

WKE

PROJECT ID:
WITH: N/A

2240-14-61

COUNTY:

MILWAUKEE

MARCH 2019
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 = 264



DESIGN DESIGNATION

A.A.D.T.	2017	=	29,800
A.A.D.T.	2037	=	35,400
D.H.V.		=	3,675
D.D.		=	58/42
T.		=	5.3%
DESIGN SPEED		=	45MPH
ESALS		=	3,806,300

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

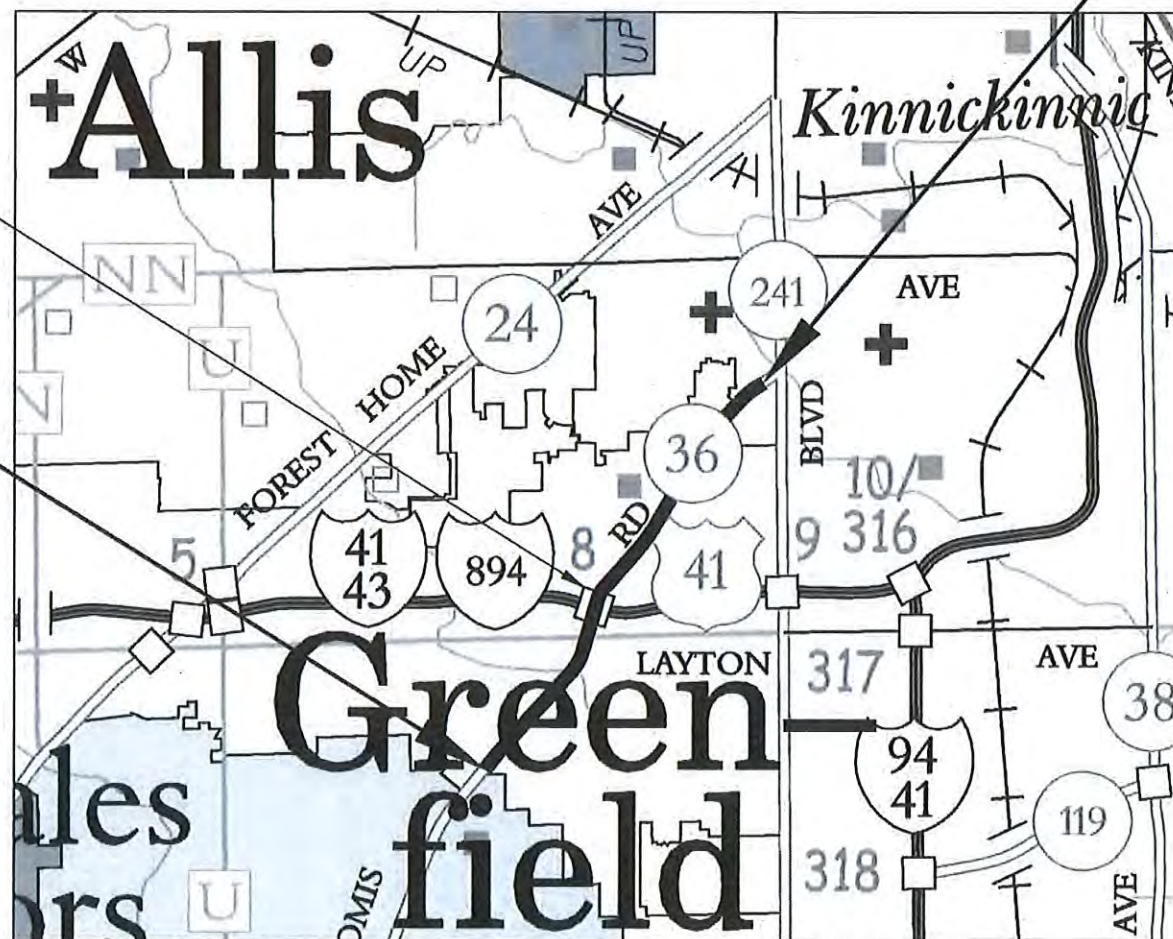
LOOMIS ROAD
SOUTH 51st STREET TO WEST FARDALE AVENUE
STH 36
MILWAUKEE COUNTY

STATE PROJECT NUMBER
2240-14-61

NET EXCEPTION TO CL LENGTH
STA 87+52 - STA 89+77

BEGIN PROJECT
STA 31+94
Y=267,023.76
X=586,832.32

END PROJECT
STA 169+60



R-21-E

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 2.565 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NGVD29

STATE PROJECT

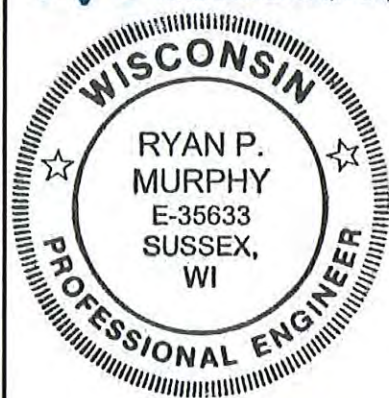
2240-14-61

FEDERAL PROJECT

PROJECT

CONTRACT

ORIGINAL PLANS PREPARED BY:



DATE: 10/30/18 Ryan P. Murphy (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	OES
Designer	OES
Project Manager	MARK WILFERT
Regional Examiner	SE REGION
Regional Supervisor	REEM SHAHIN

APPROVED FOR THE DEPARTMENT

DATE: 11-1-18 (Signature)

E

GENERAL NOTES

HMA PAVEMENT OVERLAY WILL BE PLACED IN ONE 2" LAYER

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

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

STATIONING, DISTANCES, AND OFFSETS FOR SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

RESTORATION OF EXPOSED SLOPES AND DITCHES SHALL TAKE PLACE WITHIN 5 WORKING DAYS AFTER FINISHED GRADING IS COMPLETE.

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT, OR AS DIRECTED BY THE ENGINEER.

ORDER OF SHEETS

- TITLE SHEET
- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- PERMANENT SIGNING
- TRAFFIC SIGNAL PLAN (EXISTING)
- PAVEMENT MARKING
- TRAFFIC CONTROL
- DETOUR PLAN
- ALIGNMENT DETAIL
- MISCELLANEOUS QUANTITIES
- SPECIAL SIGN DETAILS

WISDOT DESIGN CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
MARK WILFERT, P.E.
WISDOT SOUTHEAST REGION
141 N.W. BARSTOW STREET
PO BOX 798
WAUKESHA, WI 53187-0798
(262) 548-5936
MARK.WILFERT@DOT.WI.GOV

WISDOT CONTACTS

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WISCONSIN DNR

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MUNICIPAL CONTACTS

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MILWAUKEE WATER WORKS
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GREENDALE, VILLAGE OF
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CLERK
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GREENFIELD, CITY OF
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ENGINEERING DEPARTMENT
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GREENFIELD, WI 53220
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MFLYNN@MCTS.ORG

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ATILLMAN@MCTS.ORG

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OES - ONEIDA ENGINEERING SOLUTIONS
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UTILITY CONTACTS

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(920) 621-6903
ALEX.DANTINNE@WE-ENERGIES.COM

WE ENERGIES (GAS)
ALEX DANTINNE, PROJECT MANAGER
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(920) 621-6903
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CHARTER COMMUNICATIONS - COMMUNICATION LINE
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PETE.KRUZELA@CHARTER.COM

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MOLSON@ATCLLC.COM

AT&T LEGACY - COMMUNICATION LINE
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866 ROCK CREEK ROAD
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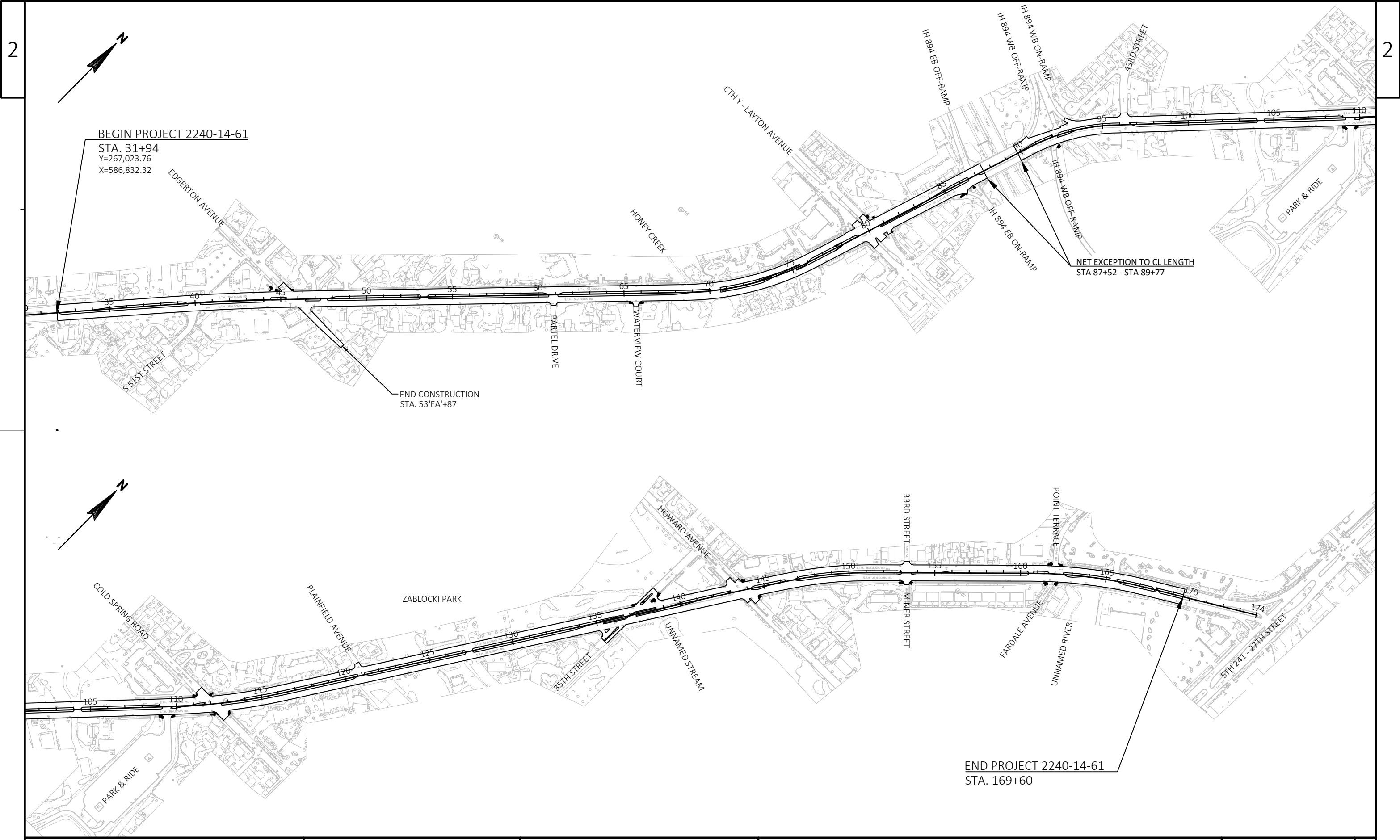
MILWAUKEE METRO SEWERAGE DIST.
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MANAGER OF ENGINEERING
260 W SEEBOTH STREET
MILWAUKEE, WI 53204
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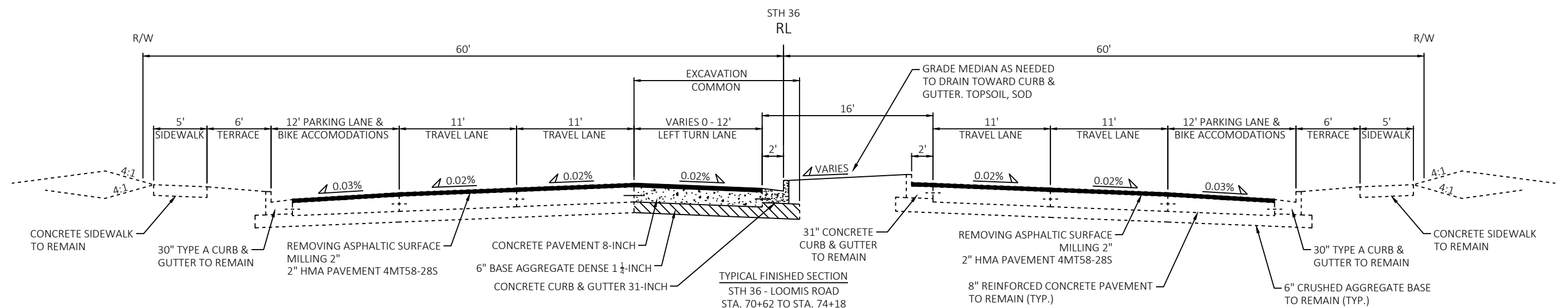
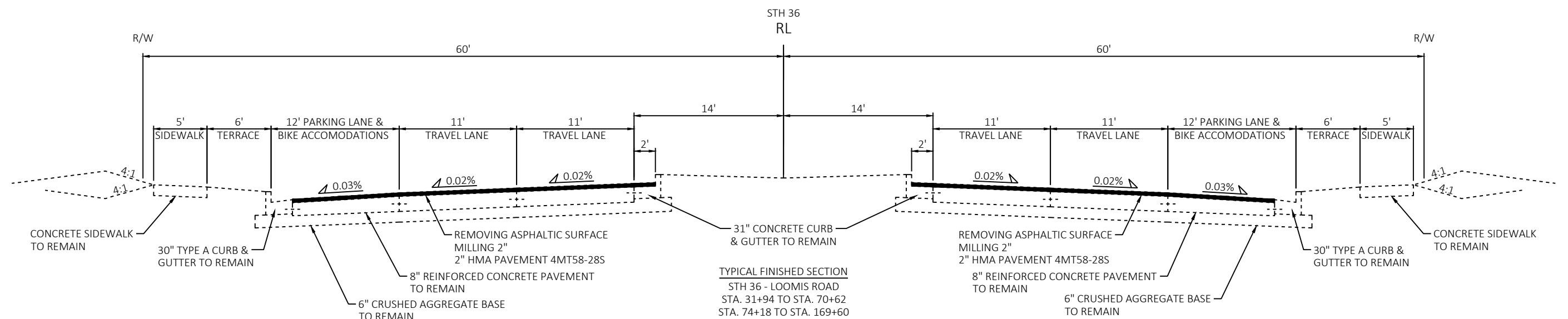
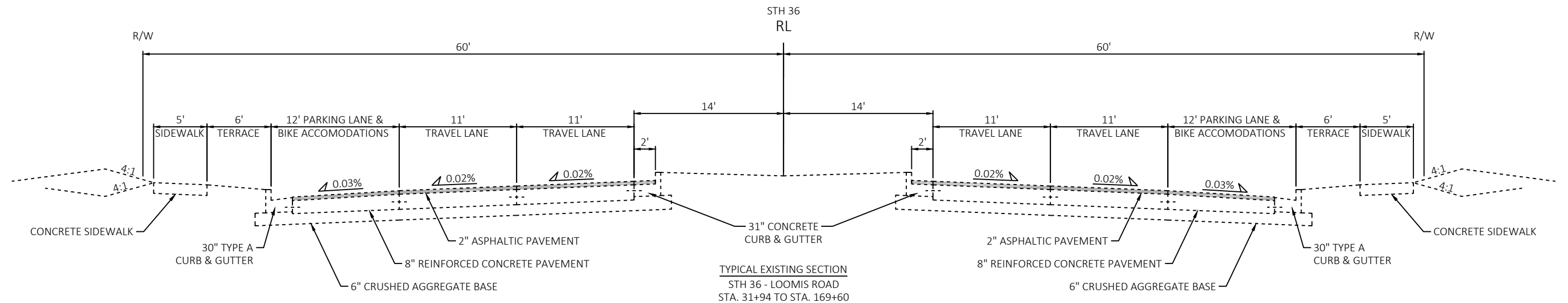
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SASHA DEMIAN
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BROOKFIELD, WI 53045
(414) 908-1042
SASHA.DEMIAN@CENTURYLINK.COM

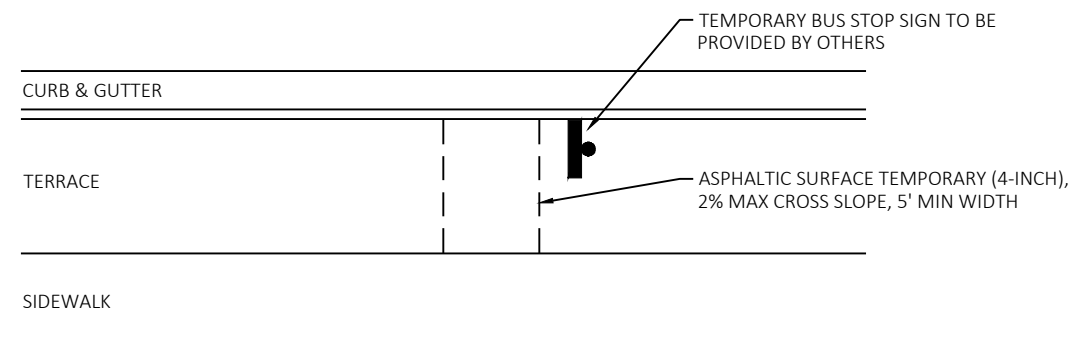
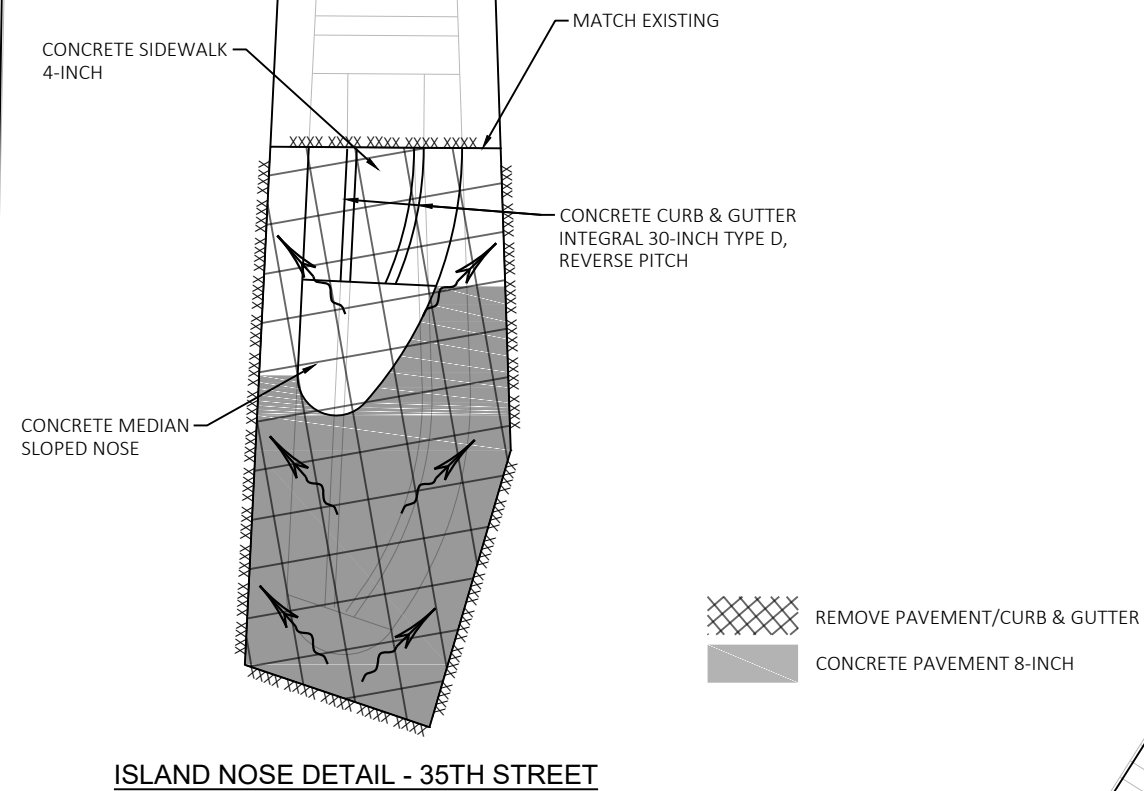
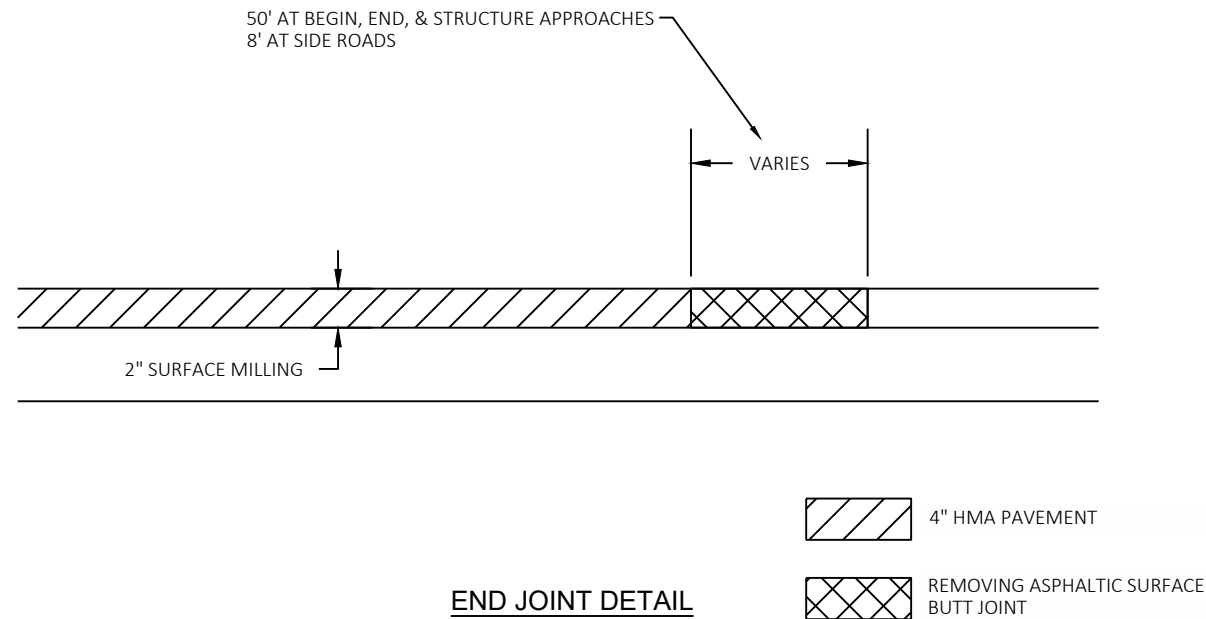
MIDWEST FIBER NETWORKS
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6070 NORTH FLINT ROAD
GLENDALE, WI 53209
(414) 672-5606
PGRAHAM@MIDWESTFIBERNETWORKS.COM



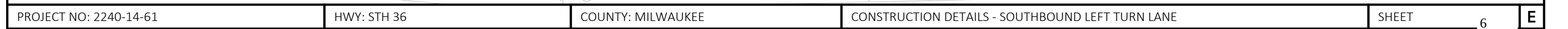
Dial  or (800)242-8511
www.DiggersHotline.com

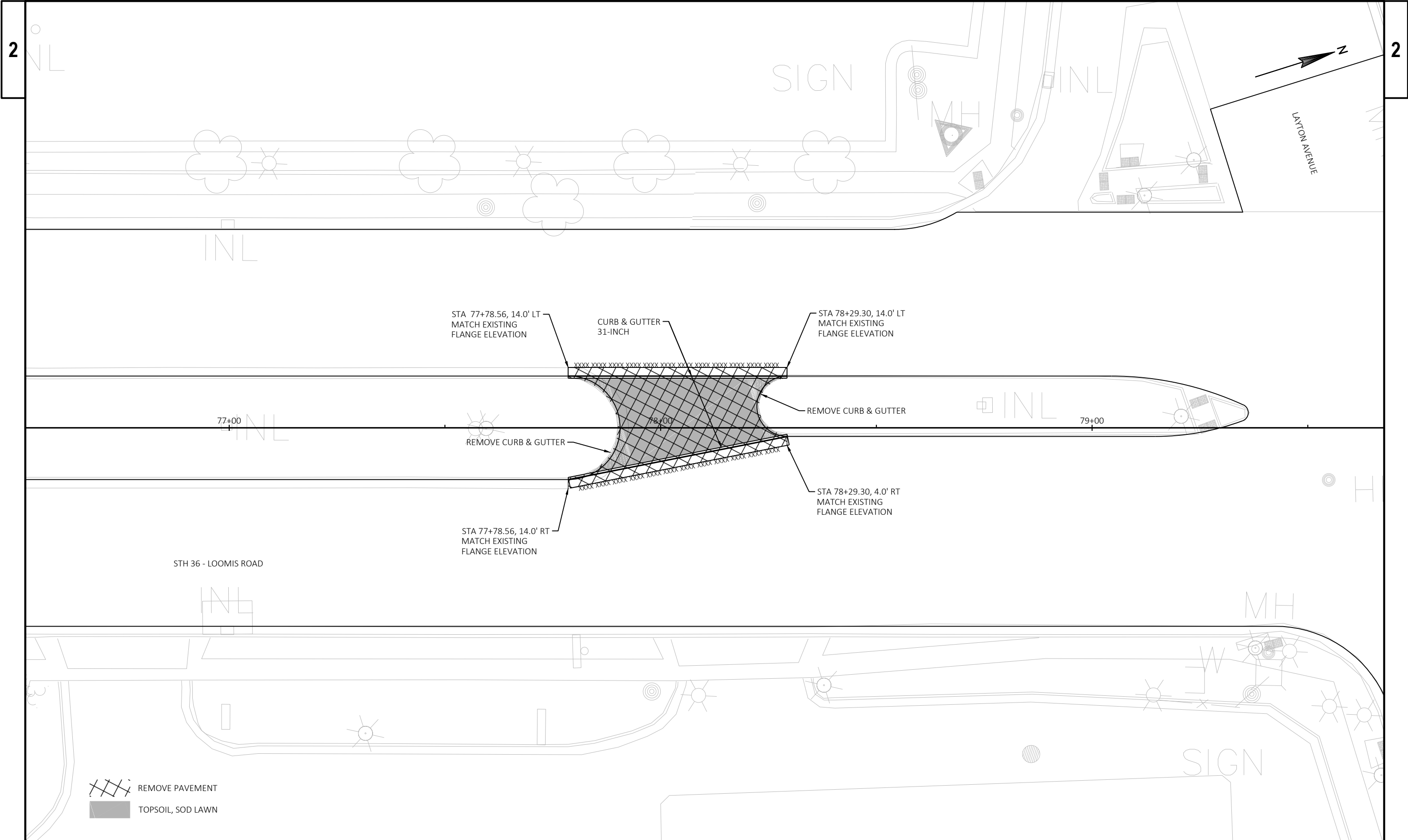




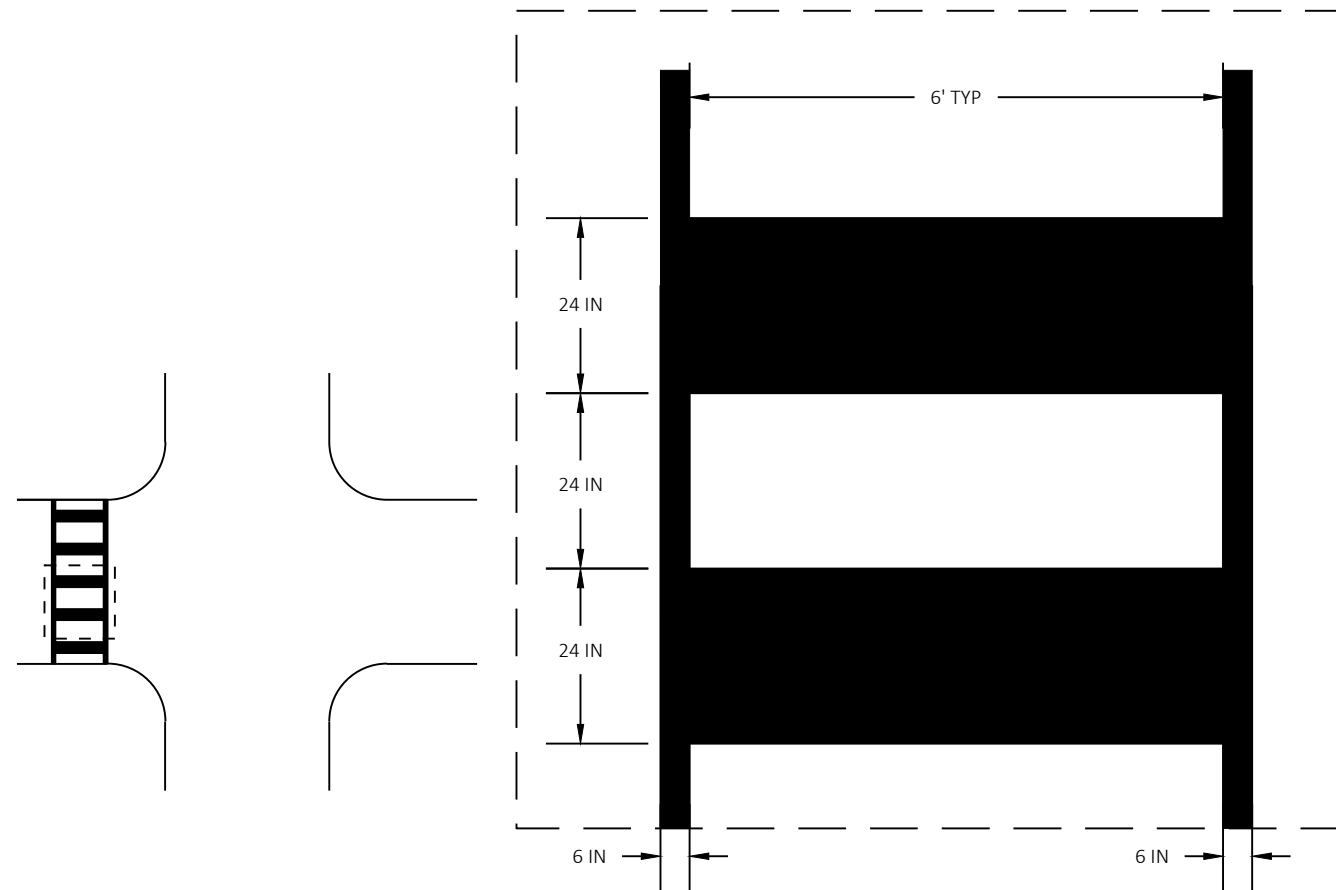


2





 REMOVE PAVEMENT
 TOPSOIL, SOD LAWN

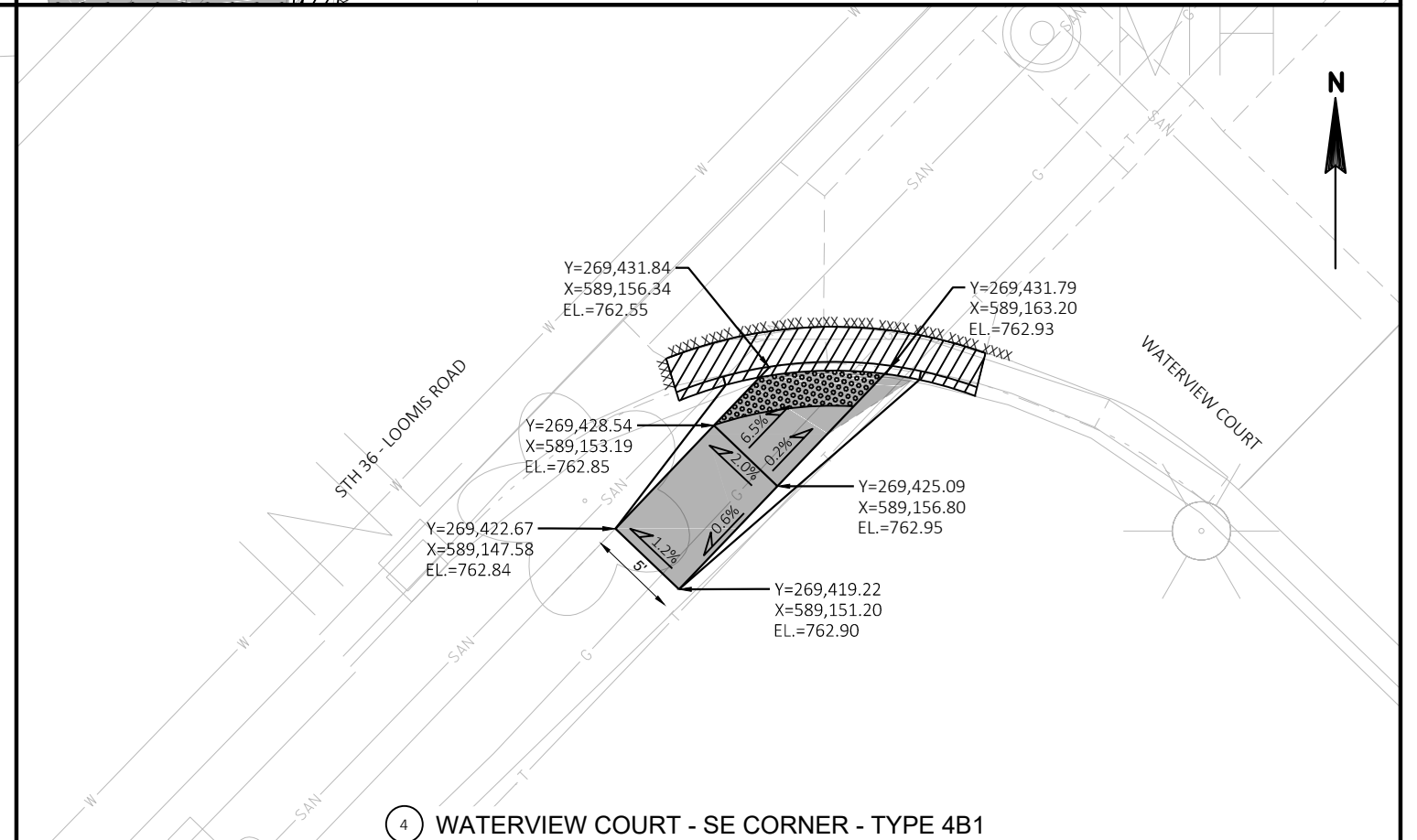
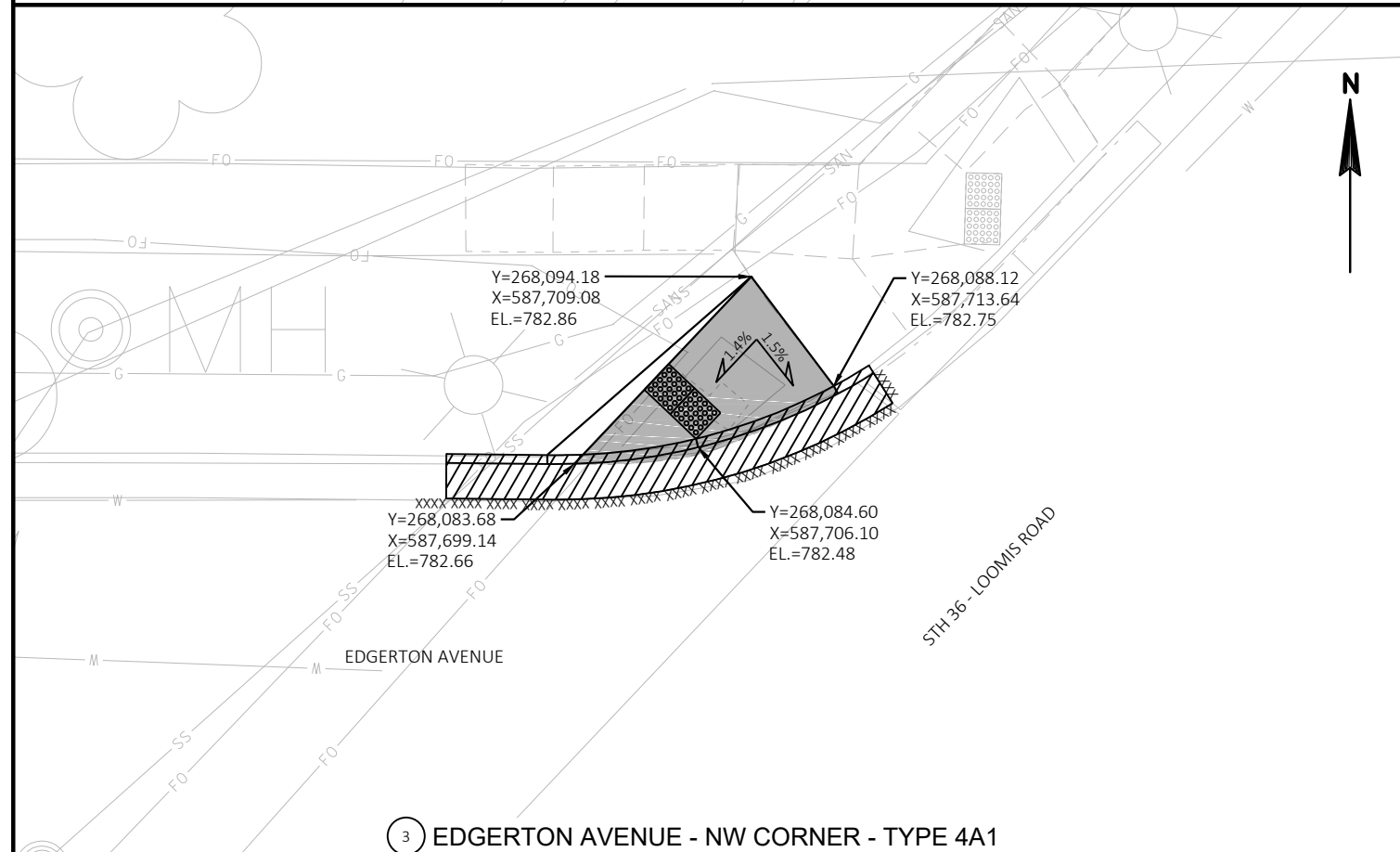
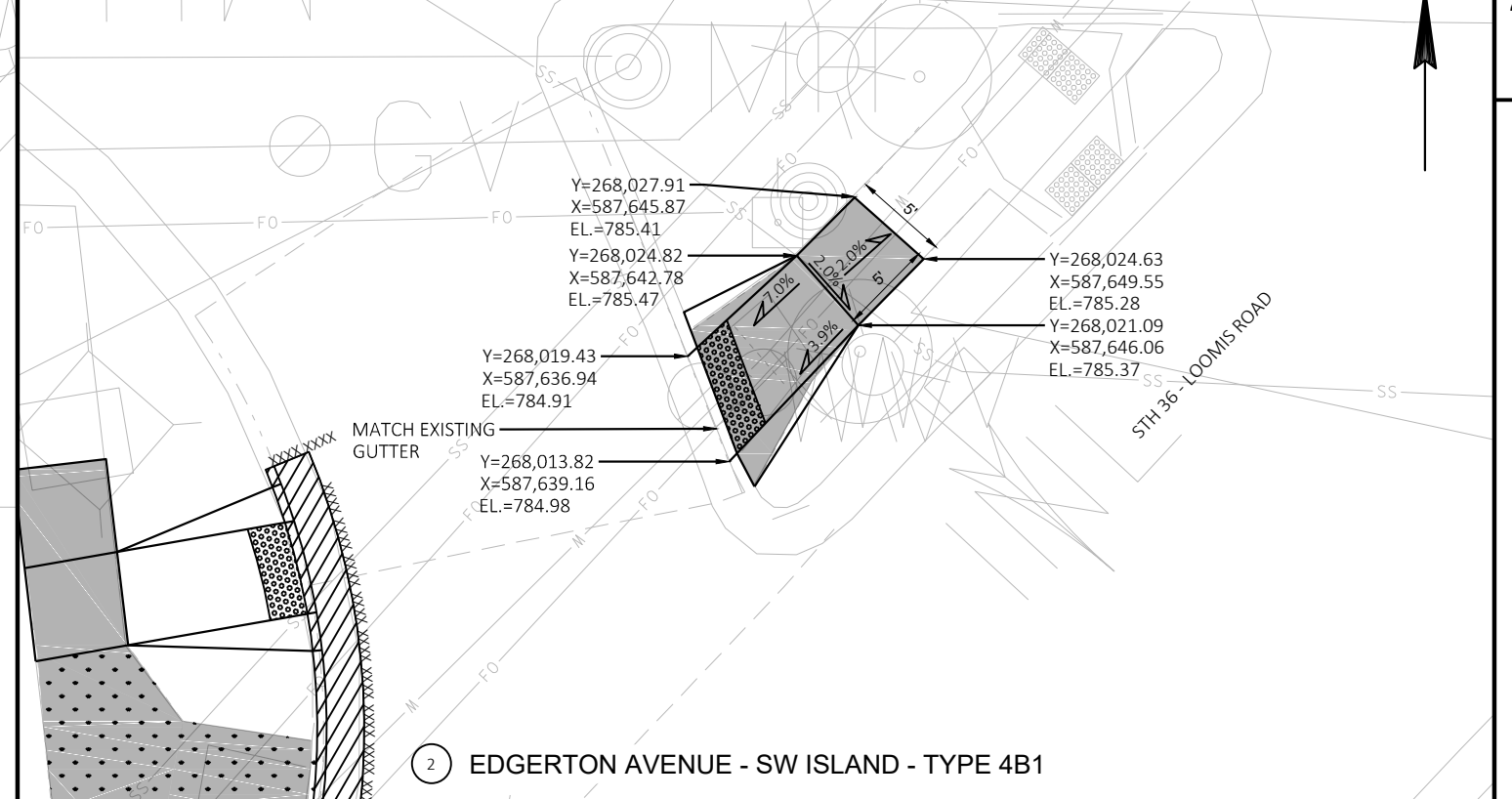
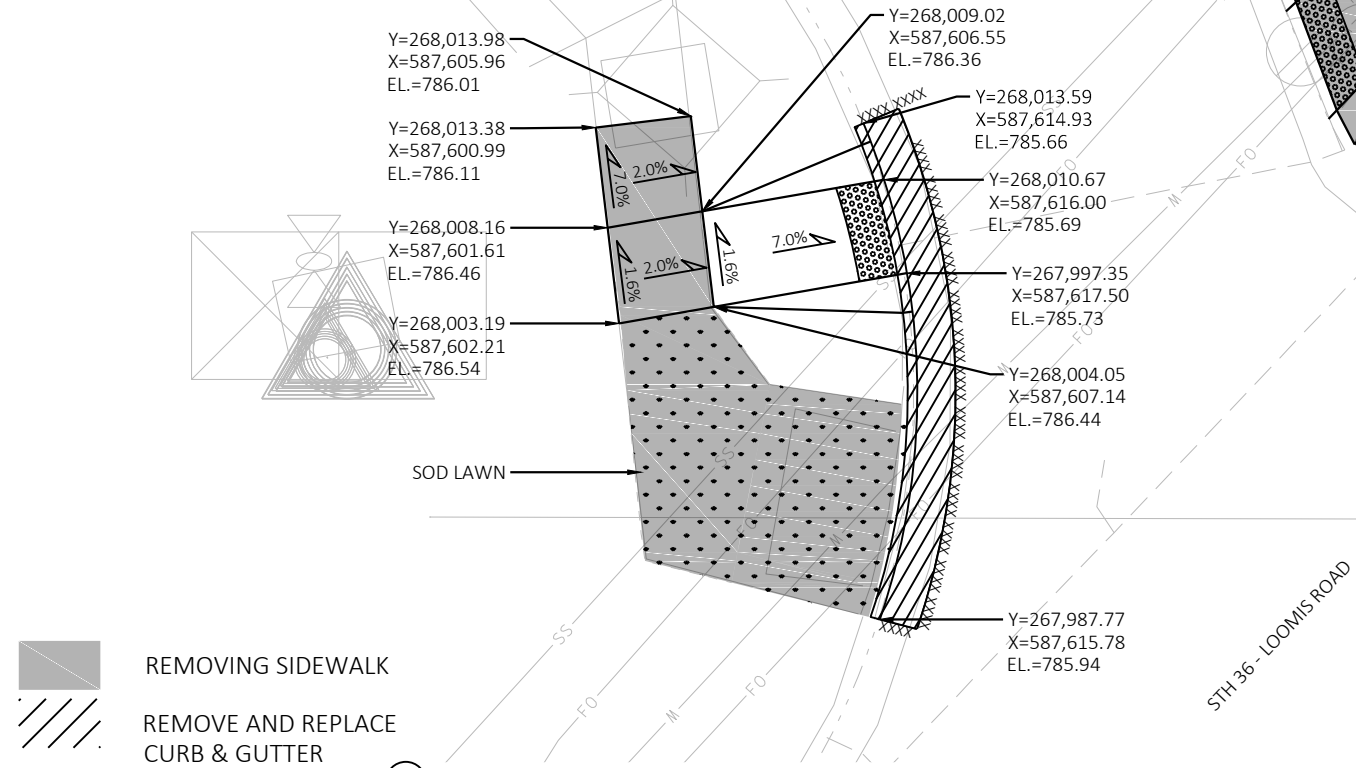


- GENERAL NOTES:
1. PAVEMENT MARKING SHALL BE WHITE REFLECTIVE EPOXY
 2. NUMBER OF PAVEMENT BARS DETERMINED BY ROADWAY WIDTH

CROSSWALK PAVEMENT MARKING

2

2



PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

CONSTRUCTION DETAILS - CURB RAMP DETAILS

SHEET

9

E

FILE NAME : Q:\2010 PROJECTS\2010078 - STH 36\AUTOCAD\PLANSET\021002_CD.DWG
LAYOUT NAME - 01

PLOT DATE : 10/12/2018 8:35 AM

PLOT BY : PATRICK SMITH

PLOT NAME :

PLOT SCALE : 1 IN:10 FT

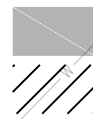
WISDOT/CADDs SHEET 42

2



STH 36 - LOOMIS ROAD

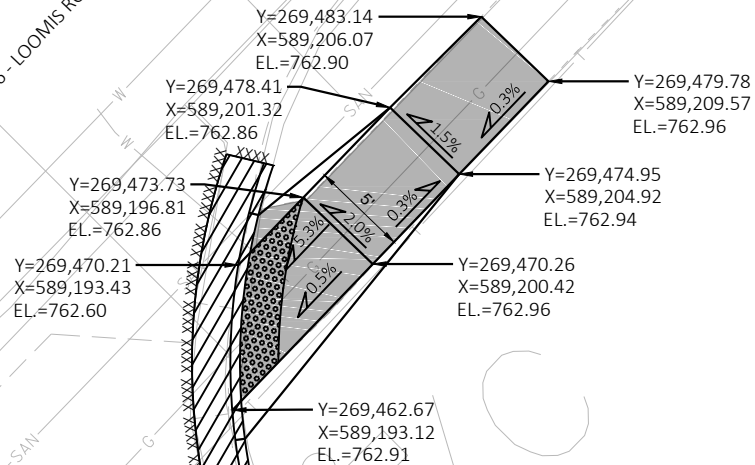
WATERVIEW COURT



REMOVING SIDEWALK
REMOVE AND REPLACE
CURB & GUTTER

5

WATERVIEW COURT - NE CORNER - TYPE 4B1



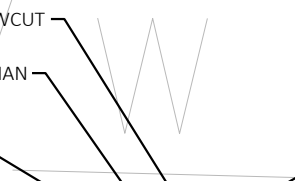
2

SAWCUT
CONCRETE CURB PEDESTRIANY=270764.00
X=589771.55
EL.=778.47Y=270,764.13
X=589,767.39
EL.=778.74Y=270,759.19
X=589,767.17
EL.=778.60Y=270,759.17
X=589,771.55
EL.=778.40Y=270,754.00
X=589,771.55
EL.=778.04Y=270,764.00
X=589,776.55
EL.=778.53Y=270,764.01
X=589,780.99
EL.=778.82Y=270,759.13
X=589,780.90
EL.=778.74Y=270,759.21
X=589,776.55
EL.=778.45Y=270,753.88
X=589,776.55
EL.=778.09

CTH Y - LAYTON AVENUE

6

CTH Y - LAYTON AVENUE - NW CORNER - TYPE 3

Y=270,787.04
X=589,802.25
EL.=779.22Y=270,783.70
X=589,800.84
EL.=779.18Y=270,780.44
X=589,799.34
EL.=779.12Y=270,778.29
X=589,798.48
EL.=779.11Y=270,781.81
X=589,808.36
EL.=778.73Y=270,777.53
X=589,806.90
EL.=778.74

STH 36 - LOOMIS ROAD

7

CTH Y - LAYTON AVENUE - NW CORNER - TYPE 3

STH 36 - LOOMIS ROAD

Y=270,799.04
X=589,933.59
EL.=778.42Y=270,794.77
X=589,936.20
EL.=778.31Y=270,803.62
X=589,941.59
EL.=778.90Y=270,799.04
X=589,943.66
EL.=778.68

8

CTH Y - LAYTON AVENUE - NE CORNER - TYPE 1

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

CONSTRUCTION DETAILS - CURB RAMP DETAILS

SHEET

10

E

FILE NAME : Q:\2010 PROJECTS\2010078 - STH 36\AUTOCAD\PLANSET\021002_CD.DWG
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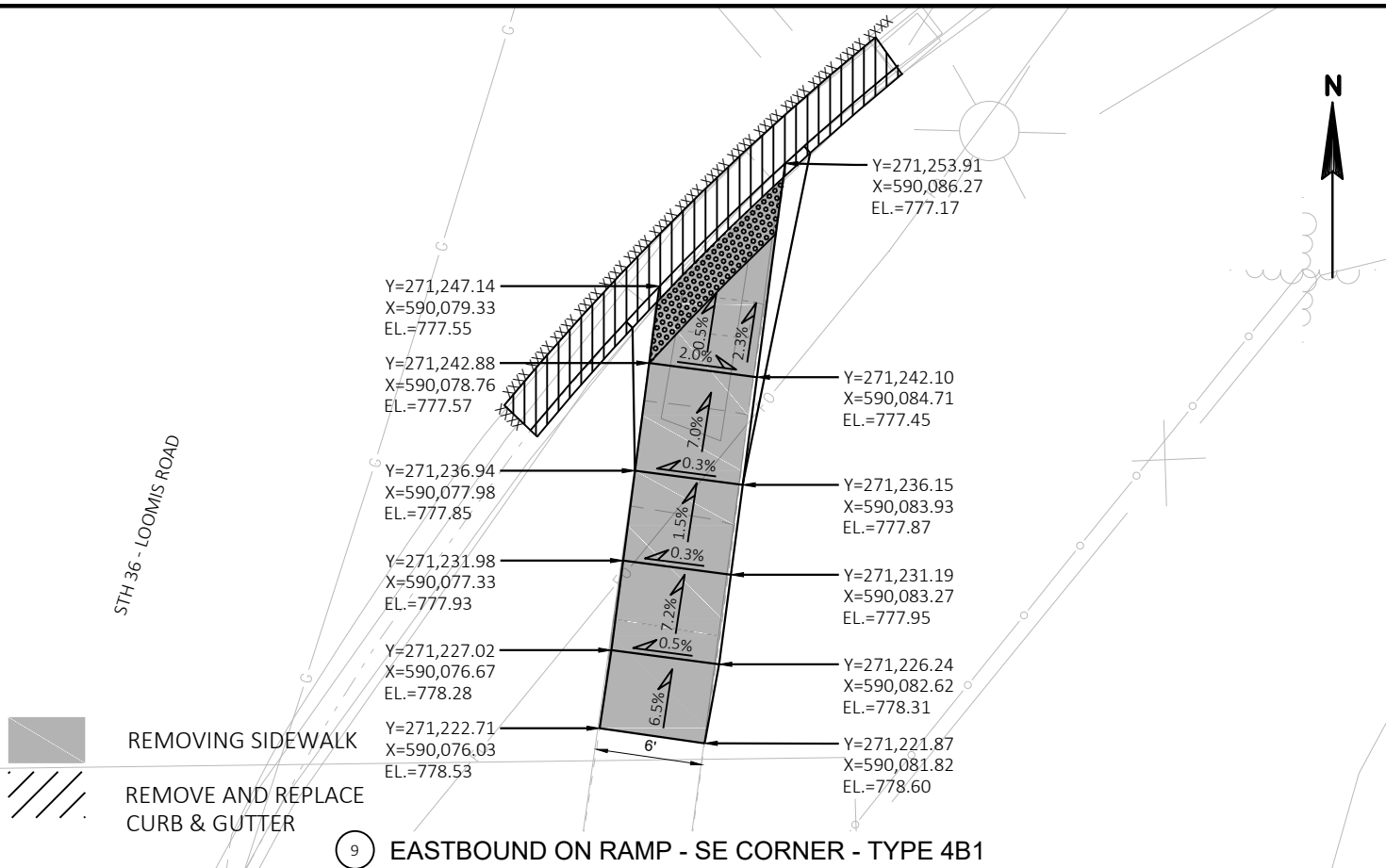
PLOT BY : PATRICK SMITH

PLOT NAME :

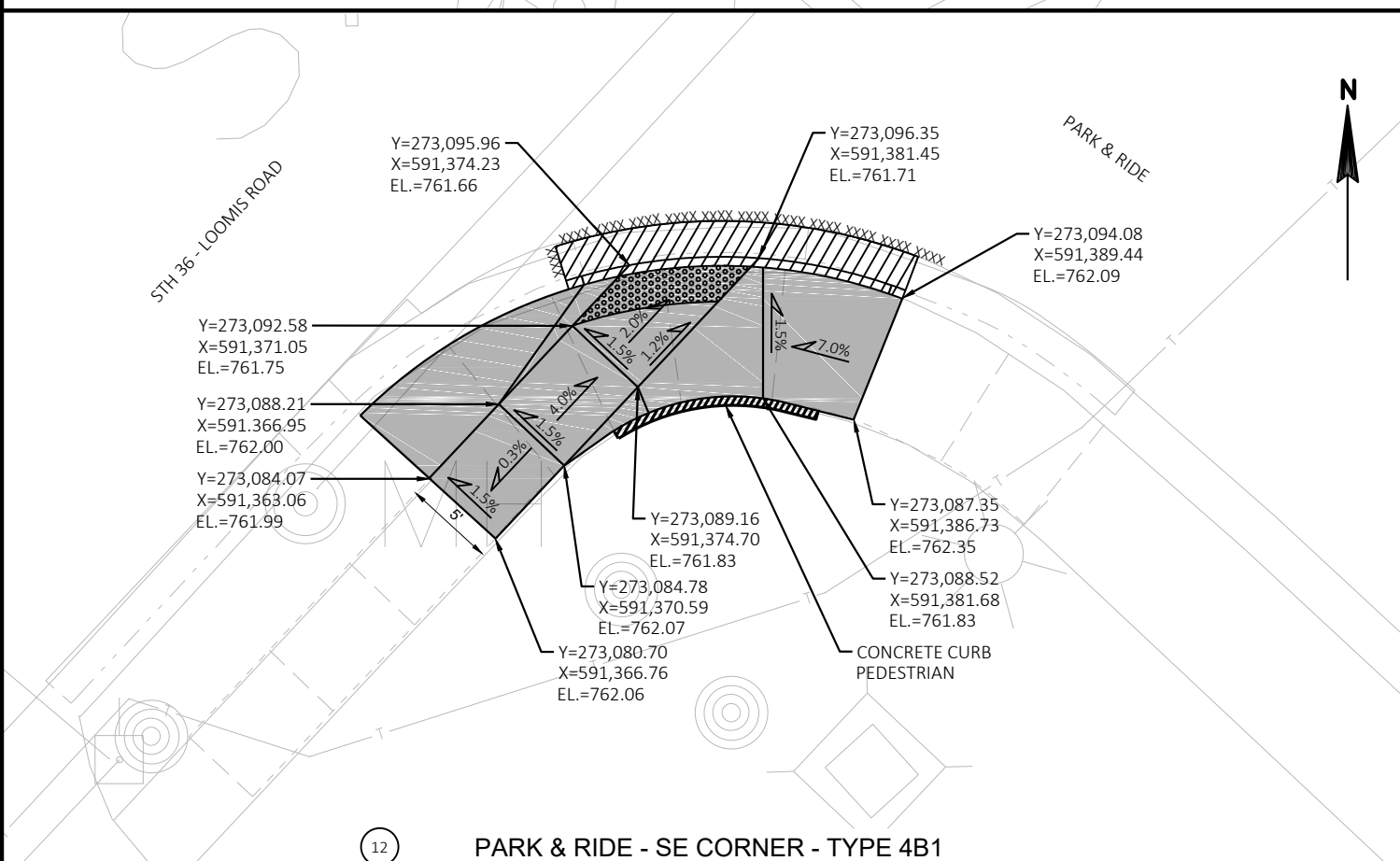
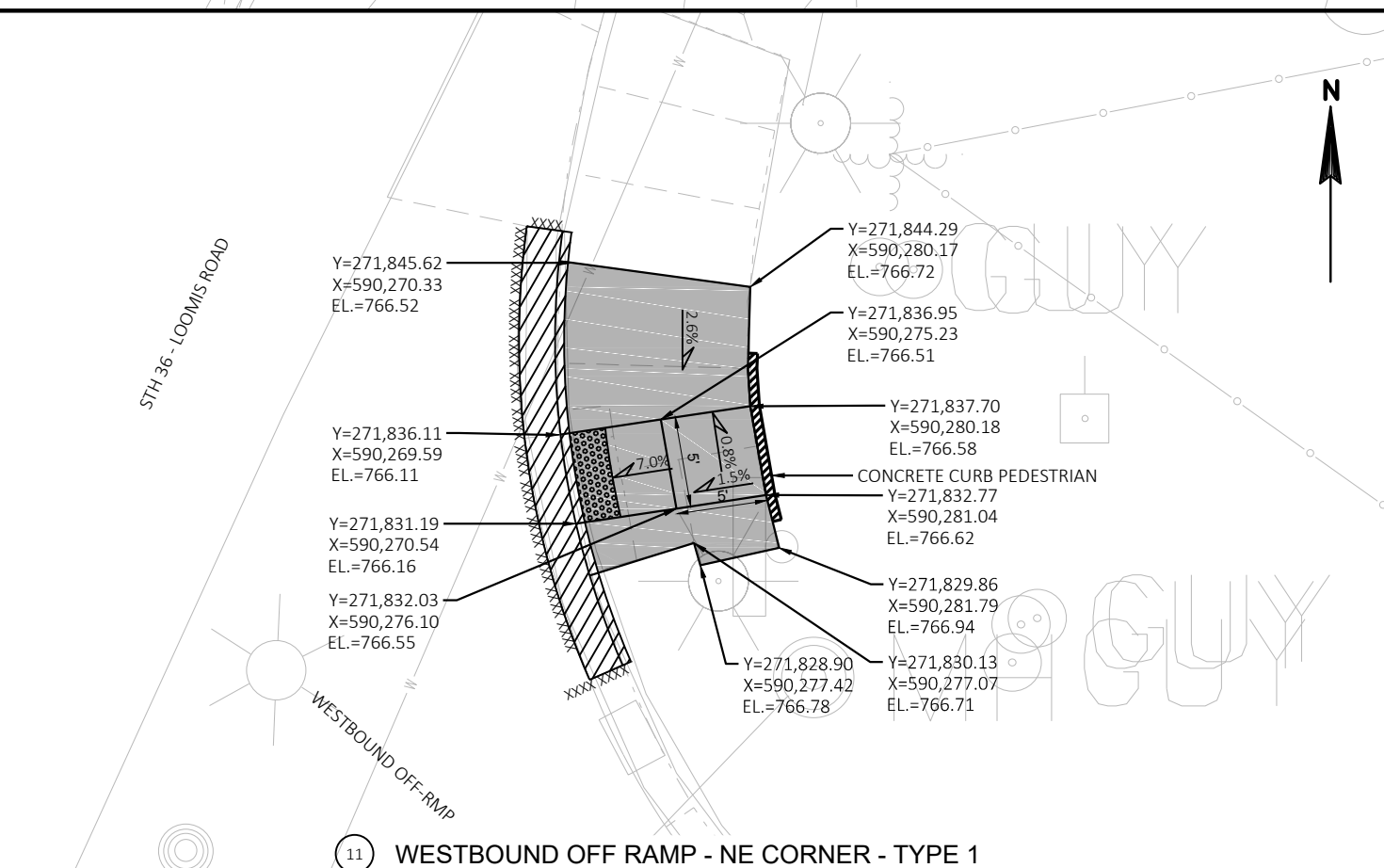
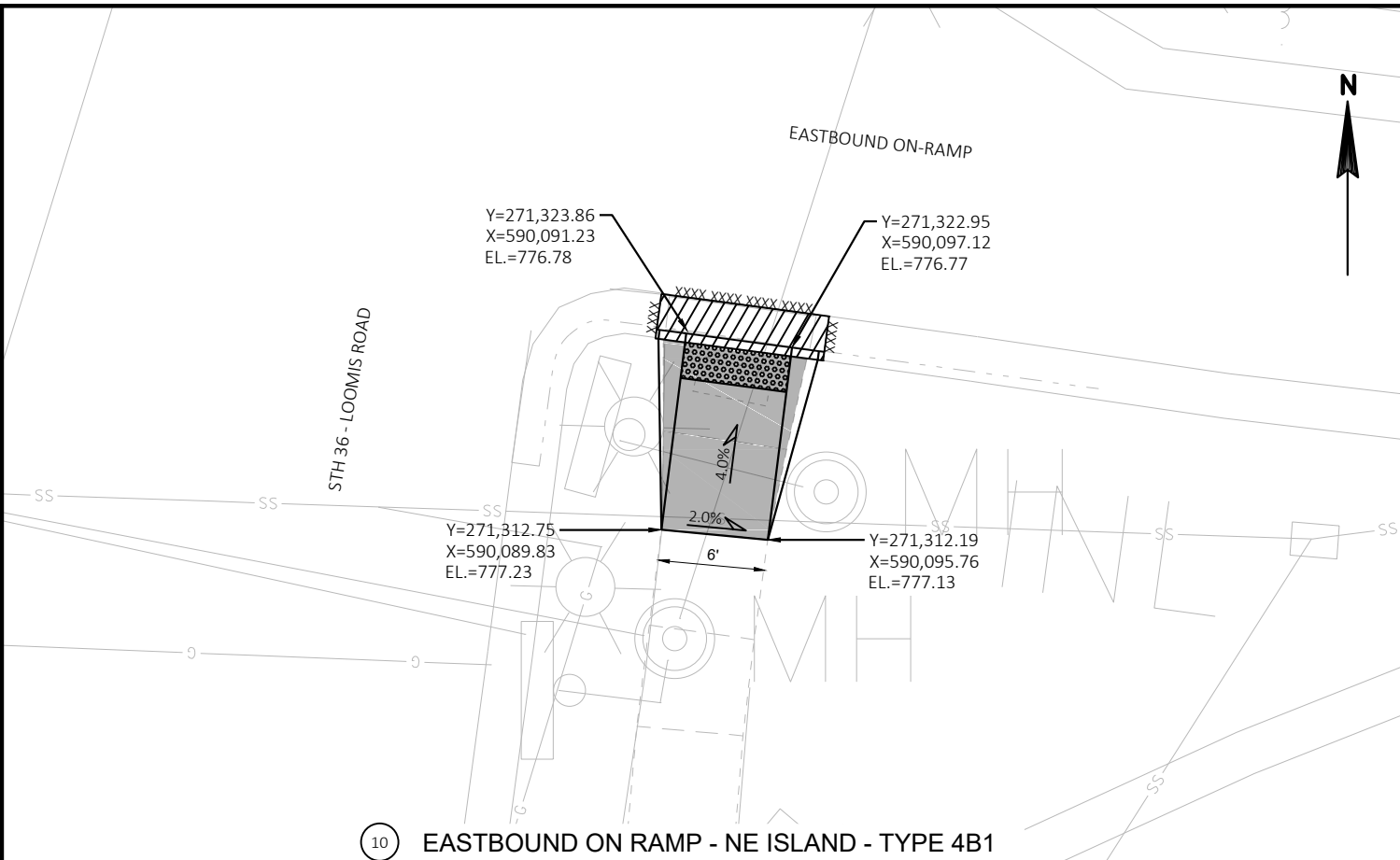
PLOT SCALE : 1 IN:10 FT

WISDOT/CADDs SHEET 42

2



2



PROJECT NO: 2240-14-61

HWY: STH 36

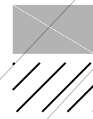
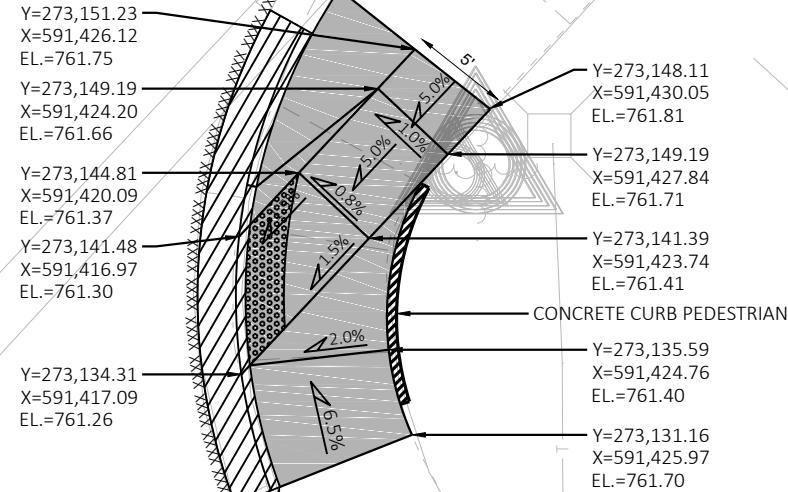
COUNTY: MILWAUKEE

CONSTRUCTION DETAILS - CURB RAMP DETAILS

SHEET

11

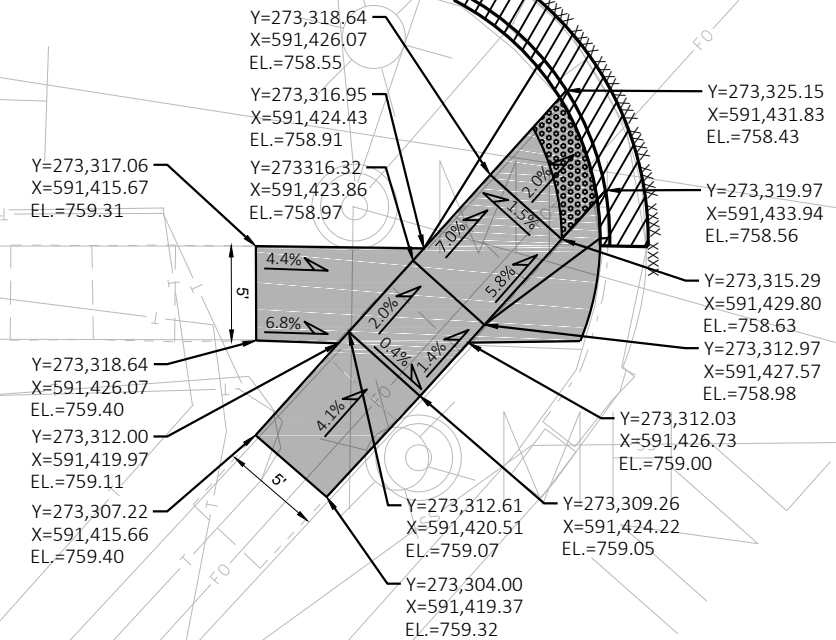
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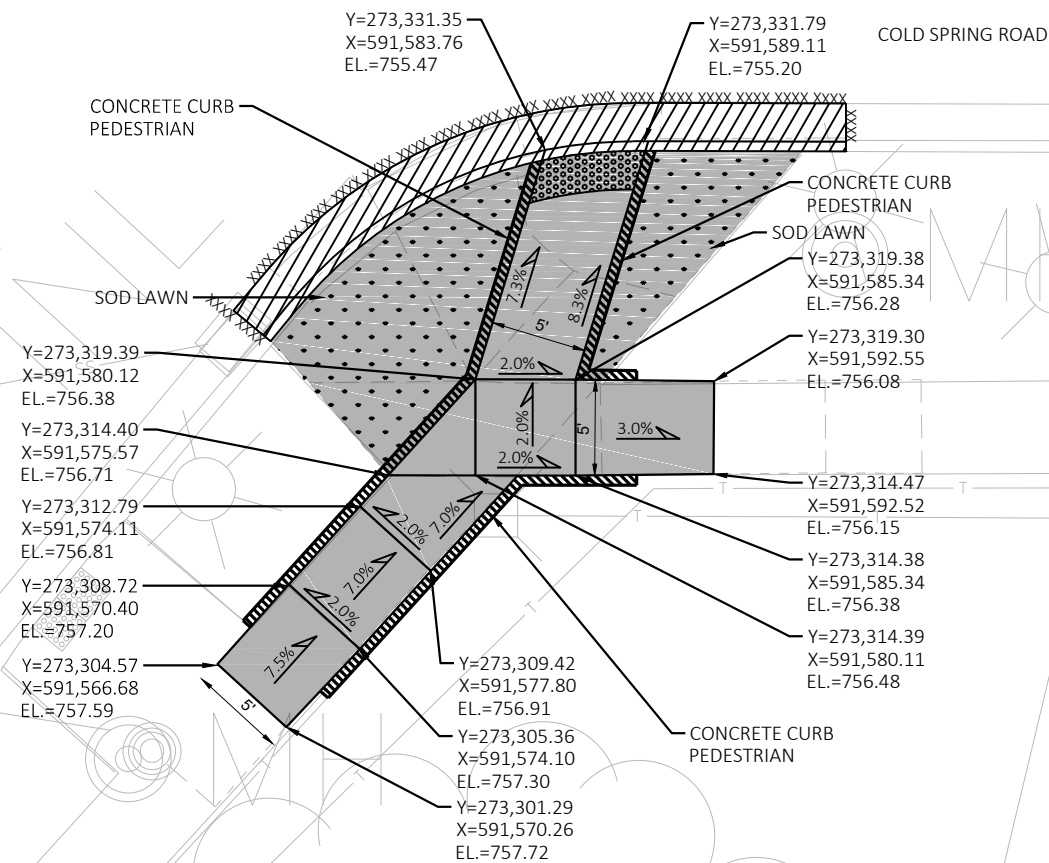
REMOVING SIDEWALK

REMOVE AND REPLACE CURB & GUTTER

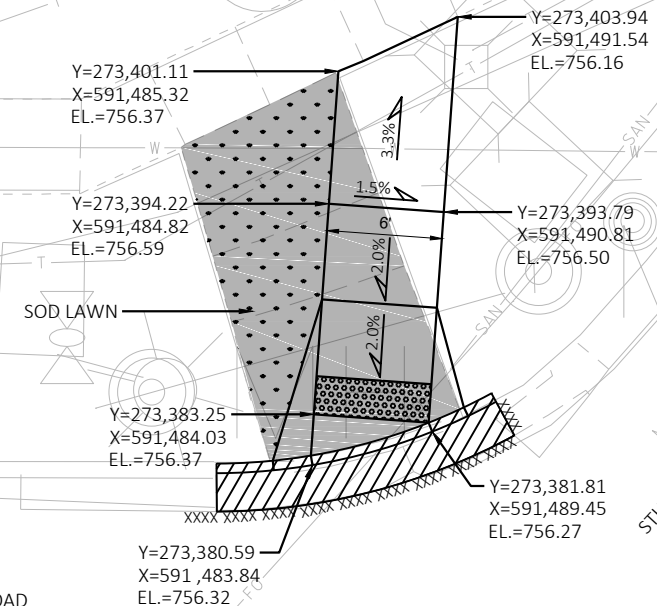
13 PARK & RIDE - NE CORNER - TYPE 4B1



14 COLD SPRING ROAD - SW CORNER - TYPE 1



15 COLD SPRING ROAD - SE CORNER - TYPE 3



16 COLD SPRING ROAD - NW CORNER - TYPE 1

2

STH 36 - LOOMIS ROAD

ADJUST MANHOLE

Y=273,399.15
X=591,632.22
EL.=752.57

Y=273,390.43
X=591,639.44
EL.=753.13

Y=273,386.29
X=591,634.39
EL.=752.85

Y=273,382.68
X=591,637.86
EL.=752.75

Y=273,394.40
X=591,638.18
EL.=753.20

Y=273,394.41
X=591,644.31
EL.=753.07

Y=273,394.41
X=591,646.00
EL.=752.97

Y=273,389.35
X=591,646.01
EL.=752.95

Y=273,387.03
X=591,643.17
EL.=753.03

Y=273,379.63
X=591,646.81
EL.=752.54

2.0%

2.0%

4.2%

COLD SPRING ROAD

REMOVING SIDEWALK

REMOVE AND REPLACE CURB & GUTTER

17 COLD SPRING ROAD - NE CORNER - TYPE 1

18 35TH STREET - SE CORNER - CLOSED

PEDESTRIAN CURB

Y=275,500.02
X=592,858.66
EL.=701.68

Y=275,492.28
X=592,855.49
EL.=701.98

Y=275,490.67
X=592,852.85
EL.=702.23

Y=275,485.96
X=592,849.92
EL.=701.49

Y=275,483.72
X=592,853.28
EL.=702.40

Y=275,488.03
X=592,857.10
EL.=702.16

Y=275,492.28
X=592,859.74
EL.=701.91

Y=275,497.38
X=592,862.90
EL.=701.58

Y=275,501.53
X=592,865.48
EL.=701.48

Y=275,511.31
X=592,865.67
EL.=701.50

SOD LAWN

5TH 36" LOOMIS ROAD

35TH STREET

19 35TH STREET - SW CORNER - TYPE 4B

Plan view of the NW corner of 35th Street, showing a Type 4B1 curb and gutter. The diagram includes stationing, elevations, and slope percentages for the curb, gutter, and street. A north arrow is present in the upper right corner.

Station	Elevation (EL)	Notes
Y=275,656.90 X=592,919.13	701.77	Top of curb at station 0+00
Y=275,653.97 X=592,919.16	701.87	Top of curb at station 0+10
Y=275,648.97 X=592,919.05	701.77	Top of curb at station 0+20
Y=275,642.97 X=592,918.93	701.37	Top of curb at station 0+30
Y=275,636.63 X=592,918.80	701.25	Top of curb at station 0+40
Y=275,630.78 X=592,923.68	701.21	Top of curb at station 0+50
Y=275,644.59 X=592,924.11	701.87	Top of curb at station 0+60
Y=275,653.86 X=592,924.16	701.97	Top of curb at station 0+70
Y=275,648.87 X=592,924.05	701.87	Top of curb at station 0+80
Y=275,642.87 X=592,923.93	701.45	Top of curb at station 0+90

Slopes indicated in the diagram:

- 2.0% (Curb to gutter)
- 2.0% (Gutter to street)
- 2.0% (Curb to gutter)
- 2.0% (Gutter to street)
- 1.5% (Curb to gutter)
- 2.0% (Gutter to street)

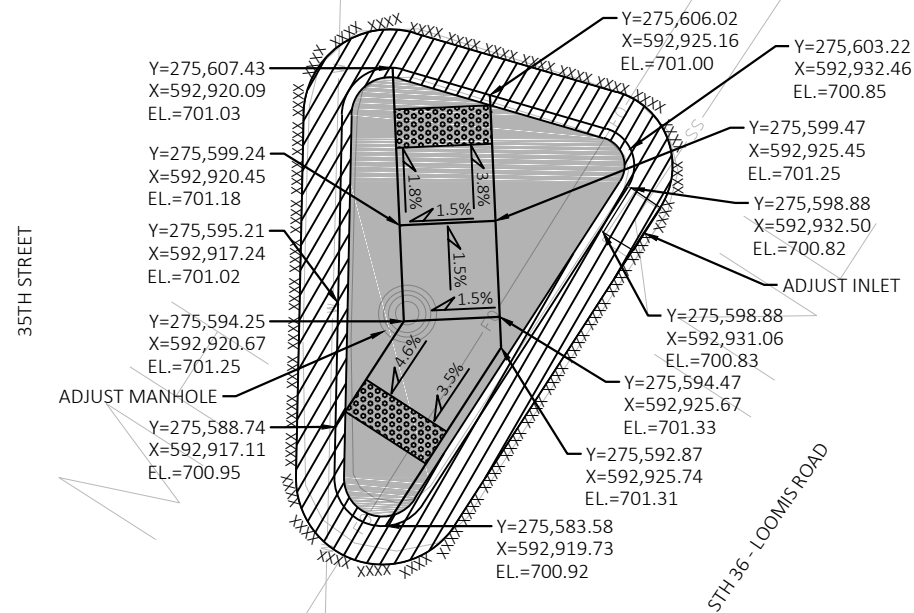
Street names: 35TH STREET, STH 36 - LOOMIS ROAD.

Stationing: 0+00, 0+10, 0+20, 0+30, 0+40, 0+50, 0+60, 0+70, 0+80, 0+90.

North Arrow: N

20 35TH STREET - NW CORNER - TYPE 4B1

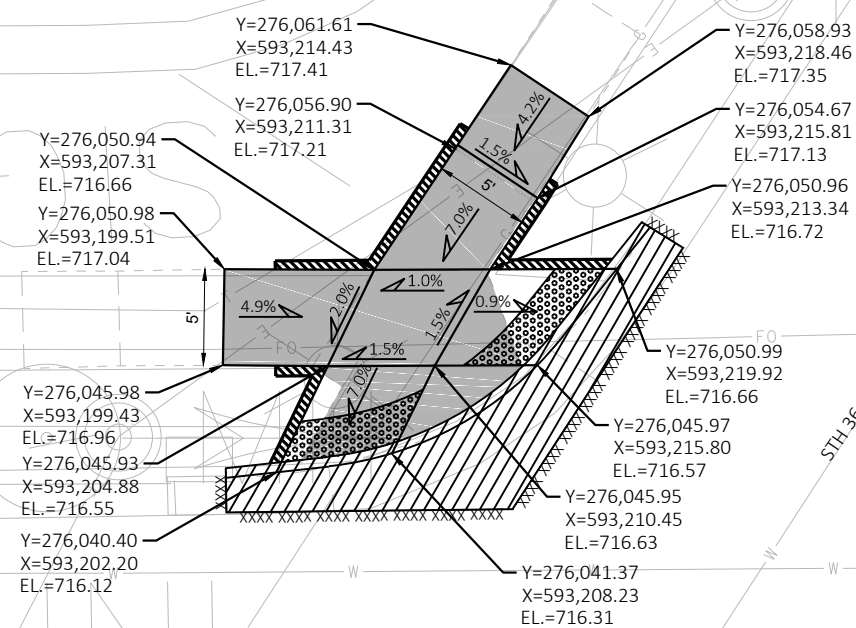
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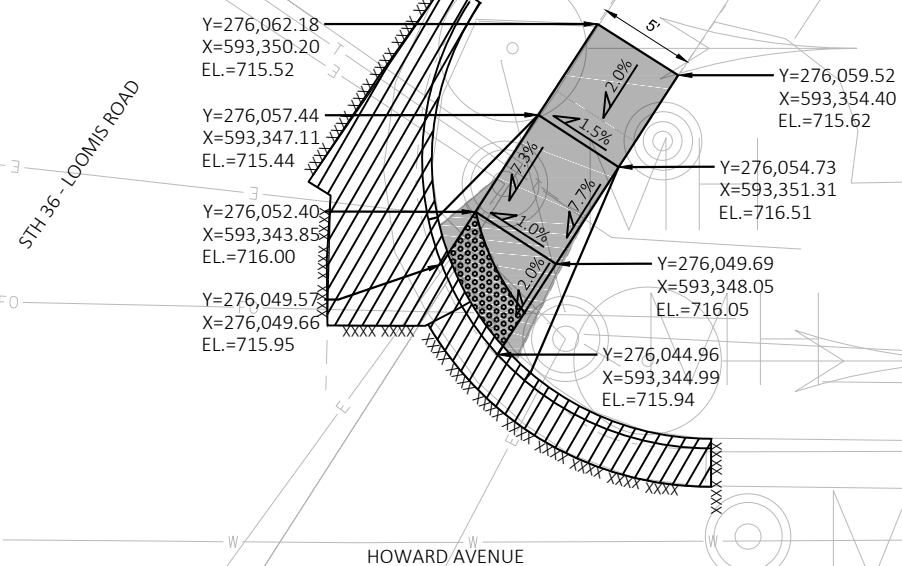
REMOVING SIDEWALK
REMOVE AND REPLACE
CURB & GUTTER

21 35TH STREET - NORTH ISLAND - TYPE 6

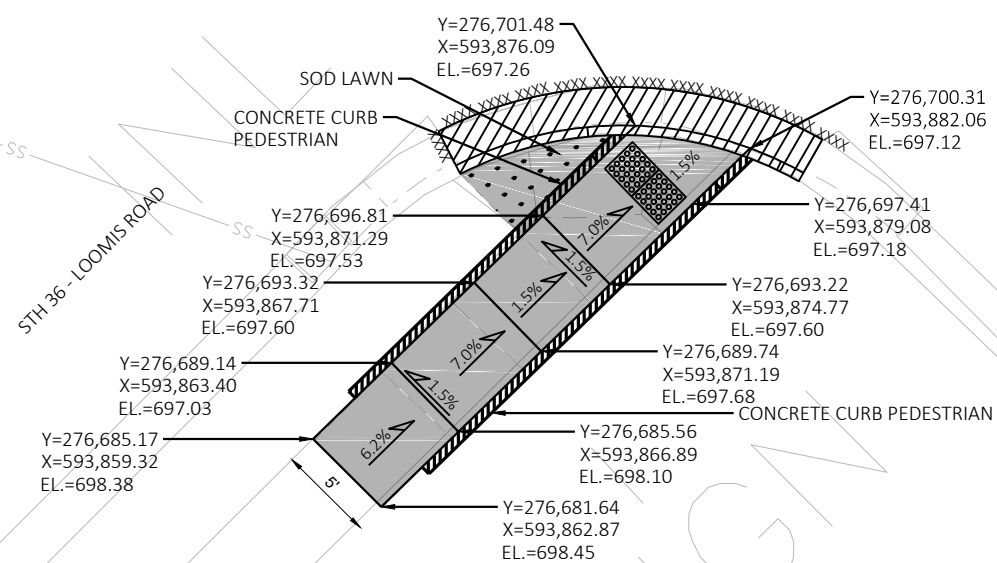
2



22 HOWARD AVENUE - NW CORNER - TYPE 2



23 HOWARD AVENUE - NE CORNER - TYPE 4B1



24 MINER STREET - SE CORNER - TYPE 4B

2

STH 36 - LOOMIS ROAD

MINER STREET

Y=276,741.05
X=593,915.65
EL.=697.04

Y=276,737.36
X=593,911.89
EL.=696.92

Y=276,732.08
X=593,906.55
EL.=696.64

Y=276,726.05
X=593,907.55
EL.=696.60

Y=276,730.29
X=593,911.84
EL.=696.82

Y=276,737.50
X=593,919.17
EL.=697.14

Y=276,733.80
X=593,915.41
EL.=696.82

Y=276,728.44
X=593,920.69
EL.=697.01

Y=276,725.01
X=593,917.05
EL.=696.91

3.7%

2.0%

2.0%

2.2%

6.1%

2.5%

2.0%

5'

5'

REMOVING SIDEWALK

REMOVE AND REPLACE CURB & GUTTER

25 MINER STREET - NE CORNER - TYPE 4B1

26 FARDALE AVENUE - SE CORNER - TYPE 2

N

Plan view of Point Terrace - SW Corner - Type 1. The diagram shows a cross-section of a road corner with various features and elevations. A north arrow is located in the top right corner.

Labels and Elevations:

- SOD LAWN:**
 - Y=277,396.89, X=594,405.45, EL.=671.40
 - Y=277,393.80, X=594,401.51, EL.=671.50
 - Y=277,389.77, X=594,405.15, EL.=671.27
 - Y=277,386.06, X=594,408.50, EL.=670.92
- CONCRETE CURB PEDESTRIAN:**
 - Y=277,380.41, X=594,402.13, EL.=671.52
 - Y=277,376.27, X=594,397.47, EL.=671.89
 - Y=277,368.97, X=594,404.25, EL.=671.11
- POINT TERRACE:**
 - Y=277,393.12, X=594,408.86, EL.=671.20
 - Y=277,389.38, X=594,412.24, EL.=670.82
 - Y=277,392.32, X=594,415.56, EL.=670.64
 - Y=277,385.93, X=594,415.89, EL.=670.76
 - Y=277,379.69, X=594,414.25, EL.=670.83
 - Y=277,382.35, X=594,411.85, EL.=670.86
 - Y=277,376.67, X=594,405.45, EL.=671.45
 - Y=277,373.16, X=594,408.52, EL.=671.49

Grades and Distances:

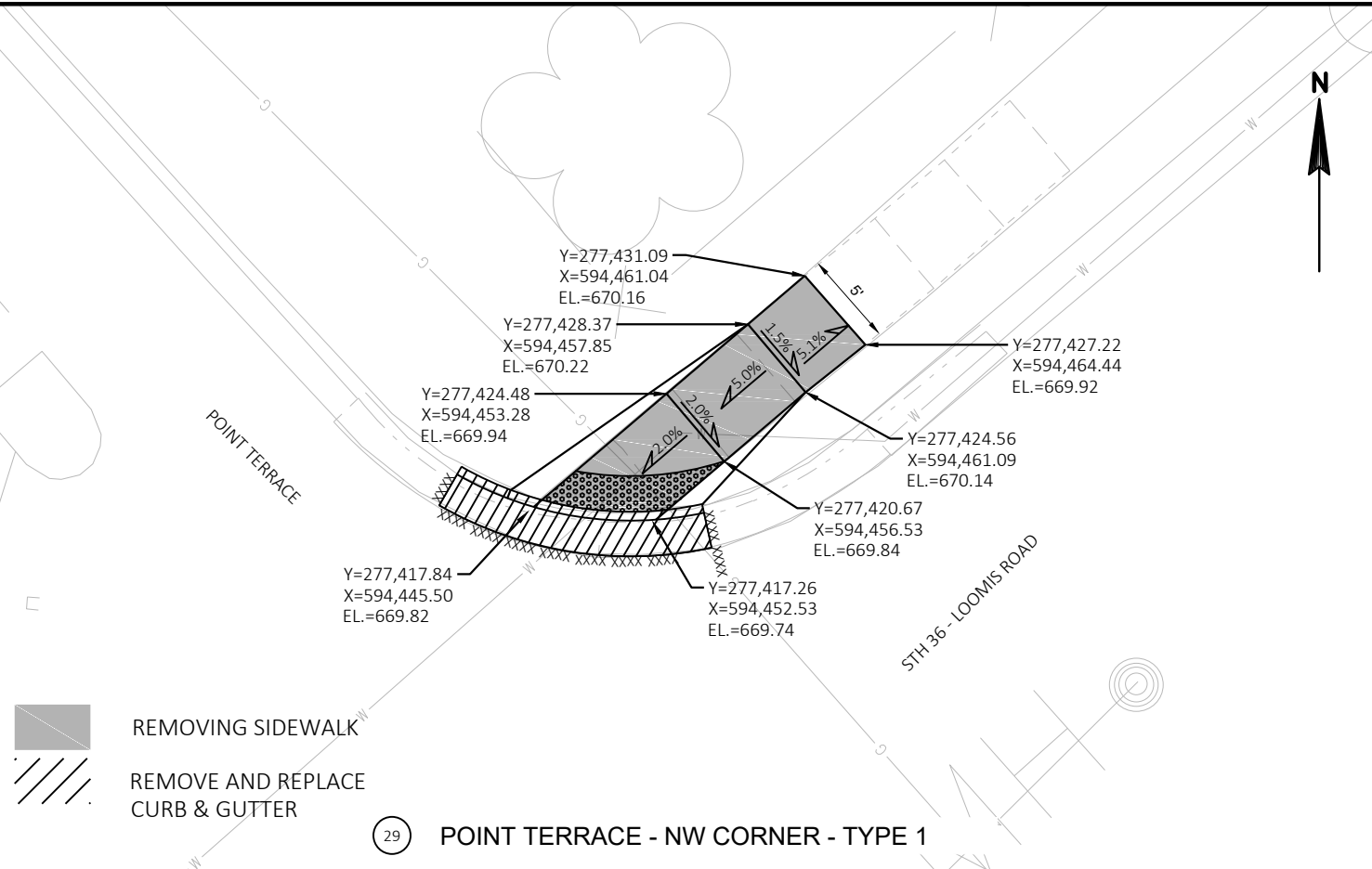
- Grades: 4.2%, 1.5%, 7.0%, 2.0%, 1.7%, 5.9%, 1.5%
- Distances: 6', 5'

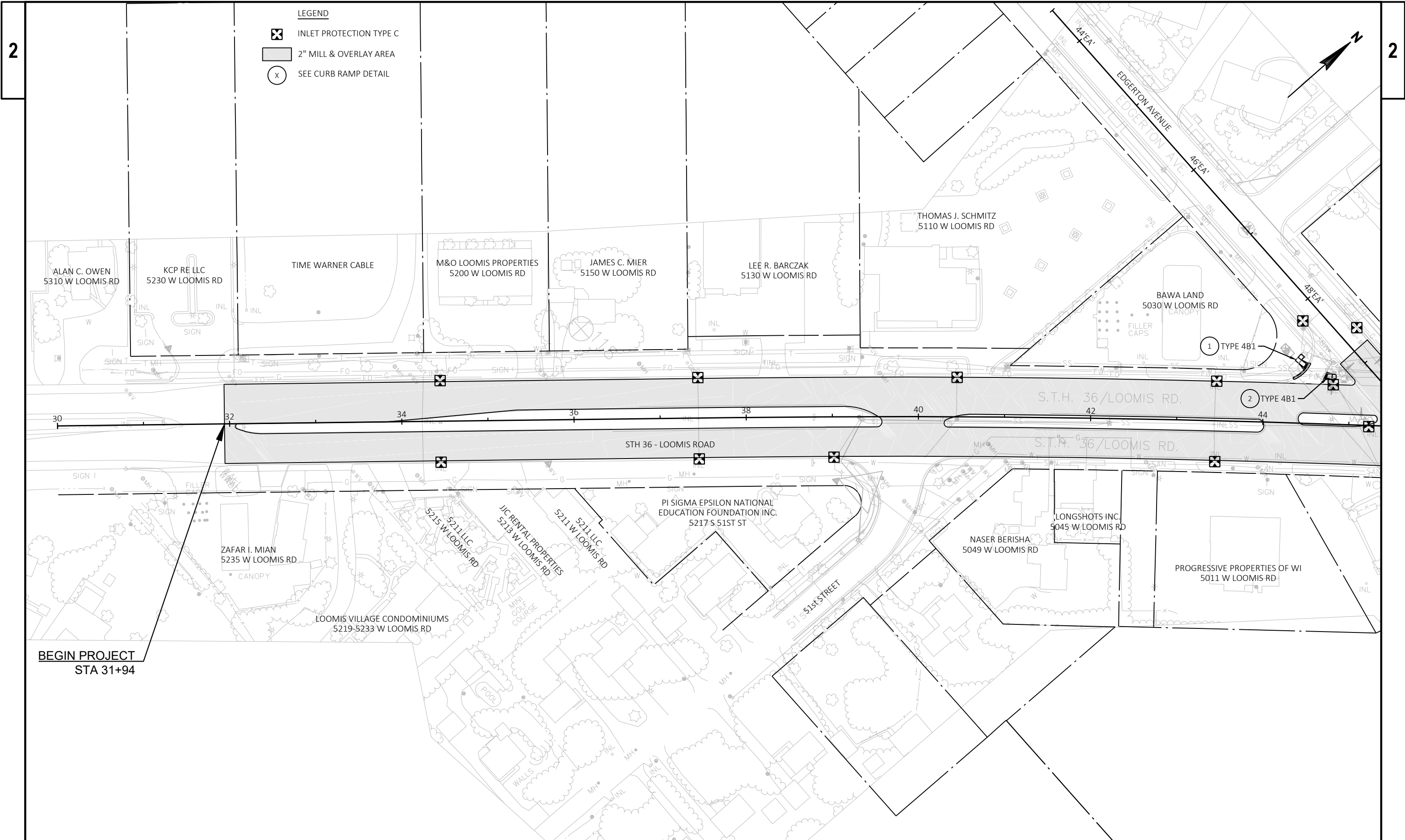
Other Labels:

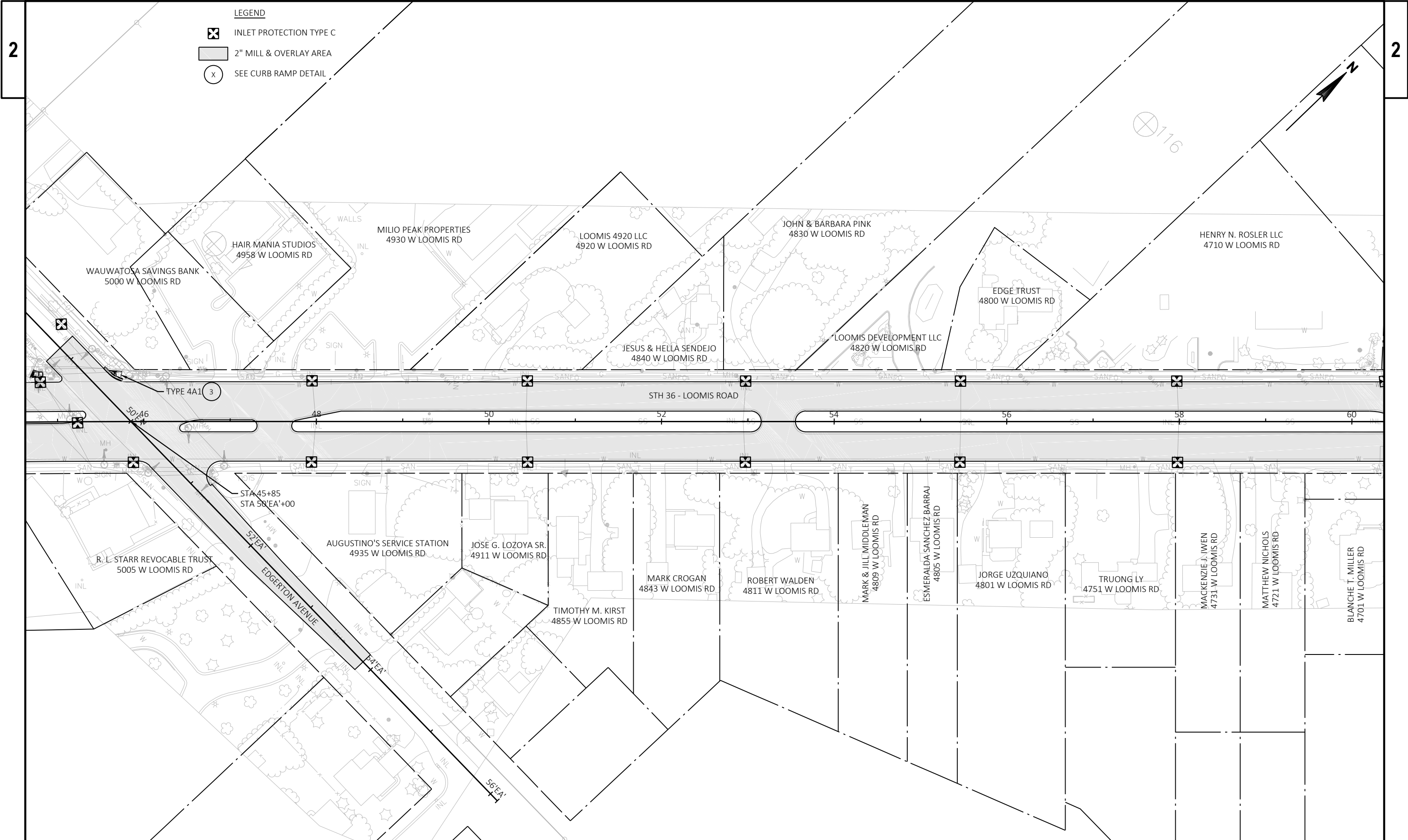
- STH 36 - LOOMIS ROAD
- SAN

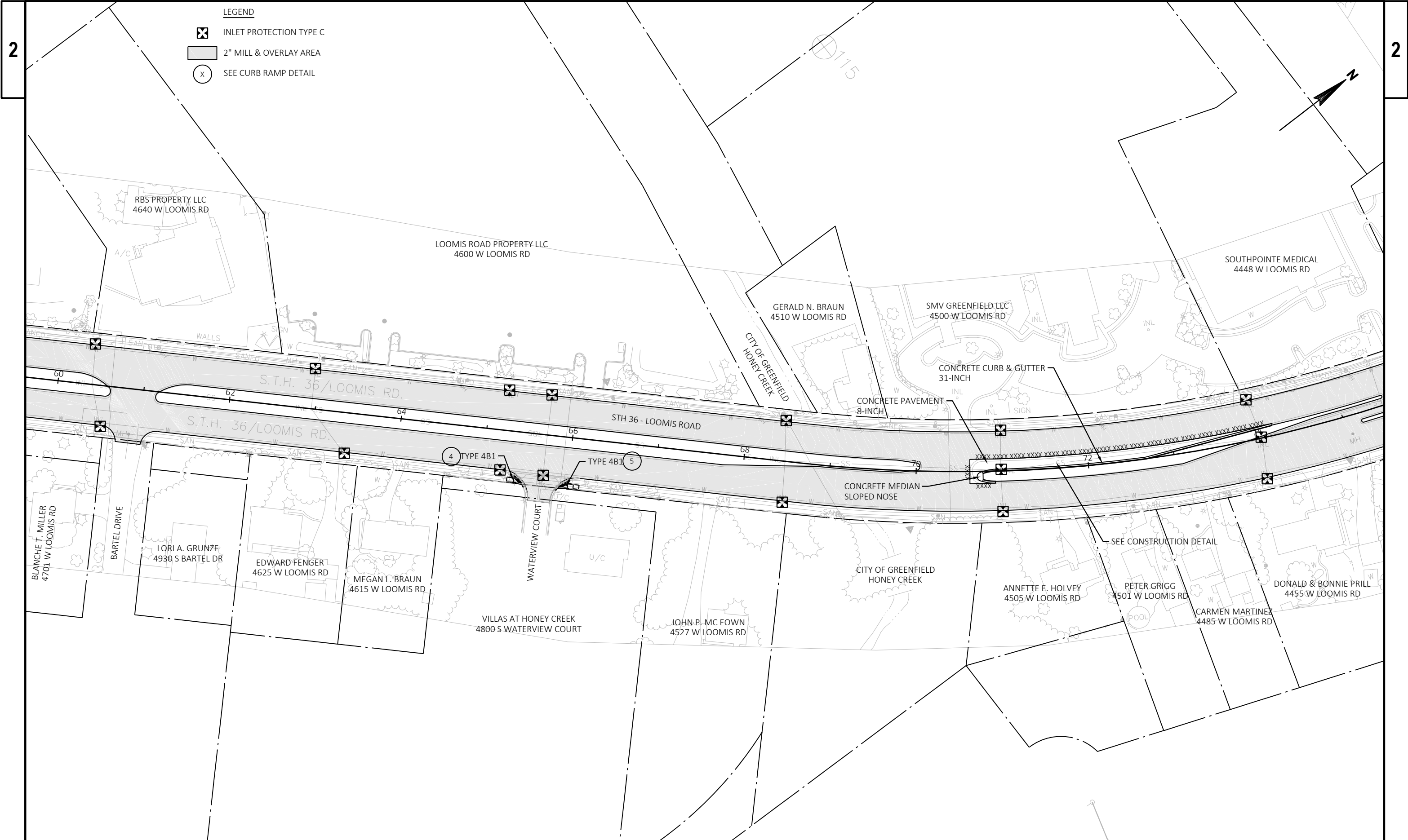
Page Number: 28

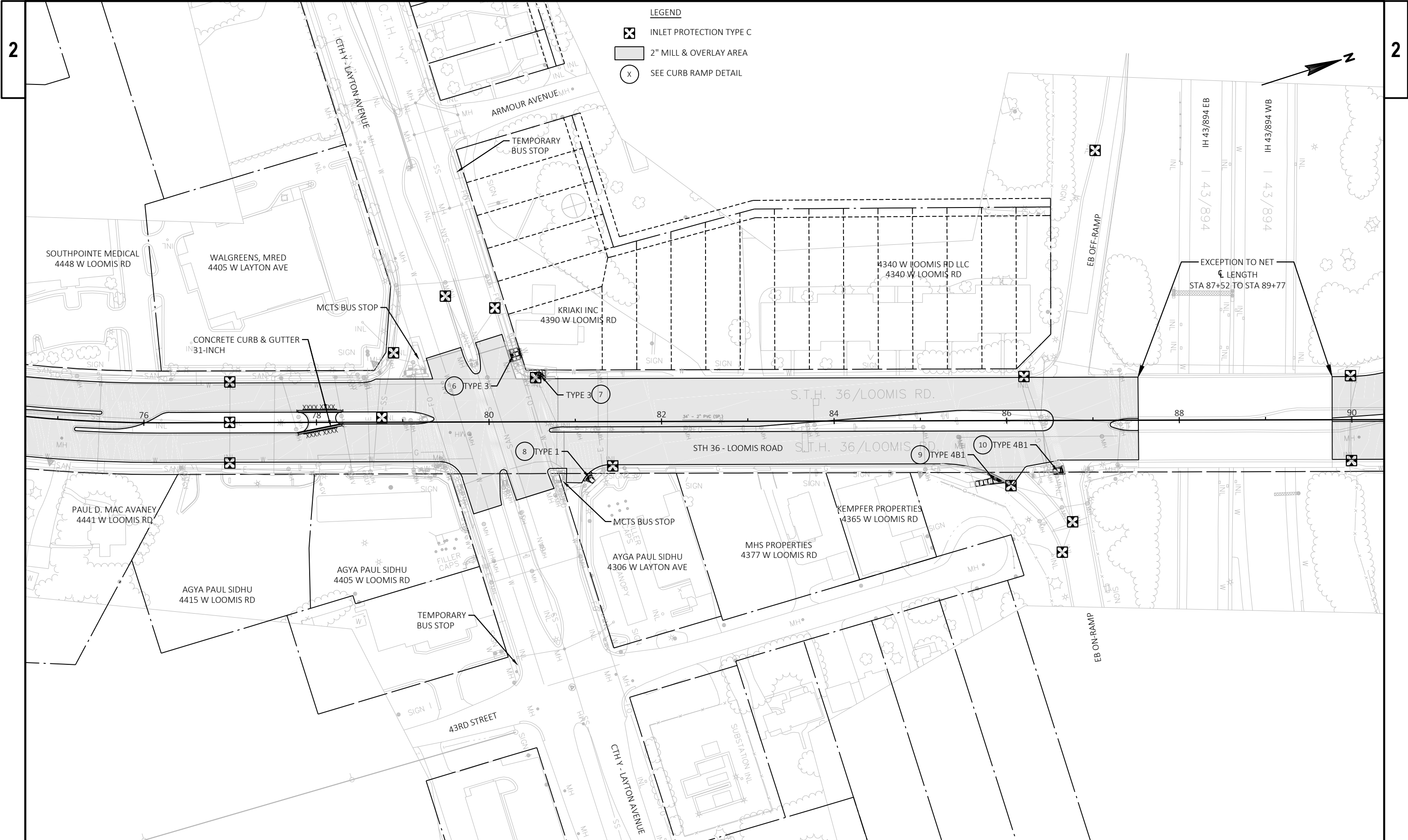
Section Title: POINT TERRACE - SW CORNER - TYPE 1



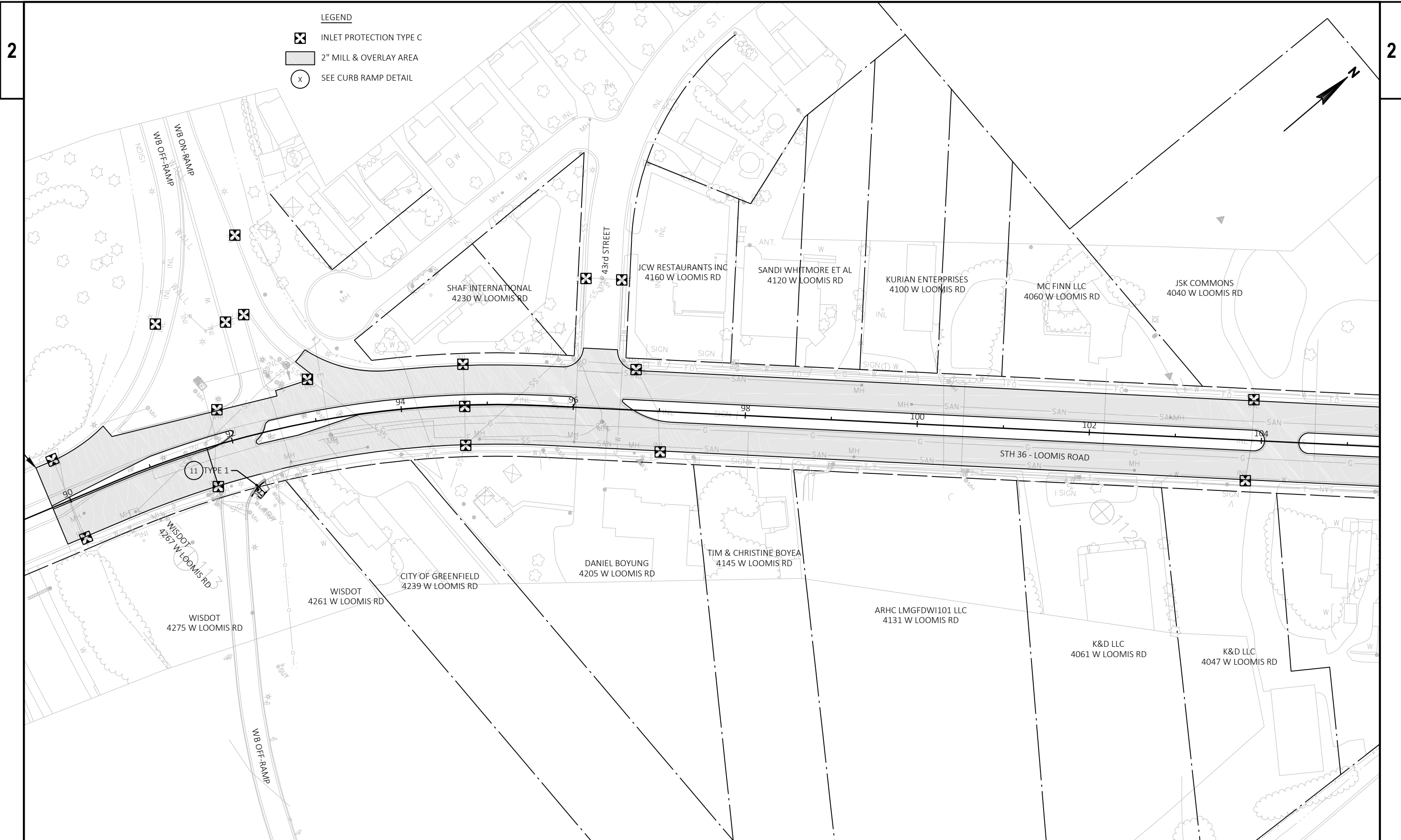


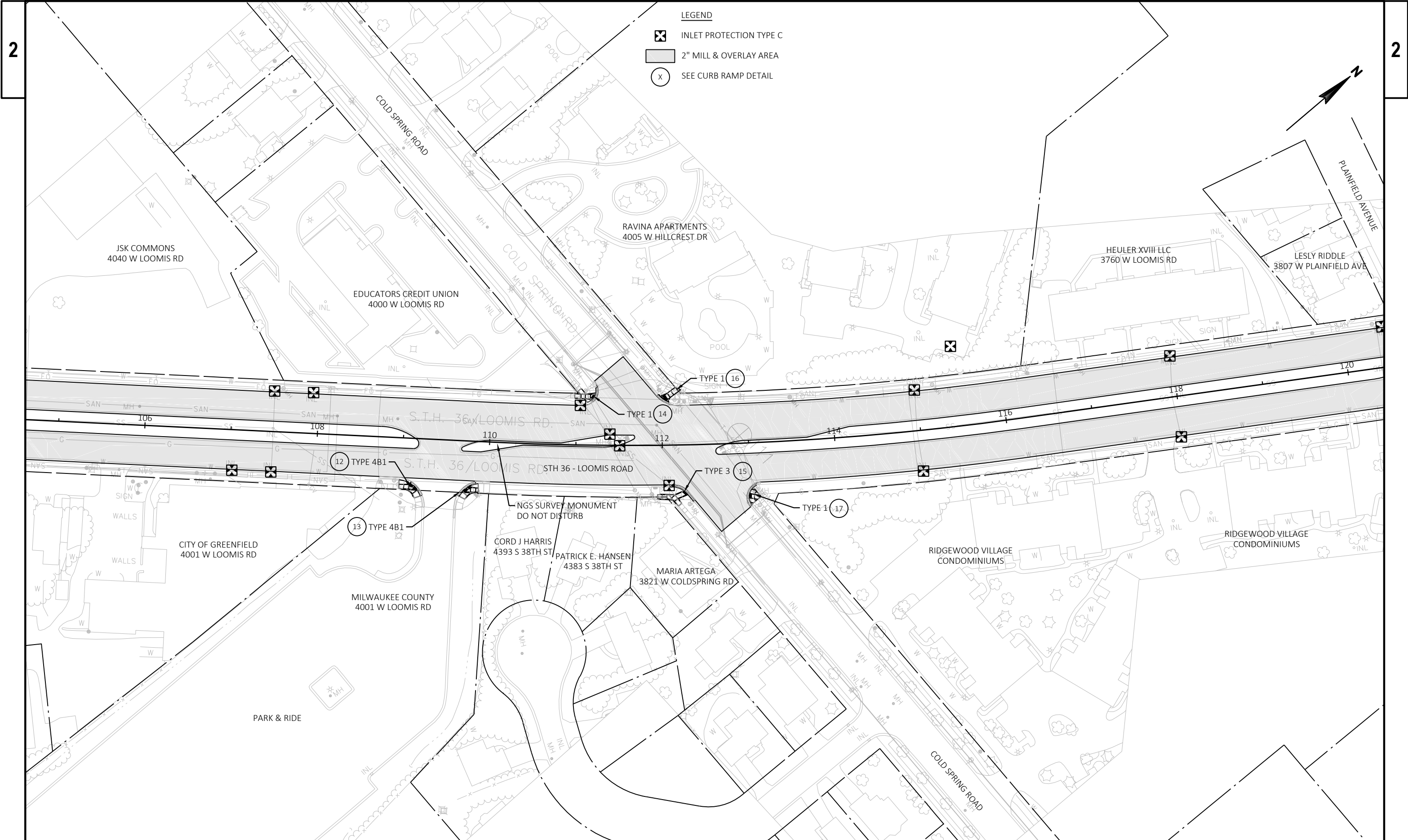






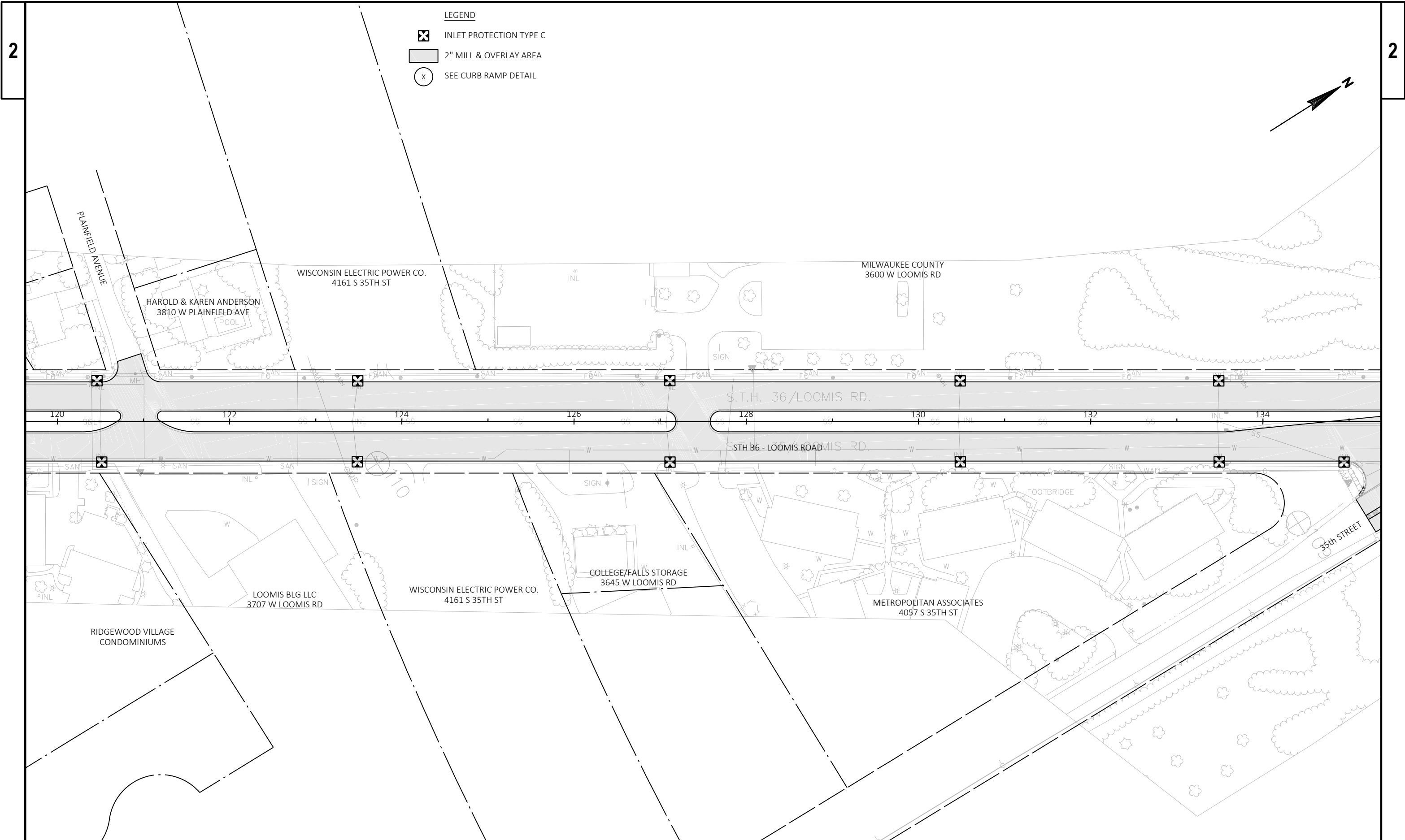
- LEGEND
- INLET PROTECTION TYPE C
 - 2" MILL & OVERLAY AREA
 - SEE CURB RAMP DETAIL

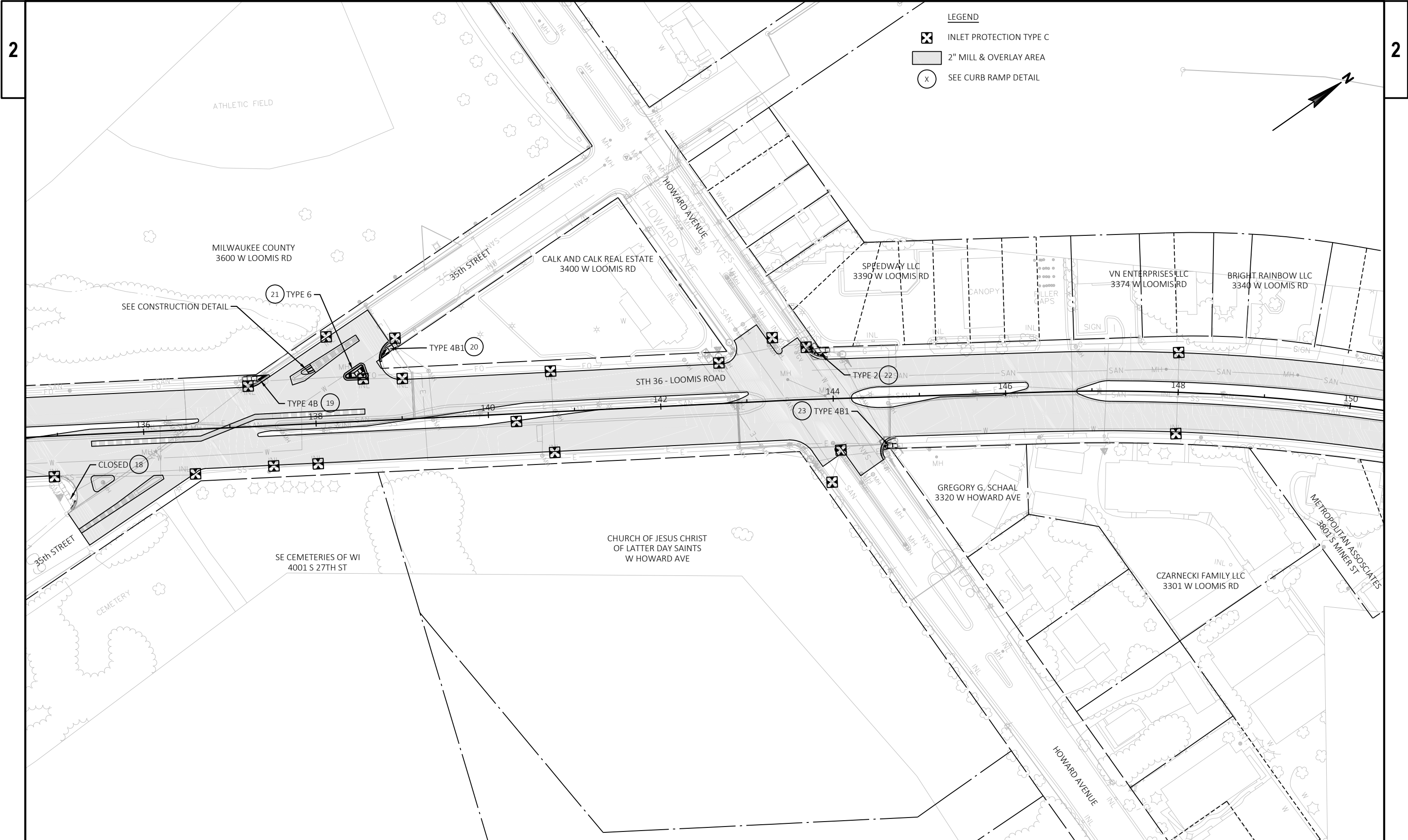


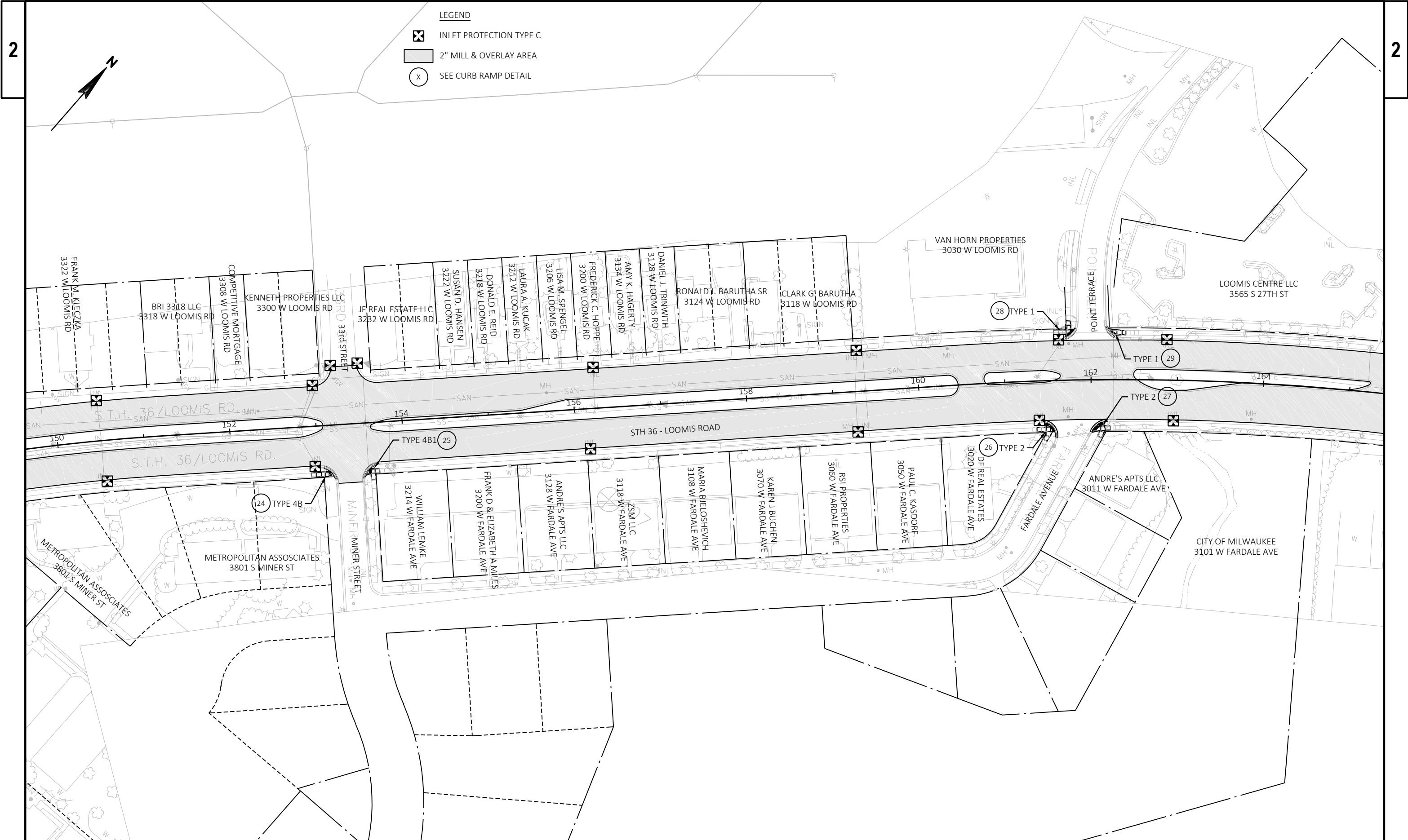


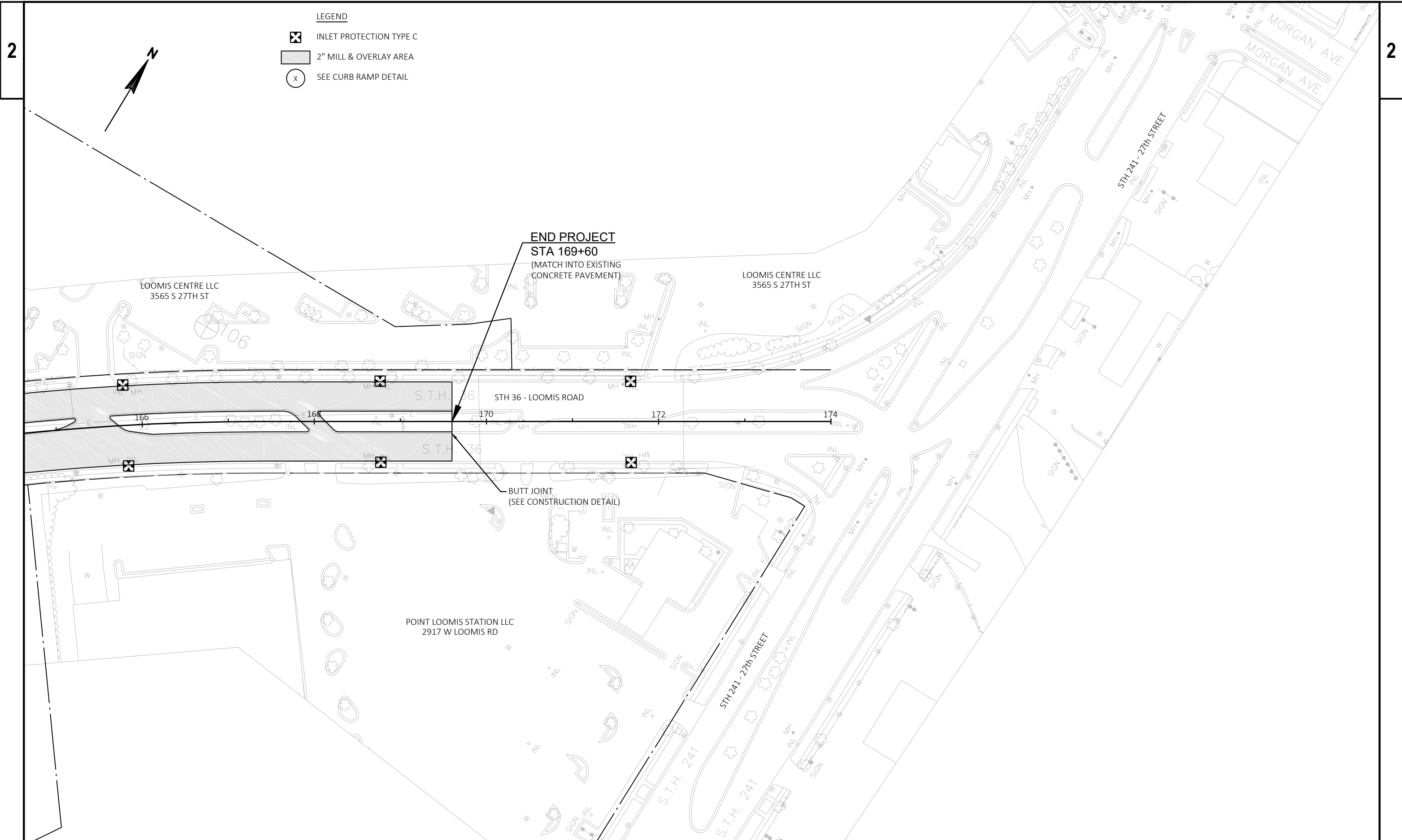
- LEGEND
- INLET PROTECTION TYPE C
 - 2" MILL & OVERLAY AREA
 - SEE CURB RAMP DETAIL

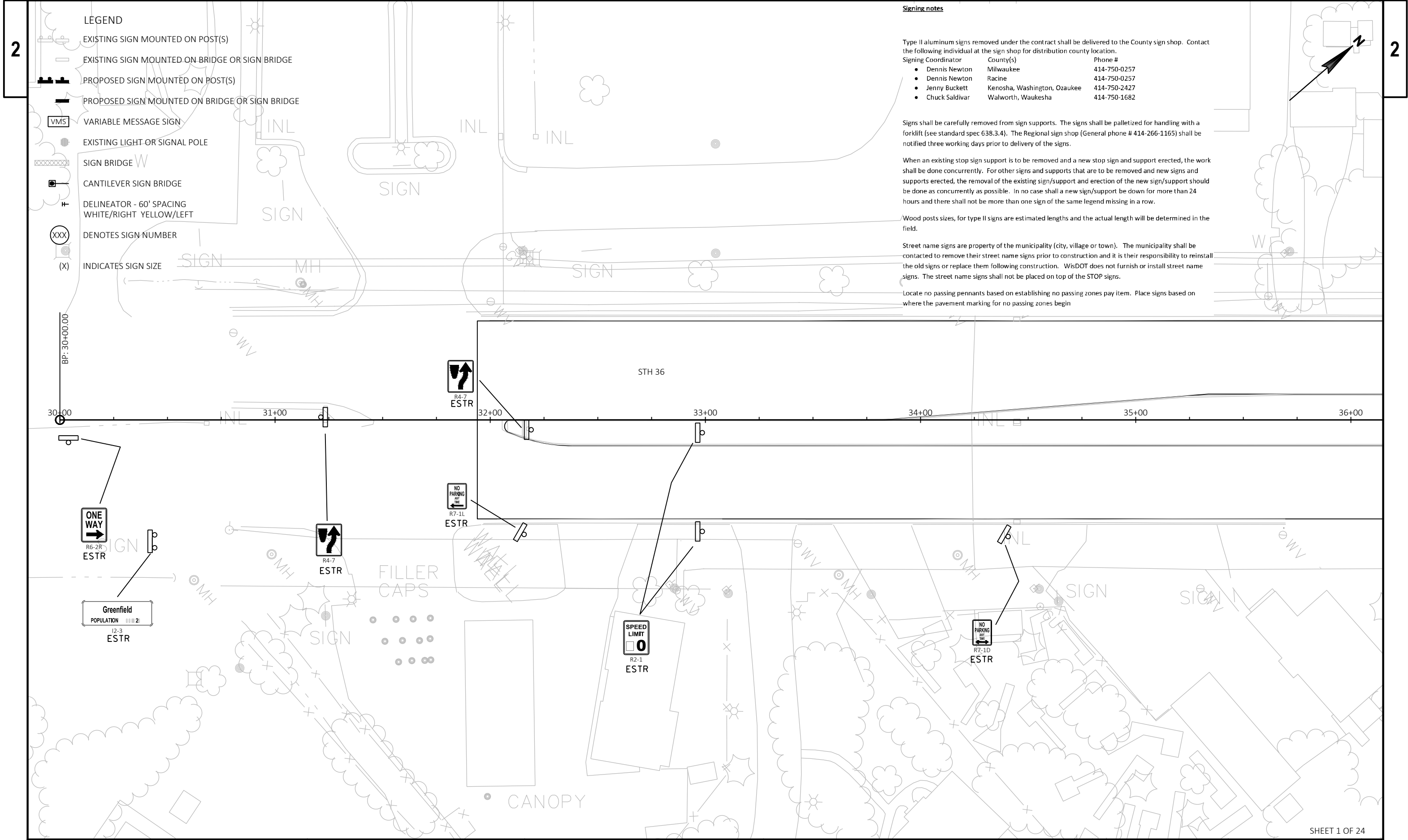


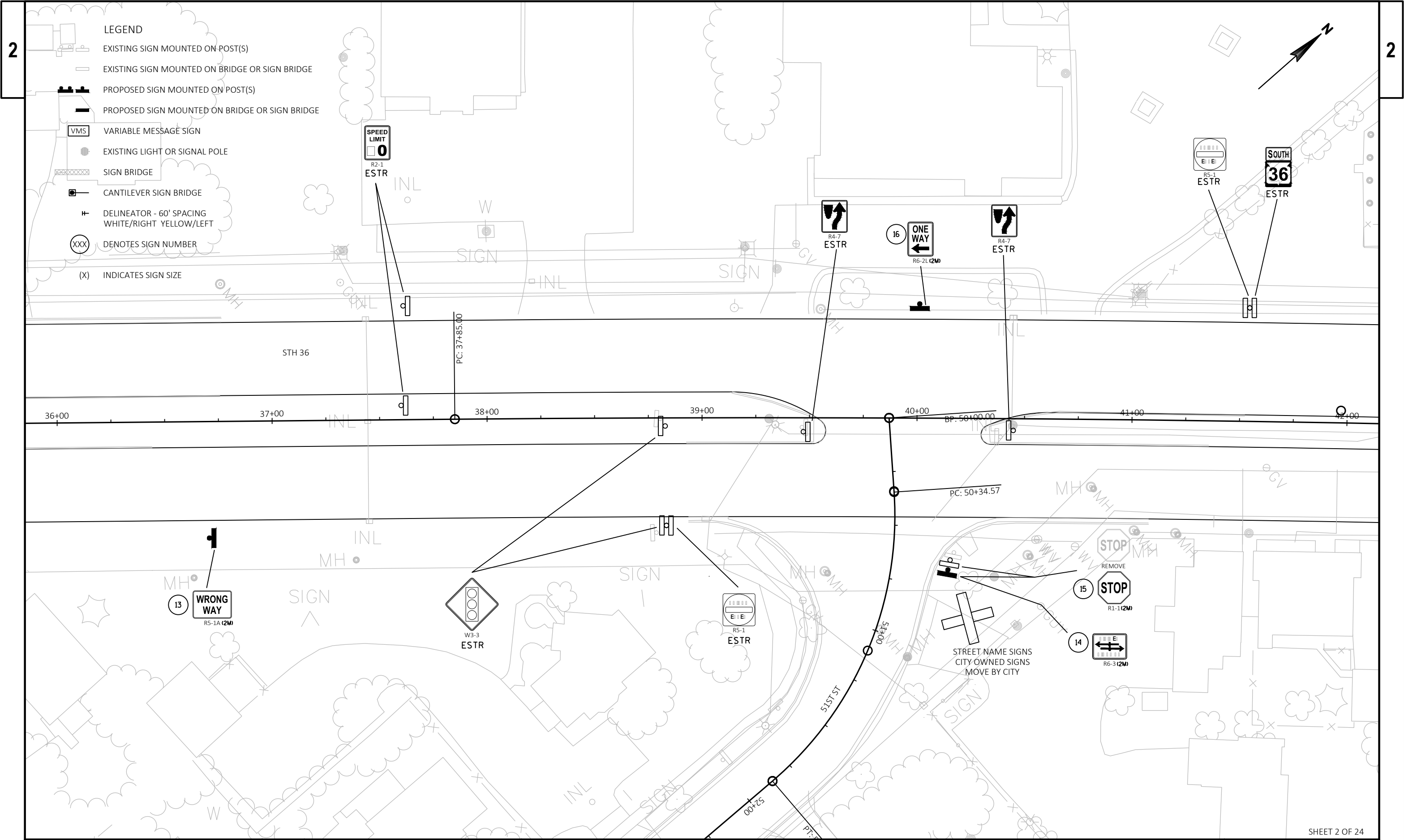




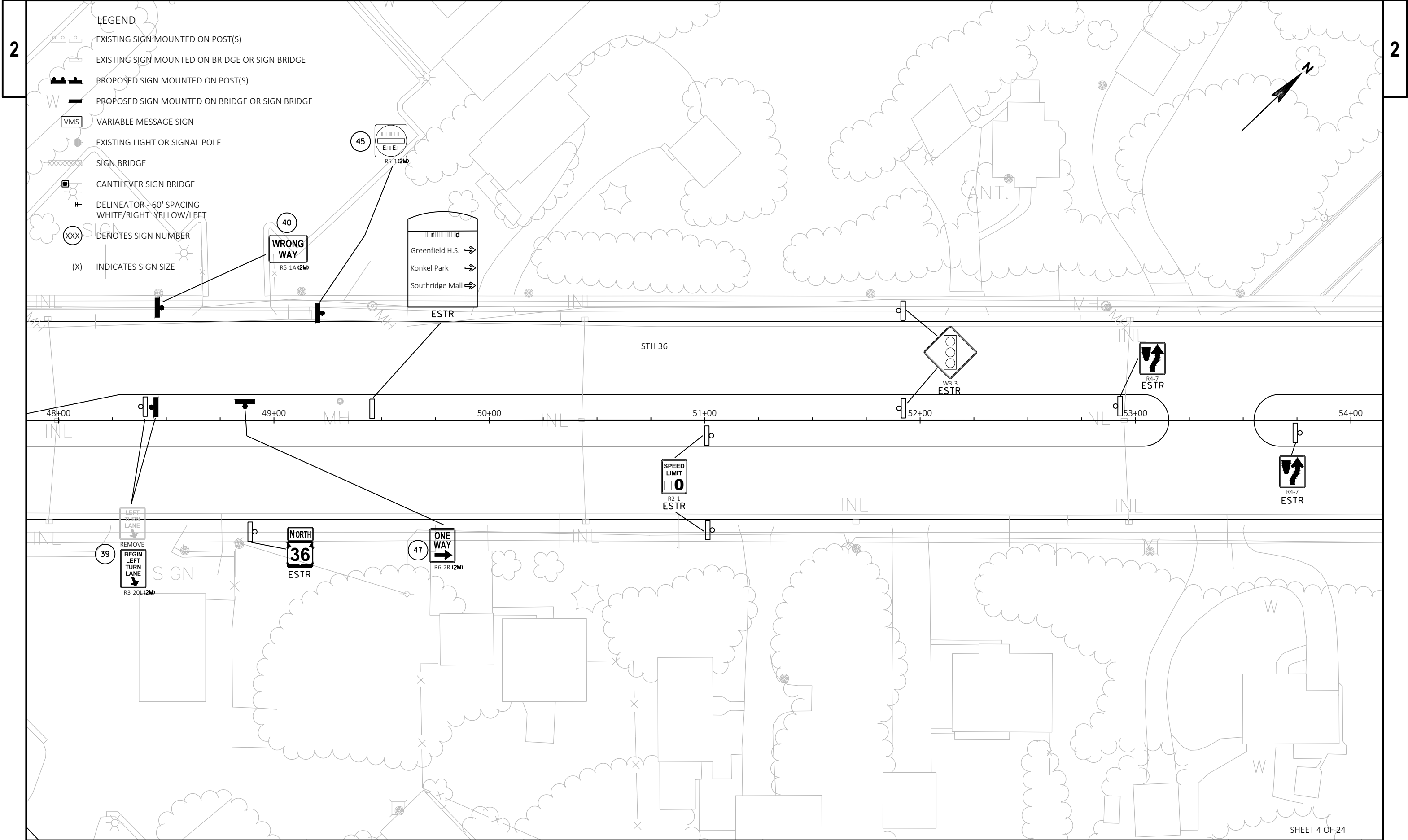






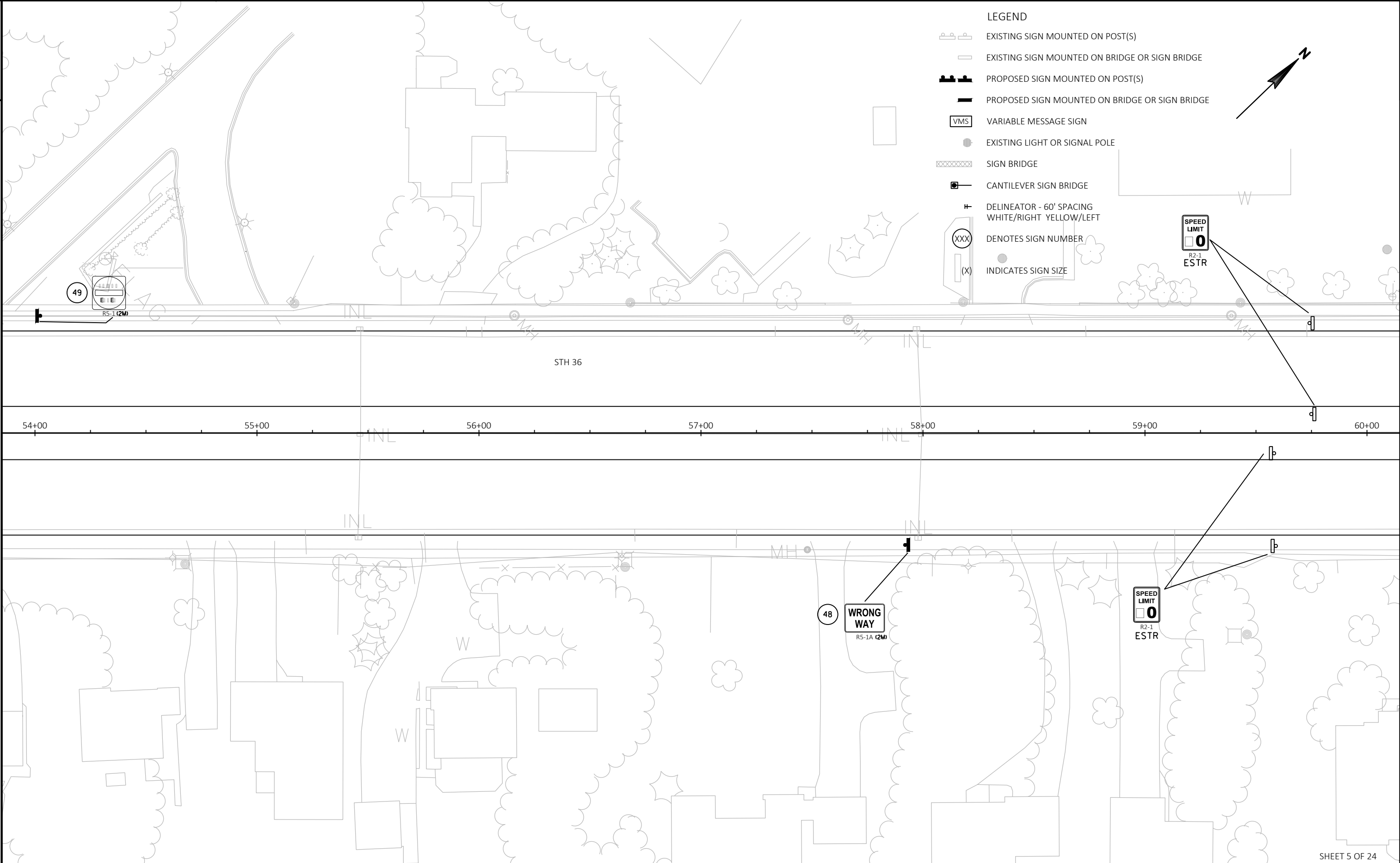






2

2



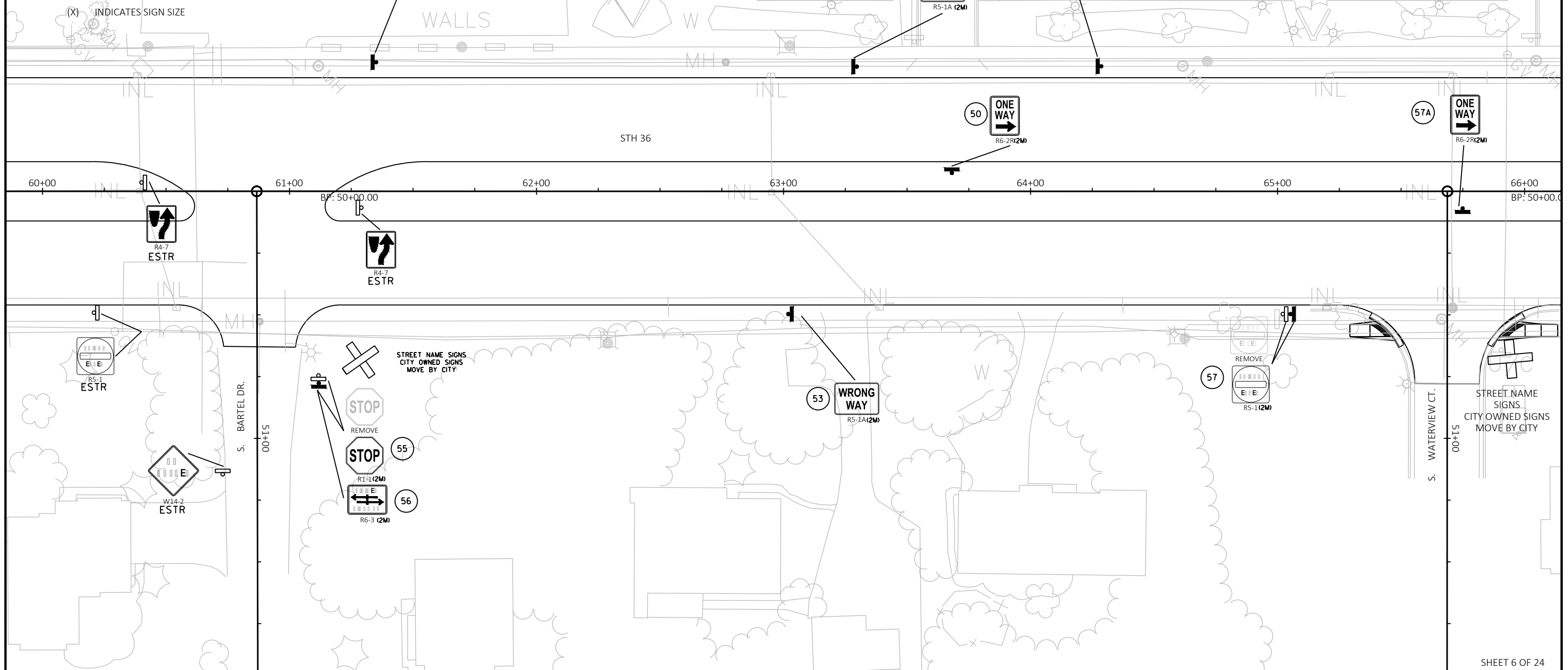
PROJECT NO: 2240-14-61	HWY: STH 36	COUNTY: MILWAUKEE	PERMANENT SIGNING PLAN	SHEET 31	E
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LAYOUT NAME :	023205_PS								

SHEET 5 OF 24

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT
- DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

PERMANENT SIGNING PLAN

SHEET

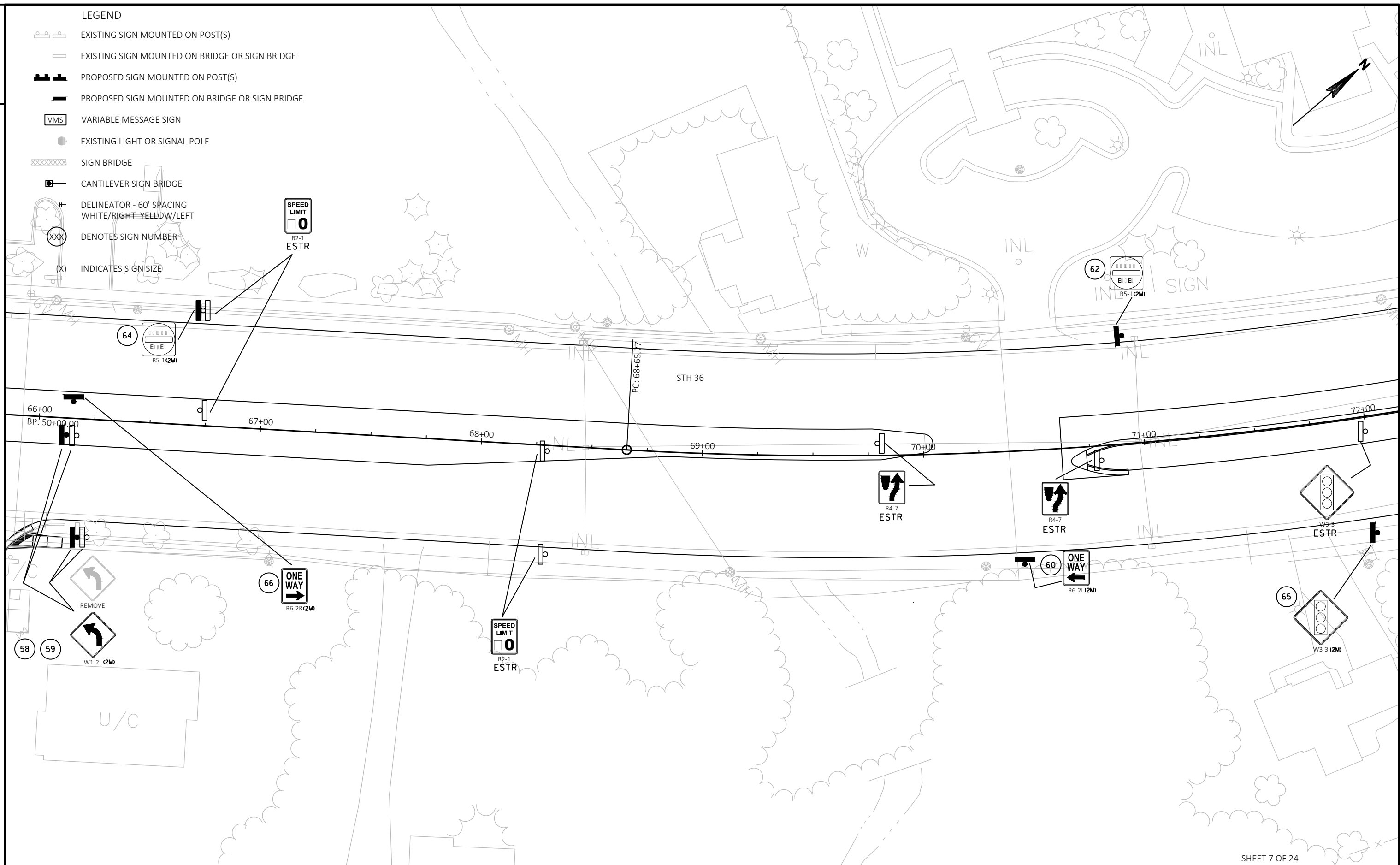
SHEET 6 OF 24

32

E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT-YELLOW/LEFT
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE



SHEET 7 OF 24

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

PERMANENT SIGNING PLAN

SHEET

33

E

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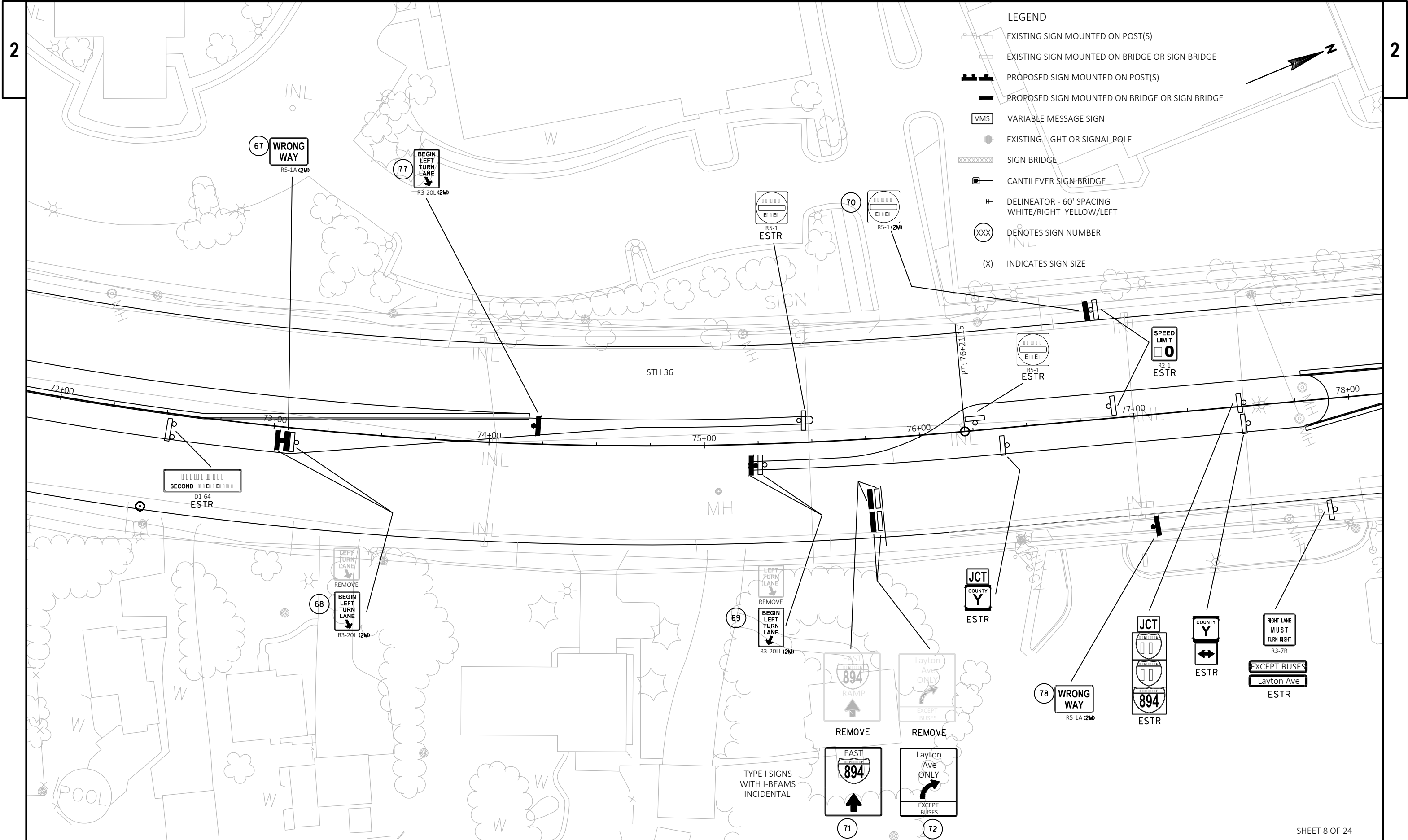
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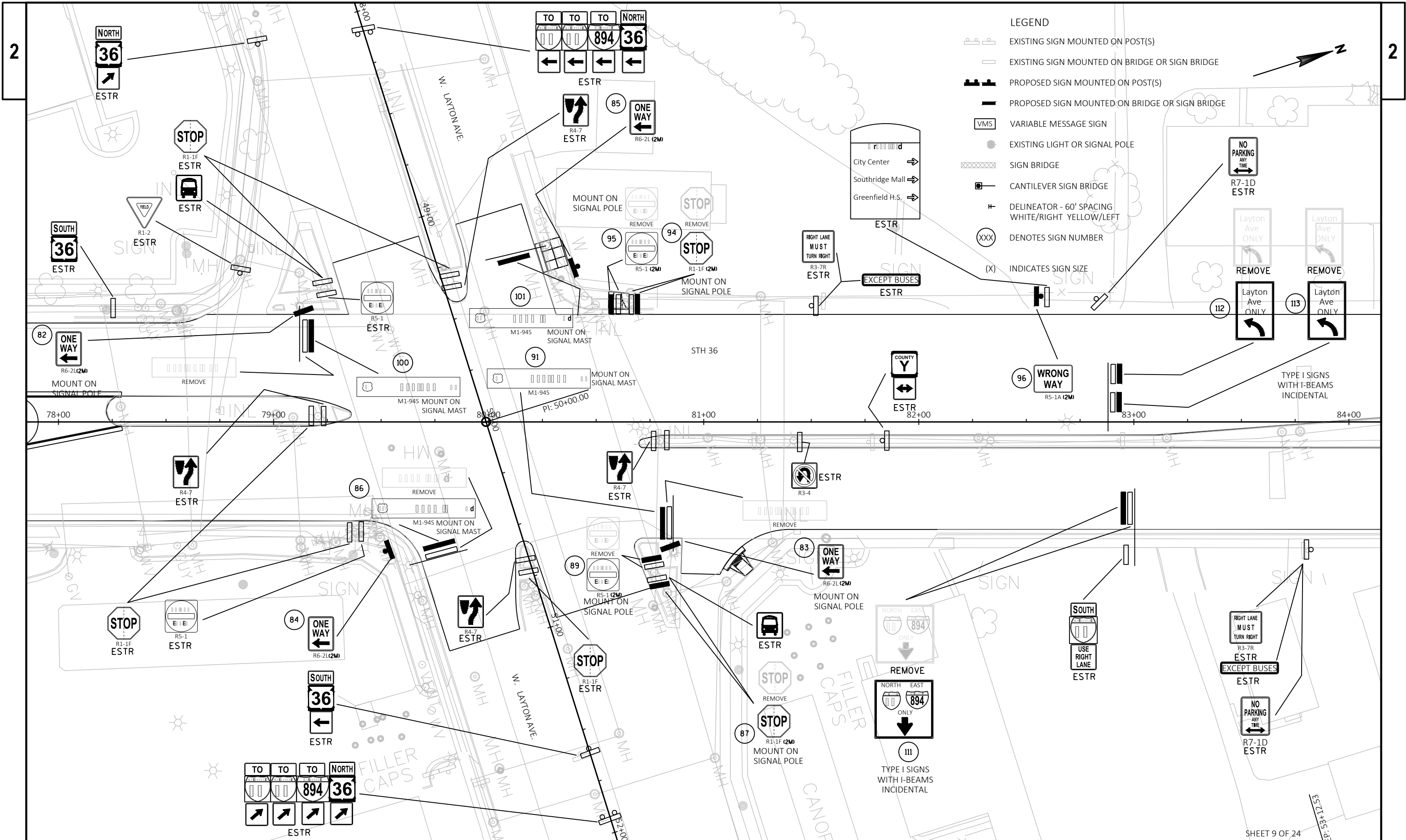
PLOT BY : VANDE LEESE, CYNTHIA

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42





PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

PERMANENT SIGNING PLAN

SHEET

35

E

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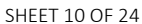
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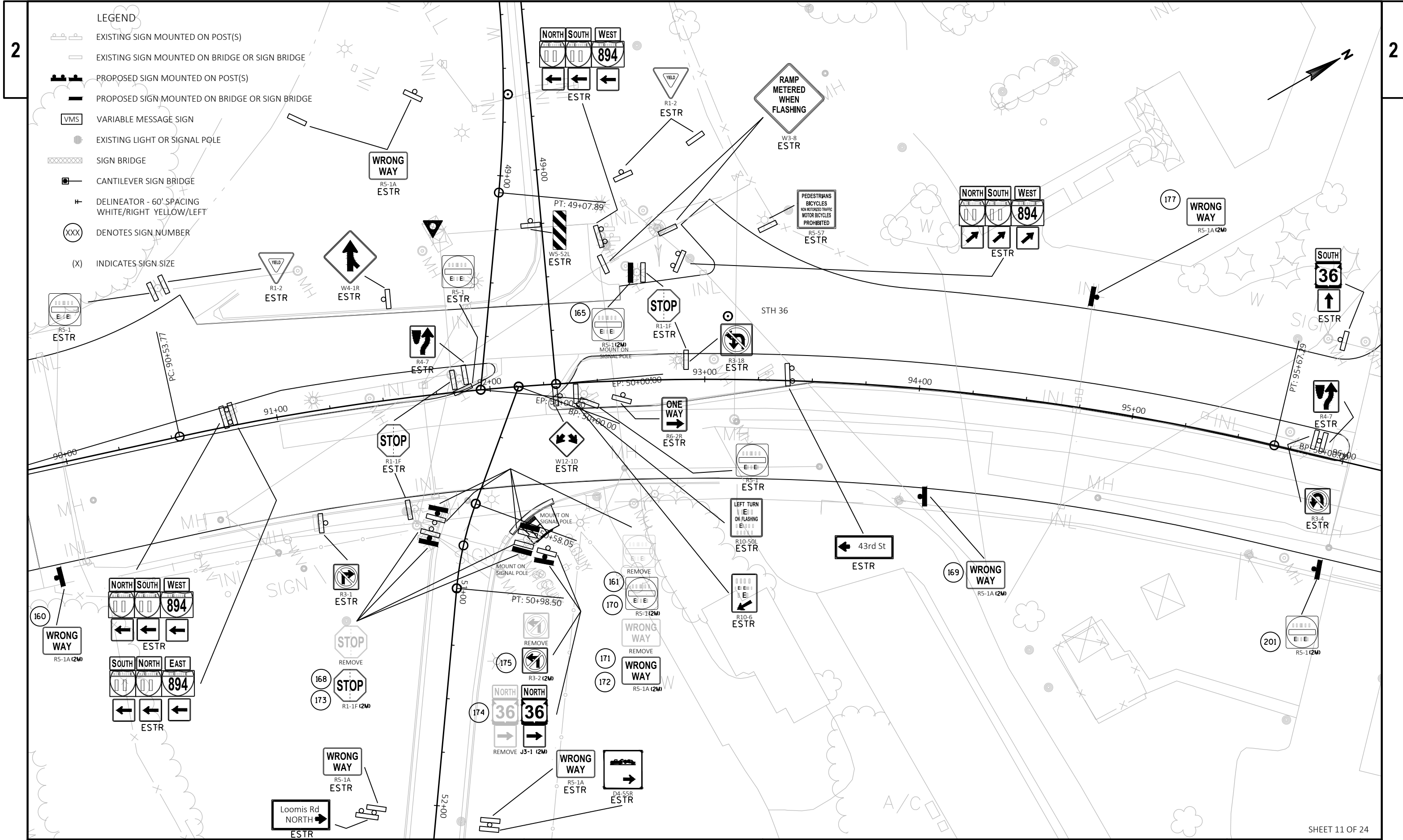
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PLOT NAME :

PLOT SCALE : 1 IN=40 FT

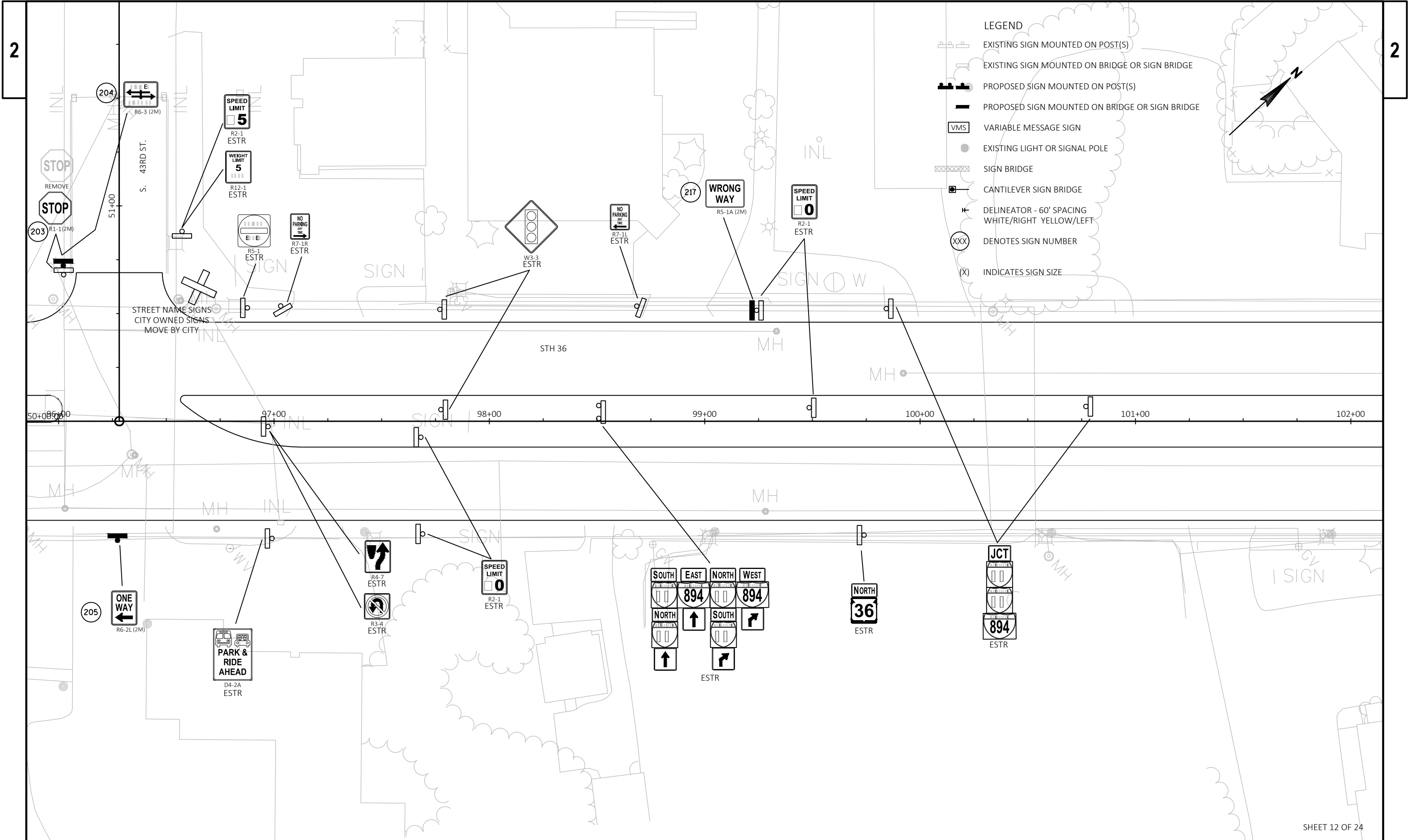
WISDOT/CADDSS SHEET 42





LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

PERMANENT SIGNING PLAN

SHEET

38

E

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LAYOUT NAME - 023212_PS

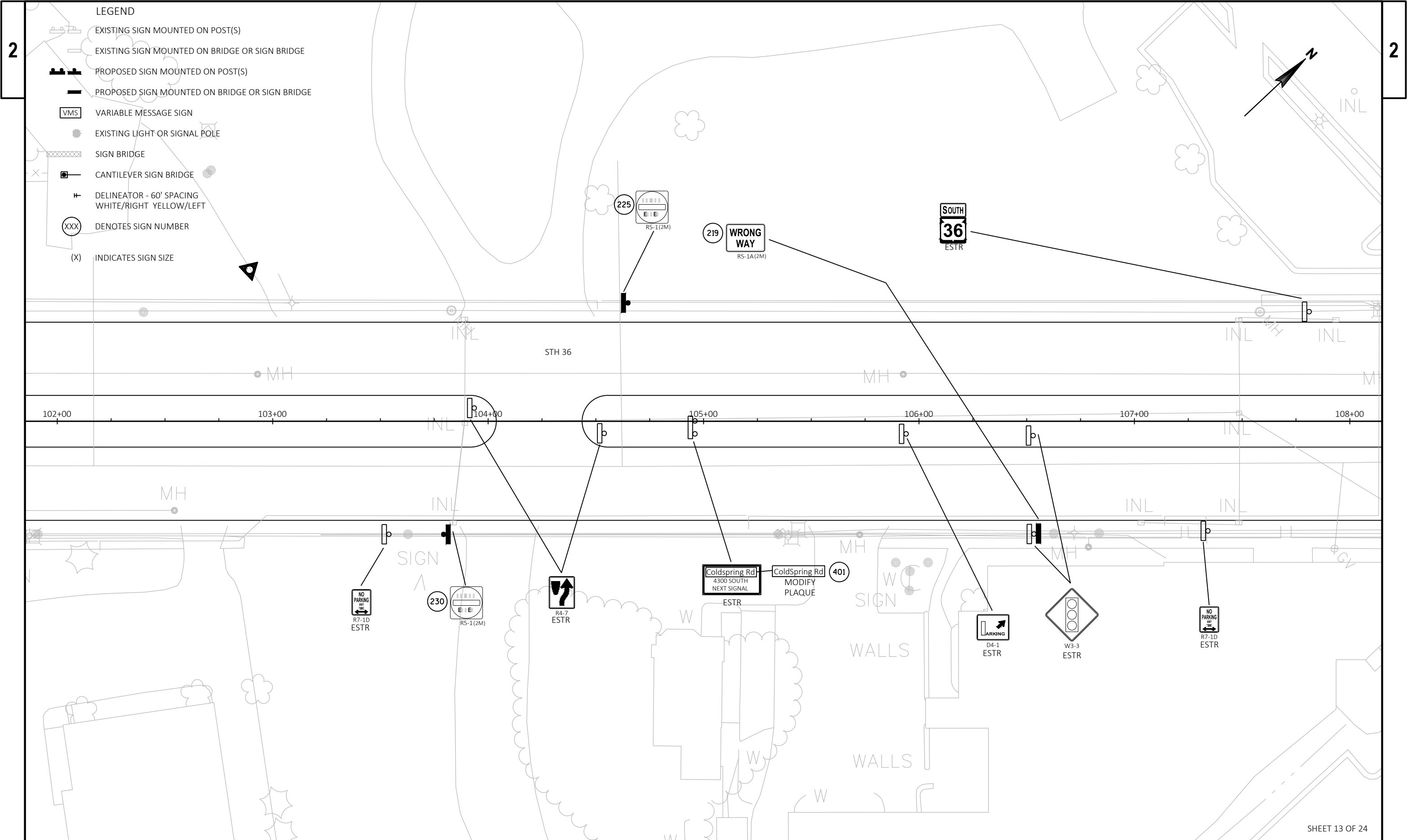
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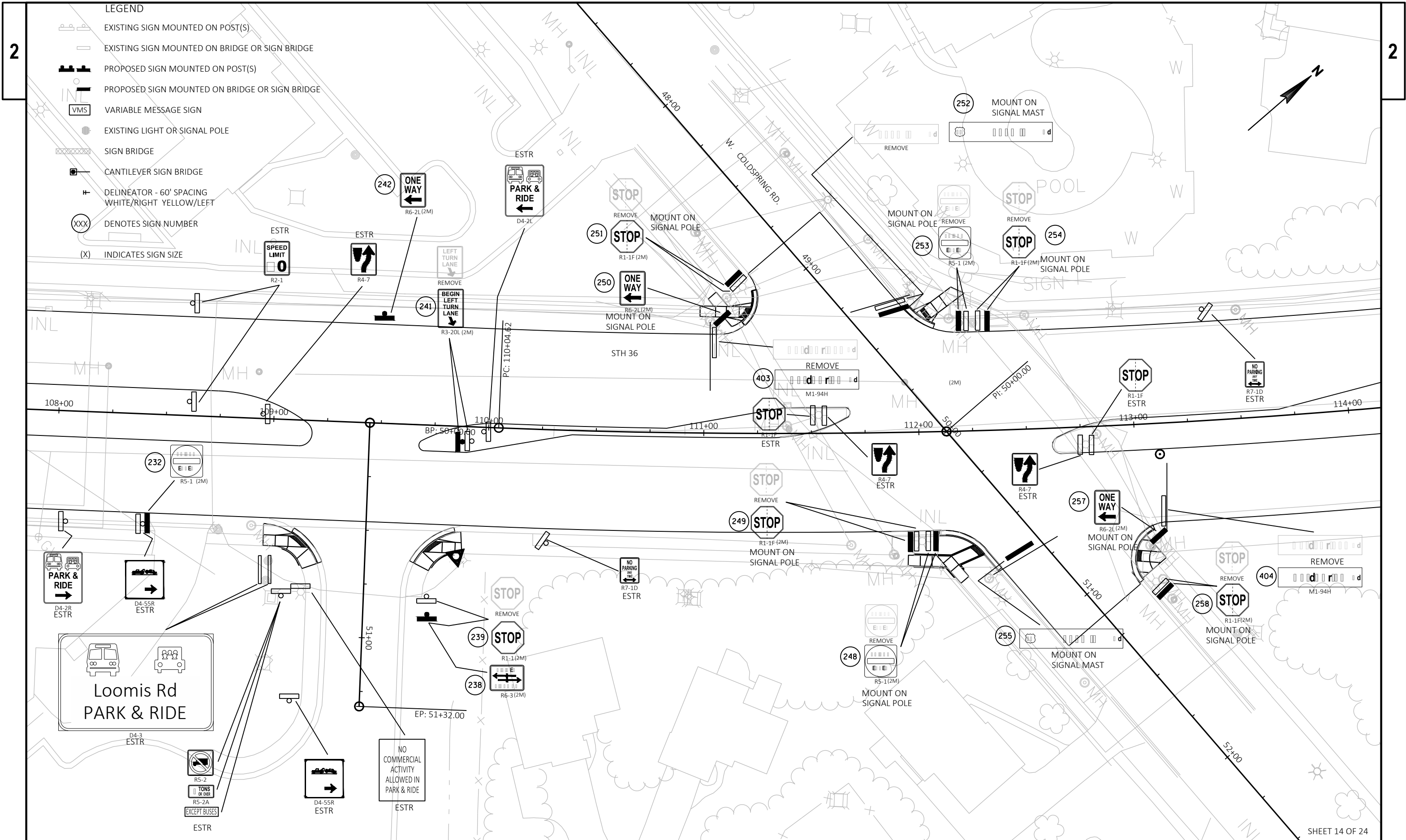
PLOT BY : VANDE LEEST, CYNTHIA

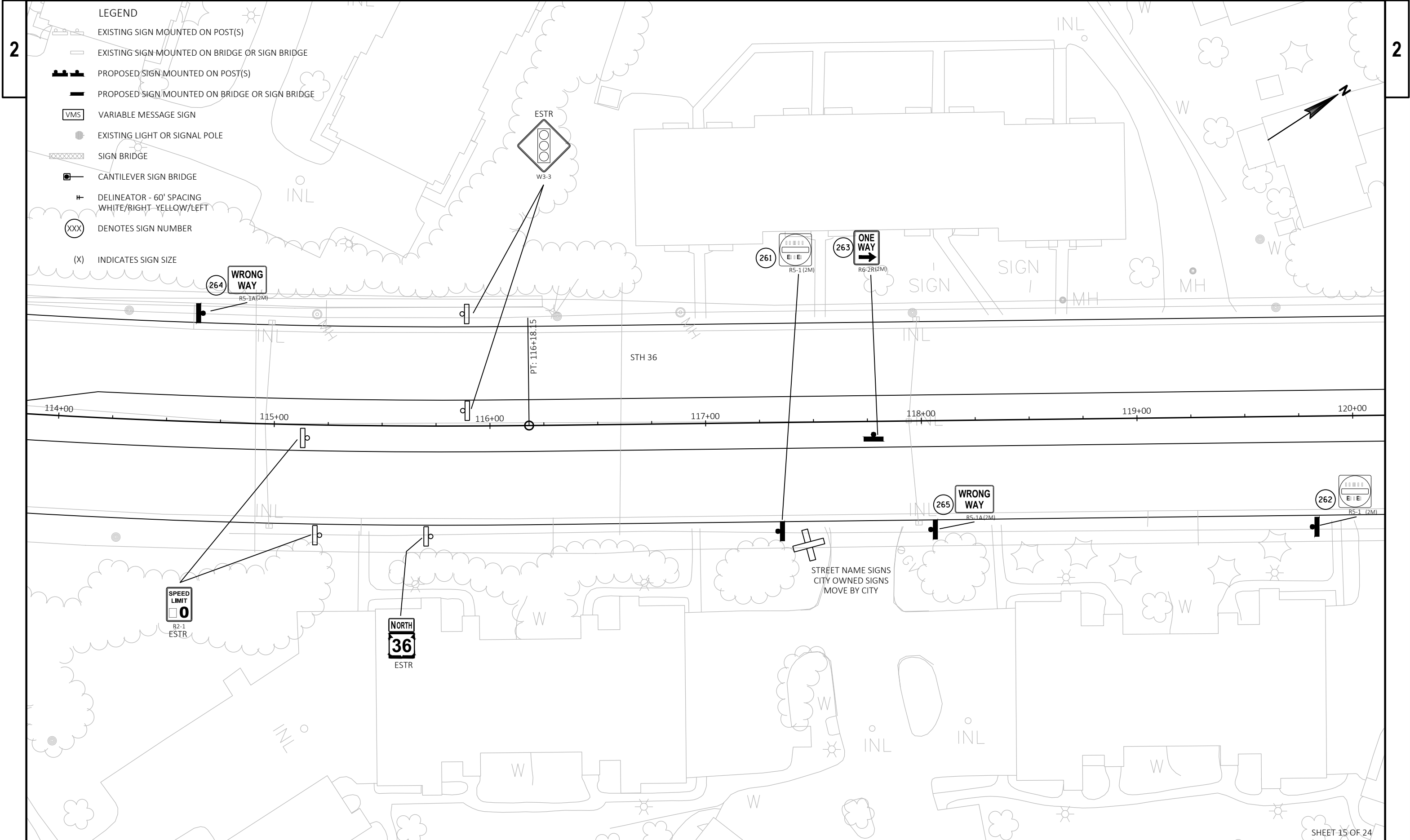
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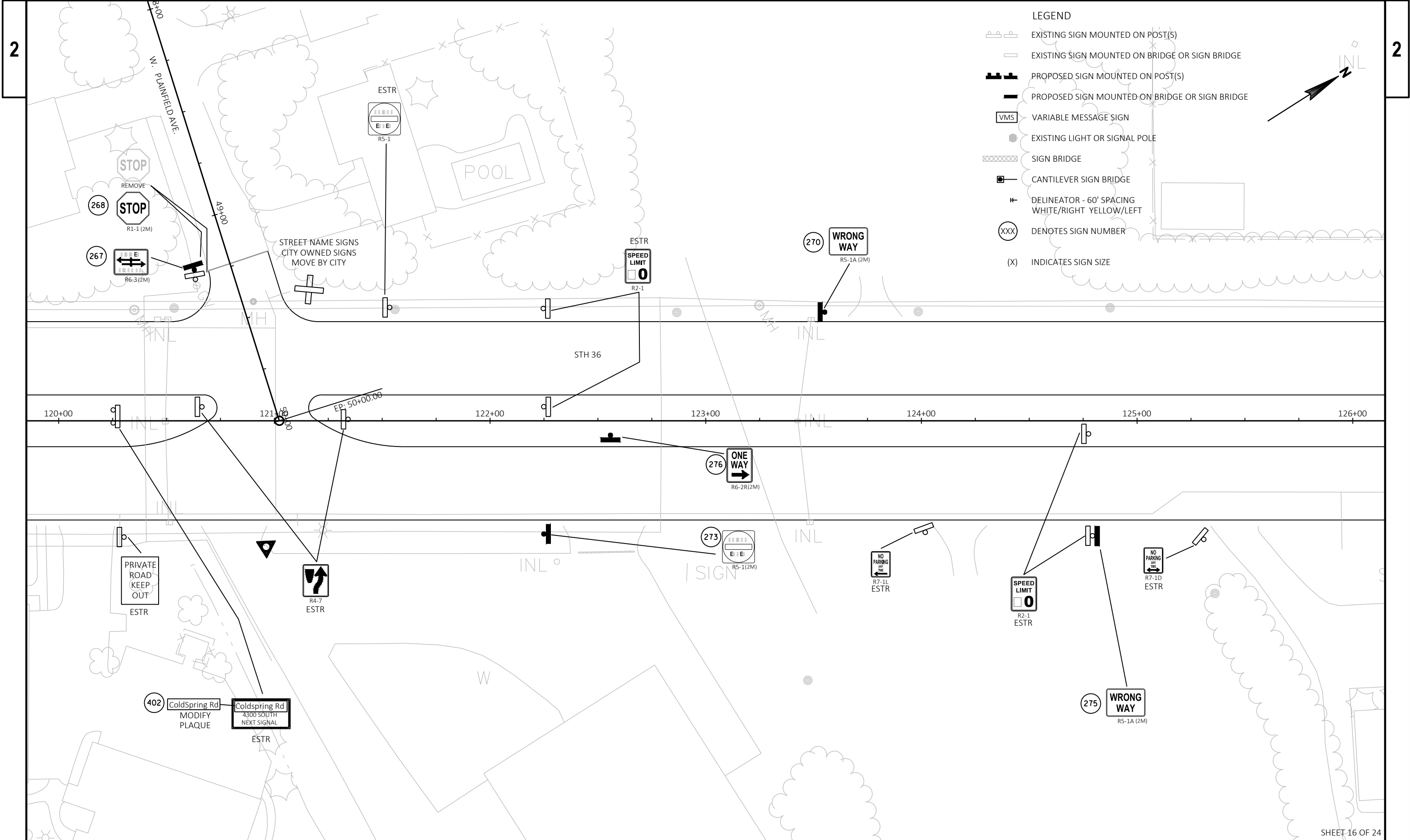
PLOT SCALE : 1 IN:40 FT

WISDOT/CADD5 SHEET 42



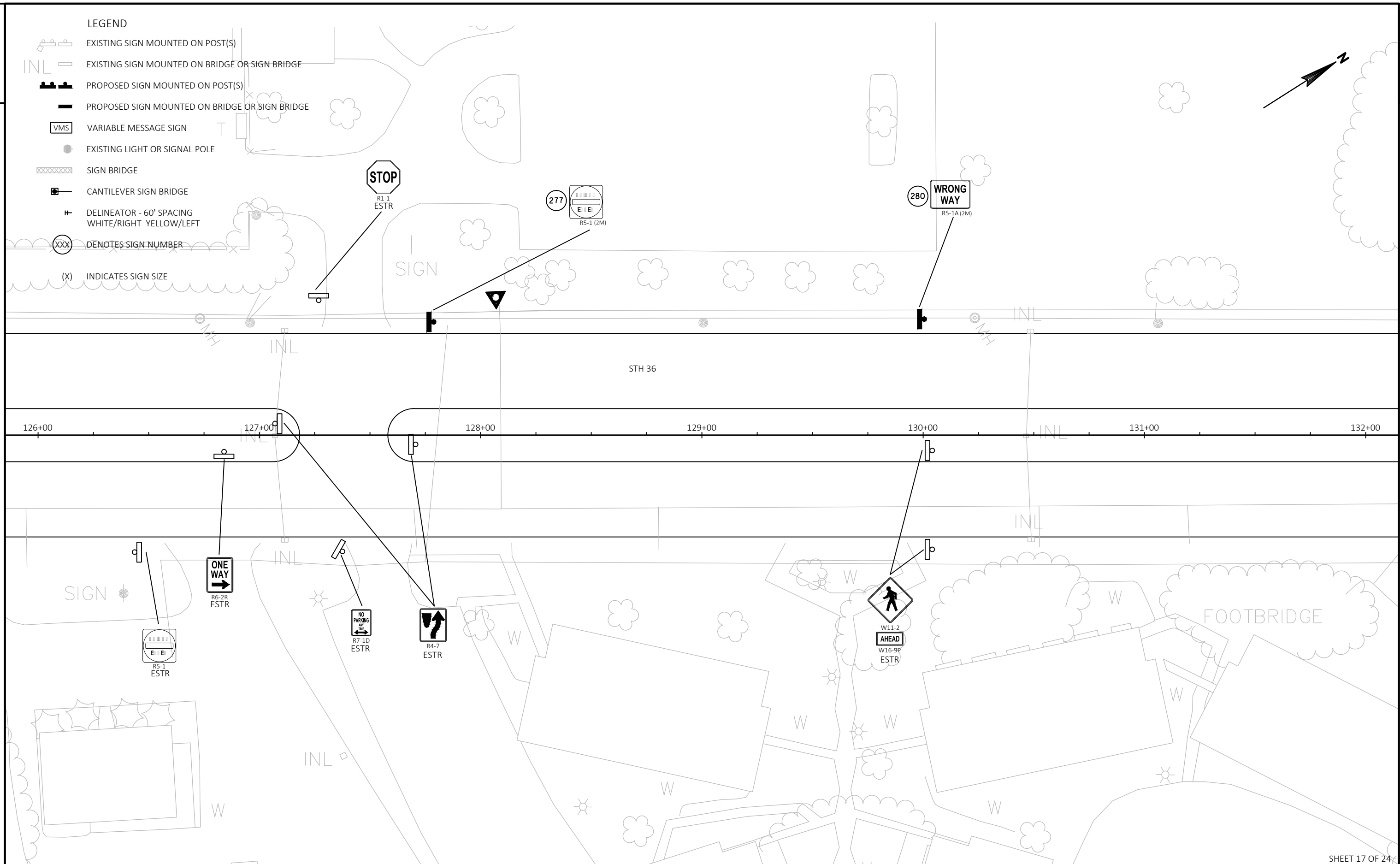






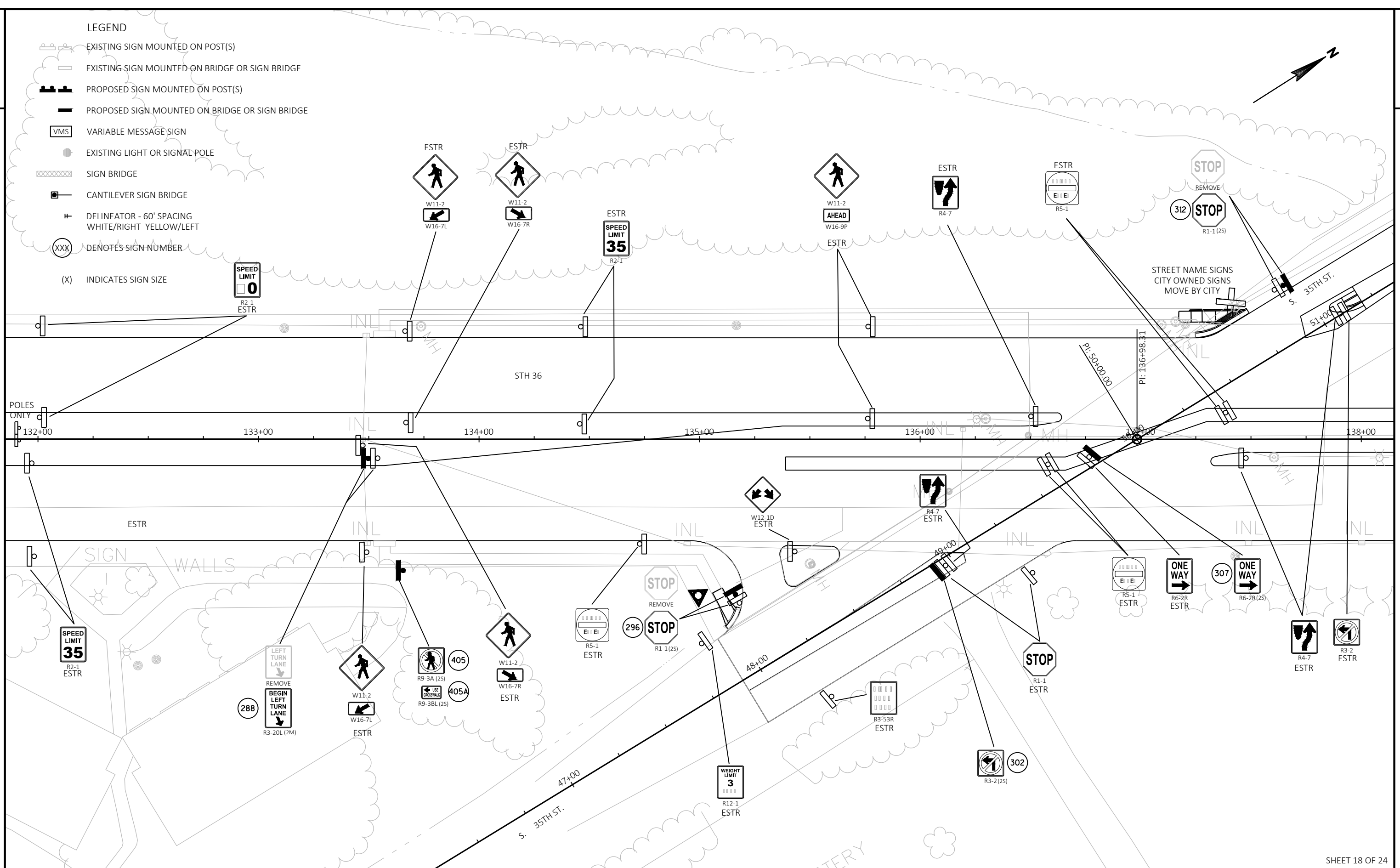
LEGEND

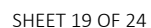
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- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE



LEGEND

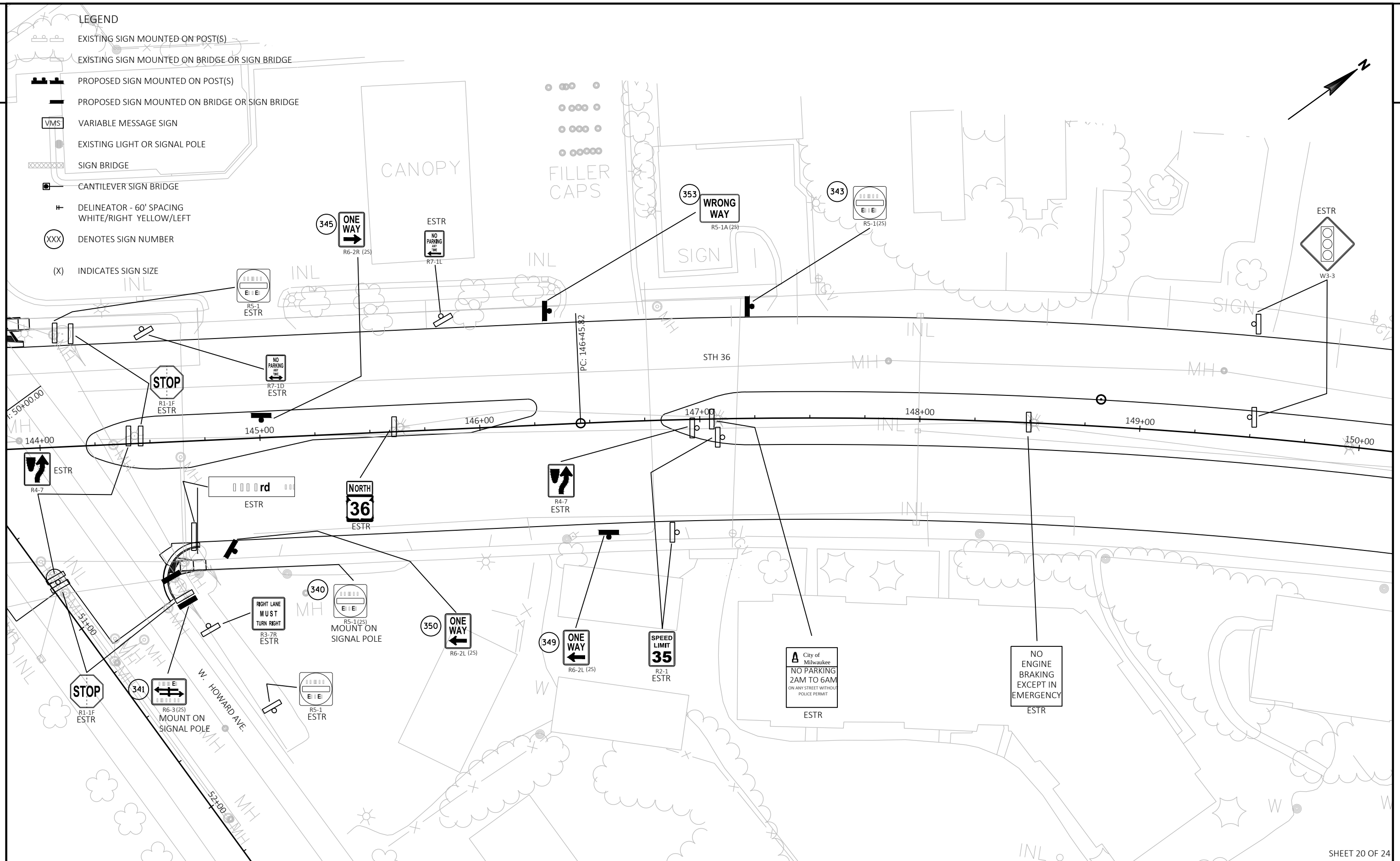
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT
- DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE





LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

PERMANENT SIGNING PLAN

SHEET

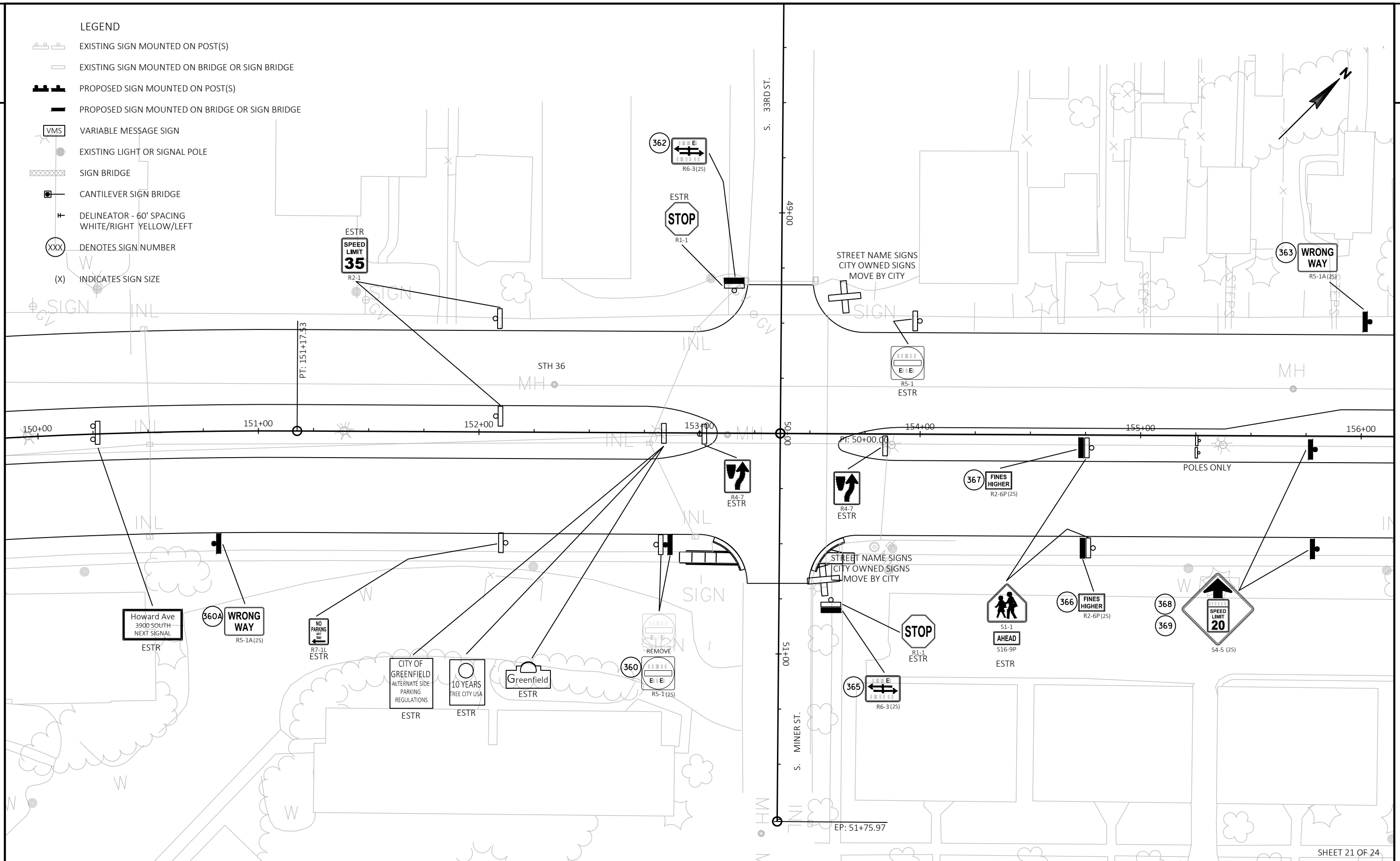
SHEET 20 OF 24

46

E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT YELLOW/LEFT
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

PERMANENT SIGNING PLAN

SHEET

47

E

FILE NAME : N:\PDS\C3D\CAD\22401431\SIGN\023201_PS_16.DWG
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PLOT BY : VANDE LEEST, CYNTHIA

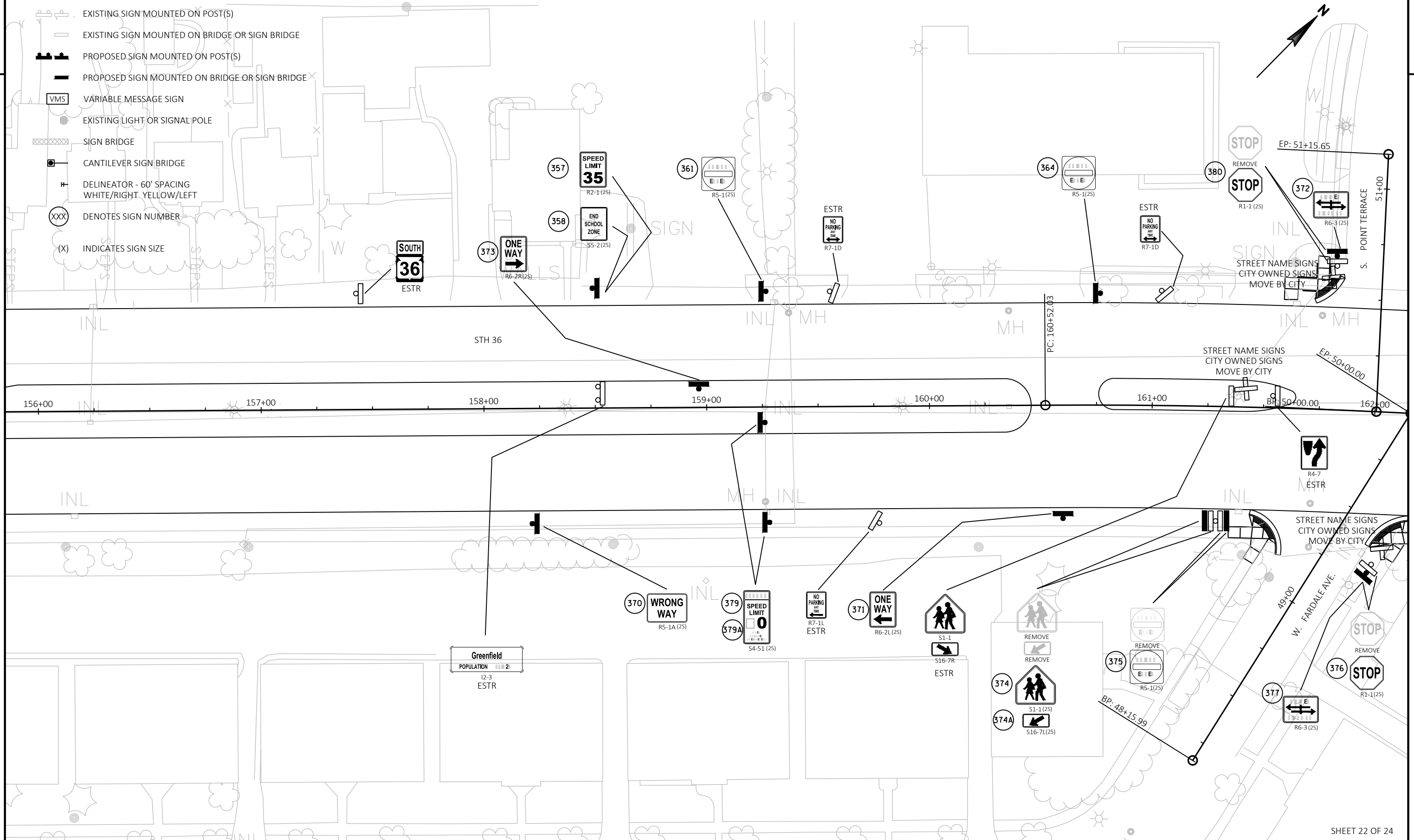
PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DELINEATOR - 60' SPACING
WHITE/RIGHT, YELLOW/LEFT
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE



SHEET 22 OF 24

PROJECT NO: 2240-14-61

HWY: STH 36

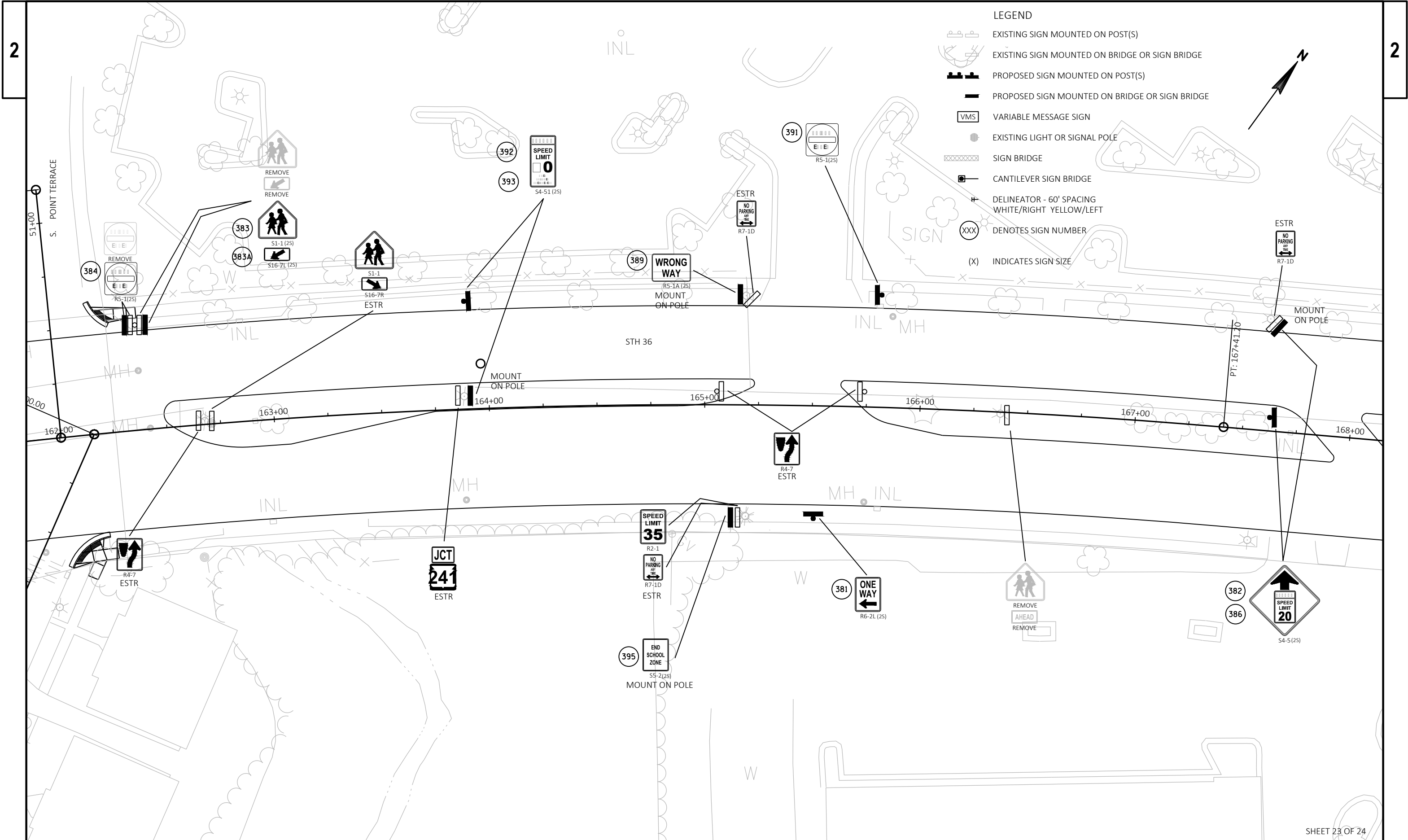
COUNTY: MILWAUKEE

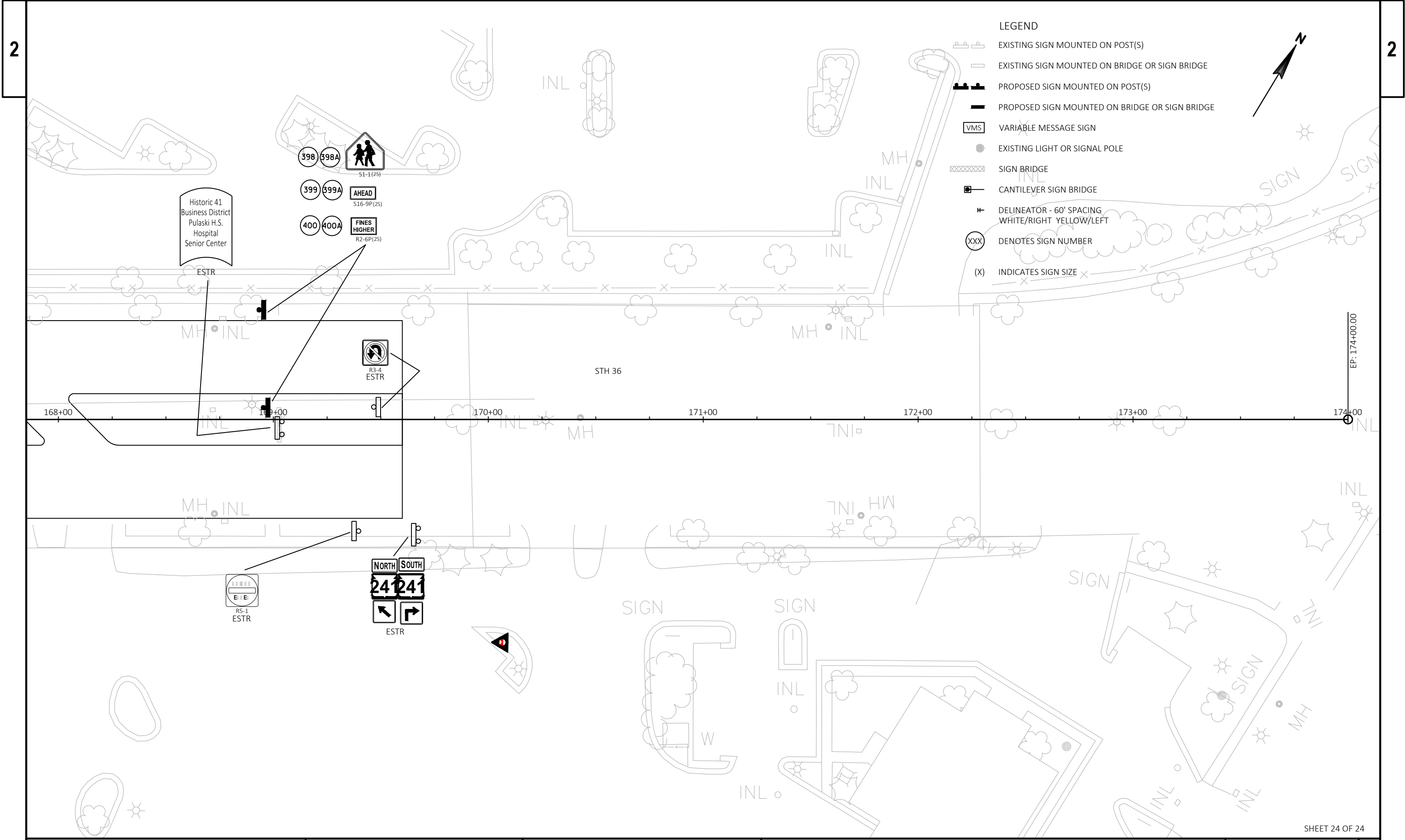
PERMANENT SIGNING PLAN

SHEET

48

E





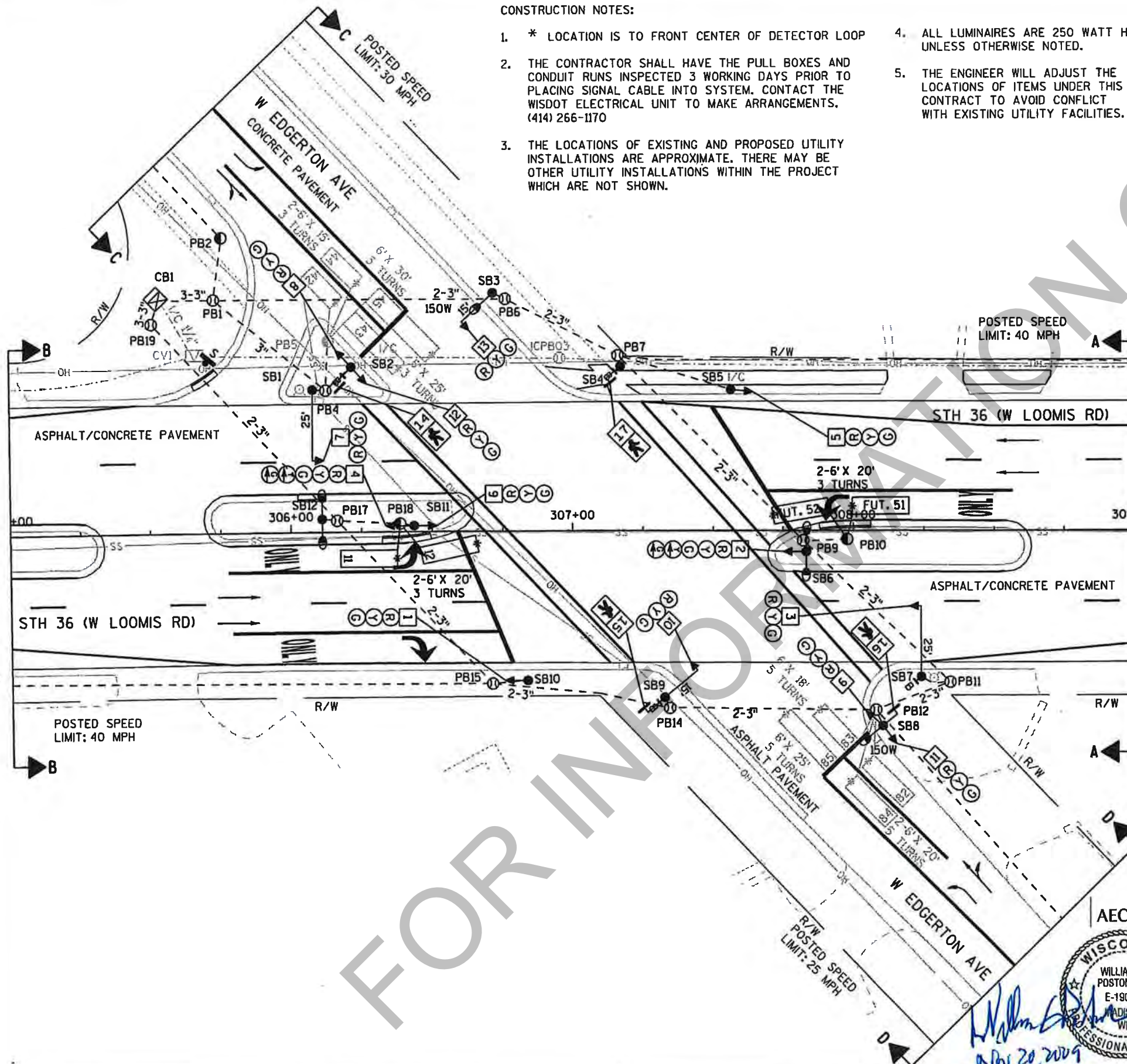
CONSTRUCTION NOTES:

- * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
- THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
- ALL LUMINAIRES ARE 250 WATT HPS UNLESS OTHERWISE NOTED.
- THE ENGINEER WILL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

LEGEND

- CONTROL CABINET
 NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
 SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
 SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
 PEDESTRIAN HEAD WITH PUSH BUTTON
 PUSH BUTTON
 LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
 LOOP DETECTOR CONDUIT 1" NONMETALLIC
 LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
 PULL BOX, 12" X 24"
 PULL BOX, 24" X 36"
 PULL BOX, 24" X 42"
 SIGNAL HEAD NUMBER
 RED CIRCULAR INDICATOR
 YELLOW CIRCULAR INDICATOR
 GREEN CIRCULAR INDICATOR
 YELLOW ARROW
 GREEN ARROW
 WALK / DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
 STOP SIGN
 LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

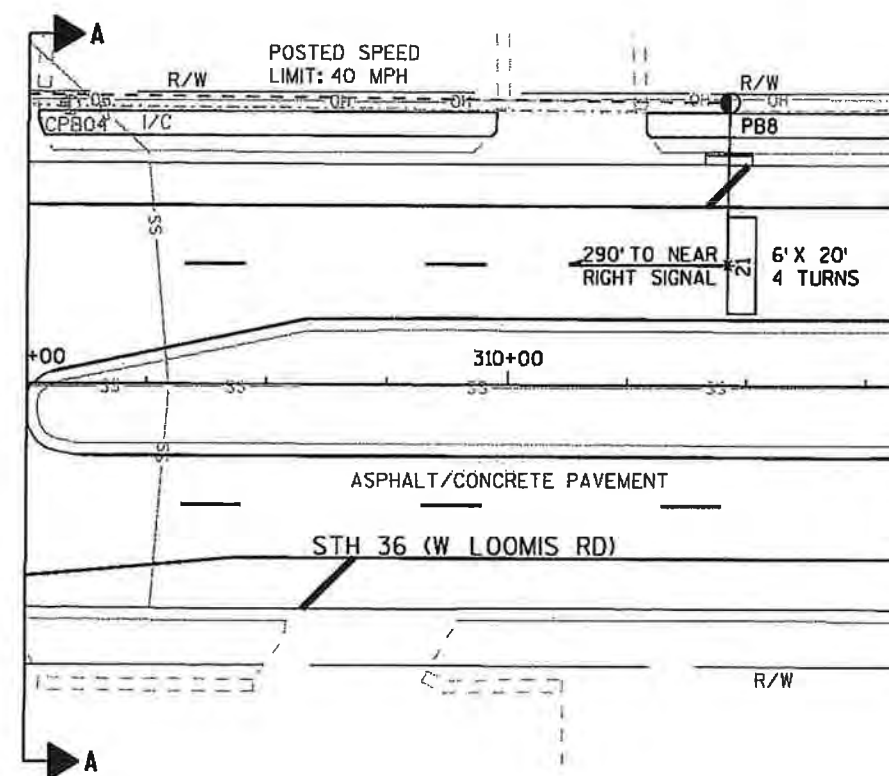
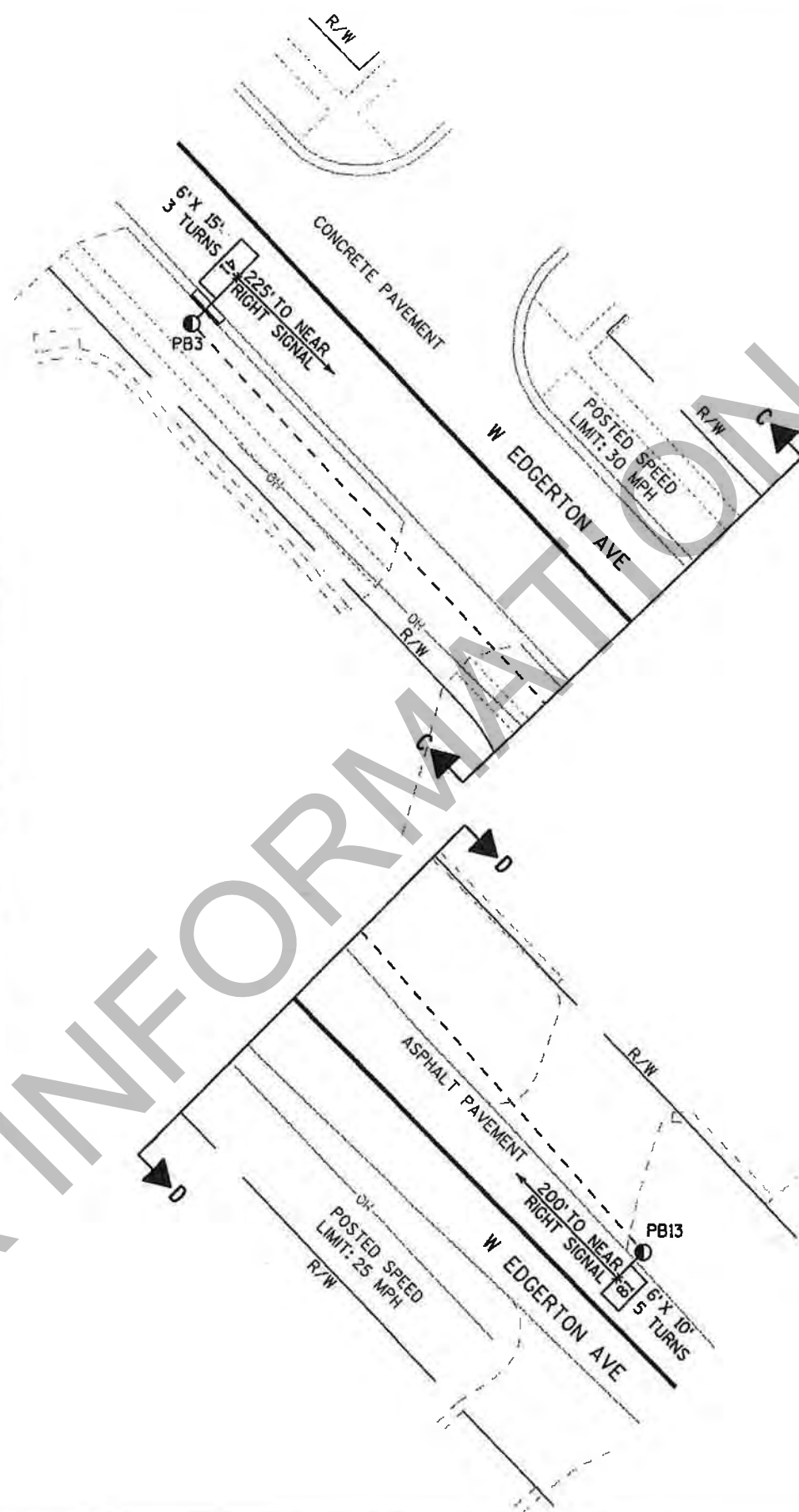
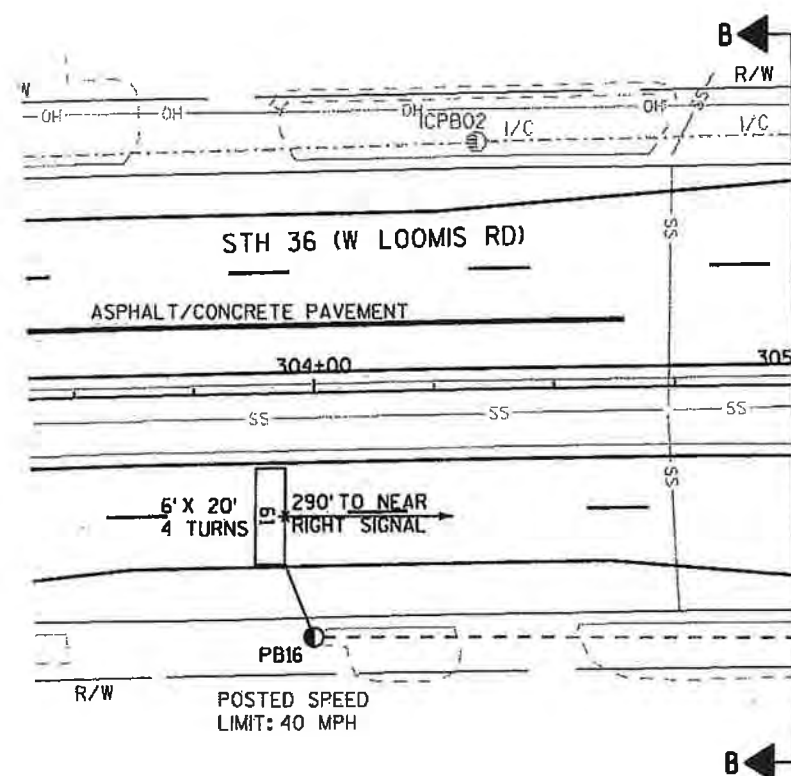


- RENUMBER PB's AND SB's
- 4/5/05 MOVE PEDESTRIAN BUTTON FROM SB3 TO SB4, ADD PULLBOX 16
- 9/03 INSTALL LOOPS 11,12,42, 43,44,45,82,83,84,85; CHANGE EMERGENCY FLASH TO R-R; INSTALL NB LEFT TURN HEADS
- 2/97 INSTALL PEDESTRIAN SIGNALS AND PUSHBUTTONS
- 7/94 INSTALL NEW CONTROLLER, LOOPS, CONDUIT AND PULLBOXES
- CONSTRUCT EB RIGHT TURN LANE AND ISLAND
- 1/23/76 INITIAL INSTALLATION

R E V I S I O N				
Rev. No.	RECONSTRUCT SIGNAL			
7	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	Date	By	Date	By
	11-23-09	ELW	11/25/09	gjb
TRAFFIC CONTROL SIGNAL				
STH 36 (W LOOMIS RD) & W EDGERTON AVE CITY OF GREENFIELD MILWAUKEE COUNTY				
SIGNAL NO. S1157 (M133) CONTROLLER TYPE: EPAC				
WISCONSIN DEPARTMENT OF TRANSPORTATION				
APPROVAL RECOMMENDED				
Date 9/24/75		ROBERT MOE		
		REGION TRAFFIC ENGINEER		
APPROVED				
Date 12/4/75		WAYNE N. VOLK		
		STATE TRAFFIC ENGINEER		
REGION CONTACT: ELIZABETH LLOYD-WEIS				
DESIGNED BY: AECOM				
REVISED BY:				

Page 1 of 3

ESS 11/23/09



TRAFFIC CONTROL SIGNAL
STH 36 (W LOOMIS RD) &
W EDGERTON AVE
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157 (M133)

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

REVISED BY:

PAGE 2 OF 3

SHEET

52

E

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

FILE NAME: I:\work\projects\106912\cadd\sigplan.edgerton.sh02.dgn
BATCH PRINT SHEET 2 OF 4

PRINTER DRIVER: L:\Library\TPN\CAD\stds\Workspace\CLIENTS\WisDOT\MicroStation\Resources\MS.Printing\Printer.Drivers\ET.PDF.11 x 17.plt
PEN TABLE: L:\work\projects\106912\cadd\MS.Printing\Pen.Tables\ET.WisDOT.Traffic.tbl

PLOT DATE: 11/20/2009
PLOT TIME: 11:38:20 AM

PLOT SCALE: 1:39,9999

WISDOT/CADD SHEET 42

SEQUENCE OF OPERATION

SEQUENCE OF OPERATION

NOT USED

NOT USED

NOT USED

NOT USED

RING 1

HEAD NUMBERS	01				02			
	R/W	XX			R/W	XX		
01	2,4	G	Y	-	-	-	-	-
02	5,6,7	R	R	R	G	Y	R	
03								
04	8,9,10	R	R	R	R	R	R	
05								
06	1,2,3,4	R	R	R	R	R	R	
07								
08	11,12,13	R	R	R	R	R	R	
02P								
04P	14,15	D	D	D	D	D	D	
06P								
08P	16,17	D	D	D	D	D	D	

RING 2

HEAD NUMBERS	05				06			
	R/W	XX			R/W	XX		
01	2,4				-	-	-	
02	5,6,7				R	R	R	
03								
04	8,9,10				R	R	R	
05								
06	1,2,3,4				G	Y	R	
07								
08	11,12,13				R	R	R	
02P								
04P	14,15				D	D	D	
06P								
08P	16,17				D	D	D	

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

BARRIER

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	6	2,4,8
2	6	1,4,8
3		
4	8	1,2,6
5		
6	1 OR 2	4,8
7		
8	4	1,2,6

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			1	1				6X20	3
12	1	X			1	1				6X20	3
21	2	X			2	2				6X20	4
41	3			X		4			X	6X15	3
42	4	X			4	4				6X15	3
43	4	X			4	4				6X25	3
44	5	X			4	4		X		6X15	3
45	5	X			4	4		X		6X30	3
51	FUTURE									6X20	3
52	FUTURE									6X20	3
61	7	X			6	6				6X20	4
81	8			X		8			X	6X10	5
82	9	X			8	8		X		6X20	5
83	9	X			8	8		X		6x18	5
84	10	X			8	8		X		6x20	5
85	10	X			8	8		X		6x25	5

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

TYPE OF INTERCONNECT COMMUNICATION

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

TYPE OF PRE-EMPT

NONE	X
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWARE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING

NONE	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

STH 36 (W LOOMIS RD) &
W EDGERTON AVE
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157 (M133)

CONTROLLER TYPE: EPAC

DATE NOVEMBER 2009

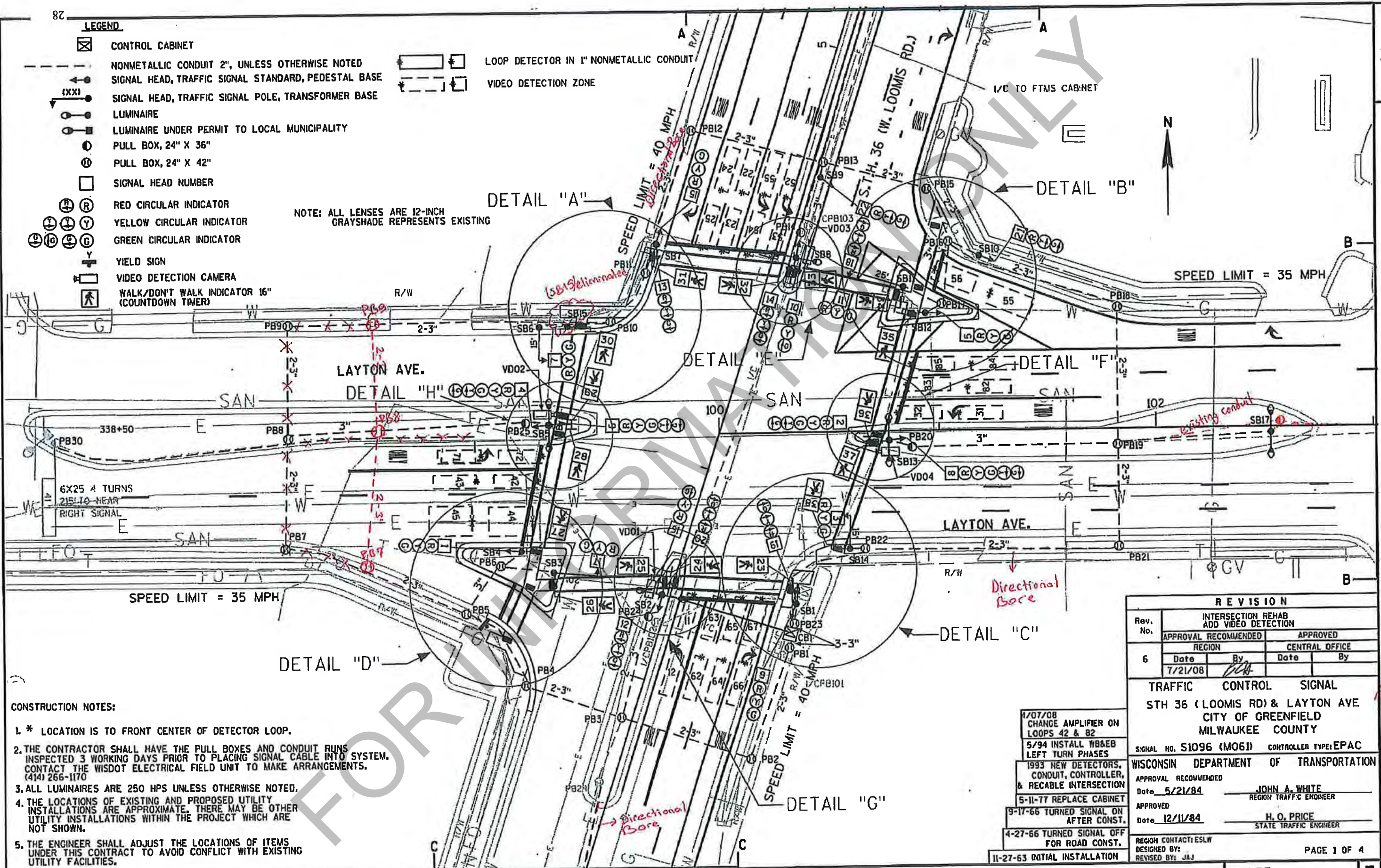
PAGE NO. 3 OF 3

LEGEND

- CONTROL CABINET
 NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
 SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
 SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
 LUMINAIRE
 LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
 PULL BOX, 24" X 36"
 PULL BOX, 24" X 42"
 SIGNAL HEAD NUMBER
 RED CIRCULAR INDICATOR
 YELLOW CIRCULAR INDICATOR
 GREEN CIRCULAR INDICATOR
 YIELD SIGN
 VIDEO DETECTION CAMERA
 WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
 VIDEO DETECTION ZONE



CONSTRUCTION NOTES:

- * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
- THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
- ALL LUMINAIRES ARE 250 HPS UNLESS OTHERWISE NOTED.
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
- THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

R E V I S I O N				
Rev. No.	INTERSECTION REHAB ADD VIDEO DETECTION			
	APPROVAL RECOMMENDED		APPROVED	
6	REGION		CENTRAL OFFICE	
	Date	By	Date	By
	7/21/08	<i>[Signature]</i>		
TRAFFIC CONTROL SIGNAL				
STH 36 (LOOMIS RD) & LAYTON AVE				
CITY OF GREENFIELD				
MILWAUKEE COUNTY				
SIGNAL NO. S1096 (M061)			CONTROLLER TYPE: EPAC	
WISCONSIN DEPARTMENT OF TRANSPORTATION				
APPROVAL RECOMMENDED			JOHN A. WHITE	
Date 5/21/84			REGION TRAFFIC ENGINEER	
APPROVED			H. O. PRICE	
Date 12/11/84			STATE TRAFFIC ENGINEER	
REGION CONTACT: ESLW				
DESIGNED BY: JAJ				
REVISED BY: JAJ				

11-27-63 INITIAL INSTALLATION

PAGE 1 OF 4

PROJECT NO: 1030-21-70

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

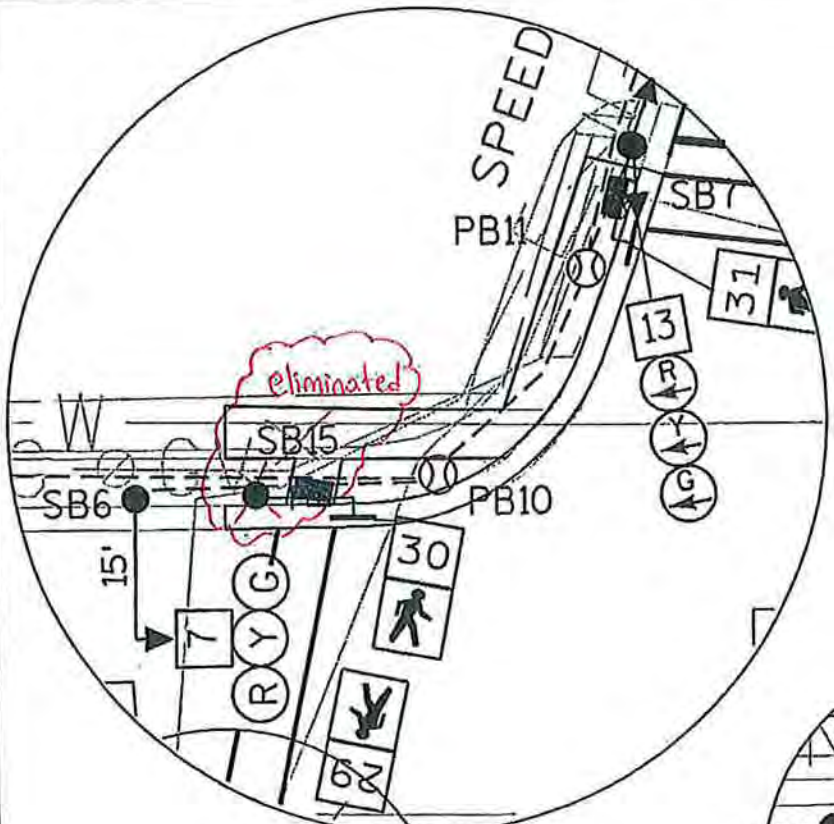
SHEET

PAGE 1 OF 4

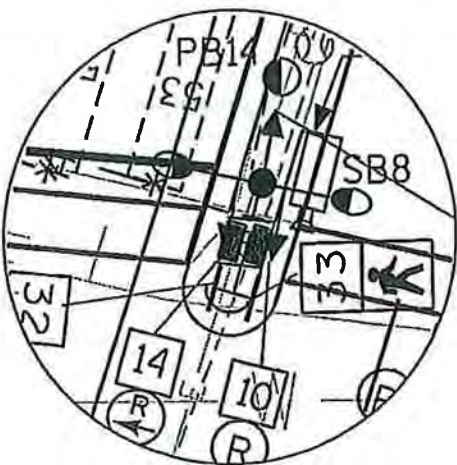


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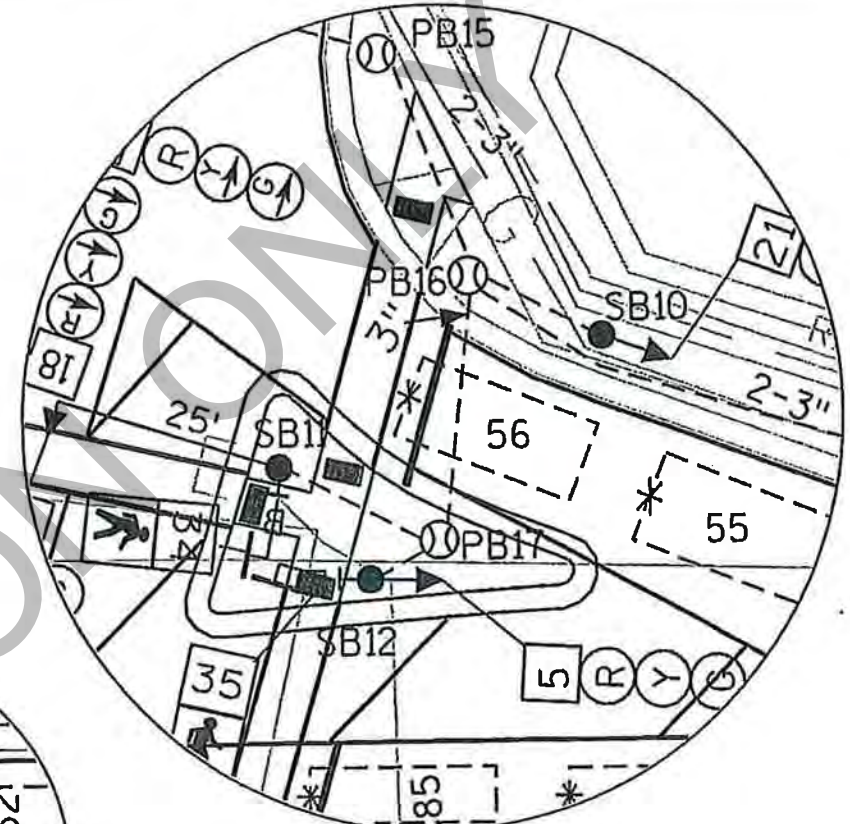
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DETAIL "A"



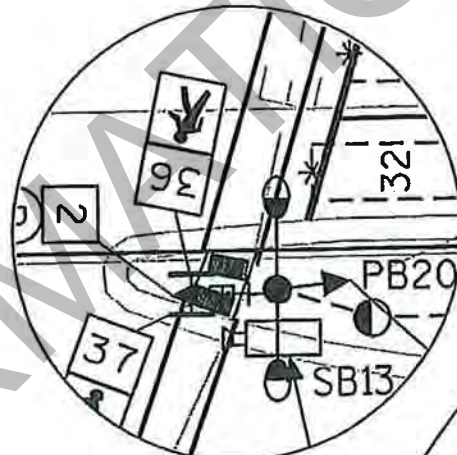
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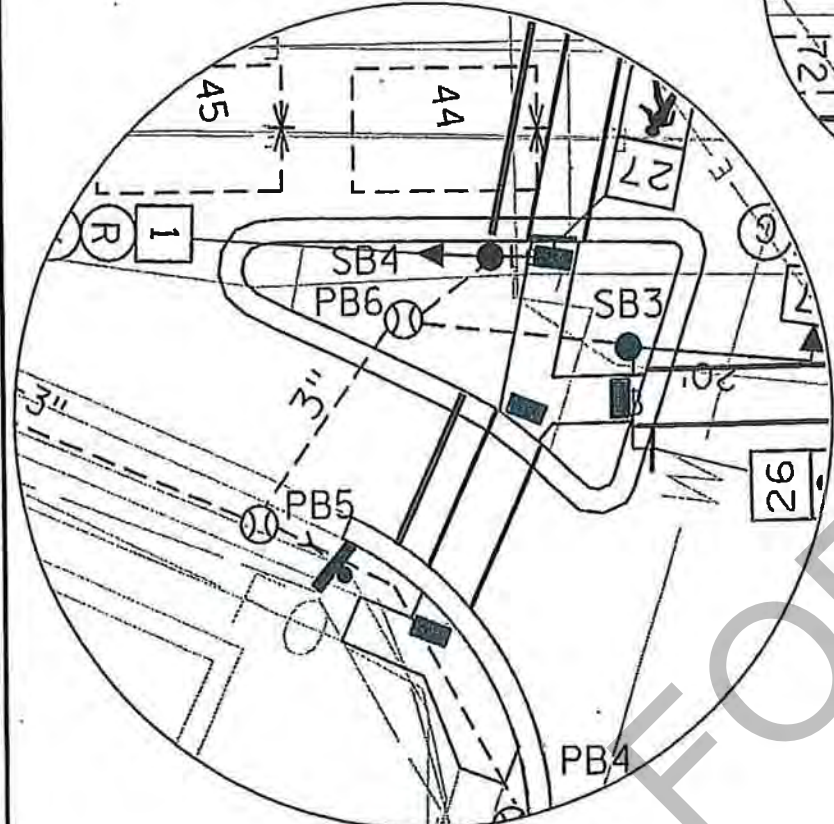
DETAIL "B"



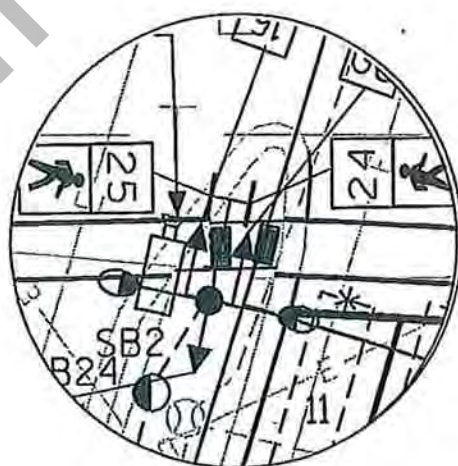
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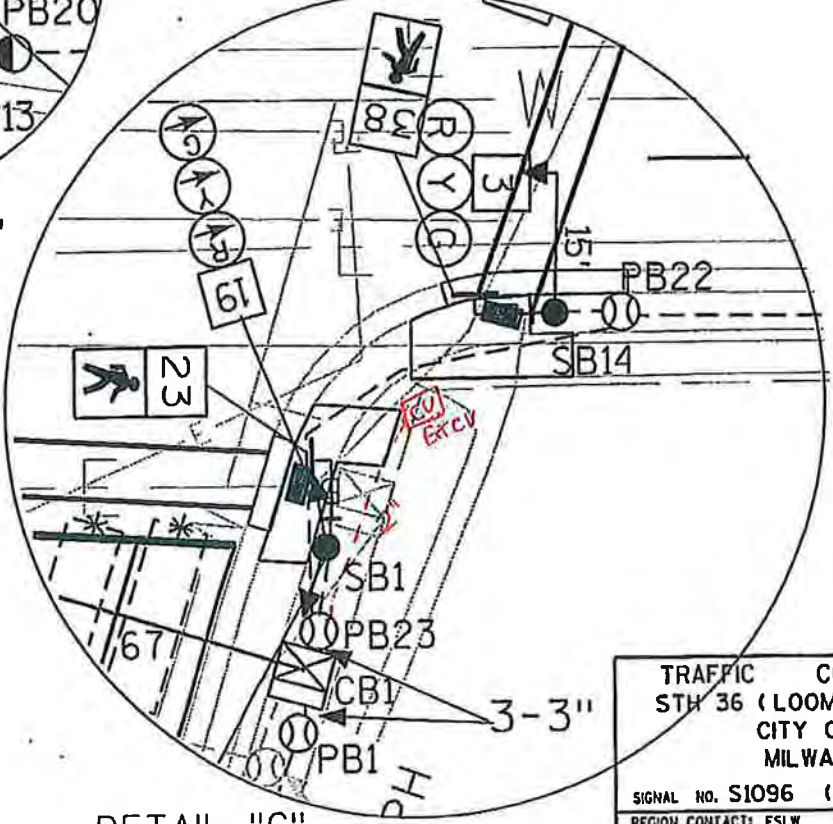
DETAIL "F"



DETAIL "D"



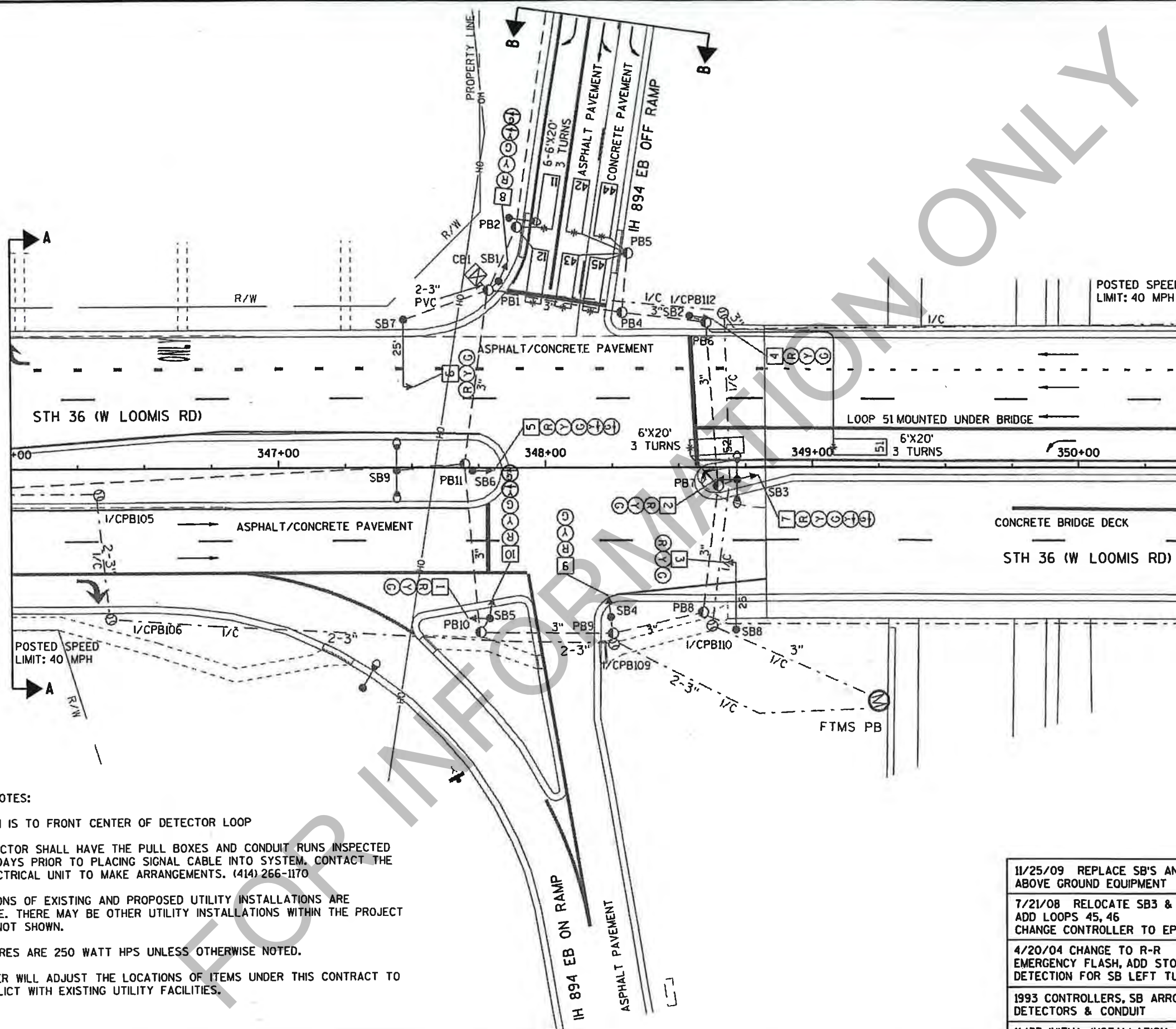
DETAIL "G"



DETAIL "C"



TRAFFIC CONTROL SIGNAL
STH 36 (LOOMIS RD) & LAYTON AVE
CITY OF GREENFIELD
MILWAUKEE COUNTY
SIGNAL NO. S1096 (M061)
REGION CONTACT: ESLW
DESIGNED BY: JAJ
REVISED BY:



LEGEND

- ☒ CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) ● SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 24" X 36"
- ⊙ PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- Ⓡ RED CIRCULAR INDICATOR
- Ⓢ YELLOW CIRCULAR INDICATOR
- Ⓢ GREEN CIRCULAR INDICATOR
- Ⓢ YELLOW ARROW
- Ⓢ GREEN ARROW
- Y YIELD SIGN
- LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

- * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
- THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
- ALL LUMINAIRES ARE 250 WATT HPS UNLESS OTHERWISE NOTED.
- THE ENGINEER WILL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

R E V I S I O N					
Rev. No.	INSTALL EB RIGHT TURN ARROWS				
	APPROVAL RECOMMENDED			APPROVED	
5	REGION		CENTRAL OFFICE		
	Date	By	Date	By	
	8-31-10	ELW	9/1/10	gjb	
TRAFFIC CONTROL SIGNAL					
IH 894 EB RAMPS & STH 36 CITY OF GREENFIELD MILWAUKEE COUNTY					
EPAC					
5	SIGNAL NO. S1161 (M137)		CONTROLLER TYPE: (NTCIP)		
WISCONSIN DEPARTMENT OF TRANSPORTATION					
APPROVAL RECOMMENDED					
Date 8/19/83		JOHN A. WHITE			
APPROVED		REGION TRAFFIC ENGINEER			
Date 12/12/84		H. O. PRICE			
		STATE TRAFFIC ENGINEER			
REGION CONTACT: ELIZABETH LLOYD-WEIS DESIGNED BY: AECOM REVISED BY:					
PAGE 1 OF 3					

PROJECT NUMBER: 1030-20-30

HWY: STH 36

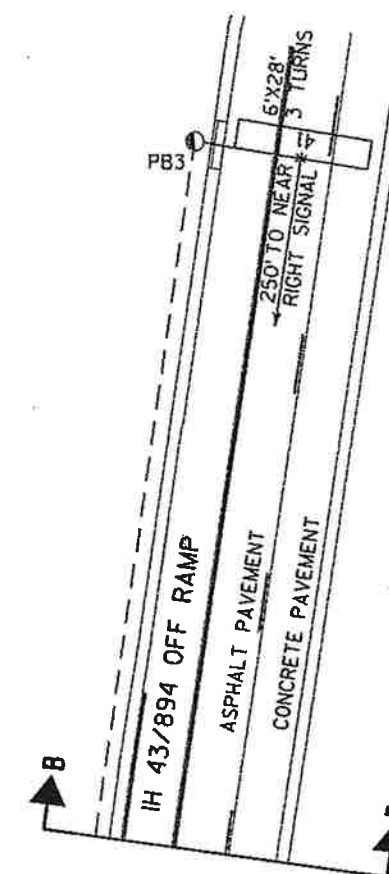
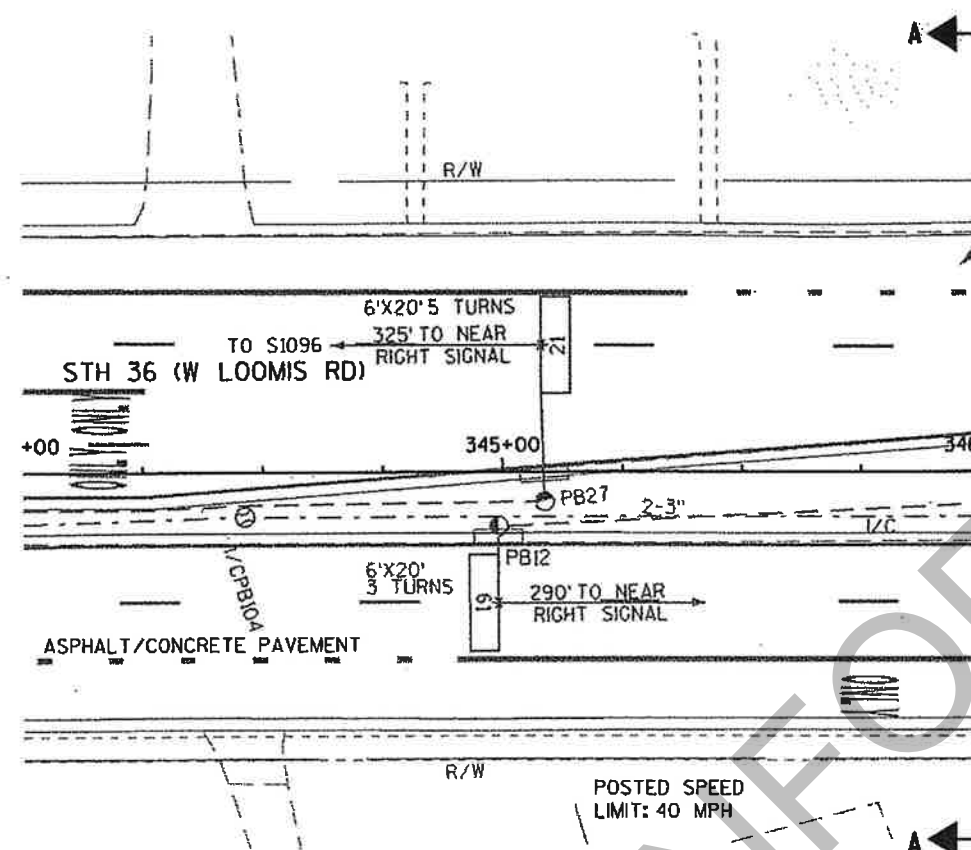
COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

57

E



TRAFFIC CONTROL SIGNAL

IH 894 EB RAMPS & STH 36
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1161 (M137)

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

REVISED BY:

PAGE 2 OF 3

PROJECT NUMBER: 1030-20-30

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

58

E

SEQUENCE OF OPERATION

RING 1

HEAD NUMBERS		01	R/W	02	R/W						
R/W	**	CLEAR TO	R/W	**	CLEAR TO						
R/W	**		R/W	**							
01	8,10	G	Y	-	-	-	-	-	-	-	-
02	4,5,6,7	R	R	R	G	Y	R				
03											
04	8,9,10	R	R	R	R	R	R				
05	5,7	-	-	-	-	-	-				
06	1,2,3	R	R	R	R	R	R				
07											
08											
02P											
04P											
06P											
08P											

NOT
USED

NOT
USED

RING 2

HEAD NUMBERS		05	R/W	06	R/W						
R/W	**	CLEAR TO	R/W	**	CLEAR TO						
R/W	**		R/W	**							
01	8,10	-	-	-	-	-	-	-	-	-	-
02	4,5,6,7	R	R	R	R	R	R				
03											
04	8,9,10	R	R	R	R	R	R				
05	5,7	G	Y	-	-	-	-				
06	1,2,3	R	R	R	G	Y	R				
07											
08											
02P											
04P											
06P											
08P											

07

08

R/W
**
CLEAR TO

R/W
**
CLEAR TO

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

BARRIER

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	5 OR 6	2,4
2	5 OR 6	1,4
3		
4	NONE	1,2,5,6
5	1 OR 2	4,6
6	1 OR 2	4,5
7		
8		

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	4	X			1	1		X		6X20	3
12	4	X			1	1		X		6X20	3
41	1			X		4			X	6X28	3
42	2	X			4	4				6X20	3
43	2	X			4	4				6X20	3
44	3	X			4	4				6X20	3
45	3	X			4	4				6X20	3
51	5	X			5	5				6X20	3
52	5	X			5	5				6X20	3
61	6	X			6	6				6X20	3

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

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

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
NONE	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

IH 894 EB RAMPS & STH 36
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1161 (M137)

CONTROLLER TYPE: EPAC (NTCIP)

DATE AUGUST 2010

PAGE NO. 3 OF 3

PROJECT NO: 1030-20-30

HWY: STH 36

COUNTY: MILWAUKEE

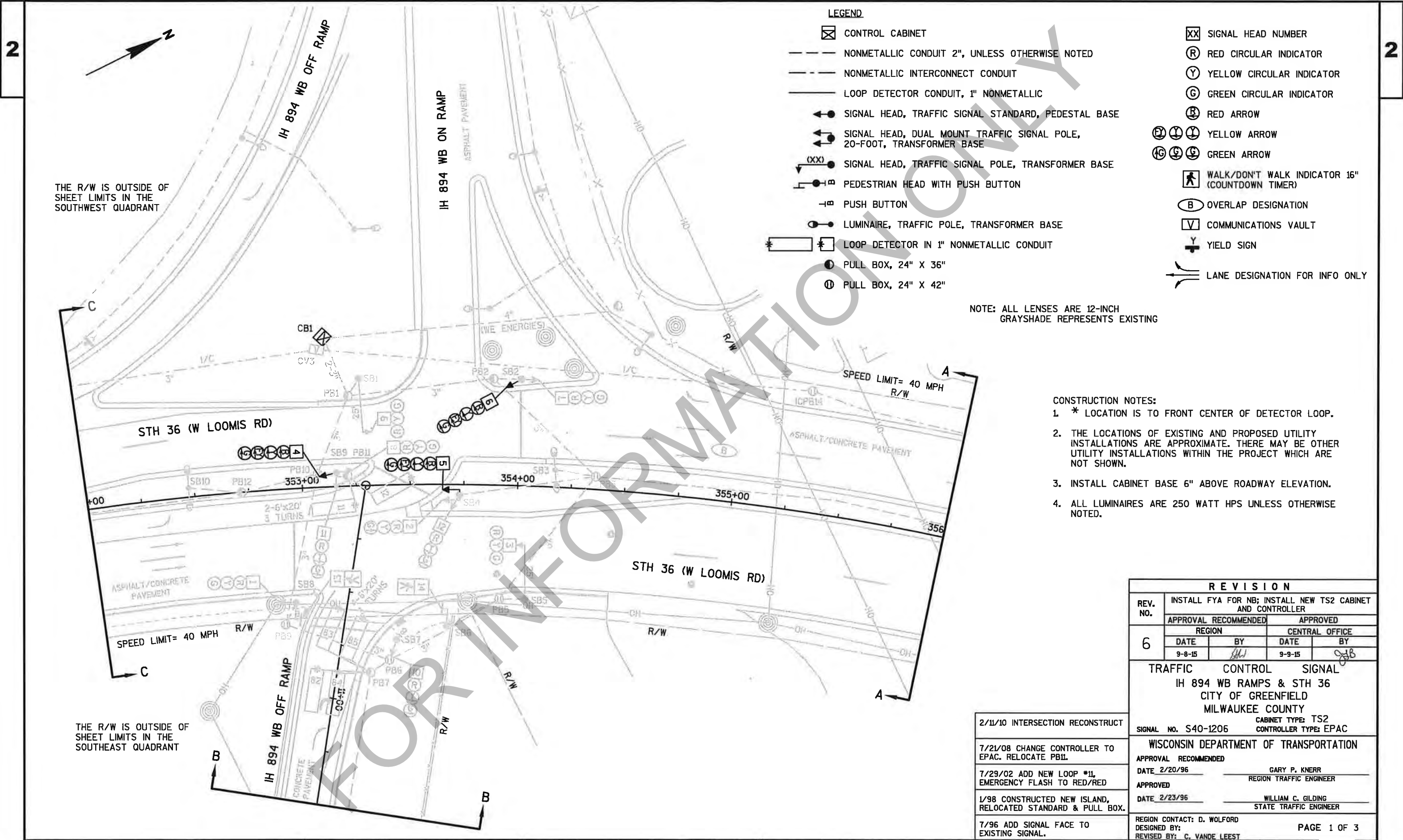
SEQUENCE OF OPERATIONS

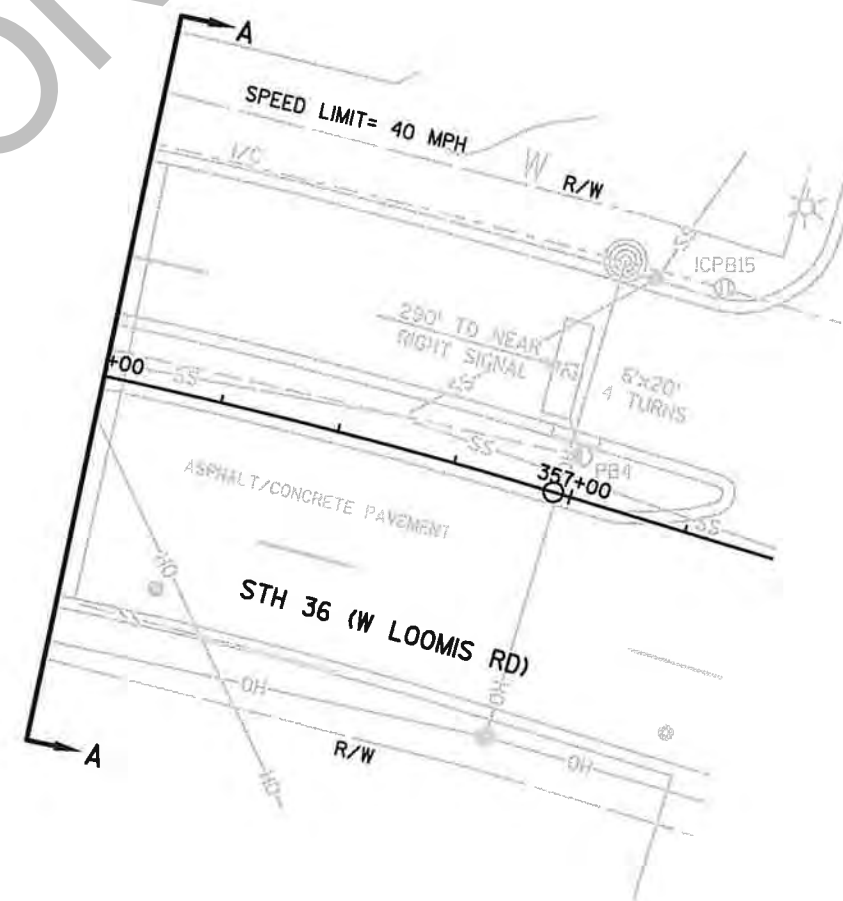
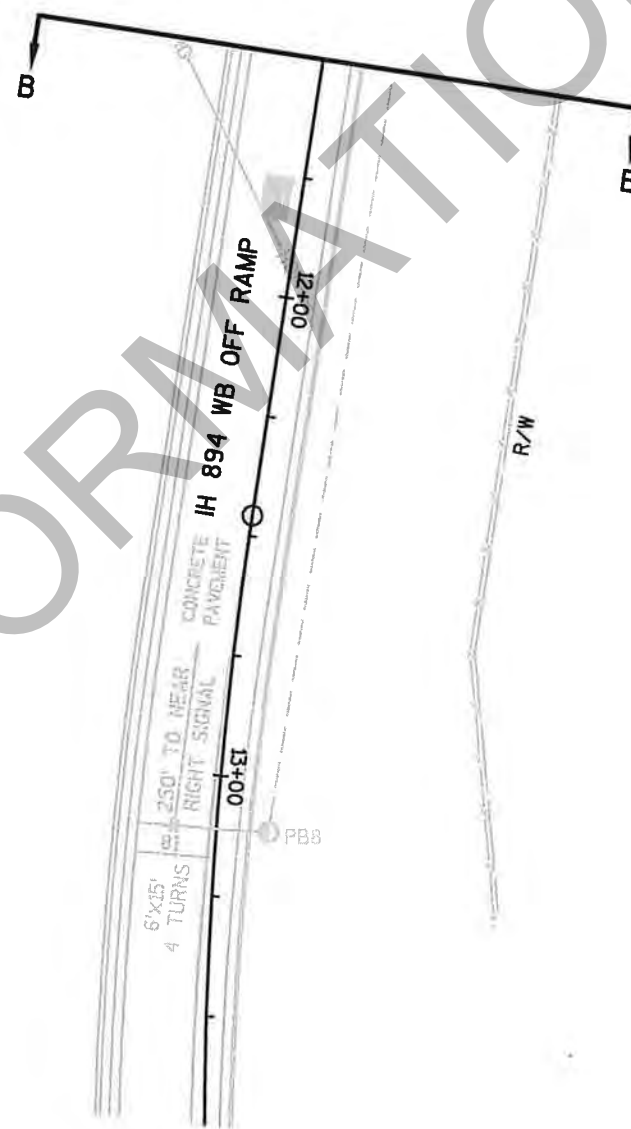
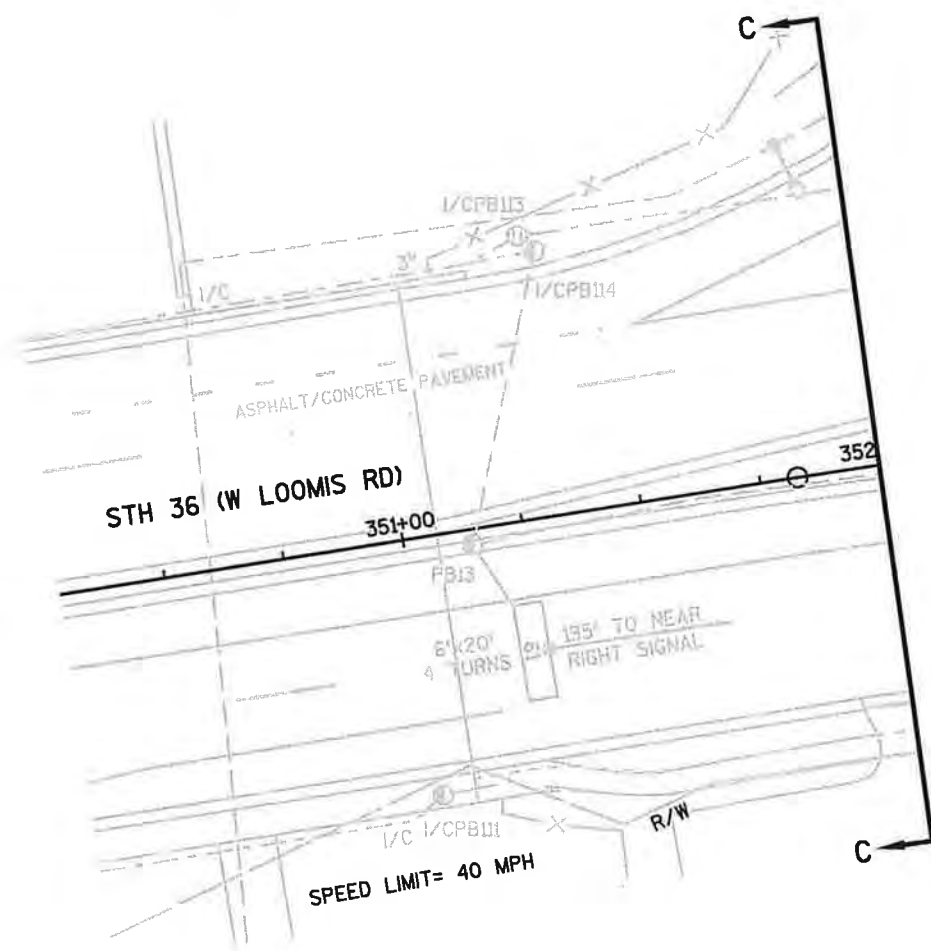
SHEET

59

E

8-31-10 2010 8/31/10 JHM





TRAFFIC CONTROL SIGNAL
IH 894 WB RAMPS & STH 36
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S40-1206

REGION CONTACT: D. WOLFORD
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PAGE 2 OF 3

PROJECT NO: 0082-03-01

HWY: IH 894

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

61

E

FILE NAME : N:\PDS\CAD\CAD\00820300\SIG\S40-1206\S40-1206_F.DWG
LAYOUT NAME - 024001.SP (2)

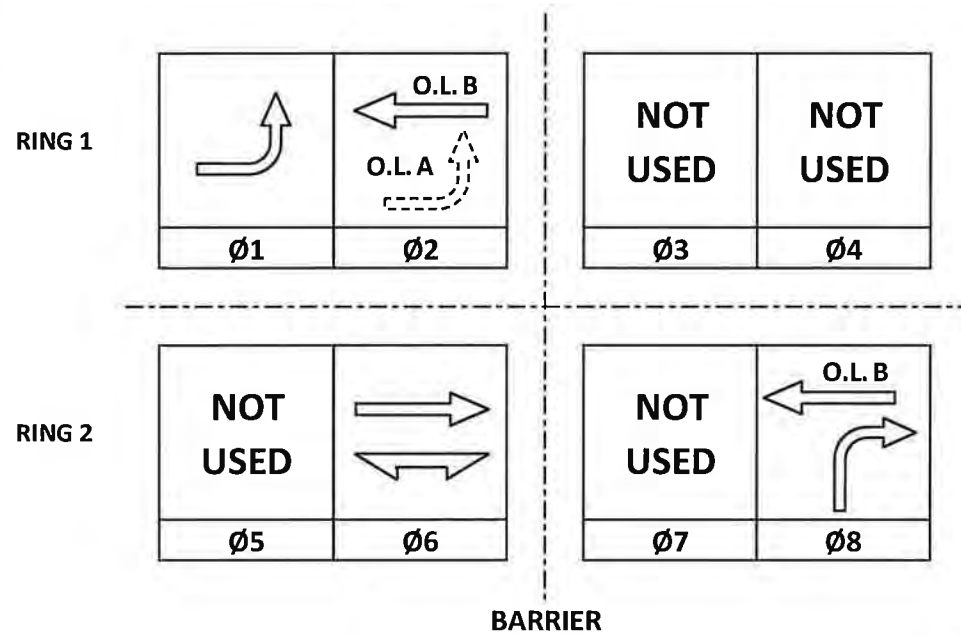
PLOT DATE : 9/21/2015 9:19 AM

PLOT BY : VANDE LEEST, CYNTHIA PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDs SHEET 42

	HEAD NUMBERS	FLASH
Ø1	4,5,6	-
Ø2		
Ø3		
Ø4		
Ø5		
Ø6	1,2,3	R
Ø7		
Ø8	10,11,12	R
Ø2P		
Ø4P		
Ø6P	13,14	
Ø8P		
OLA	4,5,6	R
OLB	7,8,9	R
OLC		
OLD		



CONTROLLER LOGIC

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

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

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 00-04

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

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

DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	81	83	85			
ASSIGNED PHASE	1	2	8	8	8			
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND			X					
DELAY	X		X	X	X			

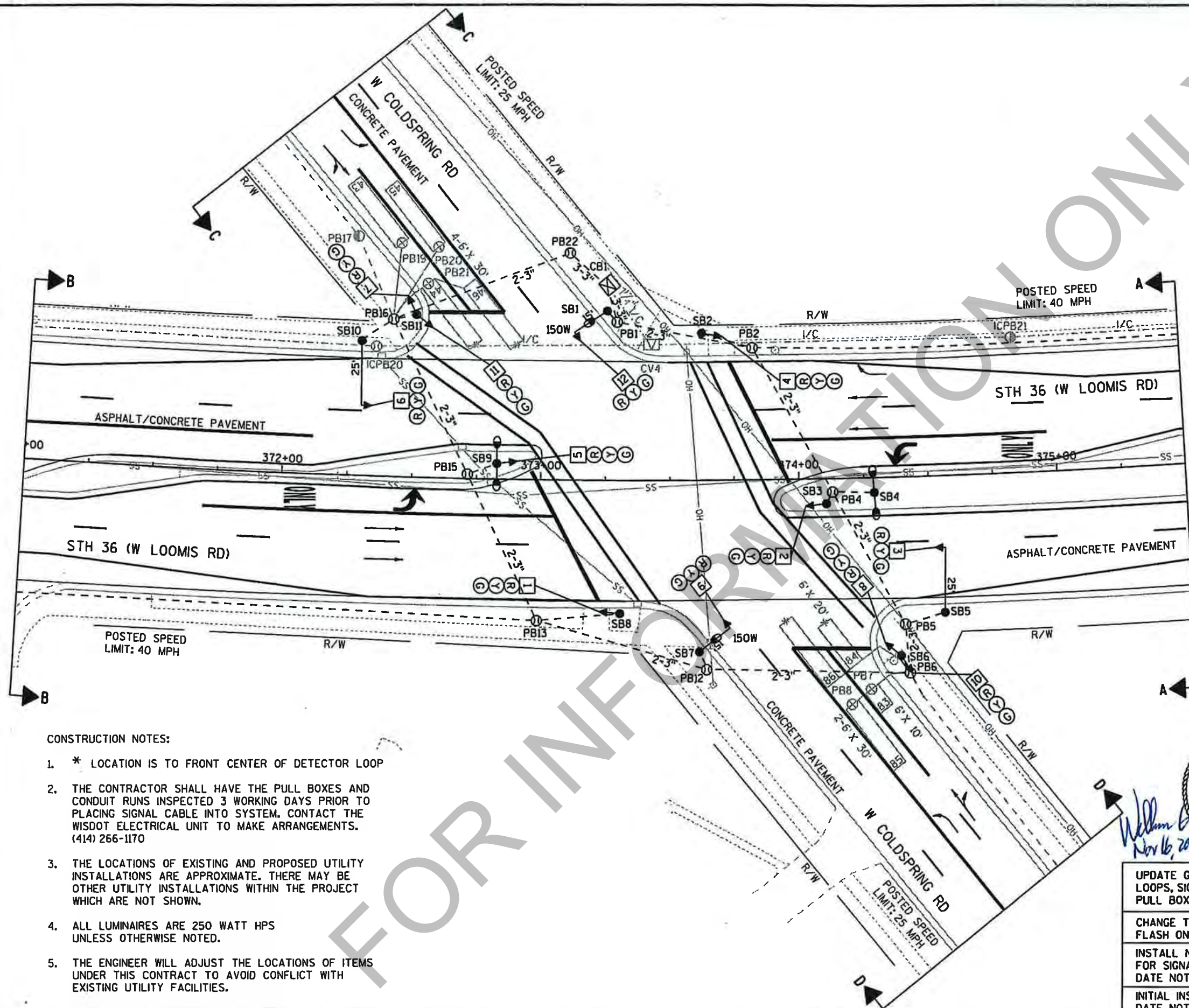
DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	61	82	84				
ASSIGNED PHASE	1	6	8	8				
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY	X		X	X				

DETECTOR INPUT	19	17	23	21	27	25	31	29
PLAN LOOP DETECTOR*(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT	20	18	24	22	28	26	32	30
PLAN LOOP DETECTOR*(S)								
ASSIGNED PHASE								
OPERATION MODE	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT								
PLAN LOOP DETECTOR*(S)								
ASSIGNED PHASE								
OPERATION MODE								
SWITCH								
EXTEND								
DELAY								

DETECTOR INPUT								
PLAN LOOP DETECTOR*(S)								
ASSIGNED PHASE								
OPERATION MODE								
SWITCH								
EXTEND								
DELAY								



LEGEND

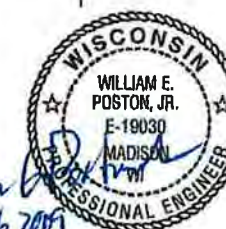
- ☒ CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) ● SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- * □ * LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- ⊕ PULL BOX, 12" X 24"
- PULL BOX, 24" X 36"
- ⊙ PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH
GRAYSHADE REPRESENTS EXISTING

CONSTRUCTION NOTES:

- * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
- THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
- ALL LUMINAIRES ARE 250 WATT HPS UNLESS OTHERWISE NOTED.
- THE ENGINEER WILL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

AECOM



UPDATE GEOMETRICS,
LOOPS, SIGNAL BASES AND
PULL BOXES 9/15/05

CHANGE TO R-R EMERGENCY
FLASH ON 7/04

INSTALL NEW CONTROLLER
FOR SIGNAL INTERCONNECT
DATE NOT RECORDED

INITIAL INSTALLATION
DATE NOT RECORDED

REVISION					
Rev. No.	RECONSTRUCT SIGNAL				
	APPROVAL RECOMMENDED		APPROVED		
	REGION	By	CENTRAL OFFICE	By	
4	Date	By	Date	By	
	11-19-09	EAR	11/25/09	GPB	
TRAFFIC CONTROL SIGNAL STH 36 (W LOOMIS RD) & W COLDSRING RD CITY OF GREENFIELD MILWAUKEE COUNTY					
EPAC SIGNAL NO. S1174 (M150) CONTROLLER TYPE: (NTCIP)					
WISCONSIN DEPARTMENT OF TRANSPORTATION					
APPROVAL RECOMMENDED		JOHN A. WHITE REGION TRAFFIC ENGINEER			
Date 2/8/05					
APPROVED		HARRY O. PRICE STATE TRAFFIC ENGINEER			
Date 4/5/05					
REGION CONTACT: ELIZABETH LLOYD-WEIS DESIGNED BY: AECOM REVISED BY:					

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

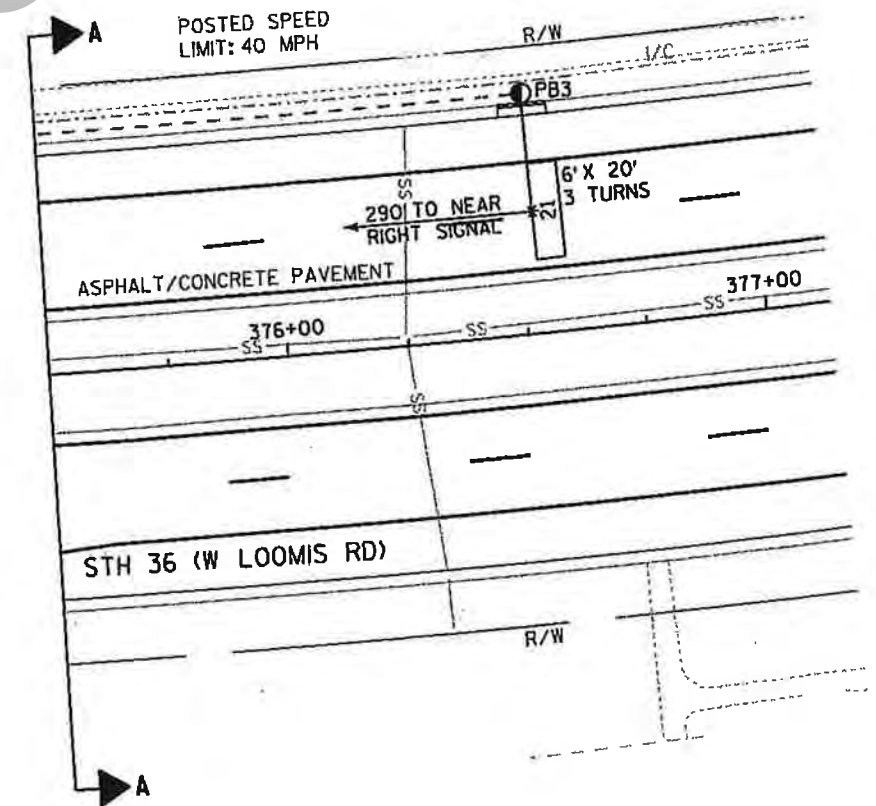
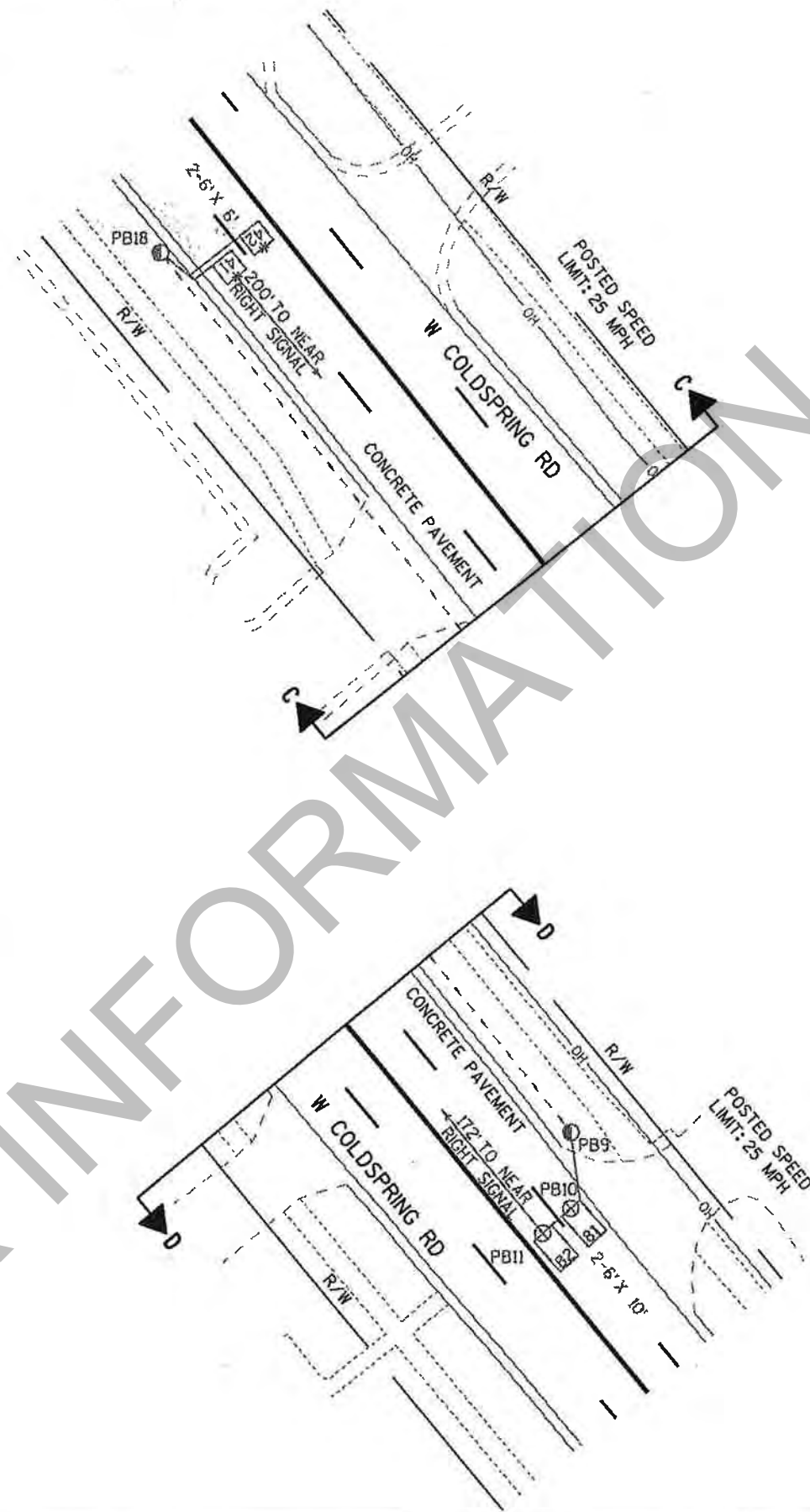
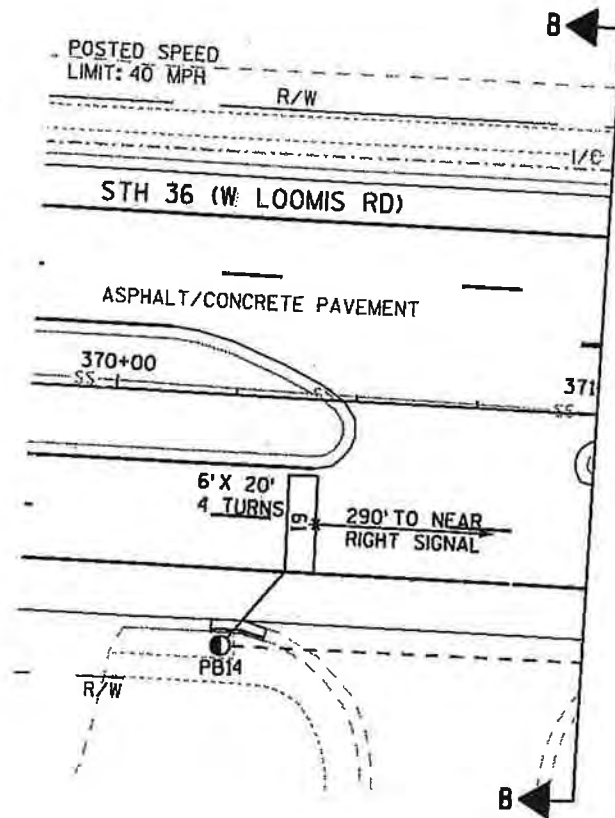
TRAFFIC SIGNAL PLAN

SHEET

63

E

895 11/20/09



TRAFFIC CONTROL SIGNAL
 STH 36 (W LOOMIS RD) &
 W COLDSRING RD
 CITY OF GREENFIELD
 MILWAUKEE COUNTY

SIGNAL NO. S1174 (M150)

REGION CONTACT: ELIZABETH LLOYD-WEIS
 DESIGNED BY: AECOM
 REVISED BY:

PAGE 2 OF 3

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET 64

E

2

SEQUENCE OF OPERATION

NOT USED

←

NOT USED

↓

RING 1

HEAD NUMBERS	Ø1				Ø2			
	R/W	XX			R/W	XX		
Ø1								
Ø2	4,5,6							
Ø3								
Ø4	7,8,9							
Ø5								
Ø6	1,2,3							
Ø7								
Ø8	10,11,12							
Ø2P								
Ø4P								
Ø6P								
Ø8P								

RING 2

HEAD NUMBERS	Ø5				Ø6			
	R/W	XX			R/W	XX		
Ø1								
Ø2	4,5,6							
Ø3								
Ø4	7,8,9							
Ø5								
Ø6	1,2,3							
Ø7								
Ø8	10,11,12							
Ø2P								
Ø4P								
Ø6P								
Ø8P								

NOT USED

→

NOT USED

↑

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	6	4,8
3		
4	8	2,6
5		
6	2	4,8
7		
8	4	2,6

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21	1	X			2	2				6X20	3
41	2			X		4			X	6X6	N/A
42	2			X		4			X	6X6	N/A
43	3	X			4	4		X		6X30	N/A
44	3	X			4	4		X		6X30	N/A
45	4	X			4	4		X		6X30	N/A
46	4	X			4	4		X		6X30	N/A
61	5	X			6	6				6X20	4
81	6			X		8			X	6X10	N/A
82	6			X		8			X	6X10	N/A
83	7	X			8	8		X		6X10	N/A
84	7	X			8	8		X		6X20	N/A
85	8	X			8	8		X		6X30	N/A
86	8	X			8	8		X		6X30	N/A

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

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

TYPE OF PRE-EMPT	
NONE	X
RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWARE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
NONE	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

GENERAL NOTES:

- ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
- WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)

STH 36 (W LOOMIS RD) &
W COLDSRING RD
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1174 (M150)

CONTROLLER TYPE: EPAC (NTCIP)

DATE NOVEMBER 2009

PAGE NO. 3 OF 3

PROJECT NO: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS

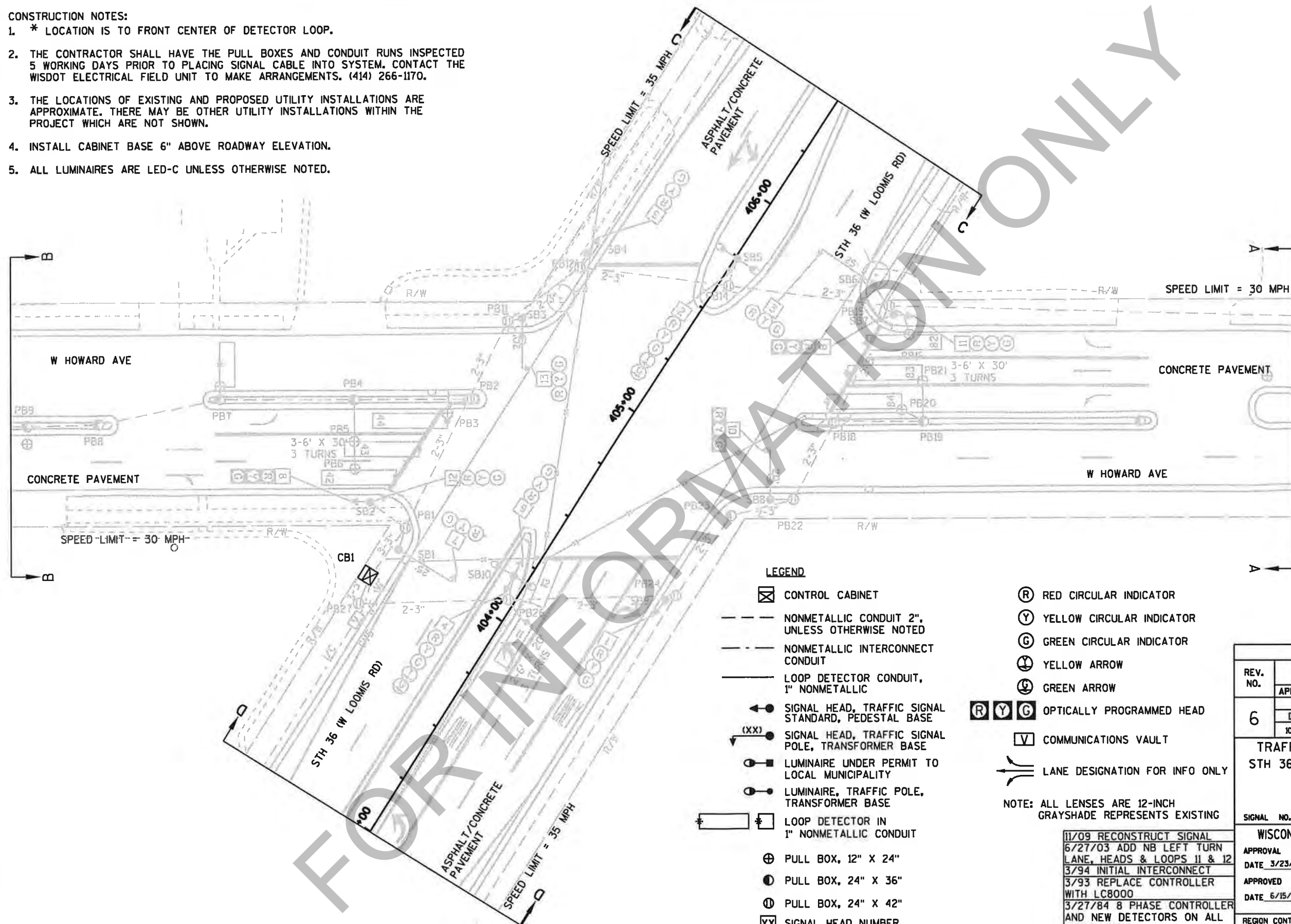
SHEET 65

E

60109 588 60109 588 11-19-09 STH

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. ALL LUMINAIRES ARE LED-C UNLESS OTHERWISE NOTED.



LEGEND

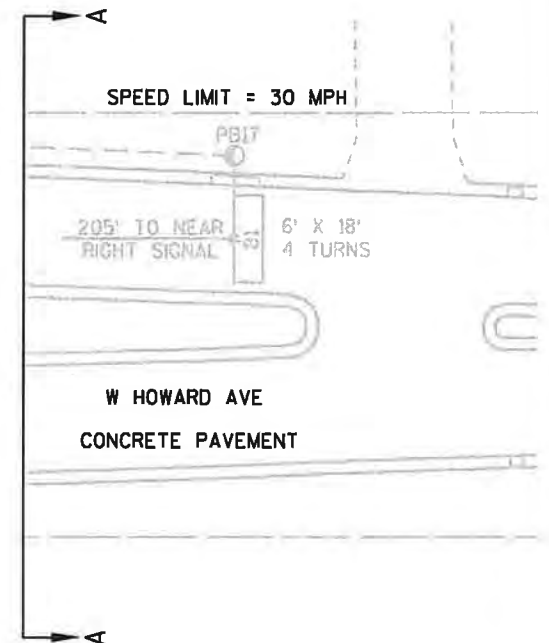
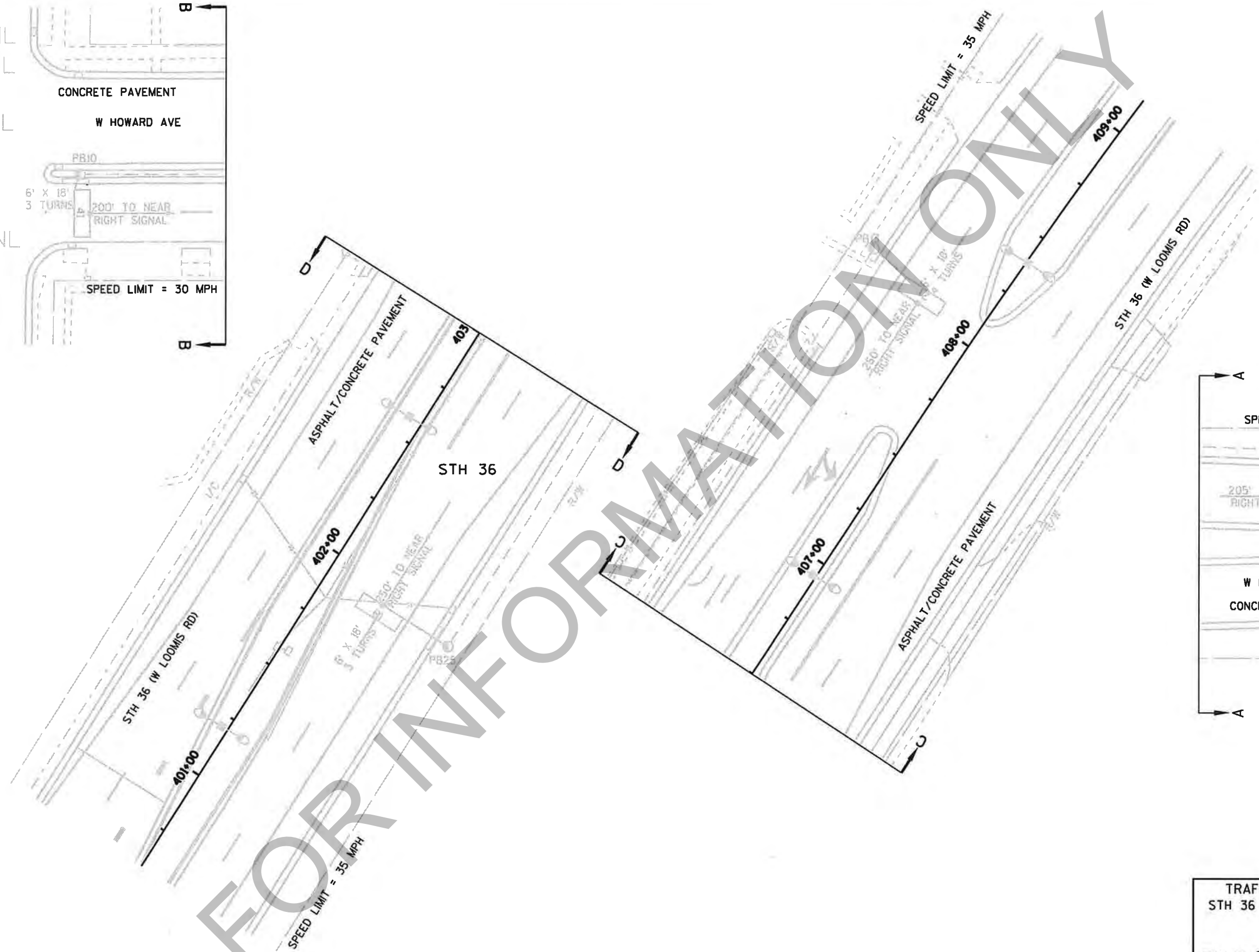
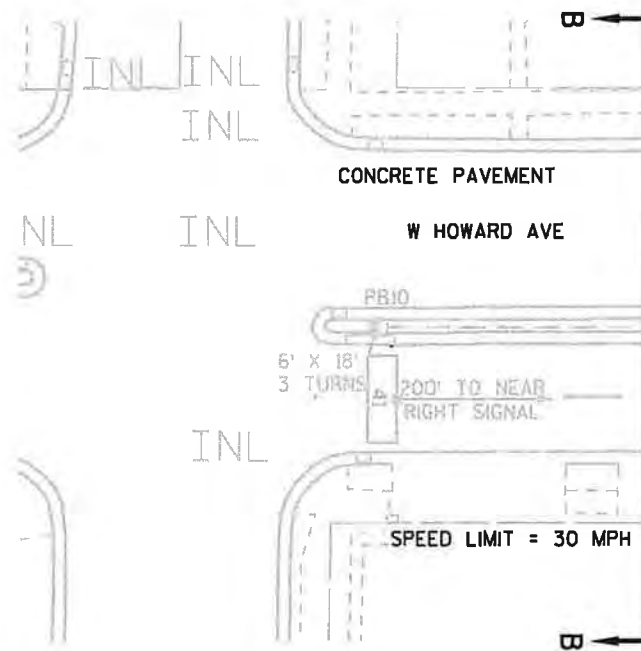
- ☒ CONTROL CABINET
 - NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
 - NONMETALLIC INTERCONNECT CONDUIT
 - LOOP DETECTOR CONDUIT, 1" NONMETALLIC
 - ⬆ SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
 - (XX) ⬆ SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
 - ⬆ LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
 - ⬆ LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
 - ☐ LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
 - ⊕ PULL BOX, 12" X 24"
 - PULL BOX, 24" X 36"
 - ⊖ PULL BOX, 24" X 42"
 - XX SIGNAL HEAD NUMBER
 - Ⓡ RED CIRCULAR INDICATOR
 - Ⓢ YELLOW CIRCULAR INDICATOR
 - Ⓣ GREEN CIRCULAR INDICATOR
 - Ⓤ YELLOW ARROW
 - Ⓥ GREEN ARROW
 - Ⓡ Ⓢ Ⓣ OPTICALLY PROGRAMMED HEAD
 - Ⓥ COMMUNICATIONS VAULT
 - Ⓥ LANE DESIGNATION FOR INFO ONLY
- NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

11/09 RECONSTRUCT SIGNAL
6/27/03 ADD NB LEFT TURN
LANE, HEADS & LOOPS 11 & 12
3/94 INITIAL INTERCONNECT
3/93 REPLACE CONTROLLER
WITH LC8000
3/27/84 8 PHASE CONTROLLER
AND NEW DETECTORS ON ALL
APPROACHES
5/23/63 INITIAL INSTALLATION

REVISION				
REV. NO.	CHANGE CONTROLLER TO ECONOLITE			
	APPROVAL RECOMMENDED		APPROVED	
6	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
	10-24-16	JRE	10-26-16	JAB
TRAFFIC CONTROL SIGNAL				
STH 36 (W LOOMIS RD) & W HOWARD AVE				
CITY OF GREENFIELD				
MILWAUKEE COUNTY				
SIGNAL NO. S40-1093			CABINET TYPE: TS1	
			CONTROLLER TYPE: ECONOLITE	
WISCONSIN DEPARTMENT OF TRANSPORTATION				
APPROVAL RECOMMENDED				
DATE 3/23/84		JOHN A. WHITE		
		REGION TRAFFIC ENGINEER		
APPROVED				
DATE 6/15/84		HARRY O. PRICE		
		STATE TRAFFIC ENGINEER		
REGION CONTACT: J. EFFINGER				
DESIGNED BY: AECOM				
REVISED BY: S. WAGNER				

2

2



TRAFFIC CONTROL SIGNAL	
STH 36 (W LOOMIS RD) & W HOWARD AVE	
CITY OF GREENFIELD	
MILWAUKEE COUNTY	
SIGNAL NO. S40-1093	
REGION CONTACT: J. EFFINGER	PAGE 2 OF 3
DESIGNED BY: AECOM	
REVISED BY: S. WAGNER	

PROJECT NO:3700-20-31

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

67

E

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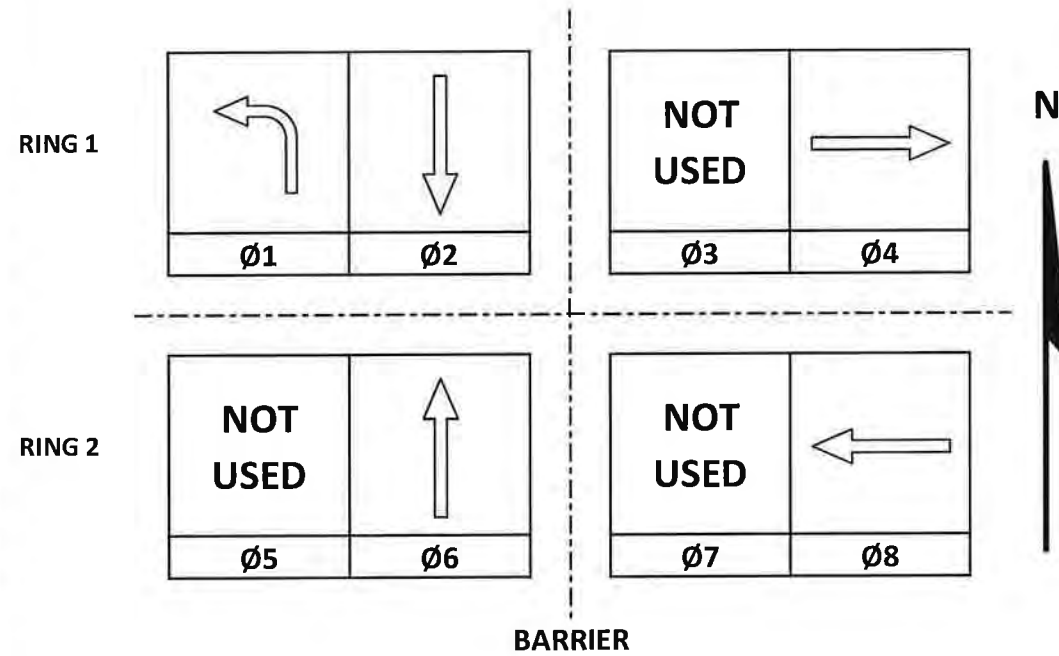
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PLOT BY : VANDE LEESE, CYNTHIA PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDs SHEET 42

	HEAD NUMBERS	F L A S H
Ø1	2,4	-
Ø2	5,6,7	R
Ø3		
Ø4	8,9,10	R
Ø5		
Ø6	1,2,3,4	R
Ø7		
Ø8	11,12,13	R
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLA		
OLB		
OLC		
OLD		



DETECTOR LOGIC

[illegible]

CONTROLLER LOGIC

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

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

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 01-76

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

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

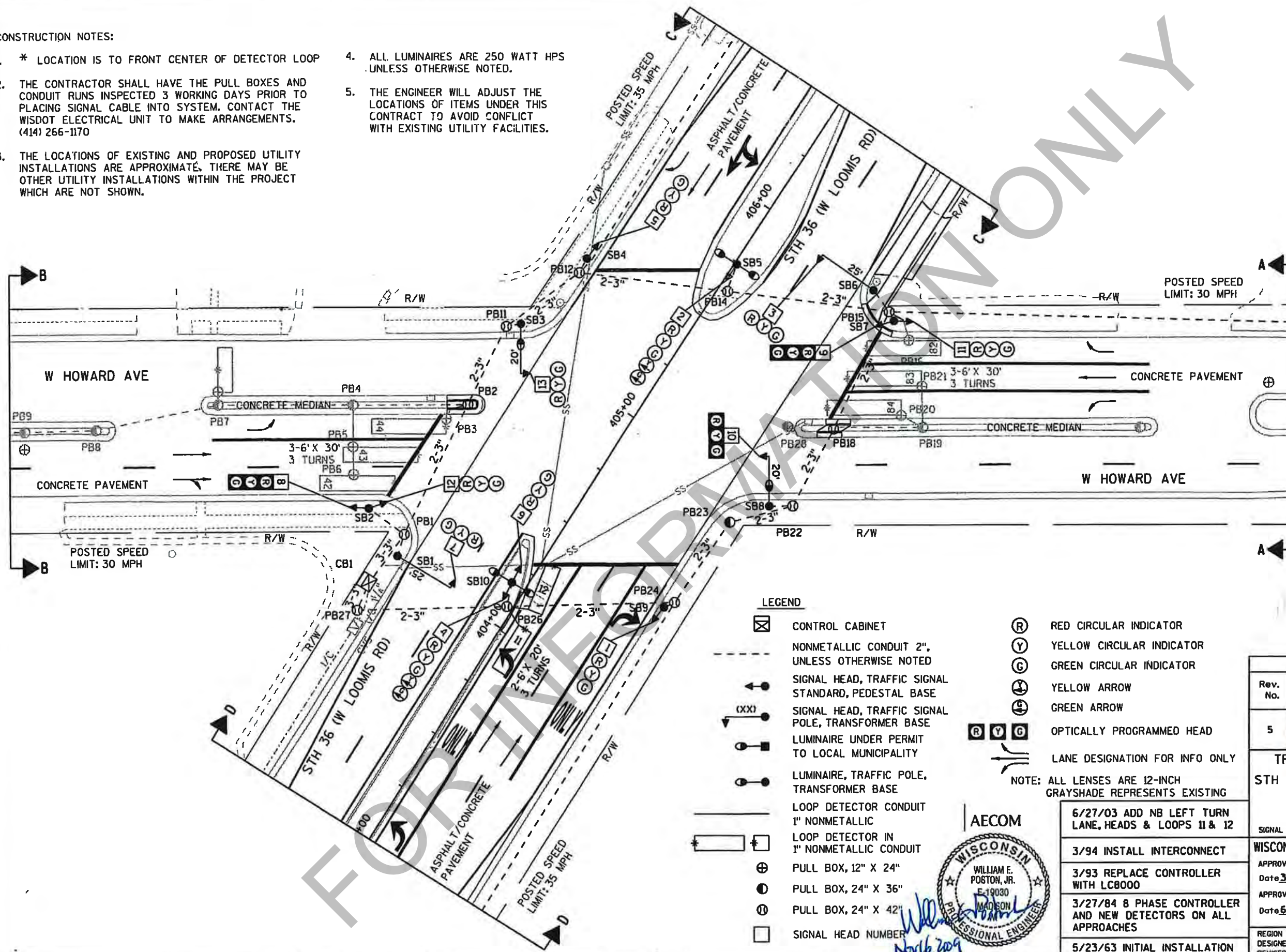
GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.
3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

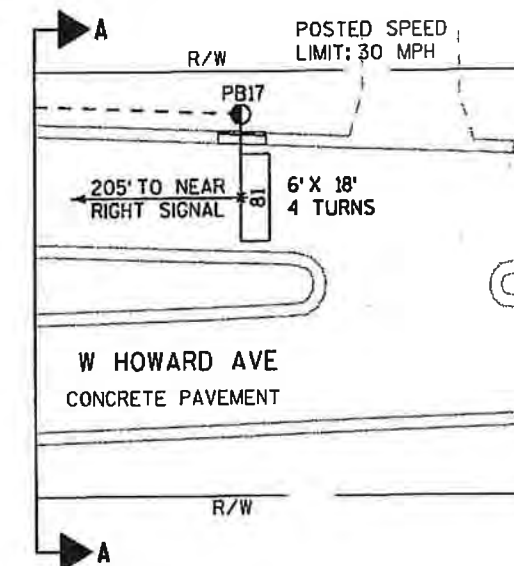
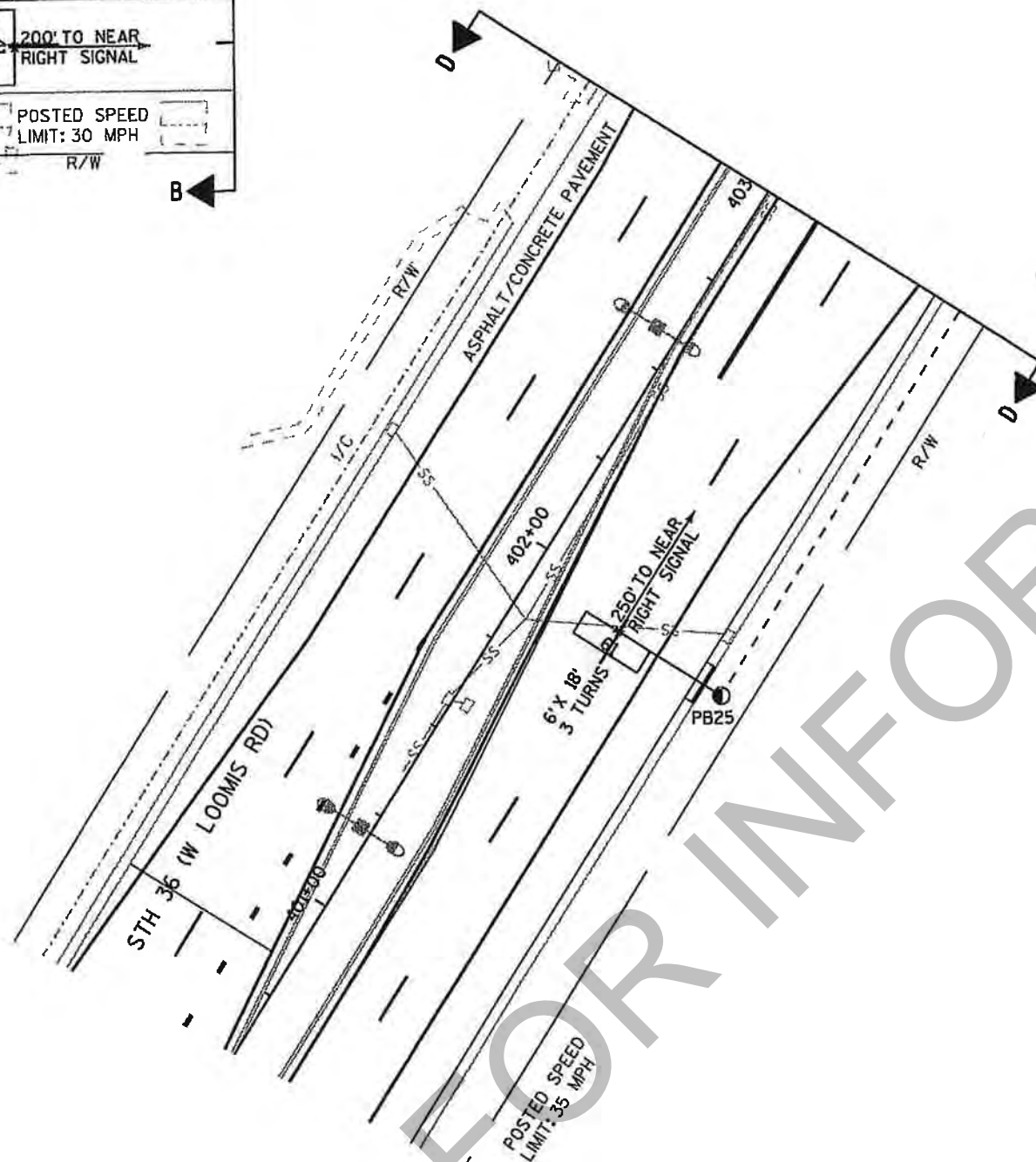
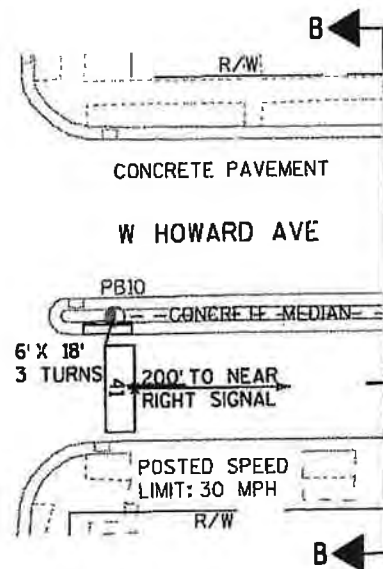
5TH 36 (LOOMIS RD) & W HOWARD AVE CITY OF GREENFIELD MILWAUKEE COUNTY	
SIGNAL NO: S40-1093	CABINET TYPE: TS1
CONTROLLER TYPE: ECONOLITE	
DATE: 10/2016	PAGE NO. 20

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE, THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. ALL LUMINAIRES ARE 250 WATT HPS UNLESS OTHERWISE NOTED.
5. THE ENGINEER WILL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.



E88 11/20/09



TRAFFIC CONTROL SIGNAL
STH 36 (W LOOMIS RD) & W HOWARD AVE
CITY OF GREENFIELD
MILWAUKEE COUNTY
SIGNAL NO. S1093 (M58)
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY:
PAGE 2 OF 3

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET 70

E

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WISDOT/CADD SHEET 42



RING 2

[illegible]

CONTROLLER LOGIC				
PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACT
1		6		X
2	X	6	MIN.	X
3				
4		8		X
5				
6	X	2	MIN.	X
7				
8		4		X

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC	X

*LOCATION OF MASTER
CONTROLLER NO: S-

SIGNAL SYSTEM #:	SS-	-
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TYPE OF PRE-EMPT
NONE
RAILROAD
EMERGENCY VEHICLE
3M
TOMAR
HARDWIRE
OTHER
LIFT BRIDGE
QUEUE DETECTOR

TYPE OF LIGHTING	
NONE	
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

BARRIER

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	6	2,4,8
2	6	1,4,8
3		
4	8	1,2,6
5		
6	1 OR 2	4,8
7		
8	4	1,2,6

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL.
(SEE CHART 1 AT LEFT.)
3. IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

STH 36 (W LOOMIS RD) &
W HOWARD AVE
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1093 (M58)

CONTROLLER TYPE: EPAC

DATE NOVEMBER 2009 PAGE NO. 3 OF 3

PROJECT NO: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

SEQUENCE OF OPERATIONS	
1	START
2	READ INSTRUCTIONS
3	ANALYZE INSTRUCTIONS
4	PERFORM OPERATIONS
5	WRITE RESULTS
6	STOP

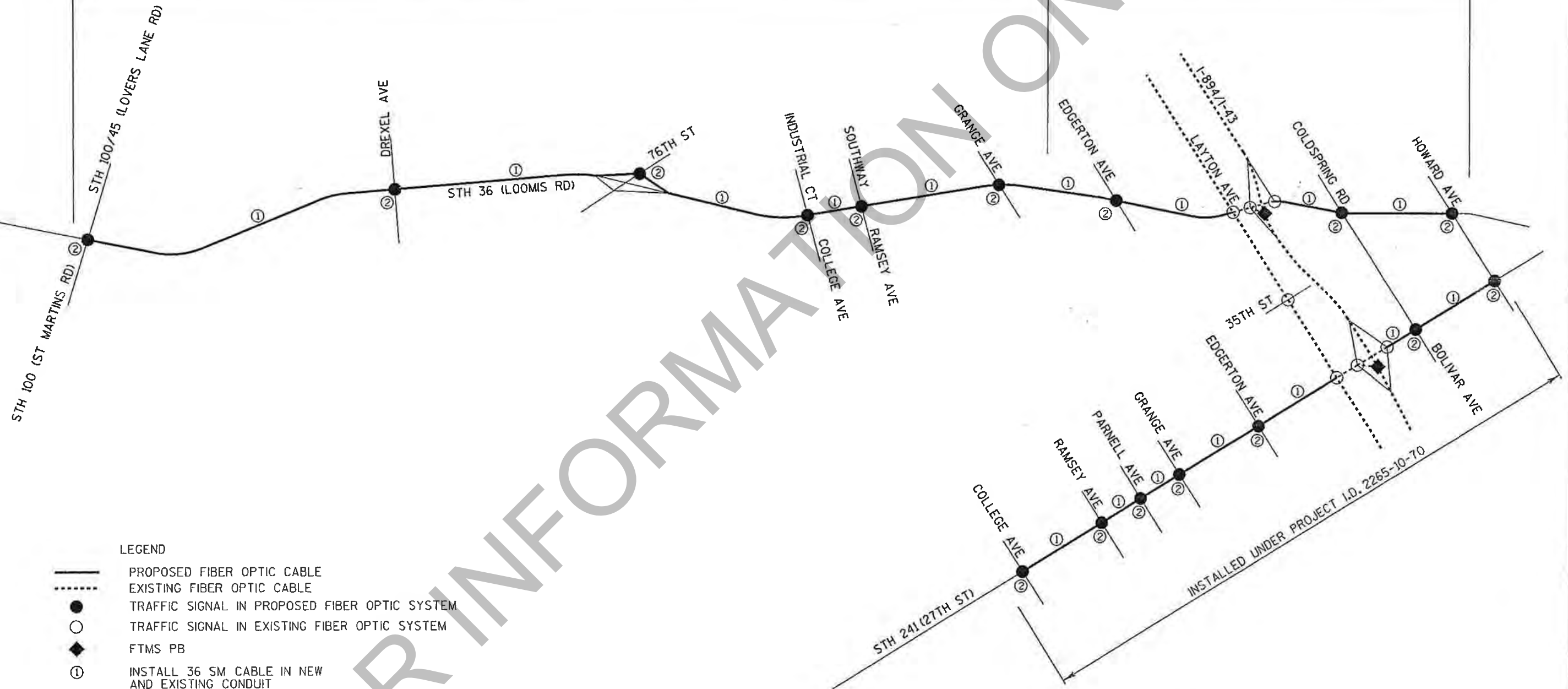
SHEET	71
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60-61-11-19-09 2213 583 11/22/79

INSTALLED UNDER PROJECT I.D. 2240-16-70

INSTALLED UNDER PROJECT I.D. 2240-14-60



AECOM



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

PAGE 1 OF 1

PROJECT NUMBER: 2240-14-60

HWY: STH 36

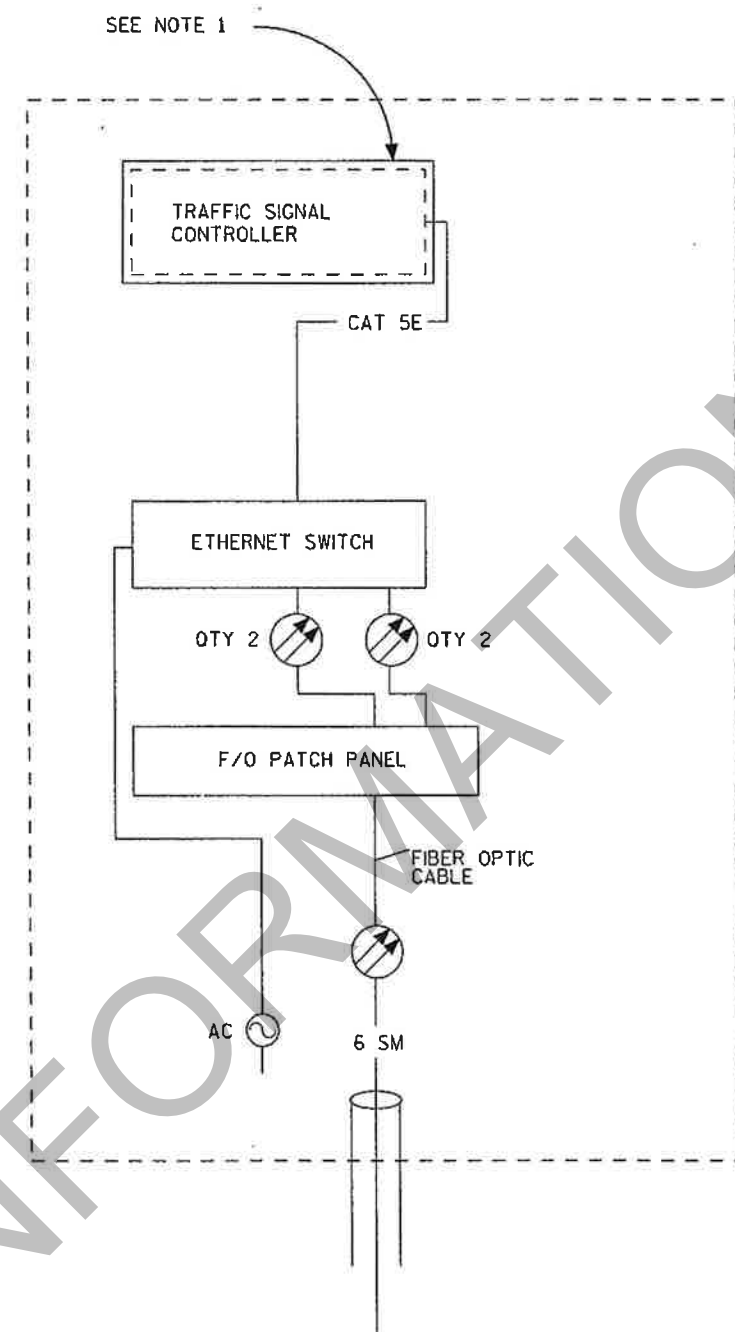
COUNTY: MILWAUKEE

FIBER OPTIC SYSTEM OVERVIEW

SHEET

72

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LEGEND

F/O - FIBER OPTIC

AC - ALTERNATING CURRENT POWER

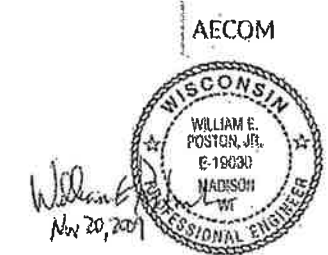
QTY 2 - NUMBER OF FIBERS

NOTES:

1. SEE FIBER OPTIC SYSTEM OVERVIEW SHEET FOR A LISTING OF CABINET IMPROVEMENTS BY LOCATION

PERMANENT TRAFFIC SIGNALS

- STH 36 & EDGERTON AVE (S1157)
- STH 36 & COLDSPRING RD (S1174)
- STH 36 & HOWARD AVE (S1093)



AECOM

TRAFFIC SIGNAL INTERCONNECT

STH 36 (W. LOOMIS ROAD)

CITY OF GREENFIELD

MILWAUKEE COUNTY

KEY

SM EQUIPMENT CONNECTION
FIBER OPTIC JUMPER

SM FIBER OPTIC
PIGTAIL

BARE FIBER LEFT
COILED IN SPLICE TRAY

EXISTING/PROPOSED
FUSION SPLICE

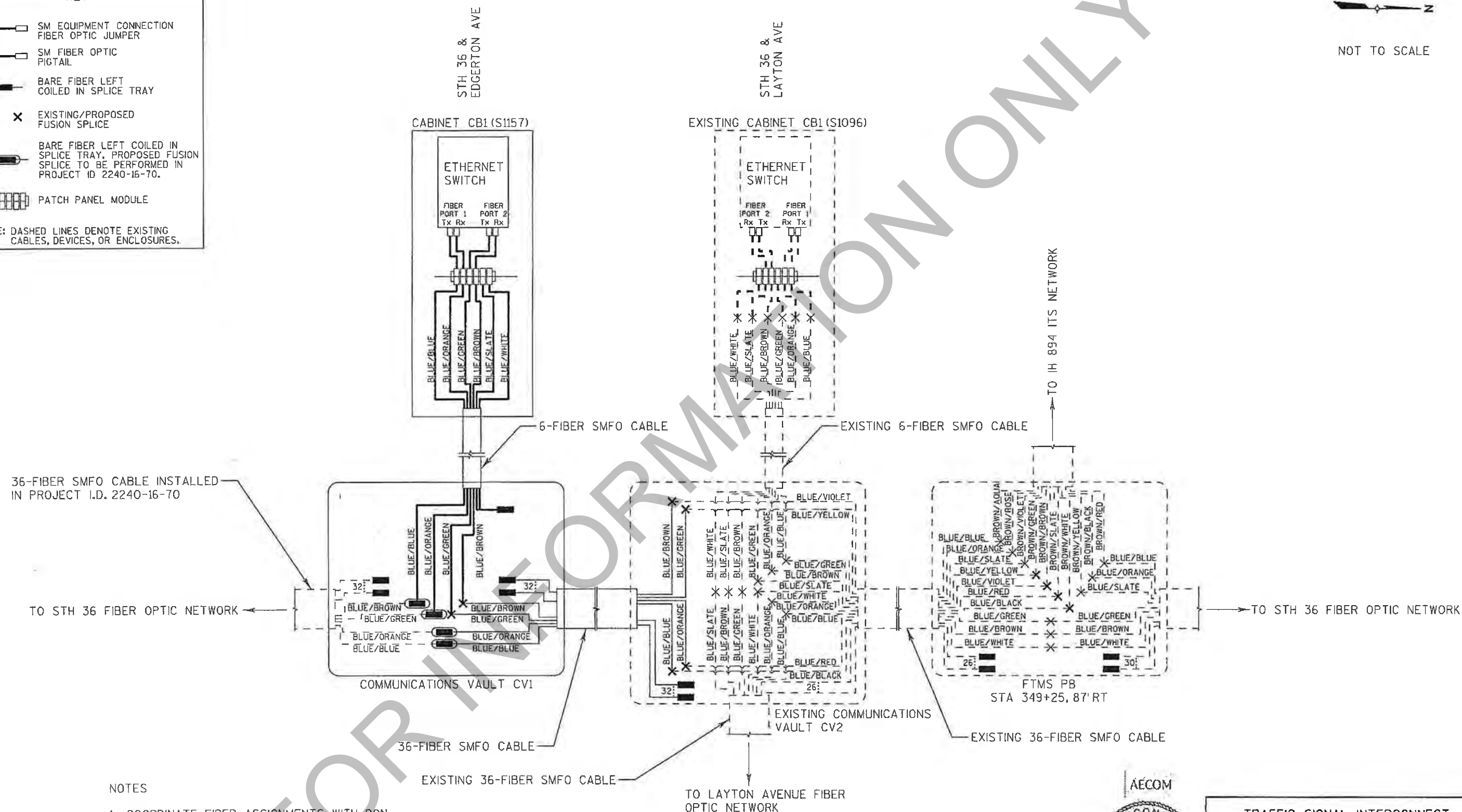
BARE FIBER LEFT COILED IN
SPLICE TRAY, PROPOSED FUSION
SPLICE TO BE PERFORMED IN
PROJECT ID 2240-16-70.

PATCH PANEL MODULE

NOTE: DASHED LINES DENOTE EXISTING
CABLES, DEVICES, OR ENCLOSURES.



NOT TO SCALE



AECOM



TRAFFIC SIGNAL INTERCONNECT

STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

PAGE 1 OF 2

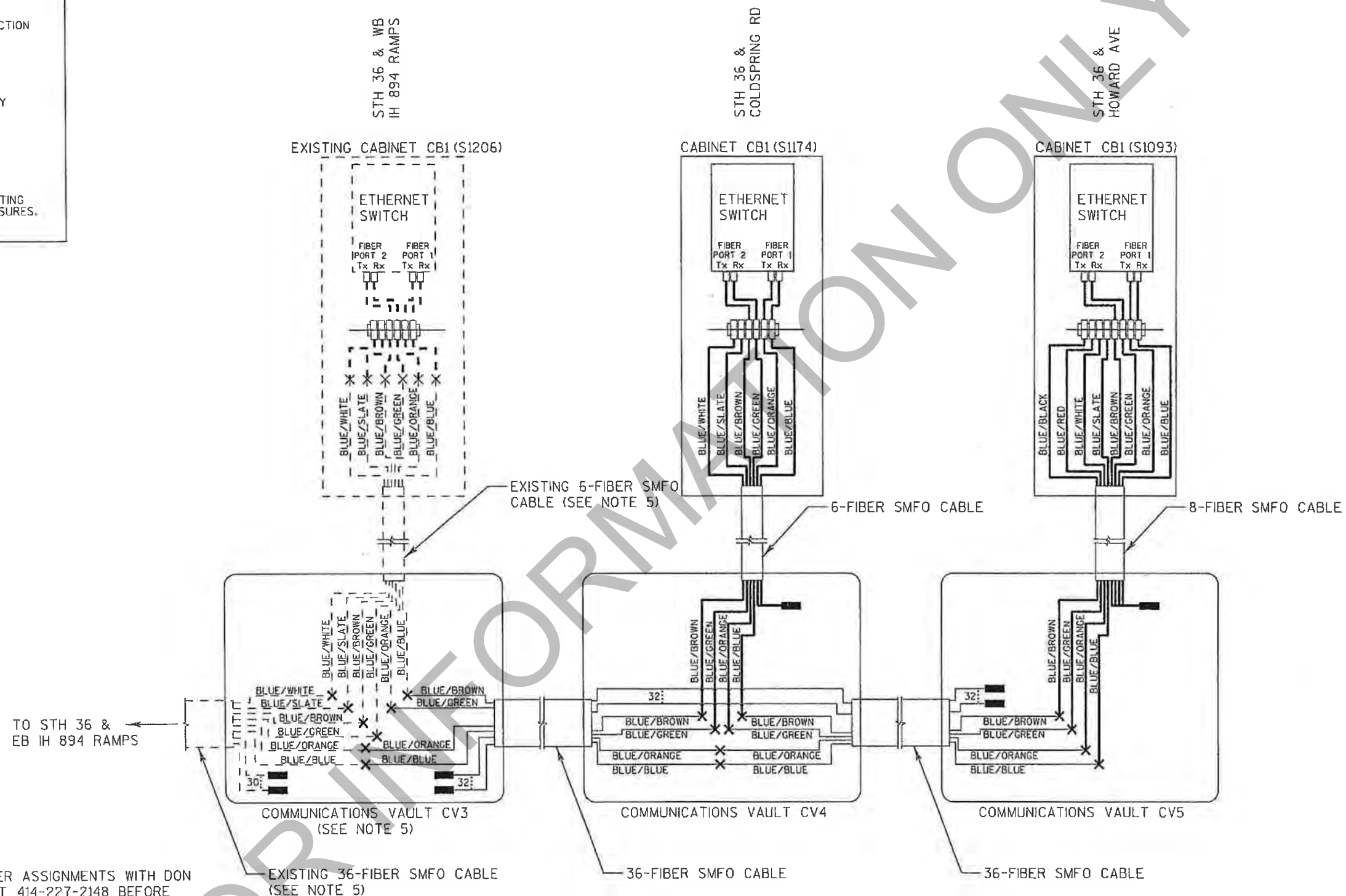
KEY

- SM EQUIPMENT CONNECTION FIBER OPTIC JUMPER
 SM FIBER OPTIC PIGTAIL
 BARE FIBER LEFT COILED IN SPLICE TRAY
 EXISTING/PROPOSED FUSION SPLICING
 PATCH PANEL MODULE

NOTE: DASHED LINES DENOTE EXISTING CABLES, DEVICES, OR ENCLOSURES.



NOT TO SCALE



NOTES

- COORDINATE FIBER ASSIGNMENTS WITH DON SCHELL, STOC, AT 414-227-2148 BEFORE SPLICING FIBER OPTIC CABLE
- MAXIMUM SPLICE LOSS SHALL BE 0.1dB
- NO INTERMEDIATE SPLICES ALLOWED
- ALL SPLICES SHALL BE FUSION SPLICES
- CUT EXISTING FIBER OPTIC CABLES IN EXISTING PULL BOX ICPB115. PERFORM NEW SPLICES IN NEW COMMUNICATIONS VAULT CV3 WITH NEW SPLICE ENCLOSURE.

TRAFFIC SIGNAL INTERCONNECT

STH 36 (W. LOOMIS ROAD)
 CITY OF GREENFIELD
 MILWAUKEE COUNTY

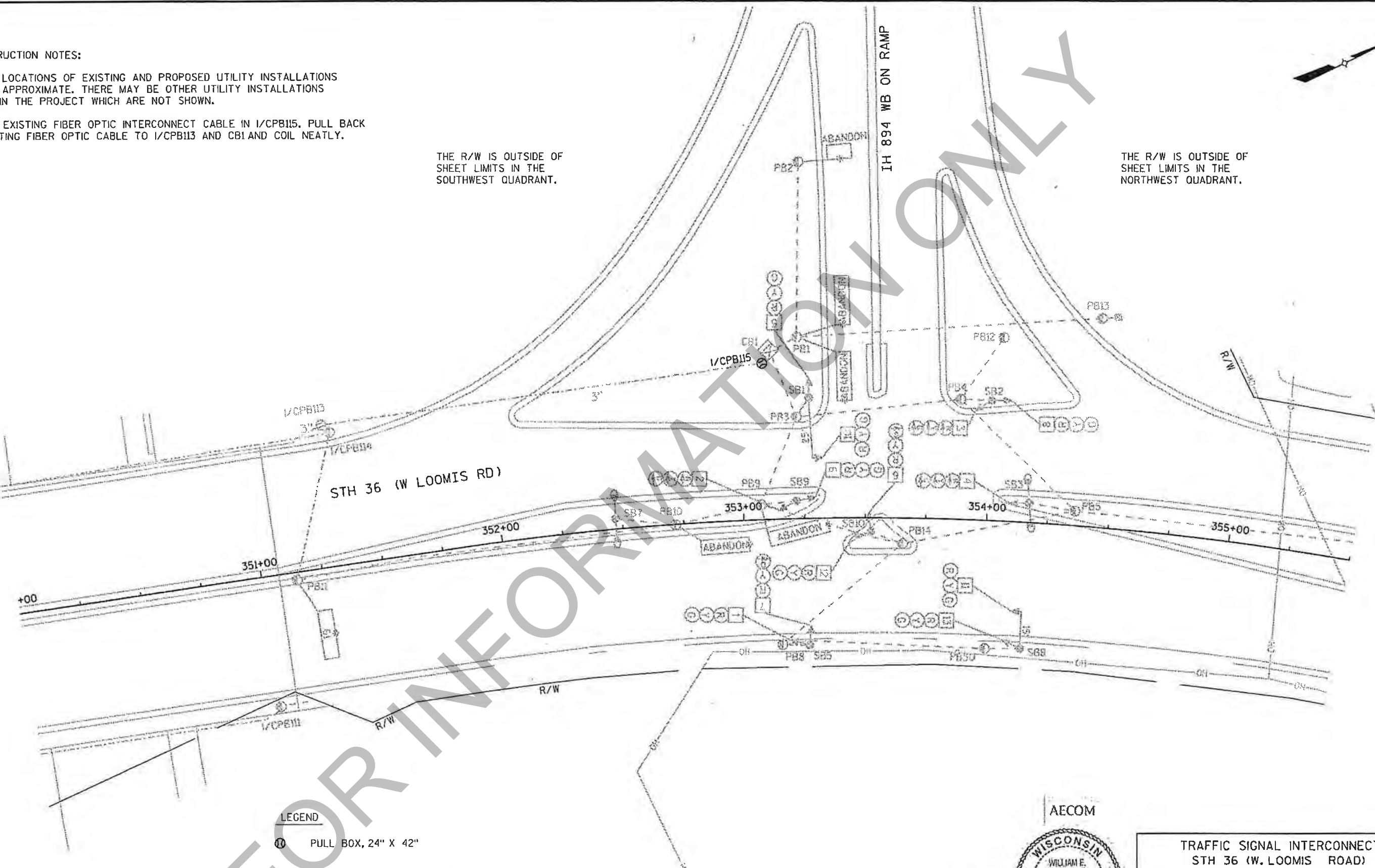
PAGE 2 OF 2

CONSTRUCTION NOTES:

1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. CUT EXISTING FIBER OPTIC INTERCONNECT CABLE IN 1/CPB115. PULL BACK EXISTING FIBER OPTIC CABLE TO 1/CPB113 AND CB1 AND COIL NEATLY.

THE R/W IS OUTSIDE OF SHEET LIMITS IN THE SOUTHWEST QUADRANT.

THE R/W IS OUTSIDE OF SHEET LIMITS IN THE NORTHWEST QUADRANT.



LEGEND

⑩ PULL BOX, 24" X 42"

NOTE: GRAYSHADE REPRESENTS EXISTING
BOLD REPRESENTS ITEMS TO BE REMOVED

AECOM



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

REVISED BY:

PAGE 1 OF 1

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT REMOVAL PLAN

SHEET

76

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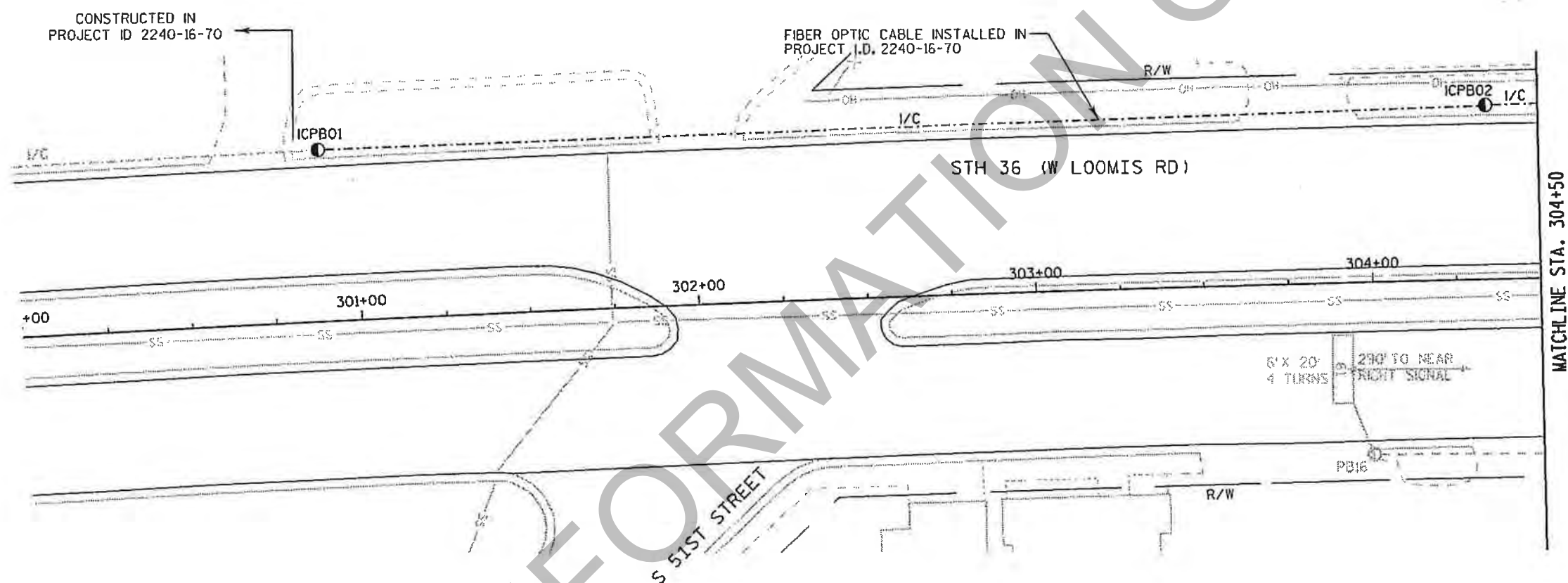
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WISDOT/CADD SHEET 42



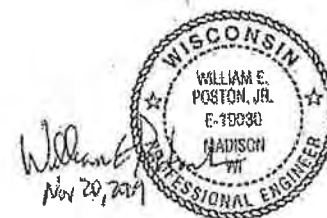
CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100' OF FIBER OPTIC CABLE COILED IN EACH COMMUNICATIONS VAULT. LEAVE 30' OF FIBER OPTIC CABLE COILED IN EACH INTERCONNECT PULL BOX.
5. INSTALL ONE 12 AWG TRACER WIRE IN INTERCONNECT CONDUIT.

LEGEND

- ☒ CONTROL CABINET
- NONMETALLIC INTERCONNECT CONDUIT 2", UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 36"
- ⊗ PULL BOX, 24" X 42"
- ☒ COMMUNICATION VAULT
- Ⓜ FTMS PULL BOX

AECOM



TRAFFIC SIGNAL INTERCONNECT
 STH 36 (W. LOOMIS RD)
 CITY OF GREENFIELD
 MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS
 DESIGNED BY: AECOM
 REVISED BY:

PAGE 1 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

77
73

E

INSTALL FIBER OPTIC CABLE PIGTAIL 6-CT
FIBER OPTIC TRACER WIRE

FIBER OPTIC CABLE INSTALLED IN
PROJECT I.D. 2240-16-70

INSTALL FIBER OPTIC CABLE OUTDOOR 36-CT
FIBER OPTIC TRACER WIRE

FIBER OPTIC SPLICE (2)
FIBER OPTIC SPLICE ENCLOSURE

STH 36 (W LOOMIS RD)

MATCHLINE STA. 304+50

MATCHLINE STA. 310+00

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

78

E

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BATCH PRINT SHEET 7 OF 27

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WISDOT/CADDS SHEET 42

TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

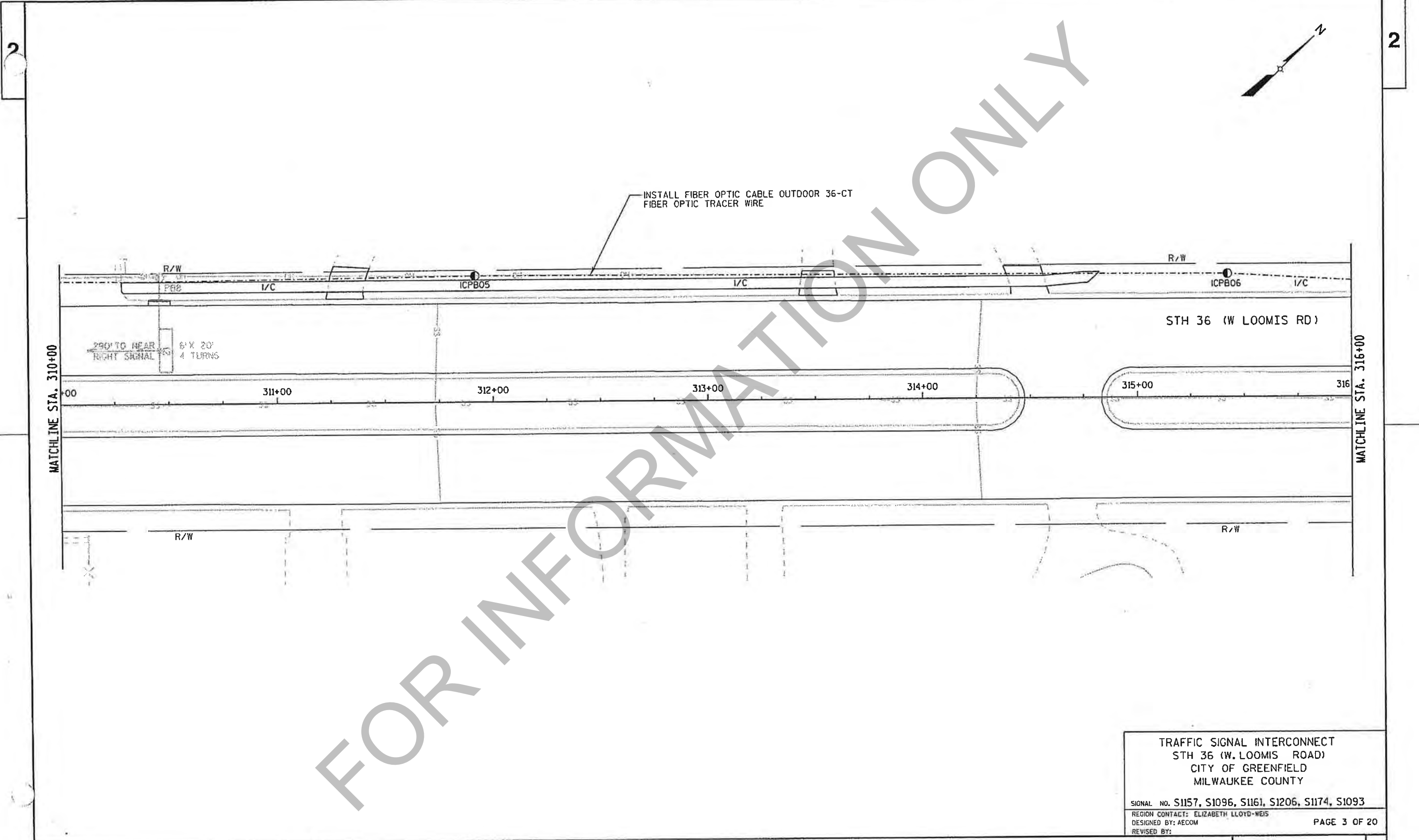
SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

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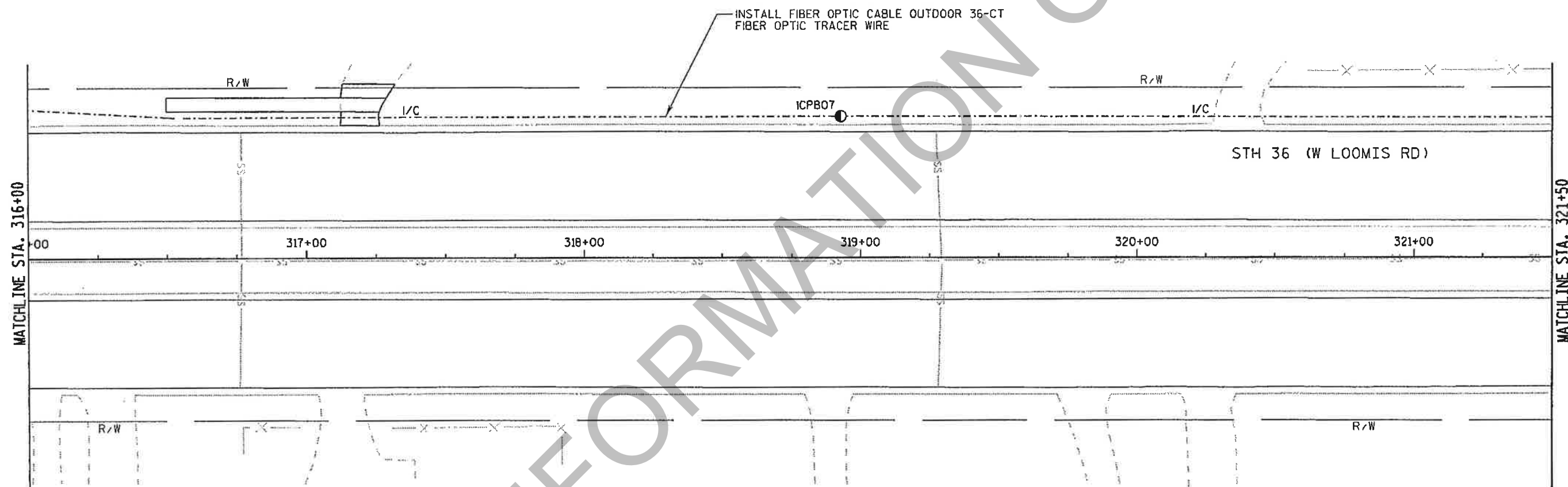
PAGE 2 OF 20



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY:

PAGE 3 OF 20



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

REVISED BY:

PAGE 4 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

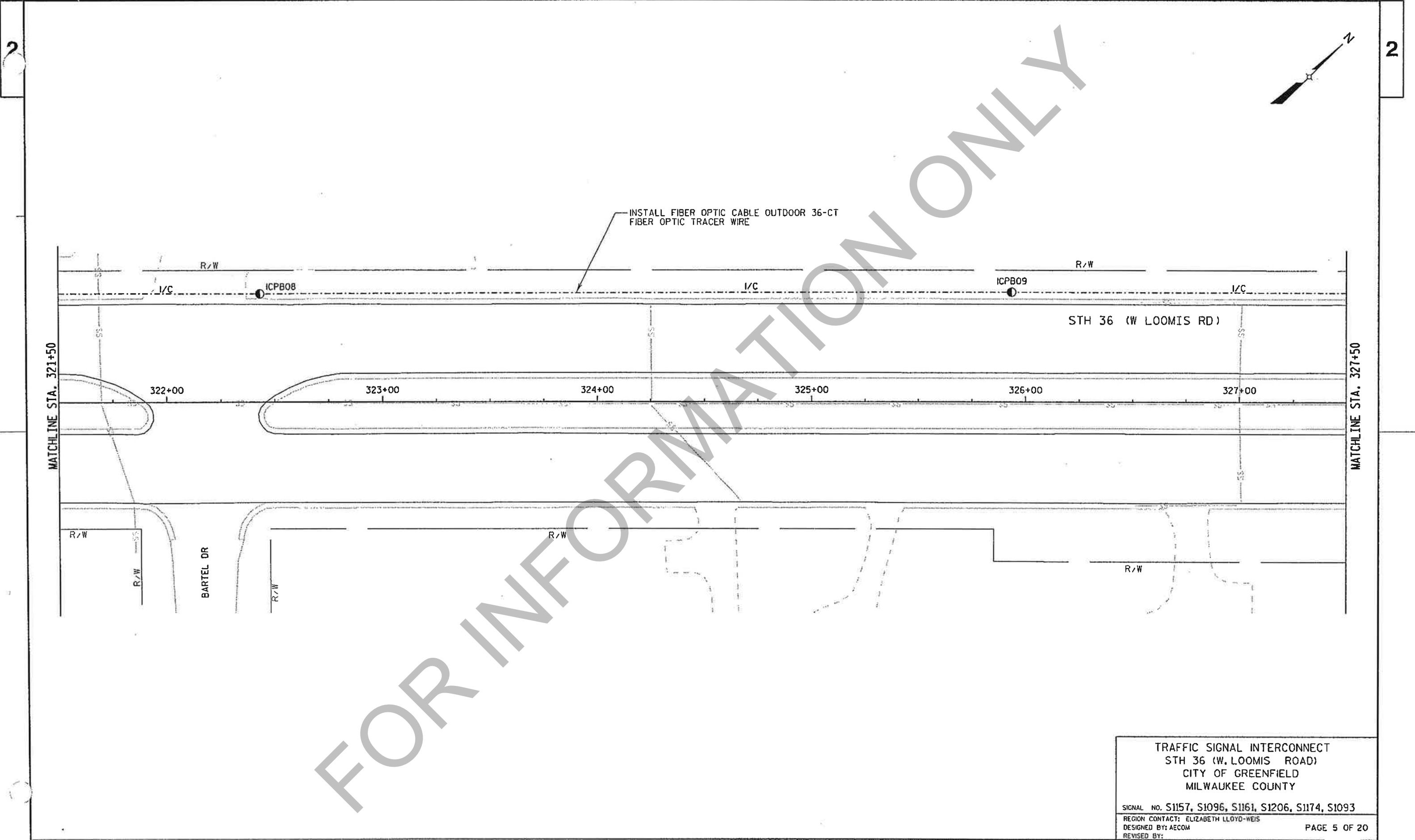
COUNTY: MILWAUKEE

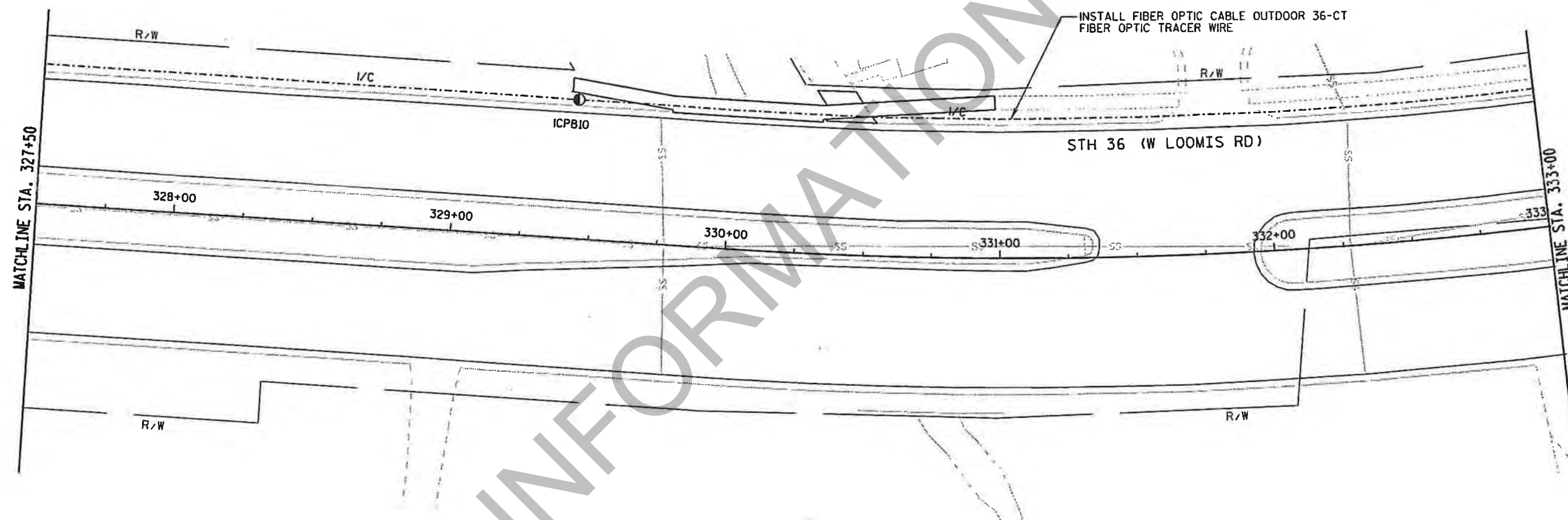
TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

80

E





TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

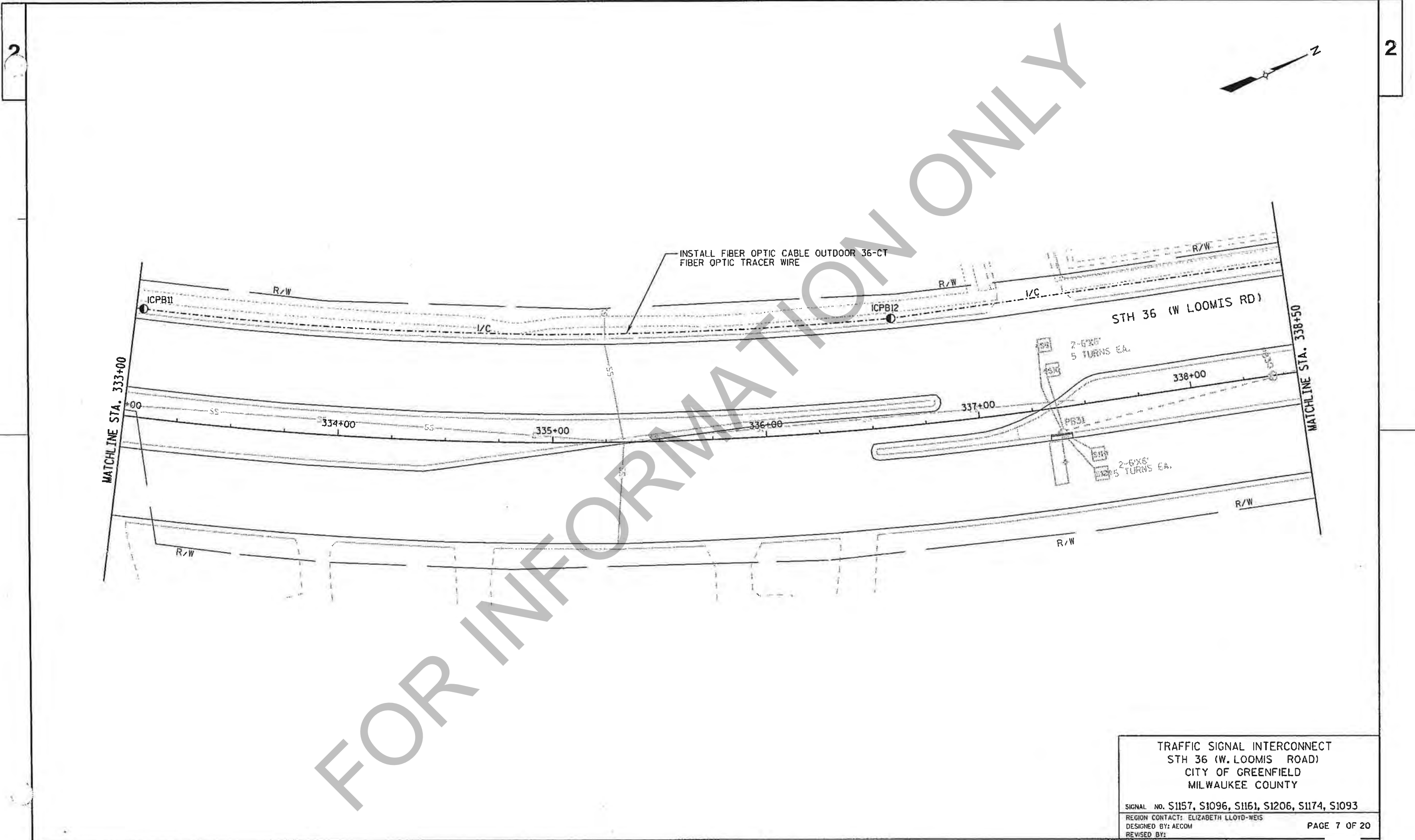
SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

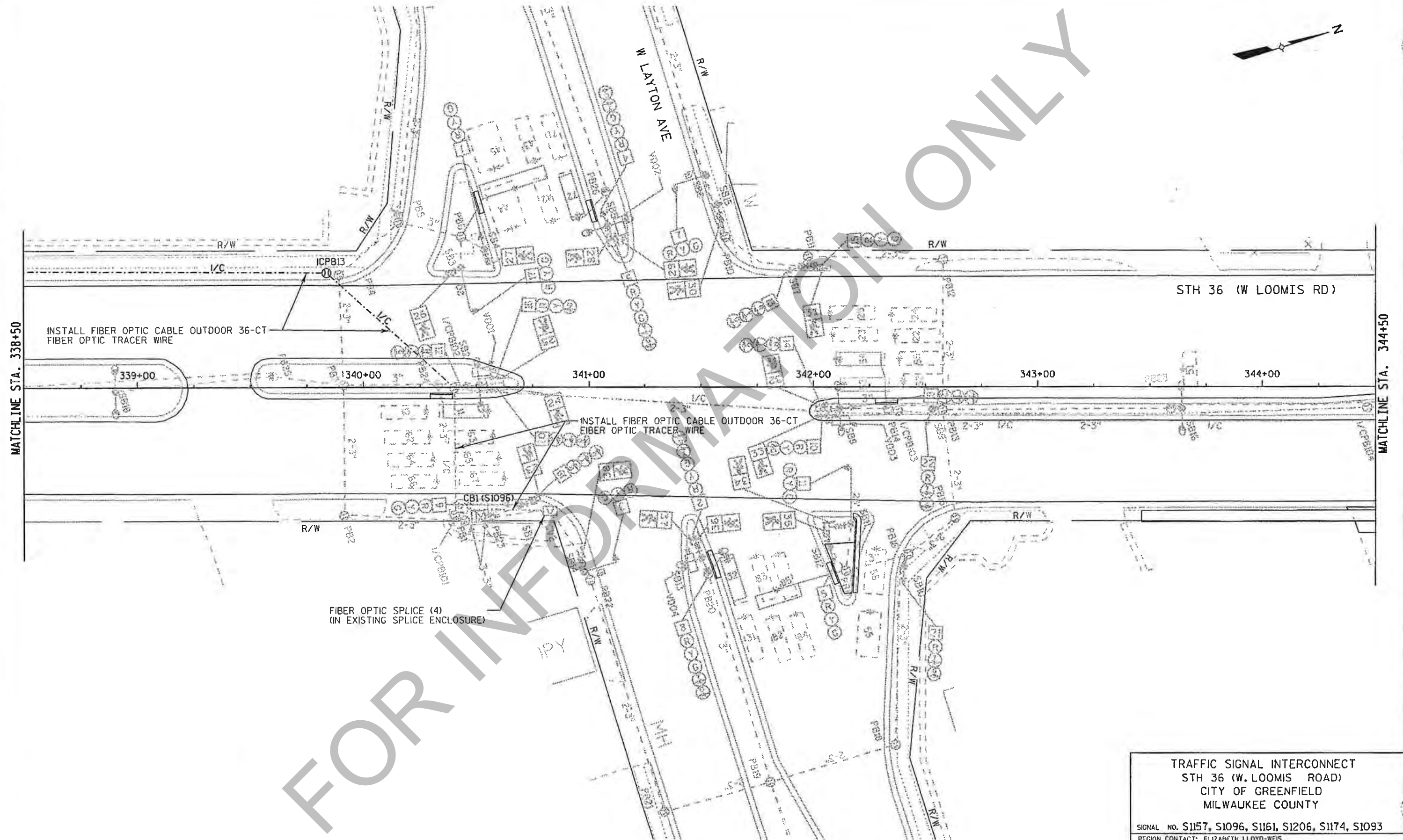
DESIGNED BY: AECOM

REVISED BY:

PAGE 6 OF 20



TRAFFIC SIGNAL INTERCONNECT STH 36 (W. LOOMIS ROAD) CITY OF GREENFIELD MILWAUKEE COUNTY	
SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093	
REGION CONTACT: ELIZABETH LLOYD-WEIS	PAGE 7 OF 20
DESIGNED BY: AECOM	
REVISED BY:	



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY: PAGE 8 OF 20

PROJECT NUMBER: 2240-14-60

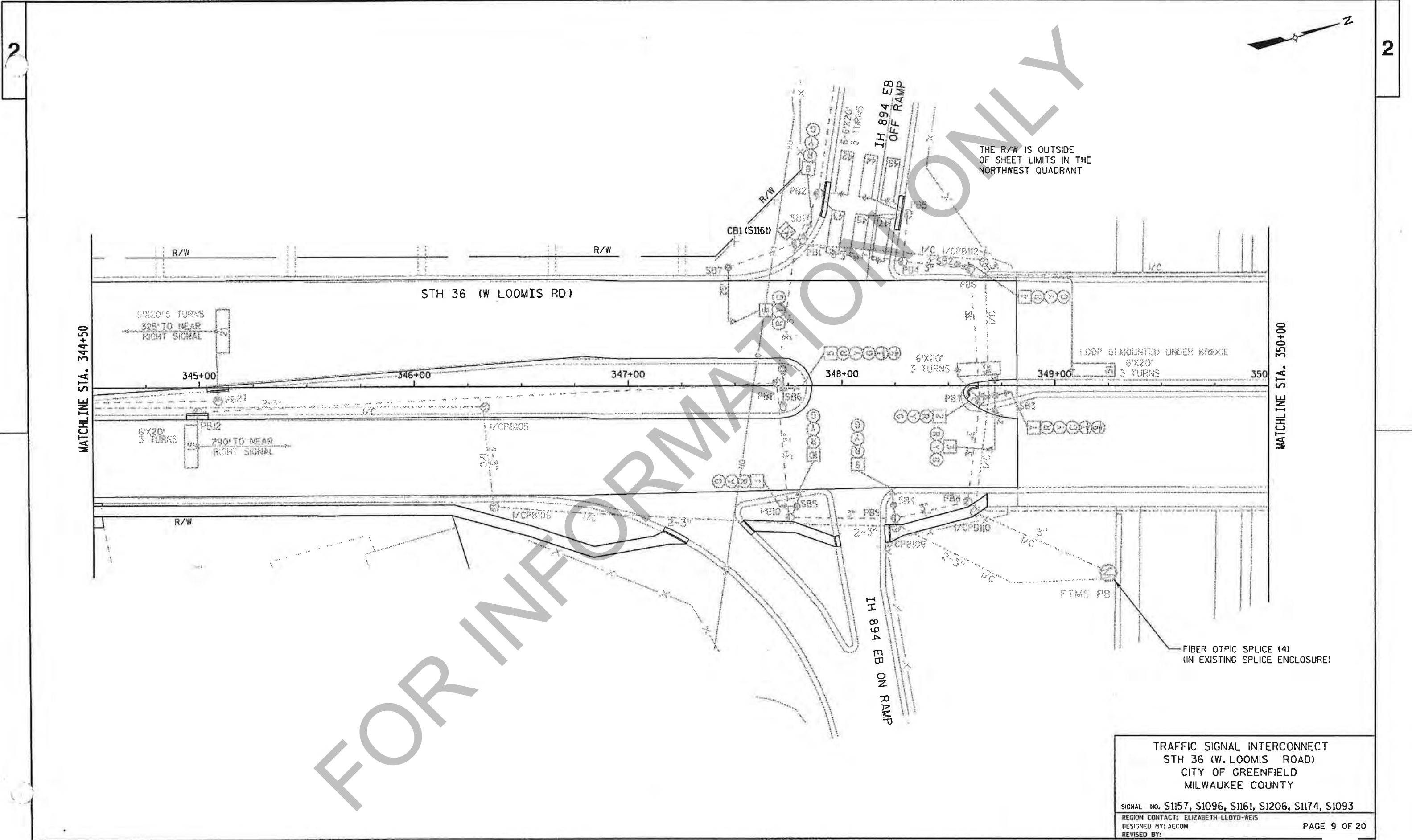
HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET 84

E



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

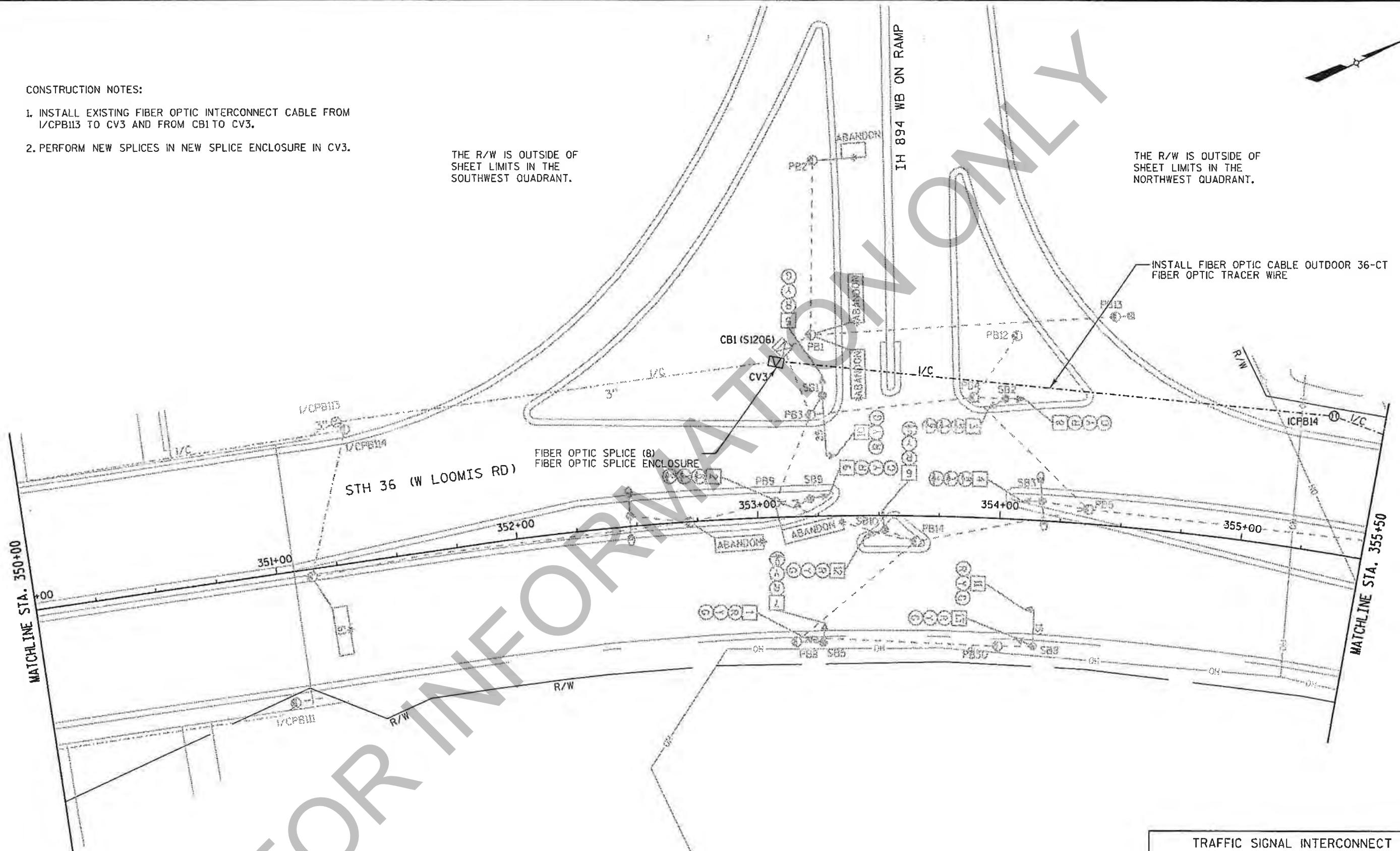
SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY: PAGE 9 OF 20

CONSTRUCTION NOTES:

1. INSTALL EXISTING FIBER OPTIC INTERCONNECT CABLE FROM I/CPB113 TO CV3 AND FROM CB1 TO CV3.
2. PERFORM NEW SPLICES IN NEW SPLICE ENCLOSURE IN CV3.

THE R/W IS OUTSIDE OF SHEET LIMITS IN THE SOUTHWEST QUADRANT.

THE R/W IS OUTSIDE OF SHEET LIMITS IN THE NORTHWEST QUADRANT.



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

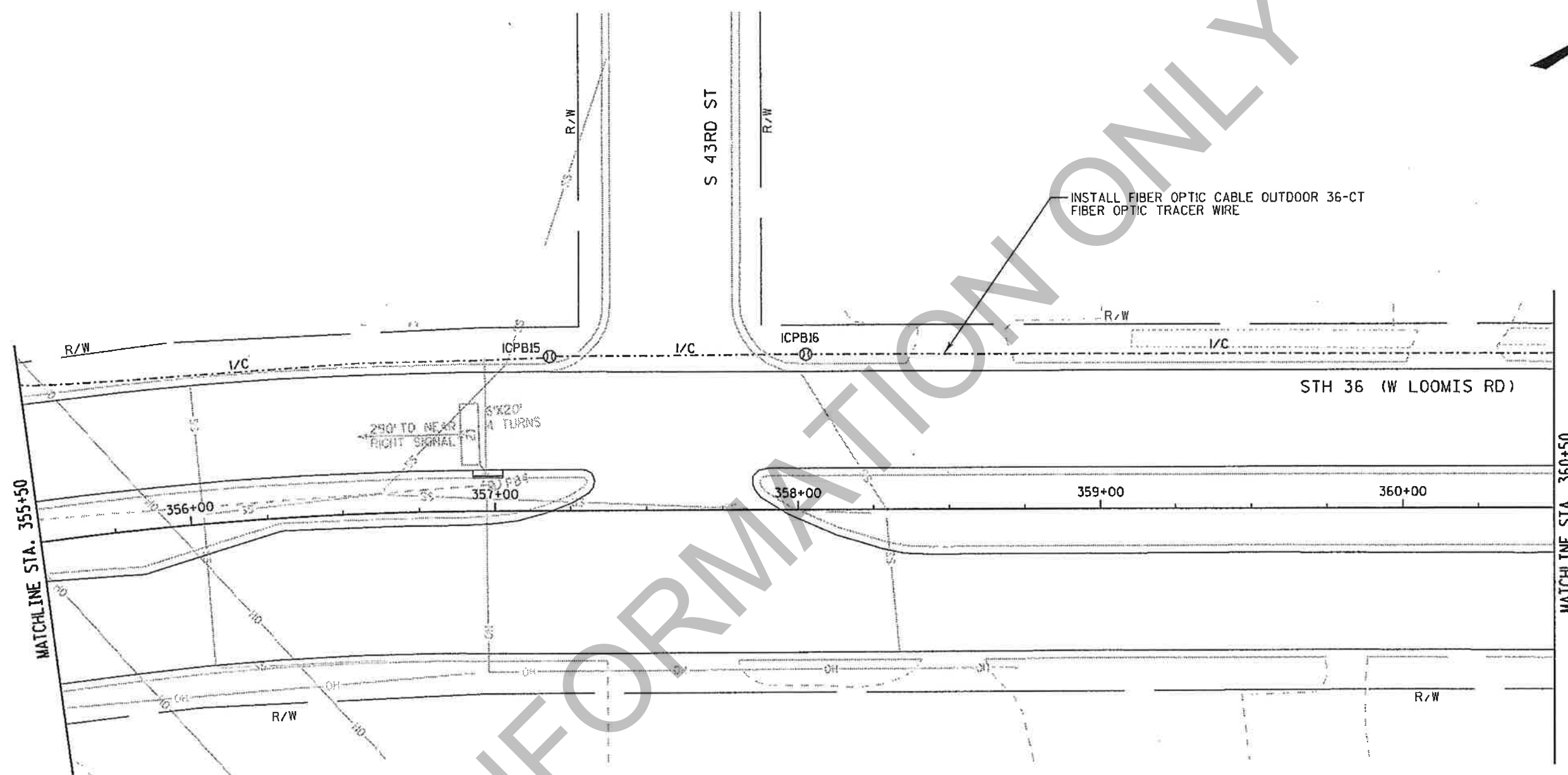
SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

REVISED BY:

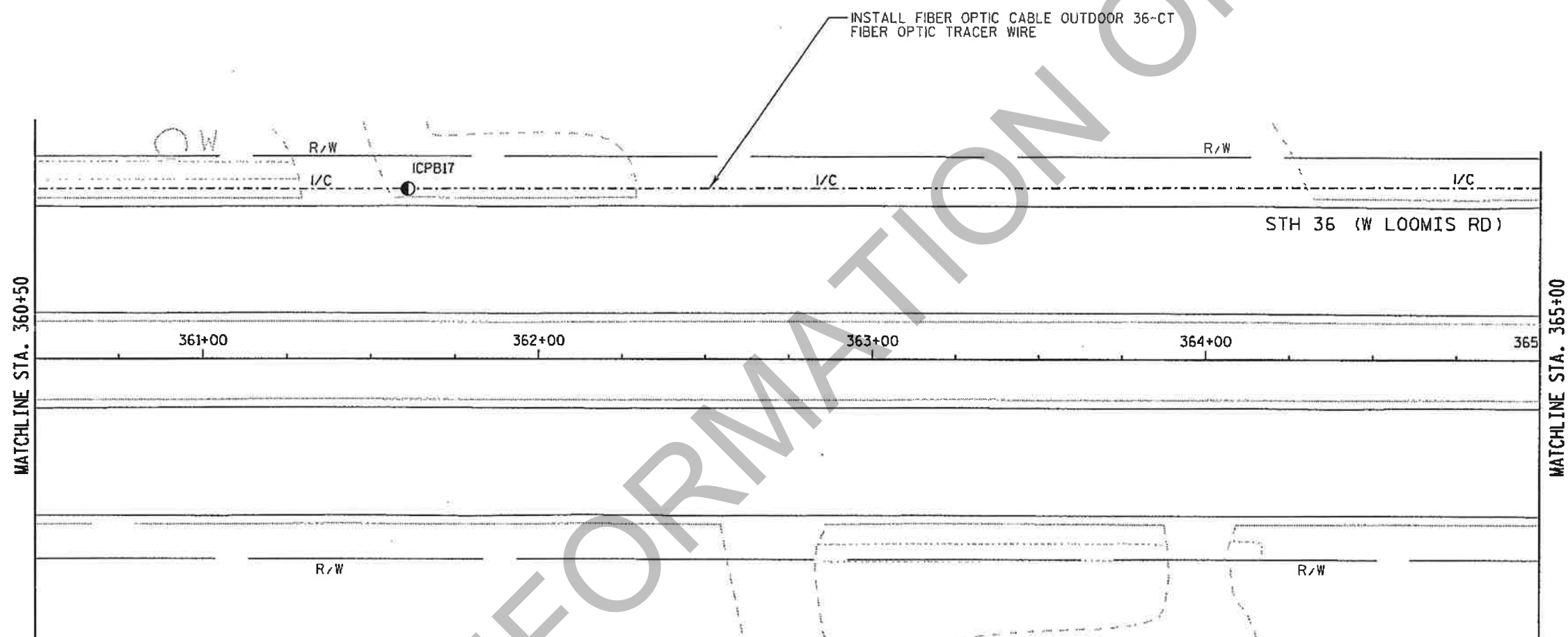
PAGE 10 OF 20



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
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PAGE 11 OF 20



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

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PAGE 12 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

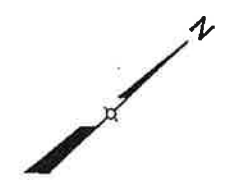
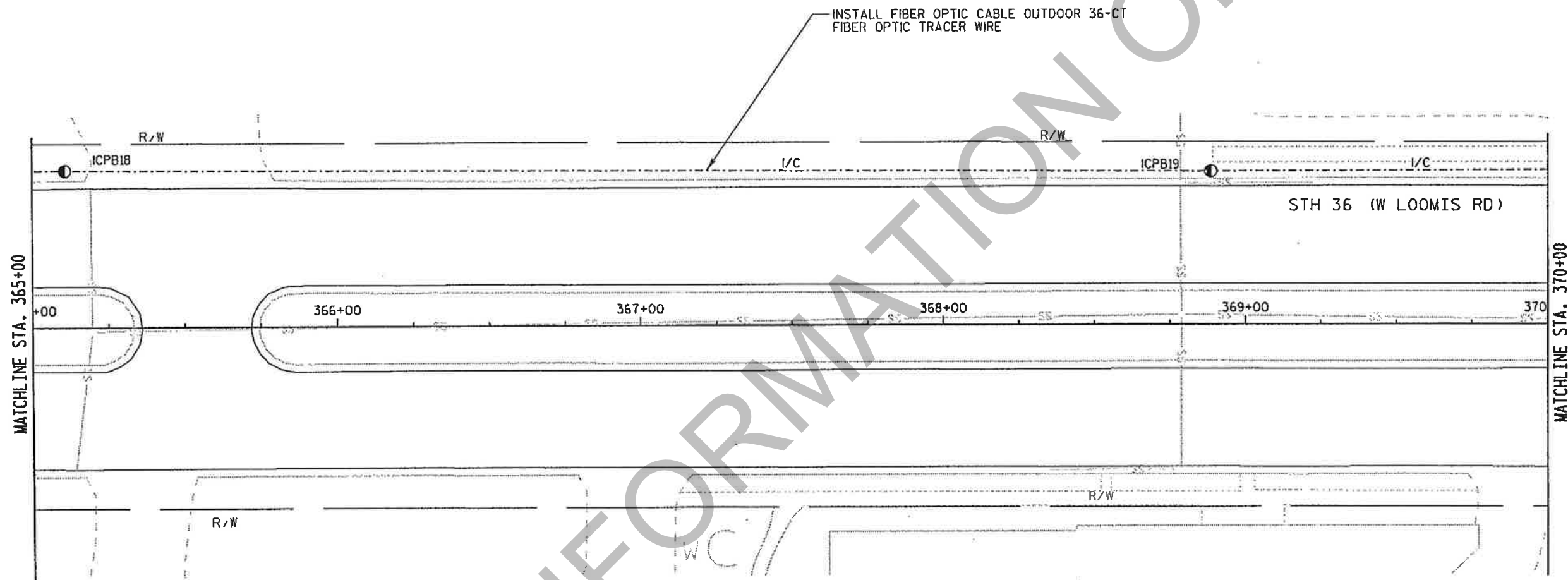
COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

88

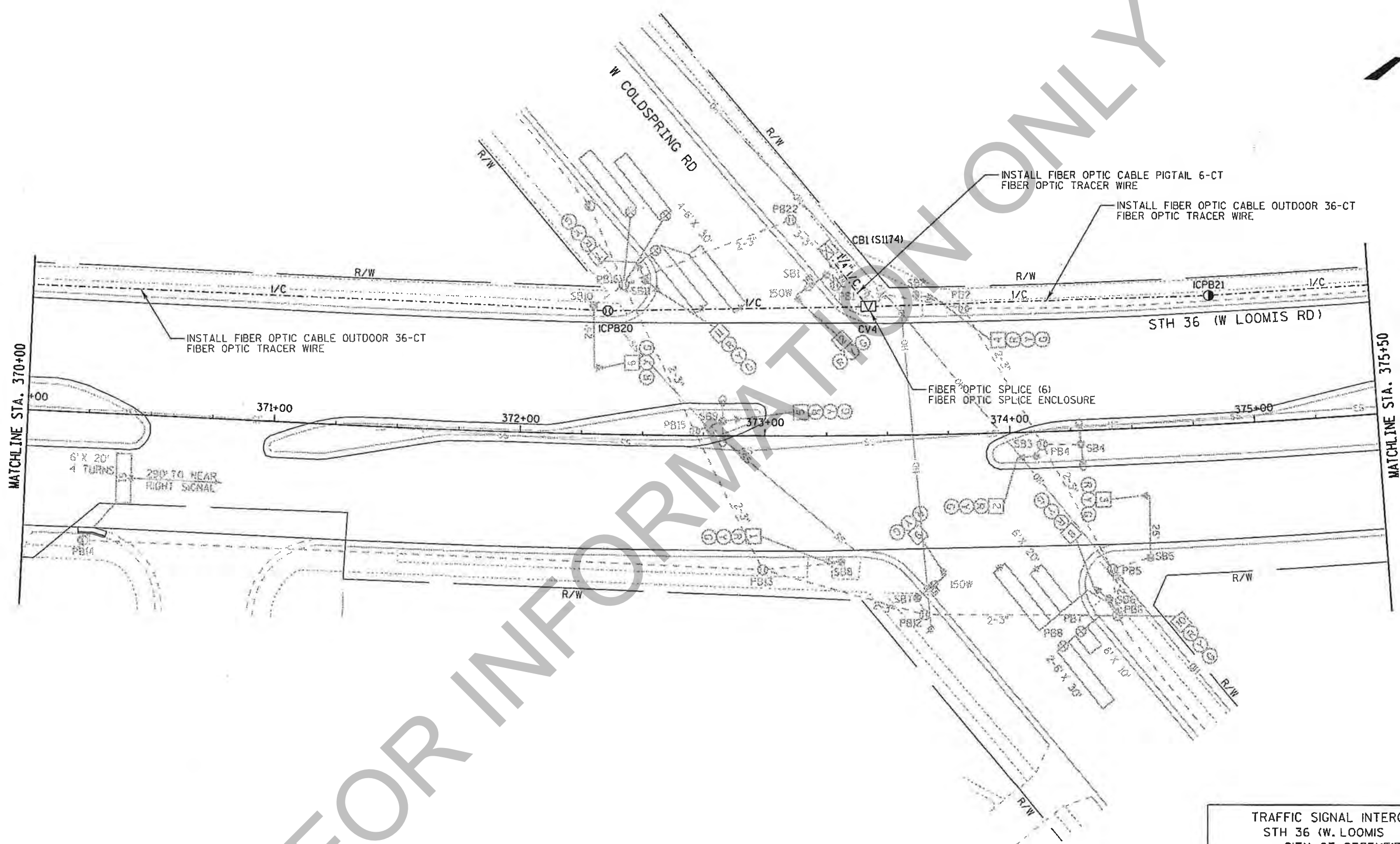
E



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY:

PAGE 13 OF 20



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY: PAGE 14 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

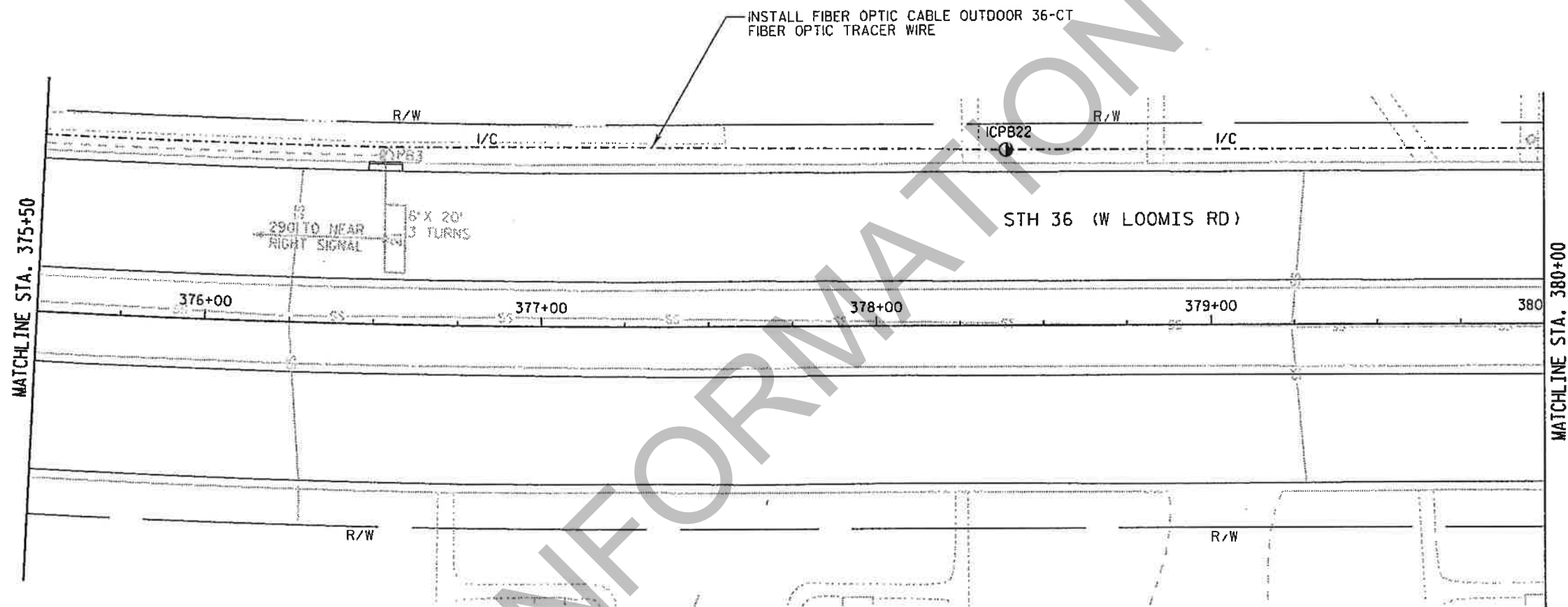
COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

90

E



TRAFFIC SIGNAL INTERCONNECT
 STH 36 (W. LOOMIS ROAD)
 CITY OF GREENFIELD
 MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS
 DESIGNED BY: AECOM
 REVISED BY:

PAGE 15 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

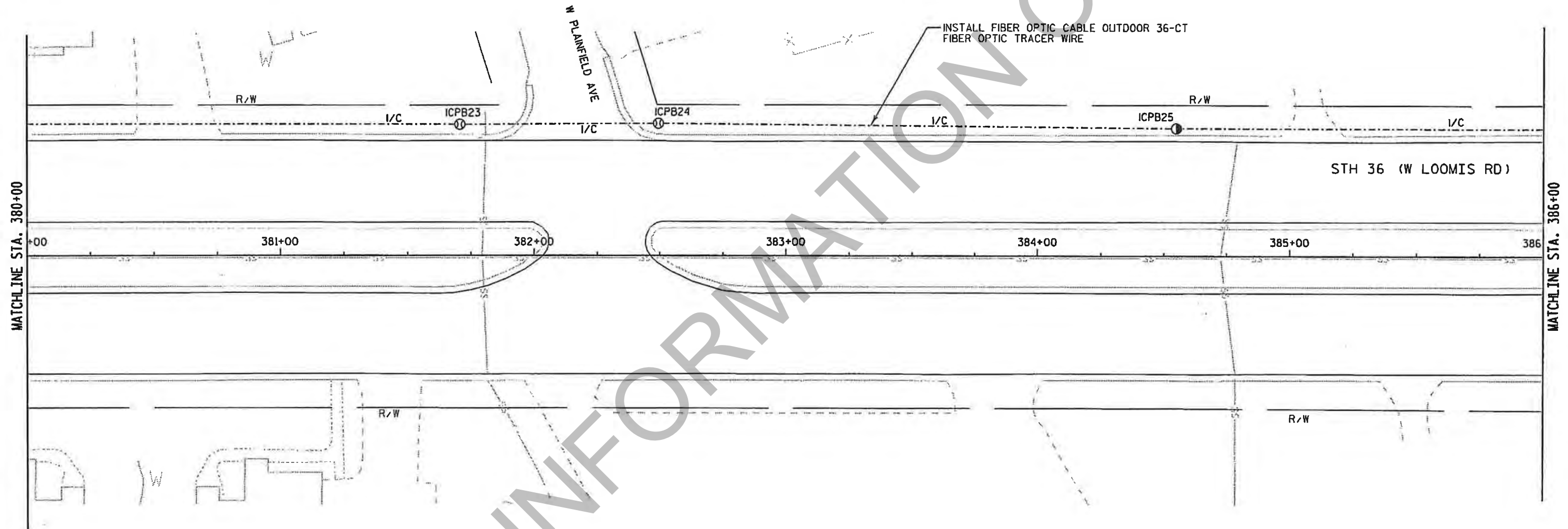
COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

91
87

E



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY:

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PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

92
88

E

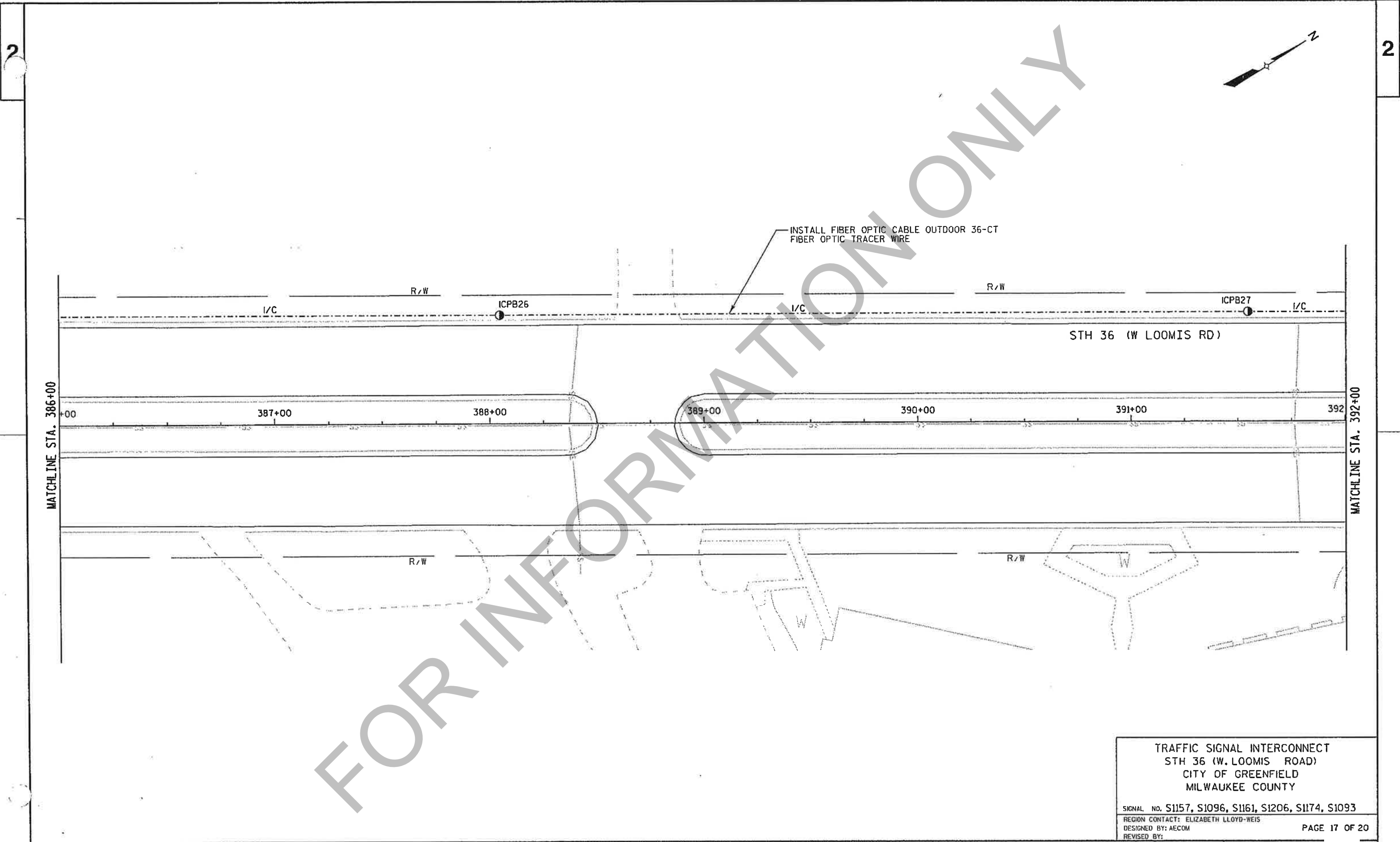
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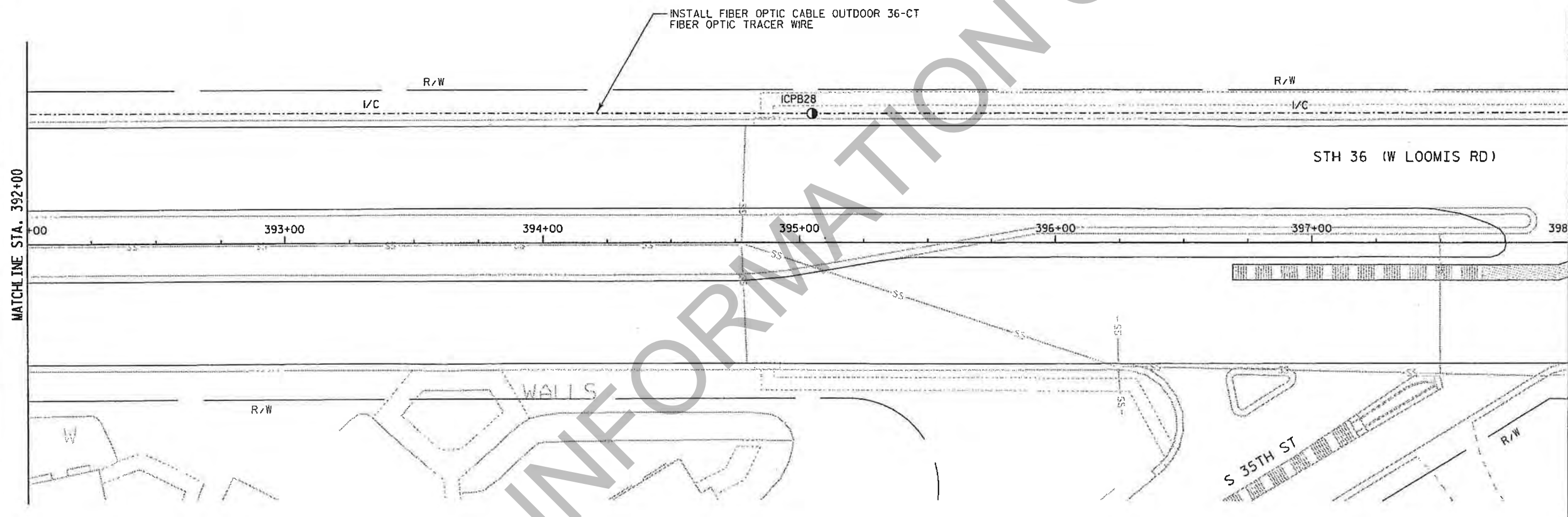
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WISDOT/CAOS SHEET 42





TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

REVISED BY:

PAGE 18 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

94

E

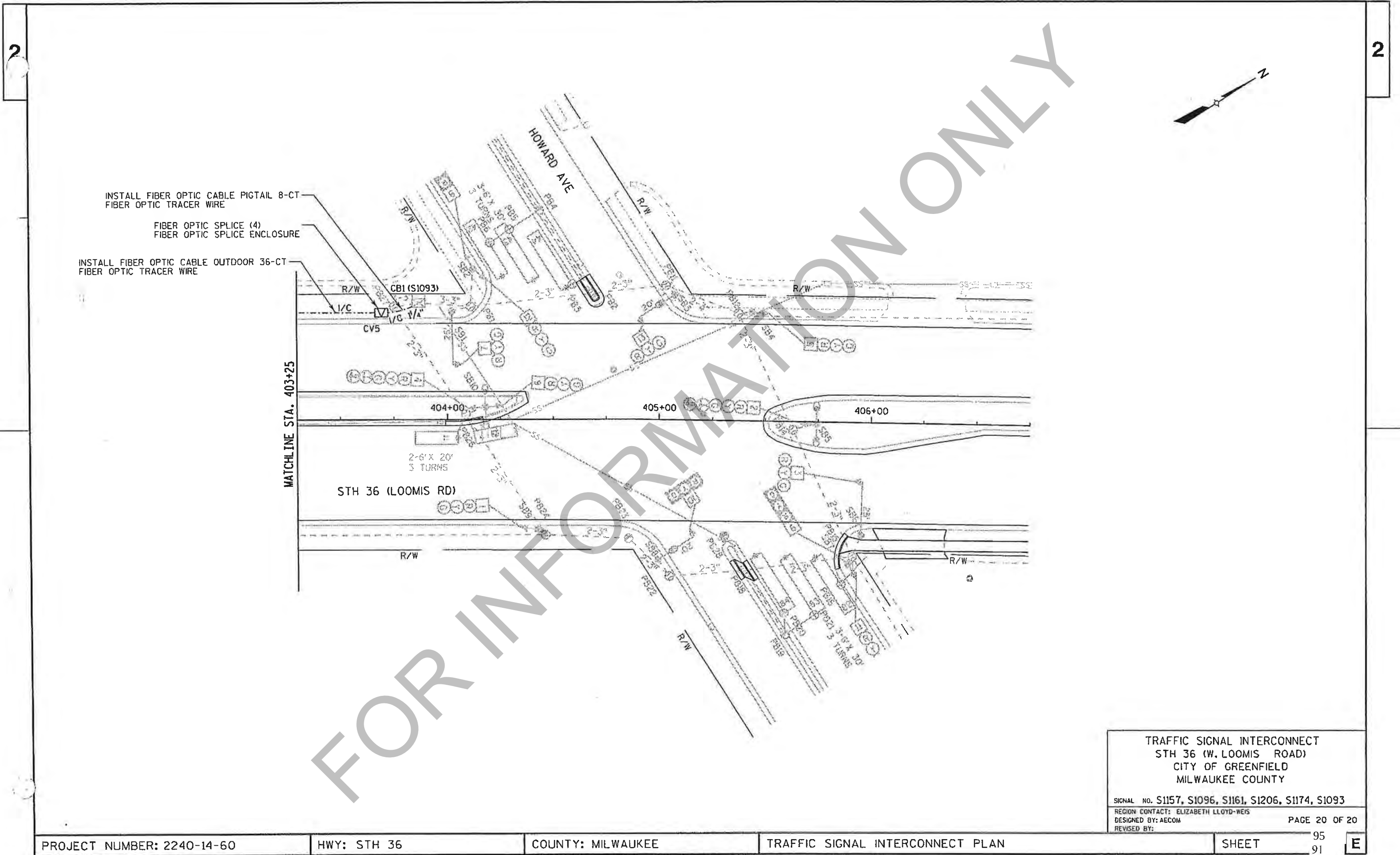
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WISDOT/CADD SHEET 42



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
REVISED BY:

PAGE 20 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

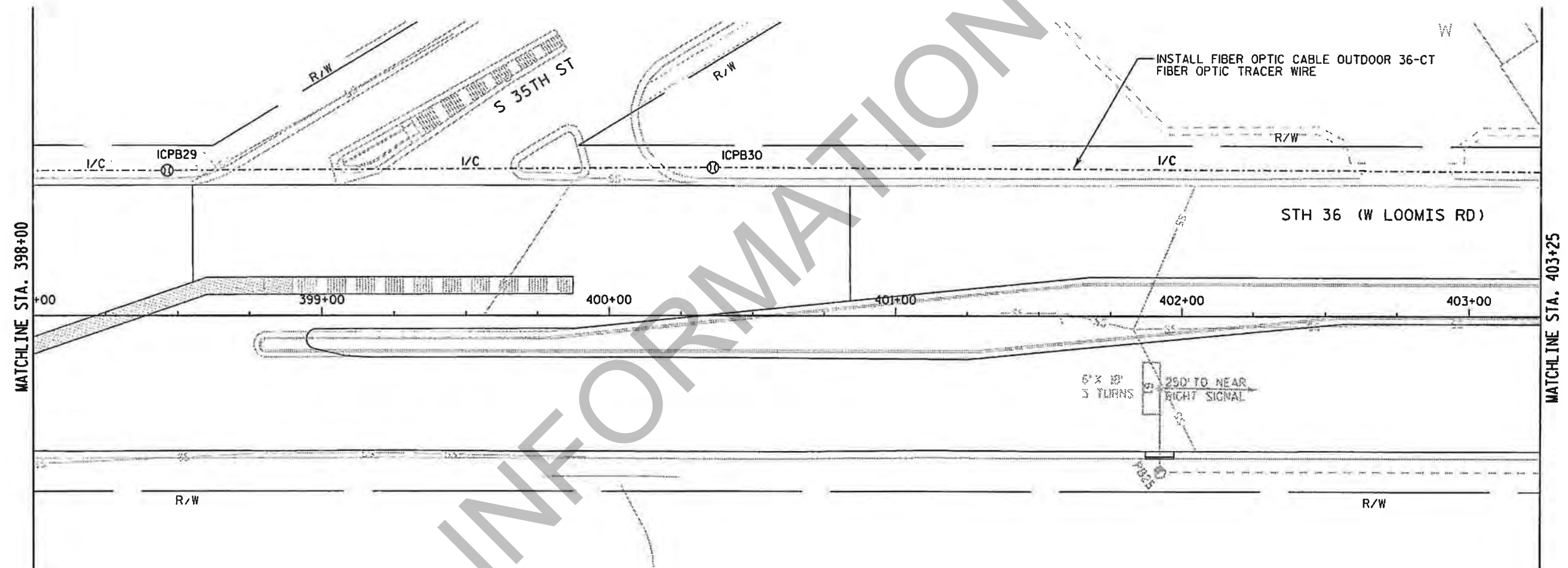
COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

95
91

E



TRAFFIC SIGNAL INTERCONNECT
STH 36 (W. LOOMIS ROAD)
CITY OF GREENFIELD
MILWAUKEE COUNTY

SIGNAL NO. S1157, S1096, S1161, S1206, S1174, S1093
REGION CONTACT: ELIZABETH LLOYD-WEIS
DESIGNED BY: AECOM
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PAGE 19 OF 20

PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL INTERCONNECT PLAN

SHEET

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E

2

2

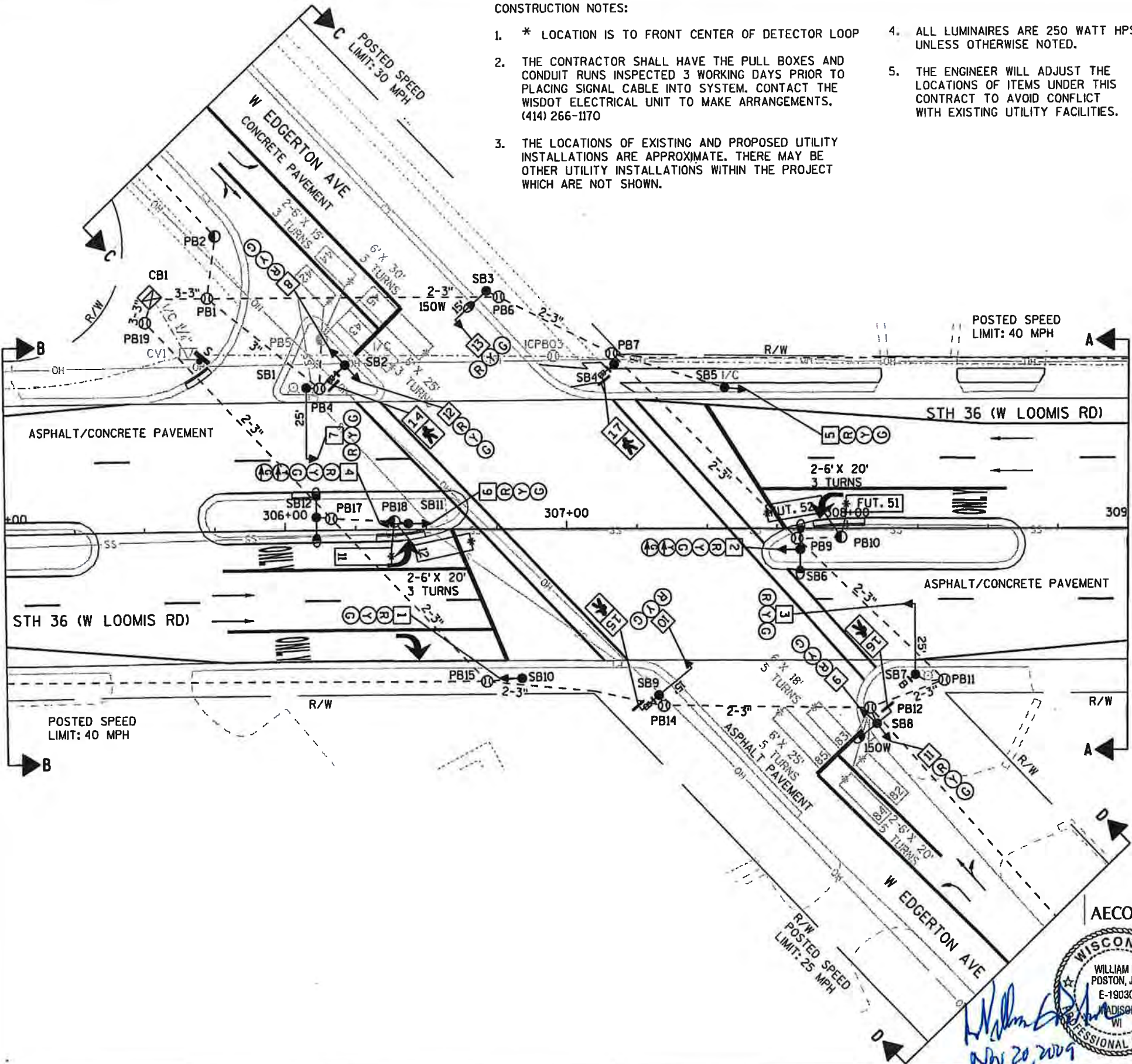
CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 3 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL UNIT TO MAKE ARRANGEMENTS. (414) 266-1170
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. ALL LUMINAIRES ARE 250 WATT HPS UNLESS OTHERWISE NOTED.
5. THE ENGINEER WILL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
- PULL BOX, 12" X 24"
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW
- GREEN ARROW
- WALK / DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- STOP SIGN
- LANE DESIGNATION FOR INFO ONLY

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING



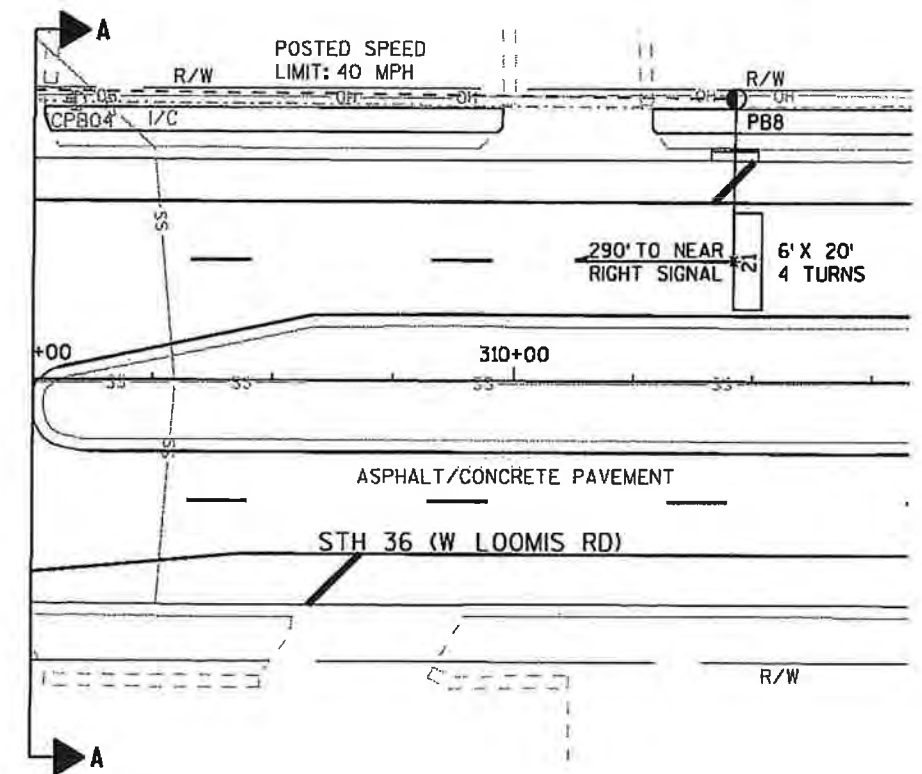
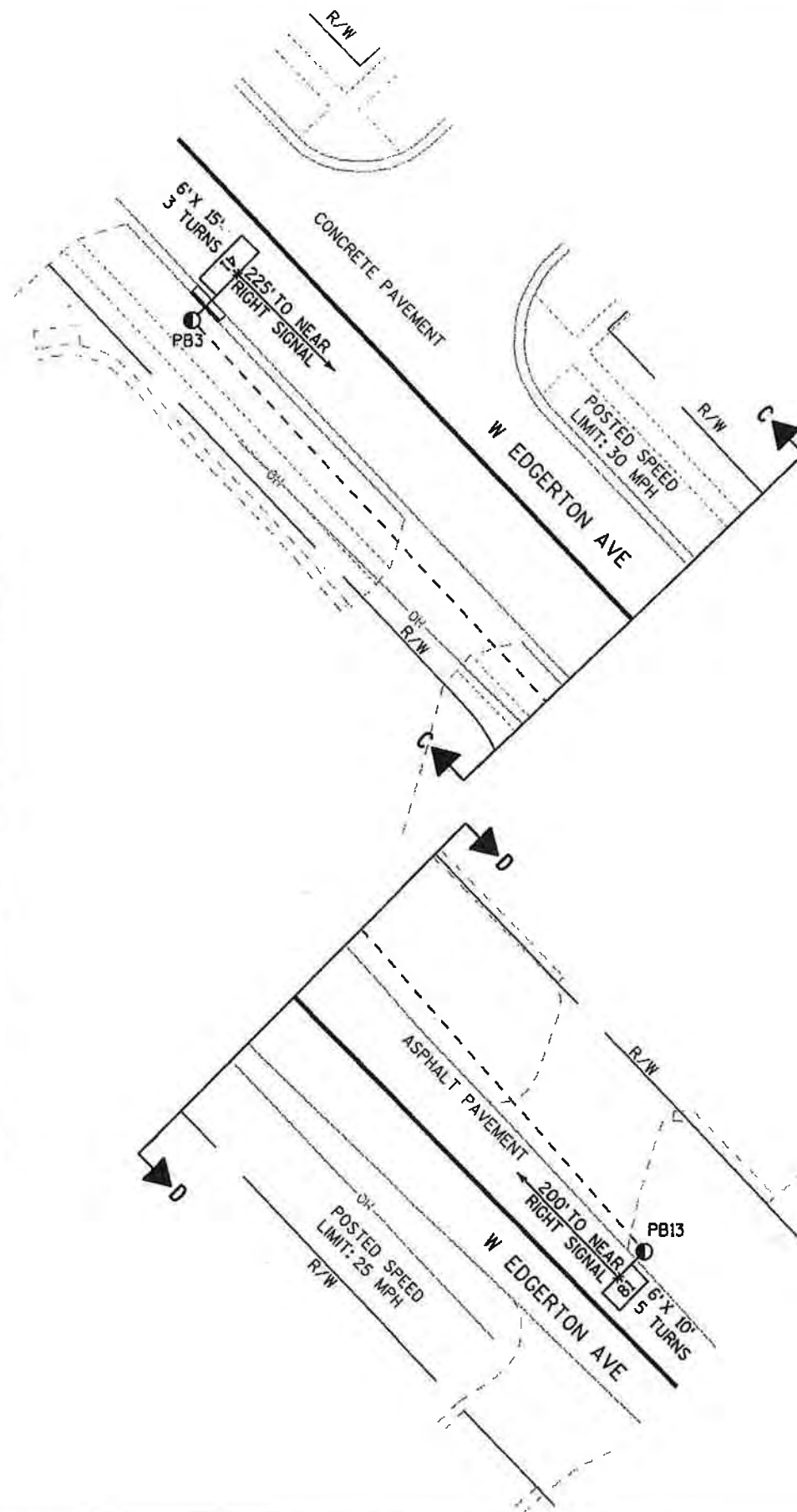
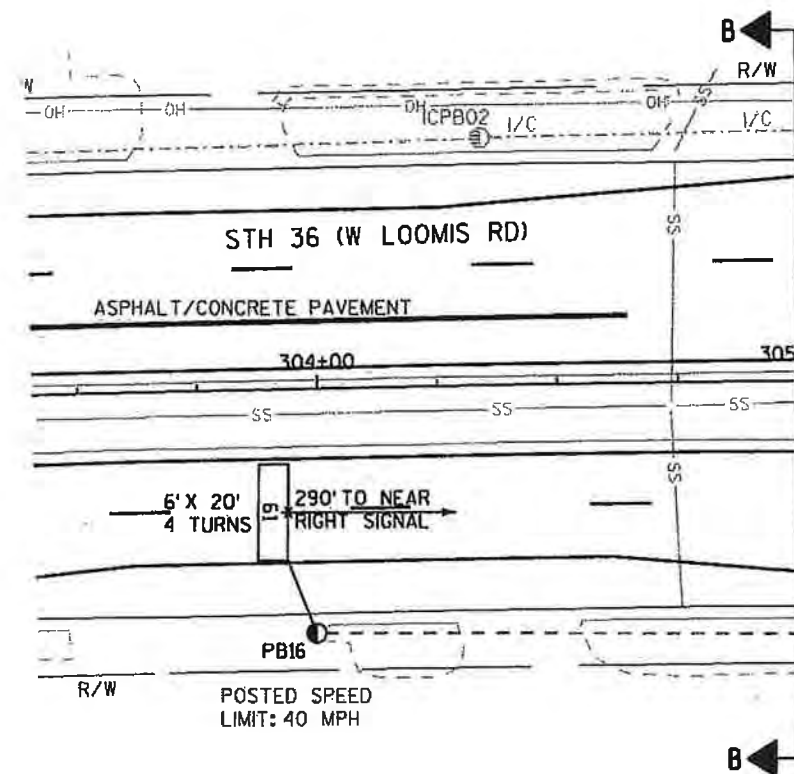
- RENUMBER PB's AND SB's
- 4/5/05 MOVE PEDESTRIAN BUTTON FROM SB3 TO SB4, ADD PULLBOX 16
- 9/03 INSTALL LOOPS 11,12,42, 43,44,45,82,83,84,85; CHANGE EMERGENCY FLASH TO R-R; INSTALL NB LEFT TURN HEADS
- 2/97 INSTALL PEDESTRIAN SIGNALS AND PUSHBUTTONS
- 7/94 INSTALL NEW CONTROLLER, LOOPS, CONDUIT AND PULLBOXES
- CONSTRUCT EB RIGHT TURN LANE AND ISLAND
- 1/23/76 INITIAL INSTALLATION

REVISION				
Rev. No.	RECONSTRUCT SIGNAL			
	APPROVAL RECOMMENDED		APPROVED	
7	REGION		CENTRAL OFFICE	
	Date	By	Date	By
	11-23-09	SAW	11/25/09	gjb
TRAFFIC CONTROL SIGNAL				
STH 36 (W LOOMIS RD) & W EDGERTON AVE CITY OF GREENFIELD MILWAUKEE COUNTY				
SIGNAL NO. S1157 (M133)			CONTROLLER TYPE: EPAC	
WISCONSIN DEPARTMENT OF TRANSPORTATION				
APPROVAL RECOMMENDED			ROBERT MOE	
Date 9/24/75			REGION TRAFFIC ENGINEER	
APPROVED			WAYNE N. VOLK	
Date 12/4/75			STATE TRAFFIC ENGINEER	
REGION CONTACT: ELIZABETH LLOYD-WEIS				
DESIGNED BY: AECOM				
REVISED BY:				
PAGE 1 OF 3				

ESS 11/23/09

2

2



TRAFFIC CONTROL SIGNAL
 STH 36 (W LOOMIS RD) &
 W EDGERTON AVE
 CITY OF GREENFIELD
 MILWAUKEE COUNTY

SIGNAL NO. S1157 (M133)

REGION CONTACT: ELIZABETH LLOYD-WEIS

DESIGNED BY: AECOM

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PAGE 2 OF 3

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PROJECT NUMBER: 2240-14-60

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC SIGNAL PLAN

SHEET

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2

SEQUENCE OF OPERATION

		SEQUENCE OF OPERATION							
		NOT USED				NOT USED			
		SEQUENCE OF OPERATION				SEQUENCE OF OPERATION			
RING 1		01				02			
		CLEAR TO				CLEAR TO			
		R/W	**			R/W	**		
	01	2,4	G	Y	-	-	-	-	-
	02	5,6,7	R	R	R	G	Y	R	
	03								
	04	8,9,10	R	R	R	R	R	R	
	05								
	06	1,2,3,4	R	R	R	R	R	R	
	07								
RING 2									
	01	2,4				-	-	-	
	02	5,6,7				R	R	R	
	03								
	04	8,9,10				R	R	R	
	05								
	06	1,2,3,4				G	Y	R	
	07								
RING 3									
	01	2,4				-	-	-	
	02	5,6,7				R	R	R	
	03								
	04	8,9,10				R	R	R	
	05								
	06	1,2,3,4				G	Y	R	
	07								
RING 4									
	01	2,4				-	-	-	
	02	5,6,7				R	R	R	
	03								
	04	8,9,10				R	R	R	
	05								
	06	1,2,3,4				G	Y	R	
	07								

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)
* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

CHART 1		
PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	6	2,4,8
2	6	1,4,8
3		
4	8	1,2,6
5		
6	1 OR 2	4,8
7		
8	4	1,2,6

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL NUMBER	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			1	1				6X20	3
12	1	X			1	1				6X20	3
21	2	X			2	2				6X20	4
41	3			X		4			X	6X15	3
42	4	X			4	4				6X15	3
43	4	X			4	4				6X25	3
44	5	X			4	4		X		6X15	3
45	5	X			4	4		X		6X30	3
51	FUTURE									6X20	3
52	FUTURE									6X20	3
61	7	X			6	6				6X20	4
81	8			X		8			X	6X10	5
82	9	X			8	8		X		6X20	5
83	9	X			8	8		X		6x18	5
84	10	X			8	8		X		6x20	5
85	10	X			8	8		X		6x25	5

CONTROLLER LOGIC

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

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

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

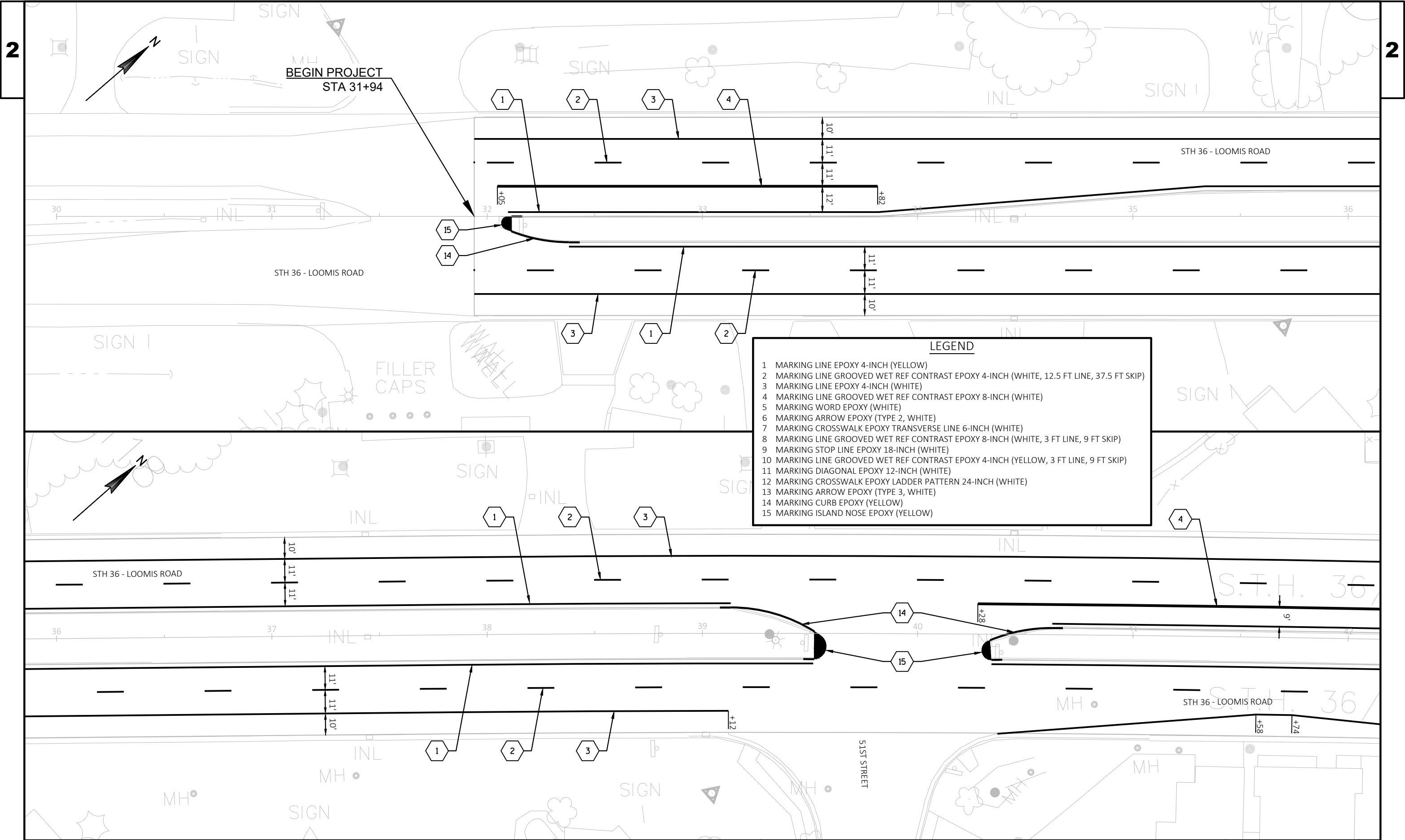
TYPE OF PRE-EMPT	
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RAILROAD	
EMERGENCY VEHICLE	
3M	
TOMAR	
HARDWARE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

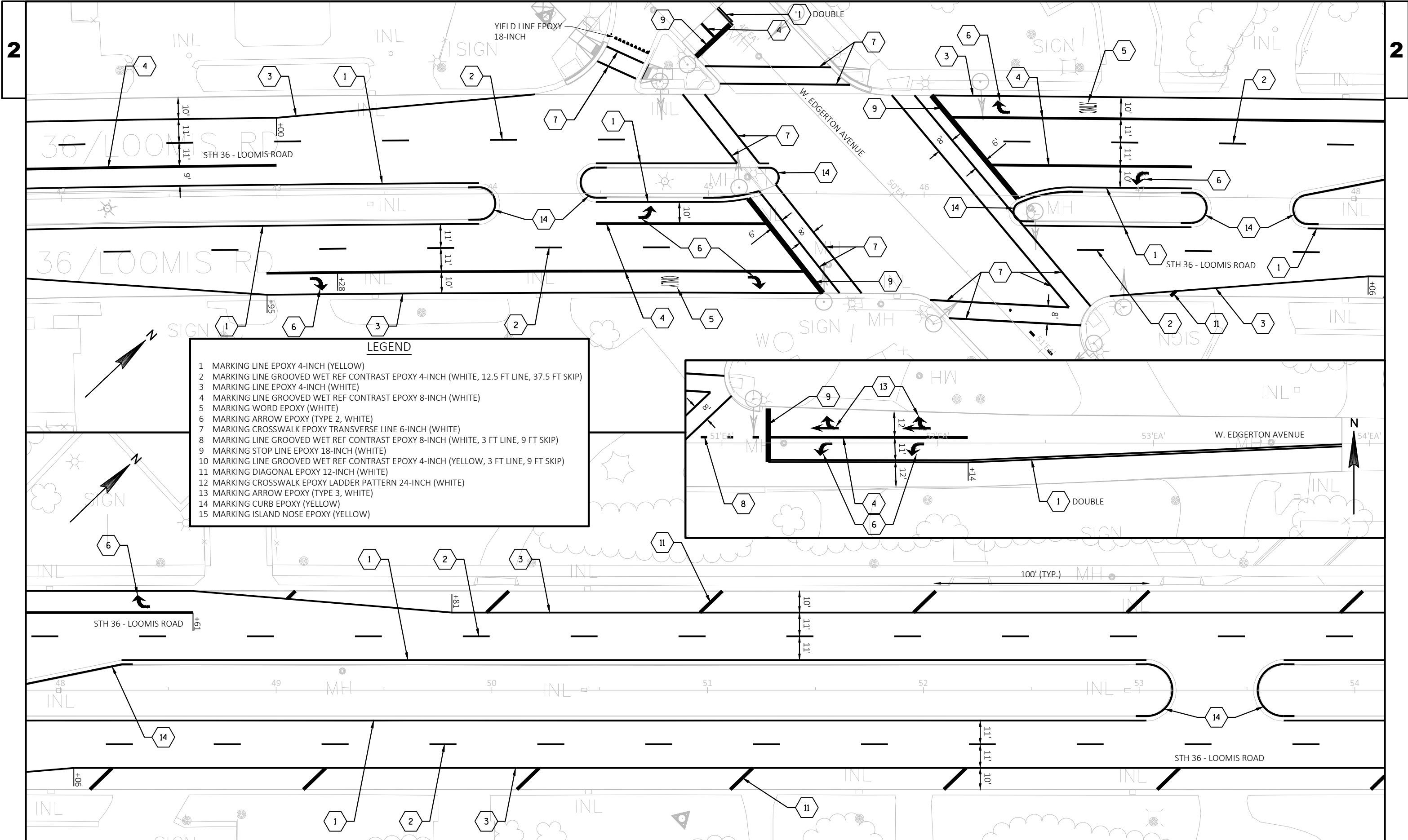
TYPE OF LIGHTING	
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IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

- GENERAL NOTES:
- ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
 - WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1 AT LEFT.)
 - IF ANY OPPOSING THRU PHASES ARE TIMING CONCURRENTLY, THEY SHALL TERMINATE TOGETHER DUE TO PERMISSIVE LEFT TURN CONFLICT.

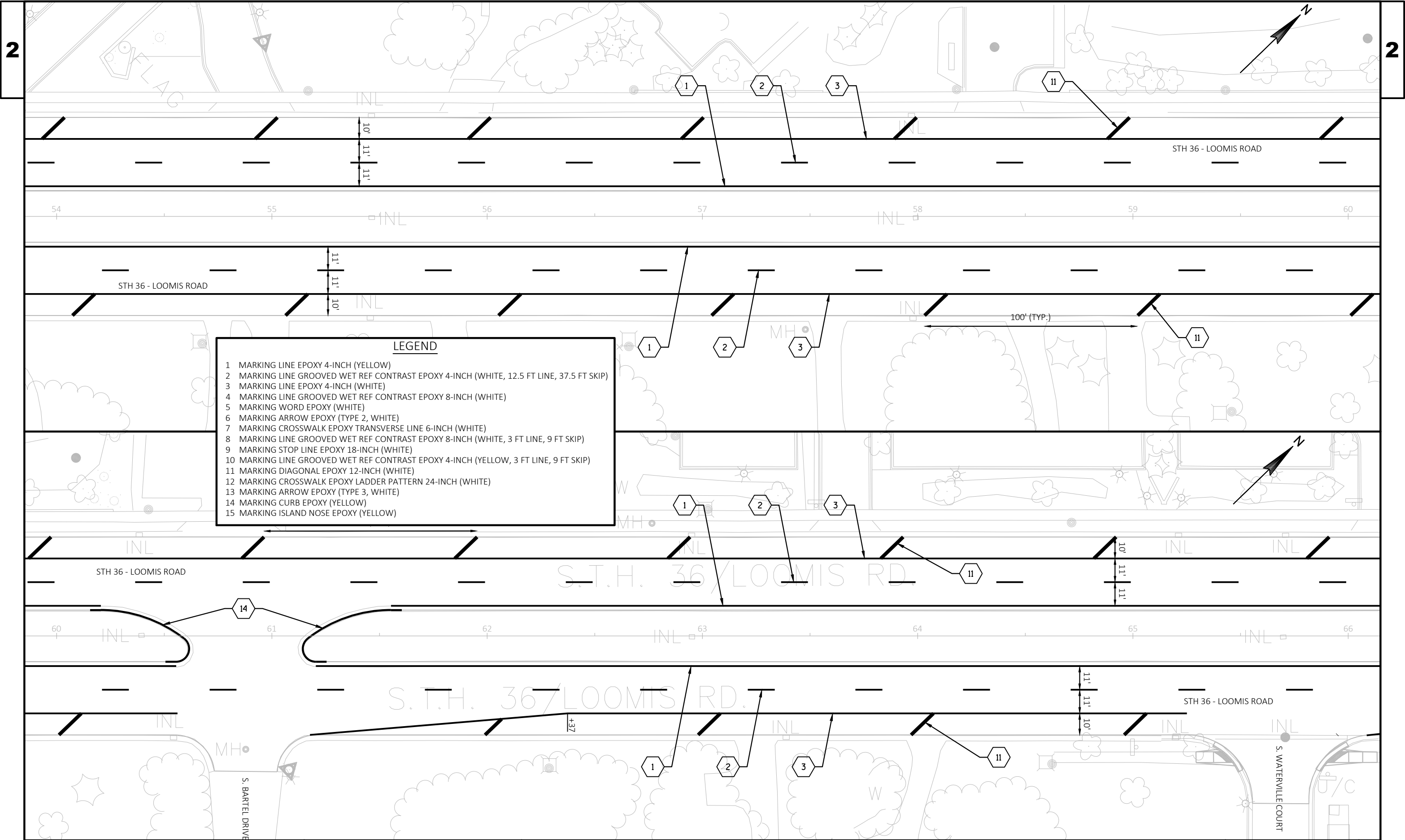
STH 36 (W LOOMIS RD) & W EDGERTON AVE CITY OF GREENFIELD MILWAUKEE COUNTY	
SIGNAL NO. S1157 (M133)	
CONTROLLER TYPE: EPAC	
DATE NOVEMBER 2009	PAGE NO. 3 OF 3

11-23-09 STH 36

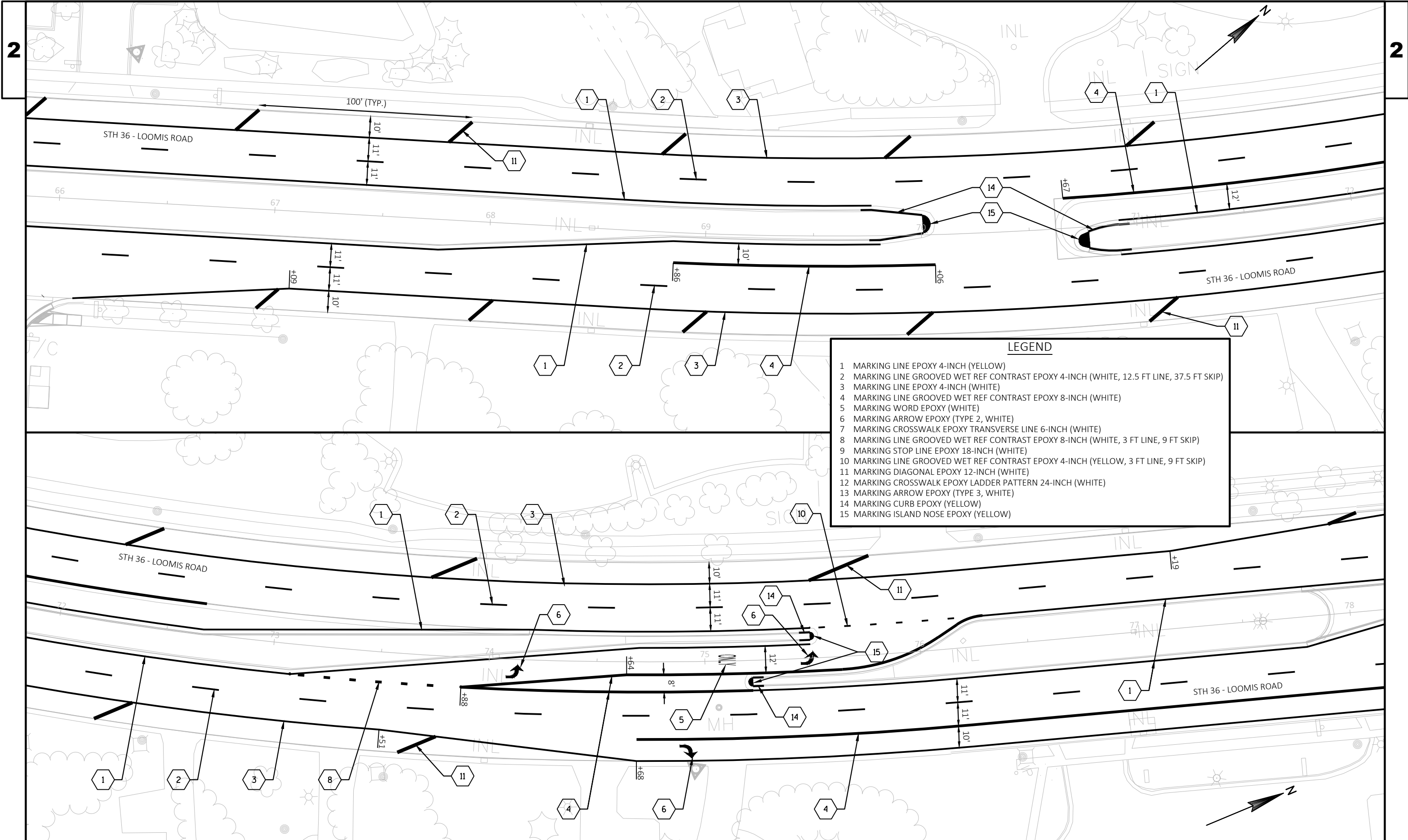




- LEGEND**
- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
 - 2 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)
 - 3 MARKING LINE EPOXY 4-INCH (WHITE)
 - 4 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE)
 - 5 MARKING WORD EPOXY (WHITE)
 - 6 MARKING ARROW EPOXY (TYPE 2, WHITE)
 - 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
 - 8 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE, 3 FT LINE, 9 FT SKIP)
 - 9 MARKING STOP LINE EPOXY 18-INCH (WHITE)
 - 10 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (YELLOW, 3 FT LINE, 9 FT SKIP)
 - 11 MARKING DIAGONAL EPOXY 12-INCH (WHITE)
 - 12 MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
 - 13 MARKING ARROW EPOXY (TYPE 3, WHITE)
 - 14 MARKING CURB EPOXY (YELLOW)
 - 15 MARKING ISLAND NOSE EPOXY (YELLOW)



- LEGEND**
- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
 - 2 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)
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 - 5 MARKING WORD EPOXY (WHITE)
 - 6 MARKING ARROW EPOXY (TYPE 2, WHITE)
 - 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
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 - 9 MARKING STOP LINE EPOXY 18-INCH (WHITE)
 - 10 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (YELLOW, 3 FT LINE, 9 FT SKIP)
 - 11 MARKING DIAGONAL EPOXY 12-INCH (WHITE)
 - 12 MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
 - 13 MARKING ARROW EPOXY (TYPE 3, WHITE)
 - 14 MARKING CURB EPOXY (YELLOW)
 - 15 MARKING ISLAND NOSE EPOXY (YELLOW)



LEGEND

1

MARKING LINE EPOXY 4-INCH (YELLOW)

2

MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)

3

MARKING LINE EPOXY 4-INCH (WHITE)

4

MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE)

5

MARKING WORD EPOXY (WHITE)

6

MARKING ARROW EPOXY (TYPE 2, WHITE)

7

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)

8

MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE, 3 FT LINE, 9 FT SKIP)

9

MARKING STOP LINE EPOXY 18-INCH (WHITE)

10

MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (YELLOW, 3 FT LINE, 9 FT SKIP)

11

MARKING DIAGONAL EPOXY 12-INCH (WHITE)

12

MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)

13

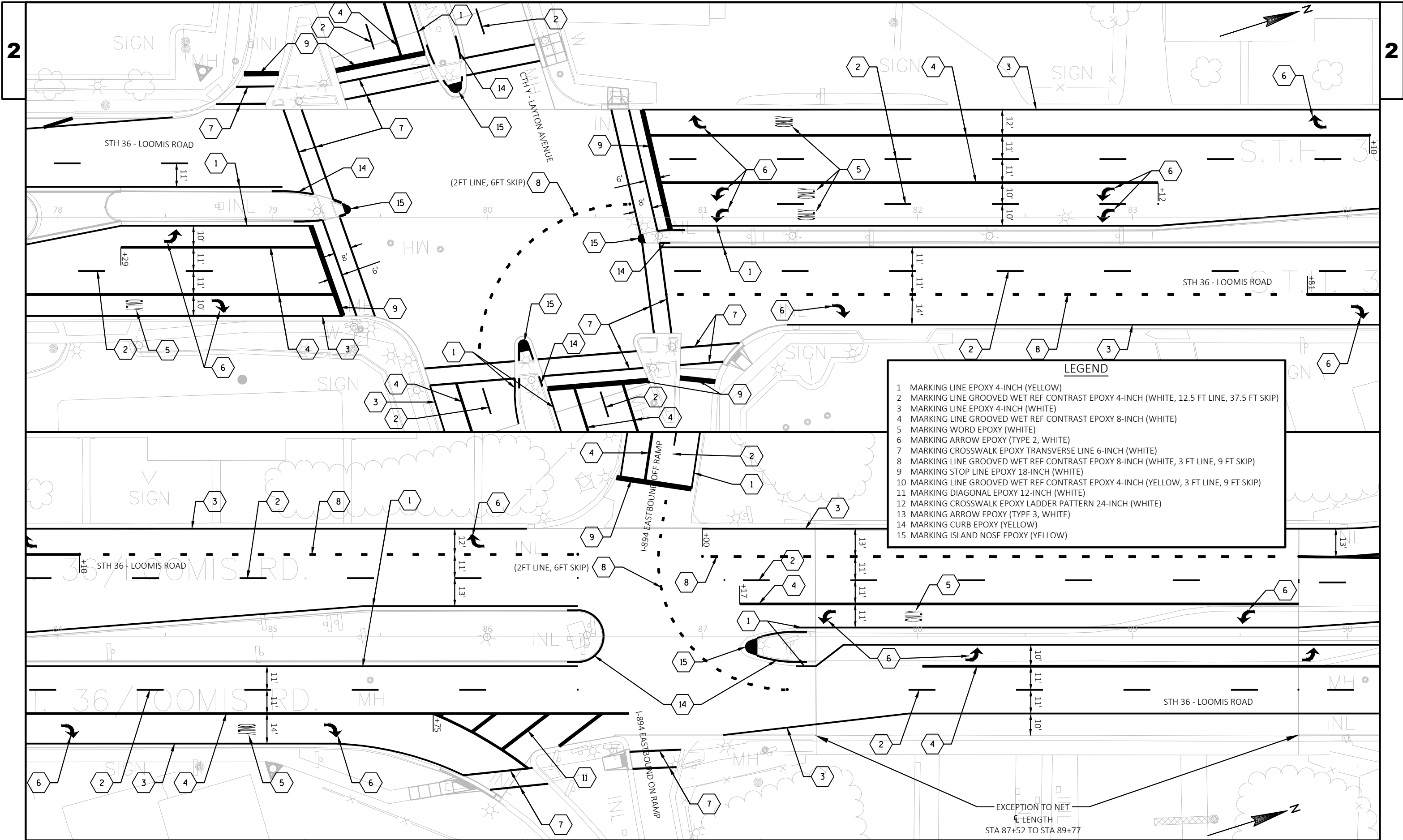
MARKING ARROW EPOXY (TYPE 3, WHITE)

14

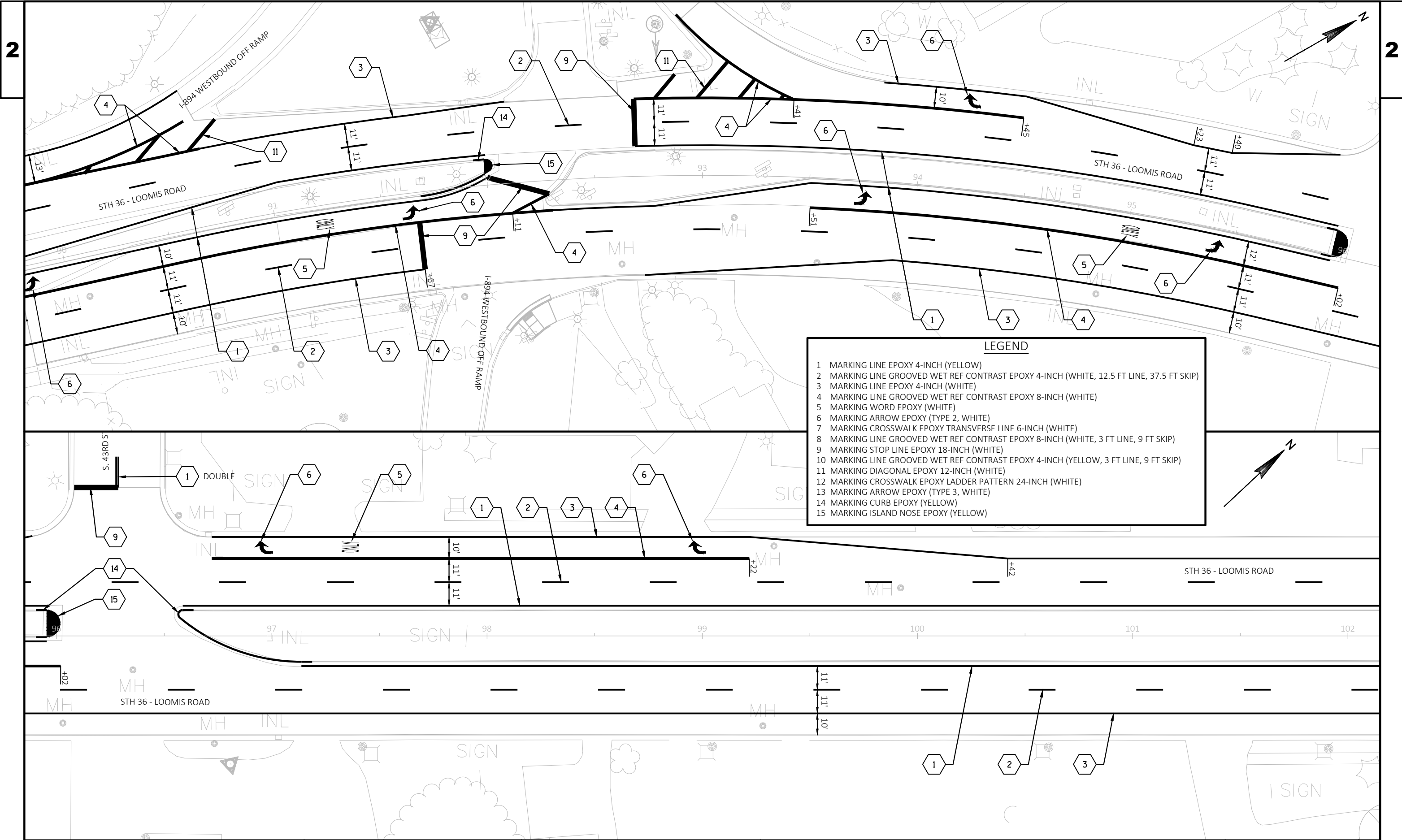
MARKING CURB EPOXY (YELLOW)

15

MARKING ISLAND NOSE EPOXY (YELLOW)

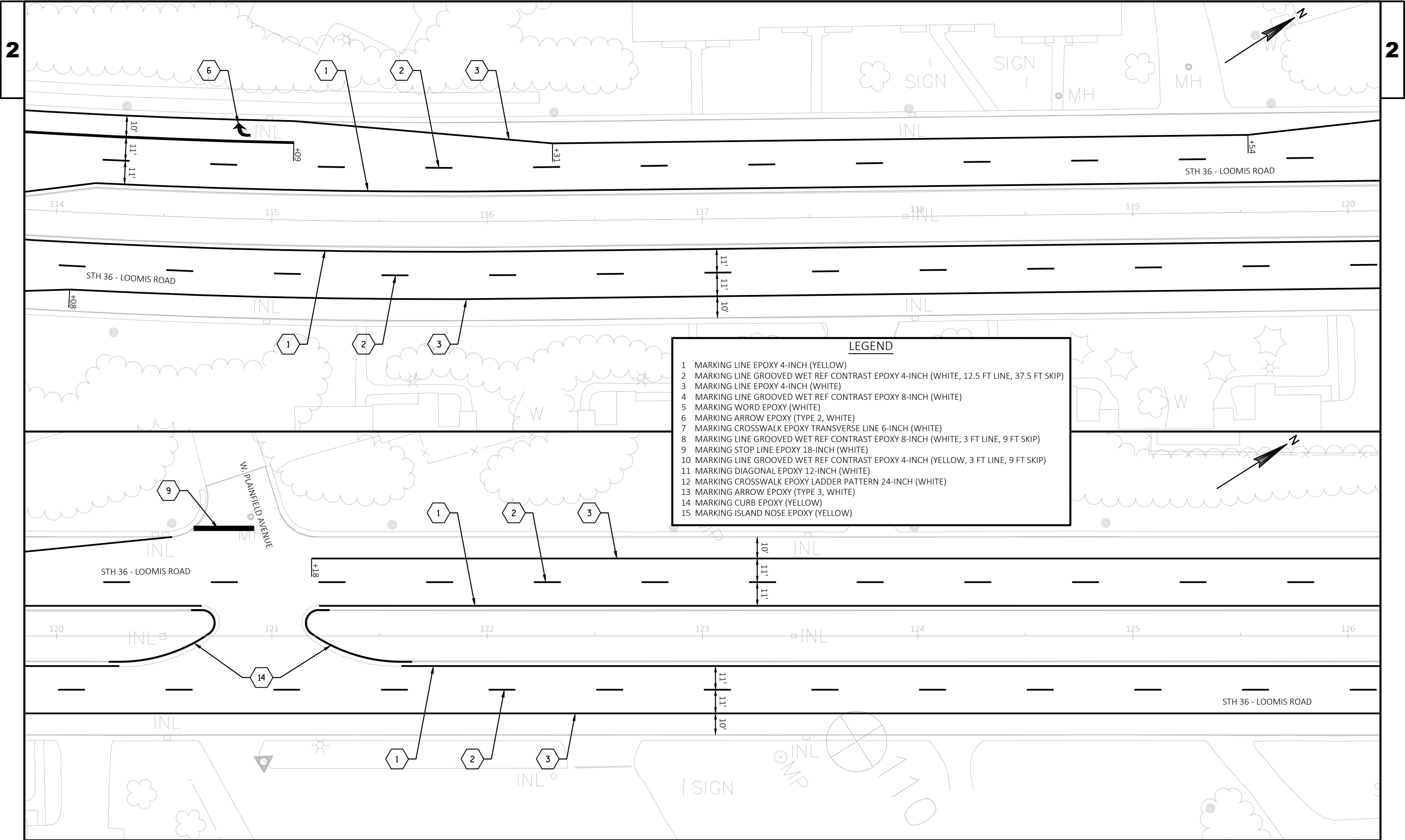


- LEGEND**
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 - 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)
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 - 12 MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)
 - 13 MARKING ARROW EPOXY (TYPE 3, WHITE)
 - 14 MARKING CURB EPOXY (YELLOW)
 - 15 MARKING ISLAND NOSE EPOXY (YELLOW)



2





LEGEND

1

MARKING LINE EPOXY 4-INCH (YELLOW)

2

MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)

3

MARKING LINE EPOXY 4-INCH (WHITE)

4

MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE)

5

MARKING WORD EPOXY (WHITE)

6

MARKING ARROW EPOXY (TYPE 2, WHITE)

7

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)

8

MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE, 3 FT LINE, 9 FT SKIP)

9

MARKING STOP LINE EPOXY 18-INCH (WHITE)

10

MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (YELLOW, 3 FT LINE, 9 FT SKIP)

11

MARKING DIAGONAL EPOXY 12-INCH (WHITE)

12

MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)

13

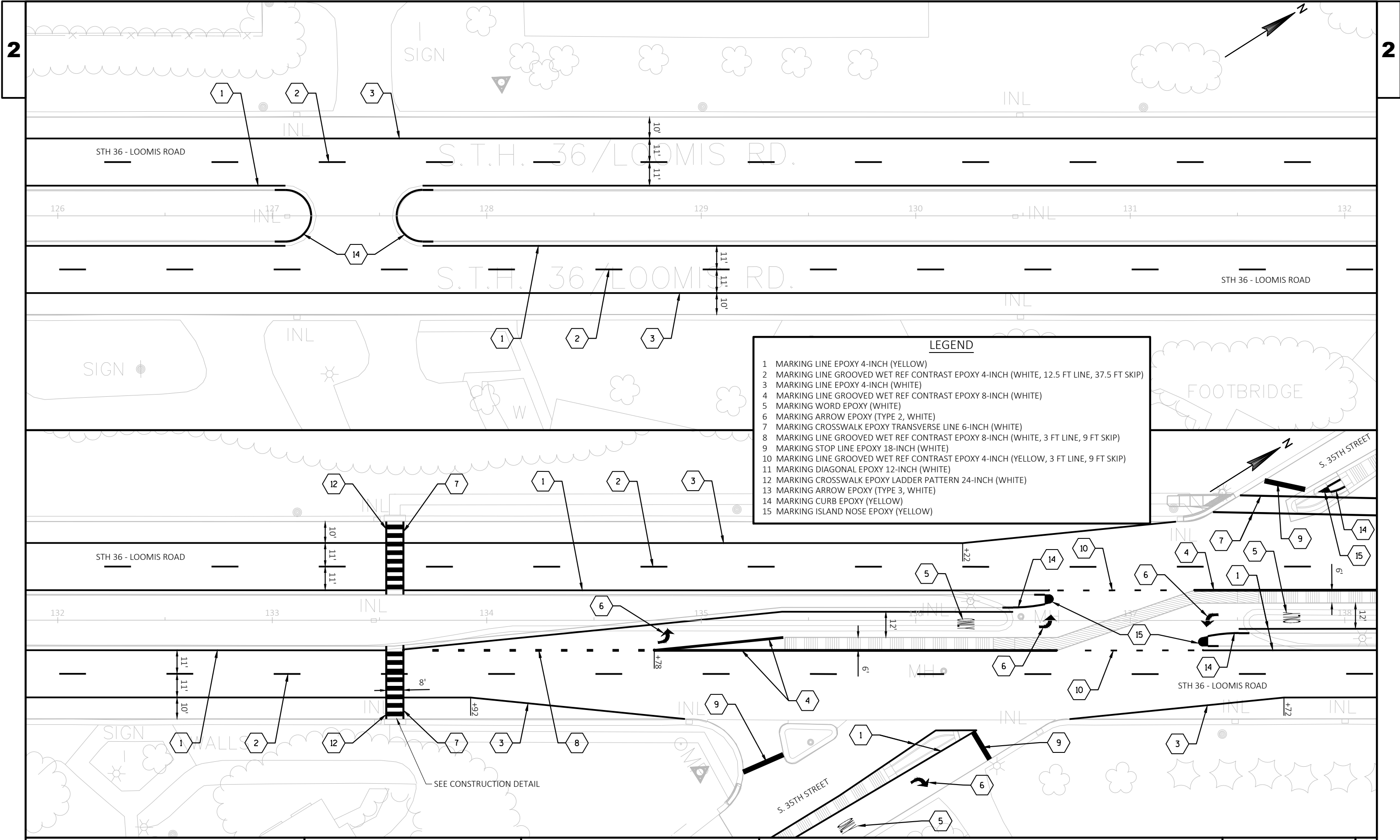
MARKING ARROW EPOXY (TYPE 3, WHITE)

14

MARKING CURB EPOXY (YELLOW)

15

MARKING ISLAND NOSE EPOXY (YELLOW)



LEGEND

1

MARKING LINE EPOXY 4-INCH (YELLOW)

2

MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)

3

MARKING LINE EPOXY 4-INCH (WHITE)

4

MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE)

5

MARKING WORD EPOXY (WHITE)

6

MARKING ARROW EPOXY (TYPE 2, WHITE)

7

MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)

8

MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE, 3 FT LINE, 9 FT SKIP)

9

MARKING STOP LINE EPOXY 18-INCH (WHITE)

10

MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (YELLOW, 3 FT LINE, 9 FT SKIP)

11

MARKING DIAGONAL EPOXY 12-INCH (WHITE)

12

MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)

13

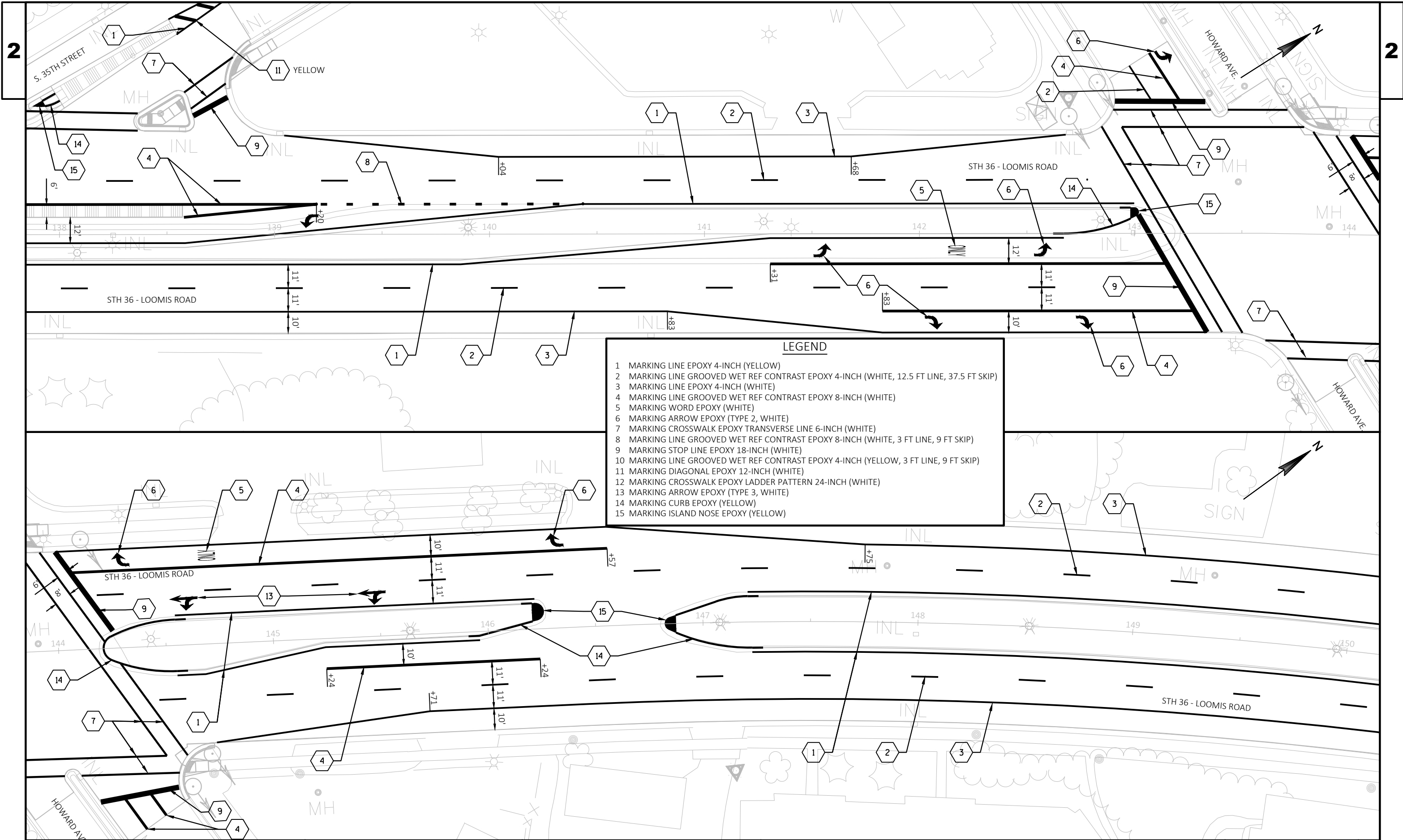
MARKING ARROW EPOXY (TYPE 3, WHITE)

14

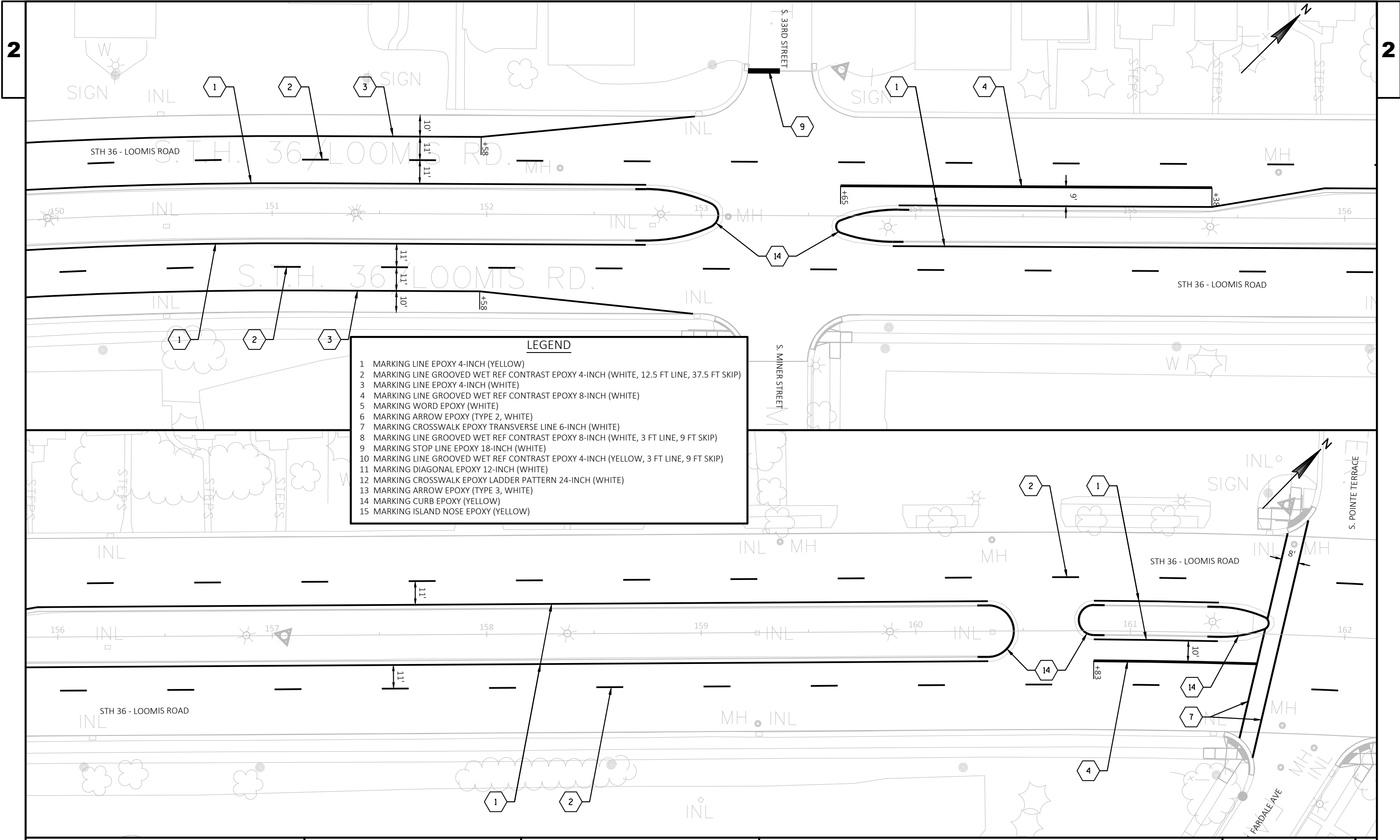
MARKING CURB EPOXY (YELLOW)

15

MARKING ISLAND NOSE EPOXY (YELLOW)



- LEGEND**
- 1 MARKING LINE EPOXY 4-INCH (YELLOW)
 - 2 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)
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 - 13 MARKING ARROW EPOXY (TYPE 3, WHITE)
 - 14 MARKING CURB EPOXY (YELLOW)
 - 15 MARKING ISLAND NOSE EPOXY (YELLOW)



LEGEND

1

 MARKING LINE EPOXY 4-INCH (YELLOW)

2

 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (WHITE, 12.5 FT LINE, 37.5 FT SKIP)

3

 MARKING LINE EPOXY 4-INCH (WHITE)

4

 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE)

5

 MARKING WORD EPOXY (WHITE)

6

 MARKING ARROW EPOXY (TYPE 2, WHITE)

7

 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)

8

 MARKING LINE GROOVED WET REF CONTRAST EPOXY 8-INCH (WHITE, 3 FT LINE, 9 FT SKIP)

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 MARKING STOP LINE EPOXY 18-INCH (WHITE)

10

 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (YELLOW, 3 FT LINE, 9 FT SKIP)

11

 MARKING DIAGONAL EPOXY 12-INCH (WHITE)

12

 MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)

13

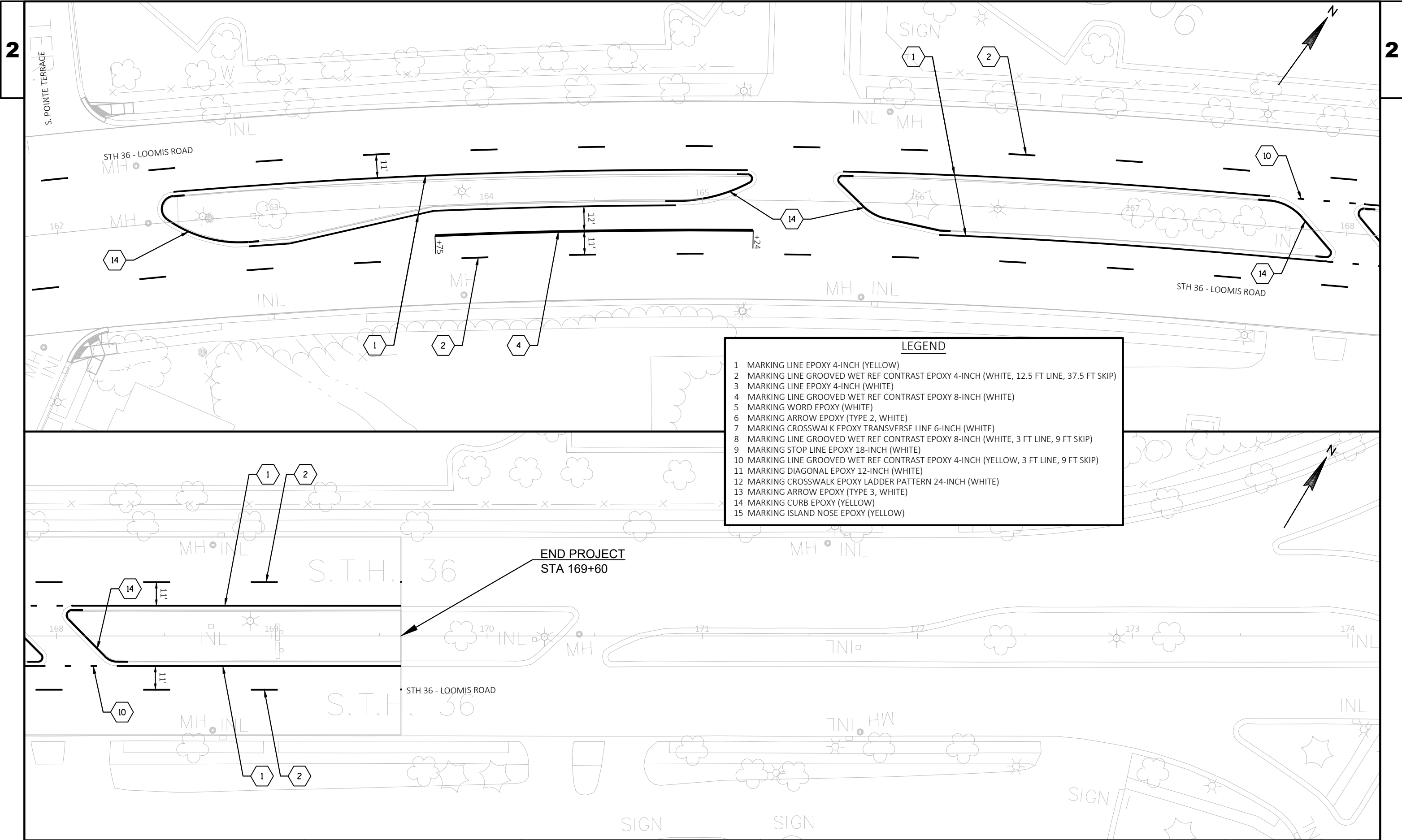
 MARKING ARROW EPOXY (TYPE 3, WHITE)

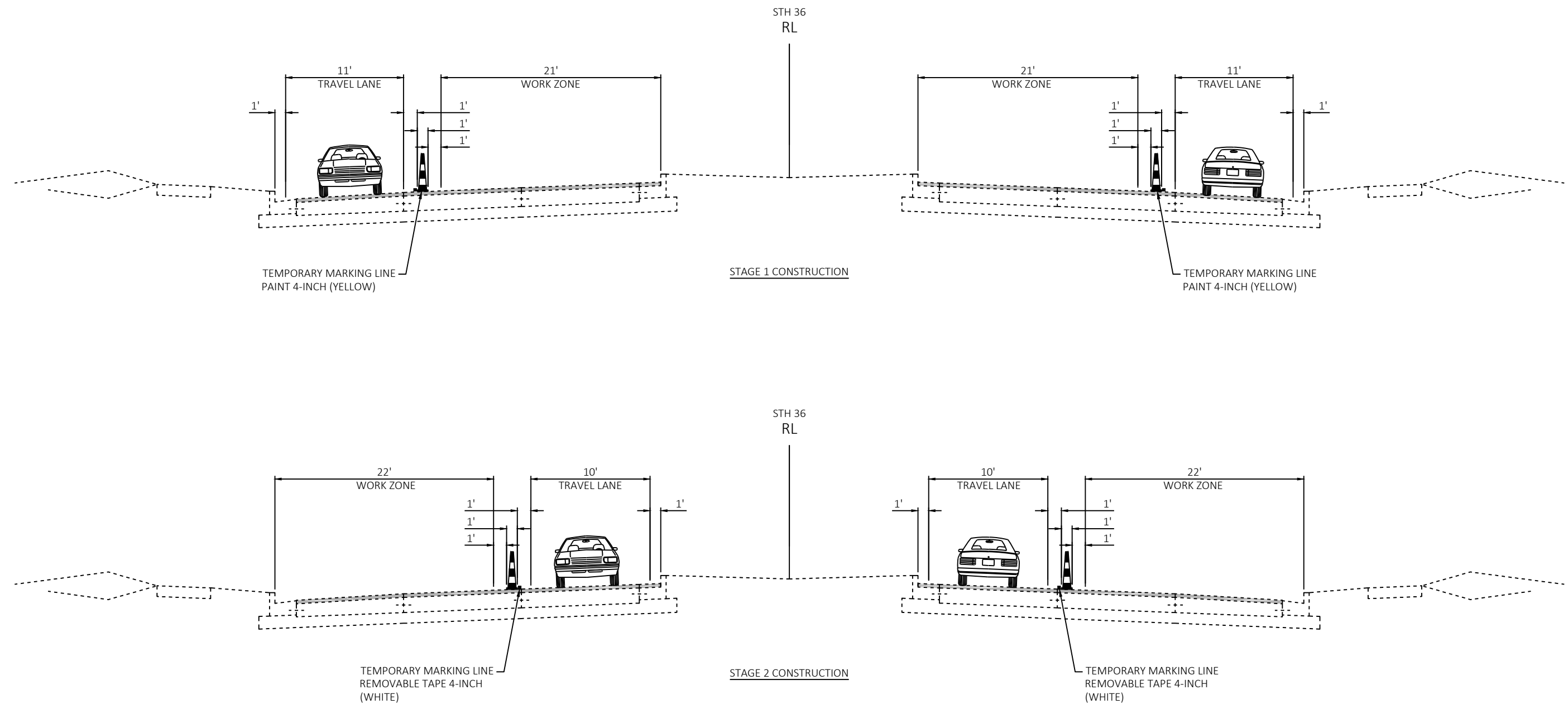
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 MARKING CURB EPOXY (YELLOW)

15

 MARKING ISLAND NOSE EPOXY (YELLOW)

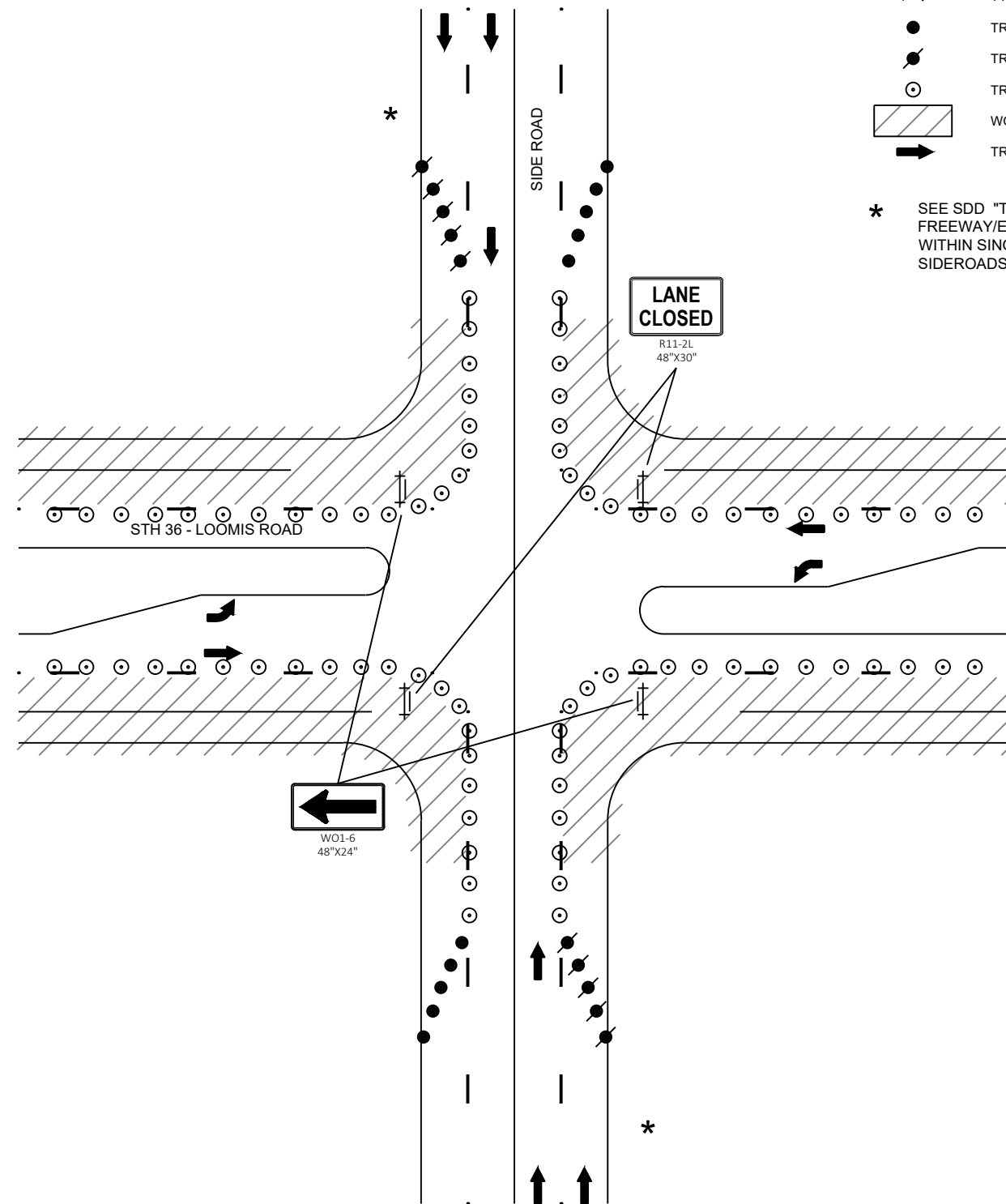




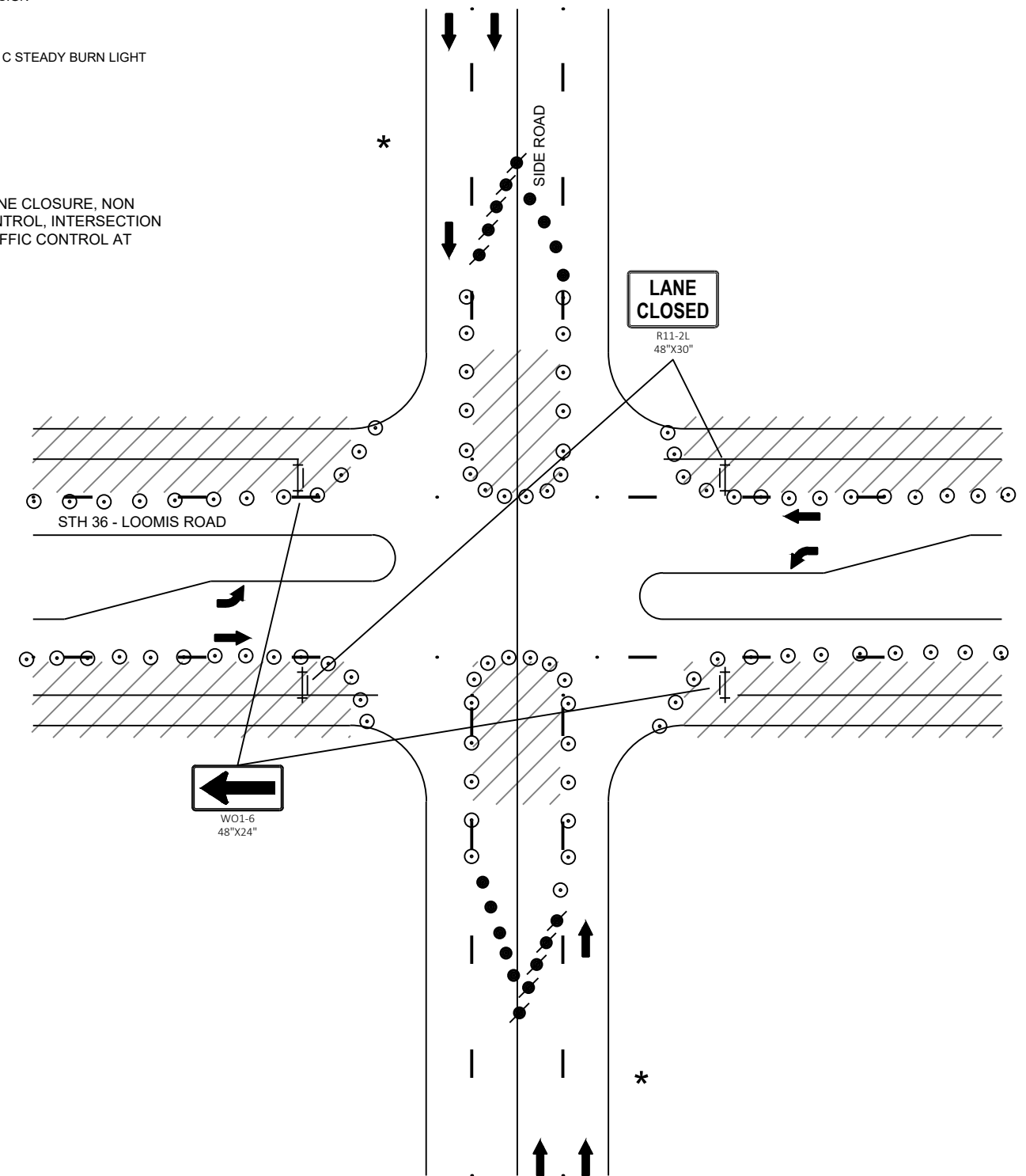
LEGEND

- ++ TYPE III BARRICADE
- ++ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONE 42-INCH
- ▨ WORK AREA
- ➔ TRAFFIC

* SEE SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY" & "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR TRAFFIC CONTROL AT SIDEROADS



STAGE 2A CONSTRUCTION



STAGE 2B CONSTRUCTION

PROJECT NO: 2240-14-61

HWY: STH 36

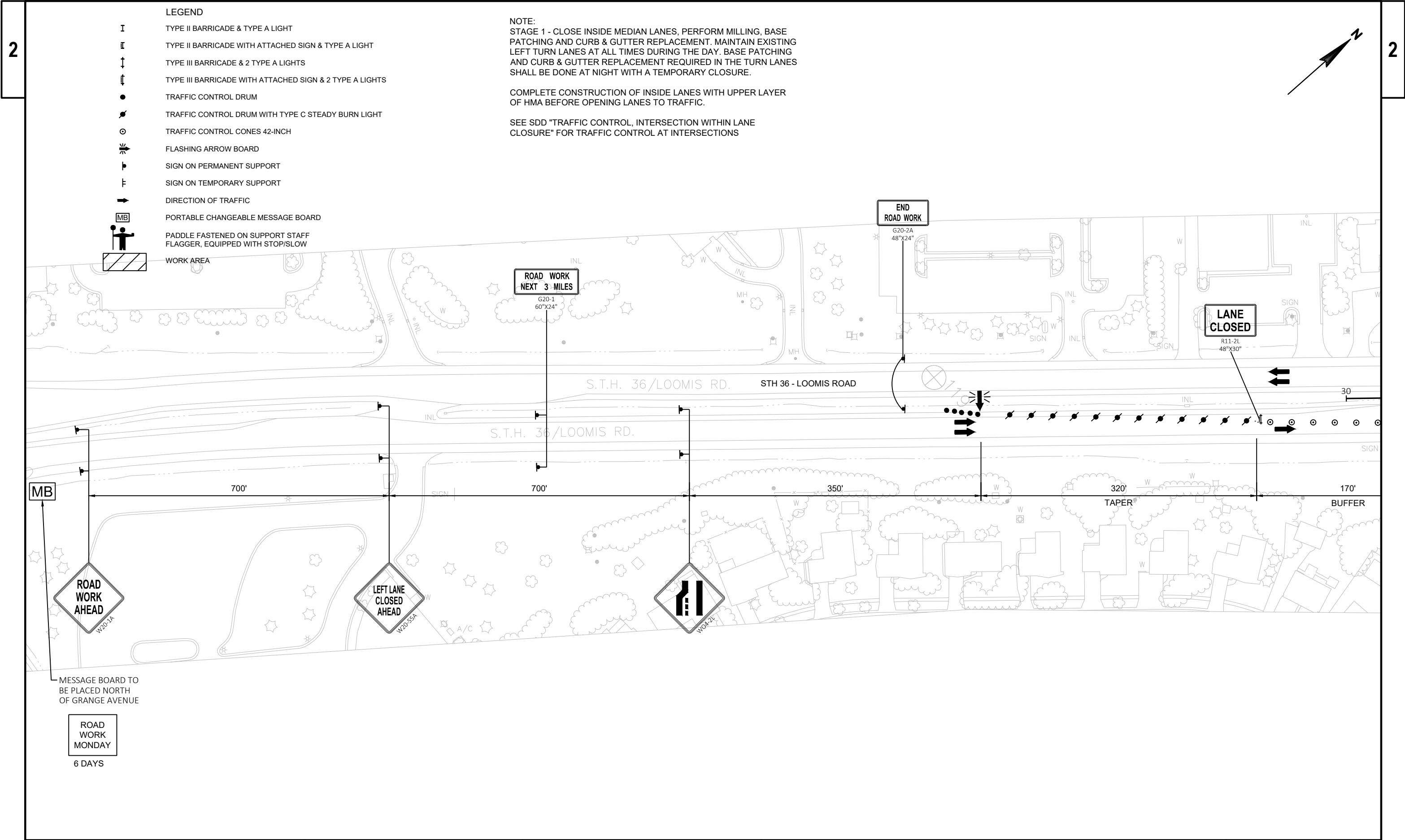
COUNTY: MILWAUKEE

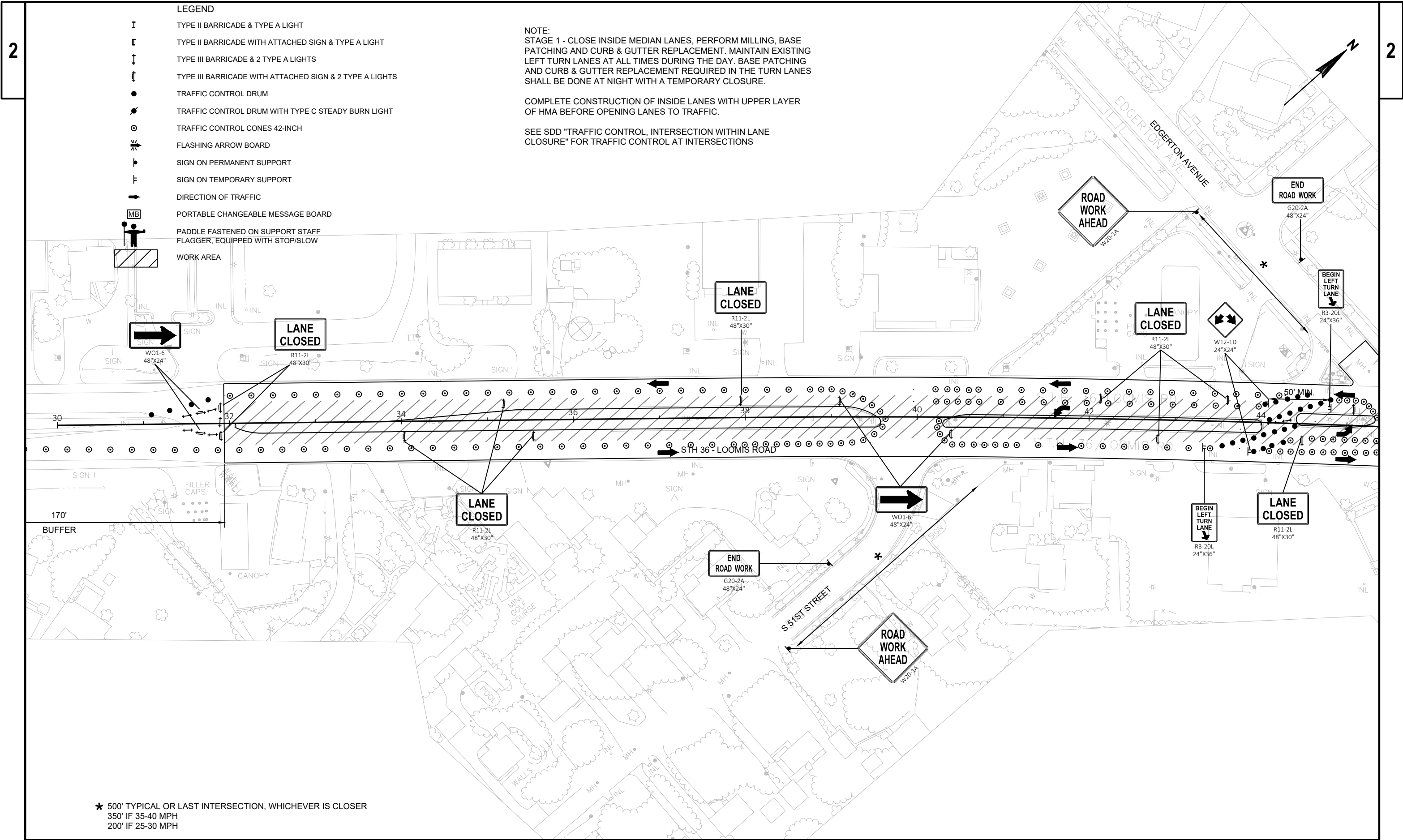
TRAFFIC CONTROL: SIDE ROAD STAGING

SHEET

113

E

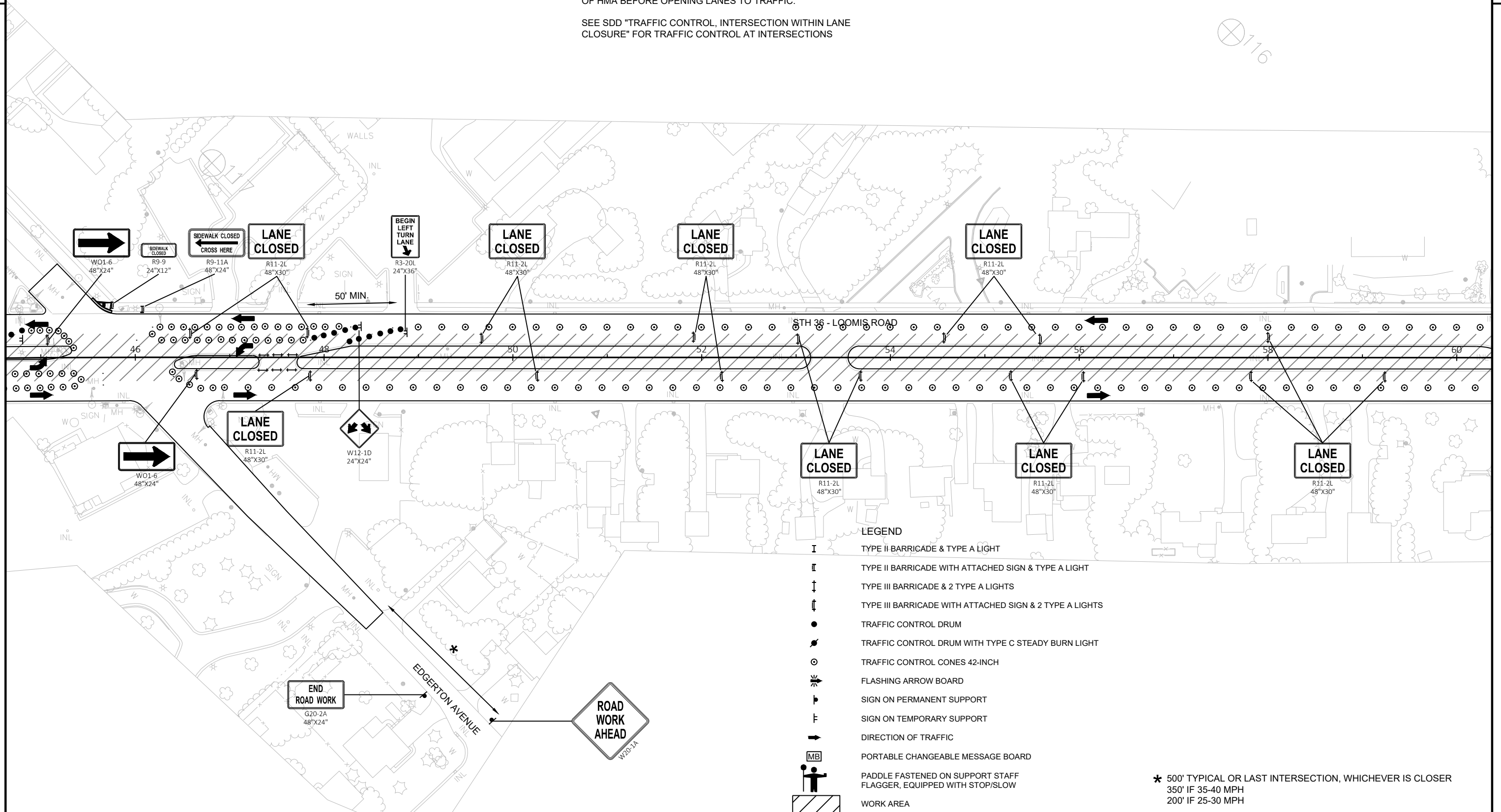




NOTE:
STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE
PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING
LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING
AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES
SHALL BE DONE AT NIGHT WITH A TEMPORARY CLOSURE.

COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER
OF HMA BEFORE OPENING LANES TO TRAFFIC.

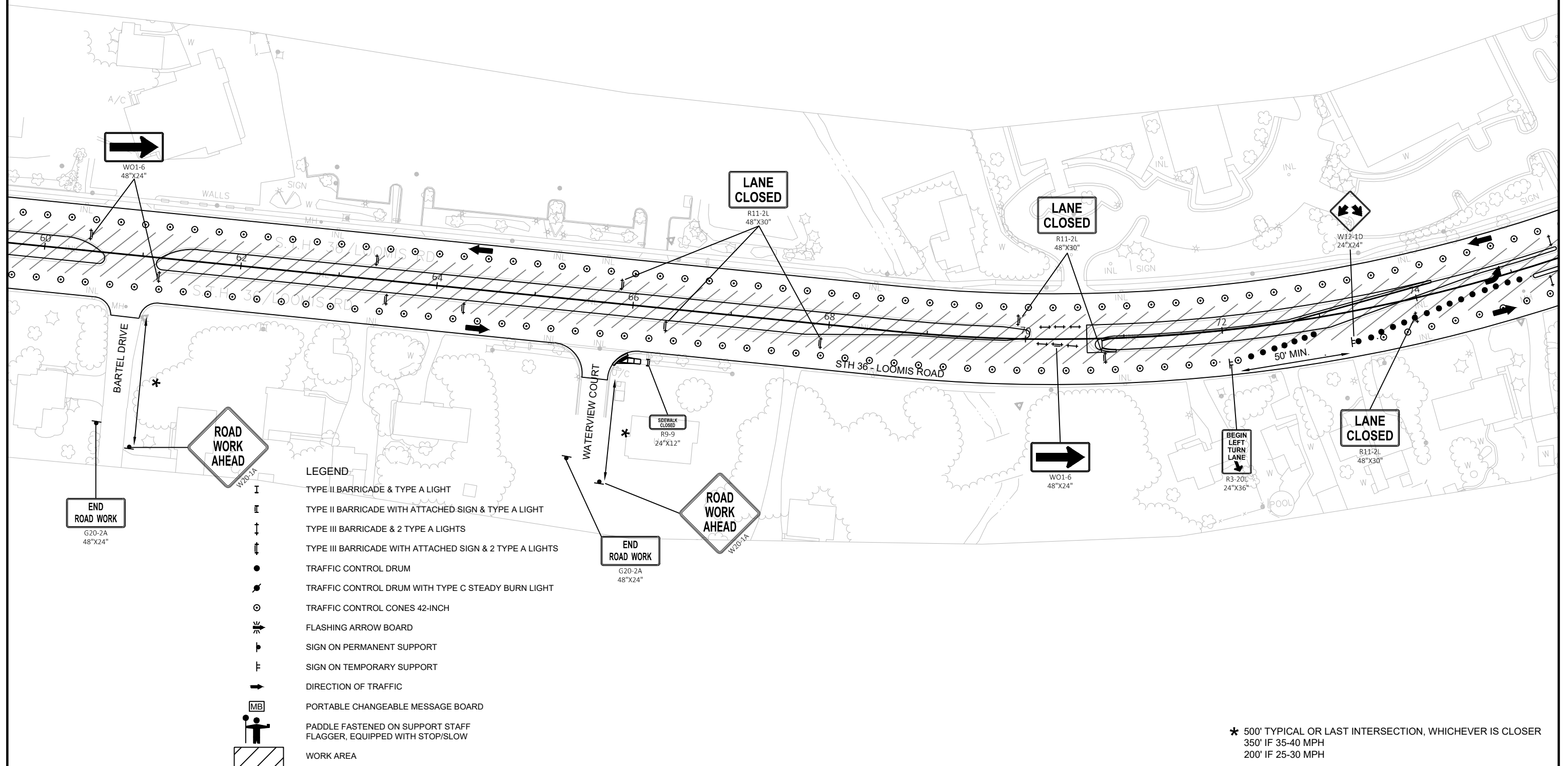
SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE
CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS

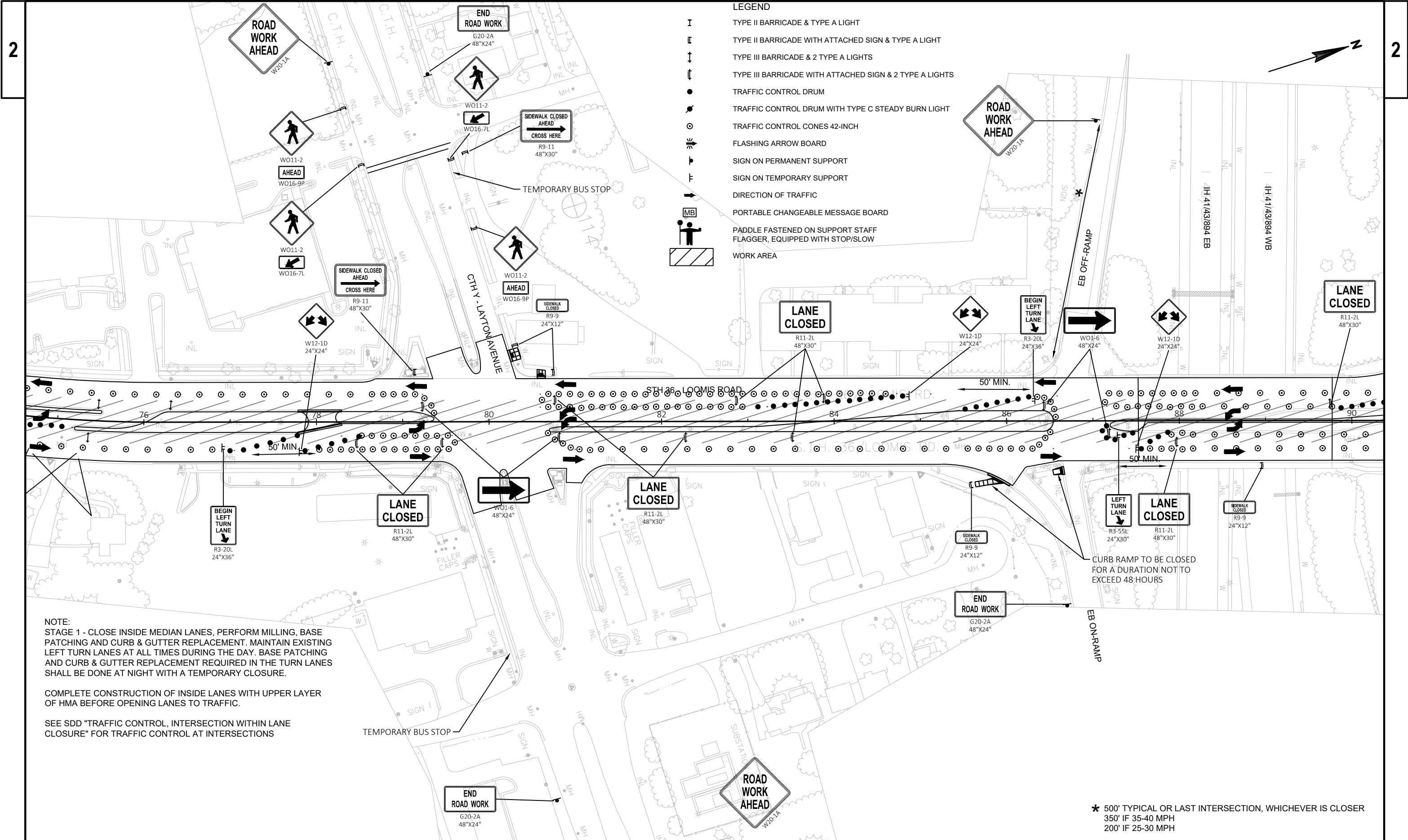


NOTE:
STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE
PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING
LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING
AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES
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COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER
OF HMA BEFORE OPENING LANES TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE
CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS



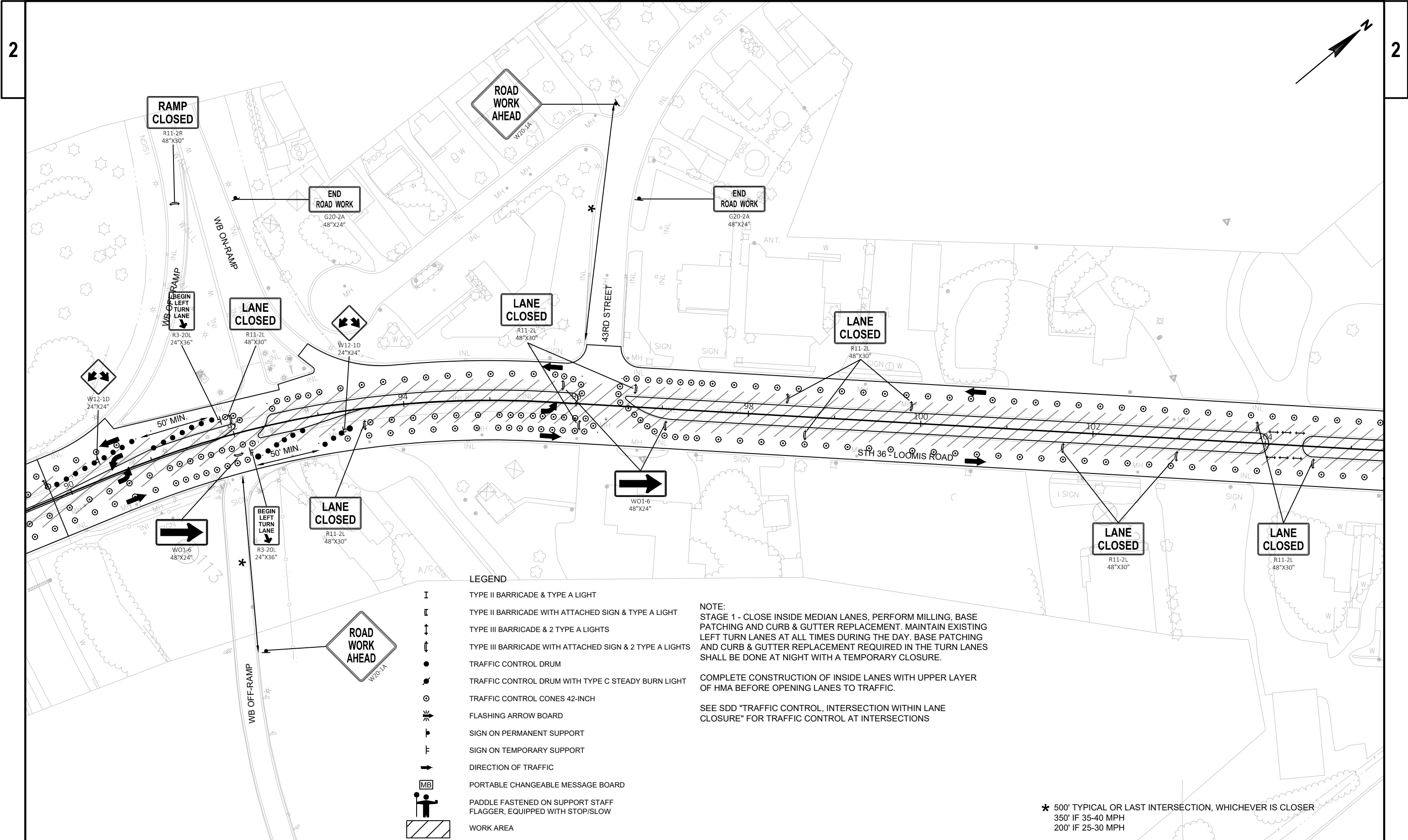


NOTE:
STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES SHALL BE DONE AT NIGHT WITH A TEMPORARY CLOSURE.

COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS

★ 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH



LEGEND

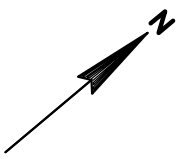
- I TYPE II BARRICADE & TYPE A LIGHT
- II TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
- III TYPE III BARRICADE & 2 TYPE A LIGHTS
- III TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL CONES 42-INCH
- ⚡ FLASHING ARROW BOARD
- ⬆ SIGN ON PERMANENT SUPPORT
- ⬆ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- ⚓ PADDLE FASTENED ON SUPPORT STAFF
- ⚓ FLAGGER, EQUIPPED WITH STOP/SLOW
- ▨ WORK AREA

NOTE:
STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES SHALL BE DONE AT NIGHT WITH A TEMPORARY CLOSURE.

COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS

* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH



LEGEND

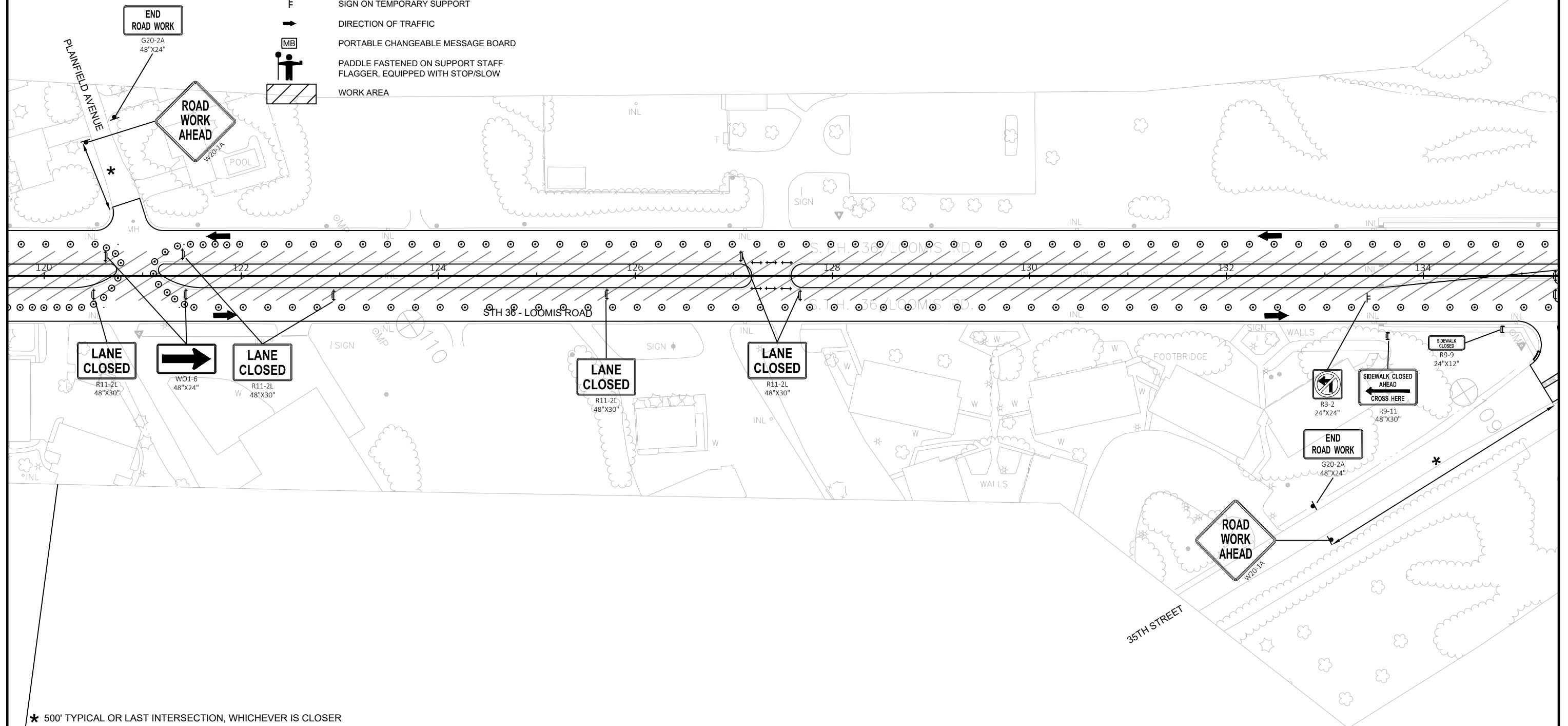
- I TYPE II BARRICADE & TYPE A LIGHT
II TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
↑ TYPE III BARRICADE & 2 TYPE A LIGHTS
↑↑ TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
● TRAFFIC CONTROL DRUM
● TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
○ TRAFFIC CONTROL CONES 42-INCH
⚡ FLASHING ARROW BOARD
└ SIGN ON PERMANENT SUPPORT
└ SIGN ON TEMPORARY SUPPORT
→ DIRECTION OF TRAFFIC
MB PORTABLE CHANGEABLE MESSAGE BOARD
P PADDLE FASTENED ON SUPPORT STAFF
F FLAGGER, EQUIPPED WITH STOP/SLOW
WORK AREA

NOTE:

STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES SHALL BE DONE AT NIGHT WITH A TEMPORARY CLOSURE.

COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS



* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH

PROJECT NO: 2240-14-61

HWY: STH 36

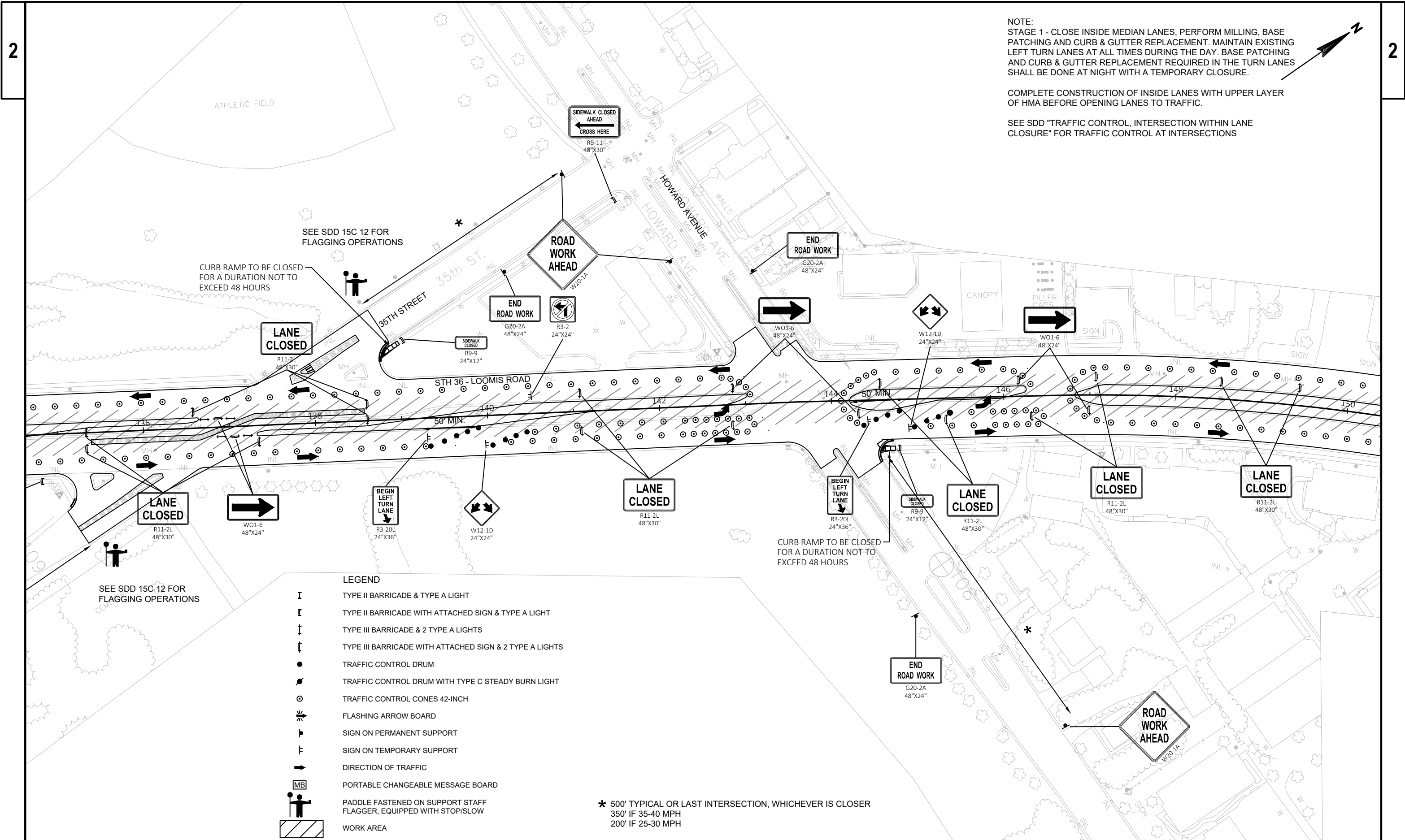
COUNTY: MILWAUKEE

TRAFFIC CONTROL: STAGE 1

SHEET

121

E



NOTE:
STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES SHALL BE DONE AT NIGHT WITH A TEMPORARY CLOSURE.

COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS

LEGEND

- I TYPE II BARRICADE & TYPE A LIGHT
- I TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
- ↑ TYPE III BARRICADE & 2 TYPE A LIGHTS
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL CONES 42-INCH
- FLASHING ARROW BOARD
- ▮ SIGN ON PERMANENT SUPPORT
- ▮ SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- ▮ PADDLE FASTENED ON SUPPORT STAFF
- ▮ FLAGGER, EQUIPPED WITH STOP/SLOW
- ▮ WORK AREA

* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH

LEGEND

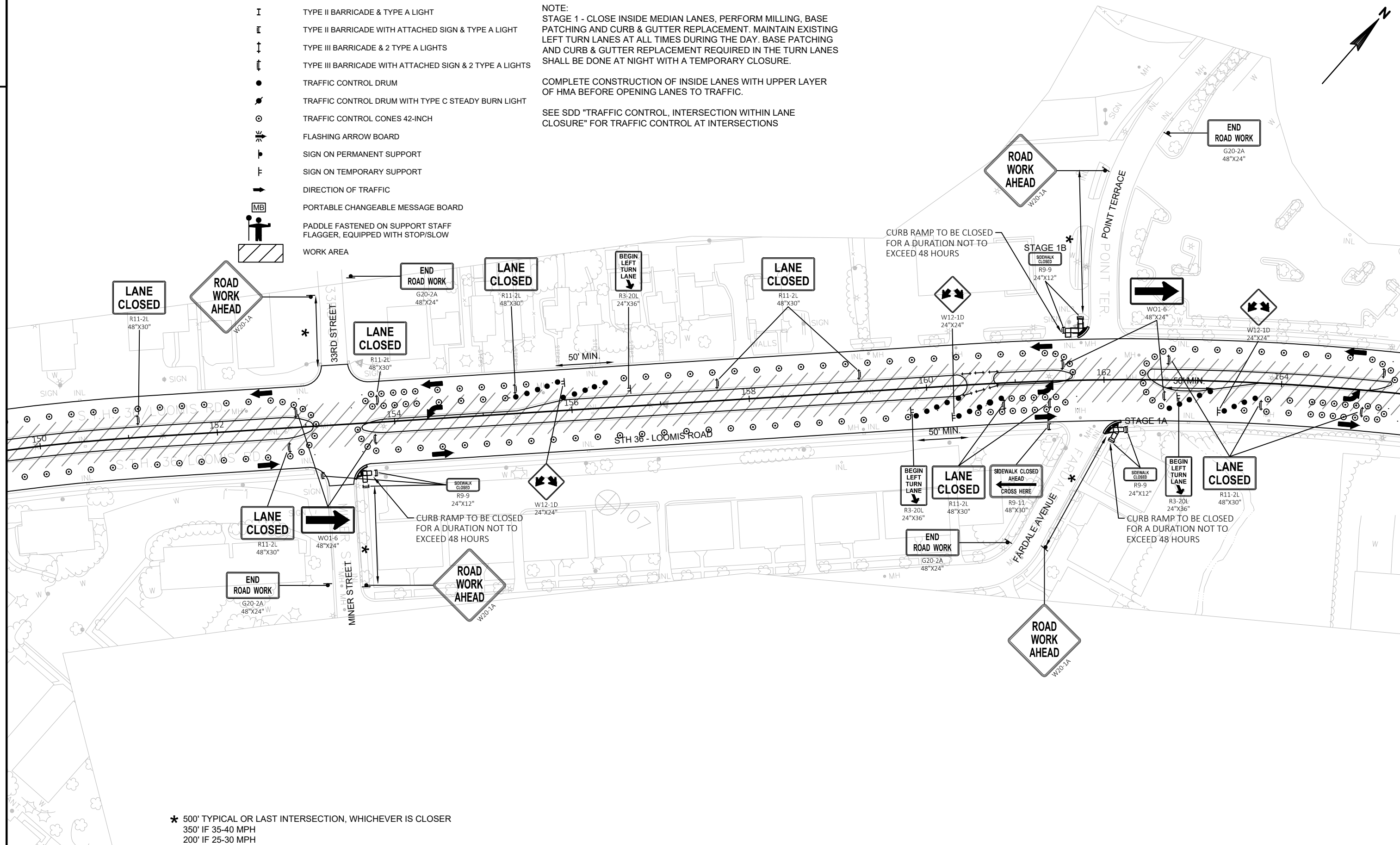
I	TYPE II BARRICADE & TYPE A LIGHT
II	TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
↑	TYPE III BARRICADE & 2 TYPE A LIGHTS
↑↑	TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
●	TRAFFIC CONTROL DRUM
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
○	TRAFFIC CONTROL CONES 42-INCH
→	FLASHING ARROW BOARD
↑	SIGN ON PERMANENT SUPPORT
↑	SIGN ON TEMPORARY SUPPORT
→	DIRECTION OF TRAFFIC
MB	PORTABLE CHANGEABLE MESSAGE BOARD
↑	PADDLE FASTENED ON SUPPORT STAFF FLAGGER, EQUIPPED WITH STOP/SLOW
▨	WORK AREA

NOTE:

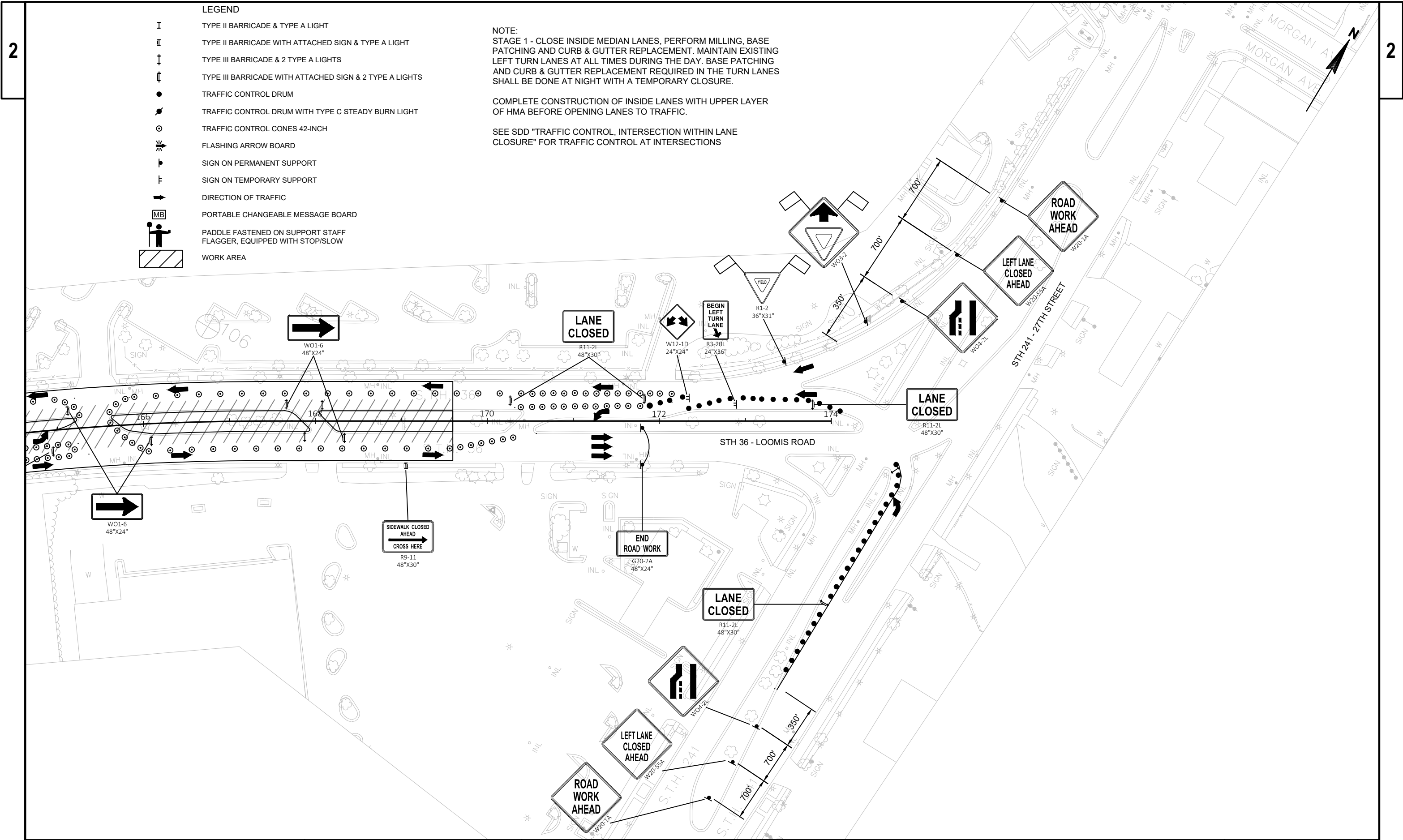
STAGE 1 - CLOSE INSIDE MEDIAN LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT. MAINTAIN EXISTING LEFT TURN LANES AT ALL TIMES DURING THE DAY. BASE PATCHING AND CURB & GUTTER REPLACEMENT REQUIRED IN THE TURN LANES SHALL BE DONE AT NIGHT WITH A TEMPORARY CLOSURE.

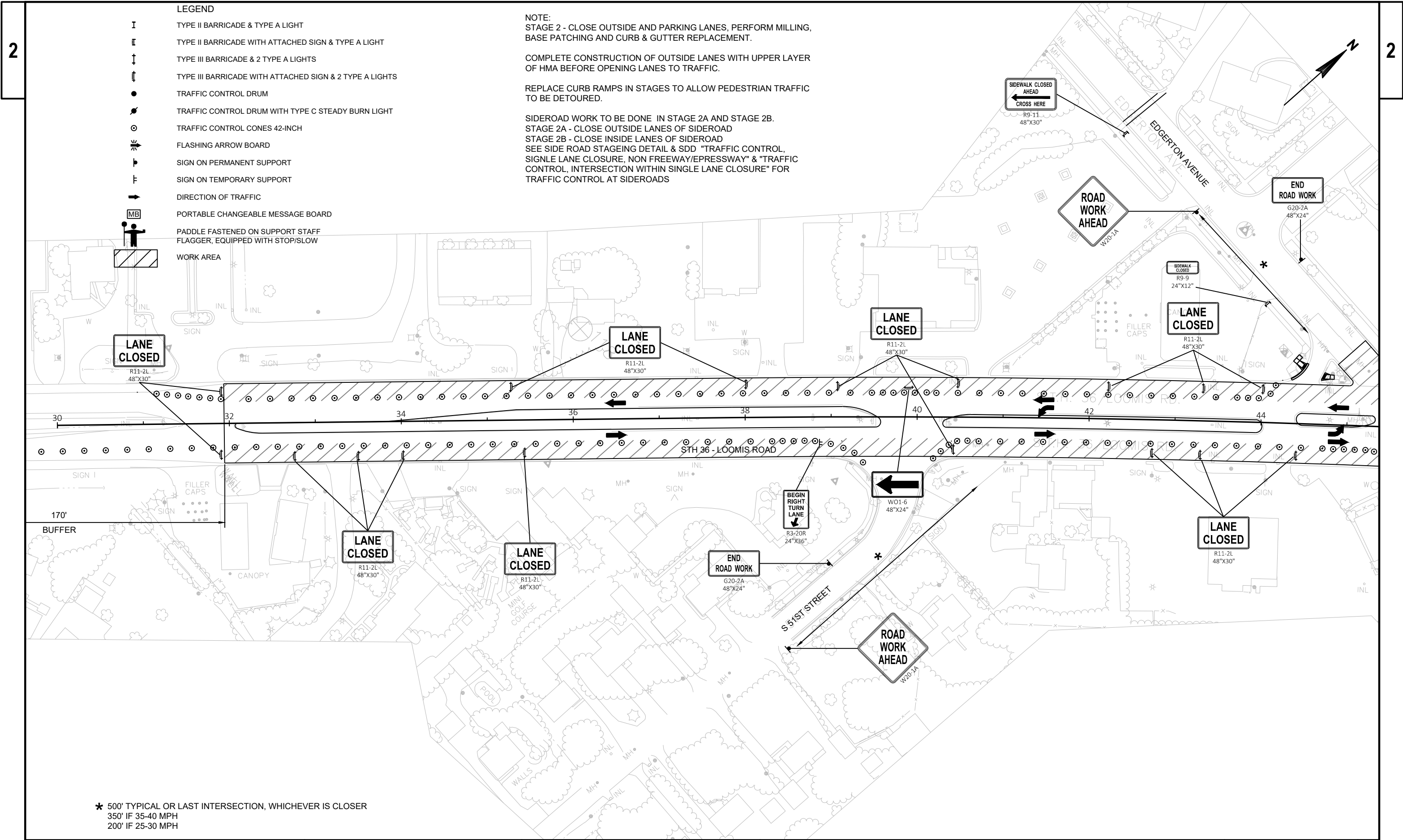
COMPLETE CONSTRUCTION OF INSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

SEE SDD "TRAFFIC CONTROL, INTERSECTION WITHIN LANE CLOSURE" FOR TRAFFIC CONTROL AT INTERSECTIONS



★ 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH





PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

TRAFFIC CONTROL: STAGE 2

SHEET

126

E

NOTE:
STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING,
BASE PATCHING AND CURB & GUTTER REPLACEMENT.

COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER
OF HMA BEFORE OPENING LANES TO TRAFFIC.

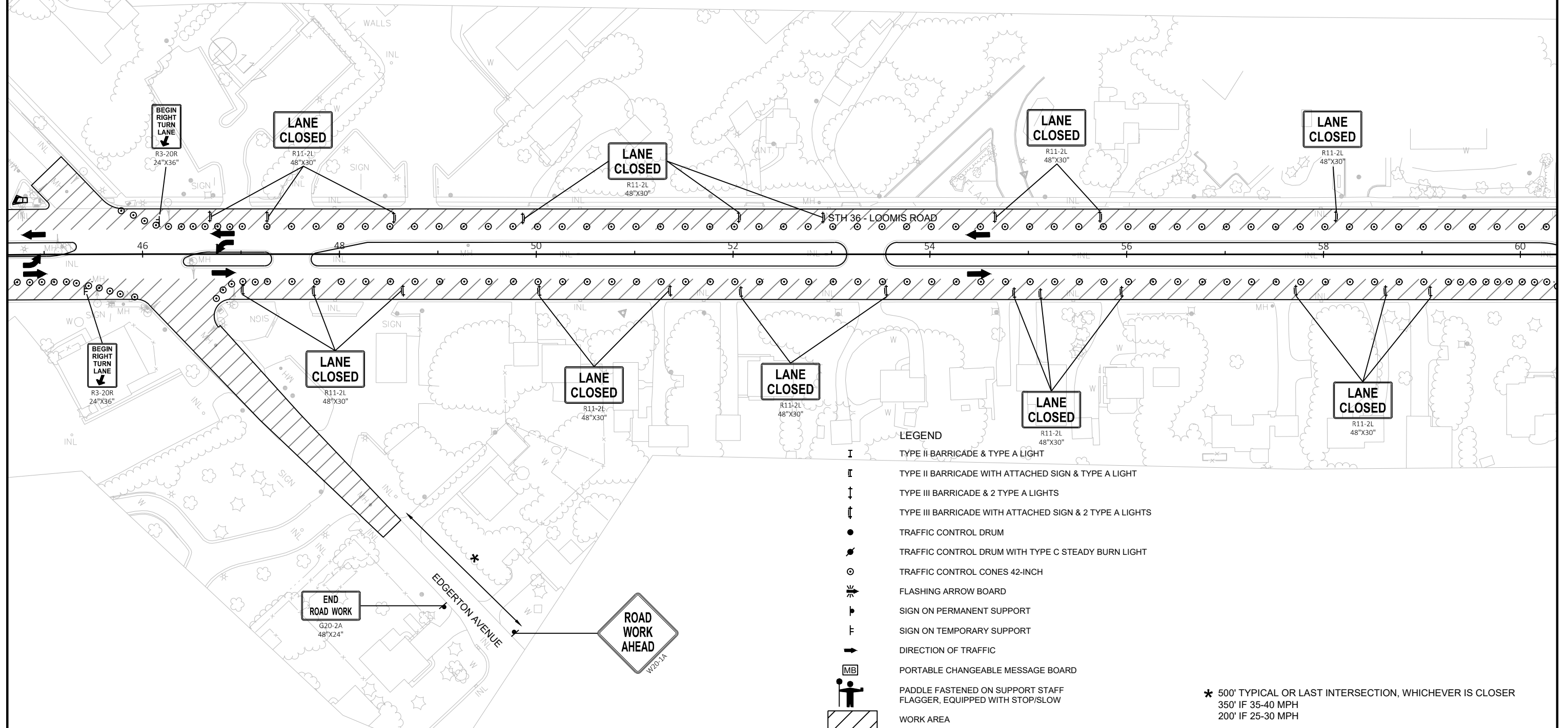
REPLACE CURB RAMPS IN STAGES TO ALLOW PEDESTRIAN TRAFFIC
TO BE DETOURED.

SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.

STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD

STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD

SEE SIDE ROAD STAGEING DETAIL & SDD "TRAFFIC CONTROL,
SINGLE LANE CLOSURE, NON FREEWAY/EPRESSWAY" & "TRAFFIC
CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR
TRAFFIC CONTROL AT SIDEROADS

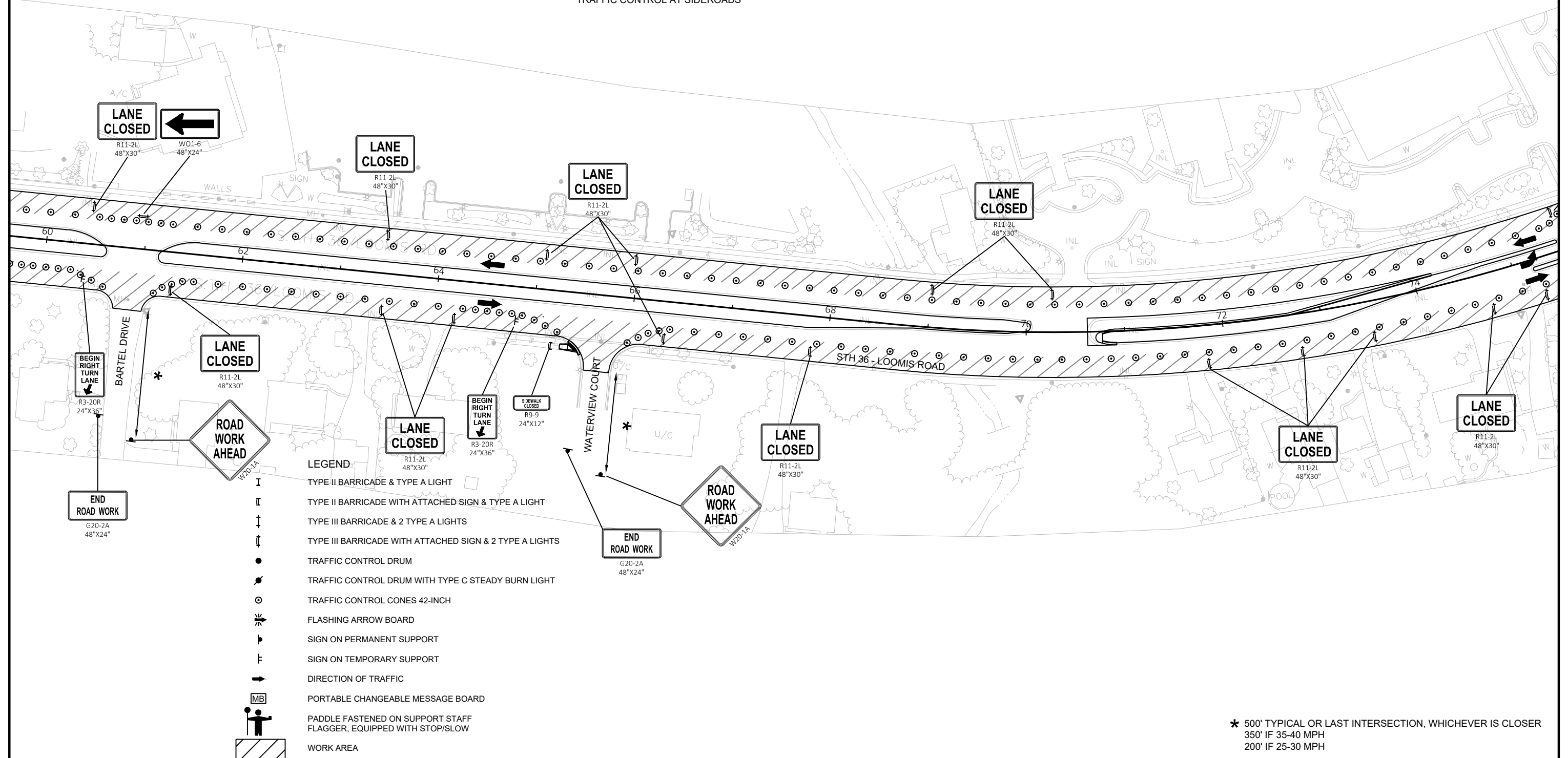


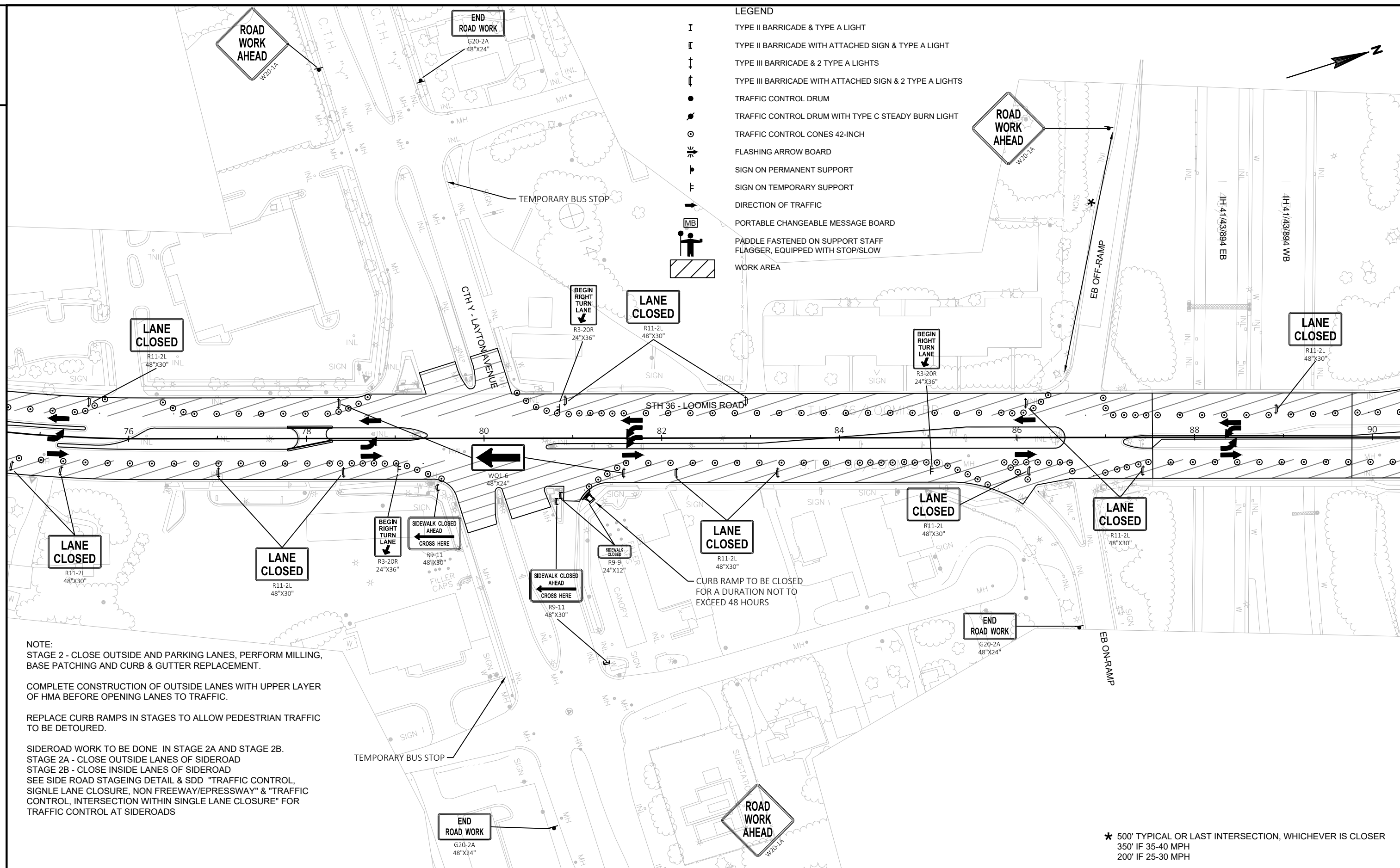
NOTE:
STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING,
BASE PATCHING AND CURB & GUTTER REPLACEMENT.

COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER
OF HMA BEFORE OPENING LANES TO TRAFFIC.

REPLACE CURB RAMPS IN STAGES TO ALLOW PEDESTRIAN TRAFFIC
TO BE DETOURED.

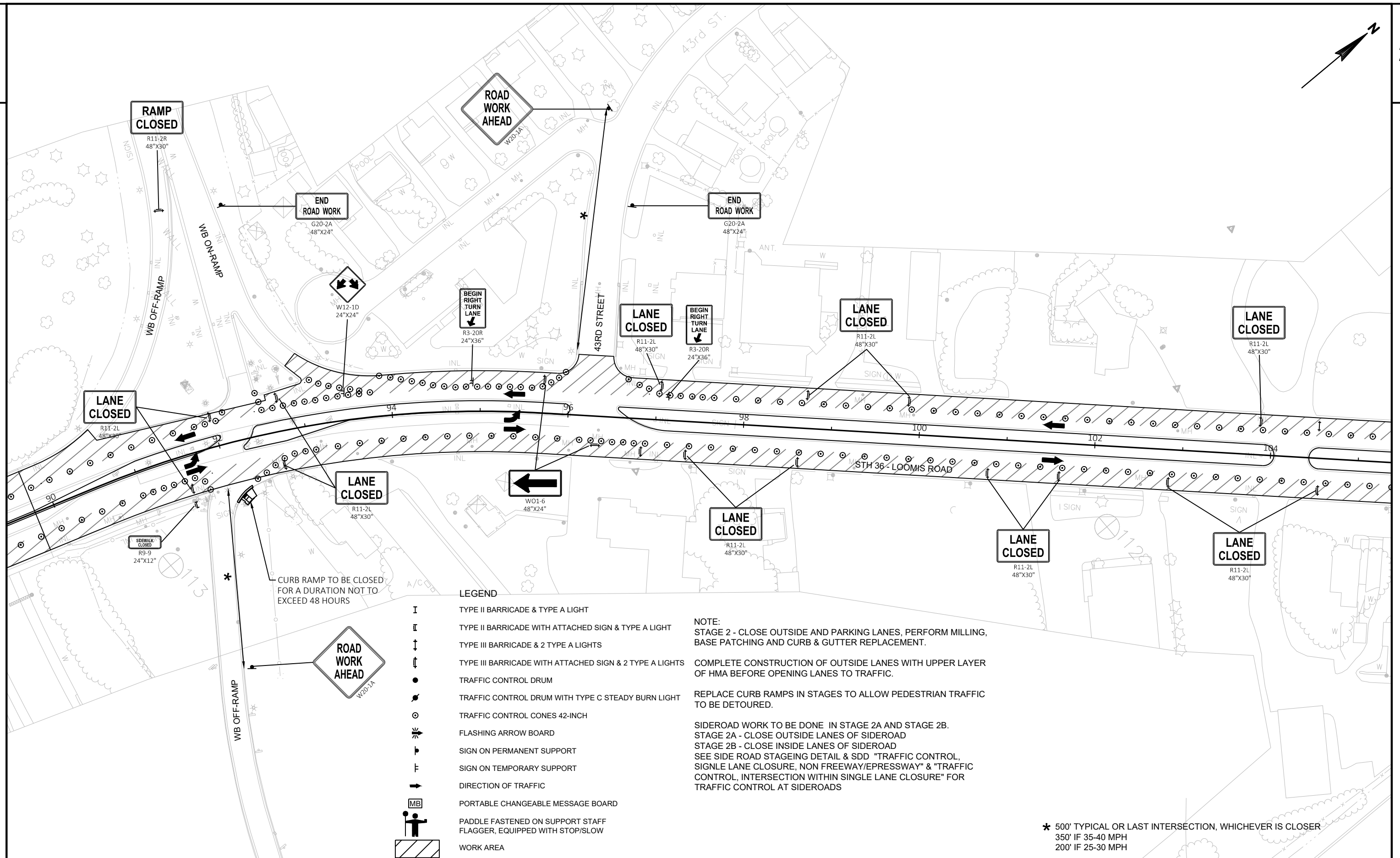
SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.
STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD
STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD
SEE SIDE ROAD STAGEING DETAIL & SDD "TRAFFIC CONTROL,
SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY" & "TRAFFIC
CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR
TRAFFIC CONTROL AT SIDEROADS





SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.
STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD
STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD
SEE SIDE ROAD STAGING DETAIL & SDD "TRAFFIC CONTROL,
SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY" & "TRAFFIC
CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR
TRAFFIC CONTROL AT SIDEROADS

* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH



LEGEND

I	TYPE II BARRICADE & TYPE A LIGHT
II	TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
↑ ↓	TYPE III BARRICADE & 2 TYPE A LIGHTS
↑ ↓	TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
●	TRAFFIC CONTROL DRUM
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
○	TRAFFIC CONTROL CONES 42-INCH
⚡	FLASHING ARROW BOARD
⬆	SIGN ON PERMANENT SUPPORT
⬆	SIGN ON TEMPORARY SUPPORT
→	DIRECTION OF TRAFFIC
MB	PORTABLE CHANGEABLE MESSAGE BOARD
⚓	PADDLE FASTENED ON SUPPORT STAFF
⚓	FLAGGER, EQUIPPED WITH STOP/SLOW
▨	WORK AREA

NOTE:

STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT.

COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

REPLACE CURB RAMPS IN STAGES TO ALLOW PEDESTRIAN TRAFFIC TO BE DETOURED.

SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.

STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD

STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD

SEE SIDE ROAD STAGING DETAIL & SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY" & "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR TRAFFIC CONTROL AT SIDEROADS

* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH

PROJECT NO: 2240-14-61

HWY: STH 36

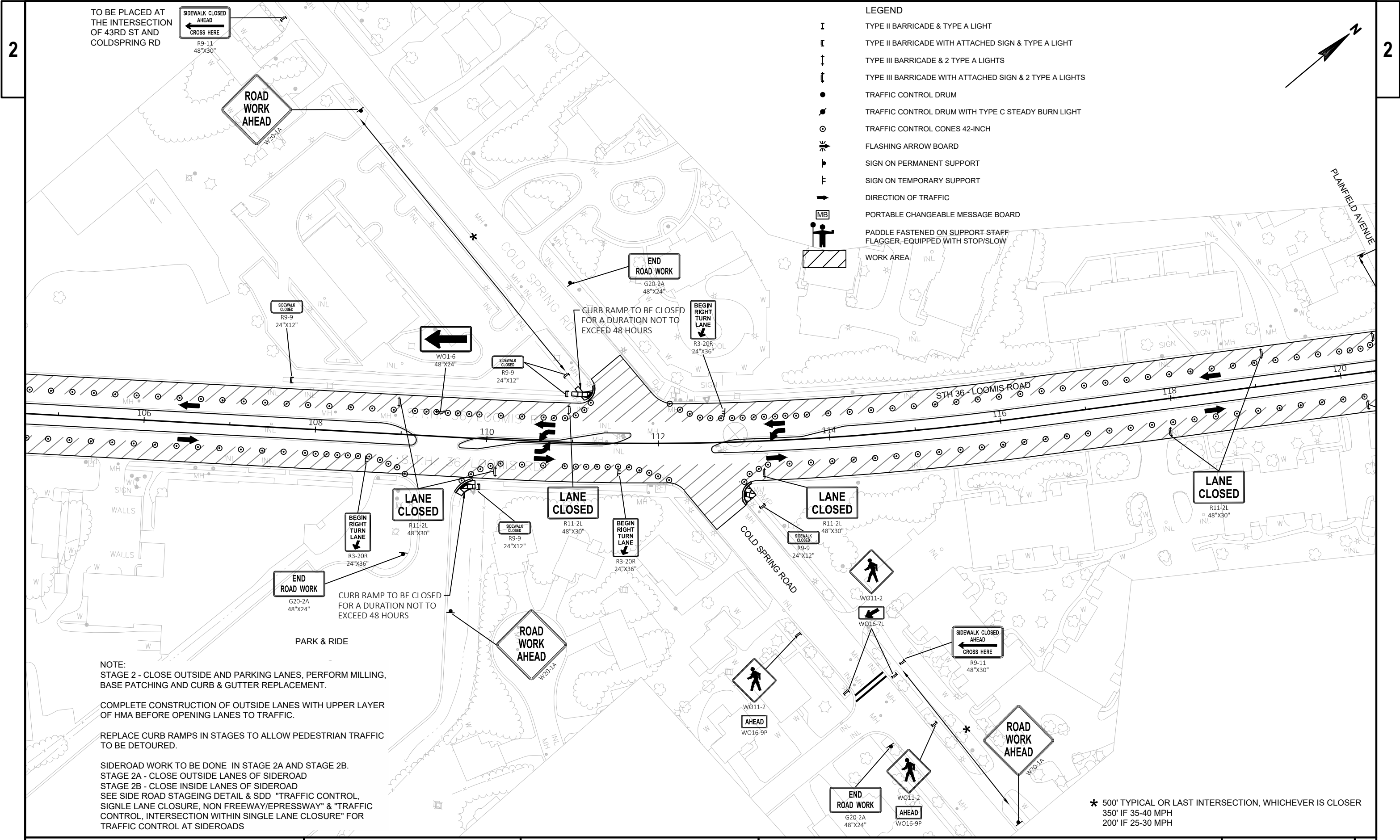
COUNTY: MILWAUKEE

TRAFFIC CONTROL: STAGE 2

SHEET

130

E



TO BE PLACED AT THE INTERSECTION OF 43RD ST AND COLDSPRING RD

SIDEWALK CLOSED AHEAD CROSS HERE R9-11 48"x30"

ROAD WORK AHEAD

SIDEWALK CLOSED R9-9 24"x12"

W01-6 48"x24"

SIDEWALK CLOSED R9-9 24"x12"

END ROAD WORK G20-2A 48"x24"

CURB RAMP TO BE CLOSED FOR A DURATION NOT TO EXCEED 48 HOURS

BEGIN RIGHT TURN LANE R3-20R 24"x36"

MB

WORK AREA

STH 36 - LOOMIS ROAD

LANE CLOSED R11-2L 48"x30"

BEGIN RIGHT TURN LANE R3-20R 24"x36"

END ROAD WORK G20-2A 48"x24"

CURB RAMP TO BE CLOSED FOR A DURATION NOT TO EXCEED 48 HOURS

PARK & RIDE

ROAD WORK AHEAD W20-1A

LANE CLOSED R11-2L 48"x30"

SIDEWALK CLOSED R9-9 24"x12"

W011-2

W016-7L

SIDEWALK CLOSED AHEAD CROSS HERE R9-11 48"x30"

ROAD WORK AHEAD W20-1A

END ROAD WORK G20-2A 48"x24"

W011-2

W016-9P

* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH

NOTE:
STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT.
COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.
REPLACE CURB RAMPS IN STAGES TO ALLOW PEDESTRIAN TRAFFIC TO BE DETOURED.
SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.
STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD
STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD
SEE SIDE ROAD STAGEING DETAIL & SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EPRESSWAY" & "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR TRAFFIC CONTROL AT SIDEROADS

- LEGEND
- I TYPE II BARRICADE & TYPE A LIGHT
 - II TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
 - ↑ TYPE III BARRICADE & 2 TYPE A LIGHTS
 - ↑ TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
 - TRAFFIC CONTROL DRUM
 - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
 - TRAFFIC CONTROL CONES 42-INCH
 - ↔ FLASHING ARROW BOARD
 - SIGN ON PERMANENT SUPPORT
 - SIGN ON TEMPORARY SUPPORT
 - DIRECTION OF TRAFFIC
 - MB PORTABLE CHANGEABLE MESSAGE BOARD
 - PADDLE FASTENED ON SUPPORT STAFF
 - FLAGGER, EQUIPPED WITH STOP/SLOW

LEGEND

- I TYPE II BARRICADE & TYPE A LIGHT
II TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
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↑ TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
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● TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
○ TRAFFIC CONTROL CONES 42-INCH
⚡ FLASHING ARROW BOARD
┆ SIGN ON PERMANENT SUPPORT
┆ SIGN ON TEMPORARY SUPPORT
→ DIRECTION OF TRAFFIC
MB PORTABLE CHANGEABLE MESSAGE BOARD
P PADDLE FASTENED ON SUPPORT STAFF
F FLAGGER, EQUIPPED WITH STOP/SLOW
WORK AREA

NOTE:

STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT.

COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

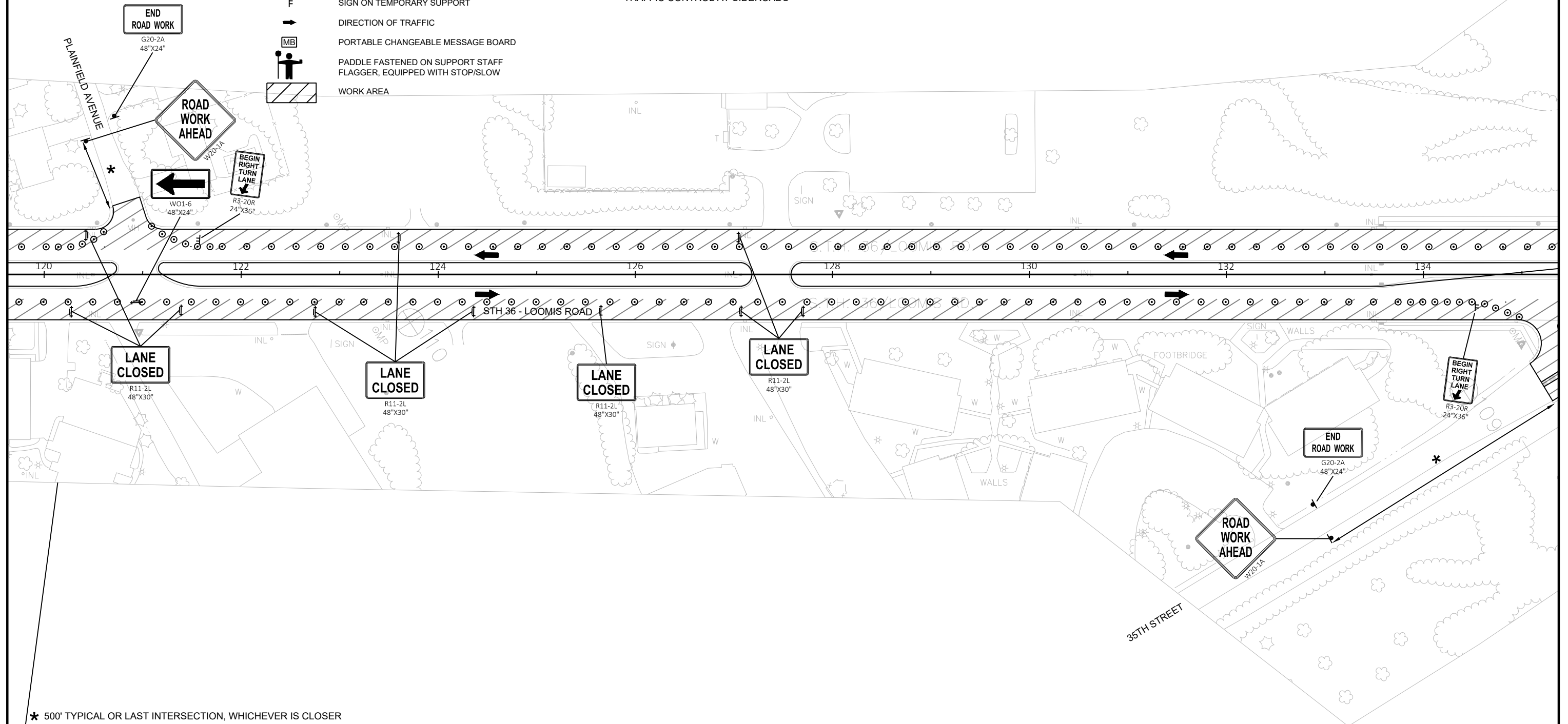
REPLACE CURB RAMPS IN STAGES TO ALLOW PEDESTRIAN TRAFFIC TO BE DETOURED.

SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.

STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD

STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD

SEE SIDE ROAD STAGEING DETAIL & SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY" & "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR TRAFFIC CONTROL AT SIDEROADS



* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH

PROJECT NO: 2240-14-61

HWY: STH 36

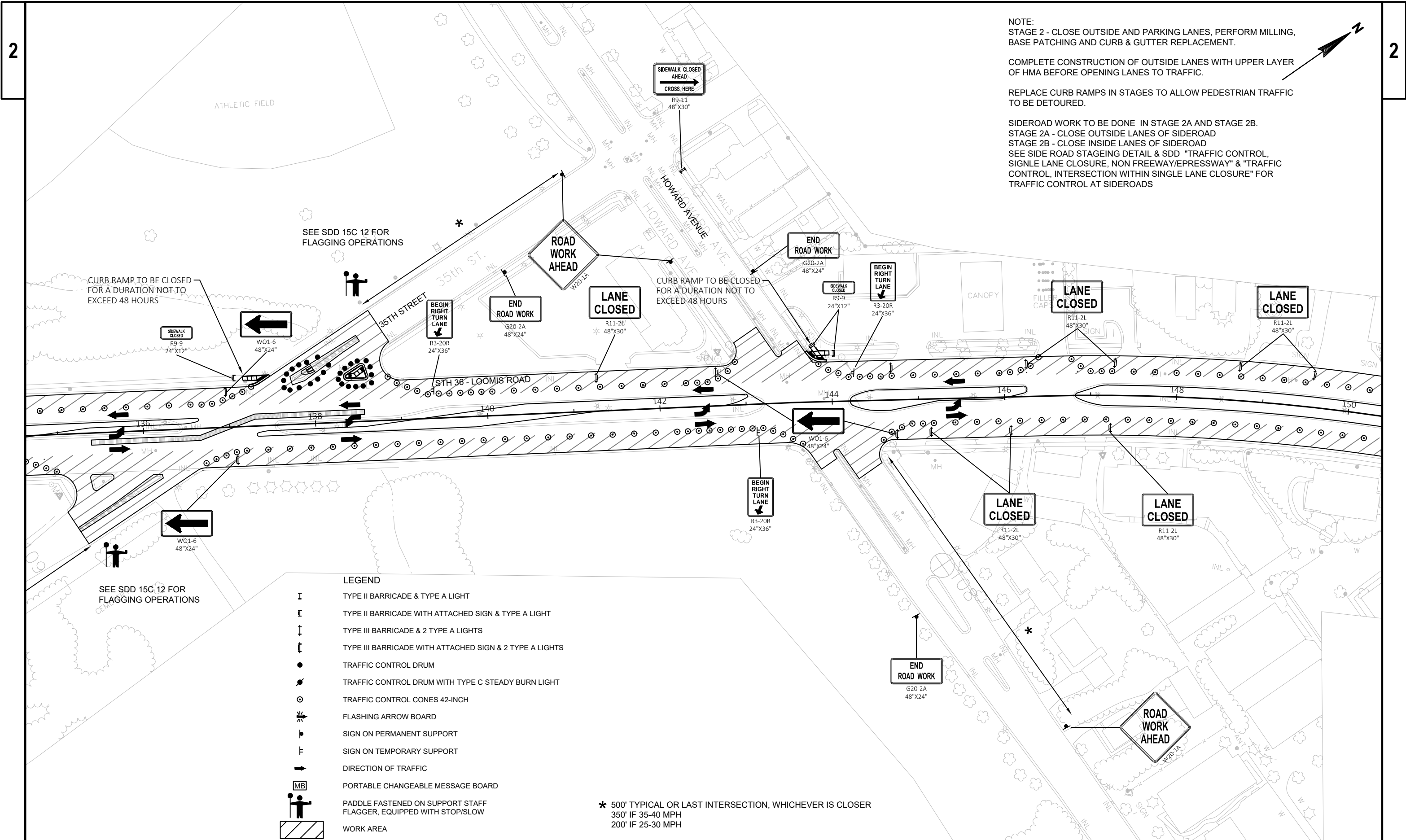
COUNTY: MILWAUKEE

TRAFFIC CONTROL: STAGE 2

SHEET

132

E



NOTE:
STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT.

COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

REPLACE CURB RAMPS IN STAGES TO ALLOW PEDESTRIAN TRAFFIC TO BE DETOURED.

SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.
STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD
STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD
SEE SIDE ROAD STAGEING DETAIL & SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EPRESSWAY" & "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR TRAFFIC CONTROL AT SIDEROADS

LEGEND

- I TYPE II BARRICADE & TYPE A LIGHT
- I TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
- ↑ TYPE III BARRICADE & 2 TYPE A LIGHTS
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN & 2 TYPE A LIGHTS
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL CONES 42-INCH
- FLASHING ARROW BOARD
- ▮ SIGN ON PERMANENT SUPPORT
- ▮ SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- ▮ PADDLE FASTENED ON SUPPORT STAFF
FLAGGER, EQUIPPED WITH STOP/SLOW
- ▮ WORK AREA

* 500' TYPICAL OR LAST INTERSECTION, WHICHEVER IS CLOSER
350' IF 35-40 MPH
200' IF 25-30 MPH

LEGEND

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II TYPE II BARRICADE WITH ATTACHED SIGN & TYPE A LIGHT
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● TRAFFIC CONTROL DRUM
● TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
○ TRAFFIC CONTROL CONES 42-INCH
→ FLASHING ARROW BOARD
T SIGN ON PERMANENT SUPPORT
T SIGN ON TEMPORARY SUPPORT
→ DIRECTION OF TRAFFIC
MB PORTABLE CHANGEABLE MESSAGE BOARD
P PADDLE FASTENED ON SUPPORT STAFF
F FLAGGER, EQUIPPED WITH STOP/SLOW
WORK AREA

NOTE:

STAGE 2 - CLOSE OUTSIDE AND PARKING LANES, PERFORM MILLING, BASE PATCHING AND CURB & GUTTER REPLACEMENT.

COMPLETE CONSTRUCTION OF OUTSIDE LANES WITH UPPER LAYER OF HMA BEFORE OPENING LANES TO TRAFFIC.

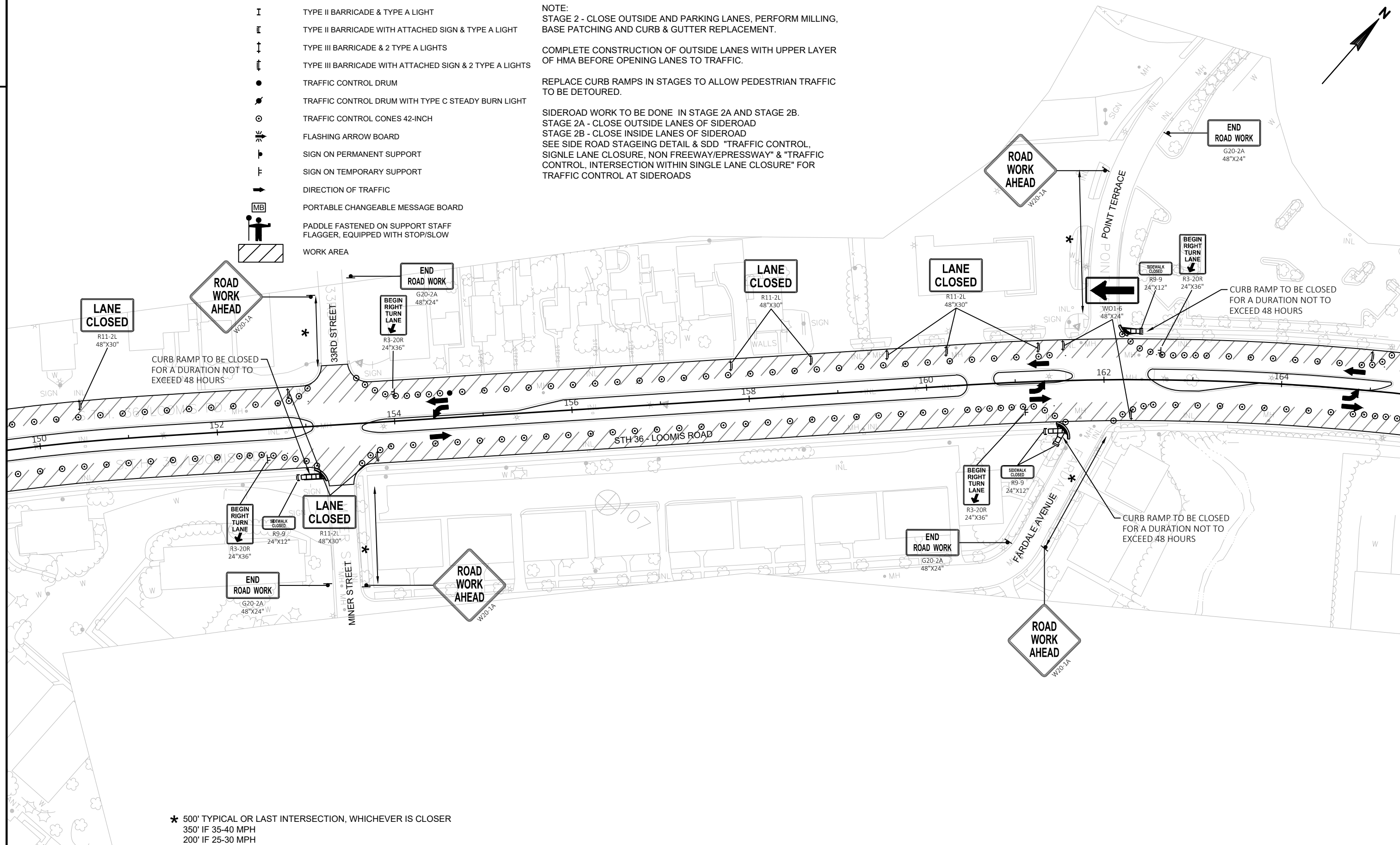
REPLACE CURB RAMP IN STAGES TO ALLOW PEDESTRIAN TRAFFIC TO BE DETOURED.

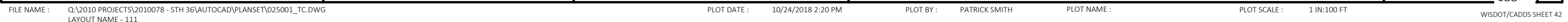
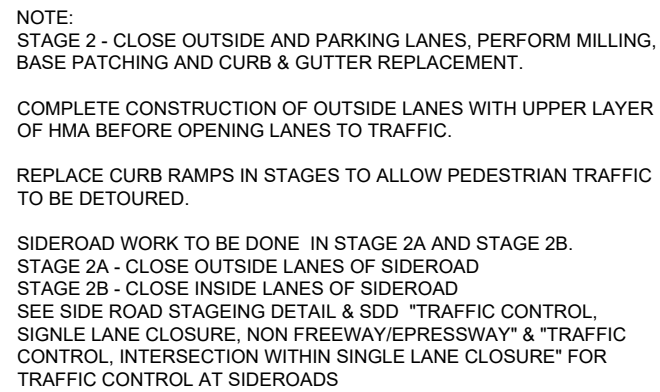
SIDEROAD WORK TO BE DONE IN STAGE 2A AND STAGE 2B.

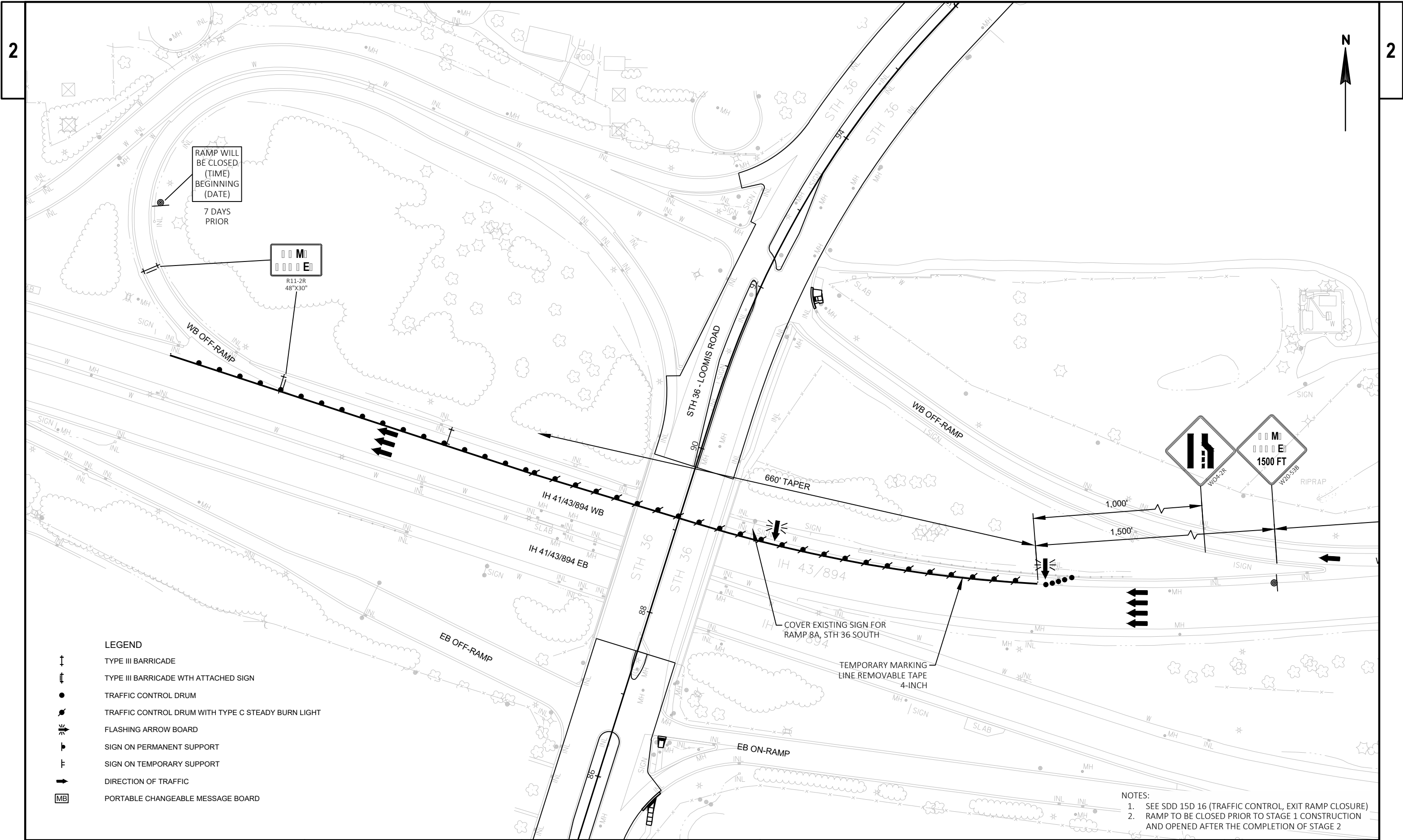
STAGE 2A - CLOSE OUTSIDE LANES OF SIDEROAD

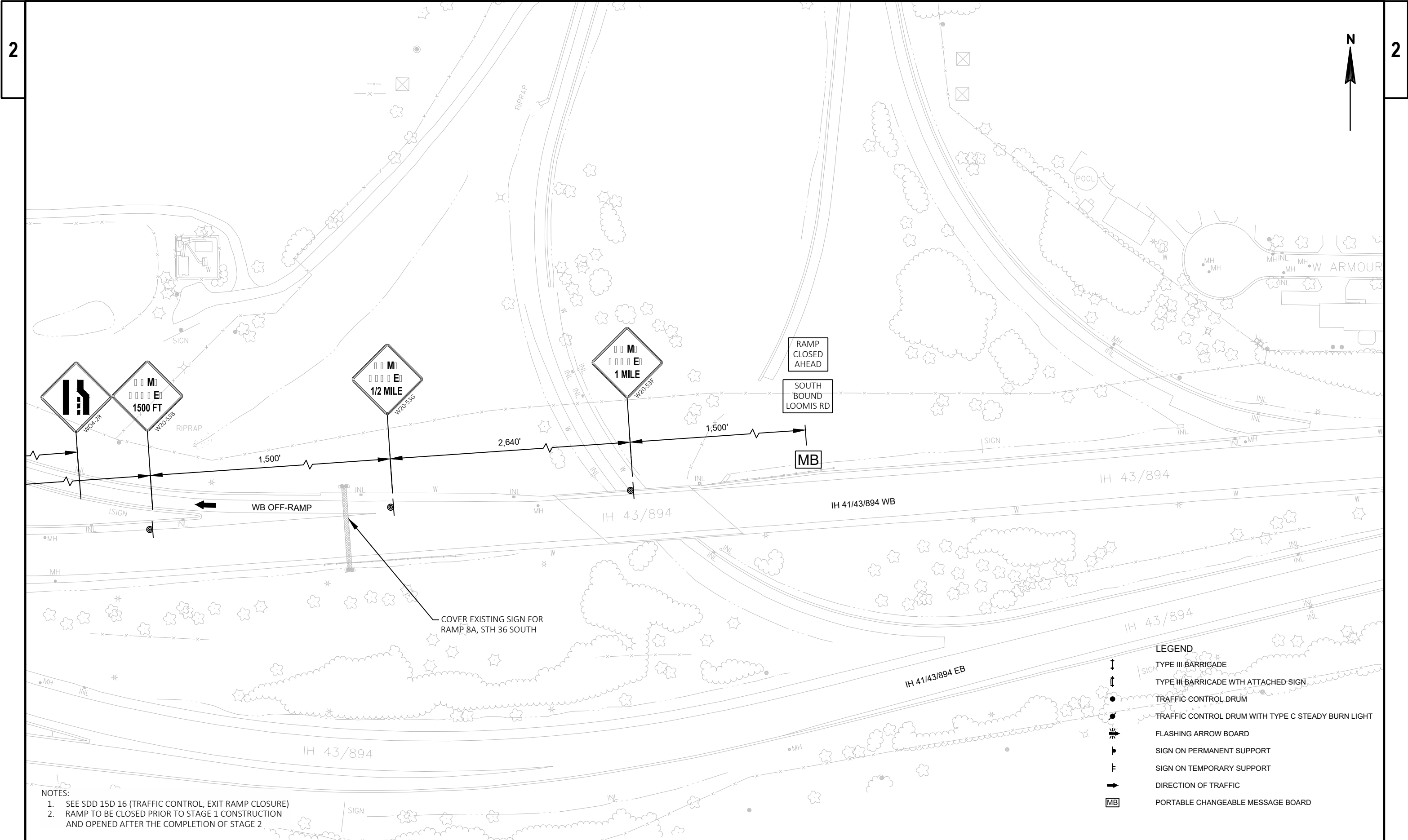
STAGE 2B - CLOSE INSIDE LANES OF SIDEROAD

SEE SIDE ROAD STAGEING DETAIL & SDD "TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON FREEWAY/EXPRESSWAY" & "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR TRAFFIC CONTROL AT SIDEROADS



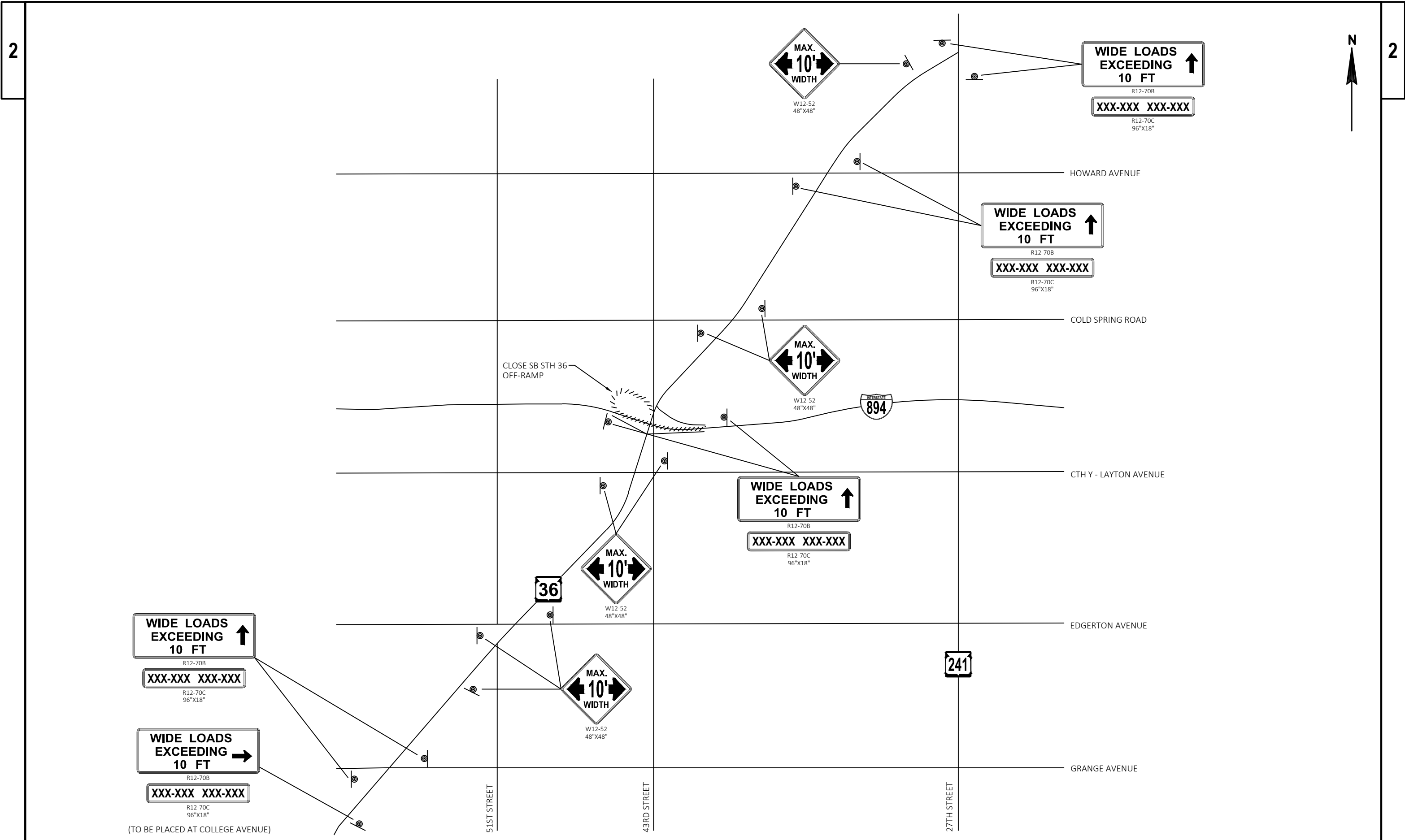






NOTES:
1. SEE SDD 15D 16 (TRAFFIC CONTROL, EXIT RAMP CLOSURE)
2. RAMP TO BE CLOSED PRIOR TO STAGE 1 CONSTRUCTION
AND OPENED AFTER THE COMPLETION OF STAGE 2

- LEGEND
- TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TRAFFIC CONTROL DRUM
 - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
 - FLASHING ARROW BOARD
 - SIGN ON PERMANENT SUPPORT
 - SIGN ON TEMPORARY SUPPORT
 - DIRECTION OF TRAFFIC
 - PORTABLE CHANGEABLE MESSAGE BOARD





NO.	NORTHING	EASTING	ELEV	DESCRIPTION	STATION	OFFSET
15	272725.859	590856.422	769.40	CP/MAG NAIL	102+89.29	70.3' LT
16	273145.256	591429.323	762.16	CP/SE BOLT IN CONC LPOL BASE	109+87.15	60.4' RT
17	273422.013	591523.557	756.47	CP/BURY TAG BOLT	112+57.61	50.6' LT
18	274055.383	592078.588	726.72	CP/MAG NAIL	120+96.17	58.5' RT
19	274719.833	592357.971	713.41	CP/SLY COR MH CASTING	128+06.80	62.2' LT
20	275233.005	592841.733	704.57	CP/3/8IN DIA IRON ROD	134+99.40	70.7' RT
21	275954.983	593141.141	715.56	CP/4/8IN DIA REBAR	142+69.40	63.1' LT
22	276253.270	593495.062	713.66	CP/MAG NAIL	147+14.15	69.0' RT
23	276823.826	593825.655	698.78	CP/MAG NAIL	153+65.04	68.1' LT
24	277015.598	594115.261	688.47	CP/3/8IN DIA IRON BAR	157+05.62	00.1' RT
25	277386.664	594406.338	671.60	CP/1.25IN DIA IRON PIPE	161+71.19	60.3' LT

Estimate Of Quantities

2240-14-61

Line	Item	Item Description	Unit	Total	Qty
0002	204.0100	Removing Pavement	SY	140.000	140.000
0004	204.0120	Removing Asphaltic Surface Milling	SY	118,460.000	118,460.000
0006	204.0150	Removing Curb & Gutter	LF	1,218.000	1,218.000
0008	204.0155	Removing Concrete Sidewalk	SY	456.000	456.000
0010	205.0100	Excavation Common	CY	330.000	330.000
0012	213.0100	Finishing Roadway (project) 01. 2240-14-61	EACH	1.000	1.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	190.000	190.000
0016	390.0403	Base Patching Concrete Shes	SY	5,000.000	5,000.000
0018	415.0080	Concrete Pavement 8-Inch	SY	394.000	394.000
0020	416.0610	Drilled Tie Bars	EACH	5,272.000	5,272.000
0022	416.0620	Drilled Dowel Bars	EACH	4,000.000	4,000.000
0024	450.4000	HMA Cold Weather Paving	TON	350.000	350.000
0026	455.0605	Tack Coat	GAL	8,292.000	8,292.000
0028	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0030	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0032	460.2005	Incentive Density PWL HMA Pavement	DOL	11,660.000	11,660.000
0034	460.2010	Incentive Air Voids HMA Pavement	DOL	13,280.000	13,280.000
0036	460.6224	HMA Pavement 4 MT 58-28 S	TON	13,280.000	13,280.000
0038	465.0125	Asphaltic Surface Temporary	TON	1.000	1.000
0040	601.0331	Concrete Curb & Gutter 31-Inch	LF	667.000	667.000
0042	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	777.000	777.000
0044	601.0452	Concrete Curb & Gutter Integral 30-Inch Type D	LF	14.000	14.000
0046	601.0600	Concrete Curb Pedestrian	LF	225.000	225.000
0048	602.0405	Concrete Sidewalk 4-Inch	SF	3,915.000	3,915.000
0050	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	88.000	88.000
0052	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	302.000	302.000
0054	611.0420	Reconstructing Manholes	EACH	19.000	19.000
0056	611.0430	Reconstructing Inlets	EACH	20.000	20.000
0058	611.0624	Inlet Covers Type H	EACH	1.000	1.000
0060	611.8110	Adjusting Manhole Covers	EACH	26.000	26.000
0062	611.8115	Adjusting Inlet Covers	EACH	24.000	24.000
0064	611.8120.S	Cover Plates Temporary	EACH	89.000	89.000
0066	618.0100	Maintenance And Repair of Haul Roads (project) 01. 2240-14-61	EACH	1.000	1.000
0068	619.1000	Mobilization	EACH	1.000	1.000
0070	620.0300	Concrete Median Sloped Nose	SF	96.000	96.000
0072	625.0100	Topsoil	SY	139.000	139.000
0074	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0076	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0078	628.7015	Inlet Protection Type C	EACH	129.000	129.000

Estimate Of Quantities

2240-14-61

Line	Item	Item Description	Unit	Total	Qty
0080	631.1000	Sod Lawn	SY	139.000	139.000
0082	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	101.000	101.000
0084	634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	2.000	2.000
0086	637.1220	Signs Type I Reflective SH	SF	109.500	109.500
0088	637.2210	Signs Type II Reflective H	SF	1,160.990	1,160.990
0090	637.2215	Signs Type II Reflective H Folding	SF	119.360	119.360
0092	637.2230	Signs Type II Reflective F	SF	173.000	173.000
0094	638.2102	Moving Signs Type II	EACH	4.000	4.000
0096	638.2602	Removing Signs Type II	EACH	62.000	62.000
0098	638.3000	Removing Small Sign Supports	EACH	32.000	32.000
0100	642.5201	Field Office Type C	EACH	1.000	1.000
0102	643.0300	Traffic Control Drums	DAY	34,960.000	34,960.000
0104	643.0410	Traffic Control Barricades Type II	DAY	4,460.000	4,460.000
0106	643.0420	Traffic Control Barricades Type III	DAY	33,420.000	33,420.000
0108	643.0800	Traffic Control Arrow Boards	DAY	462.000	462.000
0110	643.0900	Traffic Control Signs	DAY	54,750.000	54,750.000
0112	643.0920	Traffic Control Covering Signs Type II	EACH	2.000	2.000
0114	643.1050	Traffic Control Signs PCMS	DAY	178.000	178.000
0116	643.1070	Traffic Control Cones 42-Inch	DAY	210,900.000	210,900.000
0118	643.5000	Traffic Control	EACH	1.000	1.000
0120	646.1020	Marking Line Epoxy 4-Inch	LF	45,228.000	45,228.000
0122	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	6,774.000	6,774.000
0124	646.3545	Marking Line Grooved Wet Ref Contrast Epoxy 8-Inch	LF	7,691.000	7,691.000
0126	646.5020	Marking Arrow Epoxy	EACH	57.000	57.000
0128	646.5120	Marking Word Epoxy	EACH	17.000	17.000
0130	646.6120	Marking Stop Line Epoxy 18-Inch	LF	1,014.000	1,014.000
0132	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	1.000	1.000
0134	646.7120	Marking Diagonal Epoxy 12-Inch	LF	950.000	950.000
0136	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	3,803.000	3,803.000
0138	646.7520	Marking Crosswalk Epoxy Ladder Pattern 24-Inch	LF	60.000	60.000
0140	646.8120	Marking Curb Epoxy	LF	2,500.000	2,500.000
0142	646.8220	Marking Island Nose Epoxy	EACH	22.000	22.000
0144	649.0105	Temporary Marking Line Paint 4-Inch	LF	26,785.000	26,785.000
0146	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	28,692.000	28,692.000
0148	652.0800	Conduit Loop Detector	LF	120.000	120.000
0150	652.0900	Loop Detector Slots	LF	200.000	200.000
0152	655.0800	Loop Detector Wire	LF	420.000	420.000
0154	690.0250	Sawing Concrete	LF	15,194.000	15,194.000
0156	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0158	740.0440	Incentive IRI Ride	DOL	20,040.000	20,040.000

Estimate Of Quantities

2240-14-61					
Line	Item	Item Description	Unit	Total	Qty
0160	SPV.0060	Special 01. Adjusting Water Boxes	EACH	10.000	10.000
0162	SPV.0060	Special 02. Adjusting Water Manholes	EACH	10.000	10.000
0164	SPV.0060	Special 03. Curb Ramp Grading, Shaping & Finishing	EACH	29.000	29.000
0166	SPV.0105	Special 01. Survey Project 2240-14-61	LS	1.000	1.000

204.0100
REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	SY
0010	77+79	-	78+29	STH 36, MEDIAN CLOSURE	100
0010	-	-	-	35TH STREET, SLOPED NOSE	40
TOTAL:					140

204.0120
REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STAGE	STATION	TO	STATION	SY
0010	STAGE 1	31+94 NB	-	87+52 NB	15,320
0010	STAGE 1	31+94 SB	-	87+52 SB	13,930
0010	STAGE 1	89+77 NB	-	169+60 NB	19,960
0010	STAGE 1	89+77 SB	-	169+60 SB	20,440
0010	STAGE 2	31+94 NB	-	87+52 NB	9,800
0010	STAGE 2	31+94 SB	-	87+52 SB	10,520
0010	STAGE 2	89+77 NB	-	169+60 NB	14,750
0010	STAGE 2	89+77 SB	-	169+60 SB	13,740
TOTAL:					118,460

*204.0150
REMOVING CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	391
0010	-	-	-	MISCELLANEOUS, AS-NEEDED	200
TOTAL:					591

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

205.0100
EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	CY
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	330
TOTAL:					330

305.0120
BASE AGGREGATE DENSE 1 1/4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	TON
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	190
TOTAL:					190

415.0080
CONCRETE PAVEMENT 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	SY
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	370
0010	-	-	-	35TH STREET, SLOPED NOSE	24
TOTAL:					394

*416.0610
DRILLED TIE BARS

CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	164
0010	77+79	-	78+29	STH 36, MEDIAN CLOSURE	40
0010	-	-	-	35TH STREET, SLOPED NOSE	18
TOTAL:					222

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

CONCRETE CURB & GUTTER

					601.0331 31-INCH LF	601.0452 INTEGRAL 30-INCH TYPE D LF
CATEGORY	STATION	TO	STATION	LOCATION		
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	364	-
0010	77+79	-	78+29	STH 36, MEDIAN CLOSURE	103	-
0010	-	-	-	35TH STREET, SLOPED NOSE	-	14
0010	-	-	-	MISCELLANEOUS, AS-NEEDED	200	-
TOTAL:					667	14

HMA PAVEMENT ITEMS

					455.0605	460.6224	450.4000	465.0125
							HMA COLD	ASPHALTIC
							WEATHER	SURFACE
					TACK COAT	4 MT 58-28 S	PAVING	TEMPORARY
CATEGORY	STAGE	STATION	TO	STATION	GAL	TON	TON	TON
0010	STAGE 1	31+94 NB	-	87+52 NB	1,073	1,720	0	-
0010	STAGE 1	31+94 SB	-	87+52 SB	975	1,560	0	-
0010	STAGE 1	89+77 NB	-	169+60 NB	1,397	2,240	0	-
0010	STAGE 1	89+77 SB	-	169+60 SB	1,430	2,290	0	-
0010	STAGE 2	31+94 NB	-	87+52 NB	686	1,100	70	-
0010	STAGE 2	31+94 SB	-	87+52 SB	736	1,180	75	-
0010	STAGE 2	89+77 NB	-	169+60 NB	1,033	1,650	105	-
0010	STAGE 2	89+77 SB	-	169+60 SB	962	1,540	100	-
0010	STAGE 1	TEMPORARY BUS STOP			-	-	-	1
TOTAL:					8,292	13,280	350	1

HMA PAVEMENT PWL

		460.0105.S	460.0110.S
		TEST STRIP	TEST STRIP
		VOLUMETRICS	DENSITY
CATEGORY	LOCATION	EACH	EACH
0010	PROJECT	1	1
		1	1

PWL MIXTURE USE TABLE

LOCATION	STATION	TO	STATION	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
TRAVEL LANE	31+94	-	169+60	MILLED EXISTING CONCRETE SURFACE	4MT 58-28S	8,230	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
PARKING LANE	31+94	-	169+60	MILLED EXISTING CONCRETE SURFACE	4MT 58-28S	3,430	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
MISCELLANEOUS /SIDE ROADS	31+94	-	169+60	MILLED EXISTING CONCRETE SURFACE	4MT 58-28S	1,620	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	

3

*602.0405 CONCRETE SIDEWALK 4-INCH					
CATEGORY	STATION	TO	STATION	LOCATION	SF
0010	-	-	-	35TH STREET, SLOPED NOSE	19
TOTAL:					19
*ADDITIONAL QUANTITY SHOWN ELSEWHERE					

3

611.8120.S COVER PLATES TEMPORARY		
CATEGORY	LOCATION	SF
0010	RECONSTRUCTING MANHOLES	19
0010	RECONSTRUCTING INLETS	20
0010	ADJUSTING MANHOLE COVERS	26
0010	ADJUSTING INLET COVERS	24
TOTAL:		89

611.0420 RECONSTRUCTING MANHOLES			
CATEGORY	STATION	LOCATION	EACH
0010	-	MISCELLANEOUS, AS-NEEDED	19
TOTAL:			19

620.0300 CONCRETE MEDIAN SLOPED NOSE			
CATEGORY	STATION	LOCATION	SF
0010	70+67	STH 36, SB LEFT TURN LANE	60
0010	-	35TH STREET	36
TOTAL:			96

611.0430 RECONSTRUCTING INLETS			
CATEGORY	STATION	LOCATION	EACH
0010	70+97	STH 36, SB LEFT TURN LANE	1
0010	-	MISCELLANEOUS, AS-NEEDED	19
TOTAL:			20

MOBILIZATIONS EROSION CONTROL			
		628.1905	628.1910
		EMERGENCY	
CATEGORY	LOCATION	EACH	EACH
0010	PROJECT	2	4
TOTAL:		2	4

611.0624 INLET COVERS TYPE H			
CATEGORY	STATION	LOCATION	EACH
0010	70+97	STH 36, SB LEFT TURN LANE	1
TOTAL:			1

LANDSCAPING ITEMS						
					*625.0100	*631.1000.
					TOPSOIL	SOD LAWN
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY
0010	77+79	-	78+29	STH 36, MEDIAN CLOSURE	71	71
TOTAL:					71	71
*ADDITIONAL QUANTITY SHOWN ELSEWHERE						

628.7015
INLET PROTECTION TYPE C

CATEGORY	STATION	OFFSET	EACH	CATEGORY	STATION	OFFSET	EACH
0010	34+45	46' LT, 46' RT	2	0010	97+03	46' RT	1
0010	37+45	46' LT, 46' RT	2	0010	103+85	46' LT, 46' RT	2
0010	39+02	46' RT	1	0010	107+03	46' RT	1
0010	40+44	46' LT	1	0010	107+49	46' LT, 46' RT	2
0010	43+44	46' LT, 46' RT	2	0010	107+94	46' LT	1
0010	44+42	119' LT	1	0010	111+07	46' LT	1
0010	44+80	46' LT	1	0010	111+39	12' LT	1
0010	45+05	114' LT	1	0010	111+50	0	1
0010	45+23	0	1	0010	112+08	46' RT	1
0010	45+88	46' RT	1	0010	115+00	46' LT, 46' RT	2
0010	47+96	46' LT, 46' RT	2	0010	118+00	46' LT, 46' RT	2
0010	50+43	46' LT, 46' RT	2	0010	120+50	46' LT, 46' RT	2
0010	52+95	46' LT, 46' RT	2	0010	123+50	46' LT, 46' RT	2
0010	55+47	46' LT, 46' RT	2	0010	127+12	46' LT, 46' RT	2
0010	57+97	46' LT, 46' RT	2	0010	130+49	46' LT, 46' RT	2
0010	60+38	46' LT	1	0010	133+49	46' LT, 46' RT	2
0010	60+54	46' RT	1	0010	134+94	46' RT	1
0010	62+95	46' LT	1	0010	136+58	53' RT	1
0010	63+39	46' RT	1	0010	137+23	46' LT	1
0010	65+21	46' LT, 46' RT	2	0010	137+49	46' RT	1
0010	65+70	46' LT, 46' RT	2	0010	138+00	46' RT	1
0010	68+47	46' LT, 46' RT	2	0010	138+17	99' LT	1
0010	70+97	46' LT, 46' RT,0	3	0010	138+57	48' LT	1
0010	74+00	46' LT, 46' RT,0	3	0010	138+96	95' LT	1
0010	77+00	46' LT, 46' RT,0	3	0010	139+03	46' LT	1
0010	78+75	5' LT	1	0010	140+32	8' LT	1
0010	78+90	80' LT	1	0010	140+75	46' LT, 46' RT	2
0010	79+50	146' LT	1	0010	142+70	46' LT	1
0010	80+07	132' LT	1	0010	143+32	74' LT	1
0010	80+55	50' LT	1	0010	143+70	60' LT	1
0010	81+43	50' RT	1	0010	143+95	96' RT	1
0010	86+04	75' RT	1	0010	144+07	60' RT	1
0010	86+20	50' LT	1	0010	148+00	46' LT, 46' RT	2
0010	86+64	153' RT	1	0010	150+50	46' LT, 46' RT	2
0010	86+76	118' RT	1	0010	152+99	46' LT, 46' RT	2
0010	90+00	50' LT, 46' RT	2	0010	153+21	68' LT	1
0010	91+56	155' LT	1	0010	153+53	68' LT	1
0010	91+69	46' RT	1	0010	156+20	46' LT, 46' RT	2
0010	91+92	38' LT	1	0010	159+28	46' LT, 46' RT	2
0010	92+26	136' LT	1	0010	161+41	46' RT	1
0010	92+47	138' LT	1	0010	161+63	46' LT	1
0010	92+56	231' LT	1	0010	161+90	46' LT, 46' RT	2
0010	93+00	49' LT	1	0010	165+80	46' LT, 46' RT	2
0010	94+74	46' LT, 46' RT,0	3	0010	168+77	46' LT, 46' RT	2
0010	96+71	46' LT	1	0010	171+68	46' LT, 46' RT	2
TOTAL:							129

BASE PATCHING CONCRETE

					390.0403	416.0610*	416.0620	690.0250*
						DRILLED TIE	DRILLED	SAWING
					SHES	BARS	DOWEL BARS	CONCRETE
CATEGORY	STATION	TO	STATION	LOCATION	SY	EACH	EACH	LF
0010	31+94	-	169+60	STH 36 - STAGE 1	2,500	2,525	2,000	6,875
0010	31+94	-	169+60	STH 36 - STAGE 2	2,500	2,525	2,000	6,875
TOTAL:					5,000	5,050	4,000	13,750

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

CURB RAMP REPAIR ITEMS														
		*204.0150	204.0155	601.0409	601.0600	*602.0405	602.0505	602.0605	611.8110	611.8115	*625.0100	*631.1000	*690.0250	SPV.0060.03
		REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK	CONCRETE	CONCRETE CURB PEDESTRIAN	CONCRETE SIDEWALK 4-INCH	CURB RAMP DETECTABLE	CURB RAMP DETECTABLE	ADJUSTING MANHOLE COVERS EACH	ADJUSTING INLET COVERS EACH	TOPSOIL SY	SOD LAWN SY	SAWING CONCRETE LF	CURB RAMP GRADING, SHAPING & FINISHING EACH
CATEGORY	LOCATION			CONCRETE CURB & GUTTER 30- INCH TYPE A			WARNING FIELD YELLOW	WARNING FIELD RADIAL YELLOW						
0010	1- EDGERTON AVE - SW CORNER	27	23	27	-	117	8	-	-	-	18	18	33	1
0010	2 - EDGERTON AVE - SW ISLAND	-	8	-	-	82	-	12	-	-	-	-	-	1
0010	3 - EDGERTON AVE - NW CORNER	25	8	25	-	70	8	-	-	-	-	-	31	1
0010	4 - WATERVIEW COURT - SE CORNER	18	8	18	-	94	-	15	-	-	-	-	24	1
0010	5 - WATERVIEW COURT - NE CORNER	18	11	18	-	119	-	16	-	-	-	-	24	1
0010	6 - CTH Y / LAYTON AVE - NW CORNER	14	14	14	9	131	8	-	-	-	-	-	33	1
0010	7 - CTH Y / LAYTON AVE - NW CORNER	10	8	10	-	69	8	-	-	-	-	-	14	1
0010	8 - CTH Y / LAYTON AVE - NE CORNER	13	8	13	-	59	8	-	-	-	-	-	18	1
0010	9 - EASTBOUND ON RAMP - SE CORNER	29	18	29	-	183	-	20	-	1	-	-	34	1
0010	10 - EASTBOUND ON RAMP - NE ISLAND	9	8	9	-	78	-	8	-	-	-	-	14	1
0010	11 - WESTBOUND OFF RAMP - NE CORNER	25	18	25	9	160	8	-	-	-	-	-	31	1
0010	12 - PARK & RIDE - SE CORNER	19	25	19	11	228	-	16	-	-	-	-	26	1
0010	13 - PARK & RIDE - NE CORNER	25	20	25	9	184	-	15	-	-	-	-	32	1
0010	14 - COLD SPRING RD - SW CORNER	16	19	16	-	179	-	12	-	-	-	-	23	1
0010	15 - COLD SPRING RD - SE CORNER	34	42	34	64	212	-	11	-	-	17	17	40	1
0010	16 - COLD SPRING RD - NW CORNER	15	19	15	-	138	-	12	-	-	10	10	21	1
0010	17 - COLD SPRING RD - NE CORNER	28	17	28	-	151	8	-	1	-	-	-	38	1
0010	18 - 35TH STREET - SE CORNER	10	5	10	-	-	-	-	-	-	5	5	16	1
0010	19 - 35TH STREET - SW CORNER	26	11	26	25	129	-	20	1	1	2	2	32	1
0010	20 - 35TH STREET - NW CORNER	24	12	24	-	133	-	18	1	-	-	-	31	1
0010	21 - 35TH STREET - NORTH ISLAND	65	23	65	-	204	16	-	1	1	-	-	77	1
0010	22 - HOWARD AVE - NW CORNER	27	18	27	31	181	-	26	-	1	-	-	36	1
0010	23 - HOWARD AVE - NE CORNER	33	10	33	-	96	-	11	1	-	-	-	48	1
0010	24 - MINER STREET - SE CORNER	19	16	19	43	123	8	-	-	-	2	2	26	1
0010	25 - MINER STREET - NE CORNER	20	14	20	-	118	8	-	-	-	1	1	27	1
0010	26 - FARDALE AVE - SE CORNER	24	19	24	-	187	-	25	-	-	3	3	32	1
0010	27 - FARDALE AVE - NE CORNER	24	21	24	-	170	-	29	1	-	6	6	31	1
0010	28 - POINT TERRACE - SW CORNER	16	23	16	24	197	-	21	-	-	4	4	23	1
0010	29 - POINT TERRACE - NW CORNER	14	10	14	-	104	-	15	-	-	-	-	21	1
0010	MISCELLANEOUS	-	-	150	-	-	-	-	20	20	-	-	-	-
TOTAL:		627	456	777	225	3,896	88	302	26	24	68	68	836	29

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

TRAFFIC CONTROL ITEMS																
							643.0300	643.0410	643.0420	643.0800	643.0900	643.0920	643.1050	643.1070	649.0105	649.0150
							DRUMS	BARRICADES TYPE II	BARRICADES TYPE III	ARROW BOARDS	SIGNS	COVERING SIGNS TYPE II (1 CYCLE)	SIGNS PCMS	TRAFFIC CONTROL CONES 42-INCH	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH (WHITE)
CATEGORY	STAGE	STATION	TO	STATION	LOCATION	DAYS	DAYS	DAYS	DAYS	DAYS	DAYS	EACH	DAYS	DAYS	LF	LF
0010	STAGE 1	31+94	-	169+60	STH 36	77	23,560	2,460	22,180	231	29,260	2	89	111,570	26,785	-
0010	STAGE 2	31+94	-	169+60	STH 36	77	11,400	2,000	11,240	231	25,490	-	89	99,330	-	28,692
TOTAL:							34,960	4,460	33,420	462	54,750	2	178	210,900	26,785	28,692

NOTE: SIGNS COVERED IN STAGE 1 UNDER ITEM 643.0920 TO REMAIN COVERED THROUGH DURATION OF CONSTRUCTION

PAVEMENT MARKING ITEMS																	
					646.1020		646.1545 MARKING LINE GROOVED WET REF CONTRAST	646.3545 MARKING LINE GROOVED WET REF CONTRAST	646.5020	646.5120	646.6120	646.6220	646.7120	646.7420	646.7520	646.8120	646.8220
					MARKING LINE EPOXY 4-INCH		EPOXY 4-INCH	EPOXY 8-INCH	MARKING ARROW EPOXY (WHITE)	MARKING WORD EPOXY (WHITE)	MARKING STOP LINE EPOXY 18-INCH (WHITE)	MARKING YIELD LINE EPOXY 18-INCH (WHITE)	MARKING DIAGONAL EPOXY 12-INCH (WHITE)	MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE)	MARKING CROSSWALK EPOXY LADDER PATTERN 24-INCH (WHITE)	MARKING CURB EPOXY (YELLOW)	MARKING ISLAND NOSE EPOXY (YELLOW)
CATEGORY	STATION	TO	STATION	LOCATION	LF (WHITE)	LF (YELLOW)	LF (WHITE)	LF (WHITE)	EACH (WHITE)	EACH (WHITE)	LF (WHITE)	EACH (WHITE)	LF (WHITE)	LF (WHITE)	LF (WHITE)	LF (YELLOW)	EACH (YELLOW)
0010	31+94	-	45+85	STH 36	2,461	2,249	665	779	2	1	56	1	-	206	-	236	3
0010	45+85	-	79+99	STH 36	6,356	5,793	1,641	1,612	8	3	107	-	770	437	-	555	5
0010	79+99	-	86+75	STH 36	1,120	1,138	339	1,085	10	4	58	-	69	202	-	112	2
0010	86+75	-	112+13	STH 36	4,324	3,760	1,199	1,887	14	4	130	-	93	214	-	383	4
0010	112+13	-	143+59	STH 36	5,583	5,546	1,514	1,238	12	3	113	-	-	568	60	371	3
0010	143+59	-	169+60	STH 36	1,716	3,967	1,262	746	4	1	45	-	-	431	-	784	2
0010	-	-	-	EDGERTON AVENUE	-	552	-	113	4	-	67	-	-	295	-	-	-
0010	-	-	-	CTH Y - LAYTON AVENUE	97	44	97	78	-	-	122	-	-	419	-	45	2
0010	-	-	-	EASTBOUND IH-894 RAMPS	37	24	37	57	-	-	35	-	-	103	-	-	-
0010	-	-	-	43RD STREET	-	28	-	-	-	-	21	-	-	-	-	-	-
0010	-	-	-	PARK & RIDE	-	14	-	7	-	-	24	-	-	105	-	-	-
0010	-	-	-	COLD SPRING ROAD	-	94	-	32	-	-	56	-	-	274	-	-	-
0010	-	-	-	PLAINFIELD AVENUE	-	-	-	-	-	-	14	-	-	-	-	-	-
0010	-	-	-	35TH STREET	-	305	-	-	2	1	72	-	18	231	-	14	1
0010	-	-	-	HOWARD AVENUE	20	-	20	58	1	-	79	-	-	318	-	-	-
0010	-	-	-	33RD STREET	-	-	-	-	-	-	15	-	-	-	-	-	-
SUBTOTAL:					21,714	23,514											
TOTAL:					45,228		6,774	7,691	57	17	1,014	1	950	3,803	60	2,500	22

3

642.5201
FIELD OFFICE TYPE C

CATEGORY	LOCATION	EACH
0010	PROJECT	1
TOTAL:		1

643.5000
TRAFFIC CONTROL

CATEGORY	LOCATION	EACH
0010	PROJECT	1
TOTAL:		1

LOOP DETECTOR REPAIR

		652.0800 CONDUIT LOOP DETECTOR	652.0900 LOOP DETECTOR SLOTS	655.0800 LOOP DETECTOR WIRE
CATEGORY	LOCATION	LF	LF	LF
0010	MISCELLANEOUS, AS NEEDED - STAGE 1	60	100	210
0010	MISCELLANEOUS, AS NEEDED - STAGE 2	60	100	210
TOTAL:		120	200	420

3

*690.0250
SAWING CONCRETE

CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	70+62	-	74+18	STH 36, SB LEFT TURN LANE	415
0010	77+79	-	78+29	STH 36, MEDIAN CLOSURE	113
0010	-	-	-	35TH STREET, SLOPED NOSE	80
TOTAL:					608

*ADDITIONAL QUANTITY SHOWN ELSEWHERE

SPV.0060.01
ADJUSTING WATER BOXES

CATEGORY	LOCATION	EACH
0010	MISCELLANEOUS, AS-NEEDED	10
TOTAL:		10

SPV.0060.02
ADJUSTING WATER MANHOLES

CATEGORY	LOCATION	EACH
0010	MISCELLANEOUS, AS-NEEDED	10
TOTAL:		10

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			W [FT.]	X x	H [FT.]	SIGNS TYPE I REFLC SH [SF]
1	NOT USED																		
2	NOT USED																		
3	NOT USED																		
4	NOT USED																		
5	NOT USED																		
6	NOT USED																		
7	NOT USED																		
8	NOT USED																		
9	NOT USED																		
10	NOT USED																		
11	NOT USED																		
12	NOT USED																		
13	R5-1A (2M)		42	X	30	8.750	--	--			1			--	SHEET 2				
14	R6-3 (2M)		30	X	24	5.000	--	--			1			--					
15	R1-1 (2M)		36	X	36	7.460	--	--	1	1				14	MOUNT ABOVE R6-3				
16	R6-2L (2M)		30	X	36	7.500	--	--			1			--					
17	NOT USED																		
18	NOT USED																		
19	R3-20L (2M)		36	X	54	6.750	--	--	1	1	1			--	SHEET 3				
20	R1-2 (2M)		48	X	42	7.000	--	--	1	1	1			--	REMOVES R1-1				
21	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
21A	R6-3 (2M)		30	X	24	5.000	--	--						21	MOUNT ON SIGNAL POLE ABOVE R1-1F				
22	NOT USED																		
23	R4-7 (2M)		24	X	30	5.000	--	--	1					--	MOUNT ON SIGNAL POLE				
24	R1-1F (2M)		36	X	36	--	--	7.460						23	MOUNT ON SIGNAL POLE				
25	R5-1 (2M)		36	X	36	9.000	--	--	1					--	MOUNT ON SIGNAL POLE				
26	R1-1F (2M)		36	X	36	--	--	7.460						25	MOUNT ON SIGNAL POLE				
27	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--	1					--	MOUNT ON SIGNAL MAST				
28	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
29	NOT USED																		
30	R4-7 (2M)		24	X	30	5.000	--	--						--	MOUNT ON SIGNAL POLE				
31	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
32	R5-1 (2M)		36	X	36	9.000	--	--						31	MOUNT ON SIGNAL POLE				
33	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--	1					--	MOUNT ON SIGNAL MAST				
34	R6-2L (2M)		30	X	36	7.500	--	--			1			--					
35	R6-2L (2M)		30	X	36	7.500	--	--						--	MOUNT ON SIGNAL POLE				
36	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
37	R6-3 (2M)		30	X	24	5.000	--	--						36	MOUNT ON SIGNAL POLE ABOVE R1-1				

3

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			W [FT.]	X x	H [FT.]	SIGNS TYPE I REFLC SH [SF]
38	R1-1F (2M)		36	X	36	--	--	7.460	1					30	MOUNT ON SIGNAL POLE SHEET 4				
39	R3-20L (2M)		24	X	36	6.000	--	--	1	1	1			--					
40	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
41	NOT USED																		
42	NOT USED																		
43	NOT USED																		
44	NOT USED																		
45	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
46	NOT USED																		
47	R6-2R (2M)		30	X	36	7.500	--	--			1			--					
48	R5-1A (2M)		42	X	30	8.750	--	--			1			--	SHEET 5 SHEET 6				
49	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
50	R6-2R (2M)		30	X	36	7.500	--	--			1			--					
51	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
52	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
53	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
54	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
55	R1-1 (2M)		36	X	36	9.000	--	--	1	1	1			--					
56	R6-3 (2M)		30	X	24	5.000	--	--						55					
57	R5-1 (2M)		36	X	36	9.000	--	--	1	1	1			--					
57A	R6-2R (2M)		30	X	36	7.500	--	--			1			--	SHEET 7				
58	W1-2L (2M)		36	X	36	--	9.000	--	1	1	1			--					
59	W1-2L (2M)		36	X	36	--	9.000	--	1	1	1			--					
60	R6-2L (2M)		30	X	36	7.500					1								
61	NOT USED																		
62	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
63	NOT USED																		
64	R5-1 (2M)		36	X	36	9.000	--	--						--	MOUNT ON BACK OF R2-1				
65	W3-3 (2M)		36	X	36	--	9.000	--			1			--					
66	R6-2R (2M)		30	X	36	7.500	--	--			1			--					
67	R5-1A (2M)		42	X	30	8.750	--	--			1			--	SHEET 8				
68	R3-20L (2M)		24	X	36	6.000	--	--	1	1				67					
69	R3-20LL (2M)		24	X	36	6.000	--	--	1	1	1			--					
70	R5-1 (2M)		36	X	36	9.000	--	--						--		MOUNT ON BACK OF R2-1			
71		EAST IH 894 [ARROW]		X		--	--	--	1					--	MOUNT ON MAST; I BEAMS INCIDENTAL	3	X	5.5	16.500
72		LAYTON AVE ONLY/ EXCEPT BUSES		X		--	--	--						71	MOUNT ON MAST; I BEAMS INCIDENTAL	3	X	5.5	16.500
73	NOT USED																		
74	NOT USED																		
75	NOT USED																		
76	NOT USED																		

3

SHEET 2 OF 11

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES – PERMANENT SIGNING

SHEET:

E

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			W [FT.]	X x	H [FT.]	SIGNS TYPE I REFLC SH [SF]
77	R3-20L (2M)		24	X	36	6.000	--	--			1			--					
78	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
79	NOT USED																		
80	NOT USED																		
81	NOT USED														SHEET 9; MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE				
82	R6-2L (2M)		30	X	36	7.500	--	--										--	
83	R6-2L (2M)		30	X	36	7.500	--	--										--	
84	R6-2L (2M)		30	X	36	7.500	--	--			1							--	
85	R6-2L (2M)	WIS 36 LOOMIS RD	30	X	36	7.500	--	--			1			--	MOUNT ON SIGNAL MAST MOUNT ON SIGNAL POLE				
86	M1-94S		90	X	18	11.250	--	--	1					--					
87	R1-1F (2M)		36	X	36	--	--	7.460	1					--					
88	NOT USED																		
89	R5-1 (2M)		36	X	36	9.000	--	--						--	MOUNT ON SIGNAL POLE				
90	NOT USED	COUNTY Y LAYTON AVE													MOUNT ON SIGNAL MAST				
91	M1-94S		96	X	18	12.000	--	--	1									--	
92	NOT USED																		
93	NOT USED																		
94	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
95	R5-1 (2M)		36	X	36	9.000	--	--						94	MOUNT ON SIGNAL POLE				
96	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
97	NOT USED																		
98	NOT USED																		
99	NOT USED																		
100	M1-94S	COUNTY Y LAYTON AVE	96	X	18	12.000	--	--	1					--	MOUNT ON SIGNAL MAST MOUNT ON SIGNAL MAST				
101	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--						--					
102	NOT USED																		
103	NOT USED																		
104	NOT USED																		
105	NOT USED																		
106	NOT USED																		
107	NOT USED																		
108	NOT USED																		
109	NOT USED																		
110	NOT USED	NORTH IH 43 EAST IH 894 ONLY LAYTON AVE ONLY [ARROW] LAYTON AVE ONLY [ARROW]													MOUNT ON MAST; I BEAMS INCIDENTAL MOUNT ON MAST; I BEAMS INCIDENTAL MOUNT ON MAST; I BEAMS INCIDENTAL	6 3 3	X X X	6 4.5 4.5	36 13.5 13.5
111			X	--	--	--	1						--						
112			X	--	--	--	1						--						
113			X	--	--	--							112						

3

SHEET 3 OF 11

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES – PERMANENT SIGNING

SHEET:

E

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			W [FT.]	X x	H [FT.]	SIGNS TYPE I REFLC SH [SF]
114	NOT USED																		
115	NOT USED																		
116	NOT USED																		
117	NOT USED																		
118	NOT USED																		
119	R3-20L (2M)		24	X	36	6.000	--	--	1	1	1			--	SHEET 10				
120	NOT USED																		
121	W3-8 (2M)		48	X	48	--	16.000	--	1					--	MOUNT ON POLE				
122	R3-59 (2M)		24	X	30	5.000	--	--						121	MOUNT ON POLE				
123	NOT USED																		
124	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
125	NOT USED																		
126	NOT USED																		
127	NOT USED																		
128	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
129	W3-8 (2M)		48	X	48	--	16.000	--	1					--	MOUNT ON POLE				
130	JV3-2 (2M)		48	X	93	31.000	--	--	1	2	2			--					
	MB3-3	IH 41	24	x	12														
	M1-1		24	x	24														
	MB3-1	IH 43	24	x	12														
	M1-1		24	x	24														
	MB6-2R		21	x	21														
	MB3-2		24	x	12														
	M1-1	IH 894	24	x	24														
	MB6-2R		21	x	21														
131	NOT USED	LAYTON AVE ONLY [ARROW]		X		--	--	--	1					--	MOUNT ON MAST; I BEAMS INCIDENTAL	3	X	4.5	13.5
132																			
133	NOT USED																		
134	NOT USED																		
135	R6-3 (2M)		30	X	24	5.000	--	--						--	MOUNT ON SIGNAL POLE				
136	R1-1F (2M)		36	X	36	--	--	7.460	1					135	MOUNT ON SIGNAL POLE BELOW R6-3				
137	NOT USED																		
138	NOT USED																		
139	NOT USED																		
140	NOT USED																		
141	NOT USED																		
142	NOT USED																		
143	NOT USED																		
144	NOT USED																		

3

SHEET 4 OF 11

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES – PERMANENT SIGNING

SHEET:

E

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			W [FT.]	X x	H [FT.]	SIGNS TYPE I REFLC SH [SF]
145	NOT USED																		
146	NOT USED																		
147	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
148	NOT USED																		
149	NOT USED																		
150	NOT USED																		
151	NOT USED																		
152	NOT USED																		
153	R5-1 (2M)		36	X	36	9.000	--	--						128	MOUNT ON POLE				
154	NOT USED																		
155	NOT USED																		
156	NOT USED																		
157	NOT USED																		
158	NOT USED																		
159	NOT USED																		
160	R5-1A (2M)		42	X	30	8.750	--	--			1			--	SHEET 11				
161	R5-1 (2M)		36	X	36	9.000	--	--	1					--	MOUNT ON SIGNAL POLE				
162	NOT USED																		
163	NOT USED																		
164	NOT USED																		
165	R5-1 (2M)		36	X	36	9.000	--	--						--	MOUNT ON SIGNAL POLE				
166	NOT USED																		
167	NOT USED																		
168	R1-1F (2M)		36	X	36	--	--	7.460	1	1	1			--					
169	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
170	R5-1 (2M)		36	X	36	9.000	--	--	1	1	1			--					
171	R5-1A (2M)		42	X	30	8.750	--	--						161	MOUNT ON SIGNAL POLE				
172	R5-1A (2M)		42	X	30	8.750	--	--						170					
173	R1-1F (2M)		36	X	36	--	--	7.460						--	MOUNT ON SIGNAL POLE				
174	J3-1 (2M)	WIS 36	24	X	57	9.500	--	--	1	1	1			--					
	M3-1		24	x	12														
	M1-6		24	x	24														
	M6-2R		21	x	21														
175	R3-2 (2M)		36	X	36	9.000	--	--						174					
176	NOT USED																		
177	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
178	NOT USED																		
179	NOT USED																		

3

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W	X	H	SIGNS TYPE II REFLC	SIGNS TYPE II REFLC	SIGNS TYPE II REFLC	REM SIGNS TYPE II	REM SMALL SIGN SUPPORTS	WOOD POSTS 4" X 6" X 18'	POSTS TUBULAR STEEL 2" X 2" X 16'	MOVE SIGNS TYPE II			SIGNS TYPE I REFLC			
			[IN.]	x	[IN.]	H [SF]	F [SF]	H FOLDING [SF]	[EA]	[EA]	[EA]	[EA]	[EA]			W [FT.]	X x	H [FT.]	SH [SF]
180	NOT USED																		
181	NOT USED																		
182	NOT USED																		
183	NOT USED																		
184	NOT USED																		
185	NOT USED																		
186	NOT USED																		
187	NOT USED																		
188	NOT USED																		
189	NOT USED																		
190	NOT USED																		
191	NOT USED																		
192	NOT USED																		
193	NOT USED																		
194	NOT USED																		
195	NOT USED																		
196	NOT USED																		
197	NOT USED																		
198	NOT USED																		
199	NOT USED																		
200	NOT USED																		
201	R5-1 (2M)		36	X	36	9.000	--	--			1		--						
202	NOT USED																		
203	R1-1 (2M)		36	X	36	7.460	--	--	1	1	1		--	SHEET 12					
204	R6-3 (2M)		30	X	24	5.000	--	--					203						
205	R6-2L (2M)		30	X	36	7.500	--	--			1		--						
206	NOT USED																		
207	NOT USED																		
208	NOT USED																		
209	NOT USED																		
210	NOT USED																		
211	NOT USED																		
212	NOT USED																		
213	NOT USED																		
214	NOT USED																		
215	NOT USED																		
216	NOT USED																		
217	R5-1A (2M)		42	X	30	8.750	--	--					217	MOUNT SIGN ON BACK OF R2-1					
218	NOT USED																		
219	R5-1A (2M)		42	X	30	8.750	--	--					219	SHEET 13; MOUNT ON BACK OF W3-3					

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220 SIGNS TYPE I REFLC SH [SF]
			W [IN.]	X x	H [IN.]											W [FT.]	X x	H [FT.]	
220	NOT USED																		
221	NOT USED																		
222	NOT USED																		
223	NOT USED																		
224	NOT USED																		
225	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
226	NOT USED																		
227	NOT USED																		
228	NOT USED																		
229	NOT USED																		
230	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
231	NOT USED																		
232	R5-1 (2M)		36	X	36	9.000	--	--						--	SHEET 14; MOUNT ON BACK OF D4-55R				
233	NOT USED																		
234	NOT USED																		
235	NOT USED																		
236	NOT USED																		
237	NOT USED																		
238	R6-3 (2M)		30	X	24	5.000	--	--			1			--					
239	R1-1 (2M)		36	X	36	7.460	--	--	1	1				238	MOUNT ABOVE R6-3				
240	NOT USED																		
241	R3-20L (2M)		24	X	36	6.000	--	--	1	1	1			--					
242	R6-2L (2M)		30	X	36	7.500	--	--			1			--					
243	NOT USED																		
244	NOT USED																		
245	NOT USED																		
246	NOT USED																		
247	NOT USED																		
248	R5-1 (2M)		36	X	36	9.000	--	--	1					--	MOUNT ON SIGNAL POLE				
249	R1-1F (2M)		36	X	36	--	--	7.460						248	MOUNT ON SIGNAL POLE				
250	R6-2L (2M)		30	X	36	7.500	--	--						--	MOUNT ON SIGNAL POLE				
251	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
252	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--	1					--	MOUNT ON SIGNAL MAST				
253	R5-1 (2M)		36	X	36	9.000	--	--	1					--	MOUNT ON SIGNAL POLE				
254	R1-1F (2M)		36	X	36	--	--	7.460						253	MOUNT ON SIGNAL POLE				
255	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--						--	MOUNT ON SIGNAL MAST				
256	NOT USED																		
257	R6-2L (2M)		30	X	36	7.500	--	--						--	MOUNT ON SIGNAL POLE				
258	R1-1F (2M)		36	X	36	--	--	7.460	1					--	MOUNT ON SIGNAL POLE				
259	NOT USED																		

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			SIGNS TYPE I REFLC SH [SF]			
260	NOT USED																		
261	R5-1 (2M)		36	X	36	9.000	--	--			1			--	SHEET 15				
262	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
263	R6-2R (2M)		30	X	36	7.500	--	--			1			--					
264	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
265	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
266	NOT USED																		
267	R6-3 (2M)		30	X	24	5.000	--	--			1			--	SHEET 16				
268	R1-1 (2M)		36	X	36	7.460	--	--	1	1				267					
269	NOT USED																		
270	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
271	NOT USED																		
272	NOT USED																		
273	R5-1 (2M)		36	X	36	9.000	--	--			1			--					
274	NOT USED																		
275	R5-1A (2M)		42	X	30	8.750	--	--						--	MOUNT ON BACK OF R2-1				
276	R6-2R (2M)		30	X	36	7.500	--	--			1			--					
277	R5-1 (2M)		36	X	36	9.000	--	--			1			--	SHEET 17				
278	NOT USED																		
279	NOT USED																		
280	R5-1A (2M)		42	X	30	8.750	--	--			1			--					
281	NOT USED																		
282	NOT USED																		
283	NOT USED																		
284	NOT USED																		
285	NOT USED																		
286	NOT USED																		
287	NOT USED																		
288	R3-20L (2M)		24	X	36	6.000	--	--	1	1	1			--	SHEET 18				
289	NOT USED																		
290	NOT USED																		
291	NOT USED																		
292	NOT USED																		
293	NOT USED																		
294	NOT USED																		
295	NOT USED																		
296	R1-1 (2S)		30	X	30	5.180	--	--	1	1	1			--					
297	NOT USED																		
298	NOT USED																		
299	NOT USED																		

3

SHEET 8 OF 11

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES – PERMANENT SIGNING

SHEET:

E

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUPPORTS [EA]	634.0618 WOOD POSTS 4" X 6" X 18' [EA]	634.0816 POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220 SIGNS TYPE I REFLC SH [SF]
			W [IN.]	X x	H [IN.]											W [FT.]	X x	H [FT.]	
300	NOT USED																		
301	NOT USED																		
302	R3-2 (2S)		24	X	24	4.000	--	--						--	MOUNT UNDER R1-1 IN ISLAND				
303	NOT USED																		
304	NOT USED																		
305	NOT USED																		
306	NOT USED																		
307	R6-2R (2S)		24	X	30	5.000	--	--						--	MOUNT ON BACK OF R6-2R IN MEDIAN				
308	NOT USED																		
309	NOT USED																		
310	NOT USED																		
311	NOT USED																		
312	R1-1 (2S)		30	X	30	5.180	--	--	1	1	1			--					
313	NOT USED																		
314	NOT USED																		
315	NOT USED																		
316	W12-1D (2S)		24	X	24	--	4.000	--	1	1	1			--	SHEET 19; MOUNT HEIGHT 2 FEET				
317	NOT USED																		
318	R1-1 (2S)		30	X	30	5.180	--	--	1	1	1			--					
319	NOT USED																		
320	NOT USED																		
321	NOT USED																		
322	R3-20L (2S)		24	X	36	6.000	--	--	1	1	1			--					
323	NOT USED																		
324	NOT USED																		
325	R5-1A (2S)		36	X	24	6.000	--	--			1			--					
326	R6-2R (2S)		24	X	30	5.000	--	--			1			--					
327	NOT USED																		
328	NOT USED																		
329	R5-1 (2S)		30	X	30	6.250	--	--						--	MOUNT ON BACK OF R2-1				
330	R6-2L (2S)		24	X	30	5.000	--	--						--	MOUNT ON SIGNAL POLE				
331	NOT USED																		
332	R6-3 (2S)		30	X	24	5.000	--	--						--	MOUNT ON SIGNAL POLE				
333	NOT USED																		
334	NOT USED																		
335	NOT USED																		
336	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--	1					--	MOUNT ON SIGNAL MAST				
337	R7-1L (2S)		18	X	24	3.000	--	--	1	1		1		--					
338	M1-94S	WIS 36 LOOMIS RD	90	X	18	11.250	--	--	1					--	MOUNT ON SIGNAL MAST				
339	NOT USED																		

3

TYPE I AND TYPE II PERMANENT SIGNING -

2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H	SIGNS TYPE II REFLC F	SIGNS TYPE II REFLC H FOLDING	REM SIGNS TYPE II	REM SMALL SIGN SUPPORTS	WOOD POSTS 4" X 6" X 18'	POSTS TUBULAR STEEL 2" X 2" X 16'	MOVE SIGNS TYPE II			SIGNS TYPE I REFLC SH			
						[SF]	[SF]	[SF]	[EA]	[EA]	[EA]	[EA]	[EA]			[EA]	[EA]	W [FT.]	X x
340	R5-1 (2S)		30	X	30	6.250	--	--						--	SHEET 20; MOUNT ON SIGNAL POLE MOUNT ON SIGNAL POLE				
341	R6-3 (2S)		30	X	24	5.000	--	--						340					
342	NOT USED																		
343	R5-1 (2S)		30	X	30	6.250	--	--			1			--					
344	NOT USED																		
345	R6-2R (2S)		24	X	30	5.000	--	--			1			--					
346	NOT USED																		
347	NOT USED																		
348	NOT USED																		
349	R6-2L (2S)		24	X	30	5.000	--	--			1			--					
350	R6-2L (2S)		24	X	30	5.000	--	--			1			--					
351	NOT USED																		
352	NOT USED																		
353	R5-1A (2S)		36	X	24	6.000	--	--			1			--					
354	NOT USED																		
355	NOT USED	SPEED LIMIT 35													SHEET 22				
356	NOT USED																		
357	R2-1 (2S)		24	X	30	5.000	--	--			1			--					
358	S5-2 (2S)		24	X	30	5.000	--	--						357					
359	NOT USED																		
360	R5-1 (2S)		30	X	30	6.250	--	--	1	1	1			--	SHEET 21				
360A	R5-1A (2S)		36	X	24	6.000	--	--			1			--					
361	R5-1 (2S)		30	X	30	6.250	--	--			1			--					
362	R6-3 (2S)		30	X	24	5.000	--	--						--					
363	R5-1A (2S)		36	X	24	6.000	--	--			1			--					
364	R5-1 (2S)		30	X	30	6.250	--	--			1			--	SHEET 22 SHEET 21 MOUNT BELOW S16-9P MOUNT BELOW S16-9P				
365	R6-3 (2S)		30	X	24	5.000	--	--						--					
366	R2-6P (2S)		24	X	18	3.000	--	--						--					
367	R2-6P (2S)		24	X	18	3.000	--	--						--					
368	S4-5 (2S)		36	X	36	--	9.000	--			1			--					
369	S4-5 (2S)	SPEED LIMIT 20	36	X	36	--	9.000	--			1			--	SHEET 22				
370	R5-1A (2S)		36	X	24	6.000	--	--			1			--					
371	R6-2L (2S)		24	X	30	5.000	--	--			1			--					
372	R6-3 (2S)		30	X	24	5.000	--	--			1			--					
373	R6-2R (2S)		24	X	30	5.000	--	--			1			--					
374	S1-1 (2S)		36	X	36	--	6.750	--	1	1	1			--	MOUNT BELOW S1-1 MOUNT ON BACK OF S1-1				
374A	S16-7L (2S)		30	X	18	--	3.750	--						374					
375	R5-1 (2S)		30	X	30	6.250	--	--						374					
376	R1-1 (2S)		30	X	30	5.180	--	--	1	1	1			--					
377	R6-3 (2S)		30	X	24	5.000	--	--						376					

3

SHEET 10 OF 11

PROJECT NO: 2240-14-61

HWY: STH 36

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES – PERMANENT SIGNING

SHEET:

E

3

TYPE I AND TYPE II PERMANENT SIGNING -

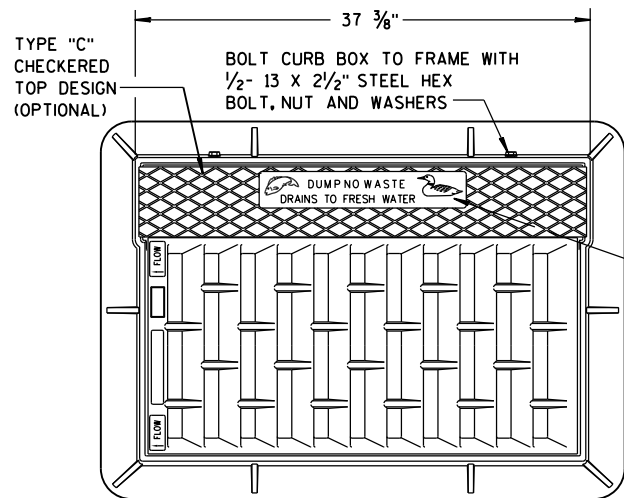
2240-14-61 STH 36

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE			637.2210	637.2230	637.2215	638.2602	638.3000	634.0618	634.0816	638.2102	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE			637.1220
			W [IN.]	X x	H [IN.]	SIGNS TYPE II REFLC H [SF]	SIGNS TYPE II REFLC F [SF]	SIGNS TYPE II REFLC H FOLDING [SF]	REM SIGNS TYPE II [EA]	REM SMALL SIGN SUPPORTS [EA]	WOOD POSTS 4" X 6" X 18' [EA]	POSTS TUBULAR STEEL 2" X 2" X 16' [EA]	MOVE SIGNS TYPE II [EA]			W [FT.]	X x	H [FT.]	SIGNS TYPE I REFLC SH [SF]
378	NOT USED	SPEED LIMIT 20													MOUNT ABOVE R6-3 SHEET 23				
379	S4-51 (2S)		24	X	48	--	8.000	--			1			--					
379A	S4-51 (2S)		24	X	48	--	8.000	--			1			--					
380	R1-1 (2S)		30	X	30	5.180	--	--	1	1				372					
381	R6-2L (2S)		24	X	30	5.000	--	--			1			--					
382	S4-5 (2S)	SPEED LIMIT 20	36	X	36	--	9.000	--			1			--	MOUNT BELOW S1-1 MOUNT ON BACK OF S1-1				
383	S1-1 (2S)		36	X	36	--	6.750	--	1	1	1			--					
383A	S16-7L (2S)		30	X	18	--	3.750	--						383					
384	R5-1 (2S)		30	X	30	6.250	--	--						383					
385	NOT USED																		
386	S4-5 (2S)	SPEED LIMIT 20	36	X	36	--	9.000	--						--	MOUNT ON POLE ABOVE R7-1D				
387	NOT USED																		
388	NOT USED																		
389	R5-1A (2S)		36	X	24	6.000	--	--						--		MOUNT ON BACK OF POLE			
390	NOT USED																		
391	R5-1 (2S)	SPEED LIMIT 20	30	X	30	6.250	--	--			1			--	MOUNT ON BACK OF POLE				
392	S4-51 (2S)		24	X	48	--	8.000	--			1			--					
393	S4-51 (2S)		24	X	48	--	8.000	--						--					
394	NOT USED			X															
395	S5-2 (2S)		24	X	30	5.000	--	--						--		MOUNT BELOW EXISTING SIGNS			
396	NOT USED			X											SHEET 24				
397	NOT USED			X															
398	S1-1 (2S)		36	X	36	--	6.750	--			1			--					
398A	S1-1 (2S)		36	X	36	--	6.750	--			1			--					
399	S16-9P (2S)			30	X	18	--	3.750	--							398	MOUNT BELOW S1-1		
399A	S16-9P (2S)		30	X	18	--	3.750	--						398A	MOUNT BELOW S1-1				
400	R2-6P (2S)		24	X	18	3.000	--	--						398	MOUNT BELOW S16-9P				
400A	R2-6P (2S)		24	X	18	3.000	--	--						398A	MOUNT BELOW S16-9P				
401	D1-65	COLD SPRING RD	72	X	12	6.000	--	--							ADD PLAQUE TO EXISTING SIGN				
402	D1-65	COLD SPRING RD	72	X	12	6.000	--	--							ADD PLAQUE TO EXISTING SIGN				
403	M1-94H	COLD SPRING RD	108	X	18	13.500	--	--	1						MOUNT ON SIGNAL MAST				
404	M1-94H	COLD SPRING RD	108	X	18	13.500	--	--	1						MOUNT ON SIGNAL MAST				
405	R9-3A (2S)		24	X	24	4.000						1			SHEET 18				
405A	R9-3BL(2S)		18	X	12	1.500									SHEET 18				
		UNDISTRIBUTED									1		4						
TOTALS						1160.990	173.000	119.360	62	32	101	2	4					109.500	

3

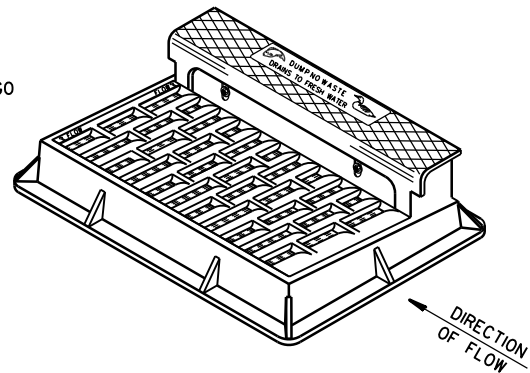
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D16-10	CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES
08E10-02	INLET PROTECTION TYPE A, B, C AND D
09F11-04	LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT WITH NEW ASPHALTIC OVERLAY
11B02-02	CONCRETE MEDIAN NOSE
13C14-07A	BASE PATCHING CONCRETE
13C14-07B	BASE PATCHING CONCRETE
13C14-07C	BASE PATCHING CONCRETE
15C07-14A	PAVEMENT MARKING SYMBOLS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C18-04	MEDIAN ISLAND MARKING
15C27-03B	PAVEMENT MARKING (ISLANDS)
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-06	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D22-03	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D23-06	TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE
15D30-04A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

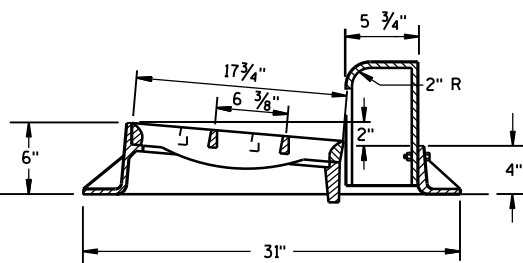
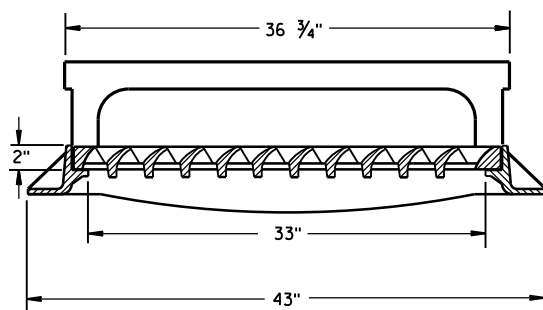
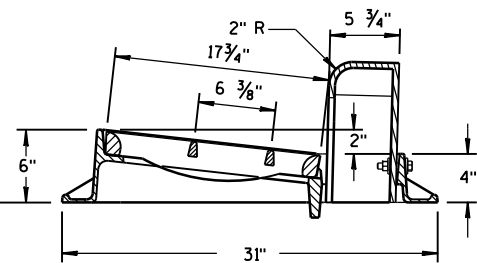
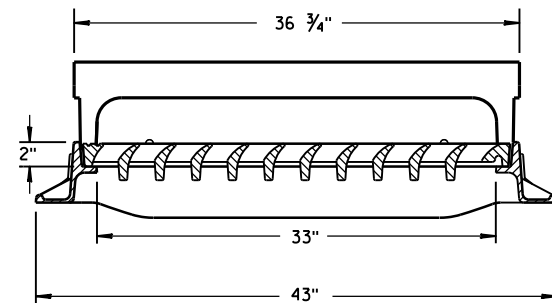
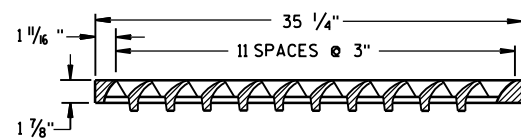


SEE LOGO
DETAIL

NOTE:
GRATE IS REVERSIBLE.

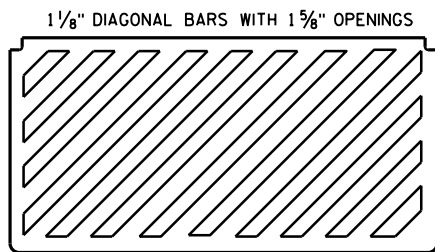


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

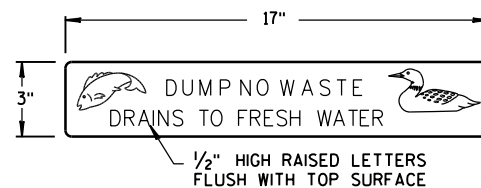
NOTE: EITHER CASTING IS ACCEPTABLE



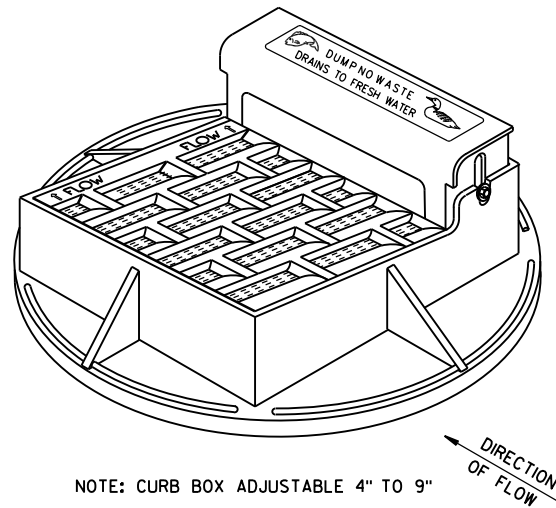
**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

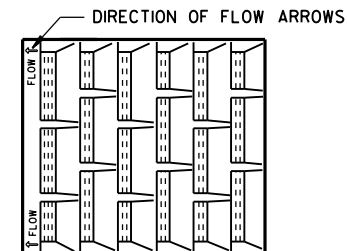


LOGO DETAIL

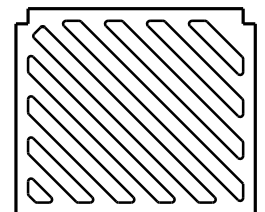


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



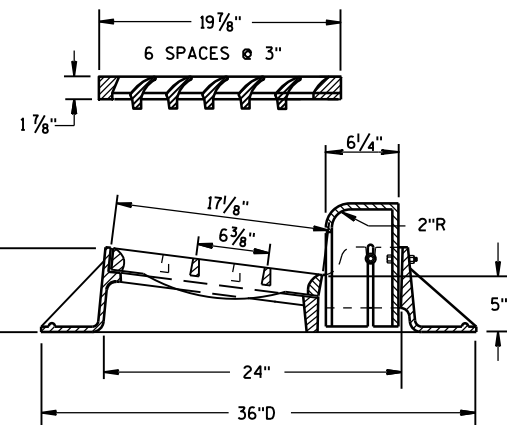
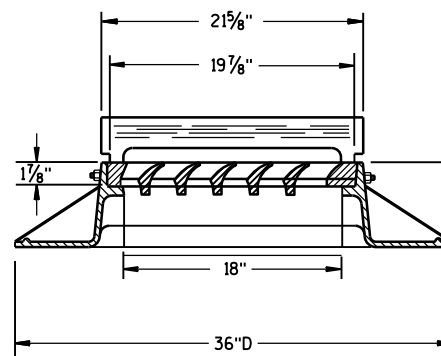
1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



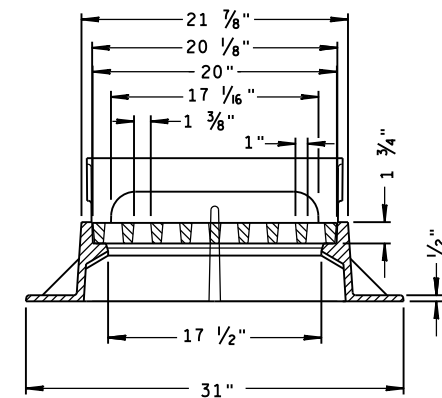
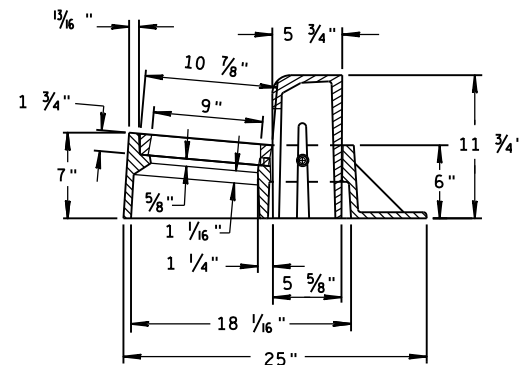
**SPECIAL GRATE FOR
TYPE "A" COVER**

(MEASURES 19 3/4" X 17" X 1 1/8")

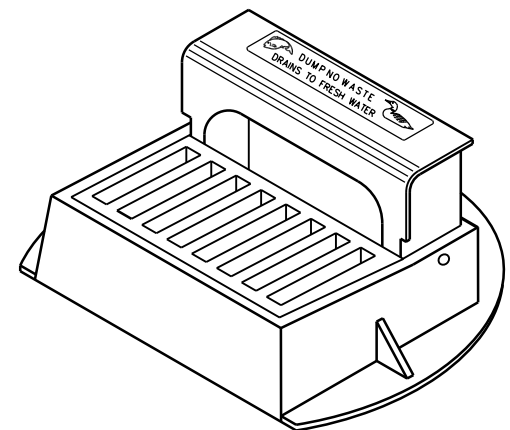
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



TYPE "Z"



**INLET COVERS
TYPE A, H, A-S, H-S & Z**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

11-27-13

DATE

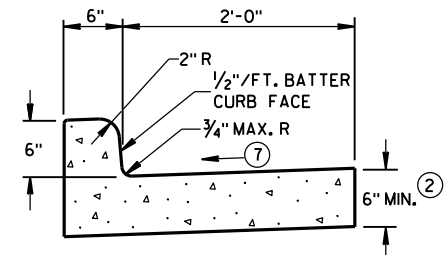
FHWA

/S/ Jerry H. Zogg

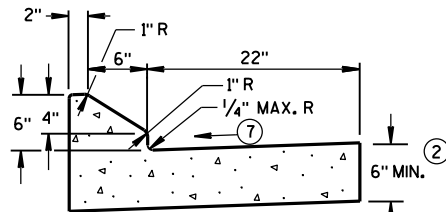
ROADWAY STANDARDS 163

ENGINEER

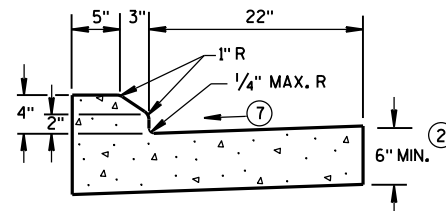
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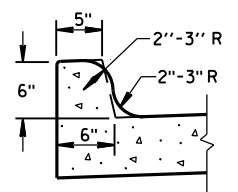
TYPES A^① & D



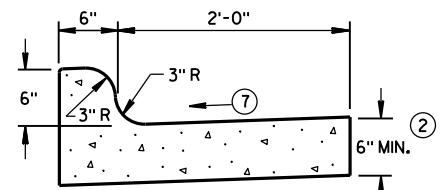
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

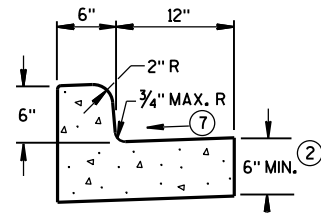


TYPES K^① & L
(OPTIONAL CURB SHAPE)



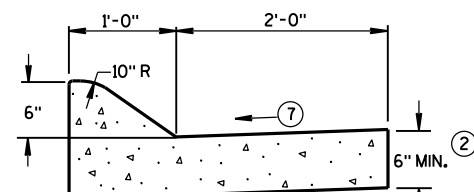
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

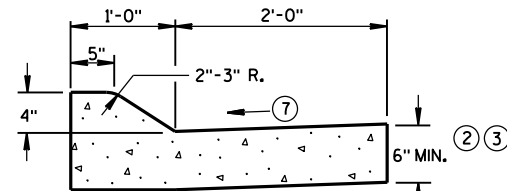


TYPES A^① & D

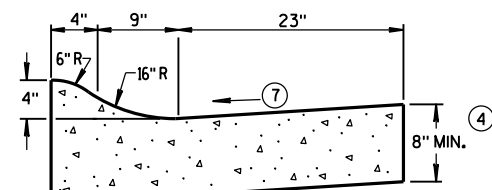
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

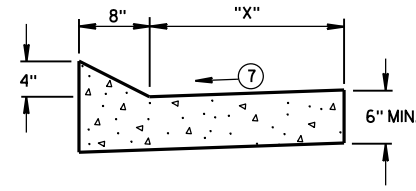


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

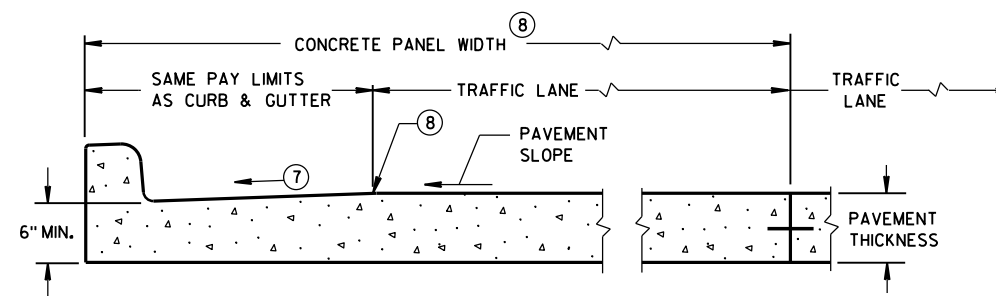
CONCRETE CURB & GUTTER 36"



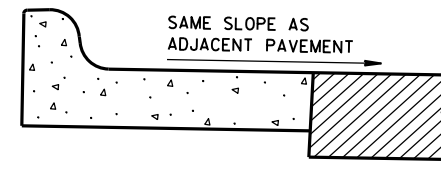
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

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

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

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

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

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

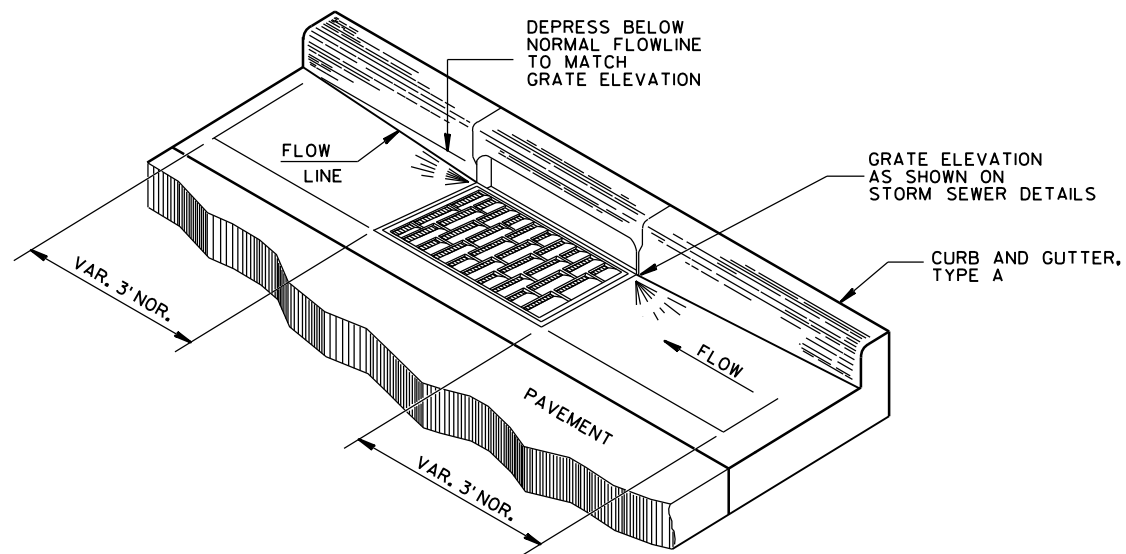
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

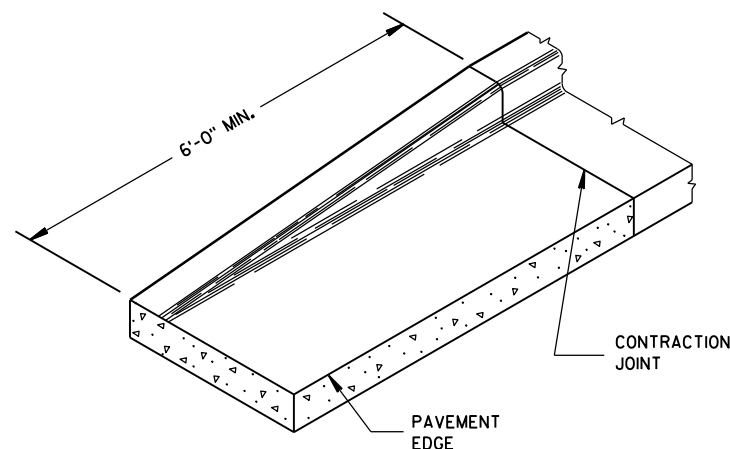
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

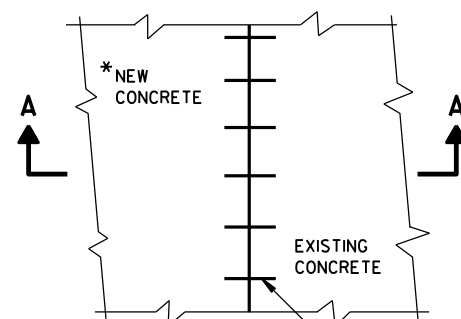


DETAIL OF CURB AND GUTTER AT INLETS

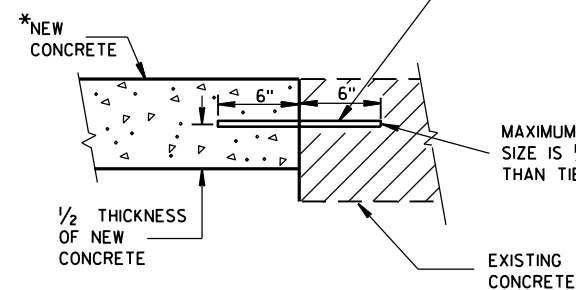
(TYPE H INLET COVER SHOWN)



END SECTION CURB & GUTTER



PLAN VIEW



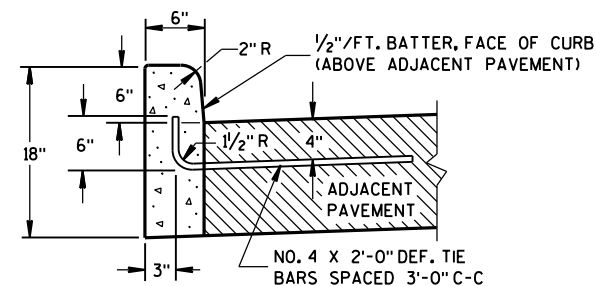
**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

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

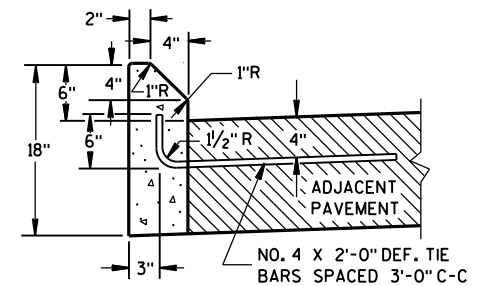
NO. 6 TIE BARS SPACED 2'-6" C-C,
INSTALLED PERPENDICULAR
TO THE LONGITUDINAL JOINT.

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

EXISTING
CONCRETE



TYPES A^① & D



TYPES G^① & J

GENERAL NOTES

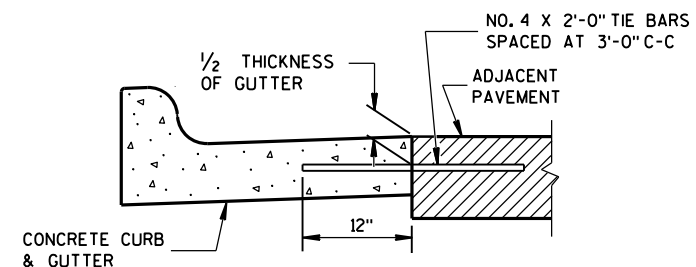
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

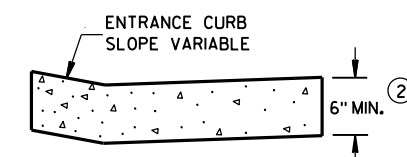
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

DATE

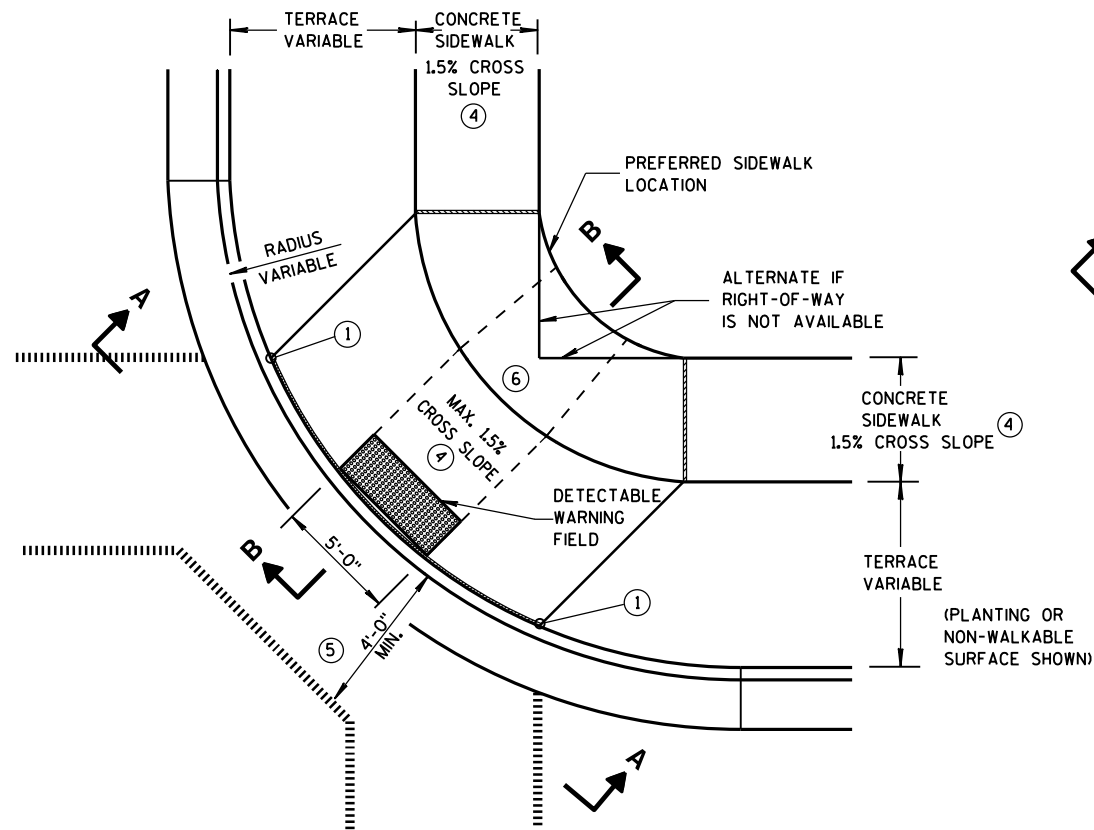
FHWA

/S/ Rodney Taylor

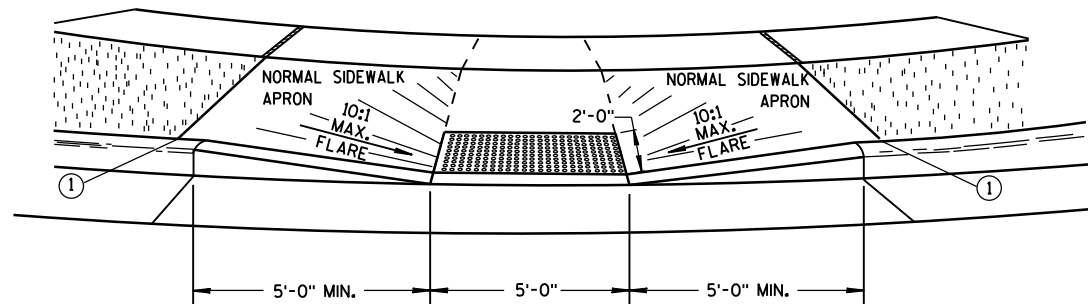
ROADWAY STANDARDS 165

UNIT SUPERVISOR

ENT

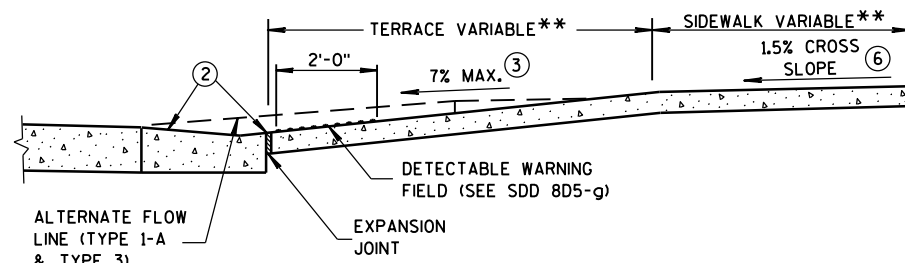


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

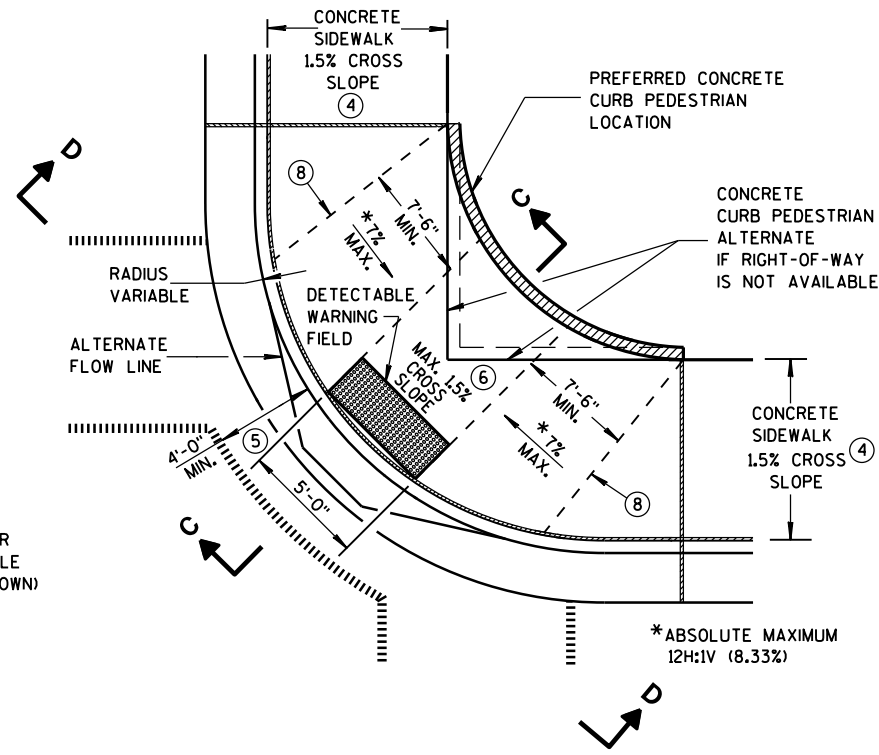


VIEW A-A

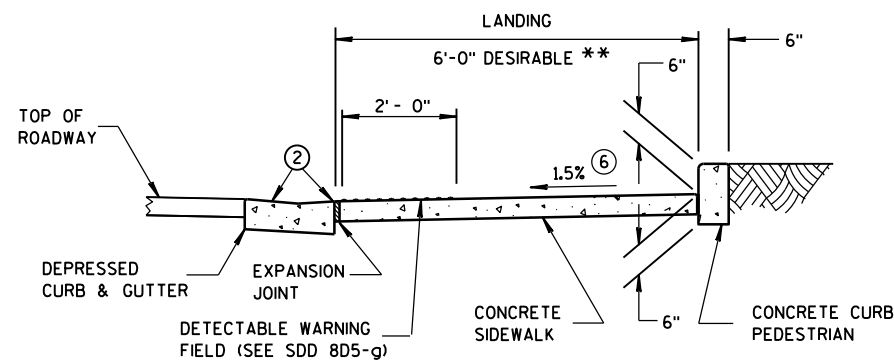
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



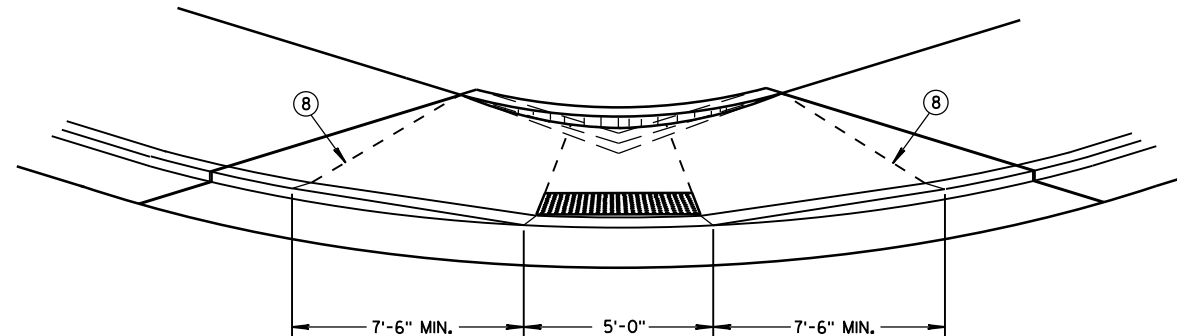
SECTION B-B



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



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

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

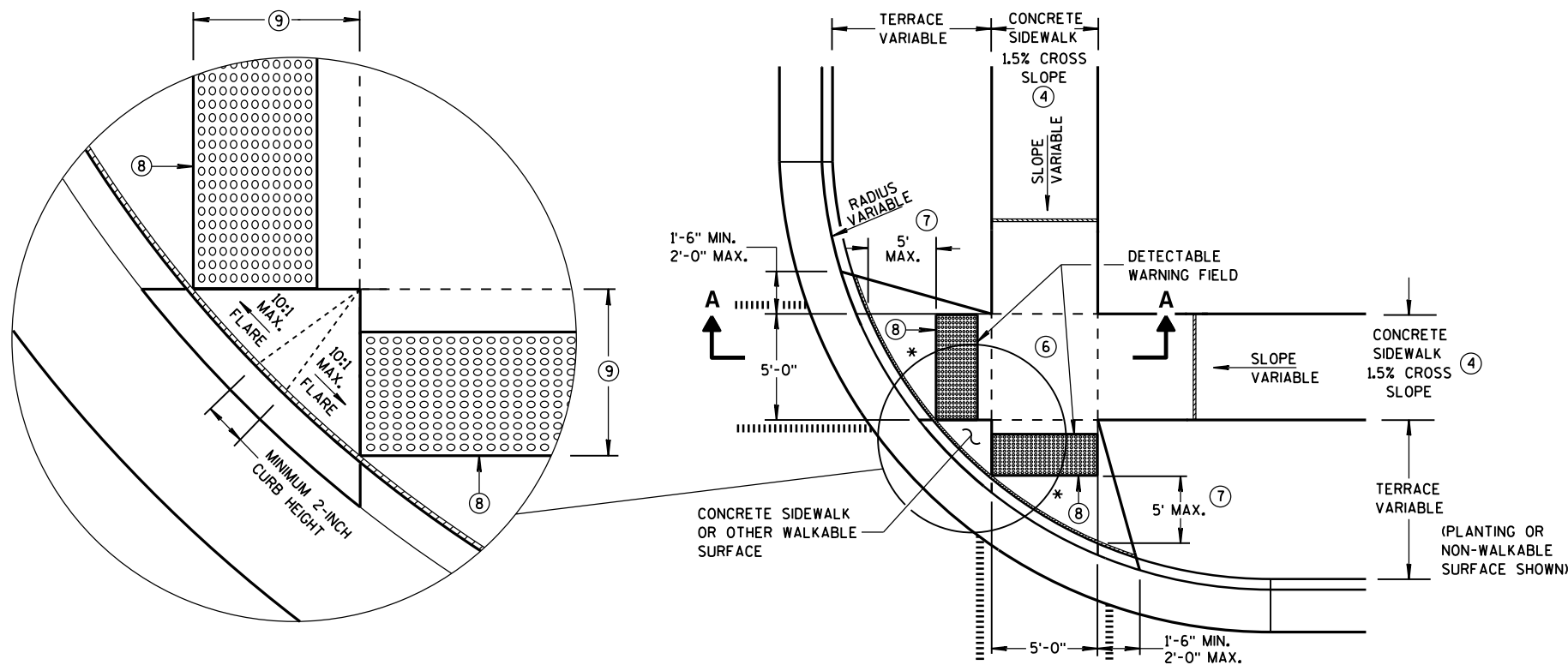
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

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

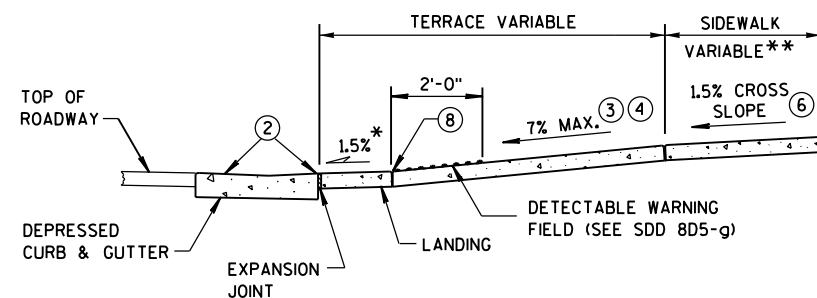
**CURB RAMPS
TYPES 1 AND 1-A**

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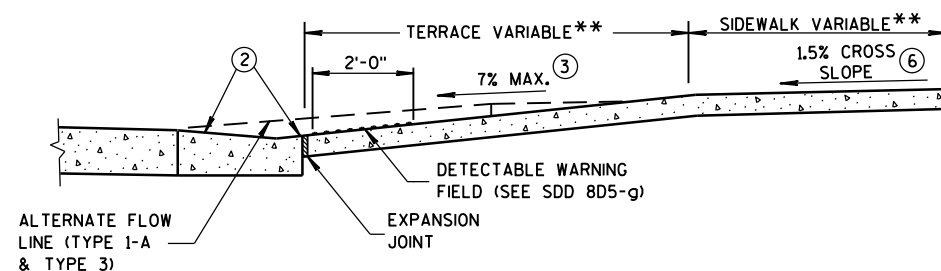
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B

GENERAL NOTES

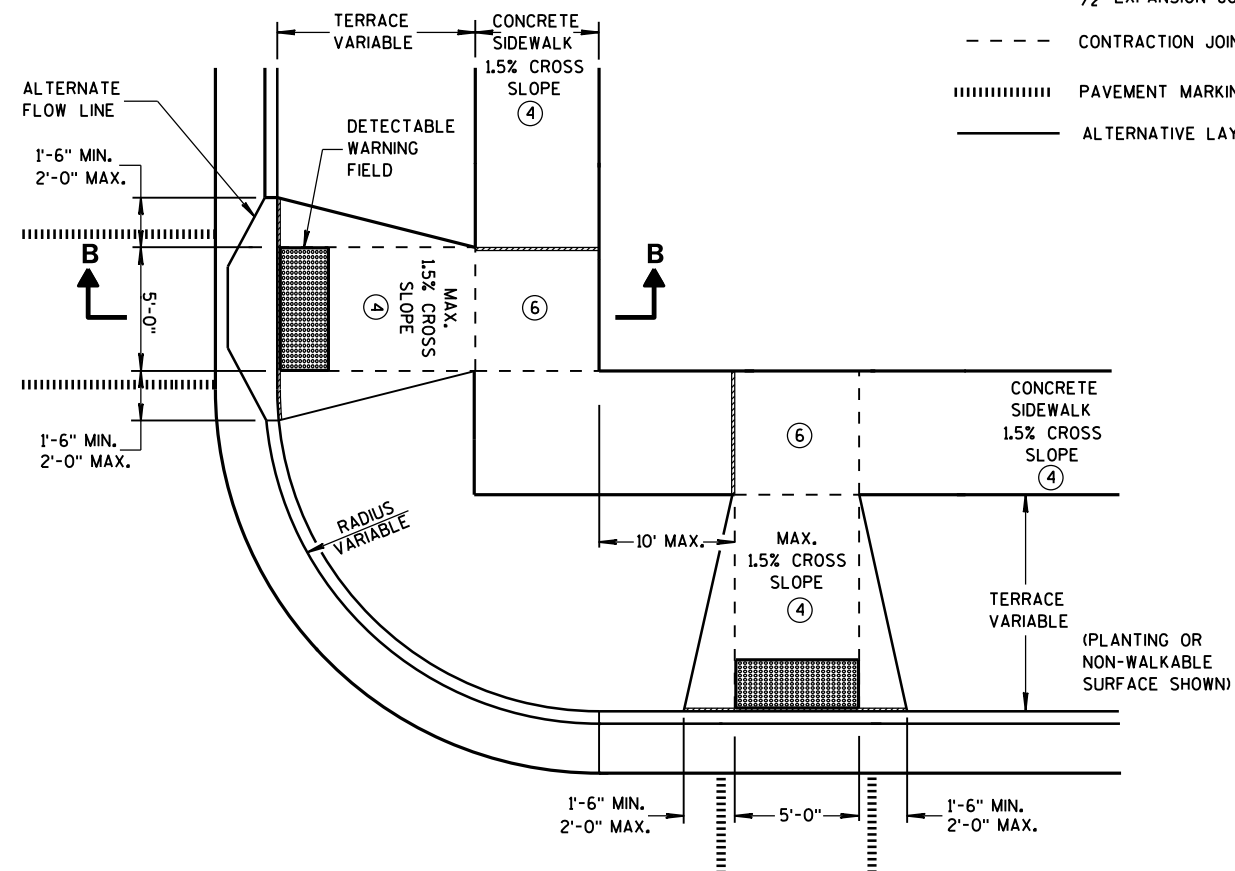
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 805-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

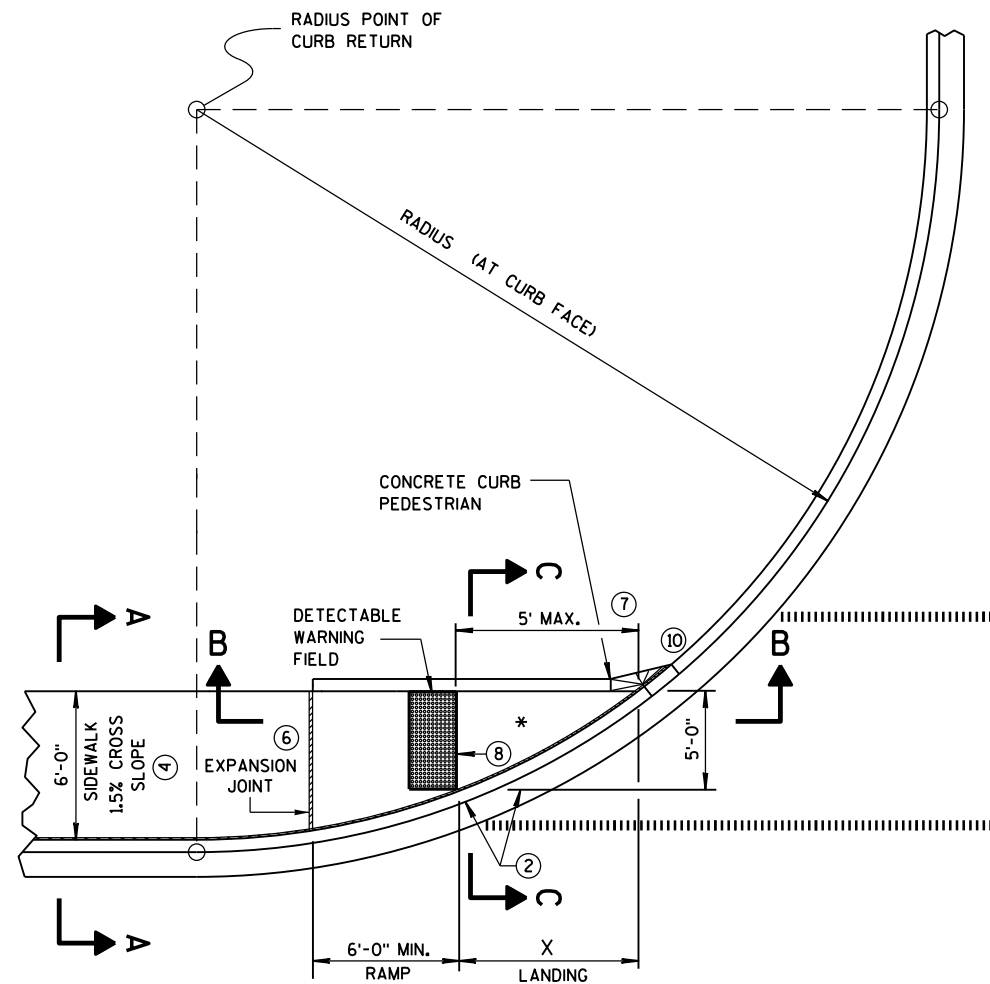
-  1/2" EXPANSION JOINT-SIDEWALK
 CONTRACTION JOINT FIELD LOCATED
 PAVEMENT MARKING CROSSWALK (WHITE)
 ALTERNATIVE LAYOUT



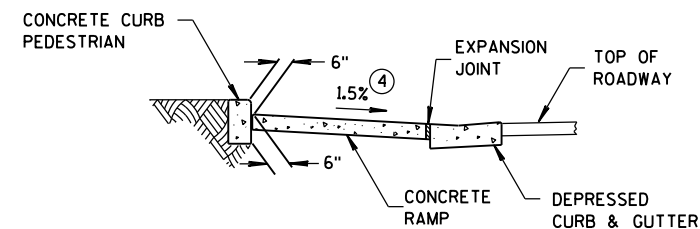
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
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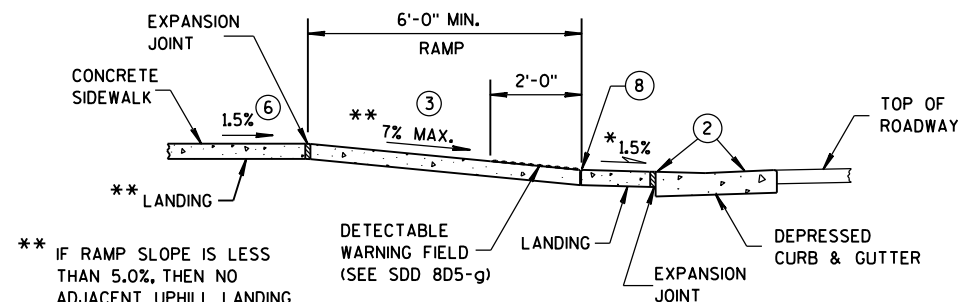


CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A

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

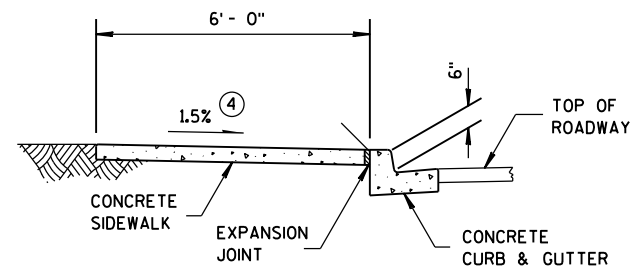


SECTION B-B FOR TYPE 4A

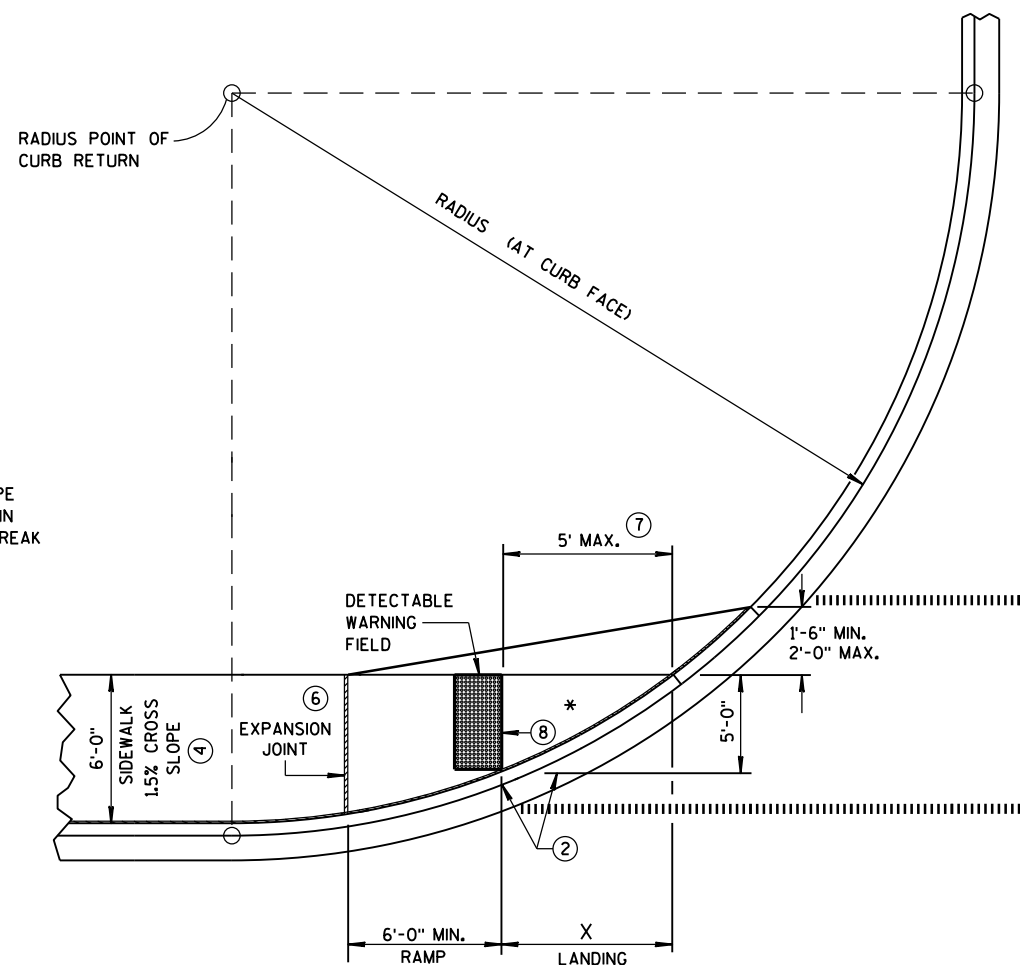
** IF RAMP SLOPE IS LESS
THAN 5.0%, THEN NO
ADJACENT UPHILL LANDING
IS REQUIRED

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



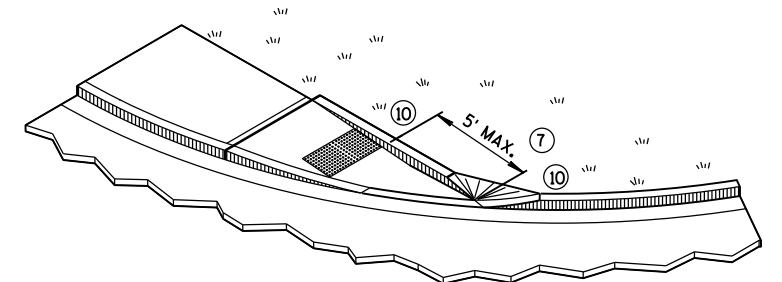
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

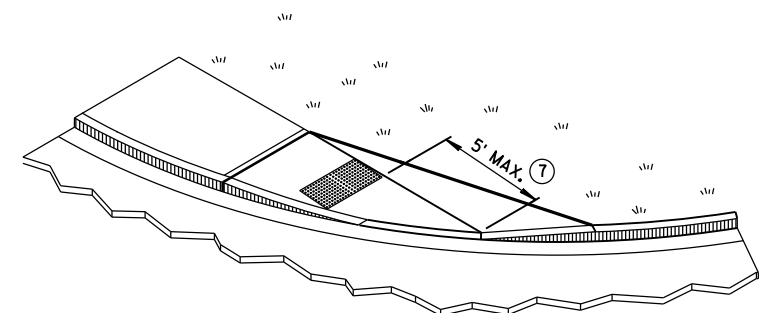
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



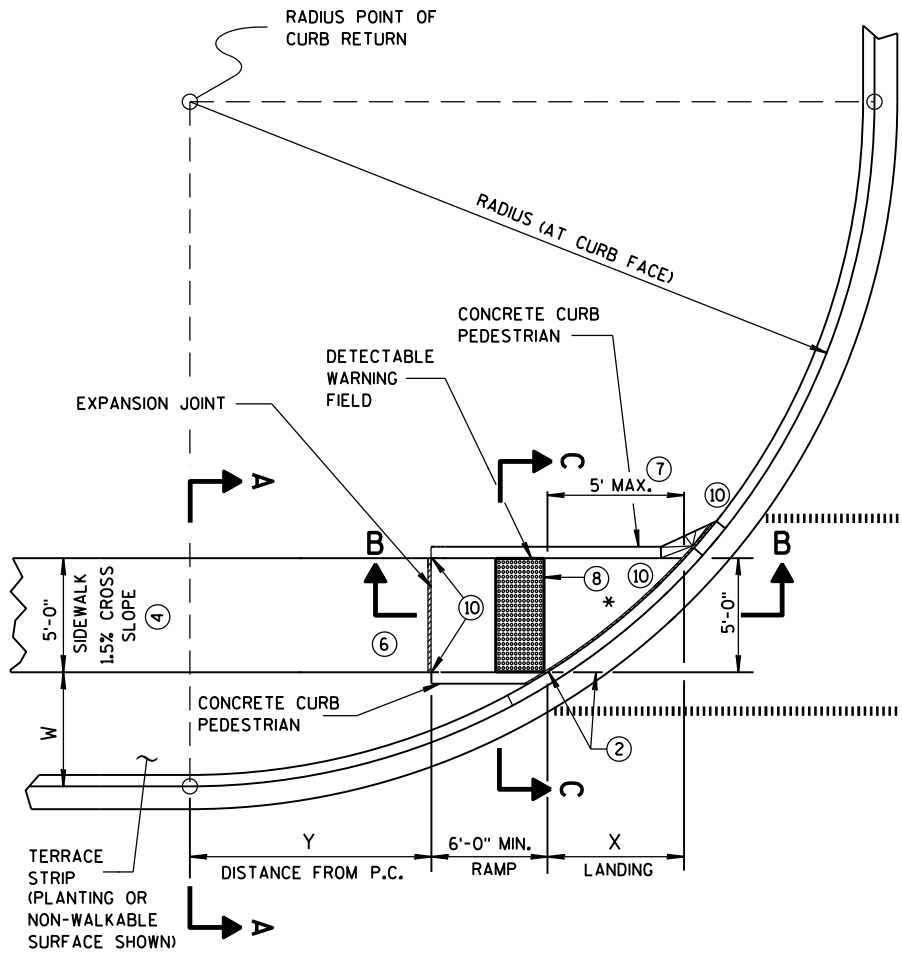
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

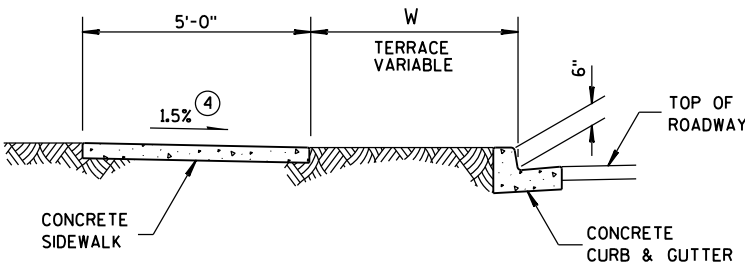
- ½" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

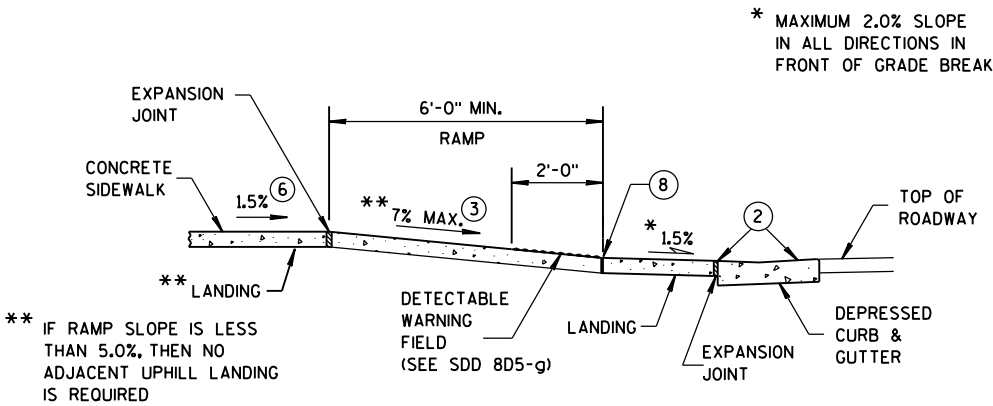
STATE OF WISCONSIN
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**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B



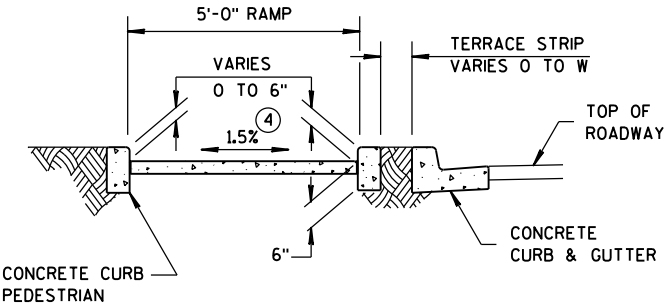
SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10 1/4"	0'-5"	2'-1"	1'-4 1/2"	1'-5"	2'-1"	0'-10"	2'-7 1/2"	0'-3 1/4"	3'-0 1/4"						
15 FEET	4'-6 3/4"	2'-1 3/4"	3'-9"	3'-5 1/4"	3'-1 1/4"	4'-6"	2'-6 3/4"	5'-4 1/2"	2'-1"	6'-1"	1'-8"	6'-8 1/2"	1'-3 1/4"	7'-2 1/2"	0'-10 3/4"	7'-7 1/4"
20 FEET	5'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 1/4"	6'-5 1/2"	3'-8 3/4"	7'-7"	3'-3"	8'-6 1/2"	2'-10"	9'-4 1/2"	2'-5 1/2"	10'-1 1/4"	2'-1 1/4"	10'-9"
30 FEET			6'-9 1/4"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"	4'-5 1/2"	13'-7 3/4"	4'-0 3/4"	14'-8 1/2"	3'-8 1/2"	15'-8 1/4"
40 FEET									6'-1 3/4"	15'-8 1/2"	5'-8"	17'-2"	5'-3"	18'-5 3/4"	4'-10 3/4"	19'-8 1/4"
50 FEET															5'-10 1/4"	23'-2"

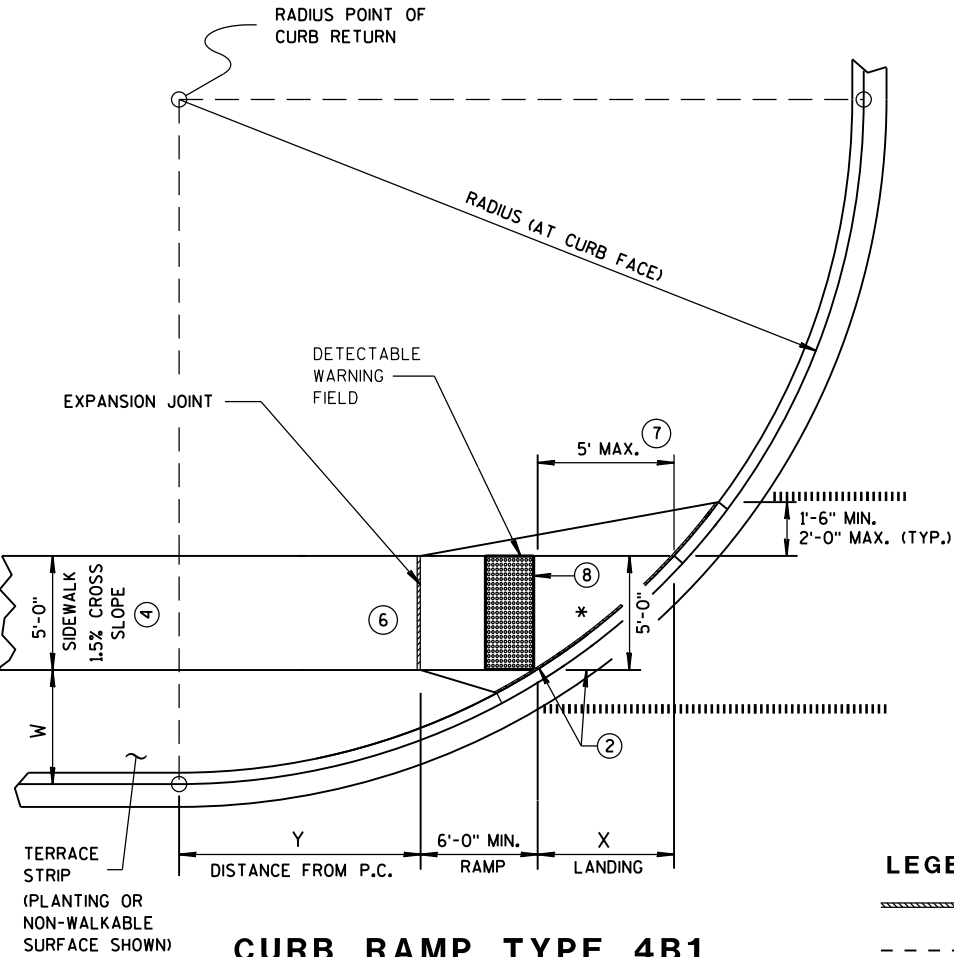
INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

GENERAL NOTES

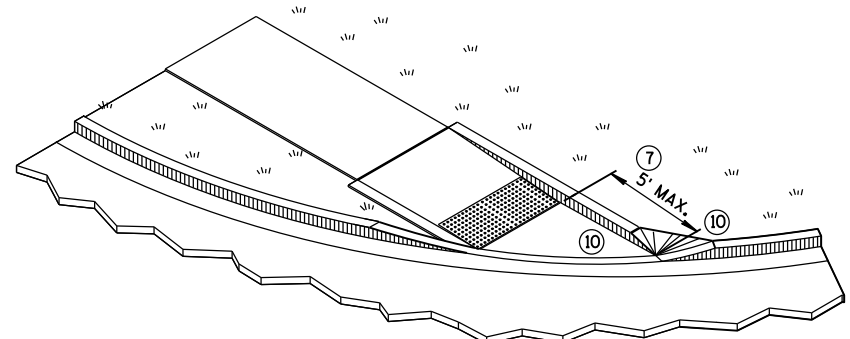
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



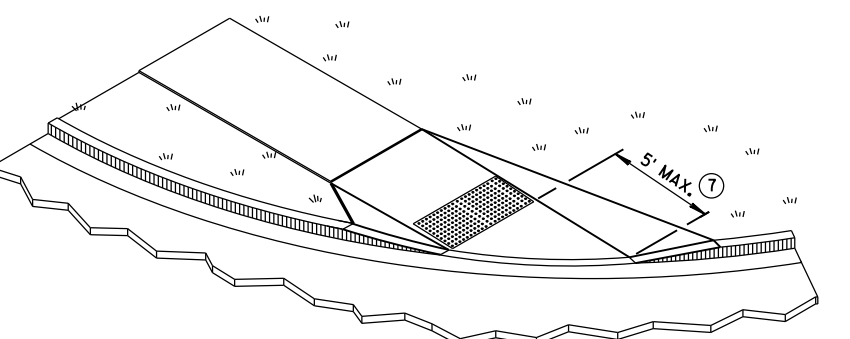
SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

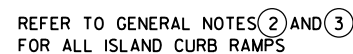
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

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

STATE OF WISCONSIN
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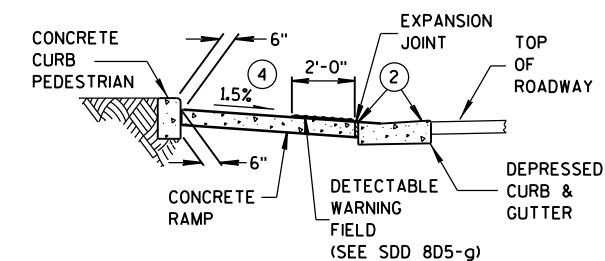
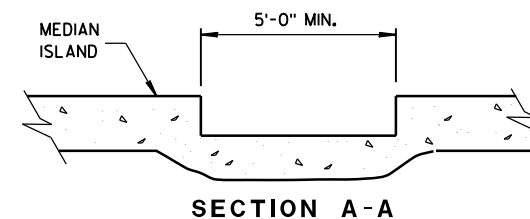


*** DETAILS TO BE DETERMINED
BY DESIGNER



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

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



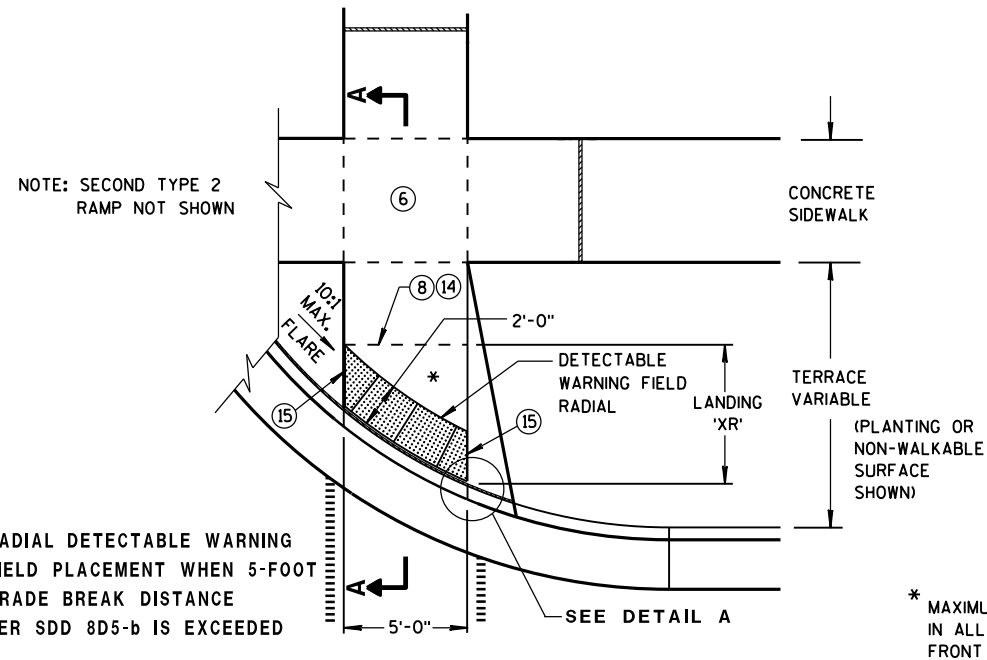
SECTION B-B

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

CURB RAMPS

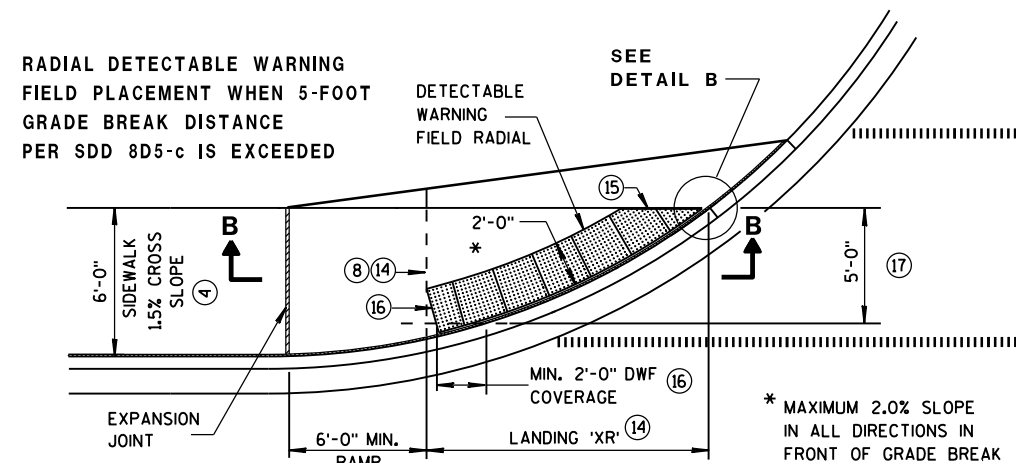
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
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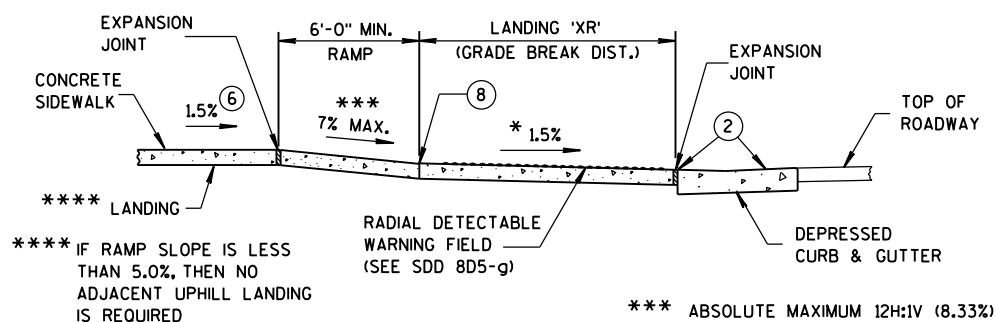
TYPE 2 RAMP PLAN VIEW

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

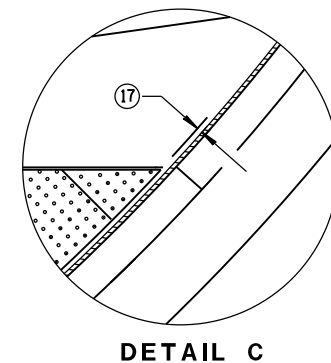
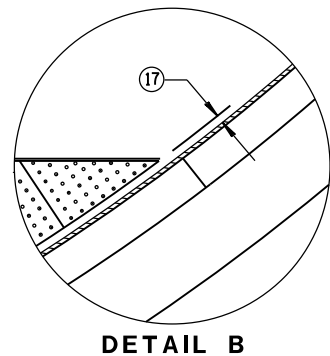
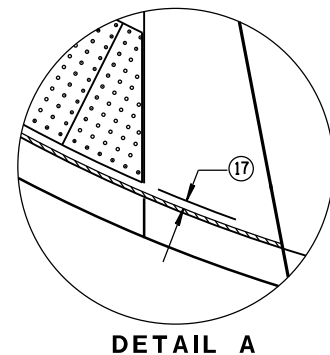
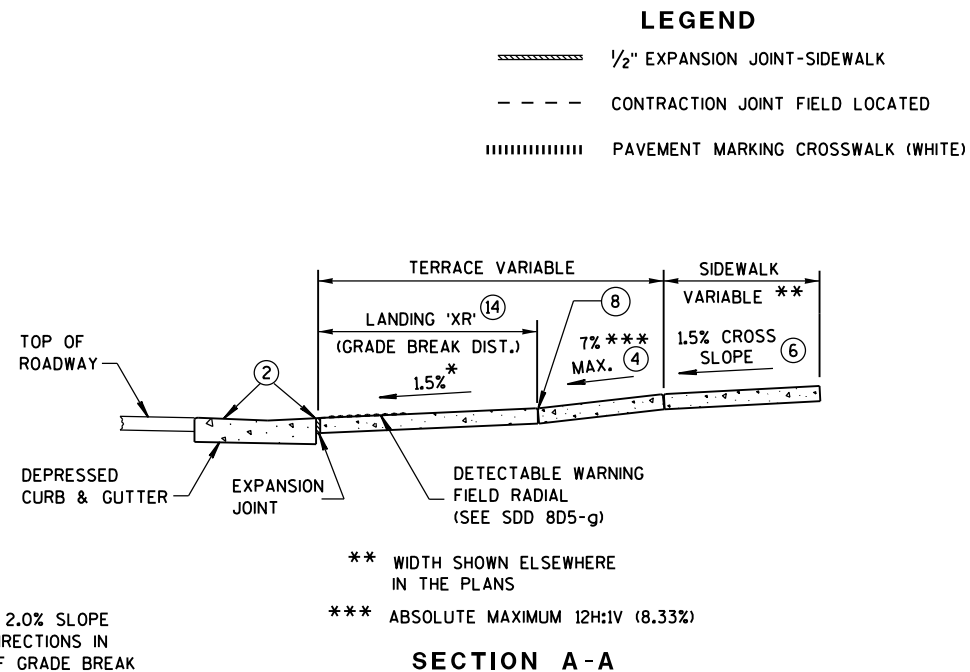


CURB RAMP TYPE 4A1 PLAN VIEW

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

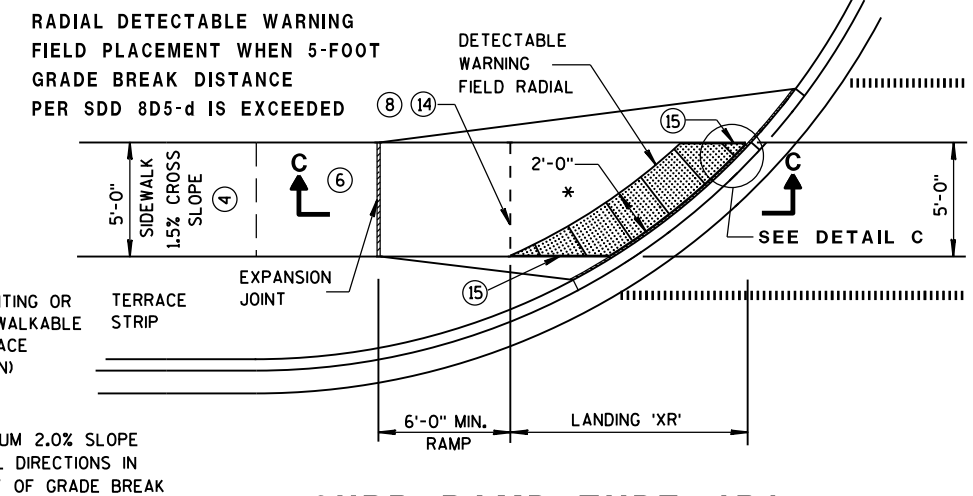


SECTION B-B FOR TYPE 4A1



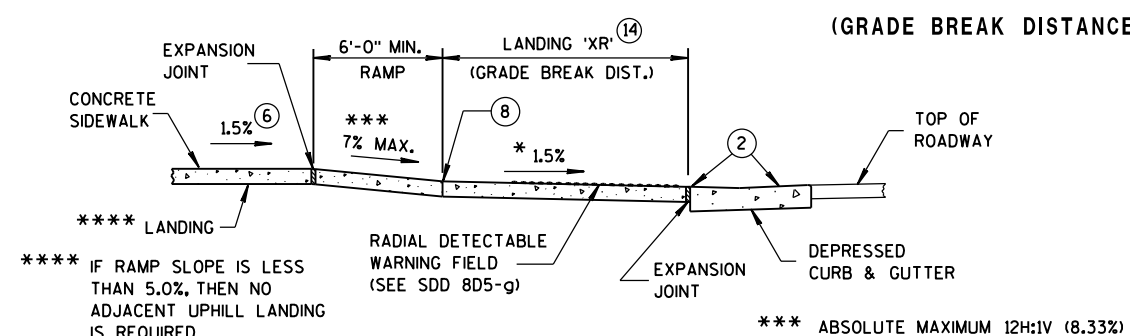
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETECTABLE WARNING FIELDS (DWFs) THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.



CURB RAMP TYPE 4B1 PLAN VIEW

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



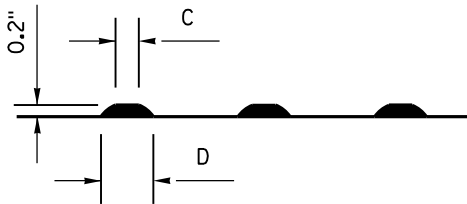
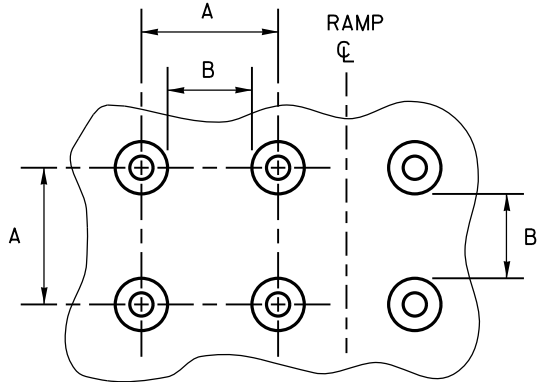
SECTION C-C FOR TYPE 4B1

**CURB RAMPS
RADIAL DETECTABLE WARNING
FIELD APPLICATIONS**

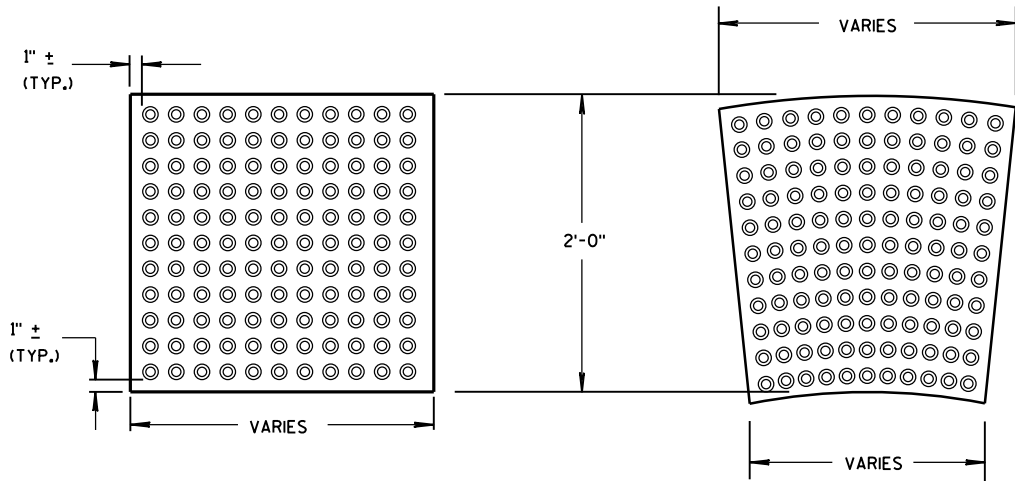
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 171

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

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



TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



PLAN VIEW

GENERAL NOTES

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

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

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

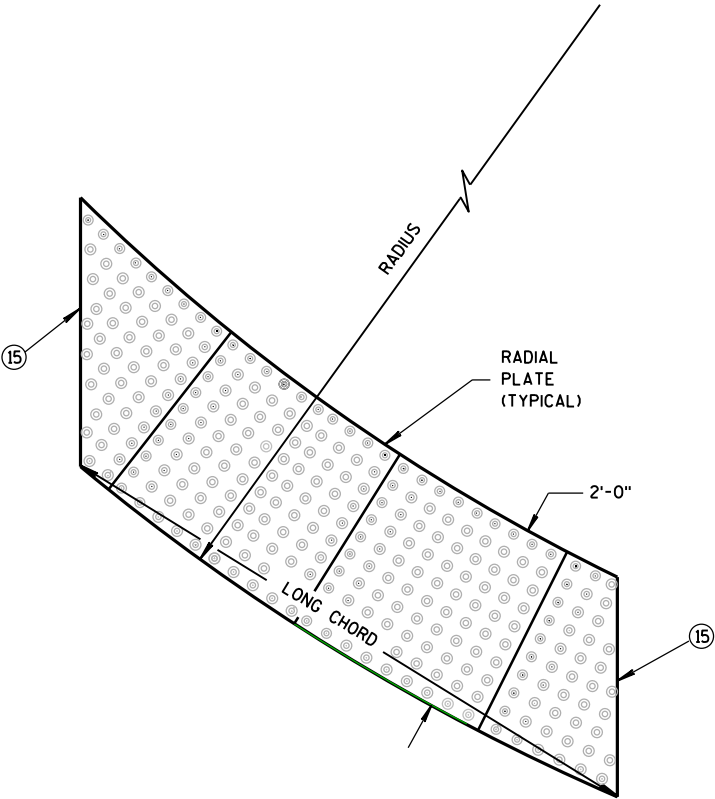
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

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

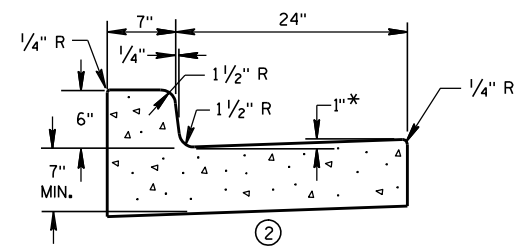
15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



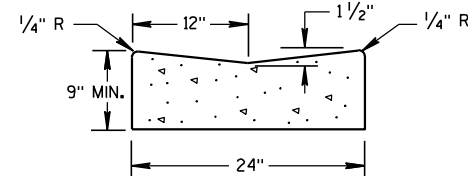
CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

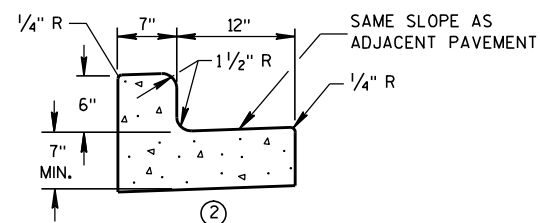
APPROVED
June, 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV 172 ENT
FHWA



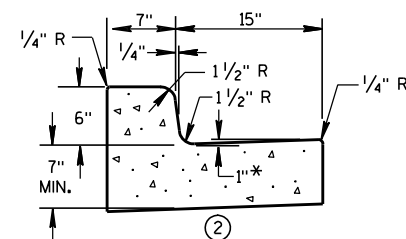
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

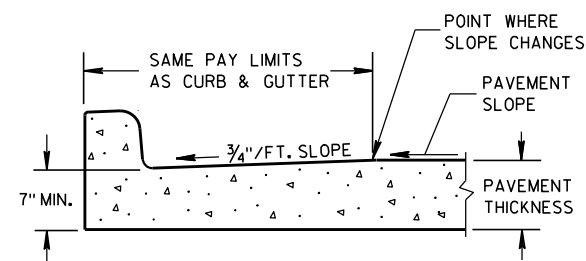


① CONCRETE CURB & GUTTER 19"

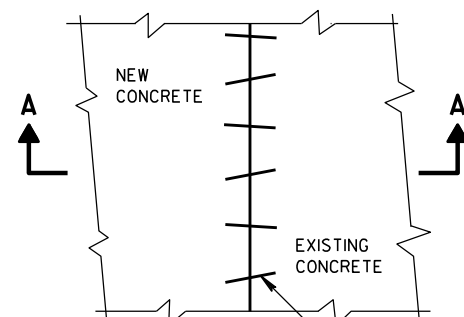


① CONCRETE CURB & GUTTER 22"

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



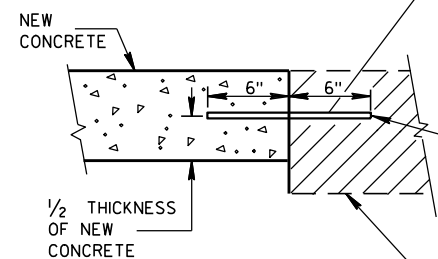
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



PLAN VIEW

EXISTING AND NEW CONCRETE MAY BE CURB & GUTTER, SURFACE DRAIN, PAVEMENT OR OTHER CONCRETE STRUCTURE.

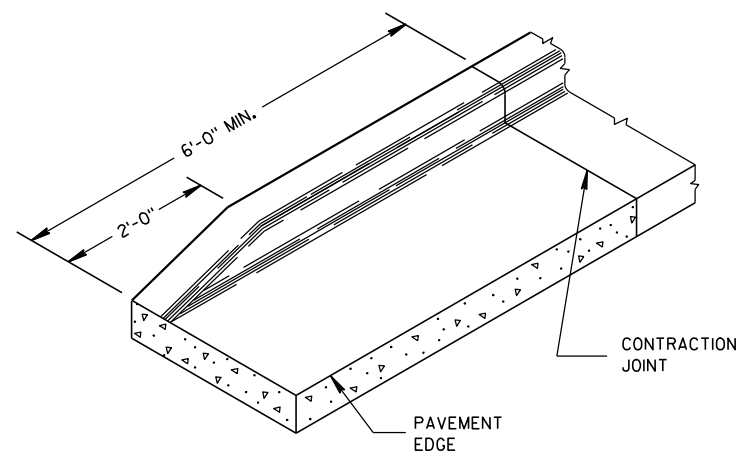
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



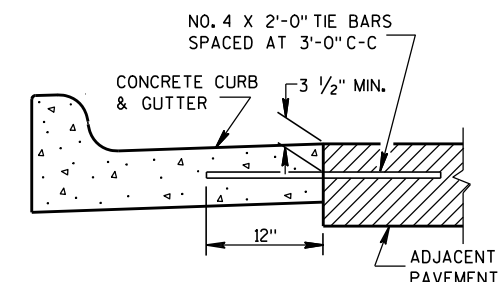
SECTION A-A
PAVEMENT TIES

THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

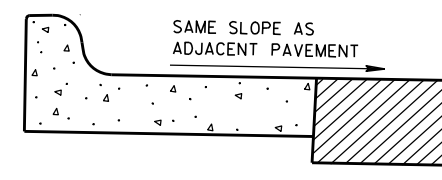
EXISTING CONCRETE



END SECTION CURB & GUTTER



① TYPICAL TIE BAR LOCATION



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

GENERAL NOTES

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

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

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

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

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

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/2/2010

DATE

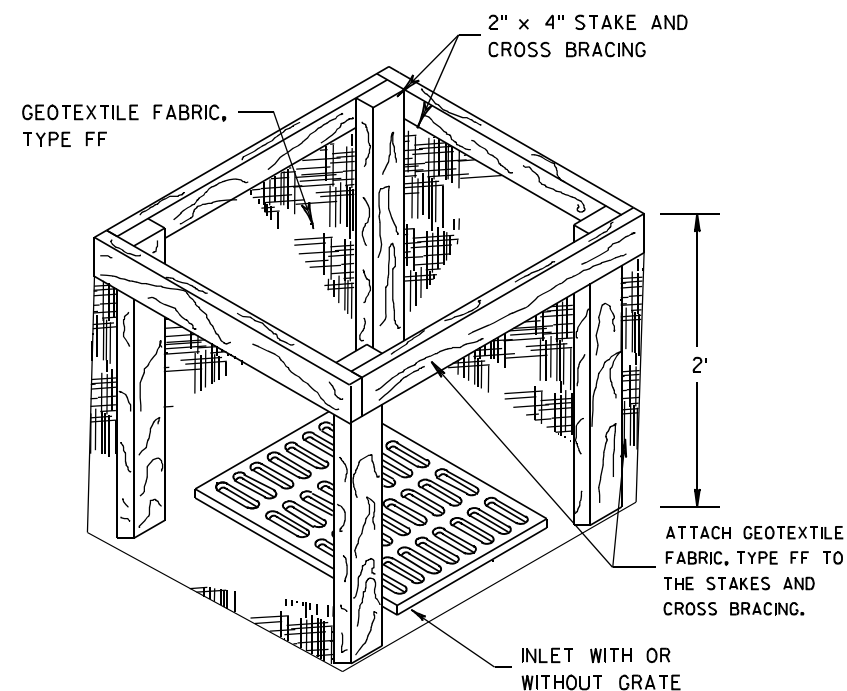
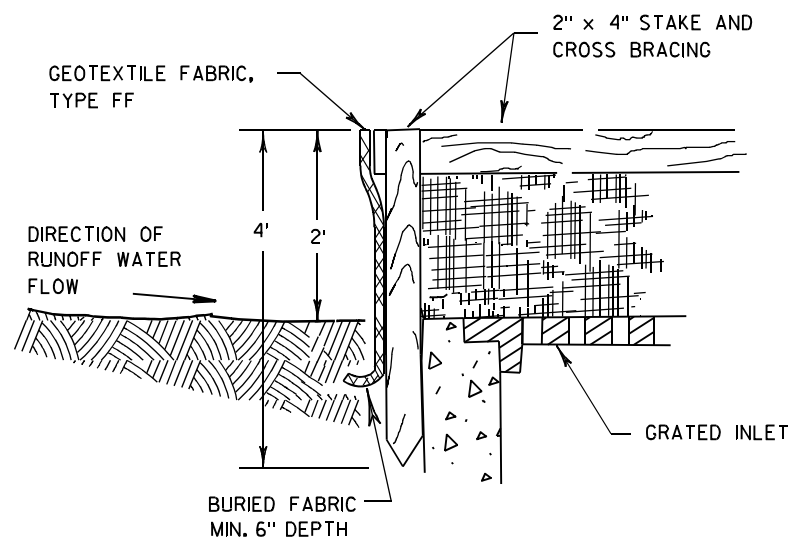
FHWA

/S/ Jerry Zonn

ROADWAY STANDARDS 173

ENGINEER

ENT



INLET PROTECTION, TYPE A

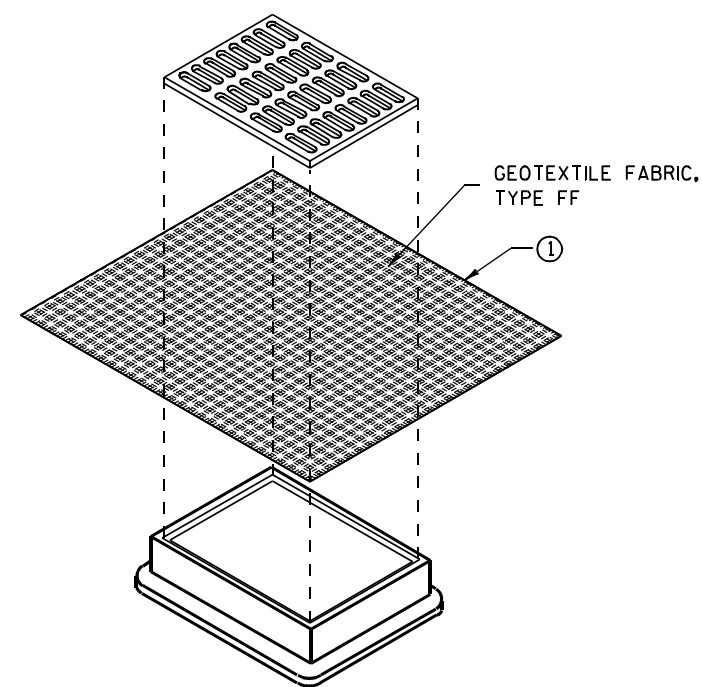
GENERAL NOTES

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

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

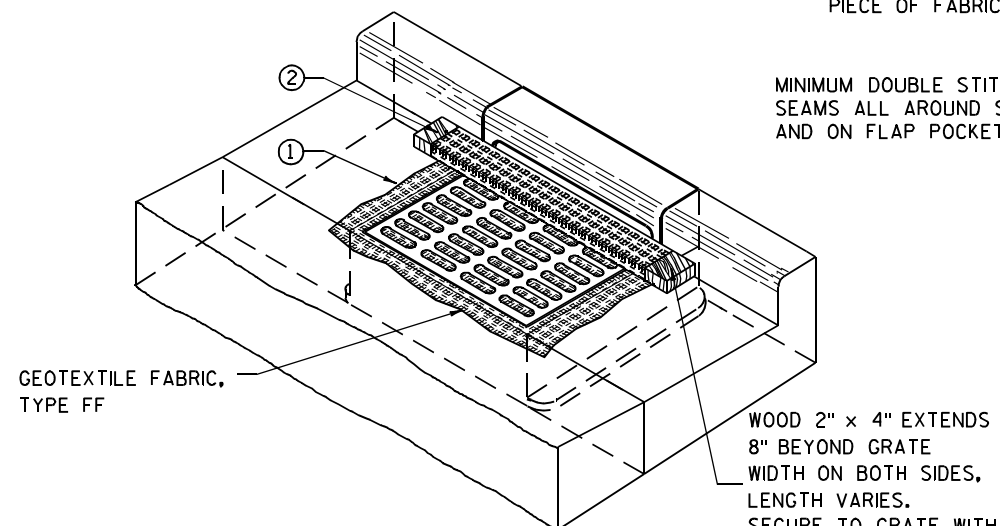
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

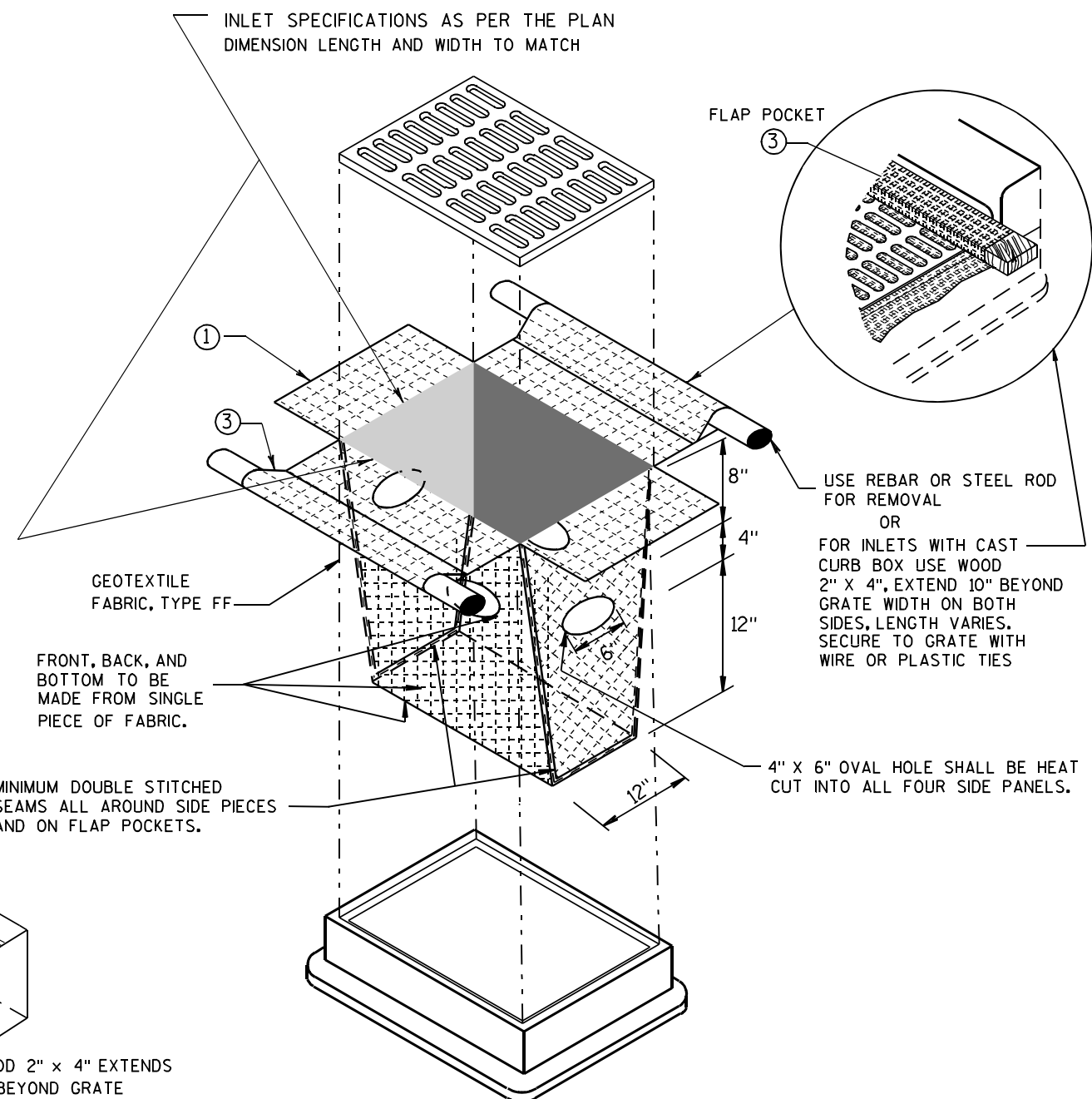
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



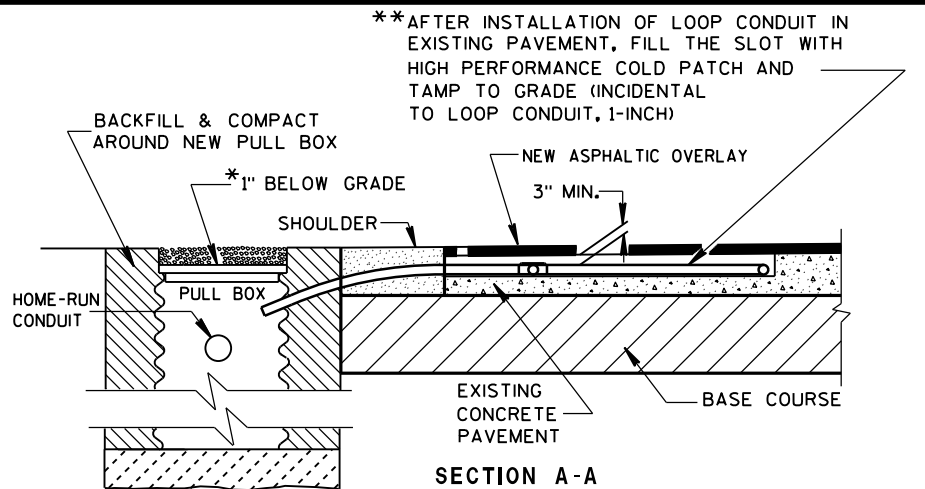
INLET PROTECTION, TYPE D

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

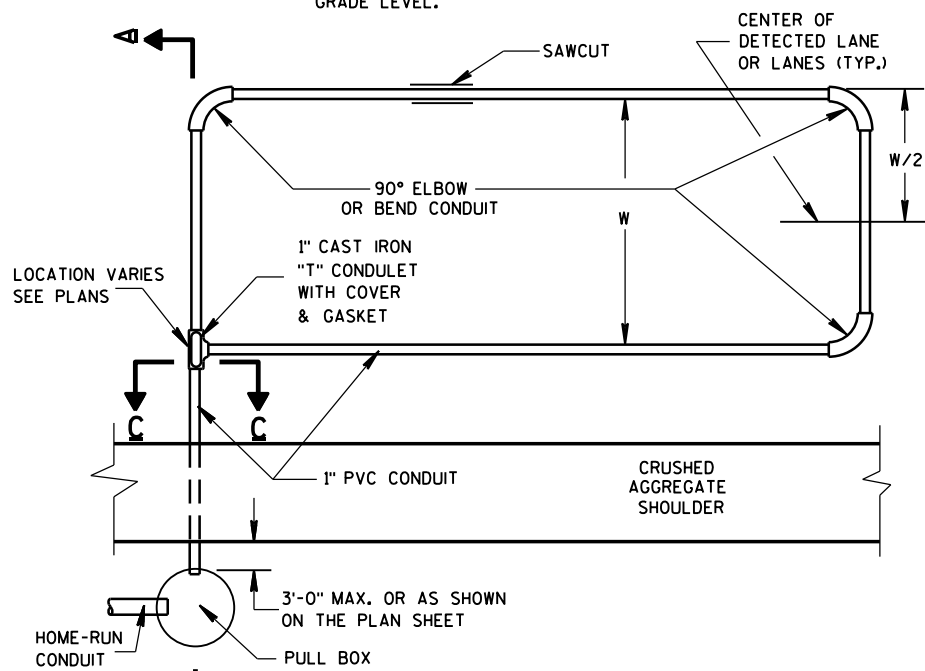
APPROVED
10/16/02 /S/ Beth Connolly
DATE 174
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



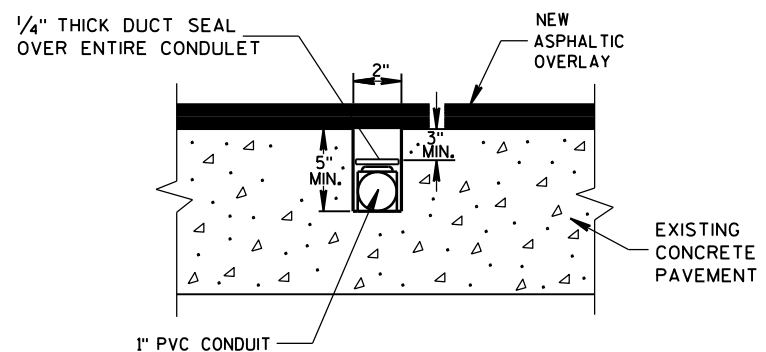
SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

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



TYPICAL PLAN OF LOOP DETECTOR



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT DETAIL

GENERAL NOTES

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

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

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

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

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

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

IN THE EVENT EPOXY IS USED AS A LOOP SLOT FILLER, THE SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION.

BEFORE PLACING THE 1 INCH CONDUIT IN THE CLEANED OUT SLOT, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

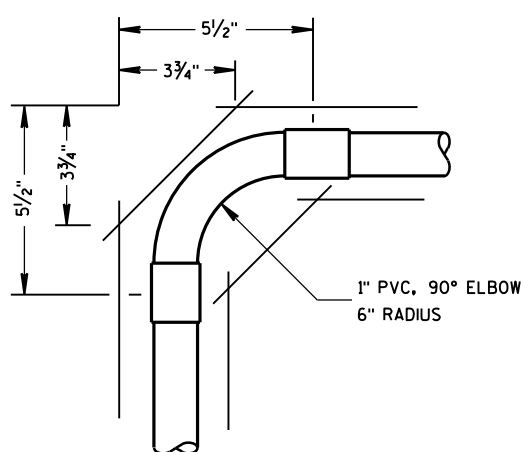
LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

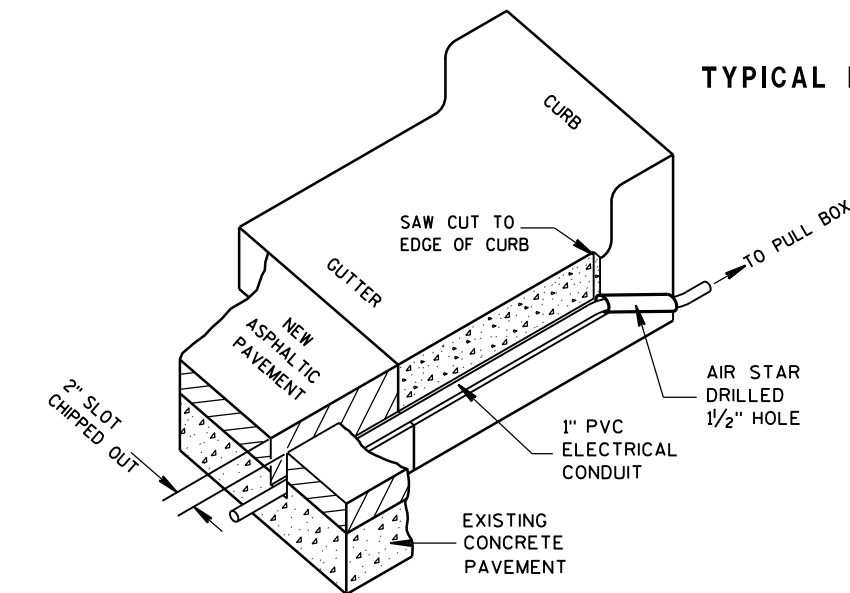
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

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

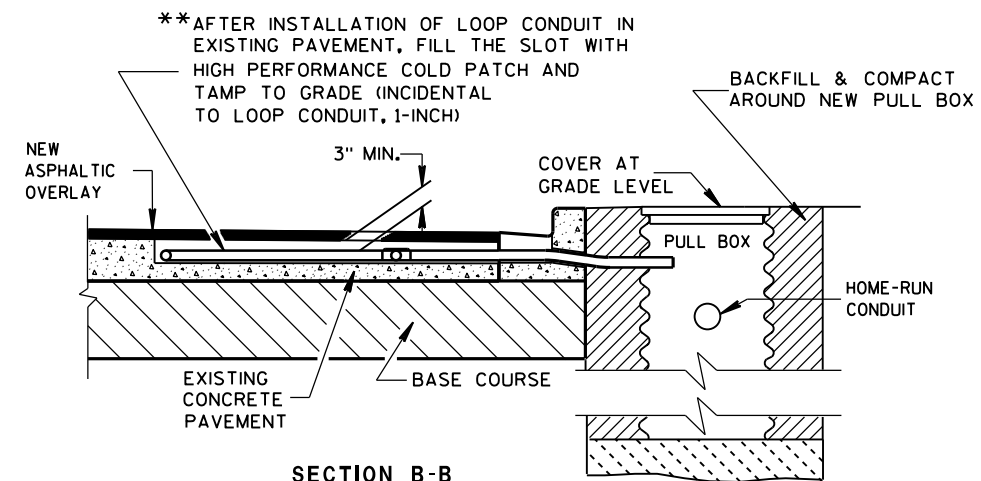
** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".



TOP VIEW
CORNER SAW SLOT DETAIL

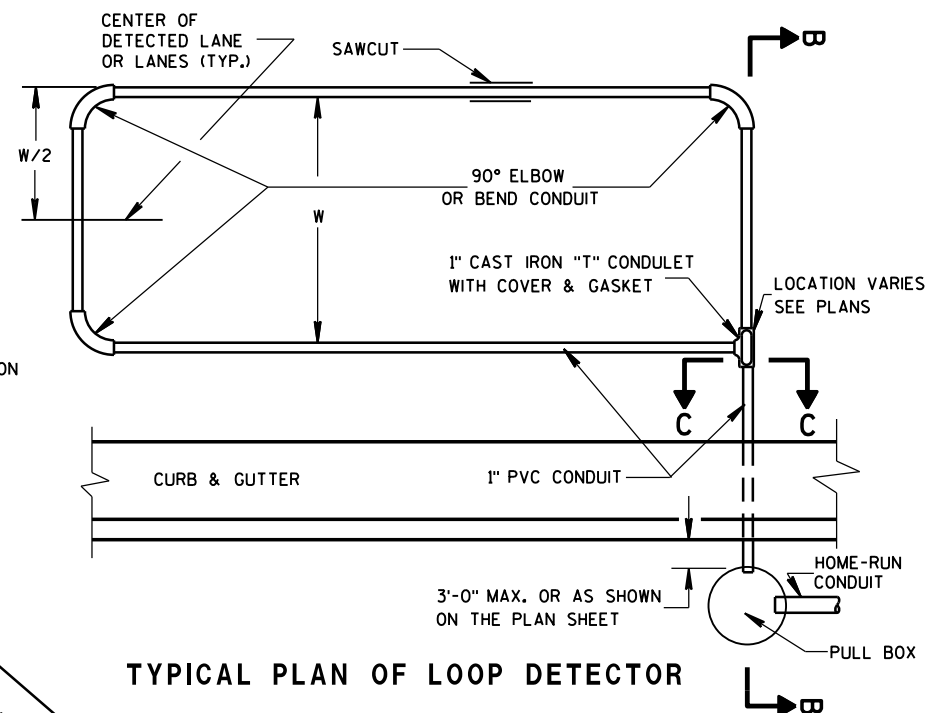


ISOMETRIC VIEW
TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

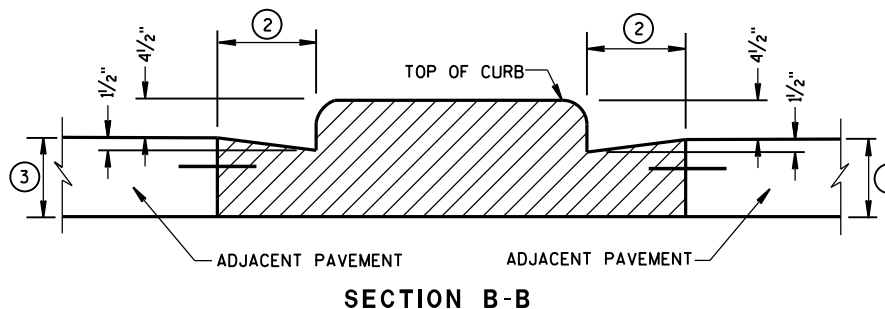
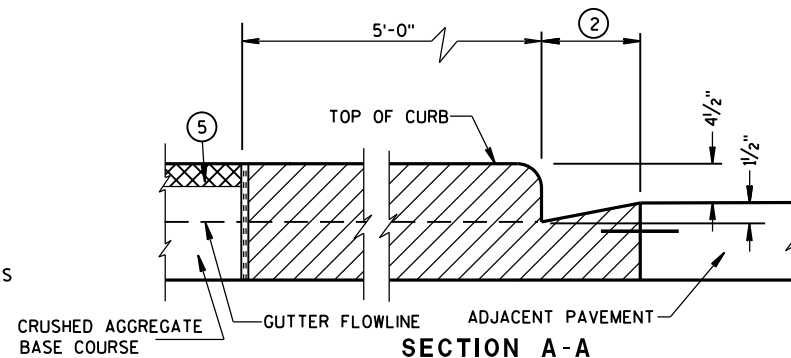
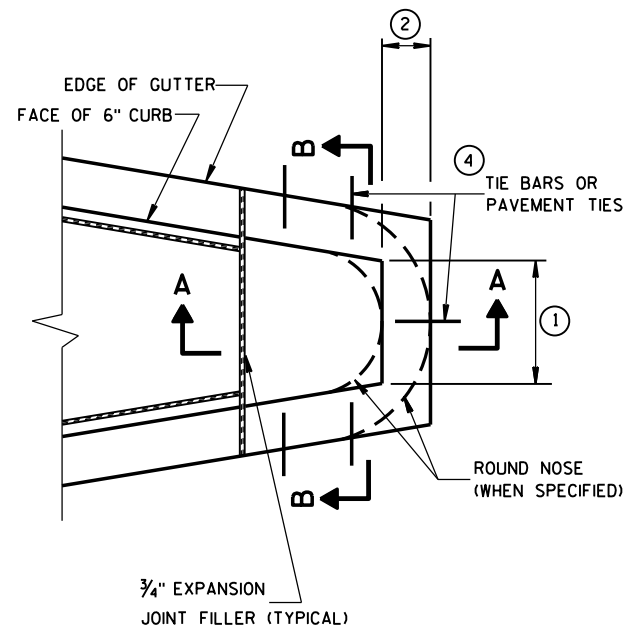
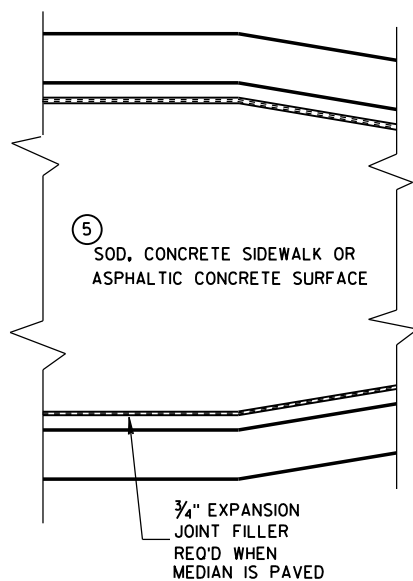


TYPICAL PLAN OF LOOP DETECTOR

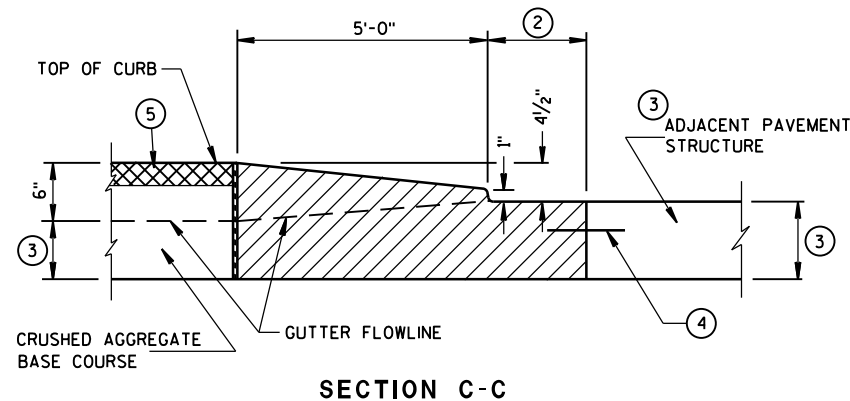
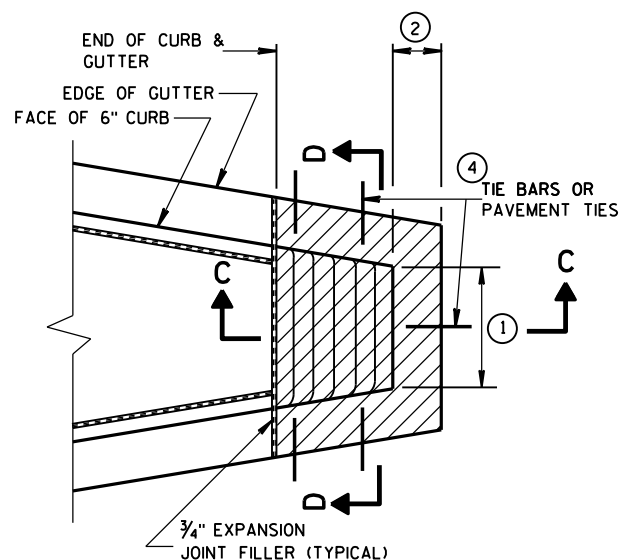
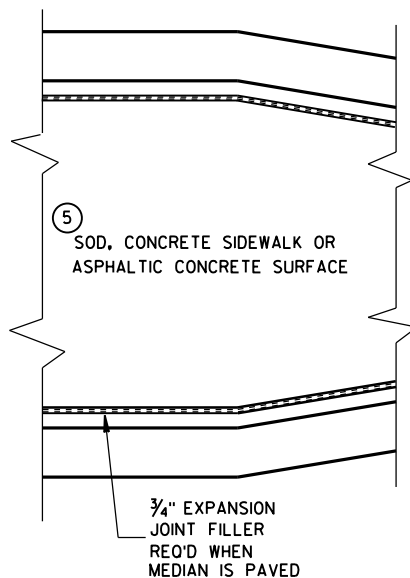
LOOP DETECTOR INSTALLED IN
EXISTING CONCRETE PAVEMENT
WITH NEW ASPHALTIC OVERLAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

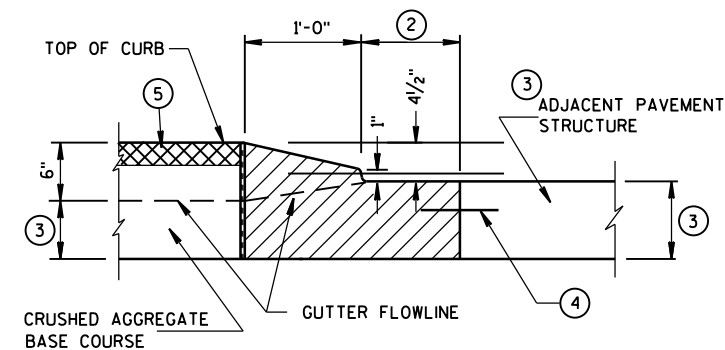
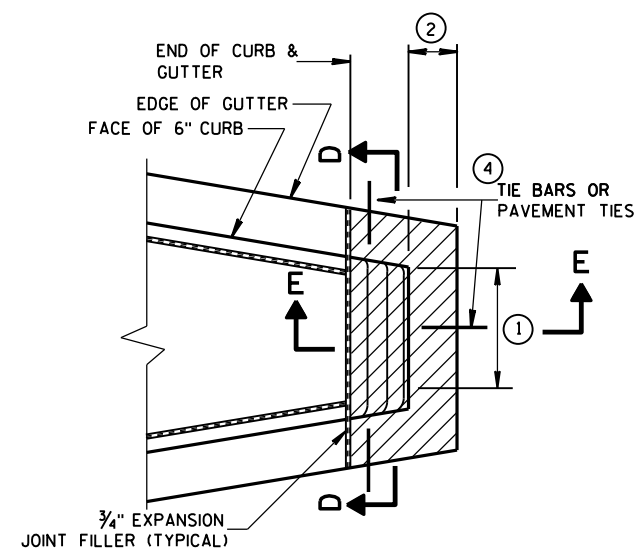
APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL 175
FHWA



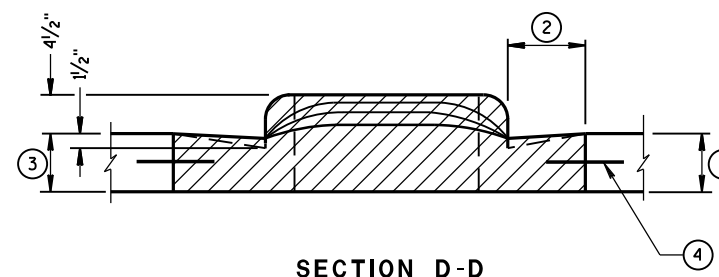
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



GENERAL NOTES

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

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

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

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

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

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006

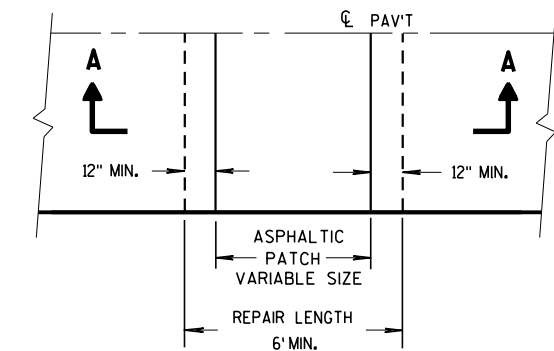
DATE

FHWA

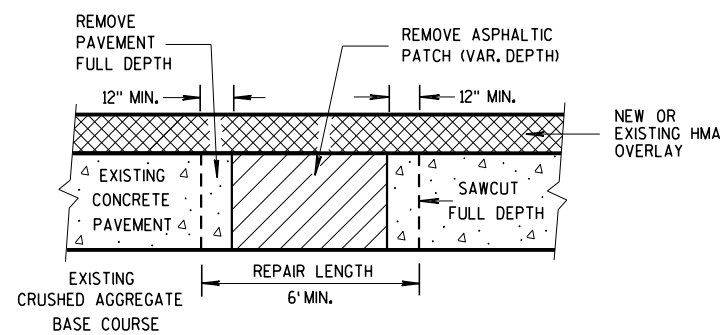
/S/ Jerry H. Zoag
ROADWAY STANDARDS & ENGINEER

176

4T

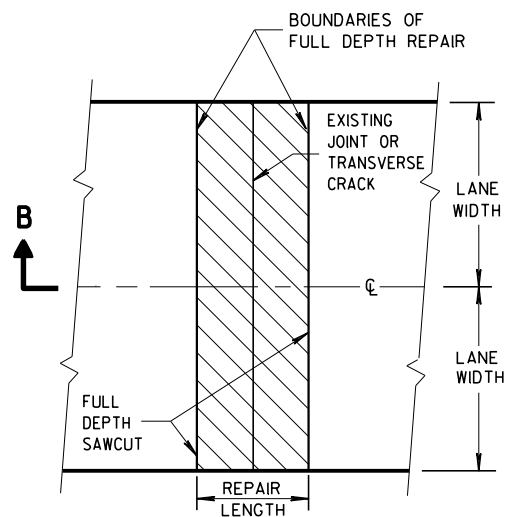


PLAN VIEW

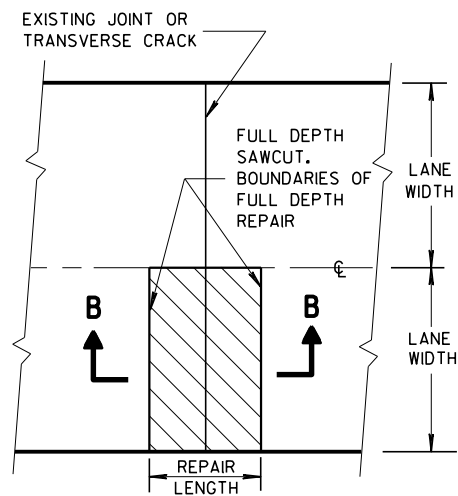


SECTION A-A

HMA PATCH REMOVAL



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

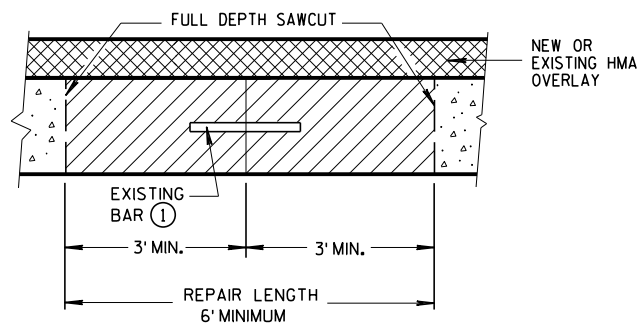
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

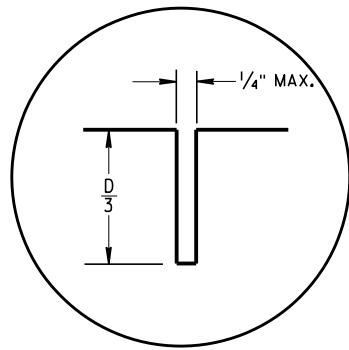
① DOWEL BARS MIGHT NOT EXIST.



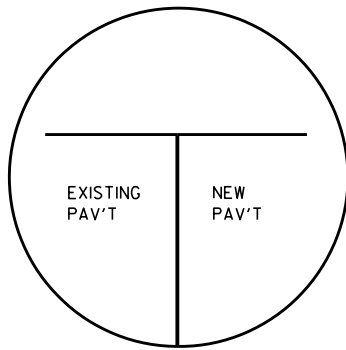
SECTION B-B
CONCRETE REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

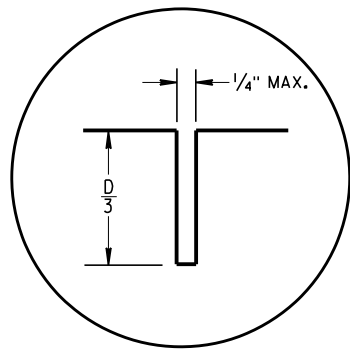


C1

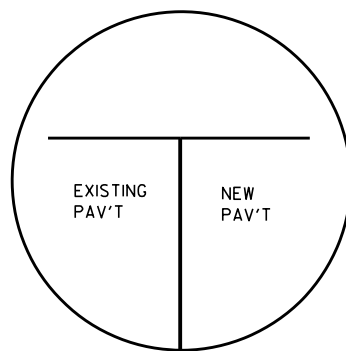


C2

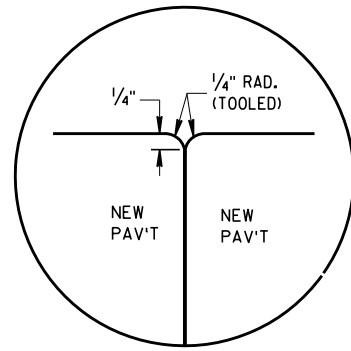
TRANSVERSE JOINTS



L1

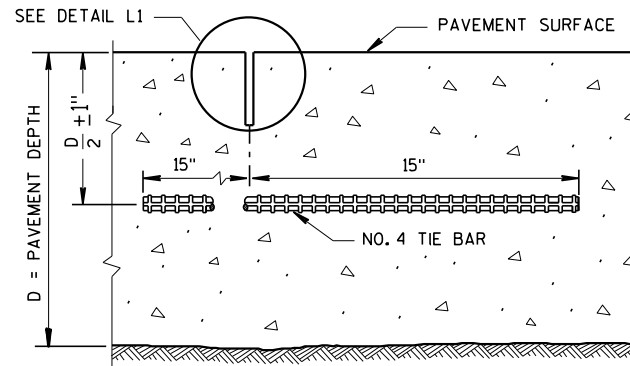


L2

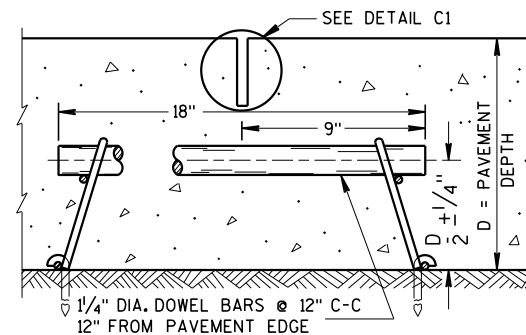


L3

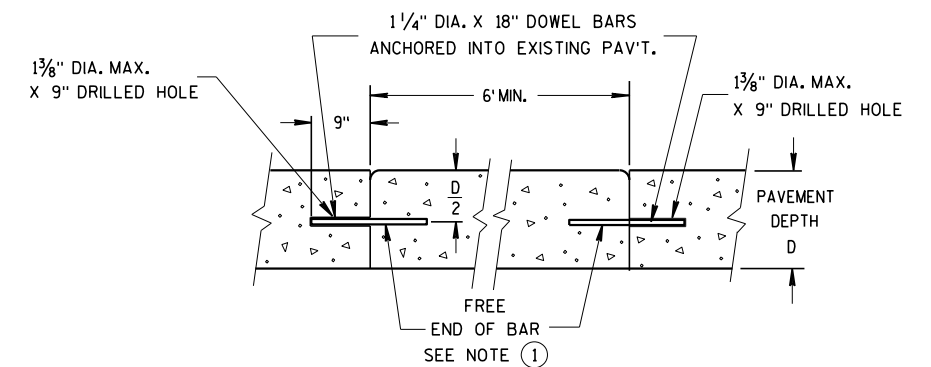
LONGITUDINAL JOINTS



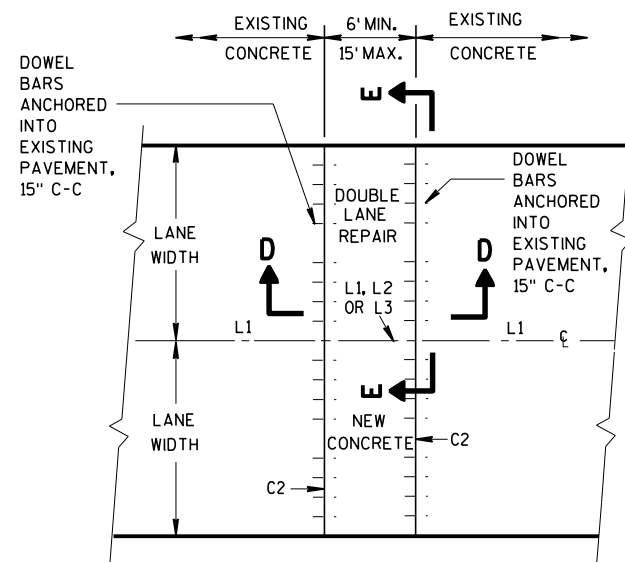
SECTION C-C
SAWED LONGITUDINAL JOINT



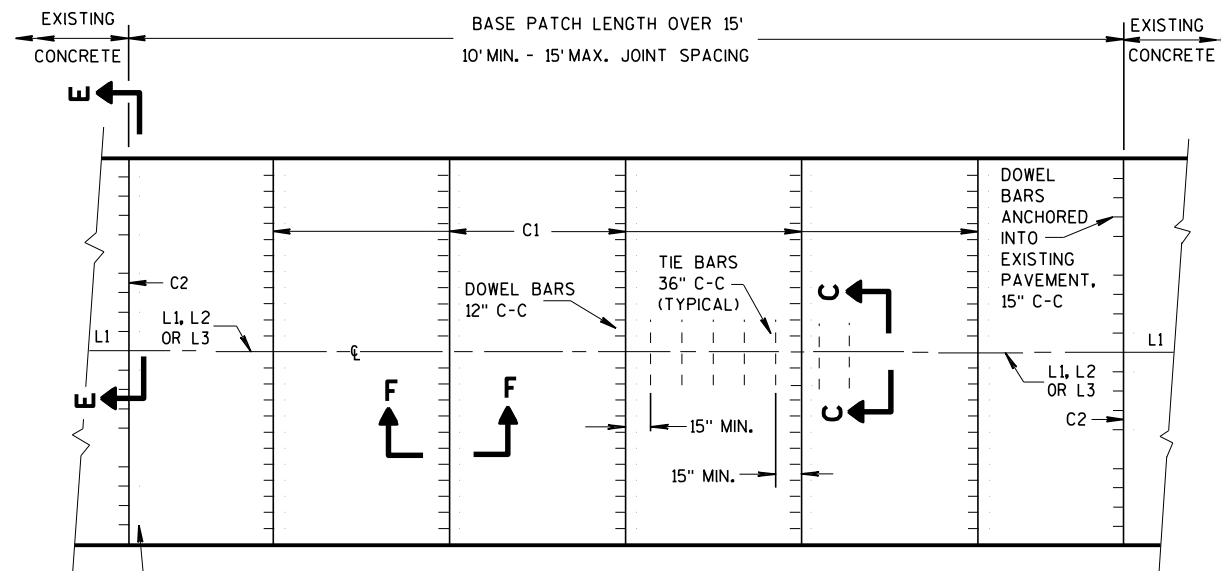
SECTION F-F
CONTRACTION JOINT



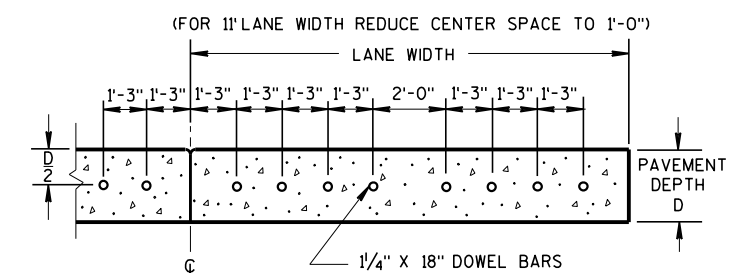
SECTION D-D



PLAN VIEW
MULTI-LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW
MULTI-LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH



SECTION E-E
SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

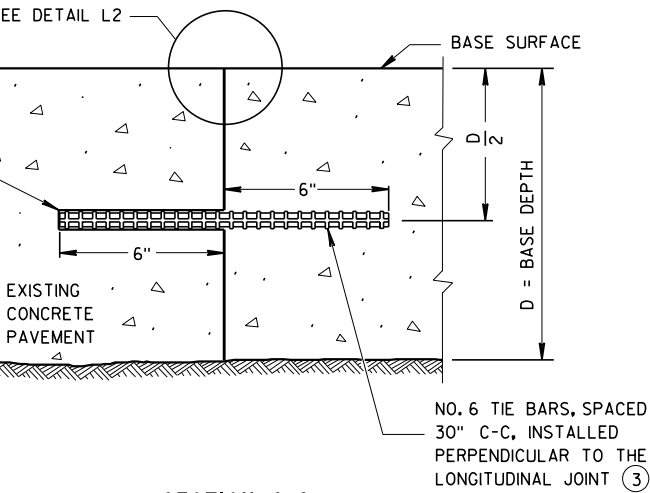
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

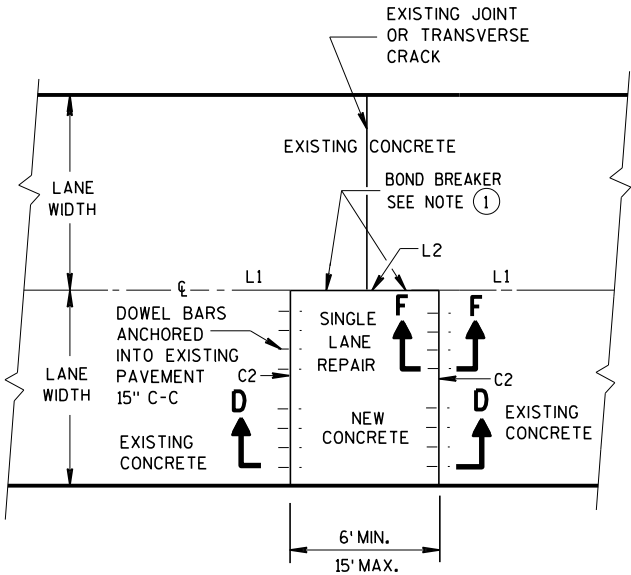
① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



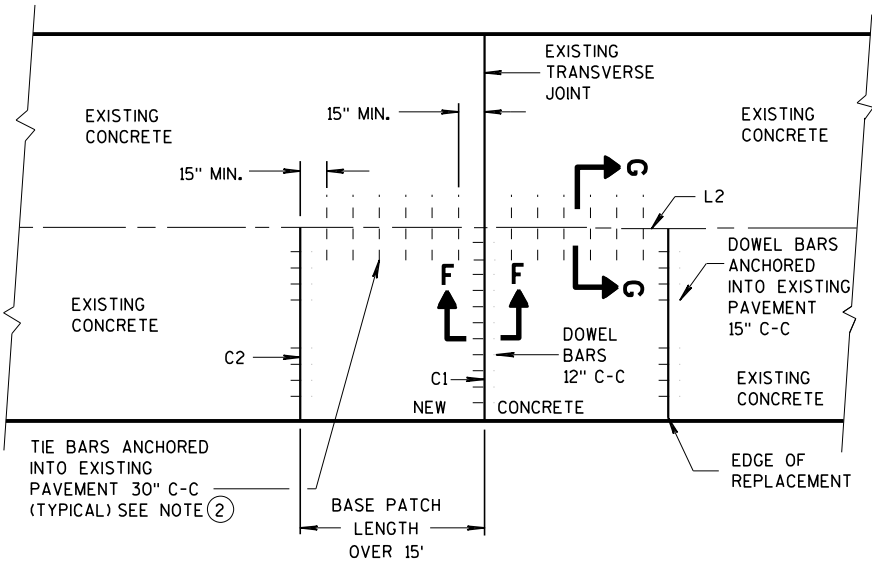
SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT

GENERAL NOTES

- ① USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.
- ② WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ③ ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH

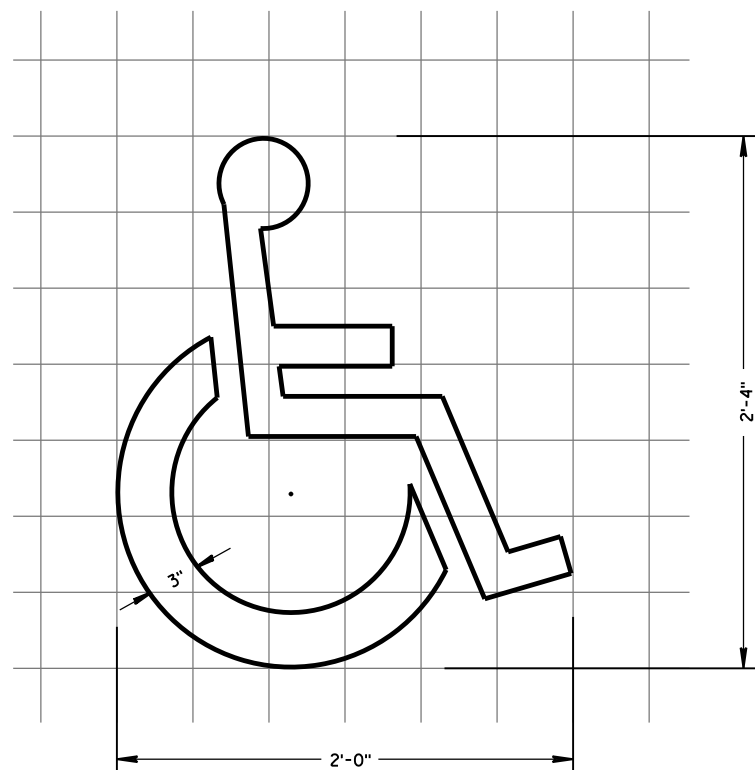


PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH

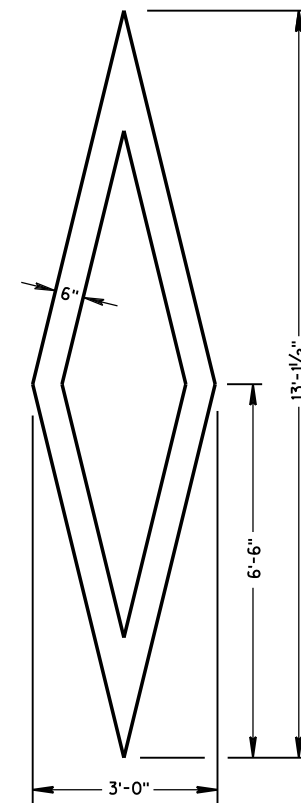
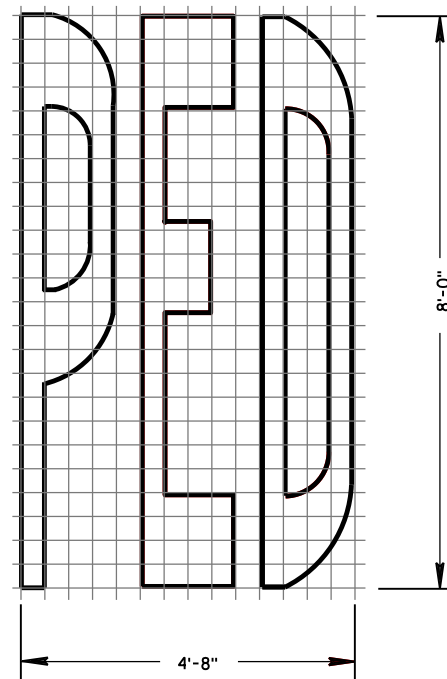
BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPER 179
FHWA



HANDICAP SYMBOL

PREFERENTIAL
LANE SYMBOL**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 SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

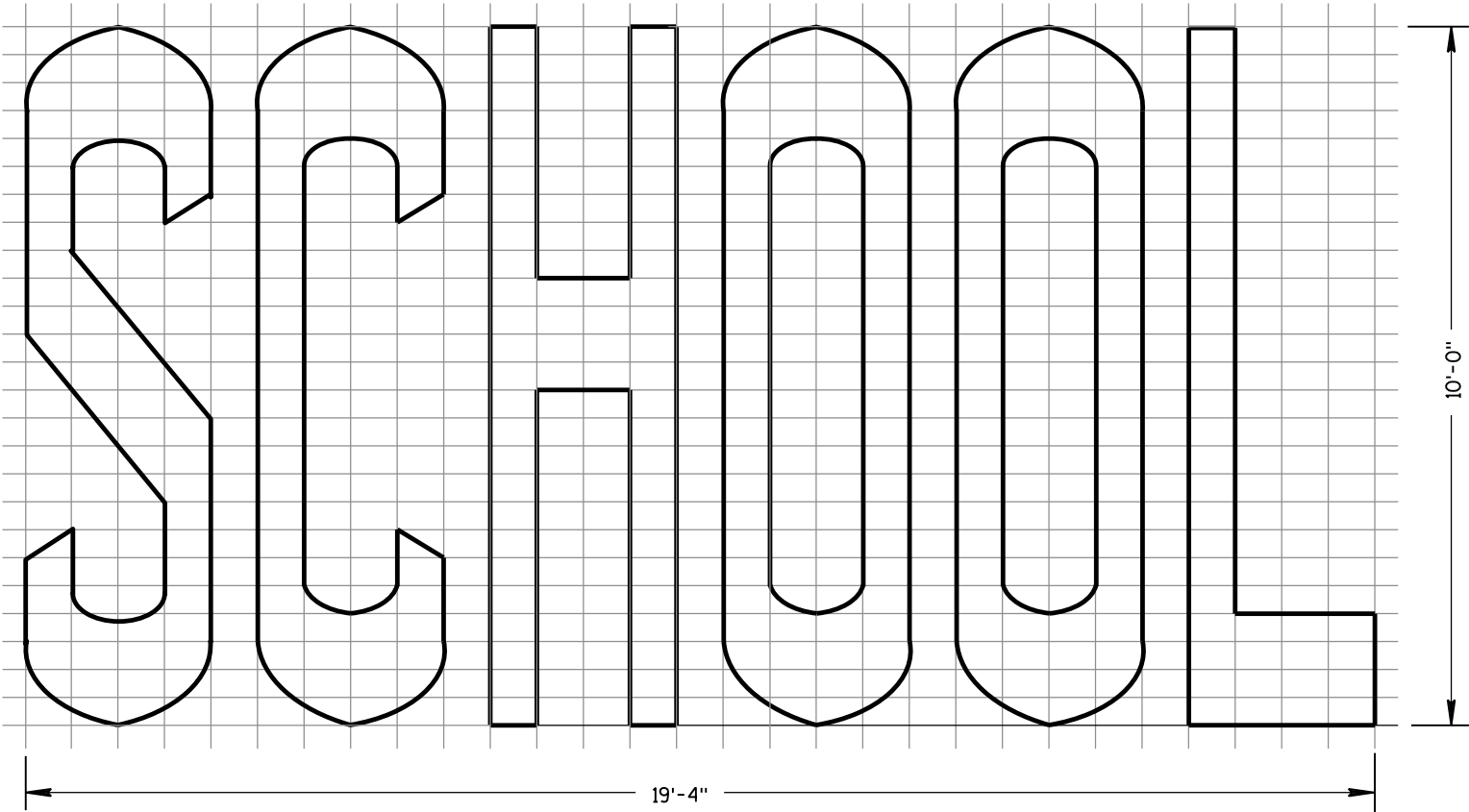
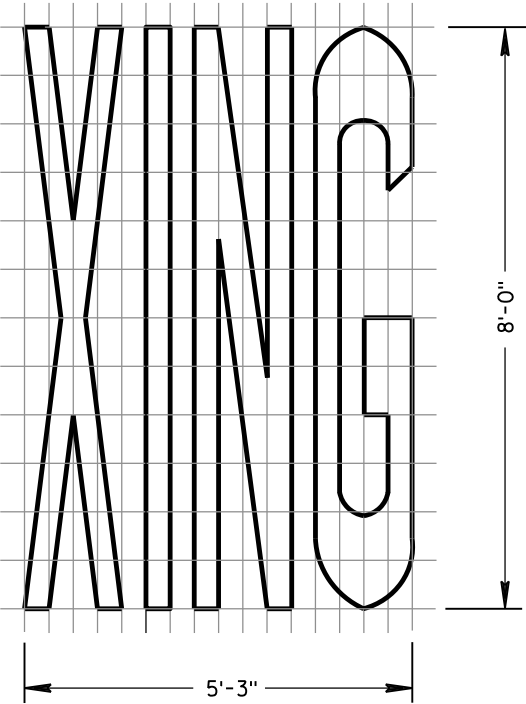
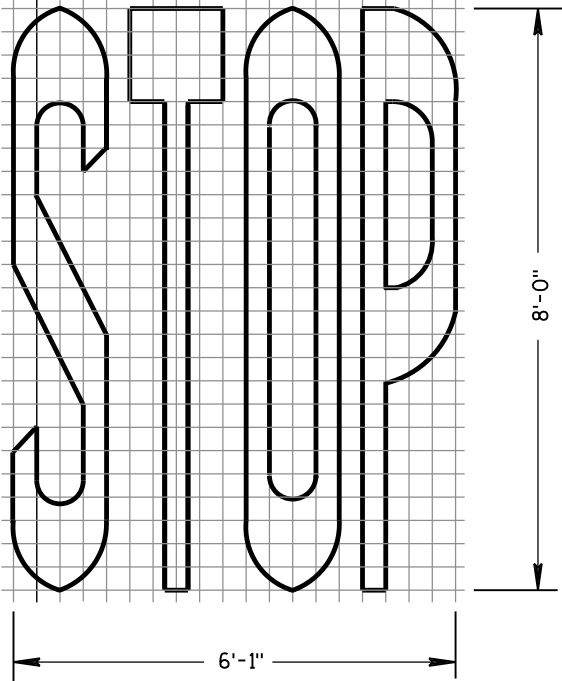
APPROVED

June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARK 180 EER

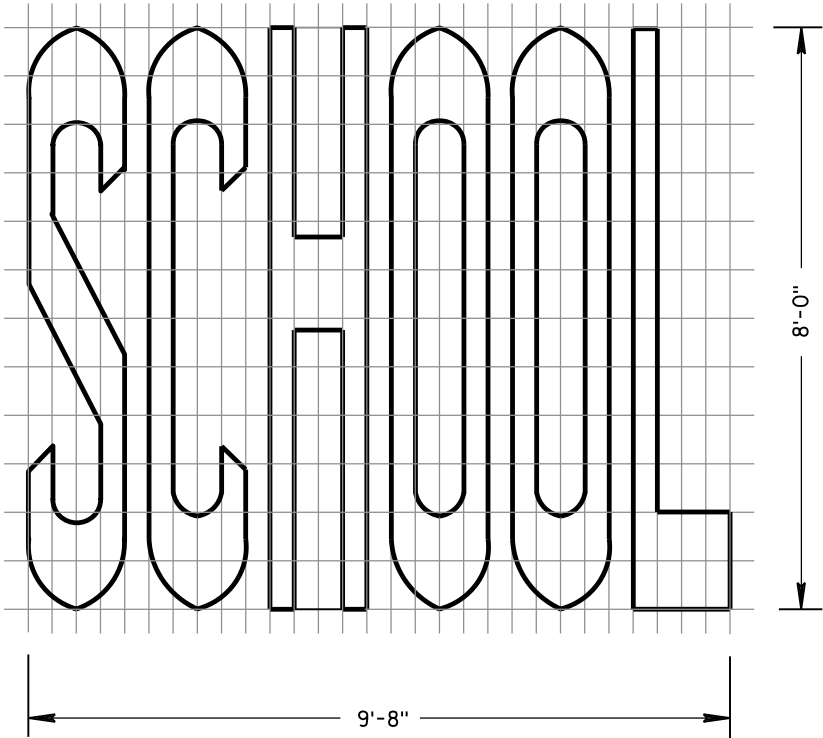
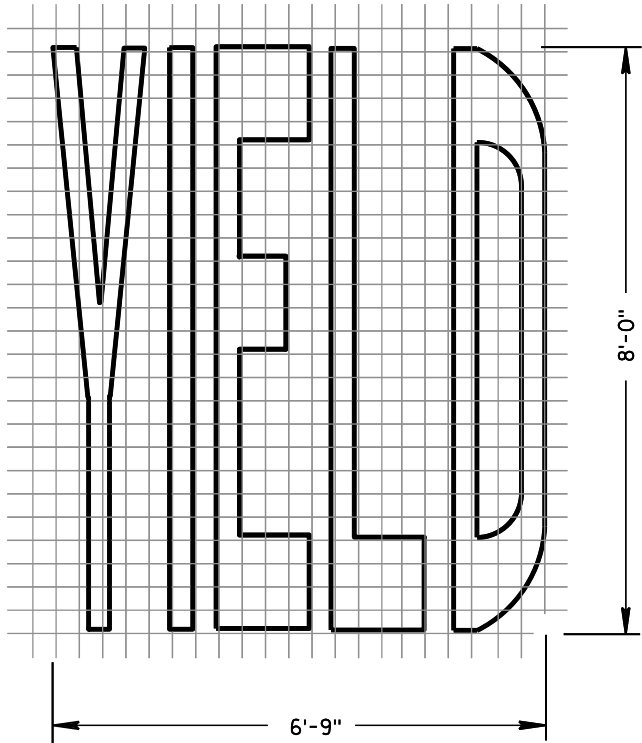
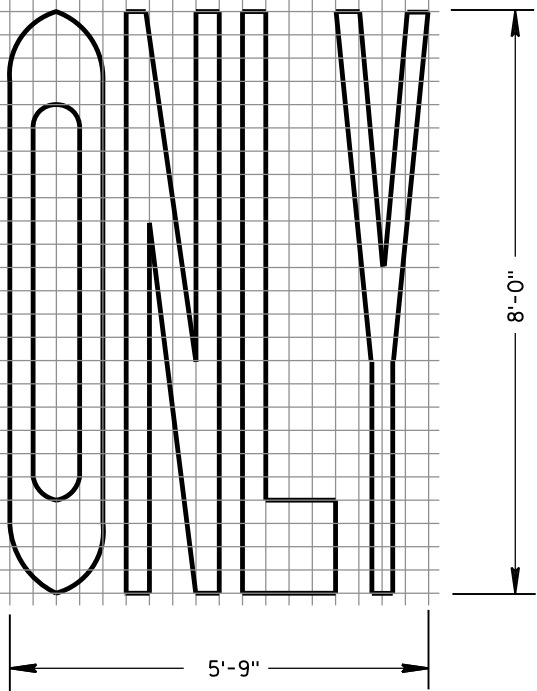
FHWA

GENERAL NOTES

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



TWO-LANE

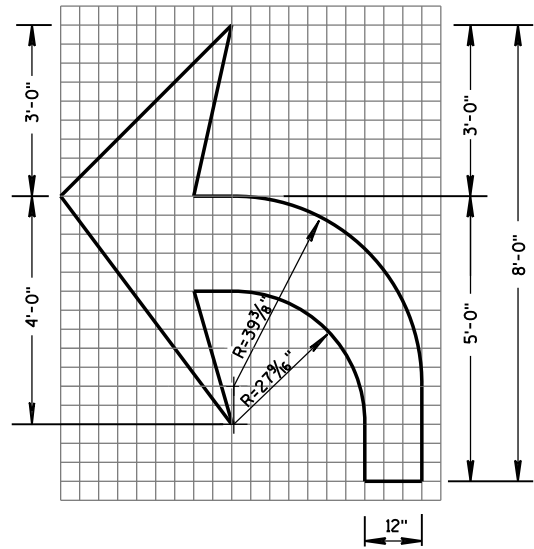


SINGLE-LANE

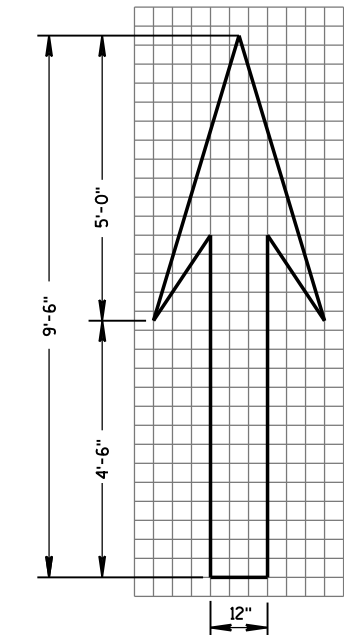
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

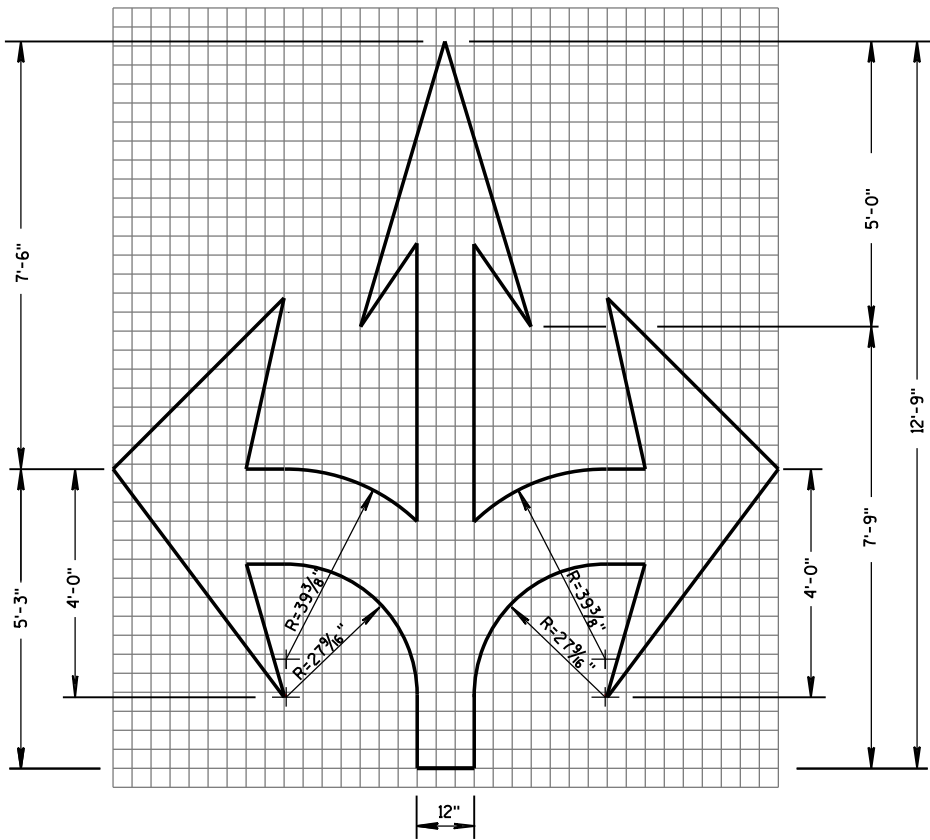
APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARK 181 EER
FHWA



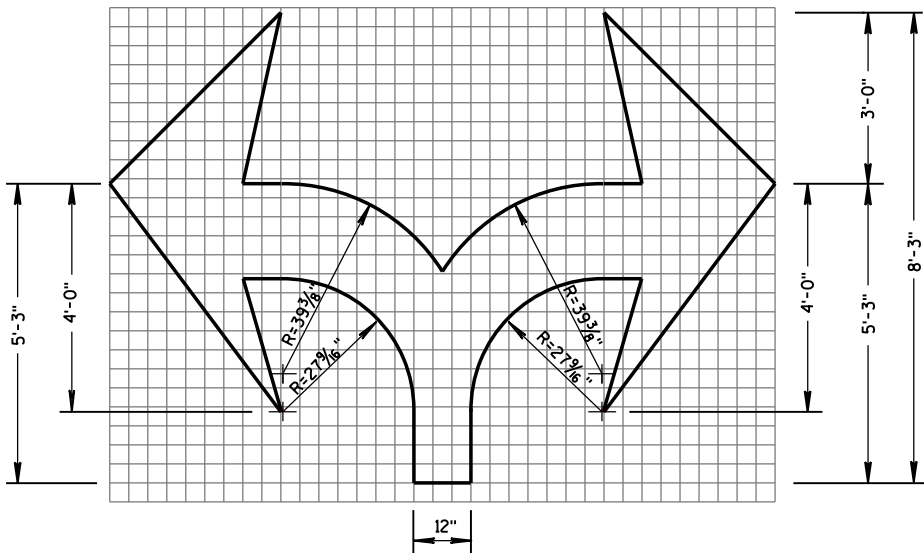
TYPE 2



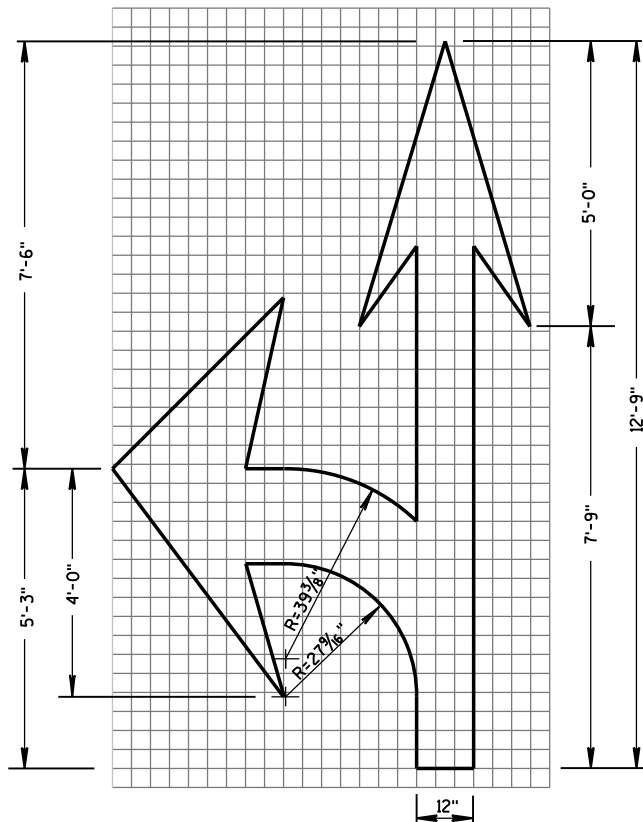
TYPE 1



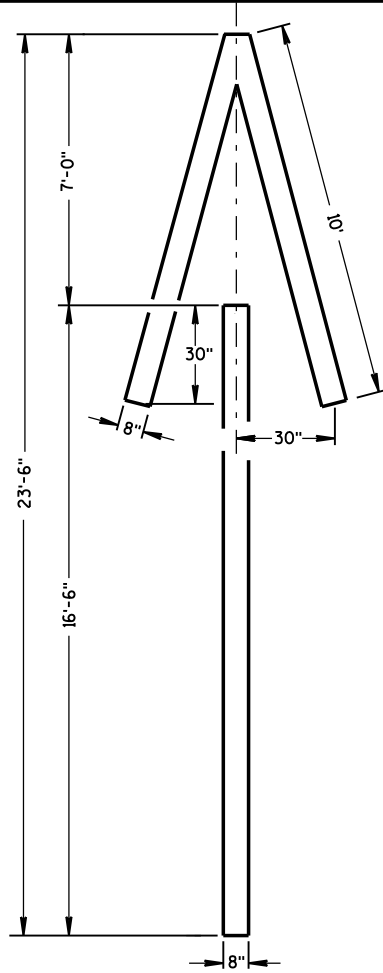
TYPE 6



TYPE 7



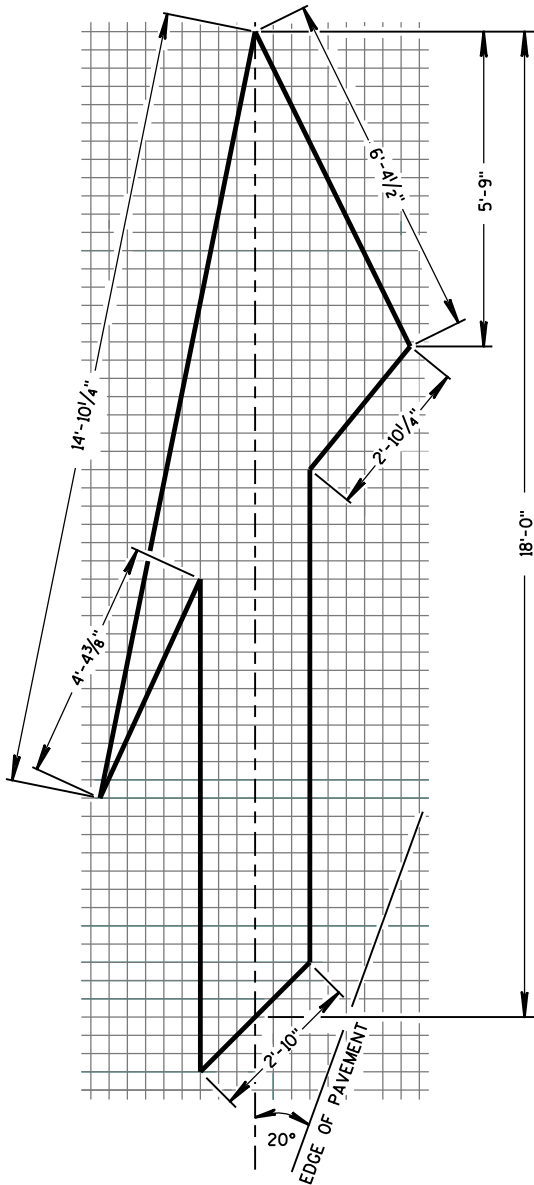
TYPE 3



TYPE 4

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.

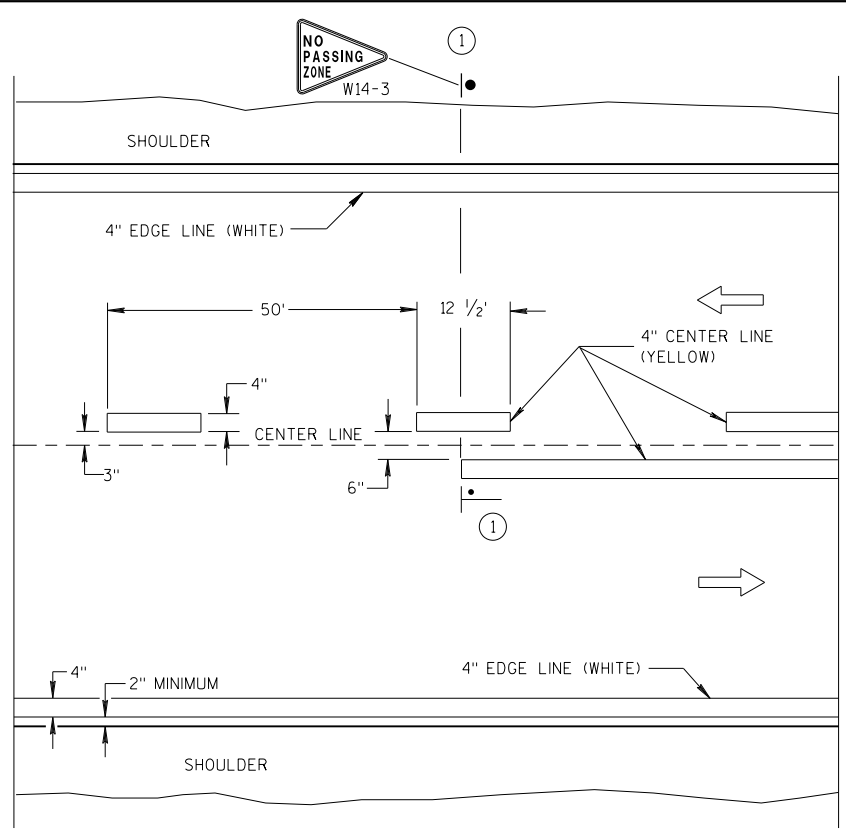


TYPE 5 LANE DROP ARROW

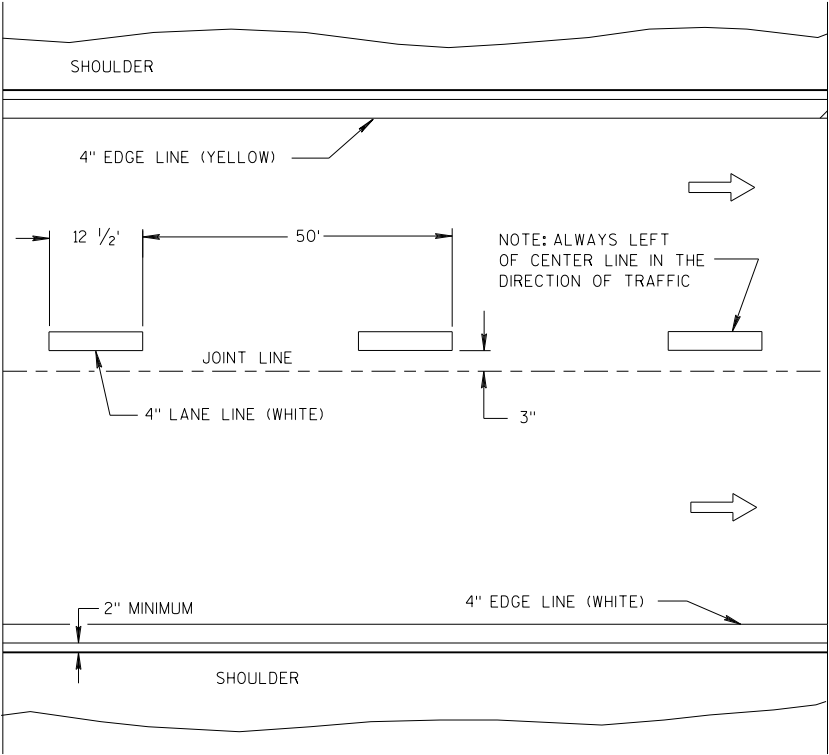
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAR 182
FHWA VER

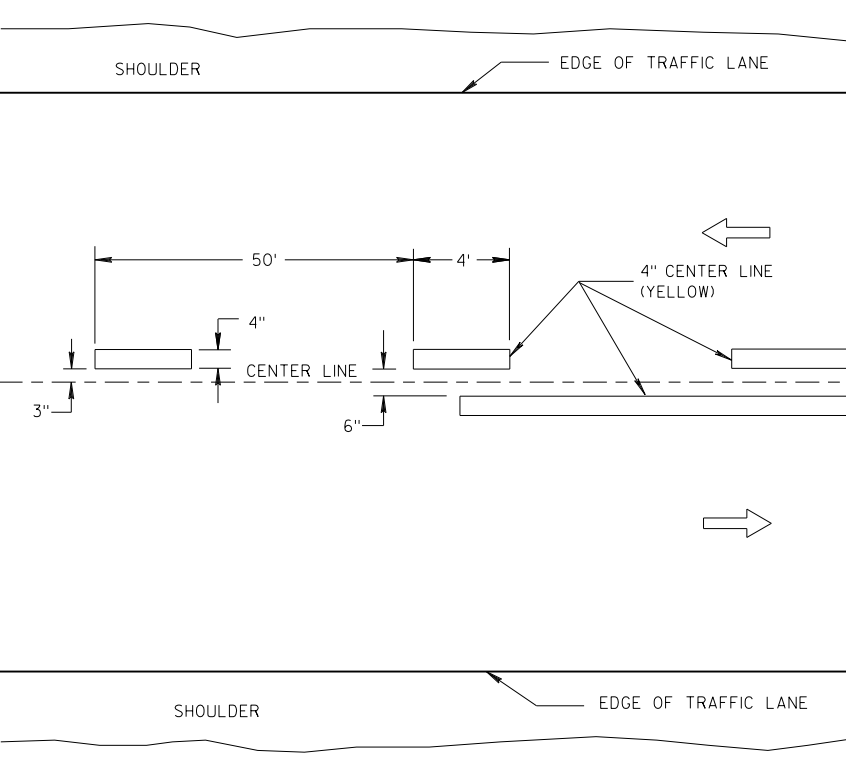


TWO WAY TRAFFIC

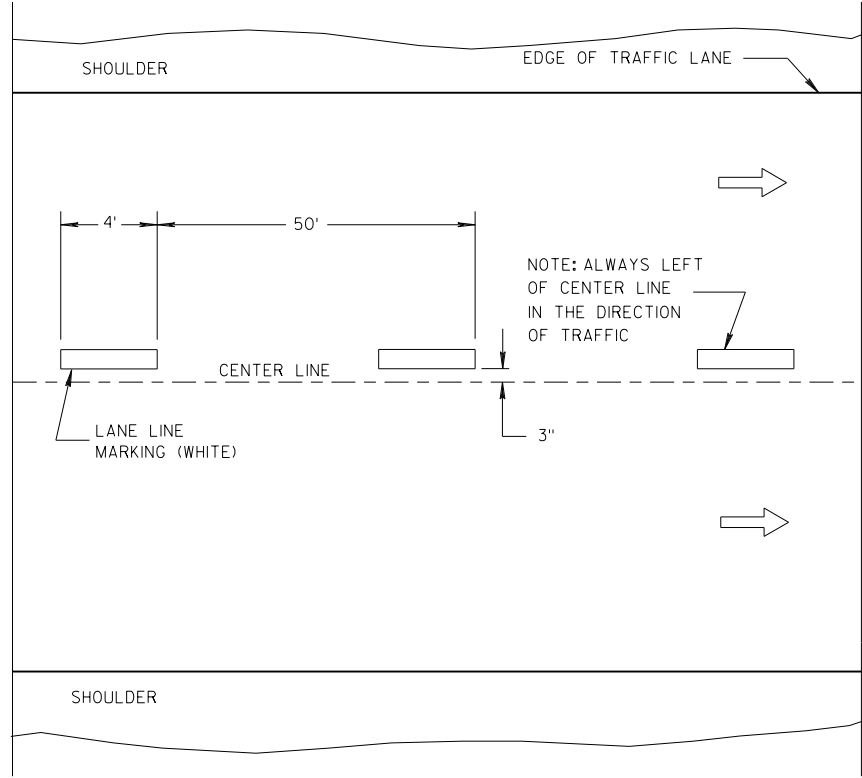


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

LEGEND

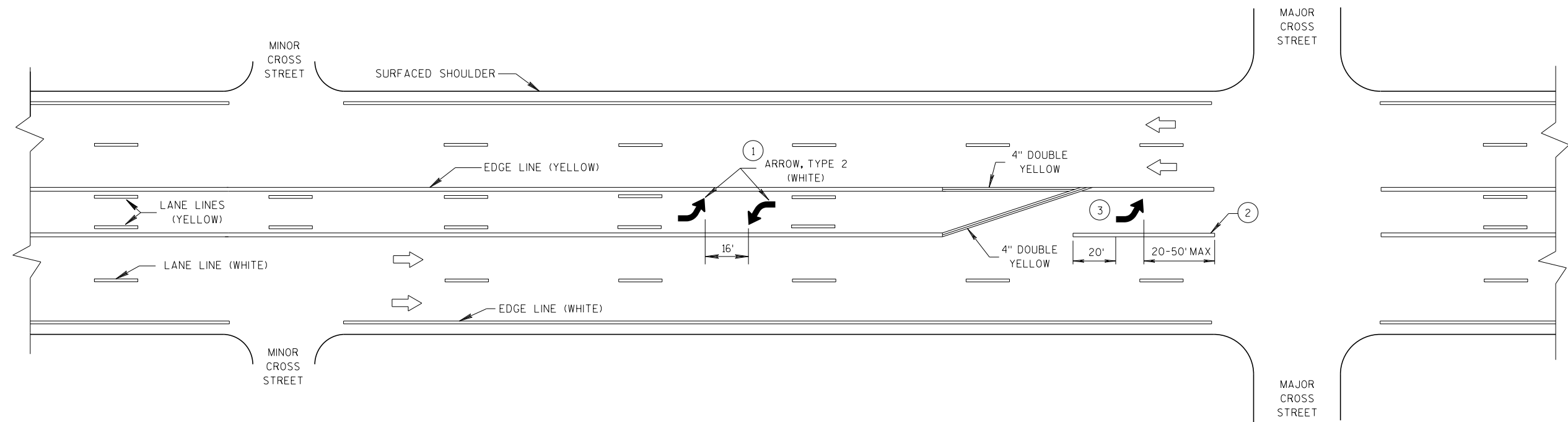
- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING (MAINLINE)			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
7/2018	/S/ Matthew R. Rauch		
DATE	STATE SIGNING AND MAR 183		
FHWA	INEER		

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

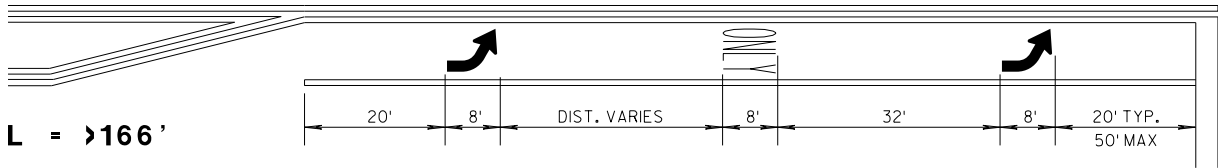
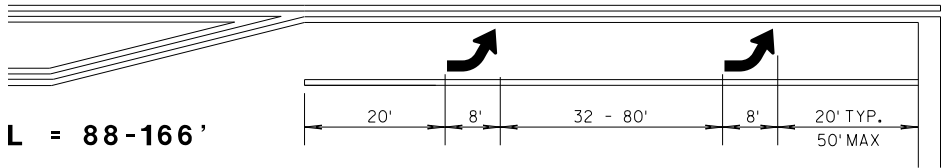
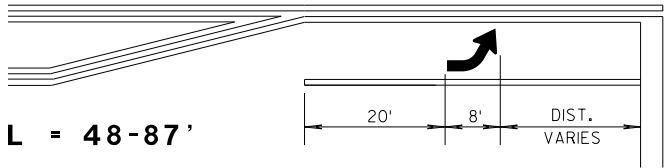
➔ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



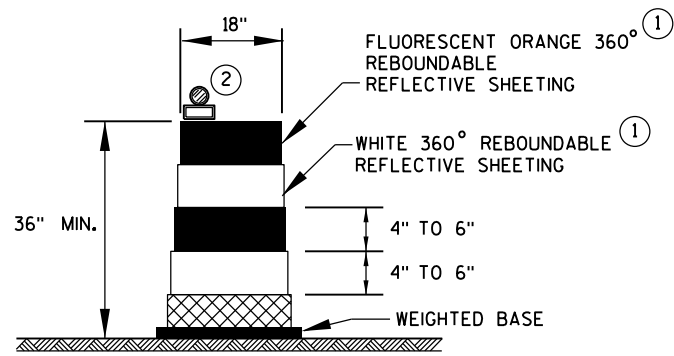
*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

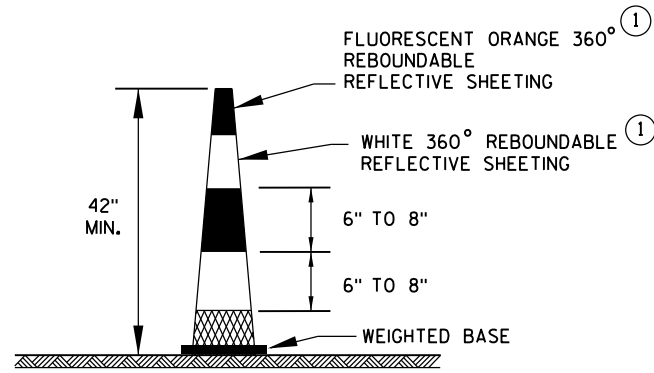
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

→ DIRECTION OF TRAFFIC
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORT 185



DRUM

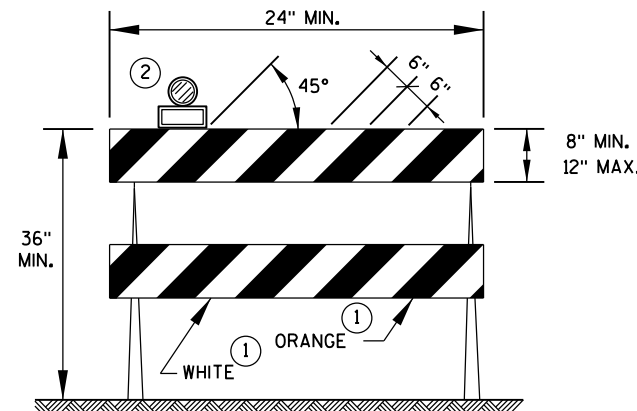


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

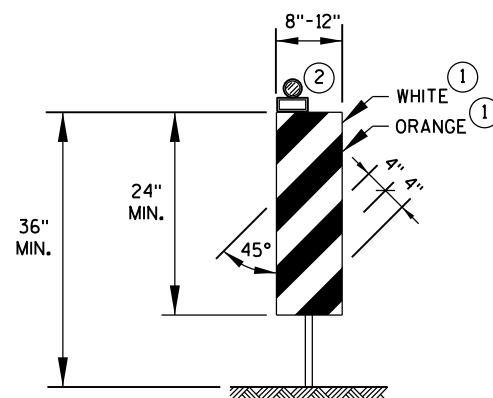
GENERAL NOTES

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



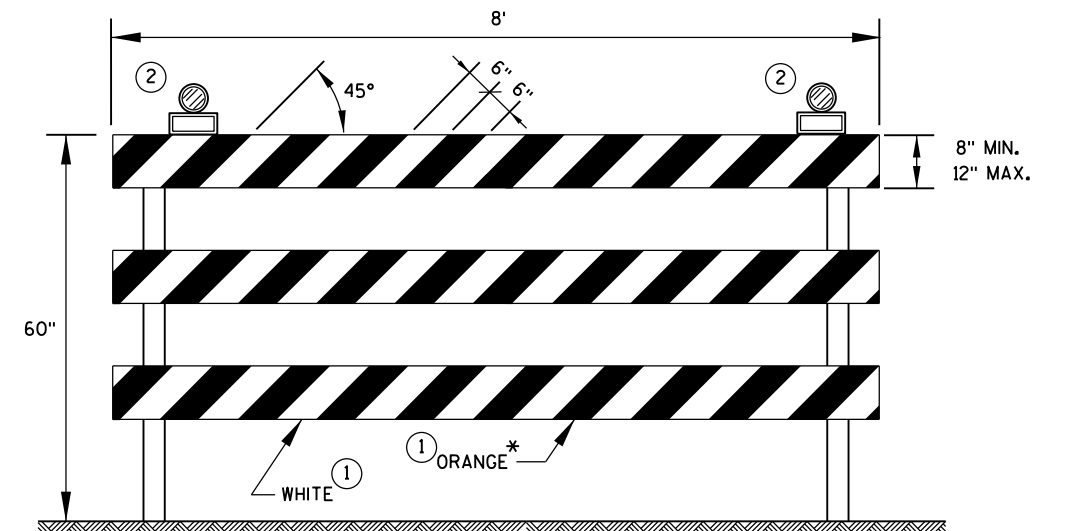
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

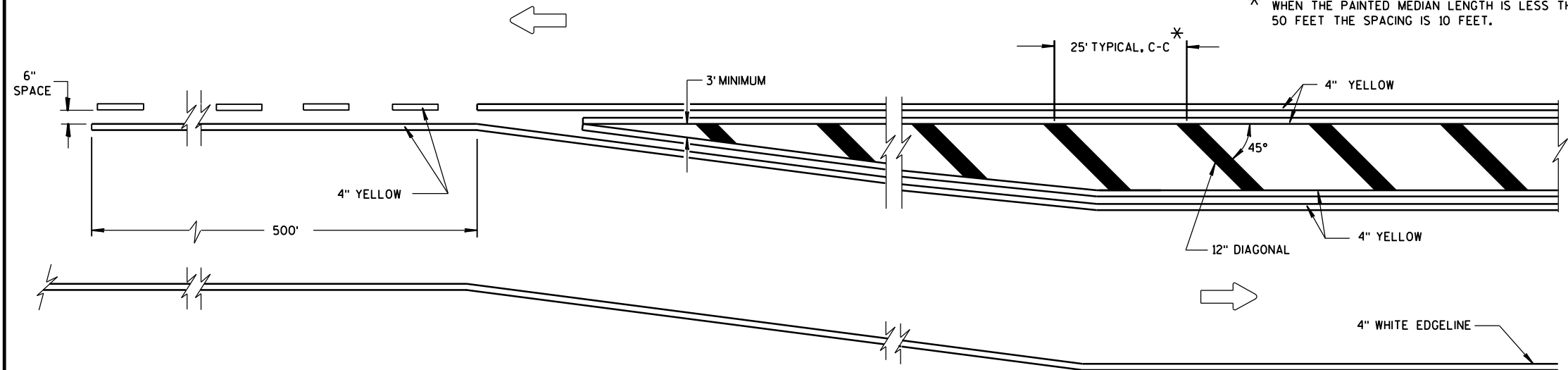
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENG 186

FHWA

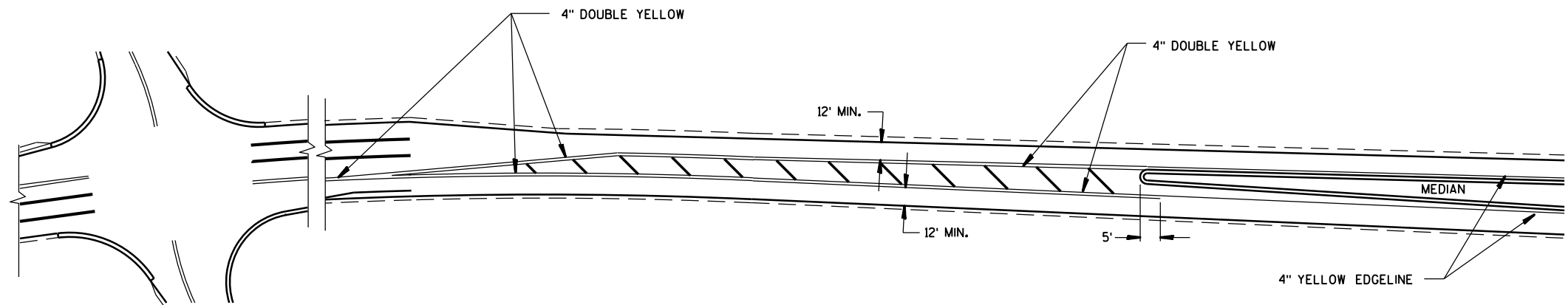


MEDIAN ISLAND DETAIL

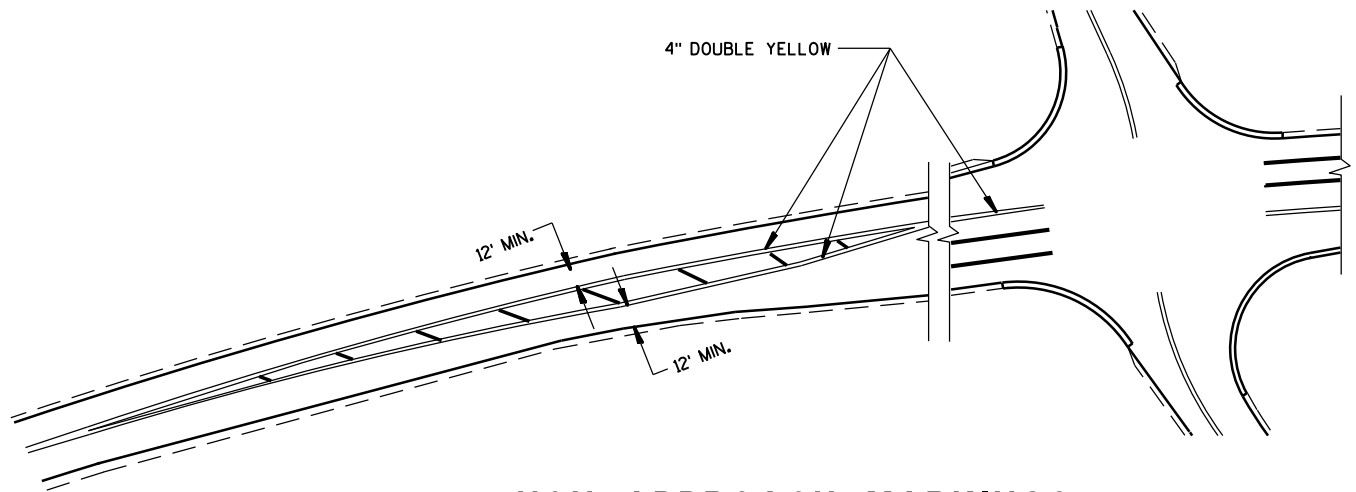
GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.

➡ DIRECTION OF TRAVEL

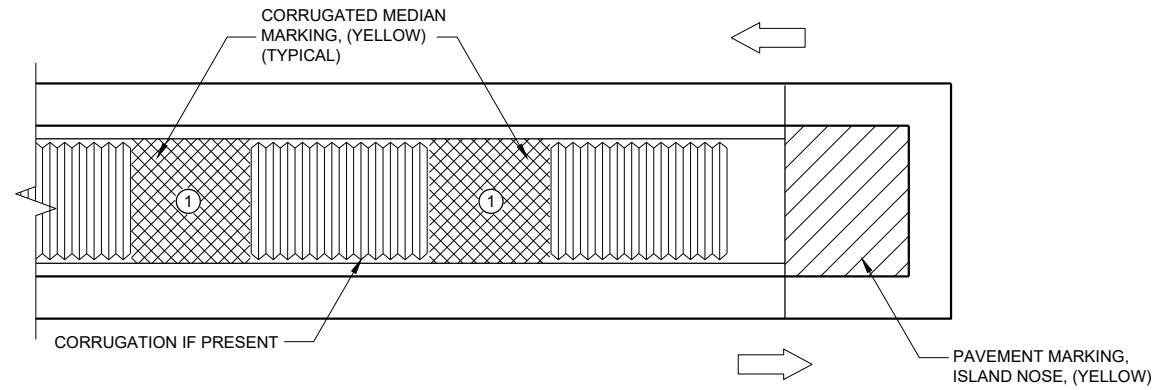


APPROACH MARKINGS FOR OTHER MEDIAN TYPES

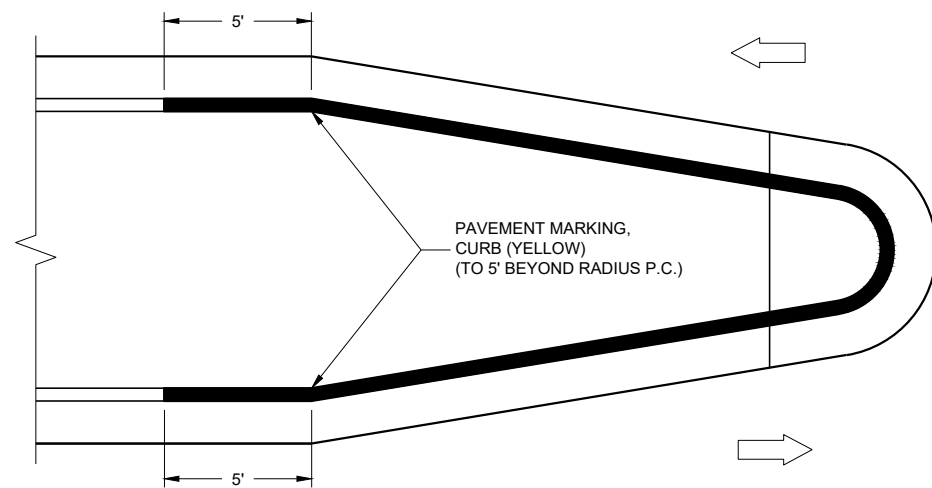


NON APPROACH MARKINGS

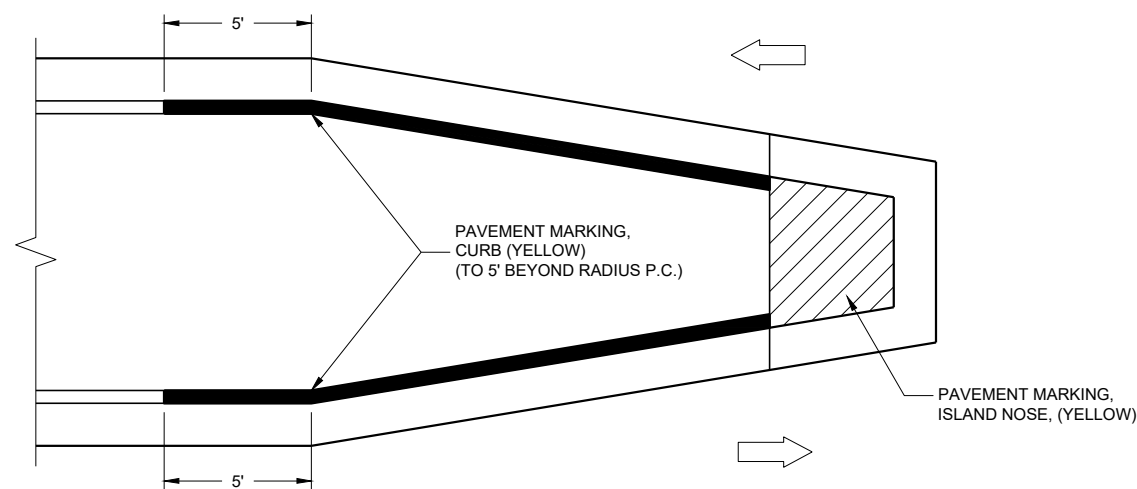
MEDIAN ISLAND MARKING			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
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June 2017	/S/ Matthew Rauch		
DATE	STATE SIGNING AND MARK	187	ER
FHWA			



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

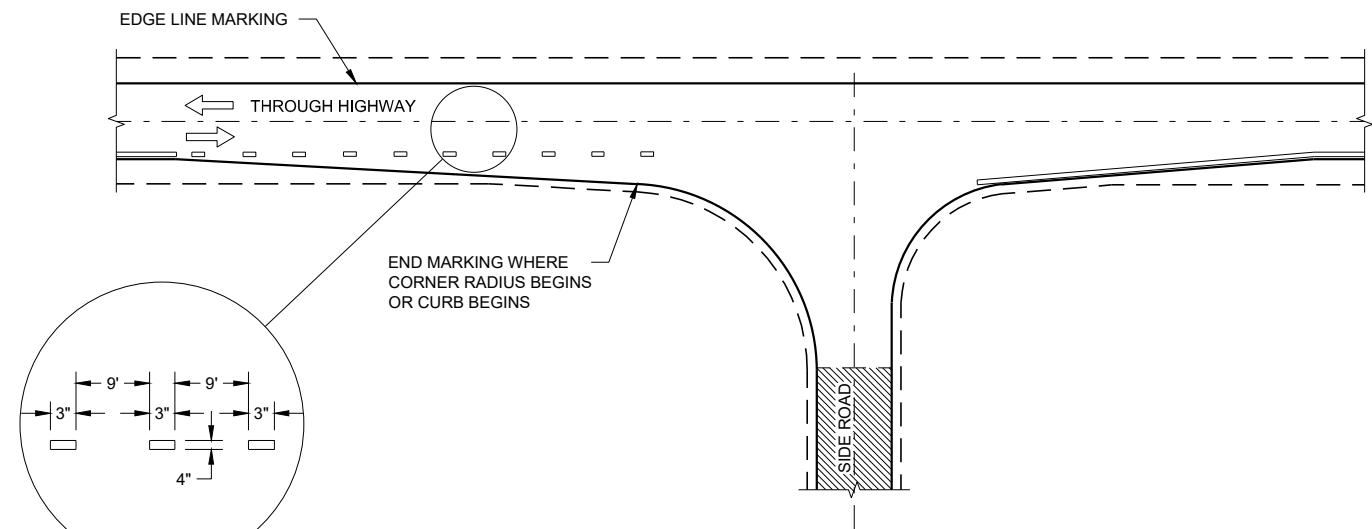
WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE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

-  ISLAND NOSE MARKING
-  CURB MARKING
-  CORRUGATED MEDIAN MARKING
-  DIRECTION OF TRAVEL

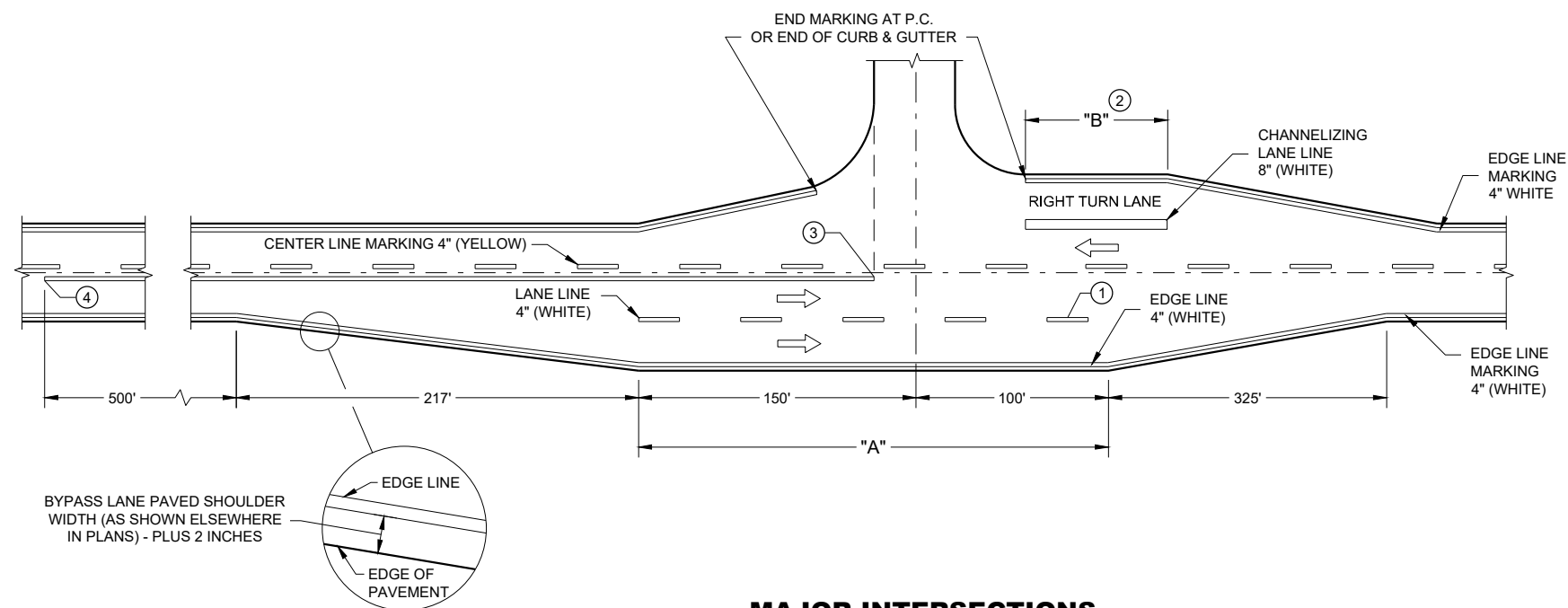
PAVEMENT MARKINGS (ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MAP ENGINEER 188
FHWA



MINOR INTERSECTION



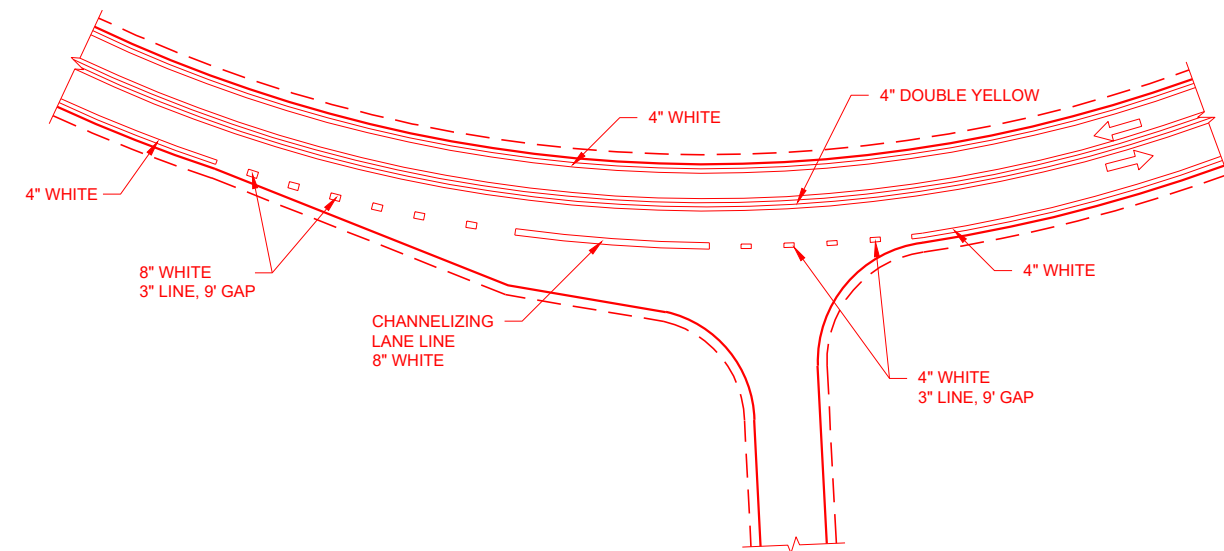
MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

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

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

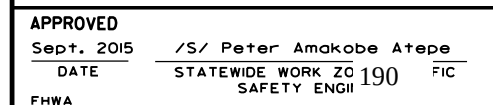


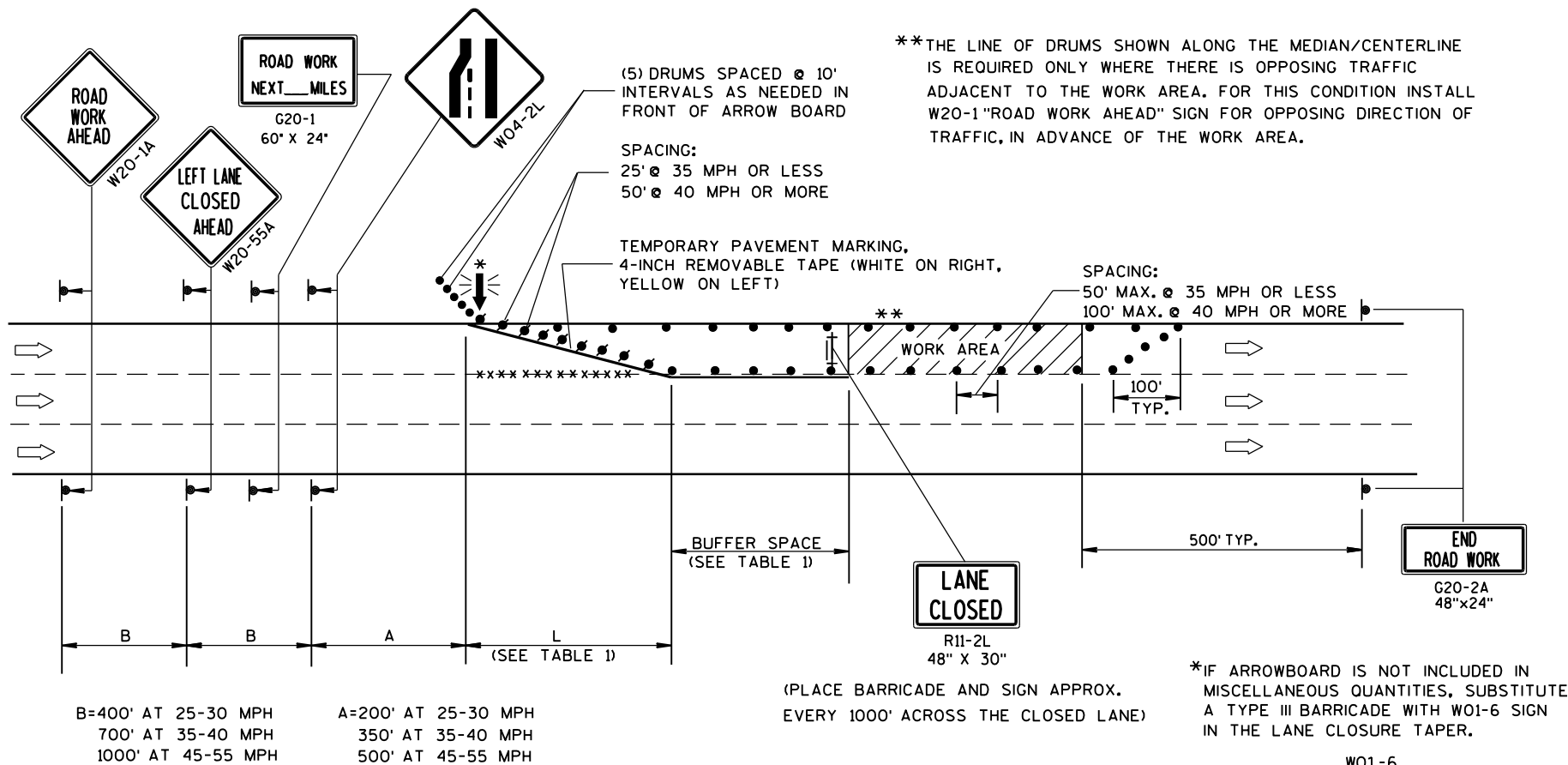
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 189

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.





GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

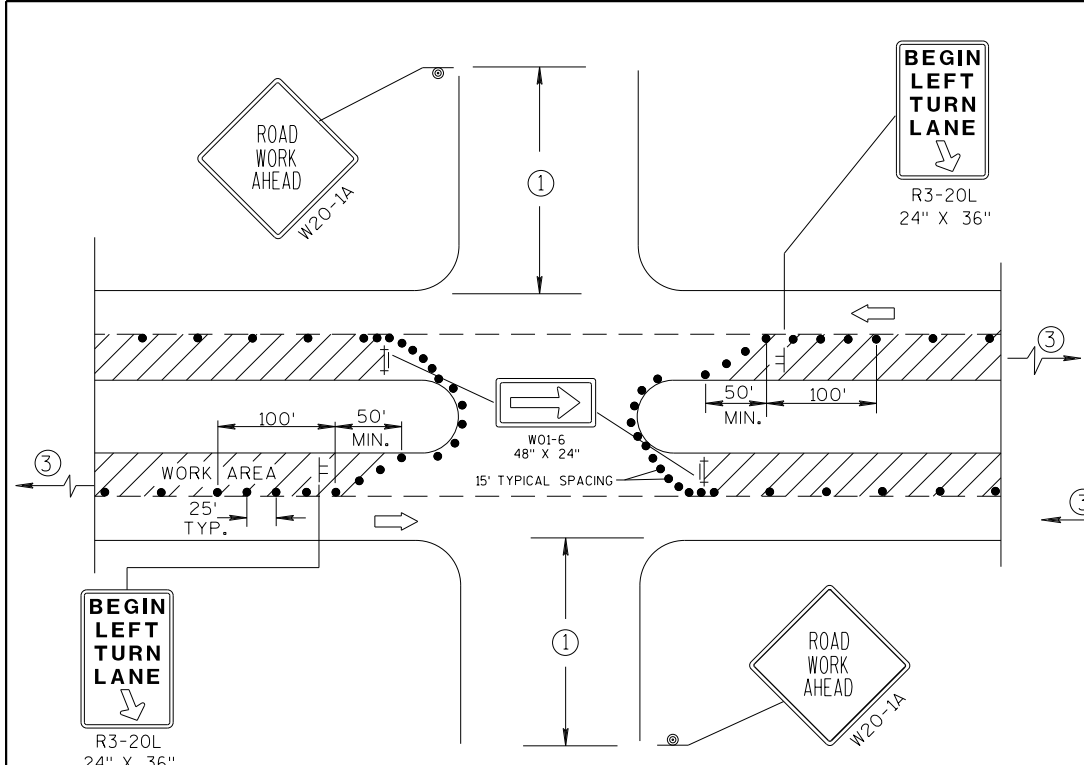
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

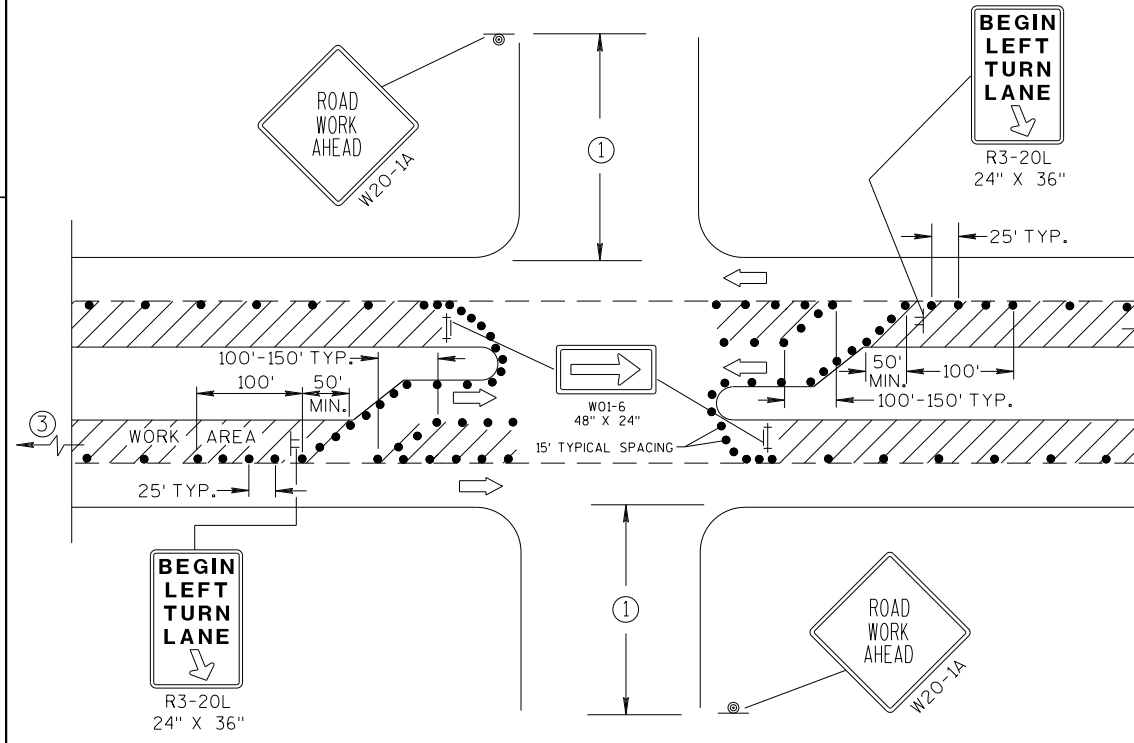
- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER 191 IC
FHWA	

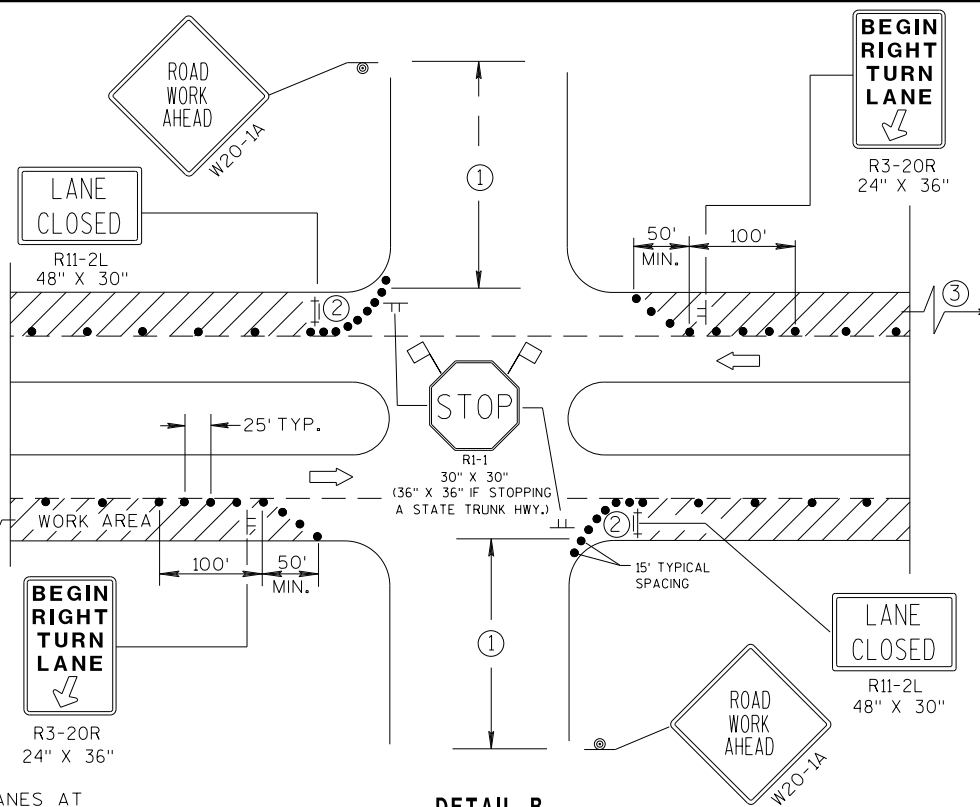


DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

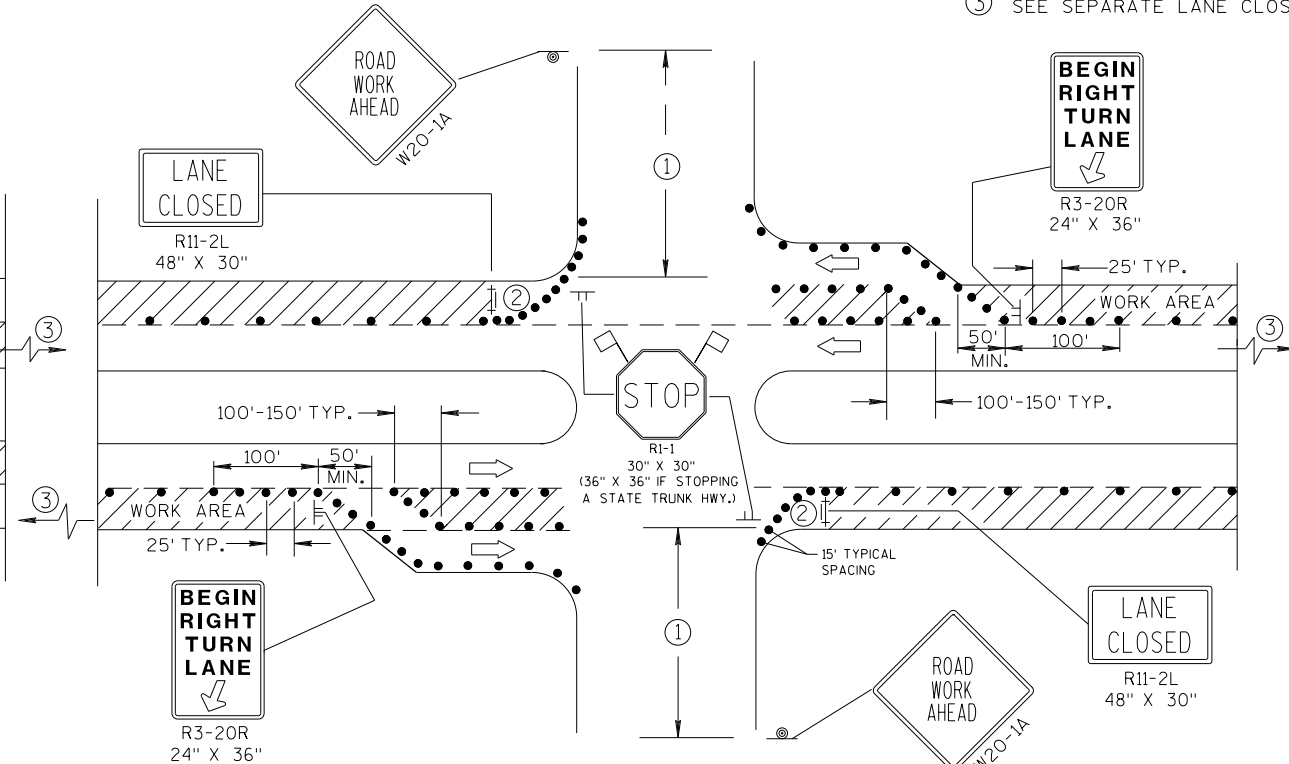
PROVIDE TURN LANES AT
INTERSECTIONS WHENEVER
STAGING OF WORK ALLOWS.
TAPER AND TURN LANE
LENGTHS BASED ON FIELD
CONDITIONS AS APPROVED
BY THE ENGINEER.



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



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION



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

GENERAL NOTES

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

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

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

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

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

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

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

LEGEND

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

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7/2018 /S/ Andrew Heidtke
WORK ZONE ENG 192
FHWA

TABLE 1
TAPER AND BUFFER SPACE
FOR 12' LANE WIDTH

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

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

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

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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

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

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

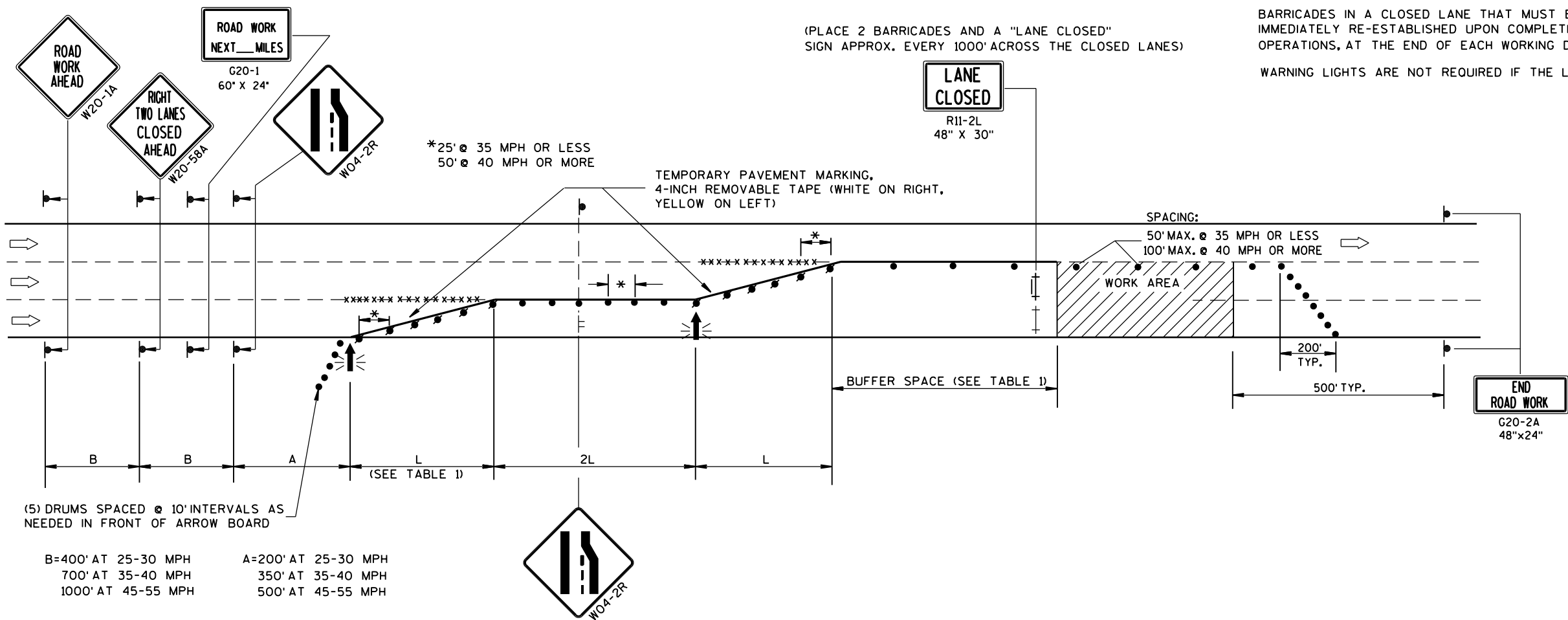
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO LOCATE THE ARROWBOARD AS SHOWN, PLACE THE ARROWBOARD IN THE LANE CLOSURE TAPER AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE TAPER.

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

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

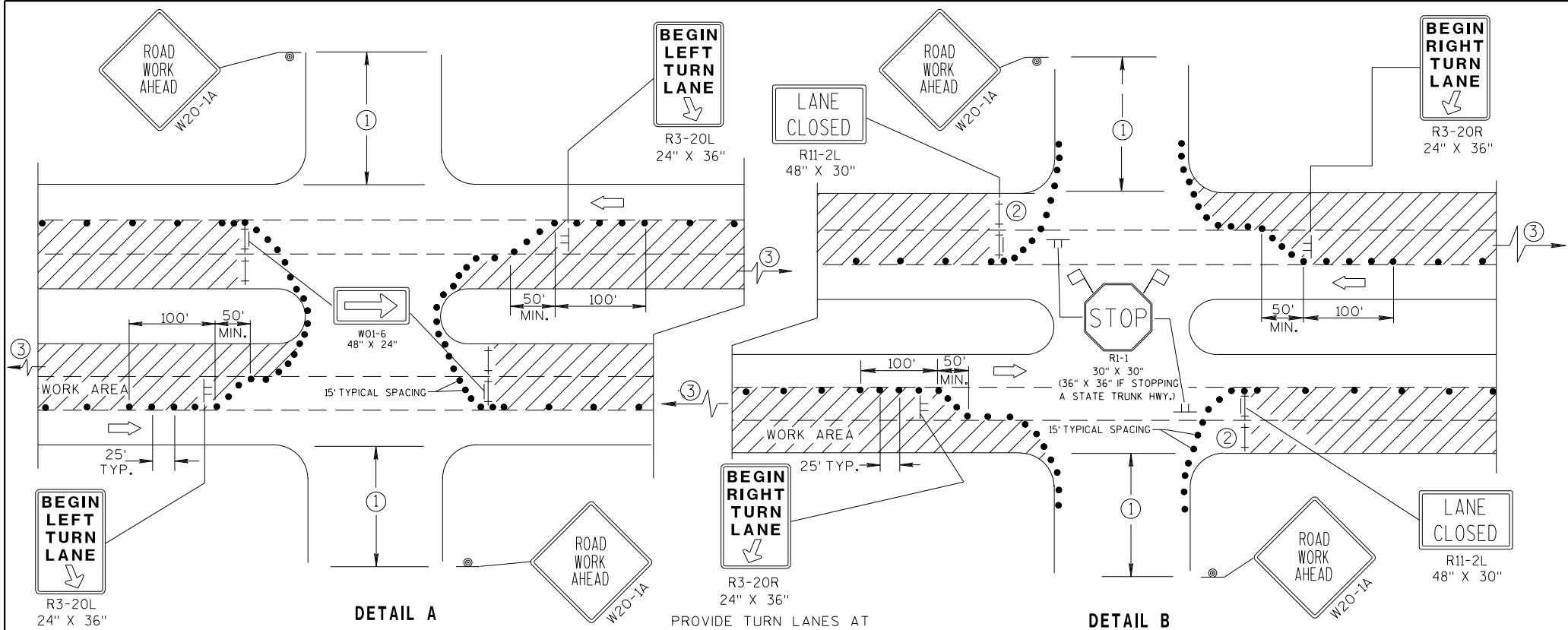
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.



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

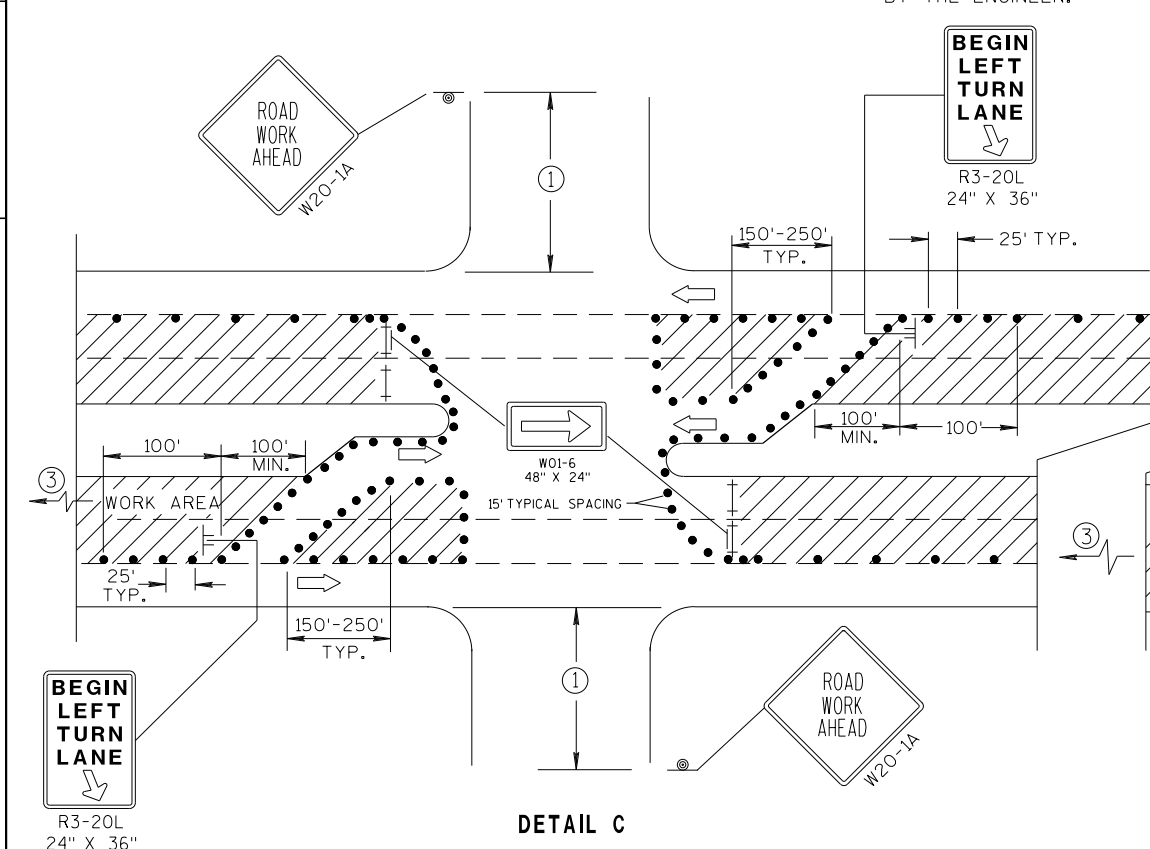
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZOI 193 'IC
FHWA SAFETY ENGINEER

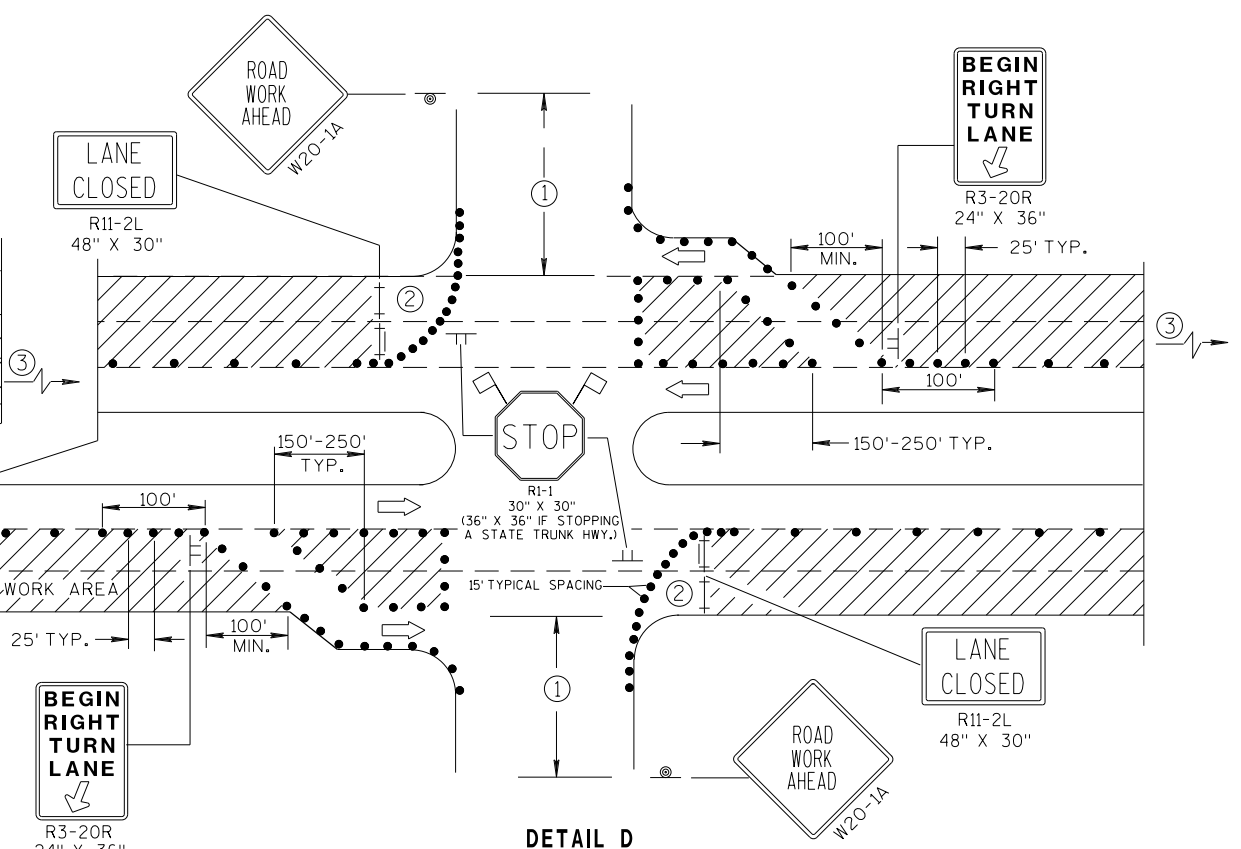


DETAIL A
FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK

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



DETAIL C
FOR LEFT TWO LANES CLOSED AT INTERSECTION OR MEDIAN BREAK (WITH LEFT TURN BAY OPEN)



DETAIL D
FOR RIGHT TWO LANES CLOSED AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

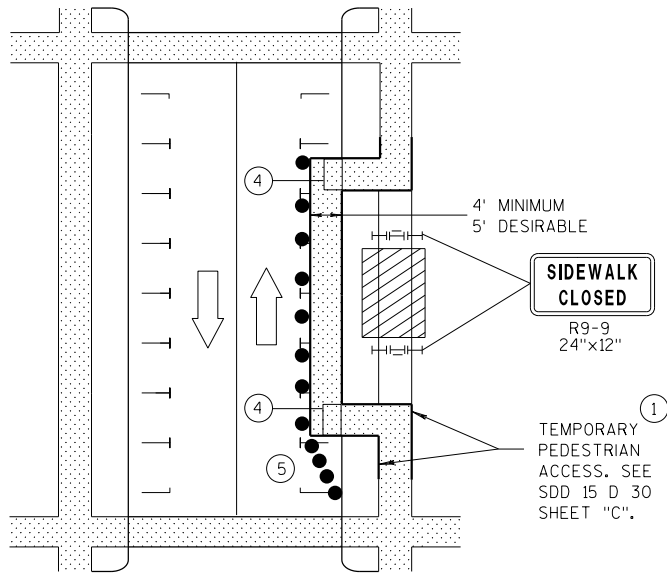
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- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
- BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.
- ① 500 FEET TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER. 350 FEET IF 35-40 MPH. 200 FEET IF 25-30 MPH.
 - ② ALSO USE BARRICADES AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
 - ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

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

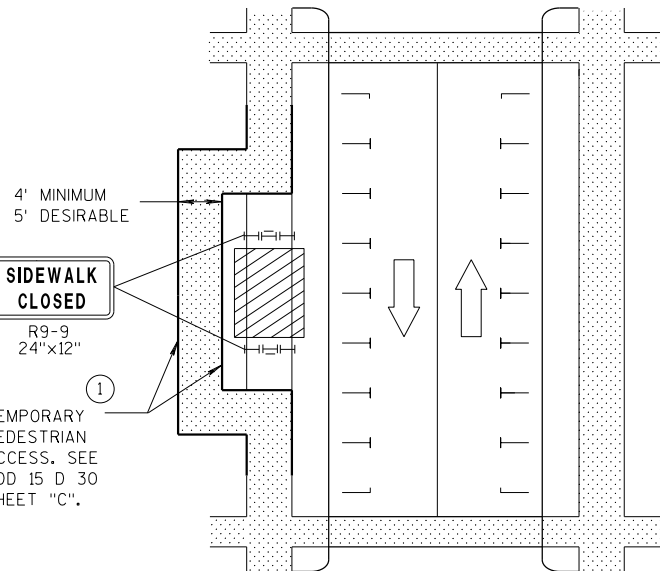
TRAFFIC CONTROL, INTERSECTION WITHIN TWO LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 7/2018	/S/ Andrew Heidtke WORK ZONE ENG 194
FHWA	

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

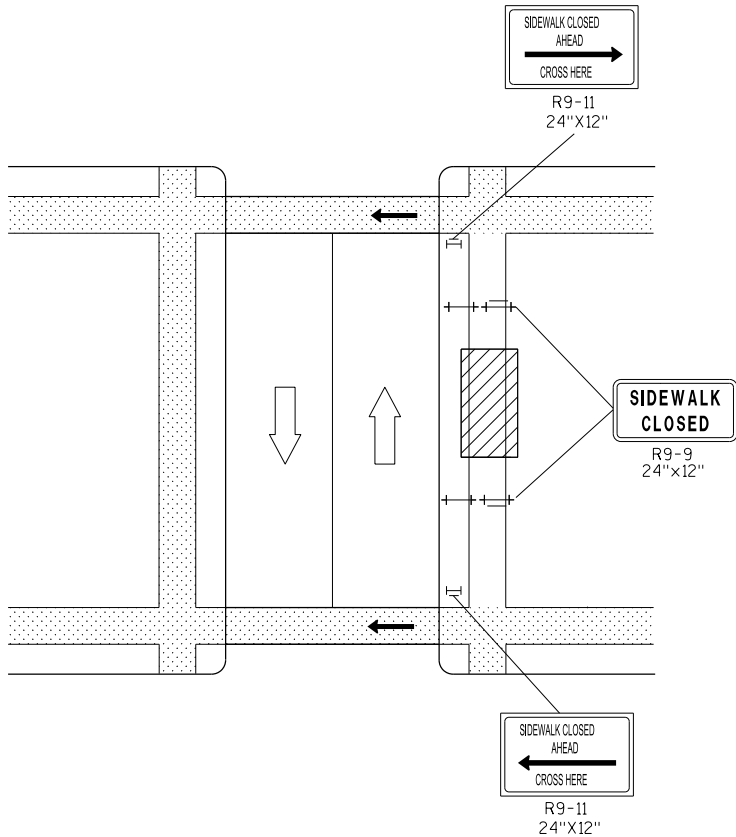


MID-BLOCK SIDEWALK CLOSURE
IN PARKING LANE

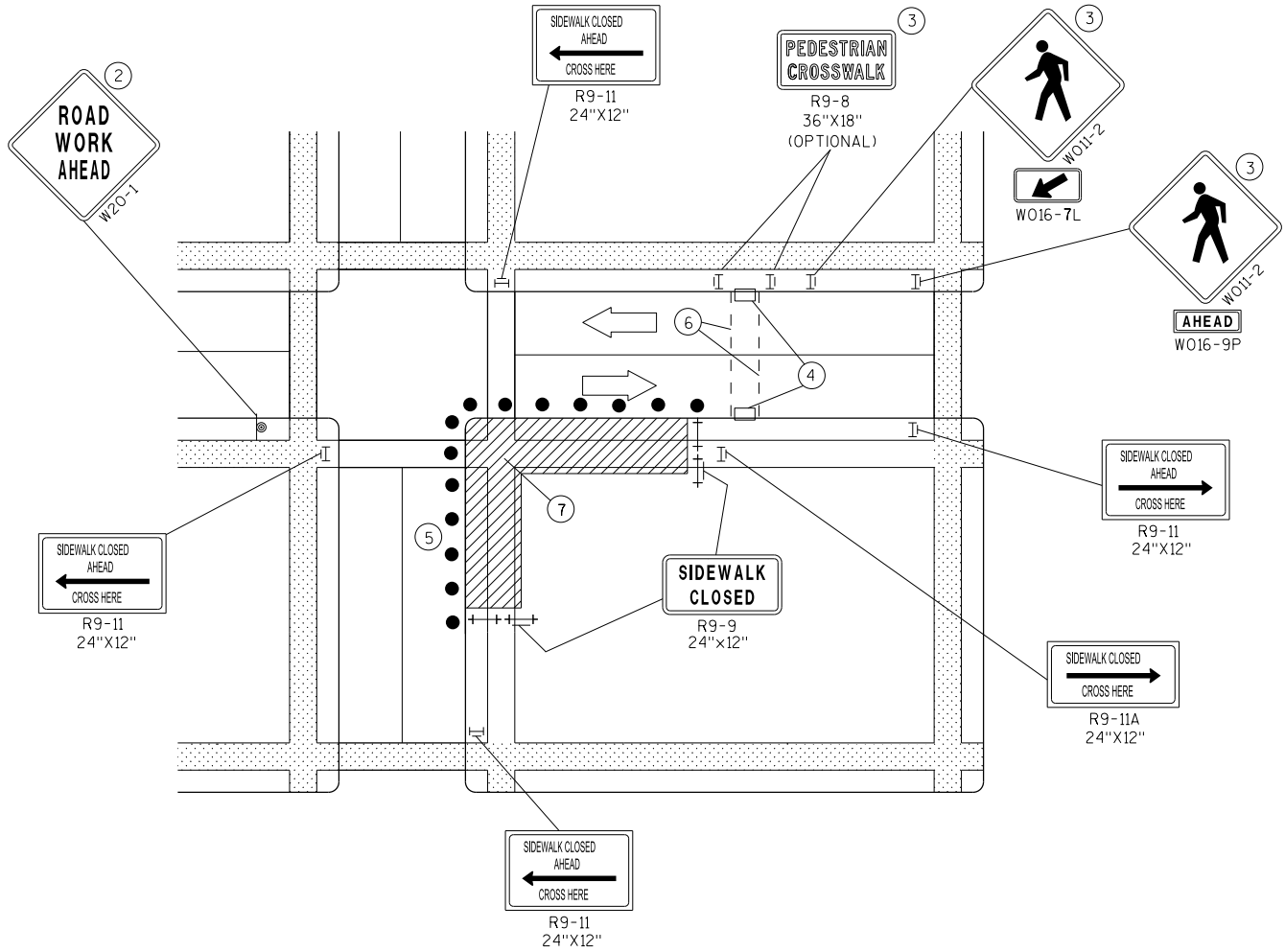
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

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

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

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

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

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

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

- IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.
- "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".
- DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

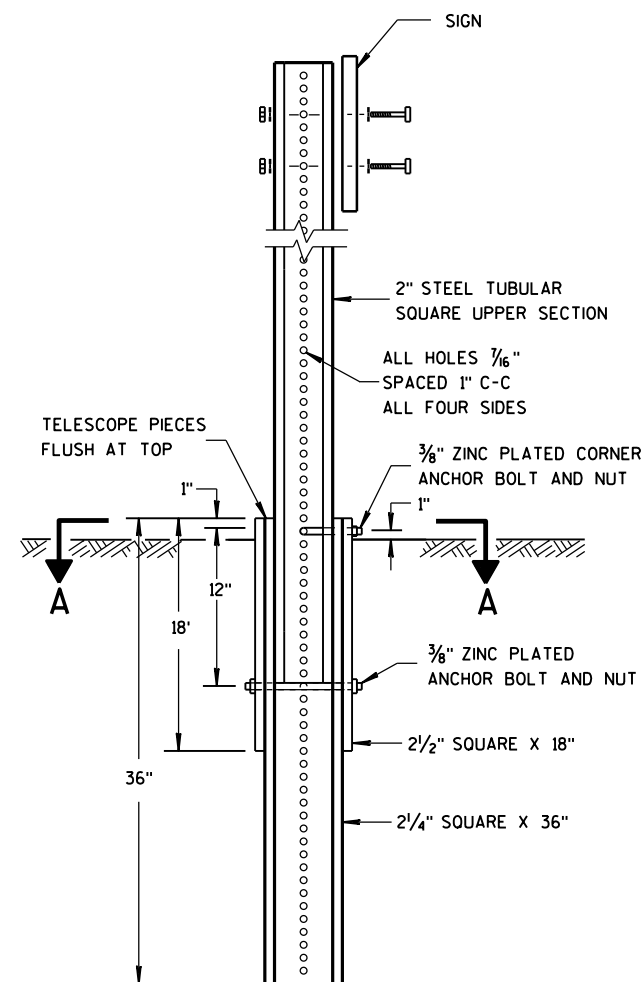
LEGEND

	SIGN ON PERMANENT SUPPORT		DIRECTION OF TRAFFIC
	UNDER PEDESTRIAN TRAFFIC		TRAFFIC CONTROL DRUM
	WORK AREA		
	PEDESTRIAN CHANNELIZATION DEVICE		
	TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)		
	TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)		

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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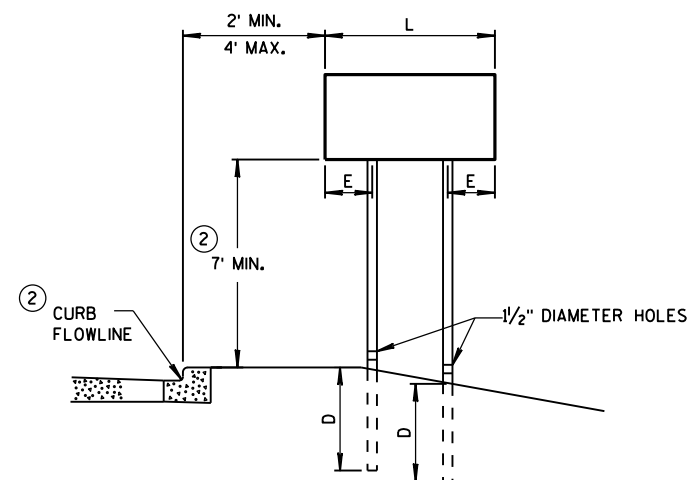
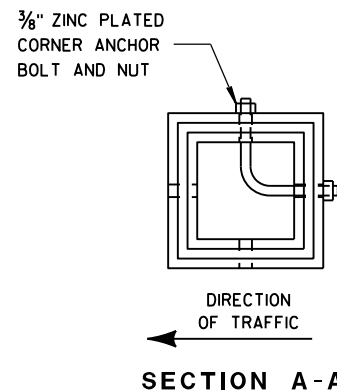


DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

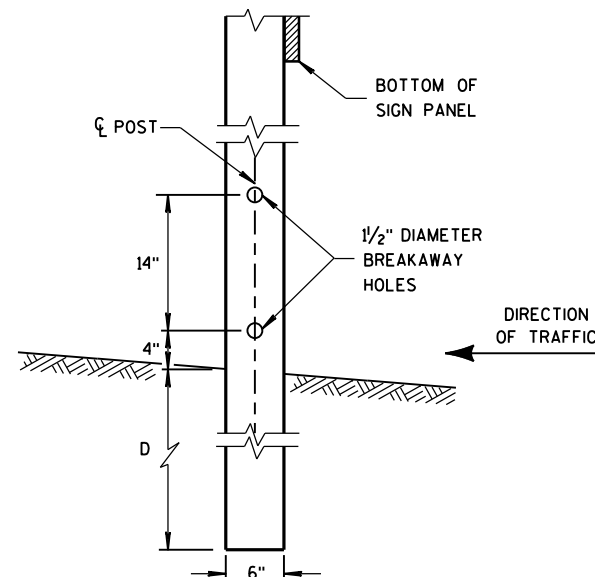


URBAN AREA

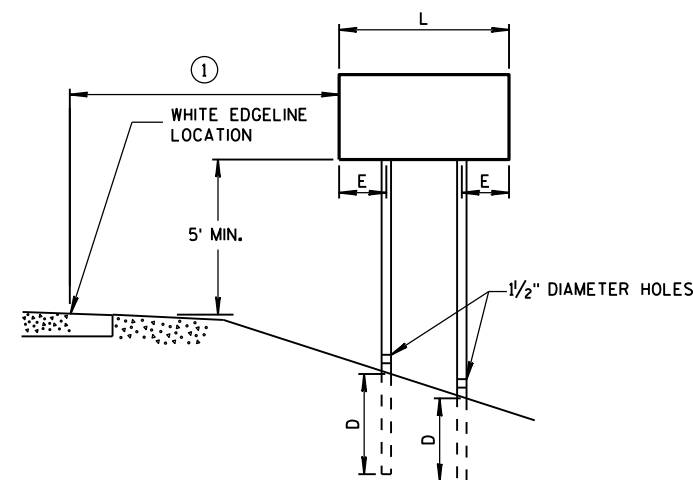
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4" x 6" WOOD POST MODIFICATION



RURAL AREA

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

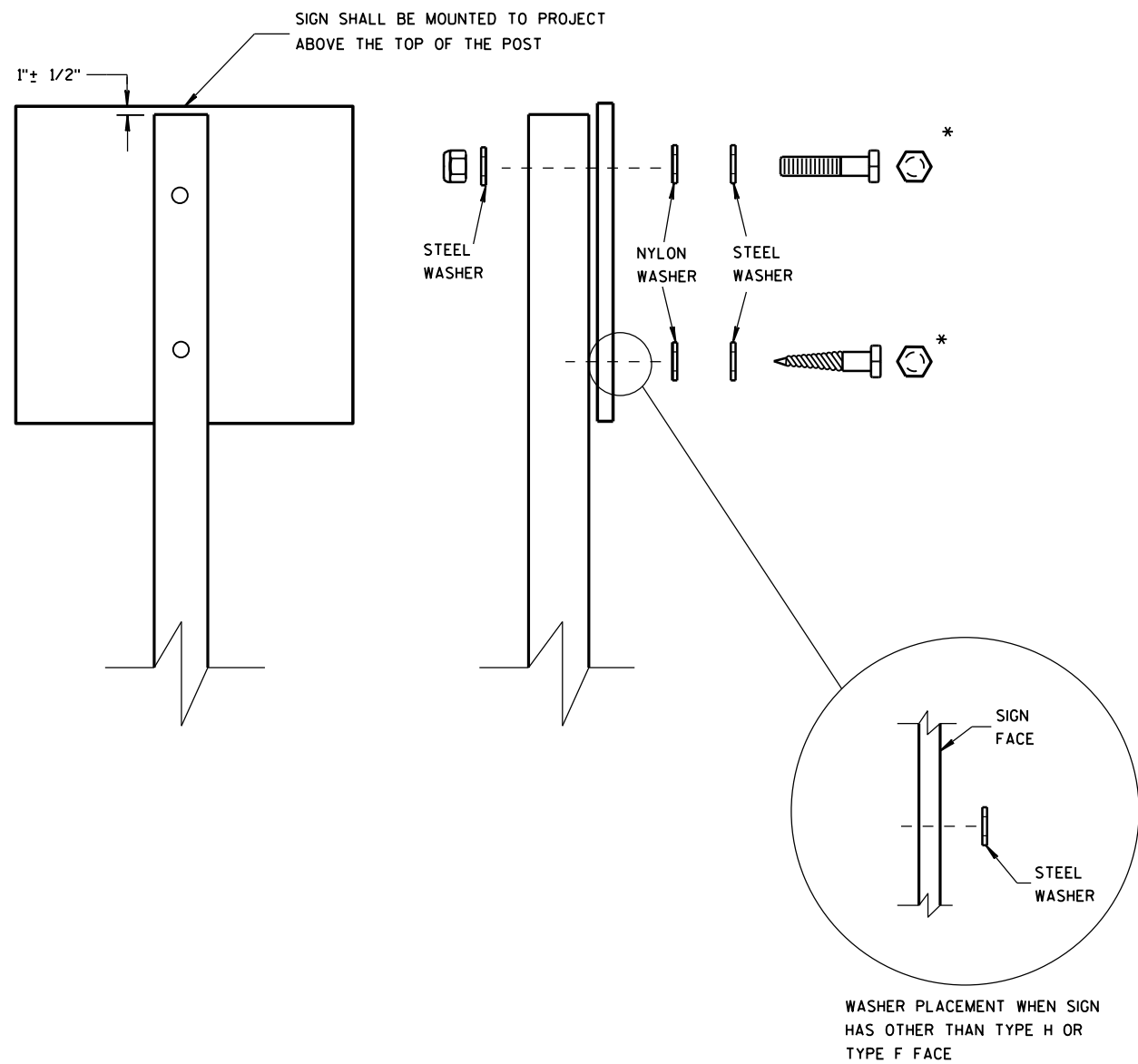
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

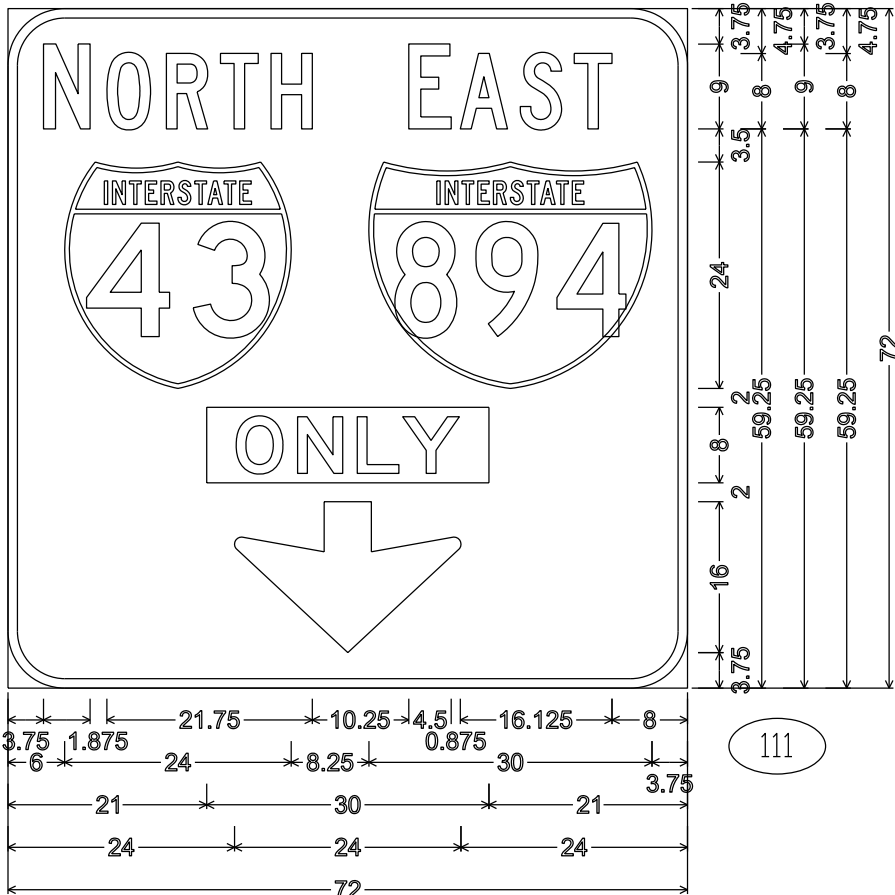
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

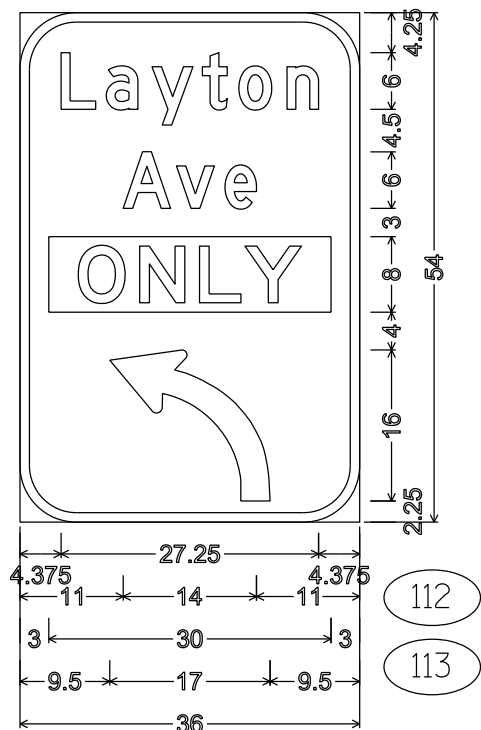
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. x 3/8" I.D. x 1/16" STEEL
 - 1-1/4" O.D. x 3/8" I.D. x .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

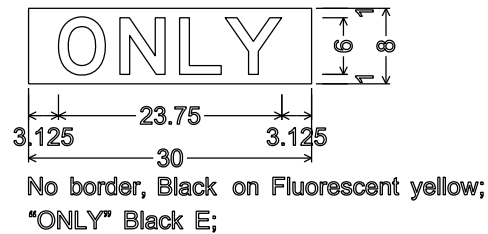
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENC 197
FHWA	



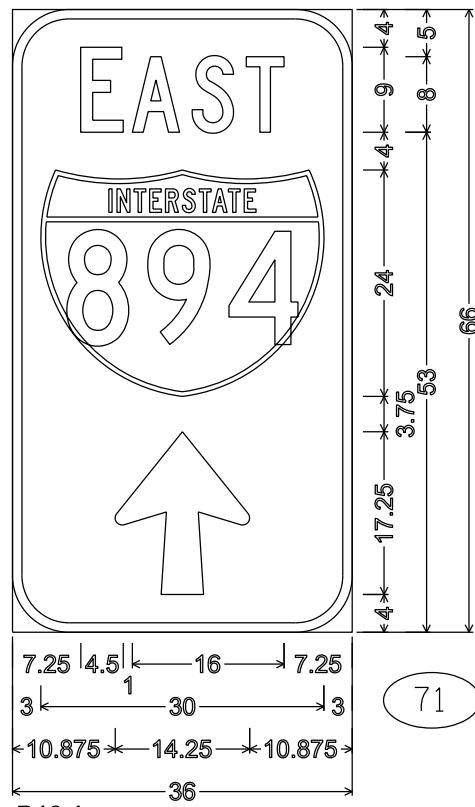
D16-1; 6.000" Radius, 1.000" Border,
"NORTH" C; "EAST" C



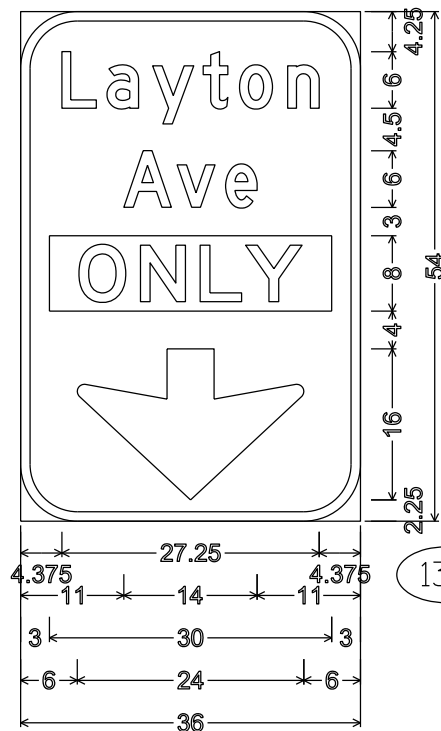
D16-1L ; 6.000" Radius, 1.000" Border,
"Layton" D; "Ave" D



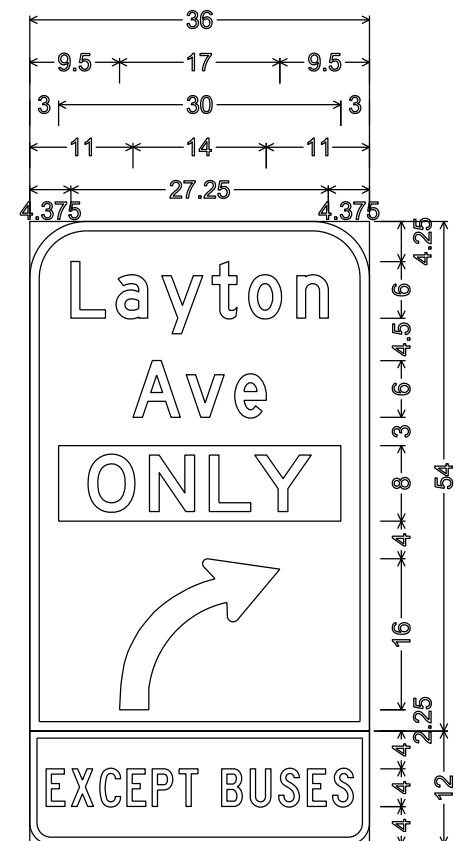
No border, Black on Fluorescent yellow;
"ONLY" Black E;



D16-1;
6.000" Radius, 1.000" Border,
"EAST" C



D16-1; 6.000" Radius, 1.000" Border,
"Layton" D; "Ave" D



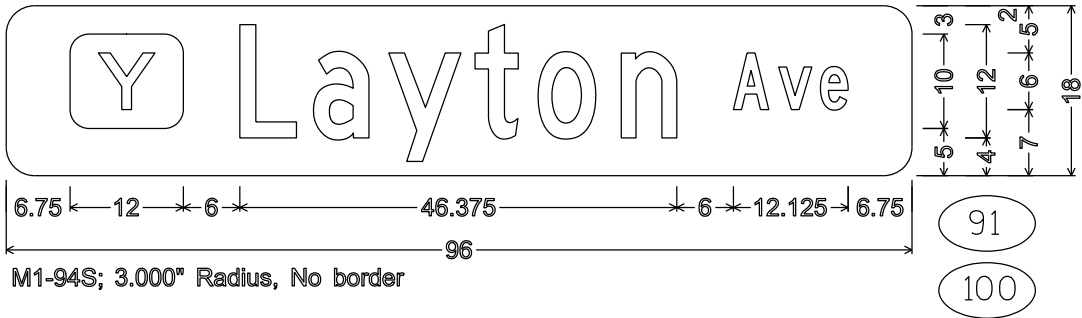
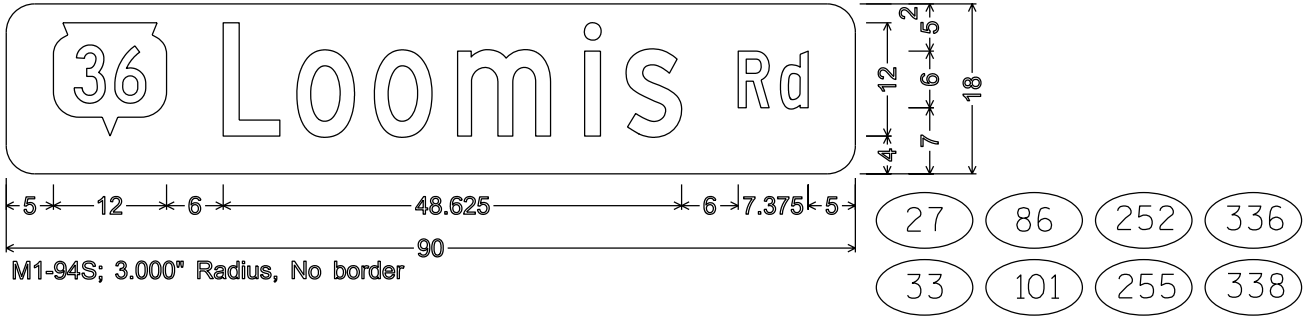
D16 1R;
6.000" Radius, 1.000" Border, White on Green;
"Layton" D; "Ave" D;
2.250" Radius, 0.750" Border, Black on White;
"EXCEPT" C; "BUSES" C;

NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
Background - Green except as noted
Message - White except as noted
3. Message Series - As noted
4. ONLY plaque is on Type F Yellow Reflective sheeting with Black Non-Reflective message

NOTES

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

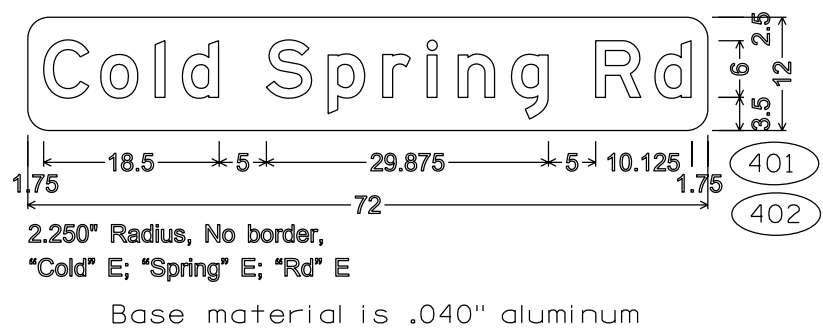
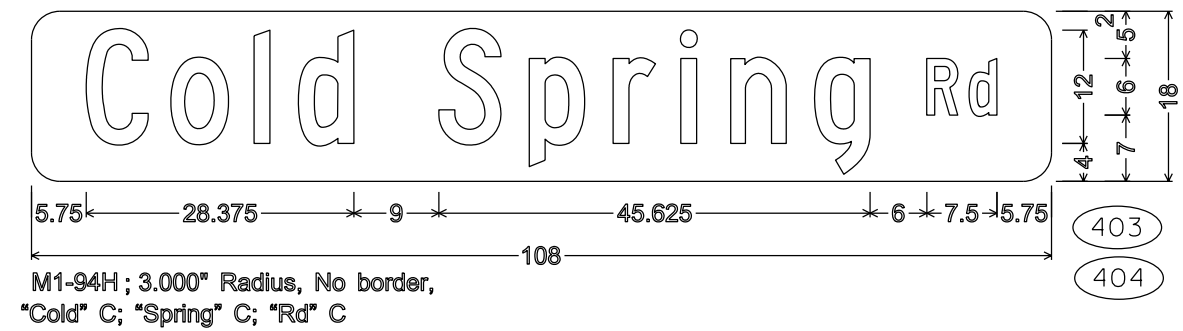


7

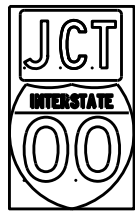
7

NOTES

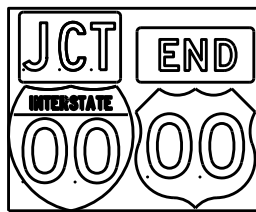
- 1. All Signs Type II - Type H Reflective
- 2. Color:
Background - Green
Message - White
- 3. Message Series - As noted
- 4. M1-94H base material is .125" aluminum



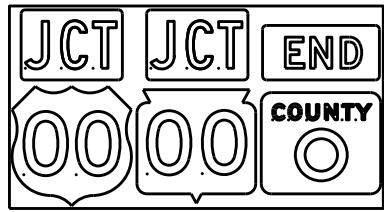
TYPICAL ASSEMBLIES



J1-1



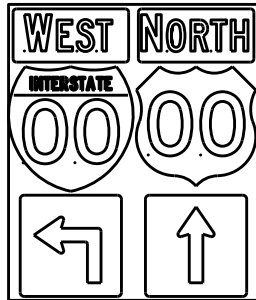
J1-2



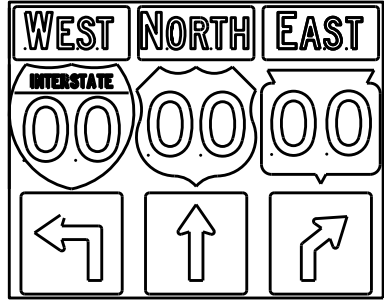
J1-3



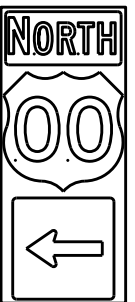
J2-1



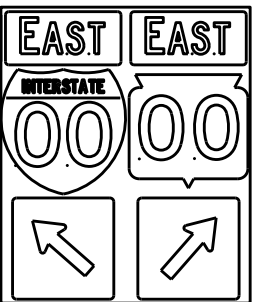
J2-2



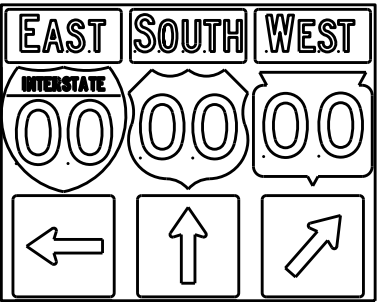
J2-3



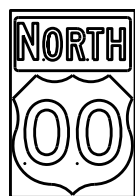
J3-1



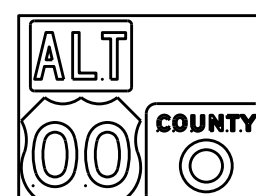
J3-2



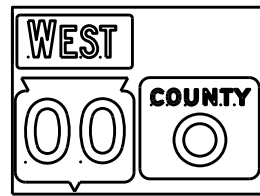
J3-3



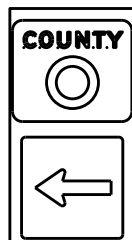
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

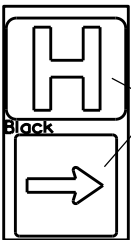


J22-1



JV

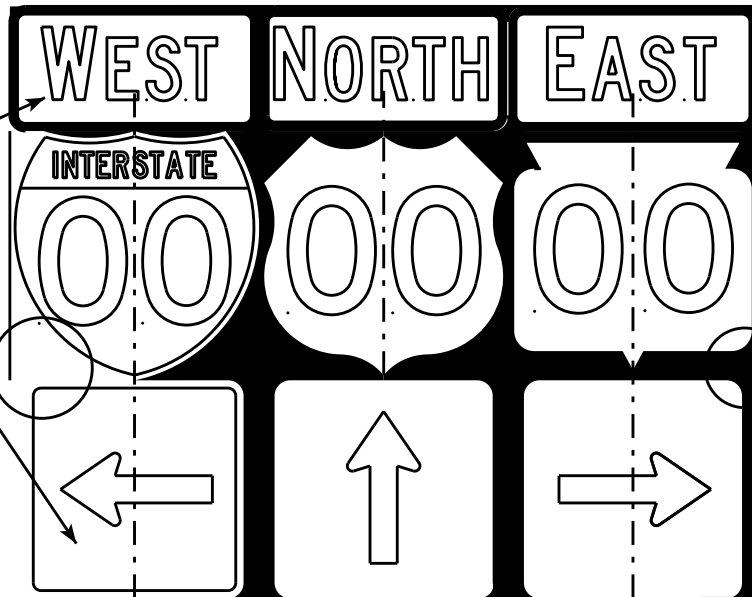
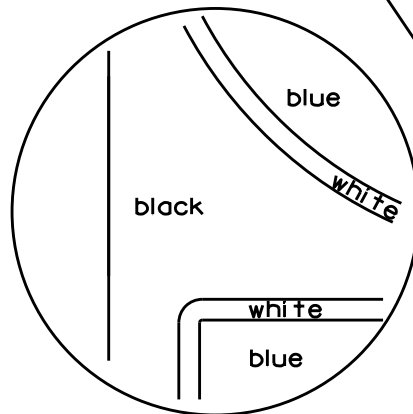
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

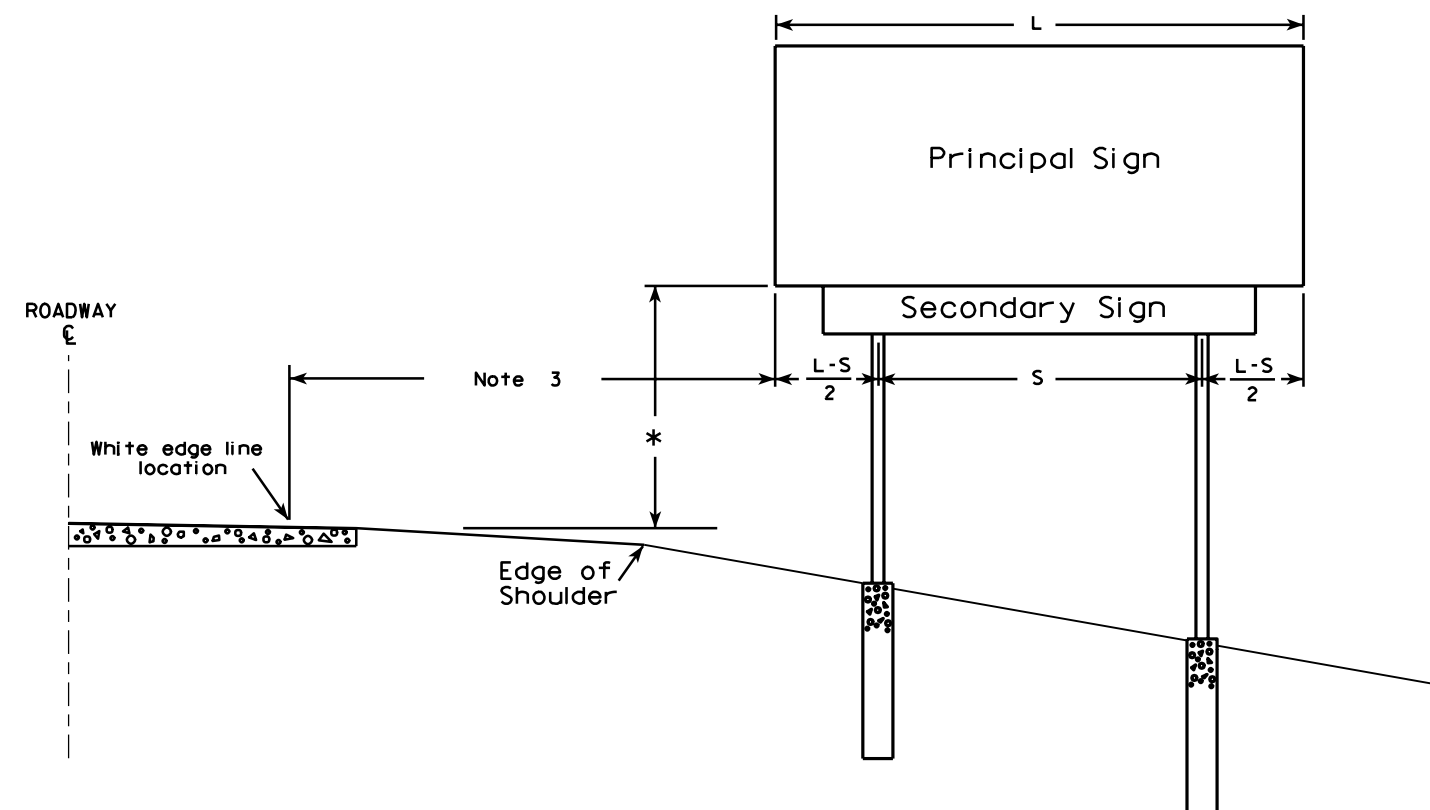
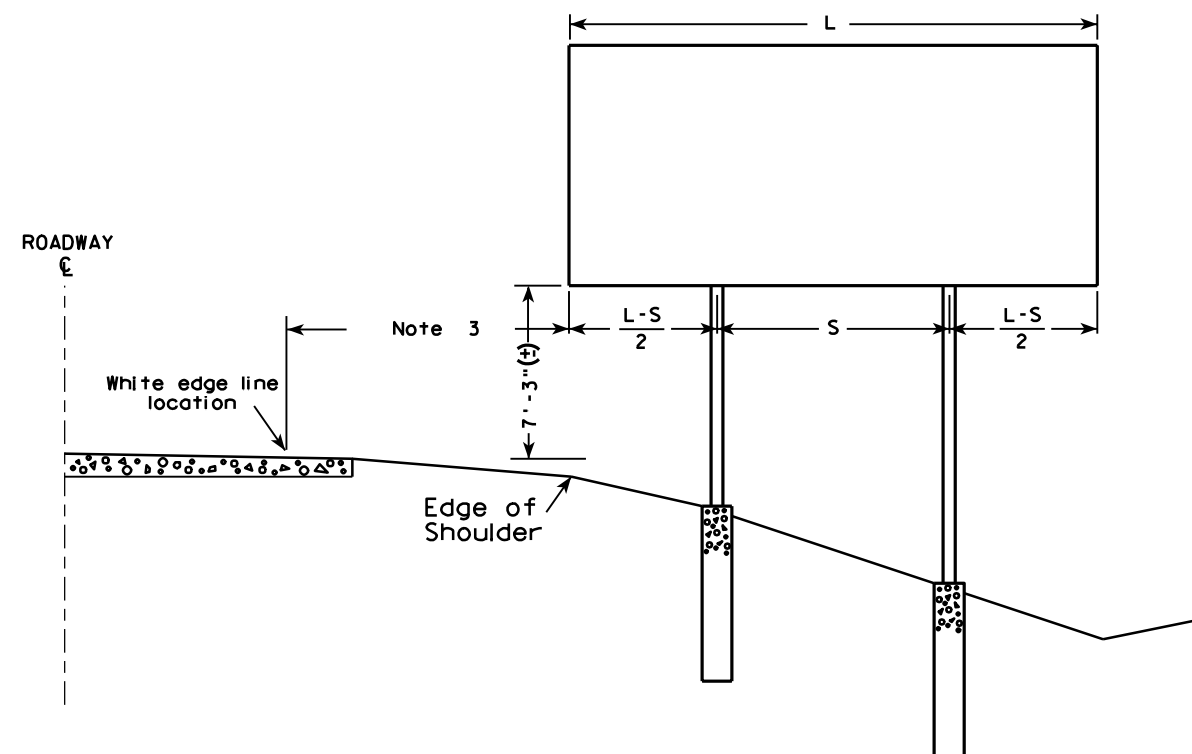
DATE 2/06/14 PL 201 A2-1S.8

SHEET NO: E

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

PROJECT NO:



GENERAL NOTES

1. For a 2 post installation, S equals $3L/5$, but shall not be less than 9 ft.
2. For a 3 post installation, S equals $5L/7$, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3" (±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

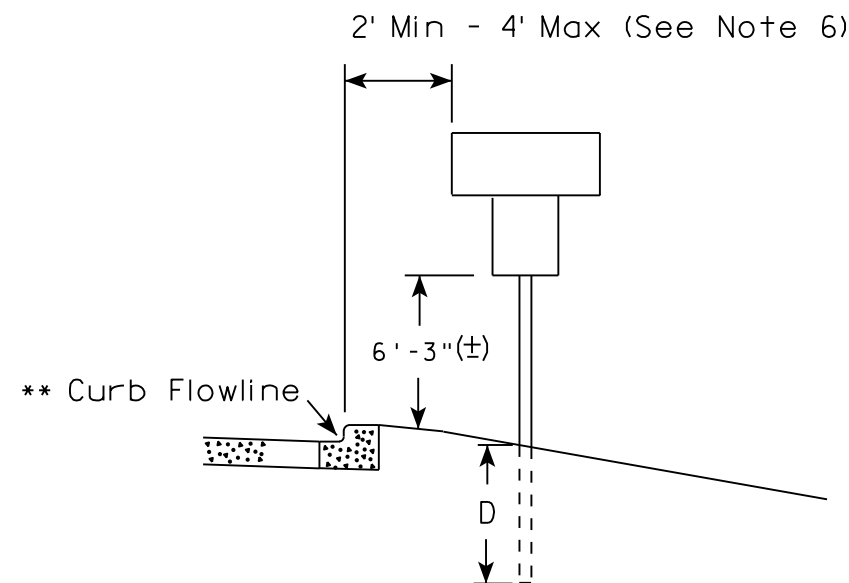
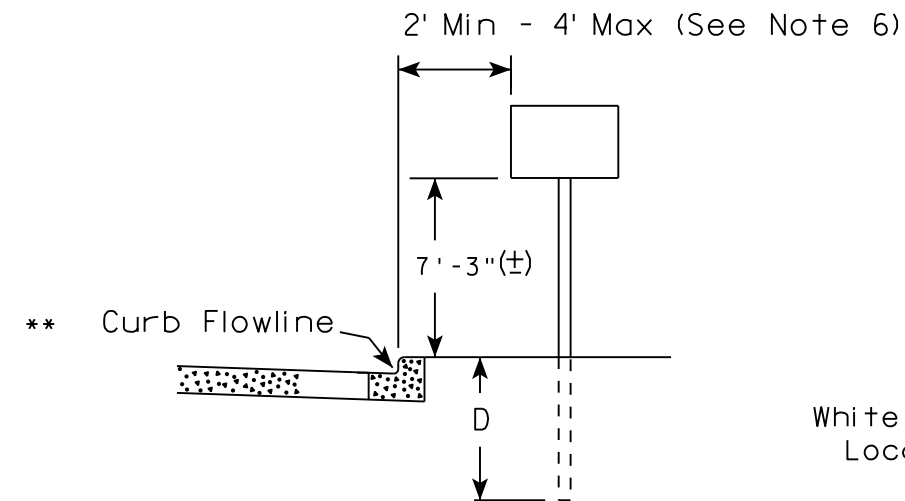
DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:

SHEET NO: 202

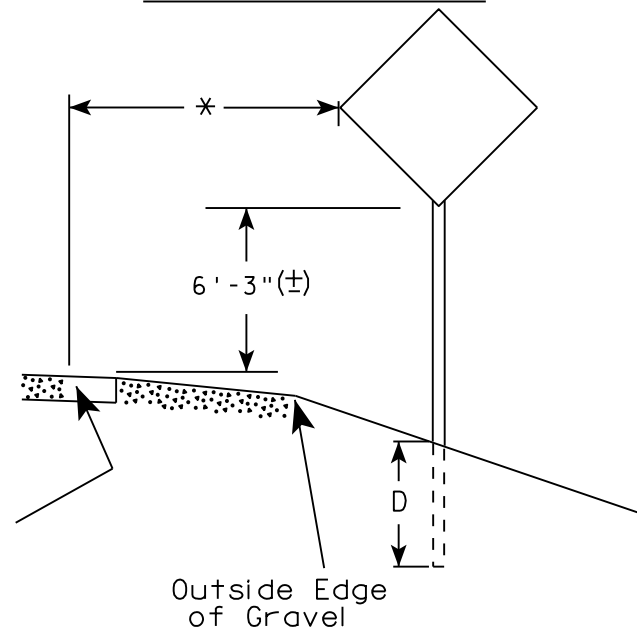
E

URBAN AREA

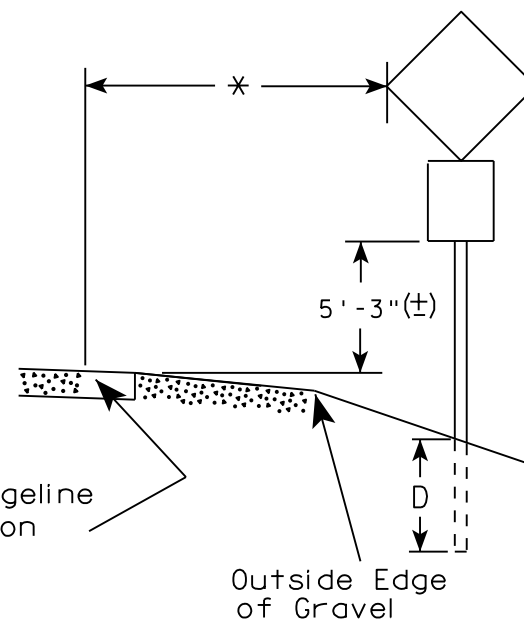


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

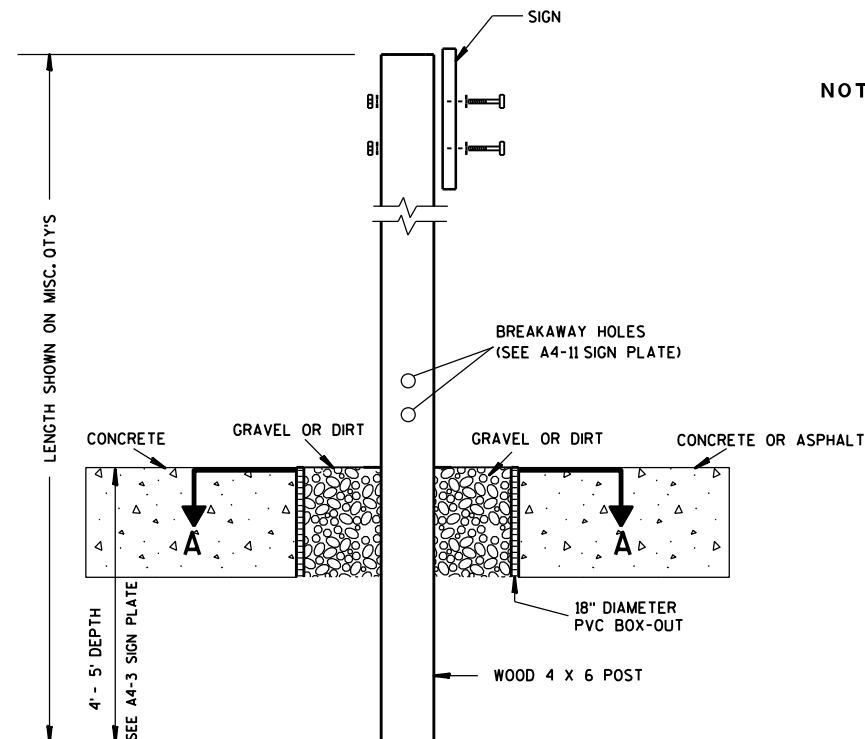
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 203

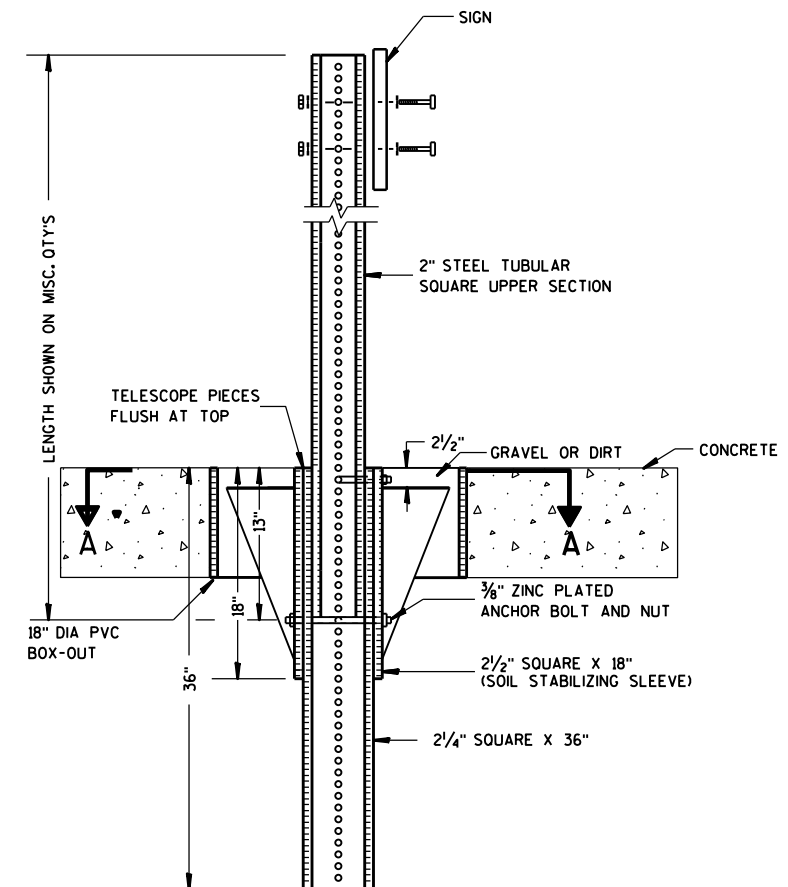
E



ELEVATION VIEW

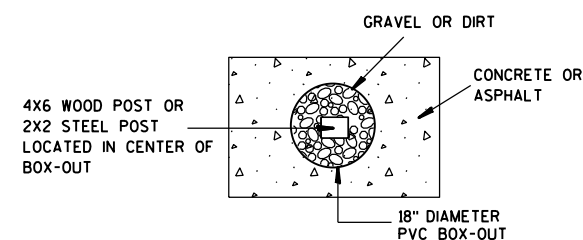
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 204 A4-3B.1

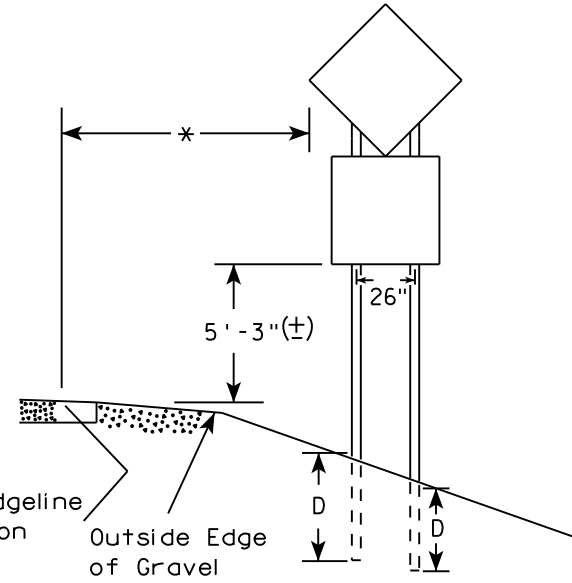
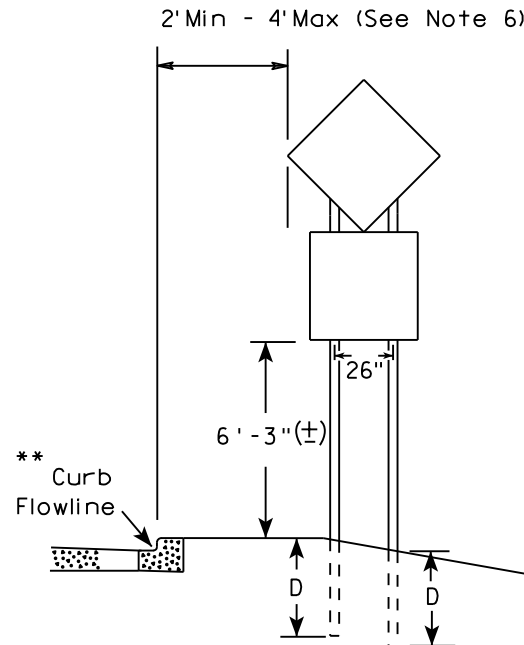
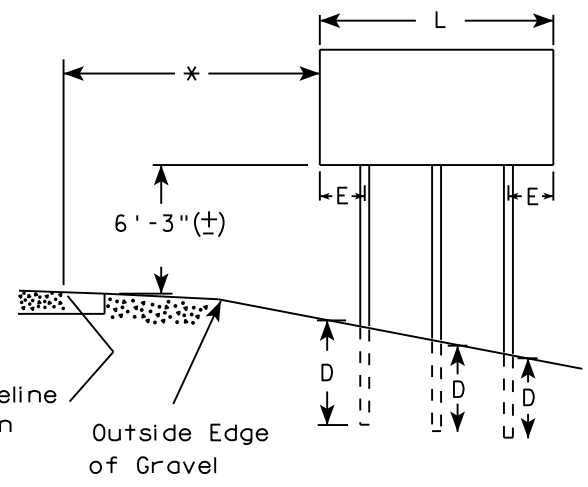
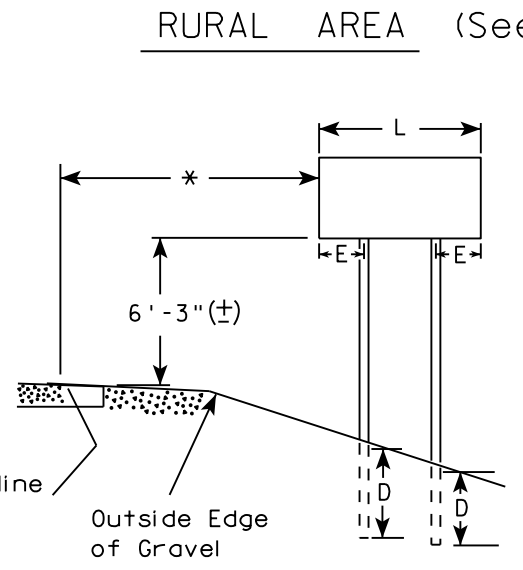
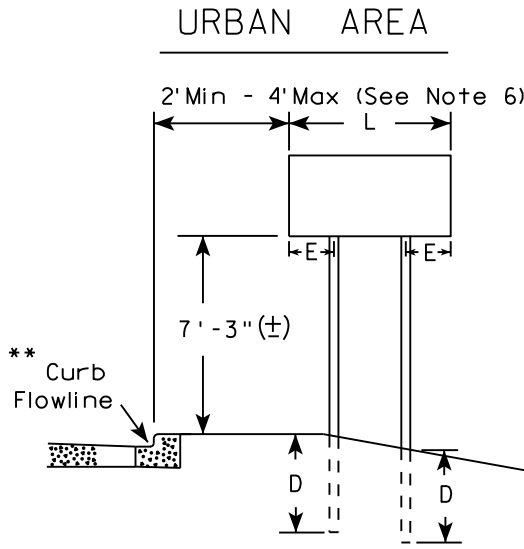
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

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

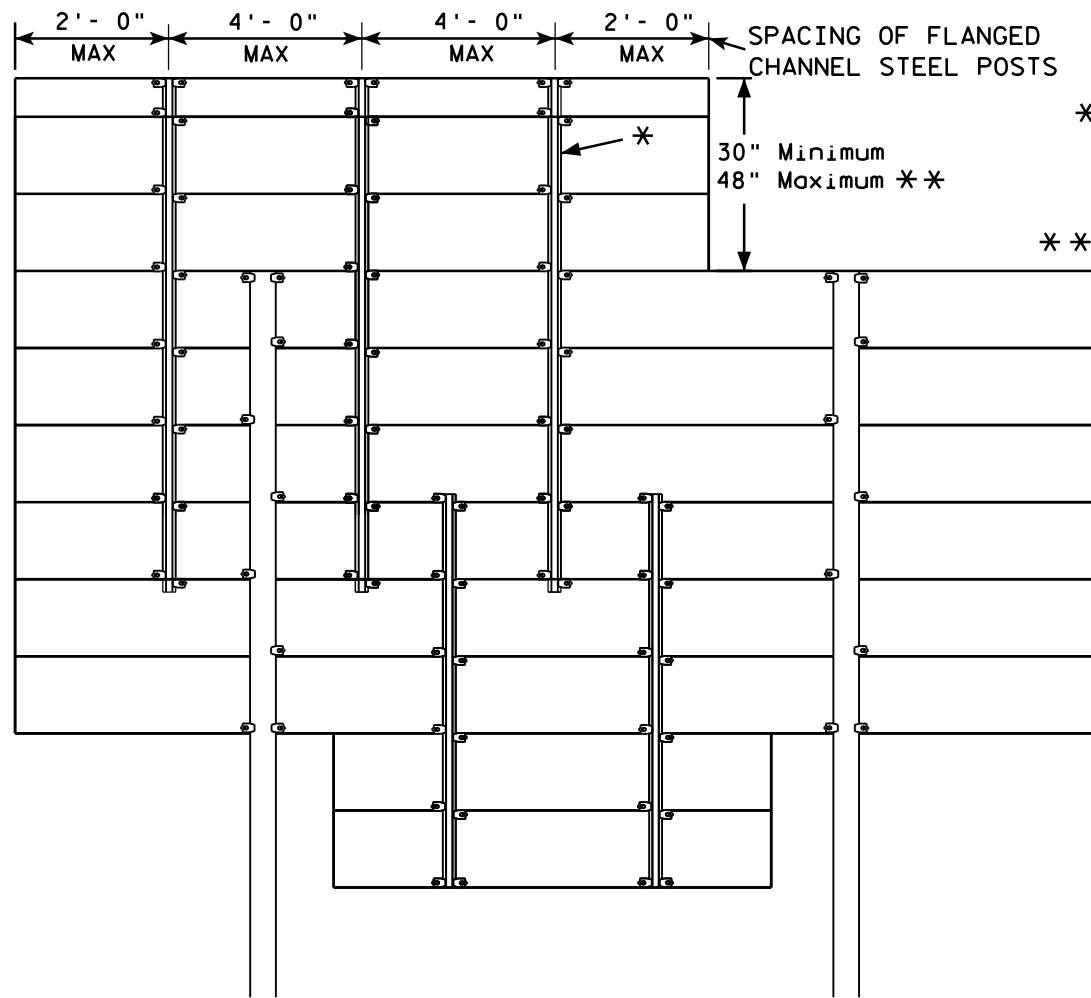
POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 8/21/17	PLATE NO. A4-4.15

- GENERAL NOTES
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. J-Assemblies are considered to be one sign for mounting height.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

GROUND MOUNTED SIGN

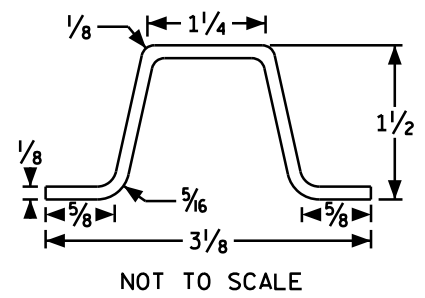


* = 2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

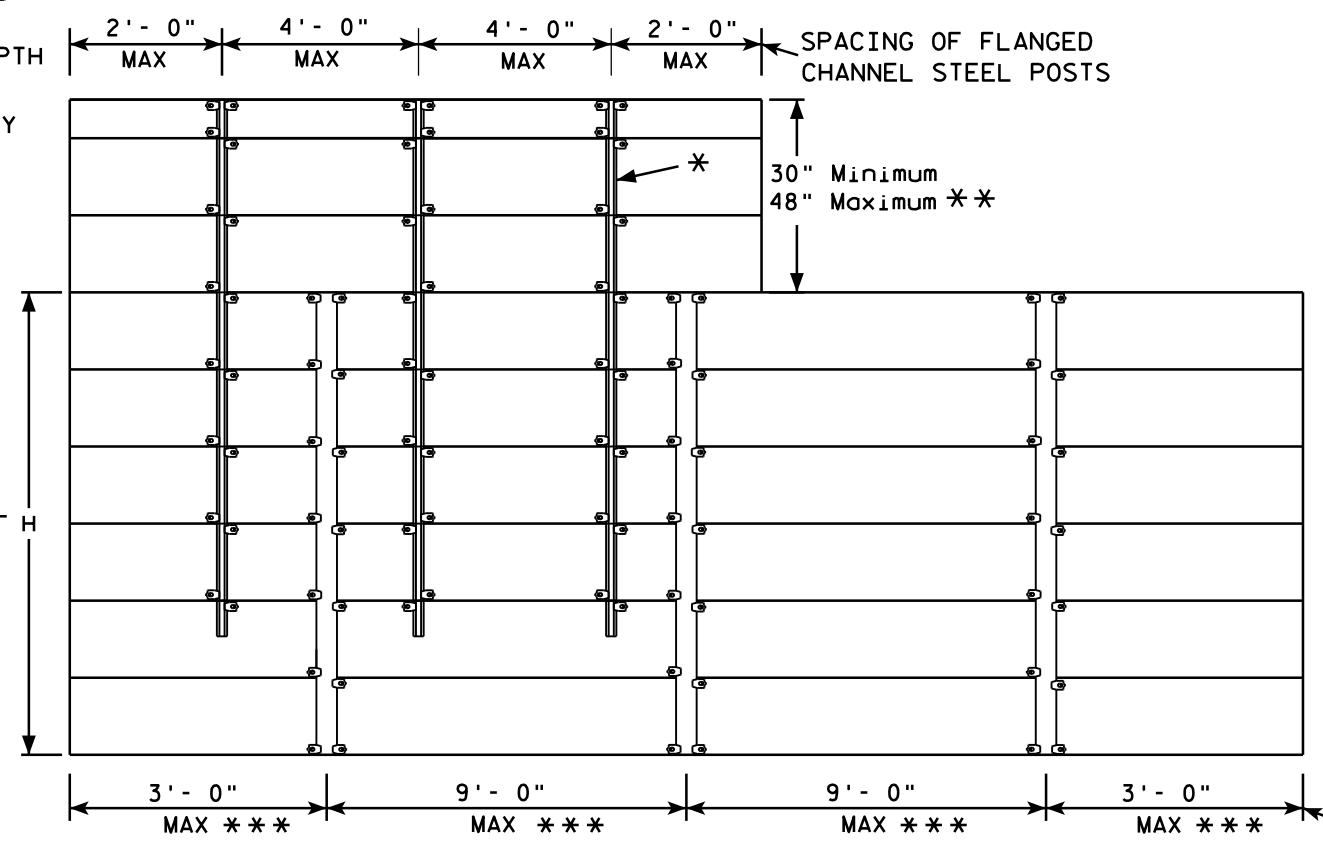
** = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:
PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
PANEL LENGTH 9'-0" - 12'-0" = 3 CHANNELS
PANEL LENGTH 13'-0" OR MORE = 4 CHANNELS
If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

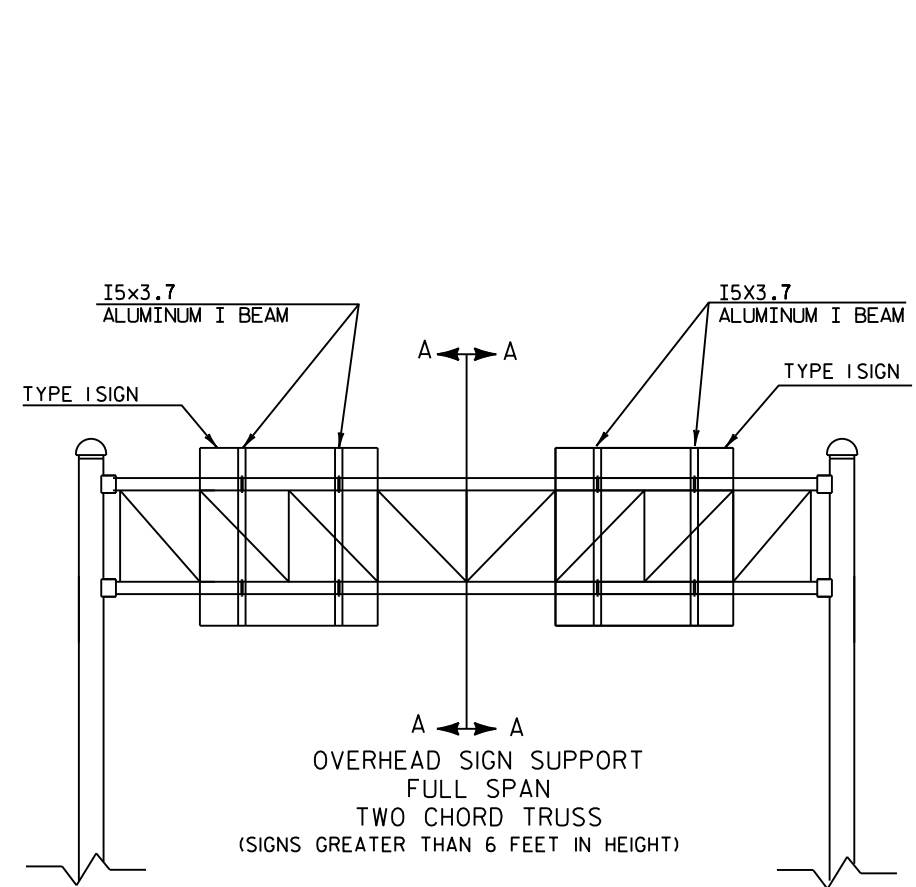
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

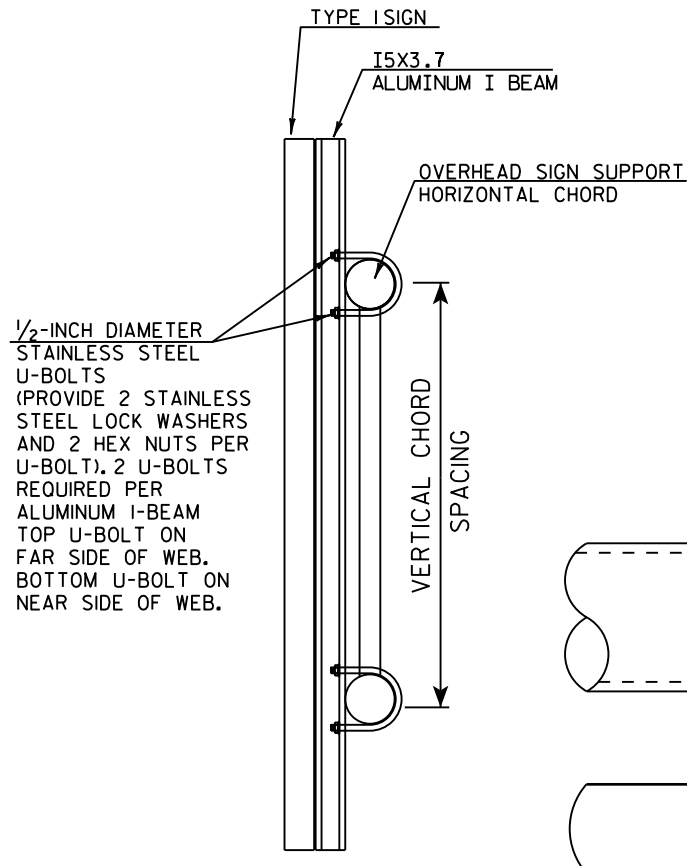
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

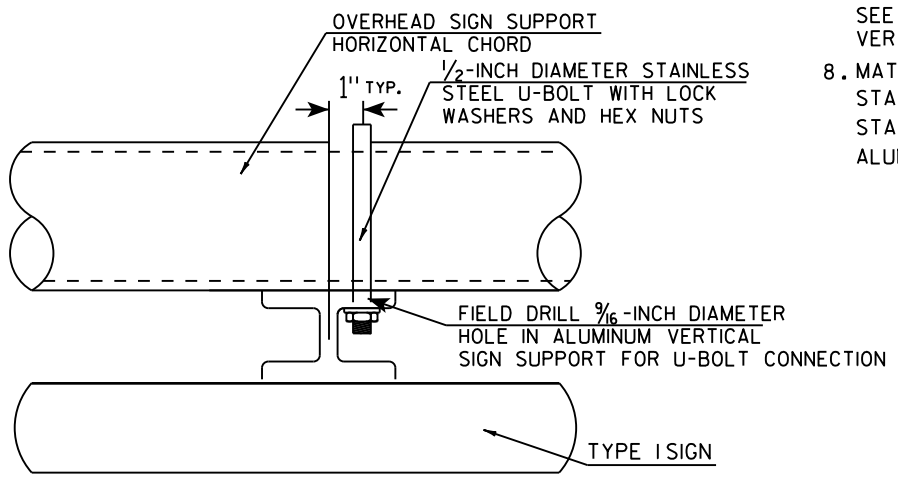
DATE 12/05/13 PLAT 206 ^4-6.12



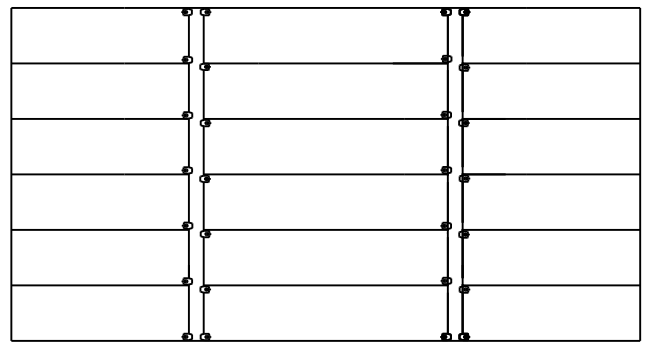
OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



CUT SECTION A-A

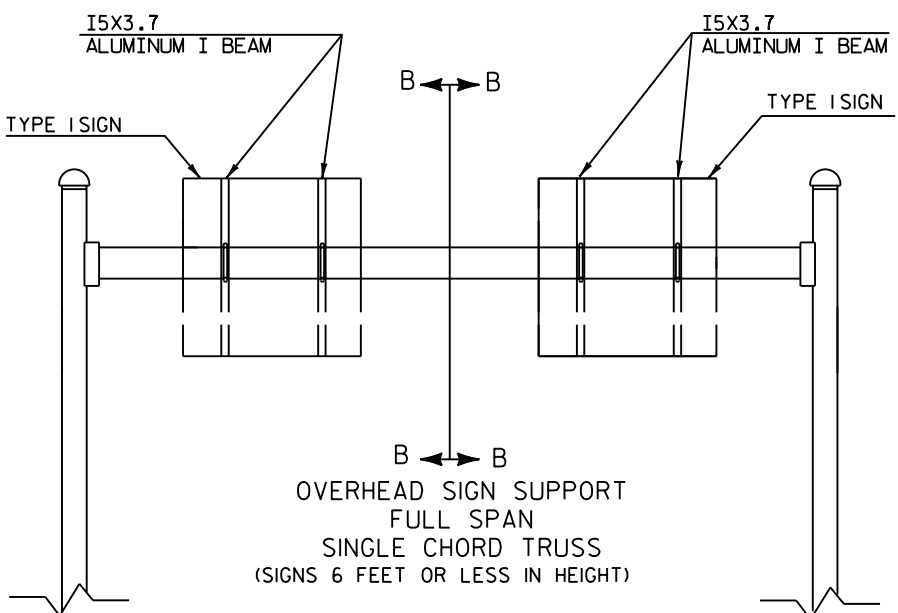


TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

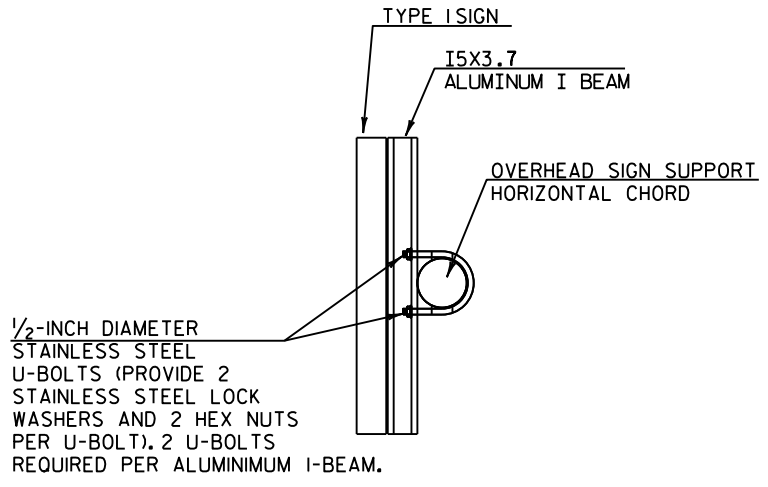


SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT

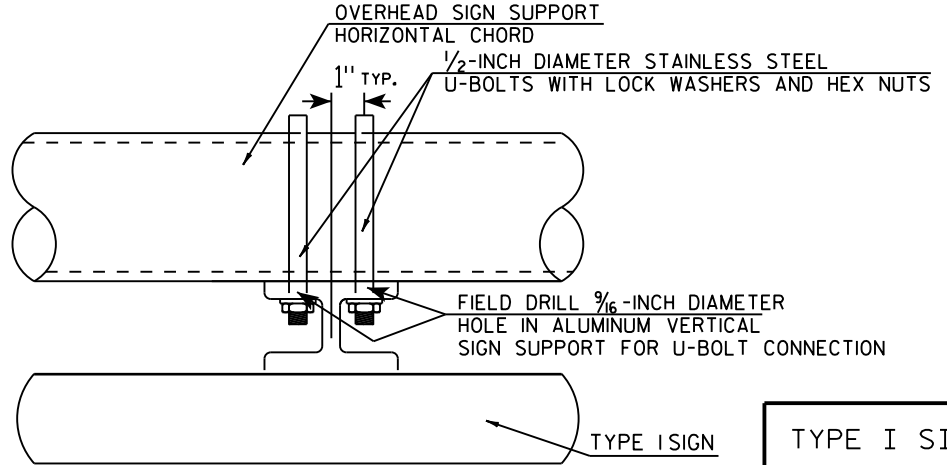
- GENERAL NOTES**
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
 2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
 3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
 4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
 5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
 6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
 7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
 8. MATERIAL NOTES:
STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
STAINLESS STEEL HEX NUTS ASTM A276.
ALUMINUM I-BEAMS ARE 6061-T6.



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



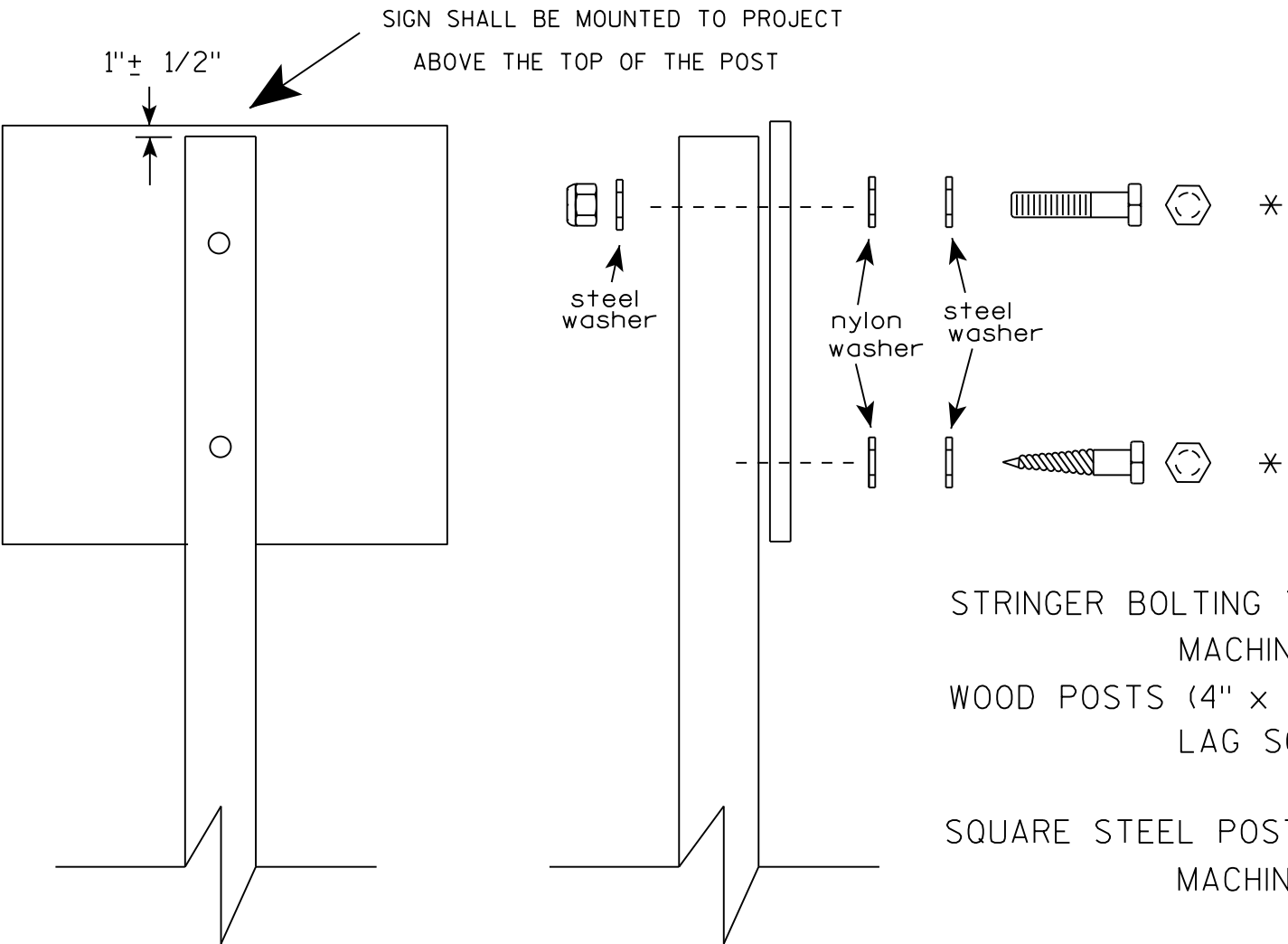
CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 11/10/15 PLAT 207 A4-7.4



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

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

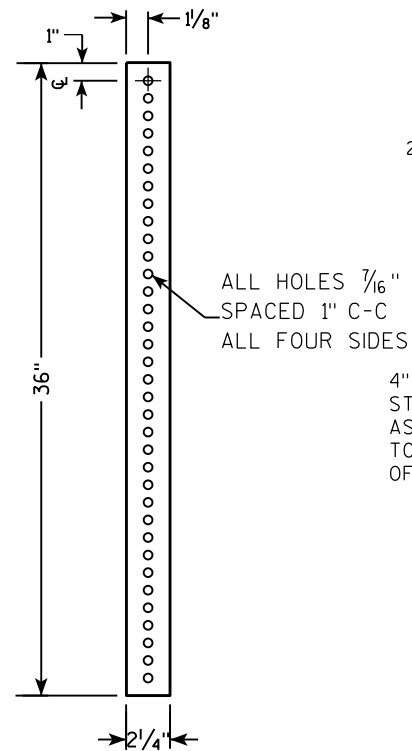
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

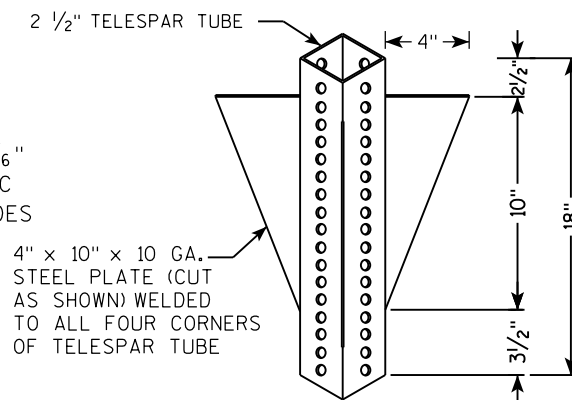
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8 208

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



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



LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 2 1/2" GRAVEL OR DIRT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

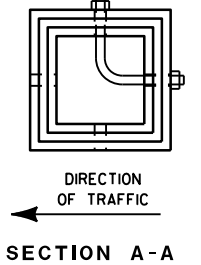
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthieu R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATI 209 14-9.9

SHEET NO: **E**

PROJECT NO:

HWY:

COUNTY:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN

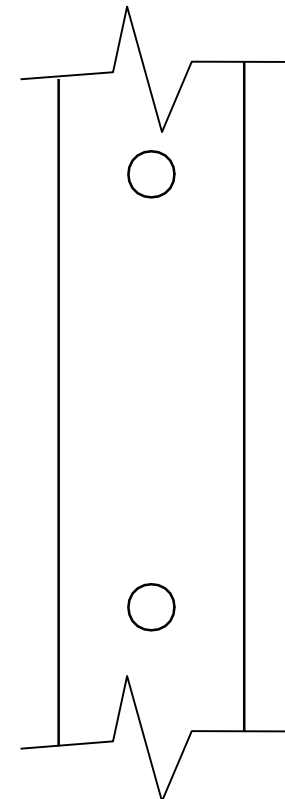
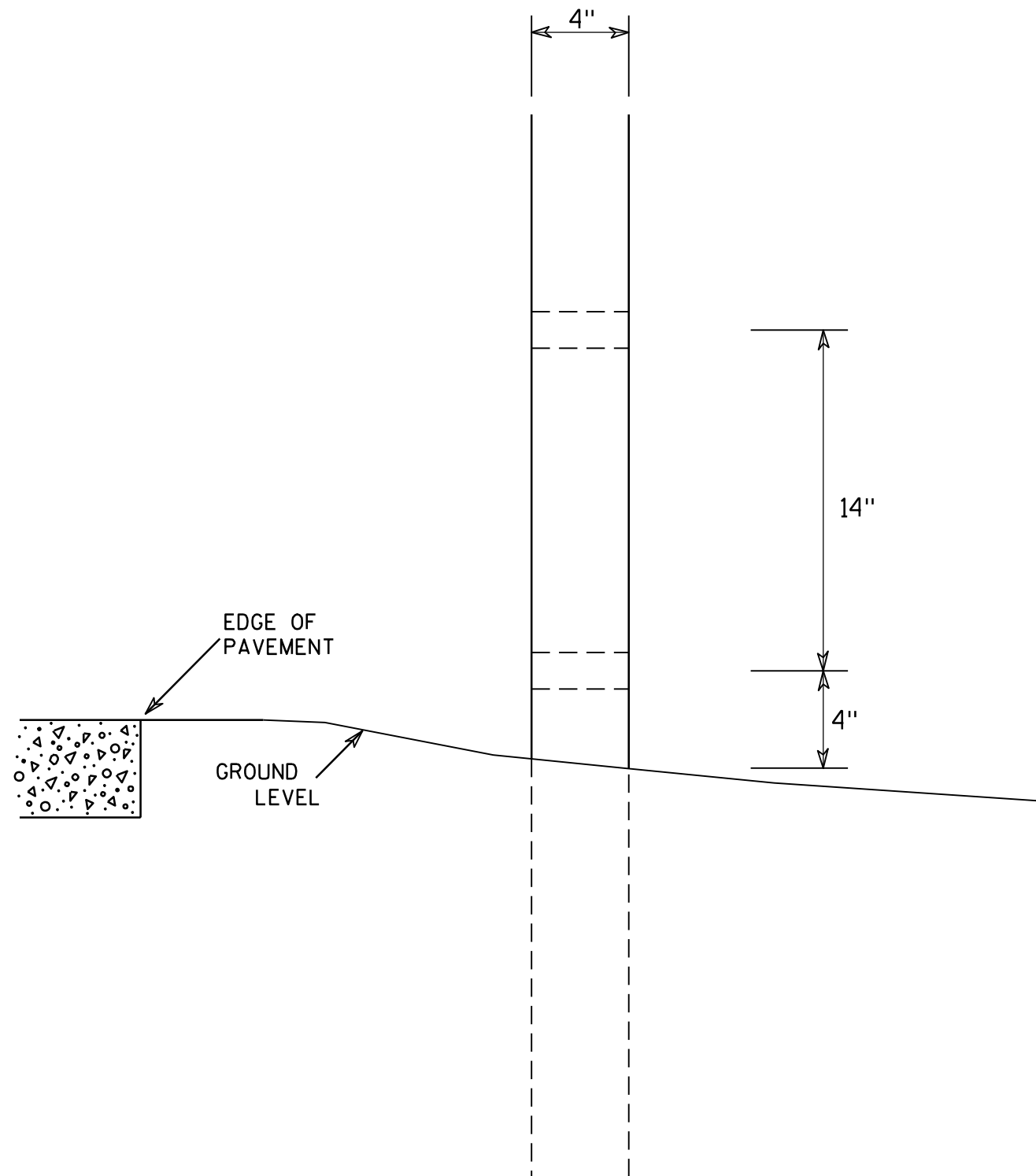
PLOT DATE : 05-FEB-2015 17:09

PLOT BY : mscs_ja

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 1 1/2" 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

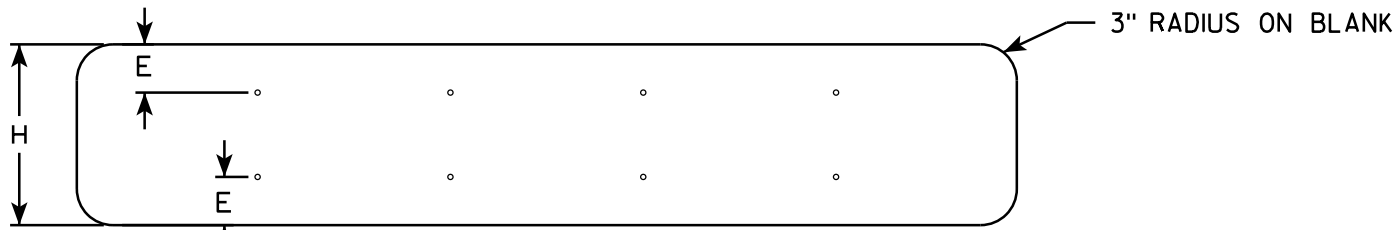
PROJECT NO:

HWY:

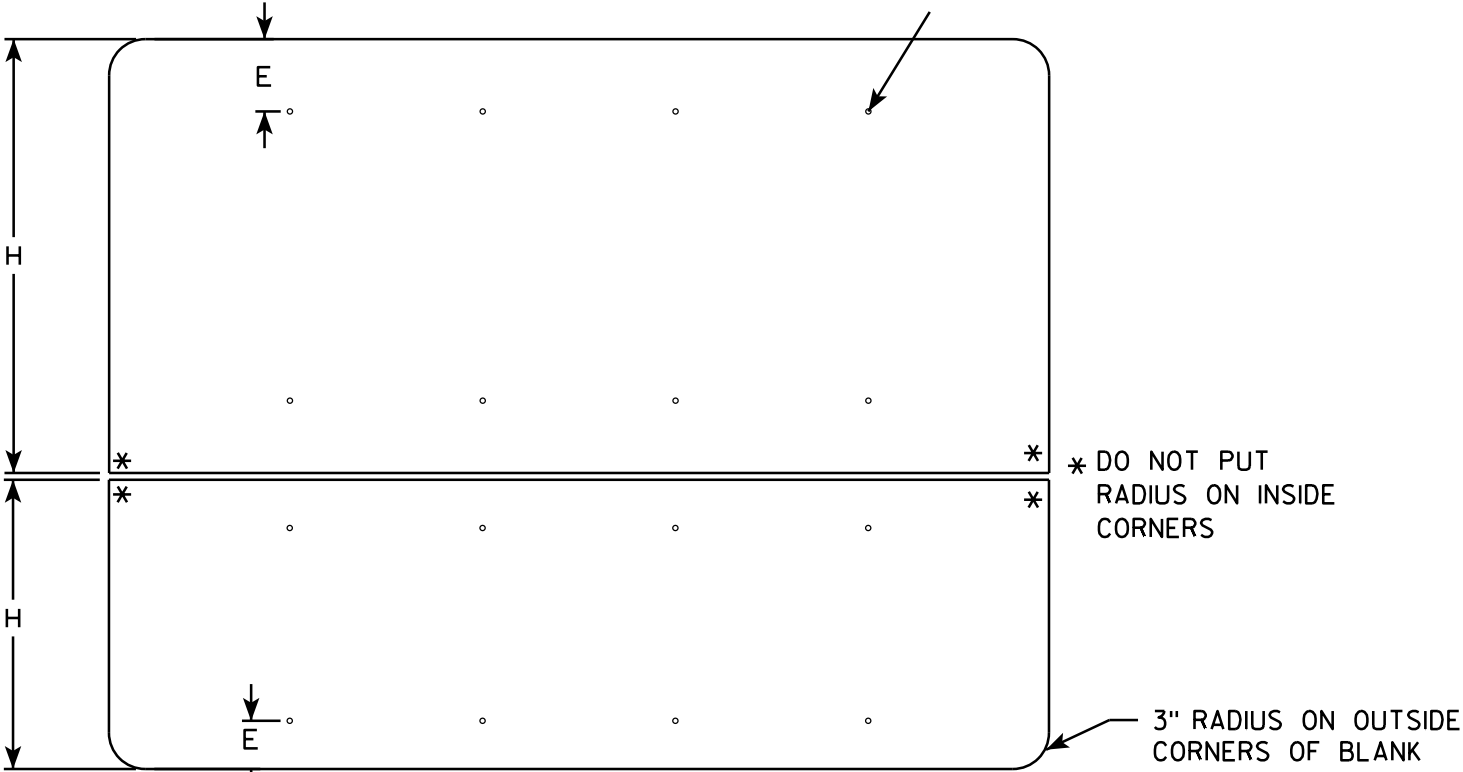
COUNTY:

SHEET NO: 210

E



SINGLE PIECE ALUMINUM SIGN 1/16" MOUNTING HOLES



MULTI-PIECE ALUMINUM SIGN

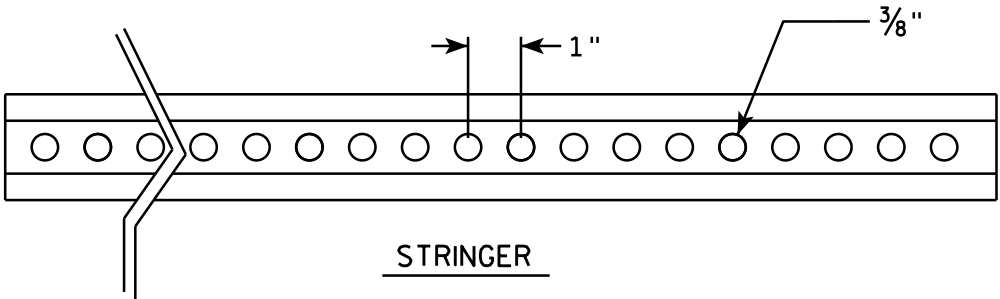
* DO NOT PUT
RADIUS ON INSIDE
CORNERS

3" RADIUS ON OUTSIDE
CORNERS OF BLANK

GENERAL NOTES

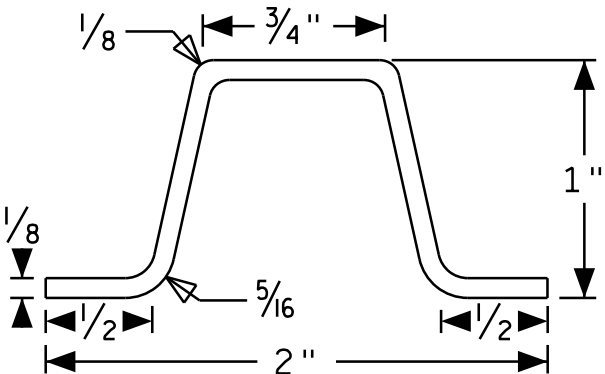
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"

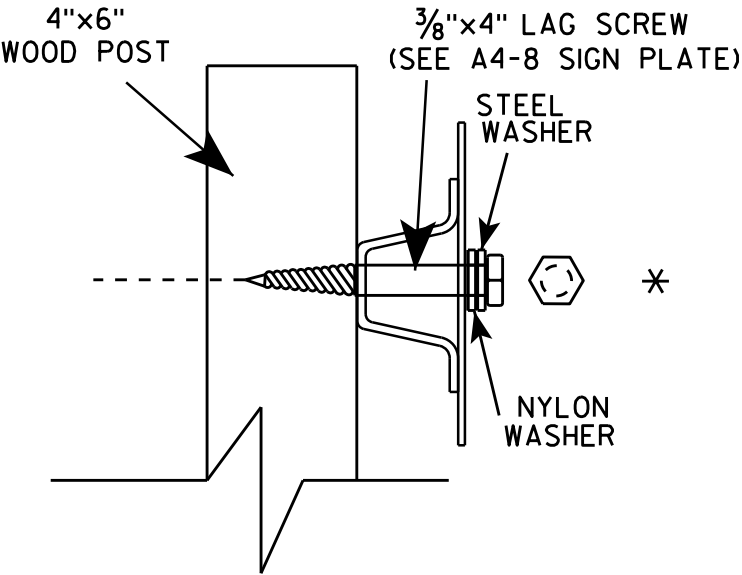


STRINGER

CROSS SECTION
VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLATE No. A4-18.1
211

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

7

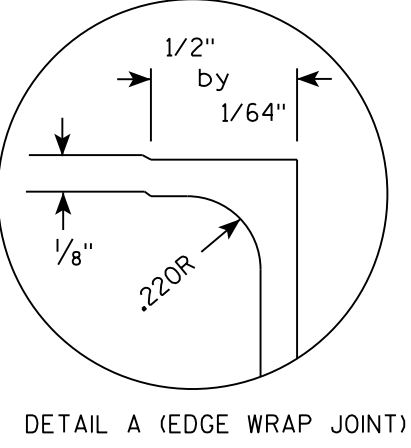


Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions $1/2"$ by $1/64"$ and $1/8"$. A fillet radius of $.220R$ is indicated at the corner.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is shown with dimensions: 1/2" by 1/64" and 1/8". A note indicates a 220R radius for the curved section.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions $1/2"$ by $1/64"$ and $1/8"$. A fillet radius of $.220R$ is indicated at the corner.



POST CLIP, POST CLIP BOLT, WASHER & NUT

POST CLIP, POST CLIP BOLT, WASHER & NUT

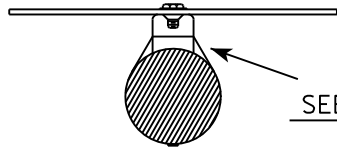
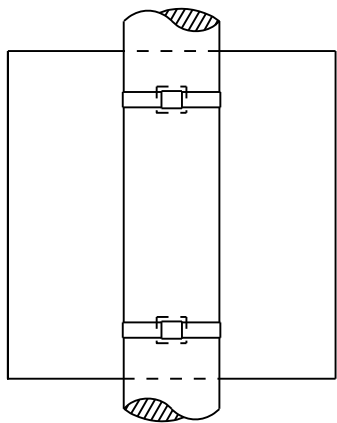


1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE <u>11/30/16</u>	PLATE NO. <u>A5-2.10</u>

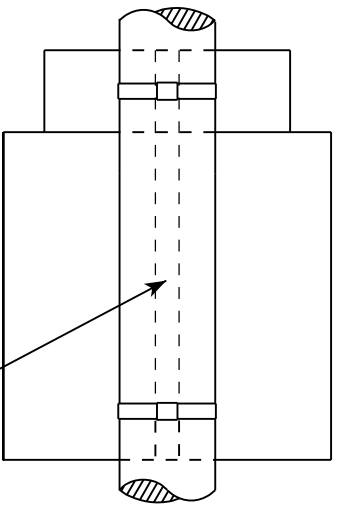
BANDING

SINGLE SIGN

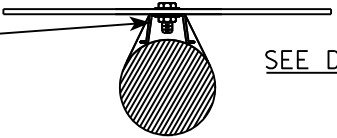


SEE DETAIL A

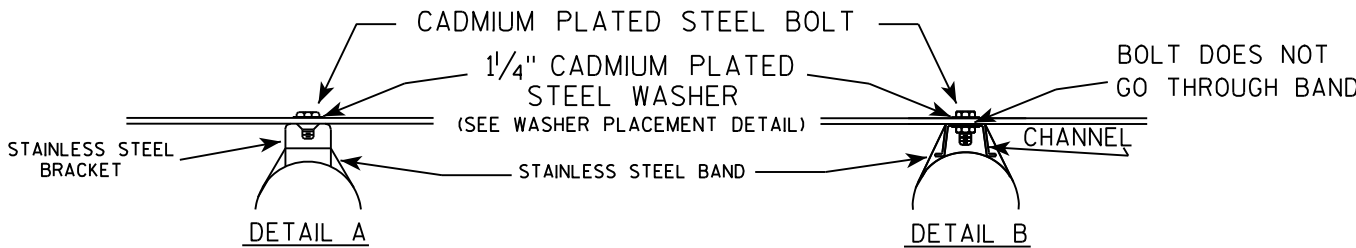
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



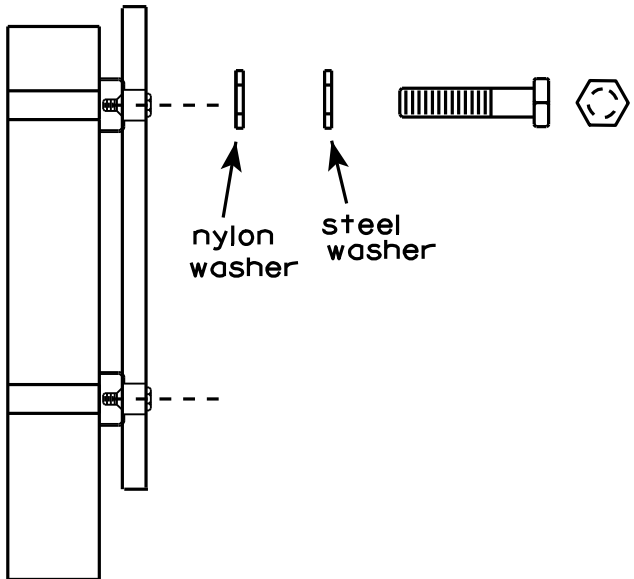
SEE DETAIL B



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



nylon washer
steel washer

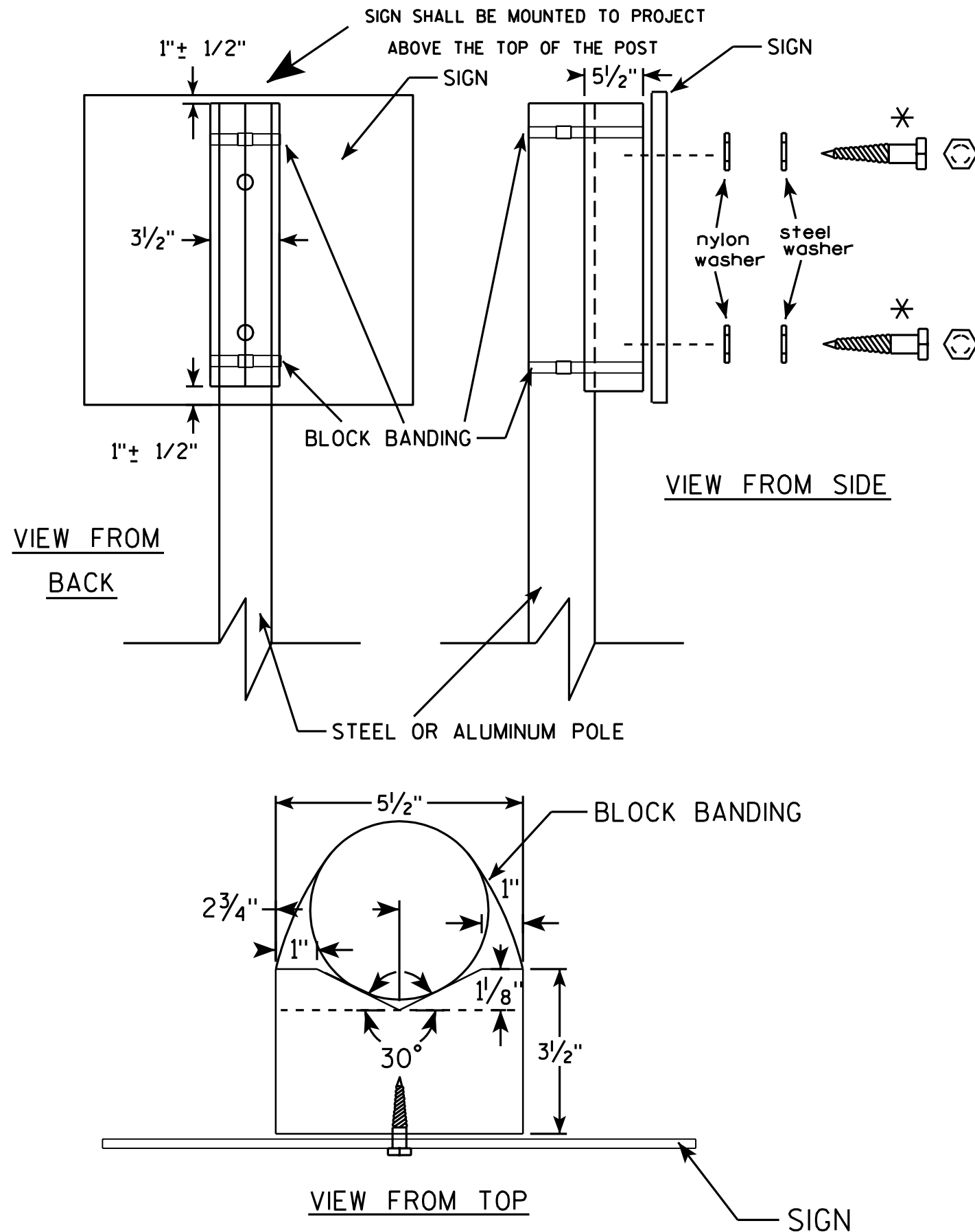
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3



GENERAL NOTES

1. WOOD 4"x6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

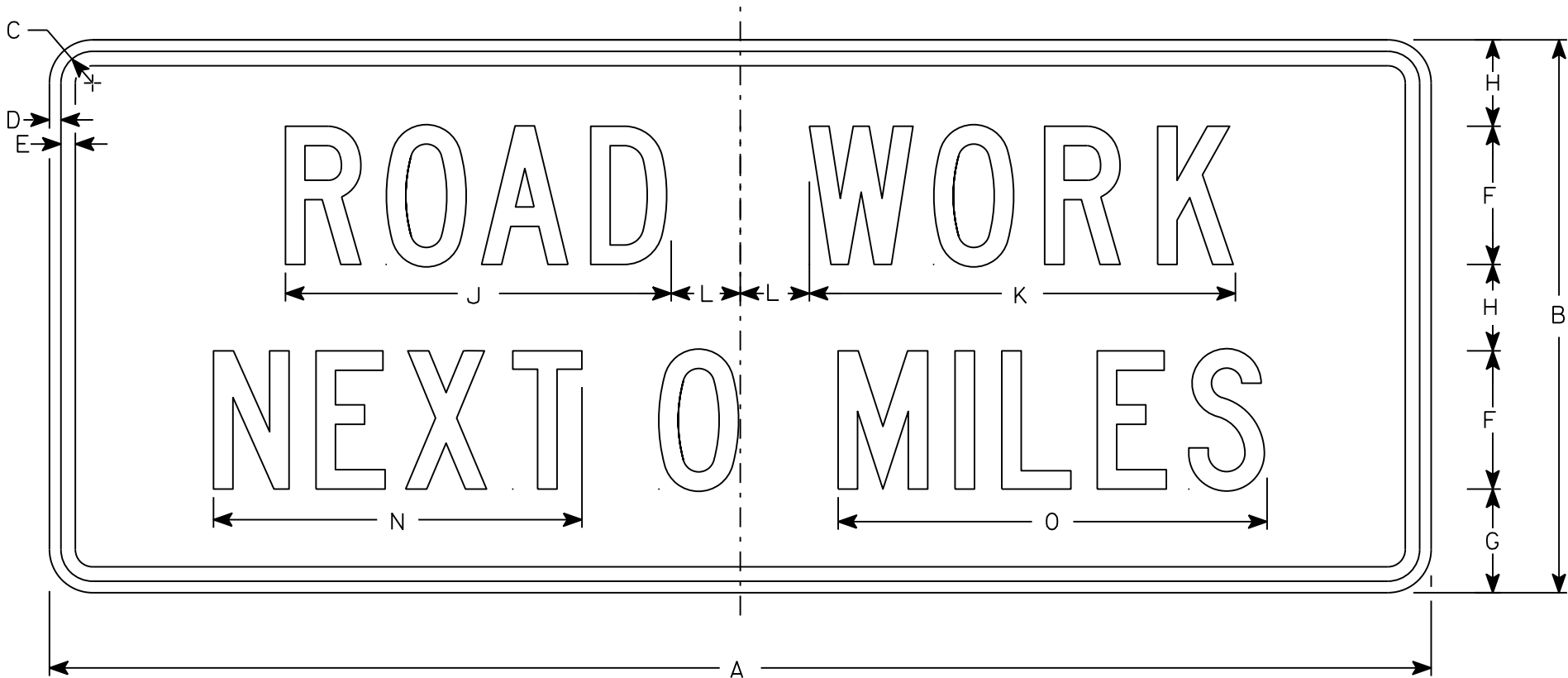
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 214

E

7



G20-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	24	1 3⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4		16 3⁄4	18 1⁄2	3		16	18 5⁄8												10
3																											
4	60	24	1 3⁄8	1⁄2	5⁄8	6	4 1⁄2	3 3⁄4		16 3⁄4	18 1⁄2	3		16	18 5⁄8												10
5																											

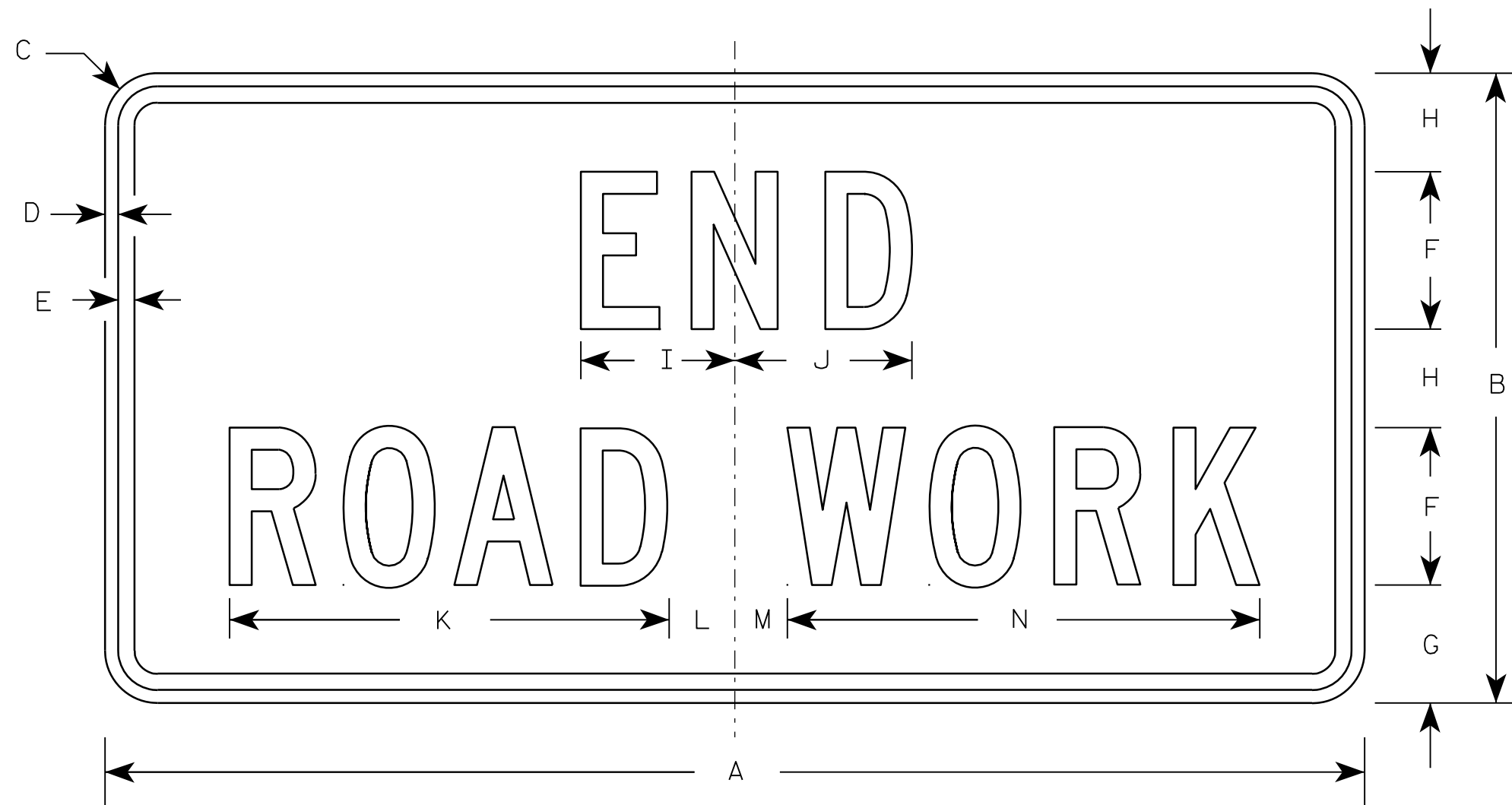
STANDARD SIGN
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

7



G20-2A

NOTES

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

Metric equivalent
for this sign is:

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

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

STANDARD SIGN

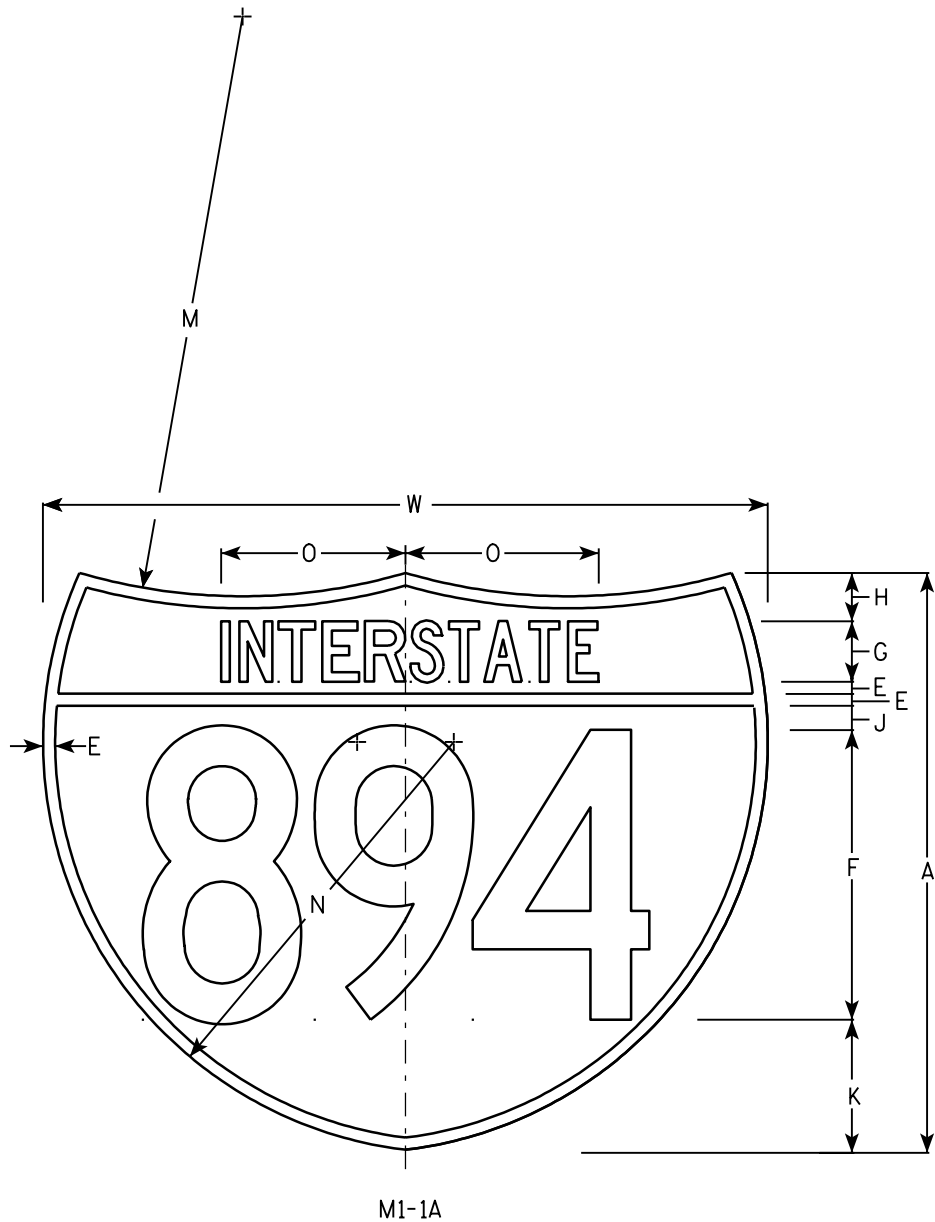
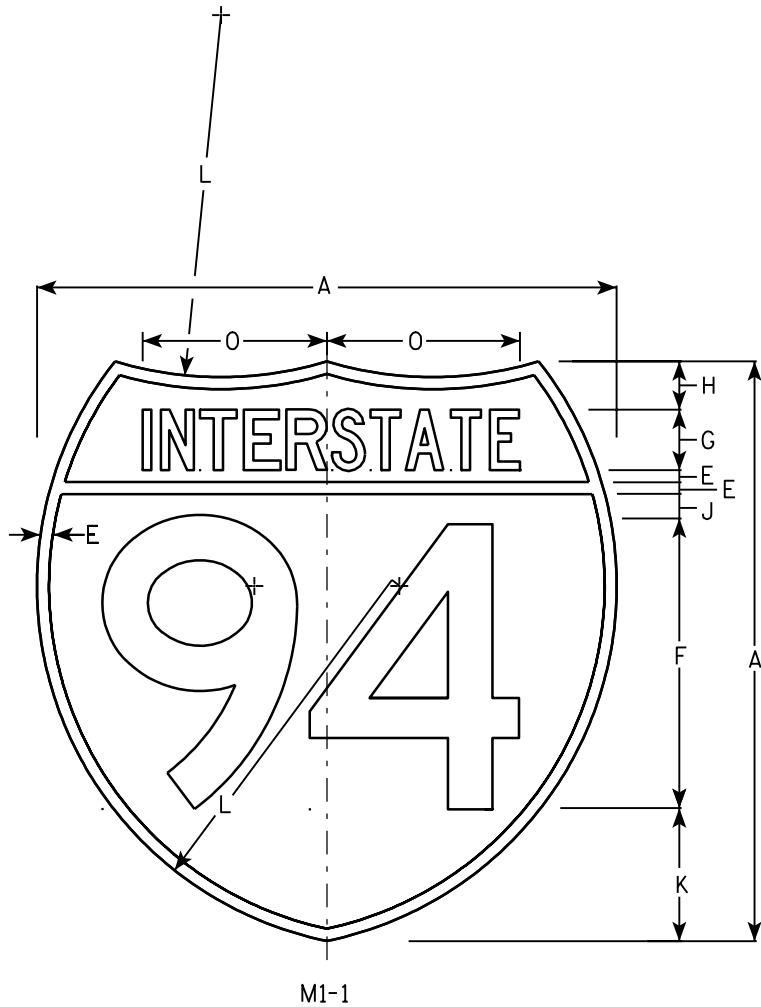
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

7



NOTES

- 1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Top Red - Bottom Blue (See Note 6)
Message - White - See Note 6
- 3. Message Series - See note 5
- 4. Substitute appropriate numerals & adjust spacing as per plate A10-1.
- 5. M1-1 - Numerals - D
Interstate - C
M1-1A - All copy - C
- 6. Permanent Signs
Message - Type H Reflective
Detour or other temporary signs
Background - Reflective
Message - Reflective

Metric equivalent for these signs are:

SIZE	M1 - 1	SIZE	M1 - 1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Area sq. ft.	Area sq. ft.	Area m ²	Area m ²
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 217

E

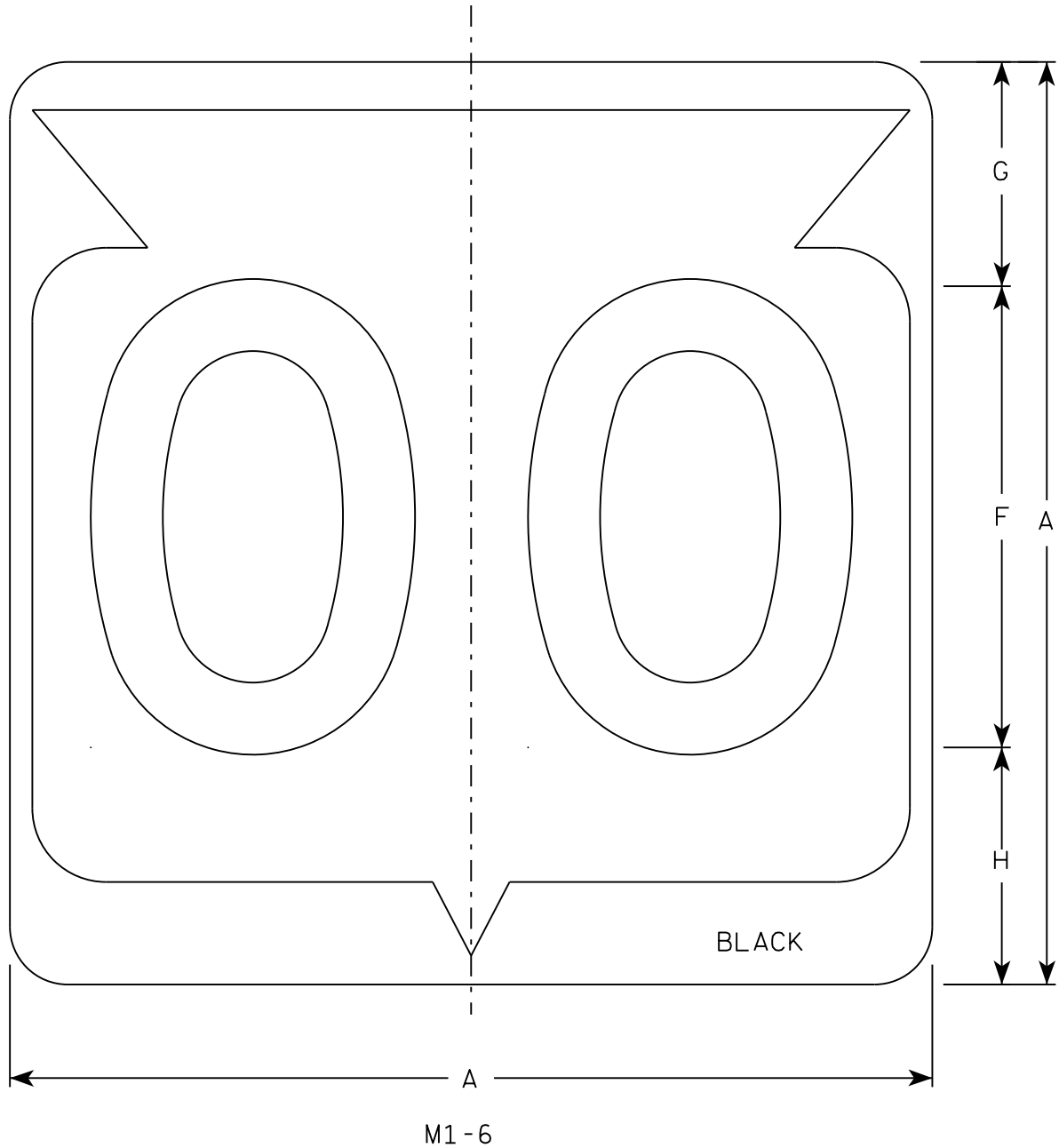
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

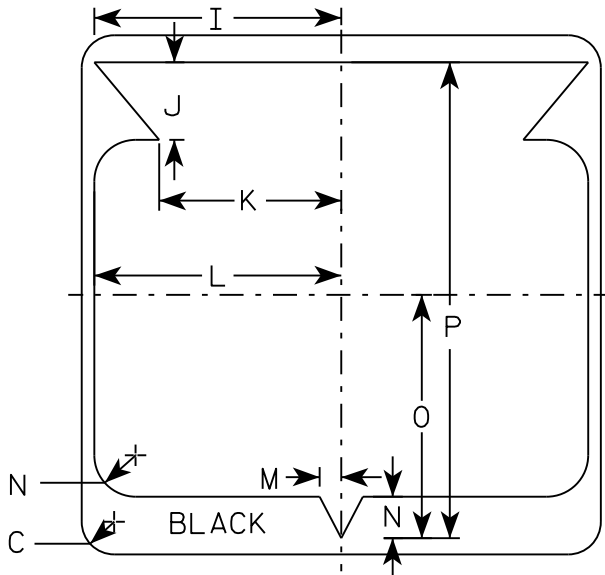
DATE 08/23/05 PLATE NO. M1-1.8

7



NOTES

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



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 218

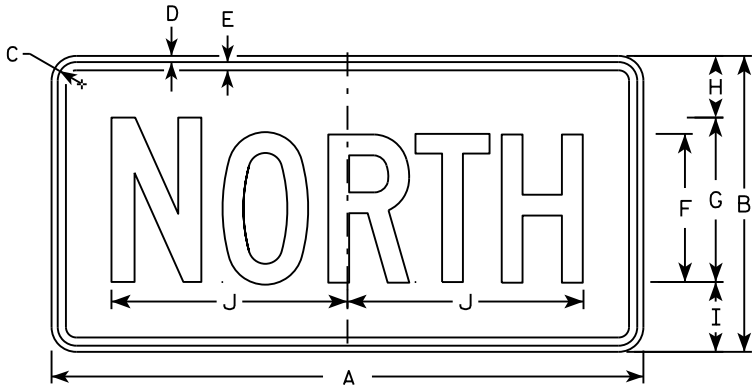
E

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

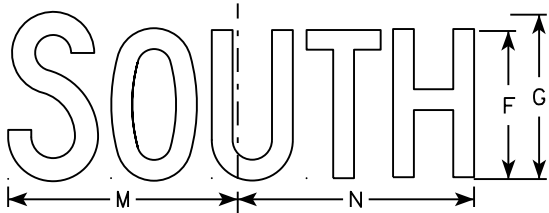
DATE 3/16/18 PLATE NO. M1-6.10



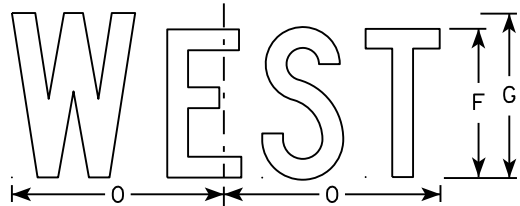
M3-1
MM3-1
MP3-1



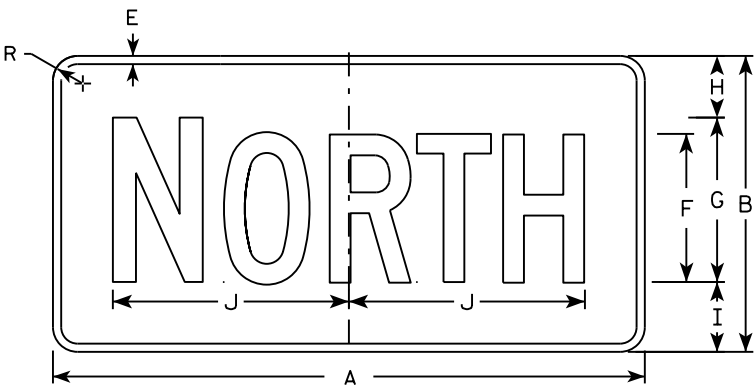
M3-2
MM3-2
MP3-2



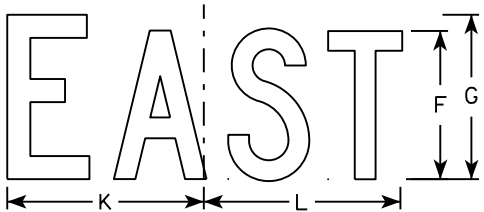
M3-3
MM3-3
MP3-3



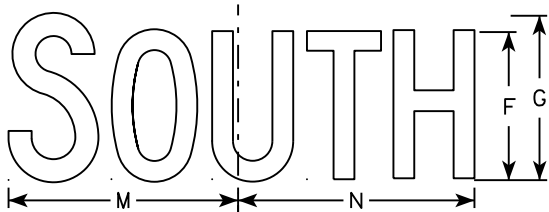
M3-4
MM3-4
MP3-4



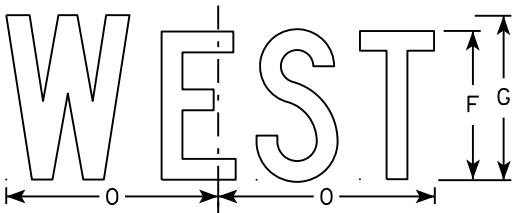
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

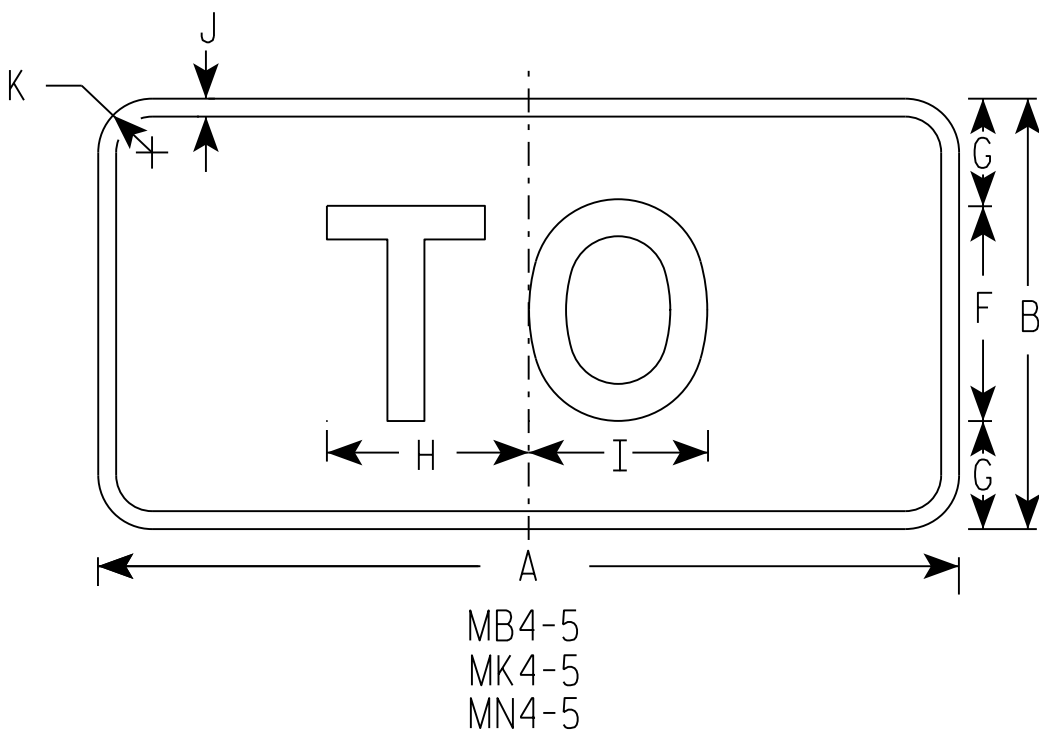
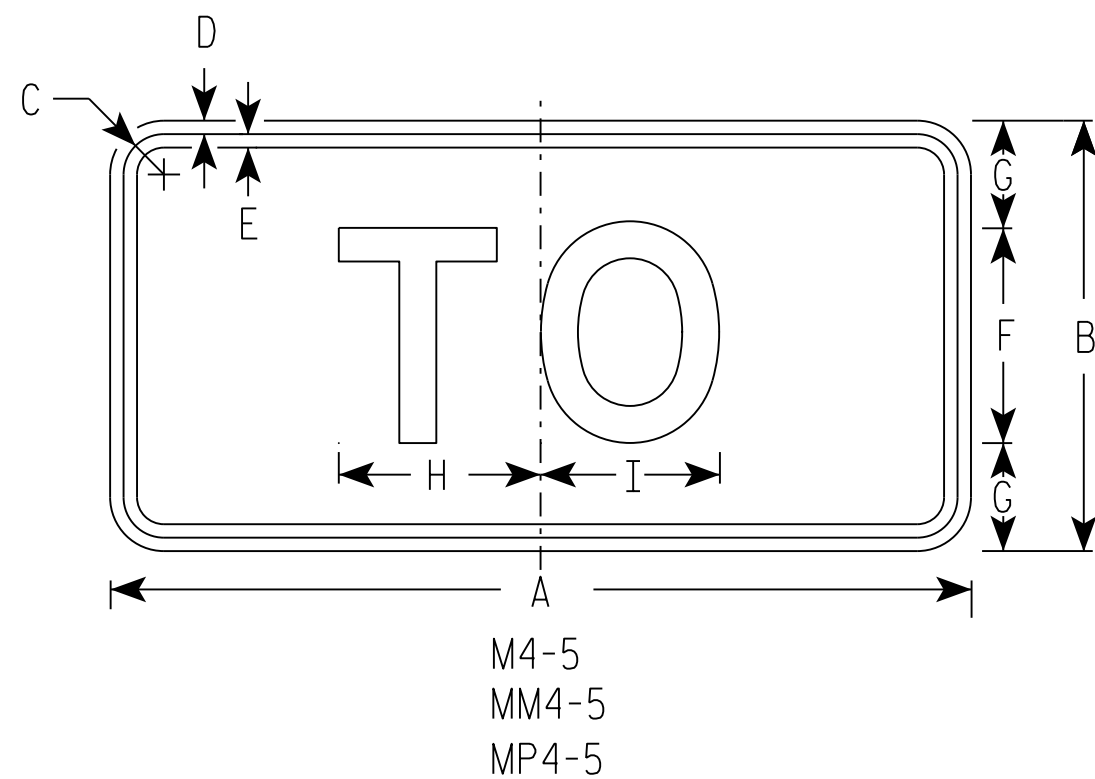
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. 219 M3-1.14



NOTES

- 1. Sign is Type II - Type H
- 2. Color:
 - Background - See note 5
 - Message - See note 5
- 3. Message Series - E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M4-5 Background - White
Message - Black
- MB4-5 Background - Blue
Message - White
- MK4-5 Background - Green
Message - White
- MM4-5 Background - White
Message - Green
- MN4-5 Background - Brown
Message - White
- MP4-5 Background - White
Message - Blue

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN

M4 - 5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

for State Traffic Engineer

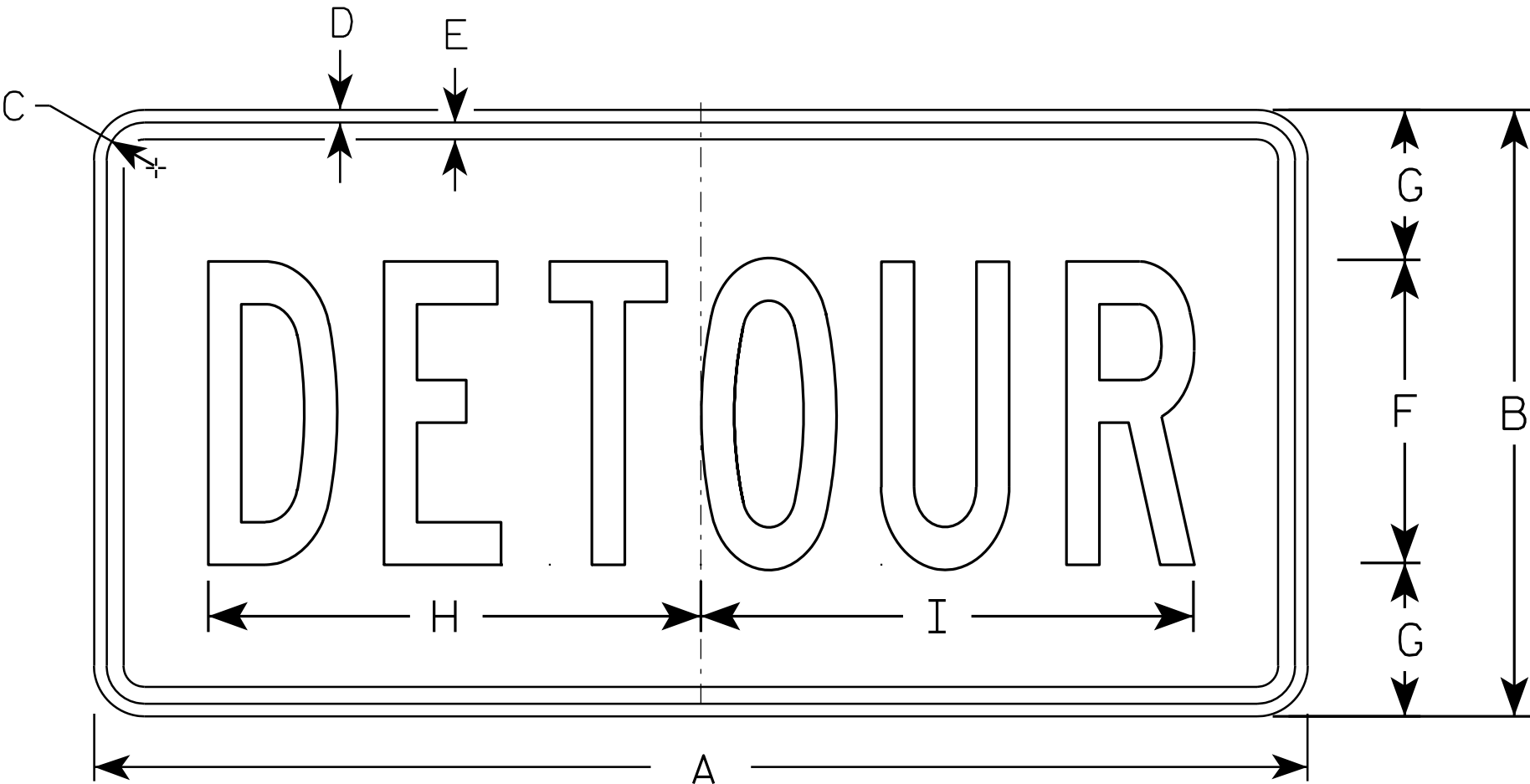
DATE 10/15/15

PLATE 220

'14-5.8

NOTES

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



M4 - 8

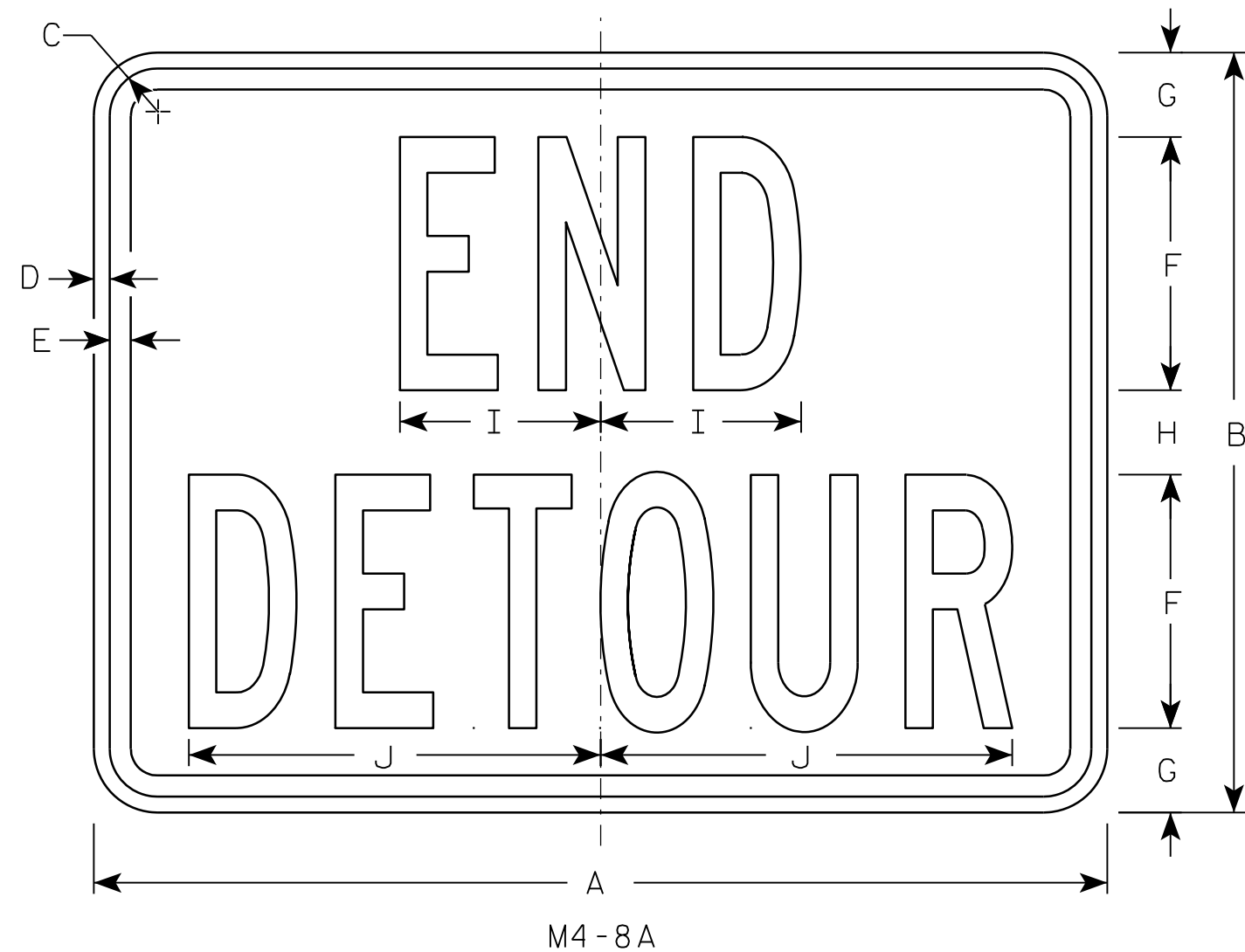
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 222	E
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STANDARD SIGN

M4-8A

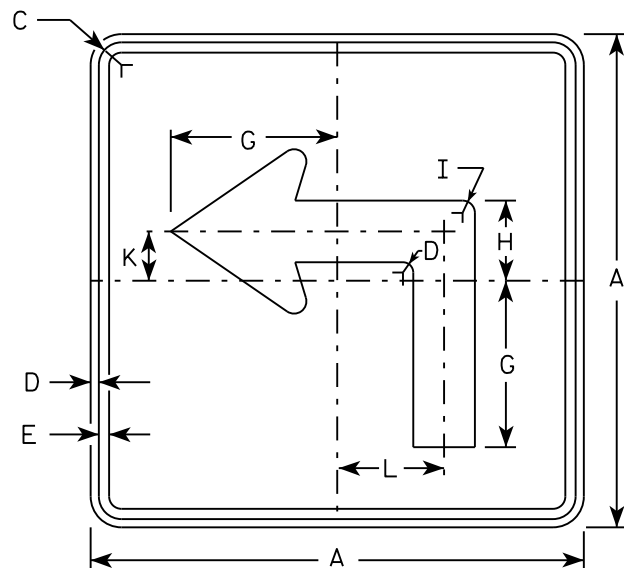
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

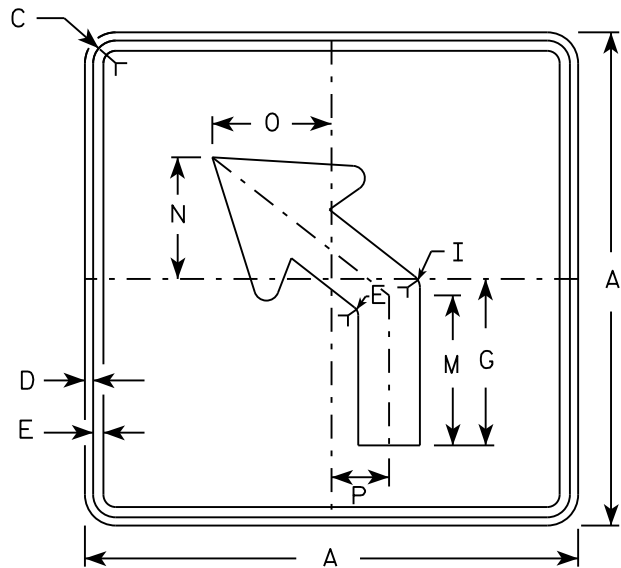
for State Traffic Engineer

DATE 3/9/11

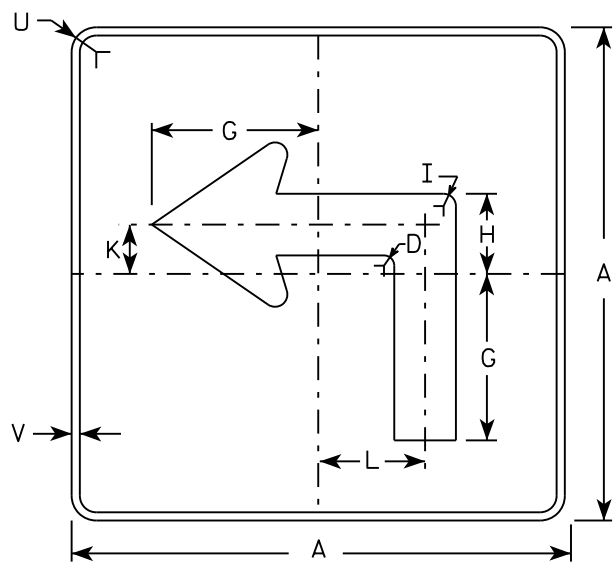
PLATE NO. M4-8A.2



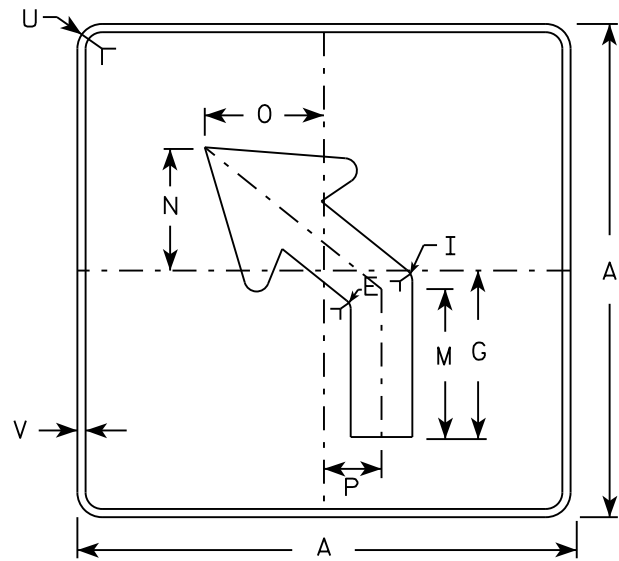
M5-1L
MM5-1L
M05-1L
MP5-1L



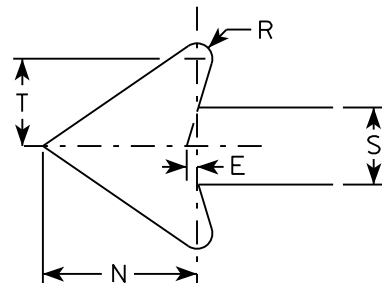
M5-2L
MM5-2L
M05-2L
MP5-2L



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



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



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White
MK5-1 and MK5-2 Background - Green
Message - White
MM5-1 and MM5-2 Background - White
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White
M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
MR5-1 and MR5-2 Background - Brown
Message - Yellow
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

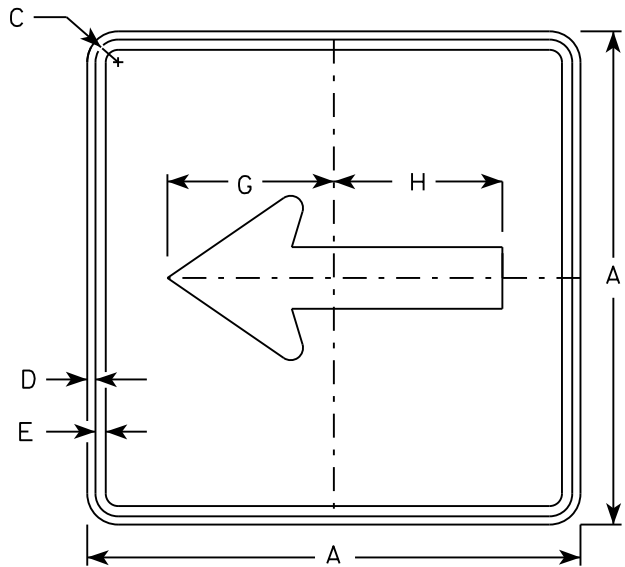
E

STANDARD SIGN
M5-1 & M5-2

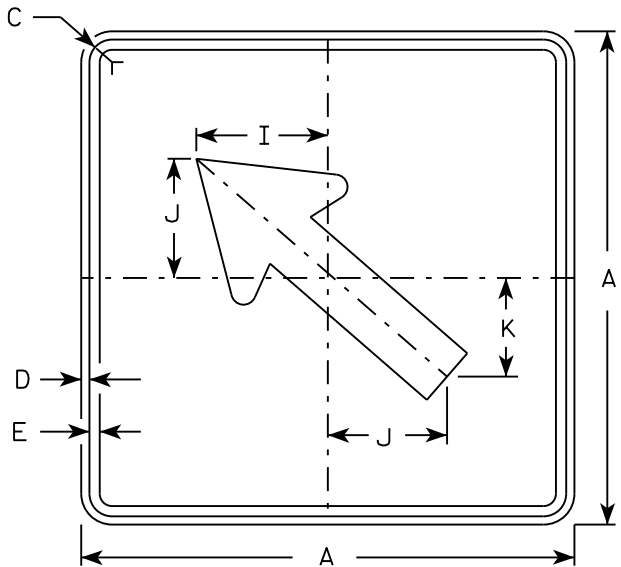
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

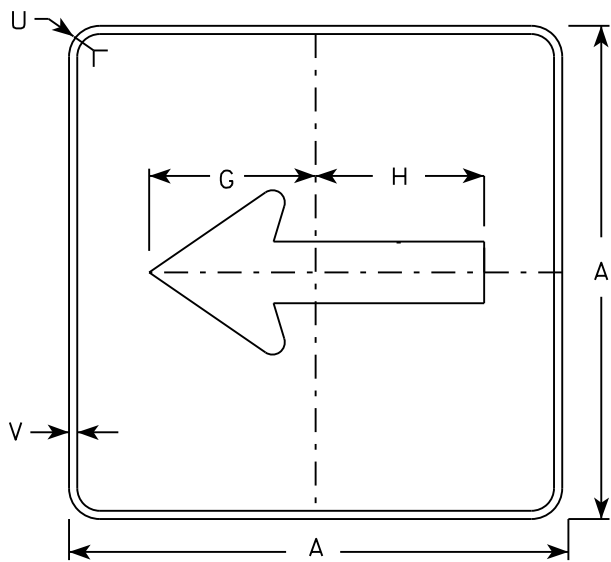
DATE 10/15/15 PLATE 223 M5-1.13



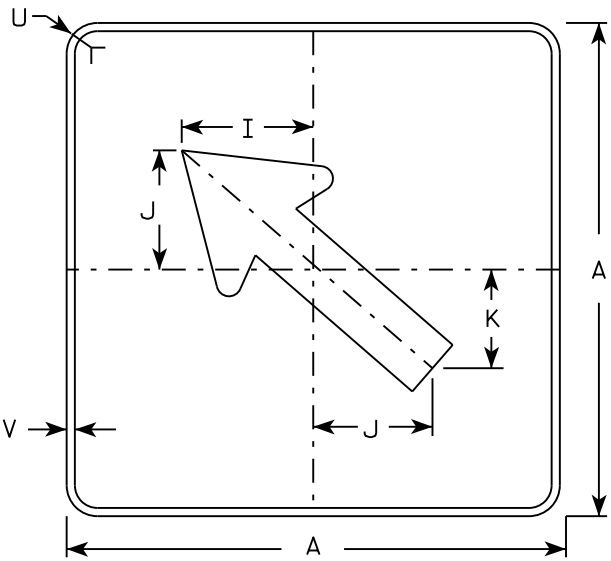
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



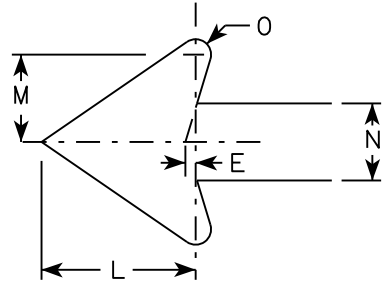
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

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

PROJECT NO:

HWY:

COUNTY:

DATE 10/15/15

PLAT 224

M6-1.15

SHEET NO:

E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

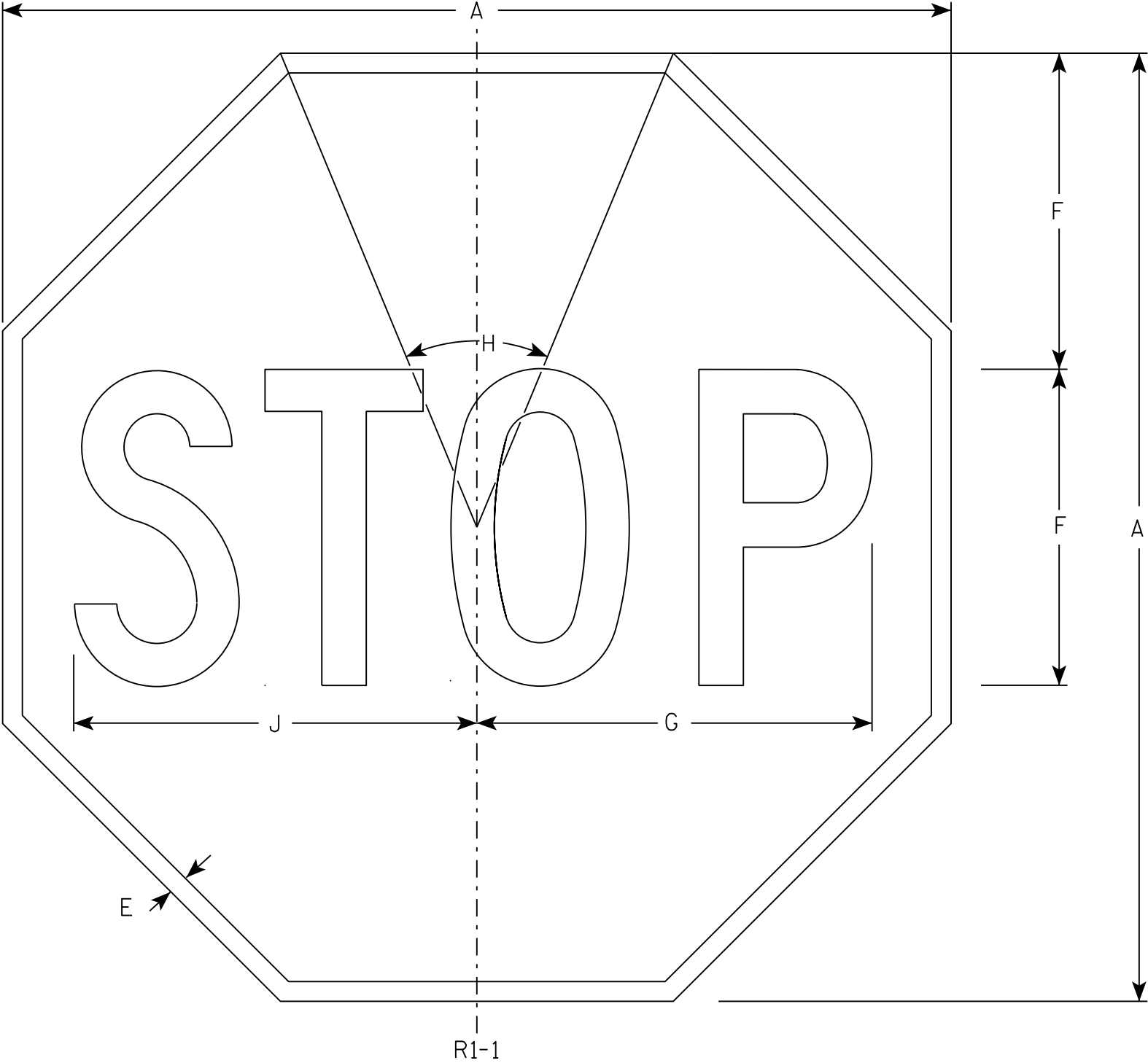
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15

PLAT 224

M6-1.15

7



NOTES

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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

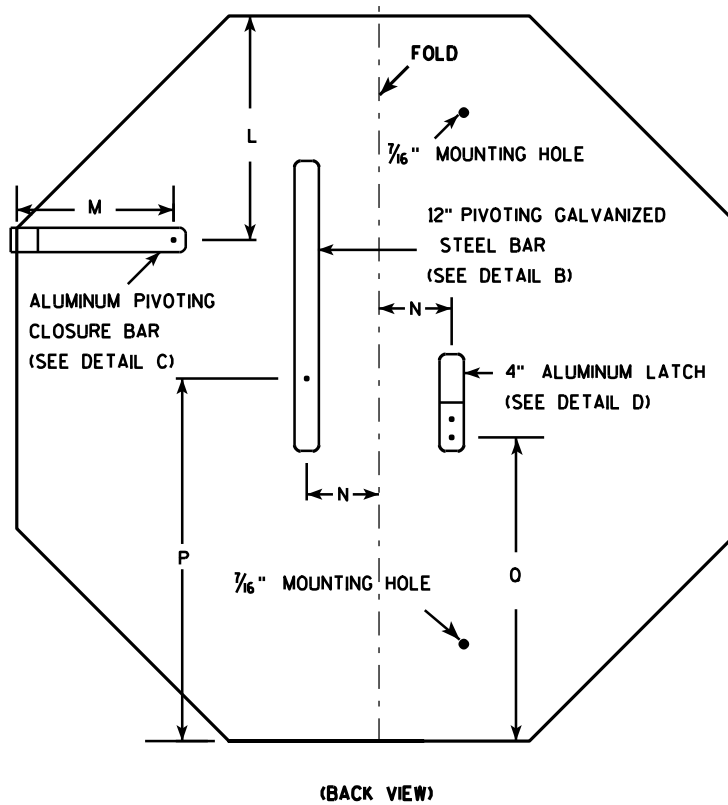
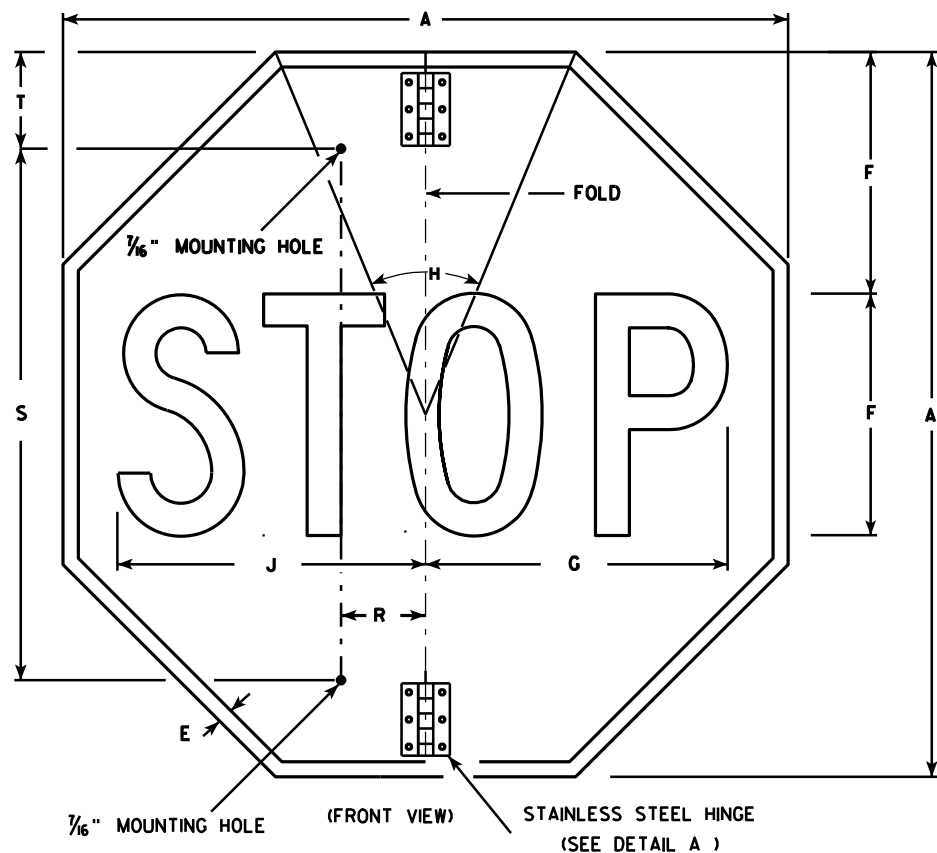
STANDARD SIGN

R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

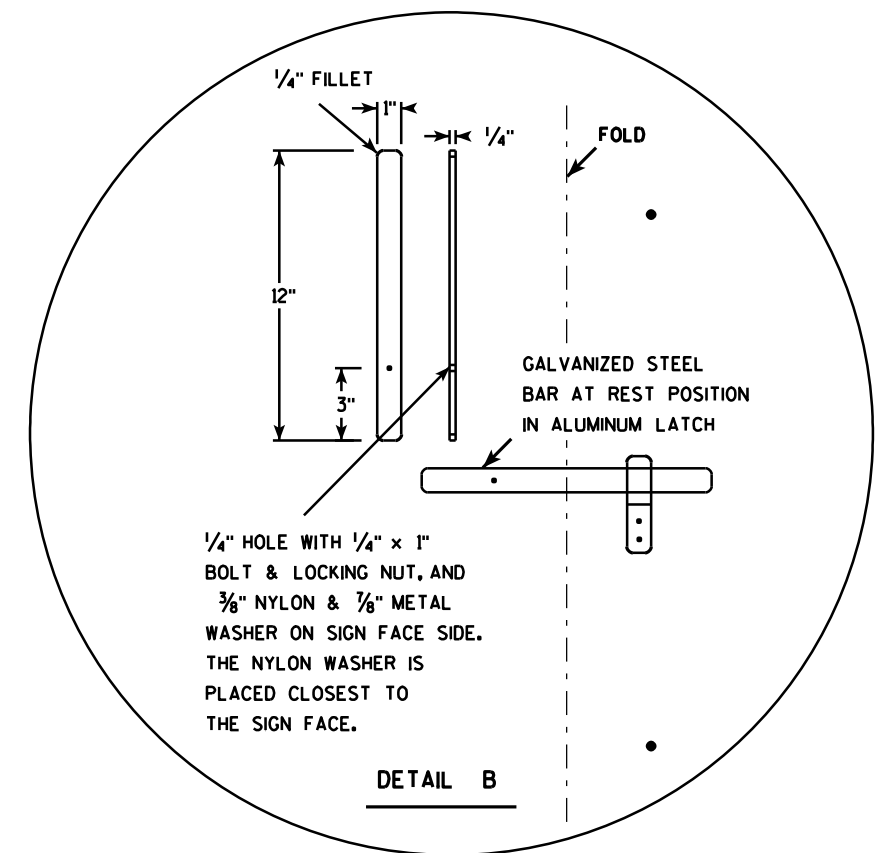
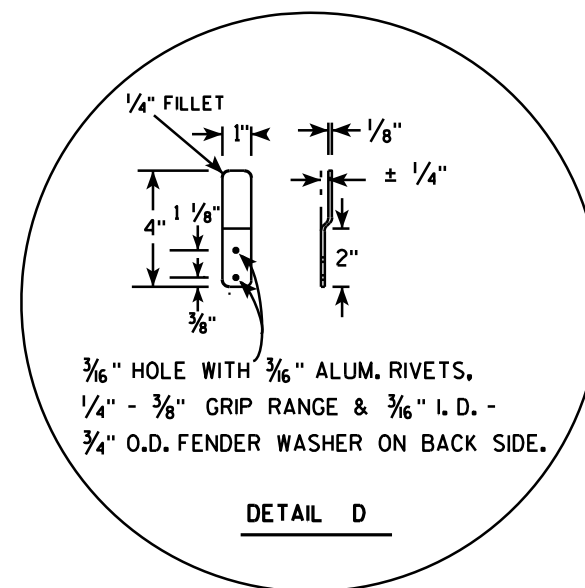
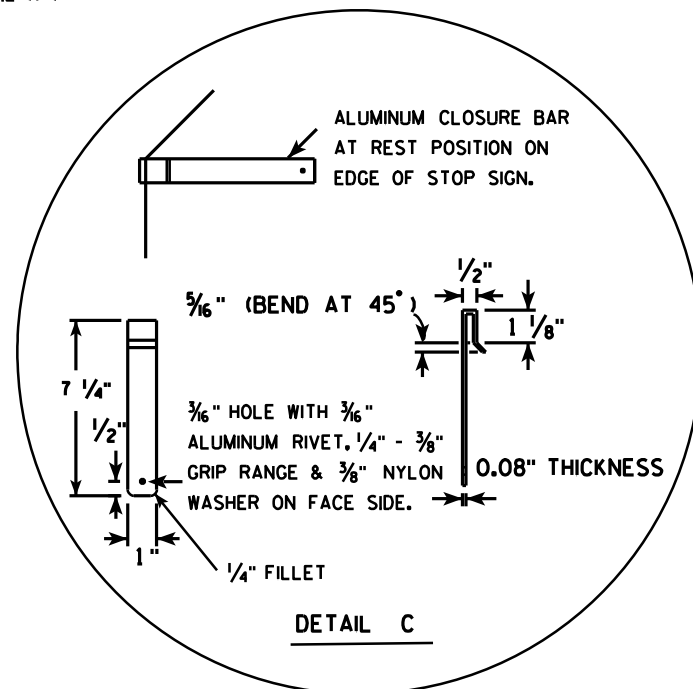
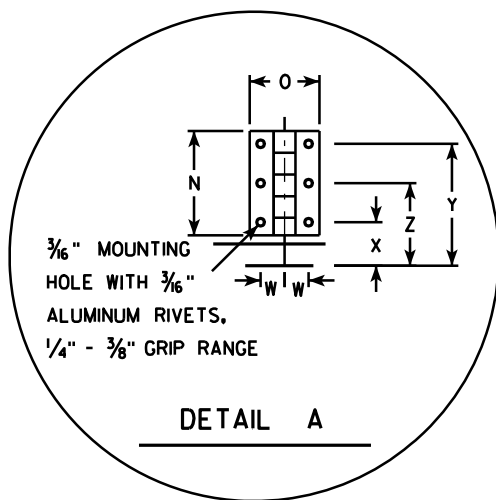
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Red
Message - White
- Message Series - C
- All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			1/8	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			1/8	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			1/8	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

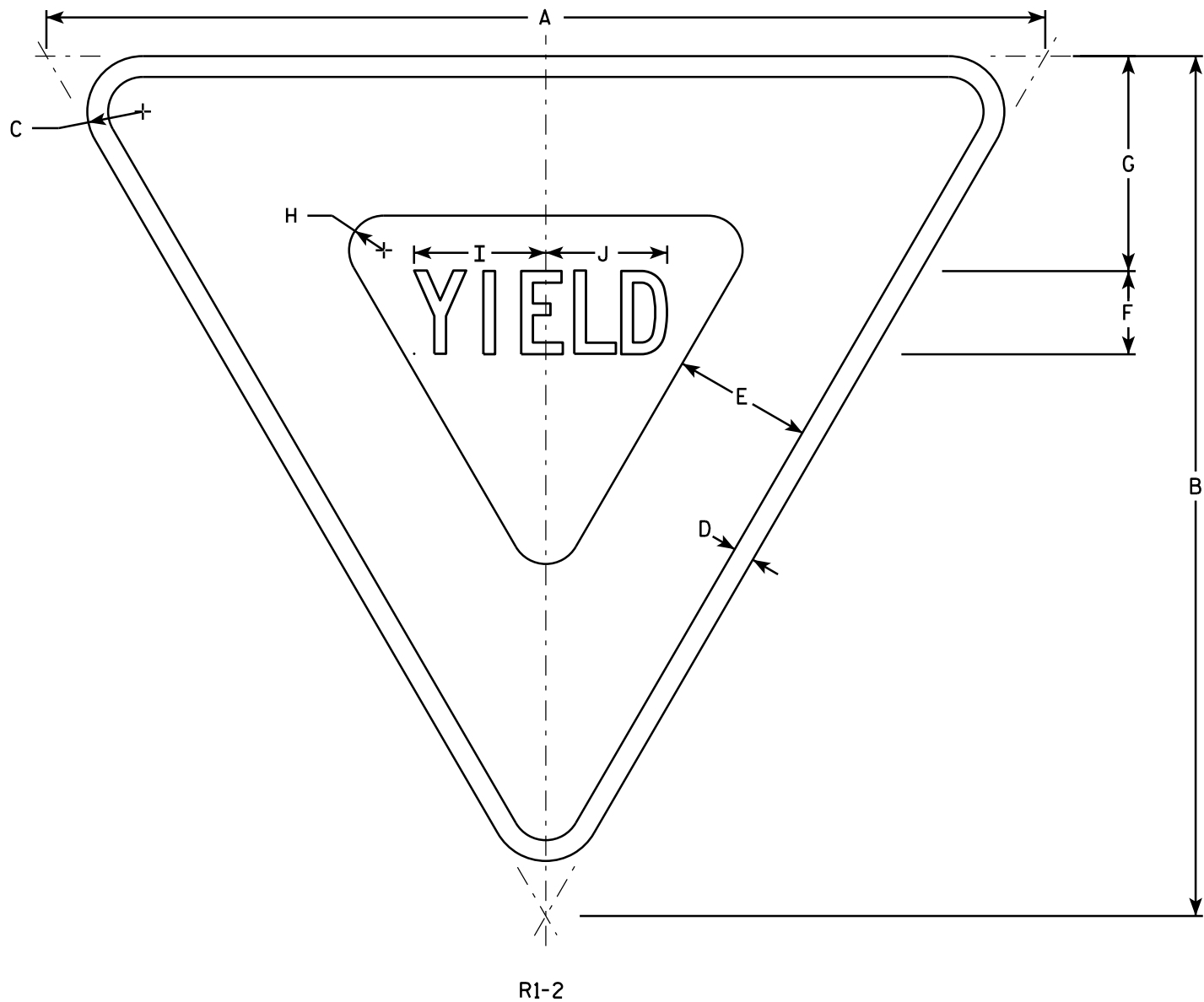
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 226	E
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STANDARD SIGN R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - See note 5
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN

R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/13/14 PLATE 227 P1-2.12



R2-6P

NOTES

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

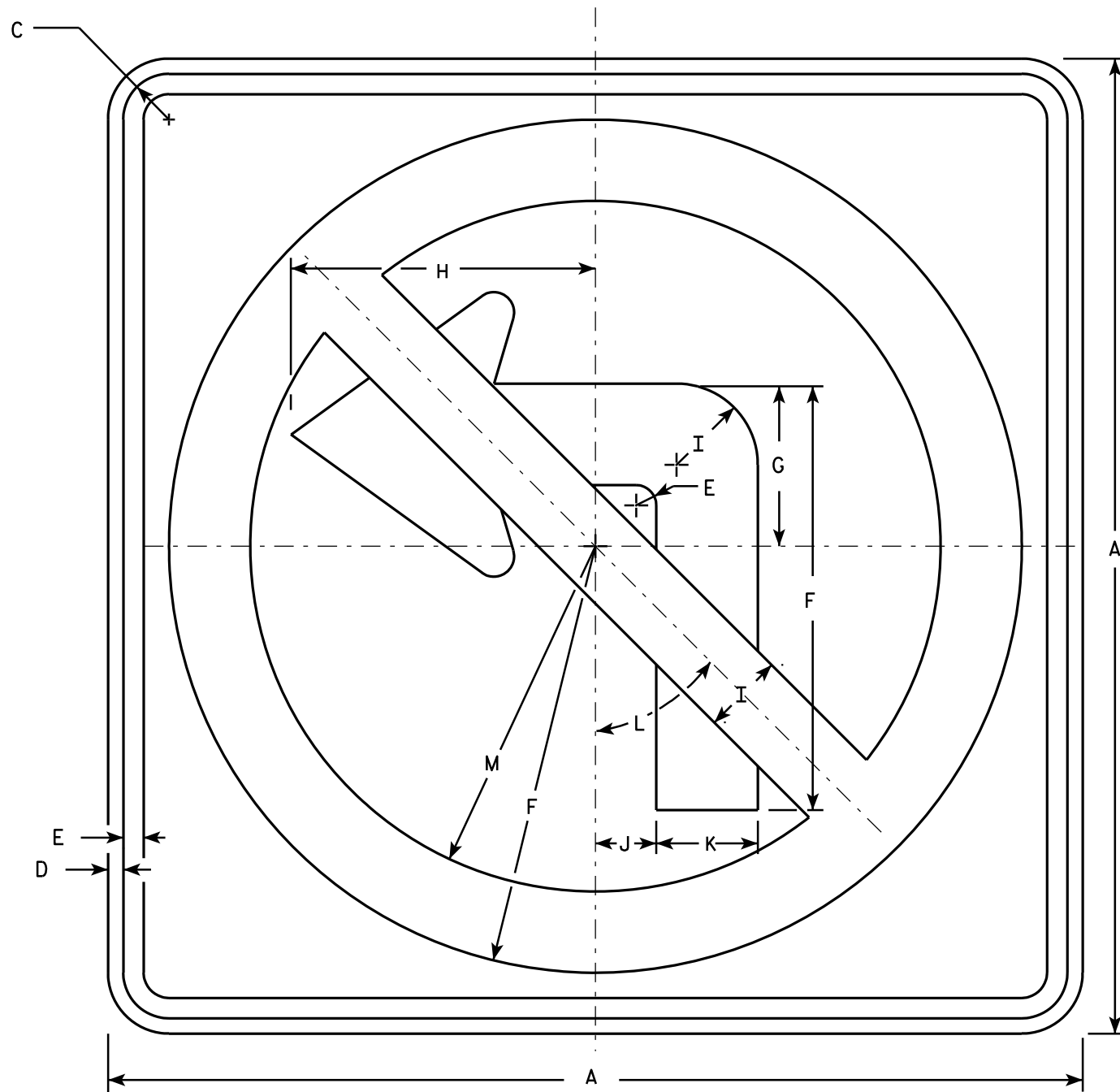
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
2M	24	18	1 1/8	3/8	3/8	4	3 1/2	3	7 5/8	9 1/4																	3.0
3	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
4	36	24	1 1/8	3/8	1/2	6	4 1/8	3 3/4	12	14																	6.0
5	48	36	1 3/8	1/2	5/8	8	7	6	15 1/8	19																	12.0

STANDARD SIGN
R2-6P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

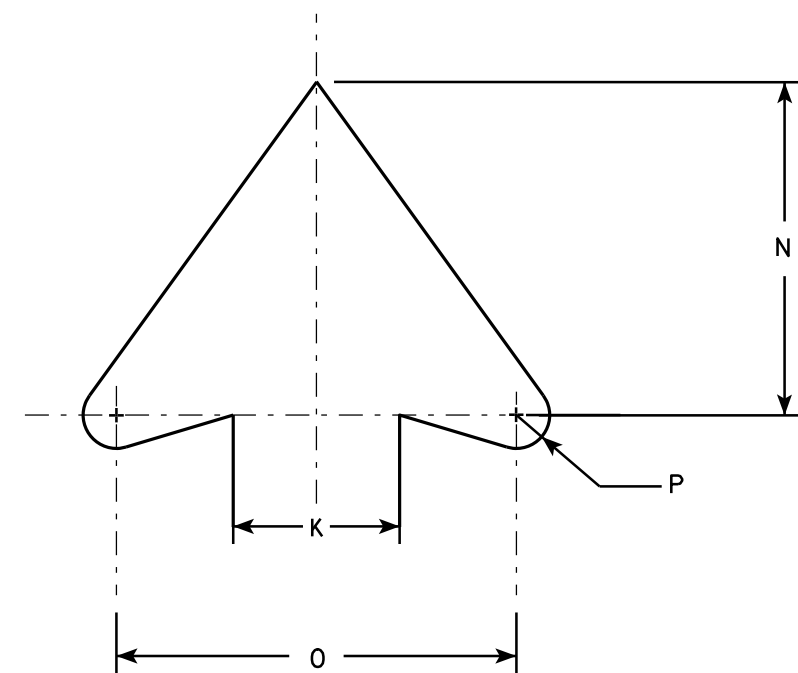
DATE 12/20/10 PLATE NO. R2-6P.2



R3-2

NOTES

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



ARROW DETAIL

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

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

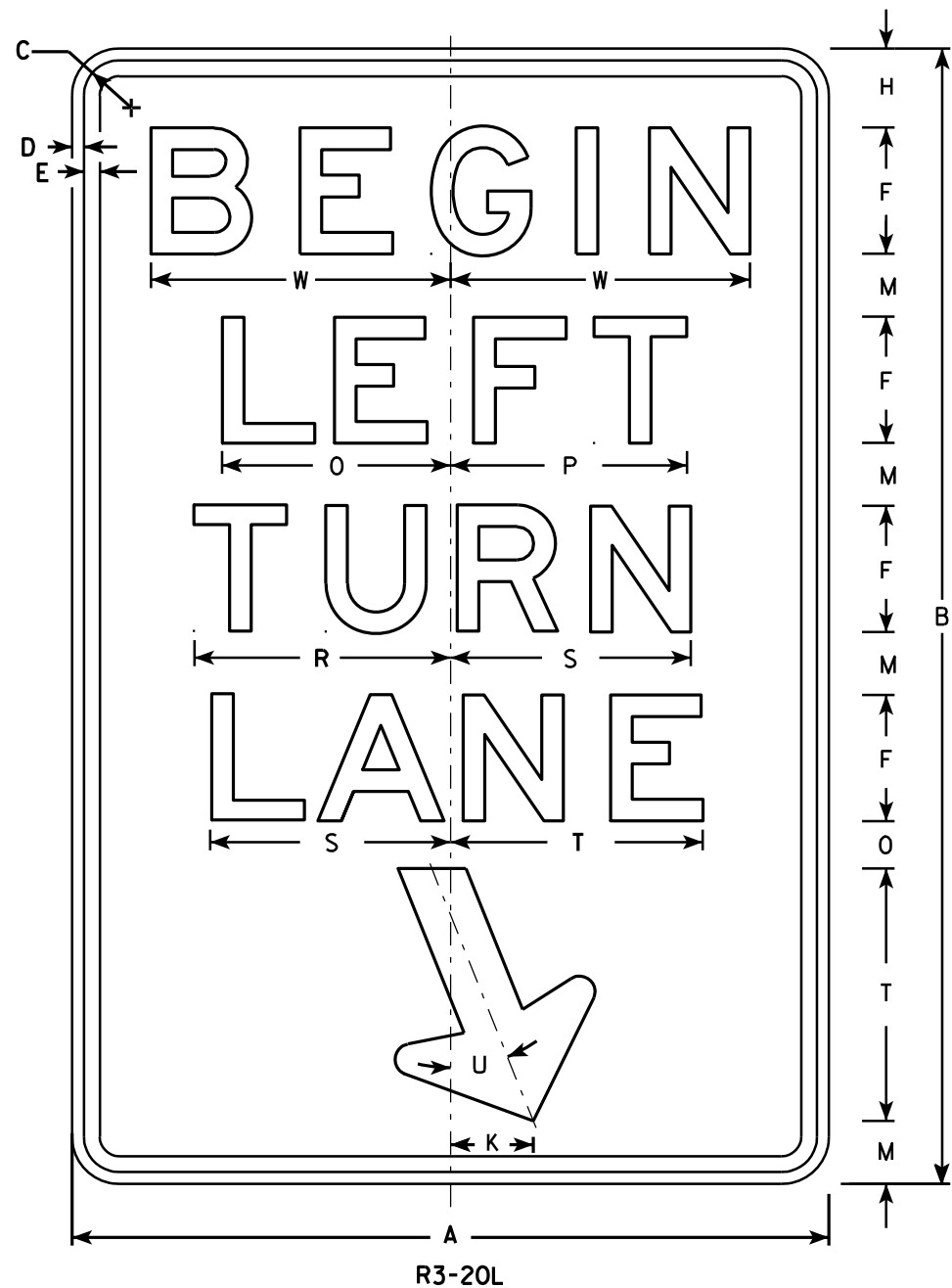
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 229

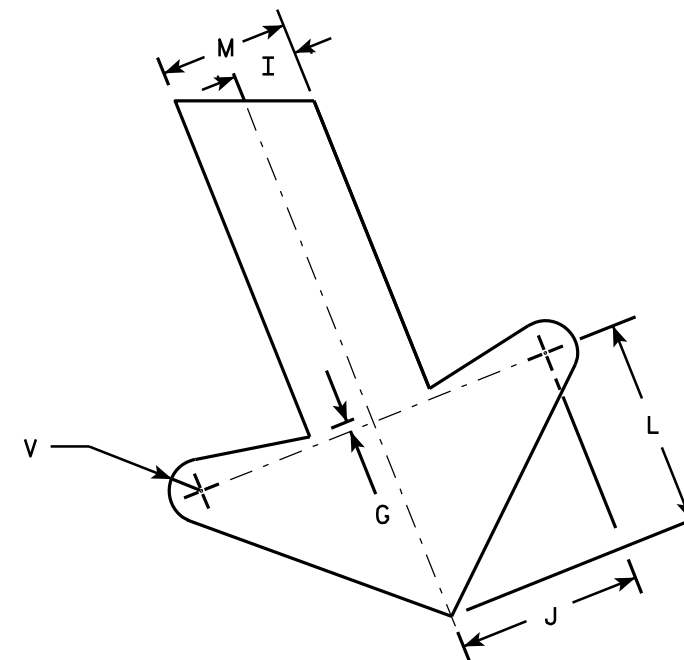
E



R3-20L

NOTES

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

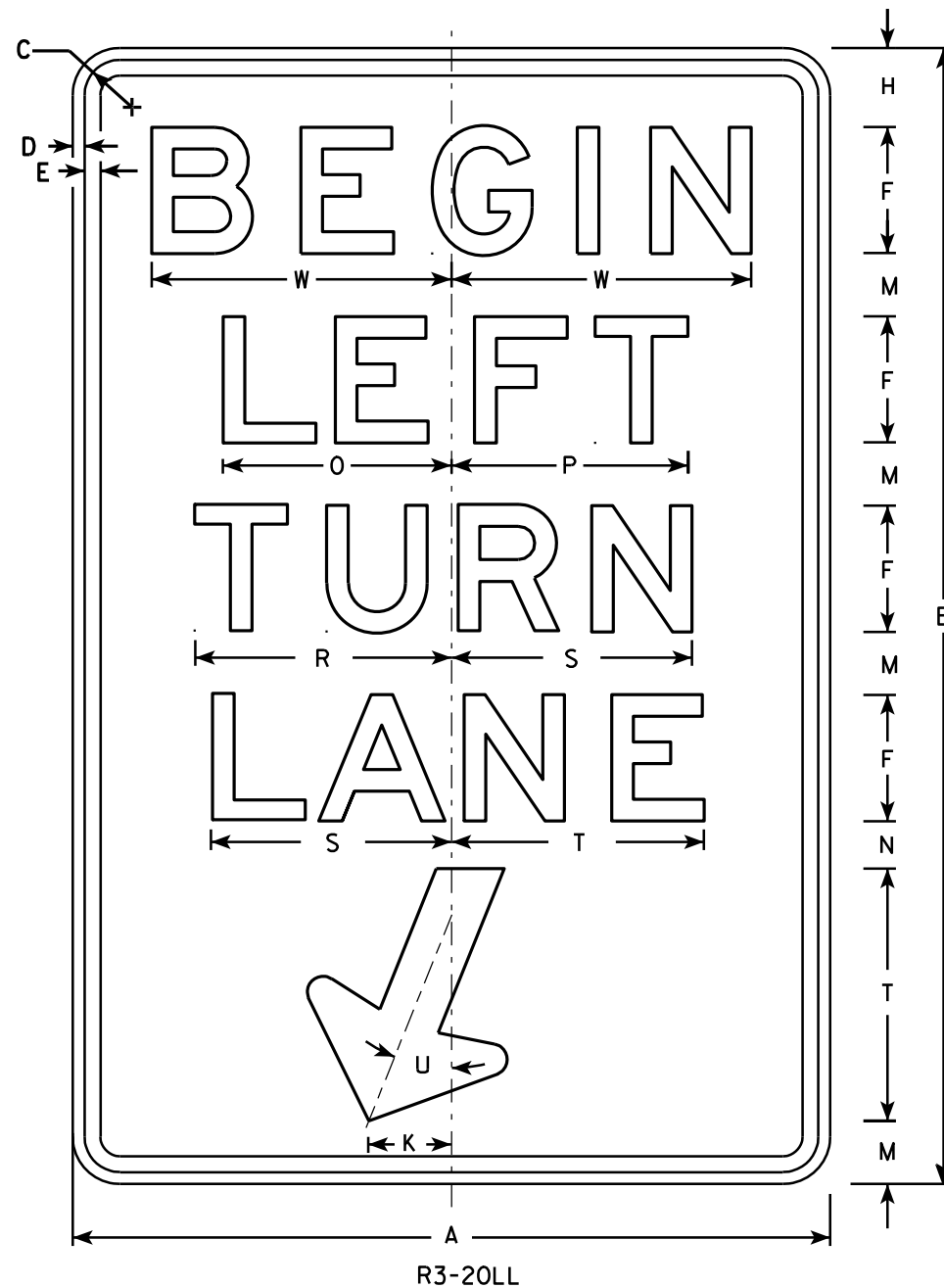


ARROW DETAIL

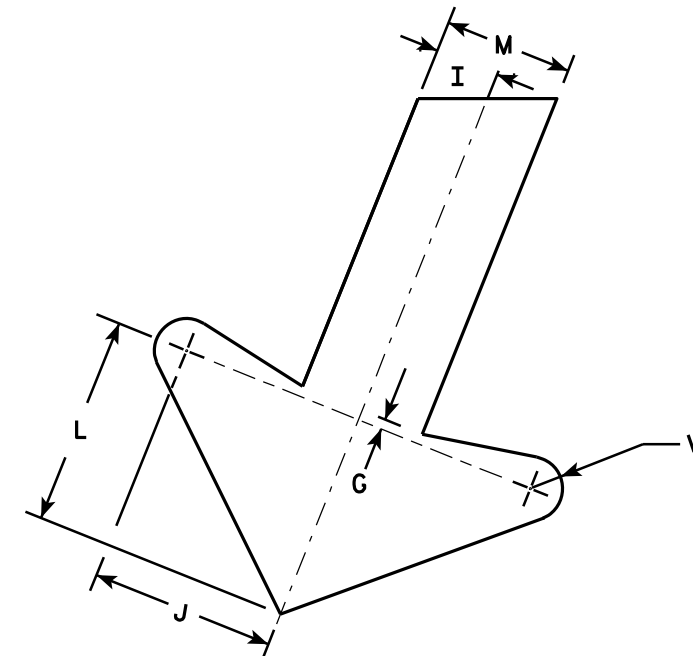
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN	
R3-20L	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 10/18/10	PLATE NO. R3-20L.7

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 230		E
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- NOTES**
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - E
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

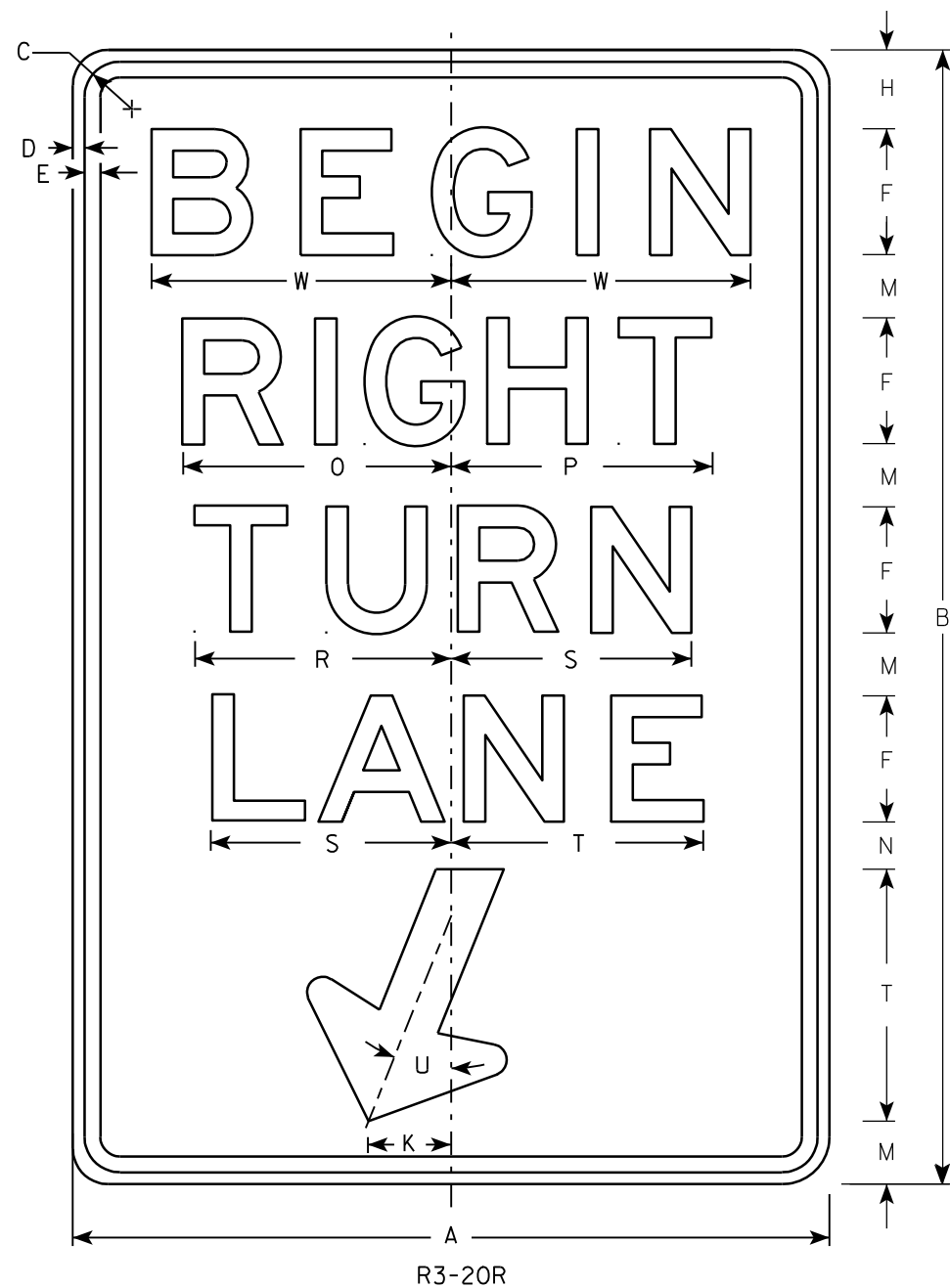


ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

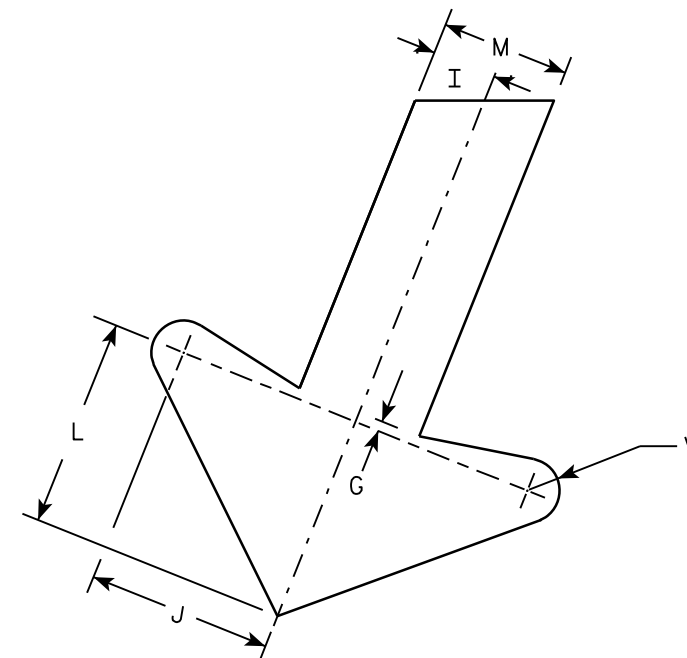
STANDARD SIGN	
R3-20LL	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 10/18/10	PLATE NO. R3-20LL.1

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 231	E
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NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

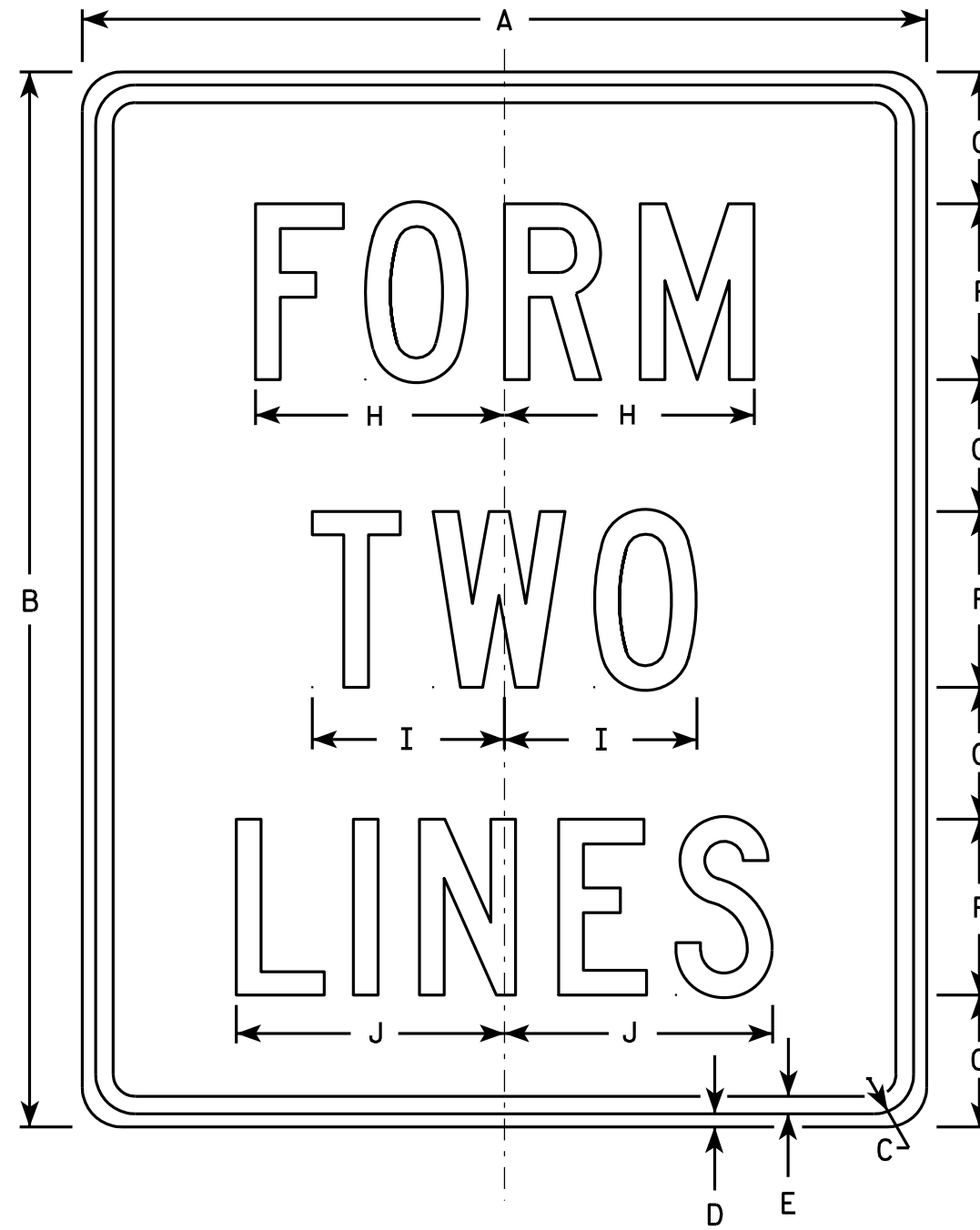
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 232	E
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STANDARD SIGN
R3-20R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20R.6



R3-59

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	5 1/2	7 5/8																	5.0
2S	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	5 1/2	7 5/8																	5.0
2M	24	30	1 1/8	3/8	1/2	5	3 3/4	7 1/8	5 1/2	7 5/8																	5.0
3	36	48	1 3/8	1/2	5/8	8	6	11 3/8	8 3/4	12 1/4																	12.0
4	36	48	1 3/8	1/2	5/8	8	6	11 3/8	8 3/4	12 1/4																	12.0
5																											

STANDARD SIGN

R3-59

WISCONSIN DEPT OF TRANSPORTATION

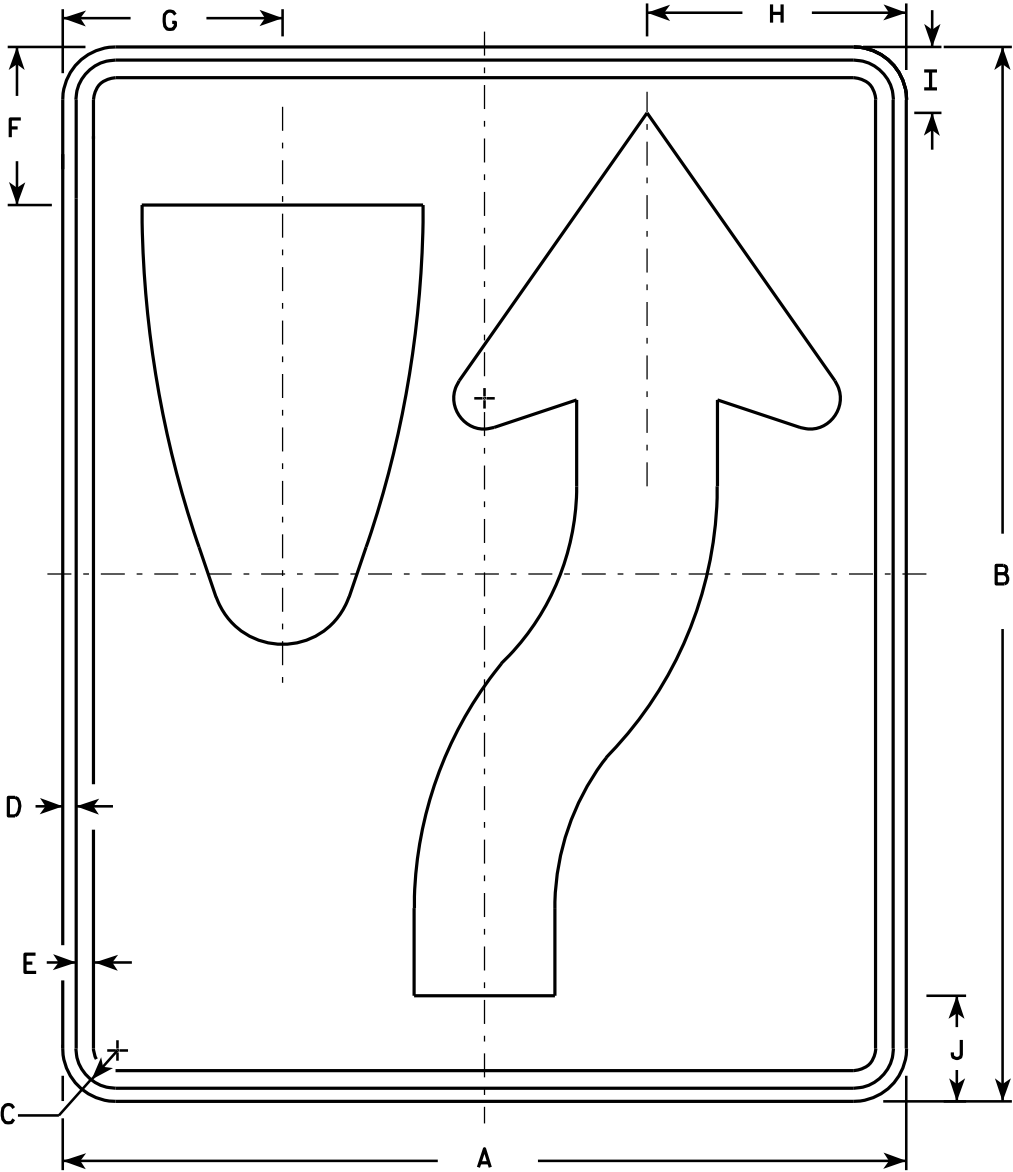
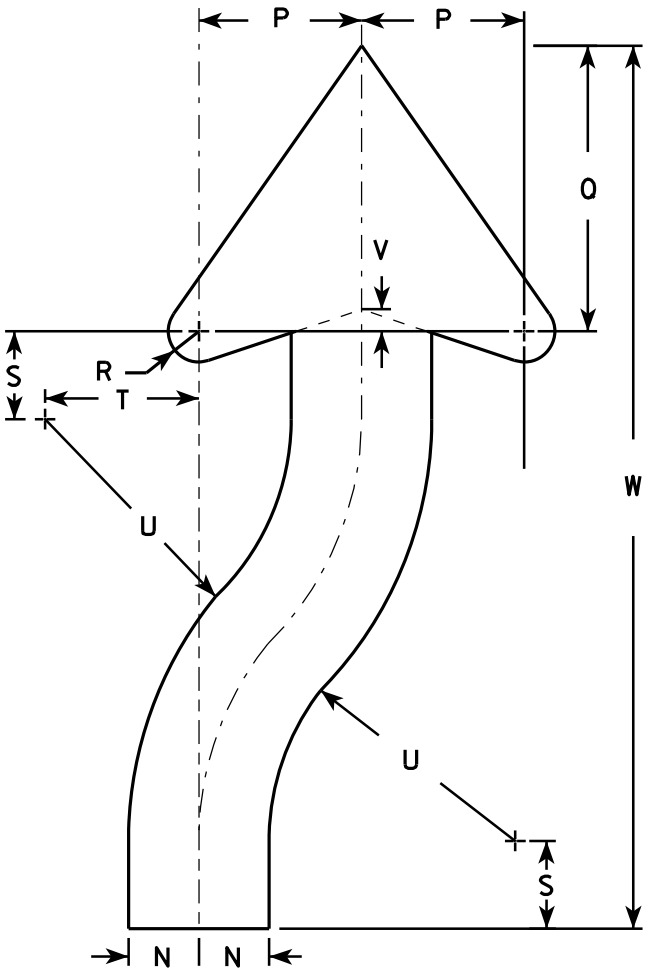
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-59.6

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 233	E
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NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
Background - White
Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

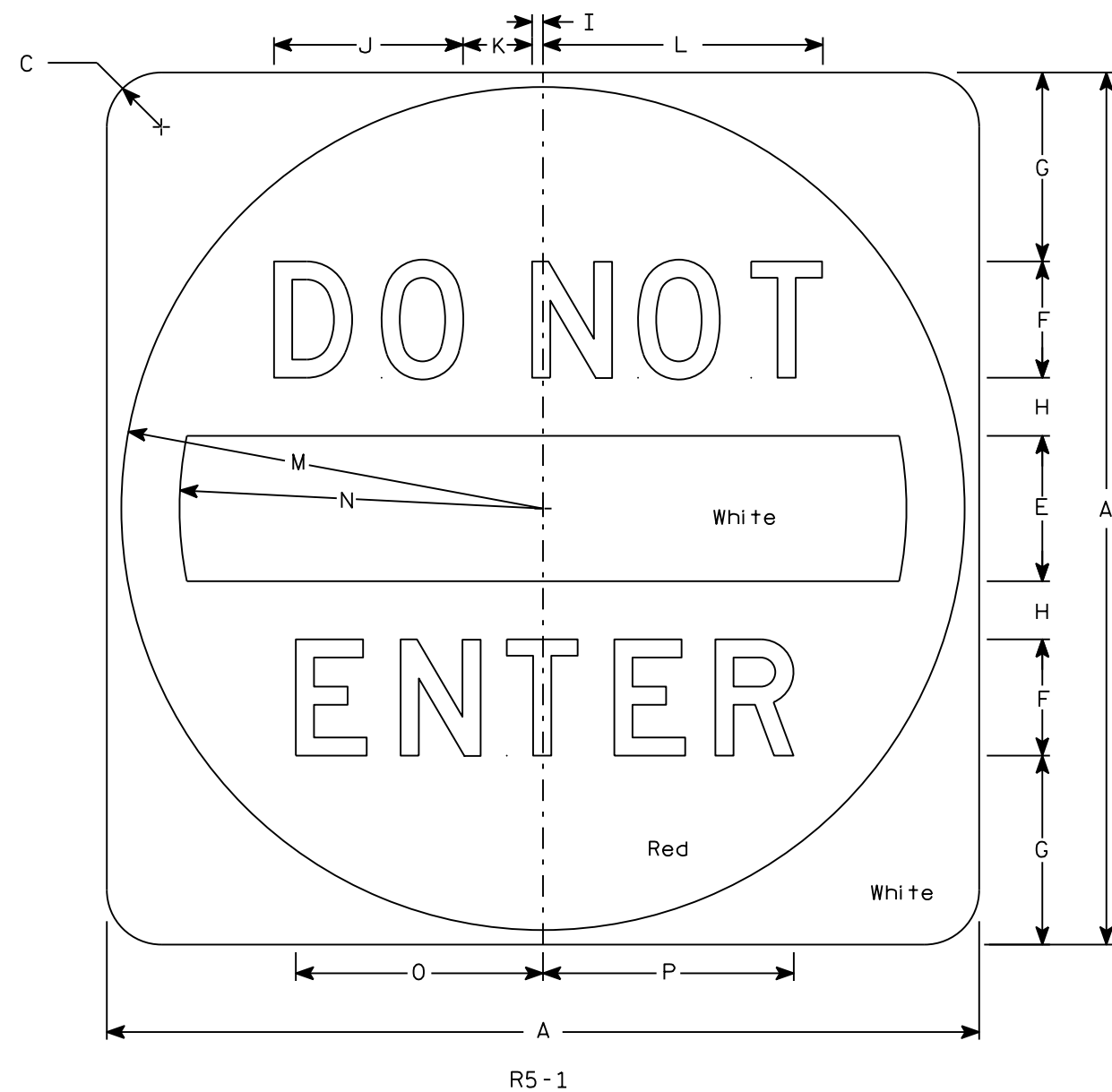
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

7



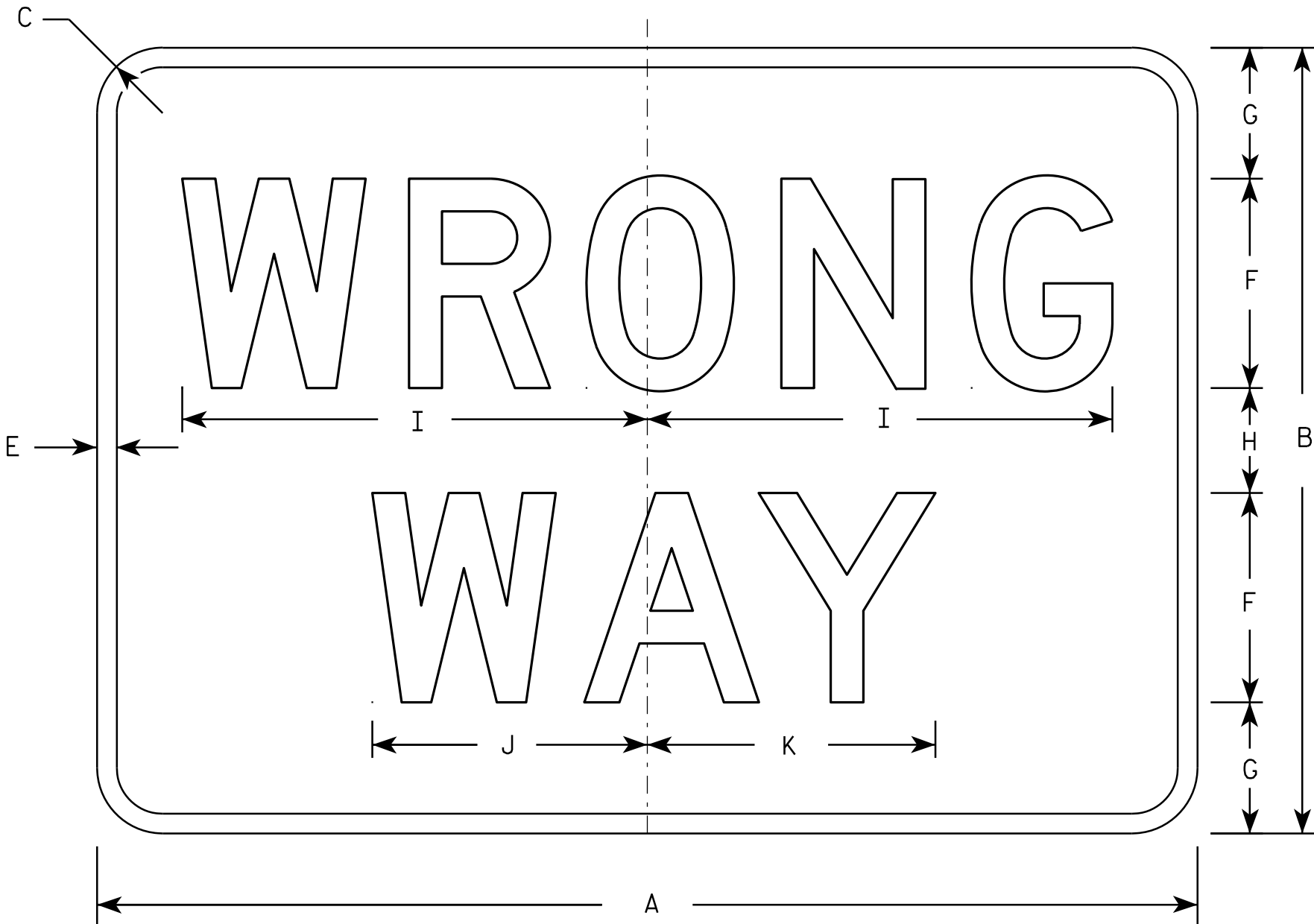
NOTES

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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.25
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN R5-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/15/18	PLATE NO. R5-1.16



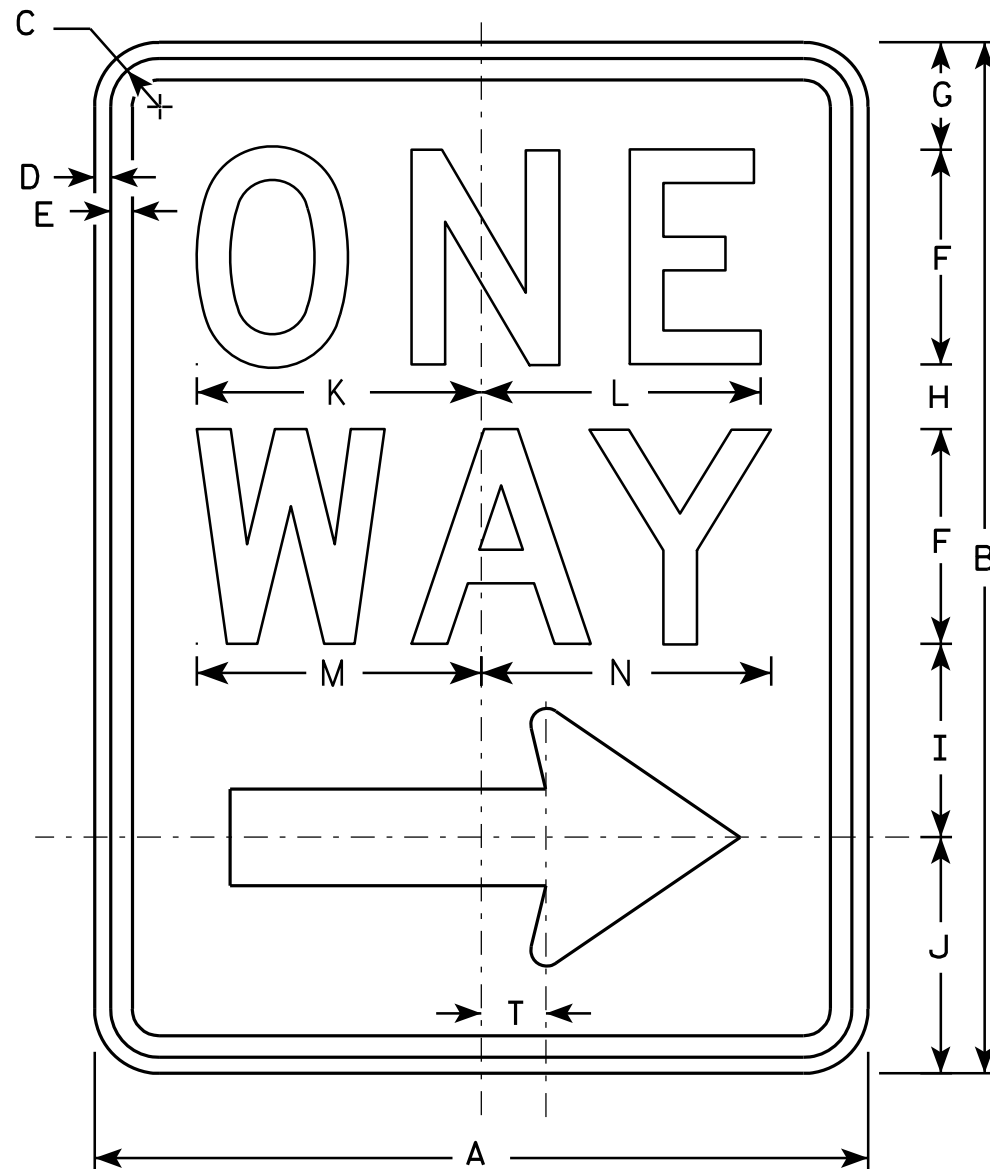
R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

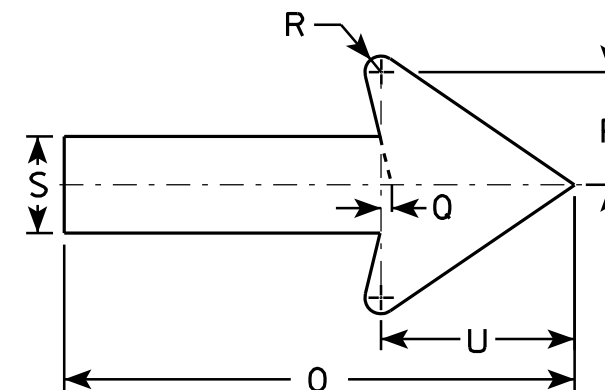
STANDARD SIGN R5-1A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/17/10	PLATE NO. R5-1A.2



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 237	E
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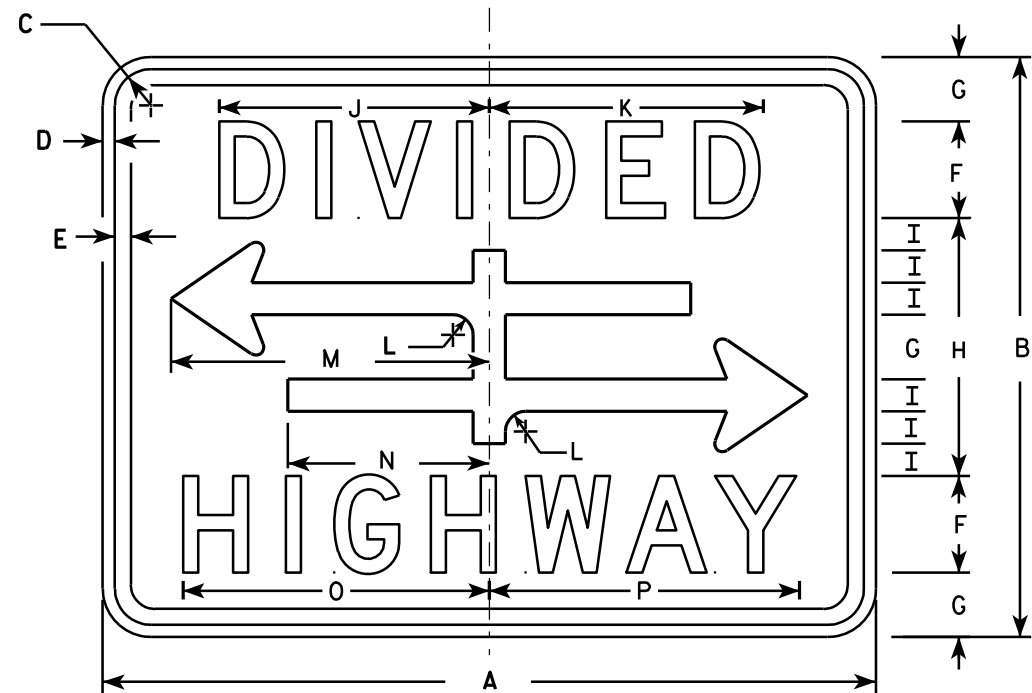
STANDARD SIGN

R6-2 R&L

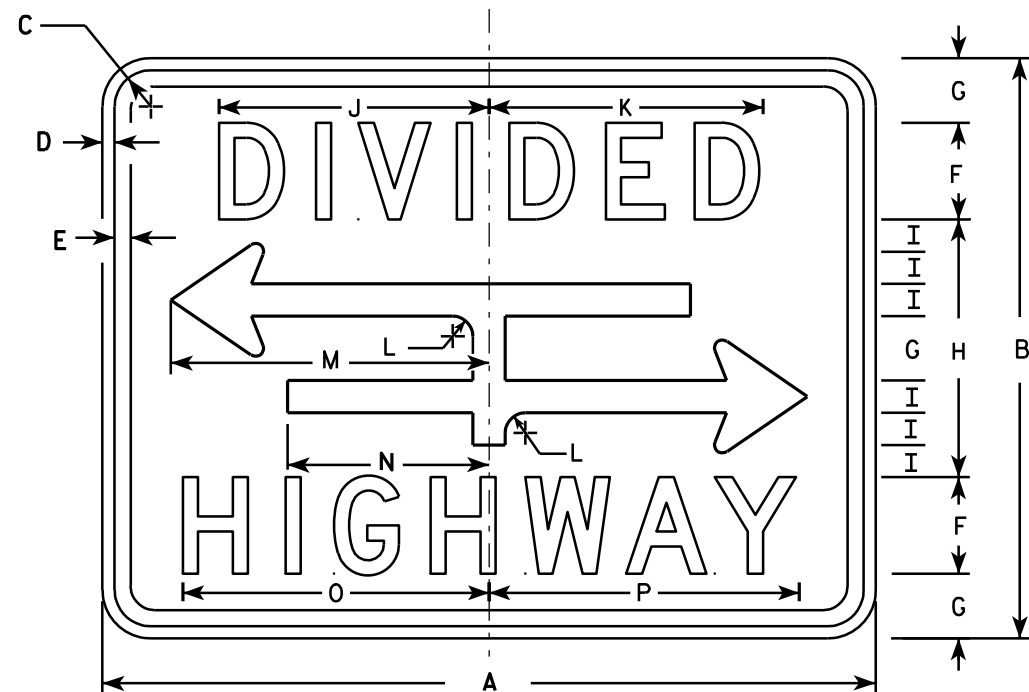
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8



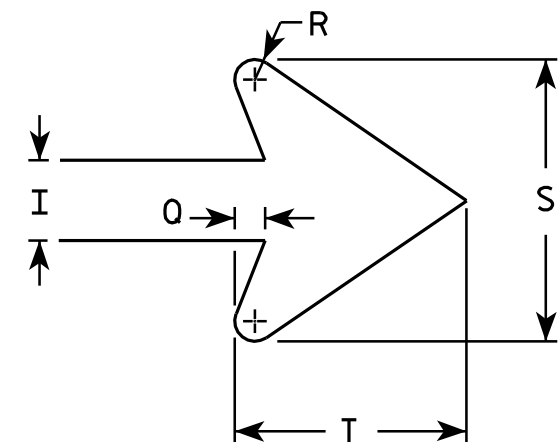
R6-3



R6-3A

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

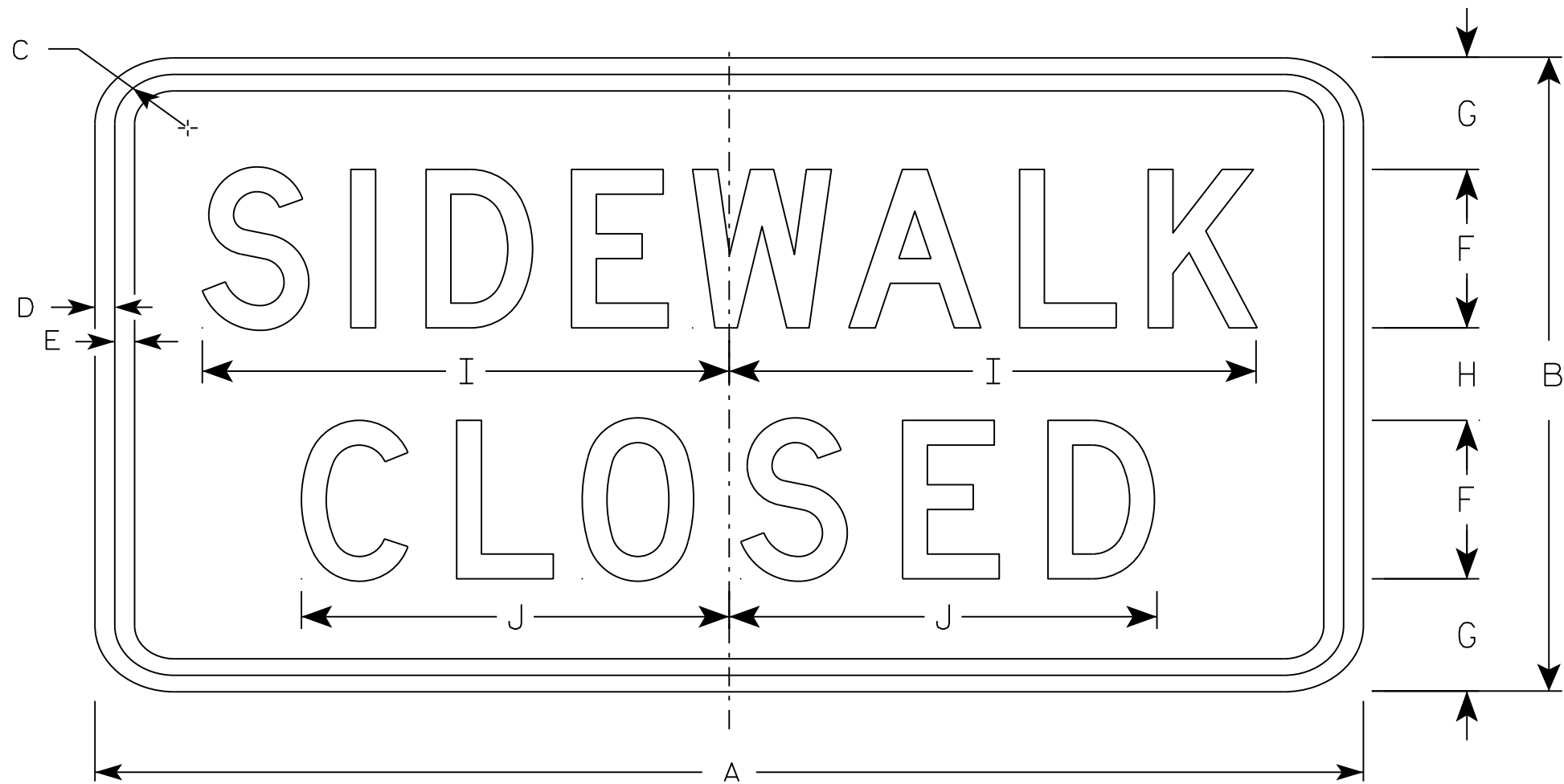
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 238

E



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. 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 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 3/4	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 3/4	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN
R9-9

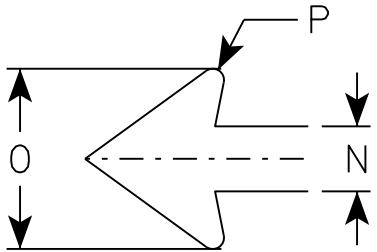
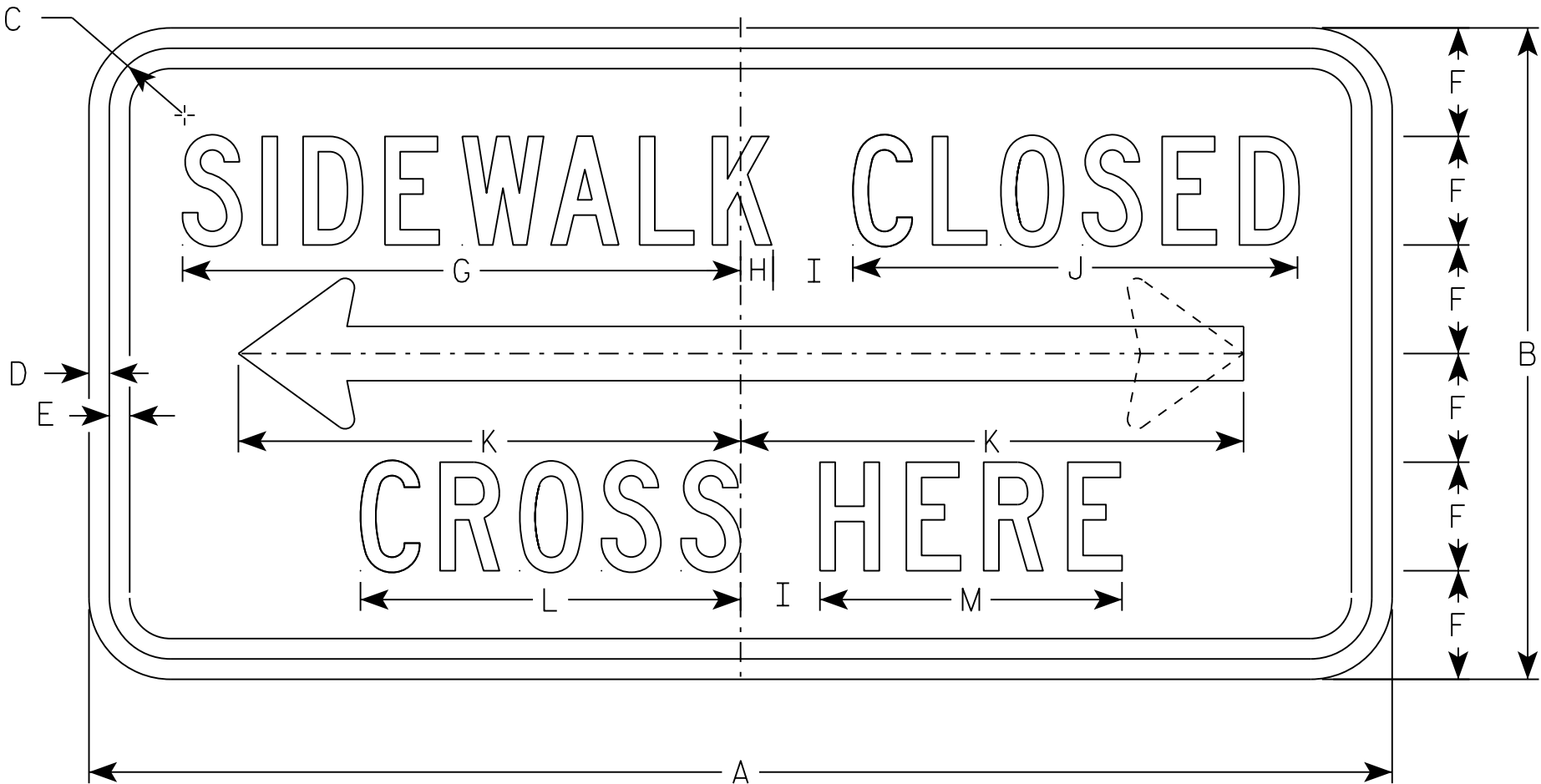
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/11/16 PLATE 239 R9-9.6

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Use Size 2 for Sidewalks. Use Size 3 for paths and Trails.



R9-11A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
2M	24	12	1 1/8	3/8	3/8	2	10 1/4	5/8	1 1/2	8 1/4	9 1/4	7	5 5/8	1	2 3/4	1/8											2.0
3	30	15	1 1/8	3/8	1/2	2	13	3/4	2	10 1/4	12 3/8	8 7/8	6 7/8	1 1/4	3 5/8	1/4											3.125
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 240

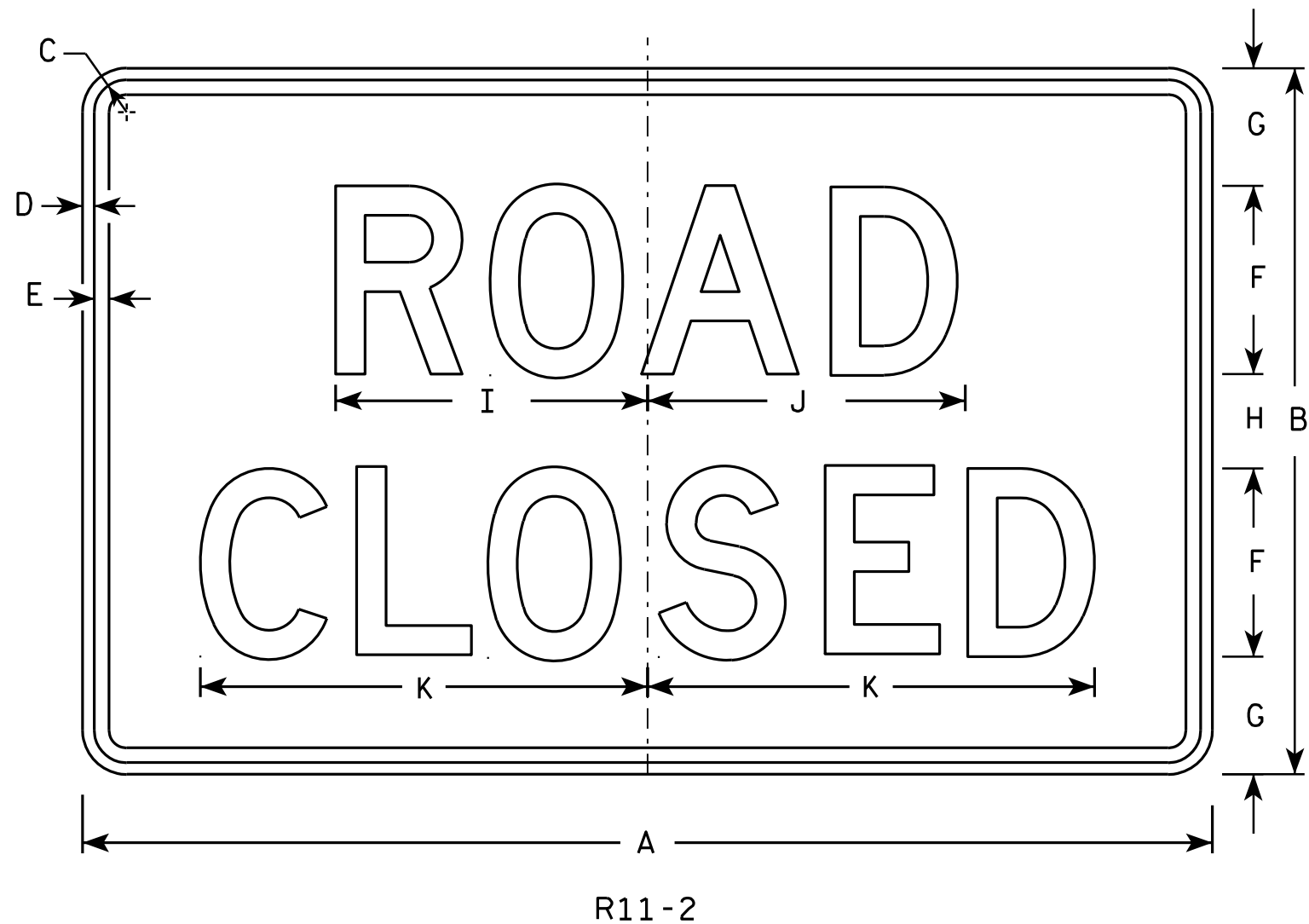
E

STANDARD SIGN
R9-11A

WISCONSIN DEPT OF TRANSPORTATION

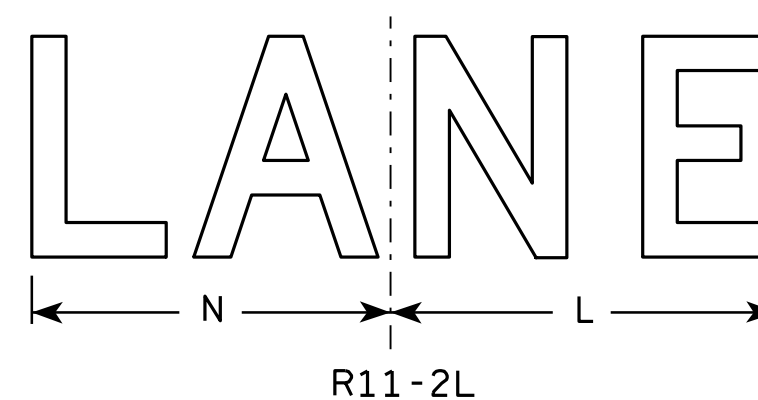
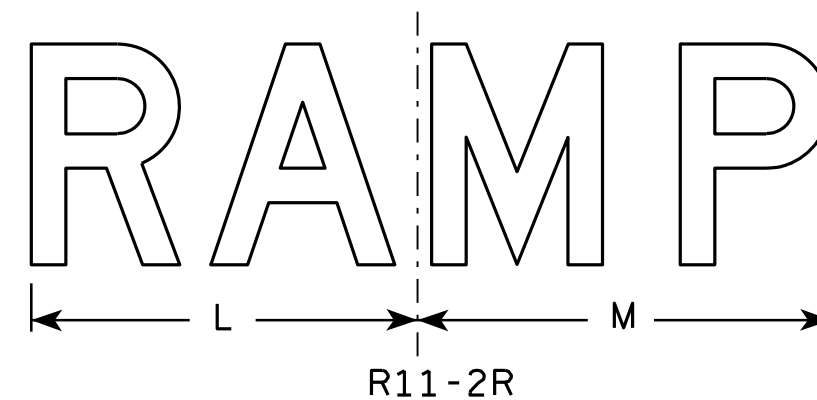
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R9-11A.3



NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

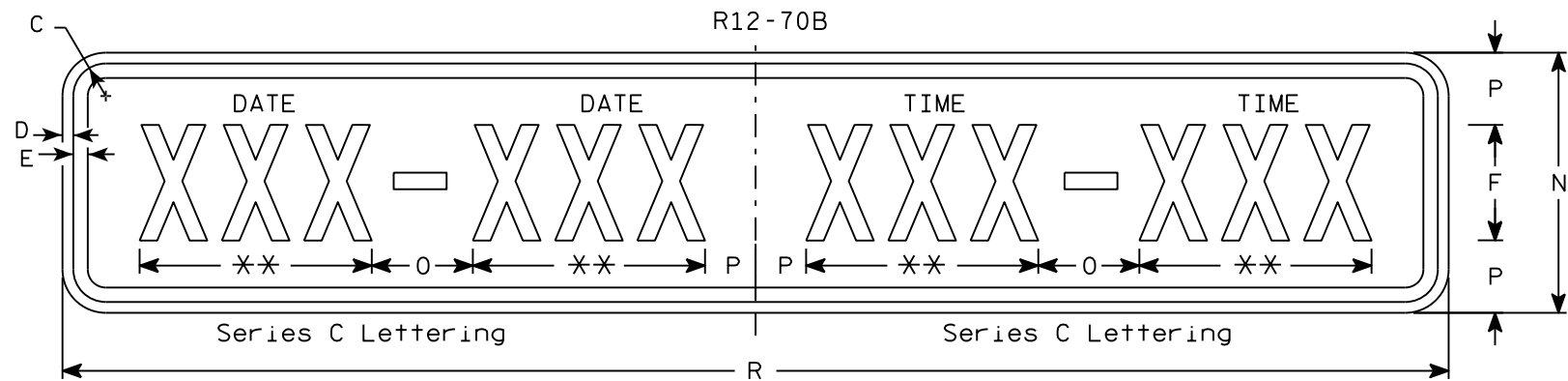
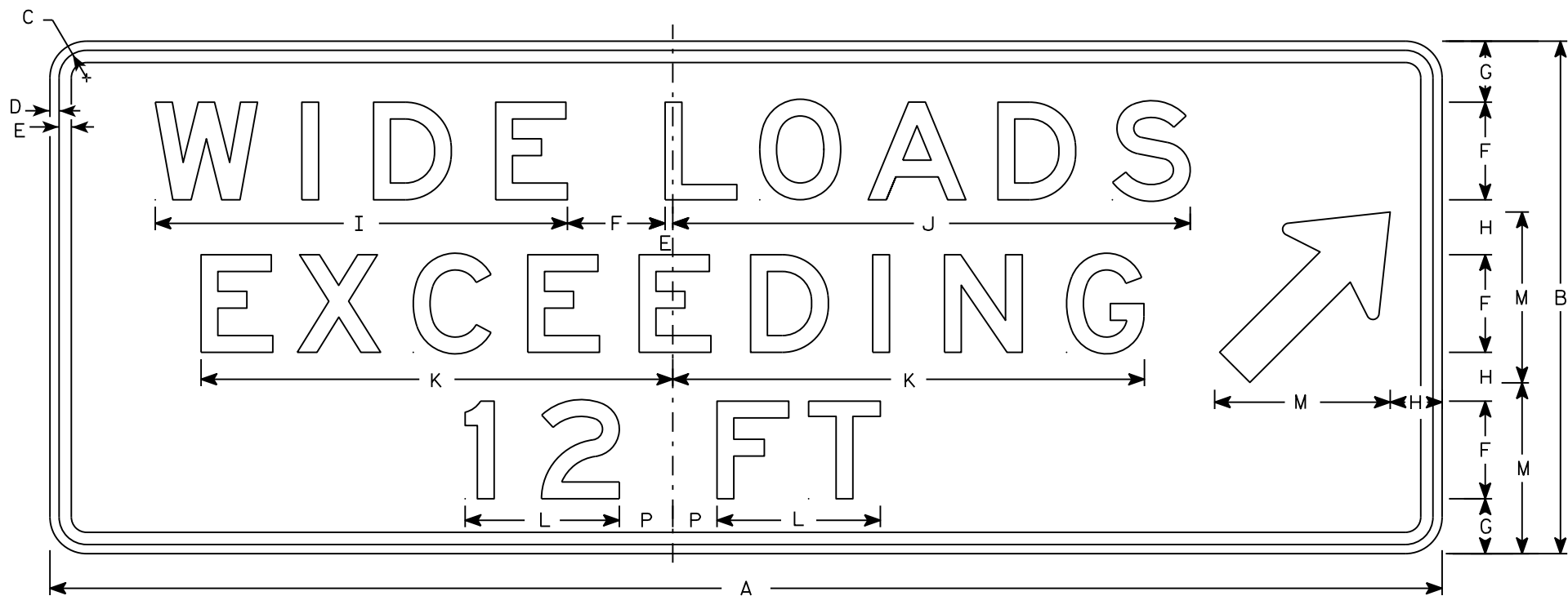
STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: HWY: COUNTY: SHEET NO: 241 E

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 - 2. Color:
Background - White
Message - Black
 - 3. Message Series - E except as noted
 - 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- ** Substitute appropriate message, optically center message



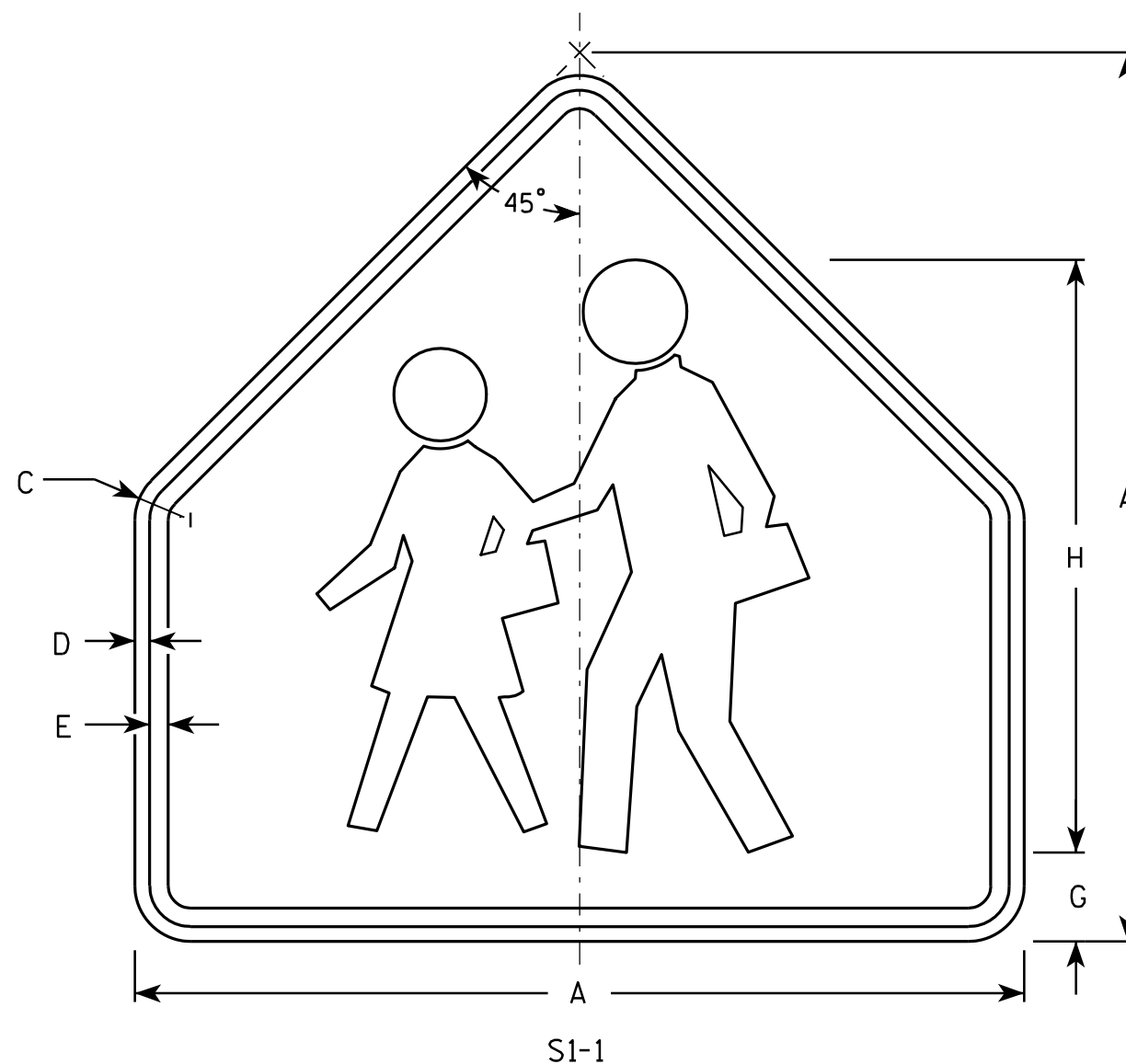
SIZE	R12-70C																										R12-70	R12-70C
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. ft.
1																												
2S	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
2M	90	36	2 1/4	1/2	5/8	6	4	5	20 7/8	28 3/8	24 5/8	8 1/8	12	12	6	3		66									22.5	5.5
3																												
4	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0
5	114	42	2 1/4	3/4	1	8	5	4	34	42	39	13	14	18	7	3 1/2		96									36.75	12.0

TYPICAL SIGN
R12-70B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/10/15 PLATE NO. R12-70B.3
242



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow-Green
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	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

STANDARD SIGN S1-1

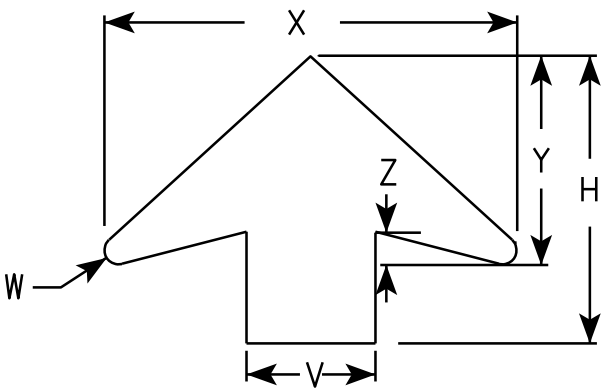
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 6/30/05 PLATE NO. S1-1.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: 243 **E**

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: See Note 5
Background - Flourescent Yellow Green
Message - BLACK
3. Message Series - See note 6
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance
5. SCHOOL background - Yellow Green -Type F Reflective.
Speed Limit panel background - White -Type H Reflective.
6. From top to bottom:
School is series D
All other lines are series E
7. 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																											
2	36	1 7⁄8	1 5⁄8	5⁄8	3⁄4	15 3⁄4	6 3⁄4	13 3⁄8	7 5⁄8	15	22 1⁄2	1⁄4	3⁄8	7⁄8	6 1⁄4	1 1⁄4	2 1⁄2	6 3⁄8	4 1⁄2	4 3⁄4	5 3⁄4	6	5⁄8	19 1⁄4	9 3⁄4	1 5⁄8	9.0
3	48	2 3⁄8	2 1⁄4	3⁄4	1	18 3⁄4	10 1⁄8	17 7⁄8	10 1⁄8	20	30	3⁄8	1⁄2	1 1⁄8	8 3⁄8	1 5⁄8	3 3⁄8	8 1⁄2	5 7⁄8	6 3⁄8	7 3⁄4	8	7⁄8	25 5⁄8	13	2	16.0
4	48	2 3⁄8	2 1⁄4	3⁄4	1	18 3⁄4	10 1⁄8	17 7⁄8	10 1⁄8	20	30	3⁄8	1⁄2	1 1⁄8	8 3⁄8	1 5⁄8	3 3⁄8	8 1⁄2	5 7⁄8	6 3⁄8	7 3⁄4	8	7⁄8	25 5⁄8	13	2	16.0
5																											

PROJECT NO:

STANDARD SIGN
S4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/21/10

PLATE NO. S4-5.3

SHEET NO: 244

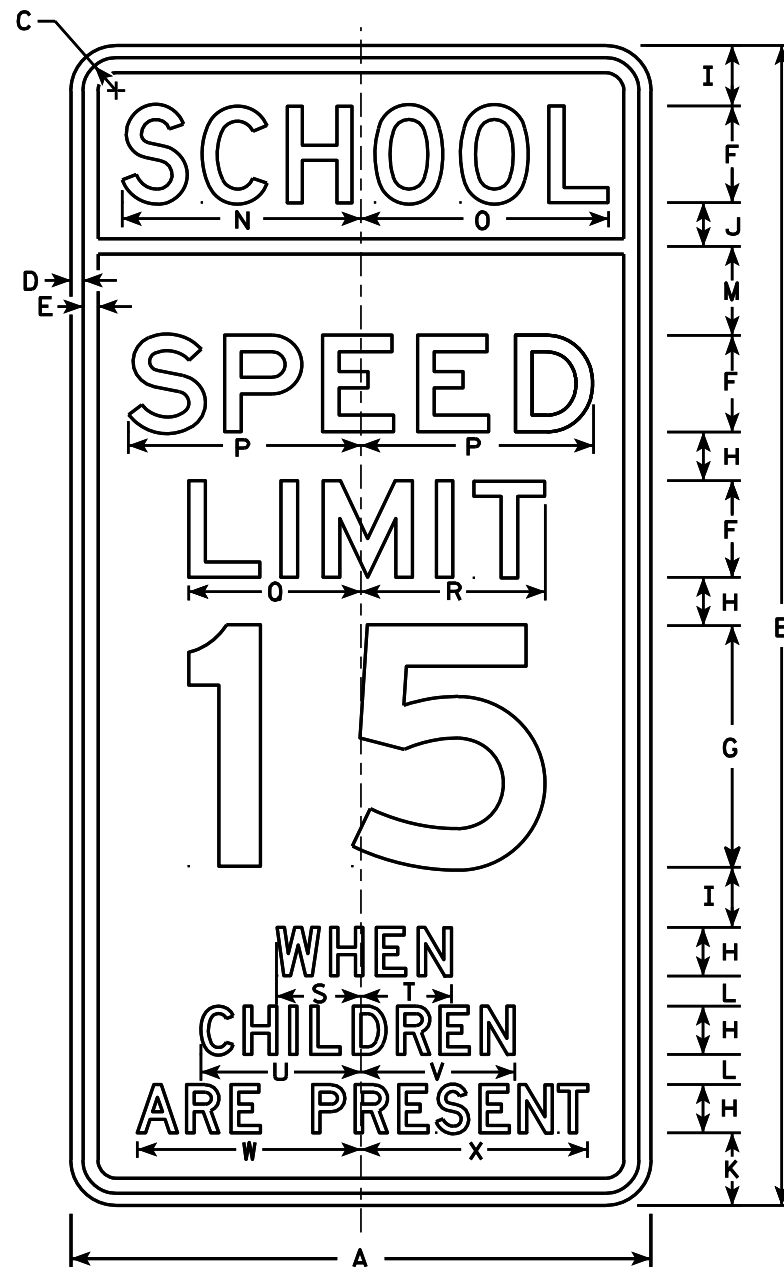
E

Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 1200 mm
3	900 mm X 1800 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24	48	1 ⅜	½	⅝	4	10	2	2 ½	1 ¾	3	1 ¼	3 ¾	9 ⅞	10 ¼	9 ⅝	7 ⅛	7 ⅝	3 ½	3 ⅜	6 ⅝	6 ⅜	9 ¼	9 ⅜			8.00	0.72
3	36	72	2 ¼	¾	1	6	15	3	3 ¾	2 ¾	4 ½	1 ⅞	5 ½	15	15 ¼	14 ½	11 ¼	11 ½	5 ½	5 ¾	10	9 ¾	14	14 ⅛			18.00	1.62
4																												
5																												

PROJECT NO:			HWY:			COUNTY:													SHEET NO: 245			E
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S4-51

NOTES

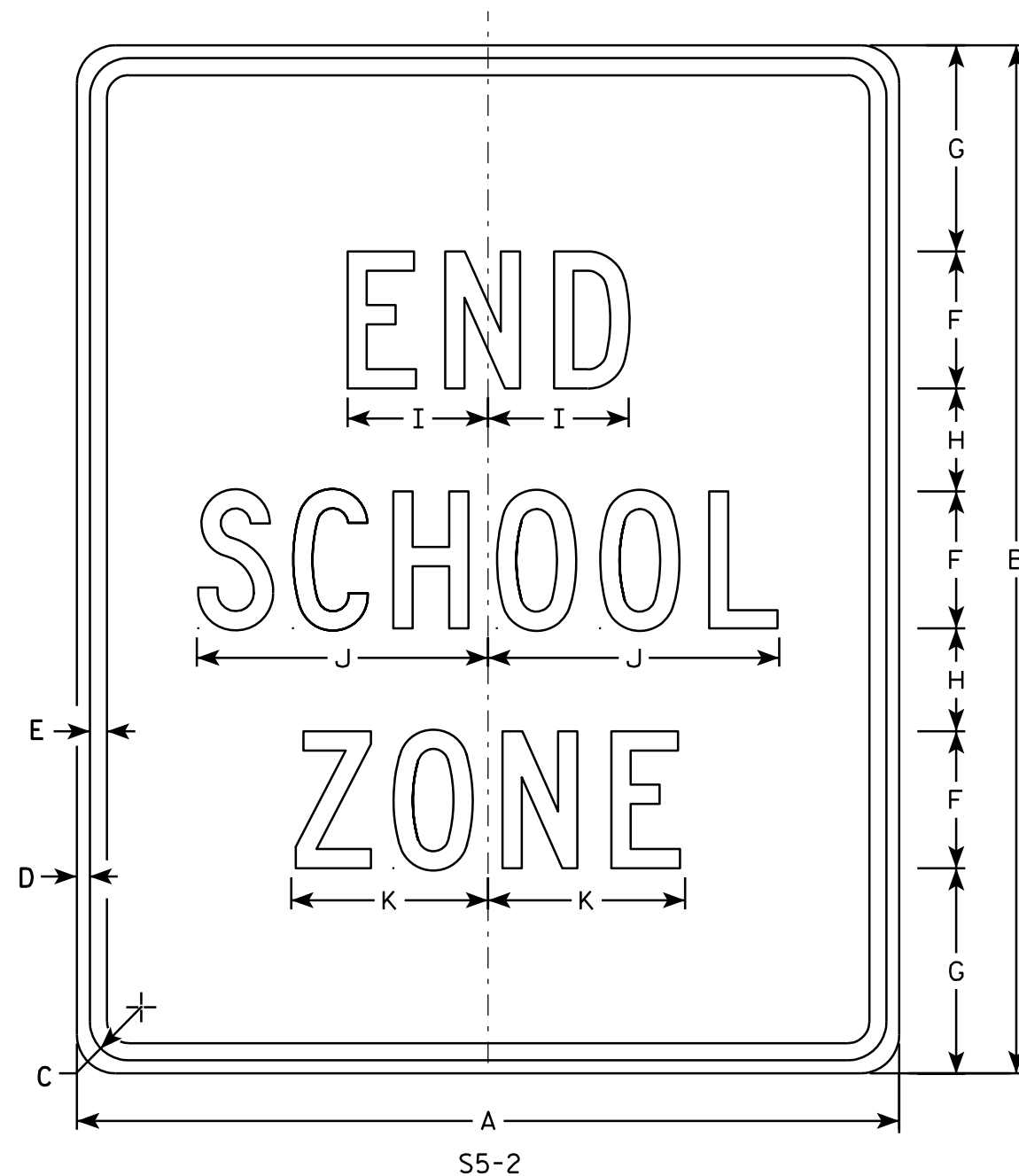
- Sign is Type II - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition. (See note 5).
- Color:
Background - See note 5
Message - Black
- Message Series - See note 6
- Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
- Top panel (SCH00L) background - Yellow Green -Type F Reflective.
Lower panel background - White -Type H Reflective.
- From top to bottom:
Lines 1, 5, 6 & 7 are series D
Lines 2, 3 & 4 are series E
- Line 4 substitute appropriate numerals and
adjust spacing to achieve proper balance.

STANDARD SIGN
S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/26/10 PLATE NO. S4-51.9

7



NOTES

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

7

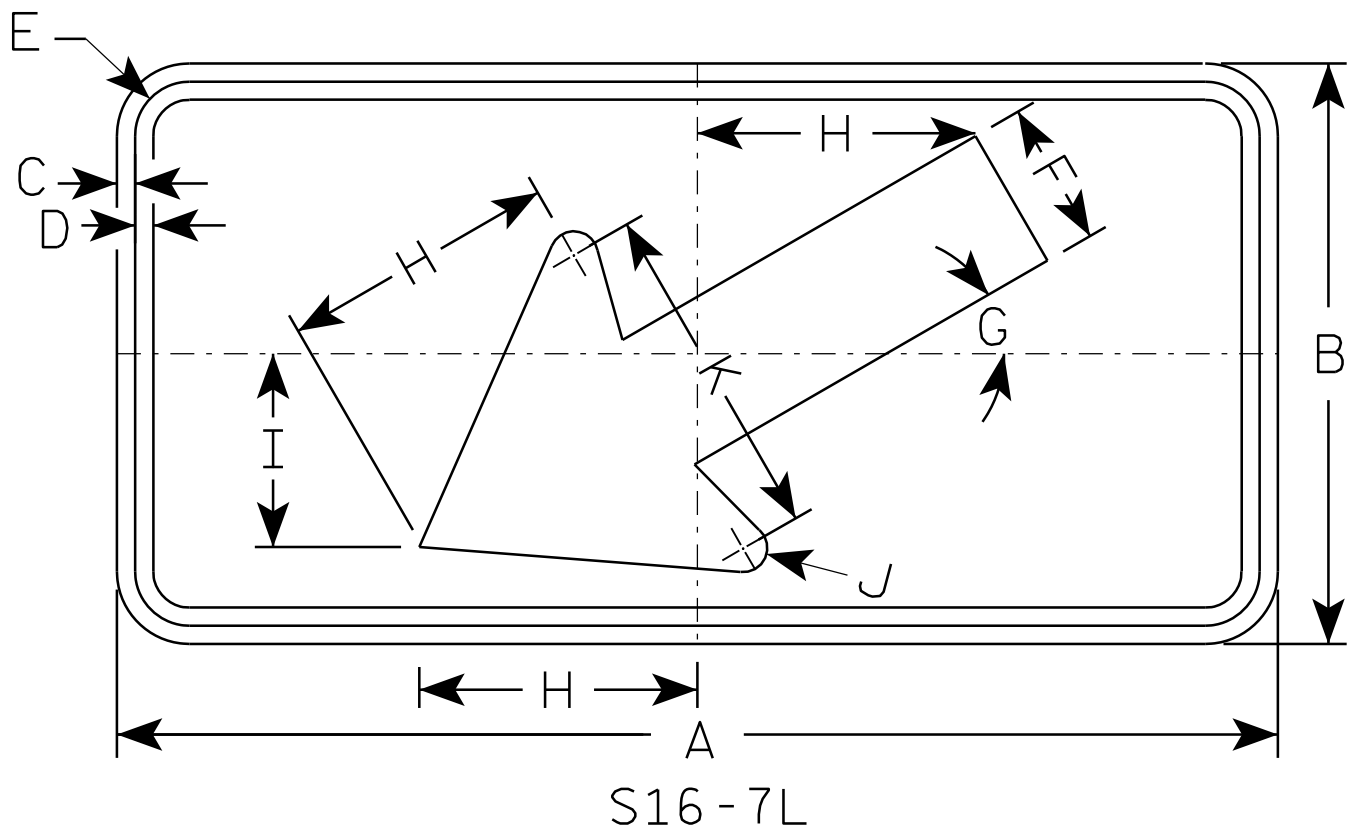
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	30	1 1/8	3/8	1/2	4	6	3	4 1/8	8 1/2	5 3/4																5.0
3	36	42	1 5/8	5/8	3/4	6	7	5	6 1/8	12 5/8	8 5/8																10.5
4																											
5																											

STANDARD SIGN S5-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/8/11	PLATE NO. S5-2.2

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 246	E
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NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow-Green
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. S16-7R are the same as S16-7L except the arrow is reversed along the vertical centerline.

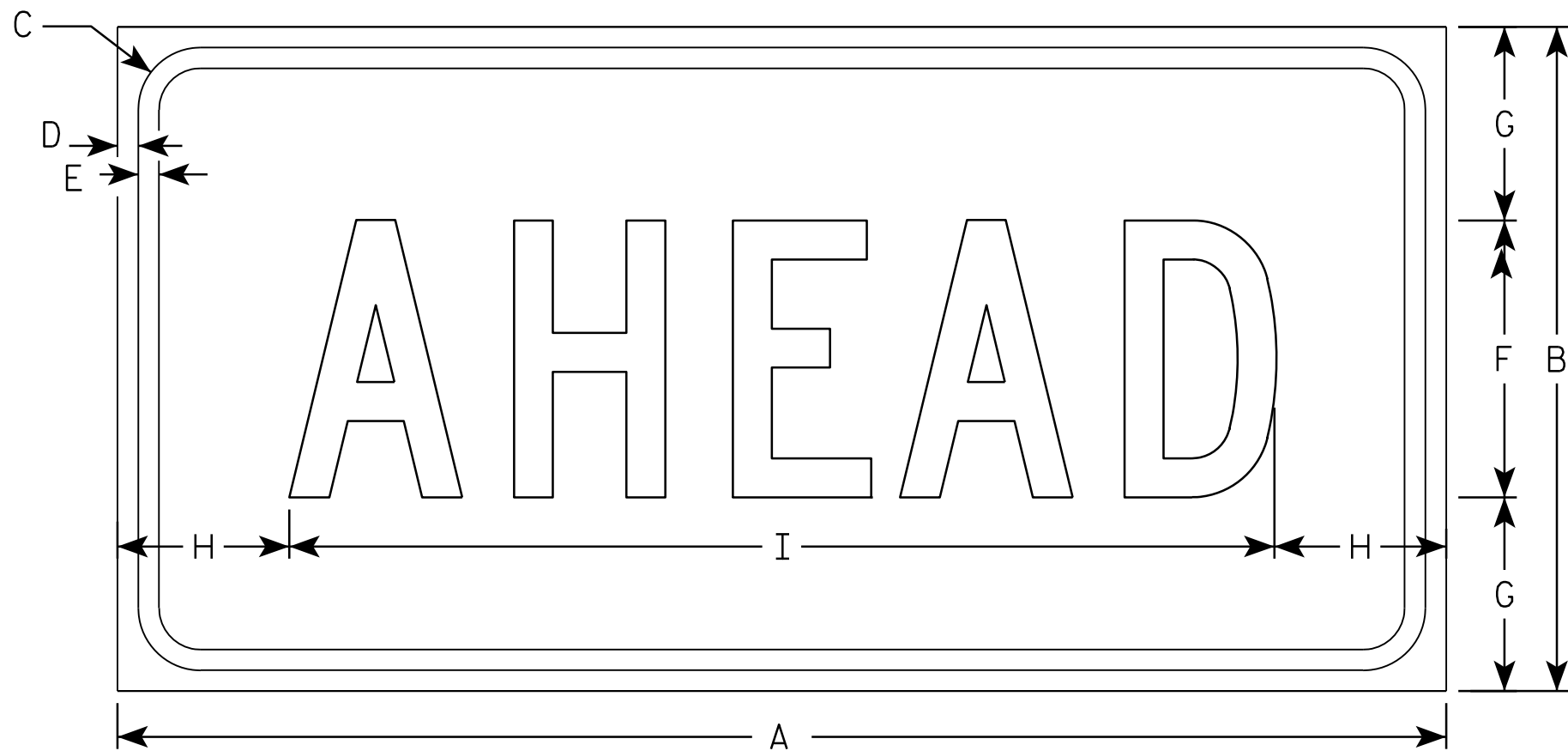


S16 - 7L

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

STANDARD SIGN	
S16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/22/13	PLATE NO. S16-7.1

7



S16-9P

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow-Green
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.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2S	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

STANDARD SIGN
S16-9P

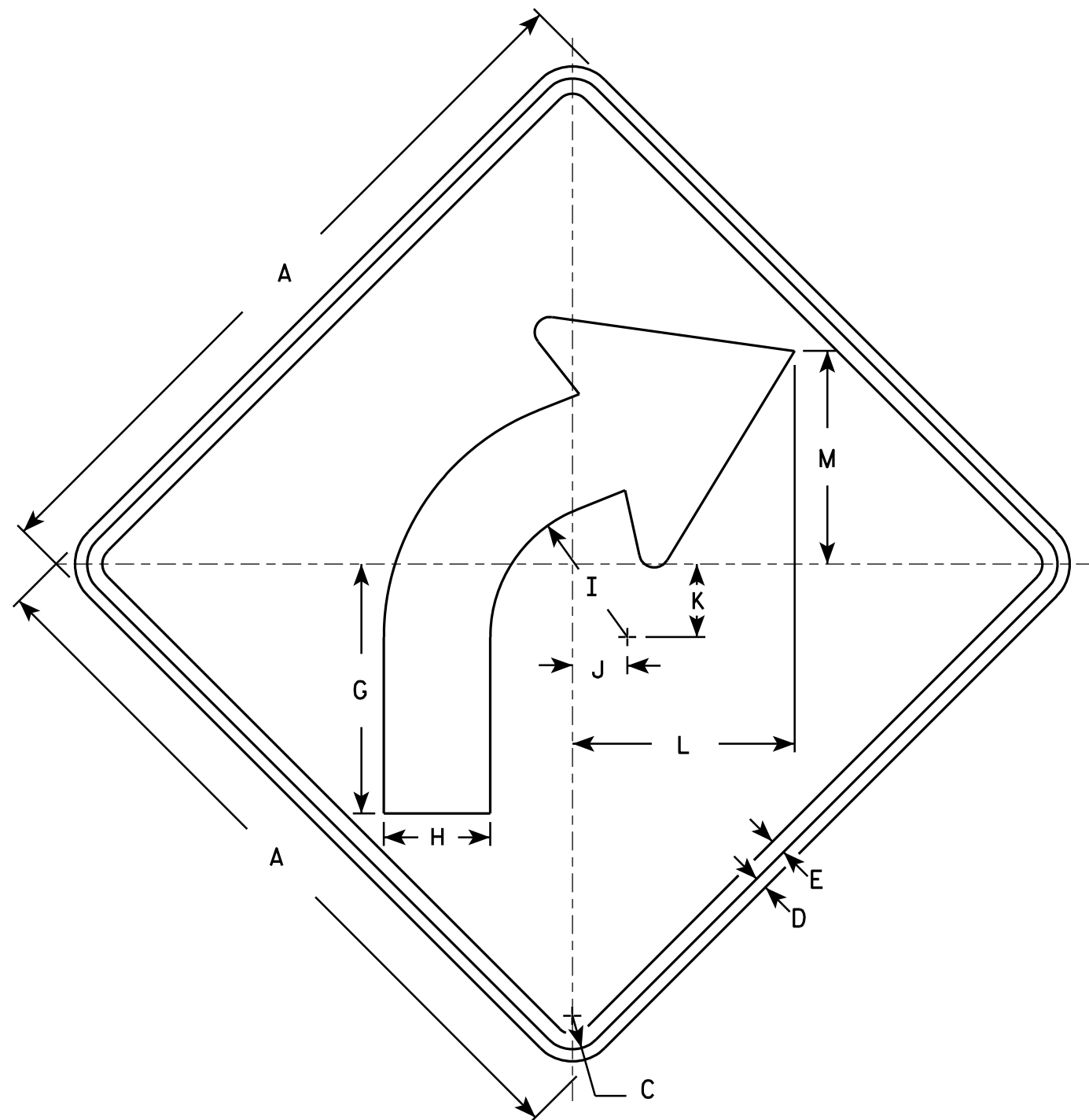
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

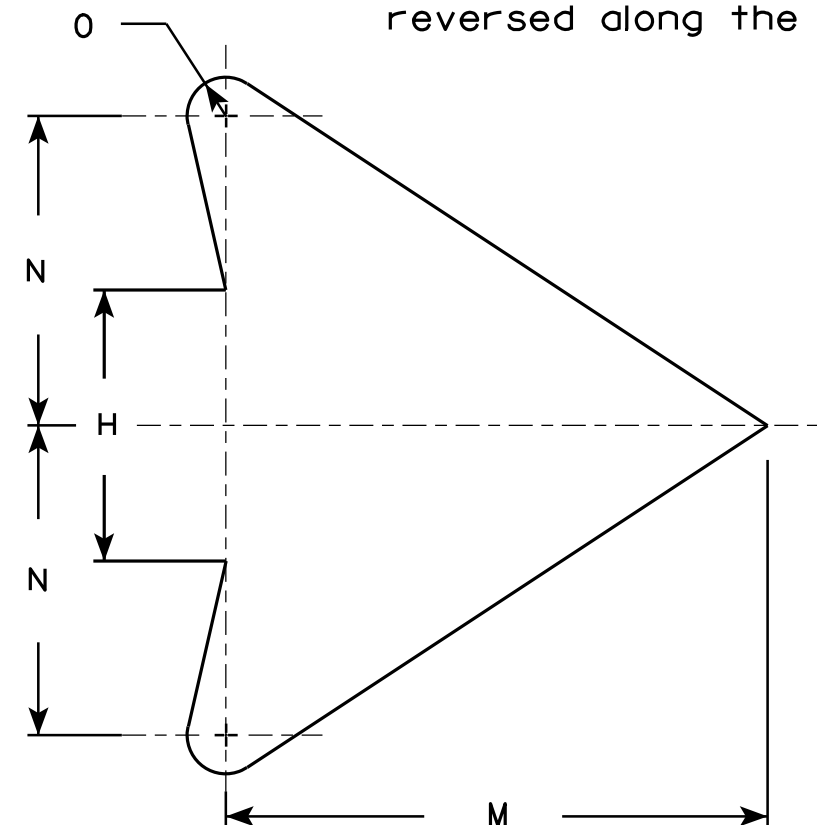
DATE 7/22/13 PLATE NO. S16-9P.1

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

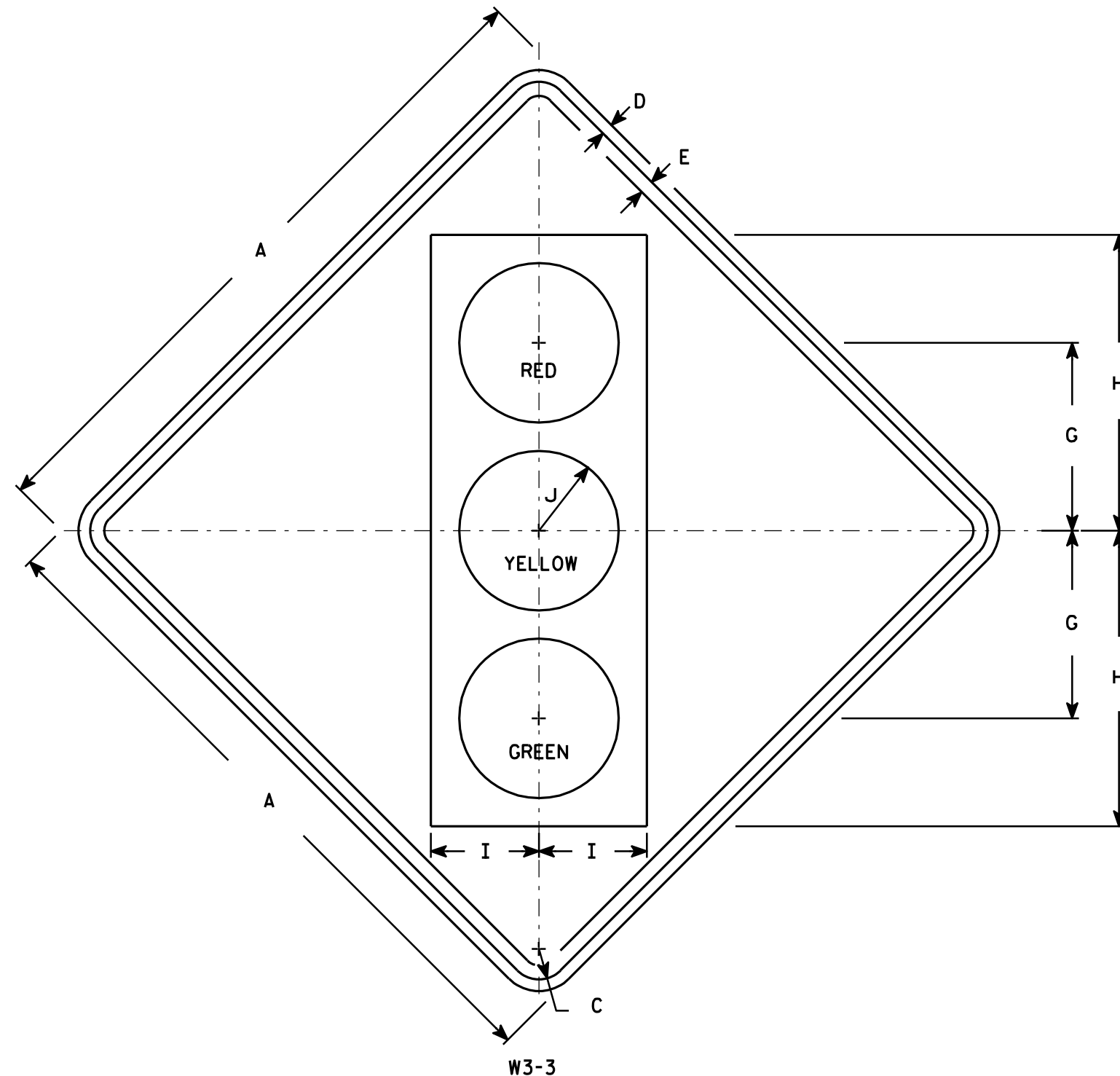
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 249

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

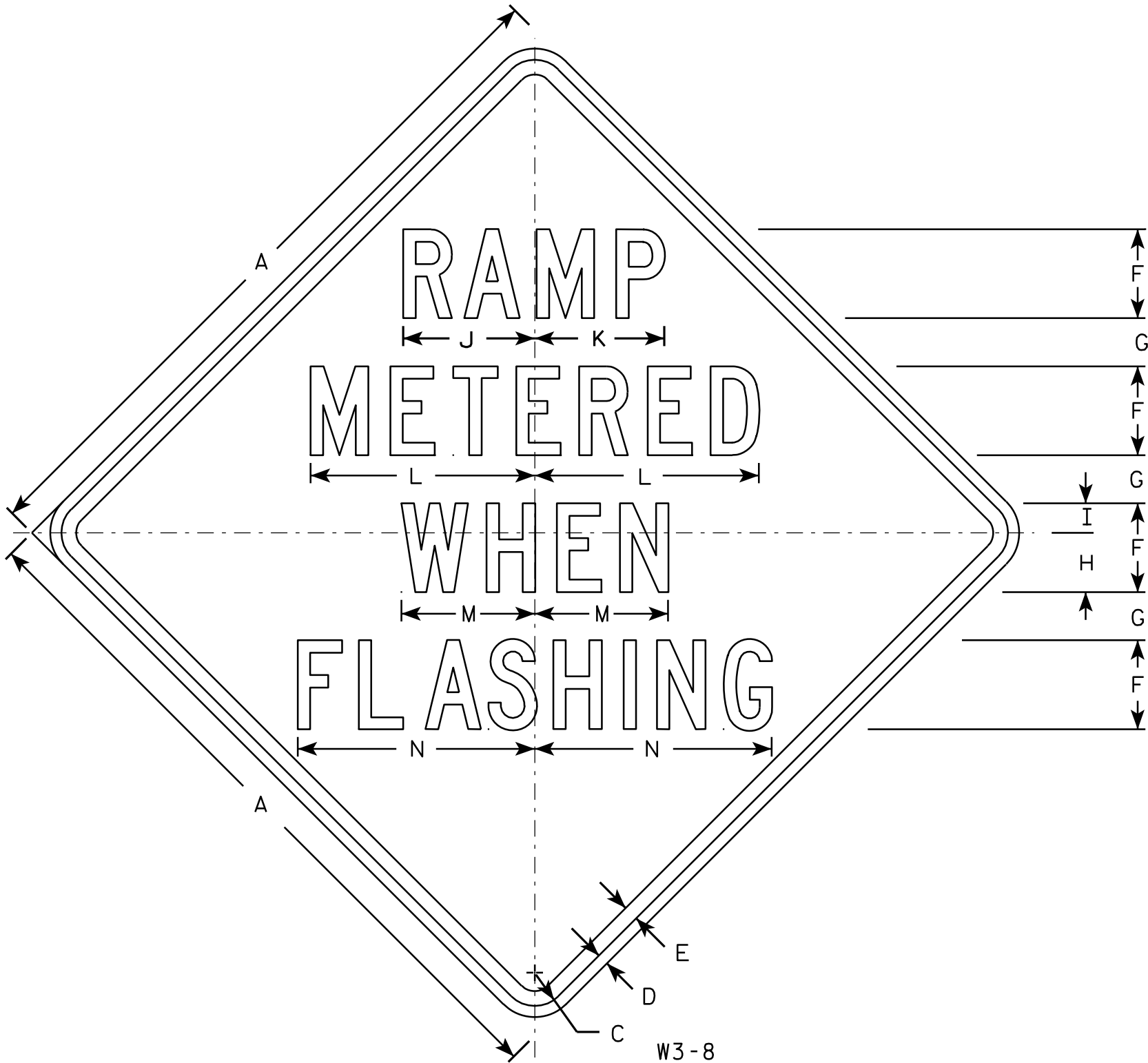
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 250	E
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STANDARD SIGN W3-3	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/7/10	PLATE NO. W3-3.11

NOTES

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



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

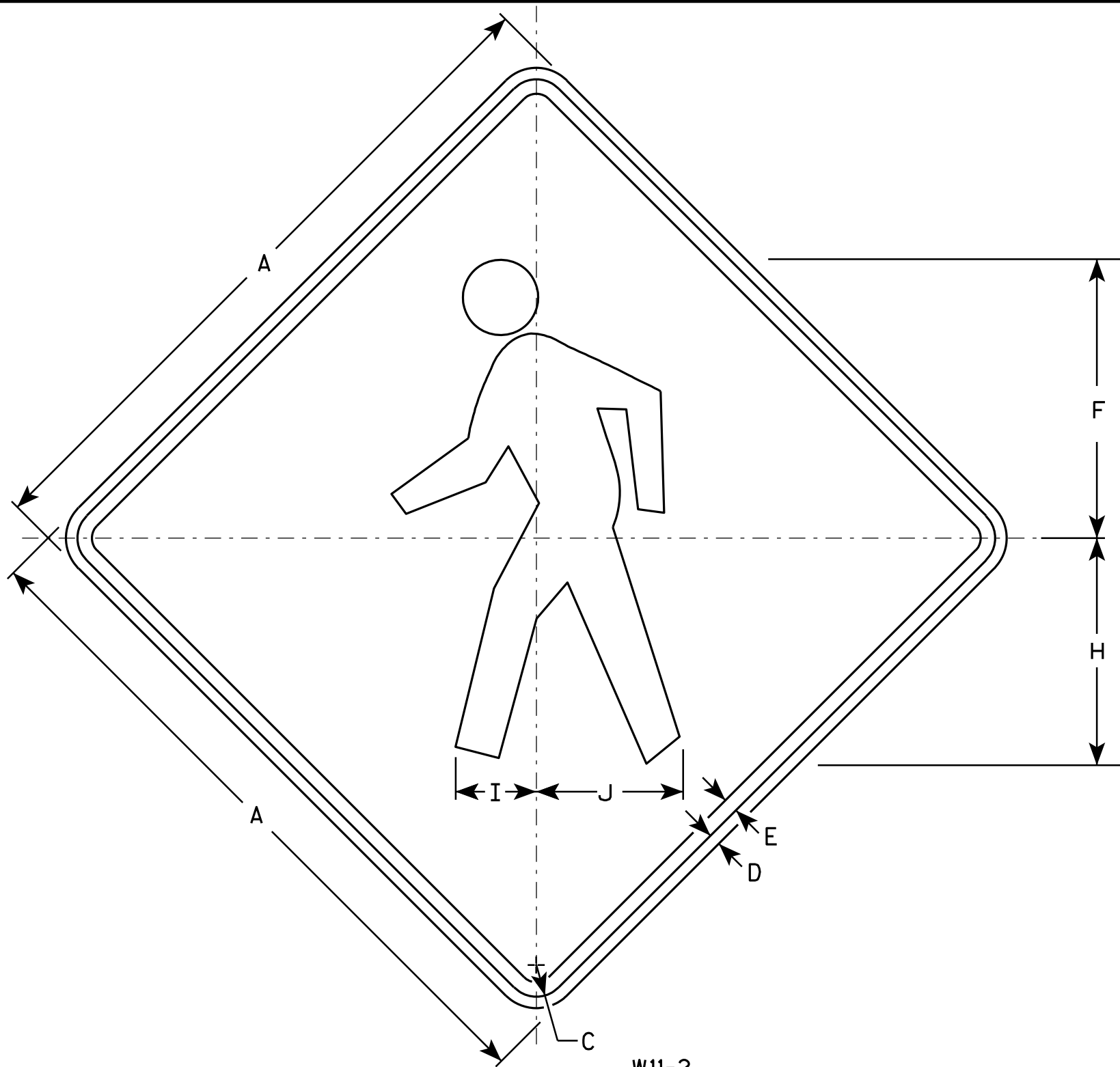
STANDARD SIGN

W3-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W3-8.2



W11-2

NOTES

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

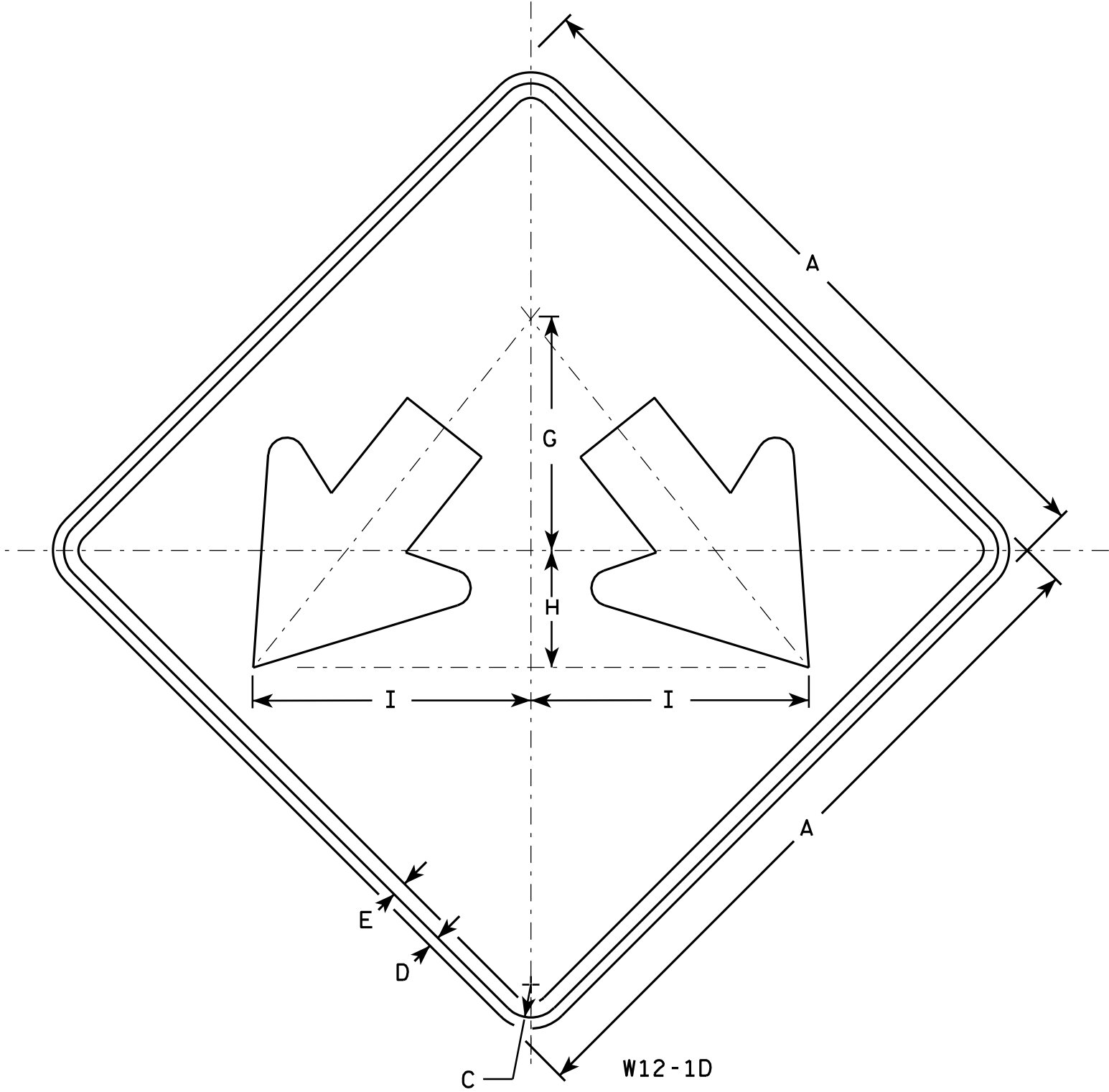
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

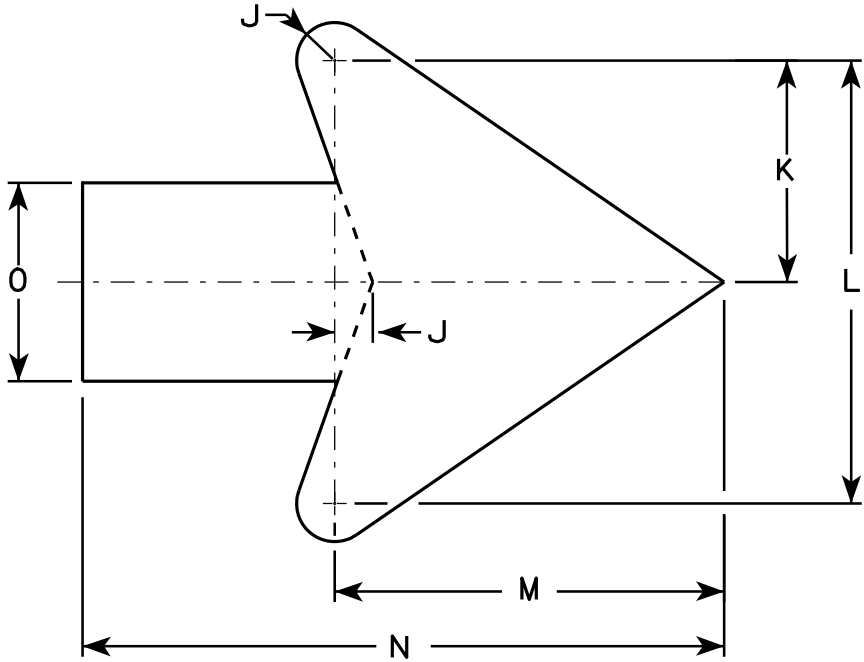
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7



NOTES

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



Arrow Detail

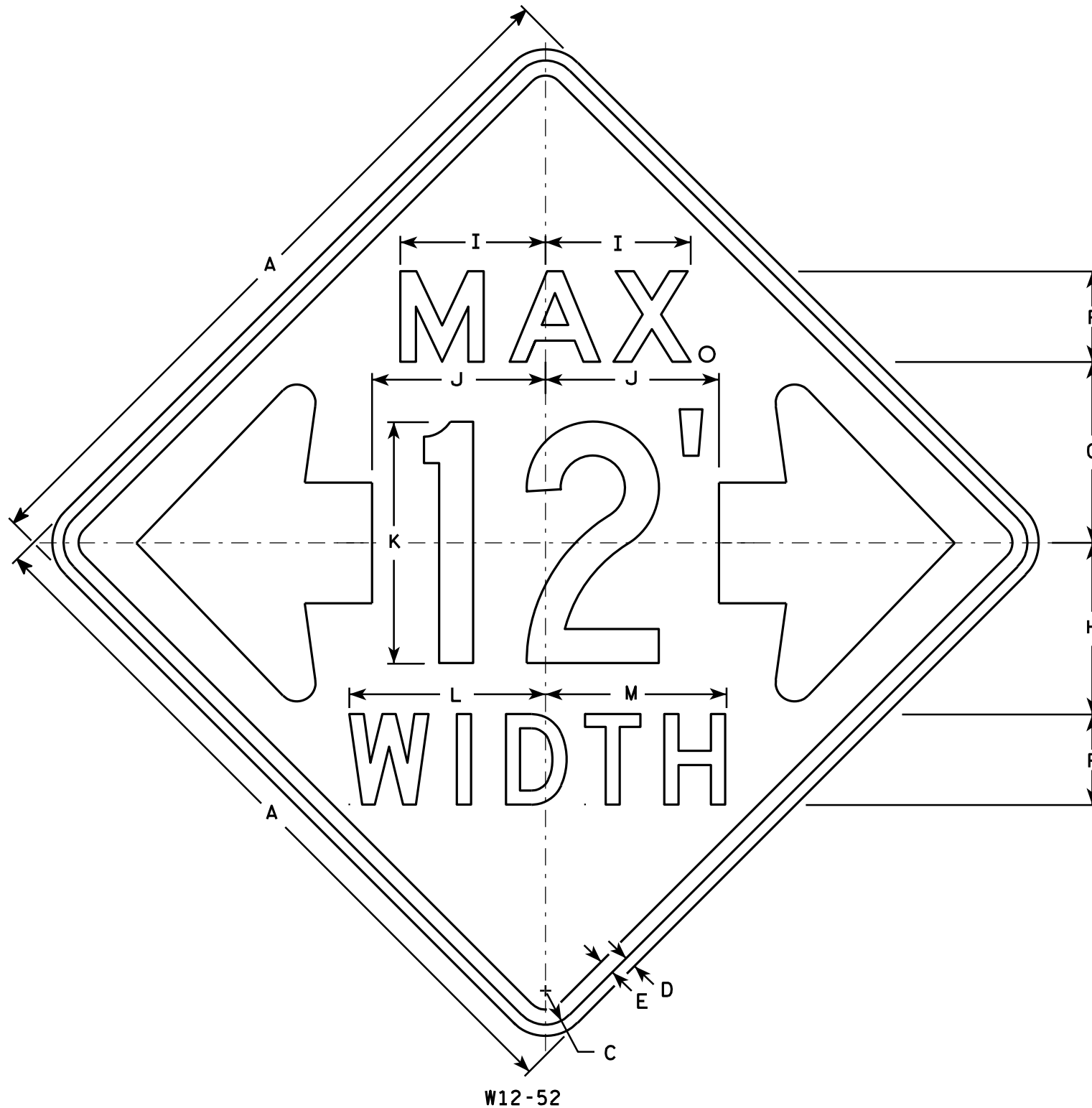
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

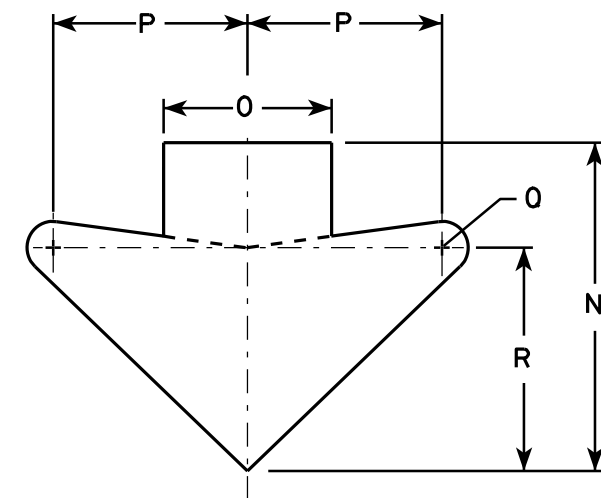
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- The top line is series E, the numerals are series C, and the bottom line is series D.
- Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

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

STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

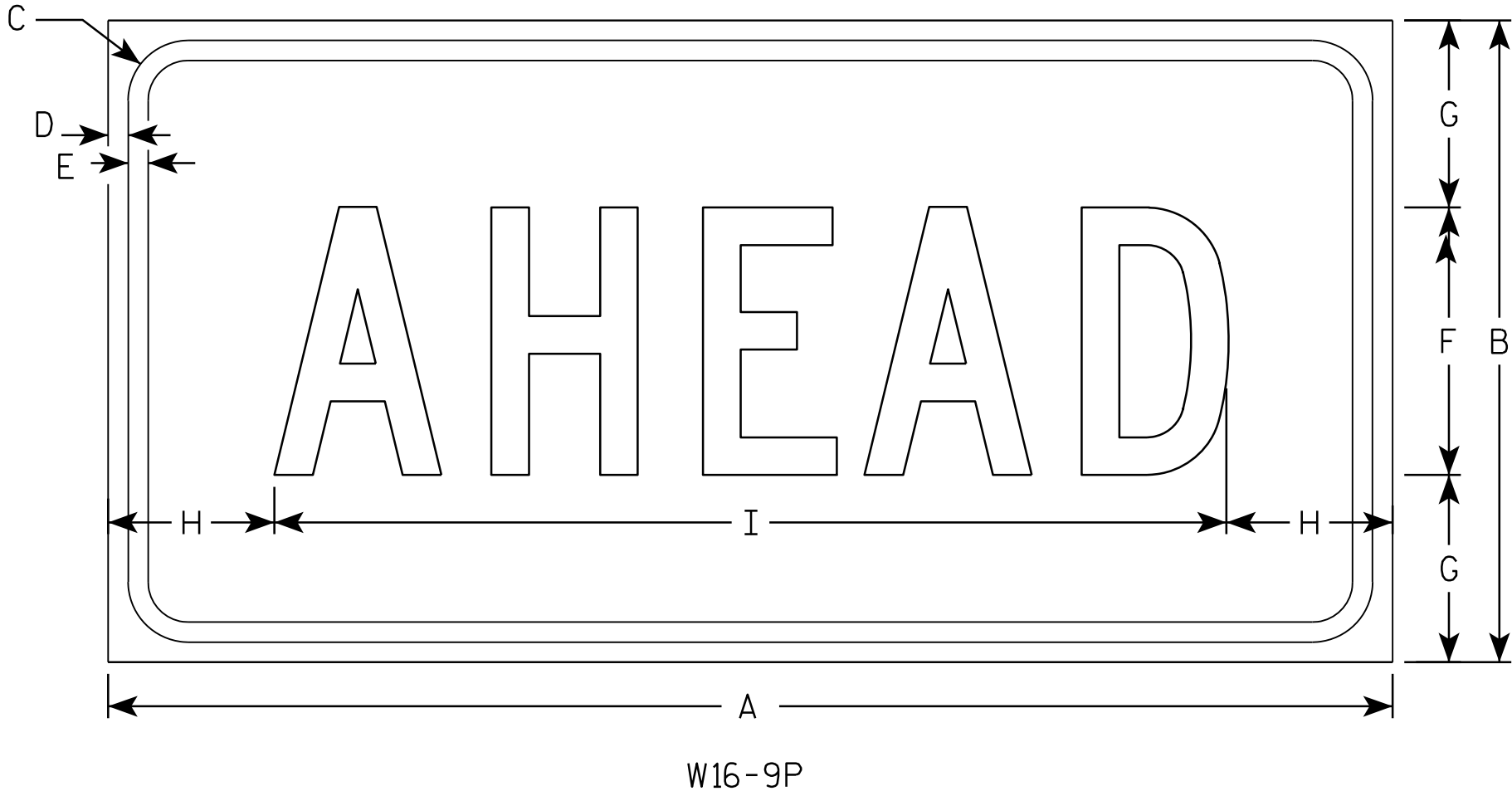
PROJECT NO: HWY: COUNTY: SHEET NO: 254 E

7

7

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

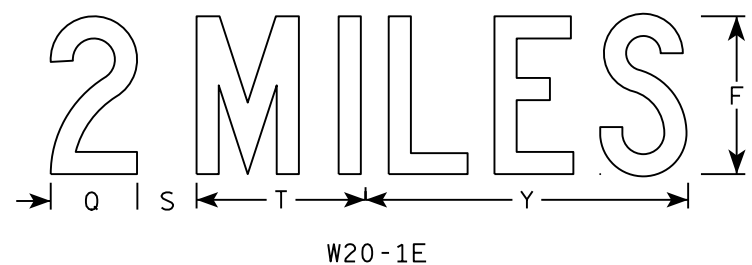
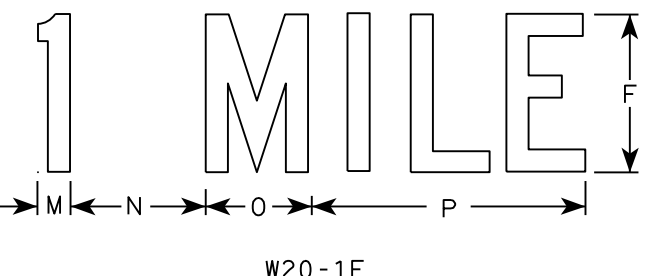
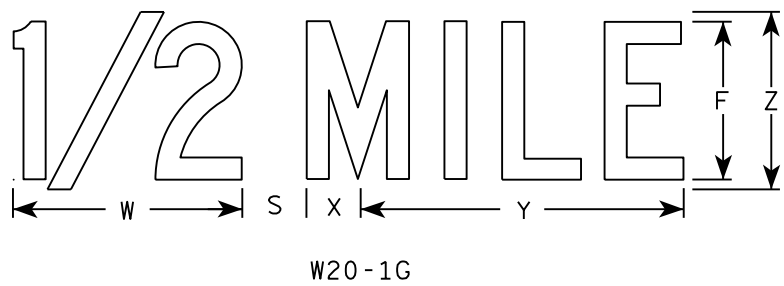
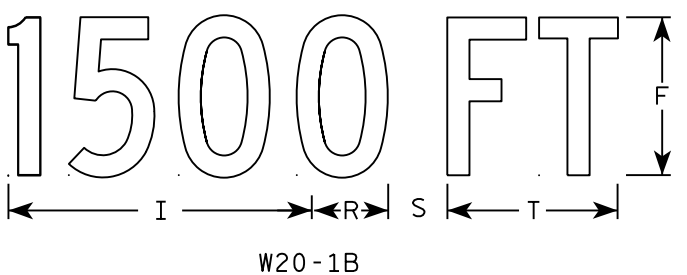
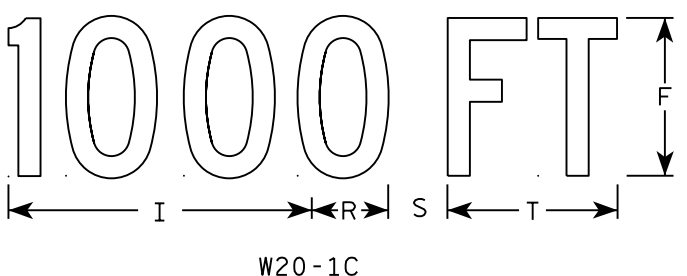
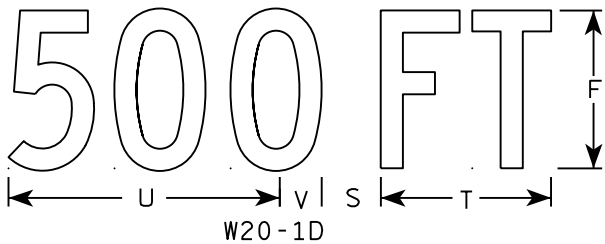
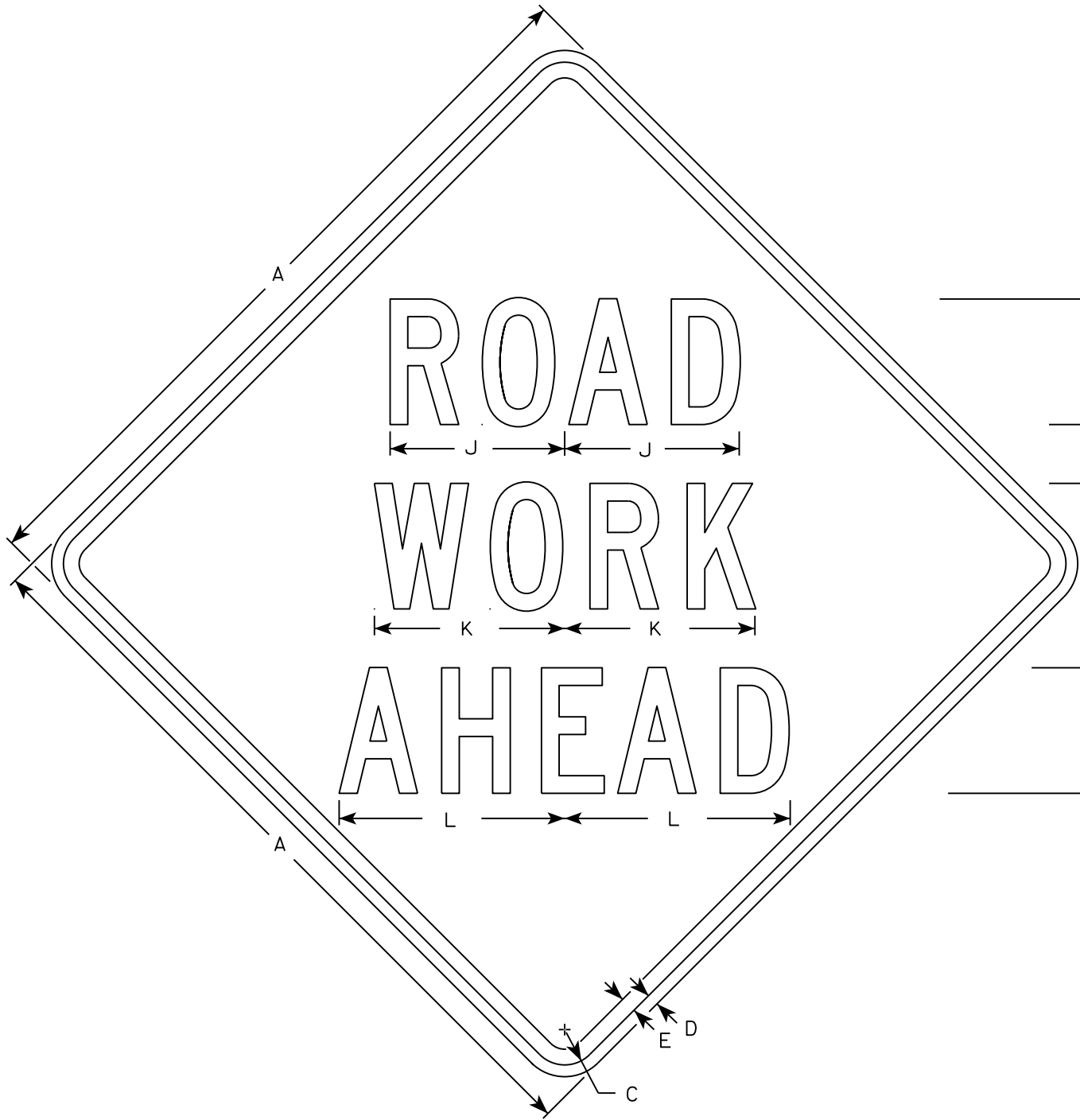
STANDARD SIGN

W16 - 9P

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6



NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

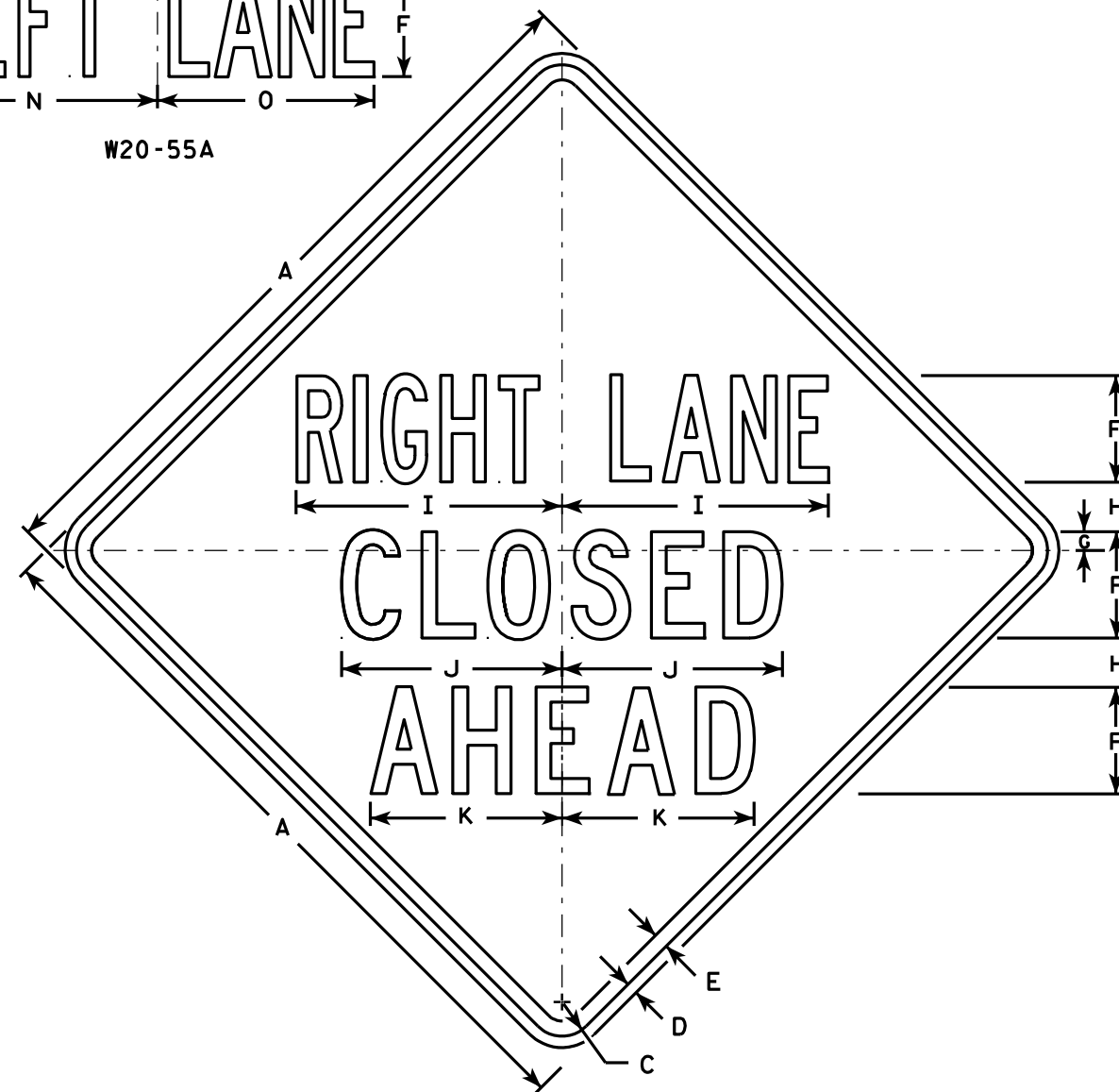
256

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

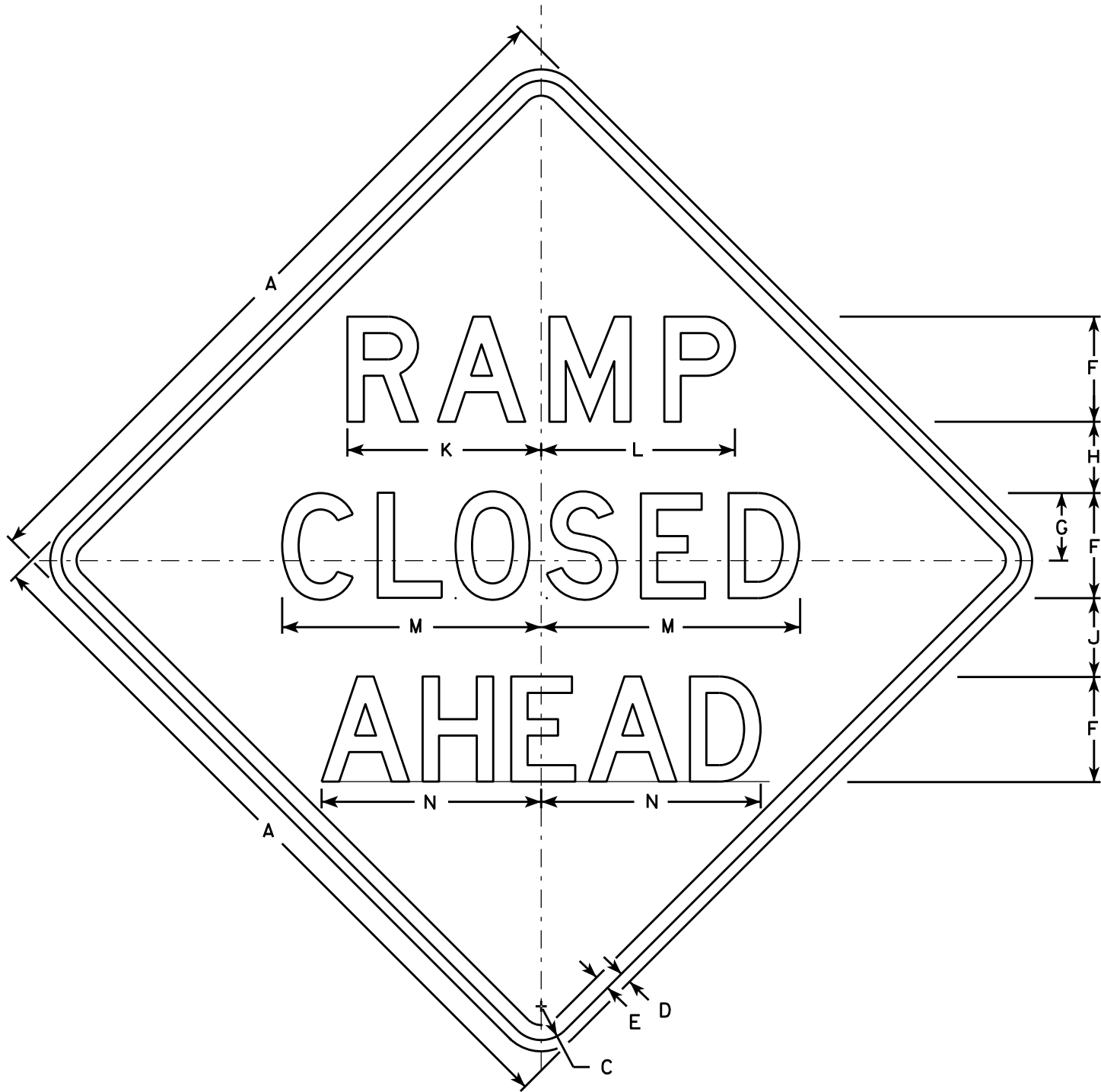
NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. "----- LANE" is Series B.
All other copy is Series C.

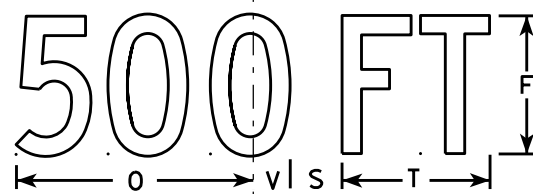
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1 1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN	
W20-5A, B, C, D, F & G	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/18/11	PLATE NO. W20-5.11

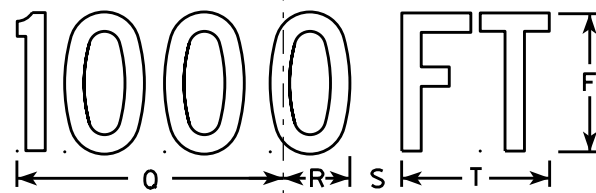
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 257	E
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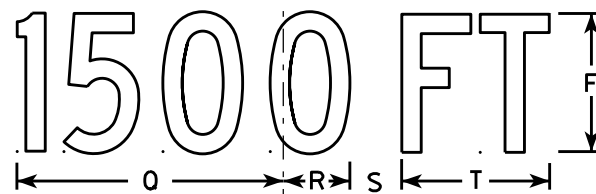
W20-53A



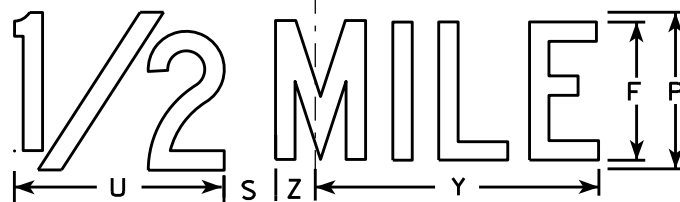
W20-53D



W20-53C



W20-53B



W20-53G



W20-53F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	9 1/4	9 1/4	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	12 7/8	12 7/8	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-53A,B,C,D,F,G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/27/15 PLATE NO. W20-53.1

258

PROJECT NO:

HWY:

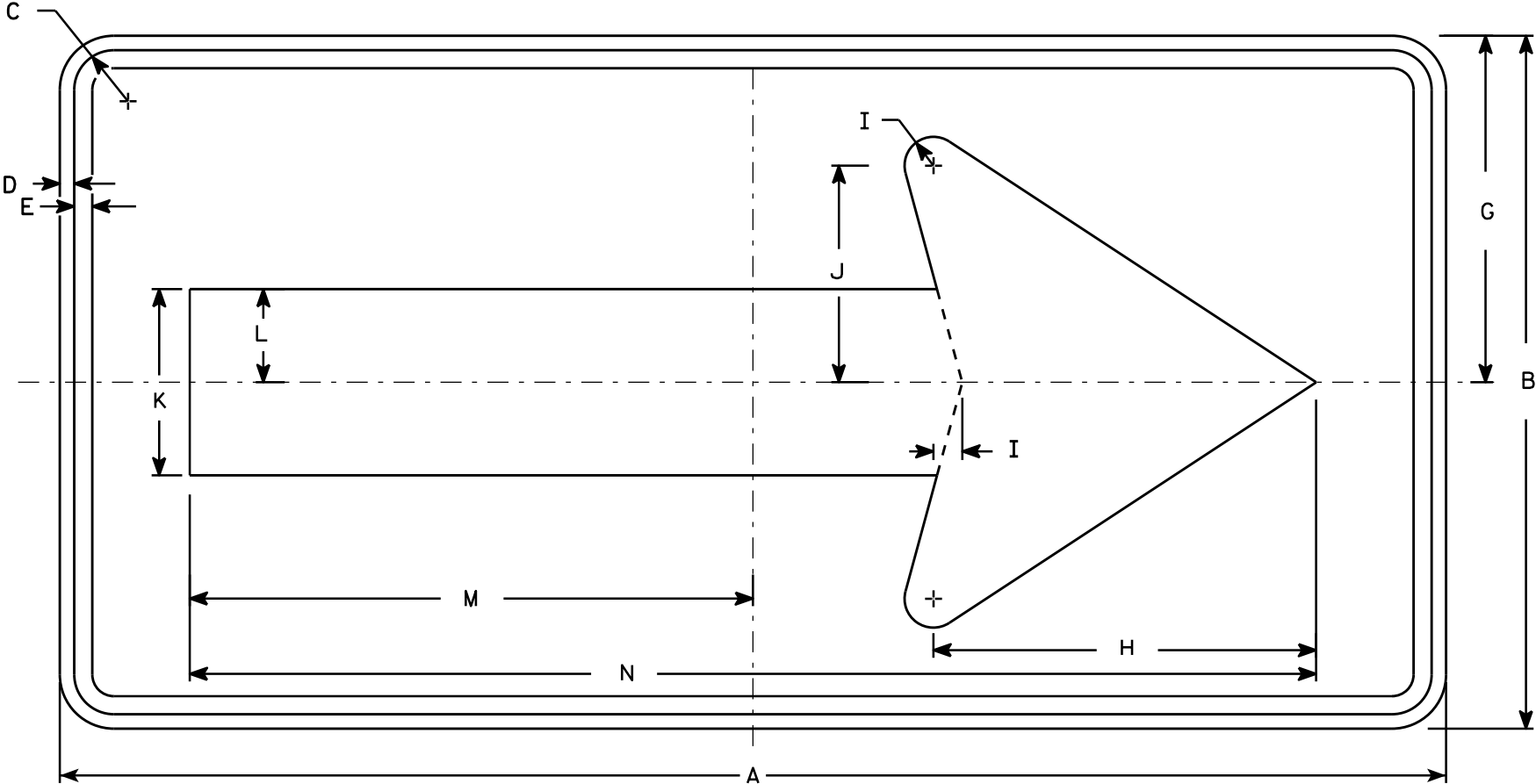
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. 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.



W01-6

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 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

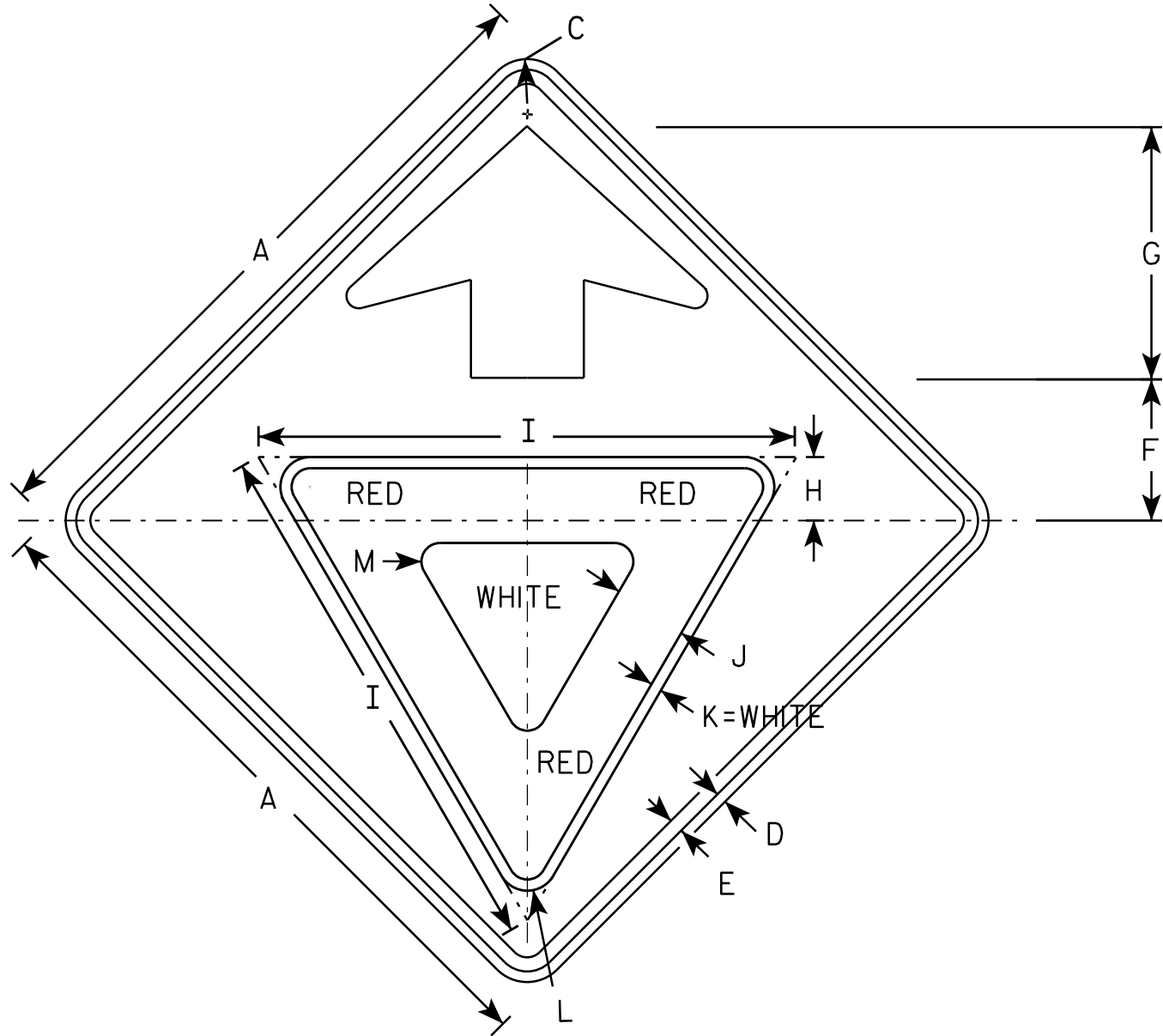
STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. 259 W01-6.1

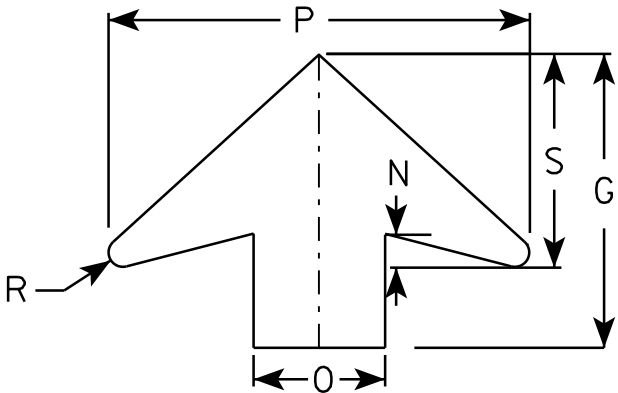
PROJECT NO: HWY: COUNTY: SHEET NO: E



W03-2

NOTES

- 1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - ORANGE
 - Arrow & Border - BLACK
 - Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

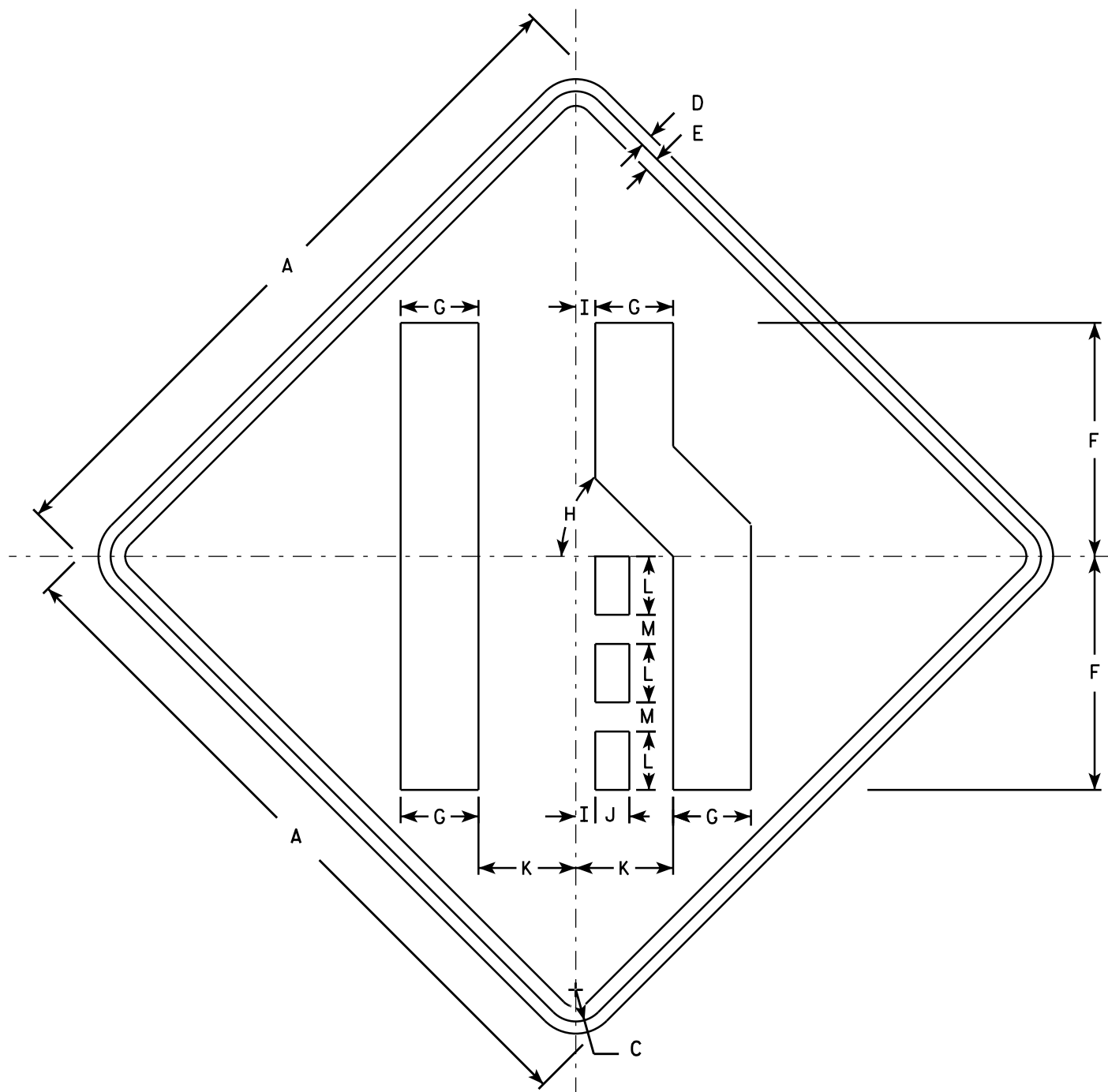
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/20/13 PLATE 260 W03-2.1



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

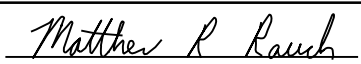
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN

W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED



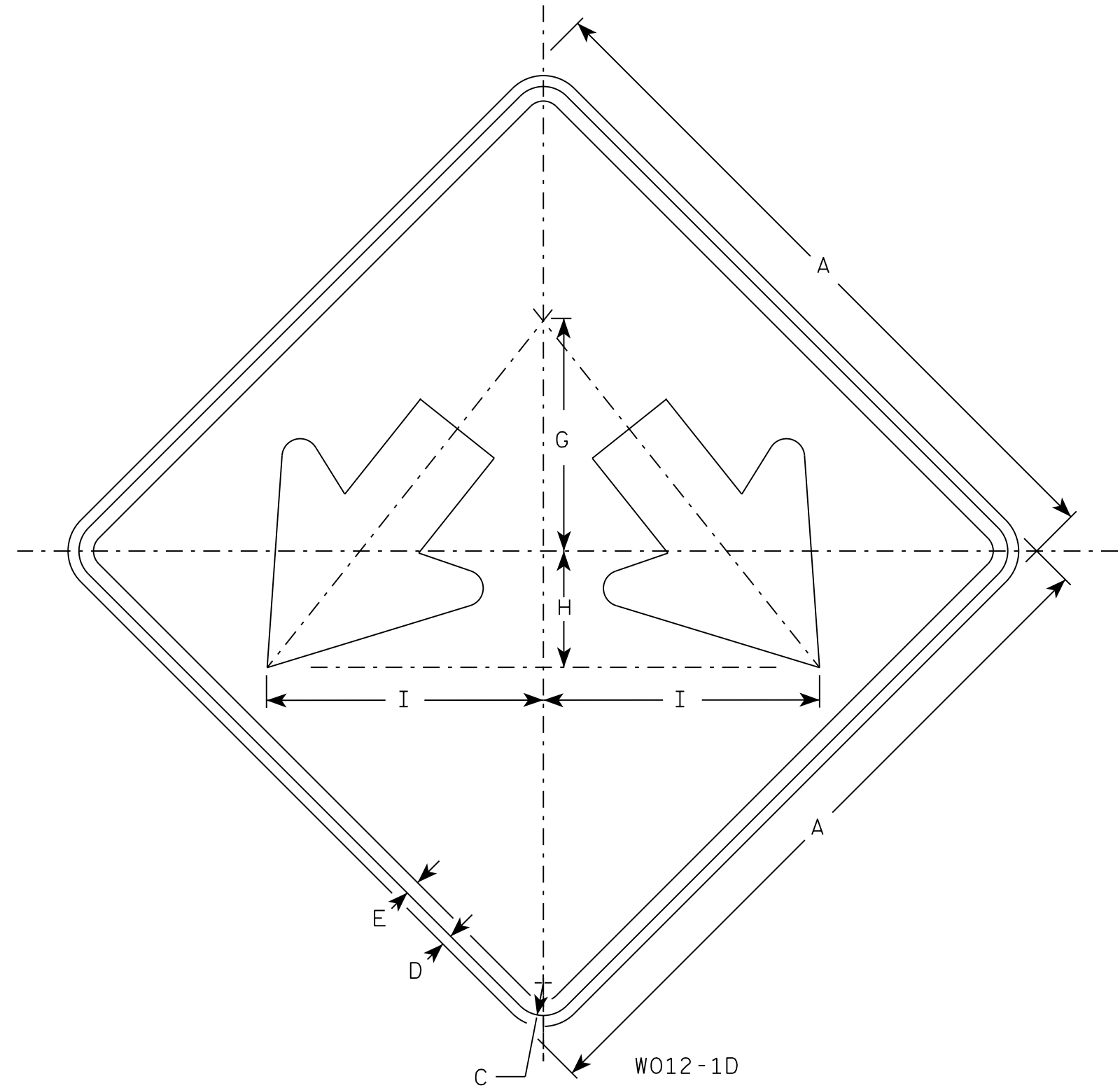
Matthew R. Rauch

For State Traffic Engineer

DATE 11/20/13

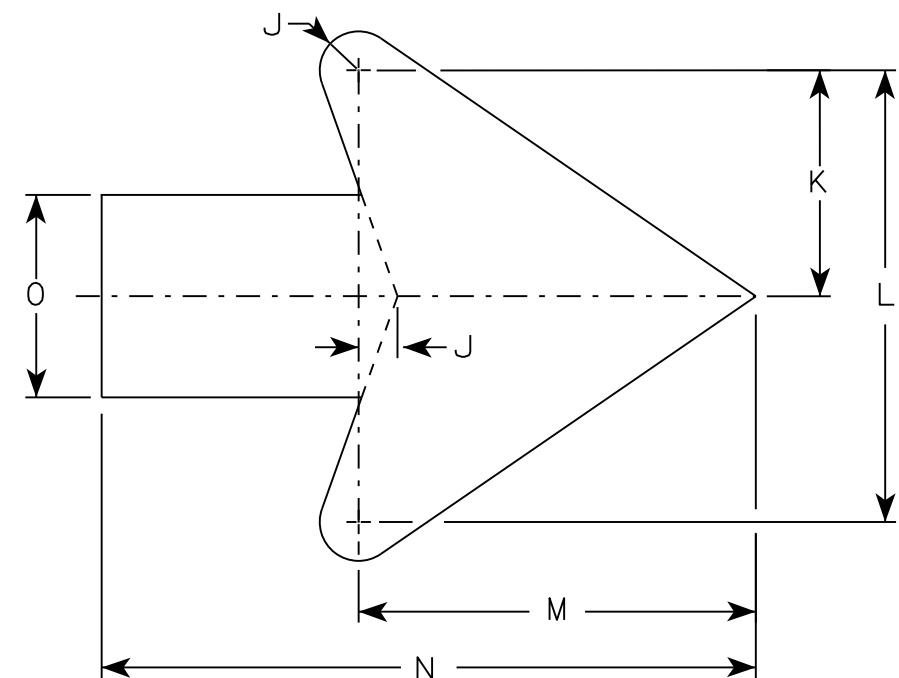
PLATE 261

W04-2.1



NOTES

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



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0

STANDARD SIGN
W012-1D

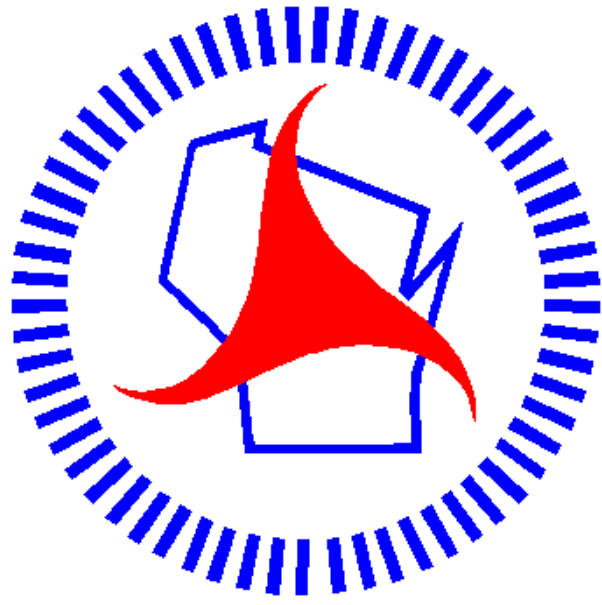
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/28/16 PLATE NO. W012-1D.2
262

SHEET NO: E

Notes



Wisconsin Department of Transportation

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