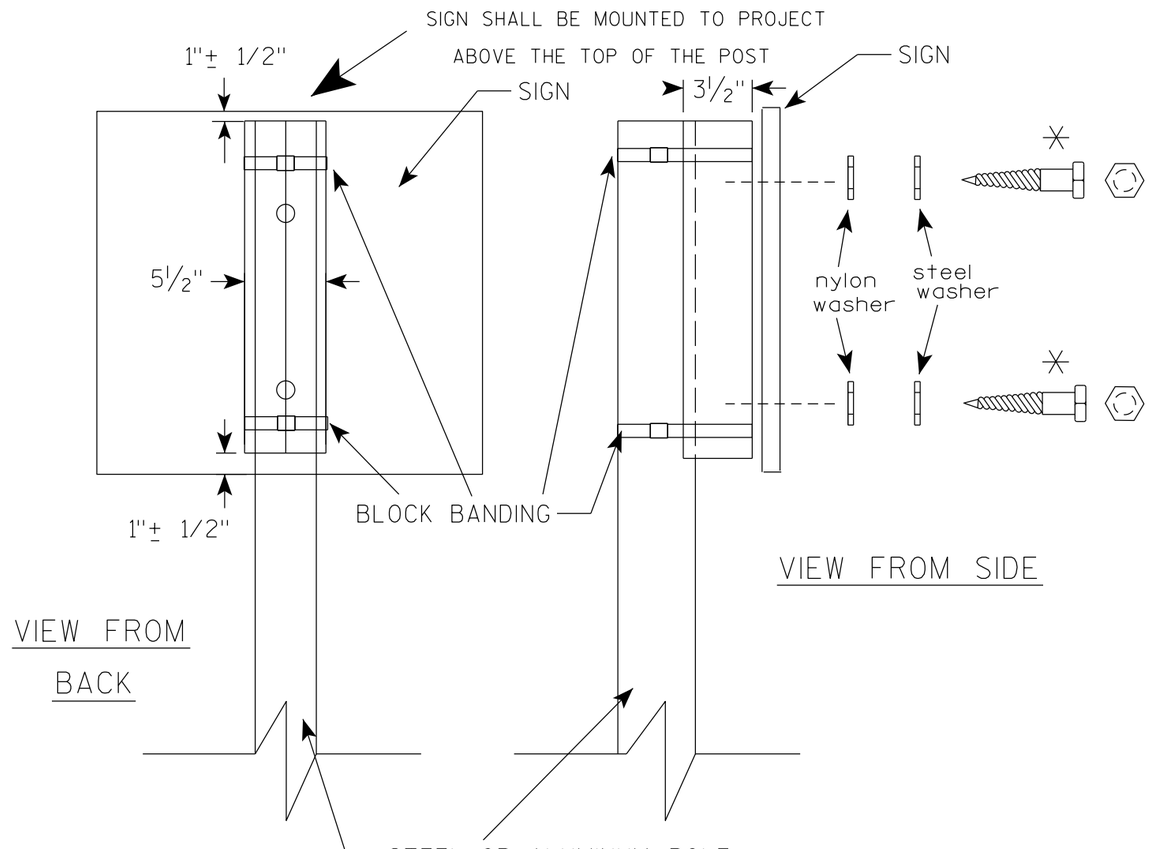
DATE 6/10/19 PLATE NO. A5-9.4

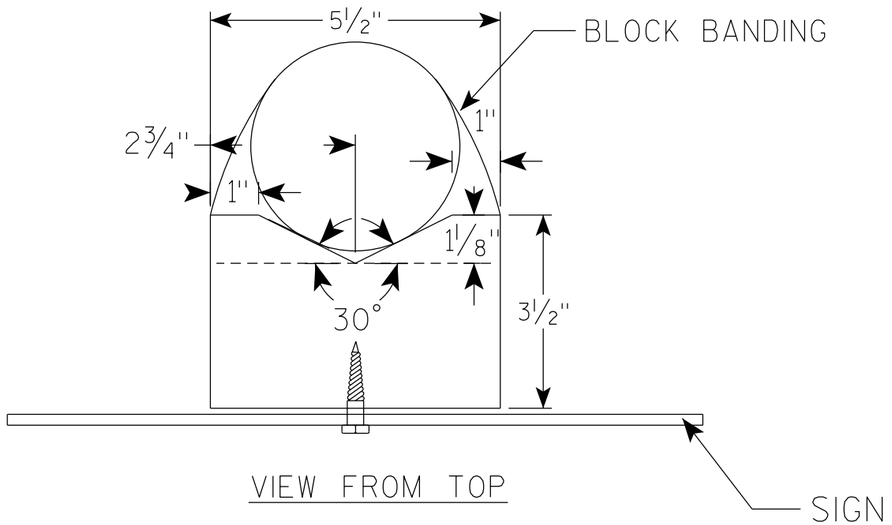
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 188 | E |
|---|---|---|---|---|---|

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7




## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 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
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 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 )

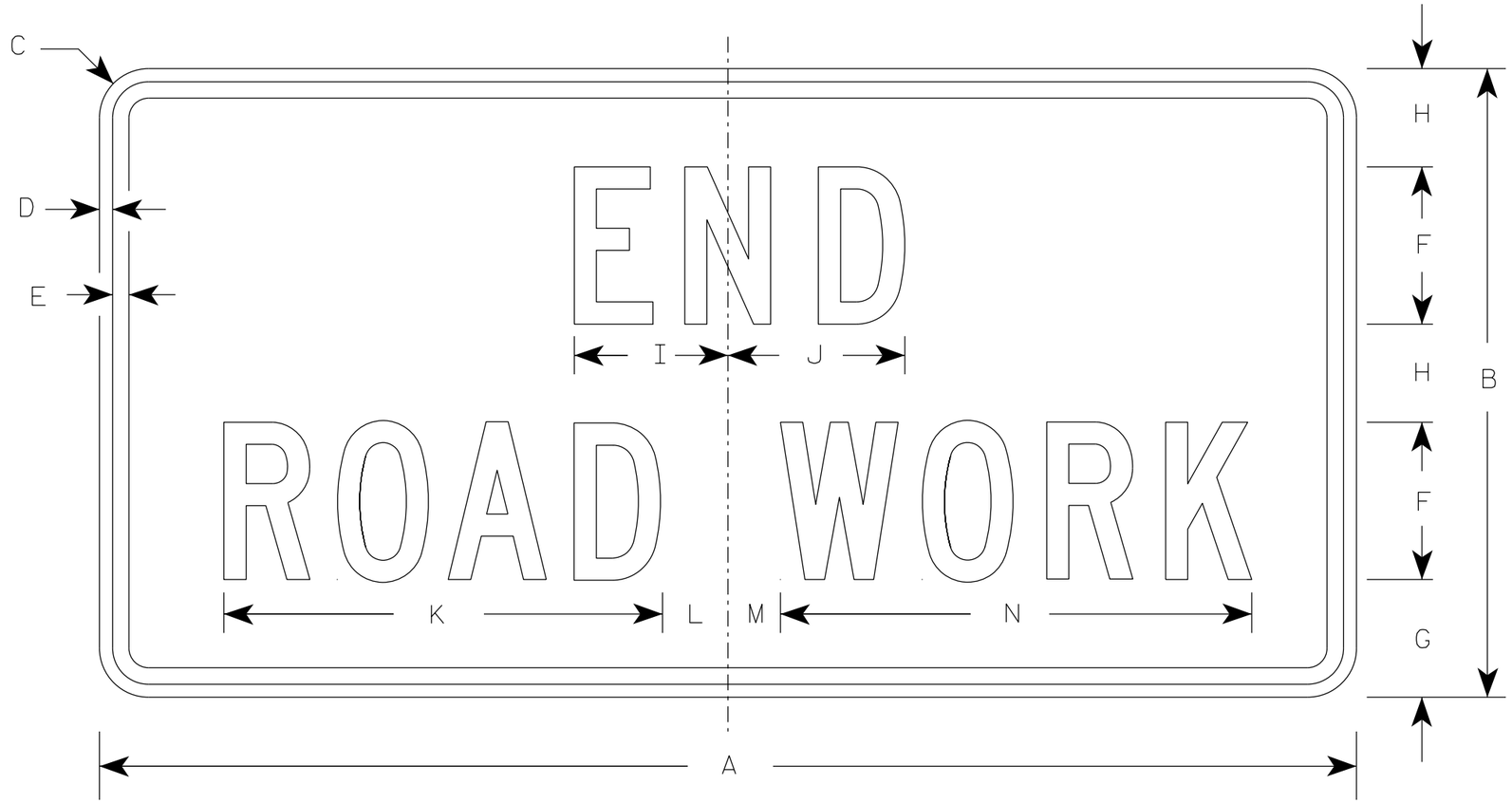
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 189 E




G20-2A

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 | 18 | 1 1/2 | 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 |
| 2 | 48 | 24 | 1 7/8 | 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 |
| 2M | 48 | 24 | 1 7/8 | 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 |
| 3 | 48 | 24 | 1 7/8 | 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 |
| 4 | 48 | 24 | 1 7/8 | 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 |
| 5 | 48 | 24 | 1 7/8 | 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 |

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

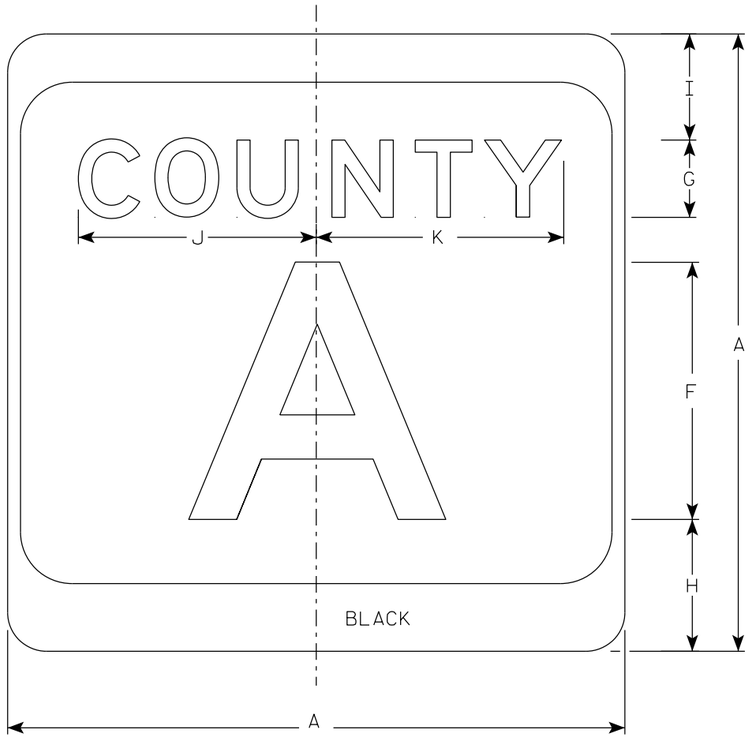
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

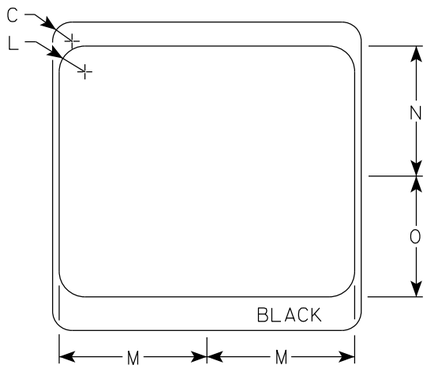
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G202A.dgn PLOT DATE : 26-JAN 2023 8:27 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

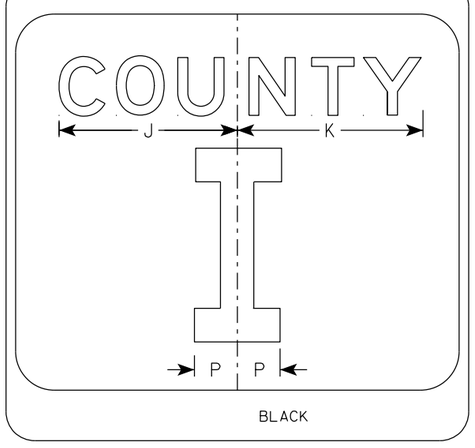


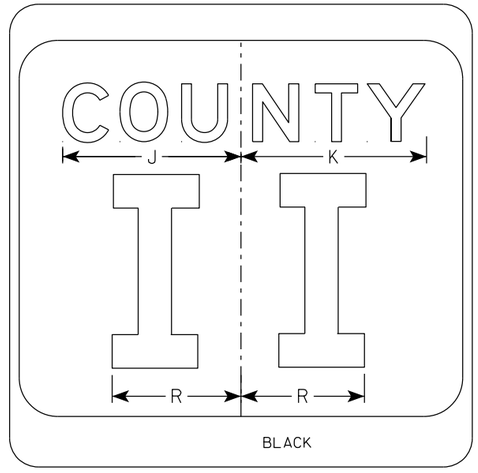

M1-5A




NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. 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.
5. Substitute appropriate letters & optically center 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 |
| 2M | 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

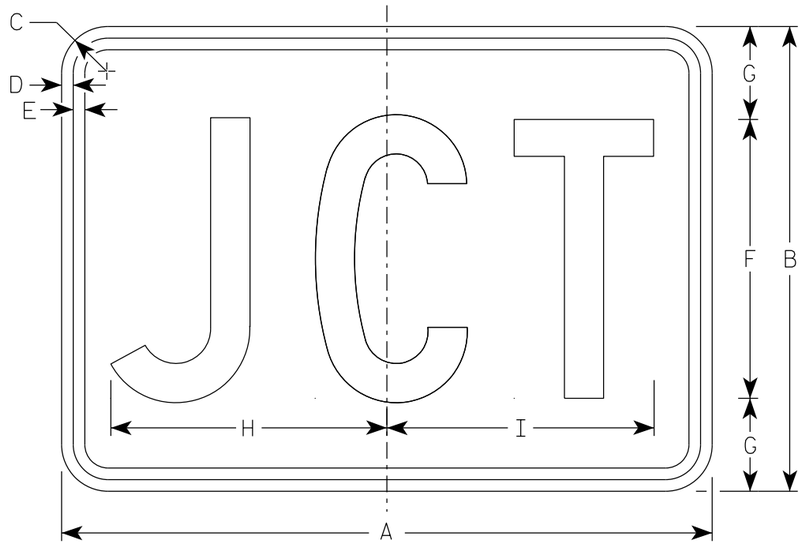
DATE 11/8/2022 PLATE NO. M1-5A.9

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: | E |
|---|---|---|---|---|---|

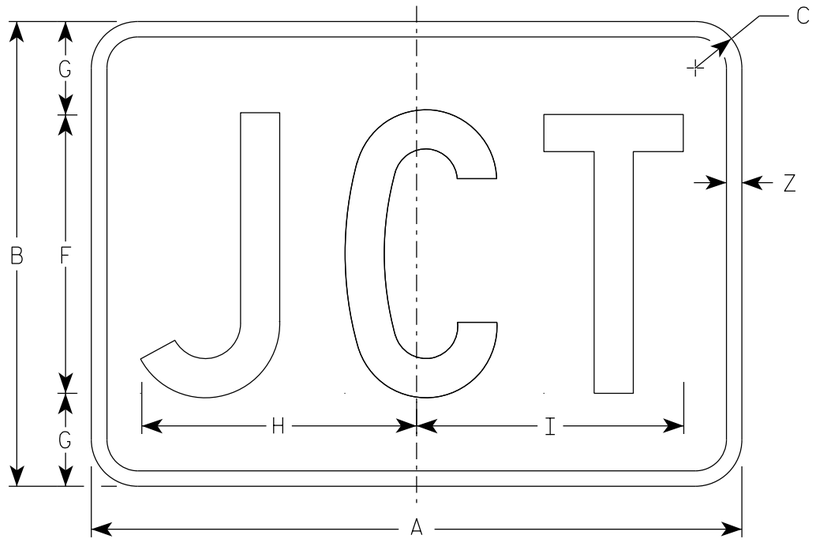


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7




M2-1
MM2-1
MP2-1




MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 21 | 15 | 1 1/2 | 3/8 | 3/8 | 9 | 3 | 8 7/8 | 8 5/8 | | | | | | | | | | | | | | | | | 1/2 | 2.20 |
| 2M | 21 | 15 | 1 1/2 | 3/8 | 3/8 | 9 | 3 | 8 7/8 | 8 5/8 | | | | | | | | | | | | | | | | | 1/2 | 2.20 |
| 3 | 30 | 21 | 1 1/2 | 3/8 | 3/8 | 13 | 4 | 12 7/8 | 12 3/8 | | | | | | | | | | | | | | | | | 1/2 | 4.40 |
| 4 | 30 | 21 | 1 1/2 | 3/8 | 3/8 | 13 | 4 | 12 7/8 | 12 3/8 | | | | | | | | | | | | | | | | | 1/2 | 4.40 |
| 5 | 30 | 21 | 1 1/2 | 3/8 | 3/8 | 13 | 4 | 12 7/8 | 12 3/8 | | | | | | | | | | | | | | | | | 1/2 | 4.40 |

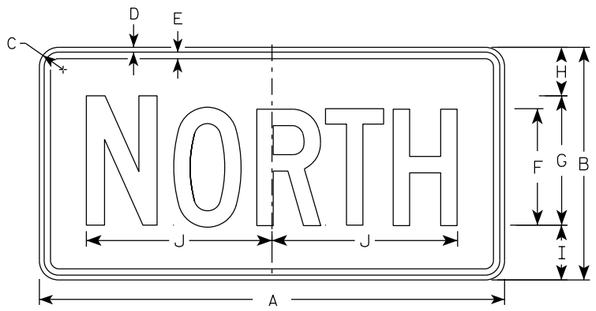
STANDARD SIGN
M2-1

*WISCONSIN DEPT OF TRANSPORTATION*

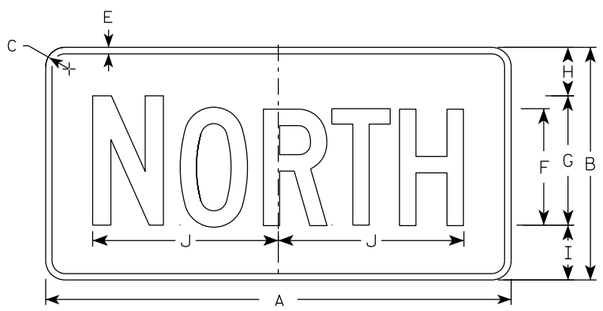
APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/8/2023 PLATE NO. M2-1.14

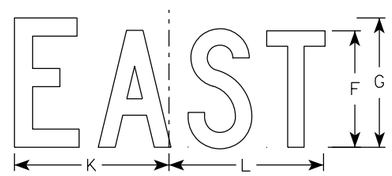
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 192 | E




M3-1
MM3-1
MP3-1



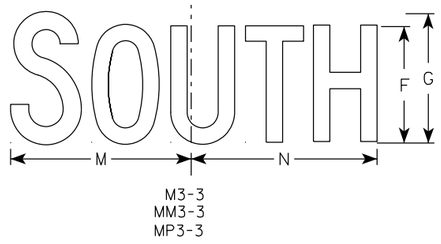

MB3-1
MK3-1
MN3-1



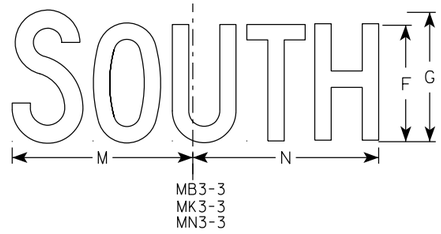

M3-2
MM3-2
MP3-2



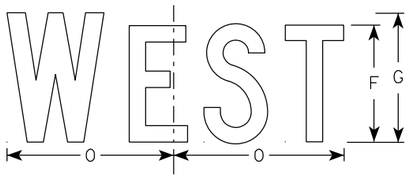

MB3-2
MK3-2
MN3-2



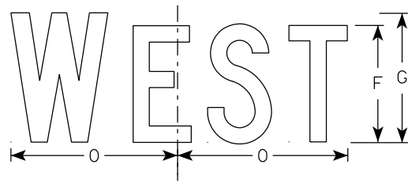

M3-3
MM3-3
MP3-3




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 Reflective
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 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 12 | 1 1/2 | 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 | | | | | | | | | | | | 2.00 |
| 2M | 24 | 12 | 1 1/2 | 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 | | | | | | | | | | | | 2.00 |
| 3 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | | | | | | | | | | 4.5 |
| 4 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | | | | | | | | | | 4.5 |
| 5 | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12 | 12 1/8 | 14 | 14 1/8 | 13 | | | | | | | | | | | | 4.5 |

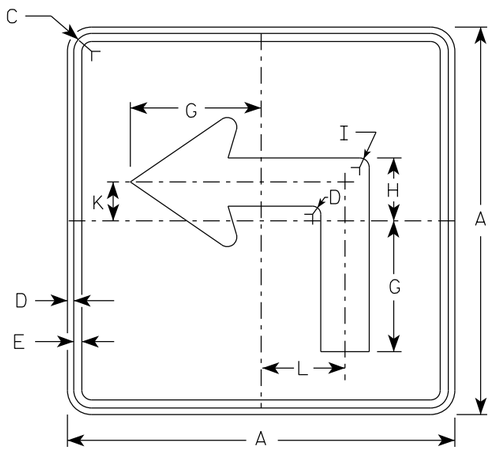
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

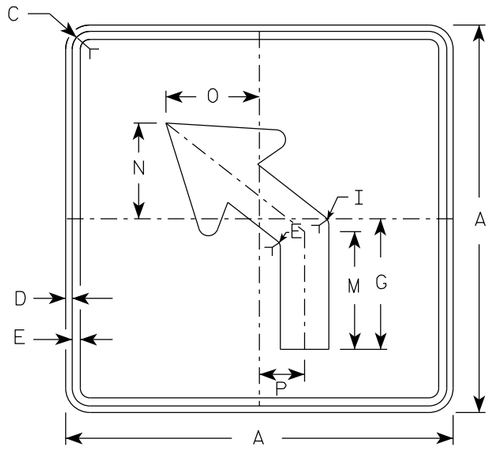
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

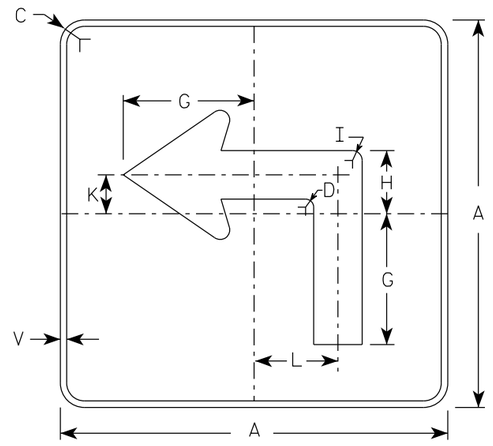
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 193 | E



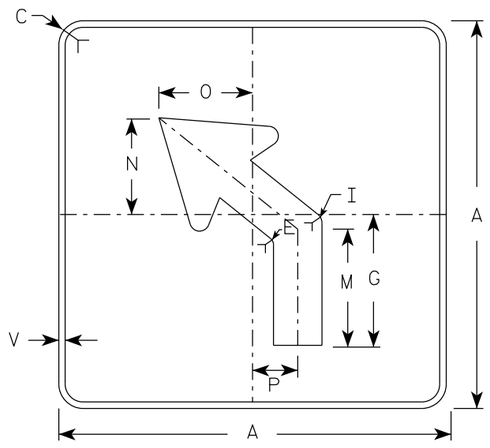

M5-1L
MM5-1L
MO5-1L
MP5-1L




M5-2L
MM5-2L
MO5-2L
MP5-2L




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

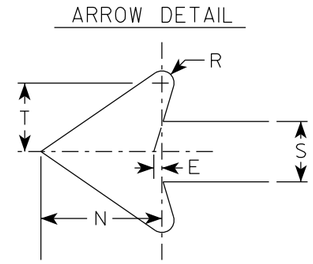



MB5-2L
MK5-2L
MN5-2L
MR5-2L

## NOTES

1. Signs are Type II - Type H reflective 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. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

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 | 21 | | 1 1/2 | 3/8 | 3/8 | | 7 | 3 3/8 | 5/8 | | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5 | 2 1/2 | | 1/2 | 2 5/8 | 3 | | 1/2 | | | | | 3.06 |
| 2M | 21 | | 1 1/2 | 3/8 | 3/8 | | 7 | 3 3/8 | 5/8 | | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5 | 2 1/2 | | 1/2 | 2 5/8 | 3 | | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 1/8 | 4 7/8 | 7/8 | | 3 | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 | | 3/4 | 3 3/4 | 4 1/4 | | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 1/8 | 4 7/8 | 7/8 | | 3 | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 | | 3/4 | 3 3/4 | 4 1/4 | | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 7/8 | 1/2 | 5/8 | | 10 1/8 | 4 7/8 | 7/8 | | 3 | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 | | 3/4 | 3 3/4 | 4 1/4 | | 1/2 | | | | | 6.25 |

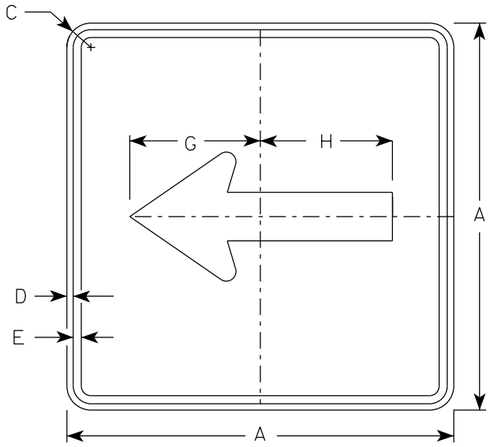
# STANDARD SIGN
# M5-1 & M5-2

*WISCONSIN DEPT OF TRANSPORTATION*

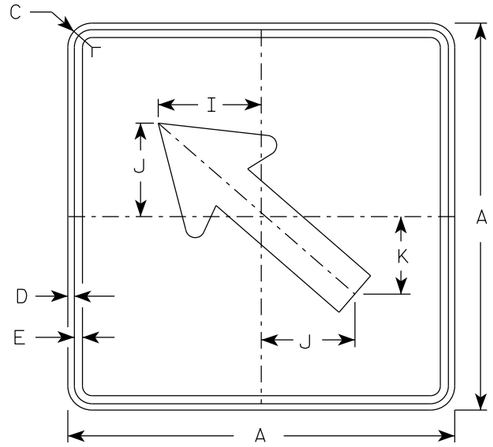
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

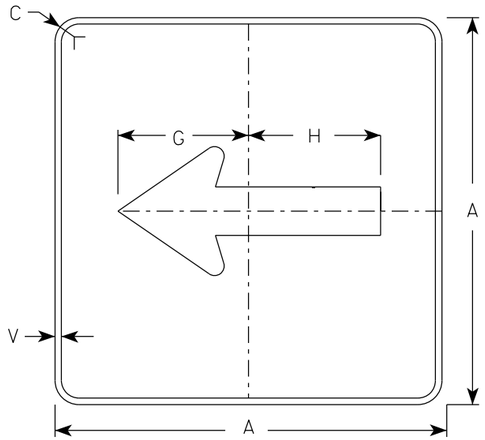
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 194 | E



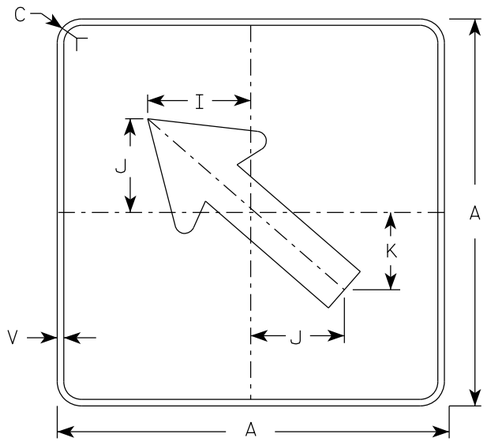

M6-1
MM6-1
MO6-1
MP6-1




M6-2
MM6-2
MO6-2
MP6-2




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

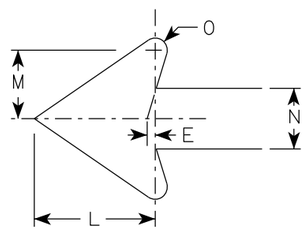



MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective 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

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 | 21 | | 1 1/2 | 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 | | | | | | | 1/2 | | | | | 3.06 |
| 2M | 21 | | 1 1/2 | 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 | | | | | | | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 7/8 | 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 | | | | | | | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 7/8 | 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 | | | | | | | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 7/8 | 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 | | | | | | | 1/2 | | | | | 6.25 |

STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

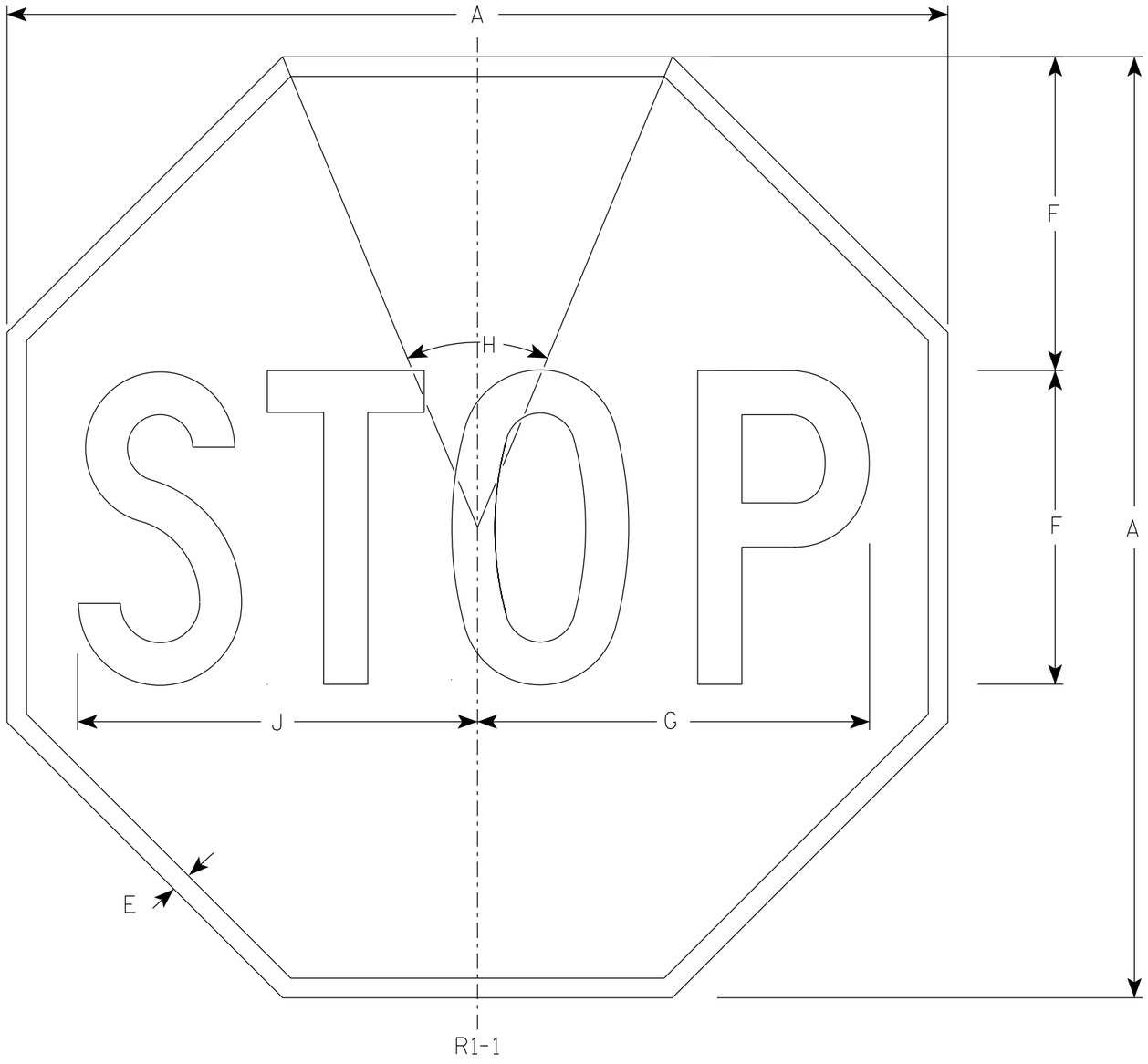
DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 195 | E



7

7




NOTES

1. Sign is Type II - Type H Reflective
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 |

STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

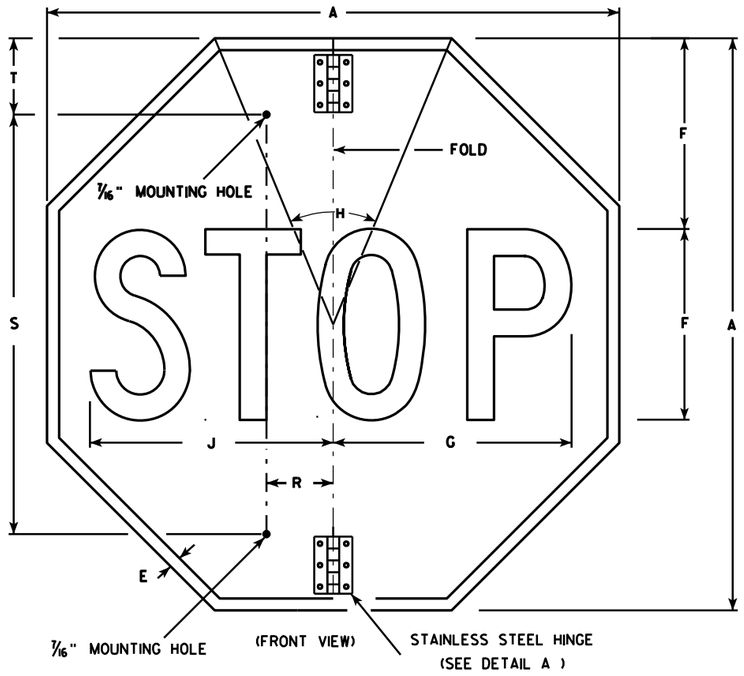
APPROVED Matthew R Rauch
for State Traffic Engineer

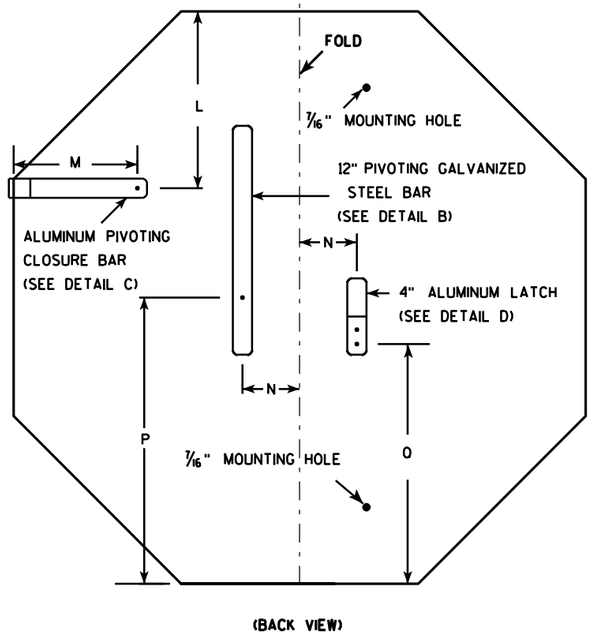
DATE 7/9/2025 PLATE NO. R1-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 196 E



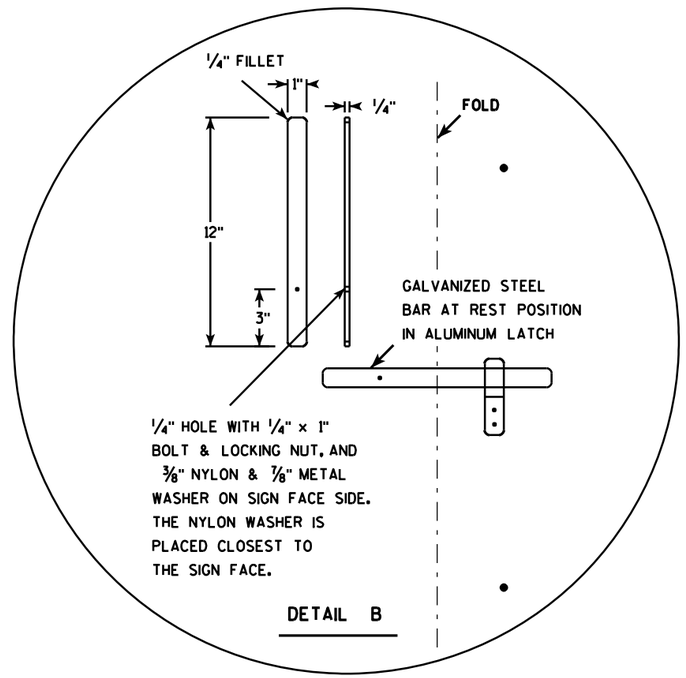

7



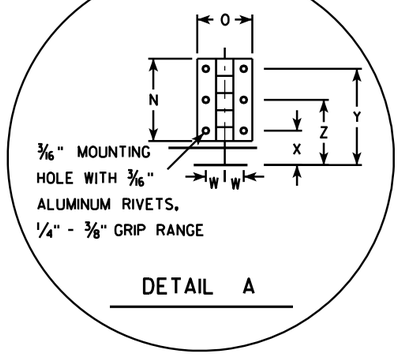




## NOTES

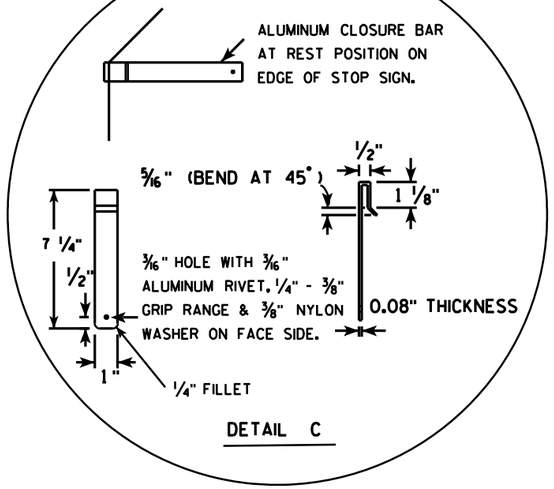
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



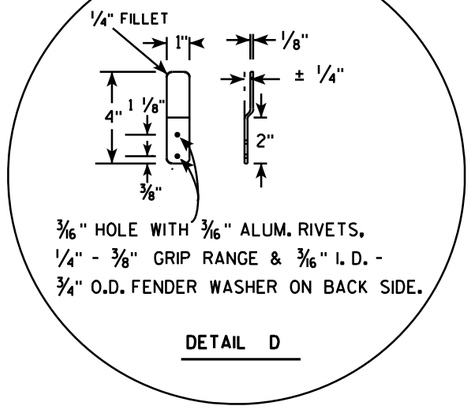

DETAIL B




DETAIL A




DETAIL C




DETAIL D

| 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

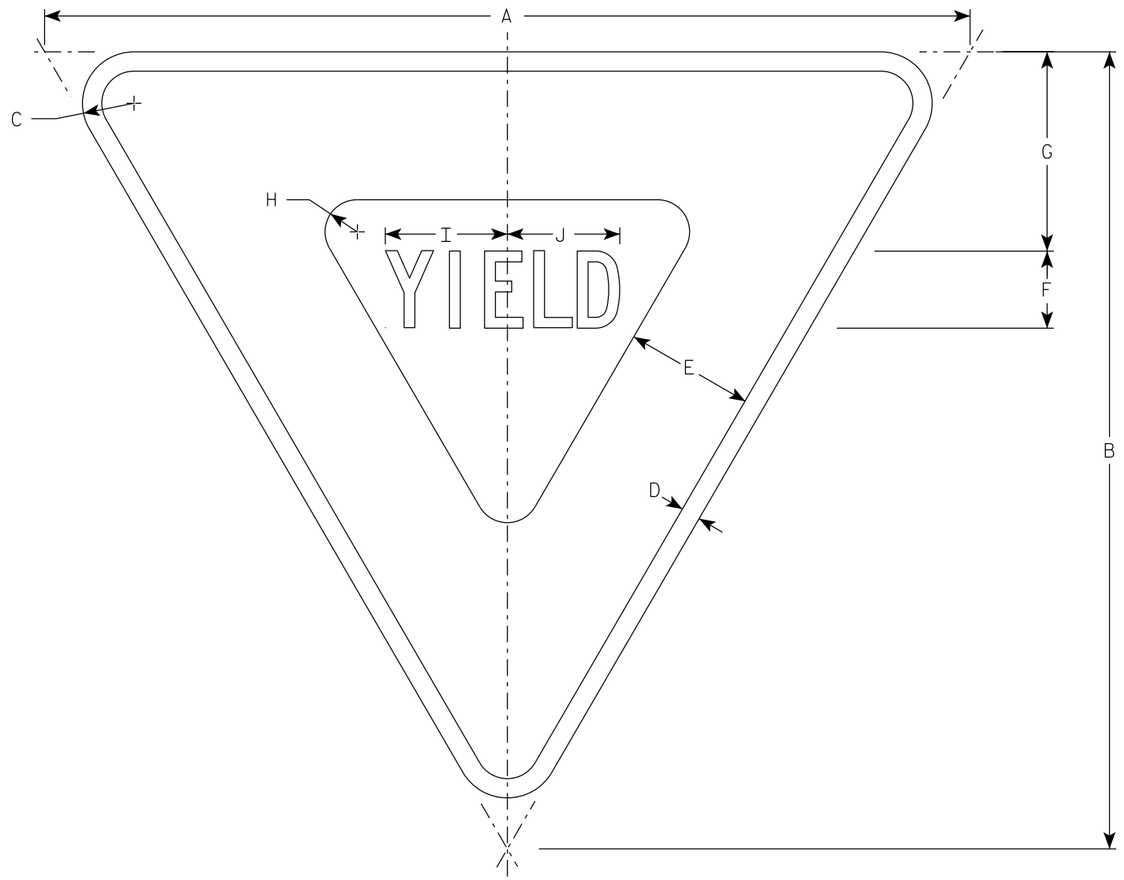
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 197 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R11F.DGN PLOT DATE : 02-DEC-2010 15:26 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

7

7




R1-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 4
3. Message Series - C
4. 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 | 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 |

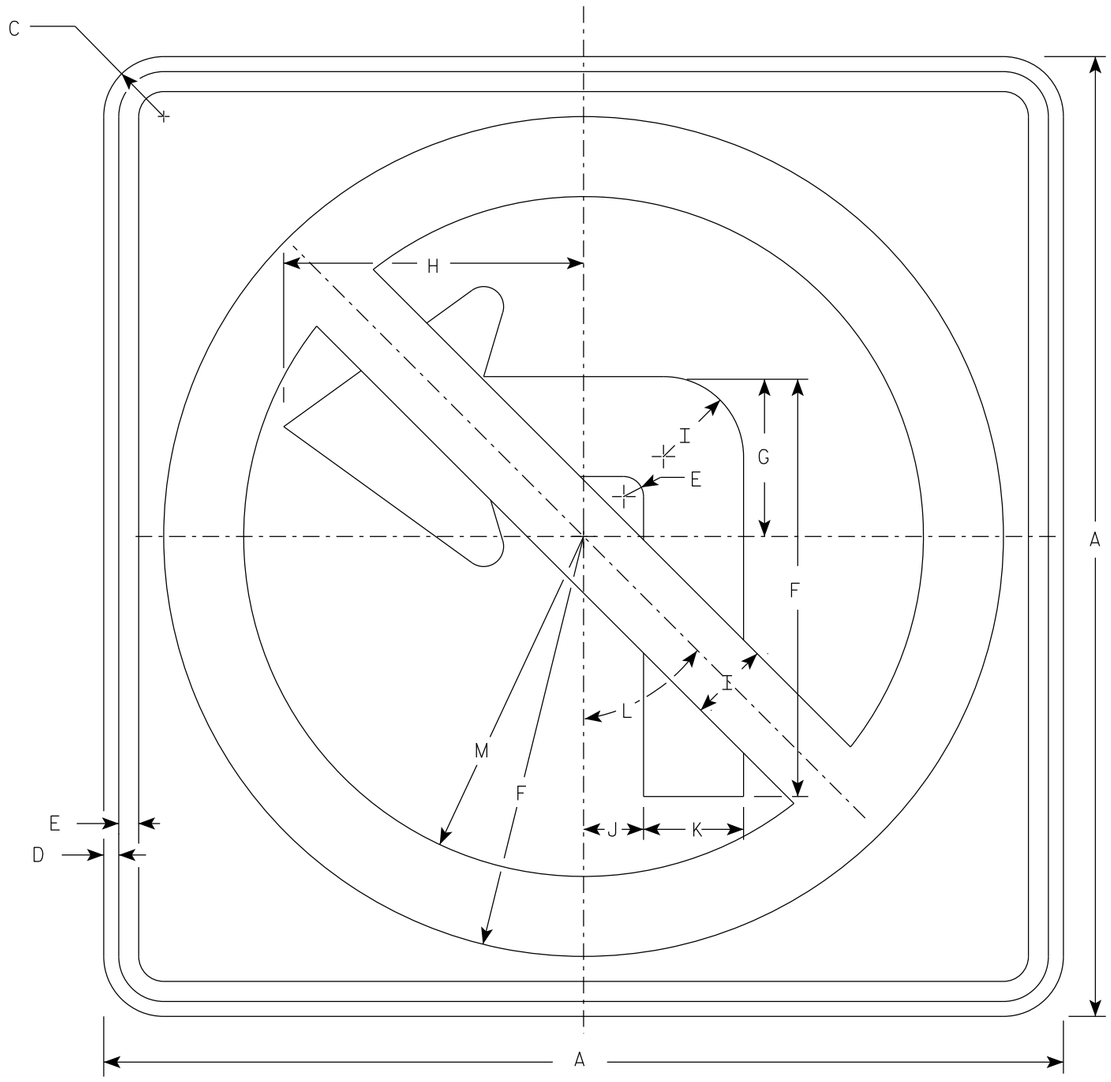
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/10/2024 PLATE NO. R1-2.13

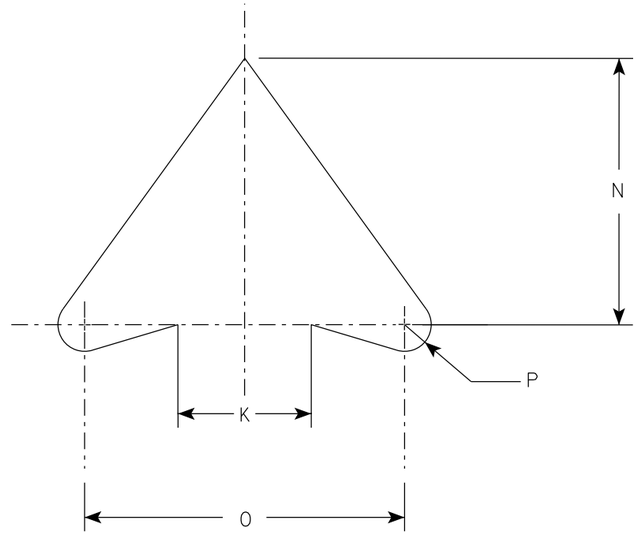
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 198 | E |
|---|---|---|---|---|---|




R3-2

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - See note 3
3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24 | | 1 ½ | ⅜ | ½ | 10 ½ | 4 | 7 ½ | 2 | 1 ½ | 2 ½ | 45° | 8 ½ | 5 | 6 | ½ | | | | | | | | | | | 4.0 |
| 2S | 24 | | 1 ½ | ⅜ | ½ | 10 ½ | 4 | 7 ½ | 2 | 1 ½ | 2 ½ | 45° | 8 ½ | 5 | 6 | ½ | | | | | | | | | | | 4.0 |
| 2M | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | | | | | | | | | | | 9.0 |
| 4 | 36 | | 2 ¼ | ⅝ | ¾ | 15 ¾ | 6 | 11 ¼ | 3 | 2 ¼ | 3 ¾ | 45° | 12 ¾ | 7 ½ | 9 | ¾ | | | | | | | | | | | 9.0 |
| 5 | 48 | | 2 ¼ | ¾ | 1 | 21 | 8 | 15 | 4 | 3 | 5 | 45° | 17 | 10 | 12 | 1 | | | | | | | | | | | 16.0 |

STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

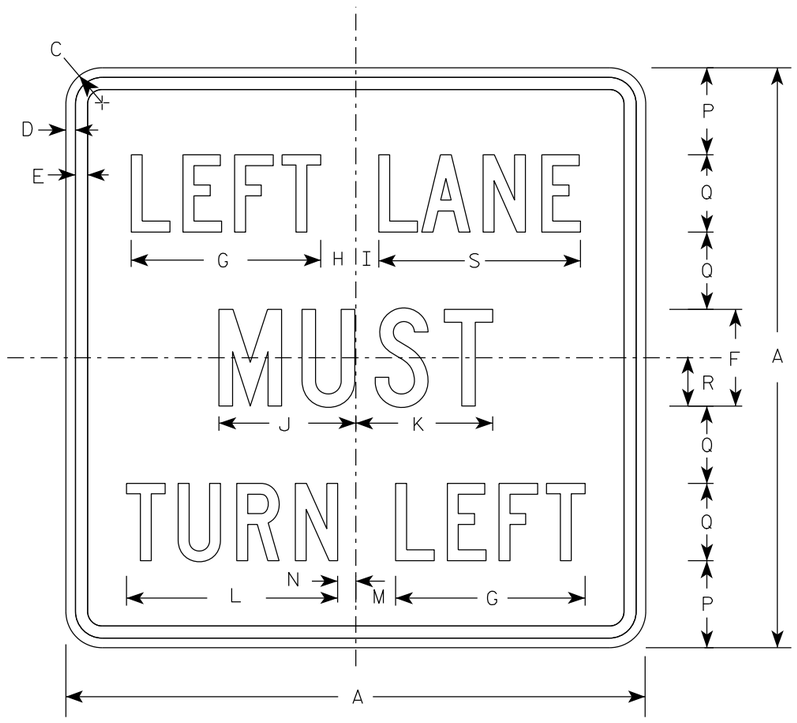
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/2/23 PLATE NO. R3-2.11

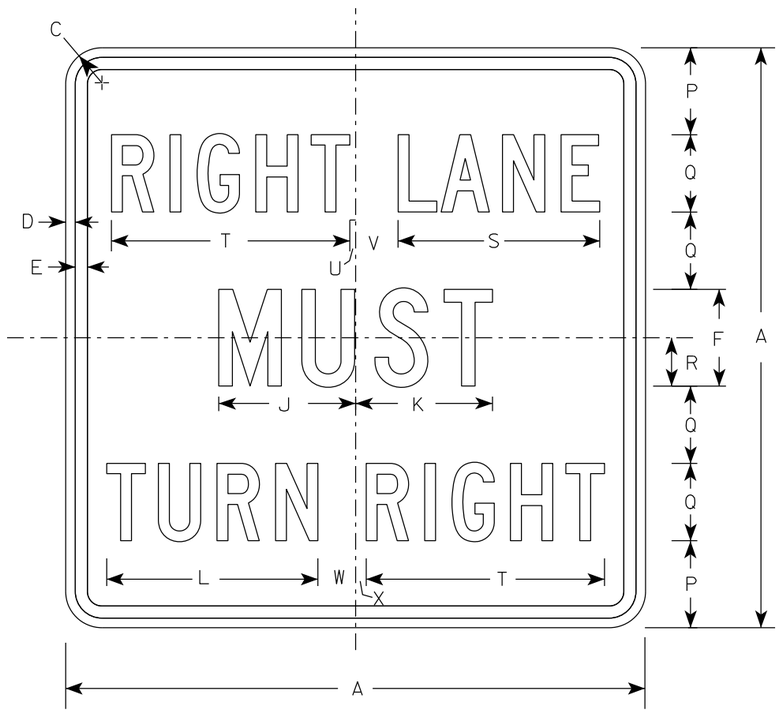
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 199 | E

NOTES

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




R3-7L




R3-7R

| 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 7/8 | 1/2 | 5/8 | 5 | 9 3/4 | 1 7/8 | 1 1/8 | 7 1/8 | 7 1/8 | 10 7/8 | 2 | 1 | | 4 1/2 | 4 | 2 1/2 | 10 3/8 | 12 3/8 | 1/4 | 2 1/4 | 2 | 1/2 | | | 6.25 |
| 2S | 30 | | 1 7/8 | 1/2 | 5/8 | 5 | 9 3/4 | 1 7/8 | 1 1/8 | 7 1/8 | 7 1/8 | 10 7/8 | 2 | 1 | | 4 1/2 | 4 | 2 1/2 | 10 3/8 | 12 3/8 | 1/4 | 2 1/4 | 2 | 1/2 | | | 6.25 |
| 2M | 30 | | 1 7/8 | 1/2 | 5/8 | 5 | 9 3/4 | 1 7/8 | 1 1/8 | 7 1/8 | 7 1/8 | 10 7/8 | 2 | 1 | | 4 1/2 | 4 | 2 1/2 | 10 3/8 | 12 3/8 | 1/4 | 2 1/4 | 2 | 1/2 | | | 6.25 |
| 3 | 36 | | 2 1/4 | 5/8 | 3/4 | 6 | 11 3/4 | 2 1/8 | 1 3/8 | 8 1/2 | 8 1/2 | 13 1/8 | 2 1/8 | 1 1/8 | | 5 3/8 | 4 3/4 | 3 | 12 1/2 | 14 3/4 | 3/8 | 2 5/8 | 2 3/8 | 5/8 | | | 9.00 |
| 4 | 48 | | 3 | 3/4 | 1 | 8 | 15 5/8 | 2 7/8 | 1 7/8 | 11 3/8 | 11 3/8 | 17 1/2 | 3 1/4 | 1 1/2 | | 7 1/8 | 6 3/8 | 4 | 16 3/4 | 19 3/4 | 1/2 | 3 1/2 | 3 1/8 | 7/8 | | | 16.00 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

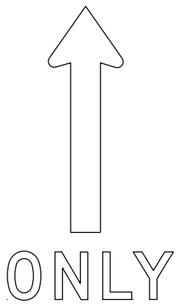
STANDARD SIGN
R3-7L & R3-7R

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/16/25 PLATE NO. R3-7.5

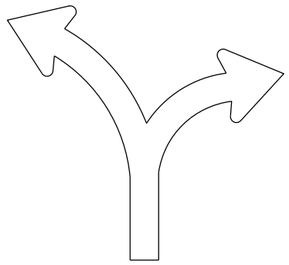
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 200 | E

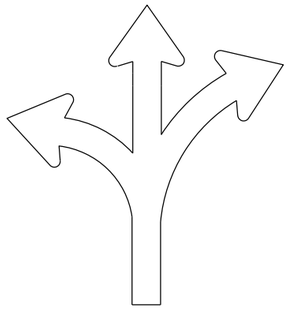


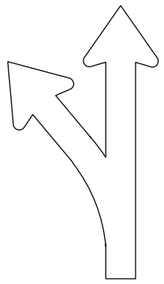
(A)

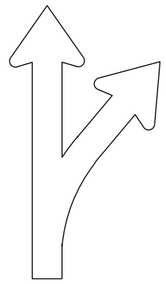


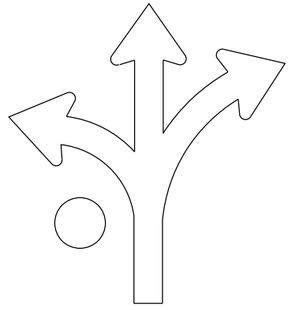
(B)

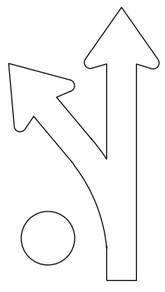

(C)

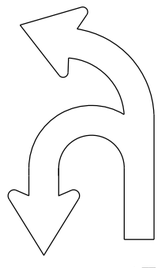

(D)

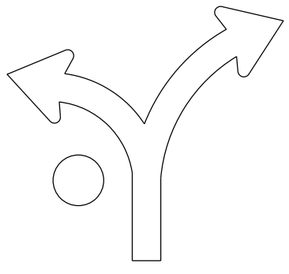

(E)

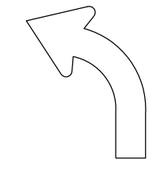

(F)


(G)

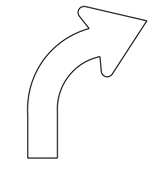

(H)


(I)


(J)



(L)



(R)

NOTES

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

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

6. When letters C,D,G,J are used on the Left or Right end of the sign the Sq. Ft. changes.
   Add the amounts when these letters are used:
   1.25 sq ft for Size 2
   1.5 sq ft for Size 3
   2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

7

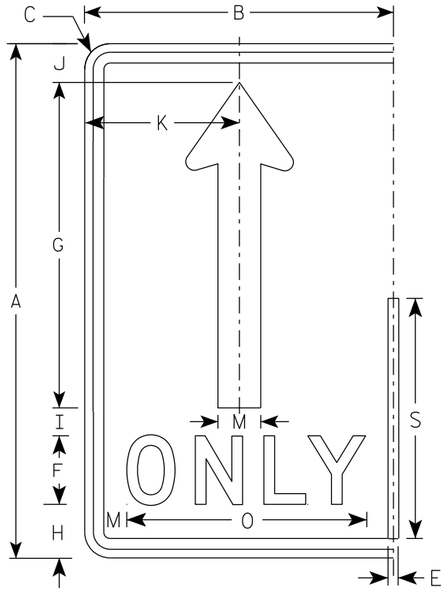
7

PROJECT NO:

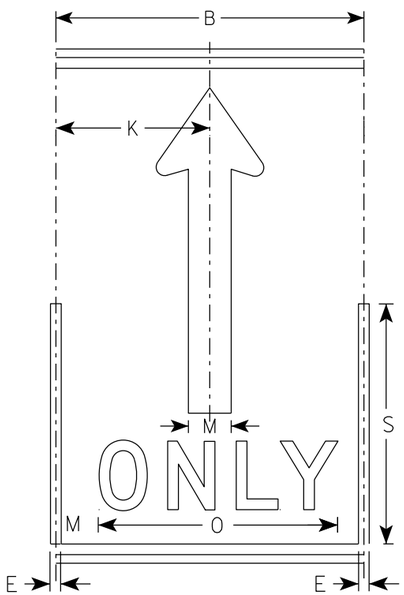
SHEET NO: 201 E

NOTES

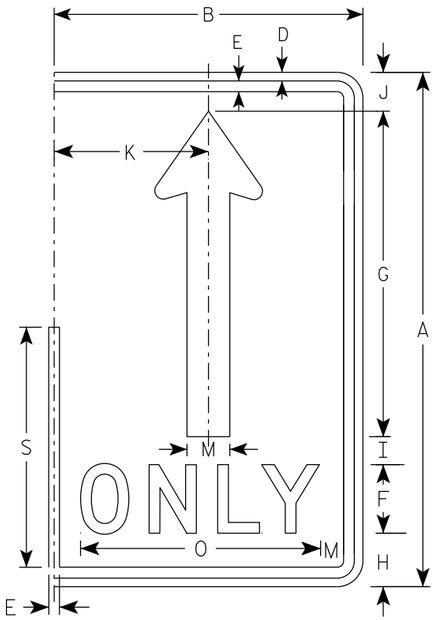
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



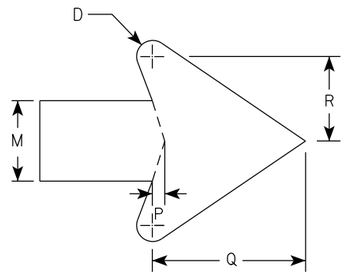

(A)




(A)




(A)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 19 | 3 1/8 | 1 5/8 | 2 1/4 | 9 | | 2 1/2 | | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 19 | 3 1/8 | 1 5/8 | 2 1/4 | 9 | | 2 1/2 | | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 22 3/4 | 3 3/4 | 1 3/4 | 2 3/4 | 12 | | 3 | | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 30 3/8 | 5 1/8 | 2 7/8 | 3 5/8 | 15 | | 4 | | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 30 3/8 | 5 1/8 | 2 7/8 | 3 5/8 | 15 | | 4 | | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | | | | | | | | 10.0 |

# STANDARD SIGN
## R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

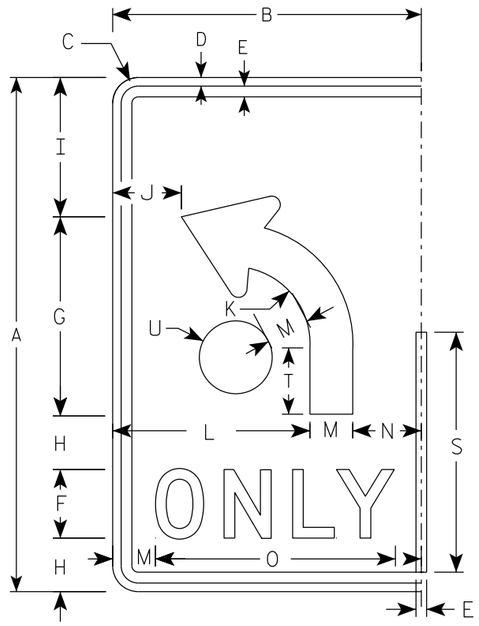
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

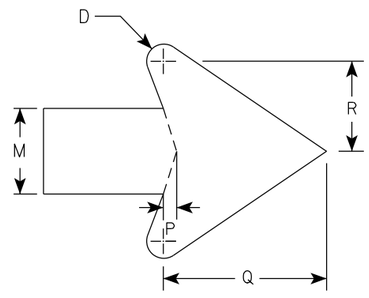
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 202 | E

NOTES

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




(B)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | 2 1/8 | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | 2 1/8 | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14 | 3 1/2 | 9 3/4 | 6 | 5 3/8 | 15 | 3 | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 | 2 1/2 | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | 3 3/8 | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | 3 3/8 | | | | | | 10.0 |

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

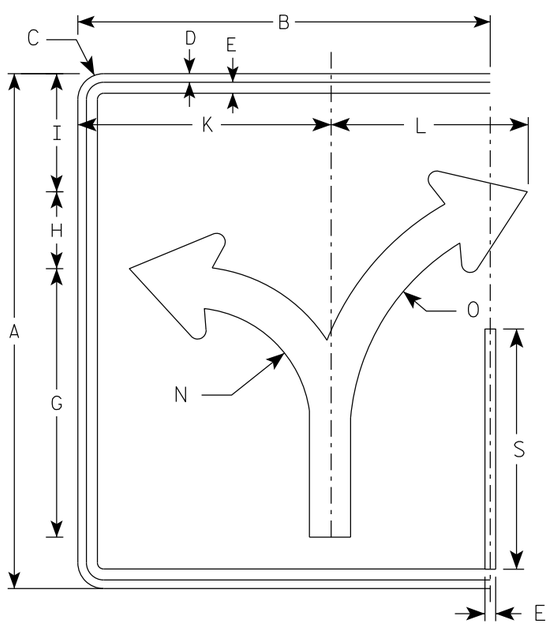
DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

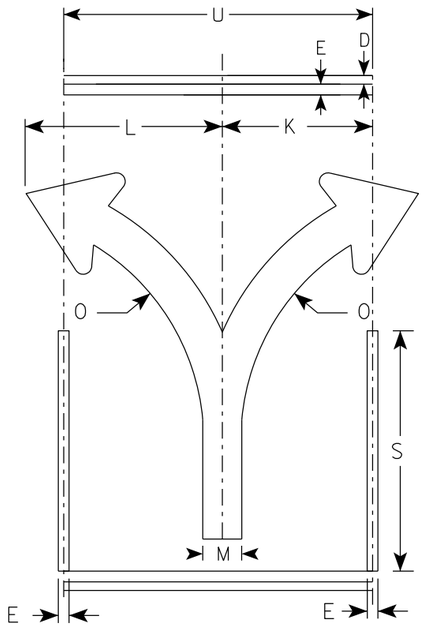
SHEET NO: 203 E

NOTES

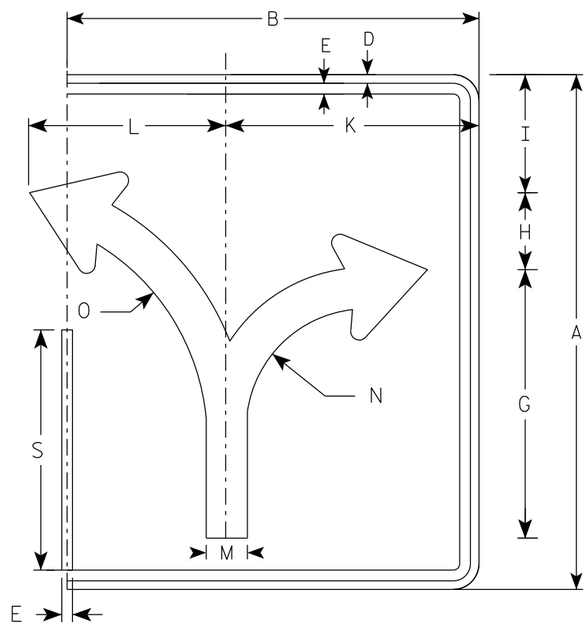
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



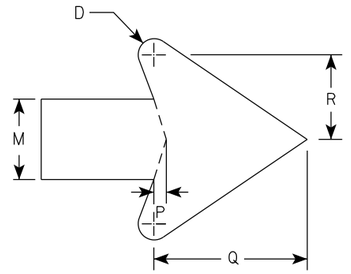

(C)




(C)




(C)




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

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 204 | E

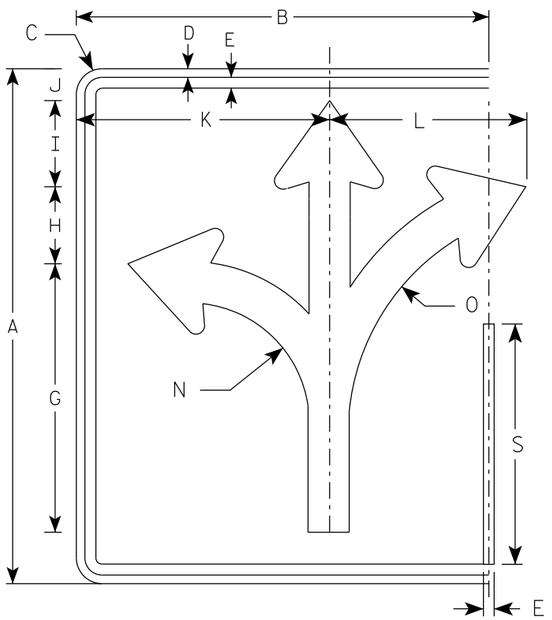


7

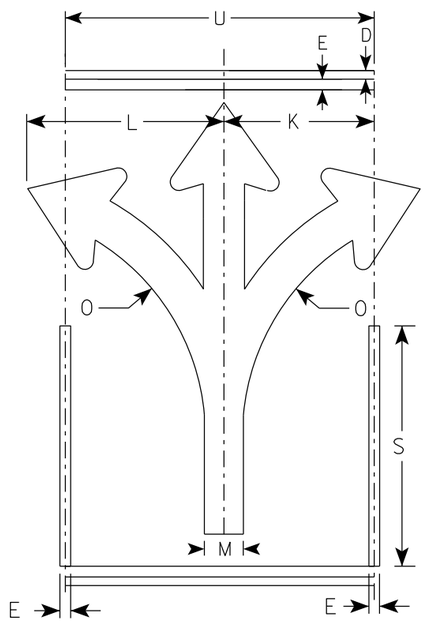
7

NOTES

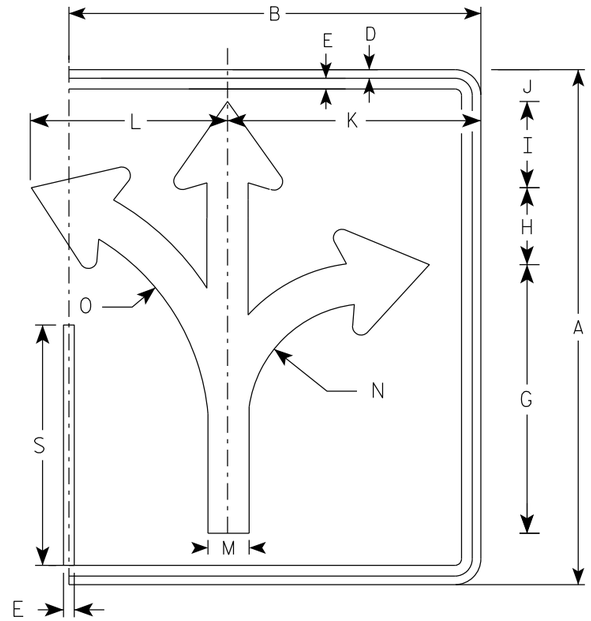
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



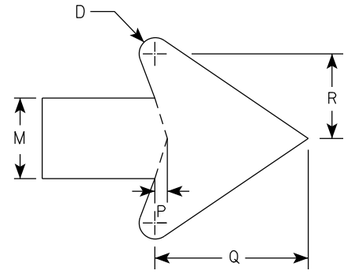

(D)




(D)




(D)




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

STANDARD SIGN
R3-8 (D) Arrow

WISCONSIN DEPT OF TRANSPORTATION

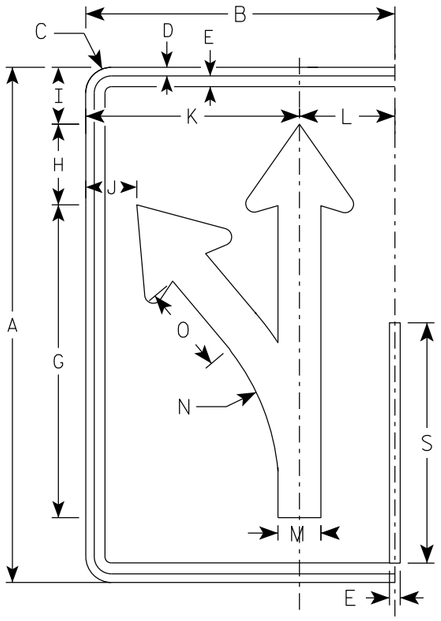
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

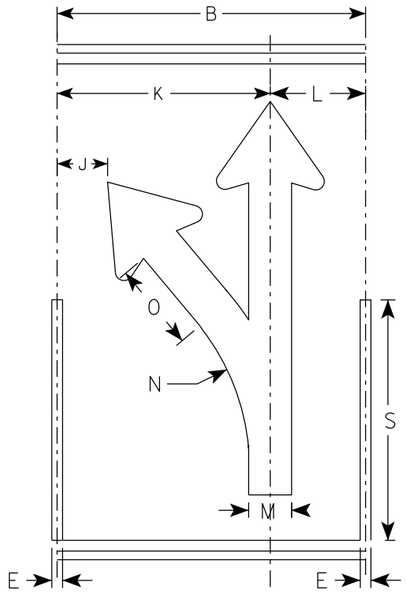
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 205 | E

NOTES

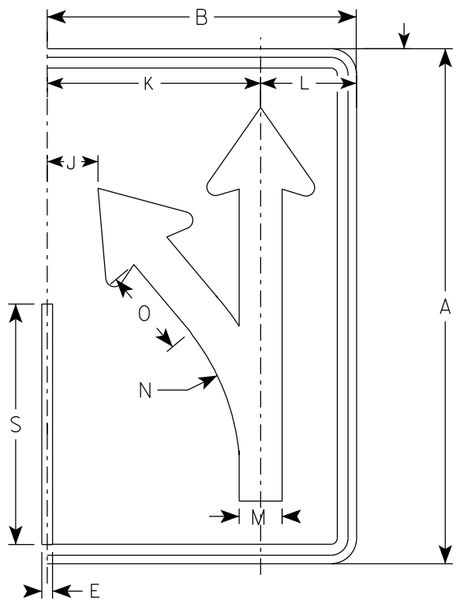
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



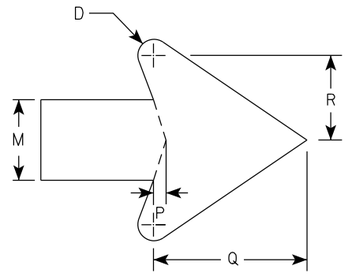

(E)




(E)




(E)




ARROW DETAIL

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

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 206 | E

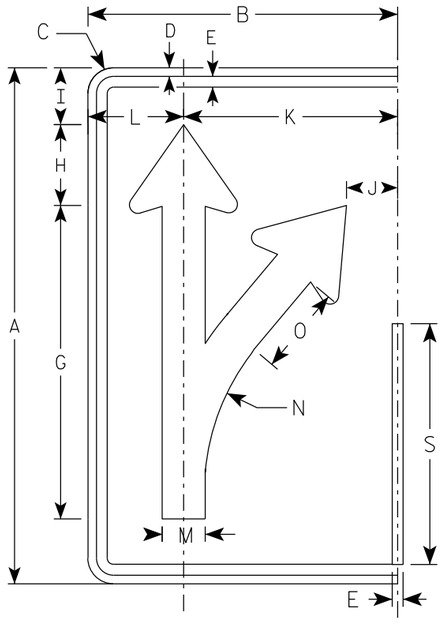




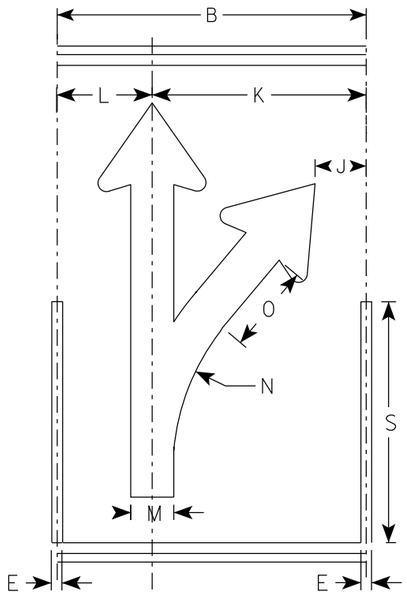

7

NOTES

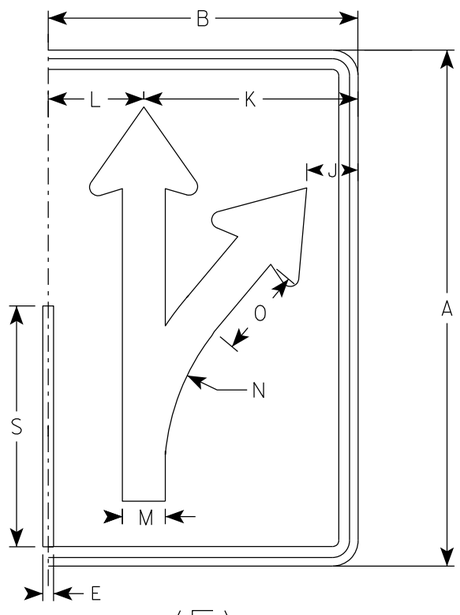
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - None



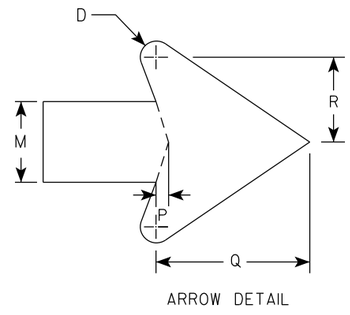

(F)




(F)




(F)




ARROW DETAIL

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

STANDARD SIGN
R3-8 (F) Arrow

*WISCONSIN DEPT OF TRANSPORTATION*

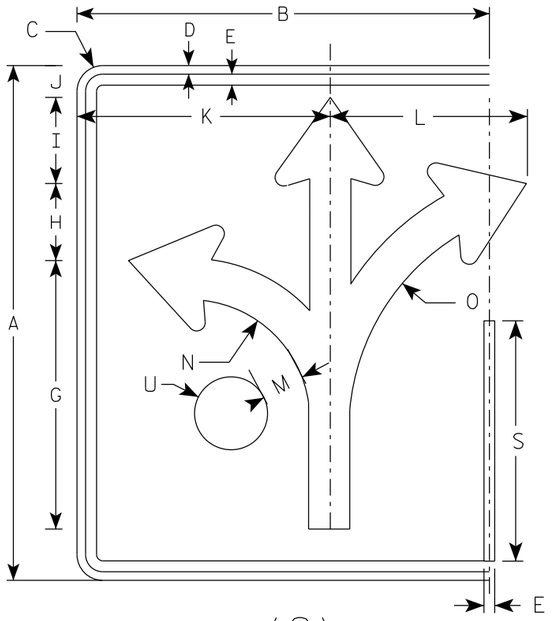
APPROVED Matthew R Rauch
*For* State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

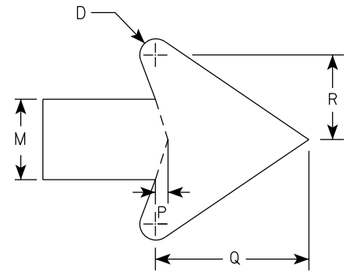
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 207 | E

## NOTES

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




(G)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 5 | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 2M | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 5 | 1 7/8 | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 3 | 36 | 30 | 1 1/2 | 1/2 | 5/8 | | 18 3/4 | 5 1/2 | 6 | 3 1/8 | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8 | 16 | 1/2 | 5 1/2 | 3 | 16 3/4 | | 2 1/2 | | | | | | 7.5 |
| 4 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |
| 5 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 7 7/8 | 3 1/8 | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |

STANDARD SIGN
R3-8 (G) Arrow

WISCONSIN DEPT OF TRANSPORTATION

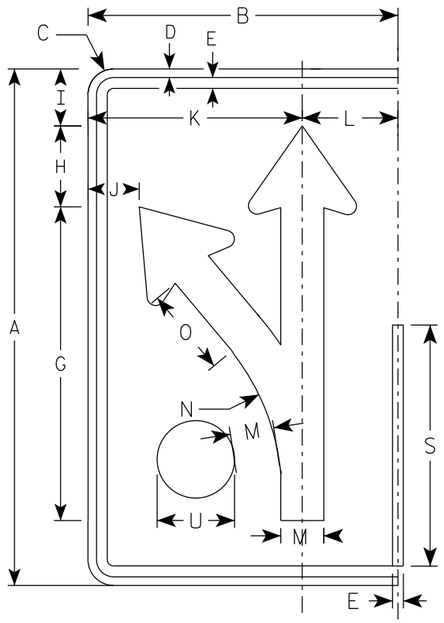
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

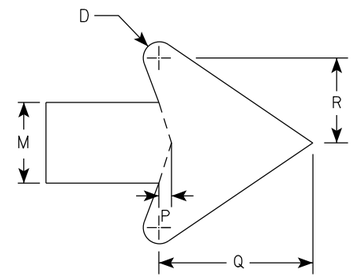
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 208 | E |
|---|---|---|---|---|---|

NOTES

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




(H)




ARROW DETAIL

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

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

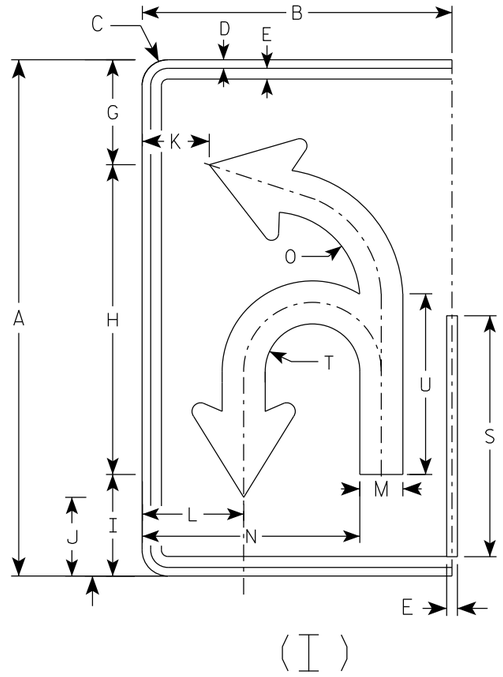
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

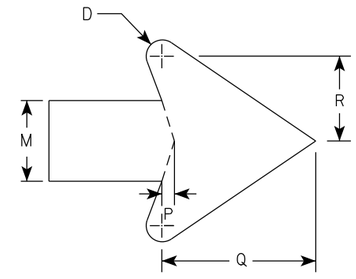
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 209 | E

NOTES

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




(I)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 6 1/8 | 18 | 5 7/8 | 4 5/8 | 3 7/8 | 5 7/8 | 2 1/2 | 12 5/8 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | 2 3/4 | 10 1/2 | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | | 6 1/8 | 18 | 5 7/8 | 4 5/8 | 3 7/8 | 5 7/8 | 2 1/2 | 12 5/8 | 5 1/8 | 3/8 | 4 3/4 | 2 5/8 | 14 | 2 3/4 | 10 1/2 | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | | 21 7/8 | 21 5/8 | 7 1/8 | 5 1/2 | 5 7/8 | 8 1/4 | 3 | 16 3/8 | 6 1/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 3 1/4 | 12 5/8 | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 28 3/4 | 9 3/8 | 7 1/4 | 6 7/8 | 10 | 4 | 20 7/8 | 8 1/8 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 4 3/8 | 16 3/4 | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | | 29 1/8 | 28 3/4 | 9 3/8 | 7 1/4 | 6 7/8 | 10 | 4 | 20 7/8 | 8 1/8 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 4 3/8 | 16 3/4 | | | | | | 10.0 |

STANDARD SIGN
R3-8 (I) Arrow

WISCONSIN DEPT OF TRANSPORTATION

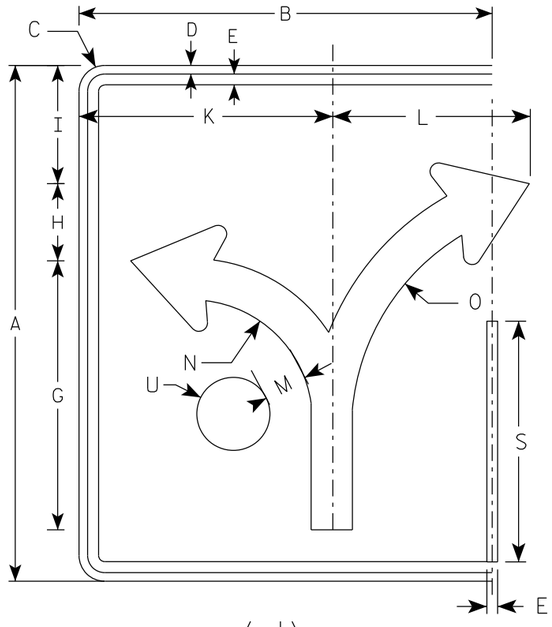
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

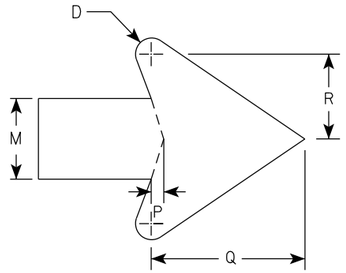
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 210 | E

NOTES

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




(J)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 6 7/8 | | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 2M | 30 | 24 | 1 1/2 | 1/2 | 5/8 | | 15 5/8 | 4 1/2 | 6 7/8 | | 14 3/4 | 11 1/2 | 2 3/8 | 7 | 13 1/4 | 3/8 | 4 1/2 | 2 1/2 | 14 | | 2 1/8 | | | | | | 5.0 |
| 3 | 36 | 30 | 1 1/2 | 1/2 | 5/8 | | 18 3/4 | 5 1/2 | 8 1/4 | | 17 1/4 | 17 1/4 | 2 7/8 | 8 3/8 | 16 | 1/2 | 5 1/2 | 3 | 16 3/4 | | 2 1/2 | | | | | | 7.5 |
| 4 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 11 | | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |
| 5 | 48 | 36 | 2 1/4 | 3/4 | 1 | | 24 7/8 | 7 1/4 | 11 | | 23 1/8 | 18 | 3 3/4 | 11 1/8 | 21 1/4 | 5/8 | 7 1/8 | 4 | 22 3/8 | | 3 3/8 | | | | | | 12.0 |

STANDARD SIGN
R3-8 (J) Arrow

WISCONSIN DEPT OF TRANSPORTATION

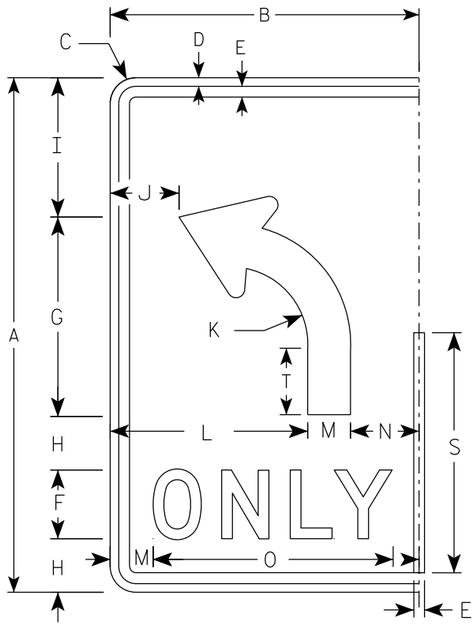
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

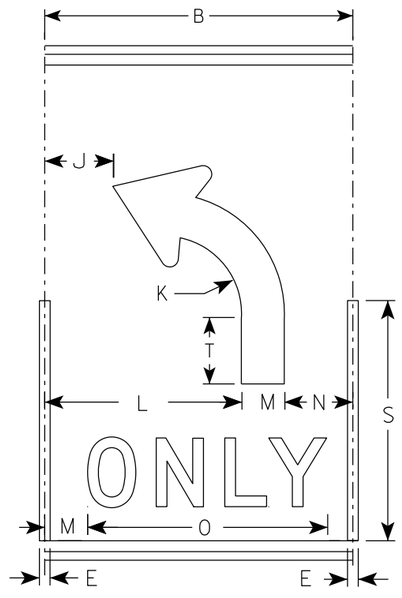
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 211 | E

NOTES

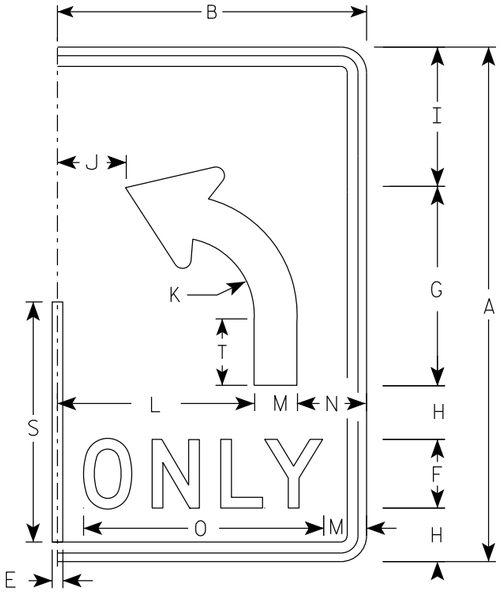
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



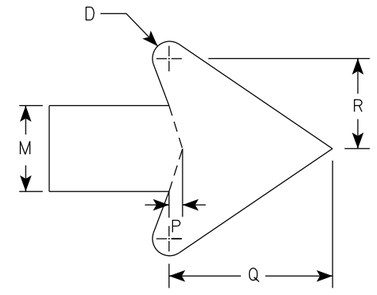

(L)




(L)




(L)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 18 | 1 ½ | ½ | ⅝ | 4 | 11 ⅝ | 3 ⅛ | 8 ⅛ | 4 | 4 ½ | 11 ½ | 2 ½ | 4 | 14 | ⅜ | 4 ¾ | 2 ⅝ | 14 | 3 ⅞ | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 ½ | ½ | ⅝ | 4 | 11 ⅝ | 3 ⅛ | 8 ⅛ | 4 | 4 ½ | 11 ½ | 2 ½ | 4 | 14 | ⅜ | 4 ¾ | 2 ⅝ | 14 | 3 ⅞ | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 ½ | ½ | ⅝ | 5 | 14 | 3 ½ | 9 ¾ | 6 | 5 ⅜ | 15 | 3 | 6 | 17 ⅝ | ½ | 5 ¾ | 3 ⅛ | 16 ¾ | 4 ⅝ | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 ¼ | ¾ | 1 | 6 | 18 ⅝ | 5 ⅛ | 13 ⅛ | 6 ⅛ | 7 ¼ | 18 | 4 | 8 | 21 ¾ | ⅝ | 7 ⅝ | 4 ¼ | 22 ⅜ | 6 ¼ | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 ¼ | ¾ | 1 | 6 | 18 ⅝ | 5 ⅛ | 13 ⅛ | 6 ⅛ | 7 ¼ | 18 | 4 | 8 | 21 ¾ | ⅝ | 7 ⅝ | 4 ¼ | 22 ⅜ | 6 ¼ | | | | | | | 10.0 |

STANDARD SIGN

R3-8 (L) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

SHEET NO: 212 E

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn PLOT DATE : 14-FEB 2023 3:02 PLOT BY : mscj9h PLOT NAME :

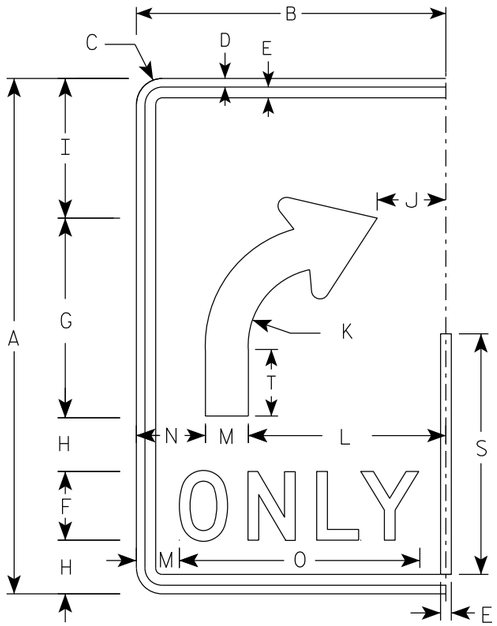
WISDOT/CADDS SHEET 42

7

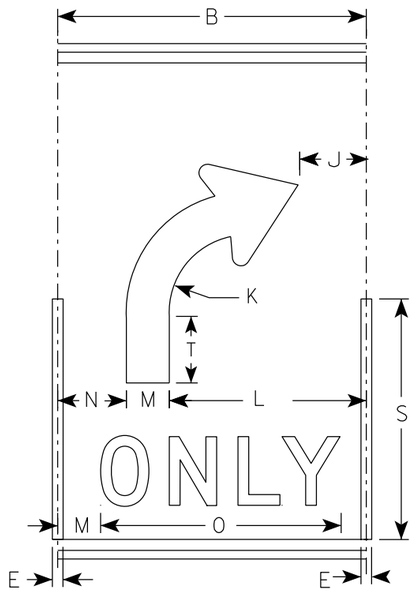
7

NOTES

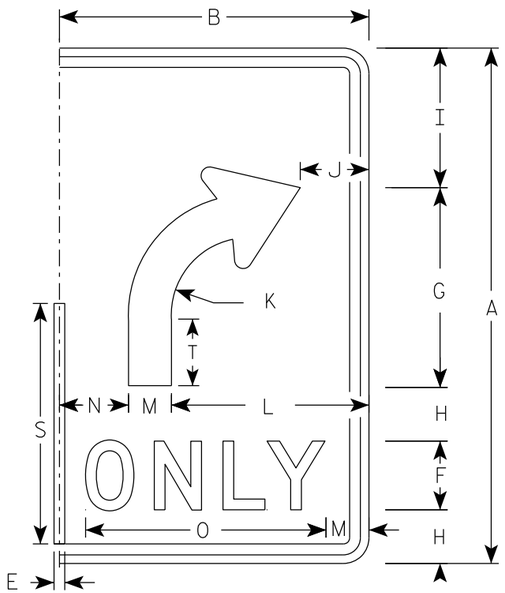
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



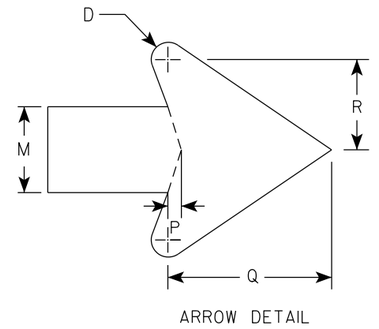

(R)




(R)




(R)




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | | | | | | | 3.75 |
| 2M | 30 | 18 | 1 1/2 | 1/2 | 5/8 | 4 | 11 5/8 | 3 1/8 | 8 1/8 | 4 | 4 1/2 | 11 1/2 | 2 1/2 | 4 | 14 | 3/8 | 4 3/4 | 2 5/8 | 14 | 3 7/8 | | | | | | | 3.75 |
| 3 | 36 | 24 | 1 1/2 | 1/2 | 5/8 | 5 | 14 | 3 1/2 | 9 3/4 | 6 | 5 3/8 | 15 | 3 | 6 | 17 5/8 | 1/2 | 5 3/4 | 3 1/8 | 16 3/4 | 4 5/8 | | | | | | | 6.0 |
| 4 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | | | | | | | 10.0 |
| 5 | 48 | 30 | 2 1/4 | 3/4 | 1 | 6 | 18 5/8 | 5 1/8 | 13 1/8 | 6 1/8 | 7 1/4 | 18 | 4 | 8 | 21 3/4 | 5/8 | 7 5/8 | 4 1/4 | 22 3/8 | 6 1/4 | | | | | | | 10.0 |

STANDARD SIGN

R3-8 (R) Arrow

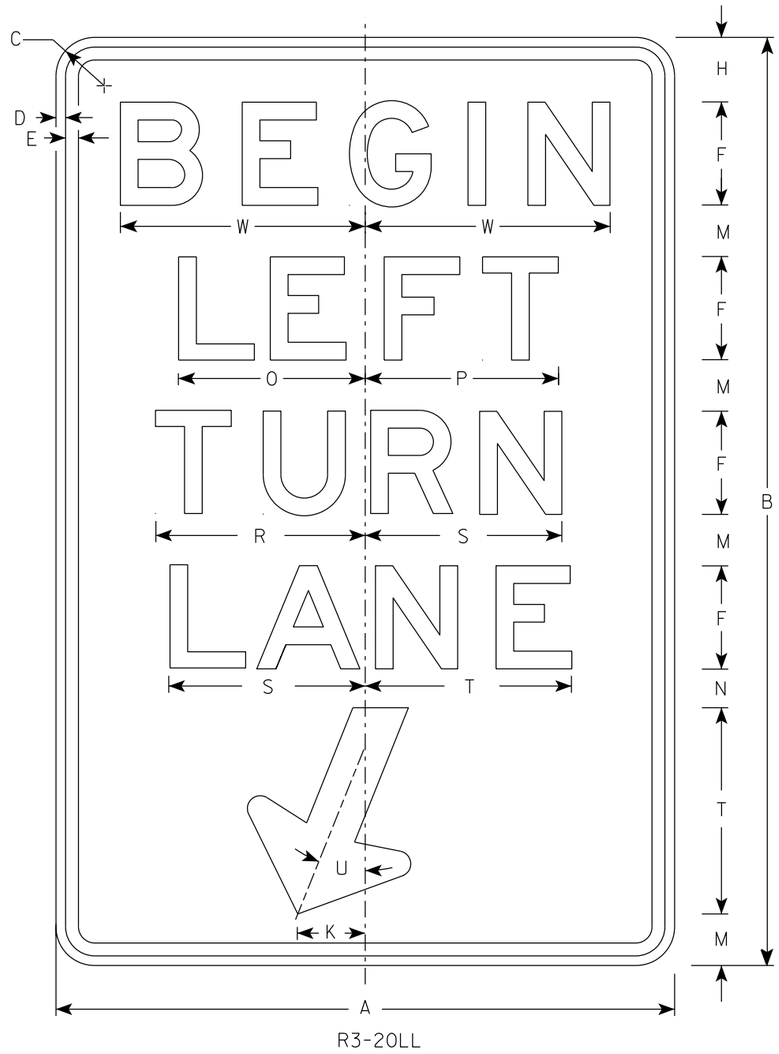
*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/14/23 PLATE NO. R3-8.2

PROJECT NO:

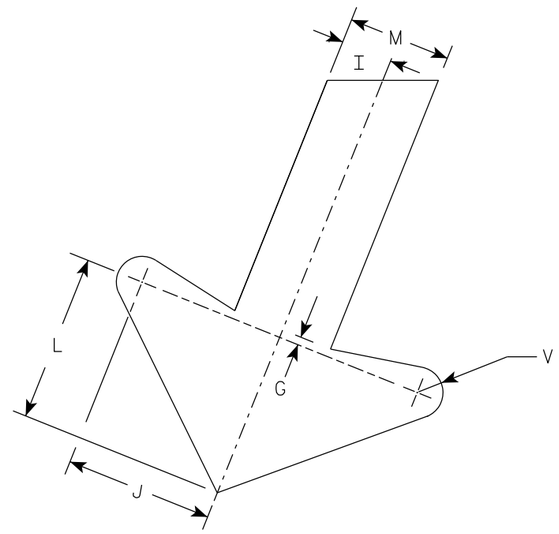
SHEET NO: 213 E




R3-20LL

## NOTES

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




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 1/2 | 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 1/2 | 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 7/8 | 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
R3-20LL

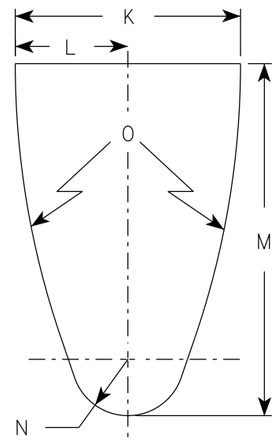
WISCONSIN DEPT OF TRANSPORTATION

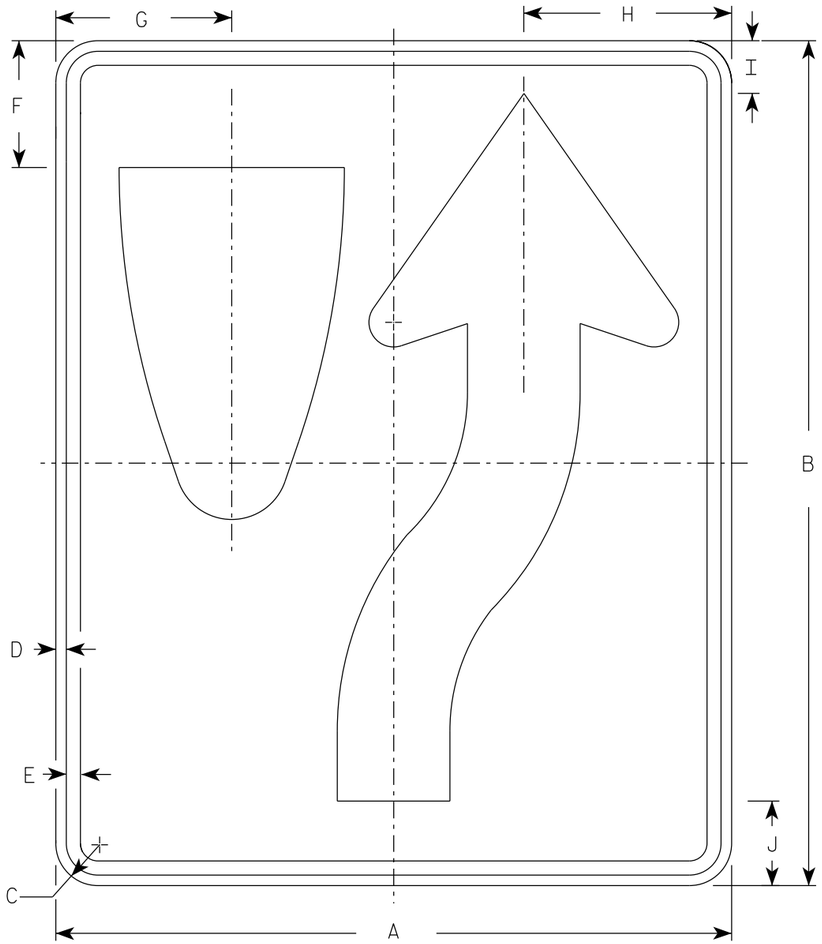
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/23/23 PLATE NO. R3-20LL.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 214 | E

## DIVIDER DETAIL



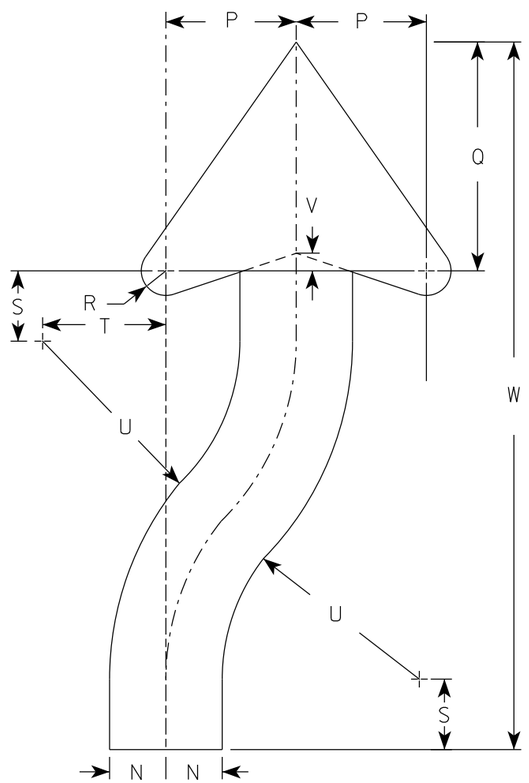




R4-7

## NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. 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 1/2 | 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 1/2 | 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 1/2 | 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 7/8 | 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 7/8 | 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 | 3 | 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 |

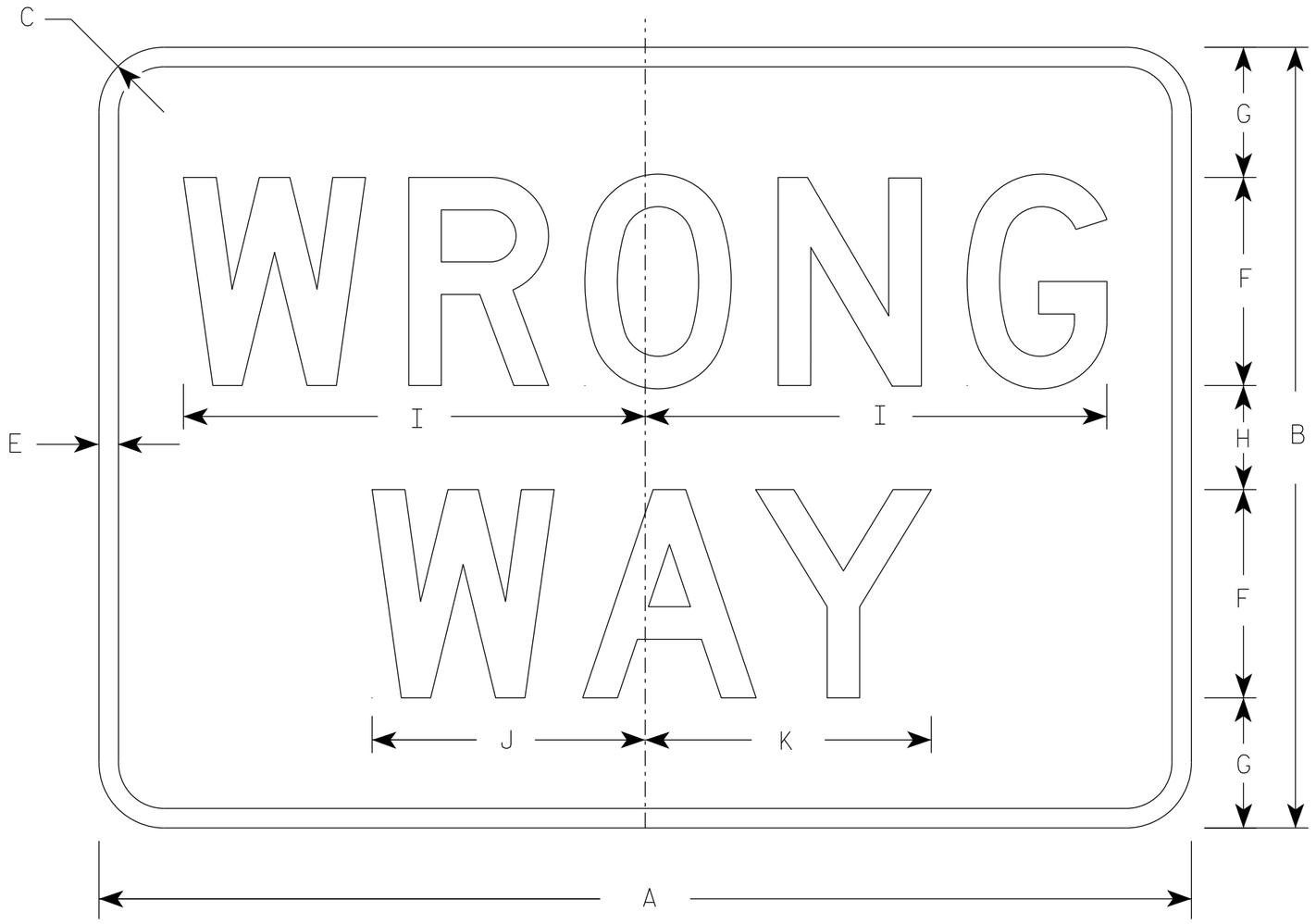
# STANDARD SIGN
# R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/17/23 PLATE NO. R4-7.9

| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 215 | E |
|---|---|---|---|---|---|




R5-1A

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - Red
   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 | 30 | 18 | 1 1/2 | | 1/2 | 5 | 3 | 2 | 11 | 6 1/2 | 6 7/8 | | | | | | | | | | | | | | | | 3.75 |
| 2S | 36 | 24 | 1 1/2 | | 5/8 | 6 | 4 1/2 | 3 | 13 1/4 | 7 7/8 | 8 1/4 | | | | | | | | | | | | | | | | 6.00 |
| 2M | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |
| 3 | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |
| 4 | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |
| 5 | 42 | 30 | 1 7/8 | | 3/4 | 8 | 5 | 4 | 17 3/4 | 10 1/2 | 11 | | | | | | | | | | | | | | | | 8.75 |

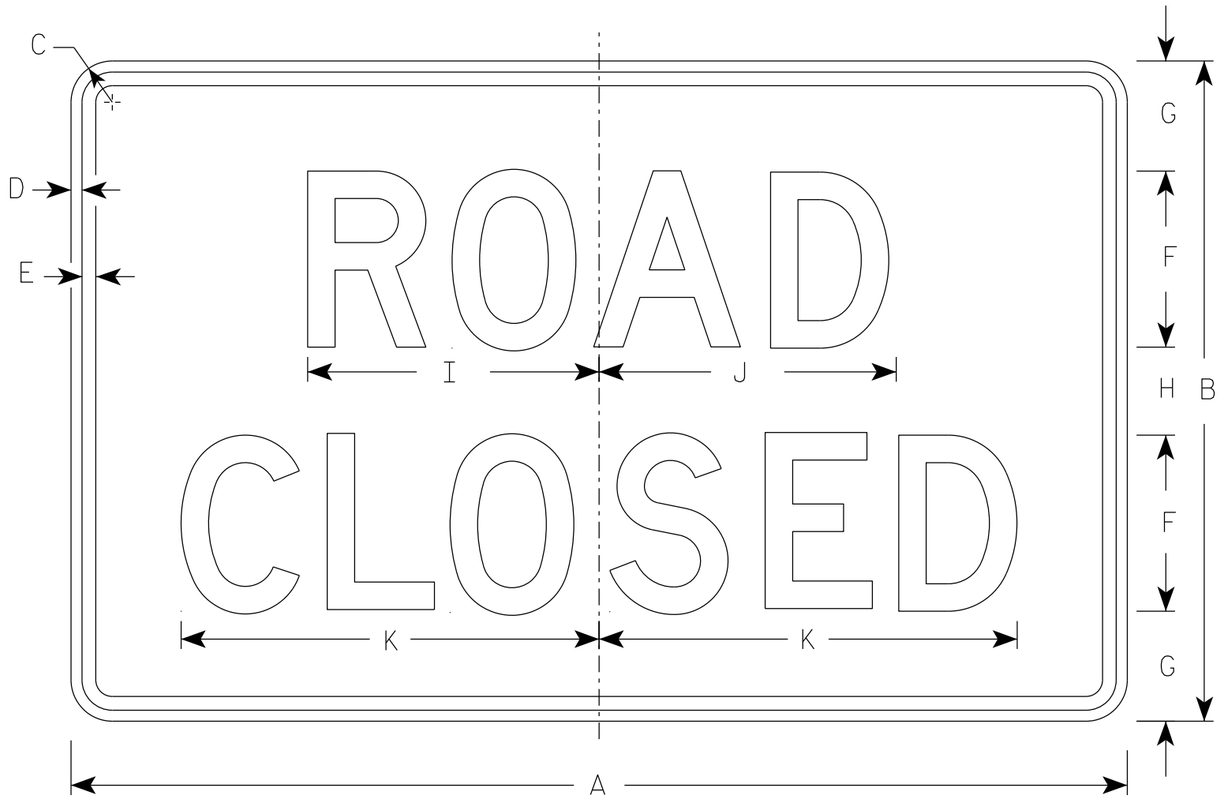
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/23 PLATE NO. R5-1A.3

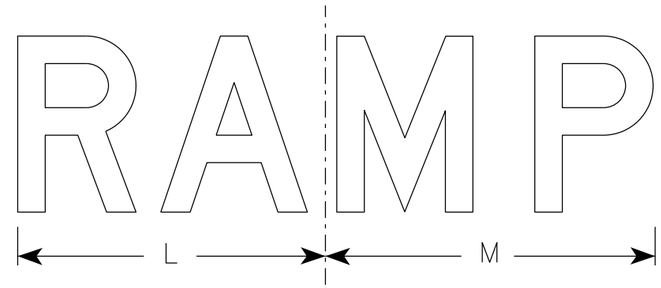
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 216 | E



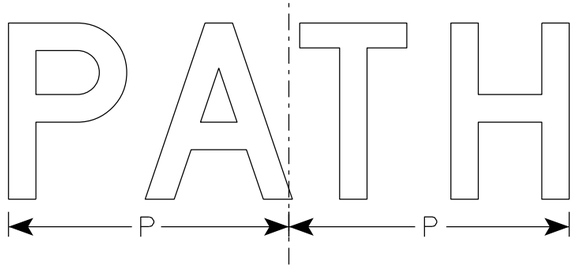

R11-2

NOTES

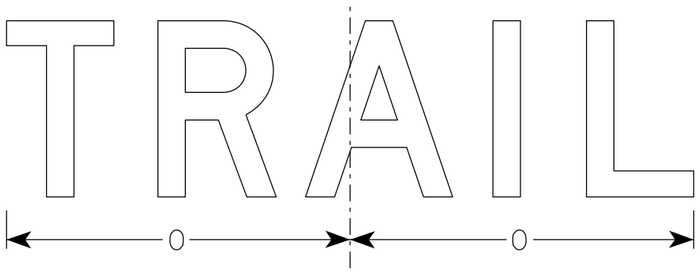
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



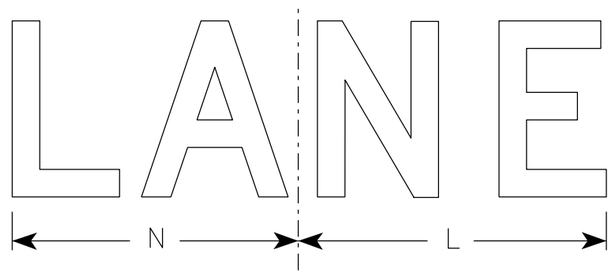

R11-2R




R11-2C




R11-2T




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 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | 12 3/4 | | | | | | | | | | | 10.0 |
| 2M | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | 12 3/4 | | | | | | | | | | | 10.0 |
| 3 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | 12 3/4 | | | | | | | | | | | 10.0 |
| 4 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | 12 3/4 | | | | | | | | | | | 10.0 |
| 5 | 48 | 30 | 1 7/8 | 1/2 | 5/8 | 8 | 5 | 4 | 13 1/4 | 13 1/2 | 19 | 14 | 15 | 13 | 15 5/8 | 12 3/4 | | | | | | | | | | | 10.0 |

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

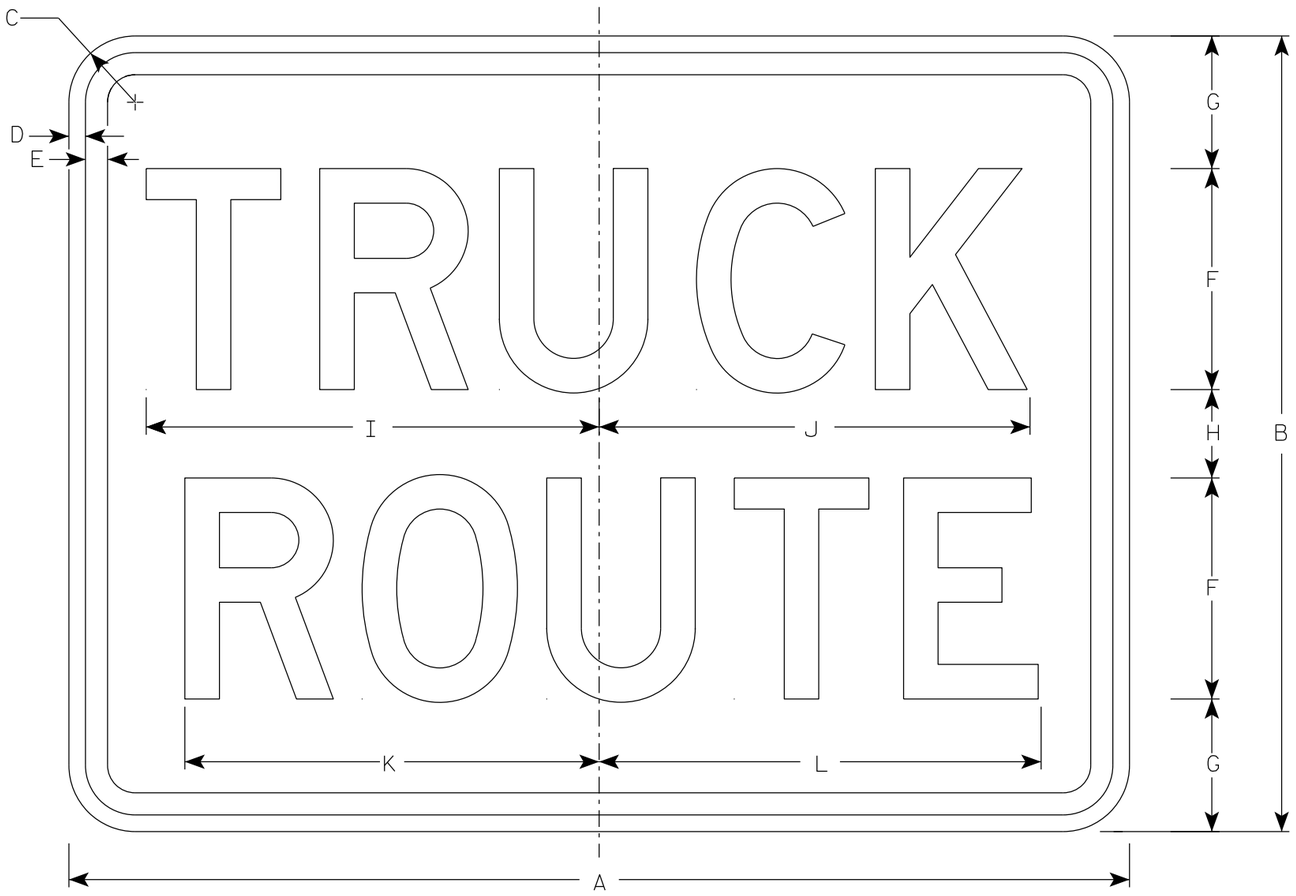
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/3/26 PLATE NO. R11-2.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

NOTES

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




R14-1

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | 18 | 1 1/2 | 3/8 | 1/2 | 5 | 3 | 2 | 10 1/4 | 9 3/4 | 9 3/8 | 10 | | | | | | | | | | | | | | | 3.0 |
| 2M | 24 | 18 | 1 1/2 | 3/8 | 1/2 | 5 | 3 | 2 | 10 1/4 | 9 3/4 | 9 3/8 | 10 | | | | | | | | | | | | | | | 3.0 |
| 3 | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 6 | 4 | 4 | 12 1/4 | 11 3/4 | 11 1/4 | 12 | | | | | | | | | | | | | | | 5.0 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

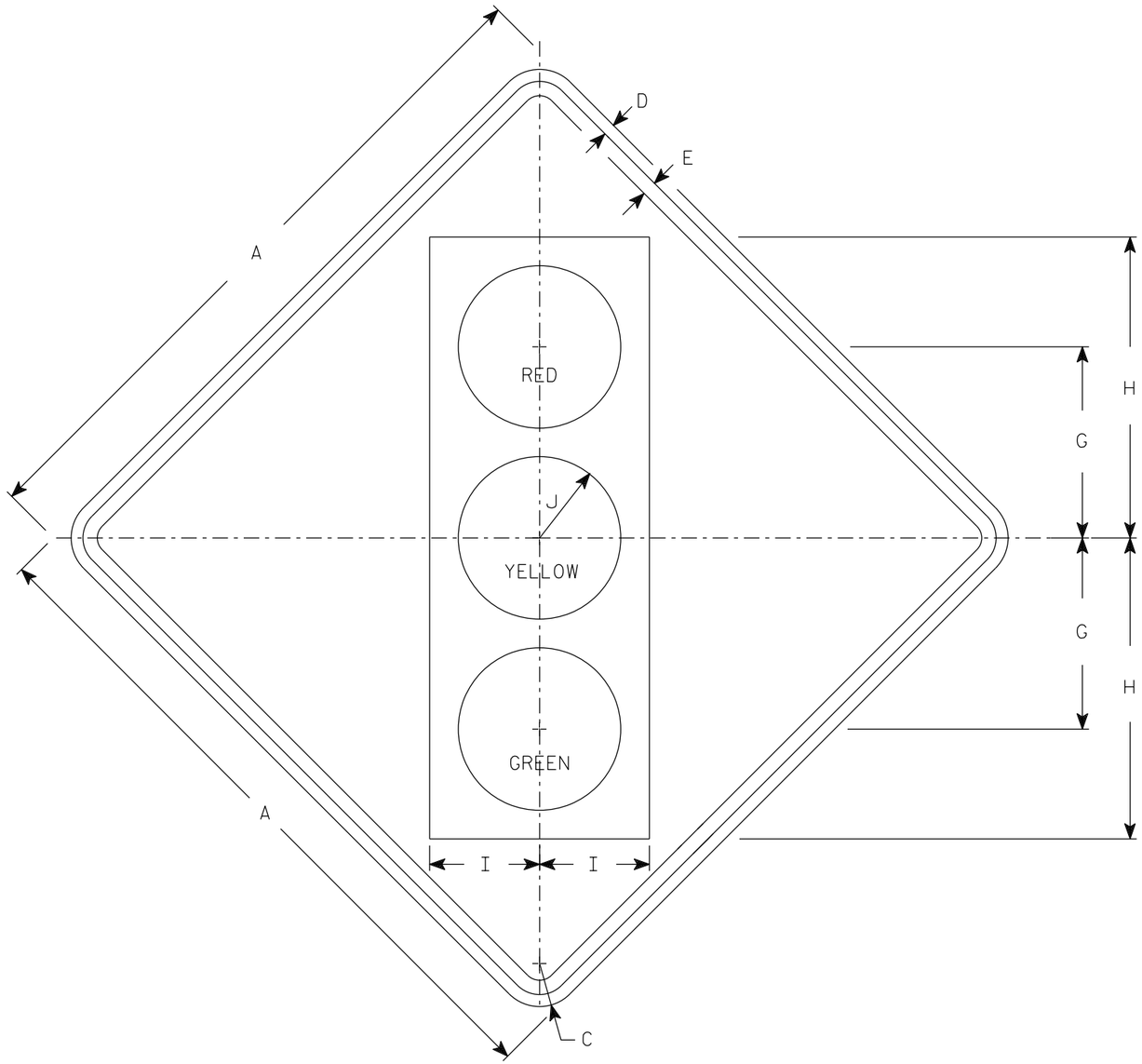
STANDARD SIGN
R14-1

*WISCONSIN DEPT OF TRANSPORTATION*

APPROVED Matthew R Rauch
*for* State Traffic Engineer

DATE 2/9/24 PLATE NO. R14-1.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 218 E




W3-3

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - See Note 3
3. 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 7/8 | 1/2 | 5/8 | | 8 3/4 | 13 3/4 | 5 | 3 3/4 | | | | | | | | | | | | | | | | | 6.25 |
| 2S | 36 | | 2 1/4 | 5/8 | 3/4 | | 10 | 15 3/4 | 5 3/4 | 4 1/4 | | | | | | | | | | | | | | | | | 9.0 |
| 2M | 36 | | 2 1/4 | 5/8 | 3/4 | | 10 | 15 3/4 | 5 3/4 | 4 1/4 | | | | | | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 2 1/4 | 5/8 | 3/4 | | 10 | 15 3/4 | 5 3/4 | 4 1/4 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 3 | 3/4 | 1 | | 12 1/2 | 20 | 7 1/2 | 5 | | | | | | | | | | | | | | | | | 16.0 |
| 5 | 48 | | 3 | 3/4 | 1 | | 12 1/2 | 20 | 7 1/2 | 5 | | | | | | | | | | | | | | | | | 16.0 |

STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

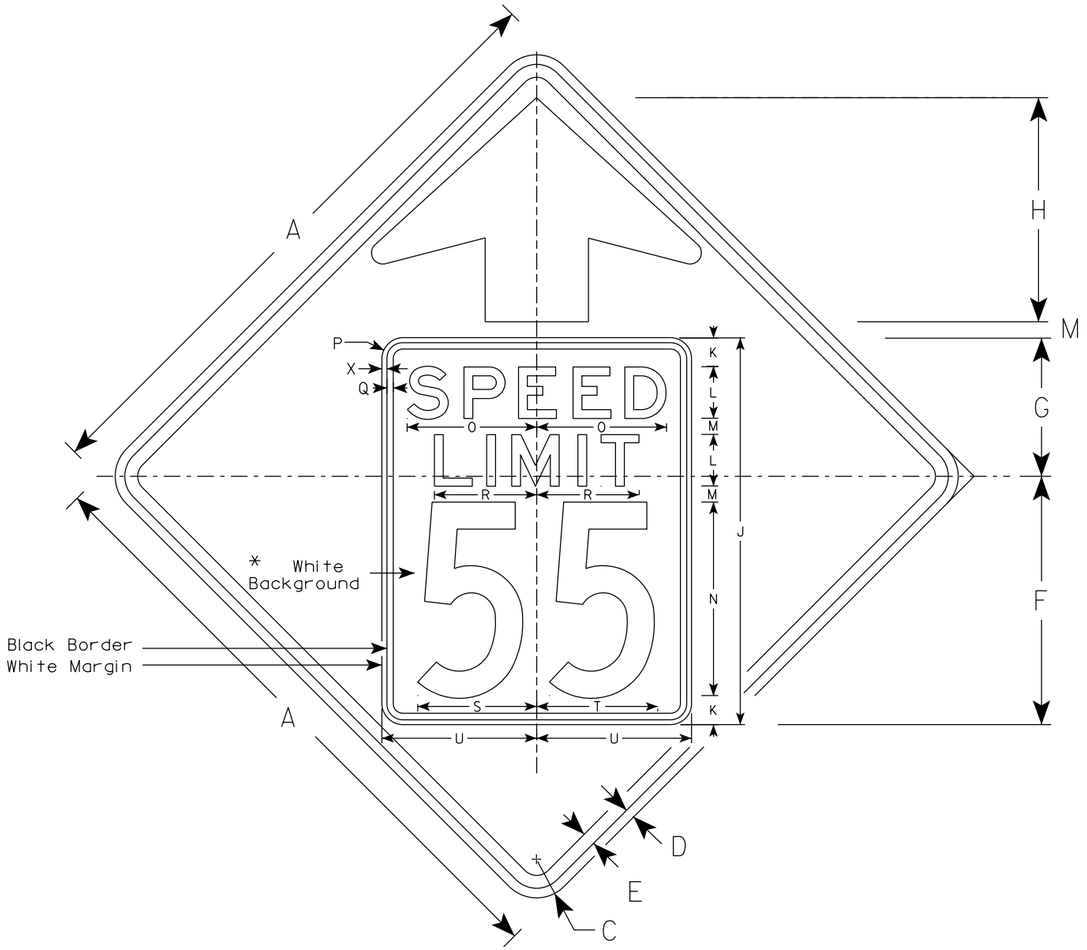
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/2023 PLATE NO. W3-3.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 219 E




7

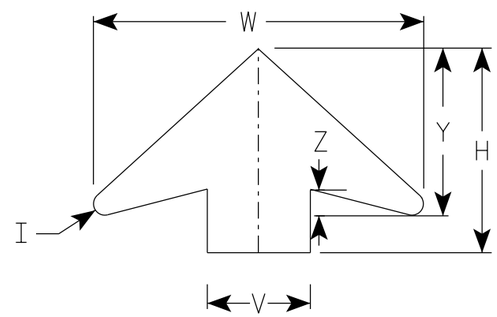



W3-5

## NOTES

1. Sign is Type II - See Note 2 for Sheeting Type
2. Color: *
   Background - Yellow* (Type F Reflective)
   Message - Black
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background with black message (Type SH Reflective)




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

# STANDARD SIGN
## W3-5

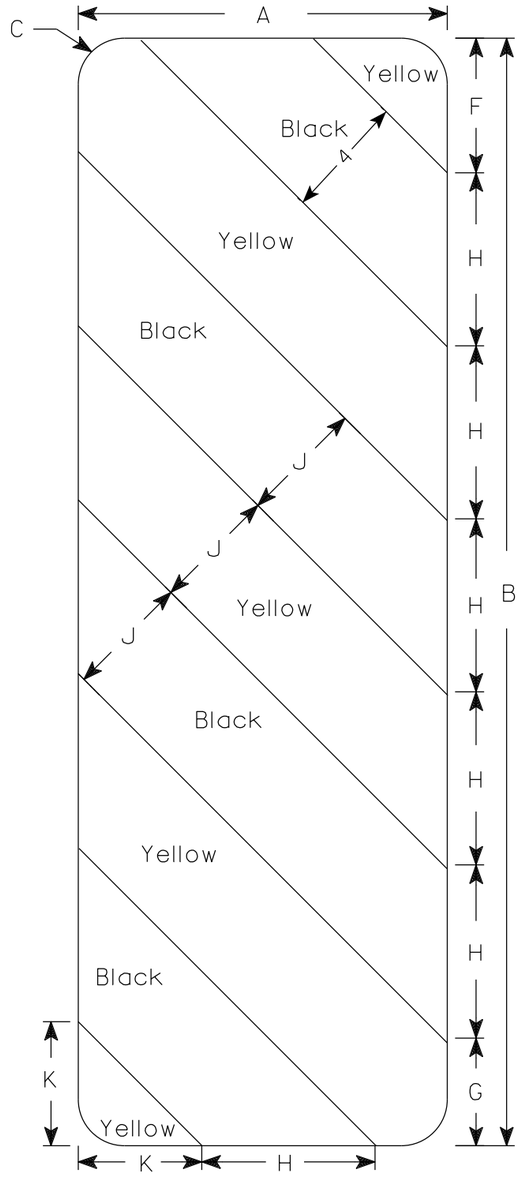
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

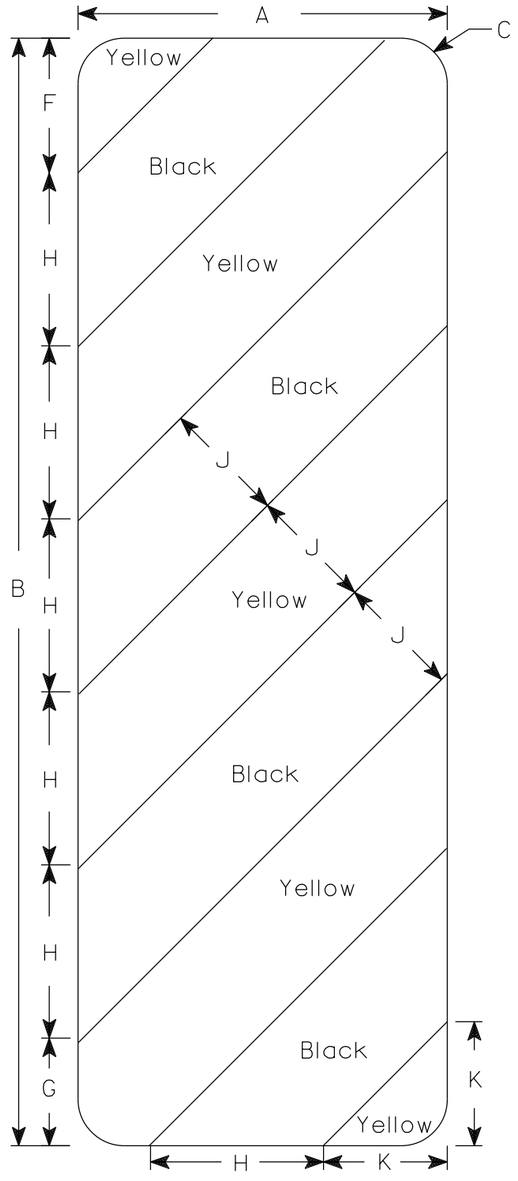
DATE 8/30/2023 PLATE NO. W3-5.7

PROJECT NO:

SHEET NO: 220 E




W5-52L




W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Alternate colors of stripes as shown.

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

STANDARD SIGN

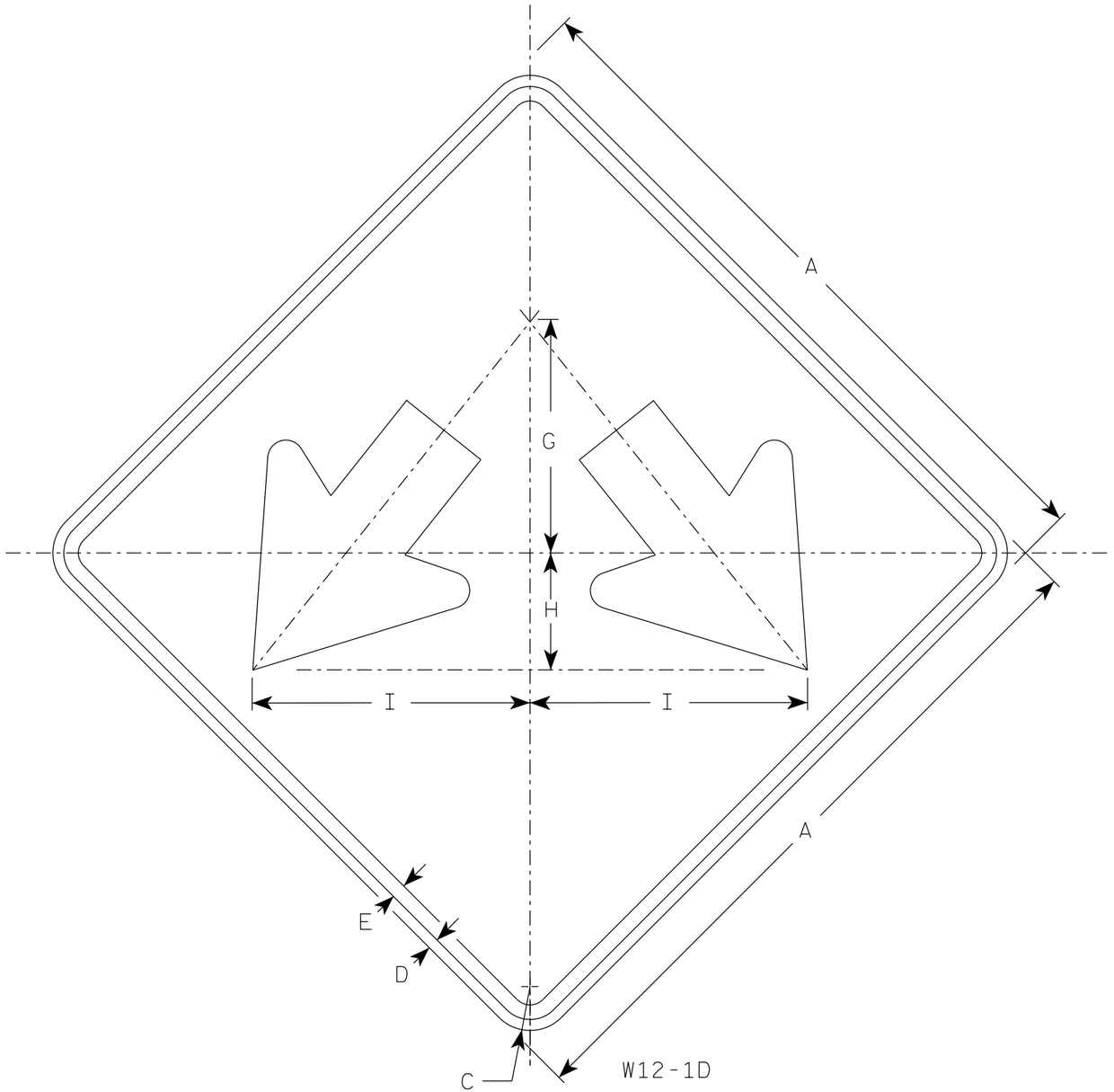
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

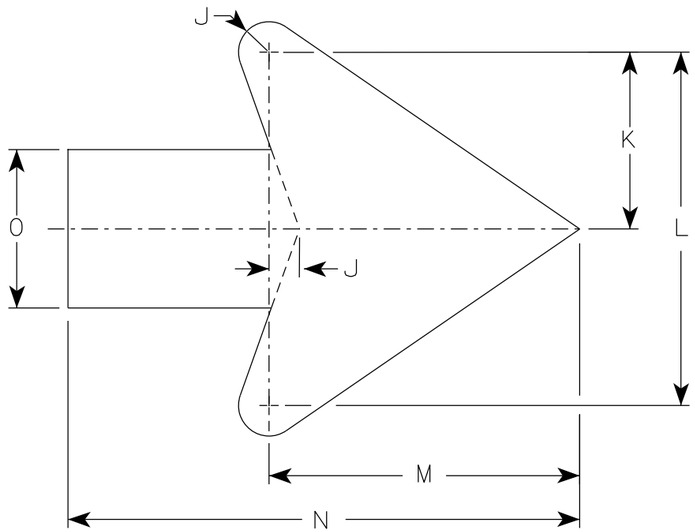
DATE 3/4/2024 PLATE NO. W5-52.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 221 E




NOTES

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




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 | Areq sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2S | 24 | | 1 1/2 | 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 1/2 | 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 7/8 | 1/2 | 5/8 | | 10 | 5 | 11 7/8 | 3/4 | 4 1/2 | 9 | 7 7/8 | 13 | 4 | | | | | | | | | | | | 6.25 |
| 4 | 36 | | 2 1/4 | 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 | | 3 | 3/4 | 1 | | 16 | 8 | 19 | 1 1/4 | 7 1/4 | 14 1/2 | 12 3/4 | 21 | 6 1/4 | | | | | | | | | | | | 16.0 |

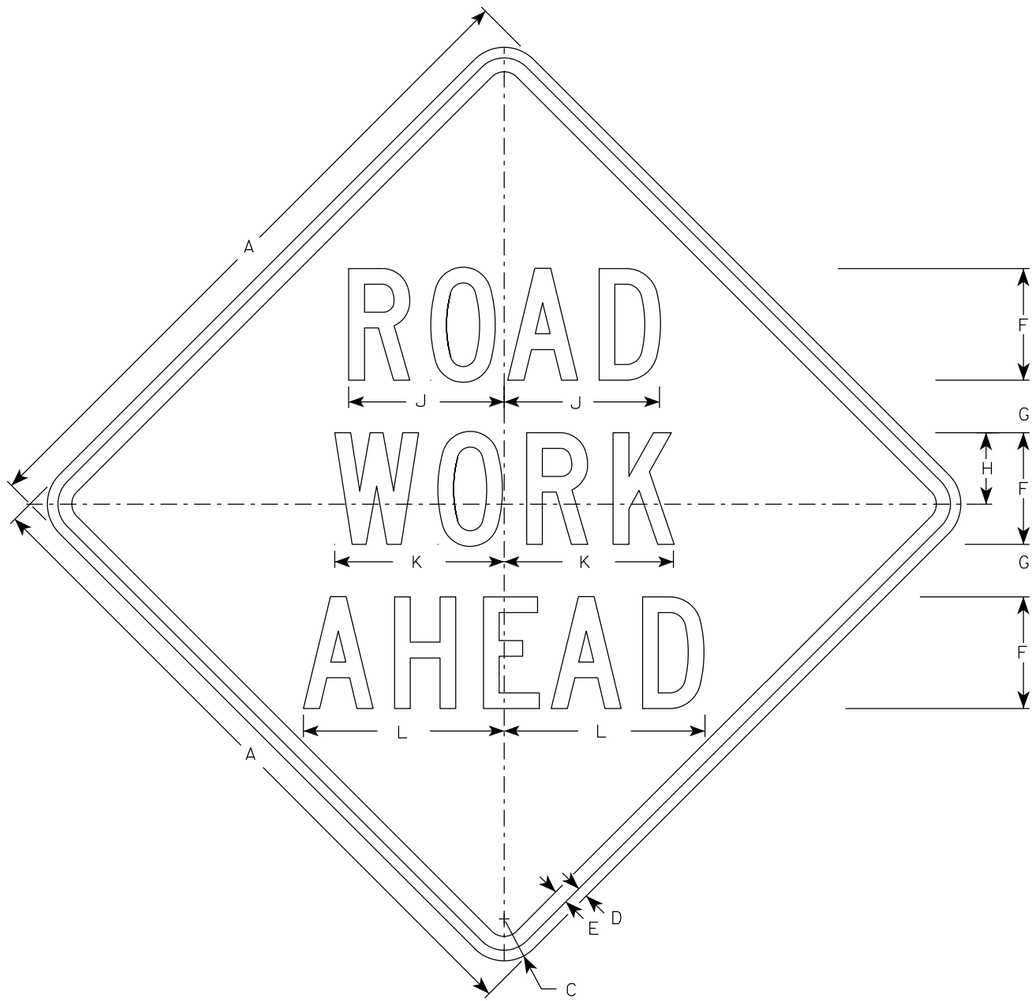
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

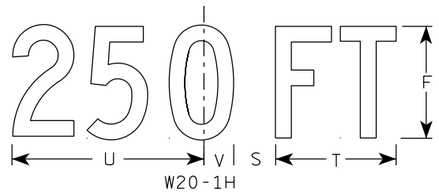
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/30/2023 PLATE NO. W12-1D.16

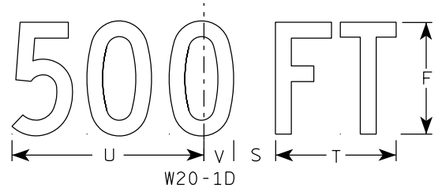
| PROJECT NO: | HWY: | COUNTY: | | SHEET NO: 222 | E |
|---|---|---|---|---|---|




W20-1A



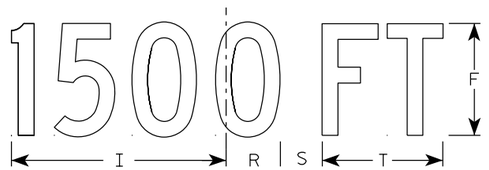

W20-1H




W20-1D



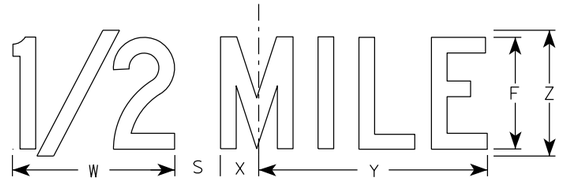

W20-1C



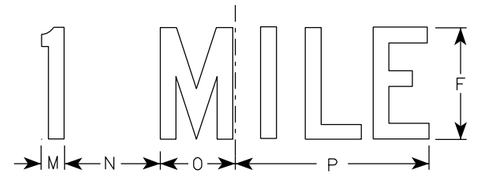

W20-1B

NOTES

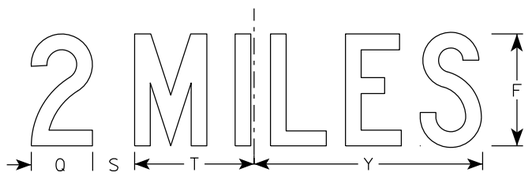
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.




W20-1G




W20-1F




W20-1E

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

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

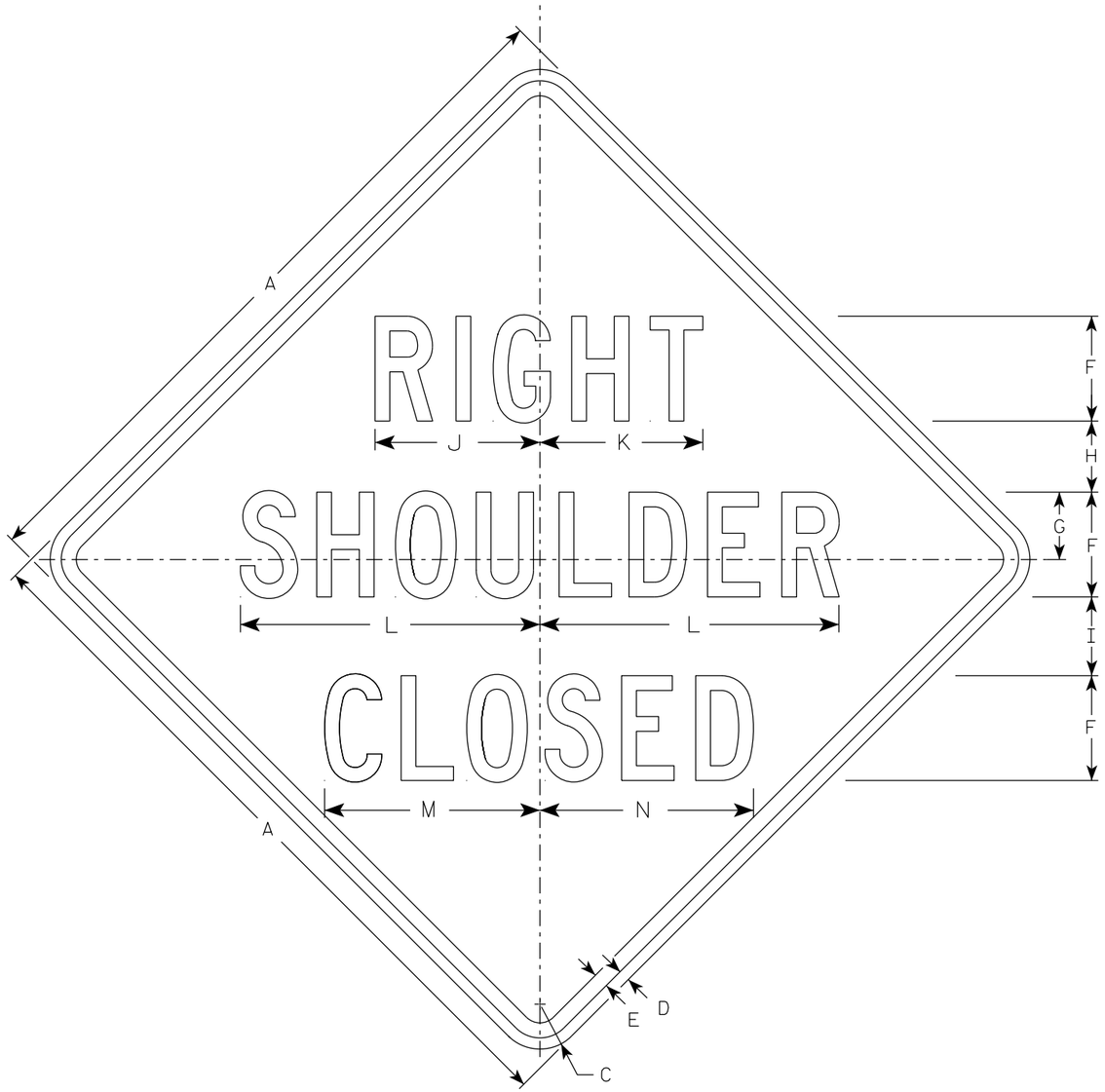
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

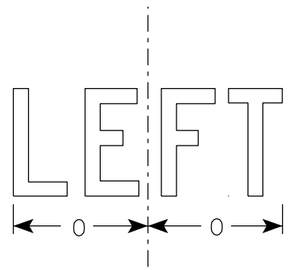
SHEET NO: 223 E




W21-5A

NOTES

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




W21-5AL

| 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 | | 2 1/4 | 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 | | 3 | 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 | | 3 | 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 | | 3 | 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 | | 3 | 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 | | 3 | 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

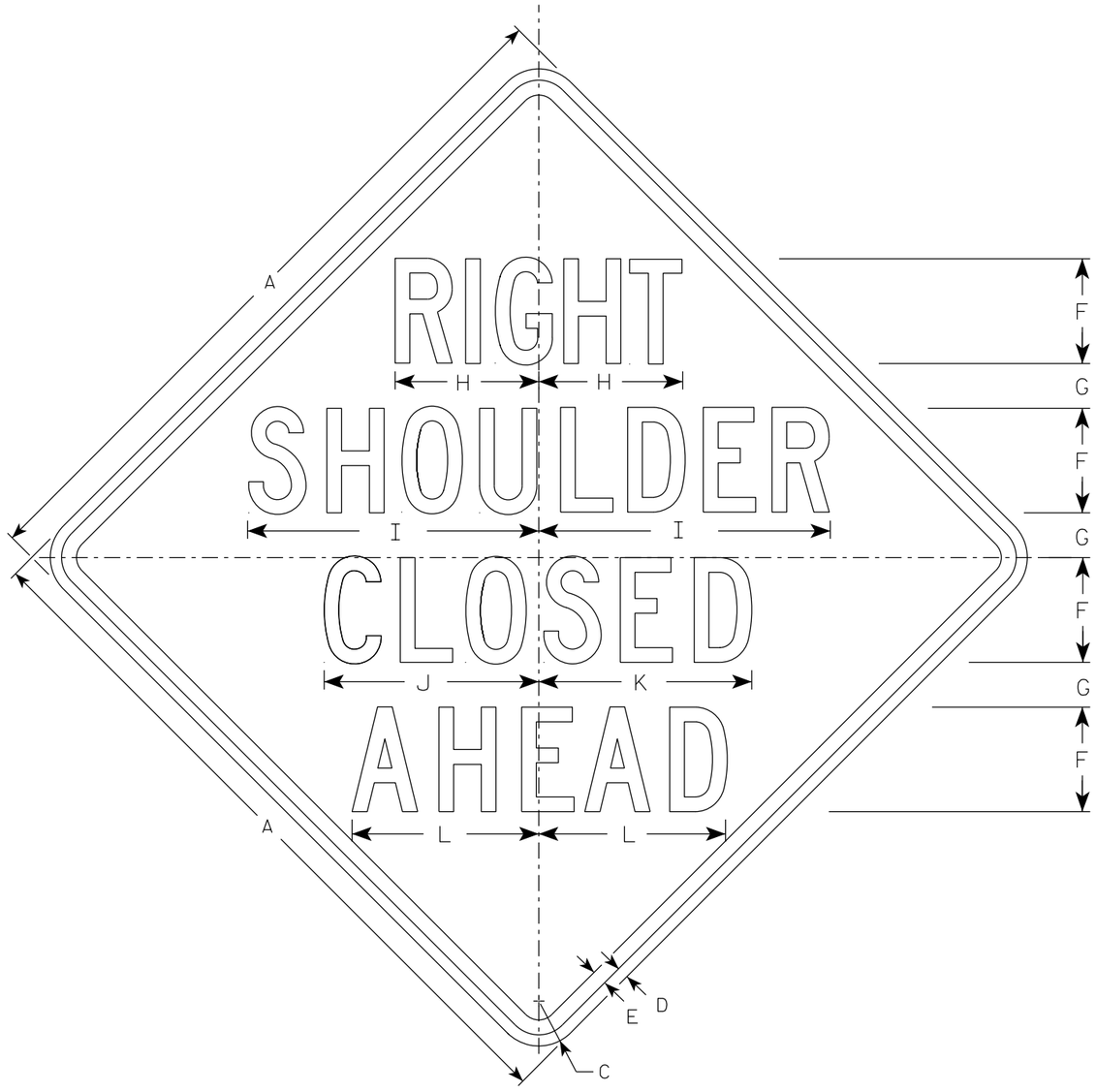
DATE 1/11/2024 PLATE NO. W21-5A.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 224 | E



7

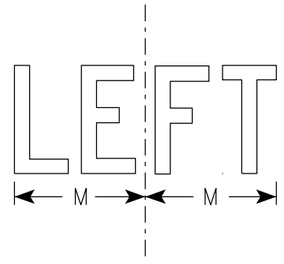
7




W21-5B

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C




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 | | 2 1/4 | 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 | | 3 | 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 | | 3 | 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 | | 3 | 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 | | 3 | 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 | | 3 | 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

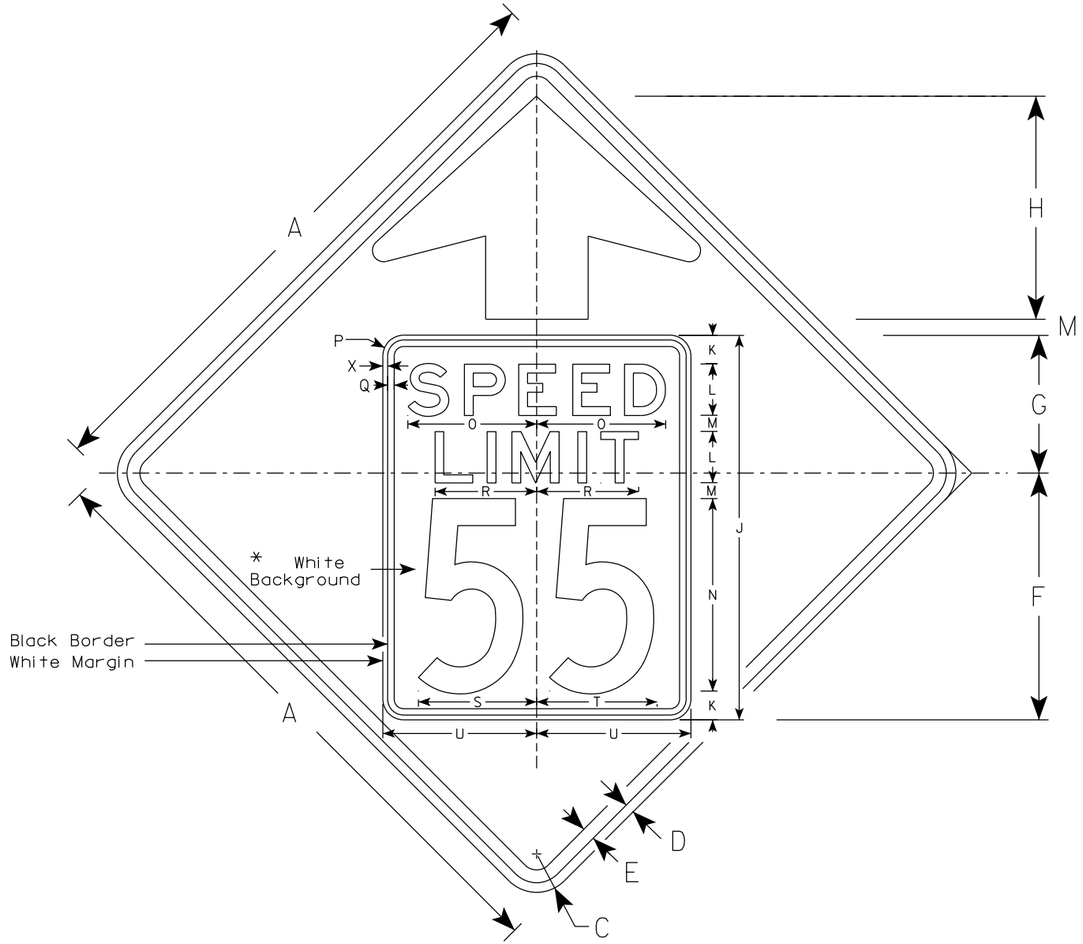
DATE 1/16/2024 PLATE NO. W21-5B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 225 E






7

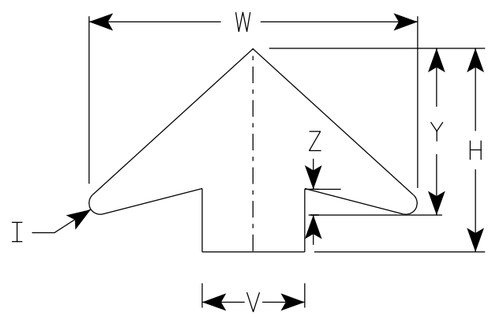



W03-5

NOTES

1. Sign is Type II - Type F Reflective
2. Color: *
   Background - ORANGE*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background




ARROW DETAIL

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36 | | 2 1/4 | 5/8 | 3/4 | 14 1/2 | 9 1/2 | 11 1/2 | 5/8 | 24 | 2 | 3 | 1 | 12 | 7 1/8 | 1 1/2 | 3/8 | 5 3/4 | 7 1/4 | 7 1/8 | 9 | 6 | 19 1/4 | 3/8 | 9 3/4 | 1 5/8 | 9.0 |
| 2S | 48 | | 3 | 3/4 | 1 | 19 1/4 | 10 3/4 | 17 3/8 | 7/8 | 30 | 2 1/4 | 4 | 1 1/4 | 15 | 10 | 1 5/8 | 1/2 | 8 | 9 1/4 | 9 3/8 | 12 | 8 | 25 5/8 | 3/8 | 13 | 2 | 16.0 |
| 2M | 48 | | 3 | 3/4 | 1 | 19 1/4 | 10 3/4 | 17 3/8 | 7/8 | 30 | 2 1/4 | 4 | 1 1/4 | 15 | 10 | 1 5/8 | 1/2 | 8 | 9 1/4 | 9 3/8 | 12 | 8 | 25 5/8 | 3/8 | 13 | 2 | 16.0 |
| 3 | 48 | | 3 | 3/4 | 1 | 19 1/4 | 10 3/4 | 17 3/8 | 7/8 | 30 | 2 1/4 | 4 | 1 1/4 | 15 | 10 | 1 5/8 | 1/2 | 8 | 9 1/4 | 9 3/8 | 12 | 8 | 25 5/8 | 3/8 | 13 | 2 | 16.0 |
| 4 | 48 | | 3 | 3/4 | 1 | 19 1/4 | 10 3/4 | 17 3/8 | 7/8 | 30 | 2 1/4 | 4 | 1 1/4 | 15 | 10 | 1 5/8 | 1/2 | 8 | 9 1/4 | 9 3/8 | 12 | 8 | 25 5/8 | 3/8 | 13 | 2 | 16.0 |
| 5 | 48 | | 3 | 3/4 | 1 | 19 1/4 | 10 3/4 | 17 3/8 | 7/8 | 30 | 2 1/4 | 4 | 1 1/4 | 15 | 10 | 1 5/8 | 1/2 | 8 | 9 1/4 | 9 3/8 | 12 | 8 | 25 5/8 | 3/8 | 13 | 2 | 16.0 |

STANDARD SIGN
W03-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W03-5.2

PROJECT NO:

SHEET NO: E

# CTH F

| STATION | REAL STATION | DISTANCE | AREA (SF) | | INCREMENTAL VOL (CY) (UNADJUSTED) | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | FILL | CUT | FILL | CUT 1.00 | EXPANDED FILL 1.25 | MASS ORDINATE |
| | | | | | NOTE 1 | NOTE 2 | NOTE 1 | | NOTE 3 |
| 275+46.89 | 27546.89 | 0.00 | 13.74 | 4.79 | 0 | 0 | 0 | 0 | 0 |
| 275+50.00 | 27550.00 | 3.11 | 13.74 | 4.83 | 2 | 1 | 2 | 1 | 1 |
| 276+00.00 | 27600.00 | 50.00 | 15.15 | 5.79 | 27 | 10 | 29 | 14 | 15 |
| 276+50.00 | 27650.00 | 50.00 | 16.02 | 4.32 | 29 | 9 | 58 | 25 | 33 |
| 277+00.00 | 27700.00 | 50.00 | 14.59 | 4.72 | 28 | 8 | 86 | 35 | 51 |
| 277+50.00 | 27750.00 | 50.00 | 20.42 | 0.92 | 32 | 5 | 118 | 41 | 77 |
| 278+00.00 | 27800.00 | 50.00 | 28.76 | 0.34 | 46 | 1 | 164 | 43 | 122 |
| 278+50.00 | 27850.00 | 50.00 | 38.43 | 0.00 | 62 | 0 | 226 | 43 | 184 |
| 280+50.00 | 27887.59 | 37.59 | 126.40 | 0.00 | 115 | 0 | 341 | 43 | 299 |
| 281+00.00 | 27937.59 | 50.00 | 88.44 | 30.29 | 199 | 28 | 540 | 78 | 463 |
| 281+50.00 | 27987.59 | 50.00 | 89.50 | 21.92 | 165 | 48 | 705 | 138 | 568 |
| 282+00.00 | 28037.59 | 50.00 | 94.03 | 9.84 | 170 | 29 | 875 | 174 | 701 |
| 282+50.00 | 28087.59 | 50.00 | 99.74 | 0.75 | 179 | 10 | 1054 | 186 | 868 |
| 282+55.25 | 28092.84 | 5.25 | 111.21 | 1.29 | 21 | 0 | 1075 | 186 | 889 |
| 282+60.00 | 28097.59 | 4.75 | 130.06 | 0.96 | 21 | 0 | 1096 | 186 | 910 |
| 282+65.00 | 28102.59 | 5.00 | 131.22 | 0.83 | 24 | 0 | 1120 | 186 | 934 |
| 282+70.00 | 28107.59 | 5.00 | 128.92 | 2.18 | 24 | 0 | 1144 | 186 | 958 |
| 282+75.00 | 28112.59 | 5.00 | 133.35 | 1.24 | 24 | 0 | 1168 | 186 | 982 |
| 282+80.00 | 28117.59 | 5.00 | 139.73 | 0.88 | 25 | 0 | 1193 | 186 | 1007 |
| 282+85.00 | 28122.59 | 5.00 | 148.20 | 0.53 | 27 | 0 | 1220 | 186 | 1034 |
| 282+90.00 | 28127.59 | 5.00 | 158.79 | 0.35 | 28 | 0 | 1248 | 186 | 1062 |
| 282+95.00 | 28132.59 | 5.00 | 170.45 | 0.32 | 30 | 0 | 1278 | 186 | 1092 |
| 283+00.00 | 28137.59 | 5.00 | 180.67 | 0.00 | 33 | 0 | 1311 | 186 | 1125 |
| 283+05.00 | 28142.59 | 5.00 | 179.03 | 0.00 | 33 | 0 | 1344 | 186 | 1158 |
| 283+10.00 | 28147.59 | 5.00 | 168.77 | 0.00 | 32 | 0 | 1376 | 186 | 1190 |
| 283+15.00 | 28152.59 | 5.00 | 147.00 | 0.00 | 29 | 0 | 1405 | 186 | 1219 |
| 283+20.00 | 28157.59 | 5.00 | 127.24 | 0.00 | 25 | 0 | 1430 | 186 | 1244 |
| 283+25.00 | 28162.59 | 5.00 | 106.68 | 0.00 | 22 | 0 | 1452 | 186 | 1266 |
| 283+30.00 | 28167.59 | 5.00 | 33.58 | 0.00 | 13 | 0 | 1465 | 186 | 1279 |
| 283+35.00 | 28172.59 | 5.00 | 25.65 | 0.00 | 5 | 0 | 1470 | 186 | 1284 |
| 283+40.00 | 28177.59 | 5.00 | 11.81 | 0.00 | 3 | 0 | 1473 | 186 | 1287 |
| 283+45.00 | 28182.59 | 5.00 | 0.14 | 0.00 | 1 | 0 | 1474 | 186 | 1288 |
| 283+50.00 | 28187.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+55.00 | 28192.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+60.00 | 28197.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+65.00 | 28202.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+70.00 | 28207.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+75.00 | 28212.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+80.00 | 28217.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+85.00 | 28222.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+90.00 | 28227.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 283+95.00 | 28232.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 284+00.00 | 28237.59 | 5.00 | 0.00 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 284+05.00 | 28242.59 | 5.00 | 3.46 | 0.00 | 0 | 0 | 1474 | 186 | 1288 |
| 284+10.00 | 28247.59 | 5.00 | 15.65 | 0.00 | 2 | 0 | 1476 | 186 | 1290 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 3 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT) - ((FILL) * FILL FACTOR)] |

# CTH F

| STATION | REAL STATION | DISTANCE | AREA (SF) | | INCREMENTAL VOL (CY) (UNADJUSTED) | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | FILL | CUT | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | 1.00 | 1.25 | |
| | | | | | NOTE 1 | NOTE 2 | NOTE 1 | | NOTE 3 |
| 284+15.00 | 28252.59 | 5.00 | 27.80 | 0.00 | 4 | 0 | 1480 | 186 | 1294 |
| 284+20.00 | 28257.59 | 5.00 | 36.67 | 0.00 | 6 | 0 | 1486 | 186 | 1300 |
| 284+25.00 | 28262.59 | 5.00 | 45.49 | 0.00 | 8 | 0 | 1494 | 186 | 1308 |
| 284+30.00 | 28267.59 | 5.00 | 62.40 | 0.00 | 10 | 0 | 1504 | 186 | 1318 |
| 284+35.00 | 28272.59 | 5.00 | 80.36 | 0.00 | 13 | 0 | 1517 | 186 | 1331 |
| 284+40.00 | 28277.59 | 5.00 | 154.84 | 0.56 | 22 | 0 | 1539 | 186 | 1353 |
| 284+45.00 | 28282.59 | 5.00 | 157.66 | 0.45 | 29 | 0 | 1568 | 186 | 1382 |
| 284+50.00 | 28287.59 | 5.00 | 156.74 | 0.32 | 29 | 0 | 1597 | 186 | 1411 |
| 284+55.00 | 28292.59 | 5.00 | 156.23 | 0.36 | 29 | 0 | 1626 | 186 | 1440 |
| 284+60.00 | 28297.59 | 5.00 | 156.55 | 0.30 | 29 | 0 | 1655 | 186 | 1469 |
| 284+65.00 | 28302.59 | 5.00 | 163.67 | 0.58 | 30 | 0 | 1685 | 186 | 1499 |
| 284+70.00 | 28307.59 | 5.00 | 166.82 | 0.81 | 31 | 0 | 1716 | 186 | 1530 |
| 284+75.00 | 28312.59 | 5.00 | 160.83 | 0.74 | 30 | 0 | 1746 | 186 | 1560 |
| 284+80.00 | 28317.59 | 5.00 | 152.56 | 0.98 | 29 | 0 | 1775 | 186 | 1589 |
| 284+85.00 | 28322.59 | 5.00 | 174.77 | 0.62 | 30 | 0 | 1805 | 186 | 1619 |
| 284+90.00 | 28327.59 | 5.00 | 171.02 | 0.70 | 32 | 0 | 1837 | 186 | 1651 |
| 284+94.70 | 28332.28 | 4.69 | 165.26 | 0.80 | 29 | 0 | 1866 | 186 | 1680 |
| 285+00.00 | 28337.59 | 5.31 | 128.41 | 0.00 | 29 | 0 | 1895 | 186 | 1709 |
| 285+50.00 | 28387.59 | 50.00 | 113.99 | 0.00 | 224 | 0 | 2119 | 186 | 1933 |
| 286+00.00 | 28437.59 | 50.00 | 107.21 | 0.02 | 205 | 0 | 2324 | 186 | 2138 |
| 286+50.00 | 28487.59 | 50.00 | 111.06 | 0.00 | 202 | 0 | 2526 | 186 | 2340 |
| 287+00.00 | 28537.59 | 50.00 | 131.84 | 0.00 | 225 | 0 | 2751 | 186 | 2565 |
| 287+50.00 | 28587.59 | 50.00 | 124.61 | 0.00 | 237 | 0 | 2988 | 186 | 2802 |
| 288+00.00 | 28637.59 | 50.00 | 72.08 | 0.56 | 182 | 1 | 3170 | 188 | 2983 |
| 288+50.00 | 28687.59 | 50.00 | 39.47 | 1.82 | 103 | 2 | 3273 | 190 | 3083 |
| 288+81.93 | 28719.52 | 31.93 | 25.81 | 0.27 | 39 | 1 | 3312 | 191 | 3121 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 3 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT) - ((FILL) * FILL FACTOR)] |

# CTH K

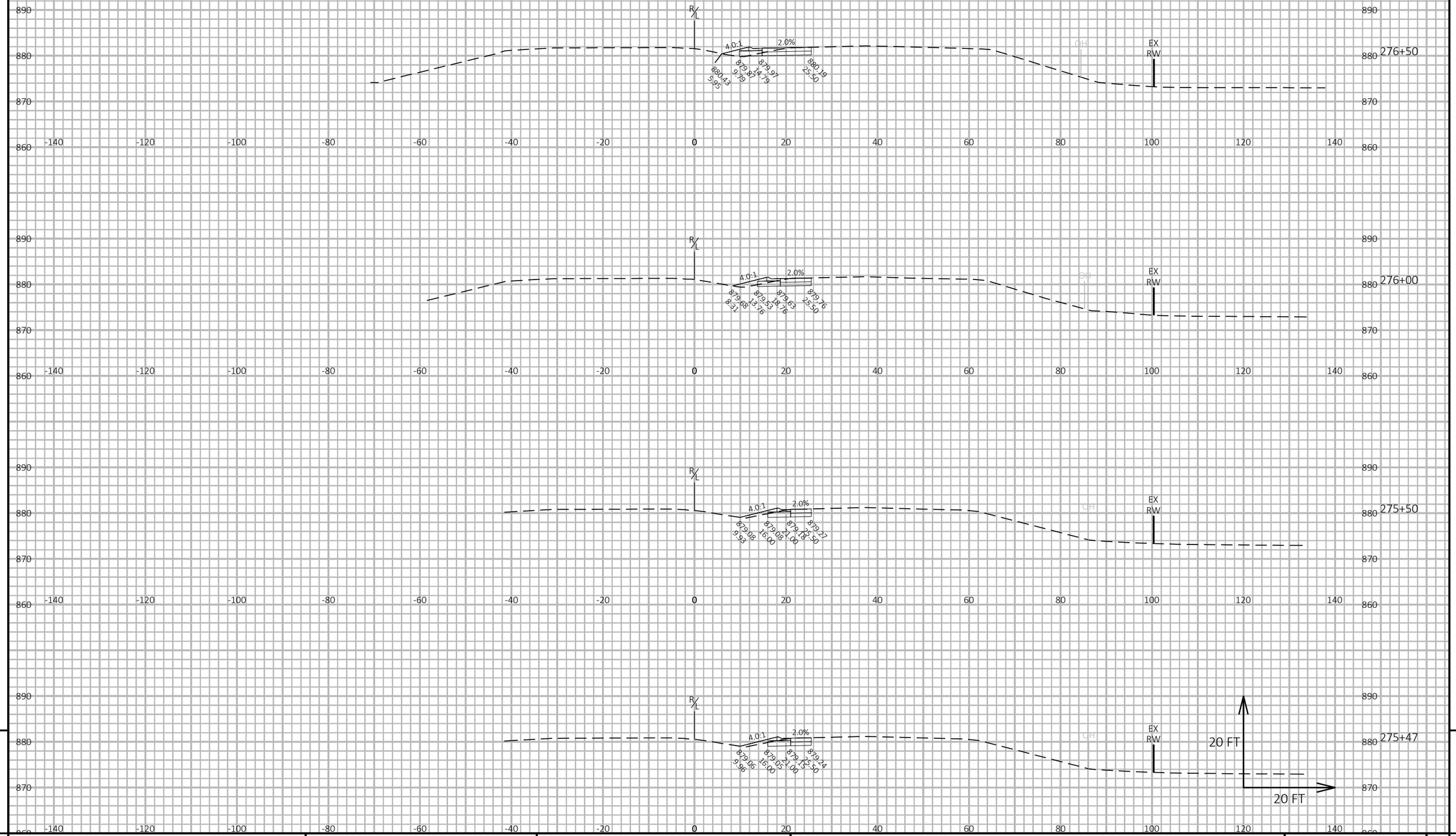
| STATION | REAL STATION | DISTANCE | AREA (SF) | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | FILL | CUT | FILL | EBS | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | | 1.00 | 1.25 | |
| | | | | | NOTE 1 | NOTE 2 | | NOTE 1 | | NOTE 8 |
| 2+26.66 | 226.66 | 0.00 | 27.89 | 0.00 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2+50.00 | 250.00 | 23.34 | 23.39 | 0.15 | 22 | 0 | 0 | 22 | 0 | 22 |
| 3+00.00 | 300.00 | 50.00 | 23.18 | 0.42 | 43 | 1 | 0 | 65 | 1 | 64 |
| 3+50.00 | 350.00 | 50.00 | 24.61 | 0.71 | 44 | 1 | 0 | 109 | 3 | 107 |
| 4+00.00 | 400.00 | 50.00 | 30.51 | 0.00 | 51 | 1 | 0 | 160 | 4 | 156 |
| 4+50.00 | 450.00 | 50.00 | 26.90 | 0.02 | 53 | 0 | 0 | 213 | 4 | 209 |
| 5+00.00 | 500.00 | 50.00 | 28.18 | 0.00 | 51 | 0 | 0 | 264 | 4 | 260 |
| 5+50.00 | 550.00 | 50.00 | 29.34 | 1.83 | 53 | 2 | 0 | 317 | 6 | 311 |
| 6+00.00 | 600.00 | 50.00 | 29.05 | 11.33 | 54 | 12 | 0 | 371 | 21 | 350 |
| 6+50.00 | 650.00 | 50.00 | 26.43 | 17.94 | 51 | 27 | 0 | 422 | 55 | 367 |
| 7+00.00 | 700.00 | 50.00 | 22.90 | 10.03 | 46 | 26 | 0 | 468 | 88 | 381 |
| 7+50.00 | 750.00 | 50.00 | 18.47 | 7.22 | 38 | 16 | 0 | 506 | 108 | 399 |
| 8+00.00 | 800.00 | 50.00 | 18.55 | 8.82 | 34 | 15 | 0 | 540 | 126 | 414 |
| 8+50.00 | 850.00 | 50.00 | 25.70 | 0.55 | 41 | 9 | 0 | 581 | 138 | 444 |
| 8+83.78 | 883.78 | 33.78 | 87.15 | 0.71 | 71 | 1 | 0 | 652 | 139 | 513 |
| 8+85.00 | 885.00 | 1.22 | 44.47 | 5.52 | 3 | 0 | 0 | 655 | 139 | 516 |
| 8+90.00 | 890.00 | 5.00 | 84.70 | 3.81 | 12 | 1 | 0 | 667 | 140 | 527 |
| 8+95.00 | 895.00 | 5.00 | 88.15 | 1.44 | 16 | 0 | 0 | 683 | 140 | 543 |
| 9+00.00 | 900.00 | 5.00 | 92.35 | 0.56 | 17 | 0 | 0 | 700 | 140 | 560 |
| 9+05.00 | 905.00 | 5.00 | 98.18 | 0.45 | 18 | 0 | 0 | 718 | 140 | 578 |
| 9+10.00 | 910.00 | 5.00 | 105.50 | 0.42 | 19 | 0 | 0 | 737 | 140 | 597 |
| 9+15.00 | 915.00 | 5.00 | 114.31 | 0.38 | 20 | 0 | 0 | 757 | 140 | 617 |
| 9+20.00 | 920.00 | 5.00 | 123.82 | 0.46 | 22 | 0 | 0 | 779 | 140 | 639 |
| 9+25.00 | 925.00 | 5.00 | 134.90 | 0.79 | 24 | 0 | 0 | 803 | 140 | 663 |
| 9+30.00 | 930.00 | 5.00 | 149.38 | 0.65 | 26 | 0 | 0 | 829 | 140 | 689 |
| 9+35.00 | 935.00 | 5.00 | 157.12 | 0.72 | 28 | 0 | 0 | 857 | 140 | 717 |
| 9+40.00 | 940.00 | 5.00 | 144.85 | 0.00 | 28 | 0 | 0 | 885 | 140 | 745 |
| 9+45.00 | 945.00 | 5.00 | 129.50 | 0.00 | 25 | 0 | 0 | 910 | 140 | 770 |
| 9+50.00 | 950.00 | 5.00 | 112.60 | 0.00 | 22 | 0 | 0 | 932 | 140 | 792 |
| 9+55.00 | 955.00 | 5.00 | 94.72 | 0.00 | 19 | 0 | 0 | 951 | 140 | 811 |
| 9+60.00 | 960.00 | 5.00 | 74.61 | 0.00 | 16 | 0 | 0 | 967 | 140 | 827 |
| 9+65.00 | 965.00 | 5.00 | 48.18 | 0.00 | 11 | 0 | 0 | 978 | 140 | 838 |
| 9+70.00 | 970.00 | 5.00 | 10.31 | 0.00 | 5 | 0 | 0 | 983 | 140 | 843 |
| 9+75.00 | 975.00 | 5.00 | 0.00 | 0.00 | 1 | 0 | 0 | 984 | 140 | 844 |
| 9+80.00 | 980.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 9+85.00 | 985.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 9+90.00 | 990.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 9+95.00 | 995.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+00.00 | 1000.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+05.00 | 1005.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+10.00 | 1010.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+15.00 | 1015.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+20.00 | 1020.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+25.00 | 1025.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+30.00 | 1030.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 3 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT) - ((FILL) * FILL FACTOR)] |

# CTH K

| STATION | REAL STATION | DISTANCE | AREA (SF) | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | CUT | FILL | CUT | FILL | EBS | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | | | | | 1.00 | 1.25 | |
| | | | | | NOTE 1 | NOTE 2 | | NOTE 1 | | NOTE 8 |
| 10+35.00 | 1035.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+40.00 | 1040.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+45.00 | 1045.00 | 5.00 | 0.00 | 0.00 | 0 | 0 | 0 | 984 | 140 | 844 |
| 10+50.00 | 1050.00 | 5.00 | 93.49 | 0.00 | 9 | 0 | 0 | 993 | 140 | 853 |
| 10+55.00 | 1055.00 | 5.00 | 175.65 | 0.00 | 25 | 0 | 0 | 1018 | 140 | 878 |
| 10+60.00 | 1060.00 | 5.00 | 193.33 | 0.00 | 34 | 0 | 0 | 1052 | 140 | 912 |
| 10+65.00 | 1065.00 | 5.00 | 205.16 | 0.00 | 37 | 0 | 0 | 1089 | 140 | 949 |
| 10+70.00 | 1070.00 | 5.00 | 219.14 | 0.00 | 39 | 0 | 0 | 1128 | 140 | 988 |
| 10+75.00 | 1075.00 | 5.00 | 239.33 | 0.00 | 42 | 0 | 0 | 1170 | 140 | 1030 |
| 10+80.00 | 1080.00 | 5.00 | 228.41 | 0.79 | 43 | 0 | 0 | 1213 | 140 | 1073 |
| 10+85.00 | 1085.00 | 5.00 | 218.49 | 0.34 | 41 | 0 | 0 | 1254 | 140 | 1114 |
| 10+90.00 | 1090.00 | 5.00 | 219.02 | 0.17 | 41 | 0 | 0 | 1295 | 140 | 1155 |
| 10+95.00 | 1095.00 | 5.00 | 211.55 | 0.19 | 40 | 0 | 0 | 1335 | 140 | 1195 |
| 11+00.00 | 1100.00 | 5.00 | 191.00 | 0.56 | 37 | 0 | 0 | 1372 | 140 | 1232 |
| 11+05.00 | 1105.00 | 5.00 | 174.39 | 0.60 | 34 | 0 | 0 | 1406 | 140 | 1266 |
| 11+10.00 | 1110.00 | 5.00 | 161.06 | 0.68 | 31 | 0 | 0 | 1437 | 140 | 1297 |
| 11+15.00 | 1115.00 | 5.00 | 146.92 | 0.79 | 29 | 0 | 0 | 1466 | 140 | 1326 |
| 11+20.00 | 1120.00 | 5.00 | 113.57 | 0.87 | 24 | 0 | 0 | 1490 | 140 | 1350 |
| 11+25.00 | 1125.00 | 5.00 | 153.88 | 1.04 | 25 | 0 | 0 | 1515 | 140 | 1375 |
| 11+30.00 | 1130.00 | 5.00 | 140.51 | 1.75 | 27 | 0 | 0 | 1542 | 140 | 1402 |
| 11+35.00 | 1135.00 | 5.00 | 131.46 | 3.36 | 25 | 0 | 0 | 1567 | 140 | 1427 |
| 11+36.90 | 1136.90 | 1.90 | 148.34 | 0.13 | 10 | 0 | 0 | 1577 | 140 | 1437 |
| 11+50.00 | 1150.00 | 13.10 | 144.76 | 0.00 | 71 | 0 | 0 | 1648 | 140 | 1508 |
| 12+00.00 | 1200.00 | 50.00 | 139.34 | 0.00 | 263 | 0 | 0 | 1911 | 140 | 1771 |
| 12+50.00 | 1250.00 | 50.00 | 146.53 | 0.00 | 265 | 0 | 0 | 2176 | 140 | 2036 |
| 13+00.00 | 1300.00 | 50.00 | 133.66 | 0.00 | 259 | 0 | 0 | 2435 | 140 | 2295 |
| 13+50.00 | 1350.00 | 50.00 | 97.01 | 0.34 | 214 | 0 | 0 | 2649 | 140 | 2509 |
| 14+00.00 | 1400.00 | 50.00 | 54.47 | 0.00 | 140 | 0 | 0 | 2789 | 140 | 2649 |
| 14+50.00 | 1450.00 | 50.00 | 41.88 | 0.88 | 89 | 1 | 0 | 2878 | 141 | 2737 |
| 15+00.00 | 1500.00 | 50.00 | 120.91 | 0.00 | 151 | 1 | 0 | 3029 | 143 | 2887 |
| 15+15.10 | 1515.10 | 15.10 | 0.00 | 0.00 | 34 | 0 | 0 | 3063 | 143 | 2921 |

| NOTES: | |
|---|---|
| 1 - CUT | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL |
| 2 - FILL | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME |
| 3 - MASS ORDINATE | IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT) - ((FILL) * FILL FACTOR)] |




9

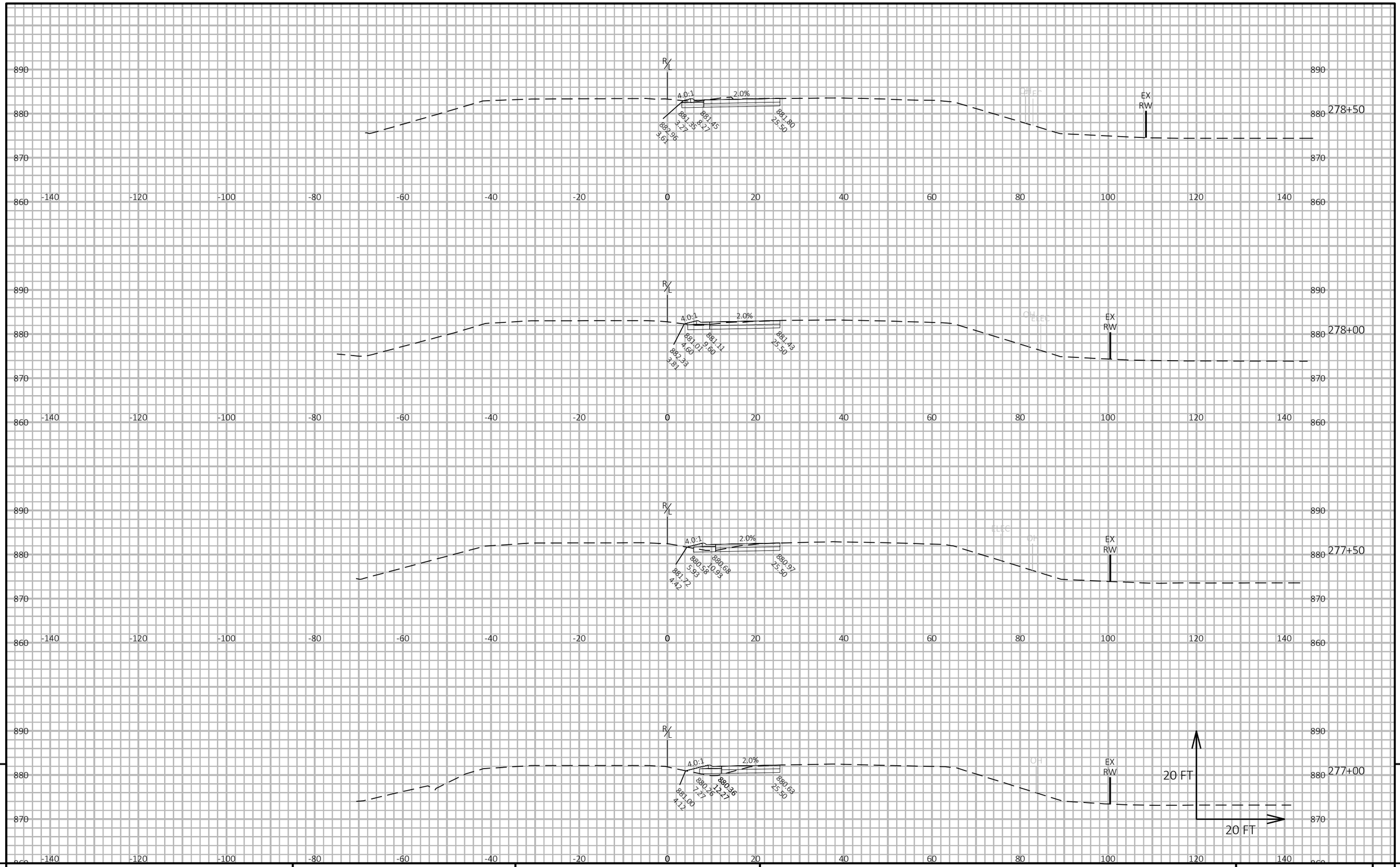
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| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH F | SHEET 231 | E |
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LAYOUT NAME - 10

PLOT DATE : 6/9/2026 2:26 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

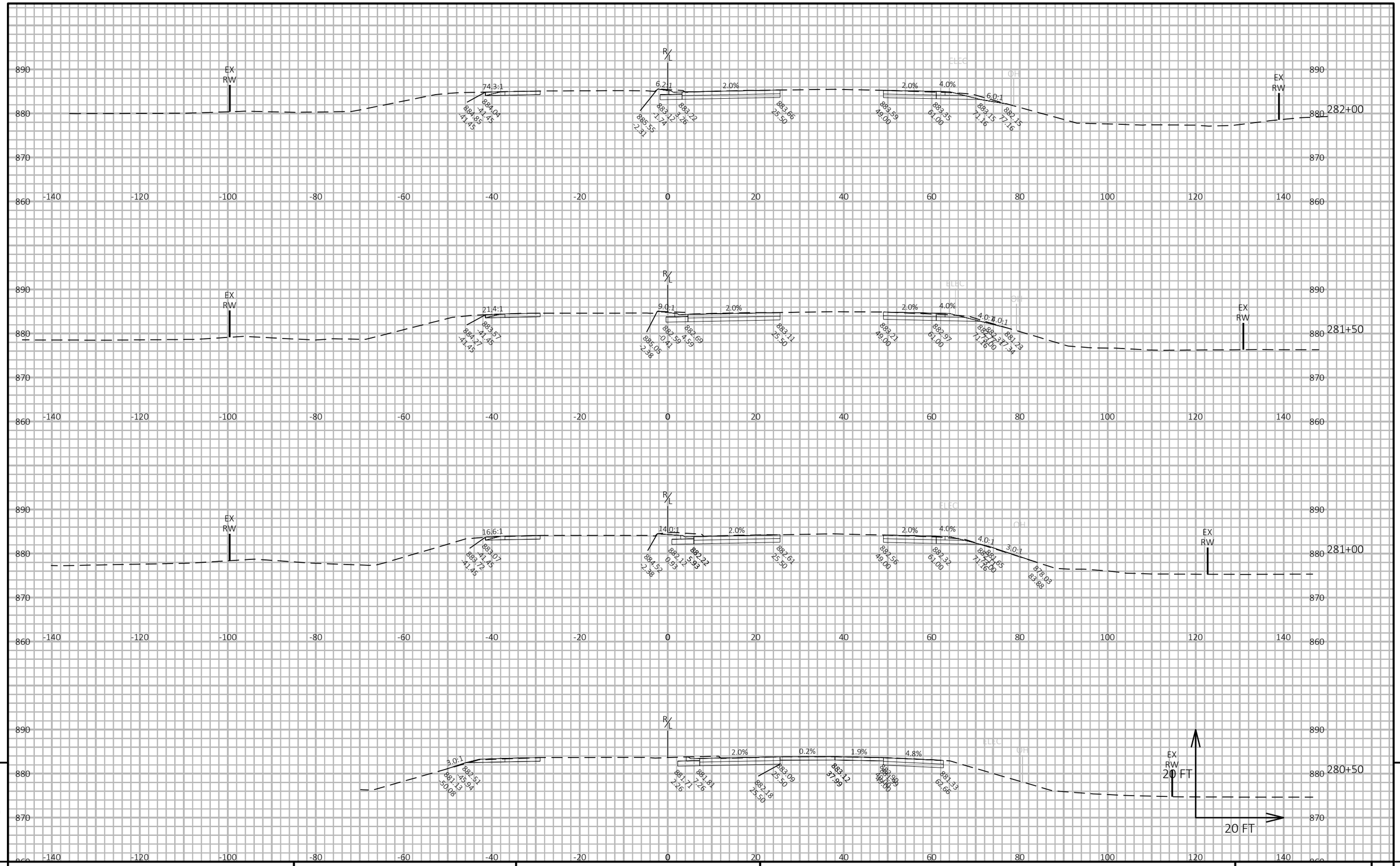



| | | | | |
|---|---|---|---|---|
| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH F | SHEET 232 E |

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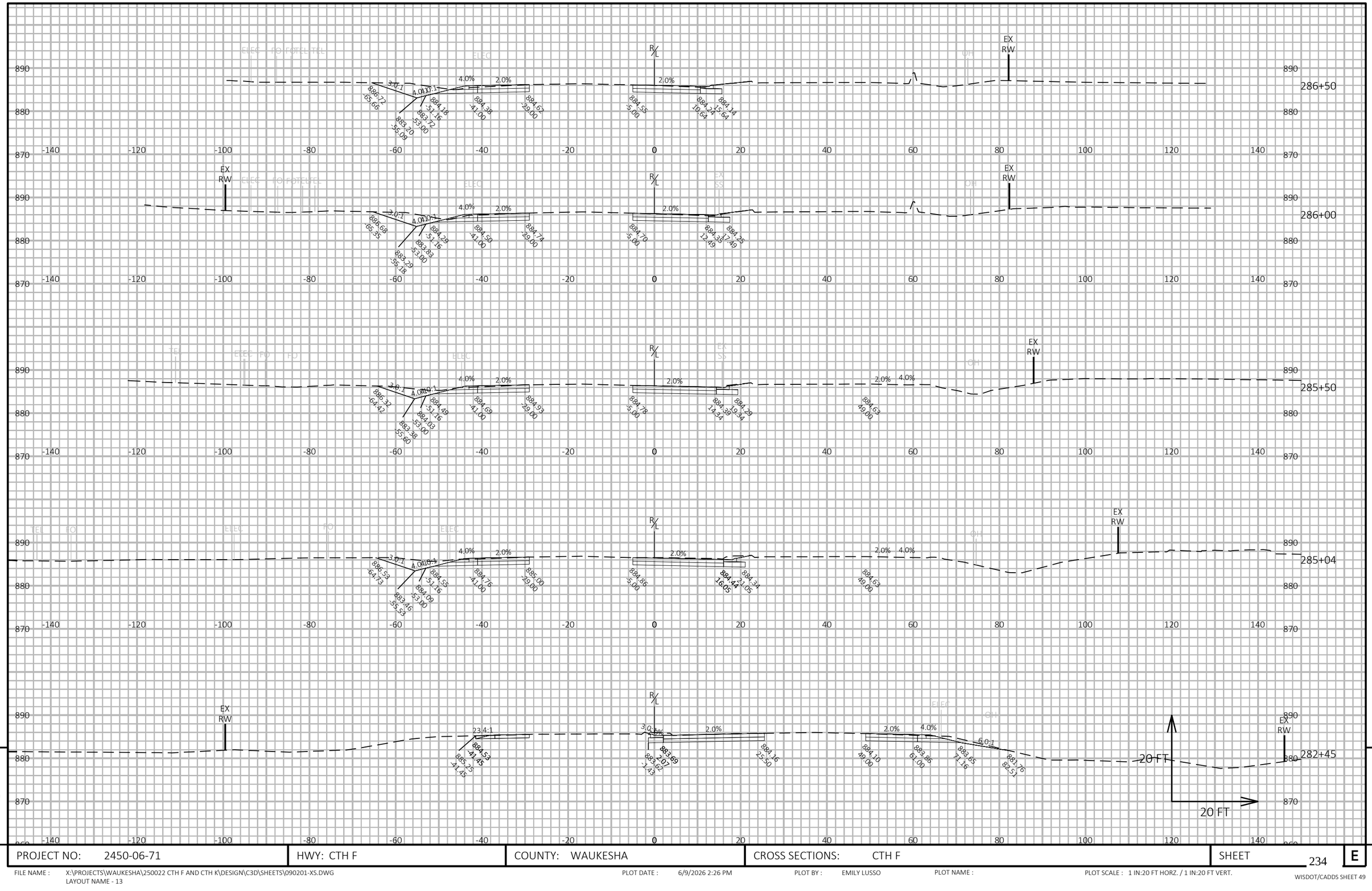
WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH F | SHEET 233 | E |
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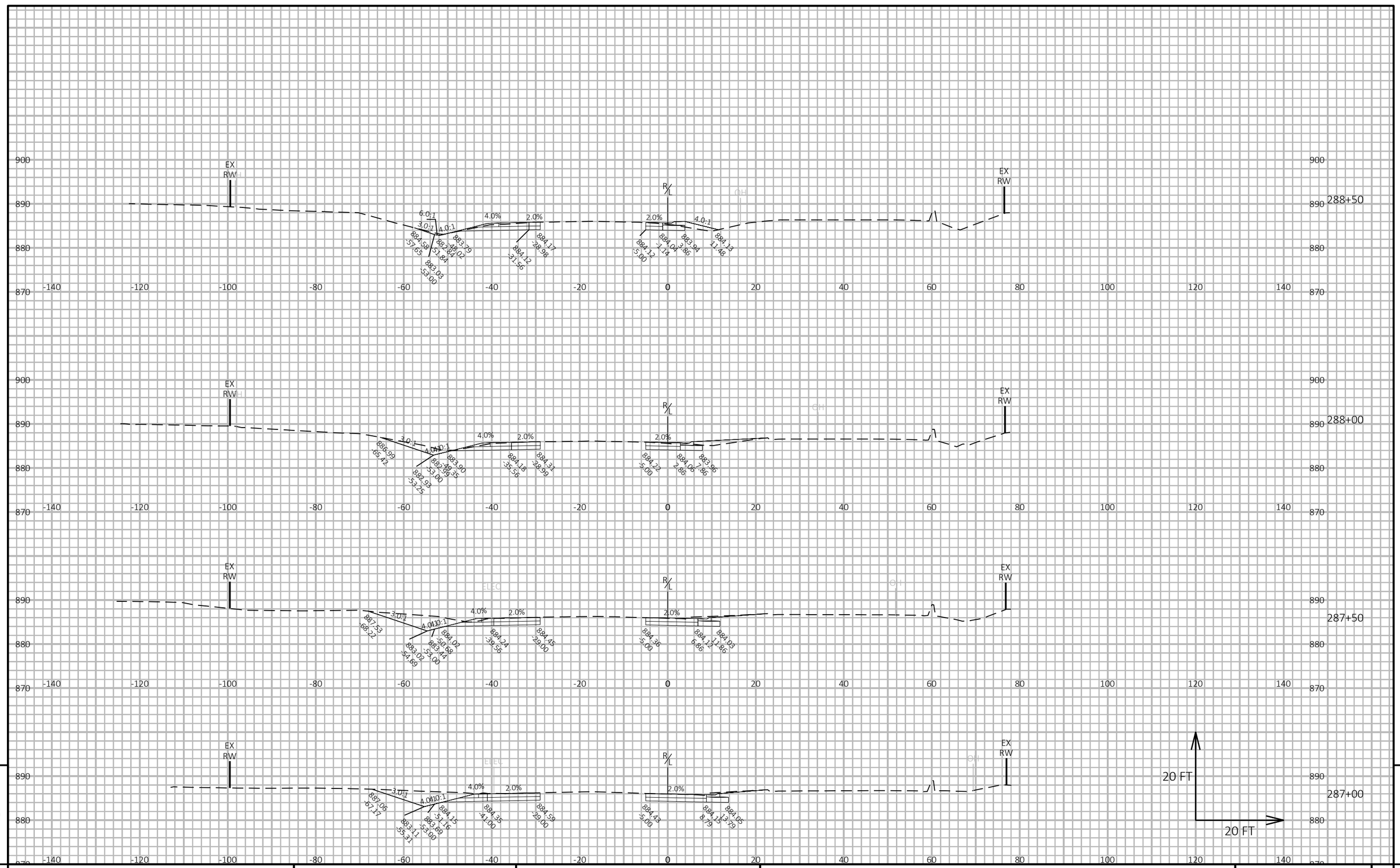



| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH F | SHEET 234 E |
|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 13

PLOT DATE : 6/9/2026 2:26 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

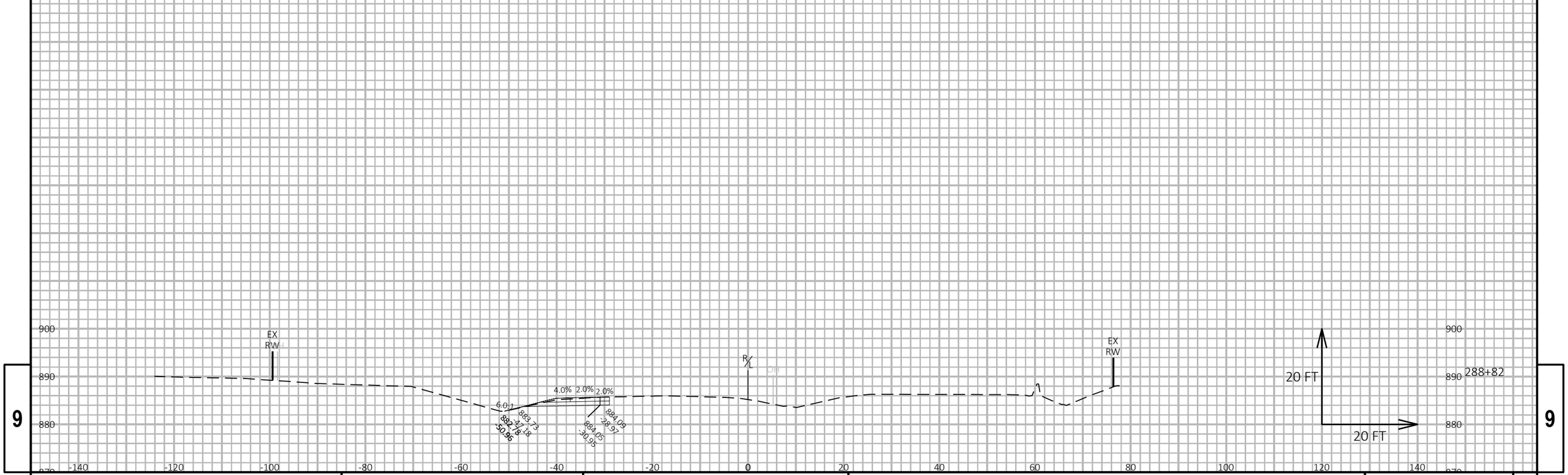
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| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH F | SHEET 235 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 14

PLOT DATE : 6/9/2026 2:26 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH F | SHEET 236 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 15

PLOT DATE : 6/9/2026 2:26 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

9

9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH K | SHEET 237 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 05

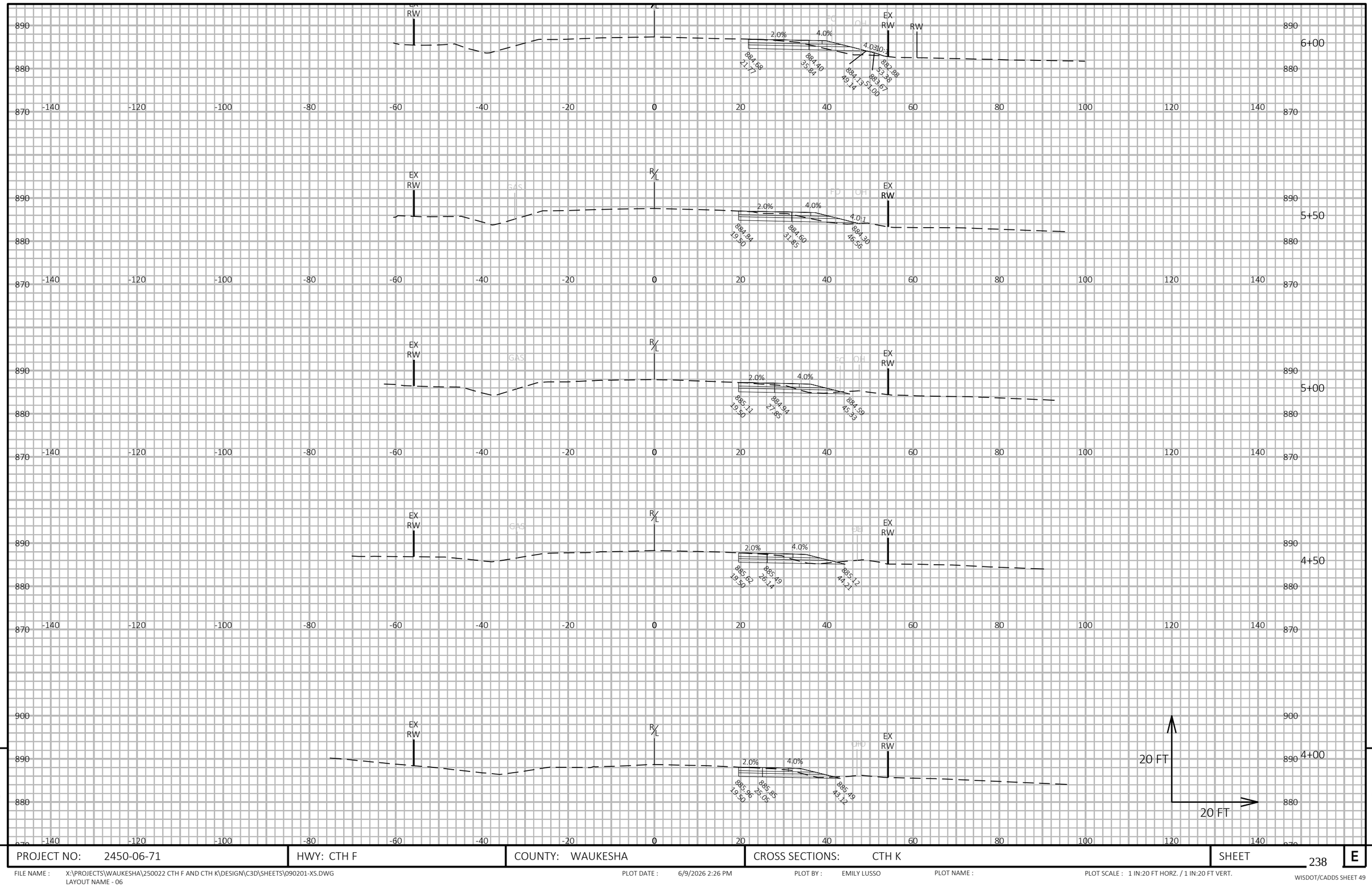
PLOT DATE : 6/9/2026 2:26 PM

PLOT BY : EMILY LUSSO

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH K | SHEET 238 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 06

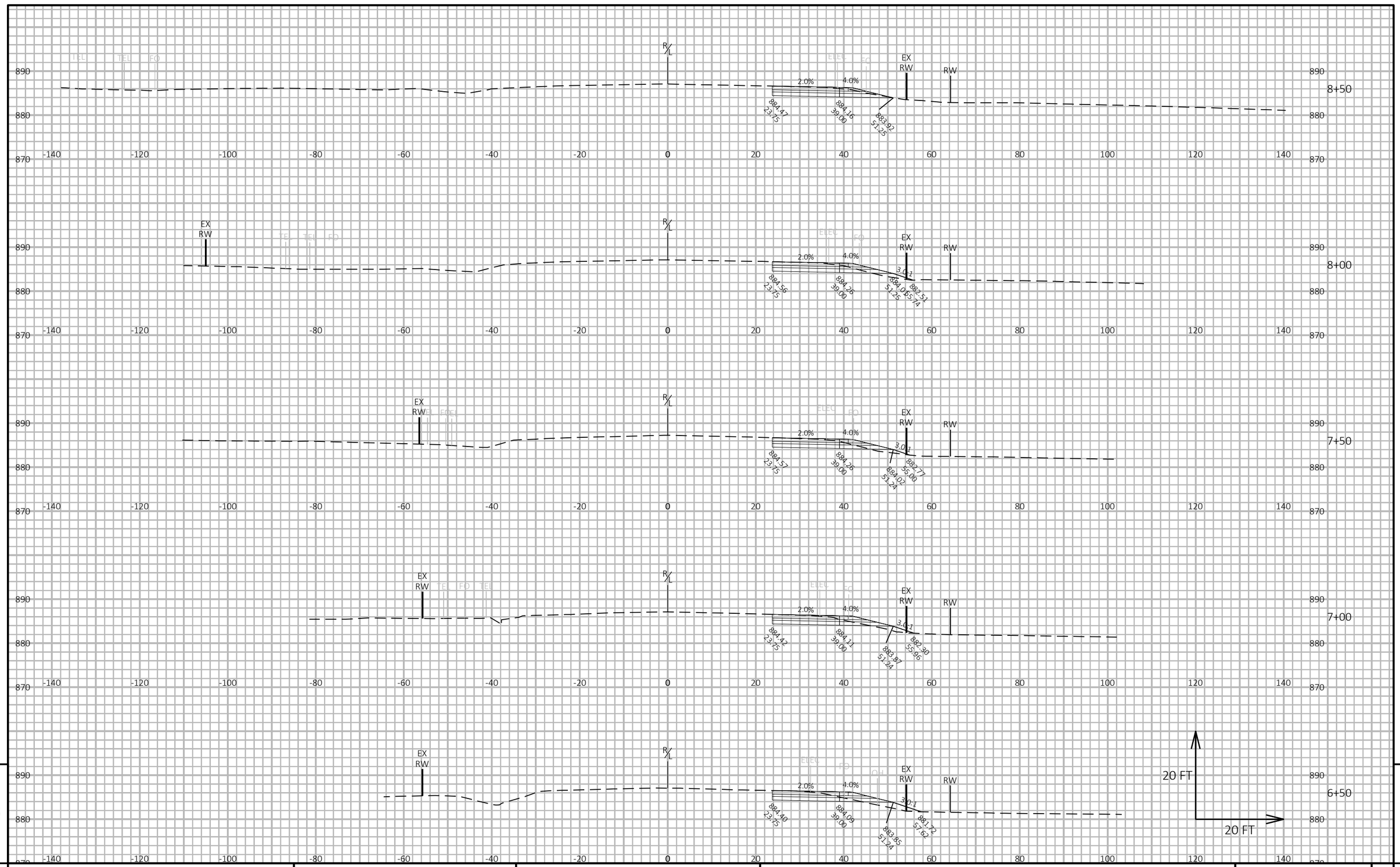
PLOT DATE : 6/9/2026 2:26 PM

PLOT BY : EMILY LUSSO

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

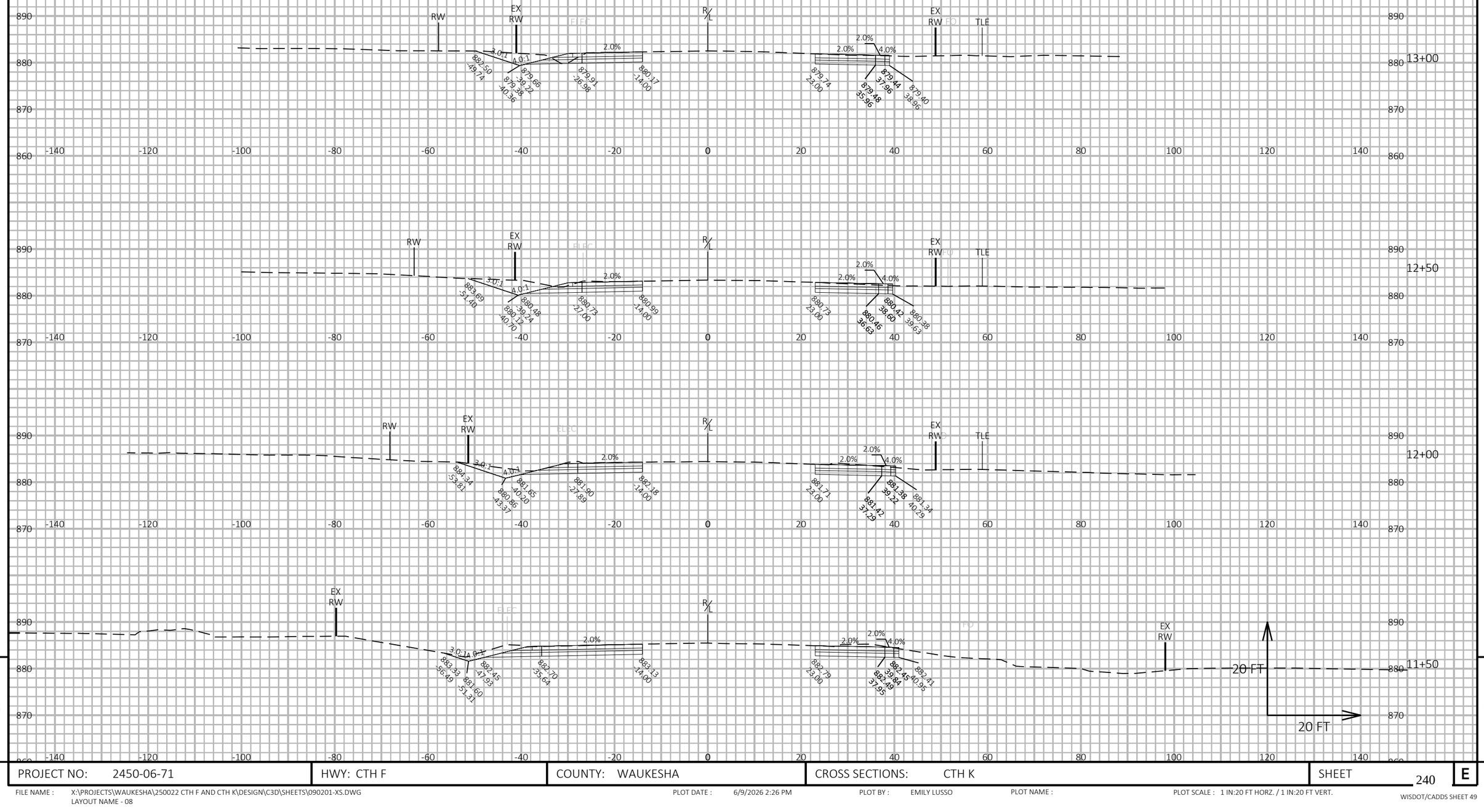
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| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH K | SHEET 239 | E |
|---|---|---|---|---|---|

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LAYOUT NAME - 07

PLOT DATE : 6/9/2026 2:26 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

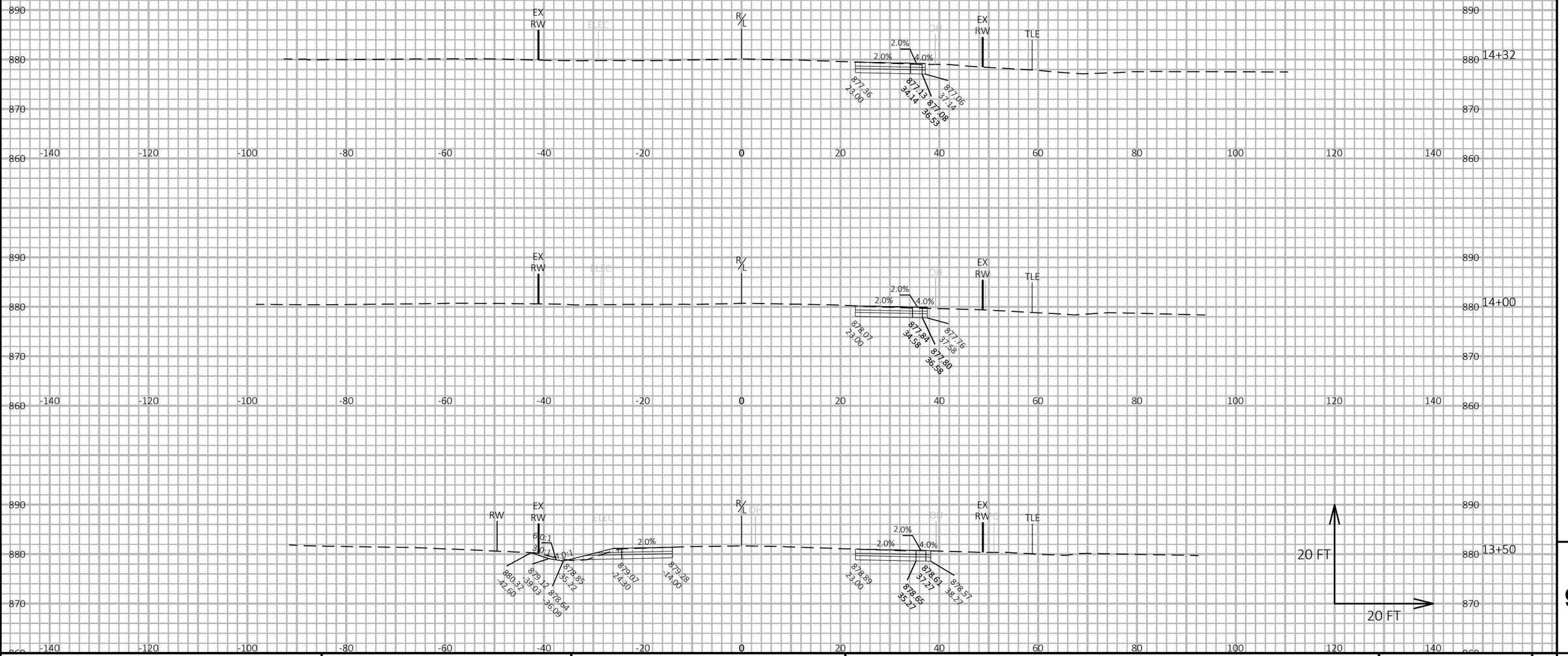



| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH K | SHEET 240 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 08

PLOT DATE : 6/9/2026 2:26 PM PLOT BY : EMILY LUSSO PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49




9

9

| PROJECT NO: 2450-06-71 | HWY: CTH F | COUNTY: WAUKESHA | CROSS SECTIONS: CTH K | SHEET 241 | E |
|---|---|---|---|---|---|

FILE NAME : X:\PROJECTS\WAUKESHA\250022 CTH F AND CTH K\DESIGN\C3D\SHEETS\090201-XS.DWG
LAYOUT NAME - 09

PLOT DATE : 6/9/2026 2:26 PM

PLOT BY : EMILY LUSSO

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

**Wisconsin Department of Transportation**

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