PROJECT ID 2984-21-71
WITH: 2984-21-72

WKE NOVEMBER 2025

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 = 154



10

DESIGN DESIGNATION

A.D.T. (2024)	=	14,700
A.D.T. (2044)	=	N/A
D.H.V.	=	N/A
D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	35 MPH
ESALS	=	N/A

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

C MILWAUKEE - N 35TH ST

INTERSECTION WITH W CENTER ST

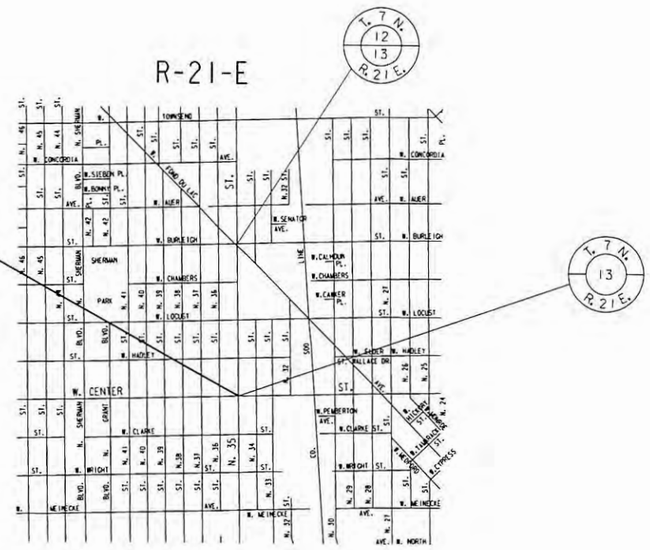
LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2984-21-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-21-71	WISC 2026031	1

N



CONVENTIONAL SYMBOLS

PLAN

COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
CORPORATE OR CITY LIMITS
PROPERTY LINE — P.L.
STANDARD BENCH MARK
EXISTING RIGHT OF WAY LINE — R/W
PROPOSED SEWER LATERAL — (SIZE)
BASE OF SURVEY LINE
CONCRETE WALK/DWY. REMOVAL
LIMITS OF CONCRETE PAVEMENT REMOVAL — X X X X X X
CATCH BASIN OR INLET — EXISTING ▒ PROPOSED ⊕

COMBUSTIBLE FLUIDS UNDER PRESSURE — CAUTION
RAILROADS
FENCE — (TYPE)
FIRE & POLICE CALL BOX
LIGHT POLE
POWER POLE
TELEPHONE OR TELEGRAPH POLE
TRAFFIC SIGNAL
TRAFFIC SIGNAL CONTROL BOX
HYDRANT
GAS OR WATER GATE VALVE
MANHOLES - SEWER ○ UTILITY (TYPE) □
TREES - EXISTING ◑ TO BE REMOVED

LAYOUT

SCALE 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI. (URBAN)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MILWAUKEE COUNTY NAD 83 (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 THE CITY OF MILWAUKEE VERTICAL DATUM TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO NORTH AMERICA VERTICAL DATUM OF 1988 ADD 580.40' TO ELEVATIONS SHOWN ON THIS PLAN.

Accepted For
City of Milwaukee

6/17/25 (Date) Commissioner of Public Works

Original Plans Prepared By

WISCONSIN
KEVIN J. MUHS
46301-6
MILWAUKEE, WI
PROFESSIONAL ENGINEER

6/17/2025 (Date) City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor CITY OF MILWAUKEE
Designer CITY OF MILWAUKEE
Project Manager GREGORY HAFEMAN
Region Examiner
Region Supervisor AMY TAETSCH

APPROVED FOR THE DEPARTMENT

DATE: 06/30/2025
(Signature)

E

COUNTY MILWAUKEE

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\TITLE.DGN

PLOT DATE:

GENERAL NOTES

1. ALL OPENINGS BELOW SUBGRADE, RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH BASE AGGREGATE DENSE, UNLESS OTHERWISE NOTED ON THE PLAN.

2. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH TOPSOIL, THEN SODDED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WITHIN 5 CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

3. TRANSVERSE JOINTS IN THE CONCRETE WALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

5. FOR ANY EXCAVATION OF SIX FEET OR MORE IN THE CITY OF MILWAUKEE, THE CONTRACTOR, WHEN REQUESTING A UTILITY LOCATE TICKET FROM DIGGER'S HOTLINE, SHALL SPECIFICALLY ASK FOR THE LOCATION TICKET TO INCLUDE THE MARKING OF ALL THE EXISTING SEWER FACILITIES WITHIN THE LIMITS REQUESTED.

6. CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC), AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

7. ALL DIMENSIONS ARE FROM THE FACE OF CURB TO THE CENTER OF THE MARKING UNLESS OTHERWISE NOTED.

8. ALL RADII IN THE PLANS ARE REFERENCED TO THE FACE OF CURB.

9. TRAFFIC CONTROL DEVICES SHOWN AT SUGGESTED LOCATIONS.

10. EROSION CONTROL DEVICES ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL DEVICES SHALL BE MANTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE DEVICE IS NO LONGER REQUIRED.

11. NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

12. THESE PLANS SHOW UTILITY FACILITIES EXISTING AT THE TIME OF THE ORIGINAL SURVEY IN JUNE OF 2022. CONTRACTOR IS ENCOURAGED TO CONTACT CITY OF MILWAUKEE PLANNING PERMIT SECTION AT (414) 286-2487 TO IDENTIFY ANY UTILITY FACILITIES INSTALLED AFTER THIS DATE.

STANDARD ABBREVIATIONS

ASPH.	- ASPHALT
B.M.	- BENCH MARK
CTR.	- CENTER
COMB.	- COMBINED
CONC.	- CONCRETE
C.W.	- CONCRETE WALK
COR.	- CORNER
C	- CURB
DOT	- DEPARTMENT OF TRANSPORTATION
ELEV.	- ELEVATION
ENT.	- ENTRANCE
EXIST.	- EXISTING
F	- FLANGE
G	- GUTTER, OR GAS
HYD.	- HYDRANT
LT.	- LEFT
MMSD	- MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
NB	- NORTHBOUND
PG/L.	- PROFILE GRADE LINE
P/L.	- PROPERTY LINE
R/L.	- REFERENCE LINE
R OR RAD.	- RADIUS
RET.	- RETAINING
RT.	- RIGHT
R/W	- RIGHT OF WAY
SB	- SOUTHBOUND
STA	- STATION
TEL	- AMERITECH
TES	- TRAFFIC ENGINEERING, AND ELECTRICAL SERVICES
T/L	- TRANSIT LINE
WEP	- WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
CONSTRUCTION DETAILS
EROSION CONTROL
STORM SEWER AND UTILITIES
SIGNING
LIGHTING
TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL AND CONSTRUCTION STAGING
ALIGNMENT

UTILITY CONTACTS

AT&T WISCONSIN-COMMUNICATION LINE
JAY C. BULANEK
2005 PEWAUKEE RD.
WAUKESHA, WI 54188
PHONE: 414-491-2855
EMAIL: JB5175@ATT.COM

CITY OF MILWAUKEE, CUC
KAREN ROGNEY
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-3243
EMAIL: KROGNEY@MILWAUKEE.GOV

CITY OF MILWAUKEE, SEWERS
ZAFAR YOUSUF
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-2467
EMAIL:ZYOUSU@MILWAUKEE.GOV

CITY OF MILWAUKEE, WATER WORKS
JOSHUA IWEN
841 N. BROADWAY, ROOM 409
MILWAUKEE, WI 53202
PHONE: 414-286-6301
CELL: 414-708-2695
EMAIL: JOSHUA.IWEN@MILWAUKEE.GOV

EVERSTREAM- COMMUNCATION LINE
ABIGAIL STEIN
324 E WISCONSIN AVE. SUITE 730
BROOKFIELD, WI 53202
PHONE: 262-442-9427
EMAIL: ASTEIN@EVERSTREAM.NET

WE ENERGIES - ELECTRIC
RAMON ARAUJO
W 140N9100 LILLY ROAD
MENOMONEE FALLS, WI 53051
PHONE: 262-365-6419
EMAIL: RAMON.ARAUJO@WE-ENERGIES.COM

WE ENERGIES - GAS
JEANNETTE SCHULTZ
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 262-365-6421
EMAIL: JEANNETTE.SCHULTZ@WE-ENERGIES.COM

OTHER CONTACTS

CITY OF MILWAUKEE, STREET LIGHTING
ENG-KIE LEE
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-2174
EMAIL: ELEE@MILWAUKEE.GOV

CITY OF MILWAUKEE, TRAFFIC SIGNALS
SCOTT REINBACHER
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-3232
EMAIL: SREINB@MILWAUKEE.GOV

CITY OF MILWAUKEE, UTILITY COORDINATOR
MOHAMMAD ABULUGHOD (North Side)
841 N. BROADWAY, ROOM 710
MILWAUKEE, WI 53202
PHONE: 414-708-3085
EMAIL: MABULU@MILWAUKEE.GOV

MILWAUKEE COUNTY TRANSIT SYSTEM
ARMOND SENSABAUGH
1942 N. 17TH STREET
MILWAUKEE, WI 53205
PHONE: 414-343-1728
EMAIL: asensabaugh@mcts.org

DAVID LOCHER
TRANSPORTATION MANAGER (BUS STOPS)
1942 N 17th S
MILWAUKEE, WI 53205
PHONE: 414-343-1727
EMAIL: DLOCHER@MCTS.ORG

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
MICHAEL LEE
260 W. SEEBOTH AVE.
MILWAUKEE, WI 53204
EMAIL: MLEE@MMSD.COM

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
ROB MERRY
W239 N1812 ROCKWOOD DRIVE
P.O. BOX 1607
WAUKESHA, WI 53187-1607
PHONE: 262-953-4289
CELL: 920-912-1036
EMAIL: RMERRY@SEWRPC.ORG

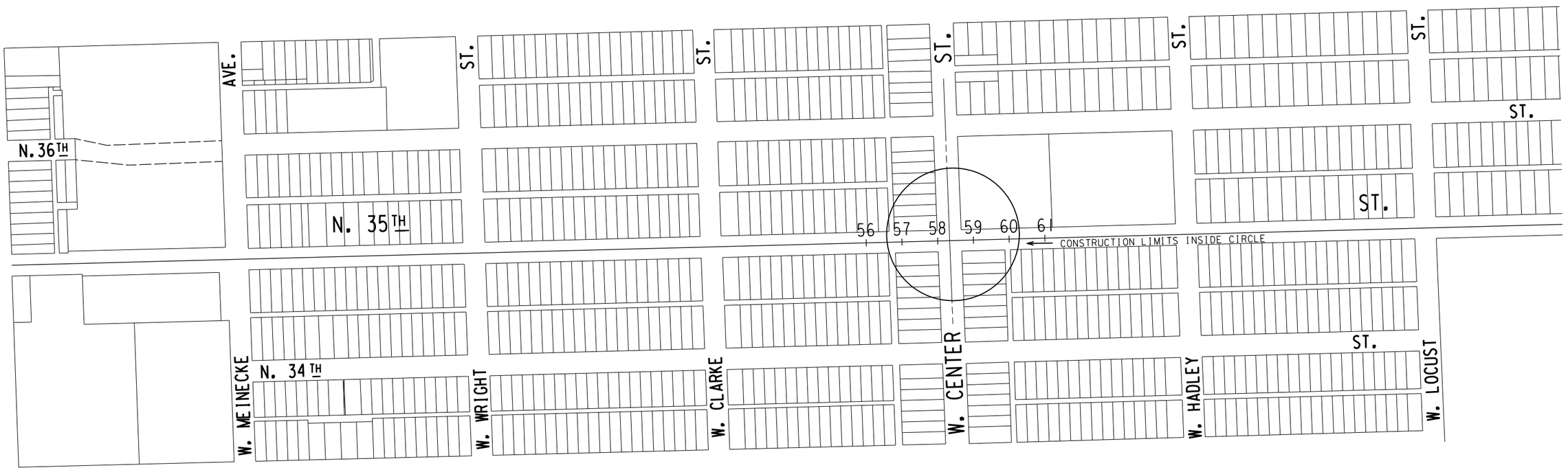
ANDY TRAEGER
W239 N1812 ROCKWOOD DRIVE
WAUKESHA, WI 53187
PHONE: 262-547-6721
EMAIL: ATRAEGER@SEWRPC.ORG

WISCONSIN DEPT. OF NATURAL RESOURCES
RYAN PAPPAS
2300 N. DR. MARTIN LUTHER KING, JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-750-7495
EMAIL: RYAN.PAPPAS@WISCONSIN.GOV

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

2

N

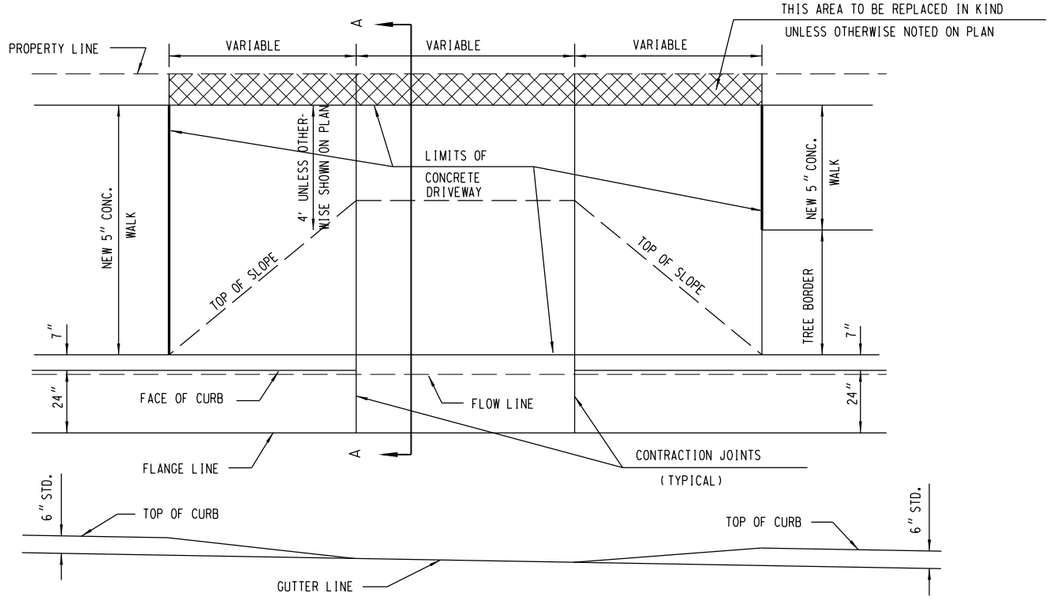


PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SCALE FEET 0' 300'	SHEET NO: 4	E

REVISED DATE: 09-12-2023 BY PSF

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2



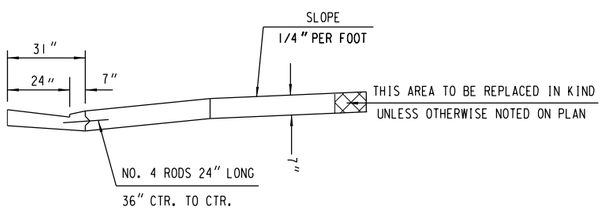
HEAVY LINE INDICATES 1/2" EXPANSION JOINT MATERIAL

DRIVEWAY CONSTRUCTION NOTES

CONSTRUCT DRIVEWAY TO PROPERTY LINE ONLY WHEN MATCHING EXISTING DRIVEWAY AND INSTALL 1/2" EXPANSION JOINT MATERIAL BETWEEN NEW AND OLD DRIVEWAY, PLACE DUMMY JOINT AT CENTER OF DRIVEWAY AND AT ALL JOINTS IN THE GUTTER

CONCRETE DRIVEWAY D8

(D8)

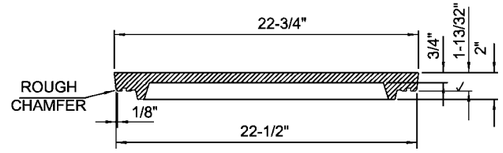


SECTION A-A

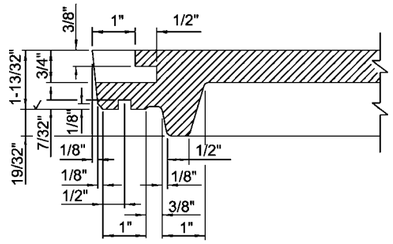
PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SCALE FEET	SHEET NO: 5	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\CONDETAIL.DGN

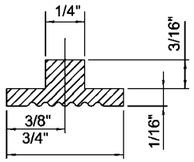
REVISED DATE: 09-15-2022 BY DB

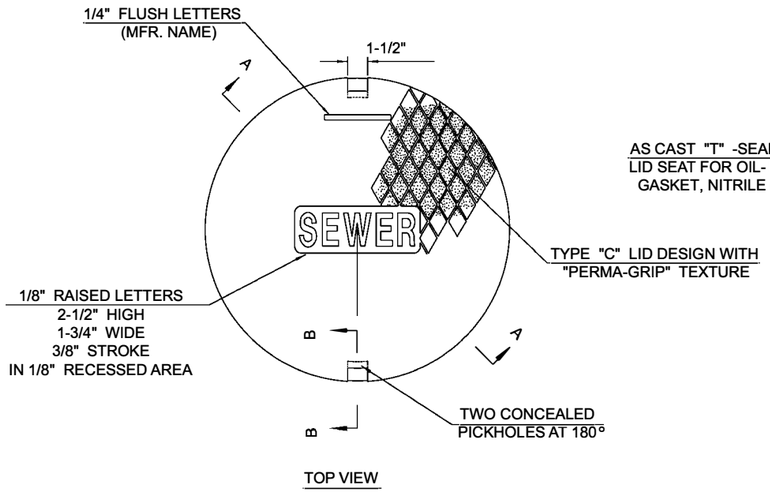


SECTION A-A

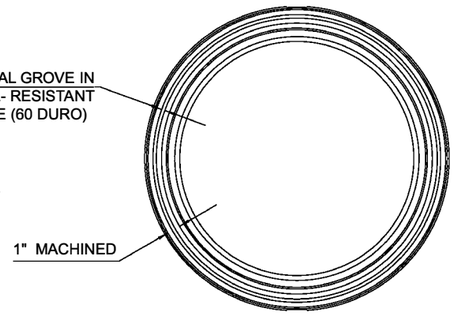


SECTION B-B





TOP VIEW



BOTTOM VIEW

MANHOLE COVER - TYPE MS 58-A

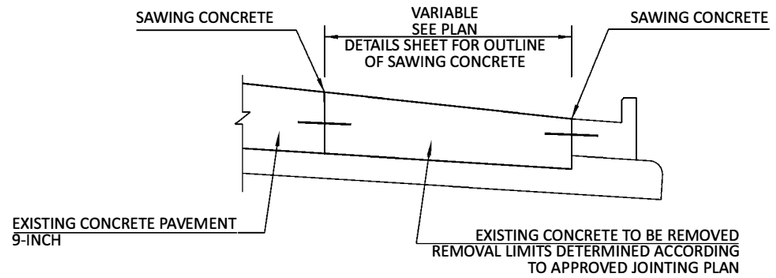
LID - 107 LBS.

NOTES

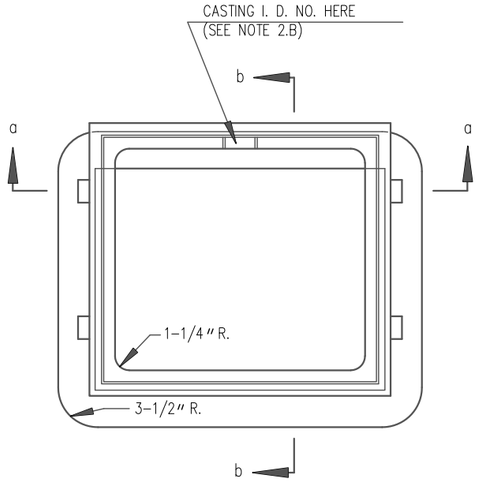
ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8" HAVING A DIGIT OR LETTER HEIGHT OF ONE INCH ON LOWER FACE OF LID:

1. THE INITIALS OR MONOGRAM OF THE FOUNDRY.
2. THE CONTRACT NUMBER YEAR MADE.
3. THE CASTING INDENTIFICATION NUMBER.
4. THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

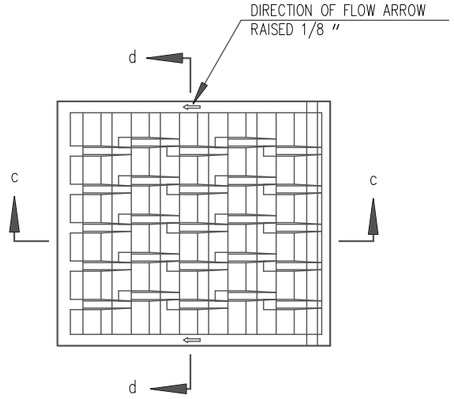
ALL EXTERIOR EDGES SHALL BE GROUND.



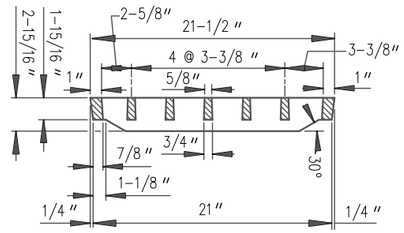
CONCRETE PAVEMENT REMOVAL DETAIL



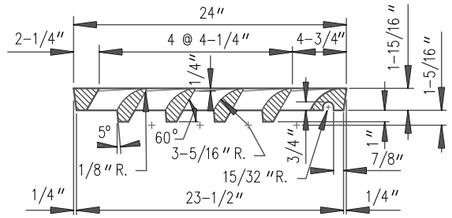
FRAME



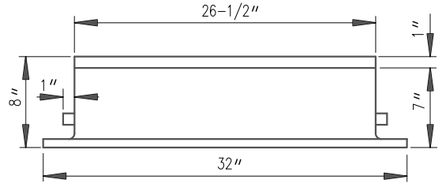
GRATE

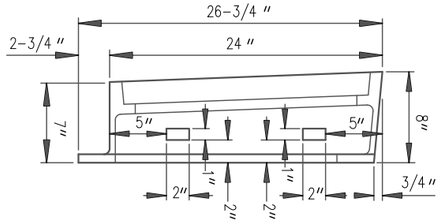


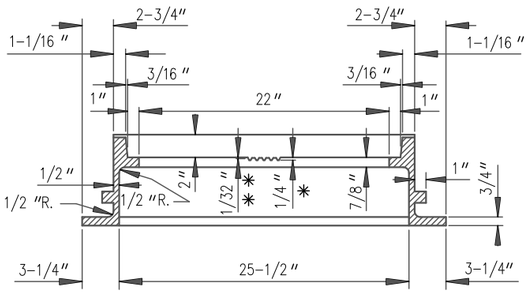
SECTION d-d



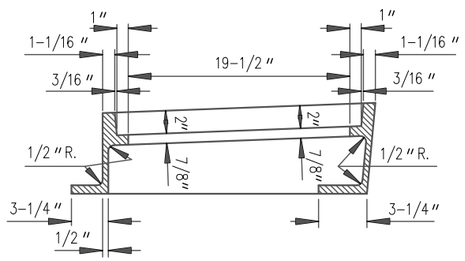
SECTION c-c







SECTION a-a



SECTION b-b

✱ DEPRESSION FOR LETTERS

✱ ✱ CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

INLET COVER – TYPE MS 57

LID-145 LBS., FRAME-204 LBS.

GENERAL NOTES

1. ALL EDGES ARE TO BE GROUND
2. ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8-inch

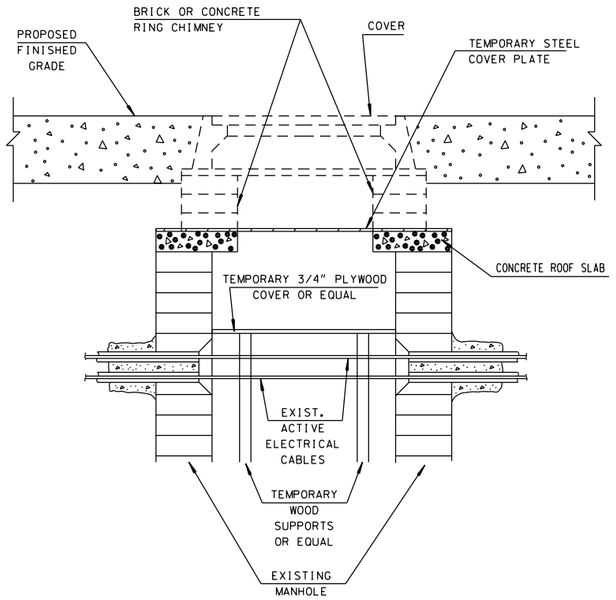
ON THE FRAME

a) ON THE UPPER FACE OF THE FLANGE IN 1-INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

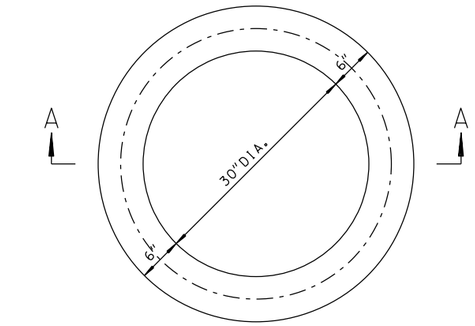
b) ON THE SEAT OF THE FRAME IN 1-INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (51).

ON THE GRATE

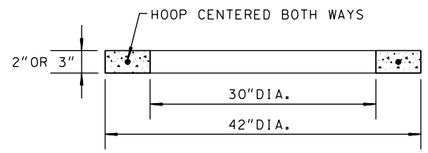
c) ON THE UPPER SIDE OF THE GRATE IN 1-INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.



BLOCK OR PRECAST MANHOLE



PLAN



SECTION A-A

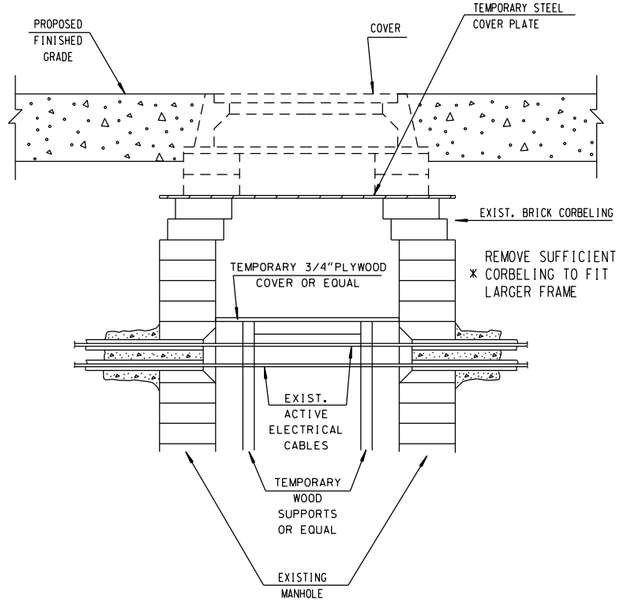
THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

CONCRETE ADJUSTING RING

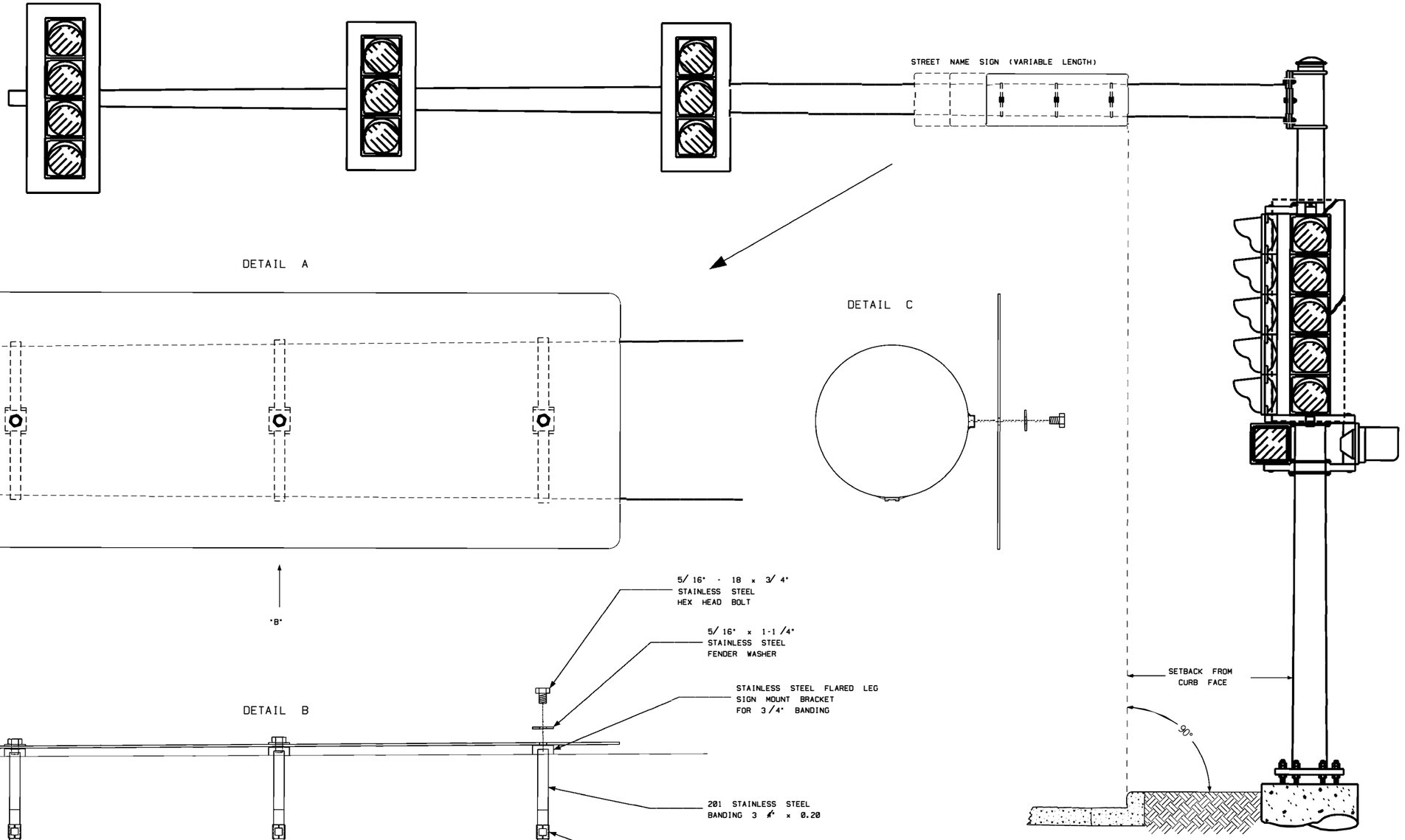


BRICK ROUND MANHOLE

2

PROJECT NO: 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT DETAILS	SHEET 8	E

2



STREET NAME SIGN INSTALLATION

PROJECT NO: 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAIL	SHEET 9	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of Center-2984-21-01\design\ConDetail.dgn PLOT DATE : 27-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : NTS

WISDOT/CADDS SHEET XX

2

N

STREET

NORTH 35TH STREET

4' CW 5 RIS WOOD HAND RAIL

4' CW 5 RIS WOOD HAND RAIL

4' CW 6 RIS WOOD HAND RAIL

WOOD HAND RAIL

CLP

BREAK

327-1536 30 #2643

327-1537 30 #2647

327-1539-100-6 60 #2655

327-1540 30 #2661

327-1501 52 #2667

327-1502 68 #3501

308-1172 255 #3516

308-1171 345 #3515

15' CONCRETE ALLEY

3 RIS 3' CW

3 RIS 6' CW

3 RIS 3' CW

GAS METER

3.6' 'ENT

WOOD HAND RAILS

UMH

8'

58+13.8 59.6' LT

58+51.8 57.5' LT

58+51.8 20.6' LT

57+75.6 20.0' LT

58+14.0 20.4' LT

58+90.4 20.0' LT

2022

56 +50 57 +50 58 +50 59 +50 60 +50 61

WEST LINE SE 1/4 SEC. 13-7-21

57+72.1 19.8' RT

58+14.6 20.0' RT

59+86.8 20.0' RT

58+52.3 20.0' RT

58+52.7 57.5' RT

58+14.9 74.0' RT

TOP CONC CURB

REMOVE CONC. BASE

ASPHALT LOT

ASPHALT LOT

CHAIN LINK FENCE

#2640 30 326-1430-100

#2646 30 326-1432-100

#2654 30 326-1434-100

#2658 30 326-1435

#2672 120 326-1401-100

#3430 120 309-0860

#2720 30 309-0861

#2724 30 309-0862

#2732 60 309-0864-100-7

#2736 30 309-0865

WEST CENTER STREET

CURB

CUT

CUT

AELEP

CLP

30"

SCRUB TREES & BUSHES

ASPHALT LOT

BURIED ASPHALT

3 RIS 6' CW

TRUE ASP EDGE

4 RIS 6' CW

+27.0 4' CW 5 RIS

+34.0 3' CW 3 RIS

+52.7 1 RIS +60.2

AELEP

ASPHALT CONCRETE

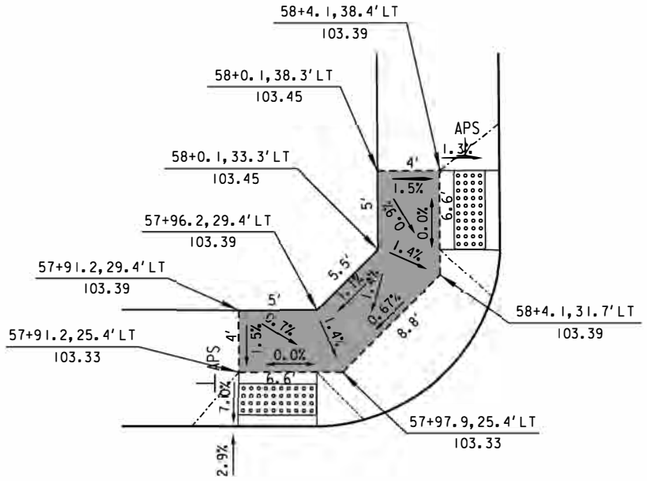
LEGEND

- (SA) SAW ASPHALT
- (SC) SAW CONCRETE
- REMOVE TREES
- REMOVING SIDEWALK
- REMOVING CURB AND GUTTER
- REMOVING CONCRETE PAVEMENT
- REMOVING ASPHALTIC SURFACE

PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN- W. CENTER ST.	SCALE FEET 0' 40'	SHEET NO: 10	E

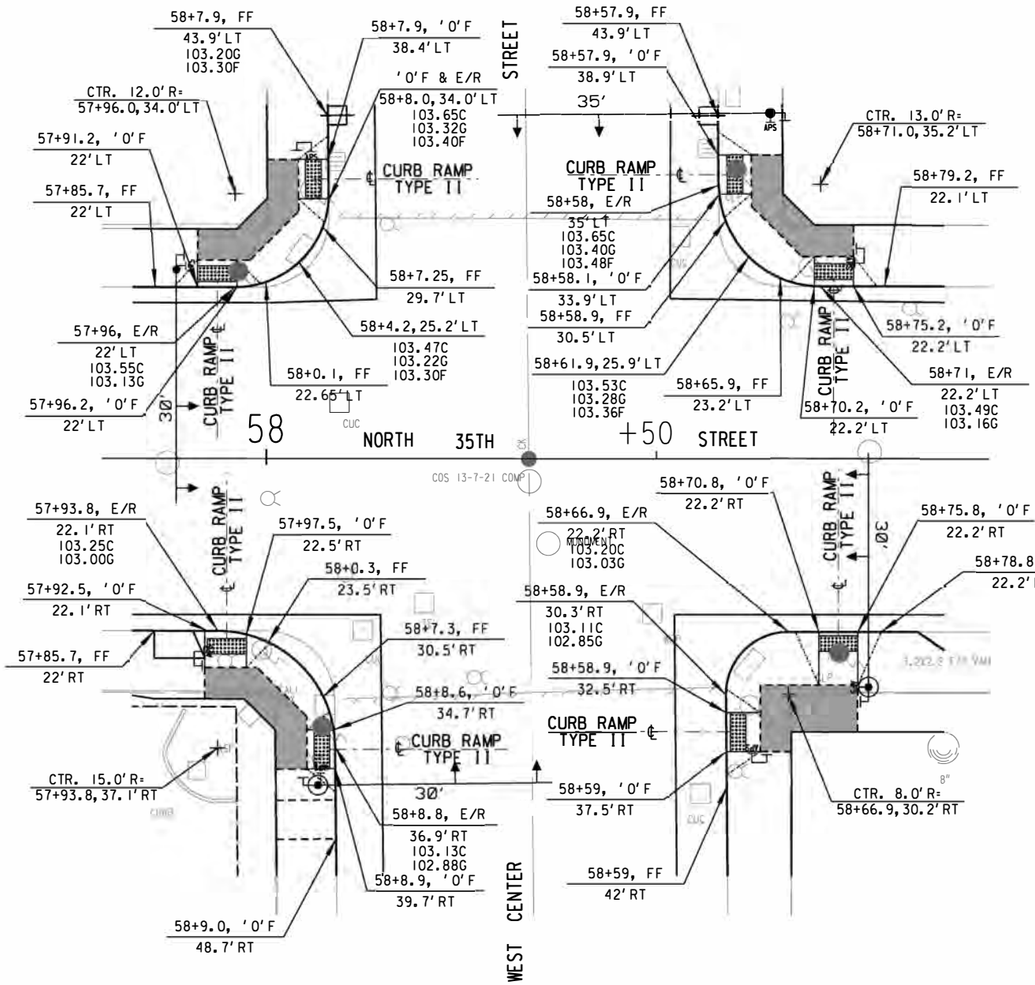
FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\REMOVAL.DGN

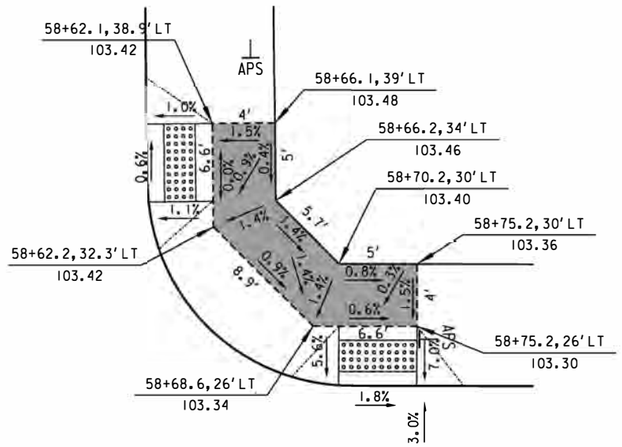
REVISED DATE: 04-07-2025 BY SLB



INSET "A"

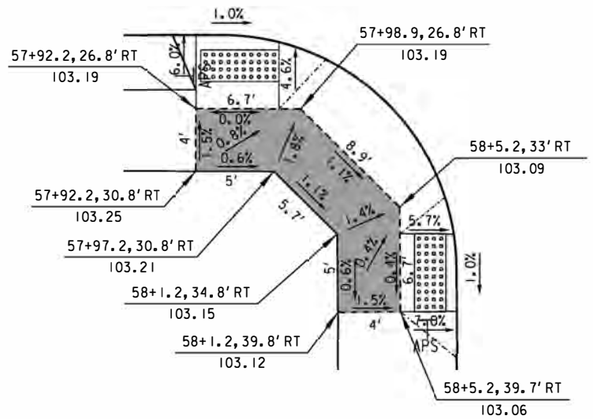
SCALE: 1" = 10'





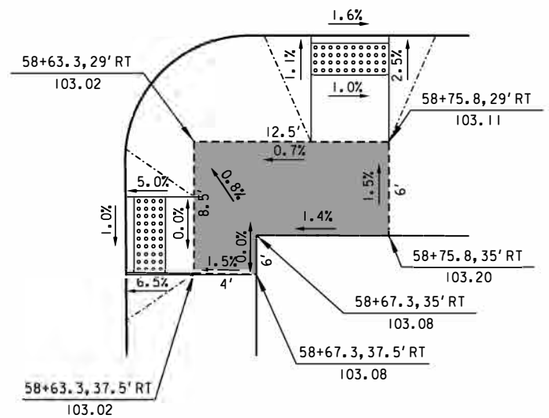
INSET "B"

SCALE: 1" = 10'



INSET "C"

SCALE: 1" = 10'



INSET "D"

SCALE: 1" = 10'

LEGEND

- MONOTUBE BASE, POLE, 15'-45' ARM
- TRAFFIC SIGNAL HEAD
- APS — ACCESSIBLE PEDESTRIAN SIGNAL (PUSH BUTTON)

NOTES:

1. CONTRACTOR TO FIELD VERIFY ELEVATIONS, GRADES, SLOPES, LENGTHS, AND MATCH POINTS PRIOR TO CURB RAMP CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONDITIONS WITHIN THE CONDITIONS OF THE STANDARD DETAIL DRAWINGS.
3. SOLID LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE EXACT JOINT LOCATIONS.
4. THE CROSS SLOPE OF THE GUTTER SHALL BE 4% UNLESS OTHERWISE SHOWN.
5. THE MAXIMUM GRADE BREAK BETWEEN THE GUTTER PAN AND CURB RAMP SHALL BE 11%

LANDING AREA

DETECTABLE WARNING FIELD

PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	CURB RAMP DETAIL - W. CENTER ST.	SCALE FEET 0' 20'	SHEET NO: 11	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\RAMPS - CENTER.DGN

REVISED DATE: 01-28-2025 BY SLB

2

66'
7.6' 50' 8.4'

4' CW
5 RIS
WOOD HAND RAIL

4' CW
5 RIS
WOOD HAND RAIL
4' CW
6 RIS
WOOD HAND RAIL
WOOD HAND RAIL
4' CW
6 RIS
WOOD HAND RAIL

CLP

BENCHMARK
C.O.M. STANDARD #174
NE CORNER OF
N. 36TH ST. & W. CENTER ST.
NW BOLT ELEV. = 106.144

N

BREAK

P.L.

327-1536
30
#2643

327-1537
30
#2647

327-1539-100-6
60
#2655

327-1540
30
#2661

327-1501
52
#2667

327-150
68
#3501

308-1172
255
#3516

308-1171
345
#3515

STREET

15' CONCRETE ALLEY

BENCHMARK
HYD @ SW CORNER OF
N. 35TH ST. & W. CENTER ST.
NW BOLT ELEV. = 105.69

NORTH 35TH STREET

2 RIS 3' CW
3 RIS 6' CW
3 RIS 3.5' CW

GAS METER
UMH
3.6' VENT
WOOD HAND RAILS

59.5'LT
59.5'LT
103.20G
103.30F
44.0'LT
112
SW5
CG22
AS2
50.0'LT
57.5'LT
103.68C
103.35G
103.43F
44.0'LT
113
CG22
AS2
SW5

103.49C
103.16G
+71.0

103.65C
103.40G
103.48F
35.0'LT

103.65C
103.32G
103.40F
34.0'LT
+75.5
+14.1
+51.8
+90.3
103.55C
103.13G
+96.0
CG31
CUC
SW5

2017 X4 BM

2022

CLP

SEC WISDOT PID 721077

56 +50 57 +50 58 +50 59 +50 60 +50 61

WEST LINE SE 1/4 SEC. 13-7-21

COS 13-721 COMP

MONUMENT

103.23C
103.06G
+99.7
+72.2
CG31
+14.6
SW5
AS4
+SP
CURB
103.22
43.8' RT
103.16
48.8' RT
AS2
CG22
D8
5'
6'
74.0' RT
74.0' RT
CUT

103.11C
102.78G
+83.5
103.13C
102.63G
+90.5
+51.8
+83.5
35.0' RT
27.0' RT
CG31
CP9
+86.8
103.50C
103.00G
+74.3
SW5
SW6
SL
CG22
AS2
57.4' RT
6.5'
103.00C
102.50G
102.58F
27' RT
115
103.17C
102.67G
+25
103.32
+25
103.34C
102.84G
+50
103.50
+50
103.65
+77.1
103.15
+0
103.28
+90.5

CHAIN LINK FENCE
2 RIS
2.5' CW
2 RIS
2 RIS
2.5' CW
2 RIS
CLP
GASP
TOP CONC CURB
ASPHALT LOT
ASPHALT LOT
TEL
CUC
AELEP
WEP
3.2X2 E/D VAULT
20' X3'

#2640
30
326-1430-100

#2646
30
326-1432-100

#2654
30
326-1434-100

#2658
30
326-1435

#2672
120
326-1401-100

#3430
120
309-0860

#2720
30
309-0861

#2724
30
309-0862

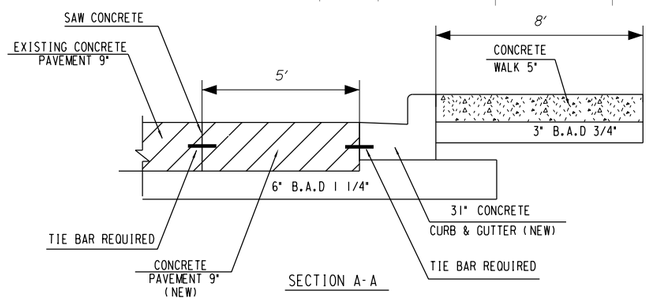
#2732
60
309-0864-100-7

#2736
30
309-0865

WEST CENTER
CURB
CUT
SCRUB TREES & BUSHES
ASPHALT LOT
BURIED ASPHALT
CUT
3 RIS 6' CW
TRUE ASP EDGE
+27.0
8"
+34.0
4' CW 5 RIS
3' CW 3 RIS

LEGEND

- (AS2) ASPHALTIC SURFACE 2-INCH
- (CG22) CONC. CURB & GUTTER 22-INCH
- (CG31) CONC. CURB & GUTTER 31-INCH
- (CP9) CONCRETE PAVEMENT 9-INCH (NON-DOWELED)
- (D8) CONCRETE DRIVEWAY 8-INCH
- (SL) SOD LAWN (WITH 4" TOPSOIL)
- (SW5) CONCRETE SIDEWALK 5-INCH

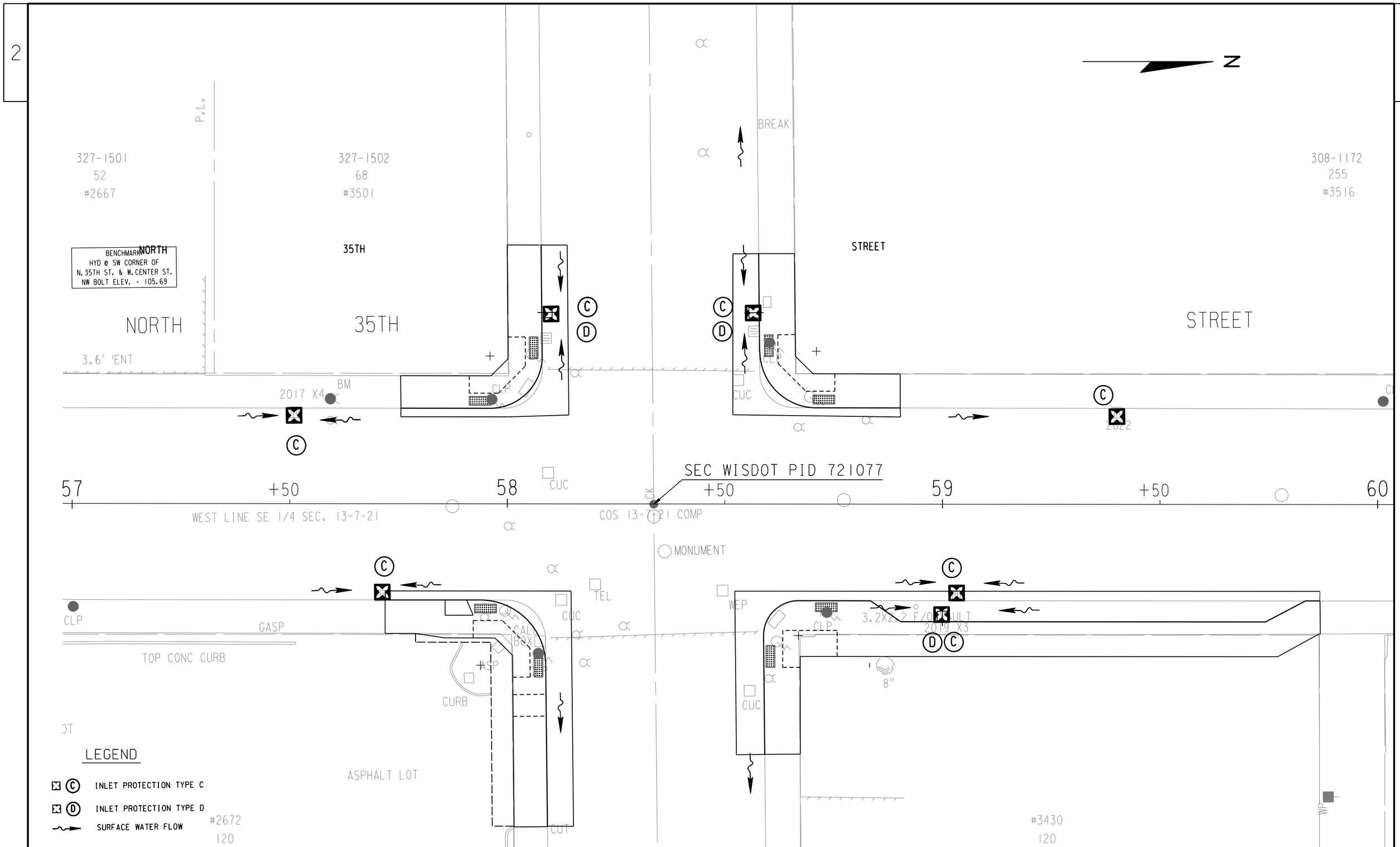


SECTION A-A

PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS- W. CENTER ST.	SCALE FEET 0' 40'	SHEET NO: 12	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\PLAN -CENTER.DGN

REVISED DATE: 02-04-2025 BY AA



PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL PLAN- CENTER ST.	SCALE FEET 0' 20'	SHEET NO: 13	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\EROSION CONTROL.DGN

REVISED DATE: - - BY

2

N

NORTH 35TH STREET

WEST CENTER STREET

4' CW
5 RIS
WOOD HAND RAIL

4' CW
5 RIS
WOOD HAND RAIL

4' CW
6 RIS
WOOD HAND RAIL

WOOD HAND RAIL
4' CW
6 RIS
WOOD HAND RAIL

BENCHMARK:
C.G.M. STANDARD #174
NE CORNER OF
N. 36TH ST. & W. CENTER ST.
NW BOLT ELEV. = 106.164

BENCHMARK:
HYD @ SW CORNER OF
N. 35TH ST. & W. CENTER ST.
NW BOLT ELEV. = 105.69

15' CONCRETE ALLEY

BREAK

327-1536 30 #2643
327-1537 30 #2647
327-1539-100-6 60 #2655
327-1540 30 #2661
327-1501 52 #2667
327-1502 68 #3501
308-1172 255 #3516
308-1171 345 #3515

2 RIS 3' CW
3 RIS 6' CW
3 RIS 3.5' CW
WOOD HAND RAILS
GAS METER
UMH
3.6' 'ENT
2017 X4 BM
CLP
2022
CUC
112
112A
113
113A
114
115

56 +50 57 +50 58 +50 59 +50 60 +50 61

WEST LINE SE 1/4 SEC. 13-7-21
COS 13-72 COMP
MONUMENT
CL

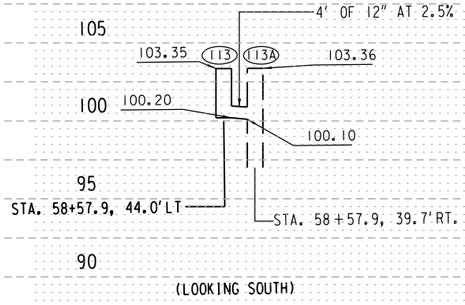
CHAIN LINK FENCE
2 RIS
2.5' CW 2 RIS
GASP
TOP CONC CURB
CURB
ASPHALT LOT
11.66'
3.2KV 2 FAULT 2019 X3
8"
12.76'

#2640 30 326-1430-100
#2646 30 326-1432-100
#2654 30 326-1434-100
#2658 30 326-1435
#2672 120 326-1401-100
#3430 120 309-0860
#2720 30 309-0861
#2724 30 309-0862
#2732 60 309-0864-100-7
#2736 30 309-0865

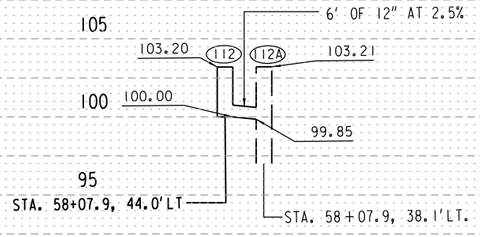
SCRUB TREES & BUSHES
ASPHALT LOT
BURIED ASPHALT
3 RIS 6' CW
TRUE ASP EDGE
4 RIS 6' CW
CUT
AELEP
+27.0 4' CW 5 RIS
+34.0 3' CW 3 RIS
+52.7 1 RIS
+60.2
ASPHALT

PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN- W. CENTER ST.	SCALE FEET 0' 40'	SHEET NO: 14	E

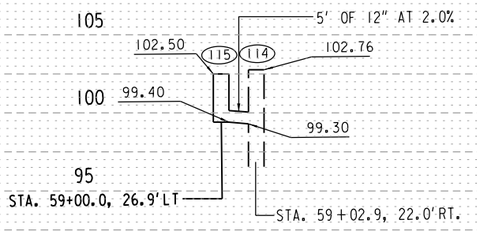
REVISED DATE: 05-02-2025 BY EMC



(LOOKING SOUTH)



(LOOKING SOUTH)



(LOOKING SOUTH)

PROJECT NO. 2984-21-71	HWY: N. 35TH STREET	COUNTY MILWAUKEE	STORM SEWER PROFILES-W. CENTER ST.	SCALE FEET	SHEET NO: 15	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\DESIGN\UTILITY - W CENTER.DGN

REVISED DATE: 05-01-2025 BY EMC

2

1-1

W Center St

M1-94H
72" X 18"

ST.

1-2

N 35th St

M1-94H
48" X 18"

N

N. 35TH ST.

+50 58 +50 59 +50

W. CENTER

8"

N 35th St

M1-94H
48" X 18"

1-4

W Center St

M1-94H
72" X 18"

1-3

PROJECT NO: 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	PERMANENT SIGN PLAN	SCALE FEET 0 20	SHEET 16	E

2

STREET LIGHTING GENERAL NOTES:

1 PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

2 THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

3 STREET LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

4 ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY STREET LIGHTING ENGINEERING.

5 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

6 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

7 LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW STREET LIGHTING, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

8 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 12 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

9 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE) IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

10 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

11 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

12 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

13 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.

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

15 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

16 PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

18 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

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

20 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE STREET LIGHTING ENGINEER.

2

STREET LIGHTING GENERAL NOTES:

21 MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT CATCH BASINS: 4-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

22 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES.
HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED.
COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

23 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 3 FT. TO 4 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

24 TYPICAL CONDUIT INSTALLATION FROM THE PULL BOX TO A DIRECT BURIED STREET LIGHT POLE IS AS FOLLOWS:
USE A NYLON LIQUIDTIGHT CONNECTOR (UL APPROVED) TO CONNECT THE 1 1/2-INCH LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT LFNC-B (UL APPROVED) TO THE PULL BOX AND CONNECT TO STREET LIGHT POLE BY STUBBING UP A MINIMUM OF 6 INCHES OF THE LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC-B) INTO THE CABLE SLOT.

25 ALL CONDUITS AND JUNCTION BOXES EMBEDDED IN STRUCTURE SHALL BE PAID UNDER STRUCTURE PAY ITEMS. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EMBEDDED CONDUITS.

26 AT EVERY BRIDGE JOINT, EXPANSION/DEFLECTION FITTINGS MUST BE USED TO PREVENT DAMAGE TO CONDUIT AND LIGHTING CIRCUITS. THIS ITEM IS INCIDENTAL TO THE CONDUIT BID ITEM, AND SHALL BE PAID UNDER STRUCTURE PAY ITEMS.

27 THE SUPPORT CHANNELS FOR INSTALLATION OF CONDUITS, LUMINAIRES, JUNCTION BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL UNISTRUT P1000 SERIES OR APPROVED EQUAL, CHANNELS SHALL BE SLOTTED OR PERFORATED.

28 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

29 PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

30 PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

31 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE. INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.

32 CONDUCTOR COLORS: 240/480, 1 PHASE - BLACK (HOT) /WHITE (NEUTRAL) // RED (HOT) /GRAY (NEUTRAL) / GREEN (GROUND)

33 INSTALL COMMON GROUND CONDUCTOR IN CONDUIT WHERE MULTIPLE BRANCH CIRCUITS CONDUCTORS ARE INSTALLED IN SAME CONDUIT AND SPLICE THE GROUND CONDUCTOR WITH TAP CONNECTOR IN PULLBOX.

34 PROVIDE MINIMUM WIRES / CONDUCTOR(S) SLACK AS NOTED BELOW:
PULL BOXES: SEE DETAIL 142
- CONNECTED WIRES TO LIGHT POLE IN PULL BOX MUST BE EXTENDED MINIMUM 3 FT. BEYOND TOP OF PULL BOX
- UNCONNECTED WIRES THAT BY PASS THROUGH PULL BOX MUST HAVE A MINIMUM OF 6 FT. SLACK COIL LEFT INSIDE PULL BOX

EMBEDDED JUNCTION BOXES IN PARAPIT WALL :
- CONNECTED WIRES IN JUNCTION BOX EXTEND MINIMUM 2 FT. BEYOND TOP OF JUNCTION BOX
- UNCONNECTED WIRES IN JUNCTION BOX LEAVE MINIMUM OF 4 FT. SLACK COIL IN JUNCTION BOX

DISTRIBUTION CENTER/LOAD CENTER: EXTEND 10-FT.
BREAK AWAY TRANSFORMER BASE: EXTEND 2-FT.

35 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

36 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.

37 ON ALL NEW STREET LIGHT POLES AND MONOTUBES WITH ATTACHED STREET LIGHTING, A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: lhickm REVISION DATE: 22-JUL-2025 14:13
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAY.1-2025

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 17	E

STREET LIGHTING GENERAL NOTES:

38 ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

39 REQUIRED MINIMUM CLEARANCES FOR THE INSTALLATION OF NEW LIGHT POLES FROM THE FOLLOWING:
1.) TREE TRUNK 15 FT. CLEAR, 2.) DRIVEWAY CURB END FLARE 6 FT. CLEAR, 3.) FIRE HYDRANT 5 FT. CLEAR,
4.) CATCH BASIN CENTER LINE TO NEAREST EDGE OF POLE 4 FT. CLEAR,
5.) GAS, WATER, AND COMMUNICATION LINES 3 FT. CLEAR,
A POLE CAN BE PLACE AT THE END RADIUS AT CORNERS, BUT NEVER IN THE RADIUS IN A CORNER,
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

40 ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

41 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES,
AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY
REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - NEAL KARWEIK (OFFICE 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

42 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT
AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH
CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE
ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - NEAL KARWEIK (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

43 CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS FOR ALL WORK BEING DONE DETAILING THE FINAL PLACEMENT OF
CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE (.PDF FORMAT)
COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN)
PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR
INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

44 MUST VERIFY WITH STREET LIGHTING SPECIFICATIONS IF CONTRACTOR IS TO DELIVER OR NOT THE
FOLLOWING REMOVED STREET LIGHTING MATERIALS:
-ALUMINUM AND WOOD POLES -LUMINAIRE BRACKET ARMS
-LUMINAIRES -BREAKAWAY TRANSFORMER PEDESTALS
-WIRING PEDESTALS (GREEN IN COLOR)
TO CITY OF MILWAUKEE STREET LIGHTING YARD AT 1540 W. CANAL ST.
CALL RICO LOPEZ AT 414-286-5983 (CANAL OFFICE) OR 414-286-6123 (DPW FIELD OFFICE) OR
DISPATCHER AT 414-286-5944 - THREE (3) WORKING DAYS BEFORE TO COORDINATE DELIVERY OF MATERIALS

45 CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE POLES, BASES, AND ABANDON CONDUIT AND WIRING.

46 CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH
THE SPECIAL PROVISIONS., UNLESS NOTED OTHERWISE.

47 ONLY WHEN THE CITY OF MILWAUKEE IS FURNISHING MATERIALS FOR A PROJECT THE CONTRACTOR IS
RESPONSIBLE TO CONTACT THE STREET LIGHTING SHOP YARD CONTACT PERSON
FOUR (4) WORKING DAYS BEFORE, AND WILL NEED TO PROVIDE THE EXACT QUANTITY OF MATERIALS NEEDED.
THE ADVANCE NOTICE WILL ALLOW THE SHOP TO GATHER THE REQUEST ITEMS FOR THE CONTRACTOR
TO PICK UP AND SIGN FOR TAKING POSSESSION OF THE MATERIALS.

48 THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MATERIALS THAT THEY TAKE POSSESSION OF AND
FOR THE ANY RETURNING OF ANY UNUSED MATERIALS BACK TO THE SHOP IN GOOD CONDITION.
IF ANY MATERIALS COME BACK DAMAGED OR BROKEN THE CONTRACTOR WILL BE RESPONSIBLE FOR
REPLACING THE BROKEN OR DAMAGED ITEMS.

49 STREET LIGHTING SHOP YARD CONTACT PERSON:
NEAL KARWEIK 414-286-5943 (OFFICE) 414-708-4245 (CELL)
ALL THE MATERIALS MUST BE EITHER PICKED OR DROPPED OFF ALL AT ONE TIME.
THE STREET LIGHTING SHOP YARD HOURS FOR PICKING UP MATERIALS IS FROM 8AM TO 2PM:
MONDAY THROUGH FRIDAY.

50 CONTRACTOR MUST BE OUT OF THE SHOP YARD BY 2PM NO LATER.

STREET LIGHTING GENERAL NOTES:

AS-BUILT GUIDELINES:

2

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND
GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO
CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS.
THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING
TO CMM STANDARDS.

UPON PROJECT COMPLETION, FOLLOW THE WISDOT REQUIREMENTS PER CMM 165.12 AS-BUILT PLANS, THE PROJECT
ENGINEER AND/OR ELECTRICAL CONTRACTOR SHALL SUBMIT AN ELECTRONIC AS-BUILT PLAN. ANY CHANGES FROM THE AS-LET
PLAN THAT WERE BUILT INTO THE PROJECT SHOULD BE RECORDED IN RED USING ADOBE ACROBAT PROFESSIONAL
OR EQUIVALENT SOFTWARE. DO NOT SCAN FIELD NOTES TO CREATE THE DIGITAL AS-BUILT PLAN.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE
CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM
SIMILARLY TO THE ORIGINAL DRAWING SHEET.
FOR EXAMPLE:
REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE
AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF
ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION
AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION:
AS-BUILT DRAWING
SUPERVISOR:
PROJECT MANAGER:
CONTRACTOR LEADER:
CONTRACTOR COMAPNY:
WORK STARTED:
WORK COMPLETED:

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL
OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED.
DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY
BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3').
  ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")
- SHOW LOCATION AND ELEVATIONS ON CONDUIT AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH
ALL OTHER REQUIRED AS-BUILT INFORMATION.

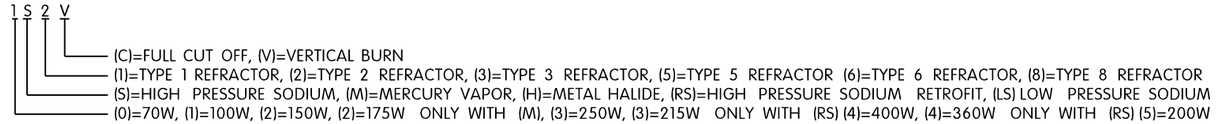
BY MAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
841 NORTH BROADWAY, ROOM 701
MILWAUKEE, WISCONSIN 53202

BY EMAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
PKELTN@MILWAUKEE.GOV

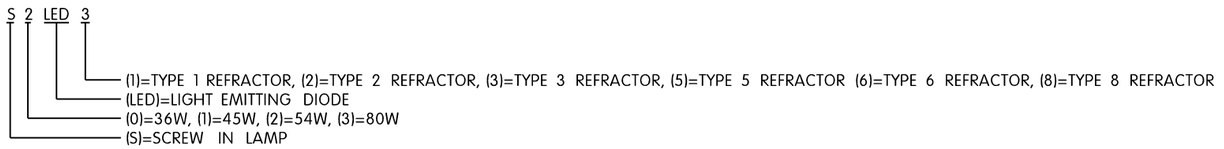
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: lhickm REVISION DATE: 22-JUL-2025 14:14
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAY.1-2025

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 18	E

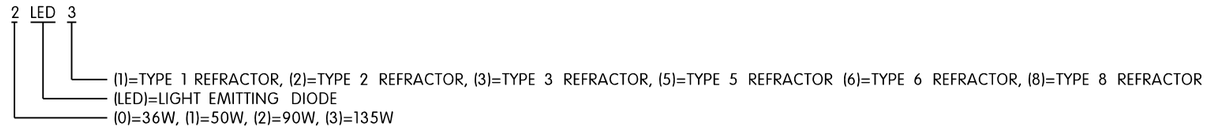
NON-LED LUMINAIRE DESCRIPTION BREAKDOWN



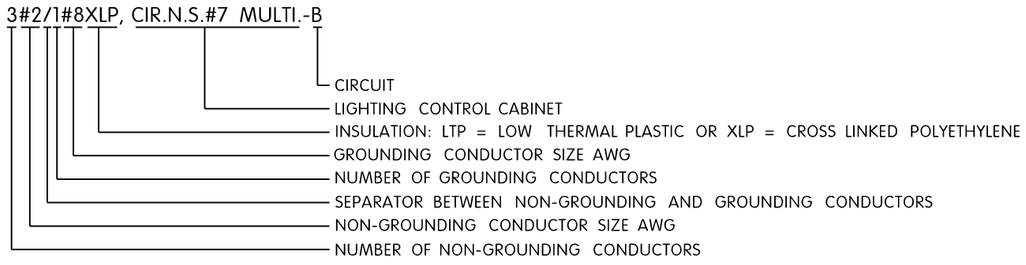
SCREW-IN LAMP LED LUMINAIRE DESCRIPTION BREAKDOWN (FOR DECORATIVE FIXTURES)



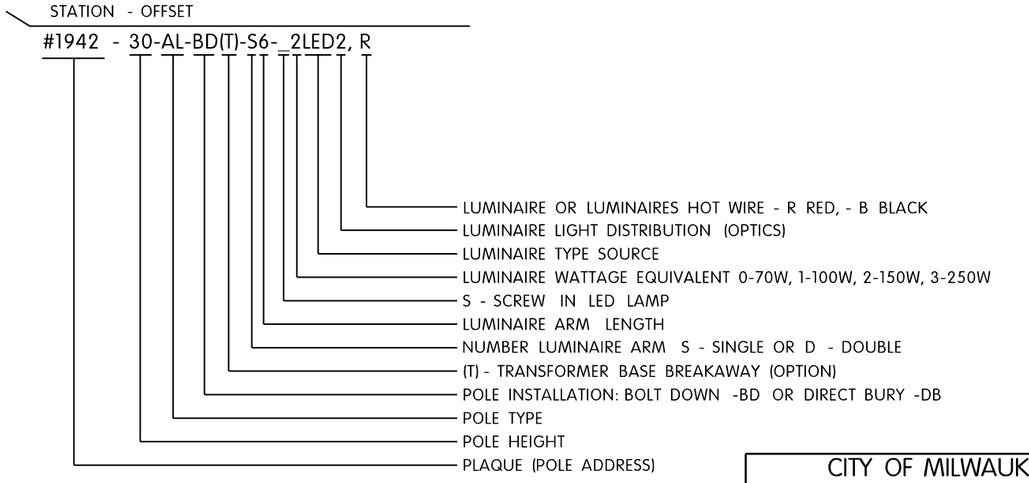
LED LUMINAIRE DESCRIPTION BREAKDOWN (COBRA STYLE FIXTURE)



LIGHTING CABLE & CIRCUIT IDENTIFICATION



LIGHTING UNIT IDENTIFICATION

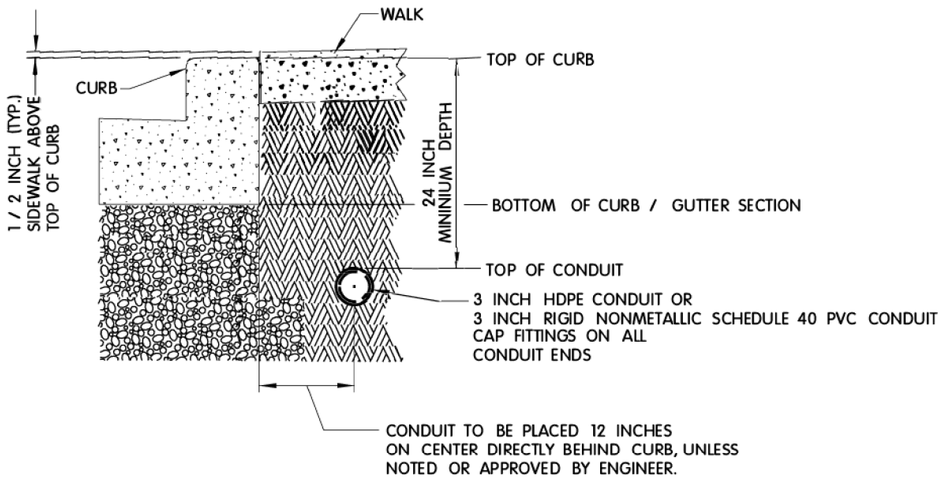


CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION

REVISION BY: lhickm REVISION DATE: 22-JUL-2025 14:41
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: JAN.19-2024

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 19	E

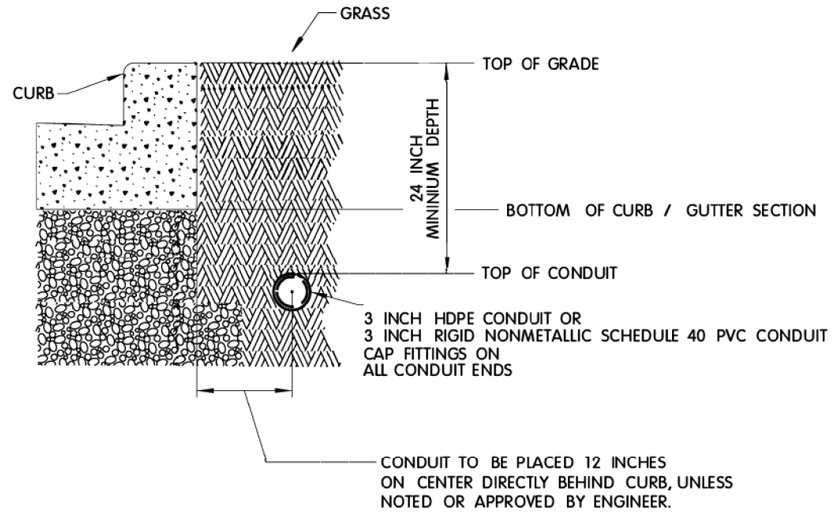
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



100 DETAIL "A" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
BEHIND CURB UNDER WALK

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



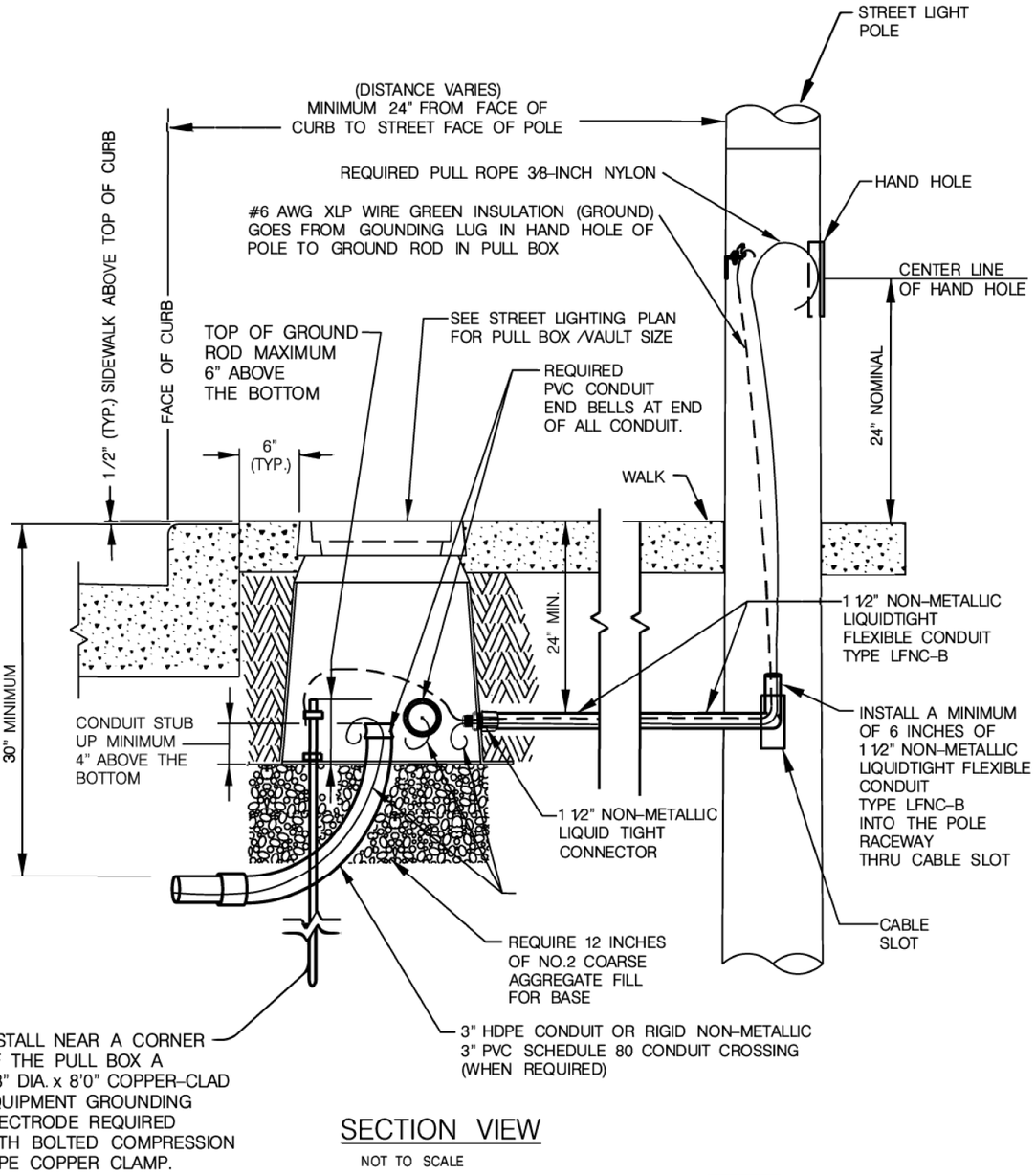
100 DETAIL "B" NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
BEHIND CURB IN GRASS AREA

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414)286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

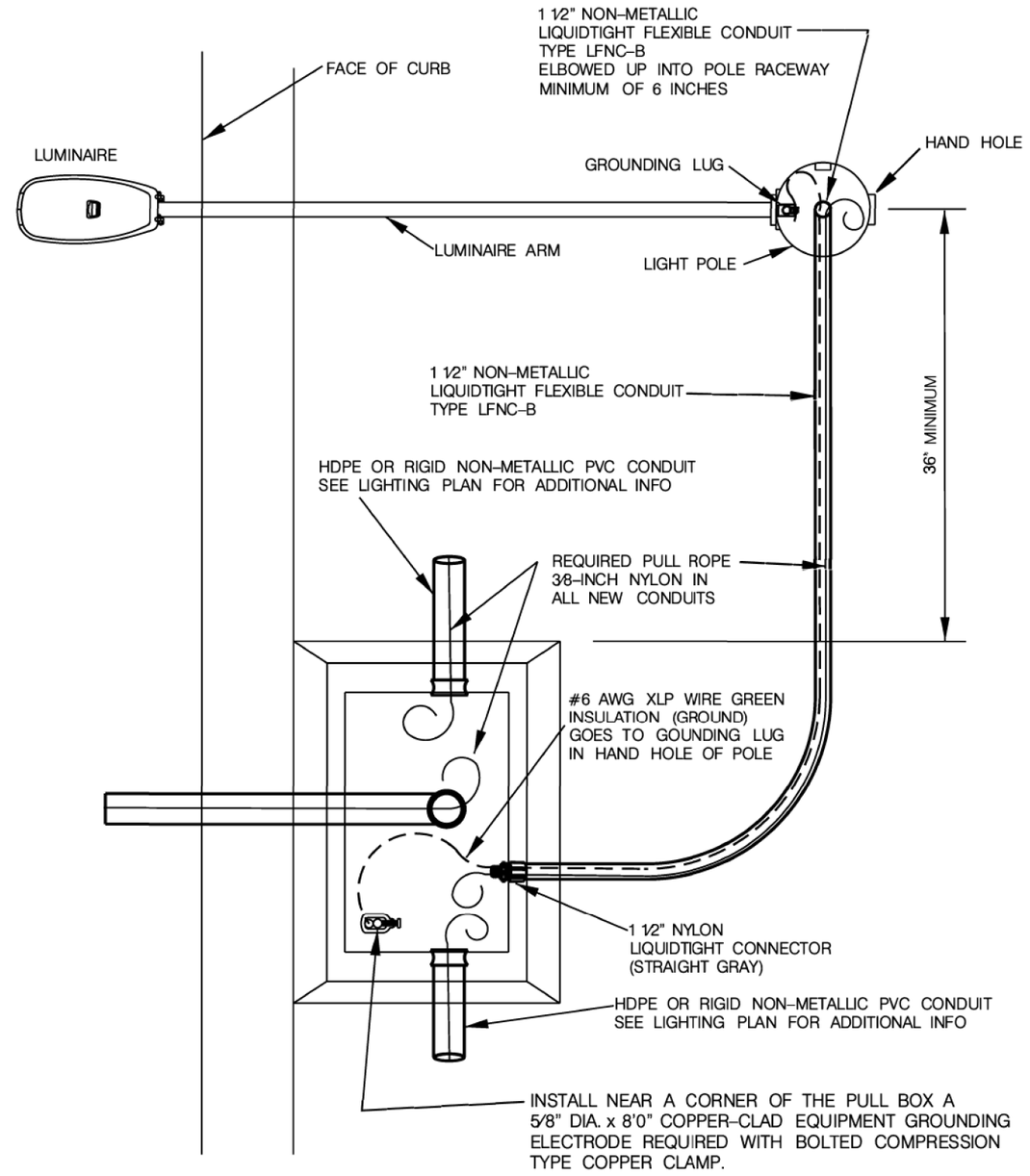
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-DEC-2023 09:28
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.14-2023

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 20	E



SECTION VIEW

NOT TO SCALE



PLAN VIEW

NOT TO SCALE

108 DETAIL VERSION

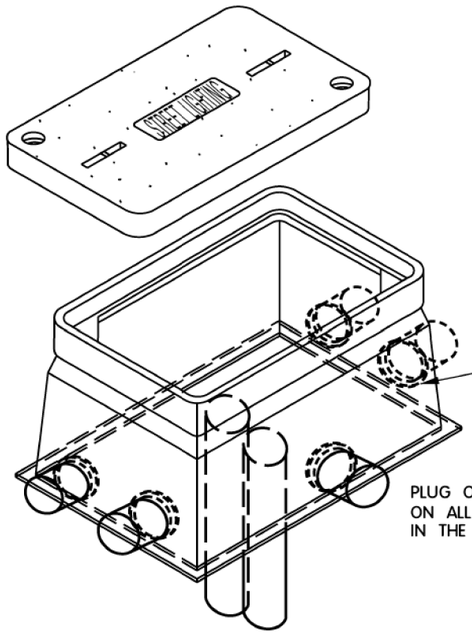
TYPICAL CONDUIT INSTALLATION FROM PULL BOX /VAULT TO DIRECT BURIED POLE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-DEC-2023 10:37
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.14-2023

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 21	E

2

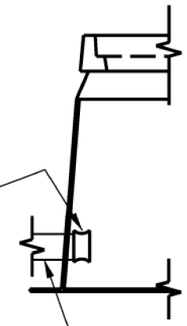


HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 PENTA BOLTS
COLOR: GRAY
TIER 15 RATING (MINIMUM)

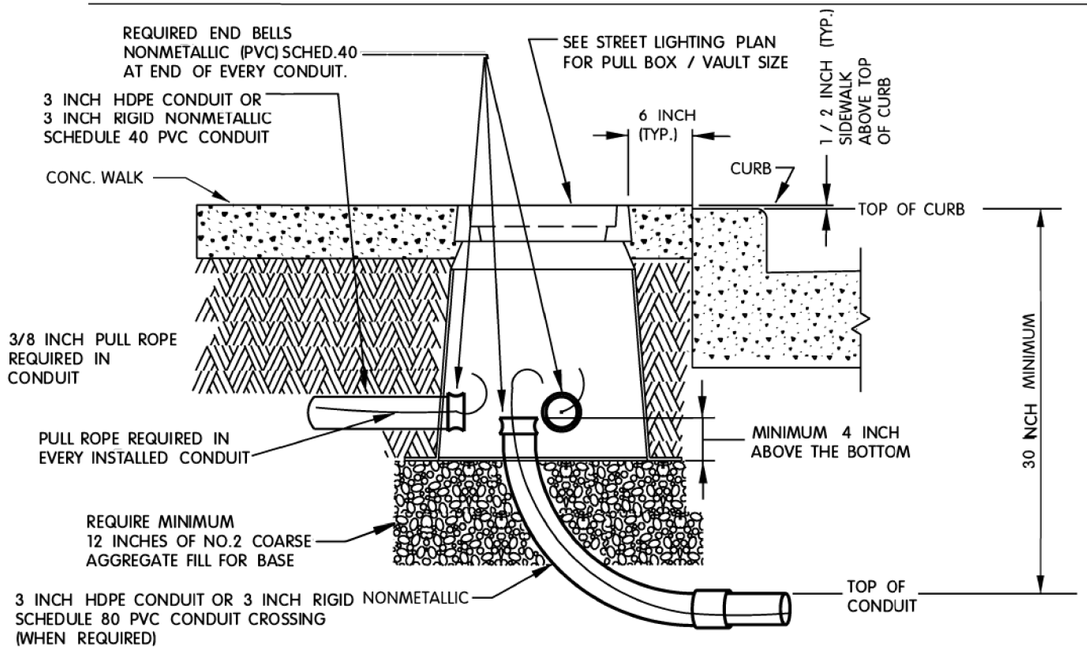
PULL BOX / VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
TIER 15 RATING (MINIMUM)
(VARIOUS SIZES)

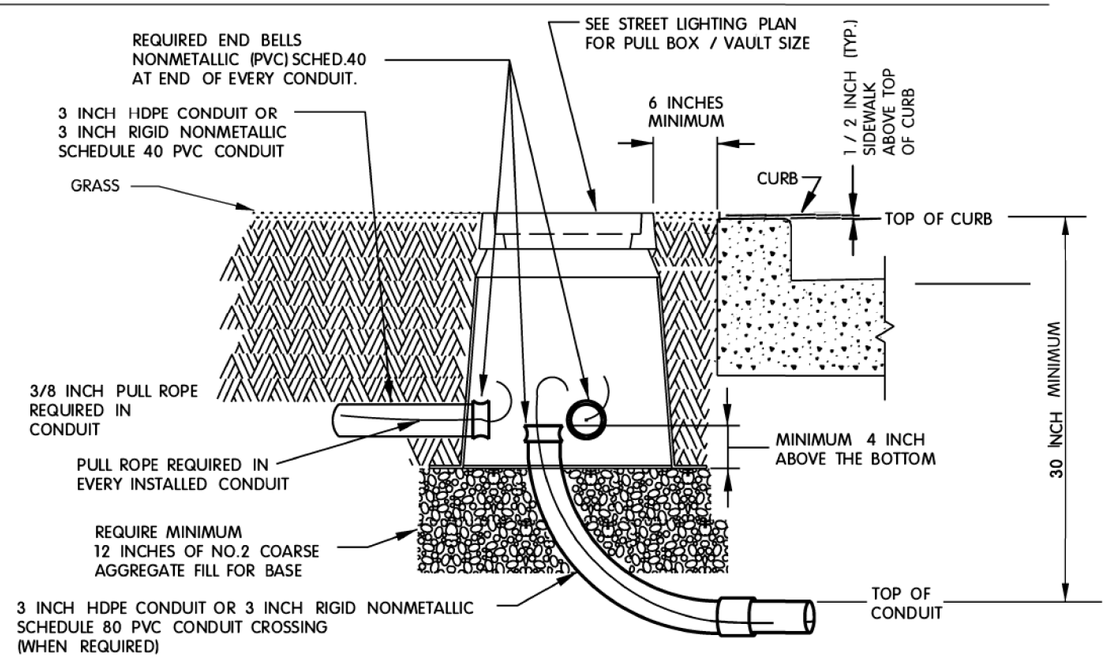
REQUIRED END BELLS
NONMETALLIC (PVC) SCHED.40
AT END OF EVERY CONDUIT.

PLUG OR CAP FITTINGS
ON ALL UNUSED CONDUITS
IN THE ENCLOSURE



3 INCH HDPE OR
3 INCH RIGID NONMETALLIC
SCHEDULE 40 PVC CONDUIT





112 DETAIL — NOT TO SCALE

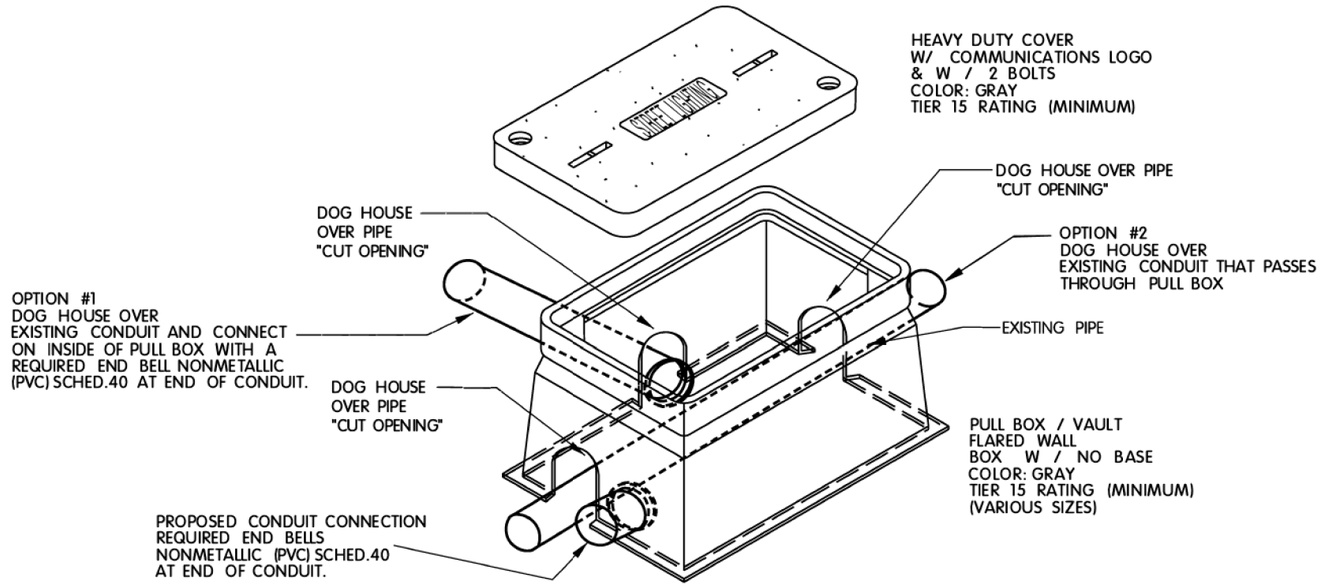
TYPICAL PULL BOX / VAULT INSTALLATION
IN EITHER PAVEMENT OR GRASS AREAS

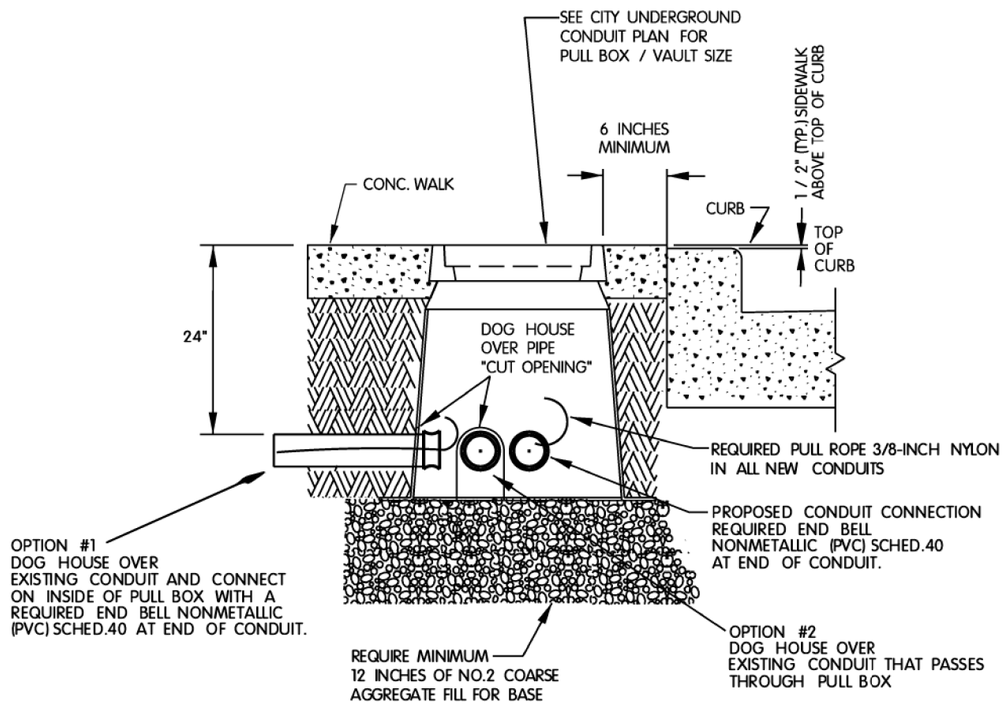
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

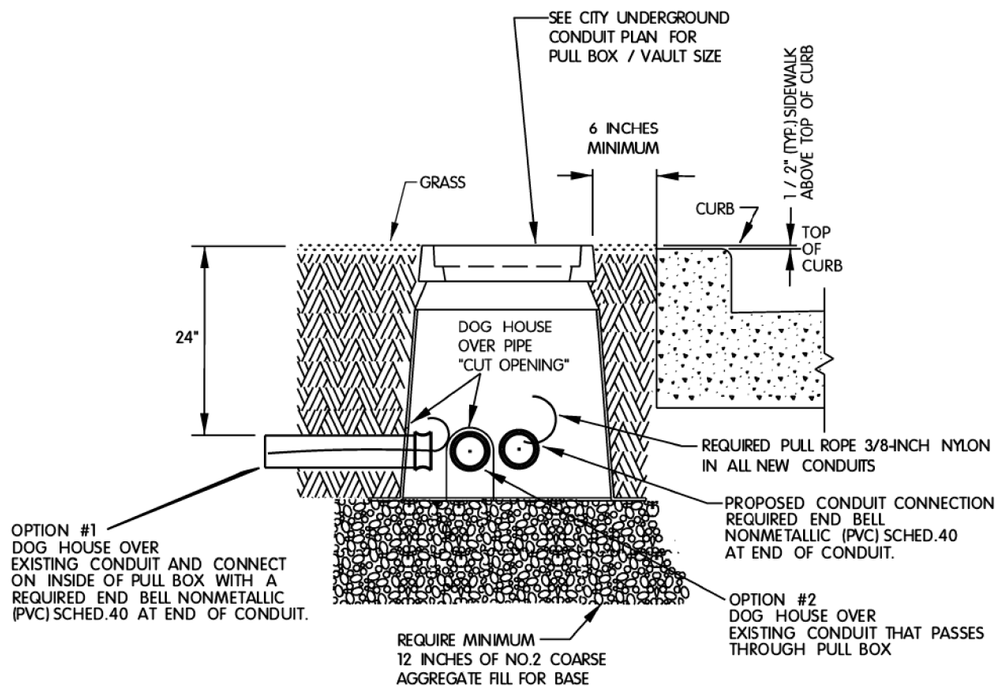
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-DEC-2023 11:34
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.13-2023

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 22	E

2







113 DETAIL FOR TYPES OF DOG HOUSING OVER EXISTING CONDUIT NOT TO SCALE

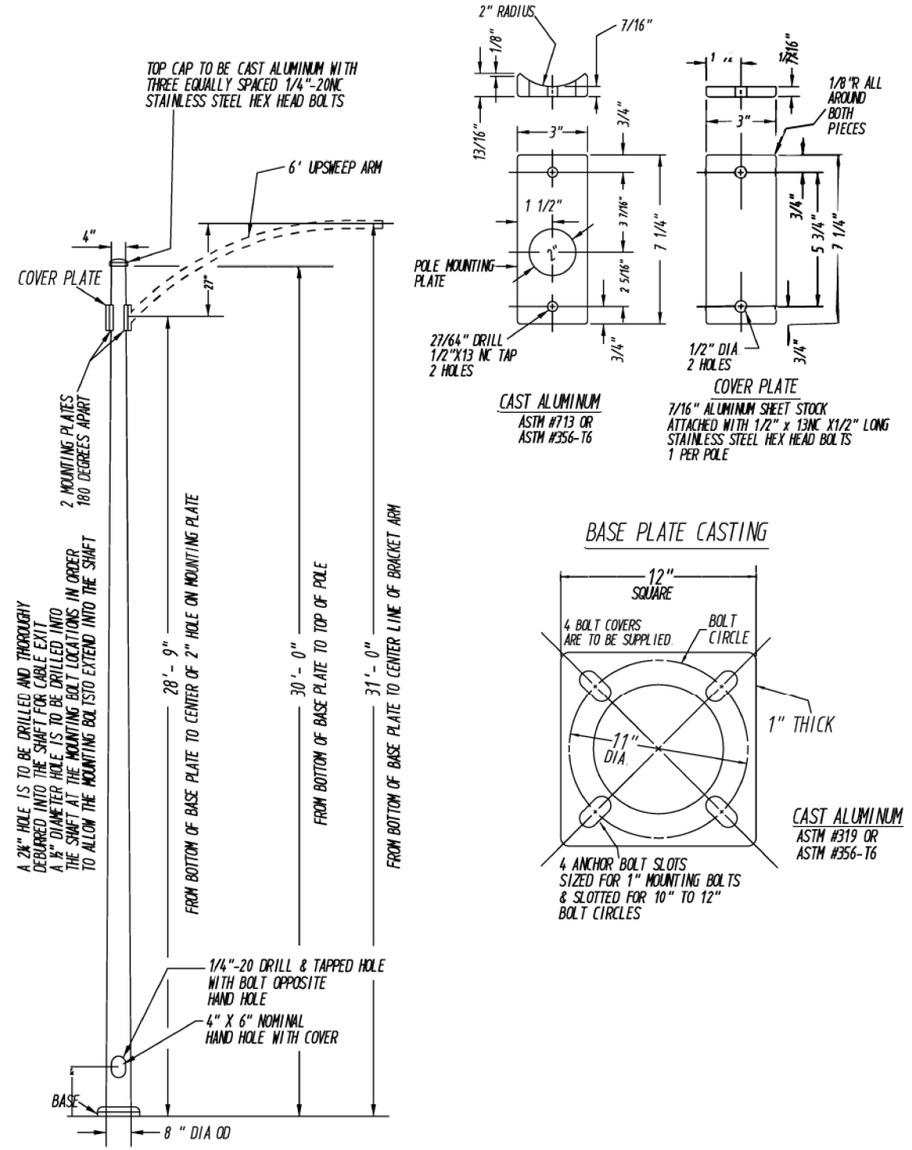
TYPICAL PULL BOX / VAULT INSTALLATION IN EITHER PAVEMENT OR GRASS AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: dkozel REVISION DATE: 14-DEC-2023 07:22
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: DEC.14-2023

PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 23	E

2



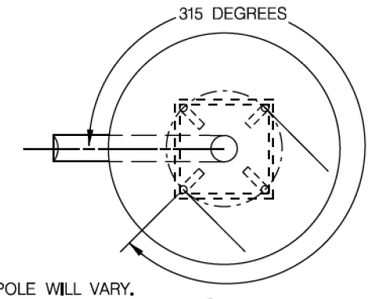
DETAIL

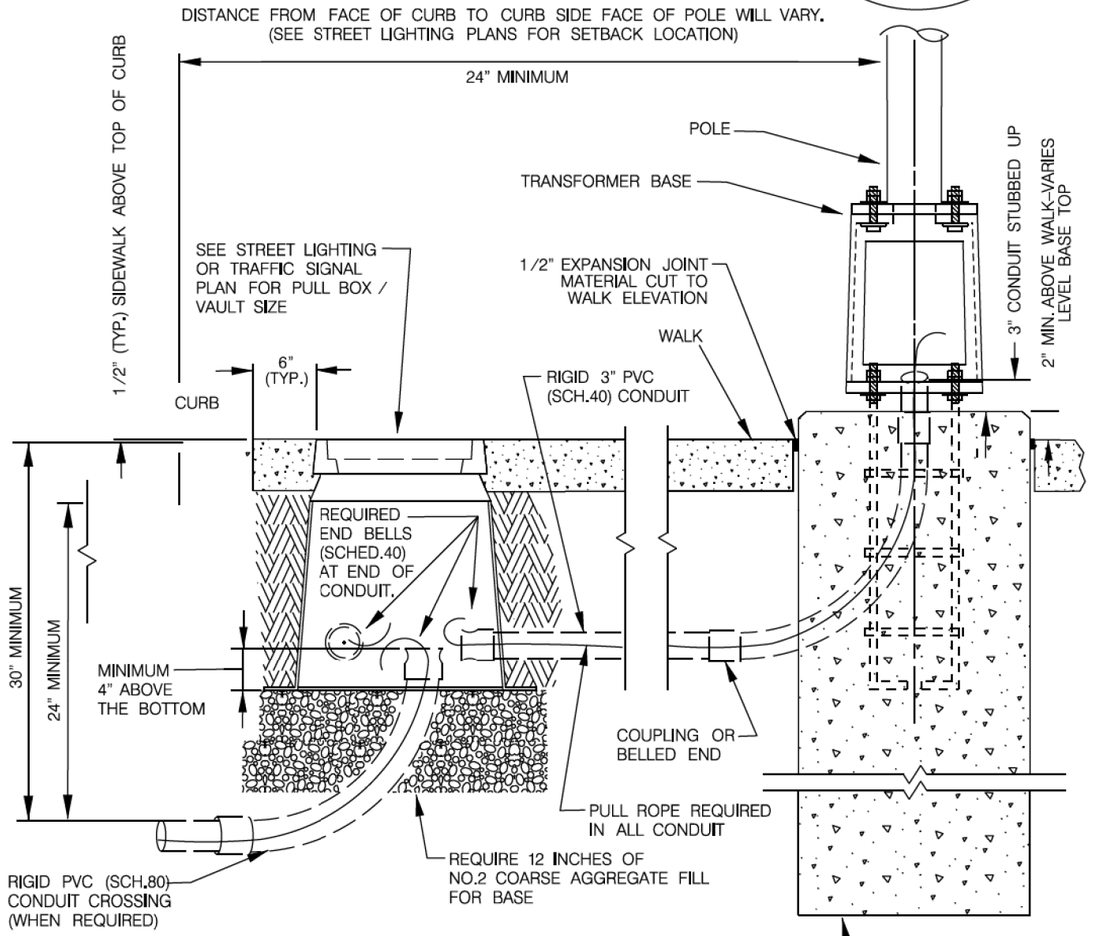
BOLT DOWN 30' ALUMINUM POLE

PROJECT NO: 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 24	E

2

BOLT CIRCLE
TOP VIEW





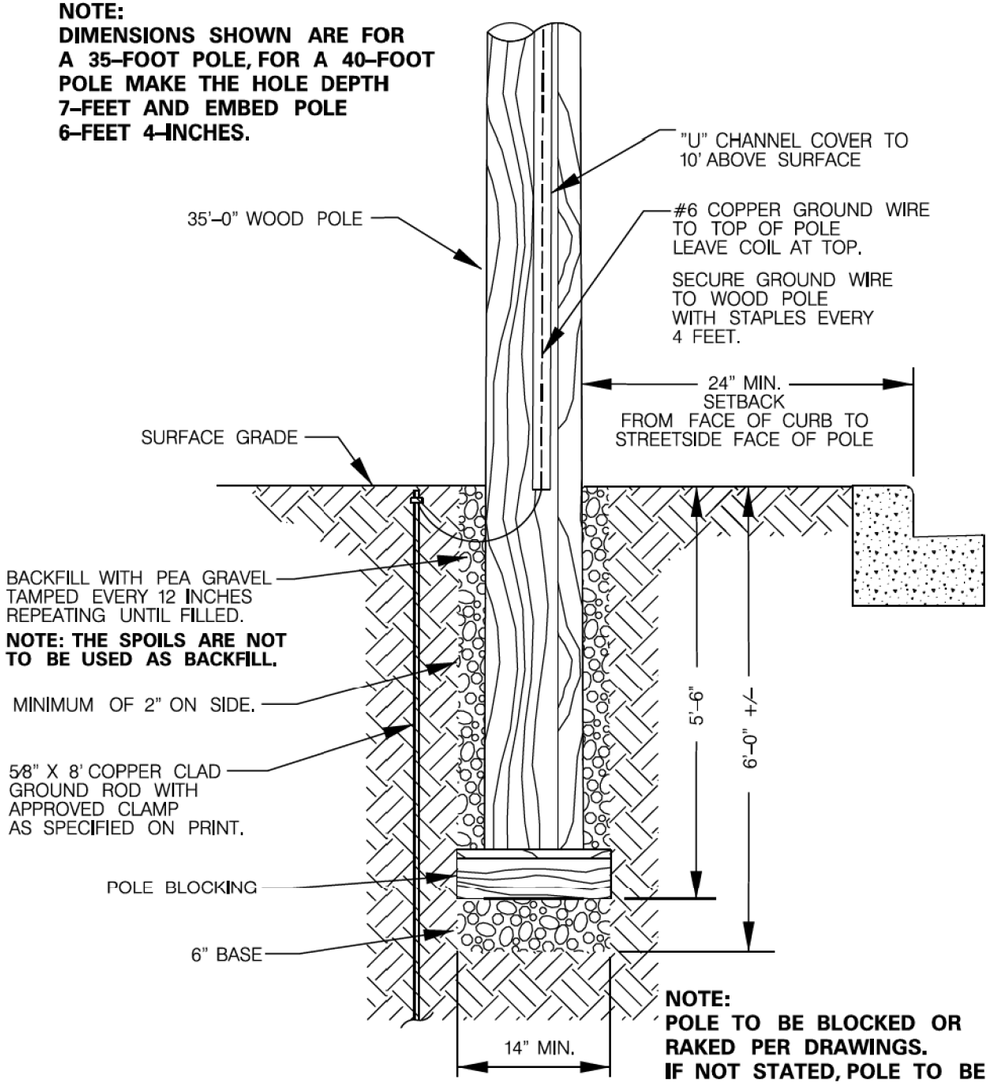
124 DETAIL

TYPICAL CONDUIT INSTALLATION
FROM PULL BOX / VAULT
TO CONCRETE BASE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

2

NOTE:
DIMENSIONS SHOWN ARE FOR A 35–FOOT POLE, FOR A 40–FOOT POLE MAKE THE HOLE DEPTH 7–FEET AND EMBED POLE 6–FEET 4–INCHES.



NOTE:
POLE TO BE BLOCKED OR RAKED PER DRAWINGS.
IF NOT STATED, POLE TO BE PERPENDICULAR WITH GROUND

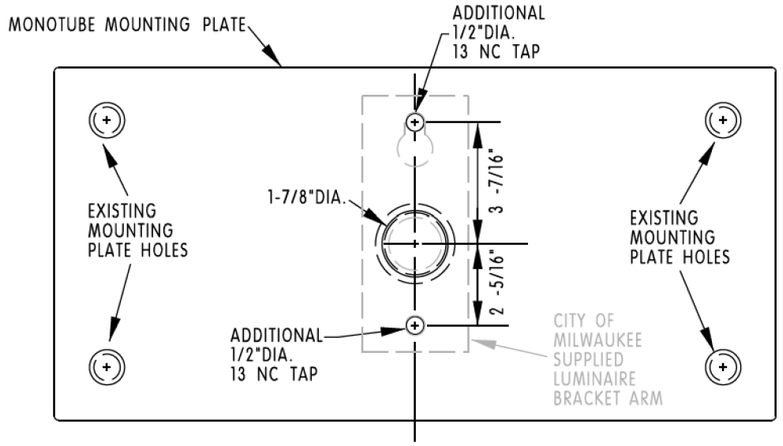
130A DETAIL — NOT TO SCALE

TYPICAL 35 FT.WOOD POLE INSTALLATION

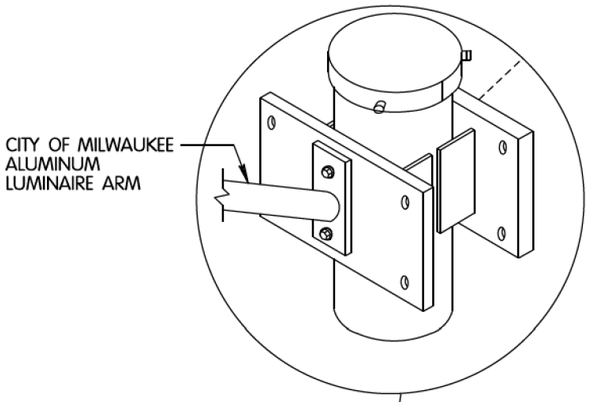
SEE NOTE FOR 40 FOOT POLE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

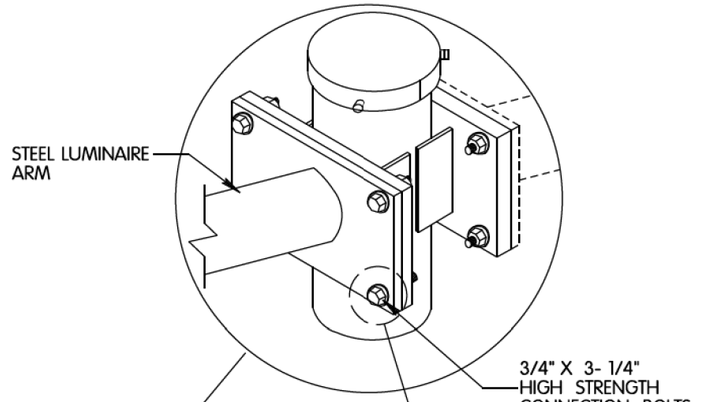
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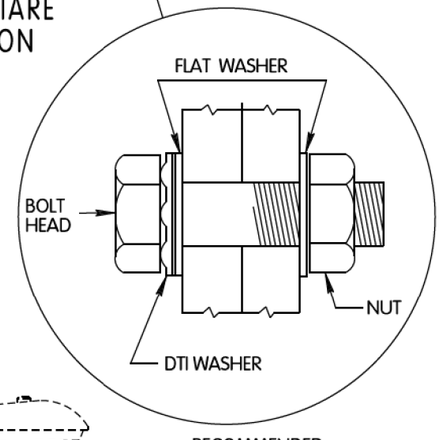
ADDITIONAL MOUNTING HOLES IN LUMINAIRE MOUNTING PLATE
NOT TO SCALE



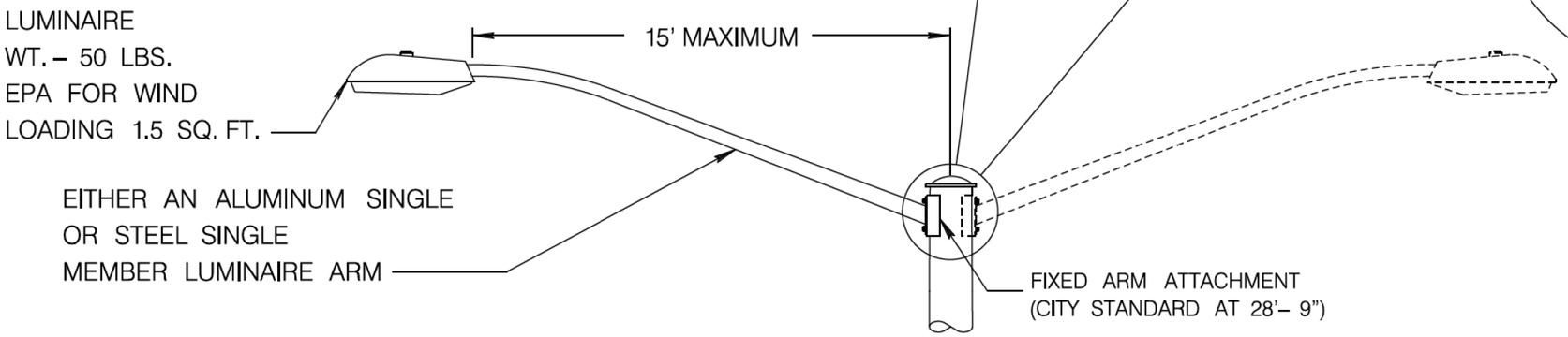
ALUMINUM LUMINIARE
ARM OPTION



STEEL LUMINIARE
ARM OPTION



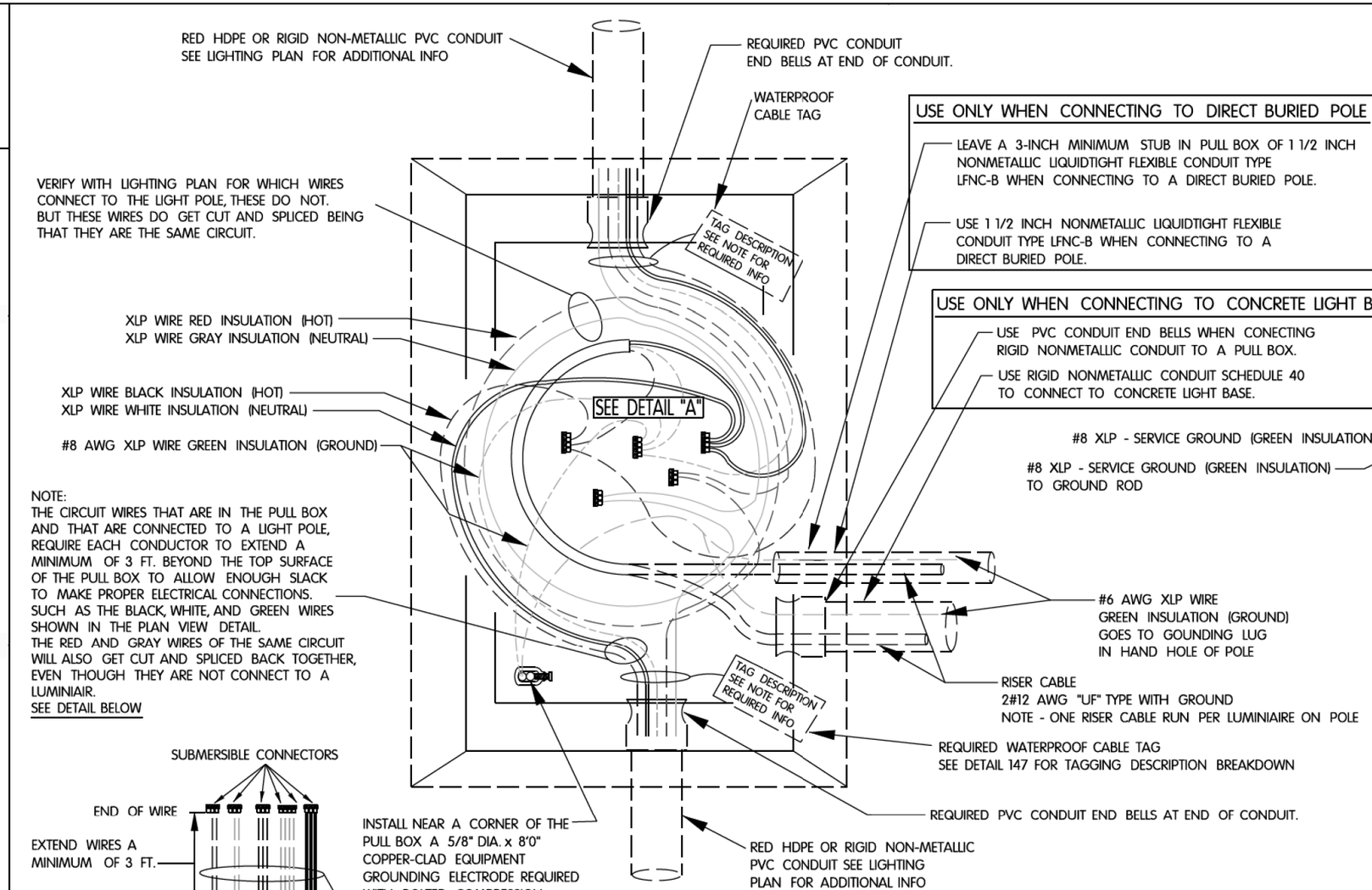
RECOMMENDED
BOLT ASSEMBLY
DETAIL



140 DETAIL — NOT TO SCALE

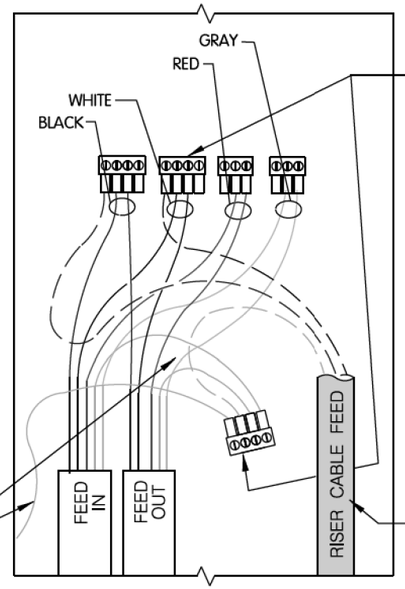
ADDITIONAL MOUNTING HOLES IN LUMINAIRE MOUNTING PLATE FOR
POLES: TYPE 10
TYPE 13 SPECIAL
TYPE 13

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAR.03-2023



PLAN VIEW

NOT TO SCALE



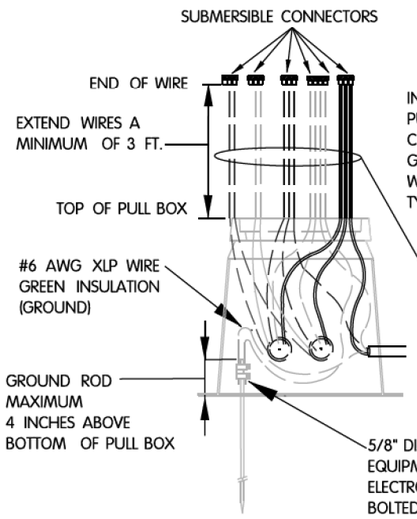
CIRCUIT MUST BE TAGGED AND IDENTIFIED INSIDE PULL BOX

USE:
POLARIS EDGE CONNECTOR (ISPB2)
OR
MORRIS PRODUCTS SUBMERSIBLE INSULATED STREETLIGHTING CONNECTOR, OR
EQUAL
3 OR 4 PORT PRE-INSULATED CONNECTOR OR EQUAL.
DESIGNED FOR USE IN BELOW GRADE BOXES, DIRECT BURIAL AND SUBMERSIBLE
CONDUCTORS RANGE FROM #2/0-#14
RATED FOR 600 VOLTS
DUAL RATED FOR CU. OR AL.
INSULATED WITH HIGH DIELECTRIC STRENGTH ABRASION AND CHEMICAL RESISTANT RUBBER
SET SCREWS OR APPROVED EQUAL
UL 486D LISTED FOR DIRECT BURIAL AND SUBMERSIBLE APPLICATIONS

"RISER CABLE FEED"
2#12 AWG TYPE "UF" WITH GROUND CABLE WITHOUT SPLICES TO FROM PULL BOX TO HAND HOLE ON POLE

DETAIL "A"

CONNECTIONS WITHIN PULL BOX
NOT TO SCALE



IF THERE ARE TWO OR MORE CIRCUITS PASSING THROUGH A PULL BOX ONLY THE CIRCUIT THAT IS CONNECTED TO THE ADJACENT LIGHT POLE WILL HAVE THE CONDUCTORS CUT AND SPLICED IN THE PULL BOX. ALL OTHER CIRCUITS WILL ONLY PASS THROUGH WITHOUT BEING CUT / SPLICE, AND WILL BE REQUIRED TO HAVE A MINIMUM OF A 6 FT. COIL OF SLACK TO BE LEFT IN THE PULL BOX FOR EACH OF THE PASS THROUGH CIRCUITS.

NOTES:

WHEN WIRING A LUMINAIRE EITHER
BLACK (HOT) WITH WHITE (NEUTRAL) GO TOGETHER
OR
RED (HOT) WITH GRAY (NEUTRAL) GO TOGETHER

ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS.

ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM.

PULL ROPE SHALL BE INSTALLED IN ALL CONDUITS WITH AND WITHOUT CABLES.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.

PROVIDE MINIMUM WIRE SLACK FOR PULL BOXES: 3-FT ONE WAY IN OR OUT AND 6-FT FOR UNSPLICED CONDUCTORS/WIRES.

PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP MANAGERS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK. THESE NAMES AND NUMBERS CAN BE FOUND ON THE STREET LIGHTING GENERAL NOTES SHEET.

142 DETAIL

TYPICAL WIRING CONNECTIONS AND EQUIPMENT GROUNDING

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAY 1-2025

2

GENERAL NOTES

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

USE THIS DETAIL 142 IN CONJUNCTION WITH THIS DETAIL FOR ELECTRICAL WIRING.

USE EITHER THE POLARIS EDGE (ISPB2) OR MORRIS PRODUCT SUBMERSIBLE INSULATED CONNECTOR OR ELSE AN EQUAL CONNECTOR THAT IS 3 or 4 PORT PRE-INSULATED, THAT IS DESIGNED FOR USE IN BELOW GRADE BOXES, DIRECT BURIAL, AND SUBMERSIBLE. THE CONDUCTORS RANGE FROM #2/0 - #14 RATED FOR 600 VOLTS DUAL RATED FOR CU. or AL.

USE A IN-LINE FUSE HOLDER ASSEMBLY THAT NEEDS TO BE 600 VOLT RATED, AND UP TO 30 AMPS, 1-POLE BREAKAWAY, WITH COPPER CRIMP TERMINALS FOR LOAD, AND WIRE SIZE RANGE #12 TO #8 AWG.
PROVIDE A FAST ACTING 5 AMP 250 VOLT FUSES, FROM THE RECOMMENDED FUSE LIST FROM THE IN-LINE FUSE HOLDER MANUFACTURER.

USE WATERPROOF AND TEAR RESISTANT CABLE TAGS/LABELS AT EACH PULL BOX, TO IDENTIFY THE LINE SIDE OF EACH CIRCUIT USING A FADE-RESISANT WATERPROOF BLACK MARKER PEN AND PROVIDE THE FOLLOWING INFO:

CIRCUIT ID: (CIR.WD-E)
LINE SIDE COMING FROM UNTIL STREET LIGHT UNIT IS ON: (STREET NAME)
SIDE OF STREET LIGHT UNIT IS ON: (N,S,E,or W)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (1,2,3,4,5)
DIRECTION FROM THE NEAREST CROSSING STREET: (N,S,E,or W)
NAME OF THE NEAREST CROSSING STREET: (STREET NAME)

EXAMPLE OF TAG INFO:

CIR.WD-E,
LINE SIDE FROM: W. CANAL ST. / N. / 1 / W. /OF POTAWATOMI CIR.

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

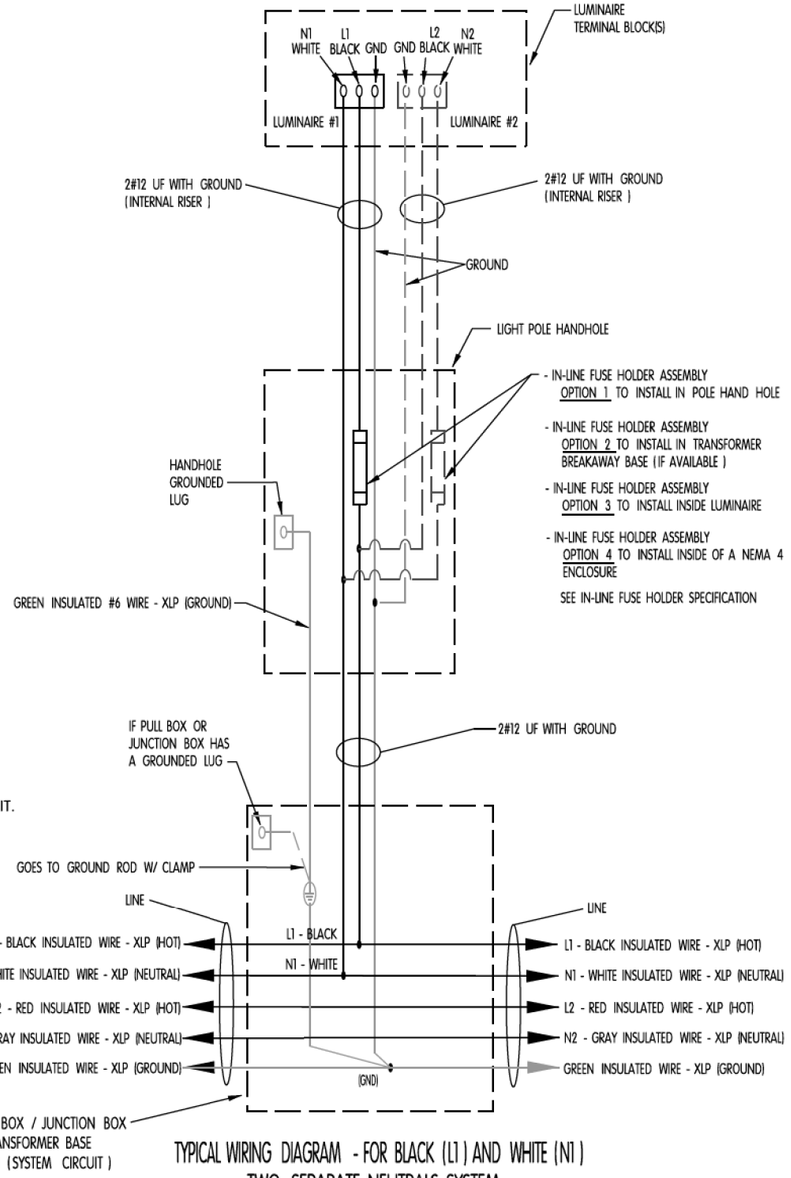
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

USE 2#12UF WITH GROUND FROM THE PULL BOX / JUNCTION BOX TO THE POLE HANDHOLE

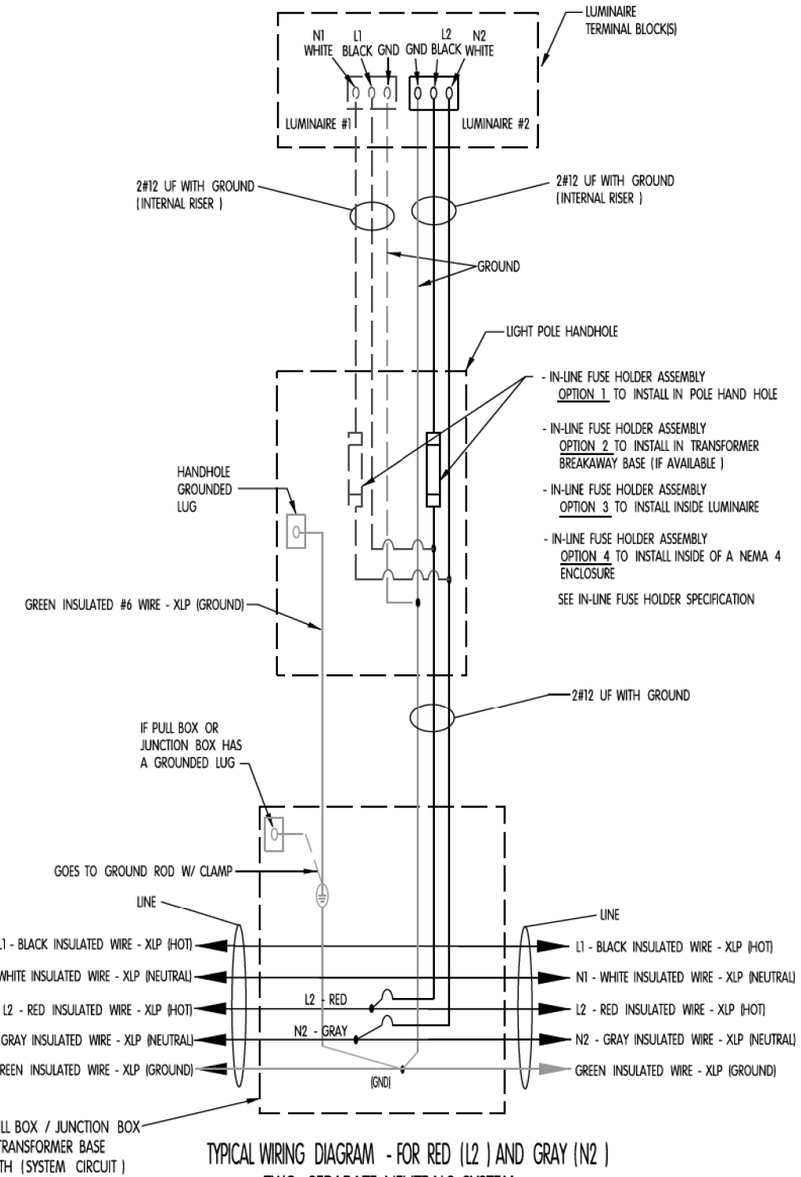
THE INTENT OF THE PULL BOX / JUNCTION BOX/ TRANSFORMER BASE SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT.

LEGEND

BLACK & RED	UNGROUNDED SYSTEM CIRCUIT CONDUCTORS (L1 & L2)
WHITE & GRAY (N)	GROUNDED SYSTEM CIRCUIT CONDUCTORS (N1 & N2)
GREEN (GND)	EQUIPMENT GROUNDING CONDUCTOR
	HANDHOLE GROUNDED LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	TERMINAL
	SPLICE
	CONDUCTOR
	GROUND ROD



TYPICAL WIRING DIAGRAM - FOR BLACK (L1) AND WHITE (N1)
TWO SEPARATE NEUTRALS SYSTEM
240 / 480VAC 4 WIRE



TYPICAL WIRING DIAGRAM - FOR RED (L2) AND GRAY (N2)
TWO SEPARATE NEUTRALS SYSTEM
240 / 480VAC 4 WIRE

145 ELECTRICAL DETAILS STRUCTURE MOUNT
LIGHT POLES SEPARATED NEUTRALS SYSTEM

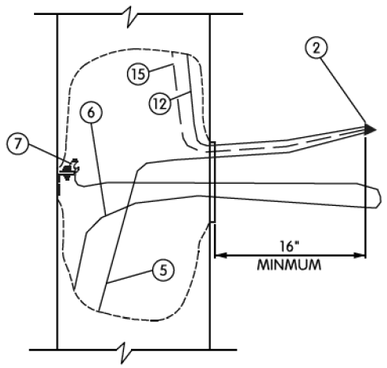
NOT TO SCALE

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: E.K LEE APPROVED REVISION DATE: DEC.09-2024

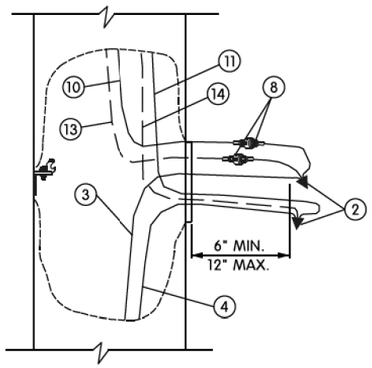
PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 29	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2

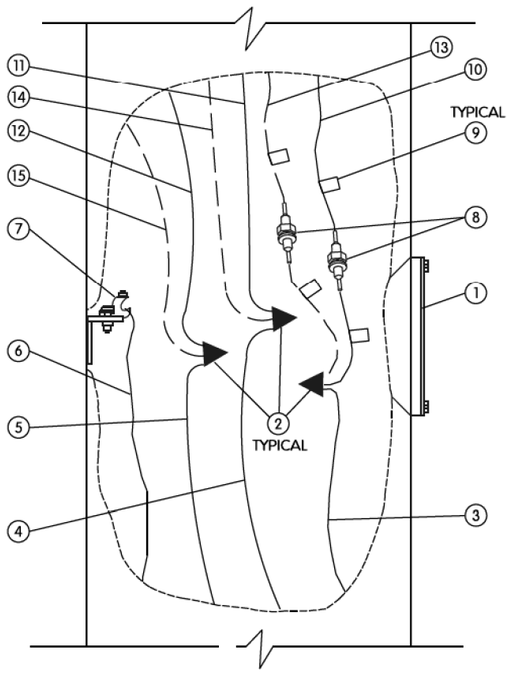


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

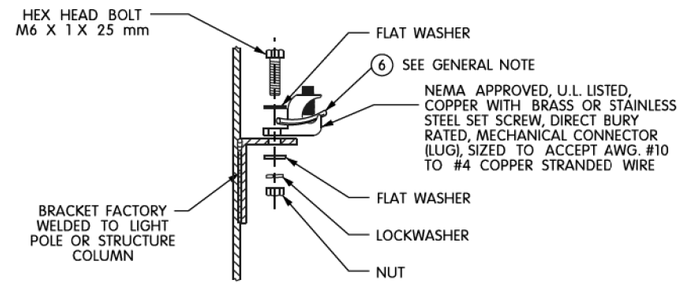
TYPICAL CONDUCTOR SLACK AT HANDHOLES



CUTAWAY HANDHOLE DETAIL
SEPARATED NEUTRAL SYSTEMS
SINGLE PHASE

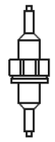
NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE TYPICAL CONDUCTOR SLACK AT HANDHOLES ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. SYSTEM UNGROUNDED LINE WIRE
4. SYSTEM GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. EQUIPMENT GROUNDING CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. RISER UNGROUNDED POLE WIRE - LUMINAIRE #1
11. RISER GROUNDED POLE WIRE - LUMINAIRE #1
12. RISER SYSTEM GROUNDING WIRE - LUMINAIRE #1
13. RISER UNGROUNDED POLE WIRE - LUMINAIRE #2
14. RISER GROUNDED POLE WIRE - LUMINAIRE #2
15. RISER SYSTEM GROUNDING WIRE - LUMINAIRE #2



HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)



VARIOUS INSTALLATION OPTIONS

- IN-LINE FUSE HOLDER ASSEMBLY
  OPTION 1 TO INSTALL IN POLE HAND HOLE
- IN-LINE FUSE HOLDER ASSEMBLY
  OPTION 2 TO INSTALL IN TRANSFORMER BREAKAWAY BASE (IF AVAILABLE)
- IN-LINE FUSE HOLDER ASSEMBLY
  OPTION 3 TO INSTALL INSIDE LUMINAIRE
- IN-LINE FUSE HOLDER ASSEMBLY
  OPTION 4 TO INSTALL INSIDE OF A NEMA 4 ENCLOSURE

- 600 VOLT RATED, UP TO 30 AMPS, 1-POLE BREAKAWAY, SET SCREW TERMINALS FOR LOAD, WIRE SIZE RANGE #12 TO #8 AWG
- FAST ACTING 5 AMP 250 VOLT FUSE RECOMMENDED FROM FUSE LIST FROM IN-LINE FUSE HOLDER MANUFACTURER

SEE IN-LINE FUSE HOLDER SPECIFICATION

IN-LINE FUSE HOLDER ASSEMBLY

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	BLACK OR RED
4	GROUNDED LINE WIRE	WHITE OR GRAY
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	GREEN
10	UNGROUNDED POLE WIRE	*
11	GROUNDED POLE WIRE	WHITE
12	SYSTEM GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING,

GENERAL NOTES

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

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

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

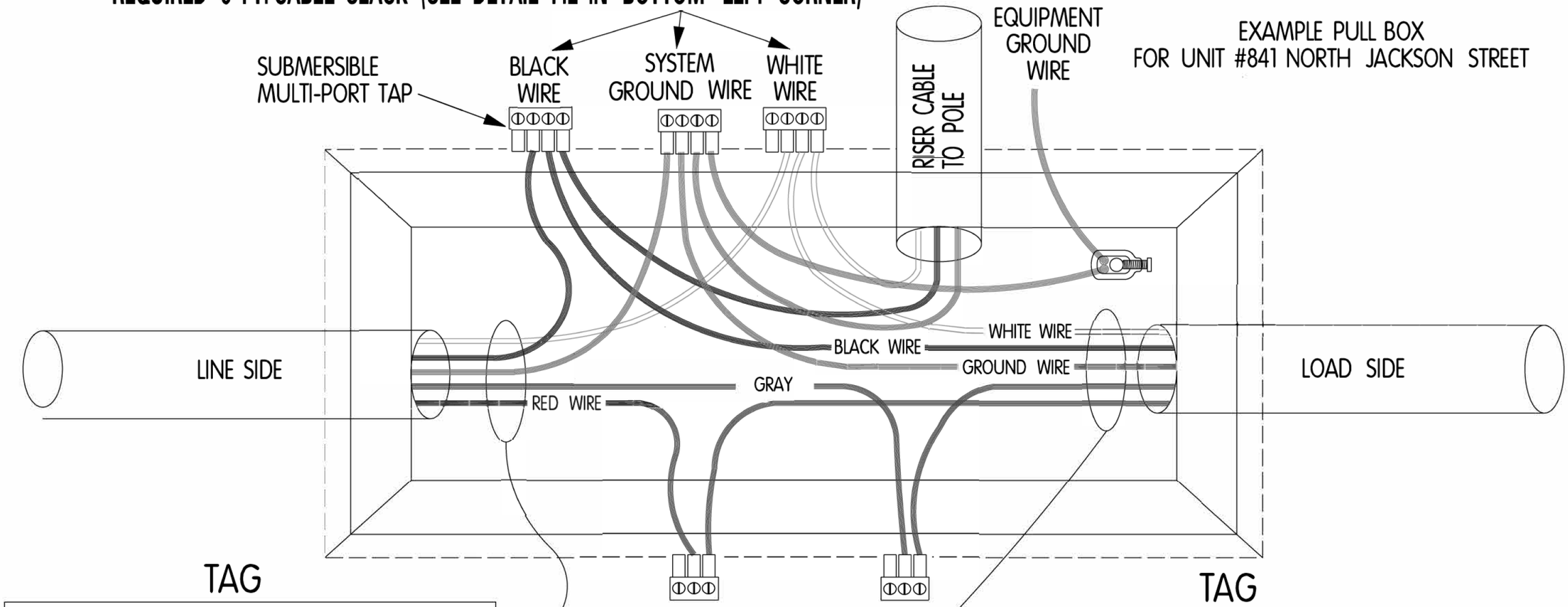
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

CIRCUIT TAGS SHALL BE INSTALLED IN ALL THE PULL BOXES AND WHERE INDICATED ON THE PLANS AND SPECIAL PROVISIONS.

146 ELECTRICAL HANDHOLE WIRING DETAIL — NOT TO SCALE

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: E.K. LEE APPROVED REVISION DATE: DEC.09-2024

REQUIRED 3 FT. CABLE SLACK (SEE DETAIL 142 IN BOTTOM LEFT CORNER)



TAG

CIR. ENCL.#3 EB-R
N. JACKSON ST./W /4 /S / E.WELLS ST..

TAG DESCRIPTION BREAKDOWN - LINE SIDE

CIRCUIT ID: (CIR. ENCL.#3 EB-R)
LINE SIDE COMING FROM UNIT STREET LIGHT UNIT IS ON: (N. JACKSON ST.)
SIDE OF STREET LIGHT UNIT IS ON: (WEST SIDE)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (COMING FROM UNIT 4)
DIRECTION FROM THE NEAREST CROSSING STREET: (TO THE SOUTH)
NAME OF THE NEAREST CROSSING STREET: (E. WELLS ST.)

TAG

CIR. ENCL.#3 EB-R
N. JACKSON ST./W /6 /N /E.KILBOURN AVE.

TAG DESCRIPTION BREAKDOWN - LOAD SIDE

CIRCUIT ID: (CIR. ENCL.#3 EB-R)
LINE SIDE COMING FROM UNIT STREET LIGHT UNIT IS ON: (N. JACKSON ST.)
SIDE OF STREET LIGHT UNIT IS ON: (WEST SIDE)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (GOING TO UNIT 6)
DIRECTION FROM THE NEAREST CROSSING STREET: (TO THE NORTH)
NAME OF THE NEAREST CROSSING STREET: (E. KILBOURN AVE.)

147 DETAIL

TYPICAL SCHEMATIC AND TAGGING

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$..PLOTUSER..$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAY 1-2025

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

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

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 2 INCHES.

ALL NON–METALLIC CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE PLUGGED IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN 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 OR 6 AWG STRANDED MINIMUM COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE MECHANICALLY CONNECTED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, AND TYPE 5 CITY OF MILWAUKEE BASES. GROUND ROD IS TO BE INSTALLED IN THE PULL BOX THAT IS DIRECTLY CONNECTED TO THE CONCRETE BASE.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER EITHER BASE TYPE THROUGH A 3–INCH CONDUIT INSTALLED FOR ALL WIRING 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–INCHES IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

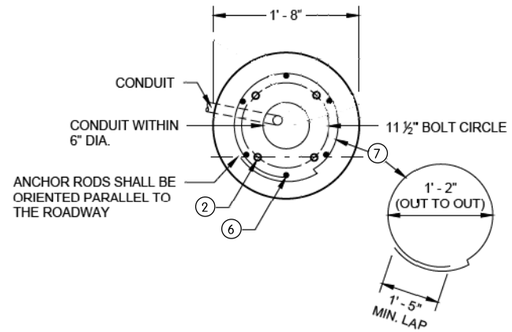
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

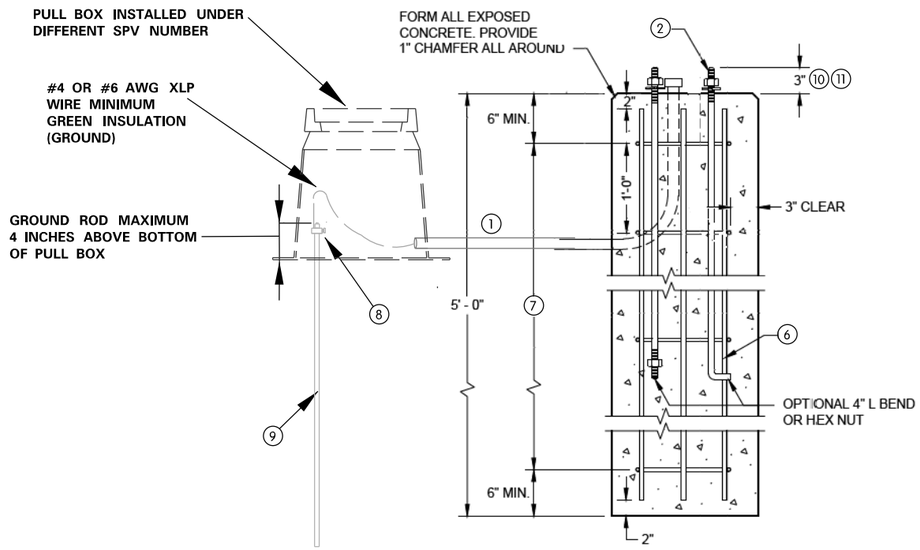
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4–INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

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.

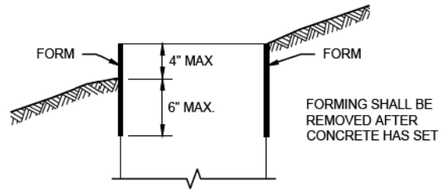
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).





151 CONCRETE BASE TYPE 5 MODIFIED

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



FORMING DETAIL

QUANTITY REQUIREMENTS	CITY OF MILWAUKEE CONCRETE BASE TYPE		
		TYPE 2	TYPE 5
APPROX. CUBIC YARDS OF CONCRETE		0.57	0.40
LBS. OF HOOP BAR STEEL		23	16
LBS. OF VERTICAL BAR STEEL		60	18

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

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

(8) BOLTED TYPE COPPER CLAMP CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR

(9) 5 /8" DIA. X 8' – 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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

(11) FOR NON–BREAKAWAY INSTALLATIONS, 4 1/2" +/– ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: JUNE 3–2025

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
5 EA	40' WOOD POLES, CLASS 4
250 LF	2-2-4 AL TRIPLEX
275 LF	3#6 TRIPLEX
4 EA	6' WP ARM, TEMP. LED COBRA
4 EA	REMOVE POLES

NOTES:

1. SECONDARY XLP CABLE RISER WITH PVC COVER ON SPECIFIED CIRCUIT BY BES.
2. EXISTING CONDUIT AND/OR CABLE TO REMAIN IN COIL AND SECURE 3' LENGTH ALLOWANCE ON TOP OF POLE FOR RISER CONNECTION SHOWN IN STREET LIGHTING PLAN.
3. MINIMUM CLEARANCE AT CENTER OF SPAN: 17-FT. ABOVE ROADWAY OR GRADE.
4. TEMPORARY 240V FIXTURES WIRED PHASE TO NEUTRAL USING ALUMINUM TRIPLEX OR FLATSTRAP, LOAD BALANCED AS SPECIFIED BY BLACK/RED TERMINATION.
5. ALL LUMINAIRES AND AERIAL CABLES ARE SEPARATE BID ITEMS AND ARE NOTpPART OF THE BID ITEM "WOOD POLE 35-FOOT". ALL REMAINING ITEMS SUCH AS WIRE ROPE TETHERS, WIRE CLIPS, DRIVE HOOKS, SERVICE SLEEVES, HEAVY DUTY INSULATED PULLY CLEVISES ARE INCIDENTAL TO BID ITEM "WOOD POLE 40-FOOT".

LEGEND

- EXISTING LIGHT POLE
- REMOVE COMPLETE EXISTING LIGHT POLE
- 40' WOOD POLE COBRA HEAD LUMINAIRE 6' WOOD POLE MOUNT ARM
- 40' WOOD POLE
- OVERHEAD CABLE SPAN
- Ⓡ Ⓑ - RED/BLACK WIRE TERMINATION

#2651
EXIST. 26' DIRECT BURY CONCRETE
6' ARM, 150W HPS LUM.
TO REMAIN IN SERVICE

130A
#2677
40' WOOD POLE
6' ARM
3LED2 COBRA
ORIENTED TOWARDS CENTER
OF INTERSECTION AS SHOWN

100'
2#2/1#4AL TRIPLEX
CIR. T30N-C

#2669
ARRANGE FOR BES TO COLLECT AT31-R POLE
31' DIRECT BURY W/LUMINAIRE PLATES
REMOVE COMPLETELY RISERS,
15' SIGNAL ARM, LUMINAIRE

(NOTE 3)
80'
3#12UF-B
CIR. T30N-C

3#6/1#8LTP
CIR.T30N-B

#3528
EXIST. 26' DIRECT BURY CONCRETE
6' ARM, 150W HPS LUM.
4"X4"X36" WIRING PEDESTAL
TO REMAIN IN SERVICE
BES TO DISCONNECT SERVICE AS SHOWN

3#6/1#8LTP
CIR.T30N-C

DISCONTINUE
3#6/1#8LTP
CIR. T30N-B

(NOTE 1 CIR.T30N-C)
#3513
EXIST. 26' DIRECT BURY CONCRETE
TYPE UD
6' ARM, 150W HPS LUM.
4"X4"X36" WIRING PEDESTAL
STA.58+08.5;130.0'LT

#3504
EXIST. 26' AT26
6' ARM, 250W HPS
15' SIGNAL ARM
POLICE CAMERA
SHOT SPOTTER
LICENSE PLATE READER
ALL REMOVED BY CONTRACTOR

130A
#3500
40' WOOD POLE
6' ARM
3LED2 COBRA
ORIENTED TOWARDS CENTER
OF INTERSECTION AS SHOWN
STA.58+71.0;30.5'LT

70'
3#6AL TRIPLEX
CIR.T30N-C

130'
3#6AL
CIR. T30N-C

(NOTE 1 CIR.T30N-B)
#2719
EXIST. 26' DIRECT BURY CONCRETE
6' ARM, 150W HPS LUM.
4"X4"X36" WIRING PEDESTAL
STA.60+01.0;23.5'LT

130A
40' WOOD POLE
BACK OF WALK
STA.60+77.0;30.5'LT

(NOTE 3)
70'
3#6AL
CIR. T30N-C

(NOTE 3)
70'
3#12UF
CIR. T30N-C

80'
2#2/1#4AL TRIPLEX
CIR. T30N-C

DISCONTINUE
3#6/1#8LTP
CIR. T41C-D

DISCONTINUE
3#6/1#8LTP
CIR. T30N-B

#2654
26' DIRECT BURY CONC.
6' ARM, 250W HPS COBRA
4"X4"X36" WIRING PEDESTAL
TO REMAIN IN SERVICE

#3437
130A
40' WOOD POLE
6' ARM, 250W HPS COBRA
ORIENTED TOWARDS CENTER
OF INTERSECTION AS SHOWN
STA.58+68.0;35.5'RT

#3439
ARRANGE FOR BES TO COLLECT AT31-R POLE
31' DIRECT BURY W/LUMINAIRE PLATES
REMOVE COMPLETELY RISERS,
15' SIGNAL ARM, LUMINAIRE

75'
3#6AL
TRIPLEX
CIR.T41C-D

#2702
ARRANGE FOR BES TO COLLECT AT31-R POLE
31' DIRECT BURY W/LUMINAIRE PLATES
REMOVE COMPLETELY RISERS,
15' SIGNAL ARM, LUMINAIRE

130A
#3438
40' WOOD POLE
6' ARM, 3LED2 COBRA
ORIENTED TOWARDS CENTER
OF INTERSECTION AS SHOWN
STA.58+68.0;35.5'RT

90'
3#12UF-B
CIR. T30N-C

#3422
EXIST. 26' DIRECT BURY CONCRETE
6' ARM, 3LED2 COBRA LUM.
TO REMAIN IN SERVICE
STA.58+58.5;126.5.0'LT

(NOTE 1 CIR.T30N-B)
#2734
EXIST. 26' DIRECT BURY CONCRETE
6' ARM, 3LED2 COBRA LUM.
4"X4"X36" WIRING PEDESTAL
STA.61+21.0;35.5'RT

W. CENTER ST.

N. 35th ST.

N. 35th ST.

W. CENTER ST.

CAUTION
240/480V
TO BE REUSED

CAUTION
240/480V
TO BE REUSED

CAUTION
WEE OH

CAUTION
240/480V
TO BE REUSED

CAUTION
240/480V
TO BE REUSED

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM ORIGINAL SOURCE.

SUBSTATION T30N IS LOCATED AT N. SHERMAN BLVD. MEDIAN, 400' NCLX OF CENTER ST.
SUBSTATION T41C IS LOCATED SE CORNER OF N33RD & W. MEINECKE AVE.

CONTACT CITY OF MILWAUKEE BES FOR LOCKOUT/TAGOUT OF SUBSTATION CIRCUITS.
FIELD CONDITIONS MAY VARY.

CONTRACTOR IS TO PROVIDE CONTACT INFORMATION AND 24/7 AVAILABILITY IN EVENT OF DAMAGE OR KNOCK DOWN WITHIN PAVING LIMITS. TARGET RESPONSE TIME IS 2 HOURS.

SCALE, FEET 0 40

PROJECT NO: 2984–21–71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TEMPORARY STREET LIGHTING	SHEET 33	E

FILE NAME : 35TH ST 90 TEMP NORTH AND CENTER | PLOT DATE : $$...plottingdate...$$ | PLOT BY : HICKMAN | PLOT NAME : | PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

NOTE:

GENERAL NOTES MUST BE FOLLOWED WHEN INSTALLING MATERIALS FOR STREET LIGHTING AND TRAFFIC SIGNALS.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

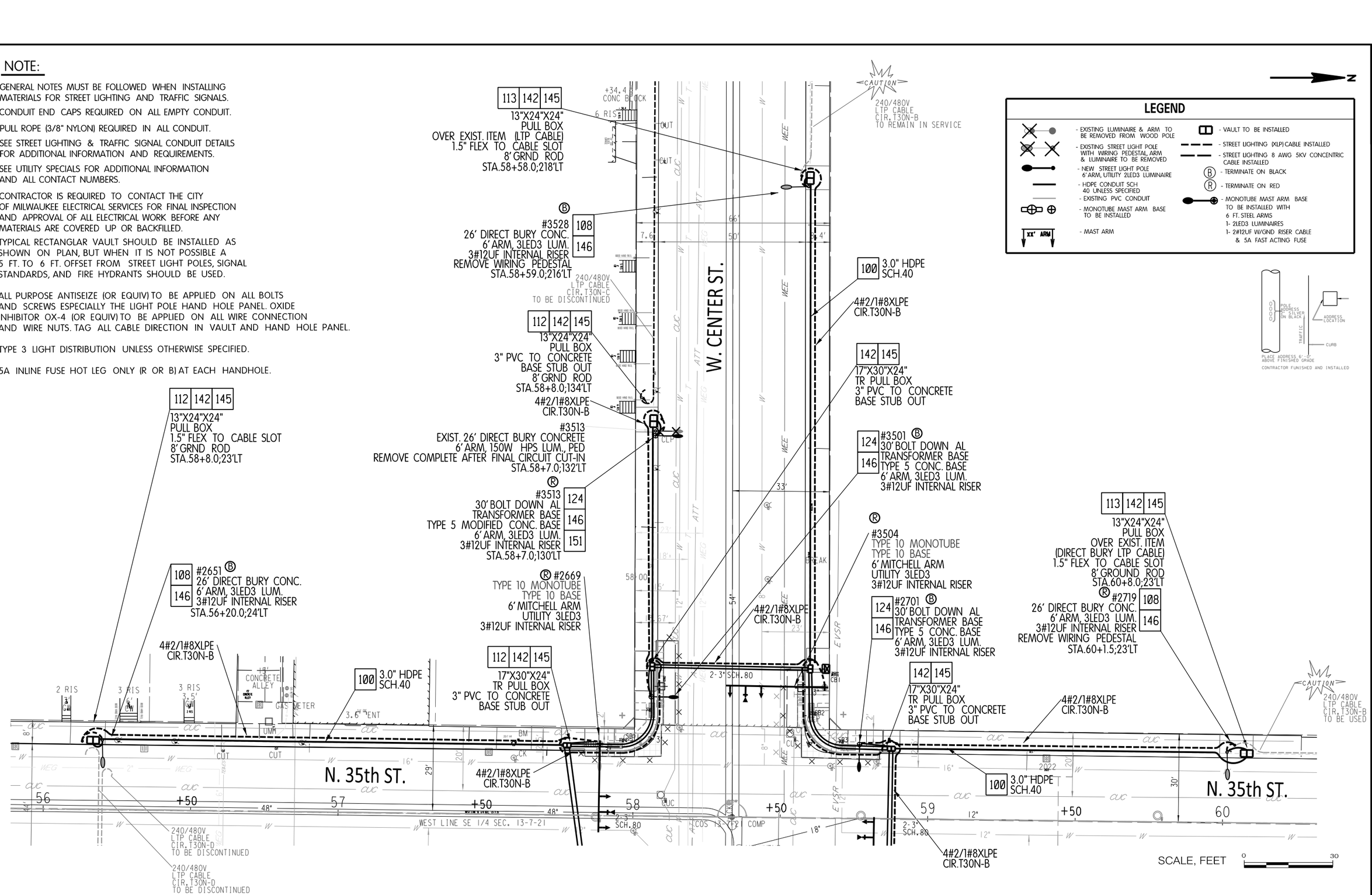
CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

ALL PURPOSE ANTISEIZE (OR EQUIV) TO BE APPLIED ON ALL BOLTS AND SCREWS ESPECIALLY THE LIGHT POLE HAND HOLE PANEL. OXIDE INHIBITOR OX-4 (OR EQUIV) TO BE APPLIED ON ALL WIRE CONNECTION AND WIRE NUTS. TAG ALL CABLE DIRECTION IN VAULT AND HAND HOLE PANEL.

TYPE 3 LIGHT DISTRIBUTION UNLESS OTHERWISE SPECIFIED.

5A INLINE FUSE HOT LEG ONLY (R OR B) AT EACH HANDHOLE.



LEGEND

- EXISTING LUMINAIRE & ARM TO BE REMOVED FROM WOOD POLE
- EXISTING STREET LIGHT POLE WITH WIRING PEDESTAL, ARM & LUMINAIRE TO BE REMOVED
- NEW STREET LIGHT POLE 6' ARM, UTILITY 2LED3 LUMINAIRE
- HDPE CONDUIT SCH 40 UNLESS SPECIFIED
- EXISTING PVC CONDUIT
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM - MAST ARM
- VAULT TO BE INSTALLED
- STREET LIGHTING (XLP) CABLE INSTALLED
- STREET LIGHTING 8 AWG 5KV CONCENTRIC CABLE INSTALLED
- (B) - TERMINATE ON BLACK
- (R) - TERMINATE ON RED
- MONOTUBE MAST ARM BASE TO BE INSTALLED WITH 6 FT. STEEL ARMS 1- 2LED3 LUMINAIRES 1- 2#12UF W/GND RISER CABLE & 5A FAST ACTING FUSE

PROJECT NO: 2984–21–71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING	SHEET 34	E

2

CONTINUED BOTTOM RIGHT

142 | 145
17"X30"X24"
TR PULL BOX
3" PVC TO CONCRETE
BASE STUB OUT
STA.57+88.0;23'RT

124 | 146
#2676 Ⓑ
30' BOLT DOWN AL
TRANSFORMER BASE
TYPE 5 CONC. BASE
6' ARM, 3LED3 LUM.
3#12UF INTERNAL RISER
STA.57+90.0;24'RT

4#2/1#8XLPE
CIR.T30N-B

17"X30"X24"
TR PULL BOX
(METER PED)

4#2/1#8XLPE
CIR.T30N-B

113 | 142 | 145
13"X24"X24"
PULL BOX
OVER EXIST. ITEM (LTP CABLE)
1.5" FLEX TO CABLE SLOT
8' GRND ROD
STA.61+24.0;23'RT

108 | 146
#2734 Ⓑ
26' DIRECT BURY CONC.
6' ARM, 3LED3 LUM.
3#12UF INTERNAL RISER
REMOVE WIRING PEDESTAL
STA.61+22.0;24'RT

N

POLE ADDRESS SILVER ON BLACK
TRAFFIC
CURB
ADDRESS LOCATION
PLACE ADDRESS 6'-0" ABOVE FINISHED GRADE
CONTRACTOR FUNISHED AND INSTALLED

N. 35th ST.

LINE SE 1/4 SEC. 13-7-21

4#2/1#8XLPE
CIR.T30N-B

3.0" HDPE
SCH.40 | 100

124 | 146
#3602 Ⓑ
30' BOLT DOWN AL
TRANSFORMER BASE
TYPE 5 CONC. BASE
6' ARM, 3LED3 LUM.
3#12UF INTERNAL RISER
STA.58+62.0;49'RT

#2702 Ⓡ
TYPE 10 MONOTUBE
TYPE 10 BASE
6' MITCHELL ARM
UTILITY 3LED3
3#12UF INTERNAL RISER

100 2EA.-3.0" HDPE
SCH.40
(TR & SL)

3.0" HDPE
SCH.40 | 100

CAUTION
240/480V
LTP CABLE
NEW T30N-B
TO REMIAN
IN SERVICE

3.0" HDPE SCH.40
WITH PULL ROPE | 100

142 | 145
17"X30"X24"
TR PULL BOX
3" PVC TO CONCRETE
BASE STUB OUT

4#2/1#8XLPE
CIR.T30N-B

#3439 Ⓡ
TYPE 10 MONOTUBE
TYPE 10 BASE
6' MITCHELL ARM
UTILITY 3LED3
3#12UF INTERNAL RISER

3.0" HDPE
SCH.40 | 100

112 | 142 | 145
13"X24"X24"
PULL BOX
1.5" FLEX TO CABLE SLOT
8' GRND ROD
STA.58+62.0;128'RT

Ⓑ #3414 | 108 | 146
26' DIRECT BURY CONC.
6' ARM, 3LED3 LUM.
3#12UF INTERNAL RISER
STA.58+8.0;218'RT

108 | 146
#2719 Ⓡ
26' DIRECT BURY CONC.
6' ARM, 3LED3 LUM.
3#12UF INTERNAL RISER
REMOVE WIRING PEDESTAL
STA.58+61.0;130'RT

W. CENTER ST.

ASPHALT CONCRETE

EXISTING
3#6/1#8LTP
CIR.T30N-D

113 | 142 | 145
13"X24"X24"
PULL BOX
OVER EXIST. ITEM (LTP CABLE)
1.5" FLEX TO CABLE SLOT
8' GRND ROD
STA.58+9.0;220'RT

NOTE:

GENERAL NOTES MUST BE FOLLOWED WHEN INSTALLING MATERIALS FOR STREET LIGHTING AND TRAFFIC SIGNALS.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

ALL PURPOSE ANTISEIZE (OR EQUIV) TO BE APPLIED ON ALL BOLTS AND SCREWS ESPECIALLY THE LIGHT POLE HAND HOLE PANEL. OXIDE INHIBITOR OX-4 (OR EQUIV) TO BE APPLIED ON ALL WIRE CONNECTION AND WIRE NUTS. TAG ALL CABLE DIRECTION IN VAULT AND HAND HOLE PANEL.

TYPE 3 LIGHT DISTRIBUTION UNLESS OTHERWISE SPECIFIED.

5A INLINE FUSE HOT LEG ONLY (R OR B) AT EACH HANDHOLE.

LEGEND

- EXISTING LUMINAIRE & ARM TO BE REMOVED FROM WOOD POLE
- EXISTING STREET LIGHT POLE WITH WIRING PEDESTAL ARM & LUMINAIRE TO BE REMOVED
- NEW STREET LIGHT POLE 6' ARM, UTILITY 2LED3 LUMINAIRE
- HDPE CONDUIT SCH 40 UNLESS SPECIFIED
- EXISTING PVC CONDUIT
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- MAST ARM (XX' ARM)
- VAULT TO BE INSTALLED
- STREET LIGHTING (XLP) CABLE INSTALLED
- STREET LIGHTING 8 AWG 5KV CONCENTRIC CABLE INSTALLED
- (B) TERMINATE ON BLACK
- (R) TERMINATE ON RED
- MONOTUBE MAST ARM BASE TO BE INSTALLED WITH 6 FT. STEEL ARMS 1- 2LED3 LUMINAIRES 1- 2#12UF W/GND RISER CABLE & 5A FAST ACTING FUSE

Ⓑ EXISTING #2640 | 108 | 146
26' DIRECT BURY CONC.
6' ARM, 3LED3 LUM.
3#12UF INTERNAL RISER
STA.57+00.0;24'RT

4#2/1#8XLPE
CIR.T30N-B

CONTINUED TOP LEFT

240/480V
LTP CABLE
CIR.T30N-D
TO BE DISCONTINUED

112 | 142 | 145
13"X24"X24"
PULL BOX
1.5" FLEX TO CABLE SLOT
8' GRND ROD
STA.56+98.0;23'RT

3.0" HDPE
SCH.40 | 100

SCALE, FEET 0 30

PROJECT NO: 2984–21–71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING	SHEET 35	E

TRAFFIC SIGNAL GENERAL NOTES:

1 PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

2 THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

3 TRAFFIC SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

4 ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY TRAFFIC ENGINEERING.

5 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

6 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF TRAFFIC FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE TRAFFIC DESIGN WITHOUT THE TRAFFIC ENGINEERS SIGNED APPROVAL.

7 LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW TRAFFIC, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

8 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 6 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

9 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE) IF THE CONTRACTOR DOES ANY DEVIATION FROM THE TRAFFIC DESIGN WITHOUT THE TRAFFIC ENGINEERS SIGNED APPROVAL.

10 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

11 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

12 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

13 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.

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

15 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

16 PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

18 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

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

20 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE TRAFFIC ENGINEER.

TRAFFIC SIGNAL GENERAL NOTES:

2

21 MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE TRAFFIC ENGINEER.

22 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED. COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

23 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

23 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

24 PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

25 PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

26 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE. INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.

27 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

28 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.

29 ON ALL NEW STREET LIGHT POLES A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

30 ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

31 ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

32 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE TRAFFIC. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

33 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

34 CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS FOR ALL WORK BEING DONE DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE (.PDF FORMAT) COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

2

TRAFFIC SIGNAL GENERAL NOTES:

AS-BUILT GUIDELINES:

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

UPON PROJECT COMPLETION, FOLLOW THE WISDOT REQUIREMENTS PER CMM 165.12 AS-BUILT PLANS, THE PROJECT ENGINEER AND/OR ELECTRICAL CONTRACTOR SHALL SUBMIT AN ELECTRONIC AS-BUILT PLAN. ANY CHANGES FROM THE AS-LET PLAN THAT WERE BUILT INTO THE PROJECT SHOULD BE RECORDED IN RED USING ADOBE ACROBAT PROFESSIONAL OR EQUIVALENT SOFTWARE. DO NOT SCAN FIELD NOTES TO CREATE THE DIGITAL AS-BUILT PLAN.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.
  FOR EXAMPLE:
  REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION:
  AS-BUILT DRAWING
  SUPERVISOR:
  PROJECT MANAGER:
  CONTRACTOR LEADER:
  CONTRACTOR COMAPNY:
  WORK STARTED:
  WORK COMPLETED:

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED. DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.

- STREET NAMES SHALL BE ON ALL SHEETS.

- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.

- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3').
  ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")

- SHOW LOCATION AND ELEVATIONS ON CONDUIT AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.

- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.

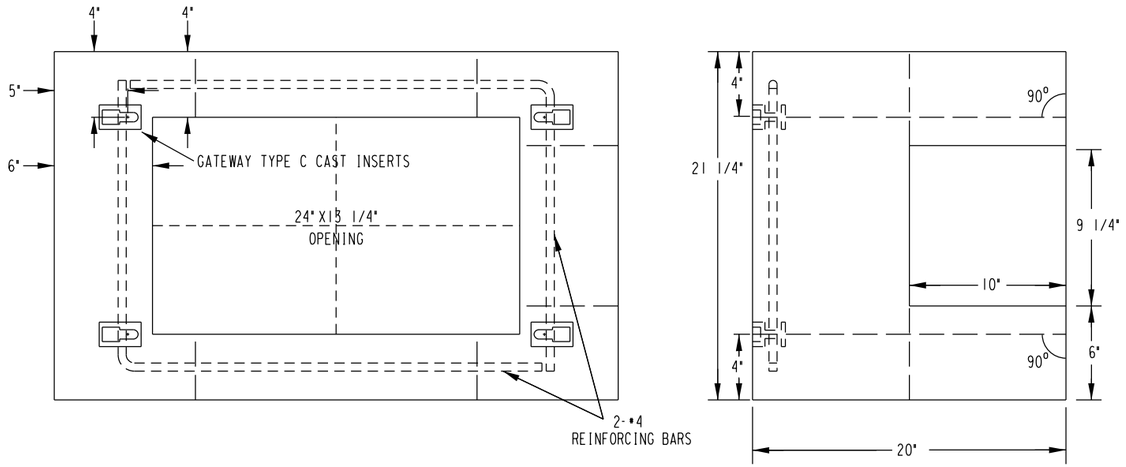
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.

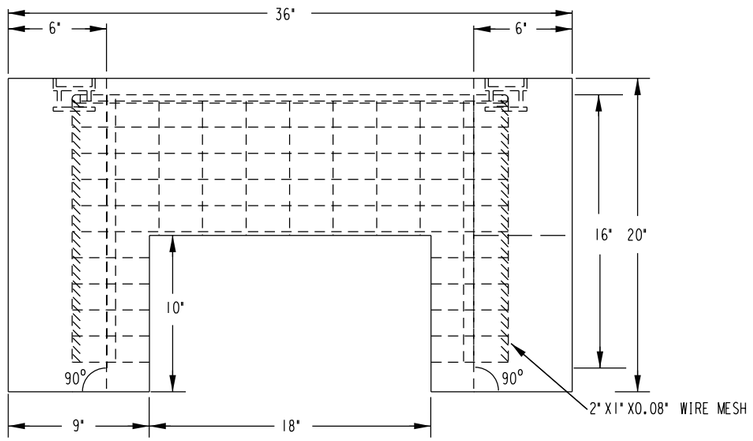
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH ALL OTHER REQUIRED AS-BUILT INFORMATION.

BY MAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
841 NORTH BROADWAY, ROOM 701
MILWAUKEE, WISCONSIN 53202

BY EMAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
PKELTN@MILWAUKEE.GOV





NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE XXXX-XXX PRE-CAST CONCRETE FOUNDATION TRAFFIC SIGNAL CABINETS P1 AND P2				
TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 8-30-16	SCALE N.T.S.	DRAWN JAB/JOZ	CHECKED SCR	APPROVED JCB
SUPERSEDES	REVISED DATE	DRG.		
SUPERSEDED BY	NEW DRG.	C-16-500-T		

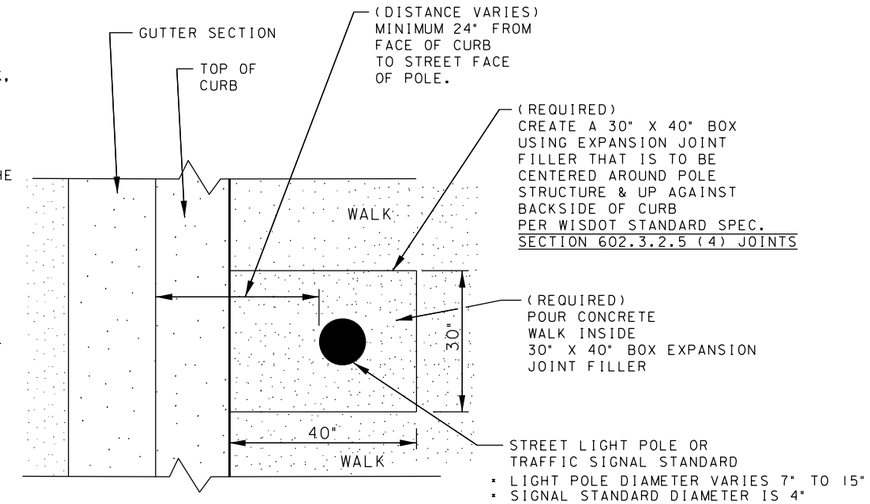
125 DETAIL

TYPICAL TRAFFIC CONTROL CABINET CONRETE FOUNDATION

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC SIGNAL FORCES.
CONTACT DISPATCHER AT (414) 286-3687 FOR SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.



122 DETAIL VERSION #1

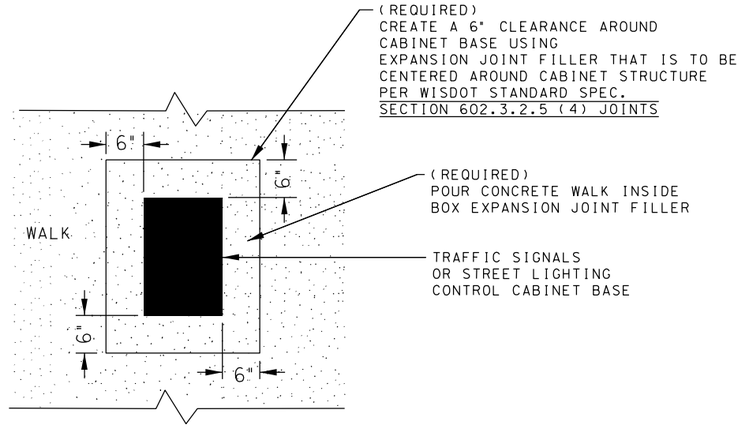
TYPICAL BOX EXPANSION JOINT FILLER AROUND TRAFFIC SIGNAL OR STREET LIGHTING CONTROL FACILITIES

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.

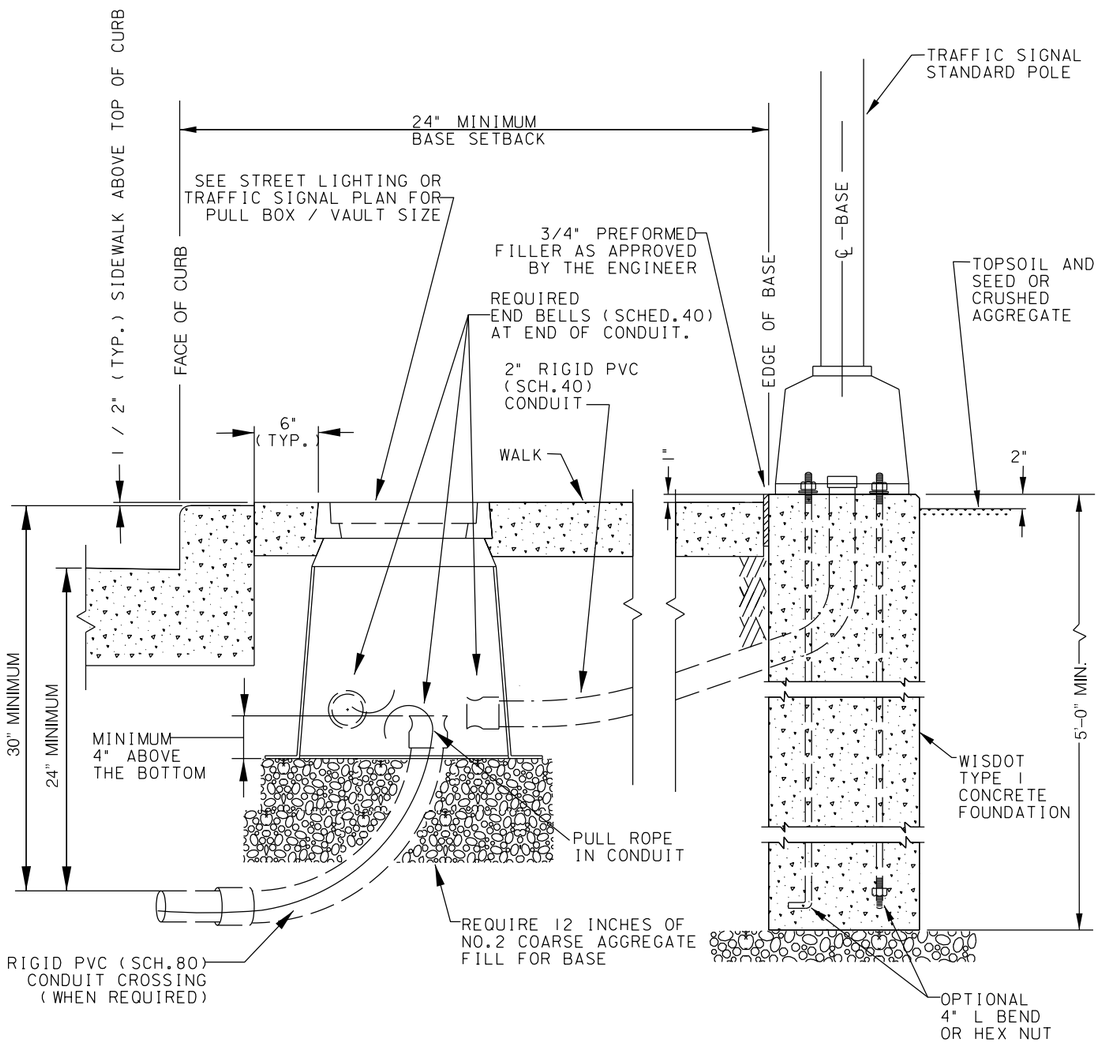


122 DETAIL VERSION #2

TYPICAL BOX EXPANSION JOINT FILLER AROUND TRAFFIC SIGNAL OR STREET LIGHTING CONTROL CABINET

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

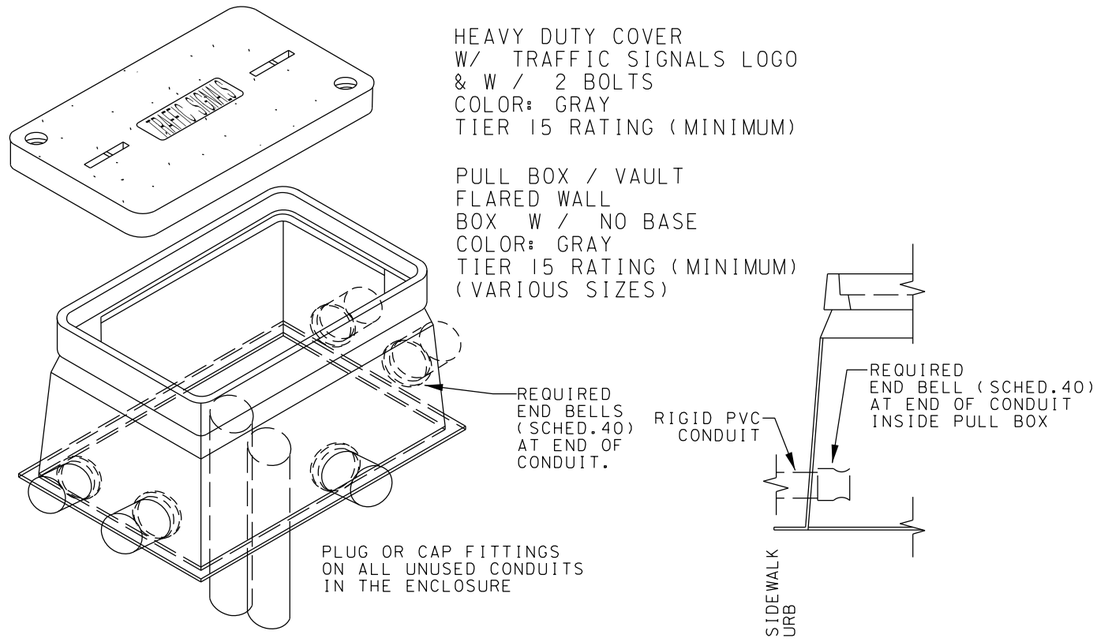


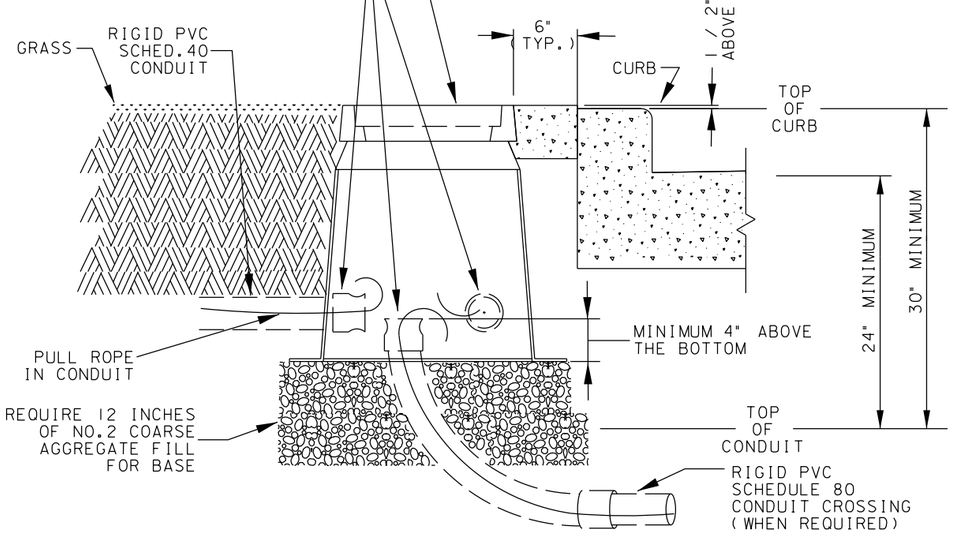
109 DETAIL

TYPICAL CONDUIT INSTALLATION FROM PULL BOX / VAULT TO SIGNAL STANDARD AND TYPICAL BASE INSTALLATION

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE





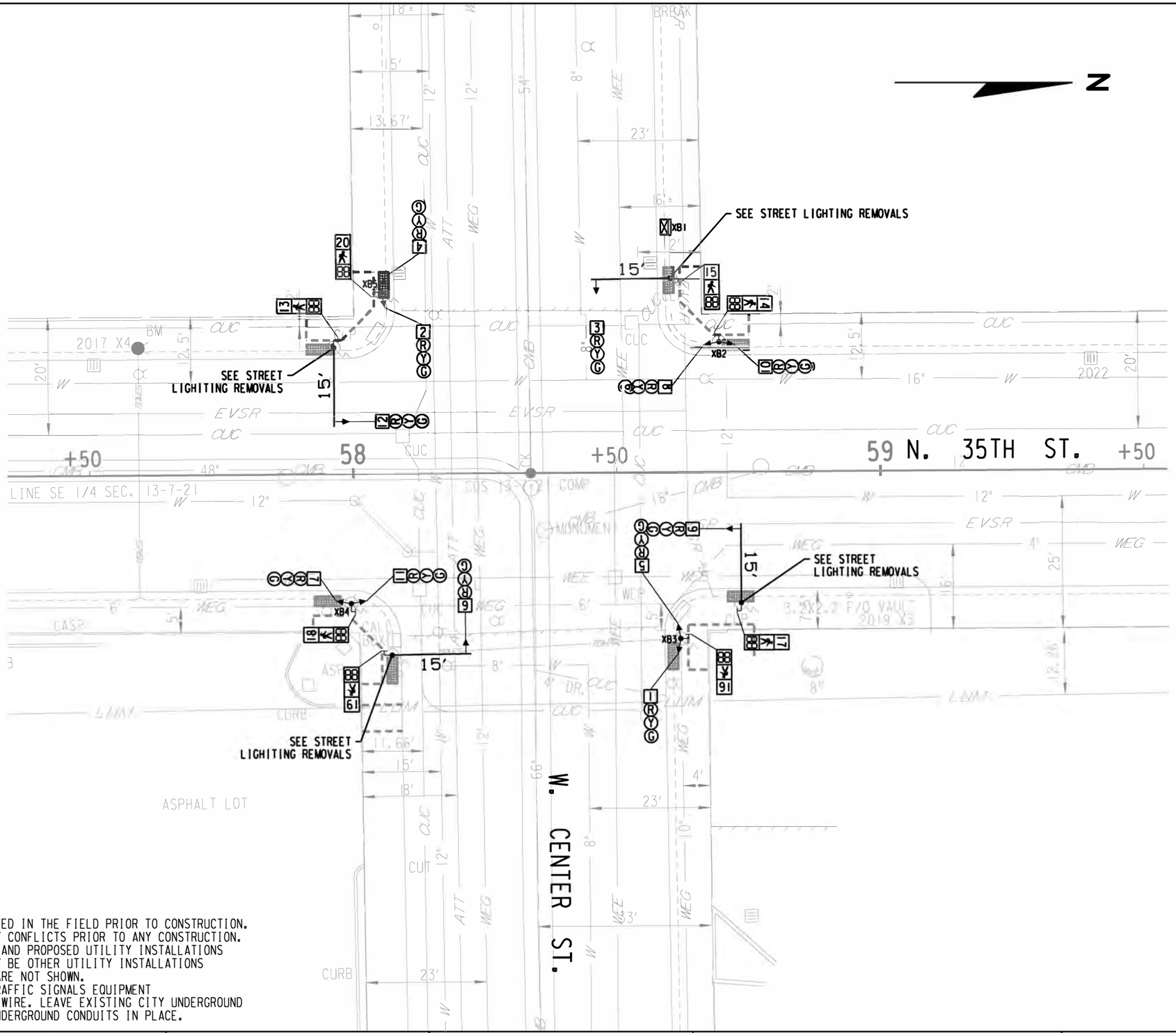
112 DETAIL

TYPICAL PULL BOX / VAULT INSTALLATION IN EITHER PAVEMENT OR GRASS AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

2

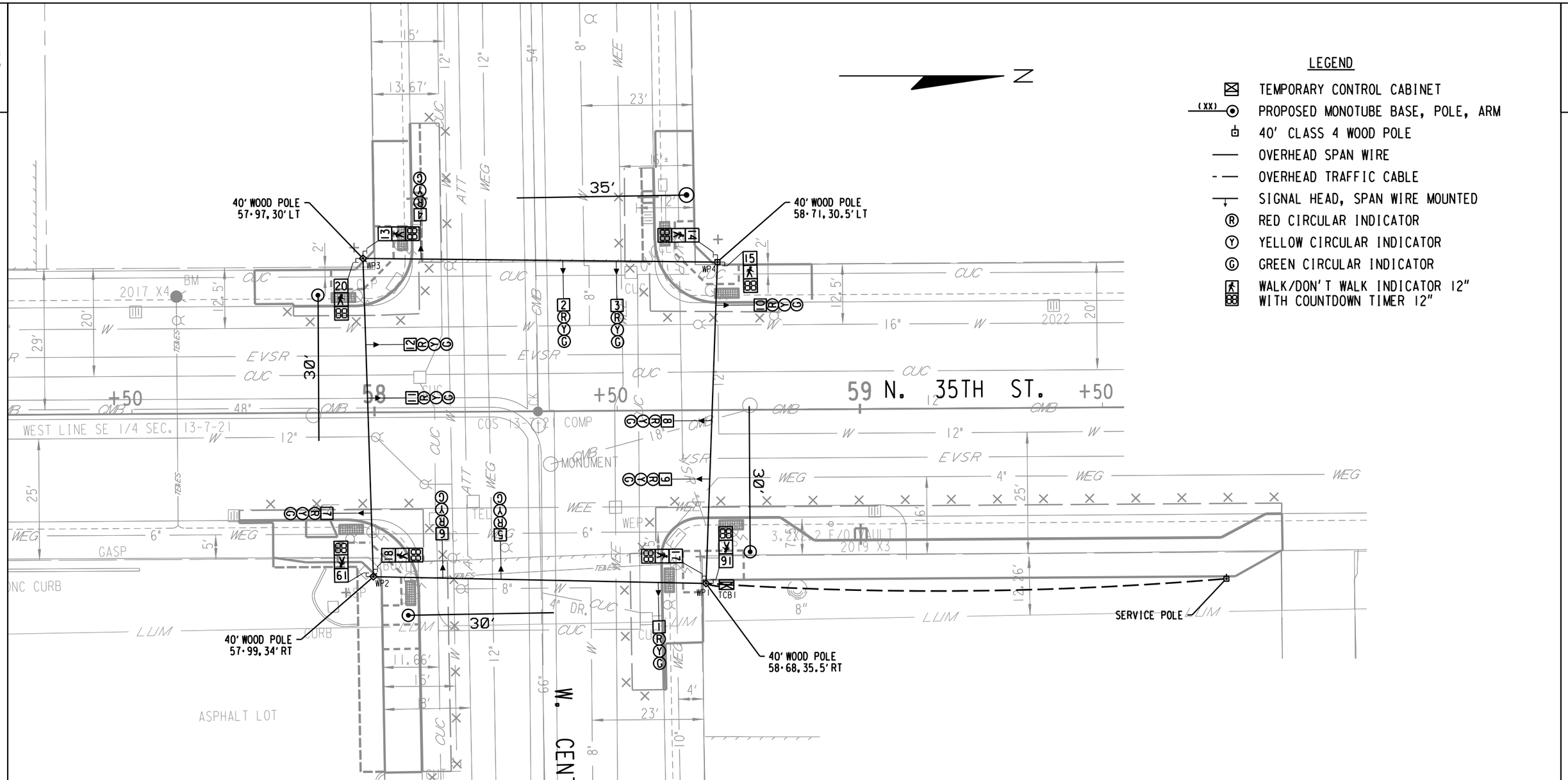


CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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. REMOVE ALL ABOVE-GROUND TRAFFIC SIGNALS EQUIPMENT
4. REMOVE ALL CONDUCTORS AND WIRE. LEAVE EXISTING CITY UNDERGROUND CONDUIT (CUC) AND OTHER UNDERGROUND CONDUITS IN PLACE.

PROJECT NO: 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SCALE FEET 0 20	SHEET 40	E

2



LEGEND

- TEMPORARY CONTROL CABINET
- (XX) PROPOSED MONOTUBE BASE, POLE, ARM
- 40' CLASS 4 WOOD POLE
- OVERHEAD SPAN WIRE
- OVERHEAD TRAFFIC CABLE
- SIGNAL HEAD, SPAN WIRE MOUNTED
- Ⓡ RED CIRCULAR INDICATOR
- Ⓨ YELLOW CIRCULAR INDICATOR
- Ⓖ GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"

CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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. TEMPORARY TRAFFIC SIGNALS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
4. ADJUST LOCATIONS OF THE MOVEABLE SIGNALS TO ACCOMODATE TRAFFIC DURING STAGING.
5. CITY OF MILWAUKEE SHALL BE NOTIFIED 5 WORKING DAYS PRIOR TO TEMPORARY TRAFFIC SIGNALS TRANSITION

TEMPORARY TRAFFIC CONTROL SIGNAL
W. CENTER ST. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:

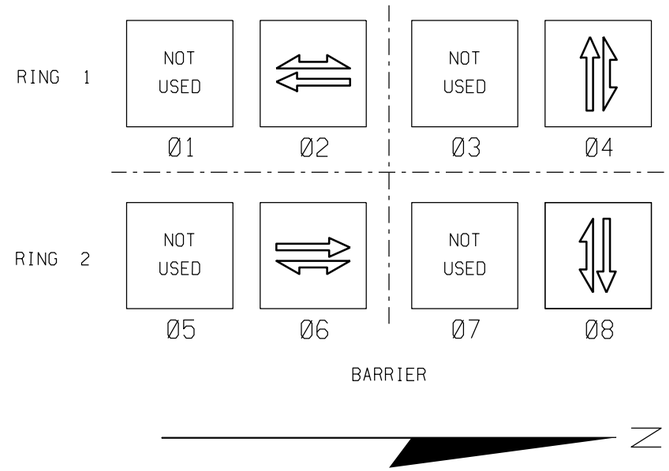
REGIONAL CONTACT: SCOTT REINBACHER
DESIGNED BY: JOZ
REVISED BY:

PAGE NO. 1 OF 1

PROJECT NO: 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL TEMPORARY PLAN	SCALE FEET 0 20	SHEET 41 E

	HEAD NUMBERS	FLASH
Ø2	10,11,12	R
Ø4	1,2,3	R
Ø6	7,8,9	R
Ø8	4,5,6	R
Ø2P	13,14	
Ø4P	15,16	
Ø6P	17,18	
Ø8P	19,20	

SEQUENCE OF OPERATION



CONTROLLER LOGIC

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

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- -	

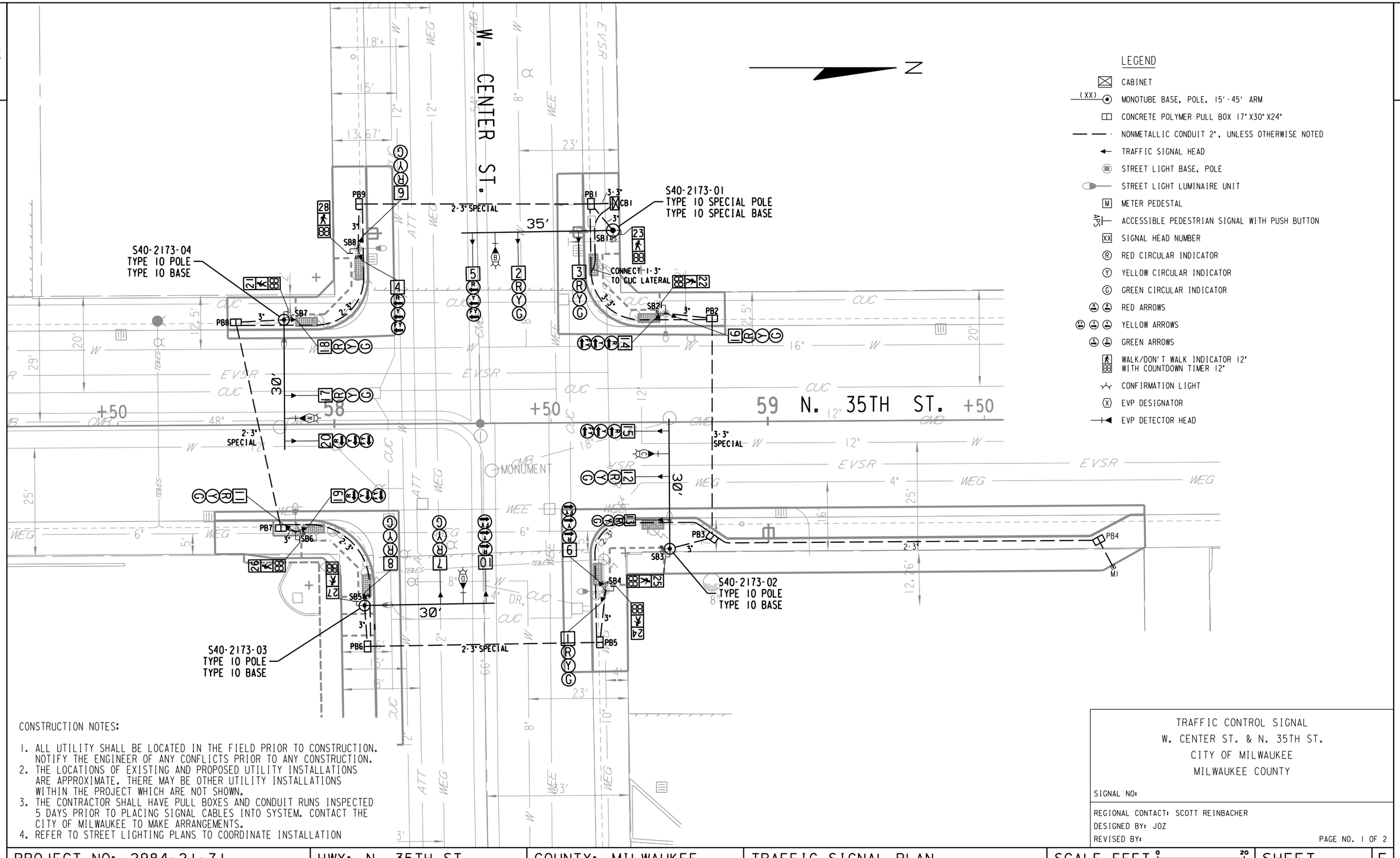
TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

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

W. CENTER ST. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TEMP
	CONTROLLER TYPE: TEMP
DATE: 2/2025	PAGE NO. 2 OF 2

2



LEGEND

- CABINET
- (XX) MONOTUBE BASE, POLE, 15'-45' ARM
- CONCRETE POLYMER PULL BOX 17"X30"X24"
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- TRAFFIC SIGNAL HEAD
- STREET LIGHT BASE, POLE
- STREET LIGHT LUMINAIRE UNIT
- M METER PEDESTAL
- APS ACCESSIBLE PEDESTRIAN SIGNAL WITH PUSH BUTTON
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROWS
- YELLOW ARROWS
- GREEN ARROWS
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"
- CONFIRMATION LIGHT
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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 CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 DAYS PRIOR TO PLACING SIGNAL CABLES INTO SYSTEM. CONTACT THE CITY OF MILWAUKEE TO MAKE ARRANGEMENTS.
4. REFER TO STREET LIGHTING PLANS TO COORDINATE INSTALLATION

TRAFFIC CONTROL SIGNAL
W. CENTER ST. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:

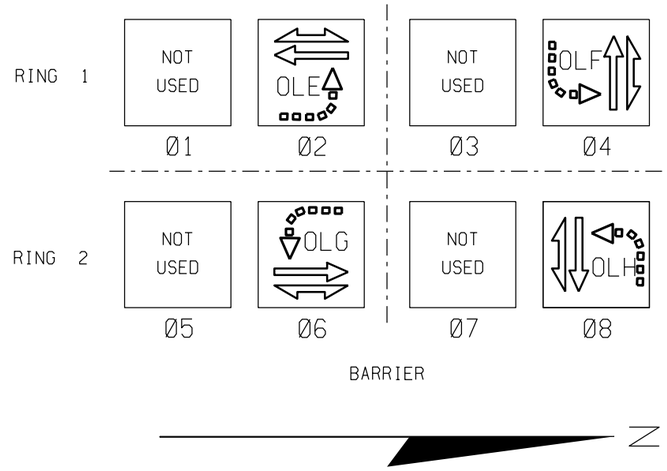
REGIONAL CONTACT: SCOTT REINBACHER
DESIGNED BY: JOZ
REVISED BY:

PAGE NO. 1 OF 2

PROJECT NO: 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SCALE FEET 0 20	SHEET 43	E

	HEAD NUMBERS	FLASH
Ø2	16,17,18	R
OLE	14,15	R
Ø4	1,2,3	R
OLF	9,10	R
Ø6	11,12,13	R
OLG	19,20	R
Ø8	6,7,8	R
OLH	4,5	R
Ø2P	21,22	
Ø4P	23,24	
Ø6P	25,26	
Ø8P	27,28	

SEQUENCE OF OPERATION



CONTROLLER LOGIC

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

OVERLAPS

O.L.	"E"	=	NB	FYA
O.L.	"F"	=	EB	FYA
O.L.	"G"	=	SB	FYA
O.L.	"H"	=	WB	FYA

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	X
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- .	

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL	
	A/C	B/D
MOVEMENT	⇄	⇅
PHASE	2-6	4-8

W. CENTER ST. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TS2
	CONTROLLER TYPE: ECONOLITE
DATE: 2/2025	PAGE NO. 2 OF 2

PROJECT ID:	2984-21-71
INTERSECTION:	N. 35TH ST. & W. CENTER ST.

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

DATE: 4/7/2024

CB TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON
					RED	YELLOW	GREEN	<RED	<YELLOW>	<FLASH YELLOW>	D/WALK	WALK	
SB1		21	2	4	RED	ORG	GRN						
			3	4	RED/BLK	ORG/BLK	GRN/BLK						
			5	OLH				RED/WHT	BLU/WHT	GRN/WHT			
			23	4							BLU	BLK	
			APS	2									BLK/WHT
			PUSH BUTTON	2									WHT/BLK
SB2		19	14	OLE				RED	ORG	GRN			
			16	2	RED/BLK	ORG/BLK	GRN/BLK						
			22	2							BLU	BLK	
			APS	4									BLK/WHT
			PUSH BUTTON	4									WHT/BLK
SB3		21	12	6	RED	ORG	GRN						
			13	6	RED/BLK	ORG/BLK	GRN/BLK						
			15	OLE				RED/WHT	BLU/WHT	GRN/WHT			
			25	6							BLU	BLK	
			APS	4									BLK/WHT
			PUSH BUTTON	4									WHT/BLK
SB4		19	1	4	RED	ORG	GRN						
			9	OLF				RED/BLK	ORG/BLK	GRN/BLK			
			24	4							BLU	BLK	
			APS	6									BLK/WHT
			PUSH BUTTON	6									WHT/BLK
SB5		21	7	8	RED	ORG	GRN						
			8	8	RED/BLK	ORG/BLK	GRN/BLK						
			10	OLF				RED/WHT	BLU/WHT	GRN/WHT			
			27	8							BLU	BLK	
			APS	6									BLK/WHT
			PUSH BUTTON	6									WHT/BLK
SB6		19	11	6	RED	ORG	GRN						
			19	OLG				RED/BLK	ORG/BLK	GRN/BLK			
			26	6							BLU	BLK	
			APS	8									BLK/WHT
			PUSH BUTTON	8									WHT/BLK
SB7		21	17	2	RED	ORG	GRN						
			18	2	RED/BLK	ORG/BLK	GRN/BLK						
			20	OLG				RED/WHT	BLU/WHT	GRN/WHT			
			21	2							BLU	BLK	
			APS	8									BLK/WHT
			PUSH BUTTON	8									WHT/BLK
SB8		19	4	OLH				RED	ORG	GRN			
			6	8	RED/BLK	ORG/BLK	GRN/BLK						
			28	8							BLU	BLK	
			APS	2									BLK/WHT
			PUSH BUTTON	2									WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR
10 AWG GRN XLP

FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

EMERGENCY VEHICLE PREEMPTION AND UF 2-12 CONFIRMATION

FROM	TO
CB1	SB1
SB1	HEAD B
CB1	SB3
SB3	HEAD C
CB1	SB5
SB5	HEAD D
CB1	SB7
SB7	HEAD A

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS. TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDU
4. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.
5. SPV.0090.307 IS WIRED FROM CONTROLLER CABINET TO METER PEDESTAL

2

N

W. CENTER ST.

N. 35TH ST.

EXISTING CUC MANHOLE 611
STA. 58+11.5, 10.0' LT.

EXISTING CUC MANHOLE 612
STA. 58+12.5, 22.0' RT.

ADJUST CUC MANHOLE COVER
EXISTING CUC MANHOLE 613
STA. 58+53, 28.5' LT.

ADJUST CUC MANHOLE COVER
EXISTING CUC MANHOLE 614
STA. 58+55.5, 44.0' RT.

13.67'

11.66'

23'

4"CT

4"DRAIN

3"FD

4"PVC

CUC

57 +50 58 +50 59 +50 60

NOTES:

1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.

LEGEND

- EXISTING CUC MANHOLE
- CUC — EXISTING CONDUIT
- CONDUIT TO BE ABANDONED

SHEET 1 OF 1

PROJECT NO: 2984-21-71	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT PLAN	SCALE FEET 0 20	SHEET 46	E

2

STAGE 1:

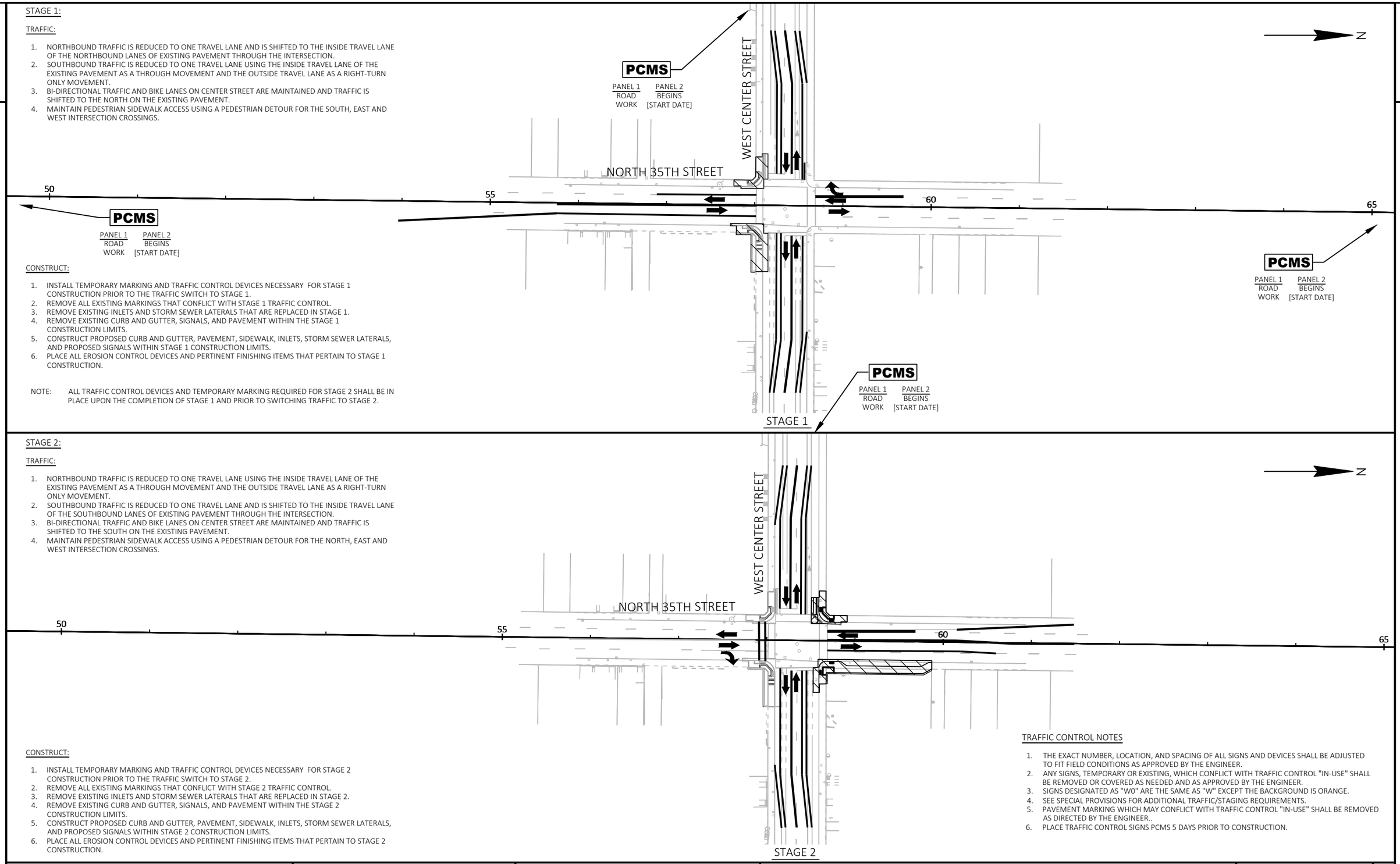
TRAFFIC:

1. NORTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE AND IS SHIFTED TO THE INSIDE TRAVEL LANE OF THE NORTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
2. SOUTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE USING THE INSIDE TRAVEL LANE OF THE EXISTING PAVEMENT AS A THROUGH MOVEMENT AND THE OUTSIDE TRAVEL LANE AS A RIGHT-TURN ONLY MOVEMENT.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON CENTER STREET ARE MAINTAINED AND TRAFFIC IS SHIFTED TO THE NORTH ON THE EXISTING PAVEMENT.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE SOUTH, EAST AND WEST INTERSECTION CROSSINGS.

CONSTRUCT:

1. INSTALL TEMPORARY MARKING AND TRAFFIC CONTROL DEVICES NECESSARY FOR STAGE 1 CONSTRUCTION PRIOR TO THE TRAFFIC SWITCH TO STAGE 1.
2. REMOVE ALL EXISTING MARKINGS THAT CONFLICT WITH STAGE 1 TRAFFIC CONTROL.
3. REMOVE EXISTING INLETS AND STORM SEWER LATERALS THAT ARE REPLACED IN STAGE 1.
4. REMOVE EXISTING CURB AND GUTTER, SIGNALS, AND PAVEMENT WITHIN THE STAGE 1 CONSTRUCTION LIMITS.
5. CONSTRUCT PROPOSED CURB AND GUTTER, PAVEMENT, SIDEWALK, INLETS, STORM SEWER LATERALS, AND PROPOSED SIGNALS WITHIN STAGE 1 CONSTRUCTION LIMITS.
6. PLACE ALL EROSION CONTROL DEVICES AND PERTINENT FINISHING ITEMS THAT PERTAIN TO STAGE 1 CONSTRUCTION.

NOTE: ALL TRAFFIC CONTROL DEVICES AND TEMPORARY MARKING REQUIRED FOR STAGE 2 SHALL BE IN PLACE UPON THE COMPLETION OF STAGE 1 AND PRIOR TO SWITCHING TRAFFIC TO STAGE 2.



STAGE 2:

TRAFFIC:

1. NORTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE USING THE INSIDE TRAVEL LANE OF THE EXISTING PAVEMENT AS A THROUGH MOVEMENT AND THE OUTSIDE TRAVEL LANE AS A RIGHT-TURN ONLY MOVEMENT.
2. SOUTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE AND IS SHIFTED TO THE INSIDE TRAVEL LANE OF THE SOUTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON CENTER STREET ARE MAINTAINED AND TRAFFIC IS SHIFTED TO THE SOUTH ON THE EXISTING PAVEMENT.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE NORTH, EAST AND WEST INTERSECTION CROSSINGS.

CONSTRUCT:

1. INSTALL TEMPORARY MARKING AND TRAFFIC CONTROL DEVICES NECESSARY FOR STAGE 2 CONSTRUCTION PRIOR TO THE TRAFFIC SWITCH TO STAGE 2.
2. REMOVE ALL EXISTING MARKINGS THAT CONFLICT WITH STAGE 2 TRAFFIC CONTROL.
3. REMOVE EXISTING INLETS AND STORM SEWER LATERALS THAT ARE REPLACED IN STAGE 2.
4. REMOVE EXISTING CURB AND GUTTER, SIGNALS, AND PAVEMENT WITHIN THE STAGE 2 CONSTRUCTION LIMITS.
5. CONSTRUCT PROPOSED CURB AND GUTTER, PAVEMENT, SIDEWALK, INLETS, STORM SEWER LATERALS, AND PROPOSED SIGNALS WITHIN STAGE 2 CONSTRUCTION LIMITS.
6. PLACE ALL EROSION CONTROL DEVICES AND PERTINENT FINISHING ITEMS THAT PERTAIN TO STAGE 2 CONSTRUCTION.

TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. 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.
3. SIGNS DESIGNATED AS "WO" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
4. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
5. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER..
6. PLACE TRAFFIC CONTROL SIGNS PCMS 5 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL OVERVIEW (CENTER)	SHEET 47	E

2

2

NORTH 36TH STREET

N

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

DETOUR
M4-9BL
30"X24"

DETOUR
M4-9BR
30"X24"

WEST CLARK STREET

END ROAD WORK
G20-2A
48"X24"

RIGHT LANE CLOSED AHEAD
W20-5A

ROAD WORK AHEAD
W20-1A

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

DETOUR
M4-9BL
30"X24"

200'

200'

W04-2R

NORTH 35TH STREET

51+00

52+00

53+00

54+00

55+00

56+00

WO1-6
48" X 24"
TYPE III BARRICADE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

6WT

25' (TYP.)

180' MERGING TAPER

+76

11'

25' (TYP.)

4DYT

4WT

12'

+89

57

MATCHLINE 57+00

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (CENTER)	SHEET 48	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\025100_TC_S1_CENTER.DWG
LAYOUT NAME - 025100_S1

PLOT DATE : 10/1/2025 4:46 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

MATCHLINE S1 CENTER

MATCHLINE 57+00

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

DETOUR
M4-9BR
30"X24"

25' (TYP.)

4WT
4DYT
18WT
AT
8WT
CW

12'
11'
10'
5'
120'

58+00
59+00
60+00
61+00
62+00
63+00

NORTH 35TH STREET

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"

ROAD WORK AHEAD
W20-1A
200'

N

END ROAD WORK
G20-2A
48"X24"

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD

W01-4R

60' SHIFTING TAPER

WEST CENTER STREET

PLACE BETWEEN 34TH STREET AND 33RD STREET

NORTH 34TH STREET

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (CENTER)	SHEET 49	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\025100_TC_S1_CENTER.DWG
LAYOUT NAME - 025101_S1

PLOT DATE : 10/1/2025 4:46 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- (A)) TEMPORARY AUDIBLE MESSAGE DEVICES

N

NORTH 36TH STREET

WEST CENTER STREET

ROAD WORK AHEAD
W20-1A

END ROAD WORK
G20-2A
48"X24"

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD

M4-9BL
30"X24"
DETOUR

M4-9BR
30"X24"
DETOUR

M4-9BL
30"X24"
DETOUR

W01-4L

W01-6
48" X 24"
TYPE III BARRICADE

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

4DYT
4WT
4WT
25' (TYP.)
25' (TYP.)
12'
12'
5'
5'
60' SHIFTING TAPER
100' TO CENTER STREET STOP BAR

MATCHLINE S1 CENTER

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (CENTER)	SHEET 50	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\025100_TC_S1_CENTER.DWG
LAYOUT NAME - 025102_S1

PLOT DATE : 10/1/2025 4:46 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

MATCHLINE S2 CENTER

END ROAD WORK
G20-2A
48"X24"
PLACE SOUTH OF CLARK STREET

R9-9
24"X12"
SIDEWALK CLOSED
M4-9BL
30"X24"
DETOUR

4WT
6'
12'
5'
12'
4DYT
18WT
CW
AT

57+00
58+00
59+00
60+00
+15
61+00
+75
62+00
63+00

WO1-4R

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

25' (TYP.)
7'
12'
12'

133' MERGING TAPER
WO1-6
48" X 24"
TYPE III BARRICADE
6WT

200'
200'
200'

WO4-2R

RIGHT LANE CLOSED AHEAD
W20-5A

NORTH 35TH STREET

ROAD WORK AHEAD
W20-1A

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD
M4-9BR
30"X24"
DETOUR
PLACE AT HADLEY STREET

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"
PLACE 200' SOUTH OF BEGIN RIGHT TURN LANE TAPER

ROAD WORK AHEAD
W20-1A
PLACE SOUTH OF CLARK STREET

WO1-4L

120'

12'
12'
6'
5'
25' (TYP.)
25' (TYP.)

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

END ROAD WORK
G20-2A
48"X24"

60' SHIFTING TAPER

WO1-6
48" X 24"
TYPE III BARRICADE

WEST CENTER STREET

WO1-4L

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A
PLACE BETWEEN 34TH STREET AND 33RD STREET

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD
M4-9BL
30"X24"
DETOUR

NORTH 34TH STREET

N

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- ((A)) TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2 (CENTER)	SHEET 51	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\025100_TC_S2_CENTER.DWG
LAYOUT NAME - 025101_S2

PLOT DATE : 10/1/2025 4:46 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

ROAD WORK AHEAD
W20-1A

WEST CENTER STREET

END ROAD WORK
G20-2A
48"X24"

N

NORTH 36TH STREET

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

M4-60D
30"X24"

PLACE AT SW CORNER OF N 36TH STREET AND HADLEY STREET

DETOUR
M4-9BL
30"X24"

DETOUR
M4-9BL
30"X24"

DETOUR
M4-9BR
30"X24"

PLACE AT SE CORNER OF N 36TH STREET AND HADLEY STREET

W01-4R

4DYT
4WT
25' (TYP.)
25' (TYP.)
4WT
60' SHIFTING TAPER
12'
12'
6'
5'
100' TO CENTER STREET STOP BAR

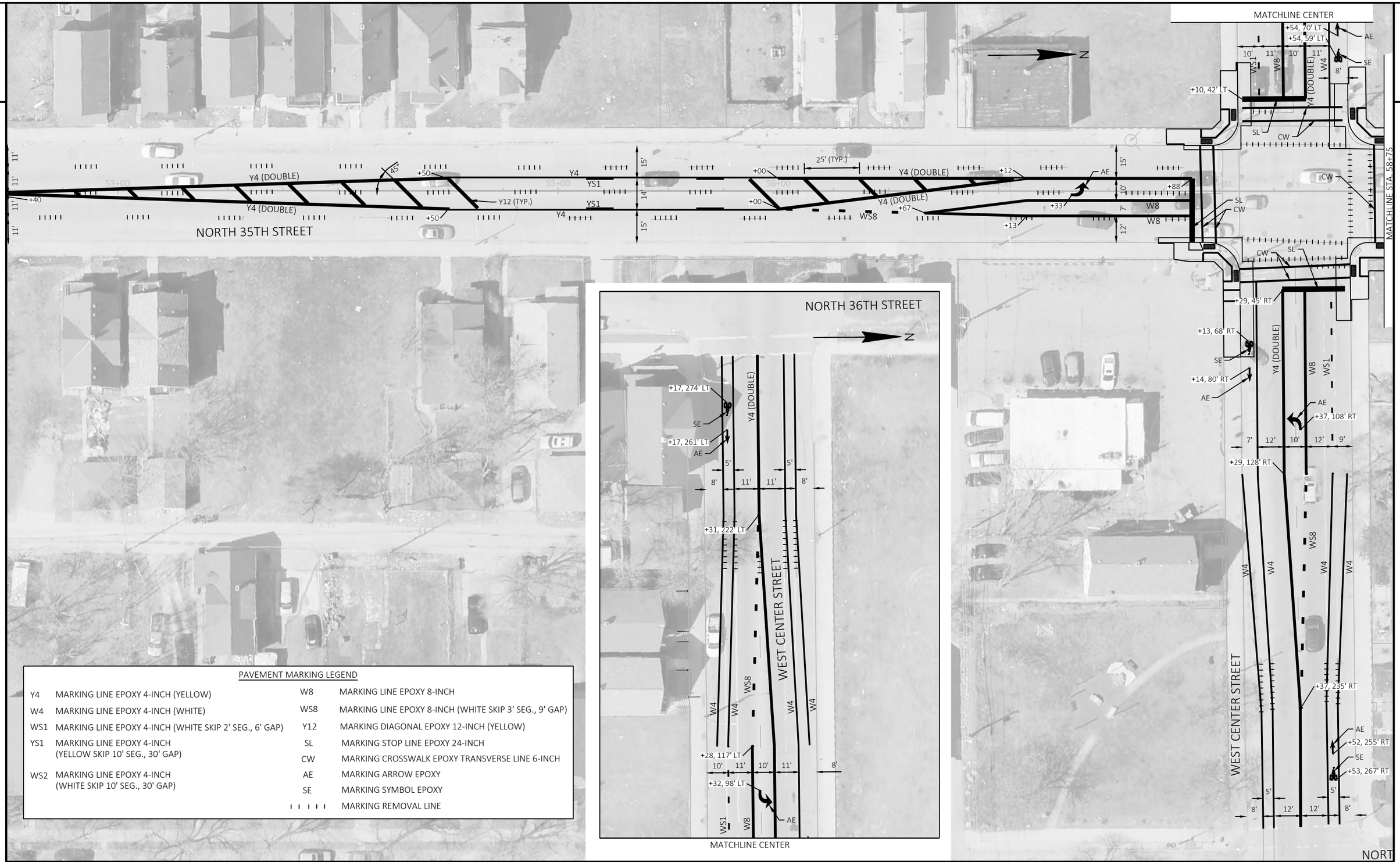
MATCHLINE S2 CENTER

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2 (CENTER)	SHEET 52	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\025100_TC_S2_CENTER.DWG
LAYOUT NAME - 025102_S2

PLOT DATE : 10/1/2025 4:46 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
		CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (CENTER)	SHEET 53	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\024501_PM.DWG
LAYOUT NAME - 024501-pm
PLOT DATE : 4/24/2025 8:43 AM
PLOT BY : WRIGHT, BRANDON
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

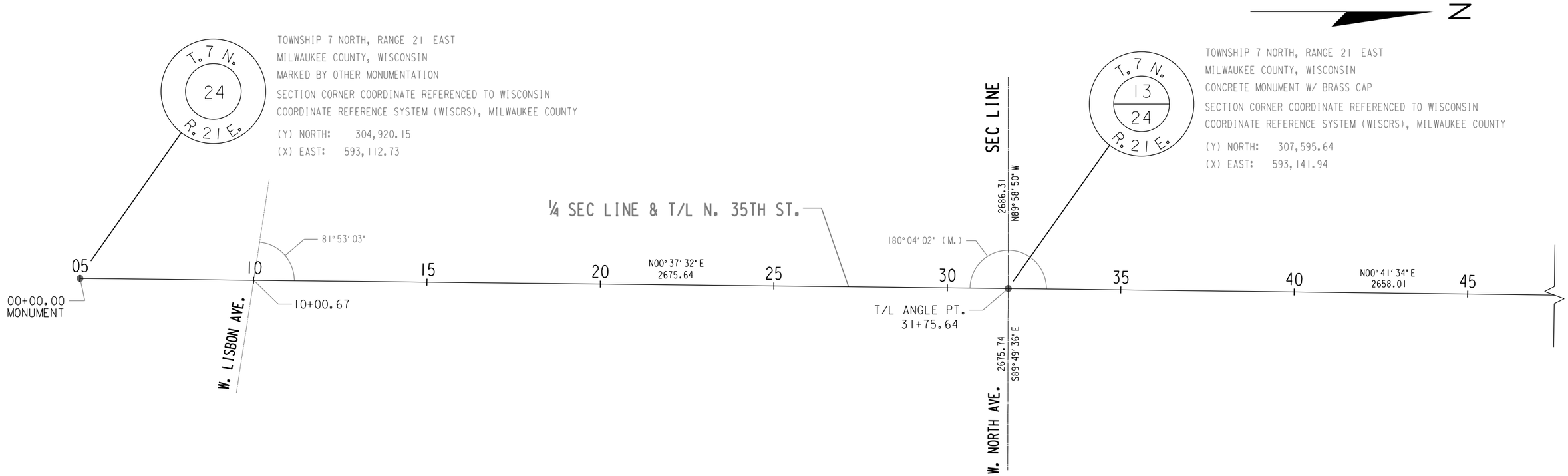


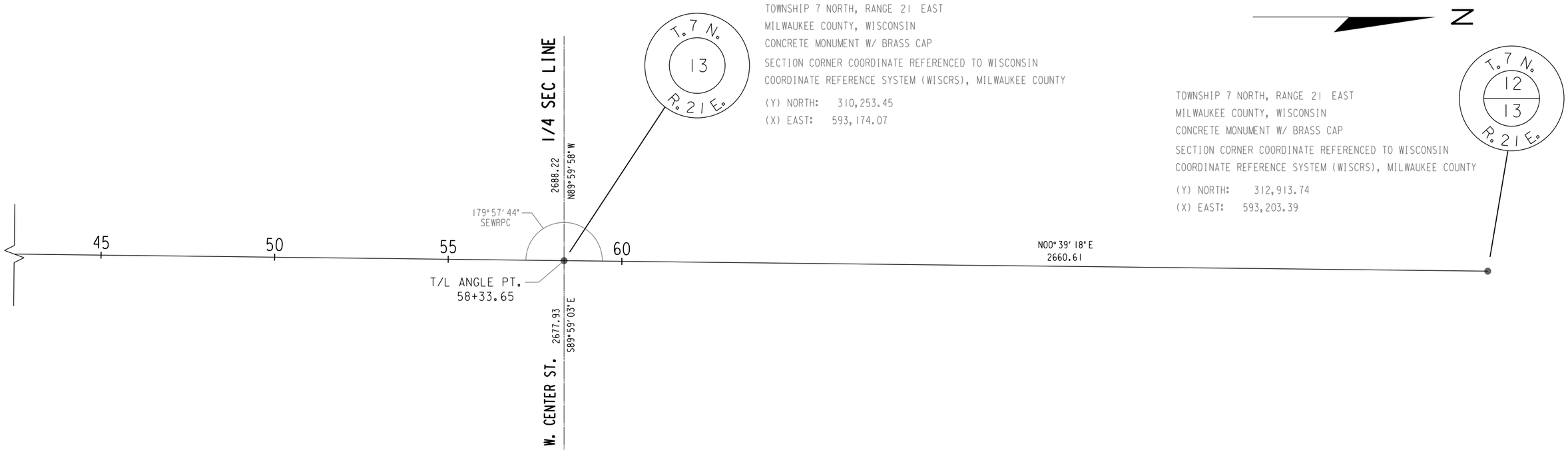
PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
		CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

PROJECT NO: 2984-21-71	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (CENTER)	SHEET 54	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\SHEETS\024501_PM.DWG
LAYOUT NAME - 024502-pm
PLOT DATE : 4/24/2025 8:43 AM
PLOT BY : WRIGHT, BRANDON
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42





PROJECT NO. 2984-21-71	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	ALIGNMENT	SCALE FEET 0' 300'	SHEET NO: 55	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF CENTER-2984-21-01\EXISTING\ALIGNMENT.DGN

REVISED DATE: 08-01-2022 BY SB

2984-21-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	25.000	25.000
0004	201.0220	Grubbing	ID	25.000	25.000
0006	204.0100	Removing Concrete Pavement	SY	110.000	110.000
0008	204.0110	Removing Asphaltic Surface	SY	30.000	30.000
0010	204.0150	Removing Curb & Gutter	LF	200.000	200.000
0012	204.0155	Removing Concrete Sidewalk	SY	320.000	320.000
0014	204.0195	Removing Concrete Bases	EACH	6.000	6.000
0022	204.9090.S	Removing (item description) 001. Aerial Cable	LF	750.000	750.000
0024	205.0100	Excavation Common	CY	38.000	38.000
0026	213.0100	Finishing Roadway (project) 001. 2984-21-71	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	11.000	11.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	24.000	24.000
0034	320.0155	Concrete Base 9-Inch	SY	72.000	72.000
0036	415.0090	Concrete Pavement 9-Inch	SY	130.000	130.000
0038	416.0610	Drilled Tie Bars	EACH	167.000	167.000
0040	416.0620	Drilled Dowel Bars	EACH	12.000	12.000
0042	455.0605	Tack Coat	GAL	6.000	6.000
0044	465.0105	Asphaltic Surface	TON	15.000	15.000
0046	601.0322	Concrete Curb & Gutter 22-Inch	LF	100.000	100.000
0048	601.0331	Concrete Curb & Gutter 31-Inch	LF	262.000	262.000
0050	602.0410	Concrete Sidewalk 5-Inch	SF	2,732.000	2,732.000
0052	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	80.000	80.000
0054	602.0820	Concrete Driveway 8-Inch	SY	27.000	27.000
0056	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	15.000	15.000
0060	611.3225	Inlets 2x2.5-FT	EACH	3.000	3.000
0062	619.1000	Mobilization	EACH	0.400	0.400
0064	624.0100	Water	MGAL	0.200	0.200
0066	625.0100	Topsoil	SY	24.000	24.000
0068	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0072	628.7015	Inlet Protection Type C	EACH	7.000	7.000
0074	628.7020	Inlet Protection Type D	EACH	3.000	3.000
0076	631.0300	Sod Water	MGAL	0.500	0.500
0078	631.1000	Sod Lawn	SY	24.000	24.000
0080	637.2220	Signs Type II Reflective SH	SF	30.000	30.000
0082	642.5201	Field Office Type C	EACH	0.400	0.400
0084	643.0300	Traffic Control Drums	DAY	4,646.000	4,646.000
0086	643.0420	Traffic Control Barricades Type III	DAY	481.000	481.000
0088	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	34.000	34.000
0090	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	34.000	34.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	962.000	962.000
0094	643.0715	Traffic Control Warning Lights Type C	DAY	657.000	657.000
0096	643.0900	Traffic Control Signs	DAY	3,467.000	3,467.000
0098	643.1050	Traffic Control Signs PCMS	DAY	20.000	20.000
0100	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	5,252.000	5,252.000
0102	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	313.000	313.000
0104	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	100.000	100.000
0106	643.3350	Temporary Marking Crosswalk Removable Tape 6-inch	LF	100.000	100.000
0108	643.3550	Temporary Marking Arrow Removable Tape	EACH	3.000	3.000

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Line	Item	Item Description	Unit	Total	Qty
0110	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	116.000	116.000
0112	643.5000	Traffic Control	EACH	0.400	0.400
0114	644.1810	Temporary Pedestrian Barricade	LF	144.000	144.000
0116	644.1900.S	Temporary Audible Message Devices	DAY	704.000	704.000
0118	646.1020	Marking Line Epoxy 4-Inch	LF	6,130.000	6,130.000
0120	646.3020	Marking Line Epoxy 8-Inch	LF	735.000	735.000
0122	646.5020	Marking Arrow Epoxy	EACH	8.000	8.000
0124	646.5220	Marking Symbol Epoxy	EACH	4.000	4.000
0126	646.7120	Marking Diagonal Epoxy 12-Inch	LF	289.000	289.000
0128	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	369.000	369.000
0130	646.9000	Marking Removal Line 4-Inch	LF	2,632.000	2,632.000
0132	646.9002	Marking Removal Line 6-Inch	LF	295.000	295.000
0134	646.9200	Marking Removal Line Wide	LF	32.000	32.000
0136	646.9300	Marking Removal Special Marking	EACH	2.000	2.000
0138	650.4000	Construction Staking Storm Sewer	EACH	3.000	3.000
0140	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	362.000	362.000
0142	650.8501	Construction Staking Electrical Installations (project) 001. 2984-21-71	EACH	1.000	1.000
0146	650.9000	Construction Staking Curb Ramps	EACH	8.000	8.000
0148	650.9500	Construction Staking Sidewalk (project) 001. 2984-21-71	EACH	1.000	1.000
0152	650.9911	Construction Staking Supplemental Control (project) 001. 2984-21-71	EACH	1.000	1.000
0156	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	10.000	10.000
0158	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	965.000	965.000
0160	652.0615	Conduit Special 3-Inch	LF	495.000	495.000
0166	654.0110	Concrete Bases Type 10	EACH	3.000	3.000
0168	654.0120	Concrete Bases Type 10-Special	EACH	1.000	1.000
0170	655.0230	Cable Traffic Signal 5-14 AWG	LF	830.000	830.000
0174	655.0280	Cable Traffic Signal 19-14 AWG	LF	510.000	510.000
0176	655.0290	Cable Traffic Signal 21-14 AWG	LF	515.000	515.000
0178	655.0305	Cable Type UF 2-12 AWG Grounded	LF	1,645.000	1,645.000
0182	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	620.000	620.000
0184	655.0900	Traffic Signal EVP Detector Cable	LF	725.000	725.000
0188	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	5.000	5.000
0190	657.0350	Poles Type 10	EACH	3.000	3.000
0192	657.0352	Poles Type 10-Special	EACH	1.000	1.000
0200	657.0530	Monotube Arms 30-FT	EACH	3.000	3.000
0202	657.0536	Monotube Arms 35-FT-Special	EACH	1.000	1.000
0204	658.0173	Traffic Signal Face 3S 12-Inch	EACH	20.000	20.000
0206	658.0412	Pedestrian Signal Face 12-Inch	EACH	8.000	8.000
0208	658.5070	Signal Mounting Hardware (location) 001. W Center St	EACH	1.000	1.000
0214	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	20.000	20.000
0216	661.0201	Temporary Traffic Signals for Intersections (location) 001. W Center St	EACH	1.000	1.000
0224	690.0150	Sawing Asphalt	LF	68.000	68.000
0226	690.0250	Sawing Concrete	LF	538.000	538.000
0228	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0230	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0232	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	2,400.000
0234	SPV.0060	Special 001. Utility Line Opening	EACH	1.000	1.000
0238	SPV.0060	Special 003. Section Corner Monuments	EACH	1.000	1.000
0242	SPV.0060	Special 102. Inlet Covers Type MS 57	EACH	3.000	3.000

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Line	Item	Item Description	Unit	Total	Qty
0244	SPV.0060	Special 103. Manhole Covers Type MS 58-A	EACH	3.000	3.000
0248	SPV.0060	Special 201. Install City Precast Controller Base	EACH	1.000	1.000
0250	SPV.0060	Special 205. ATC Controller and Cabinet Installed	EACH	1.000	1.000
0252	SPV.0060	Special 212. Fiber Optic Patch Panel	EACH	1.000	1.000
0254	SPV.0060	Special 213. Ethernet Switch	EACH	1.000	1.000
0256	SPV.0060	Special 215. Electrical Service Pedestal	EACH	1.000	1.000
0258	SPV.0060	Special 218. EVP 1 Direction Detector	EACH	4.000	4.000
0260	SPV.0060	Special 221. EVP Phase Selector Card 4 Channel	EACH	1.000	1.000
0262	SPV.0060	Special 223. EVP Confirmation Light	EACH	4.000	4.000
0266	SPV.0060	Special 243 Remove Traffic Signals (W Center St)	EACH	1.000	1.000
0272	SPV.0060	Special 267. Pedestrian Countdown Signal Face 12-Inch	EACH	8.000	8.000
0274	SPV.0060	Special 268. Voice Instruction Audible Pushbutton	EACH	8.000	8.000
0276	SPV.0060	Special 269. Voice Instruction Audible Control Unit	EACH	1.000	1.000
0278	SPV.0060	Special 291. Street Name Sign Mounting Hardware on Mast Arm	EACH	4.000	4.000
0280	SPV.0060	Special 302. Pull Boxes 13-Inch x 24-Inch x 24-Inch	EACH	7.000	7.000
0282	SPV.0060	Special 303. Pull Boxes 17-Inch x 30-Inch x 24-Inch	EACH	9.000	9.000
0284	SPV.0060	Special 310. Remove Poles Complete	EACH	5.000	5.000
0286	SPV.0060	Special 321. Poles Type 30-AL-BD	EACH	5.000	5.000
0288	SPV.0060	Special 324. 40 Ft. Wood Pole	EACH	5.000	5.000
0290	SPV.0060	Special 334. Inline 5A Fast Acting Fuse with Holder	EACH	9.000	9.000
0292	SPV.0060	Special 339. Primary or Secondary Riser	EACH	3.000	3.000
0294	SPV.0060	Special 345. Luminaire Arms Single Member 6-FT.	EACH	9.000	9.000
0296	SPV.0060	Special 346. Luminaire Arms Single Member 6-FT. WP Mount	EACH	4.000	4.000
0298	SPV.0060	Special 353. Equipment Grounding Electrode	EACH	10.000	10.000
0302	SPV.0060	Special 360. Water Tight Splices and Connections	EACH	42.000	42.000
0304	SPV.0060	Special 376. Luminaire Utility 3LED2	EACH	9.000	9.000
0306	SPV.0060	Special 400. Adjusting CUC Manhole Cover	EACH	2.000	2.000
0312	SPV.0060	Special 820. Concrete Base Type 5 Modified	EACH	5.000	5.000
0320	SPV.0090	Special 001. Marking Stop Line Epoxy 24-Inch	LF	116.000	116.000
0324	SPV.0090	Special 240. Electrical Cable 3#4/1#8 XLP	LF	220.000	220.000
0326	SPV.0090	Special 302. Electrical Cable Type 3#6 AL	LF	275.000	275.000
0328	SPV.0090	Special 304. Electrical Cable Type 2#2/1#4 AL	LF	250.000	250.000
0332	SPV.0090	Special 324. Electrical Cable Type 4#2/1#8 XLP	LF	1,965.000	1,965.000
0334	SPV.0090	Special 325. Conduit 3-Inch HDPE Schedule 40	LF	1,535.000	1,535.000

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CLEARING AND GRUBBING

CATEGORY 0010 ITEM NO.	201.0120	201.0220
	CLEARING	GRUBBING
LOCATION	ID	ID
N 35TH ST & W CENTER ST	25	25
TOTAL	25	25

REMOVALS

CATEGORY 0010 ITEM NO.	204.0100	204.0110	204.0150	204.0155	204.0195*
	REMOVING CONCRETE PAVEMENT	REMOVING ASPHALTIC SURFACE	REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK	REMOVING CONCRETE BASES
LOCATION	SY	SY	LF	SY	EACH
N 35TH ST & W CENTER ST	110	30	200	320	1
TOTAL	110	30	200	320	1

EXCAVATION COMMON

CATEGORY 0010 ITEM NO.	205.0100
	EXCAVATION COMMON
LOCATION	CY
2984-21-71	38
TOTAL	38

FINISHING ROADWAY

CATEGORY 0010 ITEM NO.	213.0100
	FINISHING ROADWAY (PROJECT) 01. 2984-21-71
LOCATION	EACH
2984-21-71	1
TOTAL	1

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BASE AGGREGATE

CATEGORY 0010 ITEM NO.	305.0110	305.0120
	BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH
LOCATION	TON	TON
N 35TH ST & W CENTER ST	11	24
TOTAL	11	24

CONCRETE BASE

CATEGORY 0010 ITEM NO.	320.0155
	CONCRETE BASE 9-INCH
LOCATION	SY
N 35TH ST & W CENTER ST	72
TOTAL	72

CONCRETE PAVEMENT

CATEGORY 0010 ITEM NO.	415.0090	602.0820	624.0100
	CONCRETE PAVEMENT 9-INCH	CONCRETE DRIVEWAY 8-INCH	WATER
LOCATION	SY	SY	MGAL
N 35TH ST & W CENTER ST	130	27	0.2
TOTAL	130	27	0.2

DRILLED BAR ITEMS

CATEGORY 0010 ITEM NO.	416.0610	416.0620
	DRILLED TIE BARS	DRILLED DOWEL BARS
LOCATION	EACH	EACH
N 35TH ST & W CENTER ST	167	12
TOTAL	167	12

ASPHALTIC SURFACE

CATEGORY 0010 ITEM NO.	455.0605	465.0105
	TACK COAT	ASPHALTIC SURFACE
LOCATION	GAL	TON
N 35TH ST & W CENTER ST	6	15
TOTAL	6	15

*Quantities shown elsewhere

CURB AND GUTTER

CATEGORY 0010 ITEM NO.	601.0322	601.0331
	CONCRETE CURB & GUTTER 22-INCH	CONCRETE CURB & GUTTER 31-INCH
LOCATION	LF	LF
N 35TH ST & W CENTER ST	100	262
TOTAL	100	262

CONCRETE SIDEWALK

CATEGORY 0010 ITEM NO.	602.0410	602.0515
	CONCRETE SIDEWALK 5-INCH	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA
LOCATION	SF	SF
N 35TH ST & W CENTER ST	2,732	80
TOTAL	2,732	80

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MOBILIZATION

CATEGORY 0010

ITEM NO.	619.1000
	MOBILIZATION
LOCATION	EACH
2984-21-71	0.4
TOTAL	0.4

LANDSCAPE ITEMS

CATEGORY 0010

ITEM NO.	625.0100	631.0300	631.1000
	TOPSOIL	SOD WATER	SOD LAWN
LOCATION	SY	MGAL	SY
N 35TH ST & W CENTER ST	24	0.5	24
TOTAL	24	0.5	24

MOBILIZATIONS EROSION CONTROL

CATEGORY 0010

ITEM NO.	628.1905	628.1910
	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL
LOCATION	EACH	EACH
N 35TH ST & W CENTER ST	1	1
TOTAL	1	1

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EROSION CONTROL

CATEGORY 0010

ITEM NO.	628.7015	628.7020
	INLET PROTECTION TYPE C	INLET PROTECTION TYPE D
LOCATION	EACH	EACH
N 35TH ST & W CENTER ST	7	3
TOTAL	7	3

FIELD OFFICE

CATEGORY 0010

ITEM NO.	642.5201
	FIELD OFFICE TYPE C
LOCATION	EACH
2984-21-71	0.4
TOTAL	0.4

TRAFFIC CONTROL

CATEGORY 0010

ITEM NO.	643.5000
	TRAFFIC CONTROL
LOCATION	EACH
2984-21-71	0.4
TOTAL	0.4

CONSTRUCTION STAKING

CATEGORY 0010

ITEM NO.	650.5500	650.9000
	CONSTRUCTION STAKING CURB GUTTER AND CURB AND GUTTER	CONSTRUCTION STAKING CURB RAMP
LOCATION	LF	EACH
N 35TH ST & W CENTER ST	362	8
TOTAL	362	8

CONSTRUCTION STAKING (PROJECT)

CATEGORY 0010

ITEM NO.	650.8501	650.9500	650.9911
	CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2984-21-71	CONSTRUCTION STAKING SIDEWALK (PROJECT) 01. 2984-21-71	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2984-21-71
LOCATION	EACH	EACH	EACH
N 35TH ST & W CENTER ST	1	1	1
TOTAL	1	1	1

SAWING

CATEGORY 0010

ITEM NO.	690.0150	690.0250
	SAWING ASPHALT	SAWING CONCRETE
LOCATION	LF	LF
N 35TH ST & W CENTER ST	68	538
TOTAL	68	538

UTILITY LINE OPENING

CATEGORY 0010

ITEM NO.	SPV.0060.001
	UTILITY LINE OPENING
LOCATION	EACH
N 35TH ST & W CENTER ST	1
TOTAL	1

SECTION CORNER MONUMENTS

CATEGORY 0010

ITEM NO.	SPV.0060.003
	SECTION CORNER MONUMENTS
LOCATION	EACH
N 35TH ST & W CENTER ST	1
TOTAL	1

CITY UNDERGROUND CONDUIT

CATEGORY 0010

ITEM NO.		SPV.0060.400
		ADJUSTING CUC MANHOLE COVERS
MANHOLE	LOCATION	EACH
613	STA 58+53, 25.5' LT	1
614	STA 58+55.5, 44.0' RT	1
	TOTAL	2

LOCATION: INTERSECTION OF N. 35TH STREET AND WEST CENTER STREET

EXISTING AND PROPOSED SEWER STRUCTURES								SEWER PIPES								
STRUCTURE NUMBER	STRUCTURE TYPE	STATION	CENTERLINE OFFSET	COVER ELEV.	DEPTH[a] (FT)	FRAME & LID	STRUCTUREREMARKS	FROM STRUCTURE	TO STRUCTURE	INVERTS INLET	INVERTS OUTLET	SLOPE (FT/FT)	PLAN LENGTH (FT)	PIPE SIZE (IN)	PIPE MATERIAL	PIPE REMARKS
112	INLET - 2'x2.5'	58+07.9	44.0' LT	103.20	3.20	MS 57	NEW STRUCTURE	112	112A	100.00	99.85	0.02500	6	12	CL IV RCP	
112A	EXISTING CATCH BASIN	58+07.9	38.1' LT	103.21		MS 58-A	Existing Structure									
113	INLET - 2'x2.5'	58+57.9	44.0' LT	103.35	3.15	MS 57	NEW STRUCTURE	113	113A	100.20	100.10	0.02500	4	12	CL IV RCP	
113A	EXISTING CATCH BASIN	58+57.9	39.7' LT	103.36		MS 58-A	Existing Structure									
114	EXISTING CATCH BASIN	59+02.9	22.0' RT	102.76		MS 58-A	Existing Structure									
115	INLET - 2'x2.5'	59+00.0	26.9' RT	102.50	3.10	MS 57	NEW STRUCTURE	115	114	99.40	99.30	0.02000	5	12	CL IV RCP	

608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	611.3225 INLETS 2X2.5-FT	650.4000 CONSTRUCTION STAKING STORM SEWER	SPV.0060.102 INLET COVERS TYPE MS 57	SPV.0060.103 MANHOLE COVERS TYPE MS 58-A
LF	EACH	EACH	EACH	EACH
15	3	3	3	3

ALL ITEMS CATEGORY 0010

[A] DEPTH = COVER ELEVATION - LOWEST PIPE INVERT ELEVATION + SUMP(FOR TYPE 44A & 44B CATCH BASINS)

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SIGN INSTALLATION

CATEGORY 0010

ITEM NO.						637.2220	SPV.0060.291	
						SIGNS	STREET NAME SIGN	
						TYPE II	MOUNTING HARDWARE	
			SIZE			REFLECTIVE SH	ON MAST ARM	
SIGN NO.	SIGN CODE	MESSAGE	INCHES	X	INCHES	SF	EACH	REMARKS
1-1	M1-94H	W CENTER ST	72	X	18	9	1	
1-2	M1-94H	N 35TH ST	48	X	18	6	1	
1-3	M1-94H	W CENTER ST	72	X	18	9	1	
1-4	M1-94H	N 35TH ST	48	X	18	6	1	
					TOTAL	30	4	

TRAFFIC CONTROL

CATEGORY 0010 ITEM NO.		643.0300		643.0420		643.0500	643.0600	643.0705		643.0715		643.0900		643.1050		644.1810	644.1900.S	
		TRAFFIC CONTROL DRUMS		TRAFFIC CONTROL BARRICADES TYPE III		TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	TRAFFIC CONTROL WARNING LIGHTS TYPE A		TRAFFIC CONTROL WARNING LIGHTS TYPE C		TRAFFIC CONTROL SIGNS		TRAFFIC CONTROL SIGNS PCMS		TEMPORARY PEDESTRIAN BARRICADE	TEMPORARY AUDIBLE MESSAGE DEVICES	
STAGE	STAGE DURATION DAYS	EACH	DAY	EACH	DAY	EACH	EACH	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	LF	EACH	DAY
STAGE 1	41	56	2,296	6	246	13	13	12	492	8	328	41	1,681	4	20	72	8	328
STAGE 2	47	50	2,350	5	235	21	21	10	470	7	329	38	1,786	-	-	72	8	376
TOTAL		4646		481		34	34	962		657		3467		20		144	704	

TEMPORARY PAVEMENT MARKINGS

CATEGORY 0010 ITEM NO.	643.3150	643.3180	643.3250	643.3350	643.3550	643.3850
	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH	TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH	TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH	TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH	TEMPORARY MARKING ARROW REMOVABLE TAPE	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
STAGE	LF	LF	LF	LF	EACH	LF
STAGE 1	2,640	180	100	-	2	51
STAGE 2	2,612	133	-	100	1	65
TOTAL	5,252	313	100	100	3	116

MARKING REMOVALS ITEMS

CATEGORY 0010 ITEM NO.	646.9000 MARKING REMOVAL LINE 4-INCH	646.9002 MARKING REMOVAL LINE 6-INCH	646.9200 MARKING REMOVAL LINE WIDE	646.9300 MARKING REMOVAL SPECIAL MARKING
LOCATION	LF	LF	LF	EACH
N 35TH ST & W CENTER ST	2632	295	32	2
TOTAL	2632	295	32	2

PERMANENT MARKING ITEMS

CATEGORY 0010 ITEM NO.	646.1020 MARKING LINE EPOXY 4-INCH			646.3020 MARKING LINE EPOXY 8-INCH		646.5020 MARKING ARROW EPOXY	646.5220 MARKING SYMBOL EPOXY	646.7120 MARKING DIAGONAL EPOXY 12-INCH YELLOW	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	SPV.0090.001 MARKING STOP LINE EPOXY 24-INCH
	YELLOW	WHITE	WHITE SKIP 2' SEG, 6' GAP	WHITE	WHITE SKIP 3' SEG, 9' GAP					
LOCATION	LF	LF	LF	LF	LF	EACH	EACH	LF	LF	LF
N 35TH ST & W CENTER ST	4570	1520	40	645	90	8	4	289	369	116
TOTAL		6130		735		8	4	289	369	116

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STREET LIGHTING ITEMS

CATEGORY 0010 ITEM NO.	SPV.0060.302 PULL BOXES 13-INCH X 24-INCH X 24-INCH	SPV.0060.321 POLES TYPE 30-AL-BD	SPV.0060.339 PRIMARY OR SECONDARY RISER	SPV.0060.820 CONCRETE BASE TYPE 5 MODIFIED
LOCATION	EACH	EACH	EACH	EACH
N 35TH ST & W CENTER ST	7	5	3	5
TOTAL	7	5	3	5

CATEGORY 0010 ITEM NO.	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE	SPV.0060.334 INLINE 5A FAST ACTING FUSE WITH HOLDER	SPV.0060.345 LUMINAIRE ARMS SINGLE MEMBER 6-FT.	SPV.0060.346 LUMINAIRE ARMS SINGLE MEMBER 6-FT. WP MOUNT	SPV.0060.353 EQUIPMENT GROUNDING ELECTRODE	SPV.0060.360 WATER TIGHT SPLICES & CONNECTIONS	SPV.0060.376 LUMINAIRE UTILITY 3LED2
LOCATION	EACH	EACH	EACH	EACH	EACH	LF	EACH
N 35TH ST & W CENTER ST	5	9	9	4	10	42	9
TOTAL	5	9	9	4	10	42	9

CATEGORY 0010 ITEM NO.	204.9090.S REMOVING AERIAL CABLE	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	655.0305* CABLE TYPE UF 2-12 AWG GROUNDED	SPV.0060.310 REMOVE POLES COMPLETE	SPV.0060.324 40 FT. WOOD POLE	SPV.0090.302 ELECTRICAL CABLE TYPE 3#6 AL	SPV.0090.304 ELECTRICAL CABLE TYPE 2#2/1#4 AL	SPV.0090.324 ELECTRICAL CABLE TYPE 4#2/1#8 XLP	SPV.0090.325 CONDUIT 3 INCH HDPE SCHEDULE 40
LOCATION	LF	LF	LF	EACH	EACH	LF	LF	LF	LF
N 35TH ST & W CENTER ST	750	150	920	5	5	275	250	1,965	1,535
TOTAL	750	150	920	5	5	275	250	1,965	1,535

* Quantities shown elsewhere

ALL THE ITEMS IN THIS PAGE ARE CATEGORY 0010

TRAFFIC SIGNALS

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SIGNAL BASE NO.	LOCATION	204.0195* REMOVING CONCRETE BASES EACH
XB1	58+60', 46.5' L	1
XB2	58+70', 24.5' L	1
XB3	58+62', 31.5' R	1
XB4	58+99', 24.5' R	1
XB5	58+05.5', 34' L	1
	SUBTOTAL	5

LOCATION	SPV.0060.215 ELECTRICAL SERVICE PEDESTAL EACH
59+79', 34' R	1
SUBTOTAL	1

PULL BOX NUMBER	LOCATION	SPV.0060.303 PULL BOXES 17-INCH X 30-INCH X 24-INCH EACH
PB1	58+59.5', 51' L	1
PB2	58+87', 23.5' L	1
PB3	58+90', 27' R	1
PB4	59+76', 27' R	1
PB5	58+61', 51' R	1
PB6	58+07', 51' R	1
PB7	57+87.5', 24' R	1
PB8	57+78', 24' L	1
PB9	58+06', 51' L	1
	SUBTOTAL	9

LOCATION	TO	LOCATION	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
CB1	TO	PB1	-	25	-
CB1	TO	CUC LATERAL	-	25	-
PB1	TO	SB1	-	10	-
PB1	TO	PB2	-	150	-
PB2	TO	SB2	-	15	-
PB2	TO	PB3	-	-	165
PB3	TO	SB3	-	10	-
PB3	TO	PB4	-	190	-
PB4	TO	M1	10	10	-
PB3	TO	PB5	-	110	-
PB5	TO	SB4	-	10	-
PB5	TO	PB6	-	-	110
PB6	TO	SB5	-	10	-
PB6	TO	PB7	-	90	-
PB7	TO	SB6	-	10	-
PB7	TO	PB8	-	-	100
PB8	TO	SB7	-	15	-
PB8	TO	PB9	-	120	-
PB9	TO	SB8	-	15	-
PB9	TO	PB1	-	-	120
		SUBTOTAL	10	815	495

SIGNAL BASE NUMBER	LOCATION	SPV.0060.201 INSTALL CITY PRECAST CONTROLLER BASE EACH	SPV.0060.205 ATC CONTROLLER AND CABINET INSTALLED EACH	SPV.0060.212 FIBER OPTIC PATCH PANEL EACH	SPV.0060.213 ETHERNET SWITCH EACH	SPV.0060.221 EVP PHASE SELECTOR CARD 4 CHANNEL EACH	SPV.0060.269 VOICE INSTRUCTION AUDIBLE CONTROL UNIT EACH
CB1	58+65', 51' L	1	1	1	1	1	1
	SUBTOTAL	1	1	1	1	1	1

* Quantities shown elsewhere

SIGNAL BASE NUMBER	LOCATION	654.0110 CONCRETE BASES TYPE 10 EACH	654.0120 CONCRETE BASES TYPE 10 SPECIAL EACH
SB1	58+64.5', 44' L	-	1
SB3	58+77.5', 29' R	1	-
SB5	58+06.5', 42' R	1	-
SB7	57+89', 24' L	1	-
	SUBTOTAL	3	1

3

TRAFFIC SIGNALS

SIGNAL BASE NUMBER	657.0350 POLES TYPE 10 EACH	657.0352 POLES TYPE 10 SPECIAL EACH	657.0530 MONOTUBE ARMS 30-FT EACH	657.0536 MONOTUBE ARMS 35-FT SPECIAL EACH	SPV.0060.218 EVP 1 DIRECTION DETECTOR EACH	SPV.0060.223 EVP CONFIRMATION LIGHT EACH	SPV.0060.268 VOICE INSTRUCTION AUDIBLE PUSH BUTTON EACH
SB1	-	1	-	1	1	1	1
SB2	-	-	-	-	-	-	1
SB3	1	-	1	-	1	1	1
SB4	-	-	-	-	-	-	1
SB5	1	-	1	-	1	1	1
SB6	-	-	-	-	-	-	1
SB7	1	-	1	-	1	1	1
SB8	-	-	-	-	-	-	1
SUBTOTAL	3	1	3	1	4	4	8

LOCATION	658.507 SIGNAL MOUNTING HARDWARE .01 W CENTER ST EACH	661.0201 TEMPORARY TRAFFIC SIGNAL .01 W CENTER ST EACH	SPV.0060.243 REMOVE TRAFFIC SIGNALS (W CENTER ST) EACH
N 35TH ST & W CENTER ST	1	1	1
SUBTOTAL	1	1	1

SIGNAL HEAD NUMBER	SIGNAL BASE NUMBER	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	SPV.0060.267 PEDESTRIAN COUNTDOWN SIGNAL FACE 12-INCH EACH
1	SB4	1	-	-
2	SB1	1	-	-
3	SB1	1	-	-
4	SB8	1	-	-
5	SB1	1	-	-
6	SB8	1	-	-
7	SB5	1	-	-
8	SB5	1	-	-
9	SB4	1	-	-
10	SB5	1	-	-
11	SB6	1	-	-
12	SB3	1	-	-
13	SB3	1	-	-
14	SB2	1	-	-
15	SB3	1	-	-
16	SB2	1	-	-
17	SB7	1	-	-
18	SB7	1	-	-
19	SB6	1	-	-
20	SB7	1	-	-
21	SB7	-	1	1
22	SB2	-	1	1
23	SB1	-	1	1
24	SB4	-	1	1
25	SB3	-	1	1
26	SB6	-	1	1
27	SB5	-	1	1
28	SB8	-	1	1
SUBTOTAL		20	8	8

3

SUMMARY OF MAJOR ITEMS FOR TRAFFIC SIGNAL CABLING

	DESCRIPITON	L.F
655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	830
655.0280	CABLE TRAFFIC SIGNAL 19-14-AWG	510
655.0290	CABLE TRAFFIC SIGNAL 21-14-AWG	515
655.0305*	CABLE TYPE UF 2-12 AWG GROUNDED	725
655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	620
655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	725
SPV.0090.240	ELECTRICAL CABLE 3#4/1#8 XLP	220

* Quantities shown elsewhere

LOCATION	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
PEDESTRIAL SIGNAL	8
TRAFFIC SIGNAL 3-SECTION	12
SUBSTOTAL	20

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
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE
CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)
OFF-PREMISE SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	□
TELEPHONE POLE	●	⌀
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	■	□

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)

PARCEL NUMBER (25)
UTILITY NUMBER (40)
PARALLEL OFFSETS

CONVENTIONAL UTILITY SYMBOLS

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

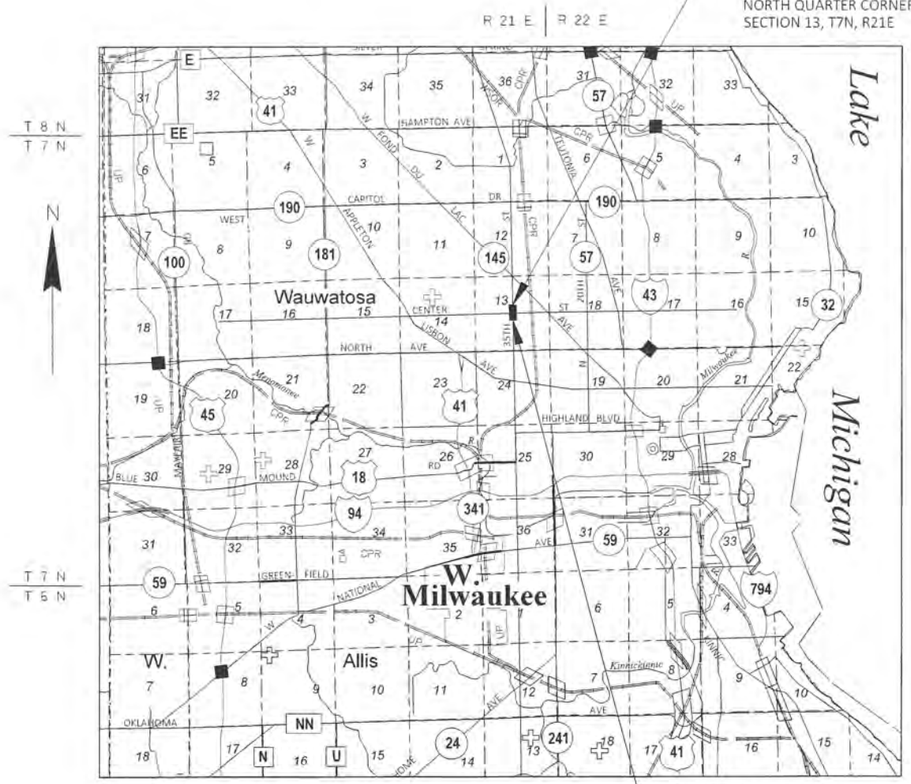
CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

END RELOCATION ORDER
2507.23 FEET SOUTH AND
28.23 FEET WEST OF THE
NORTH QUARTER CORNER OF
SECTION 13, T7N, R21E



BEGIN RELOCATION ORDER
2594.09 FEET NORTH AND
30.78 FEET EAST OF THE
SOUTH QUARTER CORNER OF
SECTION 13, T7N, R21E

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.06 MILES

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

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2984-21-01		
FEDERAL PROJECT NUMBER	4.01	

PLAT OF RIGHT OF WAY REQUIRED FOR

NORTH 35TH STREET
INTERSECTION WITH W. CENTER ST.

NORTH 35TH STREET	MILWAUKEE COUNTY

CONSTRUCTION PROJECT NUMBER
2984-21-71

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MILWAUKEE 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 ⅝" 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.

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 THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

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.

STRAND ASSOCIATES®
STRAND ASSOCIATES, INC.
910 West Wingra Drive
Madison, WI 53715
608-251-4843
www.strand.com

ORIGINAL PLAT PREPARED BY
WISCONSIN
HEATHER S. BARTELT
S-2797
MADISON
WI
LAND SURVEYOR
4/11/25
DATE

REVISION DATE
2/26/25
3/12/25

CITY OF MILWAUKEE

APPROVED FOR THE CITY
DATE 3-19-25 James Washington (Signature)

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\RW\DWG\040101_RT.DWG
PLOT DATE : 3/12/2025 11:04 AM
PLOT BY : BARTELT, HEATHER
PLOT NAME :
LOCAL STREET
2984-21-01

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNERS	INTERESTS REQUIRED	R/W S.F REQUIRED			TLE S.F.
			NEW	EXISTING	TOTAL	
1	THE CITY CAB LLC	FEE	4	---	4	---
2	CITY OF MILWAUKEE	FEE,TLE	870	---	870	667
3	RAMAHI 2672 LLC	FEE,TLE	69	---	69	364

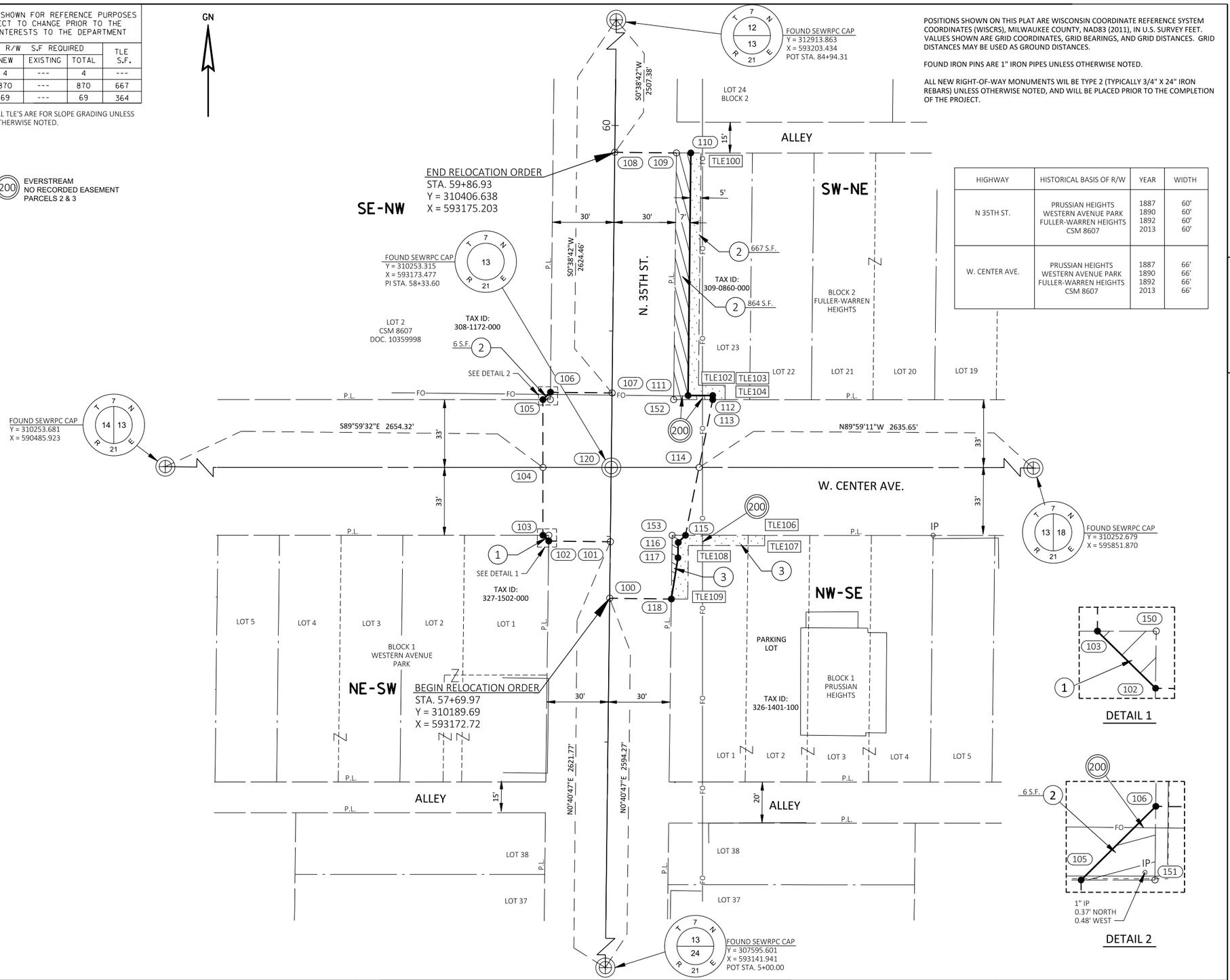
UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
200	EVERSTREAM	RELEASE OF RIGHTS

ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

COURSE TABLE		
COURSE	BEARING	DISTANCE
100 - 101	N00° 40' 47"E	27.50'
101 - 102	N89° 19' 13"W	30.00'
102 - 103	N45° 28' 21"W	3.96'
103 - 104	N00° 01' 32"E	33.00'
104 - 105	N00° 01' 32"E	33.00'
105 - 106	N45° 22' 39"E	5.10'
106 - 107	S89° 21' 18"E	30.00'
107 - 108	N00° 38' 42"E	117.08'
108 - 109	S89° 21' 18"E	30.00'
109 - 110	S89° 59' 11"E	7.00'
110 - 111	S00° 38' 42"W	118.00'
111 - 112	S89° 59' 11"E	11.98'
112 - 113	S00° 00' 49"W	2.00'
113 - 114	S11° 21' 47"W	33.66'
114 - 115	S11° 21' 47"W	33.66'
115 - 116	S45° 32' 21"W	4.96'
116 - 117	S00° 40' 47"W	7.44'
117 - 118	S09° 10' 10"W	20.32'
118 - 100	N89° 19' 13"W	30.00'
103 - 150	S89° 59' 32"E	2.86'
150 - 102	S00° 40' 47"W	2.78'
106 - 151	S00° 38' 42"W	3.58'
151 - 105	N89° 59' 32"W	3.59'
113 - 152	N89° 59' 11"W	19.00'
152 - 109	N00° 38' 42"E	120.00'
118 - 153	N00° 40' 47"E	30.98'
153 - 115	S89° 59' 11"E	6.50'
110 - TLE100	S89° 59' 11"E	5.00'
TLE100 - TLE102	S00° 38' 42"W	113.00'
TLE102 - TLE103	S89° 59' 11"E	12.92'
TLE103 - TLE104	S00° 00' 49"W	7.00'
TLE104 - 113	N89° 59' 11"W	6.00'
115 - TLE106	S89° 59' 11"E	38.50'
TLE106 - TLE107	S00° 00' 49"W	5.00'
TLE107 - TLE108	N89° 59' 11"W	37.06'
TLE108 - TLE109	S00° 40' 47"W	26.07'
TLE109 - 118	N89° 19' 13"W	8.00'

STATION & OFFSET TABLE		
POINT	STATION	OFFSET
100	57+69.97	0.00'
101	57+97.47	0.00'
102	57+97.47	-30.00'
103	58+00.21	-32.86'
104	58+33.21	-33.23'
105	58+66.23	-33.59'
106	58+69.85	-30.00'
107	58+69.85	0.00'
108	59+86.93	0.00'
109	59+86.93	30.00'
110	59+87.01	37.00'
111	58+69.01	37.00'
112	58+69.14	48.98'
113	58+67.14	49.00'
114	58+34.07	42.74'
115	58+01.02	36.50'
116	57+97.50	33.00'
117	57+90.07	33.00'
118	57+69.97	30.00'
120	58+33.60	0.00'
150	58+00.24	-30.00'
151	58+66.27	-30.00'
152	58+66.93	30.00'
153	58+00.94	30.00'
TLE100	59+87.06	42.00'
TLE102	58+74.06	42.00'
TLE103	58+74.20	54.92'
TLE104	58+67.21	55.00'
TLE106	58+01.47	75.00'
TLE107	57+96.47	75.06'
TLE108	57+96.04	38.00'
TLE109	57+97.94	38.00'



HIGHWAY	HISTORICAL BASIS OF R/W	YEAR	WIDTH
N 35TH ST.	PRUSSIAN HEIGHTS WESTERN AVENUE PARK FULLER-WARREN HEIGHTS CSM 8607	1887 1890 1892 2013	60' 60' 60' 60'
W. CENTER AVE.	PRUSSIAN HEIGHTS WESTERN AVENUE PARK FULLER-WARREN HEIGHTS CSM 8607	1887 1890 1892 2013	66' 66' 66' 66'

REVISION DATE	DATE 4/11/24	SCALE, FEET	HWY: NORTH 35TH STREET	STATE R/W PROJECT NUMBER 2984-21-01	PLAT SHEET 4.02	
2/26/25 3/12/25	GRID FACTOR N/A	0 25 50	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2984-21-71	PS&E SHEET 68	E

FILE NAME : S:\MIL\4300--4399\4390\009\DRAWINGS\CAD\AUTOCAD\29842101\RW\DWG\040101_RP.DWG
LAYOUT NAME - 4.02
PLOT DATE : 3/12/2025 11:02 AM PLOT BY : BARTELT, HEATHER PLOT NAME : PLOT SCALE : 1 IN:50 FT
LOCAL STREET
2984-21-01-4.02

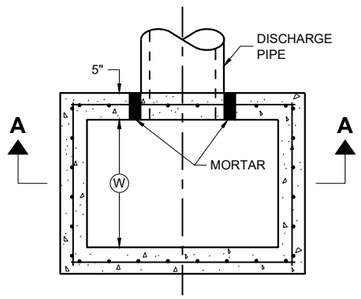
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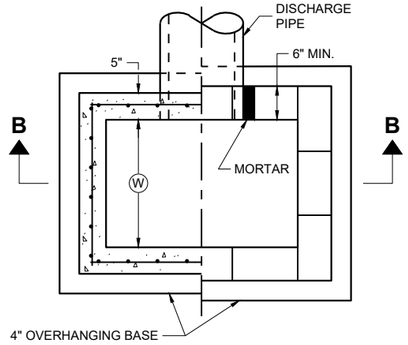
Standard Detail Drawing List

08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPE 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09C05-10	CONCRETE CONTROL CABINET BASES
09C11-10	CONCRETE BASE TYPE 10
09C15-02	CONCRETE BASE TYPE 10 SPECIAL
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09F	TYPE 10 SPECIAL POLE 35' MONOTUBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/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
10A08-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A09-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
10A10-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES PHASE-TO-PHASE SYSTEMS
10A18-05A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
13C15-08A	CONCRETE BASE
13C15-08B	CONCRETE BASE
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
13C18-08E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
15C07-16A	PAVEMENT MARKING SYMBOLS
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C07-16E	PAVEMENT MARKING FOR BIKE LANES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C29-08A	BICYCLE LANE MARKING
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-15A	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

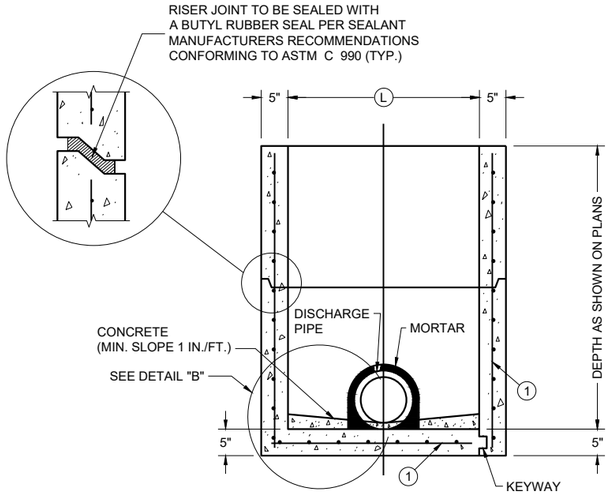
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PLAN VIEW



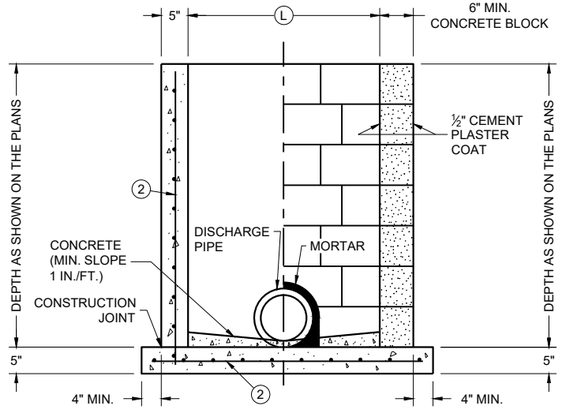
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

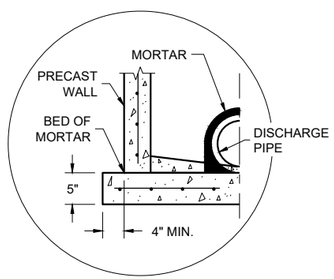
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

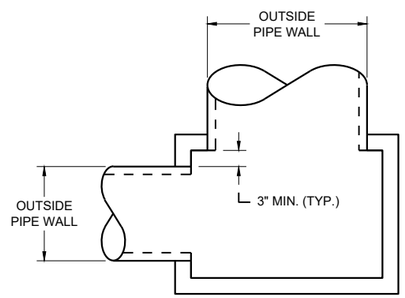
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

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

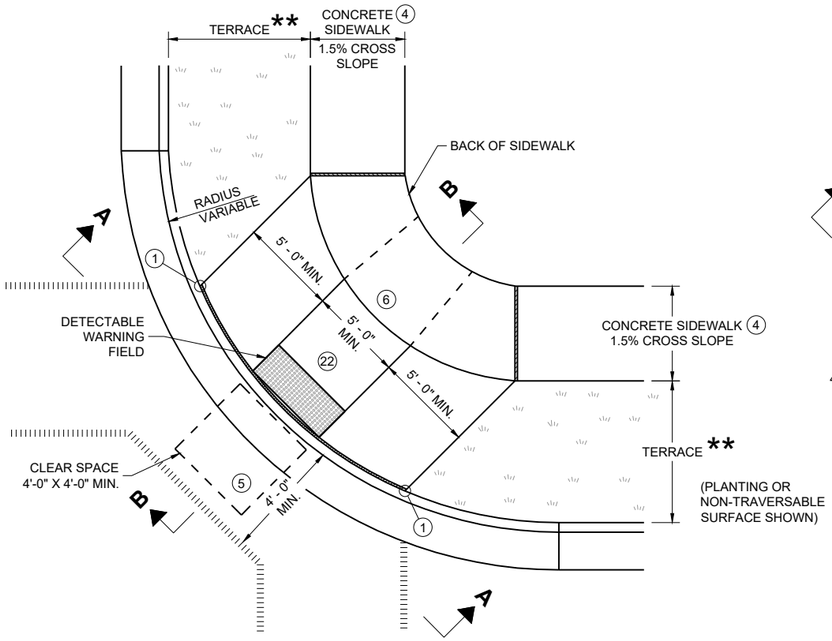
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

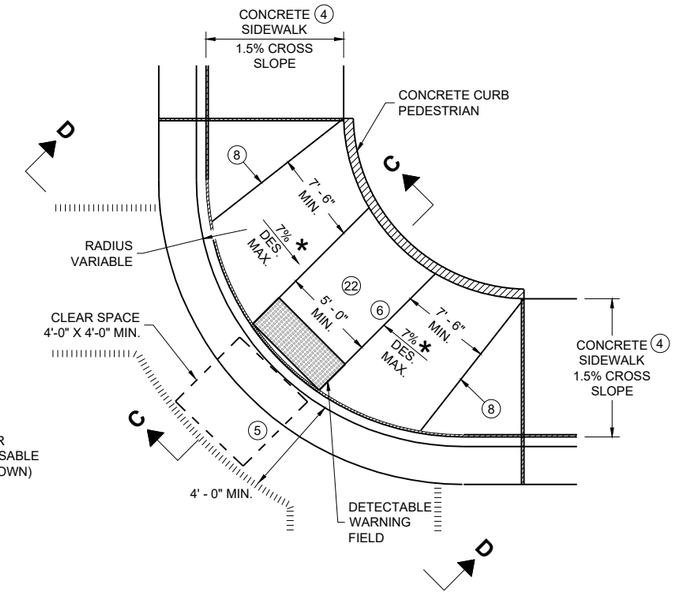
6
SDD 08C07-03



PLAN VIEW

CURB RAMP TYPE 1

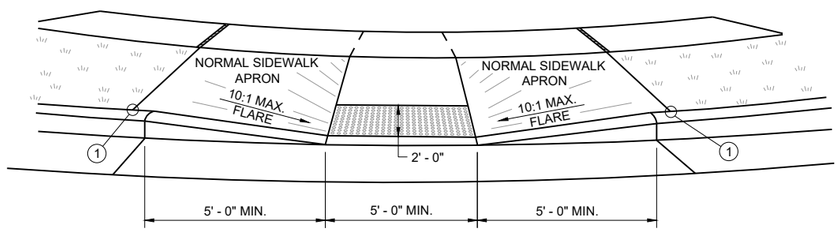
(CENTER OF CORNER RADIUS)



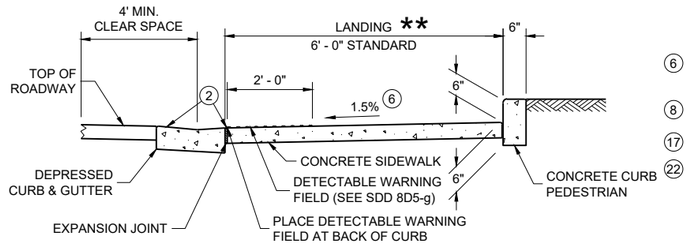
PLAN VIEW

CURB RAMP TYPE 1 - A

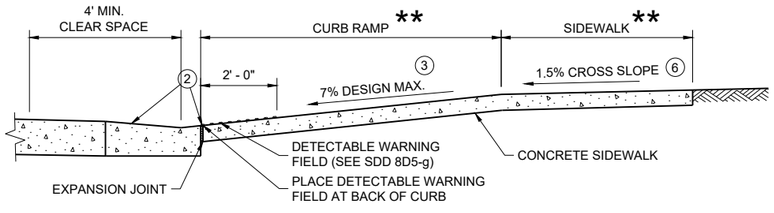
(NO TERRACE)



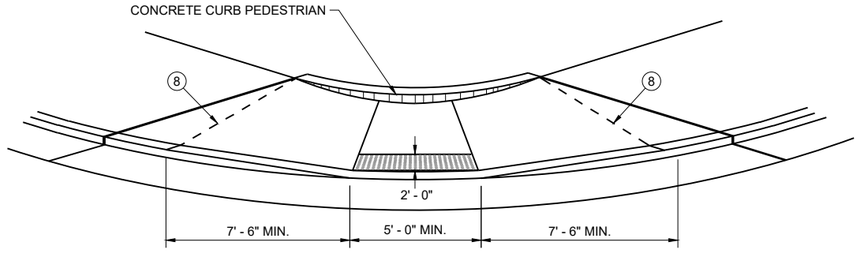
VIEW A - A FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE CURB RAMP.

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

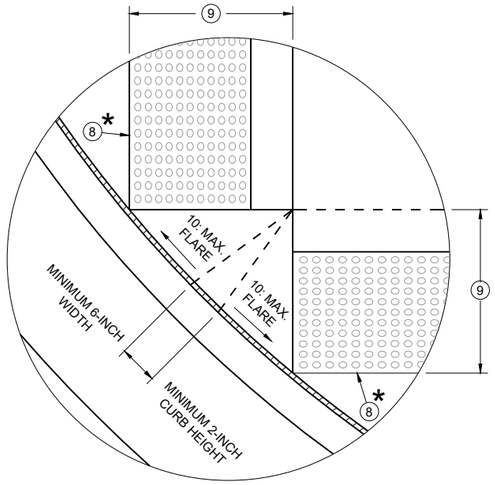
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

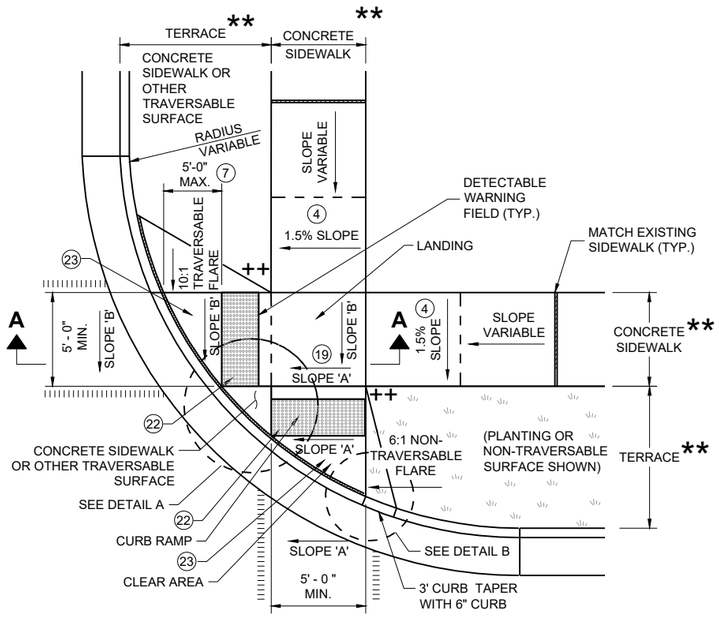
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS
TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



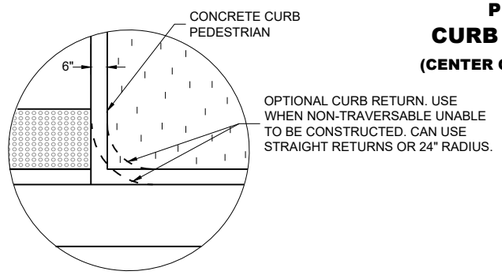
DETAIL A



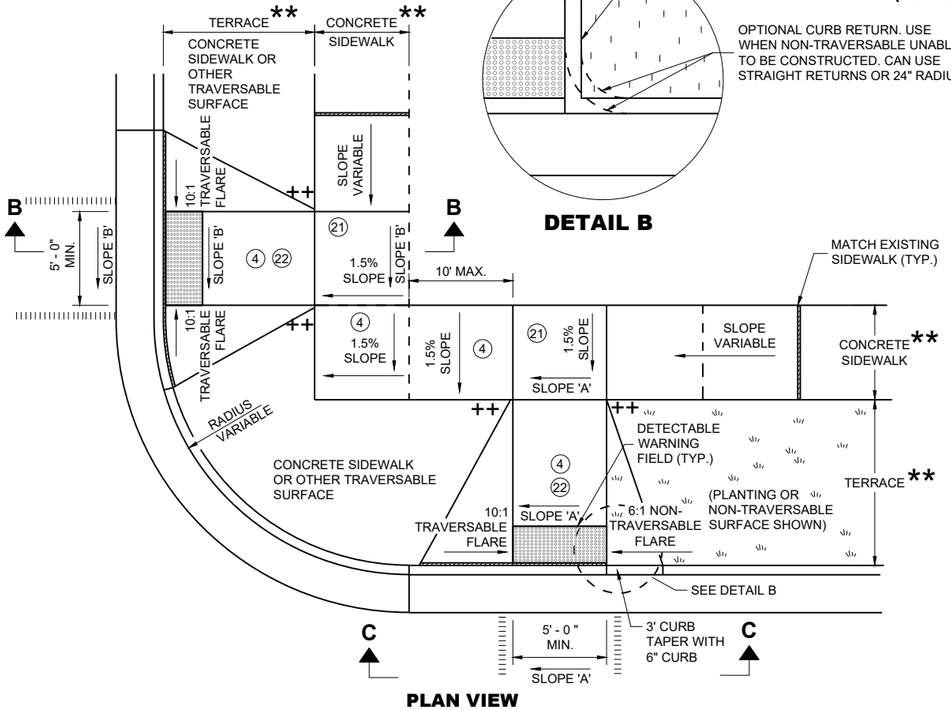
PLAN VIEW

CURB RAMP TYPE 2

(CENTER OF CORNER RADIUS)



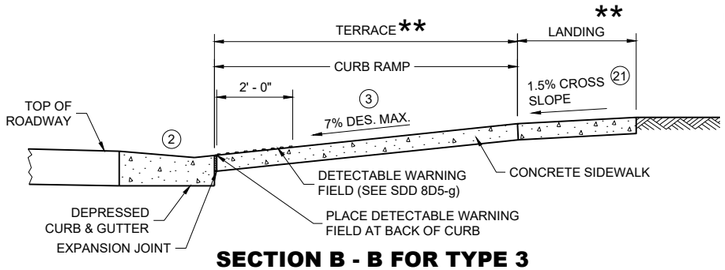
DETAIL B



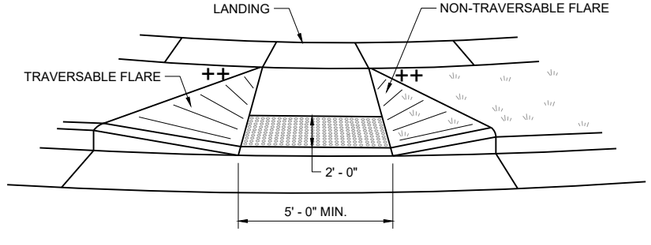
PLAN VIEW

CURB RAMP TYPE 3

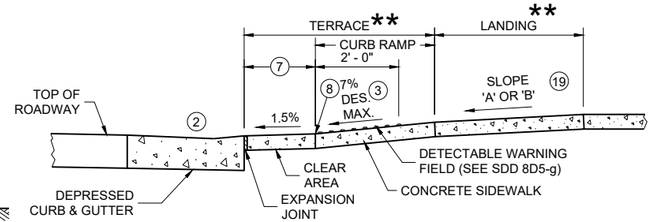
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3



SECTION A - A FOR TYPE 2

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

(21) PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

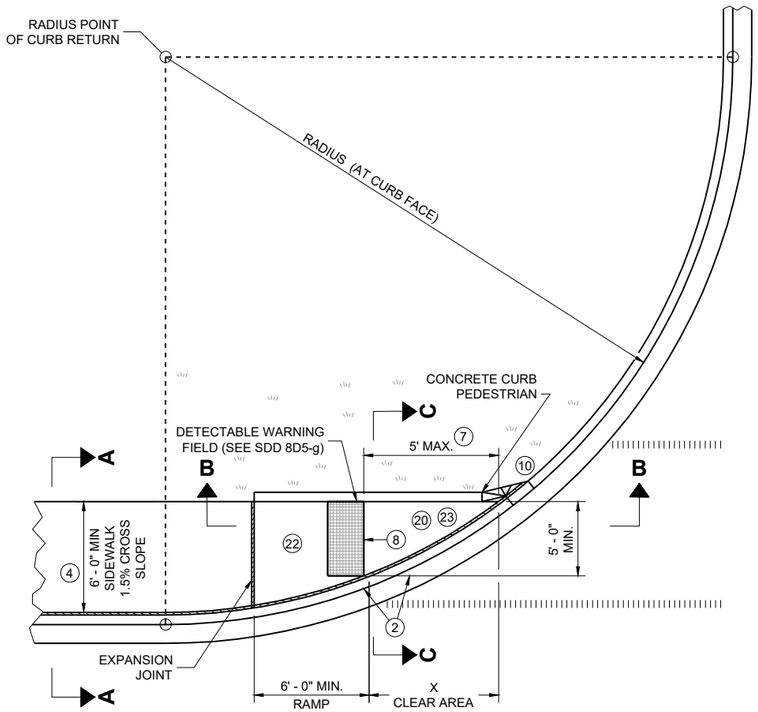
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- – – – CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS TYPE 2 AND 3

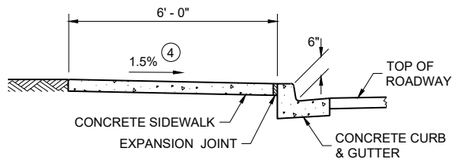
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05-22b

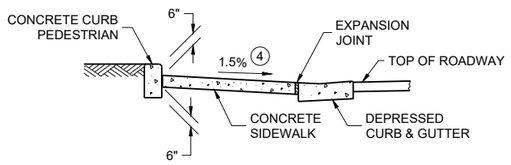


PLAN VIEW

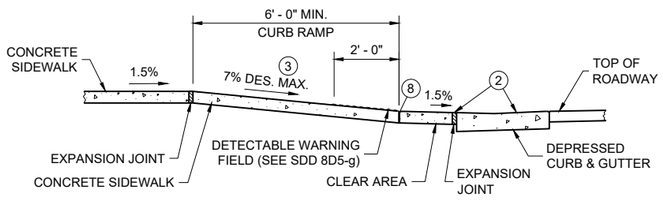
CURB RAMP TYPE 4A



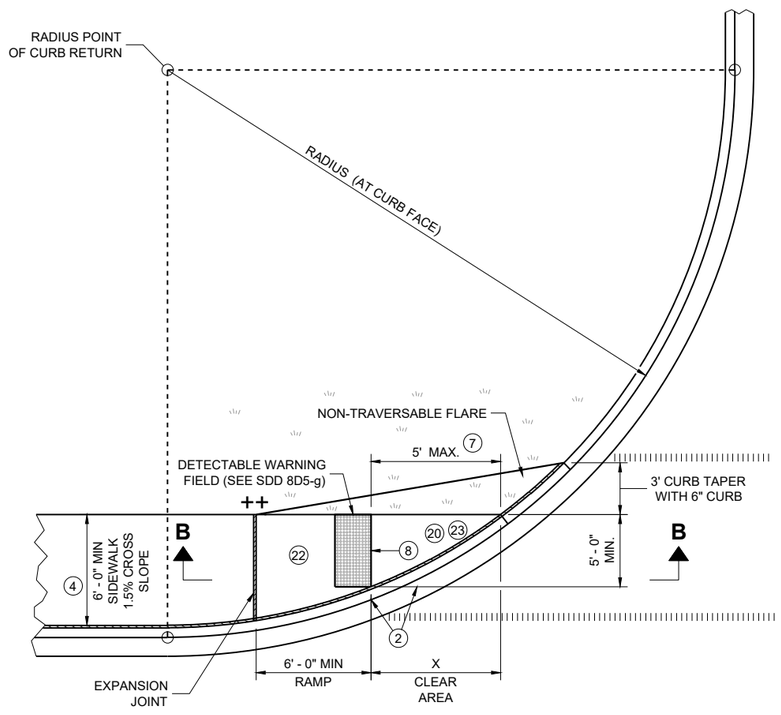
SECTION A - A FOR TYPE 4A



SECTION C - C FOR TYPE 4A



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



PLAN VIEW

CURB RAMP TYPE 4A1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

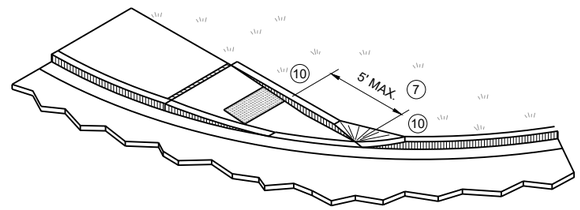
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

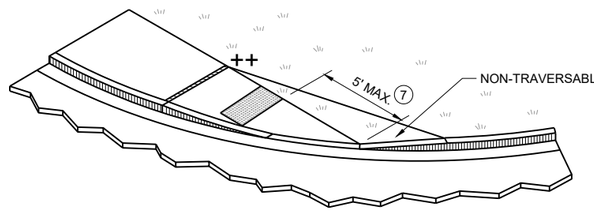
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



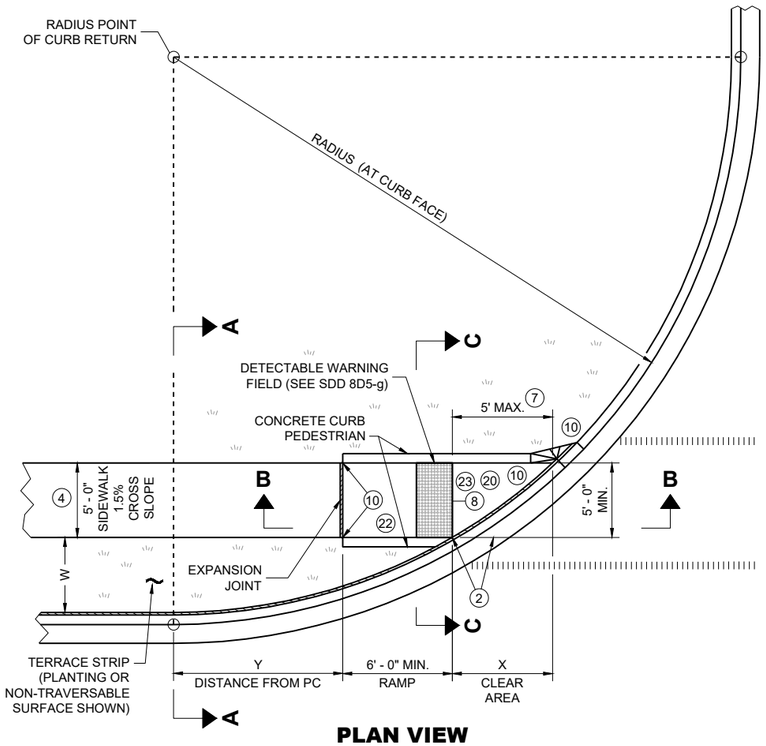
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

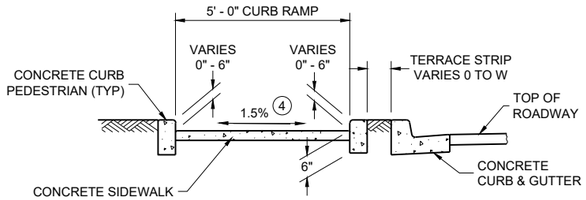
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET			4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET									4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET															4' - 10 ¾"	19' - 8 ¼"

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



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

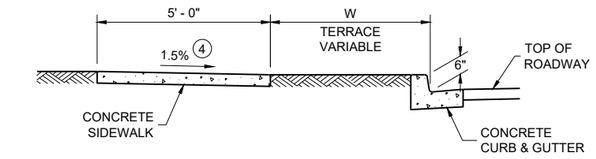
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

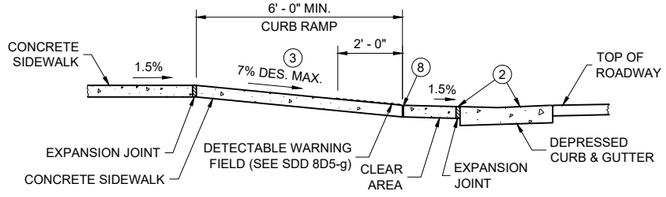
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

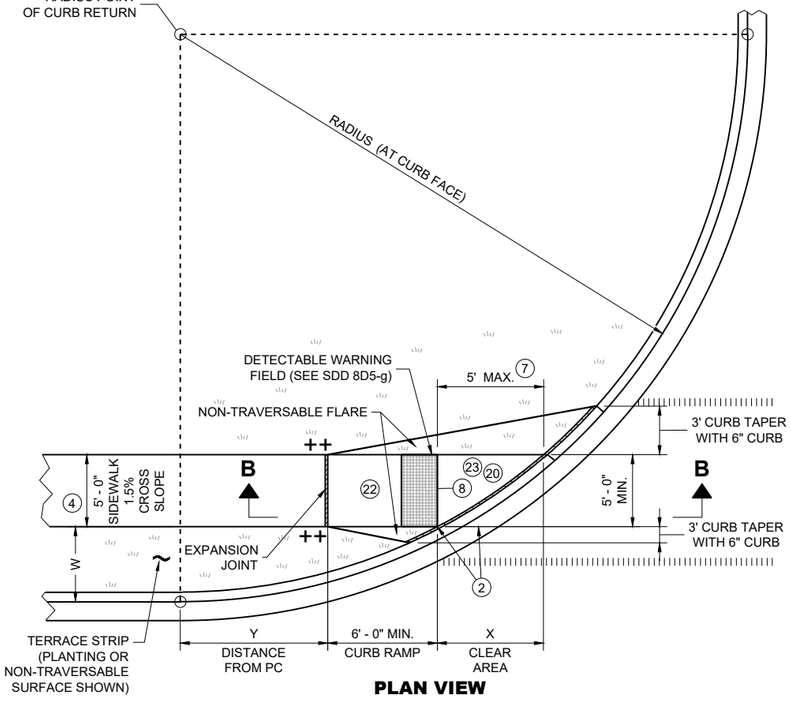
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



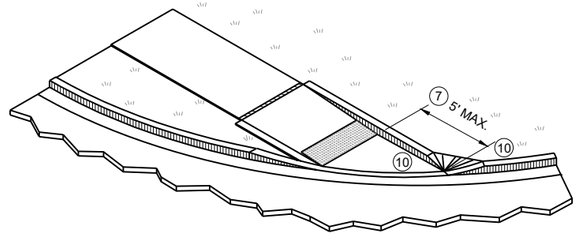
SECTION A - A FOR TYPE 4B



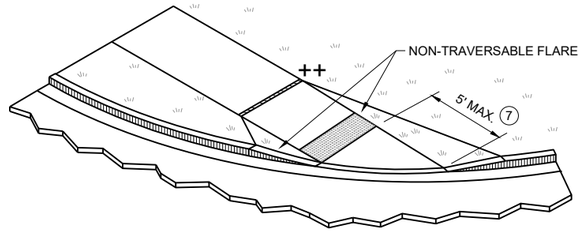
SECTION B - B FOR TYPE 4B AND TYPE 4B1



PLAN VIEW
CURB RAMP TYPE 4B1



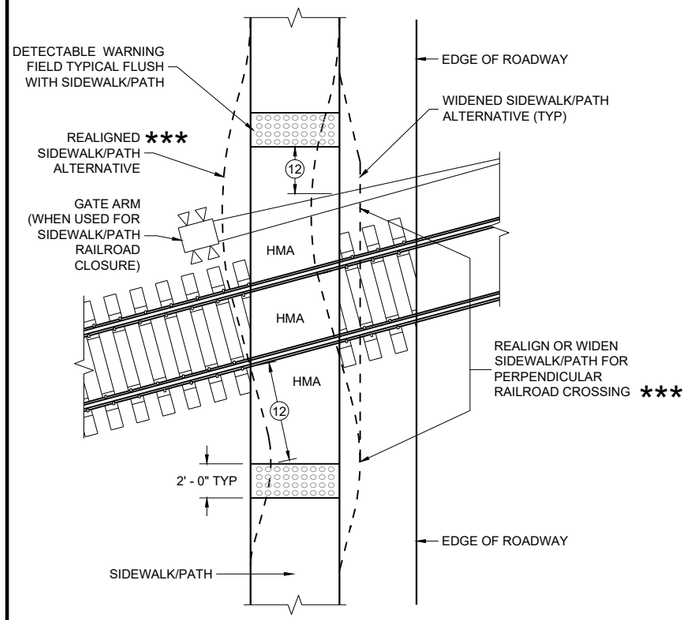
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

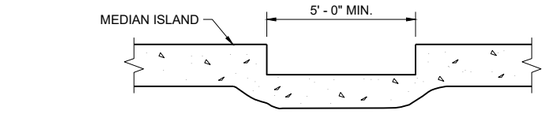
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

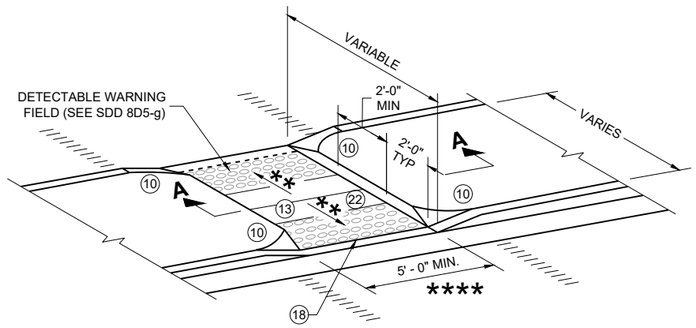


CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

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

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

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

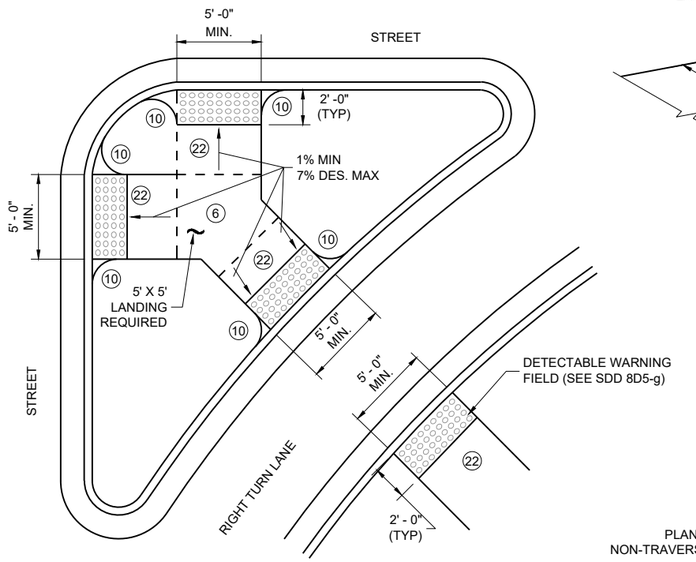
(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH, WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.

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

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.

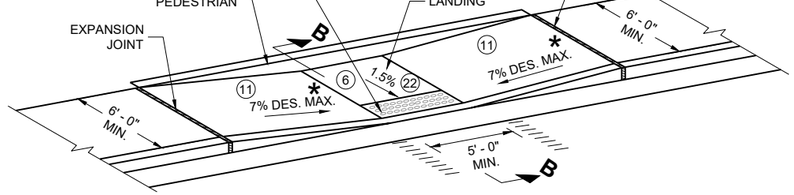
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.



CURB RAMP TYPE 6

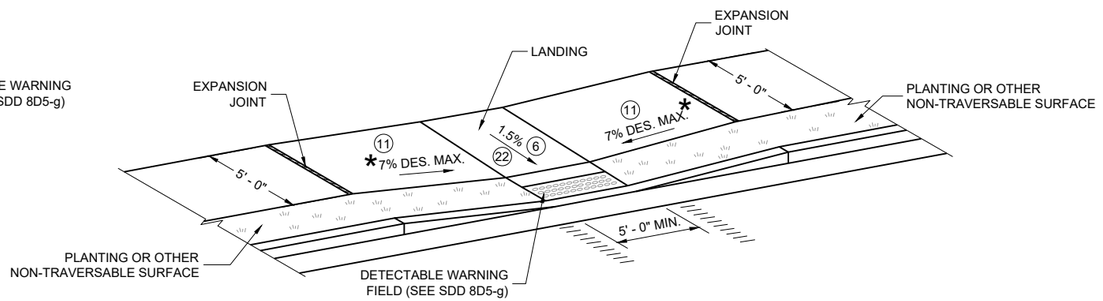
DETECTABLE WARNING AT ISLANDS

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



CURB RAMP TYPE 7A

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

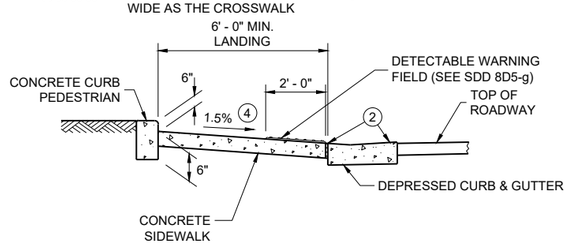


CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

LEGEND

═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT FIELD LOCATED
ıı ıı ıı ıı	PAVEMENT MARKING CROSSWALK (WHITE)
*	MAXIMUM 8.3%
**	1% MINIMUM (PROVIDE DRAINAGE)
***	DETAILS TO BE DETERMINED BY ENGINEER
****	FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

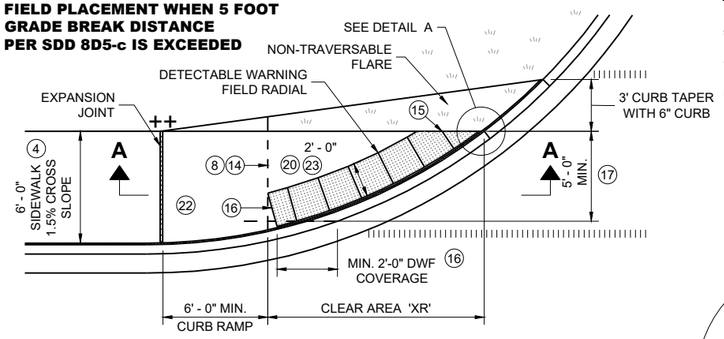


SECTION B - B FOR TYPE 7A

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

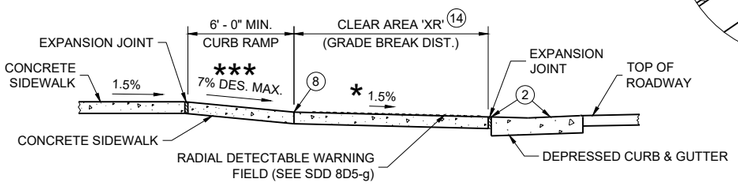
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4A1

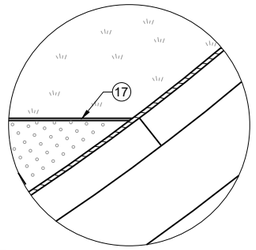
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION A - A FOR TYPE 4A1

LEGEND

═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT SIDEWALK
ıllıllıllıllı	PAVEMENT MARKING CROSSWALK (WHITE)
**	WIDTH SHOWN ELSEWHERE IN THE PLANS
***	MAXIMUM 8.3%
++	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



DETAIL A

GENERAL NOTES

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

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

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

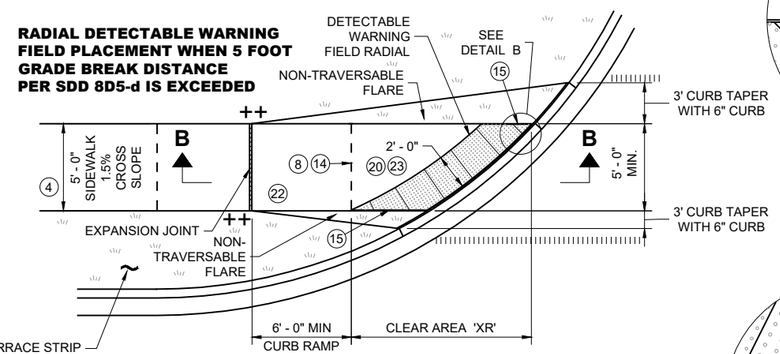
(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

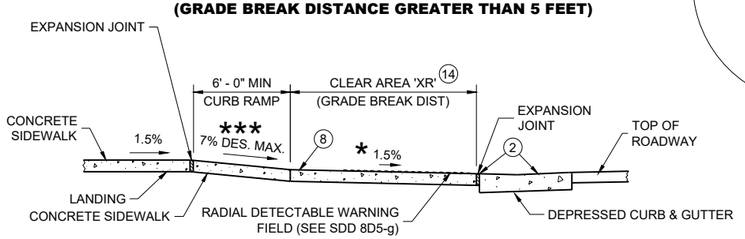
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



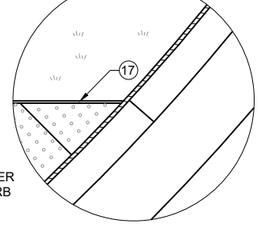
PLAN VIEW

CURB RAMP TYPE 4B1

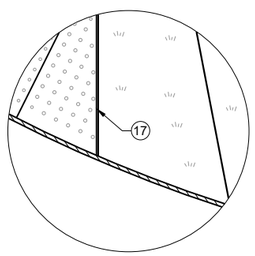
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

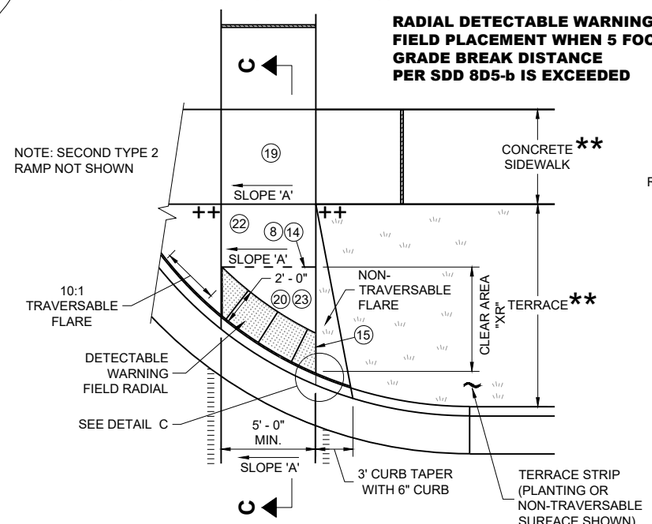


DETAIL B



DETAIL C

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

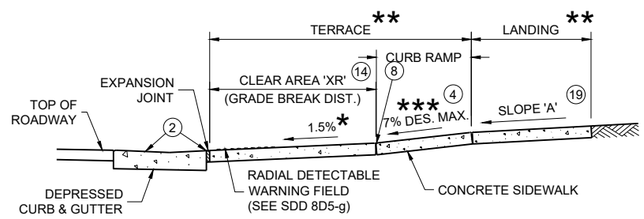


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)



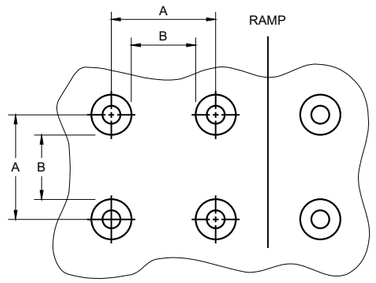
SECTION C - C FOR TYPE 2

CURB RAMPS
RADIAL DETECTABLE WARNING

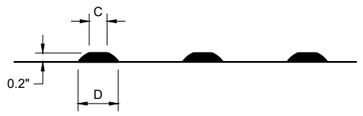
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

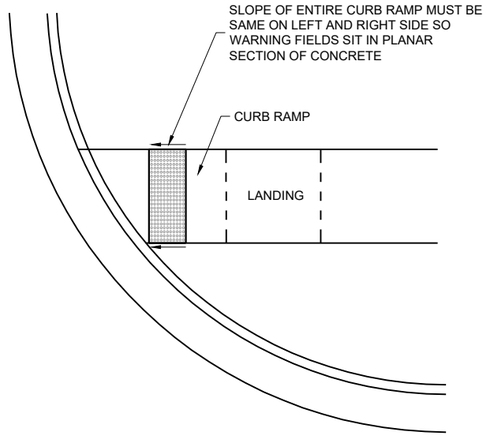
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

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

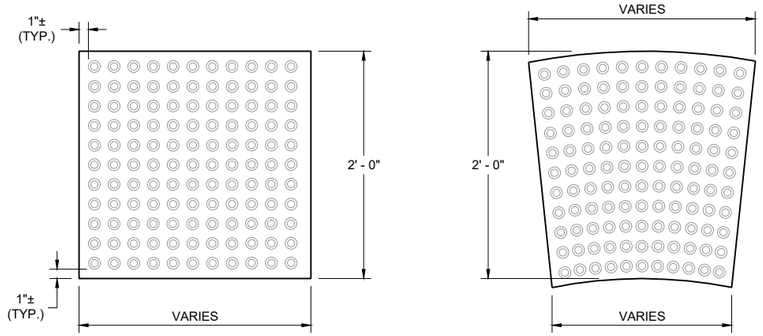
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

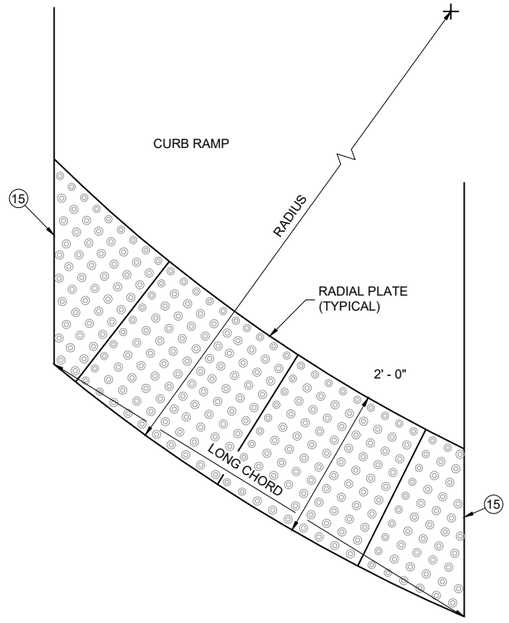
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



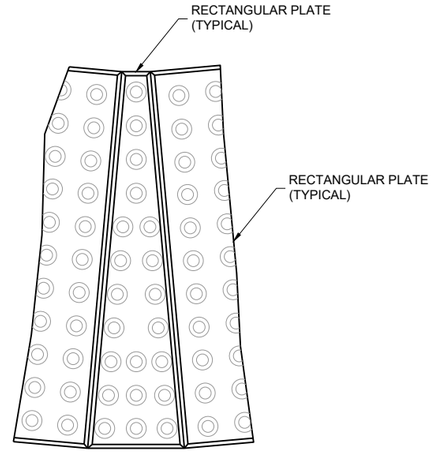
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

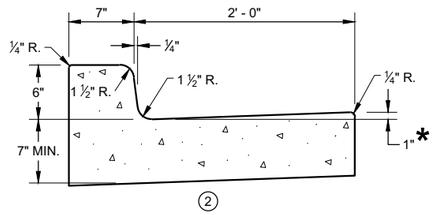
CURB RAMPS
RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodney Taylor — <position>

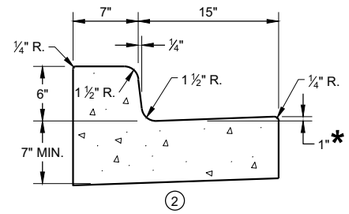
FHWA

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SDD 08D05-22g

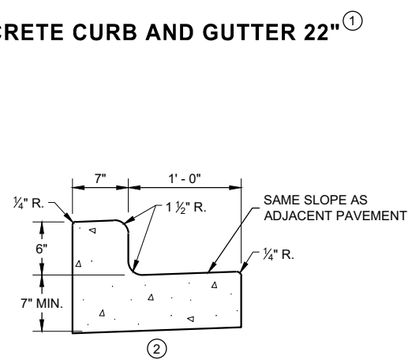


CONCRETE CURB AND GUTTER 31" ①

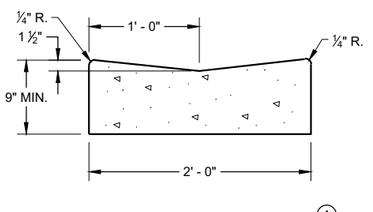
*TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



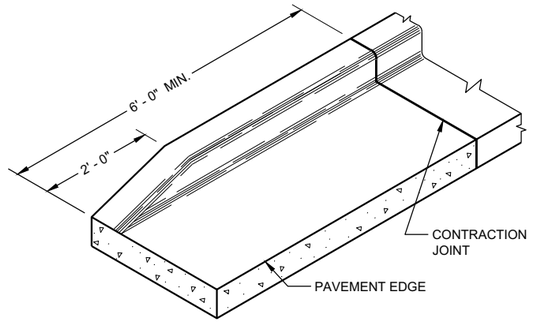
CONCRETE CURB AND GUTTER 22" ①



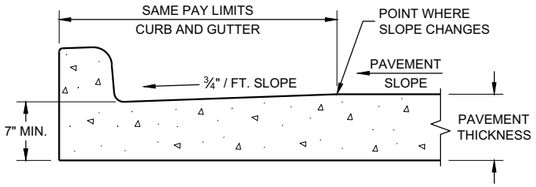
CONCRETE CURB AND GUTTER 19" ①



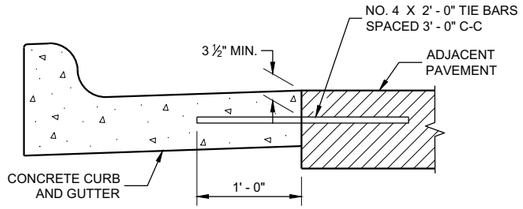
CONCRETE GUTTER 24" ①



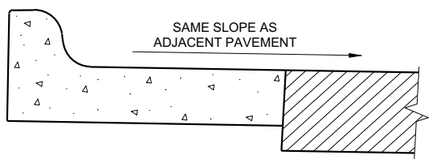
END SECTIONCURB AND GUTTER



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



TYPICAL TIE BAR LOCATION ①



HIGH SIDE SECTION ③

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

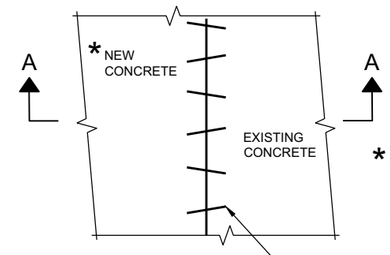
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUITED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

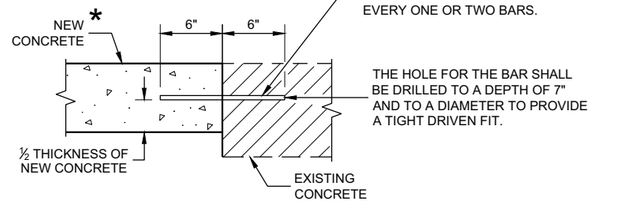
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



PLAN VIEW

*EXISTING AND NEW CONCRETE MAY BE CURB AND GUTTER, SURFACE DRAINS, PAVEMENT OR OTHER CONCRETE STRUCTURE.



SECTION A - A

PAVEMENT TIES

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional use in Milwaukee Co. Only)

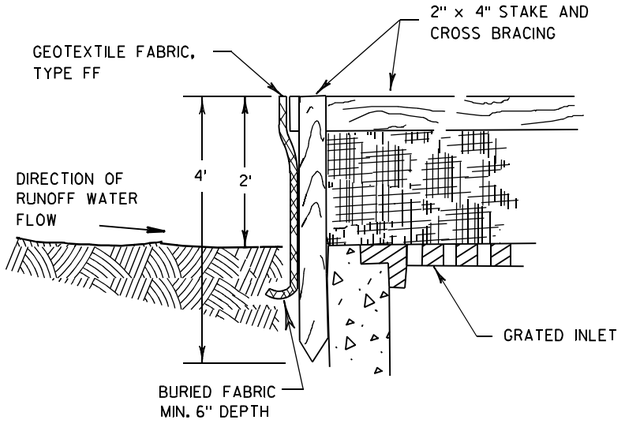
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

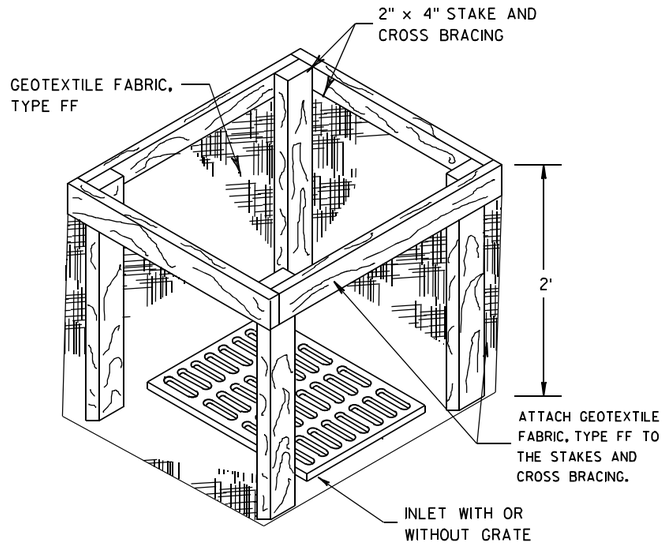
APPROVED
February 2020
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

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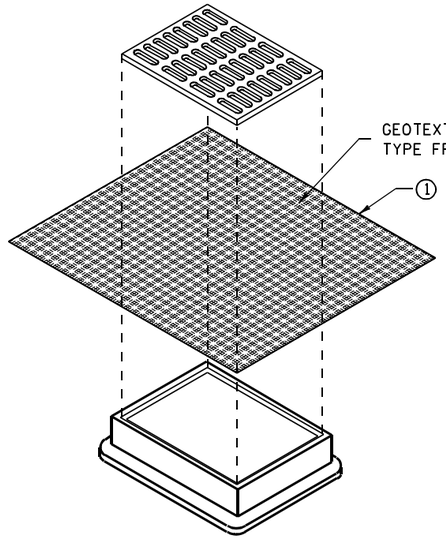
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SDD 08D16 - 11



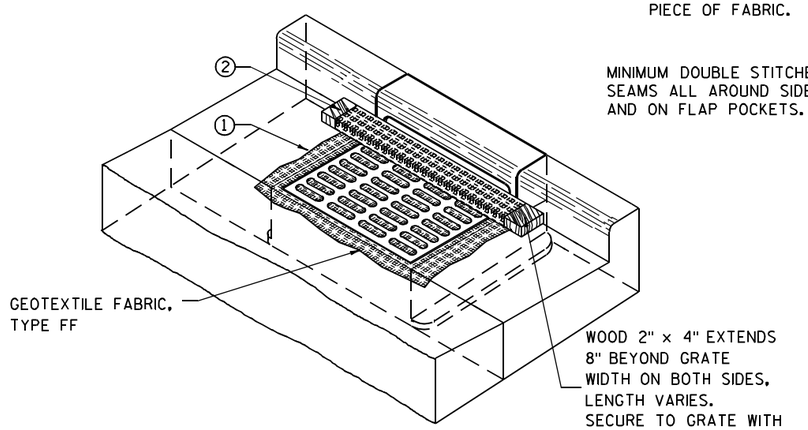


INLET PROTECTION, TYPE A

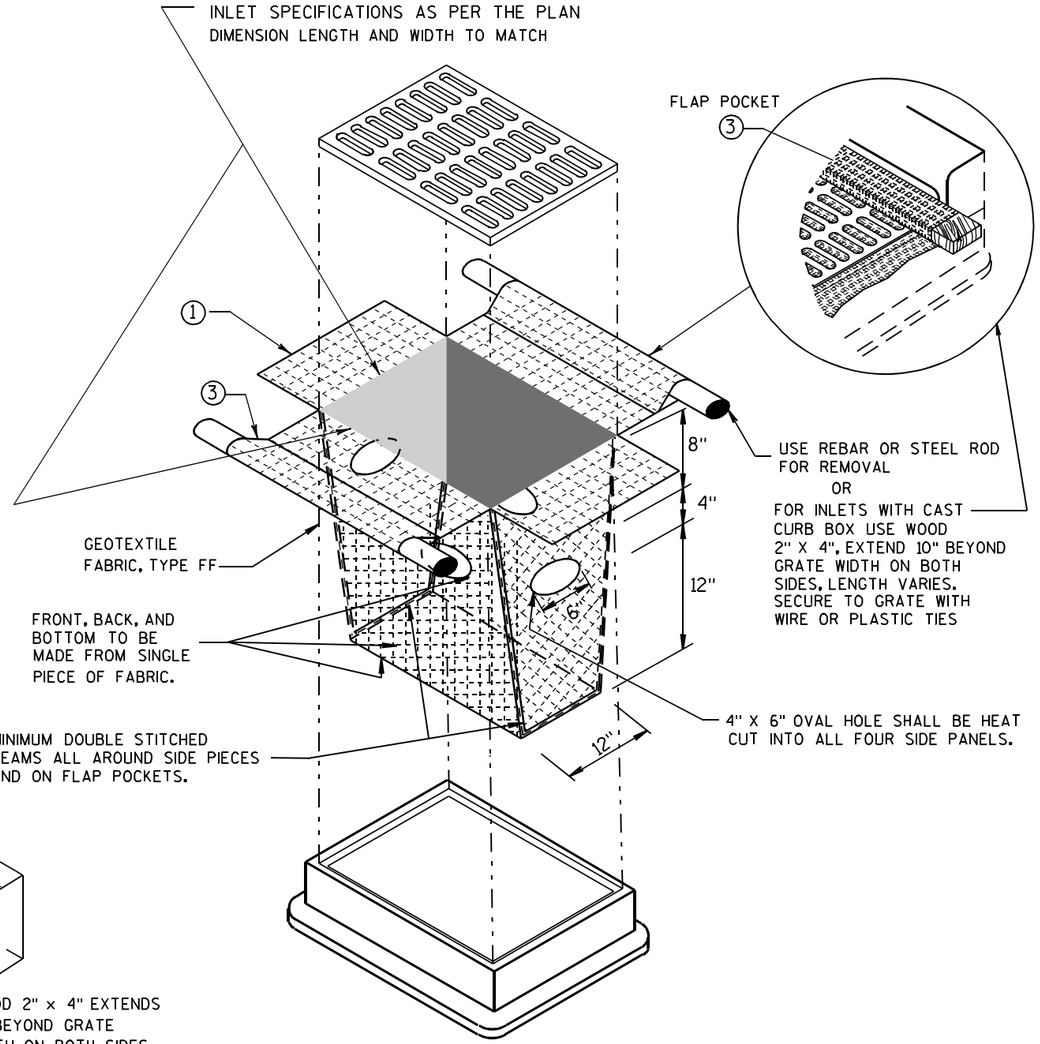


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

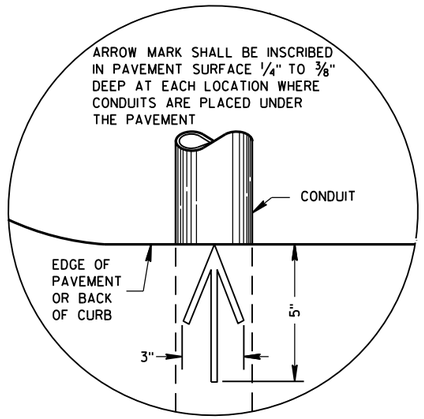
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S.D.D. 8 E 10-2

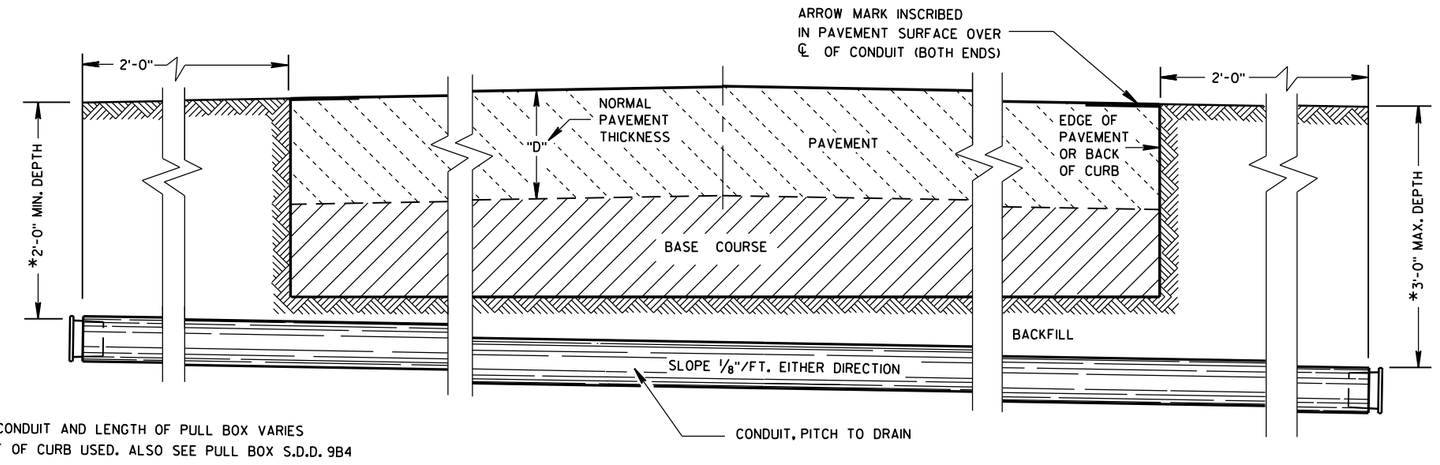
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S.D.D. 8 E 10-2



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

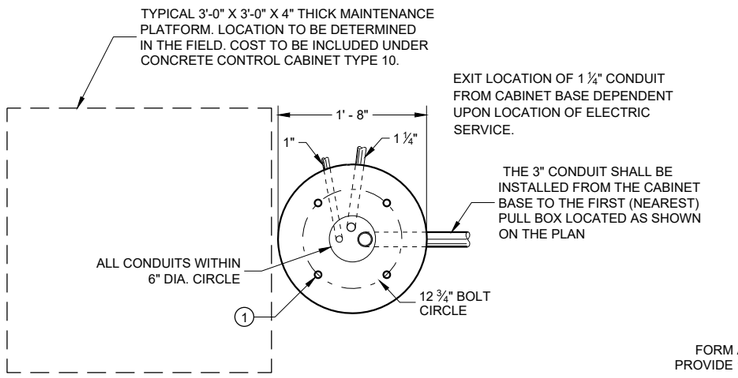
APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

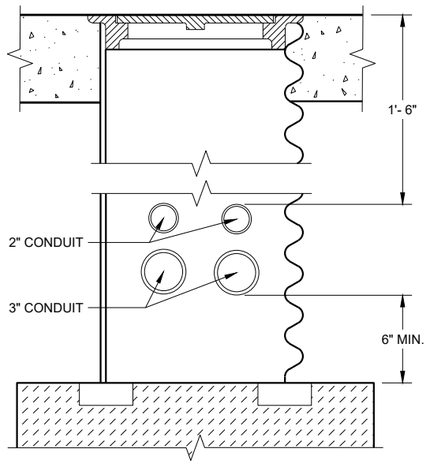
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S.D.D. 9 B 2-10

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

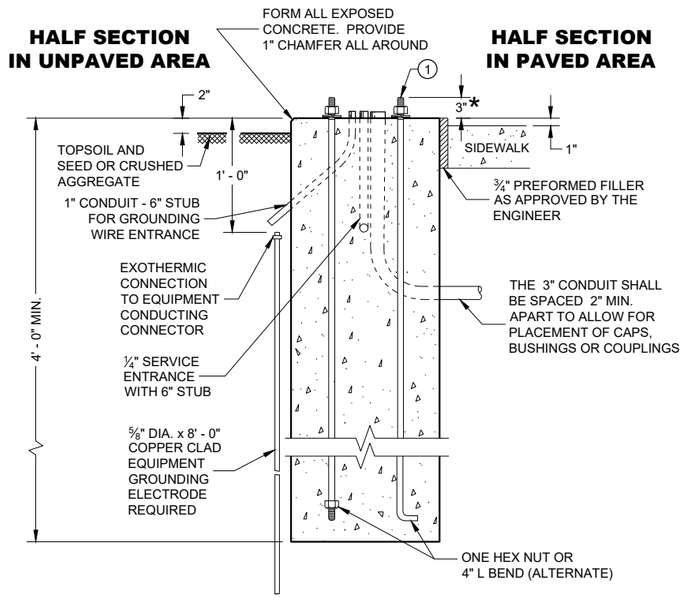
*INCLUDES MAINTENANCE PLATFORM.





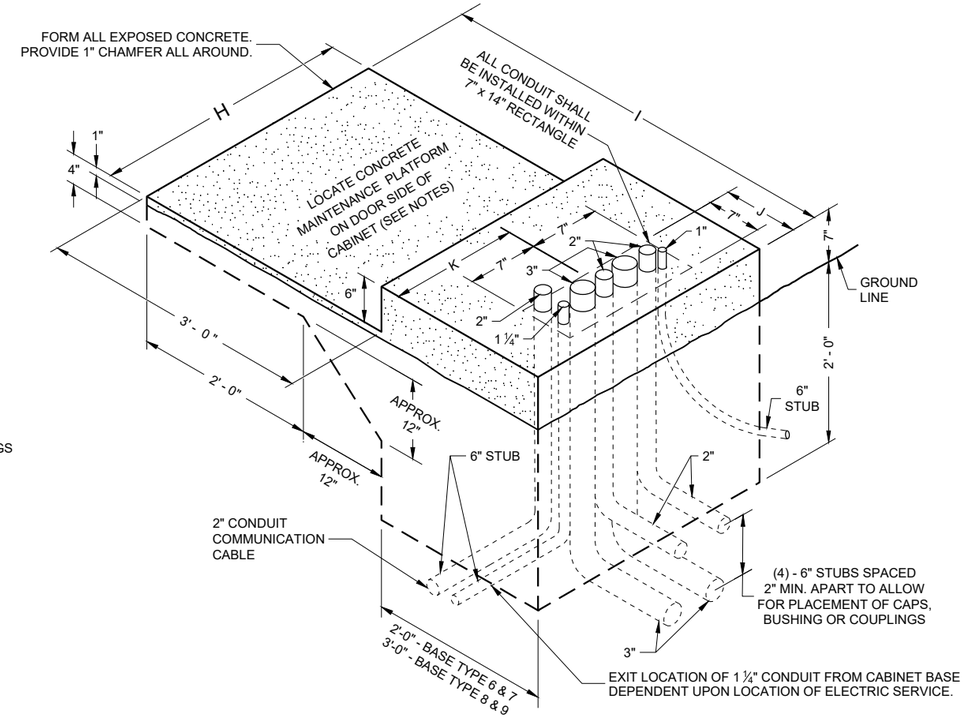
CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10

*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.



ISOMETRIC VIEW
TYPE 6, 7, 8 AND 9

GENERAL NOTES

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

INSTALL FOUR (4) ½" INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH 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.

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

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

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF 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.

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

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

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

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

THE "L" BEND SHALL NOT BE THREADED.

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

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

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 OF THE STANDARD SPECIFICATIONS.

CONCRETE CABINET CONTROL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2016
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI
FHWA

6
SDD 09C05 - 10

GENERAL NOTES

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

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.

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).

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

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" 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.

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

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.

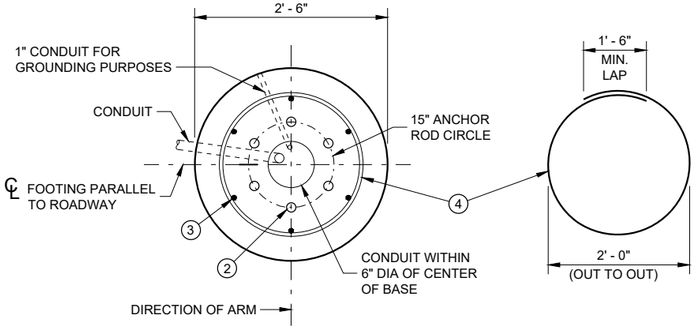
(2) (6) 1 ½ DIA. X 4' - 4" ANCHOR RODS

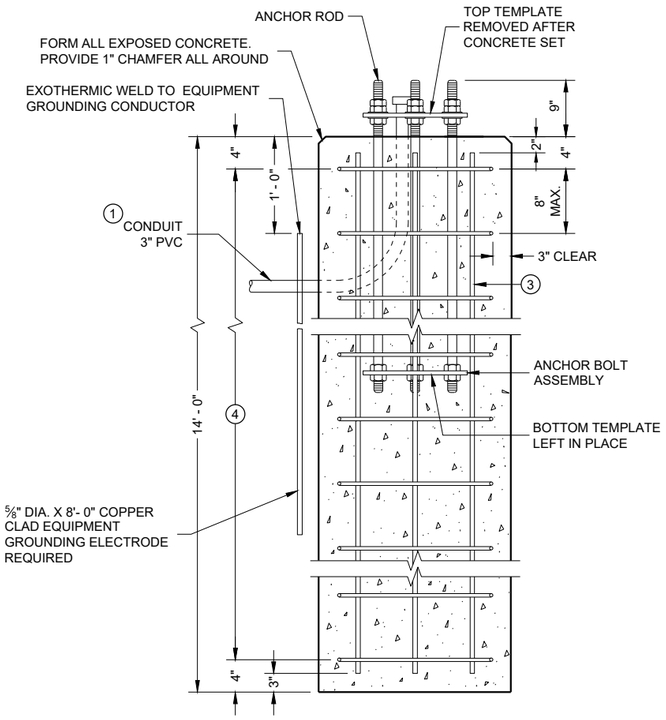
(3) (6) NO. 6 X 13' - 7" BAR STEEL REINFORCEMENT.

(4) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

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

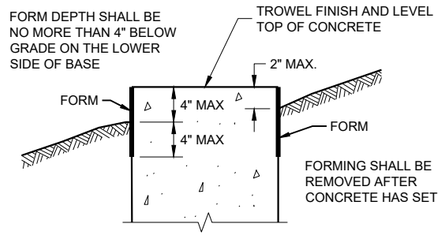
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122



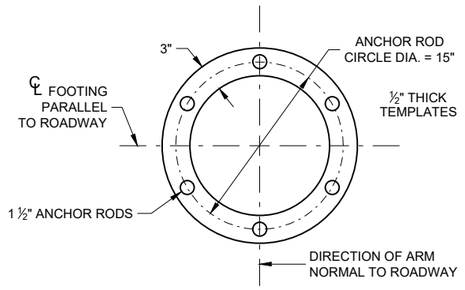


CONCRETE BASE, TYPE 10
(FOR TYPE 9, TYPE 10 AND OVER HEIGHT (OH) POLES)

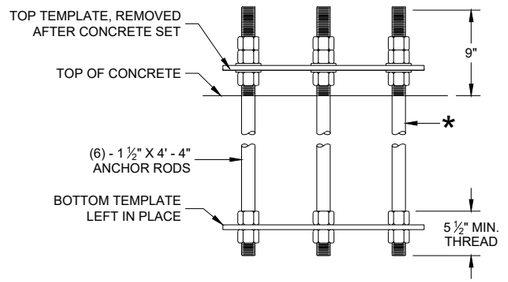
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE SDD 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



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.

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demerbilek — WIND LOADED STRUCTU PROGRAM LEADER
FHWA

6
SDD 09C11 - 10

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.

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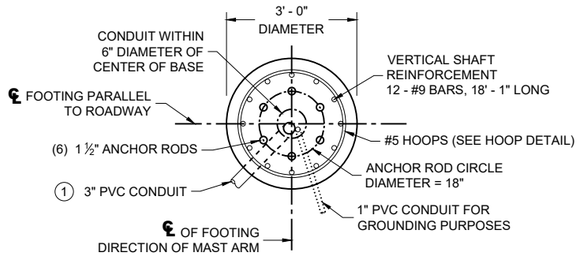
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THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY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

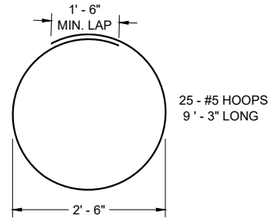
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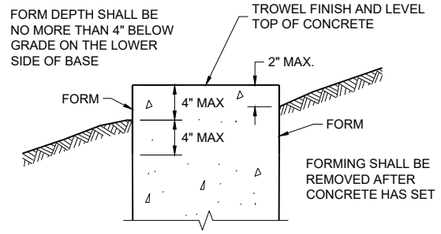
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55.....fy = 55,000 p.s.i.
(IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



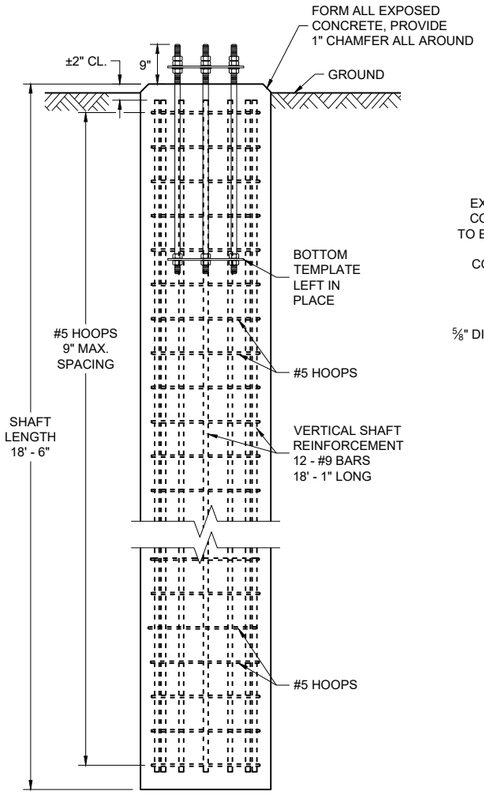
PLAN VIEW



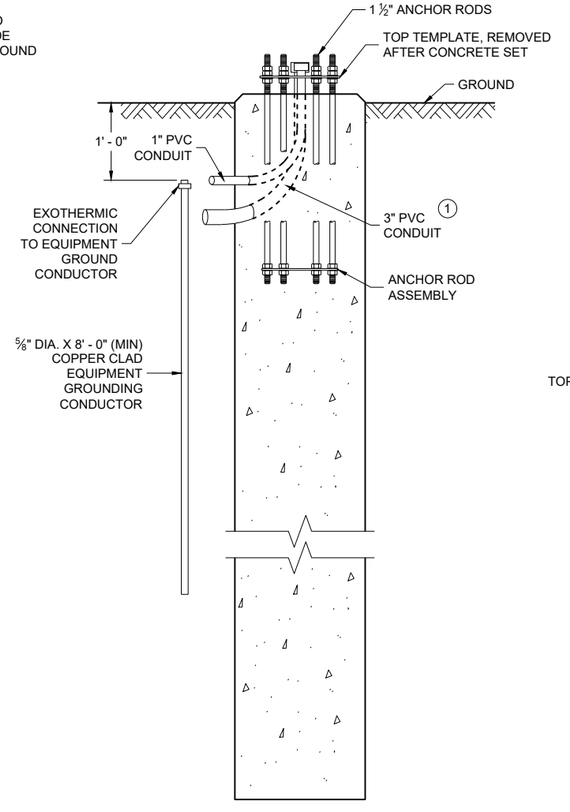
HOOP DETAIL



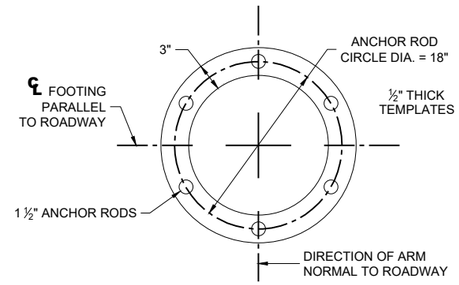
FORMING DETAIL



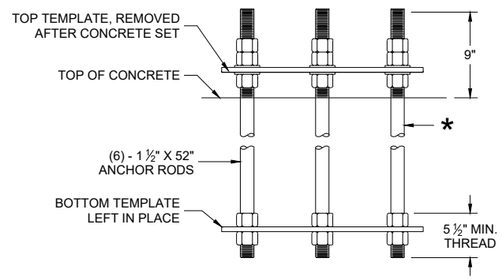
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



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.

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.

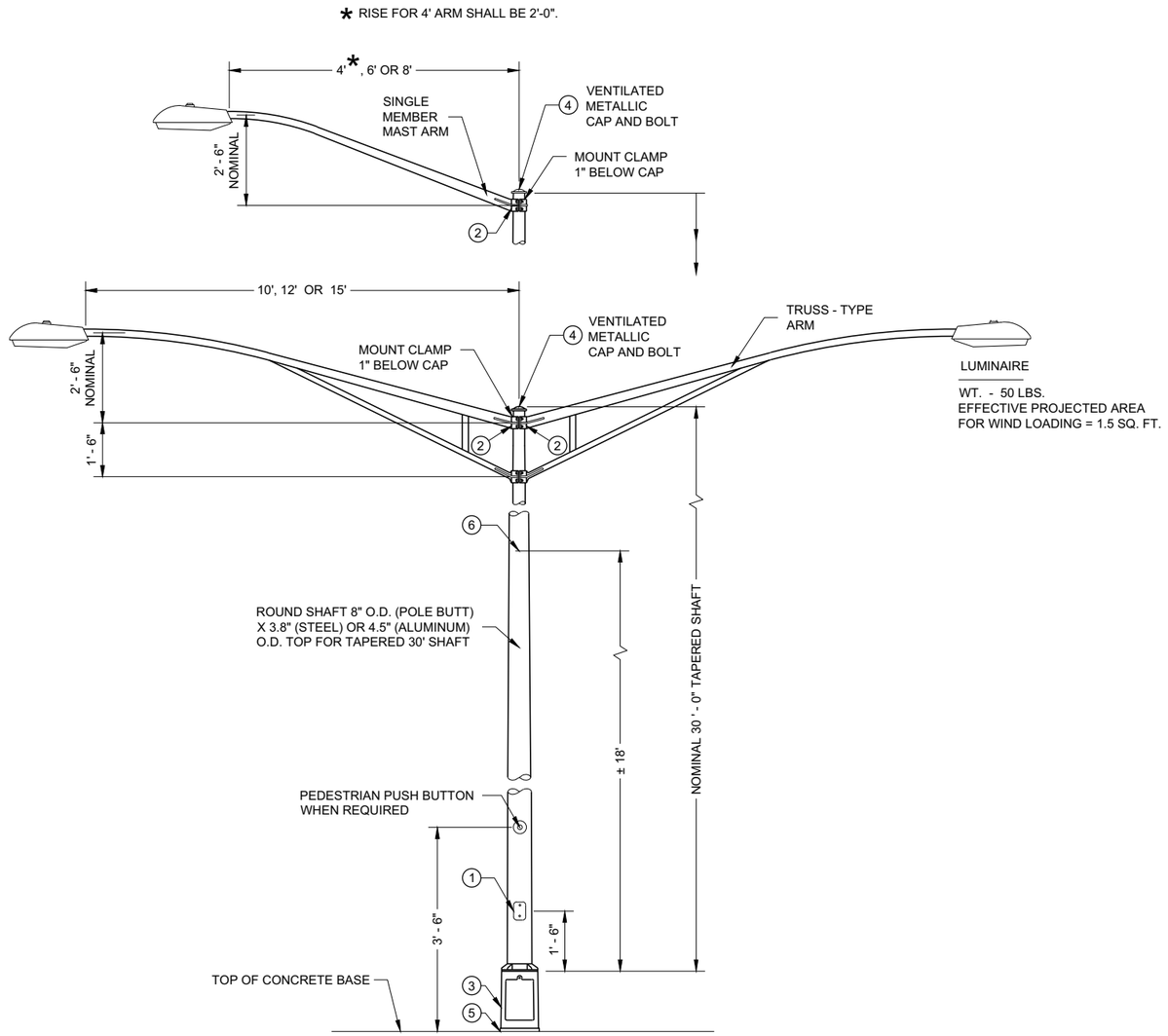
CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTURES PROGRAM LEADER

FHWA

6
SDD 09C15-02



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

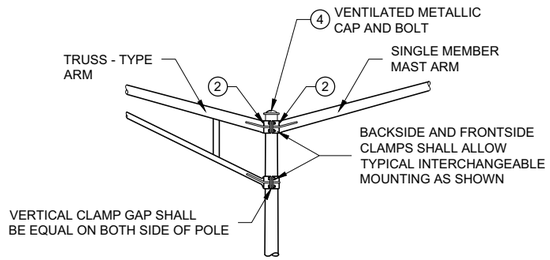
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

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

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

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



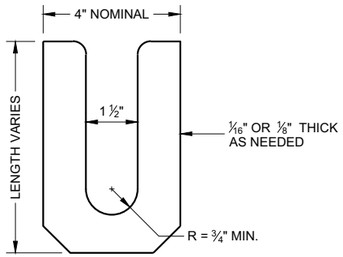
INTERCHANGEABLE MOUNTING DETAIL

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

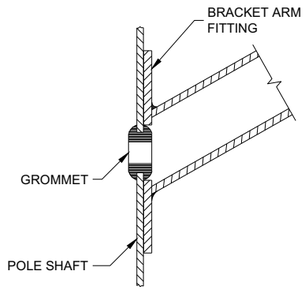
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

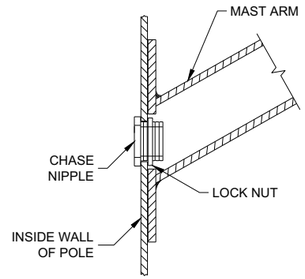
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LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

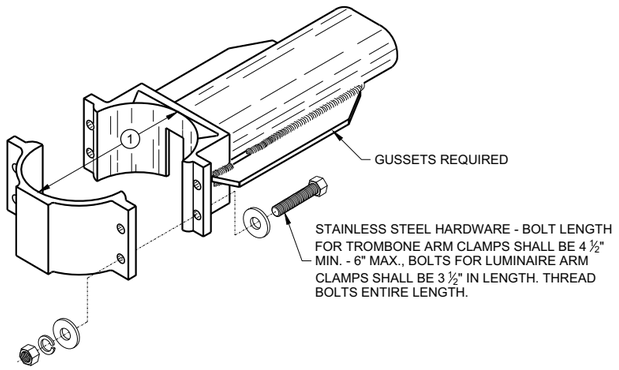
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

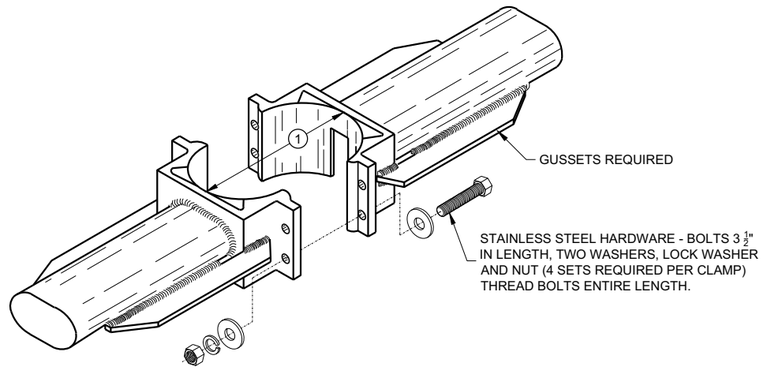
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

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

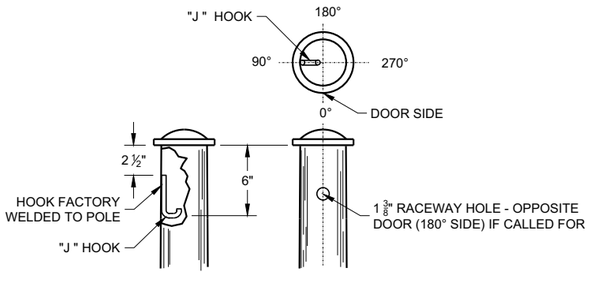
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



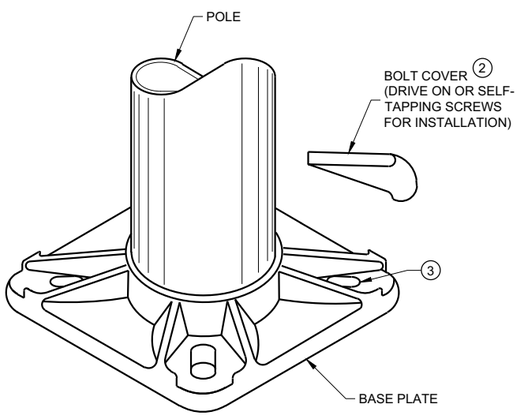
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



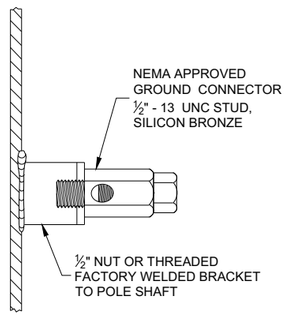
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

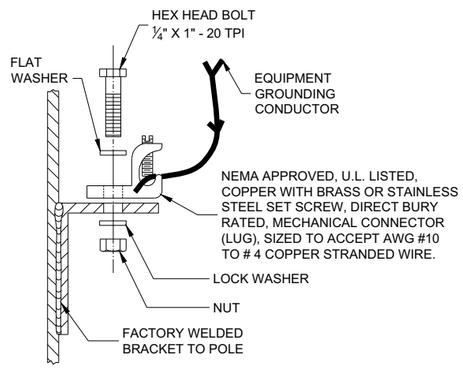


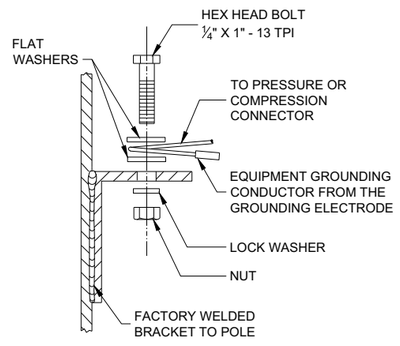
TYPICAL "J" HOOK LOCATION



BASE PLATE







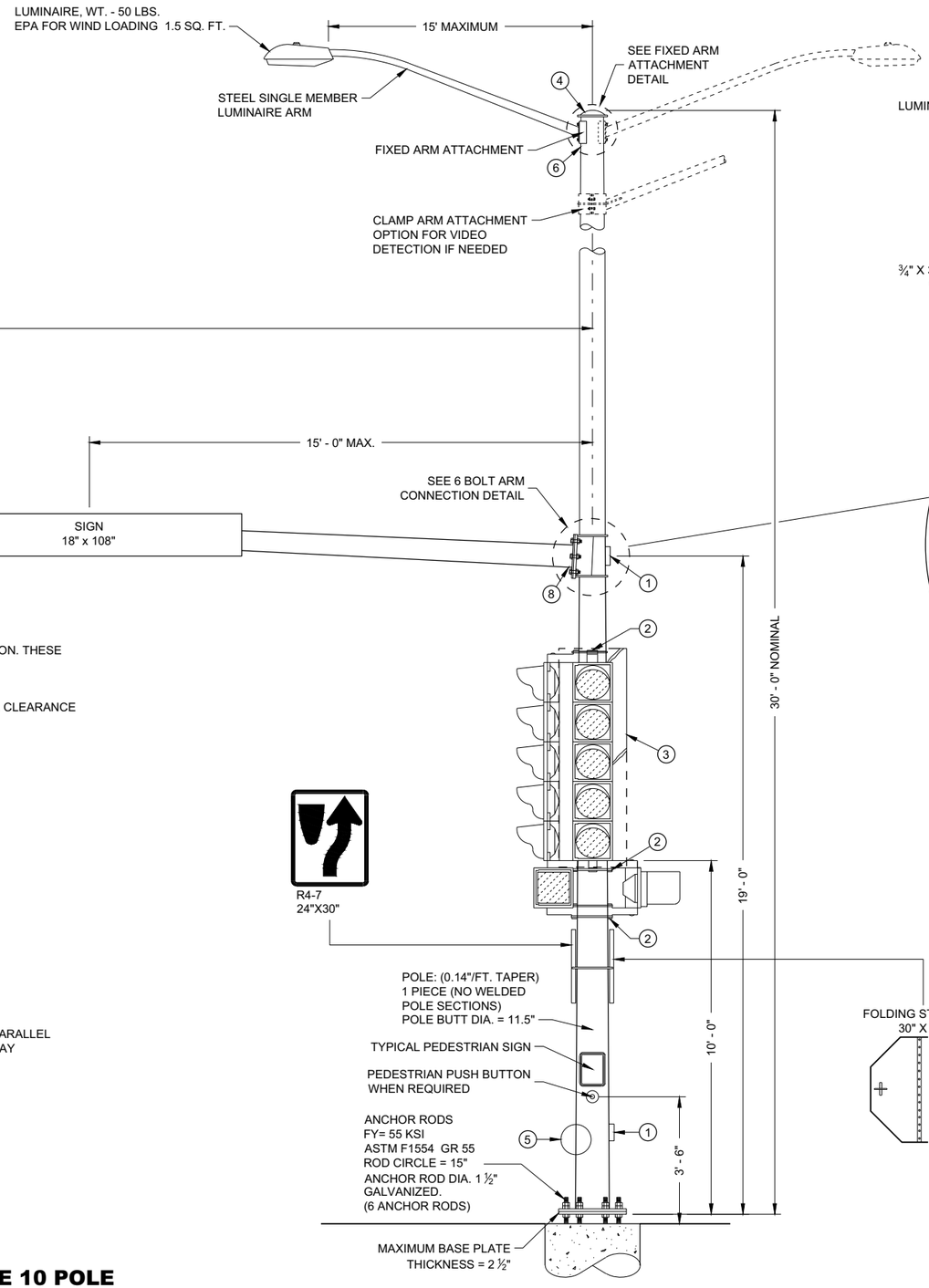
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

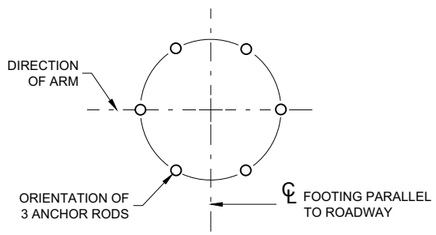
APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

FHWA

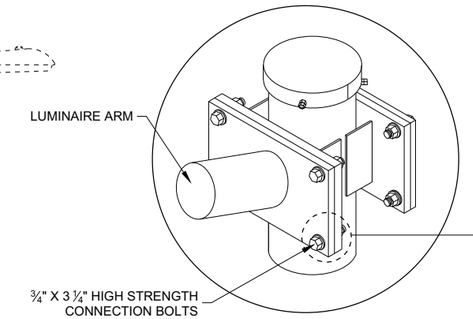


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

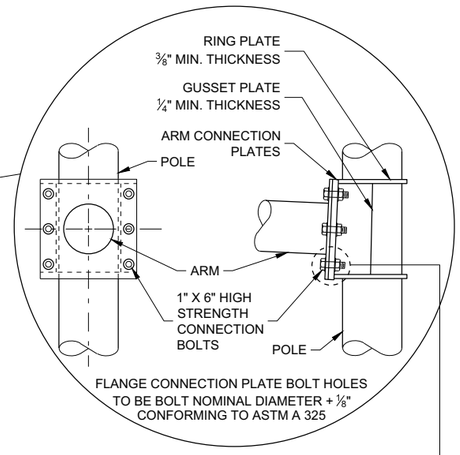
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



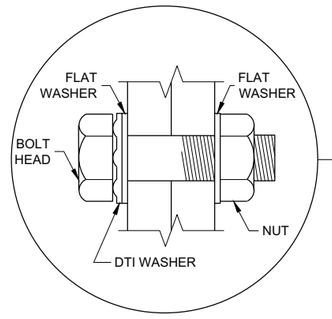
ANCHOR ROD LOCATION



FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 POLE
15' - 30' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

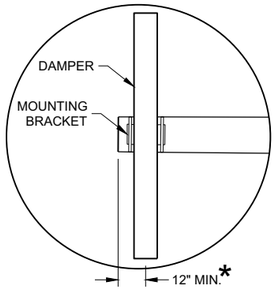
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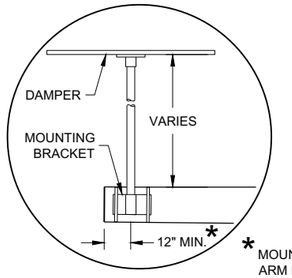
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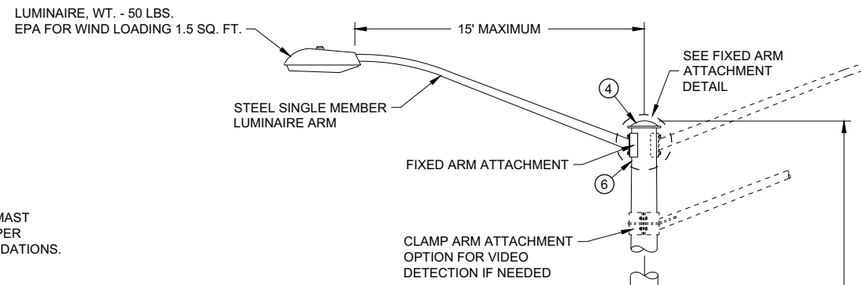


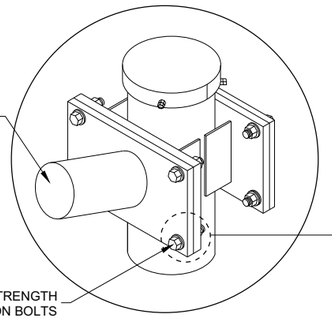
DUMBBELL VIBRATION DAMPER



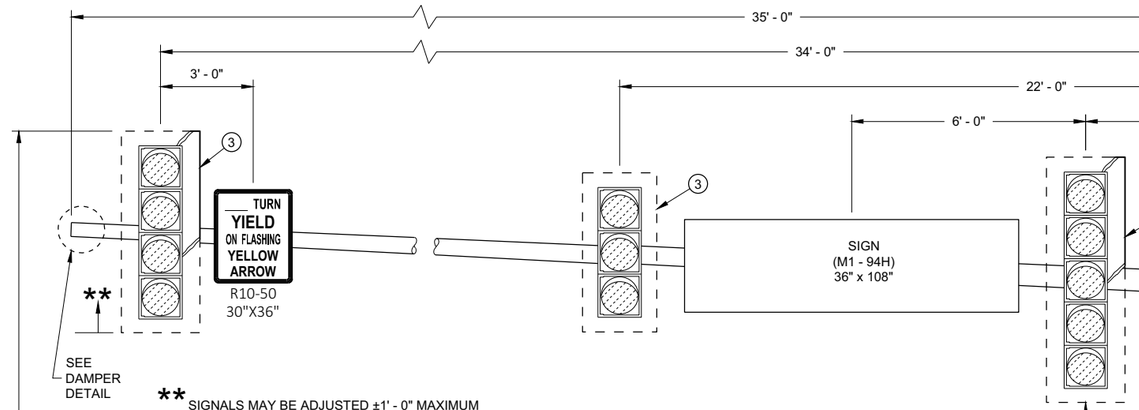
FLAT VIBRATION DAMPER

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

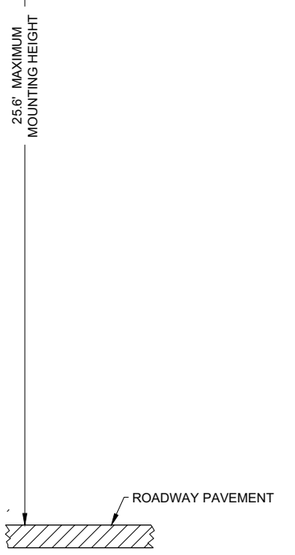


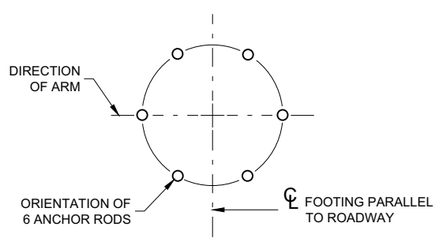


FIXED ARM ATTACHMENT DETAIL



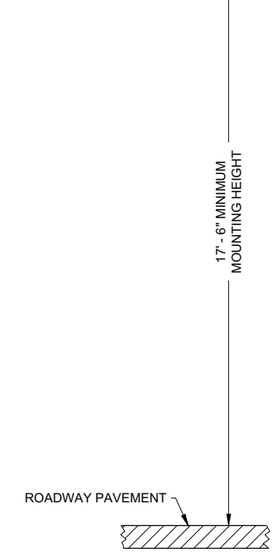
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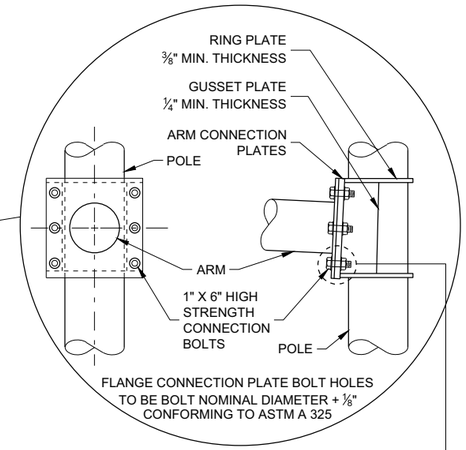




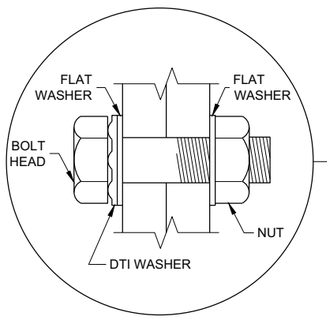
ANCHOR ROD LOCATION

TYPE 10 SPECIAL POLE
35' MONOTUBE ARM
(MAXIMUM LOAD)





6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 SPECIAL POLE
35' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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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.

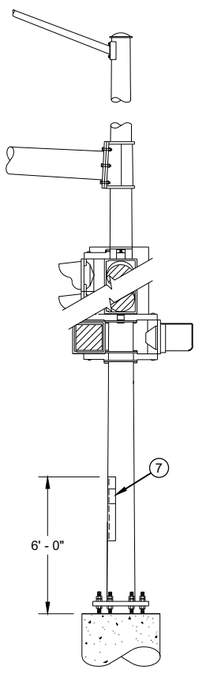
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

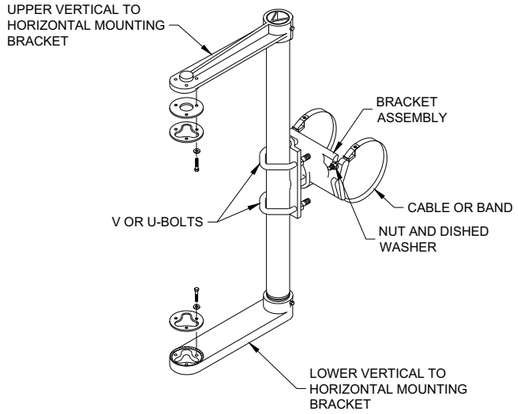
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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.

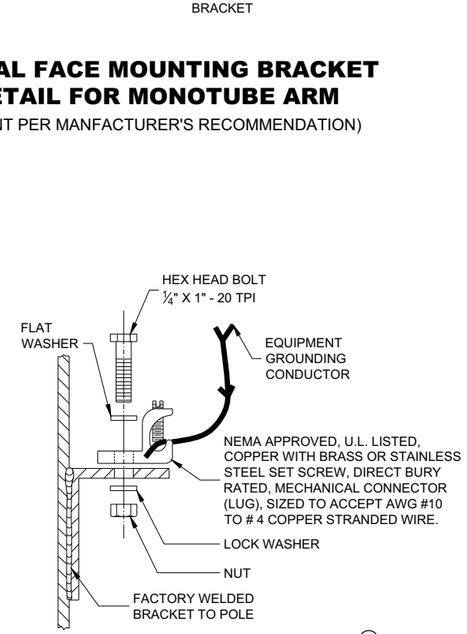


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



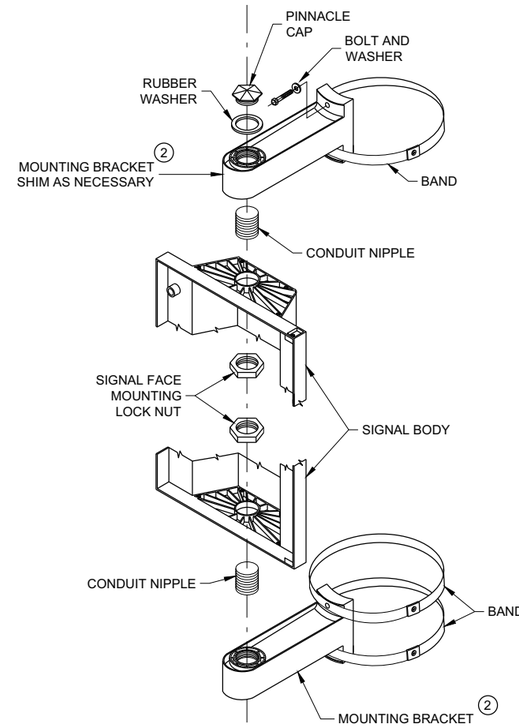
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)

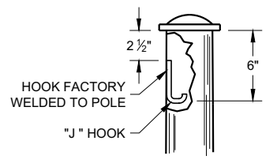


TYPICAL GROUNDING (5) CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL "J" HOOK (6) WIRE SUPPORT

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

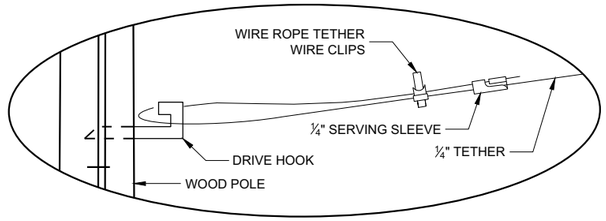
APPROVED
August 2020 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER

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

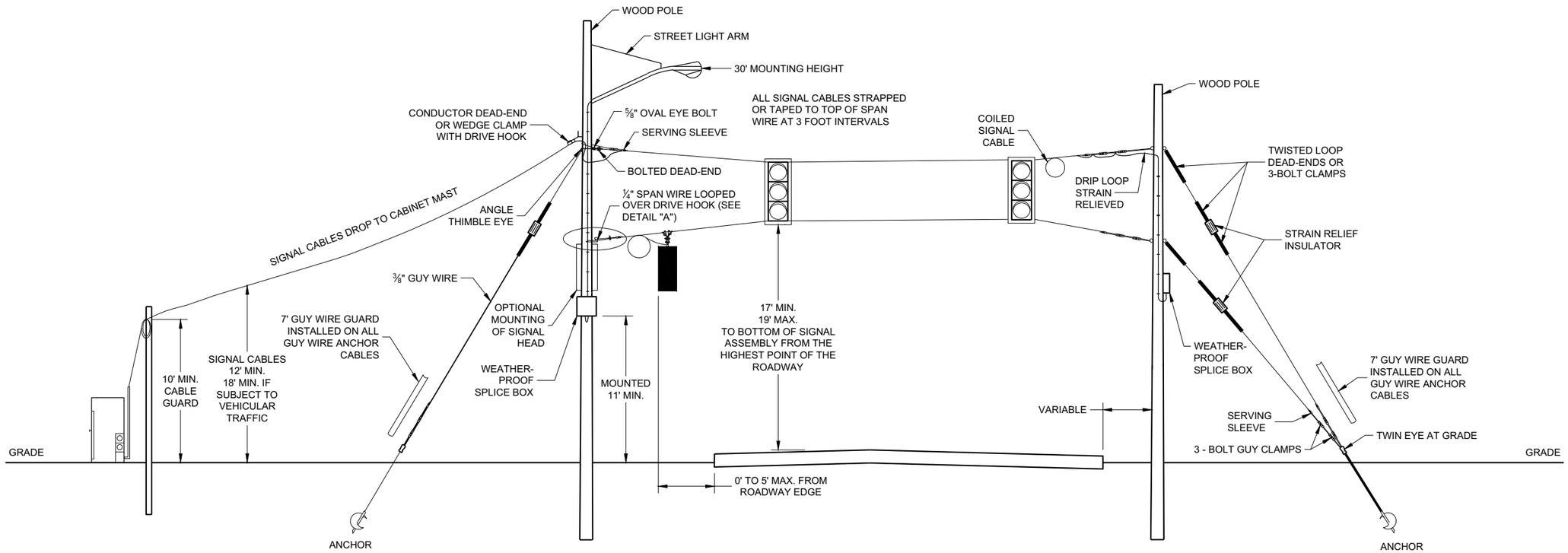


DETAIL "A"

GENERAL NOTES

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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

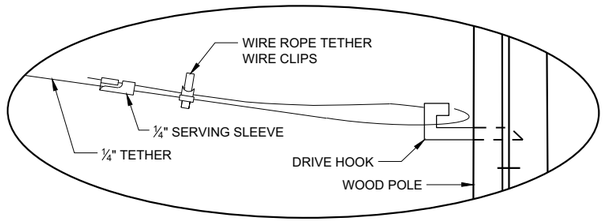
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MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

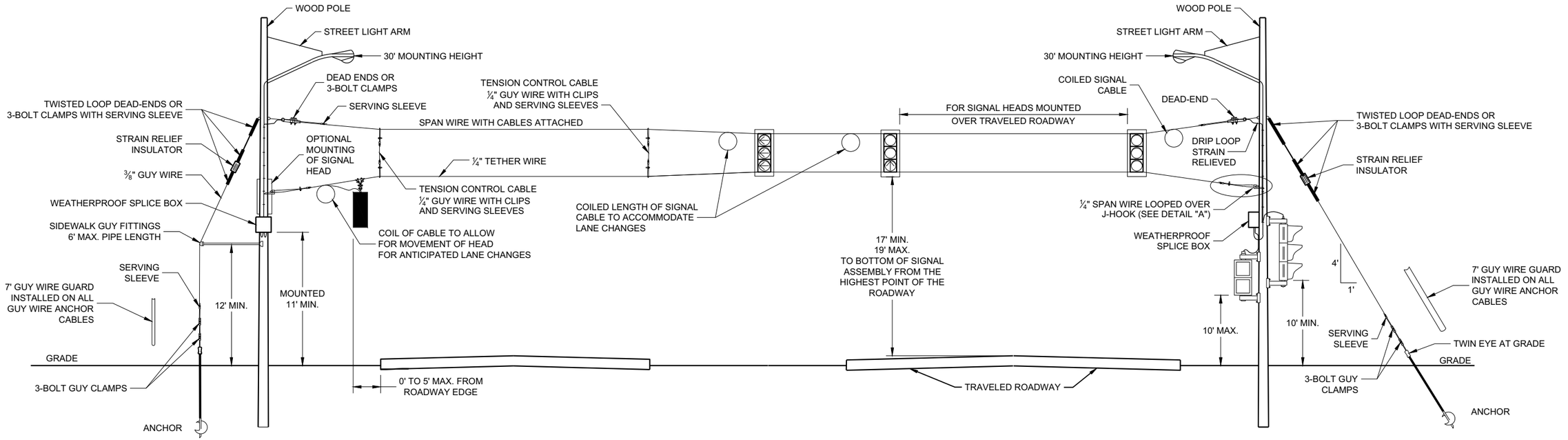


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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

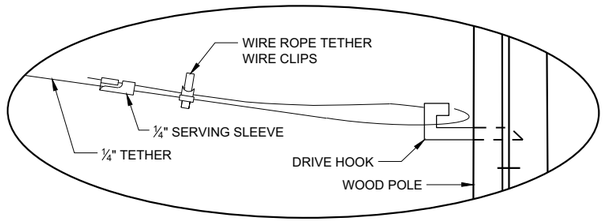
APPROVED
June 2015
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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SDD09G01 - 04b

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

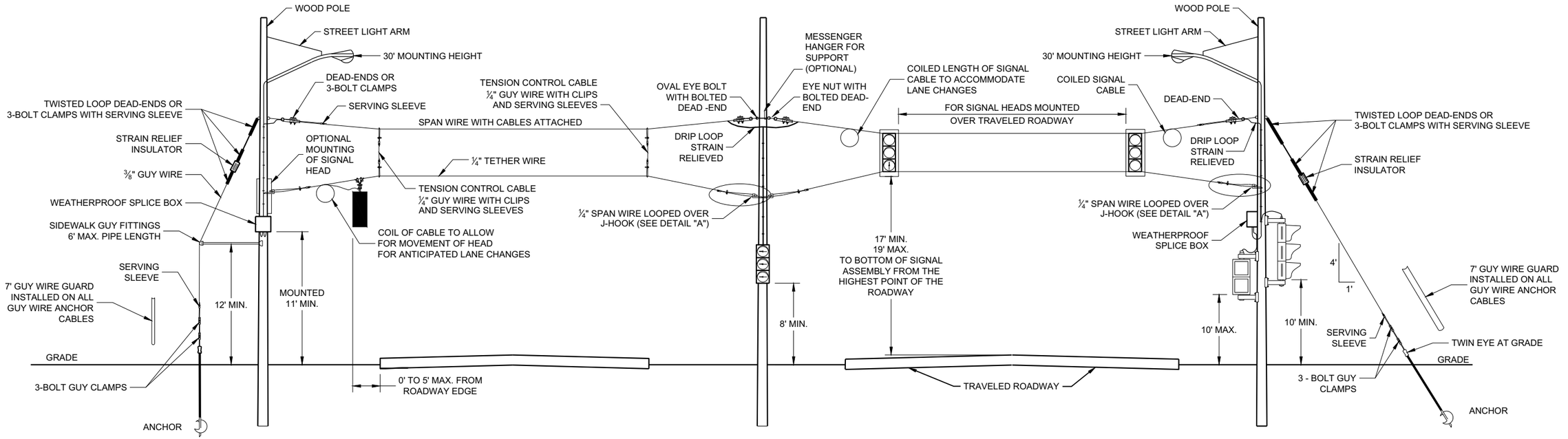


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SPAN WIRE
TEMPORARY SIGNALS
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

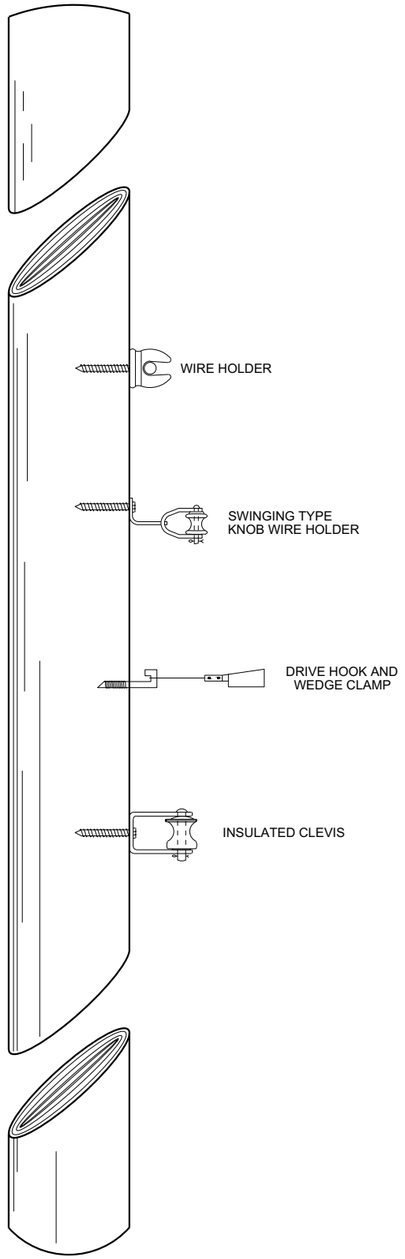
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June 2015
DATE

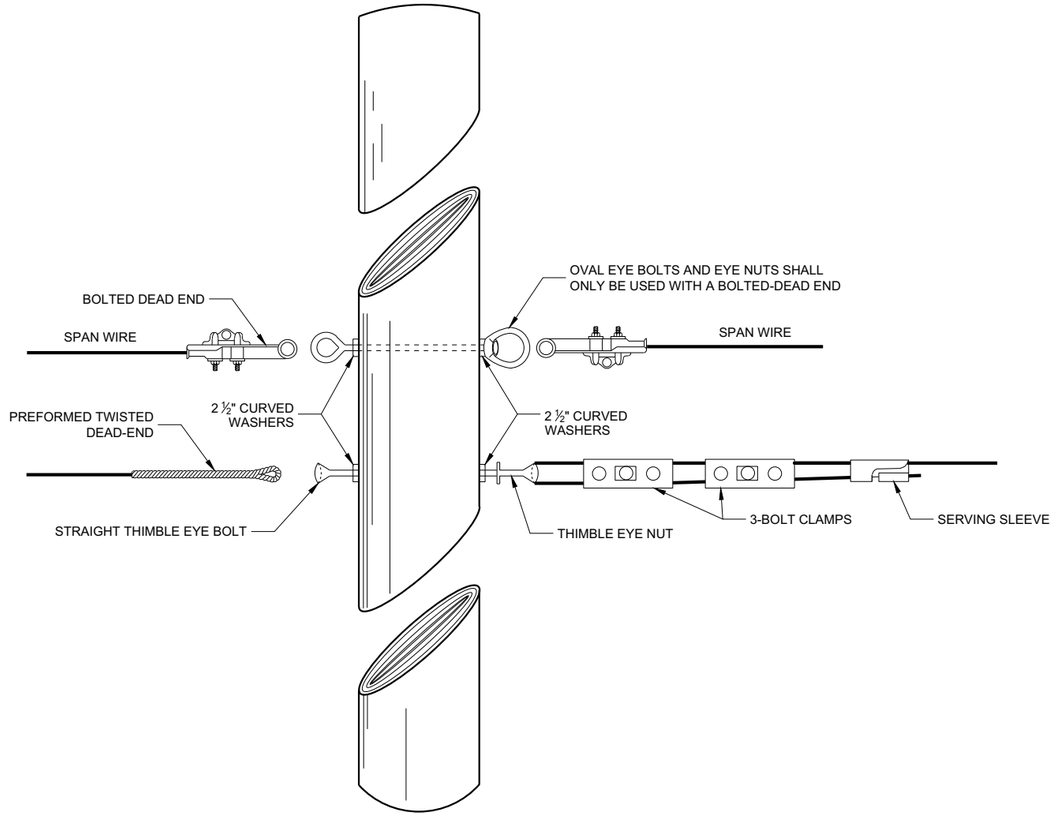
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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SDD 09G01 - 4d

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

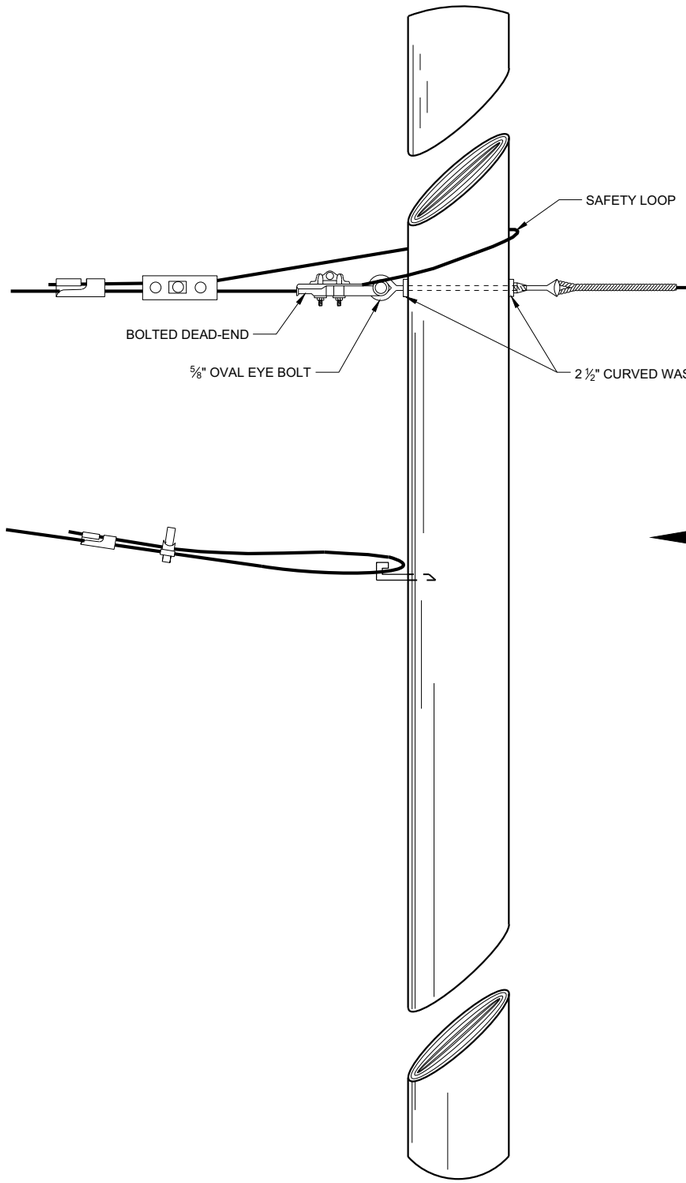
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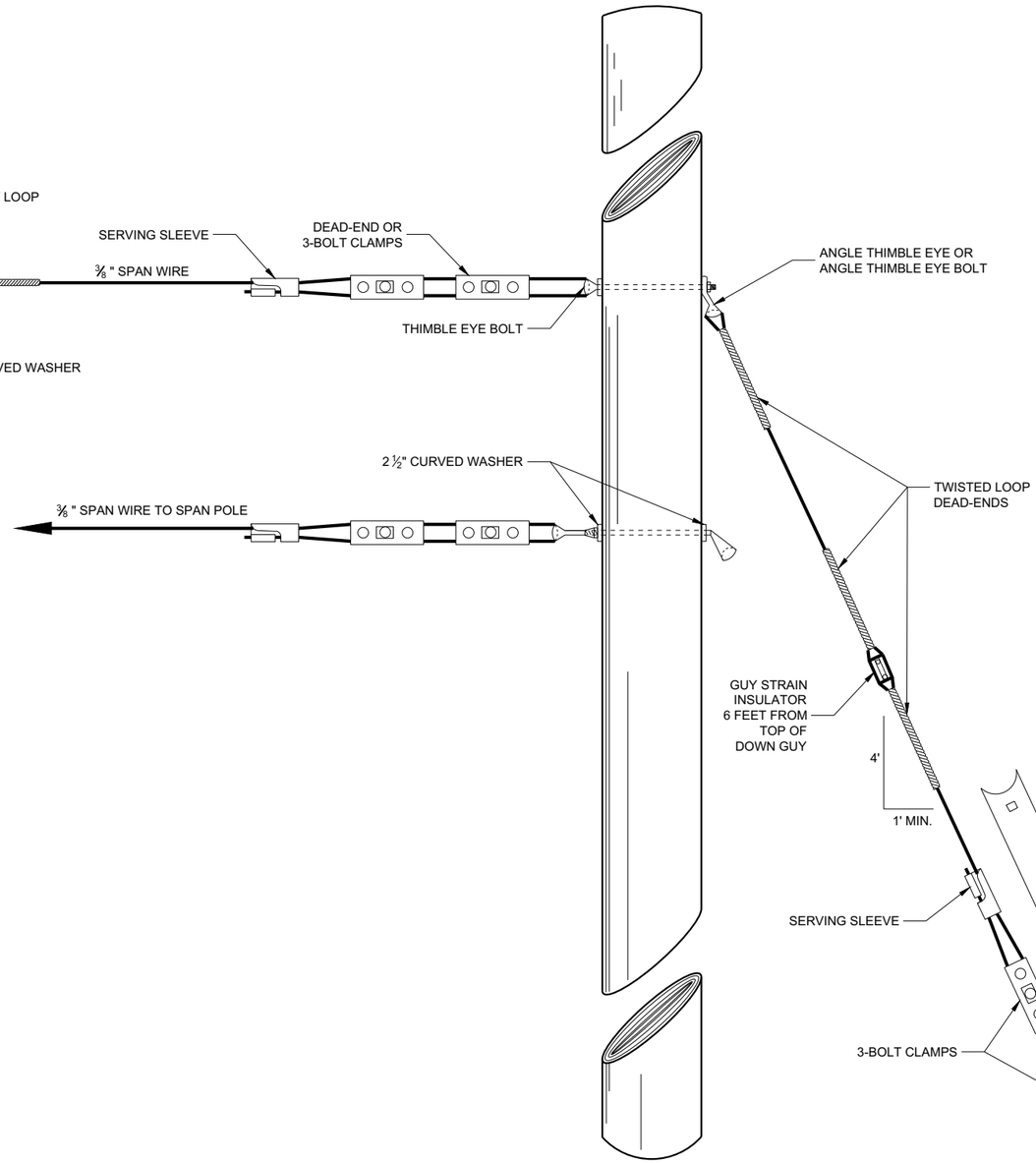
SDD 09G01 - 4d

GENERAL NOTES

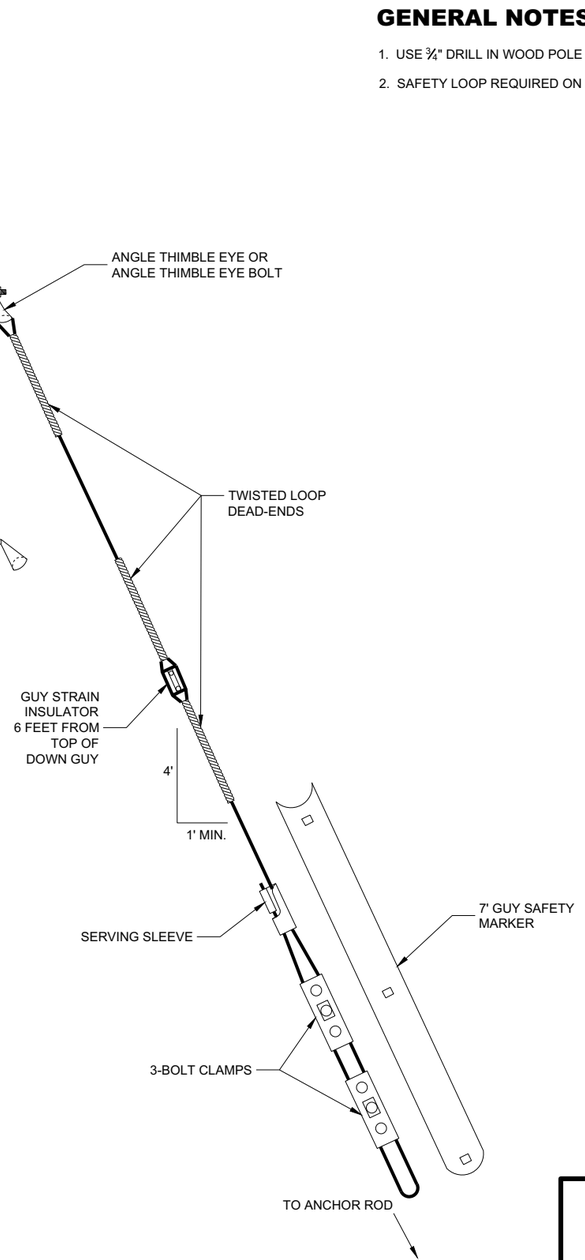
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



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

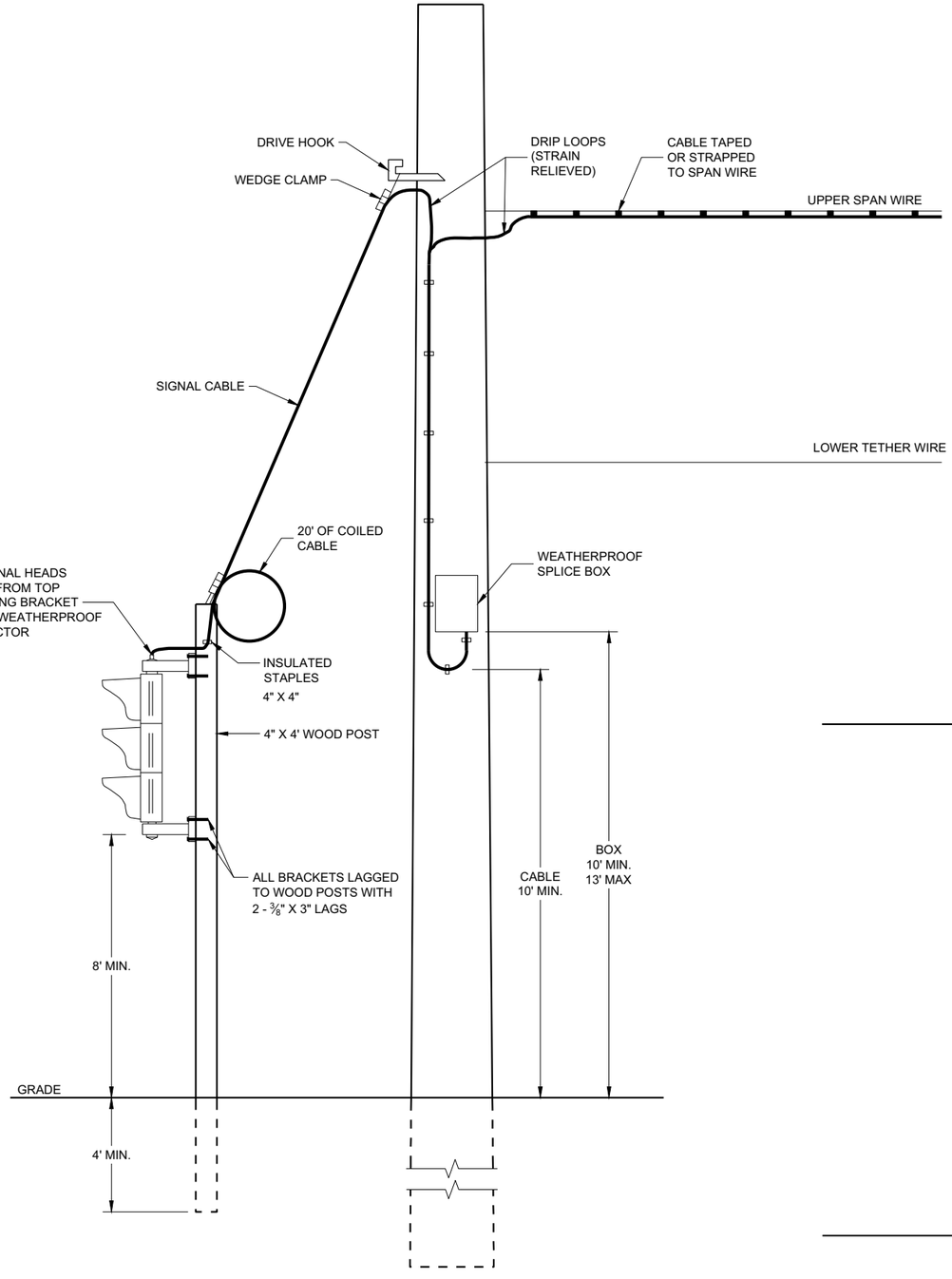
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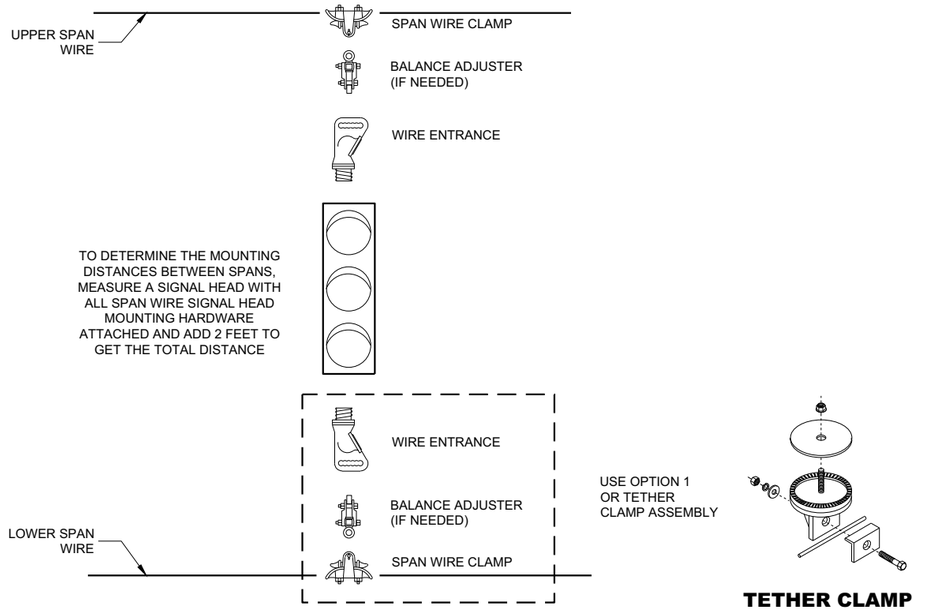
SDD 09G01 - 4e

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SDD 09G01 - 4e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

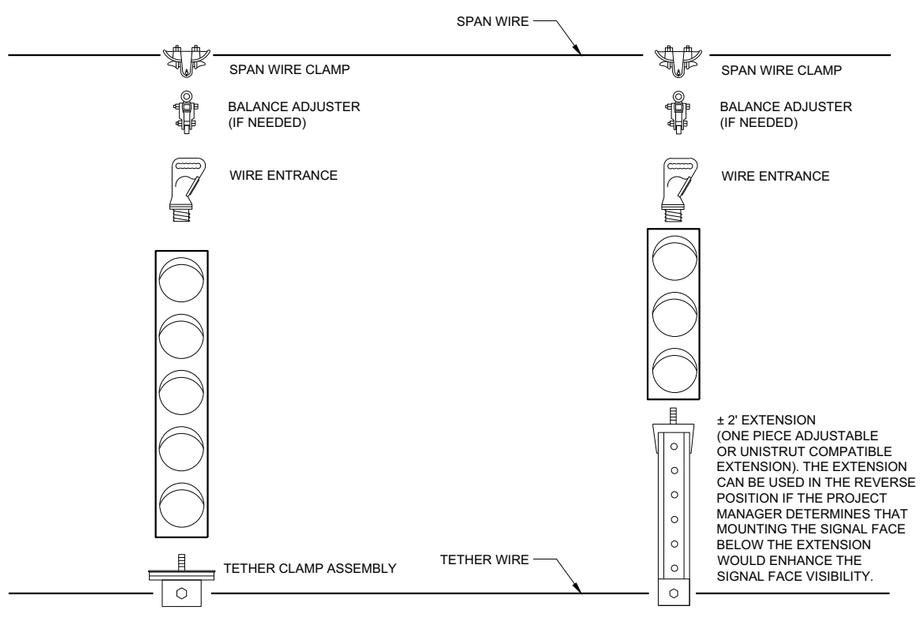


OPTION 1

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

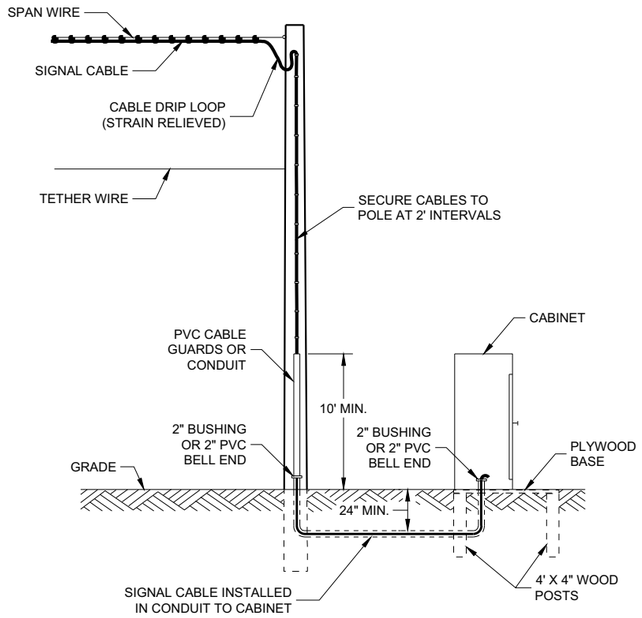
APPROVED
June 2015
DATE

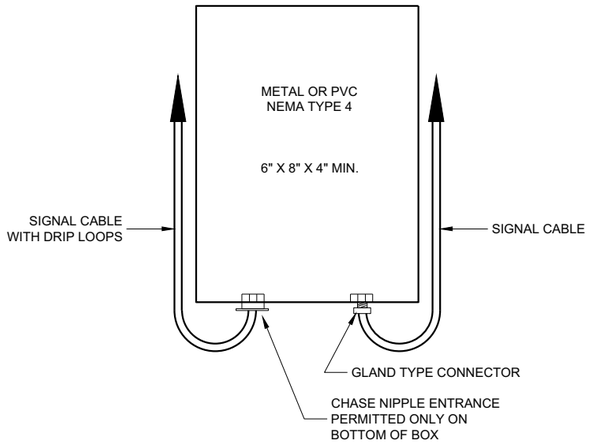
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

FHWA

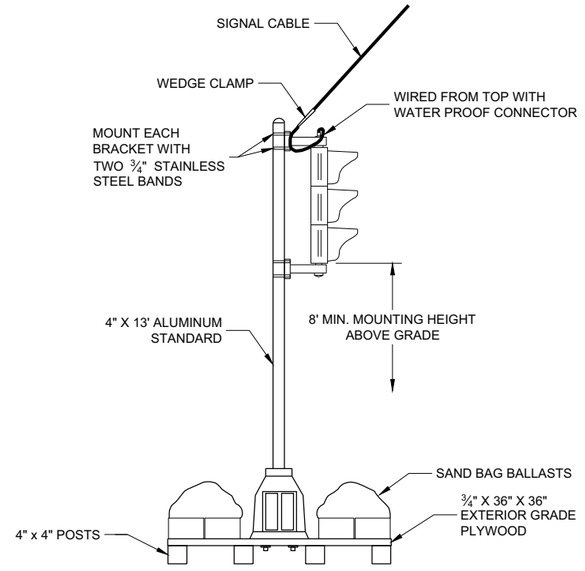
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SDD 09G01 - 4f

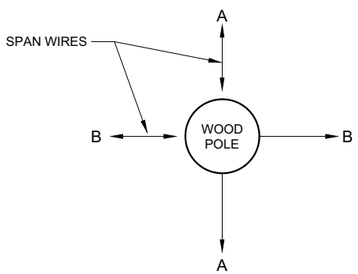




SPLICE BOX

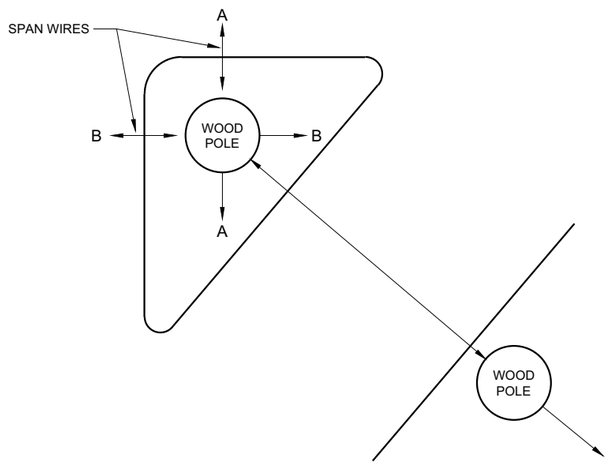


TYPICAL SKID TYPE TEMPORARY

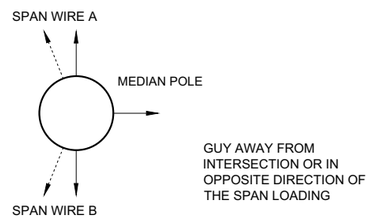


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

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

6

GENERAL NOTES

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

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

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

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

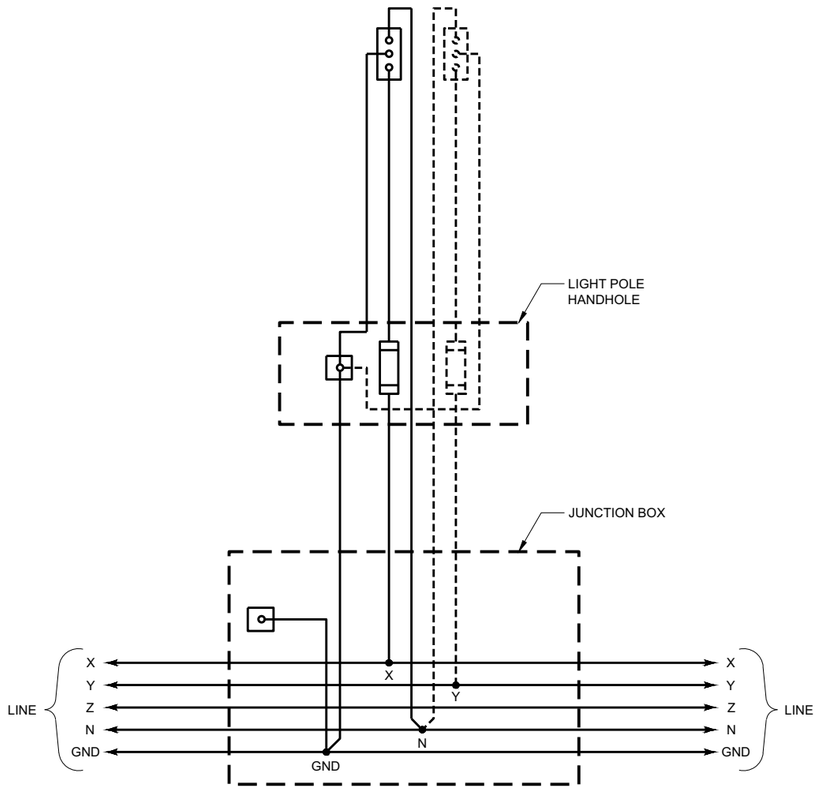
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

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THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALL ER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

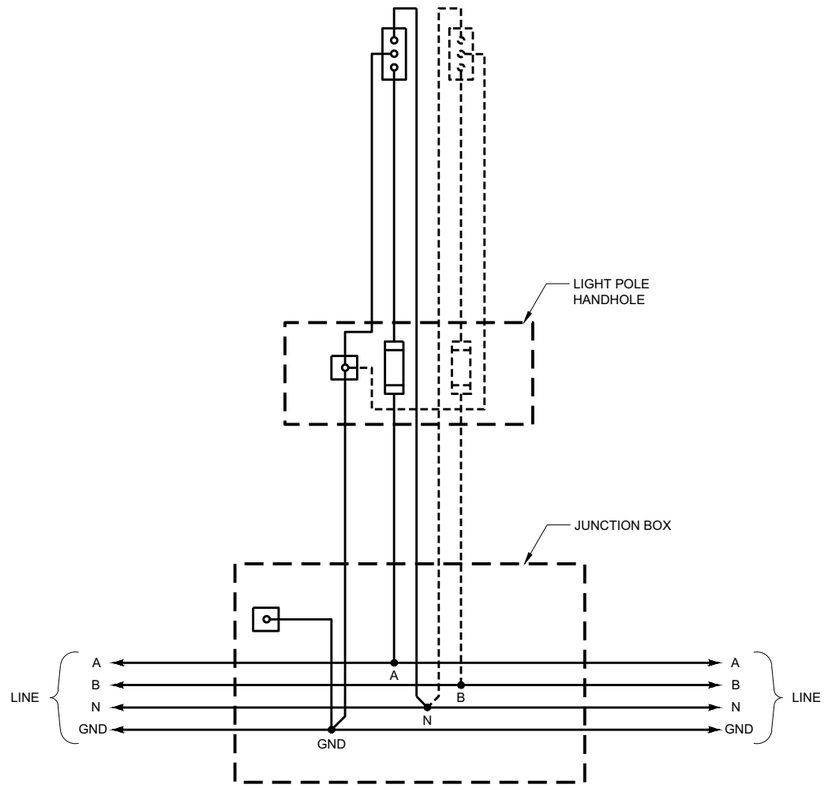
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 208Y / 120VAC OR 480Y / 277VAC 4 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 120 / 240VAC OR 240 / 480VAC 3 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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SDD 10A08 - 03

GENERAL NOTES

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

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

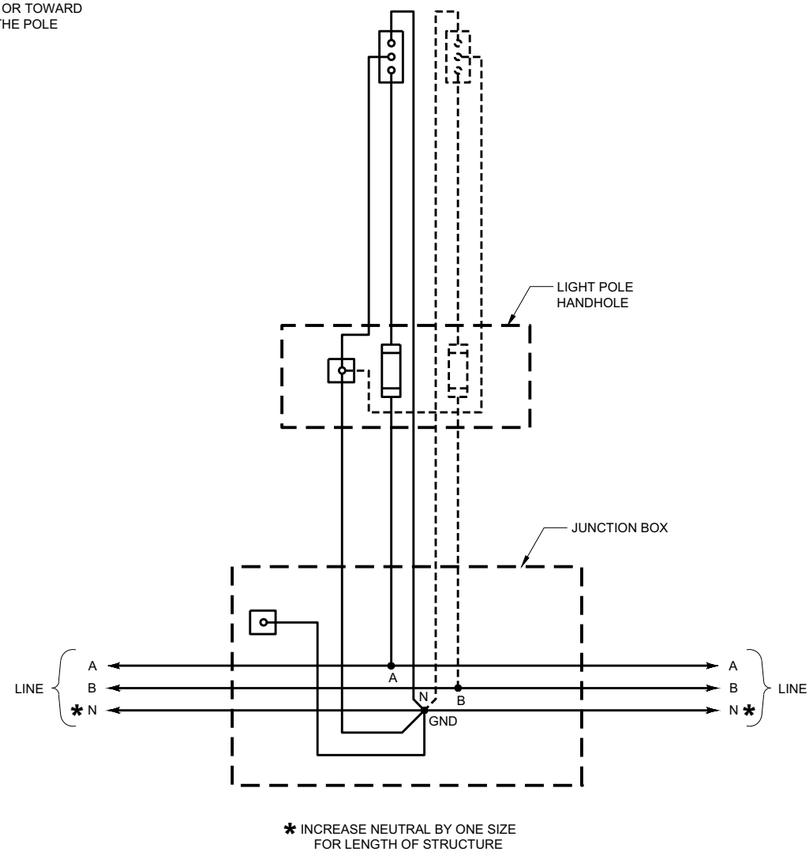
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✱ INCREASE NEUTRAL BY ONE SIZE FOR LENGTH OF STRUCTURE

TYPICAL WIRING DIAGRAM

GROUNDED NEUTRAL SYSTEM
1 - ϕ 240 / 480VAC 3 WIRE OR 480VAC 2 WIRE

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
GROUNDED NEUTRAL SYSTEMS

STATE OF WISCONSIN
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SDD 10A09 - 03

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SDD 10A09 - 03

GENERAL NOTES

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

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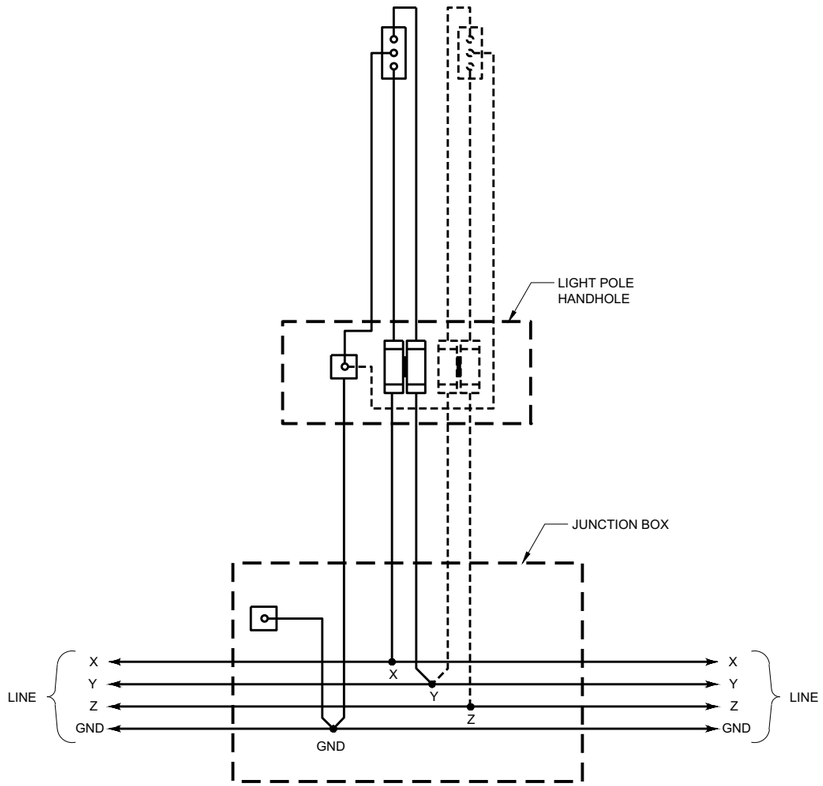
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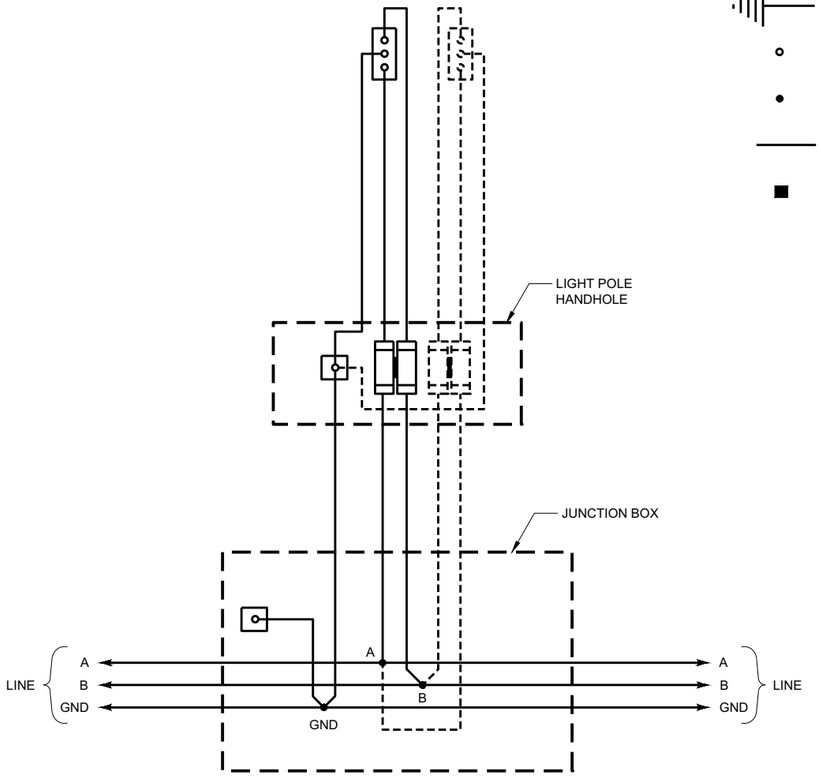
LEGEND

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GND	EQUIPMENT GROUNDING CONDUCTOR
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ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

PHASE - TO - PHASE DELTA SYSTEM
3 - ϕ 480VAC 3 WIRE



TYPICAL WIRING DIAGRAM

UNGROUNDED SYSTEM
1 - ϕ 120 - 120VAC 2 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
PHASE TO PHASE SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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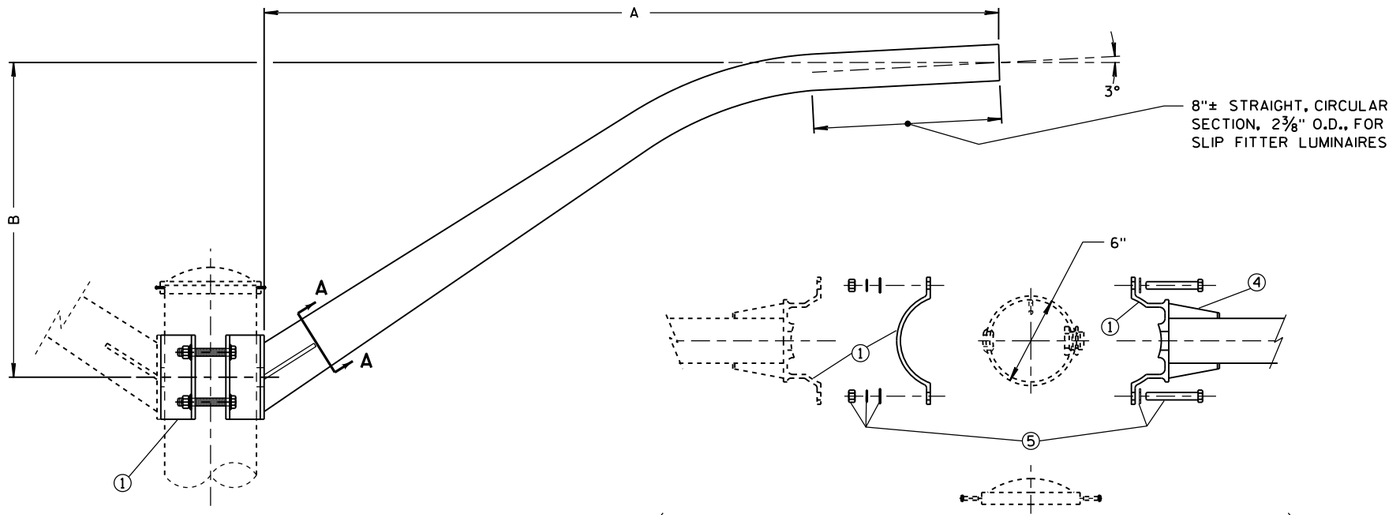
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SDD 10A10 - 03

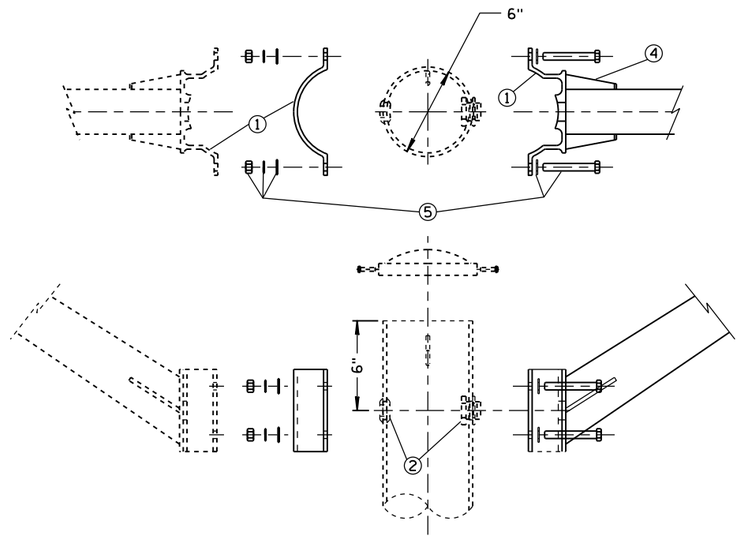
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SDD 10A10 - 03



LUMINAIRE ARMS, SINGLE MEMBER, 6-INCH CLAMP - FOR POLES, TYPE 7, A OR E

VARIOUS LENGTHS (SEE TABLE)



CLAMP ASSEMBLY

SINGLE MEMBER CLAMP SHOWN

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
SINGLE MEMBER	4.0	2.0
SINGLE MEMBER	8.0	3.0
SINGLE MEMBER	10.0	3.0
SINGLE MEMBER	15.0	3.0

GENERAL NOTES

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

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1 1/2" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY.

③ STIFFENER

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - 1/2"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

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S.D.D. 10 A 18-5a

LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP

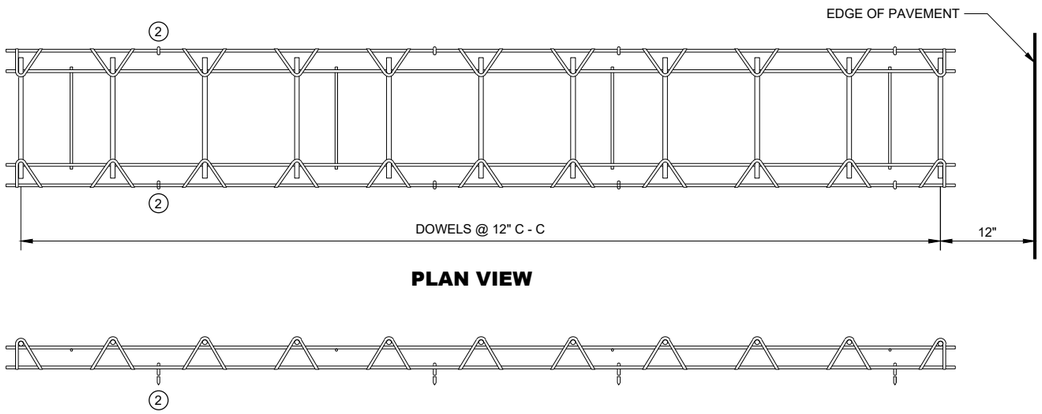
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

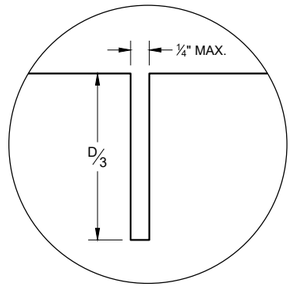
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA



CONTRACTION JOINT DOWEL ASSEMBLY (1)



JOINT DETAIL

GENERAL NOTES

CONTRACTION JOINTS

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

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

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

CONSTRUCTION JOINTS

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

(1) OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.

(2) SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

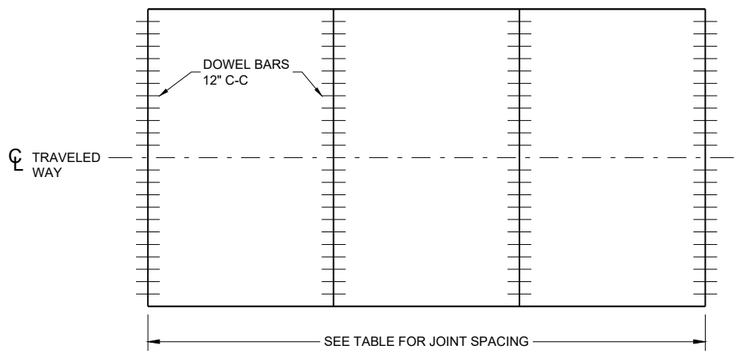
(3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.

(4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

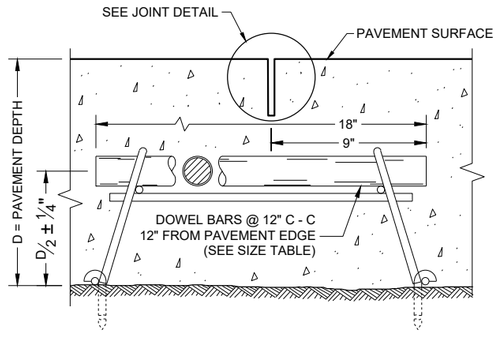
(5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.

(6) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

(7) ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



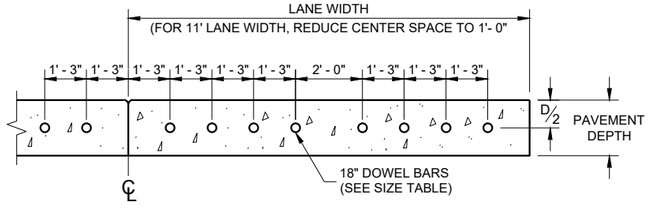
CONTRACTION JOINT LOCATIONS



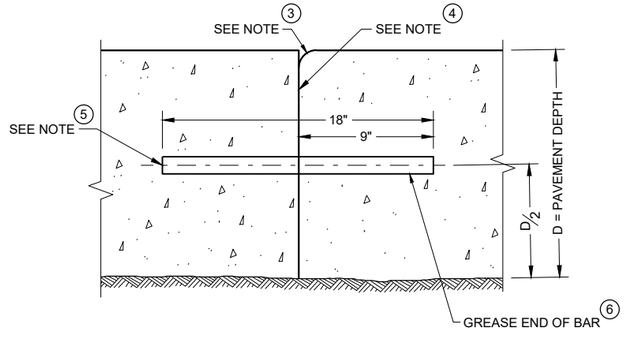
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



TRANSVERSE CONSTRUCTION JOINT

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

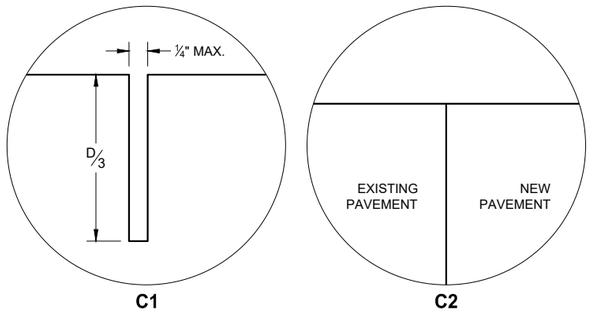
FHWA

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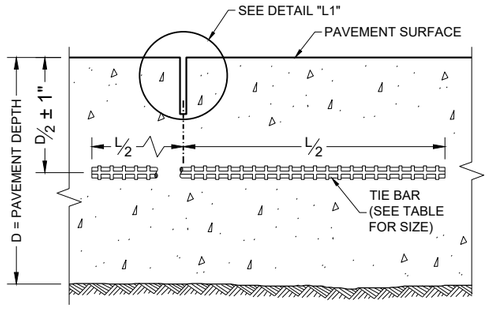
SDD 13C13 - 11

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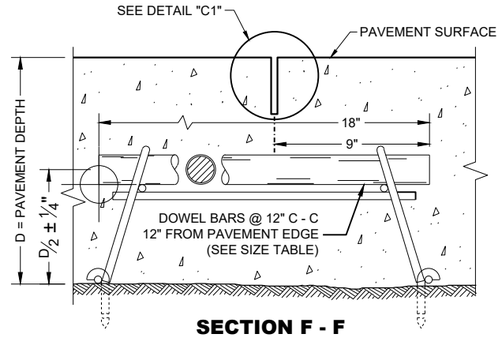
SDD 13C13 - 11



TRANSVERSE JOINTS



SECTION C - C
SAWED JOINT



SECTION F - F
CONTRACTION JOINT

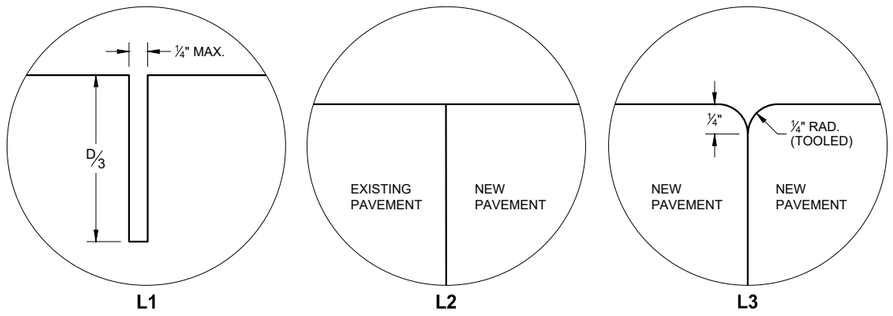
GENERAL NOTES

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

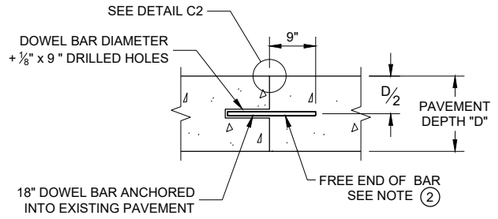
PROVIDE A MIMIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

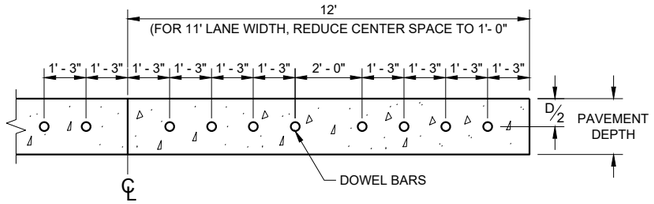
(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



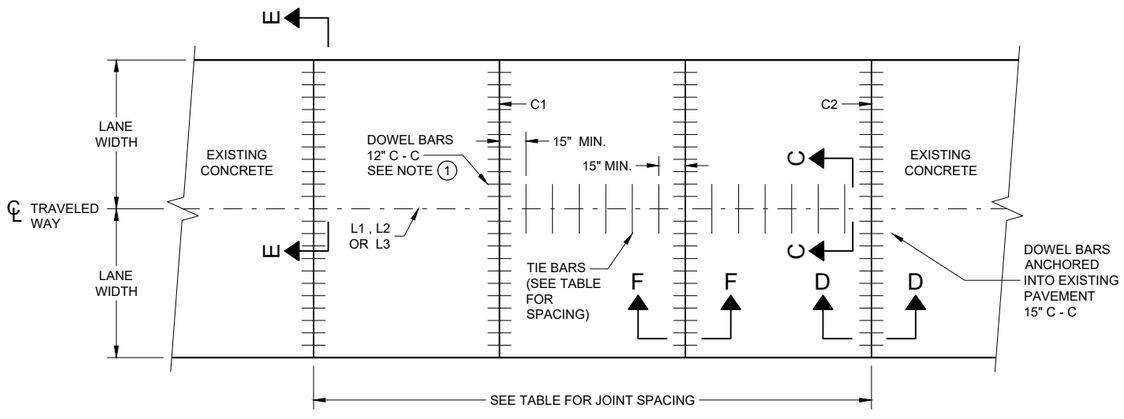
LONGITUDINAL JOINTS



SECTION D - D



SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

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	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'

CONCRETE BASE

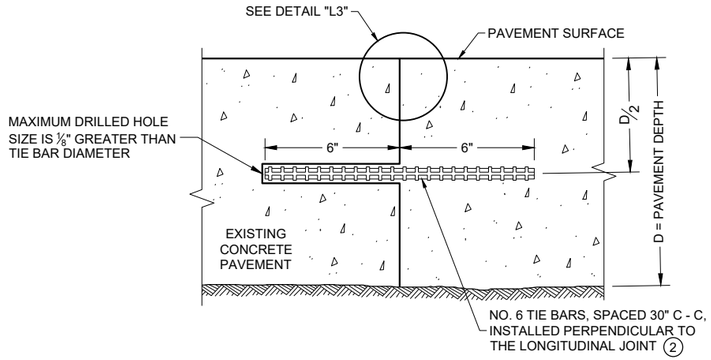
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA 101

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SDD 13C15 - 08a

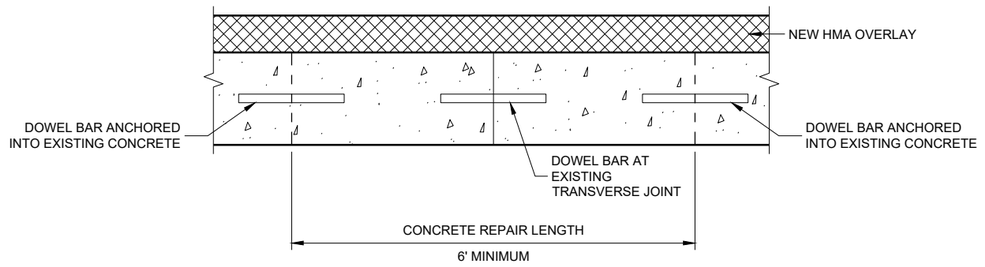
GENERAL NOTES

1. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
2. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
3. PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

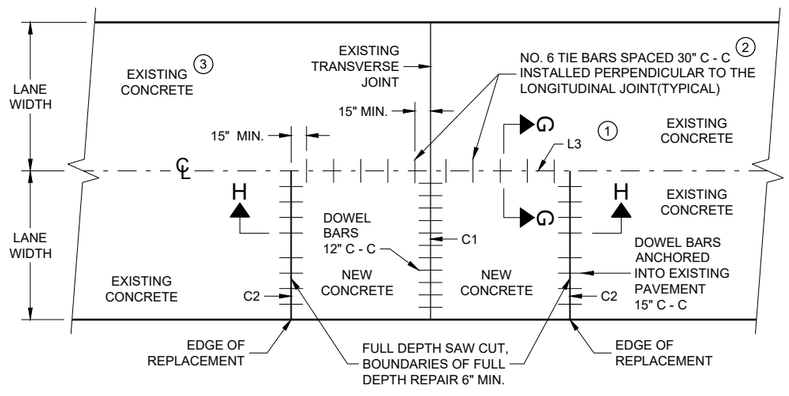


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H - H



PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

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SDD 13C15 - 08b

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

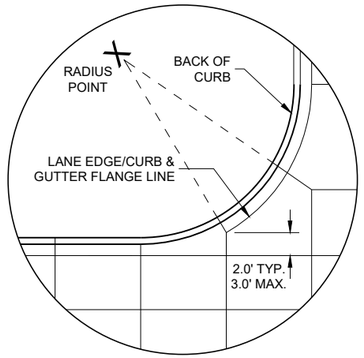
APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

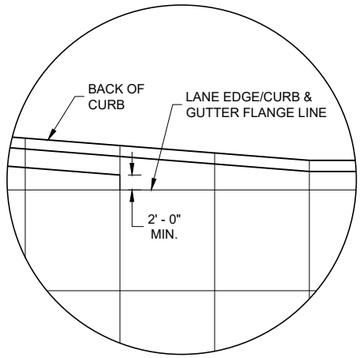
FHWA

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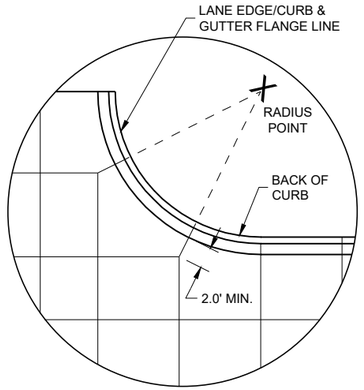
SDD 13C15 - 08b



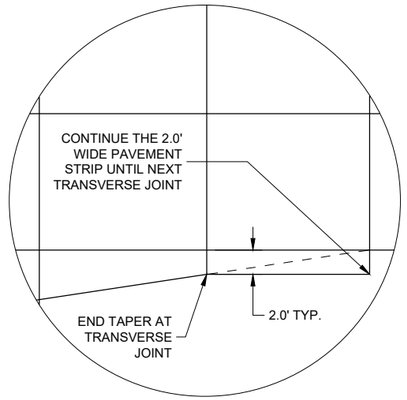
DETAIL "A"



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.

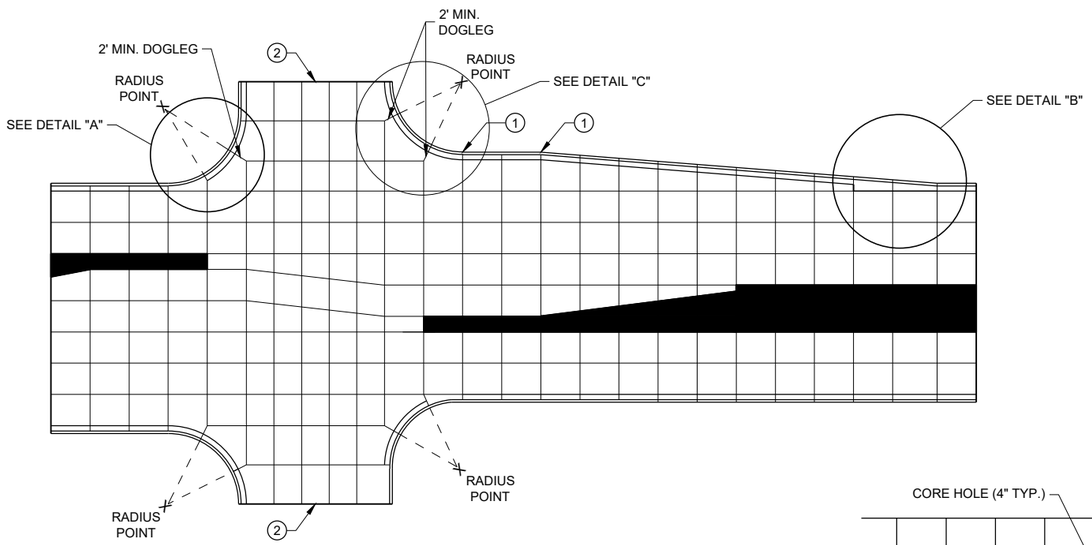
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

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.

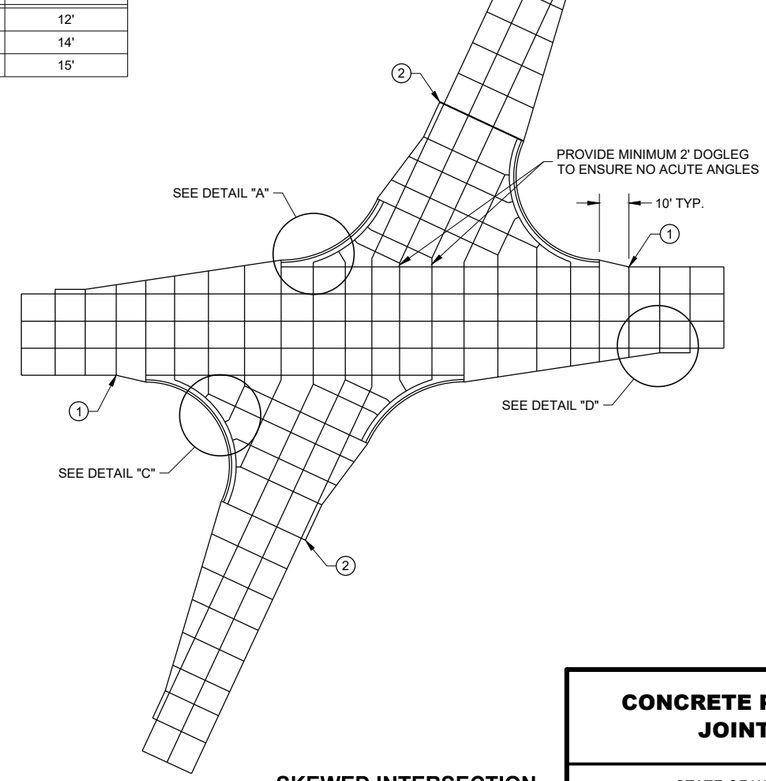
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



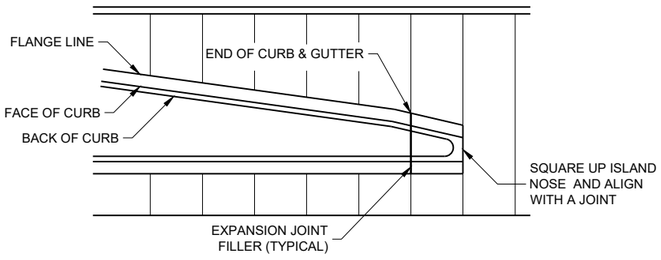
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

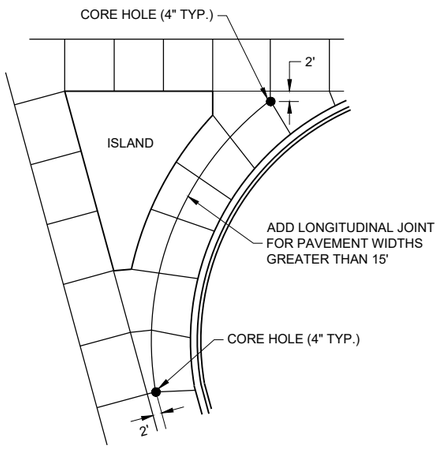
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 13C18 - 08a

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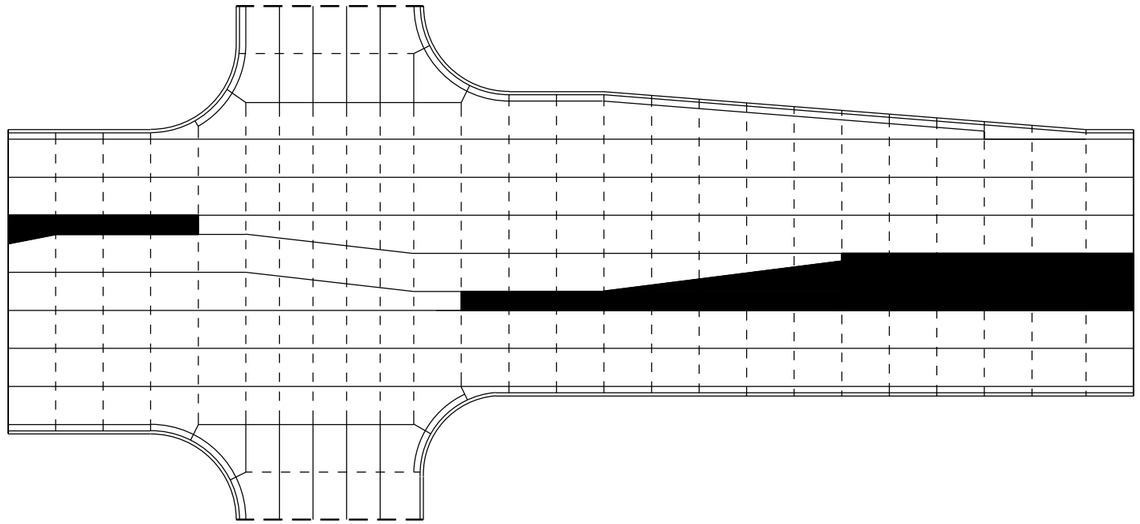
SDD 13C18 - 08a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

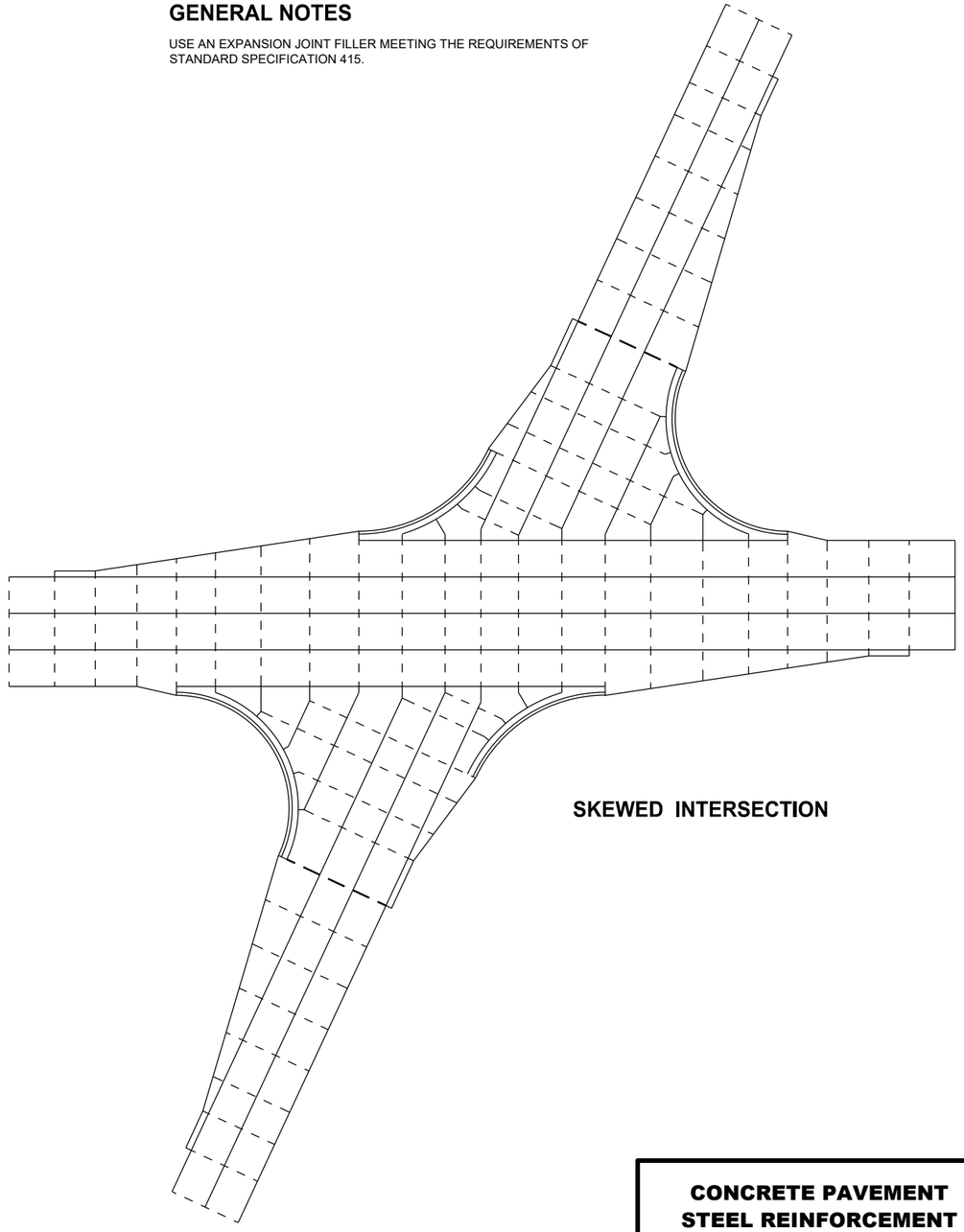
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

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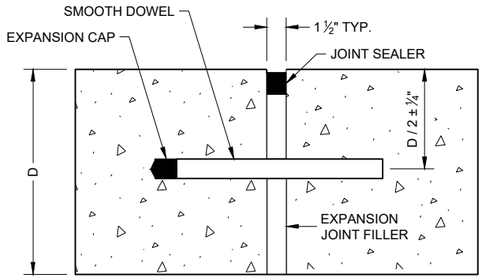
SDD 13C18 - 08b

CONCRETE PAVEMENT STEEL REINFORCEMENT

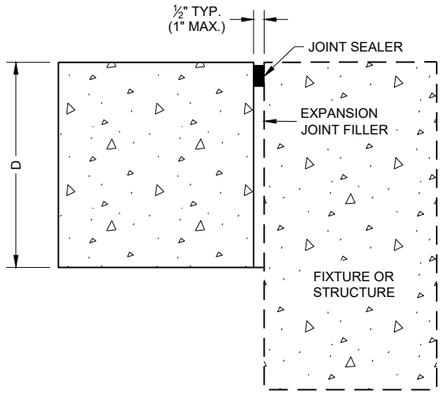
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

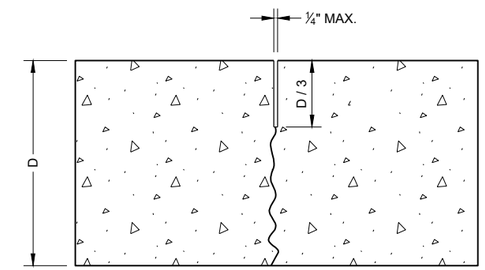
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

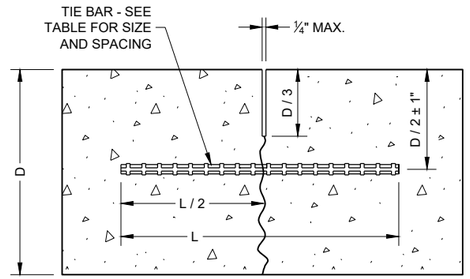
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

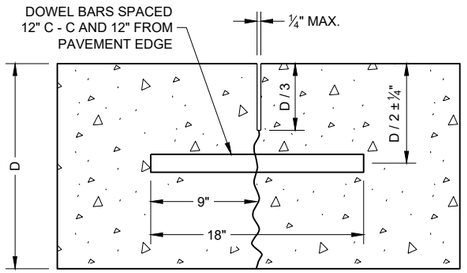
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM 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

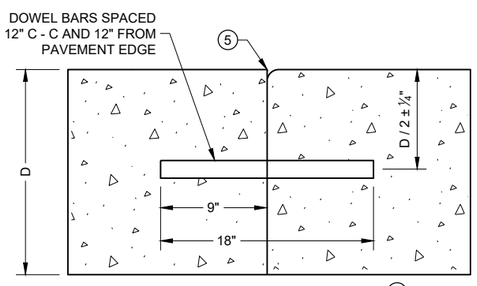


TIED LONGITUDINAL

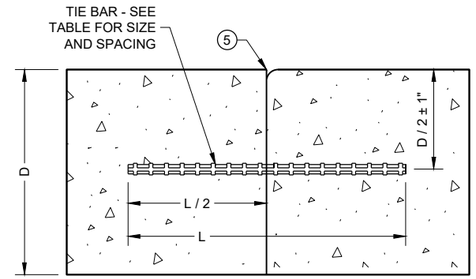


DOWELED TRANSVERSE

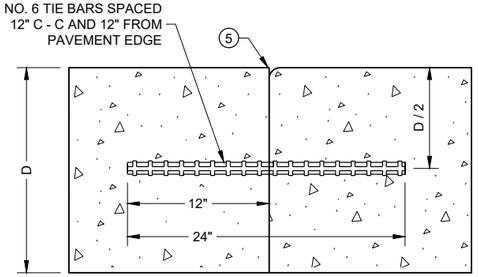
CONTRACTION JOINTS (2)



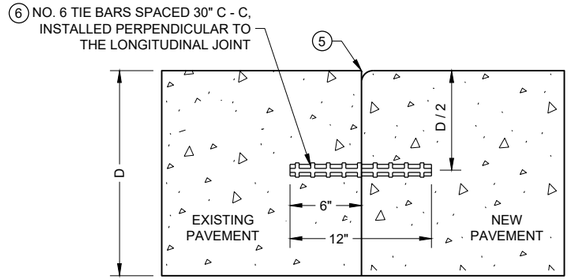
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



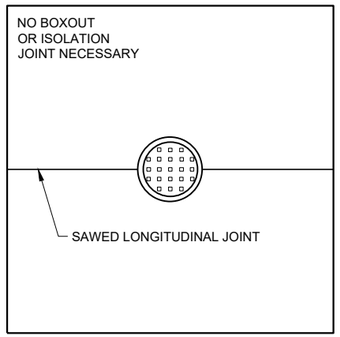
TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



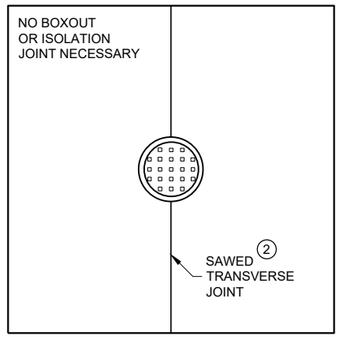
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

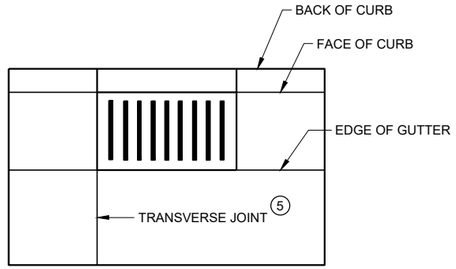
CONCRETE PAVEMENT JOINT TYPES



MANHOLE WITH LONGITUDINAL JOINT



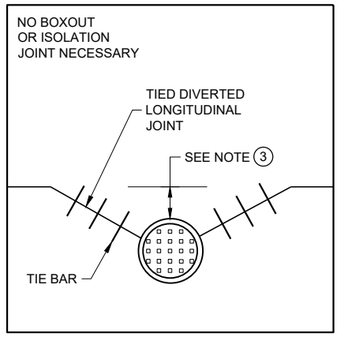
MANHOLE WITH TRANSVERSE JOINT



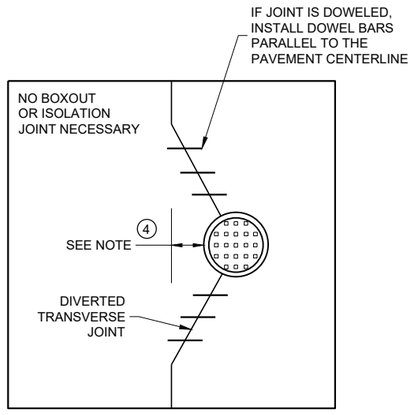
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

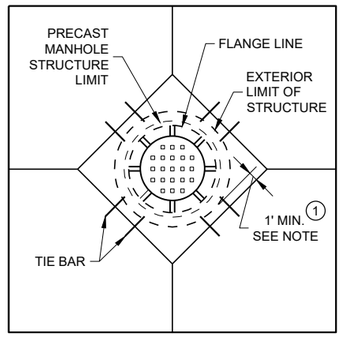
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF 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

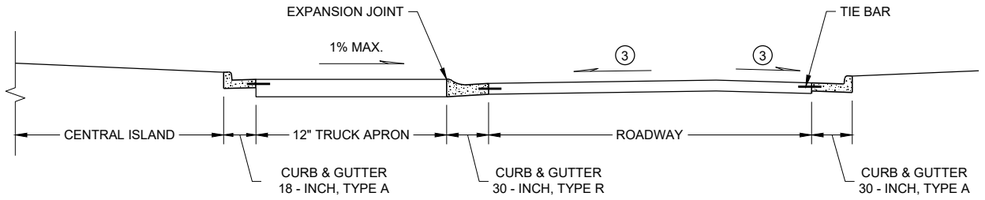
FHWA

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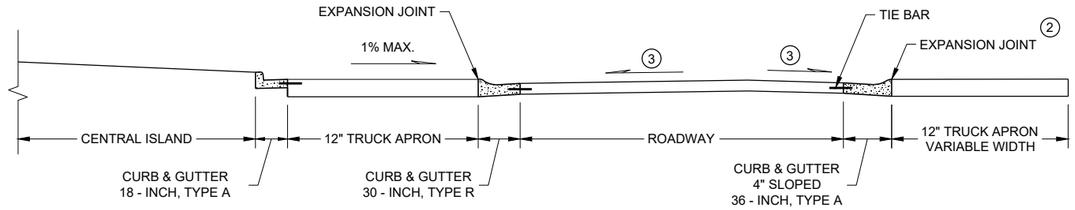
SDD13C18 - 08d

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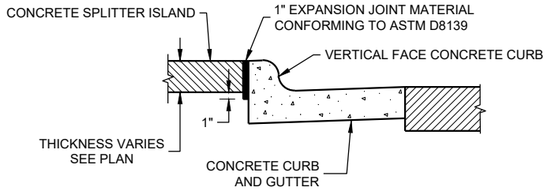
SDD13C18 - 08d



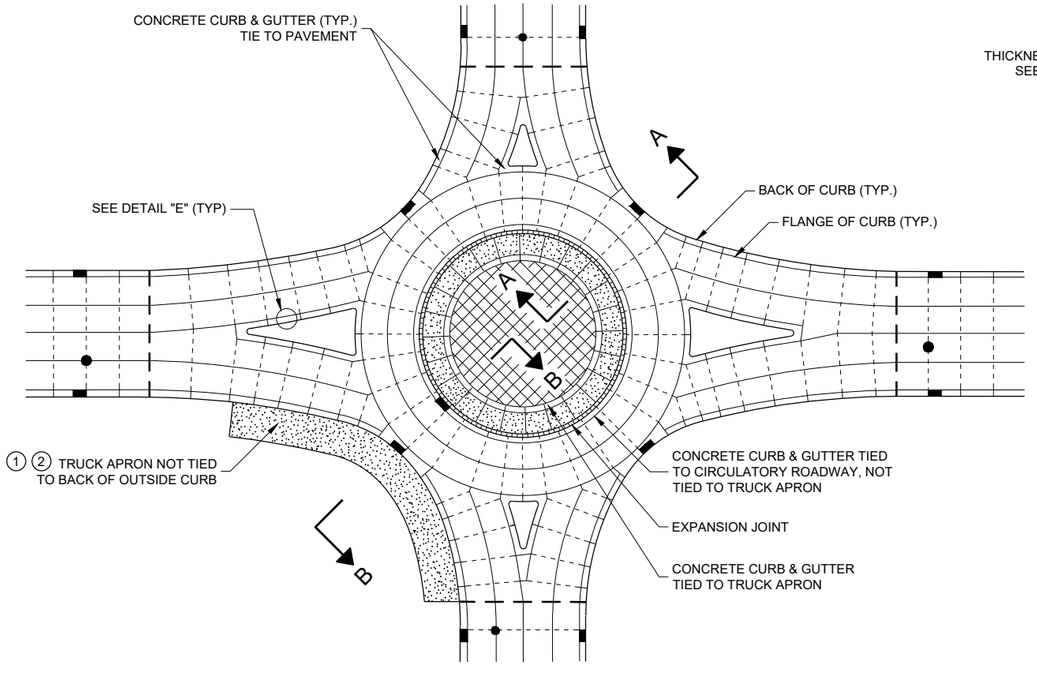
SECTION A - A



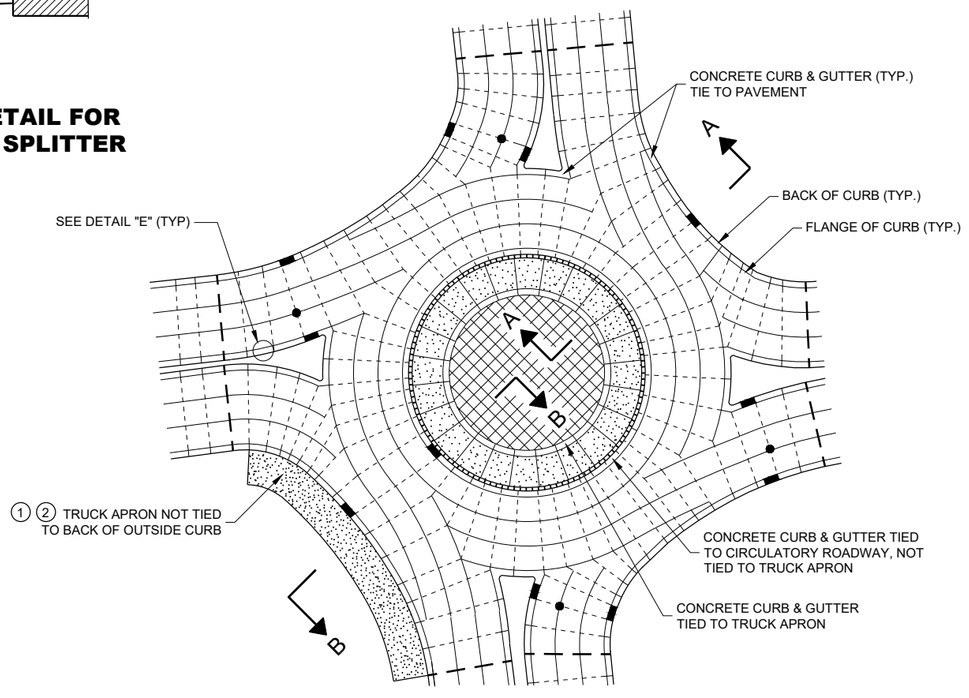
SECTION B - B



DETAIL 'E'
EXPANSION JOINT DETAIL FOR VERTICAL CURB AT A SPLITTER ISLAND



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"

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

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

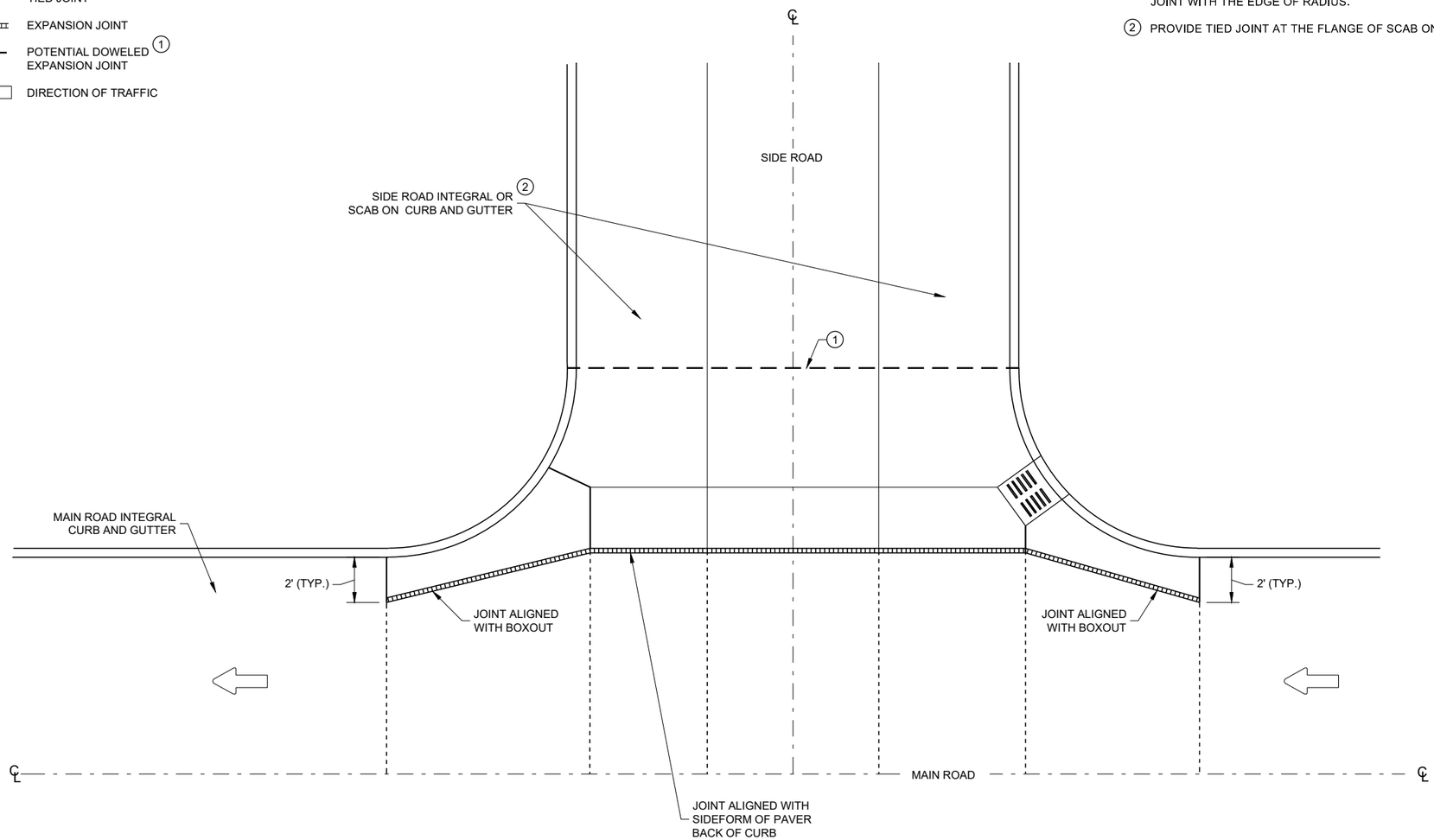
APPROVED
May 2023
DATE
/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS
FHWA

6

SDD 13C18 - 08e

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

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May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

FHWA

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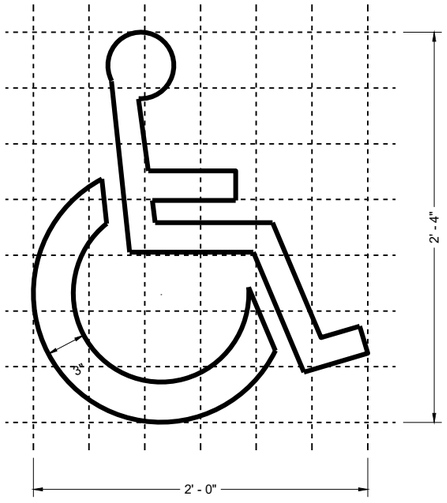
SDD 13C18 - 08f

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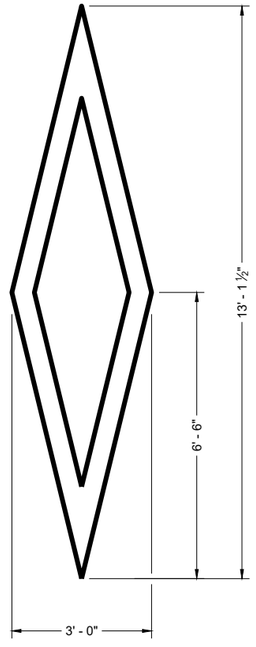
SDD 13C18 - 08f

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.



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

6

6

SDD 15C07-16a

SDD 15C07-16a

PAVEMENT MARKING SYMBOLS

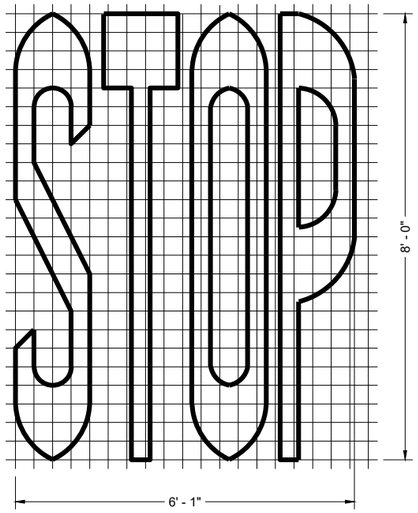
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

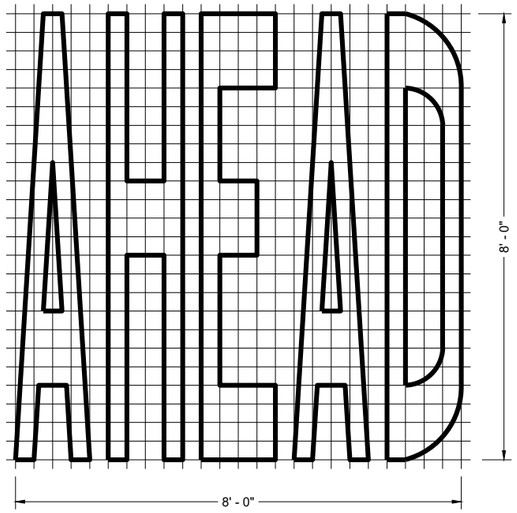
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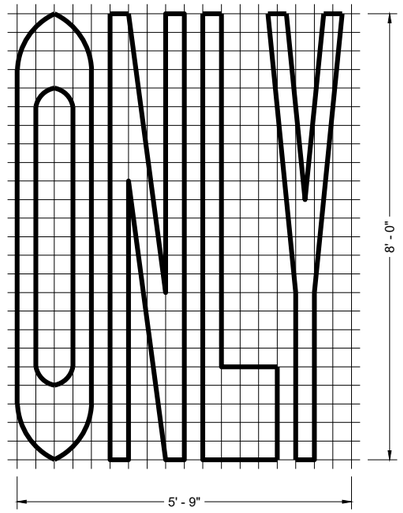
November 2024
DATE

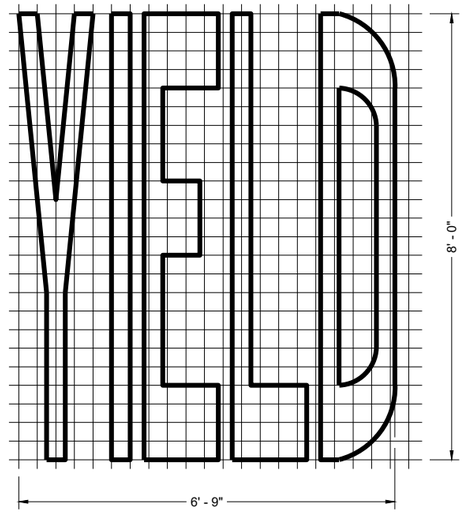
/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

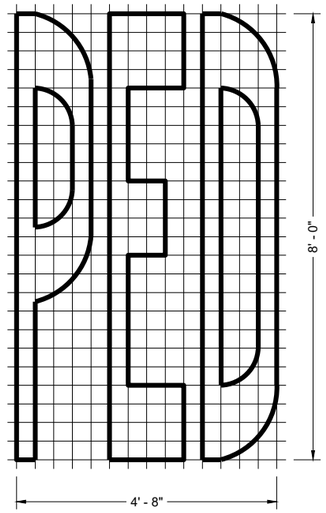
FHWA

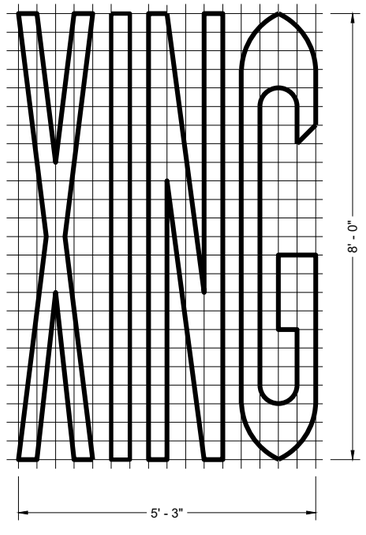


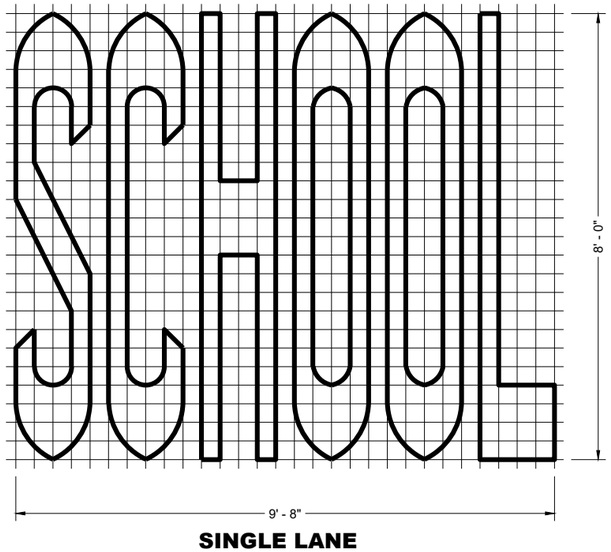




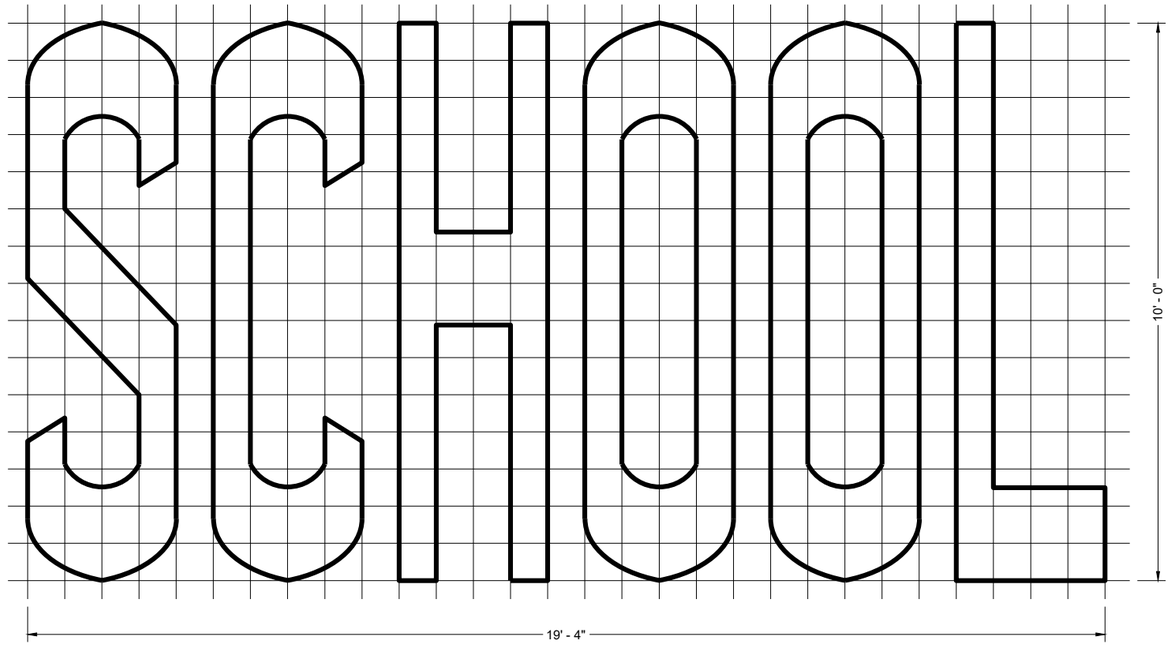








SINGLE LANE



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
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/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

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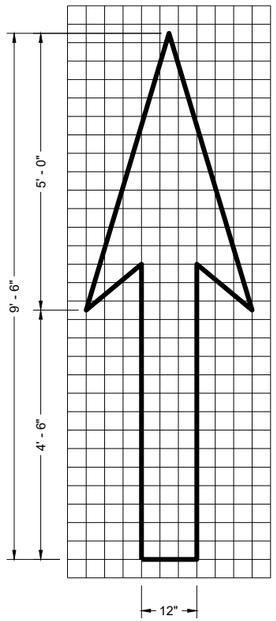
SDD 15C07-16b

6

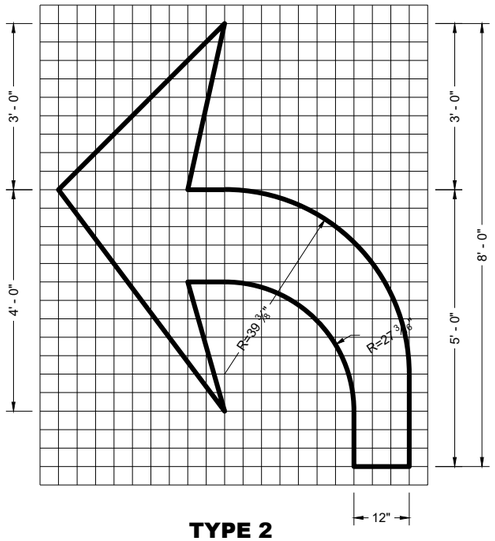
SDD 15C07-16b

GENERAL NOTES

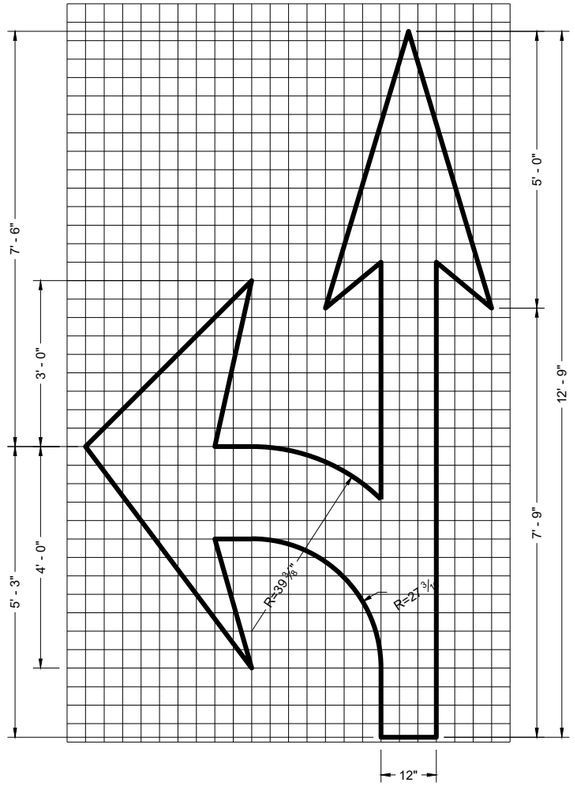
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



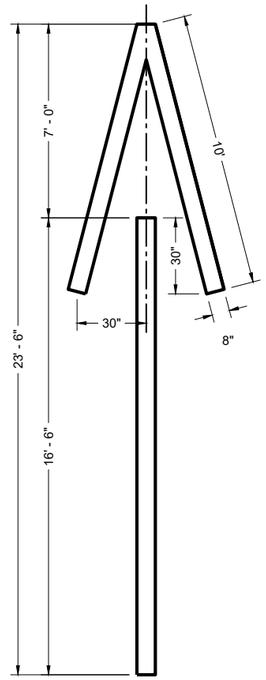
TYPE 1



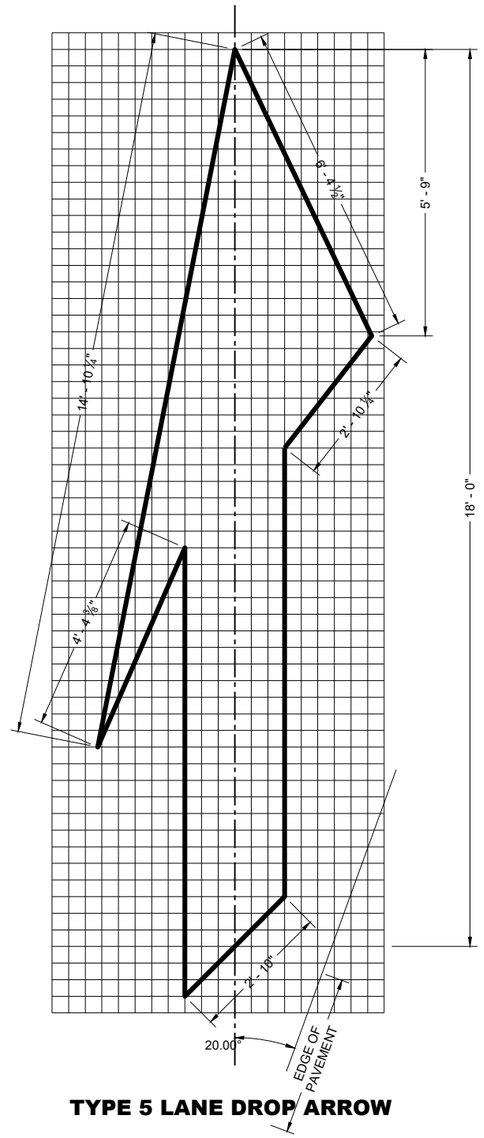
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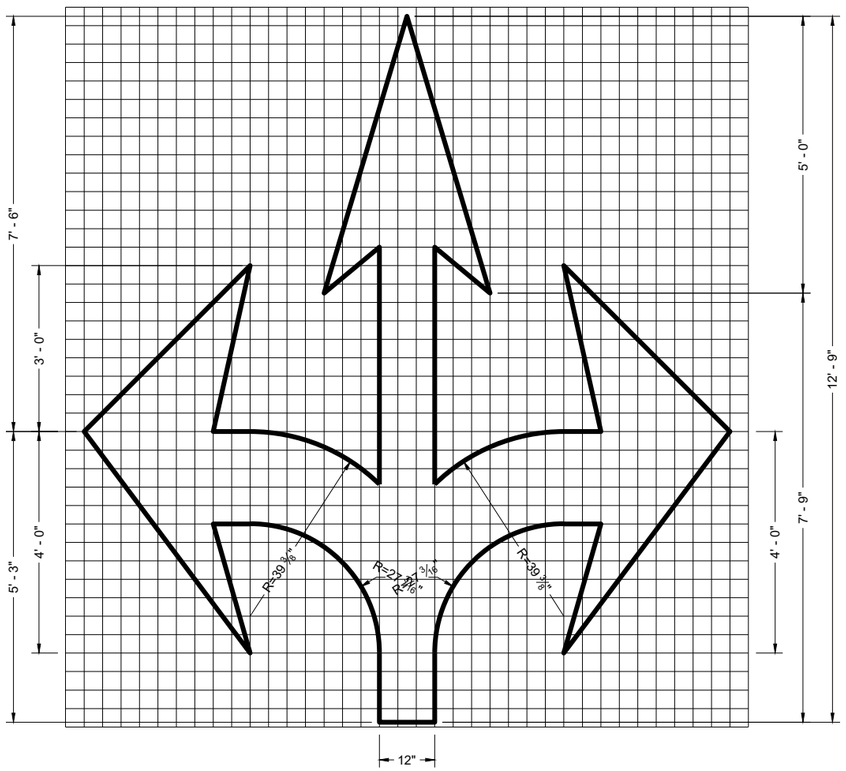
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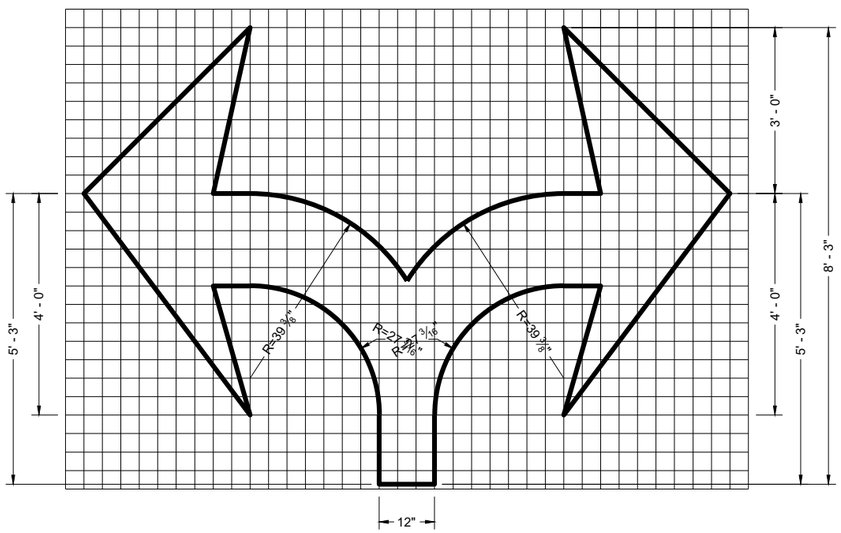
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
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/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

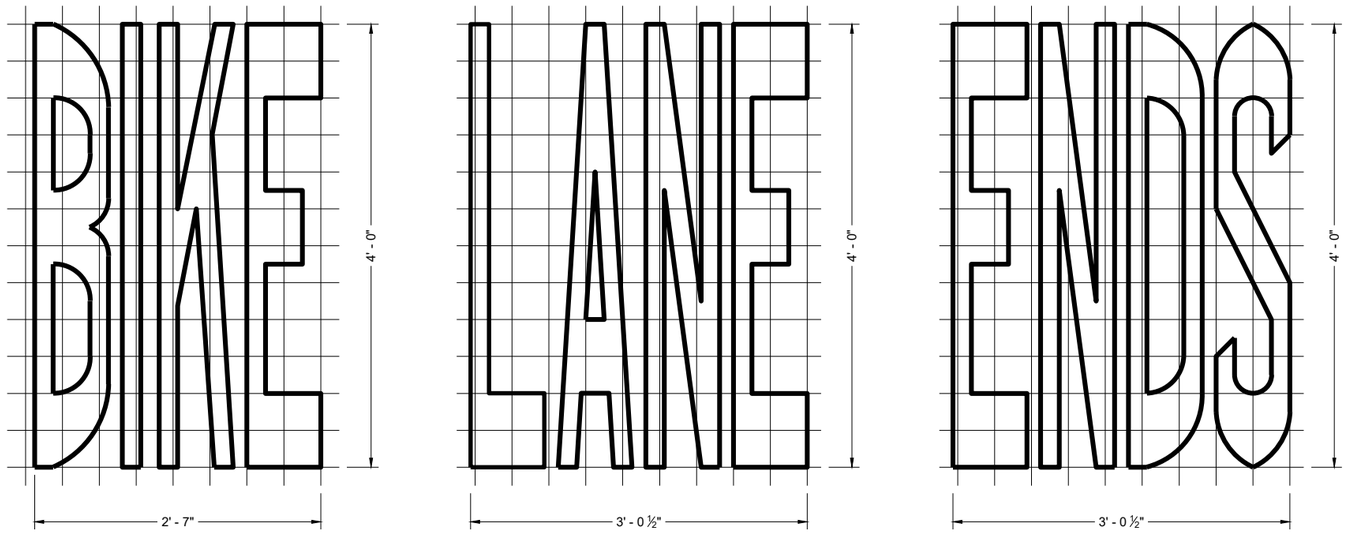
FHWA

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SDD 15C07-16c

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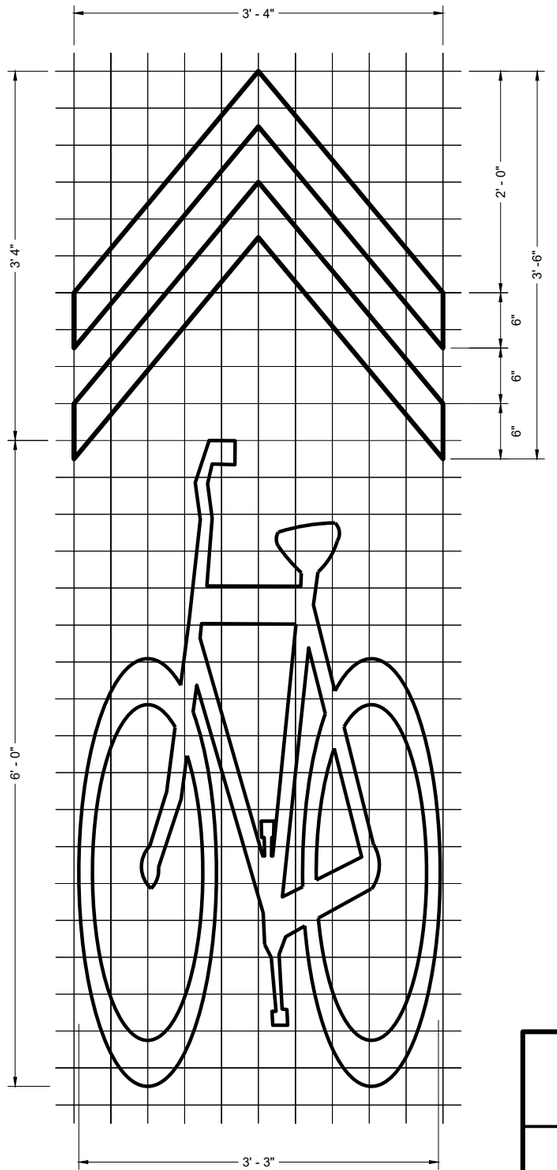
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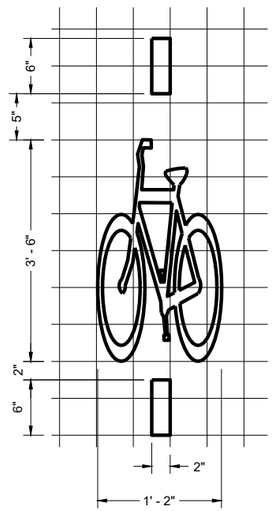
BIKE LANE WORDS

GENERAL NOTES

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



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING

BIKE LANE SYMBOL

BIKE LANE SYMBOL FOR SHARED LANE

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
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APPROVED
November 2024
DATE

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STATE SIGNING AND MARKING ENGINEER

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SDD 15C07-16e

6

SDD 15C07-16e

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

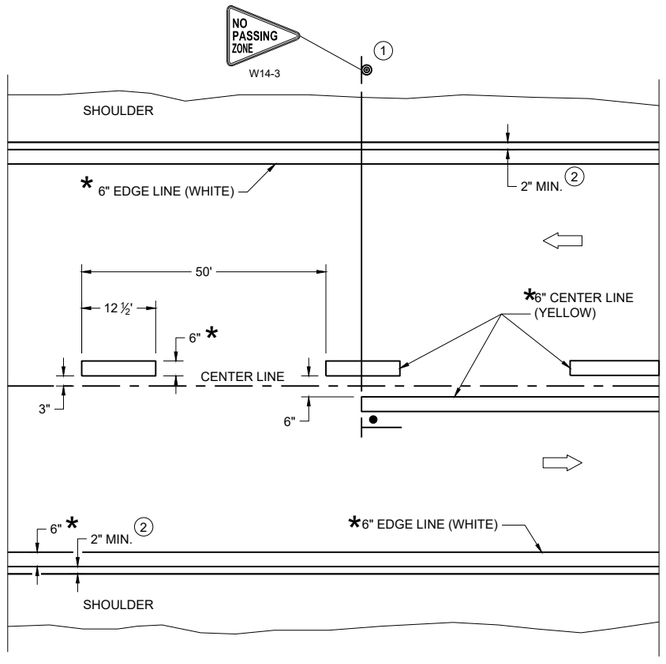
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

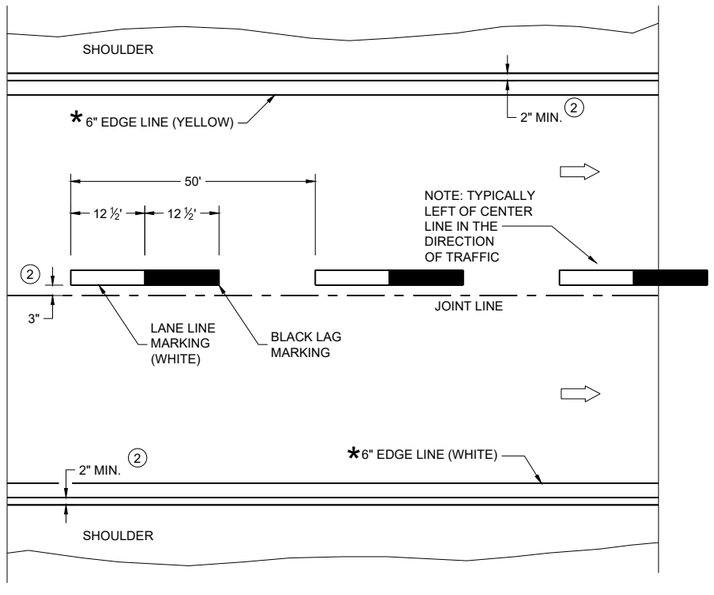
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

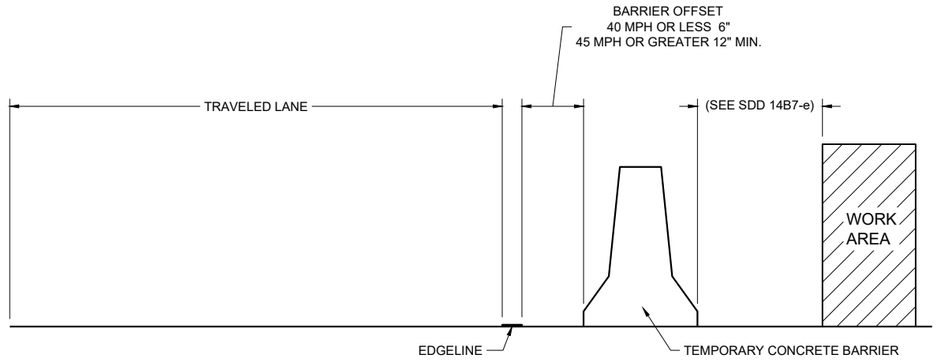
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

6

SDD 15C08-24a

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

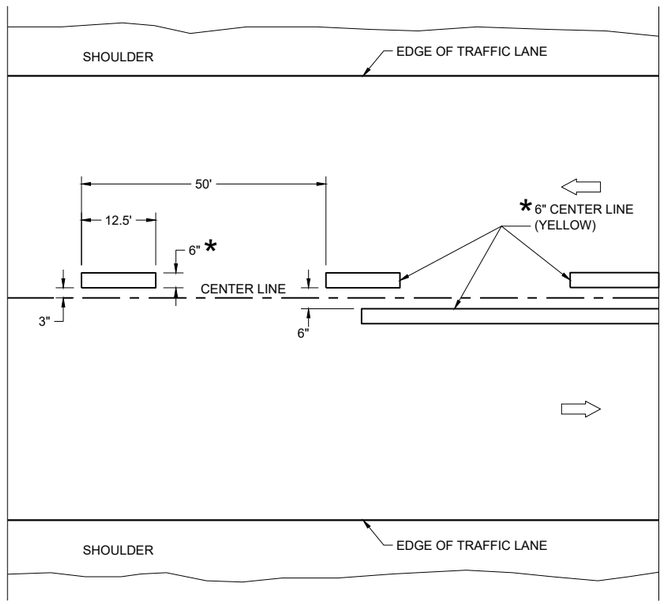
GENERAL NOTES

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

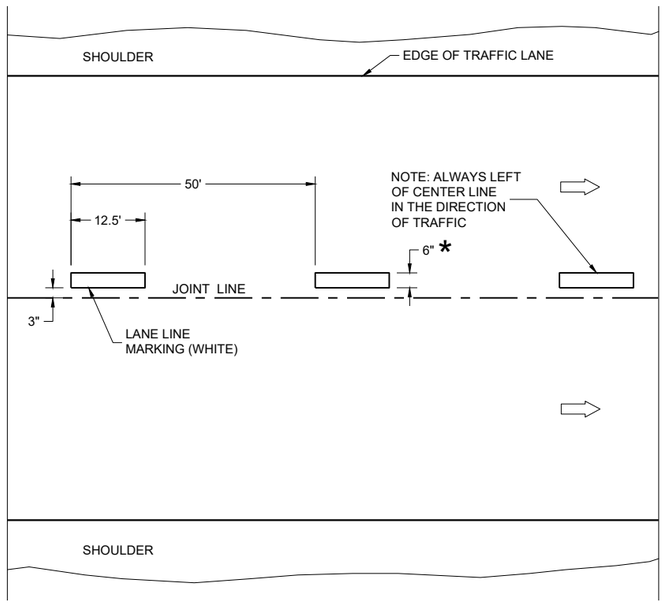
LEGEND

⇨ DIRECTION OF TRAFFIC

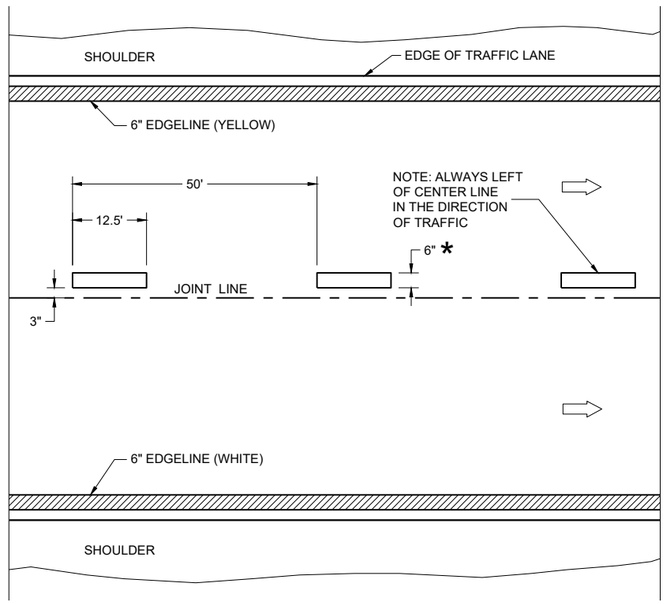
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

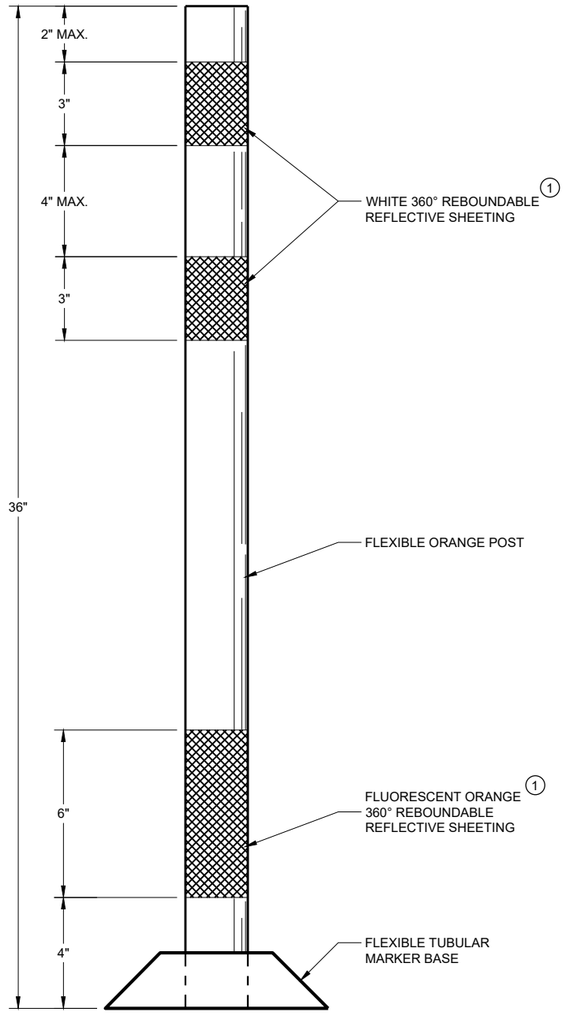
FHWA

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SDD 15C08-24b

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SDD 15C08-24b



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

6

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

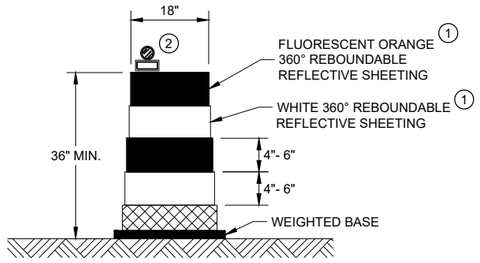
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

SDD 15C11 - 10a

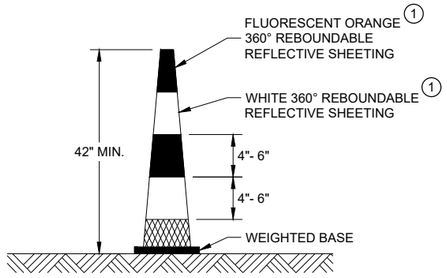
GENERAL NOTES

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



DRUM

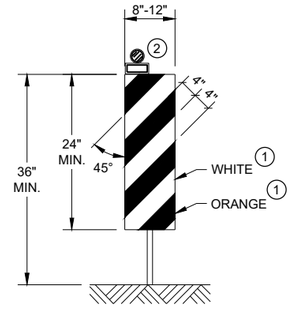
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

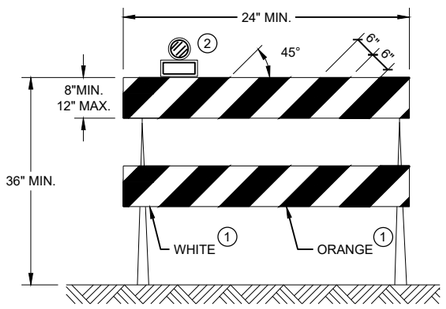
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



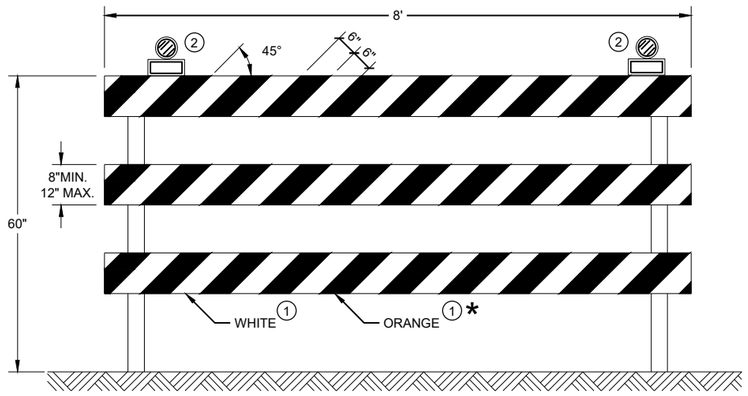
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

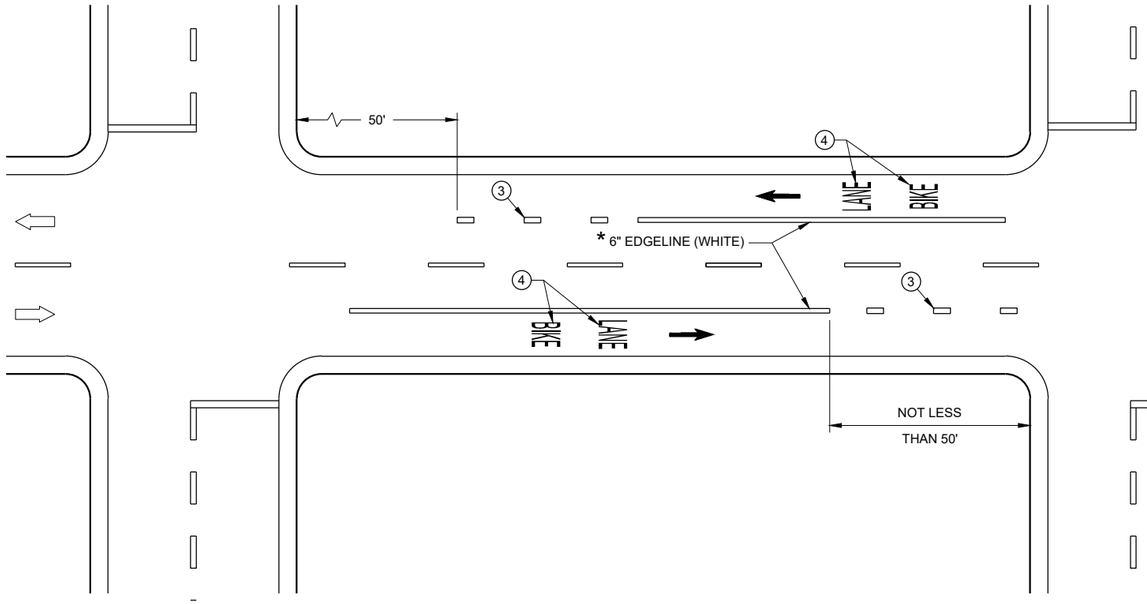
FHWA

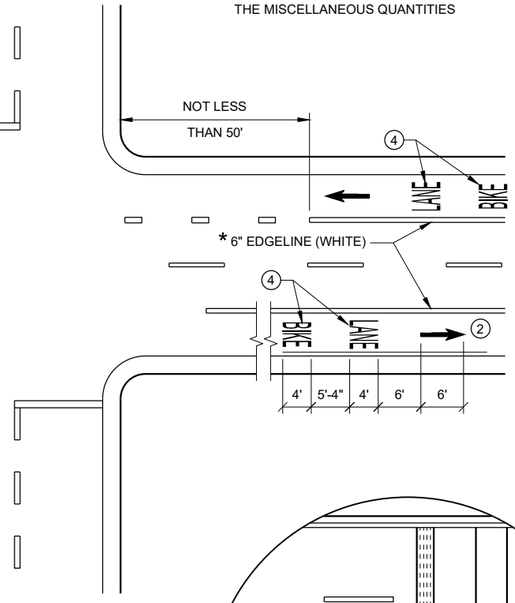
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SDD 15C11 - 10b

6

SDD 15C11 - 10b



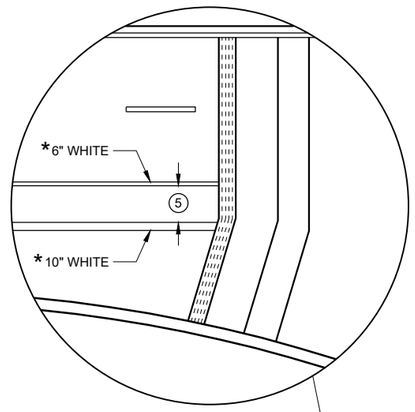


GENERAL NOTES

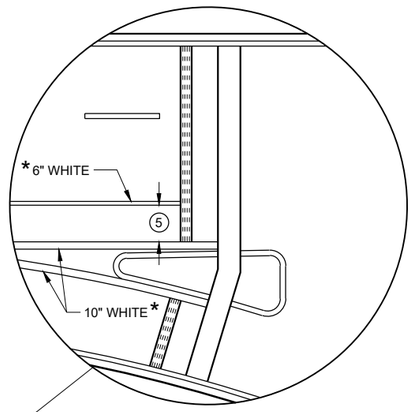
1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY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

DIRECTION OF TRAVEL

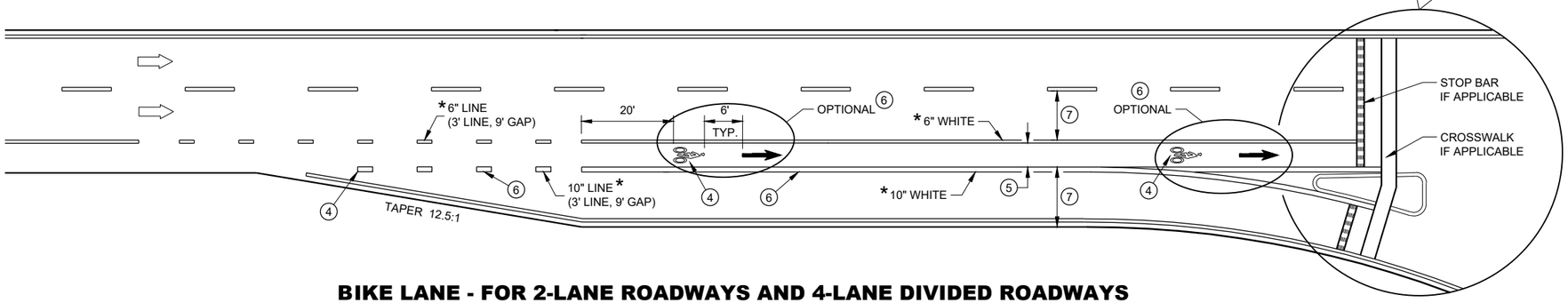
DESIGNATED BIKE LANE - NO PARKING



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



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

BIKE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER
FHWA

6

SDD 15C29-08a

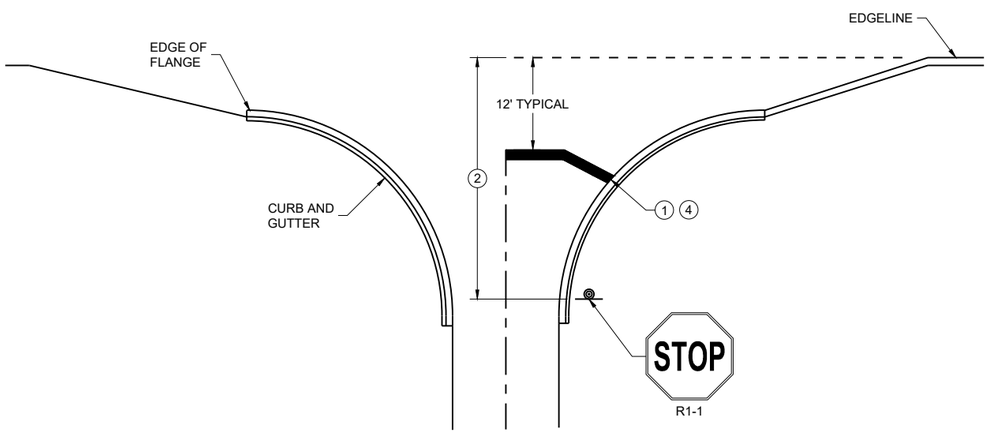
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SDD 15C29-08a

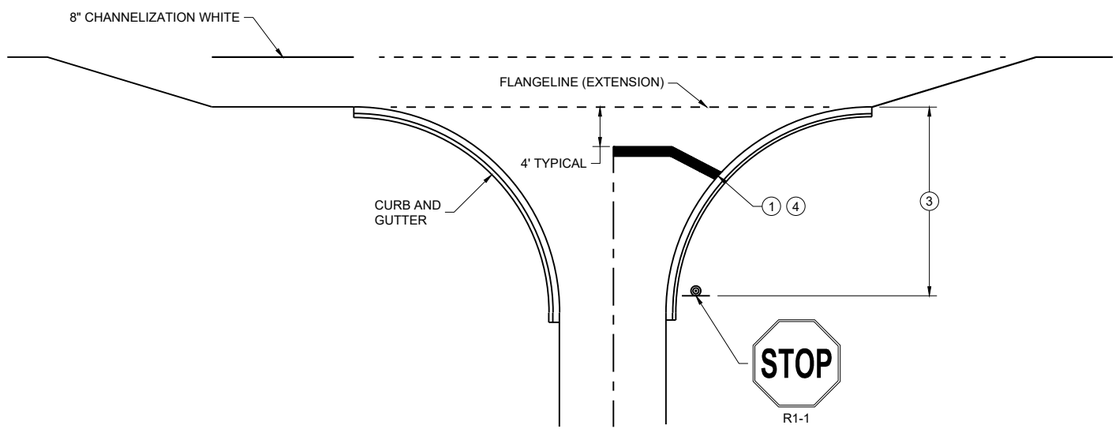
GENERAL NOTES

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

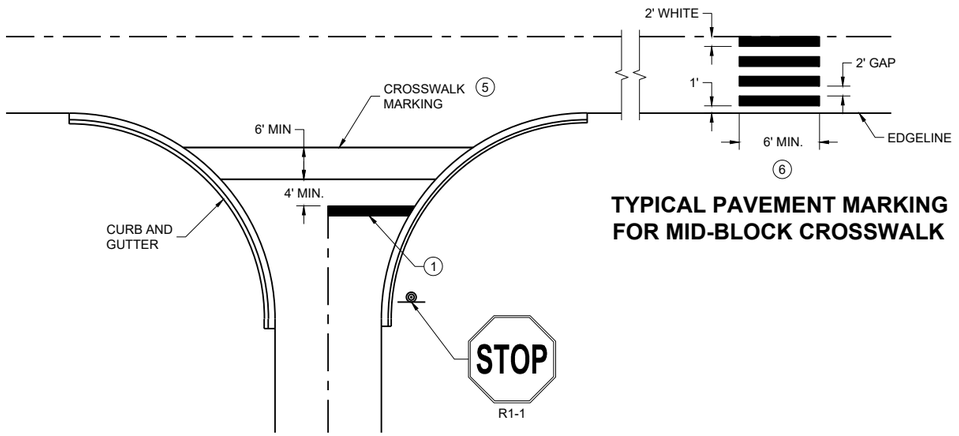
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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

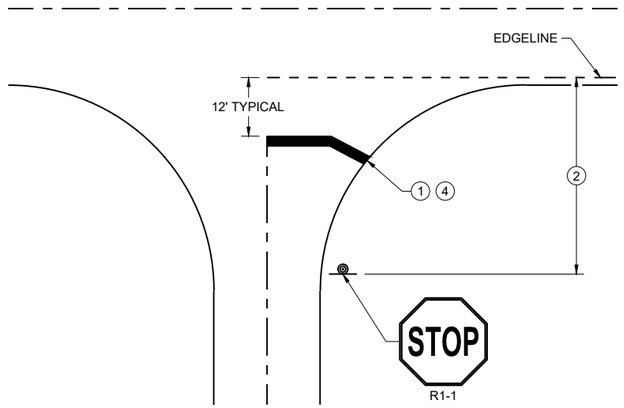


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



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

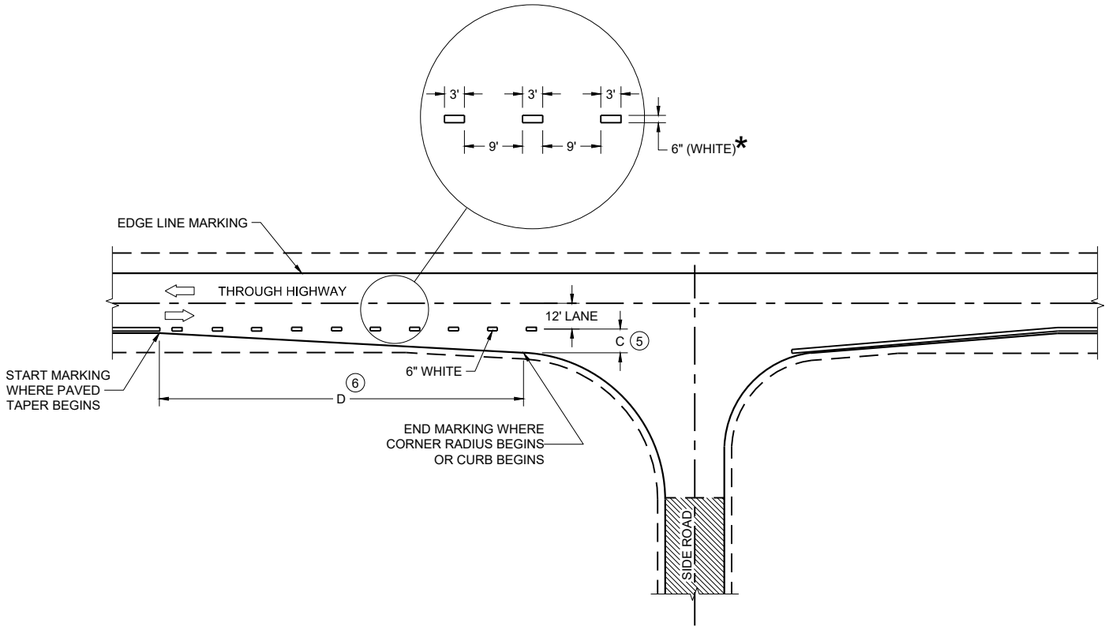
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

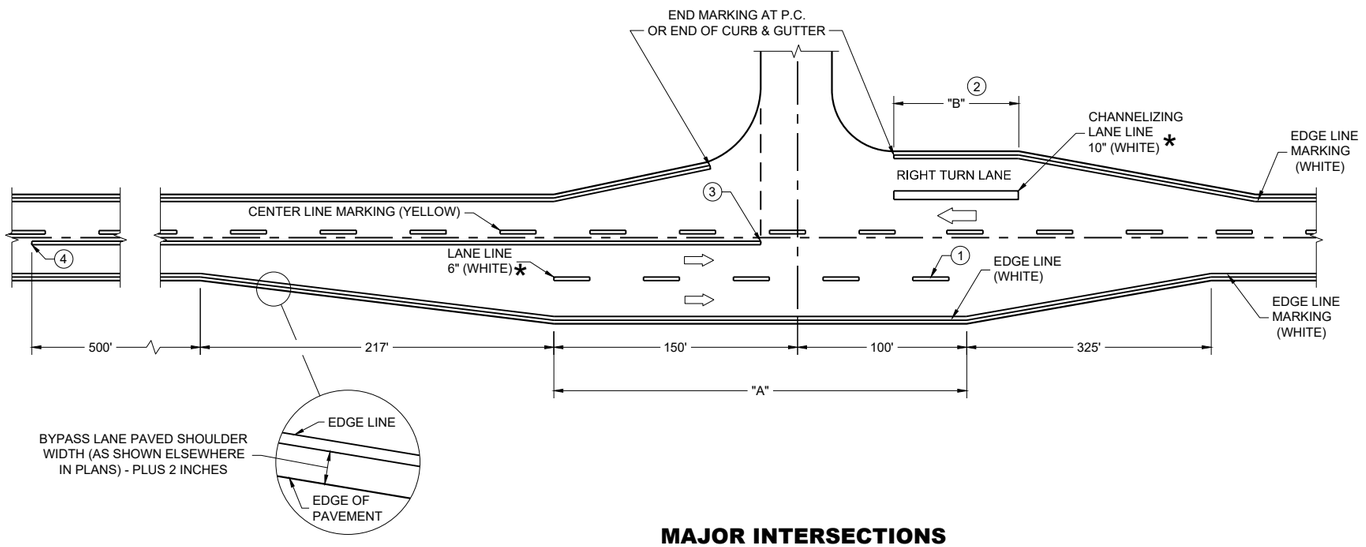
March 2024 — DATE

/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA



MINOR INTERSECTION



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

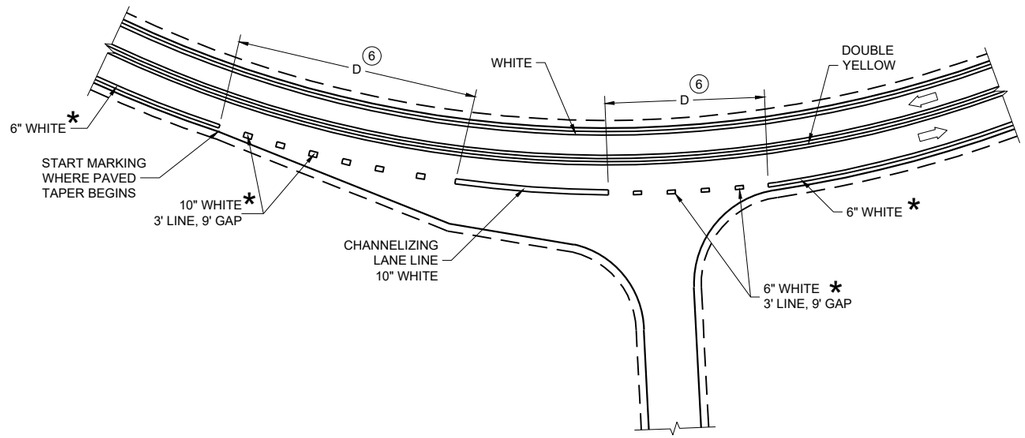
GENERAL NOTES

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.

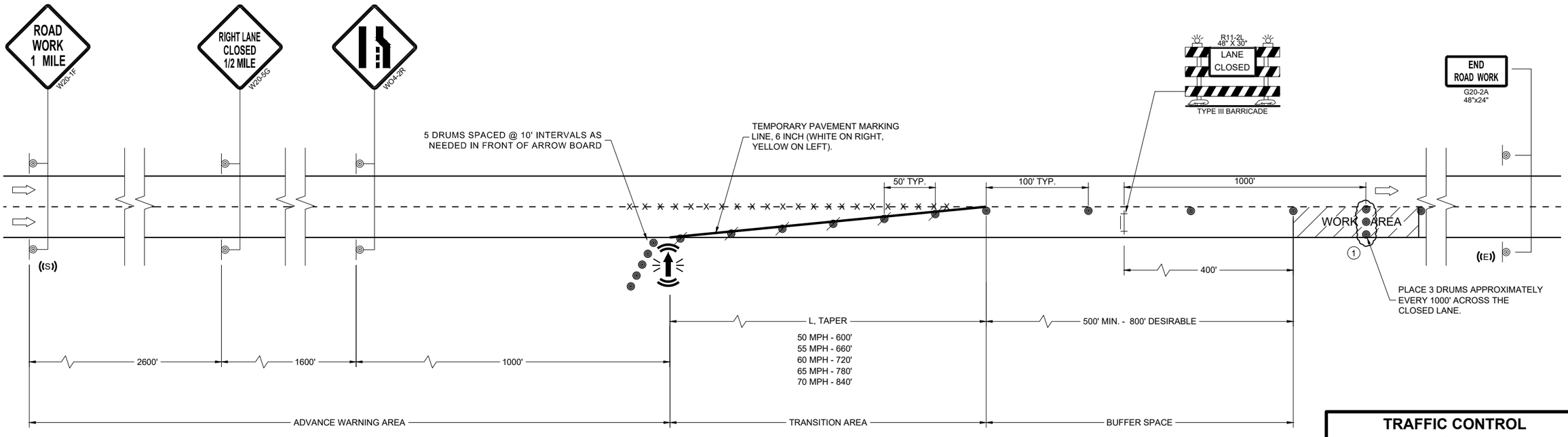
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE 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
February 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

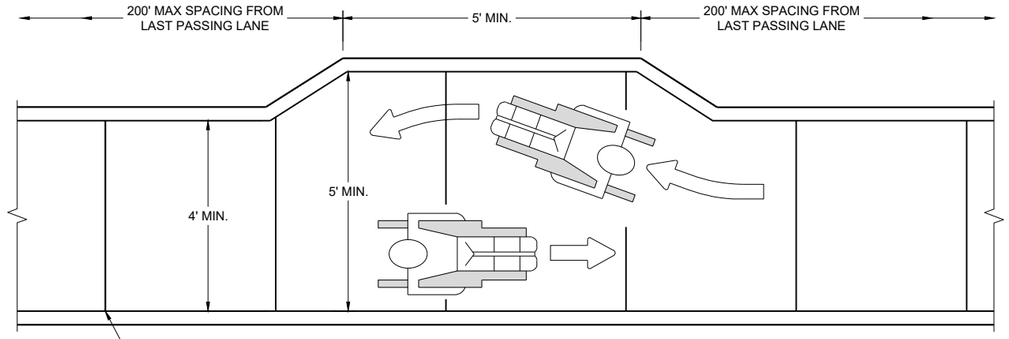
FHWA

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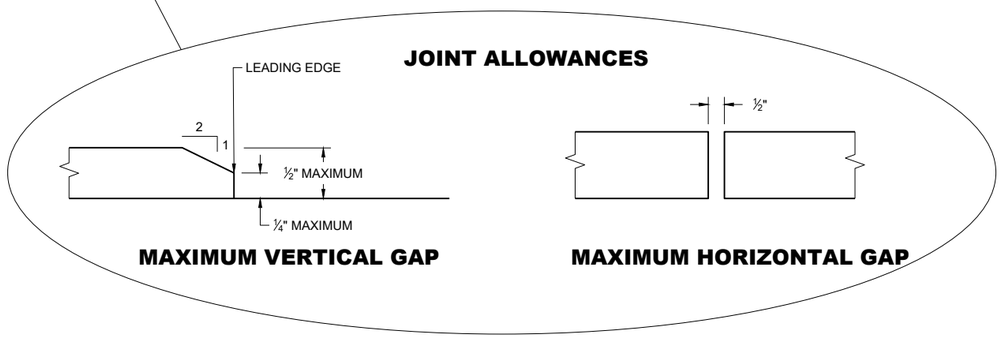
SDD 15D12-15a

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SDD 15D12-15a



NARROW SIDEWALK PASSING DETAIL



MAXIMUM VERTICAL GAP

MAXIMUM HORIZONTAL GAP

GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

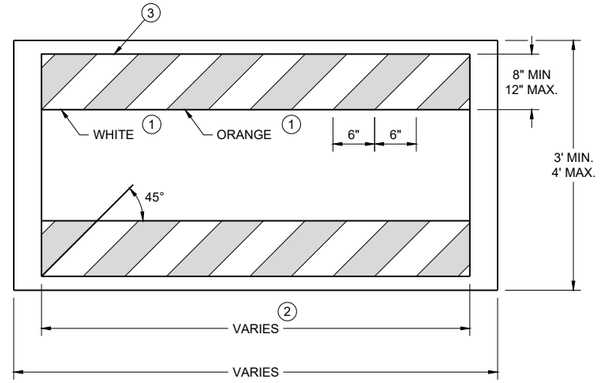
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

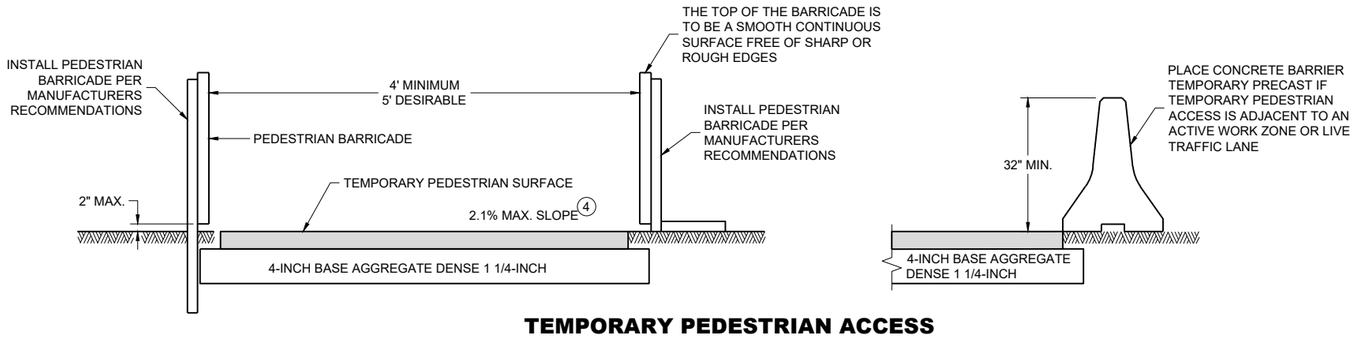
(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

(4) WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



TEMPORARY PEDESTRIAN BARRICADE *

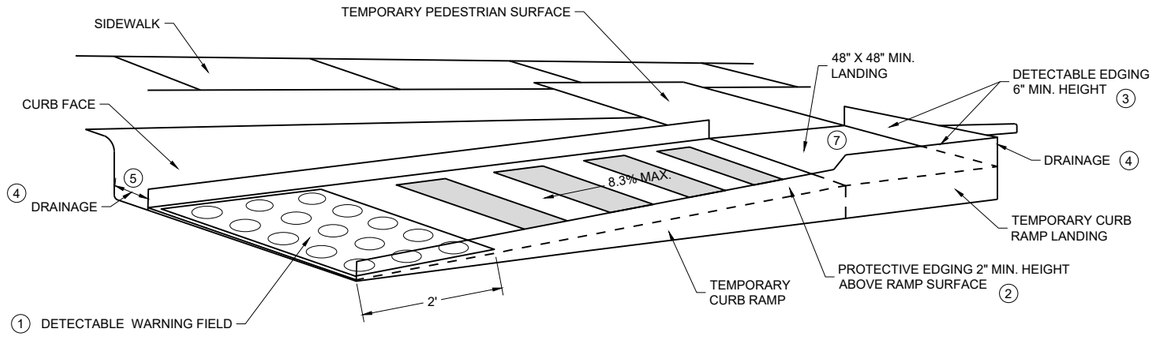


TEMPORARY PEDESTRIAN ACCESS

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 15D30-11a



PERSPECTIVE VIEW

GENERAL NOTES

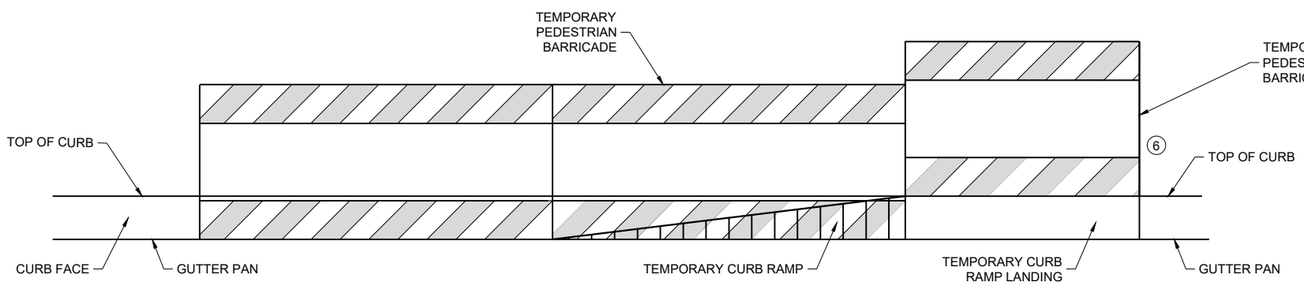
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

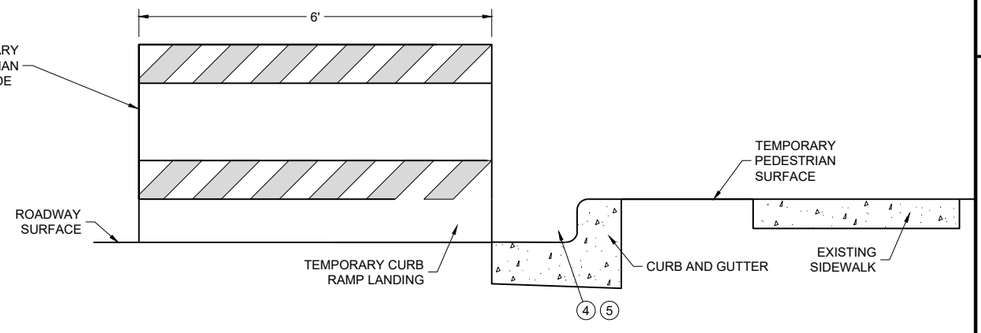
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

1. INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
2. PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
5. ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
6. IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
7. LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



FRONT VIEW



SIDE VIEW

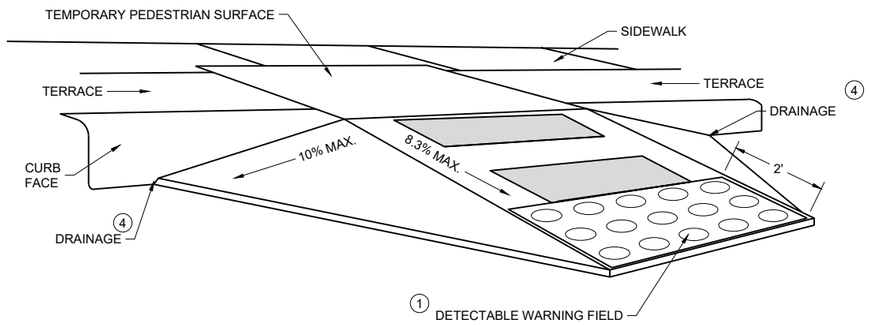
TEMPORARY CURB RAMP PARALLEL TO CURB

6

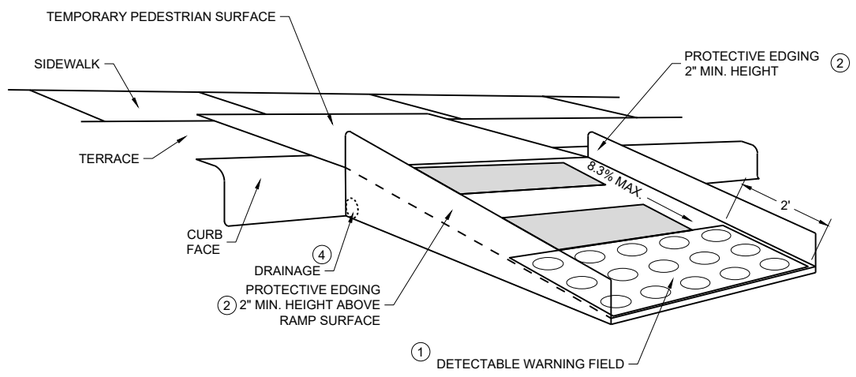
SDD 15D30-11b

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



WITH SIDE APRON (5)



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

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

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

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

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

(1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS

(2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

(3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

(4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

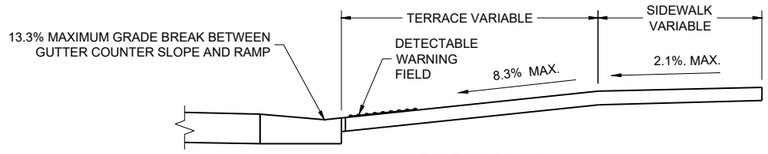
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SDD 15D30-11c

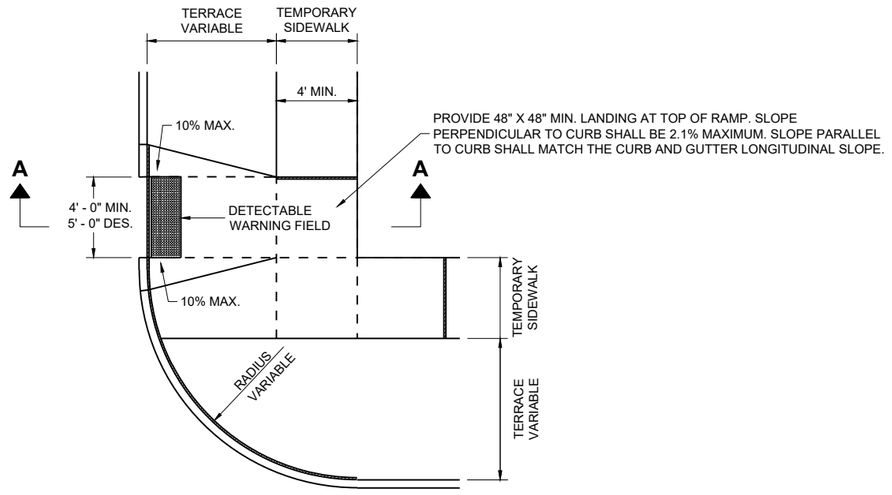
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES



SECTION A - A



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

6

SDD 15D30-11d

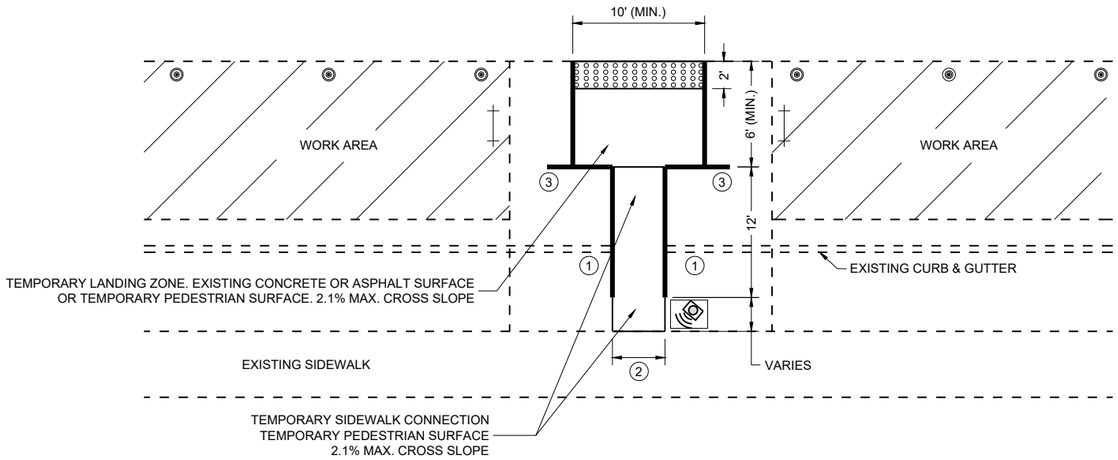
TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

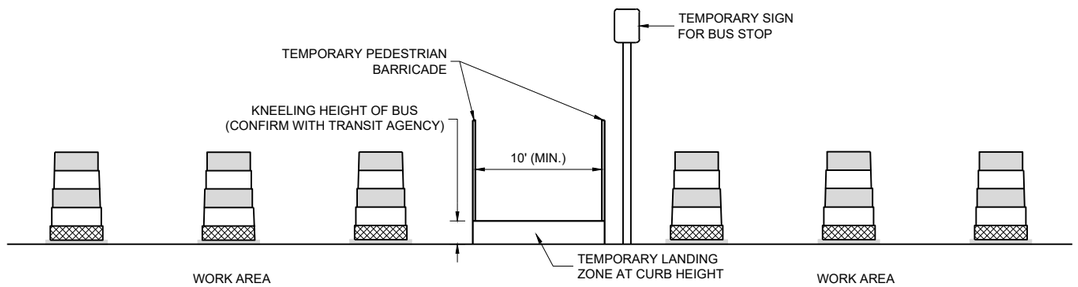
APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15D30-11d



PLAN VIEW



PROFILE VIEW TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

6

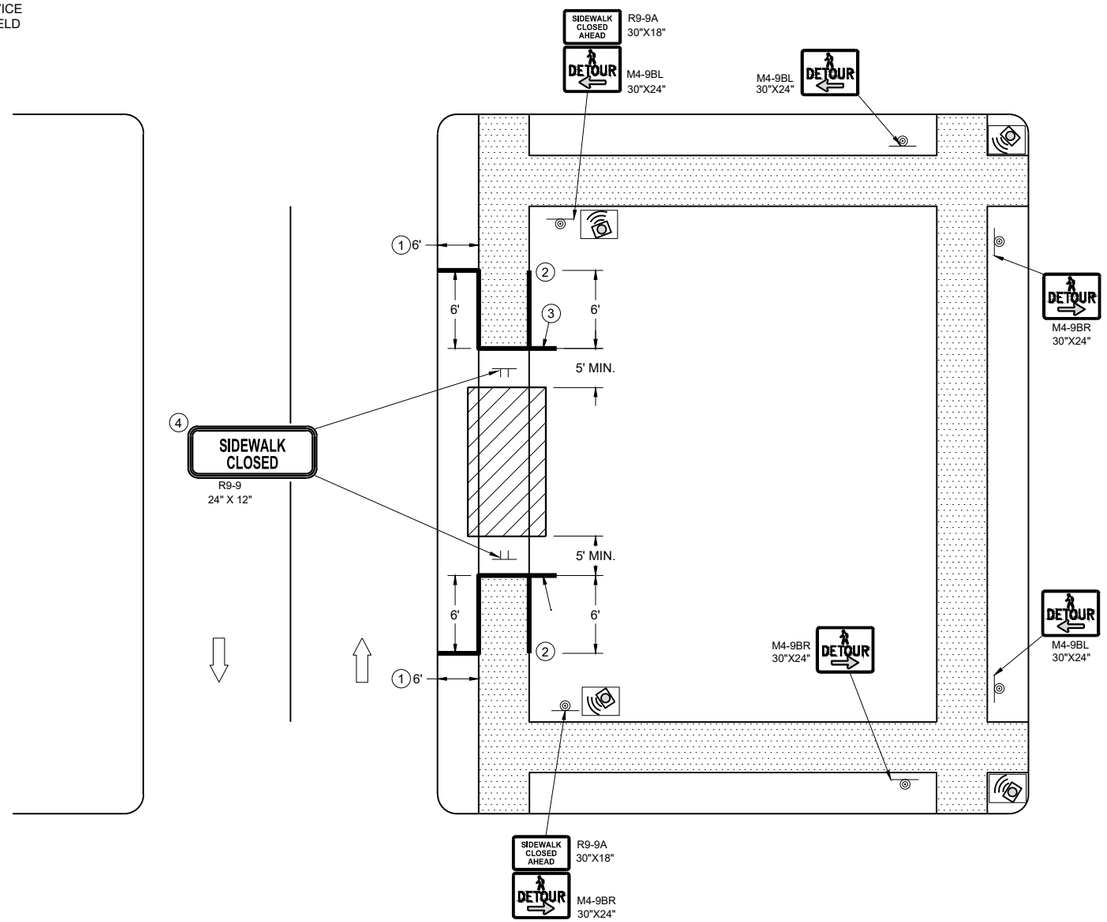
SDD 15D30-11e

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

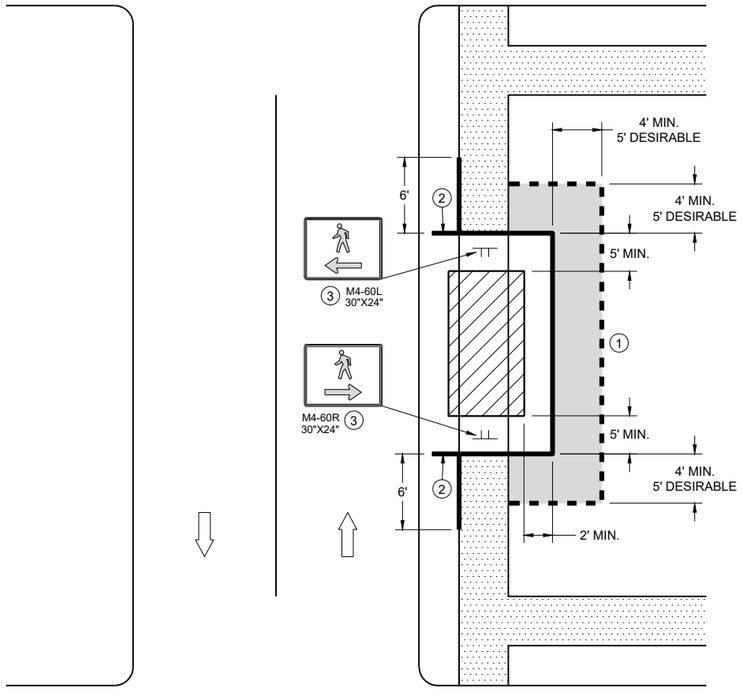
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

(1) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(2) IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK BYPASS
SINGLE SIDE

6

SDD 15D30-11g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

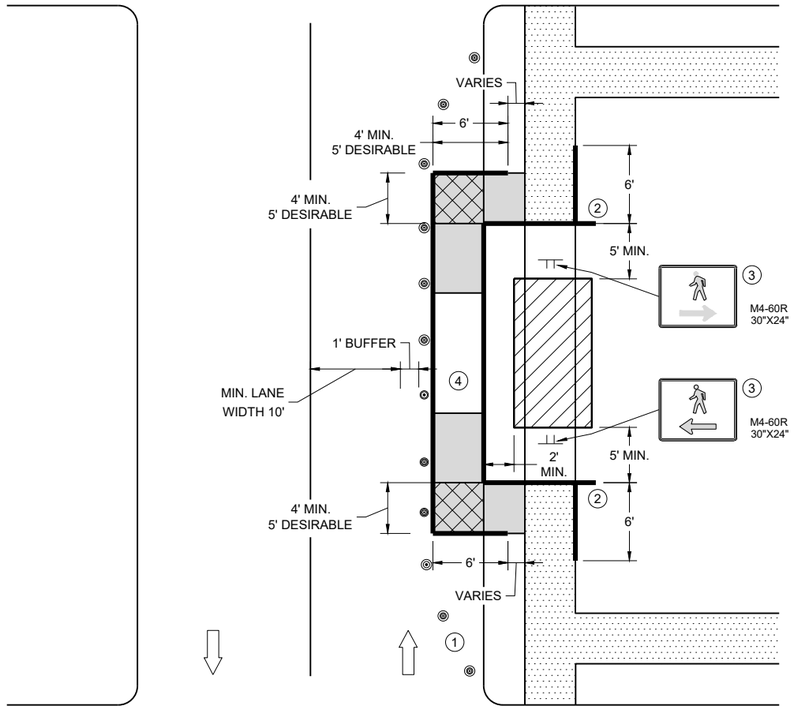
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

(1) SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.

(2) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

(4) USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



SIDEWALK BYPASS, SINGLE SIDE

6

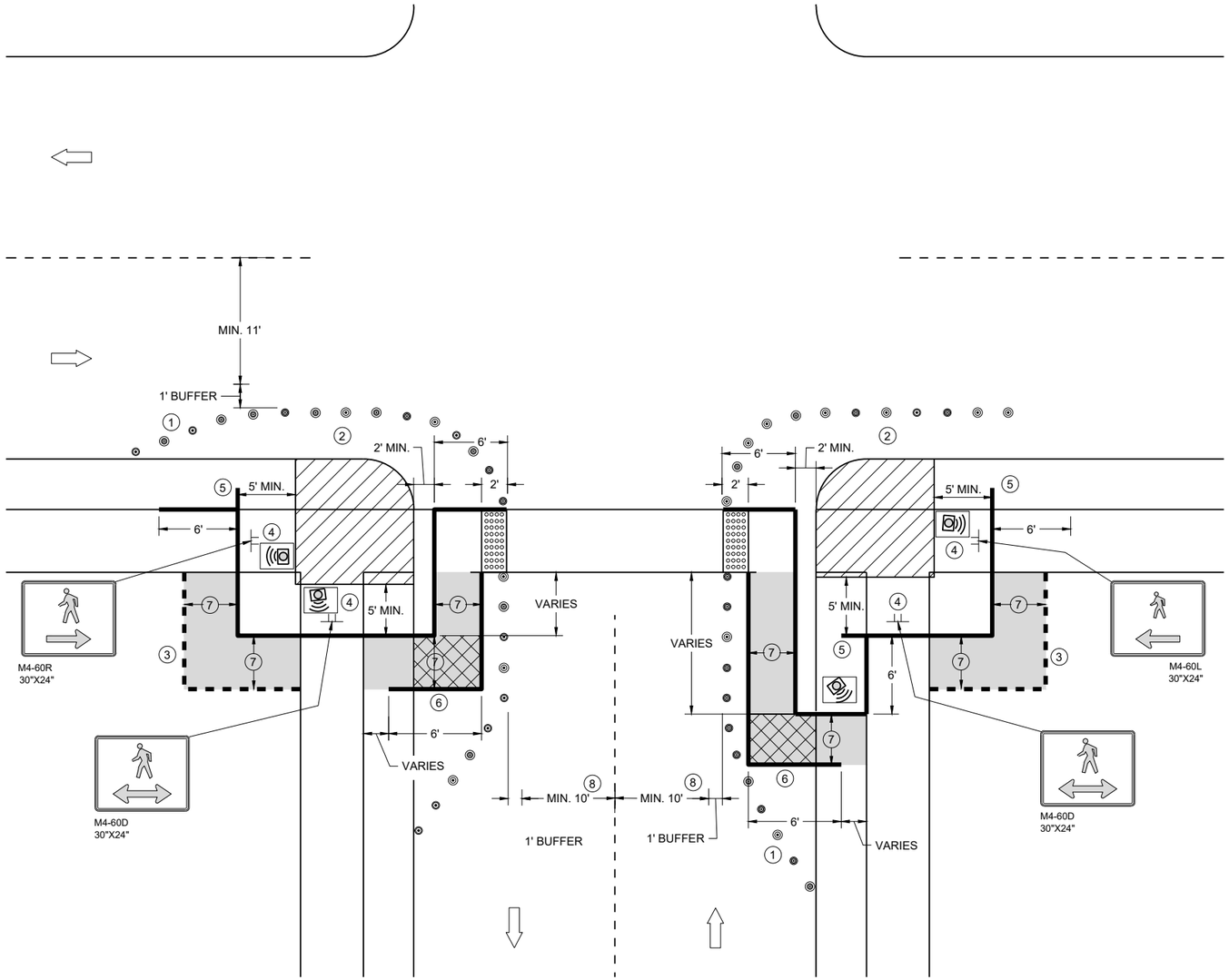
SDD 15D30-11h

6

SDD 15D30-11h

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
7. 4 FEET MINIMUM, 5 FEET DESIRABLE
8. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

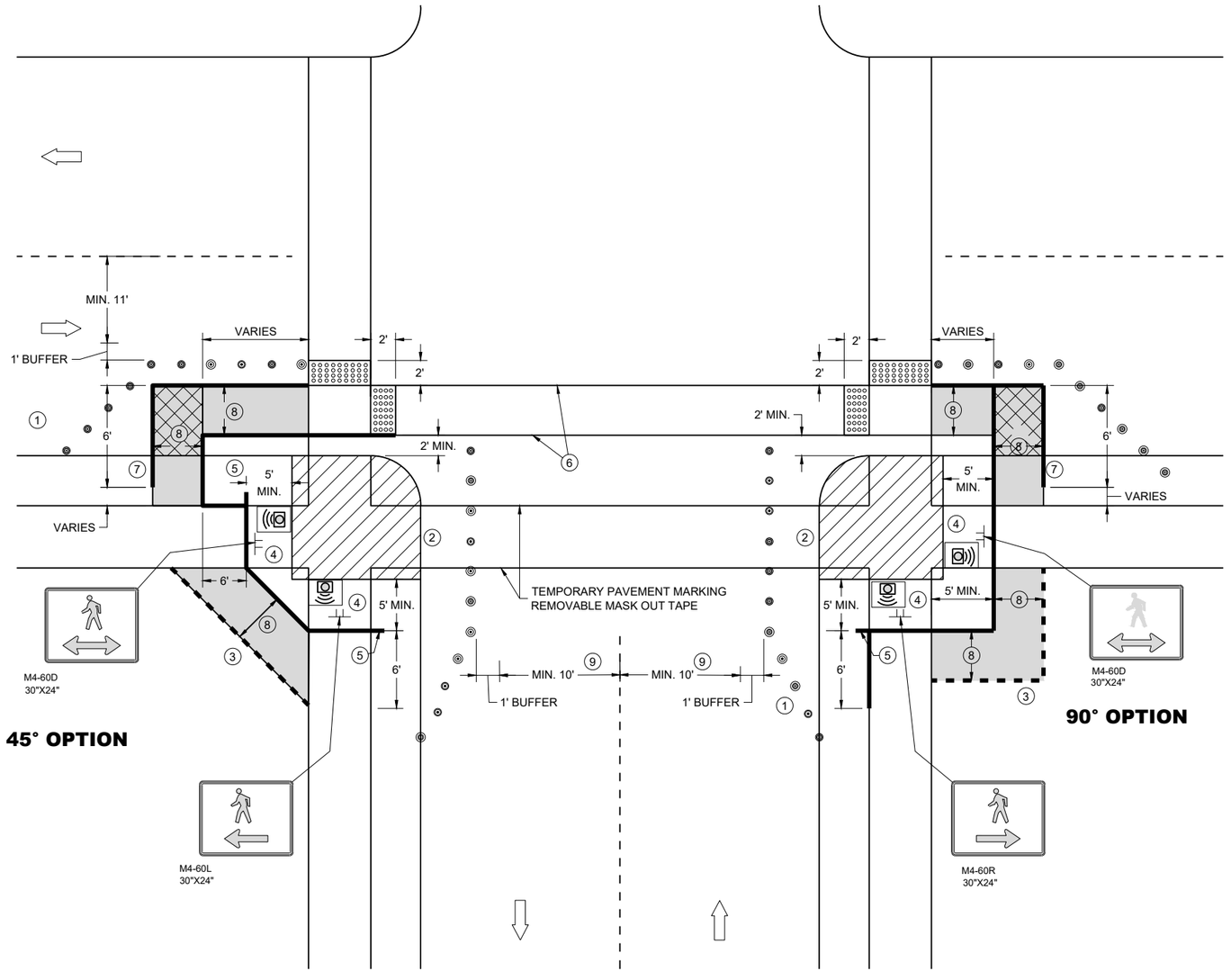
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 15D30-11i



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

(1) SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.

(2) PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS

(3) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(4) MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.

(5) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.

(6) WHITE 6" TEMPORARY PAVEMENT MARKING

(7) IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.

(8) 4 FEET MINIMUM, 5 FEET DESIRABLE

(9) IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

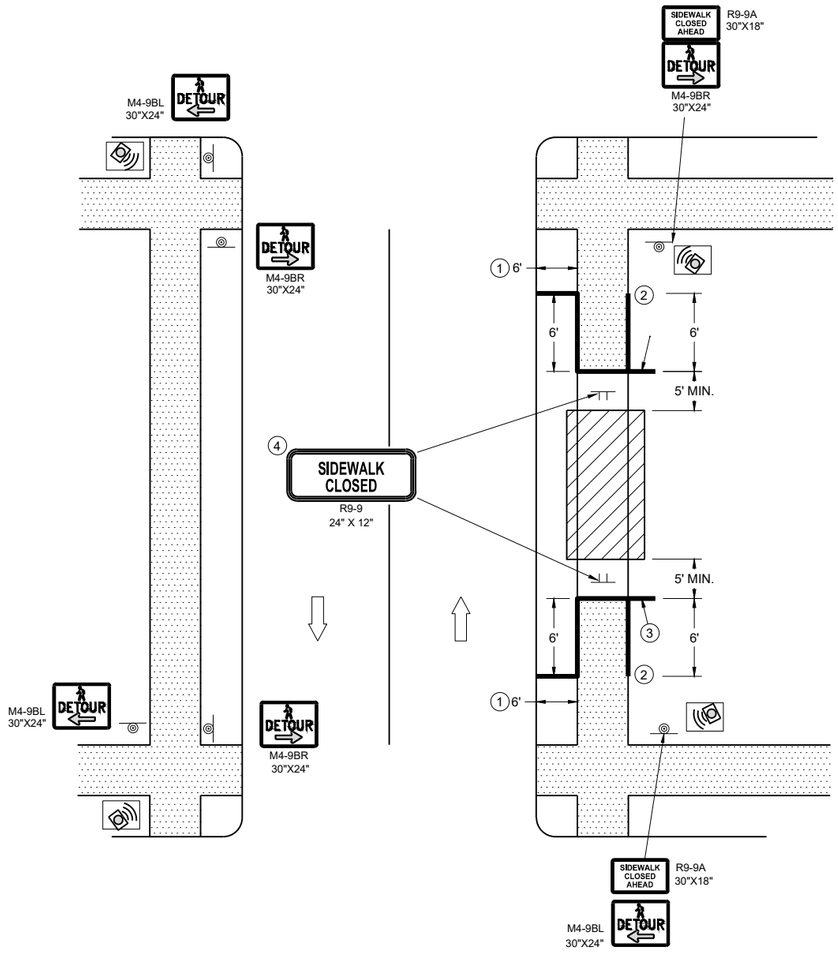
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 15D30-11j

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

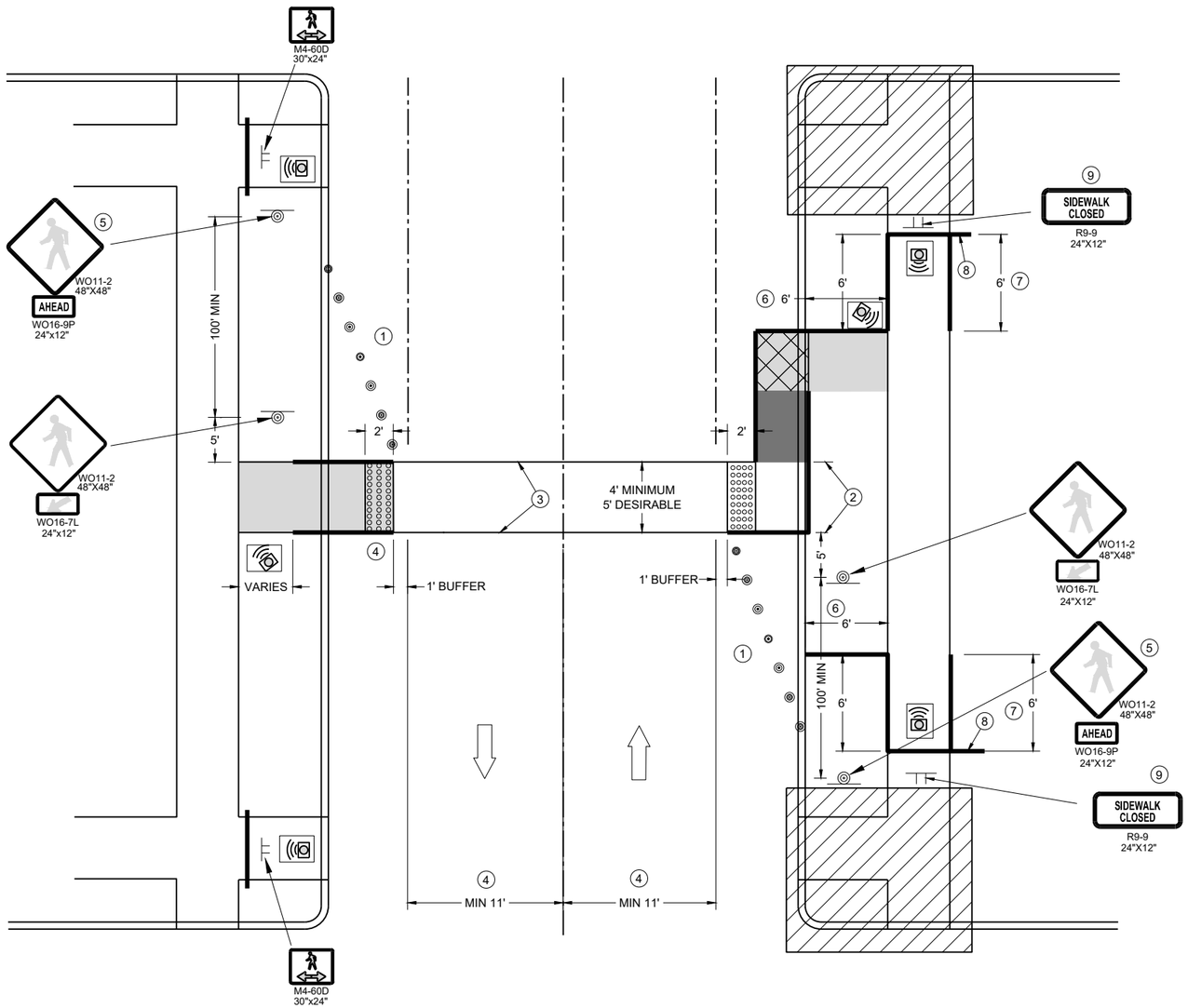
SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

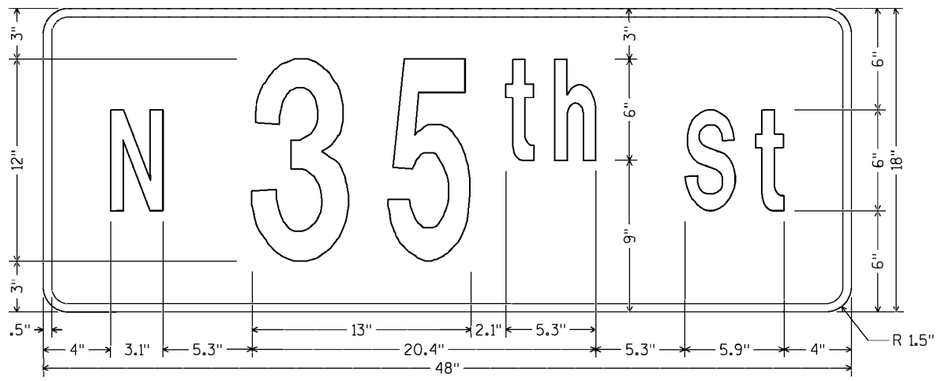
1. SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
2. 4 FEET MINIMUM, 5 FEET DESIRABLE.
3. WHITE 6" TEMPORARY PAVEMENT MARKING.
4. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.
5. IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
6. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
7. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
8. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
9. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

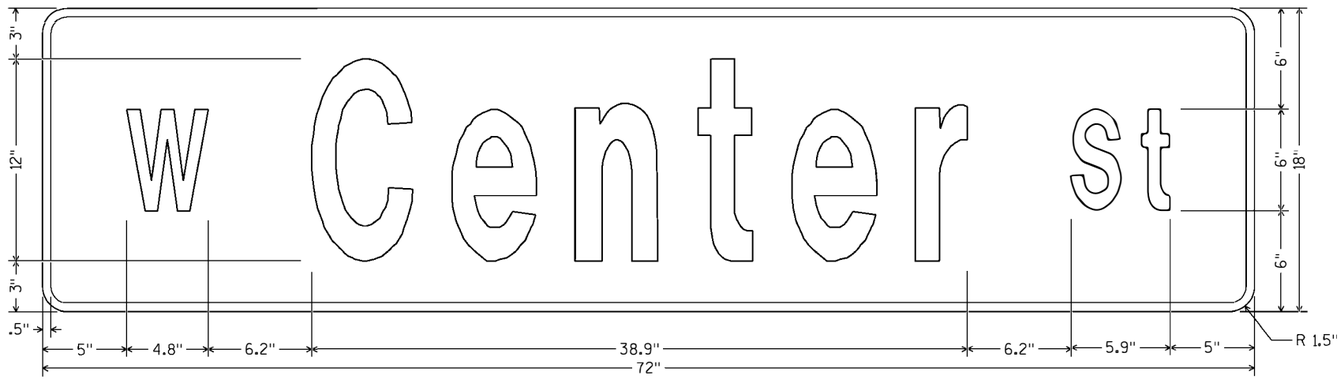
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NOTES - SIGN SUBSTRATE

1. All material to be alodized aluminum
2. All blanks to be .100'' thickness
3. All blanks shall be panel flat tension/strecher level qulality
4. All blank edges shall be true, smooth and free from burrs

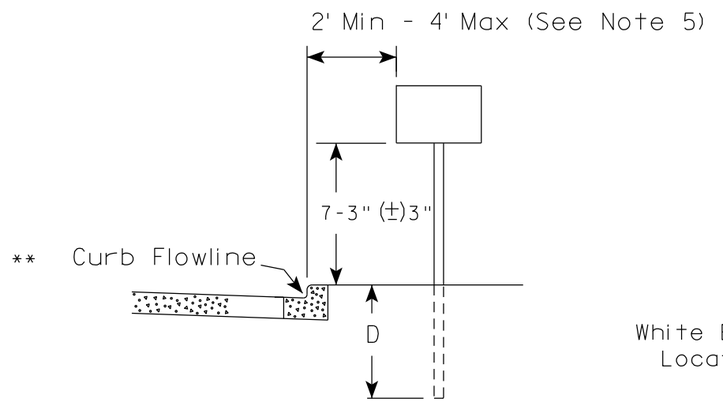


NOTES - SIGN SHEETING

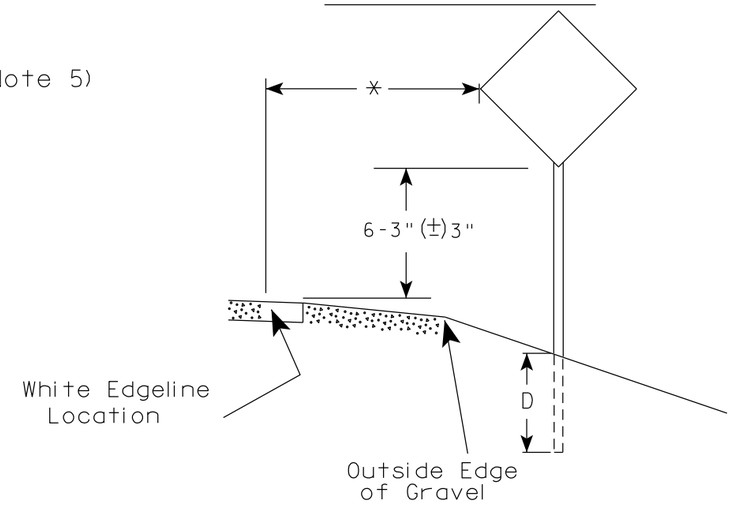
1. All signs type SH (full cubed prismatic sheeting)
2. Sheeting: 3M Diamond Grade™ DG³ type XI 4090
3. Color:
   Background - Green
   Message - White
4. Sheeting applied to one side of substrate

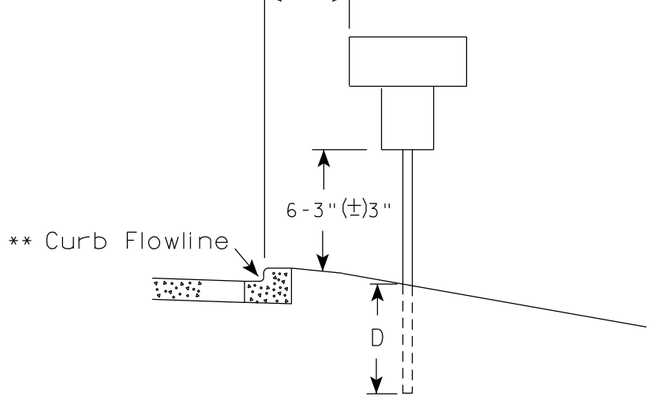
Message Series - C

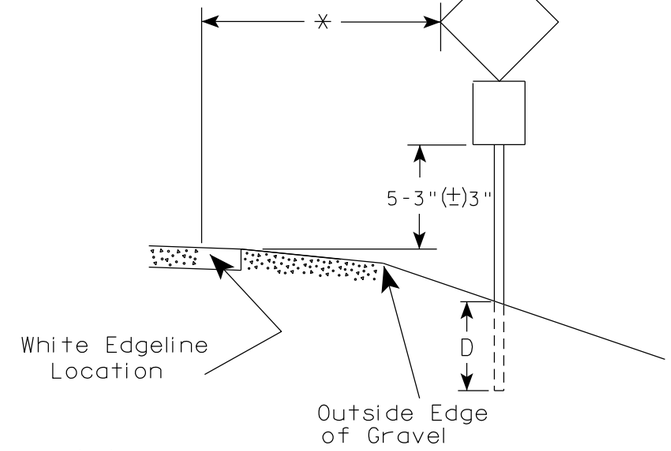
URBAN AREA



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.

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.

POST EMBEDMENT DEPTH

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

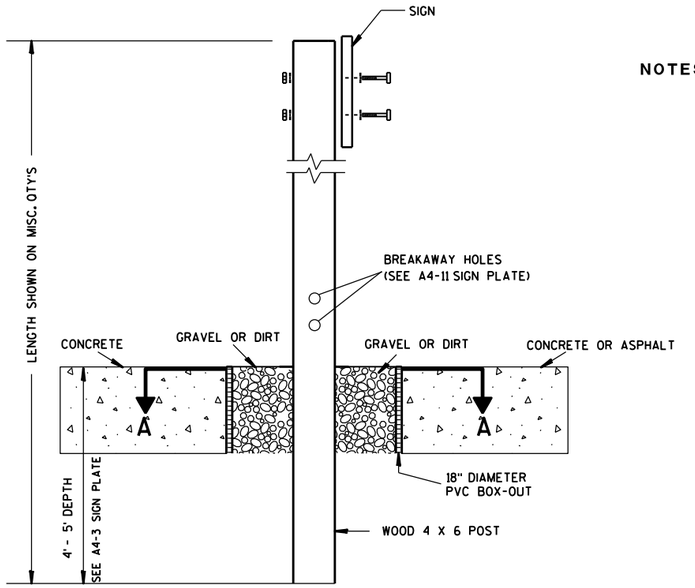
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

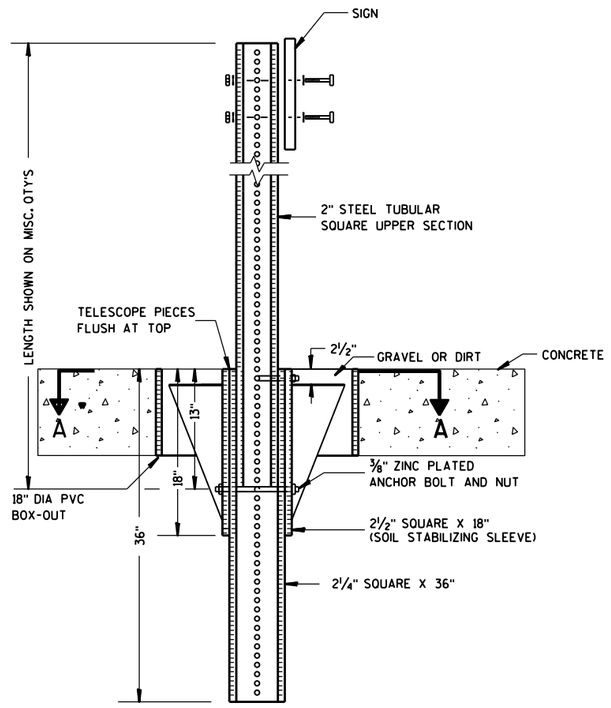
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 134	E



ELEVATION VIEW

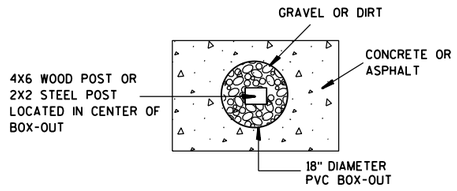
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

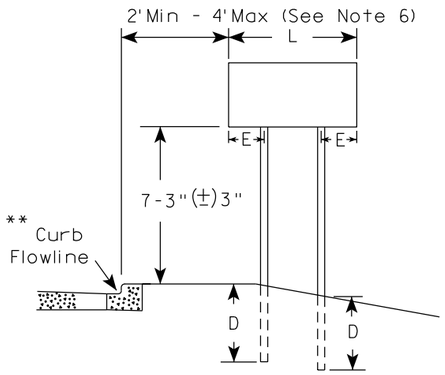
APPROVED Matthew R Rauch
for State Traffic Engineer

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

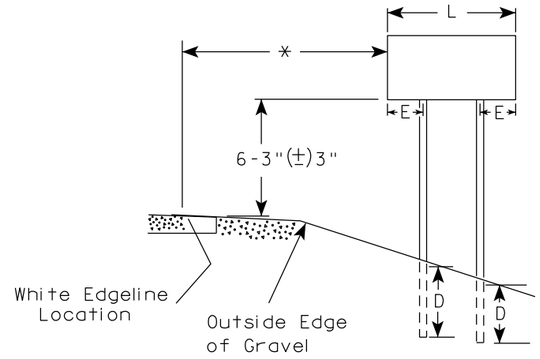
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

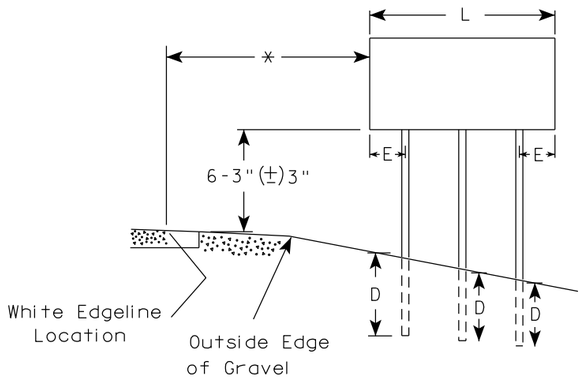
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

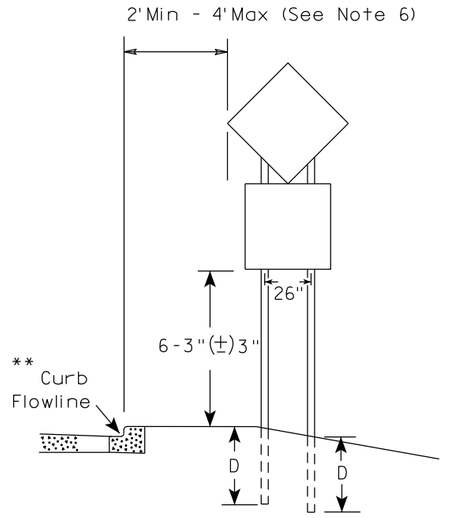
URBAN AREA



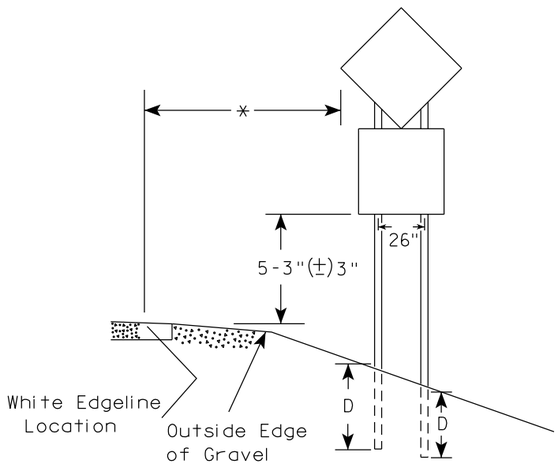
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)		
	L	E
***	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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'

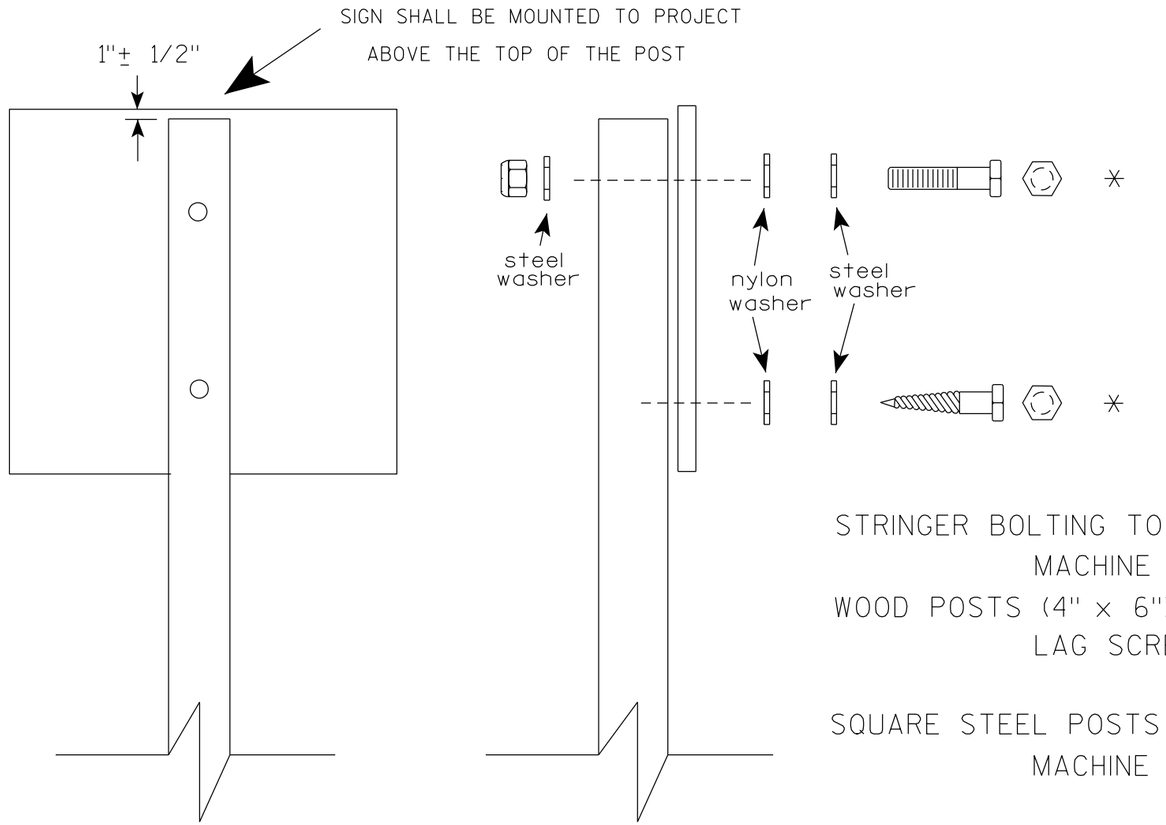
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 136	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

PROJECT NO:

SHEET NO: 137 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

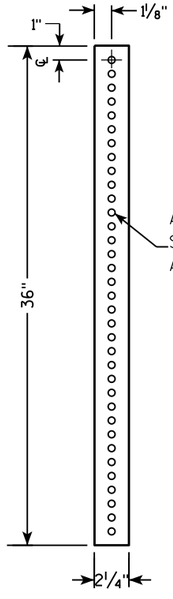
WISDOT/CADDS SHEET 42

7

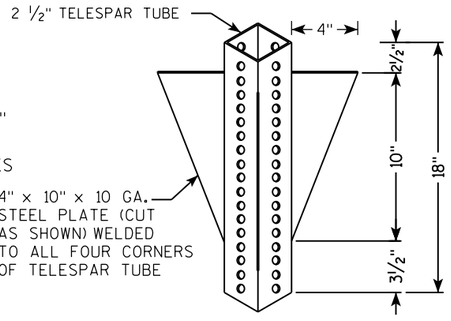
7

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

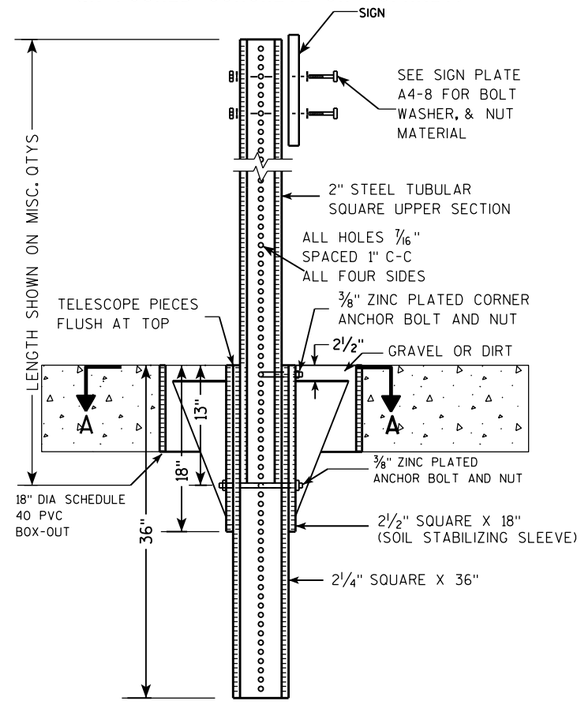
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



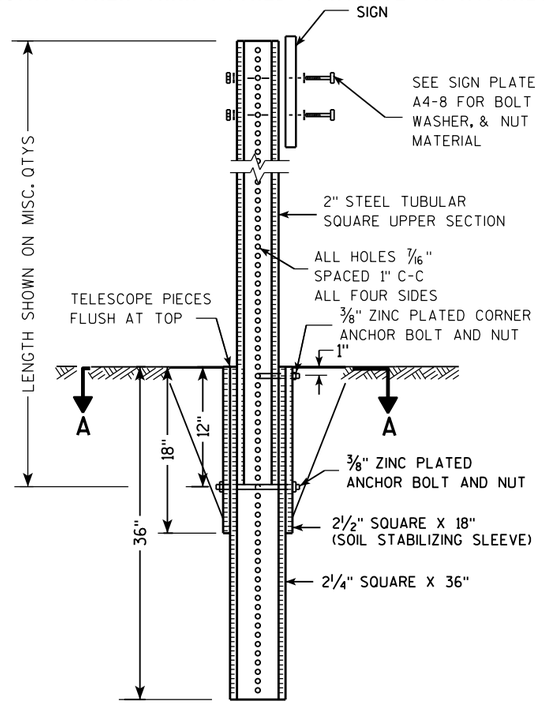
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

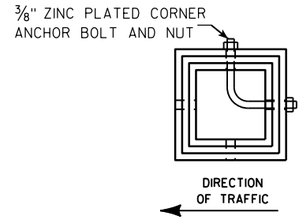


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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

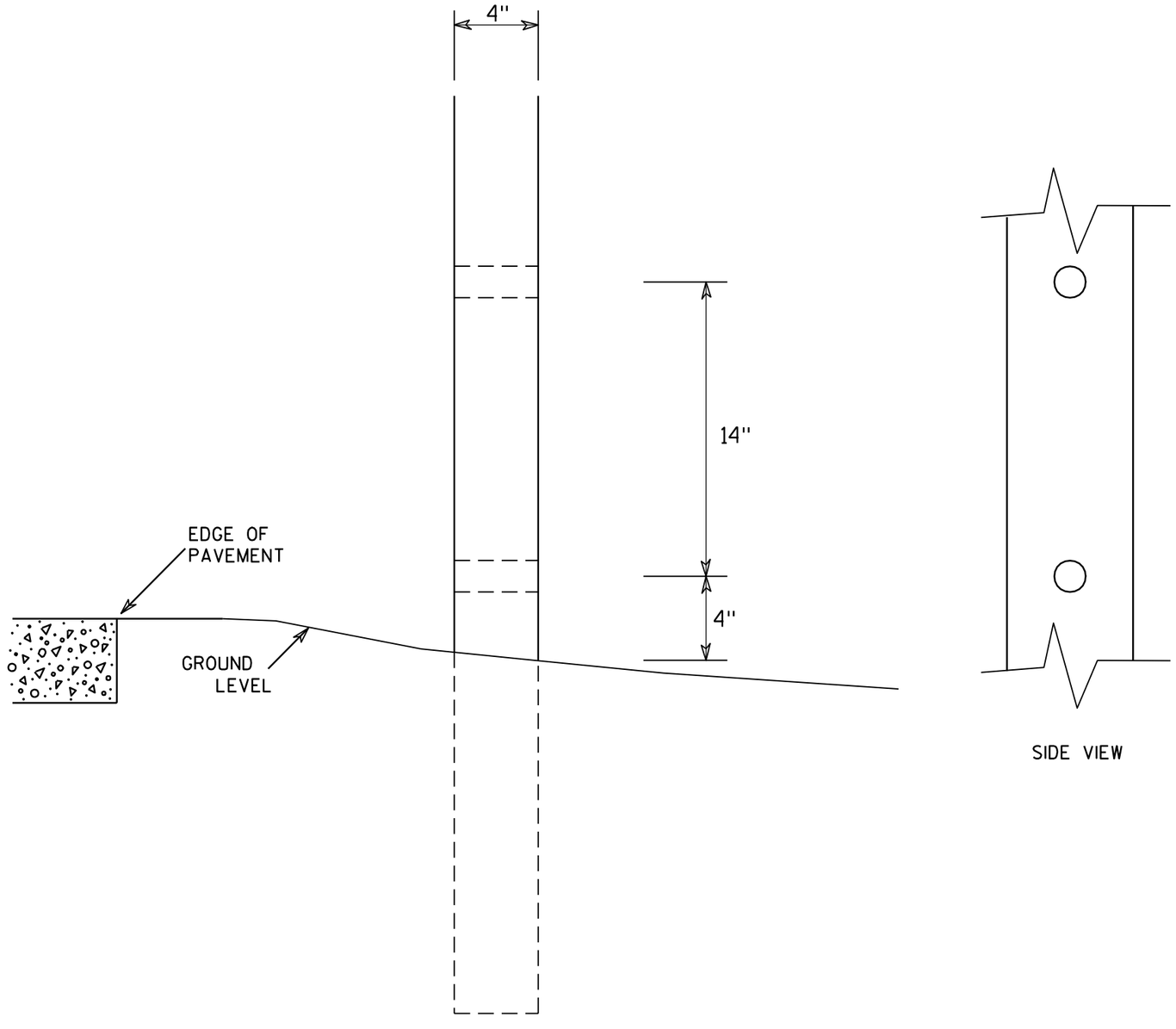
WISCONSIN DEPT OF TRANSPORTATION

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.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

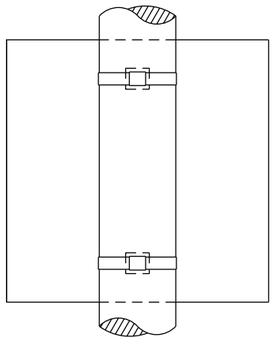
APPROVED Chester J Spang for State Traffic Engineer

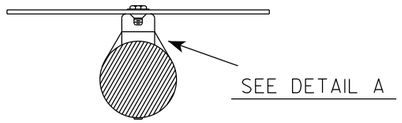
DATE 3/27/97 PLATE NO. A4-11.2

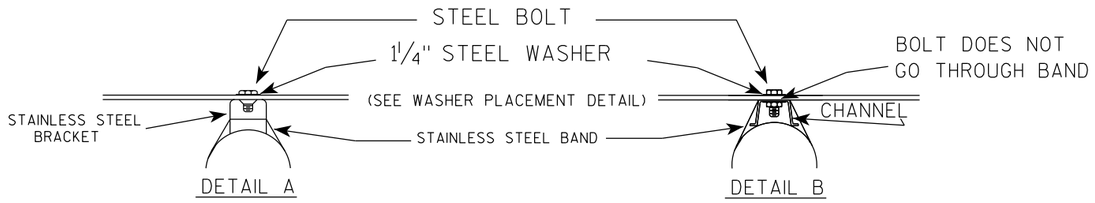
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 139	E

BANDING

SINGLE SIGN



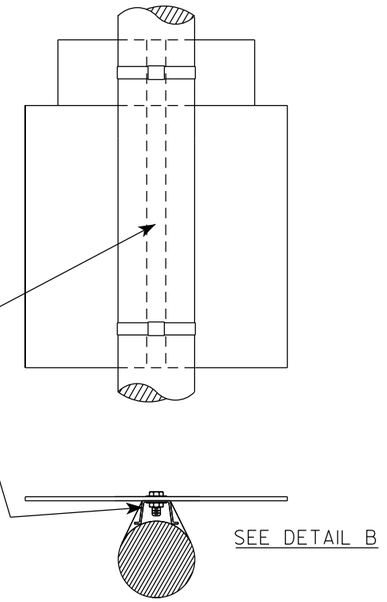




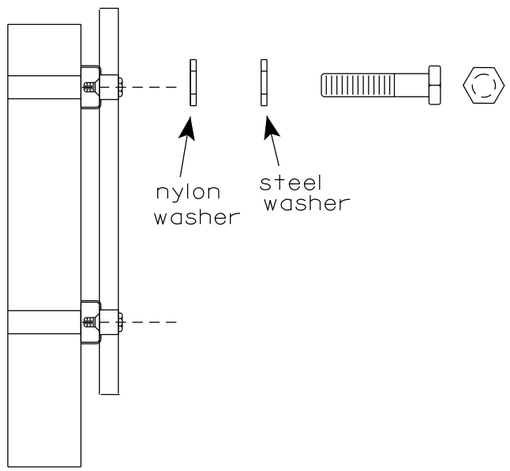
GENERAL NOTES

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

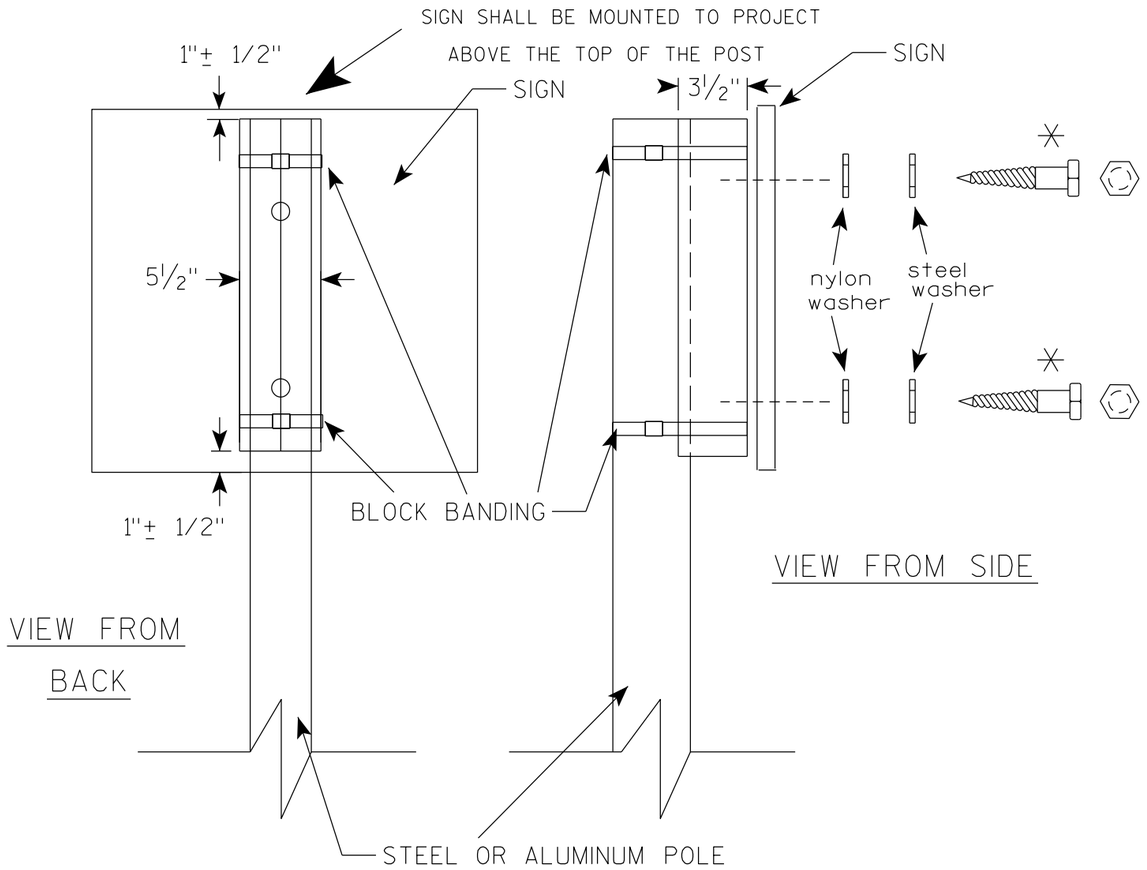
DATE 6/10/19 PLATE NO. A5-9.4

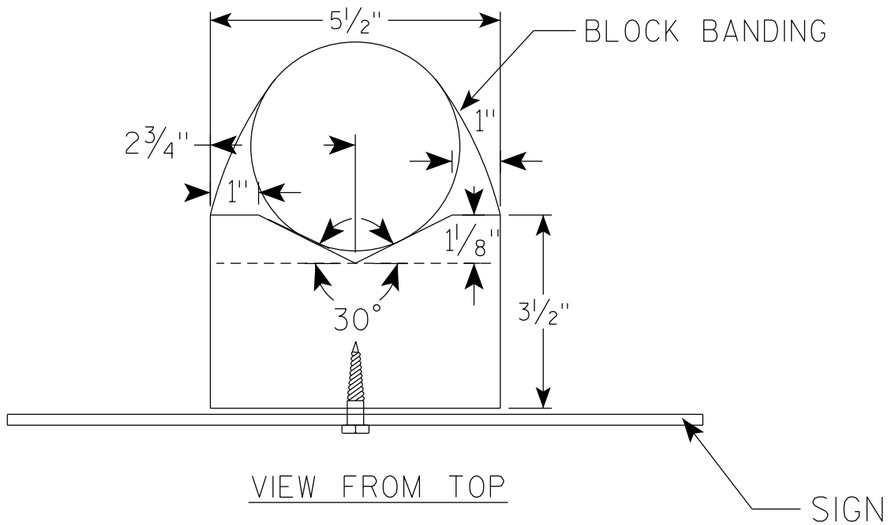
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 140	E

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

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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)

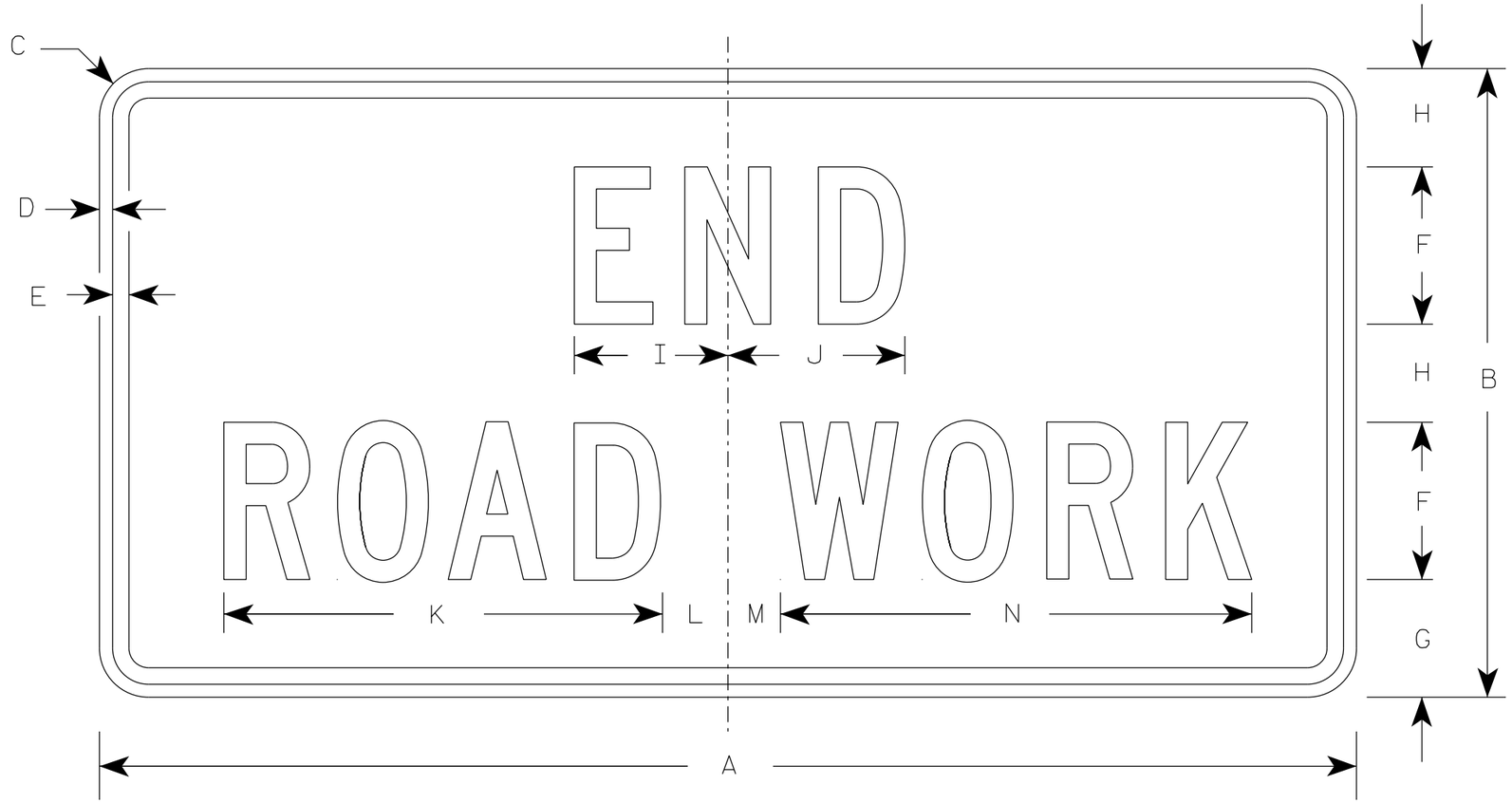
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 141 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

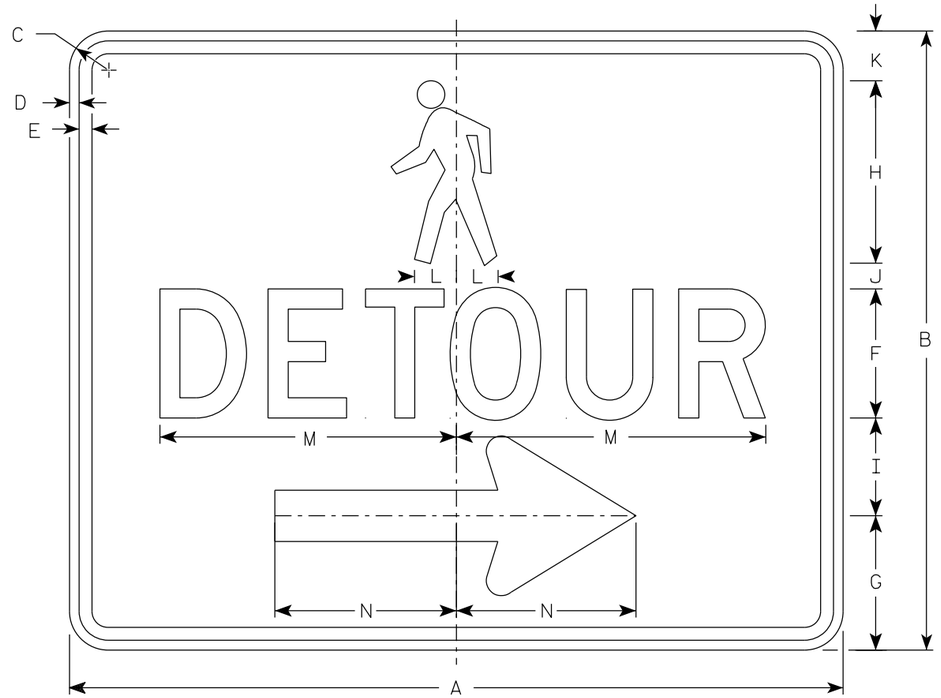
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

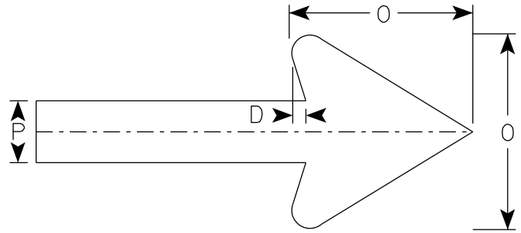
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\G202A.dgn PLOT DATE : 26-JAN 2023 8:27 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



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	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
3																											
4																											
5																											

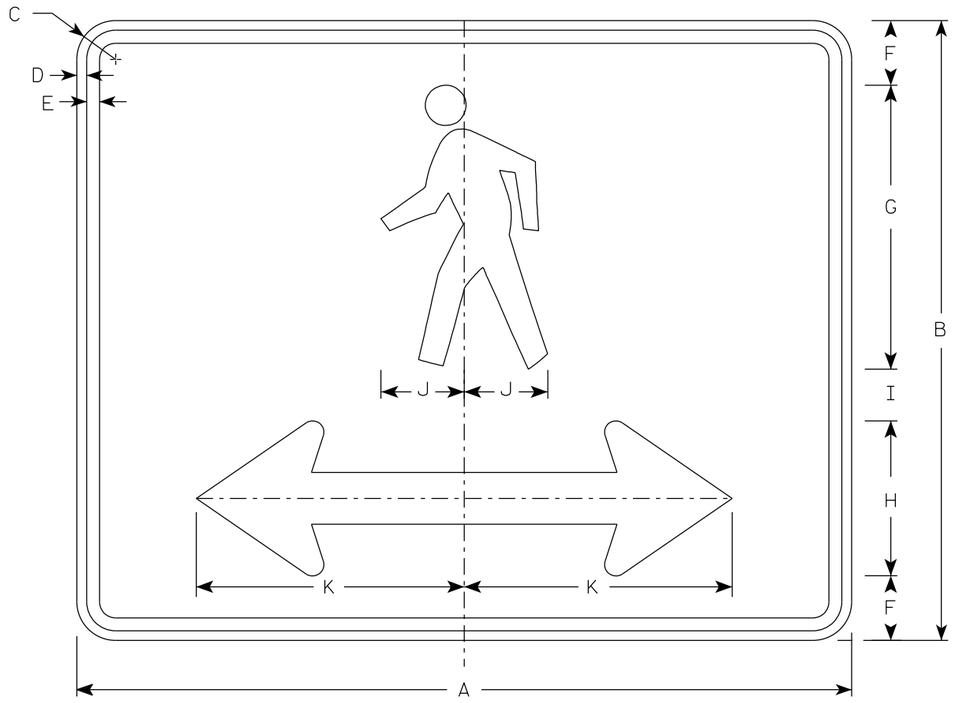
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9B.4

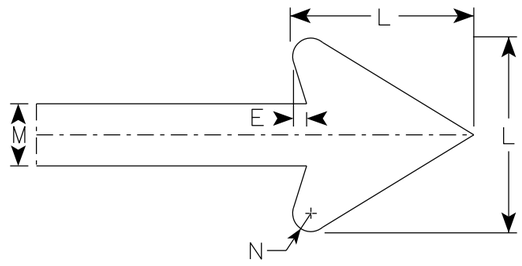
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 143 | E



M4-60D

NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	3/8	1/2	2 1/2	11	6	2	3 1/4	10 3/8	6	2	3/8													5.00
2M	30	24	1 1/2	3/8	1/2	2 1/2	11	6	2	3 1/4	10 3/8	6	2	3/8													5.00
3																											
4																											
5																											

STANDARD SIGN
M4-60D

WISCONSIN DEPT OF TRANSPORTATION

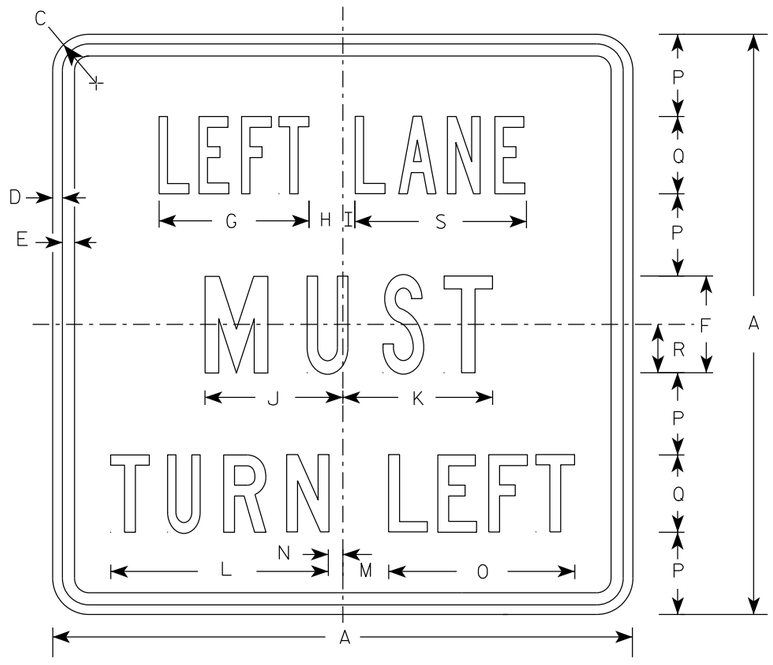
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/14/2023 PLATE NO. M4-60D.2

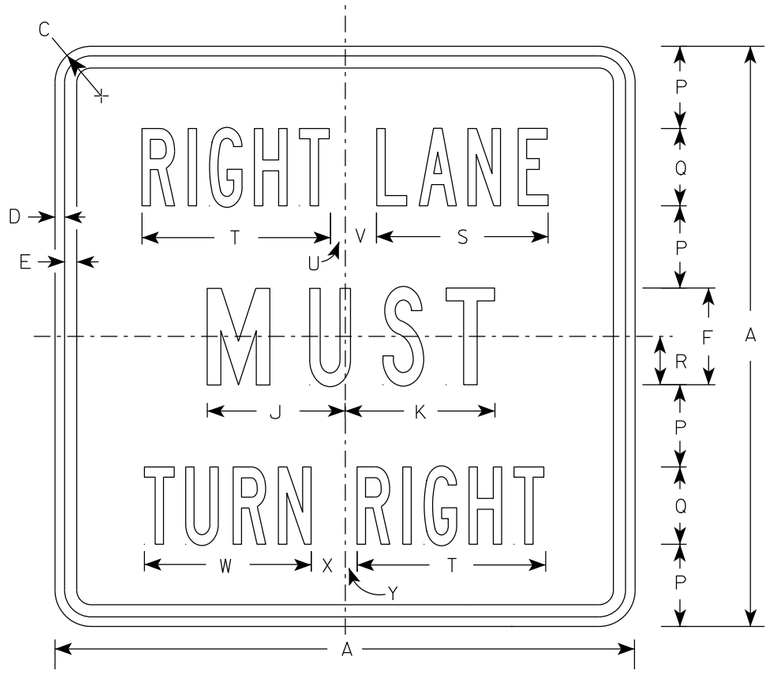
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 144 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.



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	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 7/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 7/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		2 1/4	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

STANDARD SIGN
R3-7L & R3-7R

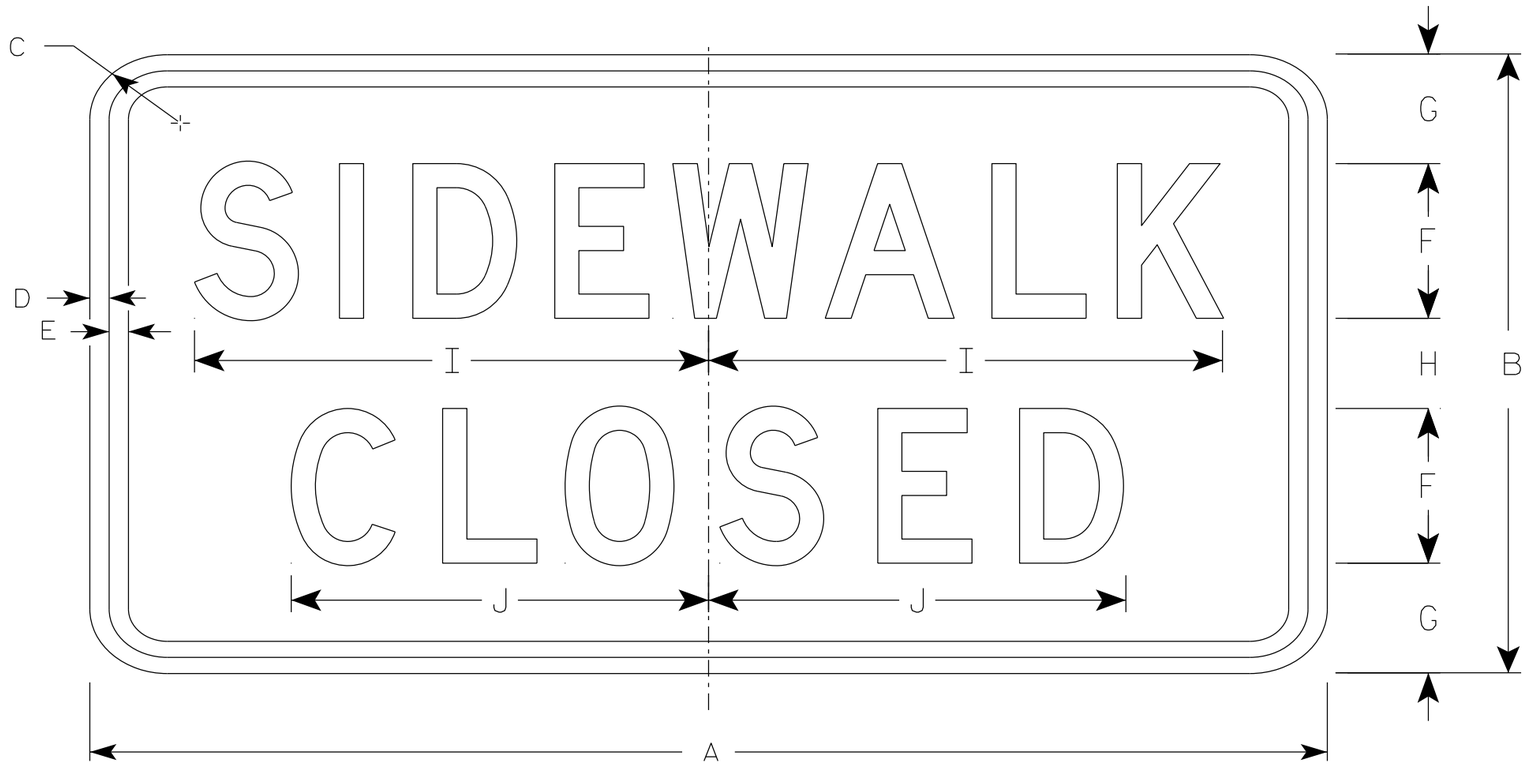
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/23 PLATE NO. R3-7.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 145 | E

7



R9-9

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
2M	24	12	1 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
3	30	18	1 ½	½	½	4	3 ½	3	12 ½	10 ¼																	3.75
4																											
5																											

STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

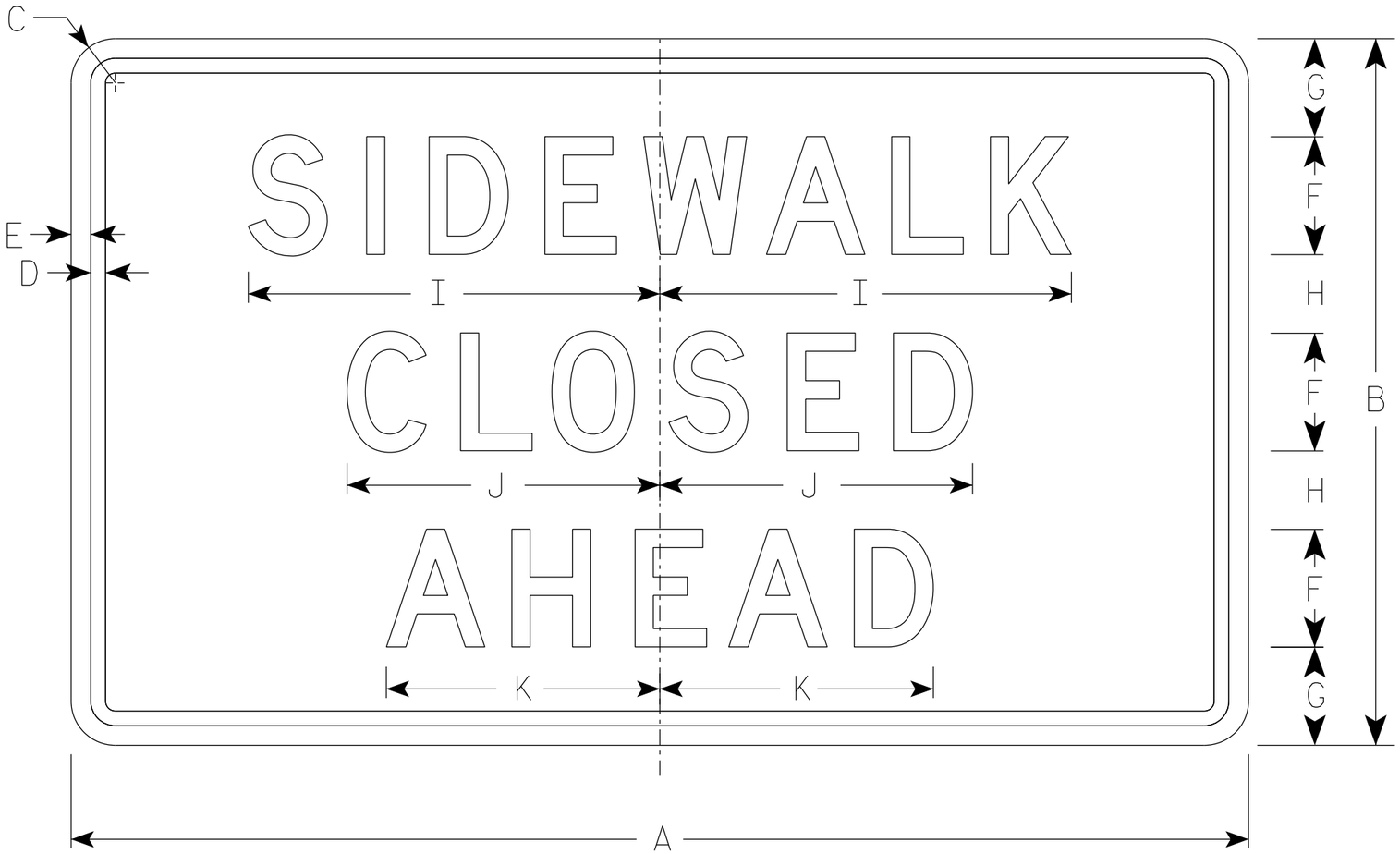
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 146 | E

NOTES

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



R9-9A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 ½	⅜	½	3	2 ½	2	10 ½	8	7																3.75
2M	30	18	1 ½	⅜	½	3	2 ½	2	10 ½	8	7																3.75
3																											
4																											
5																											

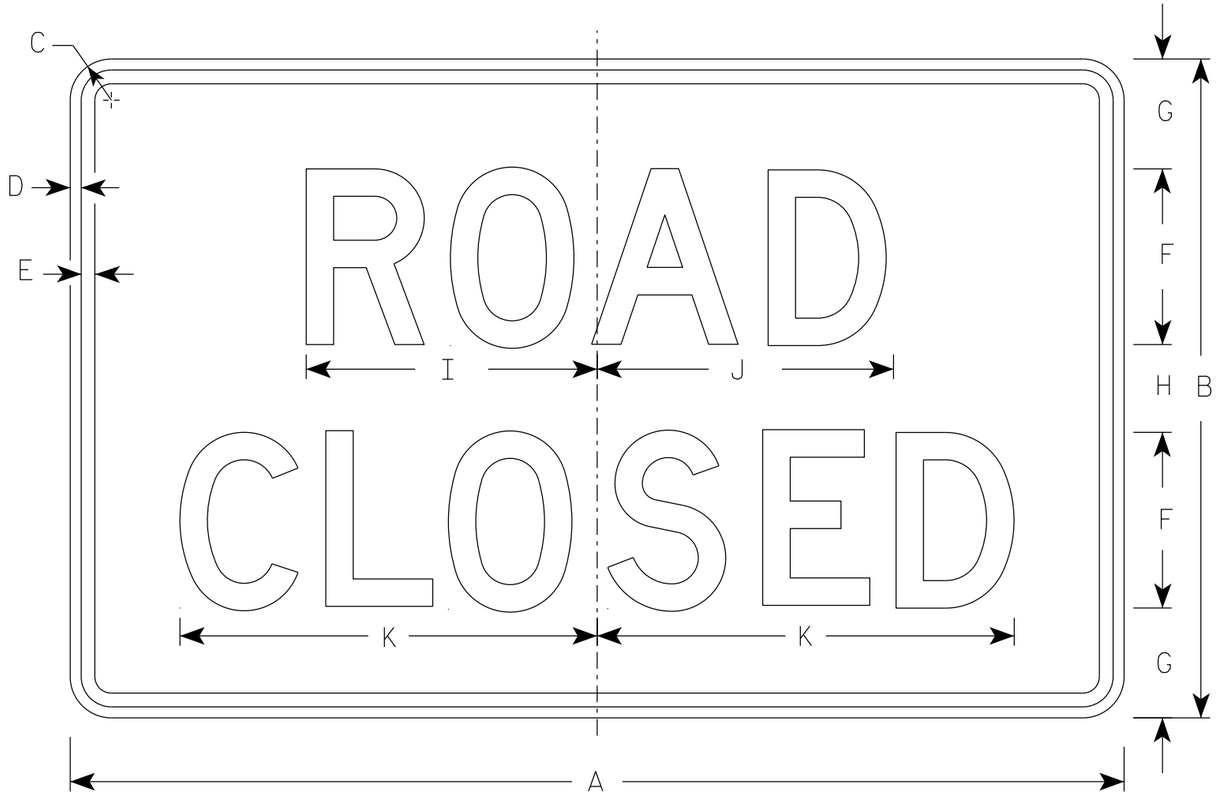
STANDARD SIGN
R9-9A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9A.2

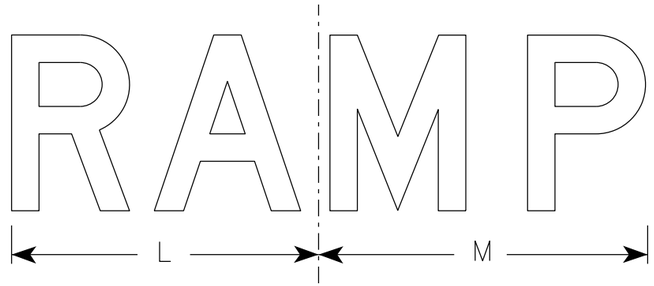
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 147 | E



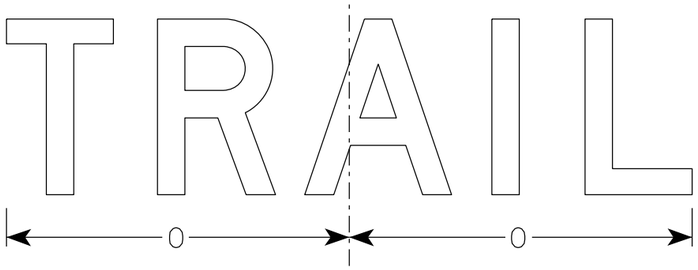
R11-2

NOTES

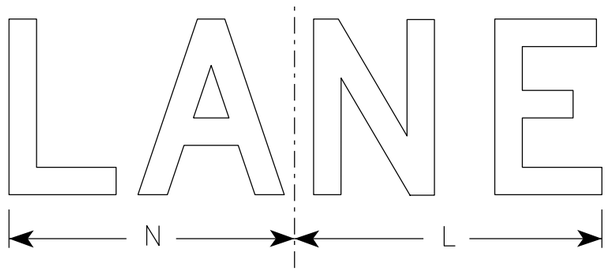
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



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												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												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												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												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												10.0

STANDARD SIGN
R11-2

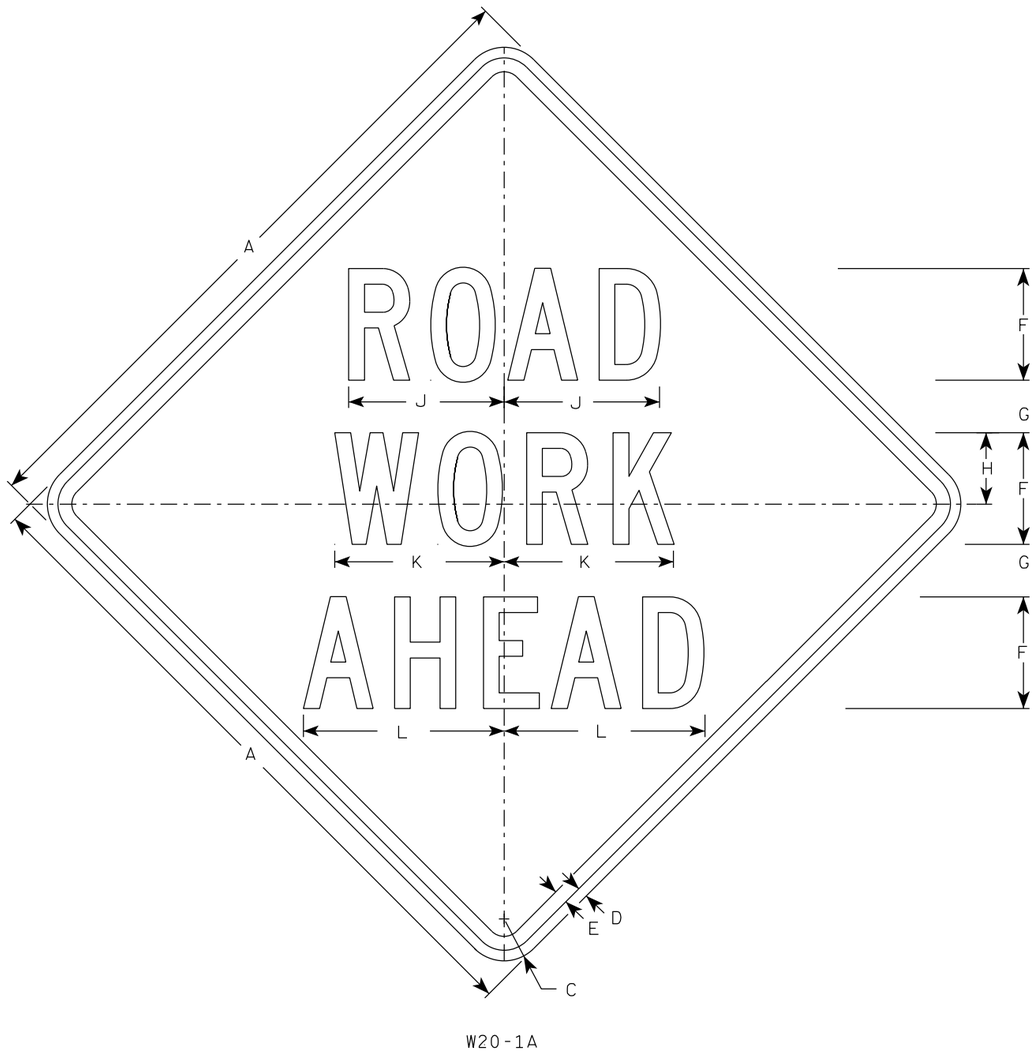
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

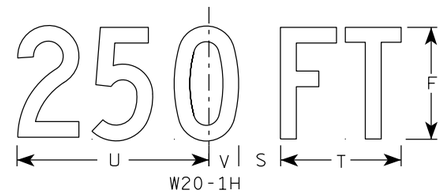
DATE 2/5/24 PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

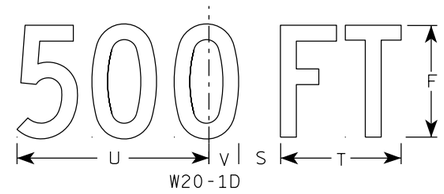
FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W20-1A



W20-1H



W20-1D



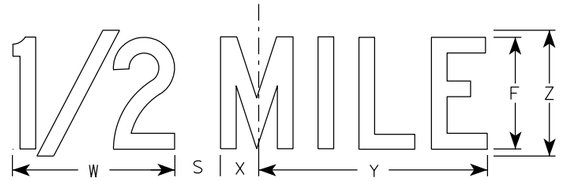
W20-1C



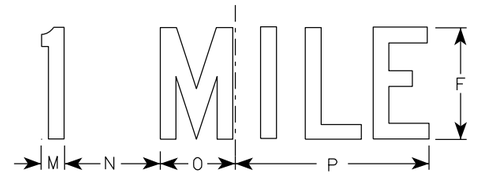
W20-1B

NOTES

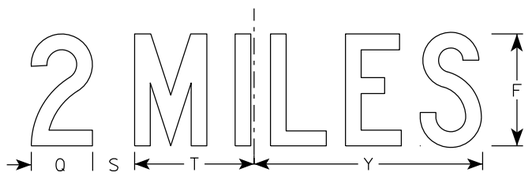
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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

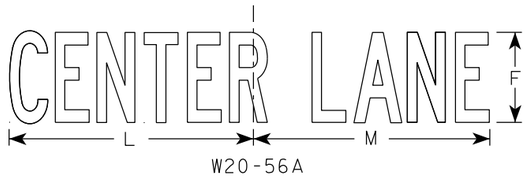
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

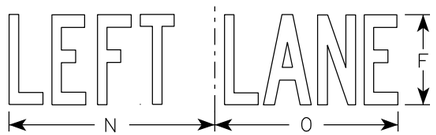
DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

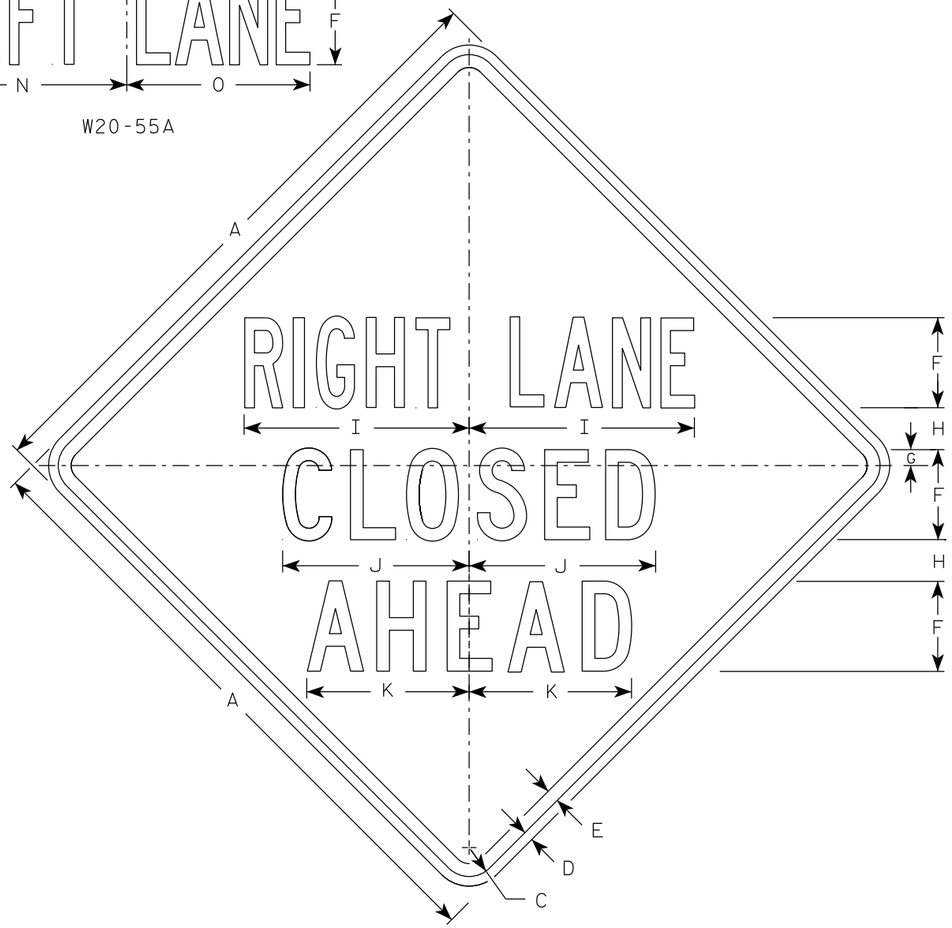
SHEET NO: 149 E



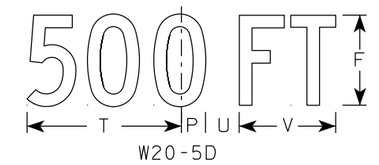
W20-56A



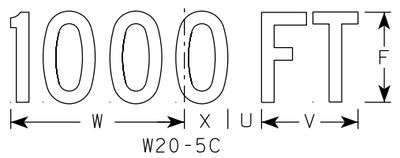
W20-55A



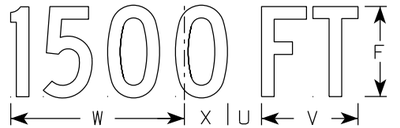
W20-5A



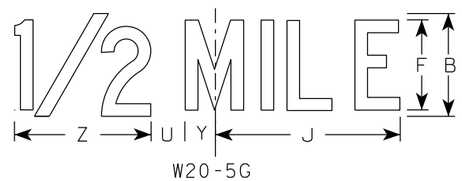
W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

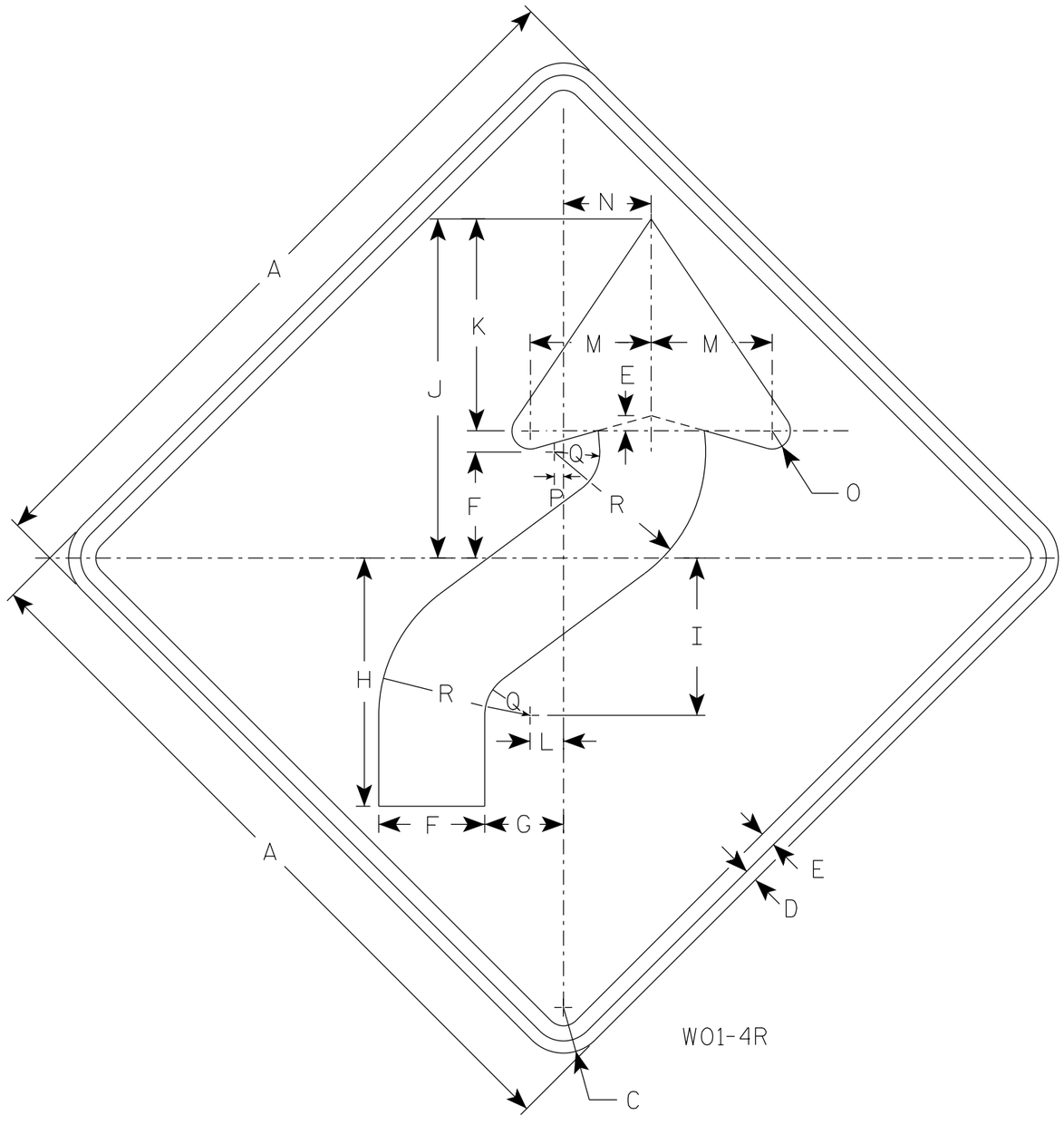
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 150	E



WO1-4R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. WO1-4L is the same as WO1-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

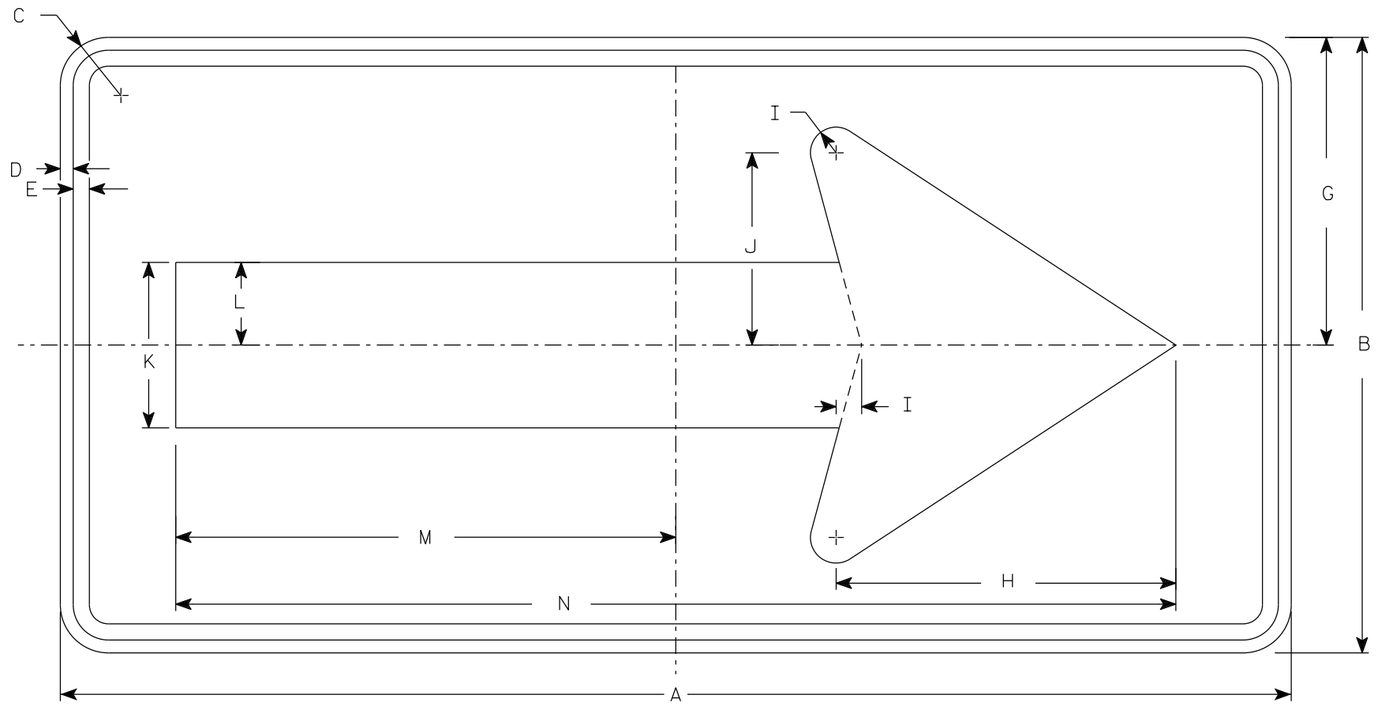
STANDARD SIGN
WO1-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 151 | E



WO1-6

NOTES

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

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	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

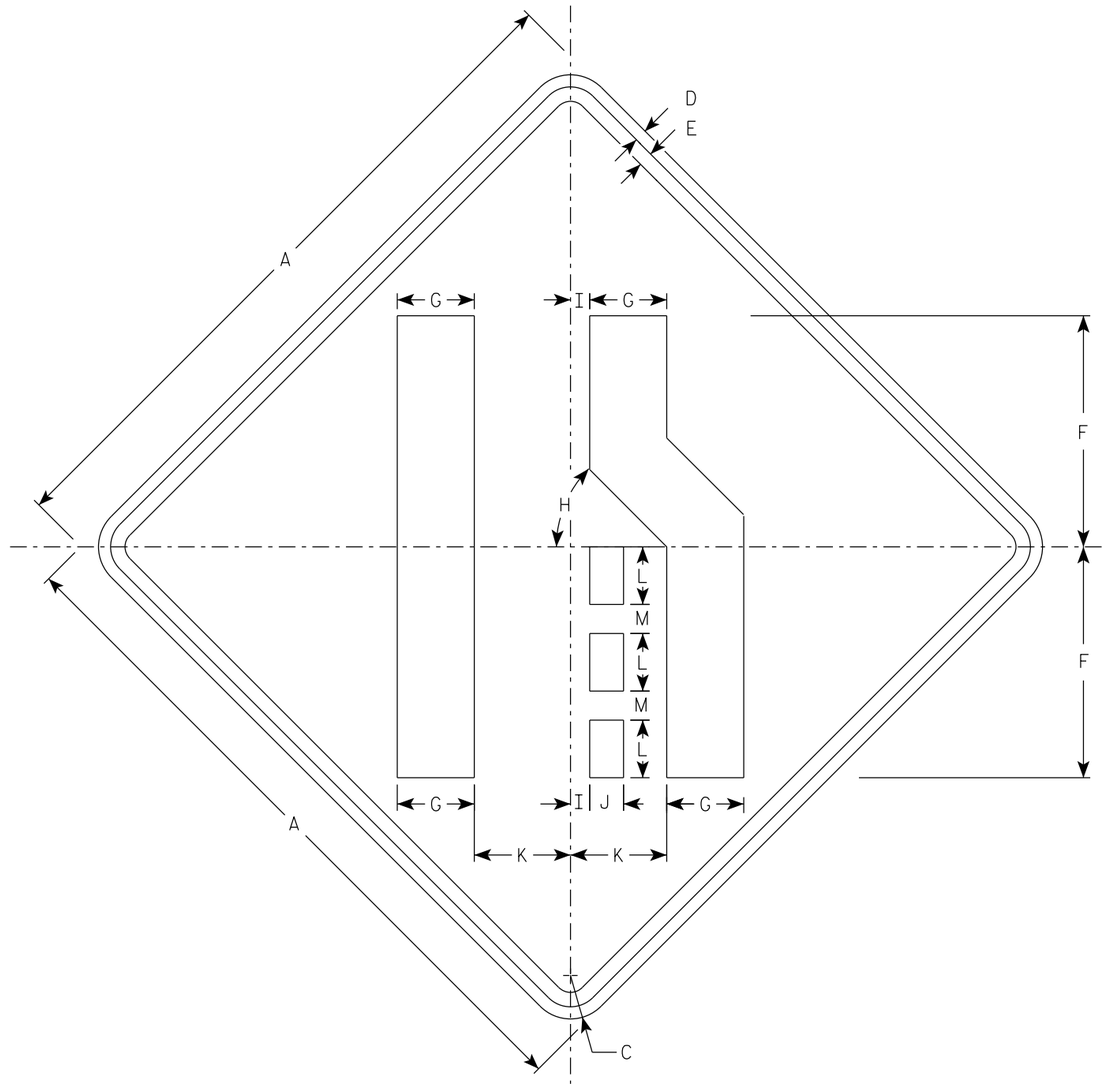
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/2024 PLATE NO. W04-2.2

PROJECT NO:

SHEET NO: E

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

PROJECT ID 2984-21-72
WITH: 2984-21-71

WKE NOVEMBER 2025

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 = 194



10

N

DESIGN DESIGNATION

		W NORTH AVE	W. LISBON AVE
A.D.T. (2024)	=	13,700	12,500
A.D.T. (2044)	=	N/A	N/A
D.H.V.	=	N/A	N/A
D.	=	N/A	N/A
T.	=	N/A	N/A
DESIGN SPEED	=	35 MPH	35 MPH
ESALS	=	N/A	N/A

CONVENTIONAL SYMBOLS

PLAN

- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- CORPORATE OR CITY LIMITS
- PROPERTY LINE — P.L.
- STANDARD BENCH MARK
- EXISTING RIGHT OF WAY LINE — R/W
- PROPOSED SEWER LATERAL — (SIZE)
- BASE OF SURVEY LINE
- CONCRETE WALK/DWY. REMOVAL
- LIMITS OF CONCRETE PAVEMENT REMOVAL — X X X X X X
- CATCH BASIN OR INLET — EXISTING — PROPOSED

- COMBUSTIBLE FLUIDS UNDER PRESSURE — CAUTION
- RAILROADS
- FENCE — (TYPE)
- FIRE & POLICE CALL BOX
- LIGHT POLE
- POWER POLE
- TELEPHONE OR TELEGRAPH POLE
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL CONTROL BOX
- HYDRANT
- GAS OR WATER GATE VALVE
- MANHOLES - SEWER — UTILITY (TYPE)
- TREES - EXISTING — TO BE REMOVED

COUNTY MILWAUKEE

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

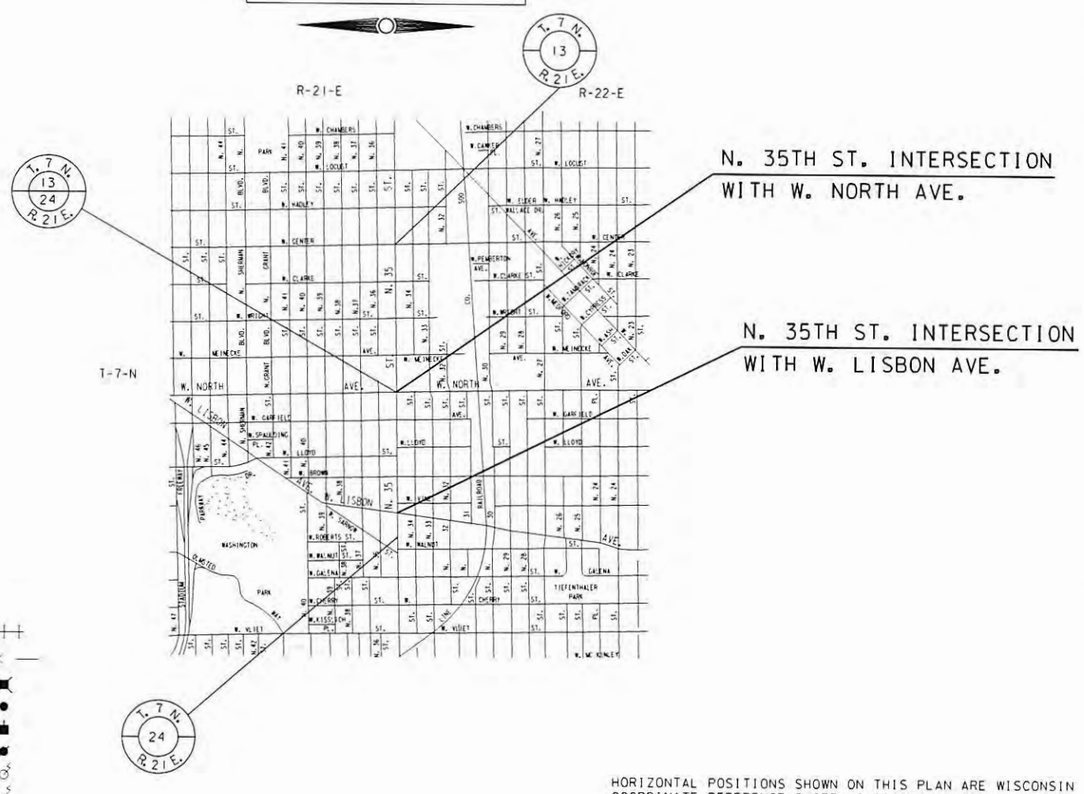
C MILWAUKEE-N 35TH STREET

INTERSECTIONS WITH NORTH & LISBON

LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT NUMBER
2984-21-72



LAYOUT
SCALE 1/2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI. (URBAN)

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), MILWAUKEE COUNTY NAD 83 (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 THE CITY OF MILWAUKEE VERTICAL DATUM TO CONVERT ELEVATIONS SHOWN ON THIS PLAN TO NORTH AMERICA VERTICAL DATUM OF 1988 ADD 580.40' TO ELEVATIONS SHOWN ON THIS PLAN.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2984-21-72	WISC 2026032	1

Accepted For
City of Milwaukee
6/17/25
(Date) Commissioner of Public Works

Original Plans Prepared By

WISCONSIN
KEVIN J. MUHS
46391-6
MILWAUKEE, WI
PROFESSIONAL ENGINEER

6/17/2025
(Date) City Engineer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor CITY OF MILWAUKEE
Designer CITY OF MILWAUKEE
Project Manager GREGORY HAFEMAN
Region Examiner
Region Supervisor AMY TAETSCH

APPROVED FOR THE DEPARTMENT
DATE: 06/30/2025
(Signature)

E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF NORTH & LISBON-2984-21-02\DESIGN\TITLE.DGN

PLOT DATE: 13-JUN-2025

GENERAL NOTES

1. ALL OPENINGS BELOW SUBGRADE, RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH BASE AGGREGATE DENSE, UNLESS OTHERWISE NOTED ON THE PLAN.

2. ALL DISTURBED AREAS, NOT SURFACED, ARE TO BE COVERED WITH 4" OF TOPSOIL, AND SODDED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. TOPSOILED AREAS SHALL BE SODDED WITHIN 5 CALENDAR DAYS.

3. TRANSVERSE JOINTS IN THE CONCRETE WALK SHALL BE CONSTRUCTED AT INTERVALS EQUAL TO THE WIDTH OF THE CONCRETE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.

5. FOR ANY EXCAVATION OF SIX FEET OR MORE IN THE CITY OF MILWAUKEE, THE CONTRACTOR, WHEN REQUESTING A UTILITY LOCATE TICKET FROM DIGGER'S HOTLINE, SHALL SPECIFICALLY ASK FOR THE LOCATION TICKET TO INCLUDE THE MARKING OF ALL THE EXISTING SEWER

6. CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC), AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY PUBLIC SURVEY MONUMENT.

7. ALL DIMENSIONS ARE FROM THE FACE OF CURB TO THE CENTER OF THE MARKING UNLESS OTHERWISE NOTED.

8. ALL RADII IN THE PLANS ARE REFERENCED TO THE FACE OF CURB.

9. TRAFFIC CONTROL DEVICES SHOWN AT SUGGESTED LOCATIONS.

10. EROSION CONTROL DEVICES ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL DEVICES SHALL BE MANTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE DEVICE IS NO LONGER REQUIRED.

11. NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

12. THESE PLANS SHOW UTILITY FACILITIES EXISTING AT THE TIME OF THE ORIGINAL SURVEY IN JUNE OF 2022. CONTRACTOR IS ENCOURAGED TO CONTACT CITY OF MILWAUKEE PLANNING PERMIT SECTION AT (414) 286-2487 TO IDENTIFY ANY UTILITY FACILITIES INSTALLED AFTER THIS DATE.

STANDARD ABBREVIATIONS

ASPH.	- ASPHALT
B.M.	- BENCH MARK
CTR.	- CENTER
COMB.	- COMBINED
CONC.	- CONCRETE
C.W.	- CONCRETE WALK
COR.	- CORNER
C	- CURB
DOT	- DEPARTMENT OF TRANSPORTATION
ELEV.	- ELEVATION
ENT.	- ENTRANCE
EXIST.	- EXISTING
F	- FLANGE
G	- GUTTER, OR GAS
HYD.	- HYDRANT
LT.	- LEFT
MMSD	- MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
NB	- NORTHBOUND
PG/L.	- PROFILE GRADE LINE
P/L.	- PROPERTY LINE
R/L.	- REFERENCE LINE
R OR RAD.	- RADIUS
RET.	- RETAINING
RT.	- RIGHT
R/W	- RIGHT OF WAY
SB	- SOUTHBOUND
STA	- STATION
TEL	- AMERITECH
TES	- TRAFFIC ENGINEERING, AND ELECTRICAL SERVICES
T/L	- TRANSIT LINE
WEP	- WISCONSIN ELECTRIC POWER

ORDER OF SECTION 2 SHEETS

GENERAL NOTES
PROJECT OVERVIEW
CONSTRUCTION DETAILS
EROSION CONTROL
STORM SEWER AND UTILITIES
LIGHTING
TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL AND CONSTRUCTION STAGING
ALIGNMENT

2

UTILITY CONTACTS

AT&T WISCONSIN-COMMUNICATION LINE
JAY C. BULANEK
2005 PEWAUKEE RD.
WAUKESHA, WI 54188
PHONE: 414-491-2855
EMAIL: JB5175@ATT.COM

CHARTER/ SPECTRUM-COMMUNICATION LINE
LUIS ROSADO
1320 N. DR. MARTIN LUTHER KING JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-277-4245
EMAIL: LUIS.ROSADO@CHARTER.COM

CITY OF MILWAUKEE, COMMUNICATIONS
COMMUNICATIONS DISPATCH
1440 WEST CANAL STREET
MILWAUKEE, WI 53233
PHONE: 414-286-3686

CITY OF MILWAUKEE, CUC
KAREN ROGNEY
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-3243
EMAIL: KROGNEY@MILWAUKEE.GOV

CITY OF MILWAUKEE, SEWERS
ZAFAR YOUSUF
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-2467
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CITY OF MILWAUKEE, WATER WORKS
JOSHUA IWEN
841 N. BROADWAY, ROOM 409
MILWAUKEE, WI 53202
PHONE: 414-286-6301
CELL: 414-708-2695
EMAIL: JOSHUA.IWEN@MILWAUKEE.GOV

EVERSTREAM-COMMUNICATION LINE
ABIGAIL STEIN
324 E. WISCONSIN AVE. SUITE 730
MILWAUKEE, WI 53202
PHONE: 262-442-9427
EMAIL: ASTEIN@EVERSTREAM.NET

LUMEN TECHNOLOGIES-COMMUNICATION LINE
RYAN BIRDSALL
3235 INTERTECH DR, SUITE 600 BROOKFIELD, WI 53045
PHONE: 608-444-2493
EMAIL: RYAN.BIRDSALL@LUMEN.COM

WE ENERGIES - ELECTRIC
MATT POZEL
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 141-944-5657
EMAIL: MATTHEW.POZEL@WE-ENERGIES.COM

WE ENERGIES - GAS
RAMON ARAUJO
500 S. 116TH ST.
WEST ALLIS, WI 53214
PHONE: 262-365-6419
EMAIL: RAMON.ARAUJO@WE-ENERGIES.COM

WINDSTREAM-COMMUNICATION LINE
LORI KETTER
969 WAUBE LANE
GREEN BAY, WI 54304
PHONE: 920-410-6902
EMAIL: LORI.KETTER@UNITI.COM

OTHER CONTACTS

CITY OF MILWAUKEE, FORESTRY
JAMES KRINGER
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-708-2428
EMAIL: JKRING@MILWAUKEE.GOV

CITY OF MILWAUKEE, STREET LIGHTING
ENG-KIE LEE
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-2174
EMAIL: ELEE@MILWAUKEE.GOV

CITY OF MILWAUKEE, TRAFFIC SIGNALS
SCOTT REINBACHER
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: 414-286-3232
EMAIL: SREINB@MILWAUKEE.GOV

CITY OF MILWAUKEE, UTILITY COORDINATOR
MOHAMMAD ABULUGHOD (North Side)
841 N. BROADWAY, ROOM 710
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MILWAUKEE COUNTY TRANSIT SYSTEM
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DAVID LOCHER
TRANSPORTATION MANAGER (BUS STOPS)
1942 N 17th S
MILWAUKEE, WI 53205
PHONE: 414-343-1727
EMAIL: DLOCHER@MCTS.ORG

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT
MICHAEL LEE
260 W. SEEBOTH AVE.
MILWAUKEE, WI 53204
EMAIL: MLEE@MMSD.COM

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
ROB MERRY
W239 N1812 ROCKWOOD DRIVE
WAUKESHA, WI 53187-1607
PHONE: 262-953-4289
EMAIL: RMERRY@SEWRPC.ORG

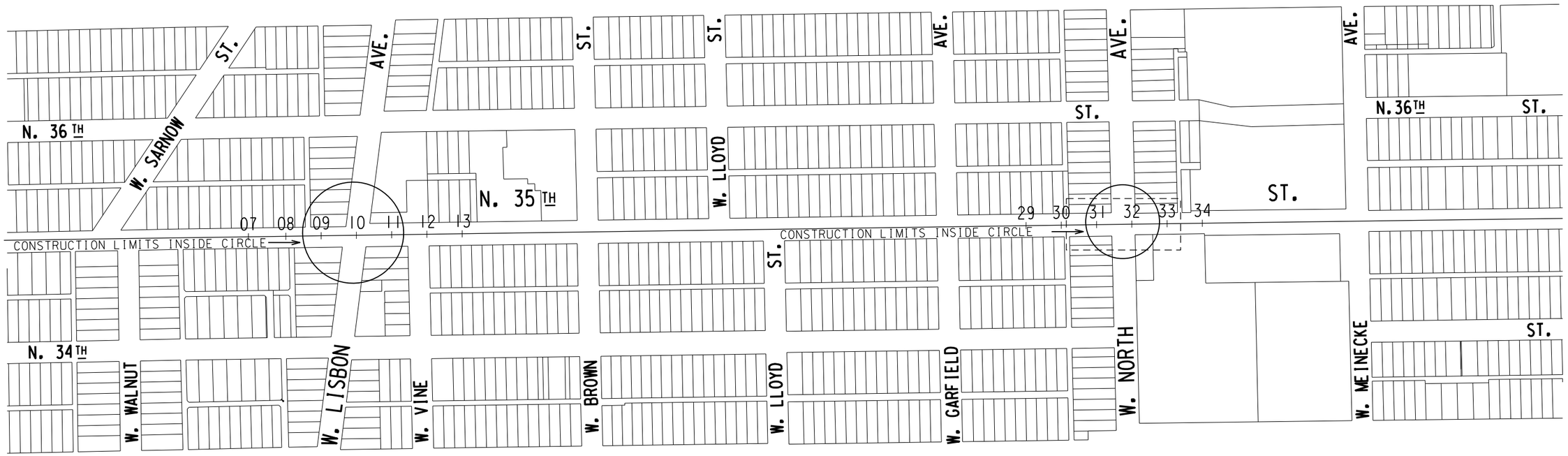
ANDY TRAEGER
W239 N1812 ROCKWOOD DRIVE
WAUKESHA, WI 53187-1607
PHONE: 262-547-6721
EMAIL: ATRAEGER@SEWRPC.ORG

WISCONSIN DEPT. OF NATURAL RESOURCES
RYAN PAPPAS
2300 N. DR. MARTIN LUTHER KING, JR. DR.
MILWAUKEE, WI 53212
PHONE: 414-750-7495
EMAIL: RYAN.PAPPAS@WISCONSIN.GOV

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

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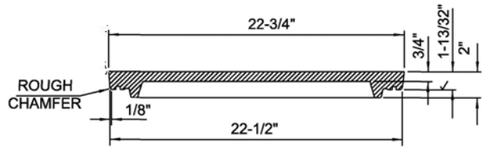


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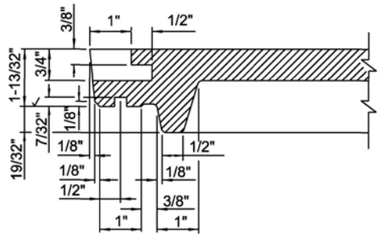
PROJECT NO: 2984-21-72	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SCALE FEET 0' 300'	SHEET NO: 4	E

FILENAME: W:\SPR\MONOTUBE PROJECTS\N 35TH ST. INTERS. OF NORTH & LISBON-2984-21-02\EXISTING\OVERVIEW_LISBON_NORTH.DGN

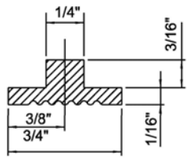
REVISED DATE: 11-13-2023 BY AA

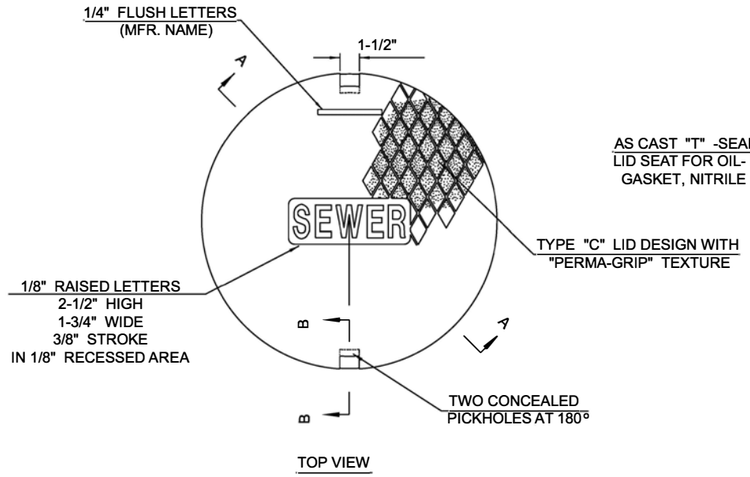


SECTION A-A

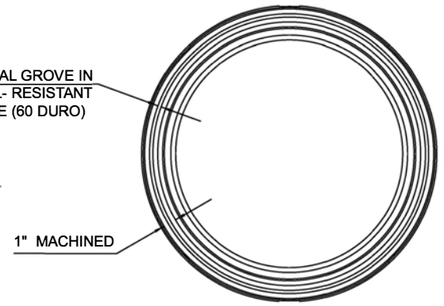


SECTION B-B





TOP VIEW



BOTTOM VIEW

MANHOLE COVER - TYPE MS58A

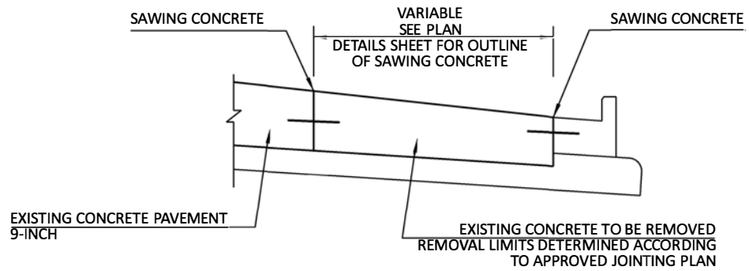
LID - 107 LBS.

NOTES

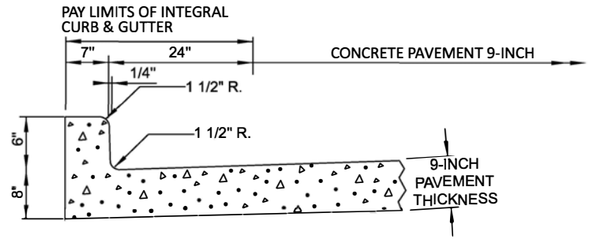
ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8" HAVING A DIGIT OR LETTER HEIGHT OF ONE INCH ON LOWER FACE OF LID:

1. THE INITIALS OR MONOGRAM OF THE FOUNDRY.
2. THE CONTRACT NUMBER YEAR MADE.
3. THE CASTING INDENTIFICATION NUMBER.
4. THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

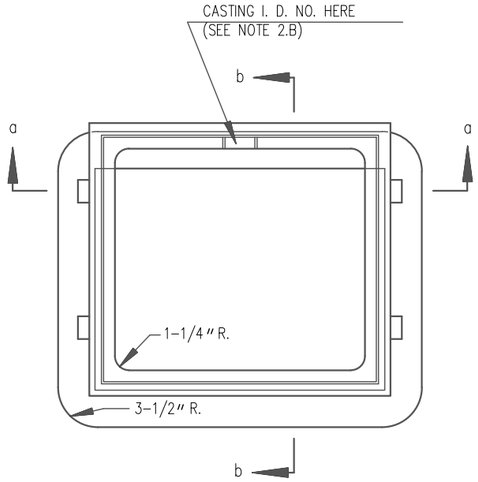
ALL EXTERIOR EDGES SHALL BE GROUND.



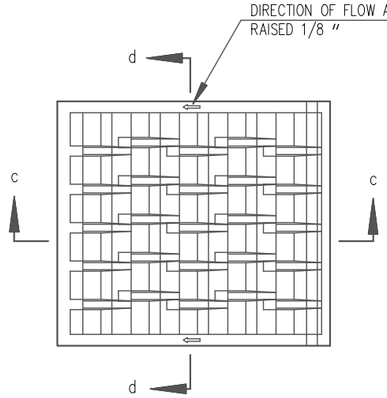
CONCRETE PAVEMENT REMOVAL DETAIL



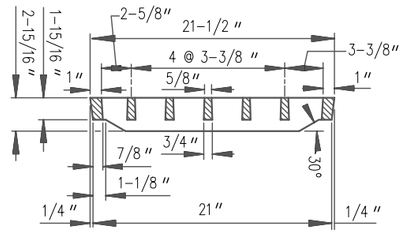
CONCRETE CURB & GUTTER INTEGRAL 31-INCH



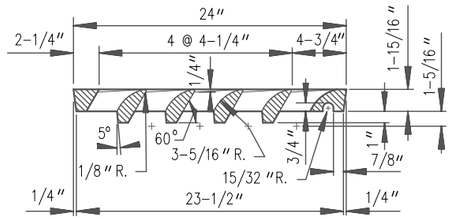
FRAME



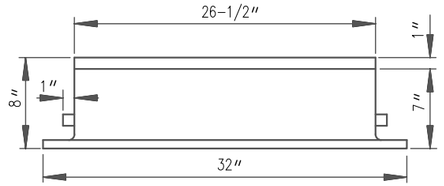
GRATE

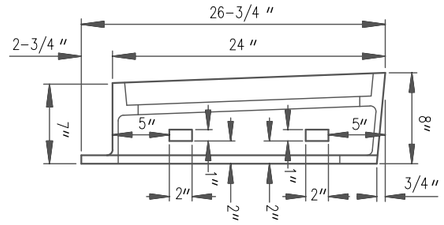


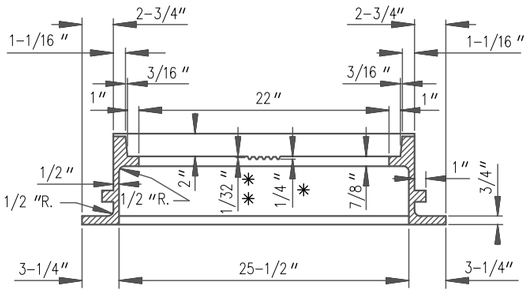
SECTION d-d



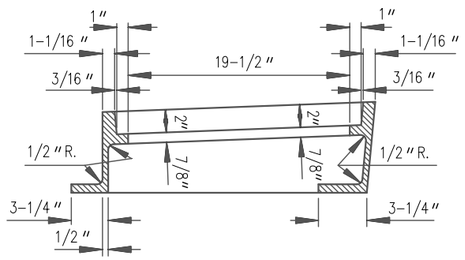
SECTION c-c







SECTION a-a



SECTION b-b

✱ DEPRESSION FOR LETTERS

✱✱ CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

INLET COVER – TYPE MS 57

LID-145 LBS., FRAME-204 LBS.

GENERAL NOTES

1. ALL EDGES ARE TO BE GROUND
2. ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8-inch

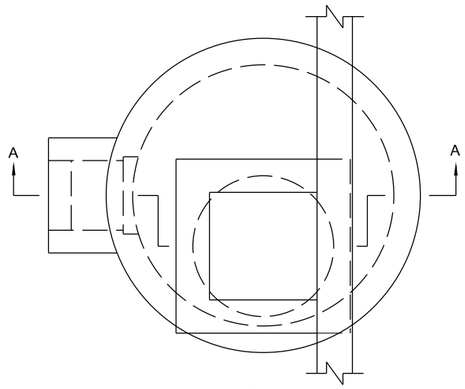
ON THE FRAME

a) ON THE UPPER FACE OF THE FLANGE IN 1-INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

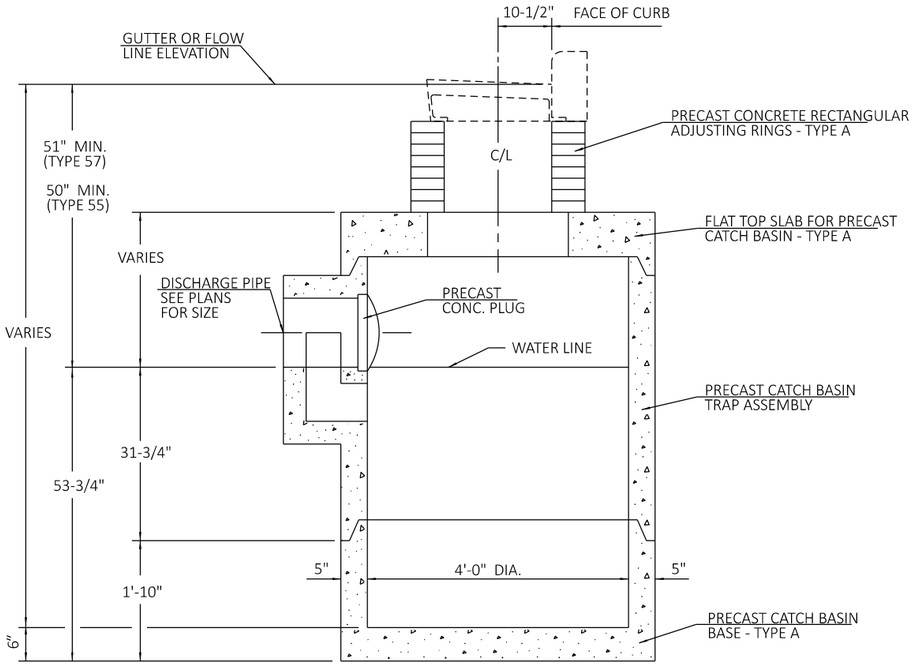
b) ON THE SEAT OF THE FRAME IN 1-INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (51).

ON THE GRATE

c) ON THE UPPER SIDE OF THE GRATE IN 1-INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.



PLAN

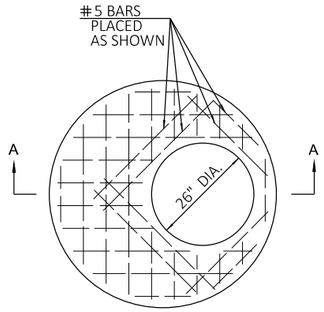


SECTION A-A

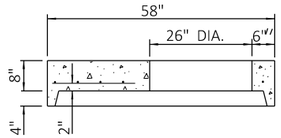
CATCH BASIN - TYPE 44A

GENERAL NOTES

1. REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED STEEL WIRE FABRIC AND SHALL BE EMBEDDED 2 CLEAR.
2. PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.
3. PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 4" IN DEPTH WHICH MEETS REQUIREMENTS FOR GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.
4. SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON PLAN.
5. A PRECAST CONCRETE PLUG SHALL BE CEMENTED INTO THE OPENING AT THE INNER FACE OF THE CATCH BASIN TRAP ASSEMBLY.



PLAN



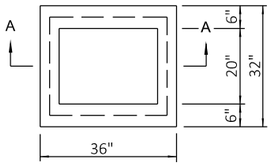
SECTION A-A

TOP SLAB - TYPE A

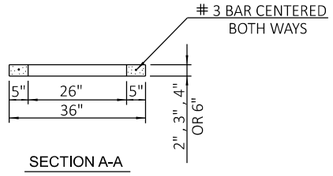
FLAT TOP SLAB SHALL BE 8" THICK REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SECTION AS SHOWN.

REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



PLAN

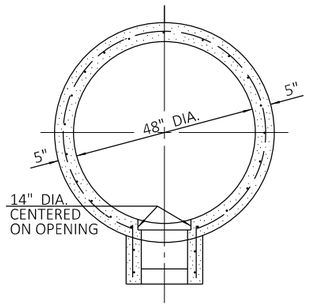


SECTION A-A

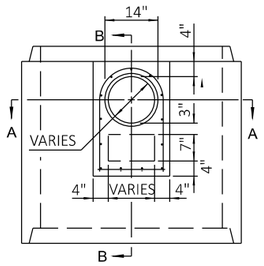
RECTANGULAR ADJUSTING RING - TYPE A

THE ADJUSTING RINGS SHALL BE 2", 3", 4" OR 6" IN HEIGHT.

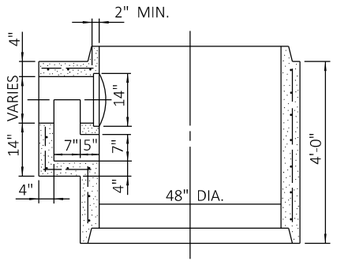
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.



SECTION A-A



PLAN



SECTION B-B

TRAP ASSEMBLY

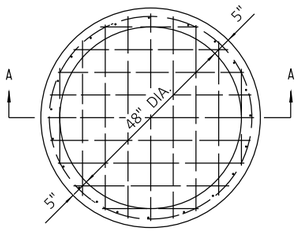
CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF ONE LINE OF STEEL NOT LESS THAN 0.12 SQ. IN. PER LINEAL FOOT, AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

TRAP ASSEMBLY SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SECTION AS SHOWN.

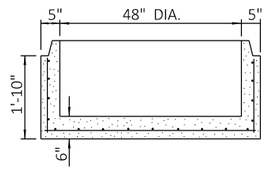
CIRCUMFERENTIAL AND TRAP ASSEMBLY REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

TWO HANDLING HOLES 2 1/4 INCHES IN DIAMETER SHALL BE CAST OR DRILLED IN THE WALL.



PLAN



SECTION A-A

BASE ASSEMBLY

CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF ONE LINE OF STEEL NOT LESS THAN 0.12 SQ. IN. PER LINEAL FOOT, AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

BOTTOM SLAB SHALL BE REINFORCED WITH ONE LAYER OF STEEL WITH A MINIMUM AREA OF 0.12 SQ. IN. PER LINEAL FOOT IN BOTH DIRECTIONS, PLACED IN THE CENTER THIRD OF THE SLAB.

CIRCUMFERENTIAL AND BOTTOM SLAB REINFORCEMENT SHALL BE TIED OR WELDED TOGETHER.

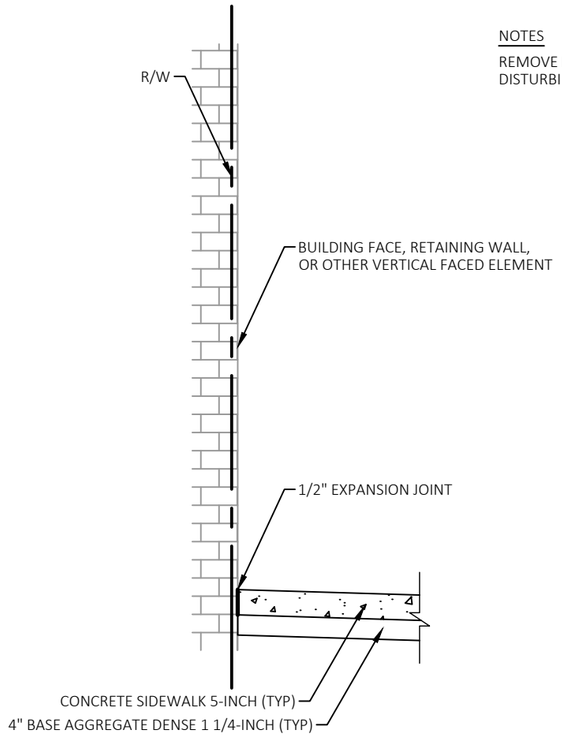
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3300 P.S.I.

TWO HANDLING HOLES 2 1/4 INCHES IN DIAMETER SHALL BE CAST OR DRILLED IN THE WALL.

2

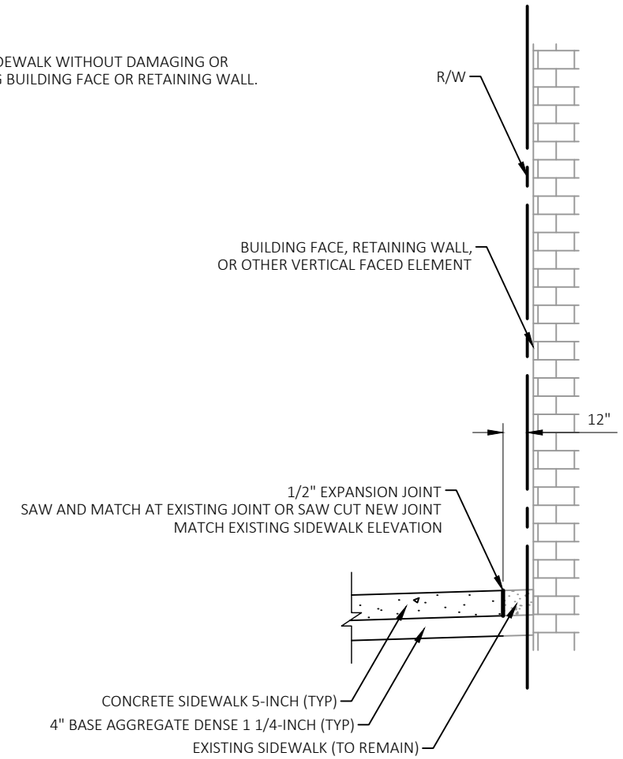
NOTES

REMOVE EXISTING SIDEWALK WITHOUT DAMAGING OR DISTURBING EXISTING BUILDING FACE OR RETAINING WALL.



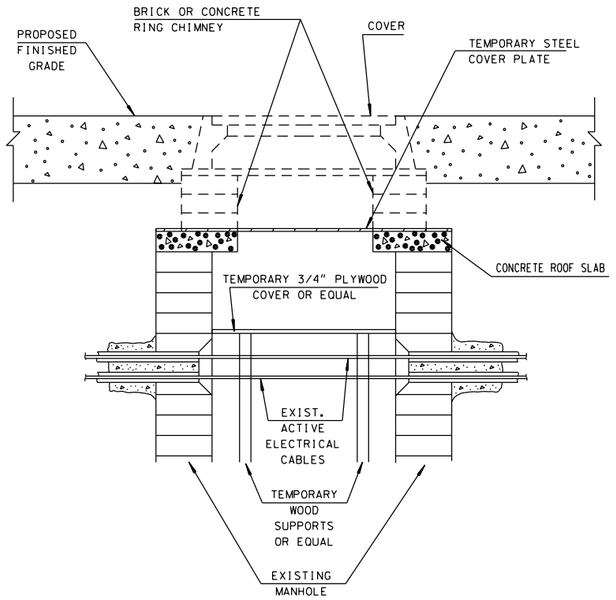
SIDEWALK REPLACEMENT AT BUILDING OR WALL FACE

LEFT SIDE SHOWN, RIGHT SIDE IS MIRROR IMAGE

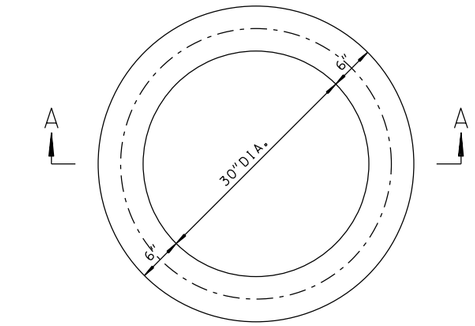


SIDEWALK REPLACEMENT NEAR BUILDING OR WALL FACE

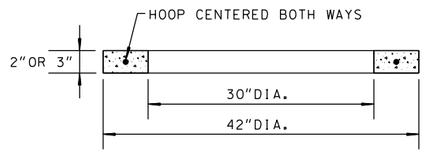
RIGHT SIDE SHOWN, LEFT SIDE IS MIRROR IMAGE



BLOCK OR PRECAST MANHOLE



PLAN



SECTION A-A

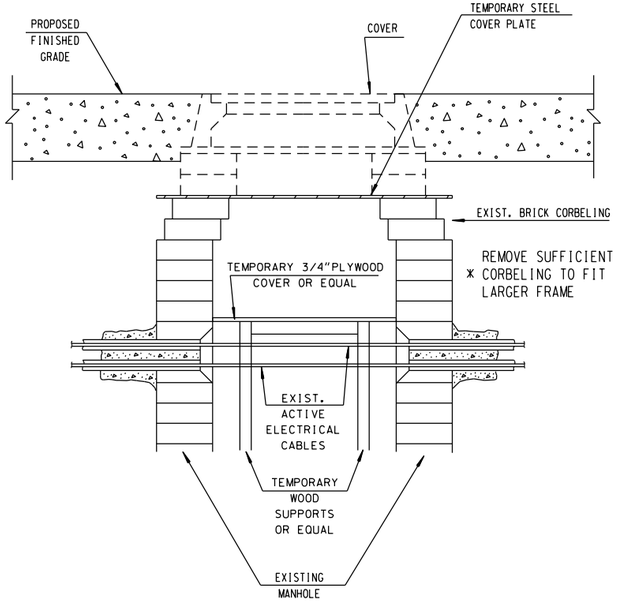
THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

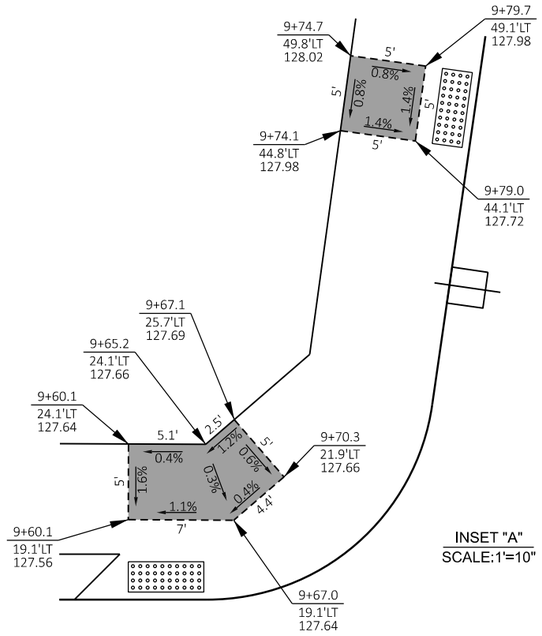
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

CONCRETE ADJUSTING RING

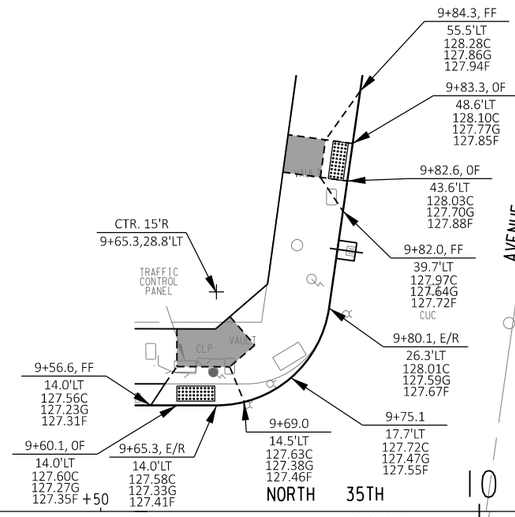


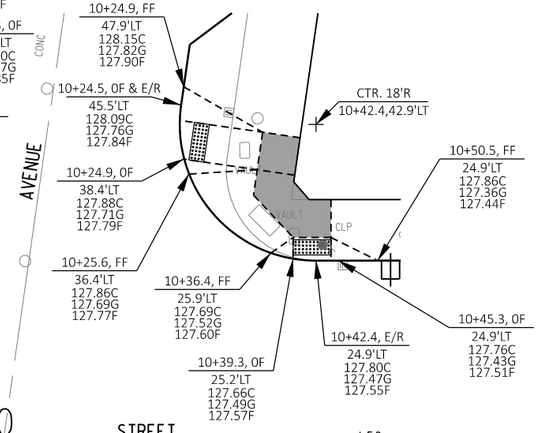
BRICK ROUND MANHOLE

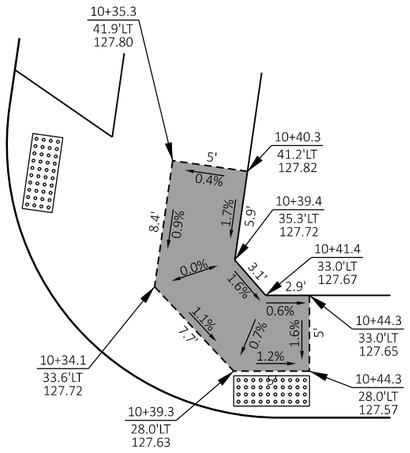
N. 35TH ST. & W. LISBON AVE.



INSET "A"
SCALE:1'=10"

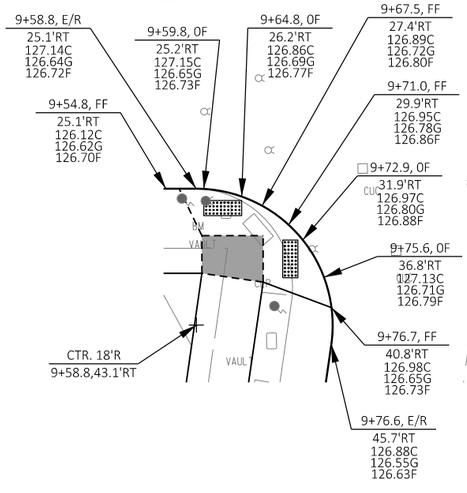




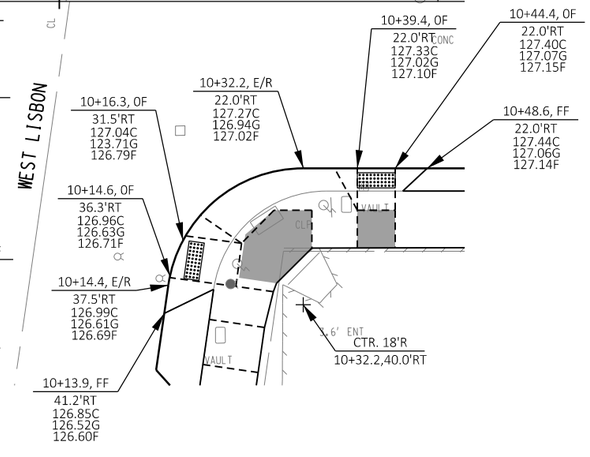


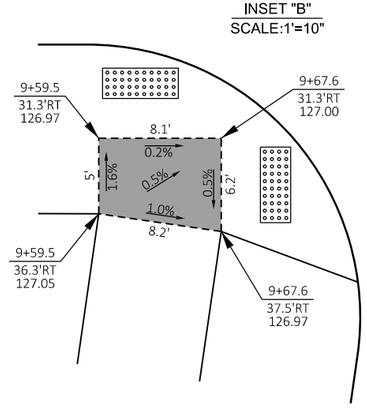
INSET "C"
SCALE:1'=10"

09 NORTH 35TH STREET 10 +50

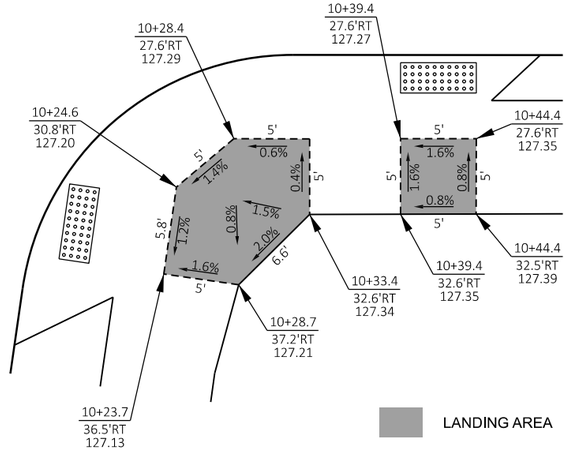


WEST LISBON





INSET "B"
SCALE:1'=10"



INSET "D"
SCALE:1'=10"

LANDING AREA

DETECTABLE WARNING FIELD

REVISED: 07-17-2025 BY SLB

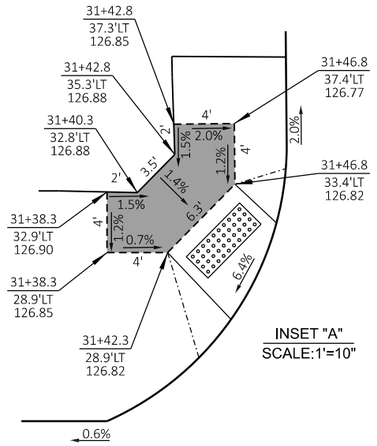
PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	CURB RAMP DETAILS - W. LISBON AVE.	SHEET 10	E

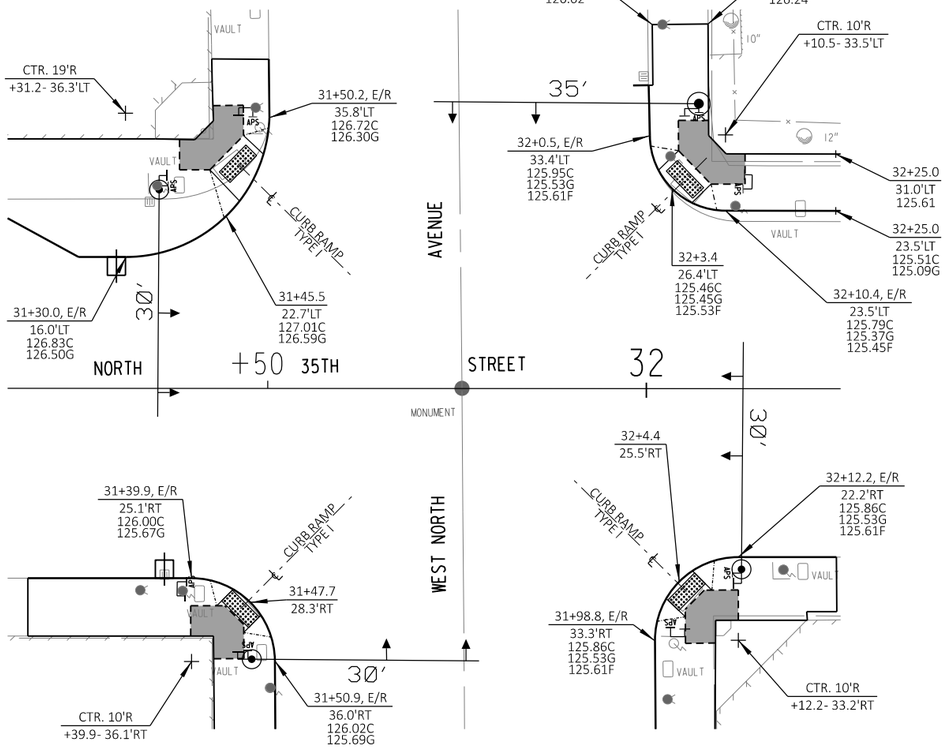
FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Lisbon Ramp.dgn PLOT DATE : 22-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:20 FT

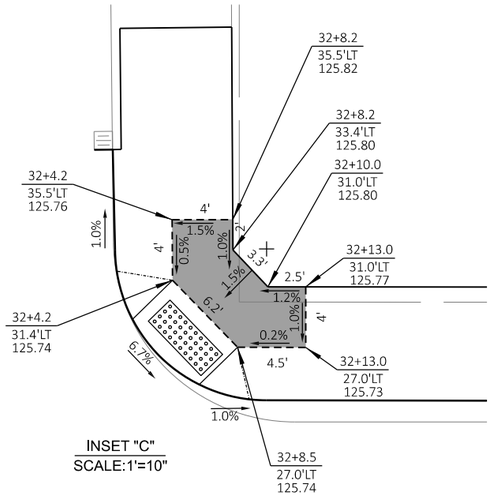
WISDOT/CADDS SHEET 42

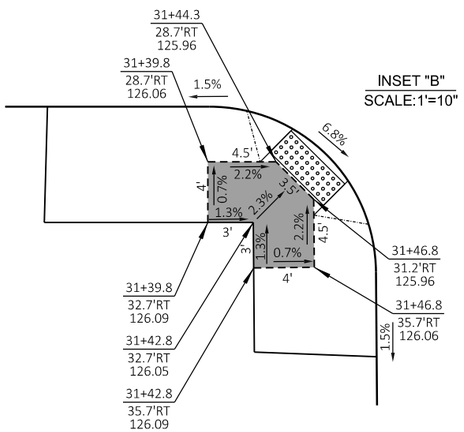
N. 35TH ST. & W. NORTH AVE.

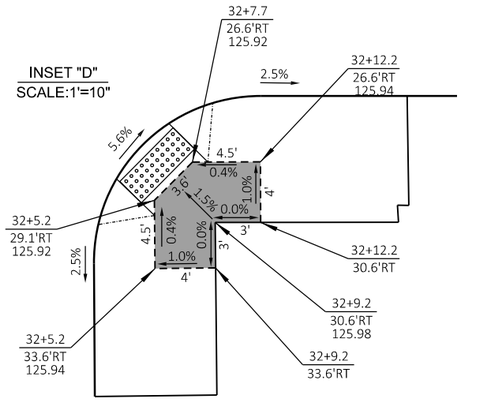
N











LANDING AREA

DETECTABLE WARNING FIELD

REVISED: 07-17-2025 BY SLB

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	CURB RAMP DETAILS - W. NORTH AVE.	SHEET 11	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\North ramp.dgn PLOT DATE : 22-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

N

NORTH 35TH STREET AVENUE

LISBON WEST

348-0030-110-0 60 #1747 | 348-0032 30 #1755 | 348-0033 60 #1801 | 348-0034 30 #1805 | 250-9996 100 #3501 | 348-9989 106 #3500 | 348-0363-111 190.29 #1905

#1748 30 349-2311 | #1750 30 349-2310 | #3421 215.33 349-2301-110 | #3430 116.74 349-1932 | #1904 60 349-1545-100-6 | #1908 60 349-1546-100-1

07 +50 08 +50 09 +50 10 +50 11 +50 12 +50 13

9+39.8 6.8'LT | 9+90.9 9.0'LT | 10+13.4 10.3'LT | 10+22.0 71.4'LT | 10+0.1 74.0'LT | 10+44.2 0.4'RT | 10+57.2 12.2'LT | 10+9.9 13.9'RT | 9+86.3 23.5'RT | 9+33.5 | 10+4.0 55.5'RT | 9+80.4 65.6'RT | 10+44.2 11.7'LT | 10+66.8 0.4'RT

SC

CONC CURB | C.O.M. ASPHALT PARKING LOT | 15' CONCRETE ALLEY | CHAIN LINK FENCE | IRON HAND RAIL | TRAFFIC CONTROL PANEL | HARP LIGHT | CONC | CONCRETE | RAISED CONC METAL HAND RAIL | METAL FENCE | CONC. RET. WALL | 3 STY BRICK & STUCCO COMM. BLDG. 33522 | BLDG OVERHANG | 2 STY FRAME COMM./APT. BLDG. #3430 | CELLAR ENTRY @ WALK & BLDG. | ASPHALT LOT | CHAIN LINK FENCE | 3.6' ENT | 4' ENT | 5.7' ENT | VAULT | CLP | WP | P.L.

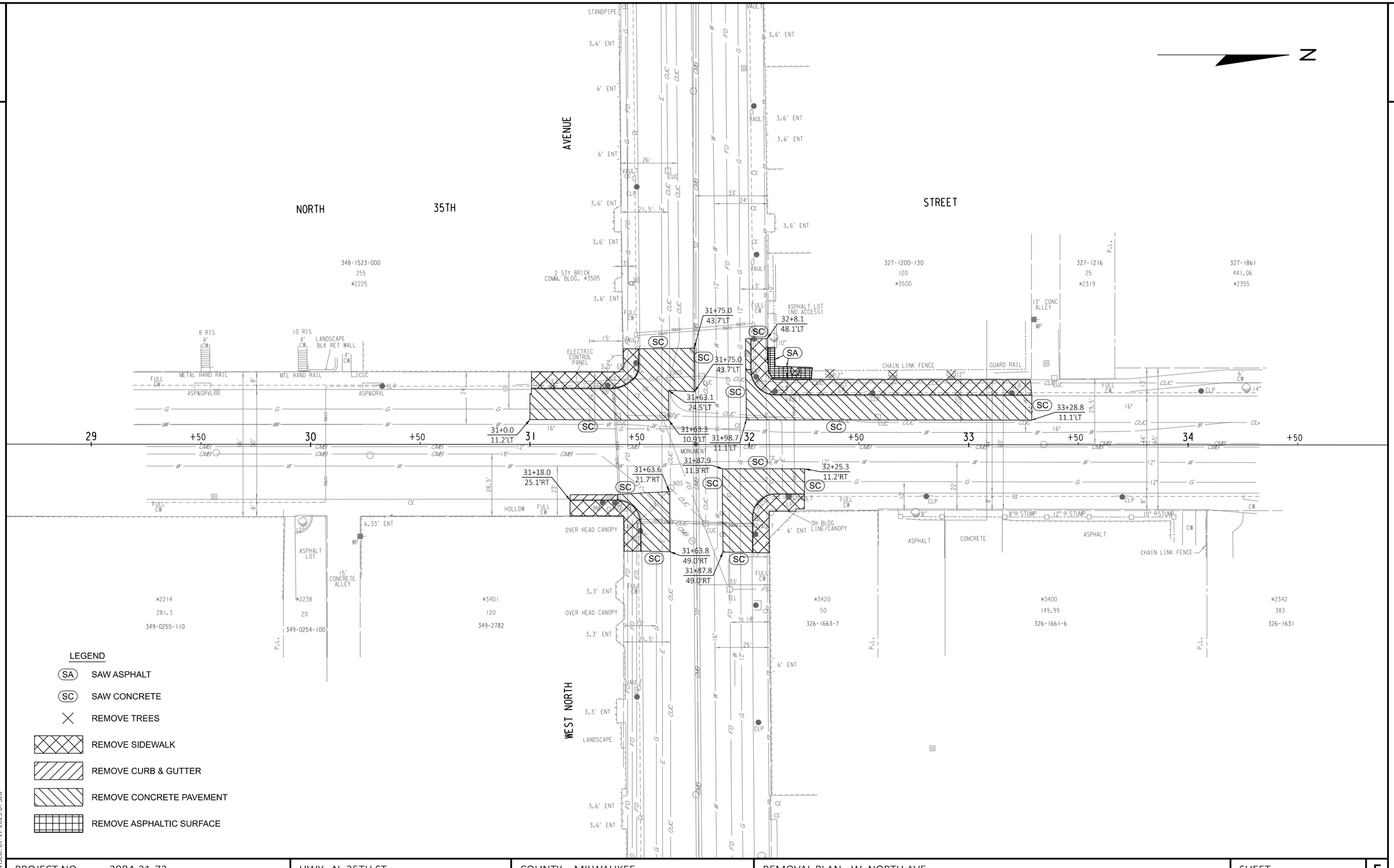
LEGEND

- SC — SAW CONCRETE
- REMOVE SIDEWALK
- REMOVE CURB & GUTTER
- REMOVE CONCRETE PAVEMENT

REVISED: 07-17-2025 BY SLB

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	REMOVAL PLAN - W. LISBON AVE.	SHEET 12	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Lisbon removal plan.dgn PLOT DATE : 24-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

- (SA) SAW ASPHALT
- (SC) SAW CONCRETE
- X REMOVE TREES
- REMOVE SIDEWALK
- REMOVE CURB & GUTTER
- REMOVE CONCRETE PAVEMENT
- REMOVE ASPHALTIC SURFACE

REVISED: 07-17-2025 BY SLB

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	REMOVAL PLAN - W. NORTH AVE.	SHEET 13	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\North removal plan.dgn PLOT DATE : 24-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NORTH 35TH STREET

AVENUE

STREET

WEST LISBON

9+84.3,55.5'LT FF
128.28C
127.86G
127.94F

9+75.8,57.2'LT
128.40

9+81.5,34.5'LT
127.97C
127.55G
127.63F
250-9996
100
#3501

∠ PT. 9+49.8,16.8'LT
127.51C
127.01G
127.09F

9+42.8,16.8'LT
127.42C
126.92G
127.00F

∠ PT. 9+72.1,30.1'LT
128.01

CTR. 15.0' R=
+65.3- 28.8'LT

∠ PT. 9+65.2
24.1'LT

9+39.8
16.8'LT

9+39.8
6.8'LT

∠ PT. 9+52.8,14.0'LT
127.48C
127.15G
127.23F

9+53.3
6.8'LT

9+90.9
9'LT

10+0.1
74'LT

10+22
71.4'LT

10+34.2,63.4'LT
128.35C
127.85G
127.94F

10+33.6,59.4'LT ∠ PT.
128.38C
127.88G
127.96F

∠ PT. 10+25.7,53.5'LT
128.35C
127.93G
128.01F
348-9989
106
#3500

CTR. 18.0' R=
+42.4- 42.9'LT

10+39.4
35.4'LT

10+41.4
33'LT

10+43.8
456.1'LT

10+57.2
12.2'LT

10+44.5 12.2'LT

10+66.8
0.4'RT

10+52.2,25.0'LT
127.78C
127.32G
127.40F

10+13.4
10.3'LT

10+21.5
13.6'RT

10+44.2
0.4'RT

10+54.5,22'RT ∠ PT.
127.59C
127.17G
127.25F

10+9.9
13.9'RT

10+4
55.5'RT

9+80.4
65.6'RT

9+75.8,51.5'RT ∠ PT.
126.76C
126.43G
126.51F

∠ PT. 10+12.8,48.7'RT
126.72C
126.39G
126.47F

∠ PT. 10+18,54.5'RT
126.57C
126.07G
126.15F

9+45.0,25.1'RT
127.02C
126.60G
126.68F

9+59.5
36.3'RT

CTR. 18.0' R=
+58.8- 43.1'RT

9+57.8,48.7'RT
126.98

9+65.8,49.8'RT
126.86

∠ PT. 9+69.1,55.6'RT
126.57C
126.24G
126.32F

9+65.4
23.1'RT

9+86.3
23.5'RT

10+33.4
32.6'RT

10+61.7,25.0'RT
127.48C
127.06G
127.14F

CTR. 18.0' R=
+32.2- 40.0'RT

10+28.7
37.2'RT

10+28.3
38.3'RT

3 STY BRICK & STUCCO COMM. BLDG. 33522

BLDG OVERHANG

2 STY FRAME COMM./APT. BLDG. #3430

CELLAR ENTRY @ WALK & BLDG.

RAISED CONC METAL HAND RAIL

METAL FENCE

CONC. RET. WALL

CONC CURB

C.O.M. ASPHALT PARKING LOT

15' CONCRETE ALLEY

IRON HAND RAIL

CHAIN LINK FENCE

ASPHALT LOT

CONCRETE

348-0030-110-0
60
#1747

348-0032
30
#1755

348-0033
60
#1801

348-0034
30
#1805

348-0363-111
190.29
#1905

#1748
30
349-2311

#1750
30
349-2310

#3421
215.33
349-2301-110

#3430
116.74
349-1932

#1904
60
349-1545-100-6

#1908
60
349-1546-100-1

LEGEND

- (CG31) CONCRETE CURB & GUTTER 31-INCH
- (CGI31) CONCRETE CURB & GUTTER INTEGRAL 31-INCH
- (CP9) CONCRETE PAVEMENT 9-INCH (NON-DOWELED)
- (M) MATCH
- (SW5) CONCRETE SIDEWALK 5-INCH
- (SL) SOD LAWN (WITH 4" TOPSOIL)

REVISED: 07.18.2025 BY PSF

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	PLAN DETAIL- W. LISBON AVE.	SHEET 14	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Lisbon Plan.dgn PLOT DATE : 1-OCT-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

AVE.

WEST NORTH

348-1523-000
255
#2225

2 STY BRICK
COMM. BLDG. #3505

8 RIS
4'
CW

10 RIS
4'
CW

LANDSCAPE
BLK RET WALL
4'
CW

METAL HAND RAIL

MTL HAND RAIL

ASP&CRVL

FULL
CW

CLP

CUC

VAULT

3.6' ENT

6' ENT

3.3' ENT

FULL
CW

CTR. 19'R
+31.2- 36.3'LT

31+50.1
44'LT

31+11.0
25'LT
126.99C
126.66G

ELECTRIC
CONTROL
PANEL

126.36

31+75
43.7'LT

CGI31

SW5

CP9

31+25
17.3'LT
126.89C
126.56G

31+0.0
11.2'LT

31+63.1
24.5'LT

31+63.3
10.9'LT

NOS

29
+50
30
+50
31
+50
32
+50
33
+50
34
+50

126.02

126.24

CTR. 10'R
+10.5- 33.5'LT

ASPHALT (NO ACCESS)

125.01C
124.59G
124.67F

124.51C
124.09G
124.17F

123.52

CHAIN LINK FENCE

GUARD RAIL

SL

125.11

125.61

125.95

125.39

124.88

124.39

123.91

123.48

+25.0

31+98.7
11.1'LT

33+28.8
11.1'LT

124.61

124.11

+00

+50

+75

12"

13' CONC
ALLEY

P.L.

327-1200-130
120
#3500

327-1216
25
#2319

327-1861
441.06
#2355

MONUMENT

SEC WISDOT PID 721090

125.70

31+44.0
25.9'RT
125.86G

31+87.9
11.3'RT

125.51C
125.09G
125.17F

124.01C
123.59G
123.67F

31+18.0
25.1'RT

125.63G

32+25.3
11.2'RT

31+63.6
21.7'RT

31+42.8
32.7'RT

CTR. 10'R
+39.9- 36.1'RT

31+63.8
49'RT

32+25.1
22.2'RT

32+21.2
30.6'RT

CTR. 11'R
+12.1- 33.2'RT

31+87.8
49'RT

OH BLDG LINE/CANOPY

TEL

HOLLOW

6.33' ENT

OVER HEAD CANOPY

3.3' ENT

LANDSCAPE

6' ENT

3.6' ENT

ASPHALT LOT

15'
CONCRETE
ALLEY

#2214
281.3
349-0255-110

#2238
20
349-0254-100

#3401
120
349-2782

#3420
50
326-1663-7

#3400
149.99
326-1661-6

#2342
383
326-1631

ASPHALT

CONCRETE

8" STUMP

12" STUMP

10" STUMP

CHAIN LINK FENCE

LEGEND

CG31	CONCRETE CURB & GUTTER 31-INCH
CGI31	CONCRETE CURB & GUTTER INTEGRAL 31-INCH
CP9	CONCRETE PAVEMENT 9-INCH (NON-DOWELED)
SL	SOD LAWN (WITH 4" TOPSOIL)
SW5	CONCRETE SIDEWALK 5"

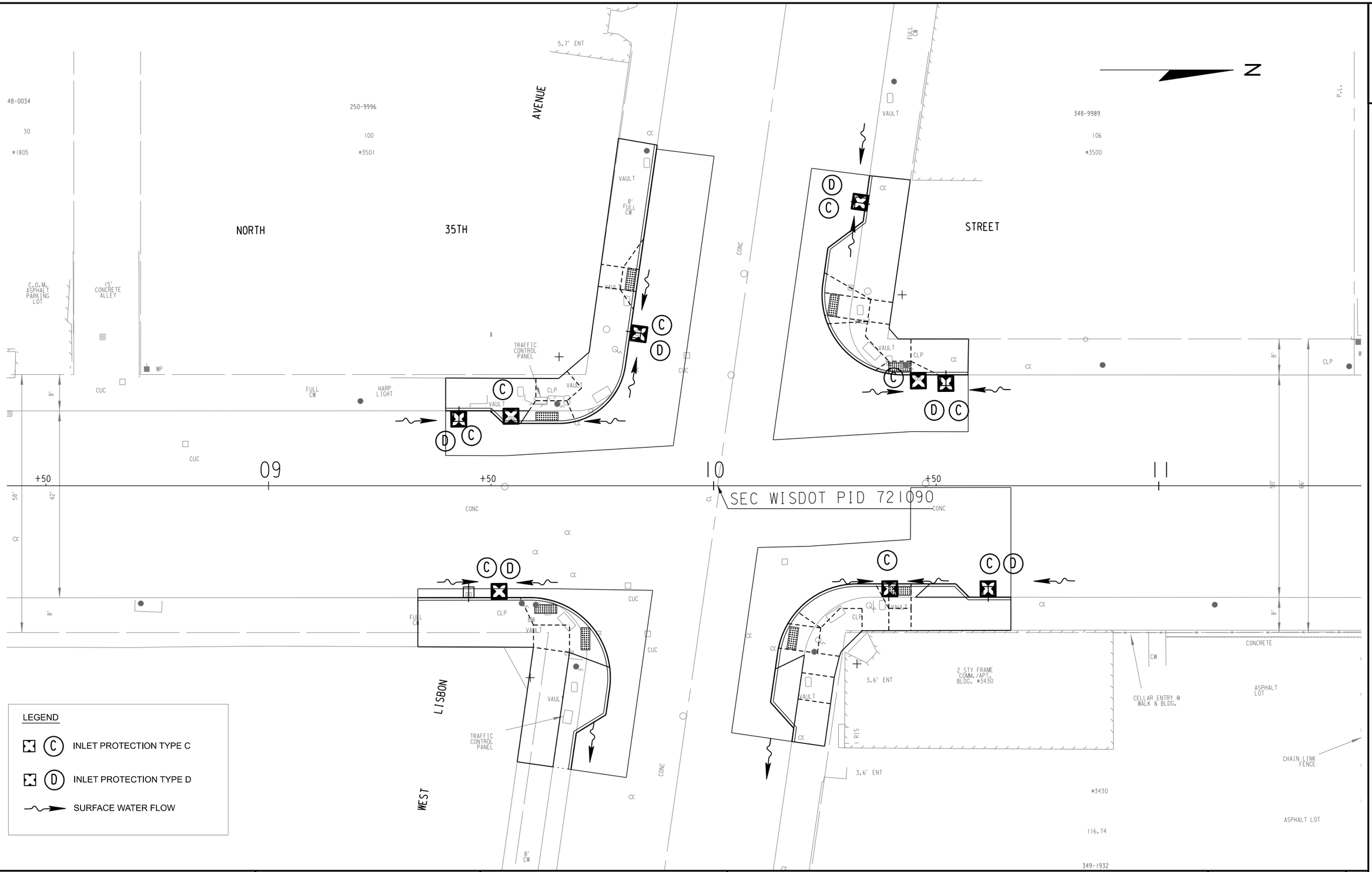
REVISED: 07-17-2025 BY SLB

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	PLAN DETAIL- W. NORTH AVE.	SHEET 15	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\North plan.dgn PLOT DATE : 1-OCT-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

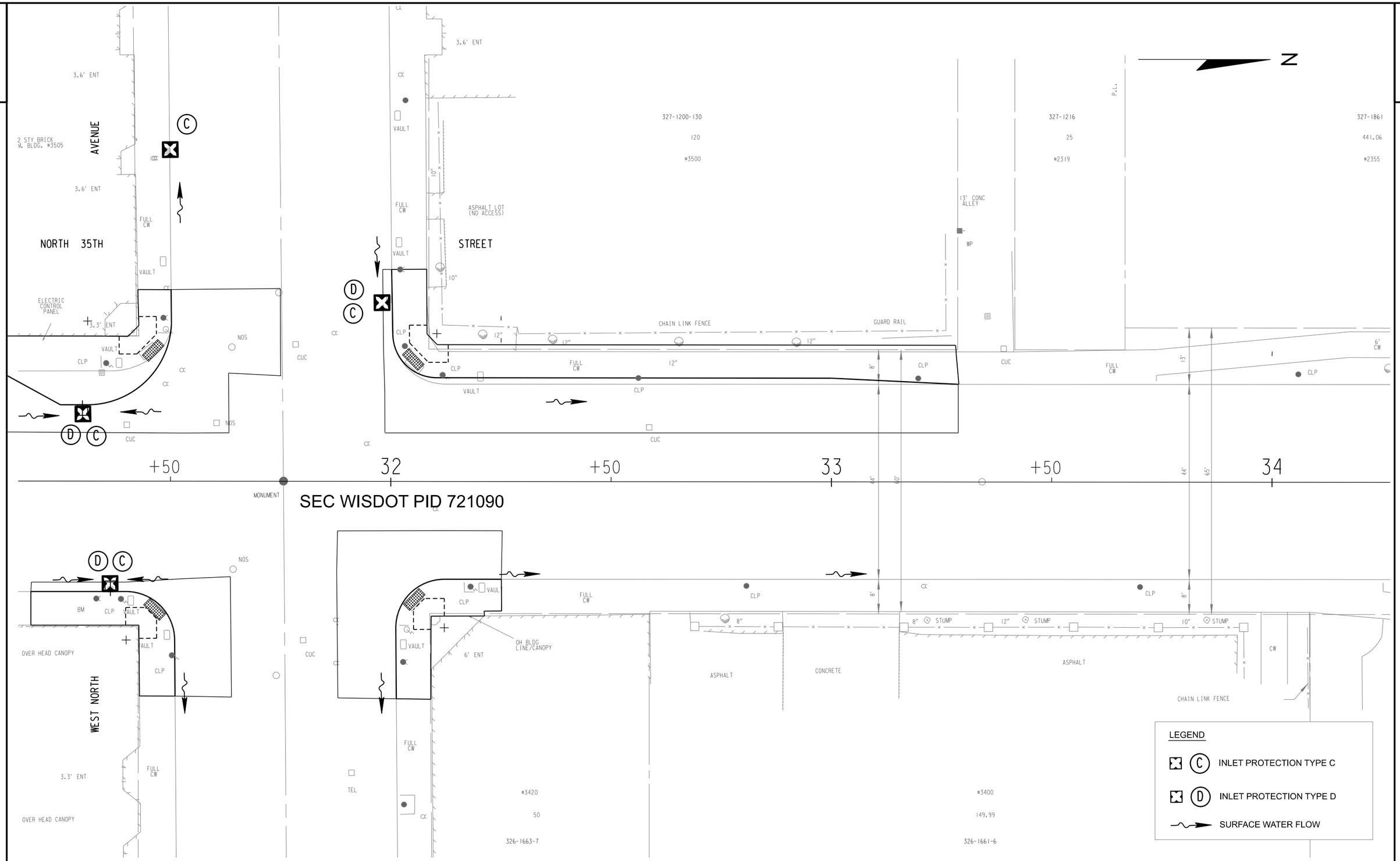


PROJECT NO: 2984-21-72	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL PLAN- W. LISBON AVE.	SHEET 16 E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Lisbon Erosion.dgn PLOT DATE : 24-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : NTS

WISDOT/CADDS SHEET XX

2



PROJECT NO: 2984-21-72	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL PLAN- W. NORTH AVE.	SHEET 17	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\North Erosion.dgn PLOT DATE : 24-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : NTS

2

2

N

NORTH 35TH STREET AVENUE

WEST LISBON

348-0030-110-0 | 60 | #1747
348-0032 | 30 | #1755
348-0033 | 60 | #1801
348-0034 | 30 | #1805
250-9996 | 100 | #3501
348-9989 | 106 | #3500
348-0363-111 | 190.29 | #1905

#1748 | 30 | 349-2311
#1750 | 30 | 349-2310
#3421 | 215.33 | 349-2301-110
#3430 | 116.74 | 349-1932
#1904 | 60 | 349-1545-100-6
#1908 | 60 | 349-1546-100-1

07 +50 08 +50 09 +50 10 +50 11 +50 12 +50 13

100 101 102 103 104 105 105A 106 107 107A 108

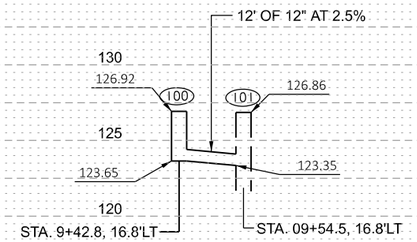
CONCRETE RAISED CONC METAL HAND RAIL
3 STY BRICK & STUCCO COMM. BLDG. 33522
BLDG OVERHANG
2 STY FRAME COMM./APT. BLDG. #3430
CELLAR ENTRY @ WALK & BLDG.
ASPHALT LOT
CONC. RET. WALL
METAL FENCE
CONC CURB
C.O.M. ASPHALT PARKING LOT
15' CONCRETE ALLEY
IRON HAND RAIL
CHAIN LINK FENCE
TRAFFIC CONTROL PANEL
HARP LIGHT
VAULT
CLP
WP
CUC
CONC
TEL
FULL CW
3.6' ENT
4' ENT
5.7' ENT

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STORM SEWER - W. LISBON AVE.	SHEET 18	E

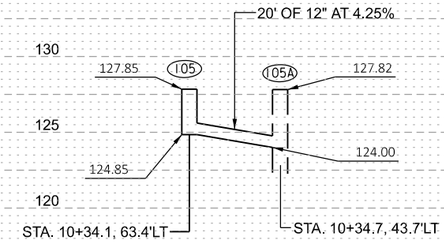
REVISED: 07-23-2025 BY SLB

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Utility- W Lisbon.dgn
PLOT DATE : 25-JUL-2025
PLOT BY :
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

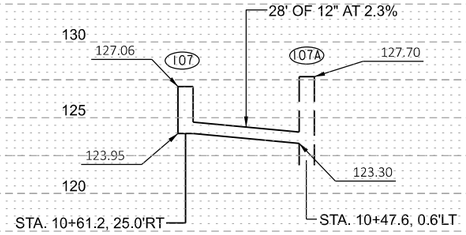
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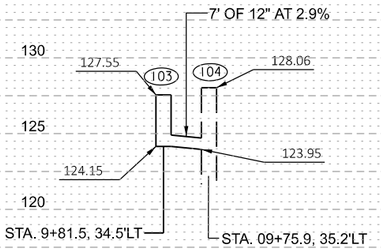
(LOOKING WEST)



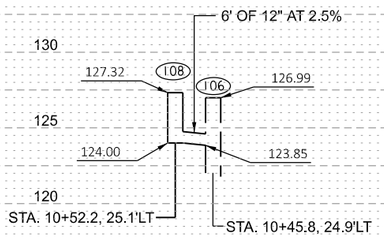
(LOOKING NORTH)



(LOOKING SOUTH)



(LOOKING EAST)



(LOOKING EAST)

REVISED: 07-23-2025 BY SLB

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STORM SEWER PROFILES - W. LISBON AVE.	SHEET 19	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Utility- W Lisbon.dgn PLOT DATE : 25-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

2

N

NORTH 35TH AVENUE STREET

SEC WISDOT PID 721090

348-1523-000
255
#2225

2 STY BRICK COMM. BLDG. #3505

327-1200-130
120
#3500

327-1216
25
#2319

327-1861
441.06
#2355

ASPHALT LOT (NO ACCESS)

13' CONC ALLEY

8 RIS 4' CW

10 RIS 4' CW

LANDSCAPE BLK RET WALL

4' CW

METAL HAND RAIL

MTL HAND RAIL

ASP&GRVL

ELECTRIC CONTROL PANEL

CHAIN LINK FENCE

GUARD RAIL

6' CW

14"

109A

109

110

29 +50 30 +50 31 +50 32 +50 33 +50 34 +50

OVER HEAD CANOPY

OH BLDG LINE/CANOPY

HOLLOW

ASPHALT LOT

15' CONCRETE ALLEY

ASPHALT

CONCRETE

CHAIN LINK FENCE

LANDSCAPE

#2214
281.3
349-0255-110

#2238
20
349-0254-100

#3401
120
349-2782

#3420
50
326-1663-7

#3400
149.99
326-1661-6

#2342
383
326-1631

NORTH

WEST

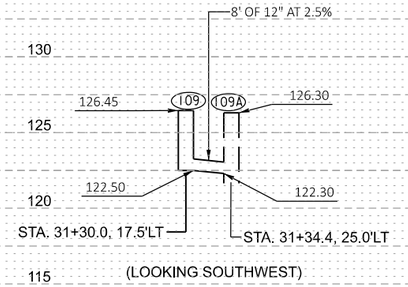
PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STORM SEWER - W. NORTH AVE.	SHEET 20	E

REVISED: 07-23-2025 BY SLB

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Utility- W North.dgn

PLOT DATE : 25-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



REVISED: 07-23-2025 BY SLB

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STORM SEWER PROFILES - W. NORTH AVE.	SHEET 21	E

FILE NAME : W:\spr\MONOTUBE PROJECTS\N 35th St. Inters. of North & Lisbon-2984-21-02\design\Utility- W North.dgn PLOT DATE : 25-JUL-2025 PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

STREET LIGHTING GENERAL NOTES:

1 PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

2 THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

3 STREET LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

4 ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY STREET LIGHTING ENGINEERING.

5 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

6 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

7 LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW STREET LIGHTING, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

8 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 12 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

9 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE) IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED APPROVAL.

10 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

11 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

12 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

13 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.

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

15 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

16 PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

18 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

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

20 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE STREET LIGHTING ENGINEER.

STREET LIGHTING GENERAL NOTES:

2

21 MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT CATCH BASINS: 4-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

22 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES.
HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED.
COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

23 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 3 FT. TO 4 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

24 TYPICAL CONDUIT INSTALLATION FROM THE PULL BOX TO A DIRECT BURIED STREET LIGHT POLE IS AS FOLLOWS:
USE A NYLON LIQUIDTIGHT CONNECTOR (UL APPROVED) TO CONNECT THE 1 1/2-INCH LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT LFNC-B (UL APPROVED) TO THE PULL BOX AND CONNECT TO STREET LIGHT POLE BY STUBBING UP A MINIMUM OF 6 INCHES OF THE LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC-B) INTO THE CABLE SLOT.

25 ALL CONDUITS AND JUNCTION BOXES EMBEDDED IN STRUCTURE SHALL BE PAID UNDER STRUCTURE PAY ITEMS. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EMBEDDED CONDUITS.

26 AT EVERY BRIDGE JOINT, EXPANSION/DEFLECTION FITTINGS MUST BE USED TO PREVENT DAMAGE TO CONDUIT AND LIGHTING CIRCUITS. THIS ITEM IS INCIDENTAL TO THE CONDUIT BID ITEM, AND SHALL BE PAID UNDER STRUCTURE PAY ITEMS.

27 THE SUPPORT CHANNELS FOR INSTALLATION OF CONDUITS, LUMINAIRES, JUNCTION BOXES AND ENCLOSURES SHALL BE STAINLESS STEEL UNISTRUT P1000 SERIES OR APPROVED EQUAL, CHANNELS SHALL BE SLOTTED OR PERFORATED.

28 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

29 PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

30 PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

31 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE. INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.

32 CONDUCTOR COLORS: 240/480, 1 PHASE - BLACK (HOT) /WHITE (NEUTRAL) // RED (HOT) /GRAY (NEUTRAL) / GREEN (GROUND)

33 INSTALL COMMON GROUND CONDUCTOR IN CONDUIT WHERE MULTIPLE BRANCH CIRCUITS CONDUCTORS ARE INSTALLED IN SAME CONDUIT AND SPLICE THE GROUND CONDUCTOR WITH TAP CONNECTOR IN PULLBOX.

34 PROVIDE MINIMUM WIRES / CONDUCTOR(S) SLACK AS NOTED BELOW:
PULL BOXES: SEE DETAIL 142
- CONNECTED WIRES TO LIGHT POLE IN PULL BOX MUST BE EXTENDED MINIMUM 3 FT. BEYOND TOP OF PULL BOX
- UNCONNECTED WIRES THAT BY PASS THROUGH PULL BOX MUST HAVE A MINIMUM OF 6 FT. SLACK COIL LEFT INSIDE PULL BOX

EMBEDDED JUNCTION BOXES IN PARAPIT WALL :
- CONNECTED WIRES IN JUNCTION BOX EXTEND MINIMUM 2 FT. BEYOND TOP OF JUNCTION BOX
- UNCONNECTED WIRES IN JUNCTION BOX LEAVE MINIMUM OF 4 FT. SLACK COIL IN JUNCTION BOX

DISTRIBUTION CENTER/LOAD CENTER: EXTEND 10-FT.
BREAK AWAY TRANSFORMER BASE: EXTEND 2-FT.

35 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

36 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.

37 ON ALL NEW STREET LIGHT POLES AND MONOTUBES WITH ATTACHED STREET LIGHTING, A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: lhickm REVISION DATE: 22-JUL-2025 11:52
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAY.1-2025

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 22	E

STREET LIGHTING GENERAL NOTES:

38 ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

39 REQUIRED MINIMUM CLEARANCES FOR THE INSTALLATION OF NEW LIGHT POLES FROM THE FOLLOWING:
1.) TREE TRUNK 15 FT. CLEAR, 2.) DRIVEWAY CURB END FLARE 6 FT. CLEAR, 3.) FIRE HYDRANT 5 FT. CLEAR,
4.) CATCH BASIN CENTER LINE TO NEAREST EDGE OF POLE 4 FT. CLEAR,
5.) GAS, WATER, AND COMMUNICATION LINES 3 FT. CLEAR,
A POLE CAN BE PLACE AT THE END RADIUS AT CORNERS, BUT NEVER IN THE RADIUS IN A CORNER,
UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

40 ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

41 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES,
AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY
REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - NEAL KARWEIK (OFFICE 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

42 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT
AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH
CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE
ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - NEAL KARWEIK (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - STEVEN RHODA (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

43 CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS FOR ALL WORK BEING DONE DETAILING THE FINAL PLACEMENT OF
CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE (.PDF FORMAT)
COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN)
PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR
INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

44 MUST VERIFY WITH STREET LIGHTING SPECIFICATIONS IF CONTRACTOR IS TO DELIVER OR NOT THE
FOLLOWING REMOVED STREET LIGHTING MATERIALS:
-ALUMINUM AND WOOD POLES -LUMINAIRE BRACKET ARMS
-LUMINAIRES -BREAKAWAY TRANSFORMER PEDESTALS
-WIRING PEDESTALS (GREEN IN COLOR)
TO CITY OF MILWAUKEE STREET LIGHTING YARD AT 1540 W. CANAL ST.
CALL RICO LOPEZ AT 414-286-5983 (CANAL OFFICE) OR 414-286-6123 (DPW FIELD OFFICE) OR
DISPATCHER AT 414-286-5944 - THREE (3) WORKING DAYS BEFORE TO COORDINATE DELIVERY OF MATERIALS

45 CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF CONCRETE POLES, BASES, AND ABANDON CONDUIT AND WIRING.

46 CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH
THE SPECIAL PROVISIONS., UNLESS NOTED OTHERWISE.

47 ONLY WHEN THE CITY OF MILWAUKEE IS FURNISHING MATERIALS FOR A PROJECT THE CONTRACTOR IS
RESPONSIBLE TO CONTACT THE STREET LIGHTING SHOP YARD CONTACT PERSON
FOUR (4) WORKING DAYS BEFORE, AND WILL NEED TO PROVIDE THE EXACT QUANTITY OF MATERIALS NEEDED.
THE ADVANCE NOTICE WILL ALLOW THE SHOP TO GATHER THE REQUEST ITEMS FOR THE CONTRACTOR
TO PICK UP AND SIGN FOR TAKING POSSESSION OF THE MATERIALS.

48 THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MATERIALS THAT THEY TAKE POSSESSION OF AND
FOR THE ANY RETURNING OF ANY UNUSED MATERIALS BACK TO THE SHOP IN GOOD CONDITION.
IF ANY MATERIALS COME BACK DAMAGED OR BROKEN THE CONTRACTOR WILL BE RESPONSIBLE FOR
REPLACING THE BROKEN OR DAMAGED ITEMS.

49 STREET LIGHTING SHOP YARD CONTACT PERSON:
NEAL KARWEIK 414-286-5943 (OFFICE) 414-708-4245 (CELL)
ALL THE MATERIALS MUST BE EITHER PICKED OR DROPPED OFF ALL AT ONE TIME.
THE STREET LIGHTING SHOP YARD HOURS FOR PICKING UP MATERIALS IS FROM 8AM TO 2PM:
MONDAY THROUGH FRIDAY.

50 CONTRACTOR MUST BE OUT OF THE SHOP YARD BY 2PM NO LATER.

2

STREET LIGHTING GENERAL NOTES:

AS-BUILT GUIDELINES:

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

UPON PROJECT COMPLETION, FOLLOW THE WISDOT REQUIREMENTS PER CMM 165.12 AS-BUILT PLANS, THE PROJECT ENGINEER AND/OR ELECTRICAL CONTRACTOR SHALL SUBMIT AN ELECTRONIC AS-BUILT PLAN. ANY CHANGES FROM THE AS-LET PLAN THAT WERE BUILT INTO THE PROJECT SHOULD BE RECORDED IN RED USING ADOBE ACROBAT PROFESSIONAL OR EQUIVALENT SOFTWARE. DO NOT SCAN FIELD NOTES TO CREATE THE DIGITAL AS-BUILT PLAN.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.
FOR EXAMPLE:
REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION:
AS-BUILT DRAWING
SUPERVISOR:
PROJECT MANAGER:
CONTRACTOR LEADER:
CONTRACTOR COMAPNY:
WORK STARTED:
WORK COMPLETED:

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED. DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS, CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.
- STREET NAMES SHALL BE ON ALL SHEETS.
- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.
- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3').
  ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")
- SHOW LOCATION AND ELEVATIONS ON CONDUIT AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.
- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH ALL OTHER REQUIRED AS-BUILT INFORMATION.

BY MAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
841 NORTH BROADWAY, ROOM 701
MILWAUKEE, WISCONSIN 53202

BY EMAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
PKELTN@MILWAUKEE.GOV

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: lhickm REVISION DATE: 22-JUL-2025 11:17
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAY.1-2025

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 23	E

NON-LED LUMINAIRE DESCRIPTION BREAKDOWN

1 S 2 V

- (C)=FULL CUT OFF, (V)=VERTICAL BURN
- (1)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR
- (S)=HIGH PRESSURE SODIUM, (M)=MERCURY VAPOR, (H)=METAL HALIDE, (RS)=HIGH PRESSURE SODIUM RETROFIT, (LS) LOW PRESSURE SODIUM
- (0)=70W, (1)=100W, (2)=150W, (2)=175W ONLY WITH (M), (3)=250W, (3)=215W ONLY WITH (RS) (4)=400W, (4)=360W ONLY WITH (RS) (5)=200W

SCREW-IN LAMP LED LUMINAIRE DESCRIPTION BREAKDOWN (FOR DECORATIVE FIXTURES)

S 2 LED 3

- (1)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR
- (LED)=LIGHT EMITTING DIODE
- (0)=36W, (1)=45W, (2)=54W, (3)=80W
- (S)=SCREW IN LAMP

LED LUMINAIRE DESCRIPTION BREAKDOWN (COBRA STYLE FIXTURE)

2 LED 3

- (1)=TYPE 1 REFRACTOR, (2)=TYPE 2 REFRACTOR, (3)=TYPE 3 REFRACTOR, (5)=TYPE 5 REFRACTOR (6)=TYPE 6 REFRACTOR, (8)=TYPE 8 REFRACTOR
- (LED)=LIGHT EMITTING DIODE
- (0)=36W, (1)=50W, (2)=90W, (3)=135W

LIGHTING CABLE & CIRCUIT IDENTIFICATION

3#2/1#8XLP, CIR.N.S.#7 MULTI.-B

- CIRCUIT
- LIGHTING CONTROL CABINET
- INSULATION: LTP = LOW THERMAL PLASTIC OR XLP = CROSS LINKED POLYETHYLENE
- GROUNDING CONDUCTOR SIZE AWG
- NUMBER OF GROUNDING CONDUCTORS
- SEPARATOR BETWEEN NON-GROUNDING AND GROUNDING CONDUCTORS
- NON-GROUNDING CONDUCTOR SIZE AWG
- NUMBER OF NON-GROUNDING CONDUCTORS

LIGHTING UNIT IDENTIFICATION

STATION - OFFSET

#1942 - 30-AL-BD(T)-S6-_2LED2, R

- LUMINAIRE OR LUMINAIRES HOT WIRE - R RED, - B BLACK
- LUMINAIRE LIGHT DISTRIBUTION (OPTICS)
- LUMINAIRE TYPE SOURCE
- LUMINAIRE WATTAGE EQUIVALENT 0-70W, 1-100W, 2-150W, 3-250W
- S - SCREW IN LED LAMP
- LUMINAIRE ARM LENGTH
- NUMBER LUMINAIRE ARM S - SINGLE OR D - DOUBLE
- (T) - TRANSFORMER BASE BREAKAWAY (OPTION)
- POLE INSTALLATION: BOLT DOWN -BD OR DIRECT BURY -DB
- POLE TYPE
- POLE HEIGHT
- PLAQUE (POLE ADDRESS)

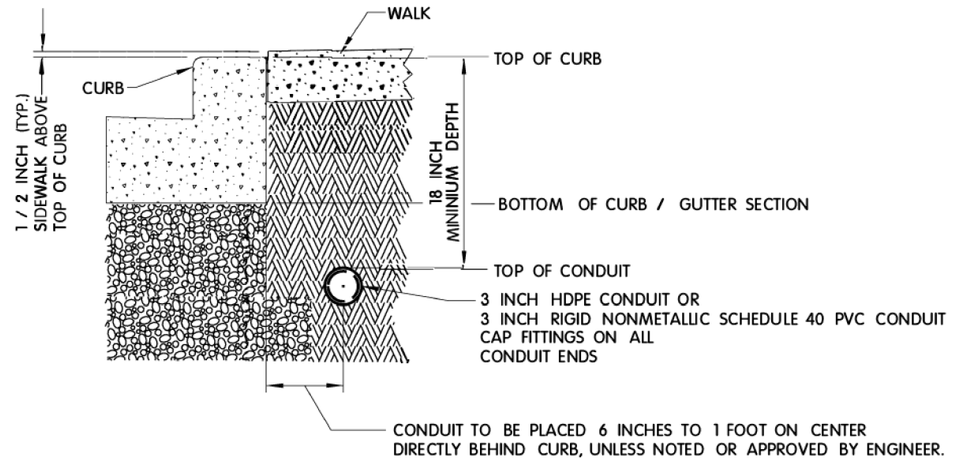
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION

REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: JAN.19-2024

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 24	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$. plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

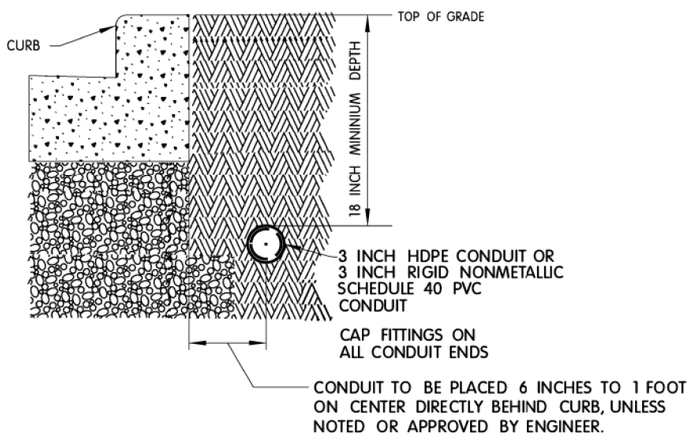
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



100 DETAIL "A" — NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
BEHIND CURB UNDER WALK

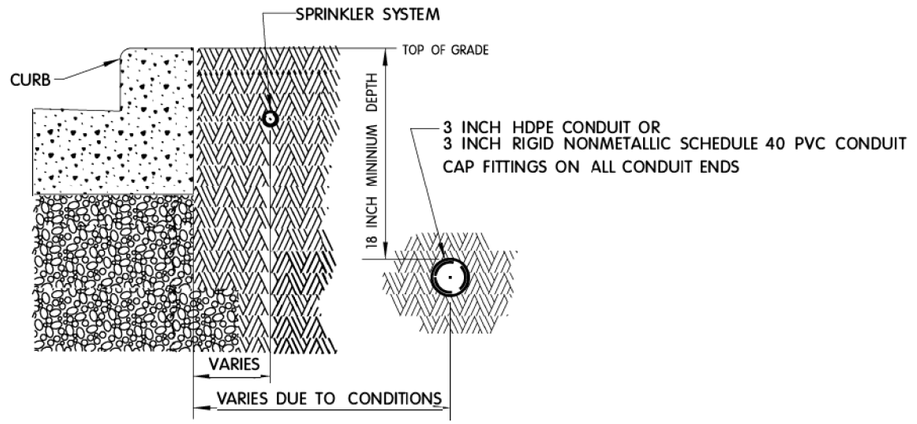
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



100 DETAIL "B" — NOT TO SCALE

TYPICAL CONDUIT INSTALLATION
BEHIND CURB IN GRASS AREA

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.



100 DETAIL "C" — NOT TO SCALE

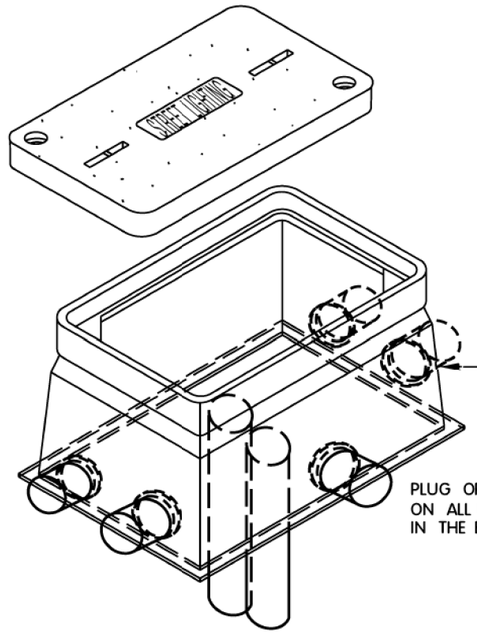
TYPICAL CONDUIT INSTALLATION WITH
OTHER UTILITIES BEHIND CURB

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: HICKMAN — REVISION DATE: 12-DEC-2022 09:38
APPROVED REVISION BY: R.BERTRAN — APPROVED REVISION DATE: DEC.12-2022

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 25	E

2

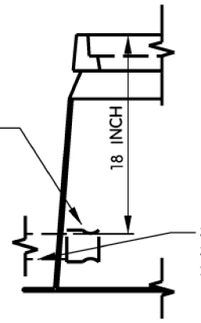


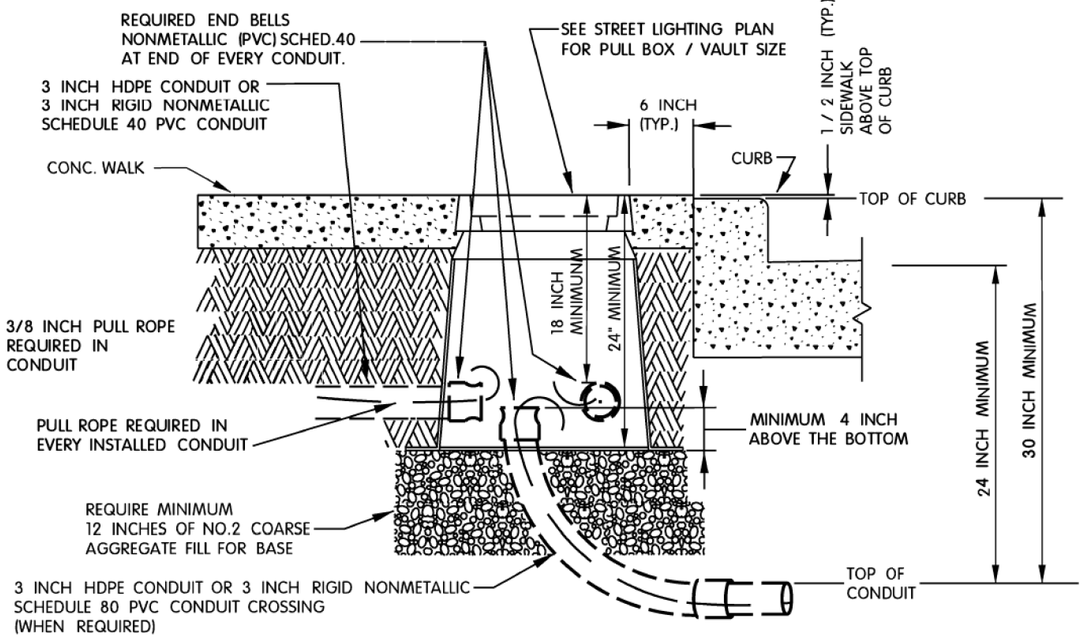
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 PENTA BOLTS
COLOR: GRAY
TIER 15 RATING (MINIMUM)

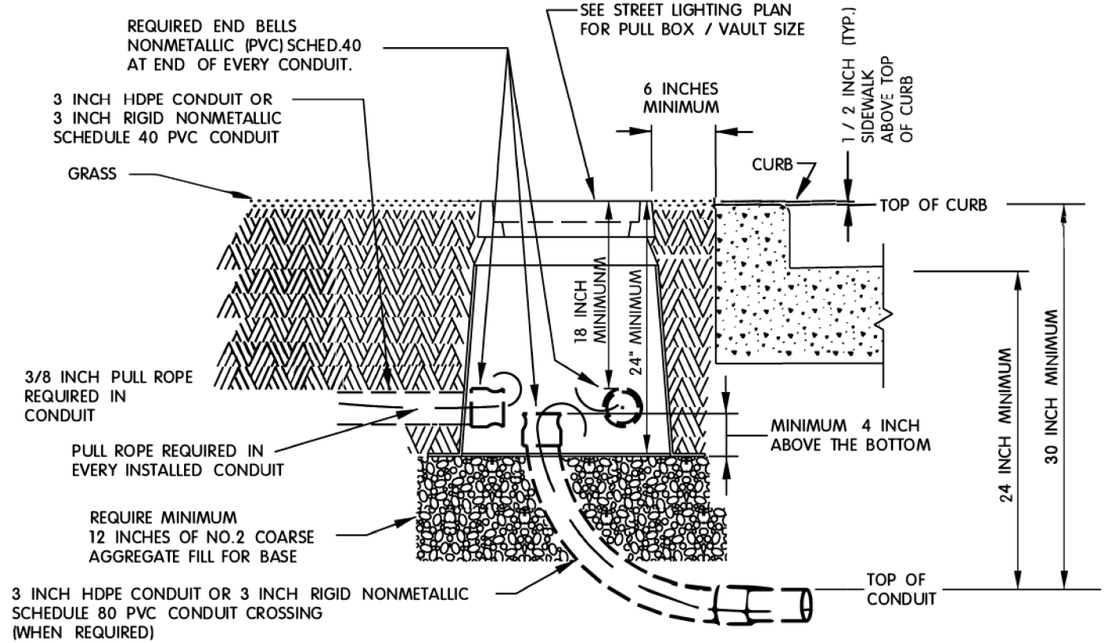
PULL BOX / VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
TIER 15 RATING (MINIMUM)
(VARIOUS SIZES)

REQUIRED END BELLS
NONMETALLIC (PVC) SCHED.40
AT END OF EVERY CONDUIT.

PLUG OR CAP FITTINGS
ON ALL UNUSED CONDUITS
IN THE ENCLOSURE







112 DETAIL — NOT TO SCALE

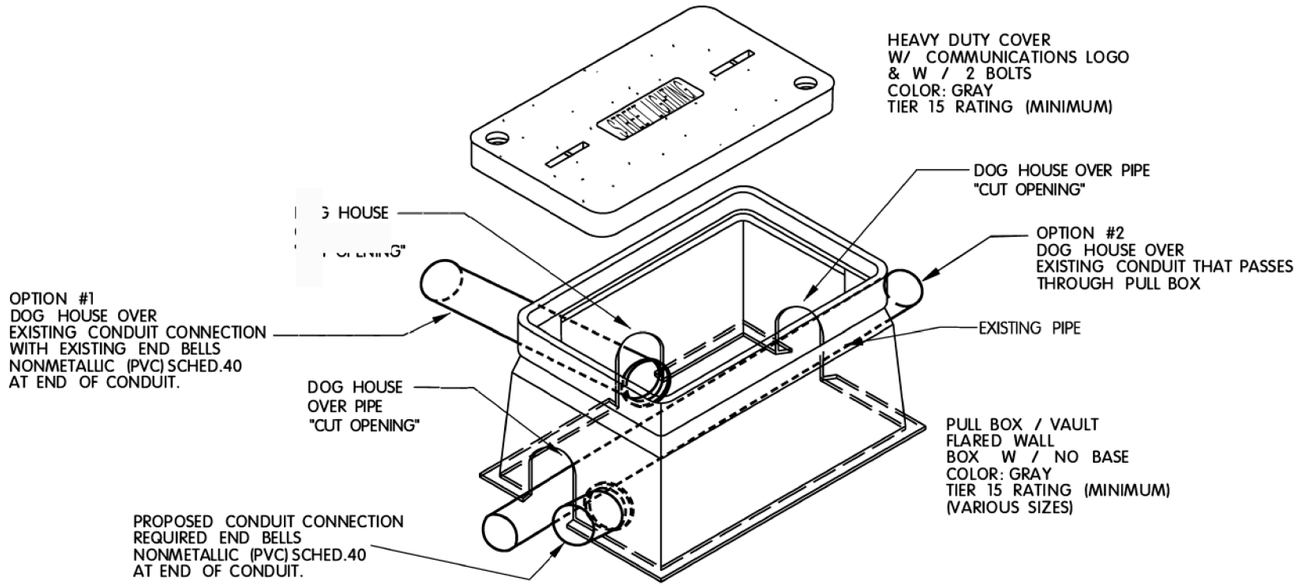
TYPICAL PULL BOX / VAULT INSTALLATION
IN EITHER PAVEMENT OR GRASS AREAS

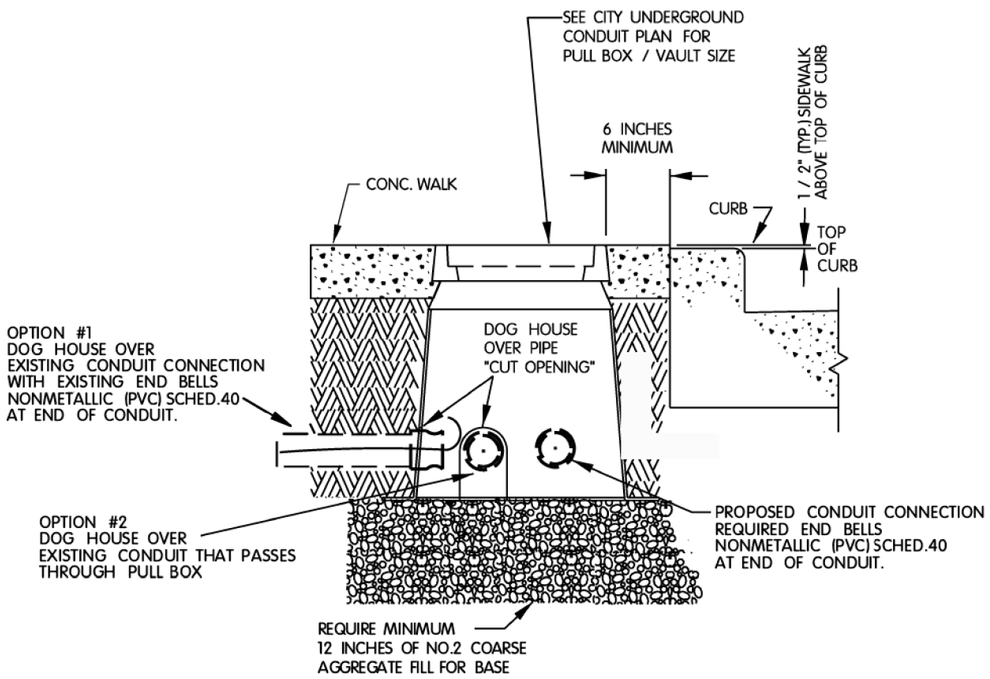
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

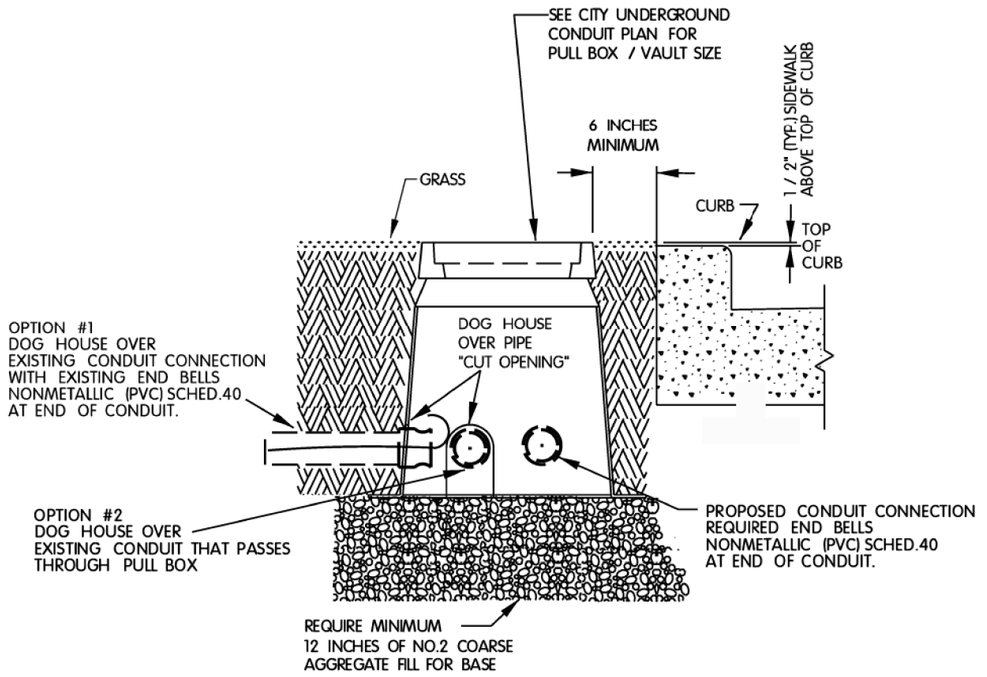
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: HICKMAN — REVISION DATE: 12-DEC-2022 09:42
APPROVED REVISION BY: R.BERTRAN — APPROVED REVISION DATE: DEC.12-2022

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 26	E

2







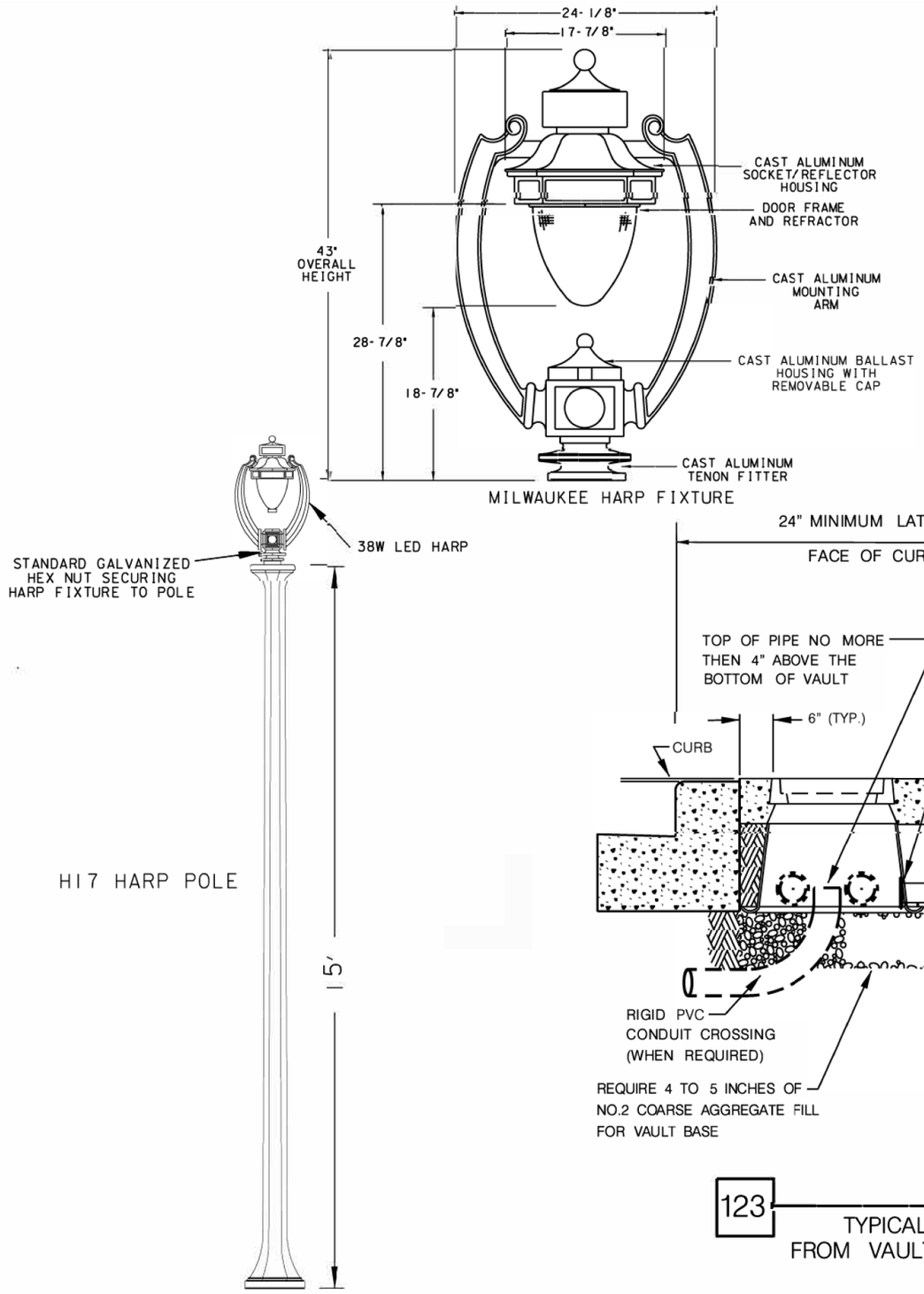
113 DETAIL FOR TYPES OF DOG HOUSING OVER EXISTING CONDUIT — NOT TO SCALE

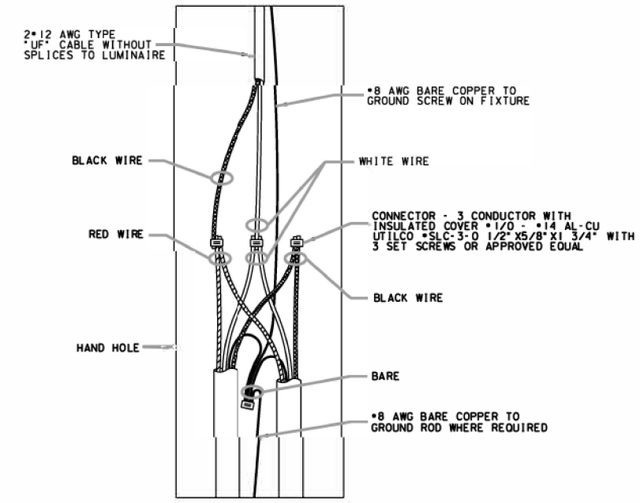
TYPICAL PULL BOX / VAULT INSTALLATION IN EITHER PAVEMENT OR GRASS AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: HICKMAN — REVISION DATE: 3-MAR-2023 11:43
APPROVED REVISION BY: R.BERTRAN — APPROVED REVISION DATE: MAR.01-2023

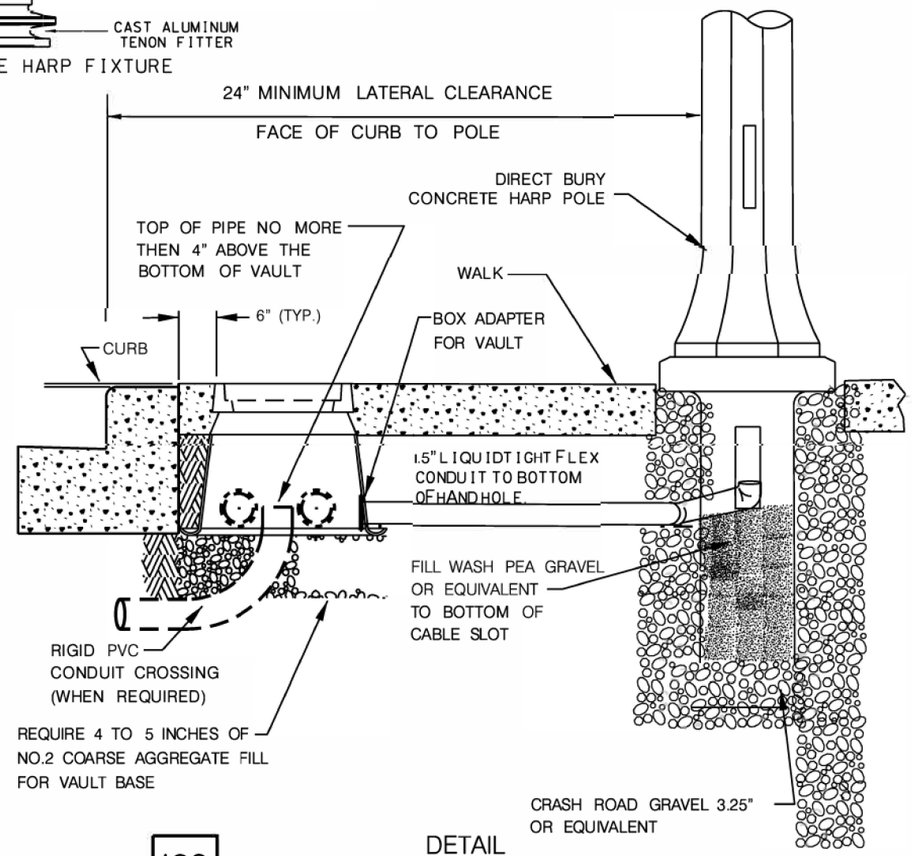
PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 27	E





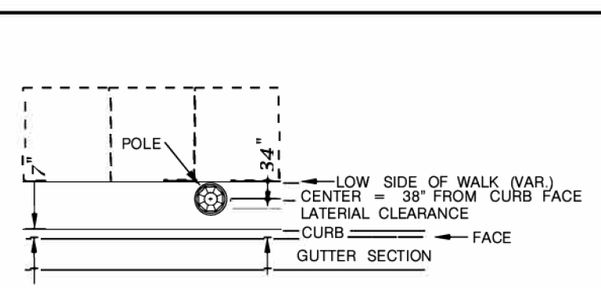
DETAIL

CTYPICAL
CONNECTION OF
EXISTING
PEDESTRIAN UNIT



123 DETAIL

TYPICAL CONDUIT INSTALLATION
FROM VAULT TO CONCRETE HARP POLE

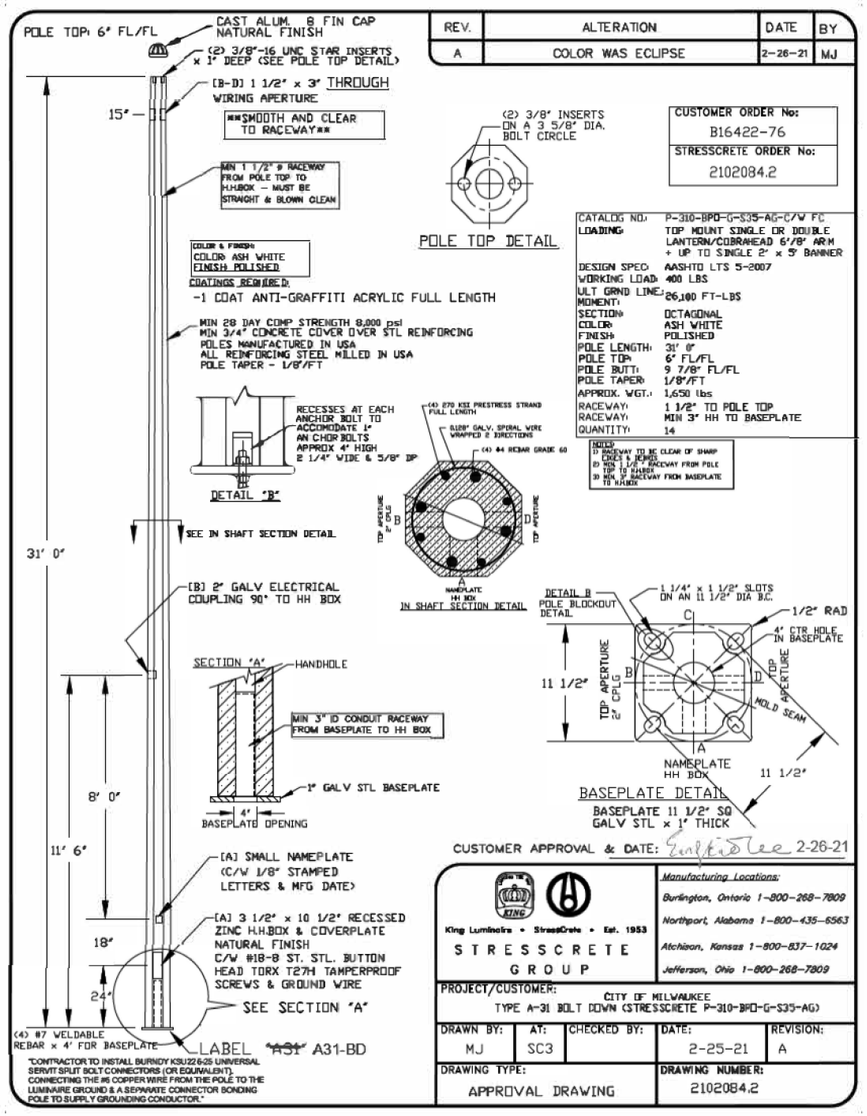


15' PEDESTRIAL UNIT INSTALLATION DETAIL

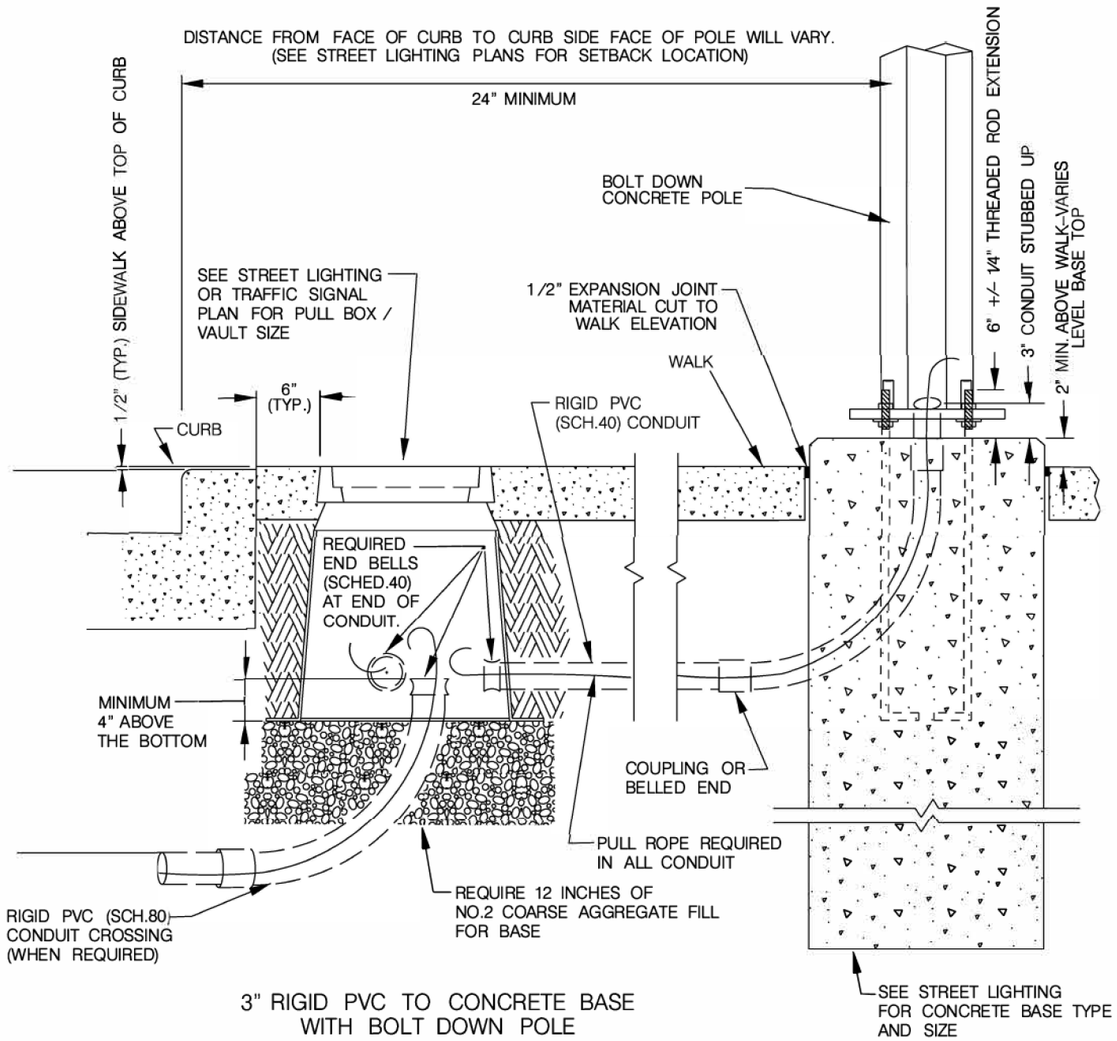
18" DIA BASE FLANGE
8 " DIA. POLE

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 28	E

2



REV.	ALTERATION	DATE	BY
A	COLOR WAS ECLIPSE	2-26-21	MJ



3" RIGID PVC TO CONCRETE BASE WITH BOLT DOWN POLE

125 DETAIL

TYPICAL CONDUIT INSTALLATION FROM PULL BOX / VAULT TO CONCRETE BASE WITH BOLT DOWN CONCRETE POLE

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER. CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED 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. CONDUIT 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.

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

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

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

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

~~THE EQUIPMENT GROUNDING CONDUCTOR SHALL 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.~~

~~EXOTHERMIC WELD TO EQUIPMENT GROUNDING CONDUCTOR~~

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1/40 FROM VERTICAL. ANTISIEZE ON THREADS AND BOLTS PRIOR TO POLE PLACEMENT.

~~5/8" DIA. X 8' 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED~~

(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 BY THE ENGINEER.

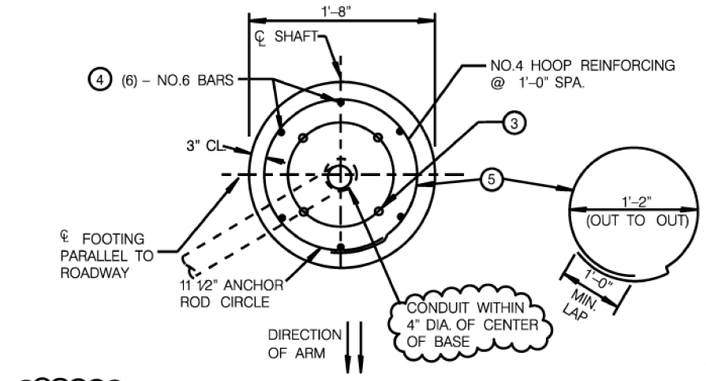
(2) (4) 6" +/- 1/4" ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. ~~RODENT SCREEN REQUIRED~~

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

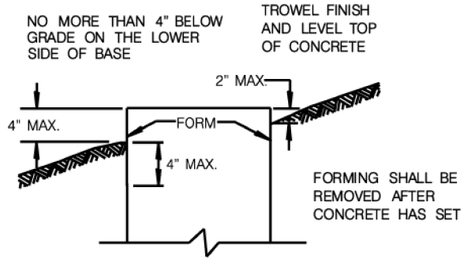
(4) (4) NO. 6 x 6'-8" BAR STEEL REINFORCEMENT.

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

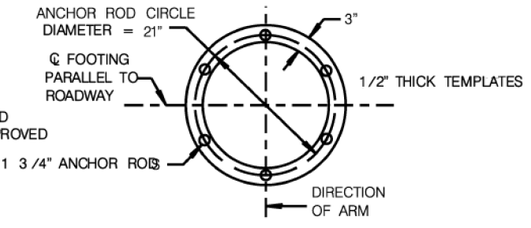
CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



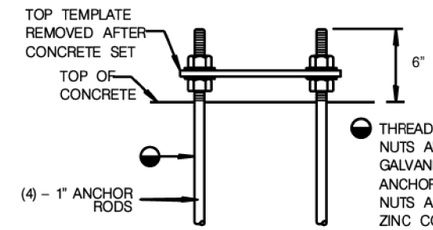
CONCRETE BASE TYPE 2 MODIFIED



FORMING DETAIL



TOP TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 2 MODIFIED

ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	.57
LBS. OF HOOP BAR STEEL	23
LBS. OF VERTICAL BAR STEEL	60

CONCRETE BASE TYPE 2 MODIFIED

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

REVISED 9/22/17 DATE — 26' & 31' CONCRETE BOLT DOWN REVISION
REVISED DATE — REVISION

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 30 E

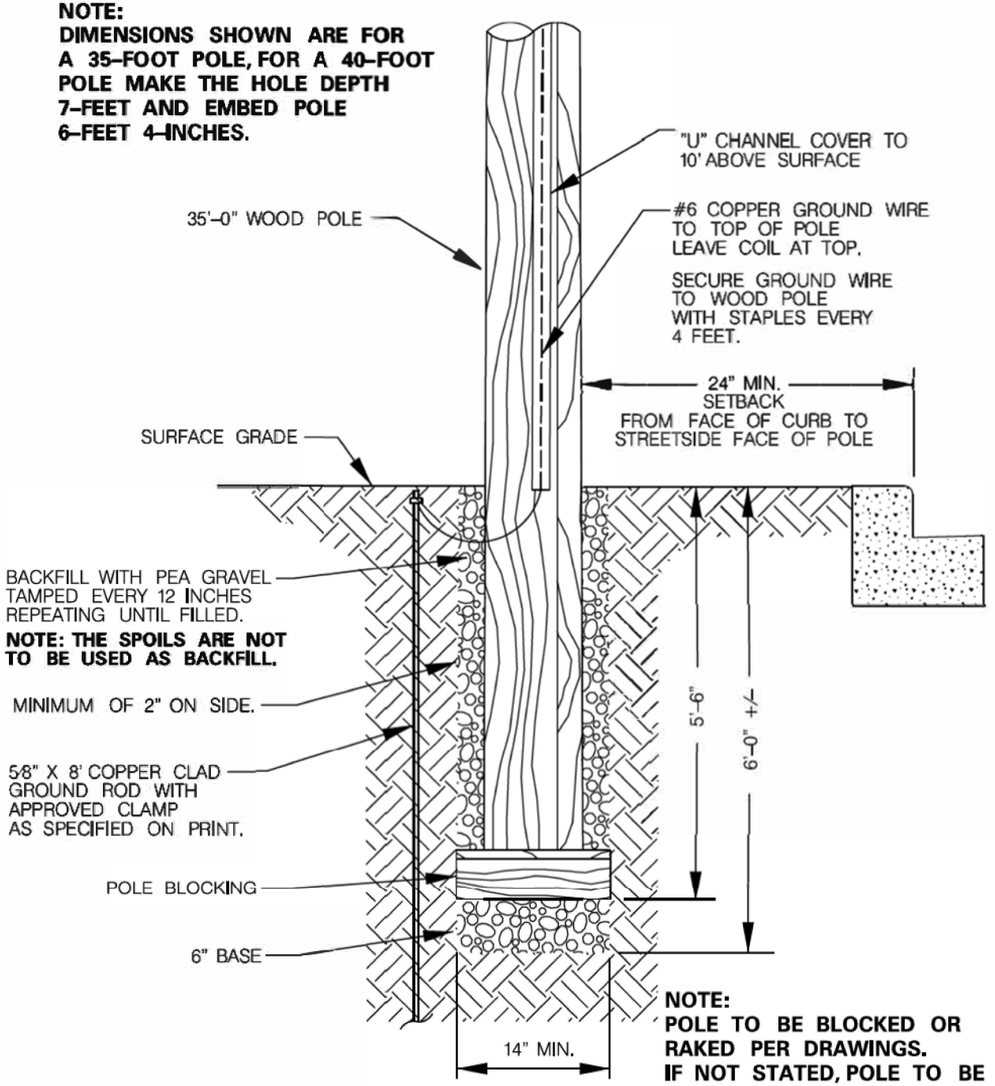
FILE NAME : C:\Users\lhickm\Desktop\WISC AVE DETAIL 9.dgn PLOT DATE : 27 SEP 2017 14:16 PLOT BY : IHICKMAN PLOT NAME : PLOT SCALE : 20.000000:1.000000

WISDOT/CADDS SHEET 42

2

2

NOTE:
DIMENSIONS SHOWN ARE FOR A 35–FOOT POLE, FOR A 40–FOOT POLE MAKE THE HOLE DEPTH 7–FEET AND EMBED POLE 6–FEET 4–INCHES.



NOTE:
POLE TO BE BLOCKED OR RAKED PER DRAWINGS.
IF NOT STATED, POLE TO BE PERPENDICULAR WITH GROUND

130A DETAIL — NOT TO SCALE

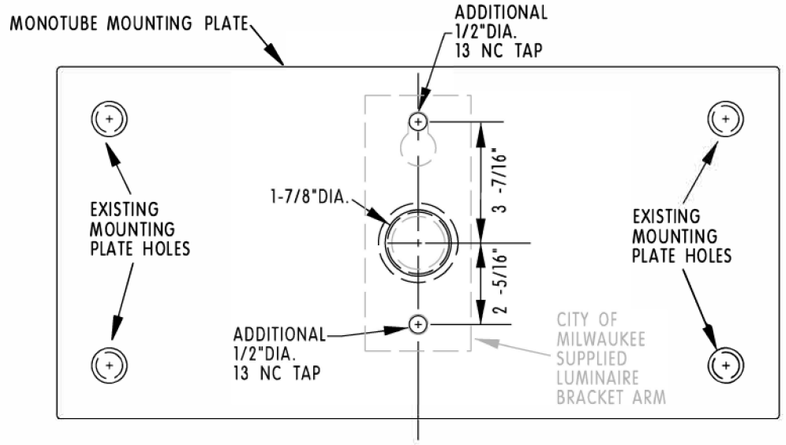
TYPICAL 35 FT.WOOD POLE INSTALLATION

SEE NOTE FOR 40 FOOT POLE

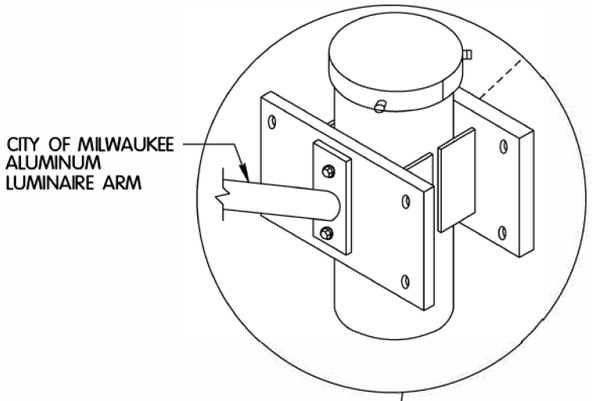
12-FEB-2022 15:26

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

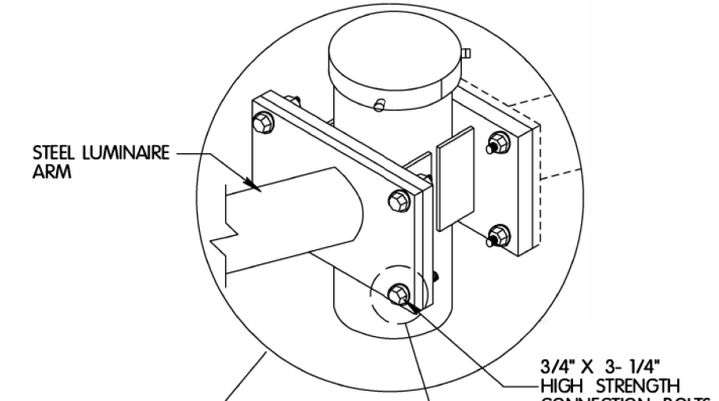
2



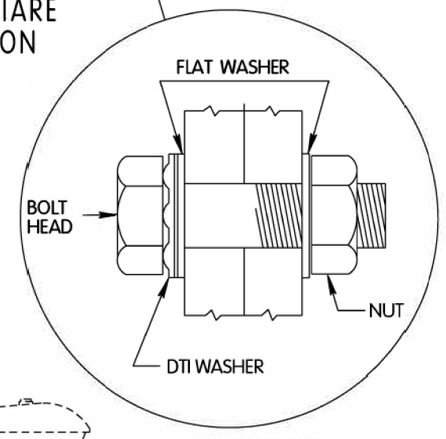
ADDITIONAL MOUNTING HOLES IN LUMINAIRE MOUNTING PLATE
NOT TO SCALE



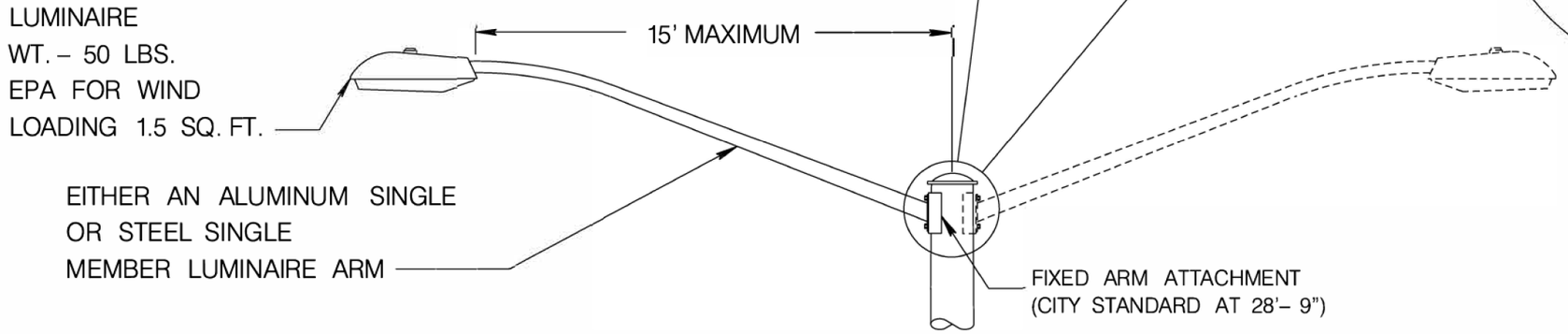
ALUMINUM LUMINIARE
ARM OPTION



STEEL LUMINIARE
ARM OPTION



RECOMMENDED
BOLT ASSEMBLY
DETAIL



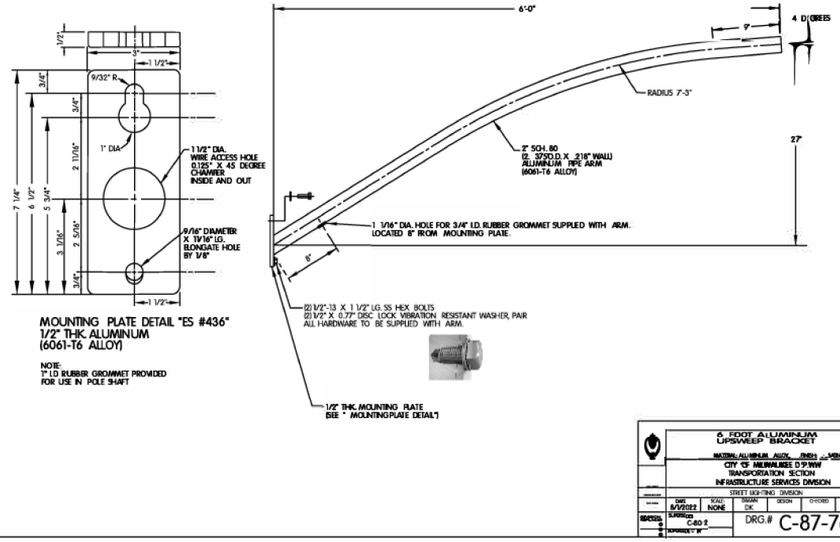
140 DETAIL — NOT TO SCALE

ADDITIONAL MOUNTING HOLES IN LUMINAIRE MOUNTING PLATE FOR
POLES: TYPE 10
TYPE 13 SPECIAL
TYPE 13

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: $$...PLOTUSER...$$ REVISION DATE: PLOTDATE
APPROVED REVISION BY: R.BERTRAN APPROVED REVISION DATE: MAR.03-2023

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 32	E

2



MOUNTING PLATE DETAIL "ES #436"
1/2" THK. ALUMINUM
(6061-T6 ALLOY)

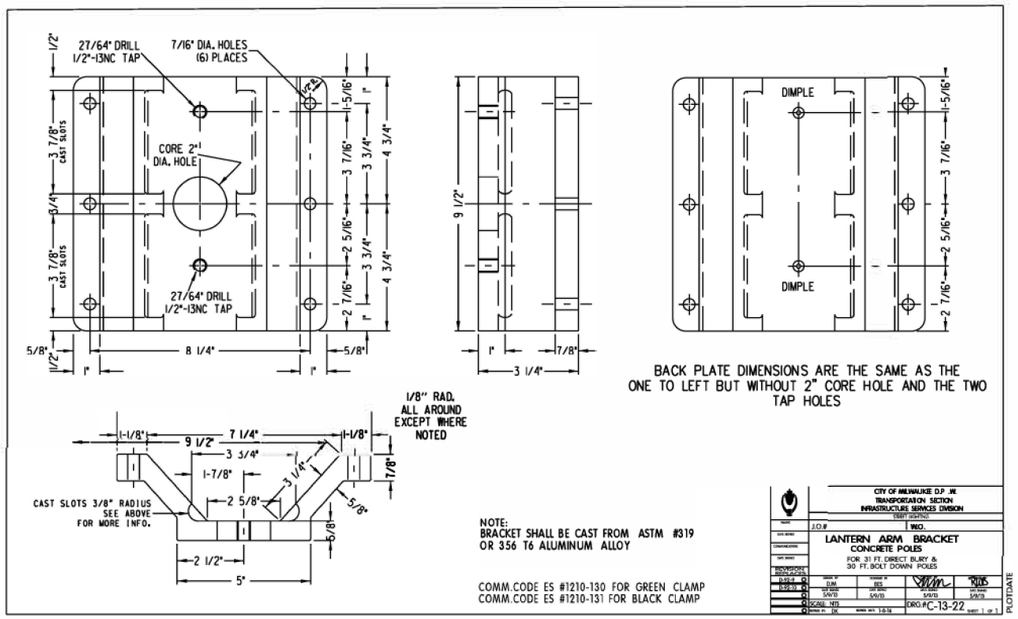
NOTE:
1" I.D. RUBBER GROMMET PROVIDED FOR USE IN POLE SHAFT

6 FOOT ALUMINUM UPSWEEP BRACKET

MATERIAL: ALUMINUM ALLOY, SHEET OR PLATE
CITY OF MILWAUKEE D.P.W.W.
TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION
STREET LIGHTING DIVISION

DATE	SCALE	DRAWN	DESIGN	CHECKED	APPROVED
5/1/2001	NONE	DK			

DRG.# C-87-76



BACK PLATE DIMENSIONS ARE THE SAME AS THE ONE TO LEFT BUT WITHOUT 2" CORE HOLE AND THE TWO TAP HOLES

NOTE:
BRACKET SHALL BE CAST FROM ASTM #319 OR 356 T6 ALUMINUM ALLOY

COMM.CODE ES #1210-130 FOR GREEN CLAMP
COMM.CODE ES #1210-131 FOR BLACK CLAMP

CITY OF MILWAUKEE D.P.W.
TRANSPORTATION SECTION
INFRASTRUCTURE SERVICES DIVISION

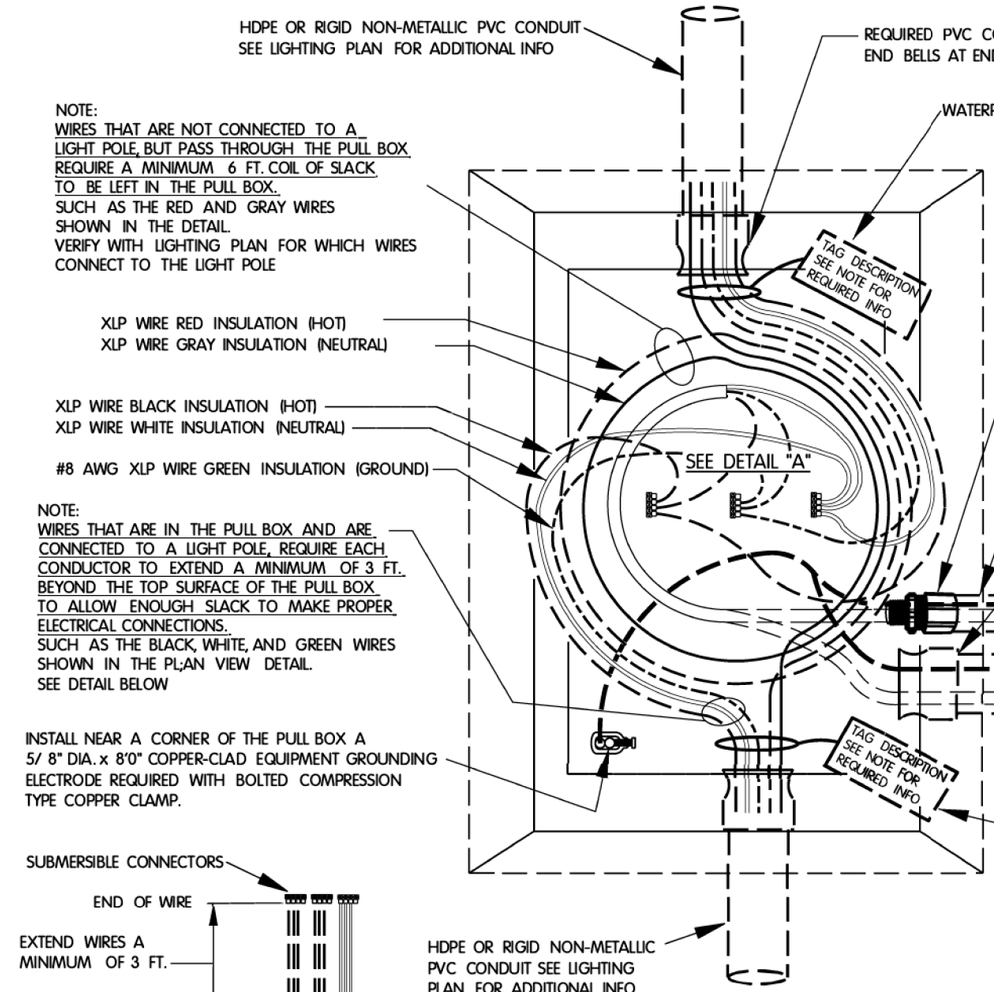
J.O.# | W.O.

LANTERN ARM BRACKET
CONCRETE POLES
FOR 31 FT. DIRECT BURY & 30 FT. BOLT DOWN POLES

DESIGNED	DRAWN	CHECKED
DM	RES	
DATE	DATE	DATE
5/4/01	5/4/01	5/8/01

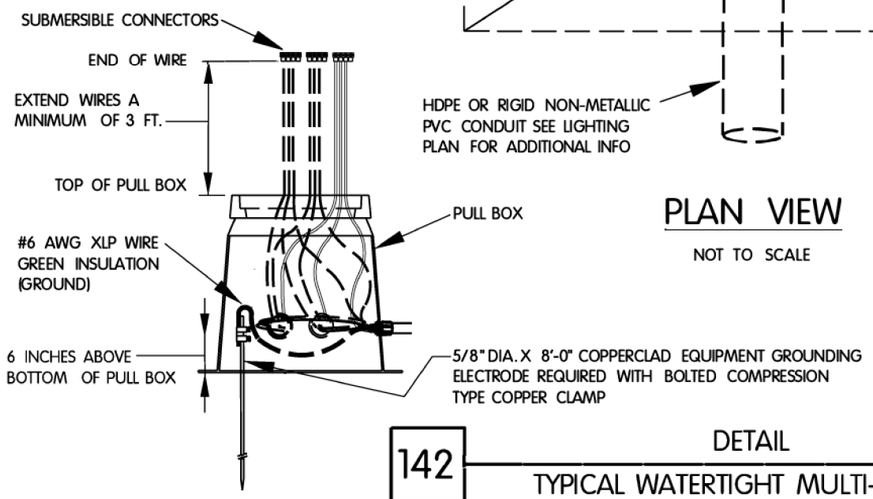
SCALE: NTS | DRG.# C-13-22 | sheet 1 of 1

PLOTDATE



PLAN VIEW

NOT TO SCALE



USE WHEN CONNECTING TO DIRECT BURIED POLE

USE 1 1/2 INCH NYLON LIQUIDTIGHT CONNECTOR (STRAIGHT GRAY)
WHEN CONNECTING 1 1/2 INCH NONMETALLIC LIQUIDTIGHT FLEXIBLE CONDUIT TO A PULL BOX.

USE 1 1/2 INCH NONMETALLIC LIQUIDTIGHT FLEXIBLE CONDUIT TYPE LFNC-B WHEN CONNECTING TO A DIRECT BURIED POLE.

USE WHEN CONNECTING TO CONCRETE LIGHT BASE

USE PVC CONDUIT END BELLS WHEN CONECTING RIGID NONMETALLIC CONDUIT TO A PULL BOX.

USE RIGID NONMETALLIC CONDUIT SCHEDULE 40 TO CONNECT TO CONCRETE LIGHT BASE.

#6 AWG XLP WIRE GREEN INSULATION (GROUND) GOES TO GOUNDING LUG IN HAND HOLE OF POLE

RISER CABLE
2#12 AWG "UF" TYPE WITH GROUND
NOTE - ONE RISER CABLE RUN PER LUMINIAIRE ON POLE

WATERPROOF CABLE TAG

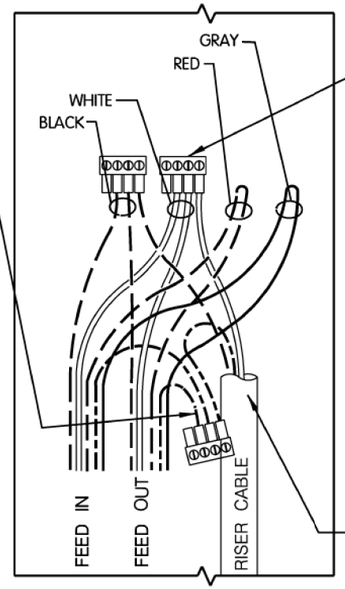
REQUIRED WATERPROOF TAGGING:

WHEN THERE IS MORE THAN ONE CIRCUIT, BUNDLE THE CIRCUIT CONDUCTORS WITH NYLON CABLE TIES OR ENGINEER APPROVED ELECTRICAL TAPE AT ACCESS POINTS.

AT EACH PULL BOX, IDENTIFY THE LINE SIDE OF EACH CIRCUIT WITH AN ATTACHED TAG USING A FADE-RESISTANT WATERPROOF BLACK MARKER PEN AND PROVIDE THE FOLLOWING INFO:

CIRCUIT ID: (CIR.WD-E)
LINE SIDE COMING FROM UNIT STREET LIGHT UNIT IS ON: (STREET NAME)
SIDE OF STREET LIGHT UNIT IS ON: (N,S,E,OR W)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (1,2,3,4,5)
DIRECTION FROM THE NEAREST CROSSING STREET: (N,S,E,OR W)
NAME OF THE NEAREST CROSSING STREET: (STREET NAME)

EXAMPLE OF TAG INFO:
CIR.WD-E,
LINE SIDE FROM: W. CANAL ST. / N. / 1 / W. /OF POTAWATOMI CIR.



CIRCUIT MUST BE TAGGED AND IDENTIFIED INSIDE PULL BOX

USE:
POLARIS EDGE CONNECTOR (ISPB2)
OR
MORRIS PRODUCTS SUBMERSIBLE INSULATED STREETLIGHTING CONNECTOR,
OR
EQUAL
3 OR 4 PORT PRE-INSULATED CONNECTOR OR EQUAL.
DESIGNED FOR USE IN BELOW GRADE BOXES, DIRECT BURIAL AND SUBMERSIBLE
CONDUCTORS RANGE FROM #2/0-#14
RATED FOR 600 VOLTS
DUAL RATED FOR CU. OR AL.
INSULATED WITH HIGH DIELECTRIC STRENGTH ABRASION AND CHEMICAL RESISTANT RUBBER
SET SCREWS OR APPROVED EQUAL
UL 486D LISTED FOR DIRECT BURIAL AND SUBMERSIBLE APPLICATIONS

"RISER CABLE"
2#12 AWG TYPE "UF" WITH GROUND CABLE WITHOUT SPLICES TO HAND HOLE ON POLE (PER LUMINAIRE)

DETAIL "A"

CONNECTIONS WITHIN PULL BOX
NOT TO SCALE

NOTES:

WHEN WIRING A LUMINAIRE EITHER
BLACK (HOT) WITH WHITE (NEUTRAL) GO TOGETHER
OR
RED (HOT) WITH GRAY (NEUTRAL) GO TOGETHER

ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

PULL ROPE SHALL BE INSTALLED IN ALL NEW CONDUITS.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.

PROVIDE MINIMUM WIRE SLACK FOR PULL BOXES: 3-FT
ONE WAY IN OR OUT

PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP MANAGERS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK. THESE NAMES AND NUMBERS CAN BE FOUND ON THE STREET LIGHTING GENERAL NOTES SHEET

142 DETAIL

TYPICAL WATERTIGHT MULTI-PORT CONNECTIONS

SPLICING CONDUCTORS WITHIN THE PULL BOX

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: HICKMAN REVISION DATE: 3-MAR-2023 15:12
APPROVED REVISION BY: APPROVED REVISION DATE: MAR.03-2023
E.BERTRAN

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 34	E

GENERAL NOTES

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

USE THIS DETAIL 142 IN CONJUNCTION WITH THIS DETAIL FOR ELECTRICAL WIRING.

USE EITHER THE POLARIS EDGE (ISPB2) OR MORRIS PRODUCT SUBMERSIBLE INSULATED CONNECTOR OR ELSE AN EQUAL CONNECTOR THAT IS 3 or 4 PORT PRE-INSULATED, THAT IS DESIGNED FOR USE IN BELOW GRADE BOXES, DIRECT BURIAL, AND SUBMERSIBLE. THE CONDUCTORS RANGE FROM #2/0 - #14 RATED FOR 600 VOLTS DUAL RATED FOR CU. or AL.

USE A WATERPROOF IN-LINE FUSE HOLDER ASSEMBLY THAT NEEDS TO BE 600 VOLT RATED, AND UP TO 30 AMPS, 1-POLE BREAKAWAY, WITH COPPER SET SCREW TERMINALS FOR LOAD, AND WIRE SIZE RANGE #12 TO #8 AWG.
PROVIDE A FAST ACTING 3 AMP 250 VOLT FUSES, FROM THE RECOMMENDED FUSE LIST FROM THE IN-LINE FUSE HOLDER MANUFACTURER.

USE WATERPROOF AND TEAR RESISTANT CABLE TAGS/LABELS AT EACH PULL BOX, TO IDENTIFY THE LINE SIDE OF EACH CIRCUIT USING A FADE-RESISANT WATERPROOF BLACK MARKER PEN AND PROVIDE THE FOLLOWING INFO:

CIRCUIT ID: (CIR.WD-E)
LINE SIDE COMING FROM UNTIL STREET LIGHT UNIT IS ON: (STREET NAME)
SIDE OF STREET LIGHT UNIT IS ON: (N,S,E,or W)
NUMBER OF STREET LIGHTING UNITS FROM NEAREST CROSSING STREET: (1,2,3,4,5)
DIRECTION FROM THE NEAREST CROSSING STREET: (N,S,E,or W)
NAME OF THE NEAREST CROSSING STREET: (STREET NAME)

EXAMPLE OF TAG INFO:

CIR.WD-E,
LINE SIDE FROM: W. CANAL ST. / N. / 1 / W. /OF POTAWATOMI CIR.

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

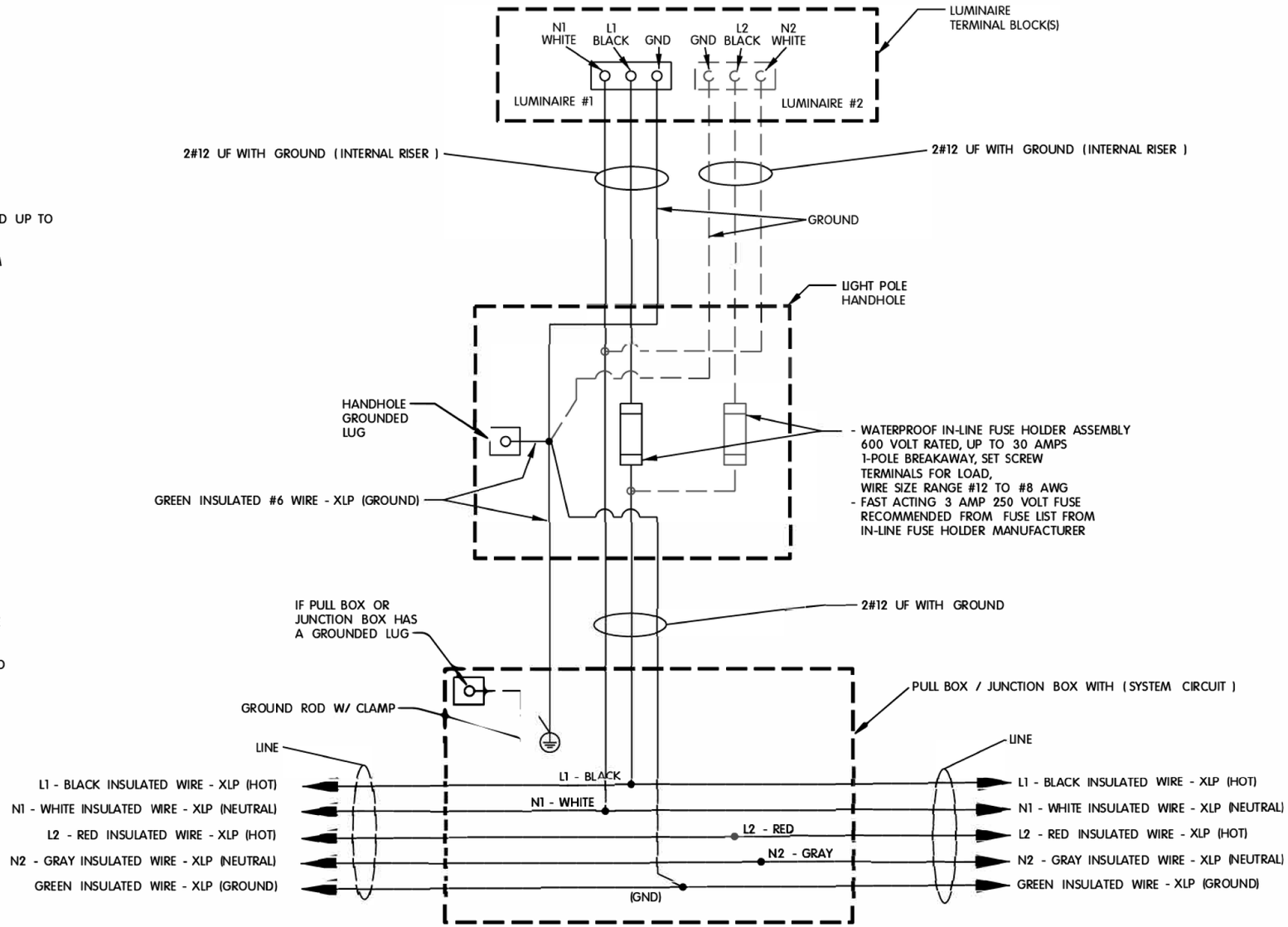
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

USE 2#12UF WITH GROUND FROM THE PULL BOX / JUNCTION BOX TO THE POLE HANDHOLE

THE INTENT OF THE PULL BOX / JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFF NESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT.

LEGEND

BLACK & RED	UNGROUNDED SYSTEM CIRCUIT CONDUCTORS (L1 & L2)
WHITE & GRAY (N)	GROUNDED SYSTEM CIRCUIT CONDUCTORS (N1 & N2)
GREEN (GND)	EQUIPMENT GROUNDING CONDUCTOR
	HANDHOLE GROUNDED LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	TERMINAL
	SPLICE
	CONDUCTOR
	GROUND ROD

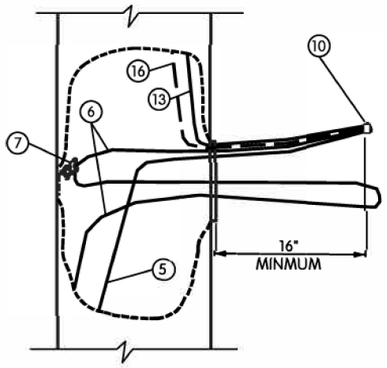


TYPICAL WIRING DIAGRAM
TWO SEPARATE NEUTRALS SYSTEM
240 / 480VAC 4 WIRE

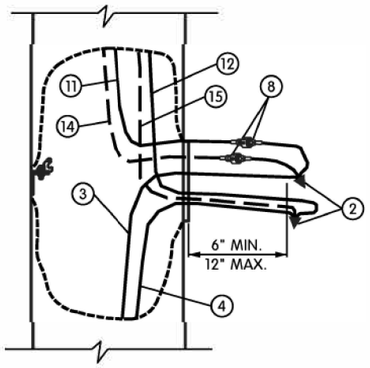
145 ELECTRICAL DETAILS STRUCTURE MOUNT
LIGHT POLES SEPARATED NEUTRALS SYSTEM — NOT TO SCALE

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION BY: HICKMAN REVISION DATE: 24-FEB-2023 09:30
APPROVED REVISION DATE: FEB 24-2023

PROJECT NO. 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET 35	E

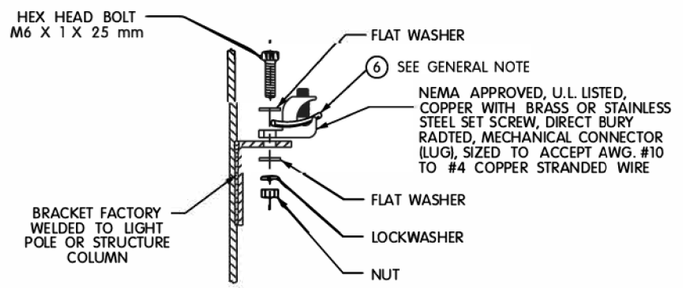


EQUIPMENT GROUNDING
CONDUCTOR SLACK



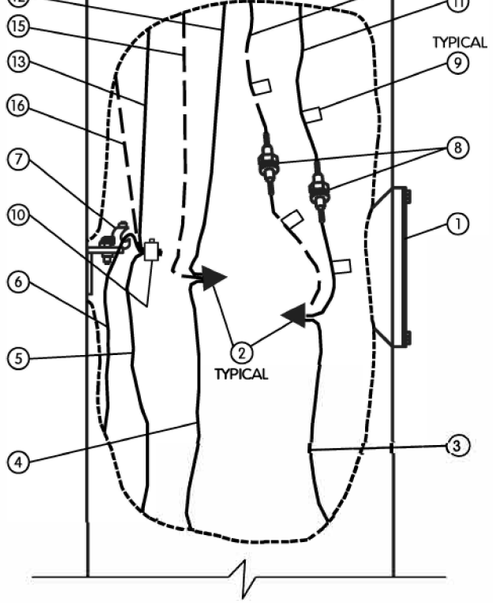
UNGROUNDED CONDUCTOR SLACK
(AND GROUNDED NEUTRAL SLACK
IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)



CUTAWAY HANDHOLE DETAIL

SEPARATED NEUTRAL SYSTEMS
SINGLE PHASE

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

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



- 600 VOLT RATED, UP TO 30 AMPS 1-POLE BREAKAWAY, SET SCREW TERMINALS FOR LOAD, WIRE SIZE RANGE #12 TO #8 AWG
- FAST ACTING 3 AMP 250 VOLT FUSE RECOMMENDED FROM FUSE LIST FROM IN-LINE FUSE HOLDER MANUFACTURER

WATERPROOF IN-LINE FUSE HOLDER ASSEMBLY

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	BLACK OR RED
4	GROUNDED LINE WIRE	WHITE OR GRAY
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	GREEN
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING,

GENERAL NOTES

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

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

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

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

CIRCUIT TAGS SHALL BE INSTALLED IN ALL THE PULL BOXES AND WHERE INDICATED ON THE PLANS AND SPECIAL PROVISIONS.

146 ELECTRICAL HANDHOLE WIRING DETAIL — NOT TO SCALE

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
STREET LIGHTING SECTION
REVISION DATE: 24-FEB-2023 09:39
APPROVED REVISION DATE: FEB.24-2023

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER. CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED 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. CONDUIT 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.

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

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

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

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

~~THE EQUIPMENT GROUNDING CONDUCTOR SHALL 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.~~

~~EXOTHERMIC WELD TO EQUIPMENT GROUNDING CONDUCTOR~~

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

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

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

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 120' FROM VERTICAL. ANTISIEZE ON THREADS AND BOLTS PRIOR TO POLE PLACEMENT.

~~5/8" DIA. X 8' 6" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED~~

(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 BY THE ENGINEER.

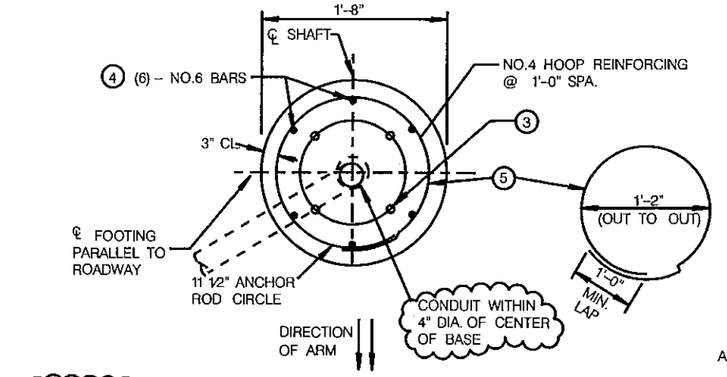
(2) (4) 6" +/- 1/4" ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED

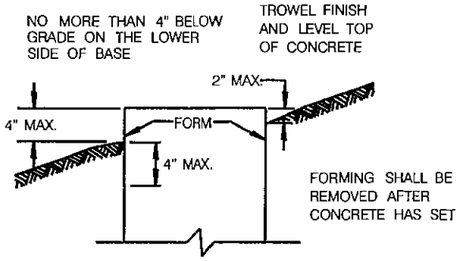
(3) (4) 1" DIA. x 5'-0" ANCHOR RODS.

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

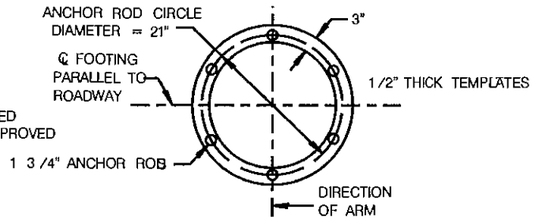
(5) (7) NO. 4 x 5'-1" BAR STEEL REINFORCEMENT @ 1'-0 c-c.

CONCRETE MASONRY	fc = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 p.s.i.
ANCHOR RODS, AASHTO M314 GRADE 55	fy = 55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy = 36,000 p.s.i.

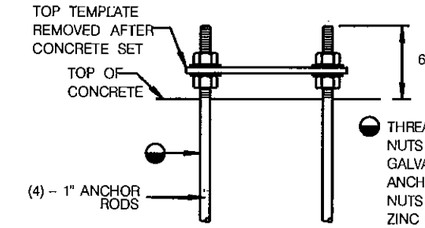




FORMING DETAIL



TOP TEMPLATES



THREAD TOP 6" OF ANCHOR ROD FOR (2) NUTS AND (2) WASHERS AND GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR RODS (AASHTO M111) AND HOT-DIP NUTS AND WASHERS (AASHTO M232). USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

ANCHOR BOLT ASSEMBLY DETAIL

CONCRETE BASE TYPE 2 MODIFIED

ANCHOR ASSEMBLY

152 CONCRETE BASE TYPE 2 MODIFIED

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	.57
LBS. OF HOOP BAR STEEL	23
LBS. OF VERTICAL BAR STEEL	60

CONCRETE BASE TYPE 2 MODIFIED

CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS

REVISED — DATE — 26" & 31" CONCRETE BOLT DOWN REVISION
REVISED — DATE — REVISION

PROJECT NO: 2984--21--72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING DETAILS	SHEET	E

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
5 EA	40' WOOD POLES, CLASS 4
950 LF	2-2-4 TRIPLEX
6 EA	SECONDARY RISER
6 EA	6' WP ARM, TEMP. LED COBRA
6 EA	REMOVE POLES

LEGEND

- EXISTING LIGHT POLE
- REMOVE COMPLETE EXISTING LIGHT POLE
- 40' WOOD POLE COBRA HEAD LUMINAIRE 6' WOOD POLE MOUNT ARM
- 40' WOOD POLE
- OVERHEAD CABLE SPAN
- Ⓡ Ⓑ - RED/BLACK WIRE TERMINATION

NOTES:

1. SECONDARY XLP CABLE RISER WITH PVC COVER ON SPECIFIED CIRCUIT BY BES.
2. EXISTING CONDUIT AND/OR CABLE TO REMAIN IN COIL AND SECURE 3' LENGTH ALLOWANCE ON TOP OF POLE FOR RISER CONNECTION SHOWN IN STREET LIGHTING PLAN.
3. MINIMUM CLEARANCE AT CENTER OF SPAN: 17-FT. ABOVE ROADWAY OR GRADE.
4. TEMPORARY 240V FIXTURES WIRED PHASE TO NEUTRAL USING ALUMINUM TRIPLEX OR FLATSTRAP, LOAD BALANCED AS SPECIFIED BY BLACK/RED TERMINATION.
5. ALL LUMINAIRES AND AERIAL CABLES ARE SEPARATE BID ITEMS AND ARE NOTpPART OF THE BID ITEM "WOOD POLE 35-FOOT". ALL REMAINING ITEMS SUCH AS WIRE ROPE TETHERS, WIRE CLIPS, DRIVE HOOKS, SERVICE SLEEVES, HEAVY DUTY INSULATED PULLY CLEVISES ARE INCIDENTAL TO BID ITEM "WOOD POLE 40-FOOT".

N

CAUTION 240/480V CIR. T27C-D TO BE REUSED

NOTE 3 95' 2#2/1#4 AL TRIPLEX CIR.T27C-E

CAUTION 240/480V CIR. T27C-E TO BE REUSED

#3519 H17 CONCRETE PEDESTRIAN OS5 HPS HARP TO REMAIN IN SERVICE

NOTE 1 (CIR.T27C-E) #3520 26' DIRECT BURY UD-ML 3S5 MILWAUKEE LANTERN TO REMAIN IN SERVICE PULL BOX TO REMAIN IN USE STA.10+55.0;188.5'LT

NOTE 1 (CIR.T27C-D) #3513 26' DIRECT BURY CONC. 3S5 MILWAUKEE LANTERN 4"X4"X36" WIRING PEDESTAL

3#2/1#8LTP NOT IN SERVICE-TO BE REUSED 3#8/1#8LTP #3520 TO HARPS TO REMAIN IN SERVICE

#3516 H17 CONCRETE PEDESTRIAN OS5 HPS HARP TO REMAIN IN SERVICE PULL BOX TO REMAIN IN USE

REMOVE COMPLETE #3513 H17 CONCRETE PEDESTRIAN OS5 HPS HARP STA.09+87.5;75.5'LT

3#2/1#8LTP NOT IN SERVICE-TO BE REUSED 3#8/1#8LTP #3520 TO HARPS TO REMAIN IN SERVICE

#3510 H17 CONCRETE PEDESTRIAN OS5 HPS HARP TO REMAIN IN SERVICE PULL BOX TO REMAIN IN USE

#3500 ARRANGE FOR BES TO COLLECT AT31-R - 31' DIRECT BURY SINGAL REMOVE COMPLETELY MILWAUKEE LANTERN 15' SIGNAL ARM STA.10+33.5;36.0'LT

95' EA. 2#2/1#4 AL TRIPLEX CIR.T27C-D,E

#3501 40' WOOD POLE 2EA.-6' ARM 2EA.-3LED2 COBRA ORIENTED AS SHOWN STA.09+69.0;28.0'LT

DISCONTINUE 3#2/1#8LTP CIR.T27C-E

#3500 40' WOOD POLE 2EA.-6' ARM 2EA.-3LED2 COBRA ORIENTED AS SHOWN STA.10+40.0;39.0'LT

NOTE 6 (CIR.T27C-D) #3613 30' BOLT DOWN AL SQ. CONCRETE BASE 6' TRUSS ARM 250W HPS COBRA HEAD SPLICE AT LUM. STA.08+31.0;52.5'LT

35' 3#12UF-B CIR. T27C-D

#1821 26' DIRECT BURY CONC. 3S5 MILWAUKEE LANTERN 4"X4"X36" WIRING PED. REMOVE COMPLETELY STA.09+68.5;40.5'RT

145' 2#2/1#4AL TRIPLEX CIR.T27C-D

#1834 26' DIRECT BURY CONCRETE HISTORIC MILWAUKEE LANTERN REMOVE ENTIRELY STA.10+42.0;26.5'LT

#1843 26' DIRECT BURY CONCRETE 3S5 HPS LANTERN HEAD SPLICE TO REMAIN FOR TEMP. LIGHTING REMOVE 4"X4"X36" WIRING PEDESTAL STA.11+42.5;26.5'LT

NOTE 1 (CIR.T27C-D) #1805 26' DIRECT BURY CONC. 6' ARM, 3LED2 HPS COBRA 4"X4"X36" WIRING PED. STA.08+26.5;19.0'LT

WEPCO 40' WOOD POLE

NOTE 2 (CIR.27C-D) #1815 H17 PEDESTRIAN UNIT HPS HARP LUM. HEAD SPLICE LUM.

55' 3#12UF-B CIR.T27C-D

#1837 EXISTING H17 PEDESTRIAN UNIT HPS HARP LUM. REMOVE COMPLETELY STA.10+86.5;26.5'LT

NOTE 3 70' 3#6 AL TRIPLEX CIR.T27C-E

NOTE 3 65' 3#12UF-B CIR.T27C-E

75' 3#12UF-B CIR.T27C-E

105' 3#12UF-B CIR.T27C-E

#1840 EXISTING H17 PEDESTRIAN UNIT HISTORIC HPS HARP HEAD SPLICE STA.11+12.5;25.5'RT

NOTE 3 80'-EA. 2#2/1#4AL TRIPLEX CIR.T27C-D,E

90' 2#2/1#4AL TRIPLEX CIR.T27C-D

#1822 26' DIRECT BURY CONC. MILWAUKEE LANTERN 4"X4"X36" WIRING PED. MPD CAM, PLATE READERS REMOVE COMPLETELY STA.09+56.5;25.5'RT

#3431 40' WOOD POLE 2EA.-6' ARM 2EA.-250W HPS COBRA ORIENTED AS SHOWN STA.09+59.0;37.0'RT

#3431 26' DIRECT BURY CONC. 3S5 MILWAUKEE LANTERN 4"X4"X36" WIRING PED. REMOVE COMPLETELY STA.09+68.5;40.5'RT

#1830 AT31-R - 31' DIRECT BURY SINGAL MILWAUKEE LANTERN TO REMAIN FOR TEMP. LIGHTING REMOVE 15' SIGNAL ARM & TR RISERS REMOVE WIRING PED. STA.10+35.0;27.0'RT

#3426 EXISTING H17 PEDESTRIAN UNIT HPS HARP LUM. HEAD SPLICE STA.10+13.5;89.5'RT

NOTE 1 (CIR.T27C-D) 40' WOOD POLE 3#12UF-B TO #1812 STA.08+67.5;25.5'RT

#1812 H17 CONCRETE PEDESTRIAN OS5 HPS HARP 3#12UF-B HEAD SPLICE STA.08+67.5;25.5'RT

65' EA. 2#2/1#4 AL TRIPLEX CIR.T27C-D,E

#3432 H17 PEDESTRIAN UNIT HPS HARP LUM. 3#12UF-B TO HEAD SPLICE STA.09+61.5;89.0'RT

NOTE 1 (CIR.T27C-D) 40' WOOD POLE 10' S. OF #3432 STA.09+61.0;101.0'RT

35' 3#12UF-B CIR.T27C-E

NOTE 1 (CIR.T27C-E) #3422 26' DIRECT BURY CONC. 6' ARM 3LED3 LUM. TO REMAIN FOR TEMP. LIGHTING STA.10+07.5;125.0'RT

NOTE 3 55' 2#2/1#4AL TRIPLEX CIR.T27C-E

CAUTION 240/480V CIR. T27C-D TO BE REUSED

CAUTION 240/480V CIR. T27C-E TO BE REUSED

CAUTION 240/480V CIR. T27C-D IN 2.5" PVC TO BE REUSED

CAUTION 240/480V CIR. T27C-D TO BE REUSED

W. LISBON AVE.

W. VINE ST.

N. 35th ST.

N. 35th ST.

CHAIN LINK FENCE

IRON AND RAIL

METAL FENCE

CONCRETE RET. WALL

C.O.M. ASPHALT PARKING LOT

CONCRETE ALLEY

CONC CURB

#1750

30

349-2310

SCALE, FEET 0 40

CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM ORIGINAL SOURCE.

SUBSTATION T27C IS LOCATED NE CORNER OF N34TH ST. & W. LISBON AVE.

CONTACT CITY OF MILWAUKEE BES FOR LOCKOUT/TAGOUT OF SUBSTATION CIRCUITS. FIELD CONDITIONS MAY VARY.

CONTRACTOR IS TO PROVIDE CONTACT INFORMATION AND 24/7 AVAILABILITY IN EVENT OF DAMAGE OR KNOCK DOWN WITHIN PAVING LIMITS. TARGET RESPONSE TIME IS 2 HOURS.

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TEMPORARY STREET LIGHTING	SHEET 38	E

FILE NAME : 35TH ST DRAFT PSE TEMP | PLOT DATE : STATE BW 11X17 | PLOT BY : HICKMAN | DESIGN : HICKMAN | PLOT SCALE : 40

SUMMARY OF SELECTED ITEMS FOR INFORMATION ONLY	
QUANTITY	DESCRIPTION
7 EA	40' WOOD POLES, CLASS 4
400 LF	2-2-4 TRIPLEX
425 LF	3#6 TRIPLEX
7 EA	6' WP ARM, TEMP. LED COBRA
7 EA	REMOVE POLES

SUBSTATION T41C IS LOCATED SE CORNER OF N33RD & W. MEINECKE AVE.

CONTACT CITY OF MILWAUKEE BES FOR LOCKOUT/TAGOUT OF SUBSTATION CIRCUITS. FIELD CONDITIONS MAY VARY.

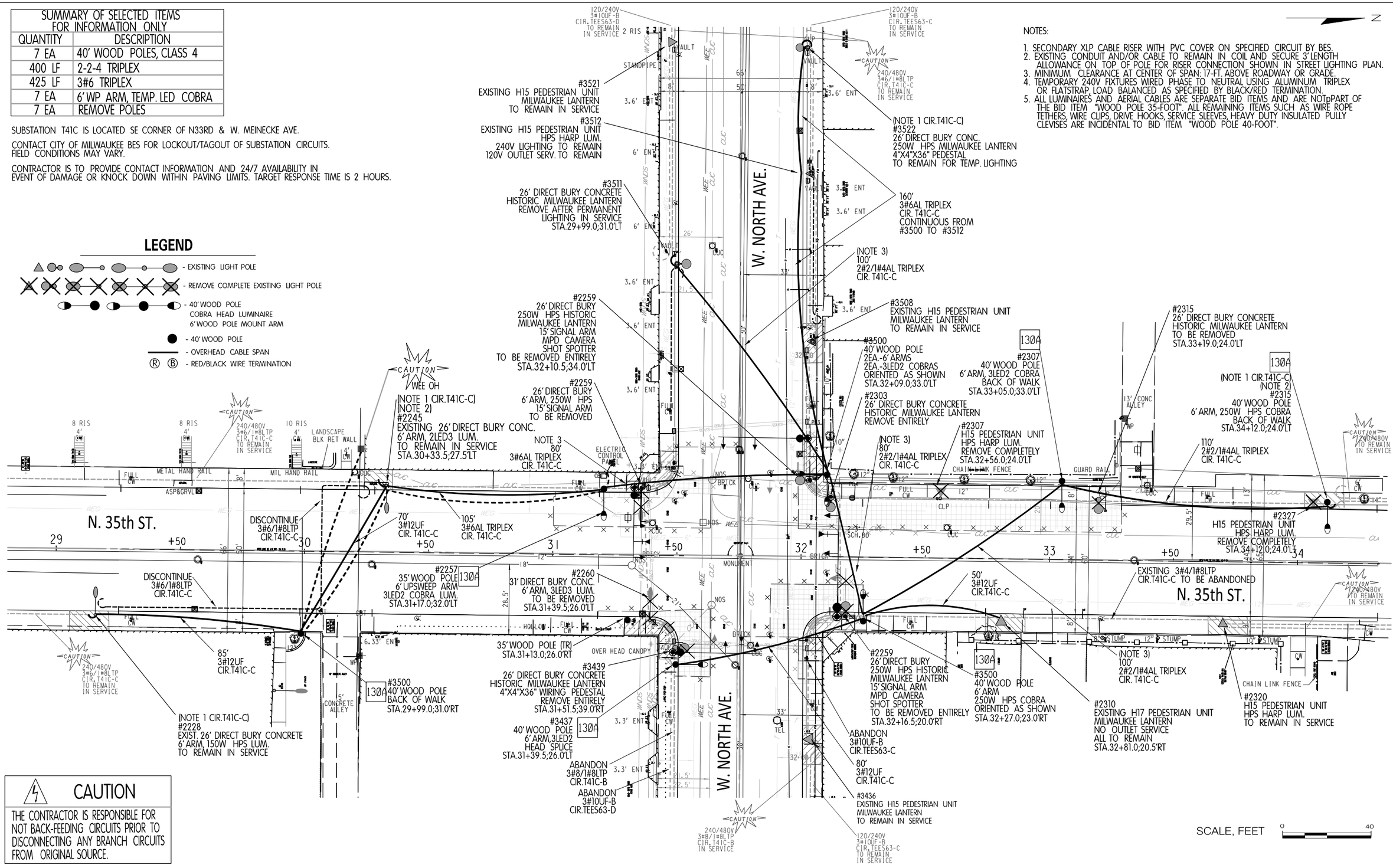
CONTRACTOR IS TO PROVIDE CONTACT INFORMATION AND 24/7 AVAILABILITY IN EVENT OF DAMAGE OR KNOCK DOWN WITHIN PAVING LIMITS. TARGET RESPONSE TIME IS 2 HOURS.

LEGEND

- EXISTING LIGHT POLE
- REMOVE COMPLETE EXISTING LIGHT POLE
- 40' WOOD POLE COBRA HEAD LUMINAIRE 6' WOOD POLE MOUNT ARM
- 40' WOOD POLE
- OVERHEAD CABLE SPAN
- Ⓡ Ⓑ - RED/BLACK WIRE TERMINATION

NOTES:

1. SECONDARY XLP CABLE RISER WITH PVC COVER ON SPECIFIED CIRCUIT BY BES.
2. EXISTING CONDUIT AND/OR CABLE TO REMAIN IN COIL AND SECURE 3' LENGTH ALLOWANCE ON TOP OF POLE FOR RISER CONNECTION SHOWN IN STREET LIGHTING PLAN.
3. MINIMUM CLEARANCE AT CENTER OF SPAN: 17-FT. ABOVE ROADWAY OR GRADE.
4. TEMPORARY 240V FIXTURES WIRED PHASE TO NEUTRAL USING ALUMINUM TRIPLEX OR FLATSTRAP, LOAD BALANCED AS SPECIFIED BY BLACK/RED TERMINATION.
5. ALL LUMINAIRES AND AERIAL CABLES ARE SEPARATE BID ITEMS AND ARE NOTpPART OF THE BID ITEM "WOOD POLE 35-FOOT". ALL REMAINING ITEMS SUCH AS WIRE ROPE TETHERS, WIRE CLIPS, DRIVE HOOKS, SERVICE SLEEVES, HEAVY DUTY INSULATED PULLY CLEVISES ARE INCIDENTAL TO BID ITEM "WOOD POLE 40-FOOT".



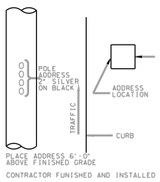
CAUTION

THE CONTRACTOR IS RESPONSIBLE FOR NOT BACK-FEEDING CIRCUITS PRIOR TO DISCONNECTING ANY BRANCH CIRCUITS FROM ORIGINAL SOURCE.

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TEMPORARY STREET LIGHTING	SHEET 39	E

LEGEND

- EXISTING LUMINAIRE & ARM TO BE REMOVED FROM WOOD POLE
- EXISTING STREET LIGHT POLE WITH WIRING PEDESTAL, ARM & LUMINAIRE TO BE REMOVED
- NEW STREET LIGHT POLE HISTORIC LANTERN & HARP
- HDPE CONDUIT SCH 40 UNLESS SPECIFIED
- EXISTING PVC CONDUIT
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- MAST ARM (XX' ARM)
- VAULT TO BE INSTALLED
- STREET LIGHTING (XLP) CABLE INSTALLED
- STREET LIGHTING 8 AWG 5KV CONCENTRIC CABLE INSTALLED
- (B) TERMINATE ON BLACK
- (R) TERMINATE ON RED
- MONOTUBE MAST ARM BASE TO BE INSTALLED WITH HISTORIC LANTERN ARM MOGUL BASE LANTERN TYPE 5 1- 2#12UF W/GND RISER CABLE & 5A FAST ACTING FUSE



N

CAUTION 277/480V TO BE REUSED

EXIST. 3#4/1#8LTP CIR.T27C-D TO REMAIN IN SERVICE

REMOVE 50' FROM CONDUIT 3#8/1#8LTP CIR.T27C-D

123 #3507 H17 PEDESTRIAN POLE HISTORIC MILWAUKEE HARP MOGUL BASE, TYPE 4 REFRACTION 45W SCREW-IN LAMP SURGE SUPRRESSOR 3#12UF INTERNAL RISER STA.09+87.5;88.0'LT

112 | 142 | 145 13"X24"X24" PULL BOX 1.5" FLEX TO CABLE SLOT 8' GRND ROD STA.09+88.5;85.0'LT

#3501 31' BOLT DOWN CONC. TYPE 2 MODIFIED CONC. BASE HISTORIC MILWAUKEE LANTERN MOGUL BASE, TYPE 4 RERACTION HEAVY DUTY BRACKET 54W SCREW-IN LAMP SURGE ARRESTOR 3#12UF INTERNAL RISER STA.09+82.0;53.0'LT — 125 | 146 | 152

4#2/1#8XLPE CIR.T27C-D

#1821 TYPE 10 MONOTUBE TYPE 10 BASE HISTORIC MILWAUKEE LANTERN MOGUL BASE TYPE 4 REFRACTION 3LED SCREW-IN LAMP SURGE SUPPRESSOR 3#12UF INTERNAL RISER — 146

3.0" HDPE SCH.40 — 100

4#2/1#8XLPE CIR.T27C-D

EXISTING #3513 26' DIRECT BURY CONCRETE HISTORIC MILWAUKEE LANTERN LIGHTING IN SERVICE

EXISTING 13"X13"X24" PULL BOX TO REMAIN IN USE

RAISED CONC METAL HAND RAIL

#3516 EXISTING H17 PEDESTRIAN UNIT MILWAUKEE LANTERN TO REMAIN IN SERVICE

EXIST. 3#2/1#8LTP CIR.T27C-E TO REMAIN IN SERVICE

113 | 142 | 145 13"X24"X24" PULL BOX 1.5" FLEX TO CABLE SLOT 8' GRND ROD STA.10+40.5;95.0'LT

123 | 146 #3510 EXISTING H17 PEDESTRIAN UNIT MILWAUKEE LANTERN TO REMAIN IN SERVICE

4#2/1#8XLPE CIR.T27C-E

146 #3500 TYPE 10 MONOTUBE TYPE 10 BASE HISTORIC MILWAUKEE LANTERN MOGUL BASE TYPE 4 REFRACTION 3LED SCREW-IN LAMP SURGE SUPPRESSOR 3#12UF INTERNAL RISER STA.10+33.0;50.5'LT

100 3.0" HDPE SCH.40

100 3.0" HDPE SCH.40

4#2/1#8XLPE CIR.T27C-E

4#2/1#8XLPE CIR.T27C-E

123 | 146 #1837 H17 PEDESTRIAN POLE HISTORIC MILWAUKEE HARP MOGUL BASE, TYPE 4 REFRACTION 45W SCREW-IN LAMP SURGE SUPPRESSOR 3#12UF INTERNAL RISER

113 13"X24"X24" PULL BOX 8' GRND ROD

125 | 146 | 152 #2402 31' BOLT DOWN CONC. TYPE 2 MODIFIED CONC. BASE HISTORIC MILWAUKEE LANTERN MOGUL BASE, TYPE 4 RERACTION HEAVY DUTY BRACKET 54W SCREW-IN LAMP SURGE ARRESTOR 3#12UF INTERNAL RISER STA.11+51.5;25.5'LT

#1 PARKING LOT EXISTING 26' BOLT DOWN ALUM. CONCRETE BASE TO REMAIN IN SERVICE

DIRECT BURY CIR.T27C-D TO BE REUSED

#1805 EXISTING 26' DIRECT BURY CONC. TO REMAIN IN SERVICE

CONC CURB

CHAIN LINK FENCE

HAND RAIL

348-0034 30 #1805

15' CONCRETE ALLEY

A.O.M. ASPHALT PARKING LOT

W. LISBON AVE

N. 35TH ST.

TR PB

VAULT

CLR

FULL CUR

CONCRETE RET. WALL

113 | 142 | 145 13"X24"X24" PULL BOX OVER EXIST. ITEM (3#4/1#8LTP CIR.T27C-D) 1.5" FLEX TO CABLE SLOT 8' GRND ROD STA.09+17.5;19.0'LT

123 EXISTING TO REMAIN #1815 — 146 H17 PEDESTRIAN POLE HISTORIC MILWAUKEE HARP

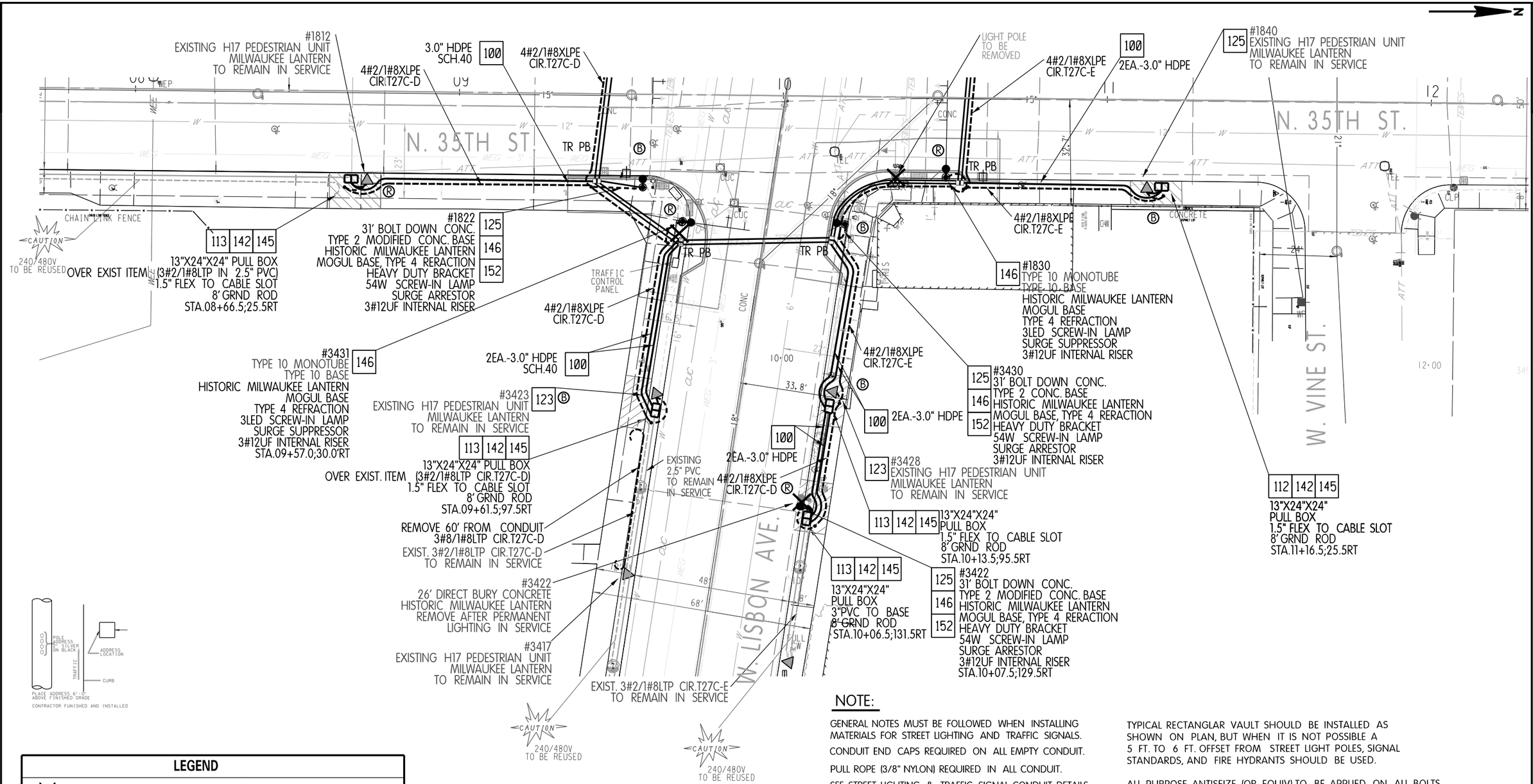
124 | 146 #1831 31' BOLT DOWN CONC. TYPE 2 CONC. BASE HISTORIC MILWAUKEE LANTERN MOGUL BASE, TYPE 4 RERACTION HEAVY DUTY BRACKET 54W SCREW-IN LAMP SURGE ARRESTOR 3#12UF INTERNAL RISER

123 | 142 | 145 13"X24"X24" PULL BOX 1.5" FLEX TO CABLE SLOT 8' GRND ROD

113 | 142 | 145 13"X24"X24" PULL BOX 3"PVC TO BASE 8' GRND ROD STA.11+46.5;24.5'LT

SCALE, FEET 0 30

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING	SHEET 40	E



LEGEND

- EXISTING LUMINAIRE & ARM TO BE REMOVED FROM WOOD POLE
- EXISTING STREET LIGHT POLE WITH WIRING PEDESTAL, ARM & LUMINAIRE TO BE REMOVED
- NEW STREET LIGHT POLE HISTORIC LANTERN & HARP
- HDPE CONDUIT SCH 40 UNLESS SPECIFIED
- EXISTING PVC CONDUIT
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- MAST ARM (XX' ARM)
- VAULT TO BE INSTALLED
- STREET LIGHTING (XLP) CABLE INSTALLED
- STREET LIGHTING 8 AWG 5KV CONCENTRIC CABLE INSTALLED
- (B) TERMINATE ON BLACK
- (R) TERMINATE ON RED
- MONOTUBE MAST ARM BASE TO BE INSTALLED WITH HISTORIC LANTERN ARM MOGUL BASE LANTERN TYPE 5 1- 2#12UF W/GND RISER CABLE & 5A FAST ACTING FUSE

NOTE:

GENERAL NOTES MUST BE FOLLOWED WHEN INSTALLING MATERIALS FOR STREET LIGHTING AND TRAFFIC SIGNALS.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

ALL PURPOSE ANTISEIZE (OR EQUIV) TO BE APPLIED ON ALL BOLTS AND SCREWS ESPECIALLY THE LIGHT POLE HAND HOLE PANEL. OXIDE INHIBITOR OX-4 (OR EQUIV) TO BE APPLIED ON ALL WIRE CONNECTION AND WIRE NUTS. TAG ALL CABLE DIRECTION IN VAULT AND HAND HOLE PANEL.

TYPE 4 LIGHT DISTRIBUTION UNLESS OTHERWISE SPECIFIED.

5A INLINE FUSE HOT LEG ONLY (R OR B) AT EACH HANDHOLE.

SCALE, FEET 0 30

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING	SHEET 41	E

LEGEND

- EXISTING LUMINAIRE & ARM TO BE REMOVED FROM WOOD POLE
- EXISTING STREET LIGHT POLE WITH WIRING PEDESTAL ARM & LUMINAIRE TO BE REMOVED
- NEW STREET LIGHT POLE HISTORIC LANTERN & HARP
- HDPE CONDUIT SCH 40 UNLESS SPECIFIED
- EXISTING PVC CONDUIT
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- MAST ARM (XX' ARM)
- VAULT TO BE INSTALLED
- STREET LIGHTING (XLP) CABLE INSTALLED
- STREET LIGHTING 8 AWG 5KV CONCENTRIC CABLE INSTALLED
- (B) (B) TERMINATE ON BLACK
- (R) (R) TERMINATE ON RED
- MONOTUBE MAST ARM BASE TO BE INSTALLED WITH HISTORIC LANTERN ARM MOGUL BASE LANTERN TYPE 5 1- 2#12UF W/GND RISER CABLE & 5A FAST ACTING FUSE

N

240/480V TO BE REUSED
120/240V OUTLET TO BE REUSED

CAUTION
240/480V TO BE REUSED

108 146 #3511
26' DIRECT BURY CONCRETE
HISTORIC MILWAUKEE LANTERN
3LED SCREW-IN LAMP
SURGE SUPPRESSOR
3#12UF INTERNAL RISER
1.5" FLEX TO CABLE SLOT

EXIST. 13"X24"X24" PB 142 145
ADD 1.5" FLEX TO CABLE SLOT
ADD 8' GROUND ROD
REMOVE EXIST. UF-B & LTP JACKETED CABLE FROM 2.5" PVC (75 FT. EACH)

EXIST. 2.5" PVC TO BE REUSED
3#10UF-B CIR.TEES63-D CONTINUOUS HARP TO HARP UNITS
4#2/1#8XLPE CIR.T41C-D

113 142 145 13"X24"X24" PULL BOX
OVER EXIST. ITEM (3#6/1#8LTP CABLE)
OVER EXIST. ITEM (3#10UF-B OUTLET)
8' GRND ROD
STA.32+01.0;91.0'LT

123 146 #3508
EXISTING H15 PEDESTRIAN UNIT
3#10UF-B OUTLET SERVICE
3LED SCREW-IN LAMP
SURGE SUPPRESSOR
3#12UF INTERNAL RISER
1.5" FLEX TO PULL BOX
STA.32+01.5;89.0'LT

3#10UF-B CIR.TEES63-C CONTINUOUS HARP TO HARP UNITS

146 #3500
TYPE 10 MONOTUBE
TYPE 10 BASE
HISTORIC MILWAUKEE LANTERN
MOGUL BASE
TYPE 4 REFRACTION
3LED SCREW-IN LAMP
SURGE SUPPRESSOR
3#12UF INTERNAL RISER

113 142 145 13"X24"X24" PULL BOX
OVER EXIST. 3#4/1#8LTP
1.5" FLEX
TO CABLE SLOT
STA.33+23.0;25.0LT

100 3.0" HDPE SPECIAL
4#2/1#8XLPE CIR.T41C-C

113 142 145 13"X24"X24" PULL BOX
OVER EXIST. ITEM (2.5" CONDUIT)
1.5" FLEX TO CABLE SLOT
8' GRND ROD
STA.30+32.5;26.0'LT

#3501 125 146 152
31' BOLT DOWN CONC.
TYPE 2 MODIFIEDCONC. BASE
HISTORIC MILWAUKEE LANTERN
MOGUL BASE, TYPE 4 RERACTION
HEAVY DUTY BRACKET
54W SCREW-IN LAMP
SURGE ARRESTOR
3#12UF INTERNAL RISER

DIRECT BURY CIR.T41C-C TO BE REUSED
RIS
4' CW
LANDSCAPE BLK RET WALL
4' CW
ND RAIL

3#2/1#8XLPE CIR.T41C-C
100 3.0" HDPE SCH.40

ELECTRIC CONTROL PANEL
HAND HOLE
CABLE VAULT

TR PB
W. NORTH AVE.
ASPHALT LOT (NO ACCESS)
2-3" SCH.80
NOS BRICK
MONUMENT
SEC WISDOT PID 241090

CHAIN-LINK FENCE
GUARD RAIL
13' CONC ALLEY
327-1216
25
#2319
P.L.
3#4/1#8LTP CIR.T41C-C TO BE REUSED
EXISTING 2.5" PVC TO REMAIN IN SERVICE
CAUTION
240/480V LIGHTING

N. 35th ST.
30 +50 31 +50 32 +50 33 +50 34
N. 35th ST.

#2245 108 146
EXISTING 26' DIRECT BURY CONC.
6' ARM, 2LED3 LUM.
TO REMAIN IN SERVICE
STA.30+33.5;27.0'LT

Ⓡ #2259 146
TYPE 10 MONOTUBE
TYPE 10 BASE
HISTORIC MILWAUKEE LANTERN
MOGUL BASE
TYPE 4 REFRACTION
3LED SCREW-IN LAMP
SURGE SUPPRESSOR
3#12UF INTERNAL RISER

3#10UF-B CIR.TEES63-D CONTINUOUS HARP TO HARP UNITS

Ⓑ #2303 125 146 152
31' BOLT DOWN CONC.
TYPE 2 MODIFIED CONC. BASE
HISTORIC MILWAUKEE LANTERN
MOGUL BASE, TYPE 4 RERACTION
HEAVY DUTY BRACKET
54W SCREW-IN LAMP
SURGE ARRESTOR
3#12UF INTERNAL RISER

112 142 145 13"X24"X24" PULL BOX
1.5" FLEX
TO CABLE SLOT
STA.32+59.0;25.5LT

3#10UF-B CIR.TEES63-C CONTINUOUS HARP TO HARP UNITS

Ⓡ 123 146 #1815
H17 PEDESTRIAN POLE
HISTORIC MILWAUKEE HARP
MOGUL BASE, TYPE 4 REFRACTION
45W SCREW-IN LAMP
SURGE SUPPRESSOR
3#12UF INTERNAL RISER
(NO OUTLET SERVICE)
STA.32+57.0;26.0'LT

Ⓑ #2315 125 146 152
31' BOLT DOWN CONC.
HISTORIC MILWAUKEE LANTERN
MOGUL BASE, TYPE 4 RERACTION
HEAVY DUTY BRACKET
TYPE 2 MODIFIED CONC. BASE
54W SCREW-IN LAMP
SURGE ARRESTOR
3#12UF INTERNAL RISER
STA.33+21.0;25.5LT

REMOVE DIRECT BURY CONC. UNIT COMPLETE AFTER FINAL CONFIG. IN SERVICE

#2327
H17 PEDESTRIAN POLE
HISTORIC MILWAUKEE HARP
MOGUL BASE, TYPE 4 REFRACTION
45W SCREW-IN LAMP
TO REMAIN IN SERVICE

POLE ADDRESS 4" SILVER ON BLACK
ADDRESS LOCATION
TRAFFIC
CURB
PLACE ADDRESS 6'-0" ABOVE FINISHED GRADE
CONTRACTOR FUNISHED AND INSTALLED

NOTE:

GENERAL NOTES MUST BE FOLLOWED WHEN INSTALLING MATERIALS FOR STREET LIGHTING AND TRAFFIC SIGNALS.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

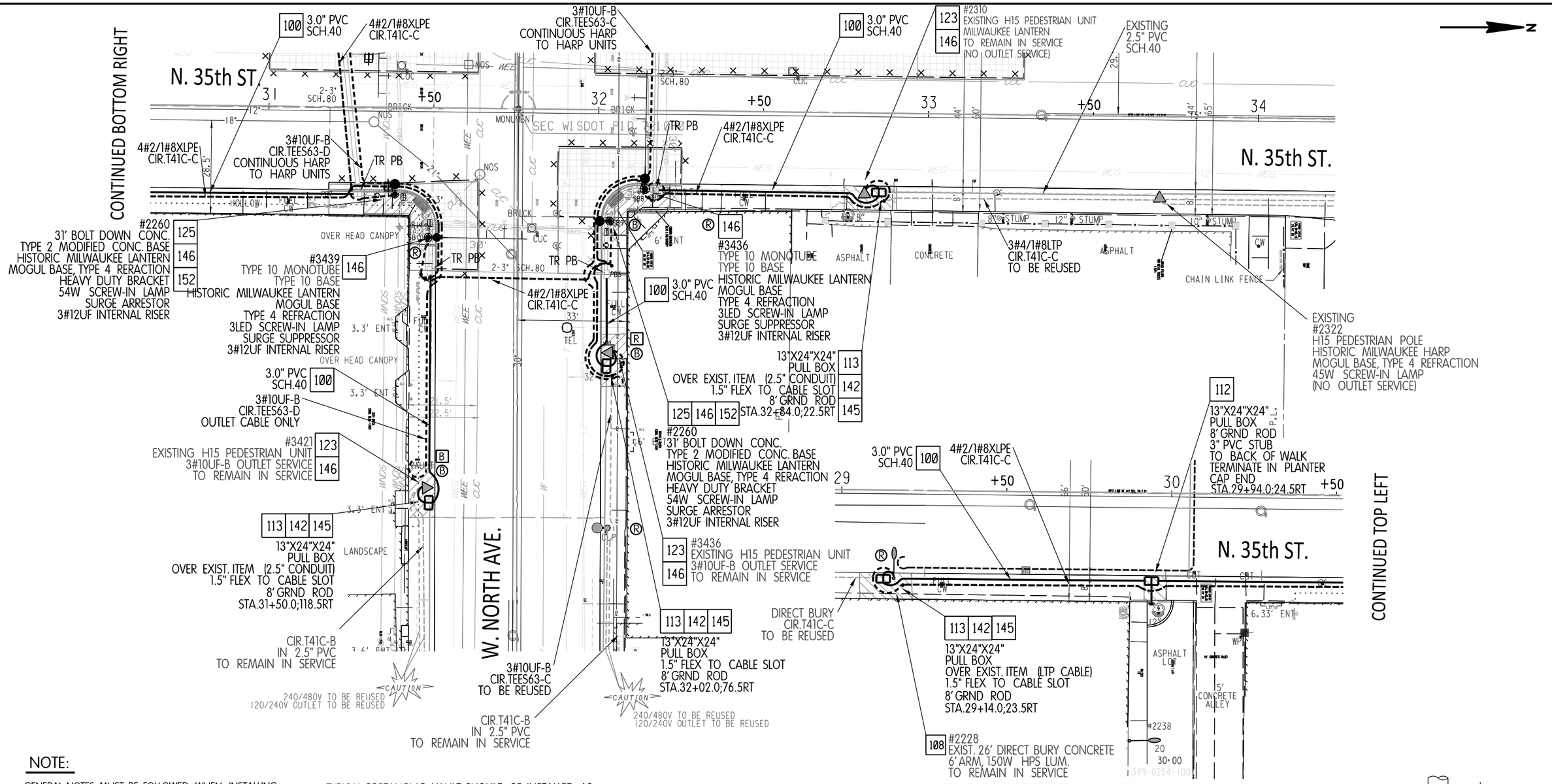
ALL PURPOSE ANTISEIZE (OR EQUIV) TO BE APPLIED ON ALL BOLTS AND SCREWS ESPECIALLY THE LIGHT POLE HAND HOLE PANEL. OXIDE INHIBITOR OX-4 (OR EQUIV) TO BE APPLIED ON ALL WIRE CONNECTION AND WIRE NUTS. TAG ALL CABLE DIRECTION IN VAULT AND HAND HOLE PANEL.

TYPE 4 LIGHT DISTRIBUTION UNLESS OTHERWISE SPECIFIED.

5A INLINE FUSE HOT LEG ONLY (R OR B) AT EACH HANDHOLE.

SCALE, FEET 0 30

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING	SHEET 42	E



NOTE:

GENERAL NOTES MUST BE FOLLOWED WHEN INSTALLING MATERIALS FOR STREET LIGHTING AND TRAFFIC SIGNALS.

CONDUIT END CAPS REQUIRED ON ALL EMPTY CONDUIT.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

SEE STREET LIGHTING & TRAFFIC SIGNAL CONDUIT DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SEE UTILITY SPECIALS FOR ADDITIONAL INFORMATION AND ALL CONTACT NUMBERS.

CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SERVICES FOR FINAL INSPECTION AND APPROVAL OF ALL ELECTRICAL WORK BEFORE ANY MATERIALS ARE COVERED UP OR BACKFILLED.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

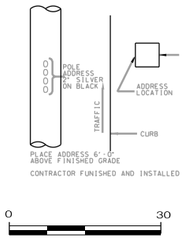
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TYPE 4 LIGHT DISTRIBUTION UNLESS OTHERWISE SPECIFIED.

5A INLINE FUSE HOT LEG ONLY (R OR B) AT EACH HANDHOLE.

LEGEND

- EXISTING LUMINAIRE & ARM TO BE REMOVED FROM WOOD POLE
- EXISTING STREET LIGHT POLE WITH WIRING PEDESTAL, ARM & LUMINAIRE TO BE REMOVED
- NEW STREET LIGHT POLE HISTORIC LANTERN & HARP
- HDPE CONDUIT SCH 40 UNLESS SPECIFIED
- EXISTING PVC CONDUIT
- MONOTUBE MAST ARM BASE TO BE INSTALLED
- XX' ARM - MAST ARM
- VAULT TO BE INSTALLED
- STREET LIGHTING (XLP) CABLE INSTALLED
- STREET LIGHTING 8 AWG 5KV CONCENTRIC CABLE INSTALLED
- B B - TERMINATE ON BLACK
- R R - TERMINATE ON RED
- MONOTUBE MAST ARM BASE TO BE INSTALLED WITH HISTORIC LANTERN ARM MOGUL BASE LANTERN TYPE 5 1- 2#12UF W/GND RISER CABLE & 5A FAST ACTING FUSE



SCALE, FEET 0 30

PROJECT NO: 2984–21–72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	STREET LIGHTING	SHEET 43	E

TRAFFIC SIGNAL GENERAL NOTES:

1 PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

2 THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

3 TRAFFIC SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

4 ALL CHANGES OR ANY DEVIATIONS FROM PLANS MUST BE APPROVED BY TRAFFIC ENGINEERING.

5 DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

6 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF TRAFFIC FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE TRAFFIC DESIGN WITHOUT THE TRAFFIC ENGINEERS SIGNED APPROVAL.

7 LOCATIONS OF THE HDPE AND NONMETALLIC PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE CITY OF MILWAUKEE DPW TRAFFIC, APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

8 CONDUIT INSTALLED BEHIND CURB AND UNDER DRIVEWAYS SHALL BE INSTALLED AT A DISTANCE OF MINIMUM OF 6 INCHES AWAY FROM THE BACK OF CURB TO THE CENTER LINE OF CONDUIT, AND MINIMUM 24 INCHES DOWN MEASURED FROM THE TOP OF CURB OR FINISHED GRADE TO THE TOP OF CONDUIT.

9 DEPTH OF CONDUIT INSTALLED BELOW STREETS, HIGHWAYS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE) IF THE CONTRACTOR DOES ANY DEVIATION FROM THE TRAFFIC DESIGN WITHOUT THE TRAFFIC ENGINEERS SIGNED APPROVAL.

10 CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

11 WHEN THERE IS MORE THAN ONE CONDUIT TO BE INSTALLED, PLACE ALL CONDUITS IN THE SAME TRENCH, OR BORE MULTIPLE CONDUITS TOGETHER AT THE SAME TIME.

12 CONDUIT INSTALLATION THAT REQUIRE TRENCHING SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

13 ANY EXCEPTION TO THE MINIMUM OR MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE STREET LIGHTING ENGINEER.

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

15 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

16 PRIOR TO CONDUIT ACCEPTANCE, ALL OPEN CONDUIT ENDS, AND UN-TERMINATED CONDUITS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

18 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

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

20 UNLESS THE CONDUIT IS DESIGNED AND SHOWN WITH BENDS ON THE PLANS, ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO CONCRETE BASE, AND PULL BOX TO ENCLOSURE. OTHERWISE IT MUST BE APPROVED BY THE TRAFFIC ENGINEER.

TRAFFIC SIGNAL GENERAL NOTES:

21 MINIMUM CONDUIT CLEARANCES FOR CONDUIT CROSSINGS AND PULL BOXES FROM THE FOLLOWING:
FIRE HYDRANTS: 6-FT TREE TRUNKS: 10-FT END OF DRIVEWAY FLARES: 6-FT
UNLESS NOTED OTHERWISE, OR APPROVED BY THE TRAFFIC ENGINEER.

22 HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED AND WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM BEING INSTALLED. COORDINATE ALL WORK NEAR GAS LINES WITH WE ENERGIES.

23 TYPICAL RECTANGULAR PULL BOXES / VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

23 ALL HDPE OR NONMETALLIC PVC CONDUITS THAT CONNECT TO PULL BOXES REQUIRE A PVC END BELL CONNECTOR INSIDE THE PULL BOX

24 PROVIDE REMOVABLE SEALANT SUCH AS DUCT SEAL IN THE CONDUITS AT THE CABINETS, PULL BOXES AND JUNCTION BOXES TO AVOID CONDENSATION CAUSED BY AIRFLOW THROUGH THE CONDUITS DUE TO TEMPERATURE DIFFERENCE. THIS WORK SHALL BE INCIDENTAL TO ASSOCIATED CONDUIT PAY ITEM.

25 PROVIDE 3 INCH PVC SCHEDULE 40 CONDUIT ELBOWS IN ALL GROUND MOUNTED CONCRETE LIGHT BASES FOR CABLE IN DUCT TYPE INSTALLATION. THIS WORK IS INCIDENTAL TO CONCRETE BASES PAY ITEMS.

26 AT EACH SIGNAL STANDARD BASE PROVIDE 2 INCH PVC SCHEDULE 40 CONDUIT FROM PULL BOX TO SIGNAL STANDARD BASE. INSTALLATION OF PULL BOX AND CONDUIT ARE INCIDENTAL TO SIGNAL STANDARD BASE INSTALLATION WORK.

27 UNDERGROUND WIRE & CONDUIT SHOWN ON PLANS TO BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

28 LIGHT POLES INSTALLED BEHIND THE CURB NEED TO BE SET 30 INCHES BACK FROM FACE OF CURB TO CENTER OF POLE, SO TO MEET THE MINIMUM DISTANCE OF 24 INCHES FROM THE CURB FACE TO THE CURB SIDE FACE OF THE POLE.

29 ON ALL NEW STREET LIGHT POLES A PLAQUE WITH THE POLE NUMBER AS SHOWN ON THE PLANS SHALL BE AFFIXED ONTO THE POLE SHAFT AS PART OF POLE INSTALLATION.

30 ALL WIRE CONNECTIONS REQUIRE ANTI-OXIDANT TO BE APPLIED TO THE CONNECTIONS

31 ALL HARDWARE NUT AND BOLT CONNECTIONS REQUIRE ANTI SEIZE TO BE APPLIED TO THEM

32 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND PULL BOXES/ VAULTS/ MANHOLES WITH CITY OF MILWAUKEE TRAFFIC. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

33 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL PULL BOXES / VAULTS, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONCRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
TRAFFIC SIGNALS - RUDY GUTIERREZ (OFFICE) 414-286-5941 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

34 CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS FOR ALL WORK BEING DONE DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE (.PDF FORMAT) COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE CITY OF MILWAUKEE DPW ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

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TRAFFIC SIGNAL GENERAL NOTES:

AS-BUILT GUIDELINES:

PROVIDE AS-BUILT DRAWINGS DETAILING THE FINAL PLACEMENT OF CONDUIT, CABLING, EQUIPMENT, AND GEOMETRIC MODIFICATIONS UNDER THE CONTRACT. PROVIDE PDF COPY CONFORMING TO CMM 1-65.14, OR RECORD ALL CHANGES IN RED INK ONLY ON THE AS-LET (DESIGN) PAPER DRAWINGS. THE ENGINEER WILL REJECT AS-BUILTS WITH INCOMPLETE OR INCORRECT CONTENT OR NOT CONFORMING TO CMM STANDARDS.

UPON PROJECT COMPLETION, FOLLOW THE WISDOT REQUIREMENTS PER CMM 165.12 AS-BUILT PLANS, THE PROJECT ENGINEER AND/OR ELECTRICAL CONTRACTOR SHALL SUBMIT AN ELECTRONIC AS-BUILT PLAN. ANY CHANGES FROM THE AS-LET PLAN THAT WERE BUILT INTO THE PROJECT SHOULD BE RECORDED IN RED USING ADOBE ACROBAT PROFESSIONAL OR EQUIVALENT SOFTWARE. DO NOT SCAN FIELD NOTES TO CREATE THE DIGITAL AS-BUILT PLAN.

IF THERE IS A STRUCTURE DRAWING, INCLUDE ALL STRUCTURES DRAWING SHEETS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSERT ANY ADDENDUM OR REPLACEMENT DRAWING SHEETS. TO DO THIS, RENUMBER THEM SIMILARLY TO THE ORIGINAL DRAWING SHEET.
  FOR EXAMPLE:
  REVISED SHEET 5 WOULD REPLACE SHEET 5. HOWEVER, ALL THE ORIGINAL SHEETS SHALL REMAIN IN THE AS-BUILT. IF THE SHEET HAS BEEN REPLACED CROSS IT OUT WITH AN X AND INDICATE THE NUMBER OF ITS REPLACEMENT SHEET. IF ADDITIONAL SHEETS WERE ADDED, INSERT THEM IN THE ORIGINAL LOCATION AND LABEL THEM WITH THE PREVIOUS SHEET NUMBER FOLLOWED BY AN "A", "B", "C", ETC.

NOTE THE SHEET CHANGES ON THE TITLE SHEET UNDER THE ORDER OF SHEETS.

THE TITLE SHEET OF THE AS-BUILT DRAWING SHOULD INCLUDE THE FOLLOWING INFORMATION:
  AS-BUILT DRAWING
  SUPERVISOR:
  PROJECT MANAGER:
  CONTRACTOR LEADER:
  CONTRACTOR COMAPNY:
  WORK STARTED:
  WORK COMPLETED:

LINE OUT OR CROSS OUT ALL CHANGED INFORMATION AND WRITE-IN THE CORRECTED INFORMATION ABOVE THE ORIGINAL OR CLOSE TO IT WHEREVER POSSIBLE. USE BLANK SPACES ON THE DRAWING SO NOTES ARE NOT SUPERIMPOSED. DRAWINGS WITH EXCESSIVE DETAIL MAY REQUIRE AN ALTERNATE APPROACH. NUMBERED CHANGES OR ADDITIONS MAY BE SHOWN ON SUPPLEMENTAL NON-DRAWING SHEETS.

- LOCATE AND CLEARLY LABEL ALL CONDUIT RUNS, FITTINGS, SPLICE VAULTS, PULL BOXES, METER PEDESTALS CONCRETE BASES, TRANSFORMERS, POLES AND OTHER APPURTENANCES IN TWO DIRECTIONS. SWING TIES SHOULD BE MADE FROM THE OBJECTS THAT ARE PERMANENT IN NATURE AND VISIBLE ON THE FINISHED SURFACE.

- STREET NAMES SHALL BE ON ALL SHEETS.

- SHOW ALL SIZES AND MATERIAL TYPES OF PIPES AND CONDUITS, IF CHANGED OR MODIFIED FROM ORIGINAL DESIGN.

- ALL HORIZONTAL DISTANCES SHALL BE SHOWN TO THE NEAREST TENTH OF A FOOT (I.E., 205.3').
  ALL VERTICAL DISTANCES SHALL BE TO THE NEAREST INCH (I.E., 24")

- SHOW LOCATION AND ELEVATIONS ON CONDUIT AND FITTINGS WHERE CHANGES OR DEFLECTIONS IN DIRECTION OCCUR.

- SPECIAL DETAIL DRAWINGS MAY BE REQUIRED WHERE INSTALLATIONS ARE NOT SHOWN ON APPROVED CONSTRUCTION DRAWINGS FOR WHATEVER REASON OR WHERE REQUIRED FOR CLARITY.

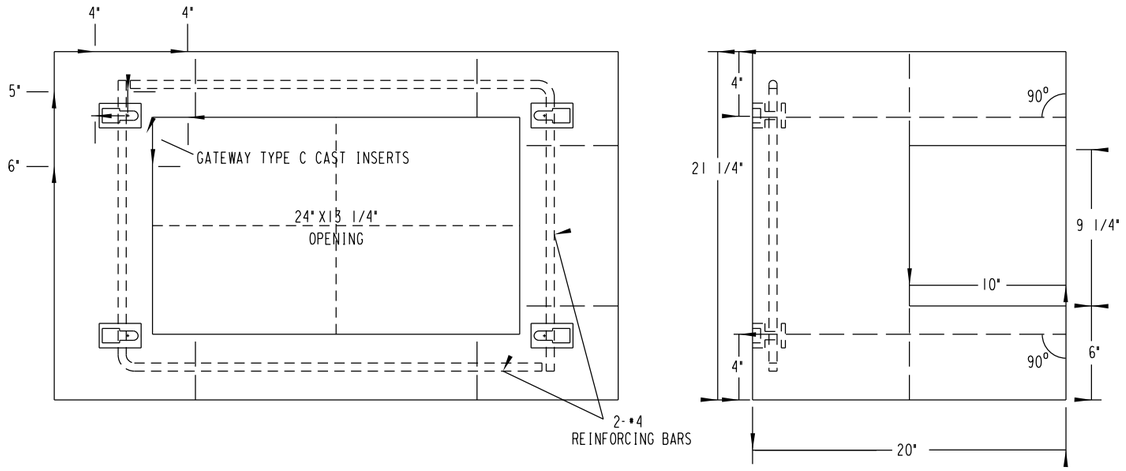
- TYPICAL SERVICE INSTALLATION DETAILS WITH DEVIATIONS FROM ORIGINAL PLANS OR STANDARD DETAILS SHALL BE NOTED ON AS-BUILT DRAWINGS.

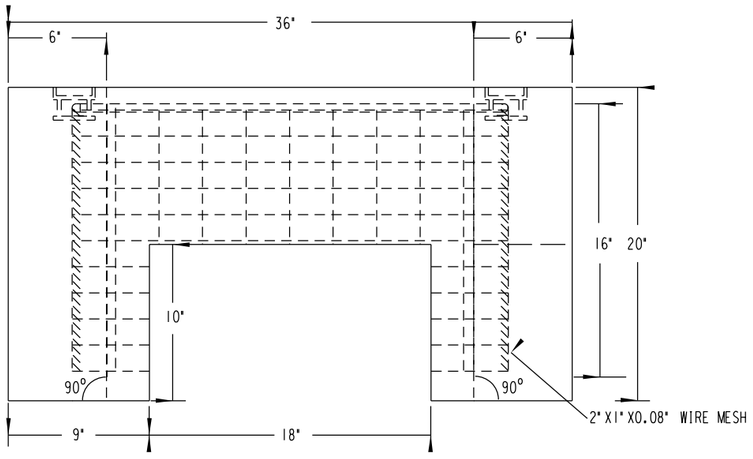
- NO ARBITRARY MARK-UPS WILL BE PERMITTED.

IF THERE ARE NO CORRECTIONS OR ADDITIONS TO THE AS-LET PLAN(S) PUT "NO CHANGE" ON THE SHEET WITH ALL OTHER REQUIRED AS-BUILT INFORMATION.

BY MAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
841 NORTH BROADWAY, ROOM 701
MILWAUKEE, WISCONSIN 53202

BY EMAIL SEND TO:
CITY OF MILWAUKEE
INFRASTRUCTURE SERVICES DIVISION
TRANSPORTATION SECTION - CONSTRUCTION
CHIEF CONSTRUCTION ENGINEER
PAUL KELTNER
PKELTN@MILWAUKEE.GOV





NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE XXXX-XXX PRE-CAST CONCRETE FOUNDATION TRAFFIC SIGNAL CABINETS P1 AND P2				
TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 8-30-16	SCALE N.T.S.	DRAWN JAB/JOZ	CHECKED SCR	APPROVED JCB
SUPERSEDES	REVISED DATE	DRG.		
SUPERSEDED BY	NEW DRG.	C-16-500-T		

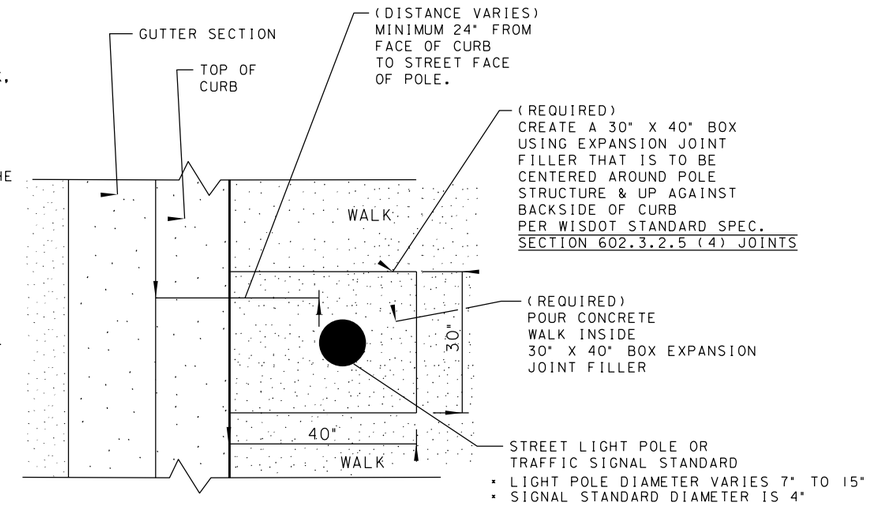
125 DETAIL

TYPICAL TRAFFIC CONTROL
CABINET CONRETE FOUNDATION

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION
FROM TRAFFIC SIGNAL FORCES.
CONTACT DISPATCHER AT (414) 286-3687 FOR SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.



122 DETAIL VERSION #1

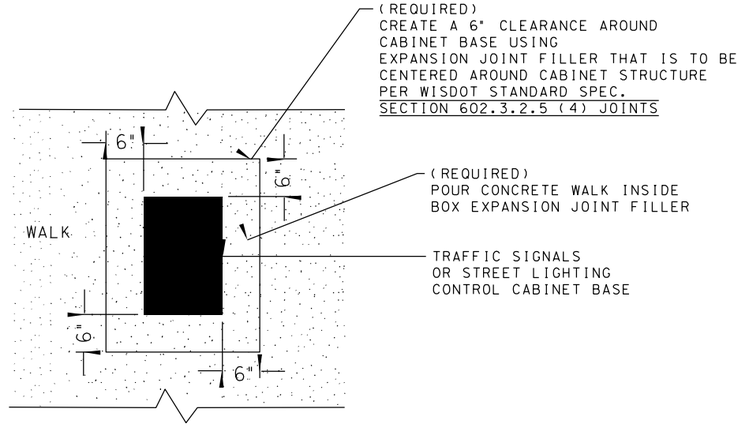
TYPICAL BOX EXPANSION JOINT FILLER
AROUND TRAFFIC SIGNAL
OR STREET LIGHTING CONTROL FACILITIES

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.

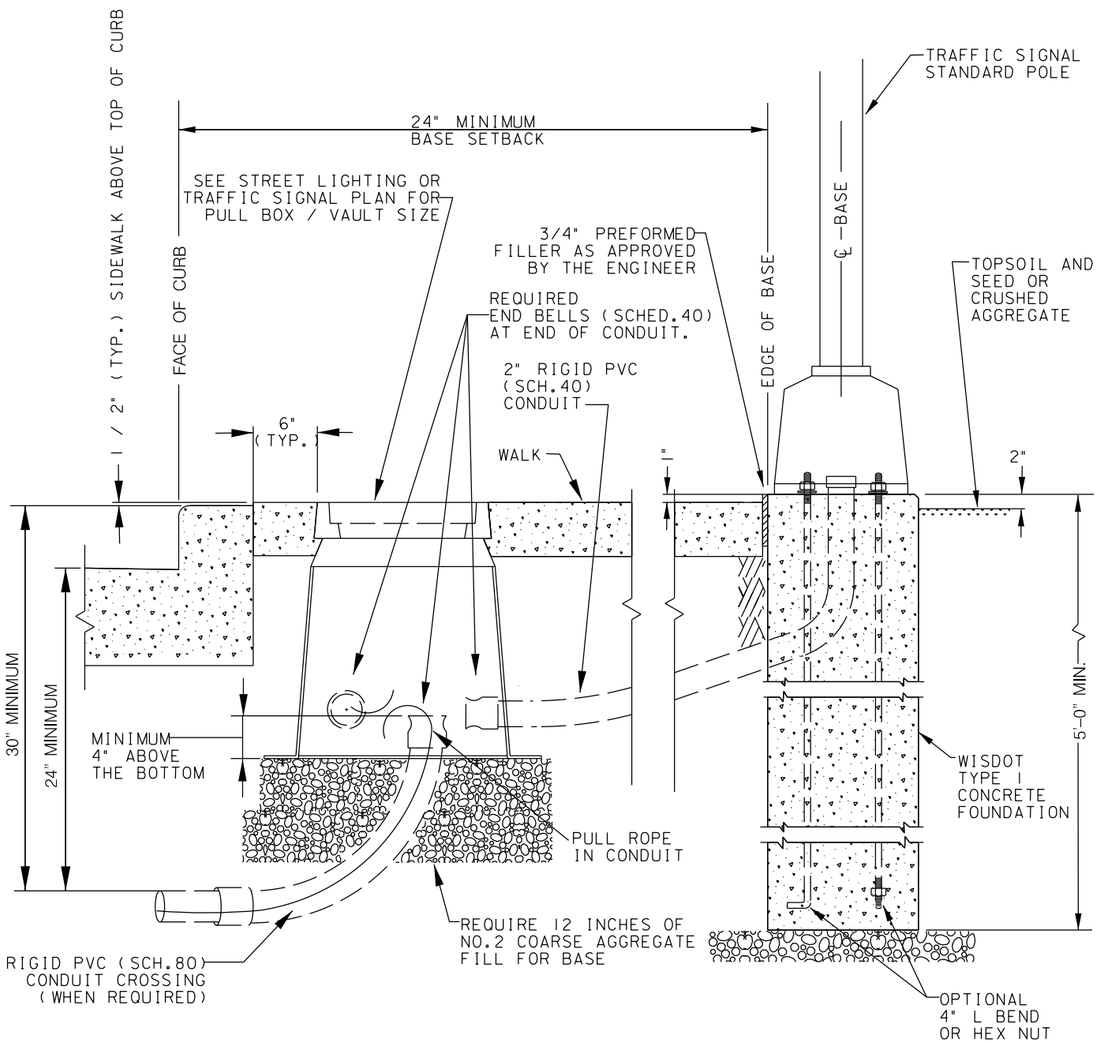


122 DETAIL VERSION #2

TYPICAL BOX EXPANSION JOINT FILLER
AROUND TRAFFIC SIGNAL
OR STREET LIGHTING CONTROL CABINET

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

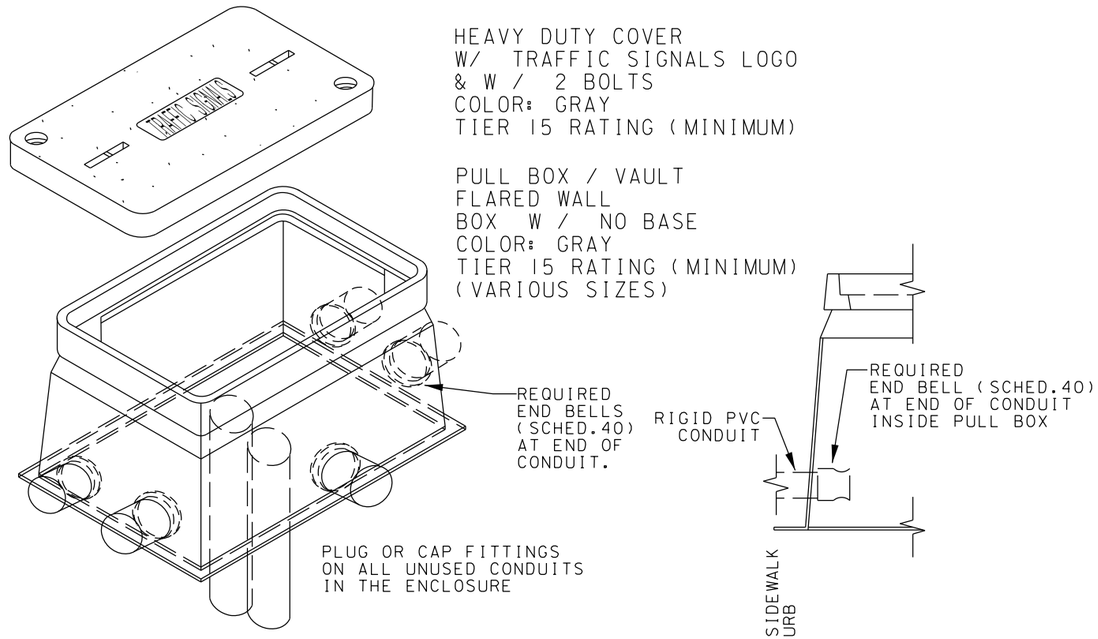


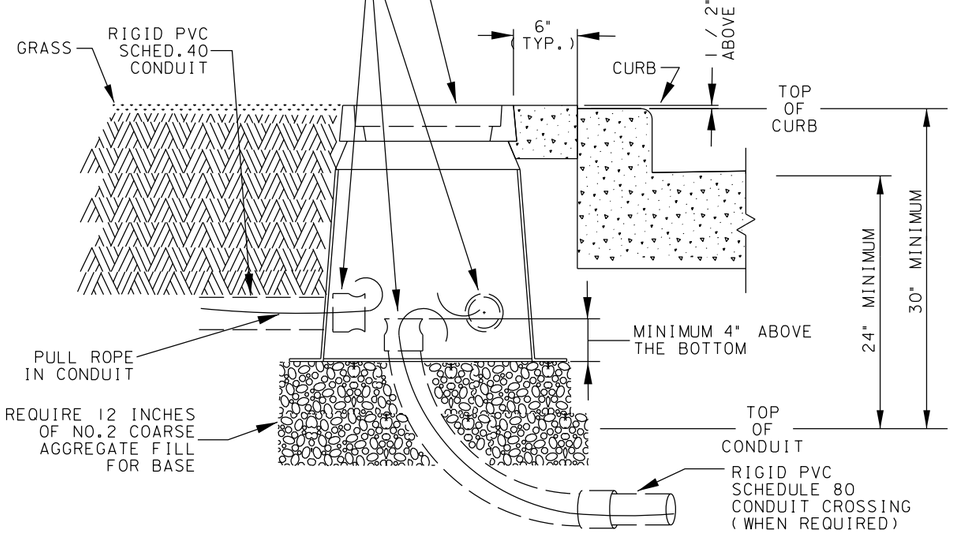
109 DETAIL

TYPICAL CONDUIT INSTALLATION FROM PULL BOX / VAULT TO SIGNAL STANDARD AND TYPICAL BASE INSTALLATION

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE





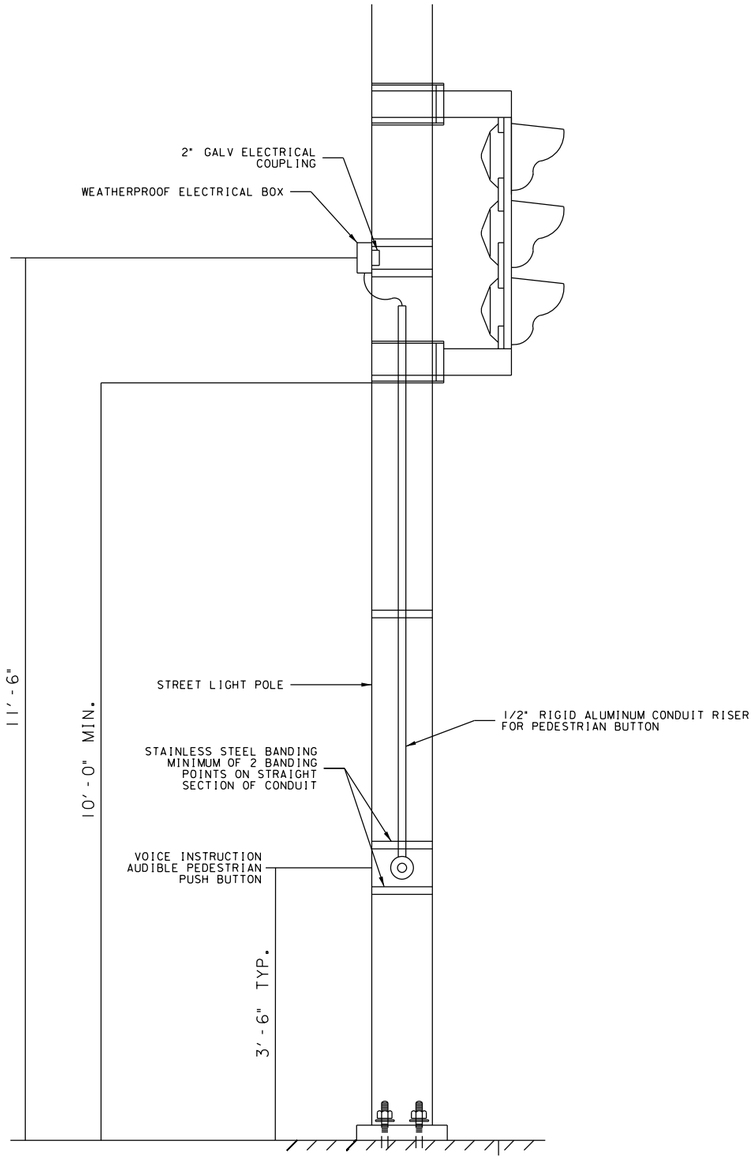
112 DETAIL

TYPICAL PULL BOX / VAULT INSTALLATION IN EITHER PAVEMENT OR GRASS AREAS

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

NOT TO SCALE

2

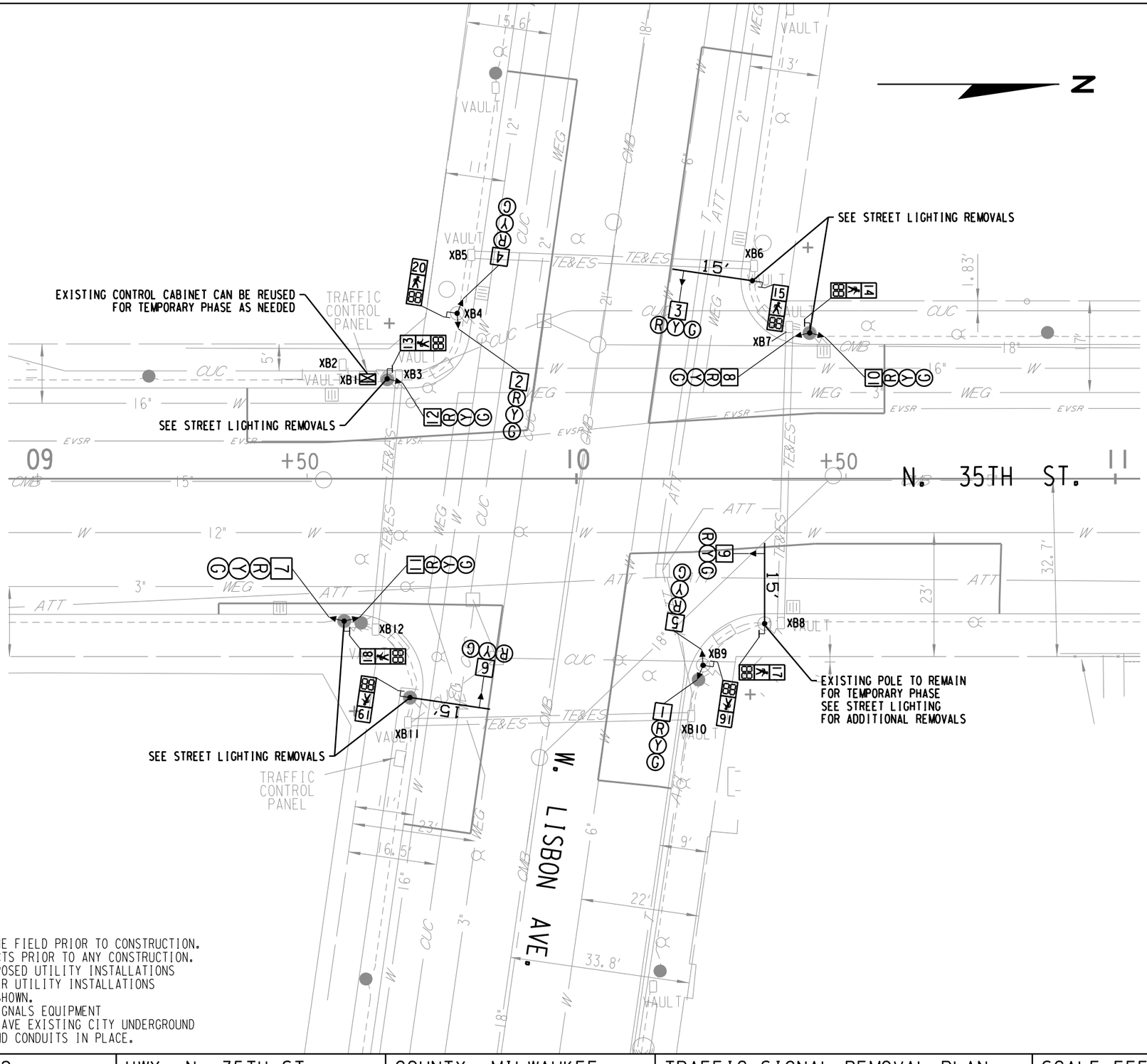


ELECTRICAL RISER

NOT TO SCALE

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET 48	E

2



CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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. REMOVE ALL ABOVE-GROUND TRAFFIC SIGNALS EQUIPMENT
4. REMOVE ALL CONDUCTORS AND WIRE. LEAVE EXISTING CITY UNDERGROUND CONDUIT (CUC) AND OTHER UNDERGROUND CONDUITS IN PLACE.

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SCALE FEET 0 20	SHEET 49	E

2

N

LEGEND

- TEMPORARY CONTROL CABINET
- (XX) PROPOSED MONOTUBE BASE, POLE, ARM
- 40' CLASS 4 WOOD POLE
- OVERHEAD TRAFFIC CABLE
- SIGNAL HEAD
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"

40' WOOD POLE STA. 9+69.28' LT

SERVICE POLE

40' WOOD POLE STA. 10+40.39' LT

TSB1 TSB2 TSB3 TSB4 TSB5 TSB6 TSB7 TSB8

TCB1

EXISTING CONTROL CABINET CAN BE USED AS NEEDED

40' WOOD POLE STA. 9+59.37' RT

EXISTING POLE TO BE USED DURING TEMPORARY PHASE

N. 35TH ST.

W. LISBON AVE.

CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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. TEMPORARY TRAFFIC SIGNALS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
4. ADJUST LOCATIONS OF THE MOVEABLE SIGNALS TO ACCOMODATE TRAFFIC DURING STAGING.
5. CITY OF MILWAUKEE SHALL BE NOTIFIED 5 WORKING DAYS PRIOR TO TEMPORARY TRAFFIC SIGNALS TRANSITION

TEMPORARY TRAFFIC CONTROL SIGNAL
W. LISBON AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:

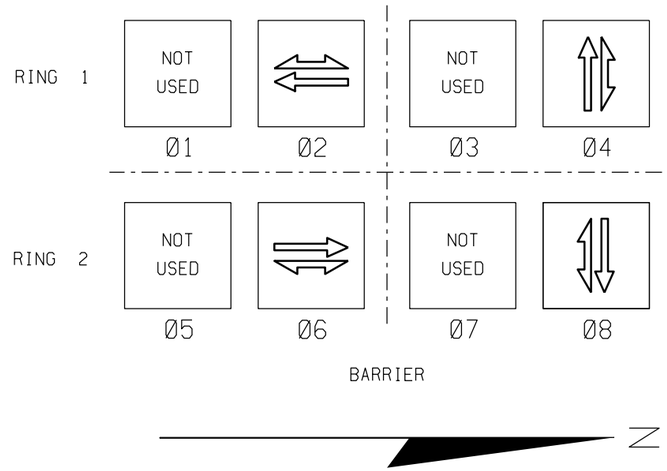
REGIONAL CONTACT: SCOTT REINBACHER
DESIGNED BY: JOZ
REVISED BY:

PAGE NO. 1 OF 1

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL TEMPORARY PLAN	SCALE FEET 0 20	SHEET 50 E

	HEAD NUMBERS	FLASH
Ø2	10,11,12	R
Ø4	1,2,3	R
Ø6	7,8,9	R
Ø8	4,5,6	R
Ø2P	13,14	
Ø4P	15,16	
Ø6P	17,18	
Ø8P	19,20	

SEQUENCE OF OPERATION



CONTROLLER LOGIC

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

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- -	

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

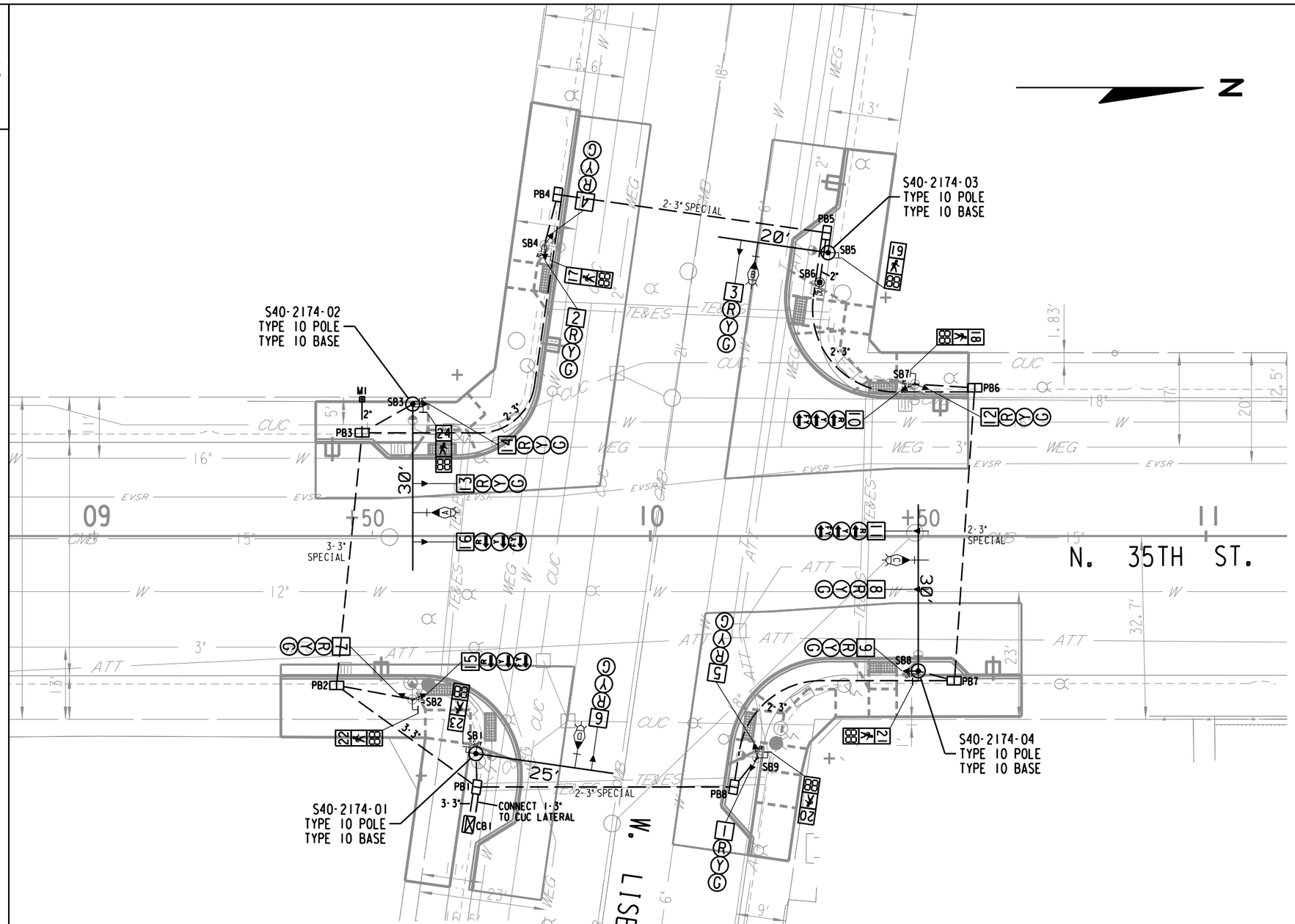
TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE LIGHTING CABINET	X

W. LISBON AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TEMP
	CONTROLLER TYPE: TEMP
DATE: 2/2025	PAGE NO. 1 OF 1

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERAITONS	SHEET 51	E

2



LEGEND

- CABINET
- (XX) MONOTUBE BASE, POLE, 15'-45' ARM
- CONCRETE POLYMER PULL BOX 17"X30"X24"
- NONMETALLIC CONDUIT 3", UNLESS OTHERWISE NOTED
- TRAFFIC SIGNAL HEAD
- STREET LIGHT BASE, POLE
- STREET LIGHT LUMINAIRE UNIT
- M METER PEDESTAL
- APS ACCESSIBLE PEDESTRIAN SIGNAL WITH PUSH BUTTON
- XX SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- RED ARROWS
- YELLOW ARROWS
- GREEN ARROWS
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"
- CONFIRMATION LIGHT
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD

CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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 CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 DAYS PRIOR TO PLACING SIGNAL CABLES INTO SYSTEM. CONTACT THE CITY OF MILWAUKEE TO MAKE ARRANGEMENTS.
4. REFER TO STREET LIGHTING PLANS TO COORDINATE INSTALLATION

TRAFFIC CONTROL SIGNAL
W. LISBON AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:

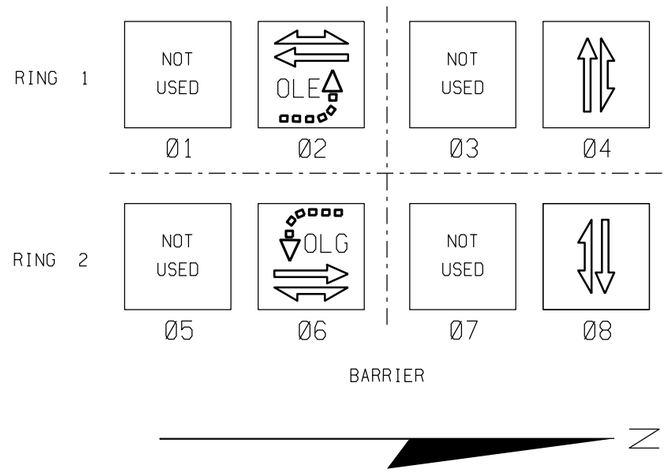
REGIONAL CONTACT: SCOTT REINBACHER
DESIGNED BY: JOZ
REVISED BY:

PAGE NO. 1 OF 2

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SCALE FEET 0 20	SHEET 52 E

	HEAD NUMBERS	FLASH
Ø2	12,13,14	R
OLE	10,11	R
Ø4	1,2,3	R
Ø6	7,8,9	R
OLG	15,16	R
Ø8	4,5,6	R
Ø2P	17,18	R
Ø4P	19,20	R
Ø6P	21,22	R
Ø8P	23,24	R

SEQUENCE OF OPERATION



CONTROLLER LOGIC

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

OVERLAPS

O.L.	"E"	-	NB	FYA
O.L.	"G"	-	SB	FYA

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	X
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- .	

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL	
	A/C	B/D
MOVEMENT	← →	↓ ↑
PHASE	2-6	4-8

W. LISBON AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TS2
	CONTROLLER TYPE: ECONOLITE
DATE: 2/2025	PAGE NO. 2 OF 2

PROJECT ID:	2984-21-72
INTERSECTION:	N. 35TH ST. & W. LISBON AVE.

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

DATE: 4/3/2025

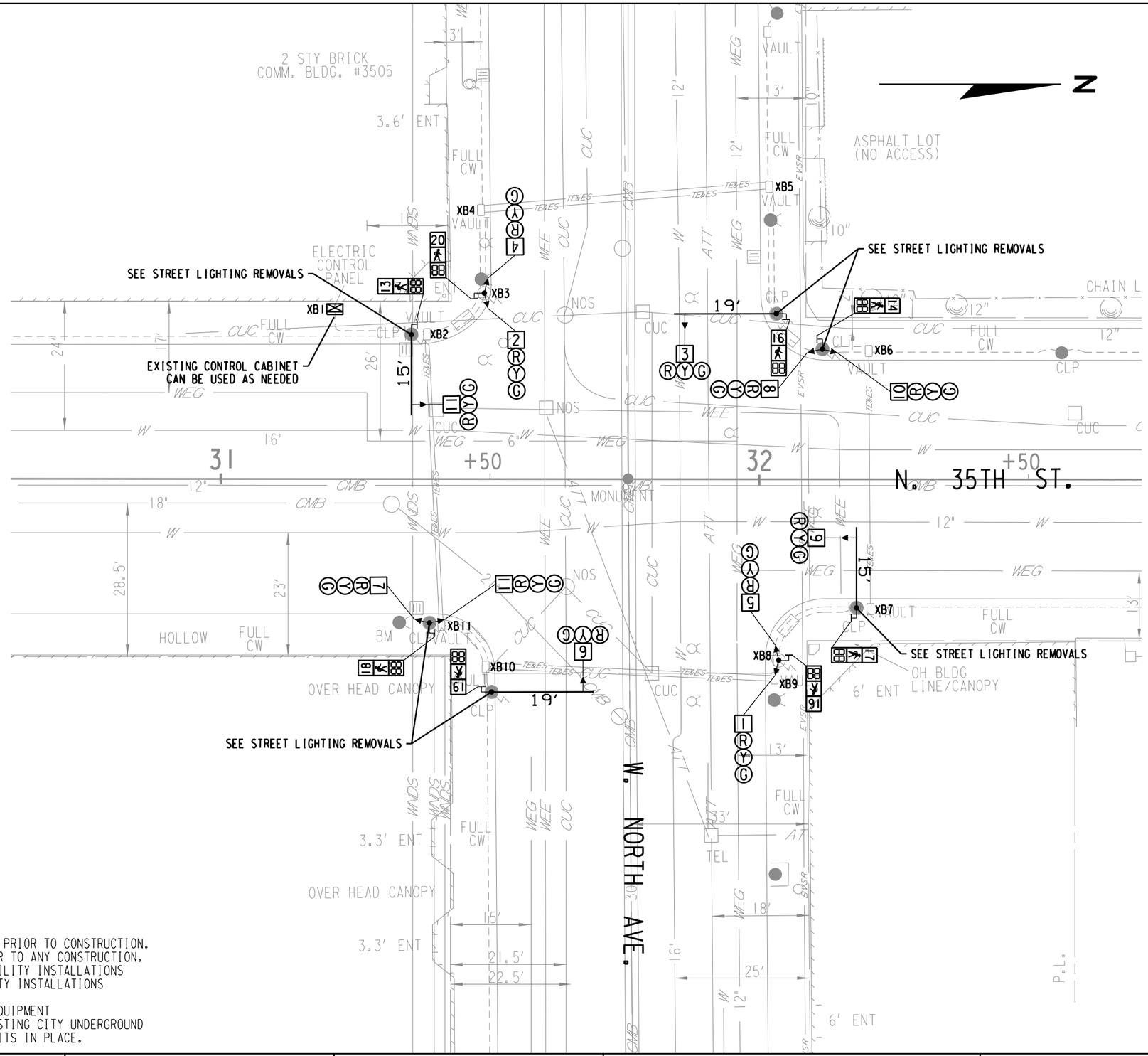
CB__ TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON
					RED	YELLOW	GREEN	<RED	<YELLOW>	<FLASH YELLOW>	D/WALK	WALK	
SB1		19	6	8	RED	ORG	GRN						
			23	8							BLU	BLK	
			APS	6									BLK/WHT
			PUSH BUTTON	6									WHT/BLK
SB2		19	7	6	RED	ORG	GRN						
			15	OLG				RED/BLK	ORG/BLK	GRN/BLK			
			22	6							BLU	BLK	
			APS	8									BLK/WHT
			PUSH BUTTON	8									WHT/BLK
SB3		21	13	2	RED	ORG	GRN						
			14	2	RED/BLK	ORG/BLK	GRN/BLK						
			16	OLG				RED/WHT	BLU/WHT	GRN/WHT			
			24	8							BLU	BLK	
			APS	8									BLK/WHT
			PUSH BUTTON	8									WHT/BLK
SB4		19	2	4	RED	ORG	GRN						
			4	8	RED/BLK	ORG/BLK	GRN/BLK						
			17	2							BLU	BLK	
			APS	2									BLK/WHT
			PUSH BUTTON	2									WHT/BLK
SB5		19	3	4	RED	ORG	GRN						
			19	4							BLU	BLK	
	SB6	9	APS	2									BLK/WHT
			PUSH BUTTON	2									WHT/BLK
SB7		19	10	OLE				RED	ORG	GRN			
			12	2	RED/BLK	ORG/BLK	GRN/BLK						
			18	2							BLU	BLK	
			APS	4									BLK/WHT
			PUSH BUTTON	4									WHT/BLK
SB8		21	8	6	RED	ORG	GRN						
			9	6	RED/BLK	ORG/BLK	GRN/BLK						
			11	OLE				RED/WHT	BLU/WHT	GRN/WHT			
			21	6							BLU	BLK	
			APS	4									BLK/WHT
			PUSH BUTTON	4									WHT/BLK
SB9		19	1	4	RED	ORG	GRN						
			5	8	RED/BLK	ORG/BLK	GRN/BLK						
			20	4							BLU	BLK	
			APS	6									BLK/WHT
			PUSH BUTTON	6									WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	CB1

EMERGENCY VEHICLE PREEMPTION AND UF 2-12 CONFIRMATION	
FROM	TO
CB1	SB1
SB1	HEAD D
CB1	SB3
SB3	HEAD A
CB1	SB5
SB5	HEAD B
CB1	SB8
SB8	HEAD C

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS. TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUC
4. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.
5. SPV.0090.240 IS WIRED FROM CONTROLLER CABINET TO METER PEDESTAL

2

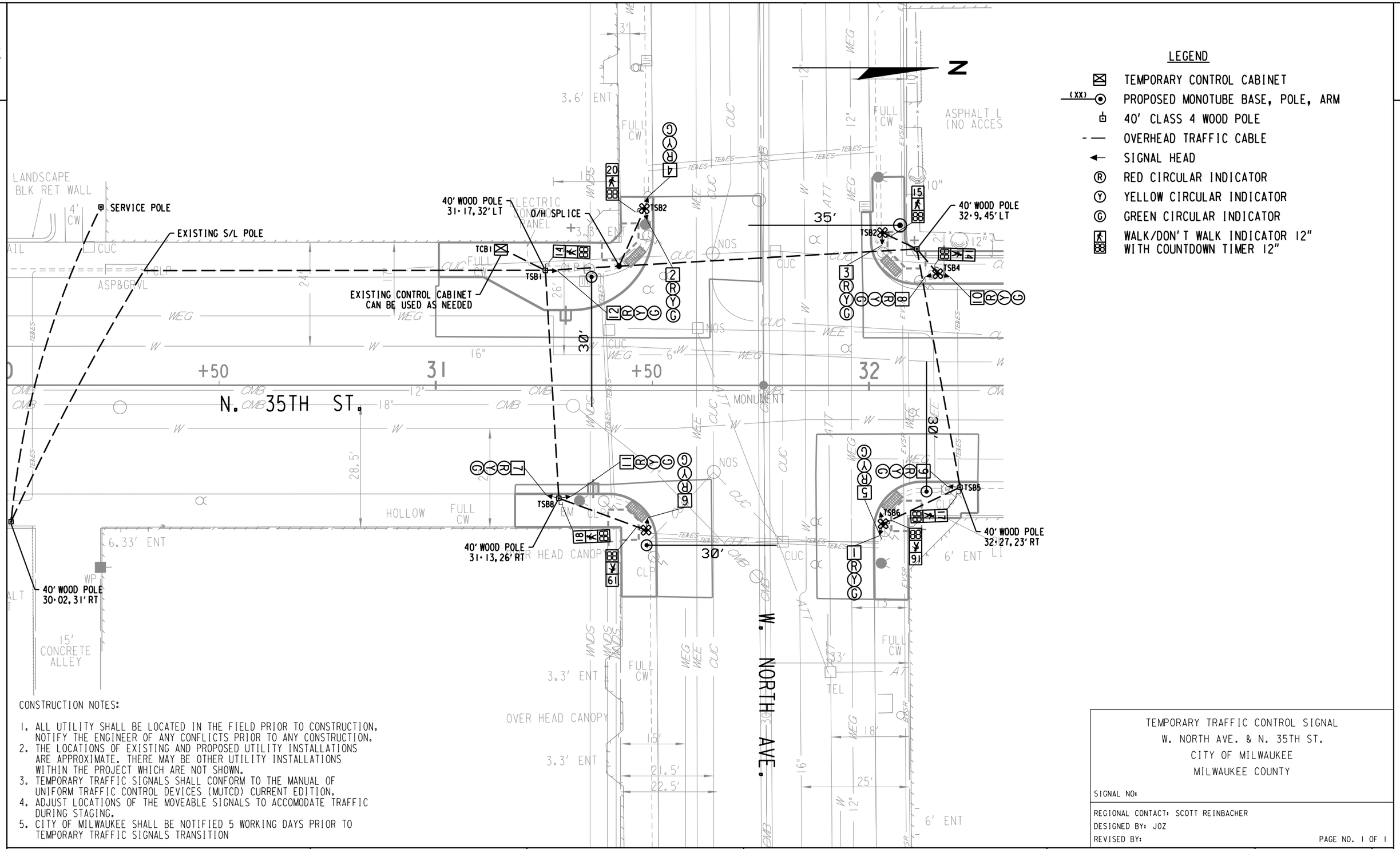


CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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. REMOVE ALL ABOVE-GROUND TRAFFIC SIGNALS EQUIPMENT
4. REMOVE ALL CONDUCTORS AND WIRE. LEAVE EXISTING CITY UNDERGROUND CONDUIT (CUC) AND OTHER UNDERGROUND CONDUITS IN PLACE.

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL REMOVAL PLAN	SCALE FEET 0 20	SHEET 55	E

2



LEGEND

- TEMPORARY CONTROL CABINET
- (XX) PROPOSED MONOTUBE BASE, POLE, ARM
- 40' CLASS 4 WOOD POLE
- OVERHEAD TRAFFIC CABLE
- SIGNAL HEAD
- Ⓡ RED CIRCULAR INDICATOR
- Ⓨ YELLOW CIRCULAR INDICATOR
- Ⓖ GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"

CONSTRUCTION NOTES:

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4. ADJUST LOCATIONS OF THE MOVEABLE SIGNALS TO ACCOMODATE TRAFFIC DURING STAGING.
5. CITY OF MILWAUKEE SHALL BE NOTIFIED 5 WORKING DAYS PRIOR TO TEMPORARY TRAFFIC SIGNALS TRANSITION

TEMPORARY TRAFFIC CONTROL SIGNAL
W. NORTH AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:

REGIONAL CONTACT: SCOTT REINBACHER
DESIGNED BY: JOZ
REVISED BY:

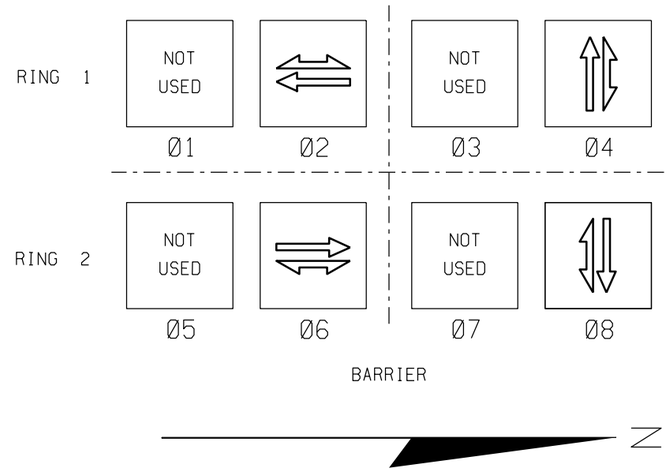
PAGE NO. 1 OF 1

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL TEMPORARY PLAN	SCALE FEET 0 20	SHEET E

FILE NAME: W:\BTE\SIGNALS\PAVING AND DESIGN\STATE PROJECTS-LFA\PRELIMINARY ENGINEERING\2984-21-72 N 35TH & NORTH AND LISBON MONOTUBES\2984-21-72 TEMP SIGNALS.DGN PLOT DATE: 20-JUL-2025 15:07 PLOT BY: JAORTIZ PLOT SCALE: 1:20 WISDOT/CADDS SHEET 42

	HEAD NUMBERS	FLASH
Ø2	10,11,12	R
Ø4	1,2,3	R
Ø6	7,8,9	R
Ø8	4,5,6	R
Ø2P	13,14	
Ø4P	15,16	
Ø6P	17,18	
Ø8P	19,20	

SEQUENCE OF OPERATION



CONTROLLER LOGIC

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

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- -	

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

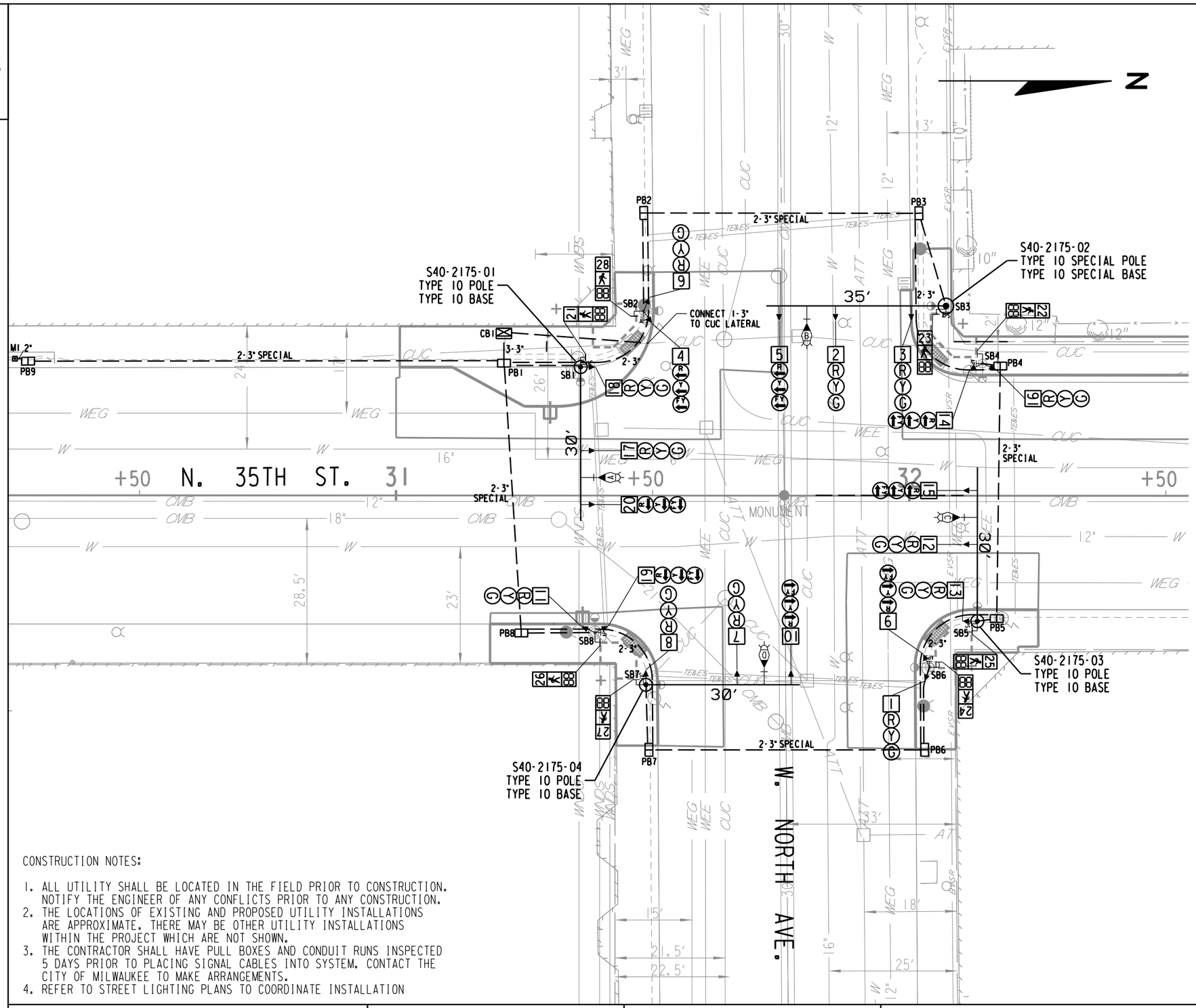
TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE LIGHTING CABINET	X

W. NORTH AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TEMP
	CONTROLLER TYPE: TEMP
DATE: 2/2025	PAGE NO. 1 OF 1

FILE NAME: W:\BTE\SIGNALS\PAVING AND DESIGN\STATE PROJECTS-LFA\PRELIMINARY ENGINEERING\2984-21-72 N 35TH & NORTH AND LISBON MONOTUBES\2984-21-72 TEMP SIGNALS.DGN PLOT DATE : 20-JUL-2025 15:08 PLOT BY : JAORTIZ PLOT SCALE : 1:20 WISDOT/CADDS SHEET 42

2



LEGEND

- CABINET
- (XX) MONOTUBE BASE, POLE, 15'-45' ARM
- CONCRETE POLYMER PULL BOX 17"X30"X24"
- NONMETALLIC CONDUIT 3", UNLESS OTHERWISE NOTED
- TRAFFIC SIGNAL HEAD
- STREET LIGHT BASE, POLE
- STREET LIGHT LUMINAIRE UNIT
- M METER PEDESTAL
- APS ACCESSIBLE PEDESTRIAN SIGNAL WITH PUSH BUTTON
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- RED ARROWS
- YELLOW ARROWS
- GREEN ARROWS
- WALK/DON'T WALK INDICATOR 12" WITH COUNTDOWN TIMER 12"
- CONFIRMATION LIGHT
- X EVP DESIGNATOR
- EVP DETECTOR HEAD

CONSTRUCTION NOTES:

1. ALL UTILITY SHALL BE LOCATED IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER OF ANY CONFLICTS PRIOR TO ANY CONSTRUCTION.
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 CONTRACTOR SHALL HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 DAYS PRIOR TO PLACING SIGNAL CABLES INTO SYSTEM. CONTACT THE CITY OF MILWAUKEE TO MAKE ARRANGEMENTS.
4. REFER TO STREET LIGHTING PLANS TO COORDINATE INSTALLATION

TRAFFIC CONTROL SIGNAL
W. NORTH AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:

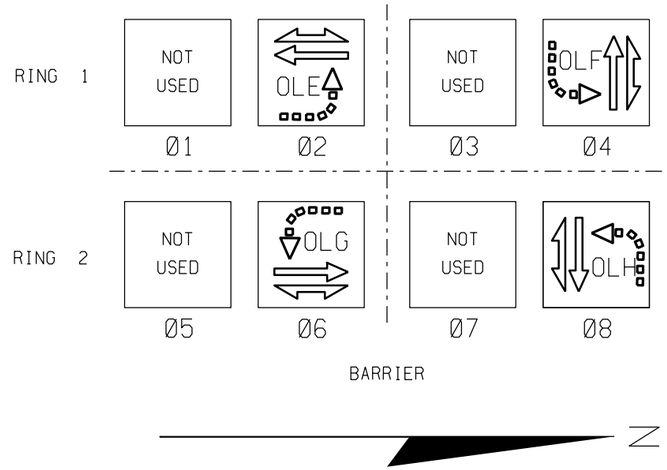
REGIONAL CONTACT: SCOTT REINBACHER
DESIGNED BY: JOZ
REVISED BY:

PAGE NO. 1 OF 1

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SCALE FEET 0 20	SHEET 58	E

	HEAD NUMBERS	FLASH
Ø2	16,17,18	R
OLE	14,15	R
Ø4	1,2,3	R
OLF	9,10	R
Ø6	11,12,13	R
OLG	19,20	R
Ø8	6,7,8	R
OLH	4,5	R
Ø2P	21,22	R
Ø4P	23,24	R
Ø6P	25,26	R
Ø8P	27,28	R

SEQUENCE OF OPERATION



CONTROLLER LOGIC

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

OVERLAPS

O.L.	"E"	=	NB	FYA
O.L.	"F"	=	EB	FYA
O.L.	"G"	=	SB	FYA
O.L.	"H"	=	WB	FYA

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.

TYPE OF INTERCONNECT COMMUNICATION	
NONE	X
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	X
RADIO	
*LOCATION OF MASTER CONTROLLER NO: S-	
SIGNAL SYSTEM *: SS- .	

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

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL	
	A/C	B/D
MOVEMENT	← →	↓ ↑
PHASE	2-6	4-8

W. NORTH AVE. & N. 35TH ST.
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO:	CABINET TYPE: TS2
	CONTROLLER TYPE: ECONOLITE
DATE: 2/2025	PAGE NO. 2 OF 2

PROJECT ID:	2984-21-72
INTERSECTION:	N. 35TH ST. & W. NORTH AVE.

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

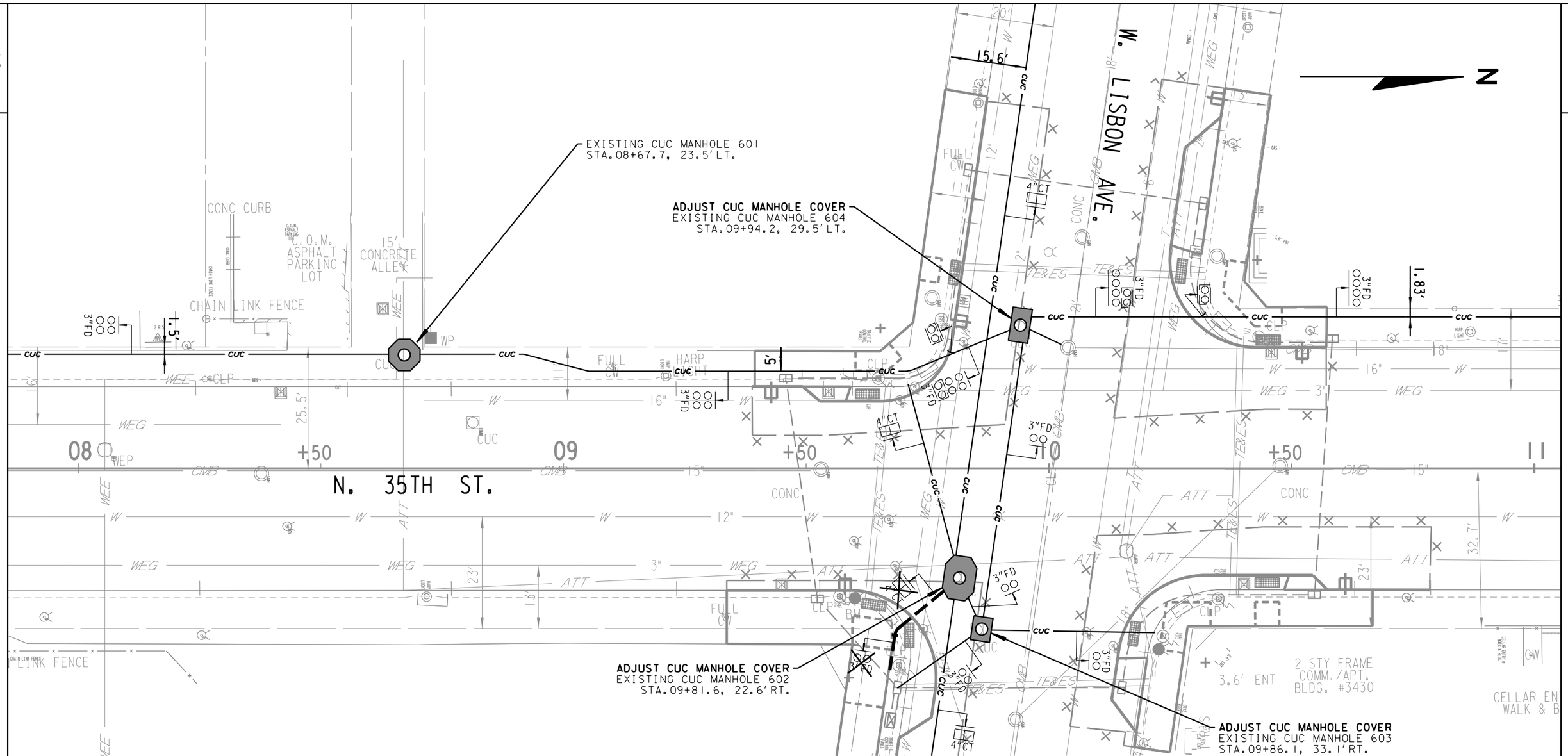
DATE: 4/3/2025

CB__TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR								PED BUTTON
					RED	YELLOW	GREEN	<RED	<YELLOW>	<FLASH YELLOW>	D/WALK	WALK	
SB1		21	17	2	RED	ORG	GRN						
			18	2	RED/BLK	ORG/BLK	GRN/BLK						
			20	OLG				RED/WHT	BLU/WHT	GRN/WHT			
			21	2							BLU	BLK	
			APS	8									BLK/WHT
			PUSH BUTTON	8									WHT/BLK
SB2		19	4	OLH				RED	ORG	GRN			
			6	8	RED/BLK	ORG/BLK	GRN/BLK						
			28	8							BLU	BLK	
			APS	2									BLK/WHT
			PUSH BUTTON	2									WHT/BLK
SB3		21	2	4	RED	ORG	GRN						
			3	4	RED/BLK	ORG/BLK	GRN/BLK						
			5	OLH				RED/WHT	BLU/WHT	GRN/WHT			
			23	4							BLU	BLK	
			APS	2									BLK/WHT
			PUSH BUTTON	2									WHT/BLK
SB4		19	14	OLE				RED	ORG	GRN			
			16	2	RED/BLK	ORG/BLK	GRN/BLK						
			22	2							BLU	BLK	
			APS	4									BLK/WHT
			PUSH BUTTON	4									WHT/BLK
SB5		21	12	6	RED	ORG	GRN						
			13	6	RED/BLK	ORG/BLK	GRN/BLK						
			15	OLE				RED/WHT	BLU/WHT	GRN/WHT			
			25	6							BLU	BLK	
			APS	4									BLK/WHT
			PUSH BUTTON	4									WHT/BLK
SB6		19	1	4	RED	ORG	GRN						
			9	OLF				RED/BLK	ORG/BLK	GRN/BLK			
			24	4							BLU	BLK	
			APS	6									BLK/WHT
			PUSH BUTTON	6									WHT/BLK
SB7		21	7	8	RED	ORG	GRN						
			8	8	RED/BLK	ORG/BLK	GRN/BLK						
			10	OLF				RED/WHT	BLU/WHT	GRN/WHT			
			27	8							BLU	BLK	
			APS	6									BLK/WHT
			PUSH BUTTON	6									WHT/BLK
SB8		19	11	6	RED	ORG	GRN						
			19	OLG				RED/BLK	ORG/BLK	GRN/BLK			
			26	6							BLU	BLK	
			APS	8									BLK/WHT
			PUSH BUTTON	8									WHT/BLK

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	CB1

EMERGENCY VEHICLE PREEMPTION AND UF 2-12 CONFIRMATION	
FROM	TO
CB1	SB1
SB1	HEAD A
CB1	SB3
SB3	HEAD B
CB1	SB5
SB5	HEAD C
CB1	SB7
SB7	HEAD D

NOTES:
1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS
2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.
3. AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS. TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDU
4. "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.
5. SPV.0090.240 IS WIRED FROM CONTROLLER CABINET TO METER PEDESTAL



NOTES:

1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.

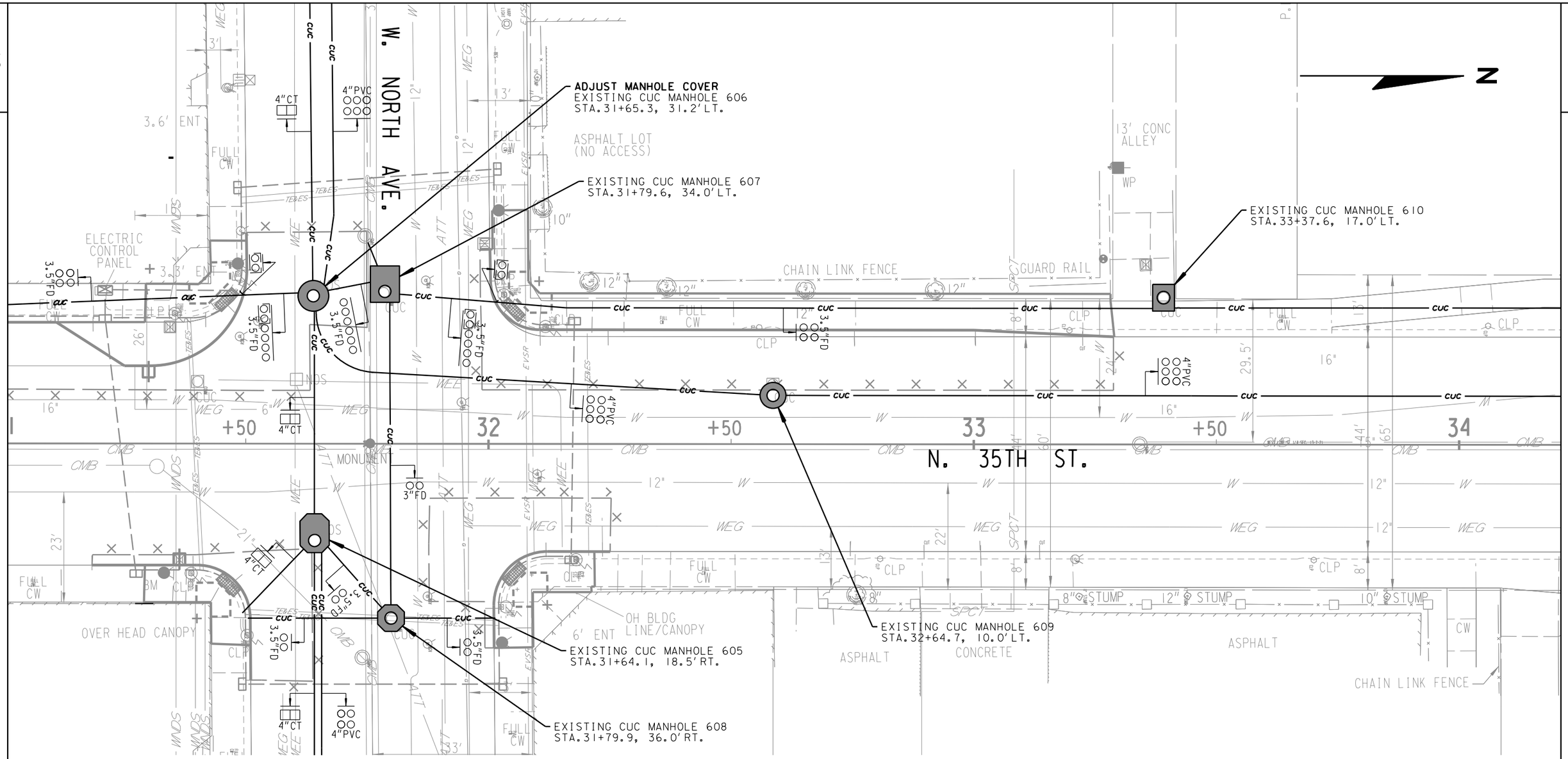
LEGEND

- EXISTING CUC MANHOLE
- CUC — EXISTING CONDUIT
- CONDUIT TO BE ABANDONED

SHEET 1 OF 2

PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT PLAN	SCALE FEET 0 20	SHEET 61	E

2



NOTES:

1) CONSTRUCTION STAKING FOR THE CITY UNDERGROUND CONDUIT (CUC) FACILITIES IS TO BE INCLUDED IN AND PAID FOR UNDER THE BID ITEM 650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS
2) THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS IS APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
3) THE LOCATION OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
4) DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.

LEGEND

- EXISTING CUC MANHOLE
- CUC — EXISTING CONDUIT
- CONDUIT TO BE ABANDONED

SHEET 2 OF 2

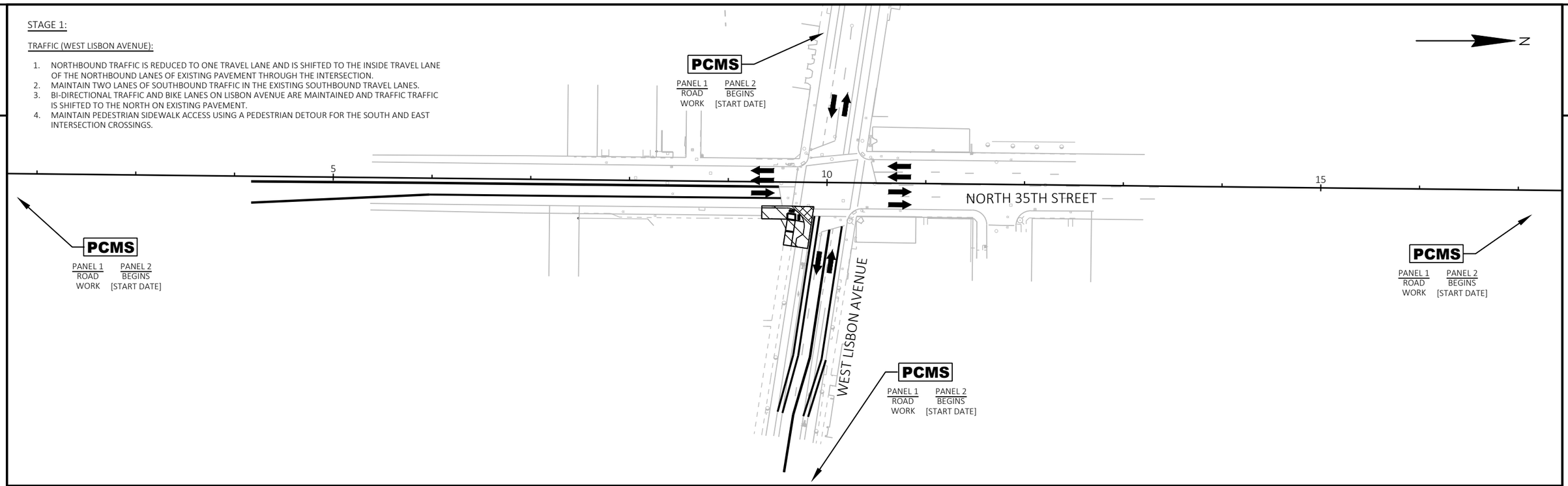
PROJECT NO: 2984-21-72	HWY: N. 35TH ST.	COUNTY: MILWAUKEE	CITY UNDERGROUND CONDUIT PLAN	SCALE FEET 0 20	SHEET 62	E

2

STAGE 1:

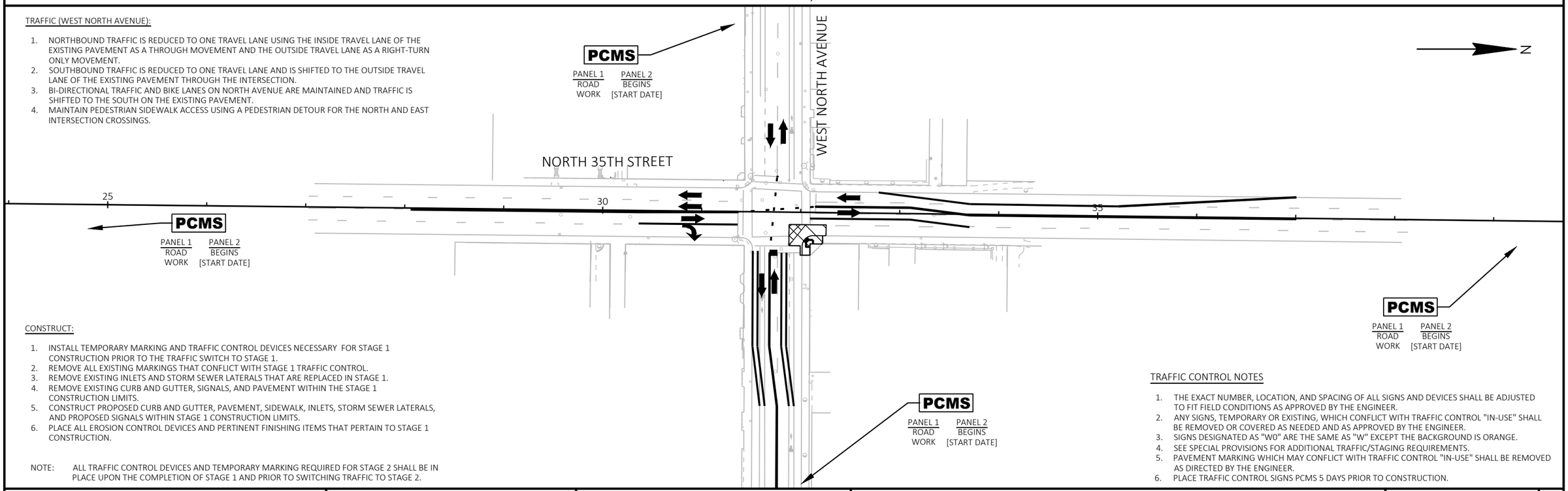
TRAFFIC (WEST LISBON AVENUE):

1. NORTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE AND IS SHIFTED TO THE INSIDE TRAVEL LANE OF THE NORTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
2. MAINTAIN TWO LANES OF SOUTHBOUND TRAFFIC IN THE EXISTING SOUTHBOUND TRAVEL LANES.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON LISBON AVENUE ARE MAINTAINED AND TRAFFIC TRAFFIC IS SHIFTED TO THE NORTH ON EXISTING PAVEMENT.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE SOUTH AND EAST INTERSECTION CROSSINGS.



TRAFFIC (WEST NORTH AVENUE):

1. NORTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE USING THE INSIDE TRAVEL LANE OF THE EXISTING PAVEMENT AS A THROUGH MOVEMENT AND THE OUTSIDE TRAVEL LANE AS A RIGHT-TURN ONLY MOVEMENT.
2. SOUTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE AND IS SHIFTED TO THE OUTSIDE TRAVEL LANE OF THE EXISTING PAVEMENT THROUGH THE INTERSECTION.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON NORTH AVENUE ARE MAINTAINED AND TRAFFIC IS SHIFTED TO THE SOUTH ON THE EXISTING PAVEMENT.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE NORTH AND EAST INTERSECTION CROSSINGS.



CONSTRUCT:

1. INSTALL TEMPORARY MARKING AND TRAFFIC CONTROL DEVICES NECESSARY FOR STAGE 1 CONSTRUCTION PRIOR TO THE TRAFFIC SWITCH TO STAGE 1.
2. REMOVE ALL EXISTING MARKINGS THAT CONFLICT WITH STAGE 1 TRAFFIC CONTROL.
3. REMOVE EXISTING INLETS AND STORM SEWER LATERALS THAT ARE REPLACED IN STAGE 1.
4. REMOVE EXISTING CURB AND GUTTER, SIGNALS, AND PAVEMENT WITHIN THE STAGE 1 CONSTRUCTION LIMITS.
5. CONSTRUCT PROPOSED CURB AND GUTTER, PAVEMENT, SIDEWALK, INLETS, STORM SEWER LATERALS, AND PROPOSED SIGNALS WITHIN STAGE 1 CONSTRUCTION LIMITS.
6. PLACE ALL EROSION CONTROL DEVICES AND PERTINENT FINISHING ITEMS THAT PERTAIN TO STAGE 1 CONSTRUCTION.

NOTE: ALL TRAFFIC CONTROL DEVICES AND TEMPORARY MARKING REQUIRED FOR STAGE 2 SHALL BE IN PLACE UPON THE COMPLETION OF STAGE 1 AND PRIOR TO SWITCHING TRAFFIC TO STAGE 2.

TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. 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.
3. SIGNS DESIGNATED AS "W0" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
4. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
5. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
6. PLACE TRAFFIC CONTROL SIGNS PCMS 5 DAYS PRIOR TO CONSTRUCTION.

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL OVERVIEW-STAGE 1 (LISBON & NORTH)	SHEET 63	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025001_S1_OV.DWG
LAYOUT NAME - 025001_s1_ov

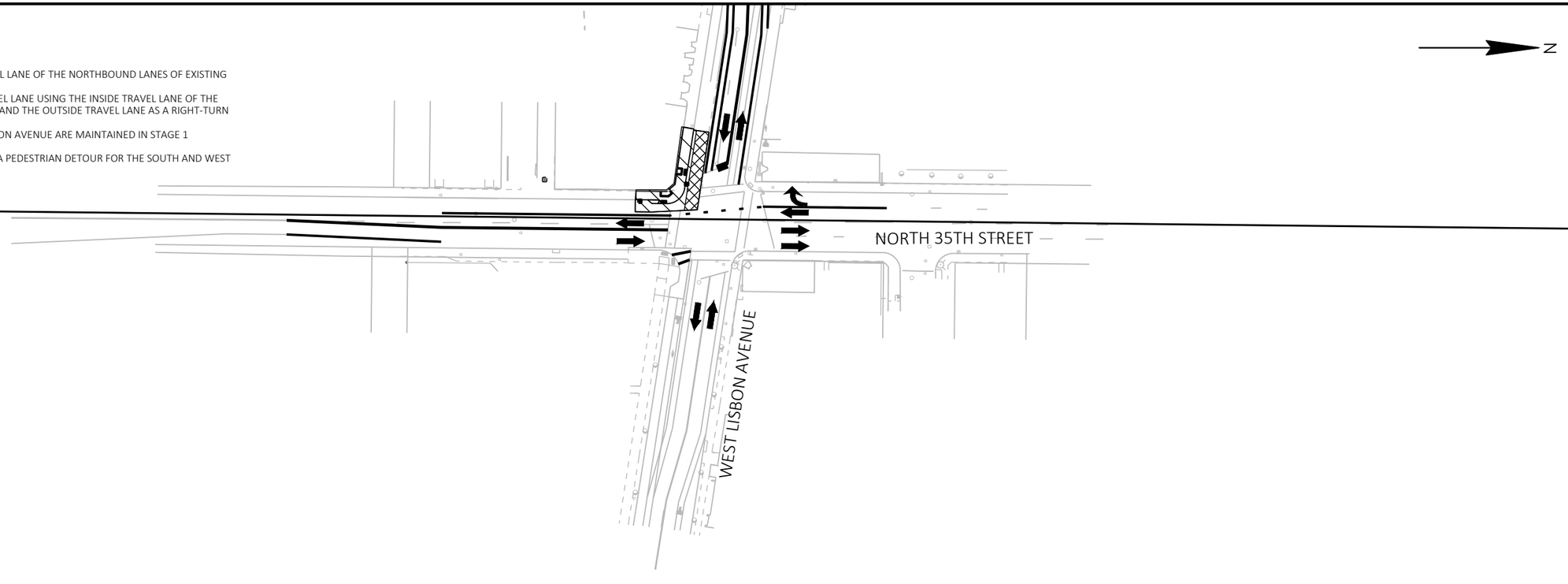
PLOT DATE : 4/23/2025 4:58 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

STAGE 2:

TRAFFIC (WEST LISBON AVENUE):

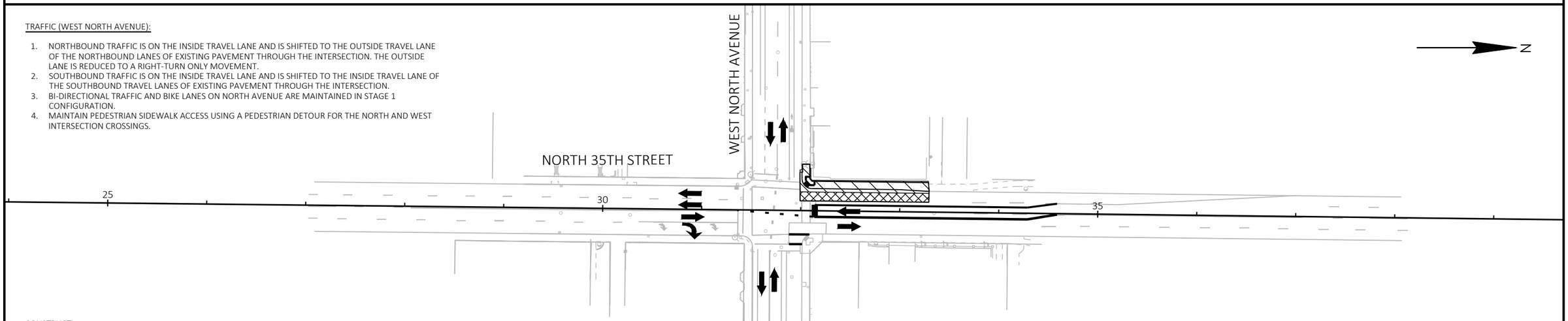
1. NORTHBOUND TRAFFIC IS ON THE OUTSIDE TRAVEL LANE OF THE NORTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
2. SOUTHBOUND TRAFFIC IS REDUCED TO ONE TRAVEL LANE USING THE INSIDE TRAVEL LANE OF THE EXISTING PAVEMENT AS A THROUGH MOVEMENT AND THE OUTSIDE TRAVEL LANE AS A RIGHT-TURN ONLY MOVEMENT.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON LISBON AVENUE ARE MAINTAINED IN STAGE 1 CONFIGURATION.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE SOUTH AND WEST INTERSECTION CROSSINGS.



2

TRAFFIC (WEST NORTH AVENUE):

1. NORTHBOUND TRAFFIC IS ON THE INSIDE TRAVEL LANE AND IS SHIFTED TO THE OUTSIDE TRAVEL LANE OF THE NORTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION. THE OUTSIDE LANE IS REDUCED TO A RIGHT-TURN ONLY MOVEMENT.
2. SOUTHBOUND TRAFFIC IS ON THE INSIDE TRAVEL LANE AND IS SHIFTED TO THE INSIDE TRAVEL LANE OF THE SOUTHBOUND TRAVEL LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON NORTH AVENUE ARE MAINTAINED IN STAGE 1 CONFIGURATION.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE NORTH AND WEST INTERSECTION CROSSINGS.



CONSTRUCT:

1. INSTALL TEMPORARY MARKING AND TRAFFIC CONTROL DEVICES NECESSARY FOR STAGE 2 CONSTRUCTION PRIOR TO THE TRAFFIC SWITCH TO STAGE 2.
2. REMOVE ALL EXISTING MARKINGS THAT CONFLICT WITH STAGE 2 TRAFFIC CONTROL..
3. REMOVE EXISTING INLETS AND STORM SEWER LATERALS THAT ARE REPLACED IN STAGE 2.
4. REMOVE EXISTING CURB AND GUTTER, SIGNALS, AND PAVEMENT WITHIN THE STAGE 2 CONSTRUCTION LIMITS.
5. CONSTRUCT PROPOSED CURB AND GUTTER, PAVEMENT, SIDEWALK, INLETS, STORM SEWER LATERALS, AND PROPOSED SIGNALS WITHIN STAGE 2 CONSTRUCTION LIMITS.
6. PLACE ALL EROSION CONTROL DEVICES AND PERTINENT FINISHING ITEMS THAT PERTAIN TO STAGE 2 CONSTRUCTION.

NOTE: ALL TRAFFIC CONTROL DEVICES AND TEMPORARY MARKING REQUIRED FOR STAGE 3 SHALL BE IN PLACE UPON THE COMPLETION OF STAGE 2 AND PRIOR TO SWITCHING TRAFFIC TO STAGE 3.

TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. 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.
3. SIGNS DESIGNATED AS "W0" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
4. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
5. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL OVERVIEW-STAGE 2 (LISBON & NORTH)	SHEET 64	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025001_S2_OV.DWG
LAYOUT NAME - 025001_s2_ov
PLOT DATE : 4/23/2025 4:58 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

STAGE 3:

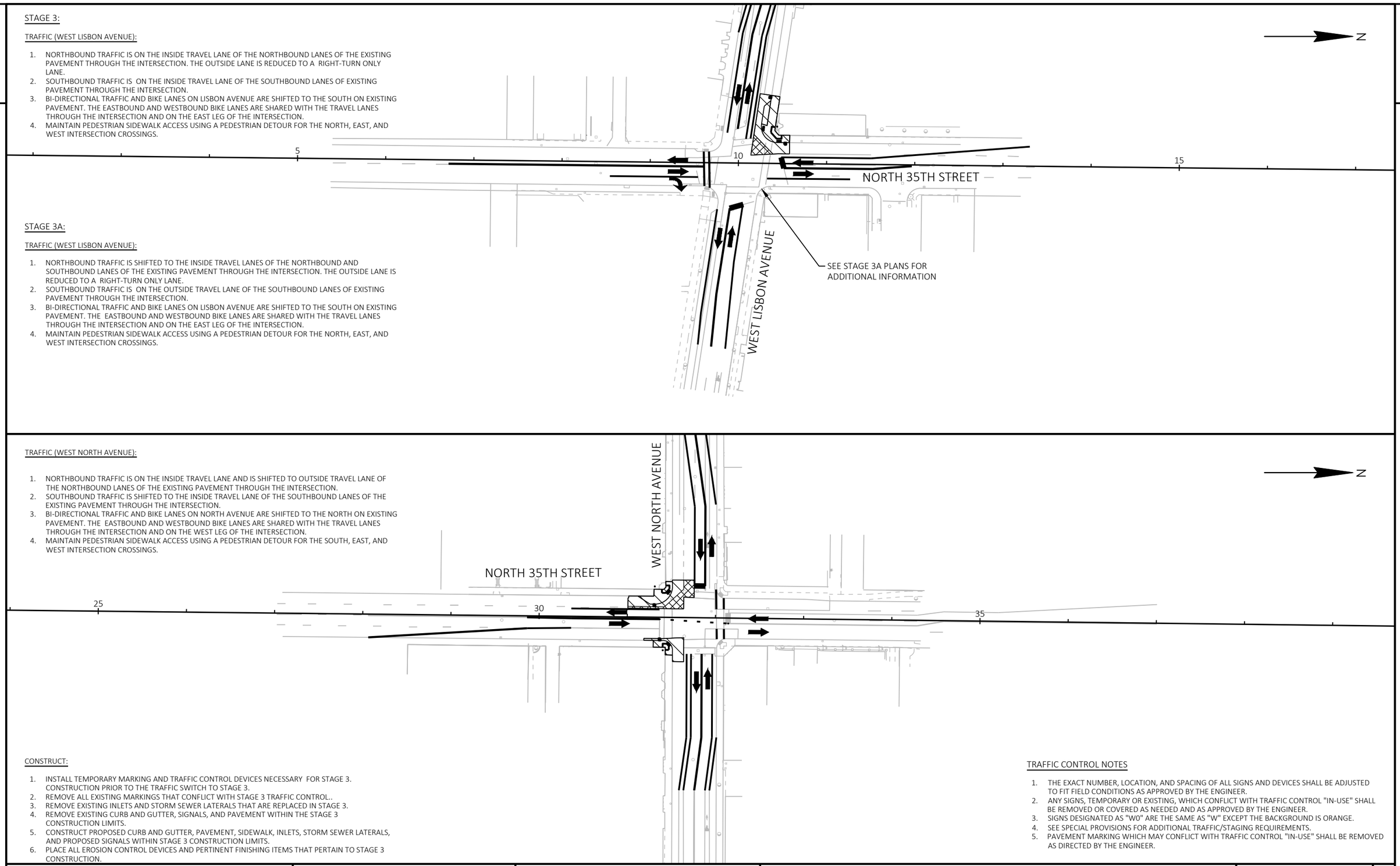
TRAFFIC (WEST LISBON AVENUE):

1. NORTHBOUND TRAFFIC IS ON THE INSIDE TRAVEL LANE OF THE NORTHBOUND LANES OF THE EXISTING PAVEMENT THROUGH THE INTERSECTION. THE OUTSIDE LANE IS REDUCED TO A RIGHT-TURN ONLY LANE.
2. SOUTHBOUND TRAFFIC IS ON THE INSIDE TRAVEL LANE OF THE SOUTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON LISBON AVENUE ARE SHIFTED TO THE SOUTH ON EXISTING PAVEMENT. THE EASTBOUND AND WESTBOUND BIKE LANES ARE SHARED WITH THE TRAVEL LANES THROUGH THE INTERSECTION AND ON THE EAST LEG OF THE INTERSECTION.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE NORTH, EAST, AND WEST INTERSECTION CROSSINGS.

STAGE 3A:

TRAFFIC (WEST LISBON AVENUE):

1. NORTHBOUND TRAFFIC IS SHIFTED TO THE INSIDE TRAVEL LANES OF THE NORTHBOUND AND SOUTHBOUND LANES OF THE EXISTING PAVEMENT THROUGH THE INTERSECTION. THE OUTSIDE LANE IS REDUCED TO A RIGHT-TURN ONLY LANE.
2. SOUTHBOUND TRAFFIC IS ON THE OUTSIDE TRAVEL LANE OF THE SOUTHBOUND LANES OF EXISTING PAVEMENT THROUGH THE INTERSECTION.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON LISBON AVENUE ARE SHIFTED TO THE SOUTH ON EXISTING PAVEMENT. THE EASTBOUND AND WESTBOUND BIKE LANES ARE SHARED WITH THE TRAVEL LANES THROUGH THE INTERSECTION AND ON THE EAST LEG OF THE INTERSECTION.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE NORTH, EAST, AND WEST INTERSECTION CROSSINGS.



TRAFFIC (WEST NORTH AVENUE):

1. NORTHBOUND TRAFFIC IS ON THE INSIDE TRAVEL LANE AND IS SHIFTED TO OUTSIDE TRAVEL LANE OF THE NORTHBOUND LANES OF THE EXISTING PAVEMENT THROUGH THE INTERSECTION.
2. SOUTHBOUND TRAFFIC IS SHIFTED TO THE INSIDE TRAVEL LANE OF THE SOUTHBOUND LANES OF THE EXISTING PAVEMENT THROUGH THE INTERSECTION.
3. BI-DIRECTIONAL TRAFFIC AND BIKE LANES ON NORTH AVENUE ARE SHIFTED TO THE NORTH ON EXISTING PAVEMENT. THE EASTBOUND AND WESTBOUND BIKE LANES ARE SHARED WITH THE TRAVEL LANES THROUGH THE INTERSECTION AND ON THE WEST LEG OF THE INTERSECTION.
4. MAINTAIN PEDESTRIAN SIDEWALK ACCESS USING A PEDESTRIAN DETOUR FOR THE SOUTH, EAST, AND WEST INTERSECTION CROSSINGS.

CONSTRUCT:

1. INSTALL TEMPORARY MARKING AND TRAFFIC CONTROL DEVICES NECESSARY FOR STAGE 3. CONSTRUCTION PRIOR TO THE TRAFFIC SWITCH TO STAGE 3.
2. REMOVE ALL EXISTING MARKINGS THAT CONFLICT WITH STAGE 3 TRAFFIC CONTROL..
3. REMOVE EXISTING INLETS AND STORM SEWER LATERALS THAT ARE REPLACED IN STAGE 3.
4. REMOVE EXISTING CURB AND GUTTER, SIGNALS, AND PAVEMENT WITHIN THE STAGE 3 CONSTRUCTION LIMITS.
5. CONSTRUCT PROPOSED CURB AND GUTTER, PAVEMENT, SIDEWALK, INLETS, STORM SEWER LATERALS, AND PROPOSED SIGNALS WITHIN STAGE 3 CONSTRUCTION LIMITS.
6. PLACE ALL EROSION CONTROL DEVICES AND PERTINENT FINISHING ITEMS THAT PERTAIN TO STAGE 3 CONSTRUCTION.

TRAFFIC CONTROL NOTES

1. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
2. 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.
3. SIGNS DESIGNATED AS "W0" ARE THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
4. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC/STAGING REQUIREMENTS.
5. PAVEMENT MARKING WHICH MAY CONFLICT WITH TRAFFIC CONTROL "IN-USE" SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL OVERVIEW-STAGE 3 (LISBON & NORTH)	SHEET 65	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025001_S3_OV.DWG
LAYOUT NAME - 025001_s3_ov
PLOT DATE : 4/23/2025 4:58 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

LEGEND

WORK ZONE	MARKING REMOVAL LINE
TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN	4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TRAFFIC CONTROL SIGNS	4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT	4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT	6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES	8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
DIRECTION OF TRAFFIC	18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
TEMPORARY PEDESTRIAN BARRICADE	AT TEMPORARY MARKING ARROW REMOVABLE TAPE
	CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
	TEMPORARY AUDIBLE MESSAGE DEVICES

N

WEST SARNOW STREET

END ROAD WORK
G20-2A
48"X24"

NORTH 35TH STREET

1+00 2+00 3+00 4+00 5+00 6+00 7+

MATCHLINE 7+00

4DYT

6WT

4WT

+98

12'

25' (TYP.)

25' (TYP.)

WO1-6
48" X 24"

TYPE III BARRICADE

180' MERGING TAPER

200'

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD

M4-9BL
30"X24"
DETOUR

ROAD WORK AHEAD
W20-1A

RIGHT LANE CLOSED AHEAD
W20-5A

W04-2R

WEST WALNUT STREET

2

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (LISBON)	SHEET 66 E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S1.DWG
LAYOUT NAME - 025100_S1

PLOT DATE : 10/1/2025 4:38 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

PLACE BETWEEN 36TH STREET AND 37TH STREET

ROAD WORK AHEAD
W20-1A

R9-9
24"X12"
SIDEWALK CLOSED
M4-9BL
30"X24"
DETOUR

END ROAD WORK
G20-2A
48"X24"

PLACE BETWEEN 35TH STREET AND 36TH STREET

N

ROAD WORK AHEAD
W20-1A

PLACE BETWEEN BROWN STREET AND LLOYD STREET

MATCHLINE 7+00

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

4WT
4DYT
12'
10'
25' (TYP.)

NORTH 35TH STREET

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

SIDEWALK CLOSED
R9-9
24"X12"

CONSTRUCTION WORK UNDER TRAFFIC. MAINTAIN AREA FOR TURNING MOVEMENTS.

SIDEWALK CLOSED
R9-9
24"X12"

W01-4R

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

WEST LISBON AVENUE

12'
12'
5'
5'
25' (TYP.)
130'

4WT
4WT
60' SHIFTING TAPER
4DYT

SIDEWALK CLOSED
R9-9
24"X12"
DETOUR
M4-9BR
30"X24"

WEST VINE STREET

END ROAD WORK
G20-2A
48"X24"

W01-4R

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

PLACE BETWEEN 33RD STREET AND 34TH STREET

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD
M4-9BR
30"X24"
DETOUR

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (LISBON)	SHEET 67	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S1.DWG
LAYOUT NAME - 025101_S1
PLOT DATE : 10/1/2025 4:38 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

END ROAD WORK
G20-2A
48"X24"

PLACE BETWEEN 36TH STREET AND 37TH STREET

ROAD WORK AHEAD
W20-1A

G20-2A
48"X24"
END ROAD WORK
PLACE BETWEEN 35TH STREET AND 36TH STREET

SIDEWALK CLOSED
DETOUR
R9-9
24"X12"
M4-9BR
30"X24"

NORTH 35TH STREET

27+00 28+00 29+00 30+00 31+00 32+00 33+00

+06 +79

4DYT 4YST 4WT 8WT AT 18WT

25' (TYP.) 15' 12'

MATCHLINE 33+00

WEST GARFIELD AVENUE

ROAD WORK AHEAD
W20-1A

PLACE BETWEEN GARFIELD AVENUE AND LLOYD STREET

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"

R9-9
24"X12"
SIDEWALK CLOSED
DETOUR
M4-9BL
30"X24"

W01-4R

CONSTRUCTION WORK UNDER TRAFFIC. MAINTAIN AREA FOR TURNING MOVEMENTS.

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

95'

5' 12' 12' 5'

WEST NORTH AVENUE

W01-4L

60' SHIFTING TAPER

WO1-6
48" X 24"
TYPE III BARRICADE

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"
DETOUR
M4-9BL
30"X24"

W01-4L

END ROAD WORK
G20-2A
48"X24"
PLACE BETWEEN 33RD STREET AND 34TH STREET

ROAD WORK AHEAD
W20-1A
PLACE BETWEEN 33RD STREET AND 34TH STREET

NORTH 34TH STREET

LEGEND

WORK ZONE	MARKING REMOVAL LINE
TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN	4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TRAFFIC CONTROL SIGNS	4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT	4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT	6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES	8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
DIRECTION OF TRAFFIC	18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
TEMPORARY PEDESTRIAN BARRICADE	AT TEMPORARY MARKING ARROW REMOVABLE TAPE
	CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
	TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (NORTH)	SHEET 68	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S1.DWG
LAYOUT NAME - 025103_S1

PLOT DATE : 10/1/2025 4:38 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

150'

180' MERGING TAPER

R11-2L
48" X 30"
LANE CLOSED

TYPE III BARRICADE

WO1-6
48" X 24"

TYPE III BARRICADE

W01-4R

W04-2R

RIGHT LANE CLOSED AHEAD
W20-5A

ROAD WORK AHEAD
W20-1A

200'

200'

25' (TYP.)

25' (TYP.)

25' (TYP.)

MATCHLINE 33+00

12'

12'

+71

34+00

35+00

36+00

37+00

38+00

39

4WT

4DYT

4WT

6WT

60' SHIFTING TAPER

NORTH 35TH STREET

SIDEWALK CLOSED AHEAD
R9-9A
30"X18"

DETOUR
M4-9BR
30"X24"

END ROAD WORK
G20-2A
48"X24"

WEST MEINECKE AVENUE

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT — TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT — TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT — TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT — TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW — TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- ((A)) — TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 1 (NORTH)	SHEET 69	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S1.DWG
LAYOUT NAME - 025104_S1
PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

PLACE AT SE CORNER OF N 36TH STREET AND N LISBON AVENUE

R9-9A 30"X18"

M4-9BL 30"X24"

SIDEWALK CLOSED AHEAD

DETOUR

PLACE BETWEEN N 36TH STREET AND N 37TH STREET

ROAD WORK AHEAD

W20-1A

PLACE BETWEEN N 36TH STREET AND N 37TH STREET

W01-4L

60' SHIFTING TAPER

85'

END ROAD WORK

G20-2A 48"X24"

4WT

WO1-6 48" X 24"

TYPE III BARRICADE

R11-2L 48" X 30"

LANE CLOSED

TYPE III BARRICADE

4WT

PLACE BETWEEN N 35TH STREET AND N 36TH STREET

PLACE BETWEEN BROWN STREET AND LLOYD STREET

ROAD WORK AHEAD

W20-1A

SIDEWALK CLOSED

R9-9 24"X12"

4WT

4DYT

R11-2L 48" X 30"

LANE CLOSED

TYPE III BARRICADE

SIDEWALK CLOSED

R9-9 24"X12"

DETOUR

M4-9BL 30"X24"

RIGHT LANE MUST TURN RIGHT

R3-7R 30"X30"

100'

200'

AT

8WT

AT

12'

18WT

4WT 3' SEG., 9' GAP

PLACE AT NW CORNER OF N 35TH STREET AND SARNOW STREET

SIDEWALK CLOSED AHEAD

R9-9A 30"X18"

DETOUR

M4-9BR 30"X24"

W01-4R

MATCH STAGE 1 MATCHLINE 6+00

7+00

8+00

9+00

10+00

11+00

12+00

+48

12'

25' (TYP.)

25' (TYP.)

4WT

12'

17'

4WT

NORTH 35TH STREET

4DYT

130' SHIFTING TAPER

CW

NORTH 35TH STREET

W01-4R

SIDEWALK CLOSED

R9-9 24"X12"

DETOUR

M4-9BR 30"X24"

R11-2L 48" X 30"

LANE CLOSED

TYPE III BARRICADE

WEST LISBON AVENUE

MATCH STAGE 1

END ROAD WORK

G20-2A 48"X24"

WEST VINE STREET

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2 (LISBON)	SHEET 70	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S2.DWG
LAYOUT NAME - 025101_S2

PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

N

SIDEWALK CLOSED AHEAD
DETOUR
R9-9A 30"X18"
M4-9BR 30"X24"
PLACE AT SE CORNER OF 36TH STREET AND W NORTH AVENUE

WEST NORTH AVENUE

G20-2A 48"X24"
END ROAD WORK
PLACE BETWEEN 35TH STREET AND 36TH STREET

PLACE BETWEEN 36TH STREET AND 37TH STREET
ROAD WORK AHEAD
W20-1A

SIDEWALK CLOSED
DETOUR
R9-9 24"X12"
M4-9BR 30"X24"

SIDEWALK CLOSED
R9-9 24"X12"

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

CONSTRUCTION WORK UNDER TRAFFIC. MAINTAIN AREA FOR TURNING MOVEMENTS.

WO1-6 48" X 24"
TYPE III BARRICADE

PLACE AT SW CORNER OF N 35TH STREET AND MEINECKE AVENUE
SIDEWALK CLOSED AHEAD
DETOUR
R9-9A 30"X18"
M4-9BL 30"X24"

WO1-4L

SIDEWALK CLOSED
R9-9 24"X12"

12'
25' (TYP.)

32+00
33+00
34+00
35+

4WT
4YST
18WT
4DYT
CW
+29

NORTH 35TH STREET
25' (TYP.)
17'

30' SHIFTING TAPER

MATCH STAGE 1

SIDEWALK CLOSED
DETOUR
R9-9 24"X12"
M4-9BL 30"X24"

MATCH STAGE 1

MATCH STAGE 1

LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 2 (NORTH)	SHEET 71	E

2

END ROAD WORK
G20-2A
48"X24"

ROAD WORK AHEAD
W20-1A

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"

200'

NORTH 35TH STREET

6+00 7+00 8+00 9+00 10+00 11+00 12+00

+71 +52

4DYT

12' 10'

8WT

AT AT

100'

CONSTRUCTION WORK UNDER TRAFFIC. MAINTAIN AREA FOR TURNING MOVEMENTS.

CW

MATCHLINE LISBON S3

SHARE THE ROAD
W16-1P
24"X30"

R9-9
24"X12"
SIDEWALK CLOSED

M4-9BR
30"X24"
DETOUR

4WT

11' 11'

5' 5'

4DYT

W01-4R

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

180' MERGING TAPER

25' (TYP.)

6WT

18WT

15' (TYP.)

12' 12'

MATCHLINE 12+00

R9-9
24"X12"
SIDEWALK CLOSED
M4-60D
30"X24"

25' (TYP.)

120'

14' 14'

WEST LISBON AVENUE

WEST VINE STREET

W01-4L

35' SHIFTING TAPER

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

W01-6
48" X 24"
TYPE III BARRICADE

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD
M4-60D
30"X24"

PLACE AT NW CORNER OF N 34TH STREET AND W LISBON AVENUE

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD
M4-9BL
30"X24"
DETOUR

PLACE AT SW CORNER OF N 34TH STREET AND W LISBON AVENUE

END ROAD WORK
G20-2A
48"X24"

SHARE THE ROAD
W16-1P
24"X30"

ROAD WORK AHEAD
W20-1A

PLACE BETWEEN 33RD STREET AND N 34TH STREET

PLACE AT SW CORNER OF N 34TH STREET AND W VINE STREET

M4-9BR
30"X24"
DETOUR

M4-9BL
30"X24"
DETOUR

LEGEND

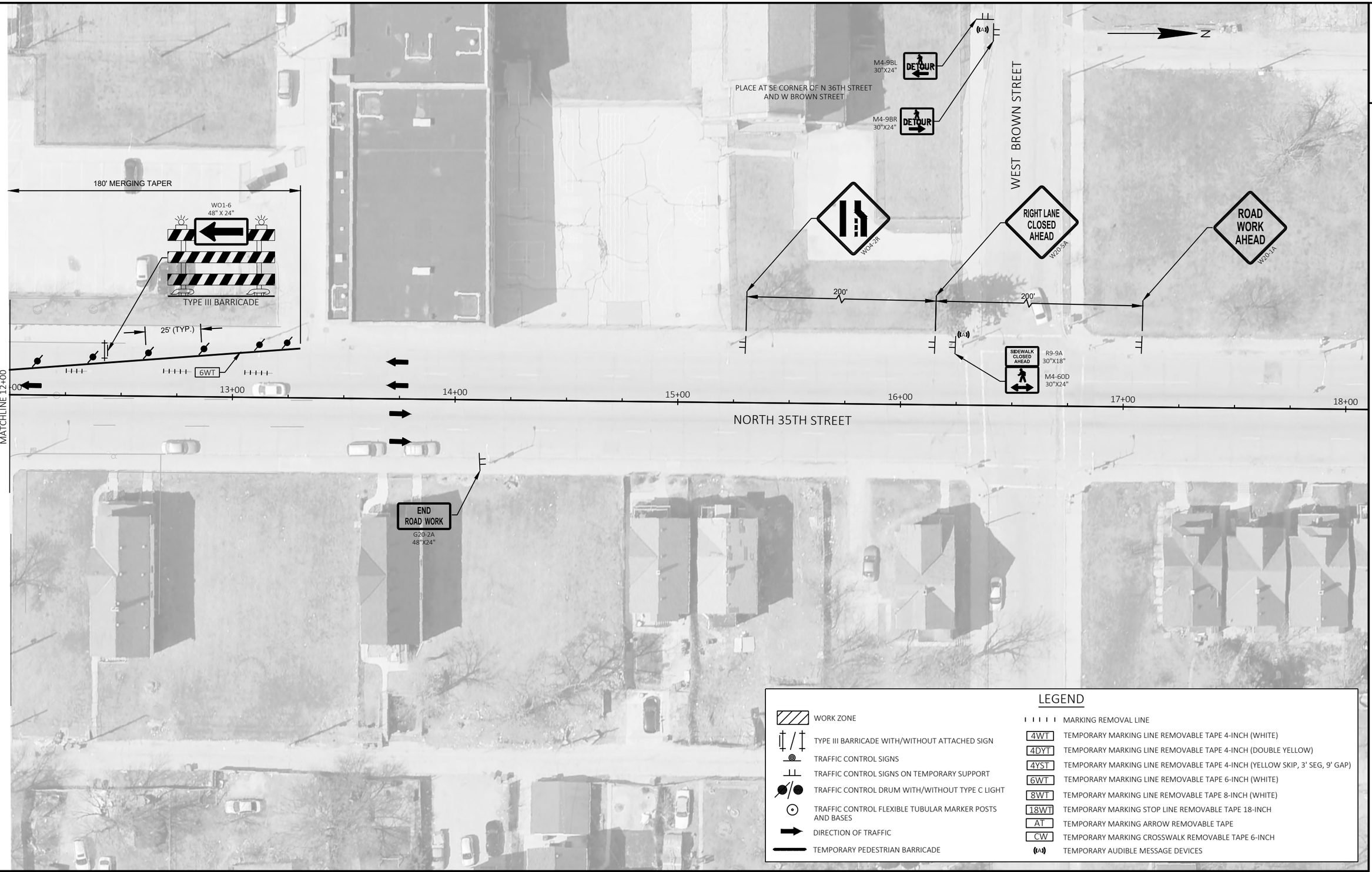
WORK ZONE	MARKING REMOVAL LINE
TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN	4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TRAFFIC CONTROL SIGNS	4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT	4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT	6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES	8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
DIRECTION OF TRAFFIC	18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
TEMPORARY PEDESTRIAN BARRICADE	AT TEMPORARY MARKING ARROW REMOVABLE TAPE
	CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
	TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3 (LISBON)	SHEET 72 E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S3.DWG
LAYOUT NAME - 025101_S3

PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT — TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT — TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT — TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT — TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW — TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3 (LISBON)	SHEET 73	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S3.DWG
LAYOUT NAME - 025102_S3

PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

MATCHLINE NORTH S3

MATCH STAGE 2 MATCHLINE 33+00

N

END ROAD WORK
G20-2A 48"X24"
PLACE BETWEEN GARFIELD AVENUE AND LLOYD STREET
SIDEWALK CLOSED AHEAD R9-9A 30"X18"
DETOUR M4-9BR 30"X24"

NORTH 35TH STREET

27+00 28+00 29+00 30+00 31+00 32+00 33+

200'

6WT

25' (TYP.)

WO1-6 48" X 24"

TYPE III BARRICADE

180' MERGING TAPER

WO4-2R

WEST GARFIELD AVENUE

ROAD WORK AHEAD W20-1A

RIGHT LANE CLOSED AHEAD W20-5A

PLACE BETWEEN GARFIELD AVENUE AND LLOYD STREET

PLACE 200' SOUTH OF GARFIELD AVENUE

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

4DYT

4WT

+86

+36

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

CONSTRUCTION WORK UNDER TRAFFIC. MAINTAIN AREA FOR TURNING MOVEMENTS.

SIDEWALK CLOSED R9-9 24"X12"

4DYT 4WT

12'

WO1-4L

SIDEWALK CLOSED R9-9 24"X12"
DETOUR M4-9BL 30"X24"

18WT

CW

25' (TYP.)

4YST

SIDEWALK CLOSED R9-9 24"X12"
M4-60D 30"X24"

SIDEWALK CLOSED R9-9 24"X12"

SIDEWALK CLOSED R9-9 24"X12"

WO1-8R

5' 12' 5' 12'

95'

R11-2L 48" X 30"
LANE CLOSED
TYPE III BARRICADE

SHARE THE ROAD W16-1P 24"X30"

60' SHIFTING TAPER

4WT 4DYT 4WT

WEST NORTH AVENUE

WO1-4R

END ROAD WORK G20-2A 48"X24"

R9-9A 30"X18"
SIDEWALK CLOSED AHEAD
M4-60D 30"X24"

ROAD WORK AHEAD W20-1A

DETOUR M4-9BR 30"X24"

NORTH 34TH STREET

DETOUR M4-9BR 30"X24"

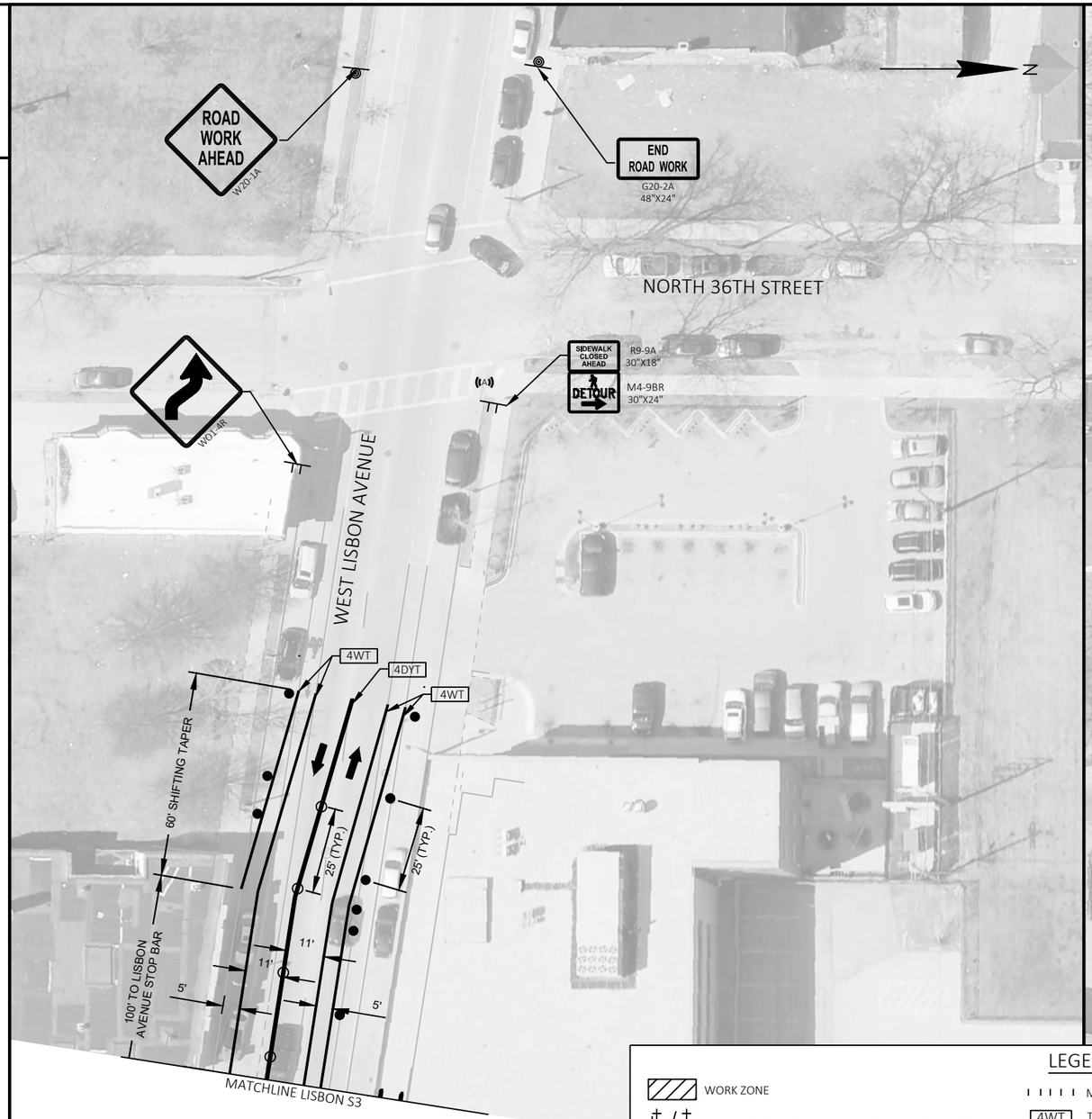
DETOUR M4-9BL 30"X24"

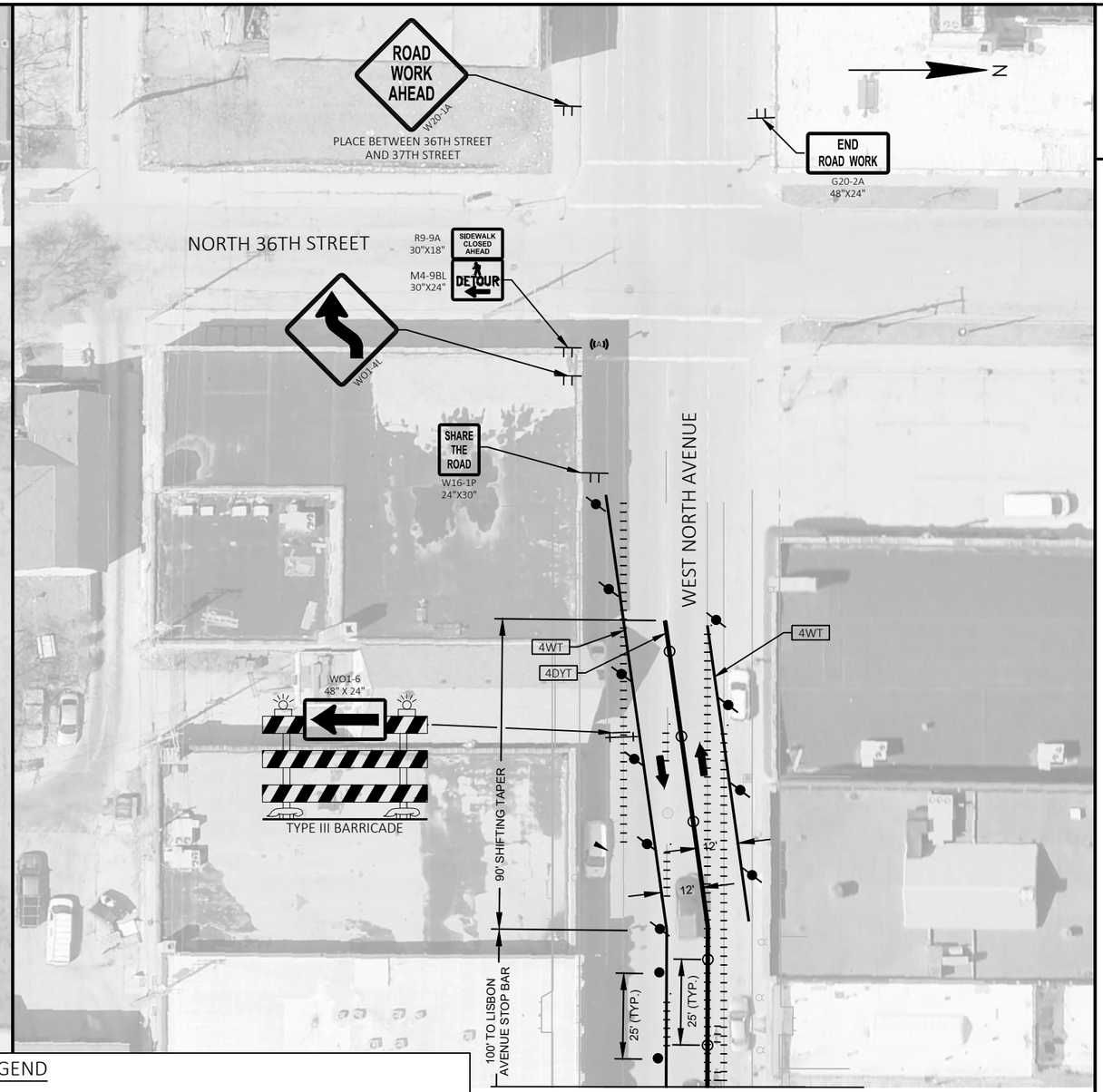
LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3 (NORTH)	SHEET 74	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S3.DWG
LAYOUT NAME - 025103_S3
PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42





LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST — TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT — TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT — TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT — TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT — TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW — TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3 (NORTH & LISBON)	SHEET 75	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S3.DWG
LAYOUT NAME - 025105_S3
PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

END ROAD WORK
G20-2A
48"X24"

NORTH 35TH STREET

6+00 7+00 8+00 9+00 10+00 11+00 12

+54 +29 +52

4DYT 18WT 6WT 4WT

12' 6' 10' 100'

200' 200' 200'

RIGHT LANE MUST TURN RIGHT
R3-7R
30"X30"

ROAD WORK AHEAD
W20-1A

W01-4L

R9-9
24"X12"
SIDEWALK CLOSED
M4-9BR
30"X24"
DETOUR

M4-60D
30"X24"

MATCHLINE LISBON S3

11' 11' 5' 5'

W01-4R

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

180' MERGING TAPER

45' SHIFTING TAPER

MATCHLINE 12+00

CONSTRUCTION WORK UNDER TRAFFIC. MAINTAIN AREA FOR TURNING MOVEMENTS.

R9-9A
30"X18"
SIDEWALK CLOSED AHEAD
M4-9BL
30"X24"
DETOUR

25' (TYP.) 14' 14'

120'

WEST LISBON AVENUE

WEST VINE STREET

WO1-6
48" X 24"

35' SHIFTING TAPER

PLACE AT NW CORNER OF N 34TH STREET AND W LISBON AVENUE

PLACE AT SW CORNER OF N 34TH STREET AND W LISBON AVENUE

PLACE AT SW CORNER OF N 34TH STREET AND W VINE STREET

M4-9BR
30"X24"

END ROAD WORK
G20-2A
48"X24"

PLACE BETWEEN 33RD STREET AND N 34TH STREET

LEGEND

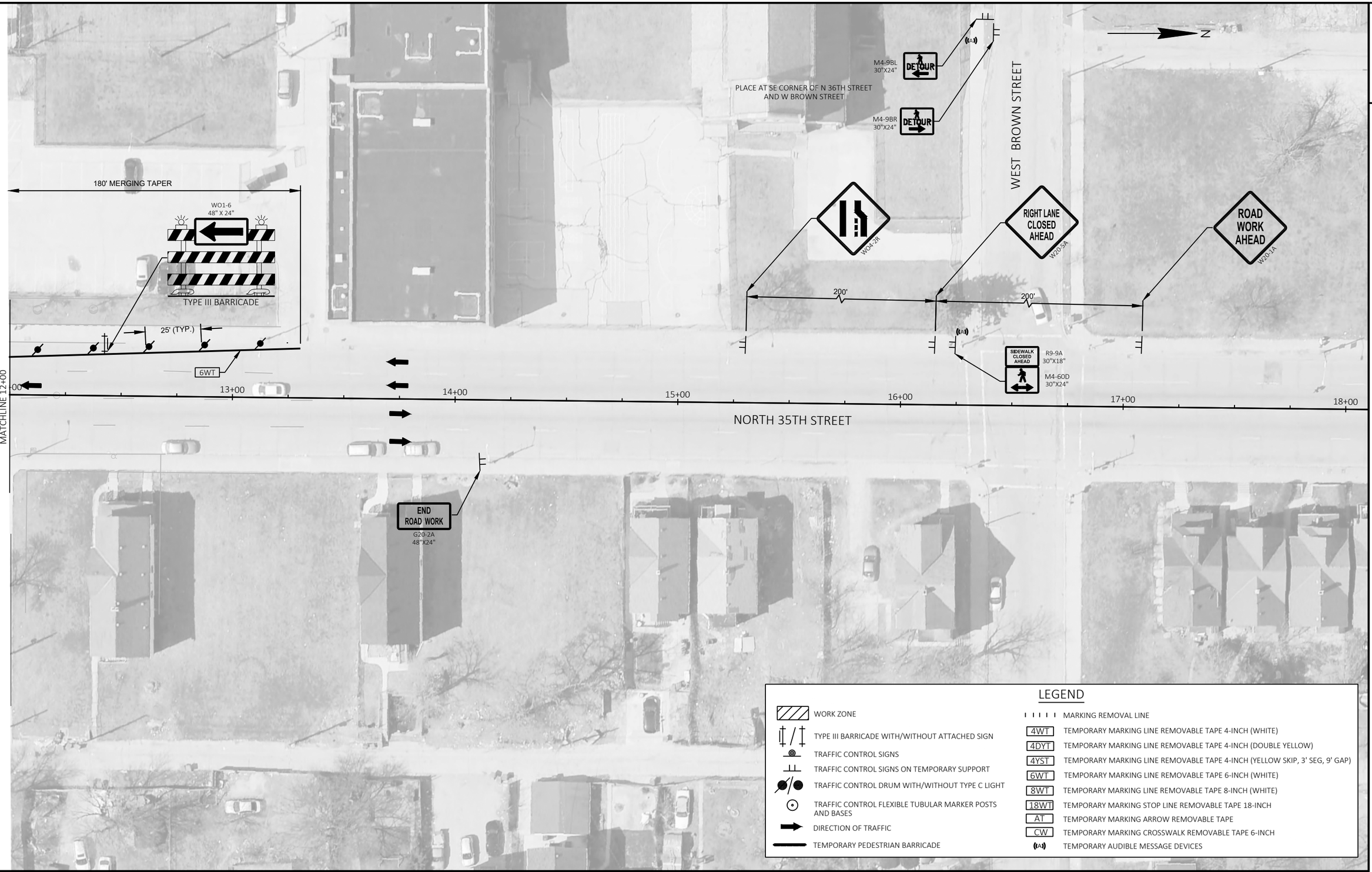
WORK ZONE	MARKING REMOVAL LINE
TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN	4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
TRAFFIC CONTROL SIGNS	4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT	4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT	6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES	8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
DIRECTION OF TRAFFIC	18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
TEMPORARY PEDESTRIAN BARRICADE	AT TEMPORARY MARKING ARROW REMOVABLE TAPE
	CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
	TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3A (LISBON)	SHEET 76	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\025100_TC_S3A.DWG
LAYOUT NAME - 025101_S3a

PLOT DATE : 10/1/2025 4:39 PM PLOT BY : GOMEZ, JACK PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

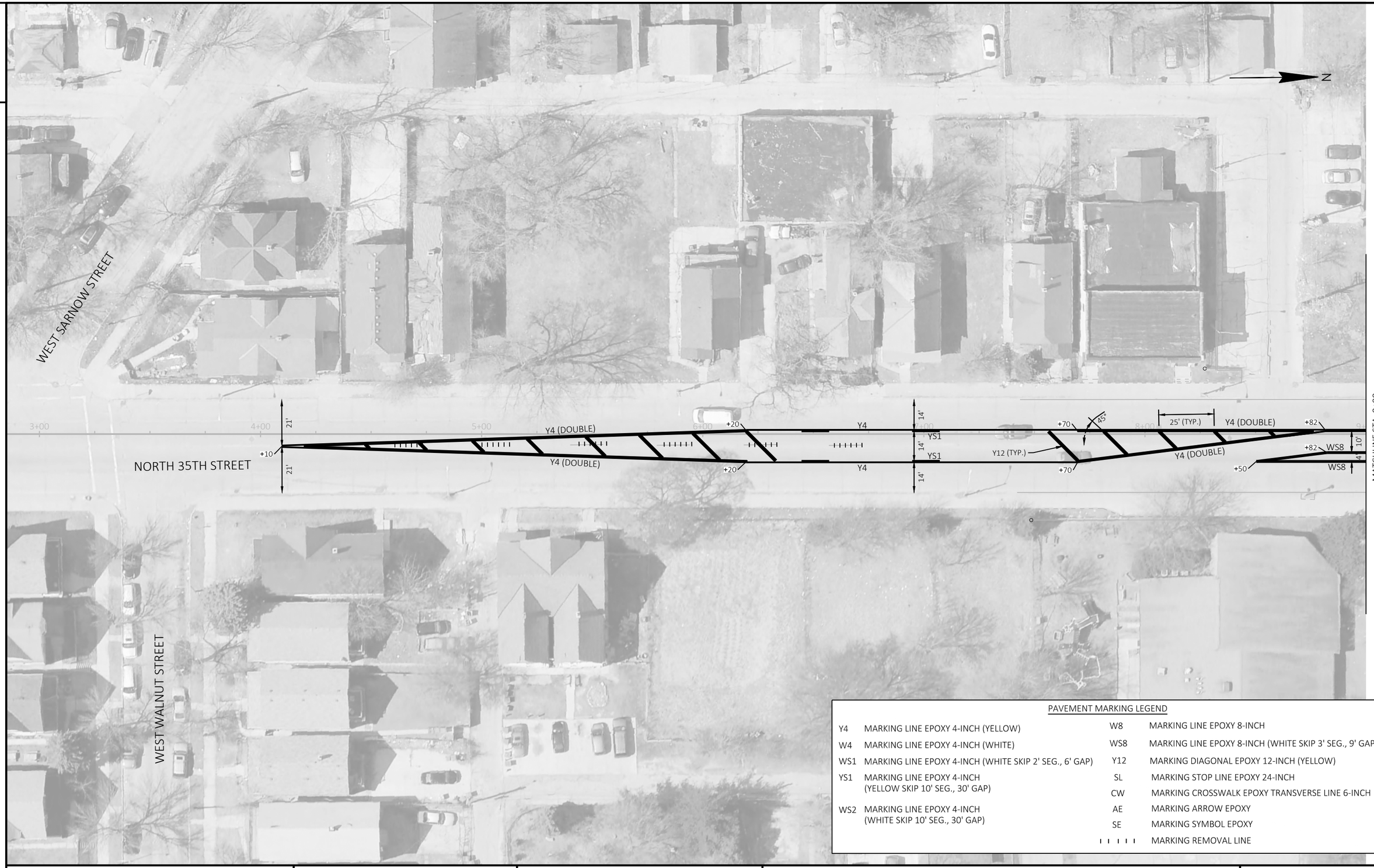


LEGEND

- WORK ZONE
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL SIGNS
- TRAFFIC CONTROL SIGNS ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN BARRICADE
- MARKING REMOVAL LINE
- 4WT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
- 4DYT TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (DOUBLE YELLOW)
- 4YST TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (YELLOW SKIP, 3' SEG, 9' GAP)
- 6WT TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH (WHITE)
- 8WT TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH (WHITE)
- 18WT TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
- AT TEMPORARY MARKING ARROW REMOVABLE TAPE
- CW TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH
- TEMPORARY AUDIBLE MESSAGE DEVICES

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - STAGE 3A (LISBON)	SHEET 77	E

2



PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
		CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (LISBON)	SHEET 78	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\024501_PM.DWG
LAYOUT NAME - 024501-pm

PLOT DATE : 4/23/2025 4:57 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

2

MATCHLINE LISBON

MATCHLINE STA. 9+00

NORTH 35TH STREET

NORTH 34TH STREET

WEST VINE STREET

WEST LISBON AVENUE

Y4 (DOUBLE)

W8

W4

WS1

WS2

YS1

Y12 (TYP.)

SL

CW

AE

SE

+02

+57

+53

+28

+85

+08

+08, 46' LT

+25, 63' LT

+80, 59' RT

+14, 45' RT

+77, 75' RT

+05

+78, 260' RT

+77, 276' RT

25' (TYP.)

45°

10+00

13+00

14+00

15+00

N

PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
		AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (LISBON)	SHEET 79	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\024501_PM.DWG
LAYOUT NAME - 024502-pm

PLOT DATE : 4/23/2025 4:57 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

MATCHLINE NORTH

MATCHLINE STA. 33+00

NORTH 35TH STREET

NORTH 34TH STREET

WEST NORTH AVENUE

27+00

28+00

29+00

32+00

25' (TYP.)

45°

+84

Y12 (TYP.)

Y4 (DOUBLE)

+62

WS2

+42

AE

W8

+17

+40

+13

CW

SL

6' (TYP.)

+51, 35' LT

+96, 68' LT

+98, 55' LT

+87

+67

+88

+02, 36' RT

+54, 53' RT

SE

+56, 67' RT

+79, 96' RT

+81, 116' RT

+78, 221' RT

+94, 256' RT

+94, 272' RT

+79

W4

WS1

WS8

Y4 (DOUBLE)

N

PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
		CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

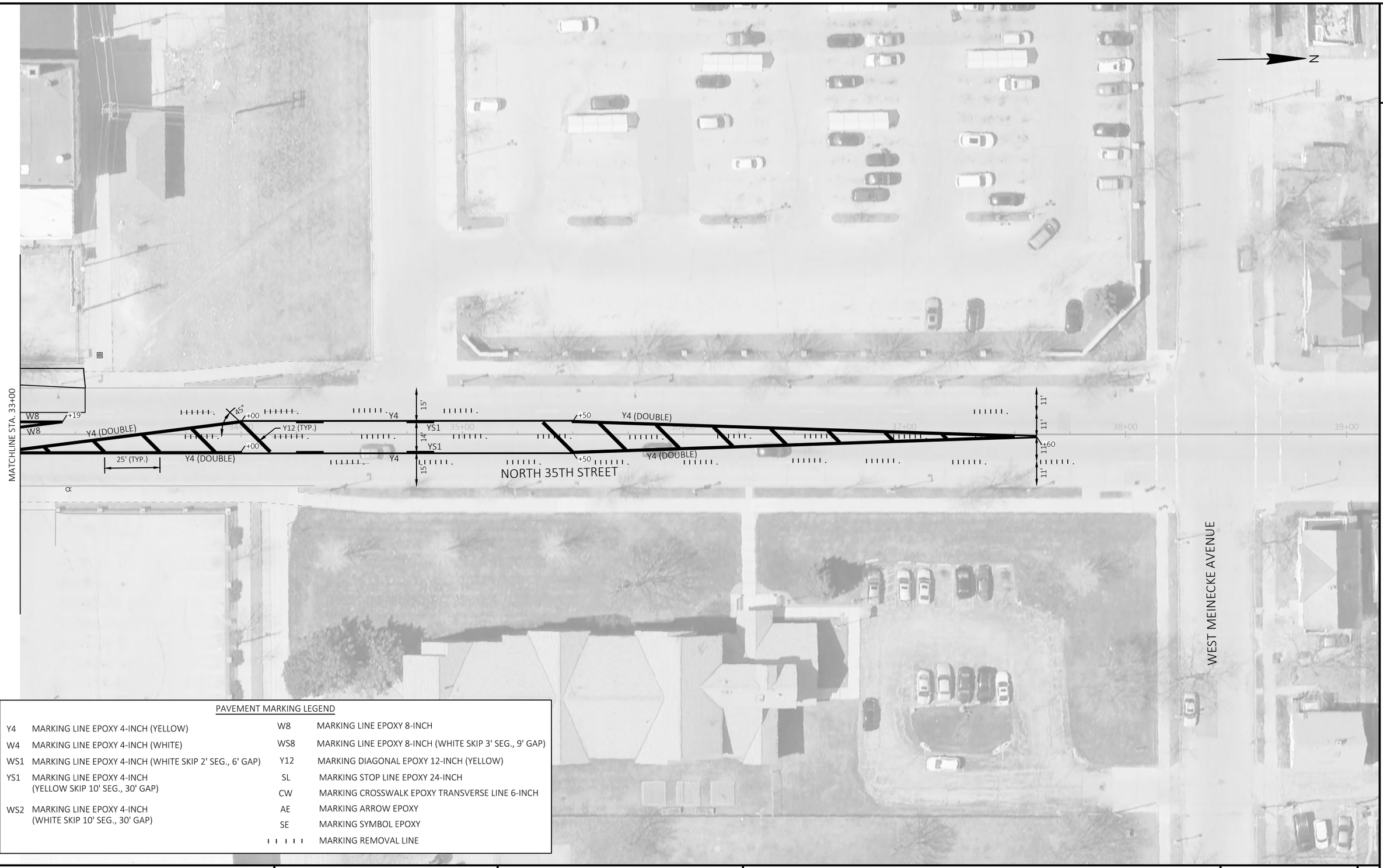
PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (NORTH)	SHEET 80	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\024501_PM.DWG
LAYOUT NAME - 024503-pm

PLOT DATE : 4/23/2025 4:57 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2



PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
		CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (NORTH)	SHEET 81	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\024501_PM.DWG
LAYOUT NAME - 024504-pm
PLOT DATE : 4/23/2025 4:57 PM
PLOT BY : WRIGHT, BRANDON
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



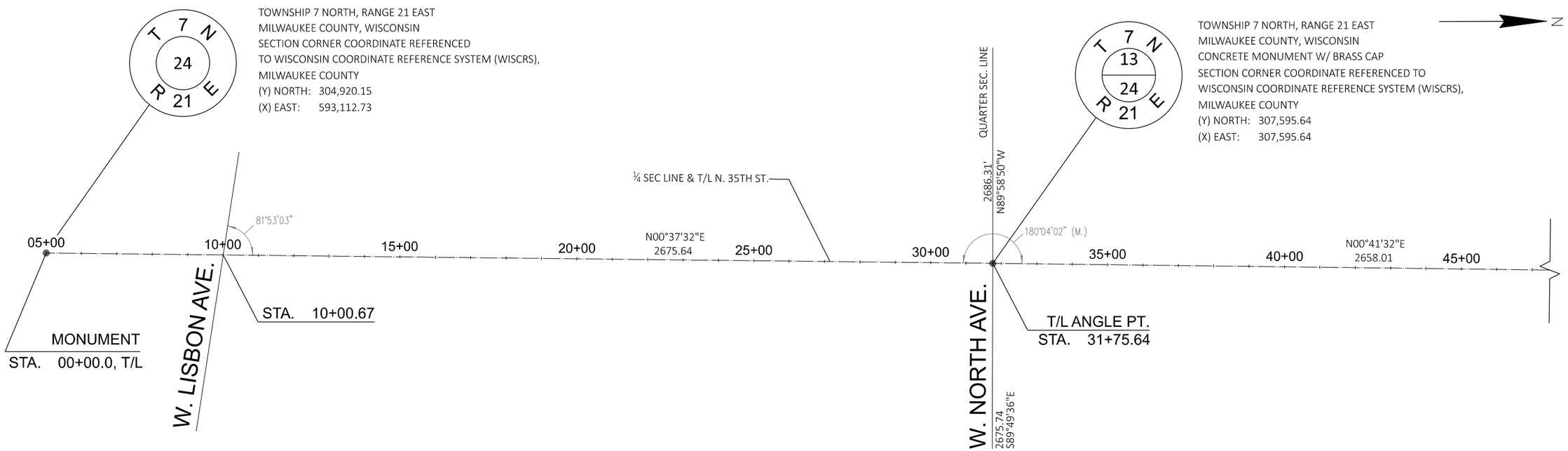


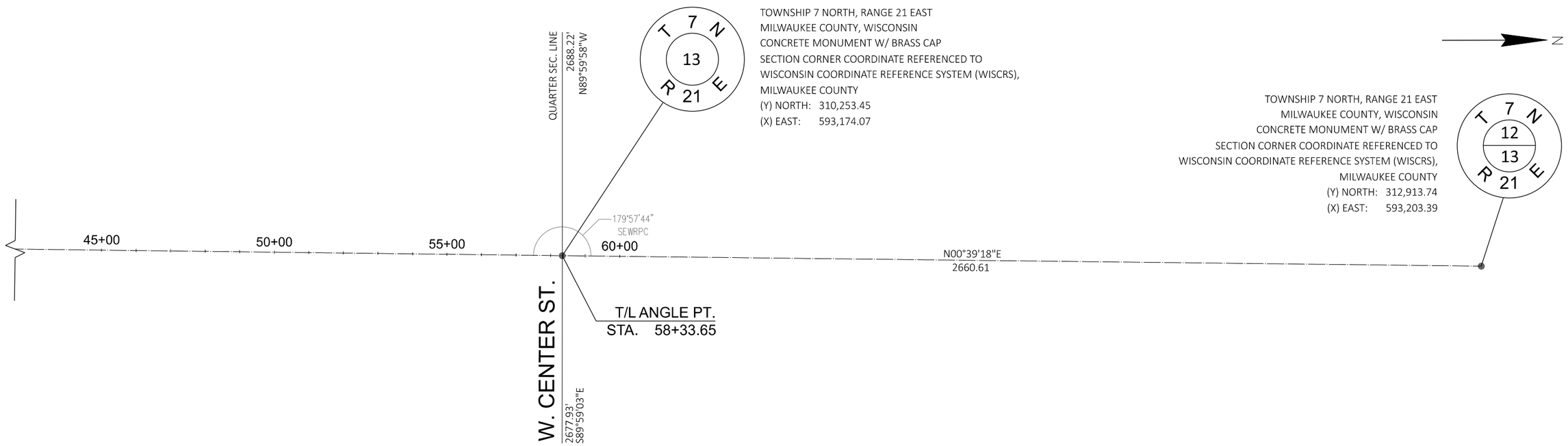
PAVEMENT MARKING LEGEND

Y4	MARKING LINE EPOXY 4-INCH (YELLOW)	W8	MARKING LINE EPOXY 8-INCH
W4	MARKING LINE EPOXY 4-INCH (WHITE)	WS8	MARKING LINE EPOXY 8-INCH (WHITE SKIP 3' SEG., 9' GAP)
WS1	MARKING LINE EPOXY 4-INCH (WHITE SKIP 2' SEG., 6' GAP)	Y12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
YS1	MARKING LINE EPOXY 4-INCH (YELLOW SKIP 10' SEG., 30' GAP)	SL	MARKING STOP LINE EPOXY 24-INCH
		CW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
WS2	MARKING LINE EPOXY 4-INCH (WHITE SKIP 10' SEG., 30' GAP)	AE	MARKING ARROW EPOXY
		SE	MARKING SYMBOL EPOXY
			MARKING REMOVAL LINE

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING (LISBON & NORTH)	SHEET 82	E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\SHEETS\024501_PM.DWG
LAYOUT NAME - 024505-pm
PLOT DATE : 4/23/2025 4:57 PM PLOT BY : WRIGHT, BRANDON PLOT NAME : PLOT SCALE : 1 IN:40 FT





PROJECT NO: 2568-00-01	HWY: N. 35TH STREET	COUNTY: MILWAUKEE	ALIGNMENT	SHEET 83	E

2984-21-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	50.000	50.000
0004	201.0220	Grubbing	ID	50.000	50.000
0006	204.0100	Removing Concrete Pavement	SY	970.000	970.000
0008	204.0110	Removing Asphaltic Surface	SY	14.000	14.000
0010	204.0150	Removing Curb & Gutter	LF	50.000	50.000
0012	204.0155	Removing Concrete Sidewalk	SY	512.000	512.000
0014	204.0195	Removing Concrete Bases	EACH	6.000	6.000
0016	204.0215	Removing Catch Basins	EACH	3.000	3.000
0018	204.0255	Abandoning Catch Basins	EACH	2.000	2.000
0020	204.0270	Abandoning Culvert Pipes	EACH	2.000	2.000
0022	204.9090.S	Removing (item description) 001. Aerial Cable	LF	2,250.000	2,250.000
0024	205.0100	Excavation Common	CY	29.000	29.000
0028	213.0100	Finishing Roadway (project) 002. 2984-21-72	EACH	1.000	1.000
0030	305.0110	Base Aggregate Dense 3/4-Inch	TON	40.000	40.000
0032	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	230.000	230.000
0036	415.0090	Concrete Pavement 9-Inch	SY	713.000	713.000
0038	416.0610	Drilled Tie Bars	EACH	377.000	377.000
0040	416.0620	Drilled Dowel Bars	EACH	158.000	158.000
0048	601.0331	Concrete Curb & Gutter 31-Inch	LF	64.000	64.000
0050	602.0410	Concrete Sidewalk 5-Inch	SF	5,170.000	5,170.000
0052	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	120.000	120.000
0056	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	81.000	81.000
0058	608.6008	Storm Sewer Pipe Composite 8-Inch	LF	15.000	15.000
0060	611.3225	Inlets 2x2.5-FT	EACH	6.000	6.000
0062	619.1000	Mobilization	EACH	0.600	0.600
0066	625.0100	Topsoil	SY	142.000	142.000
0068	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0072	628.7015	Inlet Protection Type C	EACH	13.000	13.000
0074	628.7020	Inlet Protection Type D	EACH	9.000	9.000
0076	631.0300	Sod Water	MGAL	4.000	4.000
0078	631.1000	Sod Lawn	SY	142.000	142.000
0082	642.5201	Field Office Type C	EACH	0.600	0.600
0084	643.0300	Traffic Control Drums	DAY	15,114.000	15,114.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,720.000	1,720.000
0088	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	85.000	85.000
0090	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	85.000	85.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	3,440.000	3,440.000
0094	643.0715	Traffic Control Warning Lights Type C	DAY	5,663.000	5,663.000
0096	643.0900	Traffic Control Signs	DAY	12,717.000	12,717.000
0098	643.1050	Traffic Control Signs PCMS	DAY	40.000	40.000
0100	643.3150	Temporary Marking Line Removable Tape 4-Inch	LF	14,000.000	14,000.000
0102	643.3180	Temporary Marking Line Removable Tape 6-Inch	LF	902.000	902.000
0104	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	452.000	452.000
0106	643.3350	Temporary Marking Crosswalk Removable Tape 6-inch	LF	198.000	198.000
0108	643.3550	Temporary Marking Arrow Removable Tape	EACH	6.000	6.000
0110	643.3850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	96.000	96.000
0112	643.5000	Traffic Control	EACH	0.600	0.600
0114	644.1810	Temporary Pedestrian Barricade	LF	270.000	270.000

2984-21-72

Line	Item	Item Description	Unit	Total	Qty
0116	644.1900.S	Temporary Audible Message Devices	DAY	3,004.000	3,004.000
0118	646.1020	Marking Line Epoxy 4-Inch	LF	11,008.000	11,008.000
0120	646.3020	Marking Line Epoxy 8-Inch	LF	983.000	983.000
0122	646.5020	Marking Arrow Epoxy	EACH	16.000	16.000
0124	646.5220	Marking Symbol Epoxy	EACH	8.000	8.000
0126	646.7120	Marking Diagonal Epoxy 12-Inch	LF	367.000	367.000
0128	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	814.000	814.000
0130	646.9000	Marking Removal Line 4-Inch	LF	4,319.000	4,319.000
0132	646.9002	Marking Removal Line 6-Inch	LF	445.000	445.000
0134	646.9200	Marking Removal Line Wide	LF	110.000	110.000
0136	646.9300	Marking Removal Special Marking	EACH	14.000	14.000
0138	650.4000	Construction Staking Storm Sewer	EACH	9.000	9.000
0140	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	654.000	654.000
0144	650.8501	Construction Staking Electrical Installations (project) 002. 2984-21-72	EACH	1.000	1.000
0146	650.9000	Construction Staking Curb Ramps	EACH	12.000	12.000
0150	650.9500	Construction Staking Sidewalk (project) 002. 2984-21-72	EACH	1.000	1.000
0154	650.9911	Construction Staking Supplemental Control (project) 002. 2984-21-72	EACH	1.000	1.000
0156	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	25.000	25.000
0158	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,580.000	1,580.000
0160	652.0615	Conduit Special 3-Inch	LF	1,065.000	1,065.000
0162	653.0905	Removing Pull Boxes	EACH	16.000	16.000
0164	654.0101	Concrete Bases Type 1	EACH	1.000	1.000
0166	654.0110	Concrete Bases Type 10	EACH	7.000	7.000
0168	654.0120	Concrete Bases Type 10-Special	EACH	1.000	1.000
0170	655.0230	Cable Traffic Signal 5-14 AWG	LF	1,525.000	1,525.000
0172	655.0250	Cable Traffic Signal 9-14 AWG	LF	20.000	20.000
0174	655.0280	Cable Traffic Signal 19-14 AWG	LF	1,205.000	1,205.000
0176	655.0290	Cable Traffic Signal 21-14 AWG	LF	735.000	735.000
0178	655.0305	Cable Type UF 2-12 AWG Grounded	LF	3,150.000	3,150.000
0180	655.0320	Cable Type UF 2-10 AWG Grounded	LF	400.000	400.000
0182	655.0515	Electrical Wire Traffic Signals 10 AWG	LF	1,315.000	1,315.000
0184	655.0900	Traffic Signal EVP Detector Cable	LF	1,350.000	1,350.000
0186	657.0100	Pedestal Bases	EACH	1.000	1.000
0190	657.0350	Poles Type 10	EACH	7.000	7.000
0192	657.0352	Poles Type 10-Special	EACH	1.000	1.000
0194	657.0405	Traffic Signal Standards Aluminum 3.5-FT	EACH	1.000	1.000
0196	657.0520	Monotube Arms 20-FT	EACH	1.000	1.000
0198	657.0525	Monotube Arms 25-FT	EACH	1.000	1.000
0200	657.0530	Monotube Arms 30-FT	EACH	5.000	5.000
0202	657.0536	Monotube Arms 35-FT-Special	EACH	1.000	1.000
0204	658.0173	Traffic Signal Face 3S 12-Inch	EACH	36.000	36.000
0206	658.0412	Pedestrian Signal Face 12-Inch	EACH	16.000	16.000
0210	658.5070	Signal Mounting Hardware (location) 002. W Lisbon Ave	EACH	1.000	1.000
0212	658.5070	Signal Mounting Hardware (location) 003. W North Ave	EACH	1.000	1.000
0214	659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH	40.000	40.000
0218	661.0201	Temporary Traffic Signals for Intersections (location) 002. W Lisbon Ave	EACH	1.000	1.000
0220	661.0201	Temporary Traffic Signals for Intersections (location) 003. W North Ave	EACH	1.000	1.000
0222	674.0300	Remove Cable	LF	200.000	200.000
0224	690.0150	Sawing Asphalt	LF	24.000	24.000

2984-21-72

Line	Item	Item Description	Unit	Total	Qty
0226	690.0250	Sawing Concrete	LF	1,211.000	1,211.000
0228	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0230	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0232	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,400.000	2,400.000
0234	SPV.0060	Special 001. Utility Line Opening	EACH	2.000	2.000
0236	SPV.0060	Special 002. Adjusting Water Valve Boxes	EACH	9.000	9.000
0238	SPV.0060	Special 003. Section Corner Monuments	EACH	1.000	1.000
0240	SPV.0060	Special 004. Water Main Protection	EACH	3.000	3.000
0242	SPV.0060	Special 102. Inlet Covers Type MS 57	EACH	9.000	9.000
0244	SPV.0060	Special 103. Manhole Covers Type MS 58-A	EACH	6.000	6.000
0246	SPV.0060	Special 110. Catch Basin Type 44A	EACH	3.000	3.000
0248	SPV.0060	Special 201. Install City Precast Controller Base	EACH	2.000	2.000
0250	SPV.0060	Special 205. ATC Controller and Cabinet Installed	EACH	2.000	2.000
0252	SPV.0060	Special 212. Fiber Optic Patch Panel	EACH	2.000	2.000
0254	SPV.0060	Special 213. Ethernet Switch	EACH	2.000	2.000
0256	SPV.0060	Special 215. Electrical Service Pedestal	EACH	2.000	2.000
0258	SPV.0060	Special 218. EVP 1 Direction Detector	EACH	8.000	8.000
0260	SPV.0060	Special 221. EVP Phase Selector Card 4 Channel	EACH	2.000	2.000
0262	SPV.0060	Special 223. EVP Confirmation Light	EACH	8.000	8.000
0264	SPV.0060	Special 228. Electrical Riser	EACH	8.000	8.000
0268	SPV.0060	Special 244. Remove Traffic Signals (W Lisbon Ave)	EACH	1.000	1.000
0270	SPV.0060	Special 245. Remove Traffic Signals (W North Ave)	EACH	1.000	1.000
0272	SPV.0060	Special 267. Pedestrian Countdown Signal Face 12-Inch	EACH	16.000	16.000
0274	SPV.0060	Special 268. Voice Instruction Audible Pushbutton	EACH	16.000	16.000
0276	SPV.0060	Special 269. Voice Instruction Audible Control Unit	EACH	2.000	2.000
0280	SPV.0060	Special 302. Pull Boxes 13-Inch x 24-Inch x 24-Inch	EACH	19.000	19.000
0282	SPV.0060	Special 303. Pull Boxes 17-Inch x 30-Inch x 24-Inch	EACH	17.000	17.000
0284	SPV.0060	Special 310. Remove Poles Complete	EACH	18.000	18.000
0288	SPV.0060	Special 324. 40 Ft. Wood Pole	EACH	11.000	11.000
0290	SPV.0060	Special 334. Inline 5A Fast Acting Fuse with Holder	EACH	22.000	22.000
0292	SPV.0060	Special 339. Primary or Secondary Riser	EACH	11.000	11.000
0296	SPV.0060	Special 346. Luminaire Arms Single Member 6-FT. WP Mount	EACH	13.000	13.000
0298	SPV.0060	Special 353. Equipment Grounding Electrode	EACH	14.000	14.000
0300	SPV.0060	Special 357. Luminaire Arms Mounting Clamps Poles Type -3 Single Bracket	EACH	11.000	11.000
0302	SPV.0060	Special 360. Water Tight Splices and Connections	EACH	88.000	88.000
0304	SPV.0060	Special 376. Luminaire Utility 3LED2	EACH	13.000	13.000
0306	SPV.0060	Special 400. Adjusting CUC Manhole Cover	EACH	4.000	4.000
0308	SPV.0060	Special 801. Poles Type H17	EACH	3.000	3.000
0310	SPV.0060	Special 819. Poles Type A31-BD	EACH	11.000	11.000
0314	SPV.0060	Special 821. Concrete Base Type 2 Modified	EACH	11.000	11.000
0316	SPV.0060	Special 865. Luminaire Historic Milwaukee Harp LED 1	EACH	3.000	3.000
0318	SPV.0060	Special 867. Luminaire Historic Milwaukee Lantern LED 3	EACH	19.000	19.000
0320	SPV.0090	Special 001. Marking Stop Line Epoxy 24-Inch	LF	213.000	213.000
0322	SPV.0090	Special 011. Concrete Curb & Gutter Integral 31-Inch	LF	590.000	590.000
0324	SPV.0090	Special 240. Electrical Cable 3#4/1#8 XLP	LF	220.000	220.000
0326	SPV.0090	Special 302. Electrical Cable Type 3#6 AL	LF	525.000	525.000
0328	SPV.0090	Special 304. Electrical Cable Type 2#2/1#4 AL	LF	1,200.000	1,200.000
0330	SPV.0090	Special 319. Liquidtight Flexible Nonmetallic 1 ½ - Inch Conduit	LF	295.000	295.000
0332	SPV.0090	Special 324. Electrical Cable Type 4#2/1#8 XLP	LF	2,550.000	2,550.000

					2984-21-72
0334	SPV.0090	Special 325. Conduit 3-Inch HDPE Schedule 40	LF	2,000.000	2,000.000

3

CLEARING AND GRUBBING

STATION	LOCATION	201.0120 CLEARING ID	201.0220 GRUBBING ID
STA 32+20 TO 32+90	LT	50	50
	TOTAL	50	50

REMOVALS

CATEGORY 0010

ITEM NO.	204.0100	204.0110	204.0150	204.0155
	REMOVING CONCRETE PAVEMENT	REMOVING ASPHALTIC SURFACE	REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK
LOCATION	SY	SY	LF	SY
N 35TH ST & W LISBON AVE	505	-	28	276
N 35TH ST & W NORTH AVE	465	14	22	236
TOTAL	970	14	50	512

EXCAVATION COMMON

CATEGORY 0010

ITEM NO.	205.0100
	EXCAVATION COMMON
LOCATION	CY
N 35TH ST & W LISBON AVE	16
N 35TH ST & W NORTH AVE	13
TOTAL	29

3

FINISHING ROADWAY

CATEGORY 0010

ITEM NO.	213.0100
	FINISHING ROADWAY (PROJECT) 02. 2984-21-72
LOCATION	EACH
2984-21-72	1
TOTAL	1

BASE AGGREGATE

CATEGORY 0010

ITEM NO.	305.0110	305.0120
	BASE AGGREGATE DENSE 3/4-INCH	BASE AGGREGATE DENSE 1 1/4-INCH
LOCATION	TON	TON
N 35TH ST & W LISBON AVE	20	120
N 35TH ST & W NORTH AVE	20	110
TOTAL	40	230

CONCRETE PAVEMENT

CATEGORY 0010

ITEM NO.	415.0090
	CONCRETE PAVEMENT 9-INCH
LOCATION	SY
N 35TH ST & W LISBON AVE	336
N 35TH ST & W NORTH AVE	377
TOTAL	713

DRILLED BAR ITEMS

CATEGORY 0010

ITEM NO.	416.0610	416.0620
	DRILLED TIE BARS	DRILLED DOWEL BARS
LOCATION	EACH	EACH
N 35TH ST & W LISBON AVE	207	89
N 35TH ST & W NORTH AVE	170	69
TOTAL	377	158

CURB AND GUTTER

CATEGORY 0010

ITEM NO.	601.0331	SPV.0090.011
	CONCRETE CURB & GUTTER 31-INCH	CONCRETE CURB & GUTTER INTEGRAL 31-INCH
LOCATION	LF	LF
N 35TH ST & W LISBON AVE	25	307
N 35TH ST & W NORTH AVE	39	283
TOTAL	64	590

CONCRETE SIDEWALK

CATEGORY 0010

ITEM NO.	602.0410	602.0515
	CONCRETE SIDEWALK 5-INCH	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA
LOCATION	SF	SF
N 35TH ST & W LISBON AVE	2870	80
N 35TH ST & W NORTH AVE	2300	40
TOTAL	5,170	120

3

MOBILIZATION

CATEGORY 0010

ITEM NO.	619.1000
	MOBILIZATION
LOCATION	EACH
2984-21-72	0.6
TOTAL	0.6

EROSION CONTROL

CATEGORY 0010

ITEM NO.	628.7015	628.7020
	INLET PROTECTION TYPE C	INLET PROTECTION TYPE D
LOCATION	EACH	EACH
N 35TH ST & W LISBON AVE	9	6
N 35TH ST & W NORTH AVE	4	3
TOTAL	13	9

LANDSCAPE ITEMS

CATEGORY 0010

ITEM NO.	625.0100	631.1000	631.0300
	TOPSOIL	SOD LAWN	SOD WATER
LOCATION	SY	SY	MGAL
N 35TH ST & W LISBON AVE	39	39	1
N 35TH ST & W NORTH AVE	103	103	3
TOTAL	142	142	4

3

MOBILIZATIONS EROSION CONTROL

CATEGORY 0010

ITEM NO.	628.1905	628.1910
	MOBILIZATIONS EROSION CONTROL	MOBILIZATIONS EMERGENCY EROSION CONTROL
LOCATION	EACH	EACH
2984-21-72	2	2
TOTAL	2	2

FIELD OFFICE

CATEGORY 0010

ITEM NO.	642.5201
	FIELD OFFICE TYPE C
LOCATION	EACH
2984-21-72	0.6
TOTAL	0.6

TRAFFIC CONTROL

CATEGORY 0010

ITEM NO.	643.5000
	TRAFFIC CONTROL
LOCATION	EACH
2984-21-72	0.6
TOTAL	0.6

CONSTRUCTION STAKING

CATEGORY 0010

ITEM NO.	650.5500	650.9000
	CONSTRUCTION STAKING CURB GUTTER AND CURB AND GUTTER	CONSTRUCTION STAKING CURB RAMP
LOCATION	LF	EACH
N 35TH ST & W LISBON AVE	332	8
N 35TH ST & W NORTH AVE	322	4
TOTAL	654	12

CONSTRUCTION STAKING (PROJECT)

CATEGORY 0010

ITEM NO.	650.8501 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 02. 2984-21-72	650.9500 CONSTRUCTION STAKING SIDEWALK (PROJECT) 02. 2984-21-72	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 02. 2984-21-72
LOCATION	EACH	EACH	EACH
2984-21-72	1	1	1
TOTAL	1	1	1

SAWING

CATEGORY 0010

ITEM NO.	690.0150 SAWING ASPHALT	690.0250 SAWING CONCRETE
LOCATION	LF	LF
N 35TH ST & W LISBON AVE	-	606
N 35TH ST & W NORTH AVE	24	605
TOTAL	24	1,211

UTILITY LINE OPENING

CATEGORY 0010

ITEM NO.	SPV.0060.001 UTILITY LINE OPENING
LOCATION	EACH
N 35TH ST & W LISBON AVE	1
N 35TH ST & W NORTH AVE	1
TOTAL	2

WATER VALVE BOXES

CATEGORY 0020

ITEM NO.	SPV.0060.002 ADJUSTING WATER VALVE BOXES
LOCATION	EACH
2984-21-72	9
TOTAL	9

3

WATER MAIN PROTECTION

CATEGORY 0020

ITEM NO.	SPV.0060.004 WATER MAIN PROTECTION
LOCATION	EACH
STA 8+42, 16'LT	1
STA 10+50, 23'LT	1
STA 9+75, 38'LT	1
TOTAL	3

CITY UNDERGROUND CONDUIT

CATEGORY 0010

ITEM NO.		SPV.0060.400 ADJUSTING CUC MANHOLE COVER
MANHOLE	LOCATION	EACH
602	STA 09+81.6, 25.6' RT	1
603	STA 09+86.1, 33.1' RT	1
604	STA 09+94.2, 29.5' LT	1
606	STA 31+65.3, 33.2' LT	1
	TOTAL	4

SECTION CORNER MONUMENTS

CATEGORY 0010

ITEM NO.	SPV.0060.003 SECTION CORNER MONUMENTS
LOCATION	EACH
N 35TH ST & W NORTH AVE	1
TOTAL	1

LOCATION: INTERSECTION OF N. 35TH STREET WITH W. LISBON AVENUE AND W. NORTH AVENUE

EXISTING AND PROPOSED SEWER STRUCTURES								SEWER PIPES							
STRUCTURE NUMBER	STRUCTURE TYPE	STATION	CENTERLINE OFFSET	COVER ELEV.	DEPTH[a] (FT)	FRAME & LID	STRUCTURE REMARKS	FROM STRUCTURE	TO STRUCTURE	INVERTS INLET	INVERTS OUTLET	SLOPE (FT/FT)	PLAN LENGTH (FT)	PIPE SIZE (IN)	PIPE MATERIAL	PIPE REMARKS
100	INLET 2'X2.5'	9+42.8	16.8' LT	126.92	3.27	MS 57	NEW STRUCTURE	100	101	123.65	123.35	0.02500	12	12	CL IV RCP	
101	EXISTING CATCH BASIN	9+54.5	16.8' LT	126.86		MS 58-A										
102	INLET 2'X2.5'	9+45.0	25.0' RT	126.68	*	MS 57	REPLACE EXISTING STRUCTURE	102	EXIST. DRAIN				5	8	PVCP	
103	INLET 2'X2.5'	9+81.5	34.5' LT	127.55	3.40	MS 57	REPLACE EXISTING STRUCTURE	103	104	124.15	123.95	0.02857	7	12	CL IV RCP	Protect Light Pole
104	EXISTING MANHOLE	9+75.9	35.2' LT	128.06		MS 58-A	NEW FRAME & LID ONLY									
105	INLET 2'X2.5'	10+34.1	63.4' LT	127.85	3.00	MS 57	NEW STRUCTURE	105	105A	124.85	124.00	0.04250	20	12	CL IV RCP	Protect & Support 2" Dia. Gas
105A	EXISTING MANHOLE	10+34.7	43.7' LT	127.82		MS 58-A	NEW FRAME & LID ONLY									
106	EXISTING CATCH BASIN	10+45.8	24.9' LT	126.99		MS 58-A	NEW FRAME & LID ONLY									
107	INLET 2'X2.5'	10+61.2	25.0' RT	127.06	7.09	MS 57	NEW STRUCTURE	107	107A	123.95	123.30	0.02321	28	12	CL IV RCP	
107A	EXISTING CATCH BASIN	10+47.6	0.6' LT	127.70		MS 58-A	NEW FRAME & LID ONLY									
108	INLET 2'X2.5'	10+52.2	25.1' LT	127.32	3.32	MS 57	NEW STRUCTURE	108	106	124.00	123.85	0.02500	6	12	CL IV RCP	
109	INLET 2'X2.5'	31+30.0	17.5' LT	126.45	3.95	MS 57	NEW STRUCTURE	109	109A	122.50	122.30	0.02500	8	12	CL IV RCP	
109A	EXISTING CATCH BASIN	31+34.4	25.0' LT	126.30		MS 58-A	NEW FRAME & LID ONLY									
110	CATCH BASIN 44A	31+36.3	25.2' RT	125.63		MS 57	REPLACE EXISTING STRUCTURE	110	EXIST. DRAIN				5	8	PVCP	Reuse Existing Drains
111	CATCH BASIN 44A	32+00.2	42.7' LT	125.41		MS 57	REPLACE EXISTING STRUCTURE	111	EXIST. DRAIN				5	8	PVCP	Reuse Existing Drains

608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	608.6008 STORM SEWER PIPE COMPOSITE 8-INCH	611.3225 INLETS 2'X2.5'	650.4000 CONSTRUCTION STAKING STORM SEWER	SPV.0060.102 INLET COVERS TYPE MS 57	SPV.0060.103 MANHOLE COVERS TYPE MS 58-A	SPV.0060.110 CATCH BASIN TYPE 44A
LF	LF	EACH	EACH	EACH	EACH	EACH
81	15	6	9	9	6	3

[A] DEPTH = COVER ELEVATION - LOWEST PIPE INVERT ELEVATION + SUMP(FOR TYPE 44A & 44B CATCH BASINS)

CATCH BASIN REMOVALS

CATEGORY 0010
ITEM NO.

STRUCTURE NUMBER	STATION	OFFSET	204.0215 REMOVING CATCH BASINS EACH
500	9+45.0	24.0' RT	1
501	9+82.5	34.5' LT	1
504	31+36.3	23.9' RT	1
TOTAL			3

CATCH BASIN ABANDONMENT

CATEGORY 0010
ITEM NO.

STRUCTURE NUMBER	STATION	OFFSET	204.0255 ABANDON CATCH BASIN EACH	204.0270 ABANDONING CULVERT PIPES EACH
502	10+30.3	42.3' LT	1	1
503	10+40.2	23.9' RT	1	1
TOTAL			2	2

TRAFFIC CONTROL

CATEGORY 0010 ITEM NO.		643.0300 TRAFFIC CONTROL DRUMS		643.0420 TRAFFIC CONTROL BARRICADES TYPE III		643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0900 TRAFFIC CONTROL SIGNS		643.1050 TRAFFIC CONTROL SIGNS PCMS		644.1810 TEMPORARY PEDESTRIAN BARRICADE	644.1900.S TEMPORARY AUDIBLE MESSAGE DEVICES	
STAGE	STAGE DURATION DAYS	EACH	DAY	EACH	DAY	EACH	EACH	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	EACH	DAY
STAGE 1	41	41	1681	8	328	24	24	16	656	24	984	55	2255	8	40	72	8	328
STAGE 2	47	47	2209	12	564	35	35	24	1128	33	1551	66	3102	-	-	72	8	376
STAGE 3 & 3A	92	122	11,224	9	828	26	26	18	1,656	34	3128	80	7360	-	-	126	25	2300
TOTAL		15,114		1,720		85	85	3,440		5,663		12,717		40		270	3004	

TEMPORARY PAVEMENT MARKINGS

CATEGORY 0010 ITEM NO.	643.3150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH	643.3180 TEMPORARY MARKING LINE REMOVABLE TAPE 6-INCH	643.3250 TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH	643.3350 TEMPORARY MARKING CROSSWALK REMOVABLE TAPE 6-INCH	643.3550 TEMPORARY MARKING ARROW REMOVABLE TAPE	643.3850 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH
STAGE	LF	LF	LF	LF	EACH	EACH
STAGE 1	5788	361	100	-	2	8
STAGE 2	2723	-	103	60	2	22
STAGE 3 & 3A	5,489	541	249	138	2	66
TOTAL	14,000	902	452	198	6	96

3

MARKING REMOVALS ITEMS

CATEGORY 0010 ITEM NO.	646.9000	646.9002	646.9200	646.9300
	MARKING REMOVAL LINE 4-INCH	MARKING REMOVAL LINE 6-INCH	MARKING REMOVAL LINE WIDE	MARKING REMOVAL SPECIAL MARKING
LOCATION	LF	LF	LF	EACH
N 35TH ST & W LISBON AVE	1877	203	57	6
N 35TH ST & W NORTH AVE	2442	242	53	8
TOTAL	4319	445	110	14

PERMANENT MARKING ITEMS

CATEGORY 0010 ITEM NO.	646.1020					646.3020		646.5020	646.5220	646.7120	646.7420	SPV.0090.001
	MARKING LINE EPOXY 4-INCH					MARKING LINE EPOXY 8-INCH		MARKING ARROW EPOXY	MARKING SYMBOL EPOXY	MARKING DIAGONAL EPOXY 12-INCH YELLOW	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH	MARKING STOP LINE EPOXY 24-INCH
LOCATION	YELLOW	YELLOW SKIP 10' SEG, 30' GAP	WHITE	WHITE SKIP 2' SEG, 6' GAP	WHITE SKIP 10' SEG, 30' GAP	WHITE	WHITE SKIP 3' SEG, 9' GAP	EACH	EACH	LF	LF	LF
	LF	LF	LF	LF	LF	LF	LF					
N 35TH ST & W LISBON AVE	3560	80	1760	38	40	363	-	7	4	183	423	98
N 35TH ST & W NORTH AVE	3580	80	1790	40	40	566	54	9	4	184	391	115
SUBTOTALS	7140	160	3550	78	80	929	54	16	8	367	814	213
TOTAL			11,008				983	16	8	367	814	213

STREET LIGHTING ITEMS

CATEGORY 0010

ITEM NO.	SPV.0060.302 PULL BOXES 13-INCH X 24-INCH X 24-INCH	SPV.0060.801 POLES TYPE H17	SPV.0060.339 PRIMARY OR SECONDARY RISER	SPV.0060.819 POLES TYPE A31-BD	SPV.0060.821 CONCRETE BASE TYPE 2 MODIFIED
LOCATION	EACH	EACH	EACH	EACH	EACH
N 35TH ST & W LISBON AVE	10	2	6	6	6
N 35TH ST & W NORTH AVE	9	1	5	5	5
TOTAL	19	3	11	11	11

CATEGORY 0010

ITEM NO.	SPV.0060.334 INLINE 5A FAST ACTING FUSE WITH HOLDER	SPV.0060.353 EQUIPMENT GROUNDING ELECTRODE	SPV.0060.357 LUMINAIRE ARMS MOUNTING CLAMPS POLES TYPE -3 SINGLE BRACKET	SPV.0060.360 WATER TIGHT SPLICES & CONNECTIONS	SPV.0060.376 LUMINAIRE UTILITY 3LED2	SPV.0060.865 LUMINAIRE HISTORIC MILWAUKEE HARP LED 1	SPV.0060.867 LUMINAIRE HISTORIC MILWAUKEE LANTERN LED 3
LOCATION	EACH	EACH	EACH	LF	EACH	EACH	EACH
N 35TH ST & W LISBON AVE	12	8	6	48	6	2	10
N 35TH ST & W NORTH AVE	10	6	5	40	7	1	9
TOTAL	22	14	11	88	13	3	19

CATEGORY 0010

ITEM NO.	655.0305* CABLE TYPE UF 2-12 AWG GROUNDED	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED	SPV.0060.310 REMOVE POLES COMPLETE	SPV.0060.324 40 FT. WOOD POLE	SPV.0060.346 LUMINAIRE ARMS SINGLE MEMBER 6-FT. WP MOUNT	SPV.0090.302 ELECTRICAL CABLE TYPE 3#6 AL	SPV.0090.304 ELECTRICAL CABLE TYPE 2#2/1#4 AL	SPV.0090.319 LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT 1 1/2-INCH	SPV.0090.324 ELECTRICAL CABLE TYPE 4#2/1#8 XLP
LOCATION	LF	LF	EACH	EACH	EACH	LF	LF	LF	LF
N 35TH ST & W LISBON AVE	850	--	10	4	6	100	800	240	1350
N 35TH ST & W NORTH AVE	950	400	8	7	7	425	400	55	1200
TOTAL	1,800	400	18	11	13	525	1,200	295	2,550

CATEGORY 0010

ITEM NO.	204.9090.S REMOVING AERIAL CABLE	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	674.0300 REMOVE CABLE	SPV.0090.325 CONDUIT 3-INCH HDPE SCHEDULE 40
LOCATION	LF	LF	LF	LF
N 35TH ST & W LISBON AVE	1050	320	--	1200
N 35TH ST & W NORTH AVE	1200	175	200	800
TOTAL	2,250	495	200	2,000

* Quantities shown elsewhere

ALL THE ITEMS IN THIS PAGE ARE CATEGORY 0010

TRAFFIC SIGNALS - N 35TH ST & W LISBON AVE

LOCATION	TO	LOCATION	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
CB1	TO	PB1	-	25	-
CB1	TO	CUC LATERAL	-	10	-
PB1	TO	SB1	-	10	-
PB1	TO	PB2	-	80	-
PB2	TO	SB2	-	10	-
PB2	TO	PB3	-	-	150
PB3	TO	SB3	-	15	-
PB3	TO	M1	10	-	-
PB3	TO	PB4	-	150	-
PB4	TO	SB4	-	20	-
PB4	TO	PB5	-	-	100
PB5	TO	SB5	-	5	-
PB5	TO	SB6	10	-	-
PB5	TO	PB6	-	100	-
PB6	TO	SB7	-	10	-
PB6	TO	PB7	-	-	110
PB7	TO	SB8	-	5	-
PB7	TO	PB8	-	100	-
PB8	TO	SB9	-	10	-
PB8	TO	PB1	-	-	100
		SUBTOTAL	20	550	460

LOCATION NUMBER	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH
XB1	09+61', 19' L	1	-
XB2	09+57', 21' L	-	1
XB3	09+69', 19' L	-	1
XB4	09+78', 31' L	1	-
XB5	09+80', 42' L	-	1
XB6	10+33', 40' L	-	1
XB7	10+39', 28' L	-	1
XB8	10+38', 27' R	-	1
XB9	10+23', 35' R	1	-
XB10	10+21', 44' R	-	1
XB11	09+68', 45' R	-	1
	SUBTOTAL	3	8

LOCATION	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
PEDESTRIAL SIGNAL	8
TRAFFIC SIGNAL 3-SECTION	12
SUBSTOTAL	20

SIGNAL BASE NUMBER	657.0100 PEDESTAL BASES EACH	657.0350 POLES TYPE 10 EACH	657.0405 TRAFFIC SIGNALS STANDARD ALUMINUM 3.5-FT EACH	657.0520 MONOTUBE ARMS 20-FT EACH	657.0525 MONOTUBE ARMS 25-FT EACH	657.0530 MONOTUBE ARMS 30-FT EACH	SPV.0060.218 EVP 1 DIRECTION DETECTOR EACH	SPV.0060.223 EVP CONFIRMATION LIGHT EACH	SPV.0060.228 ELECTRICAL RISER EACH	SPV.0060.268 VOICE INSTRUCTION AUDIBLE PUSH BUTTON EACH
SB1	-	1	-	-	1	-	1	1	-	1
SB2	-	-	-	-	-	1	1	1	1	1
SB3	-	1	-	-	-	-	-	-	-	1
SB4	-	-	-	-	-	-	-	-	1	1
SB5	-	1	-	1	-	-	1	1	-	-
SB6	1	-	1	-	-	-	-	-	-	1
SB7	-	-	-	-	-	-	-	-	1	1
SB8	-	1	-	-	-	1	1	1	-	1
SB9	-	-	-	-	-	-	-	-	1	1
SUBTOTAL	1	4	1	1	1	2	4	4	4	8

LOCATION	SPV.0060.215 ELECTRICAL SERVICE PEDESTAL EACH
09+48', 24.5' L	1
SUBTOTAL	1

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 95	E

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

ALL THE ITEMS IN THIS PAGE ARE CATEGORY 0010

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SIGNAL HEAD NUMBER	SIGNAL BASE NUMBER	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	SPV.0060.267 PEDESTRIAN COUNTDOWN SIGNAL FACE 12-INCH EACH
1	SB4	1	-	-
2	SB1	1	-	-
3	SB1	1	-	-
4	SB8	1	-	-
5	SB1	1	-	-
6	SB8	1	-	-
7	SB5	1	-	-
8	SB5	1	-	-
9	SB4	1	-	-
10	SB5	1	-	-
11	SB6	1	-	-
12	SB3	1	-	-
13	SB3	1	-	-
14	SB2	1	-	-
15	SB3	1	-	-
16	SB2	1	-	-
17	SB7	-	1	1
18	SB7	-	1	1
19	SB6	-	1	1
20	SB7	-	1	1
21	SB7	-	1	1
22	SB2	-	1	1
23	SB1	-	1	1
24	SB4	-	1	1
SUBTOTAL		16	8	8

LOCATION	658.5070 SIGNAL MOUNTING HARDWARE 02. W LISBON AVE EACH	661.0201 TEMPORARY TRAFFIC SIGNAL 02. W LISBON AVE EACH	SPV.0060.244 REMOVE TRAFFIC SIGNALS (W LISBON AVE) EACH
W LISBON AVE & N 35TH ST	1	1	1
SUBTOTAL	1	1	1

TRAFFIC SIGNALS - N 35TH ST & W LISBON AVE

3

SIGNAL BASE NUMBER	LOCATION	SPV.0060.201 INSTALL CITY PRECAST CONTROLLER BASE EACH	SPV.0060.205 ATC CONTROLLER AND CABINET INSTALLED EACH	SPV.0060.212 FIBER OPTIC PATCH PANEL EACH	SPV.0060.213 ETHERNET SWITCH EACH	SPV.0060.221 EVP PHASE SELECTOR CARD 4 CHANNEL EACH	SPV.0060.269 VOICE INSTRUCTION AUDIBLE CONTROL UNIT EACH
CB1	09+67.5', 52' R	1	1	1	1	1	1
	SUBTOTAL	1	1	1	1	1	1

PULL BOX NUMBER	LOCATION	SPV.0060.303 PULL BOXES 17-INCH X 30-INCH X 24-INCH EACH
PB1	09+69', 45' R	1
PB2	09+43', 27' R	1
PB3	59+48', 18.5' L	1
PB4	09+83', 61' L	1
PB5	10+31.5', 54.5' L	1
PB6	10+58', 27' L	1
PB7	10+55', 26' R	1
PB8	10+15', 45' R	1
	SUBTOTAL	8

SIGNAL BASE NUMBER	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0120 CONCRETE BASES TYPE 10 EACH
SB1	09+68.5', 39.5' R		1
SB3	09+58', 24' L	-	1
SB5	10+33', 51' L	-	1
SB6	10+30.5', 45.5' L	1	-
SB8	10+48', 24.5' R	-	1
	SUBTOTAL	1	4

SUMMARY OF MAJOR ITEMS FOR TRAFFIC SIGNAL CABLING

	DESCRIPITON	L.F
655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	675
655.0250	CABLE TRAFFIC SIGNAL 9-14-AWG	20
655.0280	CABLE TRAFFIC SIGNAL 19-14-AWG	690
655.0290	CABLE TRAFFIC SIGNAL 21-14-AWG	240
655.0305*	CABLE TYPE UF 2-12 AWG GROUNDED	655
655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	690
655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	655
SPV.0090.240	ELECTRICAL CABLE 3#4/1#8 XLP	100

ALL THE ITEMS IN THIS PAGE ARE CATEGORY 0010

TRAFFIC SIGNALS - N 35TH ST & W NORTH AVE

LOCATION	TO	LOCATION	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
CB1	TO	PB1	-	20	-
CB1	TO	CUC LATERAL	-	30	-
PB1	TO	SB1	-	20	-
PB1	TO	PB2	-	100	-
PB2	TO	SB2	-	20	-
PB2	TO	PB3	-	-	110
PB3	TO	SB3	-	25	-
PB3	TO	PB4	-	90	-
PB4	TO	SB4	-	5	-
PB4	TO	PB5	-	-	85
PB5	TO	SB5	-	5	-
PB5	TO	PB6	-	80	-
PB6	TO	SB6	-	20	-
PB6	TO	PB7	-	-	110
PB7	TO	SB7	-	15	-
PB7	TO	PB8	-	90	-
PB8	TO	SB8	-	15	-
PB8	TO	PB1	-	-	110
PB1	TO	PB9	-	-	190
PB9	TO	M1	5	-	-
		SUBTOTAL	5	535	605

LOCATION NUMBER	LOCATION	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH
XB1	31+21', 31.5' L	1	-
XB2	31+38', 26.5' L	-	1
XB3	31+48', 35' L	1	-
XB4	31+48', 50' L	-	1
XB5	32+02', 54' L	-	1
XB6	32+20', 24' L	-	1
XB7	32+20', 24' R	-	1
XB8	32+04', 33.5' R	1	-
XB9	32+03', 37' R	-	1
XB10	31+48', 35' R	-	1
XB11	31+41', 27' R	-	1
	SUBTOTAL	3	8

SIGNAL BASE NUMBER	LOCATION	654.0110 CONCRETE BASES TYPE 10 EACH	654.0120 CONCRETE BASES TYPE 10 SPECIAL EACH
SB1	31+36', 25' L	1	-
SB3	32+07', 37' L	-	1
SB5	32+13', 34' R	1	-
SB7	31+48.5', 37' R	1	-
	SUBTOTAL	3	1

SIGNAL BASE NUMBER	657.0350 POLES TYPE 10 EACH	657.0352 POLES TYPE 10 SPECIAL EACH	657.0530 MONOTUBE ARMS 30-FT EACH	657.0536 MONOTUBE ARMS 35-FT SPECIAL EACH	SPV.0060.218 EVP DIRECTION DETECTOR EACH	SPV.0060.223 EVP CONFIRMATION LIGHT EACH	SPV.0060.228 ELECTRICAL RISER EACH	SPV.0060.268 VOICE INSTRUCTION AUDIBLE PUSH BUTTON EACH
SB1	1	-	1	-	1	1	-	1
SB2	-	-	-	-	-	-	1	1
SB3	-	1	-	1	1	1	-	1
SB4	-	-	-	-	-	-	1	1
SB5	1	-	1	-	1	1	-	1
SB6	-	-	-	-	-	-	1	1
SB7	1	-	1	-	1	1	-	1
SB8	-	-	-	-	-	-	1	1
SUBTOTAL	3	1	3	1	4	4	4	8

LOCATION	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR EACH
PEDESTRIAL SIGNAL	8
TRAFFIC SIGNAL 3-SECTION	12
SUBTOTAL	20

ALL THE ITEMS IN THIS PAGE ARE CATEGORY 0010

SIGNAL HEAD NUMBER	SIGNAL BASE NUMBER	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH EACH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH EACH	SPV.0060.267 PEDESTRIAN COUNTDOWN SIGNAL FACE 12-INCH EACH
1	SB4	1	-	-
2	SB1	1	-	-
3	SB1	1	-	-
4	SB8	1	-	-
5	SB1	1	-	-
6	SB8	1	-	-
7	SB5	1	-	-
8	SB5	1	-	-
9	SB4	1	-	-
10	SB5	1	-	-
11	SB6	1	-	-
12	SB3	1	-	-
13	SB3	1	-	-
14	SB2	1	-	-
15	SB3	1	-	-
16	SB2	1	-	-
17	SB7	1	-	-
18	SB7	1	-	-
19	SB6	1	-	-
20	SB7	1	-	-
21	SB7	-	1	1
22	SB2	-	1	1
23	SB1	-	1	1
24	SB4	-	1	1
25	SB3	-	1	1
26	SB6	-	1	1
27	SB5	-	1	1
28	SB8	-	1	1
SUBTOTAL		20	8	8

LOCATION	658.5070 SIGNAL MOUNTING HARDWARE 03. W NORTH AVE EACH	661.0201 TEMPORARY TRAFFIC SIGNAL 03. W NORTH AVE EACH	SPV.0060.245 REMOVE TRAFFIC SIGNALS (W NORTH AVE) EACH
N 35TH ST & W NORTH AVE	1	1	1
SUBTOTAL	1	1	1

TRAFFIC SIGNALS - N 35TH ST & W NORTH AVE

SIGNAL BASE NUMBER	LOCATION	SPV.0060.201 INSTALL CITY PRECAST CONTROLLER BASE EACH	SPV.0060.205 ATC CONTROLLER AND CABINET INSTALLED EACH	SPV.0060.212 FIBER OPTIC PATCH PANEL EACH	SPV.0060.213 ETHERNET SWITCH EACH	SPV.0060.221 EVP PHASE SELECTOR CARD 4 CHANNEL EACH	SPV.0060.269 VOICE INSTRUCTION AUDIBLE CONTROL UNIT EACH
CB1	31+21', 31.5' L	1	1	1	1	1	1
	SUBTOTAL	1	1	1	1	1	1

PULL BOX NUMBER	LOCATION	SPV.0060.303 PULL BOXES 17-INCH X 30-INCH X 24-INCH EACH
PB1	31+21', 26' L	1
PB2	31+48', 55' L	1
PB3	32+02', 55' L	1
PB4	32+18', 25' L	1
PB5	32+18', 24' R	1
PB6	32+03', 50' R	1
PB7	31+49', 50' R	1
PB8	31+26', 27' R	1
PB9	30+25', 26.5' L	1
	SUBTOTAL	9

LOCATION	SPV.0060.215 ELECTRICAL SERVICE PEDESTAL EACH
30+26', 28.5' L	1
SUBTOTAL	1

SUMMARY OF MAJOR ITEMS FOR TRAFFIC SIGNAL CABLING

	DESCRIPITON	L.F
655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	850
655.0280	CABLE TRAFFIC SIGNAL 19-14-AWG	515
655.0290	CABLE TRAFFIC SIGNAL 21-14-AWG	495
655.0305*	CABLE TYPE UF 2-12 AWG GROUNDED	695
655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	625
655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	695
SPV.0090.240	ELECTRICAL CABLE 3#4/1#8 XLP	120

ALL THE ITEMS IN THIS PAGE ARE CATEGORY 0010

TRAFFIC SIGNALS TOTALS

204.0195 REMOVING CONCRETE BASES	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	652.0235* CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	652.0615 CONDUIT SPECIAL 3-INCH	653.0905 REMOVING PULL BOXES	654.0101 CONCRETE BASES TYPE 1	654.0110 CONCRETE BASES TYPE 10	654.0120 CONCRETE BASES TYPE 10 SPECIAL	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG
EACH	LF	LF	LF	EACH	EACH	EACH	EACH	LF
6	25	1085	1065	16	1	7	1	1525

655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG	655.0280 CABLE TRAFFIC SIGNAL 19-14 AWG	655.0290 CABLE TRAFFIC SIGNAL 21-14 AWG	655.0305* CABLE TYPE UF 2-12 AWG GROUNDED	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE	657.0100 PEDESTAL BASES	657.0350 POLES TYPE 10	657.0352 POLES TYPE 10 SPECIAL
LF	LF	LF	LF	LF	LF	EACH	EACH	EACH
20	1205	735	1350	1315	1350	1	7	1

657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	657.0520 MONOTUBE ARMS 20-FT	657.0525 MONOTUBE ARMS 25-FT	657.0530 MONOTUBE ARMS 30-FT	657.0536 MONOTUBE ARMS 35-FT SPECIAL	658.0173 TRAFFIC SIGNAL FACE 3S 12-INCH	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH	659.5000.S LAMP, BALLAST, LED, SWITCH DISPOSAL BY CONTRACTOR	658.5070 SIGNAL MOUNTING HARDWARE 02. W LISBON AVE	658.5070 SIGNAL MOUNTING HARDWARE 03. W NORTH AVE
EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1	1	1	5	1	36	16	40	1	1

661.0201 TEMPORARY TRAFFIC SIGNAL 02. W LISBON AVE	661.0201 TEMPORARY TRAFFIC SIGNAL 03. W NORTH AVE	SPV.0060.201 INSTALL CITY PRECAST CONTROLLER BASE	SPV.0060.205 ATC CONTROLLER AND CABINET INSTALLED	SPV.0060.212 FIBER OPTIC PATCH PANEL	SPV.0060.213 ETHERNET SWITCH	SPV.0060.215 ELECTRICAL SERVICE PEDESTAL	SPV.0060.218 EVP 1 DIRECTION DETECTOR
EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1	1	2	2	2	2	2	8

SPV.0060.221 EVP PHASE SELECTOR CARD 4 CHANNEL	SPV.0060.223 EVP CONFIRMATION LIGHT	SPV.0060.228 ELECTRICAL RISER	SPV.0060.244 REMOVE TRAFFIC SIGNALS (W LISBON AVE)	SPV.0060.245 REMOVING TRAFFIC SIGNALS (W NORTH AVE)	SPV.0060.267 PEDESTRIAN COUNTDOWN SIGNAL FACE 12-INCH	SPV.0060.268 VOICE INSTRUCTION AUDIBLE PUSH BUTTON	SPV.0060.269 VOICE INSTRUCTION AUDIBLE CONTROL UNIT	SPV.0060.303 PULL BOXES 17-INCH X 30-INCH X 24-INCH	SPV.0090.240 ELECTRICAL CABLE 3 #4/1#8 XLP
EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LF
2	8	8	1	1	16	16	2	17	220

* Quantities shown elsewhere

PROJECT NO: 2984-21-72	HWY: N 35TH STREET	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 99	E

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

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
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING — TO BE REMOVED
BRIDGE — CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP
OFF-PREMISE SIGN

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE	■	○
TELEPHONE POLE	●	⌀
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	■	⌀

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)

PARCEL NUMBER (25) UTILITY NUMBER (40)
PARALLEL OFFSETS

CONVENTIONAL UTILITY SYMBOLS

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

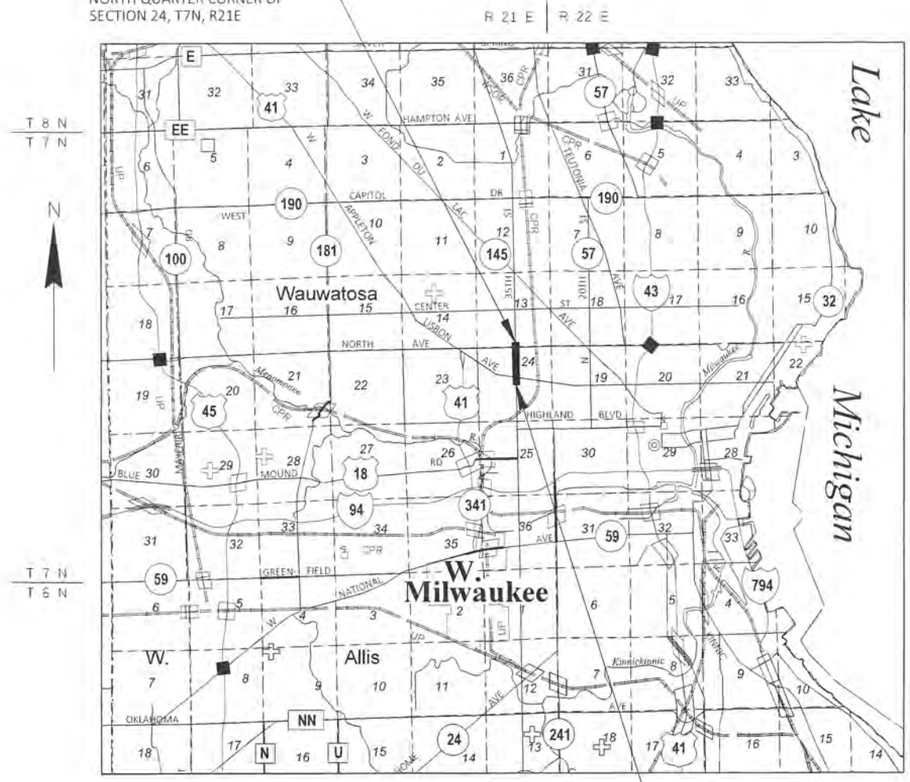
CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
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		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

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

END RELOCATION ORDER
152.65 FEET NORTH AND
1.81 FEET EAST OF THE
NORTH QUARTER CORNER OF
SECTION 24, T7N, R21E



BEGIN RELOCATION ORDER
2211.50 FEET SOUTH AND
24.26 FEET WEST OF THE
NORTH QUARTER CORNER OF
SECTION 24, T7N, R21E

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.50 MILES

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

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
2984-21-02		
FEDERAL PROJECT NUMBER	4.01	

PLAT OF RIGHT OF WAY REQUIRED FOR

NORTH 35TH STREET
INTERSECTIONS WITH NORTH AND LISBON

LOCAL STREET	MILWAUKEE COUNTY
CONSTRUCTION PROJECT NUMBER 2984-21-72	

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MILWAUKEE 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 THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE CITY OF MILWAUKEE.

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.

STRAND ASSOCIATES®
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ORIGINAL PLAT PREPARED BY
WISCONSIN
HEATHER S. BARTELT
S-2797
MADISON
WI
LAND SURVEYOR
7/3/2024 (DATE)

REVISION DATE
2/26/25
3/12/25

CITY OF MILWAUKEE

APPROVED FOR THE CITY
DATE 3-14-25 James Washington (Signature)

FILE NAME : S:\MIL\4300-4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\RW\DWG\040101_RT.DWG
PLOT DATE : 3/12/2025 10:51 AM
PLOT BY : BARTELT, HEATHER
PLOT NAME :

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNERS	INTERESTS REQUIRED	R/W S.F REQUIRED NEW	EXISTING	TOTAL	TLE S.F.
1	CITY OF MILWAUKEE	FEE	24	---	24	---
2	ELIMINATED	~~TLE~~	~~---~~	~~---~~	~~---~~	~~91~~
3	PROGRESSIVE COMMUNITY HEALTH	FEE,TLE	86	---	86	197
4	ELIMINATED	~~FEE~~	~~448~~	~~---~~	~~448~~	~~---~~

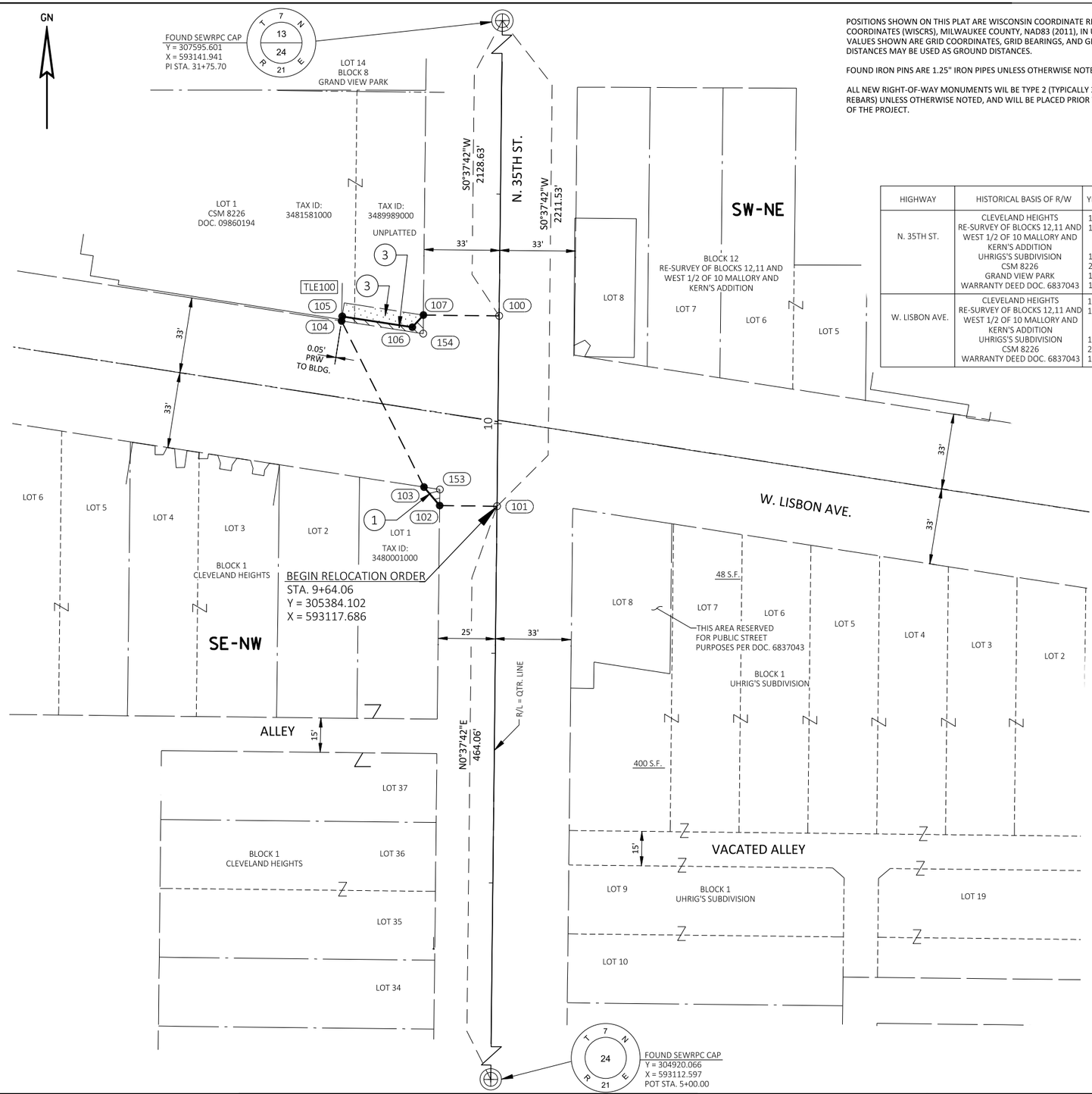
UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
N/A	N/A	N/A

ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

STATION & OFFSET TABLE		
POINT	STATION	OFFSET
100	10+46.96	0.00'
101	9+64.06	0.00'
102	9+64.06	-25.00'
103	9+72.06	-31.93'
104	10+43.98	-68.64'
105	10+45.96	-68.35'
106	10+41.58	-37.76'
107	10+46.96	-33.00'
153	9+71.06	-25.00'
154	10+38.88	-33.00'
TLE100	10+51.90	-67.50'

COURSE TABLE		
COURSE	BEARING	DISTANCE
100 - 101	S00° 37' 42"W	82.90'
101 - 102	N89° 22' 18"W	25.00'
102 - 103	N40° 17' 52"W	10.58'
103 - 104	N26° 24' 30"W	80.75'
104 - 105	N08° 46' 34"E	2.00'
105 - 106	S81° 13' 26"E	30.90'
106 - 107	N42° 09' 43"E	7.19'
107 - 100	S89° 22' 18"E	33.00'
103 - 153	S81° 13' 26"E	7.00'
153 - 102	S00° 37' 42"W	7.00'
107 - 154	S00° 37' 42"W	8.08'
154 - 104	N81° 13' 26"W	36.00'
105 - TLE100	N08° 46' 34"E	6.00'
TLE100 - 107	S81° 13' 26"E	34.85'



POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), MILWAUKEE 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.

FOUND IRON PINS ARE 1.25" IRON PIPES UNLESS OTHERWISE NOTED.

ALL NEW RIGHT-OF-WAY MONUMENTS WIL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

HIGHWAY	HISTORICAL BASIS OF R/W	YEAR	WIDTH
N. 35TH ST.	CLEVELAND HEIGHTS	1888	58'
	RE-SURVEY OF BLOCKS 12,11 AND	1892	66'
	WEST 1/2 OF 10 MALLORY AND KERN'S ADDITION		
	UHRIGS'S SUBDIVISION	1903	58'
	CSM 8226	2010	66'
	GRAND VIEW PARK	1889	66'
	WARRANTY DEED DOC. 6837043	1993	76'
W. LISBON AVE.	CLEVELAND HEIGHTS	1888	66'
	RE-SURVEY OF BLOCKS 12,11 AND	1892	66'
	WEST 1/2 OF 10 MALLORY AND KERN'S ADDITION		
	UHRIGS'S SUBDIVISION	1903	66'
	CSM 8226	2010	66'
	WARRANTY DEED DOC. 6837043	1993	130.71'

REVISION DATE 2/26/25 3/12/25	DATE 7/3/2024	SCALE, FEET 0 25 50	HWY: NORTH 35TH STREET	STATE R/W PROJECT NUMBER 2984-21-02	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2984-21-72	PS&E SHEET 101 E

FILE NAME : S:\MIL\4300--4399\4390\008\DRAWINGS\CAD\AUTOCAD\29842102\RW\DWG\040101_RP.DWG
LAYOUT NAME - 4.02
PLOT DATE : 3/12/2025 10:52 AM PLOT BY : BARTELT, HEATHER PLOT NAME : PLOT SCALE : 1 IN:50 FT
STH 100 2040-15-23/24-4.03

4

4

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNERS	INTERESTS REQUIRED	R/W S.F REQUIRED NEW	EXISTING	TOTAL	TLE S.F.
6	LIGHTHOUSE GOSPEL CHAPEL INC.	FEE,TLE	244	---	244	278
~~7~~	~~ELIMINATED~~	~~FEE,TLE~~	~~181~~	~~---~~	~~181~~	~~125~~
~~8~~	~~ELIMINATED~~	~~FEE,TLE~~	~~50~~	~~---~~	~~50~~	~~276~~

UTILITY INTERESTS REQUIRED

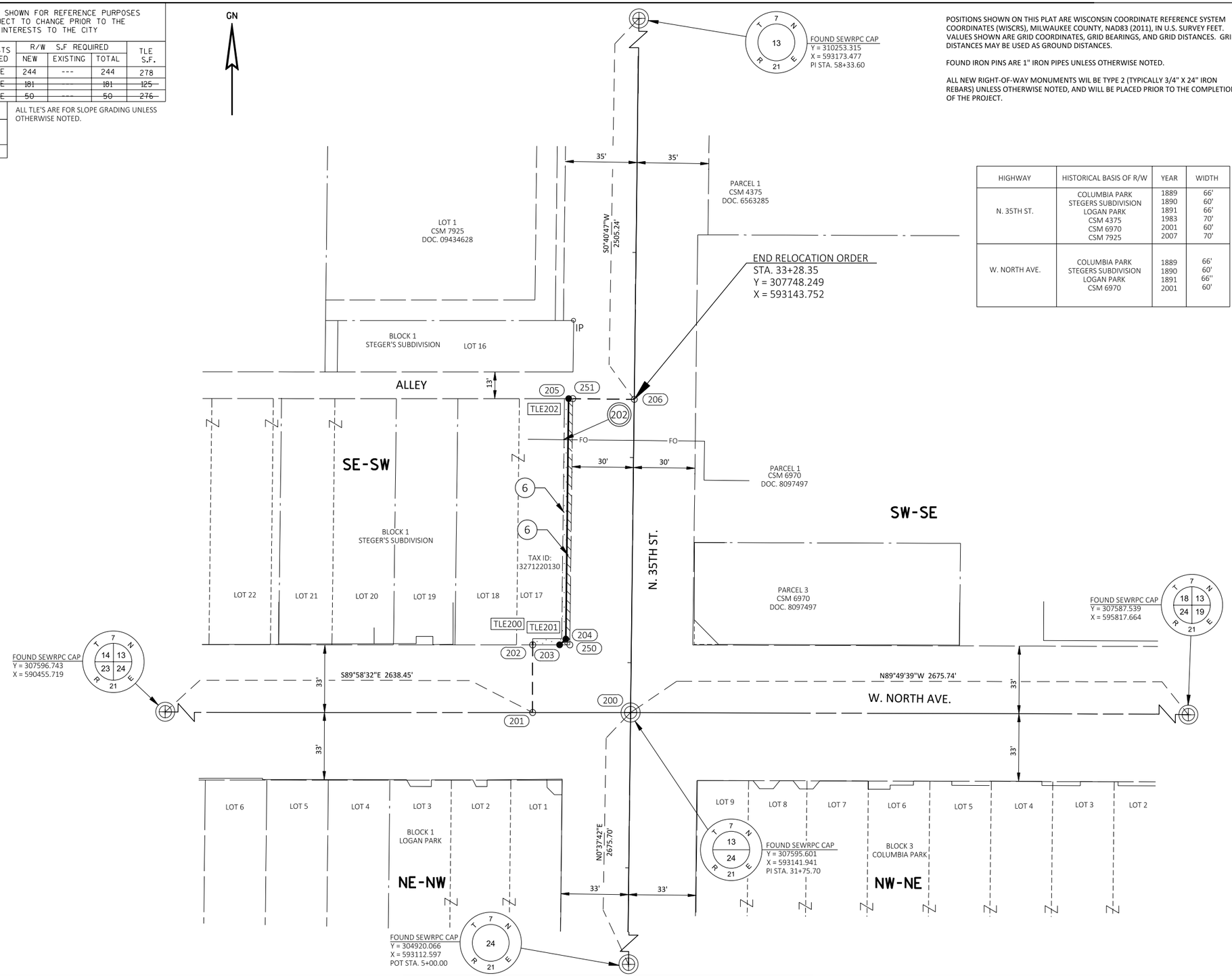
UTILITY NUMBER	UTILITY OWNER(S)	INTERESTS REQUIRED
202	SPECTRUM	RELEASE OF RIGHTS

ALL TLE'S ARE FOR SLOPE GRADING UNLESS OTHERWISE NOTED.

(202) SPECTRUM
NO RECORDED EASEMENT
PARCEL 6

STATION & OFFSET TABLE		
POINT	STATION	OFFSET
200	31+75.70	0.00'
201	31+75.19	-47.77'
202	32+08.15	-48.14'
203	32+08.30	-35.00'
204	32+11.01	-32.00'
205	33+28.33	-32.00'
206	33+28.35	0.00'
250	32+08.35	-30.00'
251	33+28.35	-30.00'
TLE200	32+11.15	-48.15'
TLE201	32+11.31	-34.00'
TLE202	33+28.31	-34.00'

COURSE TABLE		
COURSE	BEARING	DISTANCE
200 - 201	N89° 58' 32"W	47.77'
201 - 202	N00° 01' 28"E	33.00'
202 - 203	S89° 58' 32"E	13.14'
203 - 204	N48° 30' 33"E	4.05'
204 - 205	N00° 40' 47"E	117.32'
205 - 251	S89° 58' 32"E	2.00'
251 - 206	S89° 19' 13"E	30.00'
206 - 200	S00° 40' 47"W	152.66'
251 - 250	S00° 40' 47"W	120.00'
250 - 203	N89° 58' 32"W	5.00'
202 - TLE200	N00° 37' 32"E	3.00'
TLE200 - TLE201	S89° 58' 32"E	14.15'
TLE201 - TLE202	N00° 40' 47"E	117.00'
TLE202 - 205	S89° 58' 32"E	2.00'



HIGHWAY	HISTORICAL BASIS OF R/W	YEAR	WIDTH
N. 35TH ST.	COLUMBIA PARK STEGERS SUBDIVISION LOGAN PARK CSM 4375 CSM 6970 CSM 7925	1889 1890 1891 1983 2001 2007	66' 60' 66' 70' 60' 70'
W. NORTH AVE.	COLUMBIA PARK STEGERS SUBDIVISION LOGAN PARK CSM 6970	1889 1890 1891 2001	66' 60' 66'' 60'

4

4

REVISION DATE	DATE 7/3/2024	SCALE, FEET 0 25 50	HWY: NORTH 35TH STREET	STATE R/W PROJECT NUMBER 2984-21-02	PLAT SHEET 4.03	
2/26/25 3/12/25	GRID FACTOR N/A		COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 2984-21-72	PS&E SHEET 102	E

Standard Detail Drawing List

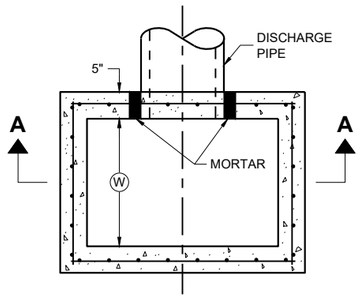
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPE 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-11	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09B02-10	CONDUIT
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-10	CONCRETE CONTROL CABINET BASES
09C11-10	CONCRETE BASE TYPE 10
09C15-02	CONCRETE BASE TYPE 10 SPECIAL
09E01-15A	POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E08-09E	TYPE 10 POLE 15'-30' MONOTUBE ARM
09E08-09F	TYPE 10 SPECIAL POLE 35' MONOTUBE ARM
09E08-09K	GENERAL NOTES,HARDWARE DETAILS FOR TYPE 9/10,9/10 SPECIAL,12 & 13 POLES W/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
10A08-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A09-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES GROUNDED NEUTRAL SYSTEMS
10A10-03	ELECTRICAL DETAILS STRUCTURE MOUNT LIGHT POLES PHASE-TO-PHASE SYSTEMS
10A18-05A	LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP
13C13-11	URBAN DOWELED CONCRETE PAVEMENT
13C15-08A	CONCRETE BASE
13C15-08B	CONCRETE BASE
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
13C18-08E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
13C18-08F	CONCRETE PAVEMENT INTERSECTION BOXOUT FOR INTEGRAL CURB AND GUTTER
15C07-16A	PAVEMENT MARKING SYMBOLS
15C07-16B	PAVEMENT MARKING WORDS
15C07-16C	PAVEMENT MARKING ARROWS
15C07-16E	PAVEMENT MARKING FOR BIKE LANES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C08-24C	PAVEMENT MARKING (TURN LANES)
15C08-24D	PAVEMENT MARKING (TURN LANES)
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C29-08A	BICYCLE LANE MARKING
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-15A	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

6

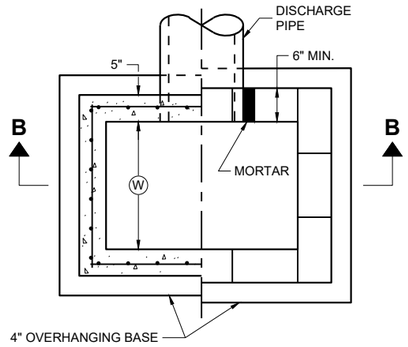
Standard Detail Drawing List

15D30-11L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

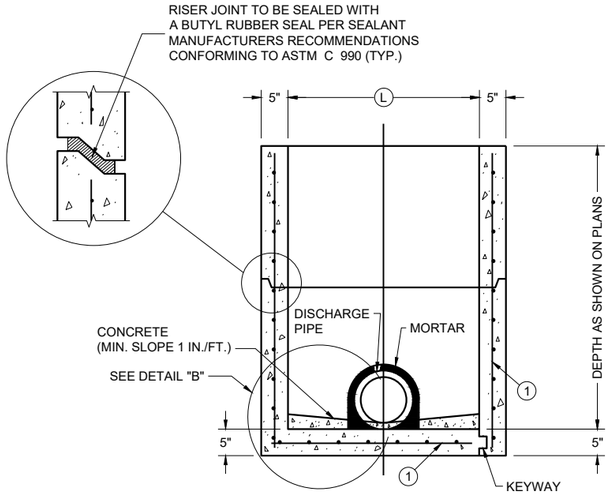
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PLAN VIEW



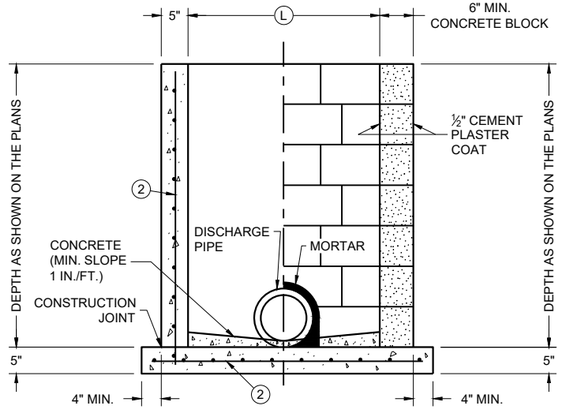
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

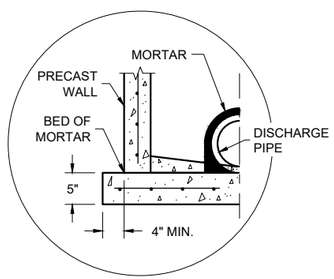
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

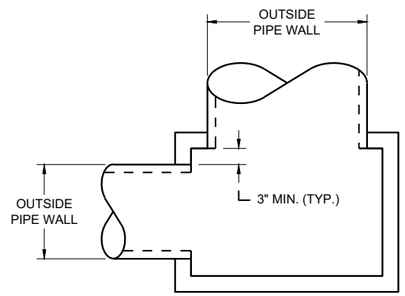
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

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

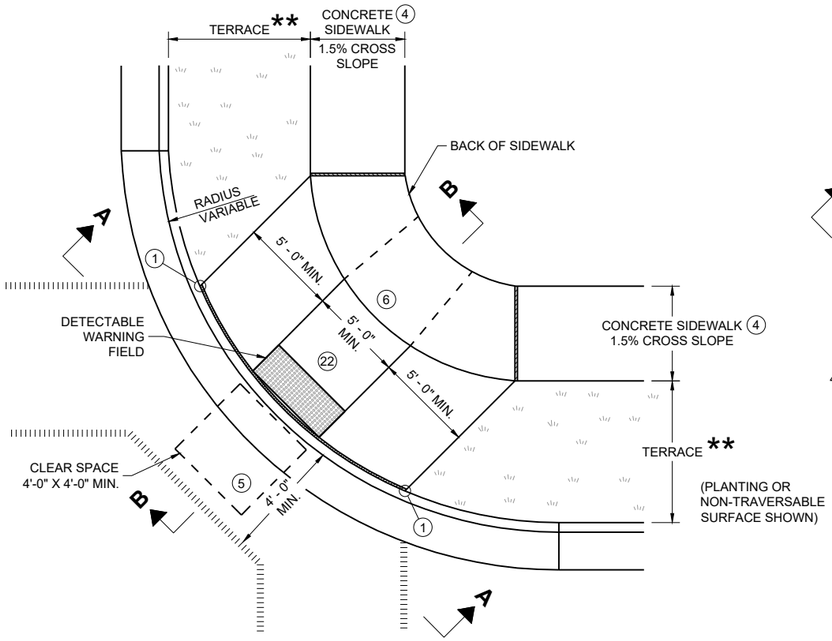
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

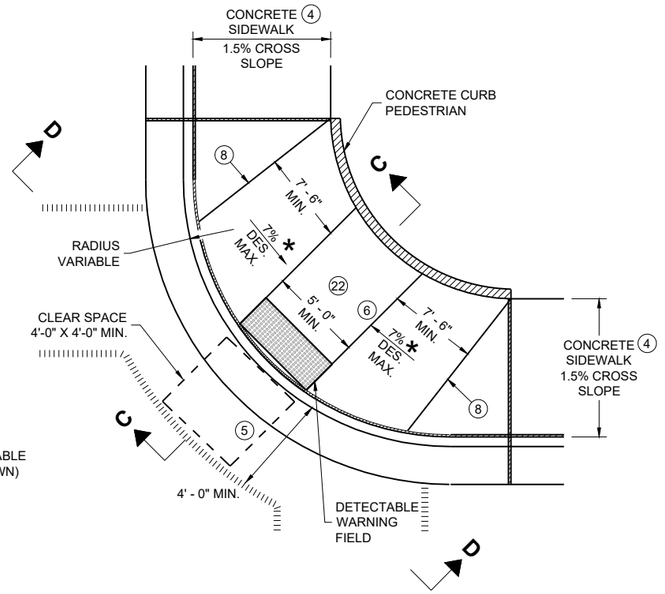
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SDD 08C07-03



PLAN VIEW

CURB RAMP TYPE 1

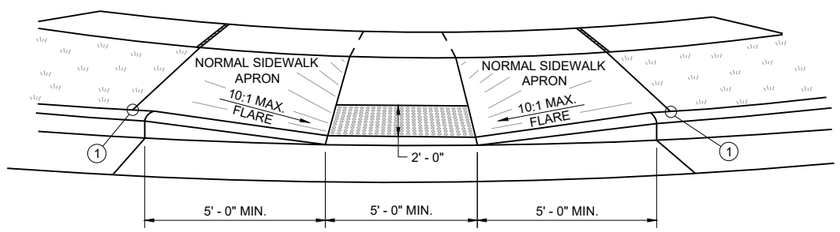
(CENTER OF CORNER RADIUS)



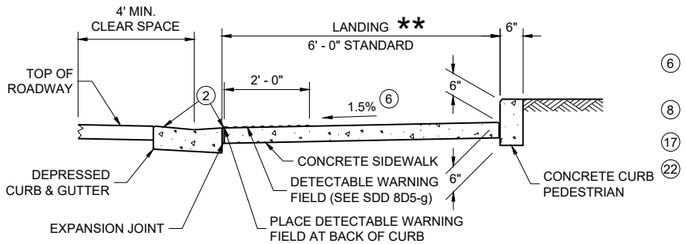
PLAN VIEW

CURB RAMP TYPE 1 - A

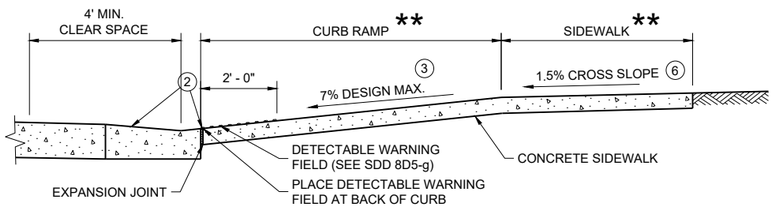
(NO TERRACE)



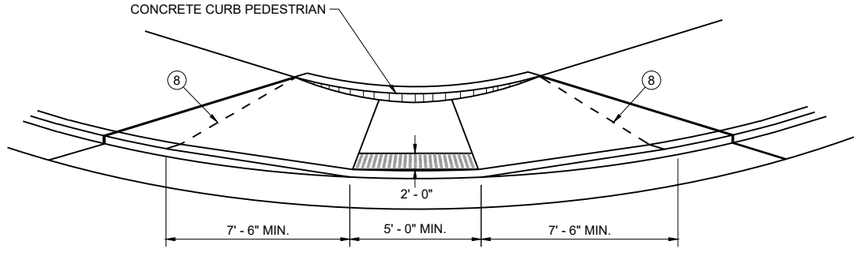
VIEW A - A FOR TYPE 1



SECTION C - C FOR TYPE 1 - A



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

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

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE CURB RAMP.

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

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

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

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

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

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

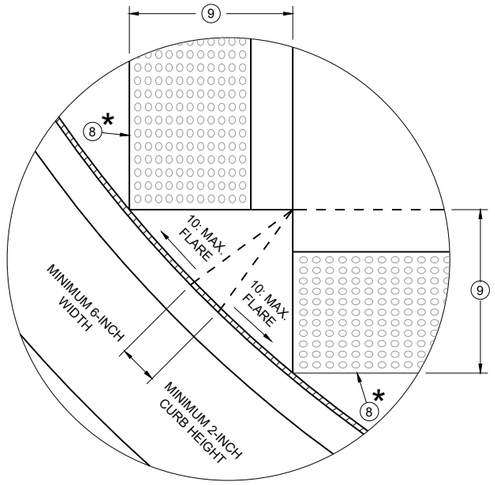
(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

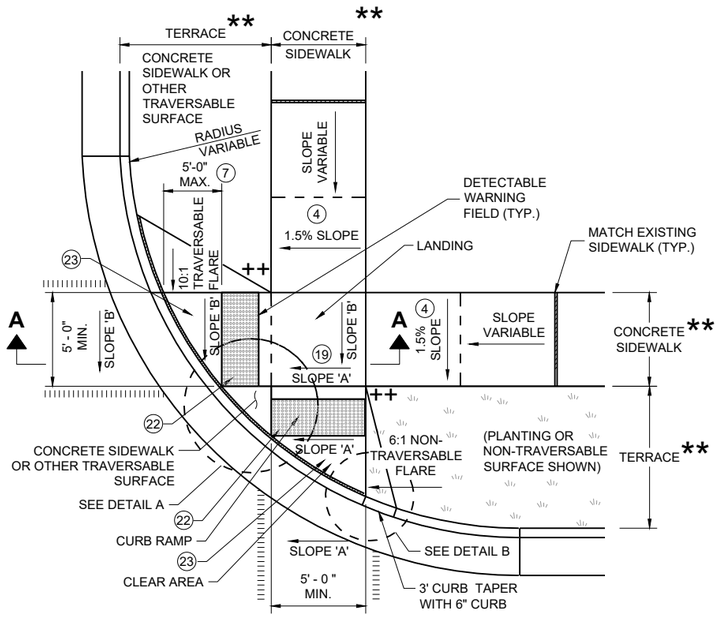
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



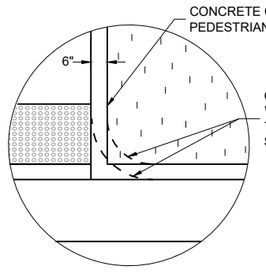
DETAIL A



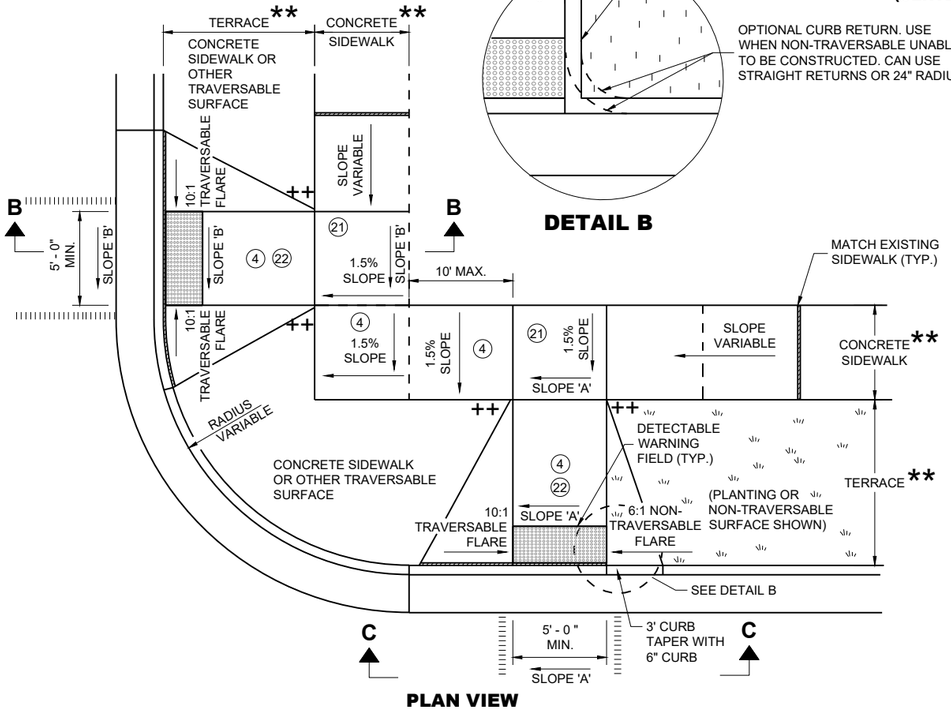
PLAN VIEW

CURB RAMP TYPE 2

(CENTER OF CORNER RADIUS)



DETAIL B



PLAN VIEW

CURB RAMP TYPE 3

(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

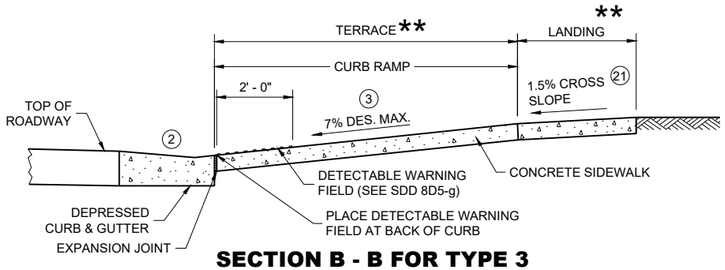
(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

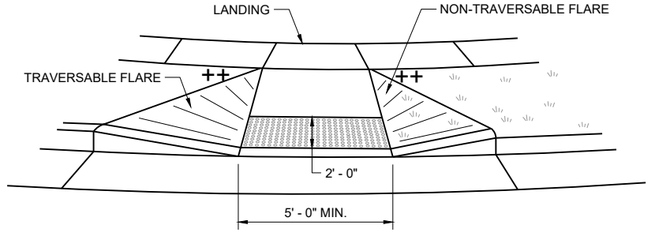
(21) PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

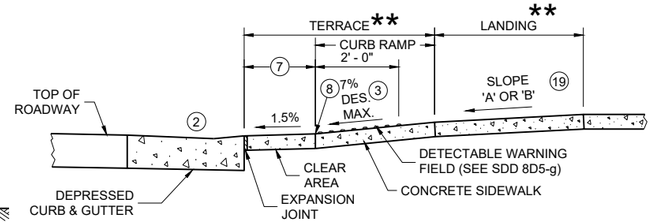
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3



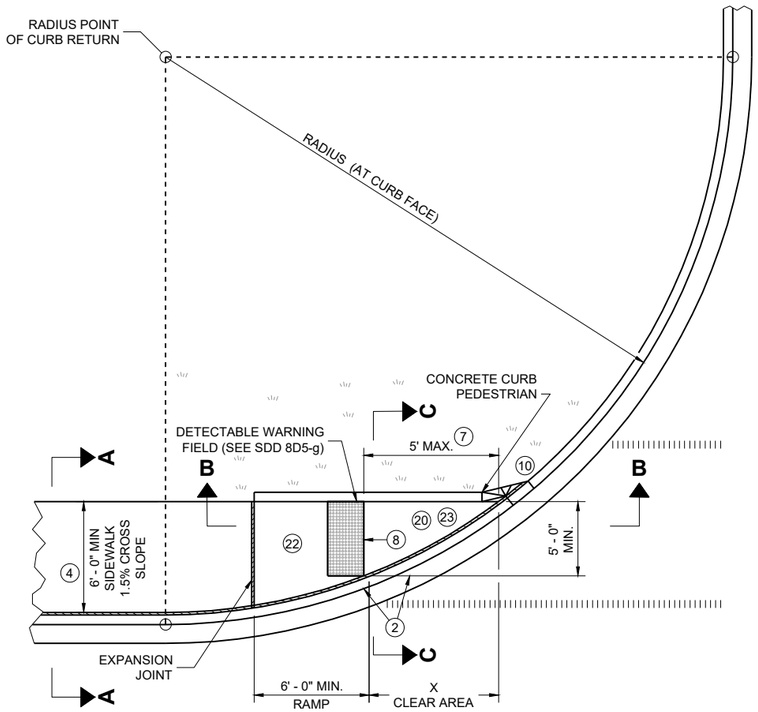
SECTION A - A FOR TYPE 2

LEGEND

▨	½" EXPANSION JOINT SIDEWALK
- - - -	CONTRACTION JOINT SIDEWALK
ıllıllıllıllı	PAVEMENT MARKING CROSSWALK (WHITE)
*	MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
**	WIDTH SHOWN ELSEWHERE IN THE PLANS
++	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW

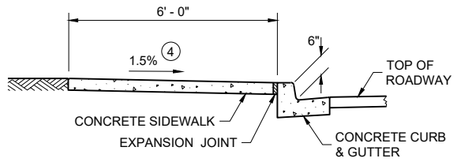
CURB RAMP TYPE 4A

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

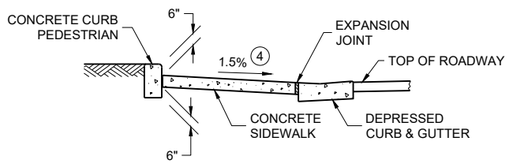
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

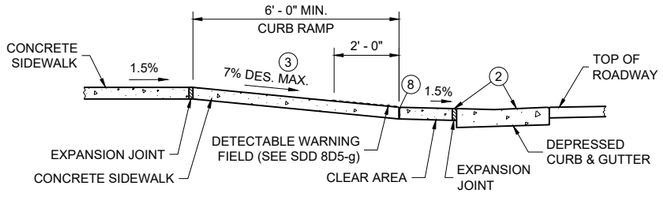
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

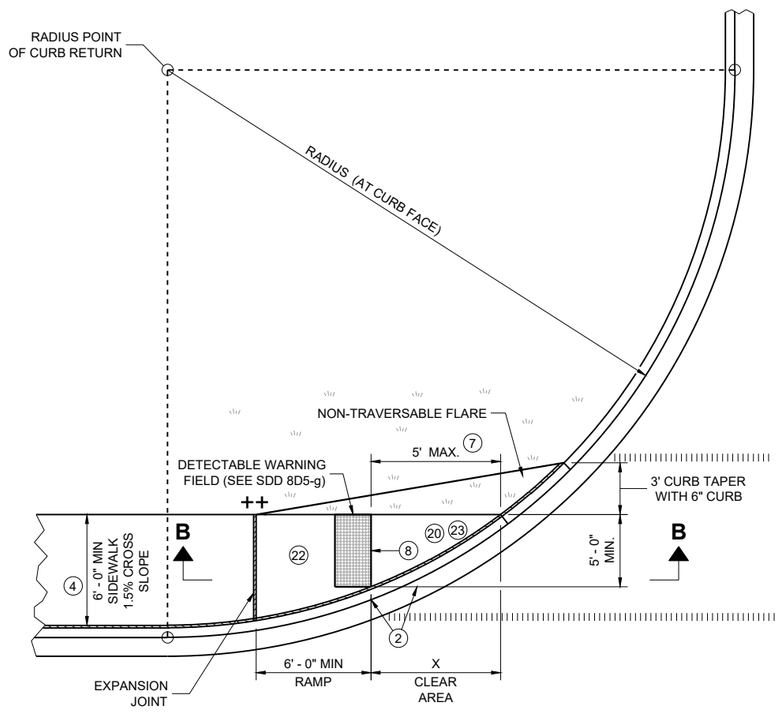
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



SECTION C - C FOR TYPE 4A

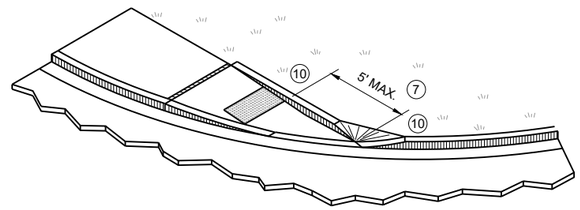


SECTION B - B FOR TYPE 4A AND TYPE 4A1

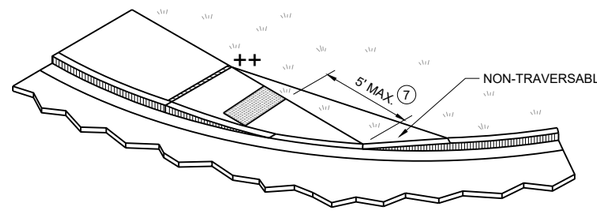


PLAN VIEW

CURB RAMP TYPE 4A1



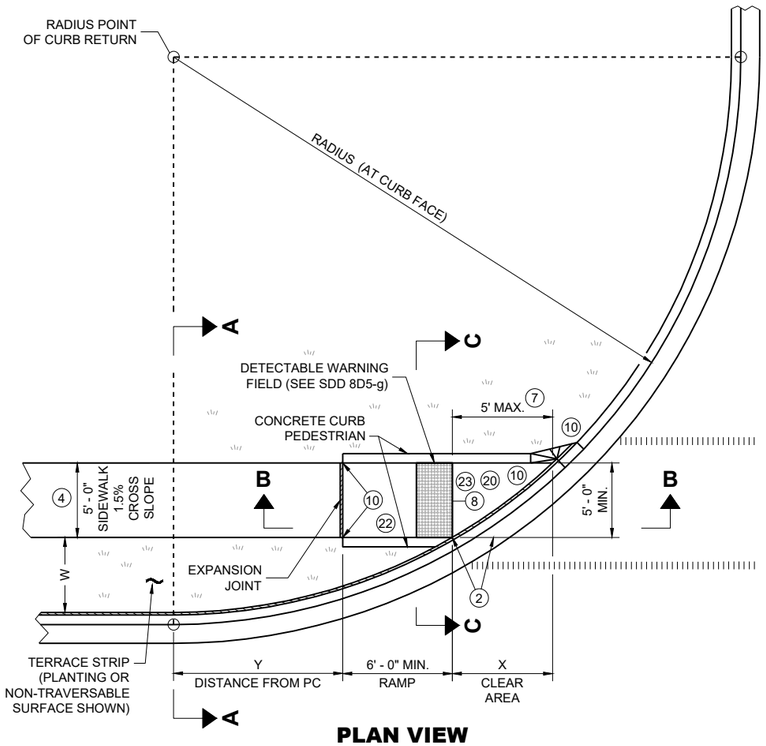
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

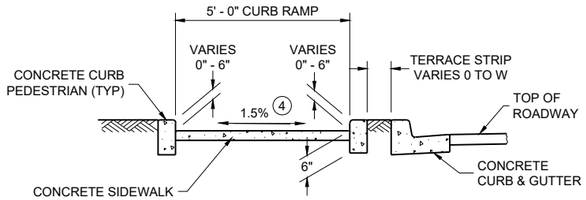
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET			4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET									4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET															4' - 10 ¾"	19' - 8 ¼"

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



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

GENERAL NOTES

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

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

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

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

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

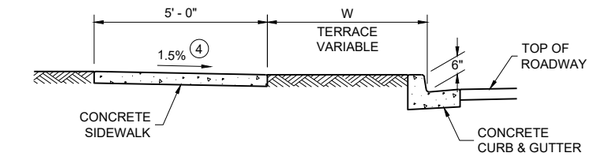
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

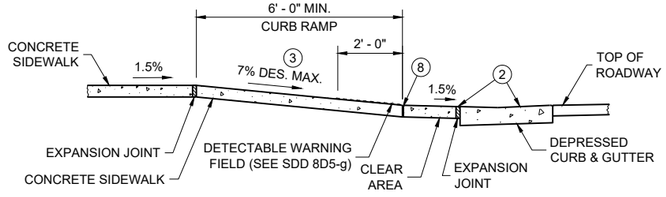
(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

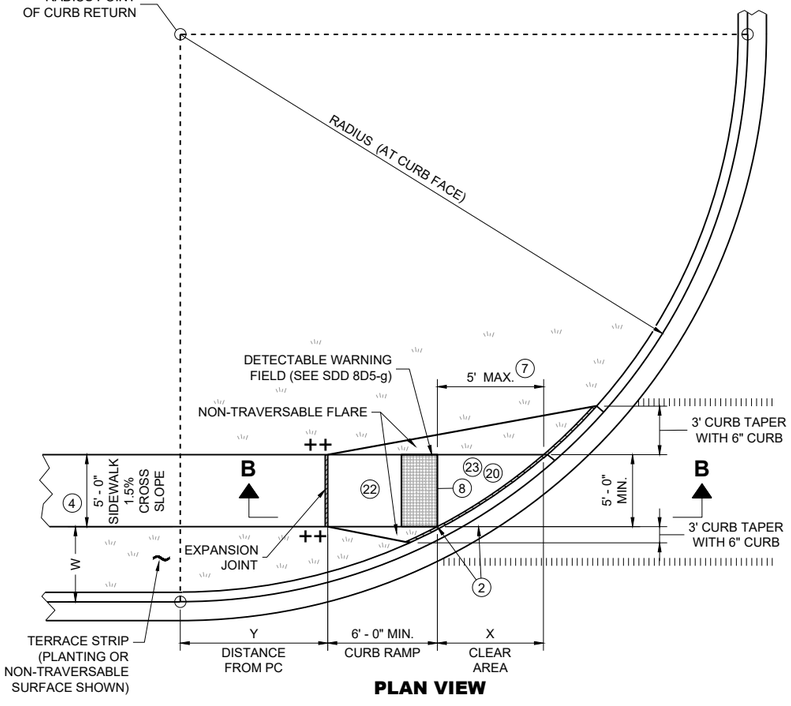
(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



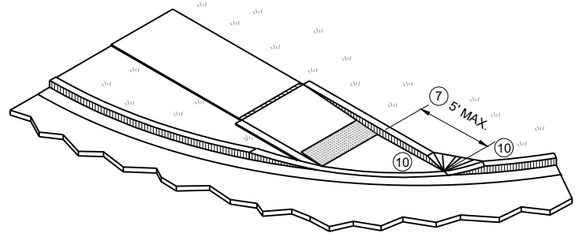
SECTION A - A FOR TYPE 4B



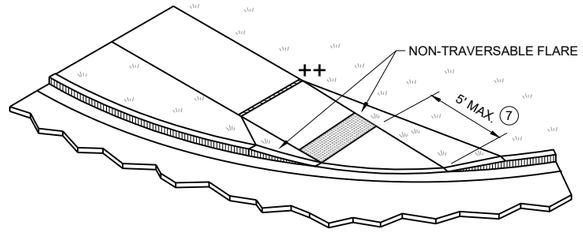
SECTION B - B FOR TYPE 4B AND TYPE 4B1



PLAN VIEW
CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



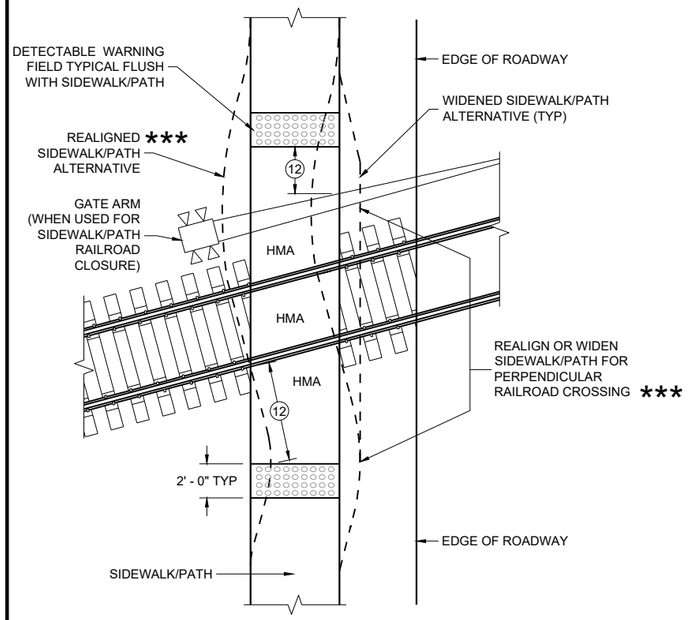
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

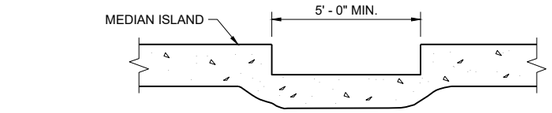
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SDD 08D05-22d

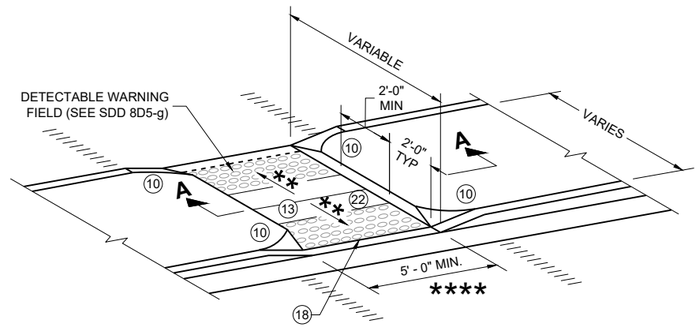


CURB RAMP TYPE 8

DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

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

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

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

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

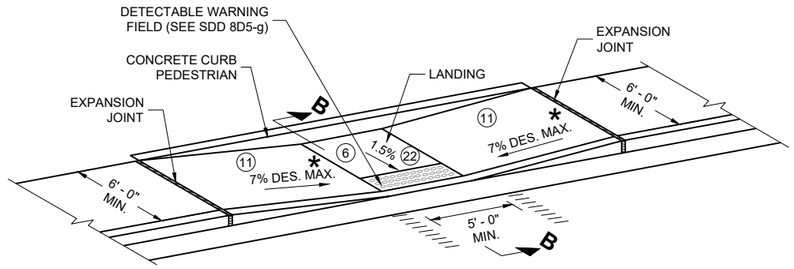
(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH, WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.

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

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

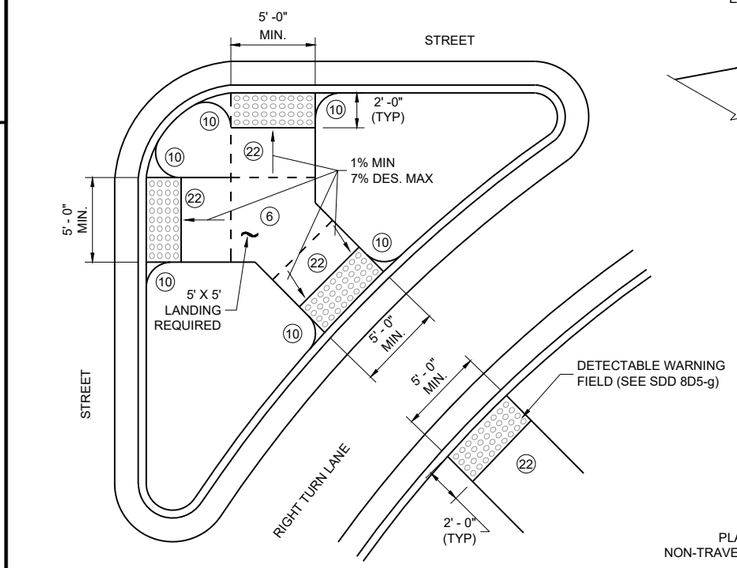
(18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.



CURB RAMP TYPE 7A

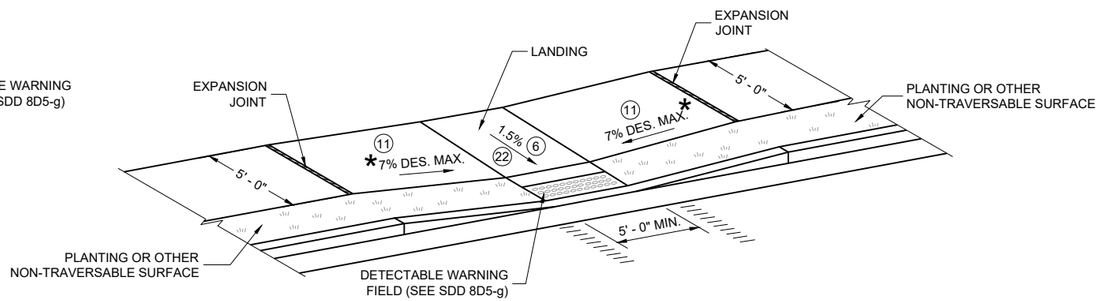
FOR INTERSECTIONS AND MID BLOCK CROSSINGS



CURB RAMP TYPE 6

DETECTABLE WARNING AT ISLANDS

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

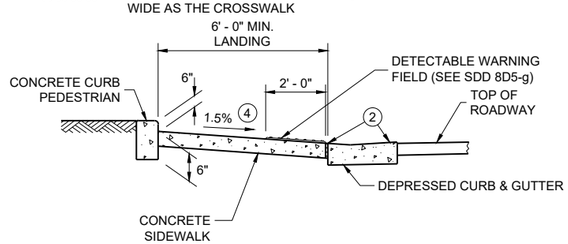


CURB RAMP TYPE 7B

FOR INTERSECTIONS AND MID BLOCK CROSSINGS

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- * MAXIMUM 8.3%
- ** 1% MINIMUM (PROVIDE DRAINAGE)
- *** DETAILS TO BE DETERMINED BY ENGINEER
- **** FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

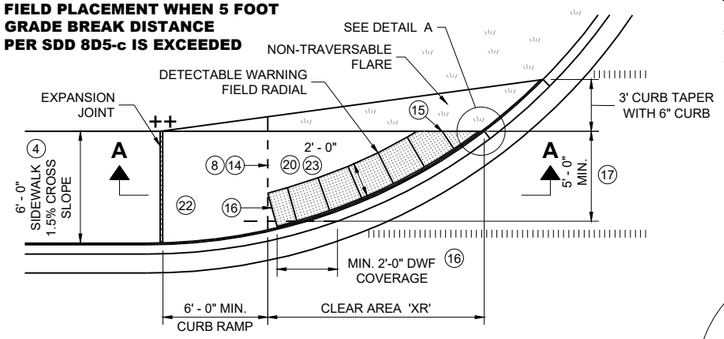


SECTION B - B FOR TYPE 7A

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

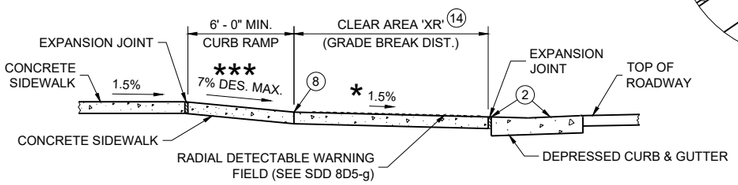
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4A1

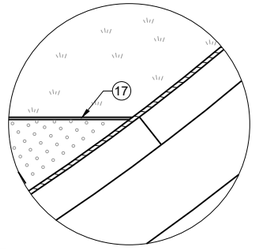
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



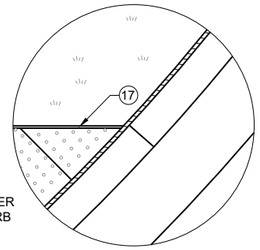
SECTION A - A FOR TYPE 4A1

LEGEND

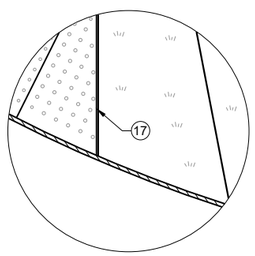
═══	½" EXPANSION JOINT SIDEWALK
– – – –	CONTRACTION JOINT SIDEWALK
ıı ıı ıı ıı	PAVEMENT MARKING CROSSWALK (WHITE)
**	WIDTH SHOWN ELSEWHERE IN THE PLANS
***	MAXIMUM 8.3%
++	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



DETAIL A

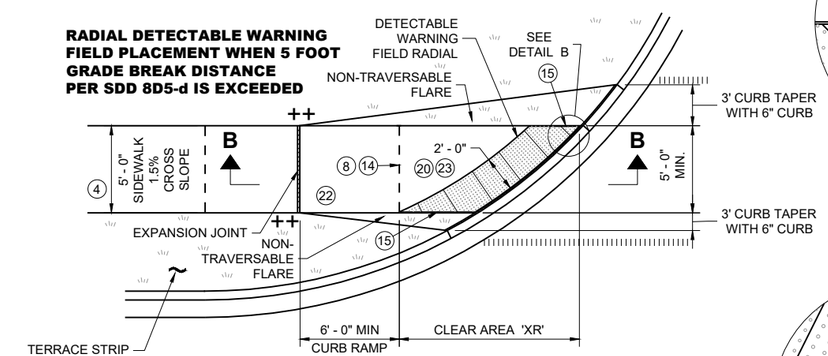


DETAIL B



DETAIL C

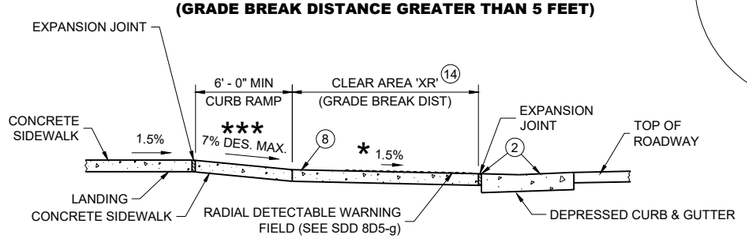
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

GENERAL NOTES

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

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

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

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

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

(2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.

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

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.

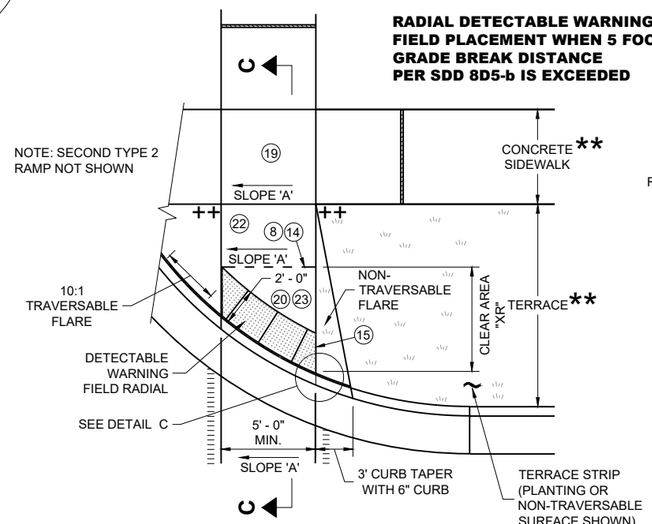
(19) WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.

(20) MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.

(22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

(23) THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

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

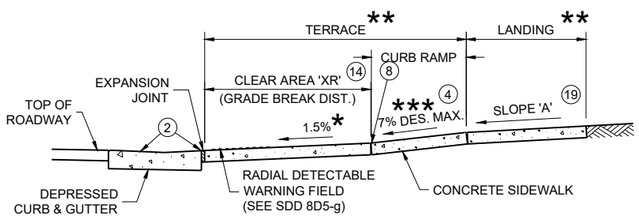


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)



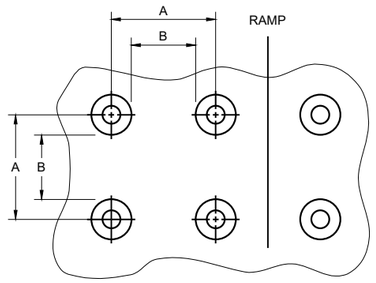
SECTION C - C FOR TYPE 2

CURB RAMPS
RADIAL DETECTABLE WARNING

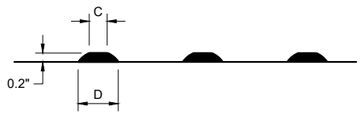
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

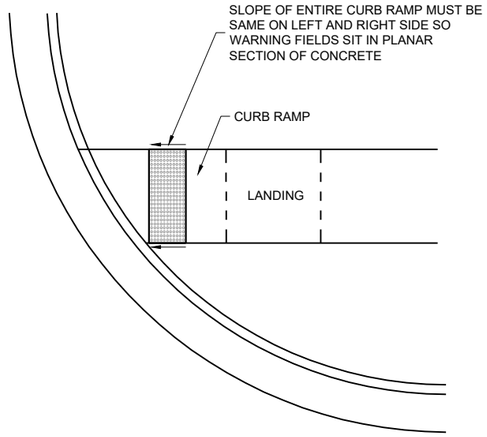
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW



DETECTABLE WARNING FIELD
PLANAR INSTALLATION

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

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

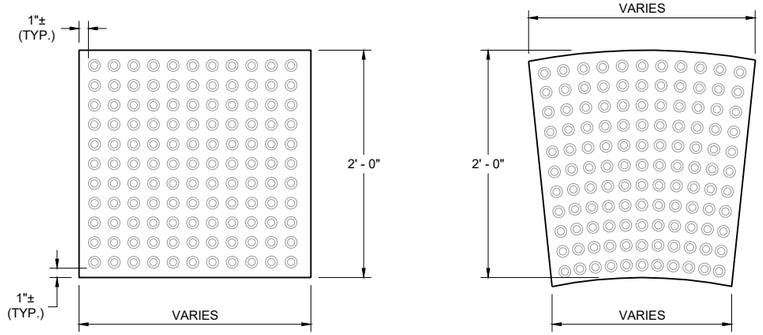
FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

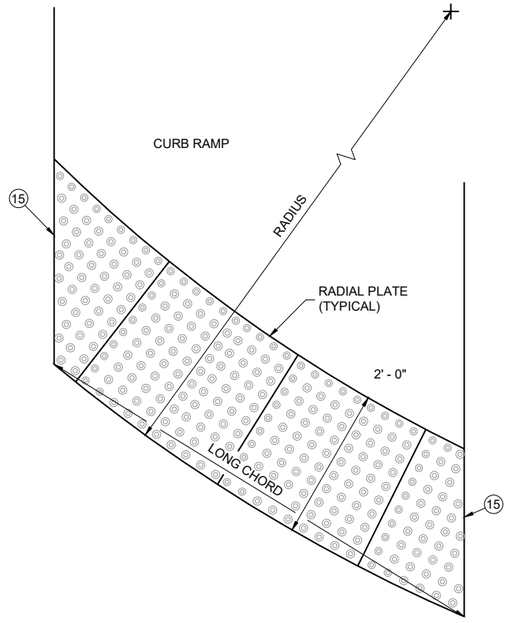
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



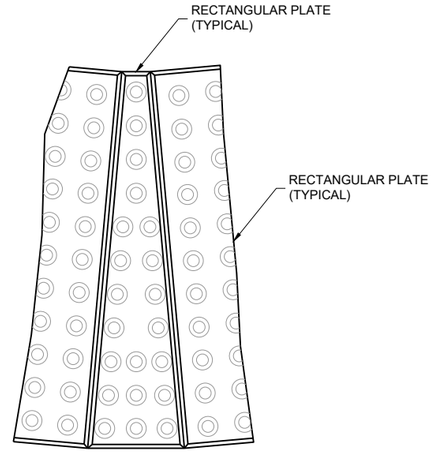
RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

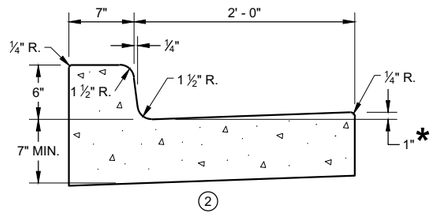
CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 — DATE
/S/ Rodney Taylor — <position>

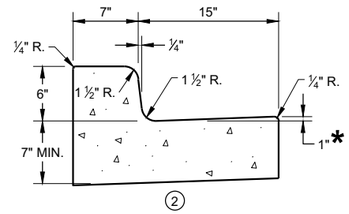
FHWA

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SDD 08D05-22g

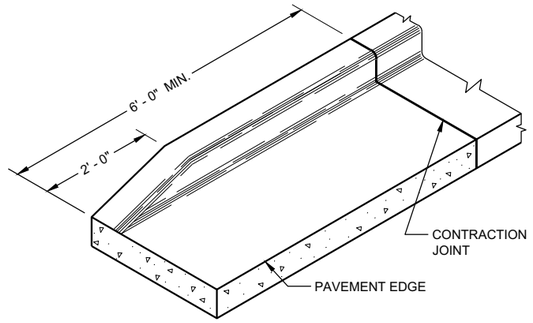


CONCRETE CURB AND GUTTER 31" ①

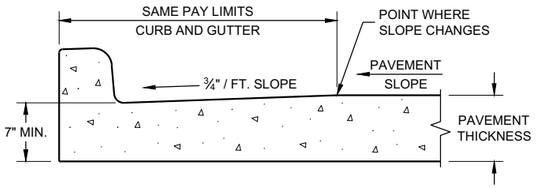
*TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



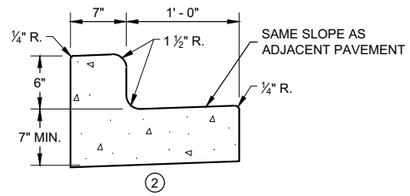
CONCRETE CURB AND GUTTER 22" ①



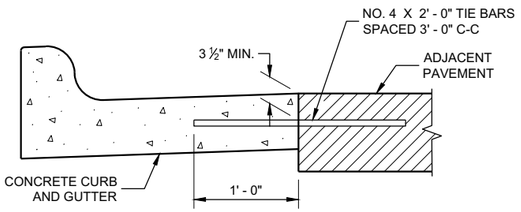
END SECTIONCURB AND GUTTER



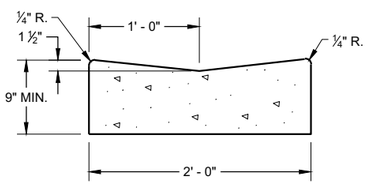
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



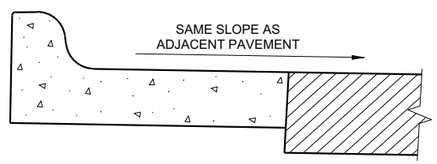
CONCRETE CURB AND GUTTER 19" ①



TYPICAL TIE BAR LOCATION ①



CONCRETE GUTTER 24" ①



HIGH SIDE SECTION ③

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

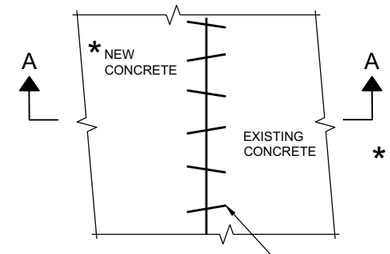
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUITED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".

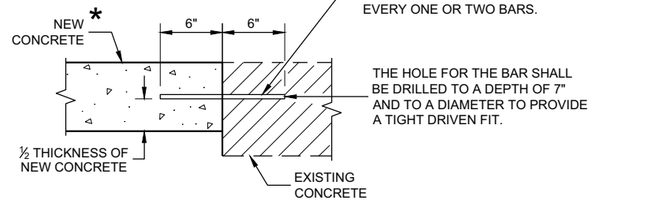
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



PLAN VIEW

*EXISTING AND NEW CONCRETE MAY BE CURB AND GUTTER, SURFACE DRAINS, PAVEMENT OR OTHER CONCRETE STRUCTURE.



SECTION A - A

PAVEMENT TIES

CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES

(For Optional use in Milwaukee Co. Only)

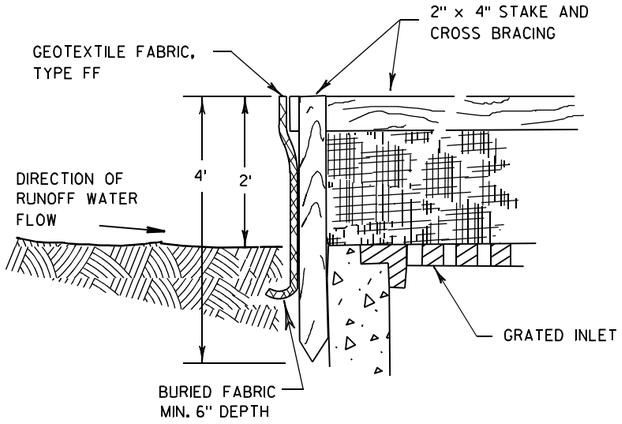
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

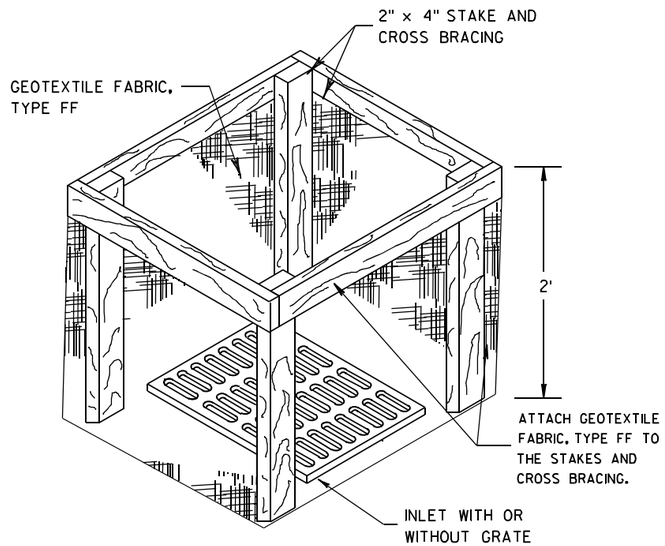
APPROVED
February 2020
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER
FHWA

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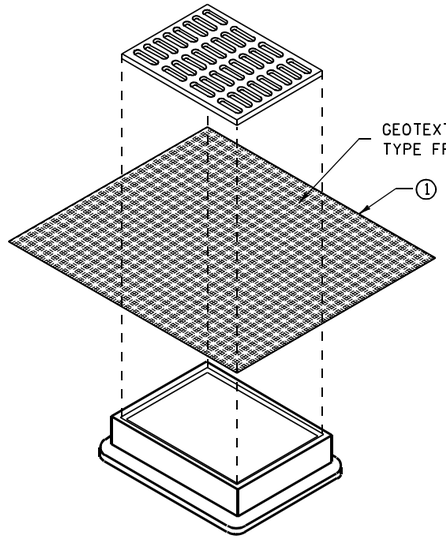
SDD 08D16 - 11

SDD 08D16 - 11



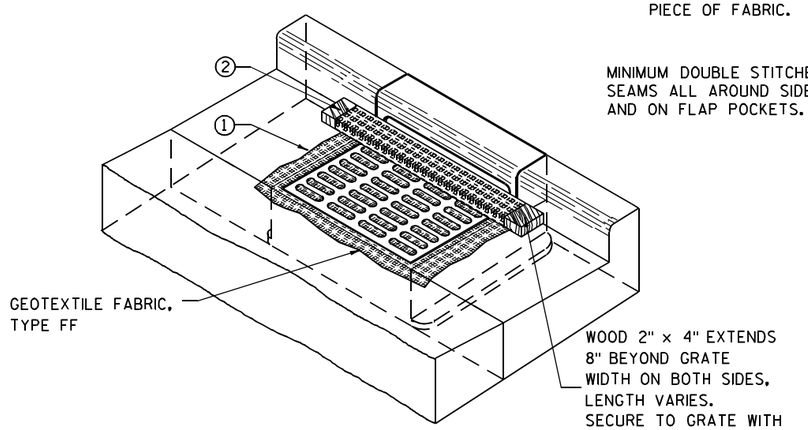


INLET PROTECTION, TYPE A

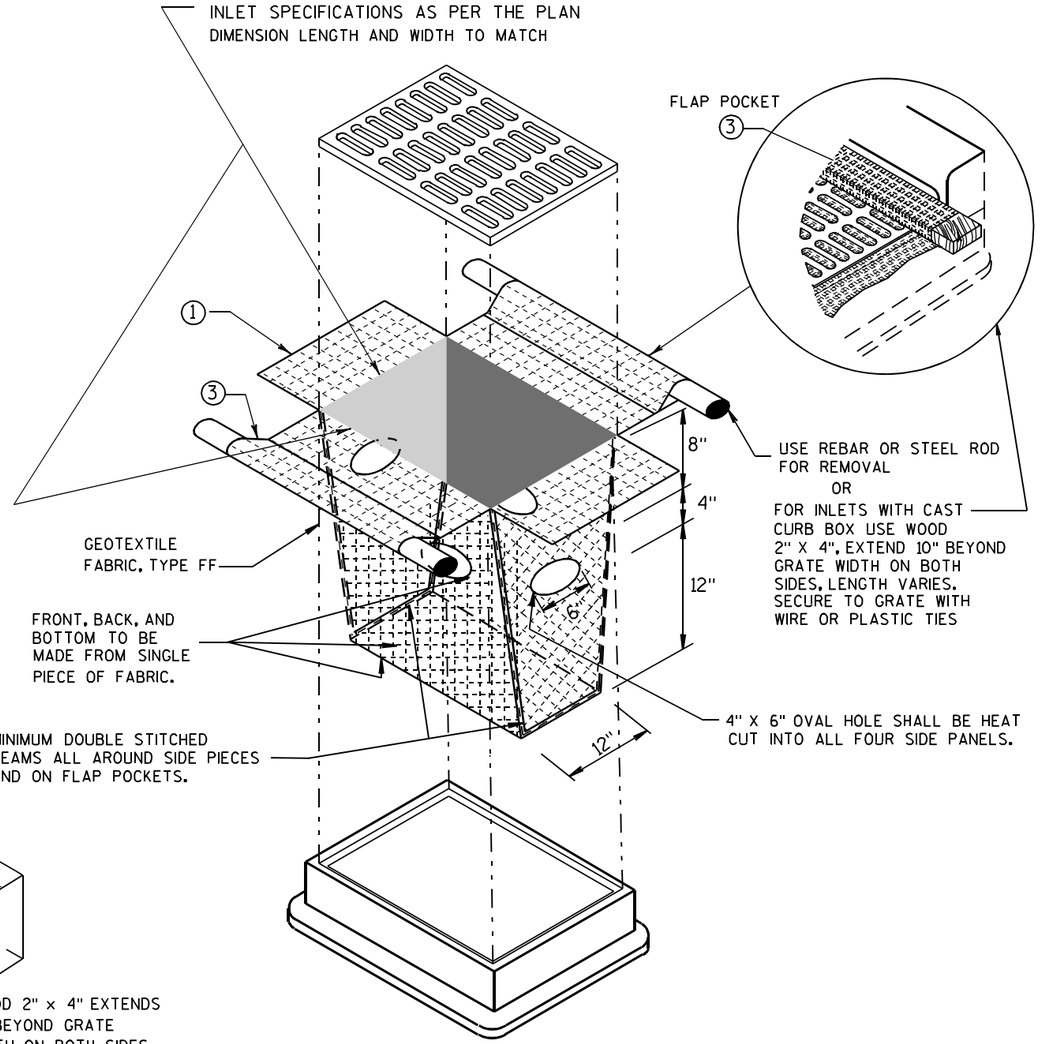


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

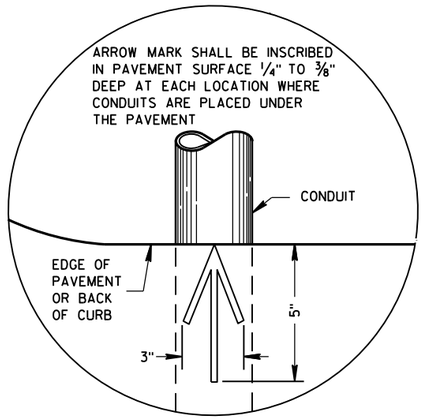
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

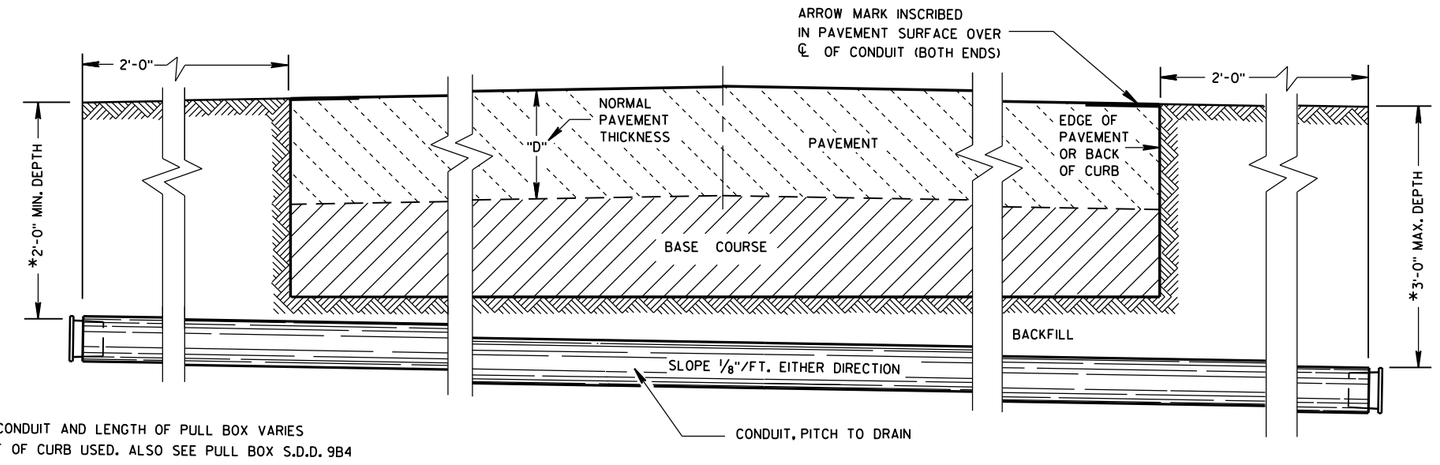
APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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



PLAN VIEW

ARROW MARK



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

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

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

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

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

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

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

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

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

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

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

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

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

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

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

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

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

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

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

CONDUIT

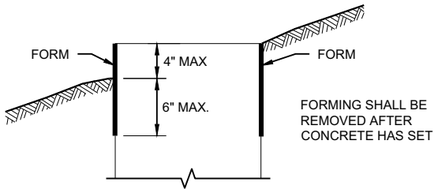
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 9 B 2-10

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.

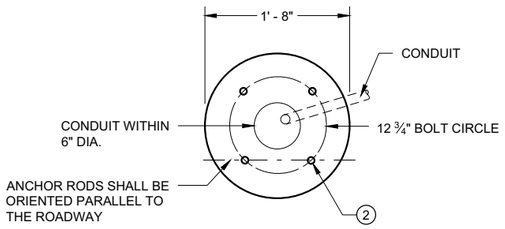
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

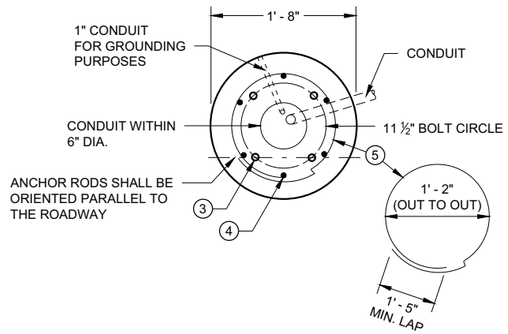
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

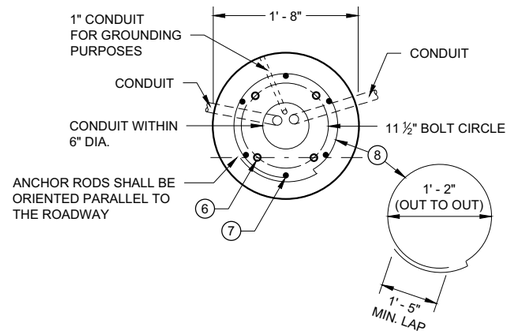
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

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

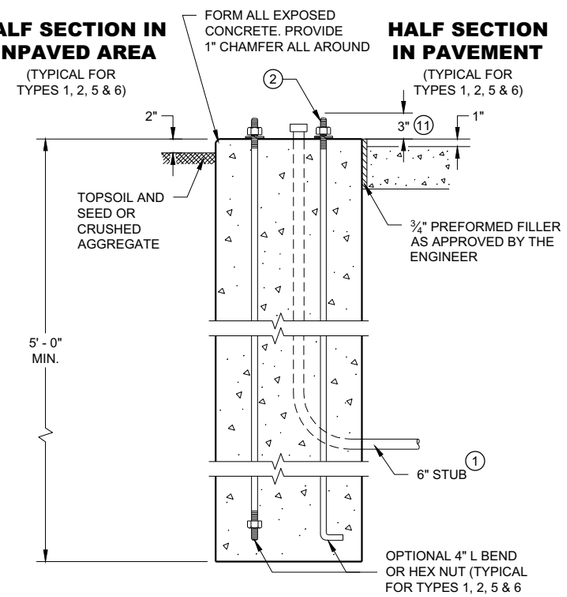
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

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.

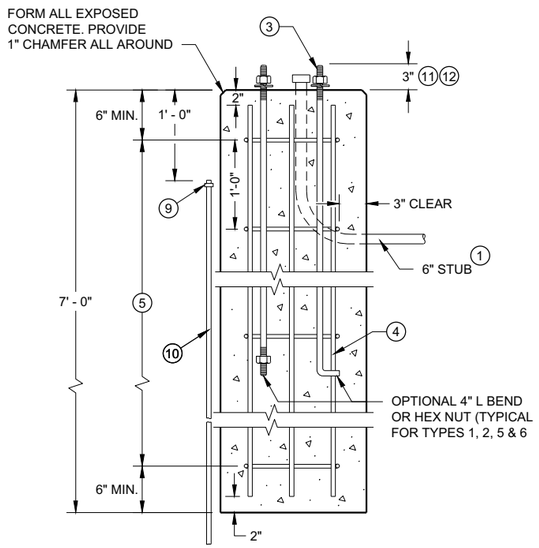
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

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

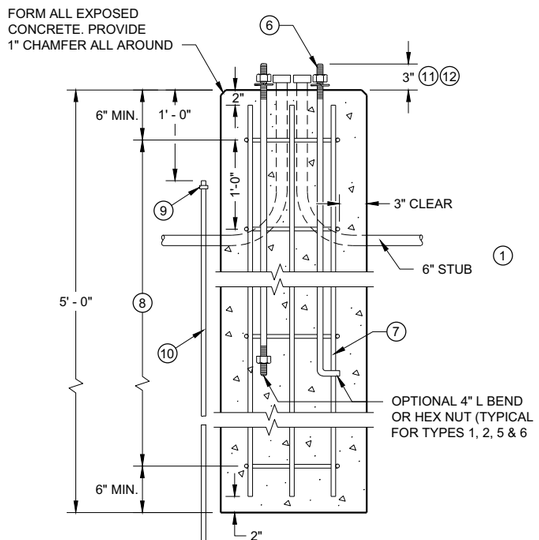
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



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

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SDD 09C02 - 09

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.

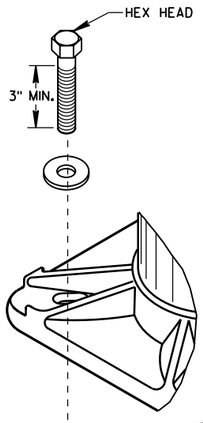
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

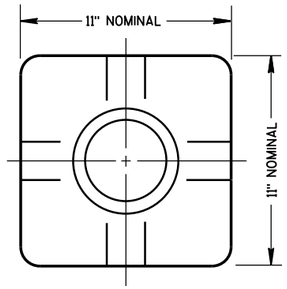
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

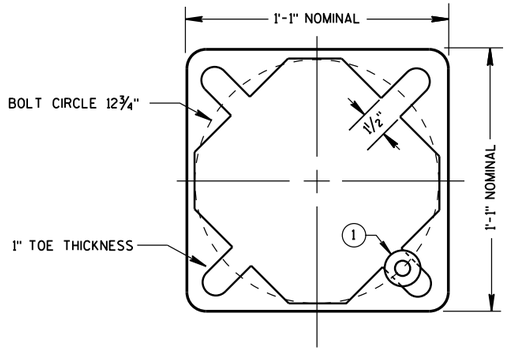
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

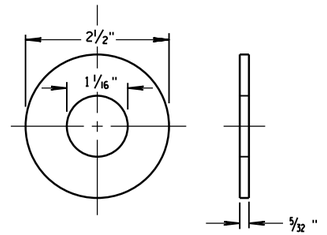




TOP VIEW
(PEDESTAL BASE)

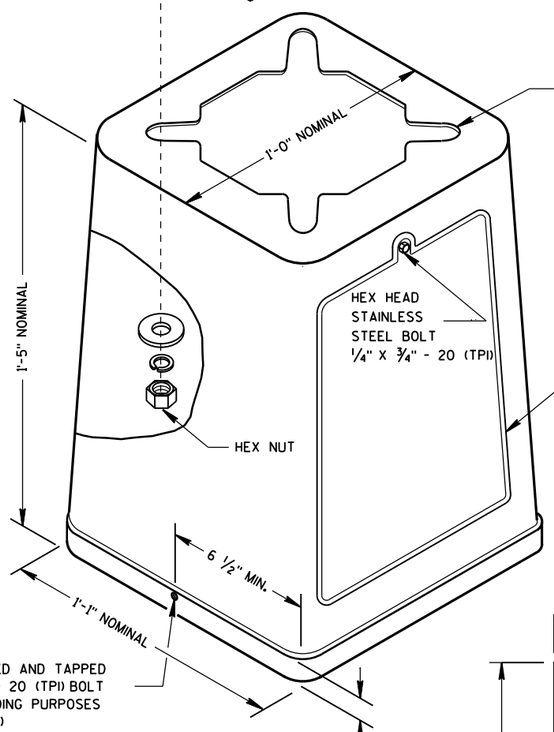


BOTTOM VIEW
(PEDESTAL BASE)

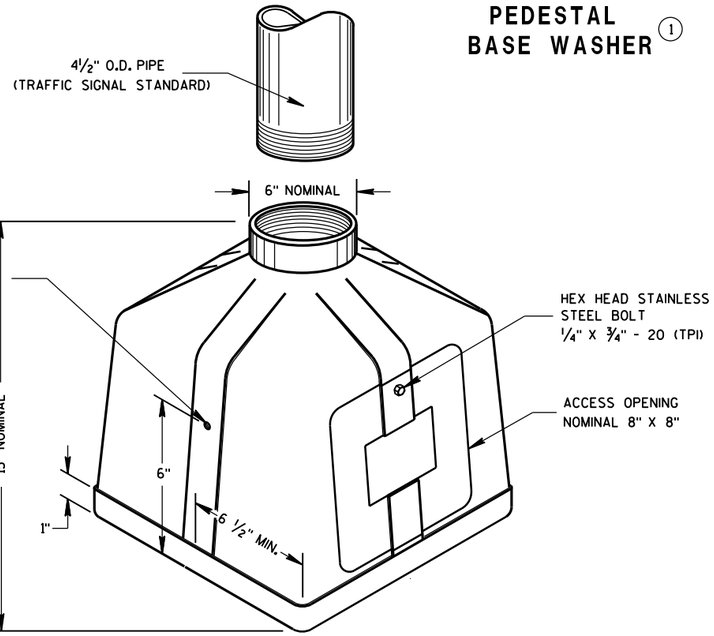


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

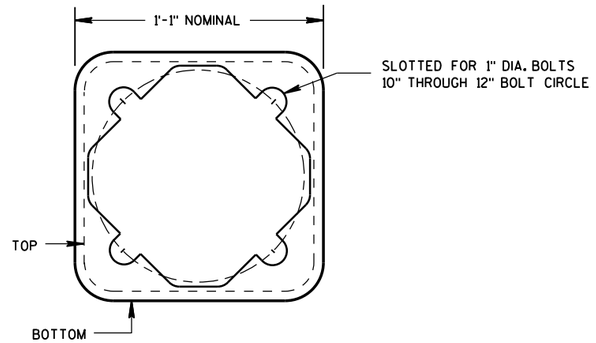


ISOMETRIC VIEW

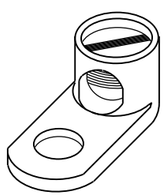


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

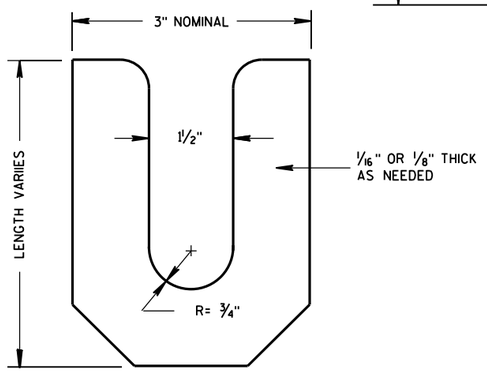


TYPICAL MECHANICAL CONNECTOR LUG

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

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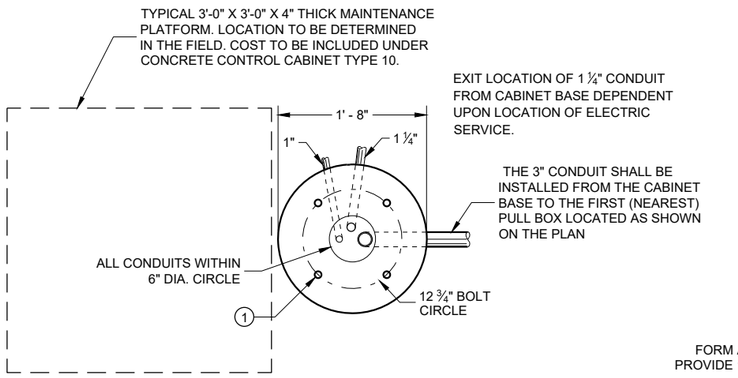
S.D.D. 9 C 3-4

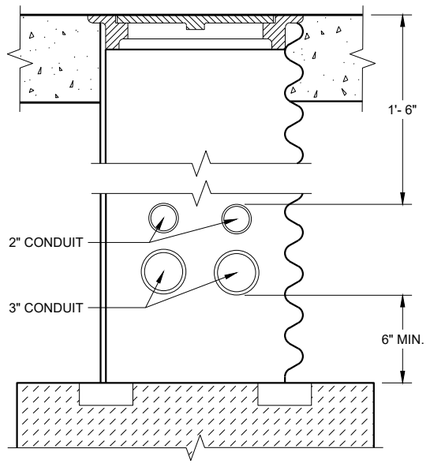
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S.D.D. 9 C 3-4

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

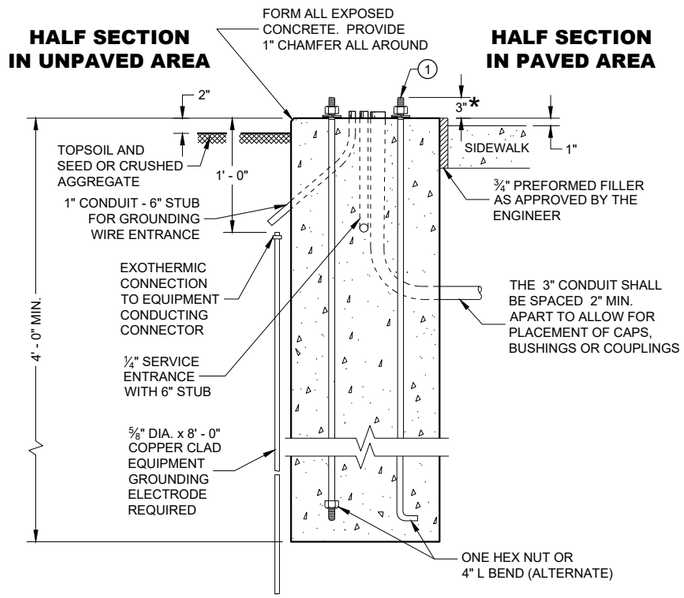
*INCLUDES MAINTENANCE PLATFORM.





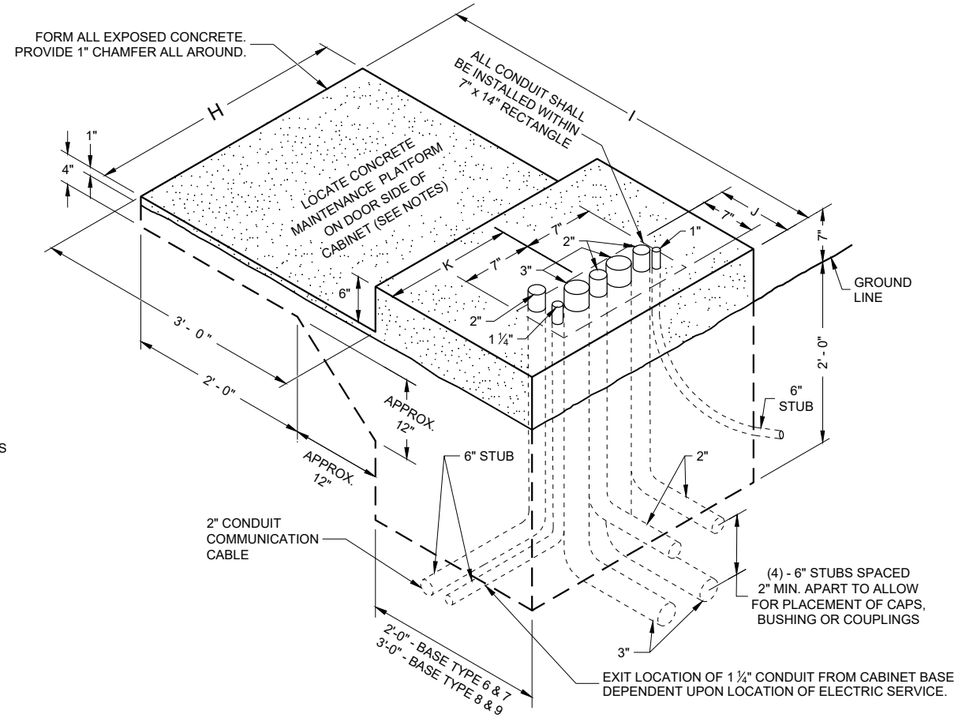
CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)



TYPE 10

*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.



ISOMETRIC VIEW
TYPE 6, 7, 8 AND 9

GENERAL NOTES

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

INSTALL FOUR (4) ½" INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH 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.

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

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

MINIMUM BENDING RADIUS OF CONDUIT EQUALS 6 TIMES THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF 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.

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

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

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

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

THE "L" BEND SHALL NOT BE THREADED.

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

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

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2 OF THE STANDARD SPECIFICATIONS.

CONCRETE CABINET CONTROL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2016
DATE
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI 118
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) 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.

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).

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

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" 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.

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

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.

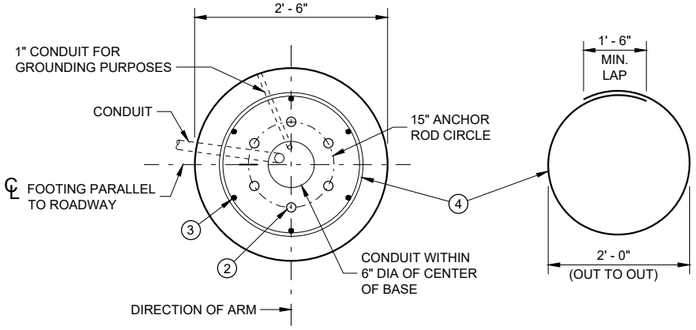
(2) (6) 1 ½ DIA. X 4' - 4" ANCHOR RODS

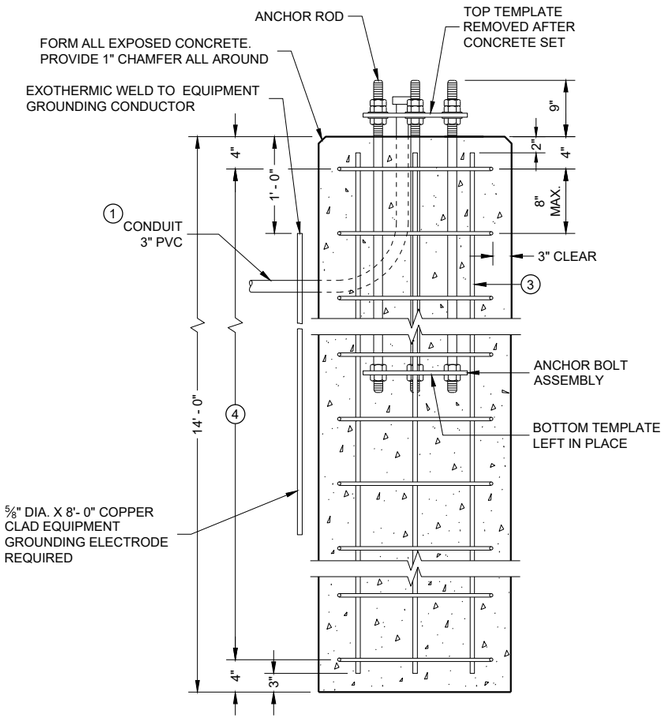
(3) (6) NO. 6 X 13' - 7" BAR STEEL REINFORCEMENT.

(4) (21) NO. 5 X 7'-10" BAR STEEL REINFORCEMENT @ 8" MAX. C-C.

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

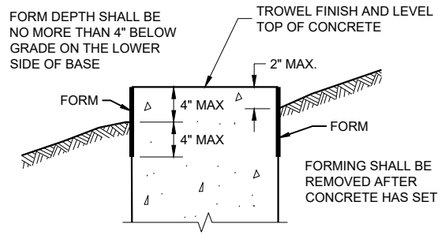
QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122



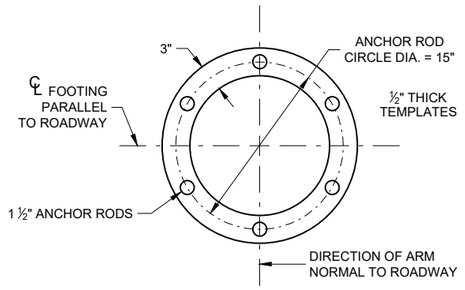


CONCRETE BASE, TYPE 10
(FOR TYPE 9, TYPE 10 AND OVER HEIGHT (OH) POLES)

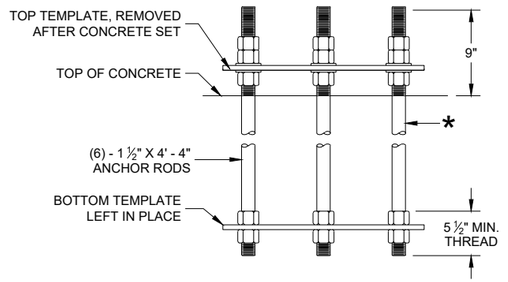
TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE SDD 9C13 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.



FORMING DETAIL



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.

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 — DATE
/S/ Ahmet Demerbilek — WIND LOADED STRUCTU PROGRAM LEADER
FHWA

6

SDD 09C11 - 10

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.

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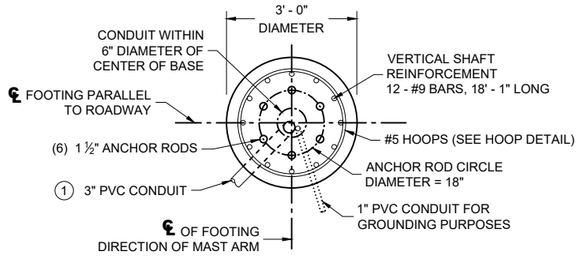
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

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.

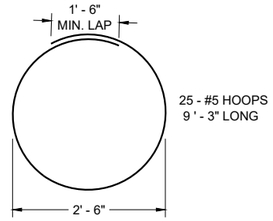
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

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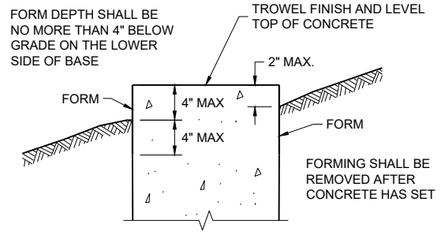
CONCRETE MASONRY.....fc = 3,500 p.s.i
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55.....fy = 55,000 p.s.i.
(IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION)
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



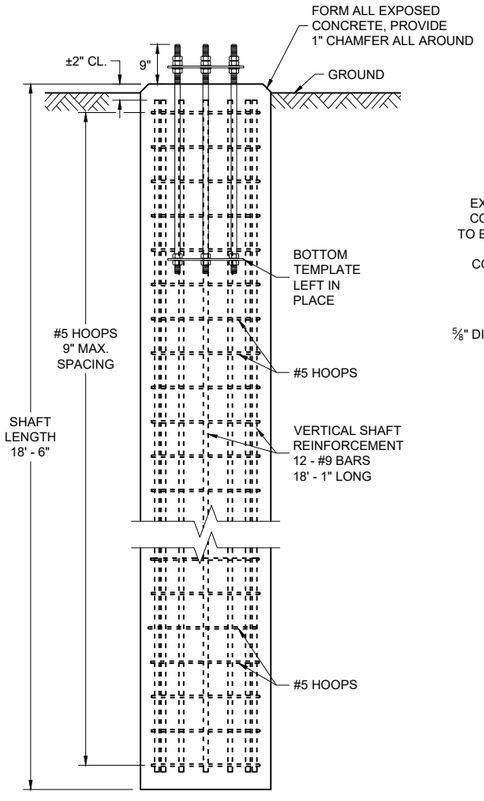
PLAN VIEW



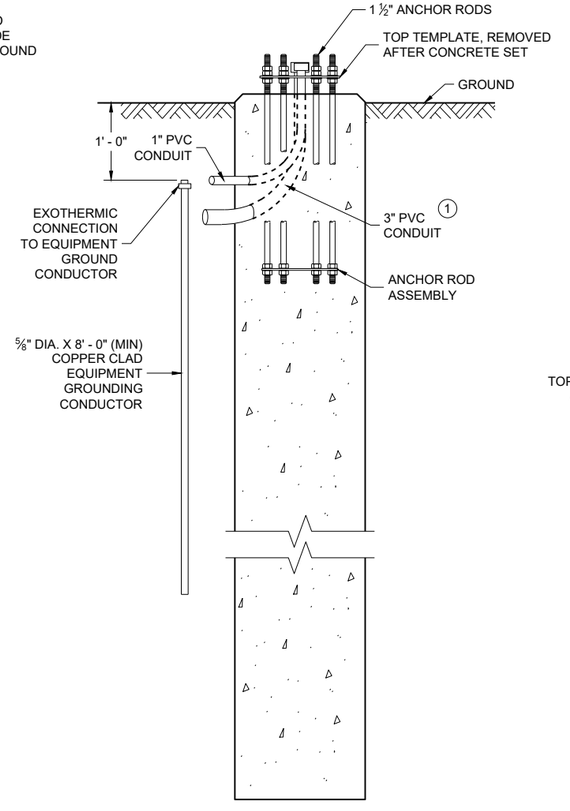
HOOP DETAIL



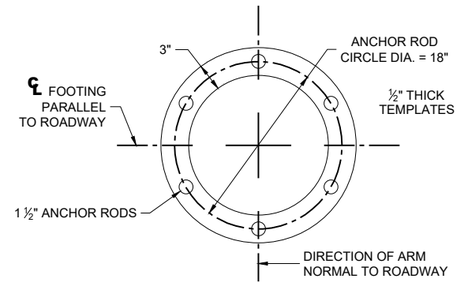
FORMING DETAIL



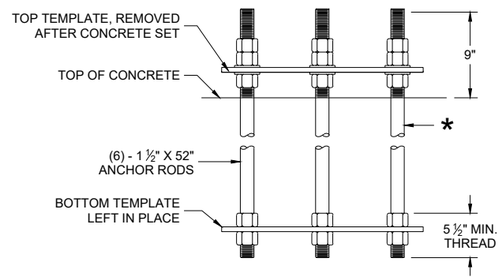
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



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.

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.

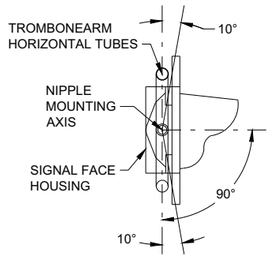
CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024 — DATE
/S/ Alex Crabtree — WIND LOADED STRUCTURES PROGRAM LEADER

FHWA

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SDD 09C15-02

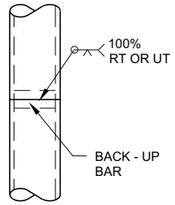


SECTION A-A

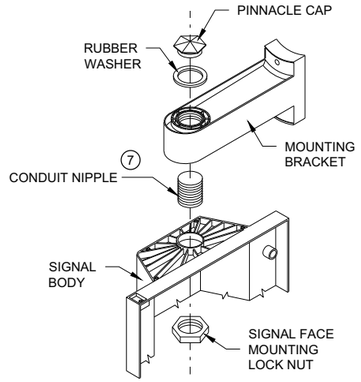
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

FOR MANUFACTURERS USE ONLY

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



POLE SPLICE DETAIL



SIGNAL FACE MOUNTING DETAIL

(BANDED)

GENERAL NOTES

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

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

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

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

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

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

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

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

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

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

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

(6) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

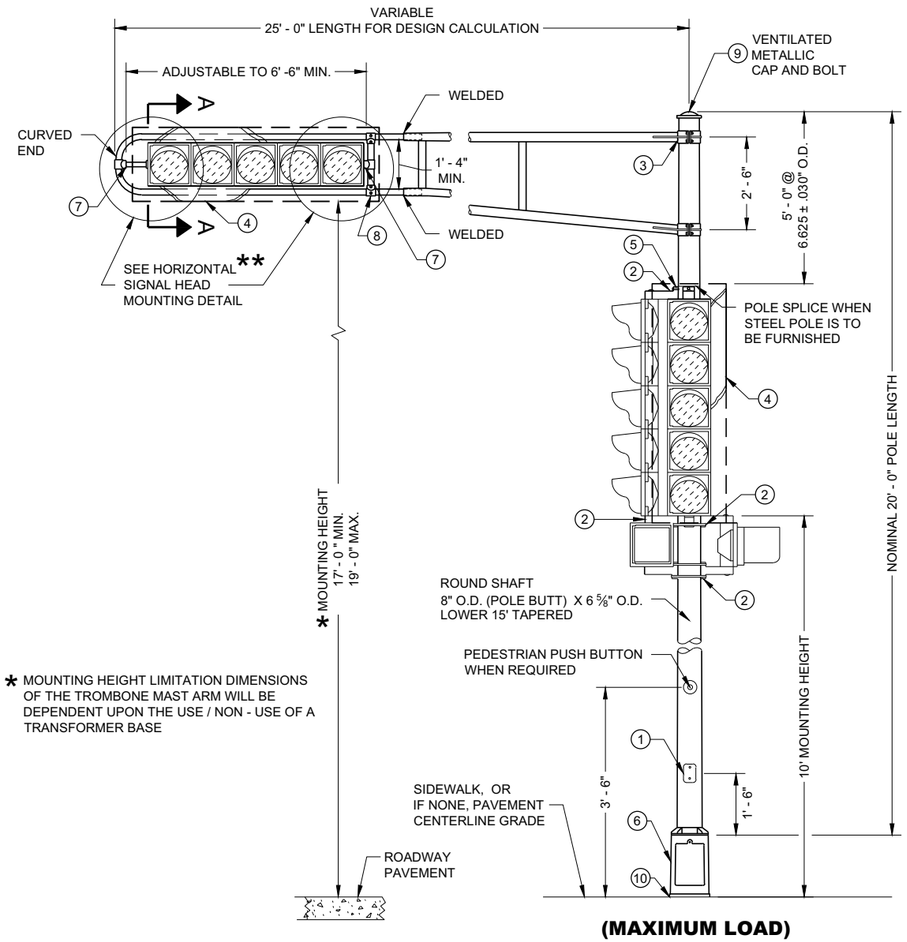
(7) USE 1 ½" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOTINTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 ½" OPENING IN SIGNAL FACES AND BRACKET ENDS.

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

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

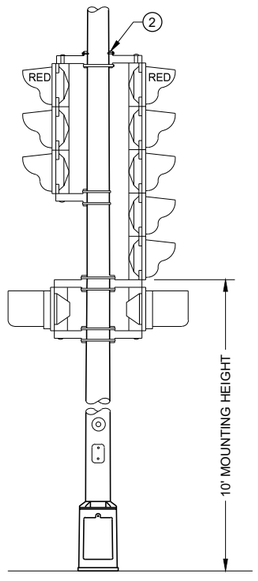
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

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

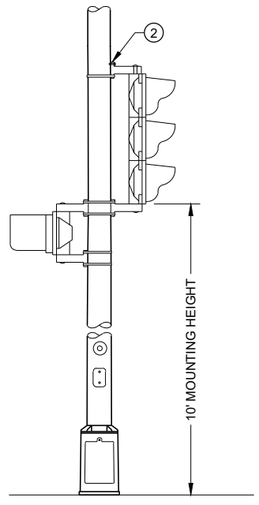


* MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE / NON - USE OF A TRANSFORMER BASE

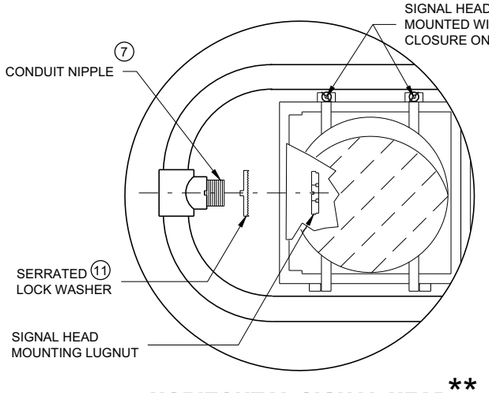
(MAXIMUM LOAD)



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



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

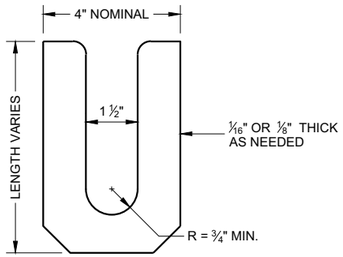
** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

TYPE 2 POLE MOUNTING CONFIGURATION

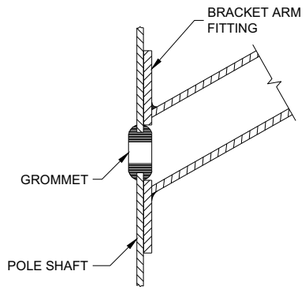
POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

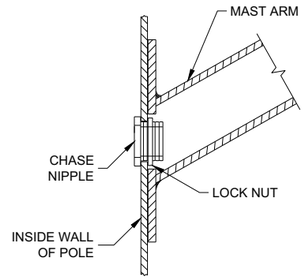
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SDD 09E01 - 15a



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

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

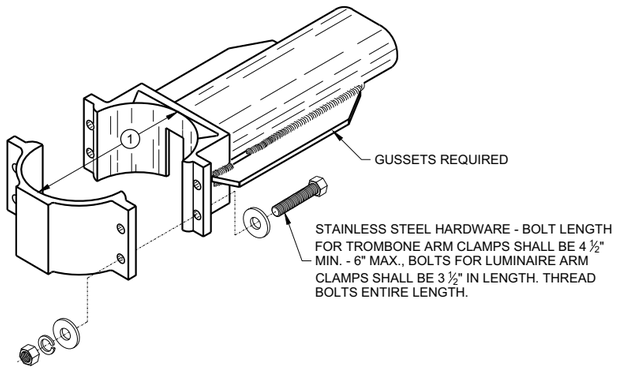
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

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

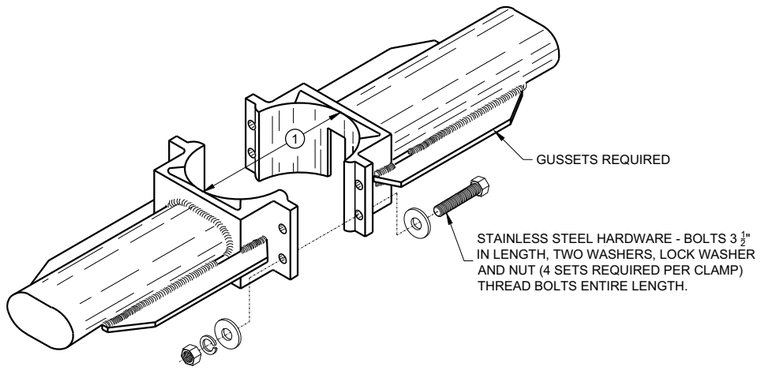
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

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

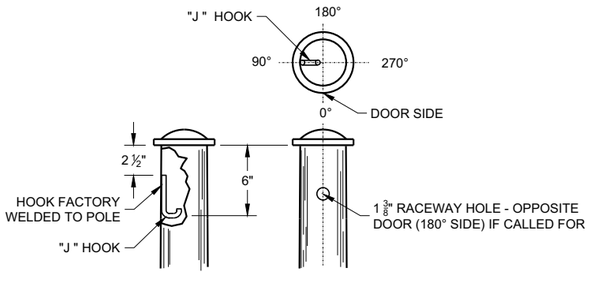
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



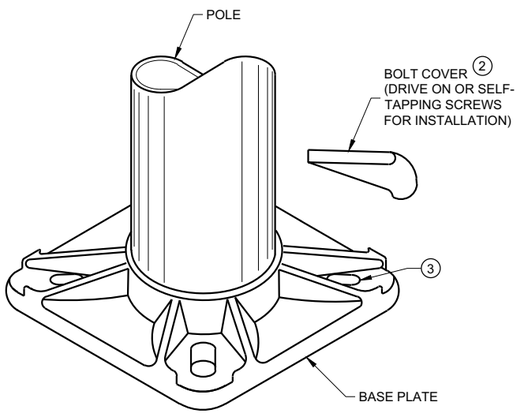
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



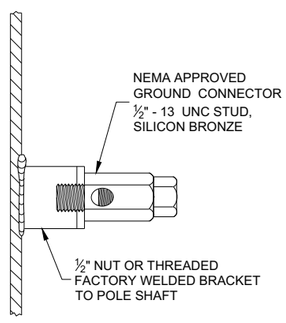
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

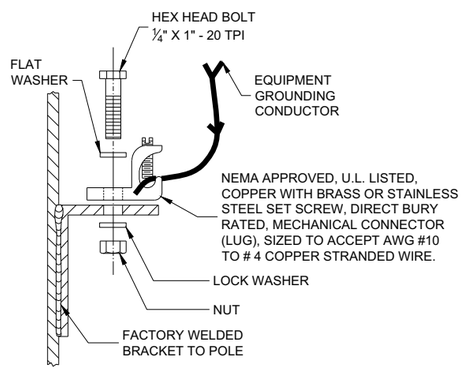


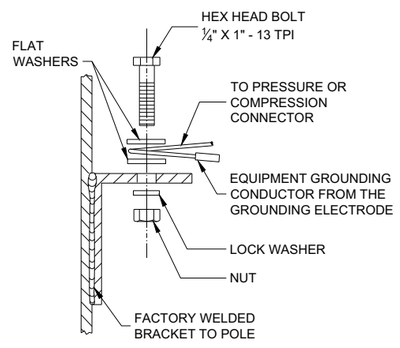
TYPICAL "J" HOOK LOCATION



BASE PLATE







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

HARDWARE DETAILS FOR POLE MOUNTING

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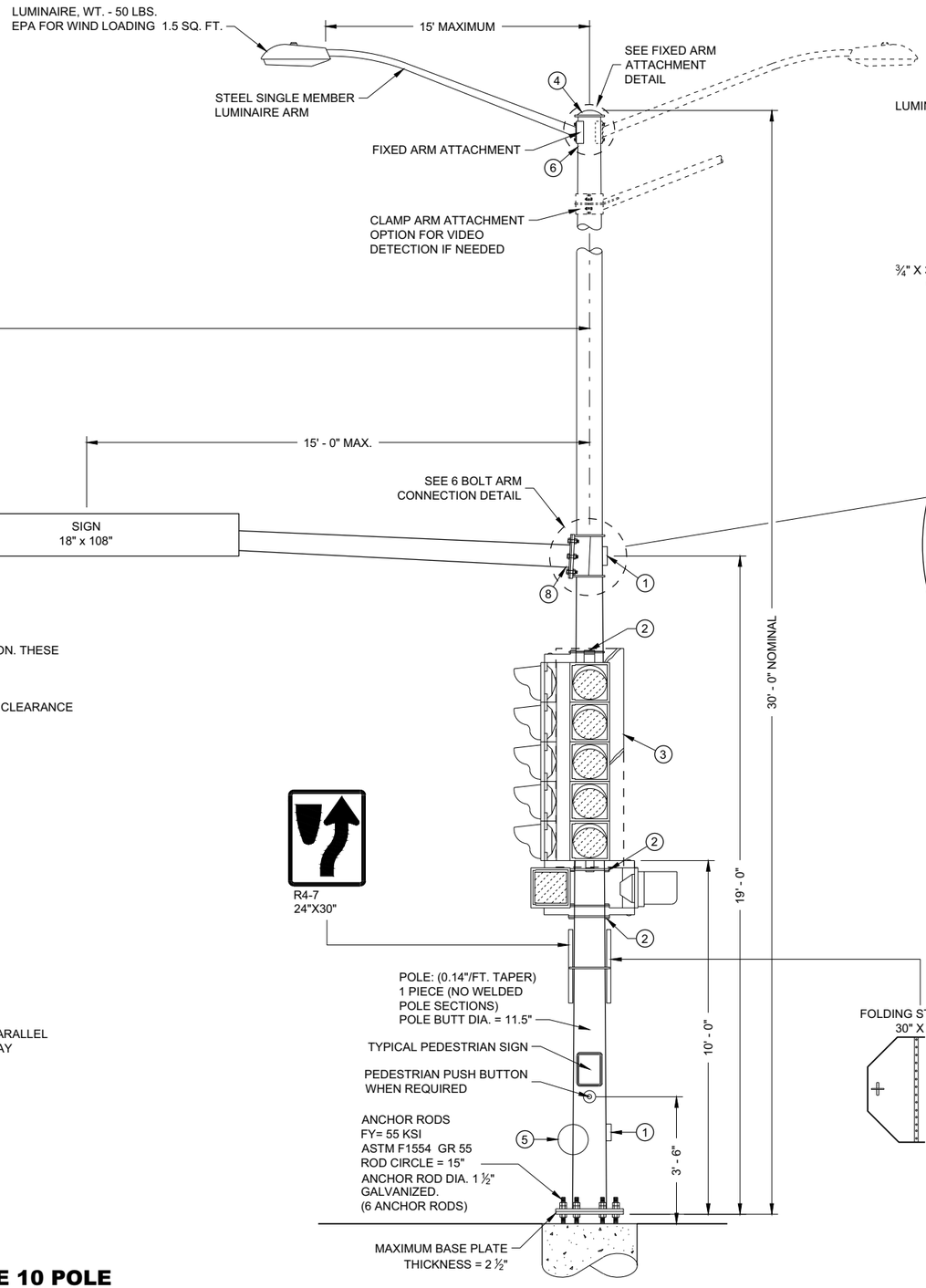
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November 2018
DATE

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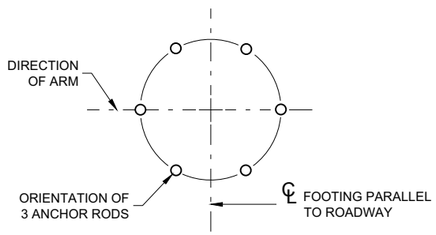
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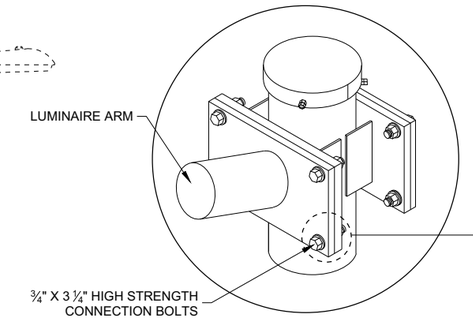


* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

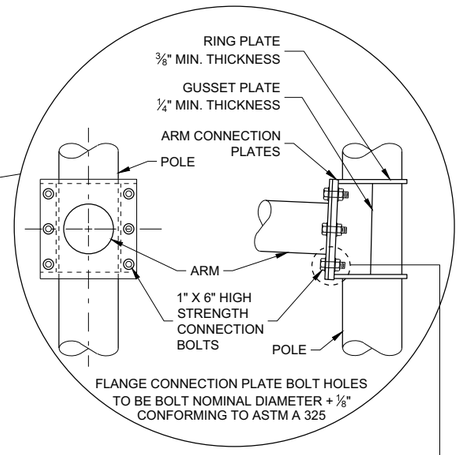
** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE



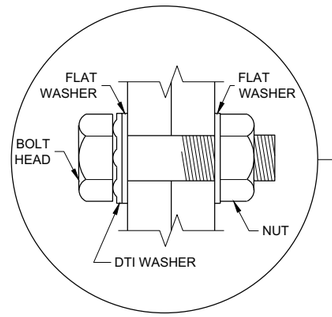
ANCHOR ROD LOCATION



FIXED ARM ATTACHMENT DETAIL



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 POLE
15' - 30' MONOTUBE ARM
(MAXIMUM LOAD)

TYPE 10 POLE
15' - 30' MONOTUBE ARM

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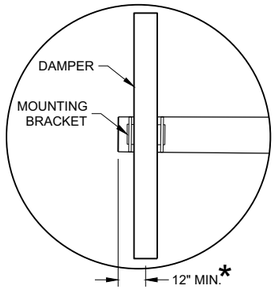
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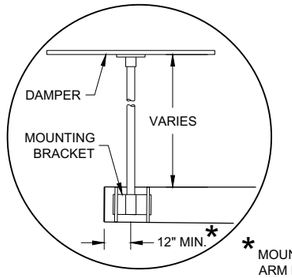
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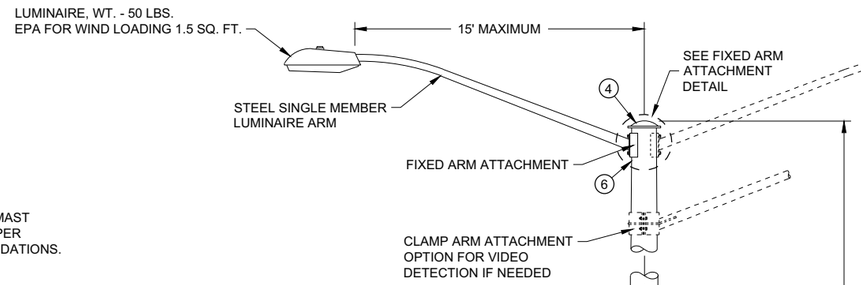


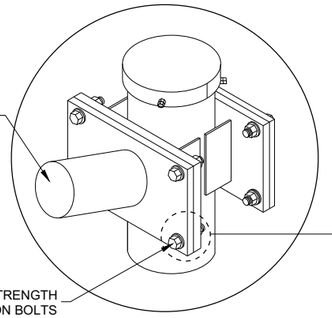
DUMBBELL VIBRATION DAMPER



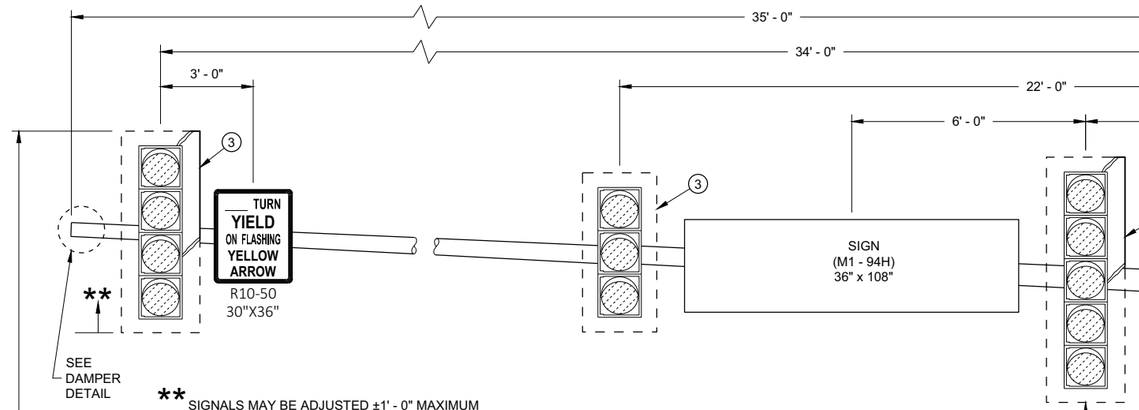
FLAT VIBRATION DAMPER

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

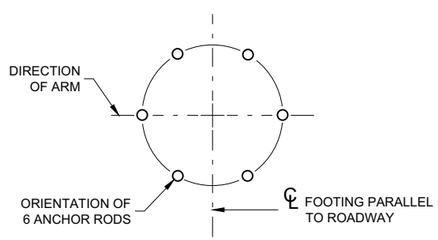




FIXED ARM ATTACHMENT DETAIL

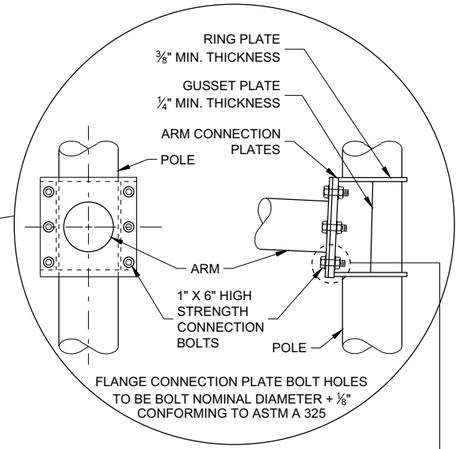


** SIGNALS MAY BE ADJUSTED ±1' - 0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE

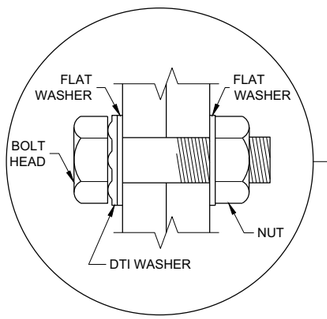


ANCHOR ROD LOCATION

TYPE 10 SPECIAL POLE
35' MONOTUBE ARM
(MAXIMUM LOAD)



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 SPECIAL POLE
35' MONOTUBE ARM

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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.

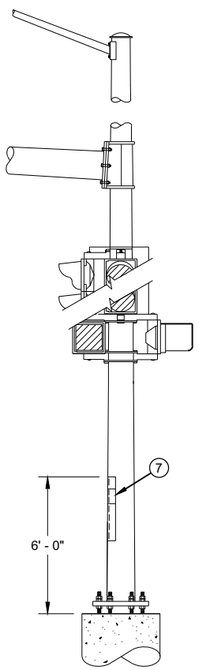
(6) FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.

(7) INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

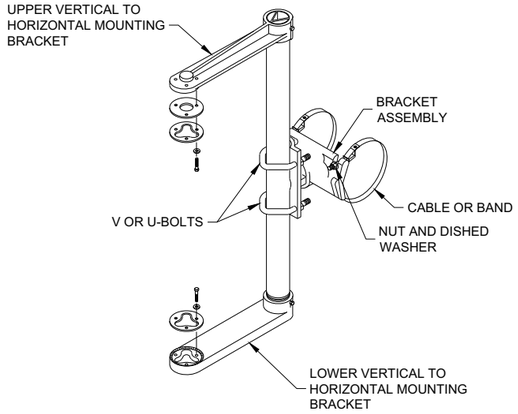
STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

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.

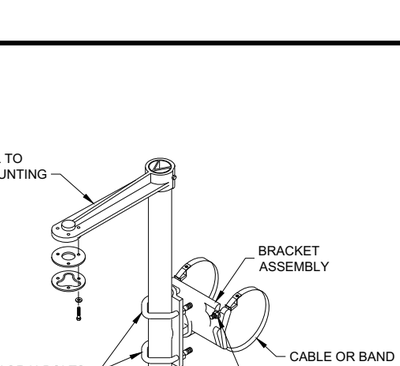


STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT



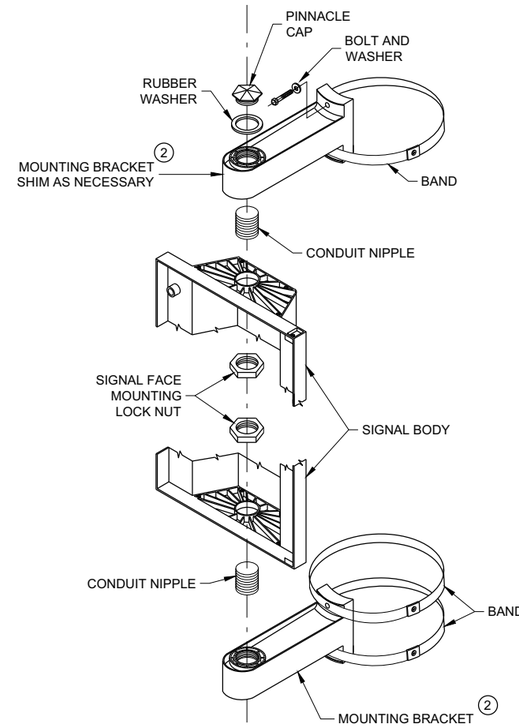
SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

(MOUNT PER MANFACTURER'S RECOMMENDATION)

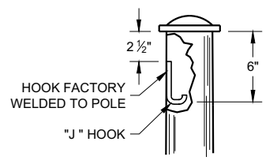


TYPICAL GROUNDING (5) CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



SIGNAL FACE VERTICAL MOUNTING DETAIL



TYPICAL "J" HOOK (6) WIRE SUPPORT

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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August 2020
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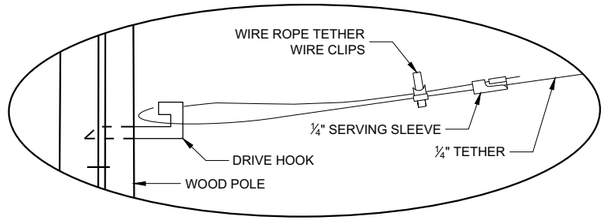
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

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

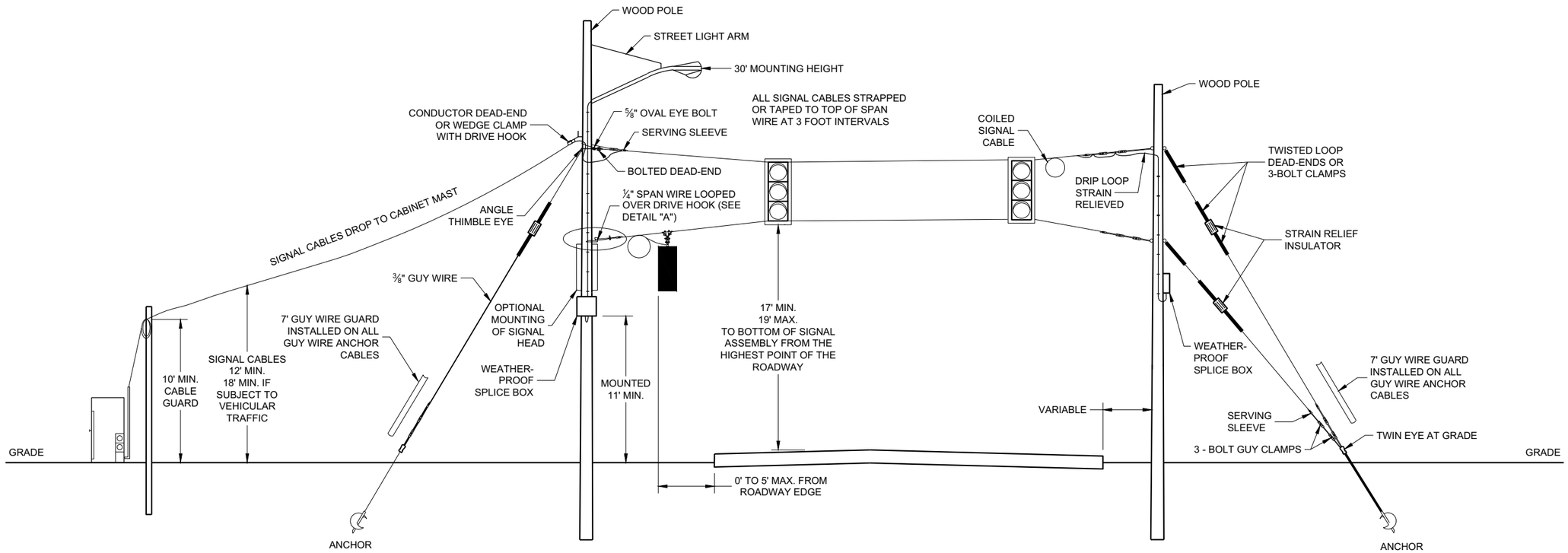


DETAIL "A"

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

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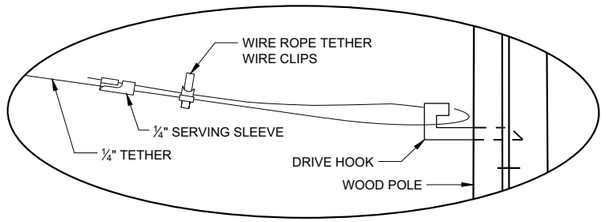
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MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

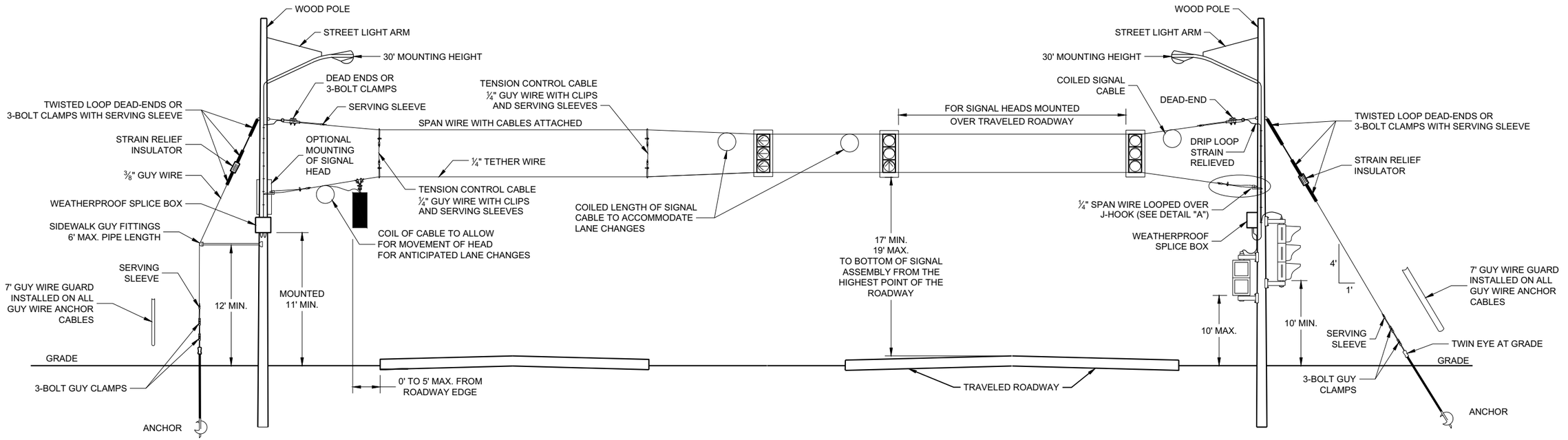


DETAIL "A"

GENERAL NOTES

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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.
   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
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APPROVED
June 2015
DATE

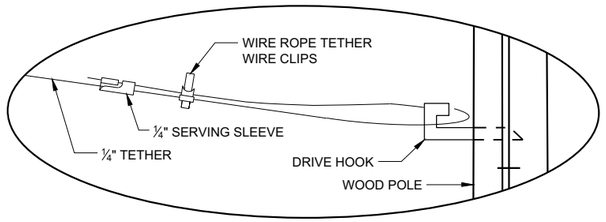
/S/ Ahmet Demerbilek
STATE ELECTRICAL ENGI

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SDD09G01 - 04b

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

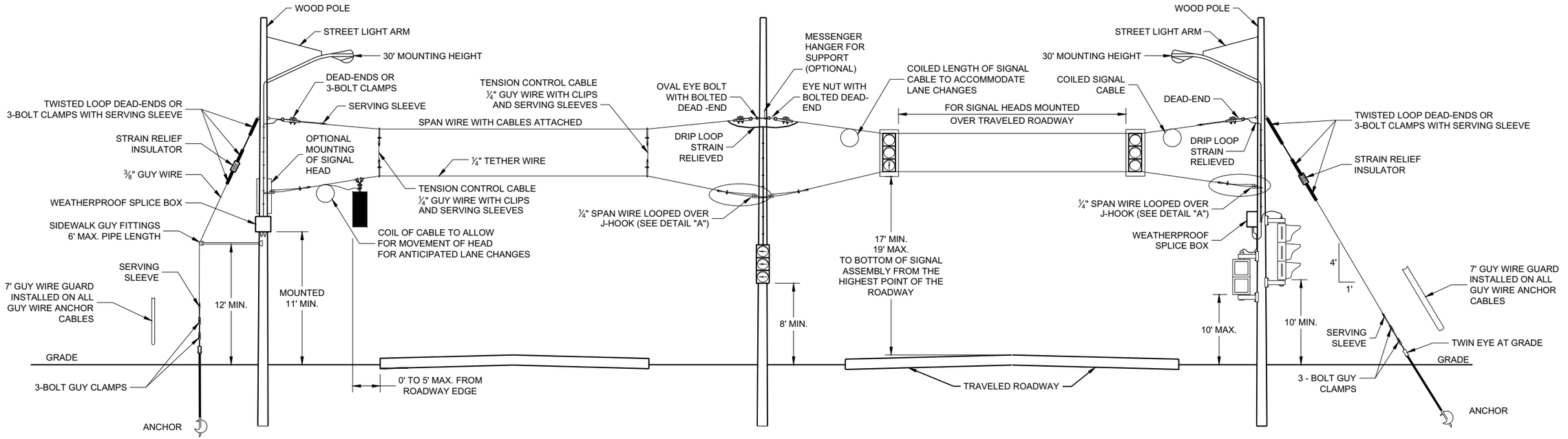


DETAIL "A"

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.
   - E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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
4 LANE ROADWAYS

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

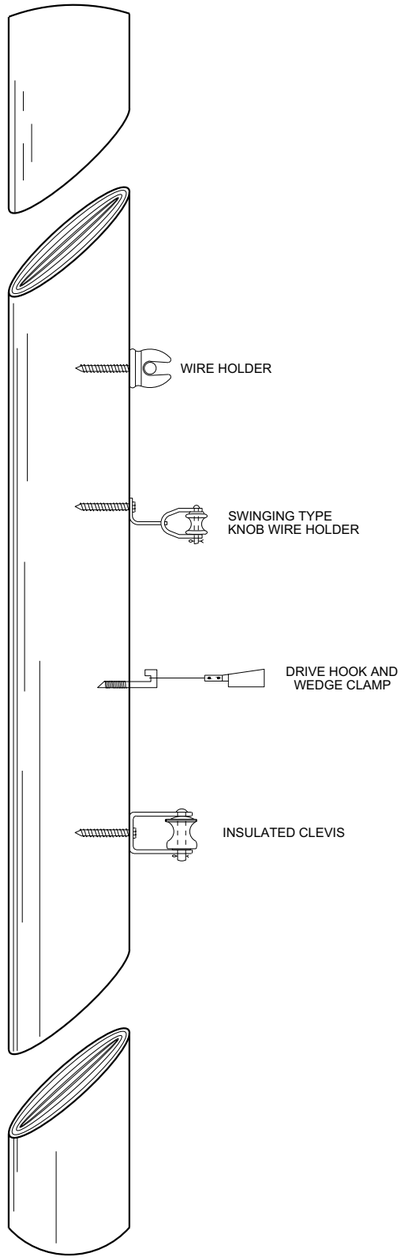
STATE OF WISCONSIN
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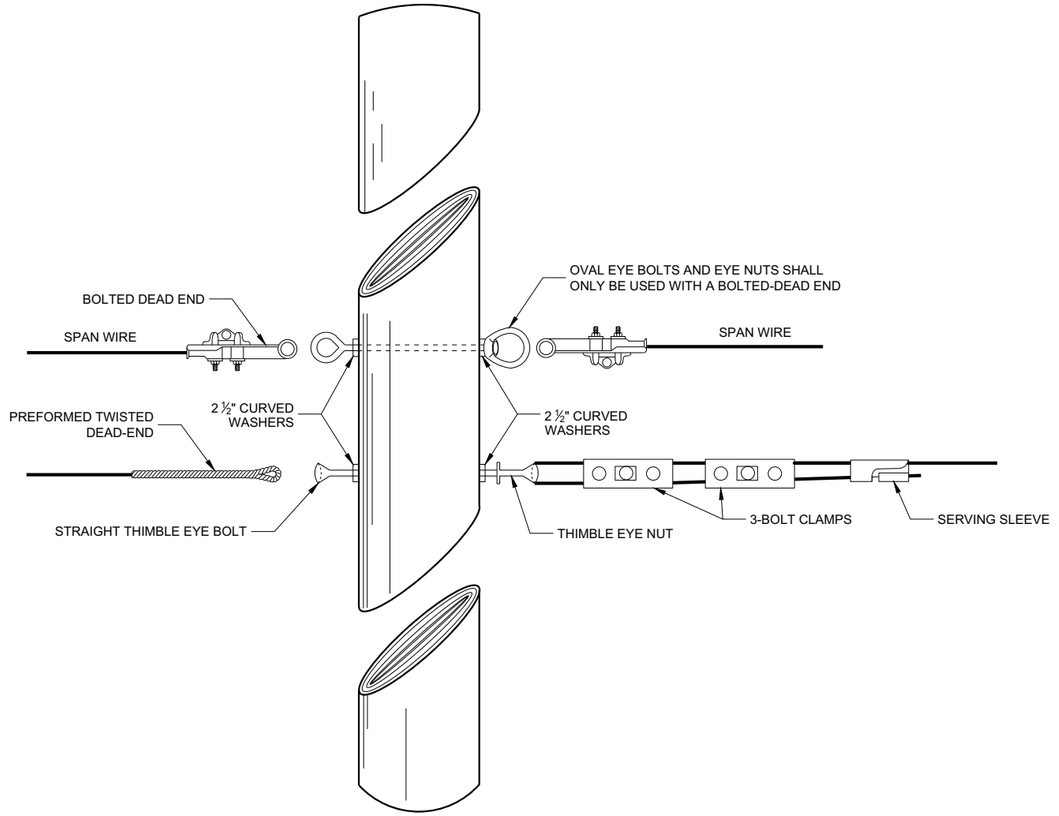
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June 2015
DATE
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SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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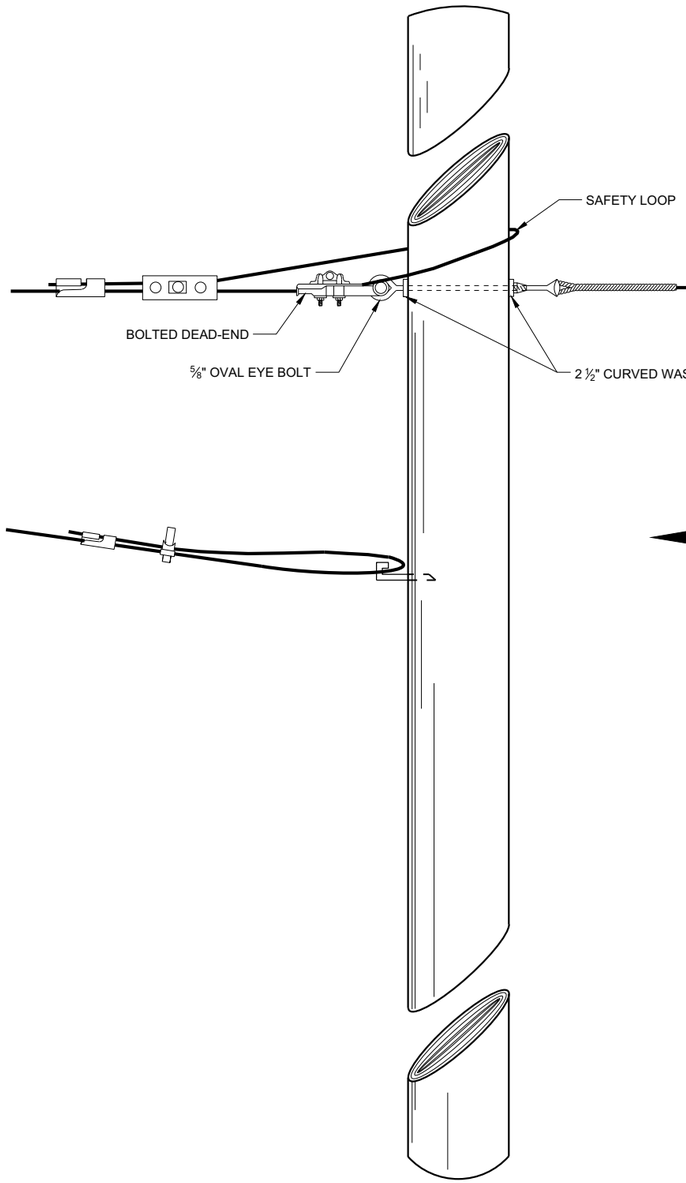
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SDD 09G01 - 4d

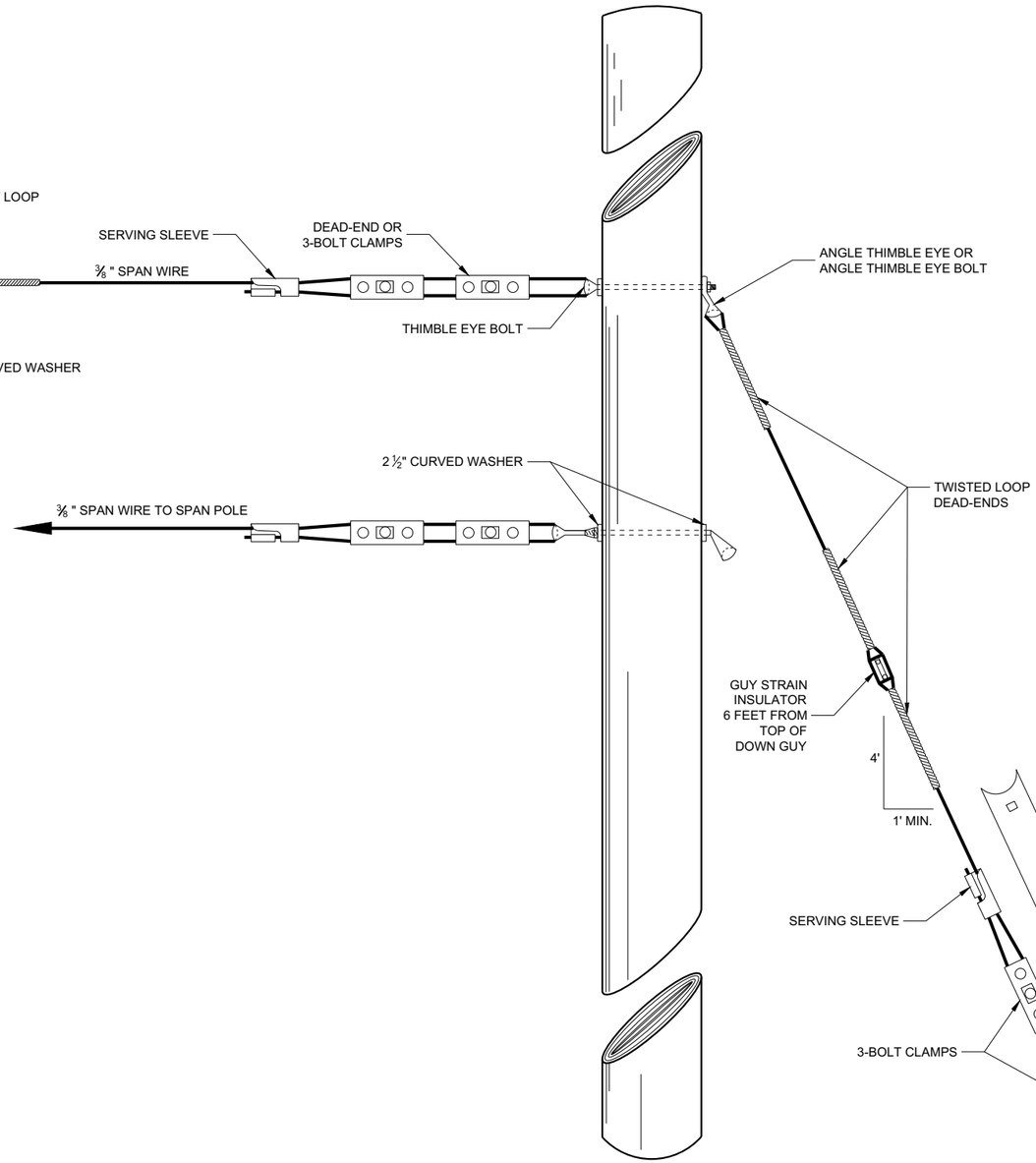
SDD 09G01 - 4d

GENERAL NOTES

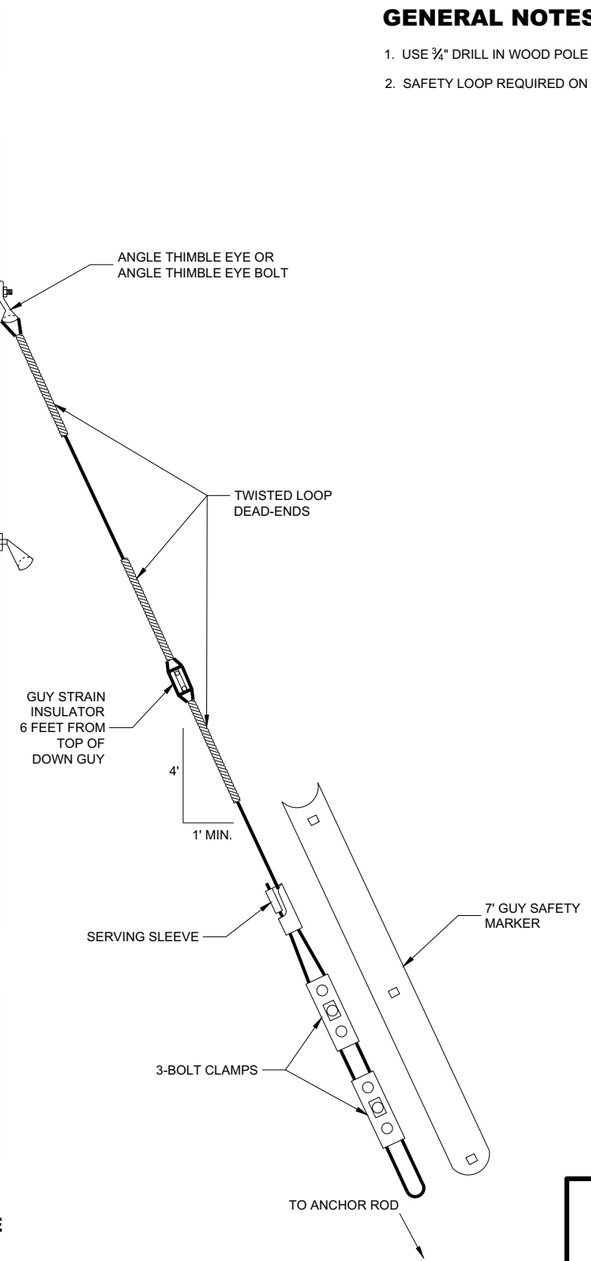
1. USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.
2. SAFETY LOOP REQUIRED ON EACH END OF ALL SPAN WIRES.



SPAN WIRE POLE



GUY POLE



TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE TEMPORARY TRAFFIC SIGNAL

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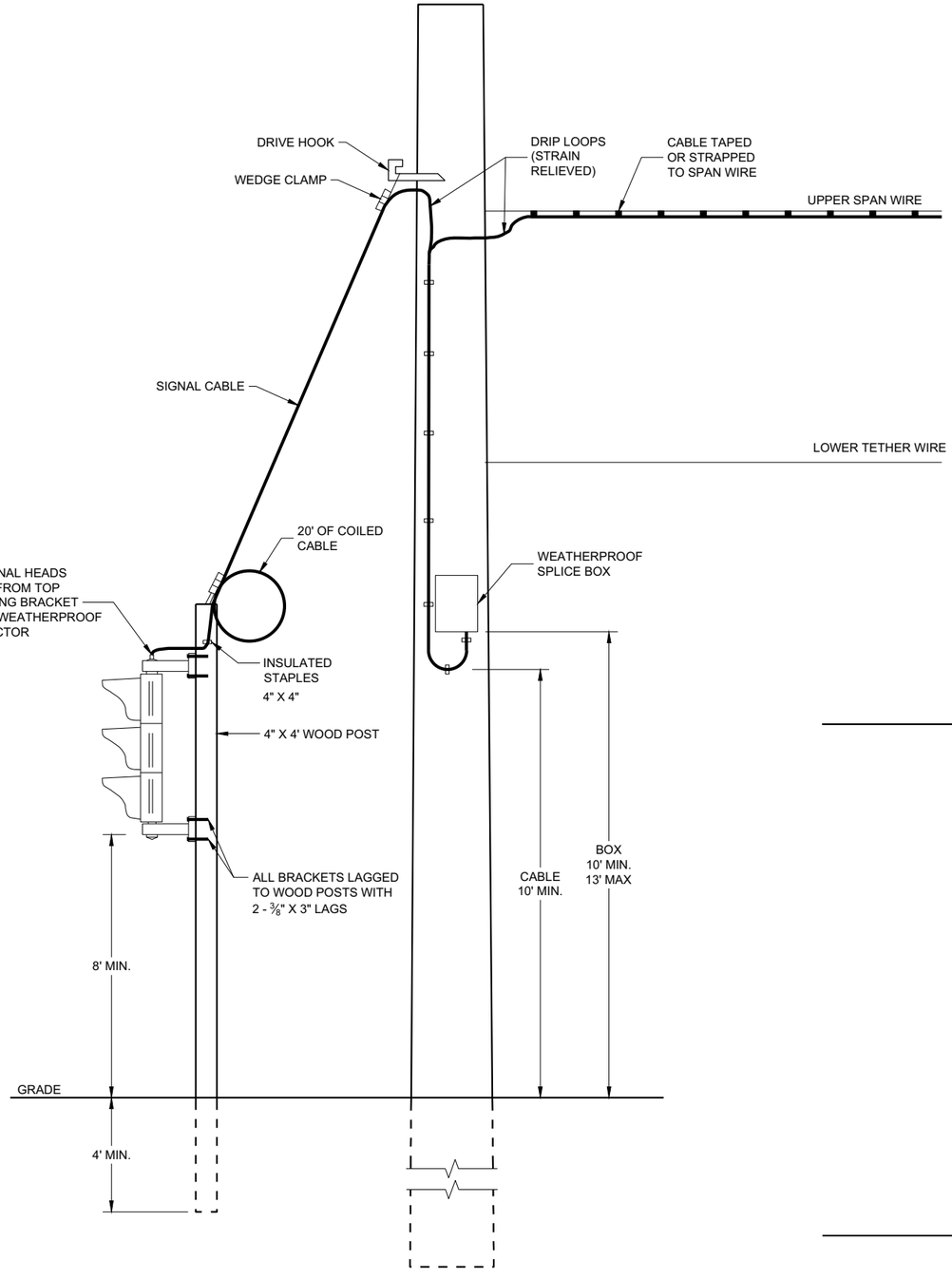
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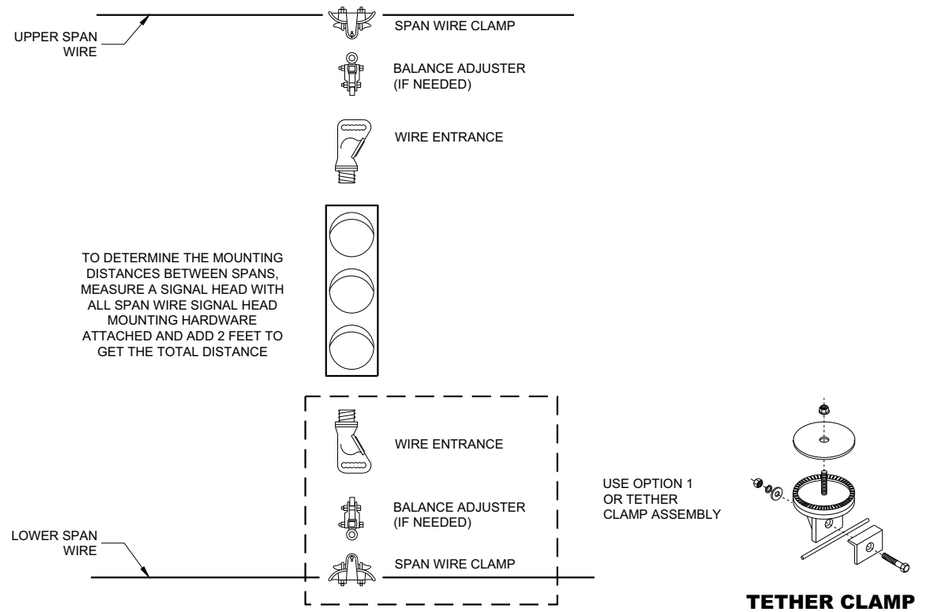
SDD 09G01 - 4e

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SDD 09G01 - 4e



TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL

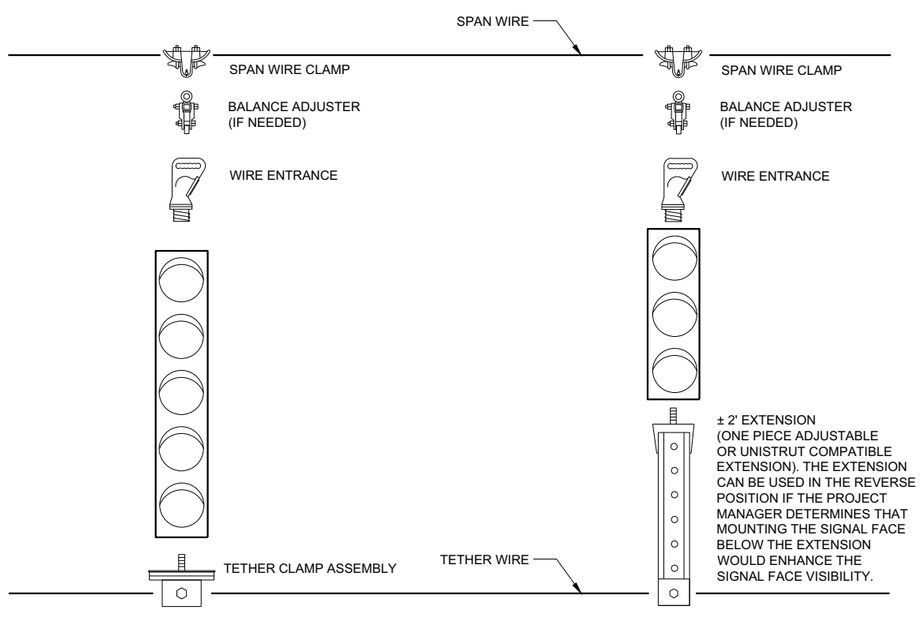


OPTION 1

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

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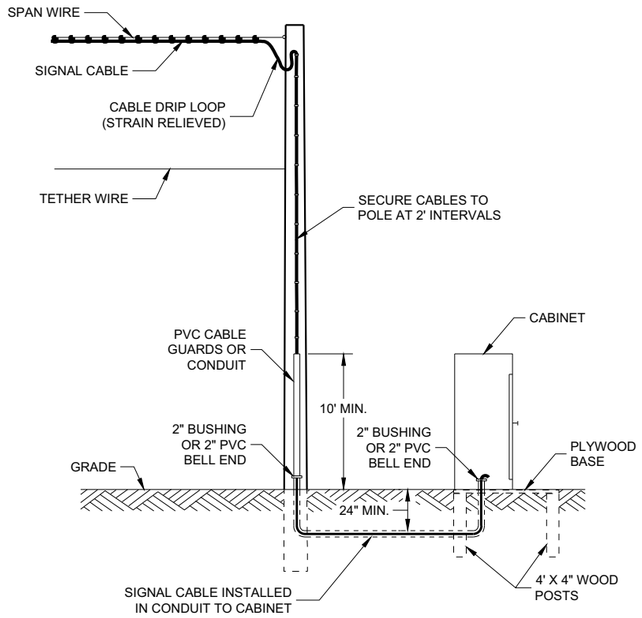
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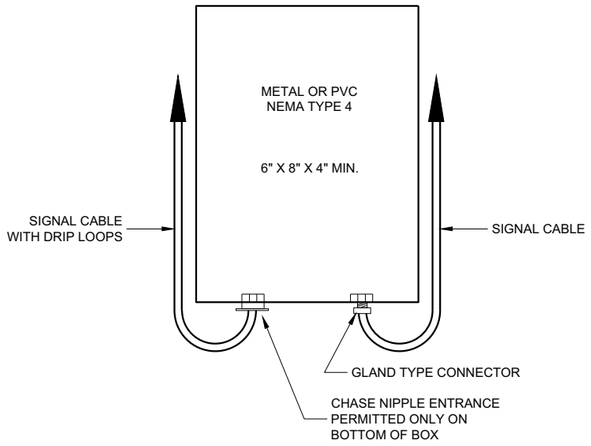
/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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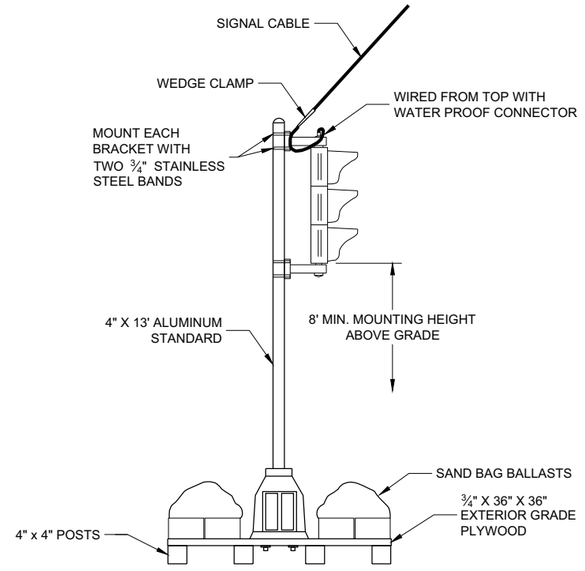
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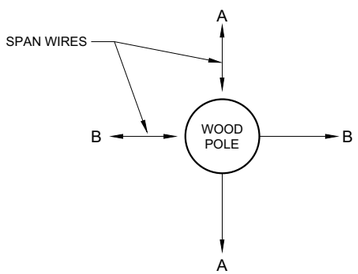




SPLICE BOX

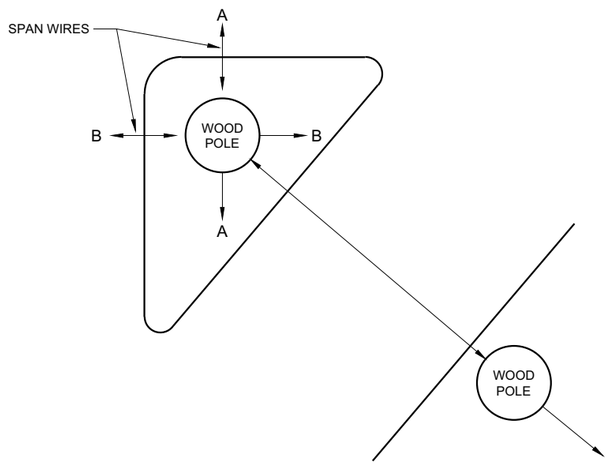


TYPICAL SKID TYPE TEMPORARY

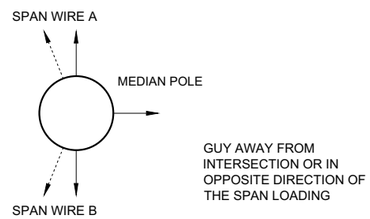


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

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
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SDD 09G01 - 4g

GENERAL NOTES

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

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

USE TIME DELAY FUSE PER LUMINAIRE MANUFACTURER RECOMMENDATION.

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

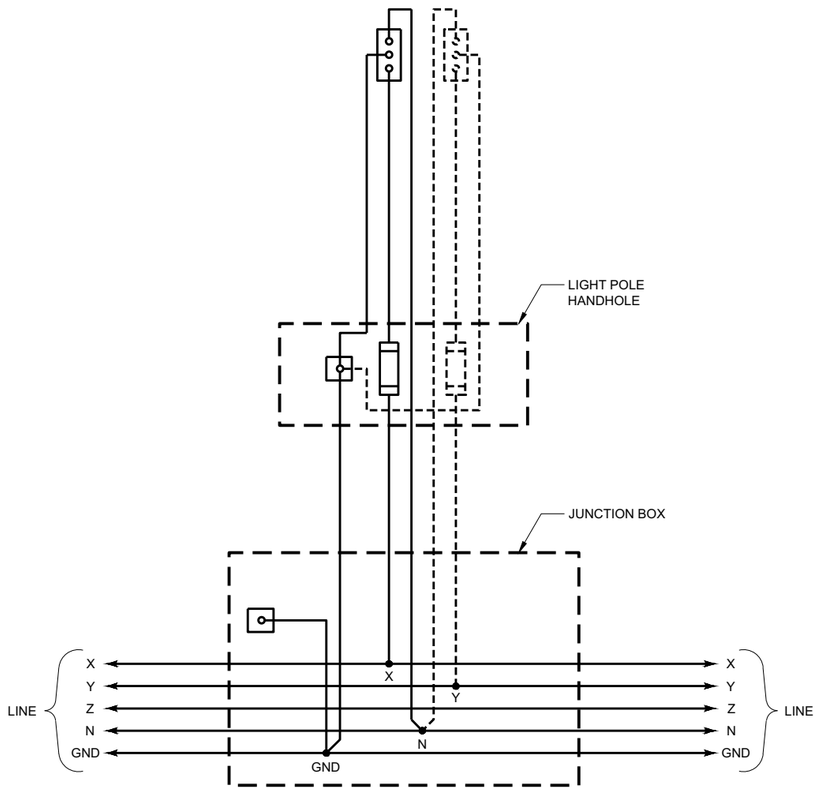
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

WIRE SIZE FROM THE JUNCTION BOX TO THE POLE HANDHOLE SHALL EQUAL THE SIZE OF THE POLE WIRE.

THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C. AND / OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE LINE WIRE IS LIGHTER, SUCH AS SMALL ER SYSTEMS OR TOWARD THE FURTHEST END OF A LARGER SYSTEM PULL THE LINE WIRE INTO THE POLE HANDHOLE FOR SPLICING.

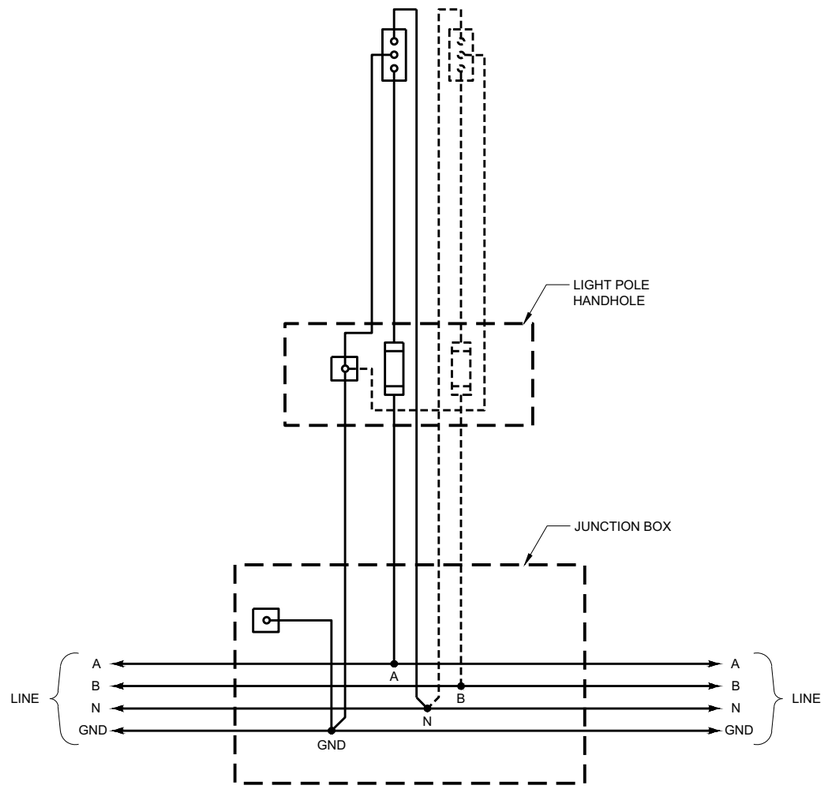
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
3 - ϕ 208Y / 120VAC OR 480Y / 277VAC 4 WIRE



TYPICAL WIRING DIAGRAM

ISOLATED NEUTRAL SYSTEM
1 - ϕ 120 / 240VAC OR 240 / 480VAC 3 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI

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SDD 10A08 - 03

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GENERAL NOTES

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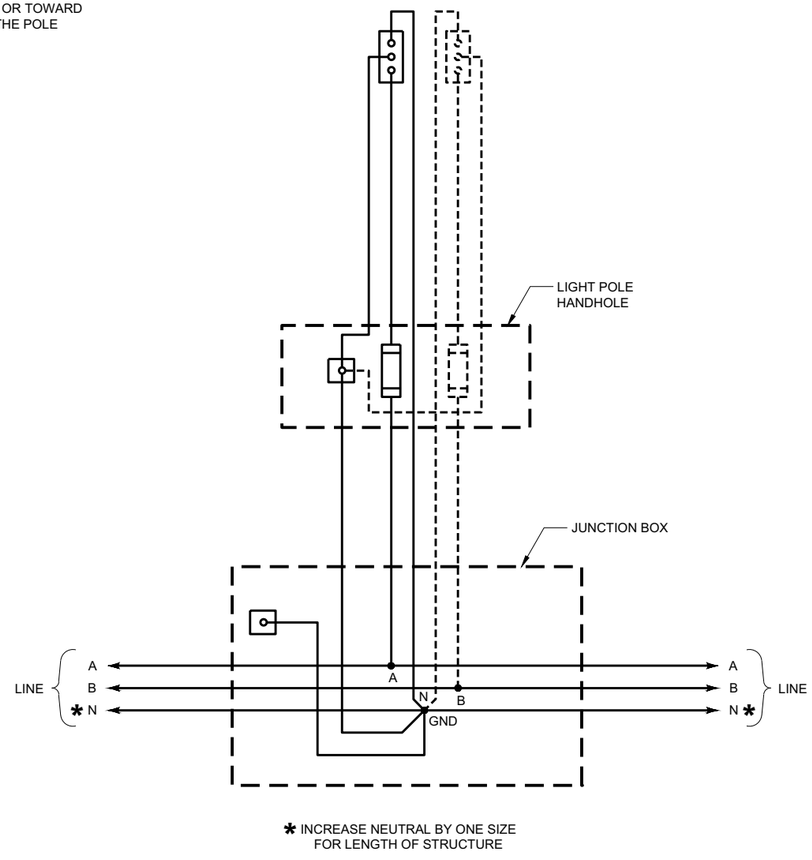
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✱ INCREASE NEUTRAL BY ONE SIZE FOR LENGTH OF STRUCTURE

TYPICAL WIRING DIAGRAM

GROUNDED NEUTRAL SYSTEM
1 - ϕ 240 / 480VAC 3 WIRE OR 480VAC 2 WIRE

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
GROUNDED NEUTRAL SYSTEMS

STATE OF WISCONSIN
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GENERAL NOTES

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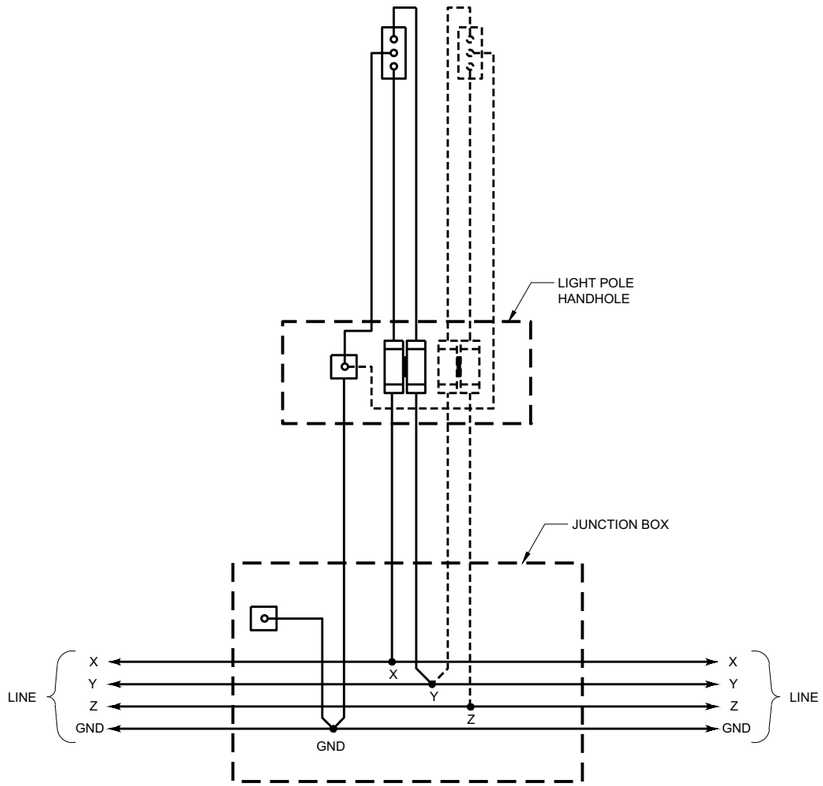
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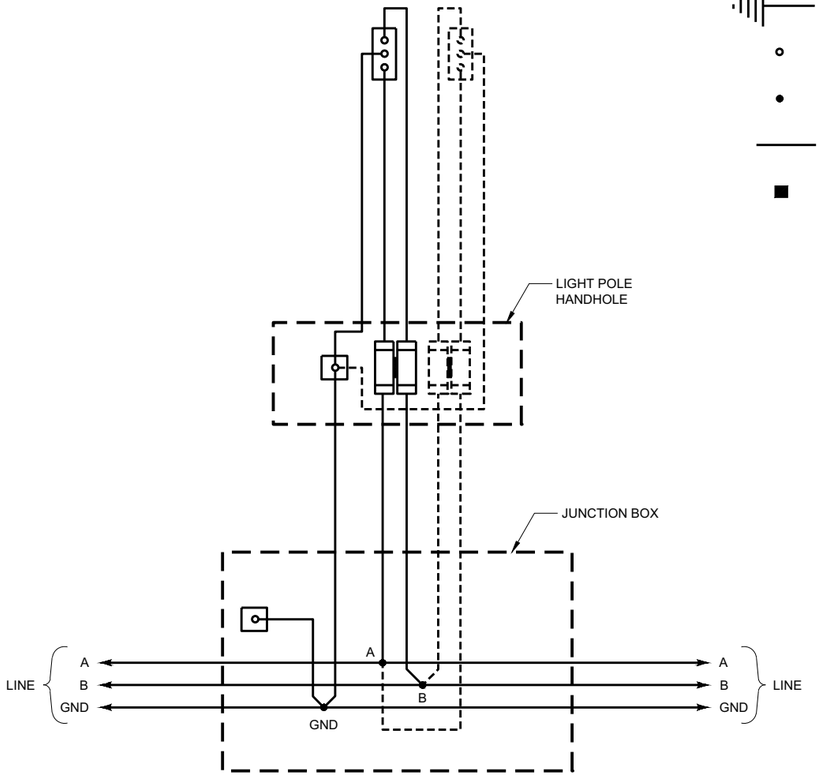
LEGEND

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GND	EQUIPMENT GROUNDING CONDUCTOR
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ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

PHASE - TO - PHASE DELTA SYSTEM
3 - ϕ 480VAC 3 WIRE



TYPICAL WIRING DIAGRAM

UNGROUNDED SYSTEM
1 - ϕ 120 - 120VAC 2 WIRE

ELECTRICAL DETAILS
STRUCTURE MOUNT LIGHT POLES
PHASE TO PHASE SYSTEMS

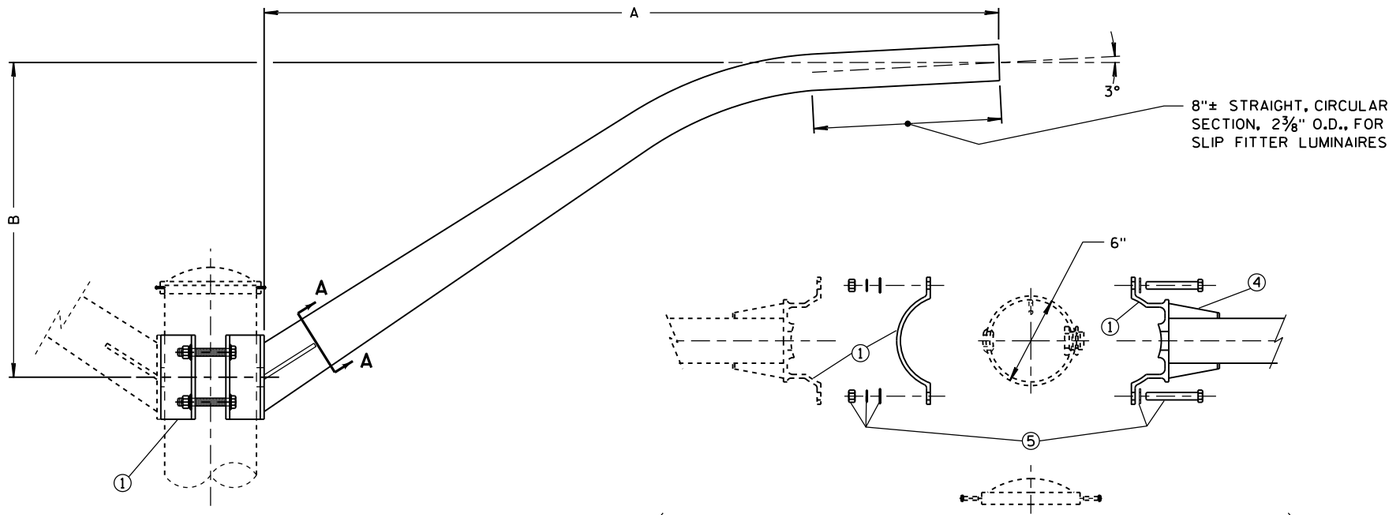
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November 2018
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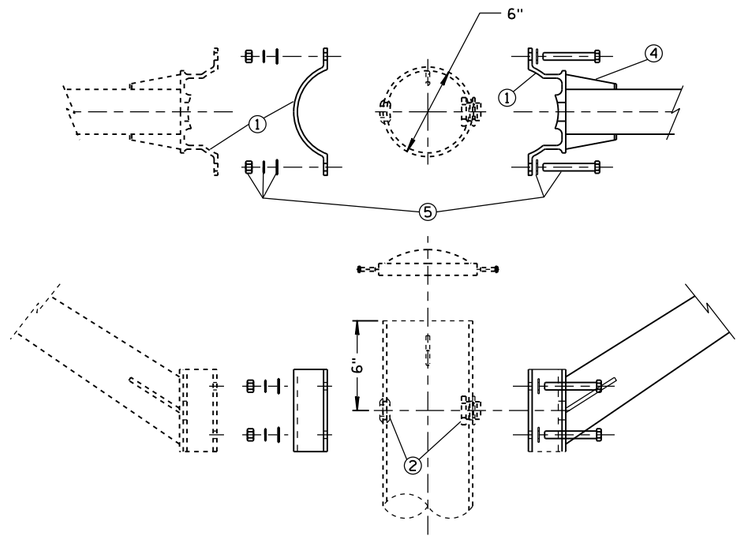
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SDD 10A10 - 03



LUMINAIRE ARMS, SINGLE MEMBER, 6-INCH CLAMP - FOR POLES, TYPE 7, A OR E

VARIOUS LENGTHS (SEE TABLE)



CLAMP ASSEMBLY

SINGLE MEMBER CLAMP SHOWN

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
SINGLE MEMBER	4.0	2.0
SINGLE MEMBER	8.0	3.0
SINGLE MEMBER	10.0	3.0
SINGLE MEMBER	15.0	3.0

GENERAL NOTES

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

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1 3/8" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1 1/2" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY.

③ STIFFENER

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - 1/2"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

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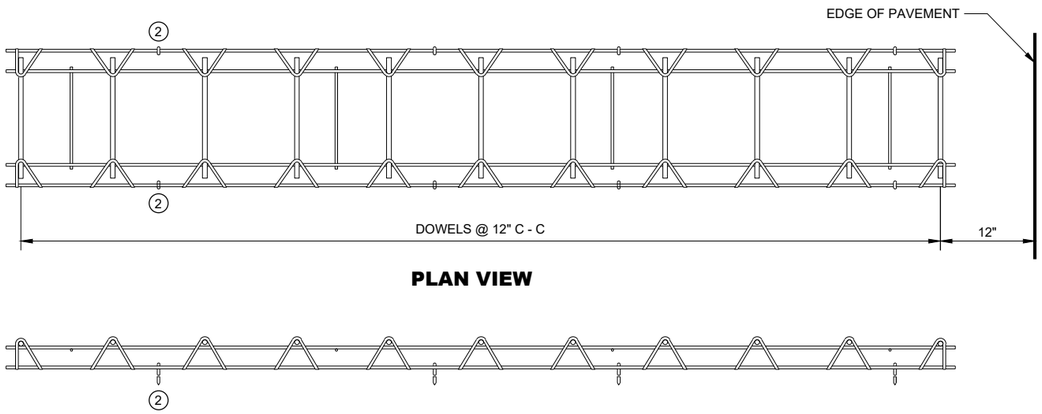
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S.D.D. 10 A 18-5a

LUMINAIRE ARMS, SINGLE MEMBER 6-INCH CLAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

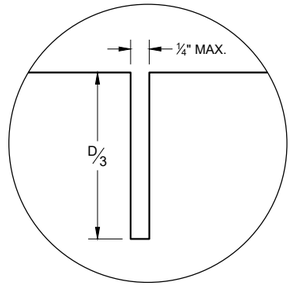
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA



PLAN VIEW

SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY (1)



JOINT DETAIL

GENERAL NOTES

CONTRACTION JOINTS

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

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

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

CONSTRUCTION JOINTS

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

(1) OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTION CONTRACTION JOINTS.

(2) SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

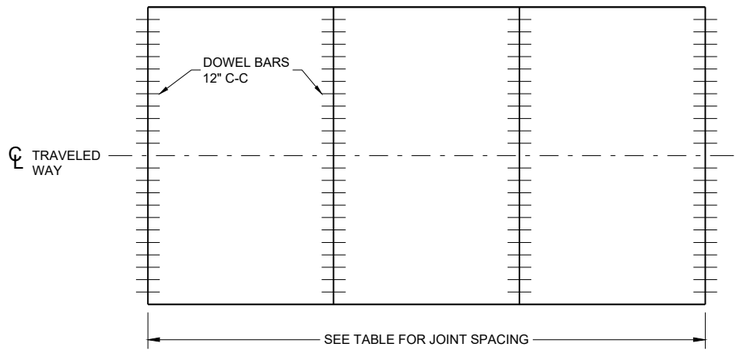
(3) FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼" RADIUS AT FORMED JOINTS.

(4) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

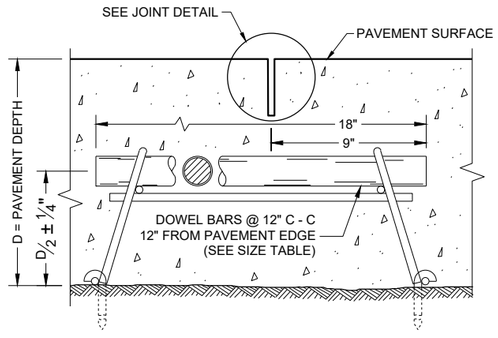
(5) INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C - C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO THE "DRILLED DOWEL BAR CONSTRUCTION JOINT" DETAIL.

(6) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

(7) ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛" GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



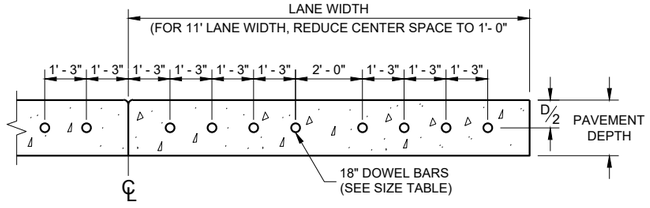
CONTRACTION JOINT LOCATIONS



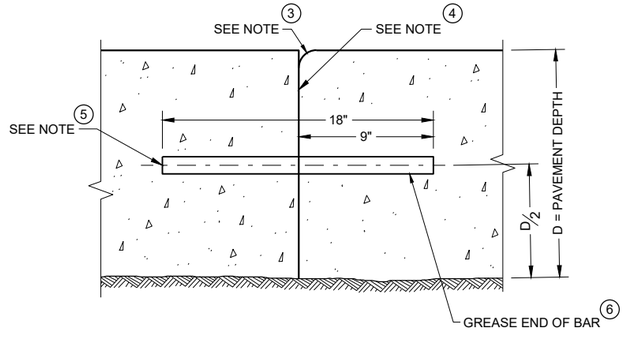
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT (7)



TRANSVERSE CONSTRUCTION JOINT

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

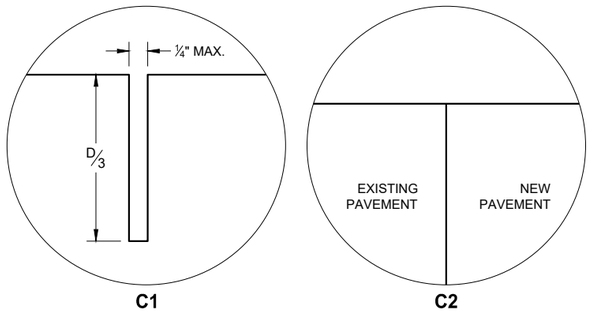
APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

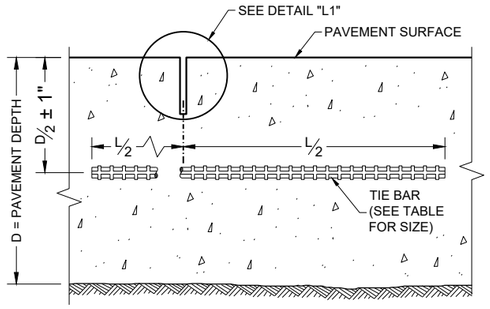
FHWA

6

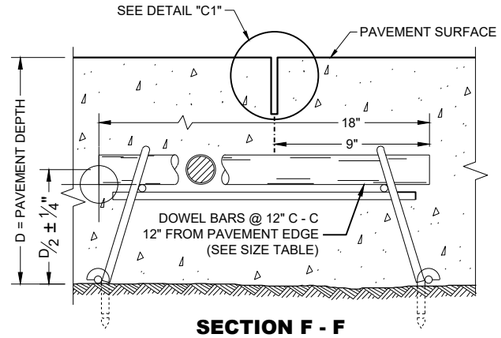
SDD 13C13 - 11



TRANSVERSE JOINTS



SECTION C - C
SAWED JOINT



SECTION F - F
CONTRACTION JOINT

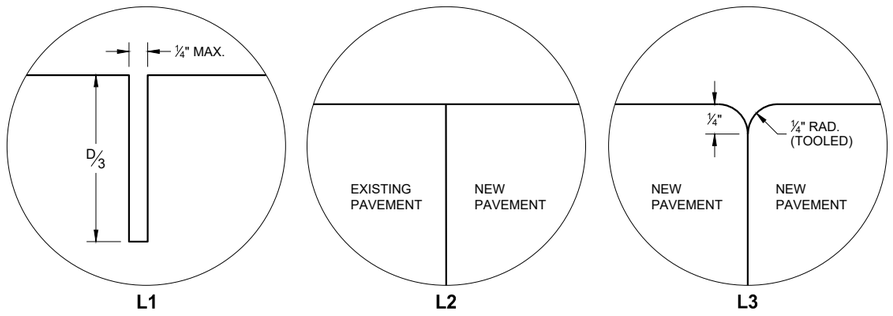
GENERAL NOTES

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

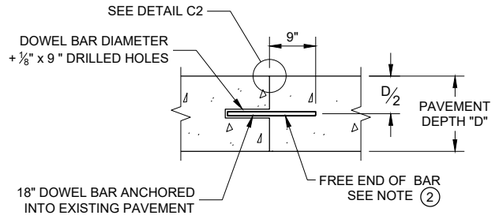
PROVIDE A MIMIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

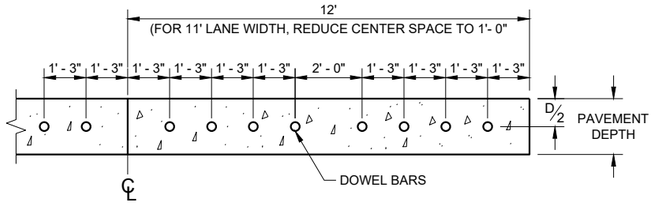
(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



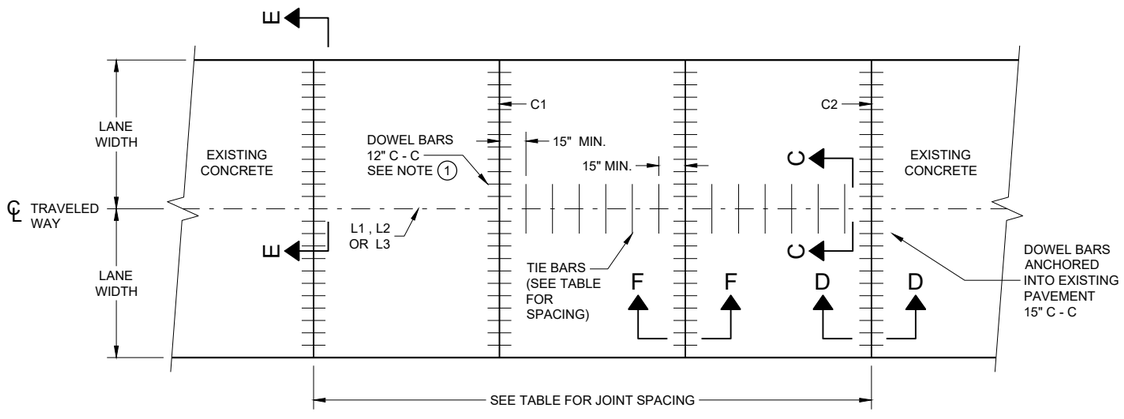
LONGITUDINAL JOINTS



SECTION D - D



SECTION E - E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT



PLAN VIEW
CONCRETE BASE
CONTRACTION JOINT LOCATIONS

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	CONTRACTION JOINT SPACING
6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8" & ABOVE	1 ¼"	15'

CONCRETE BASE

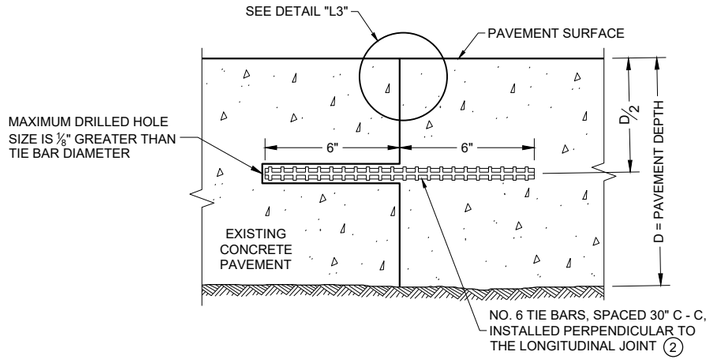
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C15 - 08a
SDD 13C15 - 08a

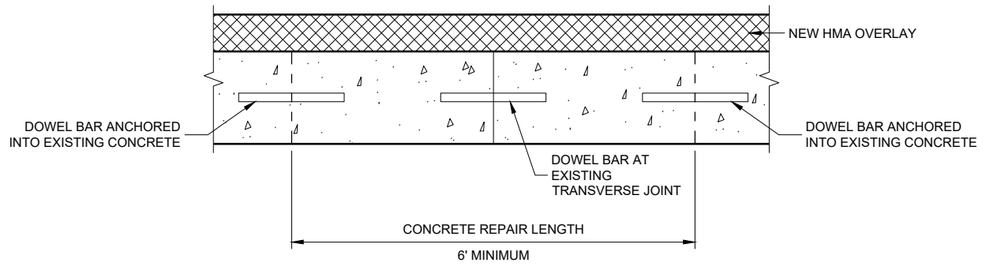
GENERAL NOTES

1. USE AN ENGINEER APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.
2. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
3. PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

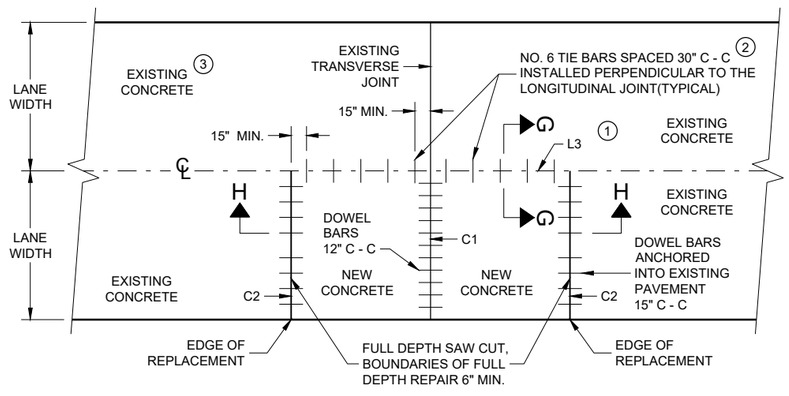


SECTION G - G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H - H



PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

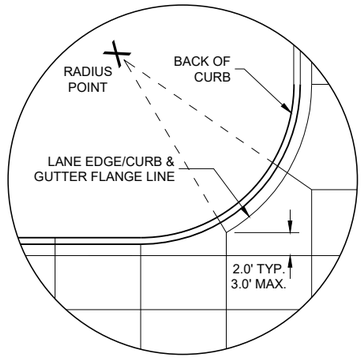
APPROVED
November 2022
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

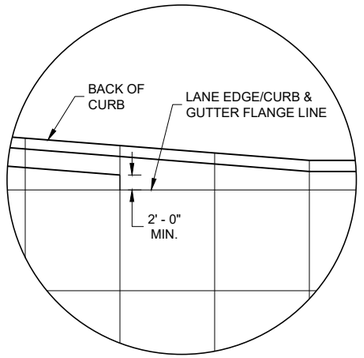
FHWA

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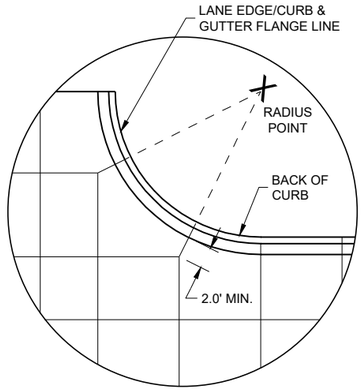
SDD 13C15 - 08b
SDD 13C15 - 08b



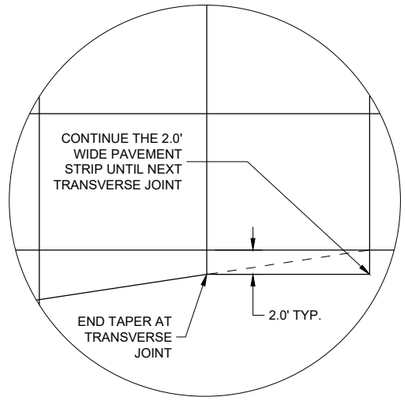
DETAIL "A"



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.

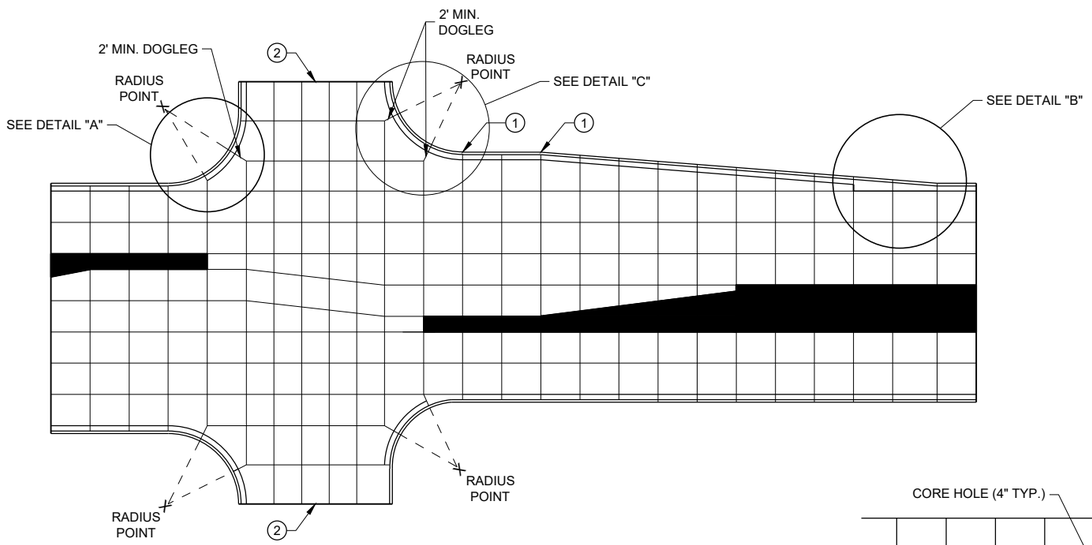
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

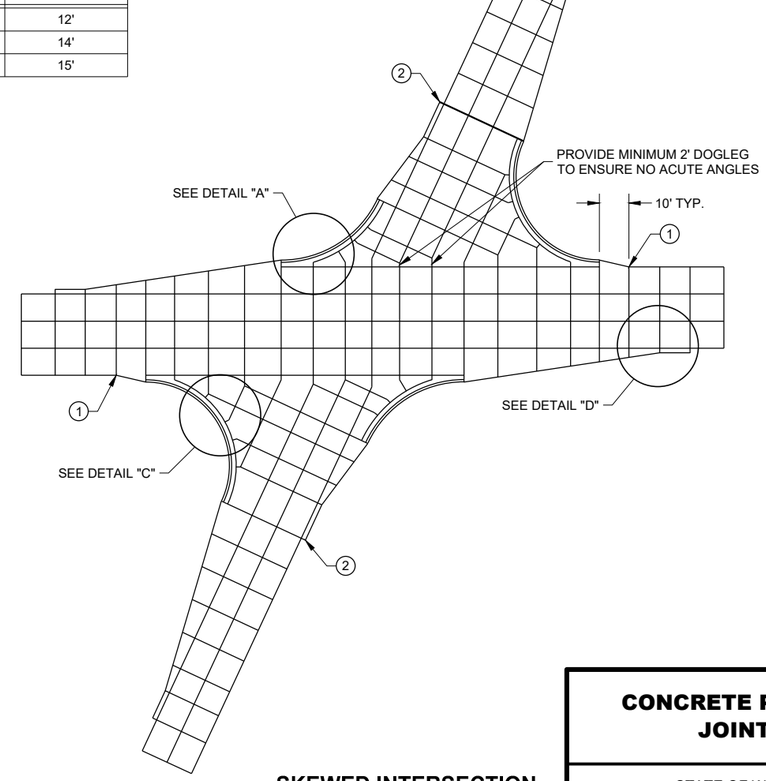
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM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



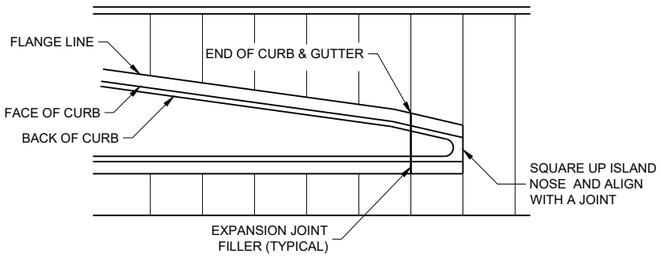
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

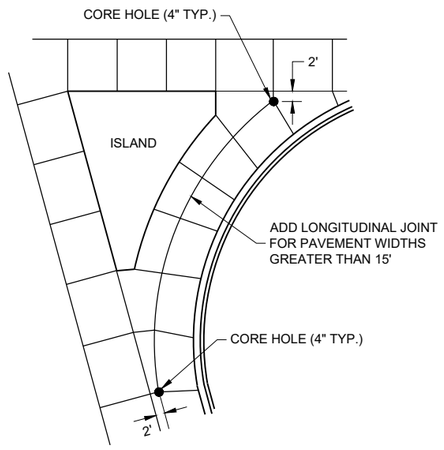
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08a

6

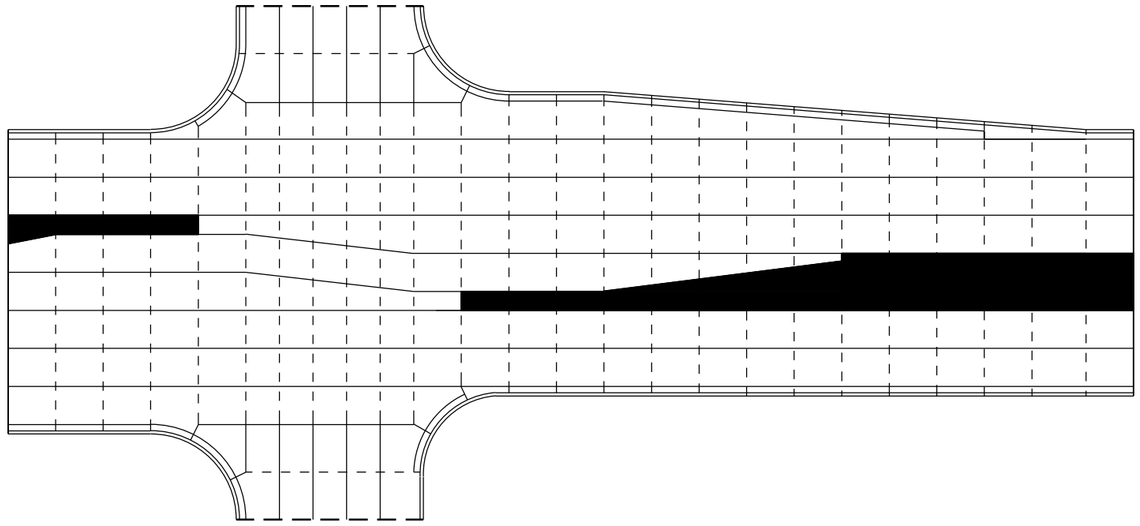
SDD 13C18 - 08a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

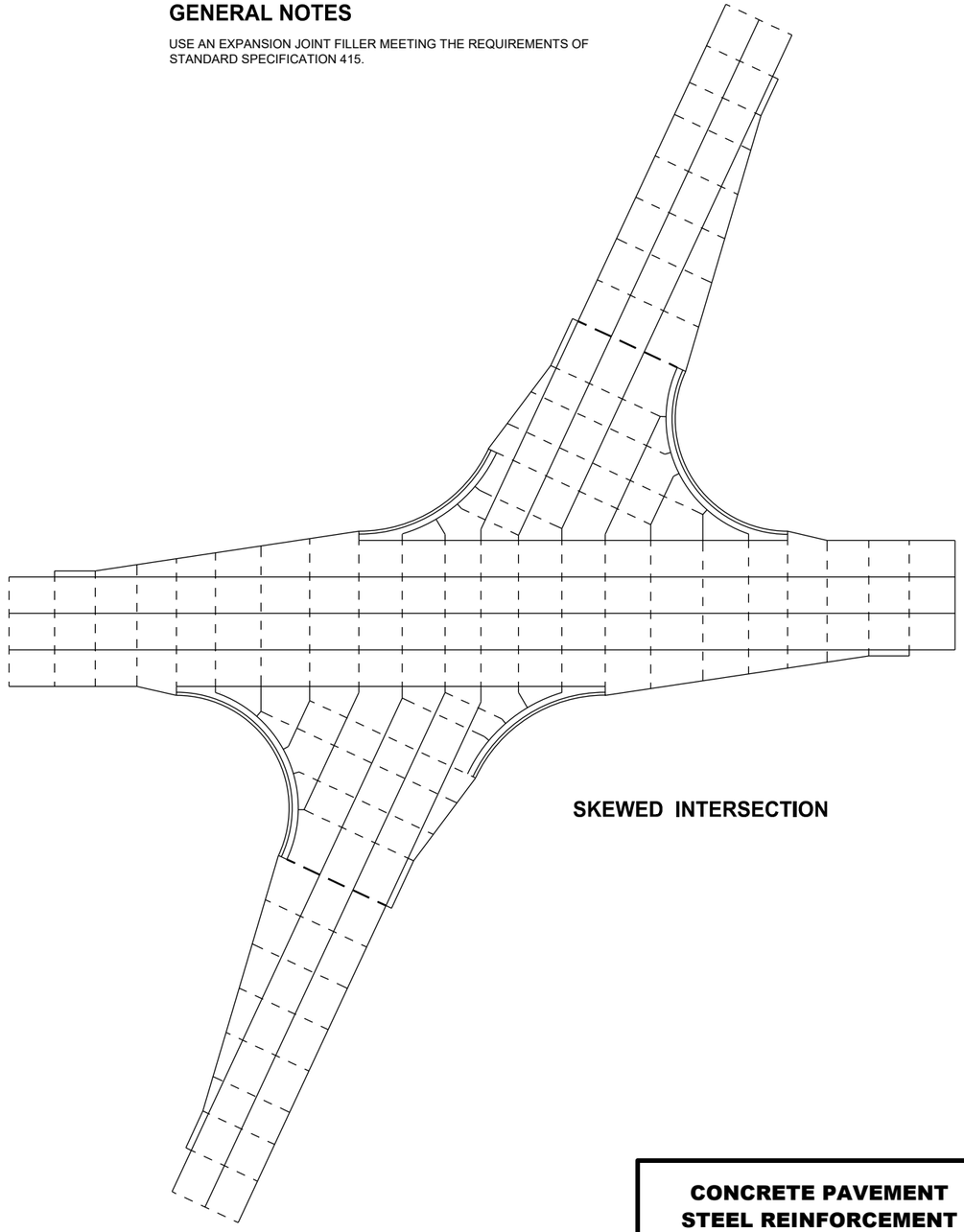
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

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



SKEWED INTERSECTION

6

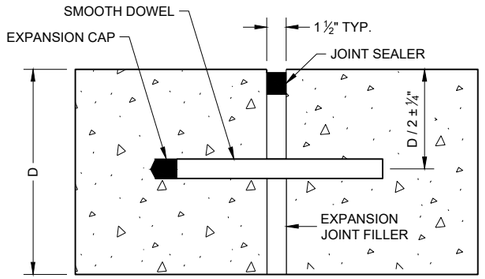
SDD 13C18 - 08b

CONCRETE PAVEMENT STEEL REINFORCEMENT

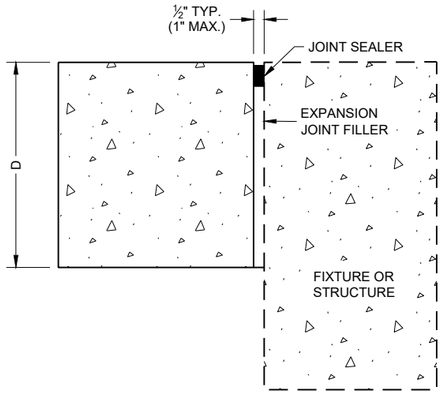
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

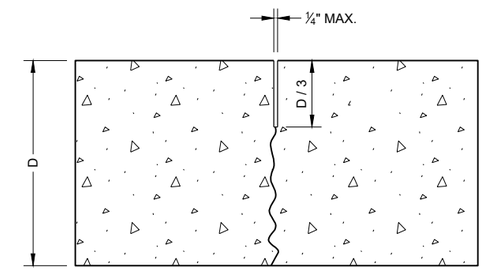
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

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

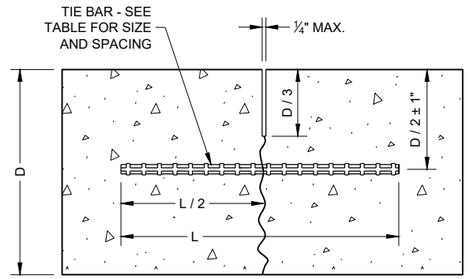
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

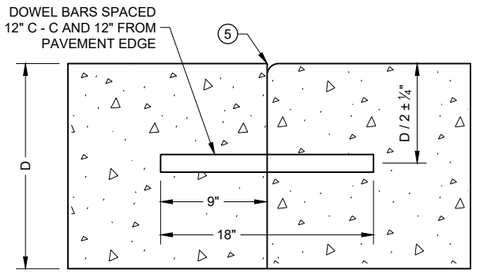
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM 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.



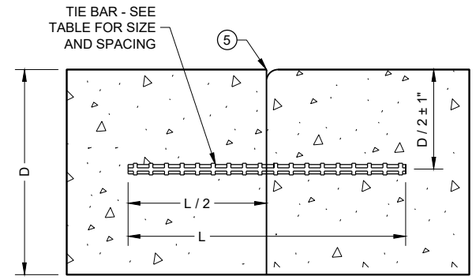
UNDOWELED TRANSVERSE



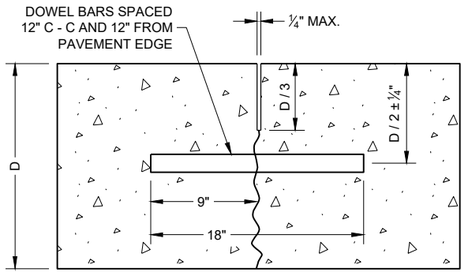
TIED LONGITUDINAL



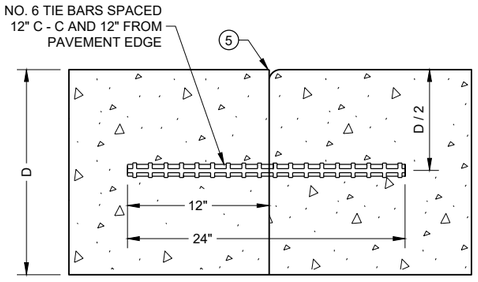
DOWELED TRANSVERSE (3)



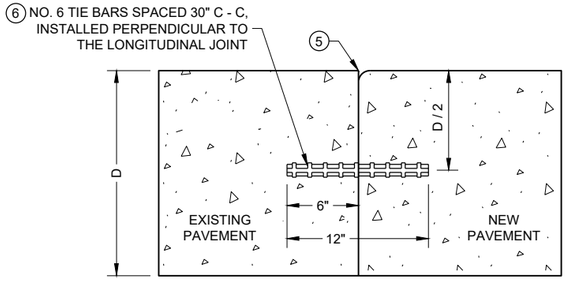
TIED LONGITUDINAL



DOWELED TRANSVERSE



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

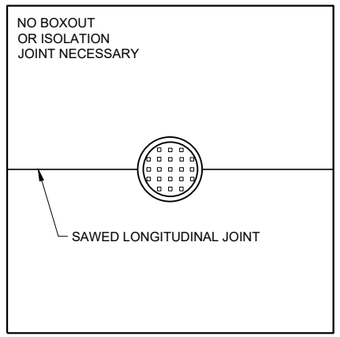


TIED LONGITUDINAL TO EXISTING

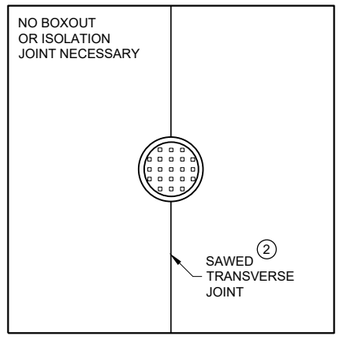
CONTRACTION JOINTS (2)

CONSTRUCTION JOINTS (4)

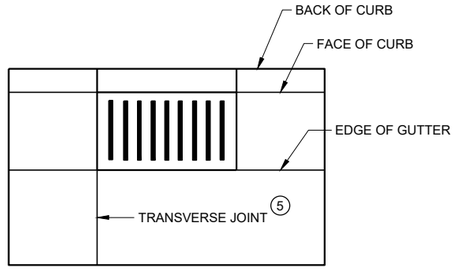
CONCRETE PAVEMENT JOINT TYPES



MANHOLE WITH LONGITUDINAL JOINT



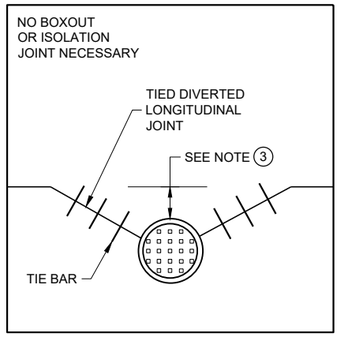
MANHOLE WITH TRANSVERSE JOINT



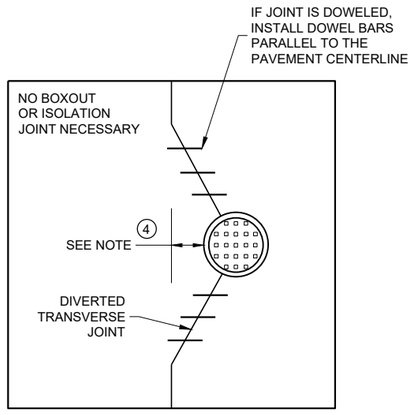
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

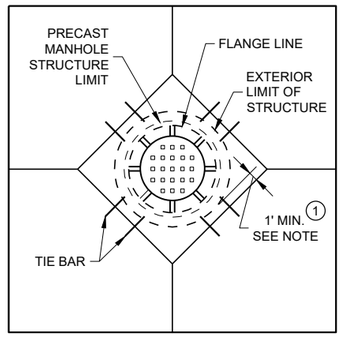
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF 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

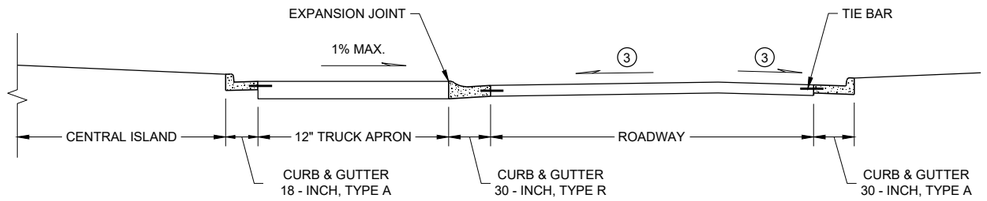
APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

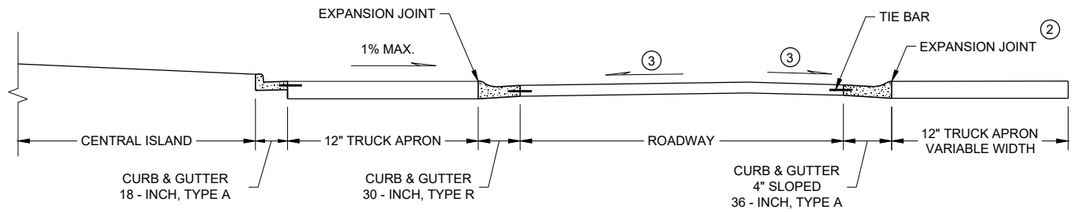
FHWA

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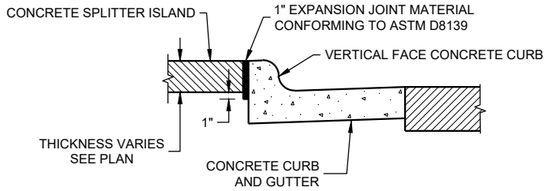
SDD13C18 - 08d
SDD13C18 - 08d



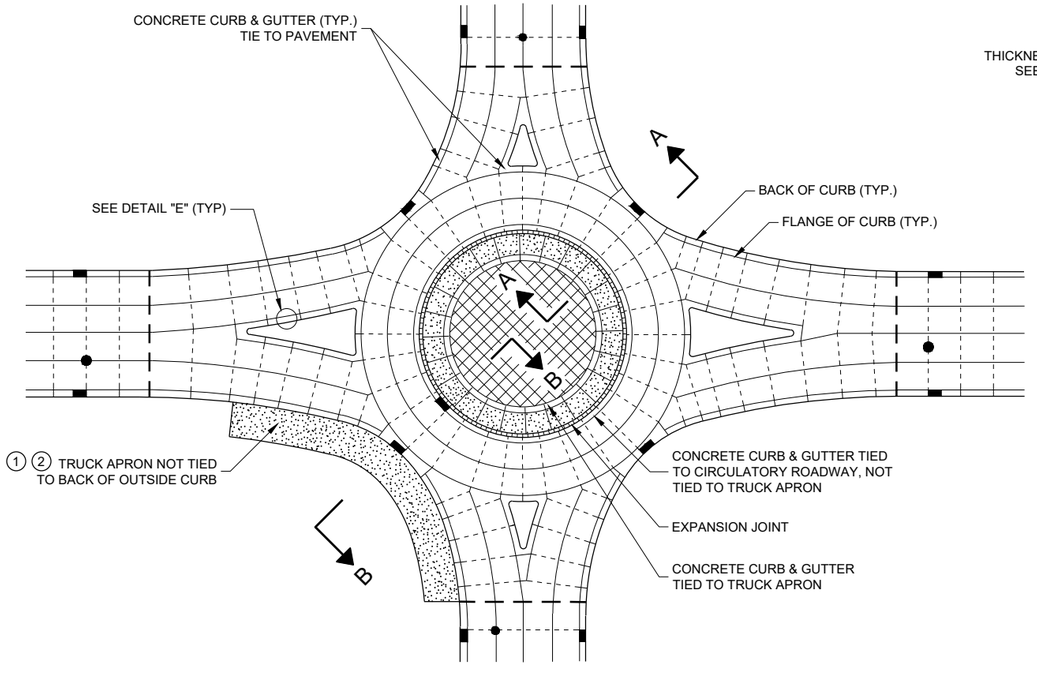
SECTION A - A



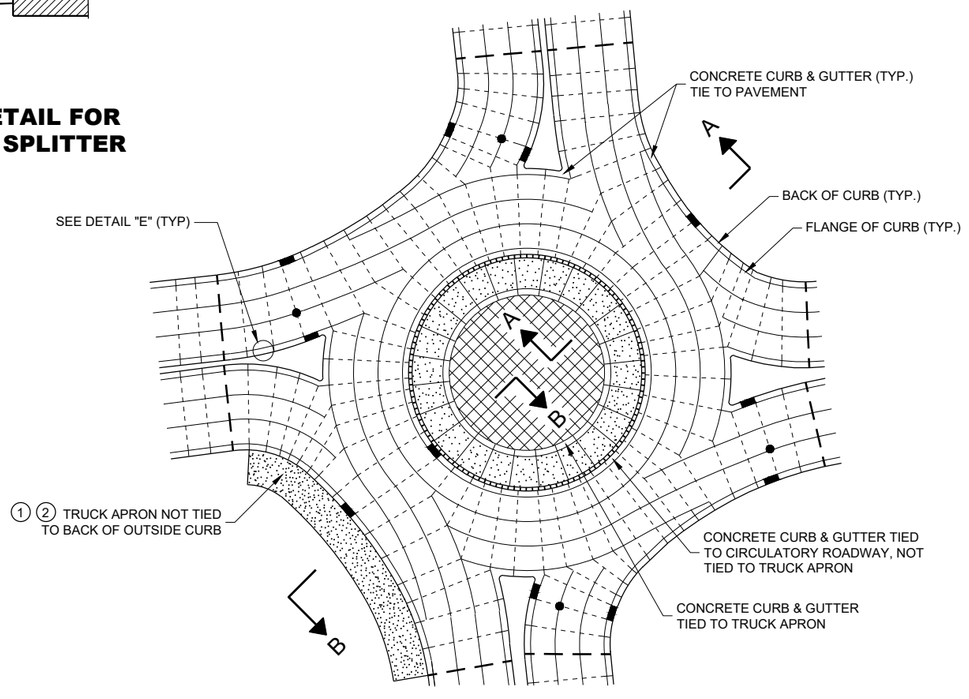
SECTION B - B



DETAIL 'E'
EXPANSION JOINT DETAIL FOR VERTICAL CURB AT A SPLITTER ISLAND



ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 - SHEET "a"

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

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.

(1) DESIGNER DETERMINES SIZE AND LOCATION(S) OF TRUCK APRON TO ACCOMMODATE TRACKING OF OVERSIZE / OVERWEIGHT VEHICLES.

(2) TIE THE OUTSIDE TRUCK APRON TO THE BACK SIDE OF CURB ONLY WHEN ENTIRE TRUCK APRON IS LESS THAN 3 FEET.

(3) CONFORM TO PLAN CONSTRUCTION DETAILS FOR CIRCULATORY ROADWAY CROSS SLOPE.

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS

STATE OF WISCONSIN
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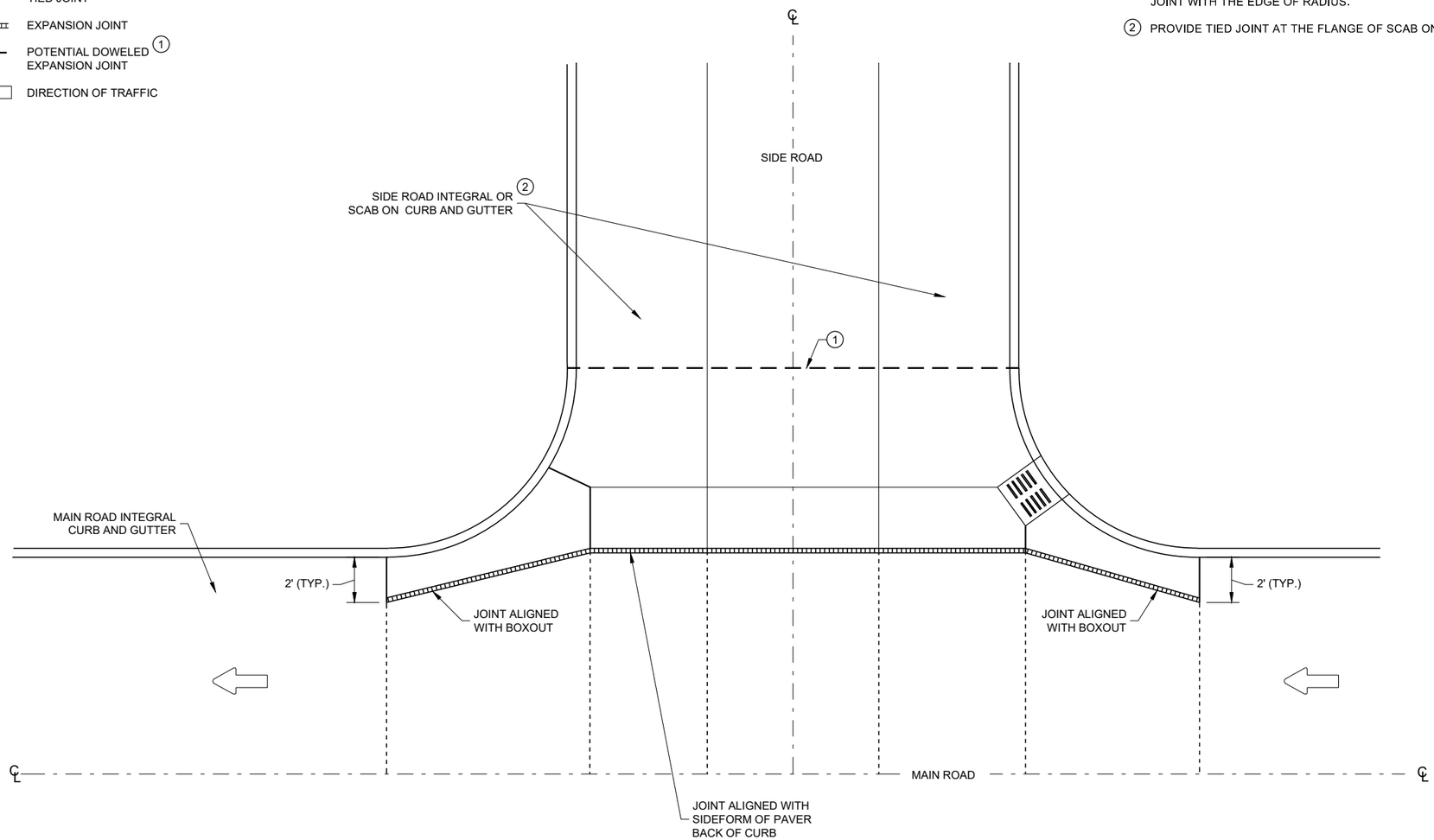
SDD 13C18 - 08e

6

SDD 13C18 - 08e

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

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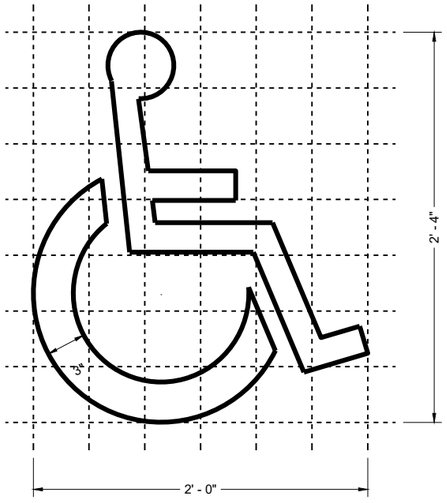
SDD 13C18 - 08f

6

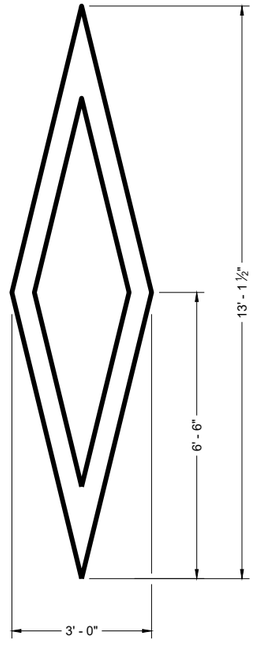
SDD 13C18 - 08f

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.



HANDICAP SYMBOL



PREFERENTIAL LANE SYMBOL

6

6

SDD 15C07-16a

SDD 15C07-16a

PAVEMENT MARKING SYMBOLS

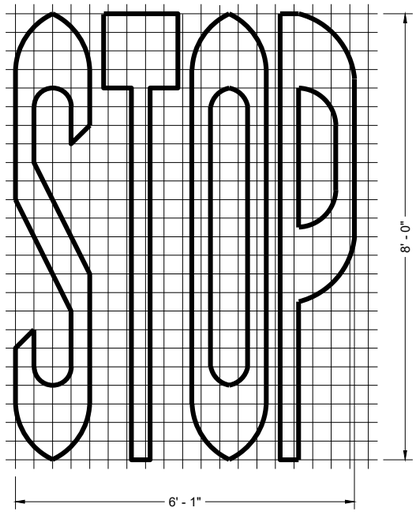
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

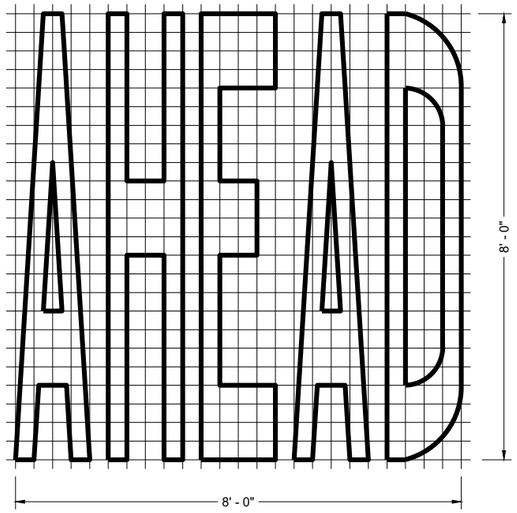
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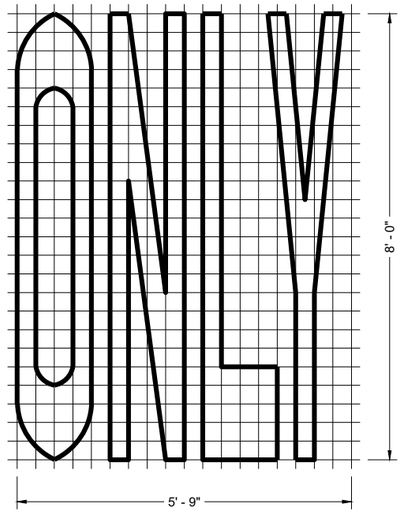
November 2024
DATE

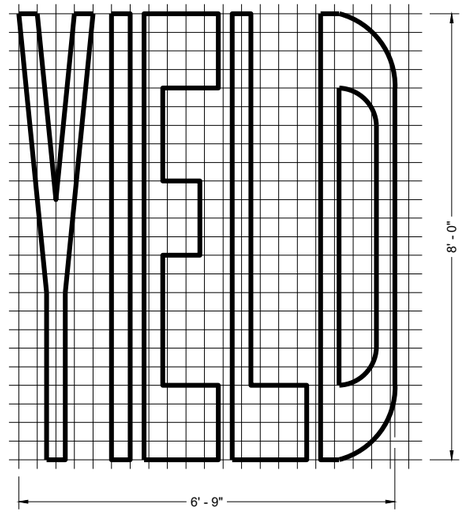
/S/ Matthew Rauch
STATE SIGNING AND MARKING ENGINEER

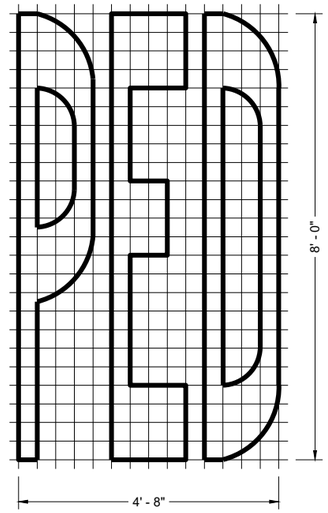
FHWA

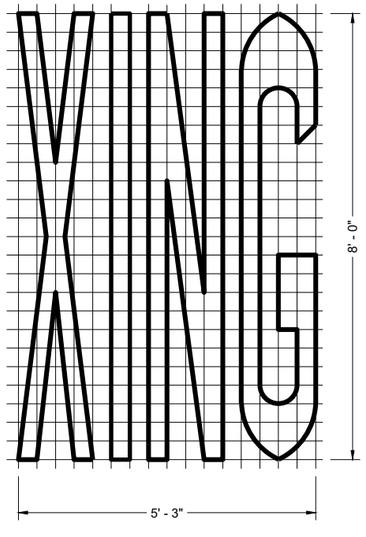


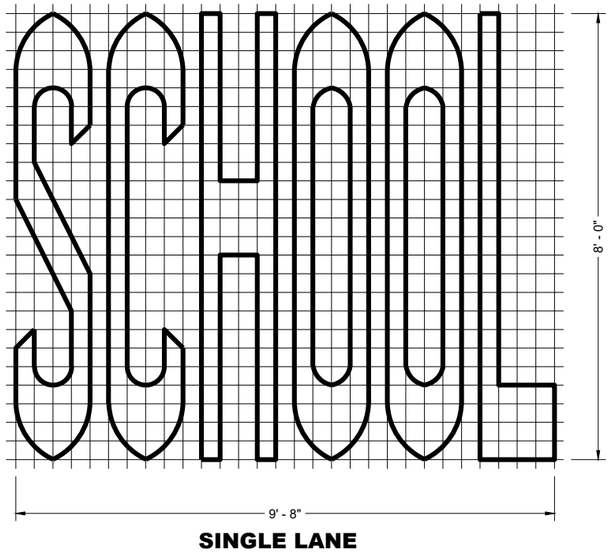




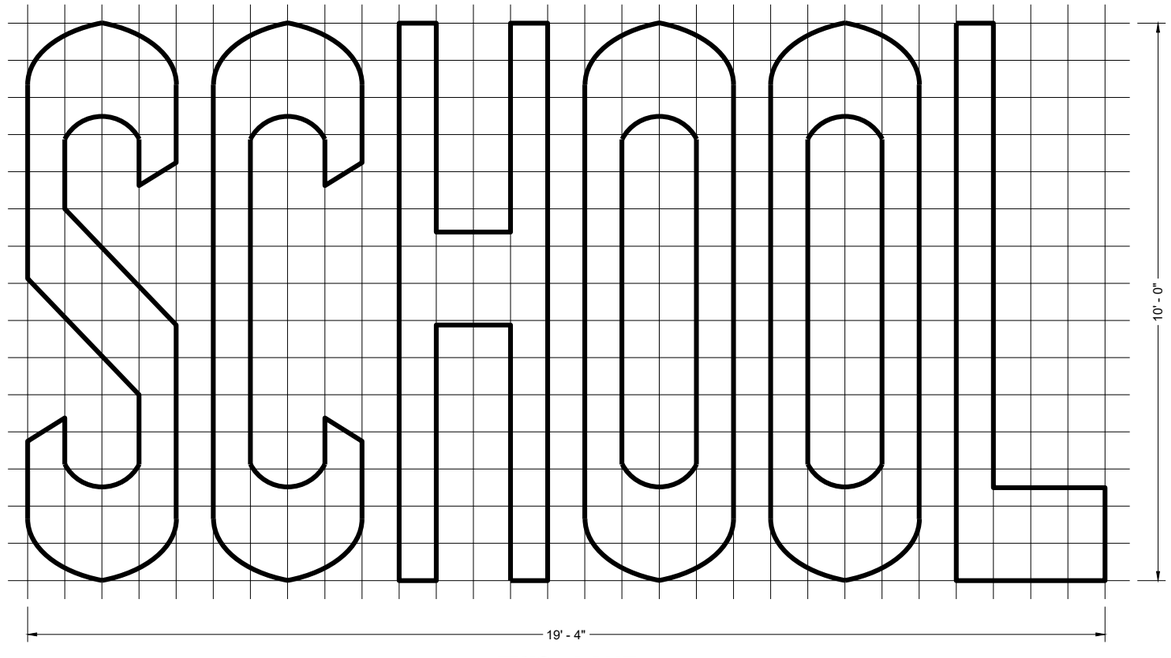








SINGLE LANE



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
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/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

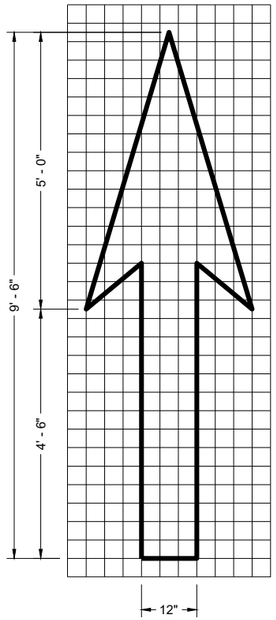
FHWA

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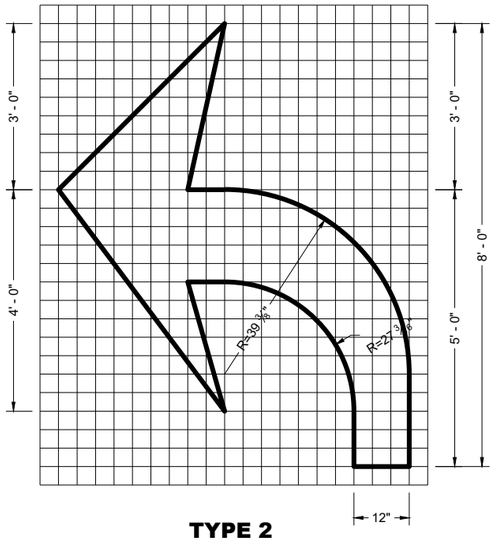
SDD 15C07-16b

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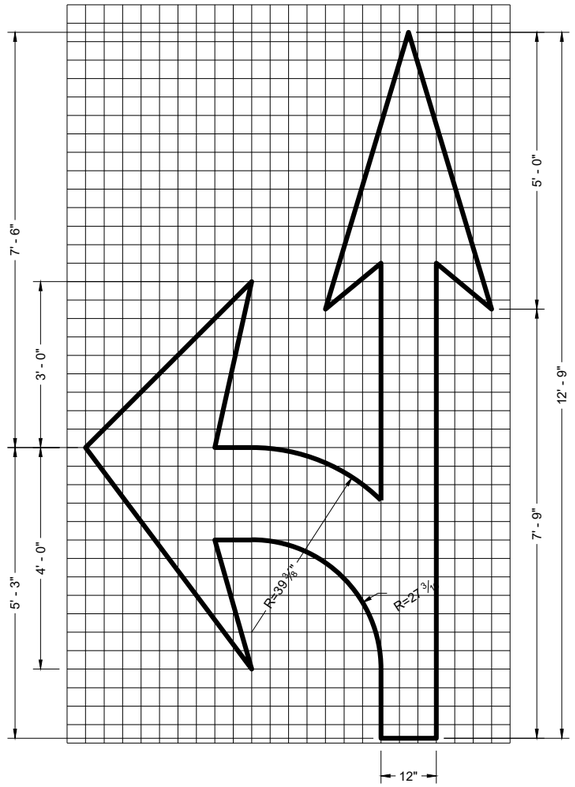
SDD 15C07-16b



TYPE 1



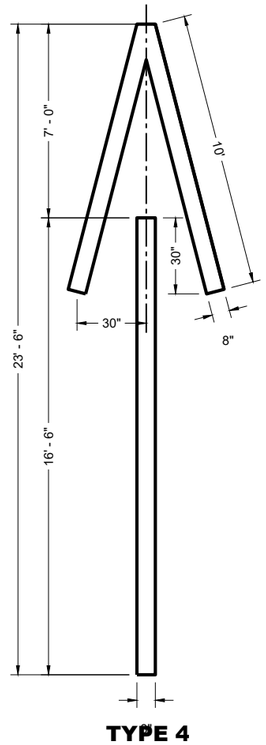
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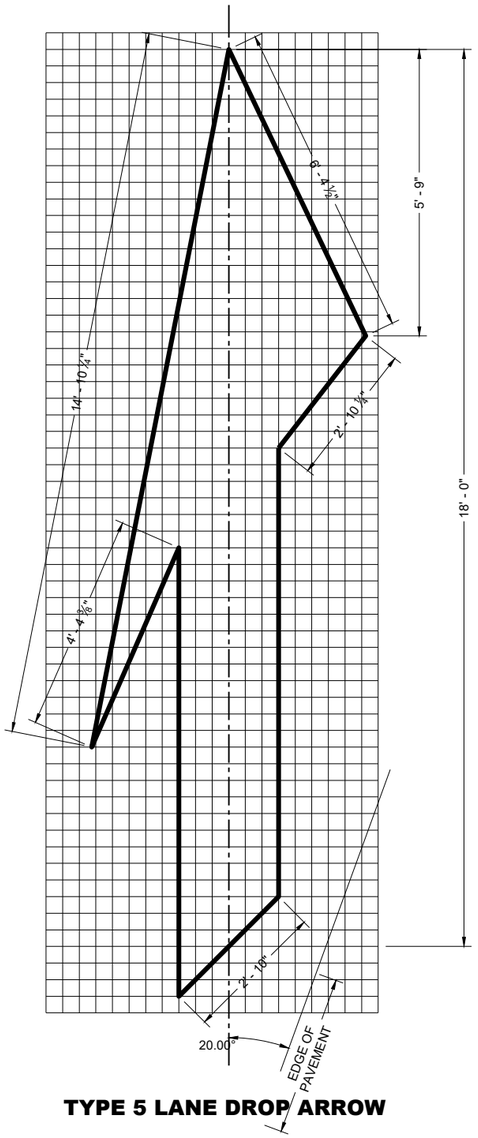
TYPE 3

GENERAL NOTES

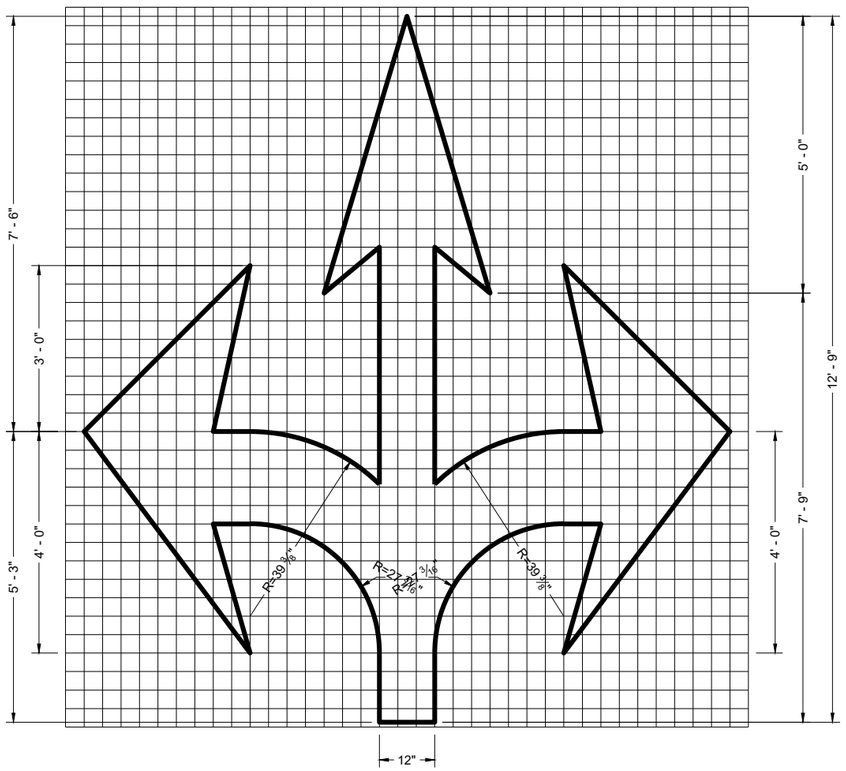
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



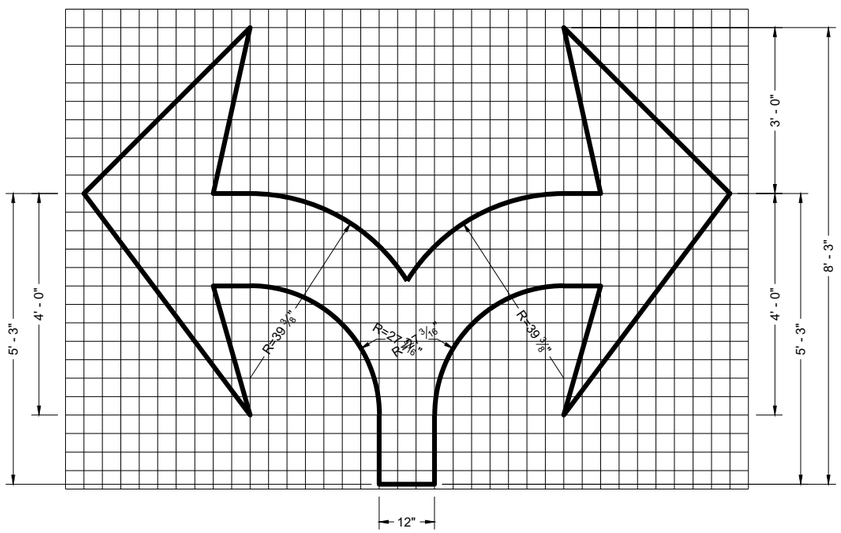
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

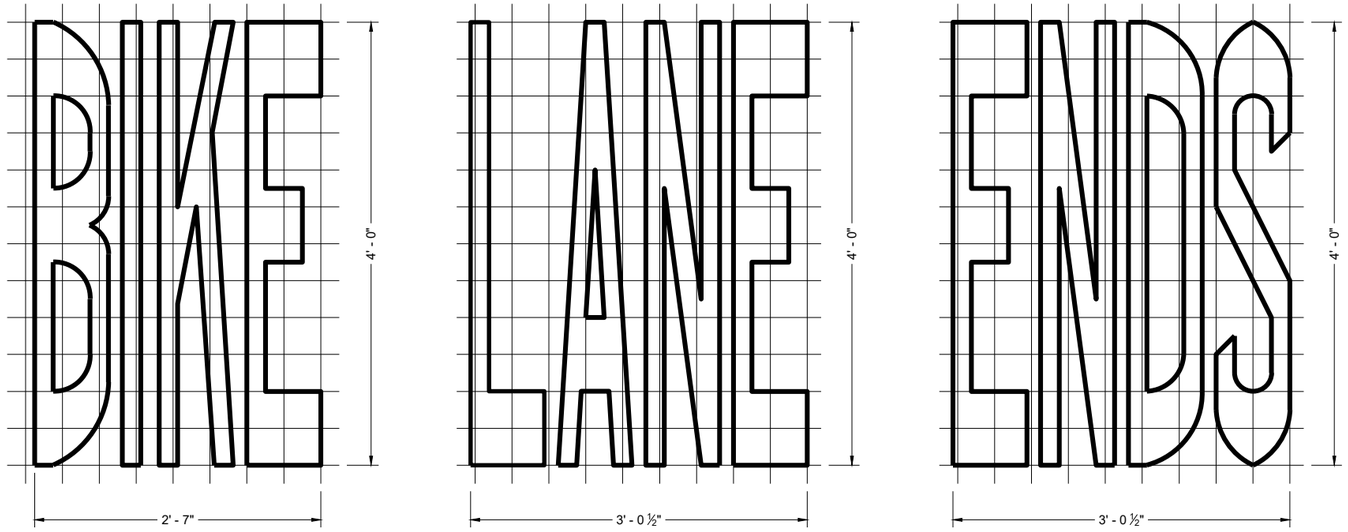
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SDD 15C07-16c

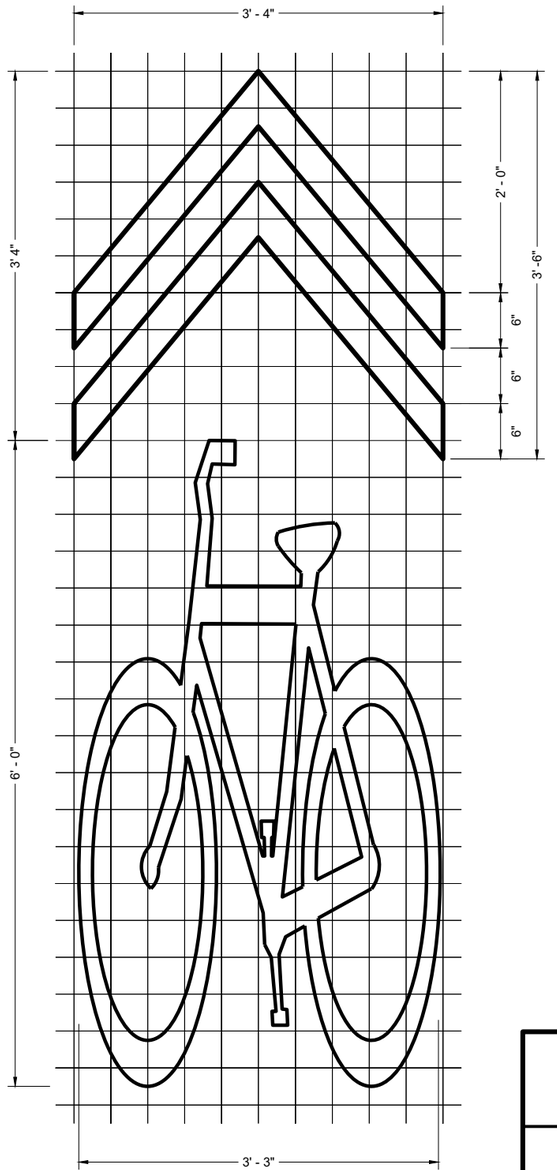
SDD 15C07-16c



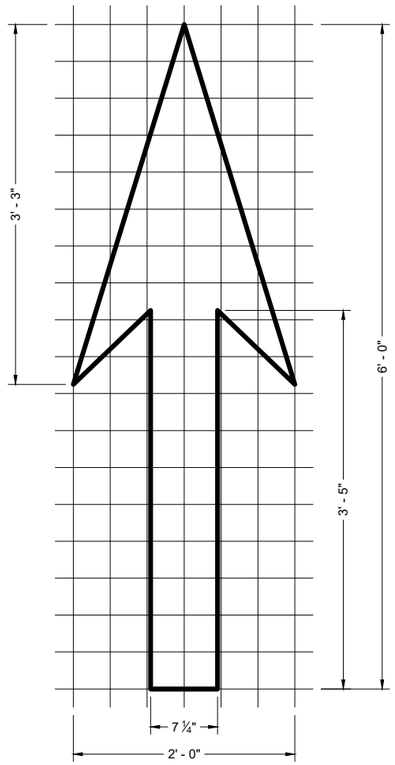
BIKE LANE WORDS

GENERAL NOTES

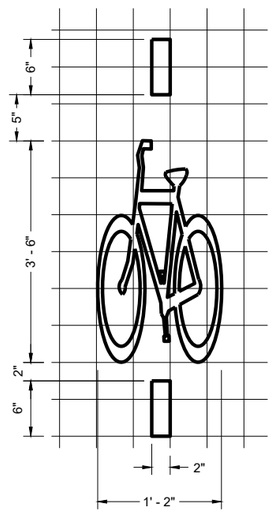
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



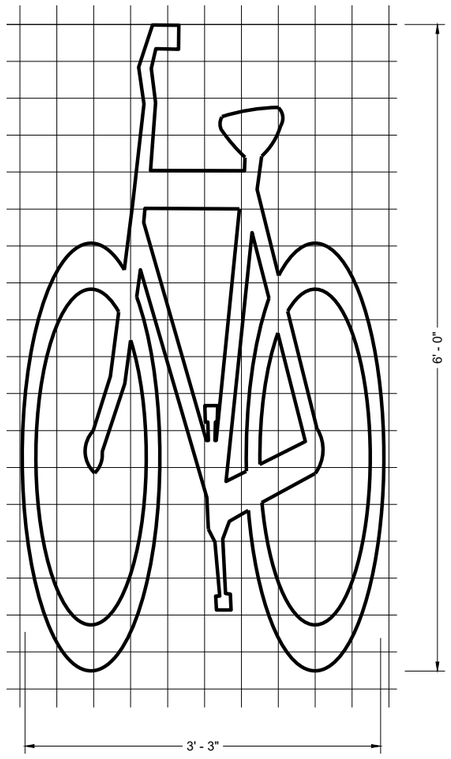
BIKE LANE SYMBOL FOR SHARED LANE



BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL

PAVEMENT MARKING FOR BIKE LANES

STATE OF WISCONSIN
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DATE

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SDD 15C07-16e

SDD 15C07-16e

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

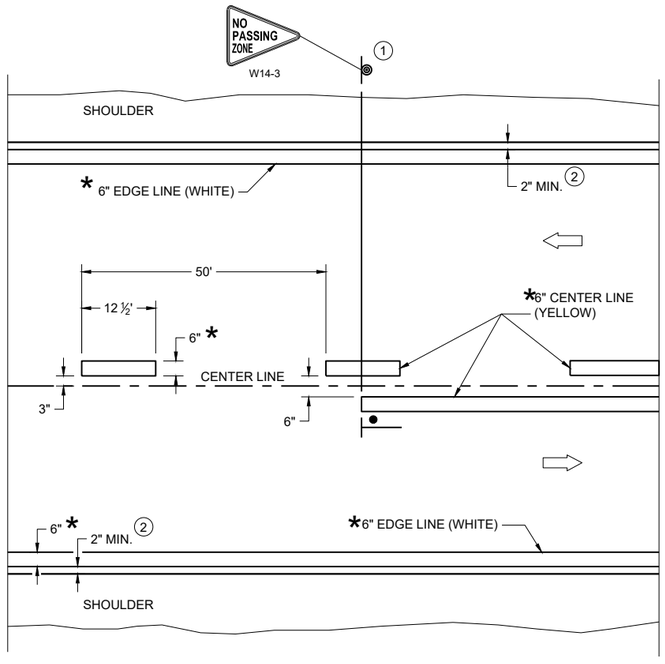
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

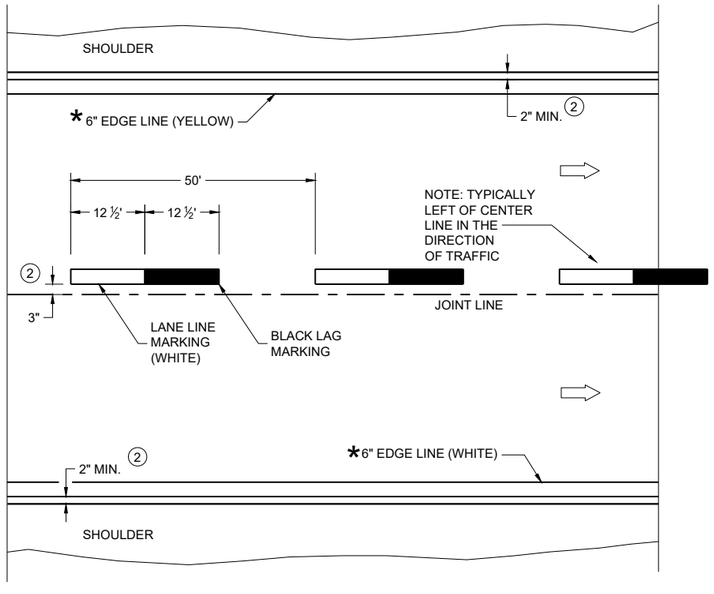
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

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DEPARTMENT OF TRANSPORTATION

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December 2024
DATE

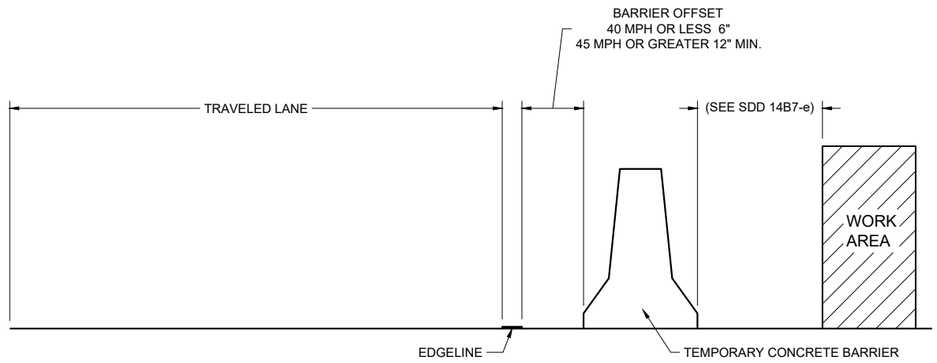
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

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SDD 15C08-24a

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

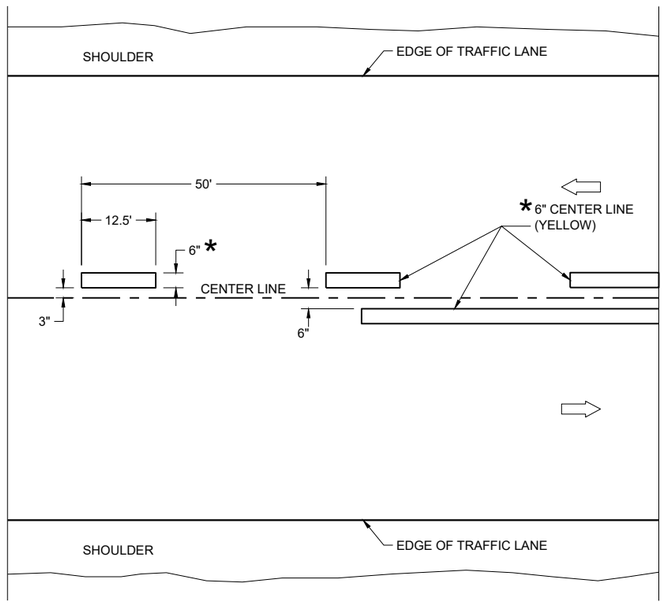
GENERAL NOTES

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

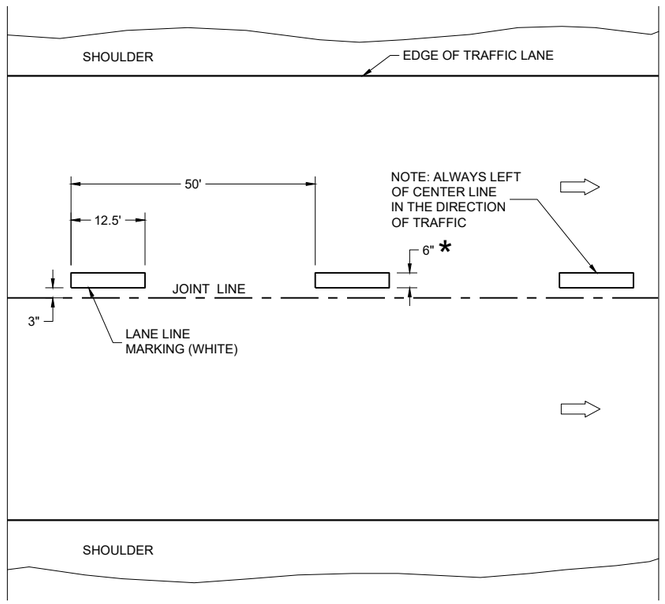
LEGEND

DIRECTION OF TRAFFIC

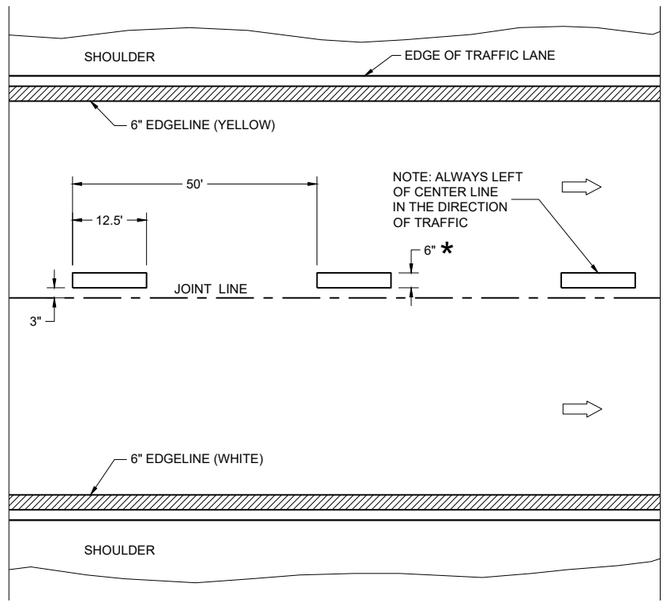
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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December 2024
DATE

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Statewide Pavement Marking Engineer

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SDD 15C08-24b

6

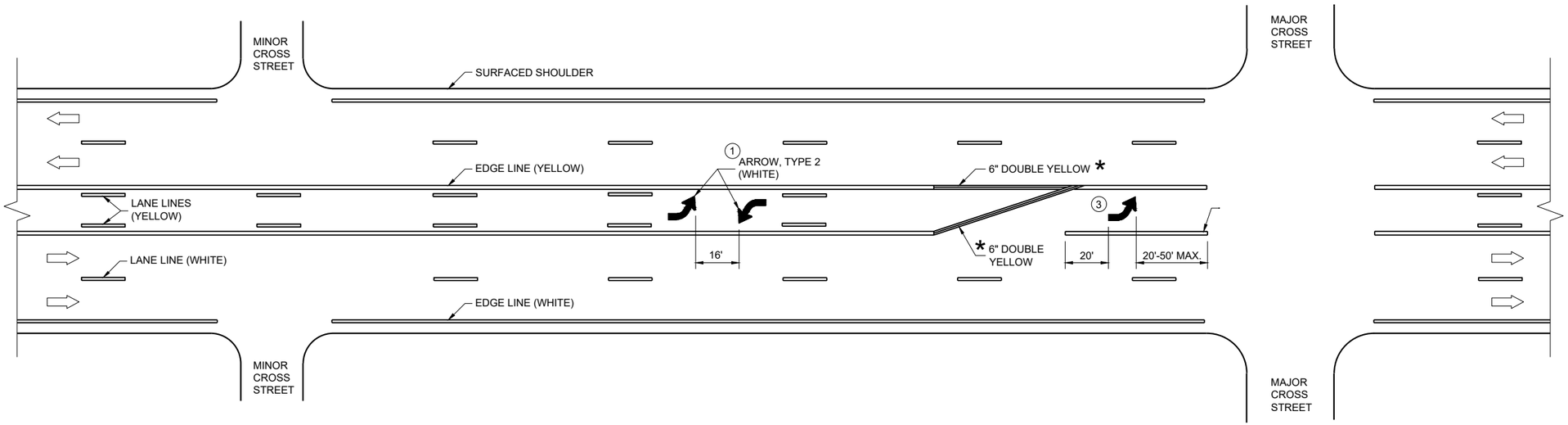
SDD 15C08-24b

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



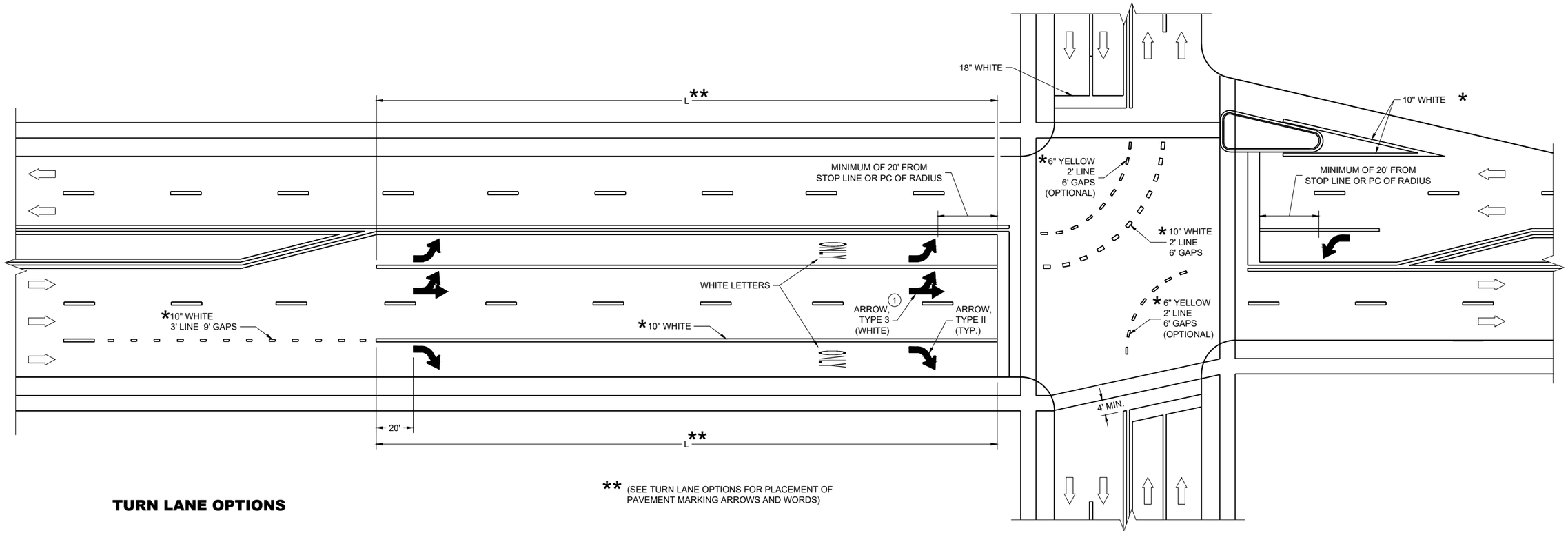
TWO WAY LEFT TURN LANE

6

SDD 15C08-24c

PAVEMENT MARKING (TURN LANES)

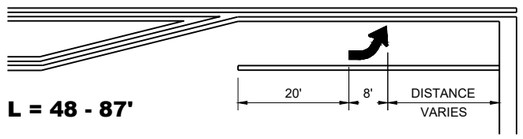
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



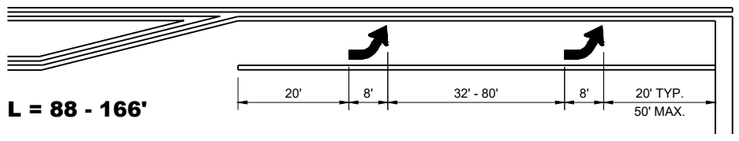
** (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

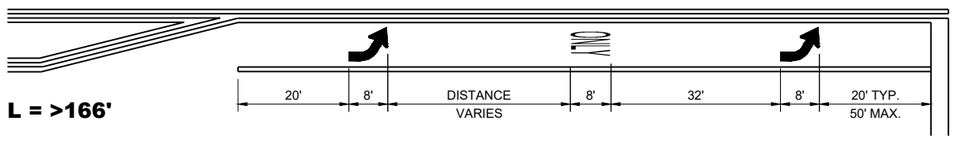
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT
REQUIRE PAVEMENT MARKING ARROWS OR WORDS



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.

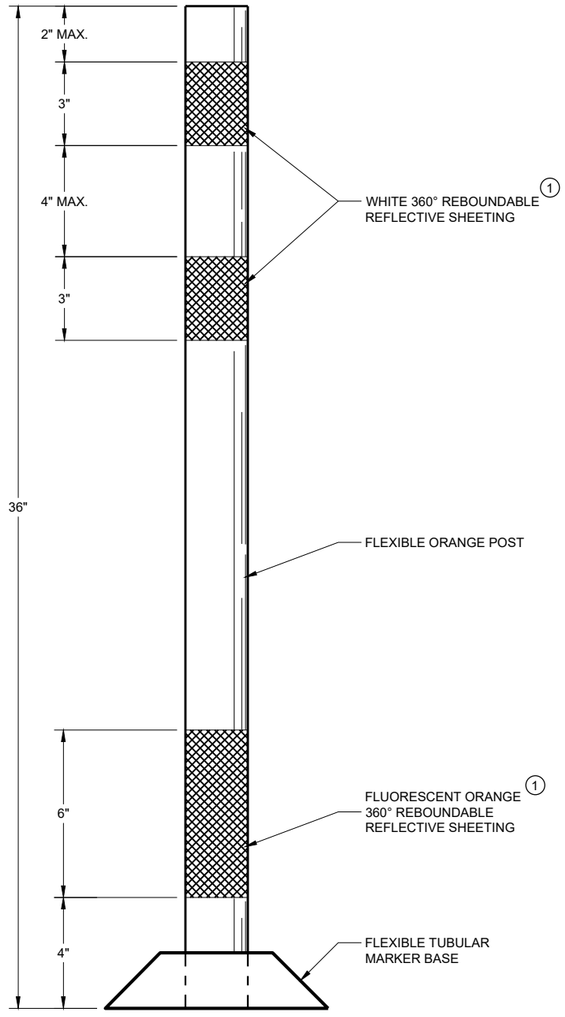
DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

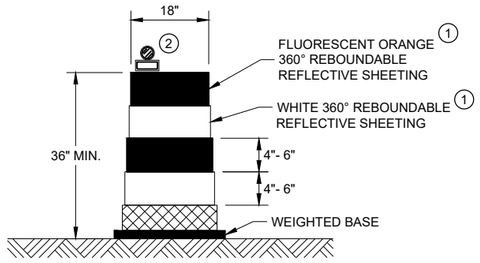
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SDD15C11 - 10a

SDD15C11 - 10a

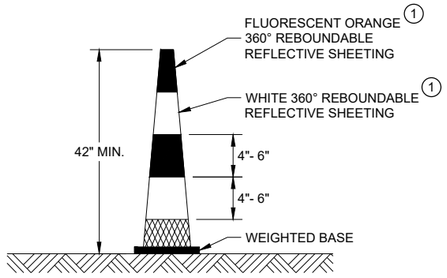
GENERAL NOTES

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



DRUM

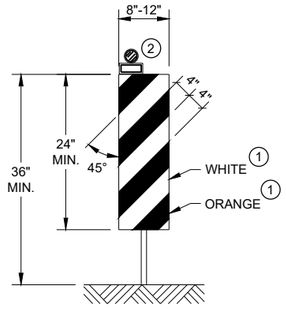
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

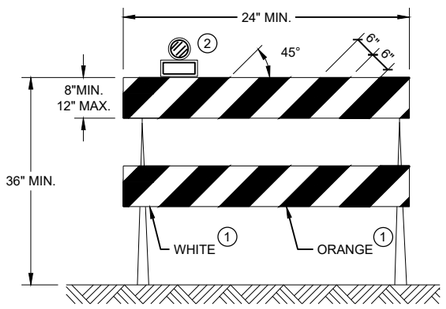
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



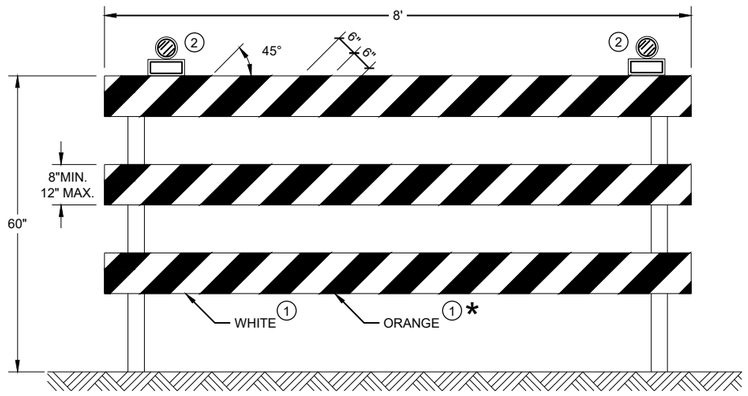
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

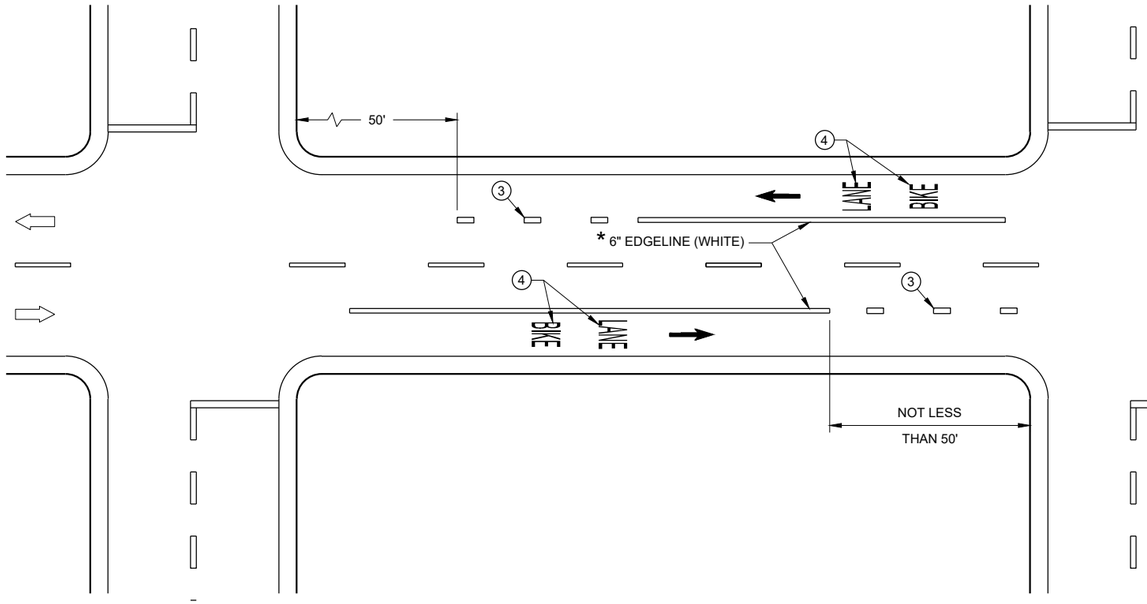
FHWA

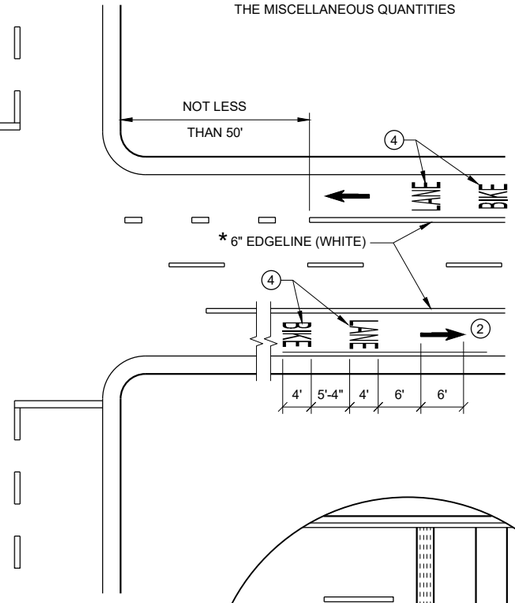
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SDD 15C11 - 10b

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SDD 15C11 - 10b





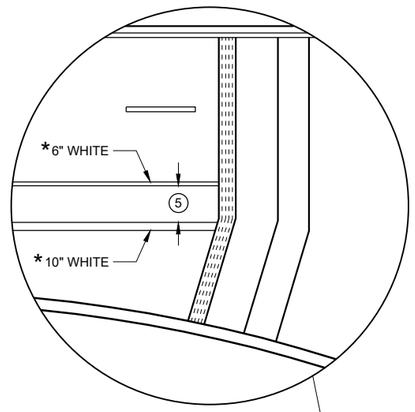
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

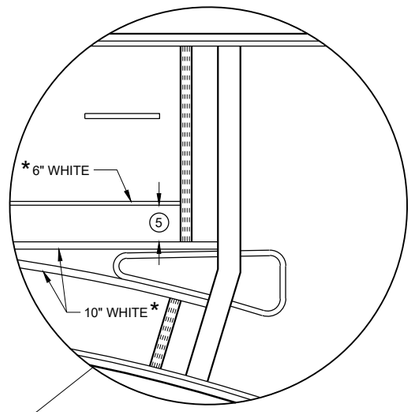
1. DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. MINIMUM OF ONE PER BLOCK. MAXIMUM OF 250 FEET.
3. DOTTED LINES (3' LINE, 9' GAP) SHOULD BE USED 50 FEET TO 200 FEET IN ADVANCE OF AN INTERSECTION WHERE THERE IS NO RIGHT TURN ONLY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

DIRECTION OF TRAVEL

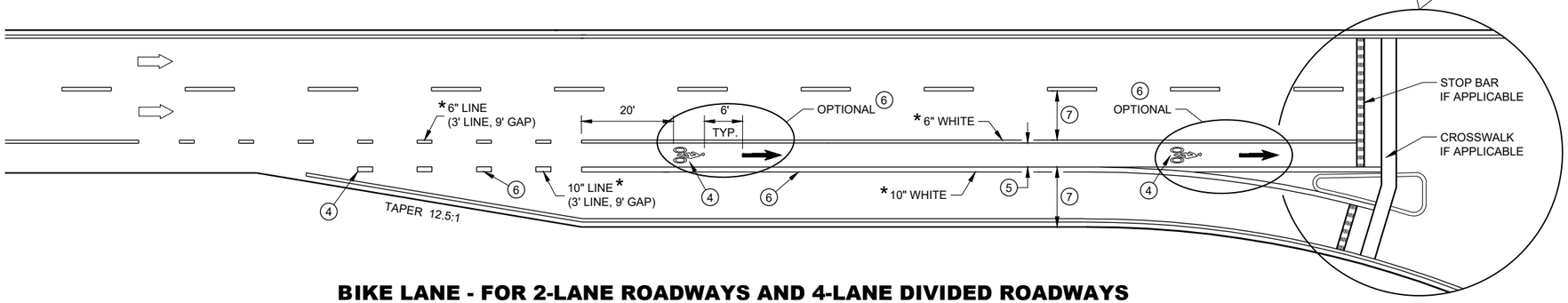
DESIGNATED BIKE LANE - NO PARKING



4 LANE DIVIDED WITHOUT ISLAND



4 LANE DIVIDED WITH ISLAND



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

BIKE LANE MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER
FHWA

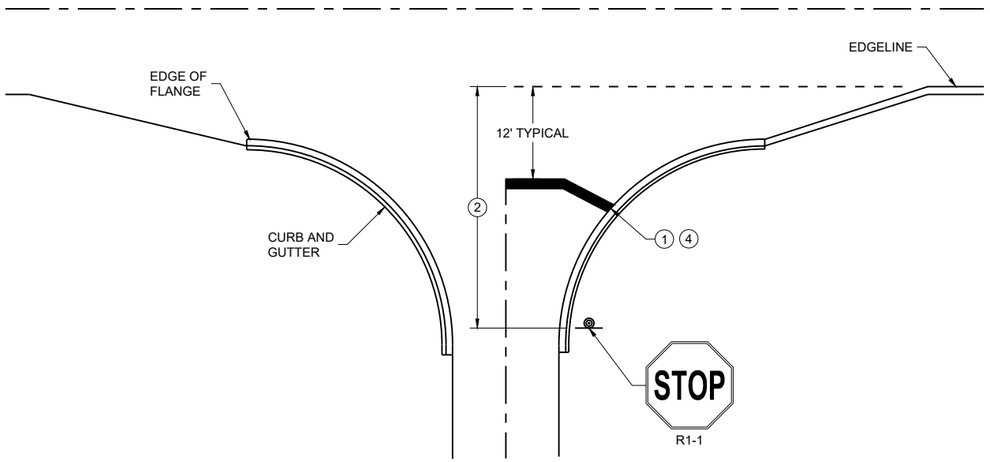
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SDD 15C29-08a

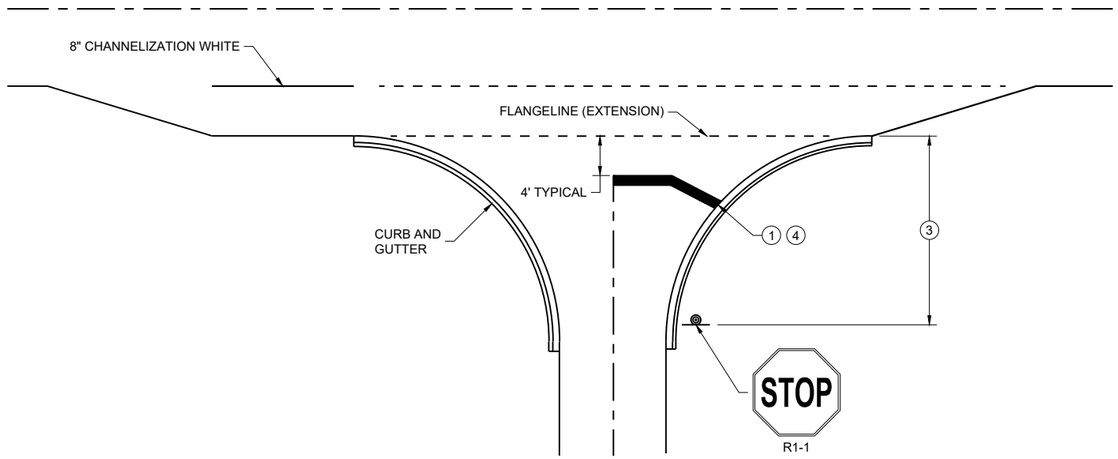
GENERAL NOTES

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

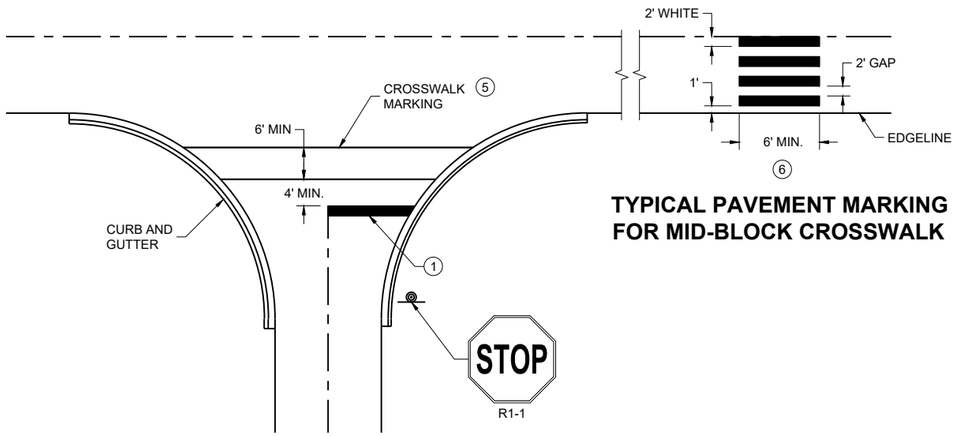
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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

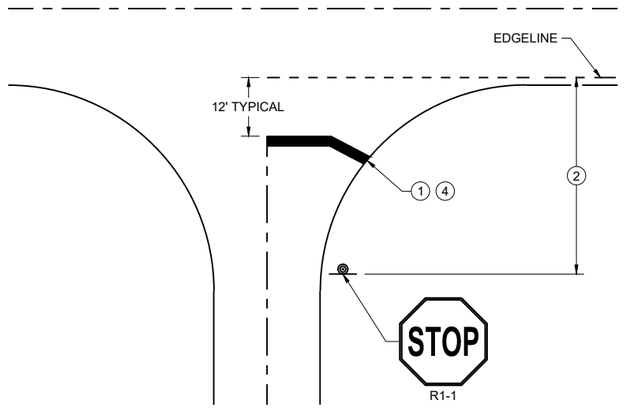


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



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

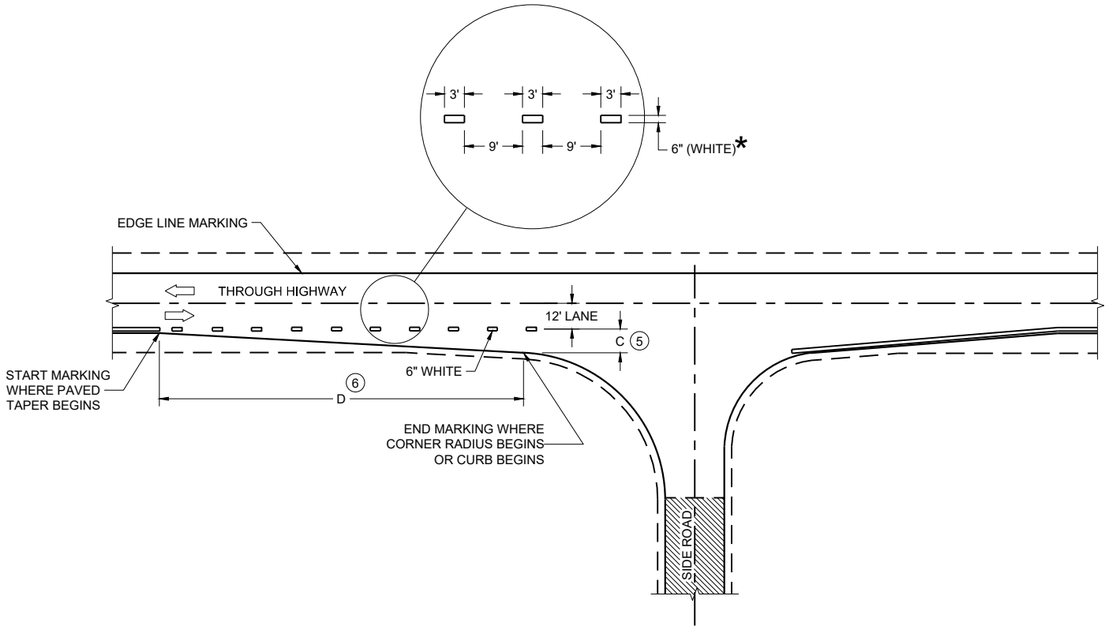
FHWA

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SDD 15C33-05

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SDD 15C33-05



MINOR INTERSECTION

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

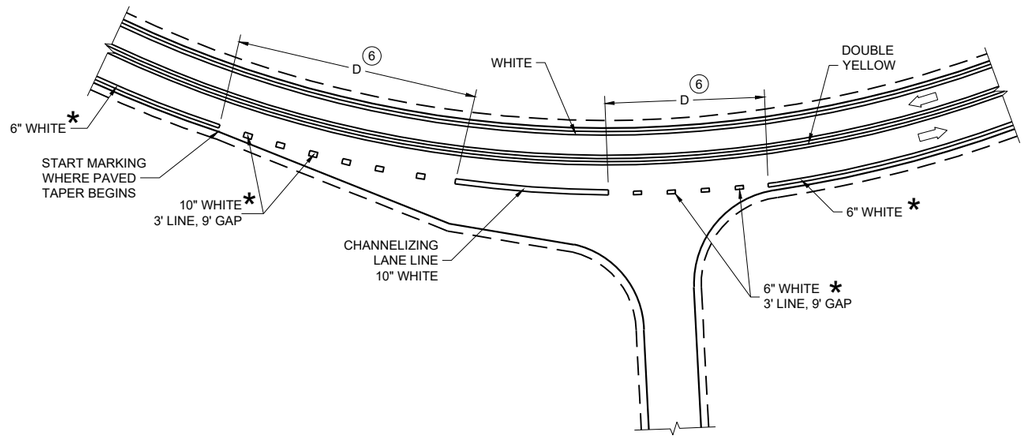
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

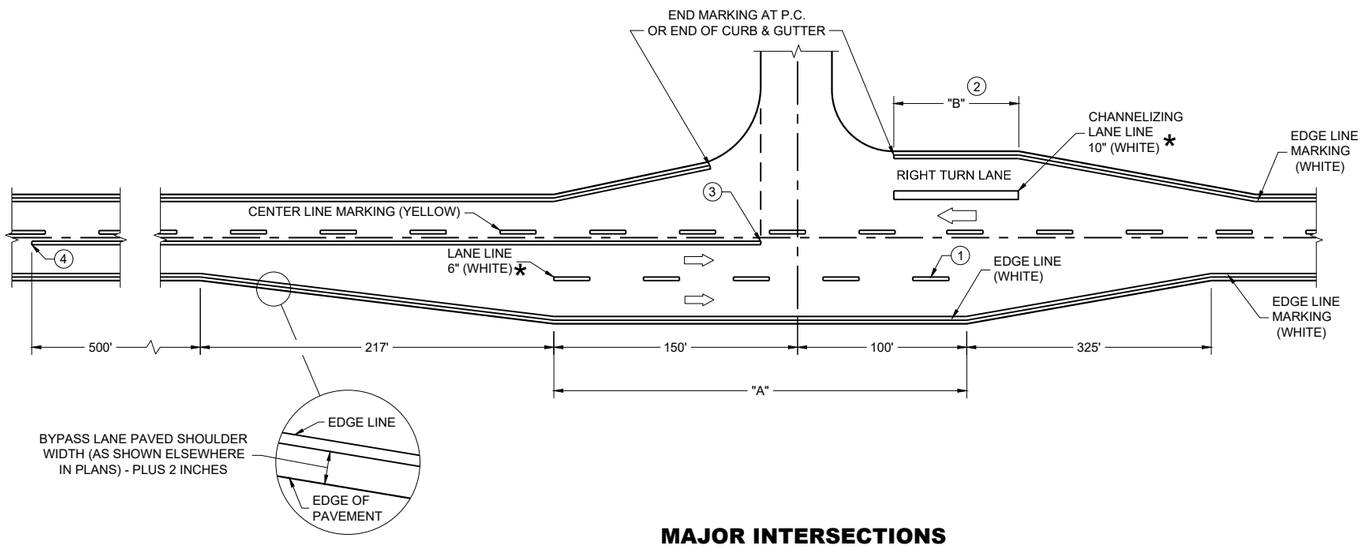
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
5. WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
6. WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 15C35-06a

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.

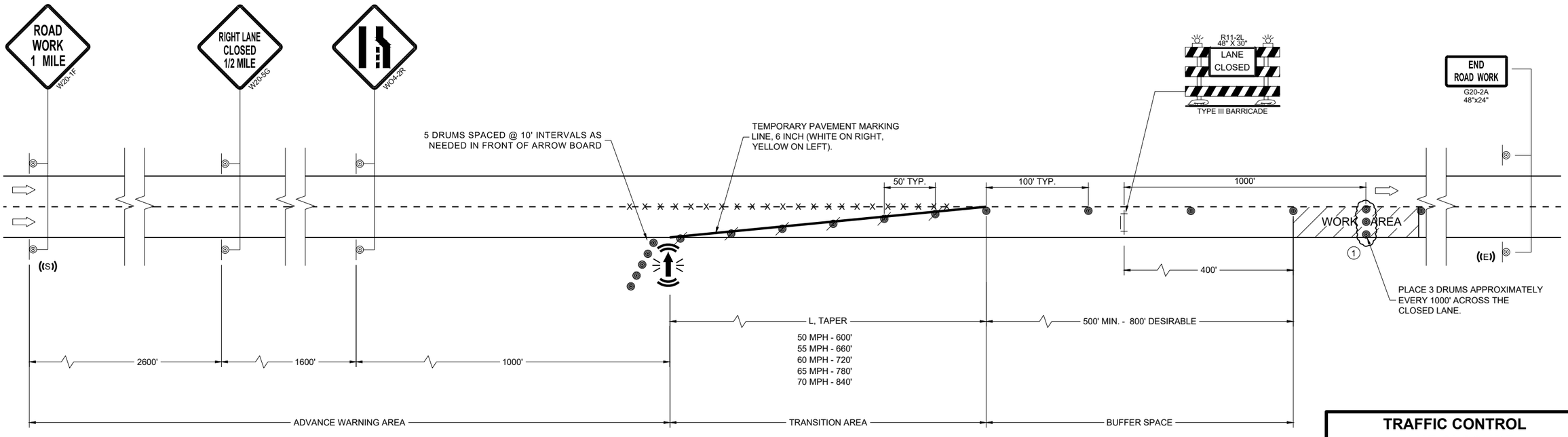
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE 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
February 2025 — DATE
/S/ Andrew Heidtke — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

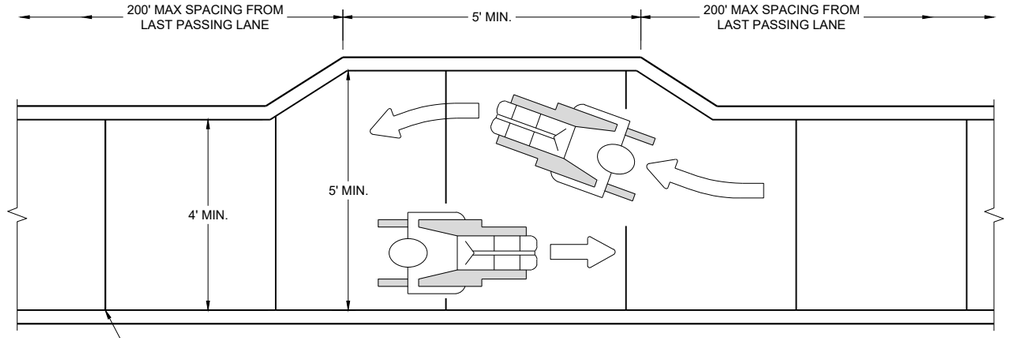
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SDD 15D12-15a

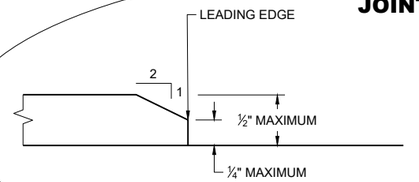
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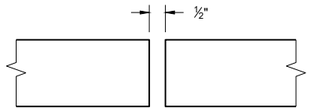


NARROW SIDEWALK PASSING DETAIL

JOINT ALLOWANCES



MAXIMUM VERTICAL GAP



MAXIMUM HORIZONTAL GAP

GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

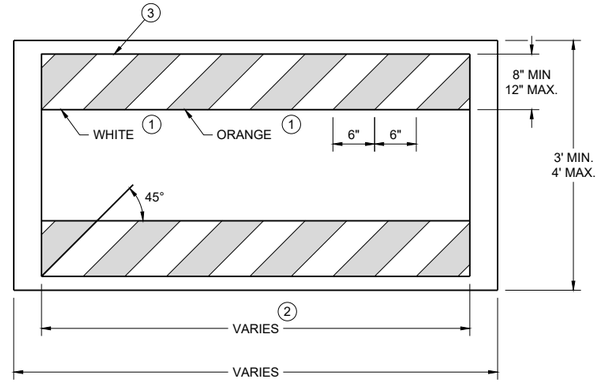
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

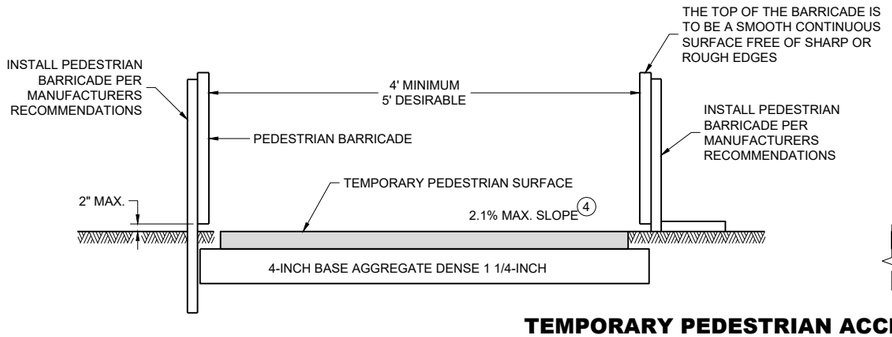
(3) PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

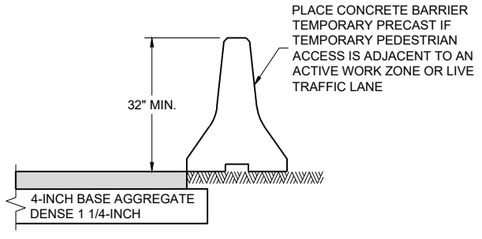
* USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

(4) WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



TEMPORARY PEDESTRIAN BARRICADE *



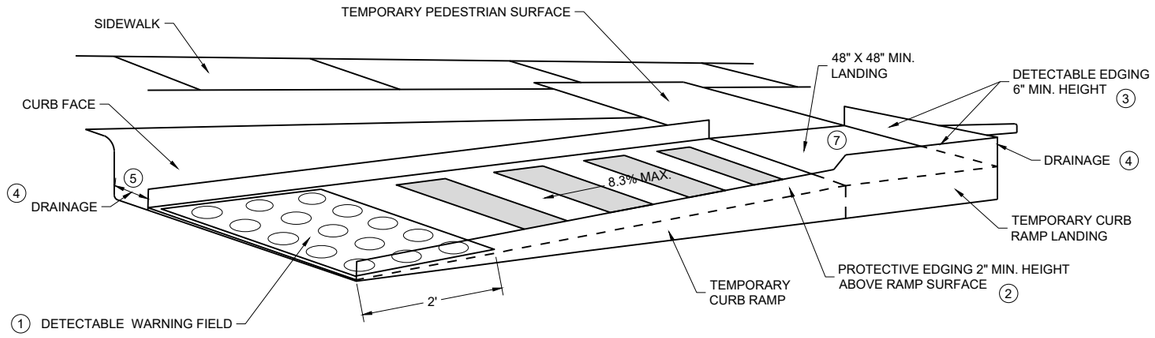


TEMPORARY PEDESTRIAN ACCESS

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SDD 15D30-11a

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PERSPECTIVE VIEW

GENERAL NOTES

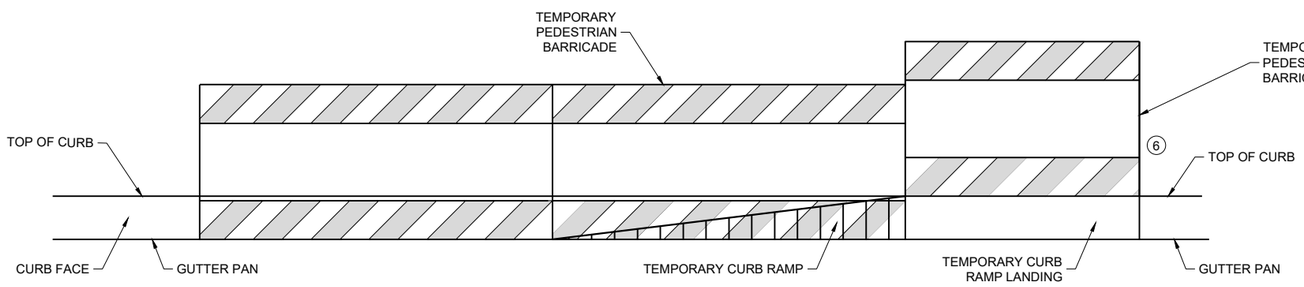
CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

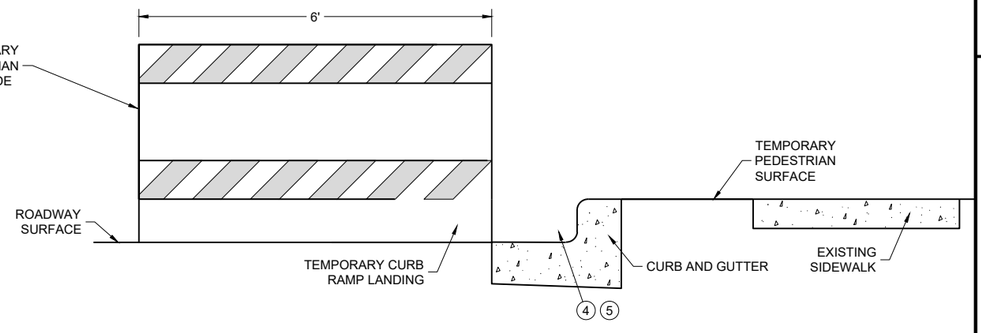
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

1. INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
2. PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
5. ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
6. IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
7. LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



FRONT VIEW



SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

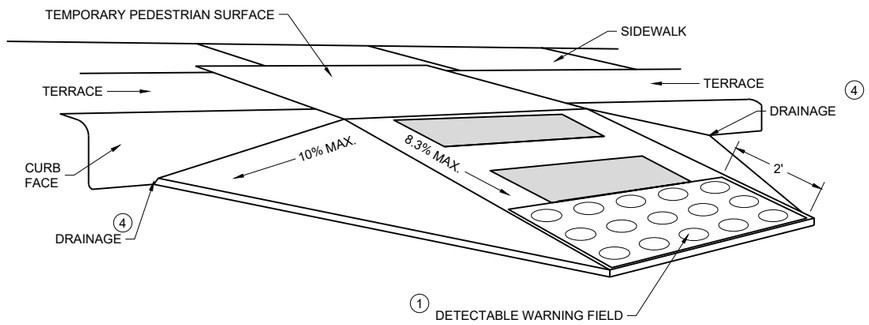
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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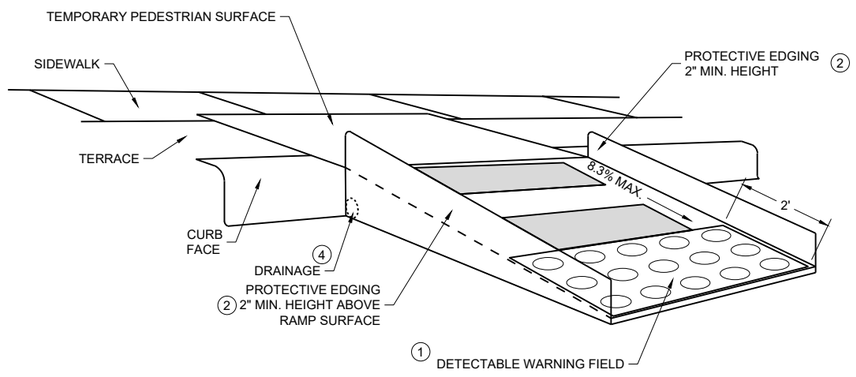
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SDD 15D30-11b



WITH SIDE APRON 5



WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

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

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

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

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

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

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

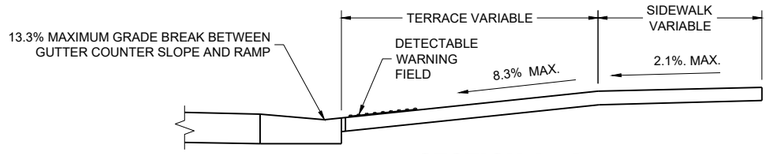
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SDD 15D30-11c

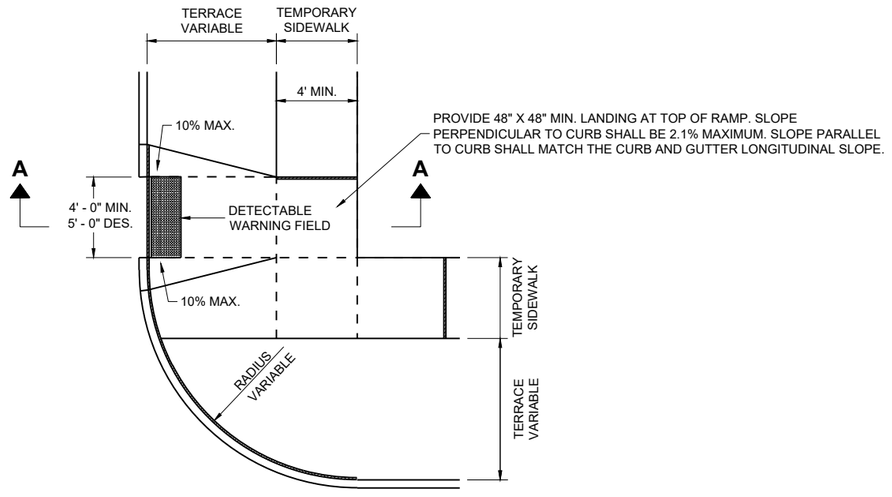
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES



SECTION A - A



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

6

SDD 15D30-11d

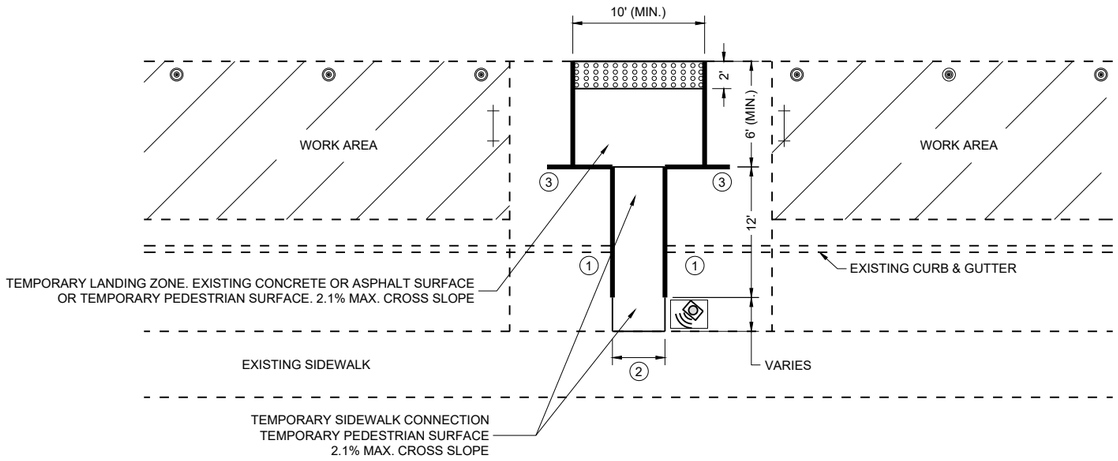
TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

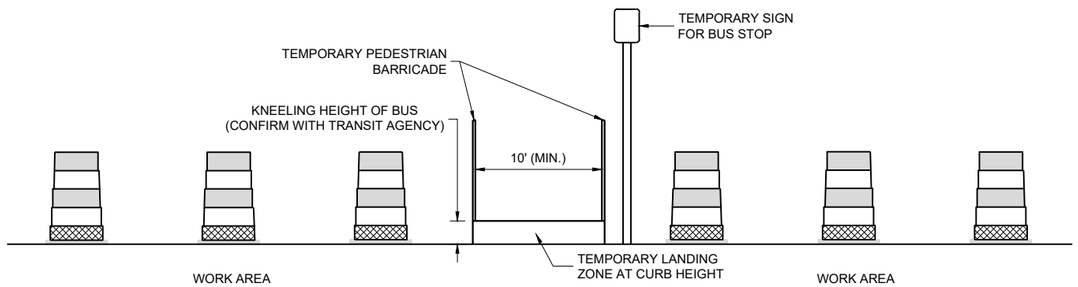
APPROVED
February 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15D30-11d



PLAN VIEW



PROFILE VIEW TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

(1) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

(2) 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.

(3) PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY DETECTABLE WARNING FIELD
- WORK AREA
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

6

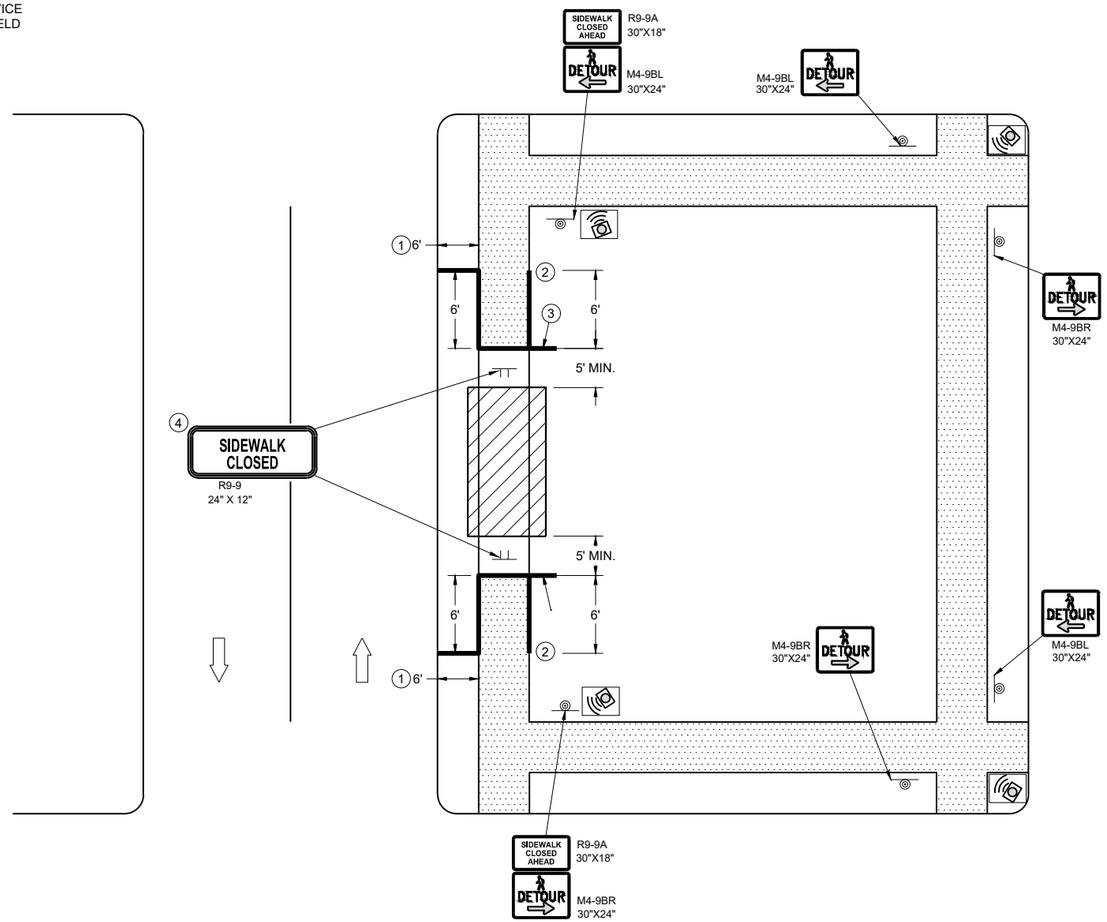
SDD 15D30-11e

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30-11f

LEGEND

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

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

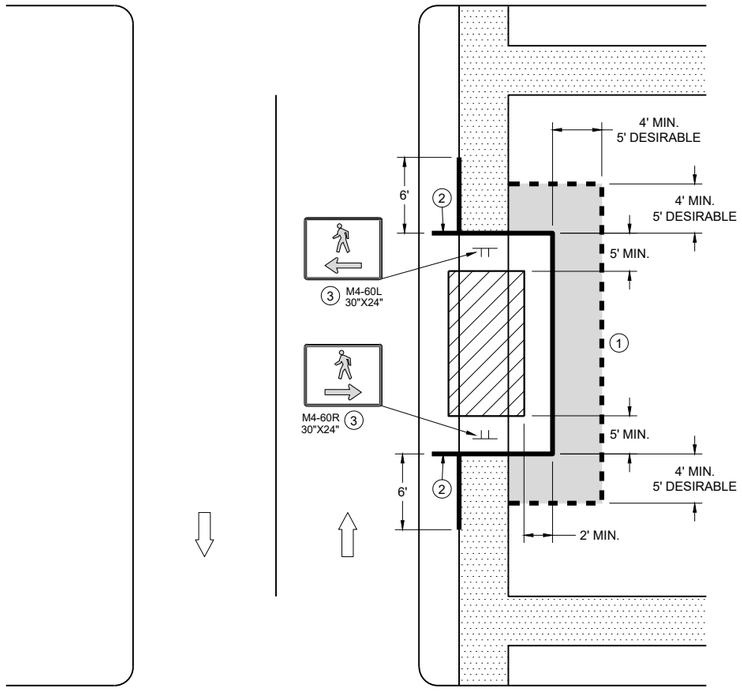
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

(1) USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.

(2) IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.

(3) MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK BYPASS
SINGLE SIDE

6

SDD 15D30-11g

6

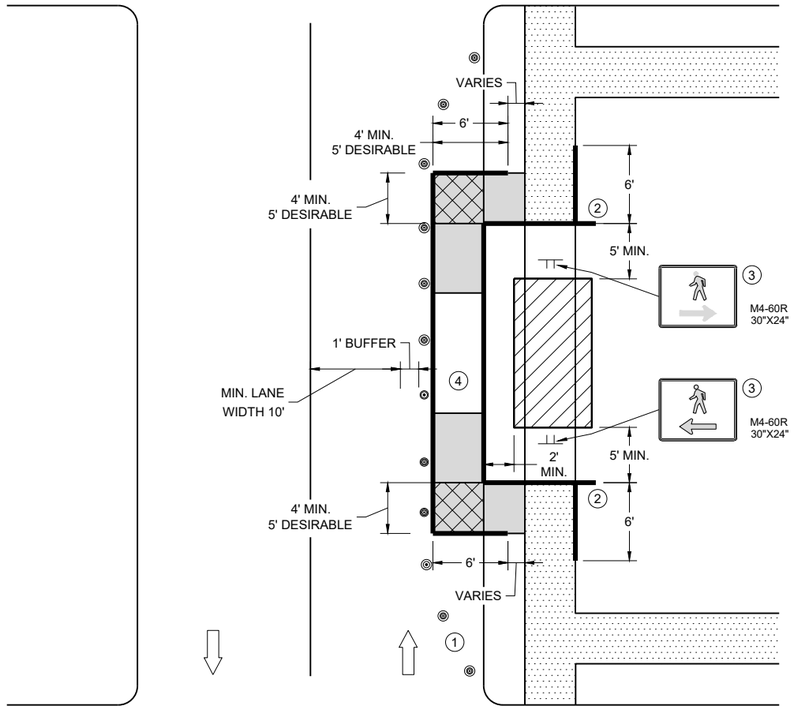
SDD 15D30-11g

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC



SIDEWALK BYPASS, SINGLE SIDE

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

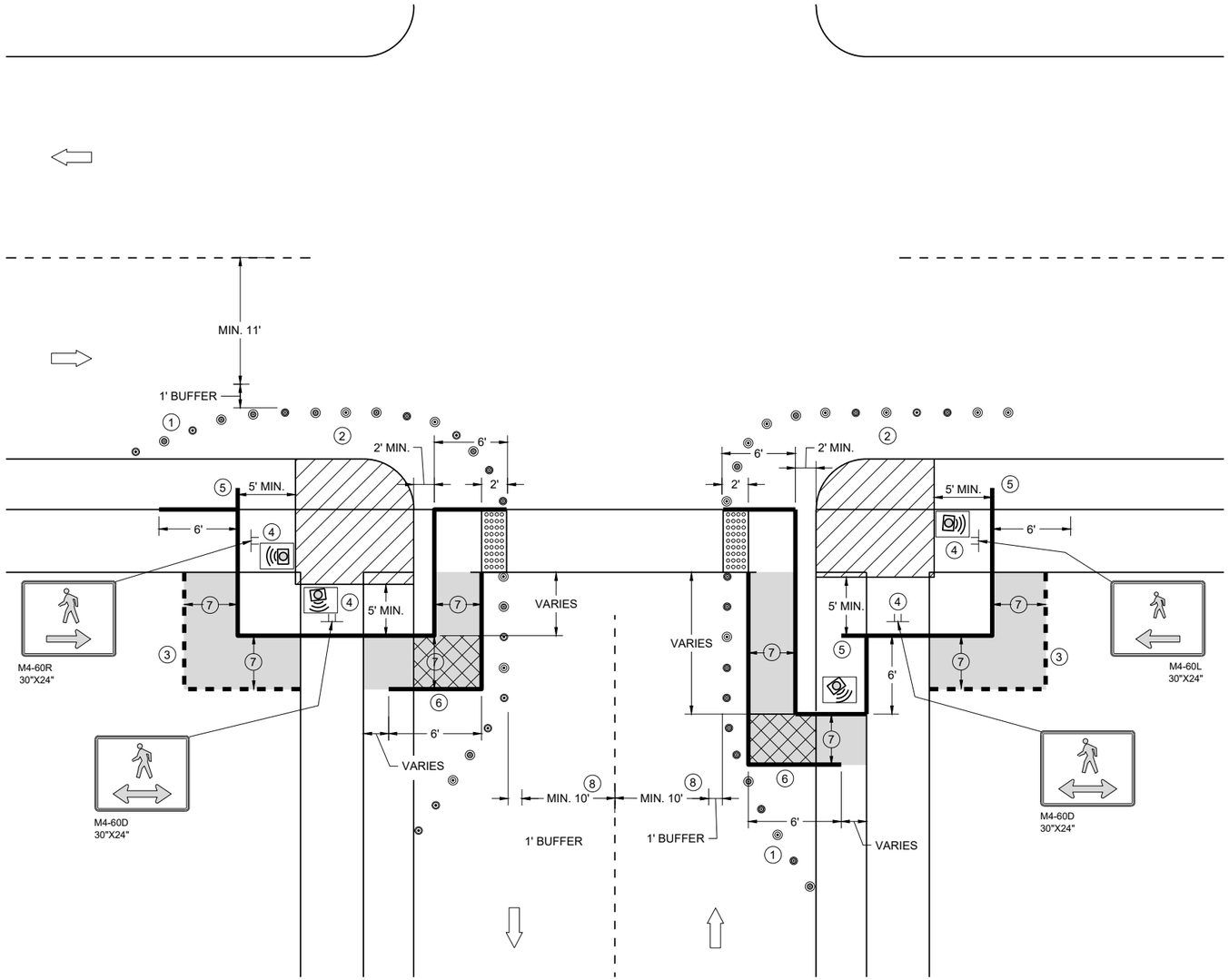
1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
2. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
3. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
4. USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30-11h



CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
7. 4 FEET MINIMUM, 5 FEET DESIRABLE
8. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

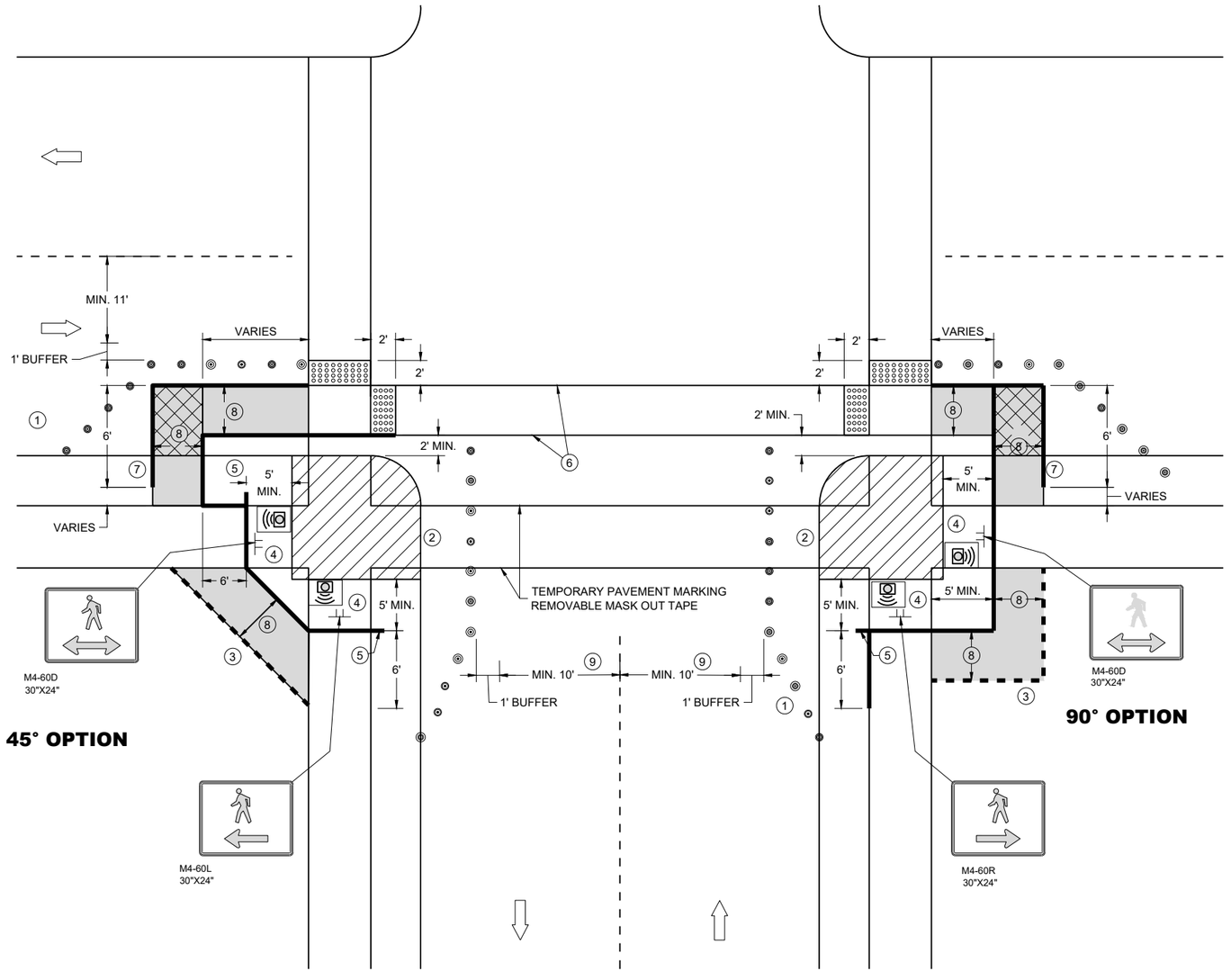
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 15D30-11i



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

1. SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
2. PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
3. USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
4. MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
5. PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
6. WHITE 6" TEMPORARY PAVEMENT MARKING
7. IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
8. 4 FEET MINIMUM, 5 FEET DESIRABLE
9. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

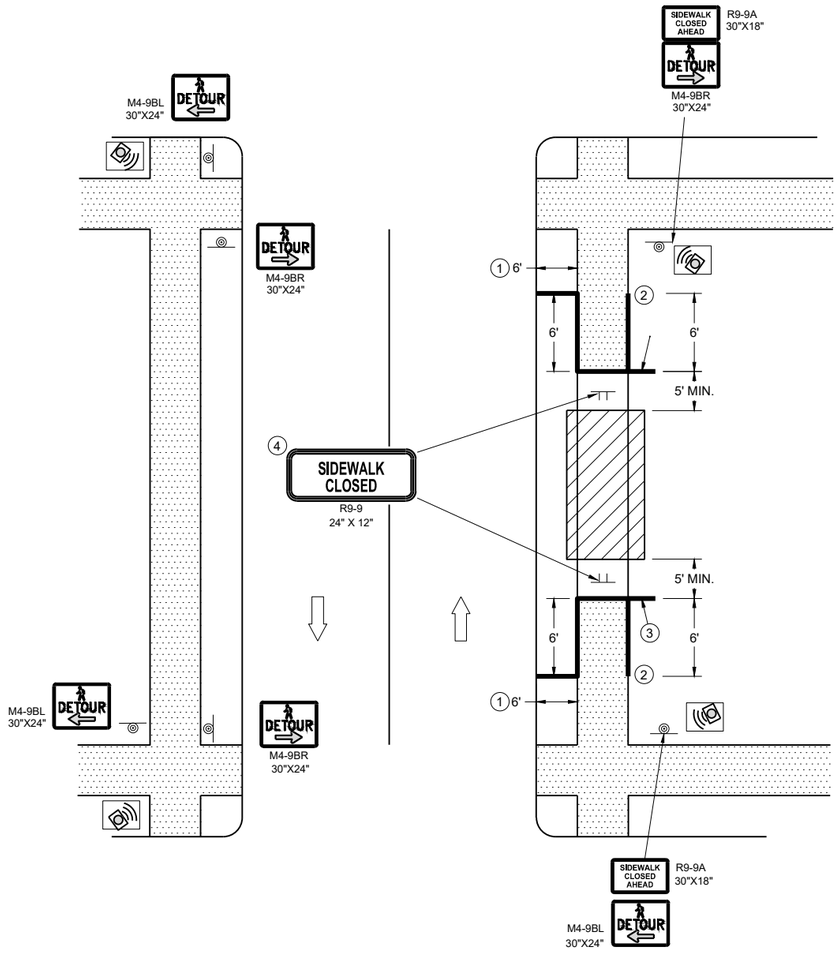
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

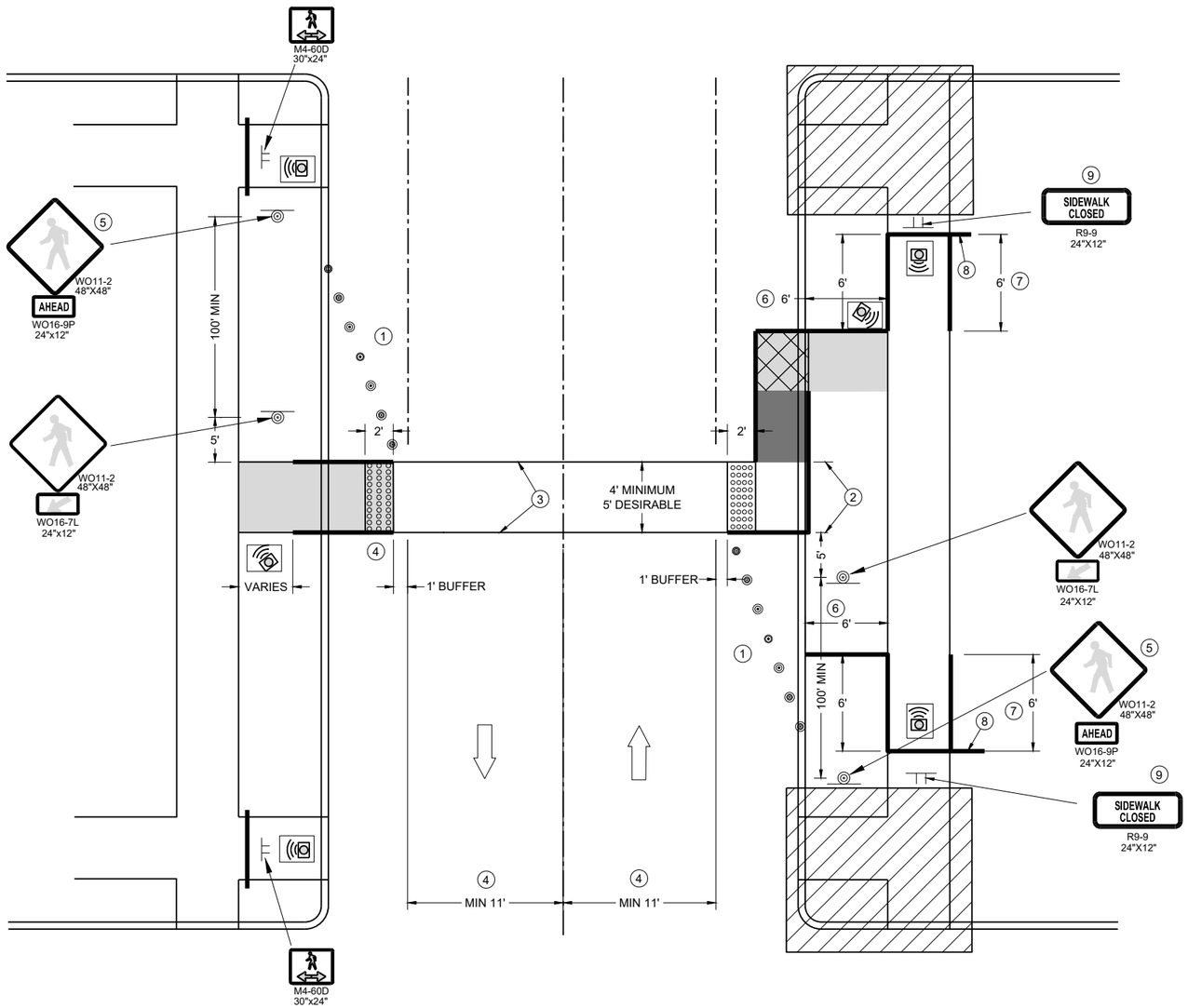
1. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
2. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
3. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
4. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D30-11k



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

1. SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
2. 4 FEET MINIMUM, 5 FEET DESIRABLE.
3. WHITE 6" TEMPORARY PAVEMENT MARKING.
4. IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.
5. IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
6. IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
7. PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
8. IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
9. MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

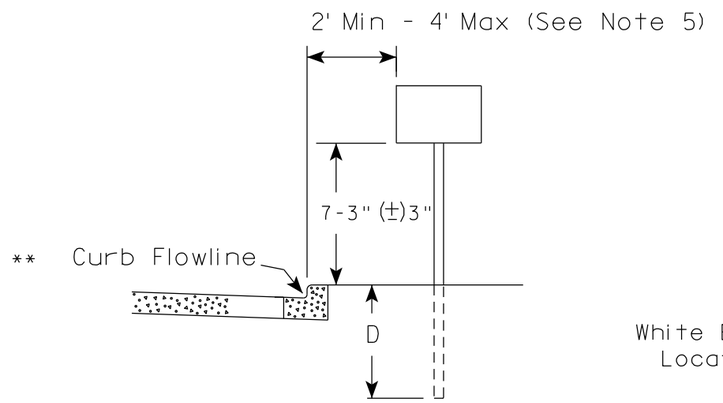
LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

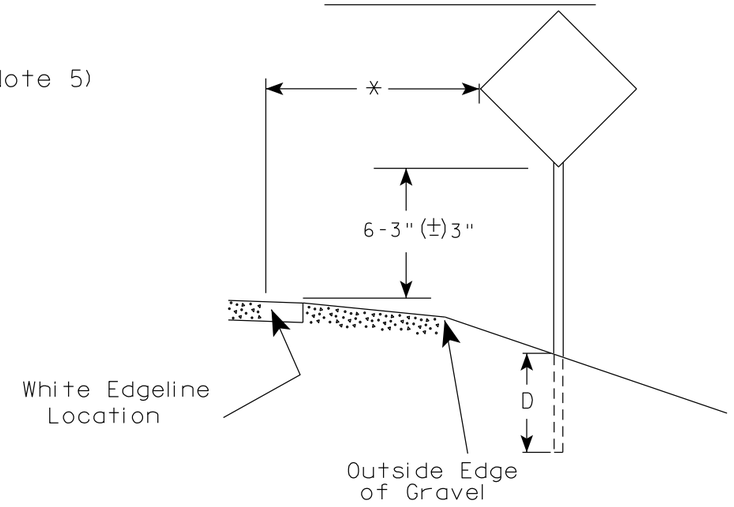
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

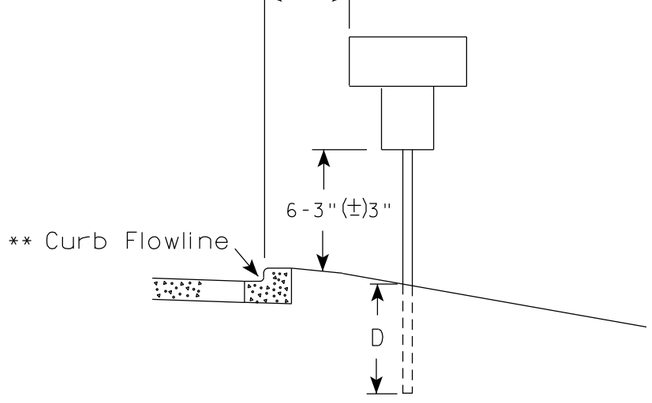
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

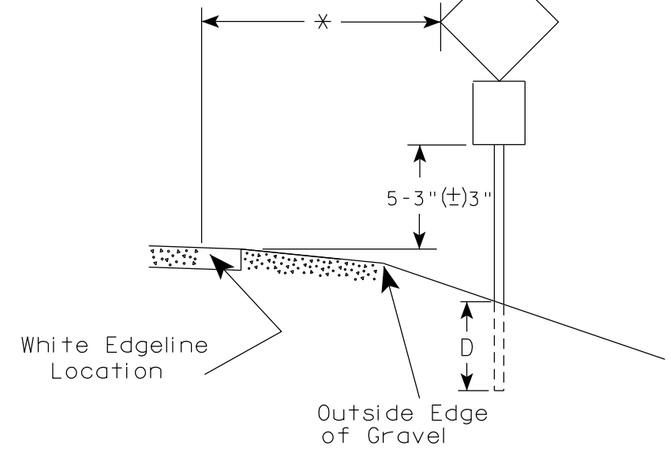
URBAN AREA



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.

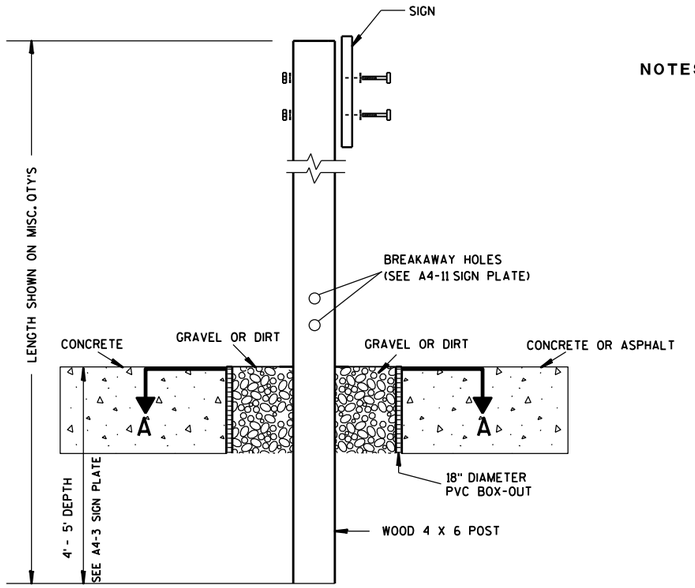
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

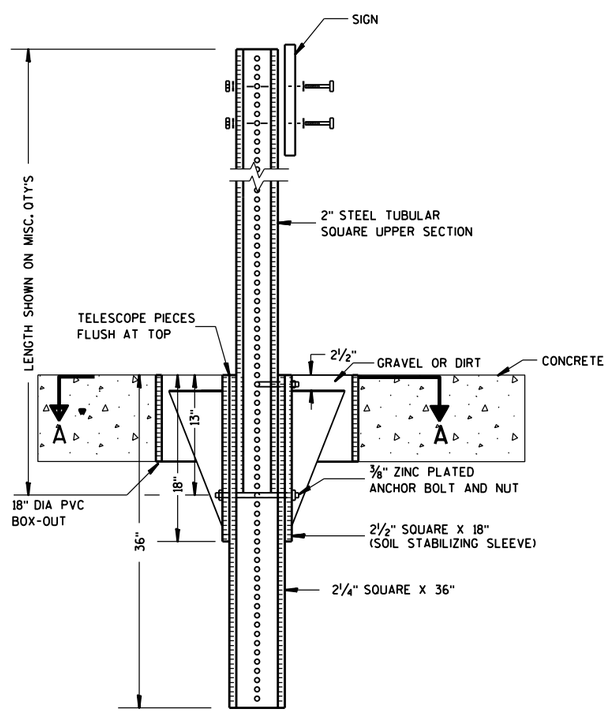
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 172	E



ELEVATION VIEW

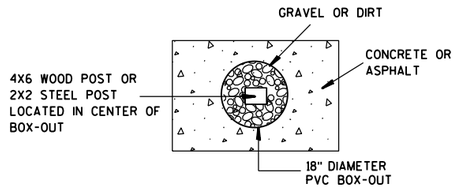
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

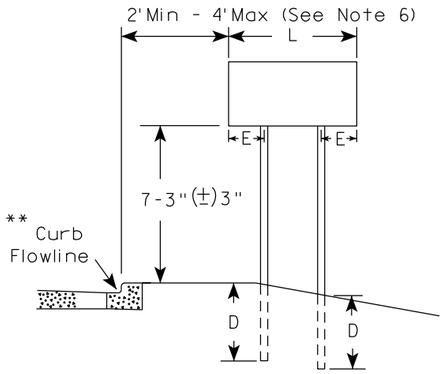
APPROVED Matthew R Rauch
for State Traffic Engineer

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

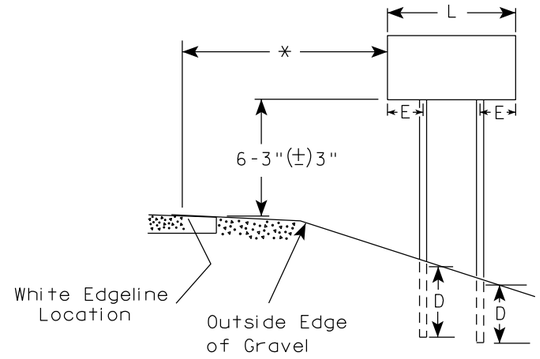
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

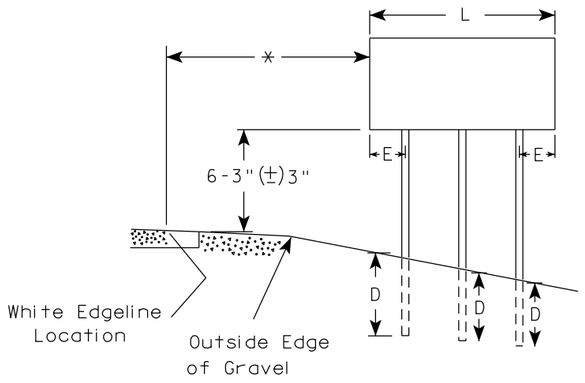
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

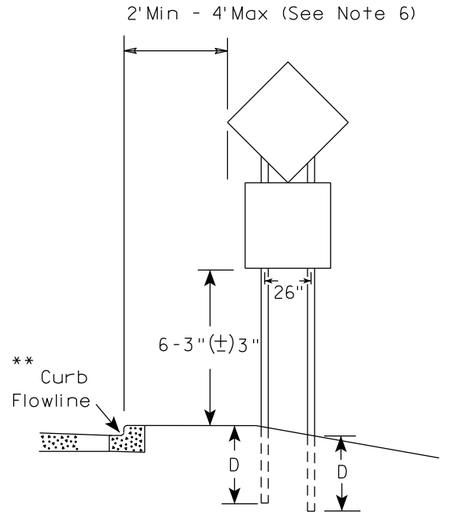
URBAN AREA



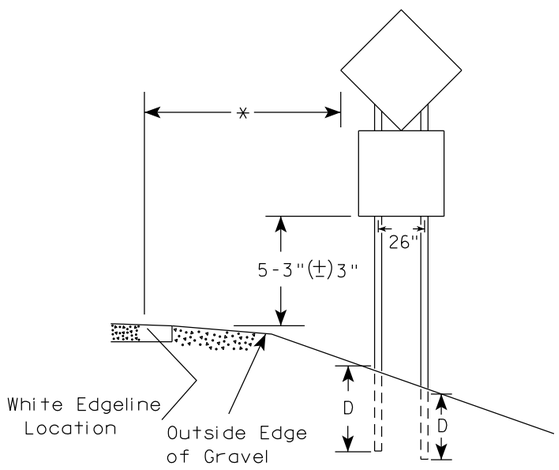
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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'

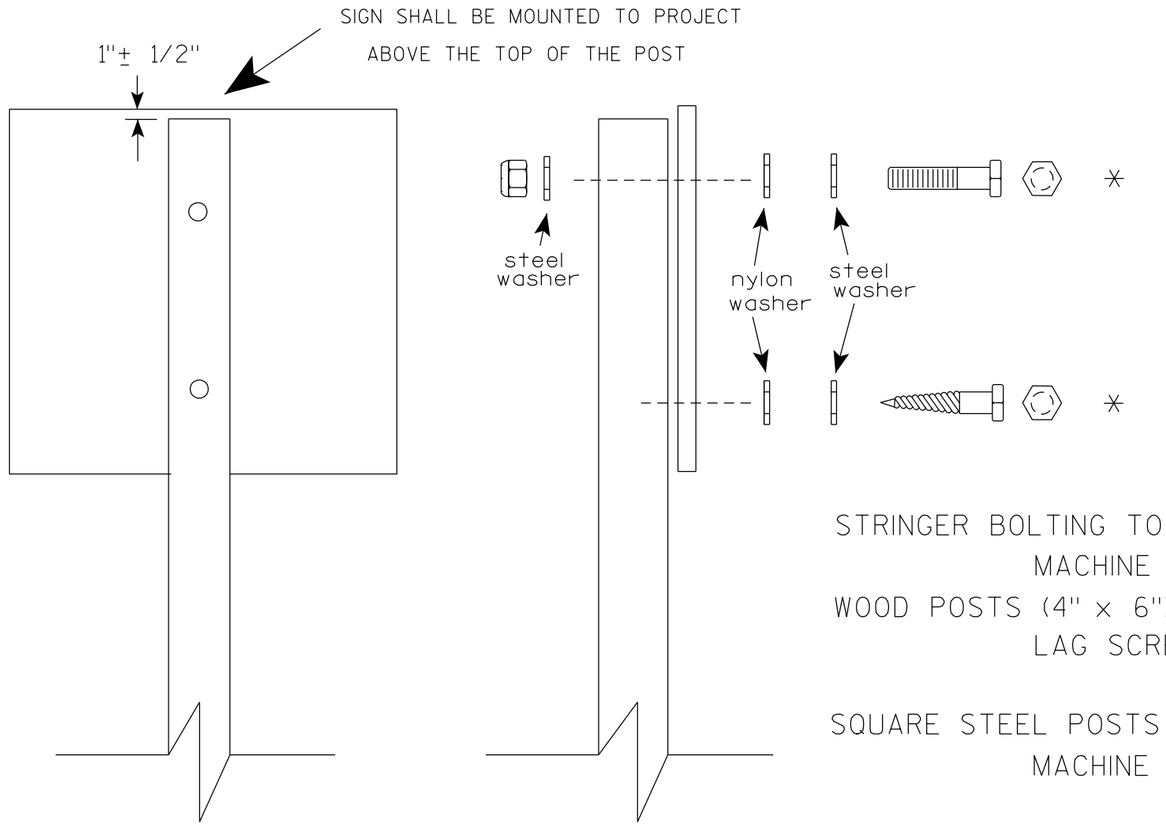
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 174	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

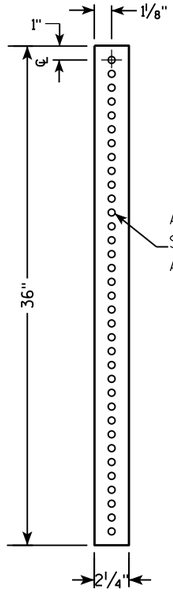
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

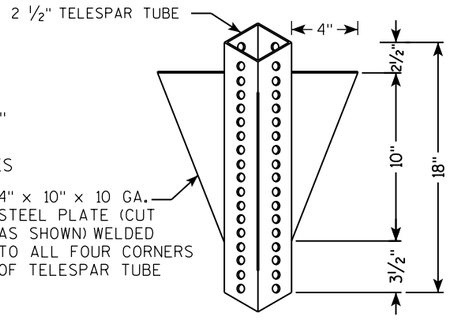
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

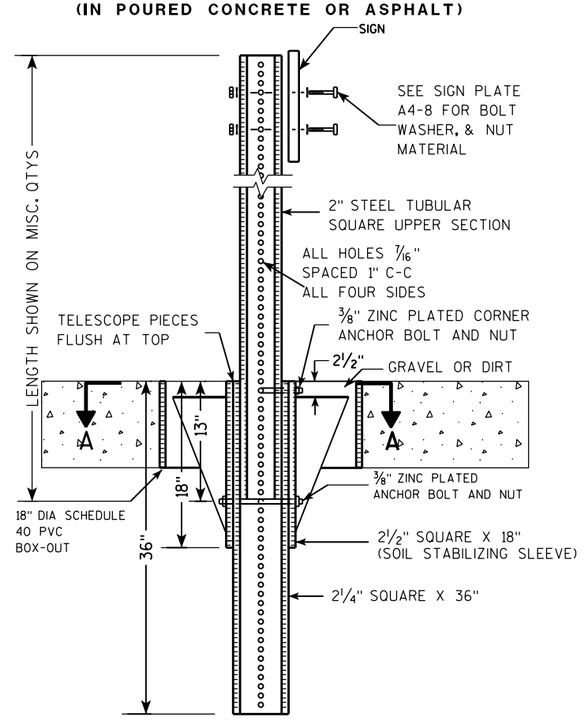
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



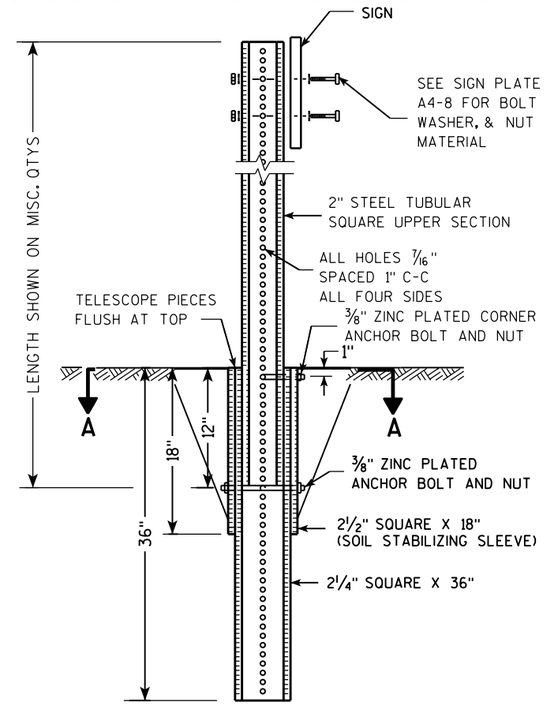
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

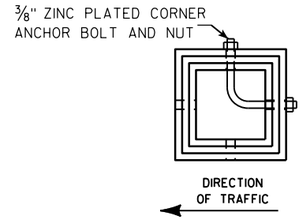


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

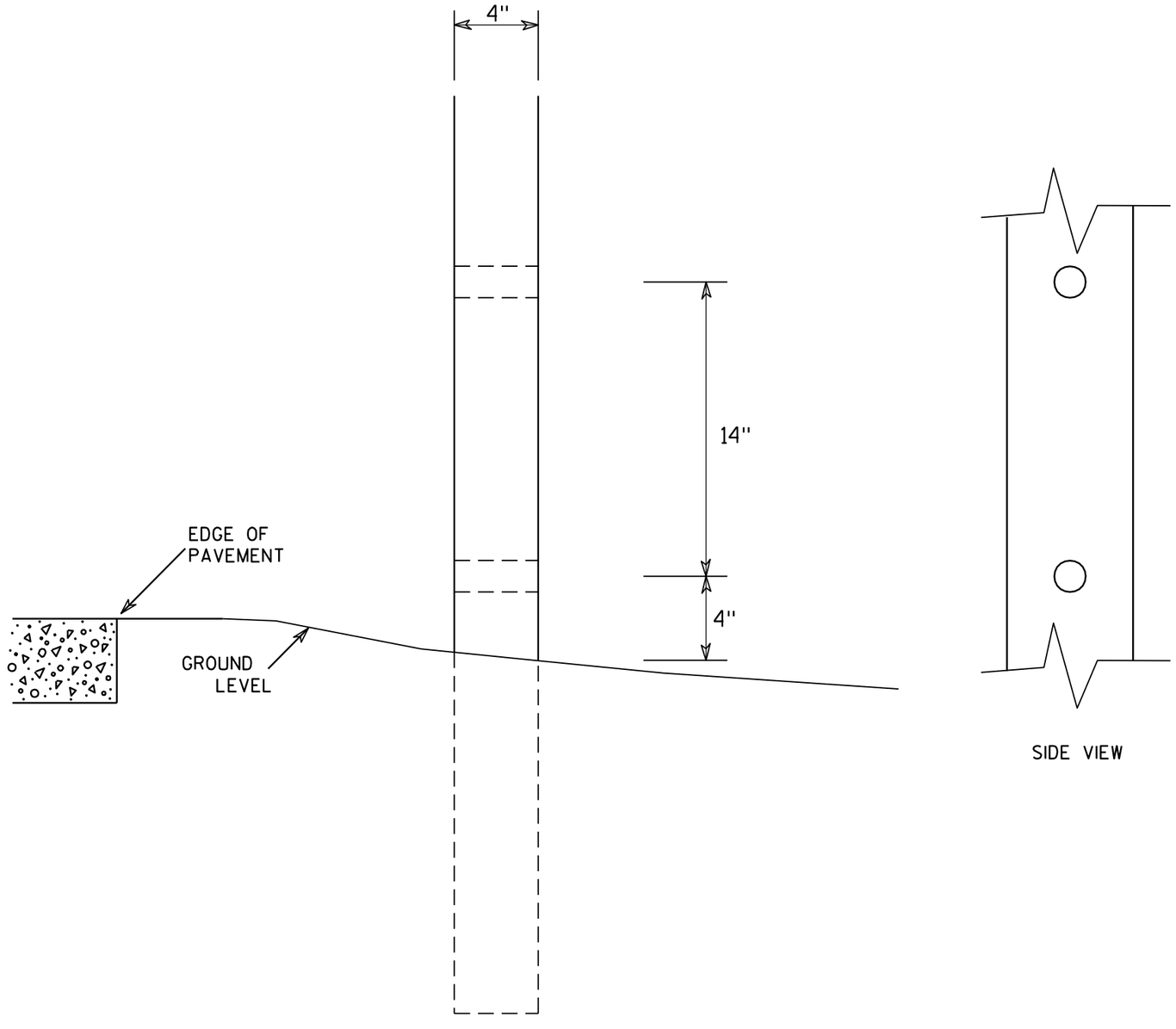
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 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

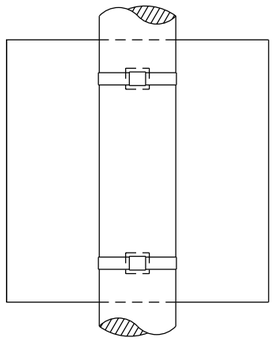
APPROVED Chester J Spang for State Traffic Engineer

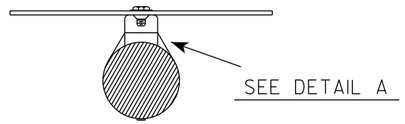
DATE 3/27/97 PLATE NO. A4-11.2

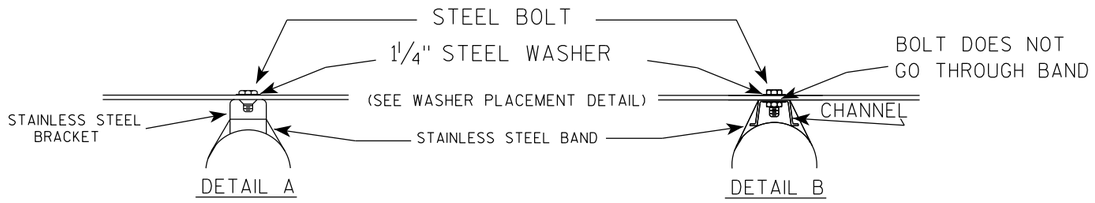
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 177	E

BANDING

SINGLE SIGN



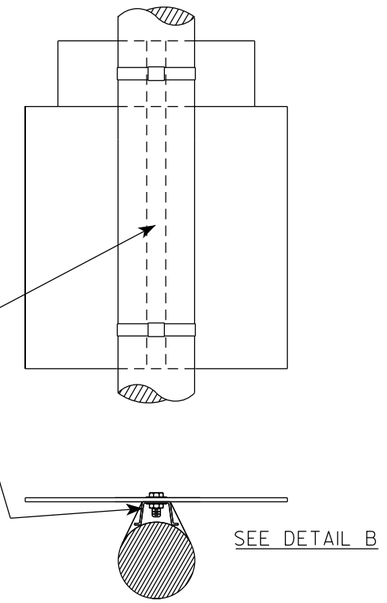




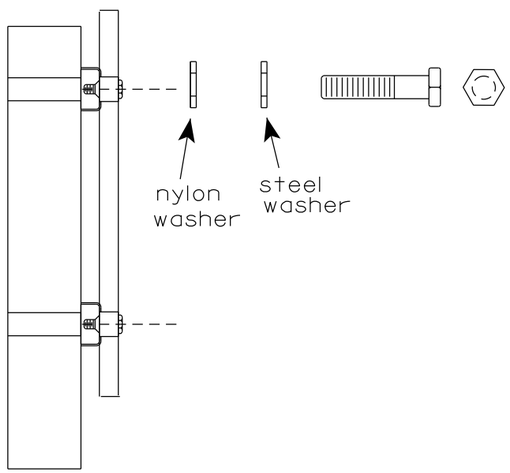
GENERAL NOTES

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

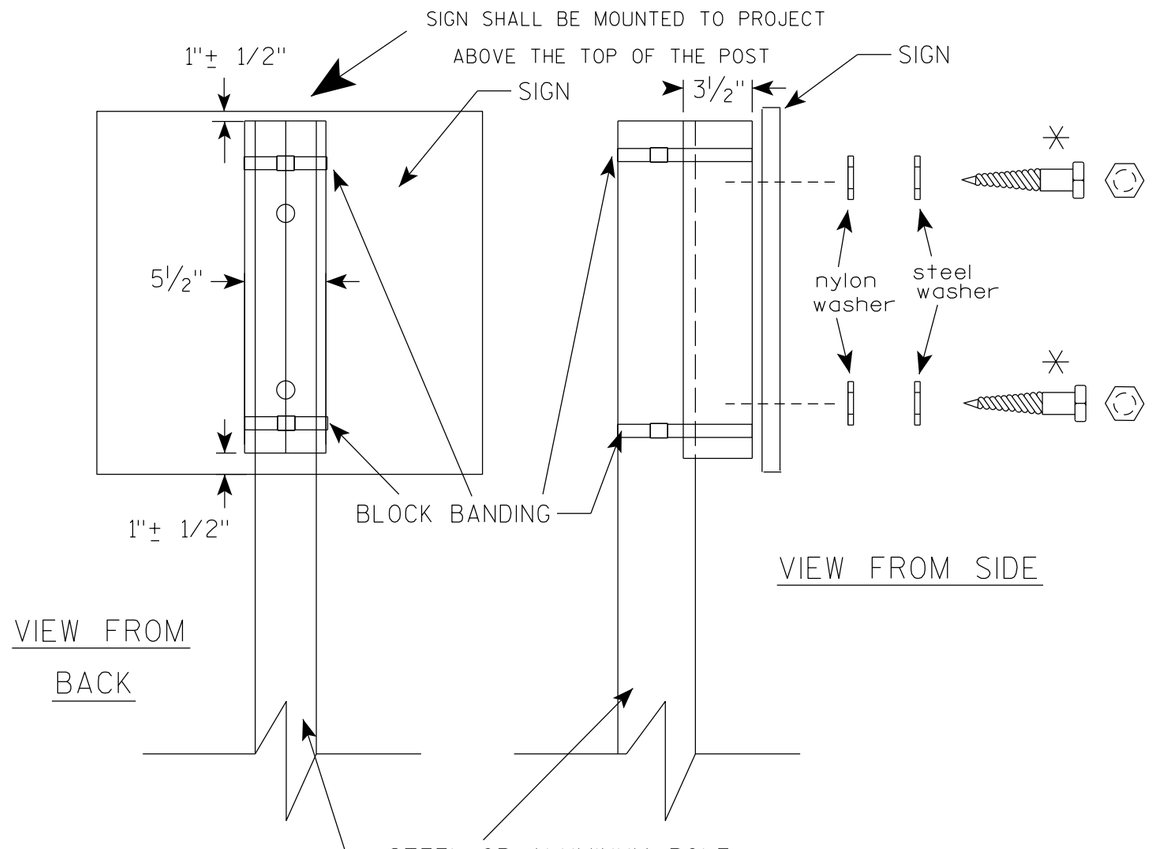
WISCONSIN DEPT OF TRANSPORTATION

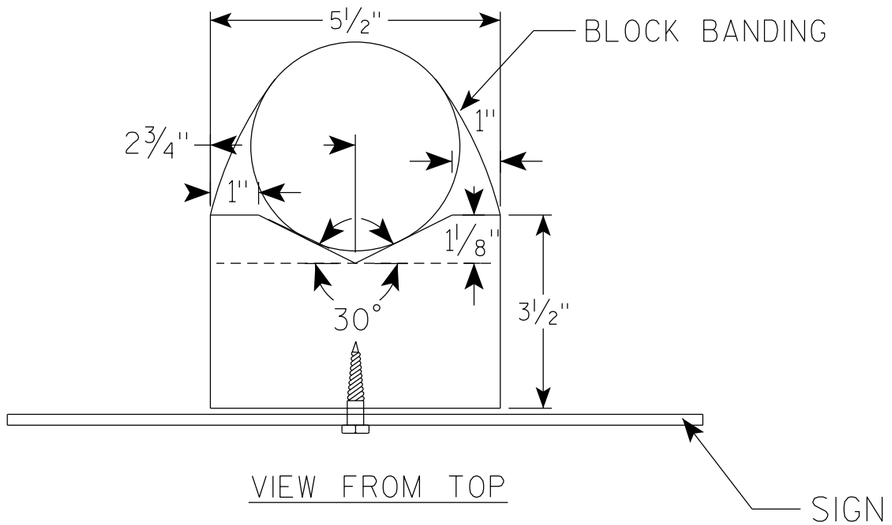
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





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)

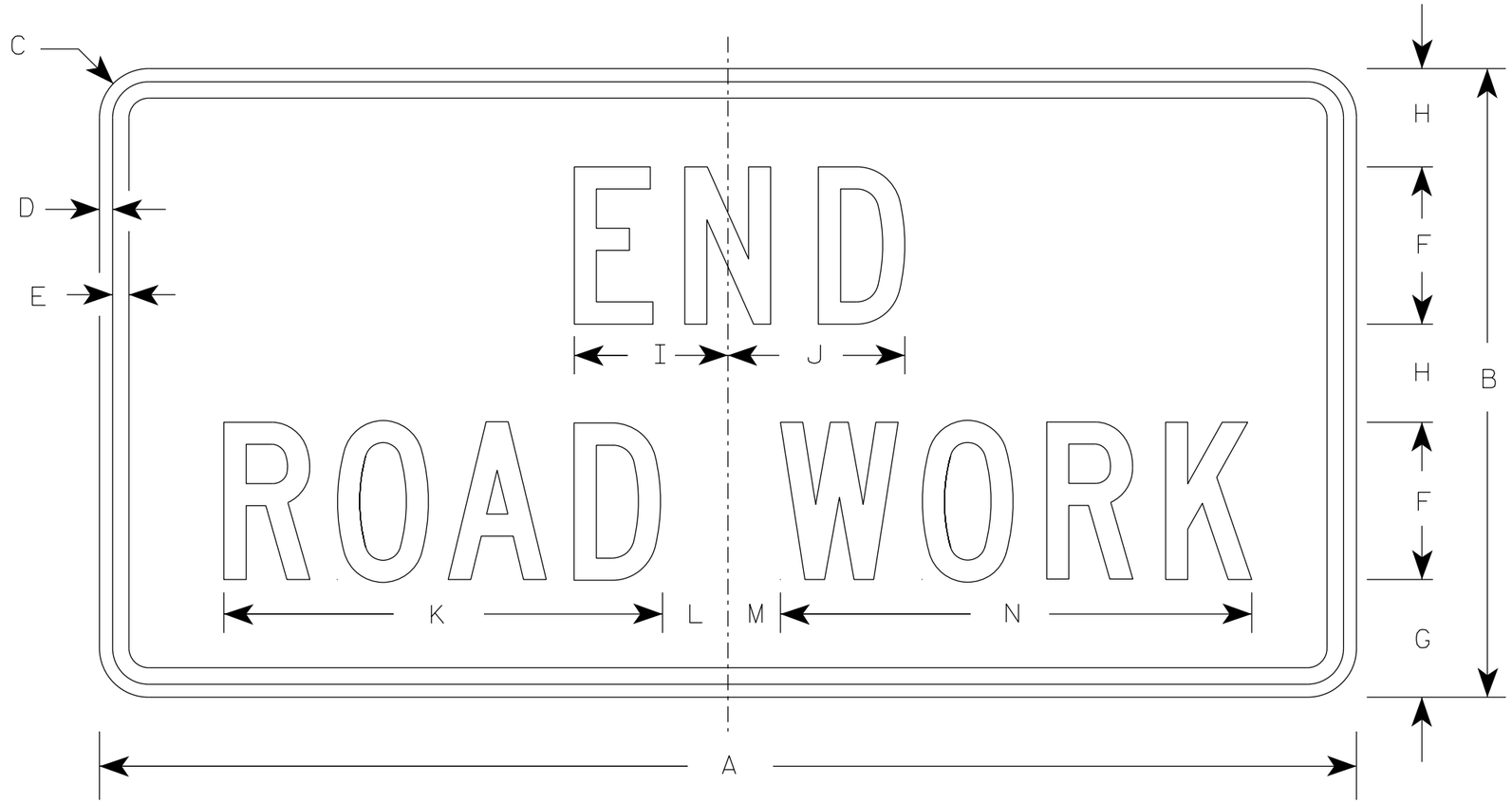
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 179 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

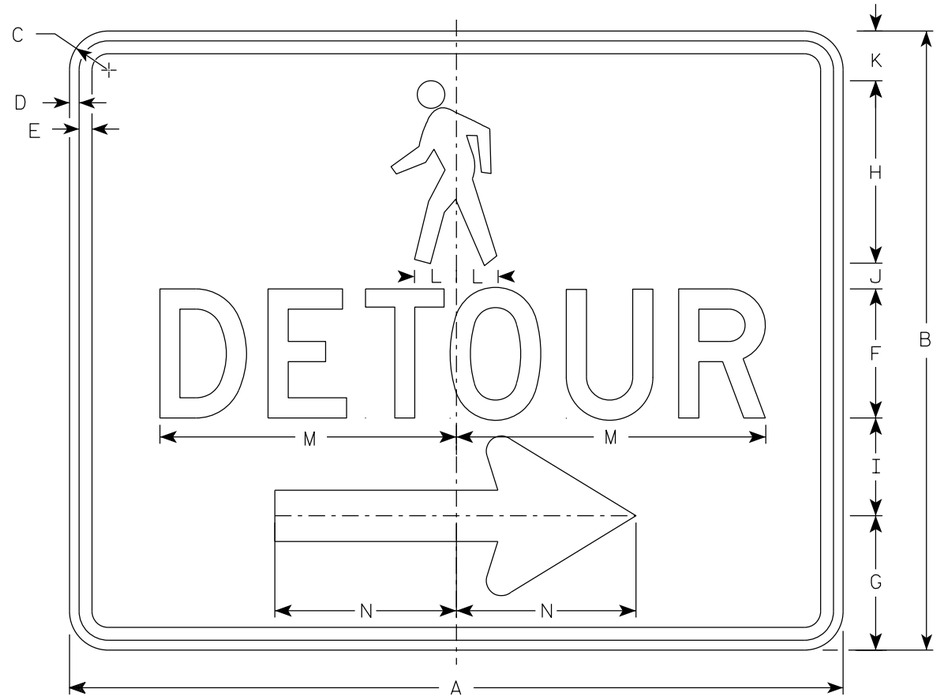
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

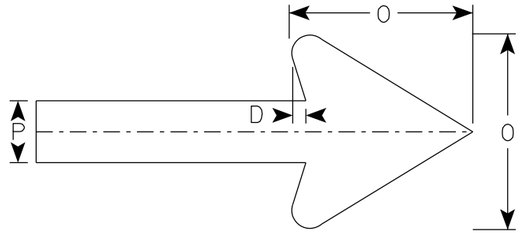
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9BL is the same as M4-9BR except the arrow is reversed.



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	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
3																											
4																											
5																											

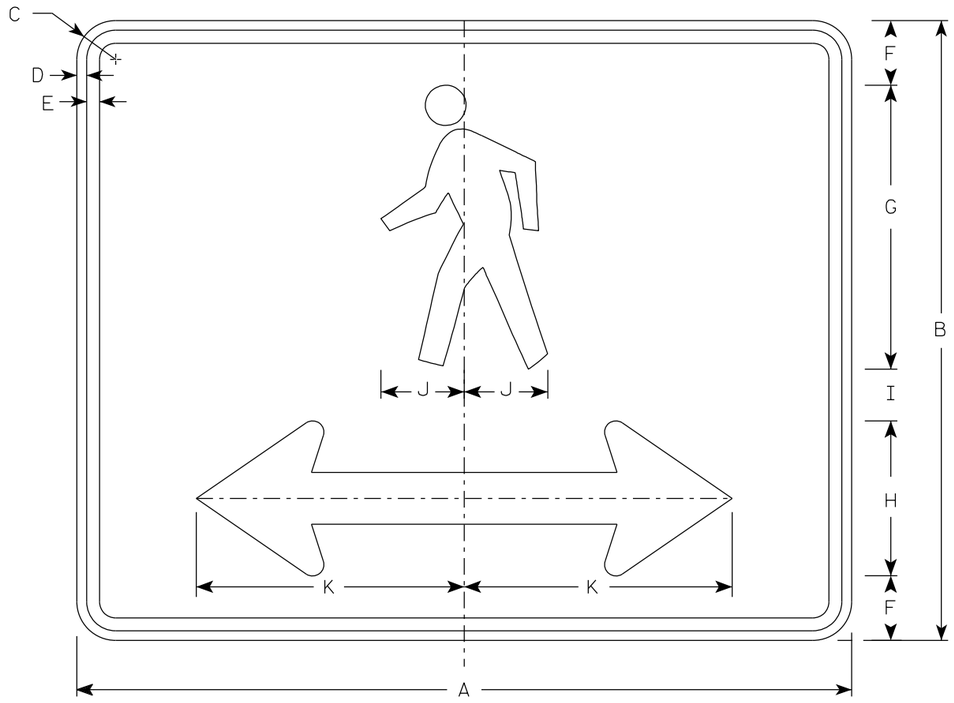
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9B.4

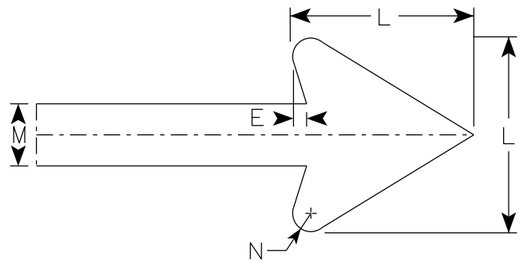
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 181 | E



M4-60D

NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	3/8	1/2	2 1/2	11	6	2	3 1/4	10 3/8	6	2	3/8													5.00
2M	30	24	1 1/2	3/8	1/2	2 1/2	11	6	2	3 1/4	10 3/8	6	2	3/8													5.00
3																											
4																											
5																											

STANDARD SIGN
M4-60D

WISCONSIN DEPT OF TRANSPORTATION

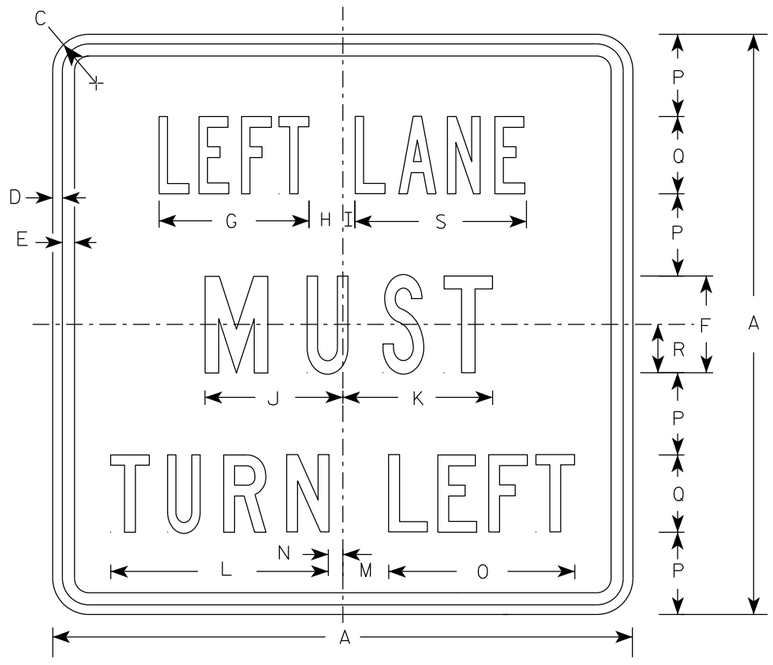
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/14/2023 PLATE NO. M4-60D.2

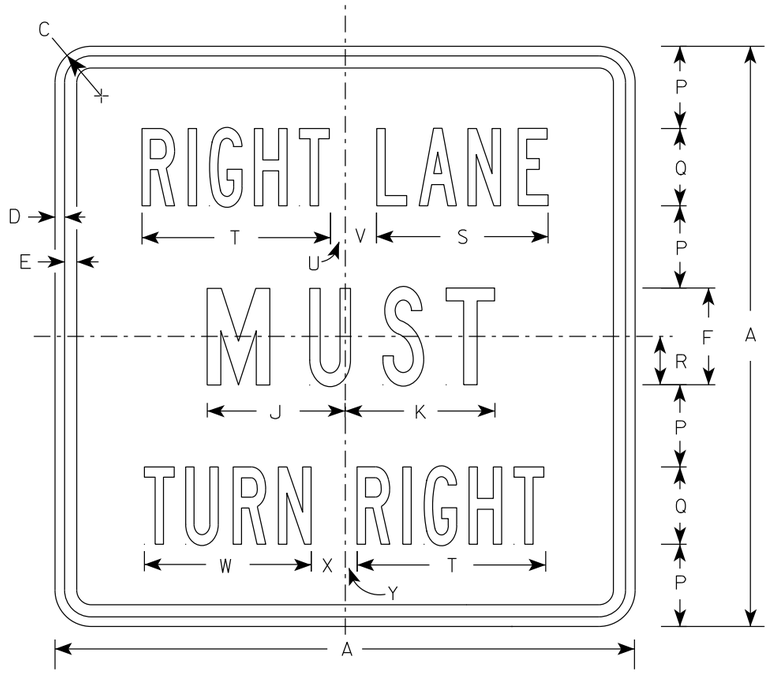
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 182 | E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.



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	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 7/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 7/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		2 1/4	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

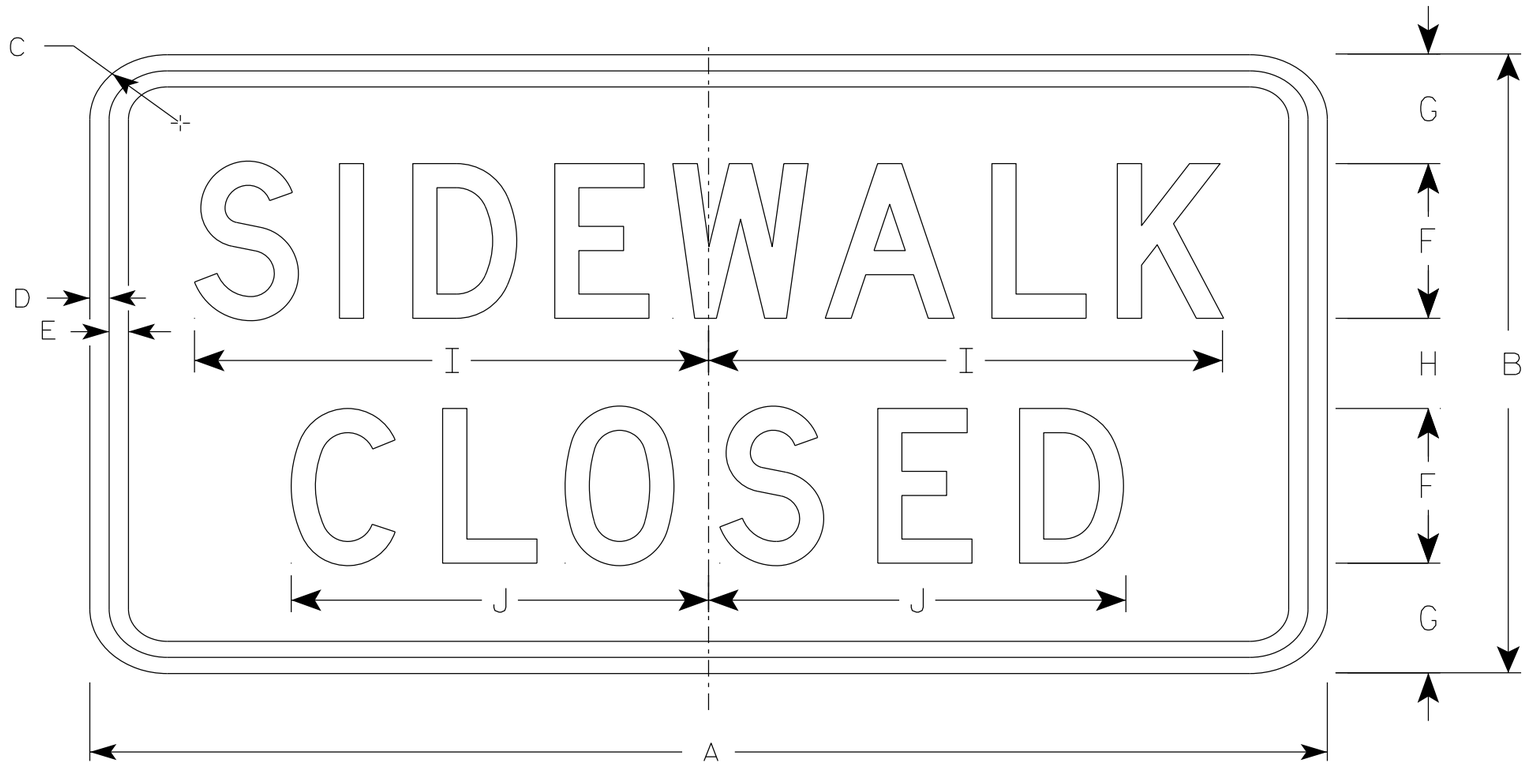
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/23 PLATE NO. R3-7.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 183 | E



R9-9

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
2M	24	12	1 ½	½	½	3	2 ⅛	1 ¾	10	8 ⅛																	2.0
3	30	18	1 ½	½	½	4	3 ½	3	12 ½	10 ¼																	3.75
4																											
5																											

STANDARD SIGN
R9-9

WISCONSIN DEPT OF TRANSPORTATION

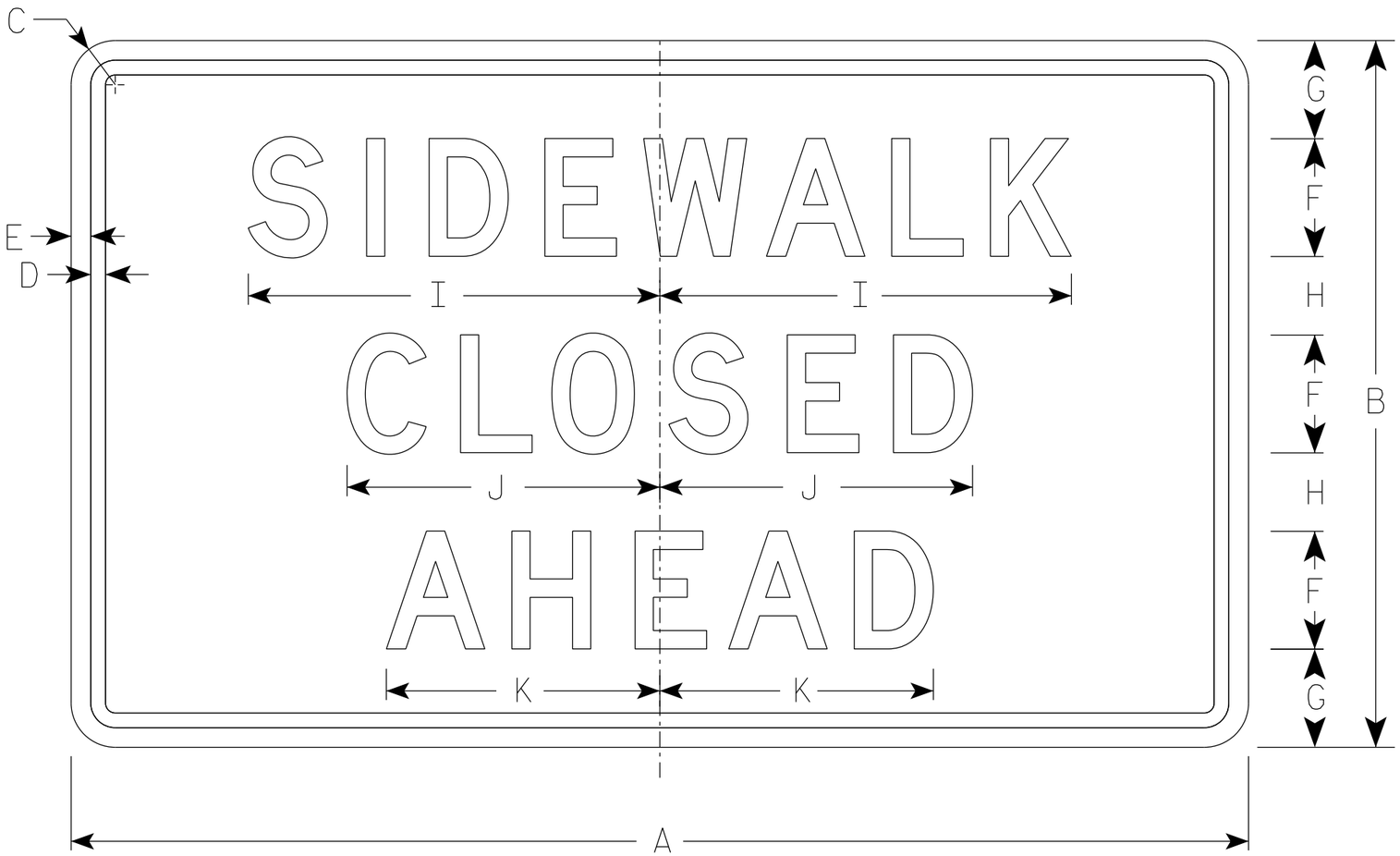
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 184 | E

NOTES

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



R9-9A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 ½	⅜	½	3	2 ½	2	10 ½	8	7																3.75
2M	30	18	1 ½	⅜	½	3	2 ½	2	10 ½	8	7																3.75
3																											
4																											
5																											

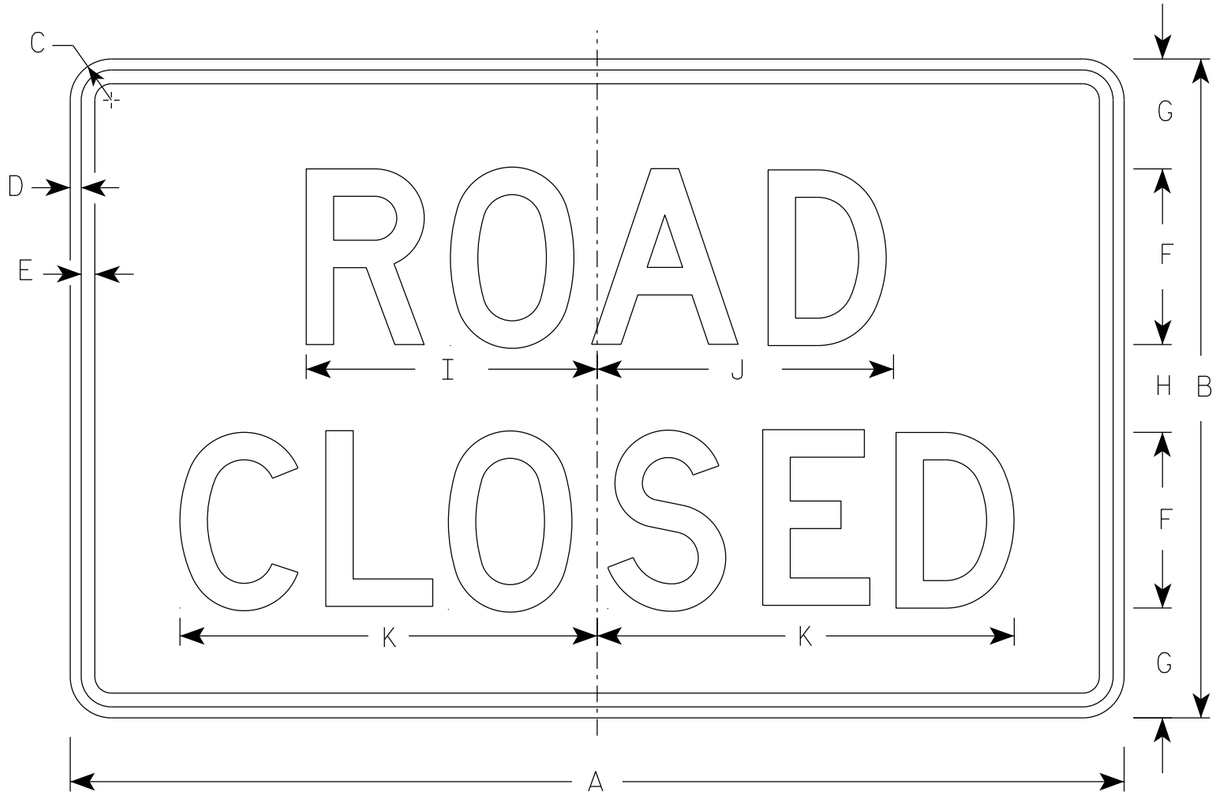
STANDARD SIGN
R9-9A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9A.2

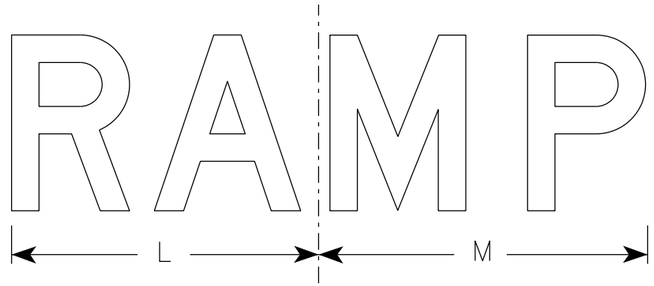
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 185 | E



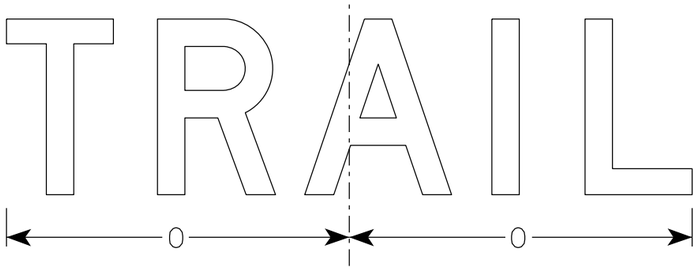
R11-2

NOTES

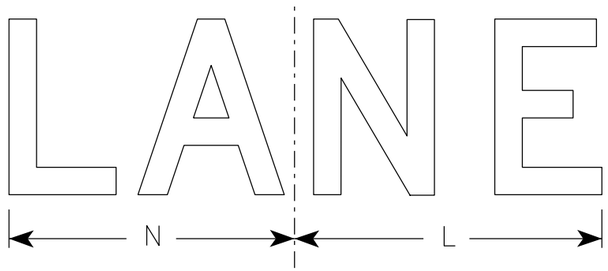
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



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												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												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												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												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												10.0

STANDARD SIGN
R11-2

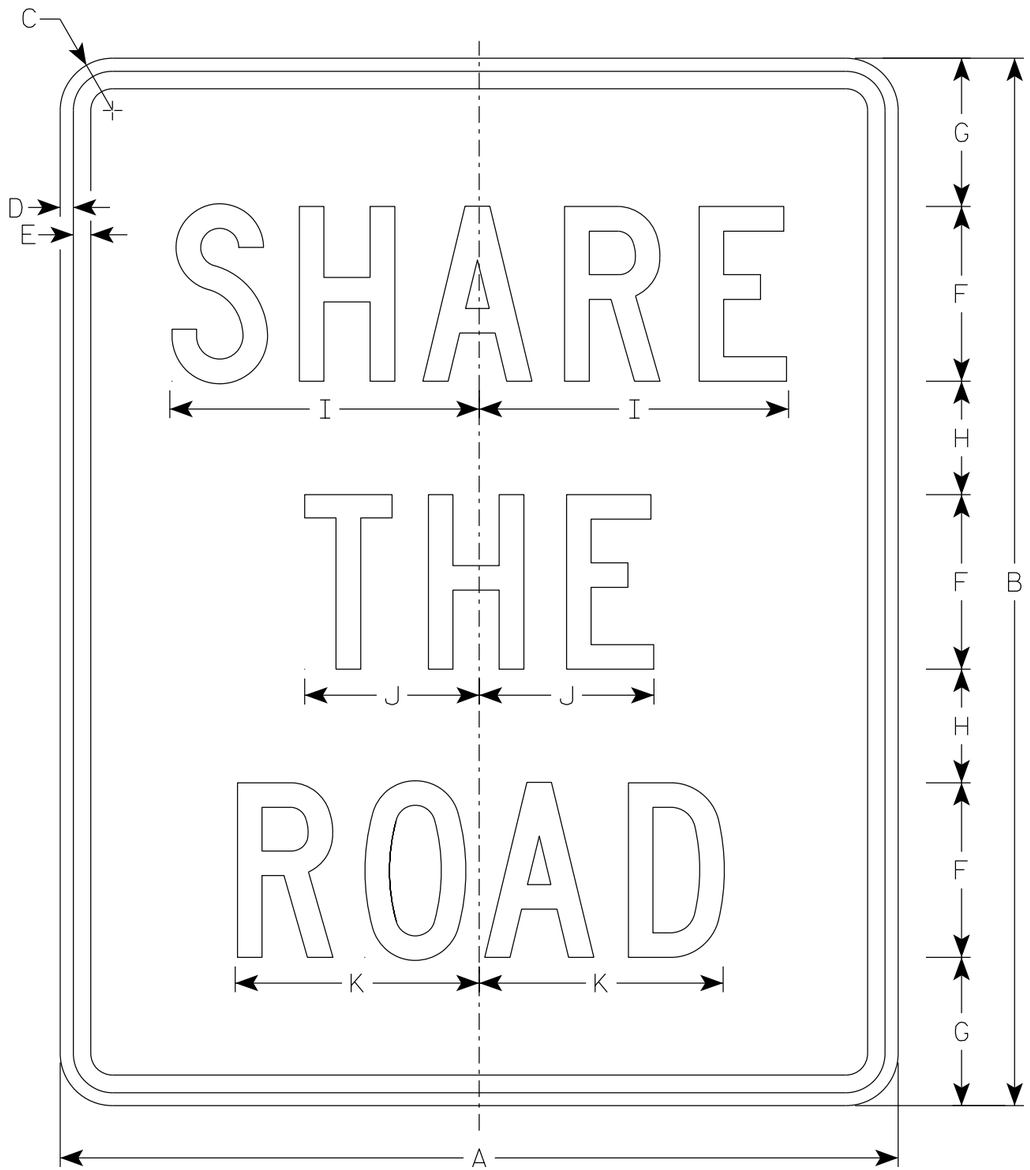
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R112.dgn PLOT DATE : 5-FEB 2024 2:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



W16-1P

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
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																											
2S	18	24	1 1/2	3/8	1/2	4	3 3/8	2 5/8	6 5/8	3 3/4	5 3/8																3.0
2M	18	24	1 1/2	3/8	1/2	4	3 3/8	2 5/8	6 5/8	3 3/4	5 3/8																3.0
3	24	30	1 1/2	3/8	1/2	5	4 1/4	3 1/4	8 7/8	5	7																5.0
4	24	30	1 1/2	3/8	1/2	5	4 1/4	3 1/4	8 7/8	5	7																5.0
5																											

STANDARD SIGN
W16-1P

WISCONSIN DEPT OF TRANSPORTATION

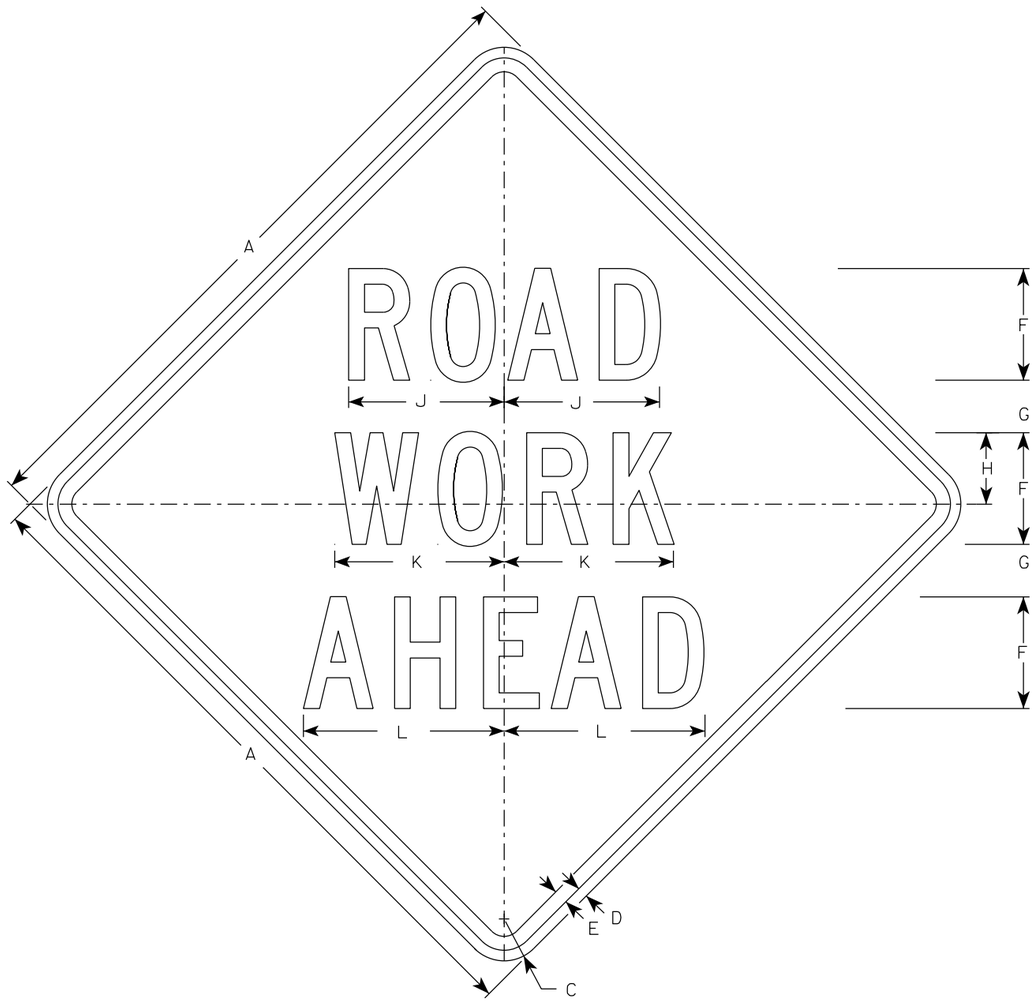
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/8/2024 PLATE NO. W16-1P.3

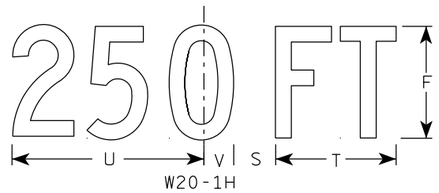
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 187 E

NOTES

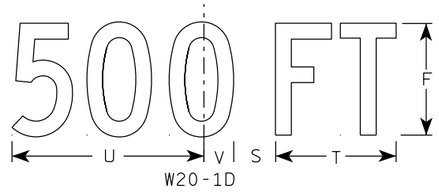
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1A



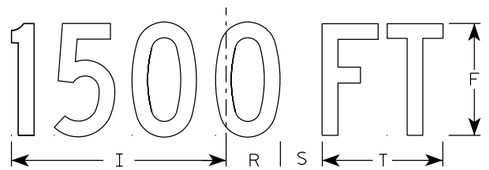
W20-1H



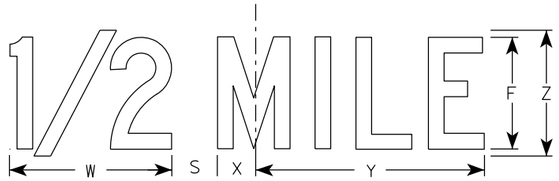
W20-1D



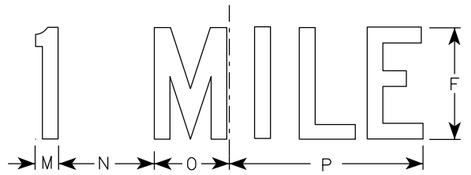
W20-1C



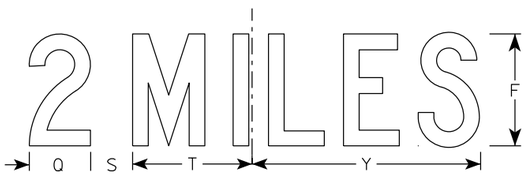
W20-1B



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:

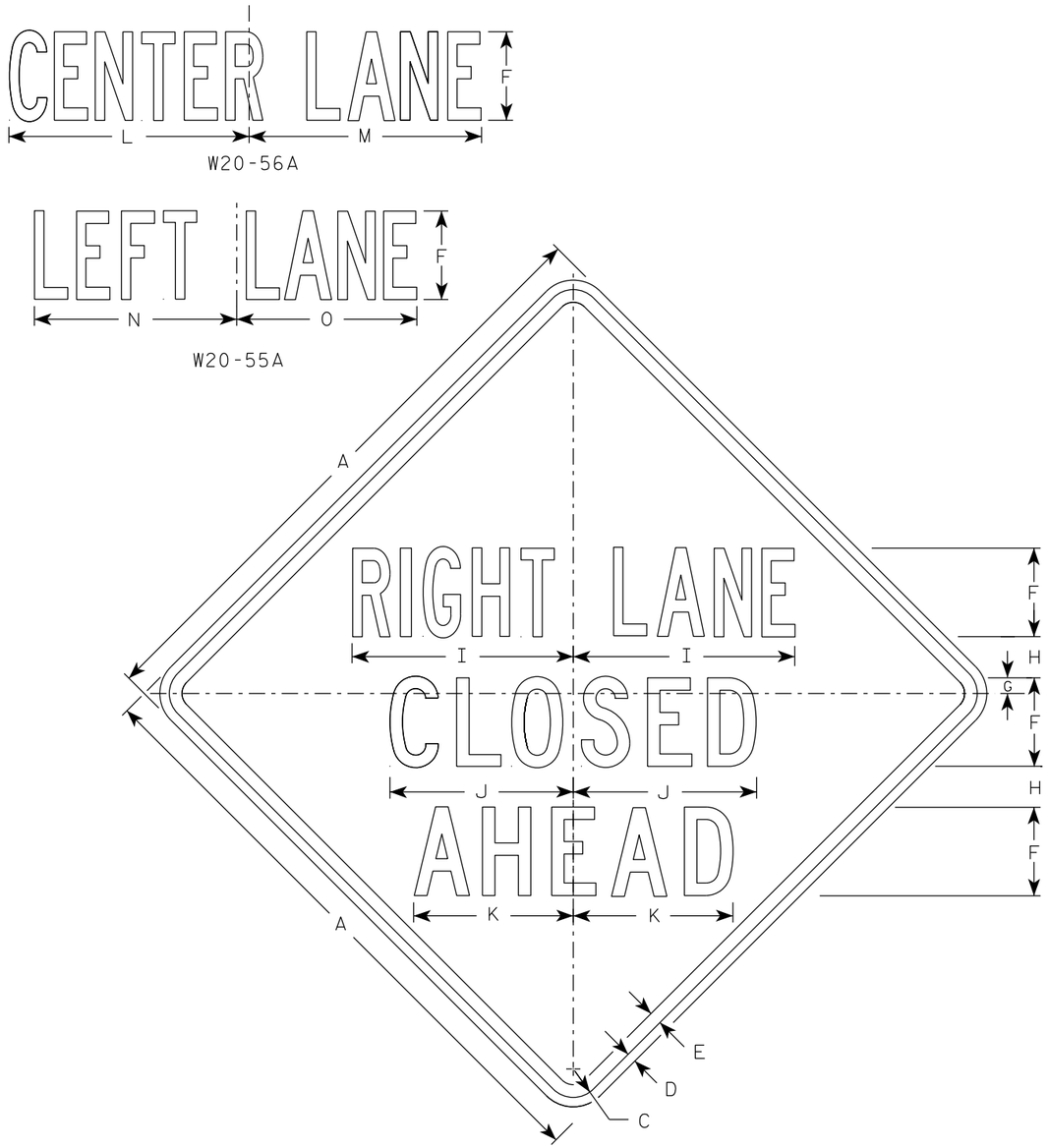
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 10-JAN 2024 11:16 PLOT BY : dotc4c

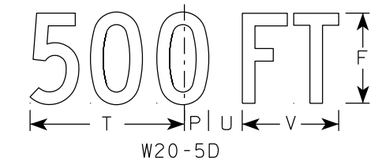
WISDOT/CADDS SHEET 42

7

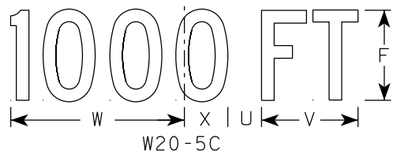
7



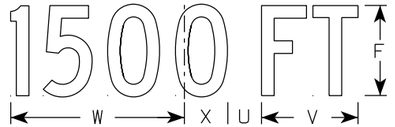
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

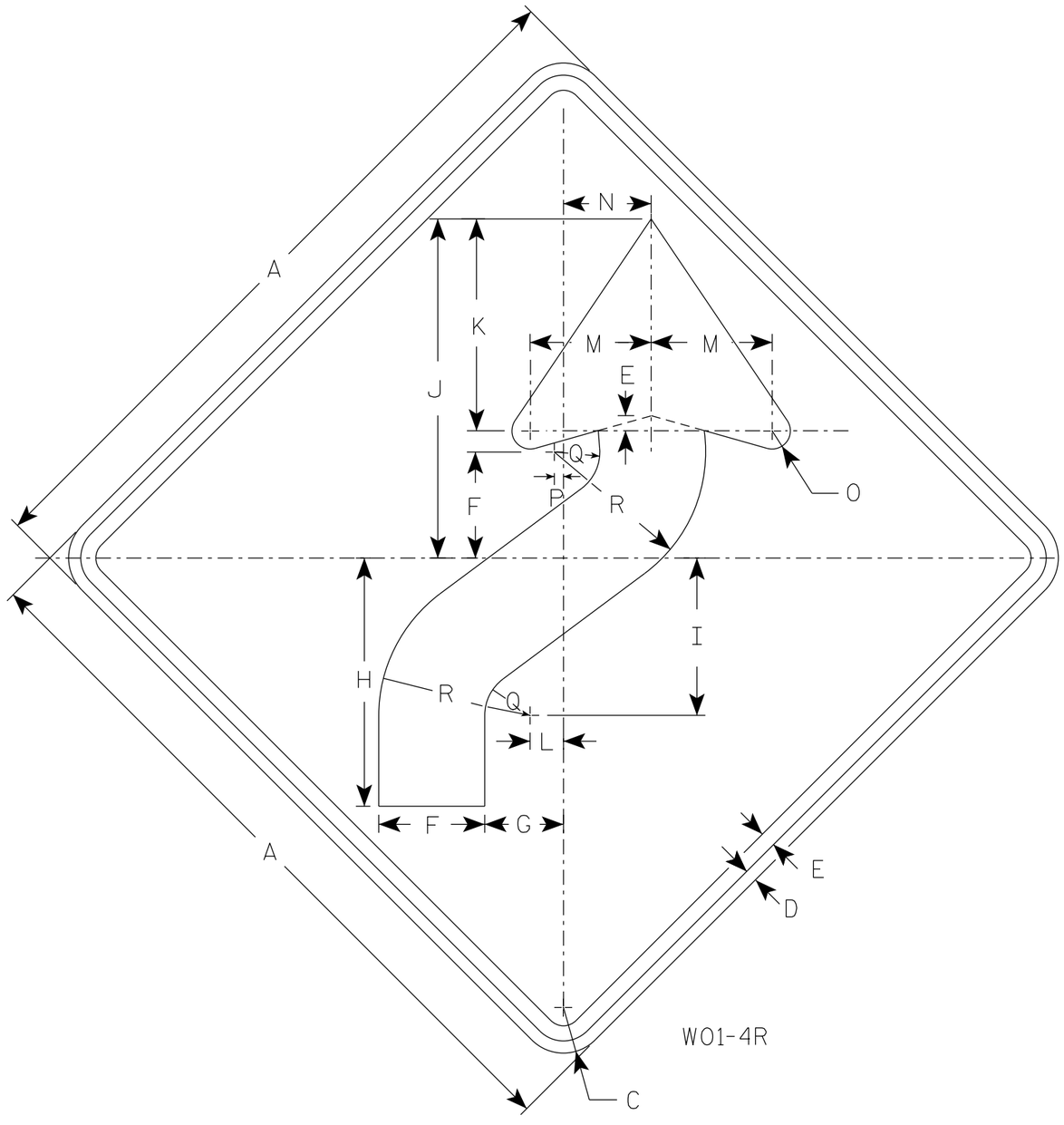
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 189 | E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		3	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

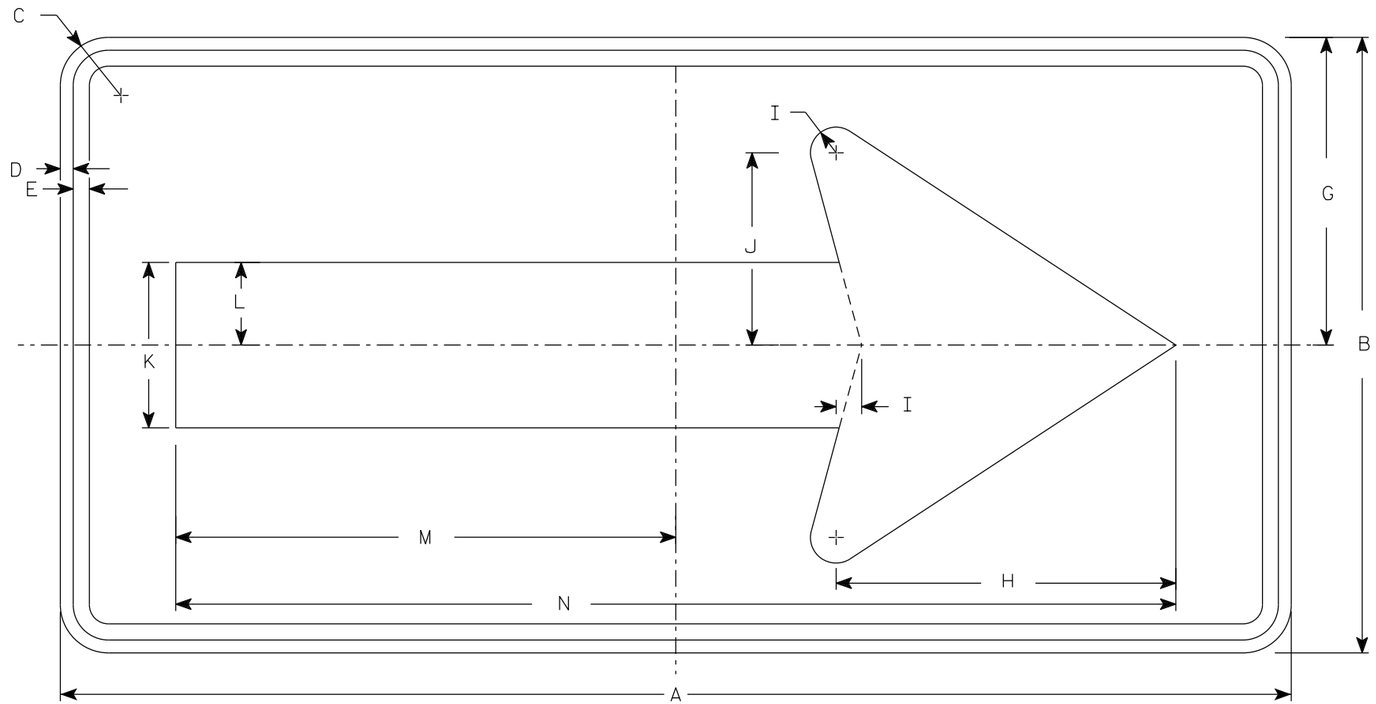
STANDARD SIGN
W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-4.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 190 E



WO1-6

NOTES

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

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	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 7/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 7/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

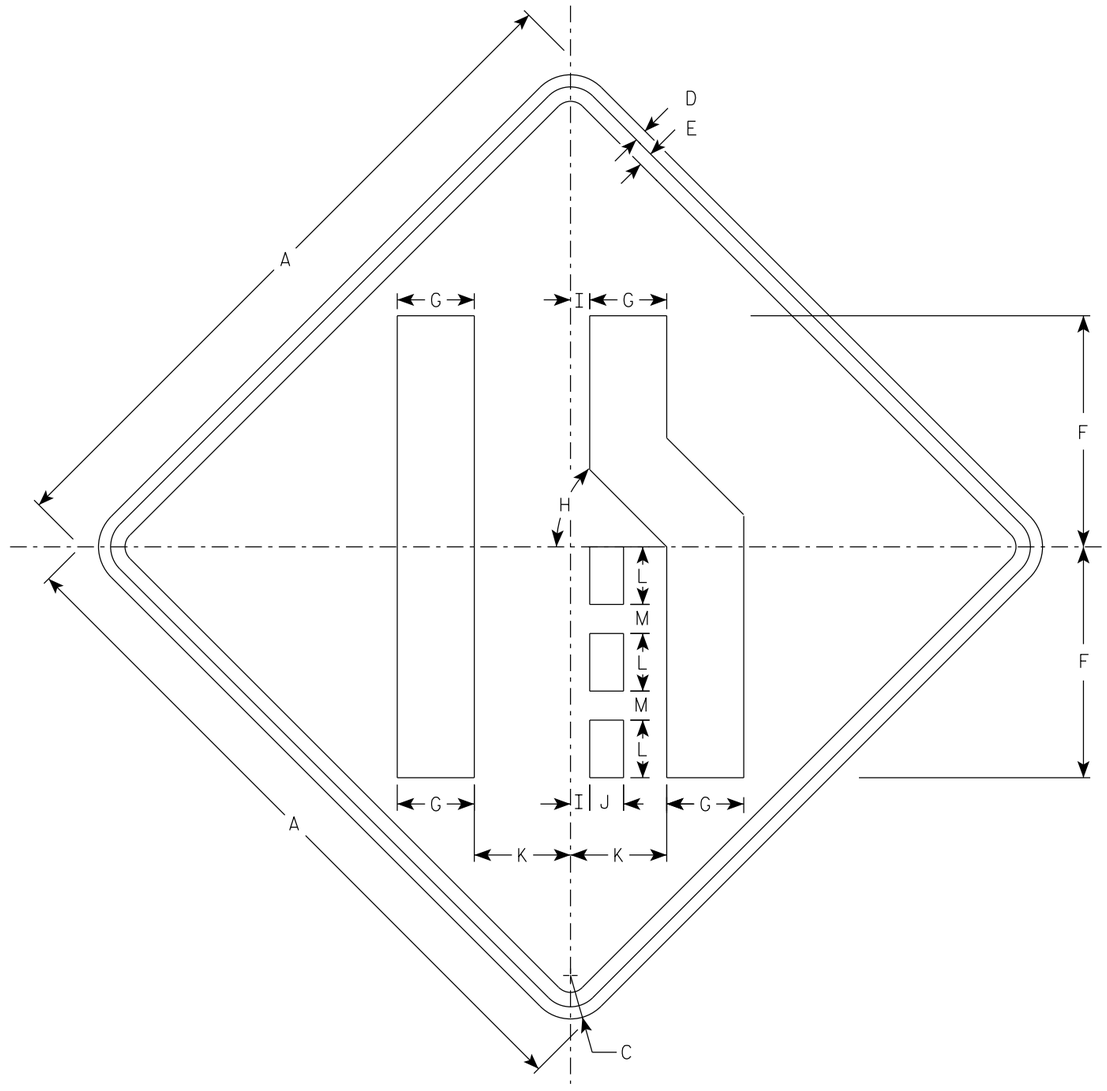
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/25/2024 PLATE NO. W04-2.2

PROJECT NO:

SHEET NO: E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W042.dgn PLOT DATE : 25-JAN 2024 9:07 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

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Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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